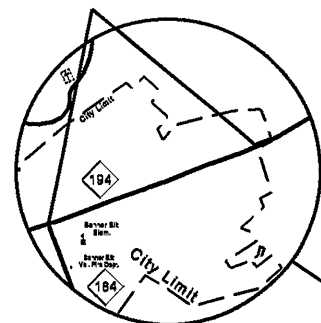
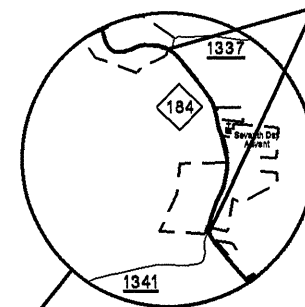


MAP #5 NC 194
FROM NC 184 TO BANNER ELK NCL

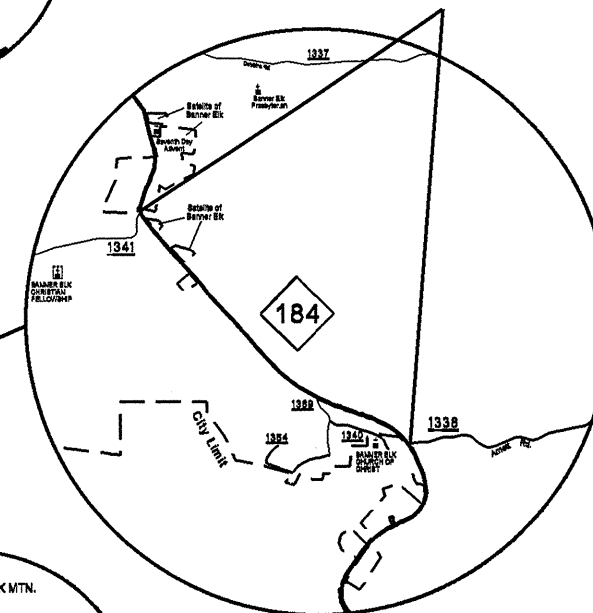


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
AVERY COUNTY

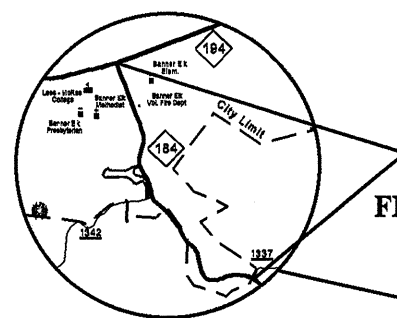
MAP #3 NC 184
FROM SR 1341 TO BANNER ELK SCL



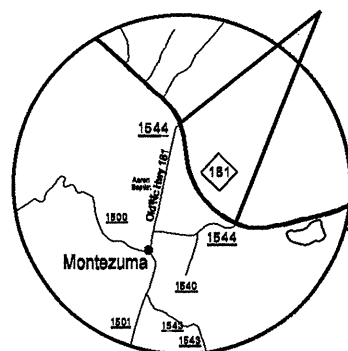
MAP #2 NC 184
FROM SR 1338 TO SR 1341



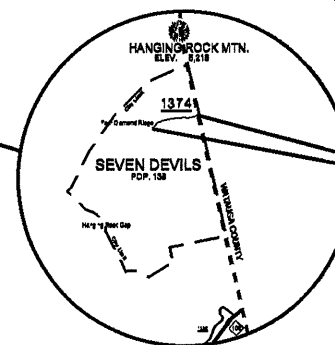
MAP #4 NC 184
FROM BANNER ELK SCL TO NC 194



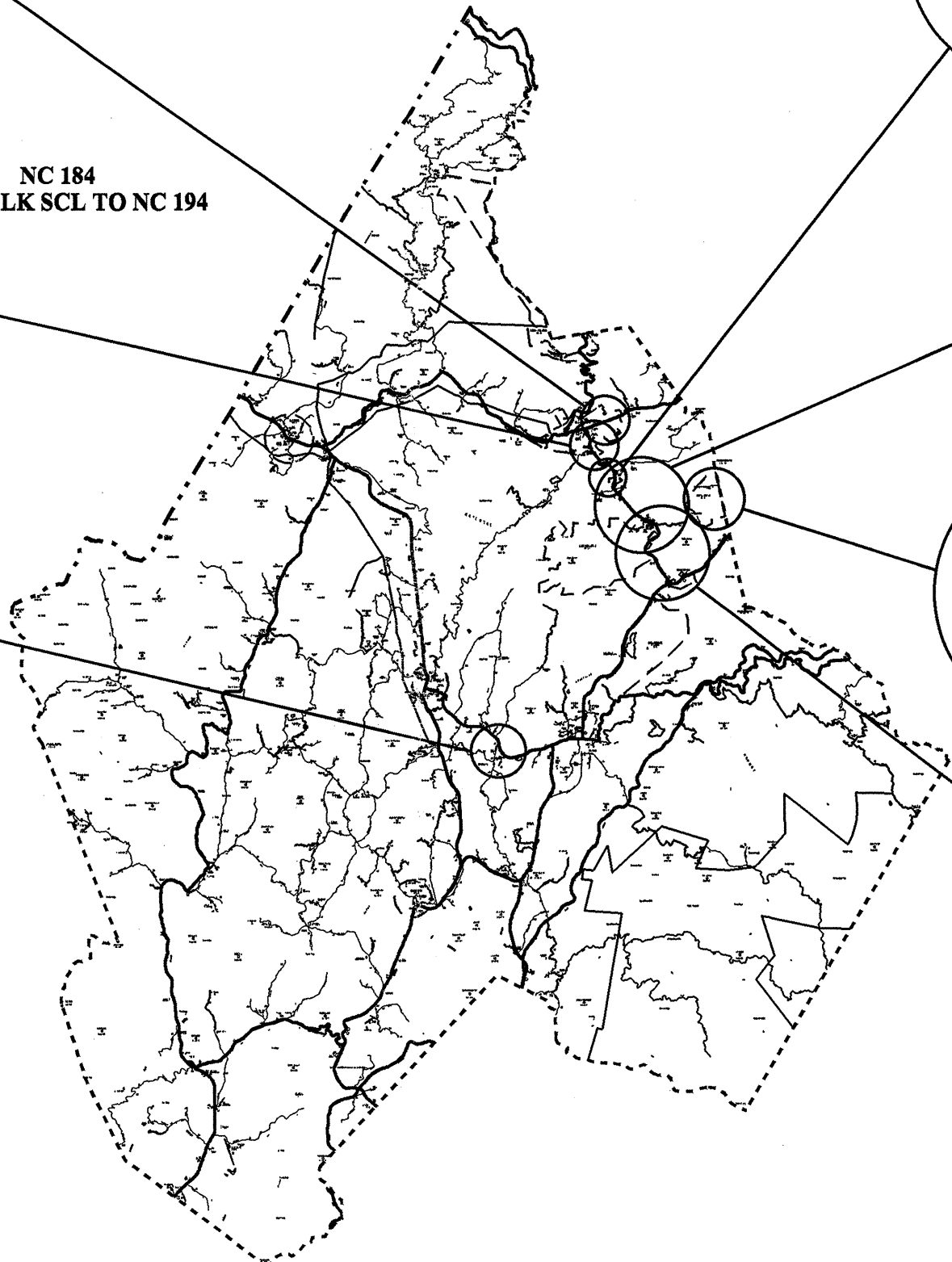
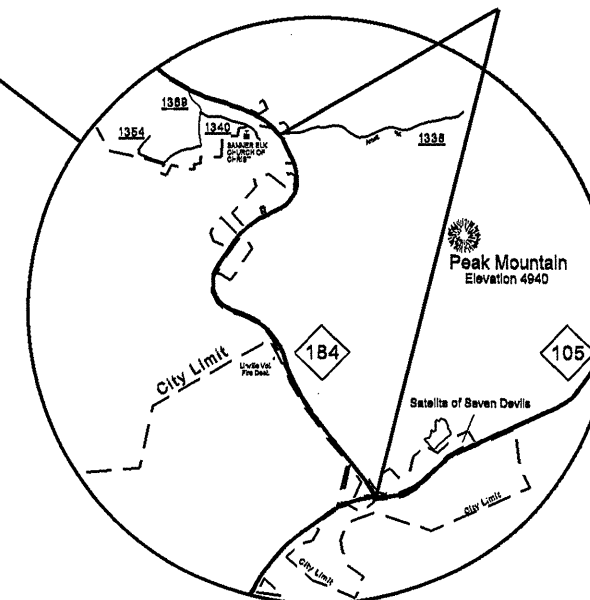
MAP #7 SR 1544
FROM NC 181 TO NC 181



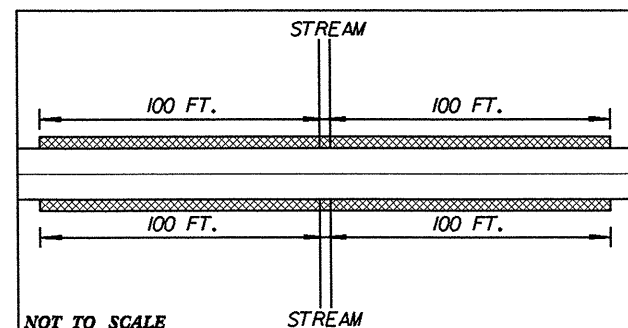
MAP #8 SR 1374
FROM WATAUGA COUNTY LINE TO EOM



MAP #1 NC 184
FROM NC 105 TO SR 1338



***DETAIL FOR AGGREGATE SHOULDER BORROW AT STREAM CROSSING**



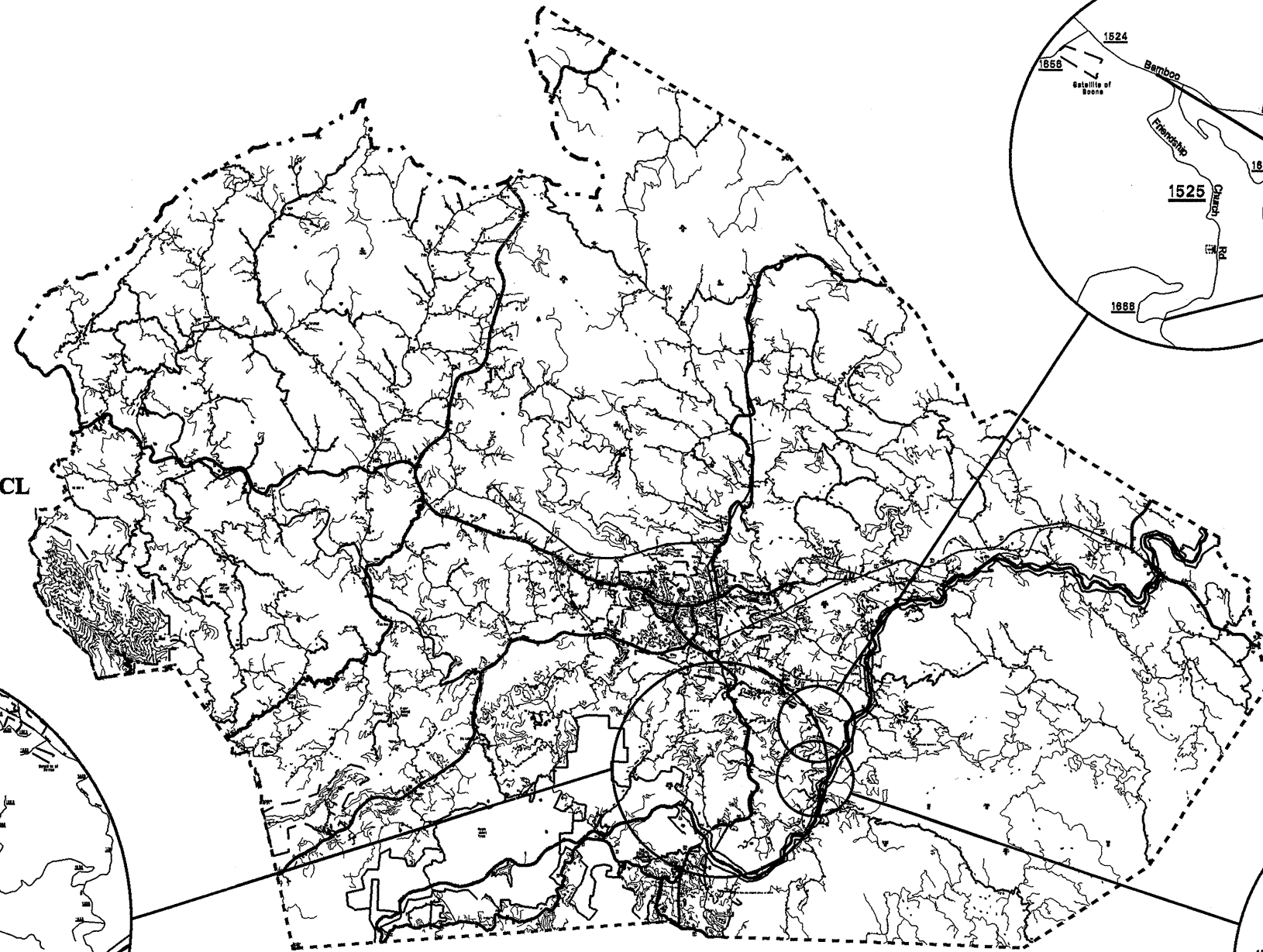
HATCHED AREA SHOWS PLACEMENT OF AGGREGATE SHOULDER BORROW

NOTE: AGGREGATE SHOULDER BORROW TO BE PLACED

- * MAP #1 APPROX. STATION 7+50 200' LT.
- * MAP #1 APPROX. STATION 33+25 200' LT.
- * MAP #2 APPROX. STATION 2.75 200' RT.
- * MAP #2 APPROX. STATION 11+50 200' RT.
- * MAP #2 APPROX. STATION 30+50 TO 37+50 700' RT.
- * MAP #2 APPROX. STATION 37+50 TO 42+50 500' LT.
- * MAP #3 APPROX. STATION 0+50 TO 4+00 350' LT.
- * MAP #3 APPROX. STATION 20+50 TO 29+00 850' LT.
- * MAP #3 APPROX. STATION 27+00 TO 29+00 200' RT.
- * MAP #4 APPROX. STATION 16+00 TO 29+00 1,300' LT.
- * MAP #4 APPROX. STATION 36+00 TO 37+00 100' RT.
- * MAP #4 APPROX. STATION 31+50 400' (SEE DETAIL)
- * MAP #5 APPROX. STATION 19+00 TO 36+00 1,700' RT.
- * MAP #7 APPROX. STATION 9+75 400' (SEE DETAIL)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

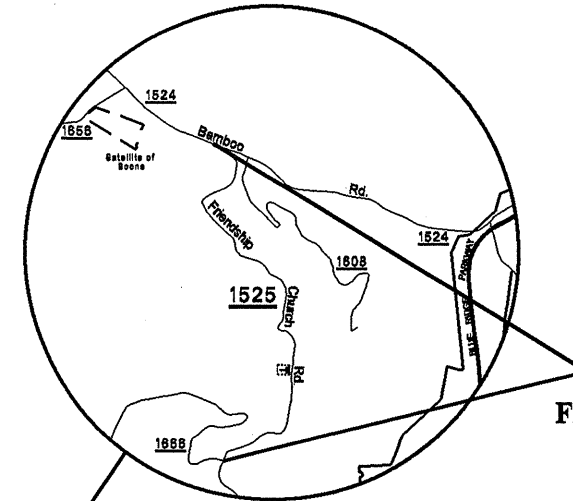
WATAUGA COUNTY



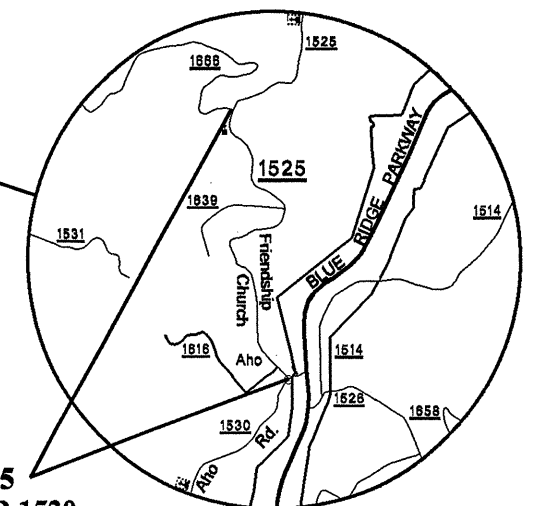
**MAP #6 US 321
FROM BOONE NCL TO BLOWING ROCK SCL**

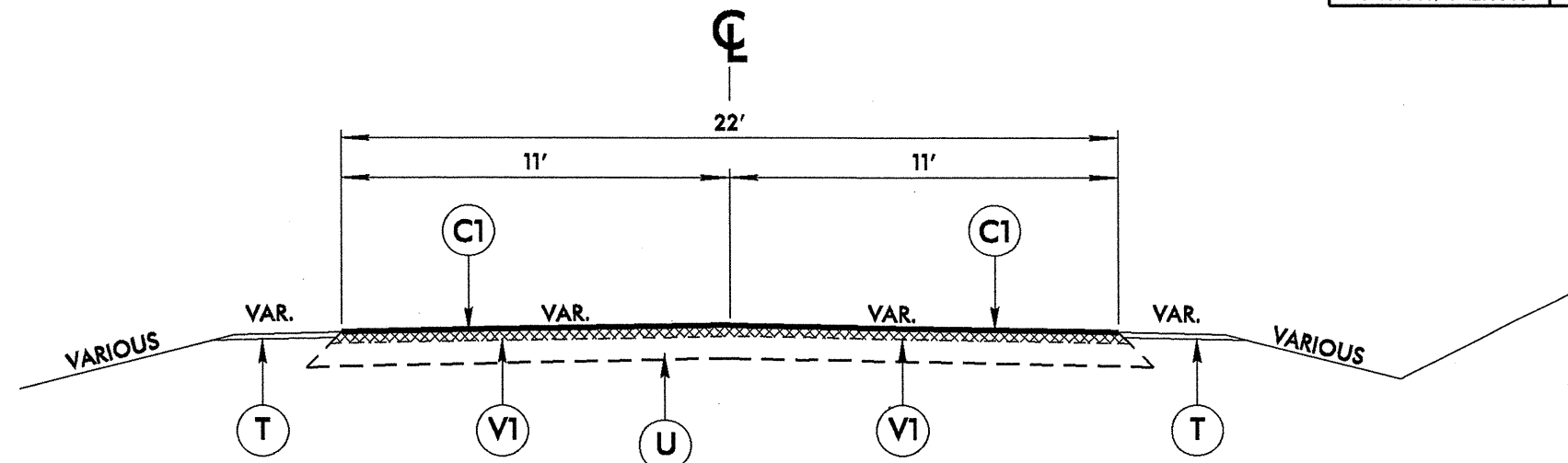


**MAP #10 SR 1525
FROM SR 1524 TO SR 1666**



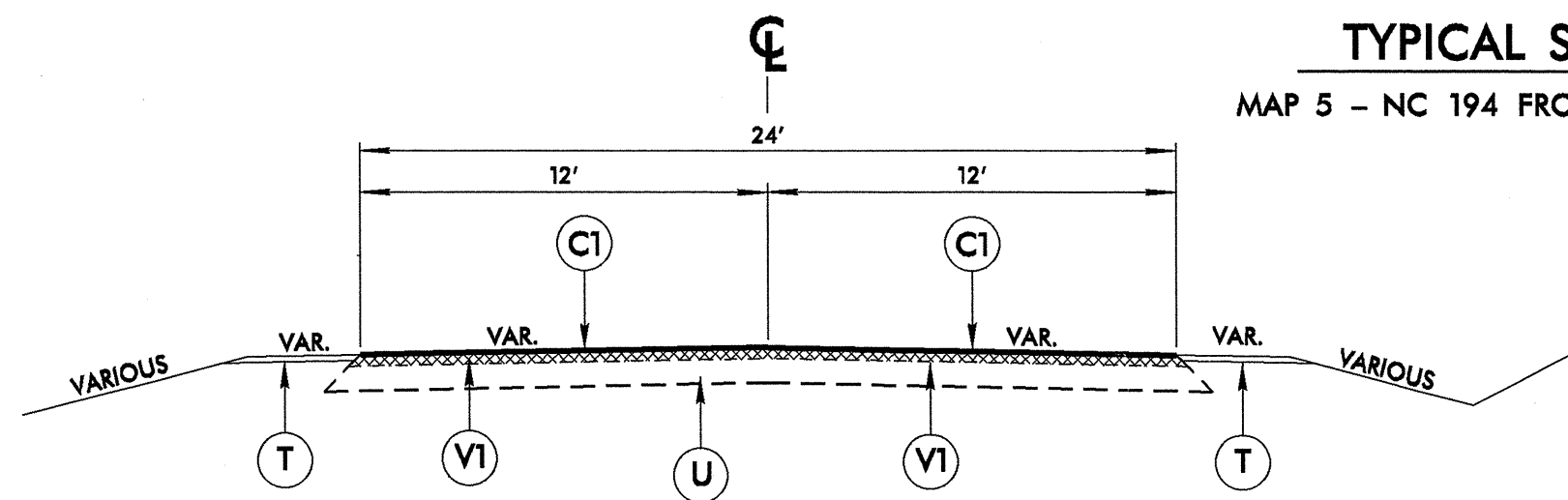
**MAP #9 SR 1525
FROM SR 1666 TO SR 1530**





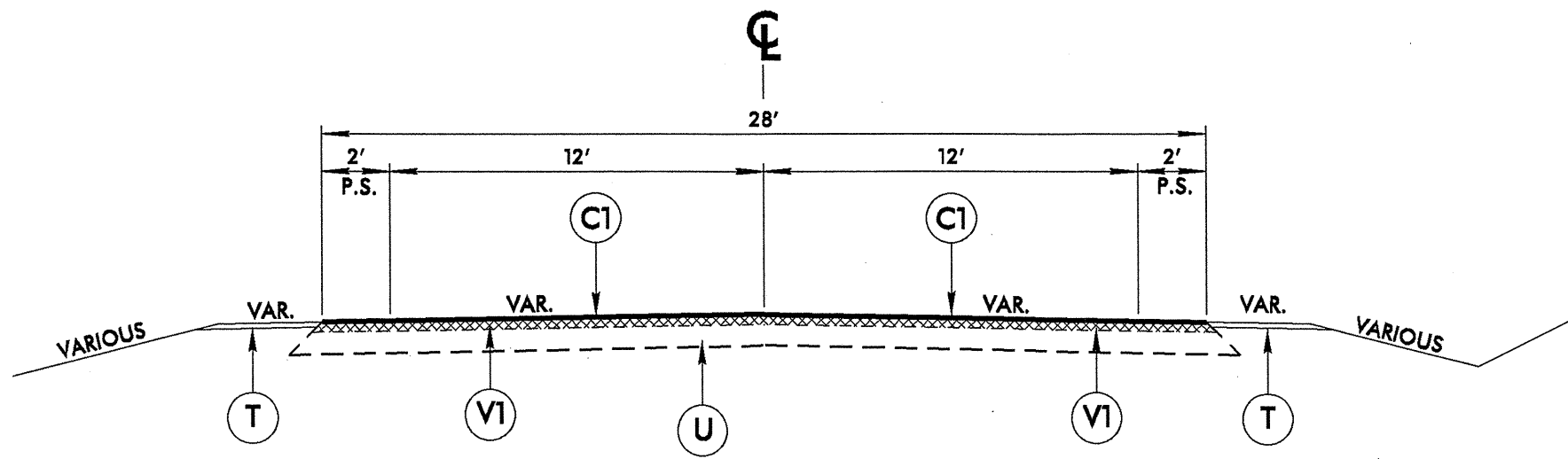
TYPICAL SECTION NO. 3

MAP 5 - NC 194 FROM NC 184 TO BANNER ELK NCL



TYPICAL SECTION NO. 2

MAP 3 - NC 184 FROM SR 1341 TO BANNER ELK SCL



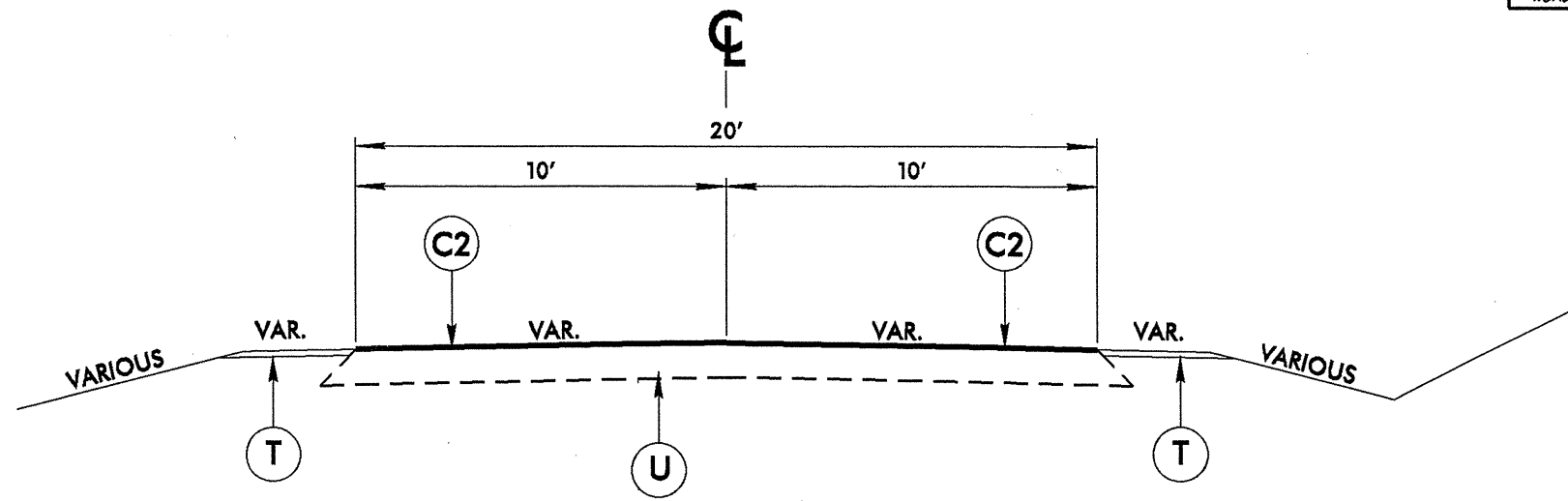
TYPICAL SECTION NO. 1

MAP 1 - NC 184 FROM NC 105 TO SR 1338
 MAP 2 - NC 184 FROM SR 1338 TO SR 1341
 MAP 4 - NC 184 FROM BANNER ELK SCL TO NC 194

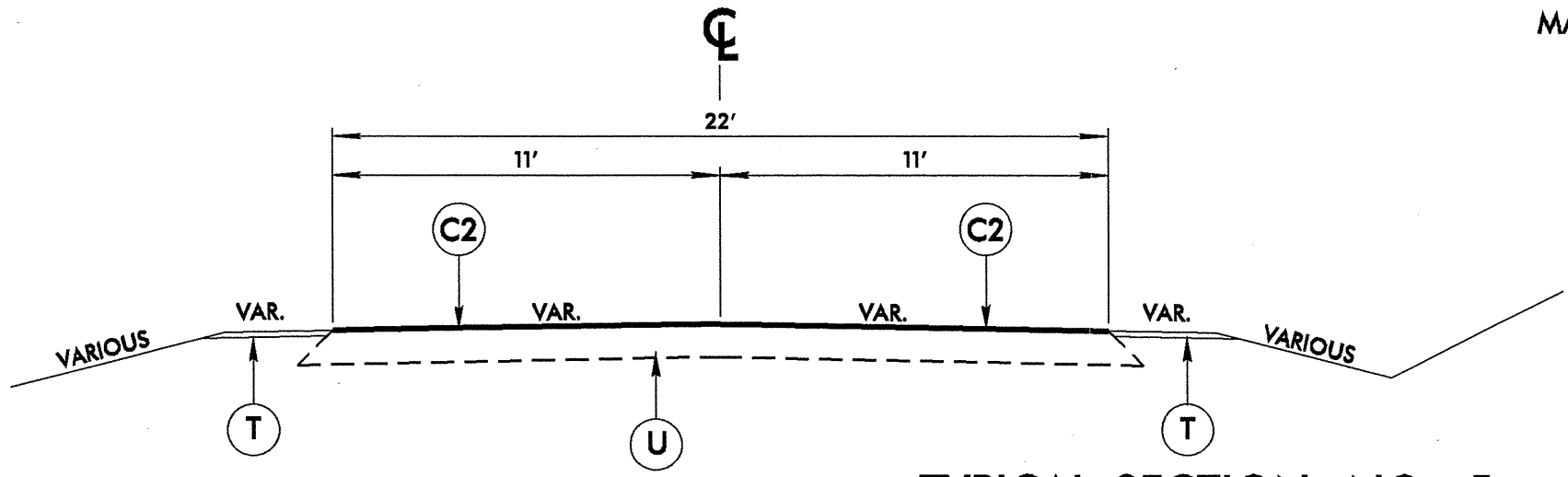
| PAVEMENT SCHEDULE | |
|-------------------|---|
| C1 | PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| C2 | PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. |
| C3 | PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| T | SHOULDER RECONSTRUCTION |
| U | EXISTING PAVEMENT |
| V1 | MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½" |

| | | |
|--|-------|--|
| AVERY AND WATAUGA COUNTIES PRIMARY AND SECONDARY RESURFACING | | |
| DIVISION II | | |
| REVISIONS | INIT. | DATE |
| | | |
| | | |
| N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION ELEVEN | | SCALE: N/A DATE: 12/2010 PREPARED BY: J. L. LAWS REVIEWED BY: REVIEWED BY: |

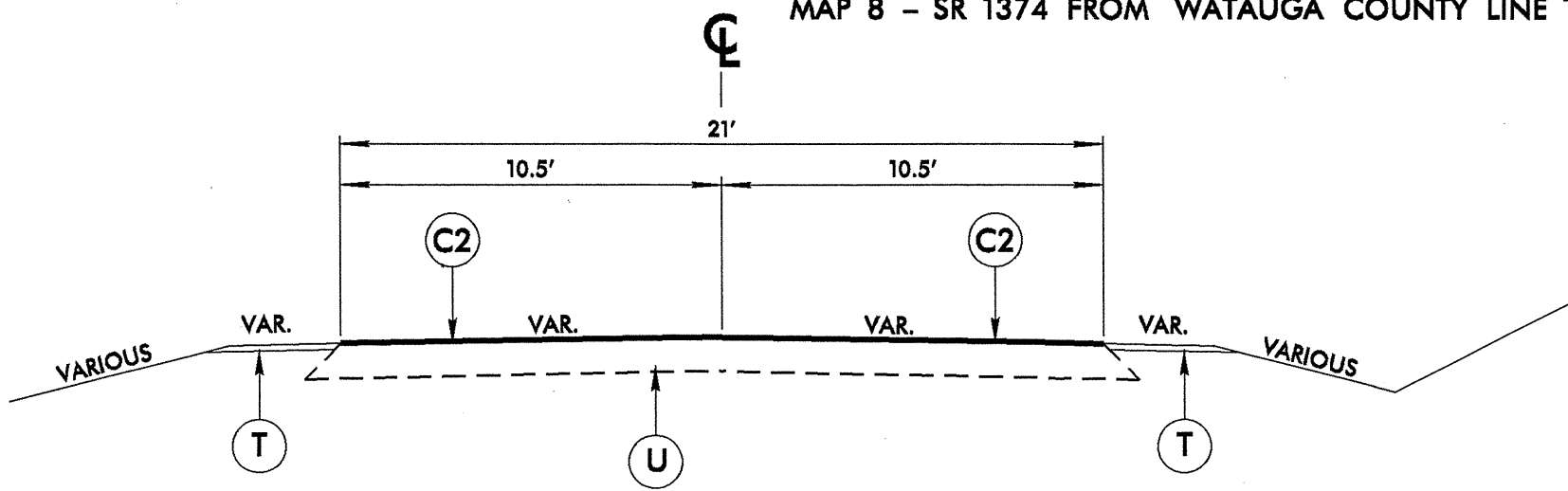
8/17/99



TYPICAL SECTION NO. 6
MAP 9 - SR 1525 FROM SR 1666 TO SR 1530



TYPICAL SECTION NO. 5
MAP 8 - SR 1374 FROM WATAUGA COUNTY LINE TO EOM



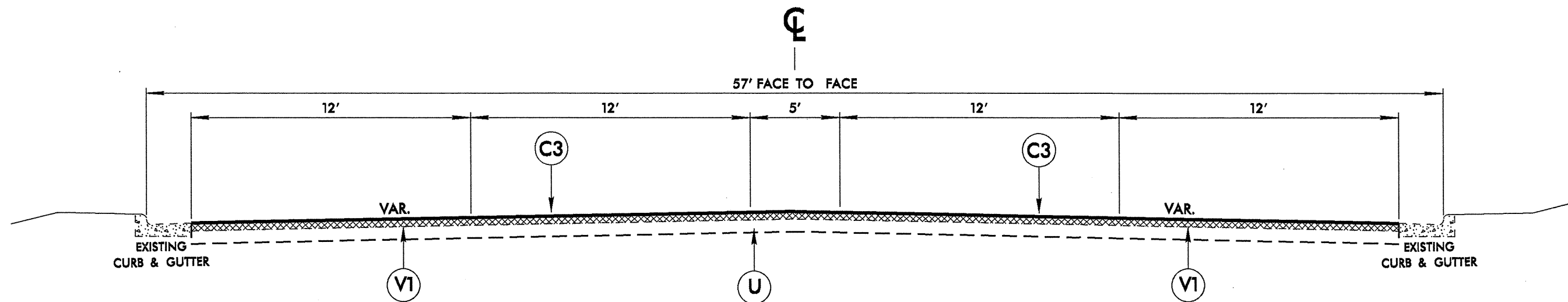
TYPICAL SECTION NO. 4
MAP 7 - SR 1544 FROM NC 181 TO NC 181

| 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 S9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. |
| C3 | PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| T | SHOULDER RECONSTRUCTION |
| U | EXISTING PAVEMENT |
| V1 | MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½" |

| | | |
|--|-------|--|
| AVERY AND WATAUGA COUNTIES PRIMARY AND SECONDARY RESURFACING | | |
| DIVISION II | | |
| REVISIONS | INIT. | DATE |
| | | |
| | | |
| N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION ELEVEN | | SCALE: N/A DATE: 12/2010 PREPARED BY: J. L. LAWS REVIEWED BY: REVIEWED BY: |

8/17/99

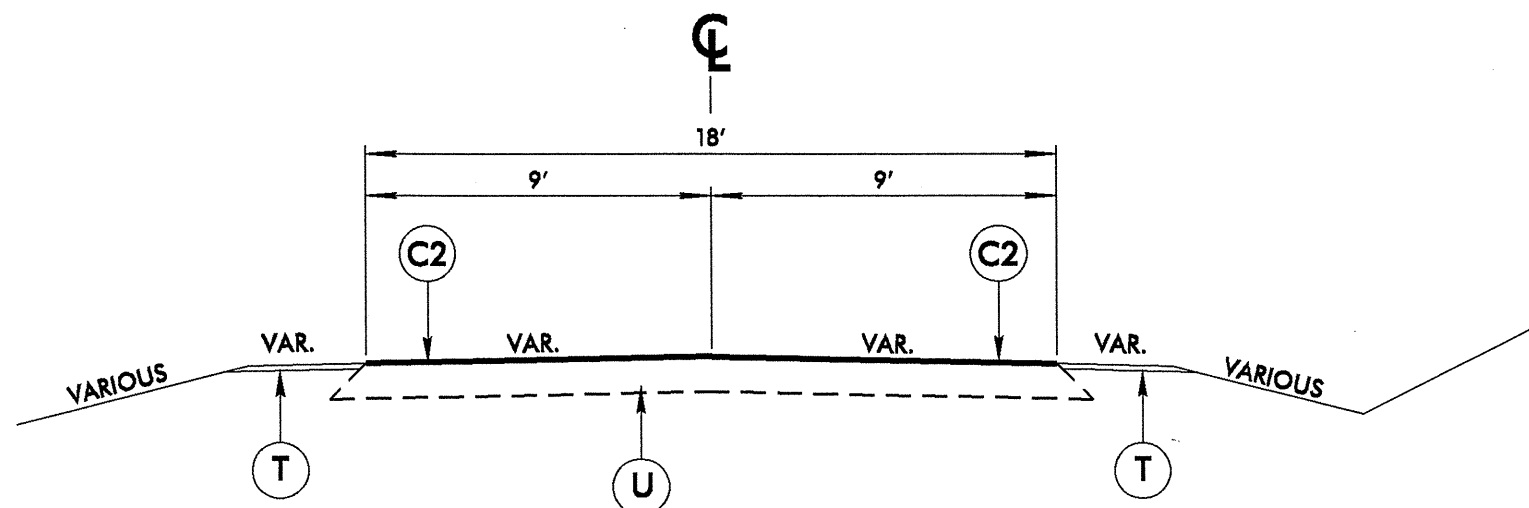
8/17/99



TYPICAL SECTION NO. 8

MAP 6 - US 321 FROM BOONE NCL TO BLOWING ROCK SCL

| 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. |
| C3 | PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. |
| T | SHOULDER RECONSTRUCTION |
| U | EXISTING PAVEMENT |
| V1 | MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½" |



TYPICAL SECTION NO. 7

MAP 10 - SR 1525 FROM SR 1524 TO SR 1666

| | | |
|---|-------|--|
| AVERY AND WATAUGA COUNTIES PRIMARY AND SECONDARY RESURFACING | | |
| DIVISION II | | |
| REVISIONS | INIT. | DATE |
| | | |
| | | |
| N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION ELEVEN | | SCALE: N/A DATE: 12/2010 PREPARED BY: J. L. LAWS REVIEWED BY: REVIEWED BY: |

| PROJECT NO. | SHEET NO. | TOTAL NO. |
|---|-----------|-----------|
| 11CR.10061.18, 11CR.10951.18 11CR.20061.18, ETC. | 6 | 7 |

SUMMARY OF QUANTITIES

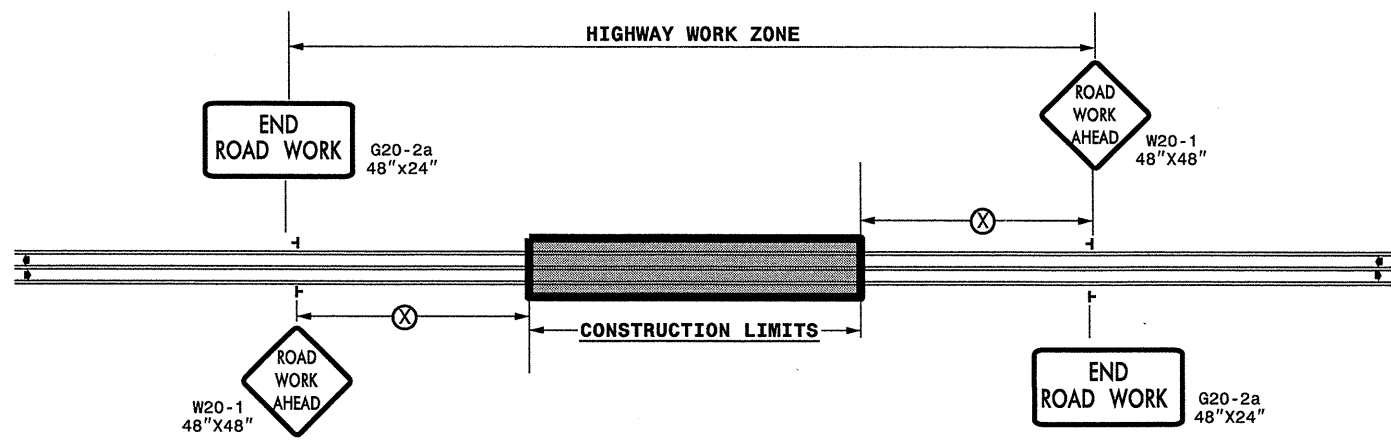
| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | TYP | FINAL SURFACE TESTING REQUIRED | LENGTH | WIDTH | BORROW | INCIDENTAL STONE BASE | SHOULDER RECONSTRUCTION | 1/2" MILLING | SURFACE COURSE, S9.5B | SURFACE COURSE, S9.5C | SURFACE COURSE, SF9.5A | PG 64-22 PLANT MIX | PG 70-22 PLANT MIX | PATCHING EXISTING PAVEMENT | SEED & MULCHING | INDUCTIVE LOOP |
|---|---------|--------|---------|------------------------------------|-----|--------------------------------|---------------|-------|--------------|-----------------------|-------------------------|----------------|-----------------------|-----------------------|------------------------|--------------------|--------------------|----------------------------|-----------------|----------------|
| NO | | NO | | | NO | | MI | FT | CY | TONS | SMI | SY | TONS | TONS | TONS | TONS | TONS | TONS | AC | LF |
| 11CR.10061.18 | Avery | 1 | NC 184 | FROM NC 105 TO SR 1338 | 1 | NO | 1.55 | 28 | 465 | 30 | 3.10 | 25,461 | 2,250 | | | 135 | | | 1.50 | 100 |
| TOTAL FOR MAP NO. 1 | | | | | | | 1.55 | | 465 | 30 | 3.10 | 25,461 | 2,250 | | | 135 | | | 1.50 | 100 |
| | | 2 | NC 184 | FROM SR 1338 TO SR 1341 | 1 | NO | 1.2 | 28 | 360 | 30 | 2.40 | 19,712 | 1,725 | | | 104 | | | | |
| TOTAL FOR MAP NO. 2 | | | | | | | 1.2 | | 360 | 30 | 2.40 | 19,712 | 1,725 | | | 104 | | | | |
| | | 3 | NC 184 | FROM SR 1341 TO BANNER ELK SCL | 2 | NO | 0.55 | 24 | 165 | 20 | 1.10 | 7,744 | 675 | | | 41 | | | 0.53 | |
| TOTAL FOR MAP NO. 3 | | | | | | | 0.55 | | 165 | 20 | 1.10 | 7,744 | 675 | | | 41 | | | 0.53 | |
| | | 4 | NC 184 | FROM BANNER ELK SCL TO NC 194 | 1 | NO | 0.95 | 28 | 285 | 40 | 1.90 | 15,605 | 1,360 | | | 82 | | | 0.92 | |
| TOTAL FOR MAP NO. 4 | | | | | | | 0.95 | | 285 | 40 | 1.90 | 15,605 | 1,360 | | | 82 | | | 0.92 | |
| | | 5 | NC 194 | FROM NC 184 TO BANNER ELK NCL | 3 | NO | 0.77 | 22 | 230 | | 1.54 | 9,938 | 860 | | | 52 | | | | 100 |
| TOTAL FOR MAP NO. 5 | | | | | | | 0.77 | | 230 | | 1.54 | 9,938 | 860 | | | 52 | | | | 100 |
| TOTAL FOR PROJ NO. 11CR.10061.18 | | | | | | | 5.02 | | 1,505 | 120 | 10.04 | 78,460 | 6,870 | | | 414 | | | 2.95 | 200 |
| 11CR.10951.18 | Watauga | 6 | US 321 | FROM BOONE NCL TO BLOWING ROCK SCL | 8 | NO | 4.922 | 53 | | | | 153,035 | | 13,300 | | | 798 | | | 768 |
| TOTAL FOR MAP NO. 6 | | | | | | | 4.922 | | | | | 153,035 | | 13,300 | | | 798 | | | 768 |
| TOTAL FOR PROJ NO. 11CR.10951.18 | | | | | | | 4.922 | | | | | 153,035 | | 13,300 | | | 798 | | | 768 |
| 11CR.20061.18 | Avery | 7 | SR 1544 | FROM NC 181 TO NC 181 | 4 | NO | 0.67 | 21 | 200 | 20 | 1.34 | | | | 700 | 46 | | 40 | 0.65 | |
| TOTAL FOR MAP NO. 7 | | | | | | | 0.67 | | 200 | 20 | 1.34 | | | | 700 | 46 | | 40 | 0.65 | |
| | | 8 | SR 1374 | FROM WATAUGA COUNTY LINE TO EOM | 5 | NO | 0.26 | 22 | 78 | 10 | 0.52 | | | | 295 | 19 | | 8 | 0.25 | |
| TOTAL FOR MAP NO. 8 | | | | | | | 0.26 | | 78 | 10 | 0.52 | | | | 295 | 19 | | 8 | 0.25 | |
| TOTAL FOR PROJ NO. 11CR.20061.18 | | | | | | | 0.93 | | 278 | 30 | 1.86 | | | | 995 | 65 | | 48 | 0.90 | |
| 11CR.20951.18 | Watauga | 9 | SR 1525 | FROM SR 1666 TO SR 1530 | 6 | NO | 1.12 | 20 | 336 | 25 | 2.24 | | | | 1,200 | 78 | | 25 | 2.17 | |
| TOTAL FOR MAP NO. 9 | | | | | | | 1.12 | | 336 | 25 | 2.24 | | | | 1,200 | 78 | | 25 | 2.17 | |
| | | 10 | SR 1525 | FROM SR 1524 TO SR 1666 | 7 | NO | 1.4 | 18 | 420 | 25 | 2.80 | | | | 1,350 | 88 | | 25 | 1.36 | |
| TOTAL FOR MAP NO. 10 | | | | | | | 1.4 | | 420 | 25 | 2.80 | | | | 1,350 | 88 | | 25 | 1.36 | |
| TOTAL FOR PROJ NO. 11CR.20951.18 | | | | | | | 2.52 | | 756 | 50 | 5.04 | | | | 2,550 | 166 | | 50 | 3.53 | |
| GRAND TOTAL | | | | | | | 13.392 | | 2,539 | 200 | 16.94 | 231,495 | 6,870 | 13,300 | 3,545 | 645 | 798 | 98 | 7.38 | 968 |

| | | |
|---|-----------|-----------|
| PROJECT NO. | SHEET NO. | TOTAL NO. |
| 11CR.10061.18, 11CR.10951.18 11CR.20061.18, ETC. | 7 | 7 |

THERMOPLASTIC AND PAINT QUANTITIES

| PROJECT NO | COUNTY | MAP NO | ROUTE | DESCRIPTION | 4810000000-E | | 4820000000-E | 4825000000-E | 4835000000-E | 4840000000-N | 4845000000-N | | | | 4905000000-N | |
|---|---------|--------|---------|------------------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------|----------------------|----------------------------|-----------------------|----------------------------|-----------------------------|
| | | | | | 4" WHITE PAINT LF | 4" YELLOW PAINT LF | 8" YELLOW PAINT LF | 12" WHITE PAINT LF | 24" WHITE PAINT LF | PAINT MSG SCHOOL EA | PAINT RT ARROW EA | PAINT LT ARROW EA | PAINT STR & LT ARROW EA | PAINT STR ARROW EA | PAINT STR & RT ARROW EA | SNOW PLOWABLE MARKERS EA |
| 11CR.10061.18 | Avery | 1 | NC 184 | FROM NC 105 TO SR 1338 | 32,736 | 38,836 | | | 40 | | 2 | 3 | 1 | | | 170 |
| TOTAL FOR MAP NO. 1 | | | | | 32,736 | 38,836 | | | 40 | | 2 | 3 | 1 | | | 170 |
| | | 2 | NC 184 | FROM SR 1338 TO SR 1341 | 25,824 | 25,824 | | | | | 2 | 4 | | | 3 | 140 |
| TOTAL FOR MAP NO. 2 | | | | | 25,824 | 25,824 | | | | | 2 | 4 | | | 3 | 140 |
| | | 3 | NC 184 | FROM SR 1341 TO BANNER ELK SCL | 11,836 | 11,836 | | | | | | | | | | 37 |
| TOTAL FOR MAP NO. 3 | | | | | 11,836 | 11,836 | | | | | | | | | | 37 |
| | | 4 | NC 184 | FROM BANNER ELK SCL TO NC 194 | 20,444 | 22,676 | | 224 | 100 | 12 | | | | | | 118 |
| TOTAL FOR MAP NO. 4 | | | | | 20,444 | 22,676 | | 224 | 100 | 12 | | | | | | 118 |
| | | 5 | NC 194 | FROM NC 184 TO BANNER ELK NCL | 16,570 | 16,570 | | | | | | | | | | 60 |
| TOTAL FOR MAP NO. 5 | | | | | 16,570 | 16,570 | | | | | | | | | | 60 |
| TOTAL FOR PROJ NO. 11CR.10061.18 | | | | | 107,410 | 115,742 | | 224 | 140 | 12 | 4 | 7 | 1 | 3 | | 525 |
| | | | | | 223,152 | | | | | | | | 15 | | | |
| 11CR.10951.18 | Watauga | 6 | US 321 | FROM BOONE NCL TO BLOWING ROCK SCL | 30,380 | 207,905 | 900 | | 724 | | 3 | 10 | | 16 | 3 | 1,550 |
| TOTAL FOR MAP NO. 6 | | | | | 30,380 | 207,905 | 900 | | 724 | | 3 | 10 | | 16 | 3 | 1,550 |
| TOTAL FOR PROJ NO. 11CR.10951.18 | | | | | 30,380 | 207,905 | 900 | | 724 | | 3 | 10 | | 16 | 3 | 1,550 |
| | | | | | 238,285 | | | | | | | | 32 | | | |
| 11CR.20061.18 | Avery | 7 | SR 1544 | FROM NC 181 TO NC 181 | 14,418 | 14,418 | | | | | | | | | | |
| TOTAL FOR MAP NO. 7 | | | | | 14,418 | 14,418 | | | | | | | | | | |
| | | 8 | SR 1374 | FROM WATAUGA COUNTY LINE TO EOM | 5,595 | 5,595 | | | | | | | | | | |
| TOTAL FOR MAP NO. 8 | | | | | 5,595 | 5,595 | | | | | | | | | | |
| TOTAL FOR PROJ NO. 11CR.20061.18 | | | | | 20,013 | 20,013 | | | | | | | | | | |
| | | | | | 40,026 | | | | | | | | | | | |
| 11CR.20951.18 | Watauga | 9 | SR 1525 | FROM SR 1666 TO SR 1530 | 23,654 | 23,654 | | | | | | | | | | |
| TOTAL FOR MAP NO. 9 | | | | | 23,654 | 23,654 | | | | | | | | | | |
| | | 10 | SR 1525 | FROM SR 1524 TO SR 1666 | 30,128 | 30,128 | | | | | | | | | | |
| TOTAL FOR MAP NO. 10 | | | | | 30,128 | 30,128 | | | | | | | | | | |
| TOTAL FOR PROJ NO. 11CR.20951.18 | | | | | 53,782 | 53,782 | | | | | | | | | | |
| | | | | | 107,564 | | | | | | | | | | | |
| GRAND TOTAL | | | | | 211,585 | 397,442 | 900 | 224 | 864 | 12 | 7 | 17 | 1 | 19 | 3 | 2,075 |
| | | | | | 609,027 | | | | | | | | 47 | | | |

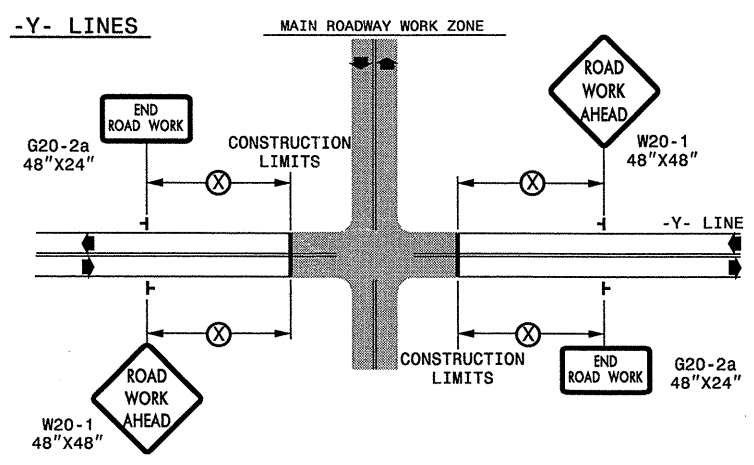
TWO-WAY UNDIVIDED ** (L-LINES)



| 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.
- 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

SHEET 1 OF 1

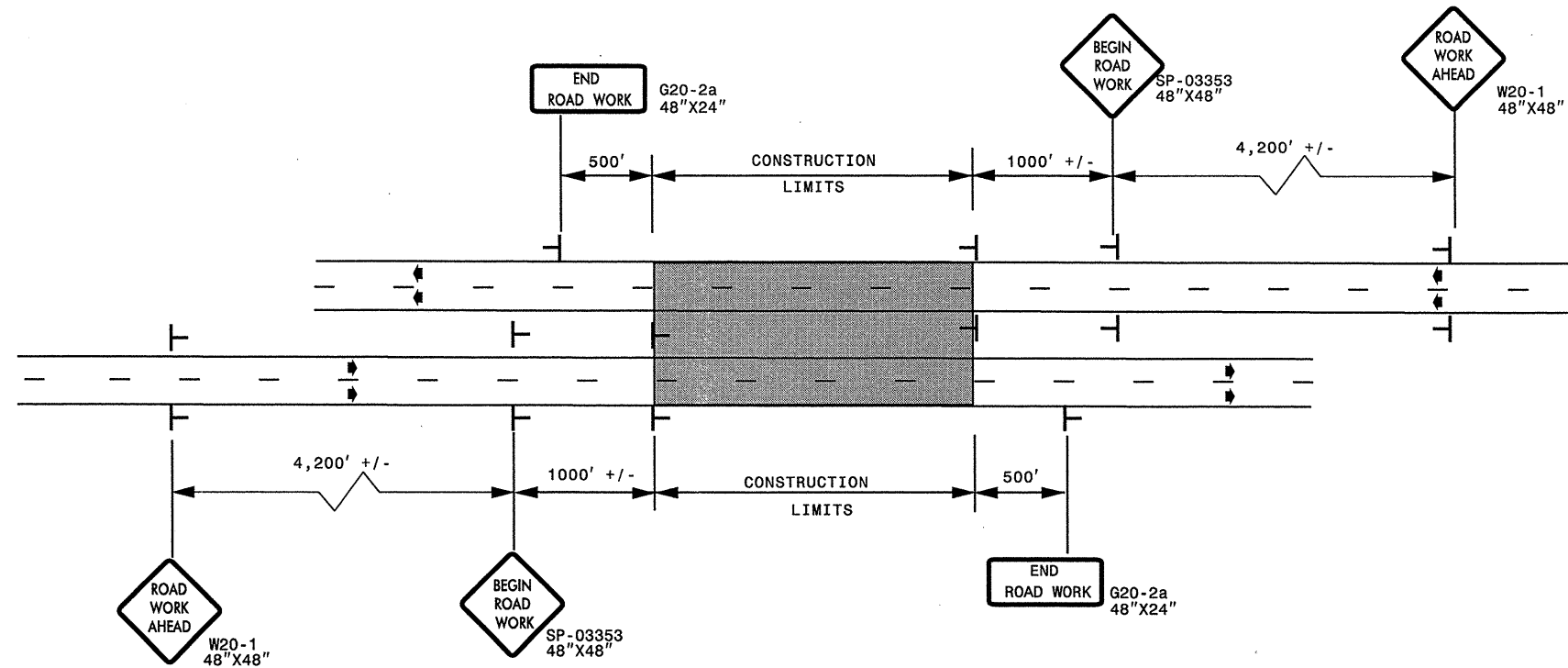
| | | | |
|-----------------|-------------|--|-------|
| APPROVED: _____ | DATE: _____ | DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS | |
| SEAL | SCALE: NONE | REVISIONS | |
| | DATE: 7-98 | 10/01 | |
| | DWG. BY: | 10-98 | 03/04 |
| | DESIGN BY: | 01/01 |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

O:\AN-2011\04
 \NOTES\GROUPS-WZTC\Resur-facing\2011\Western\2011\Div\202715A-D\ICR10061\IBx4-Avery-Watauga-US32\C202715A-D\ICR10061\IBx4-2way-Undiv.&-Urban-Fr.wys.stationary.dgn
 AT 12:47:33

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

| | |
|--|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 11CR.10061.18, 11CR.20061.18 11CR.10951.18, 11CR.20951.18 | TCP-2 |

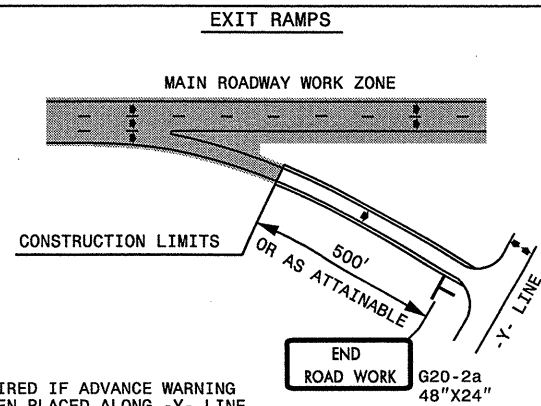
DETAIL A



| LEGEND | |
|--------|---------------------------|
| | STATIONARY SIGN |
| ▶ | DIRECTION OF TRAFFIC FLOW |

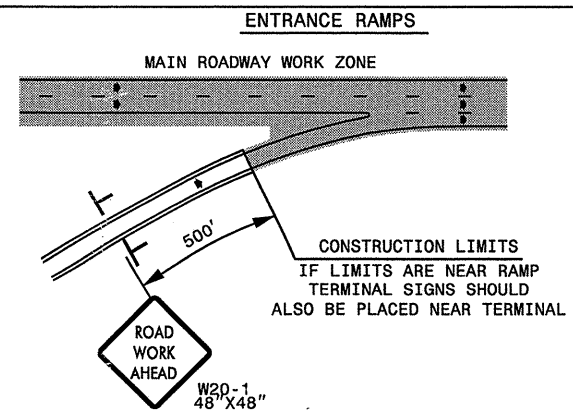
* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B

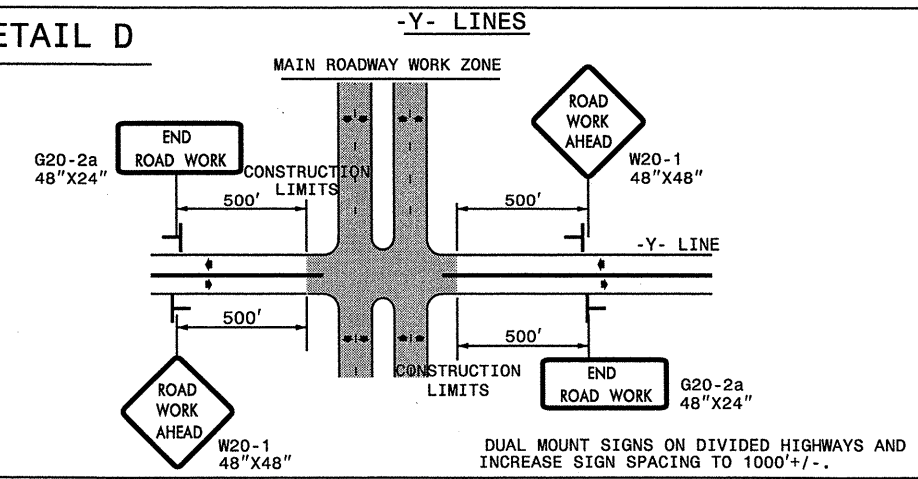


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

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) | | |
| <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto;"></div> <p style="font-size: 8px; margin: 0;">SEAL</p> | SCALE: NONE | | | |
| | DATE: 8/03 | | | REVISIONS |
| | DWG. BY: JI | | | 03/04 |
| | DESIGN BY: JI | | | |
| REVIEWED BY: | | CADD FILE | | |

04-JAN-2011 11:25
N:\DOT\UP\STREET\GROUPS-WZTC\TC-Resurfacing\2011\Western\2011\Div\N\C202715A-D_11CR.10061.18x4_Avery-Watouga.US32\C202715A-D_11CR.10061.18x4_freeways_4lanes_or_greater_stationary.dgn
engr/een AT 12:47:13

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DIVISION OF HIGHWAYS
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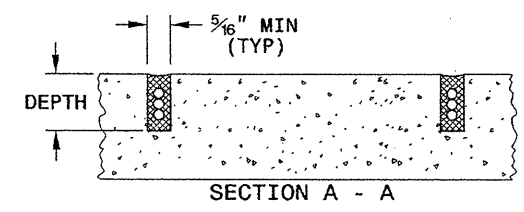
11-08

ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS

SHEET 1 OF 3
1725D01

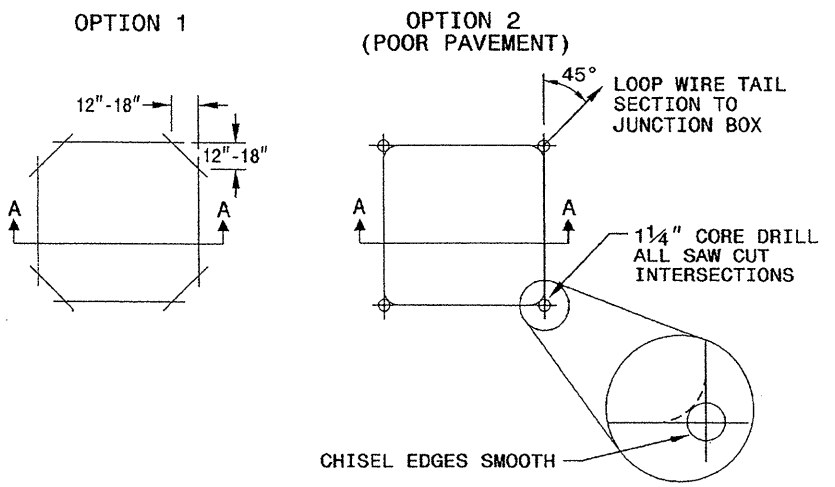
SAW SLOT DEPTH CHART

| 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 |

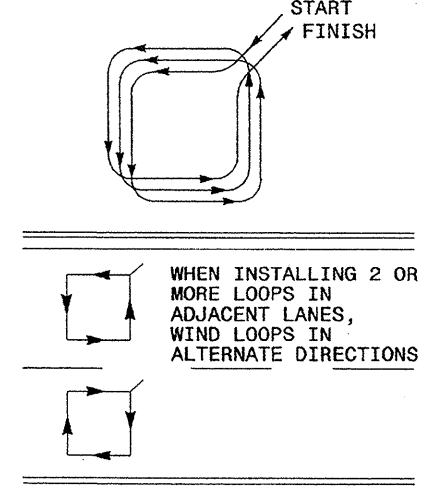


CONVENTIONAL 4-SIDED LOOP

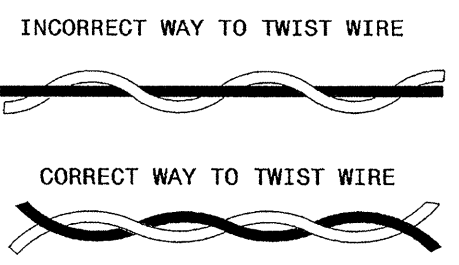
SAW CUT OPTIONS



LOOP WINDING METHOD



LOOP WIRE TWISTING METHOD

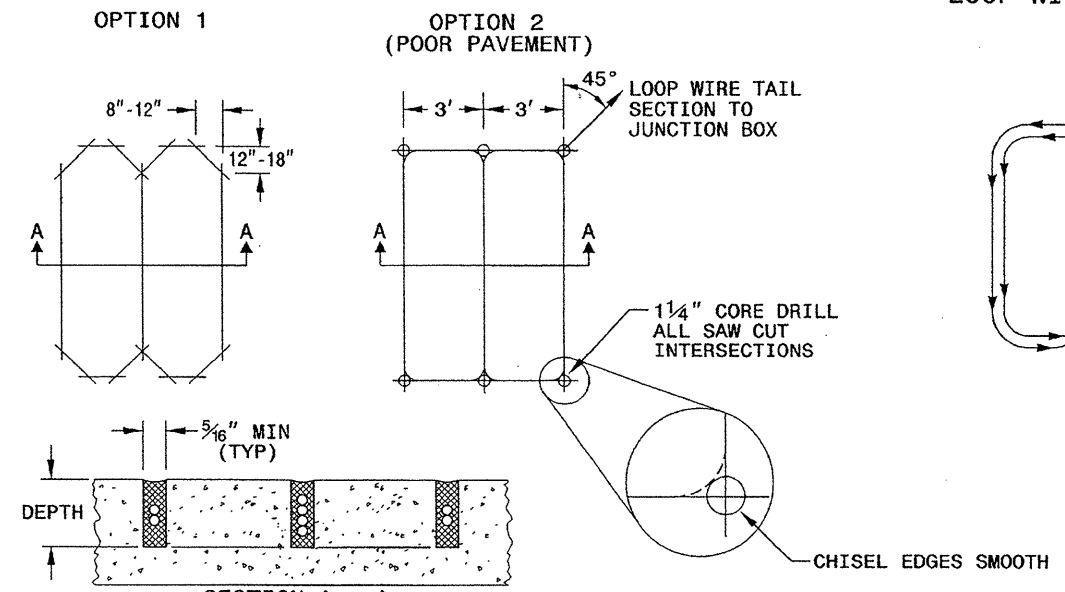


NOTES

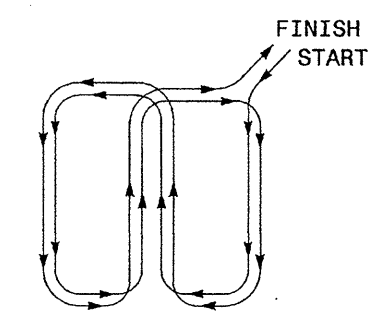
1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

QUADRUPOLE LOOP

SAW CUT OPTIONS



LOOP WINDING METHOD



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

See Plate for Title

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 SEAL 16286
ENGINEER
WILTON I. DEAN
Signature: *Wilton I. Dean* 4/24/08
DATE

24-100-208 08.28
drawn: elliaso-standford plate sheets=17250101.mxd/2307.dgn
zml/ttl/c

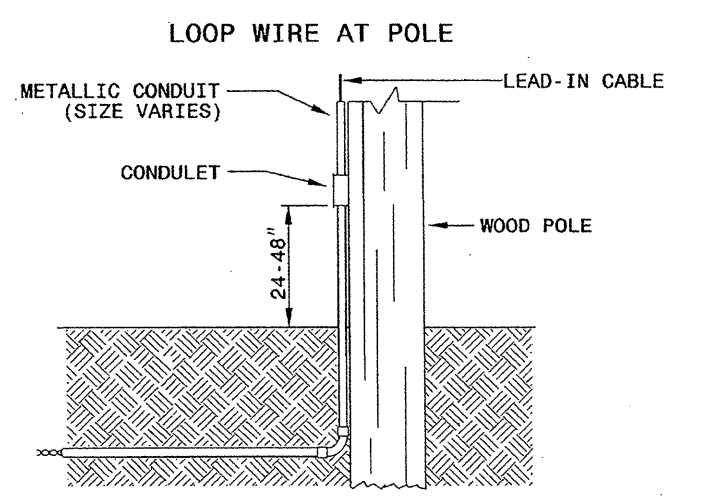
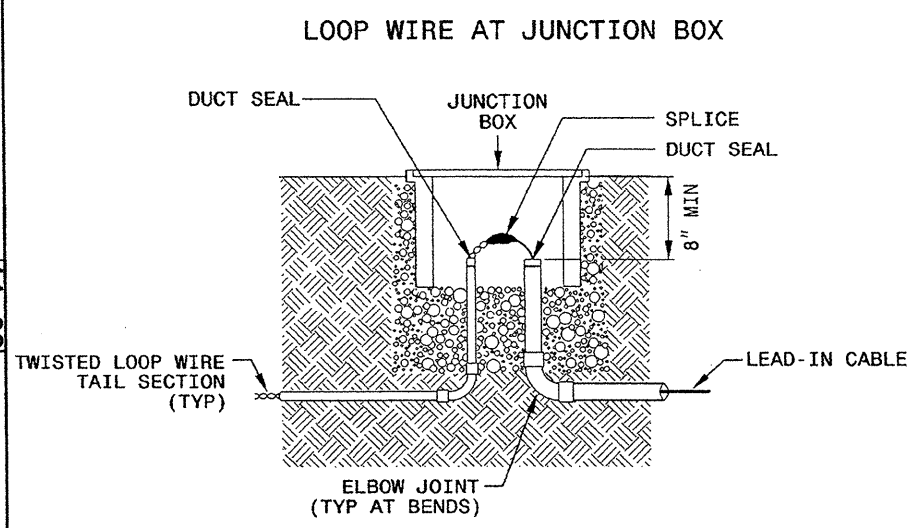
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

11-08

ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

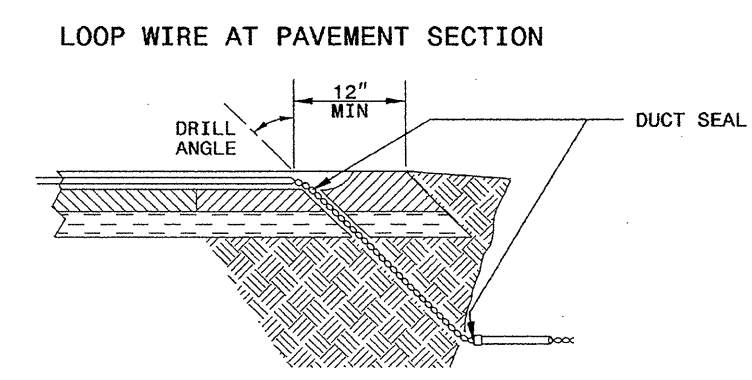
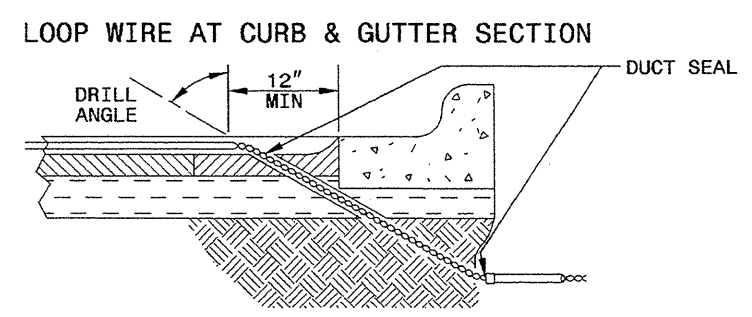
SHEET 2 OF 3
1725D01

LOOP WIRE SPLICE POINT DETAILS



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

LOOP WIRE PAVEMENT EDGE DETAILS



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

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ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

SHEET 2 OF 3
1725D01

See Plate for Title

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Garner, NC 27529

SEAL

Milton I. Dean 11/24/08
SIGNATURE DATE

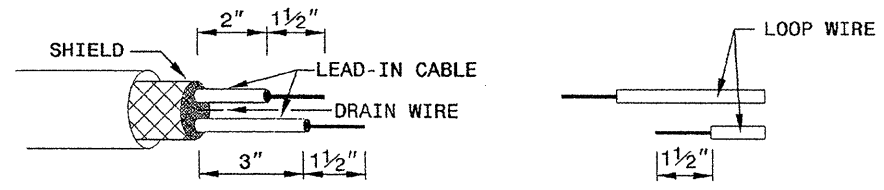
STATE OF
 NORTH CAROLINA
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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

11-08

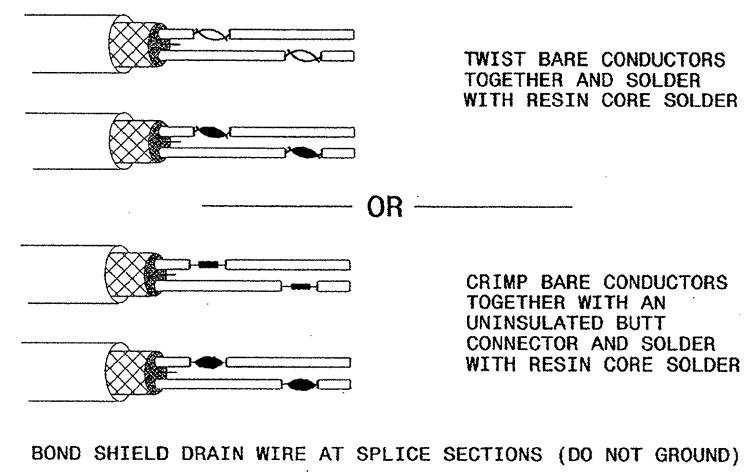
ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3
1725D01

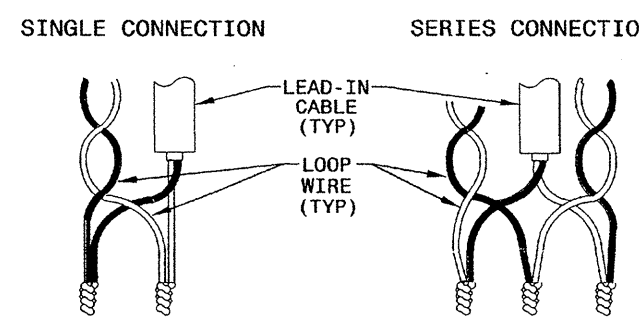
STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE



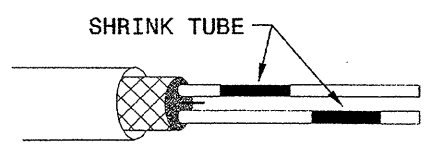
STEP 2. CONNECT AND SOLDER



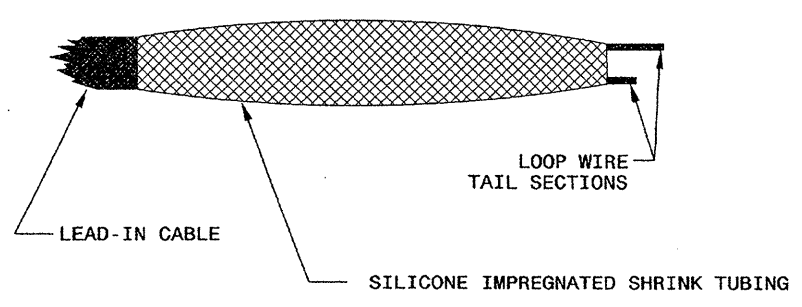
LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS



STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY



STEP 4. ENVIRONMENTALLY PROTECT SPLICE



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

SHEET 3 OF 3
1725D01

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Milton Dean 11/24/08
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24-nov-2008 09:36
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