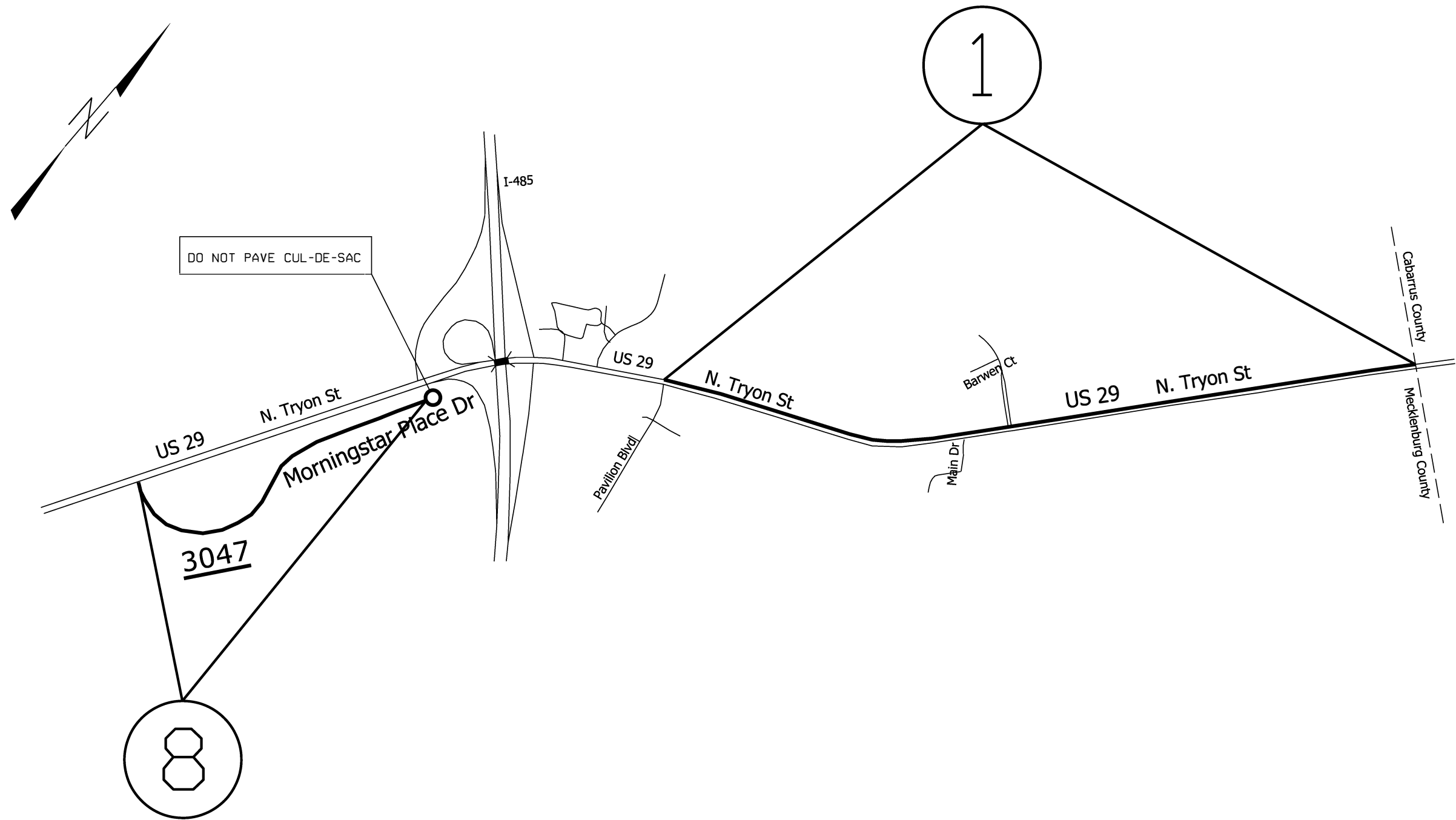


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	
WBS NO.	2027CPT.10.05.10601 2027CPT.10.05.20601		



MAP

DESCRIPTION

#1 US 29 SB N TRYON ST

FROM CABARRUS COUNTY LINE TO
PAVILION BLVD

#8 SR 3047 MORNINGSTAR PLACE DR

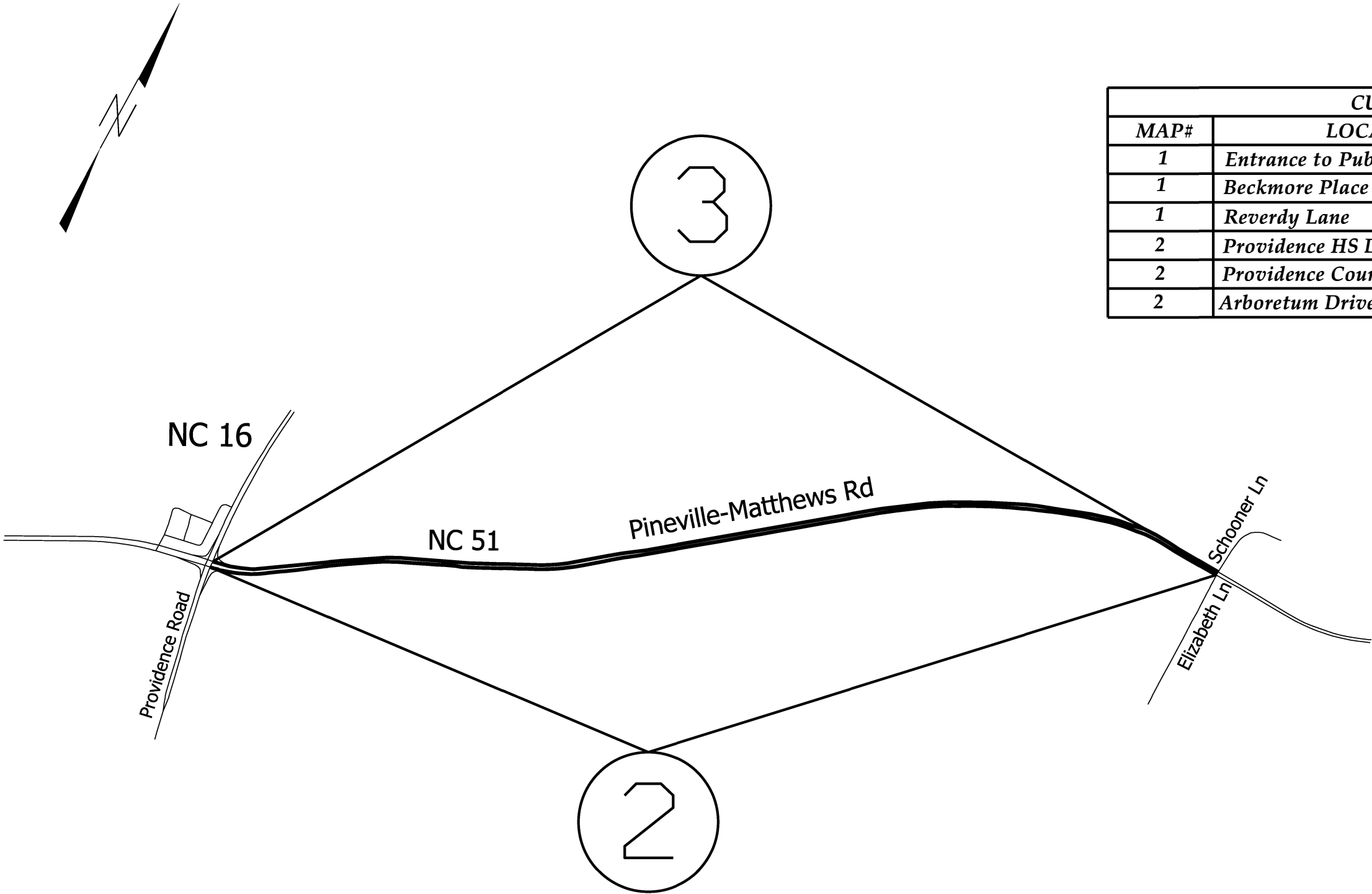
FROM N. TRYON ST TO END OF MAINTENANCE

2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	-N-		REVISIONS	
DATE				
DWG. BY	JME			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		2	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

CURB RAMP TABLE		
MAP#	LOCATION	RAMP TYPE
1	Entrance to Publix	2 Ramp Constr. RSD 848.06 Sht 3 of 13
1	Beckmore Place Enterance	2 Retro-Fit
1	Reverdy Lane	1 Retro-Fit
2	Providence HS Driveway	1 Retro-Fit
2	Providence Court Lane	4 Retro-Fit
2	Arboretum Drive	2 Ramp Constr. RSD 848.06 Sht 3 of 13



MAP	DESCRIPTION
#2 NC 51 NB PINEVILLE-MATTHEWS RD	FROM PROVIDENCE RD TO ELIZABETH LN
#3 NC 51 SB PINEVILLE-MATTHEWS RD	FROM BEGIN MEDIAN TO PROVIDENCE RD

2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE -NA-

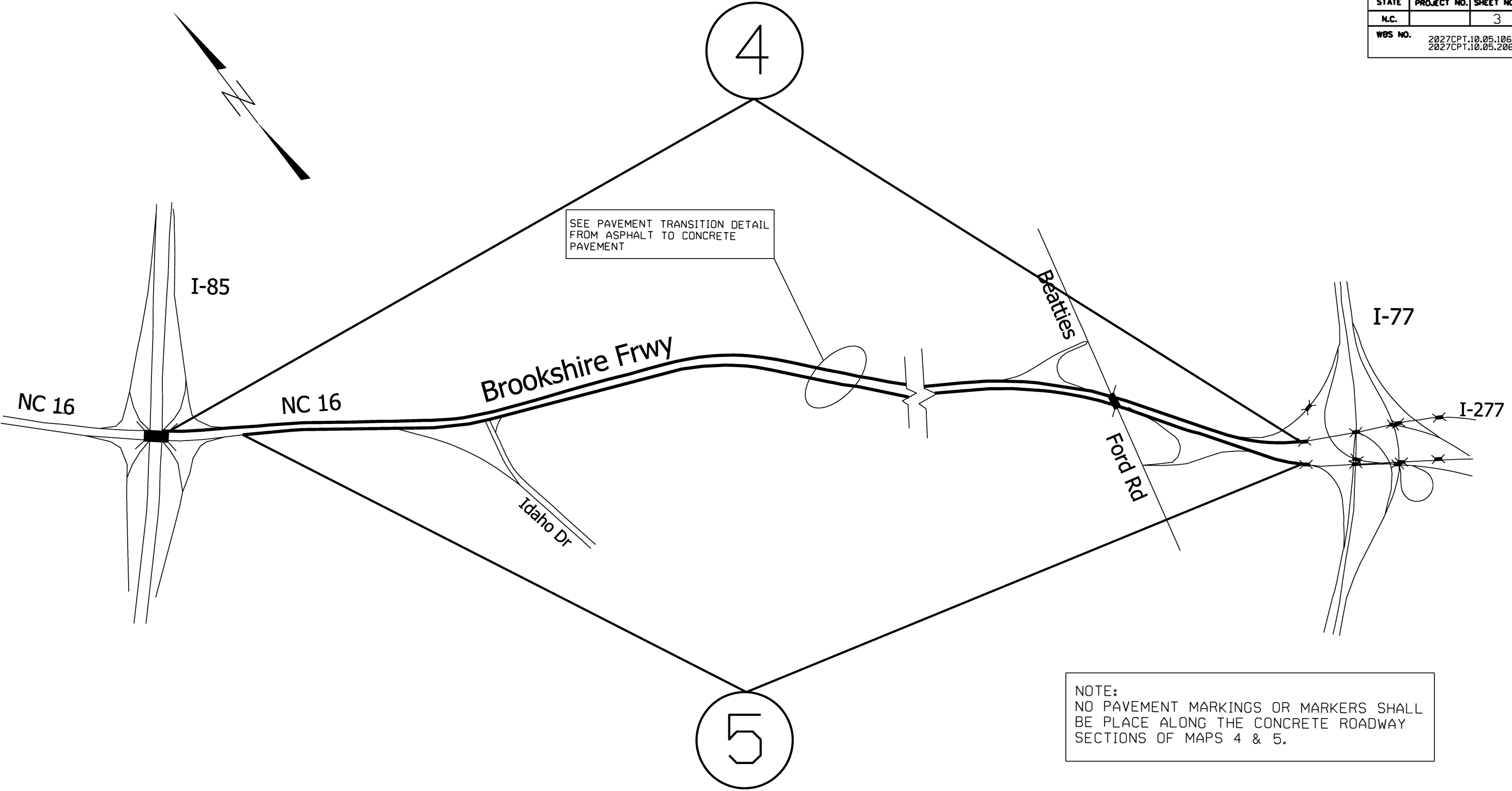
DATE

DESIGNED BY JHE

APPROVED

REVISIONS

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		3	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			



MAP

#4 NC 16 NB BROOKSHIRE FRWY

#5 NC 16 SB BROOKSHIRE FRWY

DESCRIPTION

FROM BRIDGE DECK AT IRWIN CREEK
TO I-85 BRIDGE DECK

FROM PAVEMENT JOINT AT OVERHEAD
SIGN TO BRIDGE DECK AT IRWIN CREEK

2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1		
SCALE	-1A-	
DATE		
DWG. BY	JHE	
DESIGN BY		
APPROVED		
		REVISIONS

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		4	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

CONSTRUCTION NOTES:

FOR MAPS 4 & 5 MILL DOWN AND TIE ASPHALT PAVEMENT INTO EXISTING CONCRETE ROADWAY CREATING A SMOOTH TRANSITION AT THE JOINT.

REMOVE AND REPLACE ALL PAVEMENT MARKINGS ON THE BRIDGE OVER I-85.

MILL AND PAVE ALL OUTSIDE AND INSIDE ASPHALT SHOULDERS FOR MAPS 4 & 5 FROM IDAHO DRIVE TO BRIDGE OVER IRWIN CREEK AS DIRECTED BY THE ENGINEER.

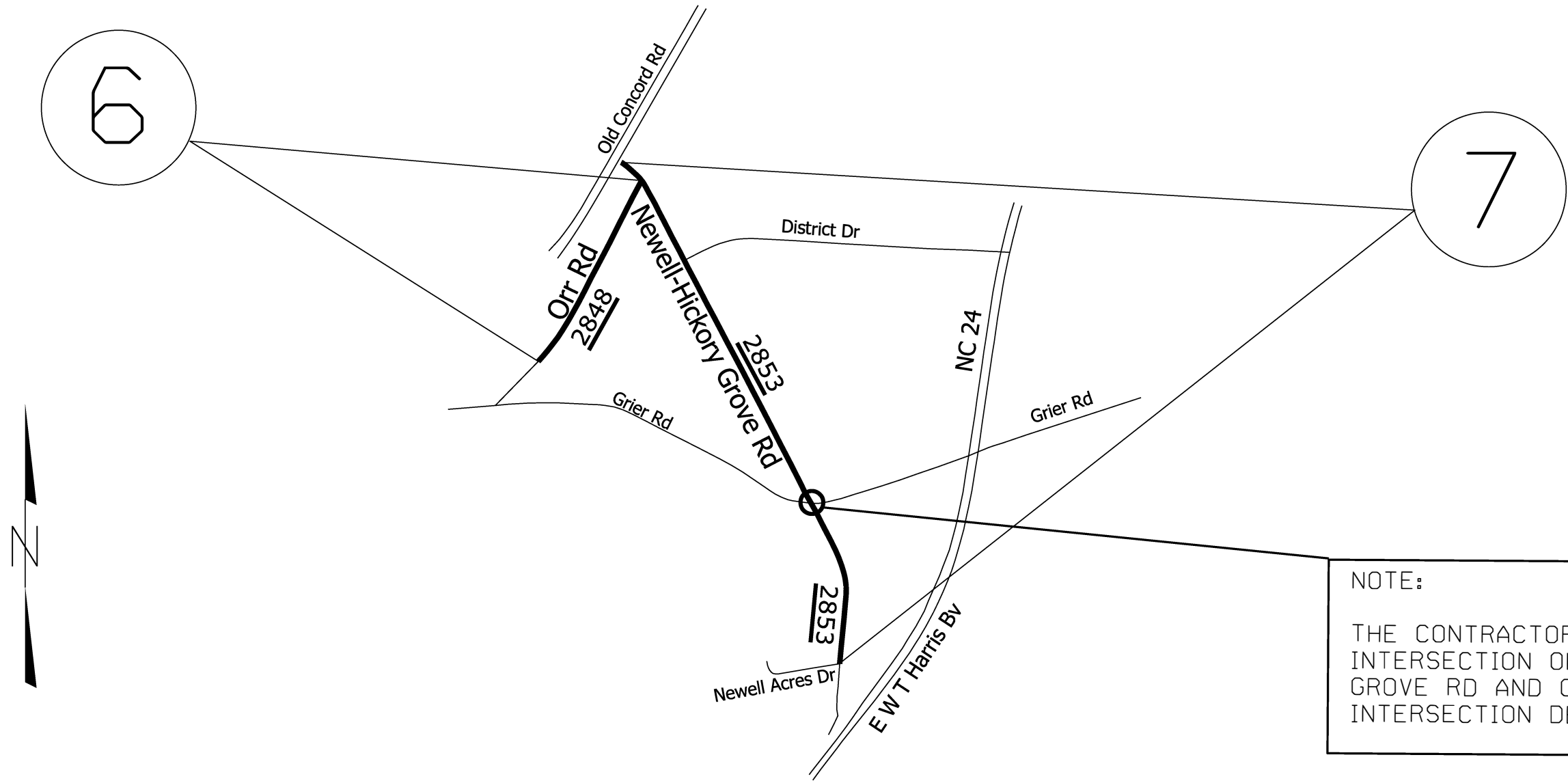
CUT MILLED RUMBLE STRIPS ON ALL OUTSIDE AND INSIDE ASPHALT SHOULDERS FOR MAPS 4 & 5 FROM IDAHO DRIVE TO BRIDGE OVER IRWIN CREEK AS DIRECTED BY THE ENGINEER.

NO PAVEMENT MARKINGS OR MARKERS SHALL BE PLACED BEYOND THE ROADWAYS TRANSITION TO THE CONCRETE ROADWAY SURFACE.

2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	1/4"		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		5	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			



NOTE:

THE CONTRACTOR IS TO PAVE THE INTERSECTION OF NEWELL-HICKORY GROVE RD AND GRIER RD AS SHOWN IN INTERSECTION DETAIL ON PLAN SHEET 20

MAP

#6 SR-2848 ORR ROAD

#7 SR-2853 NEWELL- HICKORY GROVE RD

DESCRIPTION

FROM NEWELL-HICKORY GROVE ROAD TO CURB & GUTTER SECTION

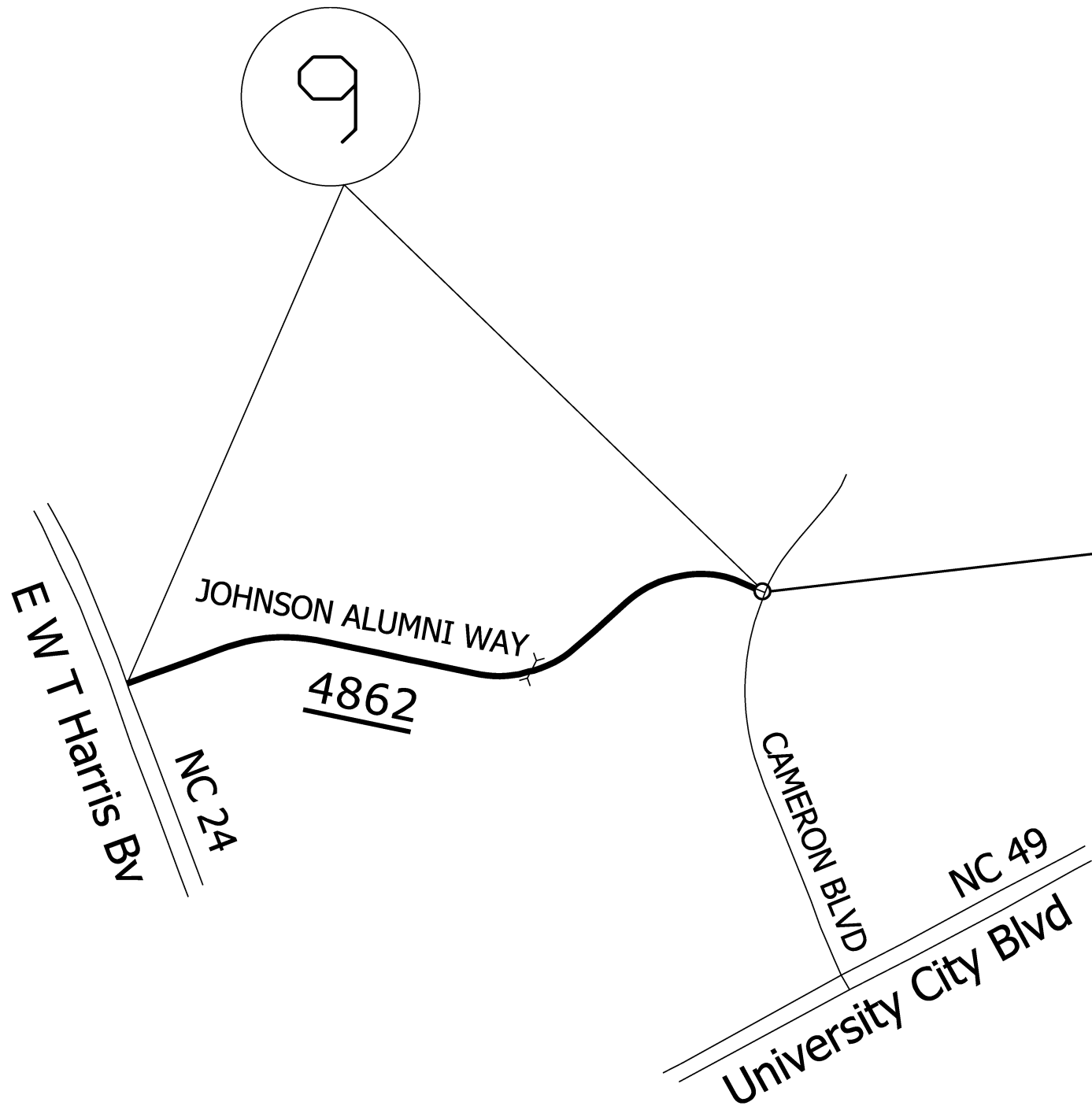
FROM FROM BEGIN MAINTENANCE TO NEWELL ACRES DR

2027 MECKLENBURG COUNTY
RESURFACING CONTRACT I

SCALE	DATE	DWG. BY	DESIGN BY	APPROVED	REVISIONS	
1"=100'		JHE				



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		6	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			



NOTE:

THE CONTRACTOR IS TO END MILL & FILL OPERATION PRIOR TO BRICK PAVER CROSSWALK AS DIRECTED BY THE ENGINEER.

MAP

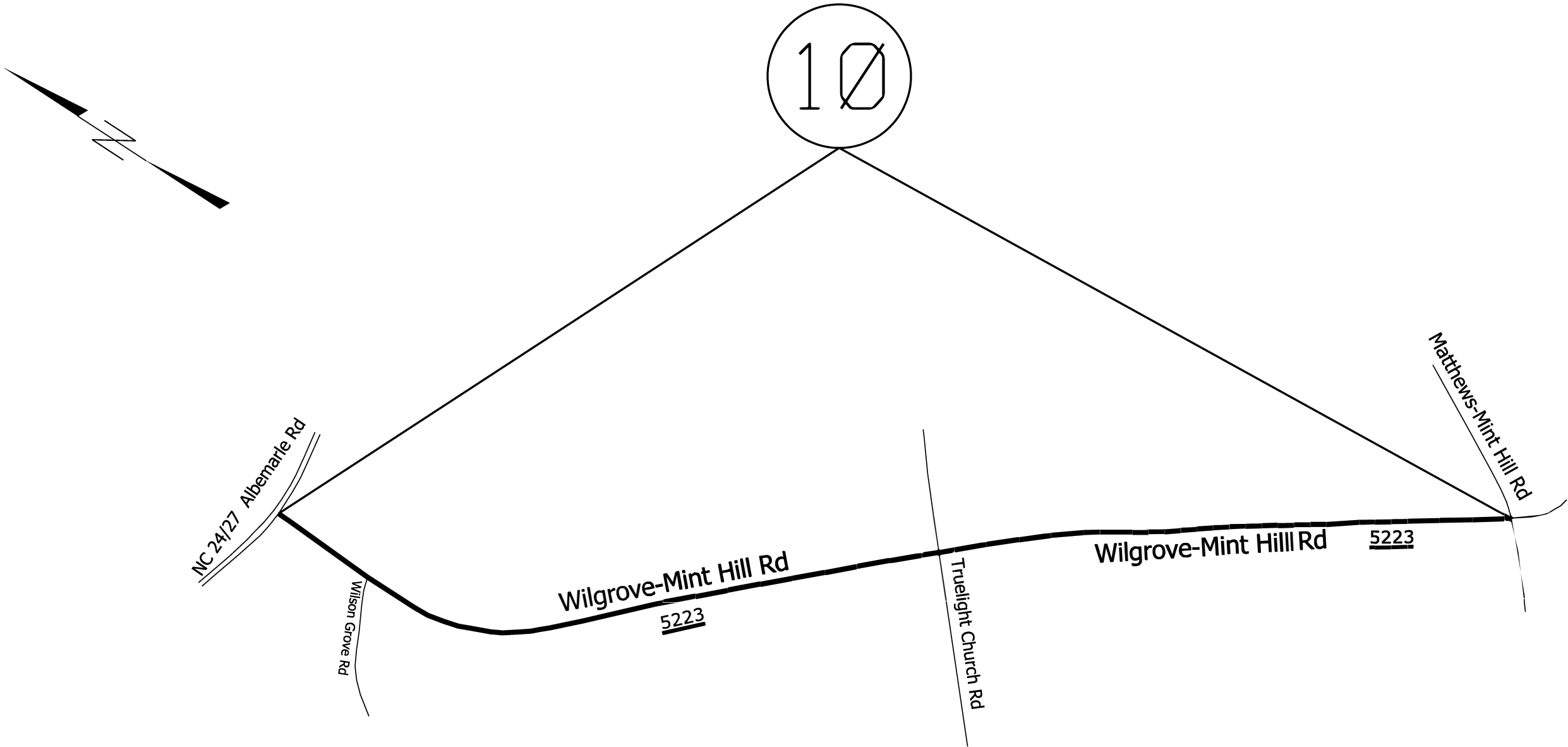
#9 SR-4862 JOHNSON ALUMNI WAY

DESCRIPTION

FROM HARRIS BLVD TO CAMERON BLVD

2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			
SCALE	-N/A-		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		7	
WBS NO. 2027CPT:10.05.10601 2027CPT:10.05.20601			



MAP

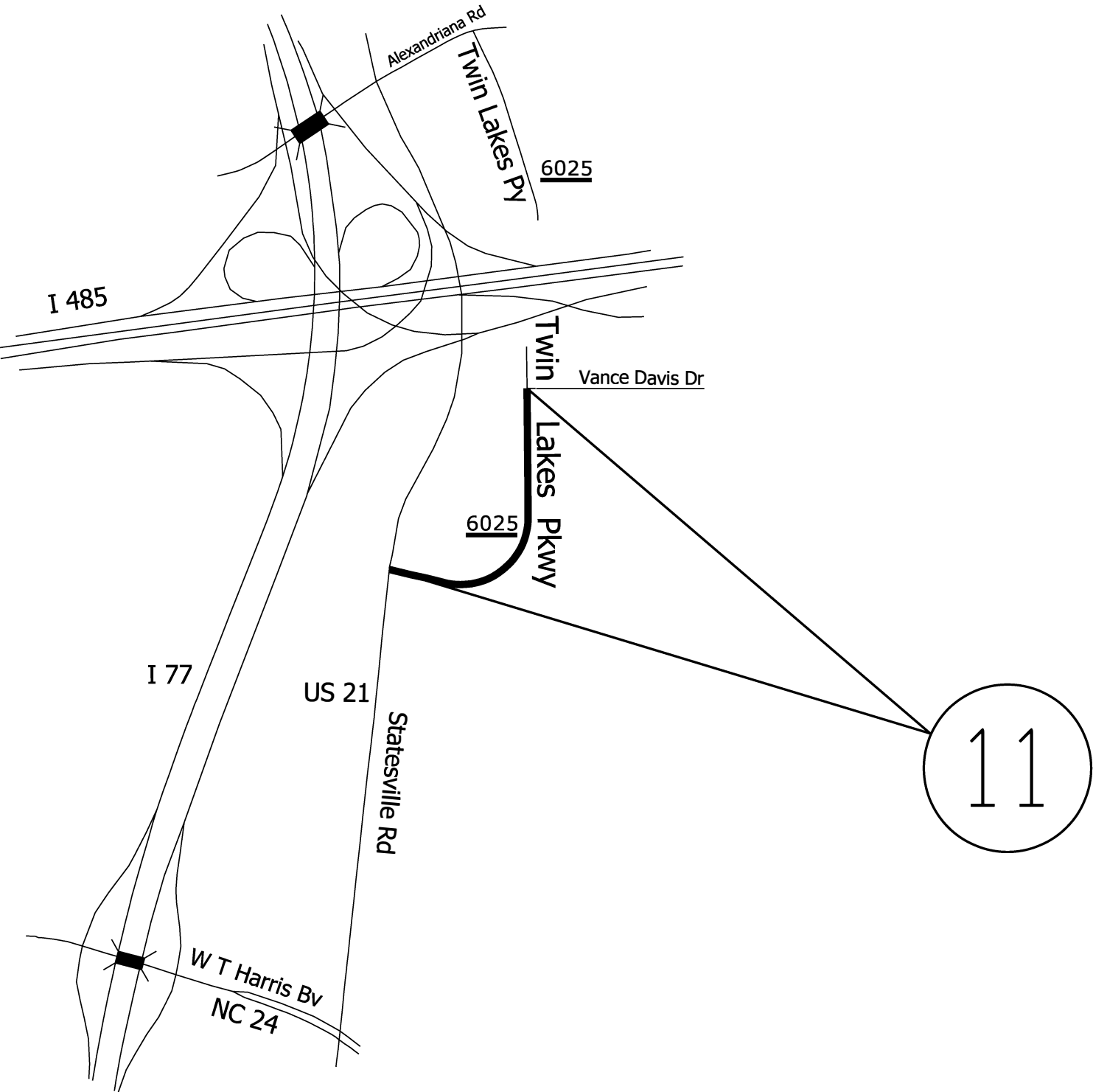
#10 SR-5223 WILGROVE-MINT HILL RD

DESCRIPTION

FROM ALBEMARLE RD TO MATTHEWS-MINT HILL RD

2027 MECKLENBURG COUNTY RESURFACING CONTRACT I			
SCALE	-1A-		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		8	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			



MAP

#11 SR-6025 TWIN LAKES PKWY

DESCRIPTION

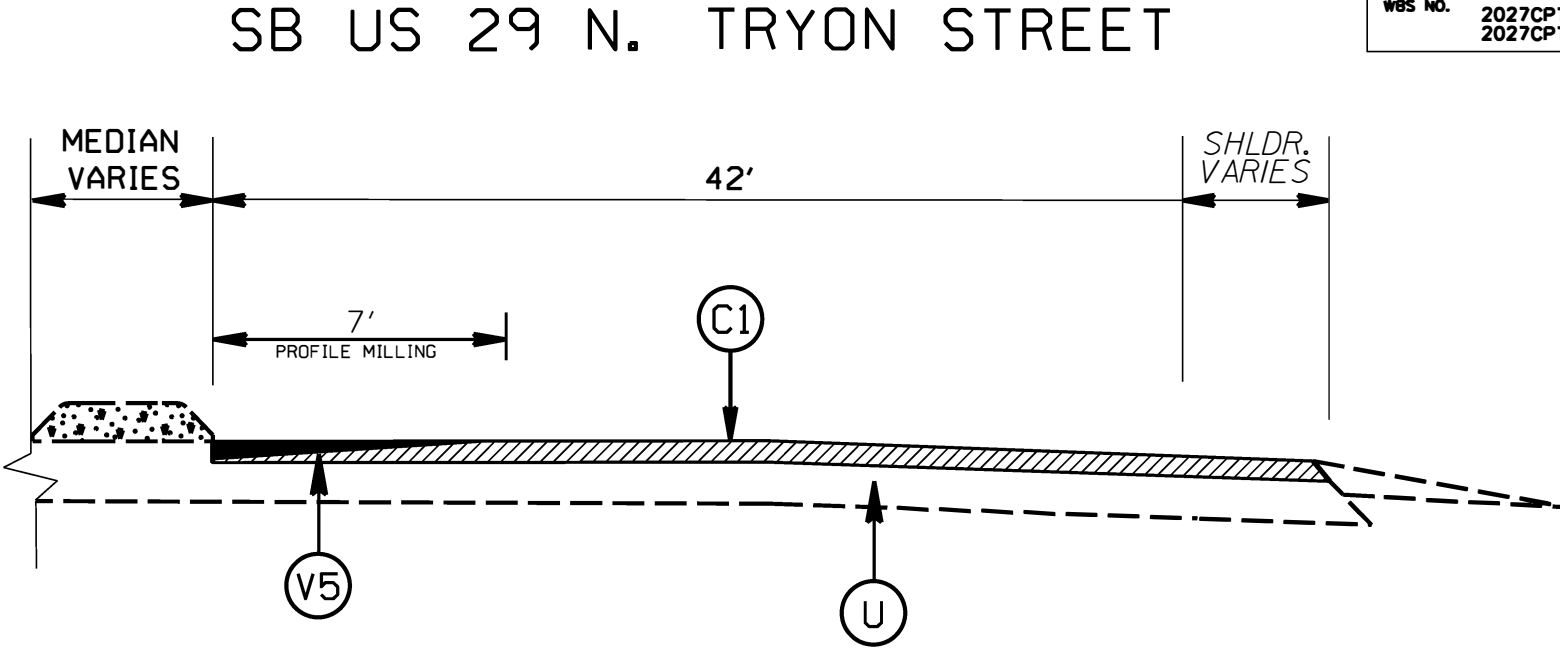
FROM VANCE DAVIS DR TO STATESVILLE RD

2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

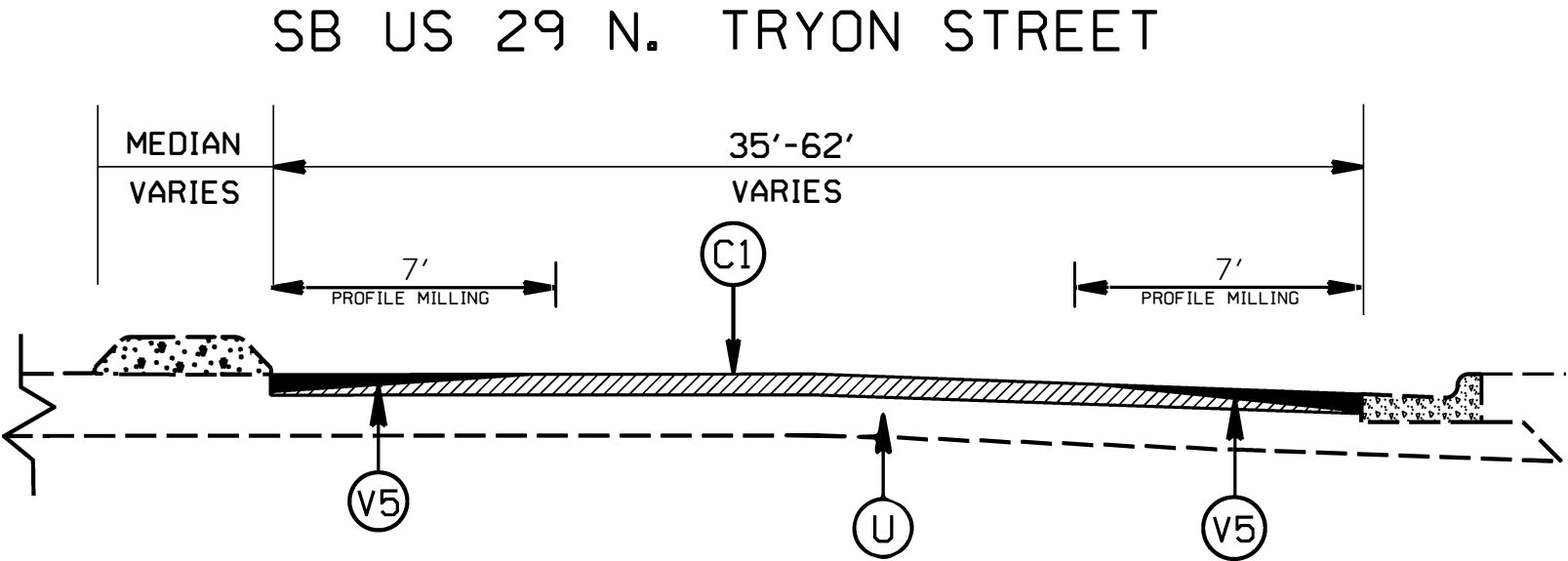
SCALE	-NA-		REVISIONS	
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		9	
WBS NO.		2027CPT.10.05.10601 2027CPT.10.05.20601	

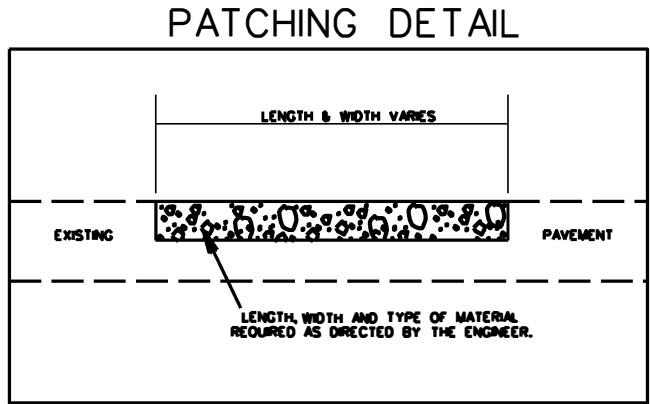
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



TYPICAL SECTION NO. 1



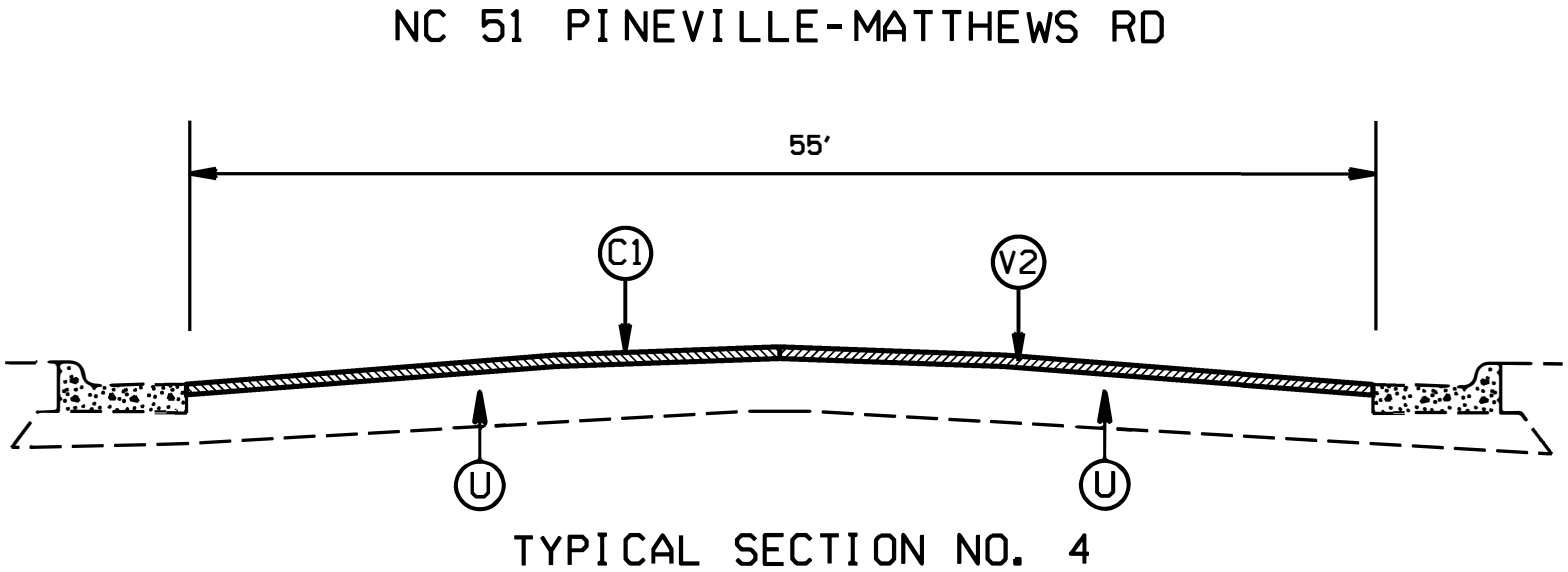
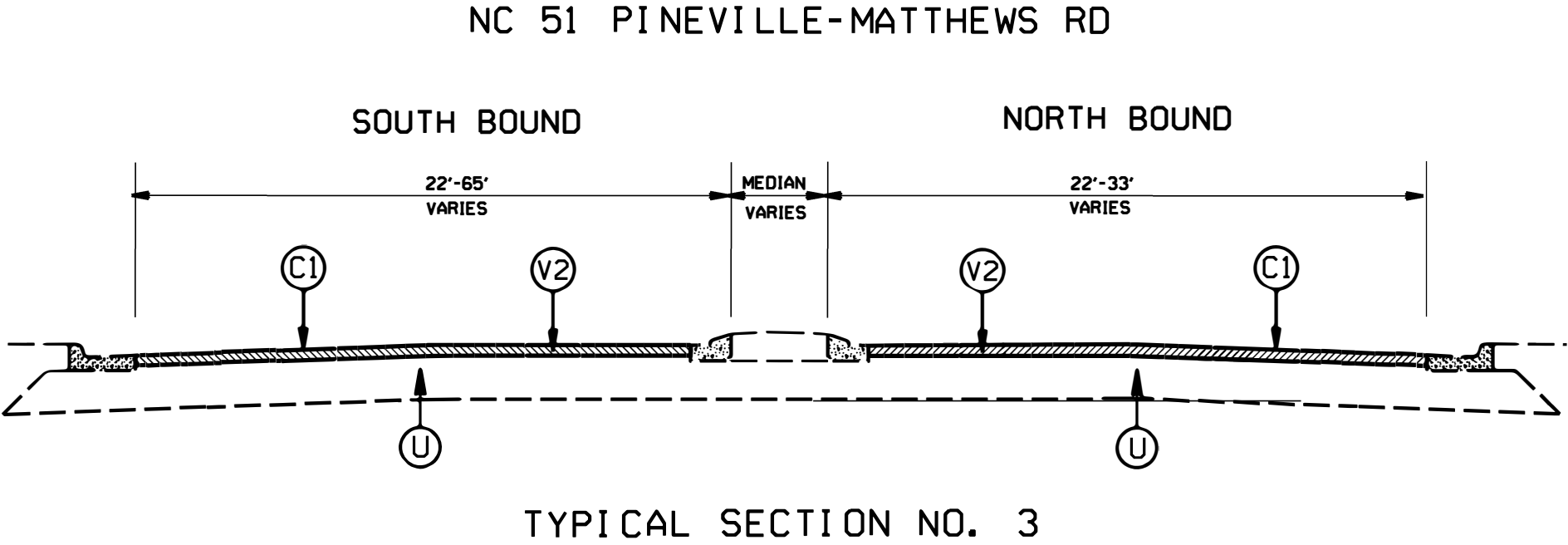
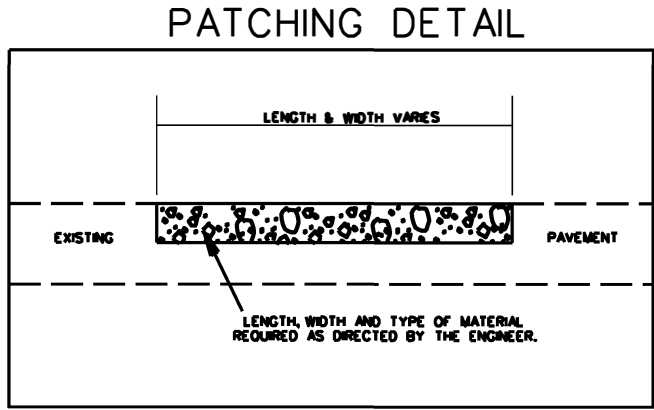
TYPICAL SECTION NO. 2



2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			
SCALE	NA		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		10	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16'

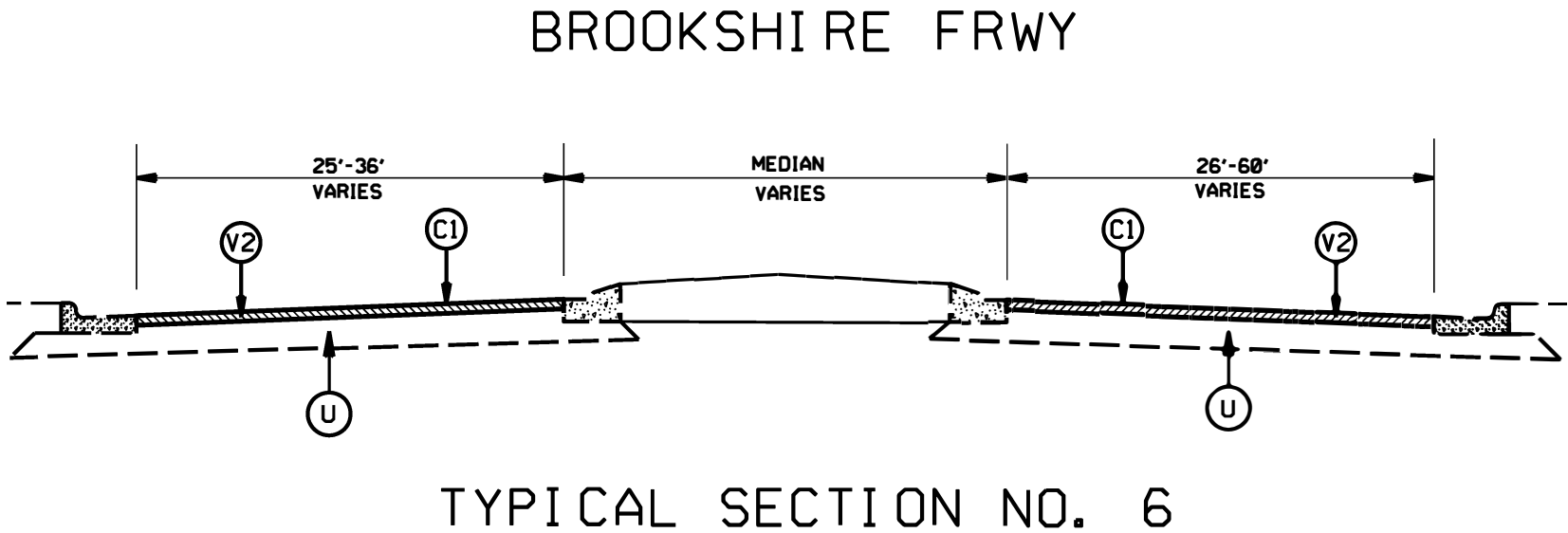
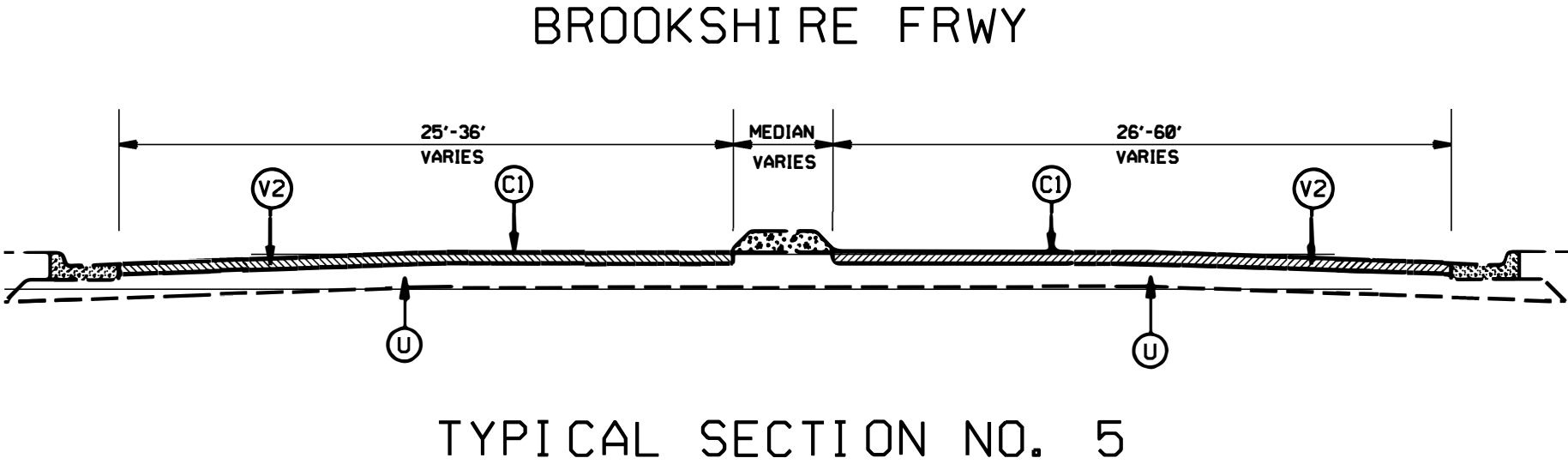


2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1		
SCALE	1"=10'	REVISIONS
DATE		
DWG. BY	JNE	
DESIGN BY		
APPROVED		

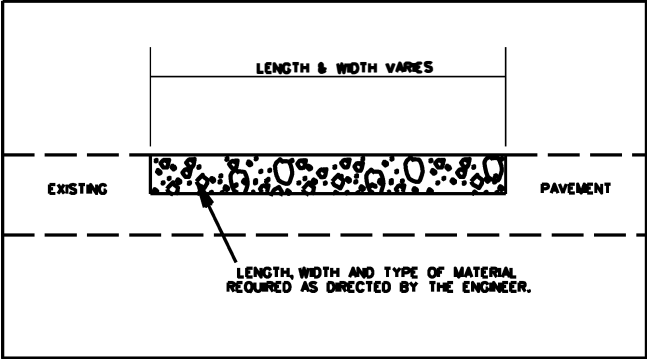


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		11	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



PATCHING DETAIL

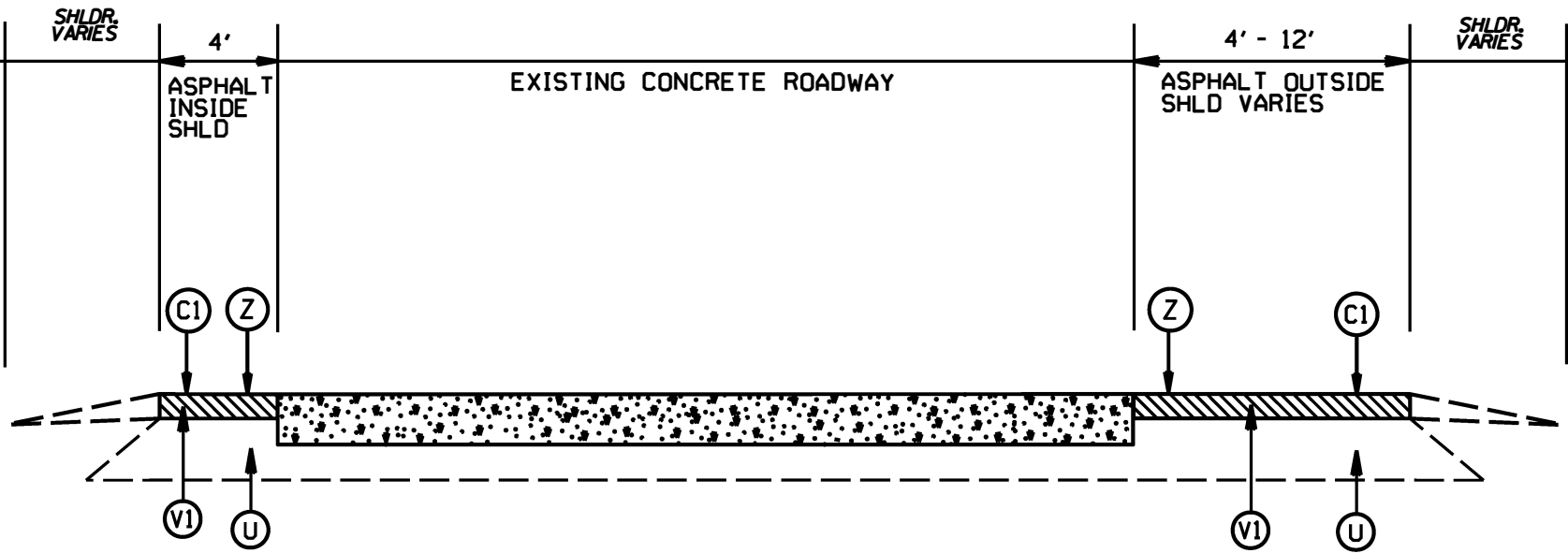


2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			REVISIONS
SCALE	-1/4"		
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		12	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

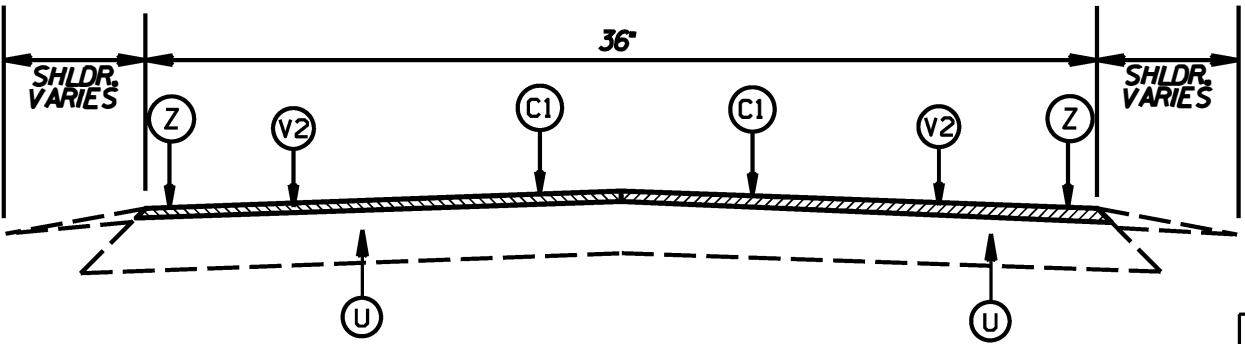
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"

NB & SB BROOKSHIRE FRWY



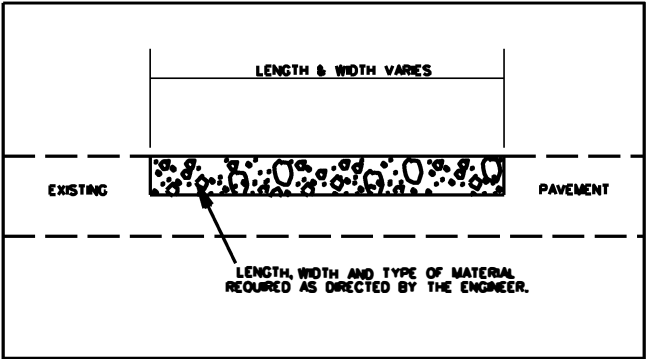
TYPICAL SECTION NO. 7

NB & SB BROOKSHIRE FRWY



TYPICAL SECTION NO. 8

PATCHING DETAIL



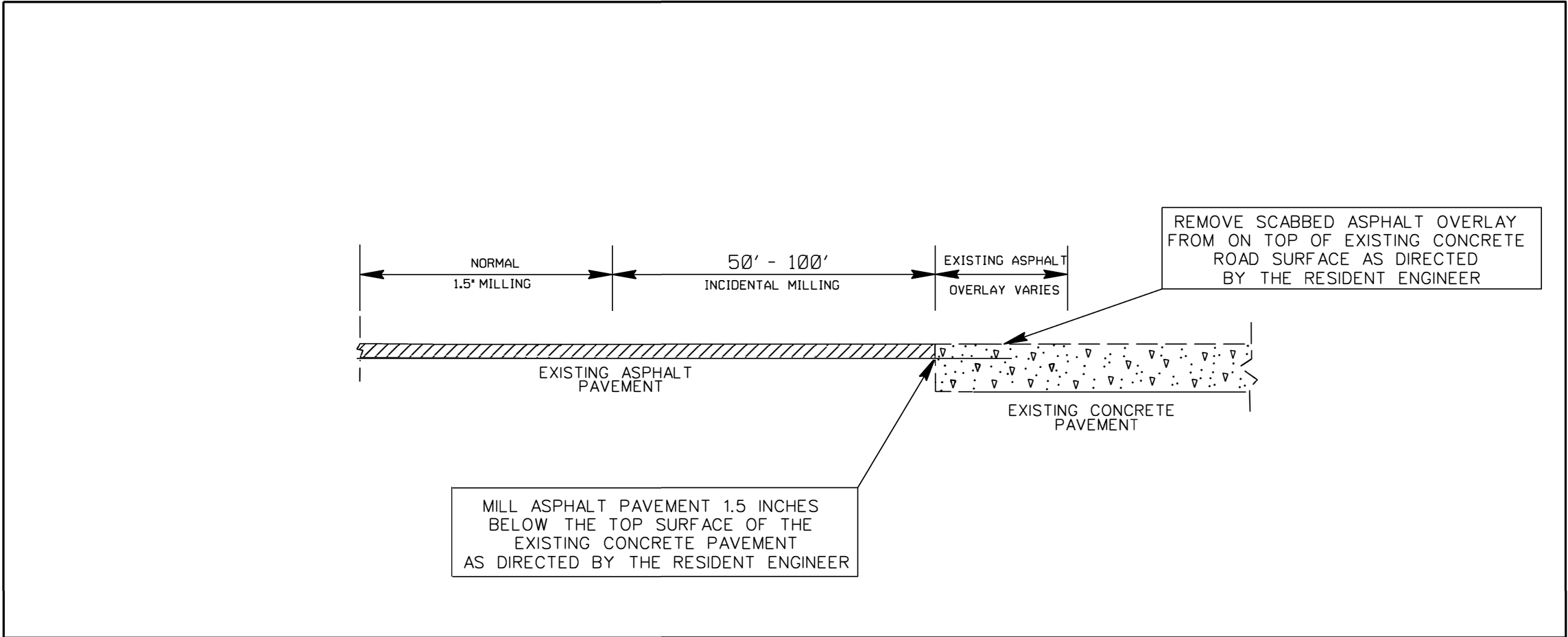
2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	DATE	DWG. BY	DESIGN BY	APPROVED	REVISIONS
1/4"		JHE			



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		13	
WBS NO.		2027CPT.10.05.10601 2027CPT.10.05.20601	

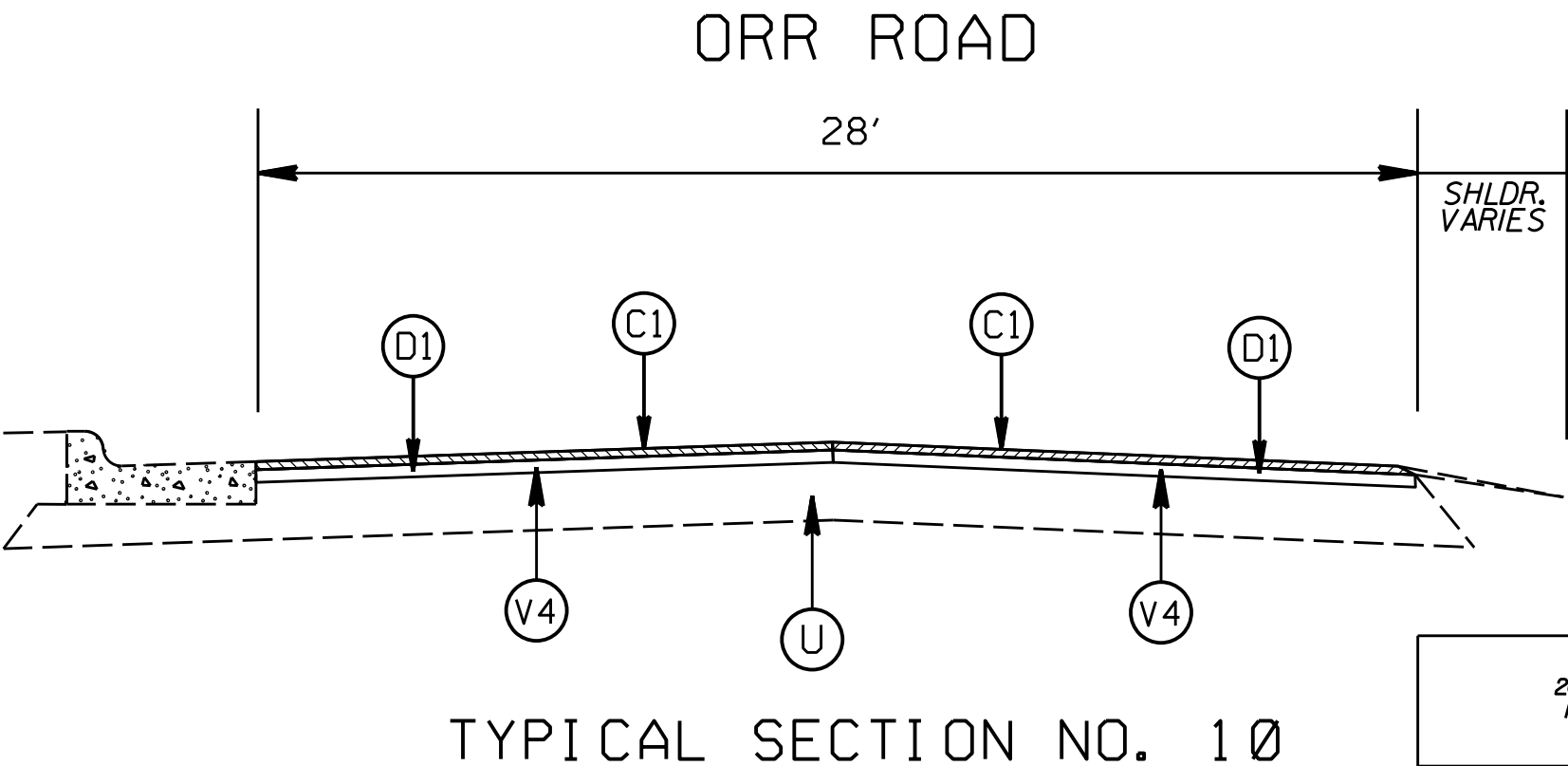
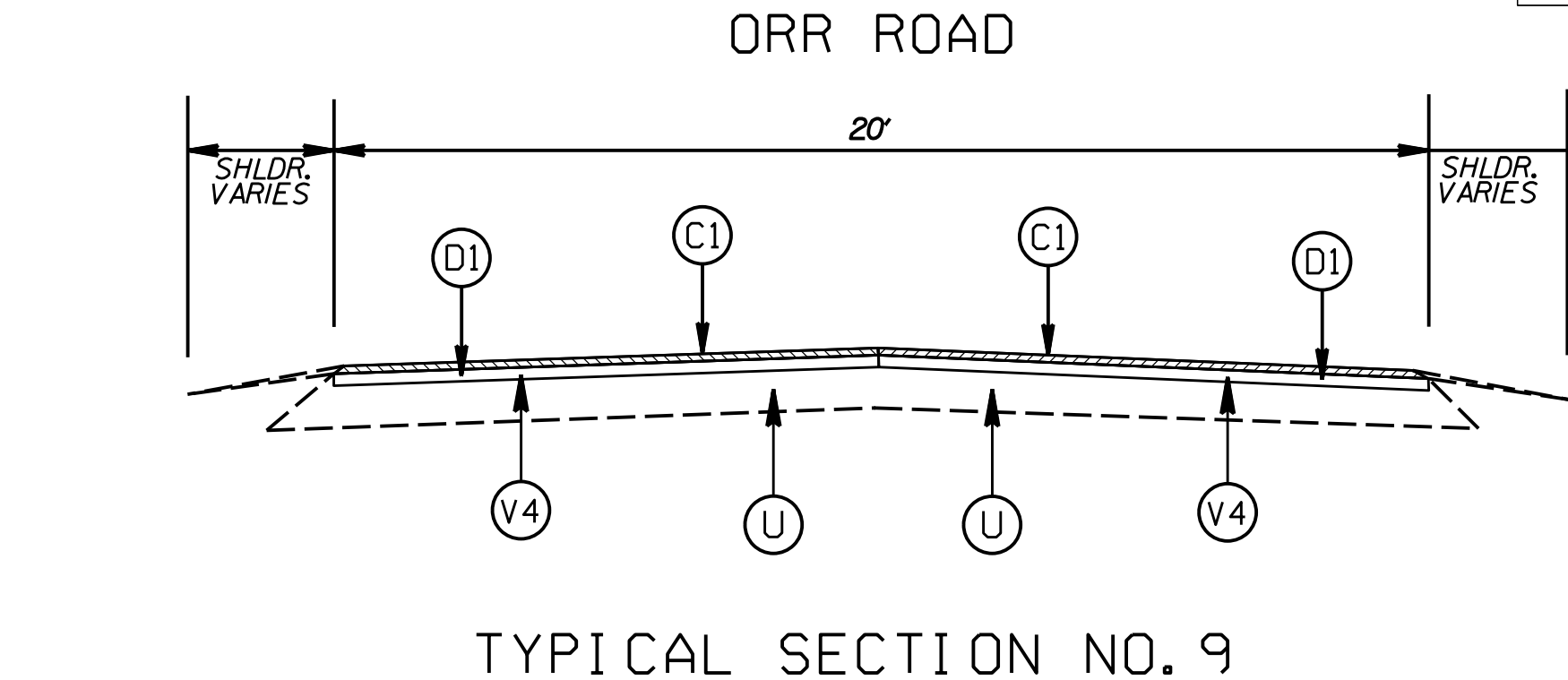
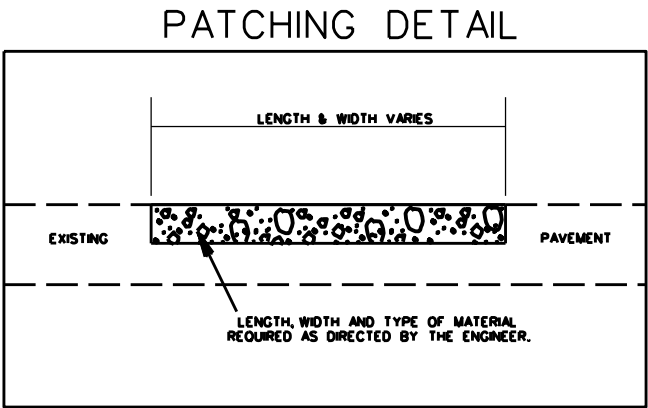
PAVEMENT TRANSITION DETAIL



2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			
SCALE	-1/4"		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		14	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"

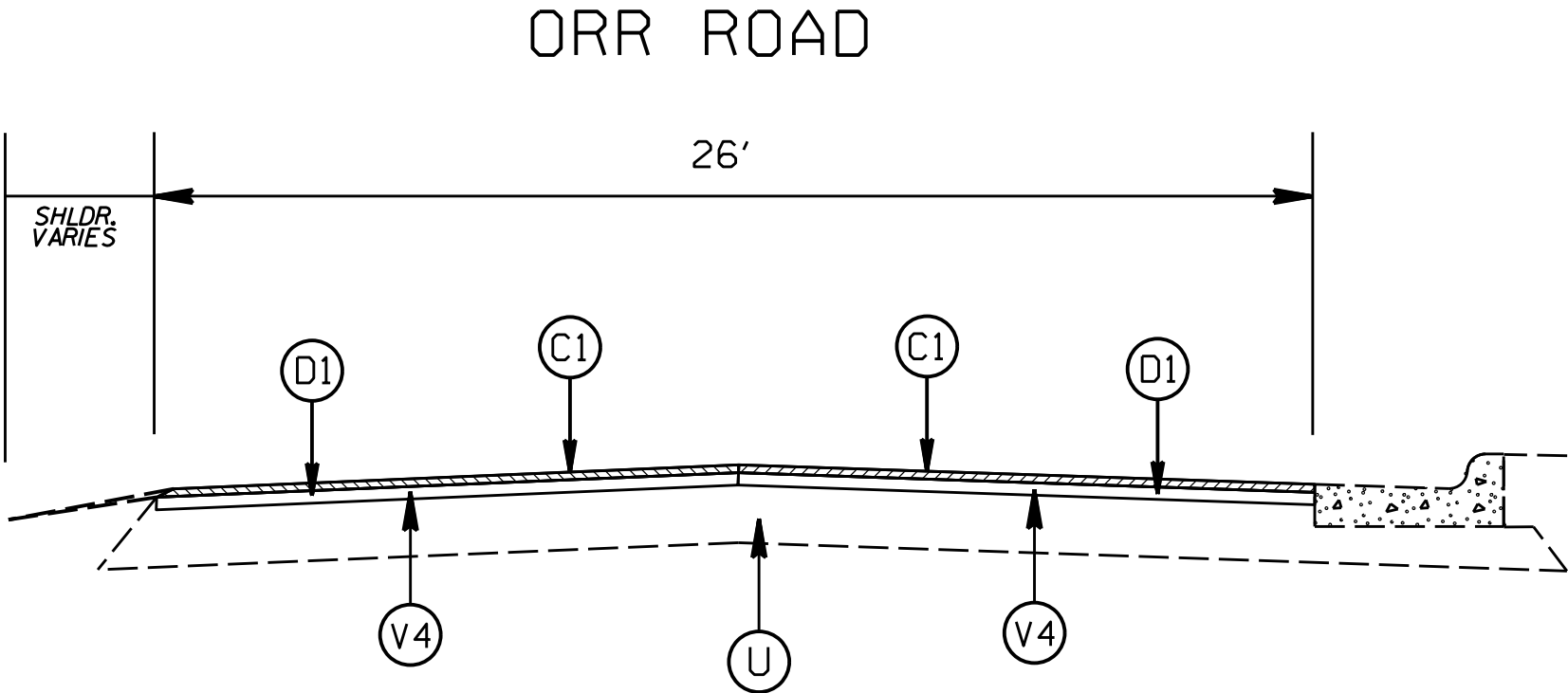


2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			REVISIONS	
SCALE	1/4"			
DATE				
DWG. BY	JHE			
DESIGN BY				
APPROVED				



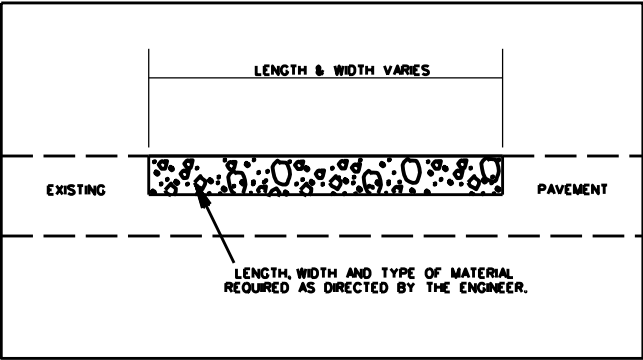
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		15	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



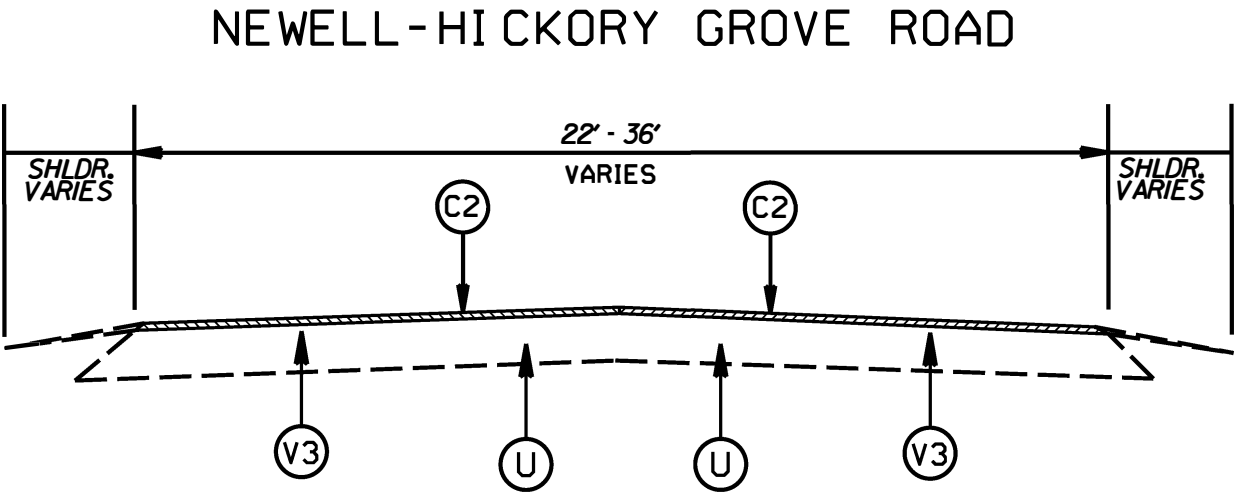
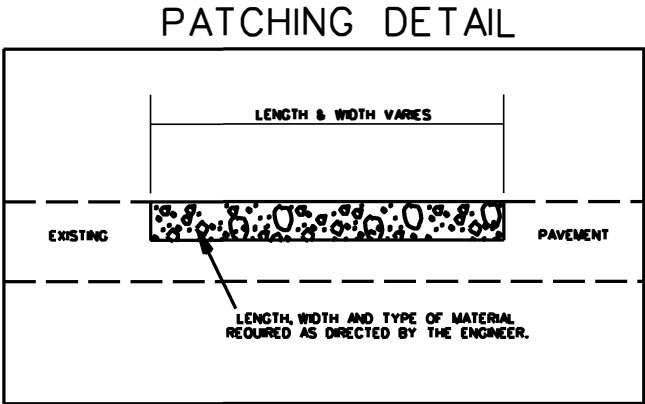
TYPICAL SECTION NO. 11

PATCHING DETAIL

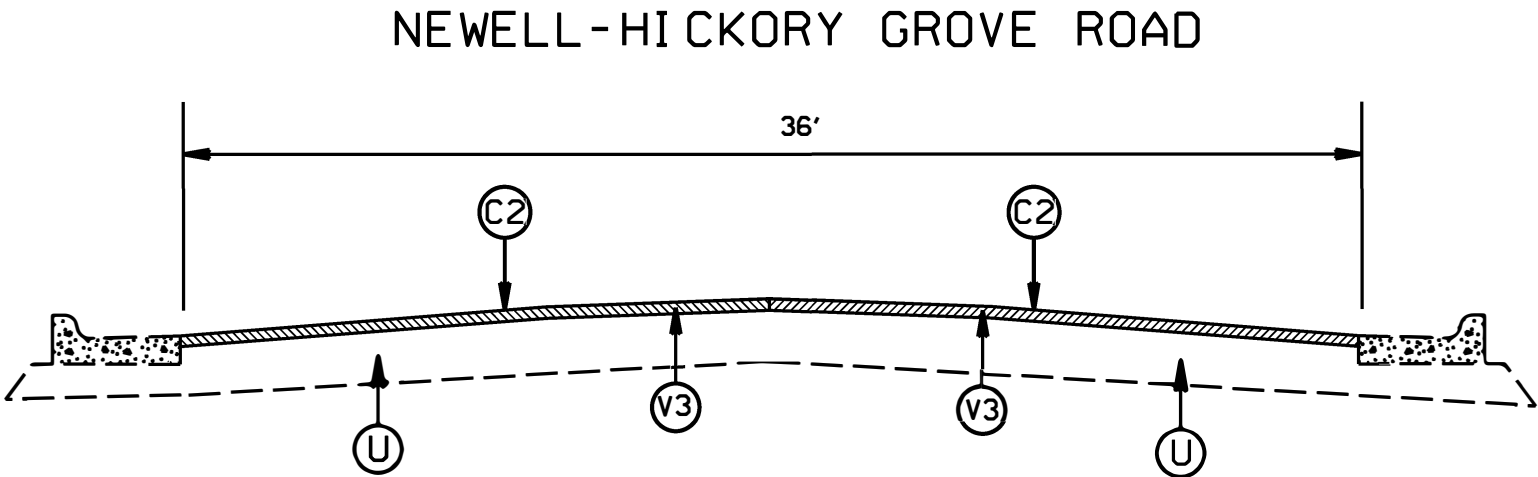


2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			
SCALE	-NA-		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



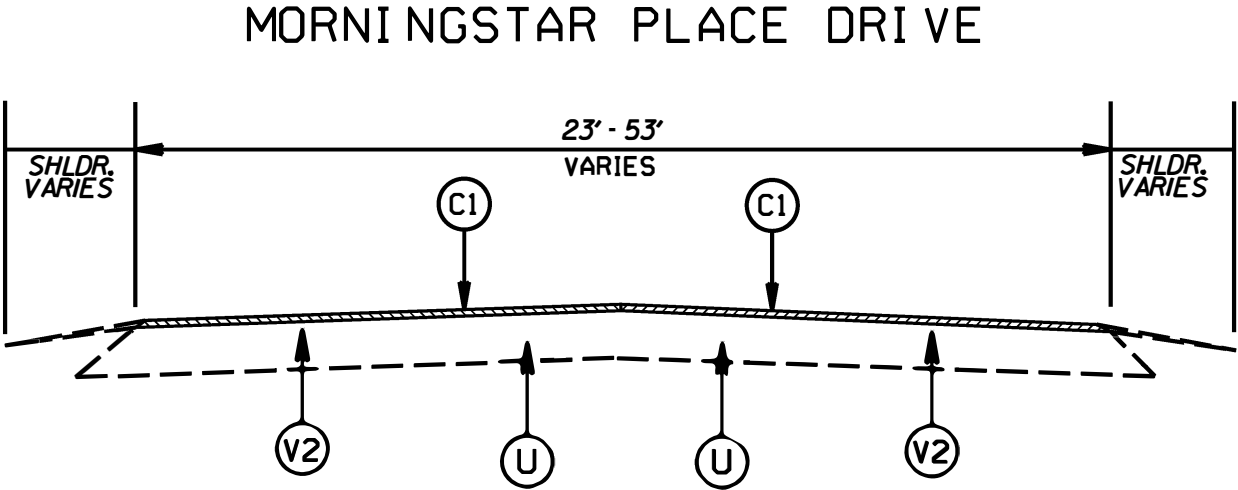
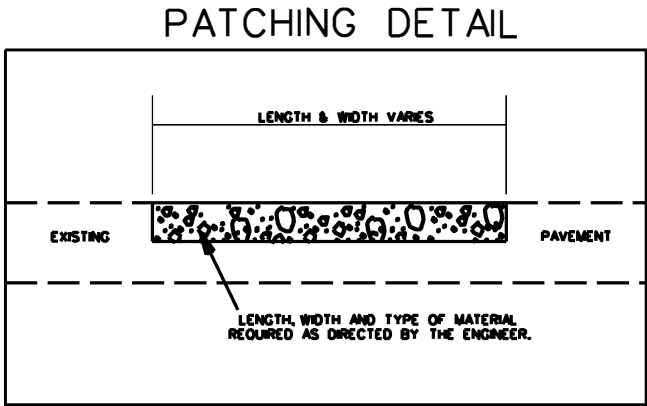
TYPICAL SECTION NO. 12



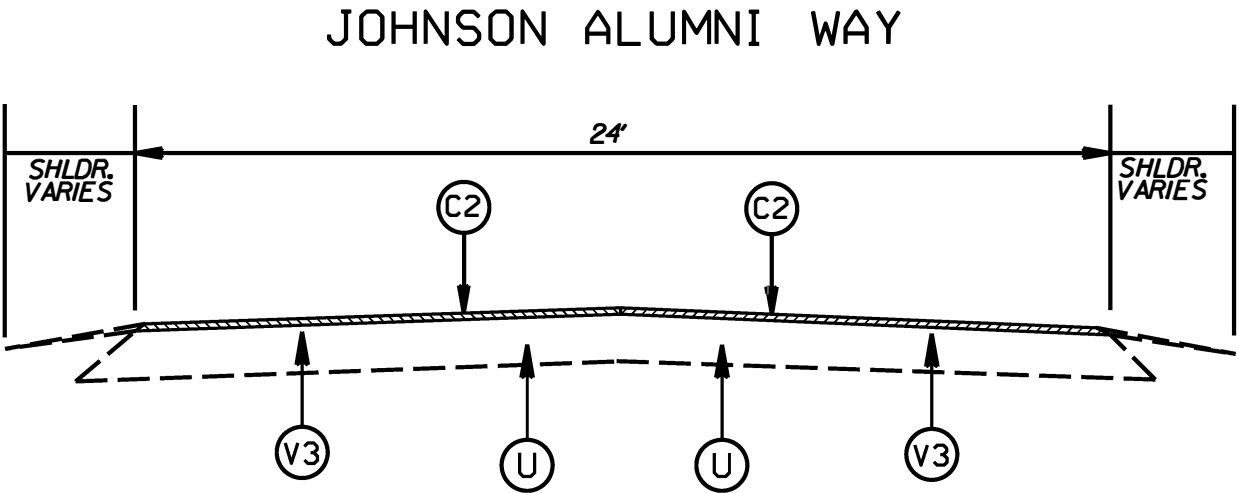
TYPICAL SECTION NO. 13

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		17	
WBS NO.	2027CPT.10.05.10601 2027CPT.10.05.20601		

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



TYPICAL SECTION NO.14



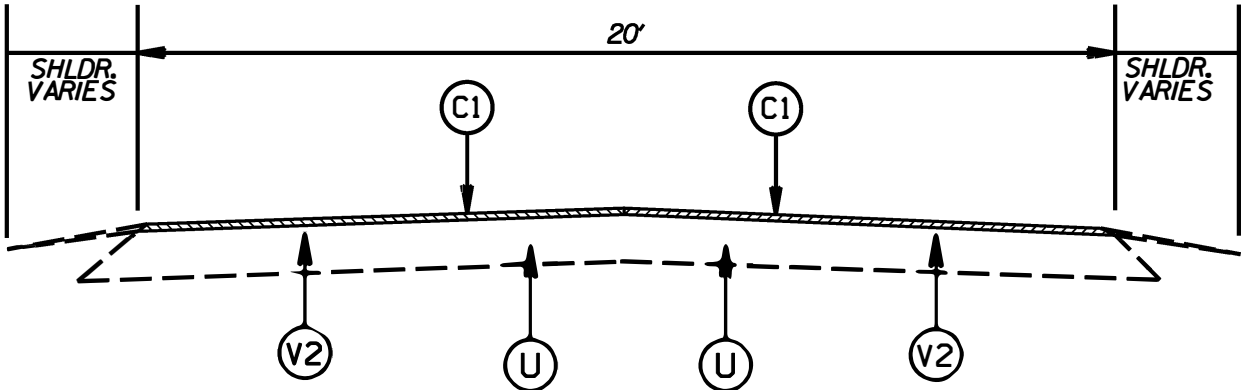
TYPICAL SECTION NO.15

2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1			
SCALE	1/4" = 1'		REVISIONS
DATE			
DWG. BY	JHE		
DESIGN BY			
APPROVED			

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		18	—
WBS NO.	2027CPT.10.05.10601 2027CPT.10.05.20601		

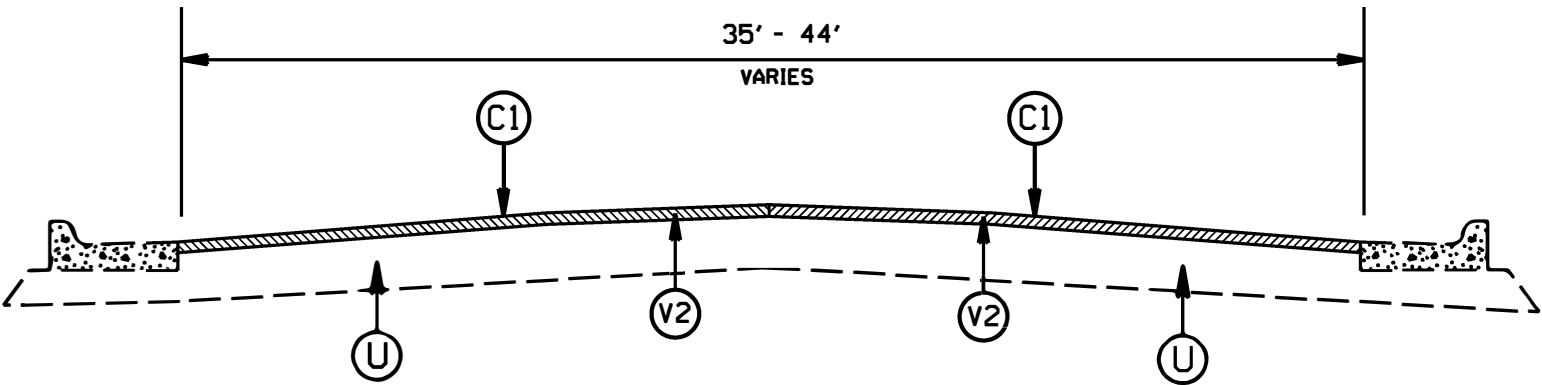
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"

WILGROVE-MINT HILL ROAD



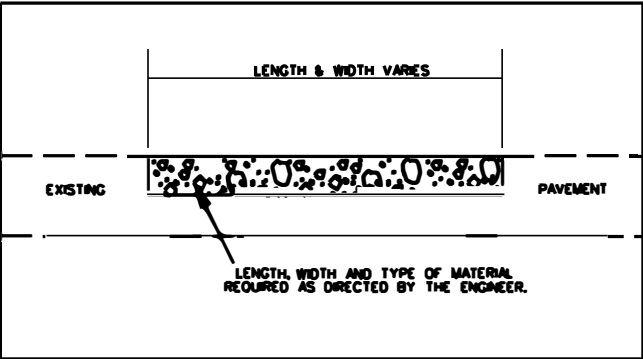
TYPICAL SECTION NO. 16

WILGROVE-MINT HILL ROAD



TYPICAL SECTION NO. 17

PATCHING DETAIL



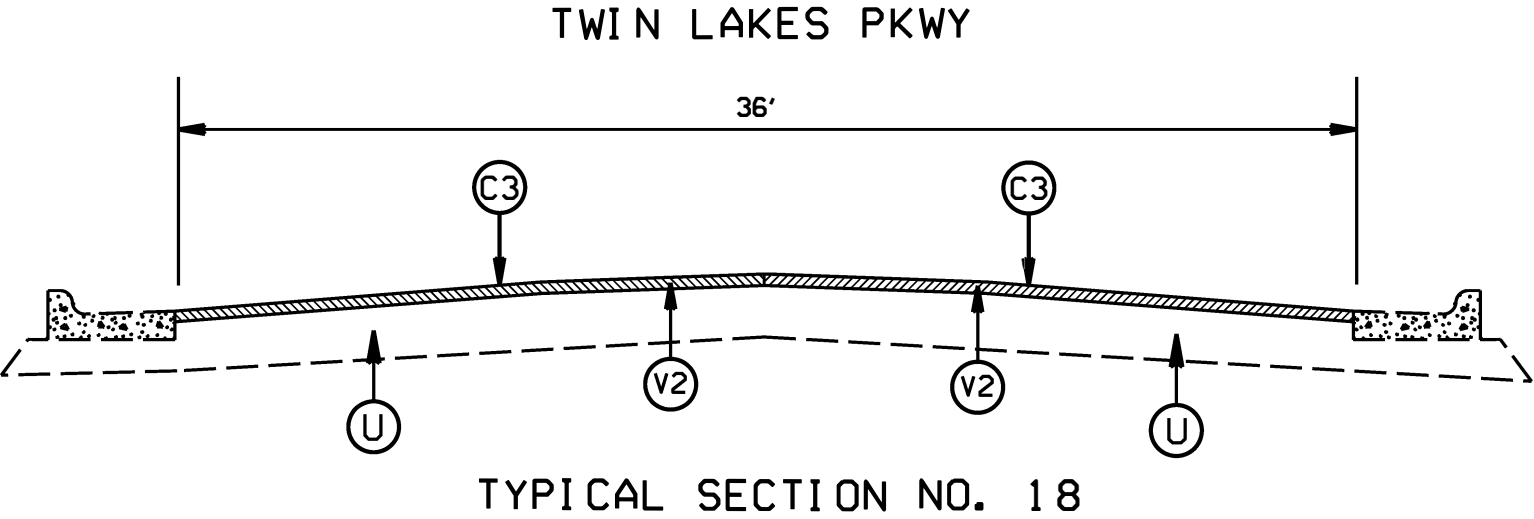
2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE	DATE	DWG. BY	DESIGN BY	APPROVED	REVISIONS
1/4"		JHE			

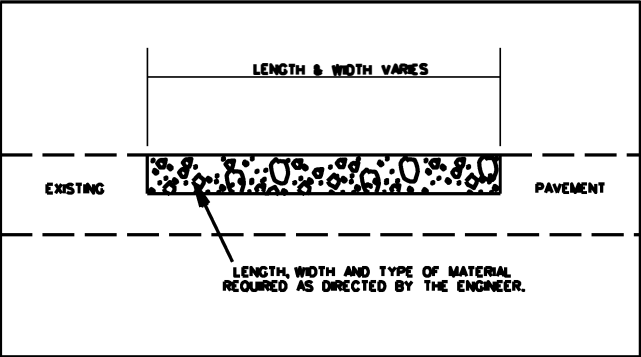


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		19	
WBS NO.	2027CPT.10.05.10601 2027CPT.10.05.20601		

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5' ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2.0' ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROP. APPROX. 1.5' ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5' ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	MILLING 1.5" DEPTH
V3	MILLING 2.0" DEPTH
V4	MILLING 4.0" DEPTH
V5	PROFILE MILLING 0" TO 1.5"
Z	MILLED RUMBLE STRIPS 16"



PATCHING DETAIL



2027 MECKLENBURG COUNTY RESURFACING CONTRACT 1		
SCALE	-NA-	REVISIONS
DATE		
DWG. BY	JHE	
DESIGN BY		
APPROVED		



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		20	
WBS NO. 2027CPT.10.05.10601 2027CPT.10.05.20601			

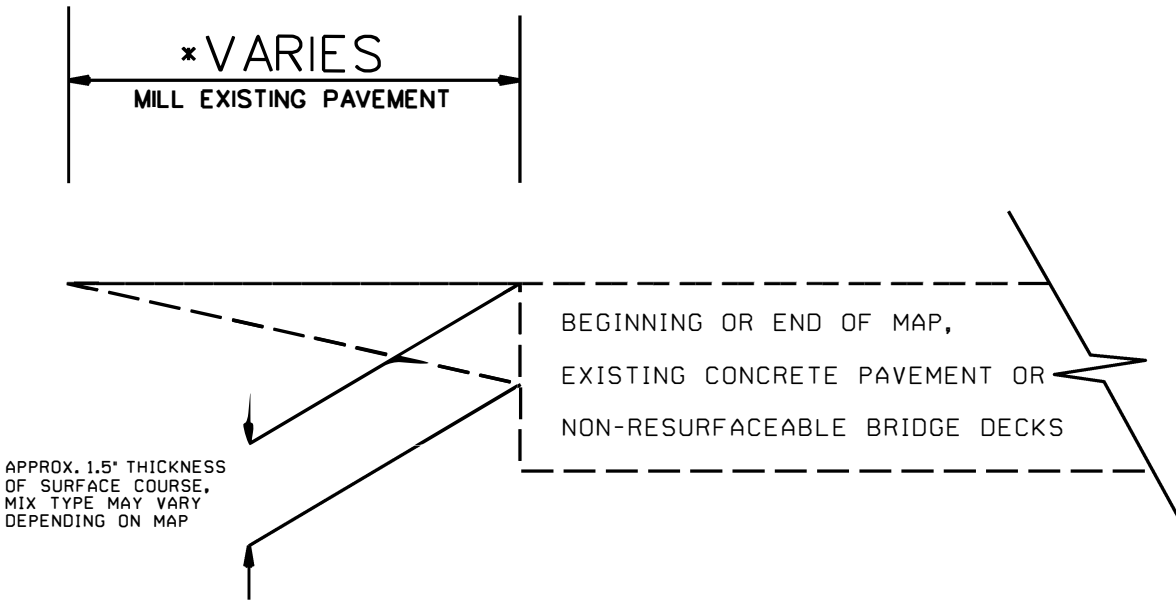
INCIDENTAL MILLING

NOTES:

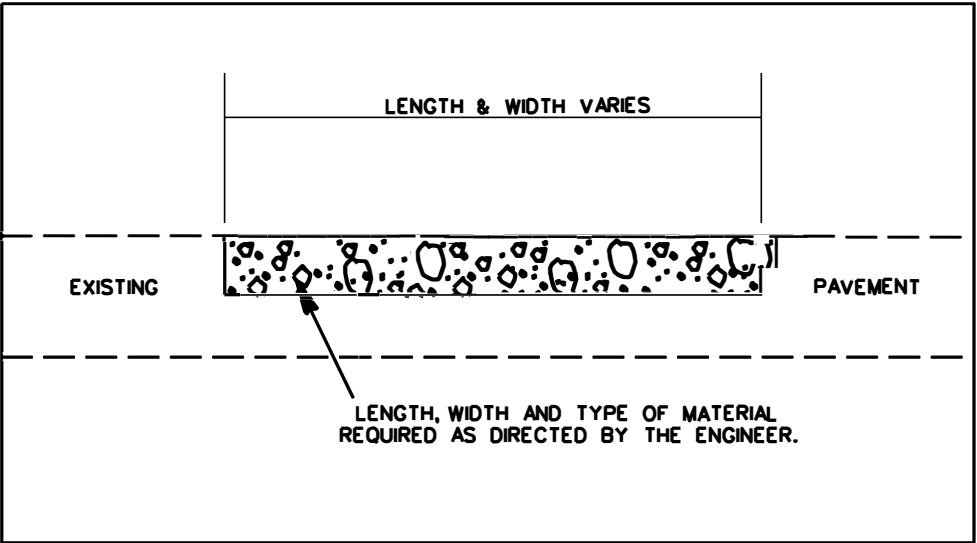
FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER.

LOCATIONS SHALL INCLUDE TIES INTO EXISTING CONCRETE PAVEMENT AT BRIDGE APPROACHES WHERE THE BRIDGE WILL NOT BE RESURFACED, AND AT THE BEGINNING AND ENDING POINT OF EACH RESURFACING MAP.

PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2024 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.



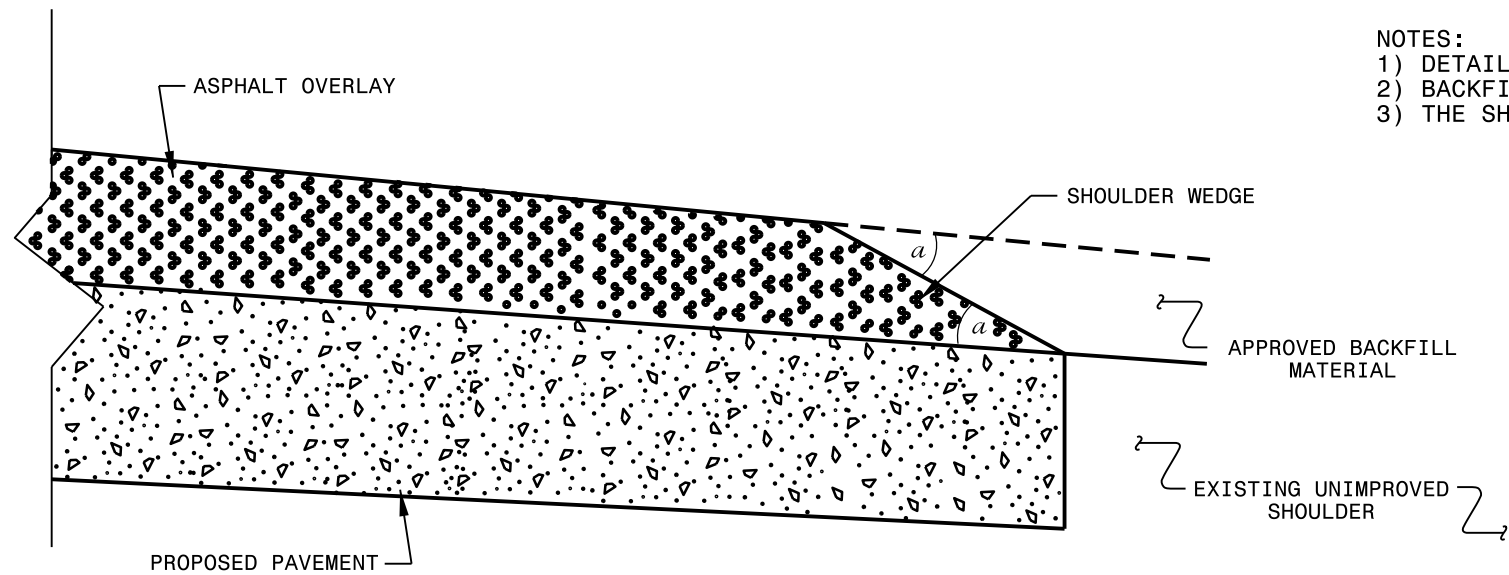
PATCHING DETAIL



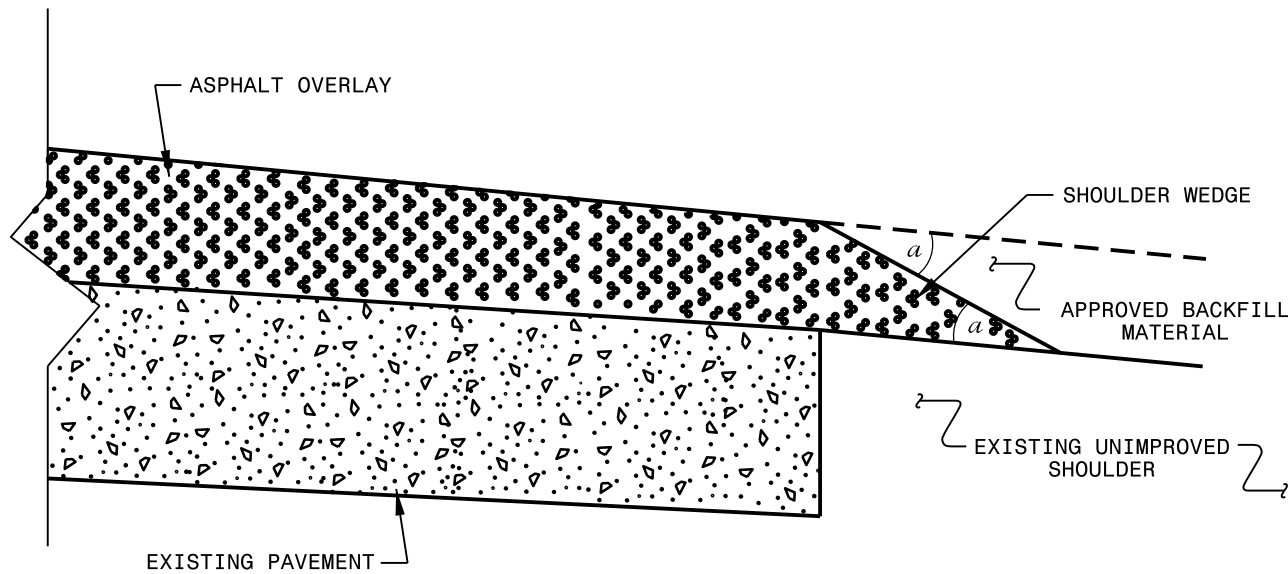
2027 MECKLENBURG COUNTY
RESURFACING CONTRACT 1

SCALE		REVISIONS
DATE		
DWG. BY JHE		
DESIGN BY		
APPROVED		

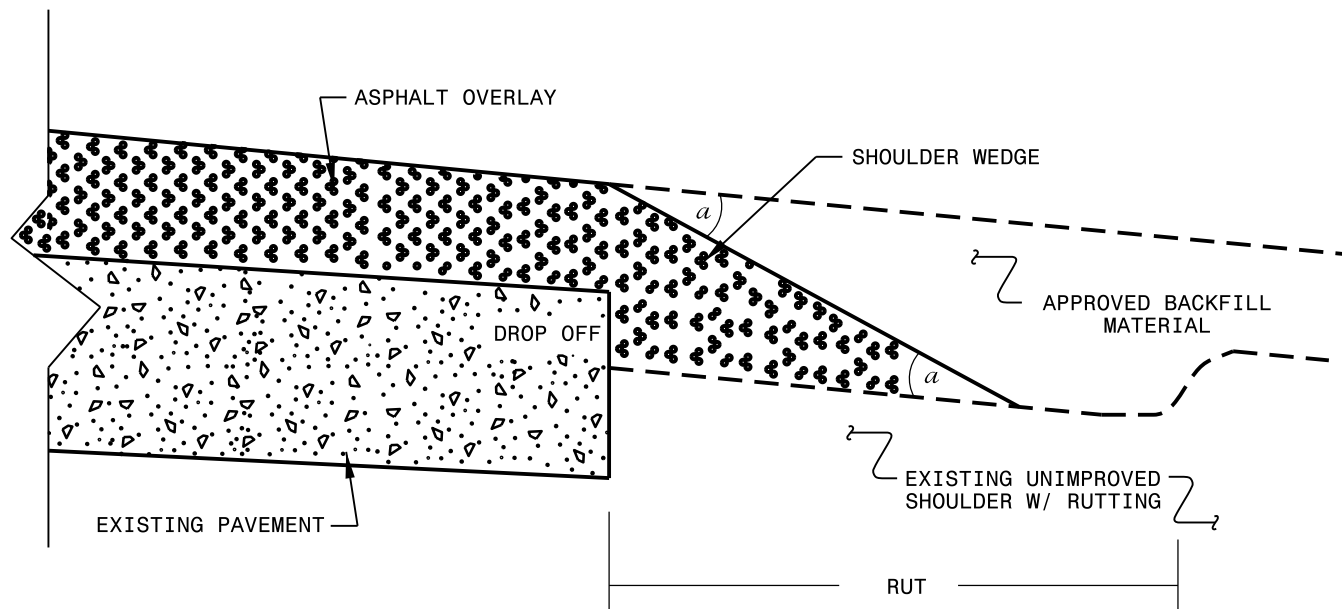
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



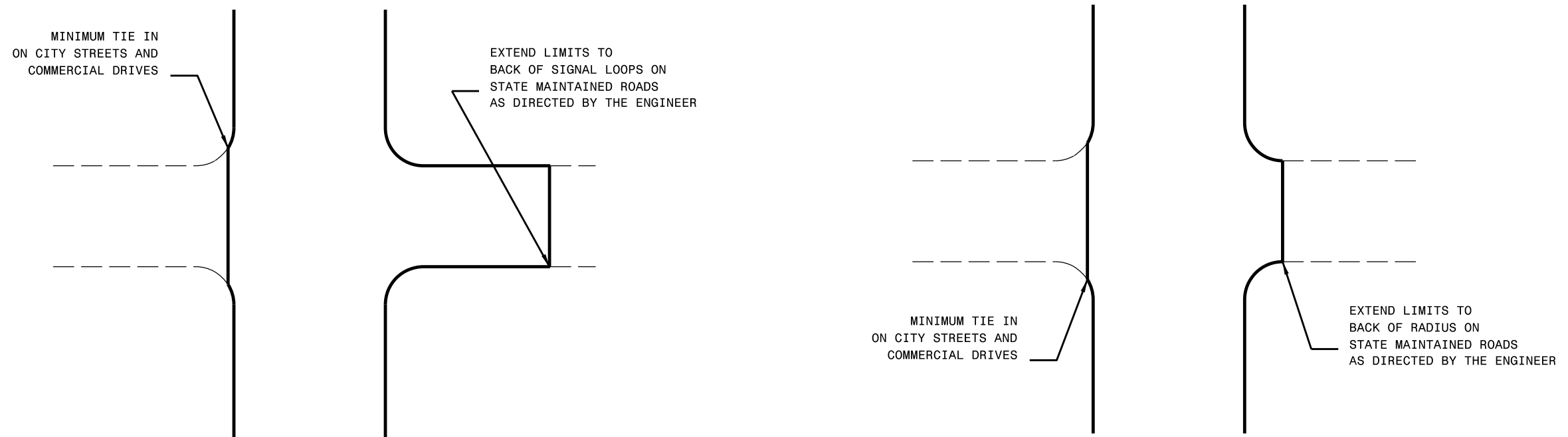
SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



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			



TYPICAL DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES

TYPICAL DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

[illegible]

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.10.05.10601 2027CPT.10.05.20601	23	

SUMMARY OF QUANTITIES

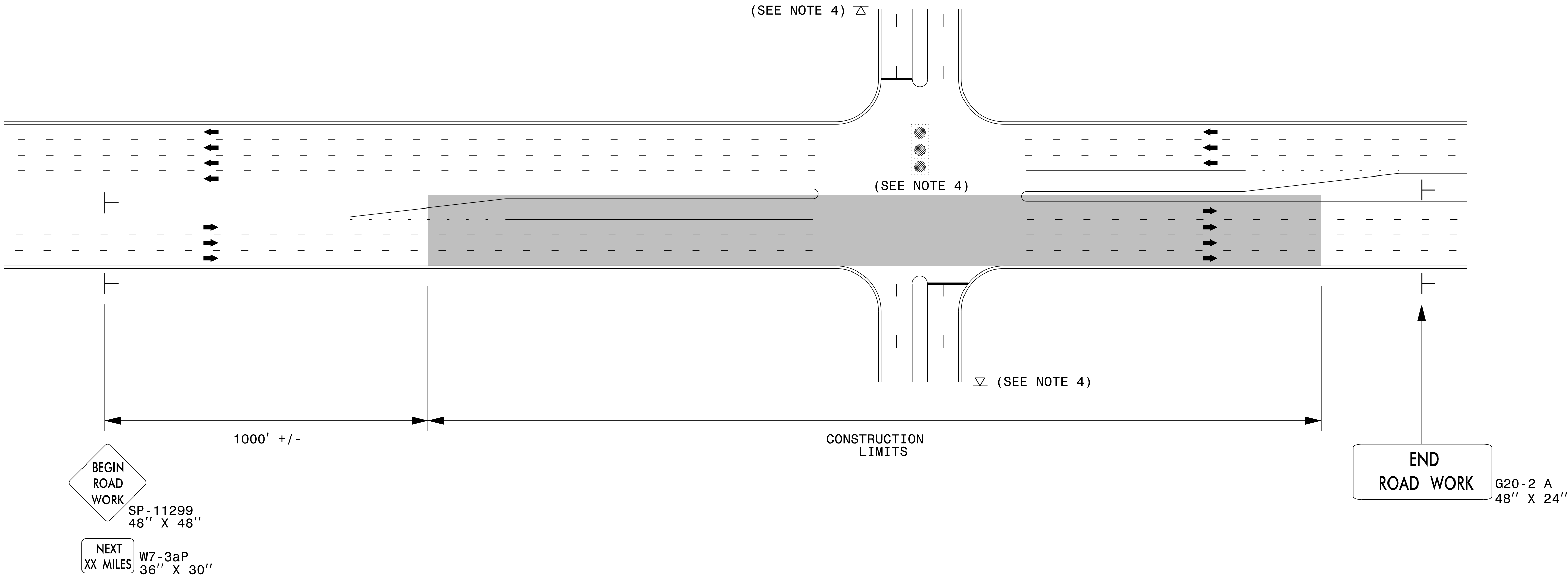
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANE S	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	1220000000-E	1297000000-E			1308000000-E	1330000000-E	1503000000-E	1519000000-E	1523000000-E	1575000000-E	1704000000-E	1841000000-E	2605000000-N	2612300000-N	2830000000-N	2845000000-N	4846000000-E			5255000000-N	7444000000-E	
												INCIDENTAL STONE BASE	1.5" MILLING	4.0" MILLING	2.0" MILLING	0.0" TO 1.5" MILLING	INCIDENTAL MILLING	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	GENERIC PAVING ITEM MILLED RUMBLE STRIPS (16")	CONCRETE CURB RAMPS	RETROFIT EXISTING CONCRETE CURB RAMPS	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOX	POLYUREA PAVEMENT MARKING LINES WHITE (6", 20 MILS)	POLYUREA PAVEMENT MARKING LINES YELLOW (6", 20 MILS)	POLYUREA PAVEMENT MARKING LINES WHITE (12", 20 MILS)	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT	
								MI	FT			TONS	SY	SY	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	LF	EA	EA	EA	EA	LF	LF	LF	LS	LF	
2027CPT.10.05.10601	Mecklenburg	1	US-29 SB N. TRYON STREET (20400029060)	FROM CABARRUS COUNTY LINE TO PAVILION BLVD	1,2	3	MD	1.51	25	0.00	1.51	5				7,790	2,621			3,705	233	300											
TOTAL FOR MAP NO. 1								1.51				5				7,790	2,621			3,705	233	300											
2027CPT.10.05.10601	Mecklenburg	2	NC-51 NB PINEVILLE-MATTHEWS ROAD (30000051060)	FROM PROVIDENCE RD TO ELIZABETH LANE	3,4	2	MD	1.98	22	8.53	10.51		28,204				4,070			2,982	181	100		2	3	3	8						
TOTAL FOR MAP NO. 2								1.98					28,204				4,070			2,982	181	100		2	3	3	8						
2027CPT.10.05.10601	Mecklenburg	3	NC-51 SB PINEVILLE-MATTHEWS ROAD (30400051060)	FROM BEGIN MEDIAN TO PROVIDENCE ROAD	3,4	2	MD	1.89	22	11.78	13.67		26,073				5,578			2,925	182	200		2	5		2						
TOTAL FOR MAP NO. 3								1.89					26,073				5,578			2,925	182	200		2	5		2						
2027CPT.10.05.10601	Mecklenburg	4	NC-16 NB BROOKSHIRE FRWY (30000016060)	FROM BRIDGE DECK AT IRWIN CREEK TO I-85 BRIDGE DECK	5,6,7,8	2	MD	2.03	24	16.27	18.30		11,530				14,839			2,437	163	400	16,673						445	240	470		
TOTAL FOR MAP NO. 4								2.03					11,530				14,839			2,437	163	400	16,673						445	240	470		
2027CPT.10.05.10601	Mecklenburg	5	NC-16 SB BROOKSHIRE FRWY (3040006060)	FROM PAVEMENT JOINT AT OVERHEAD SIGN TO BRIDGE DECK AT IRWIN CREEK	5,6,7,8	2	MD	1.97	24	8.37	10.34		9,651				13,770			2,164	147	400	16,452						445	240	470		
TOTAL FOR MAP NO. 5								1.97					9,651				13,770			2,164	147	400	16,452						445	240	470		
TOTAL FOR PROJ NO. 2027CPT.10.05.10601								9.38				5	75,458			7,790	40,878			14,213	906	1,400	33,125	4	8	3	10		890	480	940	1	9,087
																												1,370					
2027CPT.10.05.20601	Mecklenburg	6	SR-2848 / ORR ROAD (40002848060)	FROM NEWELL HICKORY GROVE ROAD TO CURB & GUTTER SECTION	9,10,11	2	2WU	0.26	20	0.00	0.26						3,107			578			341	48									
TOTAL FOR MAP NO. 6								0.26									3,107			578			341	48									
2027CPT.10.05.20601	Mecklenburg	7	SR-2853 / NEWELL-HICKORY GROVE RD (40002853060)	FROM BEGIN MAINTENANCE TO NEWELL ACRES DR	12,13	2	2WU	0.78	24	0.00	0.78	15				12,857	1,878			1,815	107												
TOTAL FOR MAP NO. 7								0.78				15				12,857	1,878			1,815	107												
2027CPT.10.05.20601	Mecklenburg	8	SR-3047 / MORNINGSTAR PLACE DR (40003047060)	FROM N. TRYON ST TO CUL-DE-SAC	14	2	2WU	0.44	24	0.00	0.44		6,412				197			611	36						2						
TOTAL FOR MAP NO. 8								0.44					6,412				197			611	36						2						
2027CPT.10.05.20601	Mecklenburg	9	SR-4862 / JOHNSON ALUMNI WAY (40004862060)	FROM HARRIS BLVD TO CAMERON BLVD	15	2	2WU	0.51	24	0.00	0.51	5				7,171	39			889	52												
TOTAL FOR MAP NO. 9								0.51				5				7,171	39			889	52												
2027CPT.10.05.20601	Mecklenburg	10	SR-5223 / WILGROVE-MINT HILL RD (40005223060)	FROM ALBEMARLE RD TO MATTHEWS-MINT HILL RD	16,17	2	2WU	2.40	20	0.01	2.41		33,180				1,927			3,244	203	250				1	1						
TOTAL FOR MAP NO. 10								2.40					33,180				1,927			3,244	203	250				1	1						
2027CPT.10.05.20601	Mecklenburg	11	SR-6025 / TWIN LAKES PKWY (40006025060)	VANCE DAVIS DR TO STATESVILLE RD	18	2	2WU	0.50	35	0.08	0.58		10,806				98		981		64					7							
TOTAL FOR MAP NO. 11								0.50					10,806				98		981		64					7							
TOTAL FOR PROJ NO. 2027CPT.10.05.20601								4.89				20	50,398	3,107	20,028		4,139	578	981	6,900	510	250				8	3				1.00	1,431	
GRAND TOTAL								14.27				25	125,856	3,107	20,028	7,790	45,017	578	981	21,113	1,416	1,650	33,125	4	8	11	13		890	480	940	1	10,518
																												1,370					

PROJECT NO.	SHEET NO.	TOTAL NO.
027CPT.10.05.1060	24	
027CPT.10.05.2060		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	4413000000-E WORK ZONE ADVANCE/GE NERAL WARNING SIGNING	4447000000-E PEDESTRIAN CHANNELIZIN G DEVICES	4457000000-N TEMPORARY TRAFFIC CONTROL	4510000000-N LAW ENFORCEMEN T	4600000000-N GTCl - AUDIBLE WARNING DEVICES	4601000000-N GTCl - TEMPORA RY CURB RAMPS	4685000000-E		4688000000-E		4695000000-E		4700000000-E	4709000000-E	4720000000-E							
								MI	FT			SF	LF	LS	HR	EA	EA	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA					
2027CPT.10.05.10601	Mecklenburg	1	US-29 SB N. TRYON STREET (20400029060)	FROM CABARRUS COUNTY LINE TO PAVILION BLVD	1,2	3	MD	1.51	25	0.00	1.51	126		*	140			12,615	7,653			1,211			118								
TOTAL FOR MAP NO. 1								1.51				126			140			12,615	7,653			1,211			118								
2027CPT.10.05.10601	Mecklenburg	2	NC-51 NB PINEVILLE-MATTHEWS ROAD (30000051060)	FROM PROVIDENCE RD TO ELIZABETH LANE	3,4	2	MD	1.98	22	8.53	10.51	126	22		230	2	2	4,666	9,882			481			312	18							
TOTAL FOR MAP NO. 2								1.98				126	22		230	2	2	4,666	9,882			481			312	18							
2027CPT.10.05.10601	Mecklenburg	3	NC-51 SB PINEVILLE-MATTHEWS ROAD (30400051060)	FROM BEGIN MEDIAN TO PROVIDENCE ROAD	3,4	2	MD	1.89	22	11.78	13.67	126			210	2	2	5,903	9,814			1,900			250	12							
TOTAL FOR MAP NO. 3								1.89				126			210	2	2	5,903	9,814			1,900			250	12							
2027CPT.10.05.10601	Mecklenburg	4	NC-16 NB BROOKSHIRE FRWY (30000016060)	FROM BRIDGE DECK AT IRWIN CREEK TO I-85 BRIDGE DECK	5,6,7,8	2	MD	2.03	24	16.27	18.30	84			100					4,588	2,710			695	72		4						
TOTAL FOR MAP NO. 4								2.03				84			100						4,588	2,710			695	72		4					
2027CPT.10.05.10601	Mecklenburg	5	NC-16 SB BROOKSHIRE FRWY (3040006060)	FROM PAVEMENT JOINT AT OVERHEAD SIGN TO BRIDGE DECK AT IRWIN CREEK	5,6,7,8	2	MD	1.97	24	8.37	10.34	84			20					3,596	2,885			925	20								
TOTAL FOR MAP NO. 5								1.97				84			20					3,596	2,885			925	20								
TOTAL FOR PROJ NO. 2027CPT.10.05.10601								9.38				546	22	1.00	700	4	4	23,184	27,349	8,184	5,595	3,592		1,620	772	30	4						
																				50,533		13,779		3,592					34				
2027CPT.10.05.20601	Mecklenburg	6	SR-2848 / ORR ROAD (40002848060)	FROM NEWELL HICKORY GROVE ROAD TO CURB & GUTTER SECTION	9,10,11	2	2WU	0.26	20	0.00	0.26	48		*	0			2,722	2,620														
TOTAL FOR MAP NO. 6								0.26				48			0			2,722	2,620														
2027CPT.10.05.20601	Mecklenburg	7	SR-2853 / NEWELL-HICKORY GROVE RD (40002853060)	FROM BEGIN MAINTENANCE TO NEWELL ACRES DR	12,13	2	2WU	0.78	24	0.00	0.78	112						6,596	9,656				205		96								
TOTAL FOR MAP NO. 7								0.78				112			0			6,596	9,656				205		96								
2027CPT.10.05.20601	Mecklenburg	8	SR-3047 / MORNINGSTAR PLACE DR (40003047060)	FROM N. TRYON ST TO CUL-DE-SAC	14	2	2WU	0.44	24	0.00	0.44	48						4,555	4,390						42								
TOTAL FOR MAP NO. 8								0.44				48			0			4,555	4,390						42								
2027CPT.10.05.20601	Mecklenburg	9	SR-4862 / JOHNSON ALUMNI WAY (40004862060)	FROM HARRIS BLVD TO CAMERON BLVD	15	2	2WU	0.51	24	0.00	0.51	48			40			5,159	5,475			35			120								
TOTAL FOR MAP NO. 9								0.51				48			40			5,159	5,475			35			120								
2027CPT.10.05.20601	Mecklenburg	10	SR-5223 / WILGROVE-MINT HILL RD (40005223060)	FROM ALBEMARLE RD TO MATTHEWS-MINT HILL RD	16,17	2	2WU	2.40	20	0.01	2.41	72			140			23,616	26,546			121	391		268			10	16				
TOTAL FOR MAP NO. 10								2.40				72			140			23,616	26,546			121	391		268			10	16				
2027CPT.10.05.20601	Mecklenburg	11	SR-6025 / TWIN LAKES PKWY (40006025060)	VANCE DAVIS DR TO STATESVILLE RD	18	2	2WU	0.50	35	0.08	0.58	48																					
TOTAL FOR MAP NO. 11								0.50				48			0																		
TOTAL FOR PROJ NO. 2027CPT.10.05.20601								4.89				376		1.00	180			42,648	48,687			156	596		526			10	16				
																				91,335			752				26,000						
GRAND TOTAL								14.27				922	22	1.00	880	4	4	65,832	76,036	8,184	5,595	3,748	596	1,620	1,298	30	4	10	16				
																		141,868		13,779		4,344				60							

URBAN / SUBURBAN WORKZONES

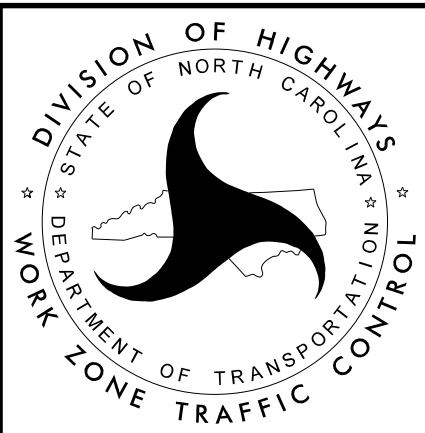


NOTES:

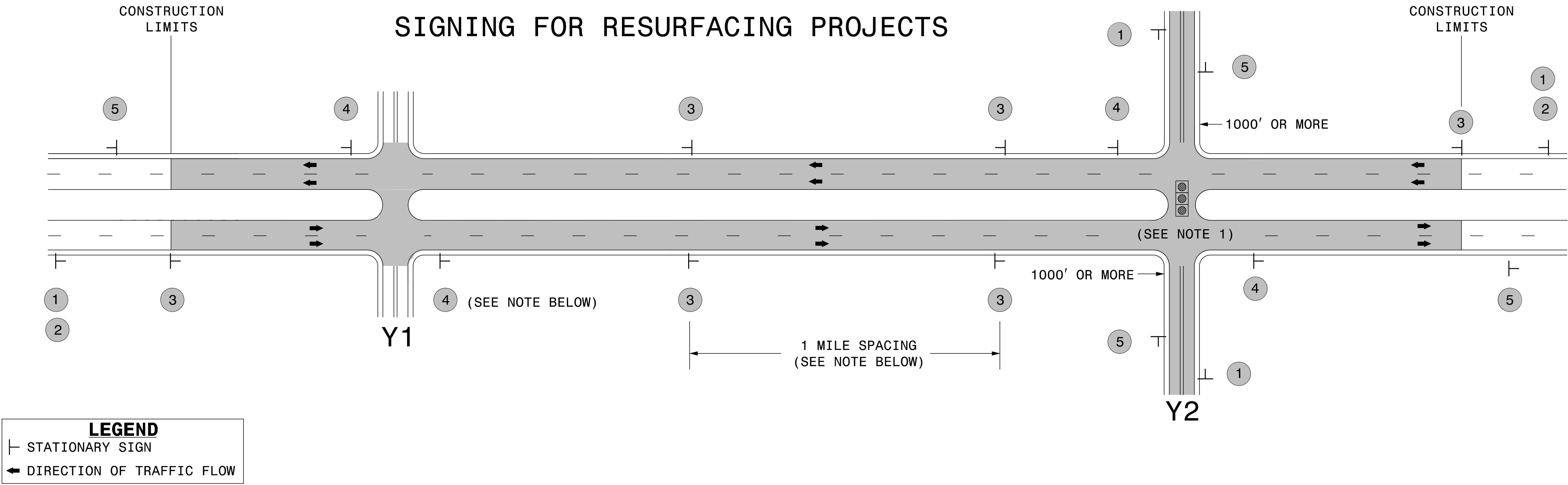
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. 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



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

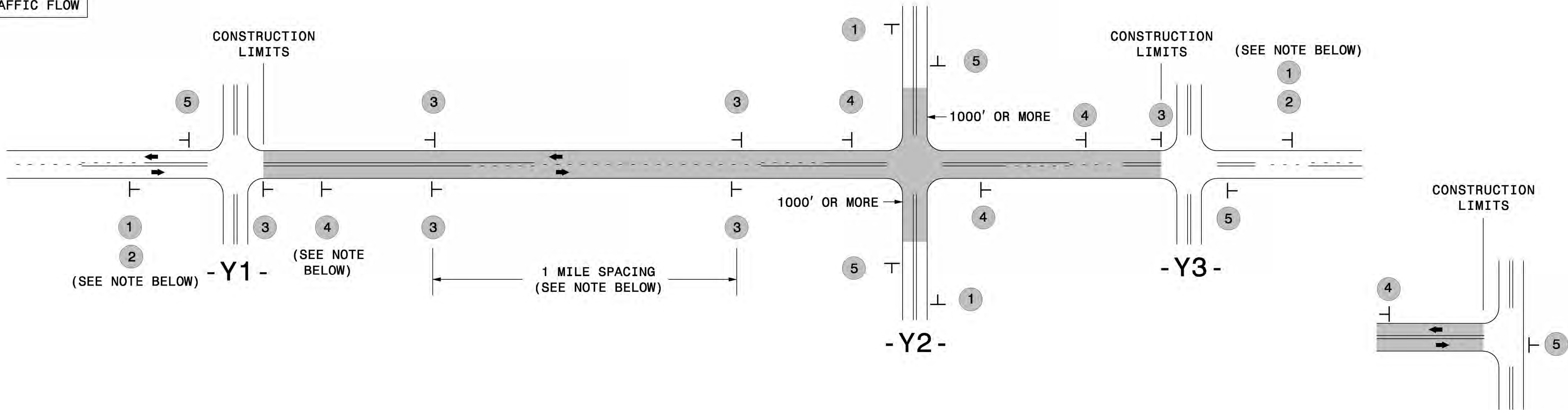
SIGNING NOTES AND PLACEMENT PER DIRECTION	1 2 ROAD WORK AHEAD W20-1 48" X 48" NEXT XX MILES W7-36P 24" X 18" PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)	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" W20-7 A 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. 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.
	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 1/2 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.	

SIGNING FOR RESURFACING PROJECTS

LEGEND

STATIONARY SIGN

DIRECTION OF TRAFFIC FLOW



TEE INTERSECTION

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

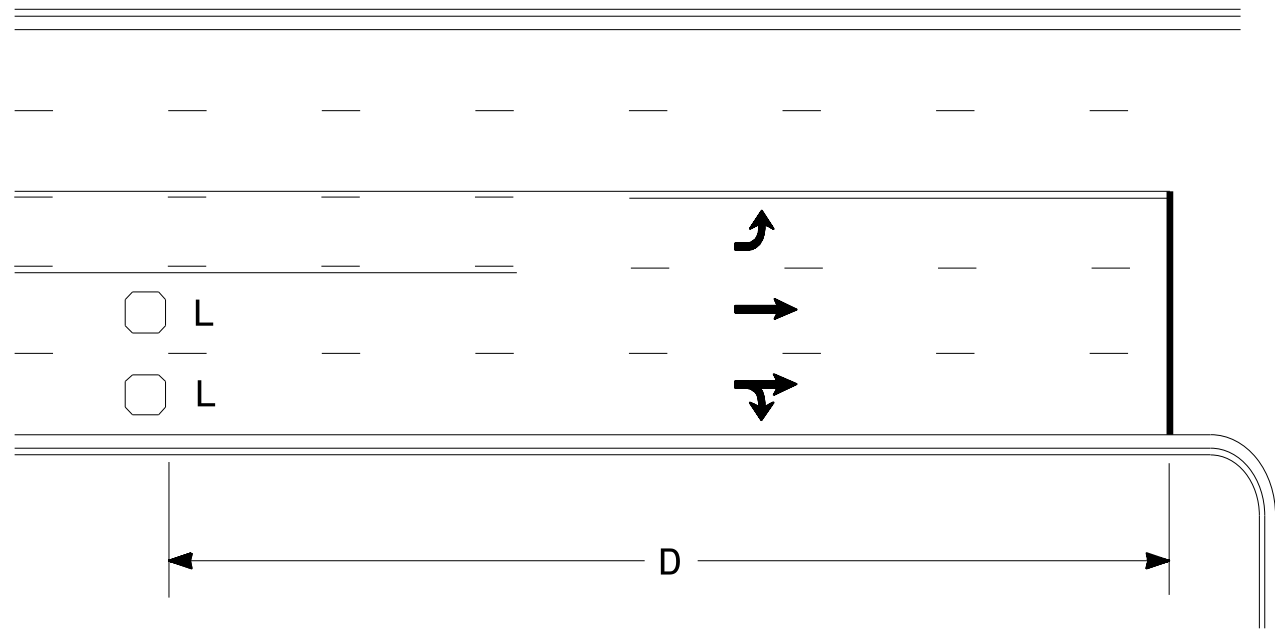
SIGNING NOTES AND PLACEMENT PER DIRECTION	1 2 ROAD WORK AHEAD W20-1 48" X 48" NEXT XX MILES W7-3aP 24" X 18" PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)	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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.
	3 LOW/SOFT SHOULDER SP 13107 48" X 48" - PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART 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. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.	
	5 END ROAD WORK G20-2 A 48" X 24" PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	
	THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.	
LESS 2 MILES	FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.	

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



ADVANCE WARNING SIGNS
FOR
RURAL AND SUBURBAN
2-LANE ROADWAY
RESURFACING

High Speed Detection
(≥35 mph)

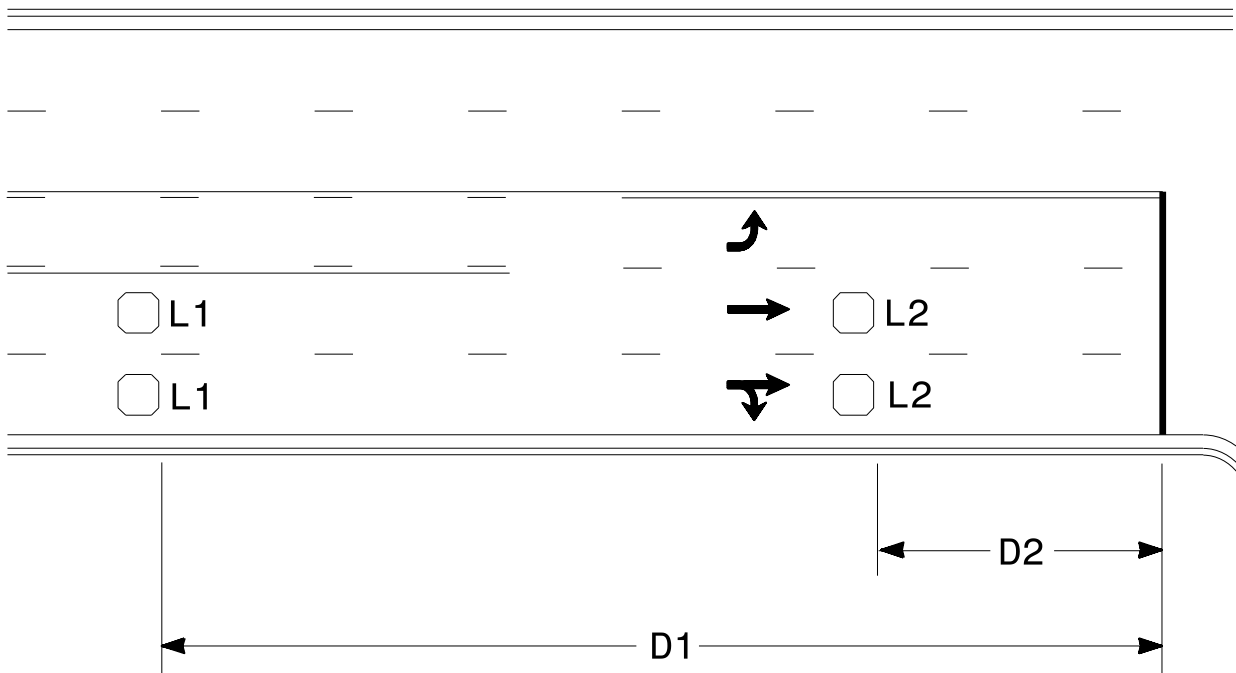


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



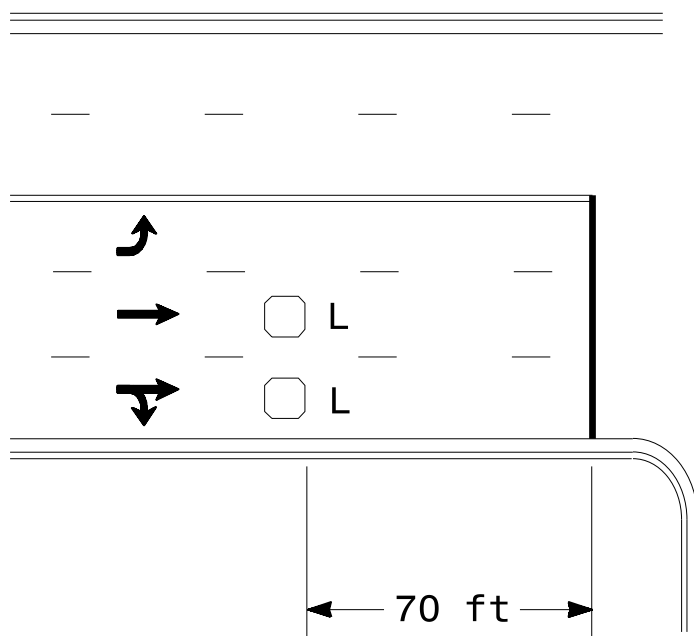
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

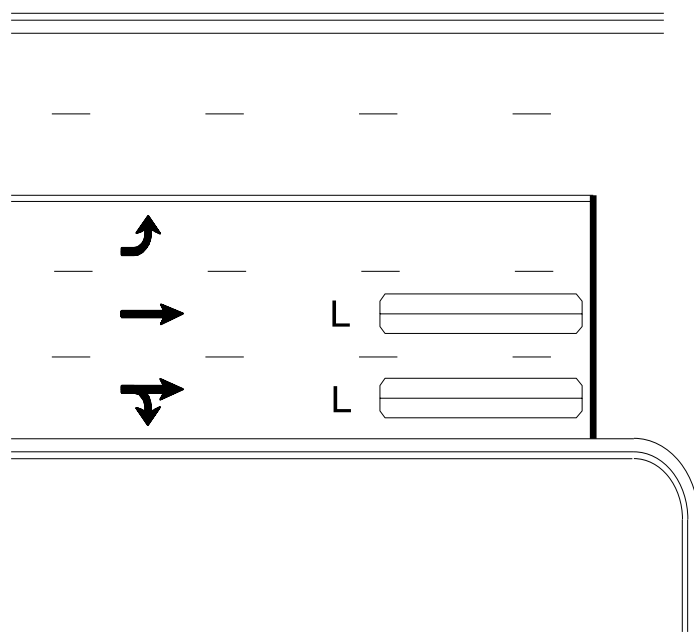
"Stretch" Operation

Low Speed Detection
(≤35 mph)



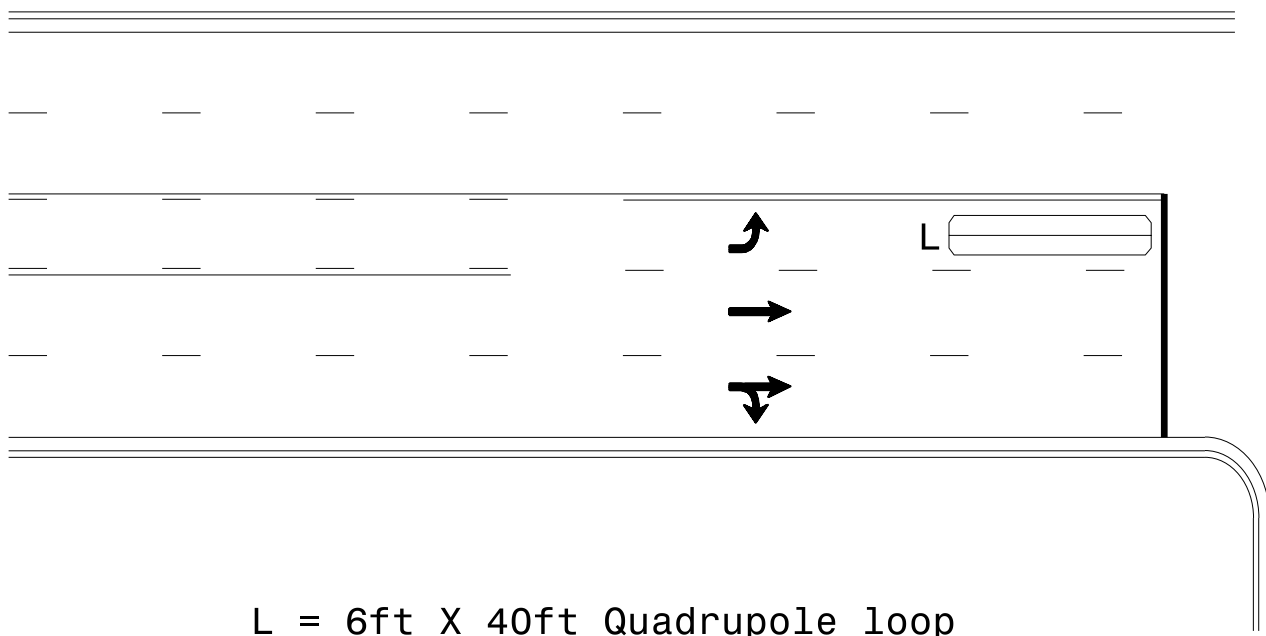
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

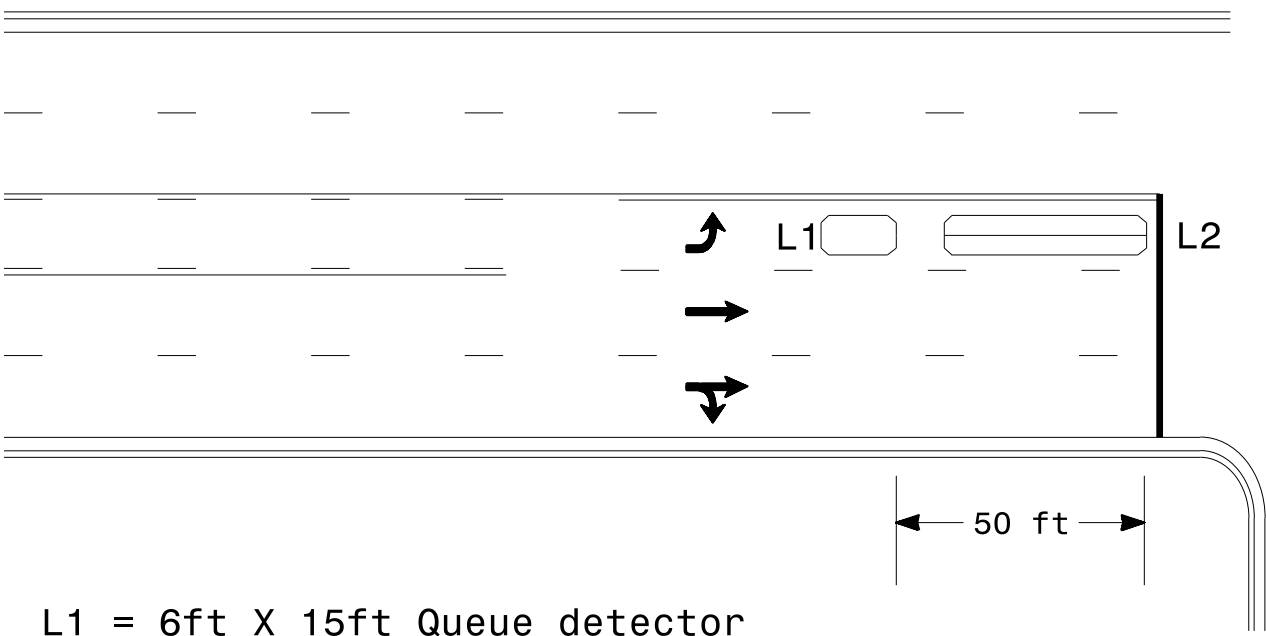
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

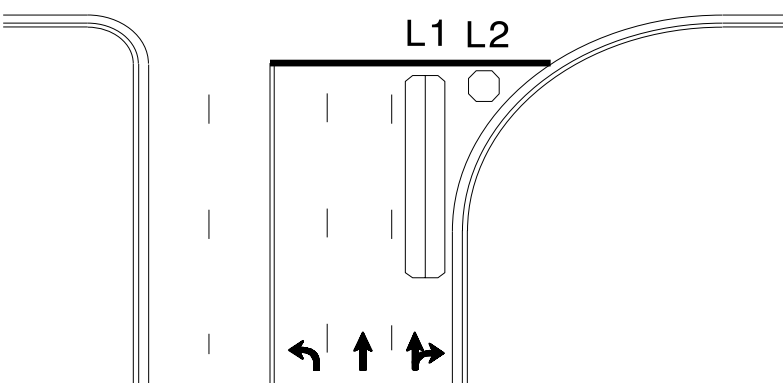
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

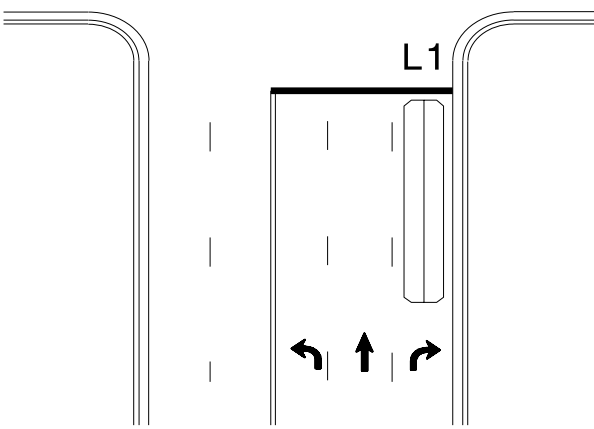
Queue Loop Detection

Right Turn Lane Detection

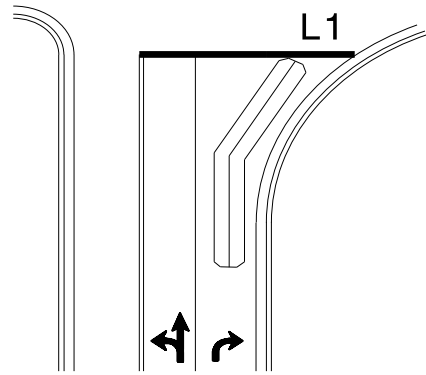


Shared Lane/
Wide Radius Turn

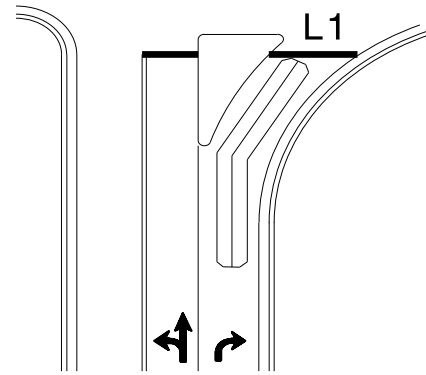
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

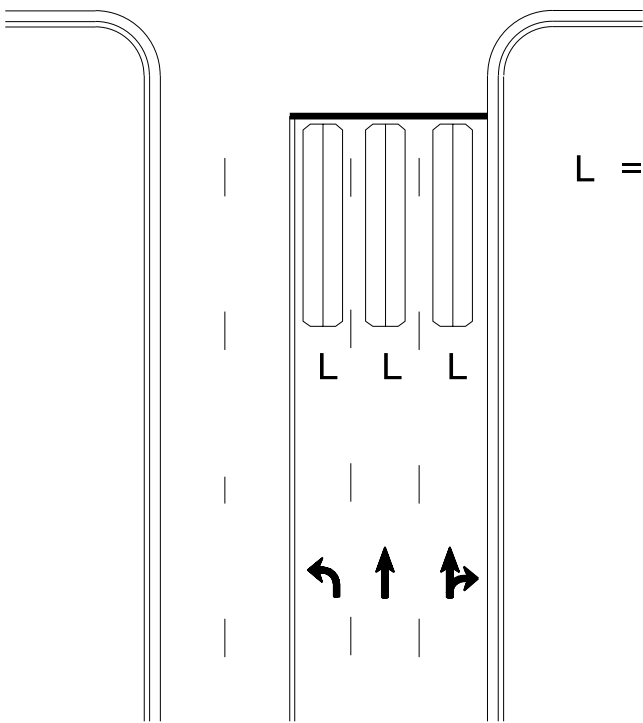


Wide Radius Turn



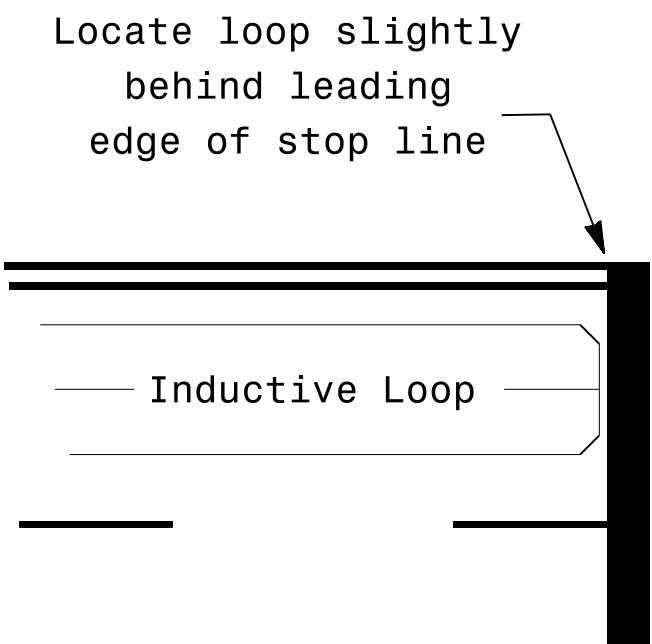
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



- Note:
Loop may be located in advance of stop line under any of the following conditions:
- 1) stop line is greater than 15' from edge of intersecting roadway
 - 2) loop detects a permissive or protected/permissive left turn
 - 3) for an exclusive right turn lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

	Typical Signal Loop Locations					
	PLAN DATE: September 2025	REVIEWED BY:			PREPARED BY: J.A. Lohr	REVIEWED BY:
	REVISIONS				INIT.	DATE
	SCALE: N/A					