

20-JUN-2008 15:10 s:\contracts\resurfacing projects\division 3\r-5023a\c\rev\lod to srmu\r-5023 a\_rdy\_dsn\_wbs\_41922 3 l.dgn  
 09/08/99  
**CONTRACT: C-202077**

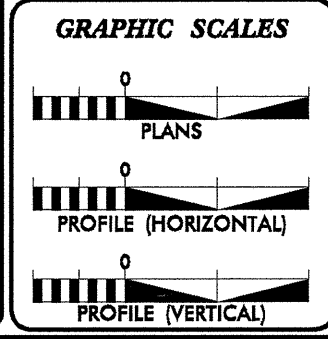
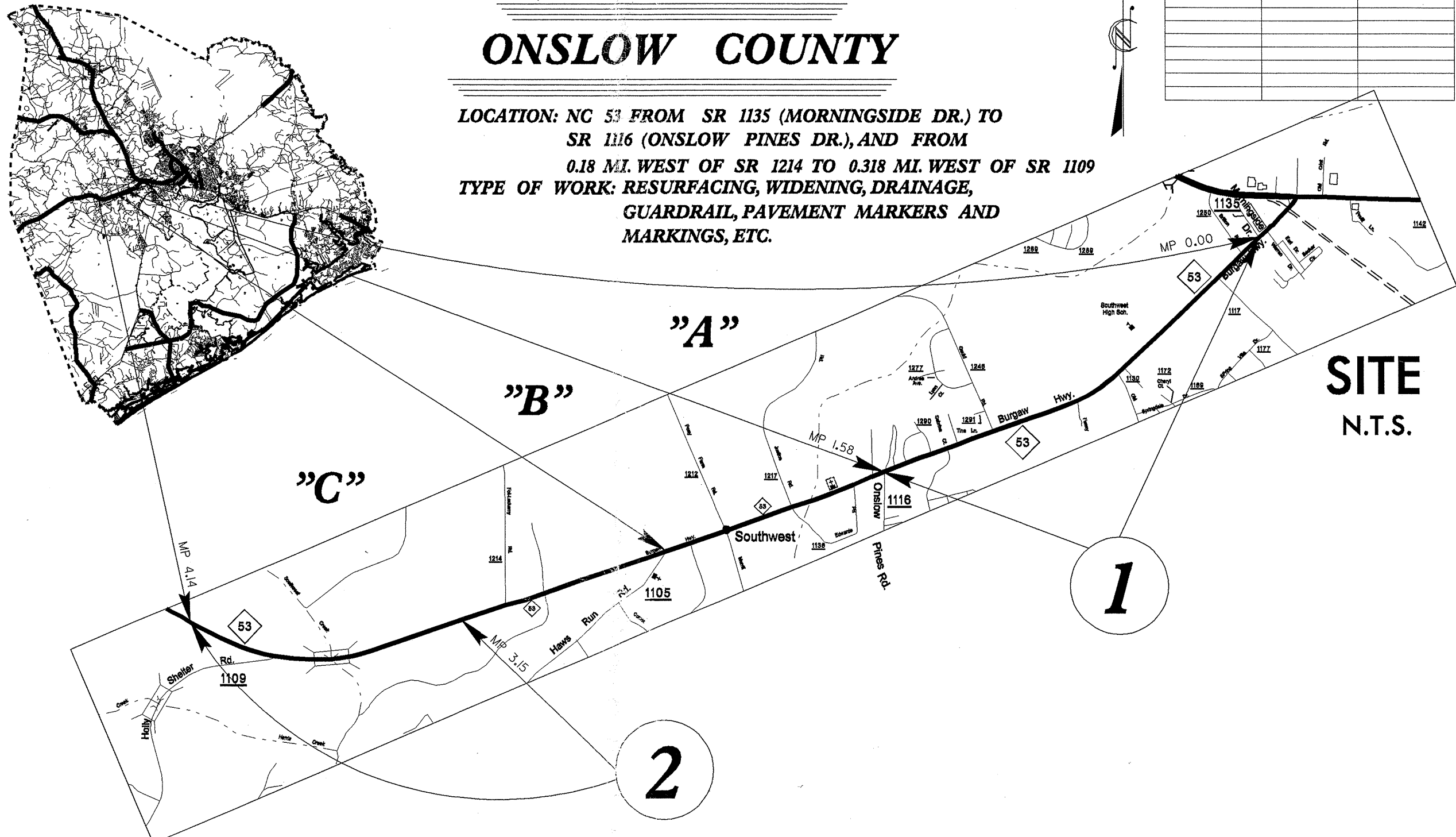
**TIP PROJECT: R-5023 A, C**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**ONSLOW COUNTY**

LOCATION: NC 53 FROM SR 1135 (MORNINGSIDE DR.) TO SR 1116 (ONSLOW PINES DR.), AND FROM 0.18 MI. WEST OF SR 1214 TO 0.318 MI. WEST OF SR 1109  
 TYPE OF WORK: RESURFACING, WIDENING, DRAINAGE, GUARDRAIL, PAVEMENT MARKERS AND MARKINGS, ETC.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS: 41922.3.1	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



**DESIGN DATA**

ADT	=	
DHV	=	%
D	=	%
T	=	% *
V	=	MPH
* TTST		DUAL

**PROJECT LENGTH**

MAP NO. 1 = 1.58 MILES  
 MAP NO. 2 = 0.99 MILES  
 TOTAL = 2.57 MILES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
 124 Division Dr., Wilmington, NC 28401

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN TECHNICIAN**  
 DNL

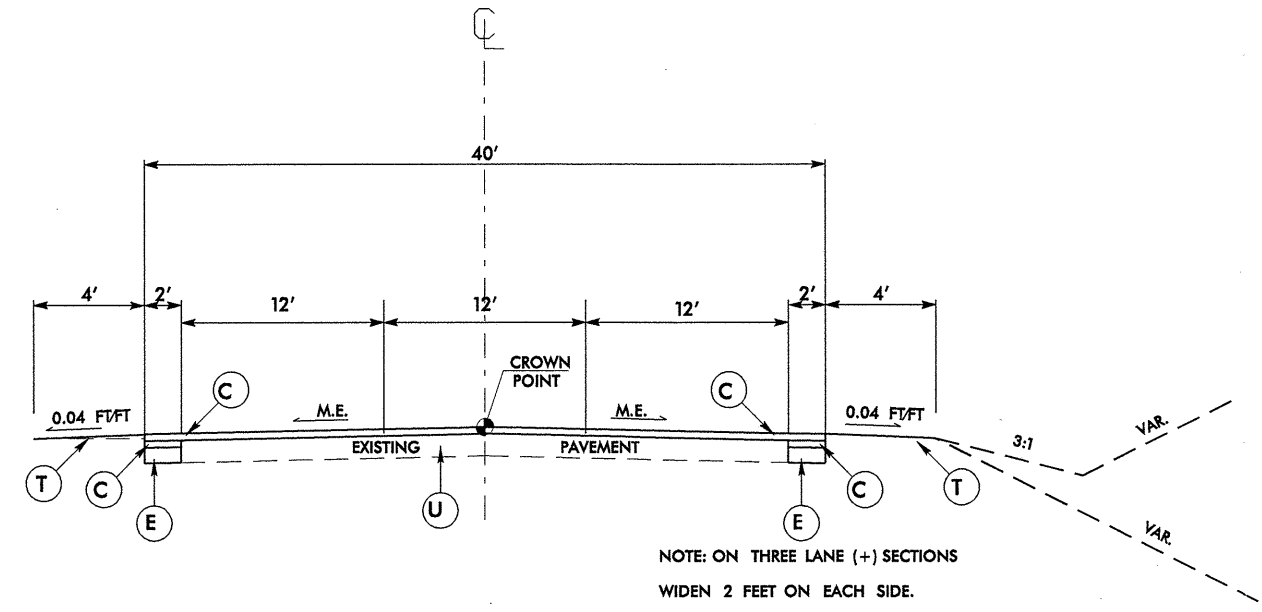
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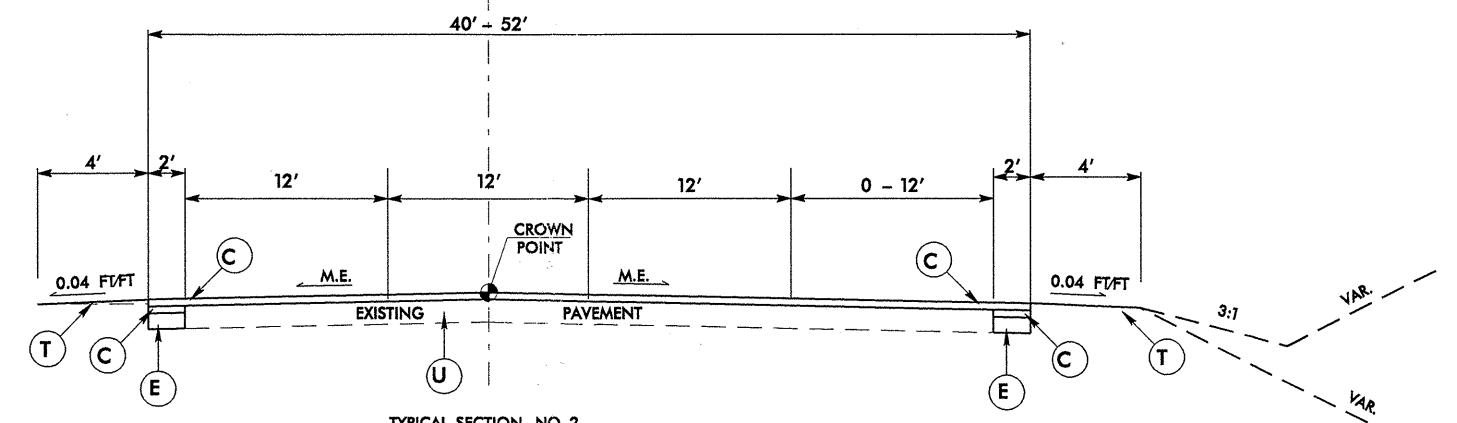
**DIVISION OF HIGHWAYS**  
 STATE OF NORTH CAROLINA

**PROFESSIONAL ENGINEER**  
 CHARLES A. SCHOONOVER  
 SEAL 20224

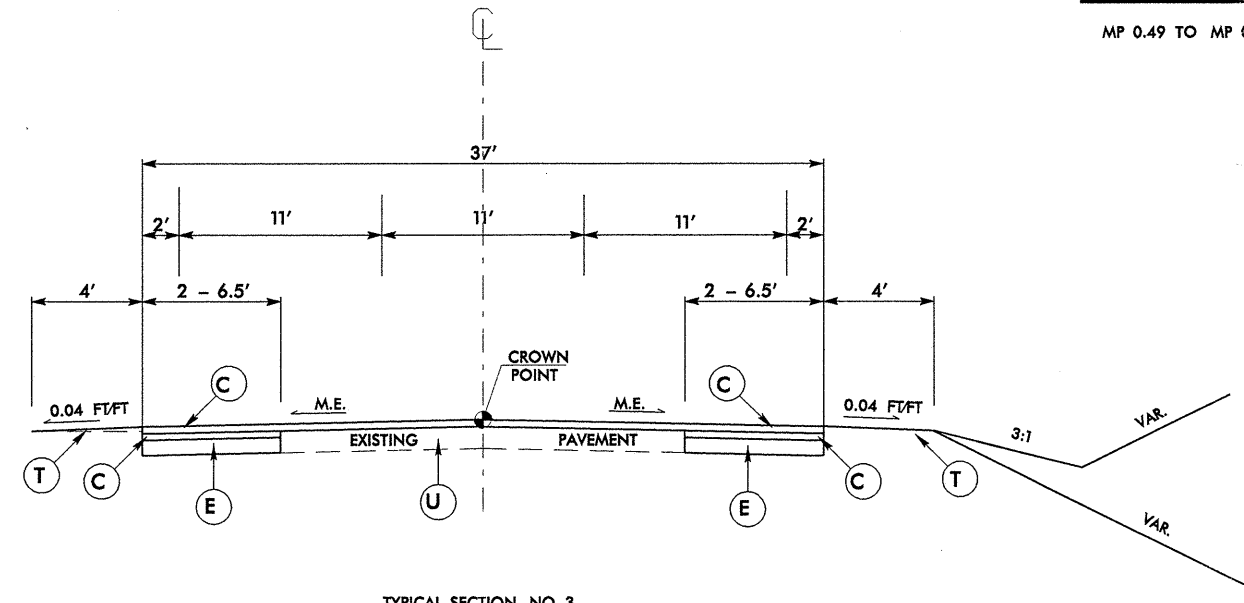
**DIVISION DESIGN ENGINEER**



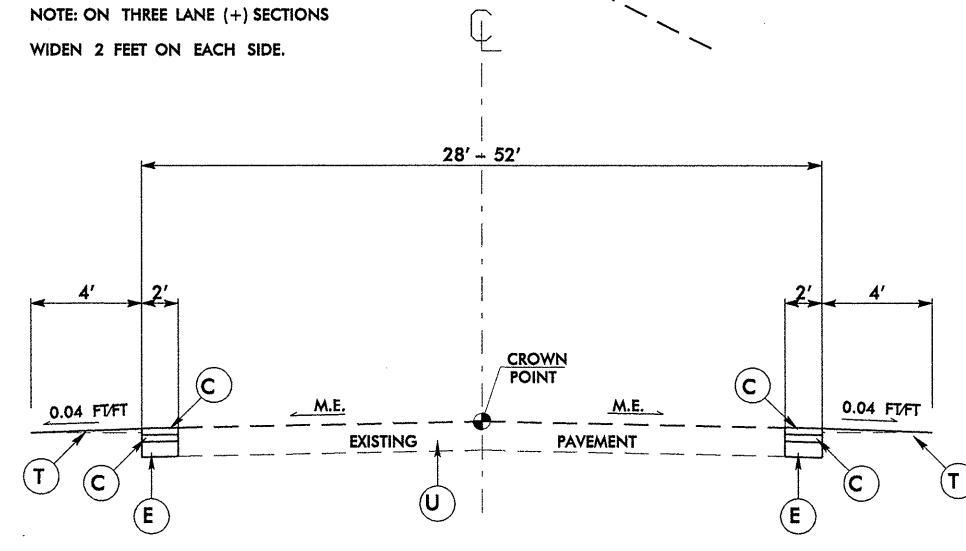
TYPICAL SECTION NO. 1  
MP 0.00 TO MP 0.49  
MP 0.57 TO MP 0.66  
MP 1.51 TO MP 1.58



TYPICAL SECTION NO. 2  
MP 0.49 TO MP 0.57



TYPICAL SECTION NO. 3  
MP 0.66 TO MP 1.51



TYPICAL SECTION NO. 4  
MP 3.15 TO 4.14

PAVEMENT SCHEDULE	
C	PROP. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. 5 1/2" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.  
M.E. = MATCH EXISTING

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PROJECT NO.	SHEET NO.	TOTAL NO.
R-5023A	3	

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	BORROW EXC. CY	GRADING PER SHOULDER MILE SMI	FOUND. COND. MATERIAL, MINOR STRS TON	15" RCP CULVERTS, CL. III LF	18" RCP CULVERTS, CL. III LF	24" RCP CULVERTS, CL. III LF	18" HDPE PIPE CULVERTS LF	PIPE REMOVAL LF	INCIDENTAL STONE BASE TONS	SHOULDER RECON. SMI	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	PATCHING (MILL) TON	PATCHING (FULL DEPTH) TONS	PIPE COLLARS CY	MASONRY DRAINAGE STRUCT EA	FRAME WITH GRATE, STD 840.37 EA	FRAME W GRATE, STD 840.16 EA	
R-5023A	Onslow	1	NC 53 "A" (ENTIRE MAP)	270 FT. WEST OF SR 1135 TO SR 1116	1,2,3	1.58	37-52	200		250						1,151													
		"	NC 53 from MP 0.00 to 0.49, MP 0.57 to 0.66, and MP 1.51 to 1.58	3 LANE SECTION (EXISTING 36', WIDEN 4')	1	0.65	40				24					80	1.29	444	586	1,630	25	98	180	20					
		"	NC 53 from MP 0.49 to 0.57	4 LANE SECTION (EXISTING 48', WIDEN 4')	2	0.08	52										0.16		72	237	3	14							
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24', WIDEN 13')	3	0.74	37		0.74		414	432	36	12	298	180	0.74		2,015	2,107	87	126	180	20	4.29	7	1	5	
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24'-36' TAPERS, WIDEN 6.5' AVE.)	3	0.11	37		0.16		100	100			70	20	0.06		155	272	7	16			0.4	1			
TOTAL FOR MAP NO. 1						1.58		200	0.9	250	538	532	36	12	368	1,431	2.25	444	2,828	4,246	122	254	360	40	4.69	8	1	5	
		2	NC 53 "C"	0.18 MI. WEST OF SR 1214 TO 0.318 MI. WEST OF SR 1109 (WIDEN 4')	4	0.99	52									69	1.98		893	477	38	29							
TOTAL FOR PROJ NO. R-5023A						2.57		200	0.9	250	538	532	36	12	368	1,500	4.23	444	3,721	4,723	160	283	360	40	4.69	8	1	5	
GRAND TOTAL						2.57		200	0.9	250	538	532	36	12	368	1,500	4.23	444	3,721	4,723	160	283	360	40	4.69	8	1	5	

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FRAME W COVER, STD 840.54 EA	INCIDENTAL CONC SY	ADJ. DROP INLET EA	ADJ. MANHOLES EA	ADJ. METER OR VALVE BOX EA	STEEL BM GUARDRAIL LF	STEEL BM GR, SHOP CURVED LF	ADD'L GUARDRAIL POSTS EA	GR ANCHOR UNITS, TYPE AT-1 EA	GR ANCHOR UNITS, TYPE 350 EA	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SEED FOR TEMP. SEEDING LBS	FERTILIZER FOR TEMP. SEEDING TON	MATTING (EROSION CONTROL) SY	1/4" HARDWARE CLOTH LF	SEED & MULCHING AC	JUNCTION BOX (STANDARD SIZE) EA	INDUCTIVE LOOP LF	LEAD-IN CABLE (18-4) LF
R-5023A	Onslow	1	NC 53 "A" (ENTIRE MAP)	270 FT. WEST OF SR 1135 TO SR 1116	1,2,3		125	1								160	40	40	1.60	80	0.40	100	80		2	500	100
		"	NC 53 from MP 0.00 to 0.49, MP 0.57 to 0.66, and MP 1.51 to 1.58	3 LANE SECTION (EXISTING 36', WIDEN 4')	1				2	3														0.65			
		"	NC 53 from MP 0.49 to 0.57	4 LANE SECTION (EXISTING 48', WIDEN 4')	2																			0.08			
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24', WIDEN 13')	3	1			3	4	150	50	5	1	5									1.85			
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24'-36' TAPERS, WIDEN 6.5' AVE.)	3	1			4	7	150	50	5	1	5	160	40	40	1.60	80	0.40	100	80	2.58	2	500	100
TOTAL FOR MAP NO. 1						2	125	1	9	7	150	50	5	1	5	260	65	65	2.60	130	0.65	100	130	3.83	2	500	100
		2	NC 53 "C"	0.18 MI. WEST OF SR 1214 TO 0.318 MI. WEST OF SR 1109 (WIDEN 4')	4											100	25	25	1.00	50	0.25	100	50	1.25			
TOTAL FOR PROJ NO. R-5023A						2	125	1	9	7	150	50	5	1	5	260	65	65	2.60	130	0.65	100	130	3.83	2	500	100
GRAND TOTAL						2	125	1	9	7	150	50	5	1	5	260	65	65	2.60	130	0.65	100	130	3.83	2	500	100

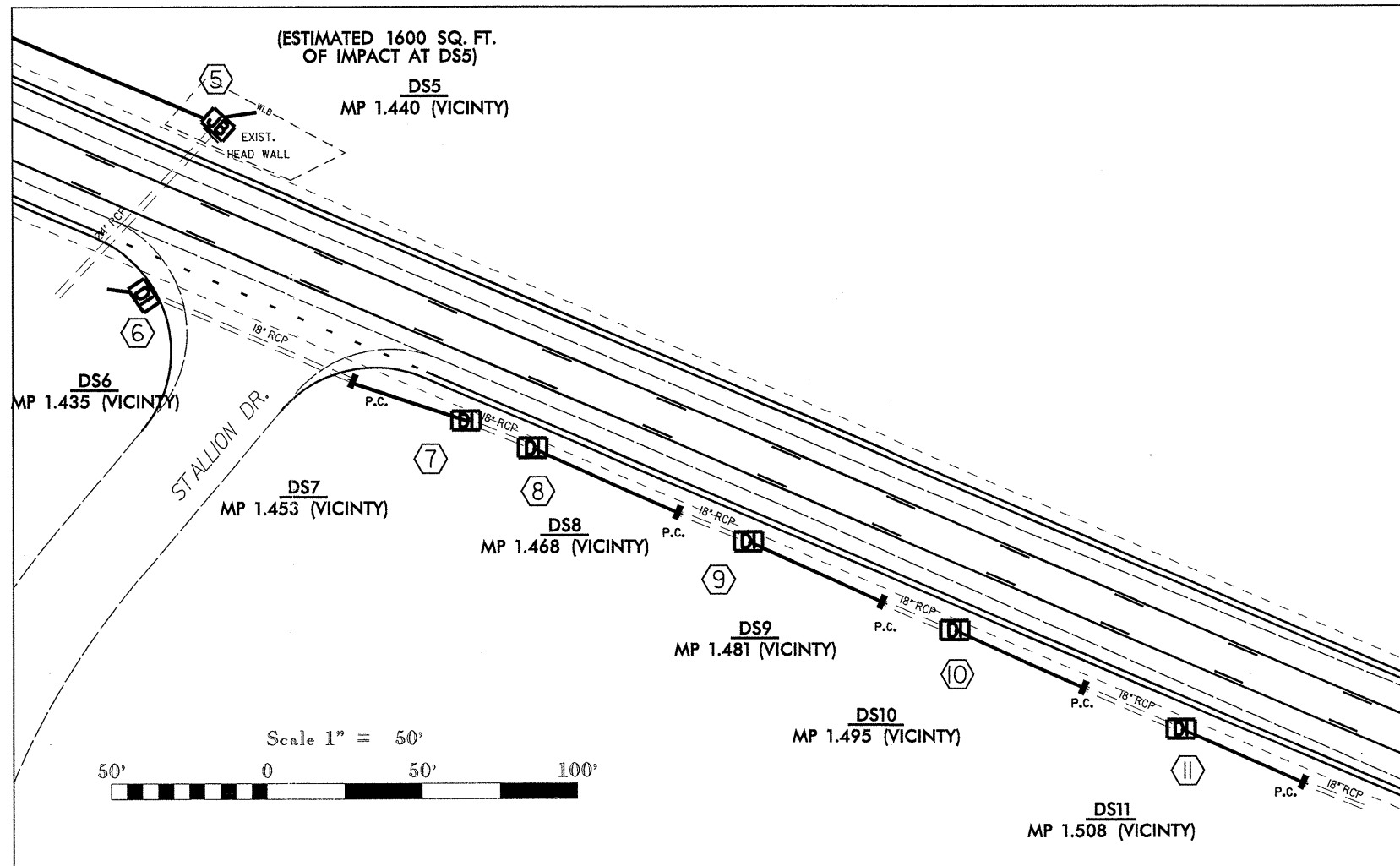
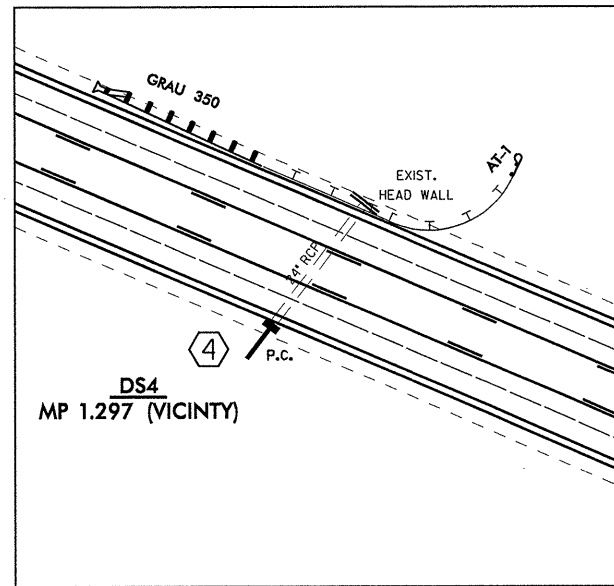
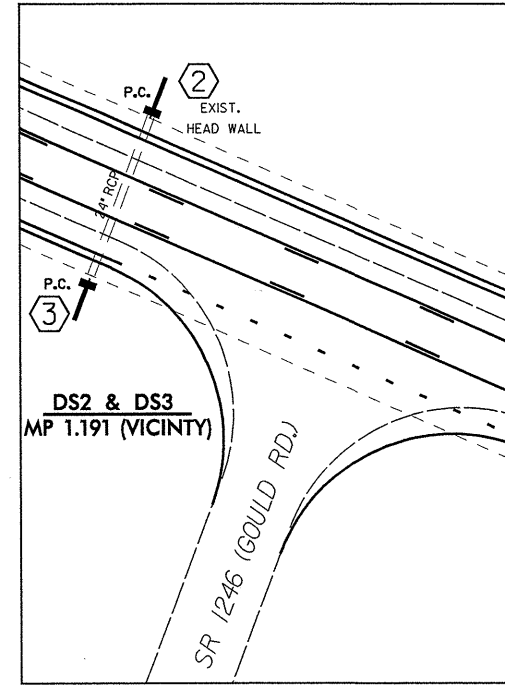
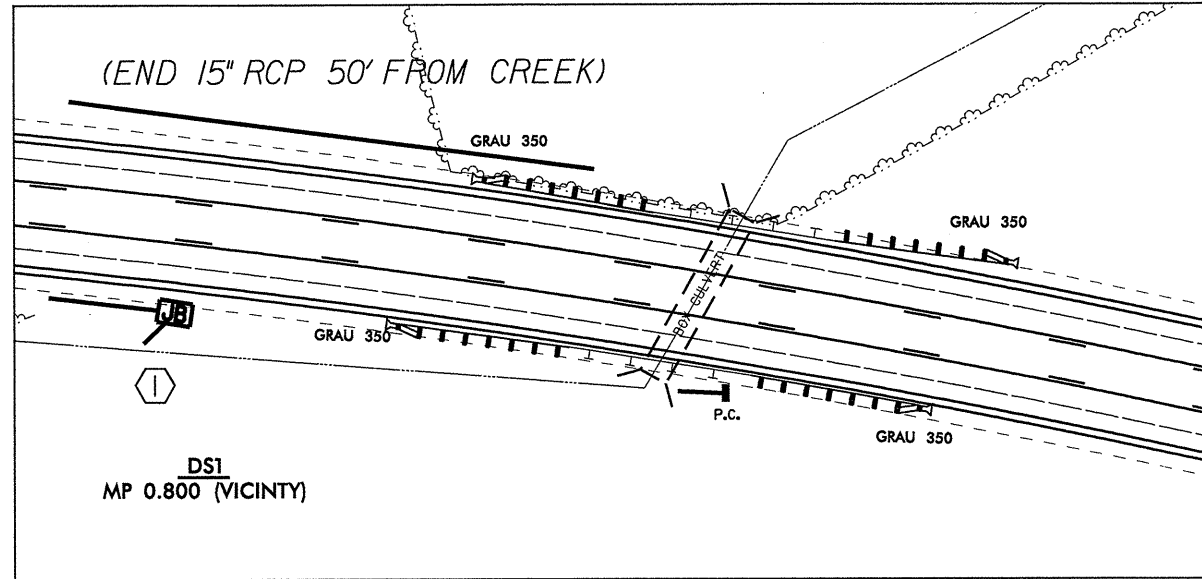
### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	4685000000-E		4686000000-E		4695000000-E		4710000000-E		4721000000-E		4725000000-E		4905000000-N		
						4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SCHOOL 120 M EA	THERMO STR ARROW 90 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	SNOW PLOWABLE MARKERS (Y/Y) EA	SNOW PLOWABLE MARKERS (C/R) EA			
R-5023A	Onslow	1	NC 53 "A" (ENTIRE MAP)	270 FT. WEST OF SR 1135 TO SR 1116	1,2,3															
		"	NC 53 from MP 0.00 to 0.49, MP 0.57 to 0.66, and MP 1.51 to 1.58	3 LANE SECTION (EXISTING 36', WIDEN 4')	1	6,994	9,009	429		500	24	2	28			213	23			
		"	NC 53 from MP 0.49 to 0.57	4 LANE SECTION (EXISTING 48', WIDEN 4')	2	877	845	211					2	1		42	13			
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24', WIDEN 13')	3	7,962	9,768	74					26		2	391	49			
		"	NC 53 from MP 0.66 to 1.51	3 LANE SECTION (EXISTING 24'-36' TAPERS, WIDEN 6.5' AVE.)	3				125	500	24	2	56	1	2	646	85			
TOTAL FOR MAP NO. 1						15,833	19,622	714	125	500	24	2	56	1	2	646	85			
		2	NC 53 "C"	0.18 MI. WEST OF SR 1214 TO 0.318 MI. WEST OF SR 1109 (WIDEN 4')	4	10,652														
TOTAL FOR PROJ NO. R-5023A						26,485	19,622	714	125	500	24	2	56	1	2	646	85			
GRAND TOTAL						26,485	19,622	714	125	500	24	2	56	1	2	646	85			



PROJECT REFERENCE NO. R-5023A	SHEET NO. 3B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

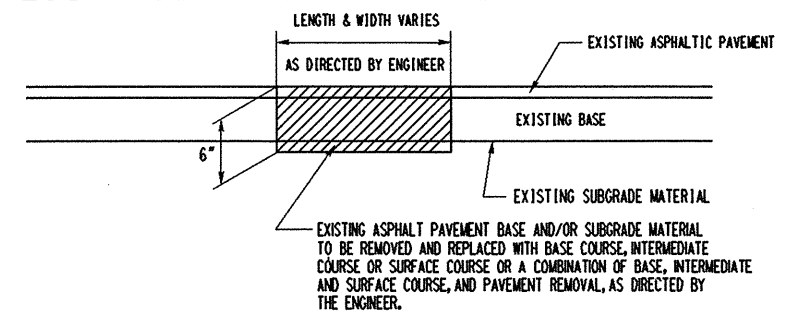
# DRAINAGE DETAILS



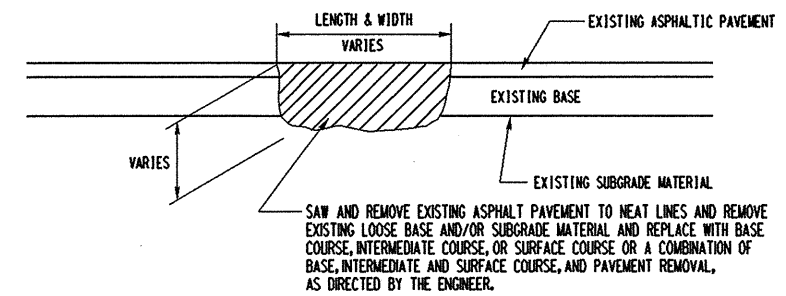
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

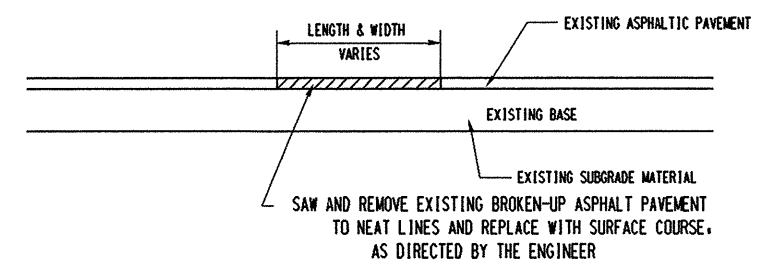
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



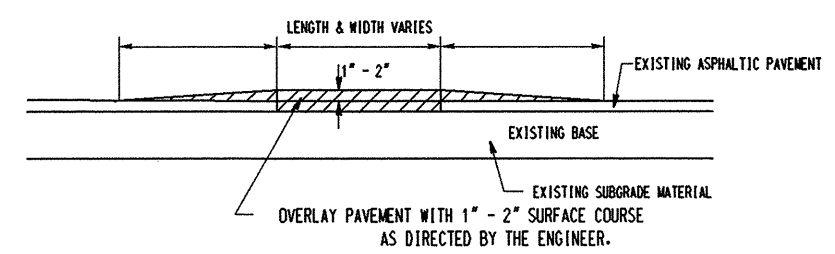
DETAIL NO. 1



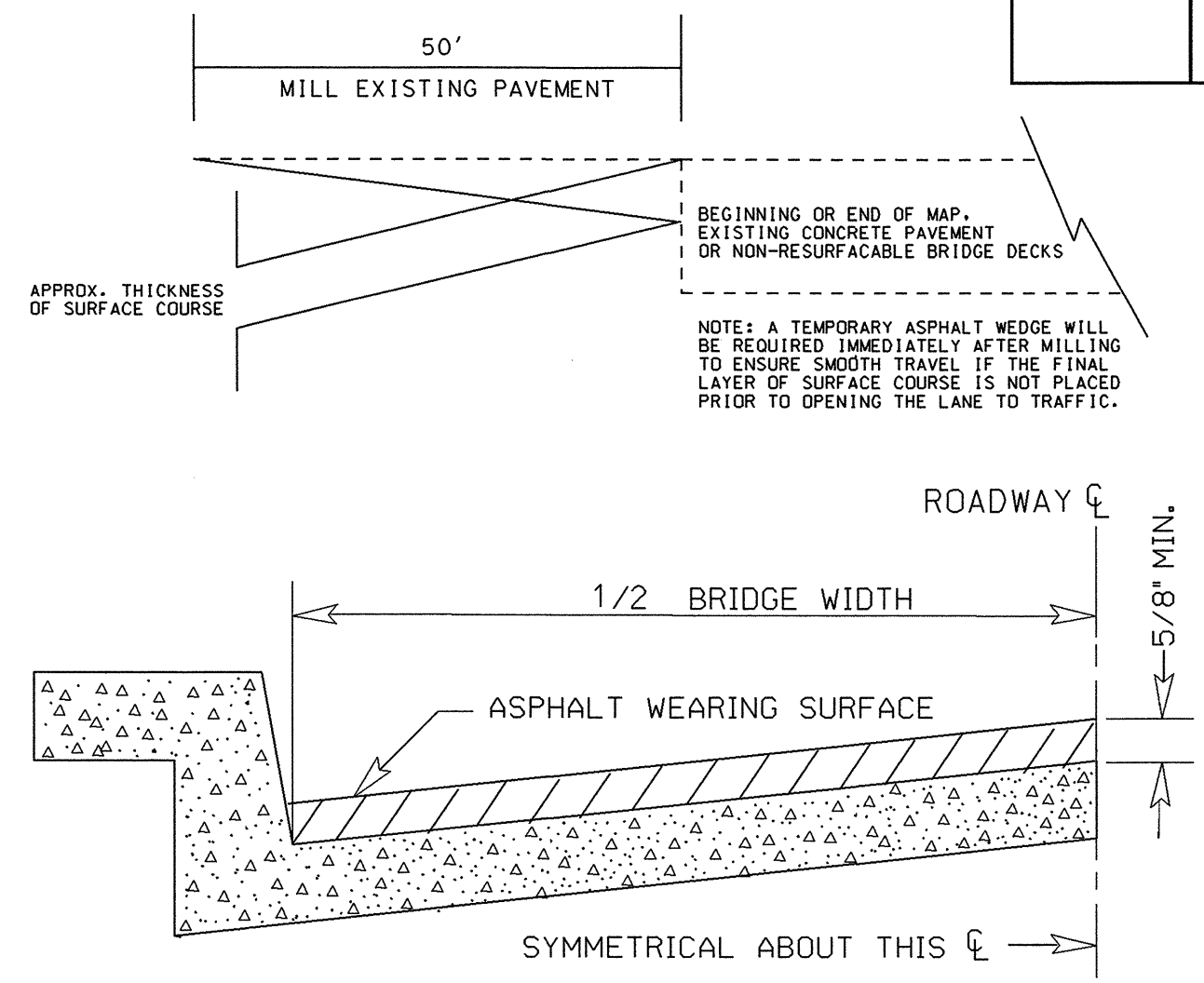
DETAIL NO. 2



DETAIL NO. 3



DETAIL NO. 4



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.

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gsurf\_onslow\dgn\vr-5023 e\_rdy\_dsn\_wbs\_41922 3 1.dgn

PROJECT REFERENCE NO. R-5023A	SHEET NO. 3D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

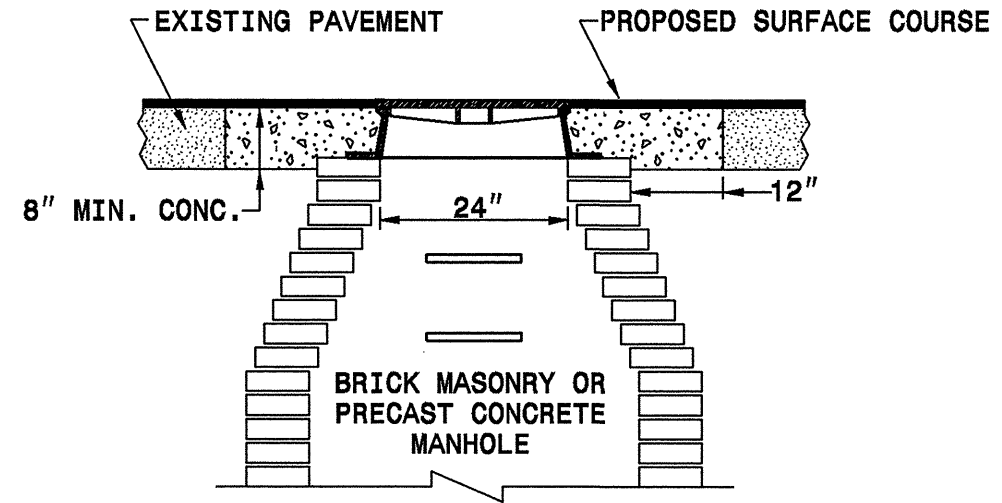
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

MANHOLE AND VALVE BOX ADJUSTMENTS

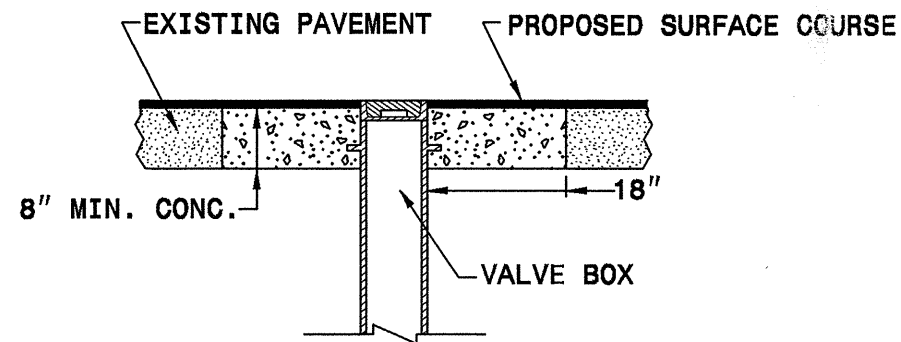
ENGLISH DETAIL DRAWING FOR

GENERAL NOTES:

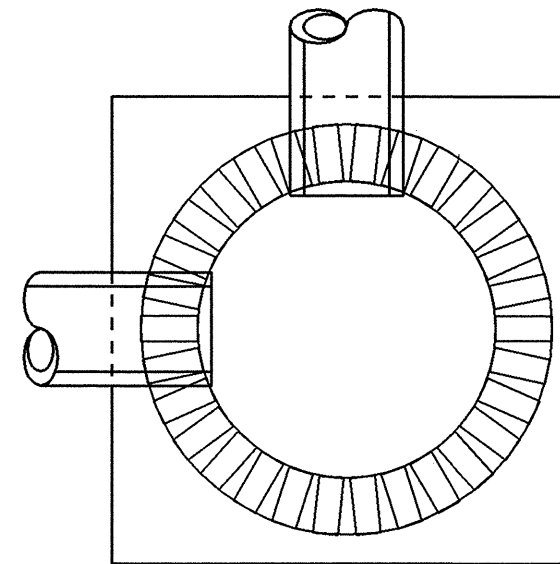
1. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
4. AREA BELOW 8" DEPTH CAN BE FILLED WITH 78M OR NO. 57 CLEAN STONE.
5. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS  $\frac{1}{2}$ " +/-  $\frac{1}{8}$ "



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

PLACE BRICK ACCORDING TO ELEVATION VIEW

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

ENGLISH DETAIL DRAWING FOR  
MANHOLE AND VALVE BOX ADJUSTMENTS

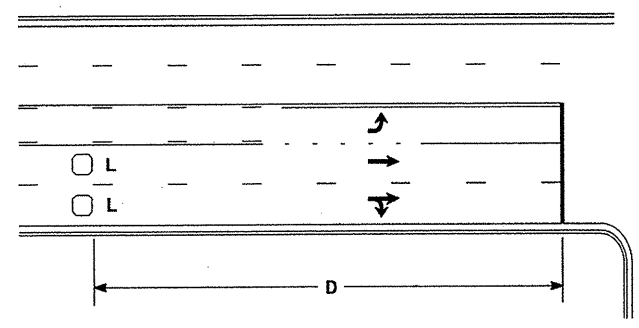
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8/15/99  
REVISIONS  
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### High Speed Detection [≥40 mph (64 km/hr)]

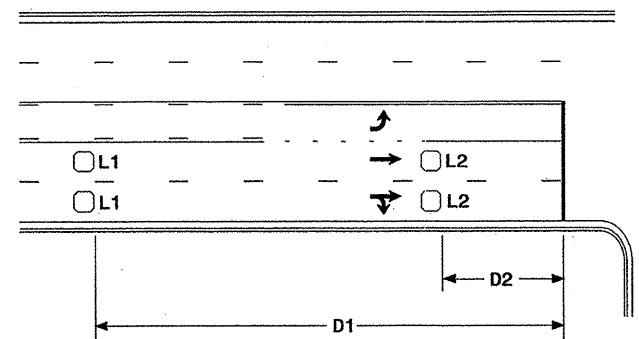


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)  
Wired in series for TS1  
Controllers  
Wired separately for TS2,  
170, and 2070L Controllers

Volume Density Operation

OR



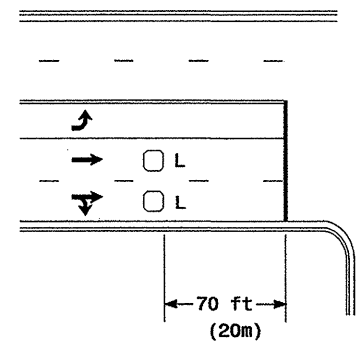
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft  
(1.8m X 1.8m)  
Wired in series  
L2 = 6ft X 6ft  
(1.8m X 1.8m)  
Wired in series

"Stretch" Operation

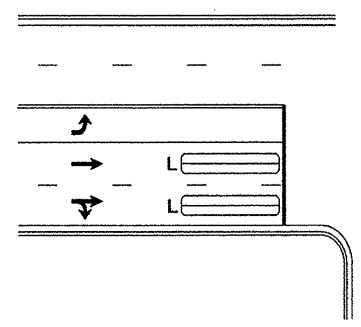
### Low Speed Detection [≤35 mph (56 km/hr)]

C202077 (41922.3.1, R-5023A )



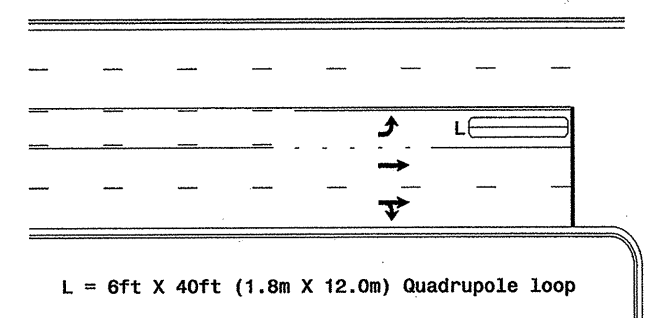
L = 6ft X 6ft (1.8m X 1.8m)  
Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)  
Quadrupole loop, wired separately

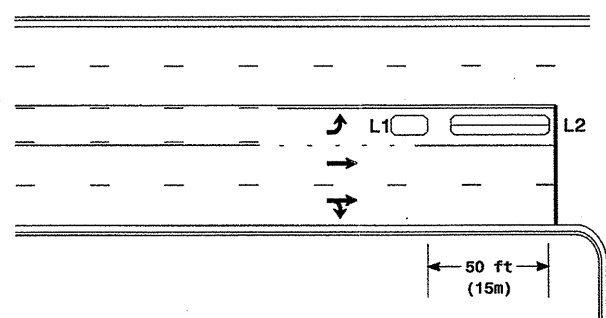
### Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

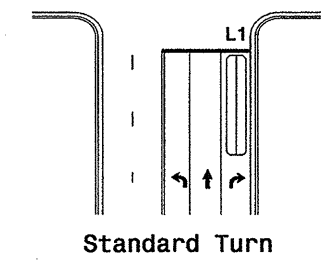
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector  
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

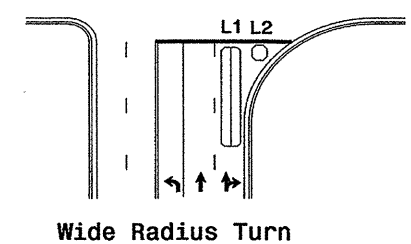
Queue Loop Detection

### Right Turn Lane Detection

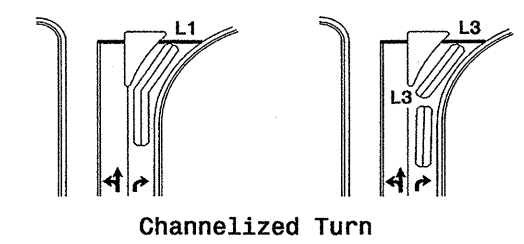


Standard Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop  
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop  
Wired separately  
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop  
Wired in series

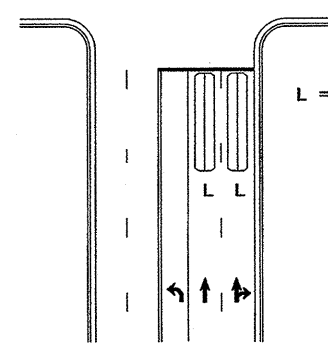


Wide Radius Turn



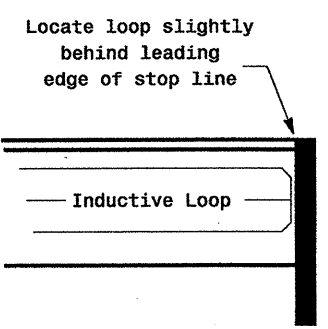
Channelized Turn

### Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)  
Quadrupole loop  
Wired to separate  
detectors/channels

### Presence Loop Placement at Stop Lines



Locate loop slightly  
behind leading  
edge of stop line

Note:  
Loop may be located in advance  
of stop line when stop line is  
greater than 15' (4.5m) from edge  
of intersecting roadway; or, when  
loop detects a permissive or  
protected/permissive left turn.

### Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)  
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns  
6' X 15' (1.8m X 4.6m) Loops:  
Lead-in < 150' (45 m), use 2 turns  
Lead-in > 150' (45 m), use 3 turns

122 N. McDowell St., Raleigh, NC 27603

#### Typical Loop Locations

PLAN DATE: June 2006  
PREPARED BY: P L Alexander

SEAL  
NORTH CAROLINA  
REGISTERED PROFESSIONAL ENGINEER  
P L ALEXANDER  
23486

SCALE N/A	REVISIONS 1. Revise pavement markings	INIT. PLA	DATE 12/11/06
REVIEWED BY:		REVIEWED BY:	
SIGNATURE		DATE	
SIG. INVENTORY NO.			

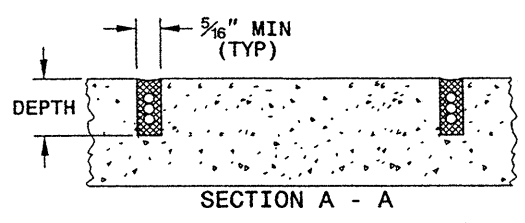
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.  
**5-07**

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

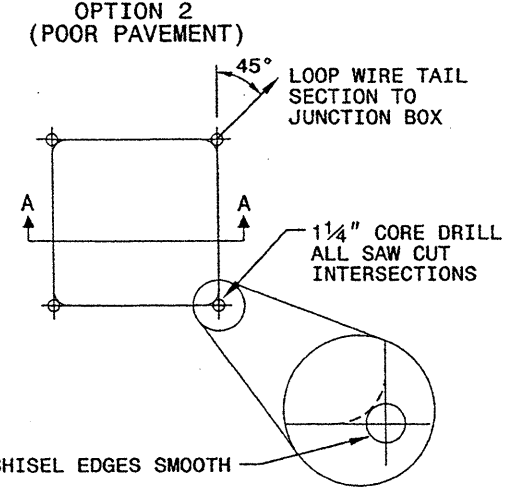
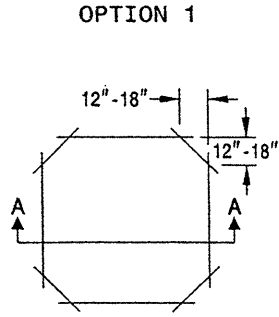
**SAW SLOT DEPTH CHART**

DEPTH (IN)	NO. OF WIRE TURNS					
	2	3	4	5	6	
CONCRETE	2.0	2.0	2.5	2.5	3.0	
ASPHALT	2.0	2.5	3.0	3.0	3.0	

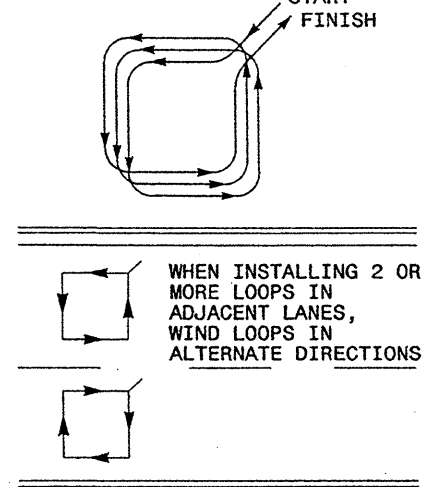


**CONVENTIONAL 4-SIDED LOOP**

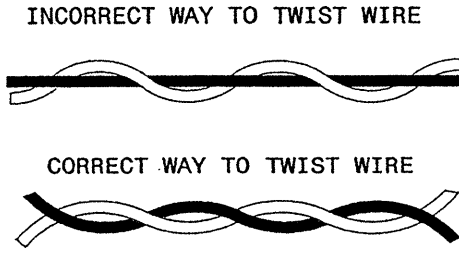
SAW CUT OPTIONS



LOOP WINDING METHOD



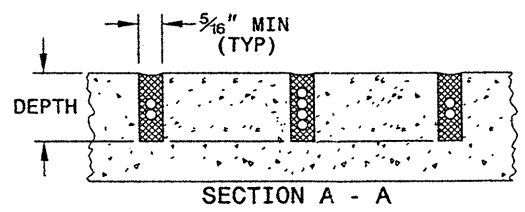
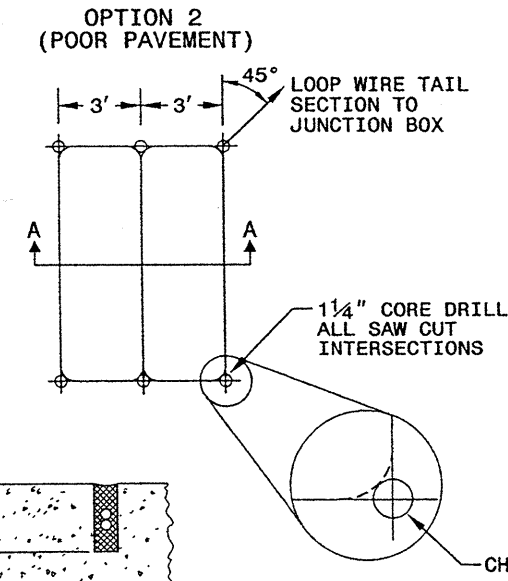
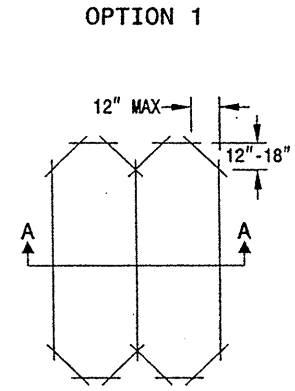
**LOOP WIRE TWISTING METHOD**



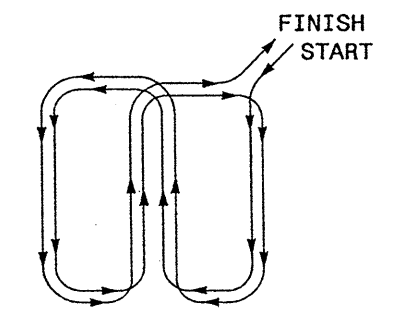
- NOTES**
1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
  2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
  3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
  4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

**QUADRUPOLE LOOP**

SAW CUT OPTIONS



LOOP WINDING METHOD



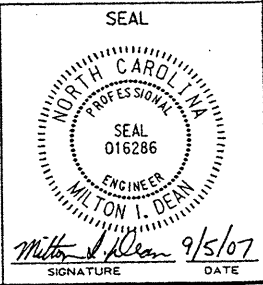
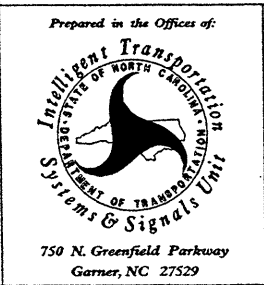
SECTION A - A  
DEPTH IS 2.5" FOR CONCRETE AND 3.0" FOR ASPHALT

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**5-07**

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

See Plate for Title



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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

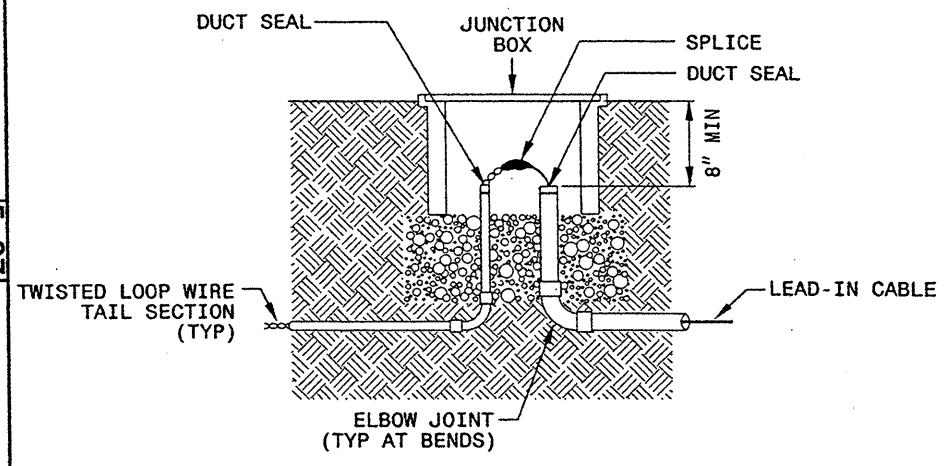
5-07

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

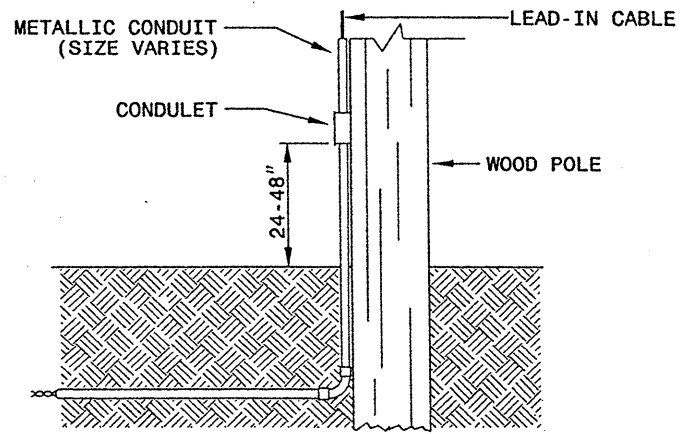
SHEET 2 OF 3  
**1725D01**

LOOP WIRE SPLICE POINT DETAILS

LOOP WIRE AT JUNCTION BOX



LOOP WIRE AT POLE

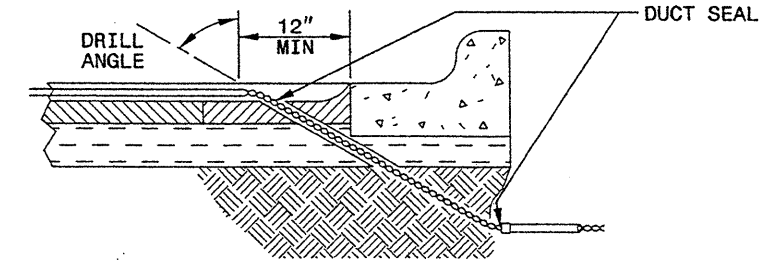


NOTE

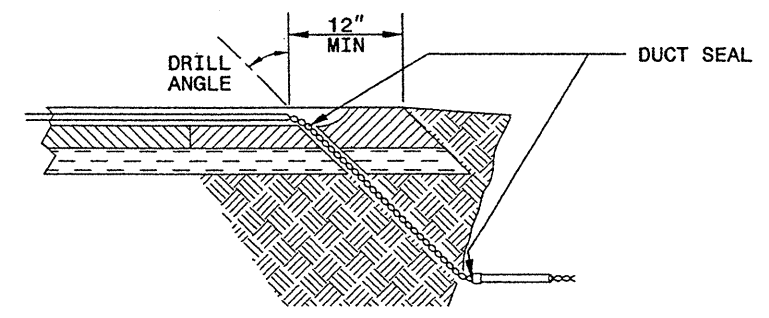
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

LOOP WIRE PAVEMENT EDGE DETAILS

LOOP WIRE AT CURB & GUTTER SECTION



LOOP WIRE AT PAVEMENT SECTION



NOTES

1. DO NOT EXCAVATE UNDER CURB AND GUTTER SECTIONS FOR CONDUIT INSTALLATION.
2. TWIST LOOP WIRE TAIL SECTIONS FROM WHERE LOOP WIRE TAIL LEAVES SAW CUT TO JUNCTION BOX, INCLUDING THROUGH CONDUIT.
3. BEFORE SEALING LOOPS, INSTALL DUCT SEAL WHERE LOOP WIRE TAIL SECTION LEAVES SAW CUT IN PAVEMENT AND AT ENTRANCE OF CONDUIT TO JUNCTION BOX.

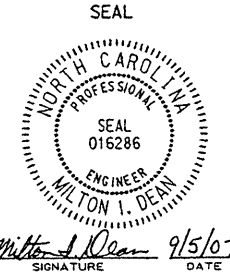
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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

SHEET 2 OF 3  
**1725D01**

See Plate for Title



750 N. Greenfield Parkway  
Garner, NC 27529

*Milton I. Dean* 9/5/07  
SIGNATURE DATE

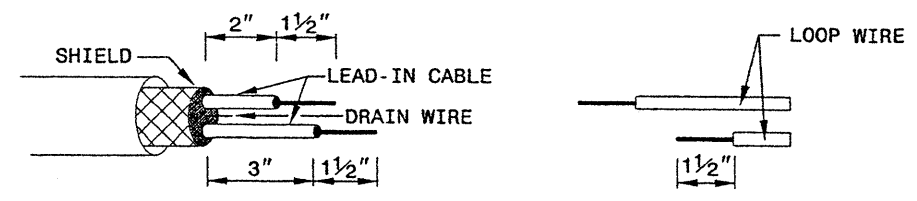
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

5-07

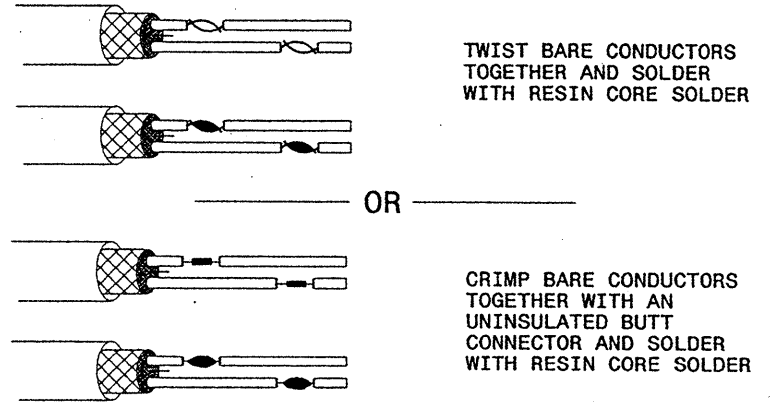
ENGLISH DETAIL DRAWING FOR  
**INDUCTION DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

**STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE**

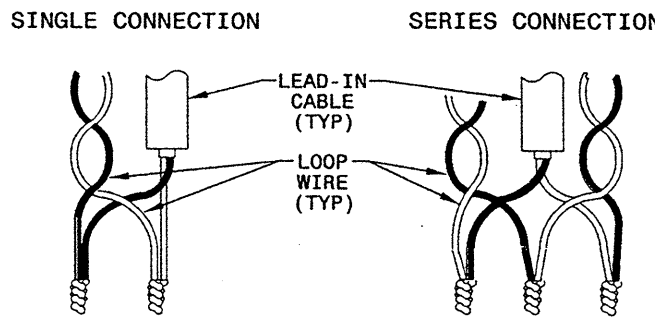


**STEP 2. CONNECT AND SOLDER**

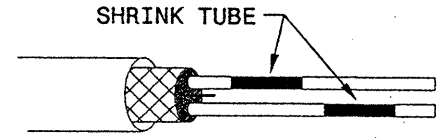


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

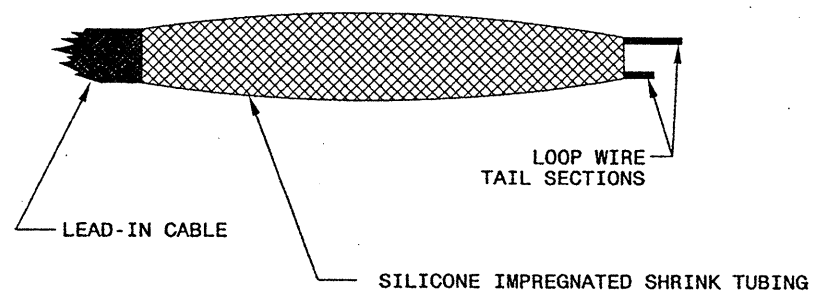
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



**STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY**



**STEP 4. ENVIRONMENTALLY PROTECT SPLICE**



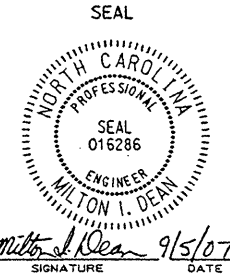
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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

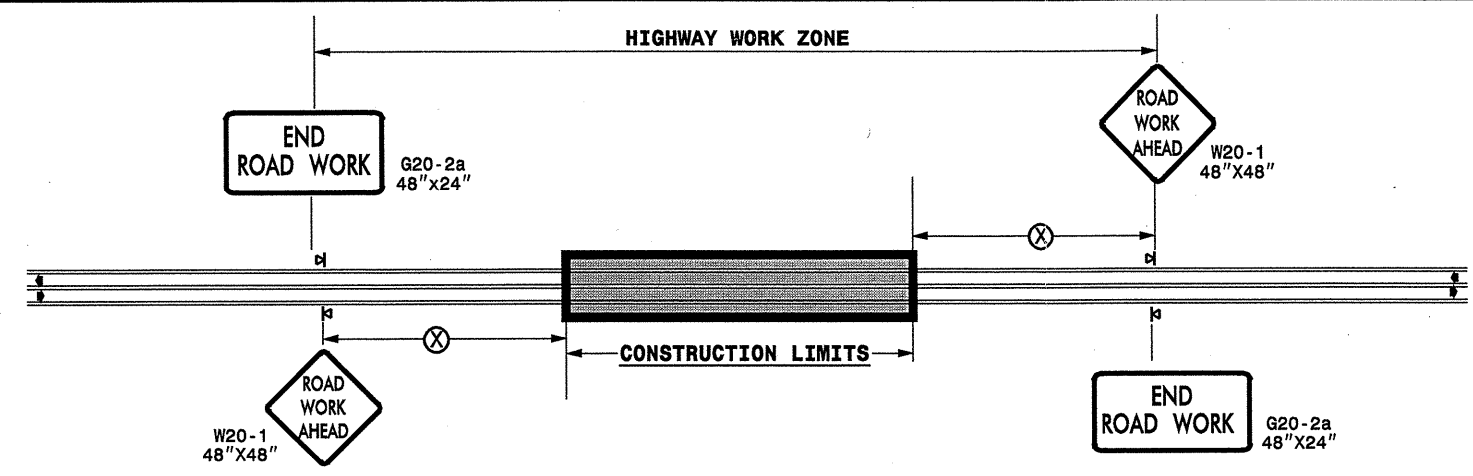
See Plate for Title



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Milton I. Dean 9/5/07  
SIGNATURE DATE

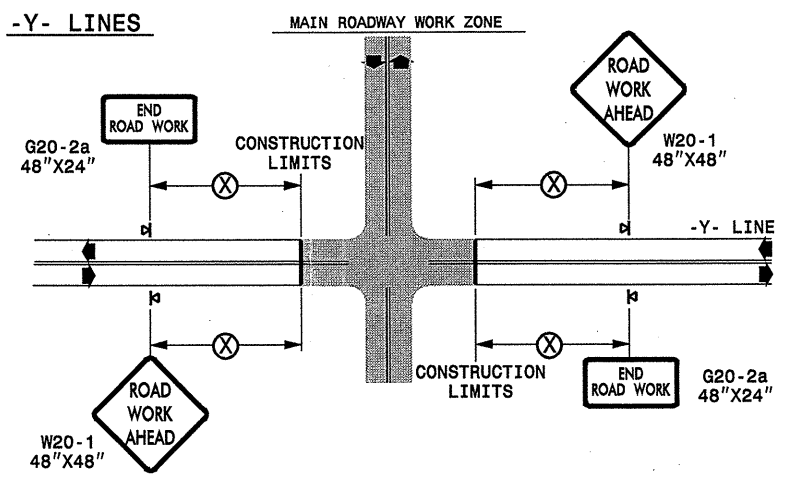
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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



DETAIL DRAWING  
FOR TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**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.

**LEGEND**

◀ PORTABLE SIGN

➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: _____	DATE: _____	<p>DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS</p>		<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>7-98</td> <td>10/01</td> </tr> <tr> <td>10-98</td> <td>03/04</td> </tr> <tr> <td>01/01</td> <td>11/04</td> </tr> </table>	REVISIONS		7-98	10/01	10-98	03/04	01/01	11/04
REVISIONS												
7-98	10/01											
10-98	03/04											
01/01	11/04											
<p>SCALE: NONE</p> <p>DATE: _____</p> <p>DWG. BY: _____</p> <p>DESIGN BY: _____</p> <p>REVIEWED BY: _____</p>		<p>SEAL</p>	<p>DATE: _____</p> <p>FILE</p>									

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