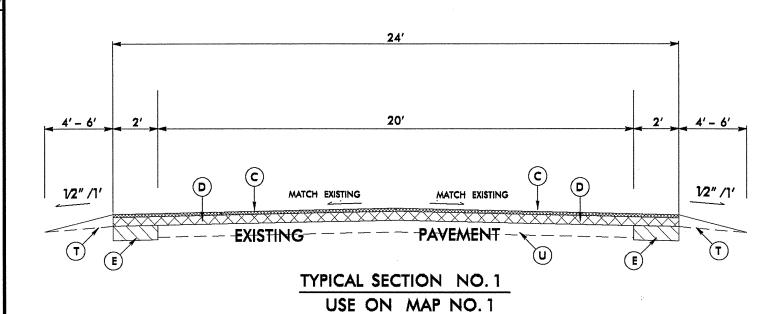
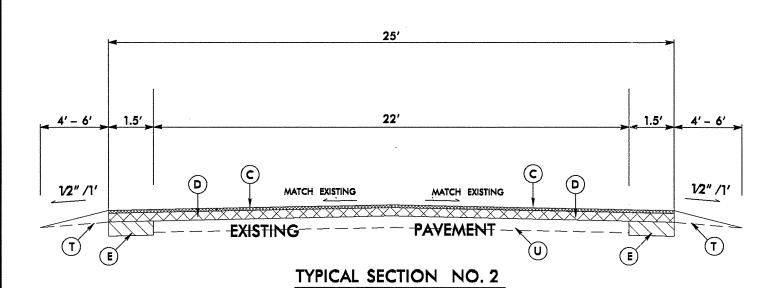
STATE OF NORTH CAROLINA N.C. R-5216 DIVISION OF HIGHWAYS STM-1500(7) 46281.3.ST1 BRUNSWICK COUNTY LOCATION: MAP NO. 1: SR 1401 (GALLOWAY RD.) FROM 0.046 MILES SOUTH OF US 17 BYPASS TO US 17 BUSINESS. MAP NO. 2: SR 1500 (MIDWAY RD.) FROM US 17 BUSINESS TO 0.12 MILES NORTH OF NC 211. TYPE OF WORK: RESURFACING, WIDENING, PAVEMENT MARKERS AND MARKINGS, ETC. Half Hell PRO Antioch 2026 Smith NOT TO SCALE DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA HYDRAULICS ENGINEER GRAPHIC SCALES DESIGN DATA PROJECT LENGTH Prepared in the Office of: DIVISION OF HIGHWAYS 124 Division Dr., Wilmington, NC 28401 MAP NO.1 = 1.21 MI.2006 STANDARD SPECIFICATIONS MAP NO.2 = 6.43 MI.RIGHT OF WAY DATE: TOTAL = 7.64 MI.ROADWAY DESIGN PROFILE (HORIZONTAL) TECHNICIAN LETTING DATE: SIGNATURE: SEPT. 21, 2010 PROFILE (VERTICAL) * TTST DUAL SIGNATURE:



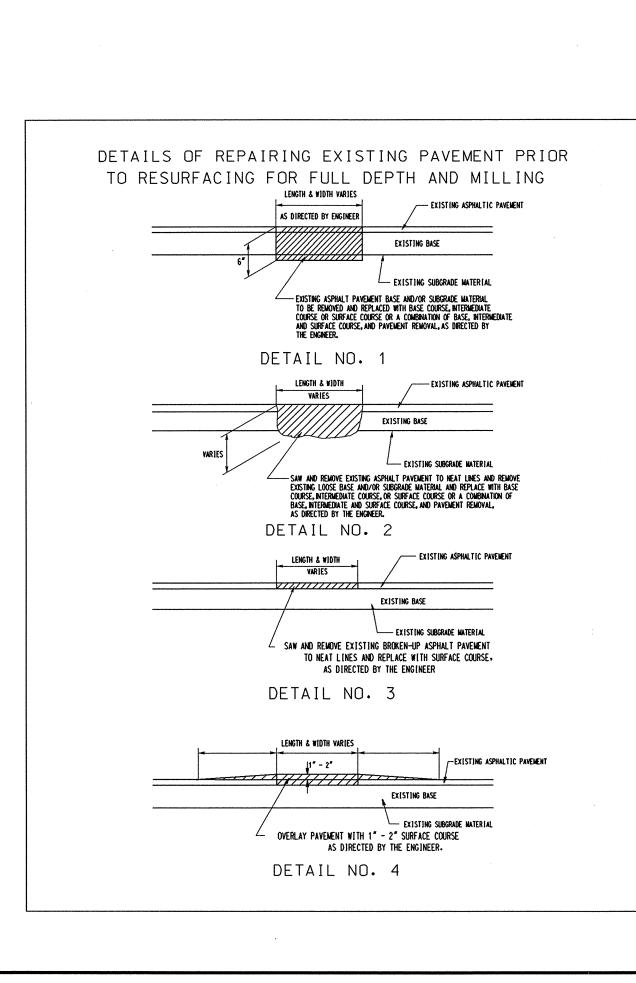


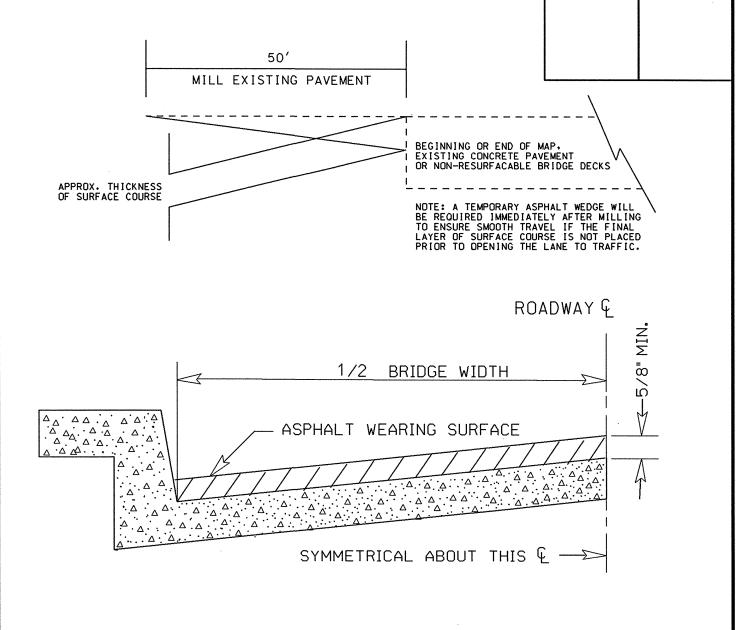
USE ON MAP NO. 2

R-5216	2
RW SHEET N	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

	PAVEMENT SCHEDULE
С	PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" DEPTH ASPHALT CONCRETE INTERNEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
Т	EARTH MATERIAL (SHOULDER RECONSTRUCTION)
ט	EXISTING PAVEMENT.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE. SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS. M.E. = MATCH EXISTING





PROJECT REFERENCE NO.
R-5216

BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5216 (46281.3.ST1)	4	5

SUMMARY OF QUANTITIES

				0 0 111 11		<u> </u>	<u> </u>	40	$\overline{\Lambda}$ II I	1 1 1 ha							
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	FINAL	LENGTH	WIDTH	BORROW	INC. STONE	SHOULDER	MILLING	BASE	INT.	SURFACE	PG 64-22	PATCHING
						SURFACE			EXC.	BASE	RECONST.	0" - 1.5"	COURSE,	COURSE,	COURSE,	PLANT MIX	EXISTING
	1		·			TESTING							B25.0B	I19.0B	S9.5B	İ	PAVEMENT
						REQUIRED											(MILL),
	1																S9.5B
NO		NO			NO		MI	FT	CY	TONS	SMI	SY	TONS	TONS	TONS	TONS	TON
R-5216 (46281.3.ST1)				0.046 MILES SOUTH OF US 17			-										
GALLOWAY	Brunswick	1	SR 1401 (GALLOWAY RD.)	BYPASS TO US 17 BUSINESS	1	NO	1.21	24	799	100	2.42	350	1,042	2,717	1,663	272	25
Т	OTAL FOR	MAP N	IO. 1				1.21		799	100	2.42	350	1,042	2,717	1,663	272	25
TOTAL FOR PRO	NO. R-5216	(4628	31.3.ST1) GALLOWAY				1.21		799	100	2.42	350	1,042	2,717	1,663	272	25
																·	*
R-5216 (46281.3.ST1)				US 17 BUSINESS TO 0.12 MILES													
,				NORTH OF NC 211,													
MIDWAY	Brunswick	2	SR 1500 (MIDWAY RD.)	RESURFACING (MP 0.00-6.43)	2	NO	6.38	25	5,161	1,000	12.76	1,444	4,261	14,912	9,130	1,432	150
				NO WORK - BRIDGE DECKS (MP			·					·			 		
		"	"	0.53-0.54, 3.48-3.50, 4.04-4.05)		NO	0.05	24									
Т	OTAL FOR	MAP N	IO. 2				6.43		5,161	1,000	12.76	1,444	4,261	14,912	9,130	1,432	150
TOTAL FOR PRO	OJ NO. R-52	16 (46	281.3.ST1) MIDWAY				6.43		5,161	1,000	12.76	1,444	4,261	14,912	9,130	1,432	150
	GRAND 1	TOTAL					7.64		5,960	1,100	15.18	1,794	5,303	17,629	10,793	1,704	175

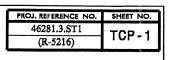
SUMMARY OF QUANTITIES

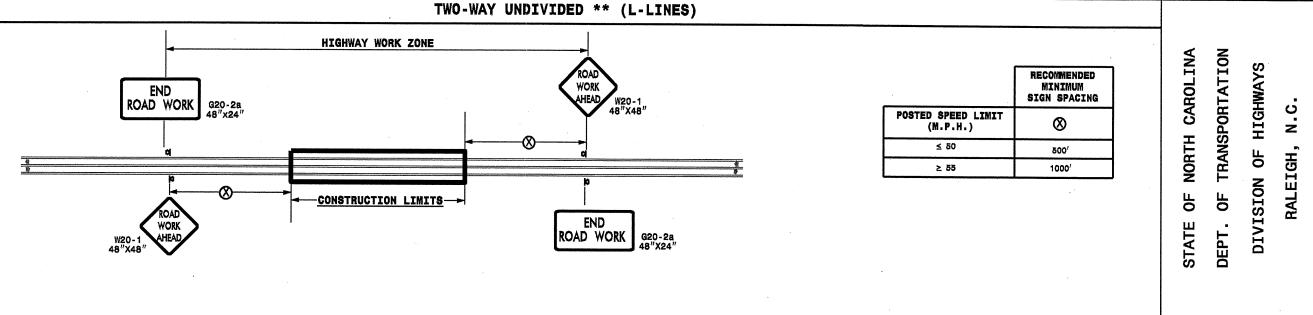
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	PATCHING	GENERIC	REMOVE &	TEMP. SILT	STONE FOR	SEDIMENT	TEMP.	SEED FOR	FERTILIZER	1/4"	SEED &
						EXISTING	PAVING	RESET	FENCE	EC CLASS B	CONTROL	MULCHING	TEMP.	FOR TEMP.	HARDWARE	MULCHING
						PAVEMENT	ITEM INC.	EXISTING			STONE		SEEDING	SEEDING	CLOTH	
						(FULL	CONC SY	GUARD-								
						DEPTH)		RAIL				·				
NO		NO			NO	TON	SY	LF	LF	TON	TON	ACR	LBS	TON	LF	AC
R-5216 (46281.3.ST1)				0.046 MILES SOUTH OF US 17												
GALLOWAY	Brunswick	1	SR 1401 (GALLOWAY RD.)	BYPASS TO US 17 BUSINESS	1	150			121	60		1.21	61	0.30	61	1.82
Т	TOTAL FOR MAP NO. 1					150			121	60	·	1.21	61	0.30	61	1.82
TOTAL FOR PRO	NO. R-5216	(4628	1.3.ST1) GALLOWAY			150			121	60		1.21	61	0.30	61	1.82
															•	
R-5216 (46281.3.ST1)				US 17 BUSINESS TO 0.12 MILES												
MIDWAY				NORTH OF NC 211,												
MIDVAT	Brunswick	2	SR 1500 (MIDWAY RD.)	RESURFACING (MP 0.00-6.43)	2	1,100	60	750	643	161	161	6.43	322	1.61	322	9.57
				NO WORK - BRIDGE DECKS (MP												
		"	11	0.53-0.54, 3.48-3.50, 4.04-4.05)												
T	TOTAL FOR MAP NO. 2					1,100	60	750	643	161	161	6.43	322	1.61	322	9.57
TOTAL FOR PRO	TOTAL FOR PROJ NO. R-5216 (46281.3.ST1) MIDWAY			·		1,100	60	750	643	161	161	6.43	322	1.61	322	9.57
					•	•						<u> </u>				
	GRAND T	OTAL				1,250	60	750	764	221	161	7.64	383	1.91	383	11.39

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5216 (46281.3.ST1)	5	5

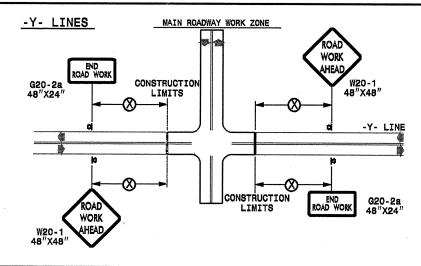
THERMOPLASTIC AND PAINT QUANTITIES

					4589000000-N	4685000000-E	4686000000-E	481000	0000-E	4905000000-N
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TRAFFIC	4" X 90 M	4" X 120 M	4" WHITE	4" YELLOW	SNOW
					CONTROL	WHITE	YELLOW	PAINT	PAINT	PLOWABLE
						THERMO	THERMO			MARKERS
										(Y/Y)
NO		NO			LS	LF	LF	LF	LF	EA
R-5216 (46281.3.ST1)				0.046 MILES SOUTH OF US 17						
GALLOWAY	Brunswick	1	SR 1401 (GALLOWAY RD.)	BYPASS TO US 17 BUSINESS	*	12,800	12,800	12,778	9,583	80
T	TOTAL FOR MAP NO. 1					12,800	12,800	12,778	9,583	80
TOTAL FOR PROJ	TOTAL FOR PROJ NO. R-5216 (46281.3.ST1) GALLOWAY				12,800	12,800	12,778	9,583	80	
TOTAL FOR PROJ							22,361			
					-		·			
R-5216 (46281.3.ST1)				US 17 BUSINESS TO 0.12 MILES						
MIDWAY				NORTH OF NC 211,						
MIDVAT	Brunswick	2	SR 1500 (MIDWAY RD.)	RESURFACING (MP 0.00-6.43)	*	67,373	50,530	67,373	50,530	421
				NO WORK - BRIDGE DECKS (MP						
		- 11	"	0.53-0.54, 3.48-3.50, 4.04-4.05)						
T	OTAL FOR	MAP N	O. 2			67,373	50,530	67,373	50,530	421
TOTAL FOR PRO) I NO R-52	16 (461	281 3 ST1) MIDWAY			67,373	50,530	67,373	50,530	421
TOTAL FOR PROJ NO. R-5216 (46281.3.ST1) MIDWAY						117,903				
		<u> </u>				90 172	62 220	90 454	60.442	504
	GRAND TOTAL				<u> </u>	80,173	63,330	80,151 140	60,113 ,264	501



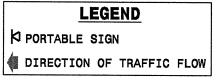


ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



SHEET 1 OF 1

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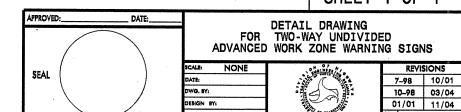
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WARNIN

NO



GENERAL NOTES (7) SIGN W28-1BSP OR R4-7A SHOULD BE PLACED ON FRONT OF APPLICATION VEHICLE AND SIGN W26-1BSP OR INFORMATIONAL SIGN ON BACK OF PROTECTION VEHICLE IN TWO-LANE, TWO-WAY TRAFFIC SO CHICLES APPROACHING FROM FRONT AND REAR ARE NOTIFIED OF OPERATION. LEGEND (1) THE FOLLOWING OPTIONS MAY BE USED AS ADVANCE WARNING SIGNS: A. TRUCK MOUNTED ADVANCE WARNING SIGNS
B. MOVING CHANGEABLE MESSAGE SIGN (CMS)
C. GROUND MOUNTED ADVANCE WARNING SIGNS PORTABLE SIGN (8) RADIO COMMUNICATION BETWEEN VEHICLES IS RECOMMENDED. (MUST USE 'NEXT 10 MILES' AND MAKE CIRCLE TO (9) USE OF A LIGHT BAR ON THE ADVANCE WARNING VEHICLE IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD. PICK UP SIGNS)
D. STATIONARY CHANGEABLE MESSAGE SIGN (CMS)
(MUST USE 'NEXT 10 MILES' AND MAKE CIRCLE TO DIRECTION OF TRAFFIC FLOW (10) USE OF A CMS WITH ADVANCED WARNING VEHICLES IS OPTIONAL. PICK UP CMS) APPLICATION VEHICLE WITH ROTATING BEACON (2) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL - TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES. HOWEVER, THE FIRST VEHICLE MOTORISTS (11) IF WORK IS PERFORMED AT NIGHT, THE FOLLOWING PROVISIONS MUST BE A. GROUND MOUNTED SIGNS MUST HAVE TYPE B FLASHING LIGHTS ATTACHED (TRUCK MOUNTED SIGNS DO NOT REQUIRE TYPE B FLASHING LIGHTS) ROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND ROTATING BEACON (SEE ROADWAY STANDARD NO. 1185.01 SEE SHOULD HAVE A TMIA. B. OPERATION MUST INCLUDE A CHANGEABLE MESSAGE SIGN (CMS) (3) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED C. WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER. TEN (10) MILES IN LENGTH. FLASHING ARROW PANEL, TYPE "B"
"CAUTION MODE" (4) DISTANCE BETWEEN APPLICATION VEHICLE AND PROTECTION VEHICLE WILL VARY AS DRYING TIMES VARY, HOWEVER, THE CRITICAL FACTOR IS PASSING MOTORISTS. IF THE GAP BETWEEN VEHICLES IS TOO GREAT, MOTORISTS WILL ATTEMPT TO PASS AND ULTIMATELY APPEAR IN THE MIDDLE OF THE OPERATION. (12) USE A TYPE "B" FLASHING ARROW PANEL. PANEL TYPE MIN. SIZE 60"X30" (5) MOUNTING HEIGHT DIMENSIONS FROM ROADWAY TO SIGN SHOULD BE A MINIMUM OF FIVE (5) FEET FOR INTERSTATES, OTHER HIGH VOLUME ROADWAYS, OR ROADWAYS THAT MAY REQUIRE A MOUNTING HEIGHT OF FIVE (5) FEET FOR INCREASED VISIBILITY AND A MINIMUM OF (13) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW. ONE (1) FOOT FOR ALL OTHER ROADWAYS. (6) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES. MAY READ "WET PAINT STAY OFF LINE",
"WET PAINT AHEAD" OR SIMILAR
INFORMATIONAL MESSAGE AND
MAY ALSO USE ARROWS TO POINT
TO WET LINES, ETC. MAY BE SIGNS OR CMS AND EITHER ADVANCE WARNING SIGN SIGN SHOULD BE ATTACHED TO THE BACK OF THE FLASHING ARROW PANEL. IF A FLASHING ARROW PANEL IS NOT USED ON THE APPLICATION VEHICLE, SIGN SHOULD BE ATTACHED TO A BRACE AT THE BACK OF THE TRUCK CAB. GROUND MOUNTED OR TRUCK MOUNTED - MAY READ "WET PAINT AHEAD" "PAINT CREW AHEAD" OR SIMILAR INFORMATIONAL MESSAGE AND MAY ALSO USE ARROWS TO POINT TO WET LINES, ETC. INFORMATIONAL SIGN ADVANCE WARNING SIGN SLOW WET MOVING **PAINT** (5)(7)OR **KEEP** SLOW MAY USE GROUND MOUNTED SIGNS OR LEAD (ADVANCE WARNING) VEHICLES WITH ADVANCE WARNING SIGNS ATTACHED. TRAFFIC AHEAD (1)(5) PAINT MOVING W26-1BSF OR CREW - INFORMATIONAL SIGN RIGHT TRAFFIC AHEAD W26-1BSP 500'+/- (4) R4-7 A PROJECT LINITS (6) 500' (6) 500 (13) (8) (2) NOTE: ALL ADVANCE WARNING SIGNS MUST BE 48"X48" BLACK ON GRANGE. PROTECTION (SHADOW) VEHICLE (6) 500' 500' (6) INFORMATIONAL SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPED. THERE IS NO MINIMUM AREA FOR THESE SIGNS, HOWEVER, GOOD JUDGEMENT SHOULD BE USED SO THAT MOTORISTS CAN SEE THE SIGNS WHILE TRAVELING 60-65 MPH. PROJECT LIMITS (1)(5)(1)(3) (5) APPLICATION VEHICLE CREW (12)**AHEAD** MACHINERY IN ROAD NEXT 10 INFORMATIONAL SIGN 10 MILES ADVANCE WARNING SIGN MOVING OPERATION CARAVAN (OPERATIONS TRAVELING 3 MPH OR FASTER) DRAWING NUMBER 6 PLACING MARKING OR MARKERS ON TWO-LANE TWO-WAY ROADWAYS IMPLEMENTATION DATE: 07/01/97

R-5216
TCP-2
RW SHEET NO.
ROADWAY DESIGN
ENGINEER
HYDRAULICS
ENGINEER

PROJECT REFERENCE NO