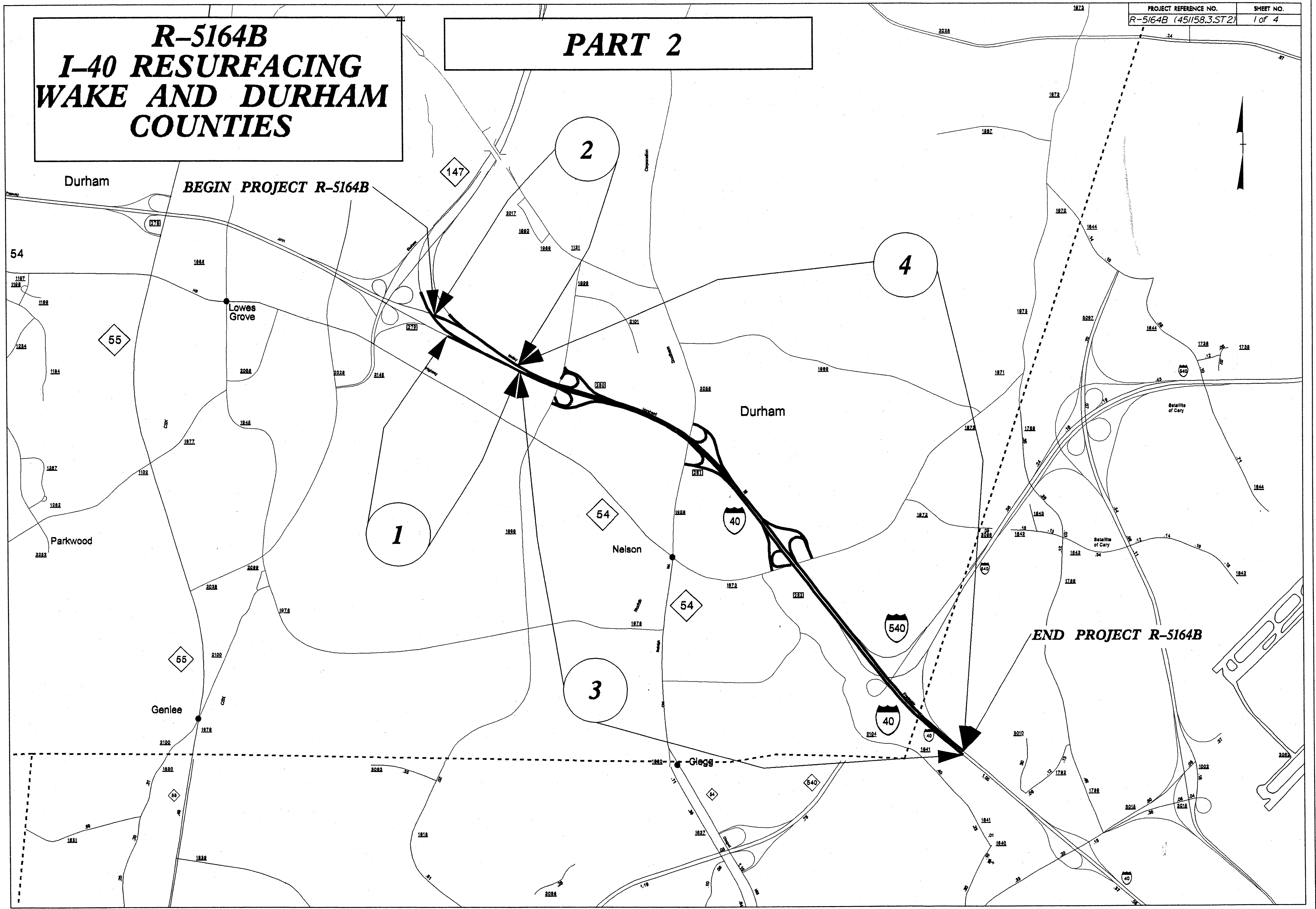
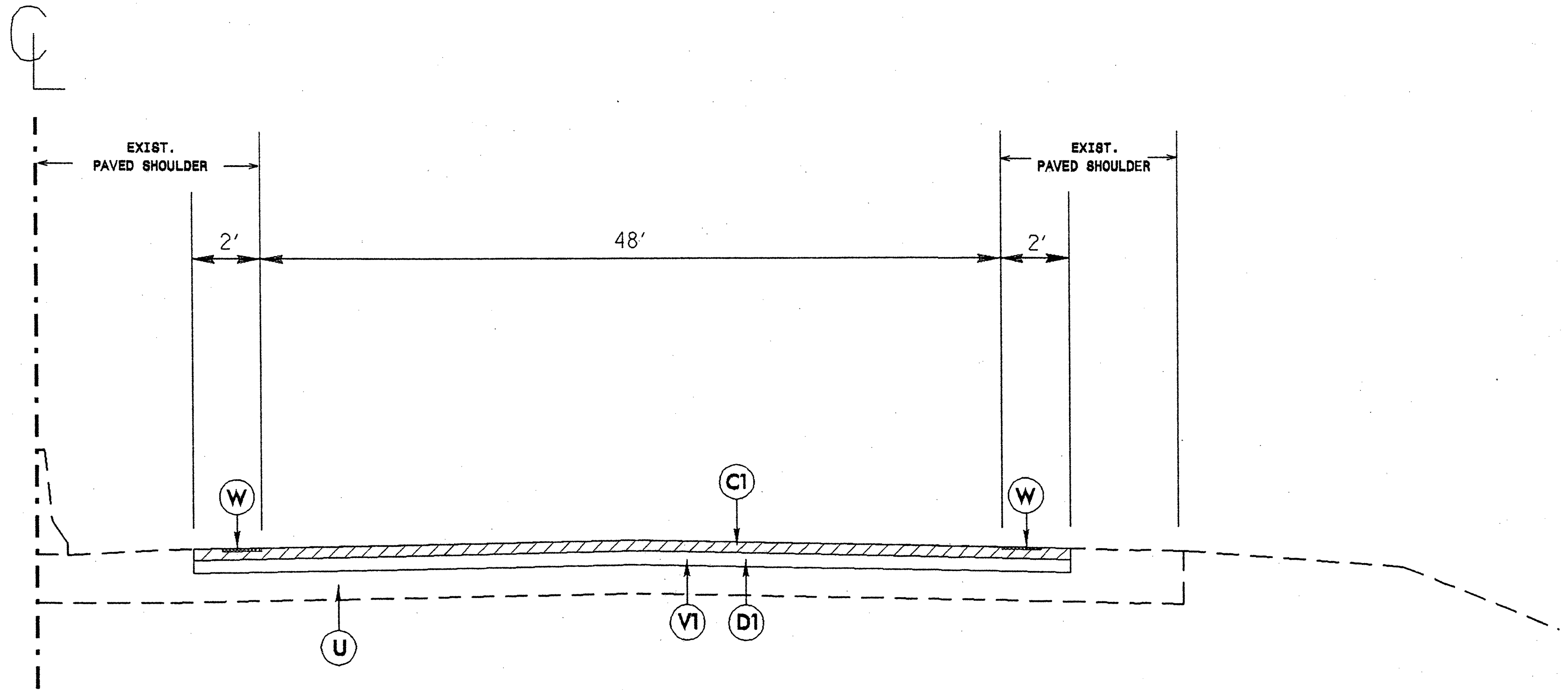


# R-5164B I-40 RESURFACING WAKE AND DURHAM COUNTIES

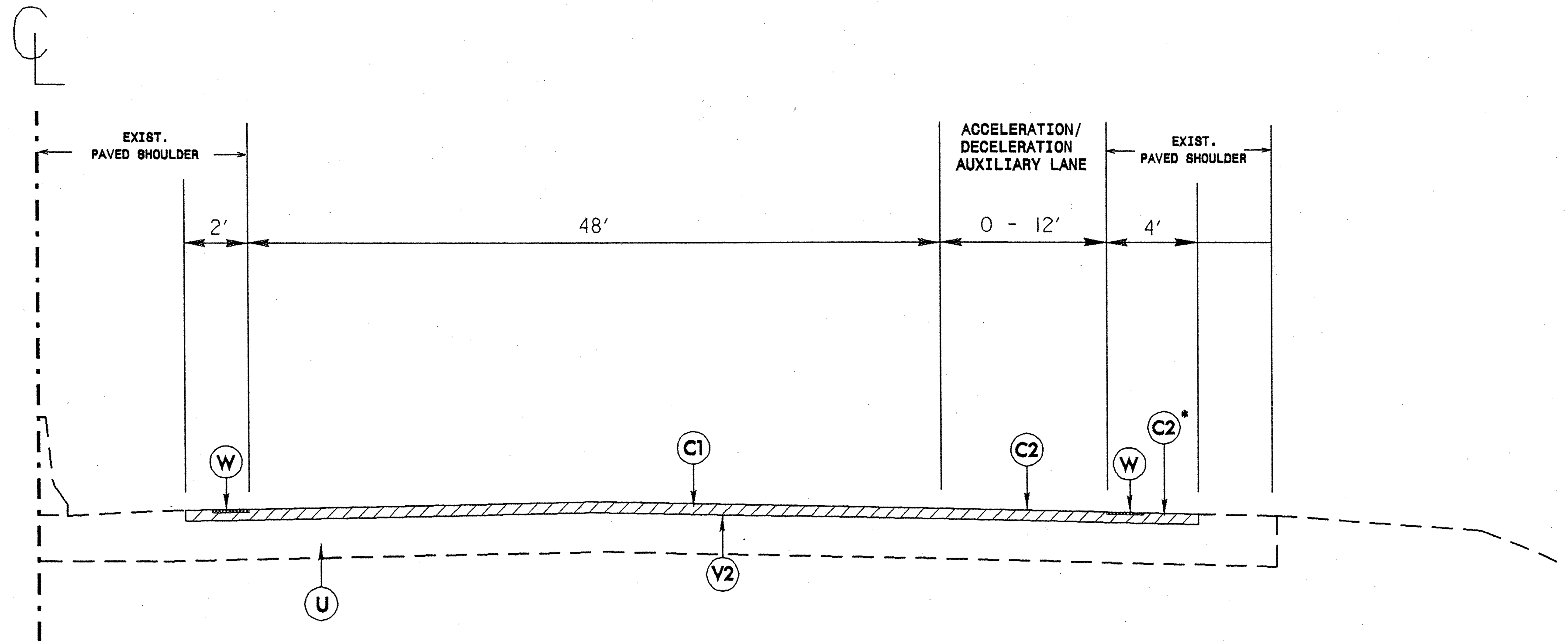
## PART 2



PAVEMENT SCHEDULE	
C1	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D1	3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0D, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
V1	MILL 5" IN DEPTH
V2	MILL 2" IN DEPTH
U	EXISTING PAVEMENT
W	MILLED RUMBLE STRIPS (STD. DWG. 665.01)



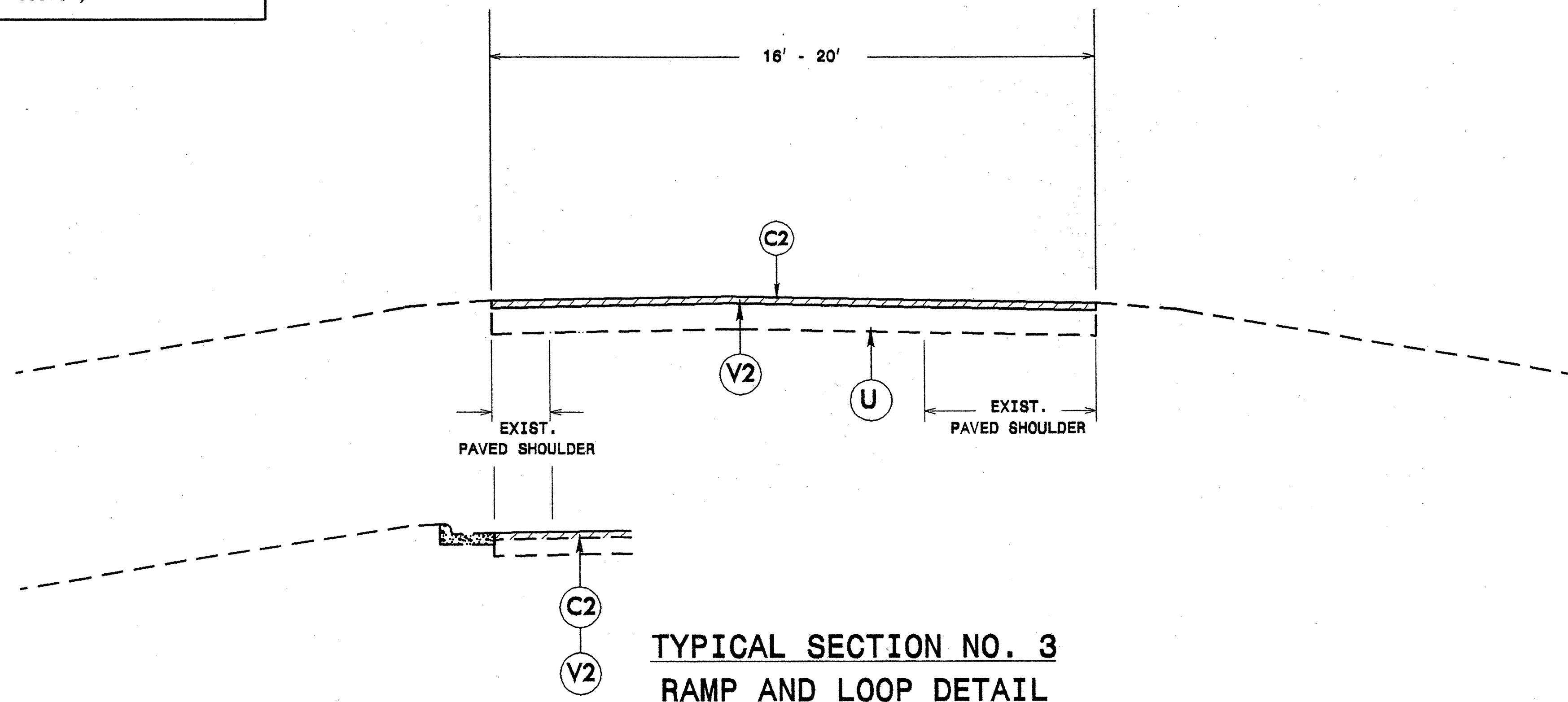
TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 2

\* CONTRACTOR MAY USE S9.5D ON SHOULDERS IN AREAS NOT ADJACENT TO AN AUXILIARY LANE

PAVEMENT SCHEDULE	
C1	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D1	3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0D, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
V1	MILL 5" IN DEPTH
V2	MILL 2" IN DEPTH
U	EXISTING PAVEMENT
W	MILLED RUMBLE STRIPS (STD. DWG. 665.01)



TYPICAL SECTION NO. 3  
RAMP AND LOOP DETAIL

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5164B	4	4
(451158.3.ST2)		

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	MILLED RUMBLE STRIPS LF	5" MILLING SY	2" MILLING SY	INTER-MEDIATE COURSE, I19.0D TONS	SURFACE COURSE, S9.5C TONS	SURFACE COURSE, S9.5D TON	PG 70-22 PLANT MIX TONS	PG 76-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	PORTABLE LIGHTING LS	INDUCTIVE LOOP LF	LEAD-IN CABLE (14-2) LF	PORTABLE WORK ZONE SIGNS SF	BARRICADE MOUNTED WORK ZONE SIGNS SF	CHANGEABLE MESSAGE SIGNS (SHORT TERM) DAY	BARRICADES (TYPE III) LF	SKINNY DRUM EA	NOTES	
R-5164B	Durham	1	I-40 EAST	FROM JOINT EAST OF NC-147 TO JOINT WEST OF DAVIS DRIVE	1	NO	0.4	52	6,924	15,203		2,688		1,758	126	97											
TOTAL FOR MAP NO. 1							0.4		6,924	15,203		2,688		1,758	126	97											
		2	I-40 WEST	FROM JOINT WEST OF DAVIS DRIVE TO OVERPASS EAST OF NC 147	1	NO	0.46	52	4,858	14,033		2,484		1,624	117	89											
TOTAL FOR MAP NO. 2							0.46		4,858	14,033		2,484		1,624	117	89											
		3	I-40 EAST	FROM JOINT WEST OF DAVIS DRIVE TO JOINT EAST OF I-540	2,3	NO	3	50	31,680		124,065		3,583	10,779	215	593	100					540	72	50	96	480	* This quantity includes signal loops on ramps/loops and counter loops on the mainline
TOTAL FOR MAP NO. 3							3		31,680	0	124,065		3,583	10,779	215	593	100		1,340*	100							
		4	I-40 WEST	FROM JOINT EAST OF I-540 TO JOINT WEST OF DAVIS DRIVE	2,3	NO	3.1	50	32,736		122,424		3,625	10,780	218	593	100		680*	100							* This quantity includes signal loops on ramps/loops and counter loops on the mainline
TOTAL FOR MAP NO. 4							3.1		32,736	0	122,424		3,625	10,780	218	593	100		680	100							
TOTAL FOR PROJ NO. R-5164B							6.96		76,198	29,236	246,489	5,172	7,208	24,941	676	1,372	200	1	2,020	200	540	72	50	96	480		
GRAND TOTAL							6.96		76,198	29,236	246,489	5,172	7,208	24,941	676	1,372	200	1	2,020	200	540	72	50	96	480		

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-N	4420000000-N	4430000000-N	4510000000-N	4688000000-E					4721000000-E					4725000000-E			4775000000-E		4845000000-N	4855000000-E	4900000000-N	4905000000-N		
					FLASHING ARROW PANELS, TYPE C	CHANGABLE MESSAGE SIGNS	DRUMS	LAW ENFORCEMENT	6" X 90 M WHITE THERMO	6" X 90 M YELLOW THERMO	6" X 120 M WHITE THERMO	8" X 120 M WHITE THERMO	12" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO MSG TRUCKS 120 M	THERMO MSG NO 120 M	THERMO MSG THIS 120 M	THERMO MSG LANE 120 M	THERMO STR ARROW 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	6" WHITE COLD APPLIED PLASTIC, TYPE III	6" YELLOW COLD APPLIED PLASTIC, TYPE III	PAINT DRAINAGE TRIANGLE PER STD. DRWG. 816.04	6" LINE REMOVAL	CRYSTAL & RED MARKERS	SNOW PLOWABLE MARKERS	
NO		NO			EA	EA	EA	HR	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	
R-5164B	Durham	1	I-40 EAST	FROM JOINT EAST OF NC-147 TO JOINT WEST OF DAVIS DRIVE	2	2.00	240	1,000	3,462	1,385	1,584			1,350						1								150	
TOTAL FOR MAP NO. 1					2	2.00	240	1,000	3,462	1,385	1,584			1,350						1								150	
		2	I-40 WEST	FROM JOINT WEST OF DAVIS DRIVE TO OVERPASS EAST OF NC 147	2	2.00	240	1,000	2,429	2,429	838			946														145	
TOTAL FOR MAP NO. 2					2	2.00	240	1,000	2,429	2,429	838			946															145
		3	I-40 EAST	FROM JOINT WEST OF DAVIS DRIVE TO JOINT EAST OF I-540					21,520	21,520	19,784	245	4,825	150	8	6	2	4	4	14	9	7	400	200	30	600	12	1,085	
TOTAL FOR MAP NO. 3									21,520	21,520	19,784	245	4,825	150	8	6	2	4	4	14	9	7	400	200	30	600	12	1,085	
		4	I-40 WEST	FROM JOINT EAST OF I-540 TO JOINT WEST OF DAVIS DRIVE					23,803	23,803	17,083	500	3,590	48		12	4	8	8	3	9	6	400	200	11	600	12	1,050	
TOTAL FOR MAP NO. 4									23,803	23,803	17,083	500	3,590	48		12	4	8	8	3	9	6	400	200	11	600	12	1,050	
TOTAL FOR PROJ NO. R-5164B					4	4	480	2,000	51,214	49,137	39,289	745	10,711	198	8	18	6	12	12	18	18	13	800	400	45	1,200	24	2,430	
GRAND TOTAL					4	4	480	2,000	51,214	49,137	39,289	745	10,711	198	8	18	6	12	12	18	18	13	800	400	45	1,200	24	2,430	



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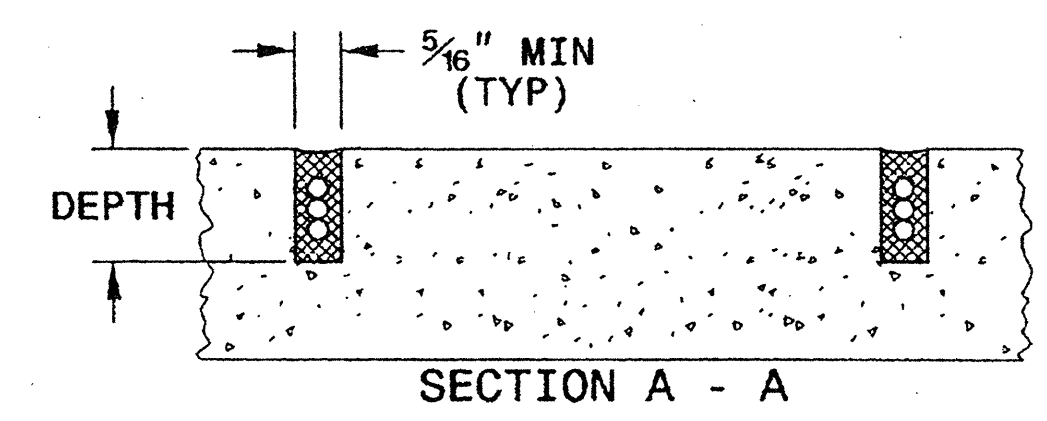
ENGLISH DETAIL DRAWING FOR  
INDUCTIVE DETECTION LOOPS

SHEET 1 OF 3  
1725D01

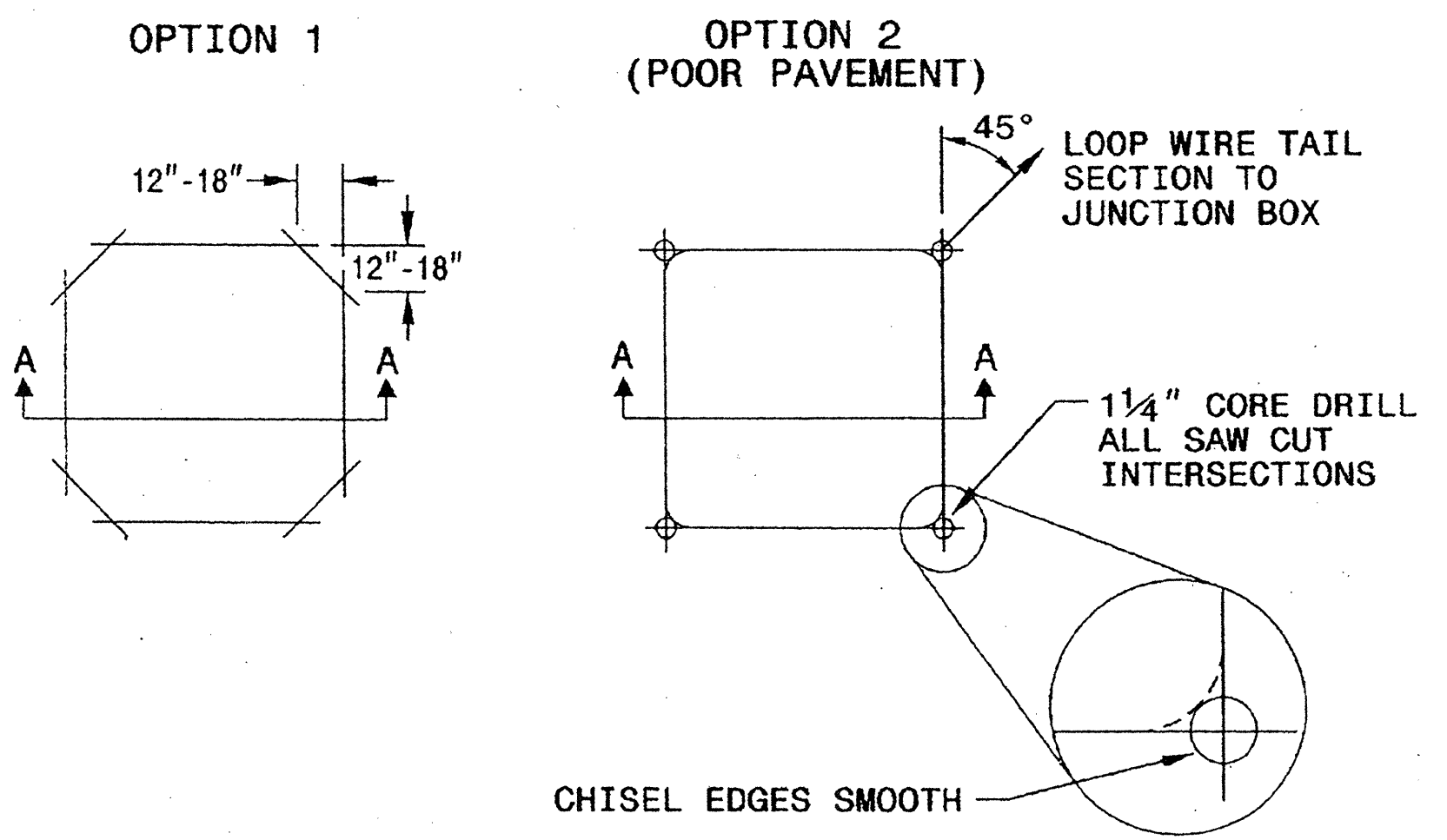
CONVENTIONAL 4-SIDED LOOP

SAW SLOT DEPTH CHART

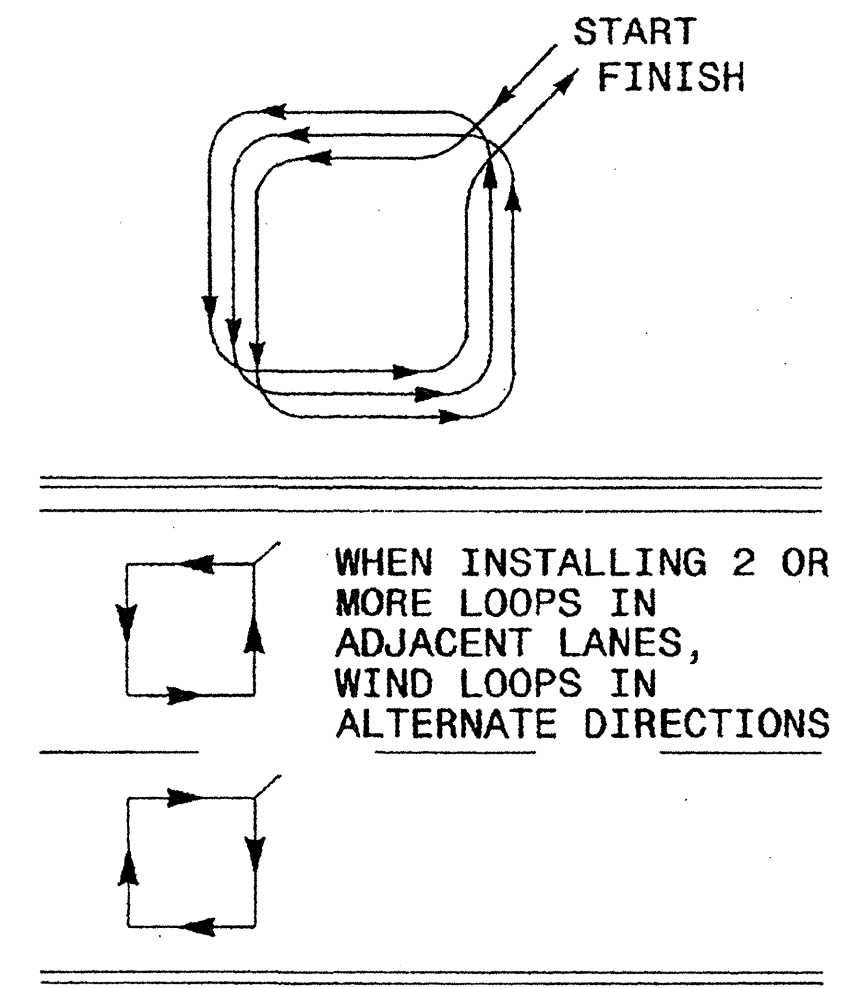
DEPTH (IN)	NO. OF WIRE TURNS				
	2	3	4	5	6
CONCRETE	2.0	2.0	2.5	2.5	3.0
ASPHALT	2.0	2.5	3.0	3.0	3.0



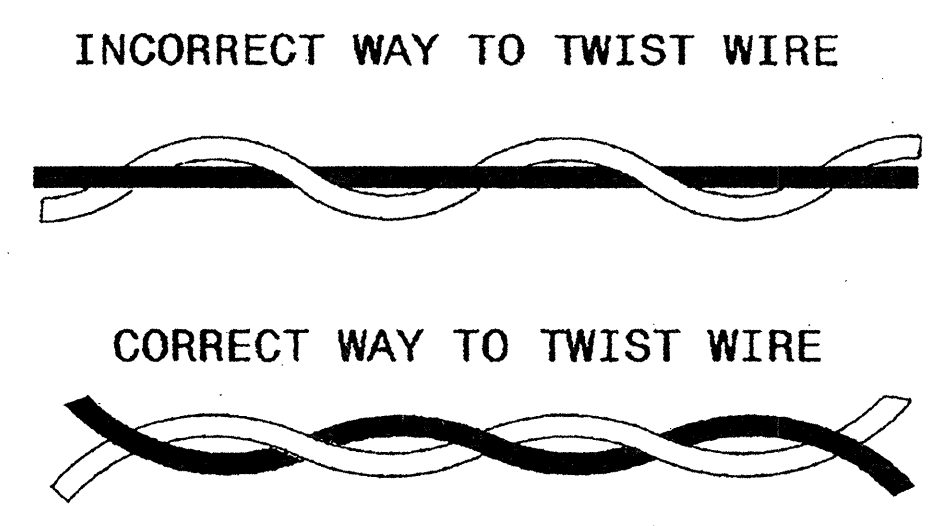
SAW CUT OPTIONS



LOOP WINDING METHOD



LOOP WIRE TWISTING METHOD

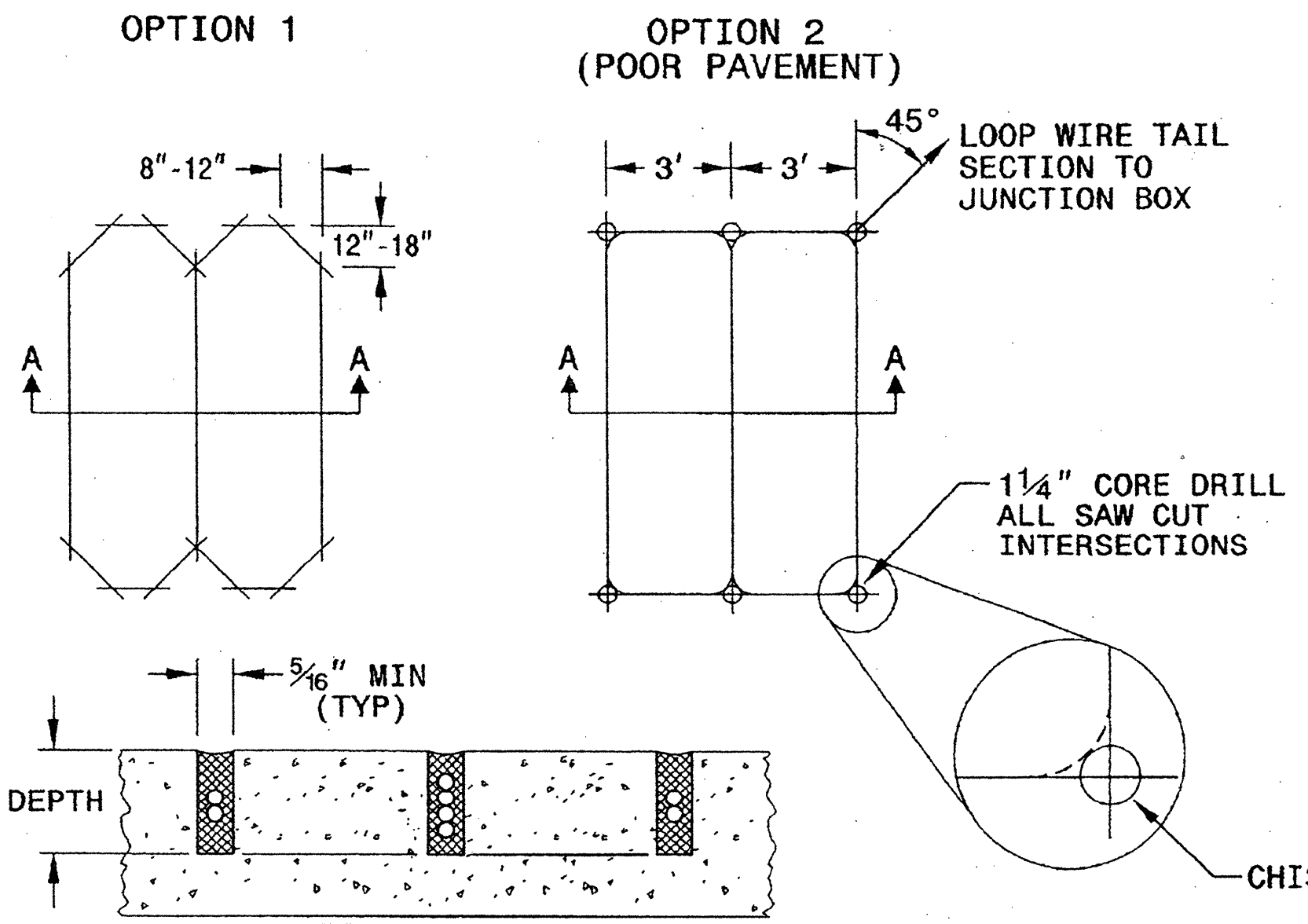


NOTES

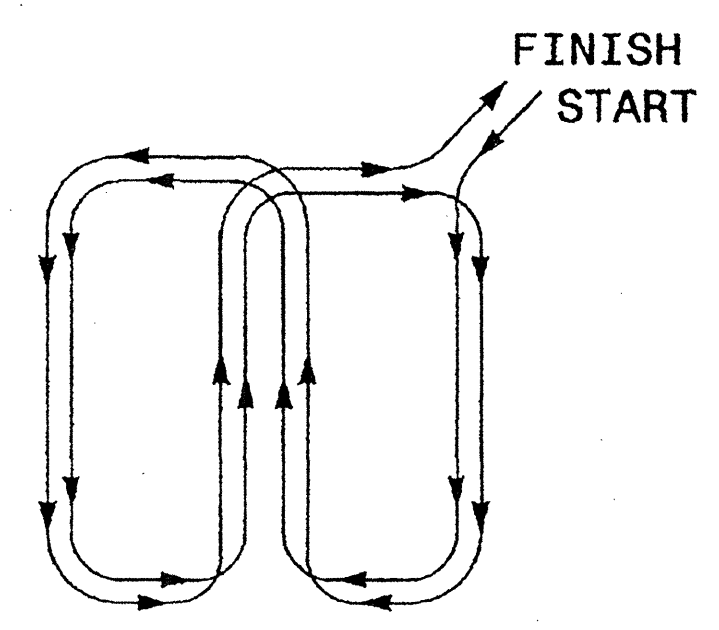
1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

QUADRUPOLE LOOP

SAW CUT OPTIONS



LOOP WINDING METHOD



DEPTH IS 2.5" FOR CONCRETE AND 3.0" FOR ASPHALT

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ENGLISH DETAIL DRAWING FOR  
INDUCTIVE DETECTION LOOPS

SHEET 1 OF 3  
1725D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

*Matthew J. Dean* 1/24/08  
SIGNATURE DATE

24-400-008 05/28  
44-11000-00000 01/04 sheets 1725D01.mxd 2/20/08  
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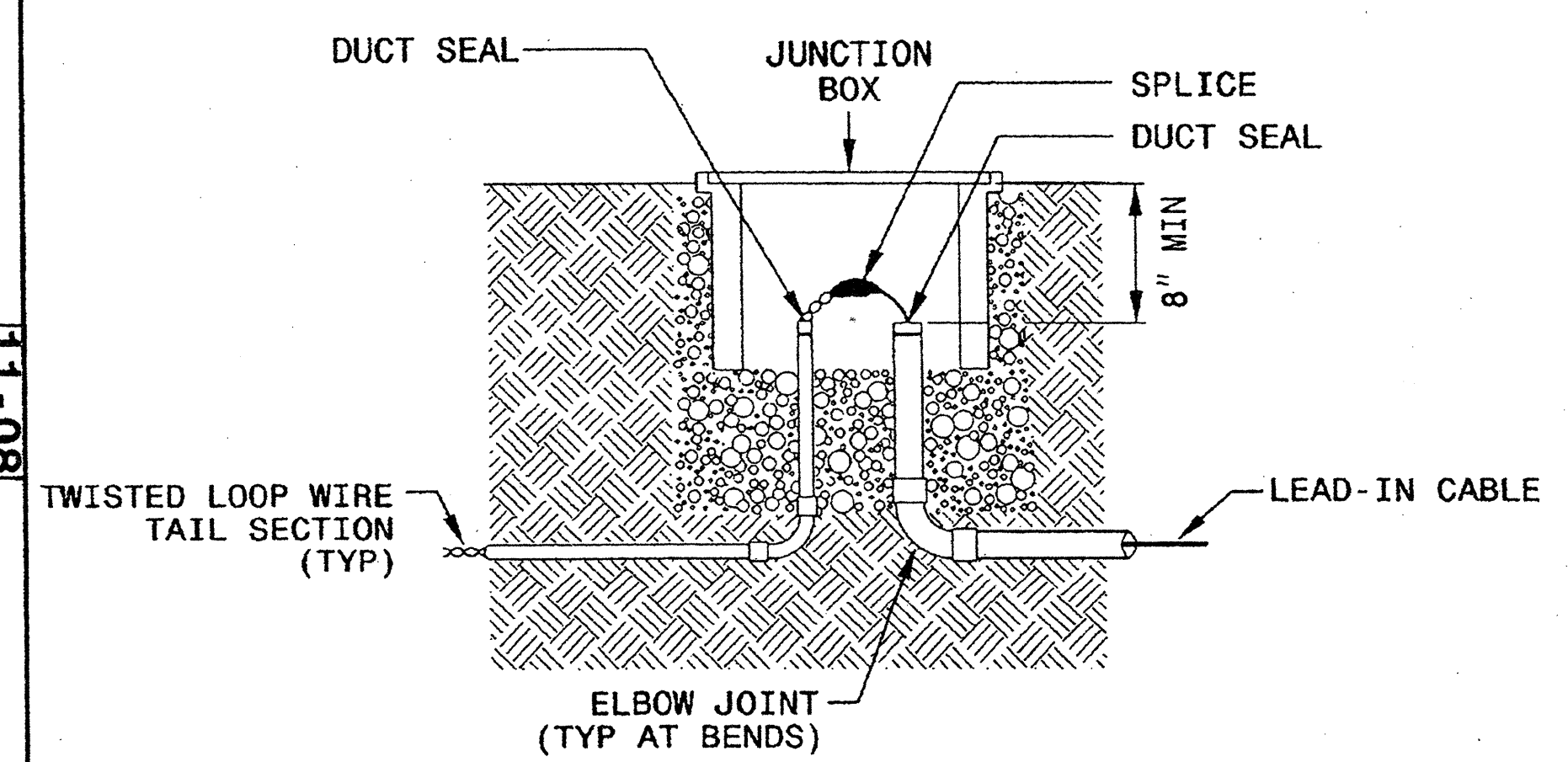
11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 LOOP WIRE DETAILS

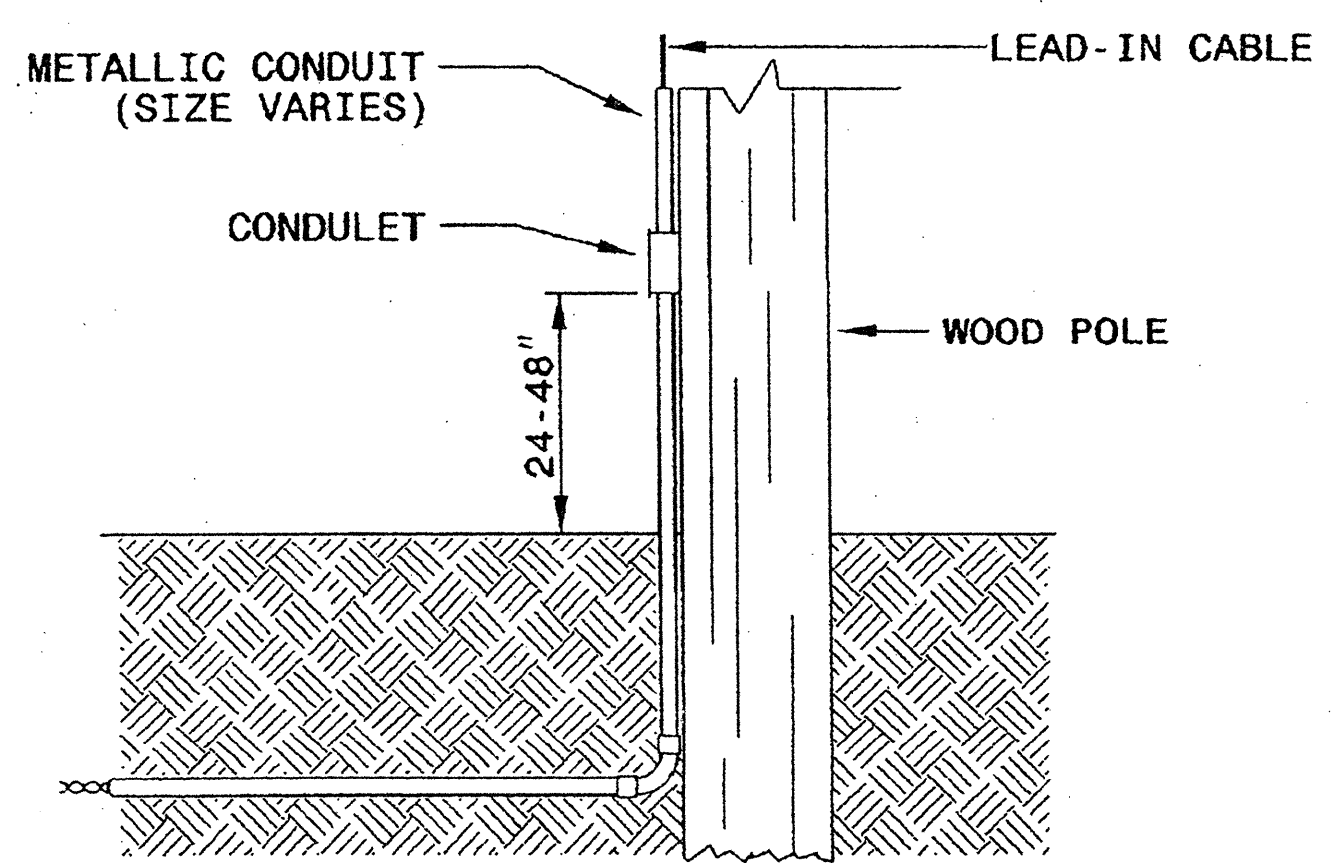
SHEET 2 OF 3  
**1725D01**

**LOOP WIRE SPLICE POINT DETAILS**

**LOOP WIRE AT JUNCTION BOX**



**LOOP WIRE AT POLE**

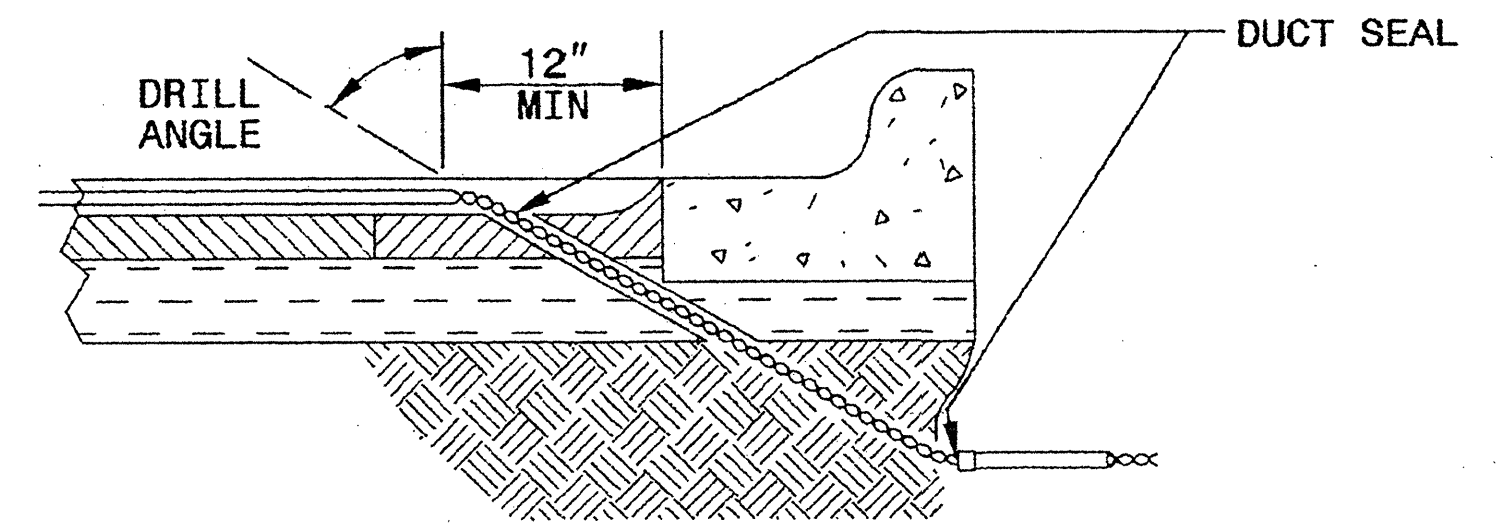


**NOTE**

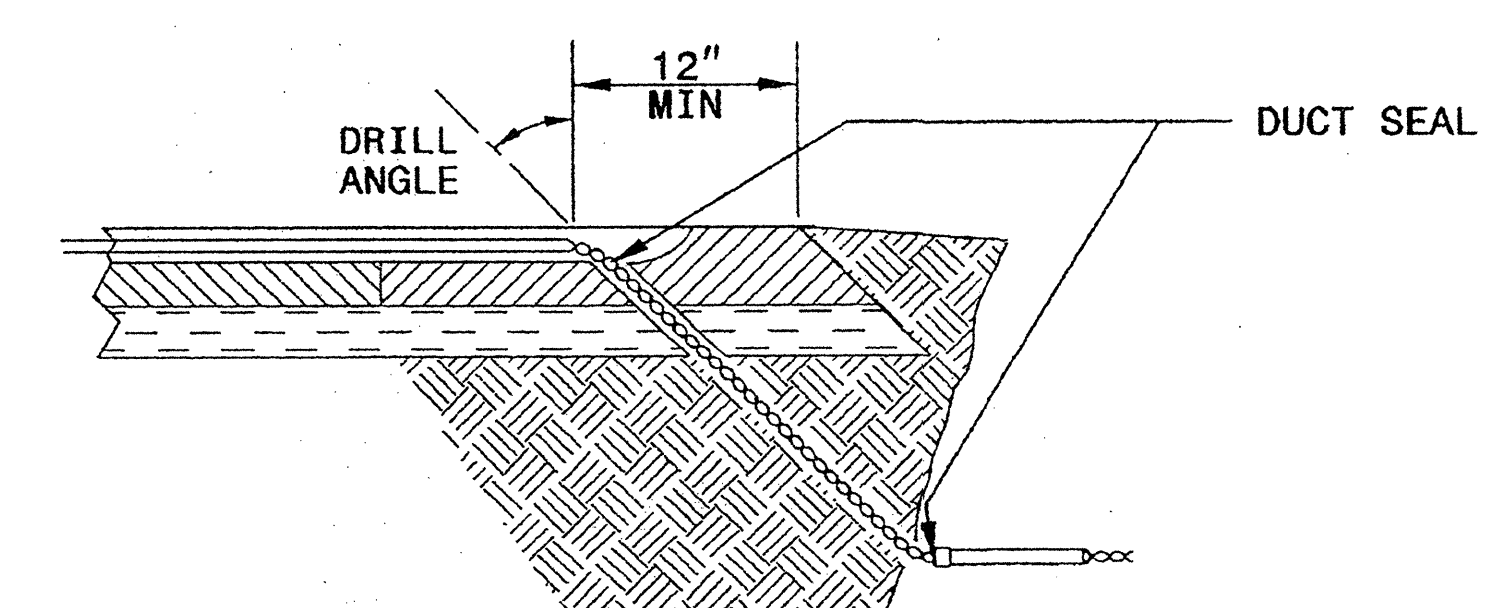
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

**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.

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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 LOOP WIRE DETAILS

SHEET 2 OF 3  
**1725D01**

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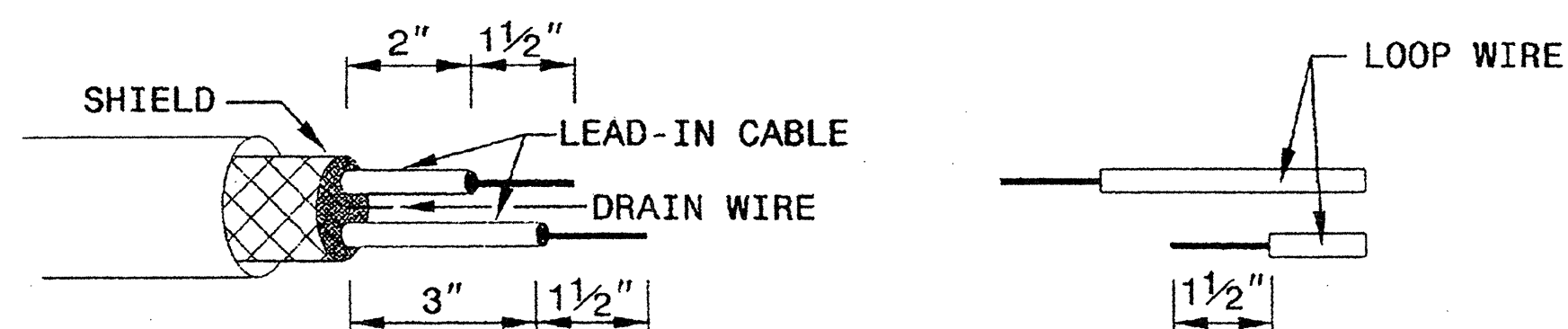
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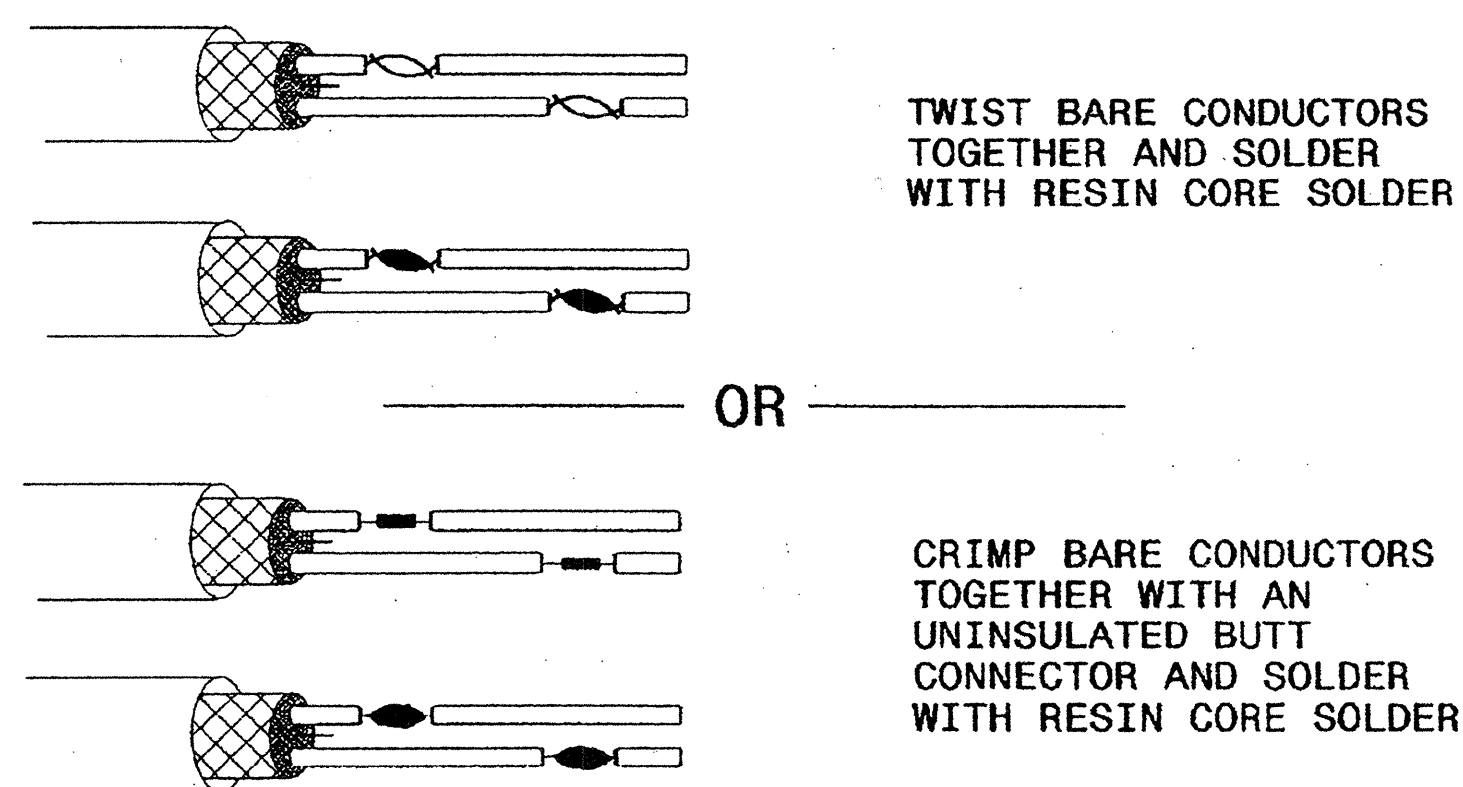
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

**STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE**

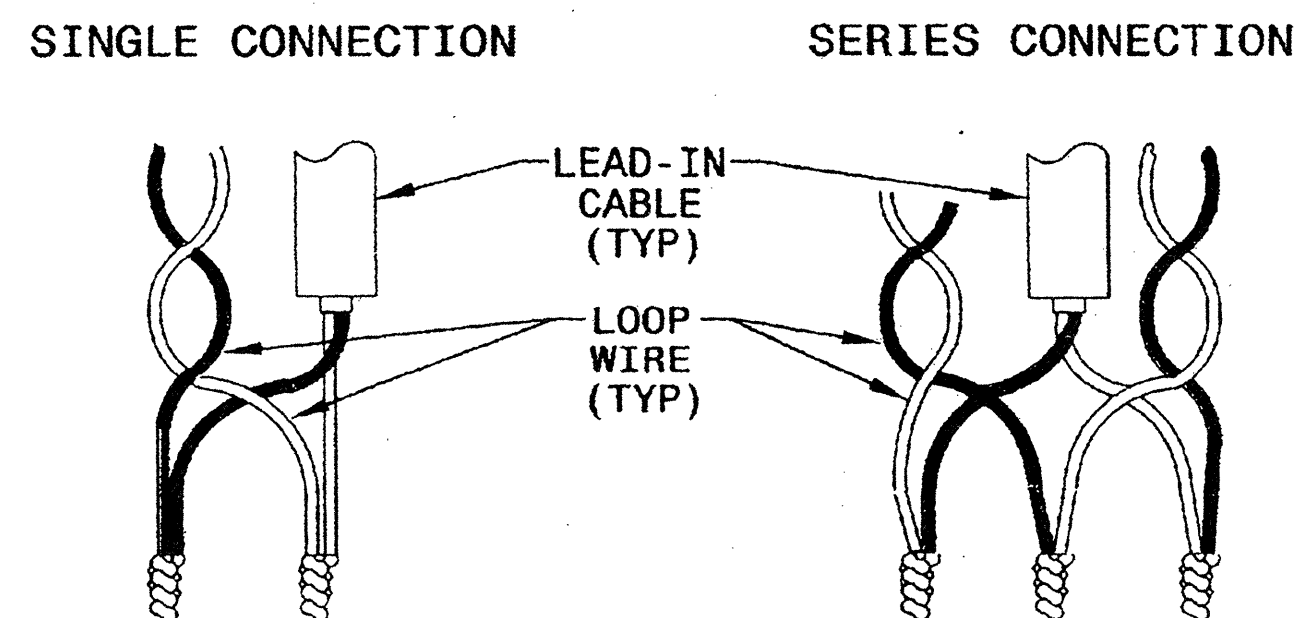


**STEP 2. CONNECT AND SOLDER**

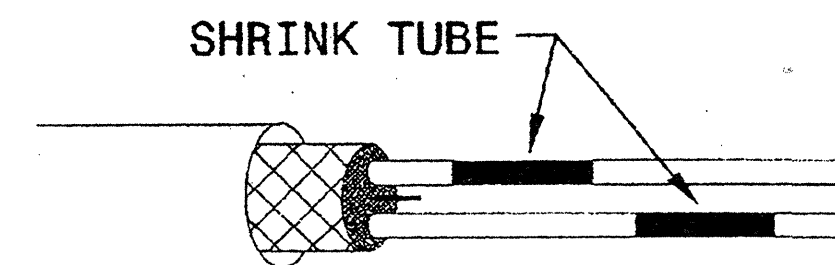


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

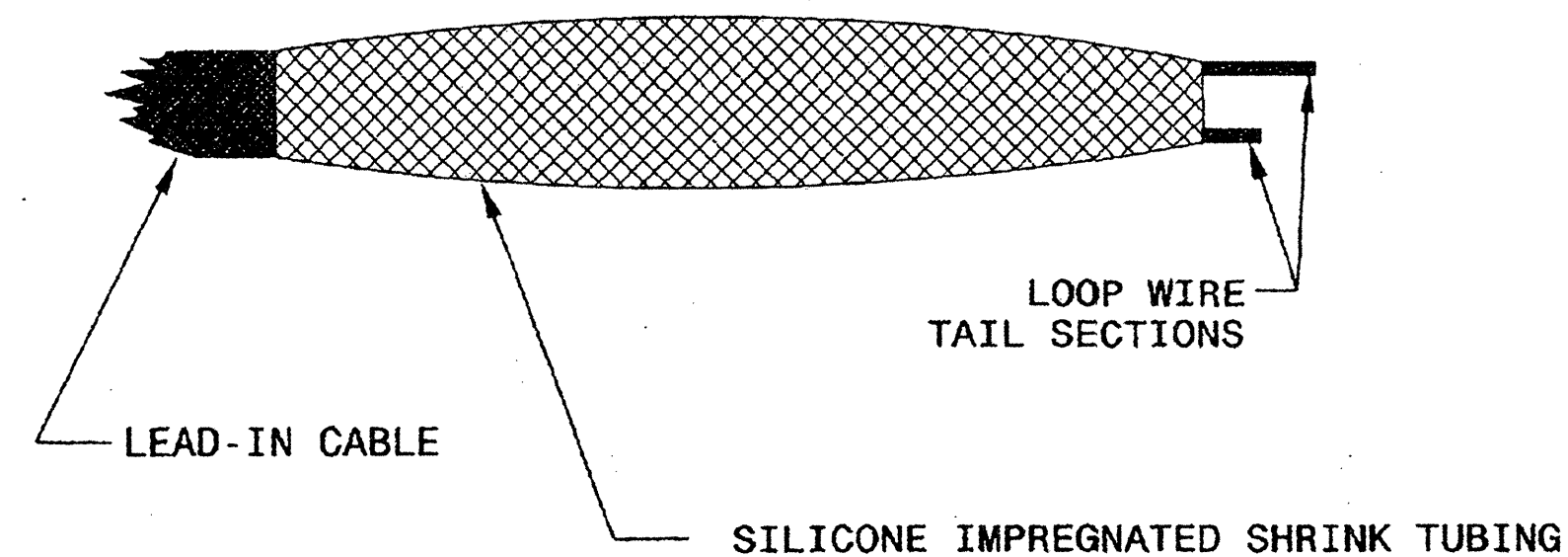
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



**STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY**



**STEP 4. ENVIRONMENTALLY PROTECT SPLICE**



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

SHEET 3 OF 3  
**1725D01**

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