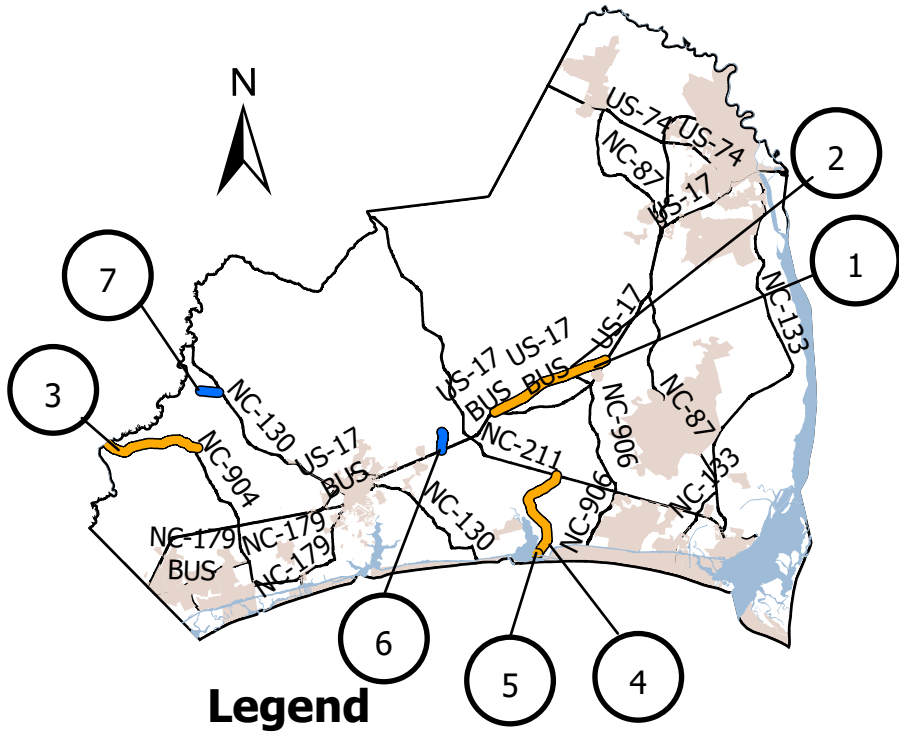
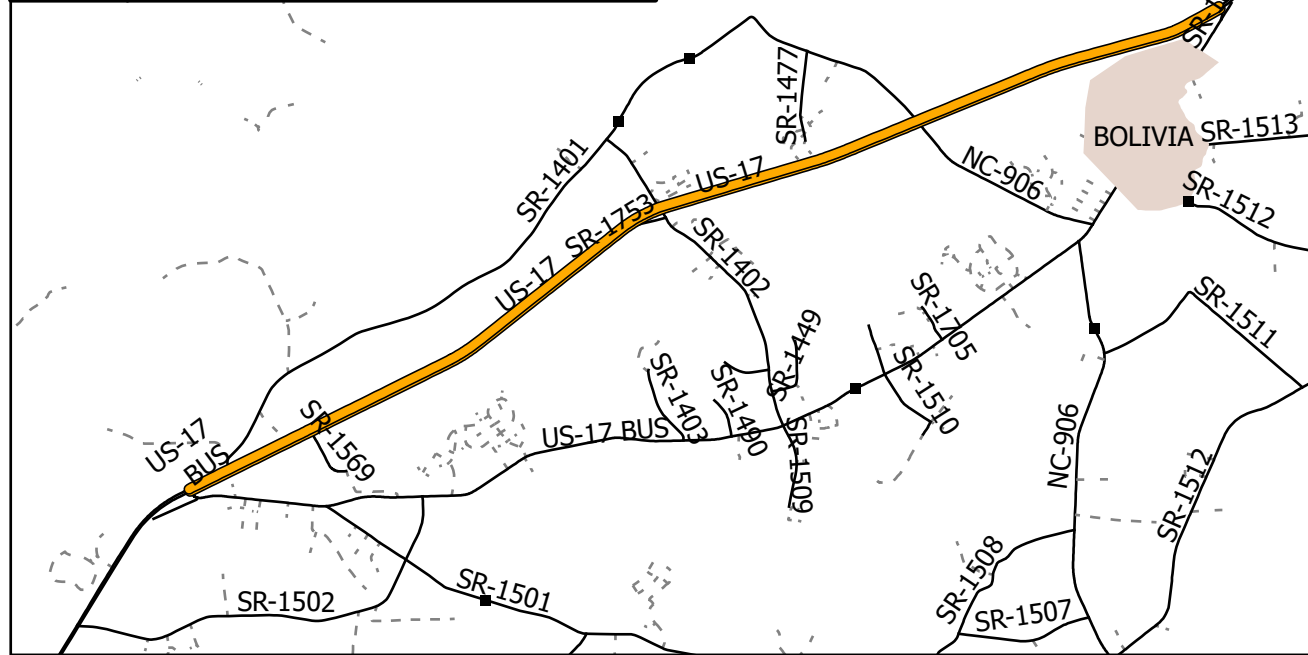


# Brunswick County 1 - 7

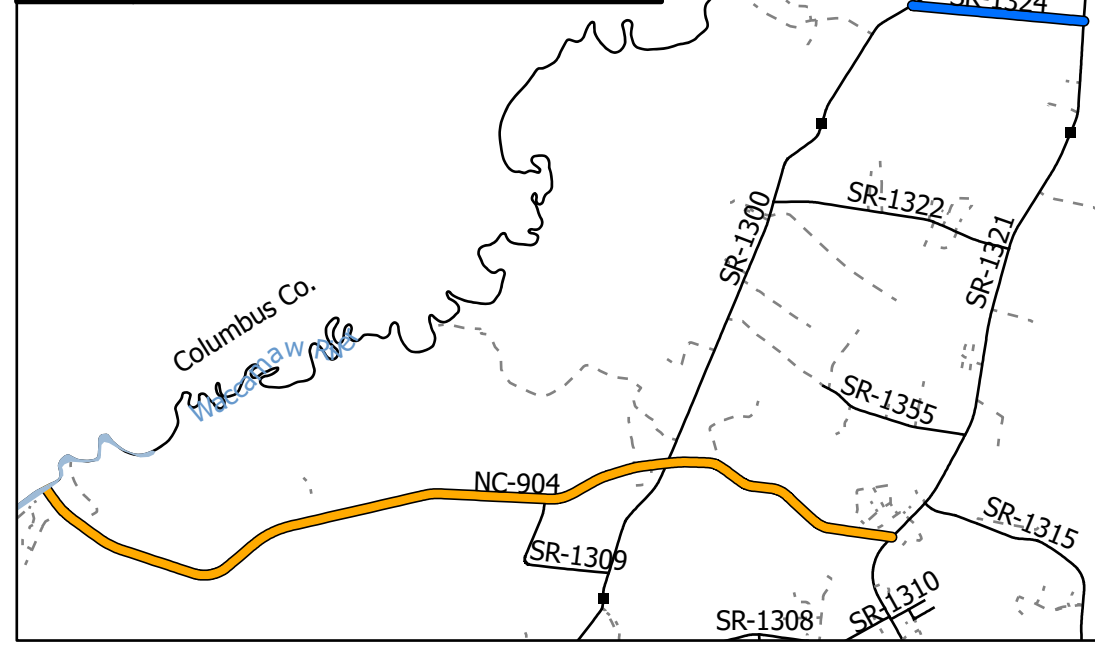
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.03.10101	1



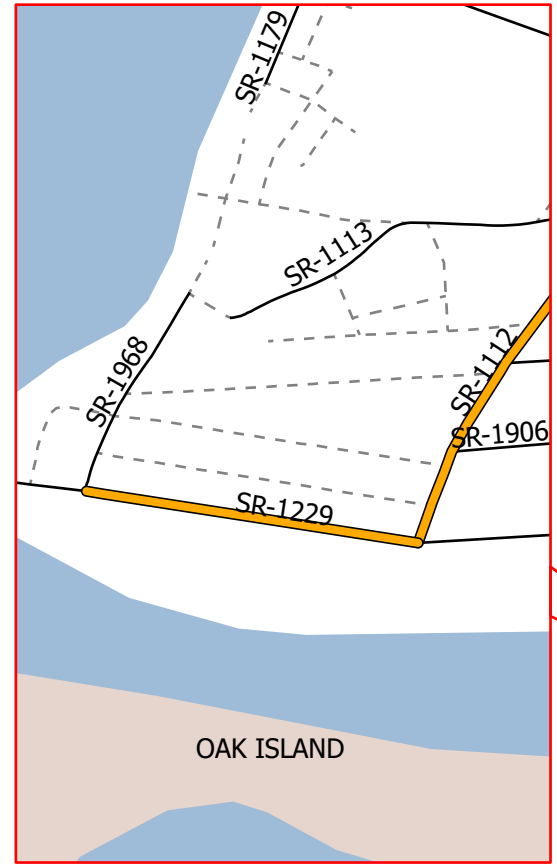
<b>1</b>	US 17 HWY. NORTH BOUND (OCEAN HIGHWAY)
<b>2</b>	US 17 HWY. SOUTH BOUND (OCEAN HIGHWAY)



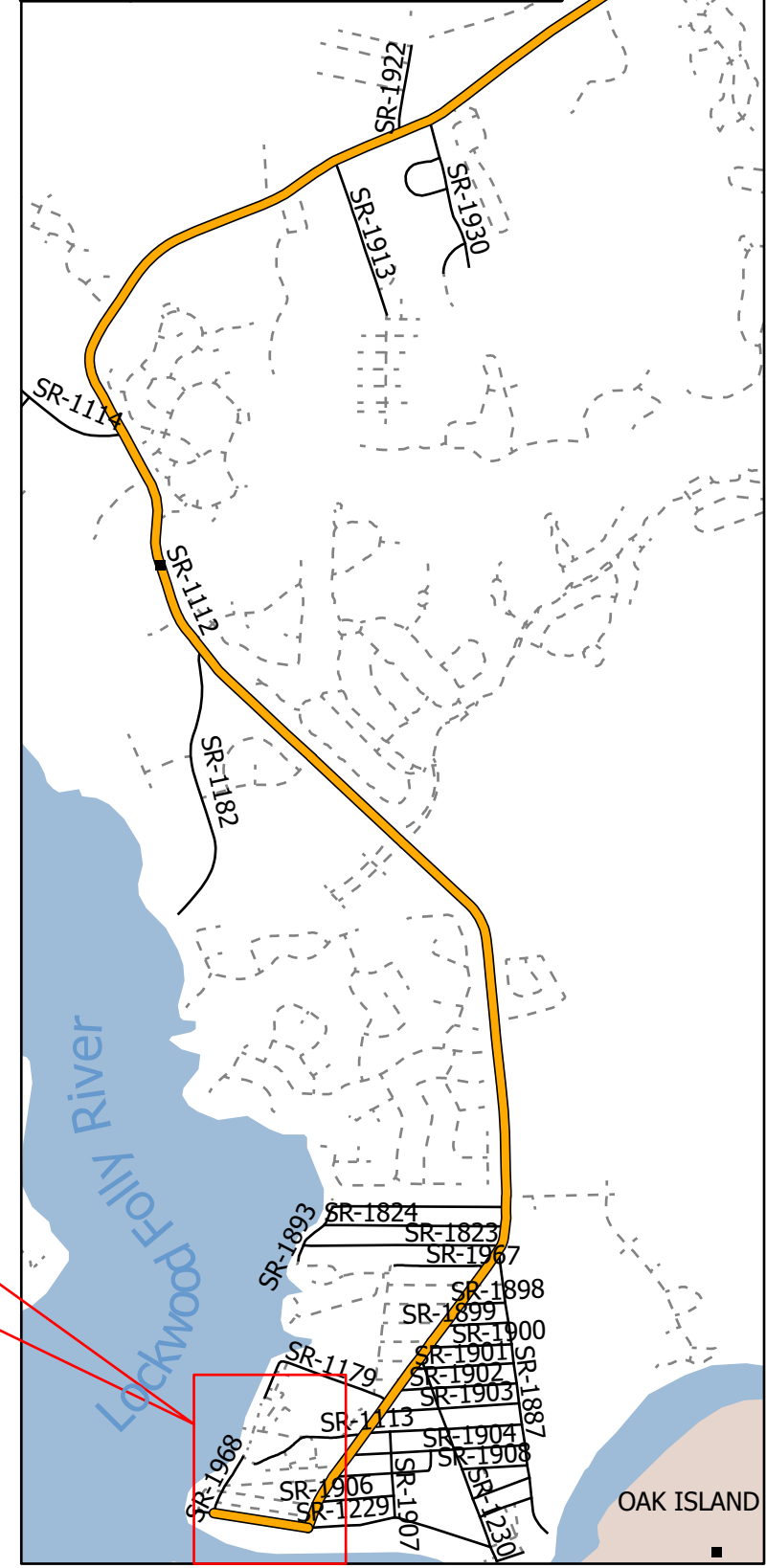
<b>3</b>	NC 904 HIGHWAY (PIREWAY RD.)
<b>7</b>	SR 1324 (LONG ROAD)

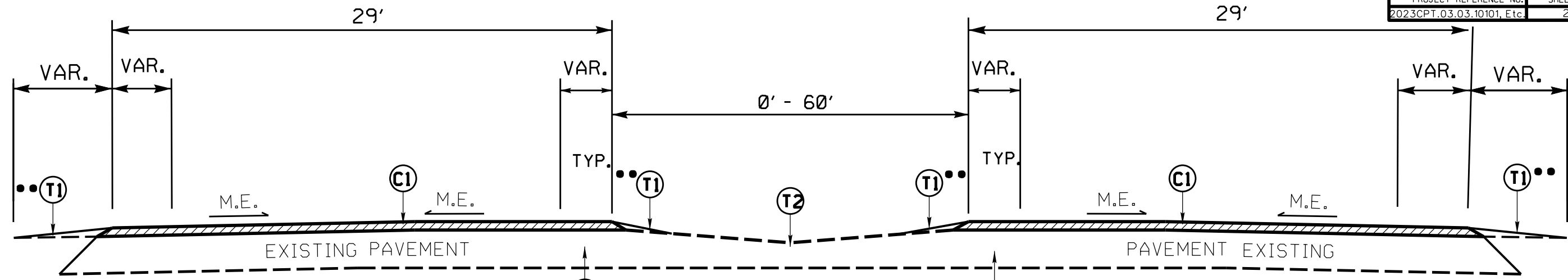


<b>6</b>	SR 1344 (SELLERS ROAD)
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<b>4</b>	SR 1112 (SUNSET HARBOR RD.)
<b>5</b>	SR 1229 (LOCKWOOD FOLLY RD.)





**(VI)** FRIS MILL 1-1/2" MAP NO. 2 MP 19.73 - MP 20.08 US 17 S. (OCEAN HWY.) MP 22.51 - MP 22.62 MP 16.68 - MP 23.78

**TYPICAL SECTION NO. 1**

**NOTES: MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY**

**••SHOULDER WORK ON MAP NO. 1 - 2, 5 AS NEEDED, TO BE DETERMINED BY ENGINEER.**

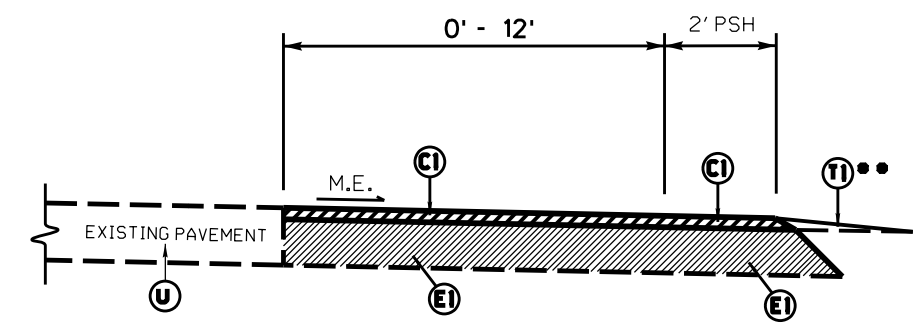
**(VI)** FRIS MILL 1-1/2" MAP NO. 1 MP 24.38 - MP 24.48 US 17 N. (OCEAN HWY.) MP 23.55 - MP 30.65

**(VI)** FRIS MILL 1-1/2" MP 24.71 - MP 24.82 MP 27.25 - MP 27.60

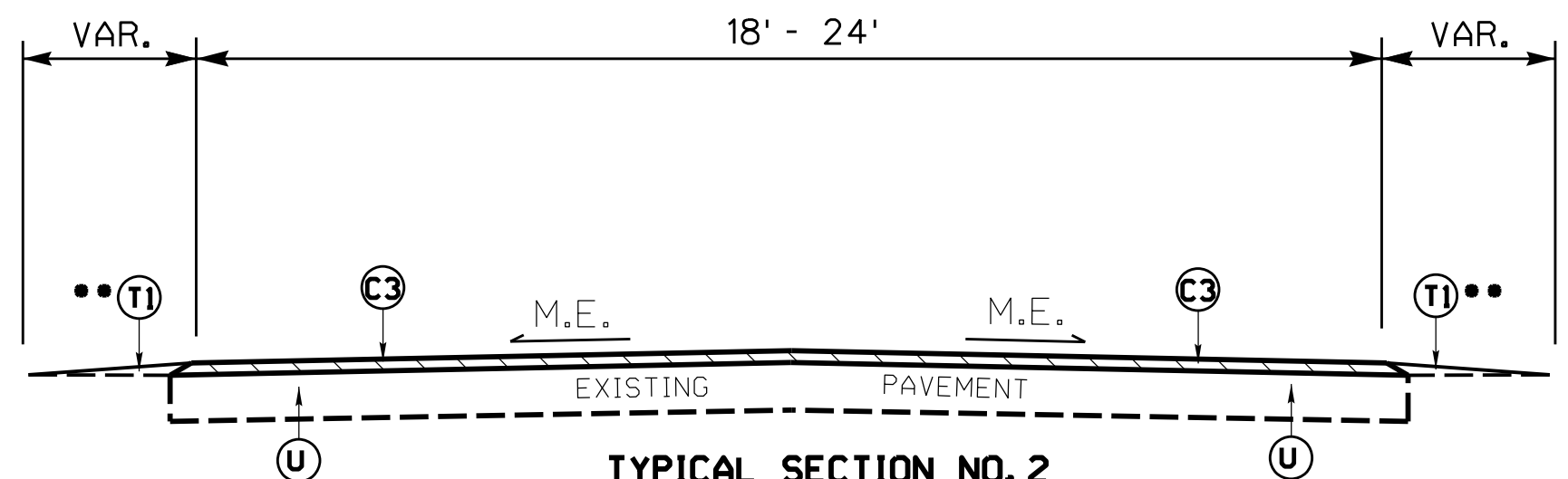
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
C3	PROP. APPROX. 1/4" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ.YD.
C4	PROP. APPROX. 1" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ.YD.
C5	PROP. APPROX. 1" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S4.75A, AT AN AVERAGE RATE OF 110 LBS. PER SQ.YD.
E1	PROP. APPROX. 5" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ.YD.
F1	ASPHALT SURFACE TREATMENT - MAT COAT #67 GRANITE
R1	EXISTING BRIDGE RAIL
T1	EARTH MATERIAL (SHOULDER RECONSTRUCTION)
T2	EXISTING EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT, 1/2" DEPTH
V2	MILLING ASPHALT PAVEMENT, 1" DEPTH
V3	MILLING ASPHALT PAVEMENT, 1 1/4" DEPTH

MAP NO. 1  
US 17 (RT. LANE TURN EXTENSION)  
MP 24.38 - MP 24.48  
BEG. TAPER 505' FROM C/L OF SR 1569 (COLLEGE RD.)  
END TAPER 280' FROM C/L OF SR 1569 (COLLEGE RD.)  
TOTAL FULL STORAGE LANE OF 240 LF

MAP NO. 2  
US 17 (LT. LANE TURN EXTENSION)  
MP 22.85 - MP 22.71  
BEG. TAPER 700' FROM C/L OF SR 1569 (COLLEGE RD.)  
END TAPER 475' FROM C/L OF SR 1569 (COLLEGE RD.)  
TOTAL FULL STORAGE LANE OF 425 LF



**TYPICAL SECTION NO. 1**  
(TURN LANE EXTENSION DETAIL)



**TYPICAL SECTION NO. 2**

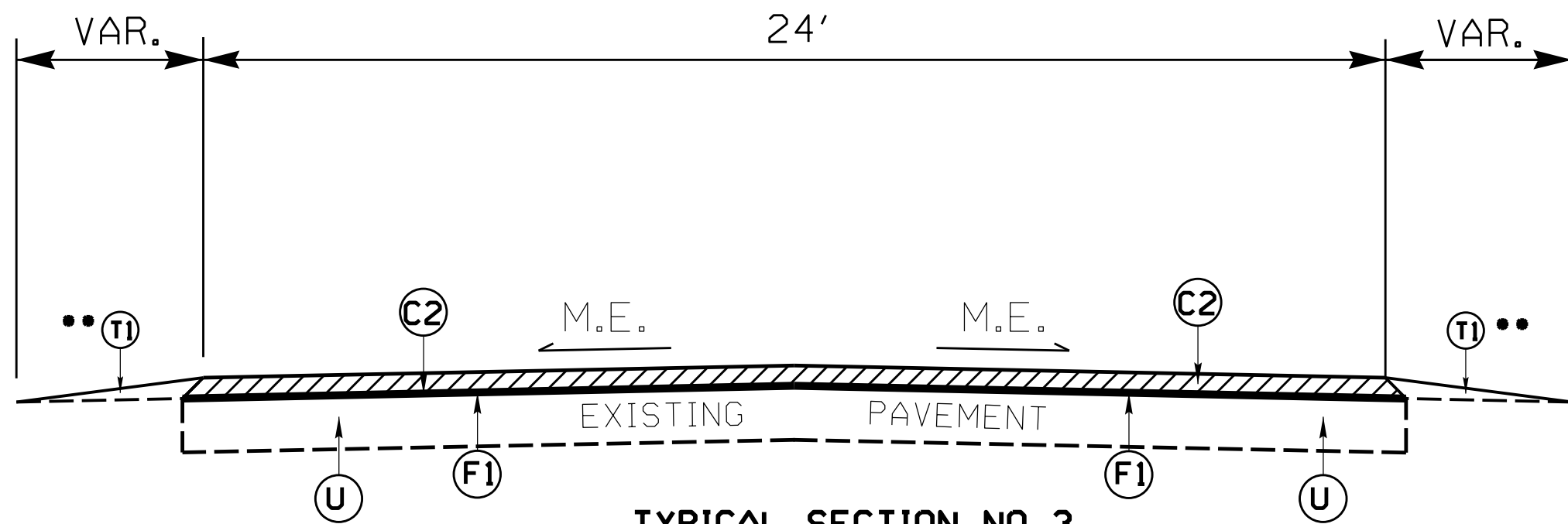
MAP NO. 5  
SR 1229 (LOCKWOOD FOLLY RD.)  
MP 0.00 - MP 0.30

PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.

REVISIONS

8/17/99

SYSTEMS DESIGN, INC. 11111 RIVERVIEW BLVD. SUITE 1000 RICHMOND, VA 23228-1111



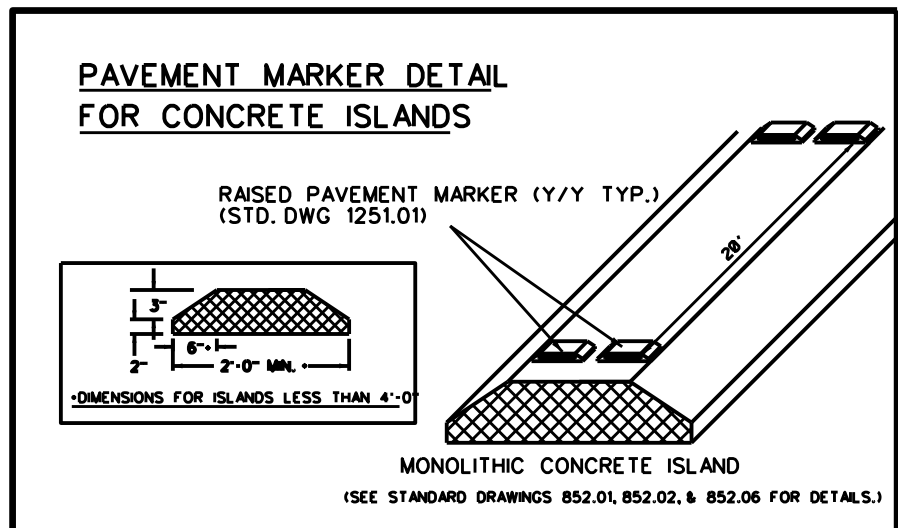
**TYPICAL SECTION NO. 3**

MAP NO. 3  
 NC 904 (PIREWAY RD.)  
 MP 0.00 - MP 5.61

PAVEMENT SCHEDULE	
C2	1½" S9.5B
F1	MAT COAT #67 STONE GRANITE
T1	EARTH MATERIAL SHOULDER RECONST.
U	EXISTING PAVEMENT

**NOTES:** MILL A SINGLE LANE AND PAVE BACK BY THE END OF EACH WORK DAY  
 \*\*SHOULDER WORK ON MAP NO. 3 AS NEEDED. TO BE DETERMINED BY ENGINEER.

REVISIONS



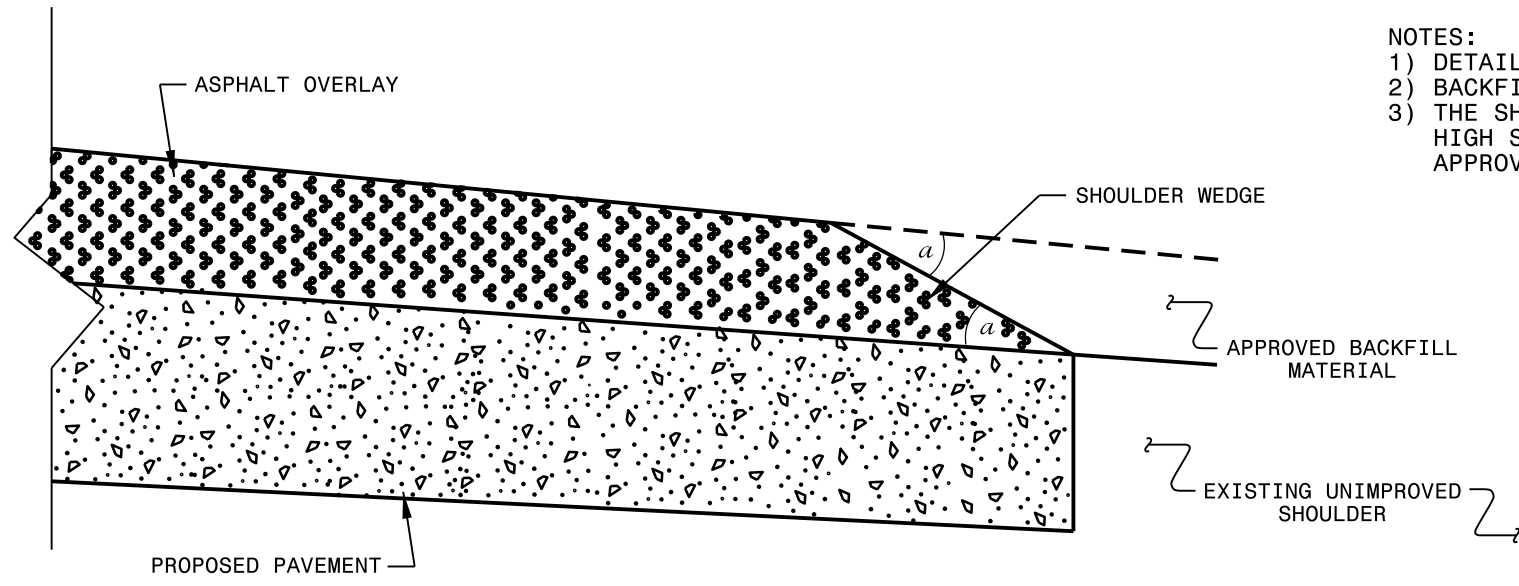
2' WIDENING LOCATIONS - SR 1112 (SUNSET HARBOR RD.)				
LOCATION	MILE POST FROM SR 1229 (LOCKWOOD FOLLY RD.)	BEGIN WIDENING	END WIDENING	DISTANCE
RT-L-	0.000	0.000	0.014	75'
RT/LT-L-	1.020	1.020	1.175	810'
RT/LT-L-	1.270	1.270	1.645	1,975'
RT/LT-L-	1.830	1.830	2.630	4,225'
RT/LT-L-	2.900	2.900	3.021	640'
RT/LT-L-	3.698	3.698	3.790	550'
RT/LT-L-	4.020	4.020	4.200	950'
RT/LT-L-	4.519	4.519	4.674	875'
RT/LT-L-	4.798	4.798	5.025	1,200'
RT/LT-L-	5.140	5.140	5.424	1,500'
RT/LT-L-	5.614	5.614	5.748	700'
				TOTAL = 13,500'

SYSTEMS DESIGN & CONSTRUCTION  
 8/17/99

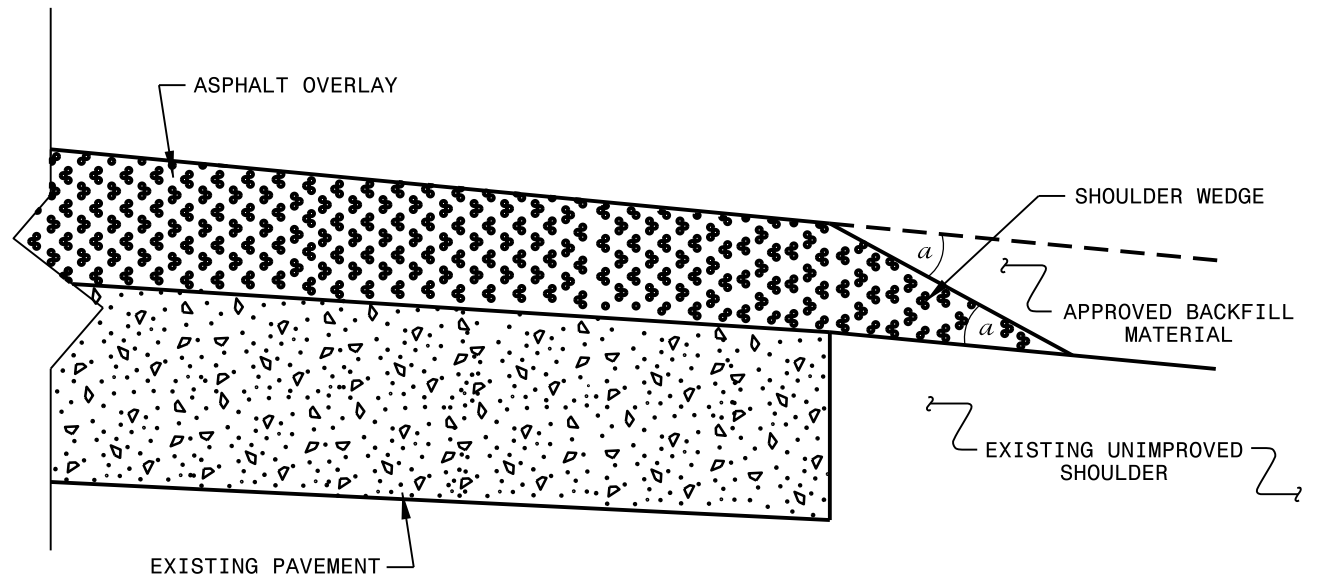




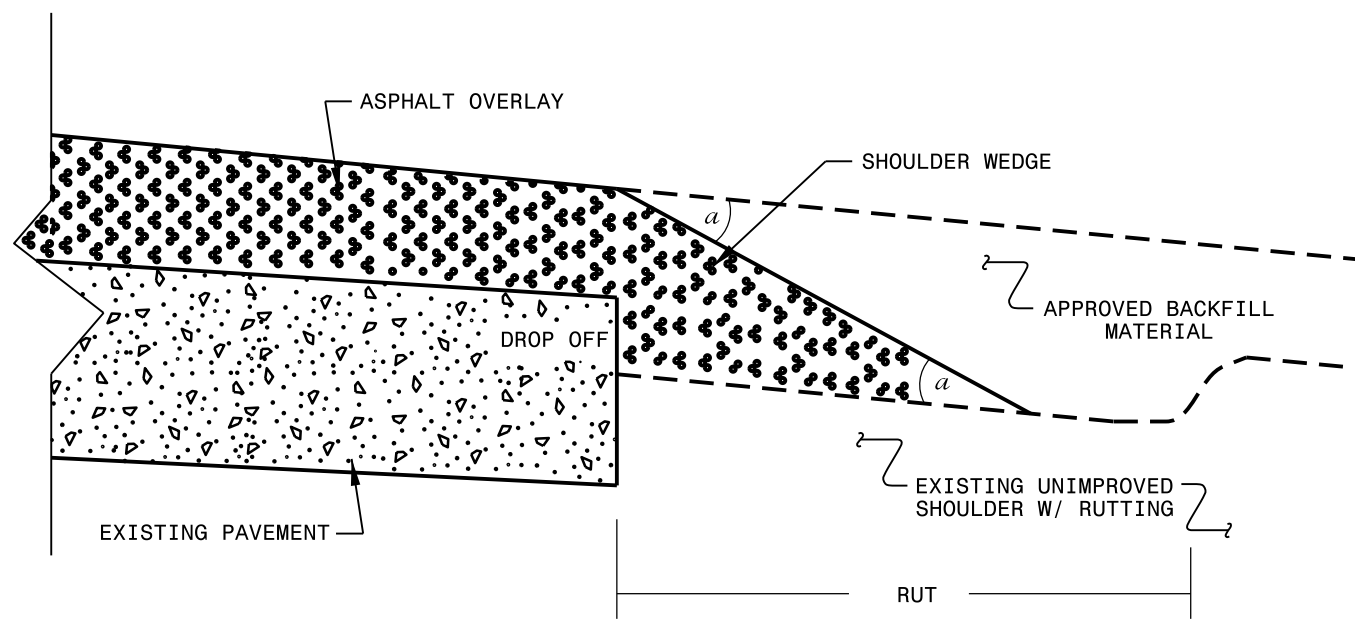
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**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°

<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			

27 JUN 2018 13:22  
 s:\projects\Resurfacing Projects\Division 3\Sampson August 2018\Revised Shoulder Wedge Detail.dgn  
 P:\porter\_41\_CSD\_2018\_05\_25

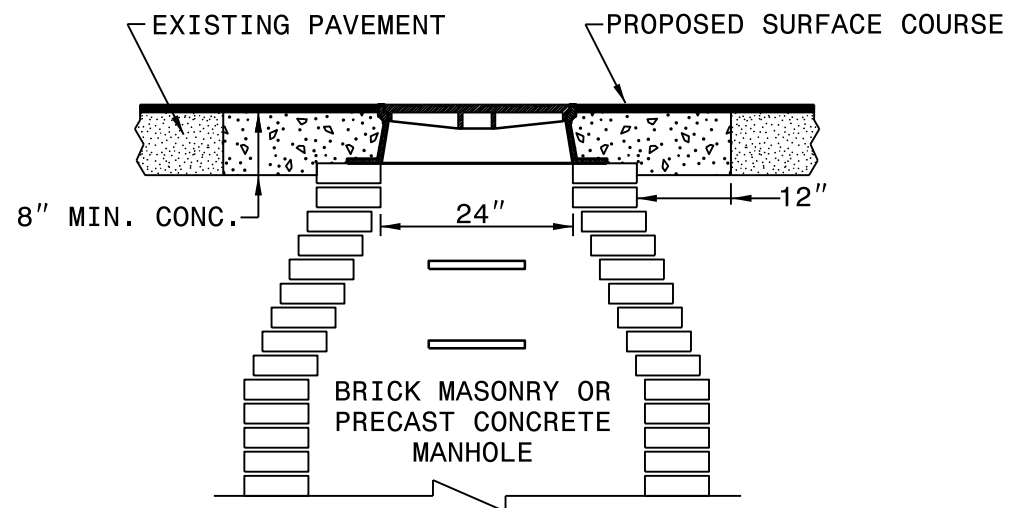
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

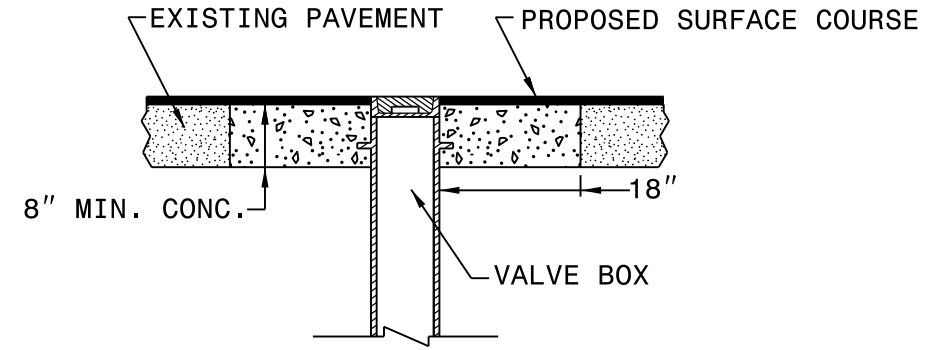
SHEET 1 OF 1  
**840D55**

GENERAL NOTES:

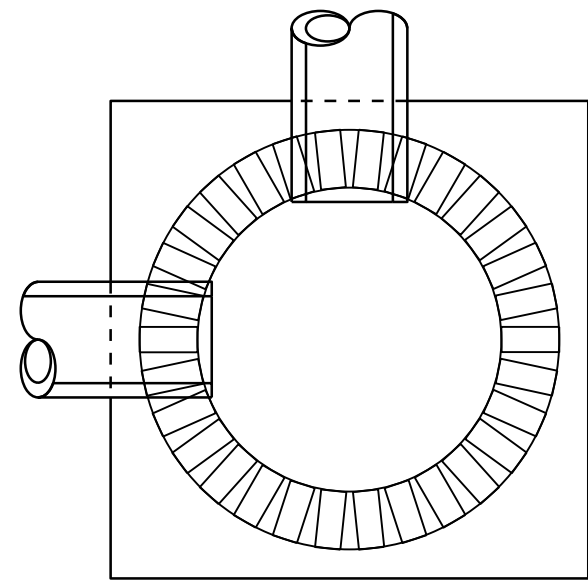
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE THAT WILL TAKE FULL SET AND BECOME LOAD BEARING WITHIN SIXTY MINUTES OF PLACEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS  $\frac{1}{2}$ " +/-  $\frac{1}{8}$ "
7. CONSTRUCT AN ASPHALT RAMP IN ACCORDANCE WITH SECTION 858-3 OF THE 2018 STANDARD SPECIFICATIONS.



**MANHOLE CONCRETE ENCASEMENT**



**VALVE BOX CONCRETE ENCASEMENT**



**ELEVATION VIEW**

PLACE BRICK ACCORDING TO ELEVATION VIEW

SHEET 1 OF 1  
**840D55**

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

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

REVISIONS

28-NOV-2017 10:49  
S:\Division Resurfacing\z Design Standards & Specifications\Drawings\Tutorials\_Curb, Etc.dwg  
8/17/99

PROJECT NO.	SHEET NO.
2023CPT.03.03.10101, Etc.	8

## 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	0106000000-E	1220000000-E	1245000000-E	1297000000-E			1330000000-E	1491000000-E	1519000000-E	1520000000-E	1523000000-E	1526000000-E	1575000000-E				
												BORROW EXCAVATION	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1.5" MILLING	1" MILLING	1.25" MILLING	INCIDENTAL MILLING	BASE COURSE, B25.0C	SURFACE COURSE, S9.5B	LEVELING COURSE, S9.5B	SURFACE COURSE, S9.5C	SURFACE COURSE, S4.75A	ASPHALT BINDER FOR PLANT MIX				
												MI	FT	CY	TON	SMI	SY	SY	SY	SY	TONS	TON	TON	TON	TON	TON		
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	NO	NO	7.1	29	2,140	30	14.20	7,353			1,649	70		50	11,070		663				
<b>TOTAL FOR MAP NO. 1</b>												<b>7.1</b>		<b>2,140</b>	<b>30</b>	<b>14.20</b>	<b>7,353</b>			<b>1,649</b>	<b>70</b>		<b>50</b>	<b>11,070</b>		<b>663</b>		
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	NO	NO	7.1	29	2,140	36	14.20	7,353			879	60		50	10,800		650				
<b>TOTAL FOR MAP NO. 2</b>												<b>7.1</b>		<b>2,140</b>	<b>36</b>	<b>14.20</b>	<b>7,353</b>			<b>879</b>	<b>60</b>		<b>50</b>	<b>10,800</b>		<b>650</b>		
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	NO	NO	5.61	24	857	70	11.22				552	10		6,621	60		440				
<b>TOTAL FOR MAP NO. 3</b>												<b>5.61</b>		<b>857</b>	<b>70</b>	<b>11.22</b>				<b>552</b>	<b>10</b>		<b>6,621</b>	<b>60</b>		<b>440</b>		
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>												<b>19.81</b>		<b>5,137</b>	<b>136</b>	<b>39.62</b>	<b>14,706</b>			<b>3,080</b>	<b>140</b>		<b>6,621</b>	<b>160</b>		<b>21,870</b>		<b>1,753</b>
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	NO	NO	5.83	22 - 24	604	86	11.66				367	15,661		1,371	1,701	5,198	50		436		
<b>TOTAL FOR MAP NO. 4</b>												<b>5.83</b>		<b>604</b>	<b>86</b>	<b>11.66</b>				<b>367</b>	<b>15,661</b>		<b>1,371</b>	<b>1,701</b>	<b>5,198</b>	<b>50</b>		<b>436</b>
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	NO	NO	0.3	18	32	14	0.60							183		219		15			
<b>TOTAL FOR MAP NO. 5</b>												<b>0.3</b>		<b>32</b>	<b>14</b>	<b>0.60</b>							<b>183</b>		<b>219</b>		<b>15</b>	
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>												<b>6.13</b>		<b>636</b>	<b>100</b>	<b>12.26</b>	<b>367</b>	<b>15,661</b>			<b>1,554</b>	<b>1,701</b>	<b>5,417</b>	<b>50</b>		<b>451</b>		
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	NO	NO	1.02	22													727	52			
<b>TOTAL FOR MAP NO. 6</b>												<b>1.02</b>															<b>727</b>	<b>52</b>
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	NO	NO	1.04	20													674	47			
<b>TOTAL FOR MAP NO. 7</b>												<b>1.04</b>															<b>674</b>	<b>47</b>
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>												<b>2.06</b>															<b>1,401</b>	<b>99</b>
<b>GRAND TOTAL</b>												<b>28</b>		<b>5,773</b>	<b>236</b>	<b>51.88</b>	<b>14,706</b>	<b>367</b>	<b>15,661</b>	<b>4,634</b>	<b>1,841</b>	<b>12,038</b>	<b>210</b>	<b>21,870</b>	<b>1,401</b>	<b>2,303</b>		



## 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	1705500000-E	1775500000-E	1838000000-E	2845000000-N	3210000000-N	3287000000-N	3420000000-E	3435000000-N	5255000000-N	6000000000-E	6009000000-E	6012000000-E	6015000000-E				
												PATCHING EXISTING PAVEMENT (MILL)	ASPHALT SURFACE TREATMENT, MATCOAT, #67 GRANITE	EMULSION FOR ASPHALT SURFACE TREATMENT	ADJUSTMENT OF METER OR VALVE BOX	GUARDRAIL END UNITS, TYPE CAT-1	GUARDRAIL END UNITS, TYPE TL-3	REMOVE & REPLACE EXISTING GUARDRAIL (GENERIC)	GUARDRAIL PREFAB ANCHOR POST (GENERIC)	PORTABLE LIGHTING	TEMPORARY SILT FENCE	STONE FOR EC CLASS B	SEDIMENT CONTROL STONE	TEMPORARY MULCHING				
												MI	FT	TON	SY	GAL	EA	EA	EA	LF	EA	LS	LF	TON	TON	ACR		
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	NO	NO	7.1	29	64					1.00	1.00	272.00	6.00	0.50	710	178	178	7.10			
<b>TOTAL FOR MAP NO. 1</b>												<b>7.1</b>		<b>64</b>					<b>1.00</b>	<b>1.00</b>	<b>272.00</b>	<b>6.00</b>	<b>0.50</b>	<b>710</b>	<b>178</b>	<b>178</b>	<b>7.10</b>	
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	NO	NO	7.1	29	148					2.00	2.00	1,077.00	4.00	0.50	710	178	178	7.10			
<b>TOTAL FOR MAP NO. 2</b>												<b>7.1</b>		<b>148</b>					<b>2.00</b>	<b>2.00</b>	<b>1,077.00</b>	<b>4.00</b>	<b>0.50</b>	<b>710</b>	<b>178</b>	<b>178</b>	<b>7.10</b>	
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	NO	NO	5.61	24	100	78,989	31,600								561	140	140	5.61			
<b>TOTAL FOR MAP NO. 3</b>												<b>5.61</b>		<b>100</b>	<b>78,989</b>	<b>31,600</b>							<b>561</b>	<b>140</b>	<b>140</b>	<b>5.61</b>		
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>												<b>19.81</b>		<b>312</b>	<b>78,989</b>	<b>31,600</b>			<b>3.00</b>	<b>3.00</b>	<b>1,349.00</b>	<b>10.00</b>	<b>1.00</b>	<b>1,981</b>	<b>496</b>	<b>496</b>	<b>19.81</b>	
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	NO	NO	5.83	22 - 24	370					1					570	142	142	5.97			
<b>TOTAL FOR MAP NO. 4</b>												<b>5.83</b>		<b>370</b>					<b>1</b>				<b>570</b>	<b>142</b>	<b>142</b>	<b>5.97</b>		
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	NO	NO	0.3	18	20										30	8	8	0.30			
<b>TOTAL FOR MAP NO. 5</b>												<b>0.3</b>		<b>20</b>									<b>30</b>	<b>8</b>	<b>8</b>	<b>0.30</b>		
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>												<b>6.13</b>		<b>390</b>					<b>1</b>				<b>600</b>	<b>150</b>	<b>150</b>	<b>6.27</b>		
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	NO	NO	1.02	22	30																
<b>TOTAL FOR MAP NO. 6</b>												<b>1.02</b>		<b>30</b>														
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	NO	NO	1.04	20																	
<b>TOTAL FOR MAP NO. 7</b>												<b>1.04</b>																
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>												<b>2.06</b>		<b>30</b>														
<b>GRAND TOTAL</b>												<b>28</b>		<b>732</b>	<b>78,989</b>	<b>31,600</b>	<b>1</b>	<b>3.00</b>	<b>3.00</b>	<b>1,349.00</b>	<b>10.00</b>	<b>1.00</b>	<b>2,581</b>	<b>646</b>	<b>646</b>	<b>26.08</b>		

PROJECT NO.	SHEET NO.
2023CPT.03.03.10101, Etc.	10

## 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	6018000000-E	6021000000-E	6036000000-E	6042000000-E	6071010000-E	6084000000-E	6090000000-E	6093000000-E	6117000000-N	7444000000-E	
												SEED FOR TEMPORARY SEEDING	FERTILIZER FOR TEMPORARY SEEDING	MATTING FOR EROSION CONTROL	1/4" HARDWARE CLOTH	WATTLE	SEED & MULCHING	SEED FOR REPAIR SEEDING	FERTILIZER FOR REPAIR SEEDING	RESPONSE FOR EROSION CONTROL	INDUCTIVE LOOP SAWCUT	
												MI	FT	LBS	TON	SY	LF	LF	AC	LB	TON	EA
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	NO	NO	7.1	29	355	1.80	50	355	110	6.88	355	1.80	8	1,500	
<b>TOTAL FOR MAP NO. 1</b>											<b>7.1</b>		<b>355</b>	<b>1.80</b>	<b>50</b>	<b>355</b>	<b>110</b>	<b>6.88</b>	<b>355</b>	<b>1.80</b>	<b>8</b>	<b>1,500</b>
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	NO	NO	7.1	29	355	1.80	50	355	110	6.88	355	1.80	8		
<b>TOTAL FOR MAP NO. 2</b>											<b>7.1</b>		<b>355</b>	<b>1.80</b>	<b>50</b>	<b>355</b>	<b>110</b>	<b>6.88</b>	<b>355</b>	<b>1.80</b>	<b>8</b>	
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	NO	NO	5.61	24	281	1.40	40	281	90	5.44	281	1.40	12		
<b>TOTAL FOR MAP NO. 3</b>											<b>5.61</b>		<b>281</b>	<b>1.40</b>	<b>40</b>	<b>281</b>	<b>90</b>	<b>5.44</b>	<b>281</b>	<b>1.40</b>	<b>12</b>	
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>											<b>19.81</b>		<b>991</b>	<b>5.00</b>	<b>140</b>	<b>991</b>	<b>310</b>	<b>19.20</b>	<b>991</b>	<b>5.00</b>	<b>28</b>	<b>1,500</b>
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	NO	NO	5.83	22 - 24	285	1.42	30	285	80	5.52	285	1.42	8		
<b>TOTAL FOR MAP NO. 4</b>											<b>5.83</b>		<b>285</b>	<b>1.42</b>	<b>30</b>	<b>285</b>	<b>80</b>	<b>5.52</b>	<b>285</b>	<b>1.42</b>	<b>8</b>	
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	NO	NO	0.3	18	15	0.08	10	15	10	0.30	15	0.08	2		
<b>TOTAL FOR MAP NO. 5</b>											<b>0.3</b>		<b>15</b>	<b>0.08</b>	<b>10</b>	<b>15</b>	<b>10</b>	<b>0.30</b>	<b>15</b>	<b>0.08</b>	<b>2</b>	
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>											<b>6.13</b>		<b>300</b>	<b>1.50</b>	<b>40</b>	<b>300</b>	<b>90</b>	<b>5.82</b>	<b>300</b>	<b>1.50</b>	<b>10</b>	
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	NO	NO	1.02	22											
<b>TOTAL FOR MAP NO. 6</b>											<b>1.02</b>											
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	NO	NO	1.04	20											
<b>TOTAL FOR MAP NO. 7</b>											<b>1.04</b>											
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>											<b>2.06</b>											
<b>GRAND TOTAL</b>											<b>28</b>		<b>1,291</b>	<b>6.50</b>	<b>180</b>	<b>1,291</b>	<b>400</b>	<b>25.02</b>	<b>1,291</b>	<b>6.50</b>	<b>38</b>	<b>1,500</b>

PROJECT NO.	SHEET NO.
2023CPT.03.03.10101, Etc.	11

**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH		WIDTH	4413000000-E	4415000000-N	4420000000-N	4434000000-N	4457000000-N	4480000000-N	4510000000-N	4685000000-E		
								MI	FT		WORK ZONE ADVANCE/GENERAL WARNING SIGNING	FLASHING ARROW BOARD	PORT CHANG MSG SIGN	SEQUENTIAL FLASHING WARNING LIGHTS	TEMPORARY TRAFFIC CONTROL	TMA	LAW ENFORCEMENT	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	
											SF	EA	EA	EA	LS	EA	HR	LF	LF	
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	7.1	29		800	2	1	17	0.23	1	40	37,648	47,360	
<b>TOTAL FOR MAP NO. 1</b>								<b>7.1</b>			<b>800</b>	<b>2</b>	<b>1</b>	<b>17</b>	<b>0.23</b>	<b>1</b>	<b>40</b>	<b>37,648</b>	<b>47,360</b>	
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	7.1	29		800	2	1	17	0.23	1	40	37,648	47,360	
<b>TOTAL FOR MAP NO. 2</b>								<b>7.1</b>			<b>800</b>	<b>2</b>	<b>1</b>	<b>17</b>	<b>0.23</b>	<b>1</b>	<b>40</b>	<b>37,648</b>	<b>47,360</b>	
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	5.61	24		640				0.19			39,636	60,364	
<b>TOTAL FOR MAP NO. 3</b>								<b>5.61</b>			<b>640</b>					<b>0.19</b>			<b>39,636</b>	<b>60,364</b>
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>								<b>19.81</b>			<b>2,240</b>	<b>4</b>	<b>2</b>	<b>34</b>	<b>0.65</b>	<b>2</b>	<b>80</b>	<b>114,932</b>	<b>155,084</b>	
																		<b>270,016</b>		
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	5.83	22 - 24		672				0.18		40			
<b>TOTAL FOR MAP NO. 4</b>								<b>5.83</b>			<b>672</b>				<b>0.18</b>		<b>40</b>			
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	0.3	18					0.01						
<b>TOTAL FOR MAP NO. 5</b>								<b>0.3</b>							<b>0.01</b>					
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>								<b>6.13</b>			<b>672</b>				<b>0.19</b>		<b>40</b>			
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	1.02	22						0.08					
<b>TOTAL FOR MAP NO. 6</b>								<b>1.02</b>							<b>0.08</b>					
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	1.04	20						0.08					
<b>TOTAL FOR MAP NO. 7</b>								<b>1.04</b>							<b>0.08</b>					
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>								<b>2.06</b>							<b>0.16</b>					
<b>GRAND TOTAL</b>								<b>28</b>			<b>2,912</b>	<b>4</b>	<b>2</b>	<b>34</b>	<b>1.00</b>	<b>2</b>	<b>120</b>	<b>114,932</b>	<b>155,084</b>	
																		<b>270,016</b>		

PROJECT NO.	SHEET NO.
2023CPT.03.03.1010	12

## THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	468800000-E		469500000-E		470000000-E		470900000-E		472500000-E				
										6" X 90 M WHITE THERMO	6" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	12" X 90 M WHITE THERMO	24" X 90 M WHITE THERMO	THERMO STR ARROW 90 M	THERMO RT ARROW 90 M	THERMO LT ARROW 90 M	THERMO U-TURN ARROW (90 MIL)	THERMO STR & LT ARROW (90 MIL)			
										MI	FT	LF	LF	LF	LF	EA	EA	EA	EA	EA		
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	7.1	29	1,320	1,320	650	84	137	24	8	11	4	3			
<b>TOTAL FOR MAP NO. 1</b>											<b>1,320</b>	<b>1,320</b>	<b>650</b>	<b>84</b>	<b>137</b>	<b>24</b>	<b>8</b>	<b>11</b>	<b>4</b>	<b>3</b>		
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	7.1	29			300	40	185	18	6	13		4			
<b>TOTAL FOR MAP NO. 2</b>													<b>300</b>	<b>40</b>	<b>185</b>	<b>18</b>	<b>6</b>	<b>13</b>		<b>4</b>		
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	5.61	24					20								
<b>TOTAL FOR MAP NO. 3</b>											<b>5.61</b>				<b>20</b>							
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>									<b>19.81</b>		<b>1,320</b>	<b>1,320</b>	<b>950</b>	<b>124</b>	<b>342</b>	<b>42</b>	<b>14</b>	<b>24</b>	<b>4</b>	<b>7</b>		
										<b>2,640</b>		<b>91</b>										
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	5.83	22 - 24													
<b>TOTAL FOR MAP NO. 4</b>											<b>5.83</b>											
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	0.3	18													
<b>TOTAL FOR MAP NO. 5</b>											<b>0.3</b>											
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>									<b>6.13</b>													
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	1.02	22													
<b>TOTAL FOR MAP NO. 6</b>											<b>1.02</b>											
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	1.04	20													
<b>TOTAL FOR MAP NO. 7</b>											<b>1.04</b>											
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>									<b>2.06</b>													
<b>GRAND TOTAL</b>									<b>28</b>		<b>1,320</b>	<b>1,320</b>	<b>950</b>	<b>124</b>	<b>342</b>	<b>42</b>	<b>14</b>	<b>24</b>	<b>4</b>	<b>7</b>		
										<b>2,640</b>		<b>91</b>										

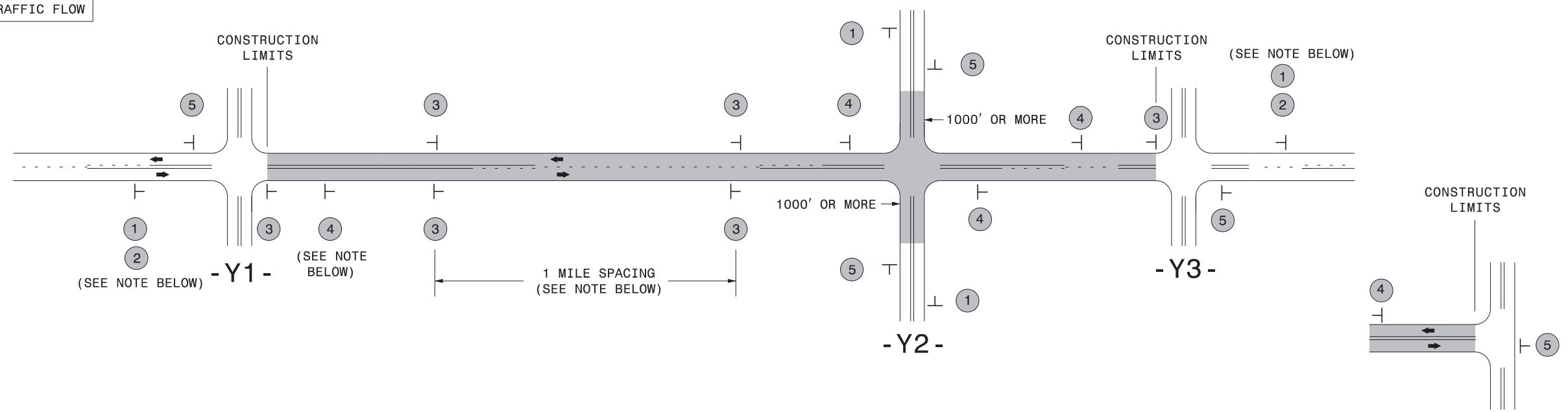
PROJECT NO.	SHEET NO.
2023CPT.03.03.10101,	13

## THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4810000000-E		4820000000-E		4835000000-E		4845000000-N		4900000000-N		4905100000-N	
										4" YELLOW PAINT	4" WHITE PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT LT ARROW	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	NON CAST IRON SNOWPLOWABLE MARKERS (C/R)	NON CAST IRON SNOWPLOWABLE MARKERS (Y/Y)			
								MI	FT	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	
2023CPT.03.03.10101	Brunswick	1	US 17 HIGHWAY NORTH BOUND (OCEAN HIGHWAY)	FROM 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) TO US 17 BUS. (OLD OCEAN HWY.) [MP 23.55 - MP 30.65]	1	2	2WD	7.1	29							55	8	521			
<b>TOTAL FOR MAP NO. 1</b>									<b>7.1</b>						<b>55</b>	<b>8</b>	<b>521</b>				
2023CPT.03.03.10101	Brunswick	2	US 17 HIGHWAY SOUTH BOUND (OCEAN HIGHWAY)	FROM US 17 BUS. (OLD OCEAN HWY.) TO 0.11 MI. SOUTH OF US 17 BUS. (OLD OCEAN HWY.) [MP 16.68 - MP 23.78]	1	2	2WD	7.1	29							41		533			
<b>TOTAL FOR MAP NO. 2</b>									<b>7.1</b>						<b>41</b>		<b>533</b>				
2023CPT.03.03.10101	Brunswick	3	NC 904 HIGHWAY (PIREWAY RD.)	FROM COLUMBUS CO. LINE TO SR 1321 (LONGWOOD RD.) [MP 0.00 TO MP 5.61]	3	2	2WU	5.61	24											375	
<b>TOTAL FOR MAP NO. 3</b>									<b>5.61</b>										<b>375</b>		
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.10101</b>									<b>19.81</b>						<b>96</b>	<b>8</b>	<b>1,054</b>	<b>375</b>			
															<b>104</b>		<b>1,429</b>				
2023CPT.03.03.20101	Brunswick	4	SR 1112 (SUNSET HARBOR ROAD)	FROM SR 1229 (LOCKWOOD FOLLY RD. SE.) TO NC 211 HWY. (SOUTHPORT/SUPPLY RD.) [MP 0.00 - MP 5.83]	4,5	2	2WU	5.83	22 - 24	98,782	122,800	620	70	4	498	12					
<b>TOTAL FOR MAP NO. 4</b>									<b>5.83</b>		<b>98,782</b>	<b>122,800</b>	<b>620</b>	<b>70</b>	<b>4</b>	<b>498</b>	<b>12</b>				
2023CPT.03.03.20101	Brunswick	5	SR 1229 (LOCKWOOD FOLLY ROAD)	FROM END OF MAINTENANCE (LOCKWOOD FOLLY RD.) TO SR 1112 (SUNSET HARBOR RD.) [MP 0.00 - MP 0.30]	2	2	2WU	0.3	18	6,320	6,320				20						
<b>TOTAL FOR MAP NO. 5</b>									<b>0.3</b>		<b>6,320</b>	<b>6,320</b>			<b>20</b>						
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20101</b>									<b>6.13</b>		<b>105,102</b>	<b>129,120</b>	<b>620</b>	<b>70</b>	<b>4</b>	<b>518</b>	<b>12</b>				
															<b>530</b>						
2023CPT.03.03.20102	Brunswick	6	SR 1344 (SELLERS ROAD)	FROM SR 1342 (BIG MACEDONIA RD.) TO US 17 HWY. (OCEAN HWY.) [MP 0.00 - MP 1.02]	6	2	2WU	1.02	22	14,874	21,542				68						
<b>TOTAL FOR MAP NO. 6</b>									<b>1.02</b>		<b>14,874</b>	<b>21,542</b>			<b>68</b>						
2023CPT.03.03.20102	Brunswick	7	SR 1324 (LONG ROAD)	FROM SR 1321 (LONGWOOD RD.) TO SR 1300 (ASH LITTLE RIVER RD.) [MP 0.00 - MP 1.04]	6	2	2WU	1.04	20	4,710	21,965				70						
<b>TOTAL FOR MAP NO. 7</b>									<b>1.04</b>		<b>4,710</b>	<b>21,965</b>			<b>70</b>						
<b>TOTAL FOR PROJ NO. 2023CPT.03.03.20102</b>									<b>2.06</b>		<b>19,584</b>	<b>43,507</b>			<b>138</b>						
															<b>138</b>						
<b>GRAND TOTAL</b>									<b>28</b>		<b>124,686</b>	<b>172,627</b>	<b>620</b>	<b>70</b>	<b>4</b>	<b>752</b>	<b>20</b>	<b>1,054</b>	<b>375</b>		
															<b>772</b>		<b>1,429</b>				

# SIGNING FOR RESURFACING PROJECTS

**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

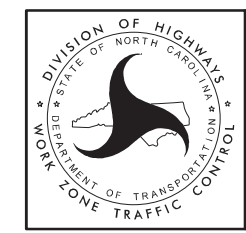
## -Y- LINE SIGNING

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"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <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;">             PLACED 500' IN ADVANCE OF FLAGGER.         </div> <div style="text-align: center;">             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		<ul style="list-style-type: none"> <li>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.</li> <li>AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</li> </ul>	
	4		<ul style="list-style-type: none"> <li>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS.</li> <li>DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.</li> <li>INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</li> <li>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.</li> <li>A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</li> <li>FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.</li> </ul>	
	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.

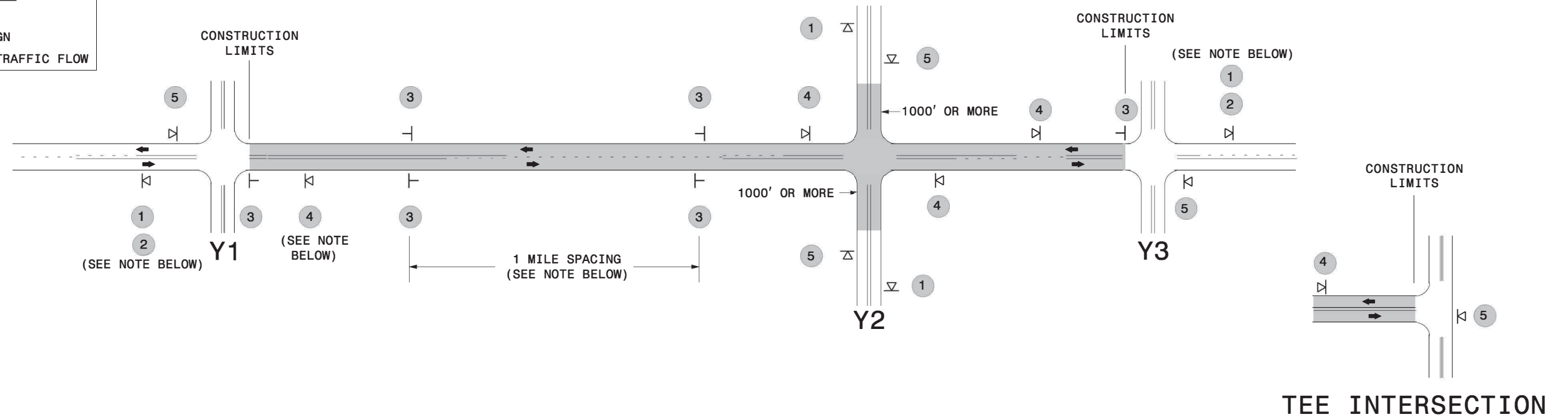


**ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING**

# SIGNING FOR ASPHALT SURFACE TREATMENT

**LEGEND**

- ⏏ PORTABLE SIGN
- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 	<ul style="list-style-type: none"> <li>- PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</li> <li>- SIGN #2 ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO THE NEAREST WHOLE NUMBER. DO NOT USE FRACTIONAL OR DECIMAL NUMBERS.</li> </ul>	<p>STATIONARY SIGNING NOT REQUIRED FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <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;"> <p>PLACED 500' IN ADVANCE OF FLAGGER.</p> </div> <div style="text-align: center;"> <p>PLACED 250' IN ADVANCE OF FLAGGER.</p> </div> </div>
	3	 	<ul style="list-style-type: none"> <li>- ALTERNATE THE FOLLOWING TWO SIGNS:</li> <li>- STARTING WITH "LOOSE GRAVEL" (W8-7) FOLLOWED BY "UNMARKED PAVEMENT".</li> <li>- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER.</li> <li>- AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</li> </ul>	
	4		<ul style="list-style-type: none"> <li>- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.</li> <li>- INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</li> <li>- 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.</li> <li>- A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</li> </ul>	
	5		<ul style="list-style-type: none"> <li>- PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.</li> </ul>	
	<p>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.</p>			

**MAPS LESS THAN 2 MILES**

FOR AST RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, USE A STATIONARY "LOOSE GRAVEL" SIGN AT THE BEGINNING CONSTRUCTION LIMIT FOLLOWED BY AN "UNMARKED PAVEMENT" SIGN MIDWAY THROUGH AND AN "END ROAD WORK" SIGN AT THE END CONSTRUCTION LIMIT.



**ADVANCE WARNING SIGNS FOR 2-LANE ROADWAY ASPHALT SURFACE TREATMENT**

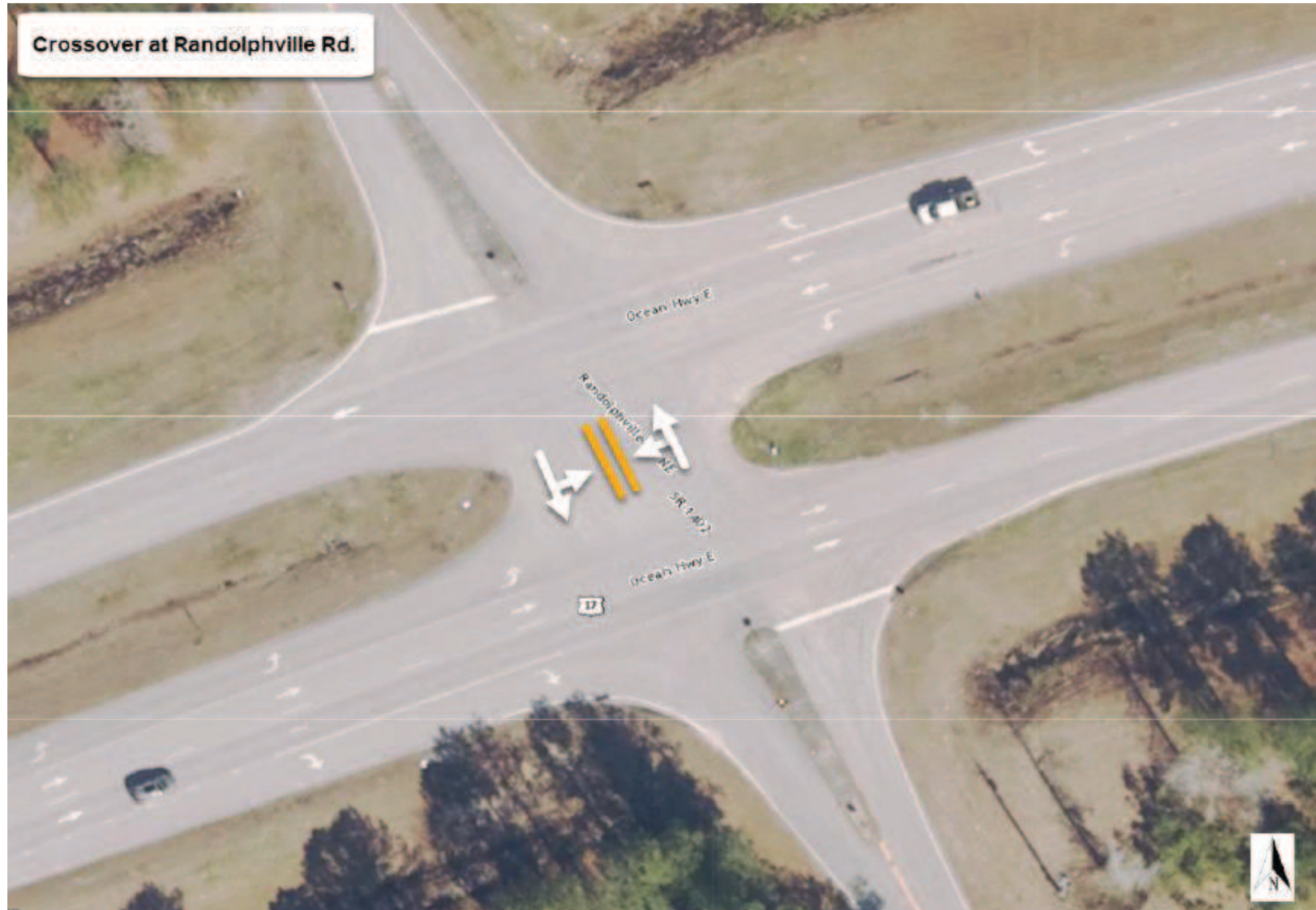








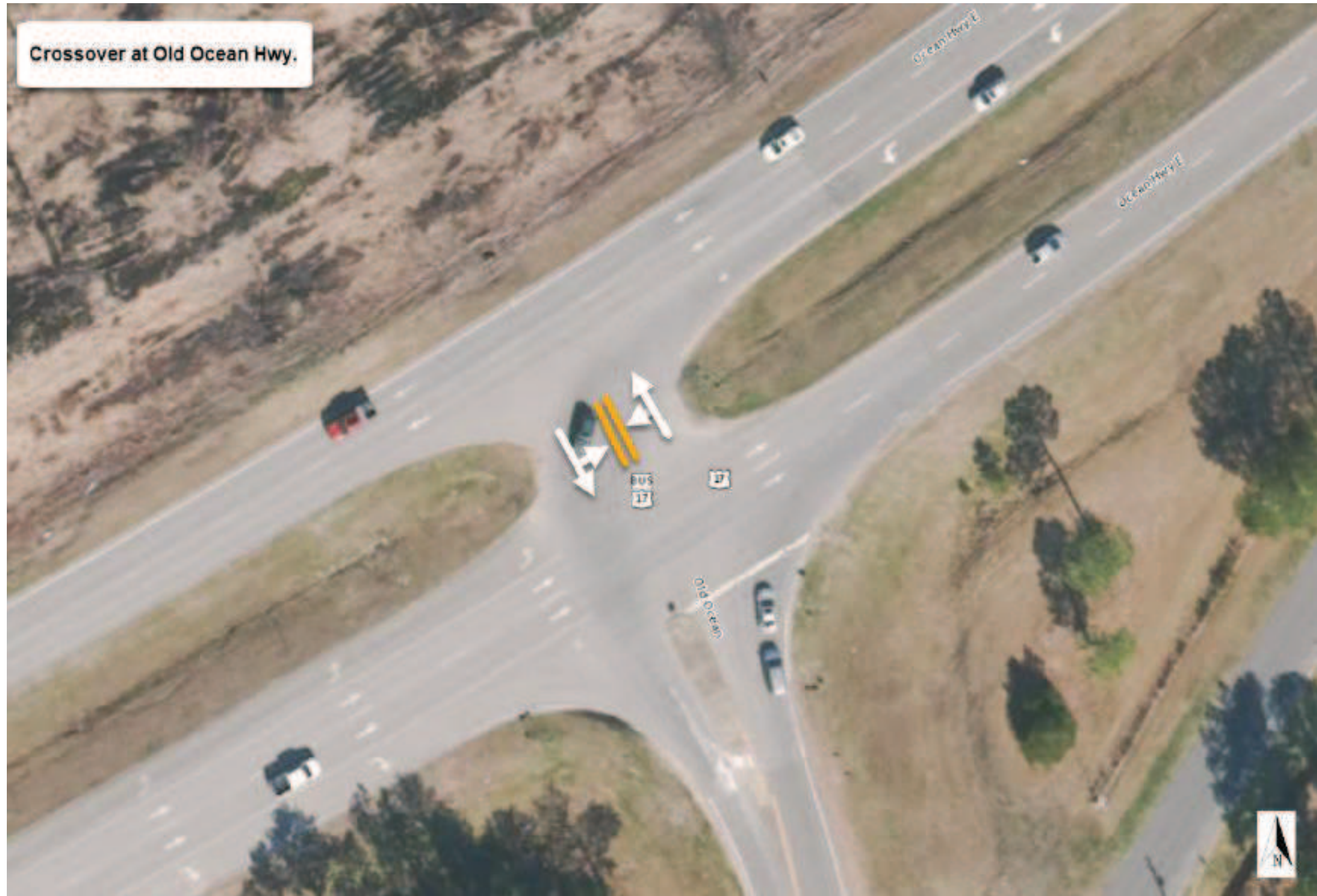












DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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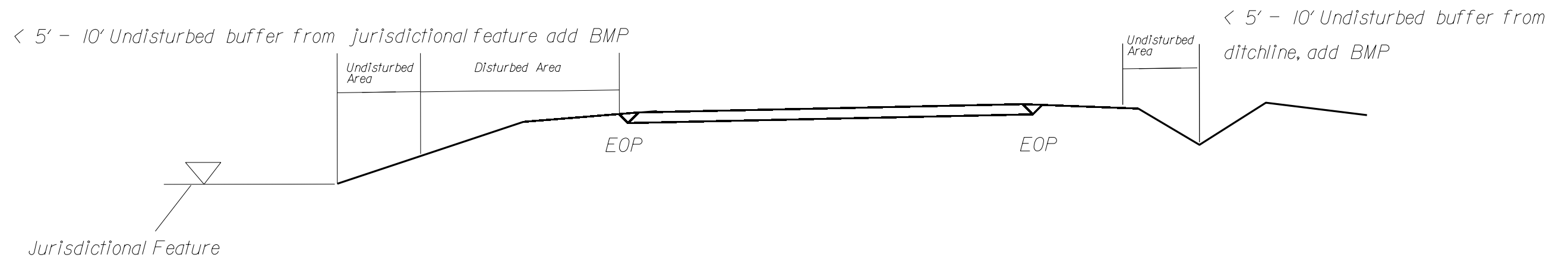
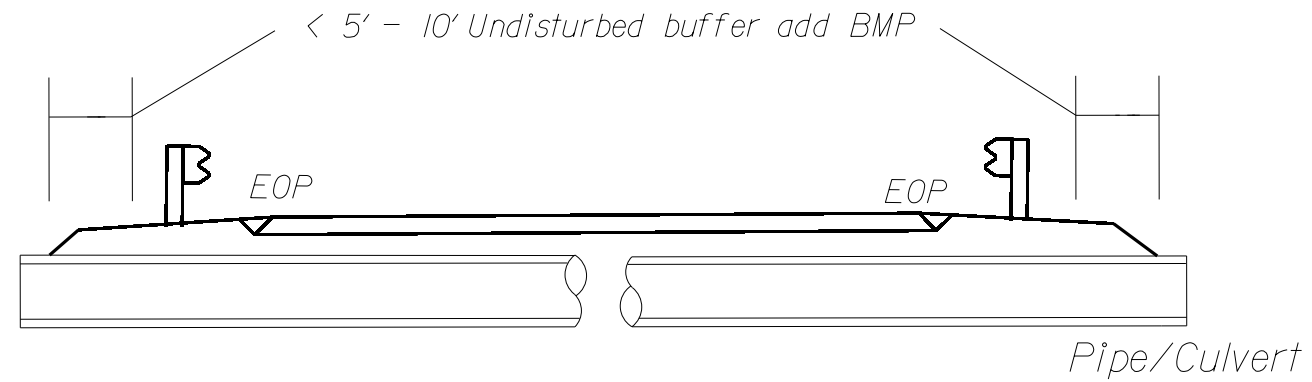
## ***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

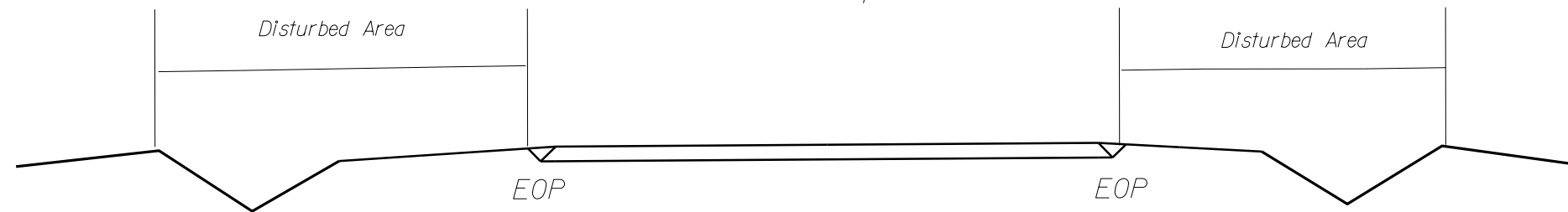
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

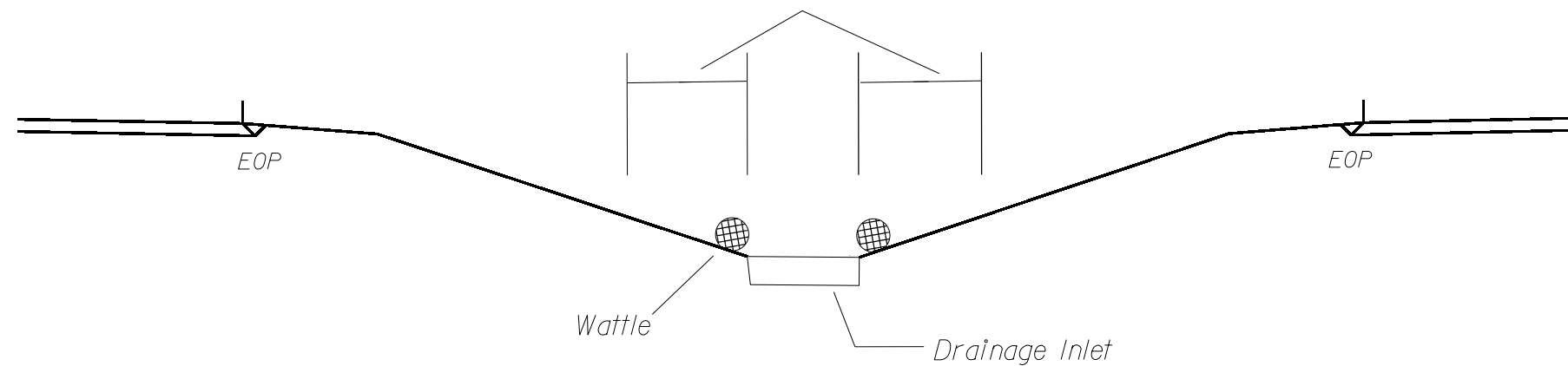
# EROSION CONTROL DETAIL



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

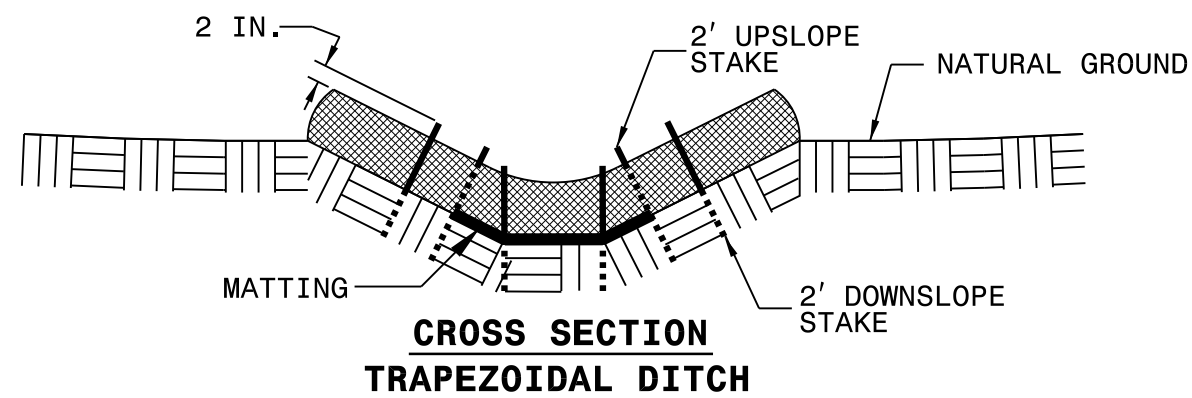
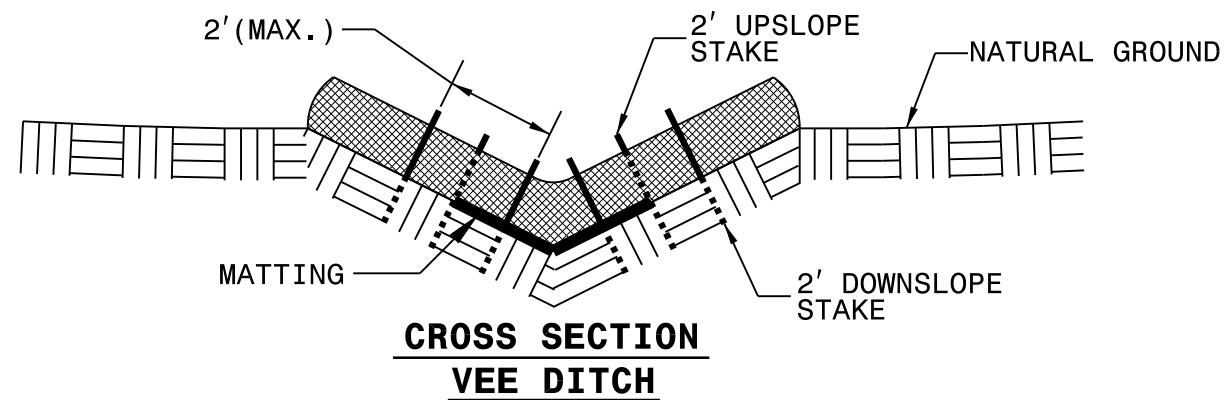
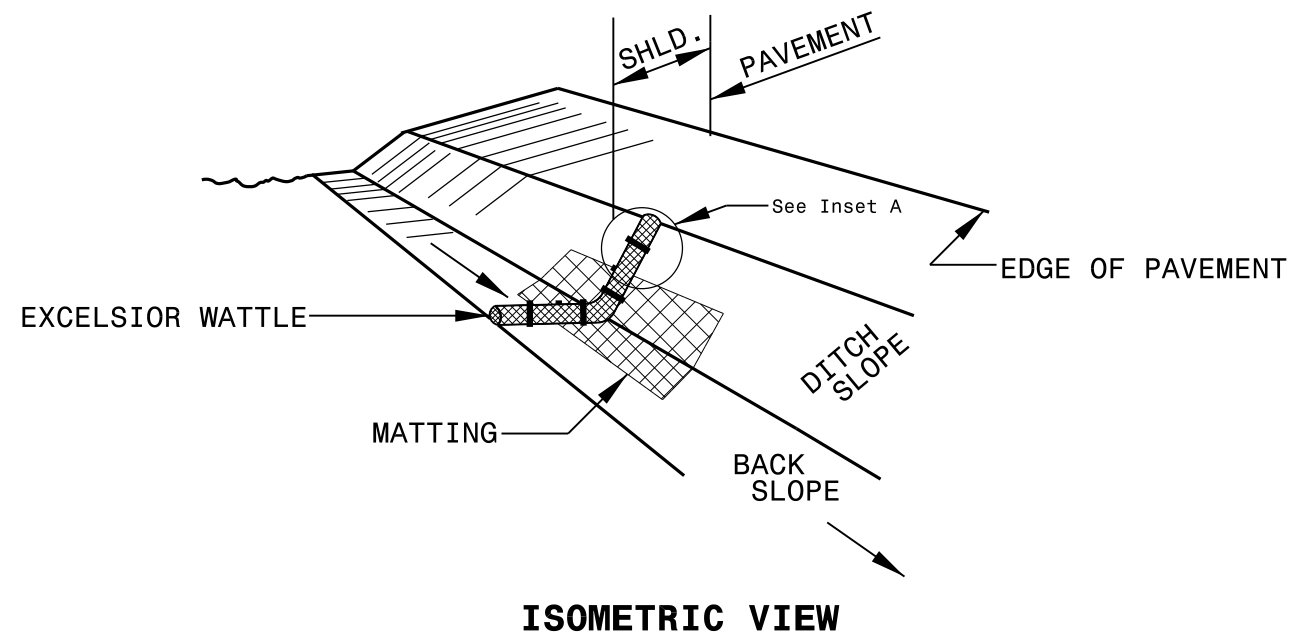


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

# WATTLE DETAIL



**NOTES:**

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

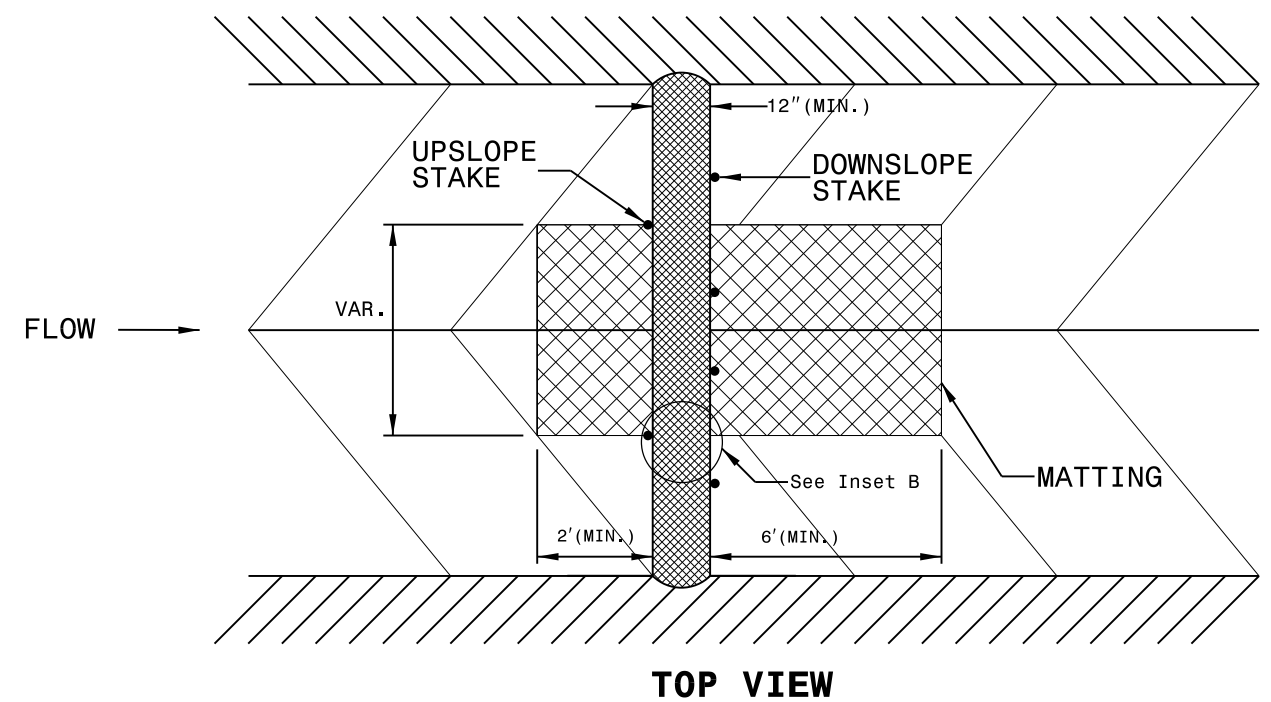
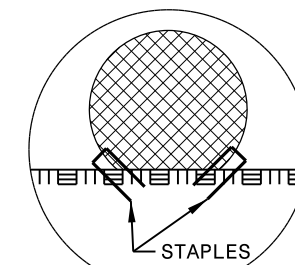
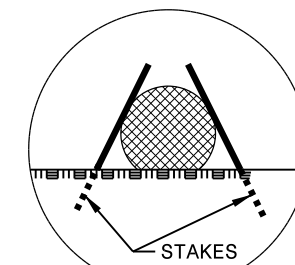
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

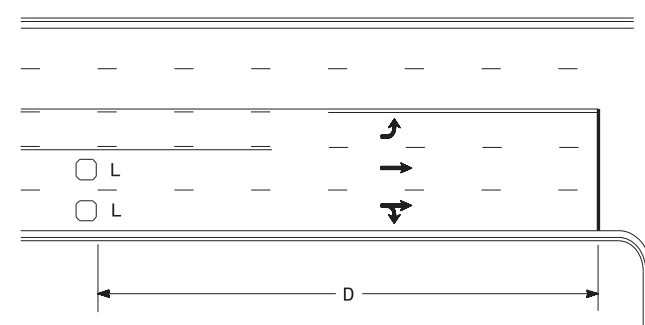
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.



### High Speed Detection (≥40 mph)

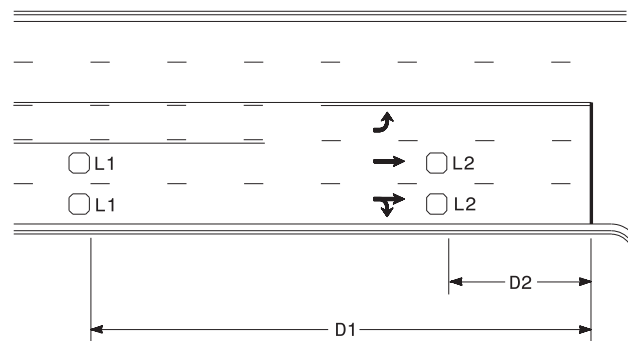


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft  
Wired separately

Volume Density Operation

OR

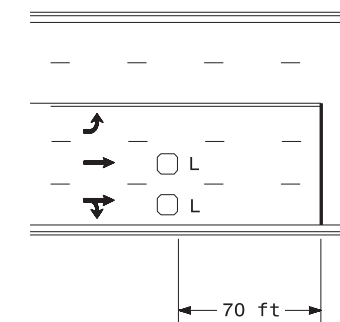


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft  
Wired in series  
L2 = 6ft X 6ft  
Wired in series

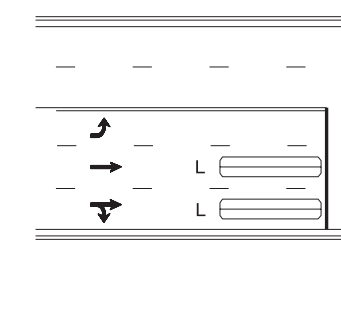
"Stretch" Operation

### Low Speed Detection (≤35 mph)



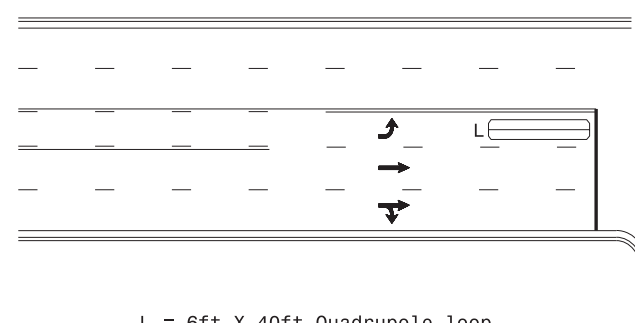
L = 6ft X 6ft  
Wired in series

OR



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

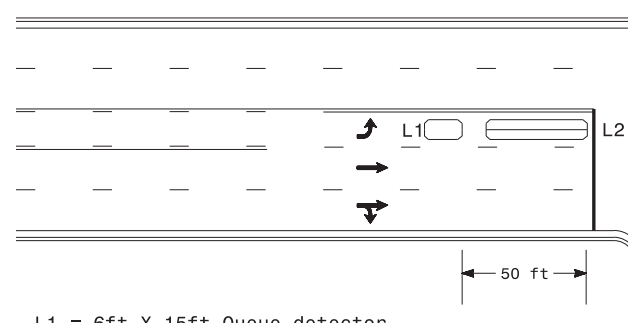
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

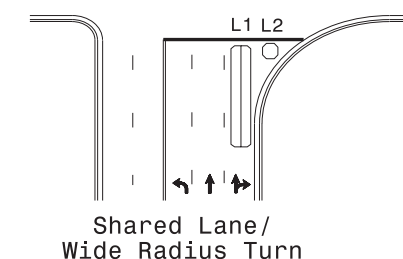
OR



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

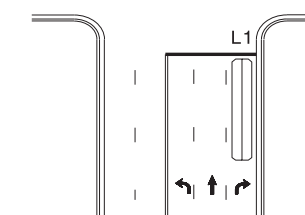
Queue Loop Detection

### Right Turn Lane Detection

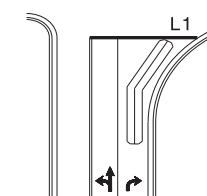


Shared Lane/  
Wide Radius Turn

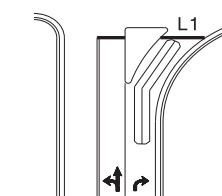
L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately



Standard Turn

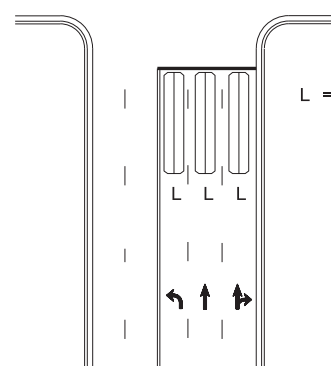


Wide Radius Turn



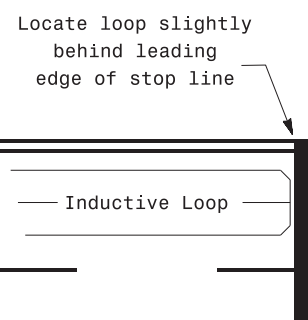
Channelized Turn

### 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

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared In the Offices of:

Typical Signal Loop Locations	
PLAN DATE: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
SCALE: N/A	REVISIONS: INIT. DATE
<p>9/8/2020</p> <p>SIG. INVENTORY NO.</p>	