

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5001AB	1	8
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41154.3.ST1	STM-040-5(52)349		

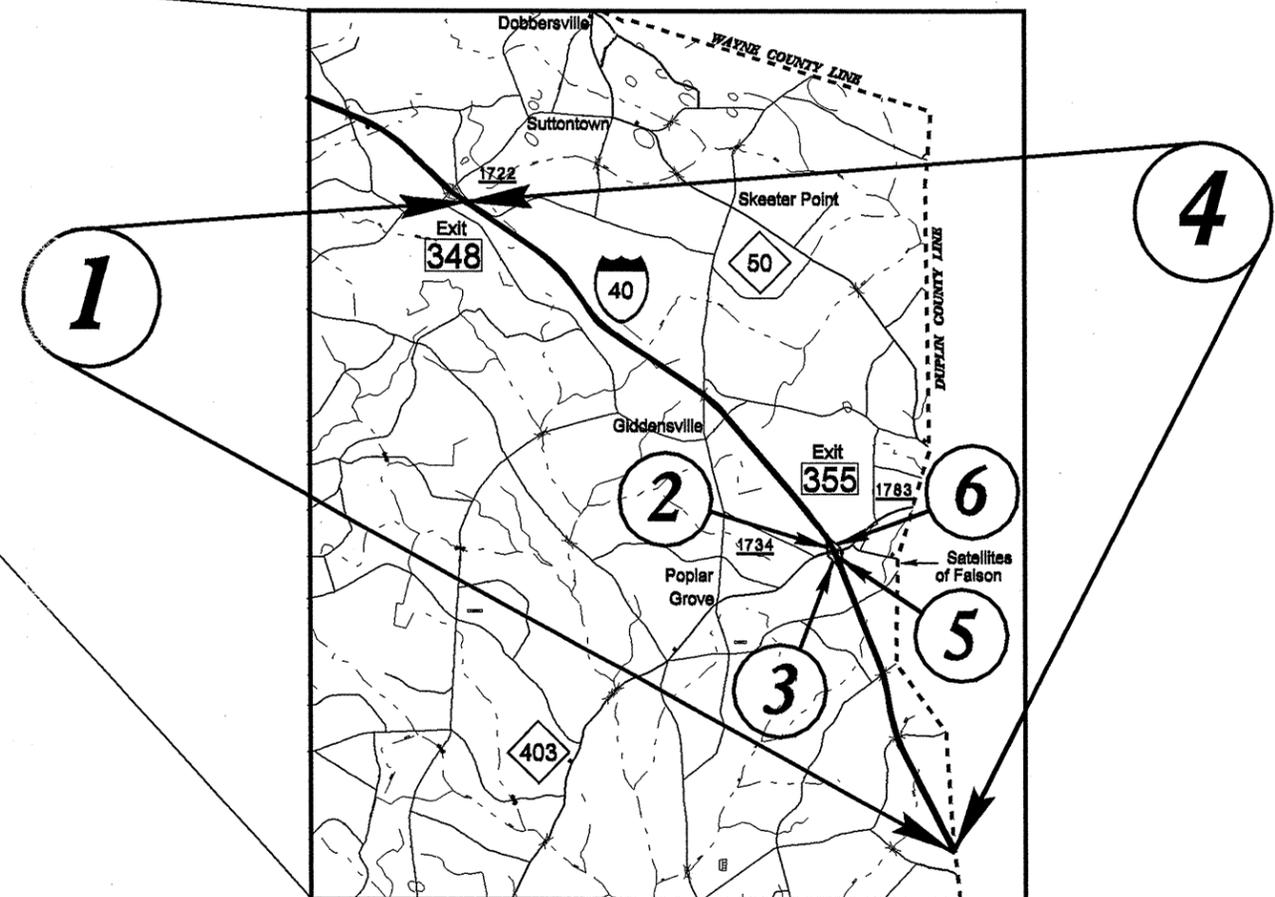
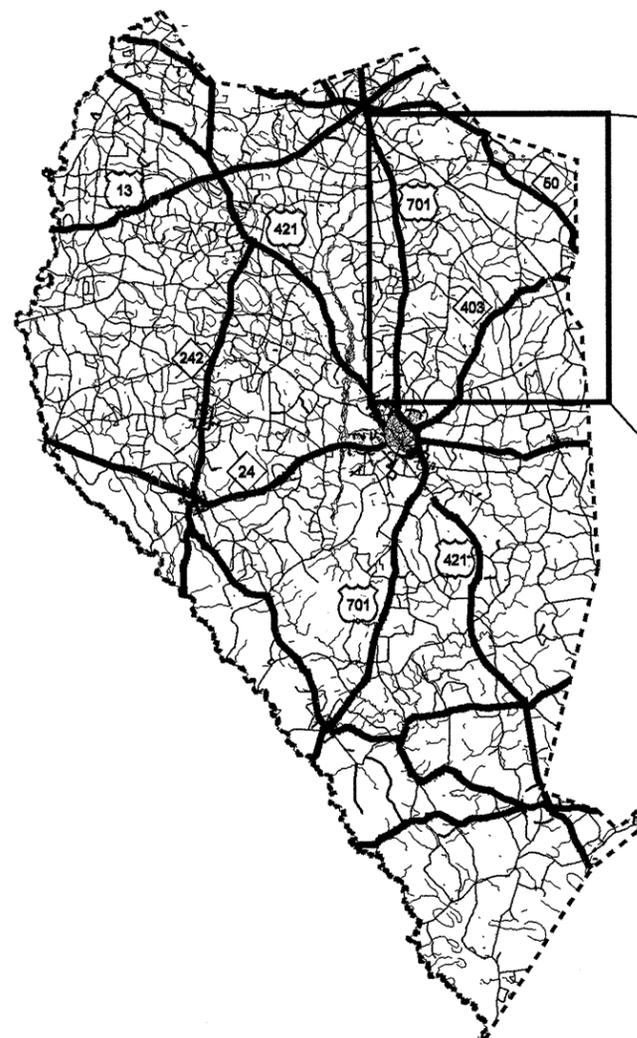
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SAMPSON COUNTY

LOCATION: I-40 FROM MP 348.53
TO MP 359.90 (DUPLIN CO. LINE)

I-40 FROM MP 359.90 (SAMPSON
CO. LINE) TO MP 369.41

TYPE OF WORK: RESURFACING, MILLING, RUMBLE STRIPS,
POLYUREA PAVEMENT MARKINGS AND
PAVEMENT MARKERS, ETC



NOT TO SCALE

TIP PROJECT: I-5001AB

CONTRACT: C202284

05-MAR-2009 10:46 s:\contracts\resurfacing projects\division 3\i-500\revised plans\4154\i-40_a.mp 348.53 to 369.41_tsh.dgn \$\$\$USERNAME\$\$\$

GRAPHIC SCALES

PLANS
PROFILE (HORIZONTAL)
PROFILE (VERTICAL)

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT I-5001AB

MAP NO.1 & MAP NO.4 = 11.37 MI.
MAP NO.7 & MAP NO.10 = 9.51 MI.
TOTAL LENGTH OF TIP PROJECT I-5001AAB
(EXCLUDING RAMPS) = 20.88 MI.

Prepared In the Office of:
DIVISION OF HIGHWAYS
124 Division Dr., Wilmington, NC 28401

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE:
APRIL 21, 2009

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN
TECHNICIAN
DNL

SIGNATURE: _____

SIGNATURE: _____

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROFESSIONAL
SEAL
20224
ENGINEER
CHARLES A. SCHOONHOVEN

DIVISION DESIGN ENGINEER

05-MAR-2009 10:42
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09/08/99

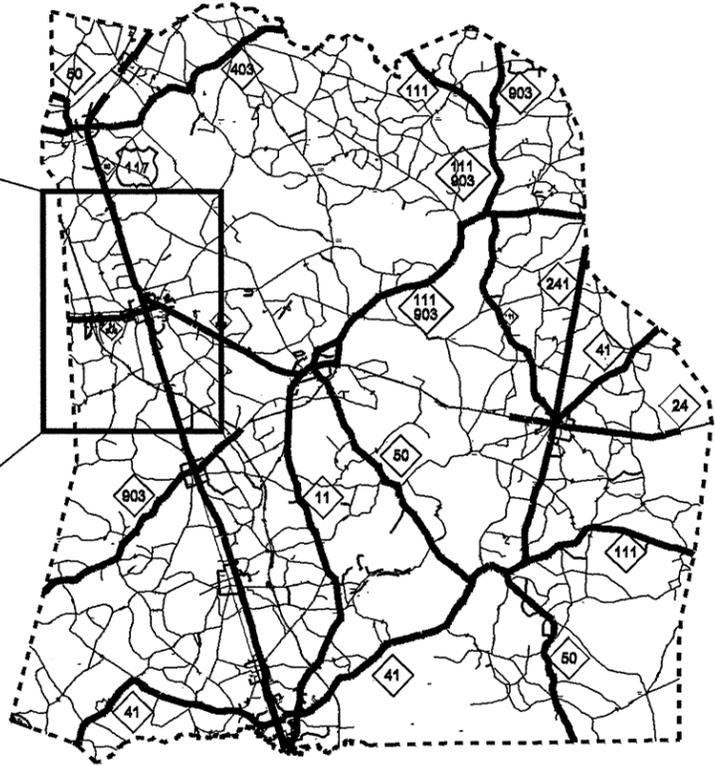
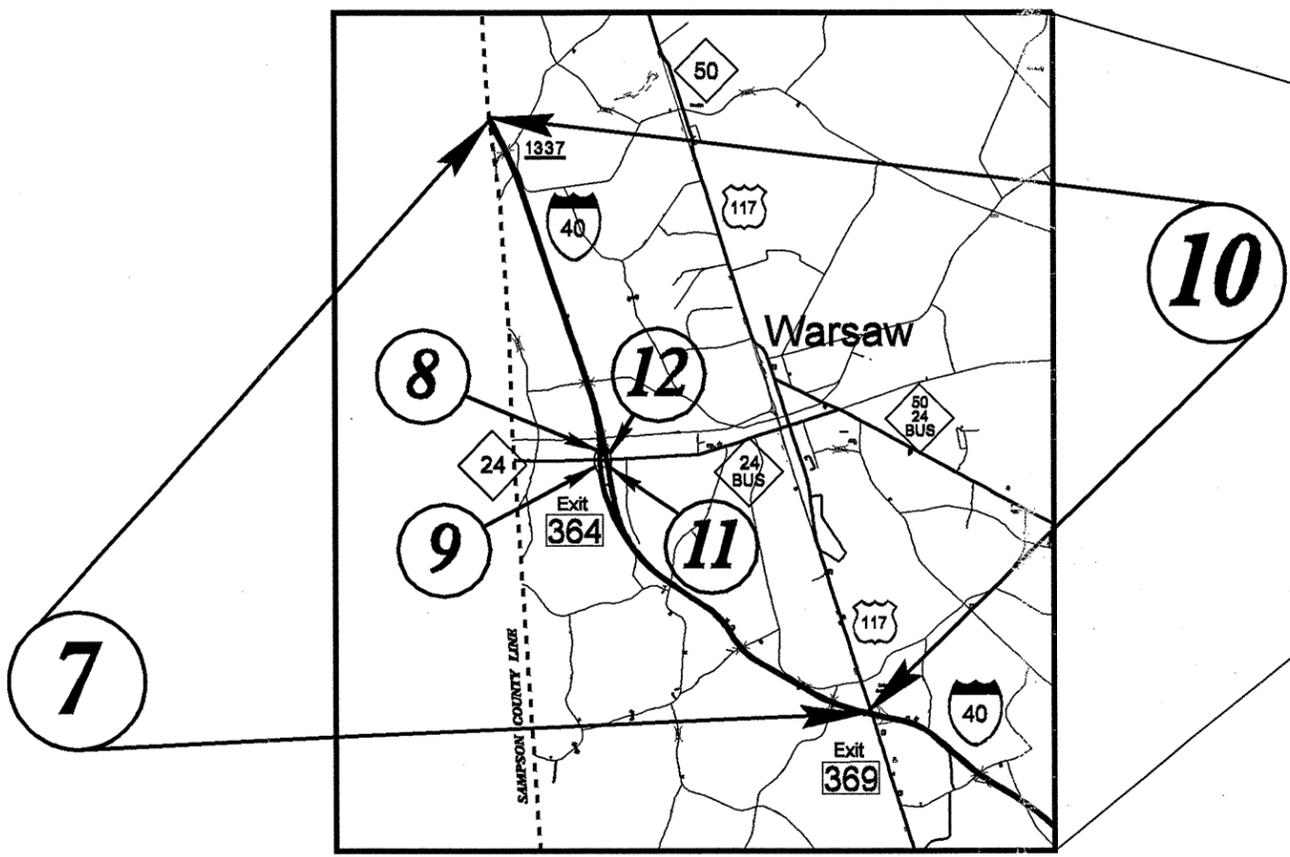
TIP PROJECT: I-500IAB

CONTRACT: C202284

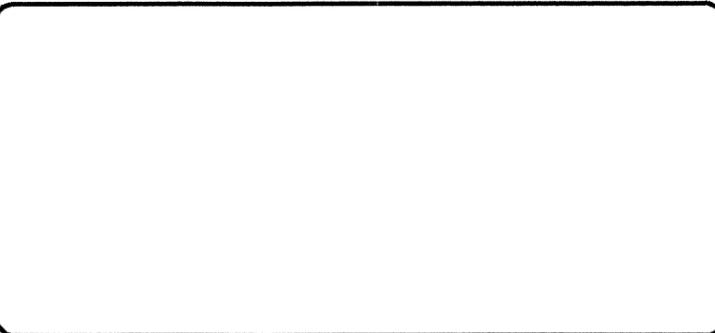
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

DUPLIN COUNTY

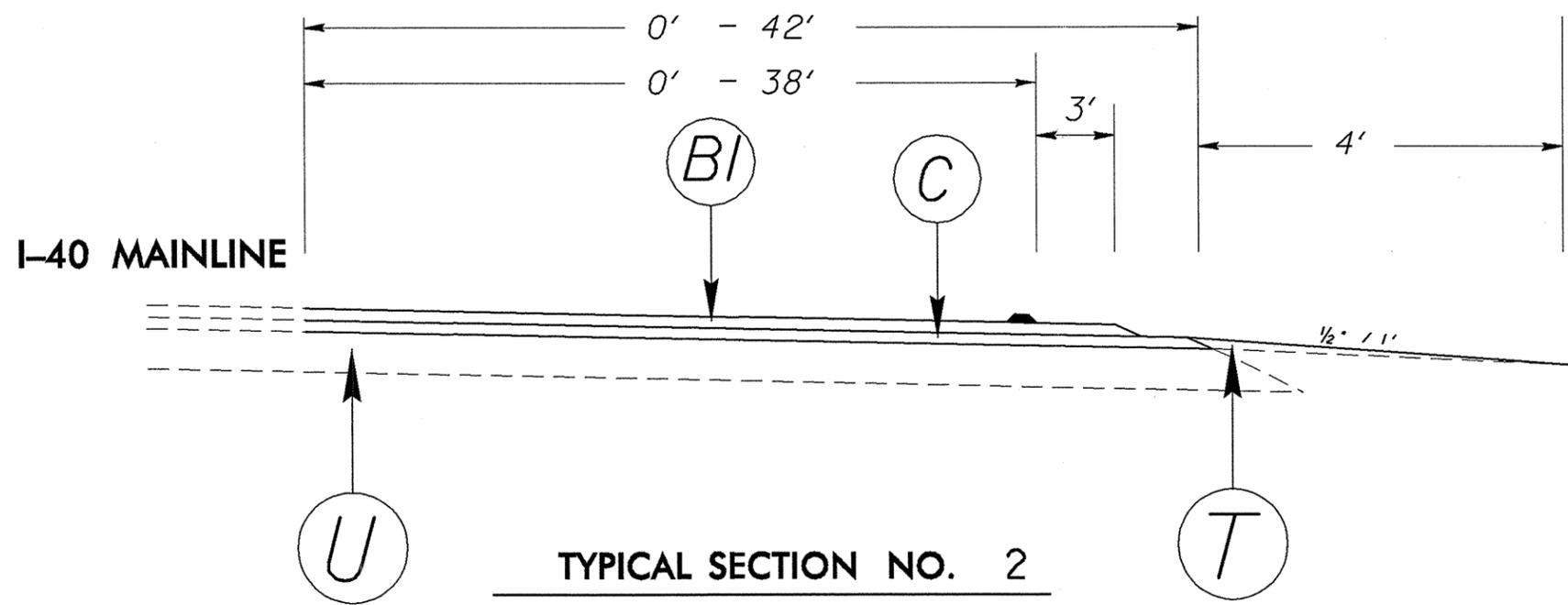
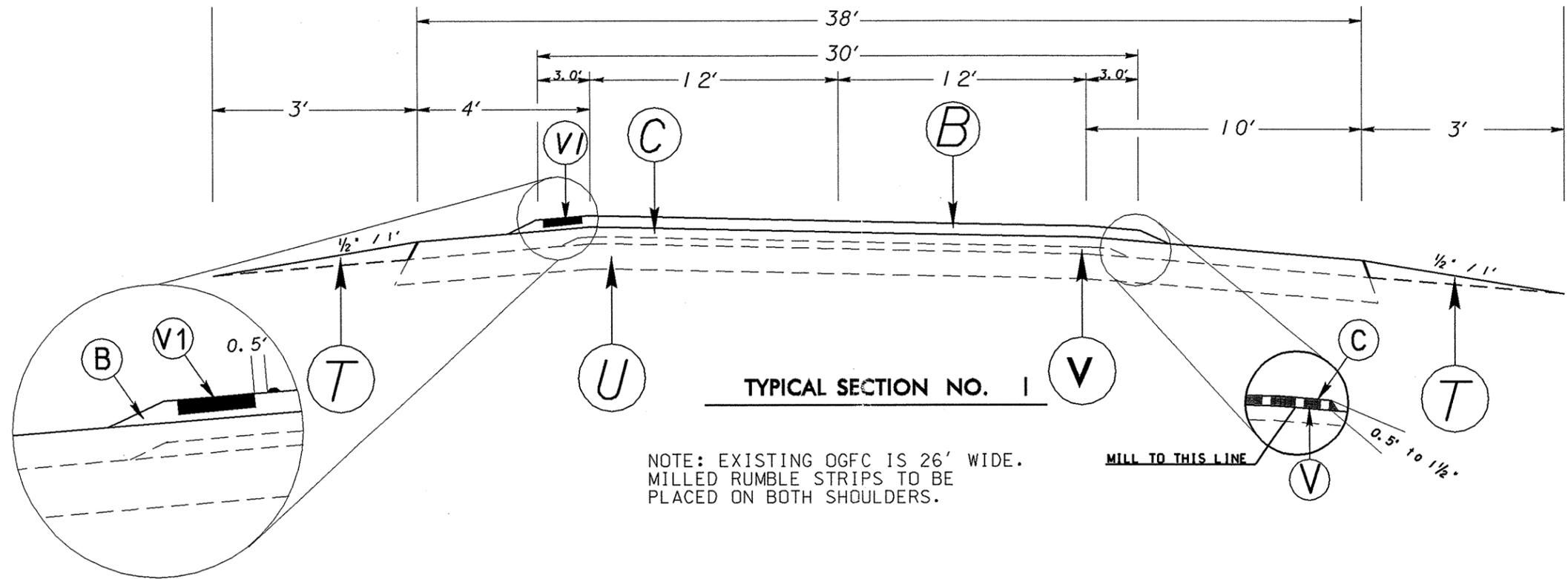
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-500IAB	2	8
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41154.3.STI	STM-040-5(52)349		



NOT TO SCALE



PROJECT REFERENCE NO. I-500IAB	SHEET NO. 3 OF 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

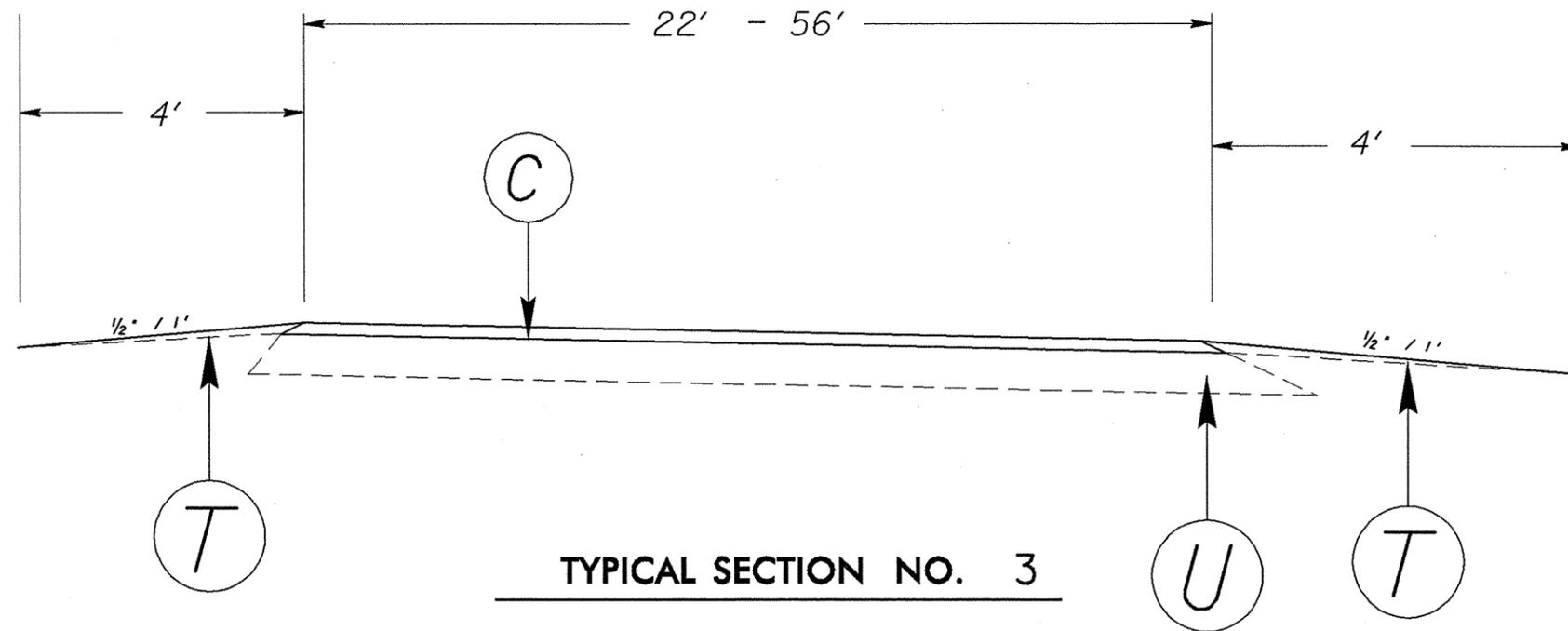


PAVEMENT SCHEDULE	
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
B1	PROP. APPROX. 5/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-1 MODIFIED, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLED RUMBLE STRIP
V2	MILLING ASPHALT PAVEMENT 4 1/2"
W	WEDGING (SURFACE MIX)

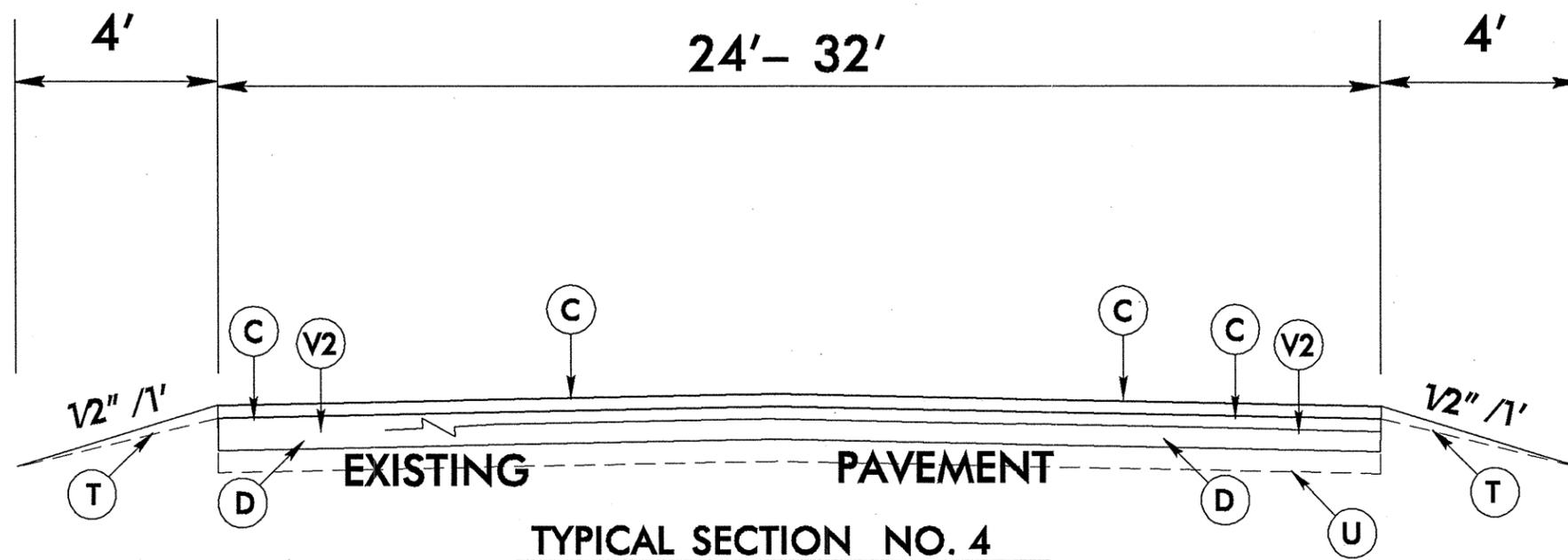
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27-FEB-2009 08:14:001 revised plans\1154.1.1 I-40-a.mp 348.53 to 369.41-tsh.dgn

PROJECT REFERENCE NO. 1-5001AB	SHEET NO. 4 OF 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4

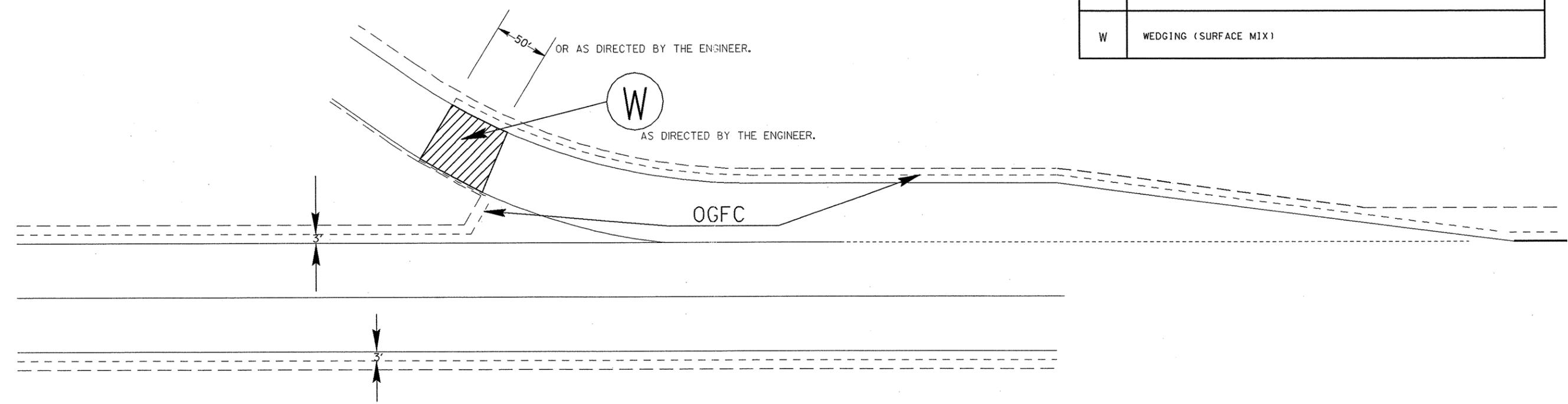
PAVEMENT SCHEDULE	
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
B1	PROP. APPROX. 5/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-1 MODIFIED, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLED RUMBLE STRIP
V2	MILLING ASPHALT PAVEMENT 4 1/2"
W	WEDGING (SURFACE MIX)

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PROJECT REFERENCE NO. 1-5001AB	SHEET NO. 5 OF 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

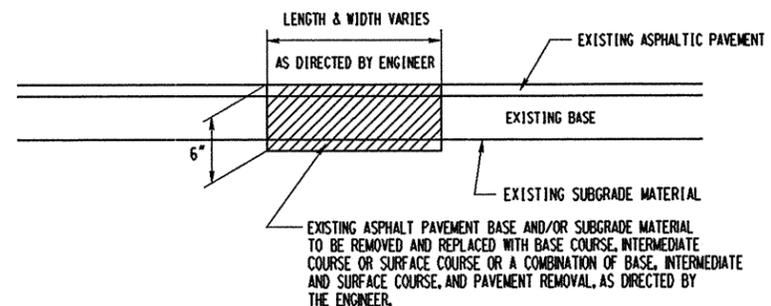
PAVEMENT SCHEDULE	
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
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V1	MILLED RUMBLE STRIP
V2	MILLING ASPHALT PAVEMENT 4 1/2"
W	WEDGING (SURFACE MIX)



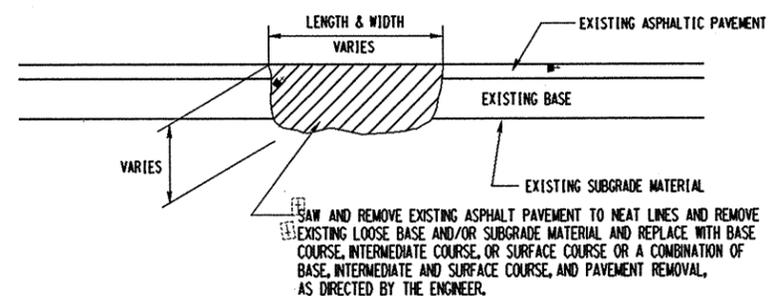
PAVING LIMITS FOR OGFC AT EXIT AND ENTRANCE RAMPS

PROJECT REFERENCE NO. I-500IAB	SHEET NO. 6 OF 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

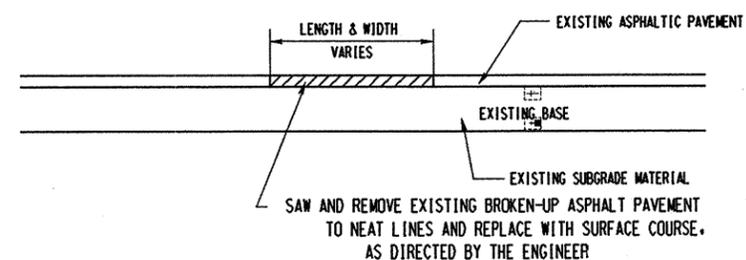
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



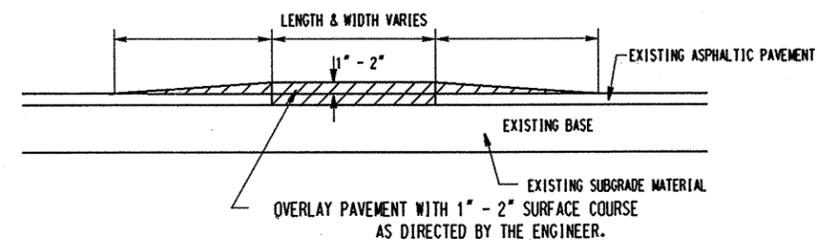
DETAIL NO. 1



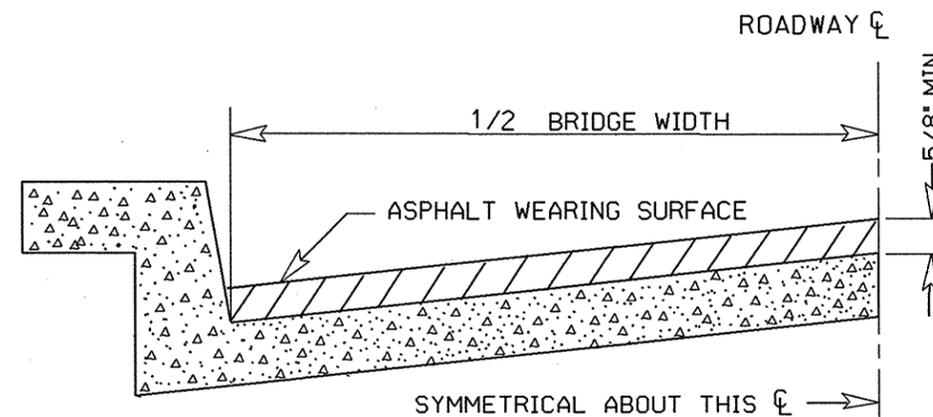
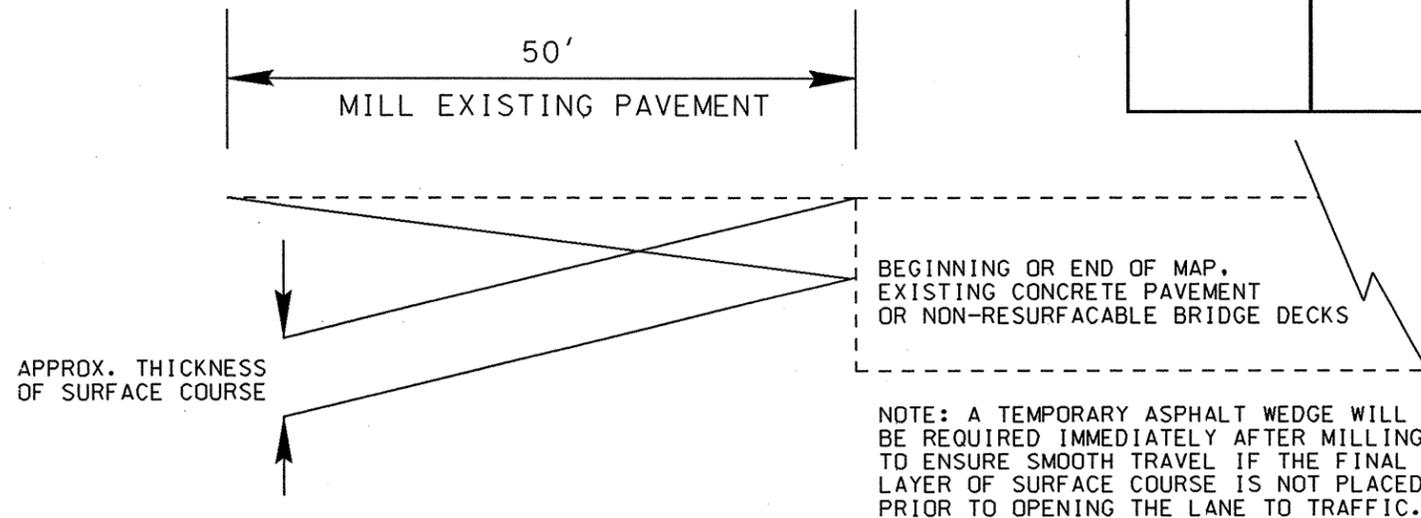
DETAIL NO. 2



DETAIL NO. 3



DETAIL NO. 4



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5001AB	7	8
41154.3.ST1		

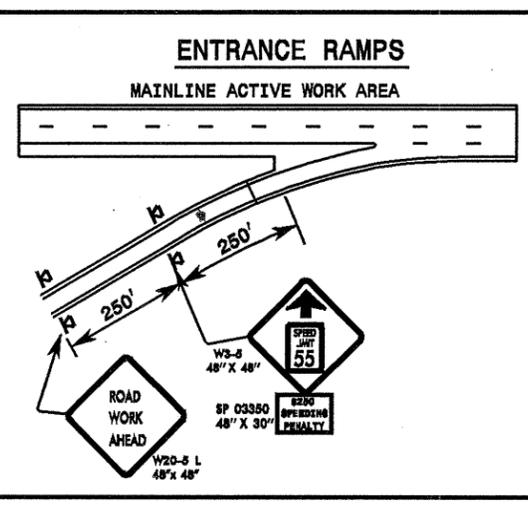
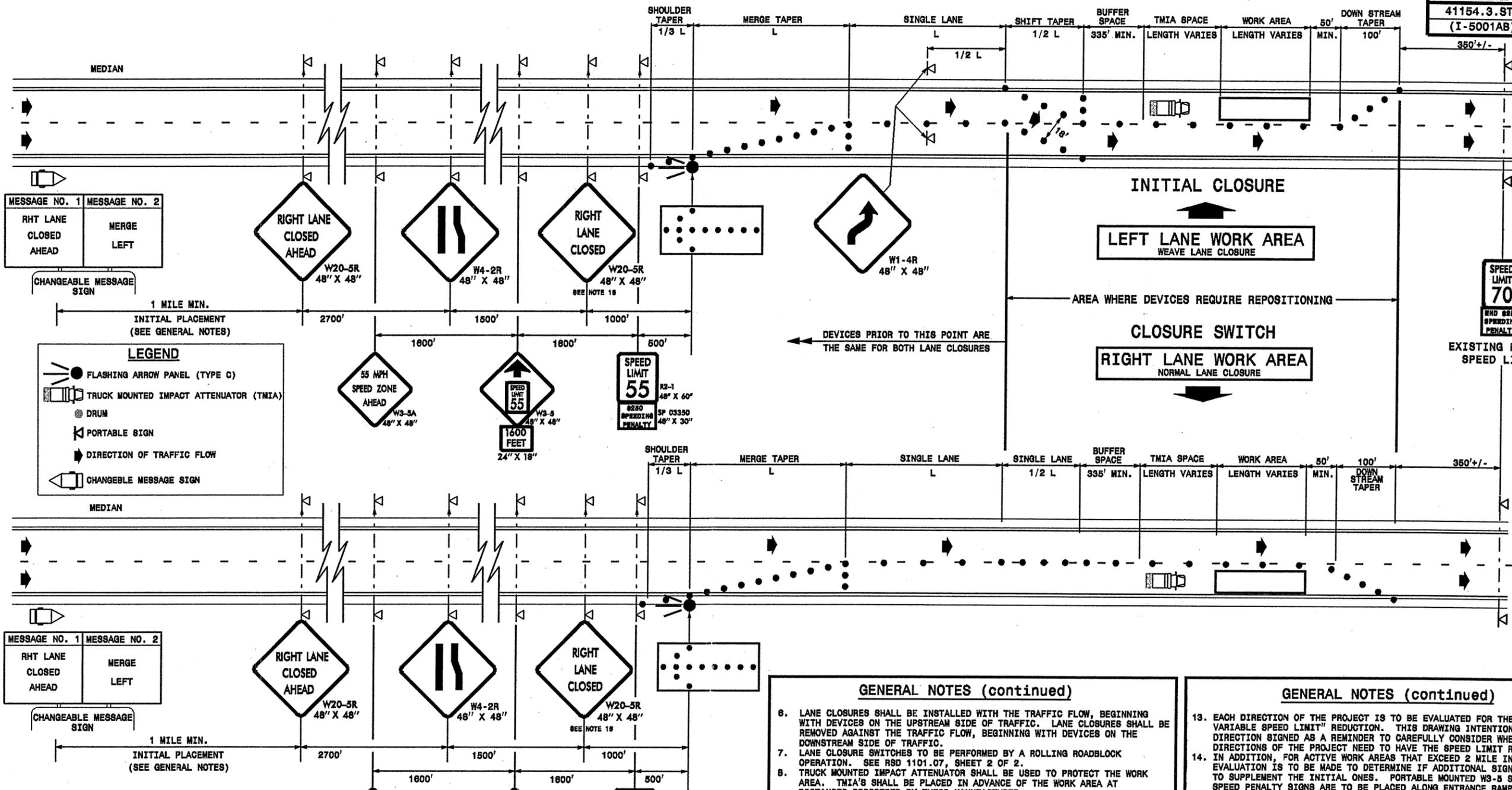
SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	LENGTH	WIDTH	BORROW EXC.	INC. STONE BASE	SHOULDER RECON.	4.5" MILLING	1/2" TO 1 1/4" MILLING	INC. MILLING	INT. COURSE, I19.0C	SURFACE COURSE, S12.5C	PG 64-22 PLANT MIX	PG 70-22 PLANT MIX	PG 76-22 PLANT MIX	OGFC, FC-1 MODIFIED	OGFC, FC-2 MODIFIED	PATCHING (MILL)	PATCHING (FULL DEPTH)	MILLED RUMBLE STRIPS	WEDGING	ADJ. DROP INLET	ADD'L GR POSTS	GR ANCHOR UNITS, TYPE 350 EA	GR ANCHOR UNITS, TYPE B-77 EA	REMOVE & RESET EXIST. GR	REPAIR STEEL BEAM GR	TEMP. SILT FENCE	TEMP MULCHING	SEED FOR TEMP SEEDING	MATTING (EROSION CONTROL)	SEED & MULCHING	INDUCTIVE LOOP						
NO		NO			NO	MI	FT	CY	TONS	SMI	SY	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TON	TONS	LF	TONS	EA	EA	EA	EA	LF	LF	LF	AC	LBS	SY	AC	LF						
I-5001AB	Sampson	1	I-40 EB	MP 348.53 (JOINT) TO MP 359.90 (DUPLIN CO. LINE)	1	11.37	38	4343		22.74		173430	1900		32791		1738	645			10,395	355	36	120,067			10	2	2	200	200	1,137	11	284	100	17.06						
		2	EXIT RAMP TO NC 403	EXIT 355, EXIT RAMP TAPER (0'-42')	2	0.12	21								192		10	3	60																							
			TOTAL FOR MAP NO. 2	EXIT 355, EXIT RAMP FULL WIDTH	3	0.22	22	112	150	0.44					368		20	3	60					3														0.33				
		3	ENTRANCE RAMP FROM NC 403	EXIT 355, ENTRANCE RAMP FULL WIDTH	3	0.28	22	143	150	0.56					469		25							3															0.42			
			TOTAL FOR MAP NO. 3	EXIT 355, ENTRANCE RAMP TAPER (0'-42')	2	0.2	21								320		17	6	99					3															0.42			
		4	I-40 WB	MP 359.90 (DUPLIN CO. LINE) TO MP 348.53 (JOINT)	1	11.37	38	4343		22.74		173430	1900		32791		1738	645			10,395	390	39	120,067		1	10	2	2	200	200	1,137	11	284	100	17.06						
		5	EXIT RAMP TO NC 403	EXIT 355, EXIT RAMP TAPER (0'-42')	2	0.12	21								192		10	3	60																							
			TOTAL FOR MAP NO. 5	EXIT 355, EXIT RAMP FULL WIDTH	3	0.24	22	122	150	0.48					402		21	3	60					3															0.36			
		6	ENTRANCE RAMP (TAPER)	EXIT 355, ENTRANCE RAMP TAPER (0'-42')	2	0.23	21								368		19	7	114					3																0.35		
			TOTAL FOR MAP NO. 6	EXIT 355, ENTRANCE RAMP FULL WIDTH	3	0.23	22	117	150	0.46					385		20	7	114					3																0.35		
	Duplin	7	I-40 EB	MP 359.90 (SAMPSON CO. LINE) TO MP 369.41	1	9.51	38	3633		19.02		145059	1056		27427		1454	539			8,695	415	42	100,426			10	2	2	200	200	951	10	238	100	14.27						
		8	EXIT RAMP TO NC 24 BUS.	EXIT 364, EXIT RAMP TAPER (0'-42')	2	0.17	21								272		14	5	85																							
			TOTAL FOR MAP NO. 8	EXIT 364, EXIT RAMP FULL WIDTH	3	0.09	22	46	150	0.18					151		8							3																0.14		
			TOTAL FOR MAP NO. 8	EXIT 364, EXIT RAMP CHANNELIZATION TAPER (22'-32')	4	0.06	27	31		0.12	950				150	246	7	13																						0.09		
			TOTAL FOR MAP NO. 8	EXIT 364, EXIT RAMP CHANNELIZATION FULL WIDTH (32')	4	0.04	32	20		0.08	751				118	194	6	10																					0.06	350		
			TOTAL FOR MAP NO. 8	EXIT 364, ENTRANCE RAMP FULL WIDTH	3	0.36	97	150	0.38	1701					268	863	13	45	5	85				3															0.29	350		
		9	ENTRANCE RAMP FROM NC 24 BUS.	EXIT 364, ENTRANCE RAMP TAPER (0'-42')	2	0.2	22	102	150	0.4					335		18							3																0.30		
			TOTAL FOR MAP NO. 9	EXIT 364, ENTRANCE RAMP TAPER (0'-42')	2	0.25	21								400		21	7	124					3																0.30		
			TOTAL FOR MAP NO. 9	EXIT 364, ENTRANCE RAMP TAPER (0'-42')	2	0.45	102	150	0.4						735		39	7	124					3																	0.30	
		10	I-40 WB	MP 369.41 TO MP 359.90 (SAMPSON CO. LINE)	1	9.51	38	3633		19.02		145059	1056		27427		1454	539			8,695	760	76	100,426			10	2	2	200	200	951	10	238	100	14.27						
		11	EXIT RAMP TO NC 24 BUS.	EXIT 364, EXIT RAMP TAPER (0'-42')	2	0.12	21								192		10	3	60																							
			TOTAL FOR MAP NO. 11	EXIT 364, EXIT RAMP FULL WIDTH	3	0.12	22	61	150	0.24					201		11							3																0.18		
			TOTAL FOR MAP NO. 11	EXIT 364, EXIT RAMP CHANNELIZATION TAPER (22'-32')	3	0.05	27	25		0.1					103		5																							0.08		
			TOTAL FOR MAP NO. 11	EXIT 364, EXIT RAMP CHANNELIZATION FULL WIDTH (32')	3	0.04	32	20		0.08					97		5																							0.06		
			TOTAL FOR MAP NO. 11	EXIT 364, ENTRANCE RAMP FULL WIDTH	3	0.33	106	150	0.42						593		31	3	60					3																0.32		
		12	ENTRANCE RAMP FROM NC 24 BUS.	EXIT 364, ENTRANCE RAMP TAPER (0'-42')	2	0.23	21								368		19	7	114					3																0.41		
			TOTAL FOR MAP NO. 12	EXIT 364, ENTRANCE RAMP TAPER (0'-42')	2	0.5	137	150	0.54						820		43	7	114					3																0.41		
			TOTAL FOR PROJ NO. 41154.1.1 1A			45.04		16,888	1,200	87.2	1,701	636,978	5,912	268	126,143	13	6,684	2,409	716	38,180	1,920	193	440,986	24	1	40	8	8	800	800	4,176	42	1,044	400	65.44	350						
			GRAND TOTAL			45.04		16,888	1,200	87.2	1,701	636,978	5,912	268	126,143	13	6,684	2,409	716	38,180	1,920	193	440,986	24	1	40	8	8	800	800	4,176	42	1,044	400	65.44	350						

PROJECT NO.	SHEET NO.	TOTAL NO.
I-5001AB	8	8
41154.3.ST1		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-N	4420000000-N	4480000000-N	4810000000-E		4820000000-E	4835000000-E	4845000000-N		4847100000-E		4847120000-E	4710000000-E	4721000000-E	4725000000-N				4895000000-N	4650000000-N	4905000000-N		
					FLASHING ARROW PANELS, TYPE C	CHANGEABLE MESSAGE SIGNS	TMIA	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	24" WHITE PAINT	PAINT LT ARROW	PAINT RT ARROW	6" WHITE POLYUREA	6" YELLOW POLYUREA	12" WHITE POLYUREA	24" WHITE THERMO	THERMO MSG STOP	THERMO STR ARROW	THERMO LT ARROW	THERMO RT ARROW	MARKERS FOR SHOULDER DRAINS	TEMPORARY PAVEMENT MARKERS (C/R)	SNOW PLOWABLE MARKERS (C/R)			
EA	EA	EA	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA			
I-5001AB	Sampson	1	I-40 EB	MP 348.53 (JOINT) TO MP 359.90 (DUPLIN CO. LINE)	1	1	1	150.084	119.385	2,558						75.042	60.034	1,285					71	1,501	750		
		2	EXIT RAMP TO NC 403	EXIT 355, EXIT RAMP TAPER (0'-42')													300							15	15		
		"	"	EXIT 355, EXIT RAMP FULL WIDTH												1,452	1,162	100	50						29		
			TOTAL FOR MAP NO. 2													1,452	1,162	400	50						15	44	
		3	ENTRANCE RAMP FROM NC 403	EXIT 355, ENTRANCE RAMP FULL WIDTH												1,848	1,478	100							37		
		"	"	EXIT 355, ENTRANCE RAMP TAPER (0'-42')													300		3	3				15	15		
			TOTAL FOR MAP NO. 3													1,848	1,478	400		3	3				15	52	
		4	I-40 WB	MP 359.90 (DUPLIN CO. LINE) TO MP 348.53 (JOINT)				150.084	119.385	2,558						75.042	60.034	1,285					52	1,501	750		
		5	EXIT RAMP TO NC 403	EXIT 355, EXIT RAMP TAPER (0'-42')													300							15	15		
		"	"	EXIT 355, EXIT RAMP FULL WIDTH												1,584	1,267	100	50						32		
			TOTAL FOR MAP NO. 5													1,584	1,267	400	50						15	47	
		6	ENTRANCE RAMP (TAPER)	EXIT 355, ENTRANCE RAMP TAPER (0'-42')														300			3				15	15	
		"	"	EXIT 355, ENTRANCE RAMP FULL WIDTH													1,518	1,214	100						30		
			TOTAL FOR MAP NO. 6														1,518	1,214	400			3				15	45
	Duplin	7	I-40 EB	MP 359.90 (SAMPSON CO. LINE) TO MP 369.41	1	1	1	125.532	99.855	2,140						62,766	50,213	1,075					18	1,255	628		
		8	EXIT RAMP TO NC 24 BUS.	EXIT 364, EXIT RAMP TAPER (0'-42')														300						15	15		
		"	"	EXIT 364, EXIT RAMP FULL WIDTH												594	475	100							12		
		"	"	EXIT 364, EXIT RAMP CHANNELIZATION TAPER (22'-32')												396	317										
		"	"	EXIT 364, EXIT RAMP CHANNELIZATION FULL WIDTH (32')												50	3	3	422	211	37	50			19		
			TOTAL FOR MAP NO. 8												50	3	3	1,412	1,003	437	50				15	46	
		9	ENTRANCE RAMP FROM NC 24 BUS.	EXIT 364, ENTRANCE RAMP FULL WIDTH												1,320	1,056	100							26		
		"	"	EXIT 364, ENTRANCE RAMP TAPER (0'-42')														300		3	3				15	15	
			TOTAL FOR MAP NO. 9													1,320	1,056	400		3	3				15	41	
		10	I-40 WB	MP 369.41 TO MP 359.90 (SAMPSON CO. LINE)				125.532	100.426	2,140						62,766	50,213	1,075					33	1,255	628		
		11	EXIT RAMP TO NC 24 BUS.	EXIT 364, EXIT RAMP TAPER (0'-42')														300						15	15		
		"	"	EXIT 364, EXIT RAMP FULL WIDTH												792	634	100							16		
		"	"	EXIT 364, EXIT RAMP CHANNELIZATION TAPER (22'-32')												330	264								3		
		"	"	EXIT 364, EXIT RAMP CHANNELIZATION FULL WIDTH (32')												422	211	37	50		5	5			19		
			TOTAL FOR MAP NO. 11													1,544	1,109	437	50		5	5			15	53	
		12	ENTRANCE RAMP FROM NC 24 BUS.	EXIT 364, ENTRANCE RAMP FULL WIDTH												1,782	1,426	100							36		
		"	"	EXIT 364, ENTRANCE RAMP TAPER (0'-42')														300			3				15		
			TOTAL FOR MAP NO. 12													1,782	1,426	400			3				15	51	
			TOTAL FOR PROJ NO. 41154.1.1_1A		2	2	2	551,232	439,051	9,396	50	3	3	288,077	230,208	7,994	200	6	12	8	8	174	5,632	3,136			
			GRAND TOTAL		2	2	2	551,232	439,051	9,396	50	3	3	288,077	230,208	7,994	200	6	12	8	8	174	5,632	3,136			



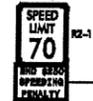
- ### GENERAL NOTES
- WEAVE LANE CLOSURES ARE TO BE USED ONLY ON DIVIDED, CONTROLLED ACCESS ROADWAYS, WITH POSTED SPEED LIMITS OF 55 MPH, OR GREATER.
 - FLASHING ARROW PANELS SHALL BE PLACED ON THE SHOULDER (PAVED OR UNPAVED). THE LOCATION OF THE ARROW PANEL SHALL MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE. LANE CLOSURES SHALL BE EXTENDED IF NEEDED, WITHIN THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE TO THE BEGINNING OF THE LANE CLOSURE OR FLASHING ARROW PANEL IS MET. SEE ROADWAY STANDARD DRAWING (RSD) 1101.11 SHEET 2 FOR STOPPING SIGHT DISTANCE & BUFFER SPACE TABLES.
 - THE MAXIMUM SPACING OF DRUMS IN TAPERS SHALL BE EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE BUFFER SPACE, AND WORK AREA, SHALL BE EQUAL IN FEET TO (2) TIMES THE POSTED SPEED LIMIT.
 - SEE RSD 1101.11-SHEETS 1 & 4, FOR VALUES OF "L", AND SIGN SPACING DISTANCES.
 - SEE RSD 1101.02-SHEETS 6 & 7 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.

- ### GENERAL NOTES (continued)
- LANE CLOSURES SHALL BE INSTALLED WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. LANE CLOSURES SHALL BE REMOVED AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
 - LANE CLOSURE SWITCHES TO BE PERFORMED BY A ROLLING ROADBLOCK OPERATION. SEE RSD 1101.07, SHEET 2 OF 2.
 - TRUCK MOUNTED IMPACT ATTENUATOR SHALL BE USED TO PROTECT THE WORK AREA. TMIA'S SHALL BE PLACED IN ADVANCE OF THE WORK AREA AT DISTANCES SPECIFIED BY THEIR MANUFACTURER.
 - SKINNY DRUMS MAY BE USED IN LIEU OF DRUMS EXCEPT IN TAPERS.
 - CHANGEABLE MESSAGE SIGN SHALL BE PLACED EITHER IN THE MEDIAN, OR ON THE OUTSIDE OF THE TRAVELWAY, AS DIRECTED BY THE ENGINEER. THE SIGN SHOULD INITIALLY BE LOCATED APPROXIMATELY 2 MILES IN ADVANCE OF THE MERGE TAPER. IF IT IS ANTICIPATED THAT TRAFFIC WILL BACK UP TO WHERE THE SIGN IS LOCATED, THE SIGN SHOULD THEN INITIALLY BE PLACED APPROXIMATELY 1 MILE PRIOR TO ANTICIPATED BACKUPS. BACKUPS SHOULD BE MONITORED SUCH THAT FOR FUTURE LANE CLOSURES, THE SIGN IS PLACED APPROXIMATELY 1 MILE PRIOR TO WHERE TRAFFIC IS ANTICIPATED TO BACK UP.
 - CHANGEABLE MESSAGE SIGN MESSAGES OTHER THAN THE ONES SHOWN MAY BE PORTRAYED AS DEEMED NECESSARY BY THE ENGINEER. NO MORE THAN 2 MESSAGE DISPLAYS SHOULD BE USED WITH ANY CYCLE.
 - THIS DRAWING IS INTENDED TO SHOW THE LOCATIONS AND SIGNING REQUIRED FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION ON A FREEWAY WHICH IS TO BE REDUCED FROM 70 MPH TO 55 MPH. REFER TO THE ROADWAY STANDARD DRAWING (RSD) 1101.02 SHEET 3 OF 9 FOR ADDITIONAL LANE CLOSURE REQUIREMENTS AND GENERAL NOTES.

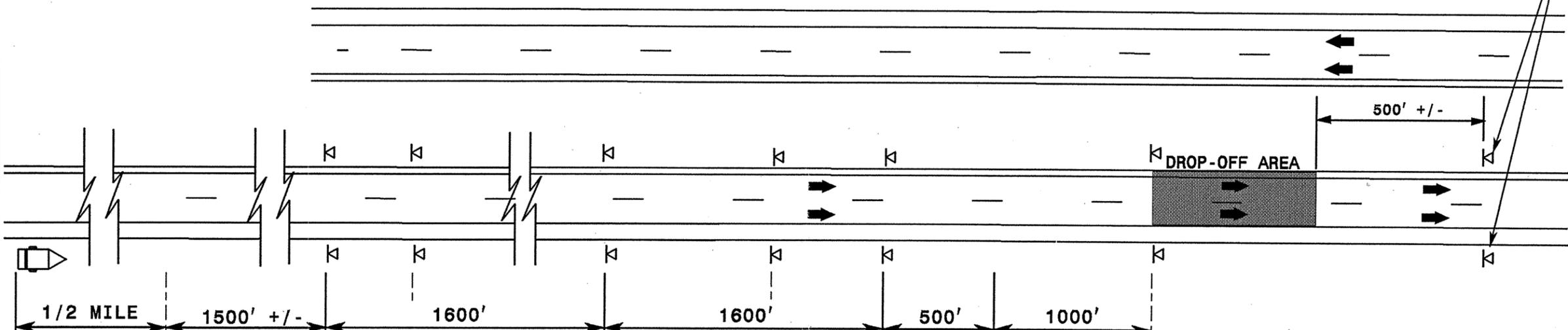
- ### GENERAL NOTES (continued)
- EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
 - IN ADDITION, FOR ACTIVE WORK AREAS THAT EXCEED 2 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEED PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMPS LOCATED WITHIN THE ACTIVE WORK AREA.
 - THE \$250 SPEEDING PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.
 - THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION IS ONLY IN EFFECT WHEN WORKERS ARE PRESENT WHILE A LANE CLOSURE IS IN PLACE OR A GREATER THAN 2' DROP-OFF BETWEEN OPEN LANES OF TRAFFIC EXISTS. THE SPEED LIMIT AND SPEED PENALTY SIGNS ARE TO BE REMOVED WHEN EITHER OF THESE CONDITIONS NO LONGER EXISTS. OTHER PERTINENT SIGNS MAY BE DISPLAYED AT THE DIRECTION OF THE ENGINEER IN COORDINATION WITH THE WORK ZONE TRAFFIC CONTROL UNIT (919-250-4159).
 - AT THE COMPLETION OF THE PROJECT, THE ENGINEER SHALL NOTIFY THE REGIONAL TRAFFIC ENGINEER TO REScind THE ORDINANCE.
 - WHEN "WORK ZONE VARIABLE SPEED LIMIT" REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.
 - IF A LANE CLOSURE REMAINS INSTALLED WHILE WORKERS ARE NOT PRESENT, AN ADVISORY SPEED PLAQUE MAY BE ADDED TO THE LAST "RIGHT LANE CLOSED" SIGN.

APPROVED: _____	DATE: _____	LANE CLOSURE SWITCHES FOR DIVIDED ROADWAYS WITH "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION	
SEAL			
		DATE: 07-07	03-09
		DWG. BY: PS	
		DESIGN BY: CL	
		REVIEWED BY: CL	

10-MAR-2009 15:26
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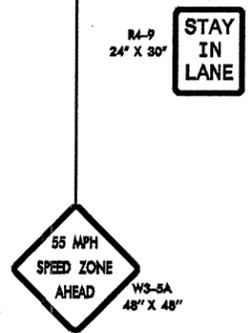


EXISTING POSTED SPEED LIMIT



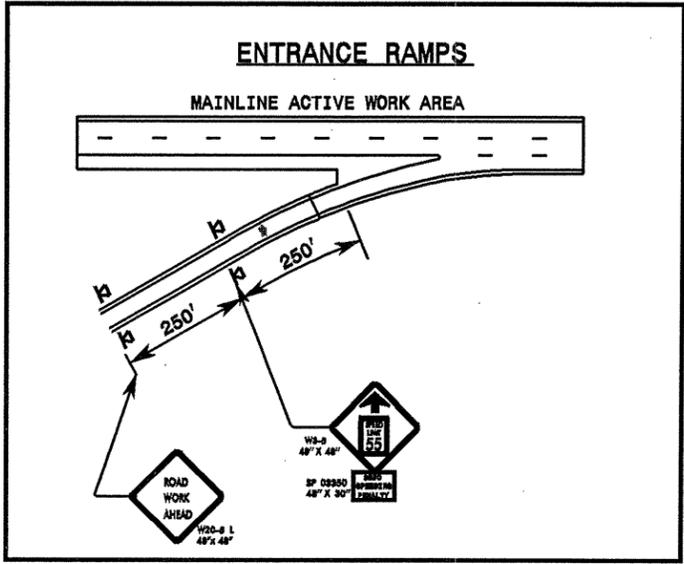
MESSAGE NO. 1	MESSAGE NO. 2
REDUCE SPEED AHEAD	UNEVEN LANES AHEAD

CHANGEABLE MESSAGE SIGN



GENERAL NOTES

1. THIS DRAWING IS INTENDED TO SHOW THE LOCATIONS AND SIGNING REQUIRED FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION ON A FREEWAY WHICH IS TO BE REDUCED FROM 70 MPH TO 55 MPH.
2. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
3. IN ADDITION, FOR DROP-OFF AREAS THAT EXCEED 2 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED WS-5 SIGNS WITH SPEED PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMP LOCATED WITHIN THE ACTIVE WORK AREA.
4. THE \$250 SPEEDING PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.
5. THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION IS ONLY IN EFFECT WHEN WORKERS ARE PRESENT WHILE A LANE CLOSURE IS IN PLACE OR WHEN A GREATER THAN TWO INCH DROP-OFF BETWEEN OPEN LANES OF TRAFFIC EXISTS. THE SPEED LIMIT AND SPEEDING PENALTY SIGNS ARE TO BE REMOVED WHEN NEITHER CONDITIONS EXIST. OTHER PERTINENT SIGNS MAY BE DISPLAYED AT THE DIRECTION OF THE ENGINEER IN COORDINATION WITH THE WORK ZONE TRAFFIC CONTROL UNIT (919-250-4159). AT THE COMPLETION OF THE PROJECT, THE ENGINEER SHALL NOTIFY THE REGIONAL TRAFFIC ENGINEER TO RESCIND THE ORDINANCE.
6. WHEN "WORK ZONE VARIABLE SPEED LIMIT" REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE "WORK ZONE VARIABLE SPEED LIMIT" REDUCTION.



APPROVED: _____ DATE: _____

SEAL

"WORK ZONE VARIABLE SPEED LIMIT" REDUCTION FOR GREATER THAN 2" DROP-OFFS BETWEEN OPEN LANES		SCALE:	NONE						
		DATE:	06/07						
		DWG. BY:	PS						
		DESIGN BY:	PS						
<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td>06/07</td> <td></td> </tr> <tr> <td>03/09</td> <td></td> </tr> </table>		REVISIONS		06/07		03/09		REVIEWED BY:	CLL
		REVISIONS							
06/07									
03/09									

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

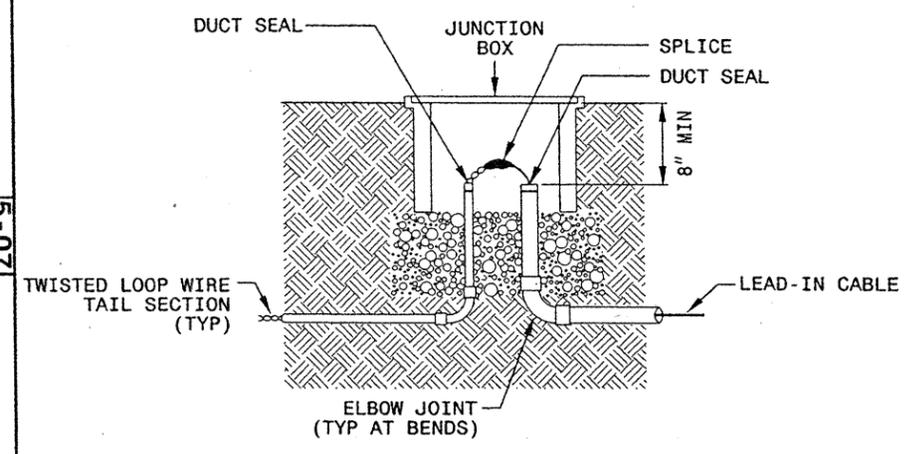
5-07

ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

SHEET 2 OF 3
1725D01

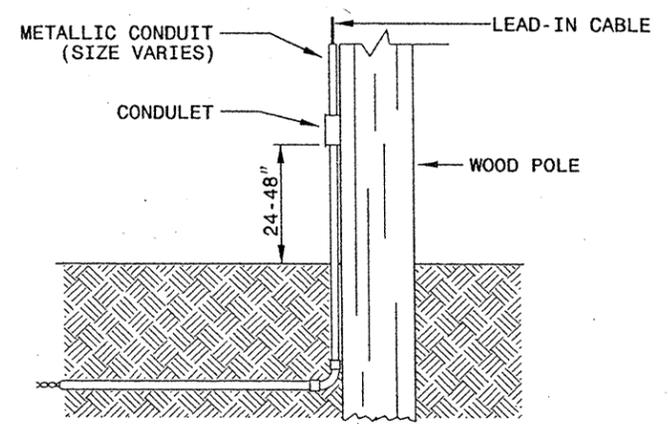
LOOP WIRE SPLICE POINT DETAILS

LOOP WIRE AT JUNCTION BOX



ELBOW JOINT
(TYP AT BENDS)

LOOP WIRE AT POLE

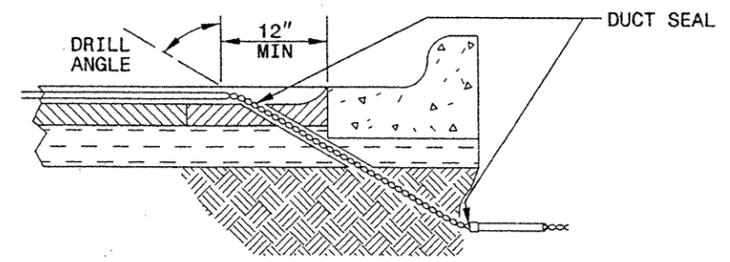


NOTE

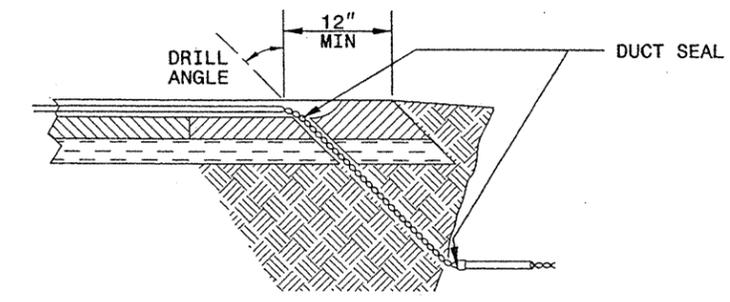
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

LOOP WIRE PAVEMENT EDGE DETAILS

LOOP WIRE AT CURB & GUTTER SECTION



LOOP WIRE AT PAVEMENT SECTION



NOTES

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

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

5-07

ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

SHEET 2 OF 3
1725D01

See Plate for Title

Prepared in the Office of:

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

Milton I. Deann
9/5/07
SIGNATURE DATE

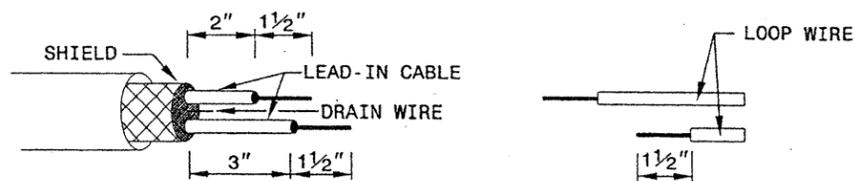
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

5-07

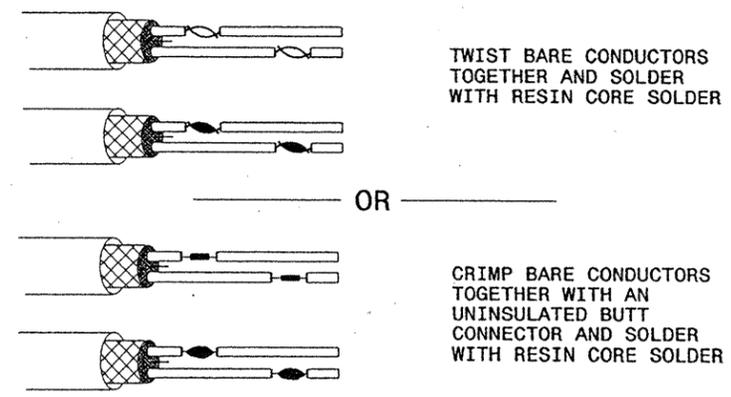
ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3
1725D01

STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE

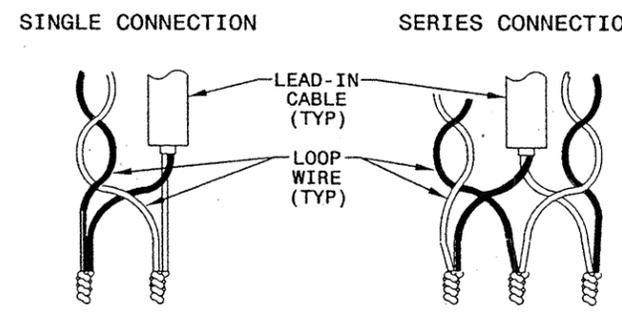


STEP 2. CONNECT AND SOLDER

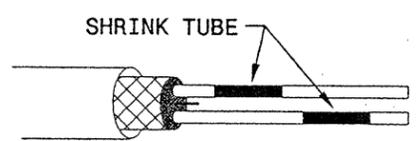


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

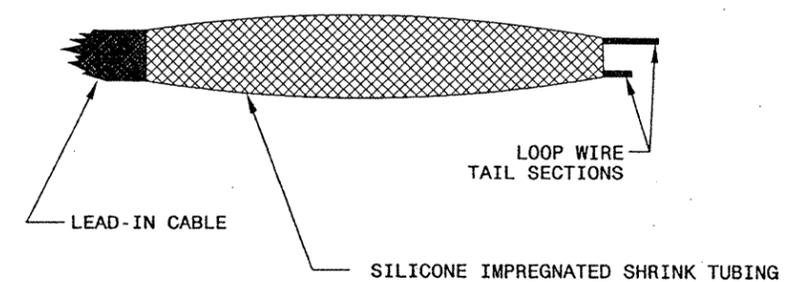
LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS



STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY



STEP 4. ENVIRONMENTALLY PROTECT SPLICE



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RALEIGH, N.C.

5-07

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

SHEET 3 OF 3
1725D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

SEAL
016286
ENGINEER
MILTON I. DEEN

Milton I. Deen 9/5/07
SIGNATURE DATE