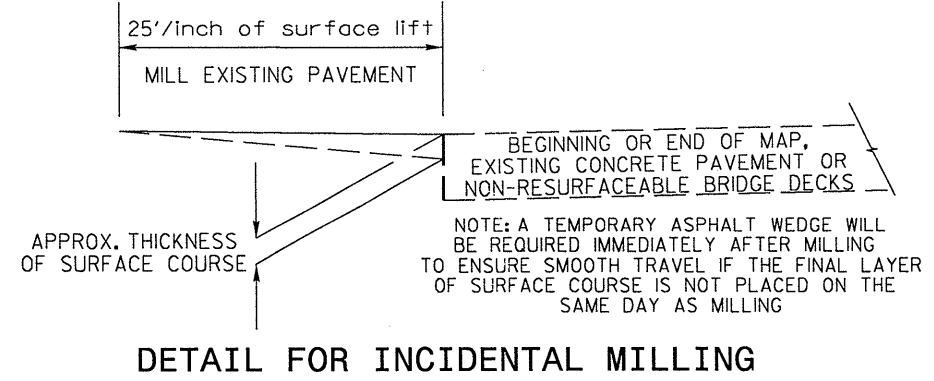


# 2011 DURHAM SOUTH RESURFACING

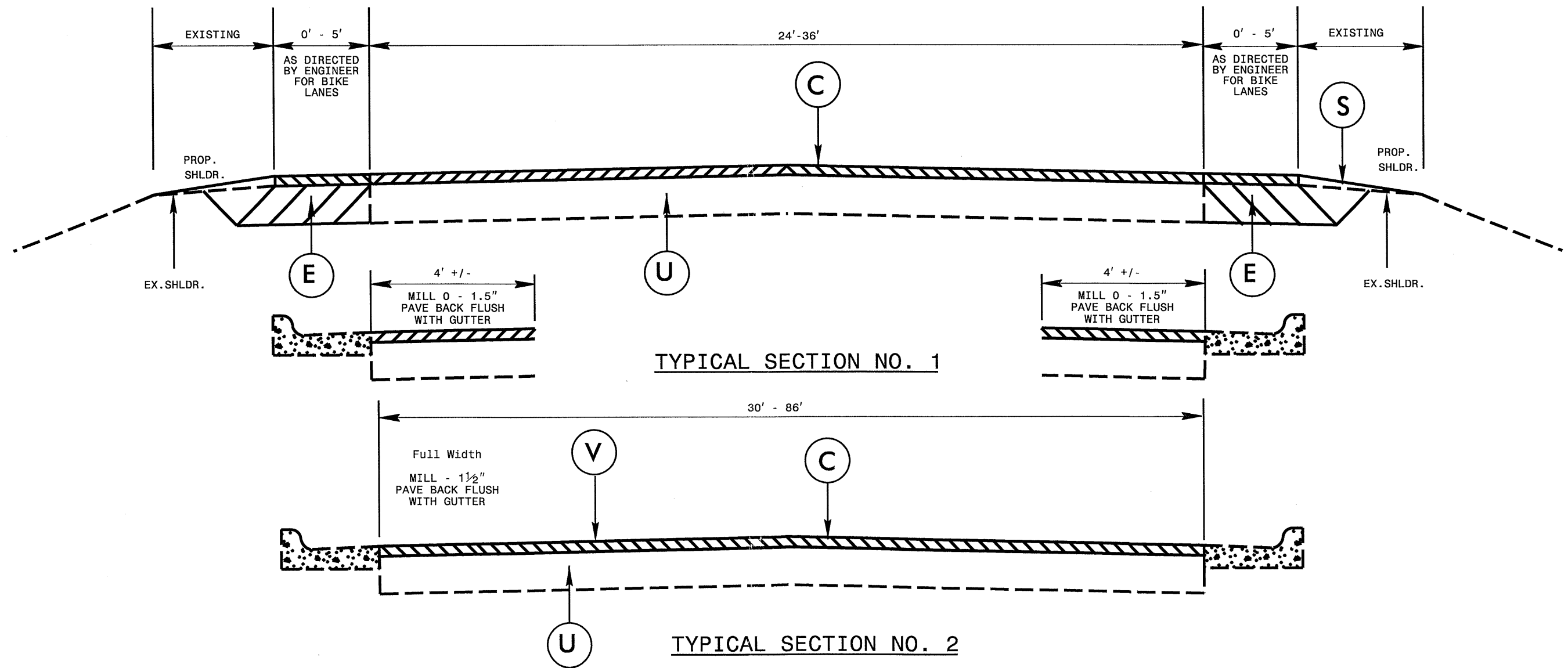
# PAVEMENT SCHEDULE

C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD., IN EACH OF 2 LIFTS
S	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V	PROP 1.5" MILLING



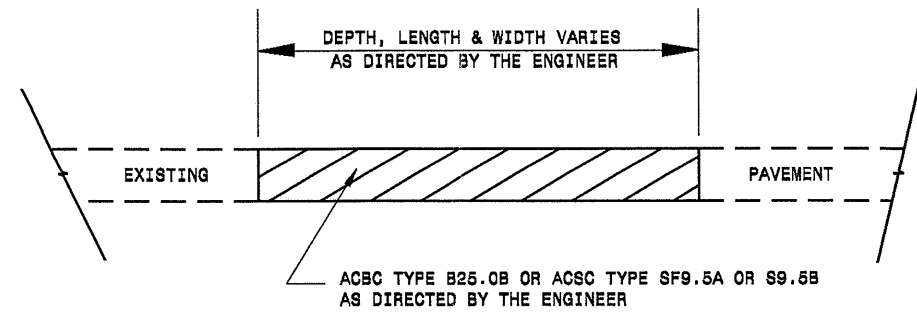
### NOTES

ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT  
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.  
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.  
 BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

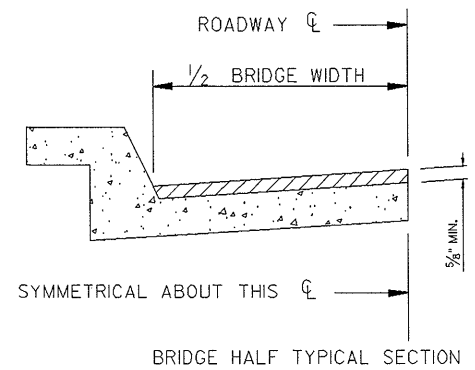


# PAVEMENT SCHEDULE

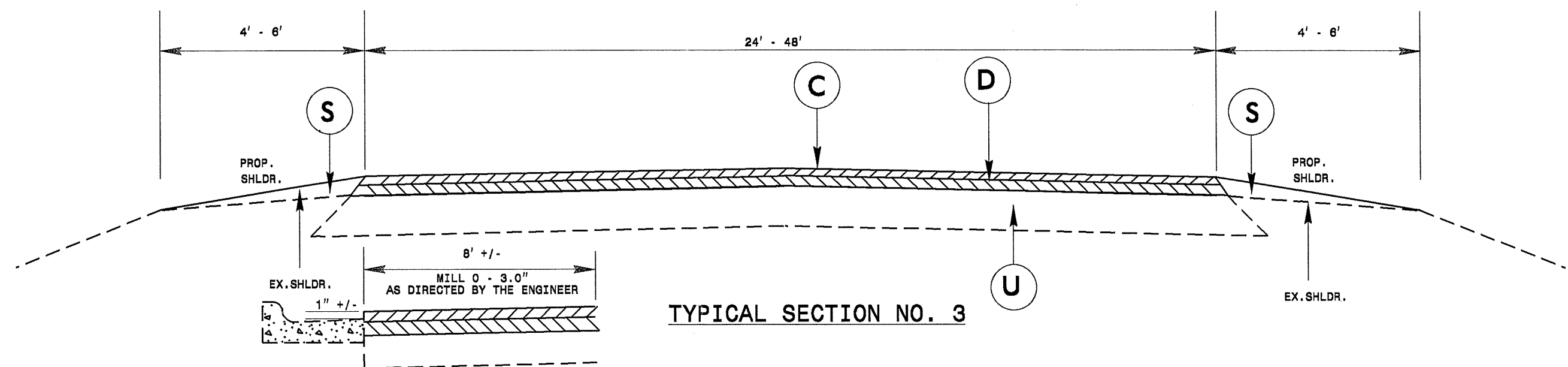
C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD., IN EACH OF 2 LIFTS
S	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V	PROP 1.5" MILLING



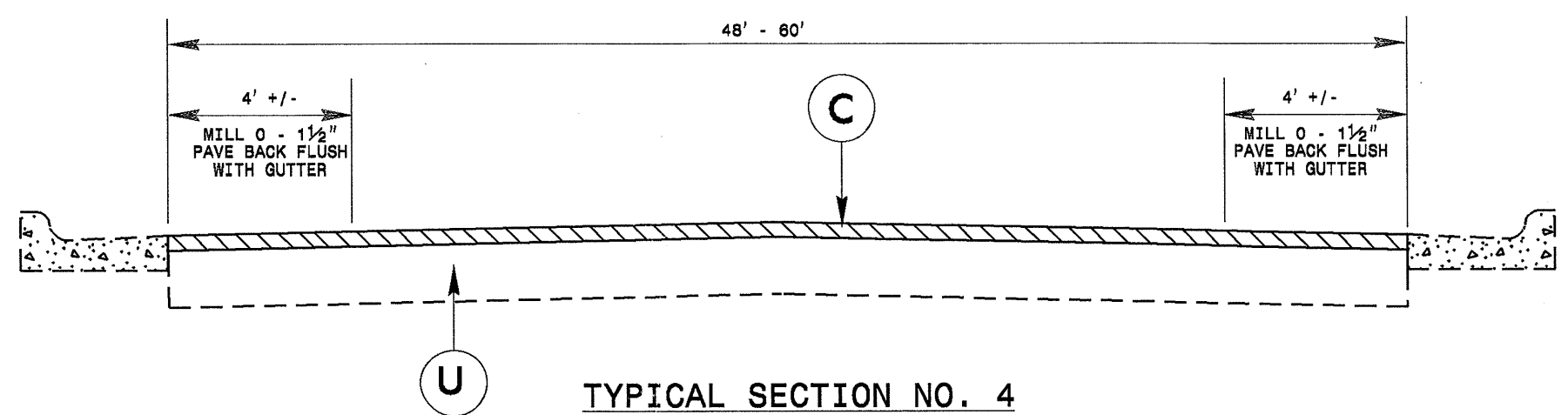
**PATCHING EXISTING PAVEMENT**



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.



**TYPICAL SECTION NO. 3**

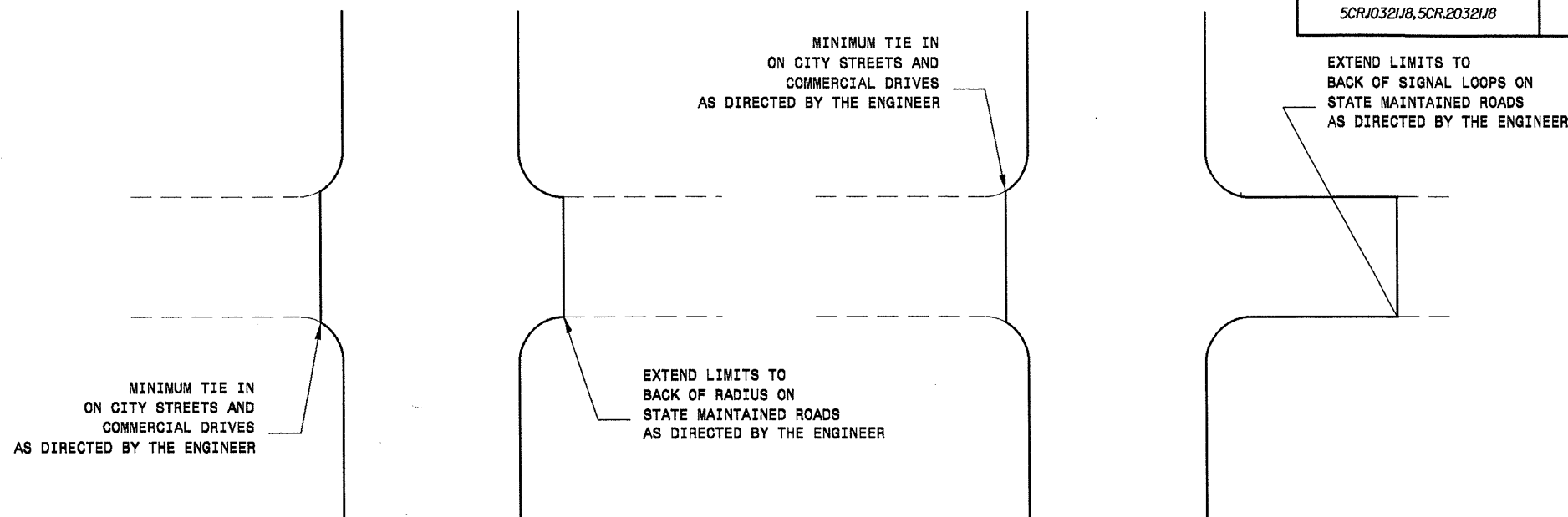


**TYPICAL SECTION NO. 4**

# PAVEMENT SCHEDULE

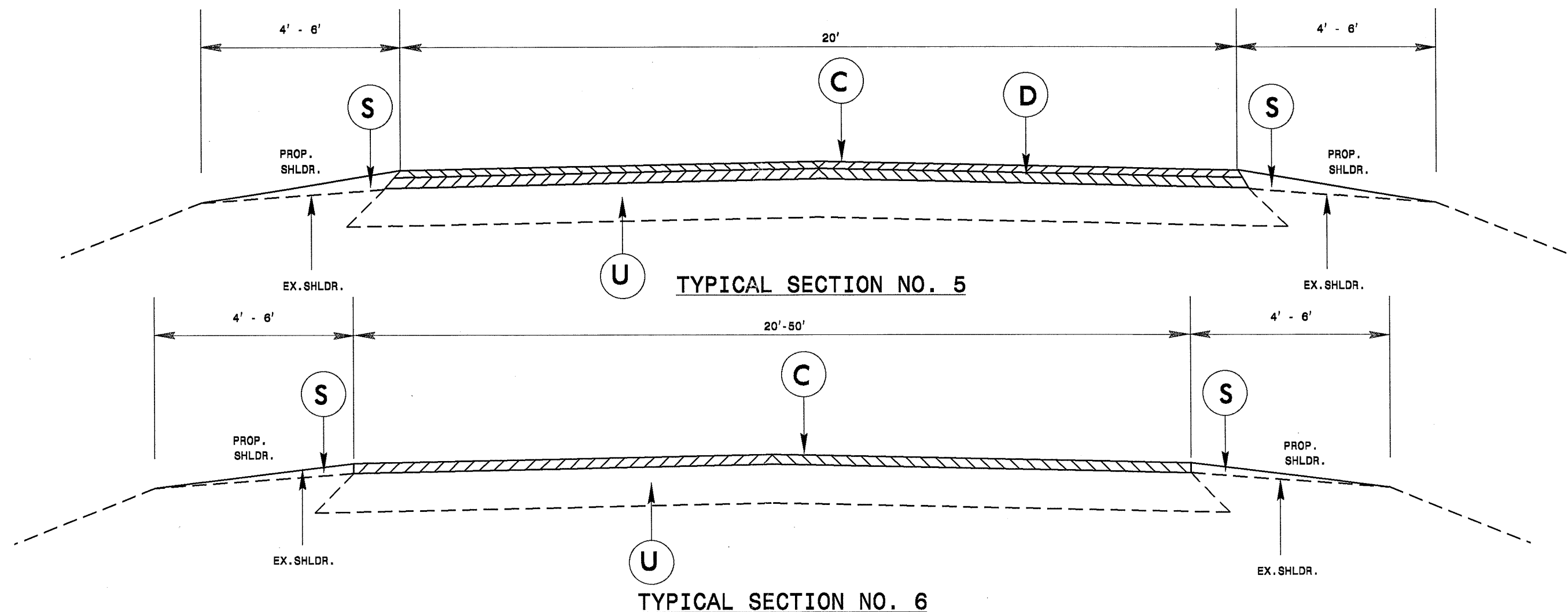
C	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD., IN EACH OF 2 LIFTS
S	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V	PROP 1.5" MILLING

PROJECT REFERENCE NO. 5CR1032118, 5CR.2032118	SHEET NO. 4
--	----------------



DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES



TYPICAL SECTION NO. 6

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT ALLOWED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	BORROW CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1 1/2" MILLING SY	0" TO 1 1/2" MILLING SY	0" TO 3" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	INTER-MEDIATE COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	SEED & MULCHING AC	INDUCTIVE LOOP LF
5CR.10321.18	Durham	1	NC-751	FROM BEG. THREE LANE SECTION TO CHATHAM CO. LINE	1	NO	YES	2.08	24		310	75	3.16		3,000		1,000	2,487		2,825	276	2,000			2.50	500
TOTAL FOR MAP NO. 1								2.08			310	75	3.16		3,000		1,000	2,487		2,825	276	2,000			2.50	500
TOTAL FOR PROJ NO. 5CR.10321.18								2.08			310	75	3.16		3,000		1,000	2,487		2,825	276	2,000			2.50	500
5CR.20321.18	Durham	2	SR 1959 (MIAMI BLVD)	FROM I-40 TO NC-54	2	NO	YES	0.8	55					25,813						2,282	137	400				800
TOTAL FOR MAP NO. 2								0.8						25,813						2,282	137	400				800
		3	SR 1811 (SHERRON ROAD)	FROM END OF CURB EAST OF KAREN DRIVE TO START OF CURB AND GUTTER WEST OF NC 98	3	NO	YES	2.26	24	150	1,603	105	4.10			1,900	1,700		5,336	3,135	439	1,800	8	2	3.16	
		"	"	FROM START OF CURB AND GUTTER WEST OF NC 98 TO NC 98	4	NO	YES	0.25	60	150					1,175		370		815	49	300				200	
TOTAL FOR MAP NO. 3								2.51		300	1,603	105	4.10		1,175	1,900	2,070		5,336	3,950	488	2,100	8	2	3.16	200
		4	SR 1905 (OLIVE BRANCH RD.)	FROM LEESVILLE RD. TO NC-98	6	NO	YES	3.85	20	300		50	7.70				500		3,933	236	750				5.39	
TOTAL FOR MAP NO. 4								3.85		300		50	7.70				500		3,933	236	750				5.39	
		5	SR 1903 (VIRGIL ROAD)	FROM KEMP RD. TO CARPENTER POND RD.	5	NO	YES	2.35	20	300		50	4.70				100		3,970	2,447	333	1,500			3.29	
TOTAL FOR MAP NO. 5								2.35		300		50	4.70				100		3,970	2,447	333	1,500			3.29	
		6	SR 1921 (LYNN ROAD)	FROM US 70 TO SR 1919	6	NO	YES	0.52	20	150		30	1.04				100		552	33	500	9	2	0.73	100	
TOTAL FOR MAP NO. 6								0.52		150		30	1.04				100		552	33	500	9	2	0.73	100	
		7	SR 1919 (LYNN ROAD)	FROM SR 1921 TO NC 98	6	NO	YES	0.93	20	150		30	1.86				100		987	59	1,000	5			1.30	
TOTAL FOR MAP NO. 7								0.93		150		30	1.86				100		987	59	1,000	5			1.30	
TOTAL FOR PROJ NO. 5CR.20321.18								10.96		1,200	1,603	265	19.40	25,813	1,175	1,900	2,870		9,306	14,151	1,286	6,250	22	4	13.87	1,200
GRAND TOTAL								13.04		1,200	1,913	340	22.56	25,813	4,175	1,900	3,870	2,487	9,306	16,976	1,562	8,250	22	4	16.37	1,700

### THERMOPLASTIC AND PAINT QUANTITIES

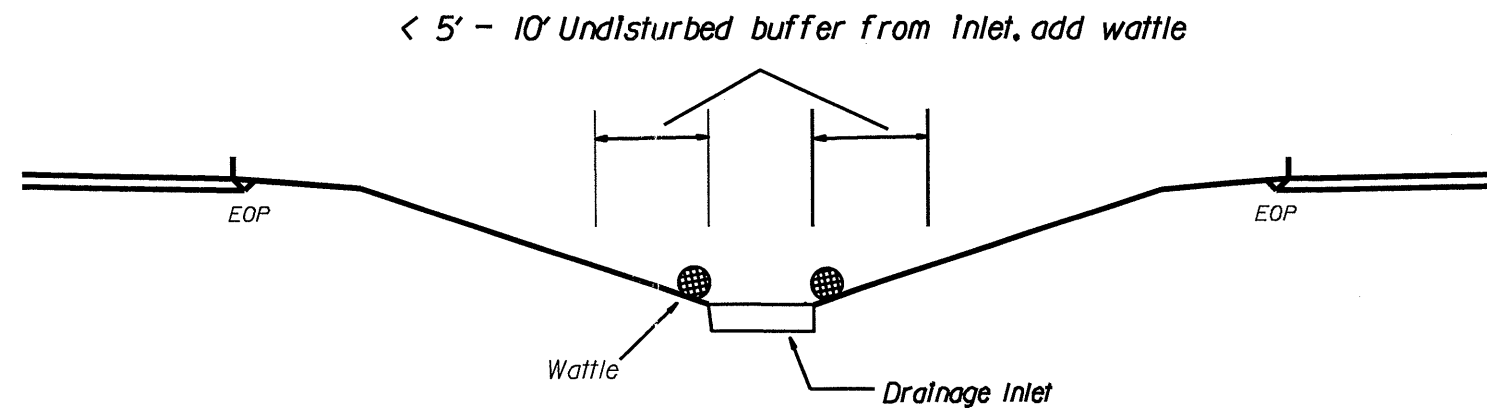
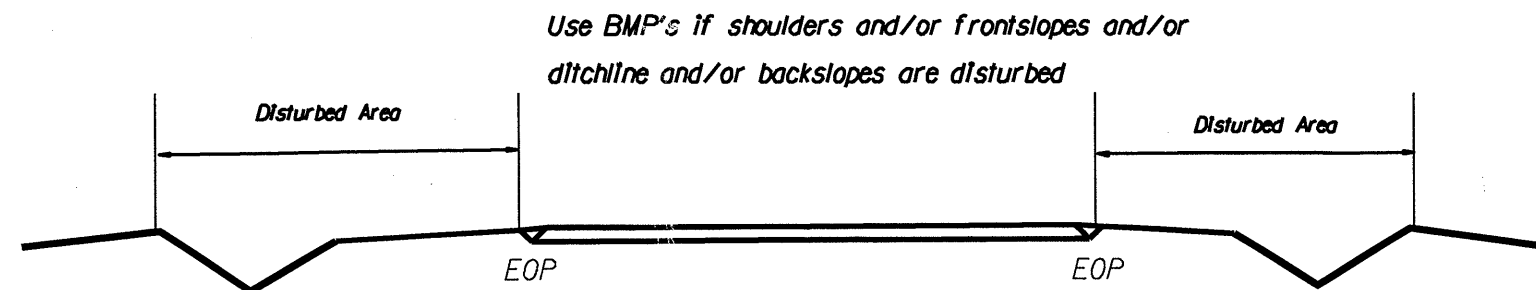
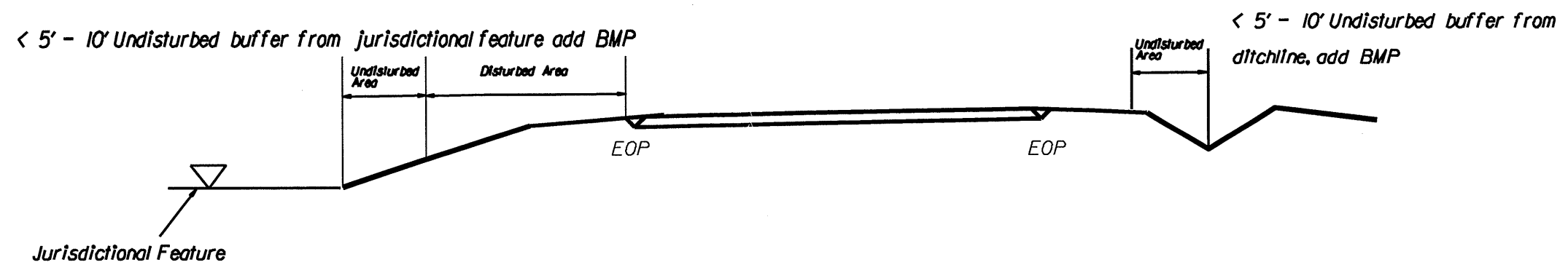
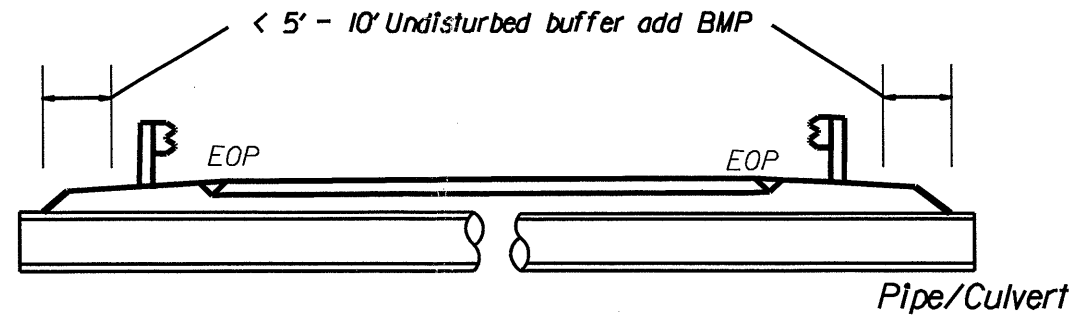
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4685000000-E		4686000000-E		4695000000-E		4697000000-E		4710000000-E		4725000000-E				4770000000-E		4805000000-N		4810000000-E		4835000000-E		4845000000-N				4850000000-E	4875000000-N	4900000000-N		4905000000-N
					4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	8" X 120 M YELLOW THERMO	24" X 120 M WHITE THERMO	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	4" WHITE COLD APPLIED PLASTIC, TYPE III	COLD APPLIED PLASTIC LEFT ARROW, TYPE III	4" WHITE PAINT	4" YELLOW PAINT	24" WHITE PAINT	PAINT LT ARROW	PAINT STR ARROW	PAINT RT ARROW	PAINT STR & RT ARROW	4" LINE REMOVAL	REML OF PVMT MRKG SYMBOLS & CHARACTERS	CRYSTAL & RED MARKERS	YELLOW & YELLOW MARKERS	SNOW PLOWABLE MARKERS					
5CR.10321.18	Durham	1	NC-751	FROM BEG. TWO LANE SECTION TO CHATHAM CO. LINE	22,381		22,381	790	900			50	17	5	5																			196	
TOTAL FOR MAP NO. 1					22,381		22,381	790	900			50	17	5	5																		196		
TOTAL FOR PROJ NO. 5CR.10321.18					22,381		22,381	790	900			50	17	5	5																		196		
5CR.20321.18	Durham	2	SR 1959 (MIAMI BLVD)	FROM I-40 TO NC-54		1,000	10,560	4,224				150	16	6	3	3	300	2	4,224	11,560	150	16	3	6	3	300	1	250	106						
TOTAL FOR MAP NO. 2						1,000	10,560	4,224				150	16	6	3	3	300	2	4,224	11,560	150	16	3	6	3	300	1	250	106						
		3	SR 1811 (SHERRON ROAD)	FROM END OF CURB EAST OF KAREN DRIVE TO START OF CURB AND GUTTER WEST OF NC 98	24,318		21,406	850				4	4						25,168	21,406								70	169						
		"	"	FROM START OF CURB AND GUTTER WEST OF NC 98 TO NC 98	2,690		2,400	2,640			505	212	55	6	3	7	3		5,330	2,400								75	75						
TOTAL FOR MAP NO. 3					27,008		23,806	3,490			505	212	55	10	7	7	3		30,498	23,806								145	244						
		4	SR 1905 (OLIVE BRANCH RD.)	FROM LEESVILLE RD. TO NC-98	41,426		25,410					36																				289			
TOTAL FOR MAP NO. 4					41,426		25,410					36																				289			
		5	SR 1903 (VIRGIL ROAD)	FROM KEMP RD. TO CARPENTER POND RD.	25,286		18,612					24							25,286	18,612															
TOTAL FOR MAP NO. 5					25,286		18,612					24							25,286	18,612															
		6	SR 1921 (LYNN ROAD)	FROM US 70 TO SR 1919	5,595		3,432		75			31																				39			
TOTAL FOR MAP NO. 6					5,595		3,432		75			31																				39			
		7	SR 1919 (LYNN ROAD)	FROM SR 1921 TO NC 98	10,007		6,138	150	213			24	4															10	70						
TOTAL FOR MAP NO. 7					10,007		6,138	150	213			24	4															10	70						
TOTAL FOR PROJ NO. 5CR.20321.18					109,322	1,000	87,958	7,864	288	505	212	320	30	13	10	6	300	2	60,008	53,978	150	16	3	6	3	300	1	405	748						
GRAND TOTAL					131,703	1,000	110,339	8,654	1,188	505	212	370	47	18	15	6	300	2	60,008	53,978	150	16	3	6	3	300	1	405	748			196			
GRAND TOTAL					132,703		118,993		1,188		717			86					113,986				28					1,153							

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence, or Hardened Aggregate.

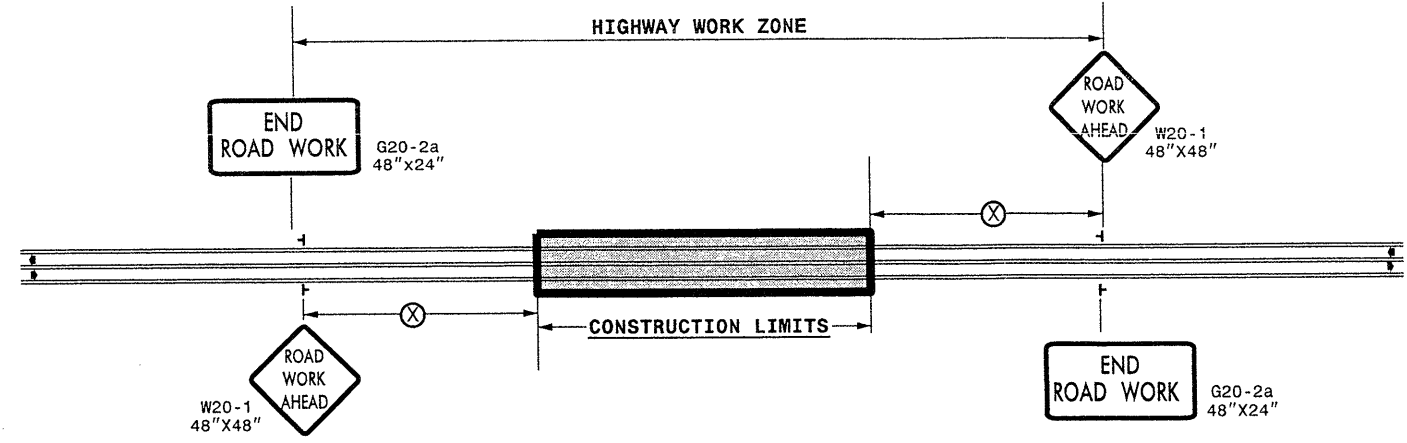
### EROSION CONTROL DETAIL

DATE: 1-11-11	EC-11/0001.11
PROJECT: 5CR.10321.18	5CR.20321.18
DESIGNED BY: [blank]	CHECKED BY: [blank]
DRAWN BY: [blank]	DATE: 1-11-11



NOT TO SCALE

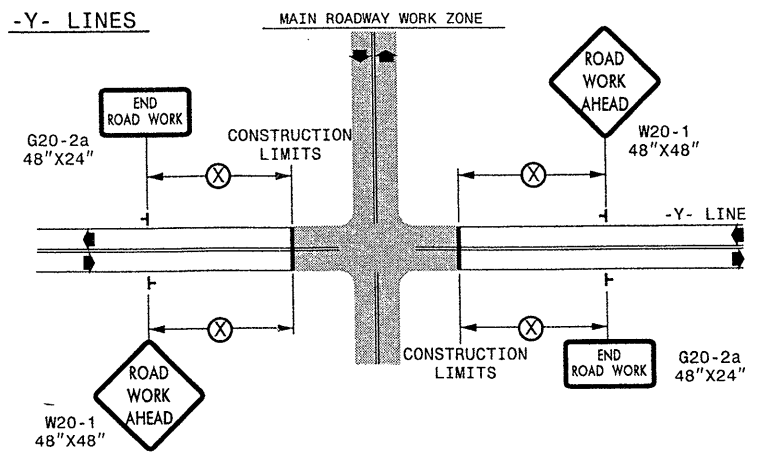
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
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.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* 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**

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

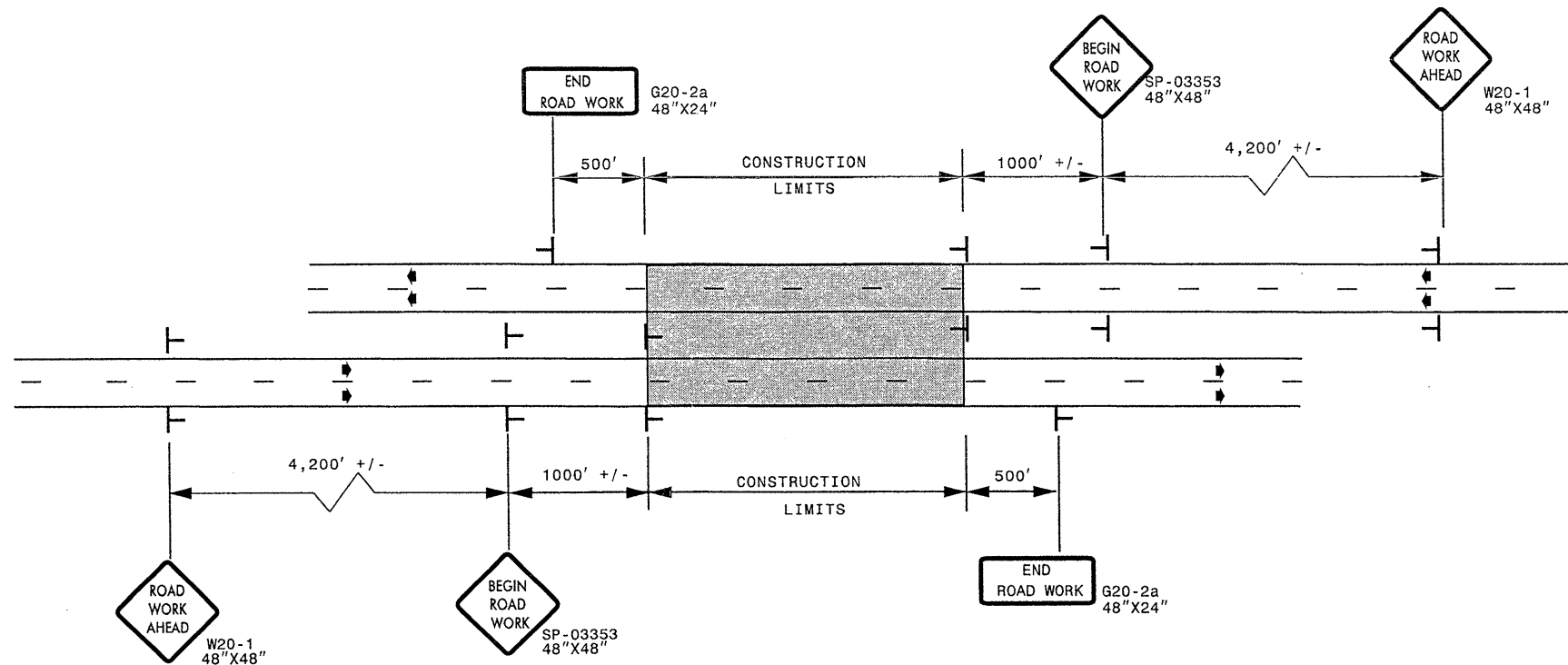
APPROVED: _____ DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
SEAL	SCALE: NONE	REVISIONS
	DATE: _____	7-98 10/01
	DWG. BY: _____	10-98 03/04
	DESIGN BY: _____	01/01 11/04
REVIEWED BY: _____	CADD FILE	

03-JAN-2011 02:29 \\DOT\DF\SR001\01\_CADD\PS-WZ\TCCC\TMU\WZ\TC\_Resur-facing\2011\Centr\2011\Div05\C202712A-B\_5C.10321.18x2\_Durham.nc751.m\C202712A-B\_5C.10321.18x2\_Durham.nc751.m\Stationary.dgn

# ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
5CR.10321.18	TCP-2
5CR.20321.18	

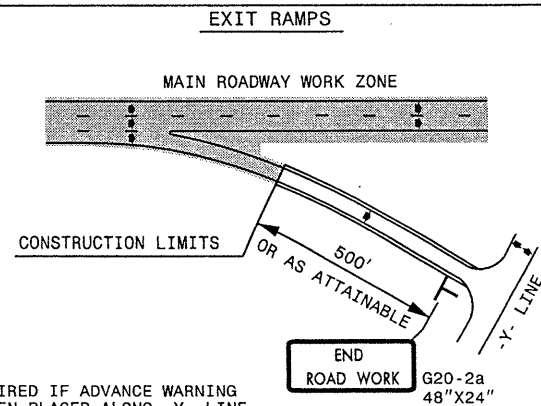
## DETAIL A



LEGEND	
	STATIONARY SIGN
→	DIRECTION OF TRAFFIC FLOW

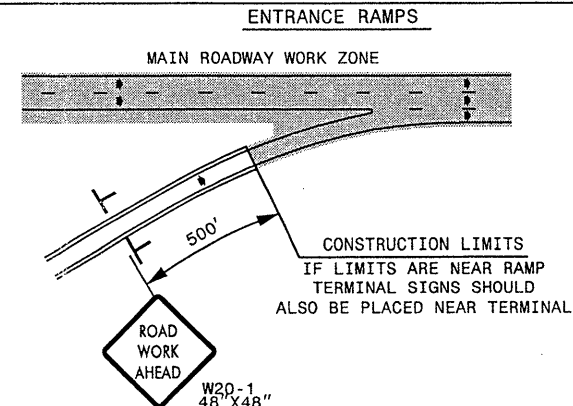
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

## DETAIL B

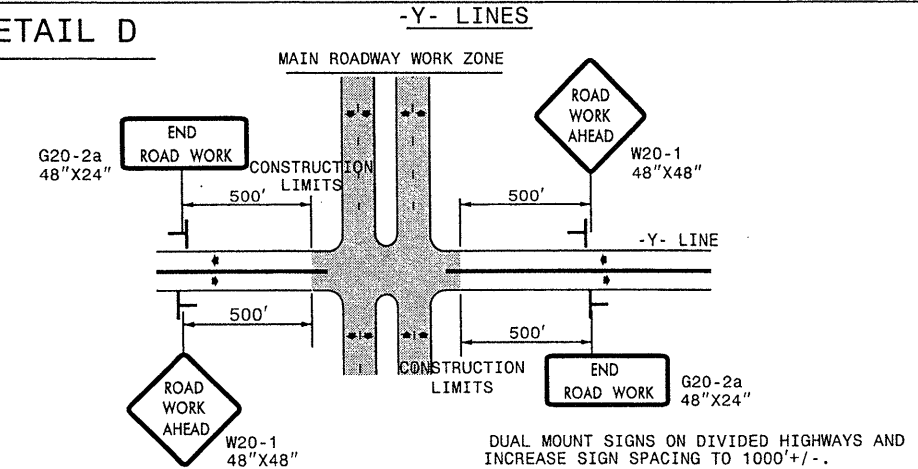


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

## DETAIL C



## DETAIL D



## GENERAL NOTES

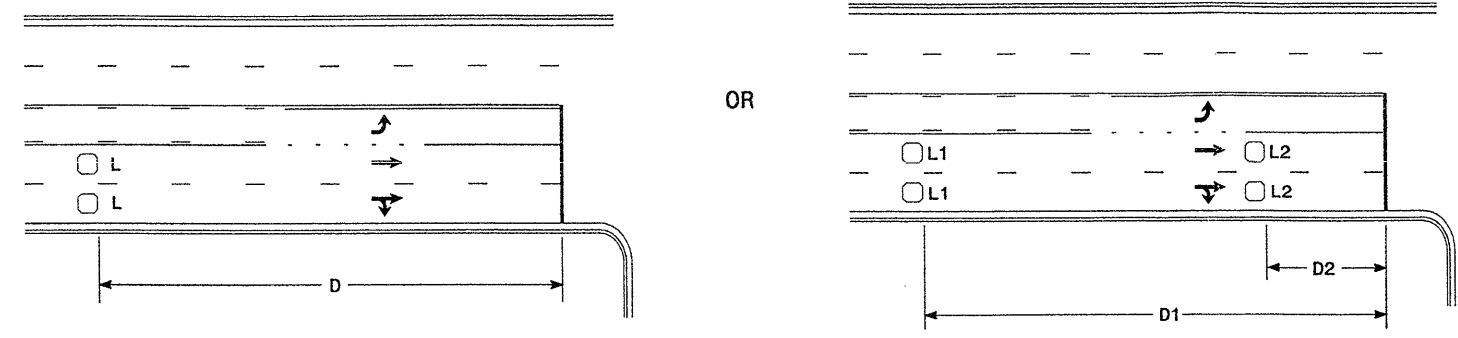
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED: _____ DATE: _____	ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)	
	SCALE: NONE	REVISIONS
	DATE: 8/03	03/04
	DWG. BY: JI	
	DESIGN BY: JI	
REVIEWED BY:		CAD FILE

03-JAN-2011 12:30 \\dot\dfs\p0101\groups\wztc\resurfacing\2010\resurfacing\2010\centr\01\div05\202712A-B\_5C\10321\18x2-Durham.NC751-freeways\_4lanes\_or\_greater\_stationary.dgn



### 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

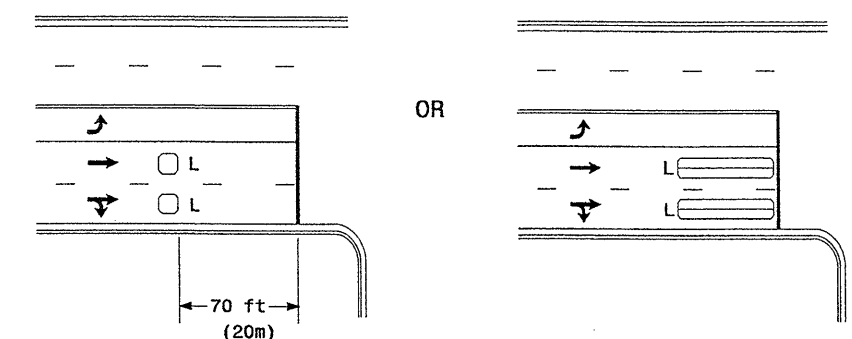
Volume Density Operation

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

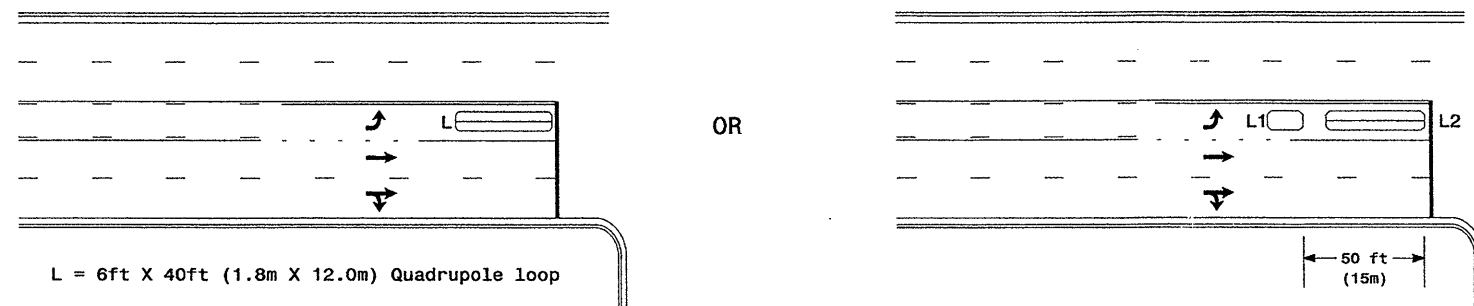
### Low Speed Detection [≤35 mph (56 km/hr)]



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

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

### Left Turn Lane Detection



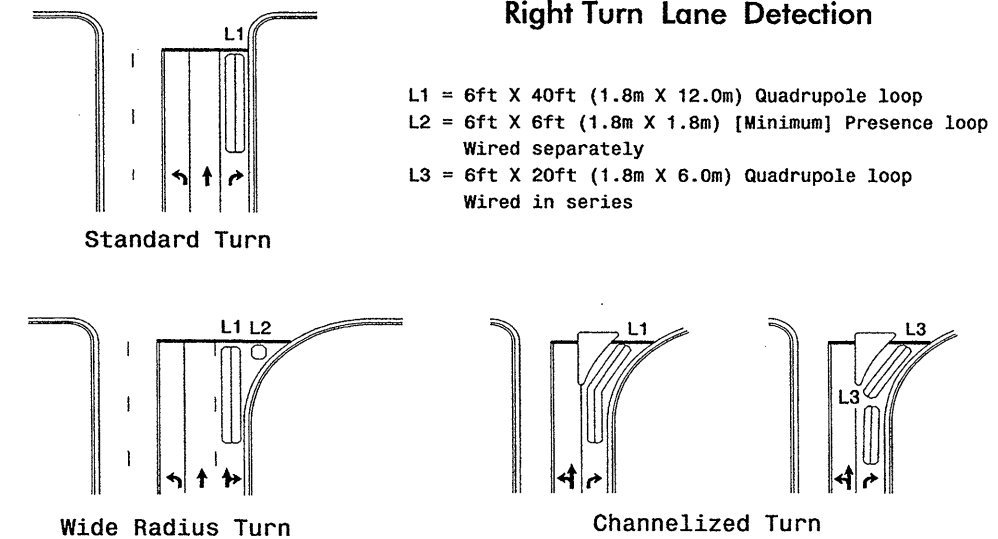
L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Presence Loop Detection

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

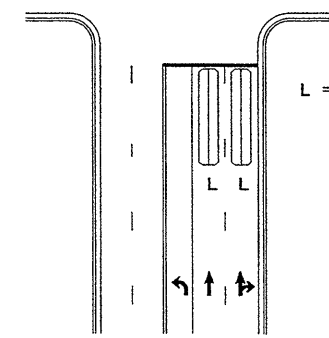
Queue Loop Detection

### Right Turn Lane Detection



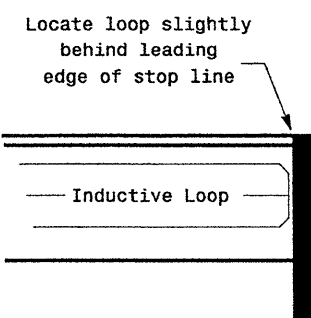
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop  
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop  
Wired separately  
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop  
Wired in series

### 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



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

	<b>Typical Loop Locations</b>		
	PLAN DATE: June 2006 PREPARED BY: P. L. Alexander	REVIEWED BY: REVIEWED BY:	
REVISIONS: Revise pavement markings		INIT. DATE: DATE:	SIGNATURE: [Signature] DATE:
SIG. INVENTORY NO.			

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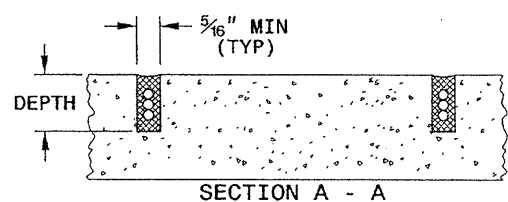
11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

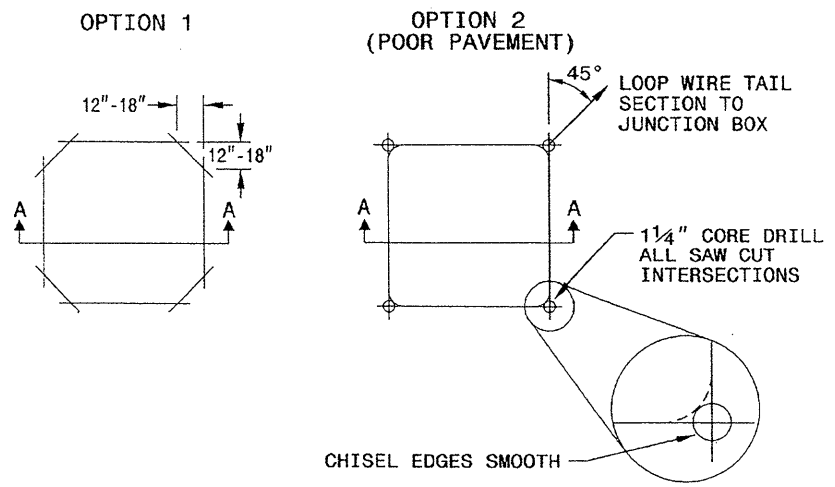
**SAW SLOT DEPTH CHART**

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

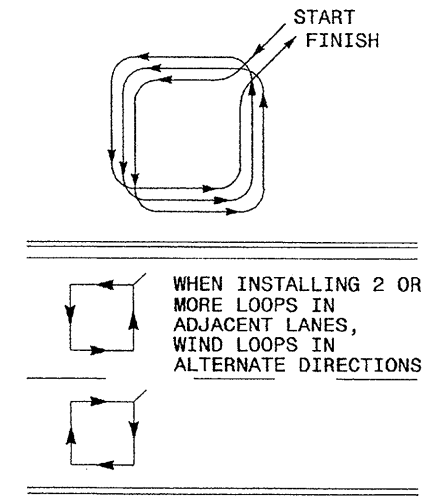


**CONVENTIONAL 4-SIDED LOOP**

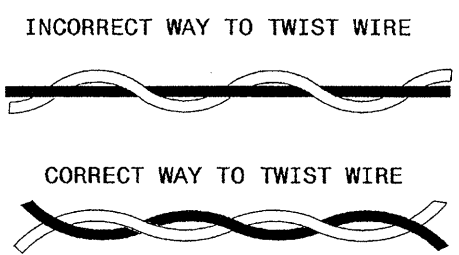
**SAW CUT OPTIONS**



**LOOP WINDING METHOD**



**LOOP WIRE TWISTING METHOD**

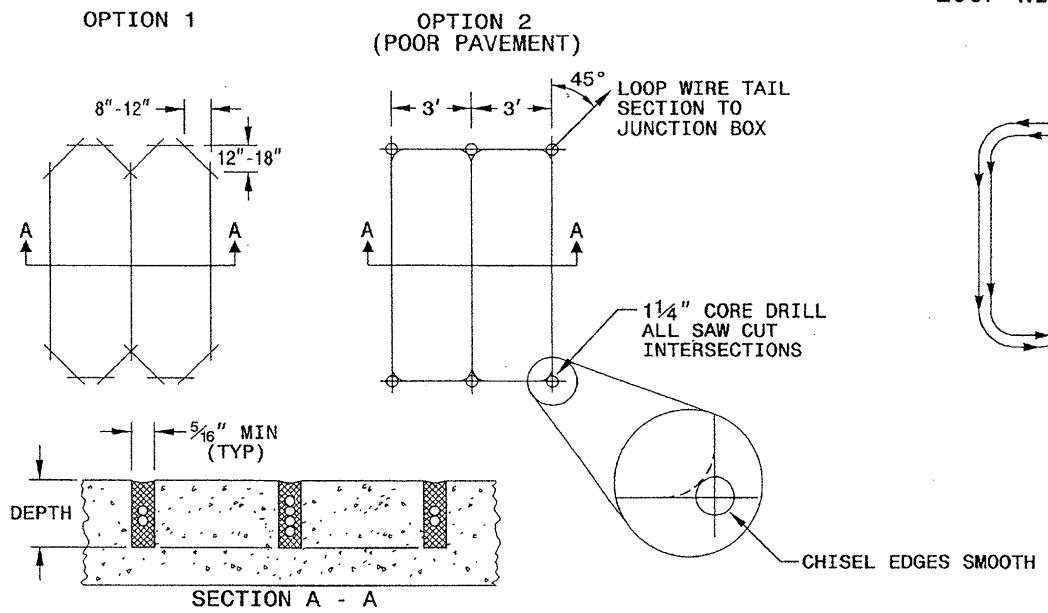


**NOTES**

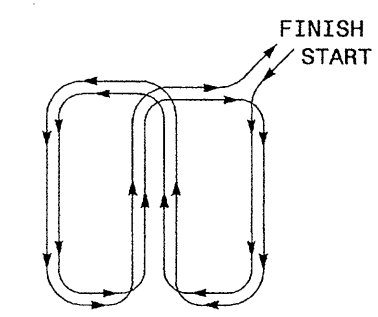
1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

**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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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

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Prepared in the Offices of:

Intelligent Transportation Systems & Signals Unit  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16286 MICHAEL J. DEAN

*Michael J. Dean* 4/24/08  
SIGNATURE DATE

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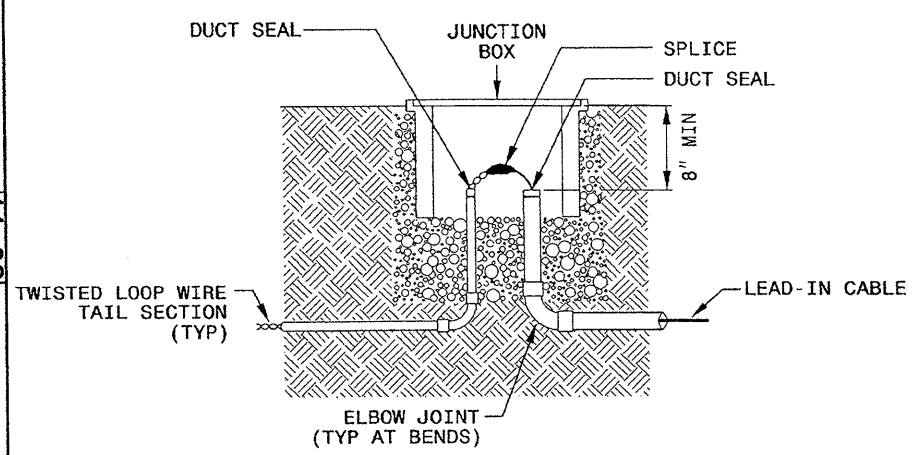
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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 LOOP WIRE DETAILS

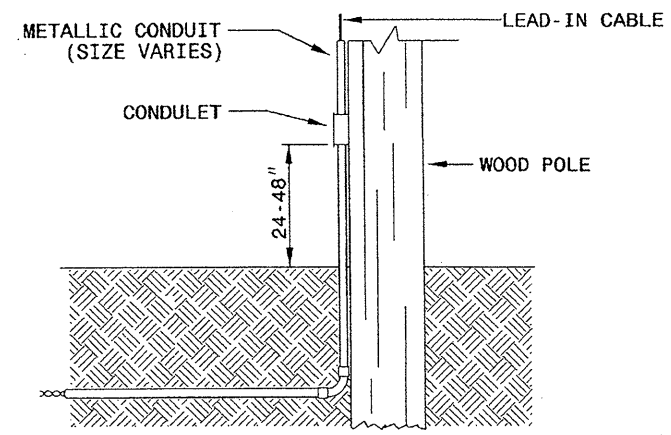
SHEET 2 OF 3  
**1725D01**

**LOOP WIRE SPLICE POINT DETAILS**

**LOOP WIRE AT JUNCTION BOX**



**LOOP WIRE AT POLE**

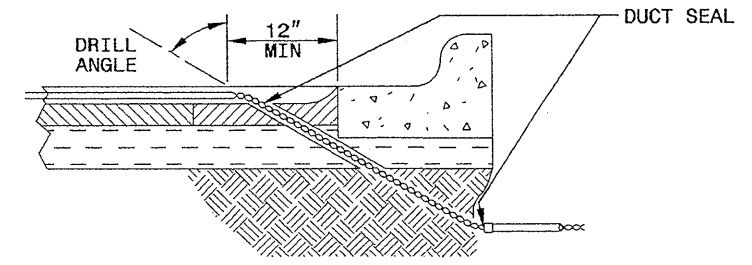


**NOTE**

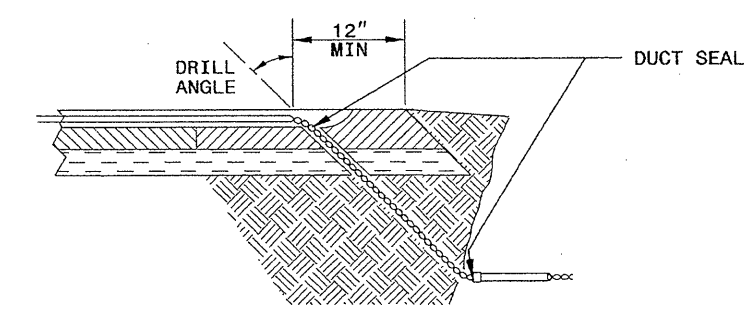
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

**LOOP WIRE PAVEMENT EDGE DETAILS**

**LOOP WIRE AT CURB & GUTTER SECTION**



**LOOP WIRE AT PAVEMENT SECTION**



**NOTES**

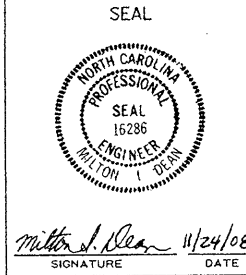
- DO NOT EXCAVATE UNDER CURB AND GUTTER SECTIONS FOR CONDUIT INSTALLATION.
- TWIST LOOP WIRE TAIL SECTIONS FROM WHERE LOOP WIRE TAIL LEAVES SAW CUT TO JUNCTION BOX, INCLUDING THROUGH CONDUIT.
- BEFORE SEALING LOOPS, INSTALL DUCT SEAL WHERE LOOP WIRE TAIL SECTION LEAVES SAW CUT IN PAVEMENT AND AT ENTRANCE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



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Signature: *Milton A. Dean*  
 Date: 11/24/08

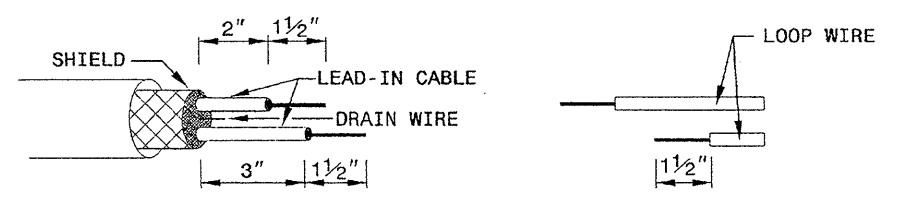
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 RALEIGH, N.C.

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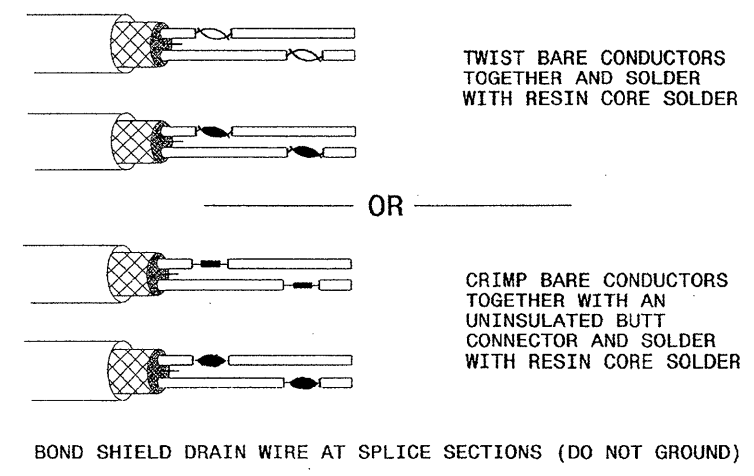
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

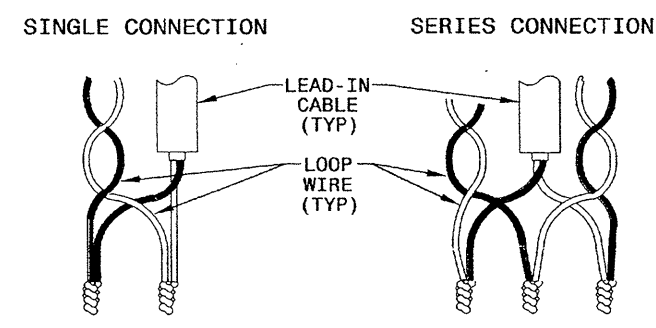
**STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE**



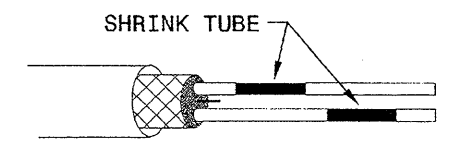
**STEP 2. CONNECT AND SOLDER**



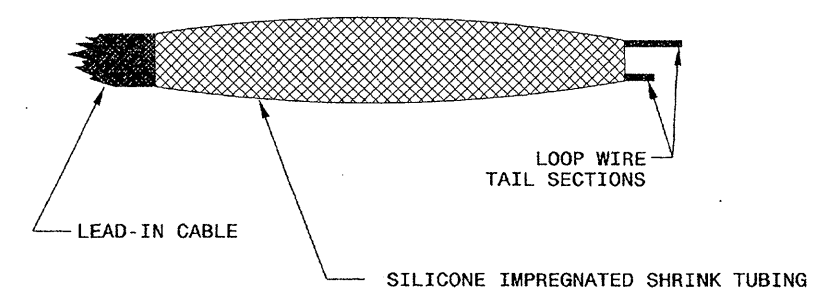
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



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



**STEP 4. ENVIRONMENTALLY PROTECT SPLICE**



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ENGLISH DETAIL DRAWING FOR  
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 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
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