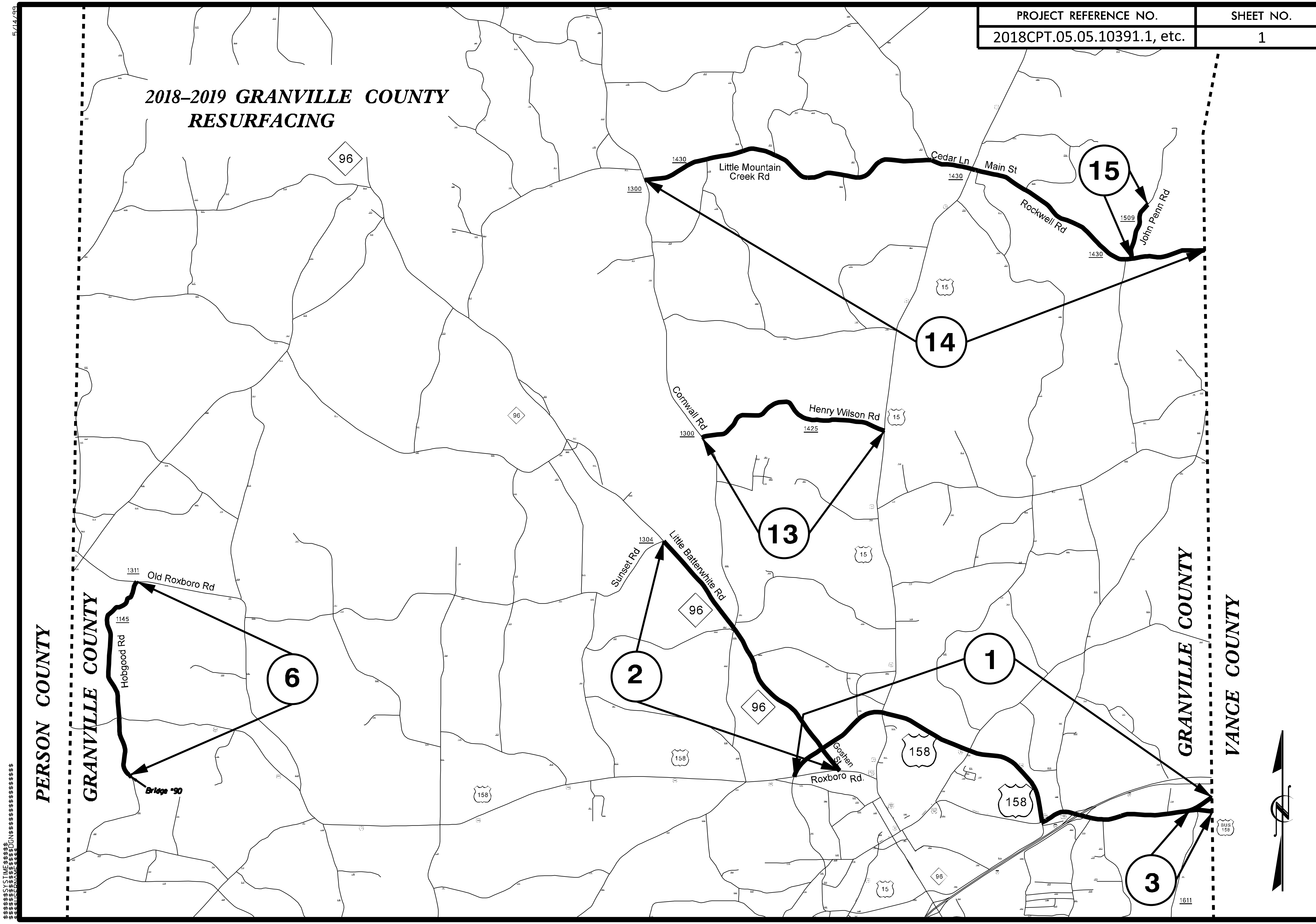
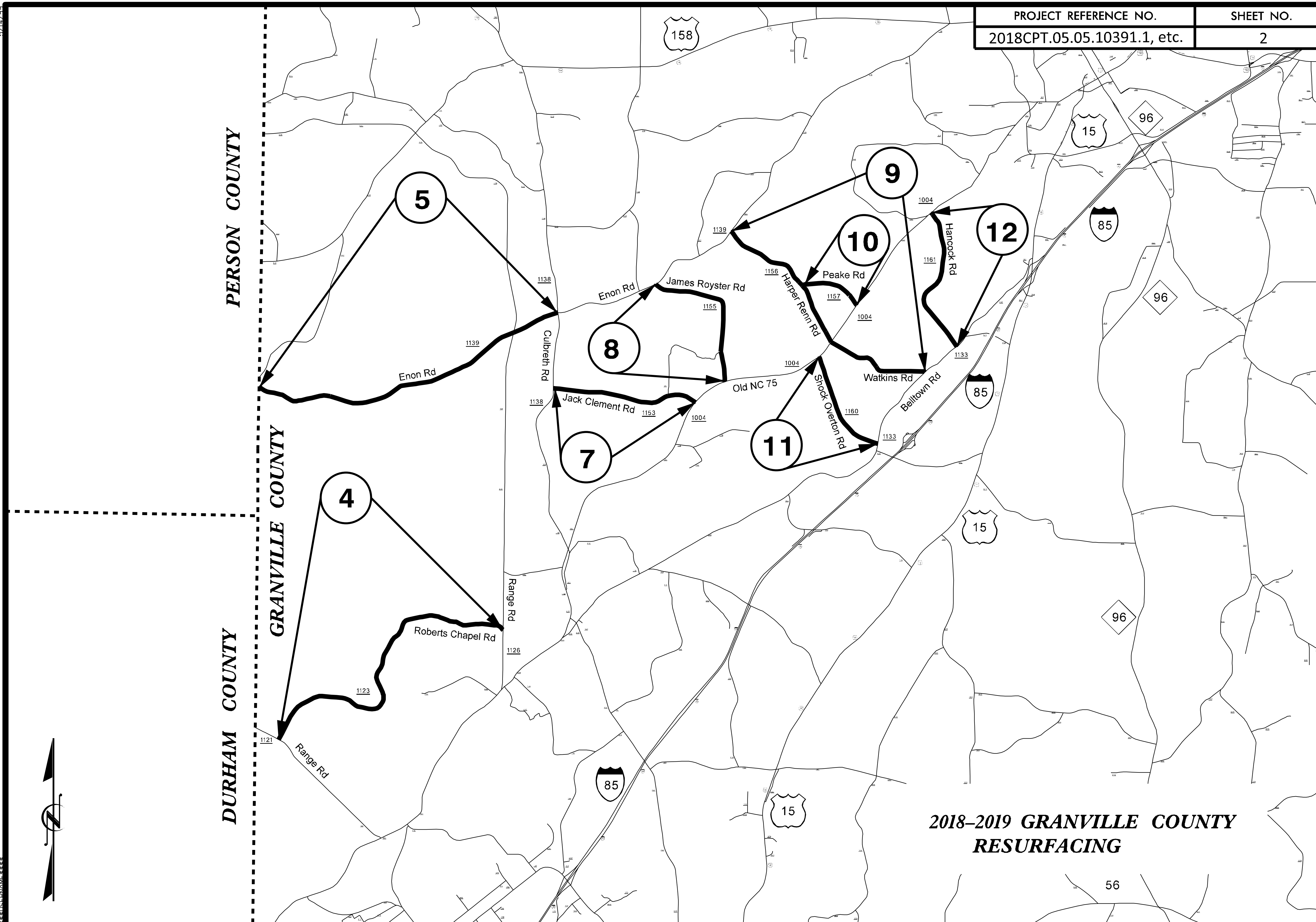
PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, etc.	1

2018–2019 GRANVILLE COUNTY RESURFACING



PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, etc.	2

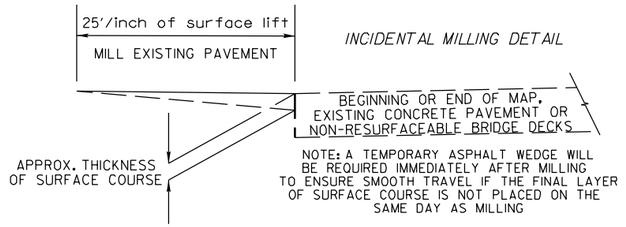


2018–2019 GRANVILLE COUNTY RESURFACING

PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05J0391J, etc.	3

PAVEMENT SCHEDULE

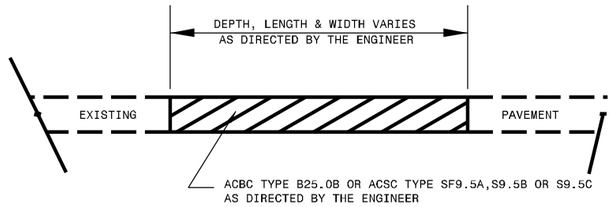
C1	1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	2″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
U	EXISTING PAVEMENT
V1	1″ MILLING
V2	0″ - 1½″ MILLING
V3	0″ - 1″ MILLING



INCIDENTAL MILLING DETAIL

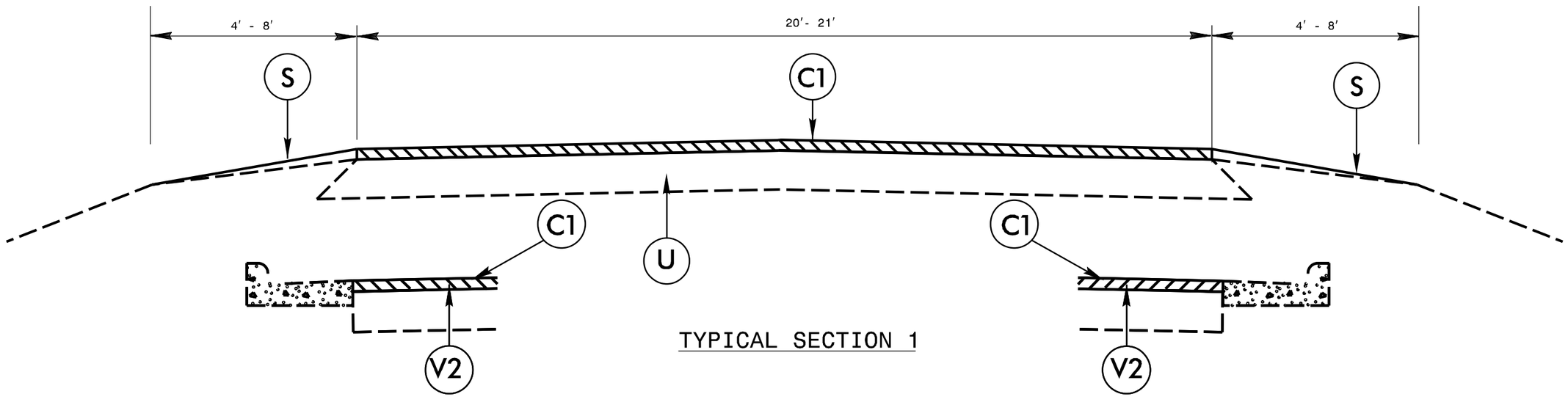
NOTES

ALL UNPAVED S.R. 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.
BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.



PATCHING EXISTING PAVEMENT

MILLING (IF REQUIRED BY TYPICAL) TO BE PERFORMED PRIOR TO PATCHING

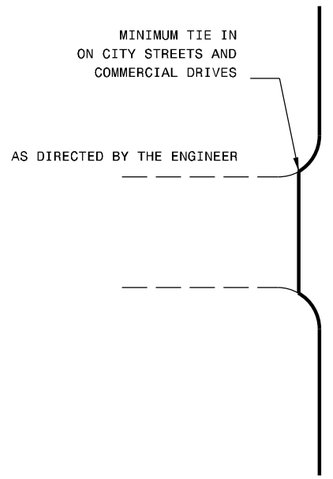


TYPICAL SECTION 1

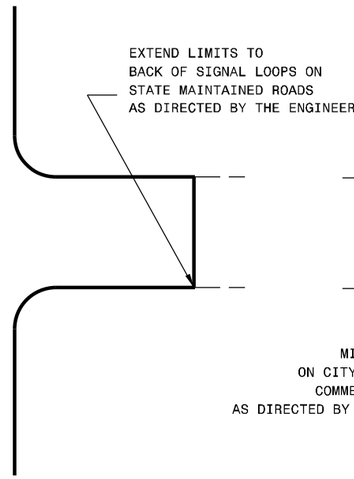
PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, etc.	4

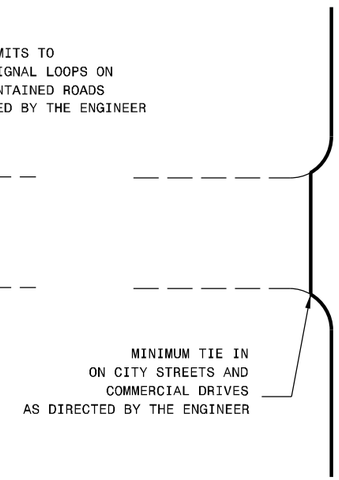
PAVEMENT SCHEDULE

C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
U	EXISTING PAVEMENT
V1	1" MILLING
V2	0" - 1½" MILLING
V3	0" - 1" MILLING

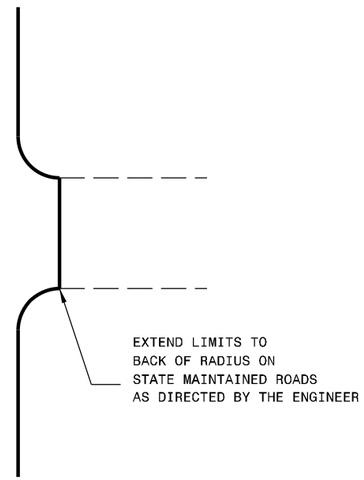


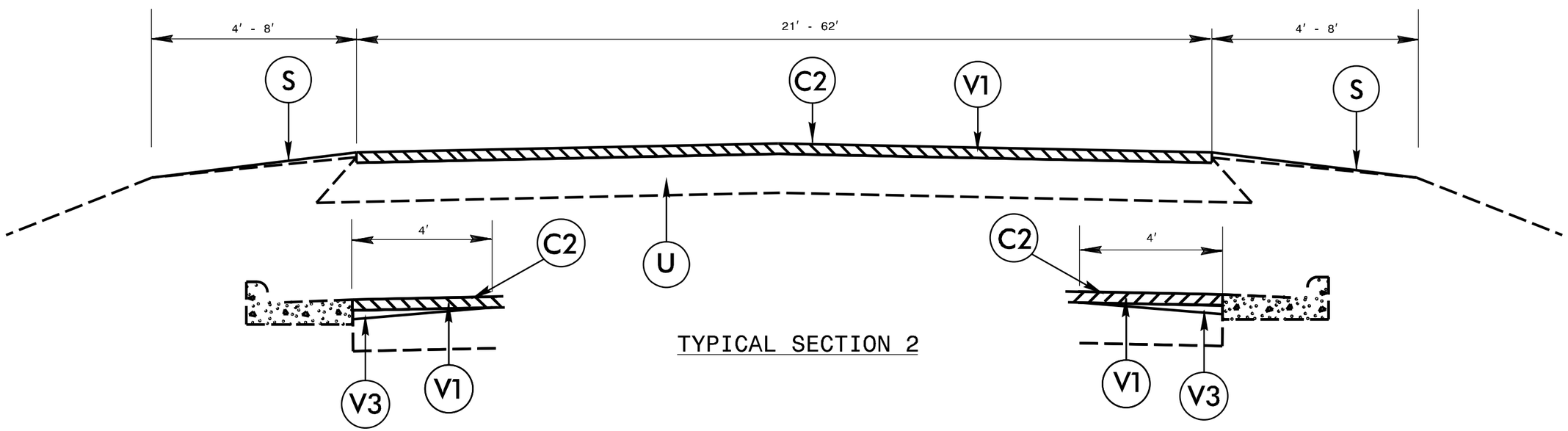
DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES





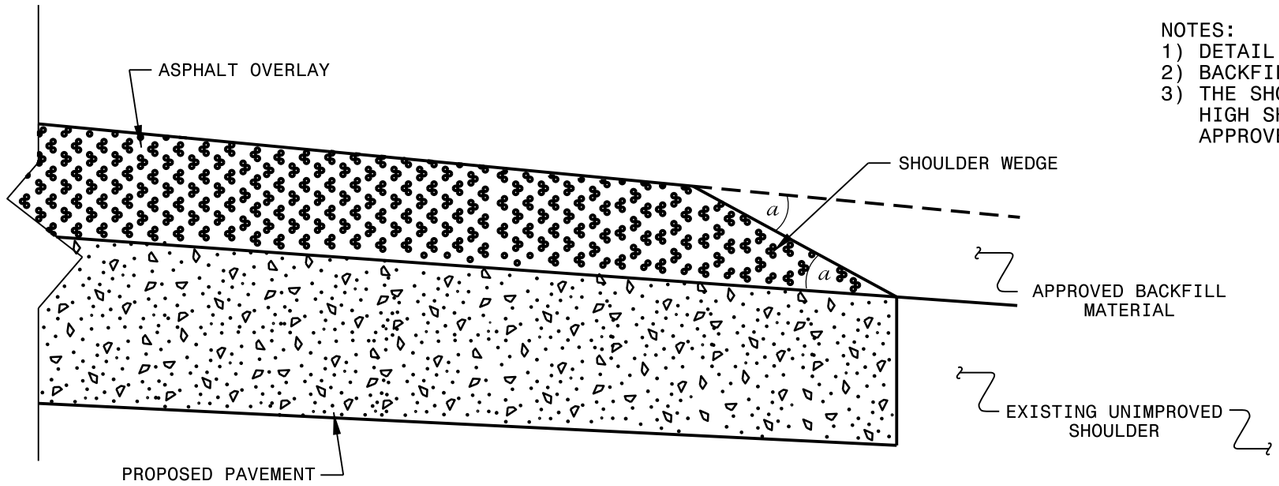
DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES





TYPICAL SECTION 2

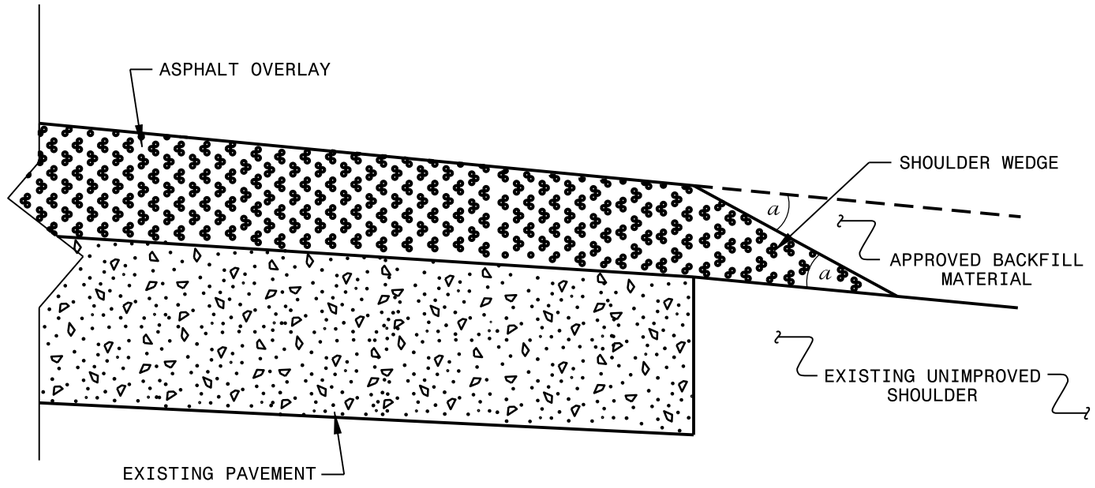
PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1,Etc.	5



NOTES:
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.

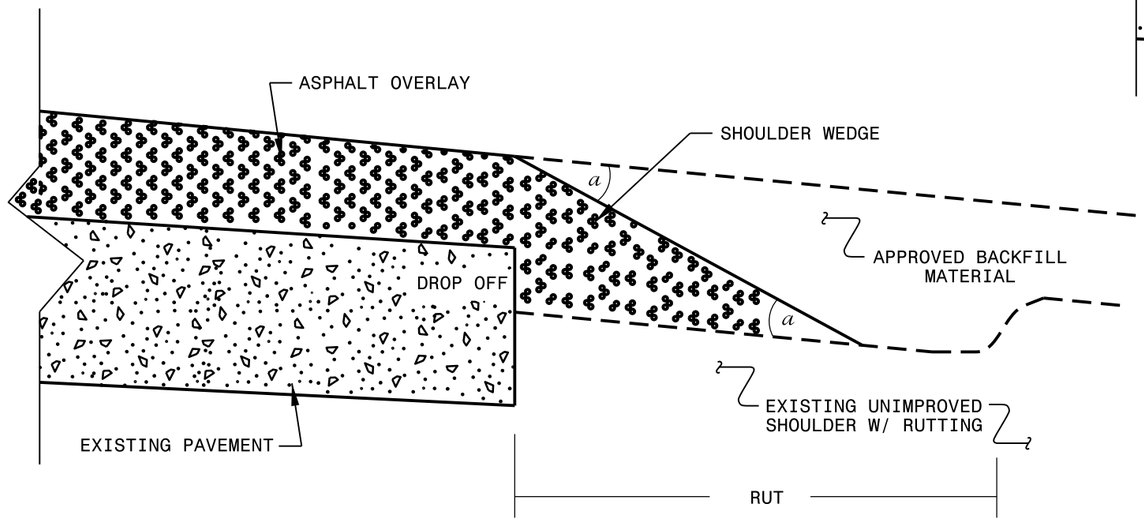
SHOULDER WEDGE DETAIL

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



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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:usr/details/stand/shoulderwedgedetail.dgn		

PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, ETC.	6

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.05.05.10391.1, etc.	7	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	AGGREGATE SHOULDER BORROW (ASB) TON	SHOULDER GRADING SMI	INCIDENTAL STONE BASE TONS	1" MILLING SY	0" TO 1" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT TONS	ADJUST MANHOLES EA	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	INDUCTIVE LOOP SAWCUT LF
2018CPT.05.05.10391.1	Granville	1	US 158	US 158 BUS/ROXBORO RD TO VANCE CO	2	2	NO	NO	7.13	22-62	113	1,254	14.19	355	144,631	173		8,628	17,091		1,025	300		83	210	0.83	3,408
TOTAL FOR MAP NO. 1									**7.13**		**113**	**1,254**	**14.19**	**355**	**144,631**	**173**		**8,628**	**17,091**		**1,025**	**300**		**83**	**210**	**0.83**	**3,408**
2018CPT.05.05.10391.1	Granville	2	NC 96 - LITTLE BATTERWHITE RD/GOSHEN ST	US 158 BUS/ROXBORO RD TO SR 1304 - SUNSET RD	2	2	NO	NO	4.15	22-34	602	214	8.24	206	66,904	164		1,894	7,914		475	50	3	437	1,100	4.37	258
TOTAL FOR MAP NO. 2									**4.15**		**602**	**214**	**8.24**	**206**	**66,904**	**164**		**1,894**	**7,914**		**475**	**50**	**3**	**437**	**1,100**	**4.37**	**258**
2018CPT.05.05.10391.1	Granville	3	US 158 BUS	US 158 TO VANCE CO	2	2	NO	NO	0.26	21-30		50	0.52	13	5,379			308	669		40	75					
TOTAL FOR MAP NO. 3									**0.26**			**50**	**0.52**	**13**	**5,379**			**308**	**669**		**40**	**75**					
TOTAL FOR PROJ NO. 2018CPT.05.05.10391.1									**11.54**		**715**	**1,518**	**22.95**	**574**	**216,914**	**337**		**10,830**	**25,674**		**1,540**	**425**	**3**	**520**	**1,310**	**5.20**	**3,666**
2018CPT.05.05.20391.1	Granville	4	SR 1123 - ROBERTS CHAPEL RD	SR 1126 - RANGE RD TO SR 1121 - RANGE RD	1	2	NO	YES	4.553	20	255	630	9.11	228				446		4,657	312	200		185	470	1.85	
TOTAL FOR MAP NO. 4									**4.553**		**255**	**630**	**9.11**	**228**				**446**		**4,657**	**312**	**200**		**185**	**470**	**1.85**	
2018CPT.05.05.20391.1	Granville	5	SR 1139 - ENON RD	SR 1138 - CULBRETH RD TO PERSON CO	1	2	NO	YES	4.59	20-21	64	821	9.18	230				890		4,752	318	150		47	120	0.47	
TOTAL FOR MAP NO. 5									**4.59**		**64**	**821**	**9.18**	**230**				**890**		**4,752**	**318**	**150**		**47**	**120**	**0.47**	
2018CPT.05.05.20391.1	Granville	6	SR 1145 - HOBGOOD RD	BRIDGE #90 TO SR 1311 - OLD ROXBORO RD	1	2	NO	NO	2.987	20	96	482	5.97	149				383		3,055	205	800		70	180	0.70	
TOTAL FOR MAP NO. 6									**2.987**		**96**	**482**	**5.97**	**149**				**383**		**3,055**	**205**	**800**		**70**	**180**	**0.70**	
2018CPT.05.05.20391.1	Granville	7	SR 1153 - JACK CLEMENT RD	SR 1138 - CULBRETH RD TO SR 1004 - OLD NC 75	1	2	NO	NO	2.064	20-21	99	301	4.13	103				724		2,139	143	300		72	190	0.72	
TOTAL FOR MAP NO. 7									**2.064**		**99**	**301**	**4.13**	**103**				**724**		**2,139**	**143**	**300**		**72**	**190**	**0.72**	
2018CPT.05.05.20391.1	Granville	8	SR 1155 - JAMES ROYSTER RD	SR 1139 - ENON RD TO SR 1004 - OLD NC 75	1	2	NO	NO	2.124	20-21	140	274	4.25	106				395		2,189	147	750		102	260	1.02	
TOTAL FOR MAP NO. 8									**2.124**		**140**	**274**	**4.25**	**106**				**395**		**2,189**	**147**	**750**		**102**	**260**	**1.02**	
2018CPT.05.05.20391.1	Granville	9	SR 1156 - HARPER RENN RD/WATKINS RD	SR 1139 - ENON RD TO SR 1133 - BELLTOWN RD	1	2	NO	NO	3.661	20-21	59	647	7.32	183				576		3,770	253	1,050		43	110	0.43	
TOTAL FOR MAP NO. 9									**3.661**		**59**	**647**	**7.32**	**183**				**576**		**3,770**	**253**	**1,050**		**43**	**110**	**0.43**	
2018CPT.05.05.20391.1	Granville	10	SR 1157 - PEAKE RD	SR 1156 - HARPER RENN RD TO SR 1004 - OLD NC 75	1	2	NO	NO	0.893	20	61	113	1.79	45				250		913	61	200		44	120	0.44	
TOTAL FOR MAP NO. 10									**0.893**		**61**	**113**	**1.79**	**45**				**250**		**913**	**61**	**200**		**44**	**120**	**0.44**	
2018CPT.05.05.20391.1	Granville	11	SR 1160 - SHOCK OVERTON RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	NO	NO	1.57	20	94	211	3.14	79				283		1,606	108	450		69	180	0.69	
TOTAL FOR MAP NO. 11									**1.57**		**94**	**211**	**3.14**	**79**				**283**		**1,606**	**108**	**450**		**69**	**180**	**0.69**	
2018CPT.05.05.20391.1	Granville	12	SR 1161 - HANCOCK RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	NO	NO	2.175	20	48	372	4.35	109				296		2,224	149	60		35	90	0.35	
TOTAL FOR MAP NO. 12									**2.175**		**48**	**372**	**4.35**	**109**				**296**		**2,224**	**149**	**60**		**35**	**90**	**0.35**	
2018CPT.05.05.20391.1	Granville	13	SR 1425 - HENRY WILSON RD	US 15 TO SR 1300 - CORNWALL RD	1	2	NO	NO	2.9	20-21	120	433	5.70	143				427		2,984	200	400		87	220	0.87	
TOTAL FOR MAP NO. 13									**2.9**		**120**	**433**	**5.70**	**143**				**427**		**2,984**	**200**	**400**		**87**	**220**	**0.87**	
2018CPT.05.05.20391.1	Granville	14	SR 1430 - LITTLE MTN CREEK RD/CEDAR LN/MAIN ST/ROCKWELL RD	SR 1300 - CORNWALL RD TO VANCE CO	1	2	NO	YES	8.723	20-21	345	1,328	17.27	432			407	2,121		9,087	609	1,100		251	630	2.51	
TOTAL FOR MAP NO. 14									**8.723**		**345**	**1,328**	**17.27**	**432**			**407**	**2,121**		**9,087**	**609**	**1,100**		**251**	**630**	**2.51**	
2018CPT.05.05.20391.1	Granville	15	SR 1509 - JOHN PENN RD	SR 1430 - ROCKWELL RD TO END PVT	1	2	NO	NO	0.8	20		154	1.60	40				73		818	55	150					
TOTAL FOR MAP NO. 15									**0.8**			**154**	**1.60**	**40**				**73**		**818**	**55**	**150**					
TOTAL FOR PROJ NO. 2018CPT.05.05.20391.1									**37.04**		**1,381**	**5,766**	**73.81**	**1,847**			**407**	**6,864**		**38,194**	**2,560**	**5,610**		**1,005**	**2,570**	**10.05**	
GRAND TOTAL									**48.58**		**2,096**	**7,284**	**96.76**	**2,421**	**216,914**	**337**	**407**	**17,694**	**25,674**	**38,194**	**4,100**	**6,035**	**3**	**1,525**	**3,880**	**15.25**	**3,666**

PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.05.05.10391.1, etc.	8	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LANES	LENGTH	WIDTH	4413000000-E	4457000000-N	4685000000-E		4686000000-E		4697000000-E	4700000000-E		4702000000-E	4705000000-E	4710000000-E	4721000000-E		4725000000-E						
									WORK ZONE ADVANCE /GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	8" X 120 M WHITE THERMO	12" X 90 M YELLOW THERMO	12" X 90 M WHITE THERMO	12" X 120 M YELLOW THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO RXR 120 M	THERMO MERGE ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO YIELD TRIANGLE 90M
NO		NO			NO				SF	LS	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA
2018CPT.05.05.10391.1	Granville	1	US 158	US 158 BUS/ROXBORO RD TO VANCE CO	2	2	7.13	22-62	799	0.20	76,719	660	68,467	5,559	144	1,105	90			610	16		8	6	14	1	11	34	26
TOTAL FOR MAP NO. 1							**7.13**		**799**	**0.20**	**76,719**	**660**	**68,467**	**5,559**	**144**	**1,105**	**90**			**610**	**16**		**8**	**6**	**14**	**1**	**11**	**34**	**26**
2018CPT.05.05.10391.1	Granville	2	NC 96 - LITTLE BATTERWHITE RD/GOSHEN ST	US 158 BUS/ROXBORO RD TO SR 1304 - SUNSET RD	2	2	4.15	22-34	465	0.13	44,654		34,376	723				90		116					4		1	4	
TOTAL FOR MAP NO. 2							**4.15**		**465**	**0.13**	**44,654**		**34,376**	**723**				**90**		**116**					**4**		**1**	**4**	
2018CPT.05.05.10391.1	Granville	3	US 158 BUS	US 158 TO VANCE CO	2	2	0.26	21-30	29	0.01	2,798		1,780	109															
TOTAL FOR MAP NO. 3							**0.26**		**29**	**0.01**	**2,798**		**1,780**	**109**															
TOTAL FOR PROJ NO. 2018CPT.05.05.10391.1							**11.54**		**1,293**	**0.34**	**124,171**	**660**	**104,623**	**6,391**	**144**	**1,105**	**90**	**90**		**726**	**16**		**8**	**6**	**18**	**1**	**12**	**38**	**26**
											124,831		**111,014**			**1,195**					**16**		**109**						
2018CPT.05.05.20391.1	Granville	4	SR 1123 - ROBERTS CHAPEL RD	SR 1126 - RANGE RD TO SR 1121 - RANGE RD	1	2	4.553	20	510	0.07	48,990		45,827	97															
TOTAL FOR MAP NO. 4							**4.553**		**510**	**0.07**	**48,990**		**45,827**	**97**															
2018CPT.05.05.20391.1	Granville	5	SR 1139 - ENON RD	SR 1138 - CULBRETH RD TO PERSON CO	1	2	4.59	20-21	514	0.07	49,388		44,729	91															
TOTAL FOR MAP NO. 5							**4.59**		**514**	**0.07**	**49,388**		**44,729**	**91**															
2018CPT.05.05.20391.1	Granville	6	SR 1145 - HOBGOOD RD	BRIDGE #90 TO SR 1311 - OLD ROXBORO RD	1	2	2.987	20	335	0.06	32,140		28,540																
TOTAL FOR MAP NO. 6							**2.987**		**335**	**0.06**	**32,140**		**28,540**																
2018CPT.05.05.20391.1	Granville	7	SR 1153 - JACK CLEMENT RD	SR 1138 - CULBRETH RD TO SR 1004 - OLD NC 75	1	2	2.064	20-21	231	0.04	22,209		20,666	33															
TOTAL FOR MAP NO. 7							**2.064**		**231**	**0.04**	**22,209**		**20,666**	**33**															
2018CPT.05.05.20391.1	Granville	8	SR 1155 - JAMES ROYSTER RD	SR 1139 - ENON RD TO SR 1004 - OLD NC 75	1	2	2.124	20-21	238	0.05	22,854		19,107	23															
TOTAL FOR MAP NO. 8							**2.124**		**238**	**0.05**	**22,854**		**19,107**	**23**															
2018CPT.05.05.20391.1	Granville	9	SR 1156 - HARPER RENN RD/WATKINS RD	SR 1139 - ENON RD TO SR 1133 - BELLTOWN RD	1	2	3.661	20-21	410	0.07	39,392		33,811	29					100	70		4							
TOTAL FOR MAP NO. 9							**3.661**		**410**	**0.07**	**39,392**		**33,811**	**29**					**100**	**70**		**4**							
2018CPT.05.05.20391.1	Granville	10	SR 1157 - PEAKE RD	SR 1156 - HARPER RENN RD TO SR 1004 - OLD NC 75	1	2	0.893	20	100	0.02	9,609		9,398						100	70		4							
TOTAL FOR MAP NO. 10							**0.893**		**100**	**0.02**	**9,609**		**9,398**						**100**	**70**		**4**							
2018CPT.05.05.20391.1	Granville	11	SR 1160 - SHOCK OVERTON RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	1.57	20	176	0.03	16,893		11,088																
TOTAL FOR MAP NO. 11							**1.57**		**176**	**0.03**	**16,893**		**11,088**																
2018CPT.05.05.20391.1	Granville	12	SR 1161 - HANCOCK RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	2.175	20	244	0.03	23,403		21,870						100	60		4							
TOTAL FOR MAP NO. 12							**2.175**		**244**	**0.03**	**23,403**		**21,870**						**100**	**60**		**4**							
2018CPT.05.05.20391.1	Granville	13	SR 1425 - HENRY WILSON RD	US 15 TO SR 1300 - CORNWALL RD	1	2	2.9	20-21	319	0.05	31,204		30,096	46															
TOTAL FOR MAP NO. 13							**2.9**		**319**	**0.05**	**31,204**		**30,096**	**46**															
2018CPT.05.05.20391.1	Granville	14	SR 1430 - LITTLE MTN CREEK RD/CEDAR LN/MAIN ST/ROCKWELL RD	SR 1300 - CORNWALL RD TO VANCE CO	1	2	8.723	20-21	977	0.15	93,859		82,903	194						92										
TOTAL FOR MAP NO. 14							**8.723**		**977**	**0.15**	**93,859**		**82,903**	**194**						**92**									
2018CPT.05.05.20391.1	Granville	15	SR 1509 - JOHN PENN RD	SR 1430 - ROCKWELL RD TO END PVT	1	2	0.8	20	90	0.02	8,608		8,448	20															
TOTAL FOR MAP NO. 15							**0.8**		**90**	**0.02**	**8,608**		**8,448**	**20**															
TOTAL FOR PROJ NO. 2018CPT.05.05.20391.1							**37.04**		**4,144**	**0.66**	**398,549**		**356,483**	**533**					**300**	**292**		**12**							
											398,549		**357,016**								**12**								
GRAND TOTAL							**48.58**		**5,437**	**1.00**	**522,720**	**660**	**461,106**	**6,924**	**144**	**1,105**	**90**	**90**	**300**	**1,018**	**16**	**12**	**8**	**6**	**18**	**1**	**12**	**38**	**26**
											523,380		**468,030**			**1,195**					**28**		**109**						

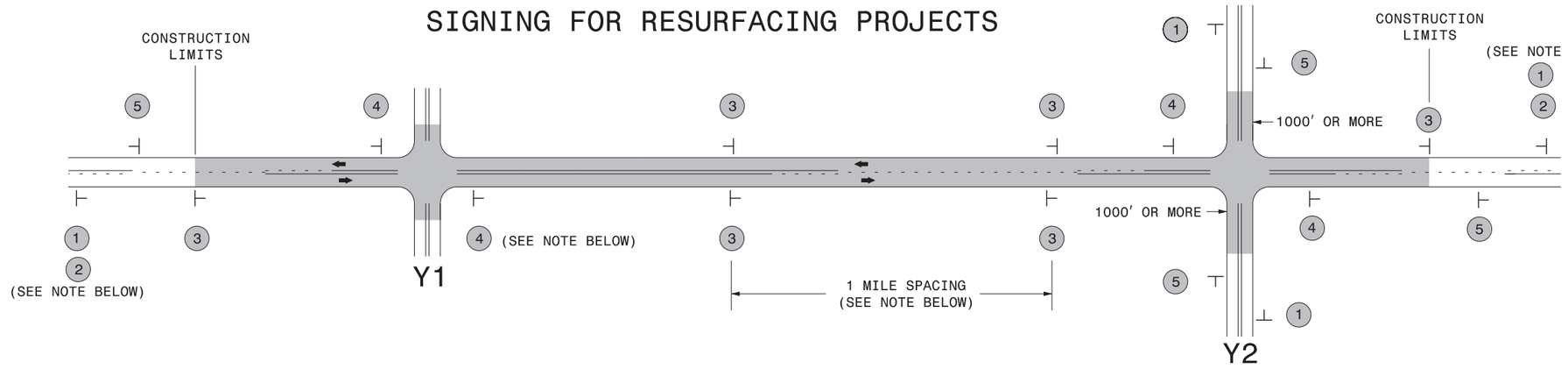
PROJECT NO.	SHEET NO.	TOTAL NO.
2018CPT.05.05.10391.1, etc.	9	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LANES	LENGTH	WIDTH	4770000000-E		4805000000-N	4810000000-E		4825000000-E	4835000000-E	4840000000-N	4845000000-N								4850000000-E	4875000000-N	4905000000-N
									4" WHITE COLD APPLIED PLASTIC, TYPE II	4" YELLOW COLD APPLIED PLASTIC, TYPE II	COLD APPLIED PLASTIC LEFT ARROW, TYPE II	4" WHITE PAINT	4" YELLOW PAINT	12" WHITE PAINT	24" WHITE PAINT	PAINT MSG ONLY	PAINT MERGE ARROW	PAINT STR ARROW	PAINT STR & RT ARROW	PAINT STR & LT ARROW	PAINT RT ARROW	PAINT LT ARROW	PAINT YIELD TRIANGLE	4" LINE REMOVAL	REML OF PVMT MRKG SYMBOLS & CHARACTERS	SNOW PLOWABLE MARKERS
NO		NO			NO				LF	LF	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	LF	EA	EA
2018CPT.05.05.10391.1	Granville	1	US 158	US 158 BUS/ROXBORO RD TO VANCE CO	2	2	7.13	22-62	940		1	82,278	69,127	1,195	610	16	8	6	14	1	11	34	26	940	1	838
TOTAL FOR MAP NO. 1							**7.13**		**940**		**1**	**82,278**	**69,127**	**1,195**	**610**	**16**	**8**	**6**	**14**	**1**	**11**	**34**	**26**	**940**	**1**	**838**
2018CPT.05.05.10391.1	Granville	2	NC 96 - LITTLE BATTERWHITE RD/GOSHEN ST	US 158 BUS/ROXBORO RD TO SR 1304 - SUNSET RD	2	2	4.15	22-34				45,377	34,376	90	116				4		1	4				292
TOTAL FOR MAP NO. 2							**4.15**					**45,377**	**34,376**	**90**	**116**				**4**		**1**	**4**				**292**
2018CPT.05.05.10391.1	Granville	3	US 158 BUS	US 158 TO VANCE CO	2	2	0.26	21-30																		12
TOTAL FOR MAP NO. 3							**0.26**																			**12**
TOTAL FOR PROJ NO. 2018CPT.05.05.10391.1							**11.54**		**940**		**1**	**127,655**	**103,503**	**1,285**	**726**	**16**	**8**	**6**	**18**	**1**	**12**	**38**	**26**	**940**	**1**	**1,142**
									940			**231,158**					**109**										
2018CPT.05.05.20391.1	Granville	4	SR 1123 - ROBERTS CHAPEL RD	SR 1126 - RANGE RD TO SR 1121 - RANGE RD	1	2	4.553	20	680	680														1,360		
TOTAL FOR MAP NO. 4							**4.553**		**680**	**680**														**1,360**		
2018CPT.05.05.20391.1	Granville	5	SR 1139 - ENON RD	SR 1138 - CULBRETH RD TO PERSON CO	1	2	4.59	20-21																		
TOTAL FOR MAP NO. 5							**4.59**																			
2018CPT.05.05.20391.1	Granville	6	SR 1145 - HOBGOOD RD	BRIDGE #90 TO SR 1311 - OLD ROXBORO RD	1	2	2.987	20	262	262														524		
TOTAL FOR MAP NO. 6							**2.987**		**262**	**262**														**524**		
2018CPT.05.05.20391.1	Granville	7	SR 1153 - JACK CLEMENT RD	SR 1138 - CULBRETH RD TO SR 1004 - OLD NC 75	1	2	2.064	20-21																		
TOTAL FOR MAP NO. 7							**2.064**																			
2018CPT.05.05.20391.1	Granville	8	SR 1155 - JAMES ROYSTER RD	SR 1139 - ENON RD TO SR 1004 - OLD NC 75	1	2	2.124	20-21																		
TOTAL FOR MAP NO. 8							**2.124**																			
2018CPT.05.05.20391.1	Granville	9	SR 1156 - HARPER RENN RD/WATKINS RD	SR 1139 - ENON RD TO SR 1133 - BELLTOWN RD	1	2	3.661	20-21																		
TOTAL FOR MAP NO. 9							**3.661**																			
2018CPT.05.05.20391.1	Granville	10	SR 1157 - PEAKE RD	SR 1156 - HARPER RENN RD TO SR 1004 - OLD NC 75	1	2	0.893	20																		
TOTAL FOR MAP NO. 10							**0.893**																			
2018CPT.05.05.20391.1	Granville	11	SR 1160 - SHOCK OVERTON RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	1.57	20																		
TOTAL FOR MAP NO. 11							**1.57**																			
2018CPT.05.05.20391.1	Granville	12	SR 1161 - HANCOCK RD	SR 1004 - OLD NC 75 TO SR 1133 - BELLTOWN RD	1	2	2.175	20																		
TOTAL FOR MAP NO. 12							**2.175**																			
2018CPT.05.05.20391.1	Granville	13	SR 1425 - HENRY WILSON RD	US 15 TO SR 1300 - CORNWALL RD	1	2	2.9	20-21																		
TOTAL FOR MAP NO. 13							**2.9**																			
2018CPT.05.05.20391.1	Granville	14	SR 1430 - LITTLE MTN CREEK RD/CEDAR LN/MAIN ST/ROCKWELL RD	SR 1300 - CORNWALL RD TO VANCE CO	1	2	8.723	20-21																		
TOTAL FOR MAP NO. 14							**8.723**																			
2018CPT.05.05.20391.1	Granville	15	SR 1509 - JOHN PENN RD	SR 1430 - ROCKWELL RD TO END PVT	1	2	0.8	20																		
TOTAL FOR MAP NO. 15							**0.8**																			
TOTAL FOR PROJ NO. 2018CPT.05.05.20391.1							**37.04**		**942**	**942**														**1,884**		
									1,884																	
GRAND TOTAL							**48.58**		**1,882**	**942**	**1**	**127,655**	**103,503**	**1,285**	**726**	**16**	**8**	**6**	**18**	**1**	**12**	**38**	**26**	**2,824**	**1**	**1,142**
									2,824			**231,158**					**109**										

PROJ. REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, ETC.	TMP-1

SIGNING FOR RESURFACING PROJECTS



TEE INTERSECTION

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 — ROAD WORK AHEAD, W20-1, 48″ X 48″

2 — NEXT XX MILES, W7-3aP, 24″ X 18″

PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS.
ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.

#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)

3 — LOW/SOFT SHOULDER, SP 13107, 48″ X 48″

- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.

4 — ROAD UNDER CONST, SP 13106, 48″ X 48″

- 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 — END ROAD WORK, G20-2 A, 48″ X 24″

PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

-Y- LINE SIGNING

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.

ROAD WORK AHEAD, W20-1, 48″ X 48″ — PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A, 48″ X 48″ — PLACED 250′ IN ADVANCE OF FLAGGER.

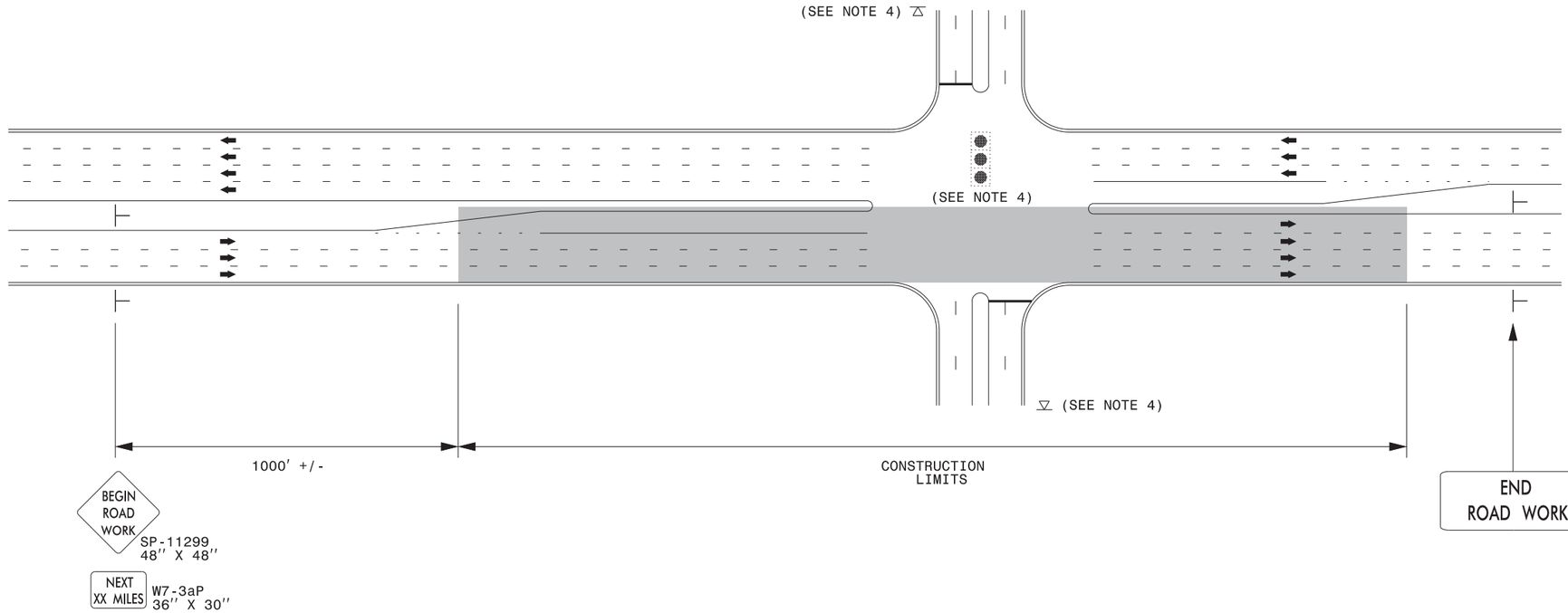
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

4/20/2016
C:\Users\rmgarrett\Desktop\Resurfacing_AdvWarn_2Ln.dgn
User:rmgarrett

PROJ. REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1, ETC.	TMP-2

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

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

4/8/2015
C:\Users\rmgarrett\Downloads\Resurfacing_AdvWarn_UrSu (2).dgn
User:rmgarrett

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

1-12

ENGLISH STANDARD DRAWING FOR

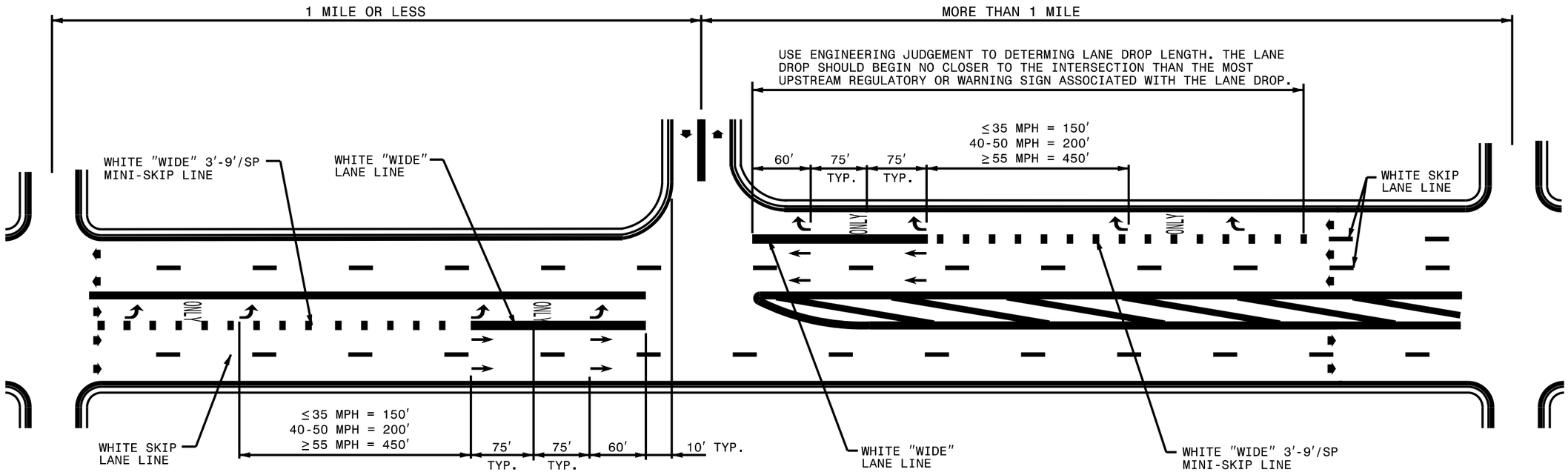
PAVEMENT MARKINGS

LANE DROPS

SHEET 1 OF 3

1205.06

THRU-LANE DROP AT AN INTERSECTION



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAIL IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE

DIRECTION OF TRAFFIC FLOW

ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS

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

1-12

ENGLISH STANDARD DRAWING FOR

PAVEMENT MARKINGS

LANE DROPS

SHEET 1 OF 3

1205.06

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

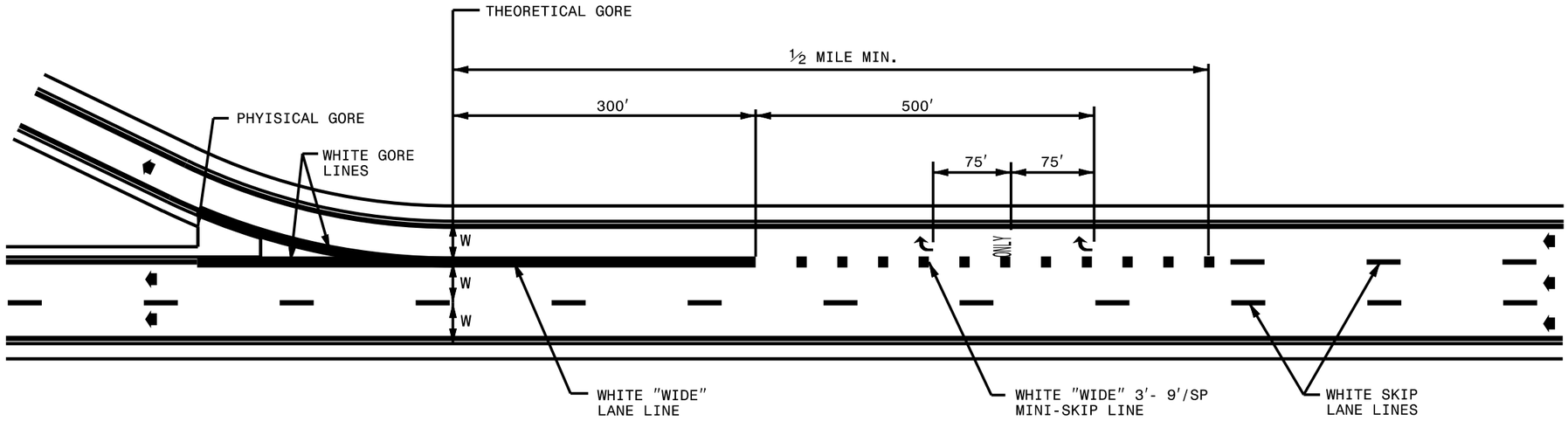
1-12

ENGLISH STANDARD DRAWING FOR

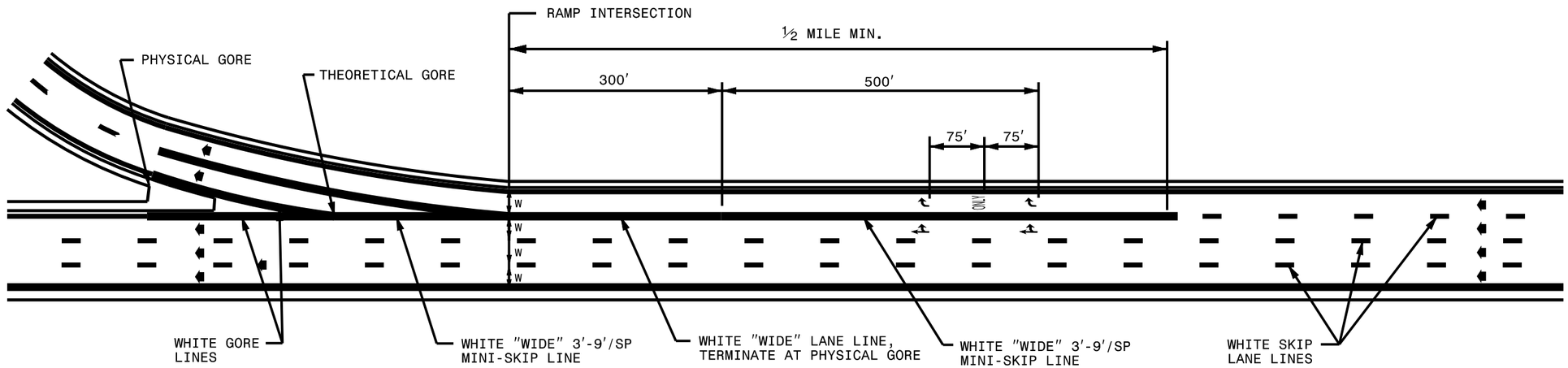
PAVEMENT MARKINGS

LANE DROPS

LANE DROP AT A SINGLE LANE EXIT RAMP



LANE DROP AT A MULTI-LANE EXIT RAMP



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE EXIT RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE

DIRECTION OF TRAFFIC FLOW

ONLY — PAVEMENT MARKING SYMBOLS & CHARACTERS

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

1-12

ENGLISH STANDARD DRAWING FOR

PAVEMENT MARKINGS

LANE DROPS

SHEET 2 OF 3
1205.06

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

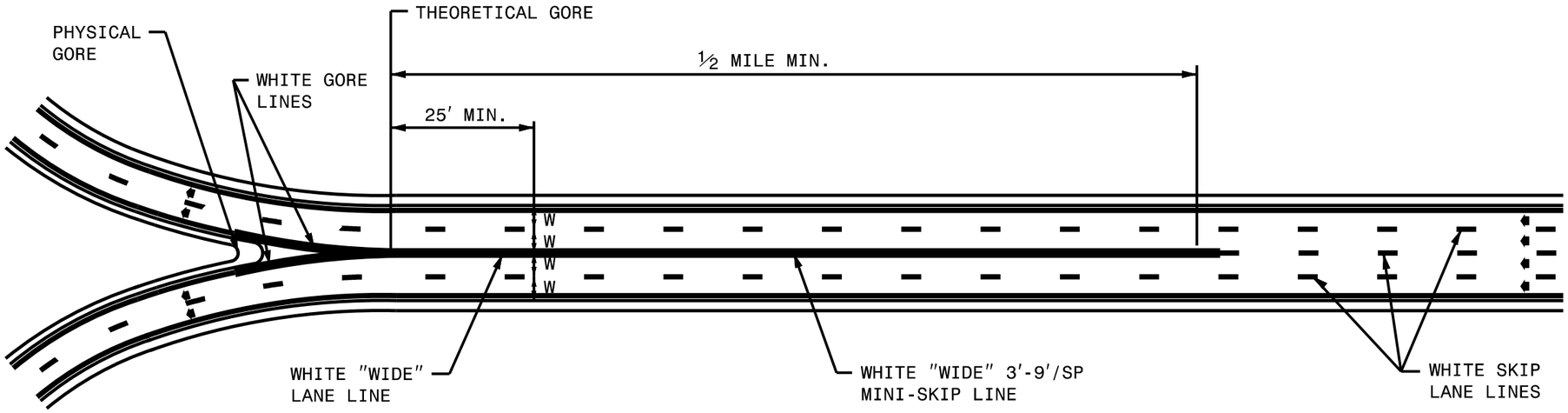
1-12

ENGLISH STANDARD DRAWING FOR

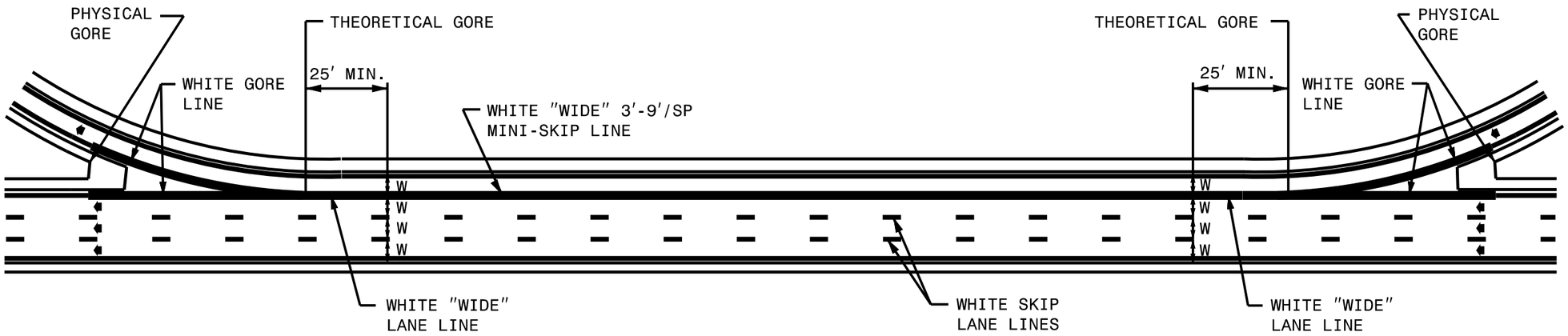
PAVEMENT MARKINGS

LANE DROPS

ROUTE SPLIT WITH DEDICATED LANES



AUXILIARY LANE 2 MILES OR LESS IN LENGTH BETWEEN RAMPS



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE FOLLOWING DETAILS IN CONJUNCTION WITH THE EXIT RAMP GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.03.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE

DIRECTION OF TRAFFIC FLOW

ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS

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

1-12

ENGLISH STANDARD DRAWING FOR

PAVEMENT MARKINGS

LANE DROPS

SHEET 3 OF 3
1205.06

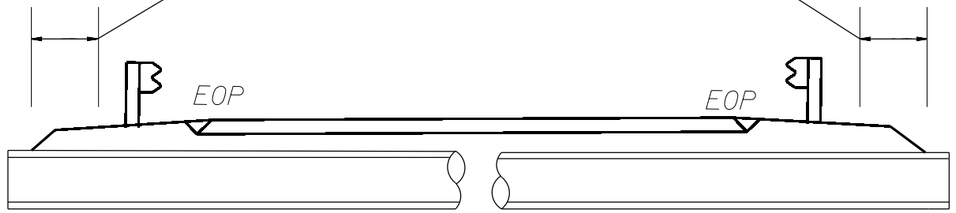
PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391J.ETC.	EC-1

EROSION CONTROL DETAIL

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

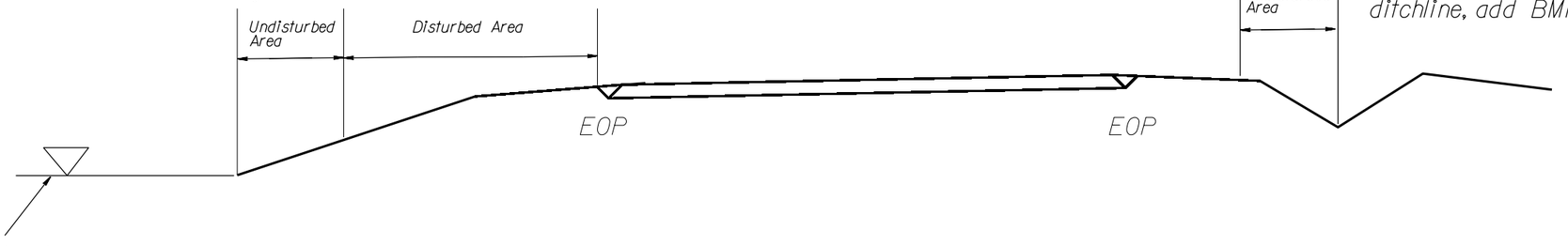
BMP Options: Wattle, Silt Fence or Hardened Aggregate.

< 5' - 10' Undisturbed buffer add BMP



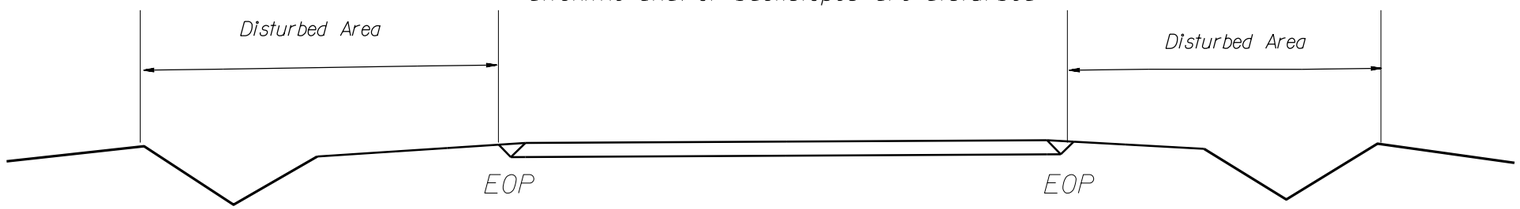
Pipe/Culvert

< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP

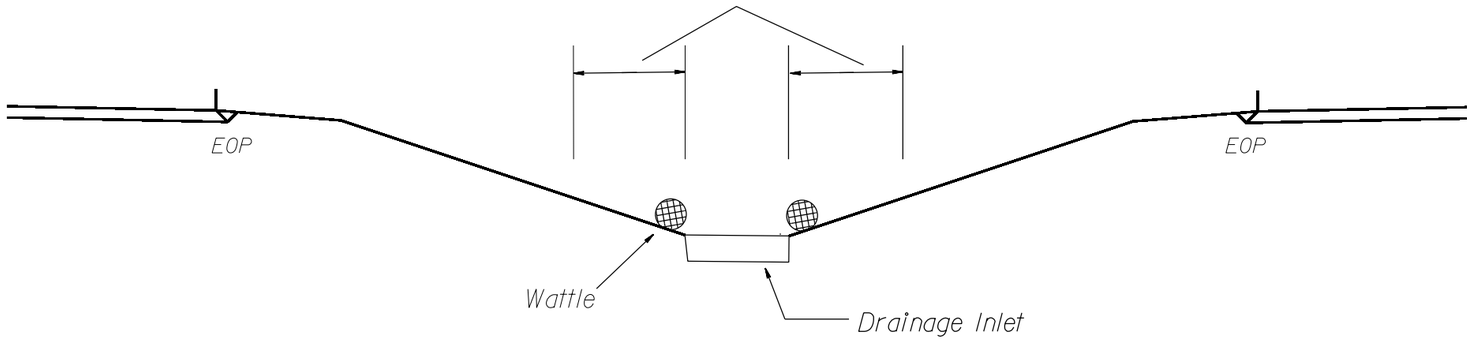


< 5' - 10' Undisturbed buffer from ditchline, add BMP

Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

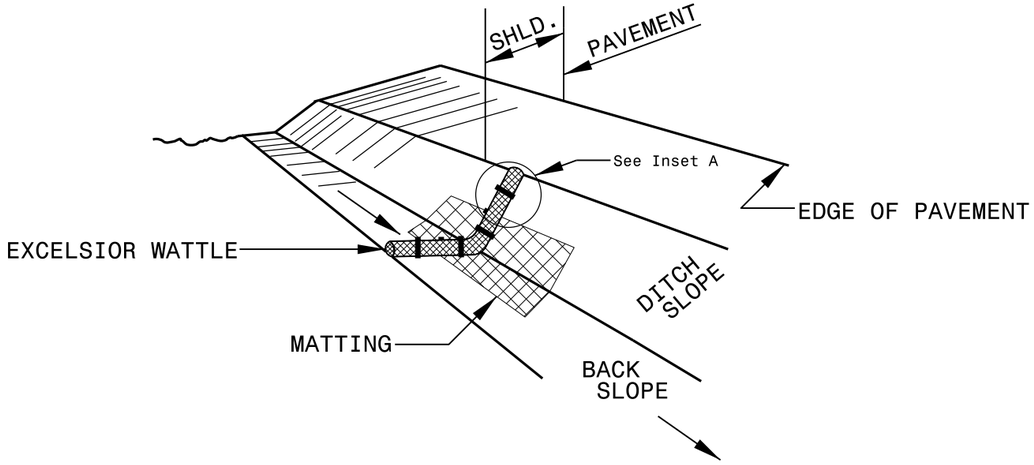


< 5' - 10' Undisturbed buffer from inlet, add wattle

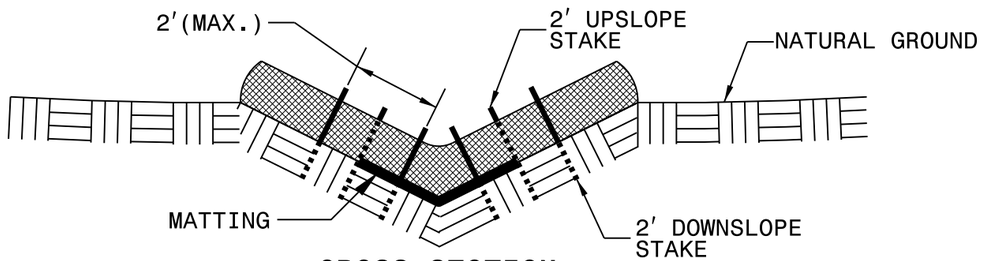


NOT TO SCALE

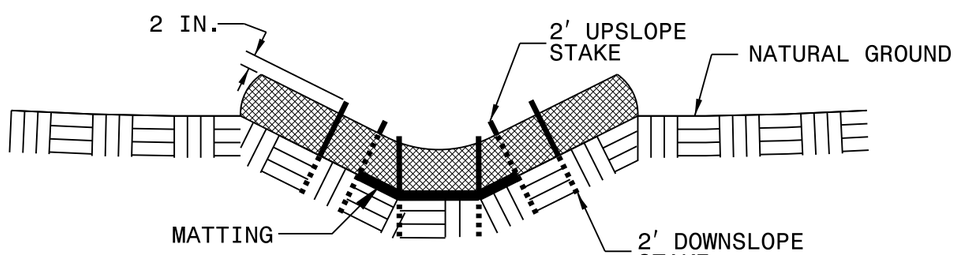
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

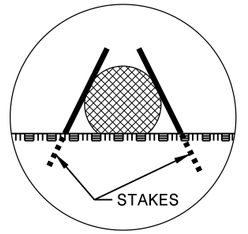
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

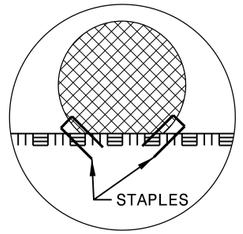
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

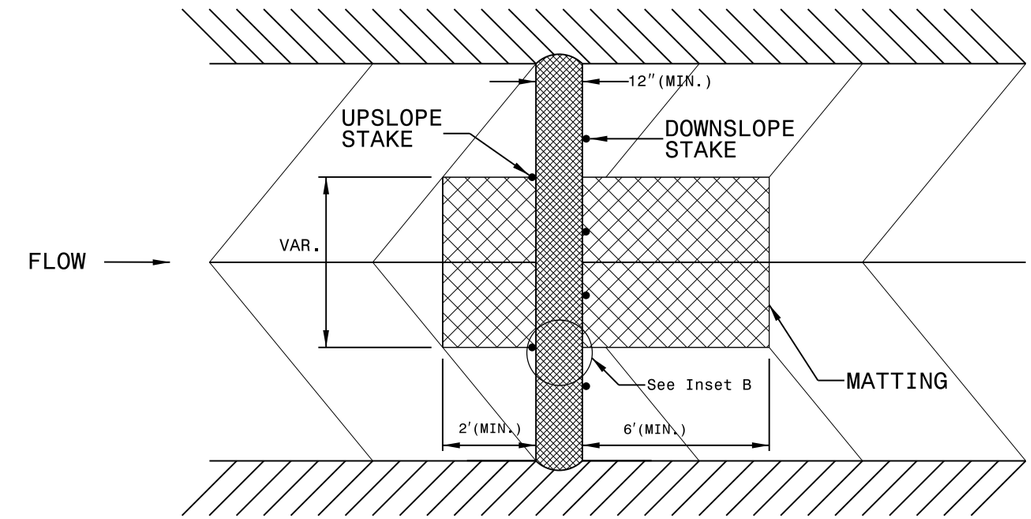
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



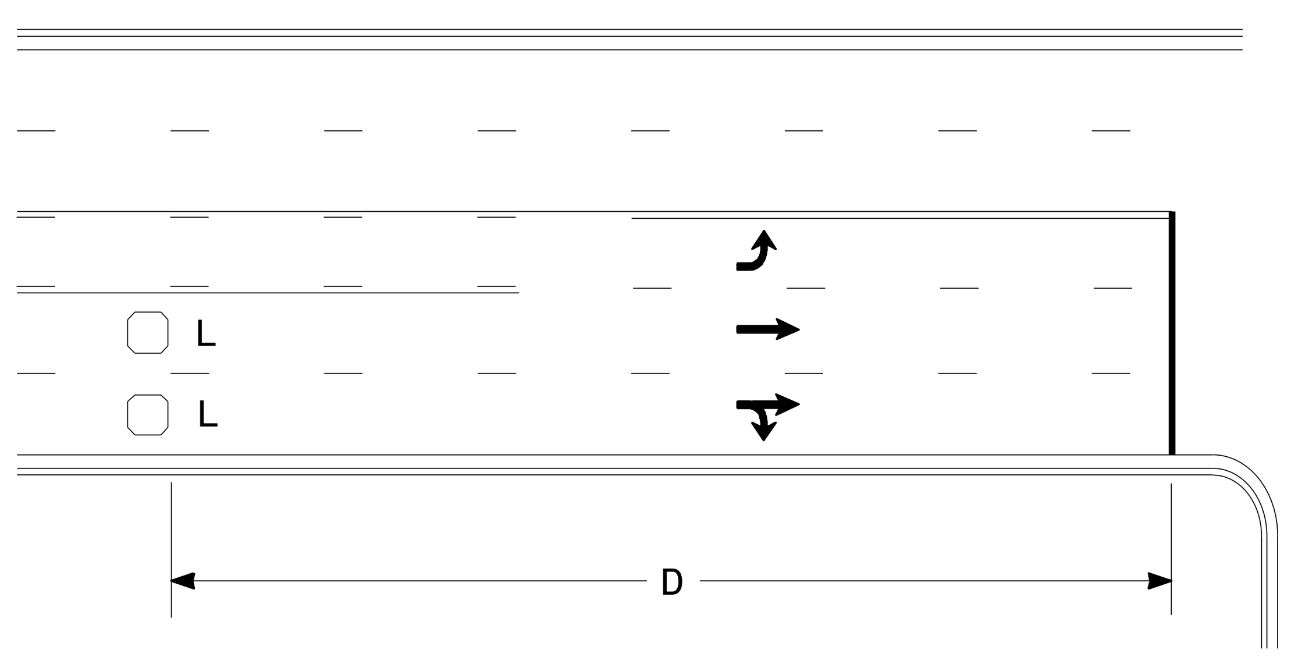
INSET B



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
2018CPT.05.05.10391.1 ETC.	SIG-1

High Speed Detection
(≥40 mph)



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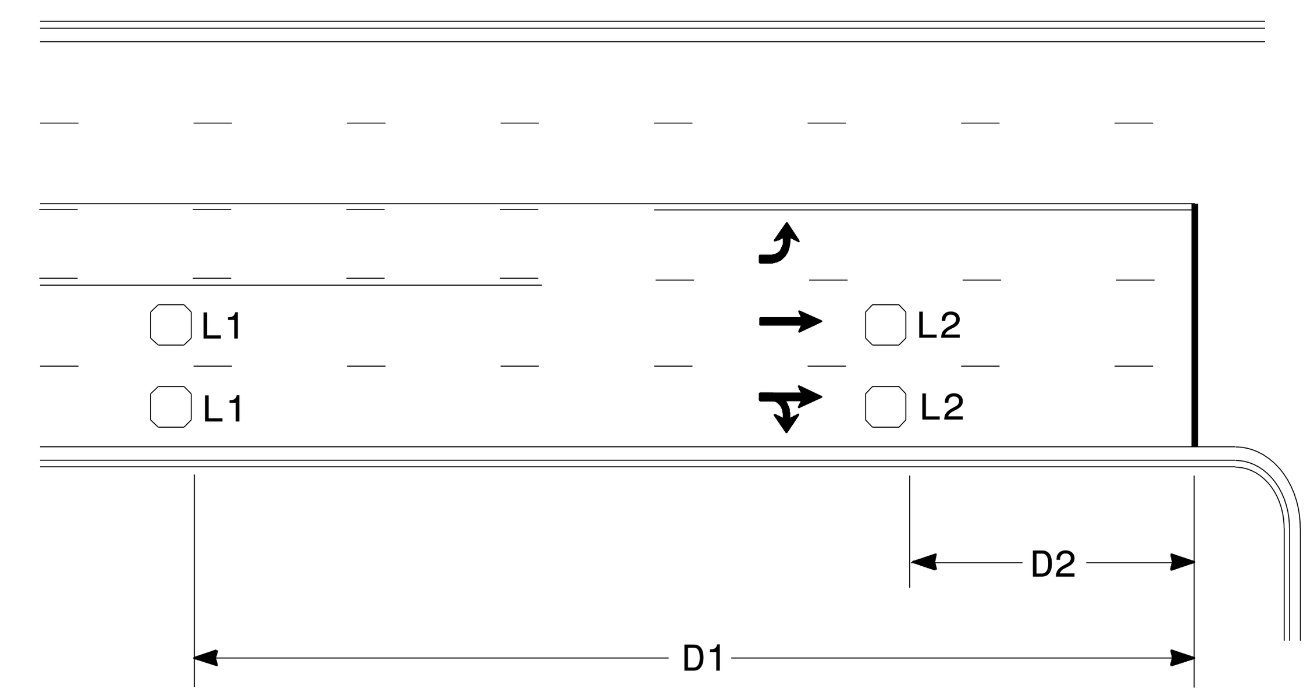


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1 Controllers
Wired separately for TS2, 170, and 2070L Controllers

Volume Density Operation

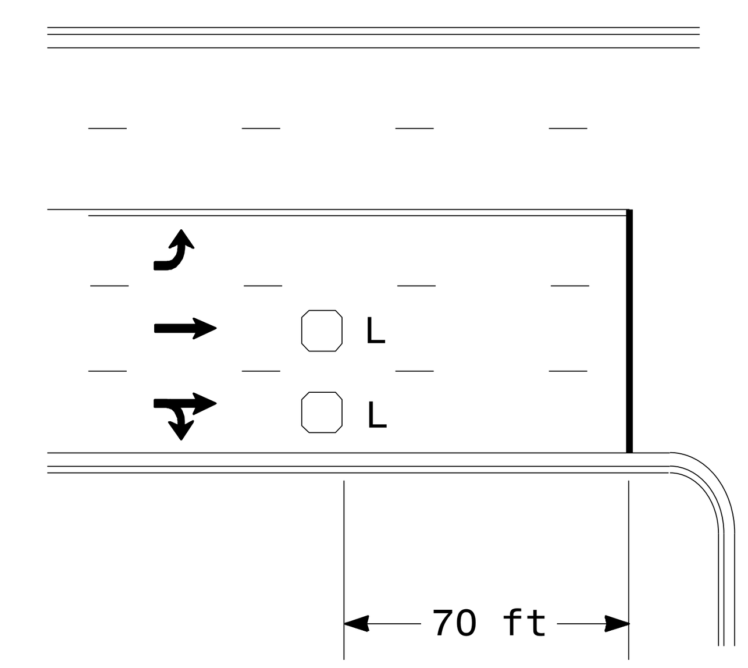
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

"Stretch" Operation

Low Speed Detection
(≤35 mph)



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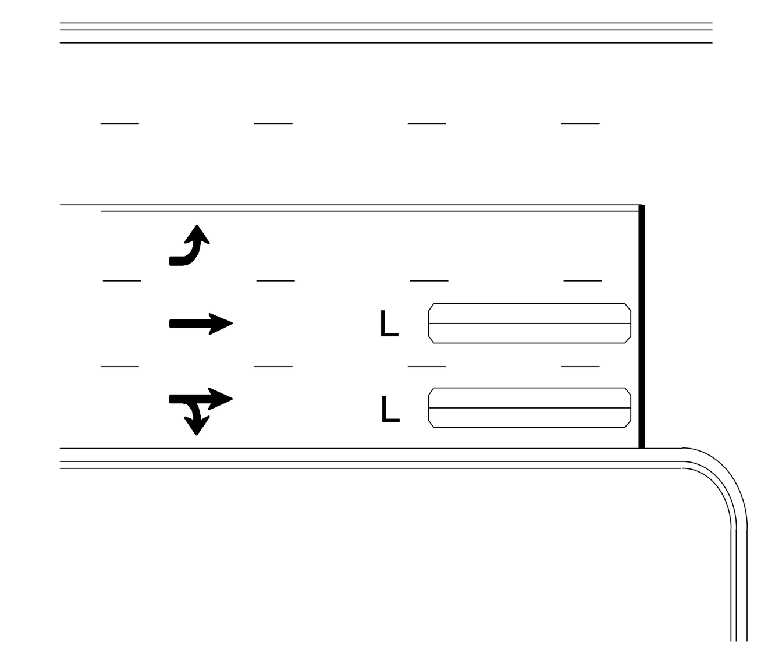
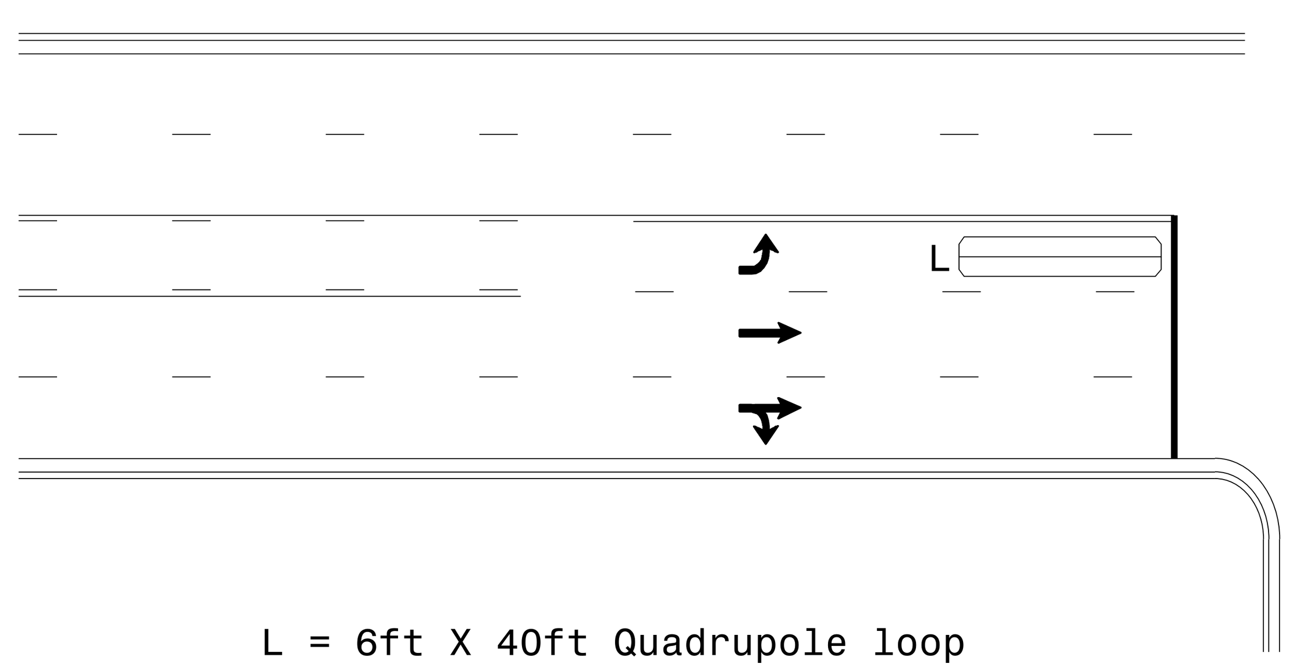


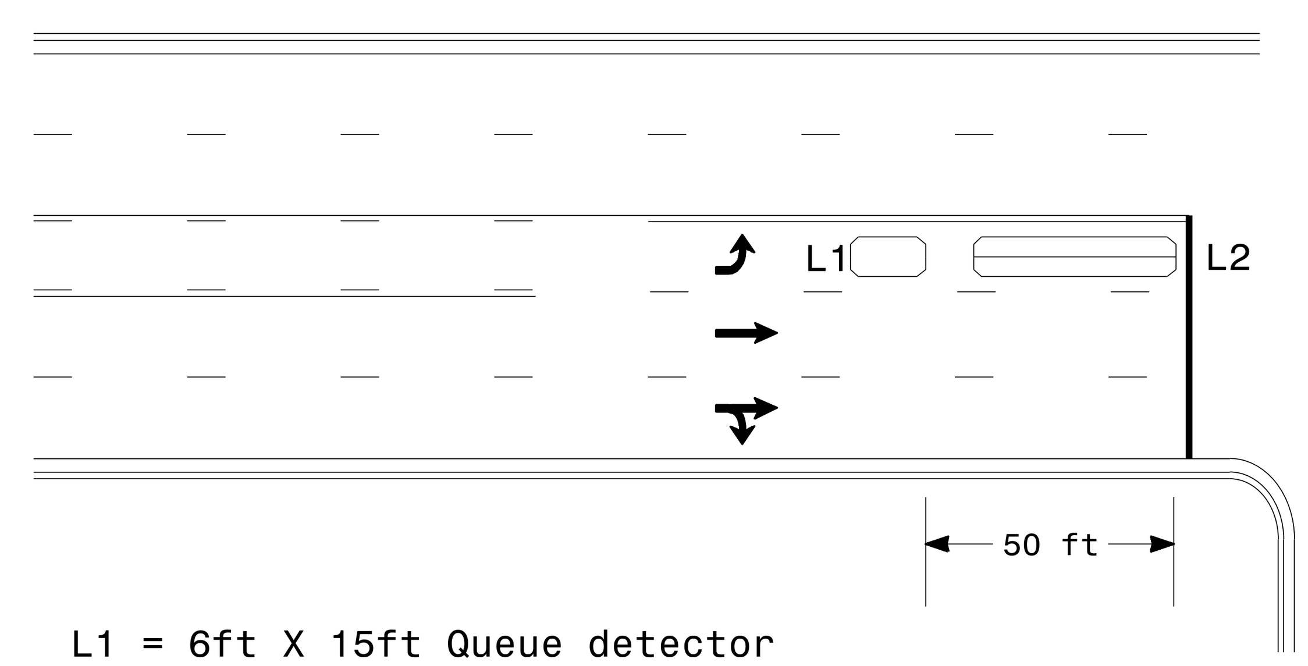
L = 6ft X 6ft
Wired in series

L = 6ft X 40ft
Quadrupole loop, wired separately

Left Turn Lane Detection



OR



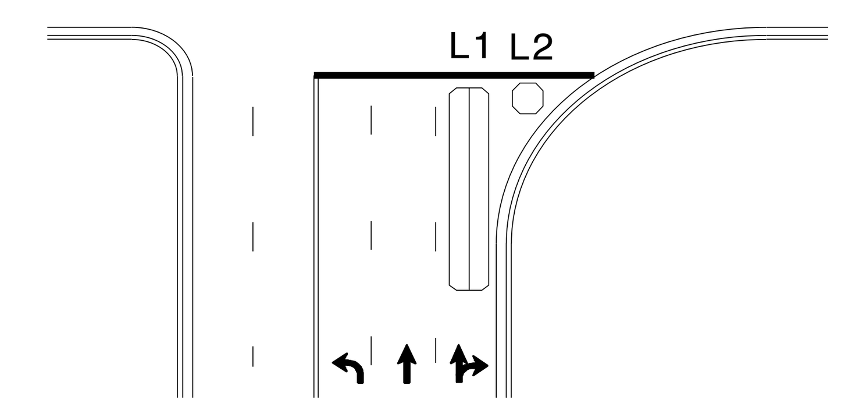
L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

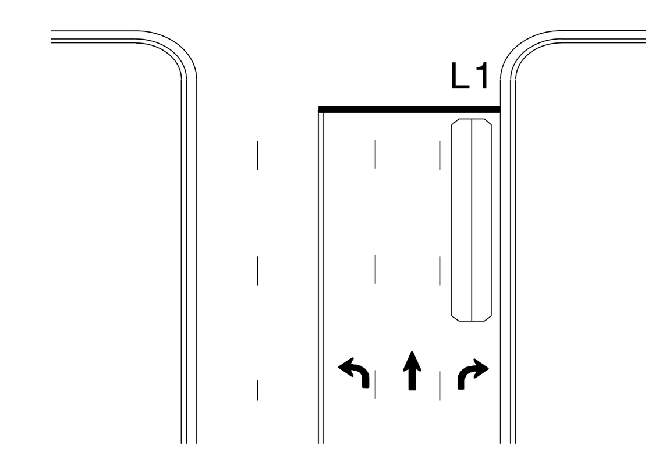
Queue Loop Detection

Right Turn Lane Detection

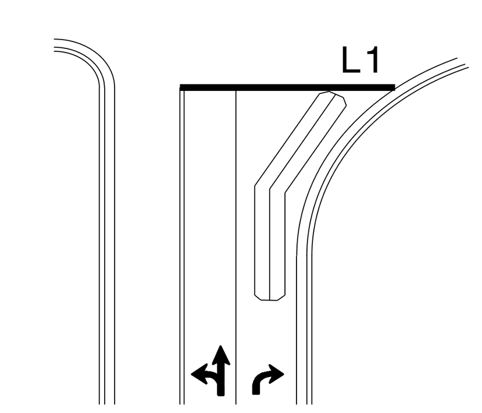


Shared Lane/
Wide Radius Turn

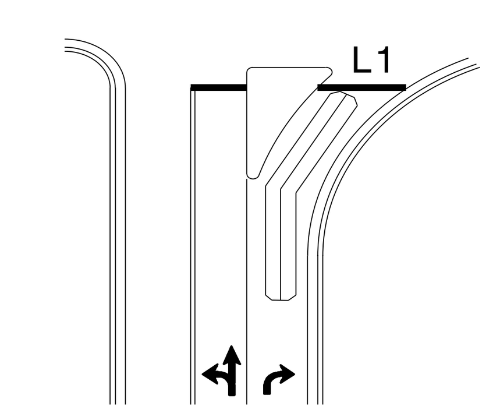
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

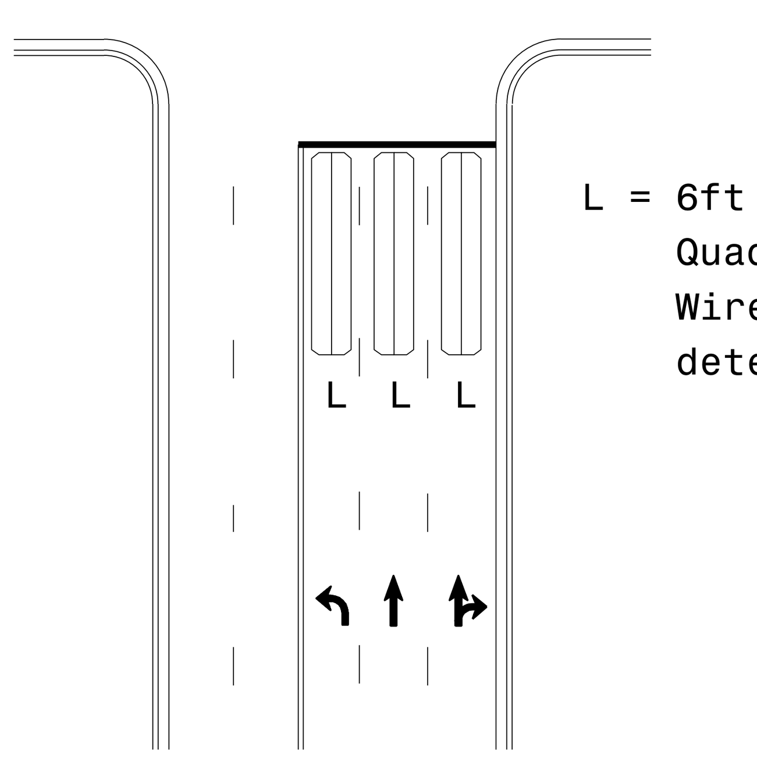


Wide Radius Turn



Channelized Turn

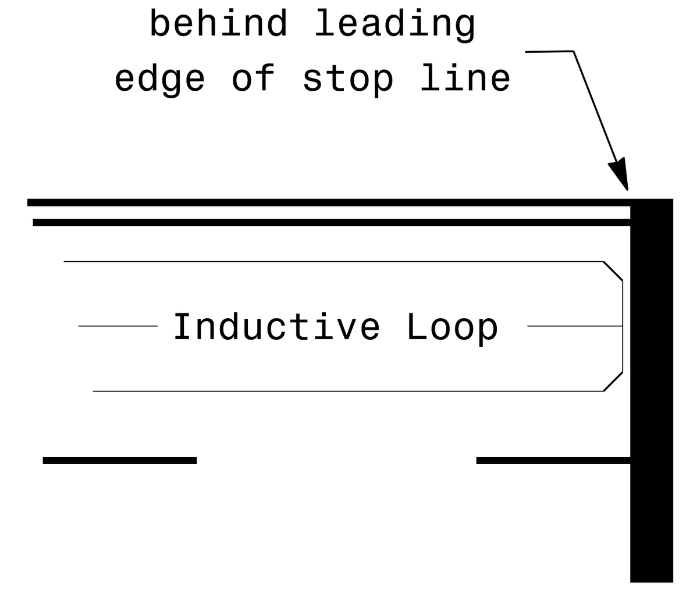
Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate detectors/channels

Presence Loop Placement at Stop Lines

Locate loop slightly behind leading edge of stop line



Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15′ from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Single 6′ X 6′ loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6′ X 15′ Loops:
Lead-in < 150′, use 2 turns
Lead-in > 150′, use 3 turns

Prepared in the Offices of:
Transportation Mobility and Safety Division
State of North Carolina Department of Transportation
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE:	January 2015	REVIEWED BY:	JPG
PREPARED BY:	PLA	REVIEWED BY:	

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 23489 ENGINEER PAMELA L. ALEXANDER
DocuSigned by: P L Alexander
B4756E00CE4E46D...
1/30/2015
DATE
SIG. INVENTORY NO.

30-JAN-2015 12:39
S:*ITS&SU*ITS Signals*Signal Design Section*Eastern Region*looptypical2015.dgn
palexander