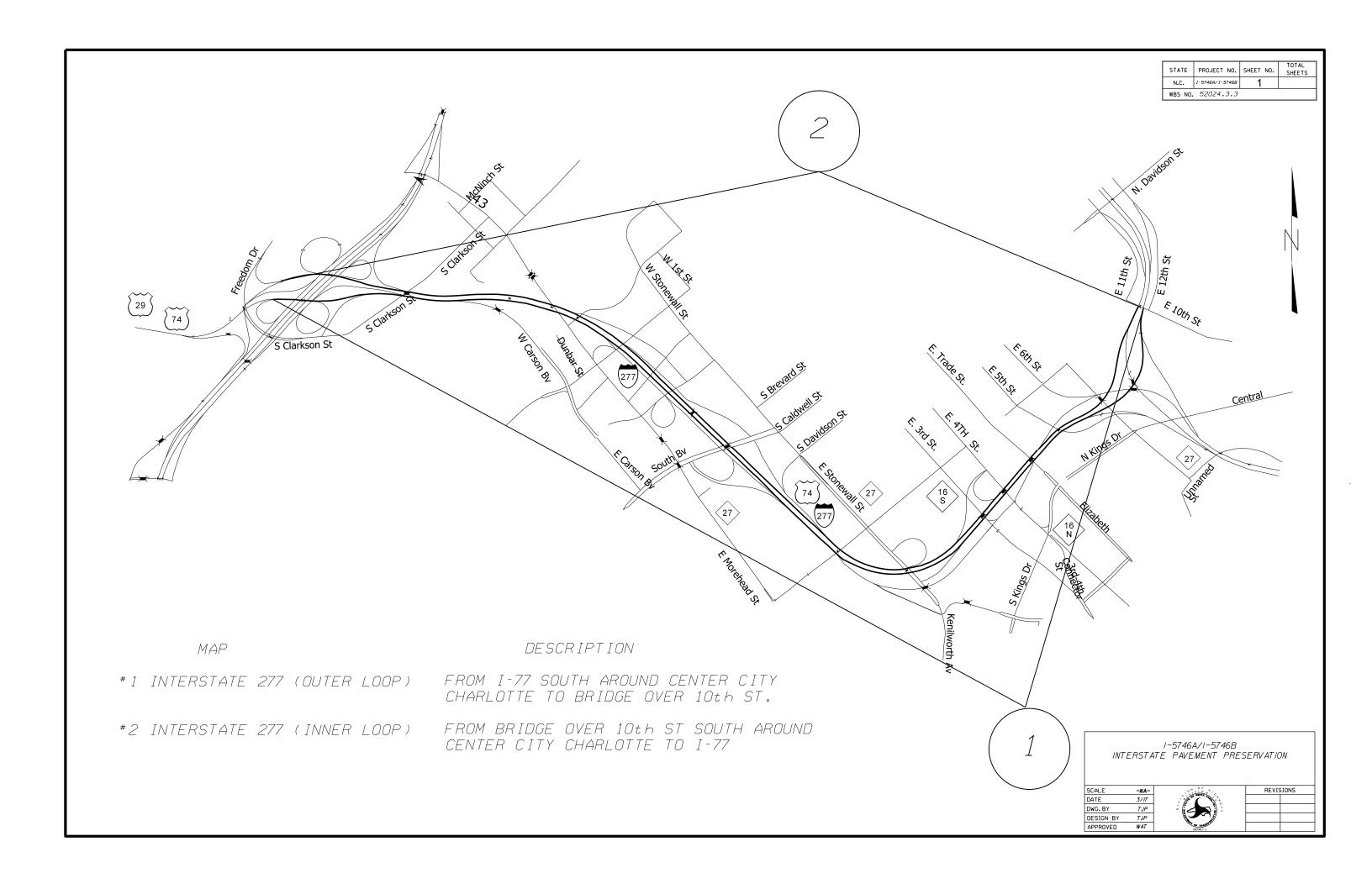
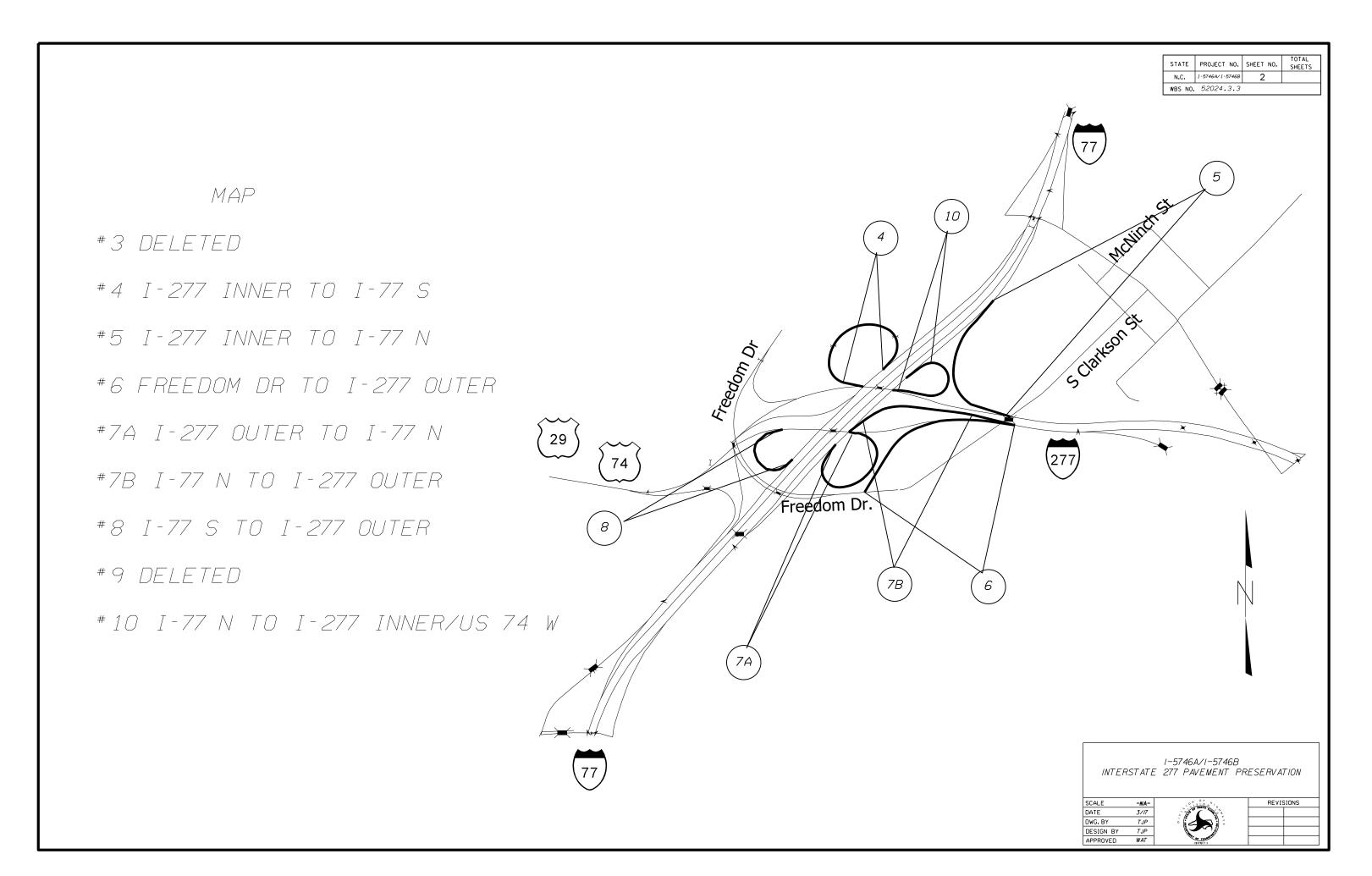
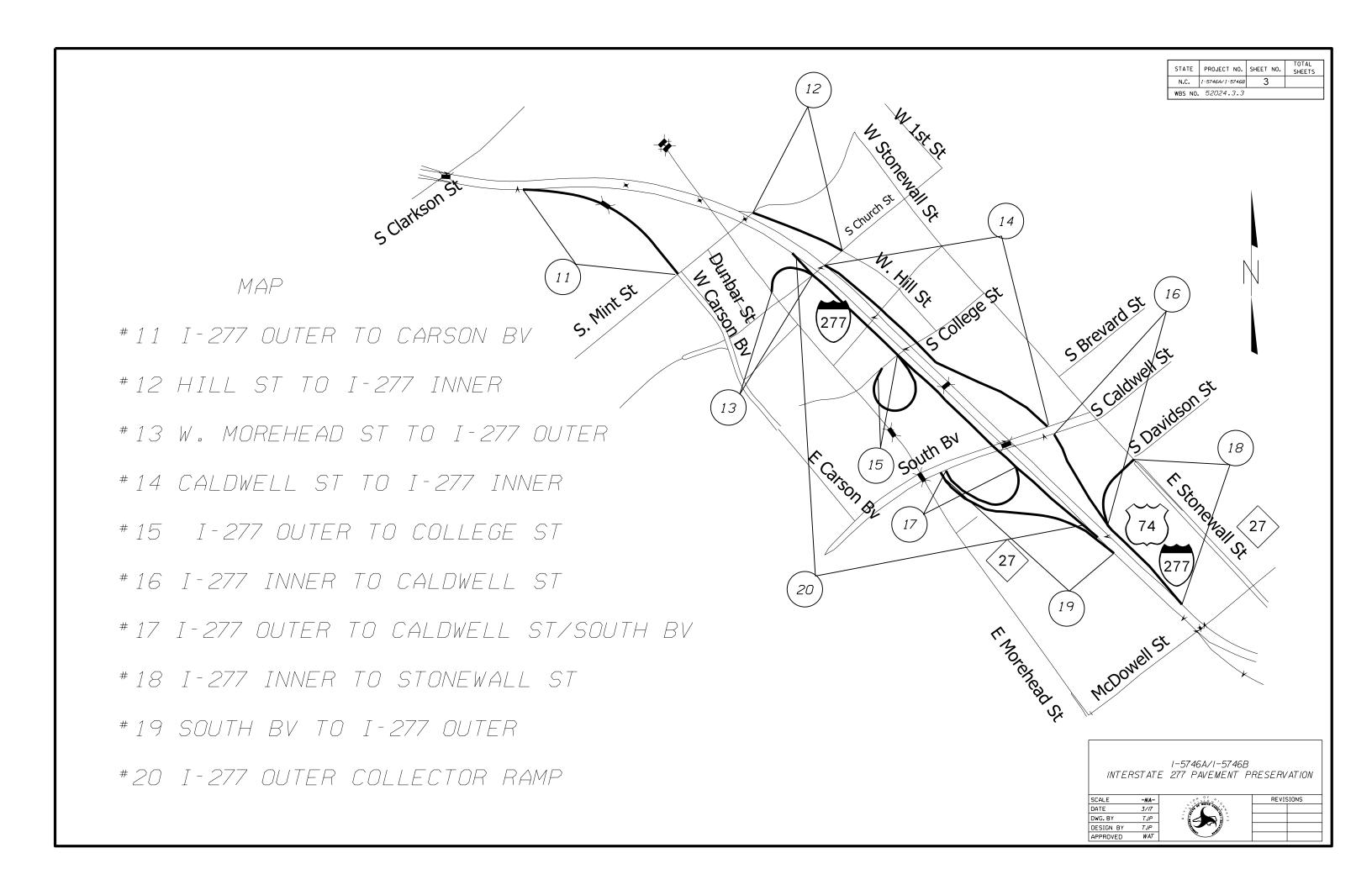
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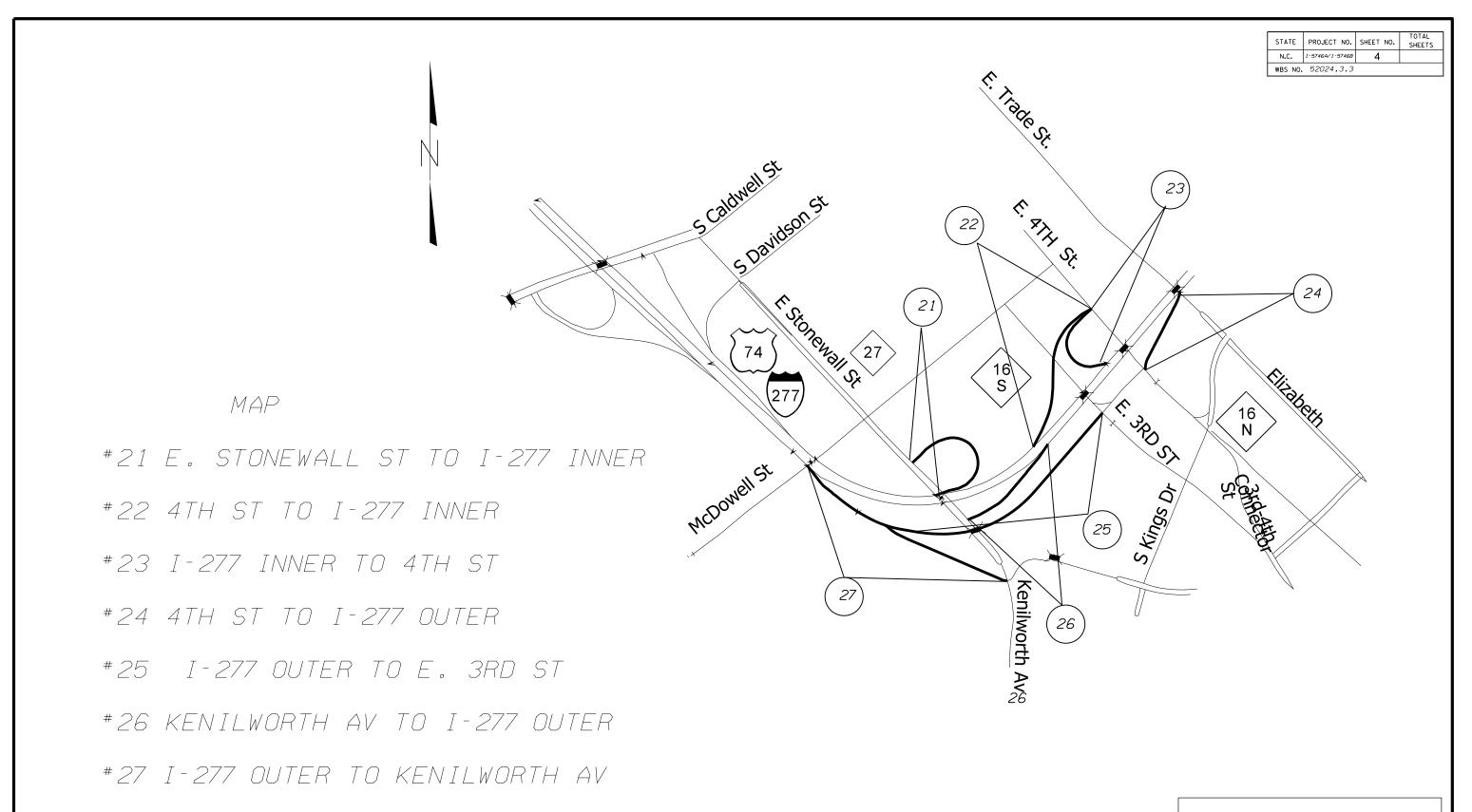
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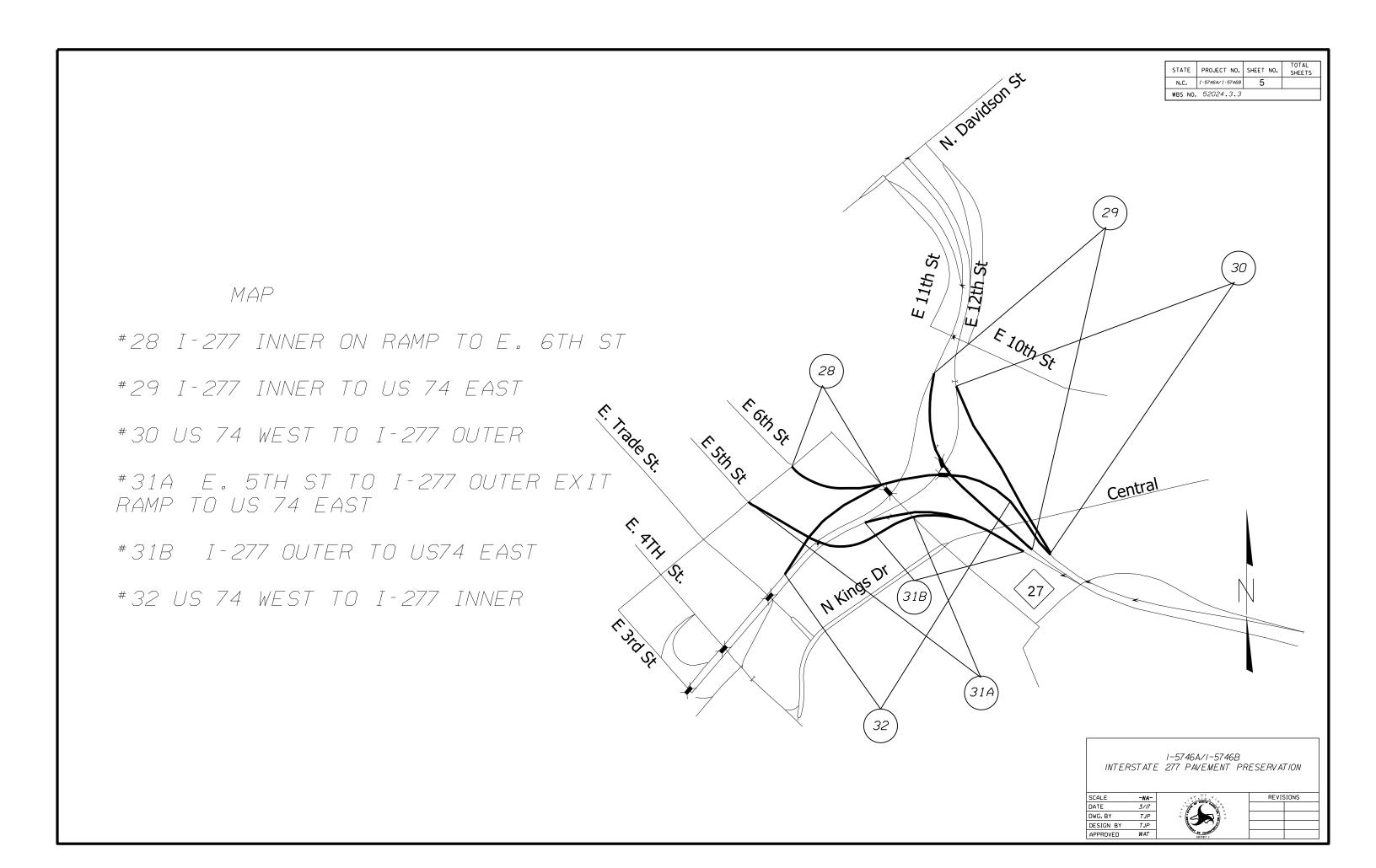


I-5746A/I-5746B INTERSTATE 277 PAVEMENT PRESERVATION

CALE	-NA-	
IATE	3/17	, ,
WG. BY	TJP	- (
ESIGN BY	TJP	/
PPROVED	WAT	

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V. O. TRANSE	

REVISIONS



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	6	
WBS NO.	52024.3.3		

Notes:

THIS CONTRACT IS INTENDED TO REPAIR AND REHABILITATE I-277 AND ITS ASSOCITATED RAMPS AND LOOPS THROUGH A COMBINATION OF PORTLAND CEMENT CONCRETE SLAB REPAIR, ASPHALT PAVEMENT REPAIR, CRACK SEALING, JOINT REPAIR, MILLING AND ASPHALT PAVING, AND FOG SEAL APPLICATION.

I-277 IS A $\frac{3}{4}$ LOOP AROUND UPTOWN CHARLOTTE THAT IS DIVIDED INTO TWO LOCALLY NAMED SECTIONS. THE SOUTHERN PORTION OF THE LOOP IS THE JOHN BELK FREEWAY. THE NORTHERN SECTION OF THE LOOP IS THE BROOKSHIRE FREEWAY. THESE TWO SECTIONS ARE DIVIDED BY THE INTERCHANGE WITH US74 (INDEPENDENCE BV) THE FOURTH QUARTER OF THE LOOP IS MADE UP OF I-77. THE LOOP IS CONSTRUCTED OF JOINTED PORTLAND CEMENT CONTRETE PAVEMENT (PCCP) WITH PREDOMINANTLY ASPHALT PAVED SHOULDERS.

THE TYPICALS IN THIS CONTRACT GENERALLY DEPICT THE FOLLOWING SCOPE OF WORK.

THE JOHN BELK FREEWAY SECTION OF I-277 FROM I-77 TO THE BRIDGE OVER 3RD ST WILL HAVE THE DISTRESSED SECTIONS OF THE PCCP REPAIRED. THE ASPHALT SHOULDERS WILL BE PRIMARILY LEFT IN PLACE AND TREATED WITH A FOG SEAL.

THE MAINLINE SECTION BETWEEN THE BRIDGE OVER 3RD ST AND THE THE BRIDGE OVER 10TH STREET SHALL HAVE THE DISTRESSED SECTIONS OF THE PCCP REPAIRED. THE ASPHALT SHOULDERS IN THIS SECTION WILL BE MILLED AND REPLACED.

THE TYPICALS FOR THE ON AND OFF RAMPS GENERALLY DEPICT THE SAME REPAIR/REHABILITATION METHODS AS THE SECTION OF MAINLINE I-277 THAT THEY SERVE.

THE PCCP REPAIR SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS, ALL APPLICABLE SECTIONS OF THE 2012 NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, AND THE NCDOT MANUAL FOR REPAIR OF PCC PAVEMENTS REVISED JULY 2015.

THERE IS A 650' SECTION OF FULL DEPTH ASPHALT PAVEMENT ON THE JOHN BELK FREEWAY JUST EAST OF I-77. THIS AREA WILL BE REHABILITATED BY MILLING TO A DEPTH OF 3" AND PAVING BACK WITH 3" OF ASPHALT CONCRETE SURFACE COURSE S9.5D. THE MILLING AND PAVING OF THIS SECTION SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT NO TRANSVERSE PAVEMENT JOINTS WILL BE LEFT AT THE END OF EACH NIGHT'S WORK AND THERE WILL BE NO OPPORTUNITY FOR WATER TO STAND IN THE ROADWAY.

THE JOINT BETWEEN THE ASPHALT SHOULDERS AND PCCP PAVEMENT SHALL BE SEALED ALONG WITH OTHER PAVEMENT CRACKS AND JOINTS AS DIRECTED BY THE ENGINEER.

THE PAVEMENT MARKINGS ON THIS PROJECT CONSIST PRIMARILY OF POLYUREA FOR THE EDGELINES, WIDE LINES, AND GORE LINES. THE LANES SKIPS AND APPLICABLE MINISKIPS WILL BE PLACED USING COLD APPLIED PLASTIC WITH 6" WIDE WHITE SURROUNDED BY A BLACK CONTRAST BORDER.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO NCDOT PAVEMENT MARKING STANDARDS FOR AUXILLARY LANES AND LANE DROPS WHICH REQUIRE THE USE OF "WIDE" MARKINGS AT SPECIFIED LOCATIONS. THERE ARE SOME AREAS OF THE PROJECT THAT IN EXISTING CONDITION DO NOT HAVE WIDE MARKINGS. THIS CONTRACT WILL REPLACE THE OLD MARKINGS WITH MARKINGS IN ACCORDANCE WITH THE NEW STANDARDS PRESENTED IN THE 2012 NCDOT ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER.

PROPOSED LANE SKIPS AND MINISKIPS SPECIFIED AS WIDE SHALL BE PLACED AS POLYUREA 12" WIDE.

THE EXISTING PAVEMENT MARKINGS SHALL BE REMOVED PRIOR APPLICATION OF NEW MARKINGS.

REMOVE EDGELINES AND VARIOUS SKIPS WITH LINE CODE "REMOVAL OF PAVEMENT MARKING LINES 6"."

REMOVE EXISTING COLD APPLIED PLASTIC LANE LINES WITH BLACK CONTRAST BORDERS USING LINE CODE "REMOVAL OF PAVEMENT MARKING LINES 9"."

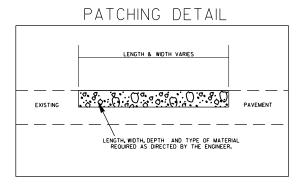
REMOVE GORES AND EXISTING WIDE MARKINGS USING LINE CODE "REMOVAL OF PAVEMENT MARKINGS 12"."

I-5746A/I-5746B Interstate 277 Pavement Rehabilitation

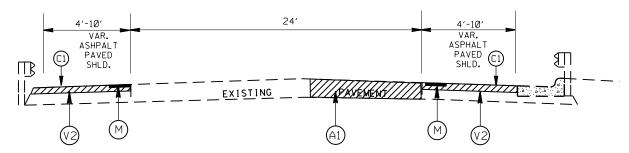




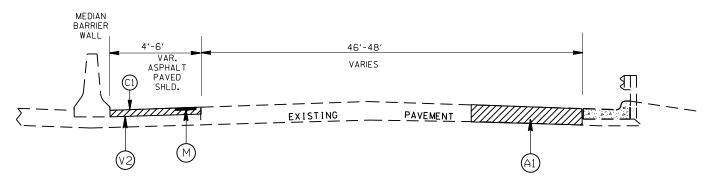
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C. 1-5746A/1-5746B 7		7	
WBS NO.	52024.3.3		



TYPICAL SECTIONS 1-6 HAVE BEEN DELETED



TYPICAL SECTION NO.7

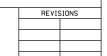


TYPICAL SECTION NO.8

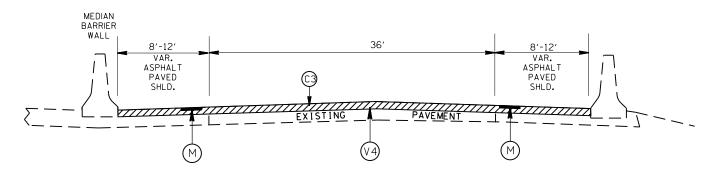
	PAVEMENT SCHEDULE
A1	PROP. APPROX. 11" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR (WITH DOWELS) AT VARIABLE LOCATIONS AS DETERMINED BY THE ENGINEER
C1	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

SCALE	-NA-	
DATE	12/16	
DWG. BY	TJP	
DESIGN BY	TJP	
APPROVED	WAT	

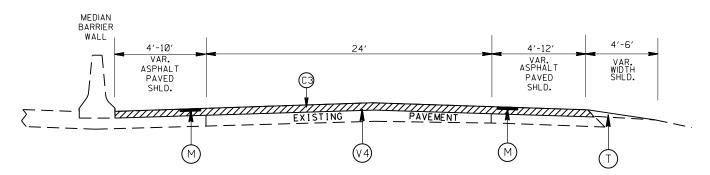




STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	8	
WBS NO.	52024.3.3		



TYPICAL SECTION NO.9



TYPICAL SECTION NO.10

					N
MEDIAN BARRIER WALL 8'-12' VAR. ASPHALT PAVED SHLD.	24' EXISTING (V4)	©3 PAVEMENT	0'-30' VAR. PAVED GORE	12'-14' INTERCHANGE ACCEL./DECEL. LANE C3	BARRIER WALL VAR. ASPHALT PAVED SHLD.

C1	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
С3	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION

MILLED RUMBLE STRIPS

PAVEMENT SCHEDULE

PROP. APPROX. 11" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR (WITH DOWELS) AT VARIABLE LOCATIONS AS DETERMINED BY THE ENGINEER

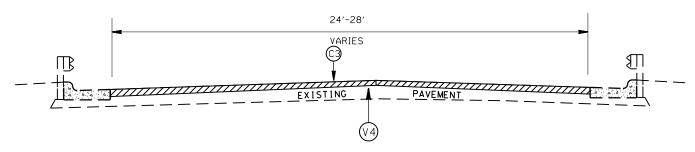
I-5746A/I-5746B Interstate 277 Pavement Rehabilitation

SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP
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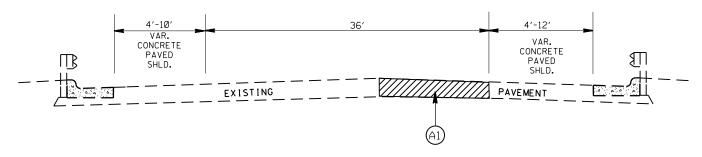


REVISIONS

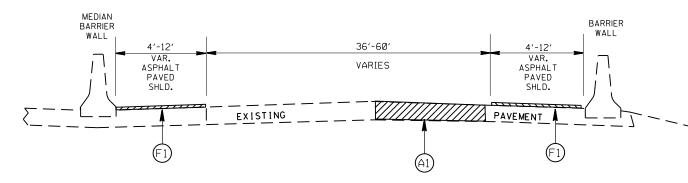
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	9	
WBS NO.	52024.3.3		



TYPICAL SECTION NO.12



TYPICAL SECTION NO.13



TYPICAL SECTION NO.14

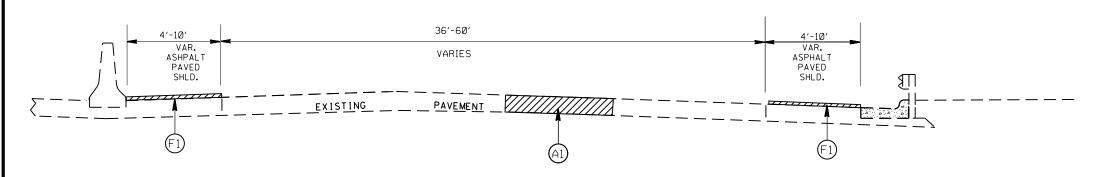
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СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP
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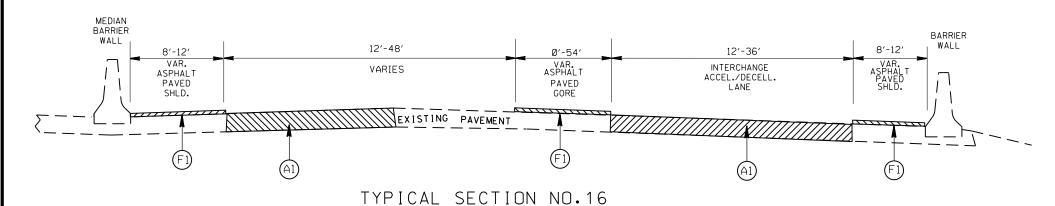


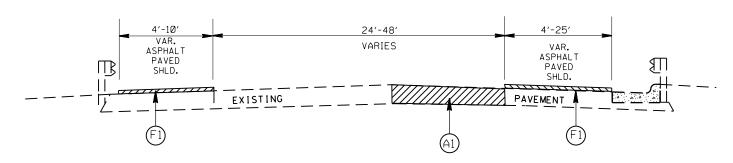
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STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
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WBS NO.	52024.3.3		



TYPICAL SECTION NO.15





TYPICAL SECTION NO.17

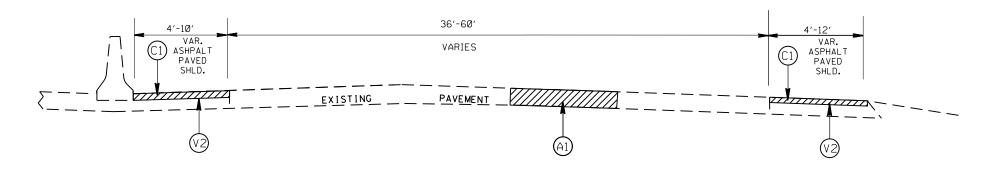
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F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

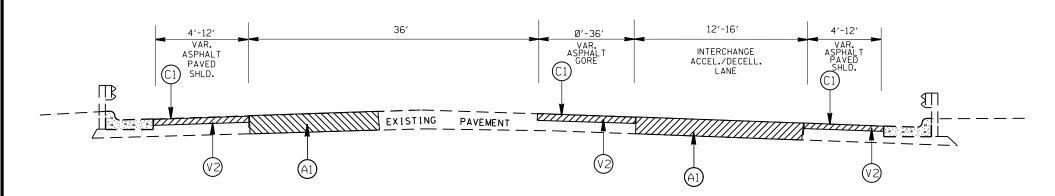
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DATE	12/16	
DWG. BY	TJP	
DESIGN BY	TJP	
APPROVED	WAT	



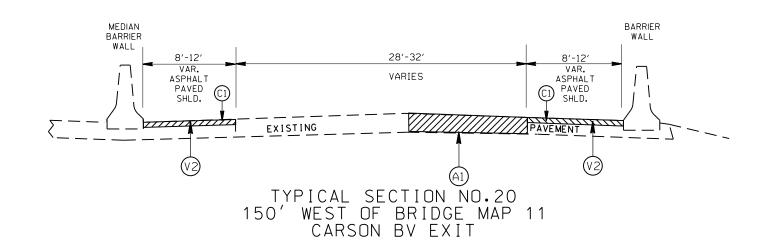
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STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	11	
WBS NO.	52024.3.3		





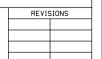
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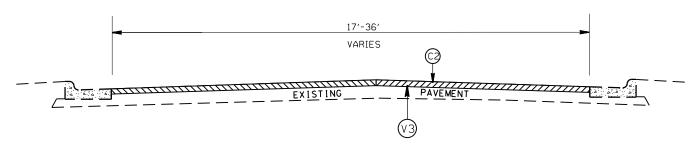
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C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
С3	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP
APPROVED	WAT

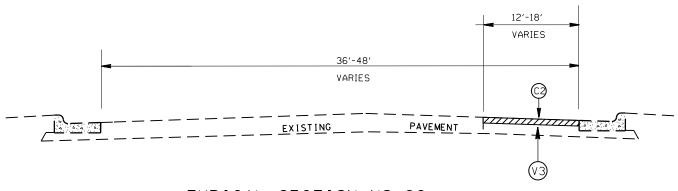




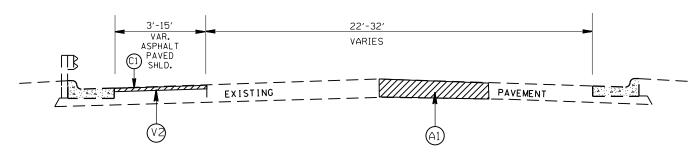
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	12	
WBS NO.	52024.3.3		



TYPICAL SECTION NO.21
PAVE TOP OF RAMP MAP 15
I-277 OUTER TO COLLEGE ST AND
MAP 22 4TH ST TO I-277 INNER



TYPICAL SECTION NO.22
PAVE TOP OF RAMP MAP 15
I-277 OUTER TO COLLEGE ST



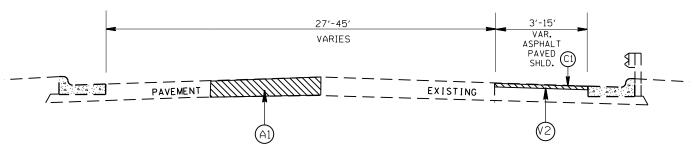
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SCALE	-NA-	
DATE	12/16	
DWG. BY	TJP	
DESIGN BY	TJP	
APPROVED	WAT	

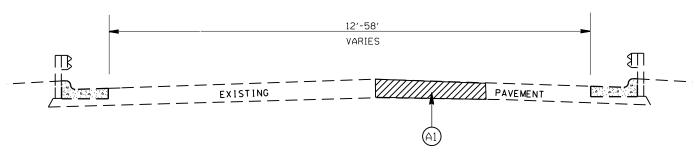


REVISIONS

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	13	
WBS NO.	52024.3.3		



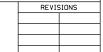
TYPICAL SECTIONS 25-26 ARE DELETED.



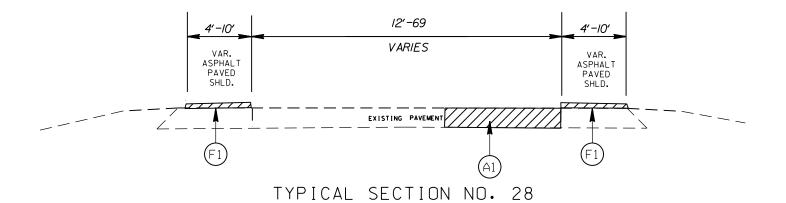
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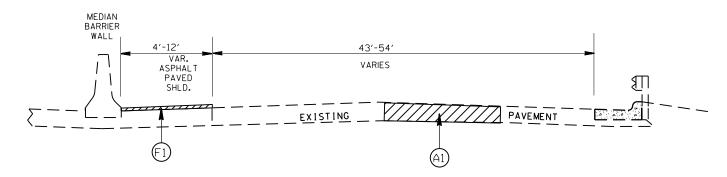
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СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
٧3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS



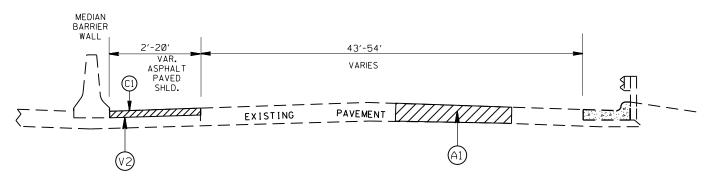


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	14	
WBS NO.	52024.3.3		





TYPICAL SECTION NO.29



TYPICAL SECTION NO.30

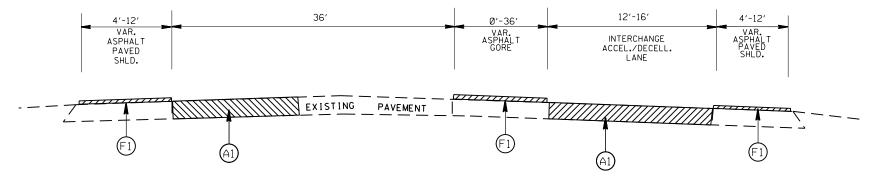
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F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

CALE	-NA-	
ATE.	12/16	
wG. BY	TJP	
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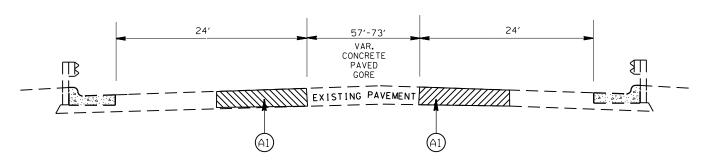




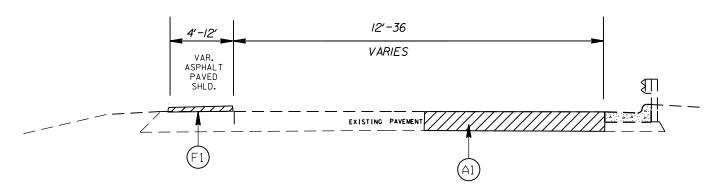
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	15	
WBS NO.	52024.3.3		



TYPICAL SECTION NO.31



TYPICAL SECTION NO.32

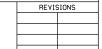


TYPICAL SECTION NO. 33

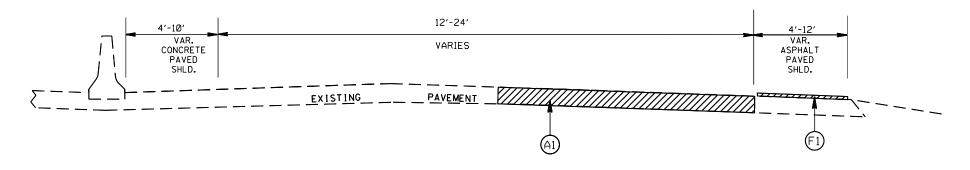
	PAVEMENT SCHEDULE
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СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

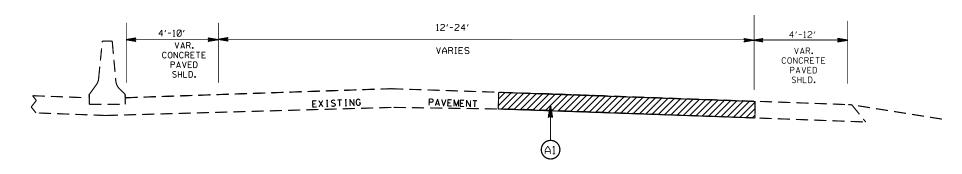
SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP
APPROVED	WAT



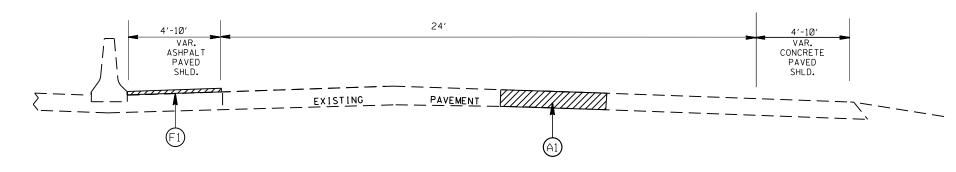


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	16	
WBS NO.	52024.3.3		





TYPICAL SECTION NO.35



TYPICAL SECTION NO.36

	PAVEMENT SCHEDULE
A1	PROP. APPROX. 11" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR (WITH DOWELS) AT VARIABLE LOCATIONS AS DETERMINED BY THE ENGINEER
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СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

I-5746A/I-5746B Interstate 277 Pavement Rehabilitation

 SCALE
 -NA

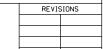
 DATE
 12/16

 DWG. BY
 TJP

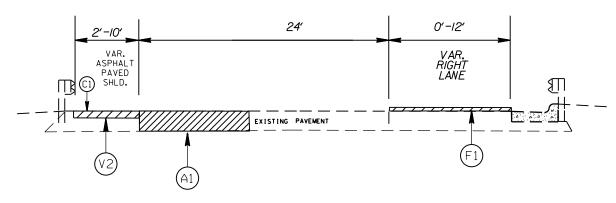
 DESIGN BY
 TJP

 APPROVED
 WAT

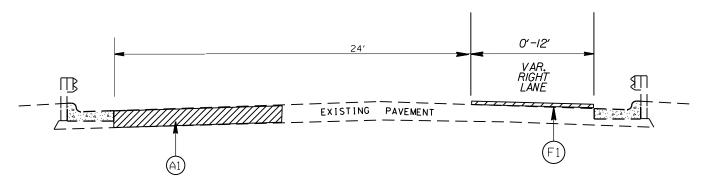




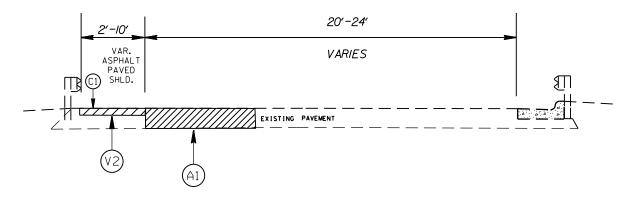
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	17	
WBS NO.	52024.3.3		



TYPICAL SECTION NO. 37



TYPICAL SECTION NO.38



TYPICAL SECTION NO. 39

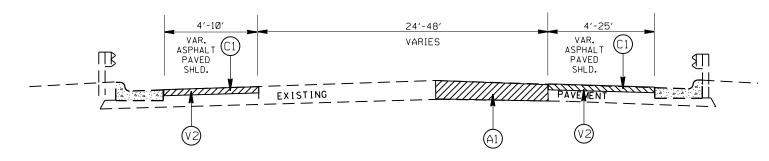
	PAVEMENT SCHEDULE
A1	PROP. APPROX. 11" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR (WITH DOWELS) AT VARIABLE LOCATIONS AS DETERMINED BY THE ENGINEER
C1	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP

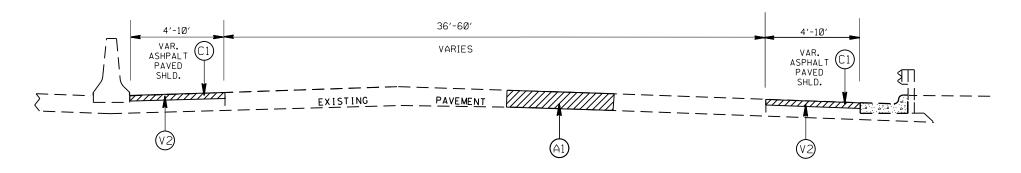




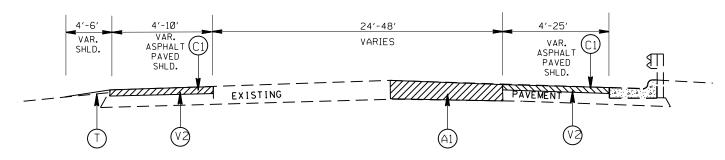
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	18	
WBS NO.	52024.3.3		



TYPICAL SECTION NO.40



TYPICAL SECTION NO.41

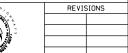


TYPICAL SECTION NO.42

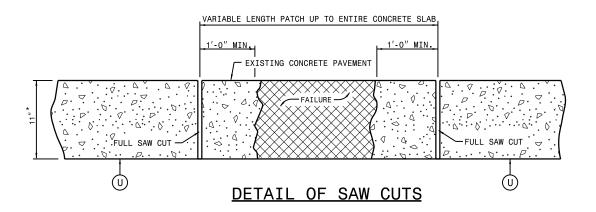
	PAVEMENT SCHEDULE
A1	PROP. APPROX. 11" PORTLAND CEMENT CONCRETE PAVEMENT REPAIR (WITH DOWELS) AT VARIABLE LOCATIONS AS DETERMINED BY THE ENGINEER
C1	PROP. APPROX. 2.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
СЗ	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF 2 LAYERS
F1	FOG SEAL
V2	MILLING 2.0" DEPTH
V3	MILLING 1.5" DEPTH
V4	MILLING, 3.0" DEPTH
Т	SHOULDER RECONSTRUCTION
М	MILLED RUMBLE STRIPS

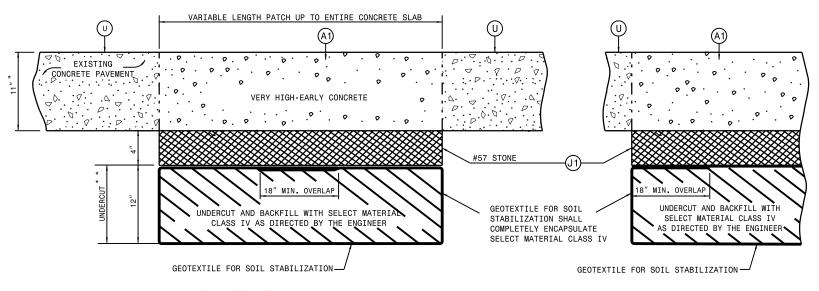
SCALE	-NA-
DATE	12/16
DWG. BY	TJP
DESIGN BY	TJP
ADDDOVED	IA/ AT





STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746A/I-5746B	19	
WBS NO.	52024.3.3		





DETAIL OF CONCRETE PAVEMENT REPAIR

- * DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED
- ** UNDERCUT REQUIRED IN AREAS AS DIRECTED BY THE ENGINEER

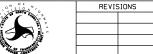
Refer to the North Carolina Department of Transportation
"Partial and Full Depth Repair Manual" when Replacing Slabs
and when Repairing Concrete Pavement.

F	PAVEMENT SCHEDULE
A1	11" VERY HIGH-EARLY CONCRETE
J1	#57 STONE
U	EXISTING PAVEMENT

I-5746A/I-5746B Interstate 277 Pavement Rehabilitation

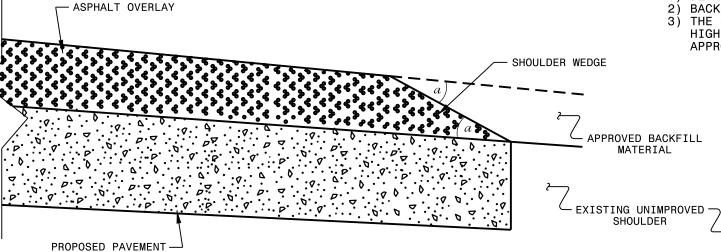
DETAIL FOR REPAIR OF CONCRETE PAVEMENT

ALE	-NA-	ζ,
TE	3/17	· %
/G. BY	TJP	`
SIGN BY	TJP	
PROVED	WAT]



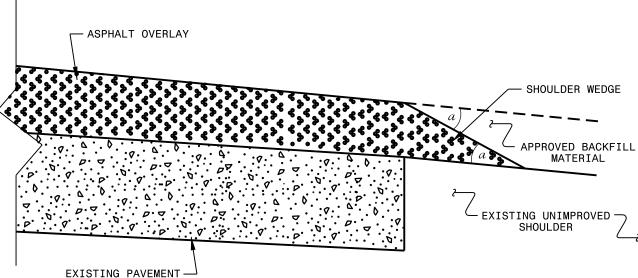
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.

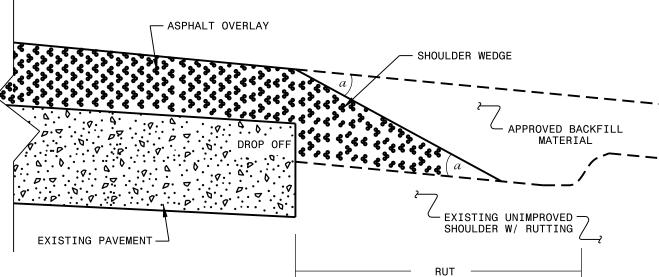
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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 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:	2/2/16	
CHECKED BY		DATE		_
FILE SPEC s:u	sr/details/stan	d/shoulderwedge	detail dgn	

SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

	PROJECT I	NO.	SHEET NO.	TOTAL NO.
I-5746A	/ I-5746B	52024.3.3	21	

SUMMARY OF QUANTITIES

	MAP ROUT	DESCRIPTION	TYP	LANE LA			M LENGTI	H WIDTH			I I				SHOULDER				SURFACE				l l			SAW-	STRUC-		REPAIR	FOG	SLAB					VATTLE POLY-
ᇤ				S TY	PE SURF	FACE MIX TING ASPHA			EXCAVATIO N	ON	REMOVAL TEXTI			STONE BASE	RECONSTRU CTION	MILLING	MILLING	MILLIN G	COURSE, S9.5C	S9.5D	BINDER FOR	MODIFIED ASPHALT	PVMT CRACKS	PAVE-	STRIPS	ING & SEAL- ING	TURAL FOAM	INSTALL ATION	JOINTED CONC	SEAL	LEVELING UNDER-			FOR ROSION	CONTROL STONE	ACRY- LAMIDE
PROJE					REQU	UIRE REQU	IRE				SOIL STABI										PLANT MIX	BINDER FOR PLANT	AND JNTS	MENT	(ASPHALT CEMENT	EXI. CONC	VOID FILL STABILI-		PVMT SLABS		SEALING & VOID			NTROL, LASS B		(PAM)
											ZATIO	N										MIX			CONC) std.665.01	PVMT JNTS	ZATION				FILLING					
NO	NO		NO				MI	FT	СУ	СУ	SY SY	TN	TN	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	TONS	LB	TONS	LF	LF	GAL	GAL	SY	SY	LB	LS	LF	TN	TN	LF LB
	I-277 JOHN FREEW		7,8,13-																																	
	1 OUTER LO		19,40,41	3 N	ID N	IO NO	2.67	55.5	9		150 60	18	3			5,744			643		38		21,847		6,000	1,111	50	300	764	21,200	400	 	200	10	5	40 1
	FREEWAY I		7-12,15- 19,40,41,42	3 N	AD N	IO NO	2.67	51.9	7	20	233 44	14	2	10	0.2	4,986	3,340		614	616	36	35	19,583	66	6,100	840			577	15,777			75	10	10	20 1
		I-77 I-277 INNER LOOP TO I-	27						2	20	12		0.5	10	0.2	4,500	3,340		014	010	30	33	13,303	00	0,100	192			120	15,777		1	-/3	10		20 1
	RAMP TO	I-77 I-277 INNER LOOP TO I-				IO NO			2			3											_									1	-	\rightarrow	-	
	5 NORT	OM FROM FREEDOM TO I-	17,27			IO NO			1		2	1	0.5										507			34			21	196		1	-	-+		
	6 FREEDON 7A RAMP		27	1 N	ID N	IO NO	0.17	16	1		2	1	0.5													43			27			- I		\rightarrow		
	7 77 NOR	TH LOOP TO I-77 NORTH FROM I-77 NORTH TO I-	27	1 N	ID N	IO NO	0.15	16.9	2		8	2.5	1													149			93			↓		\rightarrow		
		277 OUTER LOOP	27,29	1 N	ID N	IO NO			2.5		10		1										713.2			273			170	367] [
	RAMPS TO	OTAL FOR MAP NO. 7 I-277 FROM I-77 SOUTH TO I-					0.28		4.5		18		2													422			263			1		\rightarrow		
	8 OUTE RAMP TO		27	1 N	ID N	IO NO	0.08	15	2		10	3	1													192			120			- I		\rightarrow		
	10 INNE		27	1 N	ID N	IO NO	0.018	22	5		20	9	2													554			346			┨		\rightarrow		
	11 CARSON RAMP TO	BV CARSON BV	14,20,28	2 N	1D N	IO NO	0.18	31.6	1		4	1	0.5			233			29		2		1,037			64			40	670		↓ ↓	28	4	2	10 1
	12 INNE	INNER	28	1 N	ID N	IO NO	0.1	26.5	1	10	3	1	0.5	10	0.10								626			43			27	533		↓ ↓				
	RAMP TO 13 OUTE		25-27	1 N	ID N	IO NO	0.12	21	1		3	2	0.5										581			85			53	220						
	RAMP TO																																			
	14 INNER		27,35,36	1 N	AD N	IO NO	0.27	33.5	1		3	1	0.5										1,400			17			11	684		1	+	\rightarrow		
	15 COLLEGE	ST LOOP TO COLLEGE ST	21,22,33	1 N	ID N	IO NO	0.12	22	0.5		3	1	0.5					358	33		2		688			34			21	433		- I		\rightarrow		
	RAMP 16 CALDWEI		27	2 N	4D N	IO NO	0.14	44	0.5			1	0.5													43			27							
۵	RAMP	0	21	2 10	IN IN	IO NO	0.14	44	0.3		2	1	0.3													45			21			1				
4.3.3	17 ST/SOUTI		27	2 N	1D N	IO NO	0.14	36.7	1		2	1	0.5													43			27			*				
5202 Meckli	RAMP -																																			
	18 STONEWA RAMP TO		27,34,35	2 N	1D N	IO NO	0.17	39.6	1		2	1	0.5													43			27	171		1		\rightarrow		
	19 OUTE I-277 OU		27,28	1 N	ID N	IO NO	0.21	22.6	1		2	1	0.5													43			27			1 -		\rightarrow		
	LOOF																																			
	20 RAME RAMP TO	ST AND CALDWELL ST	14,29	2 N	ID N	IO NO	0.5	37.9	1		5	2	0.5										3,158			102			64	2,622]		\rightarrow		
	21 INNE		33	1 N	ID N	IO NO	0.13	22	2		2	2	0.5										690			43			27	311]				
	22 INNE	INNER	28,21	1 N	1D N	IO NO	0.09	20.5	1		2	1	0.5					1,000	92		5		552			17			11	444] [
	23 ST	4TH FROM I-277 INNER TO 4TH ST	37-39	2 N	1D N	IO NO	0.1	31.5	1		2	1	0.5			467			57		3		505			60			38	222			15	2		10 1
	24 OUTE		27	1 N	ID N	ю мо	0.08	15.5	1		2	2	0.5													68			43							
	RAMP TO E	. 3RD FROM I-277 OUTER TO E. 3RD ST	14,28	2 N	1D N	IO NO	0.31	34.2	1		2	1	0.5										1,908			21			14	1,511						
	RAMP TO	-277 FROM KENILWORTH AVE	•																													1 [
		OOP TO I-277 OUTER LOOP	28	1 N	ID N	IO NO	0.09	22.5	1		2	1	0.5										609			17			11	555		4		\rightarrow		
	KENILWO	RTH FROM I-277 OUTER TO	20.24				0.00						0.5										4.400			40			2-							
		. 6TH FROM I-277 INNER TO E.	28,31			IO NO		56.5			2		0.5										1,489			43			27	1,444		1		\rightarrow		
	28 ST RAMP TO	9574 FROM I-277 INNER LOOP	23,27	1 N	1D N	IO NO	0.1	23.5	1		4	3	0.5			195			24		1		403			145			91			1	15	2	1	10 1
	29 EAST RAMP TO	TO US74 EAST -277 FROM US74 WEST TO I-	27	1 N	1D N	IO NO	0.27	25.8	2		9	4	1		1					+						239			150			 	-+	\dashv		-
	30 OUTE	R 277 OUTER	27,32	1 N	ID N	IO NO	0.22	23.1	2		9	4	1		1											222			139			┤ ├		\longrightarrow		$\overline{}$
	31A RAMP	TO I- FROM E. 5TH ST TO 1277 ER OUTER OFF RAMP	27	1 N	AD N	IO NO	0.28	24.8	1		1	2	1													85			54							
	" "	FROM I-277 OUTER	27,30			IO NO		35.9	1		1	1	0.5			693			85		5					34			22							
	Т	OTAL FOR MAP NO. 31	41,3U	∠ IV	N U	io inu	0.18	_	2		2	3				693			85		5					119			76] [二十		
	32 INNE	-277 FROM US74 WEST TO I- 277 INNER	24,27	2 N	1D N	IO NO	0.4	34.5	2		2	3	1			733			90		5		1,697			175			109			\coprod	60	8	4	20 1
		ND TOTAL A / I-5746B (52024.3.3)					10.598	8	57.5	30	383 237	94.5	26	20	0.3	13,051	3,340	1,358	1,667	616	97	35	57,993.2	66	12,100	5,074	50	300	3,298	47,360	400	1	393	36	22	110 6

THERMOPLASTIC AND PAINT QUANTITIES

			1	1	1	1	1	46060000	46000	00000 F									· · · ·	•					147	7500000	40.474.00	0000 5	40.474.204	405500000	40050000	407500000	400400000	40050000	40050000	1005
MAP	DOUTE	DECORIDATION	TVD	LANIEC	LANE	LENGTH	1 WIDTH	46860000		00000-E				47100000				47261000		LUD		726110000		LUD			4847100					4875000000		+		_
MAP	ROUTE	DESCRIPTION	TYP	LANES	TYPE	LENGTH	WIDIH			6" X 90 M		8" X 120		1	THERMO		THERMO		HIP	HIP	HIP	HIP	HIP	HIP			' WHITE	6"	12"	PAVE-	PAVE-	PAVE-	PAVE-		REMOVE &	
					ITPE	•		M WHITE						M WHITE THERMO	MSG	STR	LT ARROW	THERMO MSG	THERMO T	l l	MERGE	THERMO LT	STR			// BLACK PC ONTRAST A			WHITE	MENT	MENT MARKING	MENT MARKING	MENT MARKING		REPLACE SNOWPL.	
<u>-</u>								THERIVIO	THEKIVIO	THERIVIO	ITTERIVIC	I HEKIVIO	ITERIVIO	THEKIVIO	M M	90 M		ONLY 120		l l	ARROW		ARROW		ARROW CC			A (HRE)			1	SYM/ CHAR			MARKERS	
															IVI	30 IVI	30 IVI	M BLACK	90 M	90 M	90 M	90 M	90 M			PLASTIC	Ι,	A (IIIL)	A (TINE) I		REMOVAL		REMOVAL	MENT	IVIAINENS	, IVIAIN
3																		CONTRAS		l l			BLACK			LINE		ļ	, '		12" WIDE	REIVIOVAL	9" WIDE	MARKER		
																			CONTRAS							WHITE		ļ	,		12 WIDE	, ,	1	REFLECT		
																			T	T	T	T	T	T		TYPE II		ļ	,	i		, ,	1 '	OR		
																					-	-							'	l			ا '		F.4	
NO			NO					LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	LF	EA	LF	EA	EA	E/
	I-277 JOHN BELK		7,8,13-																									ļ	, '	i		, !	1 '			
1 1	FREEWAY OUTER LOOP	FROM I-77 TO 10TH ST.	19,40,41	3	MD	2.67	55.5											44	3	23	6					9,850 1	14.100	14.110	9.080	28,220	9,080	76	9,850	488	35	62
	I-277 JOHN BELK		7-12,15-		1		-														·					-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										1
2	FREEWAY INNER LOOP	FROM 10TH ST TO I-77	19,40,41,42	2 3	MD	2.67	51.9		650	150	300		750					48	4	14	3					9,300 1	14,500	14,250	8,050	28,750	8,050	69	9,300	488	50	10
		I-277 INNER LOOP TO I-77																																		
4	RAMP TO I-77 SOUTH	SOUTH	27	1	MD	0.19	21.6																						<u>. </u>	<u> </u>		<u> </u>	'			
1 _ 1		I-277 INNER LOOP TO I-77																										ļ	, '	i		, !	1 '			
	RAMP TO I-77 NORTH	NORTH SPEEDOM TO L 377	17,27	1	MD	0.1	22.5																				\longrightarrow				<u> </u>		'	++		
_c '		FROM FREEDOM TO I-277	27	1	MD	0.17	16																					ļ	,	i		, ,	1 '			
0	DR 7A RAMP TO I-77	OUTER LOOP FROM I-277 OUTER LOOP	21	1	IVID	0.17	10																				\longrightarrow	\longrightarrow	'		\vdash			+		+
7	NORTH	TO I-77 NORTH	27	1	MD	0.15	16.9																					ļ	,	i		, ,	1 '			
	NORTH	FROM I-77 NORTH TO I-277			IVID	0.15	10.5																					\longrightarrow			\vdash	,——		++		+
	11	OUTER LOOP	27,29	1	MD	0.13	15.5																					300	, '	300		, !	1 '			
	TOTAL FO	DR MAP NO. 7	, -			0.28																						300	,	300		,	· ·			1
		FROM I-77 SOUTH TO I-277																											,			,	· ·			1
8 F	RAMPS TO I-277 OUTER	OUTER	27	1	MD	0.08	15																					ļ	, '	i		, !	1 '			
		FROM I-77 NORTH TO I-277																											,			,	i			1
10	RAMP TO I-277 INNER	INNER US 74 W.	27	1	MD	0.018	22																					ļ	, '	i		, !	1 '			
		FROM I-277 OUTER TO																										1	1	1		,	1			T
11	RAMP TO CARSON BV	CARSON BV	14,20,28	2	MD	0.18	31.6															1				204	962	962	└─ ─'	1,924	<u> </u>		204	25	5	5
		FROM HILL ST TO I-277																											, '	1		, !	1 '			
12	RAMP TO I-277 INNER	INNER	28	1	MD	0.1	26.5													-							517	517	'	1,034	\vdash		<u>'</u>	\vdash		4
12	DAME TO LOTT OUTED	FROM W. MOREHEAD ST TO		1	MD	0.13	21																				100	100	, '	i		, !	1 '			
13	RAMP TO I-277 OUTER	I-277 OUTER FROM CALDWELL ST TO I-	25-27	1	MD	0.12	21				-		-													+	188	188	'		\vdash	\vdash		++		+-
14	RAMP TO I-277 INNER	277 INNER	27,35,36	1	MD	0.27	33.5														3					323	1,407	1.407	115	2,814	115	, !	323	25	5	10
		FROM I-277 OUTER LOOP				0.2.															-															1
15	RAMP TO COLLEGE ST	TO COLLEGE ST	21,22,33	1	MD	0.12	22			200																	644	644	,	1,288		, ,	1 '			
		FROM I-277 INNER LOOP TO																											,			,	i			
16 F	RAMP TO CALDWELL ST	CALDWELL ST	27	2	MD	0.14	44												1	3		9	6	1		123	735	735	123	1,470	376	20	123	30	10	5
20	RAMP TO CALDWELL	FROM I-277 OUTER LOOP																											,	i		,	· ·			
17	ST/SOUTH BV	TO CALDWELL ST	27	2	MD	0.14	36.7													10		5				272	714	714	166	1,428	166	15	272	15	7	5
S S	RAMP TO STONEWALL	FROM I-277 INNER LOOP TO																										ļ	,	i		, ,	1 '			
18	ST	STONEWALL ST	27,34,35	2	MD	0.17	39.6												3	3		3				222	888	888	582	1,776	582	9	222	45	10	10
		FROM SOUTH BV TO I-277																										ļ	, '	i		, !	1 '			
19	RAMP TO I-277 OUTER	OUTER	27,28	1	MD	0.21	22.6														3					284	1,116	1,116	<u>'</u>	2,232		3	284	20	5	5
		COLLECTOR RAMP FOR																										ļ	,	i		, ,	1 '			
20	I-277 OUTER LOOP	MOREHEAD ST COLLEGE ST	44.20			0.5	27.0											42	2	-						F72	2 440	2.440	1 4 042	4.000	4.042	20		65	0	_
20	COLLECTOR RAMP	AND CALDWELL ST	14,29	- 2	MD	0.5	37.9				-		-					12	3	5						572	2,449	2,449	1,843	4,898	1,843	20	572	65	8	- 5
21	RAMP TO I-277 INNER	FROM E. STONEWALL ST TO I-277 INNER	33	1	MD	0.13	22																				707	707	,	1,414		, ,	1 '			
21	NAIVIF TO 1-277 INNER	FROM 4TH ST TO I-277	33	1	IVID	0.13	22																				707	707		1,414	\vdash			+		+-
22	RAMP TO I-277 INNER	INNER	28,21	1	MD	0.09	20.5	100				300		28	12	3	4										469	469	, '	938		, !	1 '			
	-	FROM I-277 INNER TO 4TH														-													,			,	· ·			1
23	RAMP TO 4TH ST	ST	37-39	2	MD	0.1	31.5									3						4					521	521	, '	1,042		4	1 '			
		FROM 4TH ST TO I-277																											_ 	1			_ 			
24	RAMP TO I-277 OUTER	OUTER LOOP	27	1	MD	0.08	15.5		ļ	ļ																	419	419	, <u>'</u>	838	<u> </u>		·'	<u> </u>		\perp
		FROM I-277 OUTER TO E.				1		1						1	Ţ	Ţ		1		Ţ	T	I		Γ				Ţ	7 	1 .	1 7	, Τ	1	1		
	RAMP TO E. 3RD ST	3RD ST	14,28	2	MD	0.31	34.2	1	ļ	ļ					ļ			12		3			3		3	503	1,630	1,630	· · · · · · · · ·	3,260	\vdash	21	503	20	5	
		FROM KENILWORTH AVE TO			1.							1																	i i	1		ļ	1			
26	LOOP	I-277 OUTER LOOP	28	1	MD	0.09	22.5	1	 	 		1	1					1								\longrightarrow	484	484		968	\vdash		<u> </u>	\longrightarrow		+-
	RAMP TO KENILWORTH	FROM I-277 OUTER TO	20.24	3	145	0.22	50.5	1										1		9		3	7			420	1110	1.140	1 200	2 200	1 200	10	420	30	-	
27	AVE	KENILWORTH AVE FROM I-277 INNER TO E.	28,31	3	MD	0.22	56.5	1	+	+	-	1	1	+ +			-	1		9		3	/	+		420	1,140	1,140	1,289	2,280	1,289	19	420	30	5	!
28	RAMP TO E. 6TH ST	6TH ST	23,27	1	MD	0.1	23.5					1														160	1	J	i i	1		ļ	160	8	5	
		FROM I-277 INNER LOOP TO		1	1	 		1	1	1					<u> </u>			1									-+	\rightarrow				,		+ + + + + + + + + + + + + + + + + + + +	-	1
29	RAMP TO US74 EAST	US74 EAST	27	1	MD	0.27	25.8	1										1								356	1,423	1,423	i i	2,846		, ,	356	15	5	
		FROM US74 WEST TO I-277						Ī										Ī											- 1							
30	RAMP TO I-277 OUTER	OUTER	27,32	1	MD	0.22	23.1					1														337	1,348	1,348	·	1,696		ļ	337	15	5	
	31A RAMP TO I-277	FROM E. 5TH ST TO 1277				1		1					1		Ī			1		T	1			T		T	T	一丁	— - 7	1		, 7	 			
31	OUTER	OUTER OFF RAMP	27	1	MD	0.28	24.8		ļ	ļ											5					380			·		<u> </u>	5	380	25	5	
		FROM I-277 OUTER LOOP				1		1										1										J	i i	I		, ,	i			1
"	"	TO US74 EAST	27,30	2	MD		35.9		ļ	ļ	ļ																	973	266	1,946	266		377	25	5	4
$\perp \perp \perp$	TOTAL FO	R MAP NO. 31		4		0.46		1	ļ	ļ		1	1		ļ			1			5					757	973	973	266	1,946	266	5	757	50	10	
22	DAME TO LOTE INDICE	FROM US74 WEST TO I-277		2	8.45		245	1										1								642	2 122	2 422	450	4.354	450	,		32	5	
32	RAMP TO I-277 INNER	INNER	24,27	1 2	MD	0.4	34.5	1	1	1	1		<u> </u>	1		ļ	<u> </u>	1								643	2,122	2,132	458	4,254	458		634	32	5	+
									1			300	750	28					14		20												'	++	175	24
	GRAND TOTA					10.598		100	CE-2	350					4.2	6	4	116		70		25	16	4	3	24,326 4	10 450	40 525	21 072	07.000	22 22-	261	24,317	1,371		