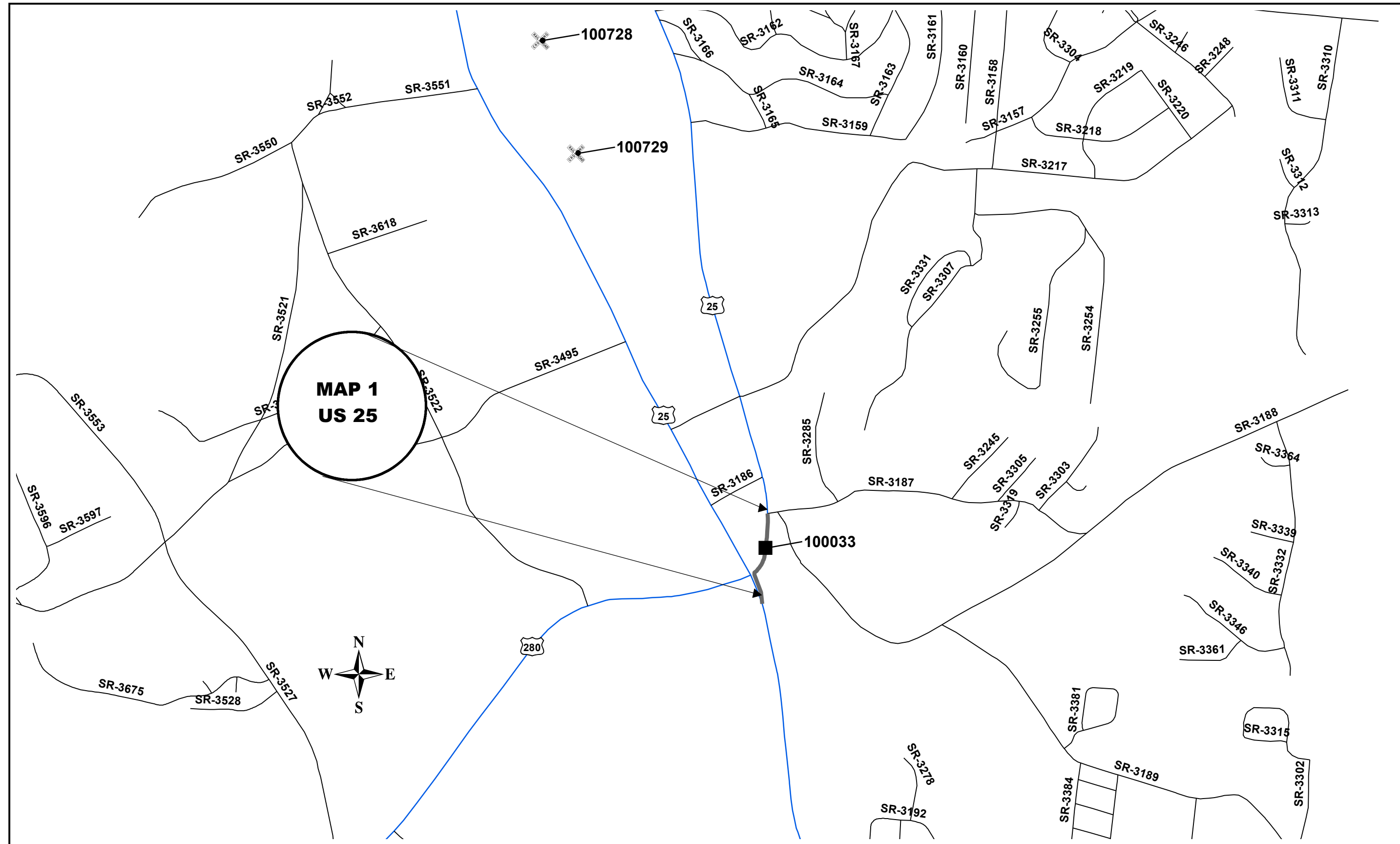
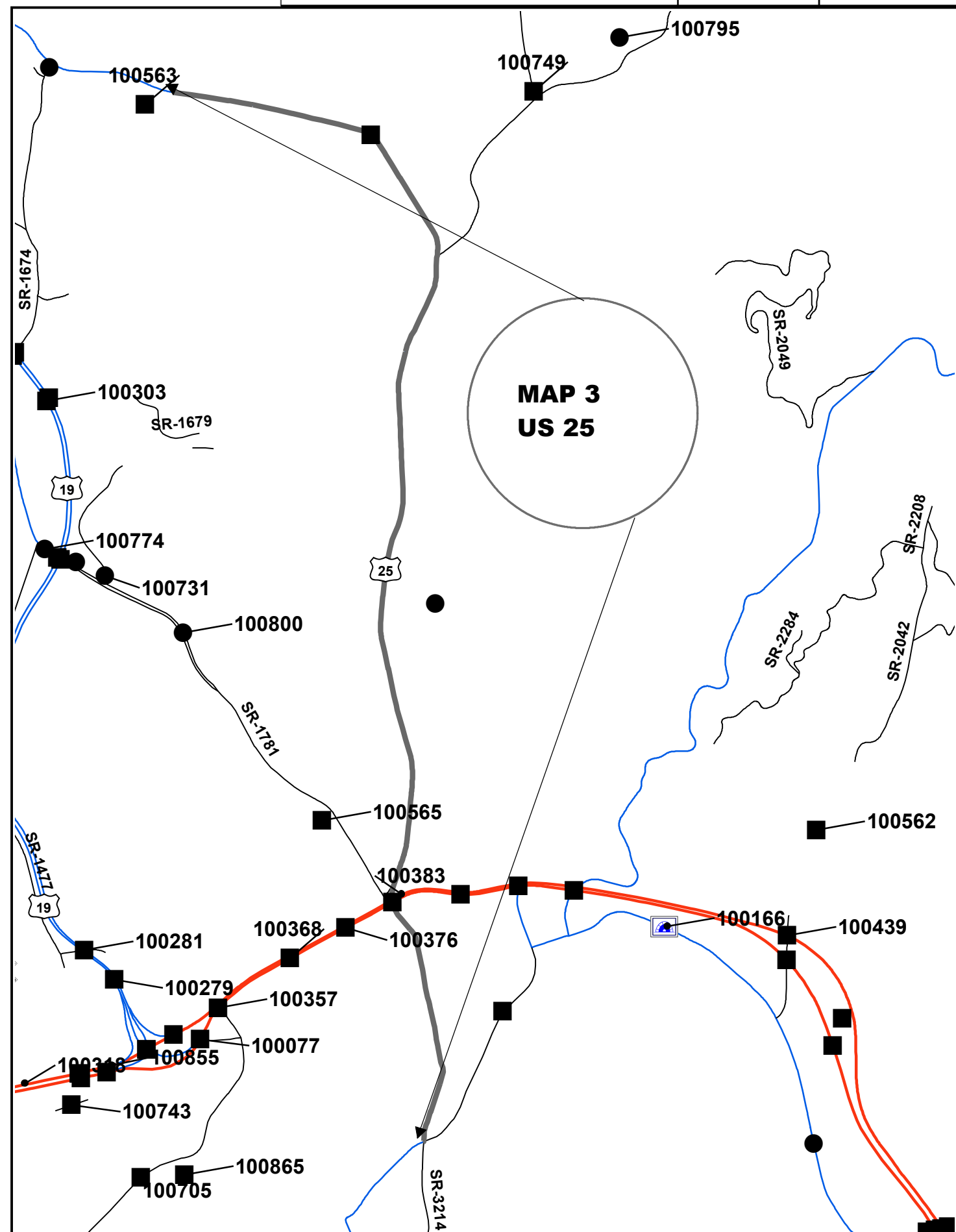
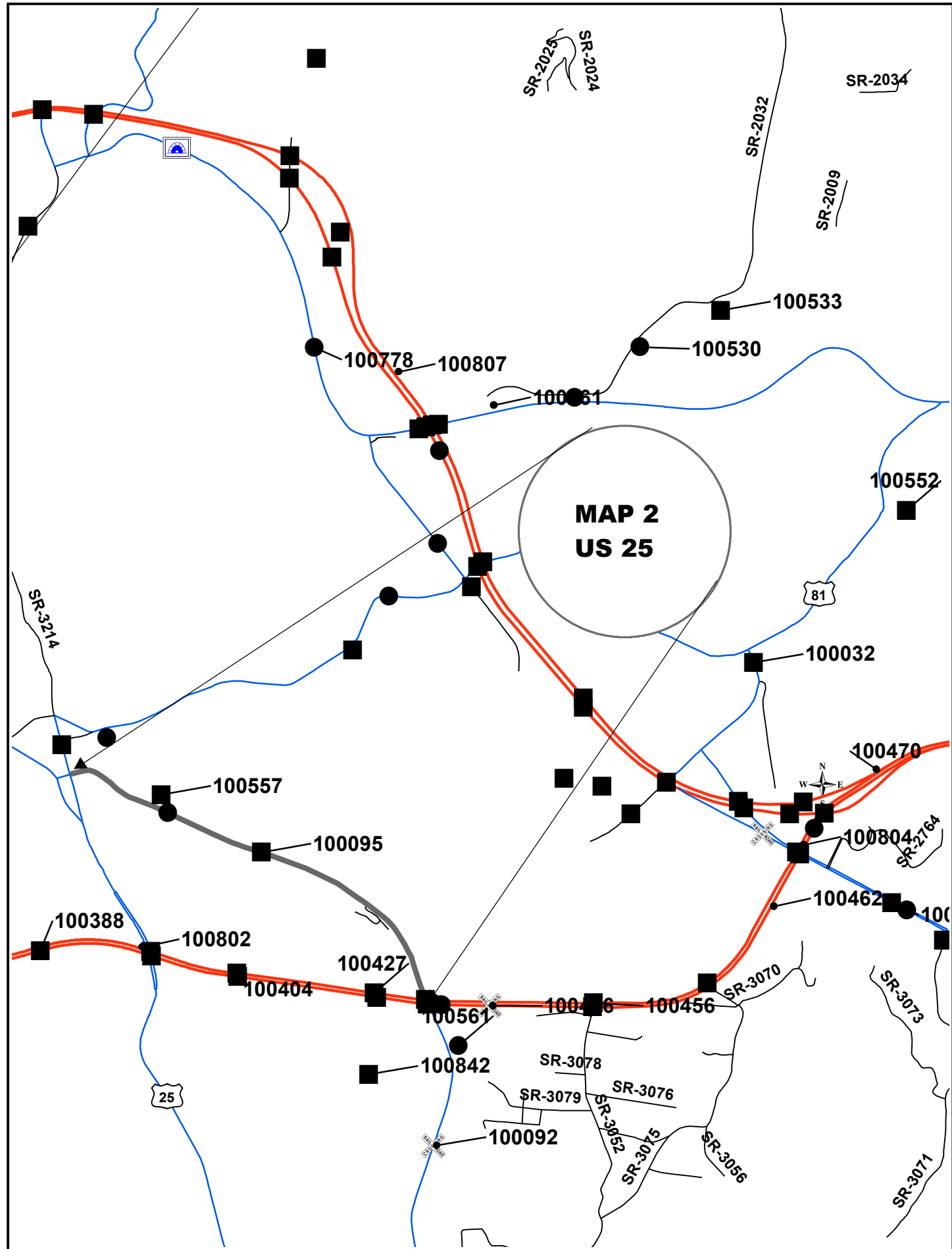


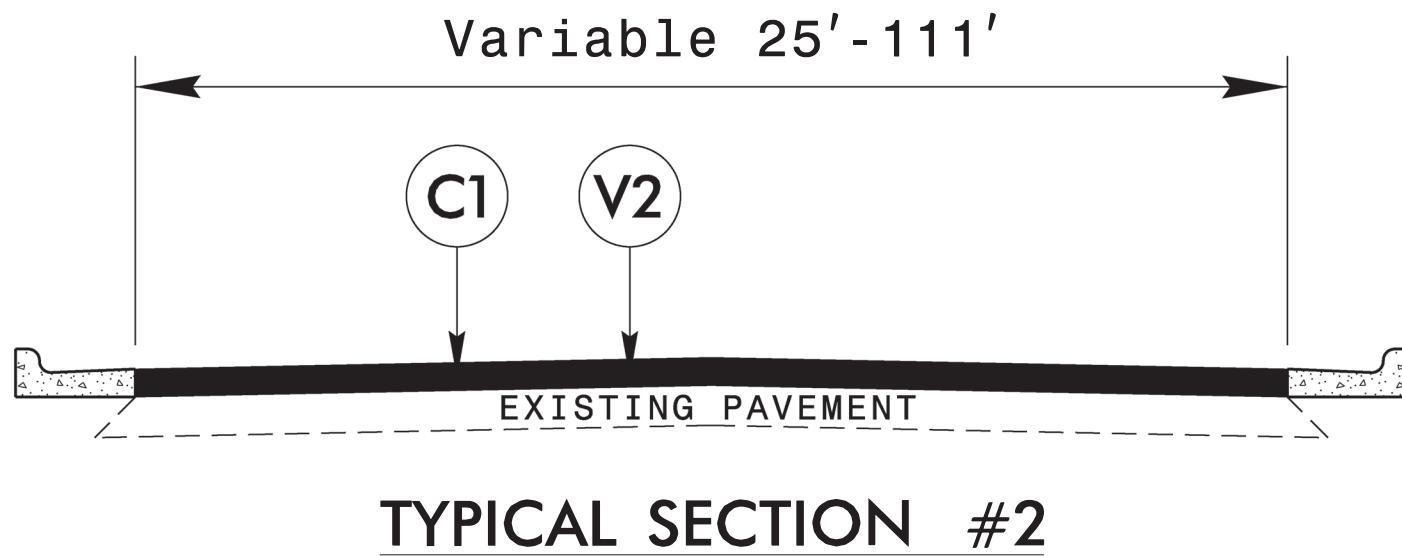
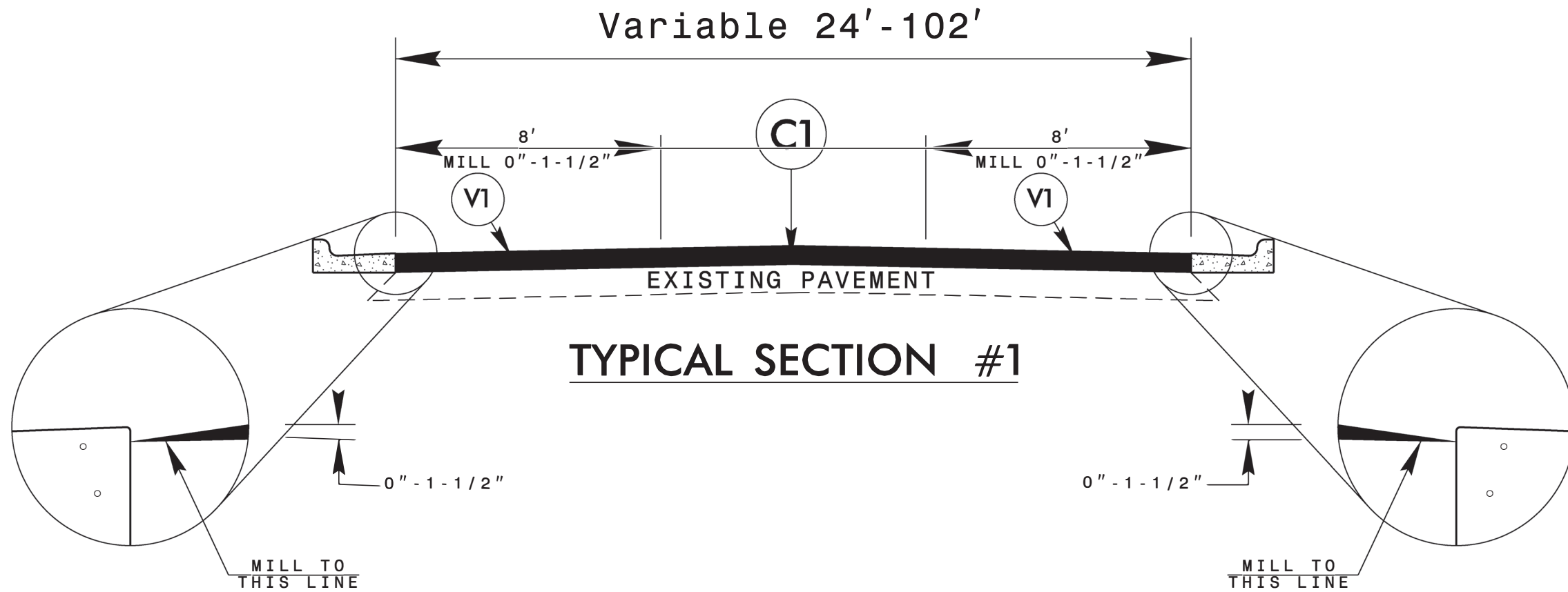
PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	1	14



PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	2	14

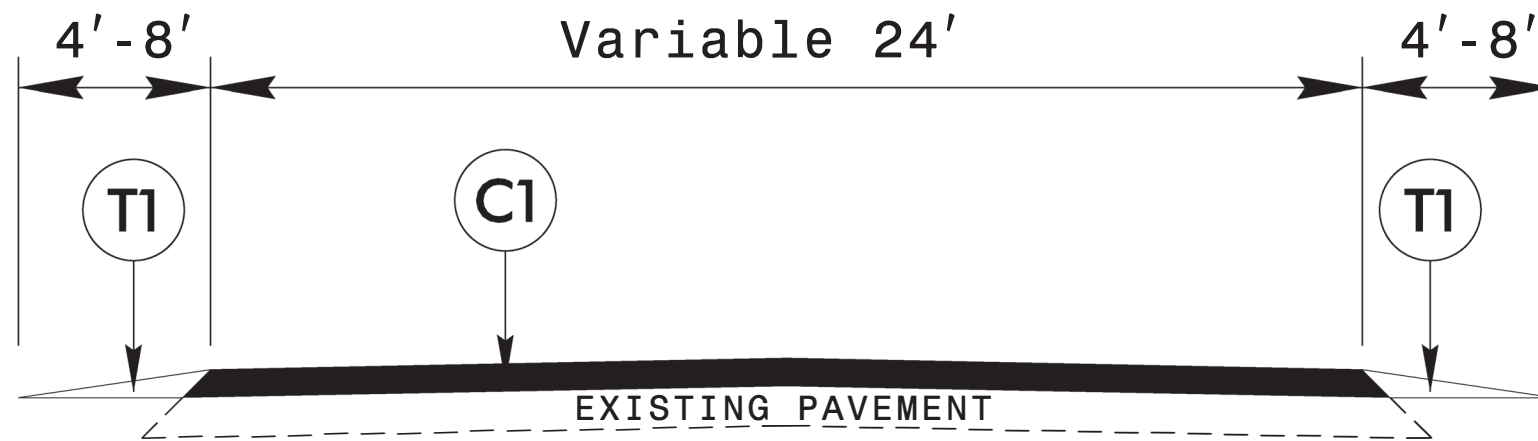


PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	3	14



PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
T1	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0 TO 1-1/2" DEPTH
V2	MILLING ASPHALT PAVEMENT 1-1/2" DEPTH
V3	INCIDENTAL MILLING

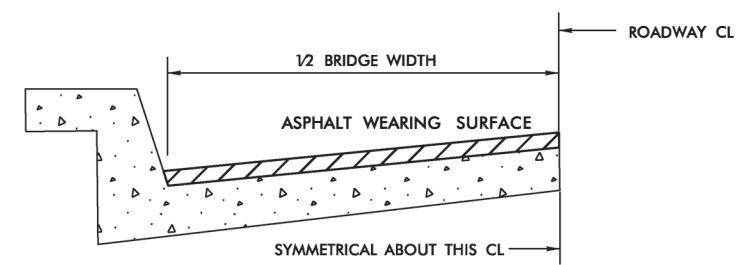
PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	4	14



**TYPICAL SECTION #3**

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
T1	SHOULDER RECONSTRUCTION

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	5	14



### 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. THE MINIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1/2", S9.5B 1", S9.5C,D 1.5" - 2". ULTRA-THIN HOT MIX ASPHALT - TYPE A 3/4". ULTRA-THIN HOT MIX ASPHALT - TYPE B 5/8". ULTRA-THIN HOT MIX ASPHALT - TYPE C 1/2". THE MAXIMUM THICKNESS SHOULD DEPEND ON PAVEMENT TYPE AS FOLLOWS: S4.75A 1", S9.5B 1.5", S9.5C,D 2". ULTRA-THIN HOT MIX ASPHALT - TYPE A 3/4", ULTRA-THIN HOT MIX ASPHALT - TYPE B 5/8", ULTRA-THIN HOT MIX ASPHALT - TYPE C 1/2".

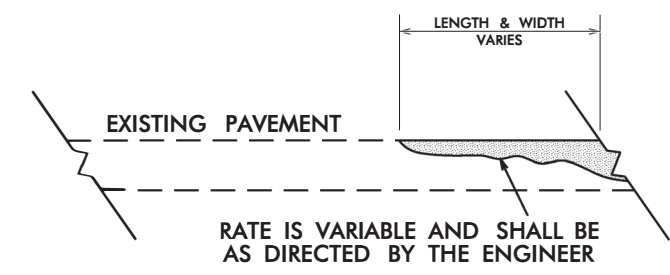
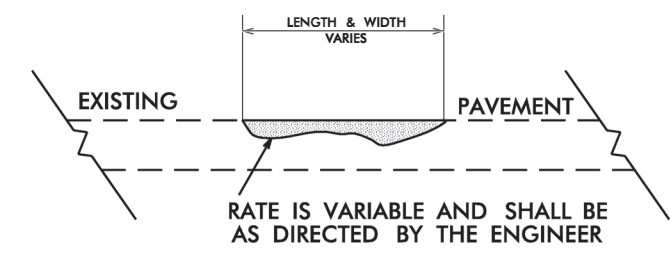
### NOTES

ALL UNPAVED ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT. ALL PAVED S. R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.

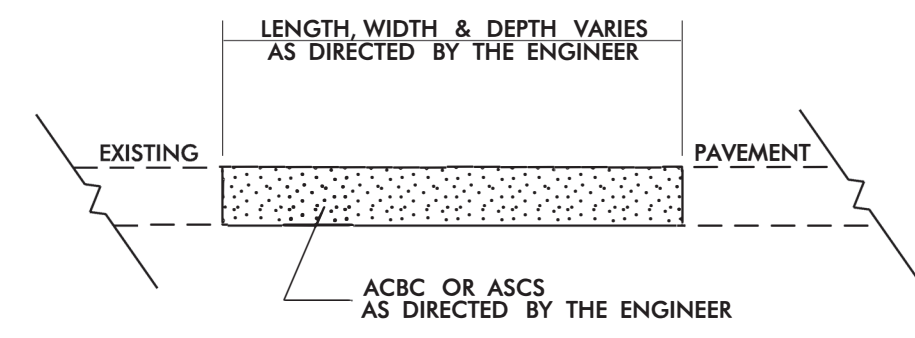
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.

SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE INDICATED.

BRIDGES ARE TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

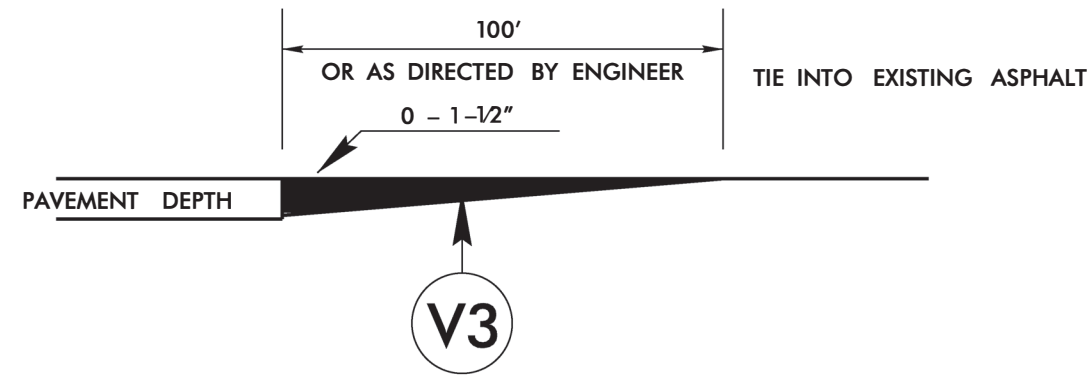


### DETAIL SHOWING METHOD OF WEDGING

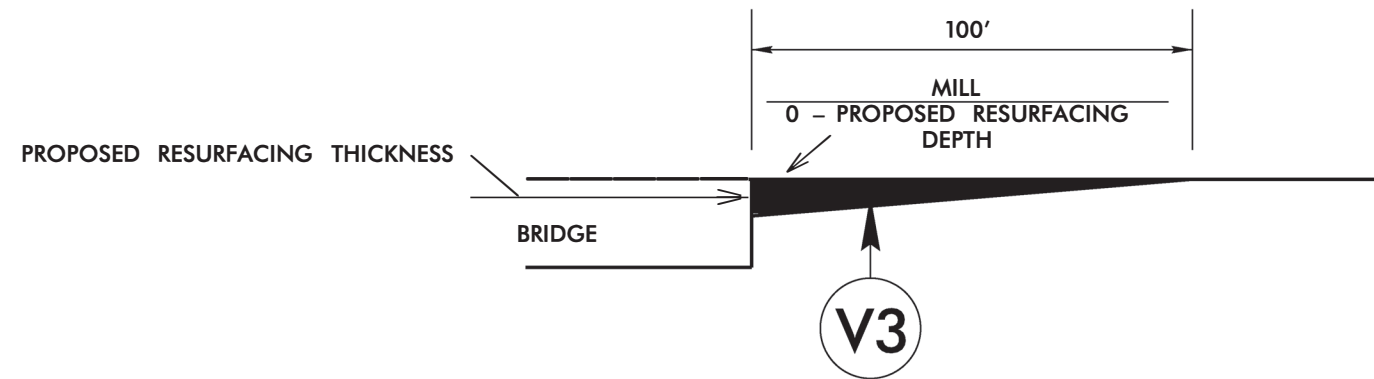


### PATCHING EXISTING PAVEMENT

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	6	14



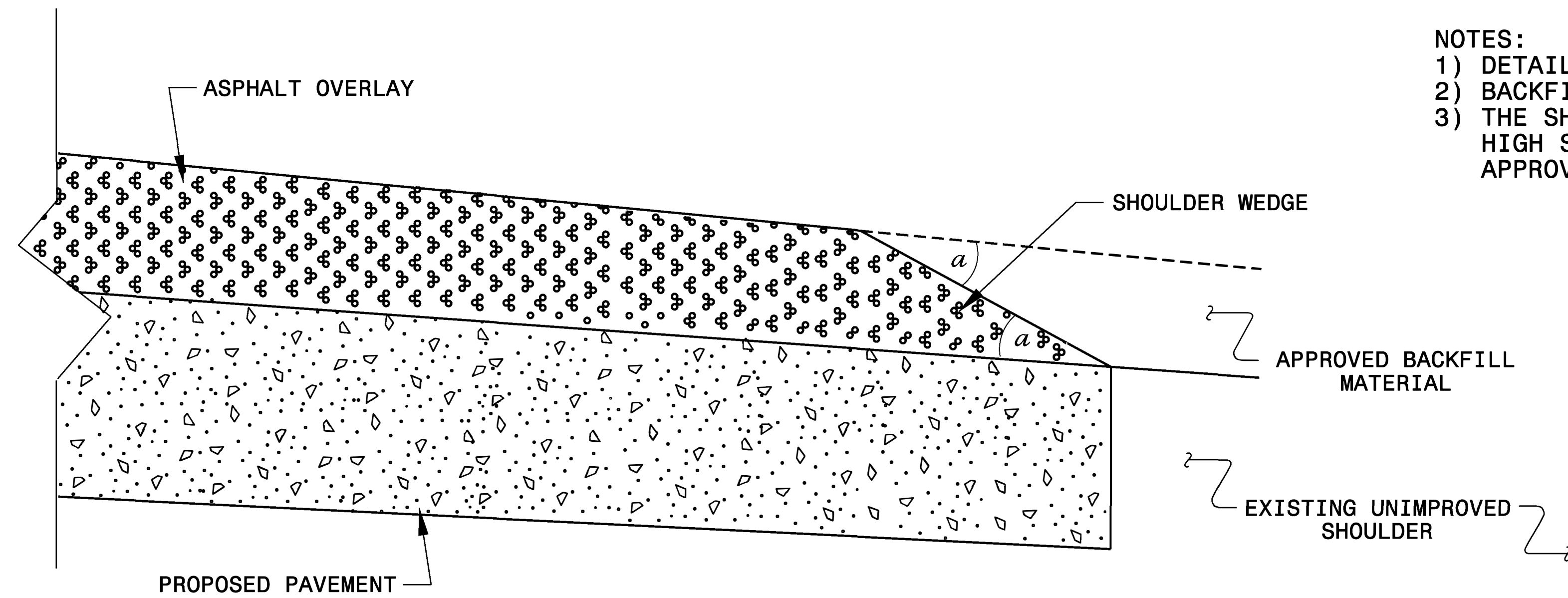
**DETAIL TO TIE INTO EXIST PAVEMENT**  
 THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT HE WILL BE REQUIRED TO MILL THE EXISTING ASPHALT PAVEMENT TO ENSURE A PROPER TIE-IN WITH THE EXISTING SURFACE AT THE BEGINNING, END AND Y LINES OF EACH MAP TO BE RESURFACED WITH ASPHALT CONC SURFACE COURSE, TYPE S9.5C. THIS WILL BE PAID FOR AS INCIDENTAL MILLING.



**MILLING DETAIL AT BRIDGE APPROACHES**  
 WHERE BRIDGES WILL NOT BE RESURFACED. THIS WILL BE PAID FOR AS INCIDENTAL MILLING. USE AT BRIDGE NUMBER: 33 MAP 1, AND 153 MAP 3.

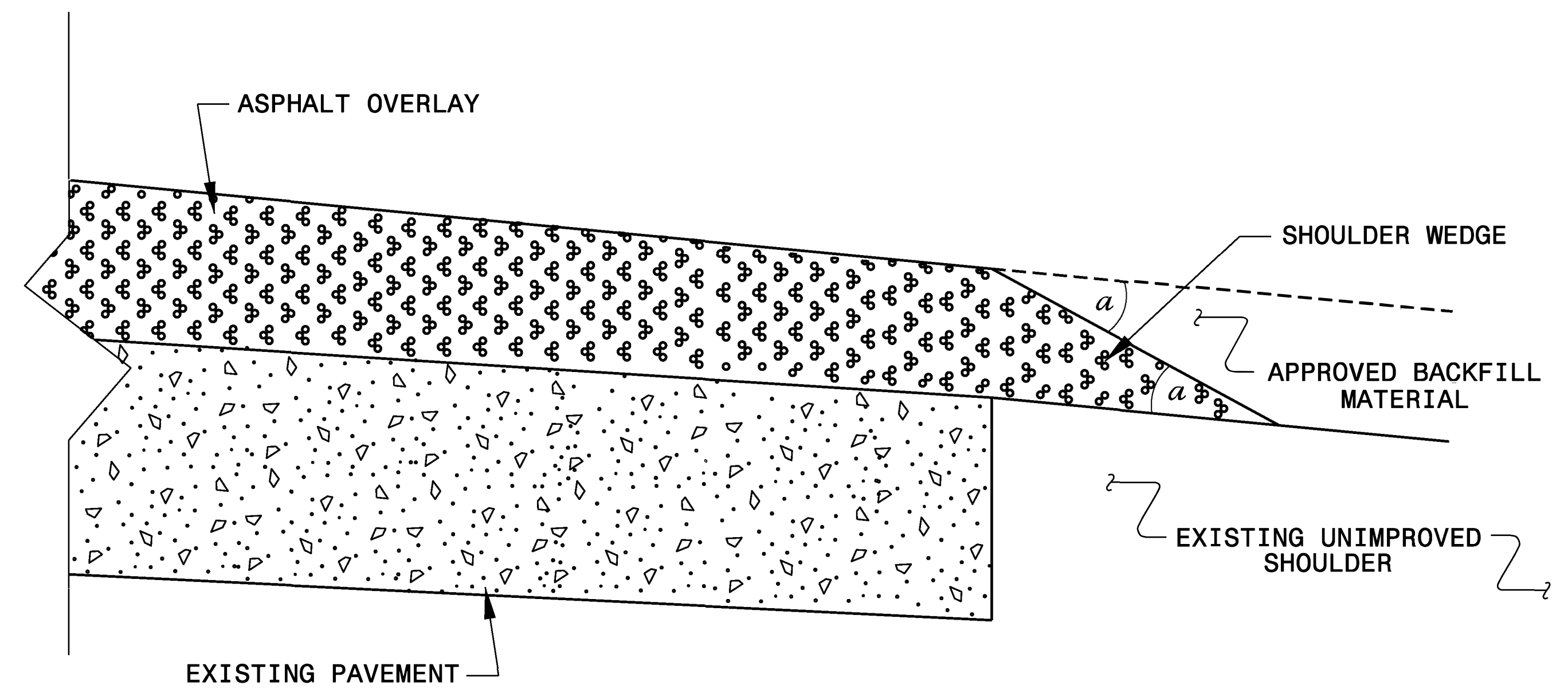
**NOTES:**

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



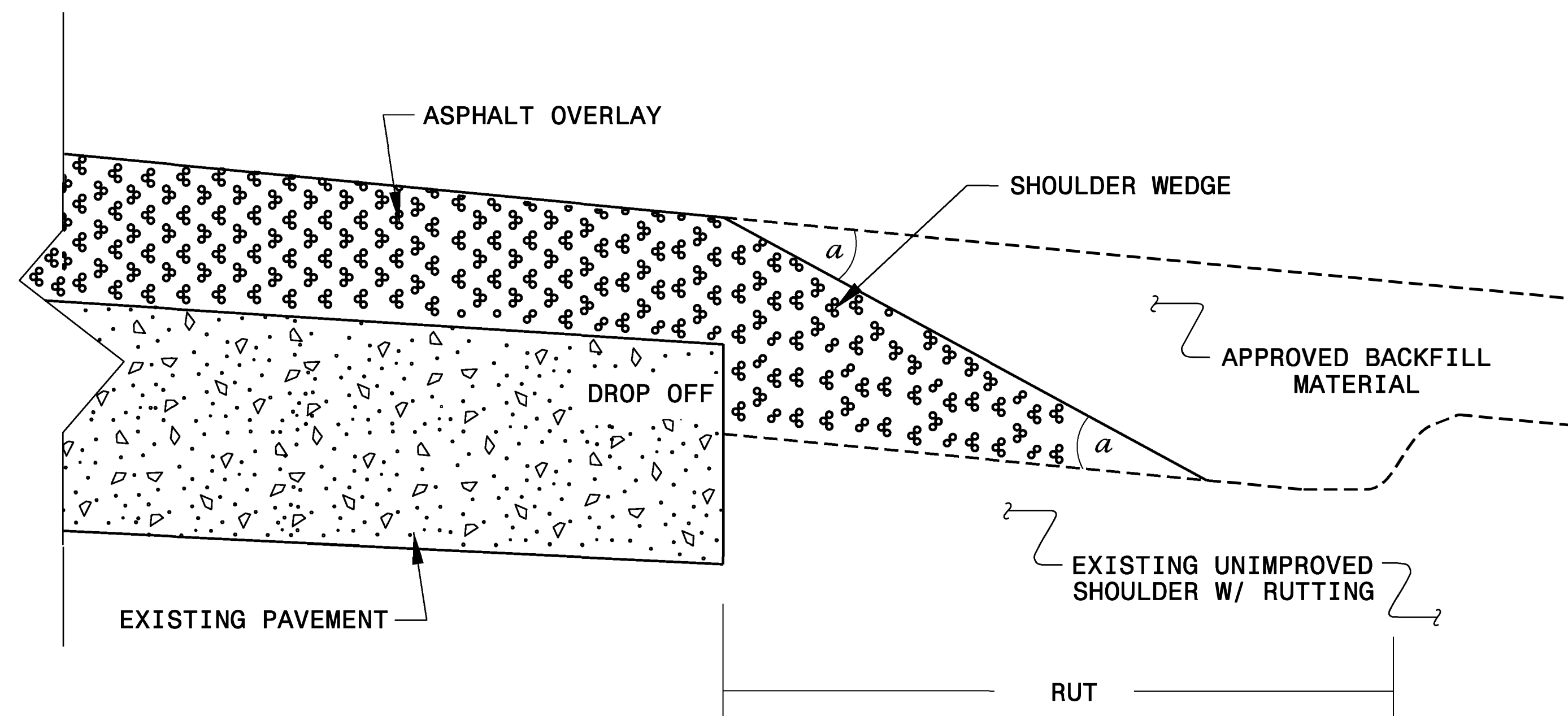
**SHOULDER WEDGE DETAIL**

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



**SHOULDER WEDGE DETAIL**

(Resurfacing Projects w/ NO Widening)



**SHOULDER WEDGE DETAIL**

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°



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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12-SEP-2018 10:10 S:\Contracts\Projects\Resurfacing Projects\Shoulder Wedge Details\Revised Shoulder Wedge Detail.dgn Jhowerton AT USD-212595

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	8	14

**SUMMARY OF QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	122000000-E	124500000-E	126000000-E	129700000-E	130800000-E	133000000-E	152300000-E	157500000-E	170400000-E	260500000-N	281500000-N	283000000-N	284500000-N	525500000-N	744000000-E		
												INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH	MILLING ASPHALT PAVEMENT, 0" TO 1-1/2" DEPTH	INCIDENTAL MILLING	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	CONCRETE CURB RAMP	ADJUSTMENT OF DROP INLET	ADJUSTMENT OF MANHOLES	ADJUSTMENT OF METER BOXES OR VALVE BOXES	PORTABLE LIGHTING	INDUCTIVE LOOP SAWCUT		
												MI	FT	TON	SMI	TON	SY	SY	SY	TON	TON	TON	EA	EA	EA	EA	LS	LF
2022CPT.13.01.10111	Buncombe	1	US 25ALT (SWEETEN CREEK RD)	FROM US 25 TO SR 3188 (MP 0.00 - MP 0.18)	2	3 to 6	MU	NO	YES	0.18	50				3,129			276	17								200	
2022CPT.13.01.10111	Buncombe	2	US 25ALT (SWEETEN CREEK RD)	FROM I-40 WEST TO NC 81 (MP 6.99 - MP 8.52)	1,2,3	2 to 5	MU	YES	YES	1.53	24	46	1.84	240	7,985	2,900		3,237	194	150	8		8	13		1,320		
2022CPT.13.01.10111	Buncombe	3	US 25 (BILTMORE AVE & MERRIMON AVE)	FROM SR 3214 TO SR 2230 +1.092 MILES (MP 10.87 - MP 14.87)	2,3	2 to 5	MU	NO	YES	4	40	60	1.20	240	99,311	2,900	767	9,497	570	100	40	30	80	67		13,662		
<b>TOTAL FOR PROJ NO. 2022CPT.13.01.10111</b>												<b>5.71</b>		<b>106</b>	<b>3.04</b>	<b>240</b>	<b>110,425</b>	<b>2,900</b>	<b>767</b>	<b>13,010</b>	<b>781</b>	<b>250</b>	<b>48</b>	<b>30</b>	<b>88</b>	<b>80</b>	<b>1</b>	<b>15,182</b>
<b>GRAND TOTAL</b>												<b>5.71</b>		<b>106</b>	<b>3.04</b>	<b>240</b>	<b>110,425</b>	<b>2,900</b>	<b>767</b>	<b>13,010</b>	<b>781</b>	<b>250</b>	<b>48</b>	<b>30</b>	<b>88</b>	<b>80</b>	<b>1</b>	<b>15,182</b>

**THERMOPLASTIC AND PAINT QUANTITIES**

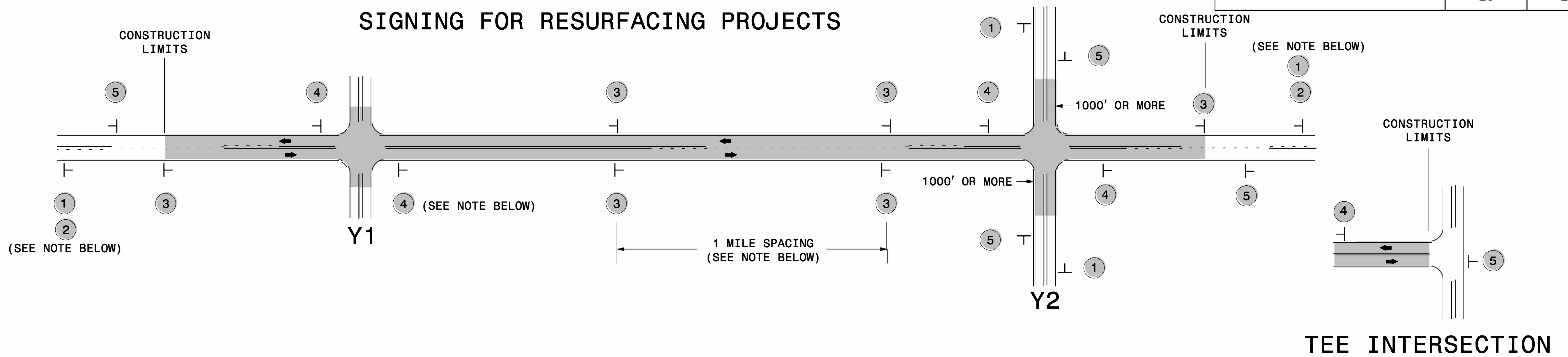
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	441300000-E	445700000-N	469500000-E		472500000-E							481000000-E		484701000-E		484703000-E	489000000-E			
										WORK ZONE ADVANCE /GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS) YELLOW	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS) WHITE	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) LT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR & RT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) RT ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) MERGE ARROW	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) 24" YIELD LINE	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS) STR & LT ARROW	PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	POLYUREA PAVEMENT MARKING LINES WHITE (4", 20 MILS) (HIGHLY REFLECTIVE MEDIA)	POLYUREA PAVEMENT MARKING LINES YELLOW (4", 20 MILS) (HIGHLY REFLECTIVE MEDIA)	POLYUREA PAVEMENT MARKING YELLOW LINES (6", 20 MILS) (HIGHLY REFLECTIVE MEDIA)	THERMOPLASTIC PAVEMENT MARKING LINES WHITE (24", 90 MILS)			
										SF	LS	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
2022CPT.13.01.10111	Buncombe	1	US 25ALT (SWEETEN CREEK RD)	FROM US 25 TO SR 3188 (MP 0.00 - MP 0.18)	2	3 to 6	MU	0.18	50					10	3	1	2						1,240	1,200	1,300	1,240			
2022CPT.13.01.10111	Buncombe	2	US 25ALT (SWEETEN CREEK RD)	FROM I-40 WEST TO NC 81 (MP 6.99 - MP 8.52)	1,2,3	2 to 5	MU	1.53	24	300	*	100	344	8	12	2	6	5						11,800	14,834		546		
2022CPT.13.01.10111	Buncombe	3	US 25 (BILTMORE AVE & MERRIMON AVE)	FROM SR 3214 TO SR 2230 +1.092 MILES (MP 10.87 - MP 14.87)	2,3	2 to 5	MU	4	40				2,876	22	27	43	7			14	30			23,767	39,314	23,767	32,872	6,442	1,701
<b>TOTAL FOR PROJ NO. 2022CPT.13.01.10111</b>										<b>126</b>	<b>1</b>	<b>100</b>	<b>3,220</b>	<b>40</b>	<b>42</b>	<b>46</b>	<b>15</b>	<b>5</b>	<b>14</b>	<b>30</b>	<b>25,007</b>	<b>40,514</b>	<b>36,867</b>	<b>48,946</b>	<b>6,442</b>	<b>2,247</b>			
<b>GRAND TOTAL</b>										<b>126</b>	<b>1</b>	<b>100</b>	<b>3,220</b>	<b>40</b>	<b>42</b>	<b>46</b>	<b>15</b>	<b>5</b>	<b>14</b>	<b>30</b>	<b>25,007</b>	<b>40,514</b>	<b>36,867</b>	<b>48,946</b>	<b>6,442</b>	<b>2,247</b>			

489200000-N	489500000-N
THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS) ONLY	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKERS
EA	EA
16	26
4	225
57	854
77	1,105
77	1,105





# SIGNING FOR RESURFACING PROJECTS



LEGEND	
—	STATIONARY SIGN
←	DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	2	3	4	5	
						<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#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)</p>
						<p>- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.</p> <p>- AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</p>
						<p>- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.</p> <p>- INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</p> <p>- 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.</p> <p>- A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</p> <p>- FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.</p>
						<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</p>

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.



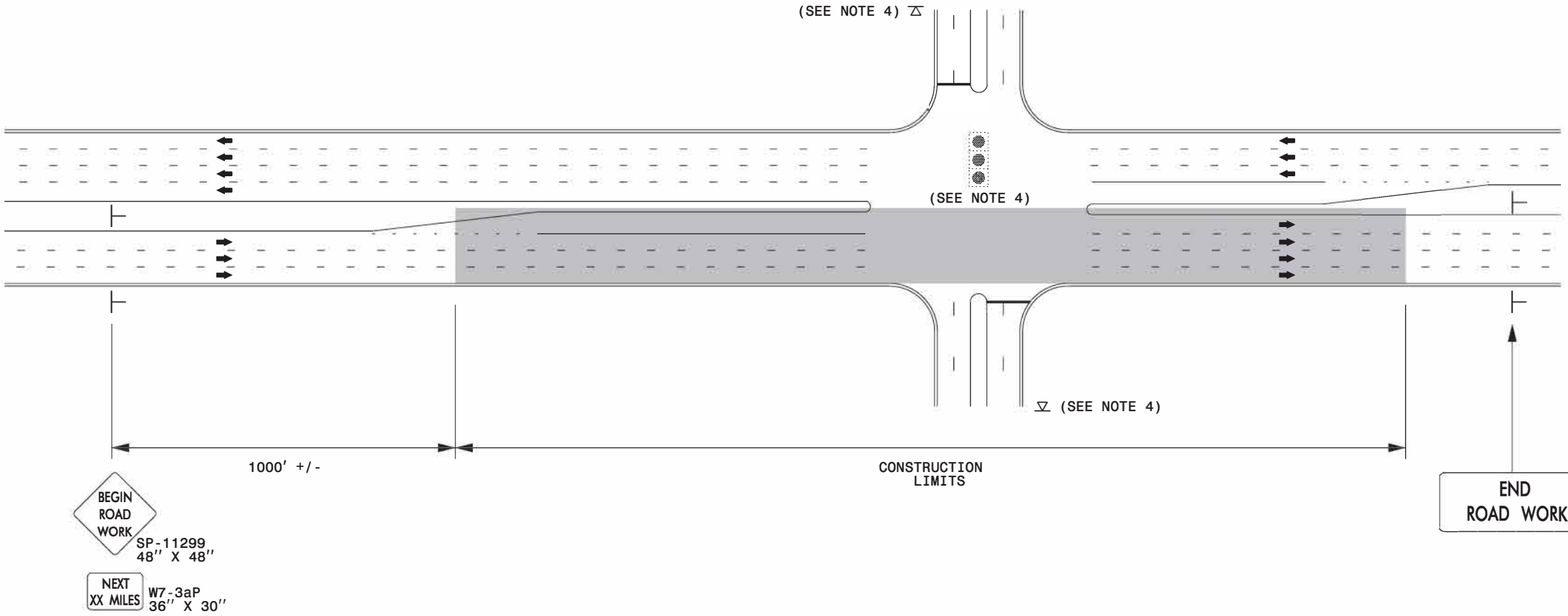
PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.

4/20/2016 C:\Users\rmgarrrett\Desktop\Resurfacing\_Advilarn\_2Ln.dgn User:rmgarrrett

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

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	11	14

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**

4/8/2015 C:\Users\rmgarrett\Downloads\Resurfacing\_AdvWarn\_Ur-Su (2).dgn User:rmgarrett



SIGN NUMBER: SP13106  
 TYPE: STATIONARY  
 QUANTITY: SEE PLANS

BACKG COLOR: Fluorescent Orange  
 COPY COLOR: Black

DESIGN BY: B. RASHID  
 PROJECT ID:

CHECKED BY: AIA  
 DIV:

DATE: Apr 26, 2013

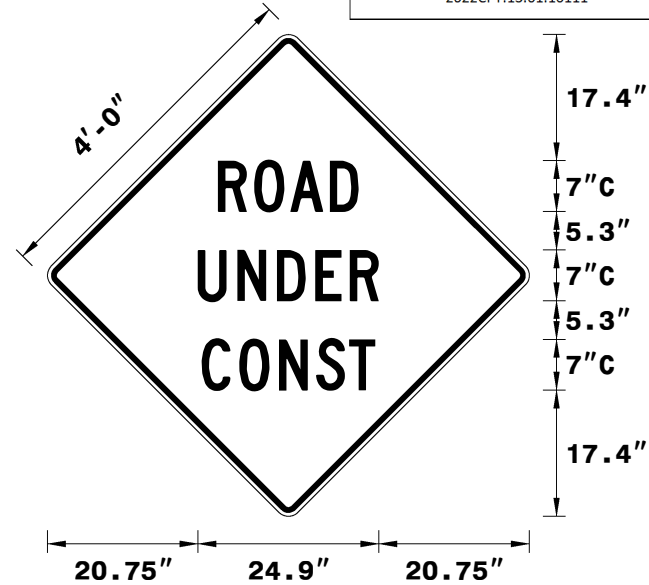
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

BORDER TYPE: INSET  
 RECESS: 0.75"  
 WIDTH: 1.25"  
 RADII: 3"

NO. Z BARS:  
 LENGTH:

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.13.01.10111	13	14



Spacing Factor is 1 unless specified otherwise

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter

Letter spacings are to start of next letter																	Series/Size Text Length	
		R	O	A	D													C 2000
	23.5	5	5	5.5	3.9	23.5												19.3
		U	N	D	E	R												C 2000
	20.7	5.5	5.5	5.3	4.8	3.9	20.7											24.9
		C	O	N	S	T												C 2000
	21.2	5.2	5.5	5.1	4.6	3.6	21.2											23.9

