



PAT McCRORY  
Governor

NICHOLAS J. TENNYSON  
Secretary

April 11, 2016

**Addendum No. 1**

RE: Contract # C203854

WBS # 2016CPT.09.22.10341.1, Etc.

STATE FUNDED

Forsyth County

1 Section Of US-52/NC-8, 1 Section of I-40 Bus/US-421, And 7 Sections of Secondary Roads

**April 19, 2016 Letting**

To Whom It May Concern:

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the plans (Sketch Maps):

The Project WBS numbers have been changed on all sheets. Please discard the Sketch Map sheets you previously received (entire package) and replace with the revised set. Only the WBS numbers were changed.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 04-11-16", also the WBS numbers were revised
R-7 thru R-9	Replaced the project special provision entitled "Non-Tracking Hot Applied Tack Coat (Entire Project)" with the project special provision entitled "Non-Tracking Tack Coat"

The WBS number was revised in the header on all pages of the proposal. Please discard the proposal we originally sent you and use the revised proposal we are providing by way of this addendum. Other than the changes listed in the above table, only the WBS number was revised on the other pages.





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 04-11-16**

DATE AND TIME OF BID OPENING: **APRIL 19, 2016 AT 2:00 PM**

CONTRACT ID C203854  
WBS 2016CPT.09.22.10341.1, 2016CPT.09.23.20341.1

FEDERAL-AID NO. STATE FUNDED  
COUNTY FORSYTH  
T.I.P. NO.  
MILES 16.335  
ROUTE NO. US 52  
LOCATION 1 SECTION OF US-52/NC-8, 1 SECTION OF I-40 BUS/US-421, AND  
7 SECTIONS OF SECONDARY ROADS.  
TYPE OF WORK MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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**Page 6-41, Subarticle 650-3(B), Mix Design Criteria**, replace Table 650-1 with the following:

<b>TABLE 650-1 OGAFC GRADATION CRITERIA</b>			
<i>Sieve Size (mm)</i>	<i>Type FC-1</i>	<i>Type FC-1 Modified</i>	<i>Type FC-2 Modified</i>
19.0	-	-	100
12.5	100	100	80 - 100
9.50	75 - 100	75 - 100	55 - 80
4.75	25 - 45	25 - 45	15 - 30
2.36	5 - 15	5 - 15	5 - 15
0.075	1.0 - 3.0	1.0 - 3.0	2.0 - 4.0

**NON-TRACKING TACK COAT:**

(1-2-14)(Rev. 4-19-16)

605

SPI 6-13A

Revise the *2012 Standard Specifications* as follows:

**Page 6-4, SECTION 605 ASPHALT TACK COAT**, line 29, after Section 605, add the following:

**SECTION 606  
NON-TRACKING ASPHALT TACK COAT**

**606-1 DESCRIPTION**

Refer to Article 605-1.

Non-tracking tack coat will be required. Notify the Engineer prior to using non-tracking tack coat.

**606-2 MATERIALS**

Use only products from the “Non-tracking Asphalt Tack Coat” materials on the NCDOT Approved Product List maintained by the Materials and Tests Unit located at the following website:

<https://connect.ncdot.gov/resources/Materials/MaterialsResources/Approved%20Non-Tracking%20Tack%20Coat%20Products%20for%20NC.pdf>

Use only an approved Hot Applied Tack for the open-graded asphalt friction course (OGAFC), if applicable.

Do not dilute or mix the non-tracking tack coat with water, solvents, or other materials before application.

**606-3 WEATHER LIMITATIONS**

Refer to Article 605-3 and Article 605-5 for OGAFS requirements.

**606-4 SURFACE PREPARATION**

Refer to Article 605-4.

**606-5 ACCEPTANCE OF ASPHALT MATERIALS**

Refer to Article 605-5.

**606-6 APPLICATION EQUIPMENT**

Refer to Article 605-6.

**606-7 APPLICATION RATES AND TEMPERATURES**

Target application rate for EMULSIFIED ASPHALT non-tracking tack shall be in accordance with Table 605-1, Application Rates for Tack Coat, contained elsewhere in this document, and if necessary adjust based on existing pavement conditions, milled surface, and manufacturer's recommendations and approved by the Engineer. Application temperatures shall be in accordance with manufacturer's recommendations. Non-tracking asphalt tack coat shall not be overheated.

Target application rate for HOT APPLIED TACK shall be 0.10 gal/sy and adjusted based on existing pavement conditions, milled surface, and manufacturer's recommendations and approved by the Engineer. Application temperatures shall be in accordance with manufacturer's recommendations. Non-tracking asphalt tack coat shall not be overheated.

**606-8 APPLICATION OF TACK COAT**

Refer to Article 605-8 except on **Page 6-4, Article 605-8**, line 6, replace second paragraph with the following:

If public traffic is being maintained, cover the non-tracking tack coat in the same day's operation or provide continual lane closures until the tack is covered. Due to non-tracking tack requiring heat to activate the adhesive properties, the application of temporary granular material will not be allowed. If extended lane closures are required, applicable liquidated damages will apply. To facilitate safe traffic conditions or for other reasons the Engineer may limit the application of non-tracking tack in advance of the paving operation.

**606-9 MEASUREMENT AND PAYMENT**

There will be no direct payment for the non-tracking tack coat and work covered by this section.

**Page 6-26, Article 610-8**, line 30, replace “Section 605” with “Sections 605 or 606”.

**Page 6-42, Article 650-5**, line 32, replace “Section 605” with “Sections 605 or 606”.

**Page 6-44, Article 652-1**, line 11, replace “Section 605” with “Sections 605 or 606”.

**SHOULDER WEDGE:**

(9-20-11) (Rev. 8-21-12)

610

SP6 R03R

Revise the *2012 Standard Specifications* as follows:

**Page 6-26, Article 610-8**, add the following after line 43:

Attach a device, mounted on screed of paving equipment, capable of constructing a shoulder wedge with an angle of 30 degrees plus or minus 4 degrees along the outside edge of the roadway, measured from the horizontal plane in place after final compaction on the final surface course. Use an approved mechanical device which will form the asphalt mixture to produce a wedge with uniform texture, shape and density while automatically adjusting to varying heights.

Payment for use of this device will be incidental to the other pay items in the contract.

**ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:**

(11-21-00) (Rev. 7-17-12)

609

SP6 R15

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0	4.4%
Asphalt Concrete Intermediate Course	Type I 19.0	4.8%
Asphalt Concrete Surface Course	Type S 4.75A	6.8%
Asphalt Concrete Surface Course	Type SA-1	6.8%
Asphalt Concrete Surface Course	Type SF 9.5A	6.7%
Asphalt Concrete Surface Course	Type S 9.5	6.0%
Asphalt Concrete Surface Course	Type S 12.5	5.6%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *2012 Standard Specifications*.

**ASPHALT PLANT MIXTURES:**

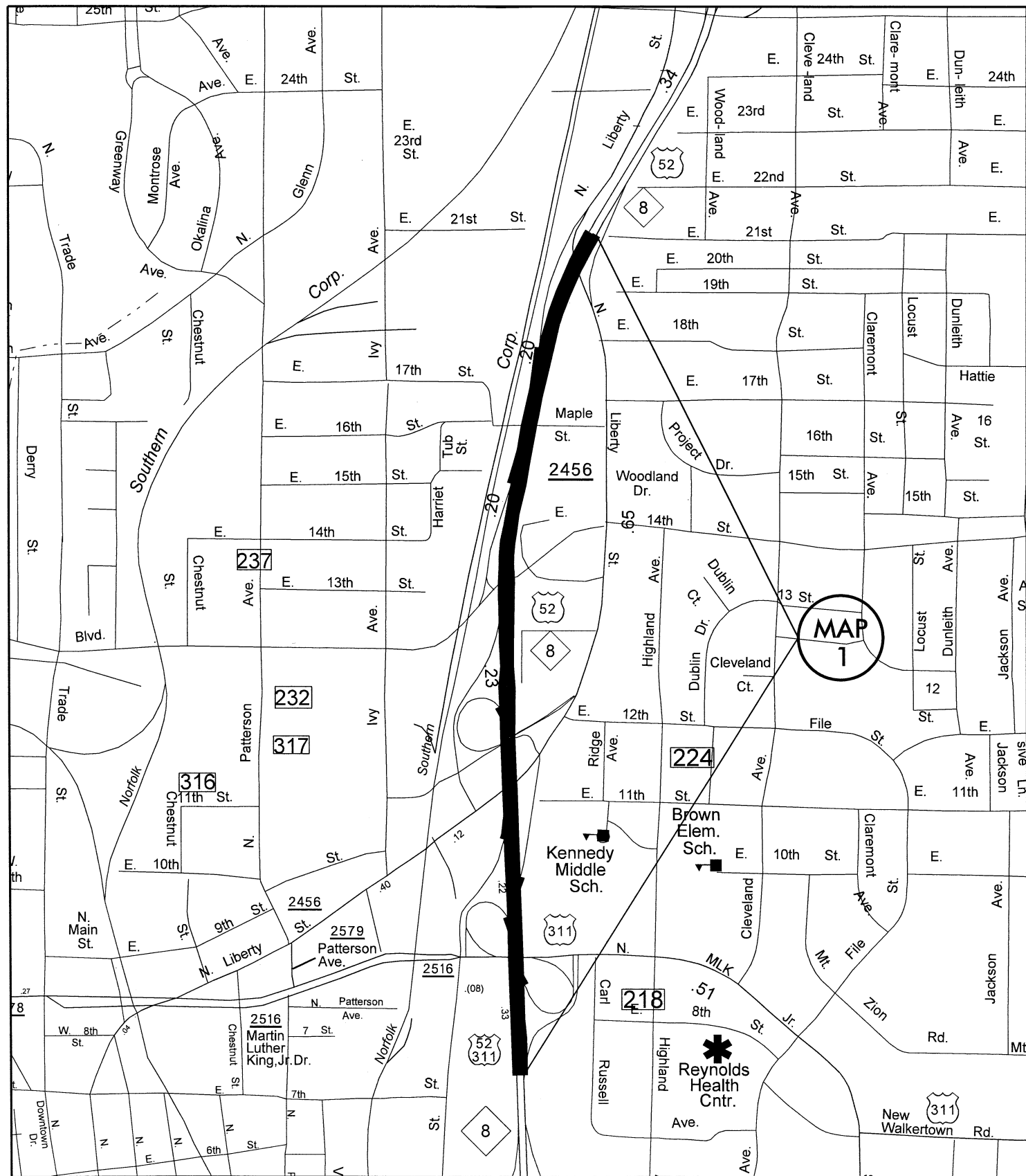
(7-1-95)

609

SP6 R20

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

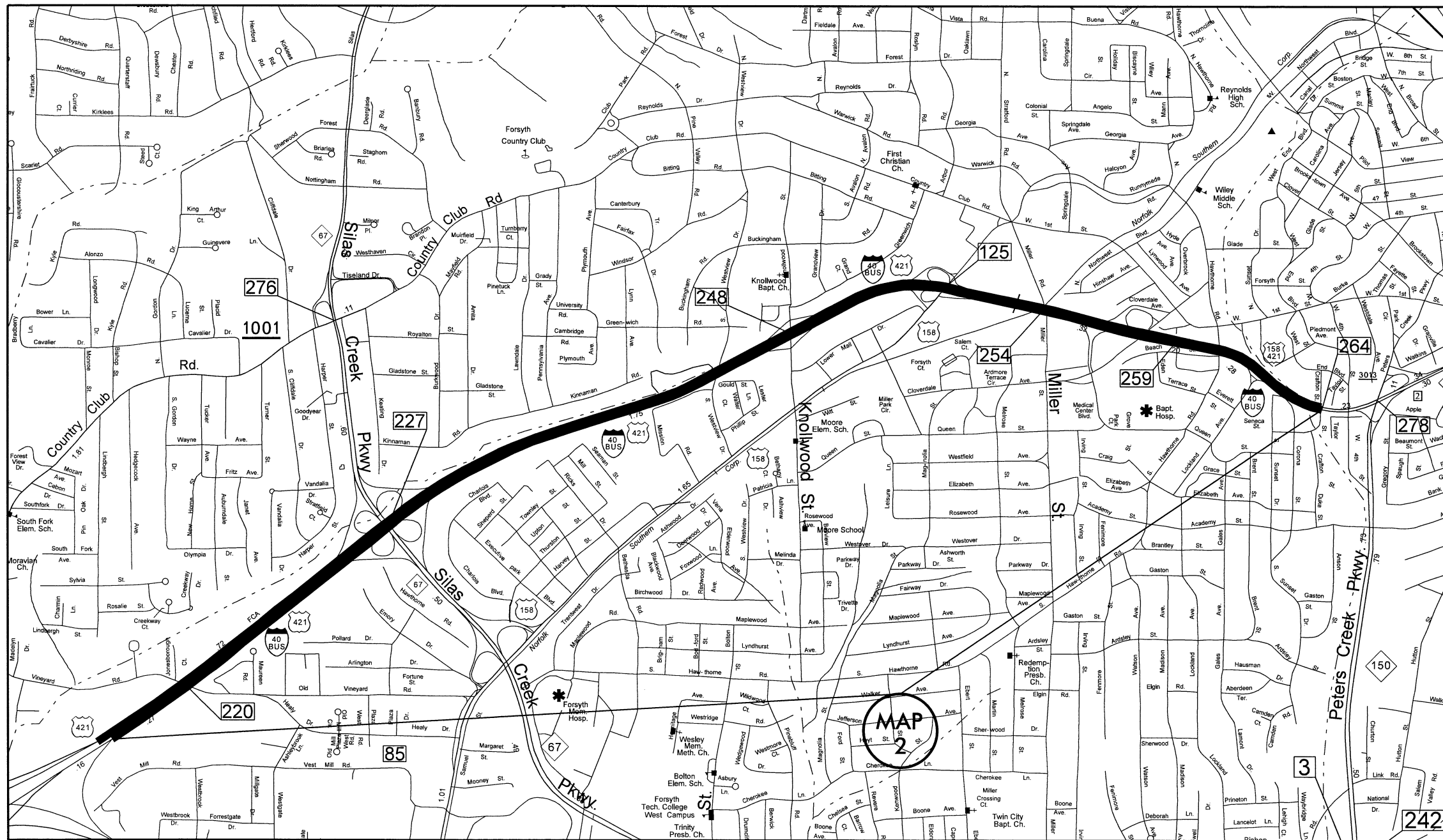
PROJECT REFERENCE NO.	SHEET NO.
2016CPT.09.22.10341.1 2016CPT.09.23.20341.1	1



MAP 1  
 US 52/NC 8 NORTHBOUND  
 US 52/NC 8 SOUTHBOUND

ALL WORK ON THESE MAPS TO BE  
 NIGHT TIME ONLY 8 P.M. TO 6 A.M.,  
 Monday-Sunday.  
 Mill Black surface only, Approximately 5/8" depth.  
 DO NOT MILL INTO EXISTING RUMBLE STRIPS,  
 Pave Back with Ultra-thin Bonded Wearing Course.  
 Start and stop all paving at concrete pavement joints on ramps.

**FORSYTH COUNTY**  
 NORTH CAROLINA



MAP 2  
 US 421/BUS 40 NORTH BOUND  
 US 421/BUS 40 SOUTH BOUND  
 ALL WORK ON THESE MAPS TO BE  
 NIGHT TIME ONLY 8 P.M. TO 6 A.M.,  
 Monday-Sunday.

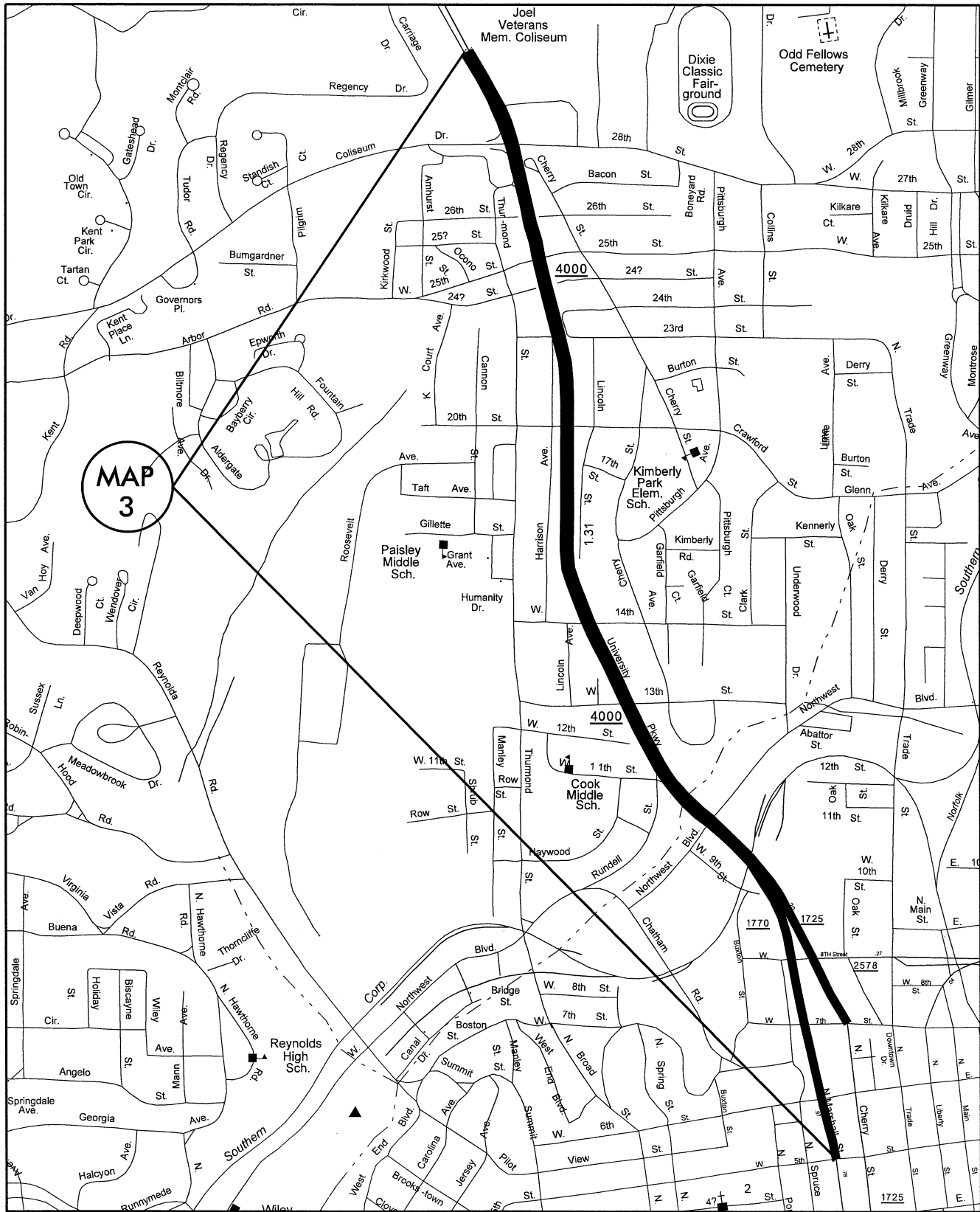
Mill  $\frac{7}{8}$ " depth from yellow line to over  
 rumble strip in outside lane.  
 DO NOT remove and replace inside rumble  
 strip.  
 Pave back with  $\frac{7}{8}$ " OGAF C TYPE FC-2  
 Modified.  
 Replace outside lane rumble strip.

Start and stop all paving at concrete  
 pavement joints on ramps.  
 Start and stop all paving at pavement  
 joints near grass gores on ramps that  
 are asphalt.

**FORSYTH COUNTY**  
 NORTH CAROLINA



PROJECT REFERENCE NO.	SHEET NO.
2016CPT.09.22.10341.1	3
2016CPT.09.23.20341.1	

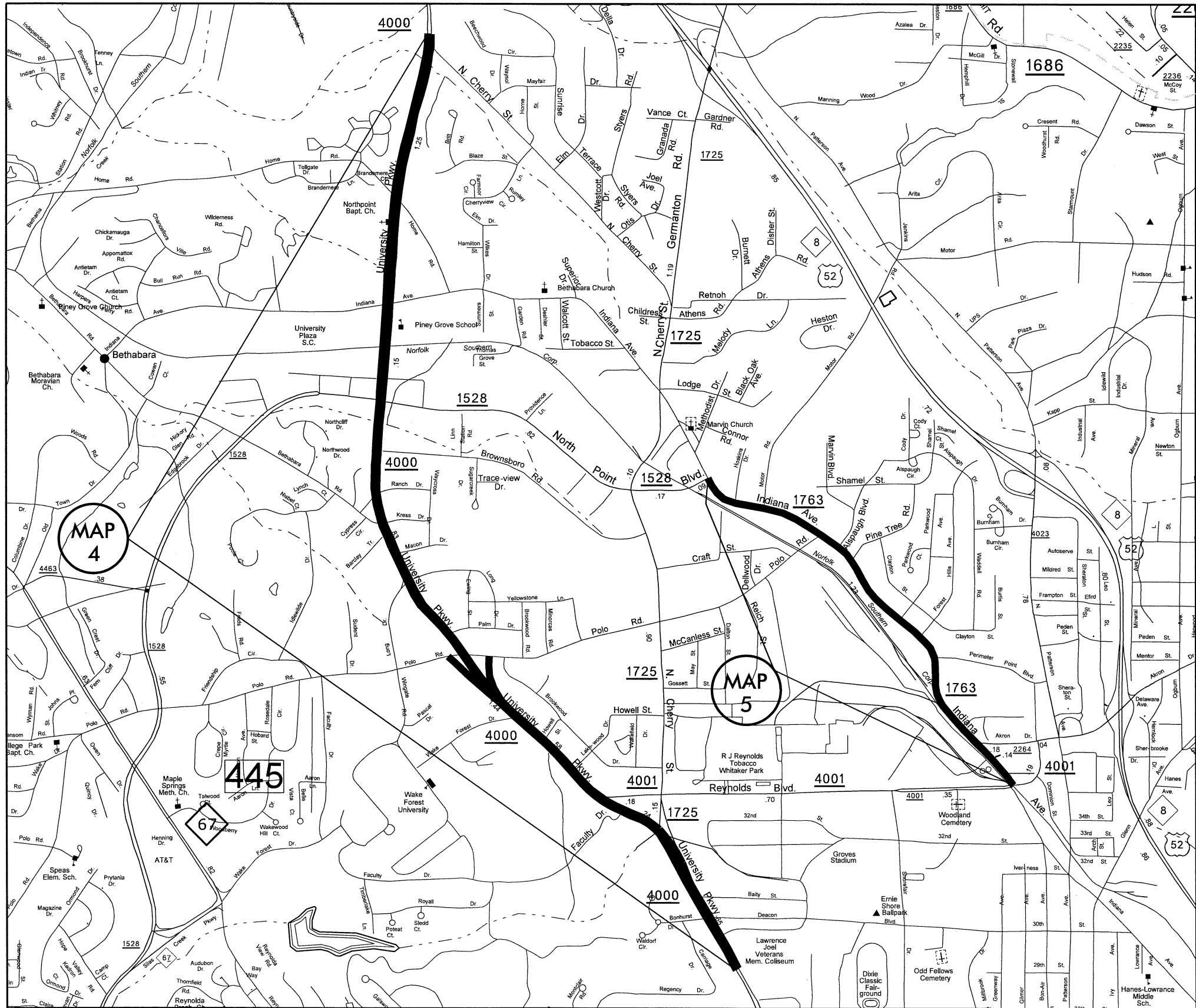


MAP 3 NORTH BOUND  
 Cherry St. SR 1725  
 University Parkway SR 1725

MAP 3 SOUTH BOUND  
 University Parkway SR 1725  
 N. Marshall St. SR 1770

ALL WORK ON THESE MAPS TO BE  
 NIGHT TIME ONLY 8 P.M. TO 6 A.M., Monday-Sunday.  
 ORDER OF OPERATION:  
 1. DIAMOND GRIND CONCRETE PAVEMENT.  
 2. MILL ASPHALT PAVEMENT SO THAT WHEN  
 RE PAVED WITH 1 1/2" S9.5C SURFACE COURSE,  
 DRIVING SURFACE WILL BE FLUSH TO DIAMOND  
 GRINDING SURFACE.

**FORSYTH COUNTY**  
 NORTH CAROLINA

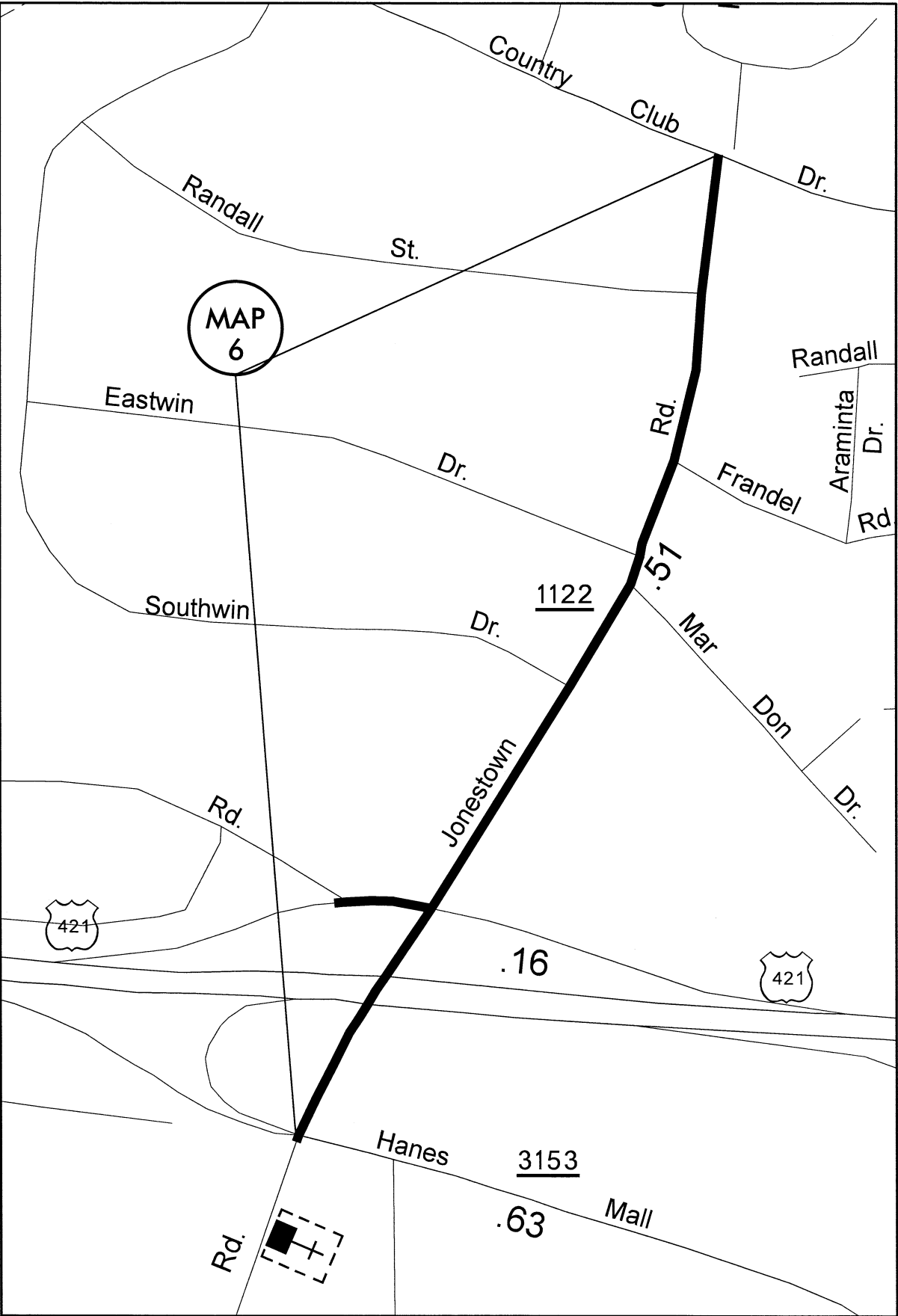


**MAP 4**  
 University Parkway SR 4000  
 Includes Ramps at Polo Road.  
 MILL 1½" DEPTH FULL WIDTH  
 OF PAVEMENT.  
 PAVE BACK WITH 1½" S9.5C  
 ALL WORK ON THIS MAP TO BE  
 NIGHT TIME ONLY 8 P.M. TO 6 A.M.,  
 Monday-Sunday.

**MAP 5**  
 Indiana Ave. SR 1763  
 MILL 1½" DEPTH FULL WIDTH  
 OF PAVEMENT.  
 PAVE BACK WITH 1½" S9.5C  
 ALL WORK ON THIS MAP TO BE  
 NIGHT TIME ONLY 8 P.M. TO 6 A.M.,  
 Monday-Sunday.

**FORSYTH COUNTY**  
 NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.09.22.10341.1	5
2016CPT.09.23.20341.1	



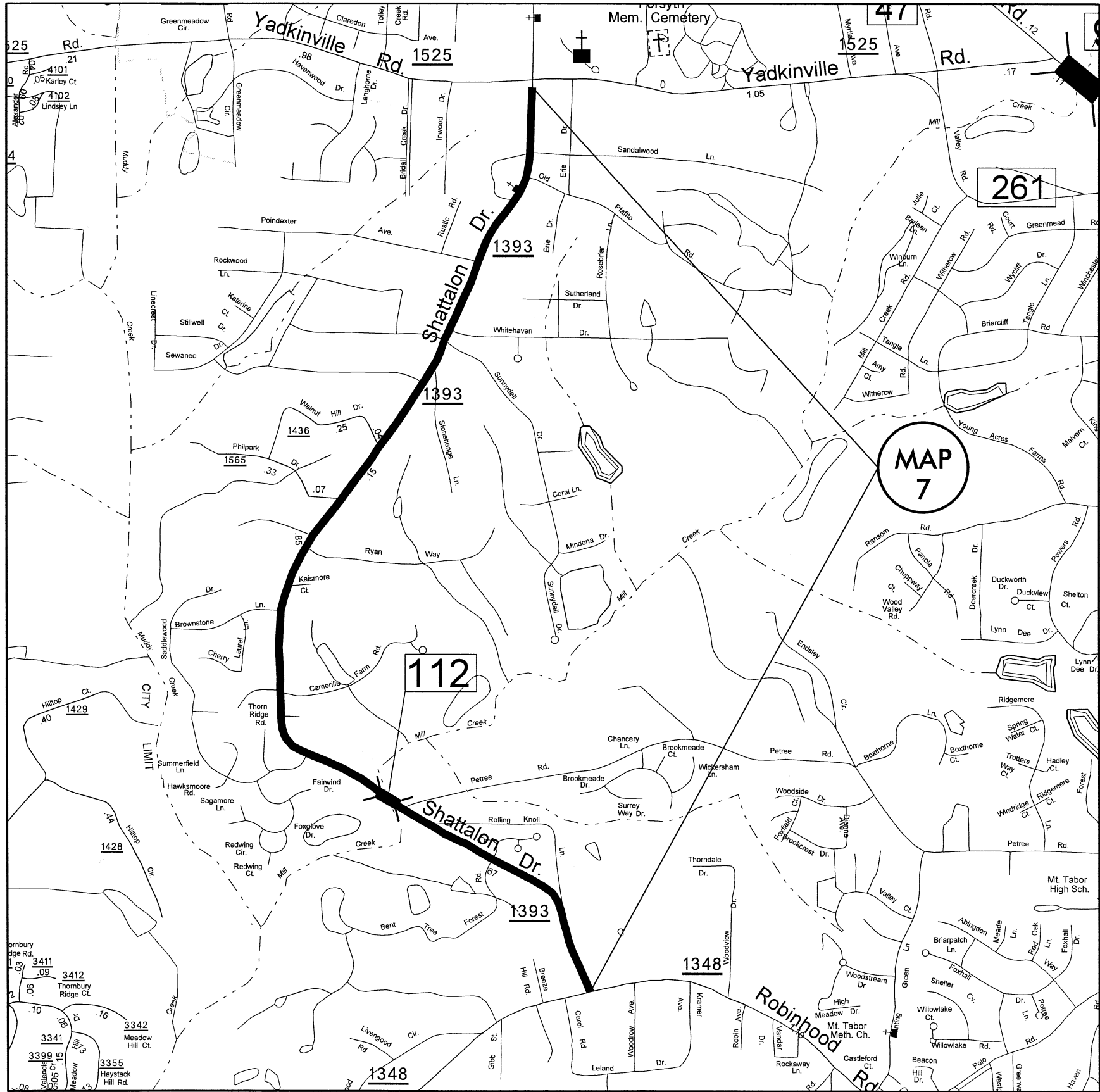
MAP 6  
Jonestown Rd. SR 1122

ALL WORK ON THESE MAPS TO BE  
NIGHT TIME ONLY 8 P.M. TO 6 A.M.,  
Monday-Sunday.  
MILL 1½" DEPTH FULL WIDTH  
OF PAVEMENT.  
PAVE BACK WITH 1½" S9.5B

MILL 1½" DEPTH FULL WIDTH AND  
RE PAVE TO PAVEMENT JOINT AT  
NORTH BOUND US 421 RAMP NEAR MCDONALDS.  
PAVE BACK WITH 1½" S9.5B

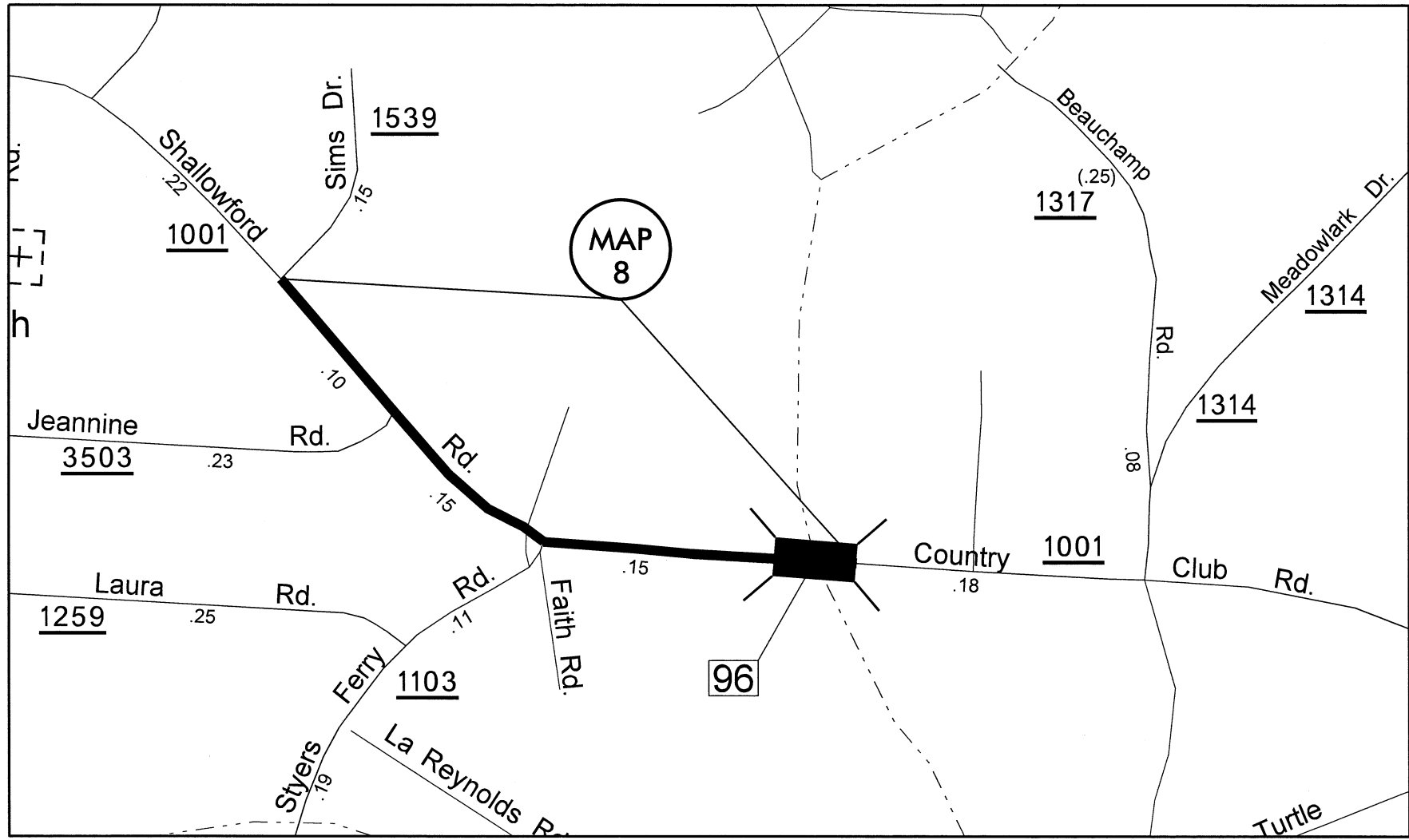
**FORSYTH COUNTY**  
NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.09.22.10341.1	6
2016CPT.09.23.20341.1	



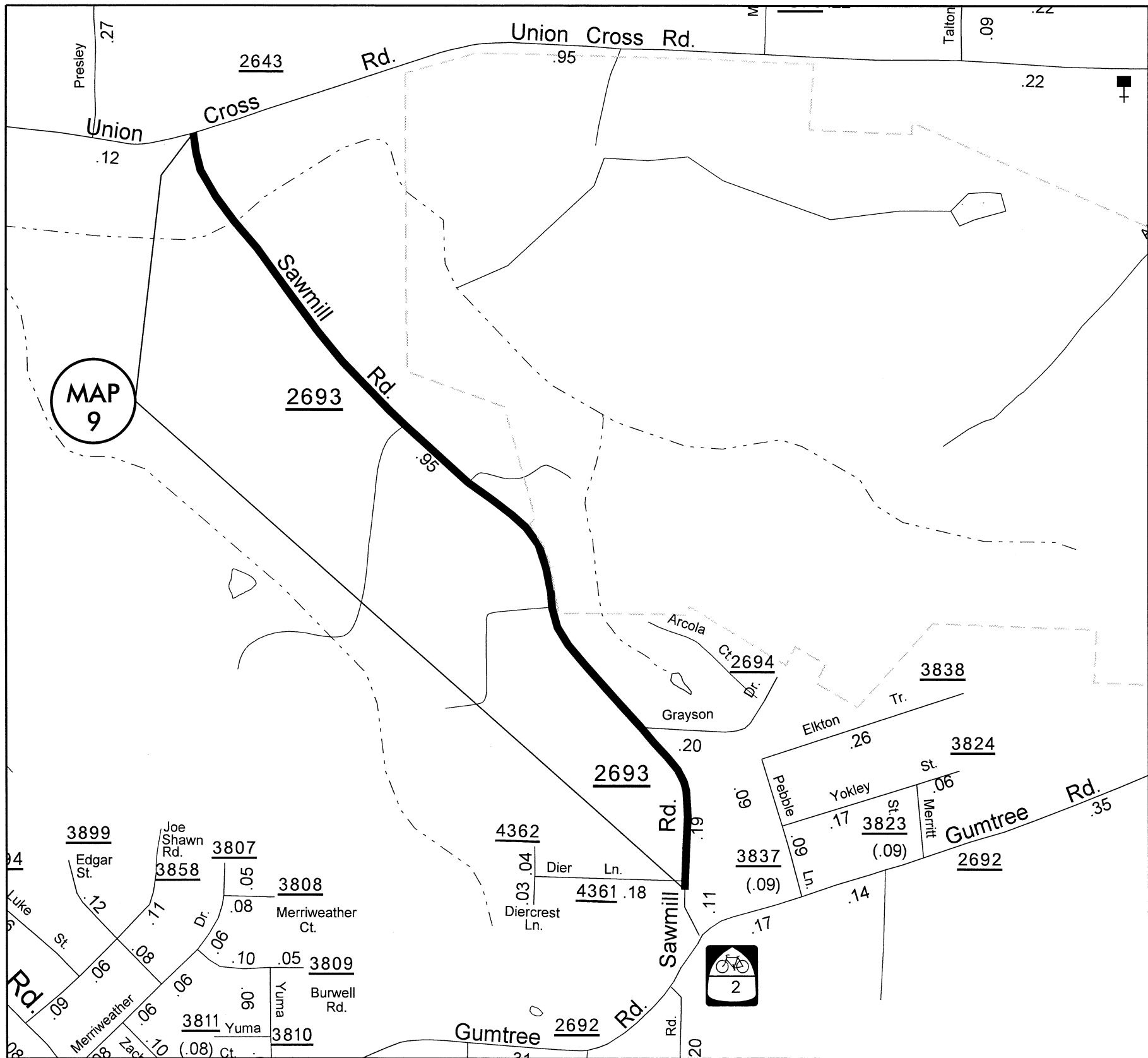
**MAP 7**  
 Shattalon Rd. SR 1393  
 Patching by NCDOT Forces.  
 Mill and tie into pavement joints at  
 Yadkinville Rd.  
 Do Not Pave through intersection  
 at Yadkinville Rd. SR 1525  
 Curb Mill 0-1½" a 12 foot width at  
 all curbs.

**FORSYTH COUNTY**  
 NORTH CAROLINA



MAP 8  
Country Club Rd./Shallowford Rd. SR 1001  
Patching done by NCDOT.  
Tie-In Mill at Map end,  
Mill Bridge deck 1½" and repave.

PROJECT REFERENCE NO.	SHEET NO.
2016CPT.09.22.10341.1 2016CPT.09.23.20341.1	8

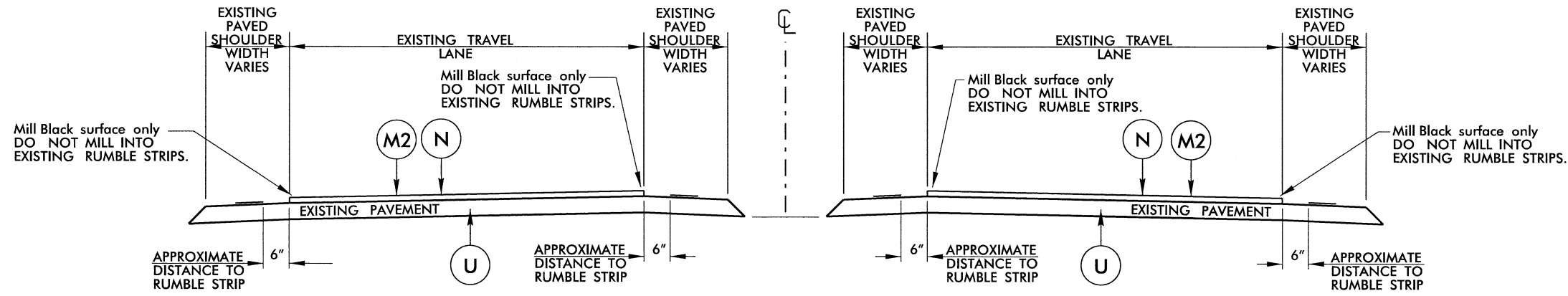


MAP  
9

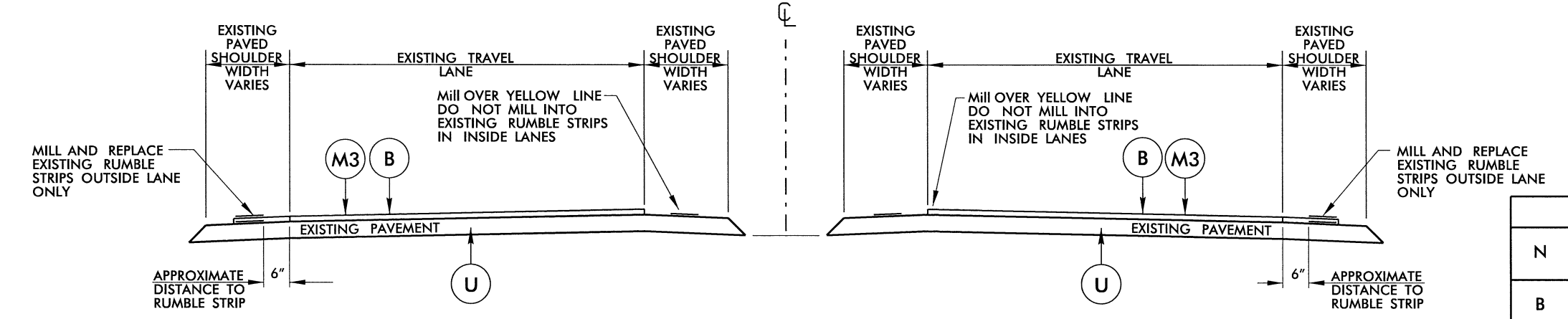
Map 9  
SR 2693 Saw Mill Rd.

**NO MILLING**  
Tie into existing surface at ends of Map.  
Widen Road a 2 foot width  
on one side as directed by NCDOT Engineer  
with 5½" of B25.0B.  
Overlay entire new width with 1½" SF9.5A.

**FORSYTH COUNTY**  
NORTH CAROLINA

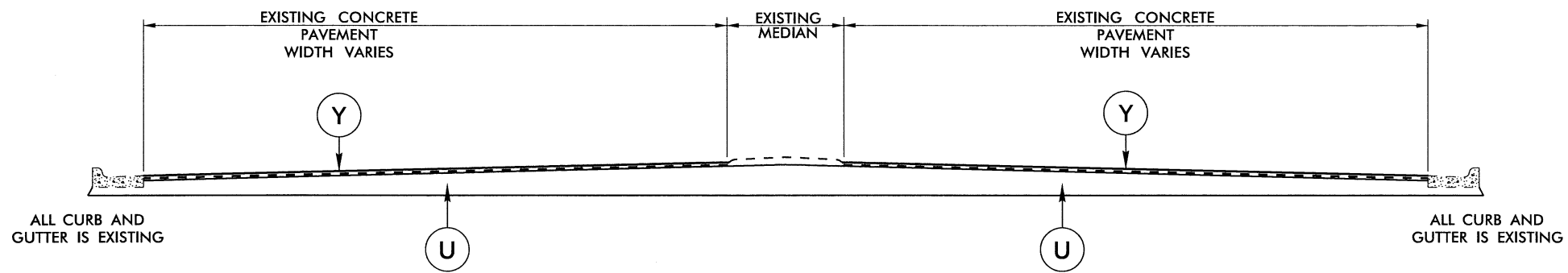


TYPICAL SECTION NO.1  
MAP 1  
US 52/NC 8 NORTH BOUND and SOUTH BOUND

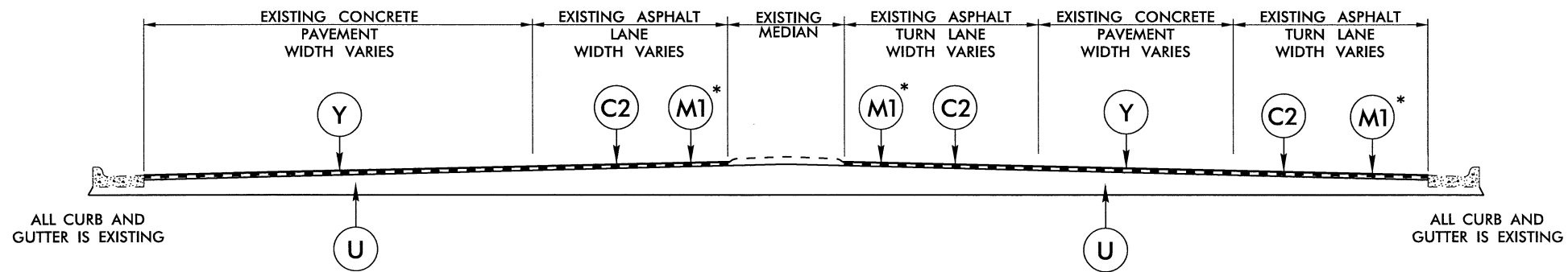


TYPICAL SECTION NO.2  
MAP 2  
BUS 40/US 421 NORTH BOUND and SOUTH BOUND

PAVEMENT SCHEDULE	
N	PROP. APPROX. 5/8" ULTRATHIN HOT MIX BONDED WEARING SURFACE COURSE, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 105 LBS. PER SQ. YD.
C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, TO BE APPLIED AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, TO BE APPLIED AT AN AVERAGE RATE OF 627 LBS PER SQ. YD.
M	MILL ASPHALT PAVEMENT, 0" TO 1 1/2"
M1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
M2	FINE MILLING, 5/8" DEPTH
M3	FINE MILLING, 7/8" DEPTH
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING CONCRETE PAVEMENT
Y	PROPOSED DIAMOND GRINDING



TYPICAL SECTION NO. 3  
 MAP 3  
 SR 1725 UNIVERSITY PARKWAY – NORTH BOUND  
 SR 1725 UNIVERSITY PARKWAY – SOUTH BOUND

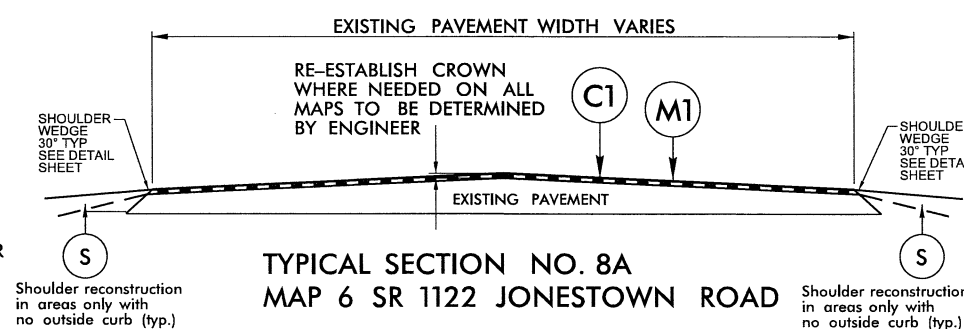
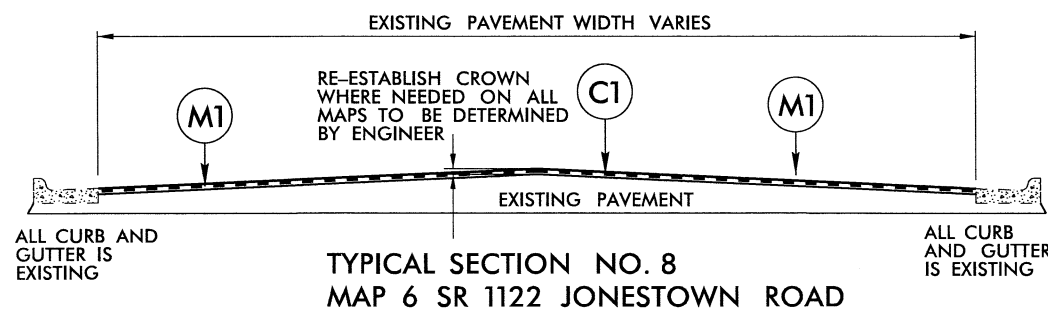
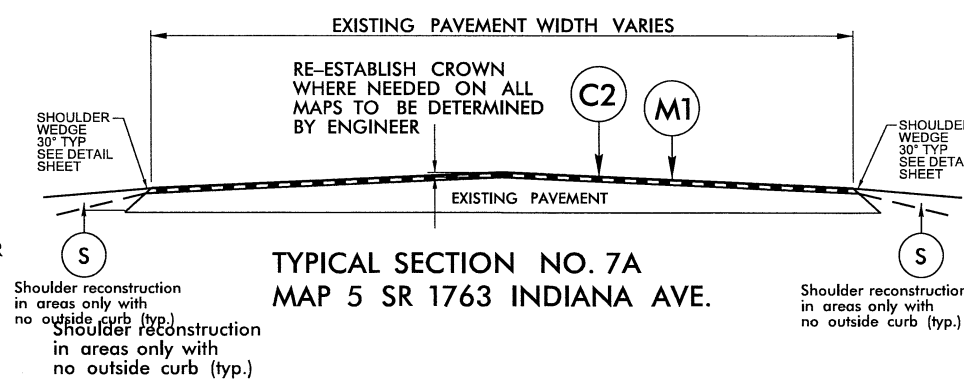
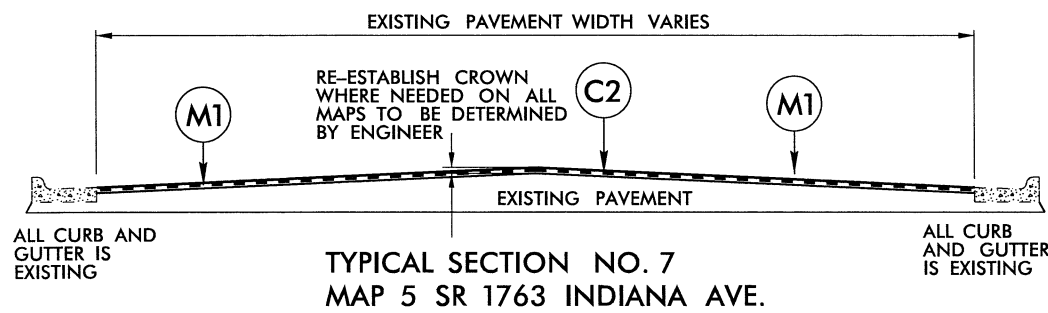
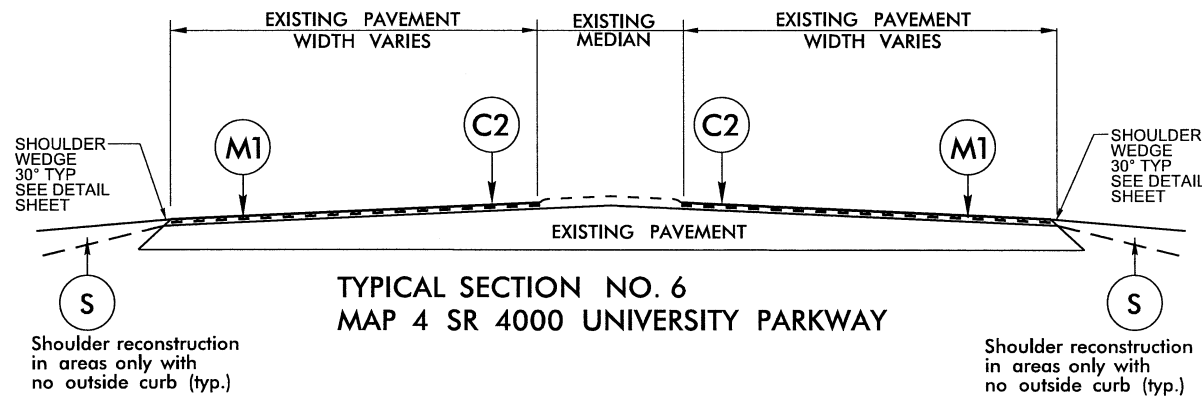
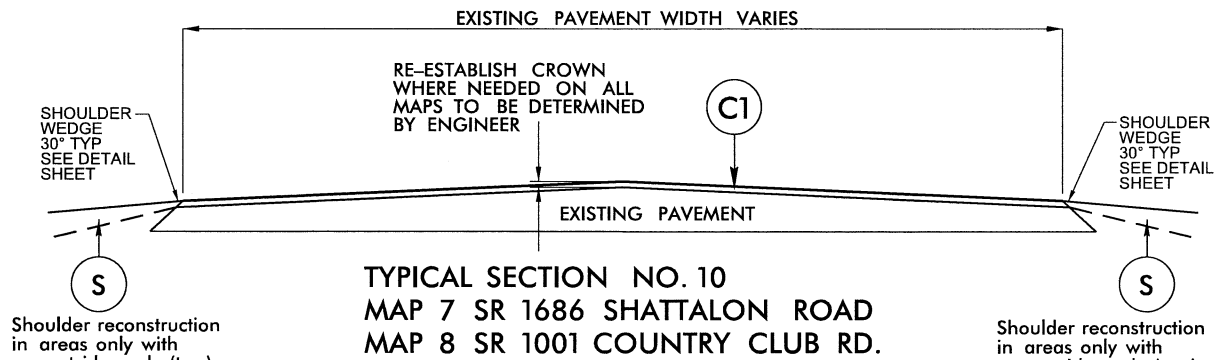
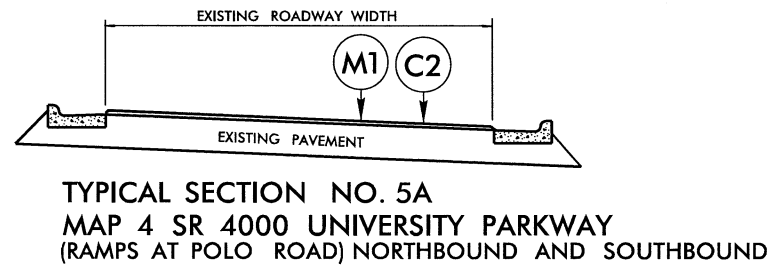
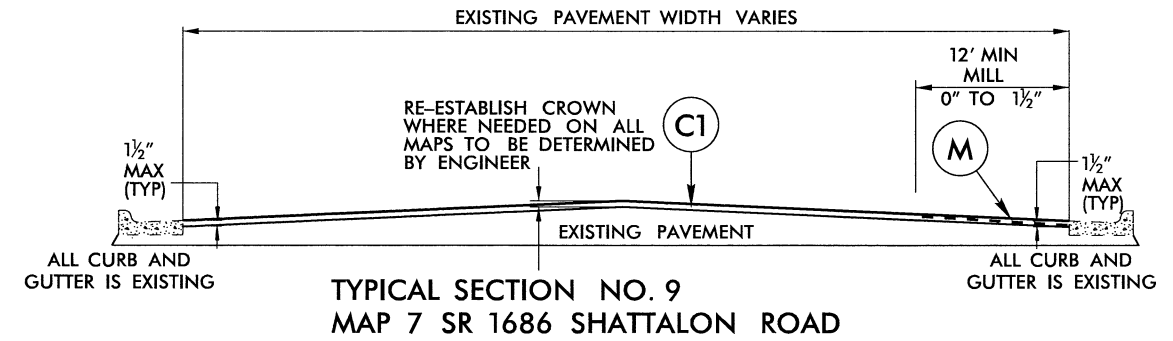
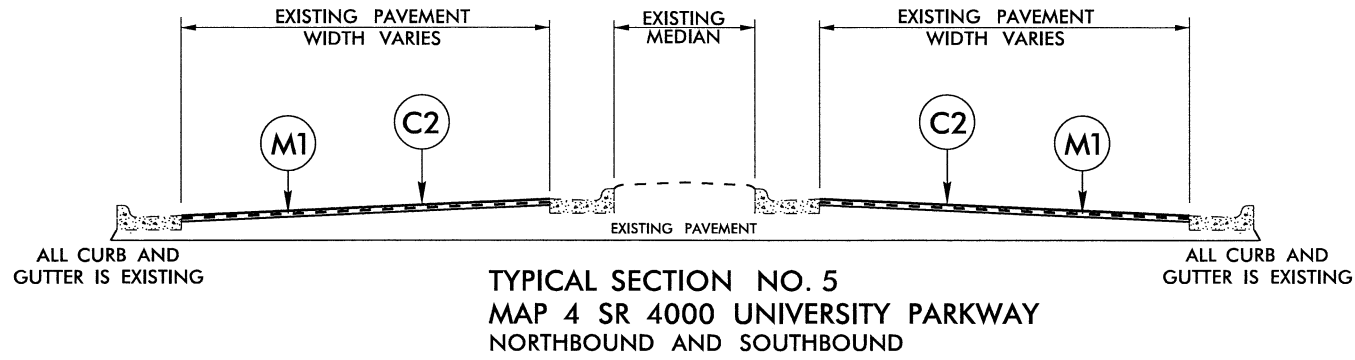


TYPICAL SECTION NO. 4  
 MAP 3  
 SR 1725 UNIVERSITY PARKWAY – NORTH BOUND  
 SR 1725 UNIVERSITY PARKWAY – SOUTH BOUND

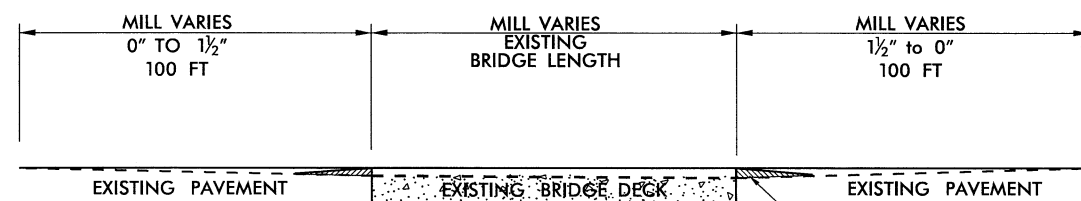
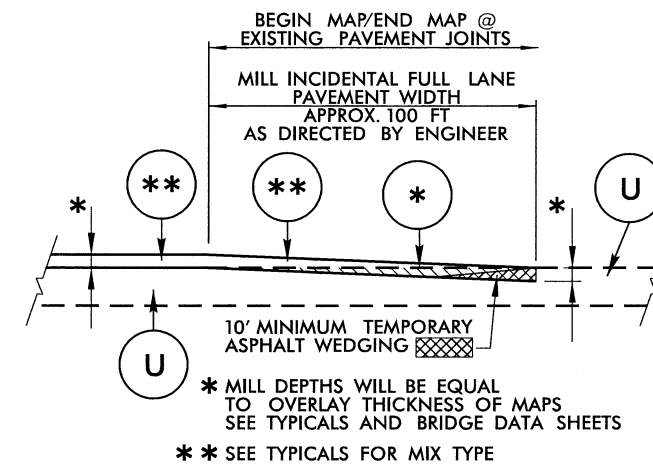
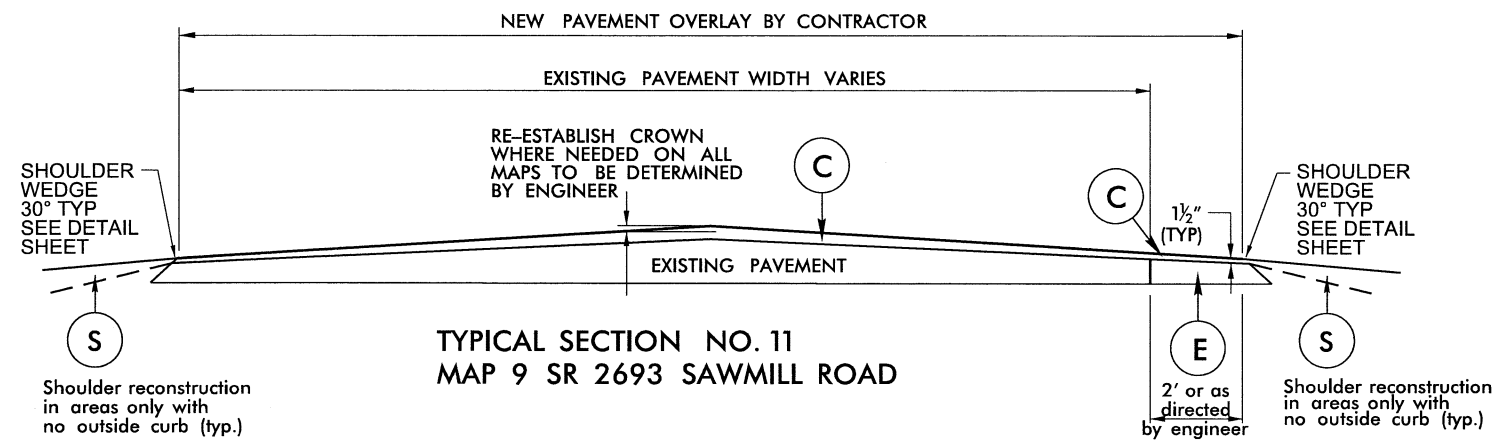
\* ORDER OF OPERATION:  
 1. DIAMOND GRIND CONCRETE PAVEMENT.  
 2. MILL ASPHALT PAVEMENT (MILLING WIDTH VARIES)  
 SO THAT WHEN REPAVED WITH 1½" S9.5C SURFACE COURSE DRIVING SURFACE WILL BE FLUSH TO DIAMOND GRINDING SURFACE.

PAVEMENT SCHEDULE	
N	PROP. APPROX. 5/8" ULTRATHIN HOT MIX BONDED WEARING SURFACE COURSE, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 105 LBS. PER SQ. YD.
C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, TO BE APPLIED AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
E	PROP. APPROX. 5/8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, TO BE APPLIED AT AN AVERAGE RATE OF 627 LBS PER SQ. YD.
M	MILL ASPHALT PAVEMENT, 0" TO 1½"
M1	MILL ASPHALT PAVEMENT, 1½" DEPTH
M2	FINE MILLING, 5/8" DEPTH
M3	FINE MILLING, 7/8" DEPTH
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING CONCRETE PAVEMENT
Y	PROPOSED DIAMOND GRINDING



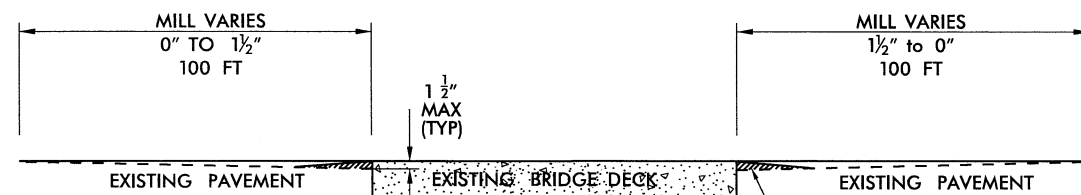


PAVEMENT SCHEDULE	
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E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, TO BE APPLIED AT AN AVERAGE RATE OF 627 LBS PER SQ. YD.
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M1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
M2	FINE MILLING, 5/8" DEPTH
M3	FINE MILLING, 7/8" DEPTH
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING CONCRETE PAVEMENT
Y	PROPOSED DIAMOND GRINDING



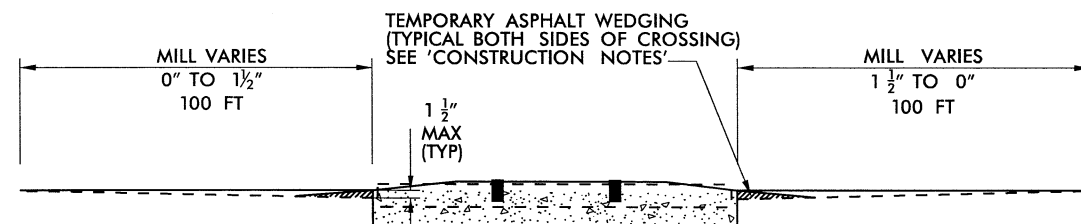
**MILLING BRIDGE DECK AND APPROACHES**  
(SEE BRIDGE DATA SHEET)

TEMPORARY ASPHALT WEDGING (TYPICAL BOTH SIDES OF BRIDGE) IF APPROACHES ARE MILLED PRIOR TO MILLING BRIDGE DECK



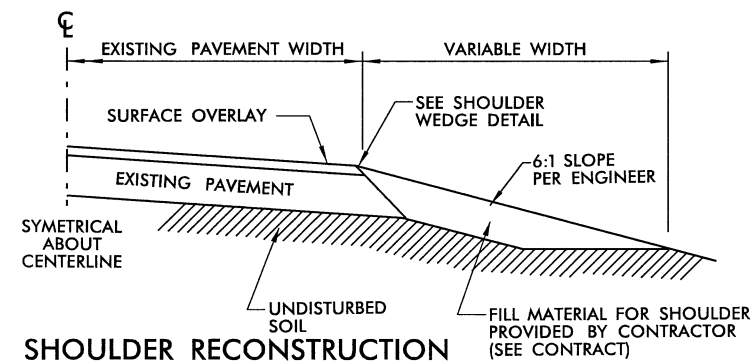
**INCIDENTAL MILLING BRIDGE APPROACHES**  
(SEE BRIDGE DATA SHEET)

TEMPORARY ASPHALT WEDGING (TYPICAL BOTH SIDES OF BRIDGE)



**INCIDENTAL MILLING RAILROAD CROSSING APPROACHES**

TEMPORARY ASPHALT WEDGING (TYPICAL BOTH SIDES OF CROSSING) SEE 'CONSTRUCTION NOTES'



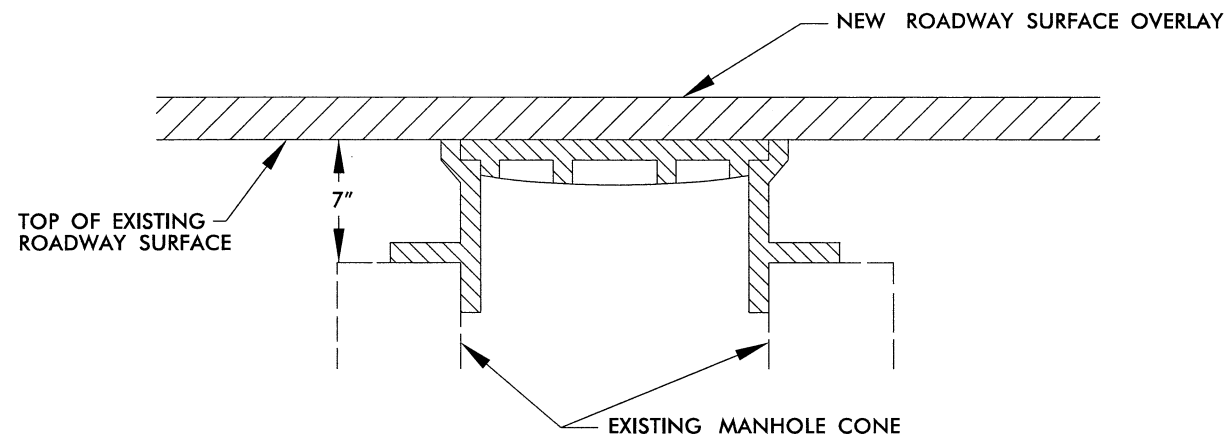
**SHOULDER RECONSTRUCTION**

PAVEMENT SCHEDULE	
N	PROP. APPROX. 5/8" ULTRATHIN HOT MIX BONDED WEARING SURFACE COURSE, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 105 LBS. PER SQ. YD.
C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, TO BE APPLIED AT AN AVERAGE RATE OF 165 LBS PER SQ. YD.
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, TO BE APPLIED AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, TO BE APPLIED AT AN AVERAGE RATE OF 627 LBS PER SQ. YD.
M	MILL ASPHALT PAVEMENT, 0" TO 1 1/2"
M1	MILL ASPHALT PAVEMENT, 1 1/2" DEPTH
M2	FINE MILLING, 5/8" DEPTH
M3	FINE MILLING, 7/8" DEPTH
S	SHOULDER RECONSTRUCTION (SEE DETAIL)
U	EXISTING CONCRETE PAVEMENT
Y	PROPOSED DIAMOND GRINDING

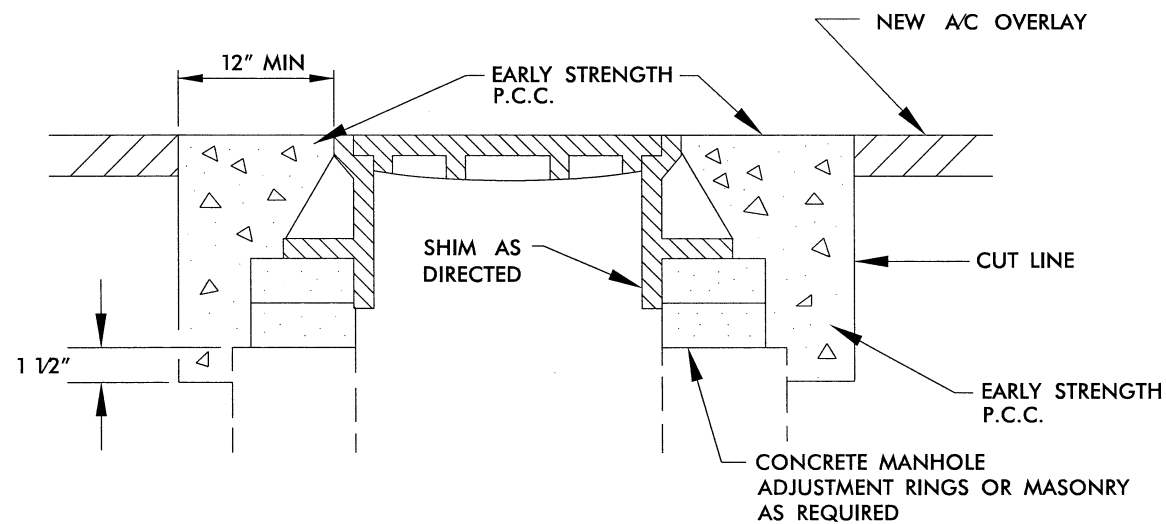
CONSTRUCTION NOTES:

- ALL QUANTITIES ARE "ESTIMATED" AS INDICATED IN THE "SUMMARY OF QUANTITIES".
- CONSTRUCTION SHALL PROGRESS IN PHASES, IN THE ORDER INDICATED BELOW:
  - PHASE 1 - MILLING AND PATCHING (WHEN REQUIRED)
  - PHASE 2 - SURFACE OVERLAY
  - PHASE 3 - SHOULDER DROP-OFF REPAIR (AS NEEDED AND DIRECTED BY ENGINEER)
  - PHASE 4 - UTILITY ADJUSTMENTS (MANHOLE RING/COVER, VALVE/METER BOX RING/COVER, CATCH BASIN GRATE/COVER, DROP INLET GRATE/COVER, ETC.) WHEN REQUIRED.
- BRIDGES THAT HAVE FLOOR DRAINS, SHALL HAVE ALL FLOOR DRAINS LEFT OPEN. EXTRA CARE SHALL BE EXERCISED IN MILLING (IF REQUIRED) AND IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE.
- TEMPORARY ASPHALT WEDGING SHALL BE PLACED ON THE SAME DAY THAT BRIDGE AND/OR RAILROAD APPROACHES ARE MILLED (AND IF APPROACHES ARE MILLED PRIOR TO BRIDGE DECK).
- FOR TWO-LANE ROADWAYS - IT SHALL BE UNDERSTOOD THAT TYPICALLY ON A ROADWAY MEASURING 20 FEET OR LESS IN WIDTH, THE CENTER OF THE WHITE EDGELINE SHALL BE LOCATED SIX INCHES FROM THE EDGE OF PAVEMENT ON EITHER SIDE OF THE ROADWAY; ON A ROADWAY MEASURING 22 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 10 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 24 FEET IN WIDTH, TRAVEL LANES SHALL MEASURE 11 FEET AND THE WHITE EDGELINE SHALL BE LOCATED ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE; ON A ROADWAY MEASURING 26 FEET OR MORE IN WIDTH, TRAVEL LANES SHALL MEASURE 12 FEET AND THE WHITE EDGELINE SHALL BE LOCATED NO LESS THAN ONE FOOT FROM THE EDGE OF PAVEMENT ON EITHER SIDE. THIS SHALL BE STANDARD PRACTICE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PAPER JOINTS ARE TO BE PLACED BETWEEN DAYS OF PAVING OPERATIONS AS SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 610-11.
- ALL MILLED AREAS WILL BE PAVED WITHIN 72 HOURS UNLESS APPROVED BY THE ENGINEER.

- REPLACE ANY PORTION OF STOP BARS AND OTHER PAVEMENT MARKINGS AT ANY INTERSECTION INCLUDING Y-LINES NOT ACTUALLY BEING PAVED OVER, THAT ARE OBLITERATED BY THE PAVING OPERATION EITHER BY HAULING WHEEL TRACKS OR TACK TRUCK BY THE END OF EACH RESURFACING OPERATION



STEP 1



STEPS 2,3, & 4

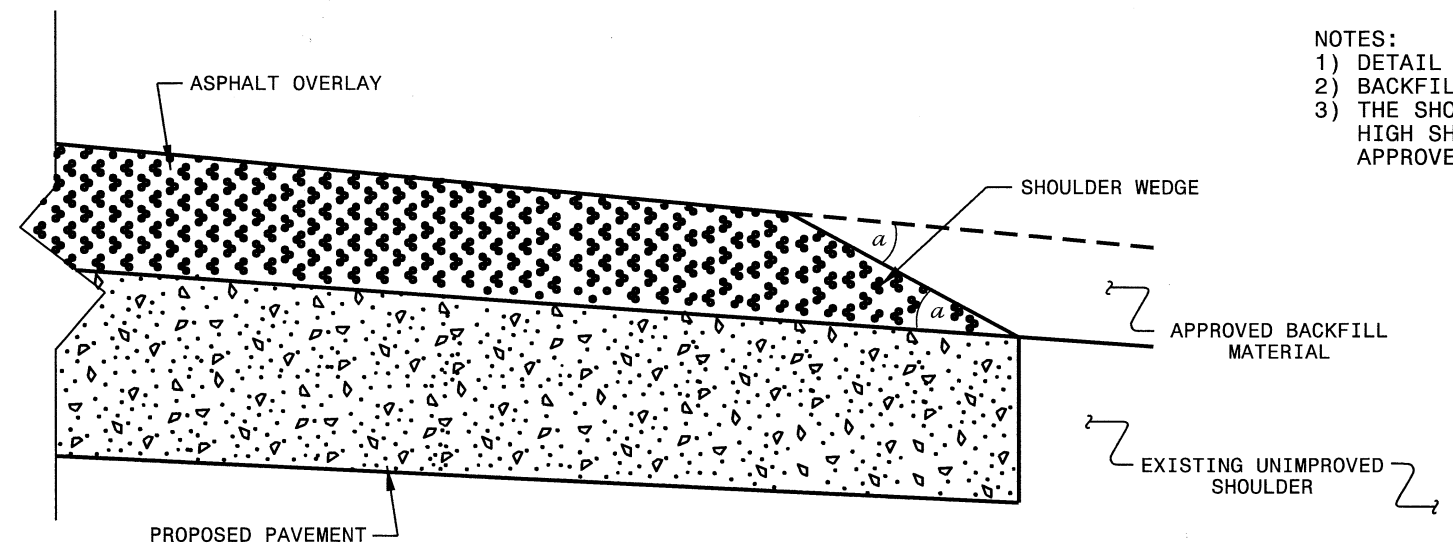
- COVER EXISTING MANHOLE WITH APPROVED MATERIAL AND CONSTRUCT OVERLAY ACROSS TOP OF MANHOLE
- SAW CUT EXCAVATION AROUND MANHOLE 12" MIN. FROM MANHOLE FRAME.
- RAISE MANHOLE FRAME RINGS TO FINISH PAVEMENT PROFILE AND CROSS SLOPE.
- BACKFILL WITH EARLY STRENGTH P.C.C. TO DEPTHS AS DIRECTED.

**MANHOLE ADJUSTMENT DETAIL**

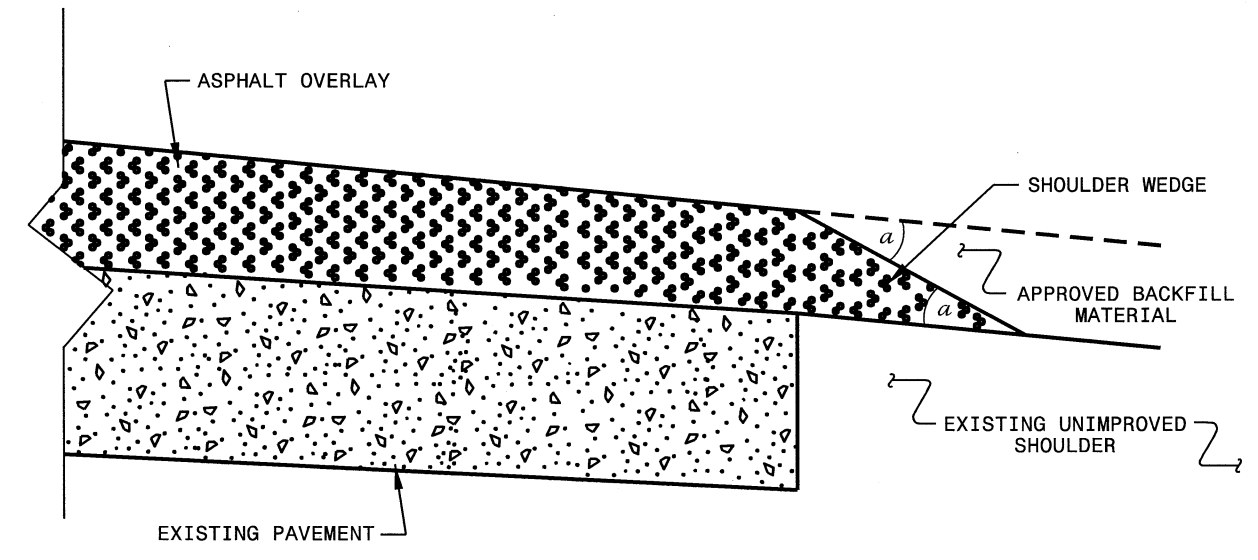
2017\_Resurfacing\_FORSYTH

								PROJECT NO.		SHEET NO.	
								2016CPT.09.22.10341.1		14	
								2016CPT.09.23.20341.1			
Map No.	Route No.	Route Name	Bridge No.	Feature Intersected	Floor Construction	Clear Roadway Width (Ft)	Horizontal Clearance Under (Ft.)	Vertical Clearance Under	Length (Ft)	Posting	Recommended Treatment, From Bridge Maintenance
1	US 52	US 52	218	US 311	6.5 RC, 1 AWS	89	NA	NA	127	NA	MILL AND PAVE BACK
1	US 52 & NC8	US 52 & NC8	224	SR 2456 N. LIBERTY ST.	7.25 RC, 1 AWS	86	NA	NA	175	NA	MILL AND PAVE BACK
1	US 52	US 52	232	LIBERTY ST. CONNECTOR E. 11TH ST.	7.25 RC, 1 AWS	86.1	NA	NA	123	NA	MILL AND PAVE BACK
1	US 52 & NC8	US 52 & NC8	237	NORTHWEST BLVD.	7.25 RC, 1 AWS	82.5	NA	NA	167	NA	MILL AND PAVE BACK
1	SIXTEENTH ST.	SIXTEENTH ST.	244	US 52 & NC 8	6 RC SLAB	NA	43.2	14FT 11 IN US 52NBL 15FT 01 IN	169	NA	MAINTAIN CLEARANCE
1	SR 2456 N. LIBERTY ST.	SR 2456 N. LIBERTY ST.	247	US 52	7" RC SLAB	NA	39	15FT 09 IN SBL 17FT 09 IN NBL	188	NA	MAINTAIN CLEARANCE
2	VINEYARD ROAD	VINEYARD ROAD	220	I40 BUS	NA	NA	52	15FT 02 IN NBL 17FT 08 IN SBL	284	NA	MAINTAIN CLEARANCE
2	NC 67	NC 67	227	I40 BUS	NA	NA	51.1	15FT 04 IN NBL 15FT 08 IN SBL	241	NA	MAINTAIN CLEARANCE
2	KNOLLWOOD ST.	KNOLLWOOD ST.	248	I40 BUS	8.5 RC SLAB	NA	38	15FT 05 IN NBL 15FT 04 IN SBL	167	NA	MAINTAIN CLEARANCE
2	US 158	US 158	125	I40 BUS & US 421	8.25 RC SLAB	NA	45.4	15FT 02 IN NBL 15FT 04 IN SBL	178	NA	MAINTAIN CLEARANCE
2	I40 BUS & US 421	I40 BUS & US 421	254	MILLER ST & SOUTHERN RXR	8.25 RC SLAB	91.8	NA	NA	328	NA	DO NOT MILL DO NOT PAVE
2	I40 BUS & US 421	I40 BUS & US 421	259	EDEX, HAWTHORNE & CLOVERDALE	8-8.5 RC SLAB	76	NA	NA	1304	NA	DO NOT MILL DO NOT PAVE
2	I40 BUS & US 421	I40 BUS & US 421	264	CRAFTON ST.	9 1/4 RC SLAB	84	NA	NA	124	NA	DO NOT MILL DO NOT PAVE
3	SR 1725	UNIVERSITY PARKWAY	322	20TH ST	PPC.C.S	57.5	NA	NA	70	NA	Do Not GRIND on Bridge
3	SR 1725	PEDESTRIAN BRIDGE	W613	SR 1725	NA	NA	35.8	15FT 01 IN	87	NA	MAINTAIN CLEARANCE
3	SR 1725	SOUTHERN RXR	R299	SR 1725	NA	NA	38	16FT 00 IN NBL 16FT 09 IN SBL	193	NA	MAINTAIN CLEARANCE
4	POLO ROAD	POLO ROAD	284	SR 4000 UNIVERSITY PARKWAY	NA	NA	28	15FT 01 IN 15FT 06 IN	187	NA	MAINTAIN CLEARANCE
4	SOUTHERN RXR	SOUTHERN RXR	320	SR 4000 UNIVERSITY PARKWAY	NA	NA	44.4	16FT 07 IN NBL 16FT 01 IN SBL	206	NA	MAINTAIN CLEARANCE
4	INDIANA AVE.	INDIANA AVE.	321	SR 4000 UNIVERSITY PARKWAY	NA	NA	99.9	16FT 08 IN NBL 16FT 01 IN SBL	223	NA	MAINTAIN CLEARANCE
6	SR 1122	JONESTOWN ROAD	239	US 421	8 3/4 RC SLAB	59	NA	NA	256	NA	DO NOT MILL DO NOT PAVE
7	SR 1393	SHATTALON ROAD	112	MILL CREEK	PPCCS, 3 AWS	33	NA	NA	150	NA	MILL AND PAVE BACK
8	SR 1001	COUNTRYCLUB ROAD	96	STEWART CREEK	7 RC SLAB 5 AWS	26.2	NA	NA	52	NA	MILL AND PAVE BACK

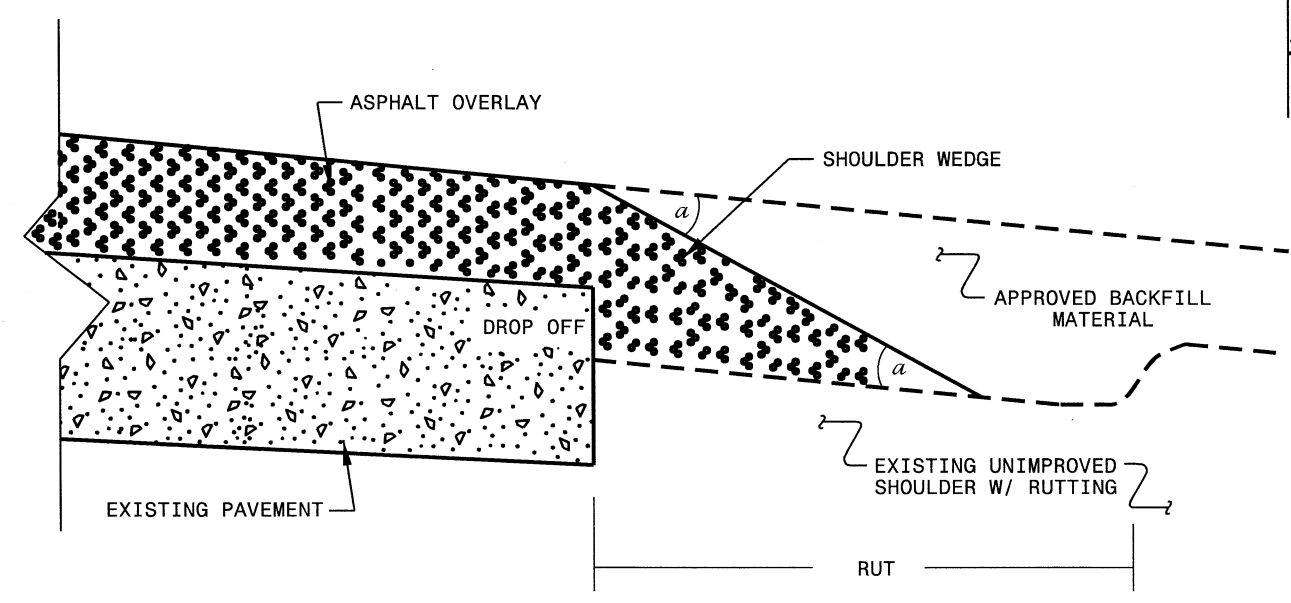
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedge\detail.dgn	

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PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.09.22.10341.1, 2016CPT.09.23.20341.1	16	

**SUMMARY OF QUANTITIES**

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	NON-TRACKING HOT APPLIED TACK COAT	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW EXCAVATION CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	FINE MILLING, 5/8" DEPTH SY	FINE MILLING, 7/8" DEPTH SY	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH SY	MILLING ASPHALT PAVEMENT, 0" TO 1 1/2" DEPTH SY	INCIDENTAL MILLING SY	BASE COURSE, B25.08 TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, S9.5A TONS	ASPHALT BINDER FOR PLANT MIX TONS	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX TONS	OGAF, TYPE FC-2 MOD TONS	ULTRA-THIN BONDED WEARING COURSE TON	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE) LF	DIAMOND GRINDING SY	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	TEMPORARY SILT FENCE LF	WATTLE LF				
2016CPT.09.22.10341.1	Forsyth	1	US 52/NC 8 NORTH BOUND	BEGIN NORTH BOUND AT PAVEMENT JT. AT EXIT# 1108 TO PAVEMENT JT NORTH OF BRIDGE # 247 OVERPASS	1	2	MD	YES	NO	NO	1.006	26				16,452										50		967						1					
		1	US 52/NC 8 SOUTH BOUND	BEGIN SOUTHBOUND AT PAVEMENT JT. NORTH OF BRIDGE # 247 LIBERTY ST. OVERPASS TO PAVEMENT JT. SOUTH OF BRIDGE # 218 OVERPASS	1	2	MD	YES	NO	NO	1.008	26				17,772										54		1,045						*					
<b>TOTAL FOR MAP NO. 1</b>											<b>2.014</b>					<b>34,224</b>										<b>104</b>		<b>2,012</b>											
2016CPT.09.22.10341.1	Forsyth	2	I-40 BUS/US421 NORTH BOUND	NORTHBOUND FROM BRIDGE #264 OVER CRAFTON ST. TO GRASS GORE AT I-40 WEST BOUND/US421 NORTH BOUND RAMP EXIT 1	2	2	MD	YES	NO	NO	4.011	26					87,199									294	4,816		14,890					*					
		2	I-40 BUS/US421 SOUTH BOUND	SOUTHBOUND FROM PAVEMENT JT AT ON RAMP FROM WEST BOUND I-40 TO BRIDGE #264 OVER CRAFTON ST.	2	2	MD	YES	NO	NO	3.845	26					82,057									276	4,532		13,728					*					
<b>TOTAL FOR MAP NO. 2</b>											<b>7.856</b>					<b>169,256</b>										<b>570</b>	<b>9,348</b>		<b>28,618</b>						<b>1</b>				
<b>TOTAL FOR PROJ NO. 2016CPT.09.22.10341.1</b>																<b>34,224</b>	<b>169,256</b>									<b>674</b>	<b>9,348</b>	<b>2,012</b>	<b>28,618</b>										
2016CPT.09.23.20341.1	Forsyth	3	SR 4000 UNIVERSITY PARKWAY/SR 1725 CHERRY ST. NORTH BOUND	NORTHBOUND FROM PAVEMENT JT. NEAR COLISEUM ENTRANCE TO PAVEMENT JT. AT N. CHERRY ST. EXT., INCLUDES POLO ROAD RAMPS	3,4	2	MD	YES	NO	NO	1.778	24						1,953					182		11				32,844	8	3	*							
		3	SR 4000 UNIVERSITY PARKWAY/SR 1770 N. MARSHALL ST-SOUTH BOUND	SOUTHBOUND FROM PAVEMENT JT AT N. CHERRY ST. EXT. TO PAVEMENT JT. NEAR COLISEUM ENTRANCE, INCLUDES POLO ROAD RAMPS	5,5A,6	2	MD	YES	NO	NO	1.978	24					753						71		4			36,109	7	2	*								
<b>TOTAL FOR MAP NO. 3</b>											<b>3.756</b>					<b>2,706</b>							<b>253</b>		<b>15</b>			<b>68,953</b>	<b>15</b>	<b>5</b>									
2016CPT.09.23.20341.1	Forsyth	4	SR 4000/SR 1725 UNIVERSITY PARKWAY NORTHBOUND	NORTHBOUND FROM PAVEMENT JT. NEAR COLISEUM ENTRANCE TO PAVEMENT JT. AT N. CHERRY ST. EXT., INCLUDES POLO ROAD RAMPS	5,5A,6	2	MD	YES	NO	NO	3.241	VARIES 24'-70'	131		1.09			70,033					6,493		383					43	9	*		436	44				
		4	SR 4000/SR 1725 UNIVERSITY PARKWAY SOUTHBOUND	SOUTHBOUND FROM PAVEMENT JT AT N. CHERRY ST. EXT. TO PAVEMENT JT. NEAR COLISEUM ENTRANCE, INCLUDES POLO ROAD RAMPS	5,5A,6	2	MD	YES	NO	NO	3.242	VARIES 24'-70'	159		1.33		69,510						6,445		380				8	1	*		531	53					
<b>TOTAL FOR MAP NO. 4</b>											<b>6.483</b>		<b>290</b>		<b>2.42</b>		<b>139,543</b>						<b>12,938</b>		<b>763</b>				<b>51</b>	<b>10</b>			<b>967</b>	<b>97</b>					
2016CPT.09.23.20341.1	Forsyth	5	SR 1763 INDIANA AVE	FROM PAVEMENT JT. AT NORTH POINT BLVD. SR 1528 TO PAVEMENT JT. BEFORE RXR AT REYNOLDS BLVD. SR 4001	7,7A	2	MU	YES	NO	NO	1.359	VARIES 24'-58'	28		0.23		38,314						3,549		209				69	14	*		94	10					
<b>TOTAL FOR MAP NO. 5</b>											<b>1.359</b>		<b>28</b>		<b>0.23</b>		<b>38,314</b>						<b>3,549</b>		<b>209</b>				<b>69</b>	<b>14</b>			<b>94</b>	<b>10</b>					
2016CPT.09.23.20341.1	Forsyth	6	SR 1122 JONESTOWN ROAD	FROM COUNTRY CLUB RD. (SR 1001) THROUGH INTERSECTION TO RADIUS AT HANES MALL BLVD. (SR 3153)	8,8A	5	MU	YES	NO	NO	0.646	53	11		0.09		22,740					2,106		126					23	12	*								
<b>TOTAL FOR MAP NO. 6</b>											<b>0.646</b>		<b>11</b>		<b>0.09</b>		<b>22,740</b>						<b>2,106</b>		<b>126</b>				<b>23</b>	<b>12</b>									
2016CPT.09.23.20341.1	Forsyth	7	SR 1393 SHATTALON RD.	FROM PAVEMENT JT AT YADKINVILLE RD. (SR 1525) TO PAVEMENT JT AT ROBINHOOD RD. (SR 1348)	9,10	2	ZWU	YES	NO	NO	2.585	VARIES 22'-34'	310	33	5.17		550	742	1,223			3,544		213				3	1			1,034	103						
<b>TOTAL FOR MAP NO. 7</b>											<b>2.585</b>		<b>310</b>	<b>33</b>	<b>5.17</b>		<b>550</b>	<b>742</b>	<b>1,223</b>			<b>3,544</b>		<b>213</b>				<b>3</b>	<b>1</b>			<b>1,034</b>	<b>103</b>						
2016CPT.09.23.20341.1	Forsyth	8	SR 1001 COUNTRY CLUB RD./SHALLOWFORD RD.	FROM PAVEMENT JT. EAST OF BRIDGE #96 TO PAVEMENT JT. AT SIMS DRIVE (SR 1539)	10	2	ZWU	YES	NO	NO	0.357	22	43		0.71		152		489			494		30								143	14						
<b>TOTAL FOR MAP NO. 8</b>											<b>0.357</b>		<b>43</b>		<b>0.71</b>		<b>152</b>		<b>489</b>			<b>494</b>		<b>30</b>								<b>143</b>	<b>14</b>						
2016CPT.09.23.20341.1	Forsyth	9	SR 2693 SAWMILL RD.	FROM EOP PAVEMENT JT AT UNION CROSS RD. (SR 2643) TO PAVEMENT JT NEAR DIER LANE (SR 4361)	11	2	ZWU	YES	NO	NO	1.149	21	138	96	2.30							571		1,300		112						460	46						
<b>TOTAL FOR MAP NO. 9</b>											<b>1.149</b>		<b>138</b>	<b>96</b>	<b>2.30</b>							<b>571</b>		<b>1,300</b>		<b>112</b>						<b>460</b>	<b>46</b>						
<b>TOTAL FOR PROJ NO. 2016CPT.09.23.20341.1</b>											<b>16.335</b>		<b>820</b>	<b>129</b>	<b>10.93</b>		<b>204,005</b>	<b>742</b>	<b>1,712</b>	<b>571</b>	<b>6,144</b>	<b>16,740</b>	<b>1,300</b>	<b>1,468</b>				<b>68,953</b>	<b>161</b>	<b>42</b>			<b>2,698</b>	<b>270</b>					
<b>GRAND TOTAL</b>											<b>26.205</b>		<b>820</b>	<b>129</b>	<b>10.93</b>		<b>34,224</b>	<b>169,256</b>	<b>204,005</b>	<b>742</b>	<b>1,712</b>	<b>571</b>	<b>6,144</b>	<b>16,740</b>	<b>1,300</b>	<b>1,468</b>		<b>674</b>	<b>9,348</b>	<b>2,012</b>	<b>28,618</b>	<b>68,953</b>	<b>161</b>	<b>42</b>	<b>1</b>	<b>2,698</b>	<b>270</b>		

PROJECT NO.	SHEET NO.	TOTAL NO.
2016CPT.09.22.10341.1.	17	
2016CPT.09.23.20341.1		

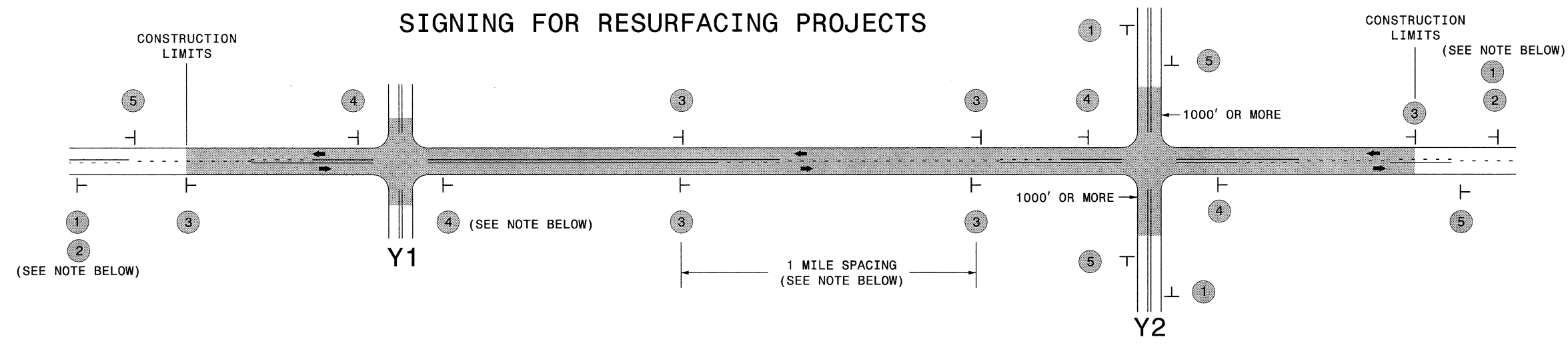
**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4510000000-N	4685000000-E	4686000000-E	4890000000-E	4890000000-E	4695000000-E	4697000000-E	4890000000-E	4890000000-E	4705000000-E	4710000000-E	4721000000-E			4735000000-E										
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	6" X 90 M WHITE THERMO (HRE)	6" X 90 M YELLOW THERMO (HRE)	6" X 120 M WHITE THERMO (HRE)	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	12" X 90 M WHITE THERMO (HRE)	12" X 120 M WHITE THERMO (HRE)	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO RXR 120 M	THERMO MERGE ARROW 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO STR & LT ARROW 90 M		
NO		NO			NO					SF	LS	HR	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA								
2016CPT.09.22.10341.1	Forsyth	1	US 52/NC 8 NORTH BOUND	BEGIN NORTHBOUND AT PAVEMENT JT. AT EXIT# 1108 TO PAVEMENT JT NORTH OF BRIDGE # 247 OVERPASS	1	2	MD	1.006	26	158	1	10			5,315	5,315	1,328			723	140															
		*	US 52/NC 8 SOUTH BOUND	BEGIN SOUTHBOUND AT PAVEMENT JT. NORTH OF BRIDGE # 247 LIBERTY ST. OVERPASS TO PAVEMENT JT. SOUTH OF BRIDGE # 218 OVERPASS	1	2	MD	1.008	26	158		10			5,323	5,323	1,553			1,663	320							2								
TOTAL FOR MAP NO. 1										316	1	20			10,638	10,638	2,881			2,386	460							2								
2016CPT.09.22.10341.1	Forsyth	2	I-40 BUS/US421 NORTH BOUND	NORTHBOUND FROM BRIDGE #264 OVER CRAFTON ST. TO GRASS GORE AT I-40 WEST BOUND/US421 NORTH BOUND RAMP EXIT 1	2	2	MD	4.011	26	558		60			22,062	22,725	7,239			5,066	1,533		4					3								
		*	I-40 BUS/US421 SOUTH BOUND	SOUTHBOUND FROM PAVEMENT JT AT ON RAMP FROM WEST BOUND I-40 TO BRIDGE #264 OVER CRAFTON ST.	2	2	MD	3.845	26	558		58			20,302	20,771	6,656			6,201	1,918		8					12								
TOTAL FOR MAP NO. 2										1,116		118			42,364	43,496	13,895			11,267	3,451			12		15		6								
TOTAL FOR PROJ NO. 2016CPT.09.22.10341.1										9,87		138			53,002	54,134	16,776			107,136						12		17		6					23	
2016CPT.09.23.20341.1	Forsyth	3	SR 4000 UNIVERSITY PARKWAY/SR 1725 CHERRY ST-NORTH BOUND	NORTHBOUND FROM PAVEMENT JOINT AT 7TH ST. TO END OF CONCRETE PAVEMENT 0.1 MILE NORTH OF 27TH ST.	3,4	2	MD	1.778	24	126		120																								
		*		SOUTHBOUND FROM PAVEMENT JOINT AT 0.1 MILE NORTH OF 27TH ST. TO PAVEMENT JOINT AT 5TH ST.	3,4	2	MD	1.978	24	126		120																								
TOTAL FOR MAP NO. 3										3,756		240																								
2016CPT.09.23.20341.1	Forsyth	4	SR 4000/SR 1725 UNIVERSITY PARKWAY NORTHBOUND	NORTHBOUND FROM PAVEMENT JT. NEAR COLISEUM ENTRANCE TO PAVEMENT JT. AT N. CHERRY ST. EXT., INCLUDES POLO ROAD RAMP	5,5A,6	2	MD	3.241	24	158		80	940	6,415	9,143				1,129		888		300	12			16	16	22	7						
		*		SOUTHBOUND FROM PAVEMENT JT AT N. CHERRY ST. EXT. TO PAVEMENT JT. NEAR COLISEUM ENTRANCE, INCLUDES POLO ROAD RAMP	5,5A,6	2	MD	3.242	24	158		80	2,286	6,453	8,232				1,554		1,224		206	16			2	12	13	27	2					
TOTAL FOR MAP NO. 4										6,483		160	3,226	12,868	17,375				2,683		2,112			506	28		2	28	29	49	9					
2016CPT.09.23.20341.1	Forsyth	5	SR 1763 INDIANA AVE	FROM PAVEMENT JT. AT NORTH POINT BLVD. SR 1528 TO PAVEMENT JT. BEFORE RKR AT REYNOLDS BLVD. SR 4001	7,7A	2	MU	1.359	24	126			1,240	3,534	18,152					53	810		50	220	8	2	3	1	27	14	4					
TOTAL FOR MAP NO. 5										1,359			1,240	3,534	18,152				53	810		50	220	8	2	3	1	27	14	4						
2016CPT.09.23.20341.1	Forsyth	6	SR 1122 JONESTOWN ROAD	FROM COUNTRY CLUB RD. (SR 1001) THROUGH INTERSECTION TO RADIUS AT HANES MALL BLVD. (SR 3153)	8,8A	5	MU	0.646	53	286		120	542	429	2,389	6,129				62	53	212					7	26	27	3	2					
TOTAL FOR MAP NO. 6										0,646		120	542	429	2,389	6,129			62	53	212						7	26	27	3	2					
2016CPT.09.23.20341.1	Forsyth	7	SR 1393 SHATTALON RD.	FROM PAVEMENT JT AT YADKINVILLE RD. (SR 1525) TO PAVEMENT JT AT ROBINHOOD RD. (SR 1348)	9,10	2	2WU	2.585	22	126			27,288		1,122	33,147				27	340						1	8								
TOTAL FOR MAP NO. 7										2,585			27,288		1,122	33,147			27	340								1	8							
2016CPT.09.23.20341.1	Forsyth	8	SR 1001 COUNTRYCLUB RD./SHALLOWFORD RD.	FROM PAVEMENT JT. EAST OF BRIDGE #96 TO PAVEMENT JT. AT SIMS DRIVE (SR 1539)	10	2	2WU	0.357	22	126			3,841		120	4,290												2	4							
TOTAL FOR MAP NO. 8										0,357			3,841		120	4,290															2	4				
2016CPT.09.23.20341.1	Forsyth	9	SR 2693 SAWMILL RD.	FROM EOP PAVEMENT JT AT UNION CROSS RD. (SR 2643) TO PAVEMENT JT NEAR DIER LANE (SR 4361)	11	2	2WU	1.149	21	126			12,363		24	12,133																				
TOTAL FOR MAP NO. 9										1,149			12,363		24	12,133																				
TOTAL FOR PROJ NO. 2016CPT.09.23.20341.1										16,335		520	48,500	13,297	24,564	73,851			2,772	446	3,134			50	1,215	48	2	5	37	92	94	16	2			
GRAND TOTAL										26,205	2,790	1	658	48,500	13,297	24,564	73,851	53,002	54,134	16,776	2,772	446	3,134	13,653	3,911	50	1,215	60	2	22	43	92	94	16	2	









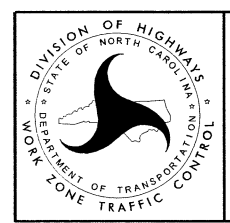
**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

**MAINLINE (-L-) SIGNING**

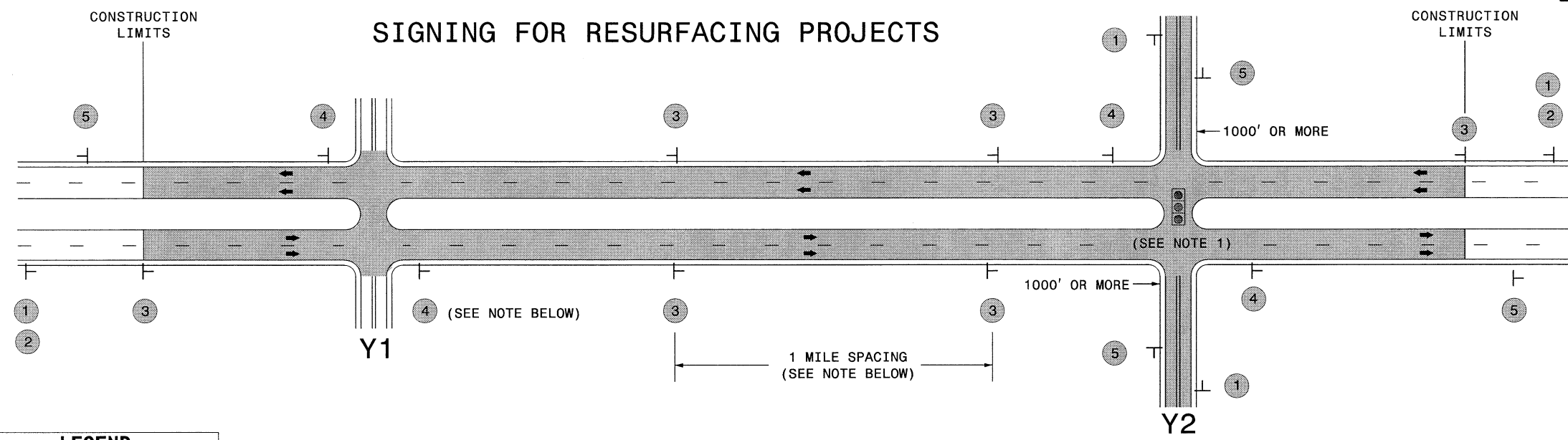
**-Y- LINE SIGNING**

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 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.	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <p>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.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">             W20-1            48" X 48"         </div> <div style="text-align: center;">             W20-7 A            48" X 48"         </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p>
	2	 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	 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 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	4	 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	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

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**RESURFACING  
 ADVANCE WARNING SIGNS  
 FOR  
 RURAL AND SUBURBAN  
 2 LANE ROADWAYS**



**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

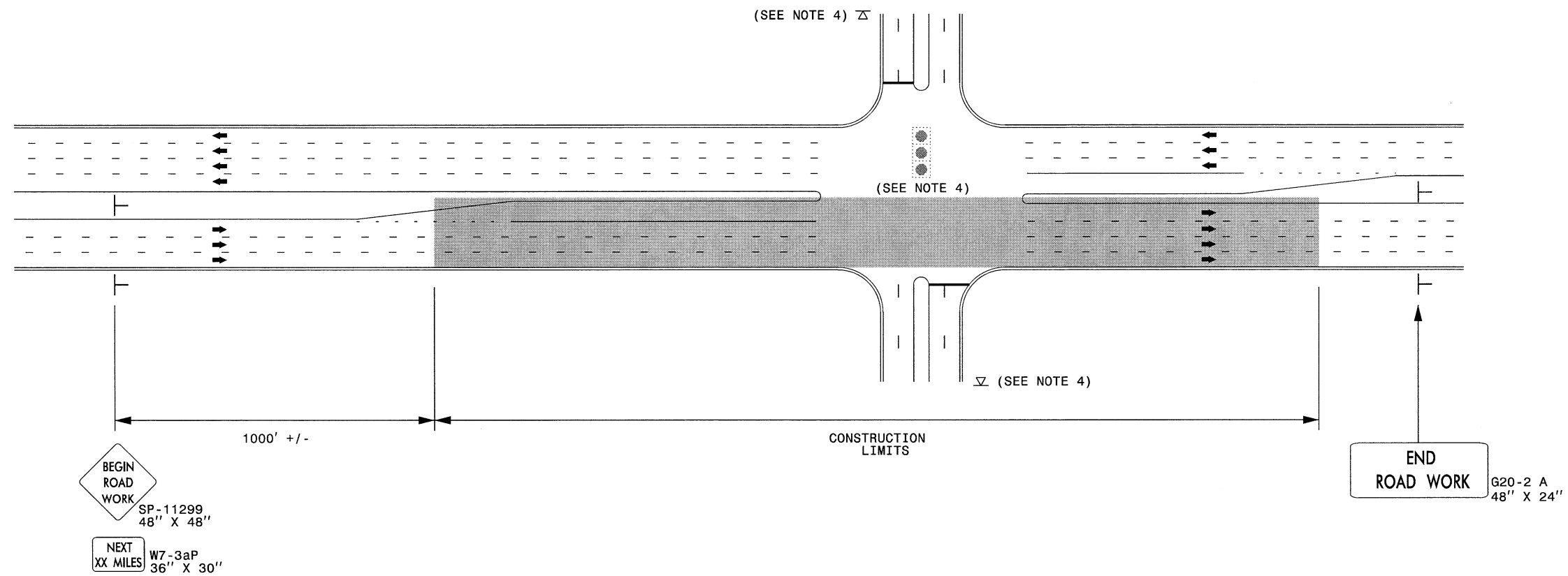
**MAINLINE (-L-) SIGNING**

**-Y- LINE SIGNING**

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>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.</li> </ol>
	2		#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		PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	4		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		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

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

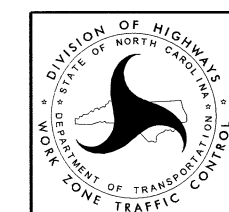
## URBAN / SUBURBAN WORKZONES



### 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

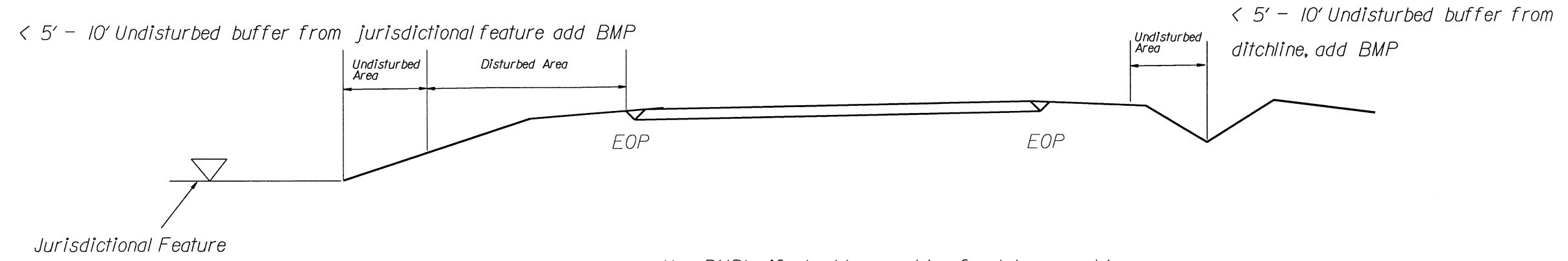
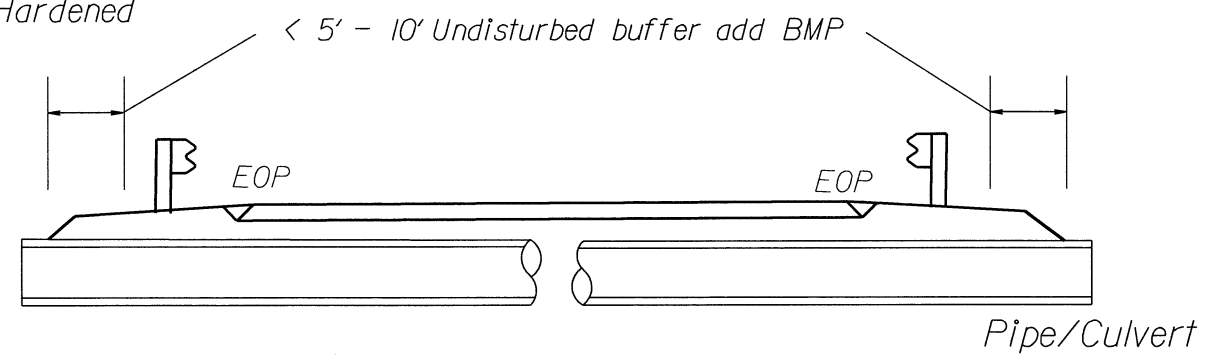


**RESURFACING ADVANCE  
WARNING SIGNS FOR  
URBAN / SUBURBAN  
FACILITIES**

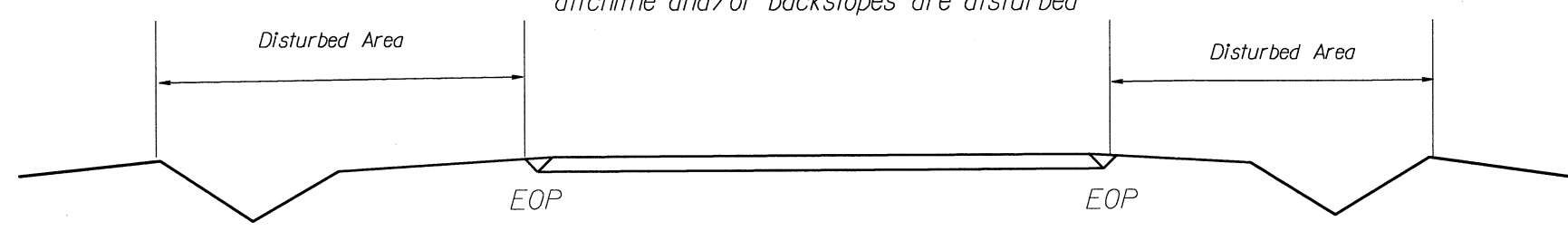
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

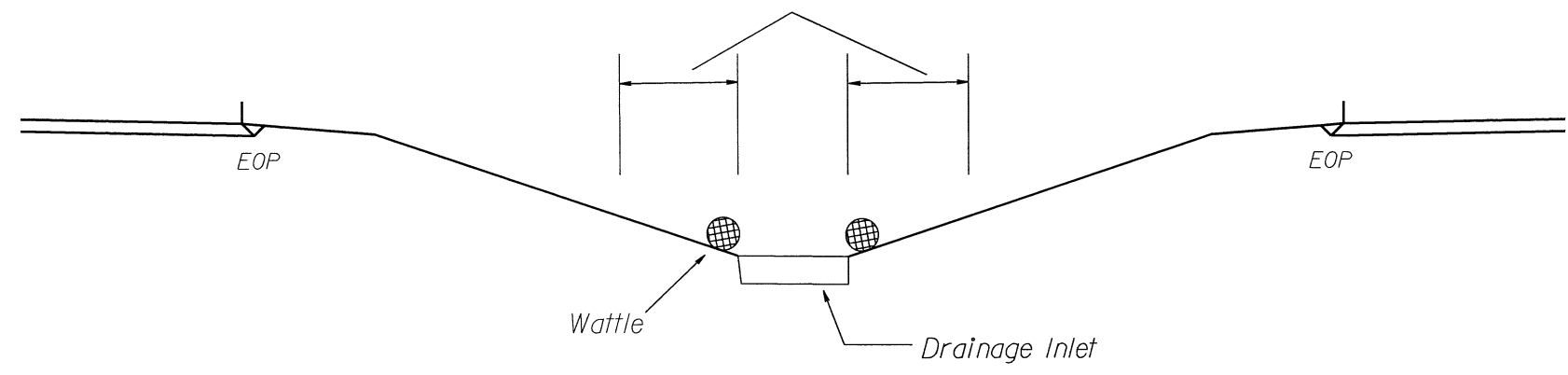
# EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

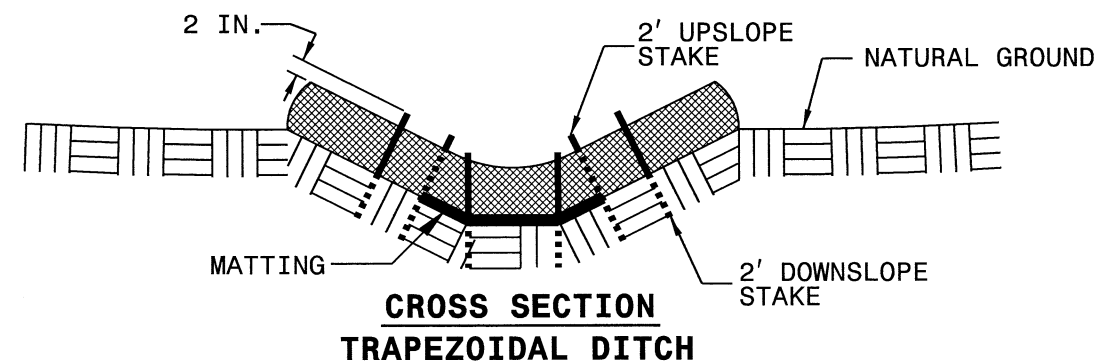
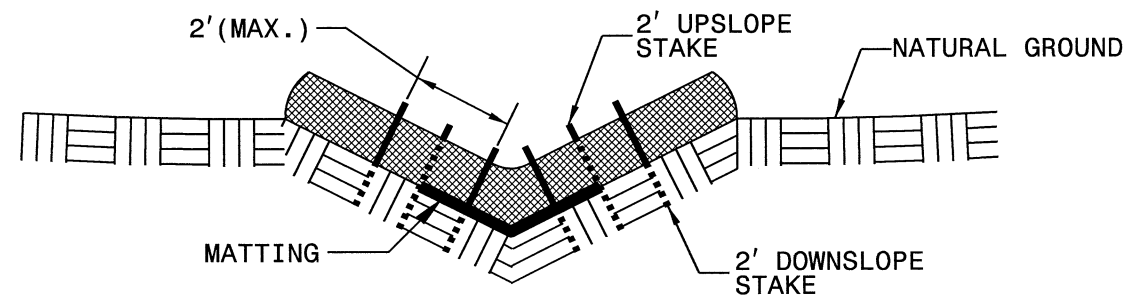
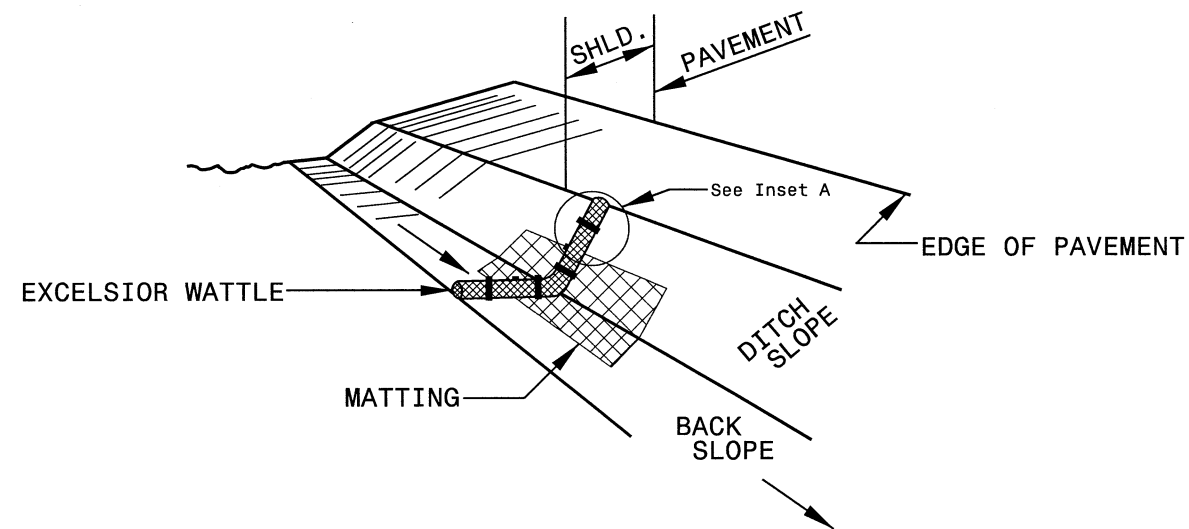


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

# WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

