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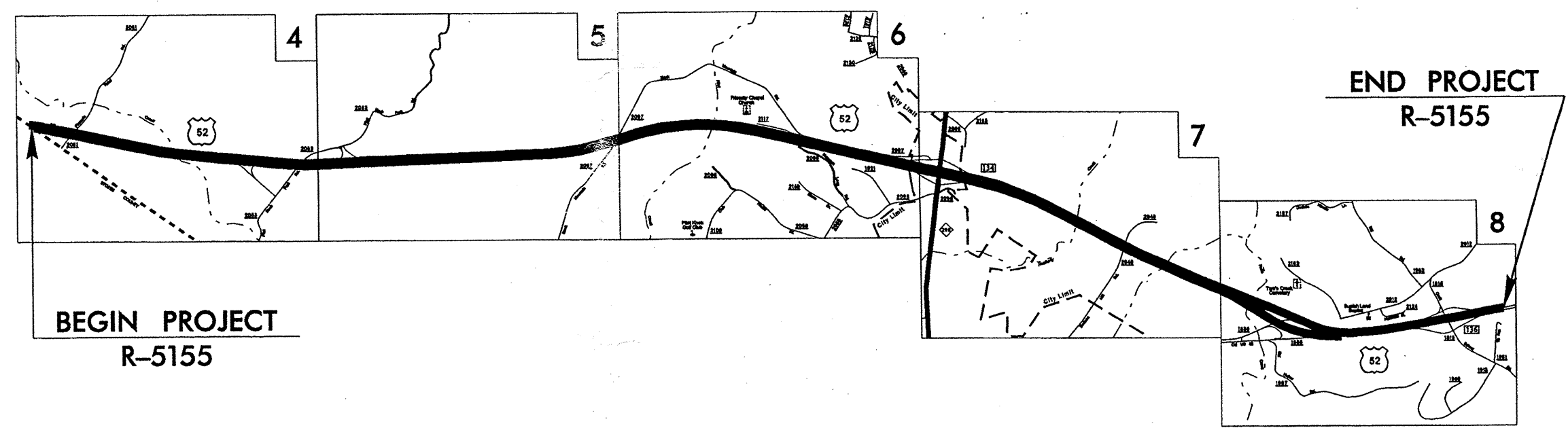
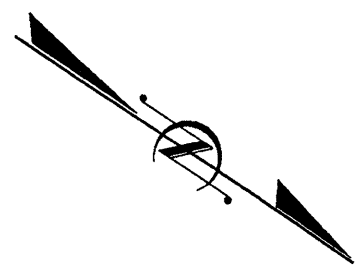
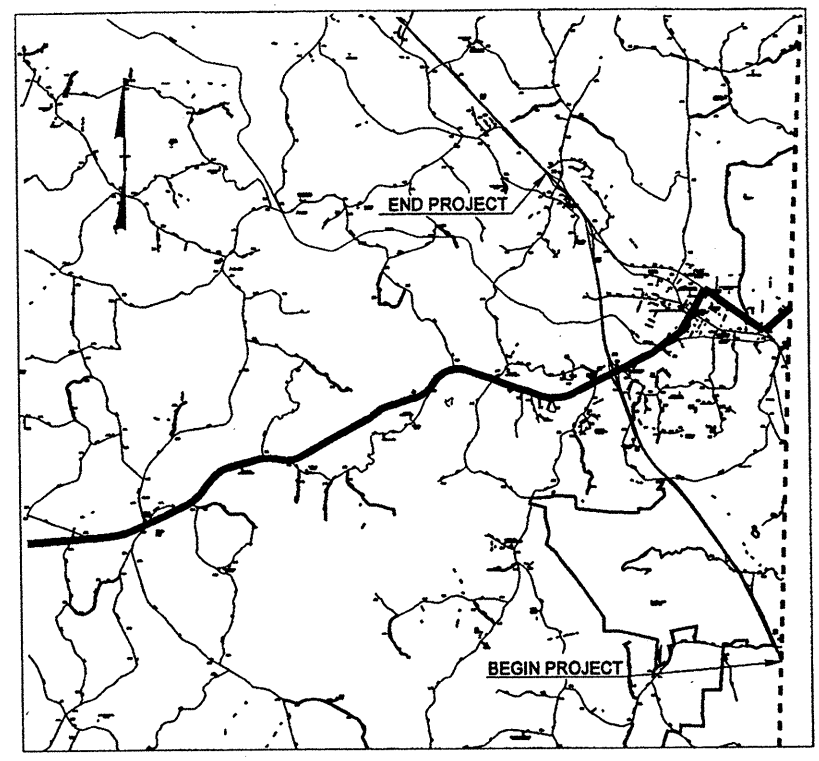
CONTRACT: TIP PROJECT: R-5155

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
R-5155	1	

SURRY COUNTY

LOCATION: US 52 FROM STOKES COUNTY LINE
TO SR 1815 (COOK SCHOOL ROAD)
TYPE OF WORK: MILLING, RESURFACING, SLAB REMOVAL
AND SHOULDER RECONSTRUCTION



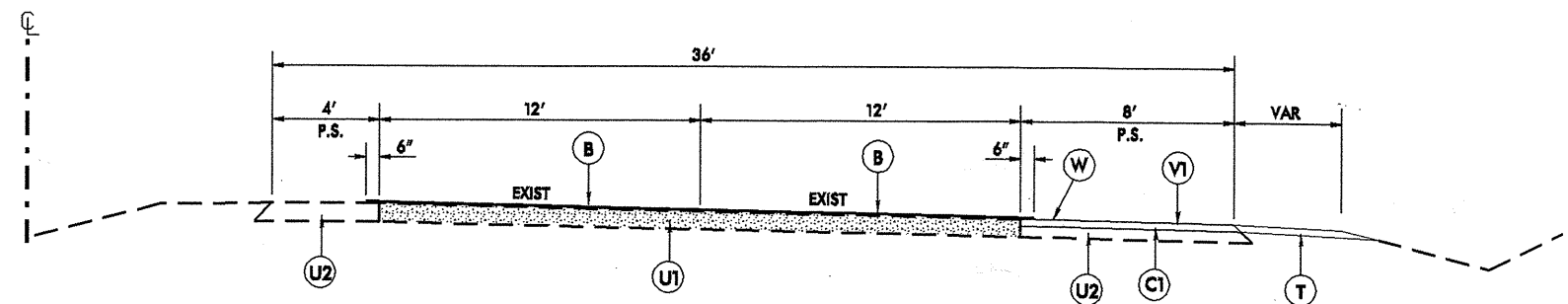
Prepared In the Office of:
DIVISION OF HIGHWAYS
801 STATESVILLE ROAD, NORTH WILKESBORO, NC 28659

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A	JOE L. LAWS, PE DIVISION PROJECT MANAGER
LETTING DATE: AUGUST 18, 2009	MICHAEL A. PETTYJOHN, PE DIVISION ENGINEER

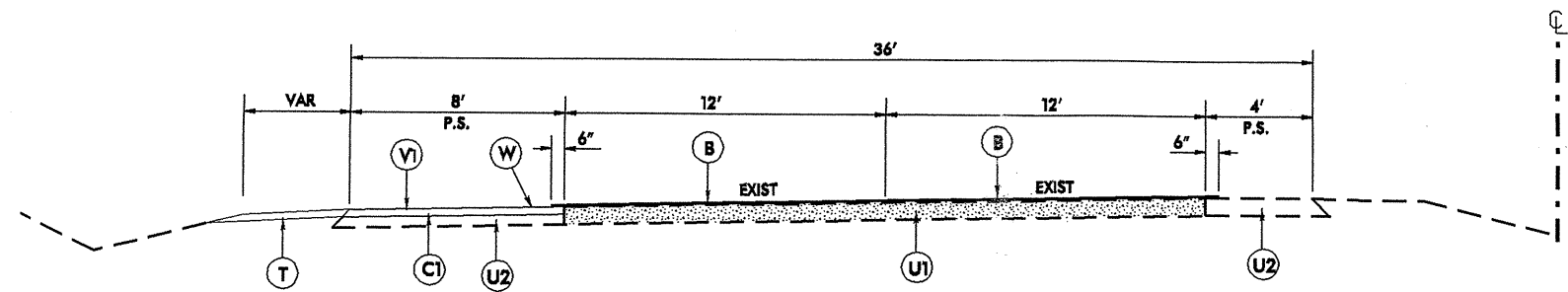
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER



TYPICAL SECTION NO. 1

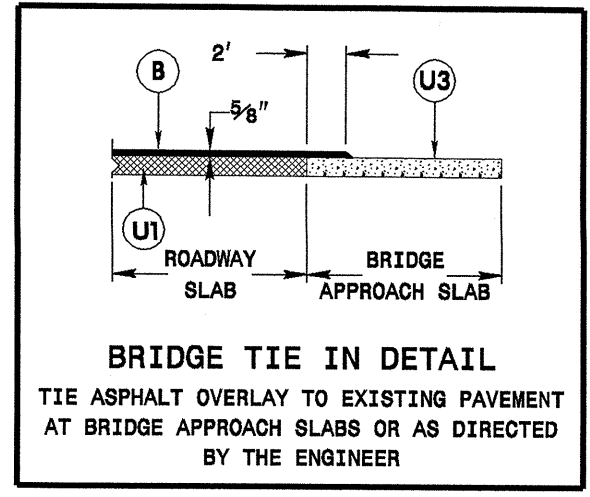
MAP #1 - US 52 NBL FROM STOKES COUNTY LINE TO PAVEMENT JOINT
AT SR 1856 (OLD US 52) ENTRANCE RAMP (5.9 MI)
SEE SHEET 2-A FOR SLAB REPLACEMENT DETAIL




TYPICAL SECTION NO. 2

MAP #2 - US 52 SBL FROM STOKES COUNTY LINE TO 1365' NORTH
OF SR 1815 (COOK SCHOOL ROAD) (6.8 MI)
SEE SHEET 2-A FOR SLAB REPLACEMENT DETAIL

PAVEMENT SCHEDULE	
A	9 1/2" JOINTED PORTLAND CEMENT CONCRETE PAVEMENT, THROUGH LANES (WITH DOWELS)
B	5/8" ULTRA-THIN HOT MIX ASPHALT, TYPE B
C1	3" ASPHALT CONCRETE SURFACE COURSE, TYPE S 9.5 C, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
T	SHOULDER RECONSTRUCTION
U1	EXISTING CONCRETE PAVEMENT
U2	EXISTING ASPHALT PAVEMENT
U3	EXISTING BRIDGE DECK
V1	MILLING BITUMINOUS PAVEMENT, 3" DEPTH
W	MILLED RUMBLE STRIPS



BRIDGE TIE IN DETAIL
TIE ASPHALT OVERLAY TO EXISTING PAVEMENT AT BRIDGE APPROACH SLABS OR AS DIRECTED BY THE ENGINEER

R-5155: US 52 FROM STOKES COUNTY LINE TO SR 1815 (COOK SCHOOL ROAD)		
DIVISION II SURRY COUNTY		
REVISIONS	INT.	DATE
N.C. DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DIVISION ELEVEN		SCALE: N/A DATE: 5/2009 PREPARED BY: J. L. LAWS REVIEWED BY: REVIEWED BY:

6/2/99

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5155	3	

SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	UNDERCUT EXCAVATION CY	REMOVAL OF EXISTING CONCRETE PAVEMENT SLABS SY	FABRIC FOR SOIL STABILIZATION SY	SELECT MATERIAL, CLASS IV TON	SEAL EXISTING PAVEMENT CRACKS LB	SHOULDER RECONSTRUCTION SMI	3" MILLING SY	SURFACE COURSE, S9.5C TONS	PG 70-22 PLANT MIX TONS	PG 70-28 PLANT MIX TONS	ULTRATHIN HOT MIX, TYPE B TONS	APPLICATION OF ULTRATHIN HOT MIX SY	MILLED RUMBLE STRIPS LF	9.5" PORT CEM CONC PAVEMENT, THROUGH LANES (WITH POWERS) SY	PORTABLE LIGHTING* LS	SEED & MULCHING AC
R-5155	Surry	1	US 52 NBL	FROM STOKES COUNTY LINE TO PAVEMENT JOINT AT SR 1856 ENTRANCE RAMP	1	5.9	25	220	658	658	430	10000	5.90	27,691.00	4,797.00	288.00	157.00	3,029.00	86,533.00	31,152	658	1	7.20
		2	US 52 SBL	FROM STOKES COUNTY LINE TO 1365' NORTH OF SR 1815	2	6.8	25	517	1551	1551	1012	10000	6.80	31,915.00	5,529.00	332.00	182.00	3,491.00	99,733.00	35,904	1,551	*	8.20
		3	SR 2053	NB EXIT RAMP	3	0.35	13						0.70	1,643.00	285.00	17.00	5.00	93.00	2,669.00			*	0.85
		4	SR 2053	NB ENTRANCE RAMP	3	0.35	13						0.70	1,643.00	285.00	17.00	5.00	93.00	2,669.00			*	0.85
		5	NC 268	NB EXIT RAMP	3	0.27	13						0.54	1,268.00	220.00	13.00	4.00	72.00	2,059.00			*	0.65
		6	NC 268	NB ENTRANCE RAMP	3	0.29	13						0.58	1,361.00	236.00	14.00	4.00	77.00	2,212.00			*	0.70
		7	SR 1815	SB EXIT RAMP	3	0.26	13						0.52	1,220.00	211.00	13.00	4.00	69.00	1,983.00			*	0.63
		8	SR 1815	SB ENTRANCE RAMP	3	0.26	13						0.52	1,220.00	211.00	13.00	4.00	69.00	1,983.00			*	0.63
		9	SR 1856	SB (LEFT) EXIT RAMP	3	0.38	13						0.76	1,784.00	309.00	19.00	5.00	102.00	2,898.00			*	0.92
		10	NC 268	SB EXIT RAMP	3	0.33	13						0.66	1,549.00	268.00	16.00	5.00	88.00	2,517.00			*	0.80
		11	NC 268	SB ENTRANCE RAMP	3	0.38	13						0.76	1,784.00	309.00	19.00	5.00	102.00	2,898.00			*	0.92
		12	SR 2053	SB EXIT RAMP	3	0.21	13						0.42	986.00	171.00	10.00	3.00	56.00	1,602.00			*	0.51
		13	SR 2053	SB ENTRANCE RAMP	3	0.2	13						0.40	939.00	163.00	10.00	3.00	53.00	1,525.00			*	0.48
TOTAL FOR PROJ NO. R-5155						15.98		737	2209	2209	1442	20000	19.26	75,003.00	12,994.00	781.00	386.00	7,394.00	211,281.00	67,056	2,209	1	23.34
GRAND TOTAL						15.98		737	2209	2209	1442	20000	19.26	75,003.00	12,994.00	781.00	386.00	7,394.00	211,281.00	67,056	2,209	1	23.34

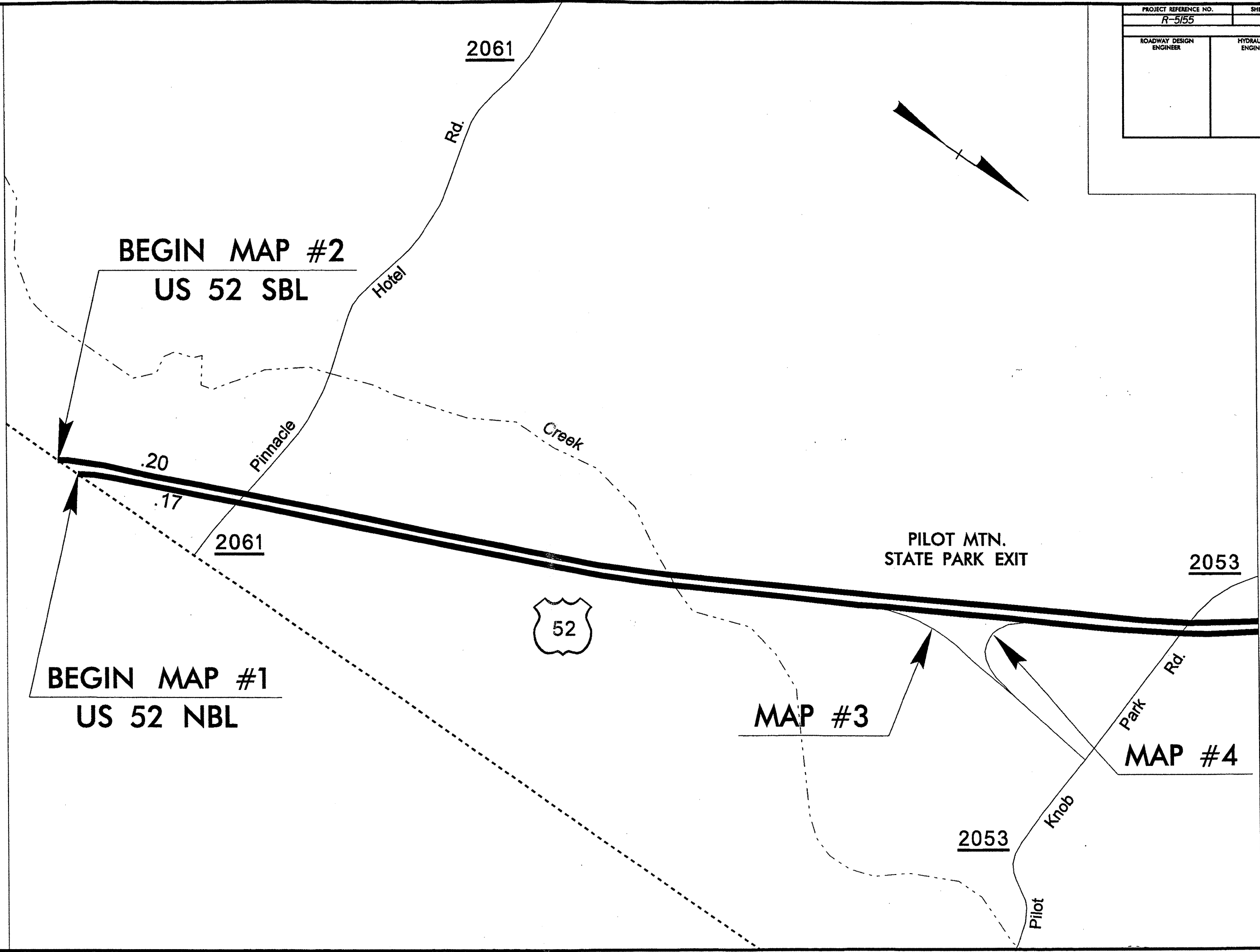
PROJECT NO.	SHEET NO.	TOTAL NO.
R-5155	3-A	

POLYUREA AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4589000000-N	4725000000-E		4815000000-E		4847100000-E		4847120000-E	4900000000-N	4905000000-N
					TRAFFIC CONTROL - LUMP SUM* LS	THERMO RAMP ARROWS EA	THERMO MERGE ARROW 90 M EA	6" WHITE PAINT LF	6" YELLOW PAINT LF	6" WHITE POLYUREA (STANDARD BEADS) LF	6" YELLOW POLYUREA (STANDARD BEADS) LF	12" WHITE POLYUREA (STANDARD BEADS) LF	CRYSTAL & RED MARKERS EA	SNOW PLOWABLE MARKERS EA
R-5155	Surry	1	US 52 NBL	FROM STOKES COUNTY LINE TO PAVEMENT JOINT AT SR 1856 ENTRANCE RAMP	1			39,000	31,152	39,000	31,152	1,600		390
		2	US 52 SBL	FROM STOKES COUNTY LINE TO 1365' NORTH OF SR 1815	*			44,900	35,904	44,900	35,904	2,800		449
		3	SR 2053	NB EXIT RAMP	*	1				1,848	1,848		14	22
		4	SR 2053	NB ENTRANCE RAMP	*		3			1,848	1,848			22
		5	NC 268	NB EXIT RAMP	*	1				1,426	1,426		14	22
		6	NC 268	NB ENTRANCE RAMP	*		3			1,531	1,531			22
		7	SR 1815	SB EXIT RAMP	*	1				1,373	1,373		14	22
		8	SR 1815	SB ENTRANCE RAMP	*		3			1,373	1,373			22
		9	SR 1856	SB (LEFT) EXIT RAMP	*	1				2,006	2,006		14	22
		10	NC 268	SB EXIT RAMP	*	1				1,742	1,742		14	22
		11	NC 268	SB ENTRANCE RAMP	*		3			2,006	2,006			22
		12	SR 2053	SB EXIT RAMP	*	1				1,109	1,109		14	22
		13	SR 2053	SB ENTRANCE RAMP	*		3			1,056	1,056			22
TOTAL FOR PROJ NO. R-5155					1	6	15	83,900	67,056	101,218	84,374	4,400	84	1,081
						21		150,956		185,592				
GRAND TOTAL					1	6	15	83,900	67,056	101,218	84,374	4,400	84	1,081
						21		150,956		185,592				

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PROJECT REFERENCE NO.	SHEET NO.
R-5155	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

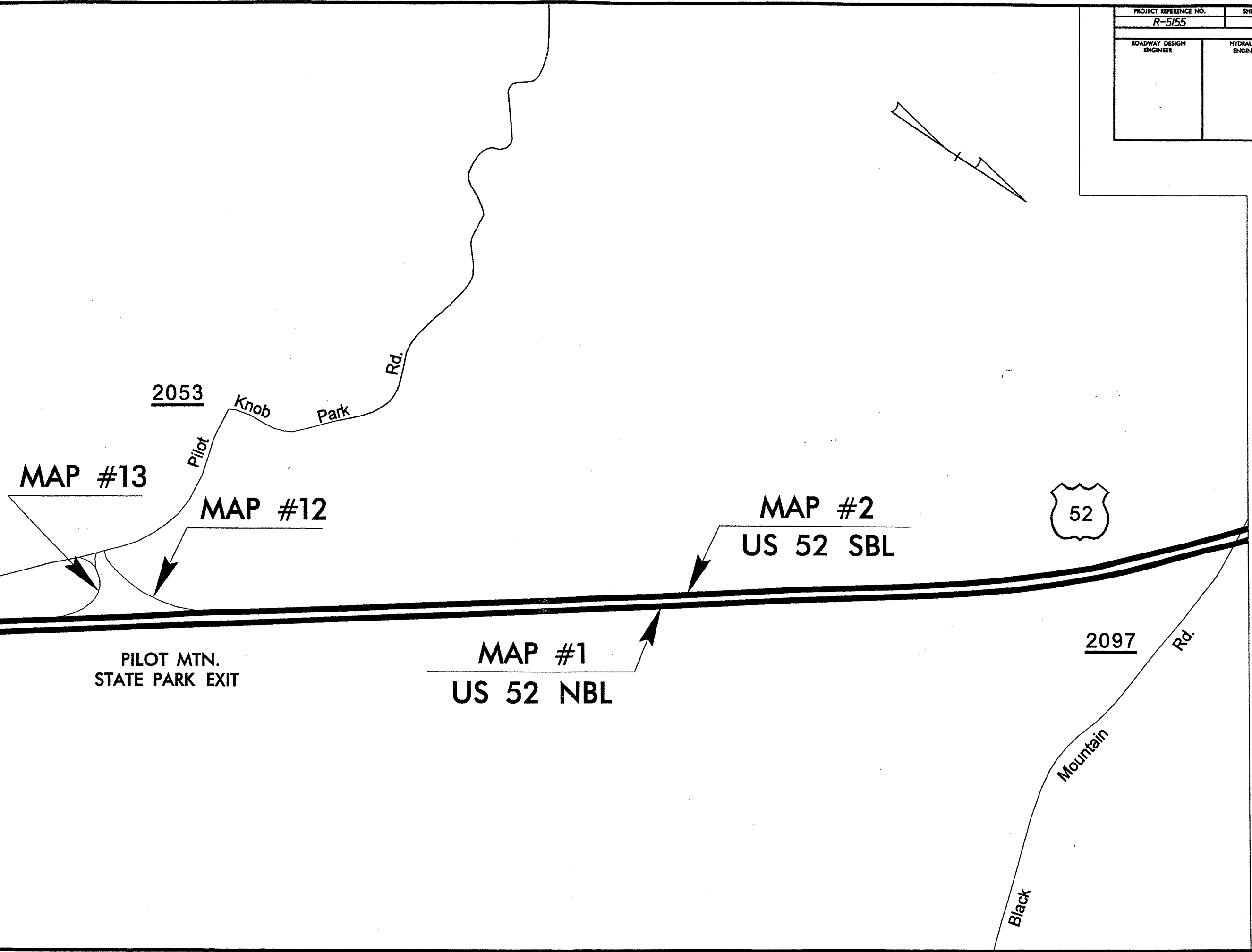


MATCHLINE *SEE SHEET 5*

8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
R-5155		5	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

MATCHLINE * SEE SHEET 4 *

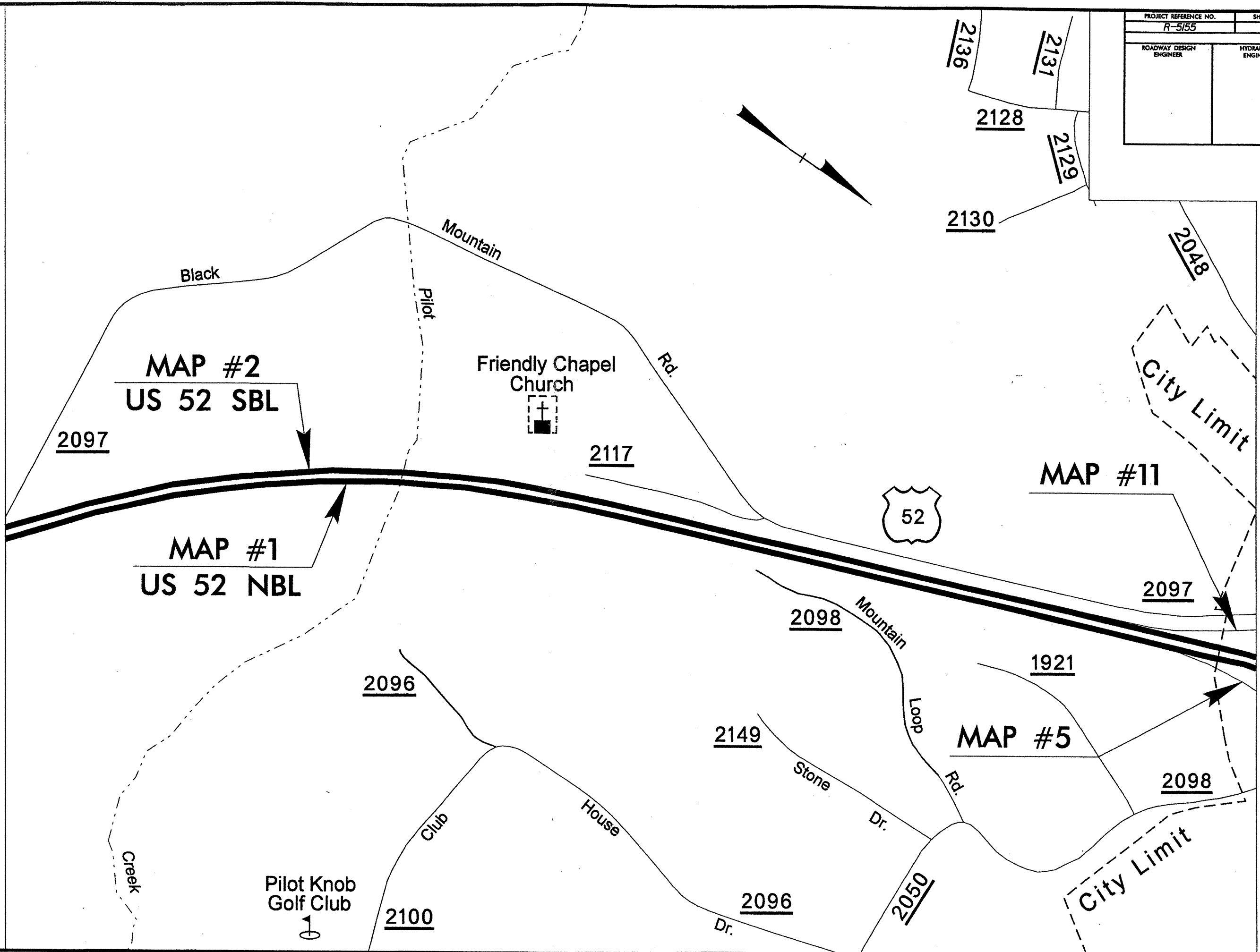


MATCHLINE * SEE SHEET 6 *

PROJECT REFERENCE NO. R-5155		SHEET NO. 6	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

MATCHLINE * SEE SHEET 5 *

MATCHLINE * SEE SHEET 7 *



MAP #2
US 52 SBL

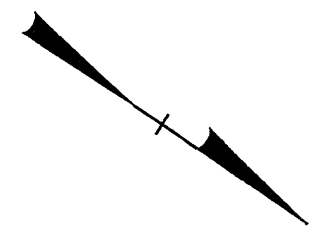
MAP #1
US 52 NBL

MAP #11

MAP #5

City Limit

City Limit



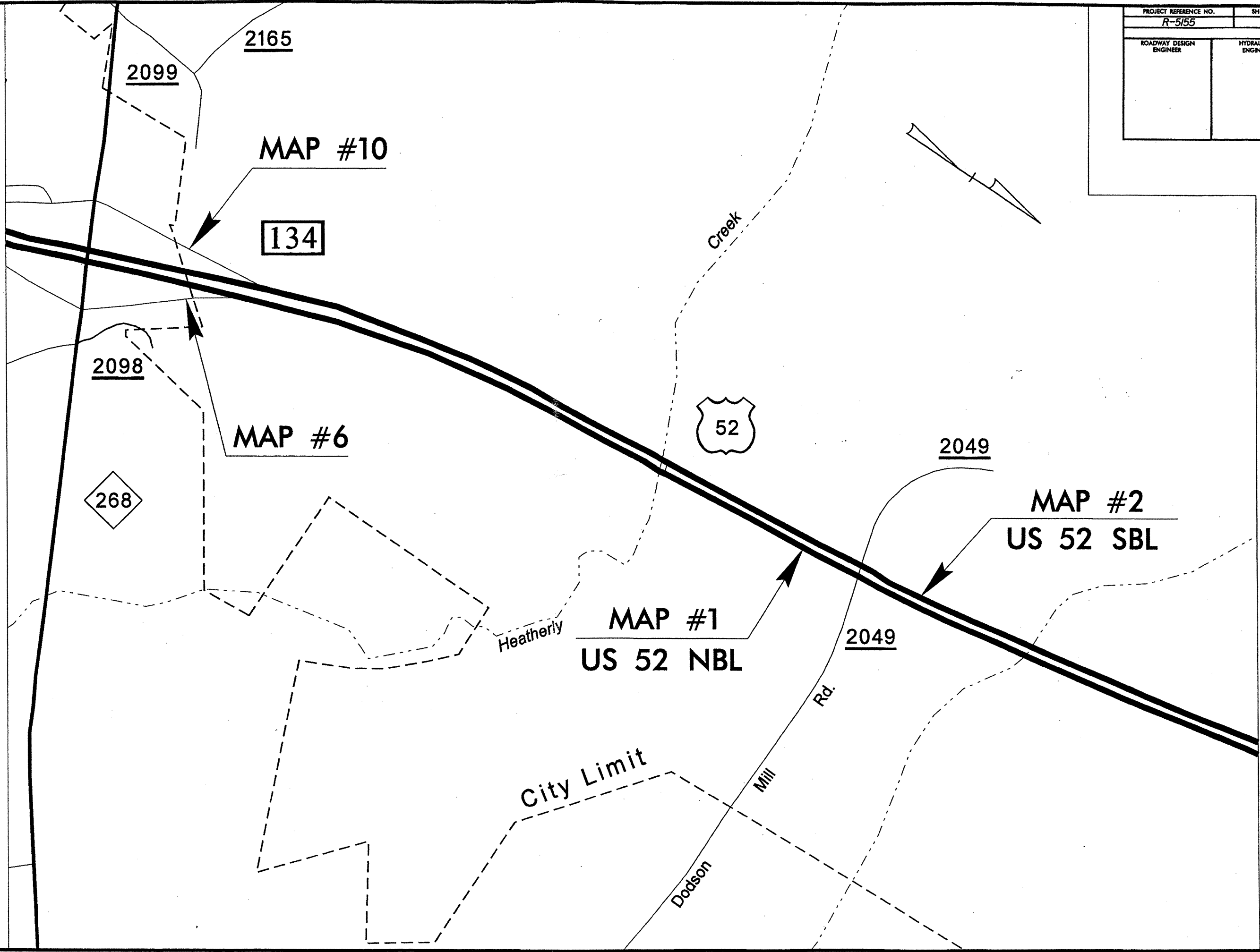
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8/17/99

PROJECT REFERENCE NO.		SHEET NO.	
R-5155		7	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

MATCHLINE * SEE SHEET 6 *

MATCHLINE * SEE SHEET 8 *

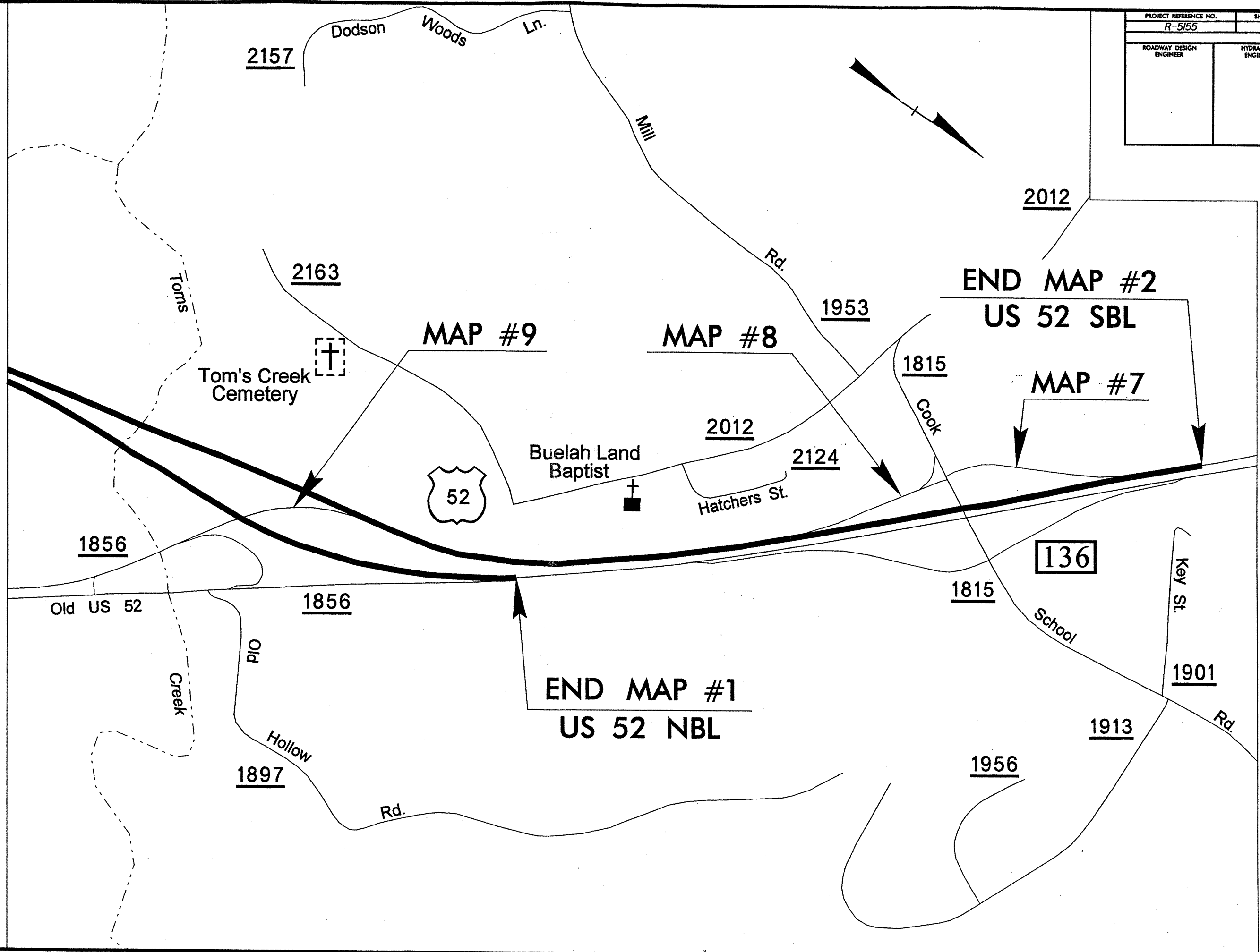


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MATCHLINE * SEE SHEET 7 *

PROJECT REFERENCE NO. R-5155		SHEET NO. 8	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

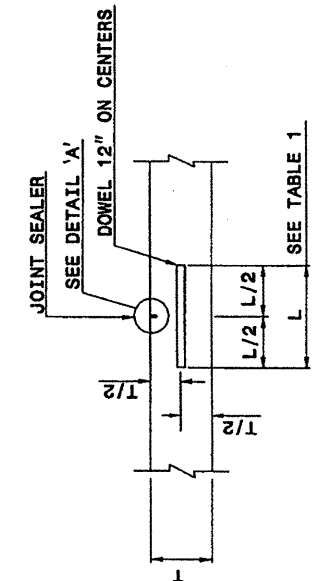


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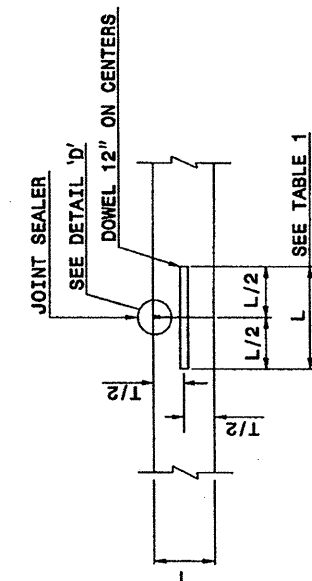
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR CONCRETE PAVEMENT JOINTS CONSTRUCTION AND CONTRACTION JOINTS

SHEET 1 OF 2
700D01

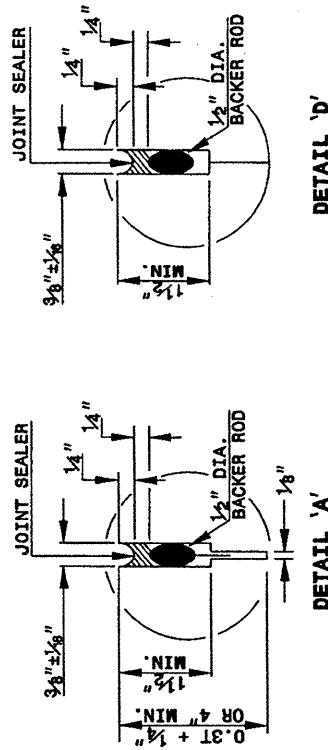


TRANSVERSE CONSTRUCTION JOINT



PLANNED TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES:
-FORM TRANSVERSE CONTRACTION JOINTS BY SAWING WITH APPROVED EQUIPMENT.
-SPACE TRANSVERSE CONTRACTION JOINTS AT INTERVALS OF 15'.
-USE A DOWEL ASSEMBLY OR OTHER APPROVED DOWEL INSERTION TECHNIQUE IN ALL TRANSVERSE CONTRACTION JOINTS.
-DOWEL ASSEMBLIES ARE COVERED IN DETAIL 700D03.
-PROVIDE SMOOTH DOWEL BARS. PROVIDE DEFORMED TIE BARS.
-WHEN UTILIZING AN EARLY ENTRY SAW, CUT THE JOINT TO A MINIMUM DEPTH OF 4".



DETAIL 'A' DETAIL 'D'

TABLE I - DOWEL BARS

SLAB THICKNESS	DOWEL BAR "D"	DOWEL BAR LENGTH "L"
8" OR LESS	1"	14"
8 1/2" TO 9 1/2"	1 1/8"	16"
10" TO 10 1/2"	1 1/4"	18"
11" AND ABOVE	1 1/2"	18"

SHEET 1 OF 2
700D01

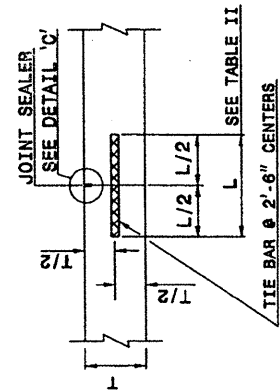
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ENGLISH DETAIL DRAWING FOR CONCRETE PAVEMENT JOINTS CONSTRUCTION AND CONTRACTION JOINTS

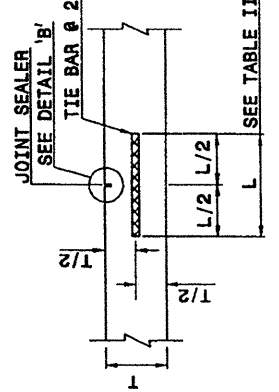
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ENGLISH DETAIL DRAWING FOR CONCRETE PAVEMENT JOINTS CONSTRUCTION AND CONTRACTION JOINTS

SHEET 2 OF 2
700D01



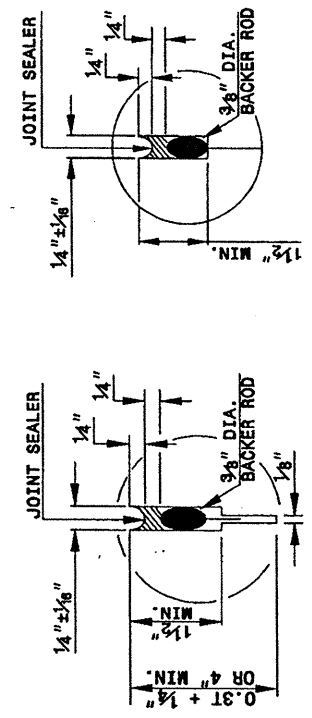
LONGITUDINAL CONSTRUCTION JOINT



EMERGENCY TRANSVERSE CONSTRUCTION JOINT

LONGITUDINAL JOINT

GENERAL NOTES:
-CONSTRUCT TRANSVERSE CONSTRUCTION JOINTS AT THE END OF EACH DAY'S OPERATION (PLANNED JOINT) OR WHEN THE PLACING OF CONCRETE IS SUSPENDED FOR MORE THAN 30 MINUTES (EMERGENCY JOINT).
-USE AN APPROVED HEADER AT EMERGENCY JOINTS STD. DWG. 700.04 AND DESIGNED TO PERMIT THE PLACEMENT OF AND CORRECTLY HOLD IN PLACE TIE BARS.
-USE TIE BARS OF THE SAME DIAMETER AS DOWEL BARS FOR EMERGENCY TRANSVERSE CONSTRUCTION JOINTS.
-LOCATE PLANNED TRANSVERSE CONSTRUCTION JOINTS AT THE SPACING REQUIRED FOR CONTRACTION JOINTS. USE AN APPROVED METHOD OF INSTALLING DOWELS IN ALL PLANNED TRANSVERSE CONSTRUCTION JOINTS.
-DO NOT LOCATE EMERGENCY TRANSVERSE CONSTRUCTION JOINTS LESS THAN 6' FROM ANY CONTRACTION JOINT OR PLANNED CONSTRUCTION JOINT.
-DO NOT PLACE TIE BARS IN LONGITUDINAL JOINTS WITHIN 1'-4" OF A TRANSVERSE JOINT.
-WHEN UTILIZING AN EARLY ENTRY SAW, CUT THE JOINT TO A MINIMUM DEPTH OF 4".



DETAIL 'B' DETAIL 'C' DETAIL 'D'

TABLE II - LONGITUDINAL TIE BARS

SLAB THICKNESS	TIE BAR DIA. "D"	TIE BAR LENGTH "L"
8 1/2" OR LESS	1/2"	30"
9" OR ABOVE	5/8"	30"

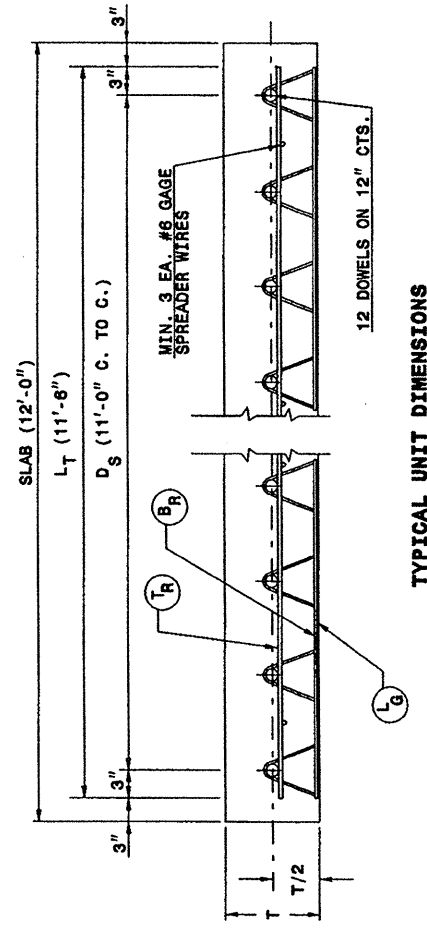
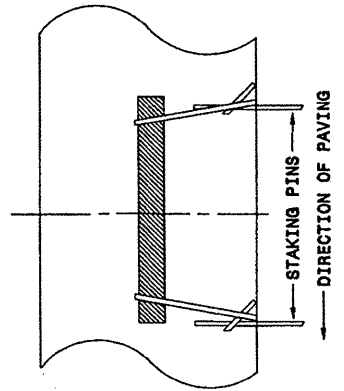
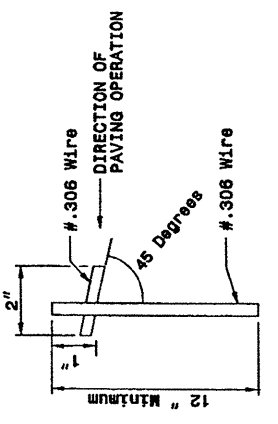
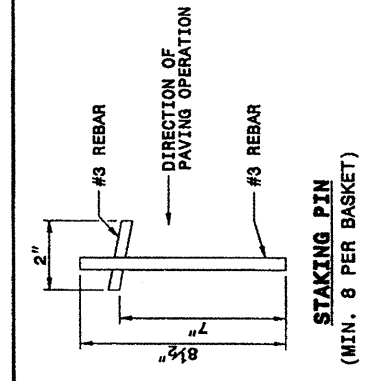
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MODIFIED BY: E.E. WARD DATE: 09-26-06
CHECKED BY: DATE:
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
 DOWEL ASSEMBLY

SHEET 1 OF 2
700D03



TYPICAL UNIT DIMENSIONS

SLAB THICKNESS	1/4" LEG ONLY WIRE GAGE		
	TR	BR	LG
8" OR LESS	2	2	2
8 1/2" - 10"	0	2	2
10 1/2" & ABOVE	2/0's	2/0's	2/0's

GENERAL NOTES:
 -USE RIGID CONSTRUCTED DOWEL ASSEMBLY CAPABLE OF HOLDING THE DOWEL BAR IN PROPER POSITION DURING PLACEMENT OF CONCRETE AND DESIGNED AS TO PERMIT UNRESTRICTED MOVEMENT OF THE SLAB.
 -USE DOWEL ASSEMBLY APPROVED BY THE ENGINEER PRIOR TO USE.
 -USE DOWEL ASSEMBLIES MANUFACTURED WITH DOWELS ALTERNATELY WELDED TO FRAME MEMBERS.
 -USE STAKING PIN OR APPROVED ALTERNATE.
 -SAW CUT EPOXY COATED DOWELS, BUFFING AS NECESSARY TO FACILITATE PROPER WELDING OF THE DOWEL TO THE ASSEMBLY FRAME. TOUCH UP OF THE BUFFED AREA WILL NOT BE REQUIRED.
 -RESISTANCE WELD FRAME MEMBERS; DOWELS AND SPREADER WIRES MAY BE ARC WELDED. WELD IN ACCORDANCE WITH AWS WELDING CODE.
 -FULLY D.P. THE DOWEL ASSEMBLIES TO ASSURE A COMPLETE COATING OF WAX.
 -SEE DETAIL 700D01 FOR DOWEL BAR SIZES.

STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

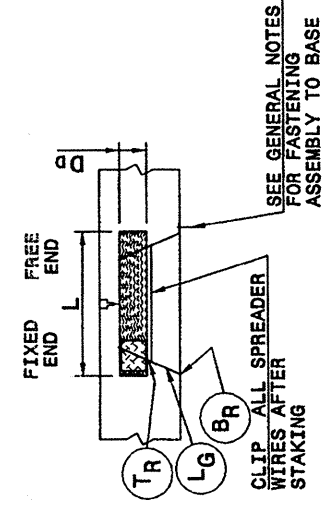
ENGLISH DETAIL DRAWING FOR
 DOWEL ASSEMBLY

SHEET 1 OF 2
700D03

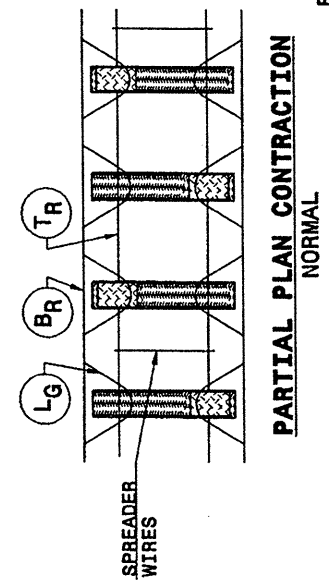
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
 DOWEL ASSEMBLY

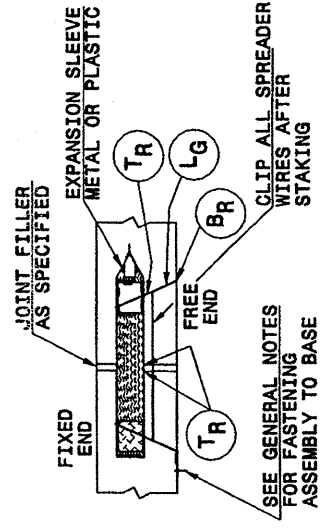
SHEET 2 OF 2
700D03



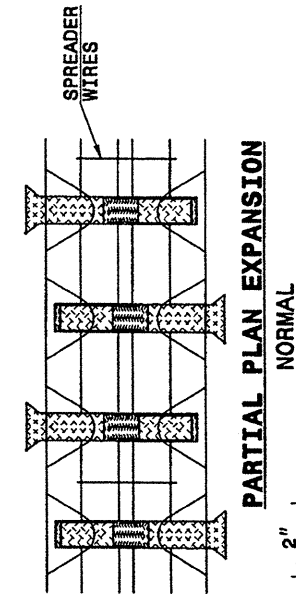
SECTION - CONTRACTION



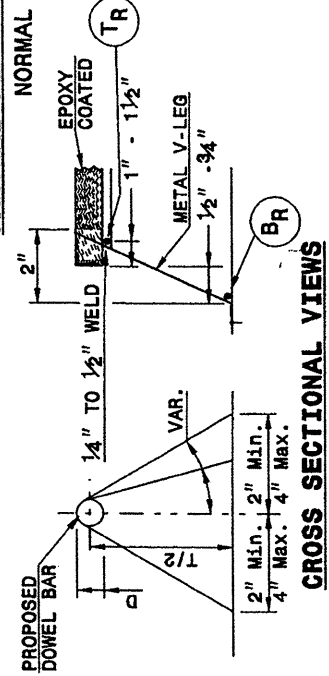
PARTIAL PLAN CONTRACTION NORMAL



SECTION - EXPANSION



PARTIAL PLAN EXPANSION NORMAL



CROSS SECTIONAL VIEWS

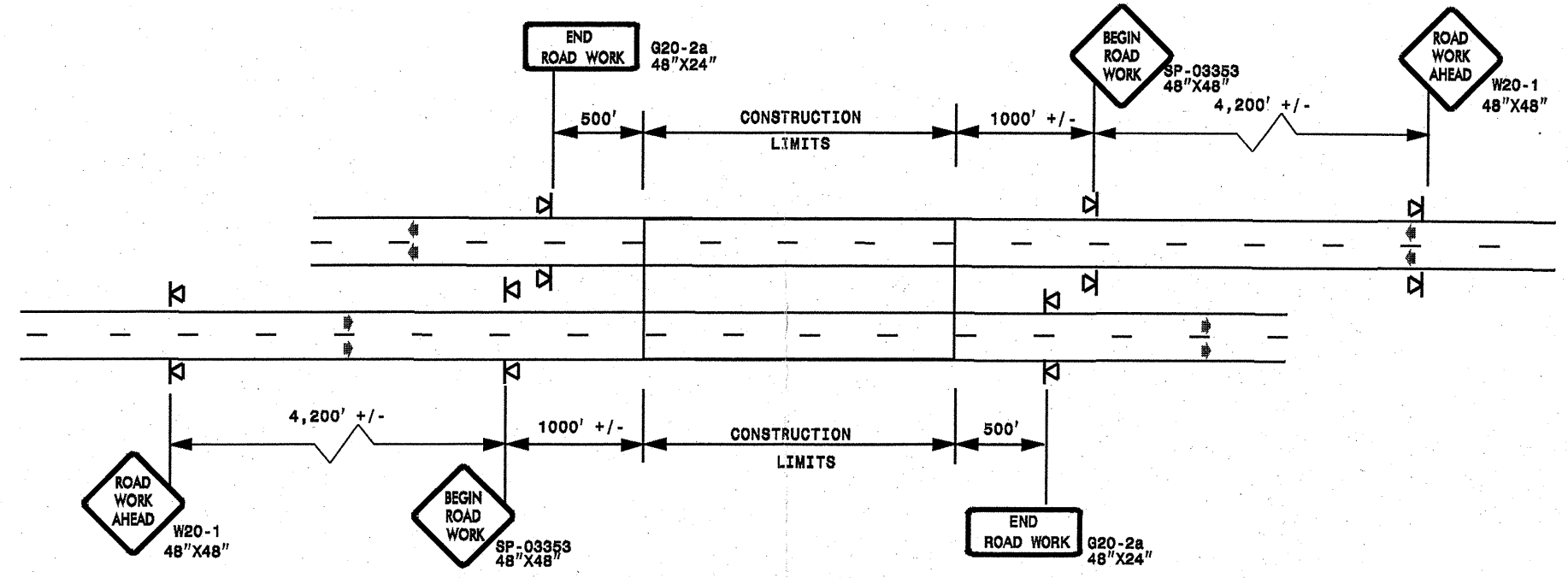
PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN
 Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

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 MODIFIED BY: E.E. WARD DATE: 12-15-05
 CHECKED BY: DATE:
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ADVANCE WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

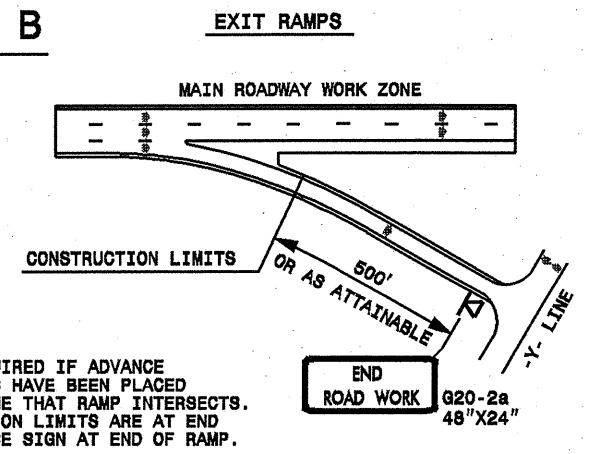
DETAIL A



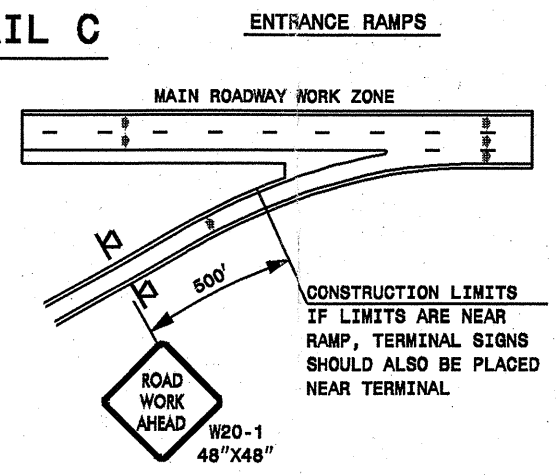
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)

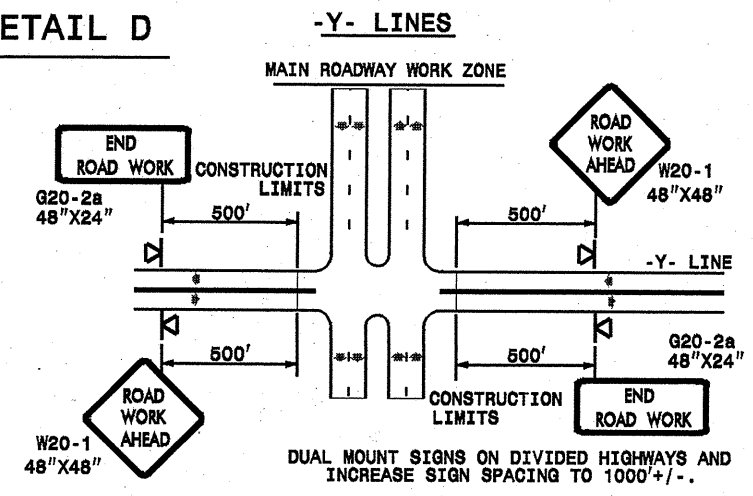
DETAIL B



DETAIL C



DETAIL D



DETAIL DRAWING
FOR FREEWAYS
WORK ZONE WARNING SIGNS
(SHORT-DURATION LANE CLOSURES)

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 MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

▣ PORTABLE SIGN

➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

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APPROVED: _____ DATE: _____	DETAIL DRAWING FOR FREEWAYS WORK ZONE WARNING SIGNS	
	SCALE: NONE	REVISIONS
SEAL	DATE: 7-98	10/01
	DWG. BY:	10-98 03/04
	DESIGN BY:	01/01 11/04
	REVIEWED BY:	