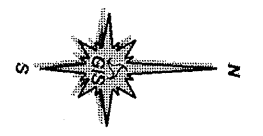
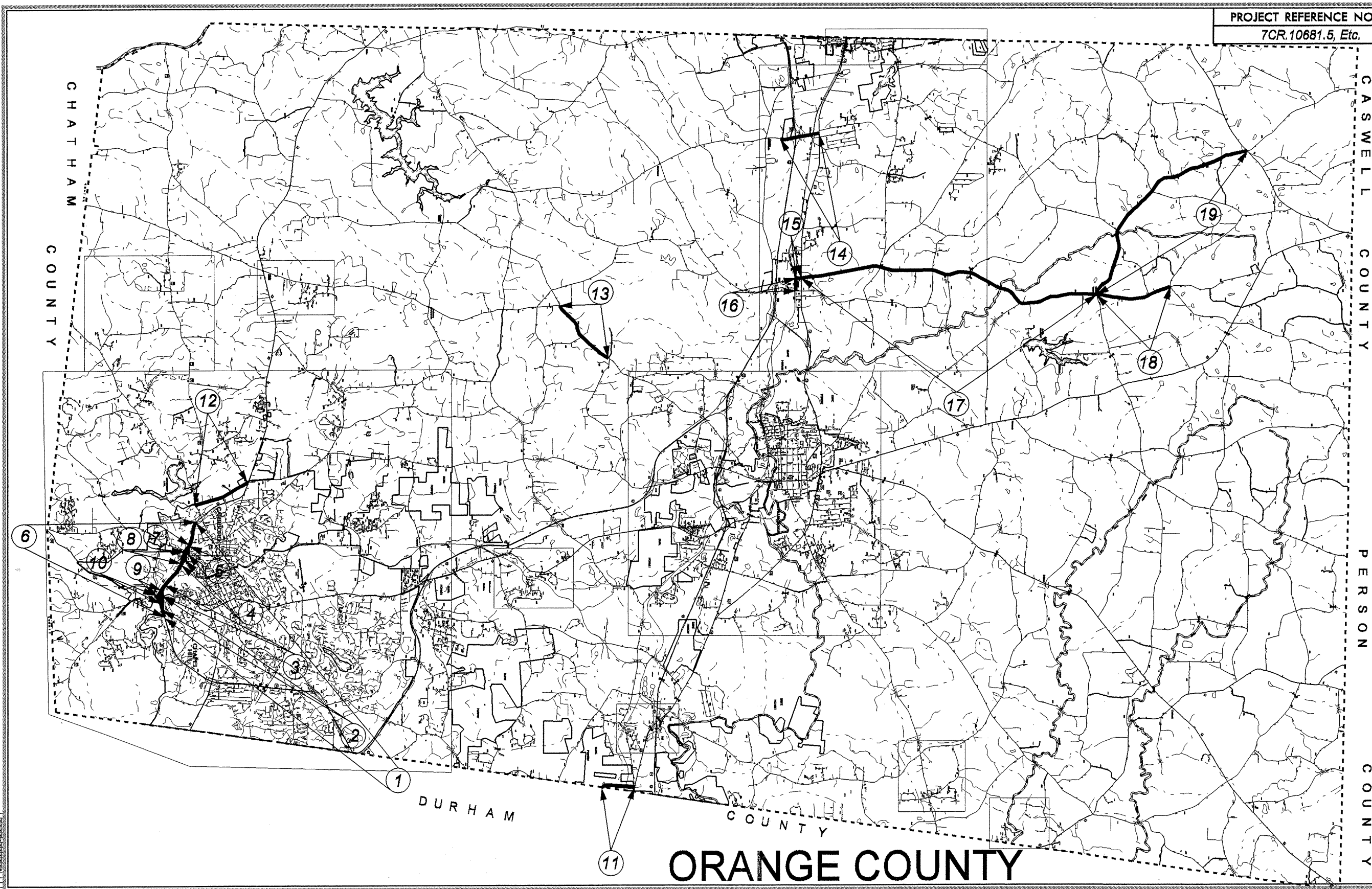


C201690

PROJECT REFERENCE NO.
7CR.10681.5, Etc.

SHEET NO.
1 of 11

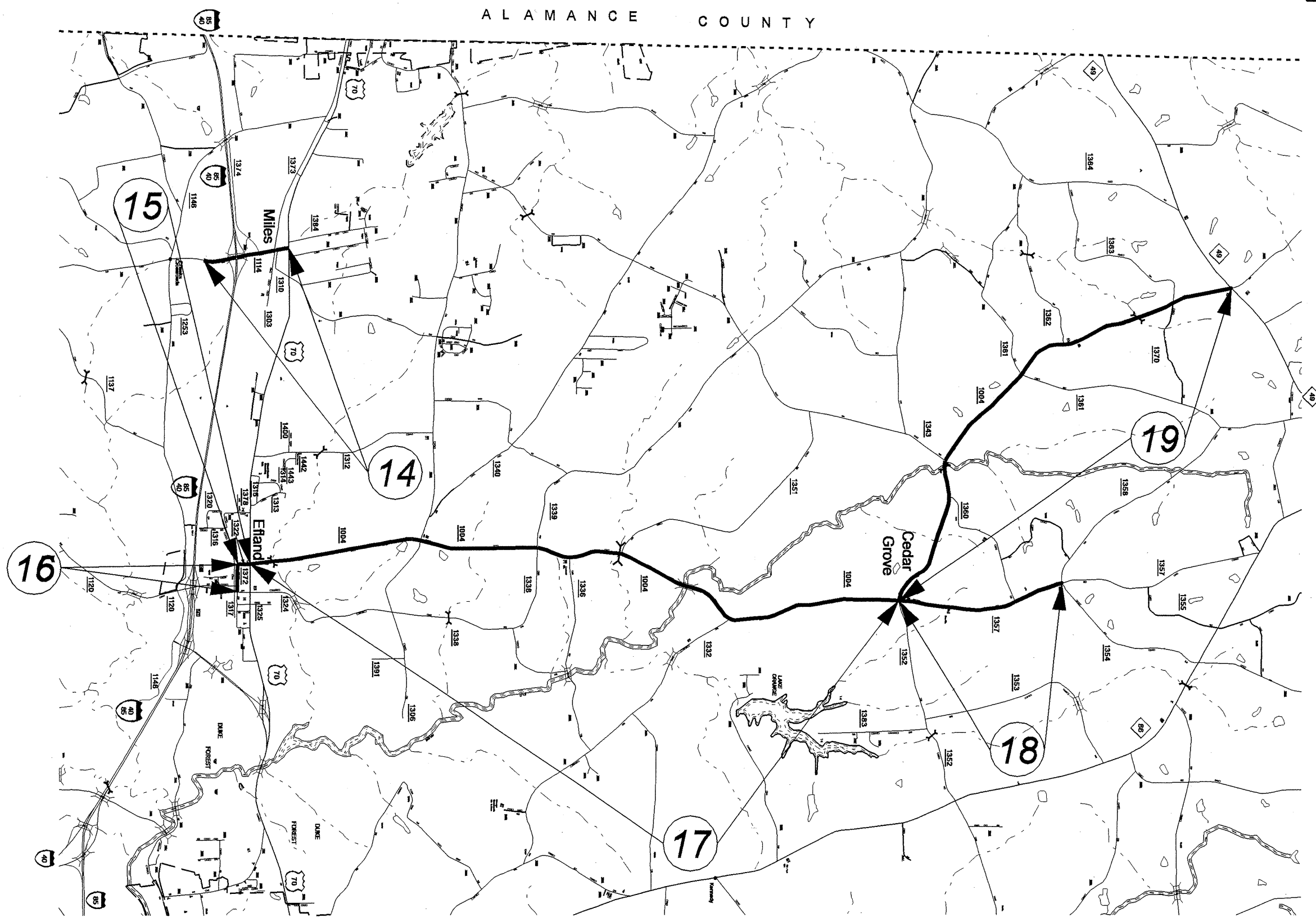
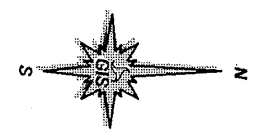
7CR.20681.5



COPIES OF THIS MAP ARE AVAILABLE
TO THE PUBLIC AT A NOMINAL COST.
N.C. DEPARTMENT OF TRANSPORTATION
OPERATIONS DIVISION
100 SOUTH PARKWAY
RALEIGH, N.C. 27609

ORANGE COUNTY

ALAMANCE COUNTY

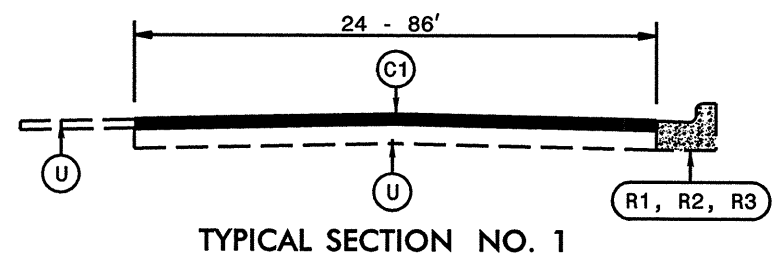


ORANGE COUNTY

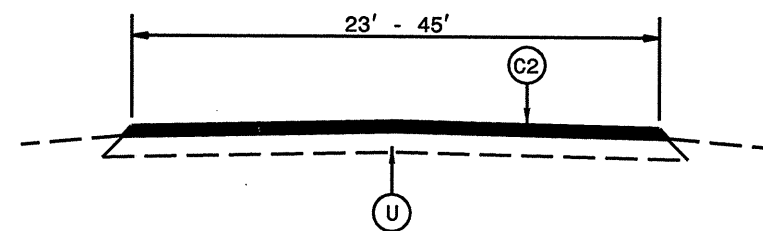
COUNTY OF ORANGE, NORTH CAROLINA
 TO THE PUBLIC RECORDS OF ORANGE COUNTY, NORTH CAROLINA
 FOR THE YEAR 1988
 THE FOLLOWING IS A TRUE AND CORRECT COPY OF THE ORIGINAL RECORD AS FILED FOR RECORDATION IN THE PUBLIC RECORDS OF ORANGE COUNTY, NORTH CAROLINA, ON 11/15/88.
 DEPUTY CLERK OF SUPERIOR COURT
 ORANGE COUNTY, NORTH CAROLINA

SUMMARY OF QUANTITIES

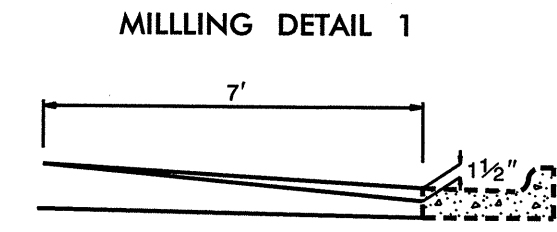
PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	3" MILLING SY	1 1/2" MILLING SY	8" MILLING SY	0" TO 1.25" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	INTERMEDIATE COURSE, I19.0B TONS	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	RETROFITTING EXISTING WHEELCHAIR RAMP EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	SEED & MULCHING AC	RESIDENTIAL SEEDING AC	TRENCHING (UNPAVED) (1) (2") LF	PULL BOX (STANDARD) EA	INDUCTIVE LOOP SAW CUT LF	LEAD-IN CABLE (18 2) LF	LEAD-IN CABLE (18 4) LF							
7CR.20681.5	Orange	12	SR 1937 (OLD FAYETTEVILLE ROAD)	FROM SR 1005 (JONES FERRY ROAD) TO JOINT SOUTH OF NC 54	6	0.08	28	33					315						92.33		6		13		5															
					7	0.57	28														657.86		39																	
					6	0.38	21															349.34		21																
					6	0.12	22-34																138.50		8															
TOTAL FOR MAP NO. 12						1.15		33		0	0	0	0	0	0	0	0	0	1,238.03		74		13		5															
"	"	13	SR 1006 (ORANGE GROVE ROAD)	FROM SR 1199 (TREEFARM ROAD) TO SR 1102 (DODSON CROSSROADS)	6	1.5	21	88											1,340.02		80																			
					8	0.1	22-23	18	0.82	200												131.50		2	8				0.37											
					8	0.09	22																128.13		8															
					8	0.08	26-44																	168.48		10														
					8	0.05	34-36																	88.55		5														
					8	0.03	44-63																	79.28		5														
					9	0.02	50-72																	60.00		4														
					8	0.05	44-50																	116.12		7														
					8	0.04	44																																	
					8	0.05	44-50																	116.12		7														
					8	0.01	60-63																	110.37		7														
					8	0.02	47-55																	50.39		3														
					9	0.01	50-57																	28.43		2														
					8	0.12	40-55																	281.64		17														
8	0.12	24-25																	145.62		9																			
8	0.01	36-50																	21.25		1																			
TOTAL FOR MAP NO. 14						0.8		18	0.82	200	0	0	0	0	489	0	0	34	1,521.88		2	93				0.37														
"	"	15	SR 1322 (FOREST AVENUE)	FROM SR 1324 (BROOKHOLLOW ROAD) TO SR 1372 (EFLAND CEDAR GROVE ROAD)	5	0.25	20												287.94		17																			
"	"	16	SR 1372 (EFLAND CEDAR GROVE ROAD)	FROM SR 1322 (FOREST AVENUE) TO US 70	5	0.1	20		0.1										119.18		7							0.05												
"	"	17	SR 1004 (EFLAND CEDAR GROVE ROAD)	FROM US 70 TO SR 1352 (CARR STORE ROAD)	5	0.01	21-25	190	6.23						350				11.40		1					2.00		1												
5	6.2				21															6,634.45		398																		
TOTAL FOR MAP NO. 17						6.23		190	6.23	0	0	0	0	0	350	0	0	0	6,707.16		403				2.00		1													
"	"	18	SR 1357 (EFLAND CEDAR GROVE ROAD)	FROM SR 1352 (CARR STORE ROAD) TO SR 1358 (MCDADE STORE ROAD)	5	1.53	20	60	1.53										1,537.39		92					0.50		0.24												
5	1.44				21	45	1.47														1,519.10		91					0		0										
5	0.03				21-22																	51.97		3																
"	"	19	SR 1004 (CARR STORE ROAD)	FROM SR 1357 (EFLAND CEDAR GROVE ROAD) TO SR 1343 (MILL CREEK ROAD)	5	3.19	21-22	103	1.55										3,499.52		210					1.00		0.55												
5	4.86					148	3.02	0	0	0	0	0	0	0	0	0	0	0	0	0	5,070.59		304					1		1										
TOTAL FOR PROJ NO. 7CR.20681.5						16.22		537	11.7	200	0	0	0	0	839	0	0	34	16,300.31	1,521.88	979	93	13		5	4	2													
GRAND TOTAL						22.144		547	15.7	555	667	69	315	26,687	3,119	31	61	34	26,939	1,522	1,623	93	16	25	15	1	6.21	2.15	50	1	1,200	50	50							



TYPICAL SECTION NO. 1

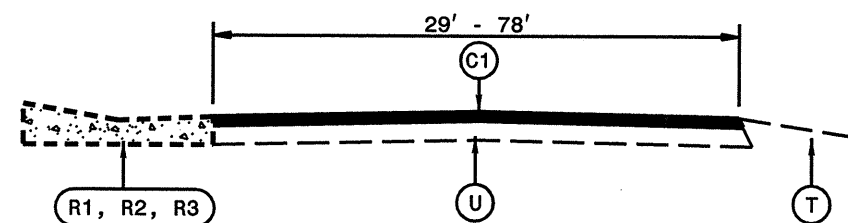


TYPICAL SECTION NO. 6

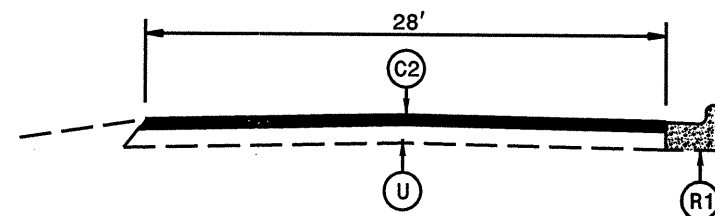


MILL EXISTING ASPHALT PAVEMENT 0-1 1/2" AT LOCATIONS AS DIRECTED BY THE ENGINEER

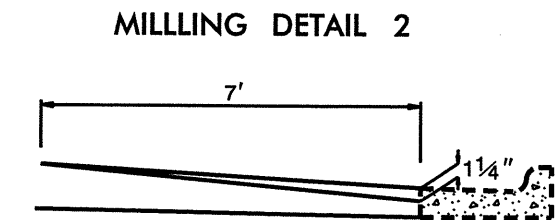
NOTE:
TO BE USED IN CONJUNCTION WITH
TS. NO. 1, 2, 3 ON MAP 1
T.S. NO. 1 ON MAP 3
T.S. NO. 1 ON MAP 4
T.S. NO. 4 ON MAP 5
T.S. NO. 2, 3 ON MAP 6
T.S. NO. 1 ON MAPS 8, 9, 10



TYPICAL SECTION NO. 2

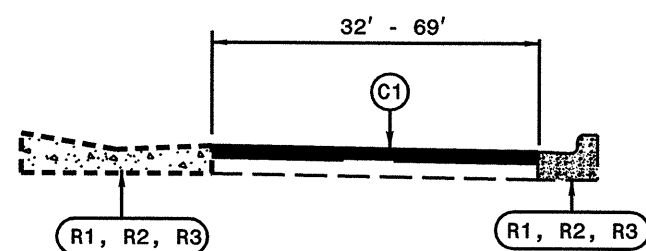


TYPICAL SECTION NO. 7

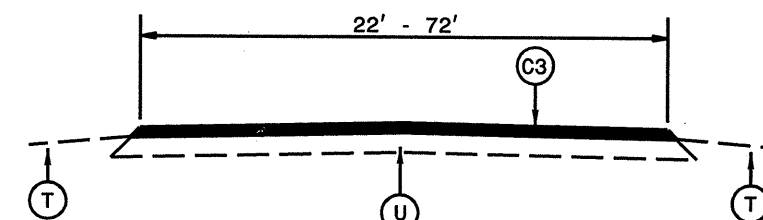


MILL EXISTING ASPHALT PAVEMENT 0-1 1/4" AT LOCATIONS AS DIRECTED BY THE ENGINEER

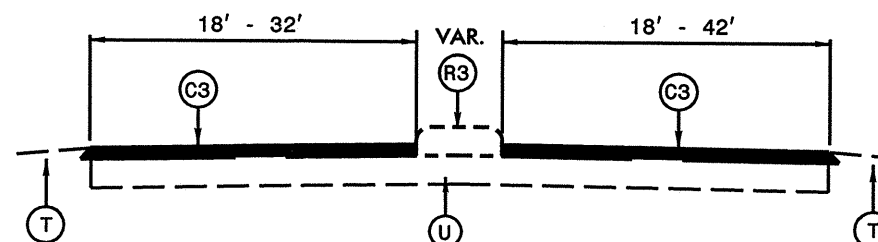
NOTE:
TO BE USED IN CONJUNCTION WITH
TS. NO. 7 ON MAP 12



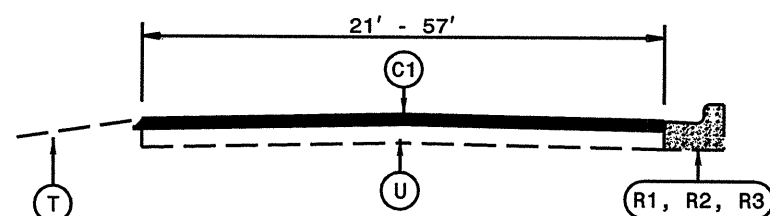
TYPICAL SECTION NO. 3



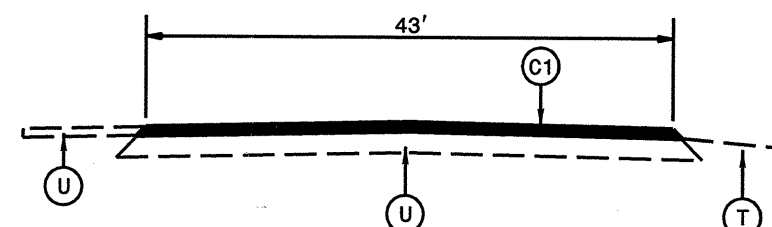
TYPICAL SECTION NO. 8



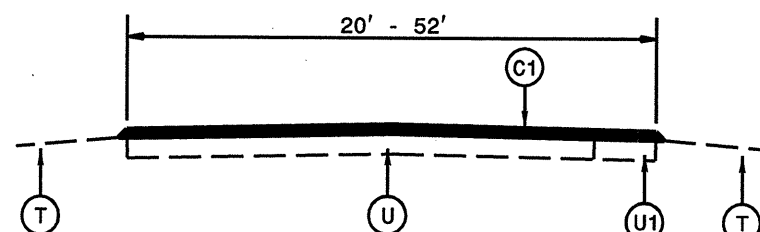
TYPICAL SECTION NO. 9



TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 10

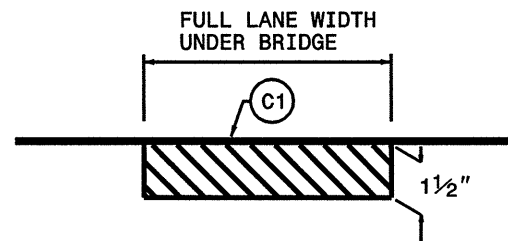


TYPICAL SECTION NO. 5

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD.	
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	
R1	EXISTING 2-6 CURB AND GUTTER	
R2	EXISTING EXPRESSWAY GUTTER	R3 EXISTING CONCRETE MONOLITHIC ISLAND
T	SHOULDER RECONSTRUCTION	
U	EXISTING PAVEMENT	
U1	EXISTING PAVED SHOULDER	

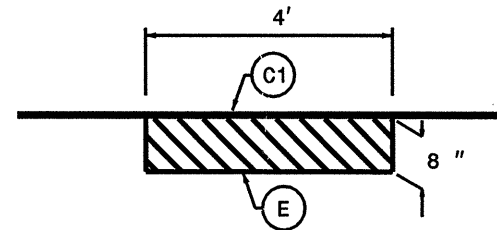
MILLING DETAIL 3



MILL EXISTING ASPHALT PAVEMENT 1 1/2" IN DEPTH, REPLACE WITH 1 1/2" SURFACE COURSE WHEN RESURFACING, AT LOCATIONS AS DIRECTED BY THE ENGINEER.

NOTE:
TO BE USED ON MAPS 1 & 6

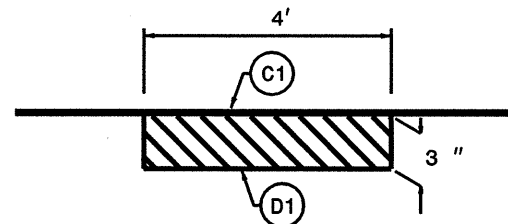
PATCHING DETAIL 6



DIG OUT EXISTING ASPHALT PAVEMENT 8" IN DEPTH, AT LOCATIONS AS DIRECTED BY THE ENGINEER.

NOTE:
TO BE USED IN CONJUNCTION WITH
TS. NO. 2-3 ON MAP 6

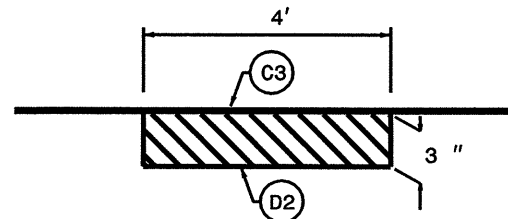
MILLING DETAIL 4



MILL EXISTING ASPHALT PAVEMENT 3" IN DEPTH, AT LOCATIONS AS DIRECTED BY THE ENGINEER.

NOTE:
TO BE USED IN CONJUNCTION WITH
TS. NO. 5 ON MAP 7 &
TS. NO. 1 ON MAP 9

MILLING DETAIL 5



MILL EXISTING ASPHALT PAVEMENT 3" IN DEPTH, AT LOCATIONS AS DIRECTED BY THE ENGINEER.

NOTE:
TO BE USED IN CONJUNCTION WITH
TS. NO. 8 ON MAP 14

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.		
C2	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 140 LBS. PER SQ. YD.		
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.		
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.		
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.		
E	PROP. APPROX. 8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.		
R1	EXISTING 2-6 CURB AND GUTTER		
R2	EXISTING EXPRESSWAY GUTTER	R3	EXISTING CONCRETE MONOLITHIC ISLAND
T	SHOULDER RECONSTRUCTION		
U	EXISTING PAVEMENT		
U1	EXISTING PAVED SHOULDER		

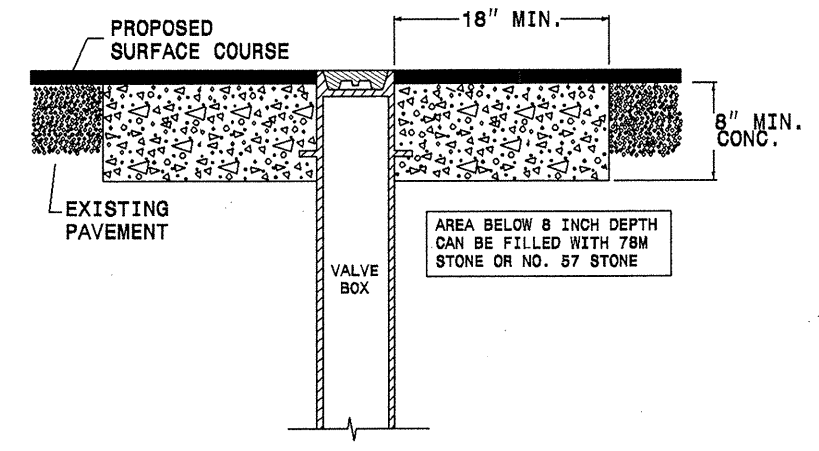
5/14/99

:SYTIME:*****

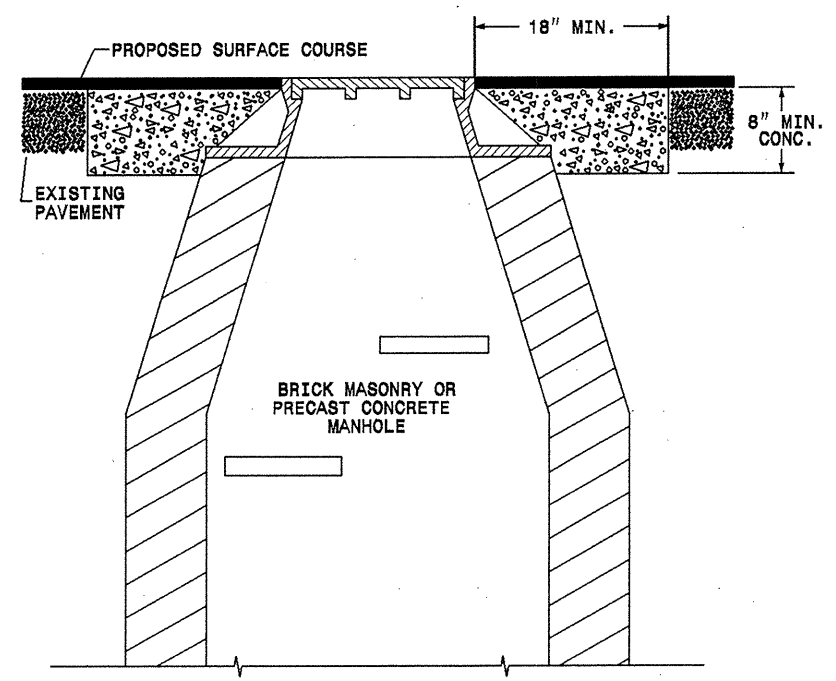
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10681.5, ETC	11	11

7CR.20681.5

STANDARD CONCRETE ENCASEMENT FOR MANHOLE & VALVE CASTINGS IN PAVEMENT
DETAIL DRAWING NO. 858.01

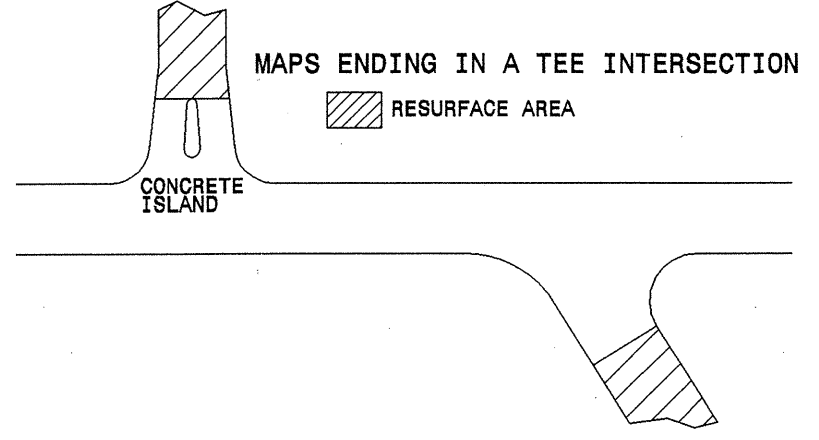


USE RAPID SET GROUT, MORTAR, OR CONCRETE
 CLASS B CONCRETE MAY BE USED WHEN ADJUSTMENTS
 ARE NOT IN THE TRAVEL LANE.

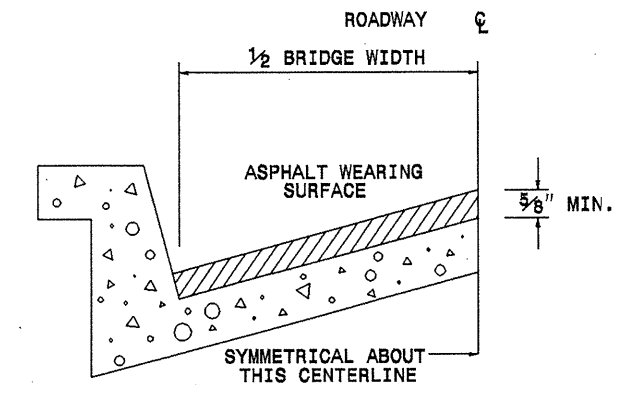
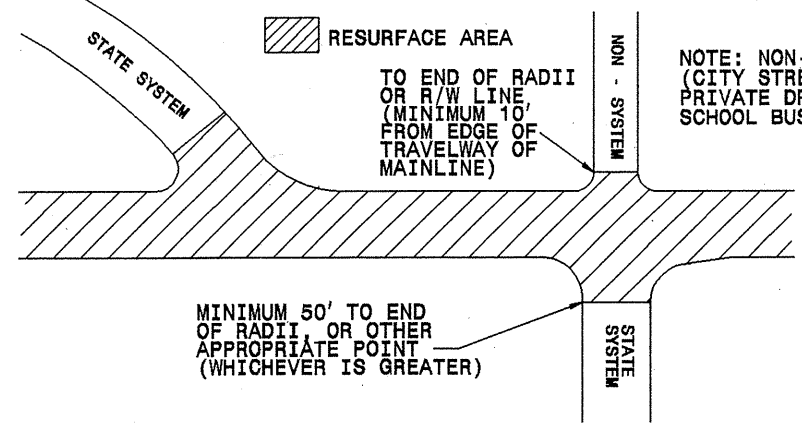


- NOTES:**
1. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
 2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
 3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
 4. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL BE USED

PAVING DETAIL 1
MAIN LINE IS NOT BEING RESURFACED



PAVING DETAIL 2
MAIN LINE IS BEING RESURFACED



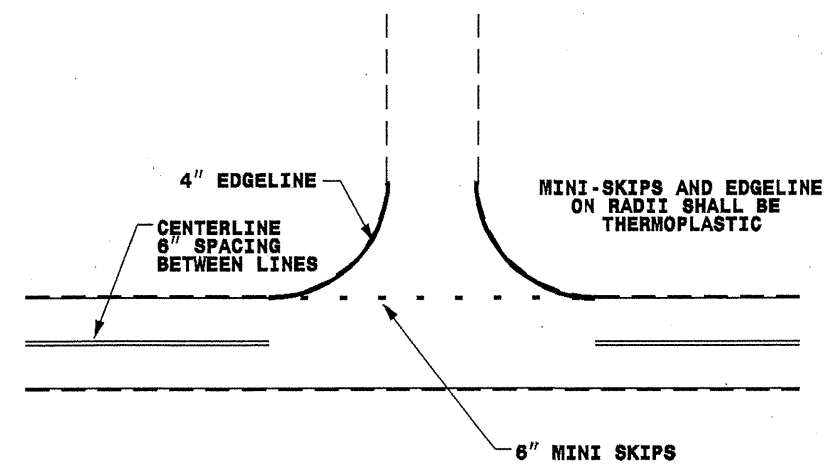
BRIDGE HALF TYPICAL SECTION

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.

NOTES

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

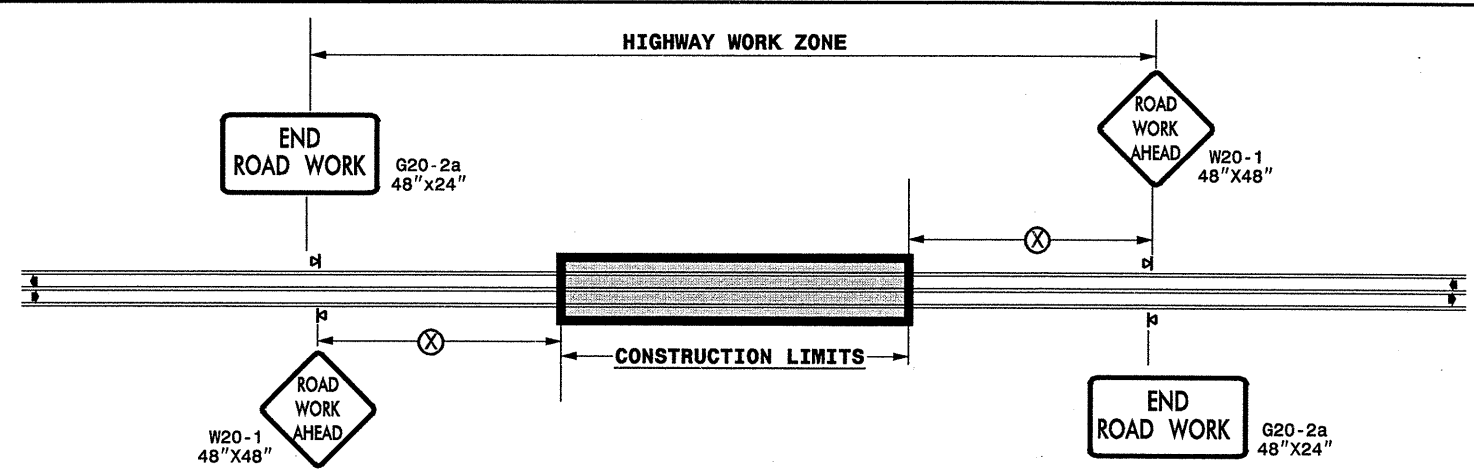
TO BE USED AT ALL NON-SIGNALIZED INTERSECTIONS (NOT TO SCALE)



NOTE: MINI SKIPS SHALL BE PLACED ON A 10' CYCLE, CONTAINING AN 8' AND 2' SKIP, THE WIDTH OF THE SKIP SHALL BE 6".

23-OCT-2006 12:46
 c:\cadd\staff\eng\typicals-6.dgn
 5/28/99

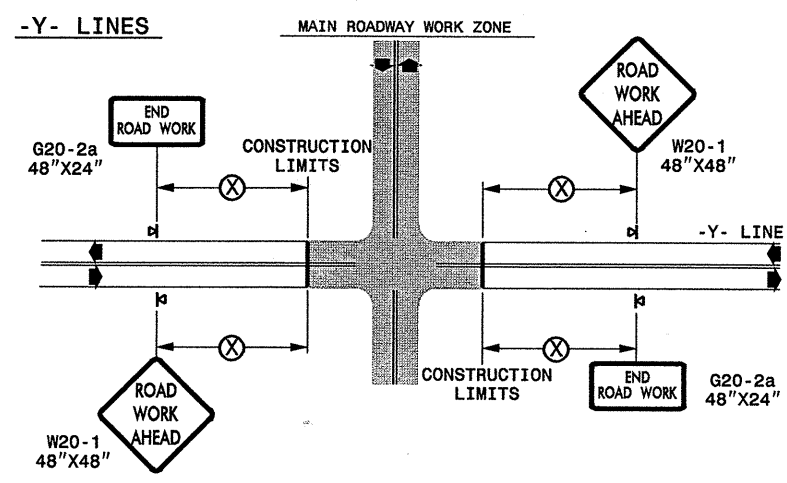
TWO-WAY UNDIVIDED ** (L-LINES)



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)



DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

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

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: _____			CADD FILE

02-NOV-2006 14:31
\\DOT\DF-SR001\DOT\GROUPS-WZTCC\design\group4\resurfacing\resurfacing2006\div01\7cr106815_2wayundivurbtrwys\july2006.dgn
psey@more AT WZTCC206427

SP 03353

SIGN NUMBER: SP-03353	BACKG COLOR: Fluorescent Orange	DESIGN BY: CL DOWNEY	CHECKED BY: CHECKED	STD #: W20-1
TYPE: A	COPY COLOR: Black	PROJECT ID: ALL PROJECTS	DIV: DIV	DATE: Aug 20, 2003
QUANTITY: 1				
SIGN WIDTH: 4'-0"				
HEIGHT: 4'-0"				
TOTAL AREA: 16.0 Sq.Ft.				
BORDER TYPE: FLUSH				
RECESS: 0.59"				
WIDTH: 0.75"				
RADII: 1.38"				
NO. Z BARS: N/A	MAT'L:			
LENGTH: N/A				

USE NOTES: 2, 4

- Legend and border shall be direct applied Type VII reflective sheeting.
- Legend and border shall be direct applied non-reflective sheeting.
- Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
- Background shall be Type VII reflective sheeting.
- Background shall be Type I reflective sheeting.
- Center arrow(s) vertically on sign.
- Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

BORDER
R=1.38"
TH=0.75"
IN=0.59"

LETTER POSITIONS

Letter spacings are to start of next letter

	B	E	O	Z	H																Series/Size	Tact Length		
	22.4	5.3	4.6	5.4	2.5	3.8	22.4															C7	21.6	
		R	O	A	D																		C7	19.6
	23.4	5	5.2	5.6	3.8	23.4																	C7	21.2
		W	O	R	K																			
	22.6	6.4	5.6	5.2	4	22.6																		

Spacing Factor is 1 unless specified otherwise

FILENAME: SP03353AK

NORTH CAROLINA D.O.T. SIGN DETAIL

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

DETAIL DRAWING FOR
WORK ZONE SIGNS
BEGIN ROAD WORK

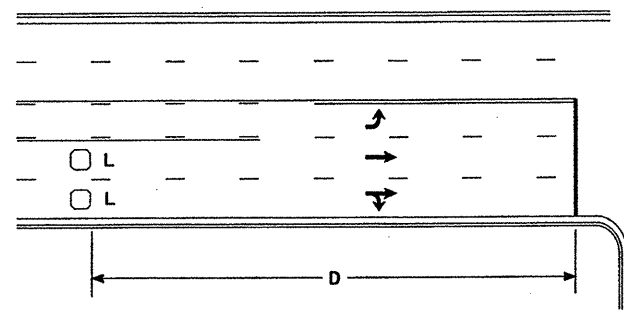
GENERAL NOTES FOR SIGN SP-03353 "BEGIN ROAD WORK"

- SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS
- WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL FOR FREEWAY WORK ZONE SIGNS

APPROVED: _____ DATE: _____	DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING SIGN DESIGNS	
	SCALE: NONE	REVISIONS
	DATE: 0803	0404
	DWG. BY:	1104
	DESIGN BY:	
REVIEWED BY:		CADD FILE

02-NOV-2006 14:33
 \ADO\T\SP03353\GROUPS\WZ\TCCC\designgroup4\resur-facing\resur-facing\div07\7cr106815e\7cr106815e\7cr106815e\signDesigns\July2006.dgn
 pseymore AT WZ1206421

High Speed Detection [≥40 mph (64 km/hr)]

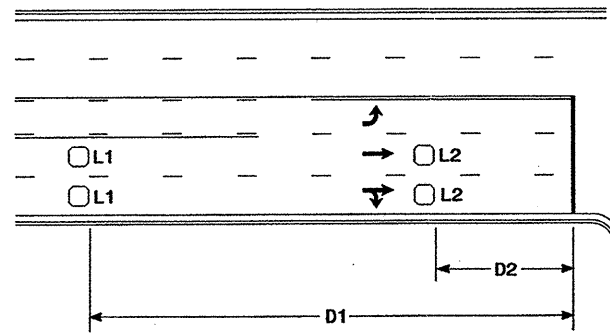


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

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

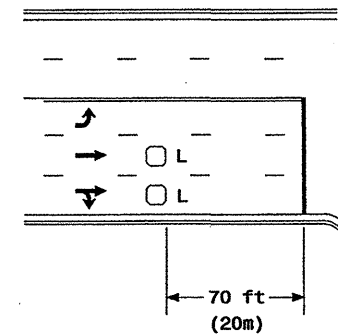


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

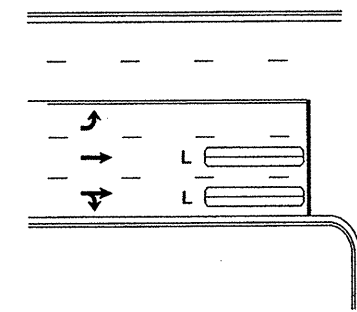
"Stretch" Operation

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



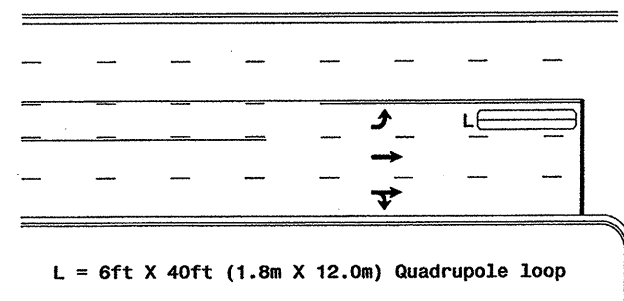
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



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

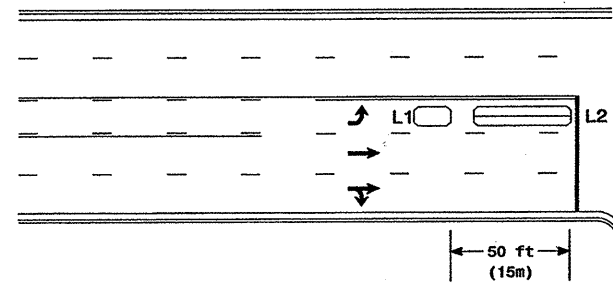
Left Turn Lane Detection



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

Presence Loop Detection

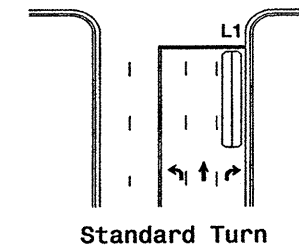
OR



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

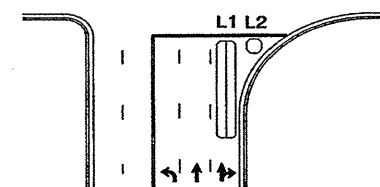
Queue Loop Detection

Right Turn Lane Detection

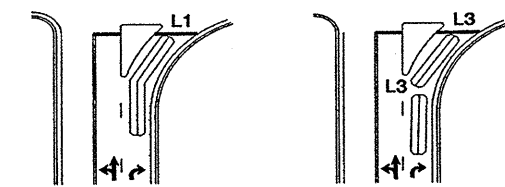


Standard Turn

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

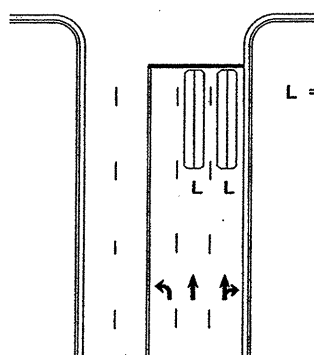


Wide Radius Turn



Channelized Turn

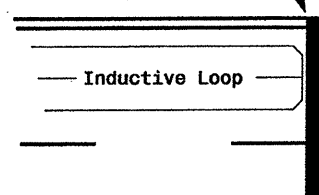
Side Street Detection



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
PROFESSIONAL
ENGINEER
P L ALEXANDER
23485

REVISIONS	INIT.	DATE

SCALE: N/A

SIG. INVENTORY NO. 06/06