

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 6

PLANS

Revised Date: October 31, 2017

Bid Date: November 1, 2017

CONTRACT ID: DF00187

WBS ELEMENT NO.: 2018CPT.06.05.20241.1

FEDERAL AID NO.: STATE FUNDED

COUNTY: COLUMBUS

TIP NO.: -----

LENGTH OF PROJECT: 25.6 MILES

ROUTE NO.: VARIOUS ROUTES

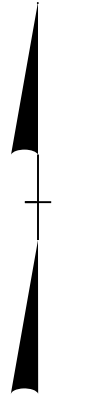
TYPE OF WORK: RESURFACING ,WIDENING & PVT. MKGS.

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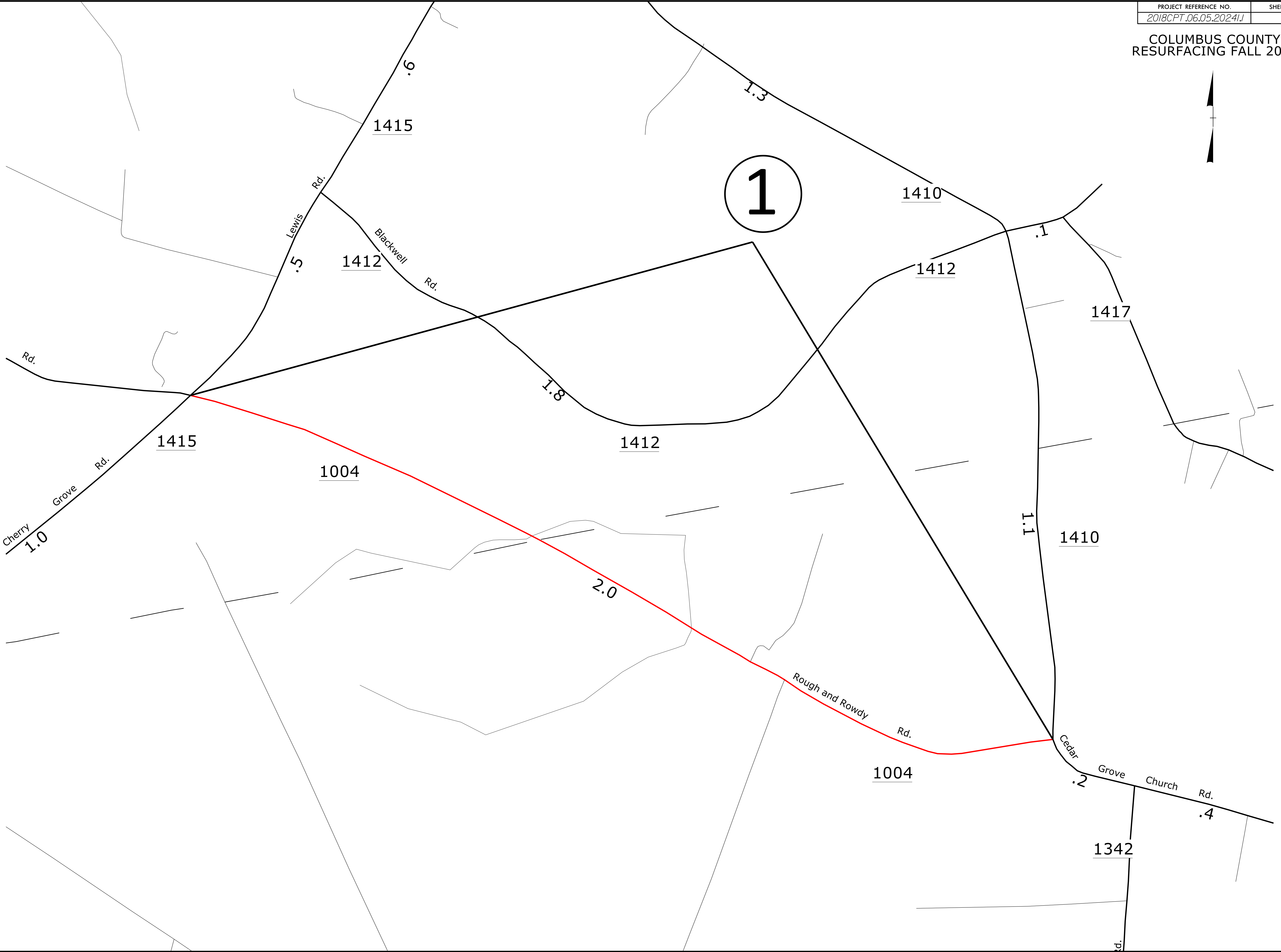
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COLUMBUS COUNTY
RESURFACING FALL 2017



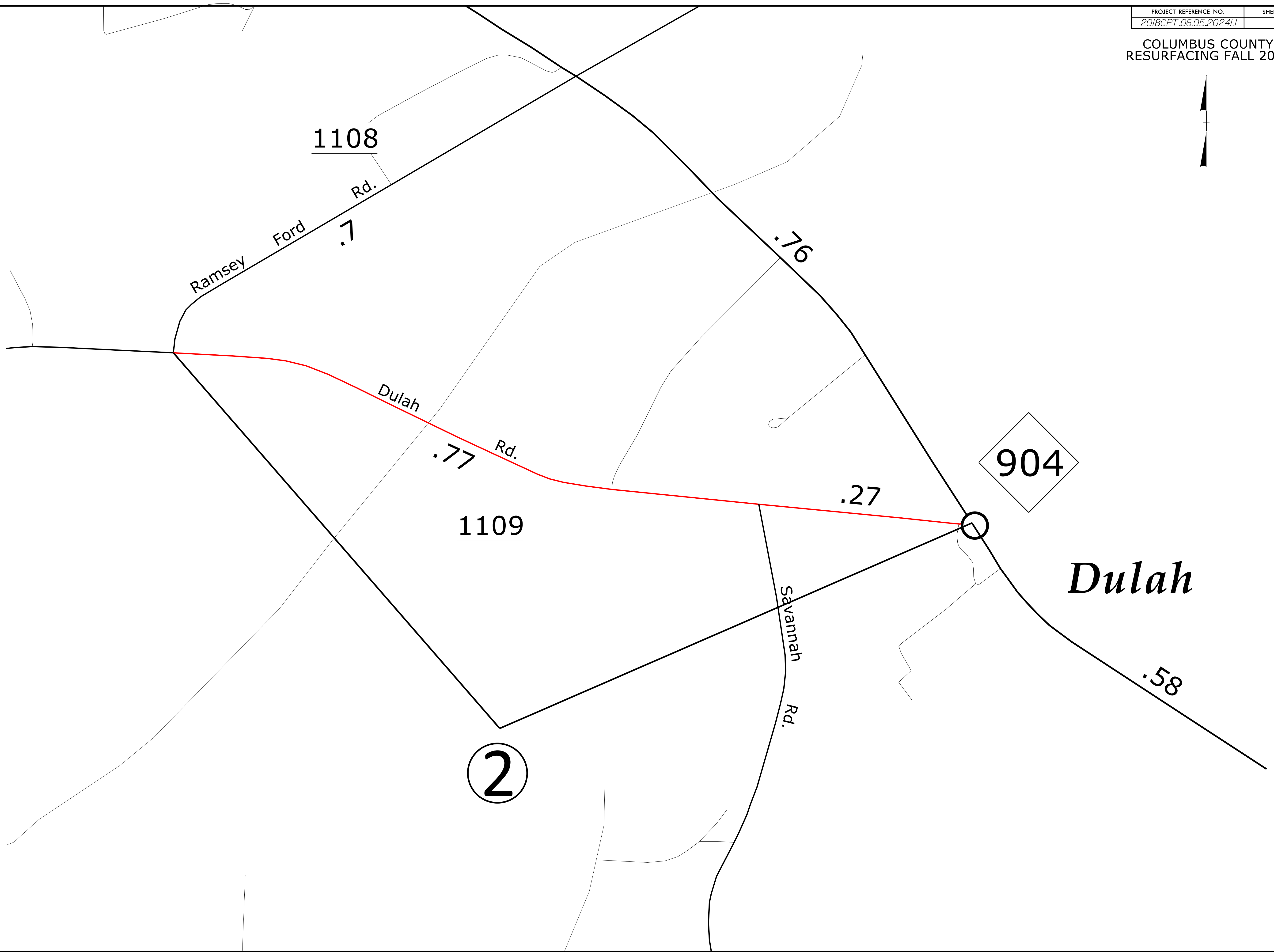
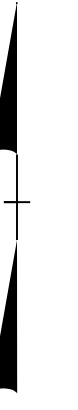
1



REVISIONS

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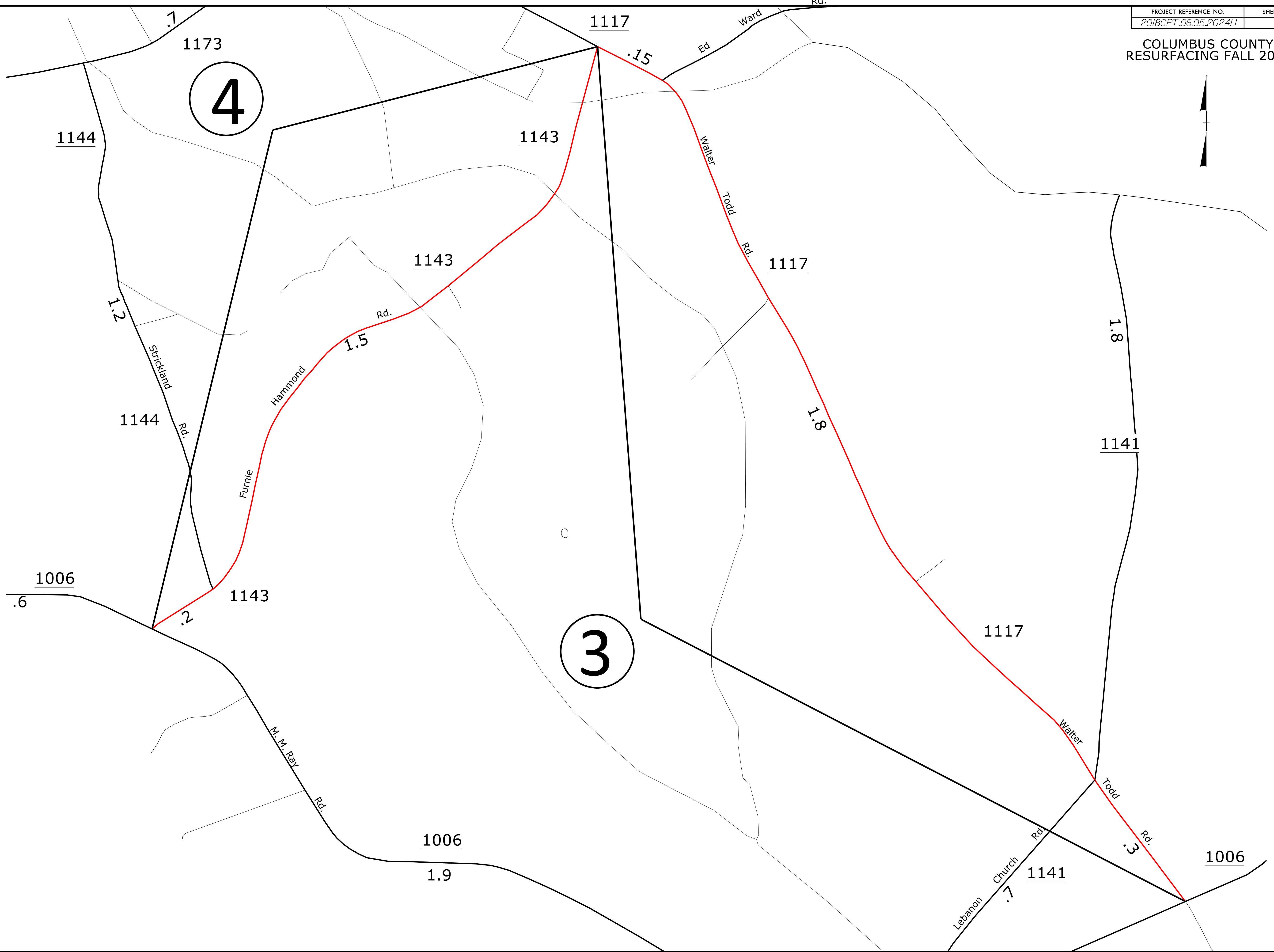
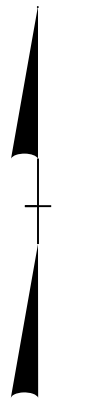
COLUMBUS COUNTY
RESURFACING FALL 2017



REVISIONS

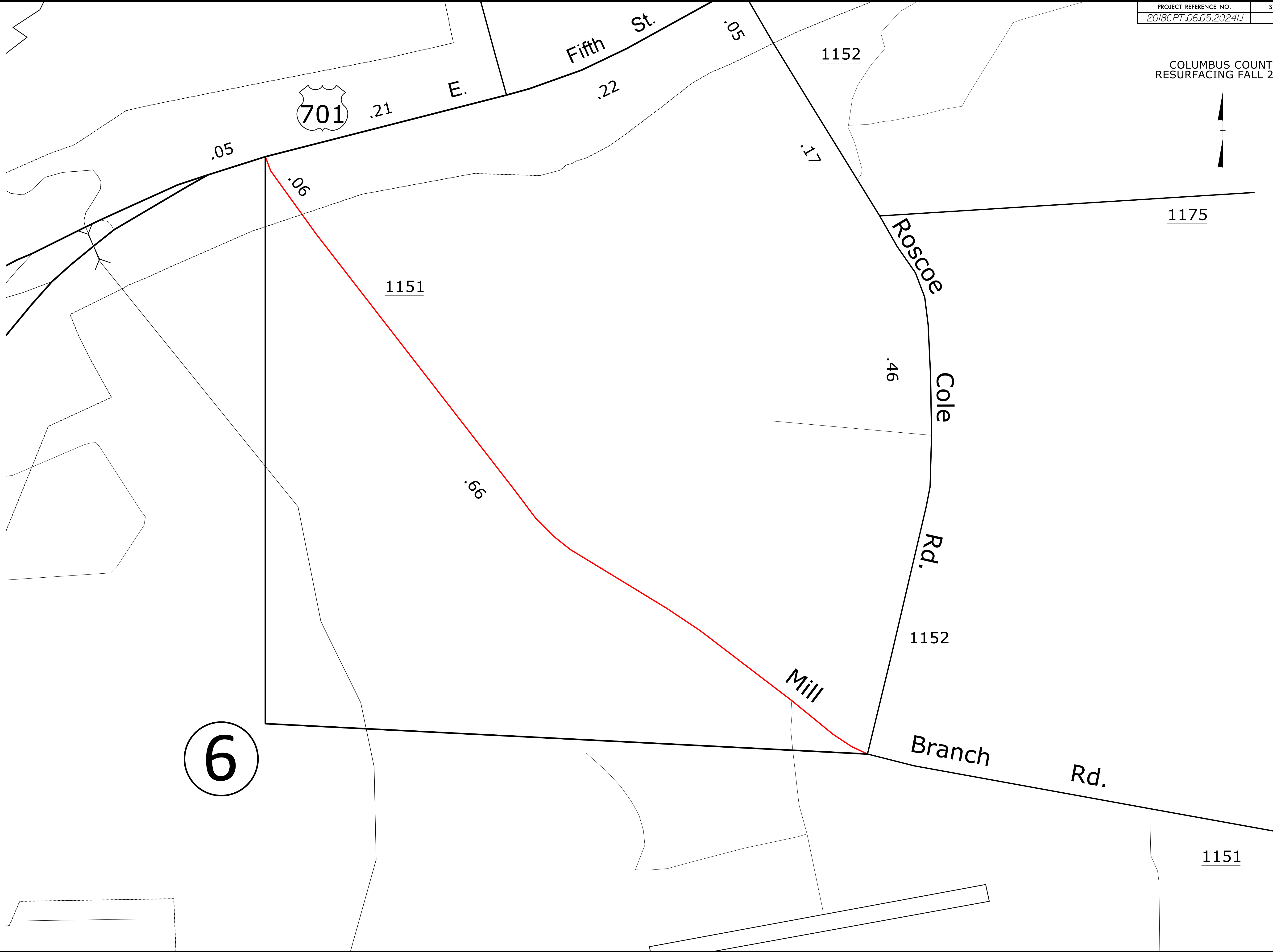
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Author: A11604133562

COLUMBUS COUNTY
RESURFACING FALL 2017



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REVISIONS

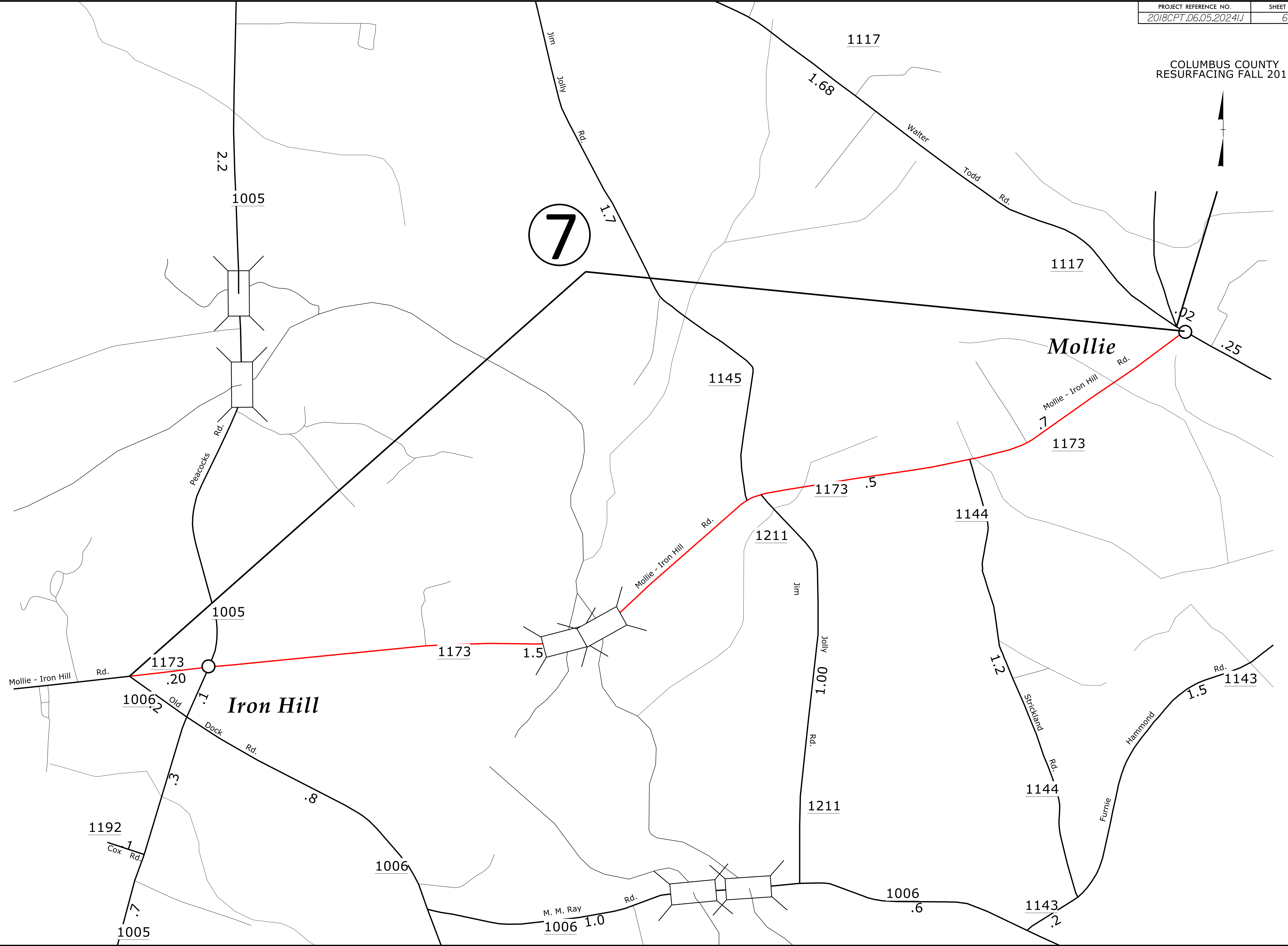
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COLUMBUS COUNTY
RESURFACING FALL 2017



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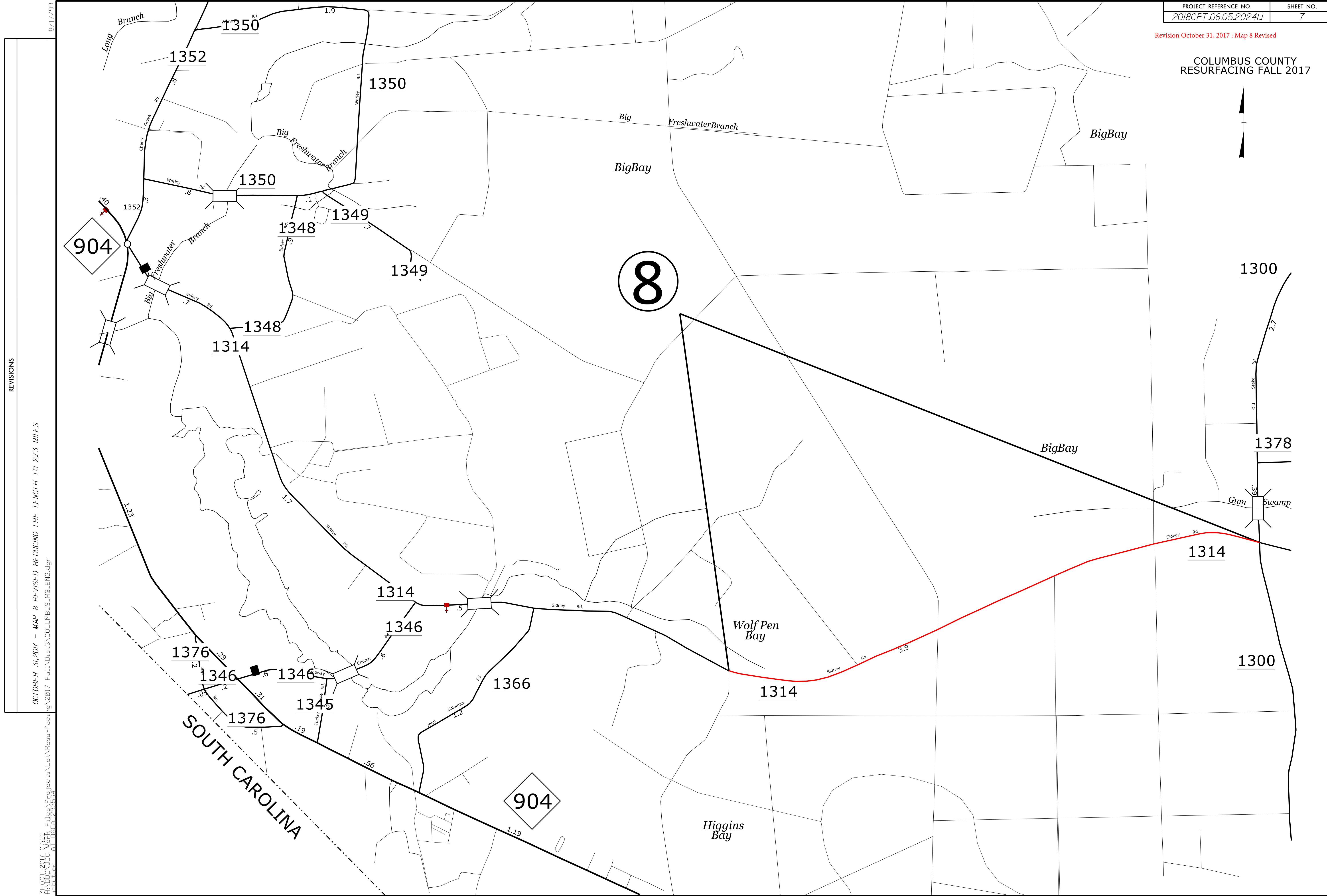


REVISIONS

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 8/17/17

Revision October 31, 2017 : Map 8 Revised

COLUMBUS COUNTY
RESURFACING FALL 2017



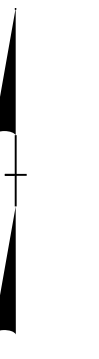
REVISIONS

OCTOBER 31, 2017 - MAP 8 REVISED REDUCING THE LENGTH TO 2.73 MILES

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Author: ATR\604133562

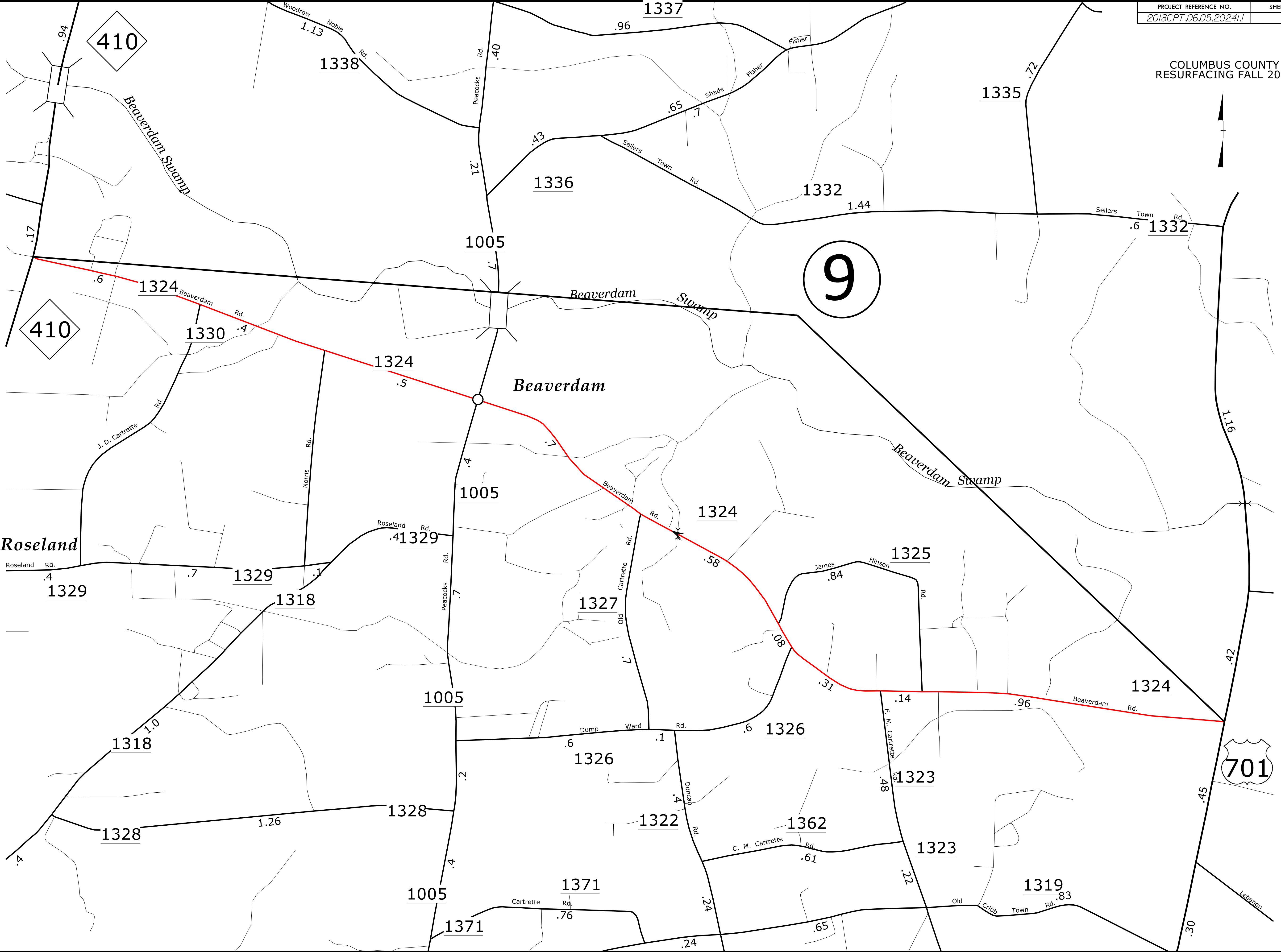
SOUTH CAROLINA

COLUMBUS COUNTY RESURFACING FALL 2017



9

701



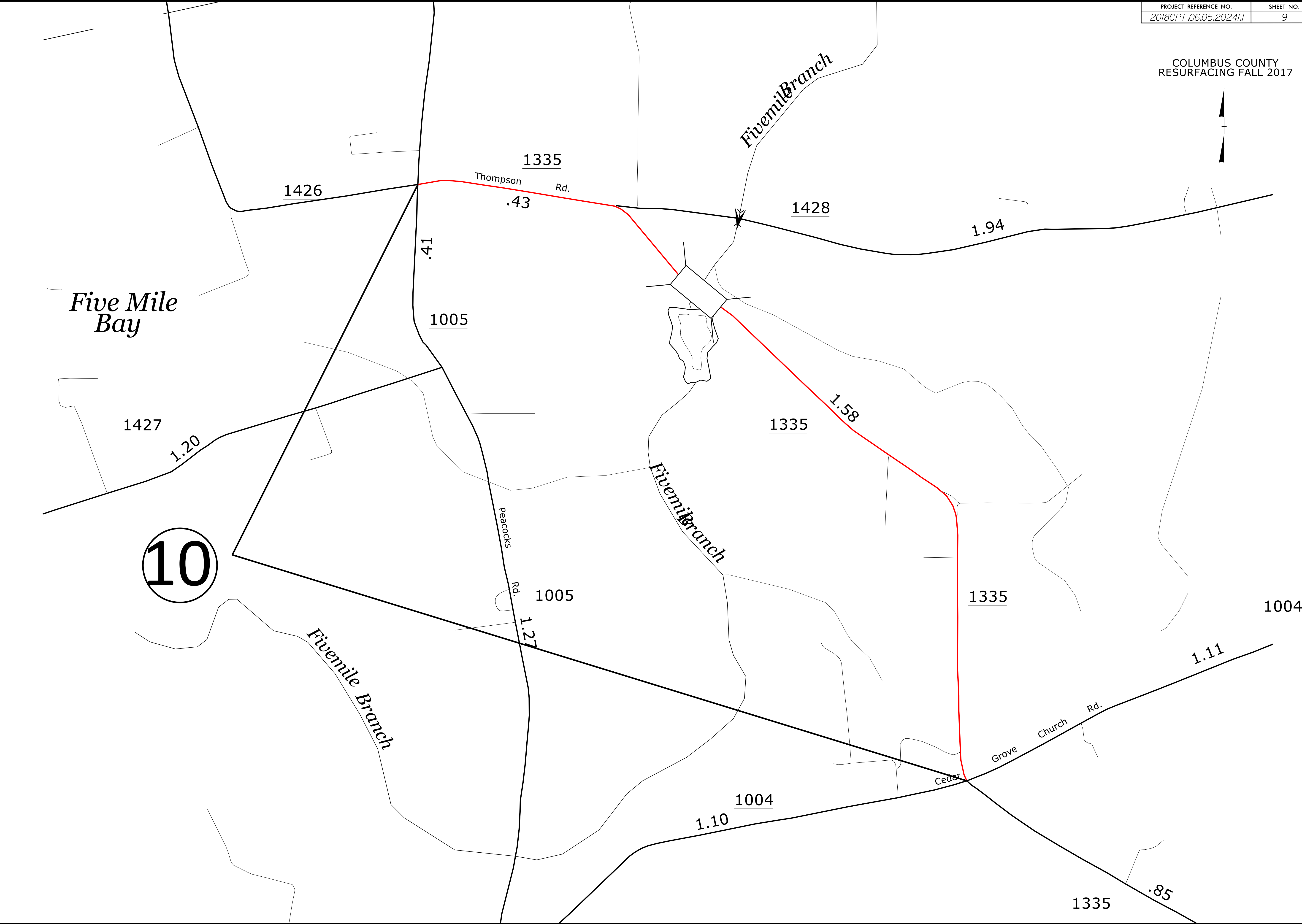
REVISIONS

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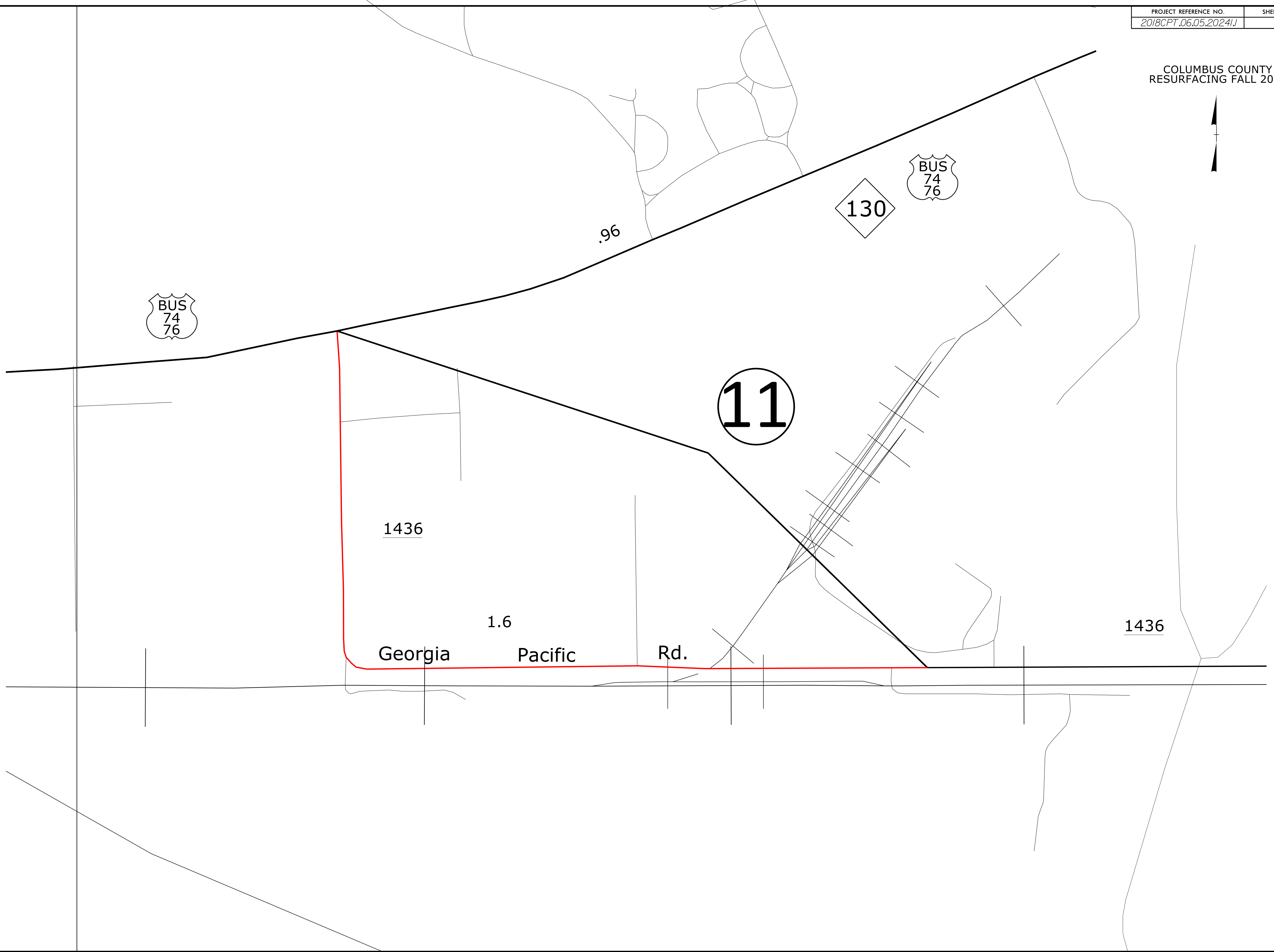


REVISIONS

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COLUMBUS COUNTY
RESURFACING FALL 2017



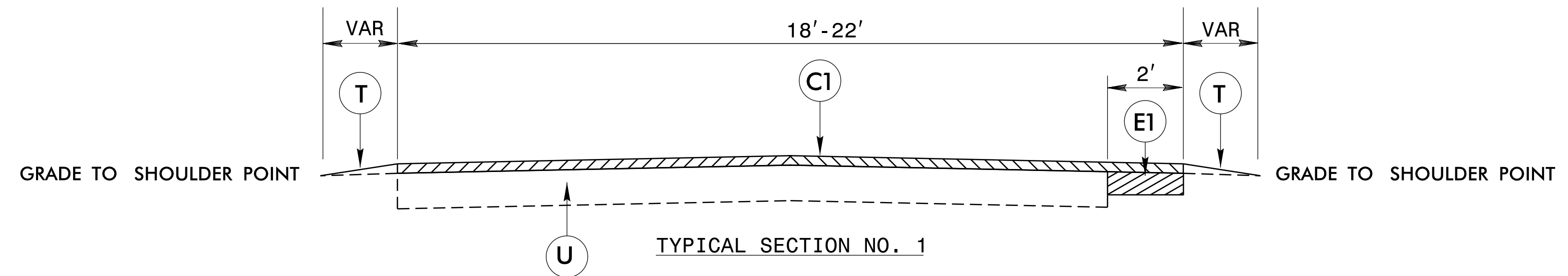
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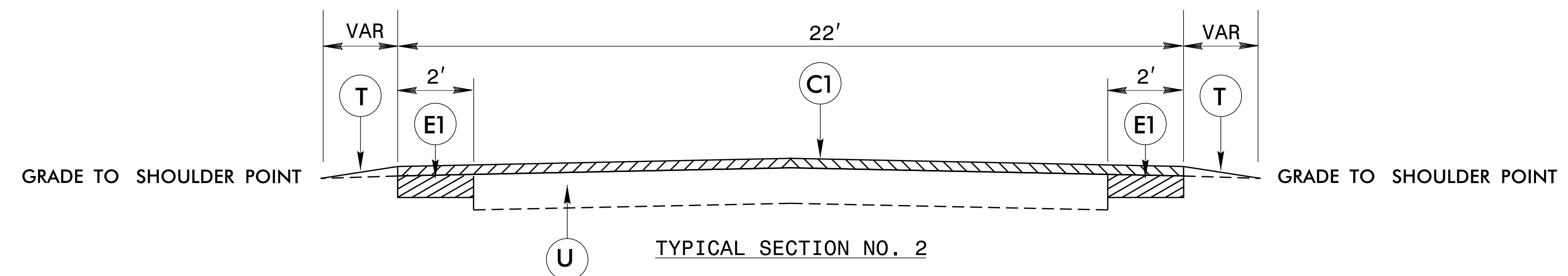
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
E1	5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION WITH AGGREGATE SHOULDER BORROW
U	EXISTING ASPHALT
V1	0" - 1½" MILLING
V2	1½" MILLING

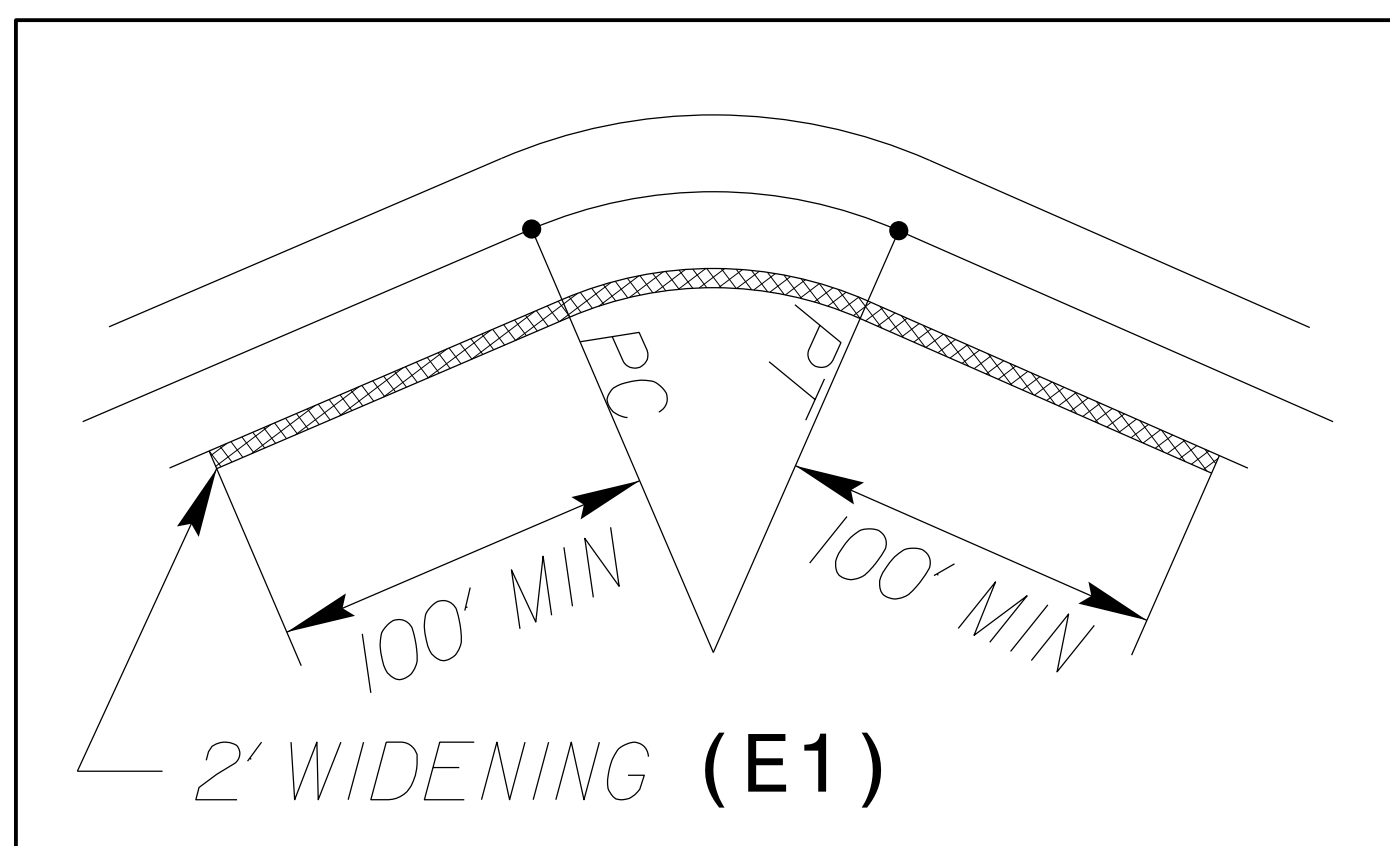
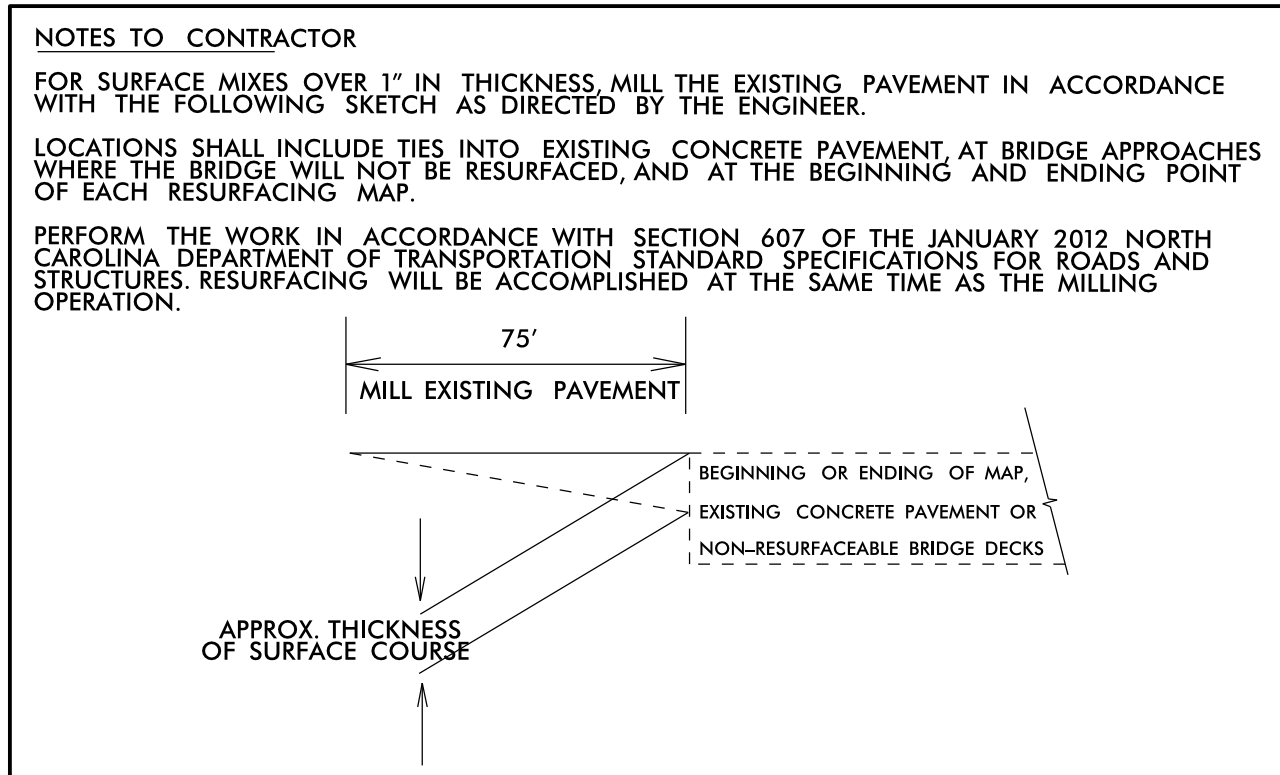
Revision October 24, 2017 : Milling Approaches Detail Added



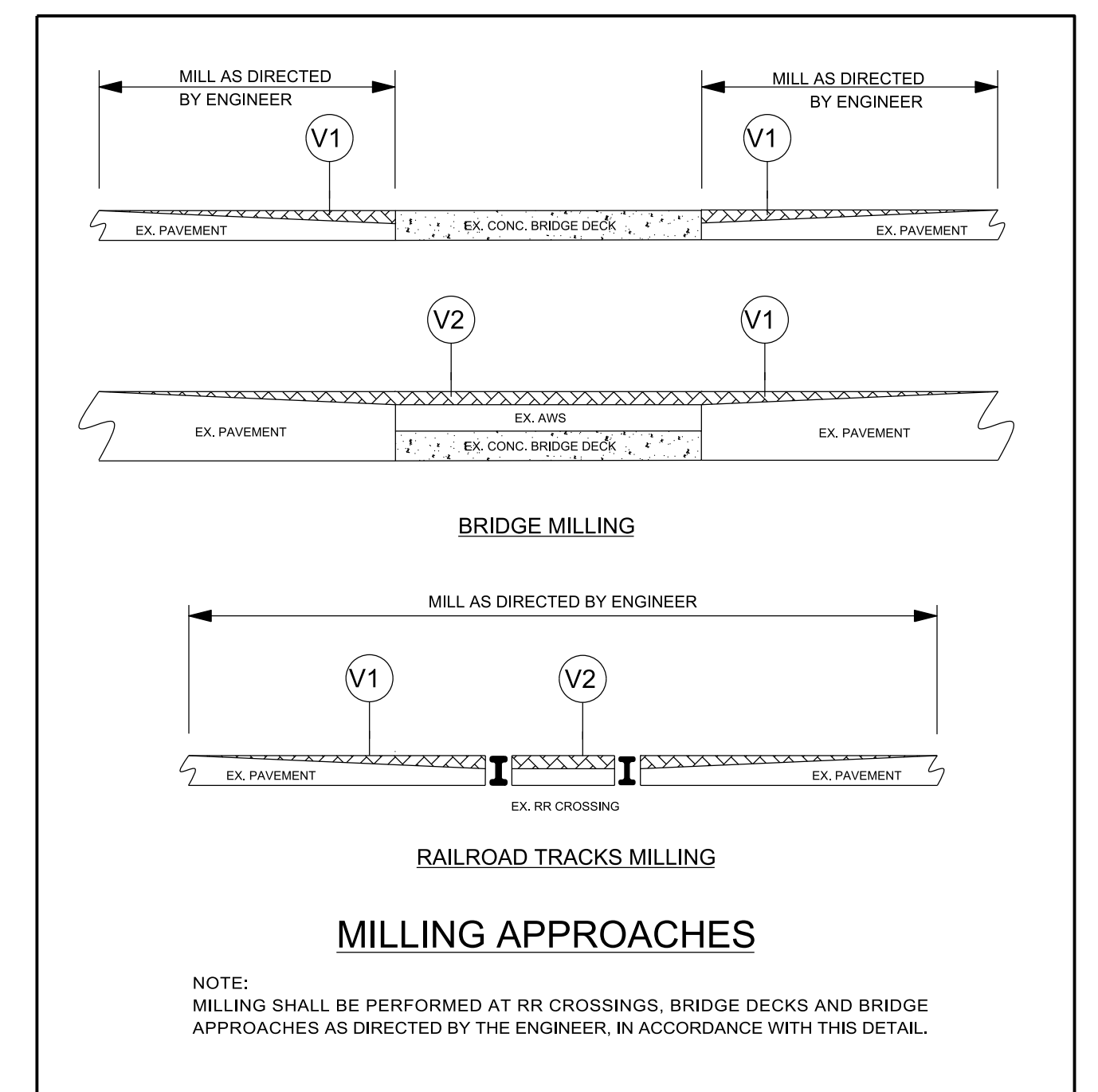
* INCLUDES INSIDE CURVE WIDENING. SEE DETAIL.



* PLUS INSIDE CURVE WIDENING. SEE DETAIL.



ALL MAPS

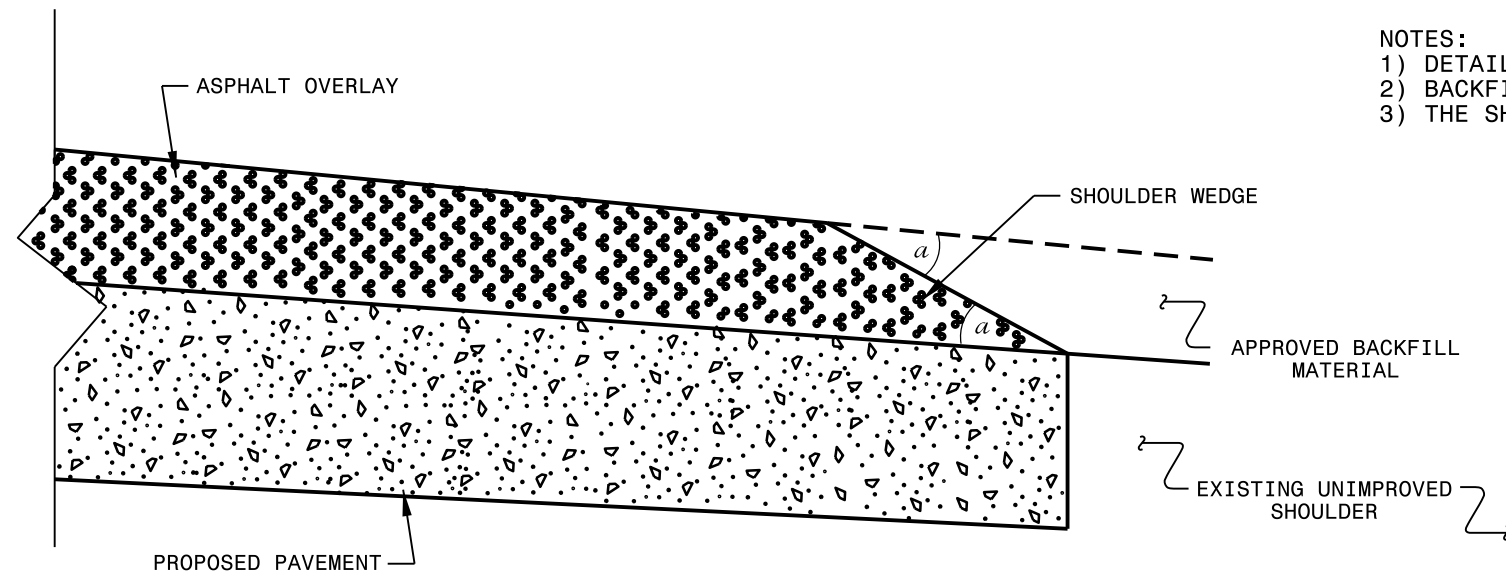


REVISIONS

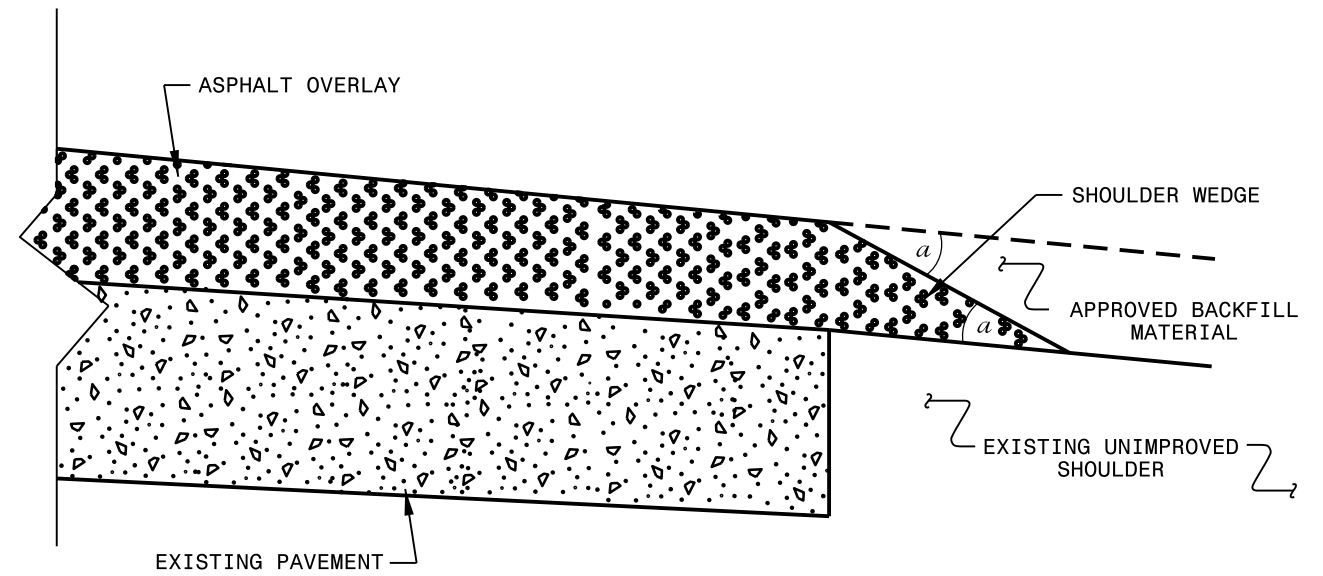
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24-OCT-2017 08:58
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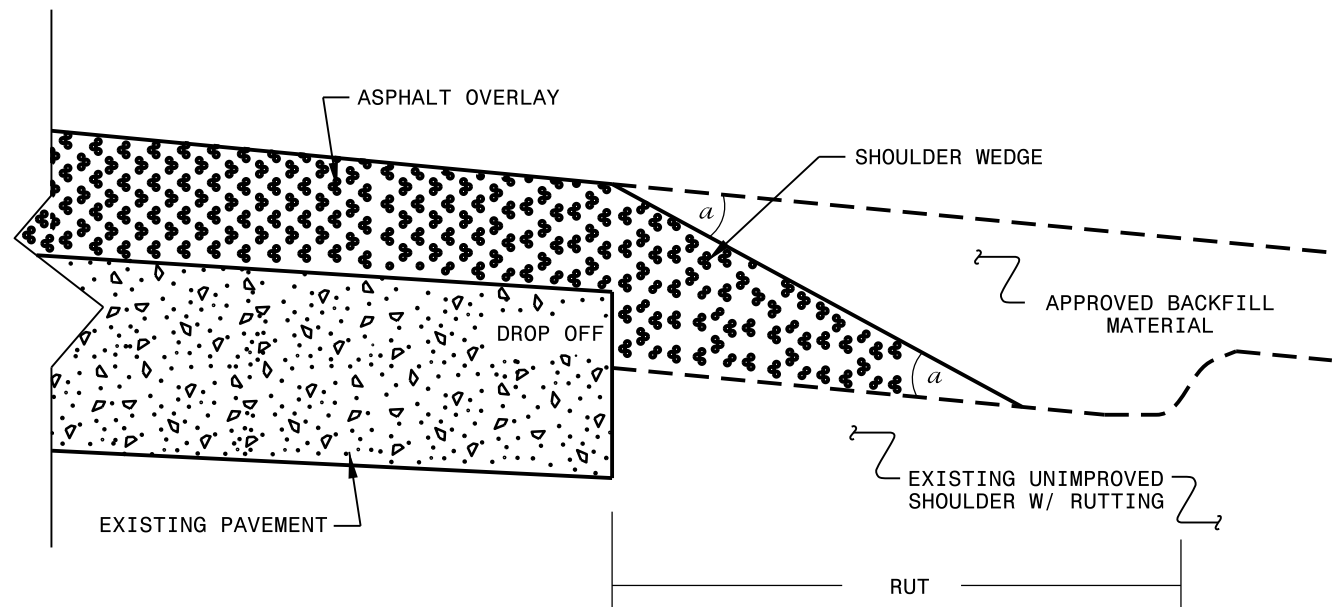
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



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



SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to
Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

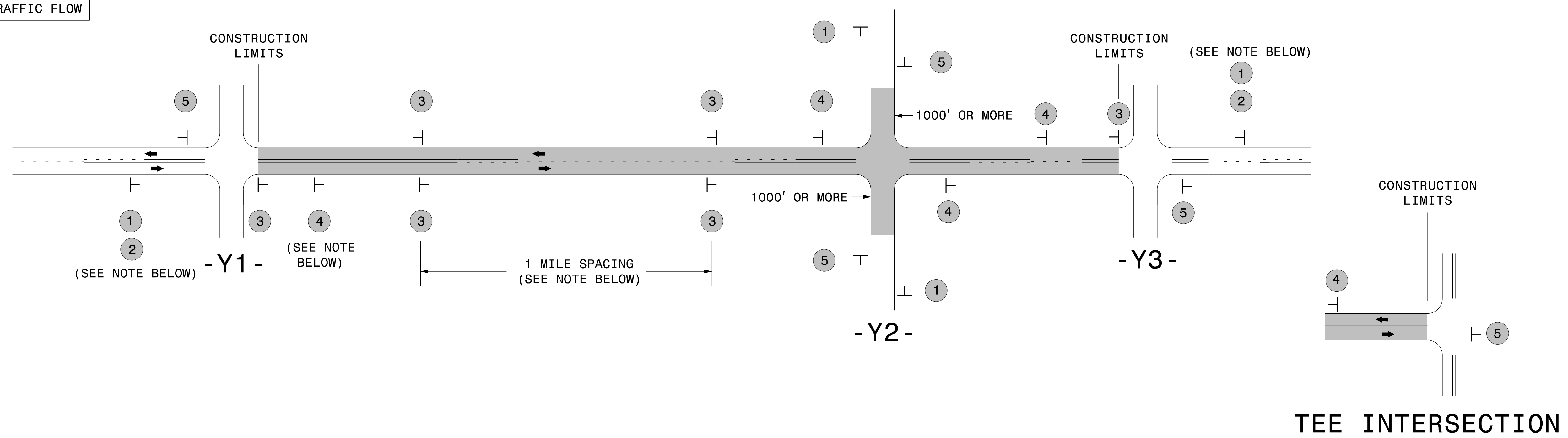
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
SHOULDER WEDGE DETAILS	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/16/12
CHECKED BY:	DATE:
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn	

SIGNING FOR RESURFACING PROJECTS

LEGEND

┃ STATIONARY SIGN

← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

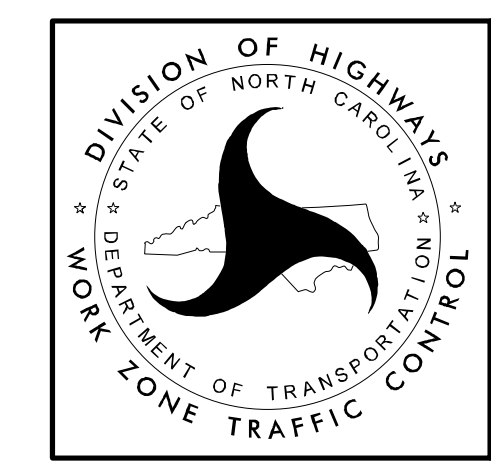
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> LESS THAN 1000' OF RESURFACING ALONG -Y- LINE SUBDIVISION ROADS DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.	
	5		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

GUIDELINES FOR LANE WIDTHS ON RESURFACING PROJECTS

Contractor shall place the new pavement markings in accordance with this table and detail unless otherwise directed by the Engineer.

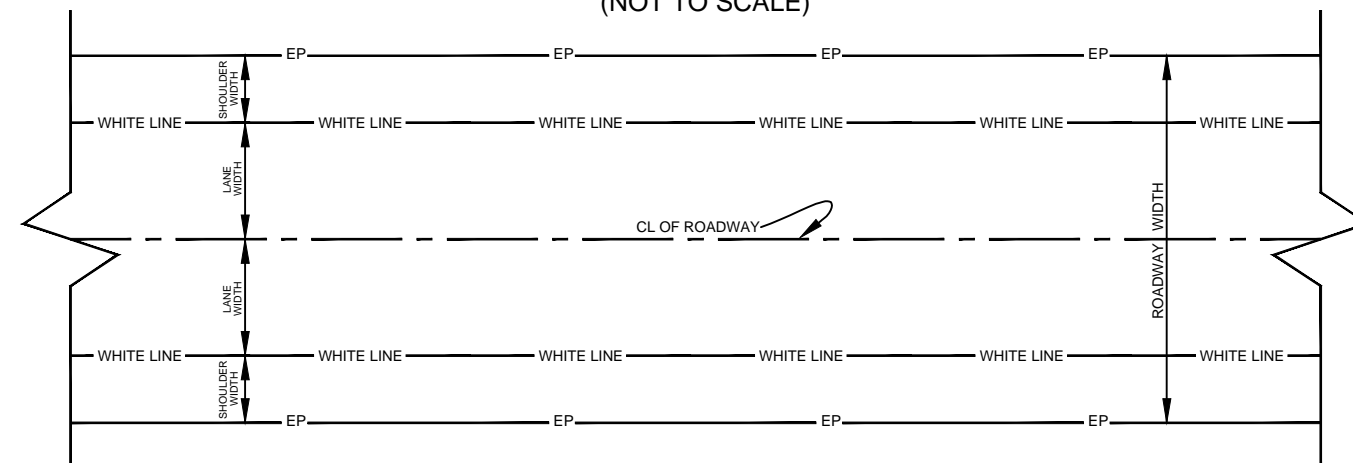
TWO LANE - TWO WAY ROADWAY - 55 MPH		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	12'	2'
32'	12'	4'

* May vary due to pavement width

TWO LANE - TWO WAY ROADWAY 50 MPH OR LESS		
ROADWAY WIDTH	LANE WIDTH	SHOULDER WIDTH
18'	9' *	0'
20'	10' *	0'
22'	10'	1'
24'	10'	2'
26'	11'	2'
28'	11'	3'
32'	11'	5'

* May vary due to pavement width

SCHEMATIC OF ROADWAY (NOT TO SCALE)



SUMMARY OF QUANTITIES

													PROJECT NO. 2018CPT.06.05.20241.1			SHEET NO. 16	TOTAL NO.			
PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0255000000-E GENERIC GRADING ITEM AGGREGATE SHOULDER BORROW	1245000000-E SHOULDER RECONSTRUCTION	1297000000-E 1½" MILLING	1330000000-E INCIDENTAL MILLING	1489000000-E BASE COURSE, B25.0B	1525000000-E SURFACE COURSE, SF9.5A	1525100000-E LEVELING COURSE, SF9.5A	1575000000-E ASPHALT BINDER FOR PLANT MIX	1704000000-E PATCHING EXISTING PAVEMENT
NO		NO			NO					MI	FT	TON	SMI	SY	SY	TONS	TONS	TONS	TONS	TONS
2018CPT.06.05.20241.1	Columbus	1	SR 1004	FROM SR 1415 TO SR 1410	1	2	2WU	NO	NO	1.98	22	640	4.00		89	73	2,152	32	149	59
TOTAL FOR MAP NO. 1										1.98		640	4.00		89	73	2,152	32	149	59
2018CPT.06.05.20241.1	Columbus	2	SR 1109	FROM NC 904 TO DEAD END	1	2	2WU	NO	NO	1.04	20	336	2.10		89	38	1,042	15	72	31
TOTAL FOR MAP NO. 2										1.04		336	2.10		89	38	1,042	15	72	31
2018CPT.06.05.20241.1	Columbus	3	SR 1117	FROM SR 1143 TO SR 1006	2	2	2WU	NO	NO	2.22	18	718	4.40		267	1,715	2,460	29	242	67
TOTAL FOR MAP NO. 3										2.22		718	4.40		267	1,715	2,460	29	242	67
2018CPT.06.05.20241.1	Columbus	4	SR 1143	FROM SR 1006 TO SR 1117	1	2	2WU	NO	NO	1.63	20	527	3.30		133	60	1,631	24	113	49
TOTAL FOR MAP NO. 4										1.63		527	3.30		133	60	1,631	24	113	49
2018CPT.06.05.20241.1	Columbus	5	SR 1150	FROM SR 1117 TO US 701	1	2	2WU	NO	NO	4.09	18	1,323	8.20	351	600	150	3,652	53	254	123
TOTAL FOR MAP NO. 5										4.09		1,323	8.20	351	600	150	3,652	53	254	123
2018CPT.06.05.20241.1	Columbus	6	SR 1151	FROM US 701 TO SR 1152	1	2	2WU	NO	NO	0.72	18	233	1.40		89	26	659	9	46	22
TOTAL FOR MAP NO. 6										0.72		233	1.40		89	26	659	9	46	22
2018CPT.06.05.20241.1	Columbus	7	SR 1173	FROM SR 1117 TO SR 1006	1	2	2WU	NO	NO	2.9	18	938	5.80	580	1,112	107	2,629	38	183	87
TOTAL FOR MAP NO. 7										2.9		938	5.80	580	1,112	107	2,629	38	183	87
2018CPT.06.05.20241.1	Columbus	8	SR 1314	FROM SR 1300 TO PVT.CHG.	1	2	2WU	NO	NO	2.73	18	883	5.50		89	100	2,479	36	173	82
TOTAL FOR MAP NO. 8										2.73		883	5.50		89	100	2,479	36	173	82
2018CPT.06.05.20241.1	Columbus	9	SR 1324	FROM US 701 TO NC 410	1	2	2WU	NO	NO	4.17	18	1,349	8.30		400	153	3,785	55	264	125
TOTAL FOR MAP NO. 9										4.17		1,349	8.30		400	153	3,785	55	264	125
2018CPT.06.05.20241.1	Columbus	10	SR 1335	FROM SR 1004 TO SR 1005	1	2	2WU	NO	NO	2.01	18	650	4.00		978	74	1,808	26	126	60
TOTAL FOR MAP NO. 10										2.01		650	4.00		978	74	1,808	26	126	60
2018CPT.06.05.20241.1	Columbus	11	SR 1436	FROM NC 130 TO PVT. CHANGE	1	2	2WU	NO	NO	0.98	20	317	2.00		89	36	983	14	68	29
TOTAL FOR MAP NO. 11										0.98		317	2.00		89	36	983	14	68	29
2018CPT.06.05.20241.1	Columbus	12	SR 1439	FROM SR 1437 TO NC 130	1	2	2WU	NO	NO	1.01	22	327	2.00		133	37	1,122	16	78	30
TOTAL FOR MAP NO. 12										1.01		327	2.00		133	37	1,122	16	78	30
2018CPT.06.05.20241.1	Columbus	13	SR 1452	FROM SR 1439 TO END MAINT.	1	2	2WU	NO	NO	0.12	20	39	0.20		44	4	130	2	9	4
TOTAL FOR MAP NO. 13										0.12		39	0.20		44	4	130	2	9	4
TOTAL FOR PROJ NO. 2018CPT.06.05.20241.1										25.6		8,280	51.20	931	4,112	2,573	24,532	349	1,777	768
GRAND TOTAL										25.6		8,280	51.20	931	4,112	2,573	24,532	349	1,777	768

Revision October 31, 2017 : Map 8 Quantities Revised

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO. 2018CPT.06.05.20241.1	SHEET NO. 17	TOTAL NO.
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PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4685000000-E	4686000000-E	4705000000-E	4710000000-E	4721000000-E	4810000000-E		4900000000-N	
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 120 M YELLOW THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO RXR 120 M	4" WHITE PAINT	4" YELLOW PAINT	YELLOW & YELLOW MARKERS	
NO		NO			NO			MI	FT	SF	LS	LF	LF	LF	LF	EA	LF	LF	EA	
2018CPT.06.05.20241.1	Columbus	1	SR 1004	FROM SR 1415 TO SR 1410	1	2	2WU	1.98	22	222	1	20,908	17,772						130	
TOTAL FOR MAP NO. 1									1.98		222	1	20,908	17,772					130	
2018CPT.06.05.20241.1	Columbus	2	SR 1109	FROM NC 904 TO DEAD END	1	2	2WU	1.04	20	116							21,965	13,728		
TOTAL FOR MAP NO. 2									1.04		116						21,965	13,728		
2018CPT.06.05.20241.1	Columbus	3	SR 1117	FROM SR 1143 TO SR 1006	2	2	2WU	2.22	18	249							46,886	39,855		
TOTAL FOR MAP NO. 3									2.22		249						46,886	39,855		
2018CPT.06.05.20241.1	Columbus	4	SR 1143	FROM SR 1006 TO SR 1117	1	2	2WU	1.63	20	183							34,426	29,264		
TOTAL FOR MAP NO. 4									1.63		183						34,426	29,264		
2018CPT.06.05.20241.1	Columbus	5	SR 1150	FROM SR 1117 TO US 701	1	2	2WU	4.09	18	458							86,381	73,423		
TOTAL FOR MAP NO. 5									4.09		458						86,381	73,423		
2018CPT.06.05.20241.1	Columbus	6	SR 1151	FROM US 701 TO SR 1152	1	2	2WU	0.72	18	81							15,206	12,927		
TOTAL FOR MAP NO. 6									0.72		81						15,206	12,927		
2018CPT.06.05.20241.1	Columbus	7	SR 1173	FROM SR 1117 TO SR 1006	1	2	2WU	2.9	18	325							61,248	52,060		
TOTAL FOR MAP NO. 7									2.9		325						61,248	52,060		
2018CPT.06.05.20241.1	Columbus	8	SR 1314	FROM SR 1300 TO PVT.CHG.	1	2	2WU	2.73	18	306							57,658	49,100		
TOTAL FOR MAP NO. 8									2.73		306						57,658	49,100		
2018CPT.06.05.20241.1	Columbus	9	SR 1324	FROM US 701 TO NC 410	1	2	2WU	4.17	18	467							88,070	74,861		
TOTAL FOR MAP NO. 9									4.17		467						88,070	74,861		
2018CPT.06.05.20241.1	Columbus	10	SR 1335	FROM SR 1004 TO SR 1005	1	2	2WU	2.01	18	225							42,451	31,838		
TOTAL FOR MAP NO. 10									2.01		225						42,451	31,838		
2018CPT.06.05.20241.1	Columbus	11	SR 1436	FROM NC 130 TO PVT. CHANGE	1	2	2WU	0.98	20	110				300	150	12	20,698	17,592		
TOTAL FOR MAP NO. 11									0.98		110				300	150	12	20,698	17,592	
2018CPT.06.05.20241.1	Columbus	12	SR 1439	FROM SR 1437 TO NC 130	1	2	2WU	1.01	22	113							21,331	18,132		
TOTAL FOR MAP NO. 12									1.01		113						21,331	18,132		
2018CPT.06.05.20241.1	Columbus	13	SR 1452	FROM SR 1439 TO END MAINT.	1	2	2WU	0.12	20	13										
TOTAL FOR MAP NO. 13									0.12		13									
TOTAL FOR PROJ NO. 2018CPT.06.05.20241.1									25.6		2,868	1	20,908	17,772	300	150	12	496,320	412,780	130
GRAND TOTAL									25.6		2,868	1	20,908	17,772	300	150	12	496,320	412,780	130

Revision October 31, 2017 : Map 8 Quantities Revised