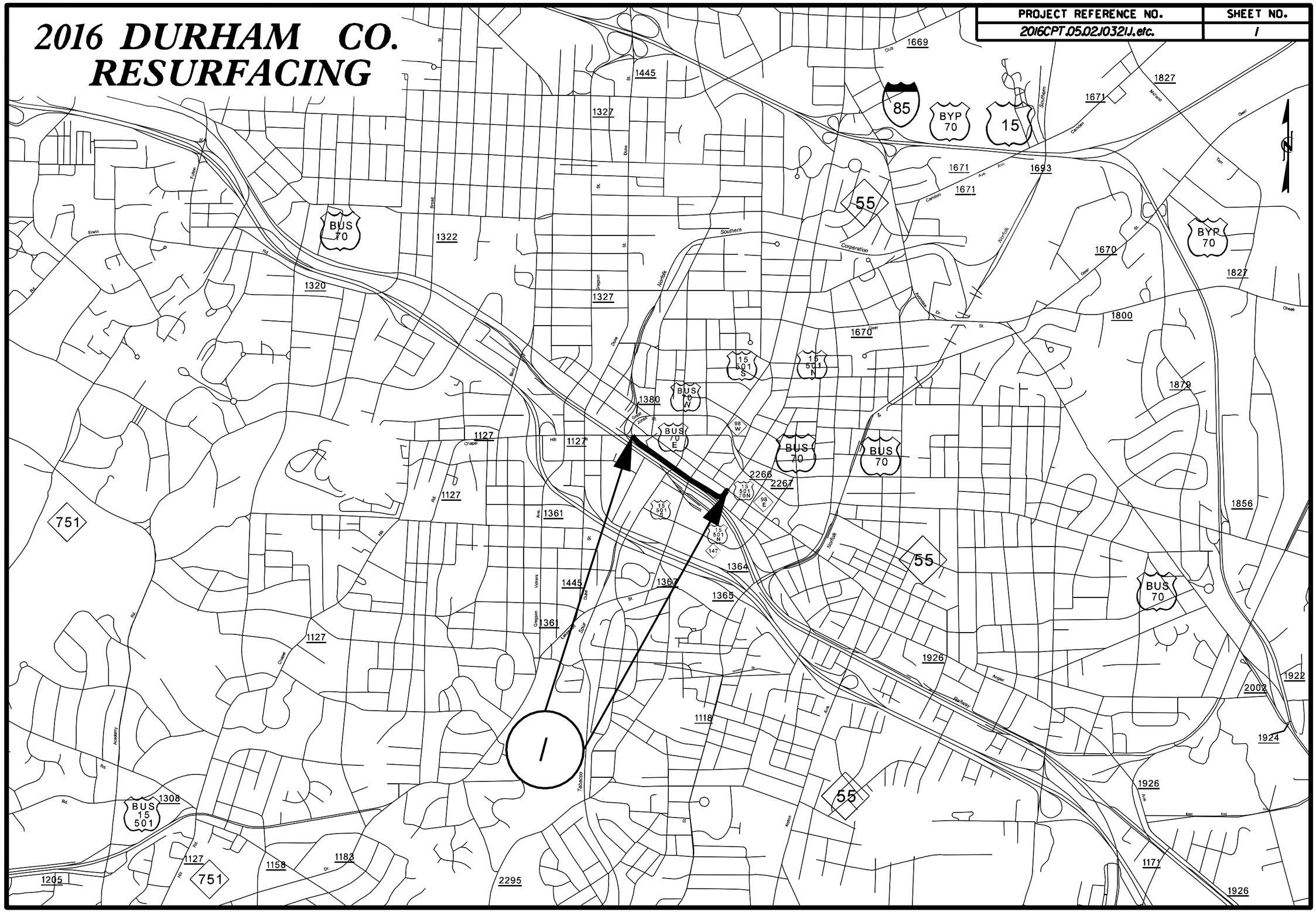
2016 DURHAM CO. RESURFACING

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10.32.11, etc.	1



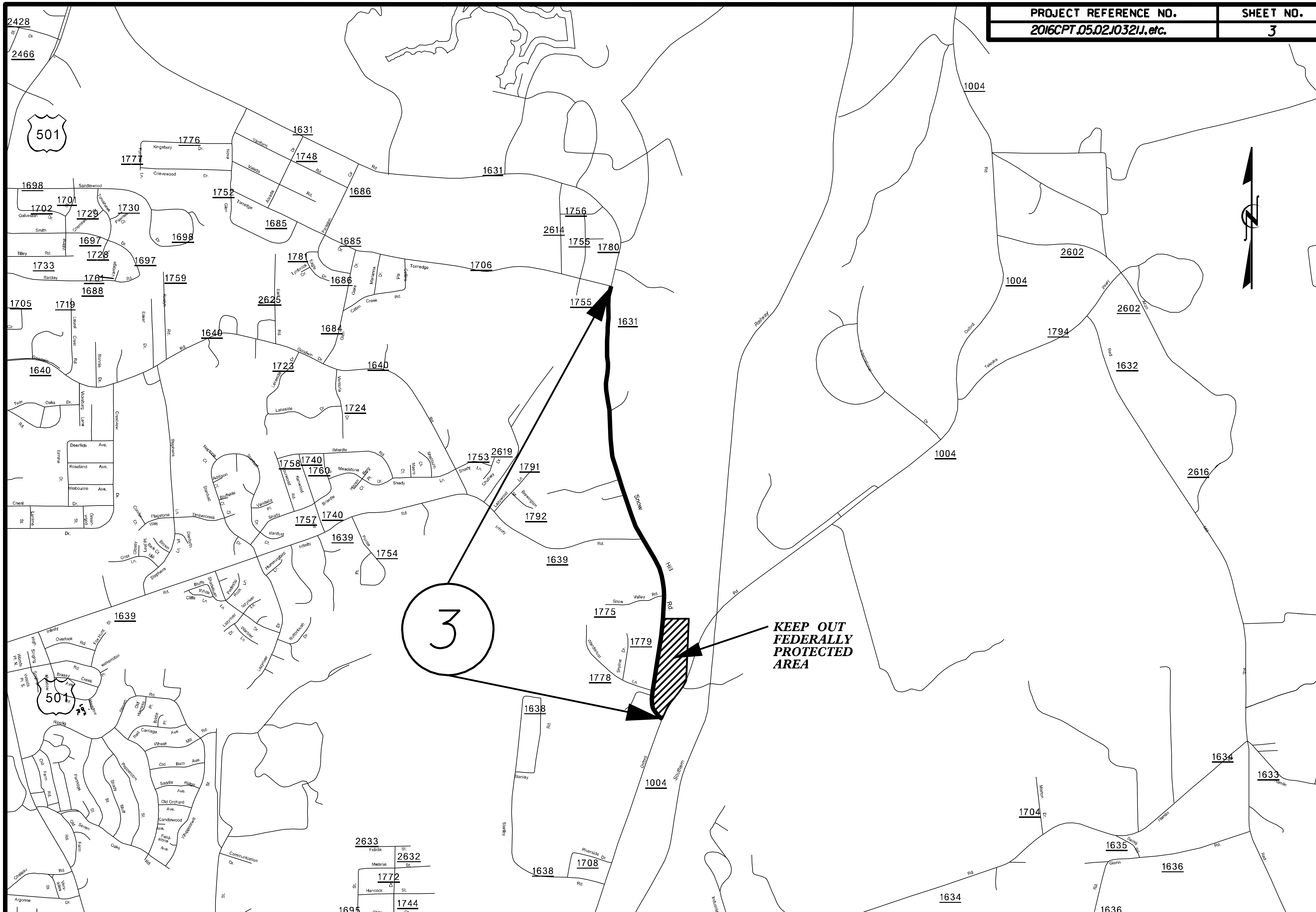
PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321J, etc.	2

PERSON COUNTY

6

1605
1606
1610
2624
2629
2623
1604
1471
1607
1609
1771
1608
1603
1611
1614
1613
1612
1681

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321.1, etc.	3



PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321J, etc.	4

4

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321J.etc.	5

Durham

Lowes Grove

Fayetteville St.

Alston Ave.

Ellis Rd.

Maughan Dr.

Glaxo

Northrop corp.

Nutech Corp.

General Electric

C & O Whse. Corp.

C.I.I.T.

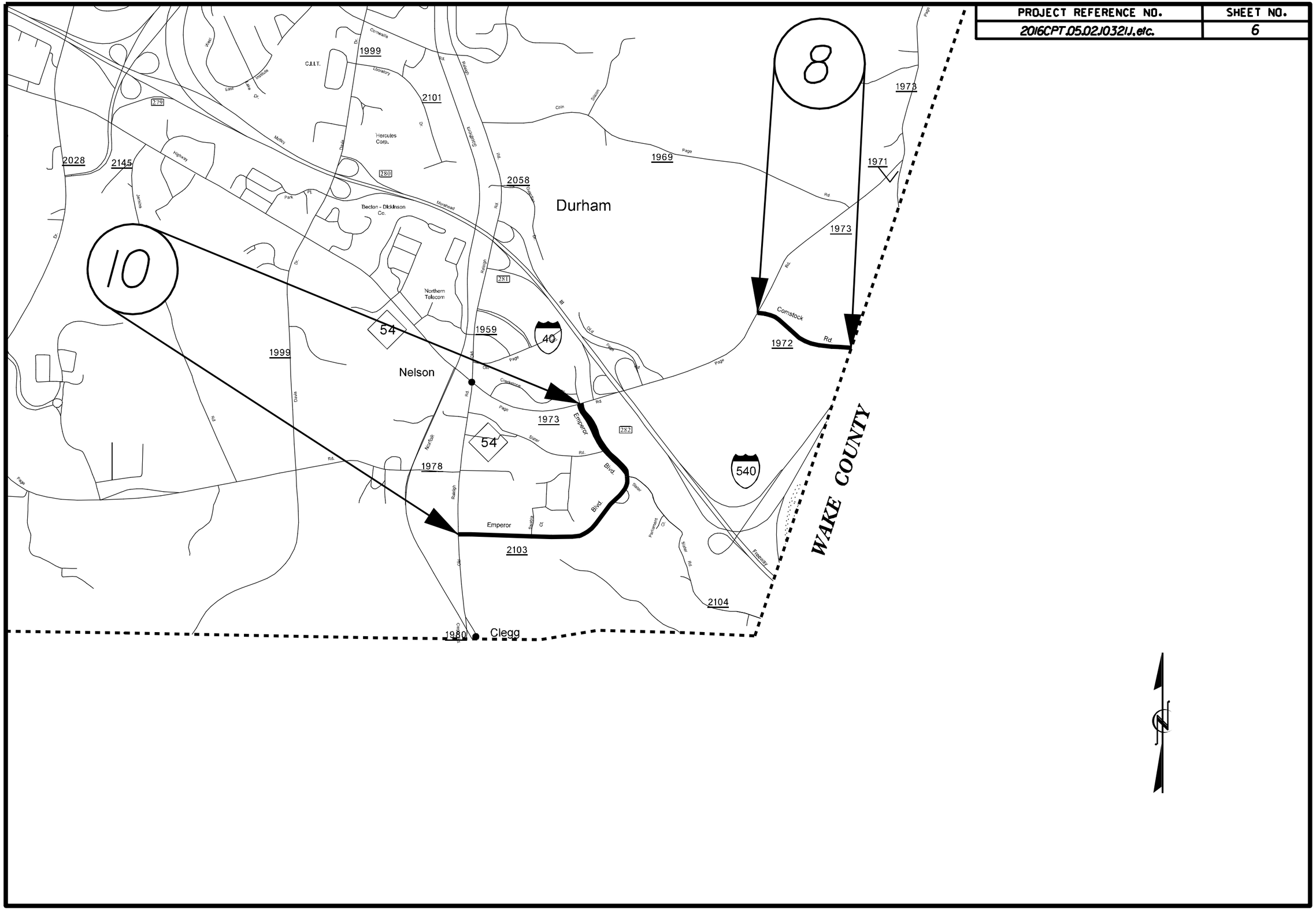
Ragland Bldg.

*1. Creasbury Ave.
2. Rose Brook Dr.
3. Fieldcrest Ct.
4. Sandstone Ridge Dr.
5. Sandstone Ridge Ct.
6. Streamview Ct.
7. Steeple Chase Ct.
8. Winterberry Ridge Dr.
9. Strawberry Ridge Ln.
10. Marlborough Way
11. Barwicke Ct.
12. Glen Eden Rd.
13. Simpson Ct.
*14. Shepard Springs Ct.
15. Cobbleridge Ct.
16. Birchcrest Ct.
17. Running Brook Ct.
18. Tarwick Ct.
19. Greens Ct.
20. Sleepy Creek Dr.
21. Ashwood Sq.
22. Windsong Ln.
23. Hickory Grove Rd.
24. Hearthwood Cir.
25. Priestmere Dr.
26. Penfield Ct.
27. Wyndon Ct.

15. Radcliff Cir.
16. Braddock Cir.
17. Burbank Cir.
18. Howe Cir.
19. Avalon Ct.
20. Kilkenny Ct.
21. Shelter Cove
22. Ainsworth Ct.
23. Deblyn Ct.

50. Honeysuckle Ln.
51. Cat Tail Ct.
52. Blue Ridge Ct.
53. Indian Head Ct.
54. Shadsty Point Ct.
55. Willow Point Ct.
56. Hidden Hollow Dr.
57. Home Croft Ct.

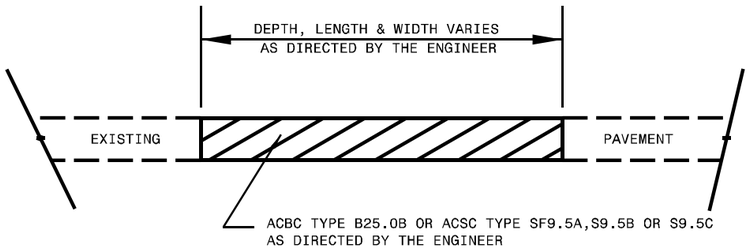
PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321J, etc.	6



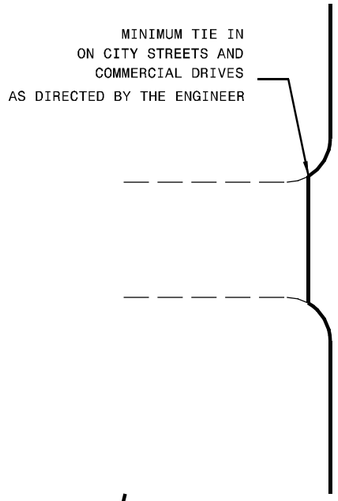
PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321.1, etc.	T-1

PAVEMENT SCHEDULE

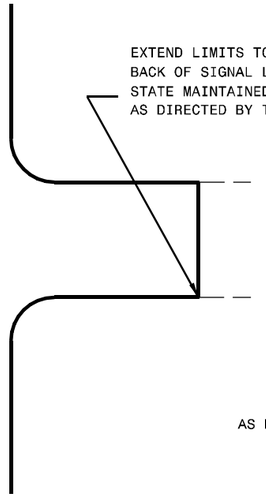
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	1½" MILLING
V2	2" MILLING

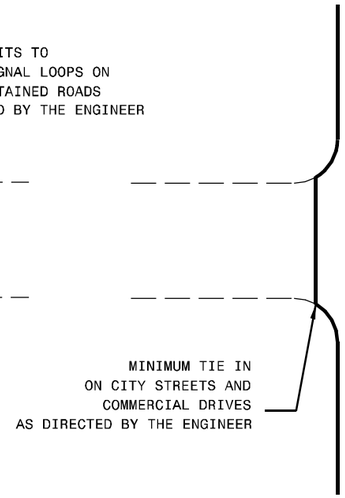


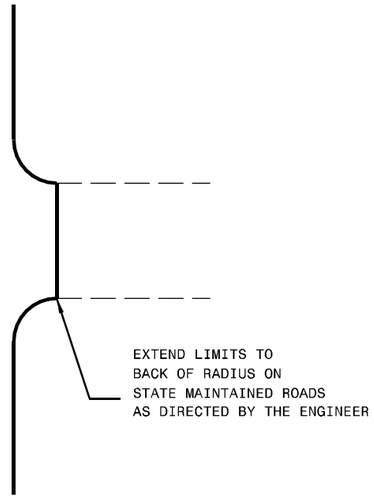
PATCHING EXISTING PAVEMENT



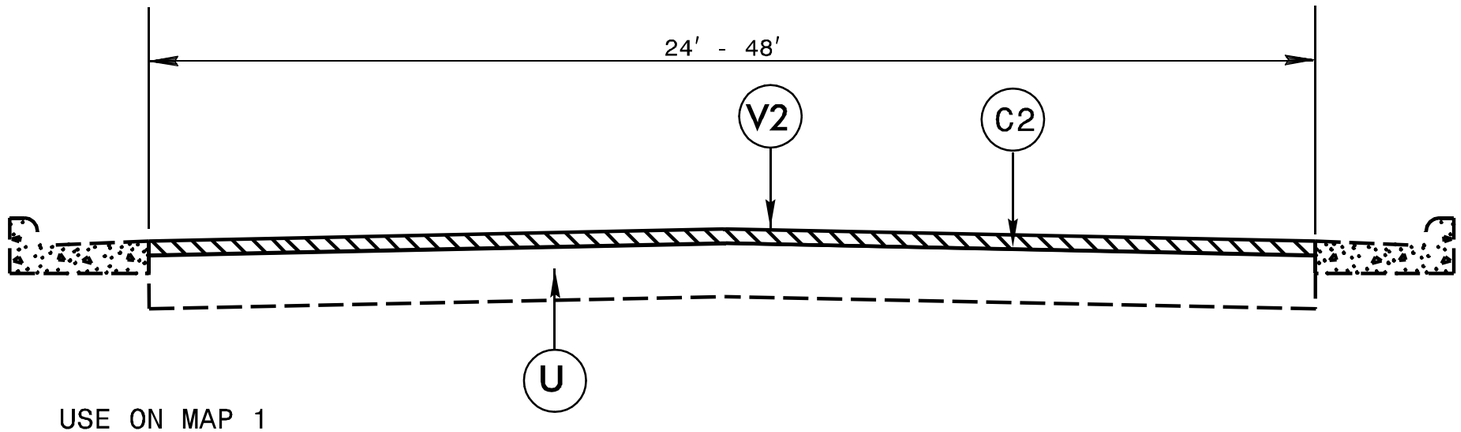
DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES







DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES



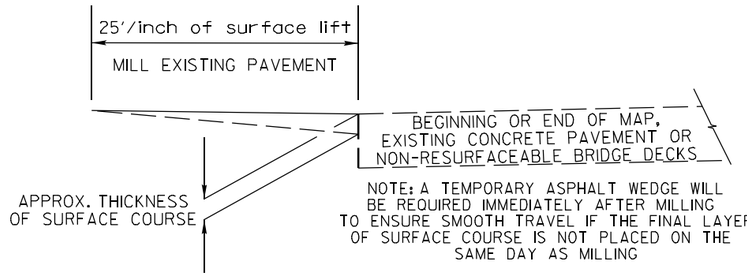
USE ON MAP 1

TYPICAL SECTION NO. 1

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321.1, etc.	T-2

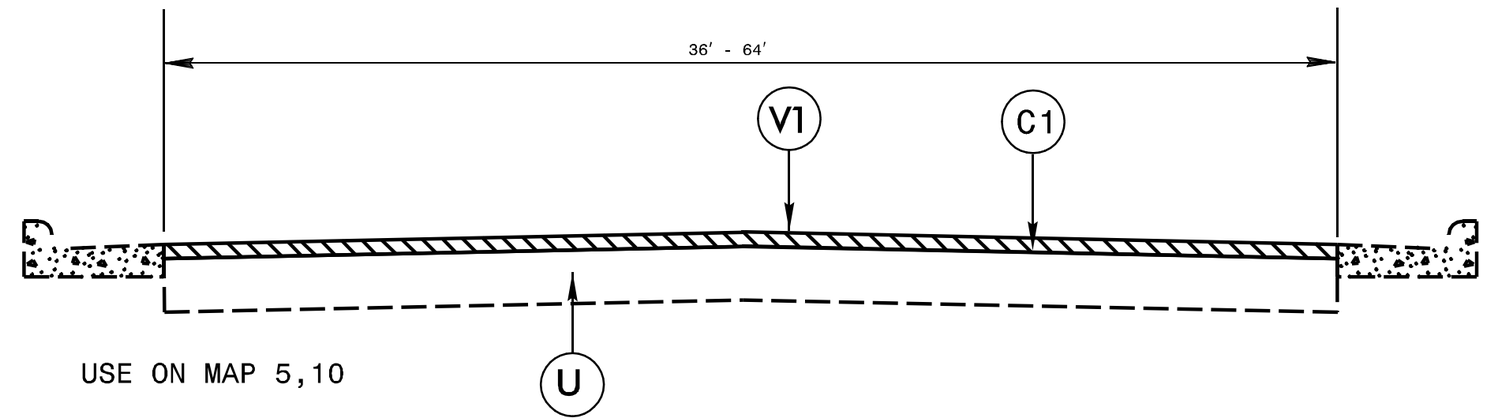
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	1½" MILLING
V2	2" MILLING

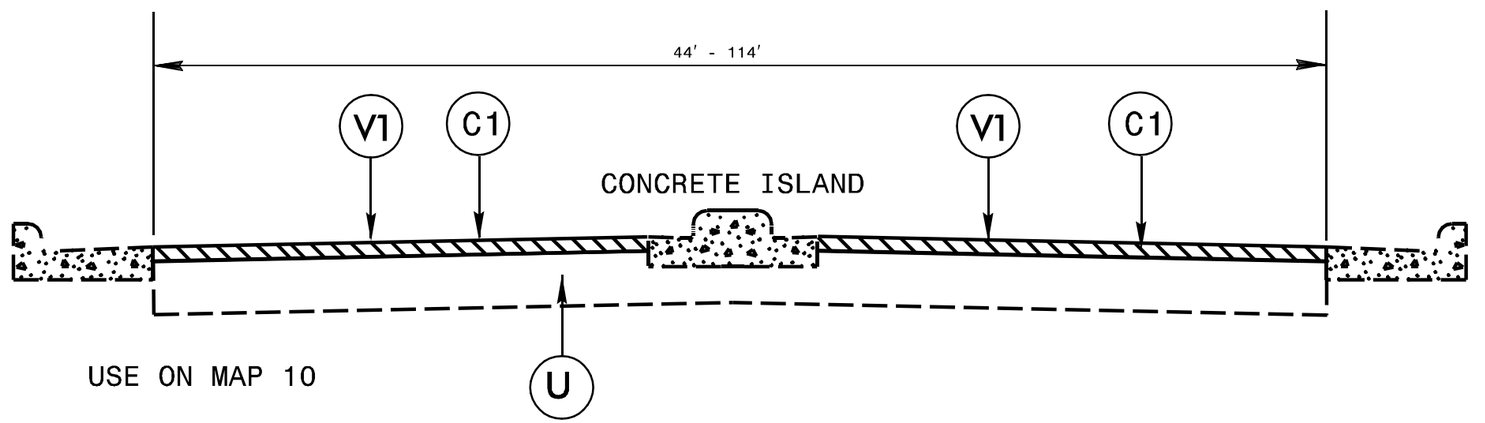


NOTES

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.



TYPICAL SECTION NO. 2

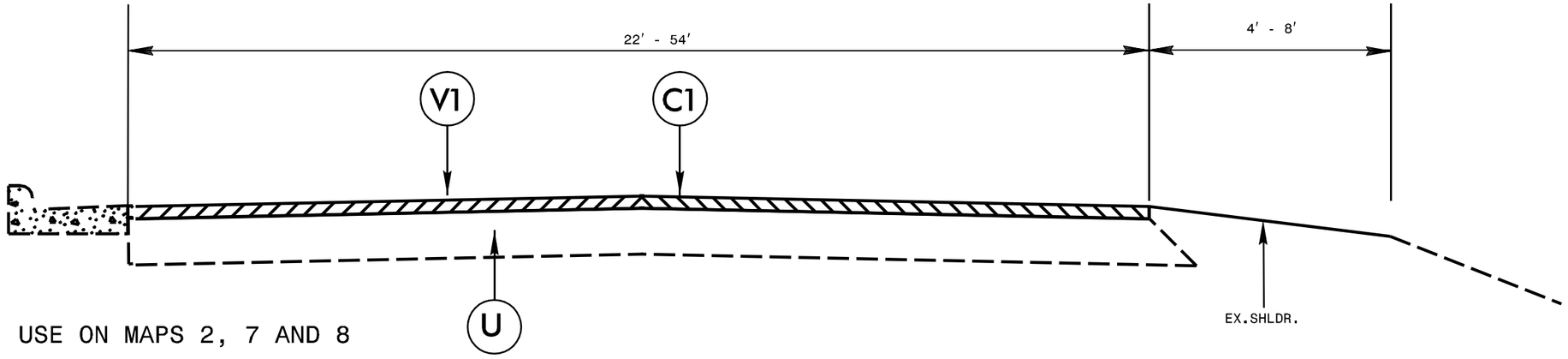


TYPICAL SECTION NO. 3

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.05.02.10321.1, etc.	T-3

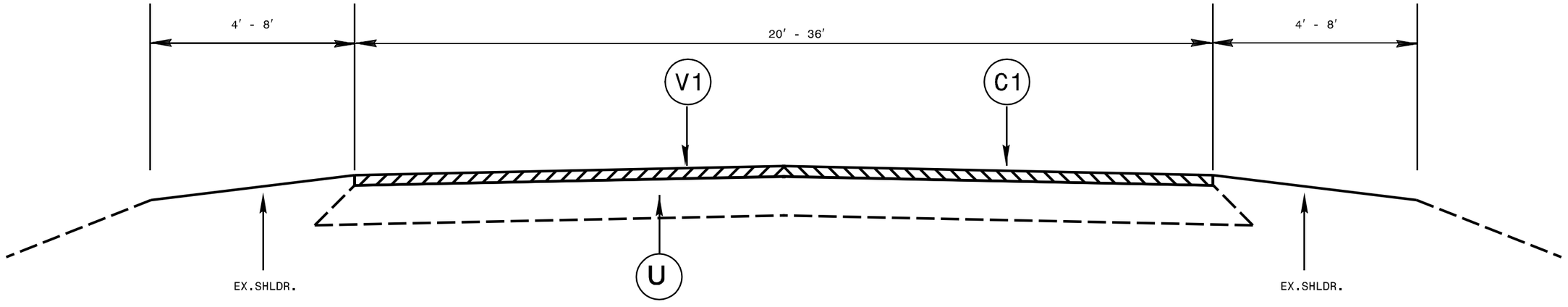
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	1½" MILLING
V2	2" MILLING



USE ON MAPS 2, 7 AND 8

TYPICAL SECTION NO. 4



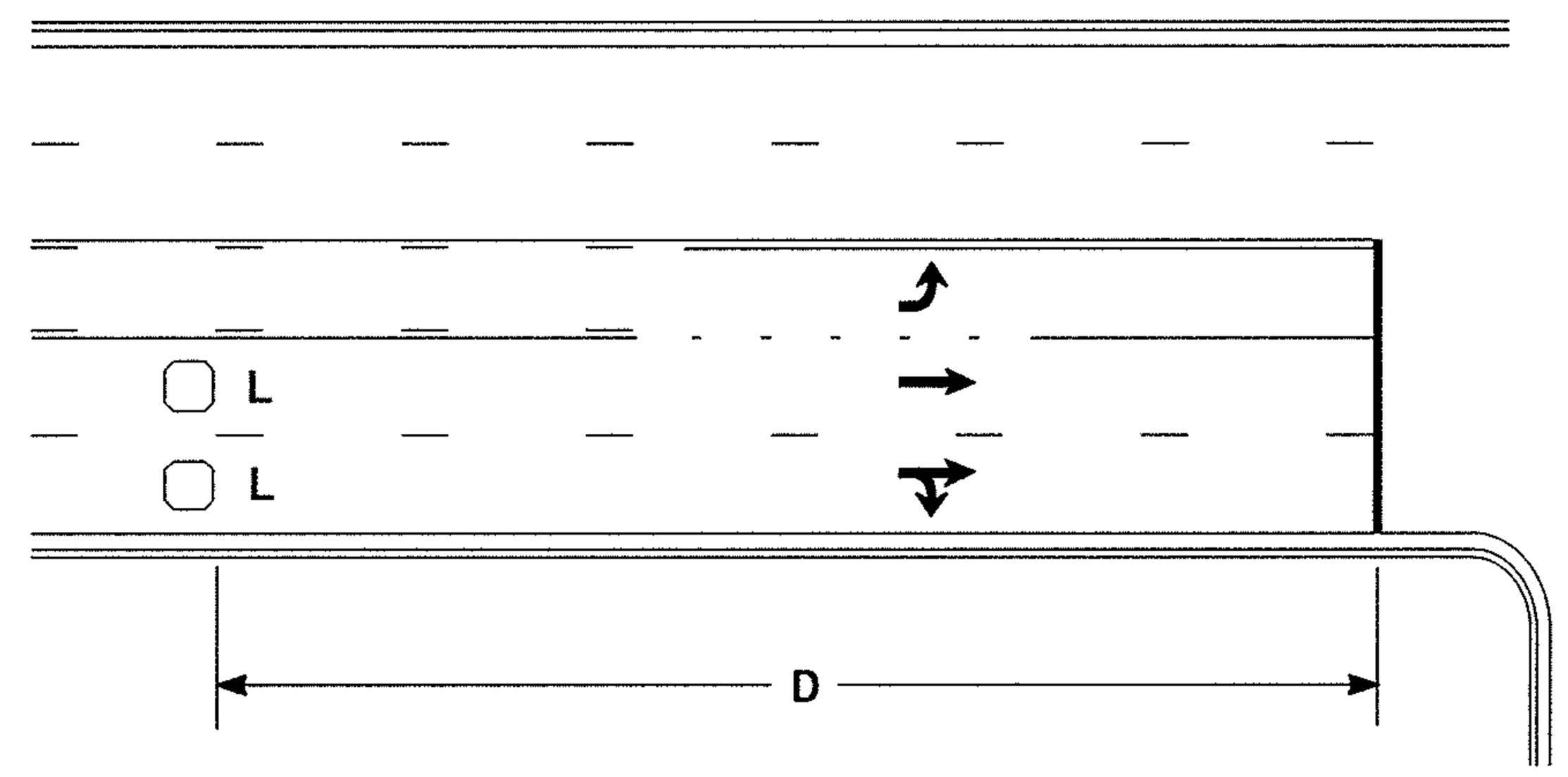
USE ON MAPS 3, 4, 6 AND 9

TYPICAL SECTION NO. 5

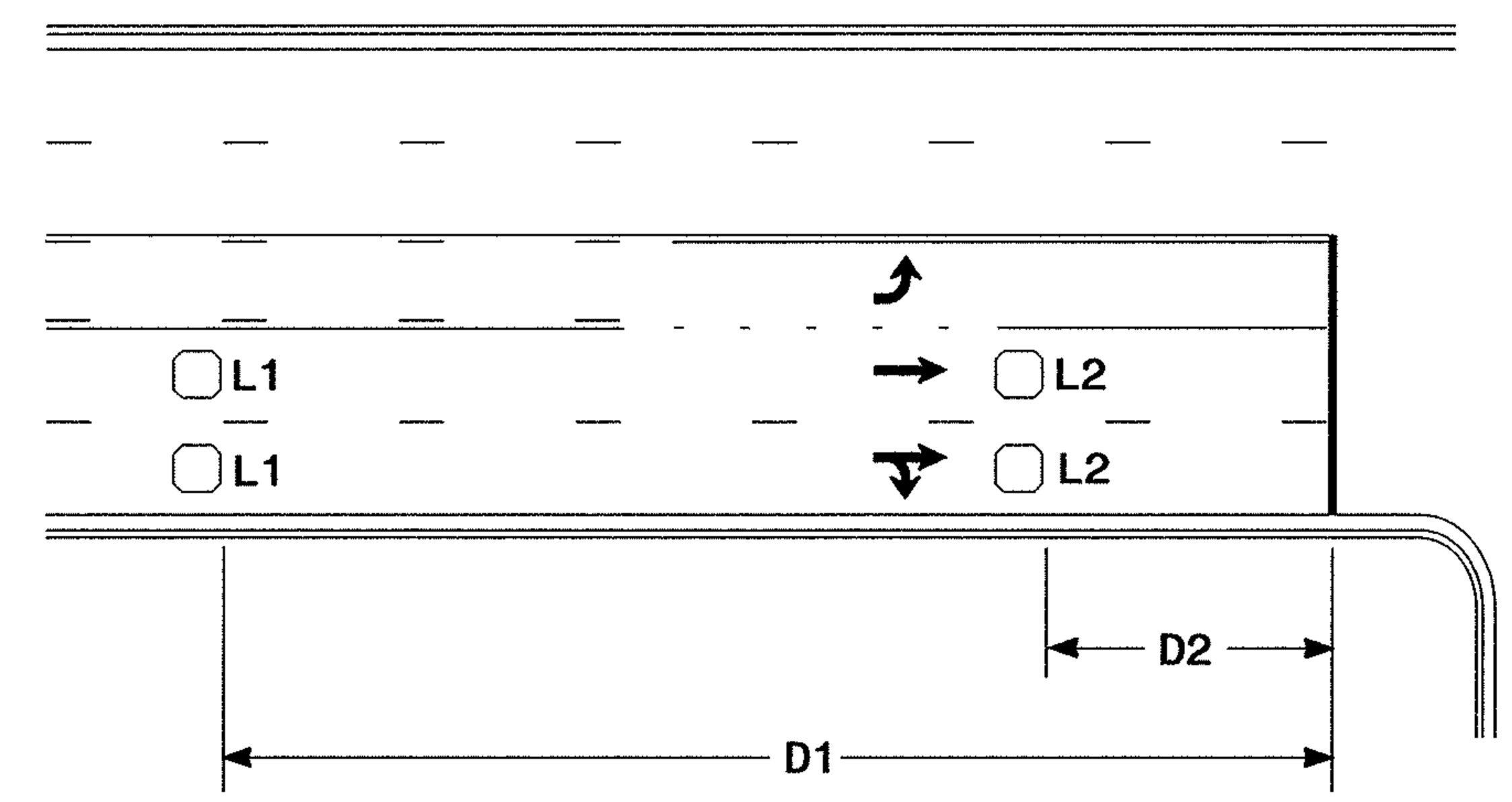
PROJECT REFERENCE NO.	SHEET NO.
	SIG 1

High Speed Detection

[≥40 mph (64 km/hr)]



OR



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)

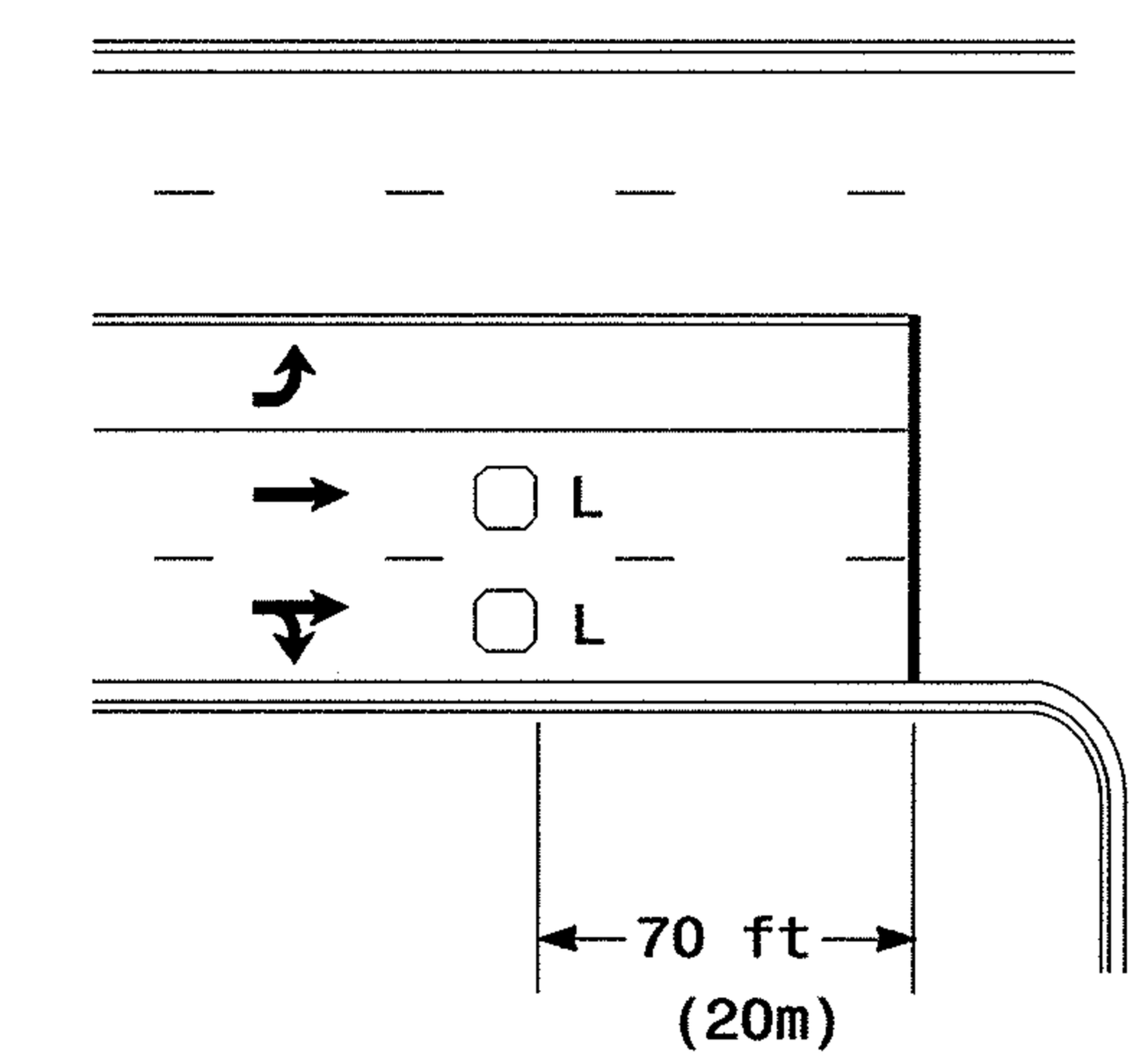
L1 = 6ft X 6ft (1.8m X 1.8m) Wired in series

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

"Stretch" Operation

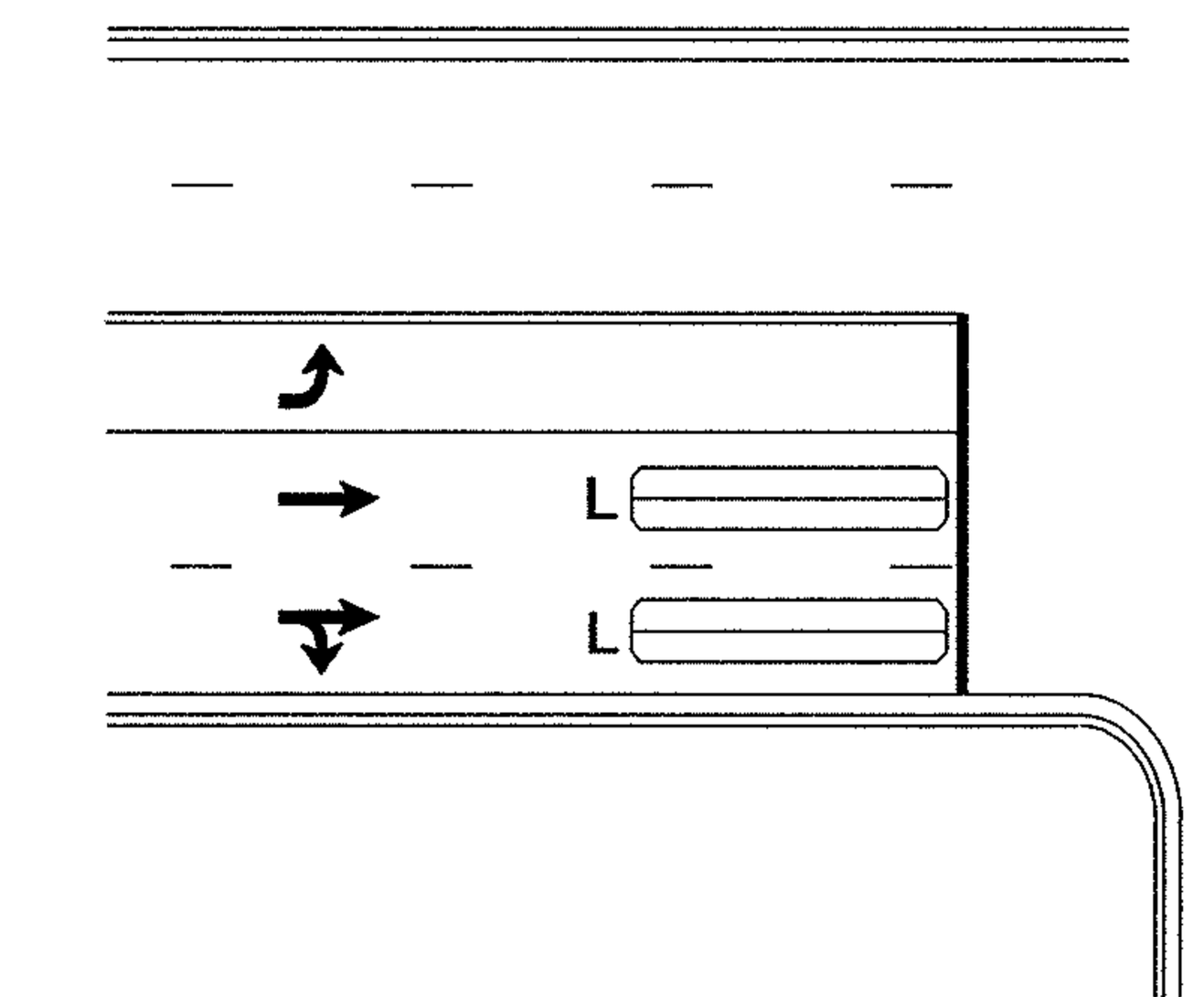
Low Speed Detection

[≤35 mph (56 km/hr)]



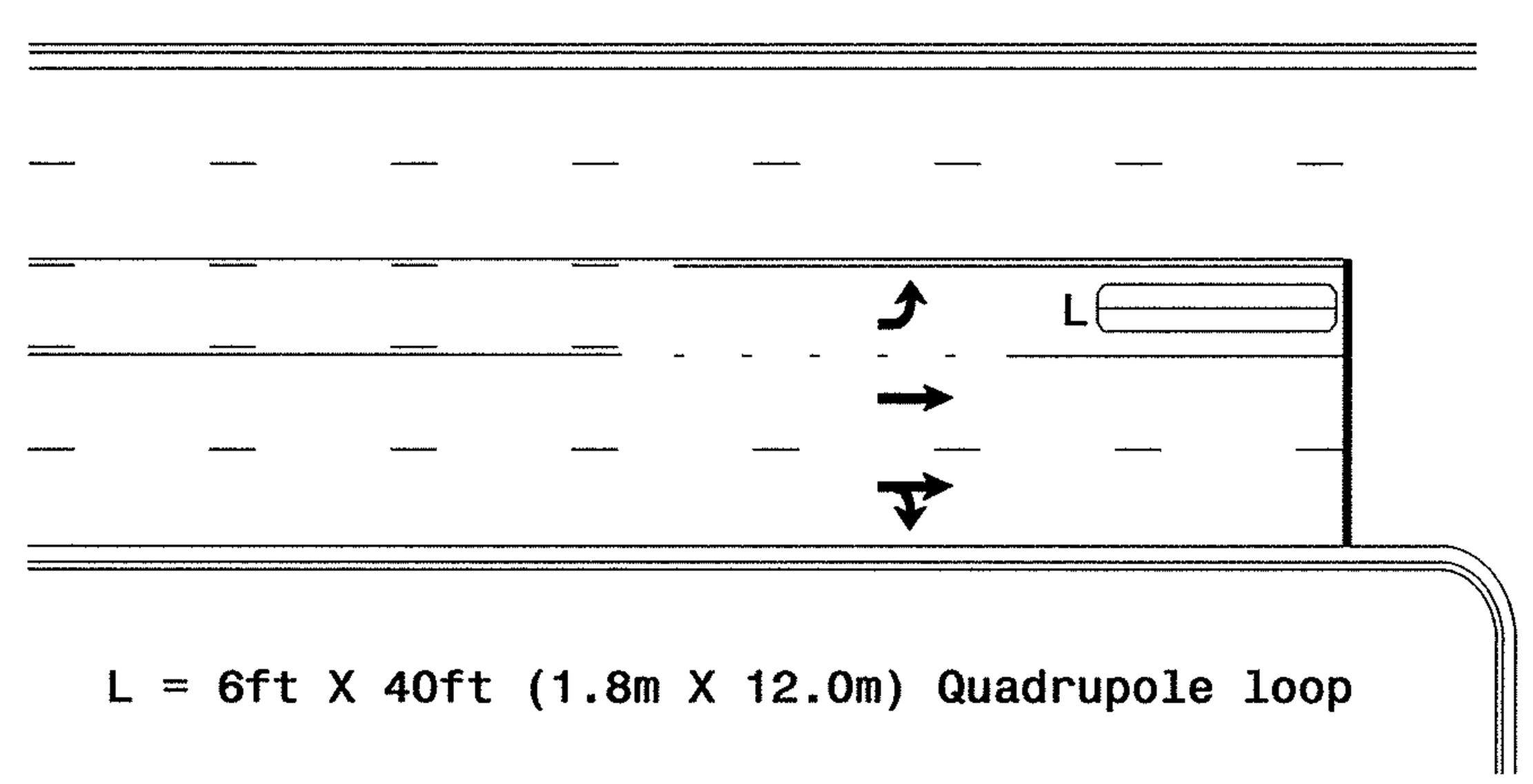
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



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

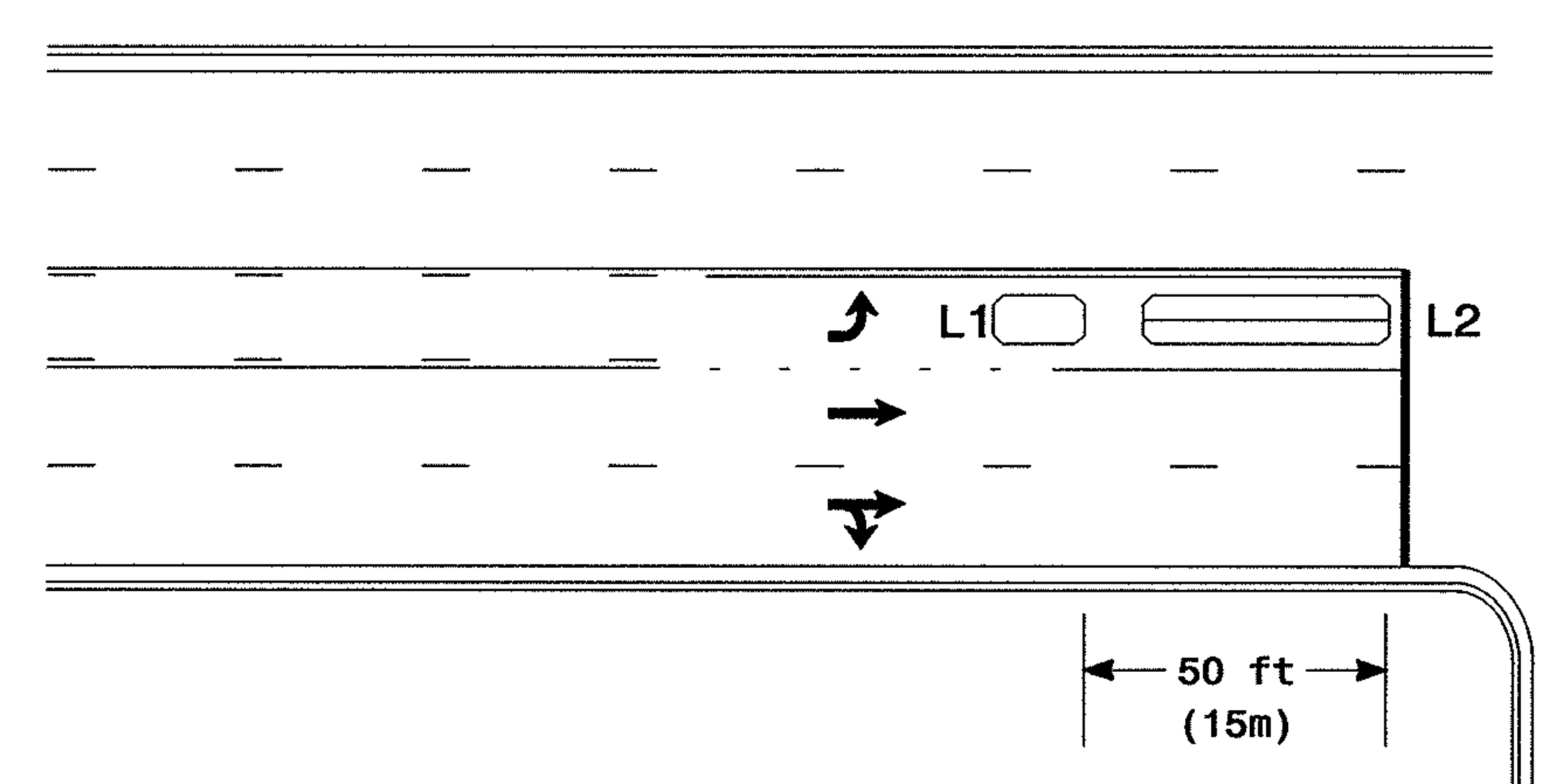
Left Turn Lane Detection



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

Presence Loop Detection

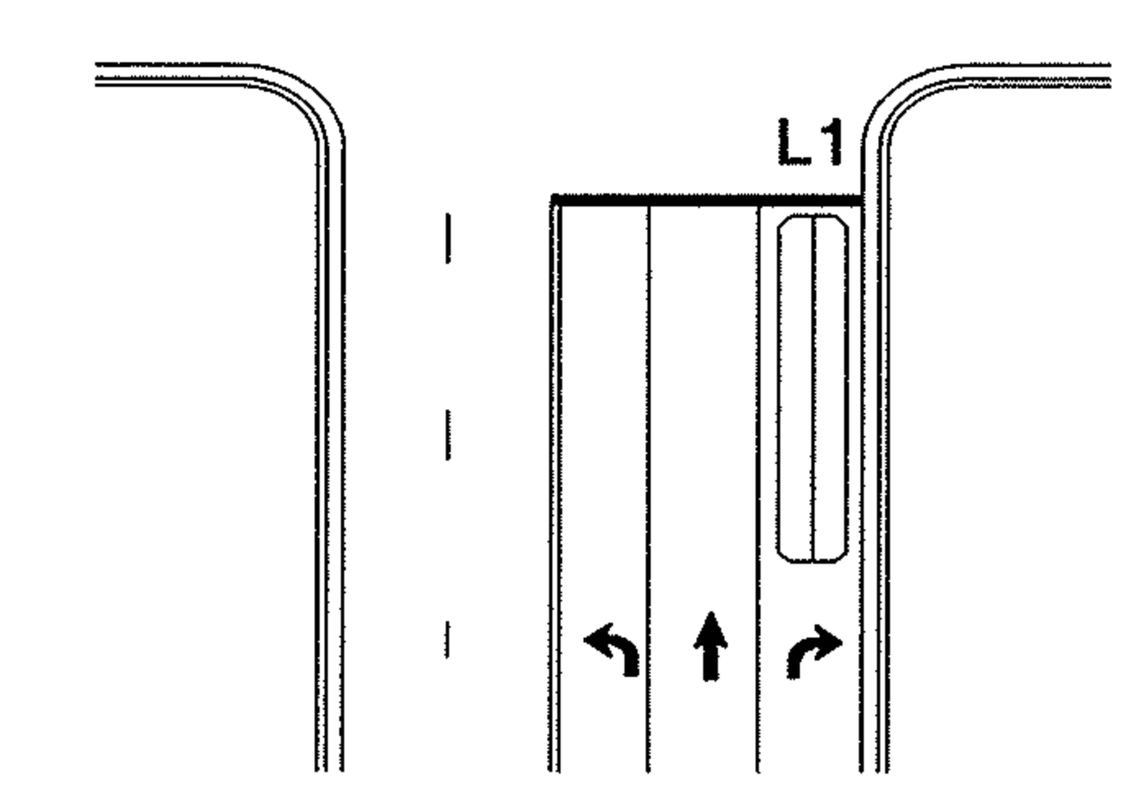
OR



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

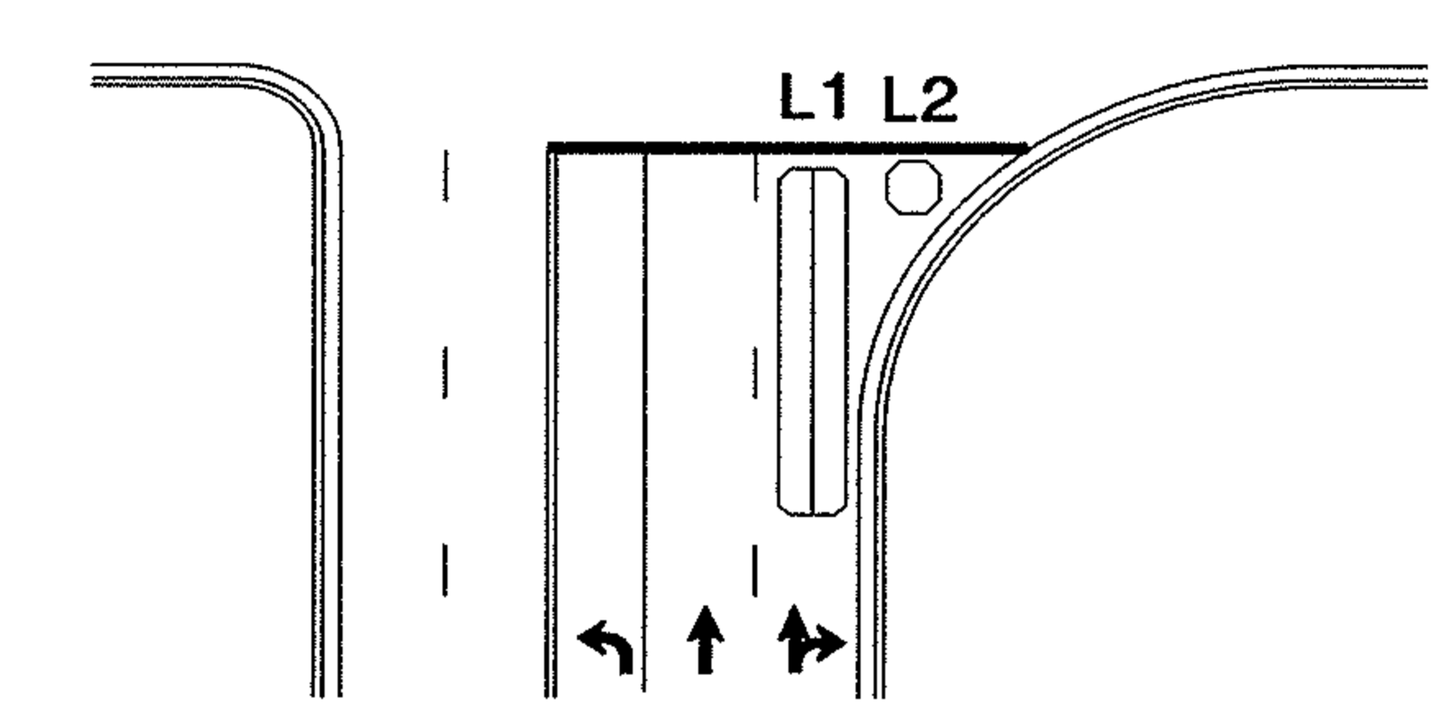
Queue Loop Detection

Right Turn Lane Detection

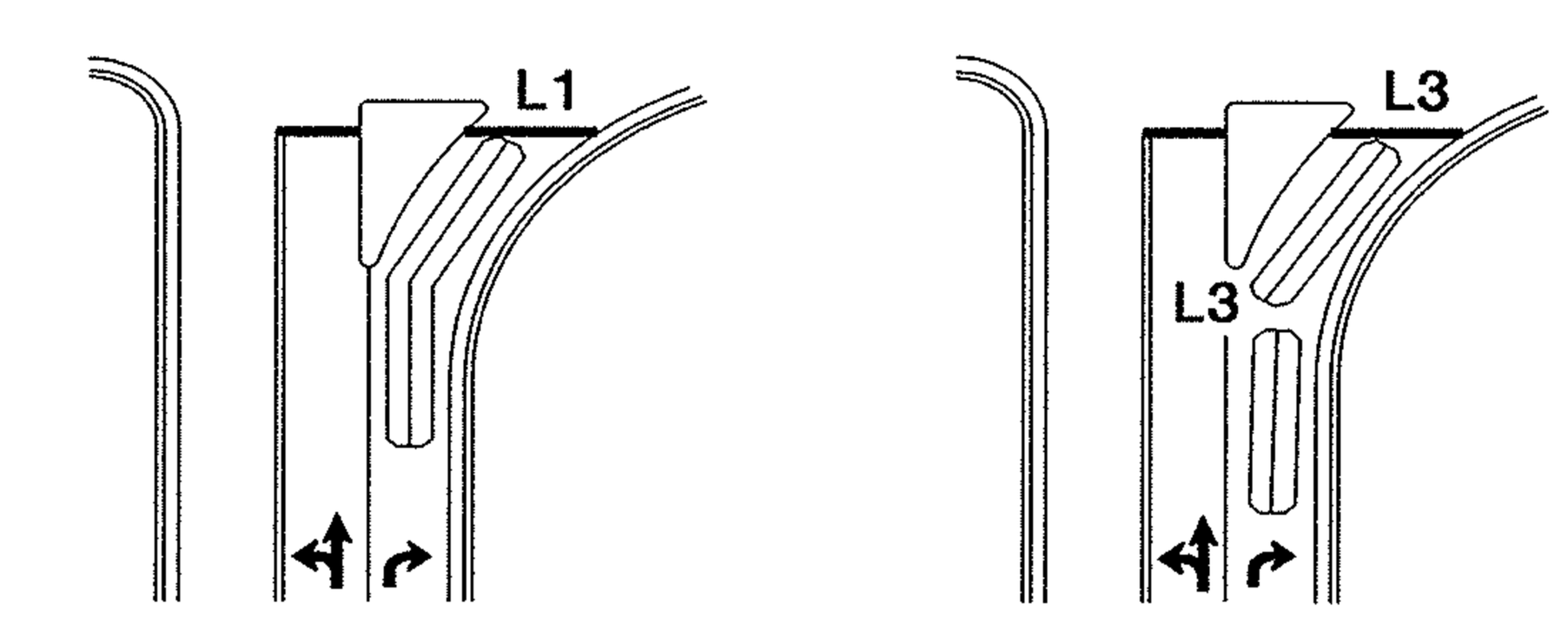


Standard Turn

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

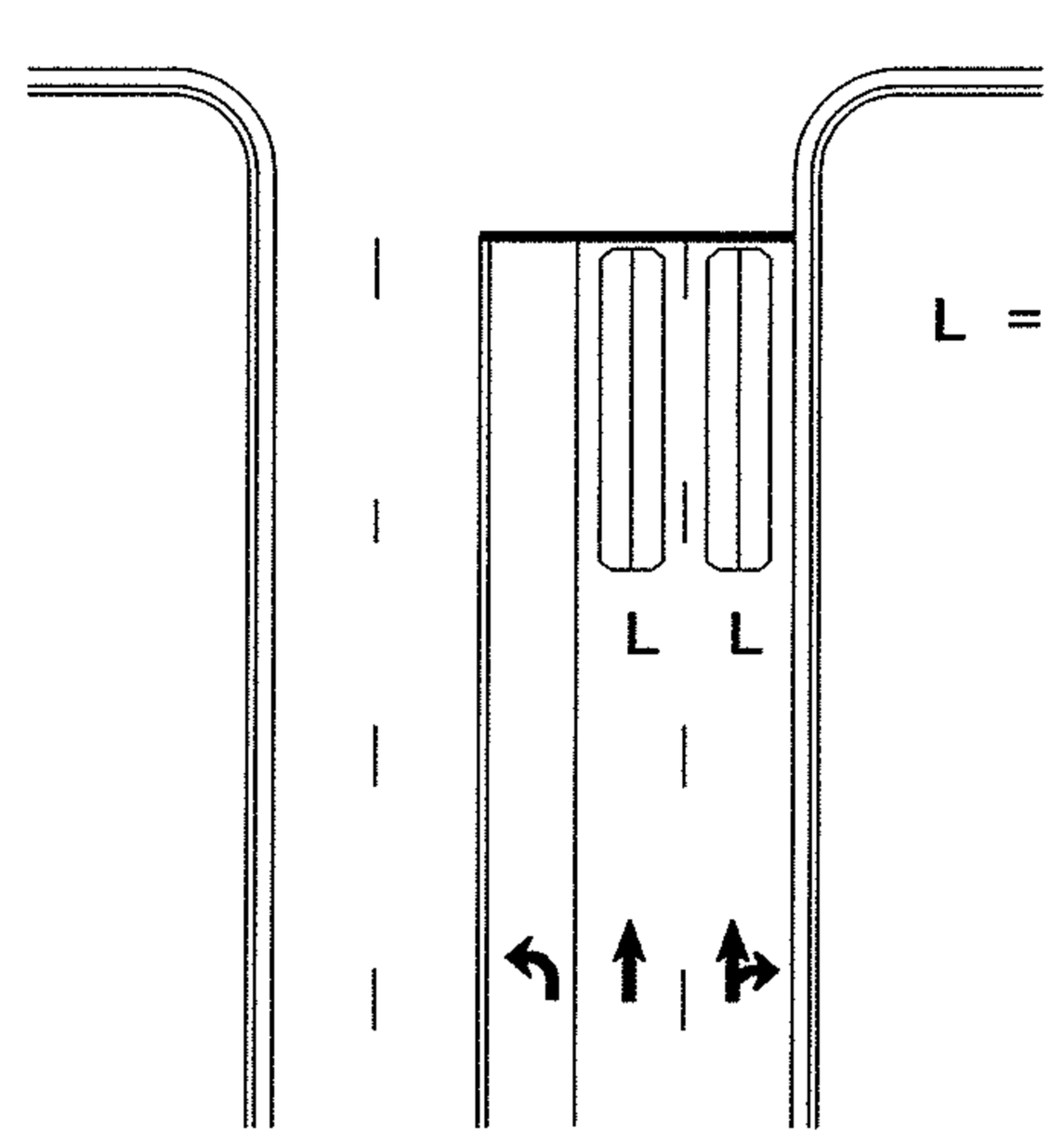


Wide Radius Turn



Channelized Turn

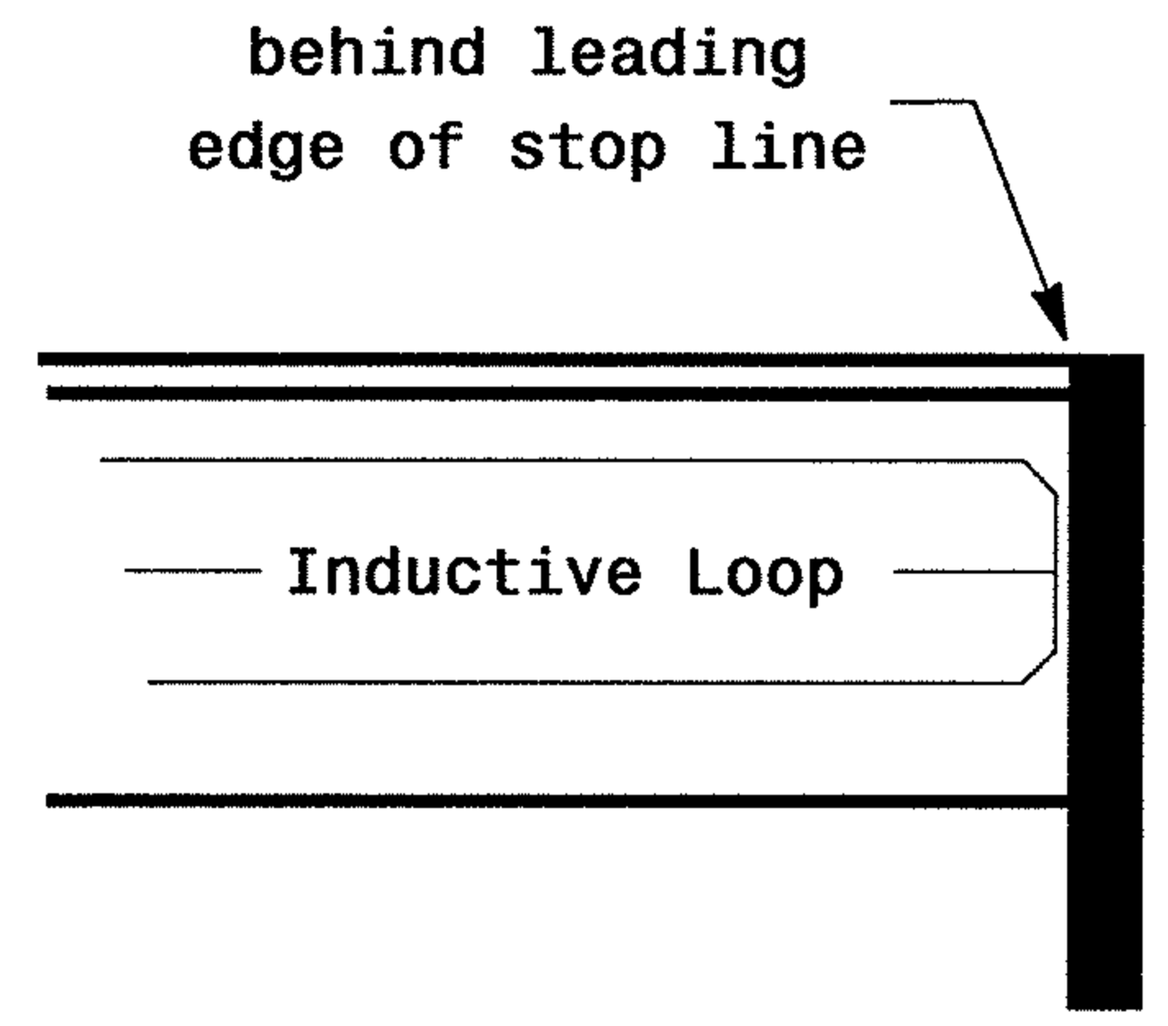
Side Street Detection



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

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
State of North Carolina Department of Transportation
Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE: June 2006	REVIEWED BY:
PREPARED BY: P L Alexander	REVIEWED BY:

SCALE N/A

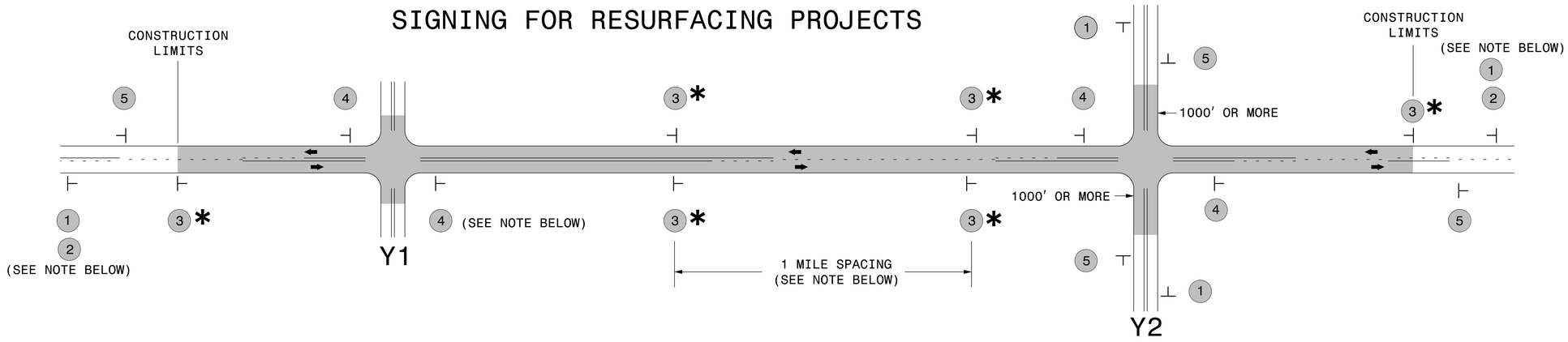
REVISIONS	INIT.	DATE
Revise pavement marKings	aa	12/19/06

SEAL
North Carolina Professional Engineer Seal 23489 Pamela Alexander
SIGNATURE DATE 6/6/06
SIG. INVENTORY NO.

19-DEC-2006 14:29
s:*its signals*lib turn in*misc*looptypical2006.dgn
palexander

PROJ. REFERENCE NO.	SHEET NO.

SIGNING FOR RESURFACING PROJECTS



LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD W20-1 48″ X 48″	PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.
2	NEXT XX MILES W7-3aP 24″ X 18″	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)
3 *	LOW/SOFT SHOULDER SP 13107 48″ X 48″	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.
4	ROAD UNDER CONST SP 13106 48″ X 48″	THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500′ +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500′ OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.
5	END ROAD WORK G20-2 A 48″ X 24″	PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000′ OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD W20-1 48″ X 48″ — PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″ — PLACED 250′ IN ADVANCE OF FLAGGER.

* SIGNING FOR ASPHALT SURFACE TREATMENTS (ONLY)

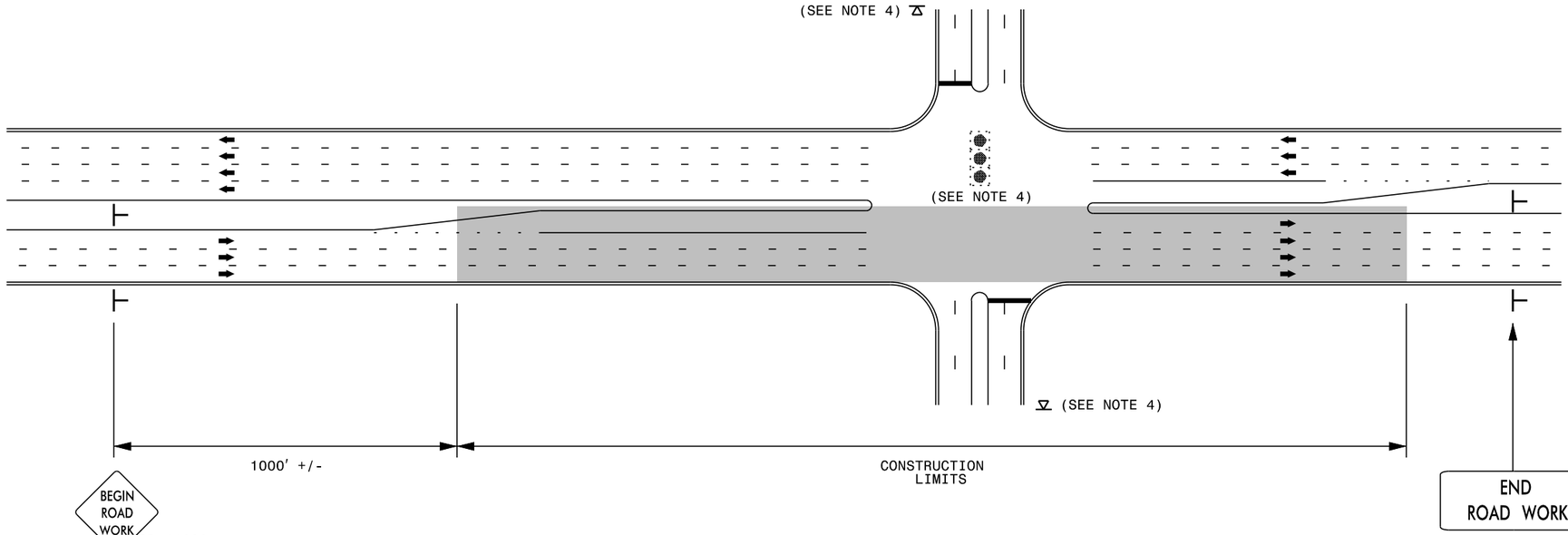
SUBSTITUTE LOW/SOFT SHOULDER SIGNS BY ALTERNATING THE FOLLOWING TWO SIGNS:
STARTING WITH "UNMARKED PAVEMENT AHEAD" (SP 06026) FOLLOWED BY "LOOSE GRAVEL" (W8-7).

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING
ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2 LANE ROADWAYS

PROJ. REFERENCE NO.	SHEET NO.

URBAN / SUBURBAN WORKZONES



NOTES:

1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS.THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

⊢ STATIONARY SIGN

➡ DIRECTION OF TRAFFIC FLOW

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

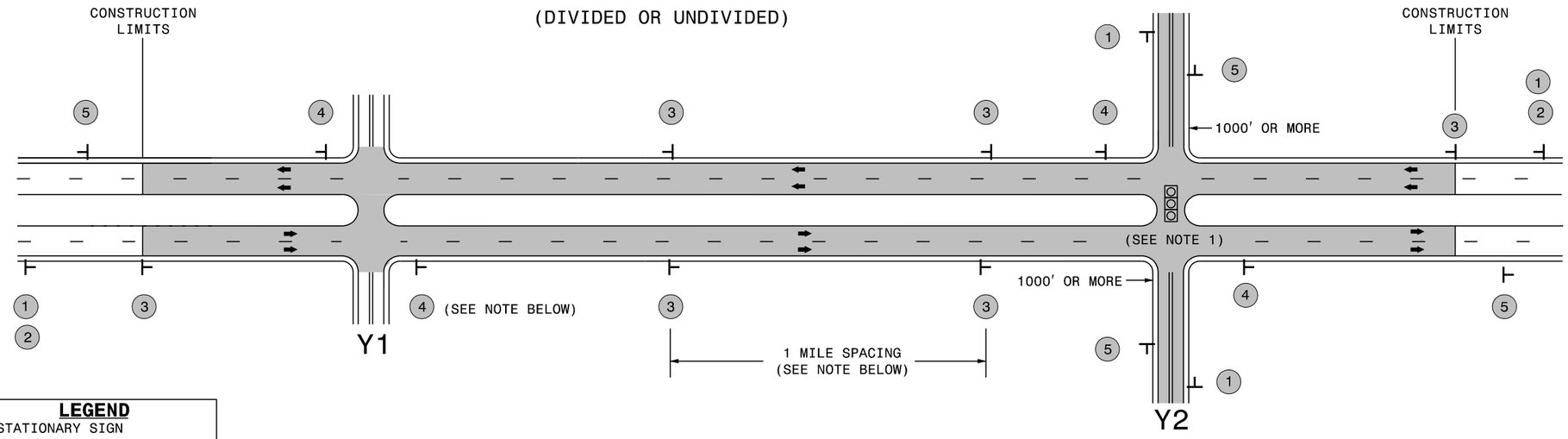
RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

2/24/2014
S:\TMU\WZTC\Resurfacing\2013Resurfacing\2013Documents\New_Procedures_05_09_2013\Resurfacing_AdvWarn_Ur-Su.dgn

PROJ. REFERENCE NO.	SHEET NO.

SIGNING FOR RURAL AND SUBURBAN MULTI-LANE ROADWAYS WITH SHOULDER SECTIONS

(DIVIDED OR UNDIVIDED)



LEGEND

⊢ STATIONARY SIGN

⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD W20-1 48″ X 48″	PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.
2	NEXT XX MILES W7-3aP 24″ X 18″	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)
3	LOW/SOFT SHOULDER SP 13107 48″ X 48″	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.
4	ROAD UNDER CONST SP 13106 48″ X 48″	THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500′ +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500′ OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.
5	END ROAD WORK G20-2 A 48″ X 24″	PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000′ OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD W20-1 48″ X 48″ — PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″ — PLACED 250′ IN ADVANCE OF FLAGGER.

NOTES:

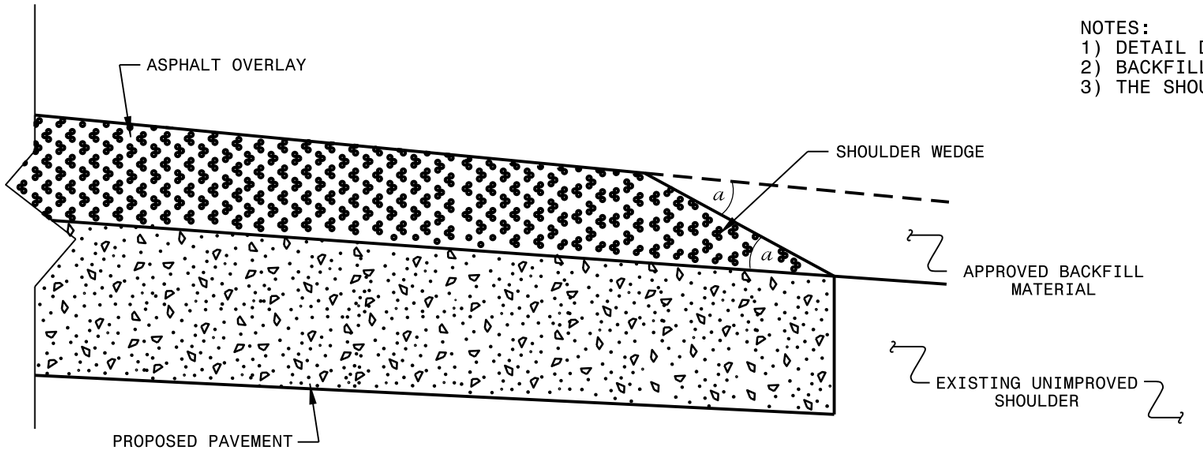
1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500′ IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN MULTI-LANE ROADWAYS W/ SHOULDER SECTIONS

2/24/2014
S:\TMU\WZTC\Resurfacing\2013Resurfacing\2013Documents\New_Procedures_05.09.2013\Resurfacing_AdvWarn_UrSu_Shldr.dgn
User:rmgarrett

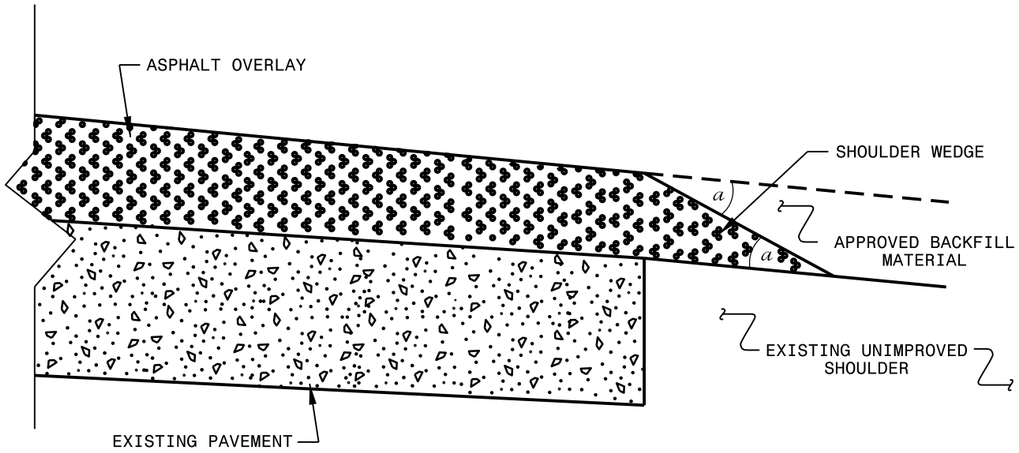
PROJECT REFERENCE NO.	SHEET NO.



NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.

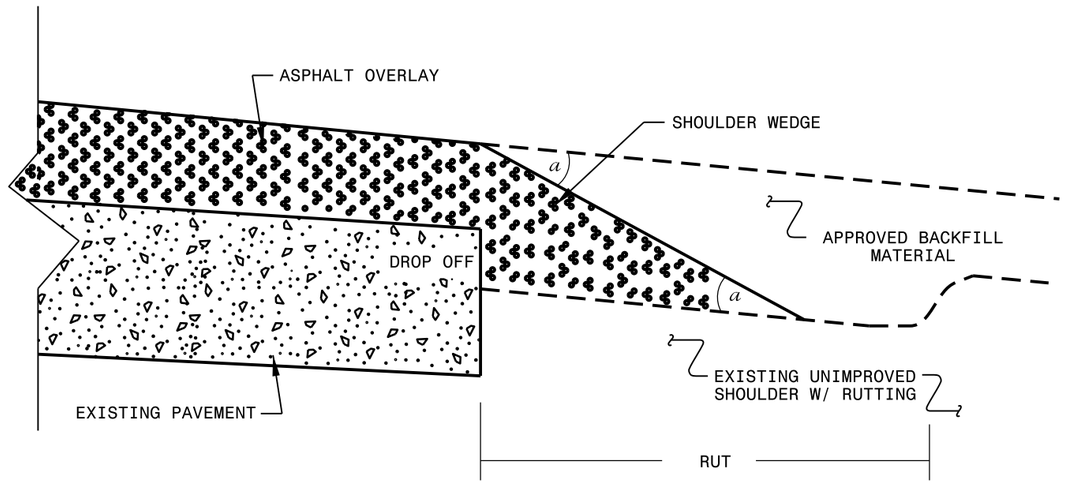
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

ORIGINAL BY:	T.SPELL	DATE:	7-19-11
MODIFIED BY:		DATE:	10/16/12
CHECKED BY:		DATE:	
FILE SPEC.:	s:usr/details/stand/shoulderwedgedetail.dgn		

$$$$$$SYSTIME$$$$$
$$$$$$USERNAME$$$$$

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.05.02.10321.1	SOQ-1	2
2016CPT.05.02.20321.1		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	2" MILLING SY	1½" MILLING SY	SURFACE COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	ADJUST MANHOLES EA	ADJUST METER OR VALVE BOX EA	INDUCTIVE LOOP LF
2016CPT.05.02.10321.1	Durham	1	US 70 BUS EB (RAMSEUR ST)	FROM CHAPEL HILL ST TO MAIN ST	1	2		NO	NO	0.475	24-48	11,635		1,374	82	50	6	2	800
TOTAL FOR MAP NO. 1										**0.475**		**11,635**		**1,374**	**82**	**50**	**6**	**2**	**800**
TOTAL FOR PROJ NO. 2016CPT.05.02.10321.1										**0.475**		**11,635**		**1,374**	**82**	**50**	**6**	**2**	**800**
2016CPT.05.02.20321.1	Durham	2	SR 2149 - ELLIS RD	SR 1954 - SO HI DR. TO SR 1171 - RIDDLE RD.	4	2		NO	NO	1.116	24-36		16,968	1,504	90	110			408
TOTAL FOR MAP NO. 2										**1.116**			**16,968**	**1,504**	**90**	**110**			**408**
2016CPT.05.02.20321.1	Durham	3	SR 1631 - SNOW HILL RD	SR 1706 - TORREDGE RD TO SR 1004 - OLD OXFORD HY	5	2		NO	NO	1.797	21-32		24,251	2,151	129	170			640
TOTAL FOR MAP NO. 3										**1.797**			**24,251**	**2,151**	**129**	**170**			**640**
2016CPT.05.02.20321.1	Durham	4	SR 1822 - CARPENTER RD	SR 1671 - FERREL RD. TO SR 1800 - CHEEK RD.	5	2		NO	NO	1.116	22-36		16,641	1,475	88	115			
TOTAL FOR MAP NO. 4										**1.116**			**16,641**	**1,475**	**88**	**115**			
2016CPT.05.02.20321.1	Durham	5	SR 1118 - FAYETTEVILLE RD	E. CORNWALLIS TO PAVEMENT JOINT SOUTH OF SR 1121	2	4		NO	NO	1.01	46-64		36,215	3,201	192	200	5	3	5,270
TOTAL FOR MAP NO. 5										**1.01**			**36,215**	**3,201**	**192**	**200**	**5**	**3**	**5,270**
2016CPT.05.02.20321.1	Durham	6	SR 1471 - RED MOUNTAIN RD	SR 1605 - MORIAH RD. TO SR 1607 - BAHAMA RD.	5	2		NO	NO	1.852	20		22,041	1,956	117	180			
TOTAL FOR MAP NO. 6										**1.852**			**22,041**	**1,956**	**117**	**180**			
2016CPT.05.02.20321.1	Durham	7	SR 1945 - S. ALSTON AVE	SR 1171 - RIDDLE ROAD TO NC 54 SKIPPING NEW PAVEMENT AT I-40	4	2		NO	NO	3.77	22-54		57,817	5,124	307	300	5	2	2,100
TOTAL FOR MAP NO. 7										**3.77**			**57,817**	**5,124**	**307**	**300**	**5**	**2**	**2,100**
2016CPT.05.02.20321.1	Durham	8	SR 1972 - COMSTOCK RD	SR 1973 - PAGE RD TO WAKE CO.	4	2		NO	NO	0.418	22-30		6,067	538	32	35			
TOTAL FOR MAP NO. 8										**0.418**			**6,067**	**538**	**32**	**35**			
2016CPT.05.02.20321.1	Durham	9	SR 2078 - MAUGHAN DR	SR 2028 - ALEXANDER DR TO EOM	5	2		NO	NO	0.26	24		3,861	342	21	25		2	
TOTAL FOR MAP NO. 9										**0.26**			**3,861**	**342**	**21**	**25**		**2**	
2016CPT.05.02.20321.1	Durham	10	SR 2103 - EMPEROR BLVD	SR 1973 - PAGE RD TO NC 54	2,3	3		NO	NO	1.1	36-114		30,232	2,674	160	110	3		1,550
TOTAL FOR MAP NO. 10										**1.1**			**30,232**	**2,674**	**160**	**110**	**3**		**1,550**
TOTAL FOR PROJ NO. 2016CPT.05.02.20321.1										**12.439**			**214,093**	**18,965**	**1,136**	**1,245**	**13**	**7**	**9,968**
GRAND TOTAL										**12.914**		**11,635**	**214,093**	**20,339**	**1,218**	**1,295**	**19**	**9**	**10,768**

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.05.02.10321.1	SOQ-2	2
2016CPT.05.02.20321.1		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E WORK ZONE ADVANCE/GENERAL WARNING SIGNING SF	4457000000-N TEMPORARY TRAFFIC CONTROL LS	4685000000-E 4" X 90 M WHITE THERMD LF	4686000000-E 4" X 120 M WHITE THERMD LF	4686000000-E 4" X 120 M YELLOW THERMD LF	4695000000-E 8" X 90 M WHITE THERMD LF	4695000000-E 8" X 90 M YELLOW THERMD LF	4697000000-E 8" X 120 M WHITE THERMD LF	4702000000-E 12" X 120 M WHITE THERMD LF	4705000000-E 16" X 120 M WHITE THERMD LF	4710000000-E 24" X 120 M WHITE THERMD LF	4721000000-E THERMD RXR 120 M EA	4721000000-E THERMD M&G ONLY 120 M EA	4721000000-E THERMD M&G SCHOOL 120 M EA	4721000000-E THERMD M&G STOP 120 M EA	4721000000-E THERMD M&G AHEAD 120 M EA	4725000000-E THERMD STR ARROW 90 M EA	4725000000-E THERMD STR & RT ARROW 90 M EA	4725000000-E THERMD STR & LT ARROW 90 M EA	4725000000-E THERMD RT ARROW 90 M EA	4725000000-E THERMD LT ARROW 90 M EA	4725000000-E THERMD MERGE ARROW 90 M EA	4810000000-E 4" WHITE PAINT LF	4810000000-E 4" YELLOW PAINT LF	4820000000-E 8" WHITE PAINT LF	4820000000-E 8" YELLOW PAINT LF
2016CPT.05.02.10321.1	Durham	1	US 70 BUS EB (RAMSEUR ST)	FROM CHAPEL HILL ST TO MAIN ST	1	2		0.475	24-48	126	0.06	5,111	1,500		300		470	434	50	265	2	4				11	2	4	5			6,610		770	
TOTAL FOR MAP NO. 1								**0.475**		**126**	**0.06**	**5,111**	**1,500**		**300**		**470**	**434**	**50**	**265**	**2**	**4**				**11**	**2**	**4**	**5**			**6,610**		**770**	
TOTAL FOR PROJ NO. 2016CPT.05.02.10321.1								**0.475**		**126**	**0.06**	**5,111**	**1,500**		**300**		**470**	**434**	**50**	**265**	**2**	**4**				**11**	**2**	**4**	**5**			**6,610**		**770**	
													1,500		**300**								**6**								**22**			**6,610**		**770**	
2016CPT.05.02.20321.1	Durham	2	SR 2149 - ELLIS RD	SR 1954 - SO HI DR. TO SR 1171 - RIDDLE RD.	4	2		1.116	24-36	125	0.07	11,140	600	12,160		95				30									1	2		11,740	12,160		95
TOTAL FOR MAP NO. 2								**1.116**		**125**	**0.07**	**11,140**	**600**	**12,160**		**95**				**30**									**1**	**2**		**11,740**	**12,160**		**95**
2016CPT.05.02.20321.1	Durham	3	SR 1631 - SNOW HILL RD	SR 1706 - TORREDGE RD TO SR 1004 - OLD OXFORD HY	5	2		1.797	21-32	202	0.10	19,336	300	19,850		575				62			6	4	5					4		19,336	19,860		575
TOTAL FOR MAP NO. 3								**1.797**		**202**	**0.10**	**19,336**	**300**	**19,850**		**575**				**62**			**6**	**4**	**5**					**4**		**19,336**	**19,860**		**575**
2016CPT.05.02.20321.1	Durham	4	SR 1822 - CARPENTER RD	SR 1671 - FERREL RD. TO SR 1800 - CHEEK RD.	5	2		1.116	22-36	125	0.07	12,008	245	11,697		150				70										8		12,253	11,697		150
TOTAL FOR MAP NO. 4								**1.116**		**125**	**0.07**	**12,008**	**245**	**11,697**		**150**				**70**										**8**		**12,253**	**11,697**		**150**
2016CPT.05.02.20321.1	Durham	5	SR 1118 - FAYETTEVILLE RD	E. CORNWALLIS TO PAVEMENT JOINT SOUTH OF SR 1121	2	4		1.01	46-64	101	0.15		4,100	14,650	360	425	620			1,550		4	30			14	9	1	2	24	2	4,141	14,650	980	425
TOTAL FOR MAP NO. 5								**1.01**		**101**	**0.15**		**4,100**	**14,650**	**360**	**425**	**620**			**1,550**		**4**	**30**			**14**	**9**	**1**	**2**	**24**	**2**	**4,141**	**14,650**	**980**	**425**
2016CPT.05.02.20321.1	Durham	6	SR 1471 - RED MOUNTAIN RD	SR 1605 - MORIAH RD. TO SR 1607 - BAHAMA RD.	5	2		1.852	20	207	0.09	19,928	35	19,558																19,928	19,558		
TOTAL FOR MAP NO. 6								**1.852**		**207**	**0.09**	**19,928**	**35**	**19,558**																**19,928**	**19,558**		
2016CPT.05.02.20321.1	Durham	7	SR 1945 - S. ALSTON AVE	SR 1171 - RIDDLE ROAD TO NC 54 SKIPPING NEW PAVEMENT AT I-40	4	2		3.77	22-54	441	0.28	34,335	2,187	43,592	365	570	100		100	250	4		6	4	5		4	2	7	36		36,522	43,592	465	570
TOTAL FOR MAP NO. 7								**3.77**		**441**	**0.28**	**34,335**	**2,187**	**43,592**	**365**	**570**	**100**		**100**	**250**	**4**		**6**	**4**	**5**		**4**	**2**	**7**	**36**		**36,522**	**43,592**	**465**	**570**
2016CPT.05.02.20321.1	Durham	8	SR 1972 - COMSTOCK RD	SR 1973 - PAGE RD TO WAKE CO.	4	2		0.418	22-30	48	0.03	3,740	125	4,400						32									2	2		3,865	4,400		
TOTAL FOR MAP NO. 8								**0.418**		**48**	**0.03**	**3,740**	**125**	**4,400**						**32**									**2**	**2**		**3,865**	**4,400**		
2016CPT.05.02.20321.1	Durham	9	SR 2078 - MAUGHAN DR	SR 2028 - ALEXANDER DR TO EOM	5	2		0.26	24	29	0.02	2,385		2,385						60												2,385	2,385		
TOTAL FOR MAP NO. 9								**0.26**		**29**	**0.02**	**2,385**		**2,385**						**60**												**2,385**	**2,385**		
2016CPT.05.02.20321.1	Durham	10	SR 2103 - EMPEROR BLVD	SR 1973 - PAGE RD TO NC 54	2,3	3		1.1	36-114	123	0.13		1,900	9,970	1,140		675			165						5			5	30		1,900	9,970	1,815	
TOTAL FOR MAP NO. 10								**1.1**		**123**	**0.13**		**1,900**	**9,970**	**1,140**		**675**			**165**						**5**			**5**	**30**		**1,900**	**9,970**	**1,815**	
TOTAL FOR PROJ NO. 2016CPT.05.02.20321.1								**12.439**		**1,401**	**0.94**	**102,872**	**9,492**	**138,262**	**1,865**	**1,815**	**1,395**		**100**	**2,219**	**4**	**4**	**42**	**8**	**10**	**19**	**13**	**3**	**17**	**106**	**2**	**112,070**	**138,272**	**3,260**	**1,815**
													147,754		**3,680**								**68**								**160**			**250,342**		**5,075**	
GRAND TOTAL								**12.914**		**1,527**	**1.00**	**107,983**	**10,992**	**138,262**	**2,165**	**1,815**	**1,865**	**434**	**150**	**2,484**	**6**	**8**	**42**	**8**	**10**	**30**	**15**	**7**	**22**	**106**	**2**	**118,680**	**138,272**	**4,030**	**1,815**
													149,254		**3,980**								**74**								**182**			**256,952**		**5,845**	

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4825000000-E 12" WHITE PAINT LF	4830000000-E 16" WHITE PAINT LF	4835000000-E 24" WHITE PAINT LF	4840000000-N PAINT M&G RXR EA	4840000000-N PAINT M&G ONLY EA	4840000000-N PAINT M&G SCHOOL EA	4840000000-N PAINT M&G STOP EA	4840000000-N PAINT M&G AHEAD EA	4845000000-N PAINT RT ARROW EA	4845000000-N PAINT STR ARROW EA	4845000000-N PAINT STR & RT ARROW EA	4845000000-N PAINT STR & LT ARROW EA	4845000000-N PAINT LT ARROW EA	4845000000-N PAINT MERGE ARROW EA	4900000000-N CRYSTAL & RED MARKERS EA	4900000000-N YELLOW & YELLOW MARKERS EA
2016CPT.05.02.10321.1	Durham	1	US 70 BUS EB (RAMSEUR ST)	FROM CHAPEL HILL ST TO MAIN ST	1	2		0.475	24-48	434	50.00	265	2	4				10	11	2	4			150	
TOTAL FOR MAP NO. 1								**0.475**		**434**	**50.00**	**265**	**2**	**4**				**10**	**11**	**2**	**4**			**150**	
TOTAL FOR PROJ NO. 2016CPT.05.02.10321.1								**0.475**		**434**	**50.00**	**265**	**2**	**4**				**10**	**11**	**2**	**4**			**150**	
															6					**27**				**150**	
2016CPT.05.02.20321.1	Durham	2	SR 2149 - ELLIS RD	SR 1954 - SO HI DR. TO SR 1171 - RIDDLE RD.	4	2		1.116	24-36			30						1				2		15	88
TOTAL FOR MAP NO. 2								**1.116**				**30**						**1**				**2**		**15**	**88**
2016CPT.05.02.20321.1	Durham	3	SR 1631 - SNOW HILL RD	SR 1706 - TORREDGE RD TO SR 1004 - OLD OXFORD HY	5	2		1.797	21-32			62			6	4	5					4		12	134
TOTAL FOR MAP NO. 3								**1.797**				**62**			**6**	**4**	**5**					**4**		**12**	**134**
2016CPT.05.02.20321.1	Durham	4	SR 1822 - CARPENTER RD	SR 1671 - FERREL RD. TO SR 1800 - CHEEK RD.	5	2		1.116	22-36			70										8		13	100
TOTAL FOR MAP NO. 4								**1.116**				**70**										**8**		**13**	**100**
2016CPT.05.02.20321.1	Durham	5	SR 1118 - FAYETTEVILLE RD	E. CORNWALLIS TO PAVEMENT JOINT SOUTH OF SR 1121	2	4		1.01	46-64			1,550		4	30			2	14	9	1	24	2	325	145
TOTAL FOR MAP NO. 5								**1.01**				**1,550**		**4**	**30**			**2**	**14**	**9**	**1**	**24**	**2**	**325**	**145**
2016CPT.05.02.20321.1	Durham	6	SR 1471 - RED MOUNTAIN RD	SR 1605 - MORIAH RD. TO SR 1607 - BAHAMA RD.	5	2		1.852	20																122
TOTAL FOR MAP NO. 6								**1.852**																	**122**
2016CPT.05.02.20321.1	Durham	7	SR 1945 - S. ALSTON AVE	SR 1171 - RIDDLE ROAD TO NC 54 SKIPPING NEW PAVEMENT AT I-40	4	2		3.77	22-54		100.00	250	4		6	4	5	7		4	2	36		200	249
TOTAL FOR MAP NO. 7								**3.77**			**100**	**250**	**4**		**6**	**4**	**5**	**7**		**4**	**2**	**36**		**200**	**249**
2016CPT.05.02.20321.1	Durham	8	SR 1972 - COMSTOCK RD	SR 1973 - PAGE RD TO WAKE CO.	4	2		0.418	22-30			32						2				2			
TOTAL FOR MAP NO. 8								**0.418**				**32**						**2**				**2**			
2016CPT.05.02.20321.1	Durham	9	SR 2078 - MAUGHAN DR	SR 2028 - ALEXANDER DR TO EOM	5	2		0.26	24			60													17
TOTAL FOR MAP NO. 9								**0.26**				**60**													**17**
2016CPT.05.02.20321.1	Durham	10	SR 2103 - EMPEROR BLVD	SR 1973 - PAGE RD TO NC 54	2,3	3		1.1	36-114			165						5	5			30		162	198
TOTAL FOR MAP NO. 10								**1.1**				**165**						**5**	**5**			**30**		**162**	**198**
TOTAL FOR PROJ NO. 2016CPT.05.02.20321.1								**12.439**			**100**	**2,219**	**4**	**4**	**42**	**8**	**10**	**17**	**19**	**13**	**3**	**106**	**2**	**727**	**1,053**
															68					**160**				**1,780**	
GRAND TOTAL								**12.914**		**434**	**150**	**2,484**	**6**	**8**	**42**	**8**	**10**	**27**	**30**	**15**	**7**	**106**	**2**	**877**	**1,053**
															74					**187**				**1,930**	