

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10831.8, 8CR.20831.8	1	4

### SUMMARY OF QUANTITIES

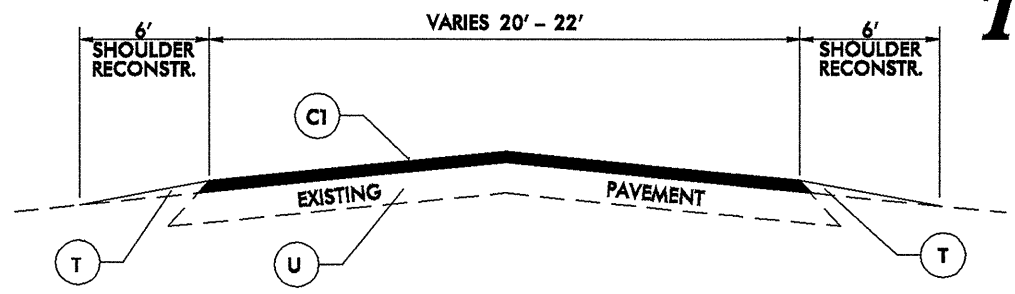
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1½" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	2'-6" CURB & GUTTER LF	WHEELCHAIR RAMPS (RETROFIT) EA	ADJUST CATCH BASIN EA	ADJUST DROP INLET EA	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	SEED & MULCHING AC	INDUCTIVE LOOP LF
8CR.10831.8	Scotland	1	US 401 BUS.	FROM US 74 BUS. TO US 501 BUS.	2	0.72	39			16000	100		1515		91	15	60	18		2	13	6		1,500
<b>TOTAL FOR PROJ NO. 8CR.10831.8</b>						<b>0.72</b>				<b>16000</b>	<b>100</b>		<b>1515</b>		<b>91</b>	<b>15</b>	<b>60</b>	<b>18</b>		<b>2</b>	<b>13</b>	<b>6</b>		<b>1,500</b>
8CR.20831.8	Scotland	2	SR 1001	FROM SR 1345 TO SR 1341	1	3.32	20	170	6.64		100		3500		210	75							4.80	
8CR.20831.8		3	SR 1438	FROM US 74 BYP. TO US 74 BUS.	2,3	1.2	37.5	25		150	100		2530		152	50	435	28	3		21	7		
8CR.20831.8		4	SR 1640	FROM US 401 BUS. TO US 501 BUS.	2	0.02	36				100		45		3									
8CR.20831.8		5	SR 1641	FROM SR 1640 TO US 501 BUS.	2	0.45	39	25			100		955		57	25	120		2		7	8		
8CR.20831.8		6	SR 1642	FROM US 501 TO SR 1643	2	1.07	38				100		1790		107	25	300	14	8		35	13		
8CR.20831.8		7	SR 1643	FROM SR 1642 TO US 401 BUS.	4	0.06	30		0.06		100		95		6	10							0.05	
8CR.20831.8		8	SR 1174	FROM US 401 TO US 401 BUS.	5,6	0.25	23	20	0.5		100			330	21	10							0.35	
8CR.20831.8		9	SR 1176	FROM SR 1174 TO LAUCHWOOD CIRCLE	5	0.11	23	15	0.22		100			130	8	10							0.15	
8CR.20831.8		10	SR 1360 N	FROM US 74 BUS. TO PAVEMENT CHANGE	5	0.13	20	25	0.26		100			135	9	10							0.20	
8CR.20831.8		11	SR 1360 S	FROM US 74 TO PAVEMENT CHANGE	5	0.13	20	25	0.26		100			135	9	10							0.20	
8CR.20831.8		12	SR 1360	FROM PAVEMENT CHANGE TO SR 1300	5	0.97	20	50	1.94		100			995	65	25							1.40	
8CR.20831.8		13	SR 1271	FROM US 401 TO SR 1614	5,7	1.64	22	85	3.28		100	1275		1845	175	40							2.40	
<b>TOTAL FOR PROJ NO. 8CR.20831.8</b>						<b>9.35</b>		<b>440</b>	<b>13.16</b>	<b>150</b>	<b>1200</b>	<b>1275</b>	<b>8915</b>	<b>3570</b>	<b>822</b>	<b>290</b>	<b>855</b>	<b>42</b>	<b>13</b>		<b>63</b>	<b>28</b>	<b>9.55</b>	
<b>GRAND TOTAL</b>						<b>10.07</b>		<b>440</b>	<b>13.16</b>	<b>16150</b>	<b>1300</b>	<b>1275</b>	<b>10430</b>	<b>3570</b>	<b>913</b>	<b>305</b>	<b>915</b>	<b>60</b>	<b>13</b>	<b>2</b>	<b>76</b>	<b>34</b>	<b>9.55</b>	<b>1,500.00</b>

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10831.8, 8CR.20831.8	2	4

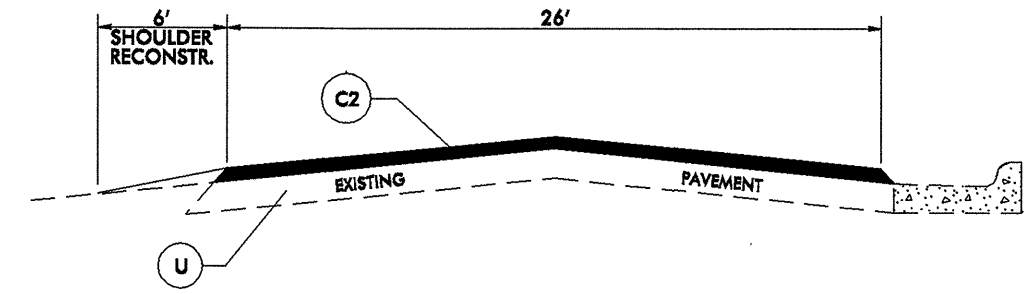
## THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4685000000-E	4686000000-E		4705000000-E	4710000000-E	4721000000-E		4725000000-E			4810000000-E		4820000000-E	4900000000-N	4900000000-N
					4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SCHOOL 120 M EA	THERMO RXR 120 M EA	THERMO LT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	8" WHITE PAINT LF	YELLOW & YELLOW MARKERS EA	CRYSTAL & RED MARKERS EA
8CR.10831.8	Scotland	1	US 401 BUS.	FROM US 74 BUS. TO US 501 BUS.		10,000	200		135			43	3	14				110	10
<b>TOTAL FOR PROJ NO. 8CR.10831.8</b>						<b>10,000</b>	<b>200</b>		<b>135</b>			<b>43</b>	<b>3</b>	<b>14</b>				<b>110</b>	<b>10</b>
						10,200						60						120	
8CR.20831.8	Scotland	2	SR 1001	FROM SR 1345 TO SR 1341	35,800	26,850			140	12					13,000		90	295	
		3	SR 1438	FROM US 74 BYP. TO US 74 BUS.														125	
		4	SR 1640	FROM US 401 BUS. TO US 501 BUS.												425		5	
		5	SR 1641	FROM SR 1640 TO US 501 BUS.												9,500		40	
		6	SR 1642	FROM US 501 TO SR 1643				100	90	4					22,000	22,000		95	
		7	SR 1643	FROM SR 1642 TO US 401 BUS.											1,300	1,300			
		8	SR 1174	FROM US 401 TO US 401 BUS.											5,400	4,320			
		9	SR 1176	FROM SR 1174 TO LAUCHWOOD CIRCLE											2,400	2,400			
		10	SR 1360 N	FROM US 74 BUS. TO PAVEMENT CHANGE				50	25	2					2,800	2,800		15	
		11	SR 1360 S	FROM US 74 TO PAVEMENT CHANGE				50	25	2					364	2,800		15	
		12	SR 1360	FROM PAVEMENT CHANGE TO SR 1300				100	100	6	4				21,000	18,900		125	
		13	SR 1271	FROM US 401 TO SR 1614											35,300	28,240			
<b>TOTAL FOR PROJ NO. 8CR.20831.8</b>					<b>35,800</b>	<b>26,850</b>		<b>300</b>	<b>380</b>	<b>18</b>	<b>12</b>				<b>103,564</b>	<b>92,685</b>	<b>90</b>	<b>715</b>	
						26,850				30					196,249			715	
<b>GRAND TOTAL</b>					<b>35,800</b>	<b>36,850</b>	<b>200</b>	<b>300</b>	<b>515</b>	<b>18</b>	<b>12</b>	<b>43</b>	<b>3</b>	<b>14</b>	<b>103,564</b>	<b>92,685</b>	<b>90</b>	<b>825</b>	<b>10</b>
						37,050				30		60			196,249			835	

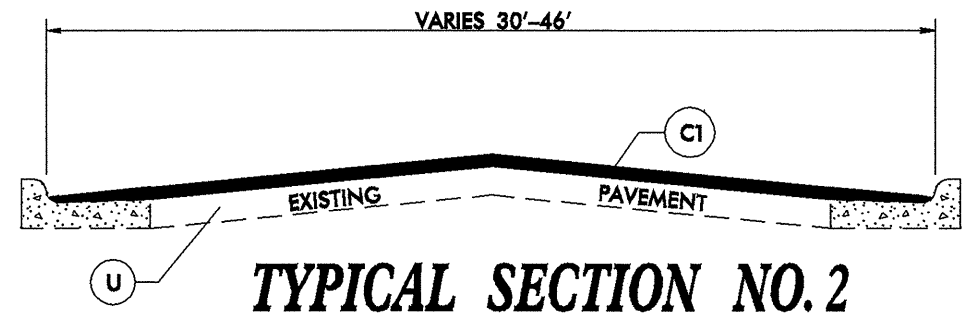
# SCOTLAND COUNTY TYPICAL SECTIONS



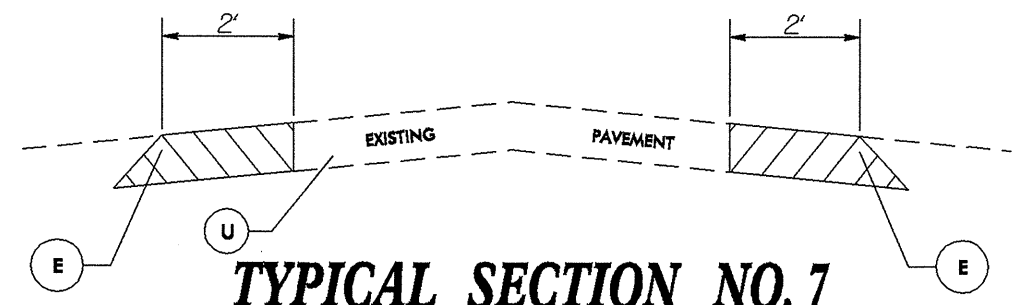
**TYPICAL SECTION NO. 1**



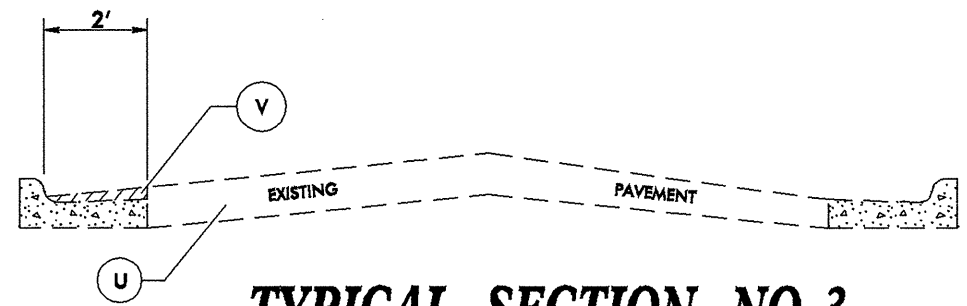
**TYPICAL SECTION NO. 6**



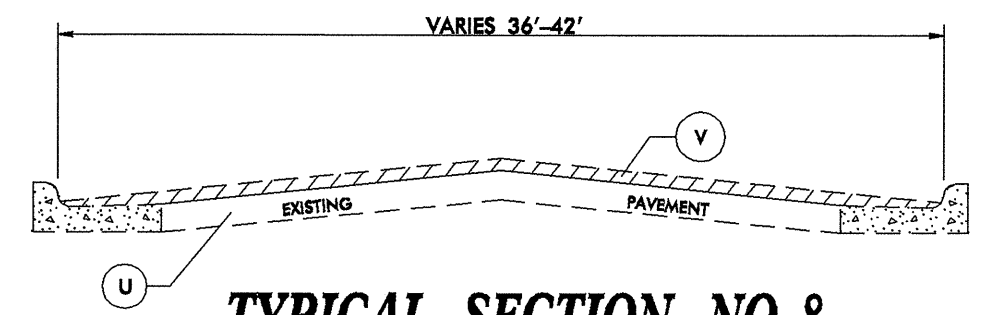
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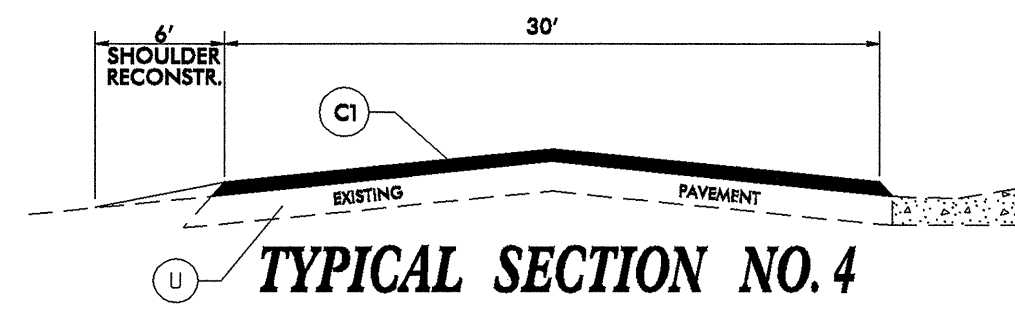
**TYPICAL SECTION NO. 7**



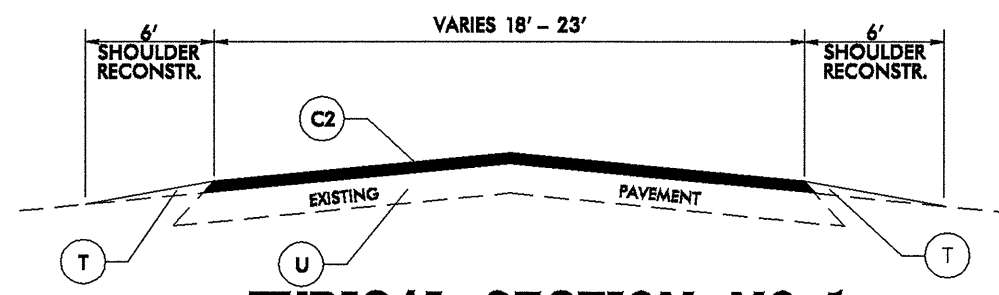
**TYPICAL SECTION NO. 3**



**TYPICAL SECTION NO. 8**




**TYPICAL SECTION NO. 4**

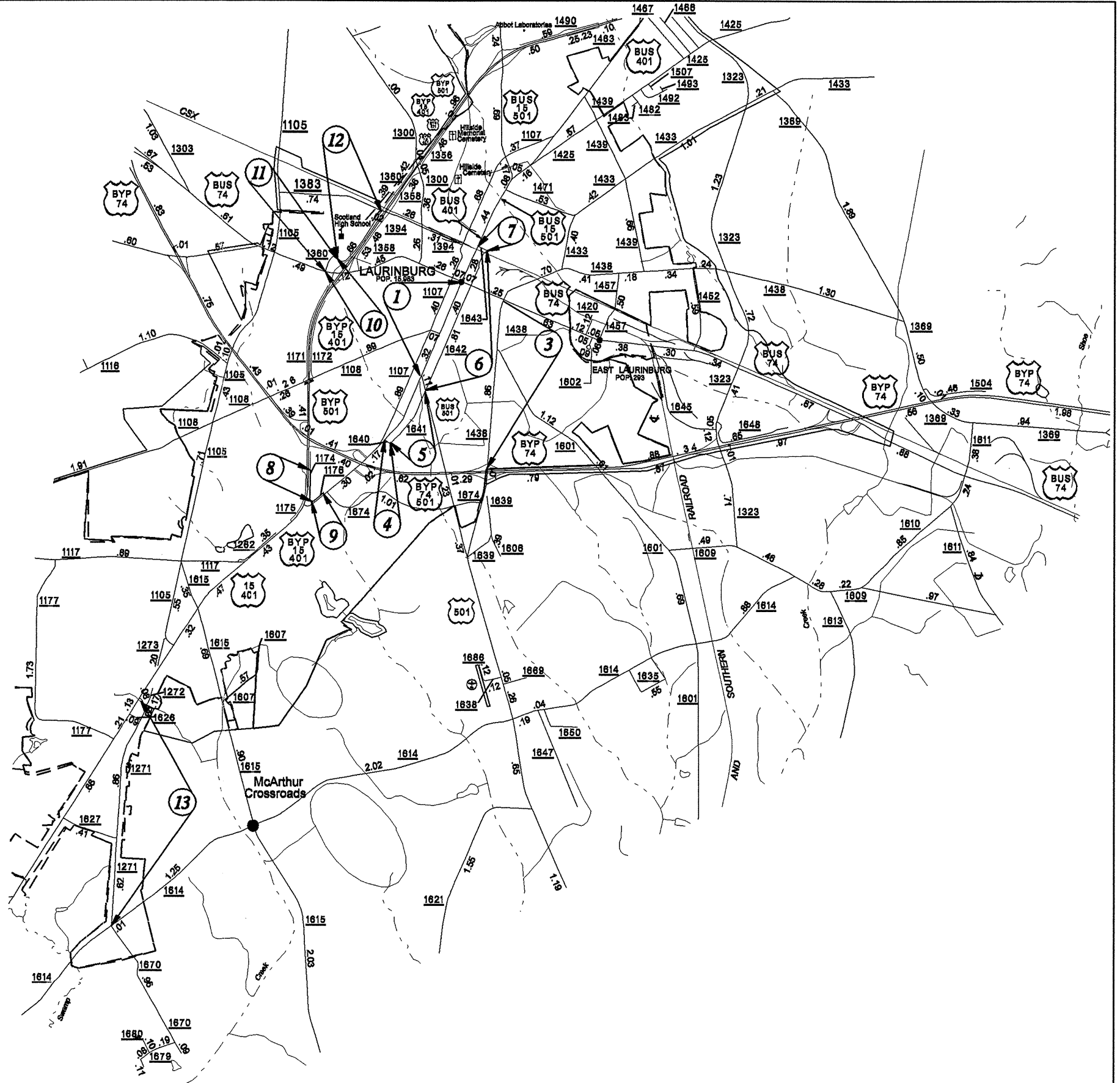
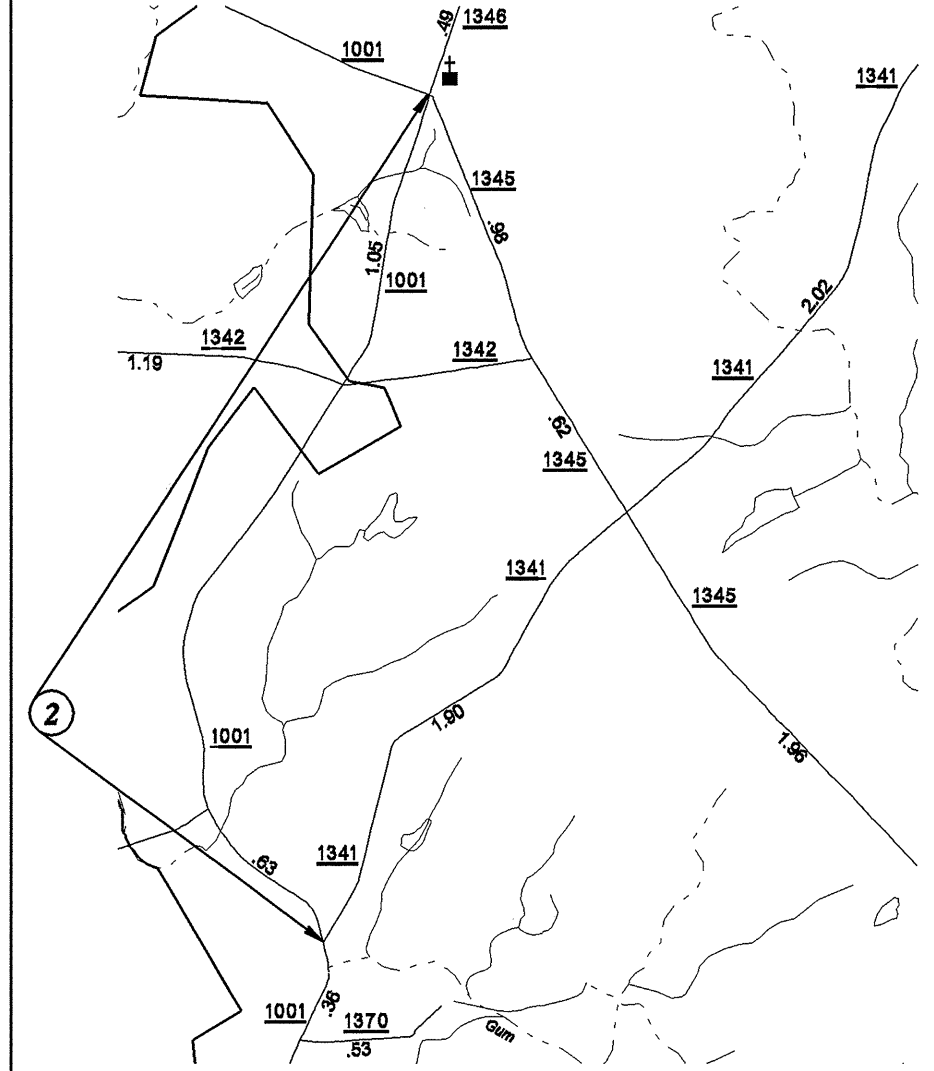


**TYPICAL SECTION NO. 5**

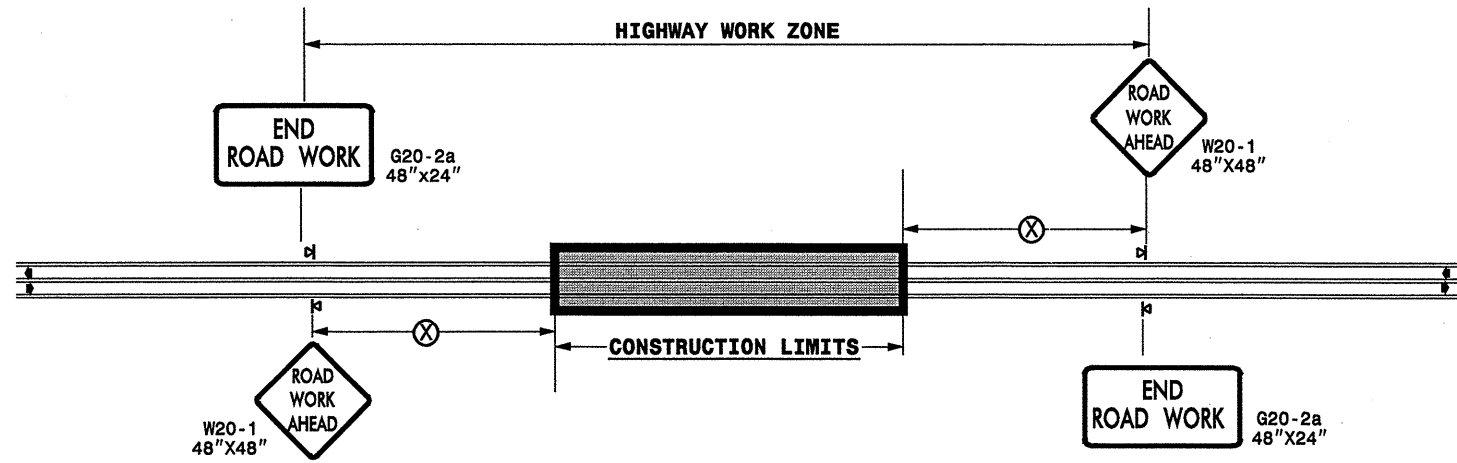
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
E	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING 1½" IN DEPTH.

  
**SCOTLAND COUNTY**  
 NORTH CAROLINA  

 DIVISION OF HIGHWAYS - OS UNIT  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION



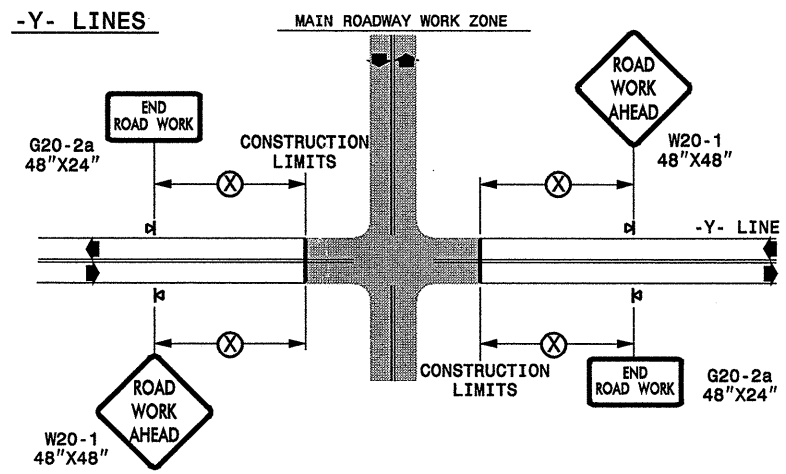
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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

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

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



**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED 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.

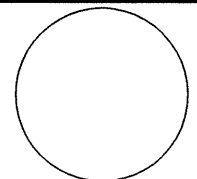

**LEGEND**

⊞ PORTABLE SIGN

◀ DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING  
FOR TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

SHEET 1 OF 1

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

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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

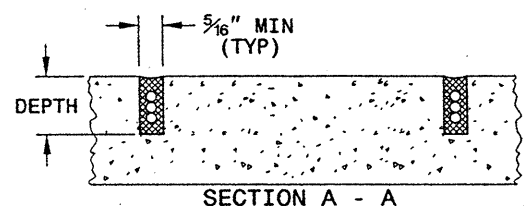
5-07

ENGLISH DETAIL DRAWING FOR  
INDUCTIVE DETECTION LOOPS

SHEET 1 OF 3  
1725D01

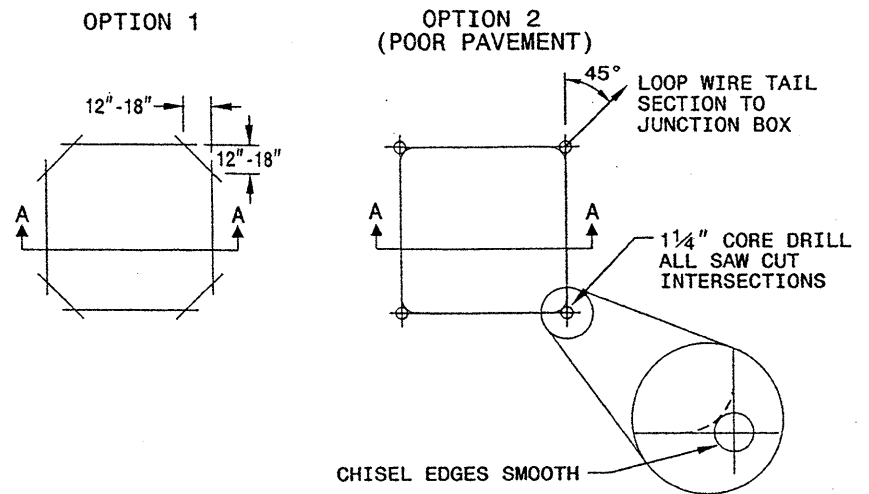
SAW SLOT DEPTH CHART

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	

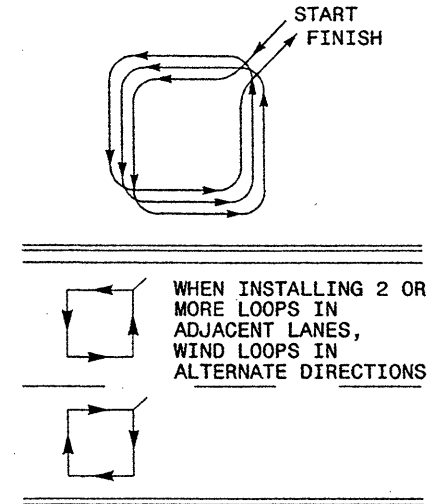


CONVENTIONAL 4-SIDED LOOP

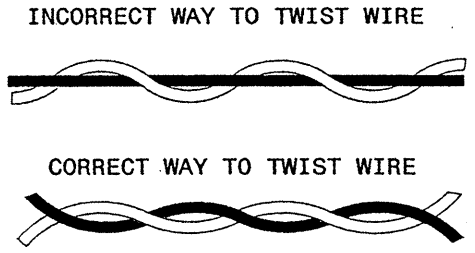
SAW CUT OPTIONS



LOOP WINDING METHOD



LOOP WIRE TWISTING METHOD

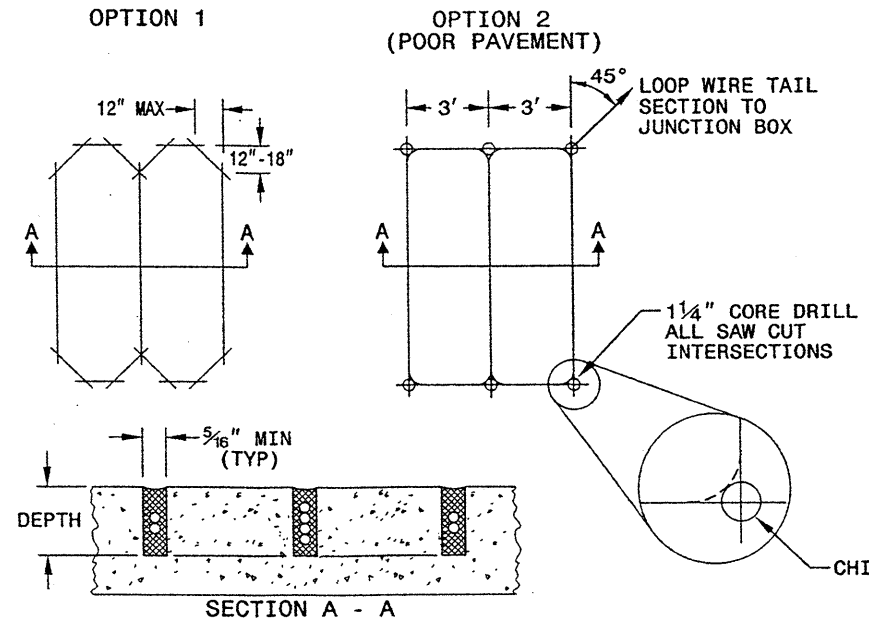


NOTES

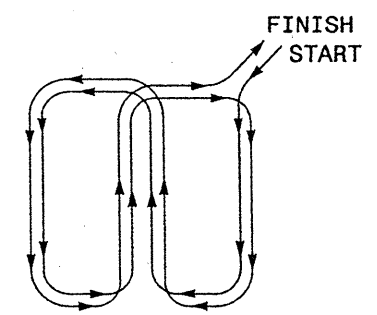
1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

QUADRUPOLE LOOP

SAW CUT OPTIONS



LOOP WINDING METHOD



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

Prepared in the Offices of:

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

Milton I. Dean 9/5/07  
SIGNATURE DATE

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 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

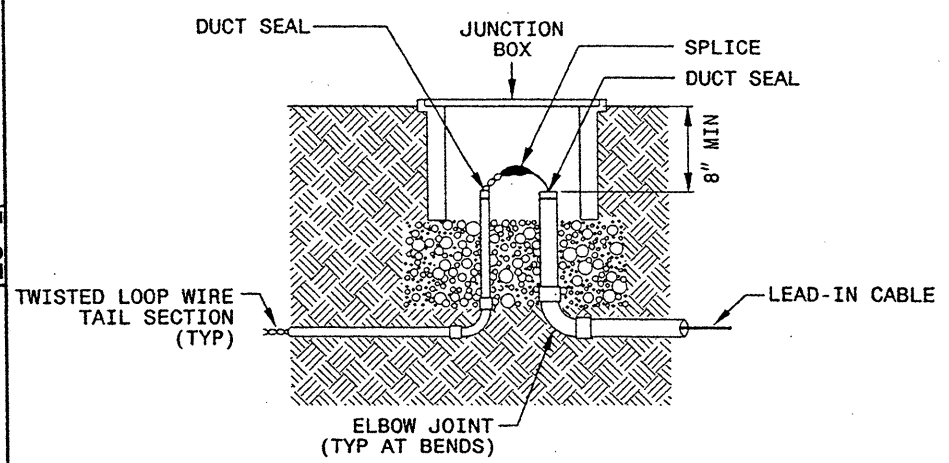
5-07

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

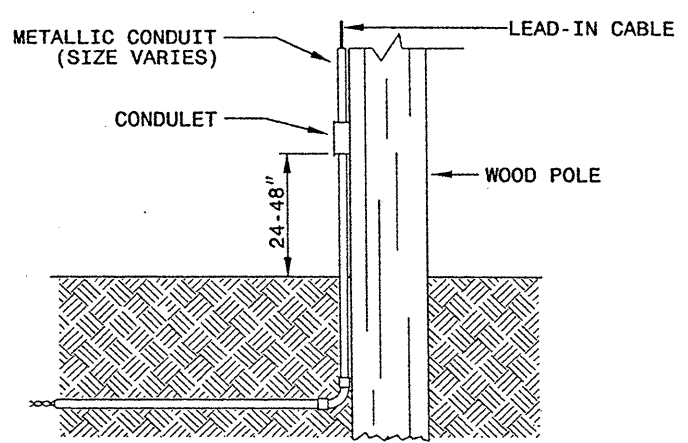
SHEET 2 OF 3  
**1725D01**

**LOOP WIRE SPLICE POINT DETAILS**

**LOOP WIRE AT JUNCTION BOX**



**LOOP WIRE AT POLE**

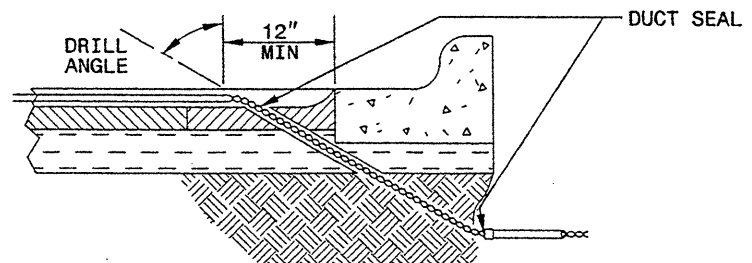


**NOTE**

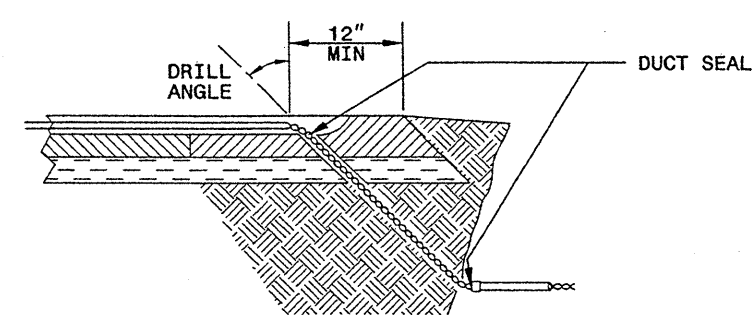
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

**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.

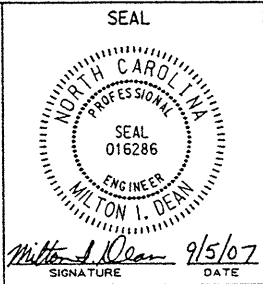
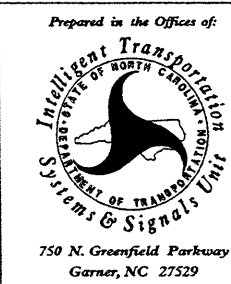
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 RALEIGH, N.C.

5-07

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

SHEET 2 OF 3  
**1725D01**

See Plate for Title



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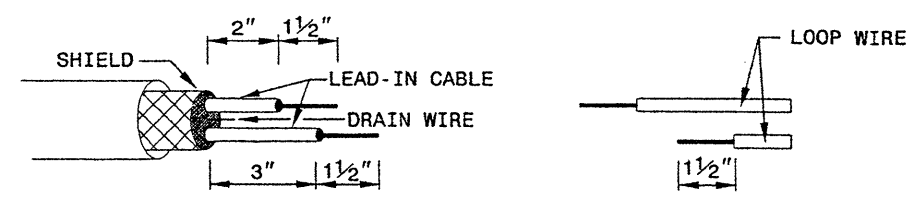
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 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

5-07

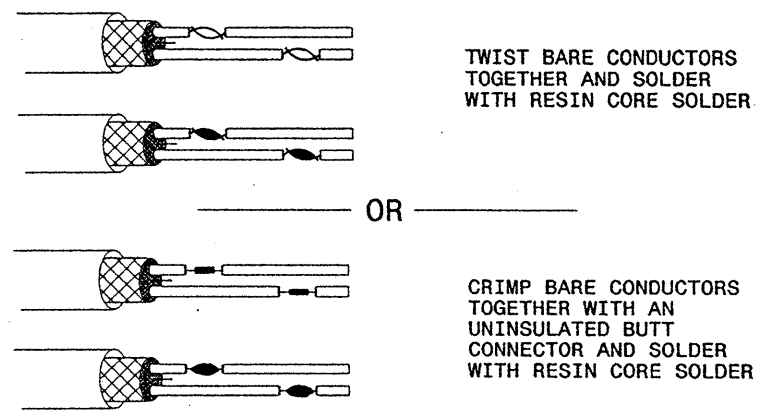
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

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

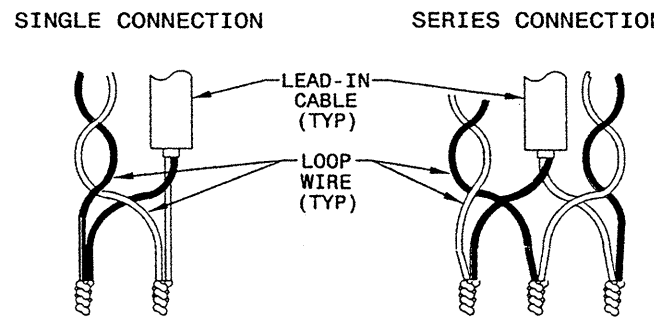


**STEP 2. CONNECT AND SOLDER**

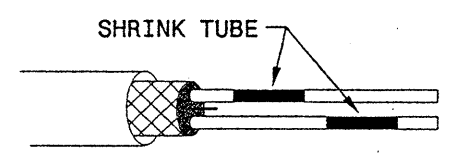


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

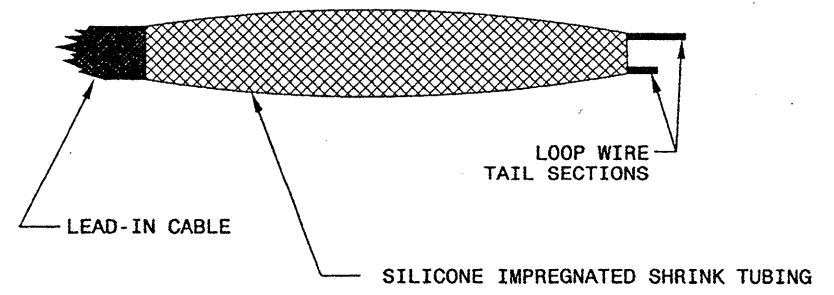
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



**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

Prepared in the Offices of:

750 N. Greenfield Parkway  
 Garner, NC 27529

SEAL

Milton I. Dean 9/5/07  
 SIGNATURE DATE

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