

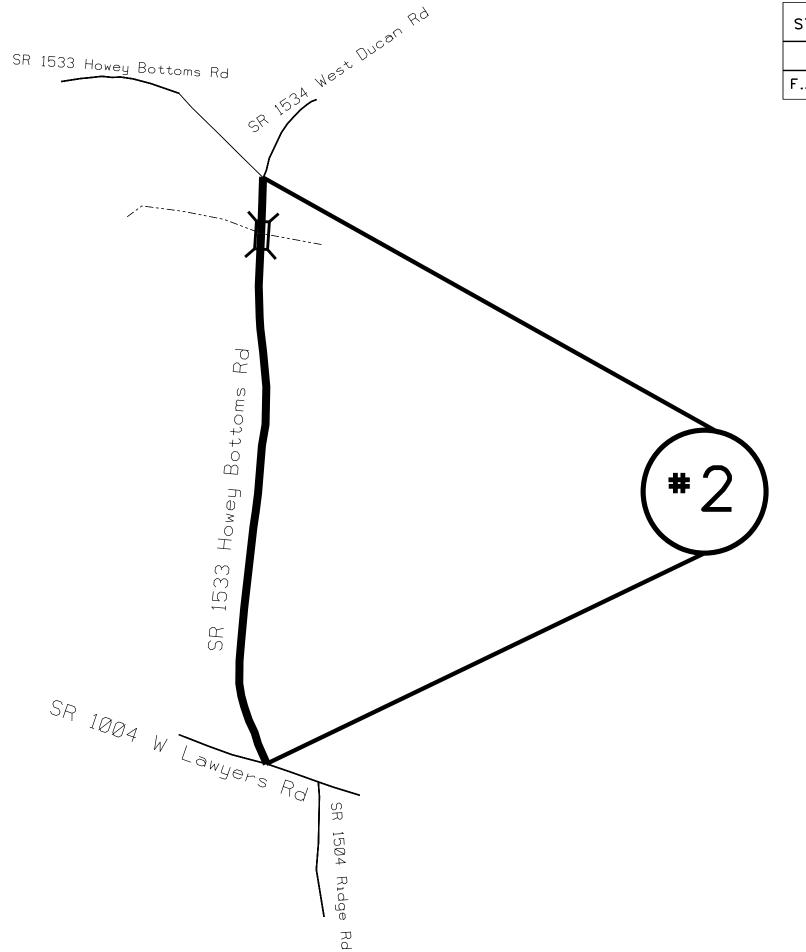
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	1	
F.A. PROJECT NO.			



NORTH CAROLINA
PREPARED BY THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #1 SR 1547 BRIEF RD 2.03 MILES FROM US 601 TO MECKLENBURG COUNTY LINE



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	2	
F.A. PROJECT NO.			

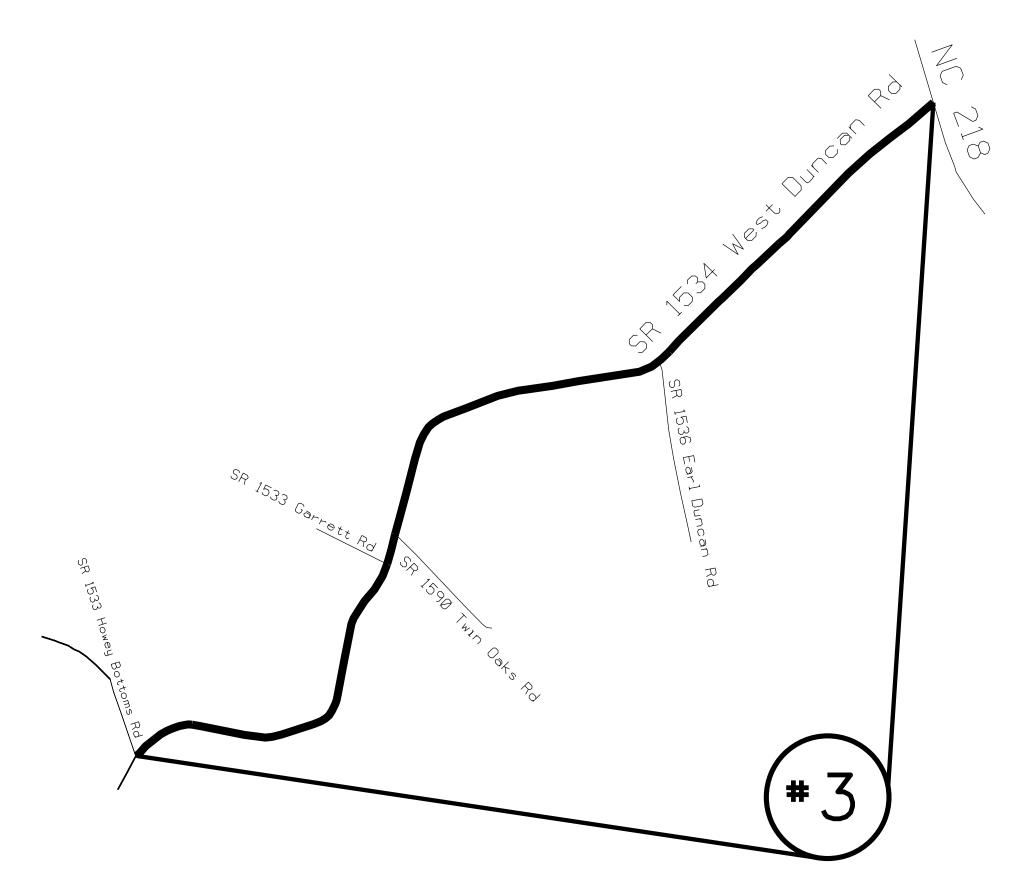


### UNION COUNTY

NORTH CAROLINA

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #2 SR 1533 HOWEY BOTTOMS RD .87 MILES FROM SR 1004 LAWYERS RD TO NC 218



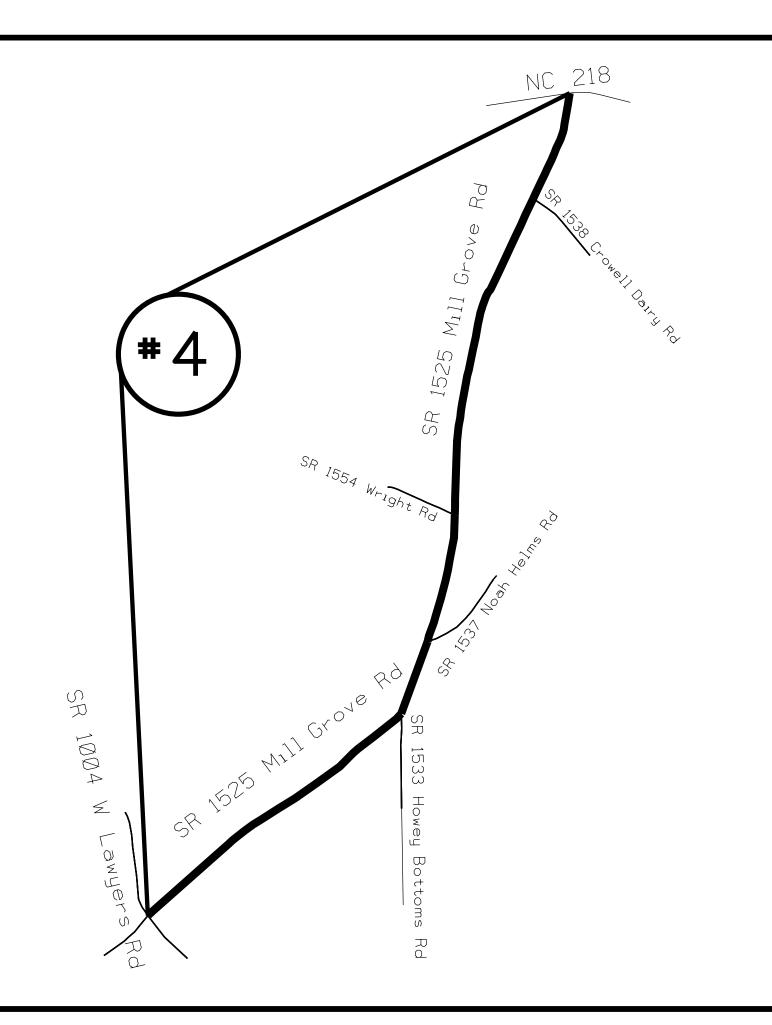
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	3	
F.A. PROJECT NO.			



NORTH CAROLINA
PREPARED BY THE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #3 SR 1534 WEST DUNCAN RD 2.48 MILES FROM SR 1533 HOWEY BOTTOMS RD TO NC 218



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	4	
F.A. PROJECT NO.			

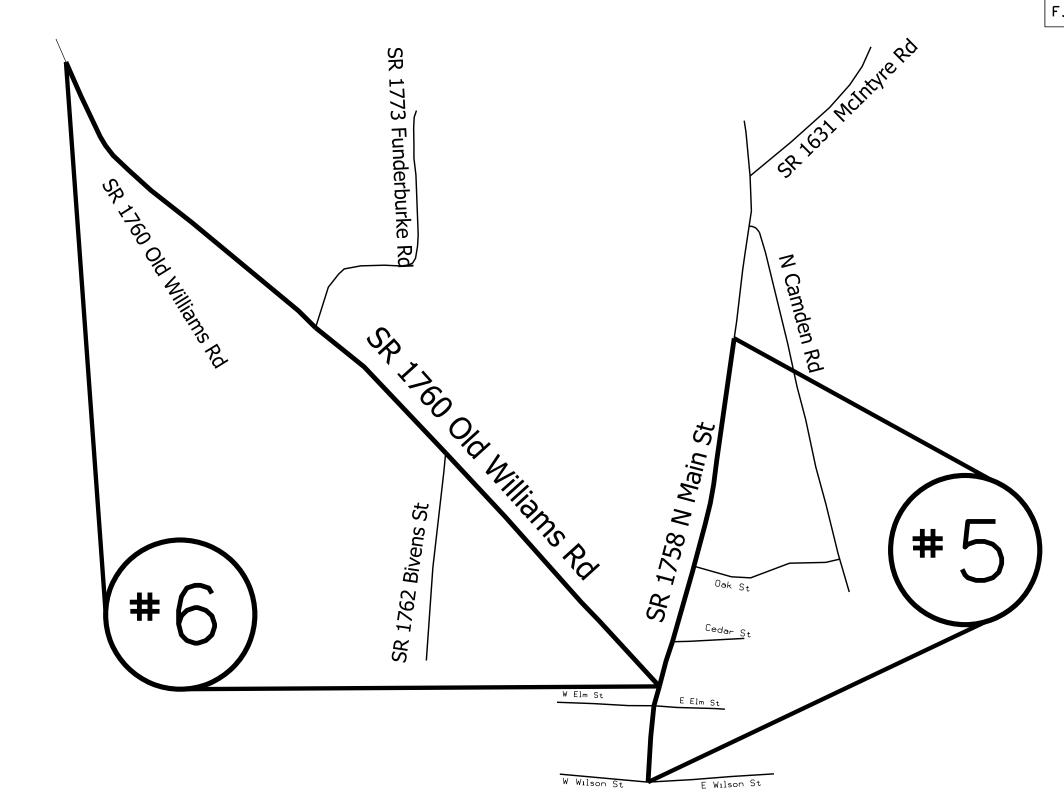


#### UNION COUNTY

NORTH CAROLINA

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #4 SR 1525 MILL GROVE RD 2.85 MILES FROM SR 1004 LAWYERS RD TO NC 218



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	5	
F.A. PROJECT NO.			

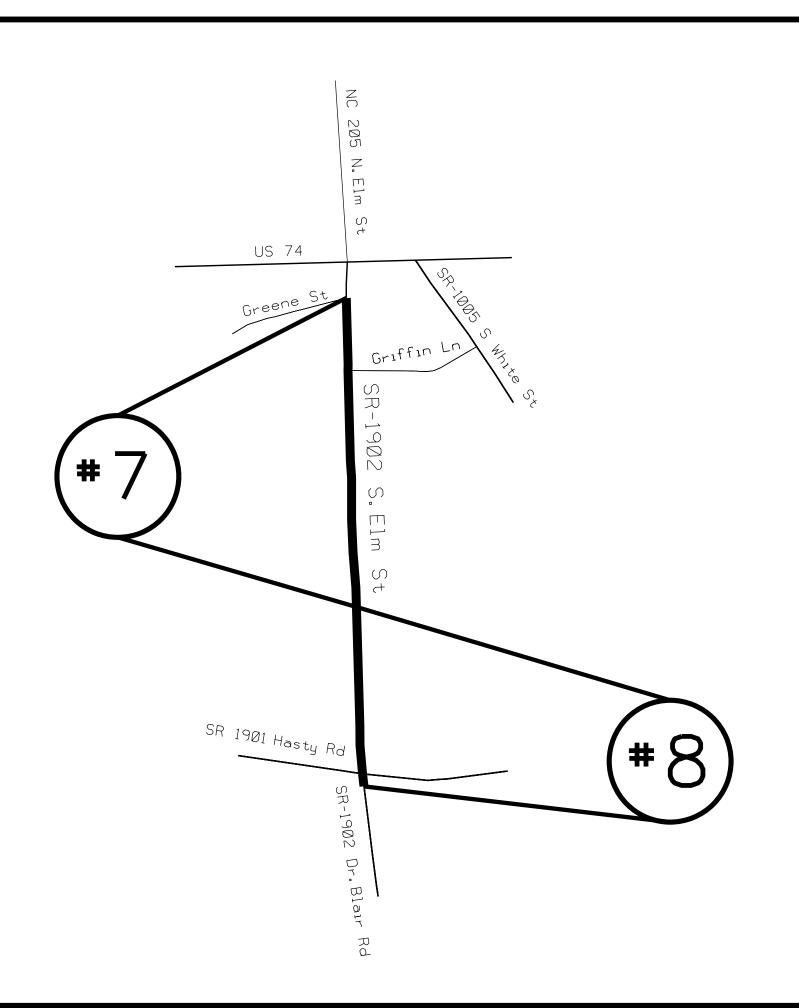


NORTH CAROLINA

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #5 SR 1758 N MAIN ST .64 MILES FROM WILSON ST TO PVMT JOINT AT MUNICIPLE LIMITS

MAP #6 SR 1760 OLD WILLIAMS RD 1.Ø8 MILES FROM SR 1758 N MAIN ST TO PVMT JOINT AT CUL DE SAC



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	6	
F.A. PROJECT NO.			



#### UNION COUNTY

#### NORTH CAROLINA

PREPARED BY THE

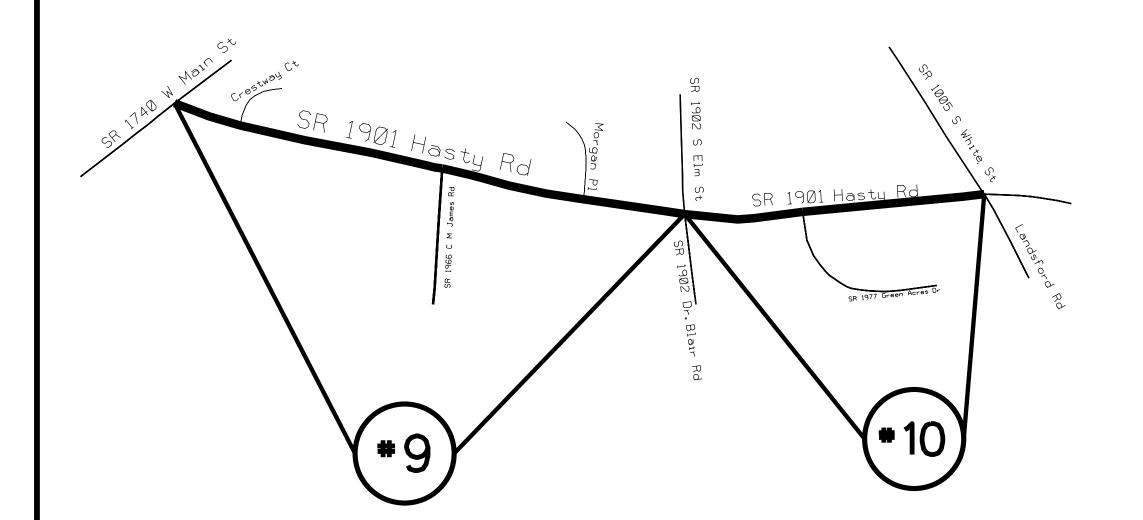
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #7 SR 1902 ELM ST .35 MILES FROM GREENE ST TO MILE POST 0.40

MAP #8 SR 1902 ELM ST .25 MILES FROM MILE POST .40 TO MILE POST 0.65 SR 1902 DR BLAIR RD

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	7	
E A DDO JECT NO			

F.A. PROJECT NO.





ENLARGED MUNICIPAL AND SUBURBAN AREAS

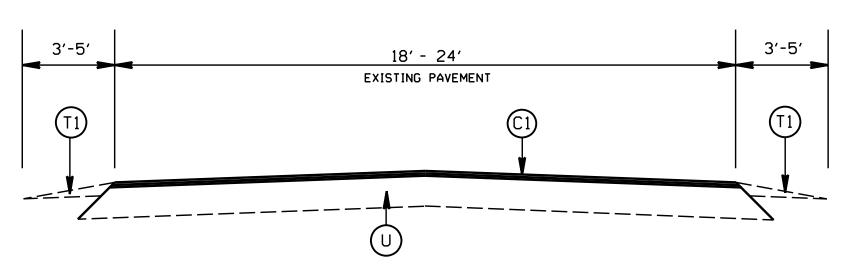
## UNION COUNTY

NORTH CAROLINA

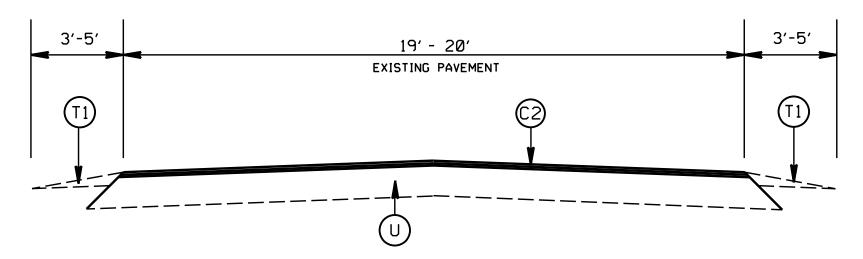
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS - DIVISION 10 DISTRICT 3

MAP #9 SR 1901 HASTY RD .78 MILES FROM SR 1740 W. MAIN ST TO SR 1902 DR BLAIR RD

MAP #10 SR 1901 HASTY RD .45 MILES FROM SR 1902 DR BLAIR RD TO SR 1005 WHITE STORE RD



TYPICAL SECTION NO.1
SR 1547 BRIEF RD (MAP 1)
SR 1525 MILL GROVE RD (MAP 4)
SR 1758 N MAIN ST (MAP 5)
APPROX. STA 36+05 TO 43+79
SR 1760 OLD WILLIAMS RD (MAP 6)
APPROX. STA 37+58 TO 66+55
SR 1902 S ELM ST (MAP 8)
SR 1901 HASTY RD (MAPS 9 & 10)



TYPICAL SECTION NO.2

SR 1533 HOWEY BOTTOMS RD (MAP 2)

APPROX.STA 10+00 TO 50+73

APPROX.STA 52+53 TO 56+10

SR 1534 WEST DUCAN RD (MAP 3)

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	8	

F.A. PROJECT NO.

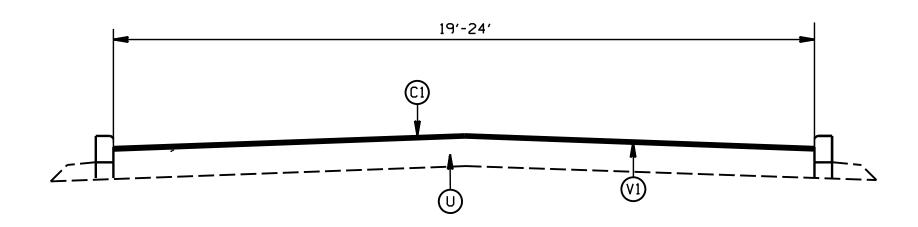
#### PAVEMENT SCHEDULE

CI	PROP. APPROX. 1.5° ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(1)	SHOULDER RECONSTRUCTION
(E)	EXISTING PAVEMENT
(VI)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.

2025 UNION COUNTY RESURFACING

ريم فيعدي	REVIS	SIONS
No. market		

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	9	
E A BBO IECT	NO		



TYPICAL SECTION NO.3

SR 1758 N MAIN ST (MAP 5)
APPROX.STA 10+00 TO 36+05

SR 1760 OLD WILLIAMS RD (MAP 6)
APPROX.STA 10+00 TO 37+58

SR 1902 S ELM ST (MAP 7)

# EXISTING CONCRETE BRIDGE WITH ASPHALT RIDING SURFACE TYPICAL SECTION NO. 4

SR 1533 HOWEY BOTTOMS RD (MAP 2) APPROX STA 50+73 TO 52+53

#### PAVEMENT SCHEDULE

PROP. APPROX. 1.5° ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SO. YD.
RATE OF 165 LBS.PER SO.YD.

PROP. A	APPROX.	1.5"	ASPHAL 1	CONC.	SURFACE	COURSE,	TYPE	S9.5C.	ΑT	ΑN	AVERAGE
RATE C	DF 168	LBS.	PER SO	. YD.							

#### T1 SHOULDER RECONSTRUCTION

(u)	)	EXISTING	PAVEMENT
	,	L ~ 13 1 1140	

(	vī	١	MILLING	ΩF	EXISTING	PAVEMENT.	1.5"	DEPTH.
١.	VΙ	, ,	MILLING	UF	EVIDITIO	LHACMEM !	, I.J	DEL IU.

2025 UNION COUNTY RESURFACING

SCALE	-NA-
DATE	11/23
DWG. BY	AJB
DESIGN BY	AJB
APPROVED	CLA

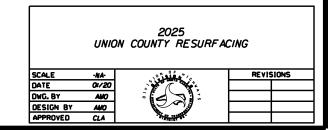


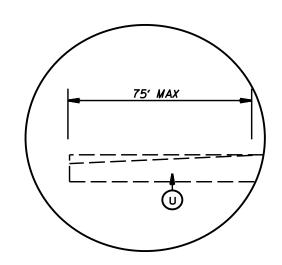


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS			
N.C.	2025CPT.10.15.20901	10				
F.A. PROJECT NO.						

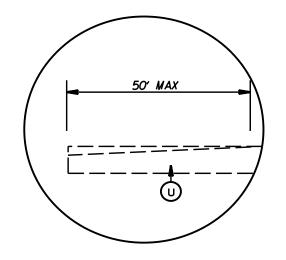
# PROJECT NOTES:

- I.DEPTH OF PATCHING WILL BE AS DIRECTED BY THE ENGINEER.
- 2. SHOULDER RECONSTRUCTION WILL BE AS DIRECTED BY THE ENGINEER.
- 3.MILL AS NEEDED TO ALLOW PROPER ASPHALT TIE IN TO EXISITNG CONCRETE ISLAND ON MAP I (BRIEF RD SR 1547).
- 4.MAP 2 (HOWEY BOTTOMS RD SR 1533), INCIDENTAL MILLING WILL NOT BE PAID FOR TAPERS TO 1.5" MILLING FOR THE BRIDGE (TYPICAL 4).TAPERS WILL BE PAID AS 1.5" MILLING.
- 5. RETROFIT EXISITNG CURB RAMPS ON MAP 6 OLD WILLIAMS RD SR 1760.
- 6. MILLED RUMBLE STRIPS TO BE INSTALLED ON MAPS 1,4,9 AND 10, SEE SPECIAL PROVISIONS AND MILLED/SINUSOIDAL RUMBLE STRIP DETIAL SHEET, TYPICAL SECTION NO.1

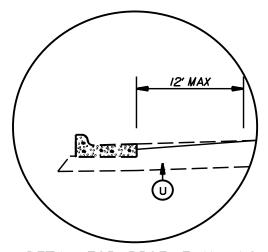




DETAIL FOR INCIDENTAL MILLING (O" TO 1.5")

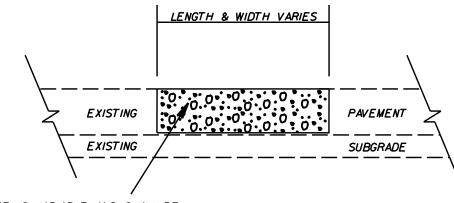


DETAIL FOR INCIDENTAL MILLING (O"TO 1.0")



DETAIL FOR PROFILE MILLING

#### PATCHING DETAIL



RATE IS VARIABLE AND SHALL BE AS DIRECTED BY THE ENGINEER. ASPHALT TYPE 119.0C SHALL BE PLACED.

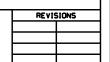
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	2025CPT.10.15.20901	11	

#### PAVEMENT SCHEDULE

( <del>-</del> 3)	PROP. APPROX. 1.5° ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SO. YD.
(Z)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SO. YD.
(=)	SHOULDER RECONSTRUCTION
(3)	EXISTING PAVEMENT
(\$)	MILLING OF EXISTING PAVEMENT, 1.5" DEPTH.

2025 UNION COUNTY RESURFACING

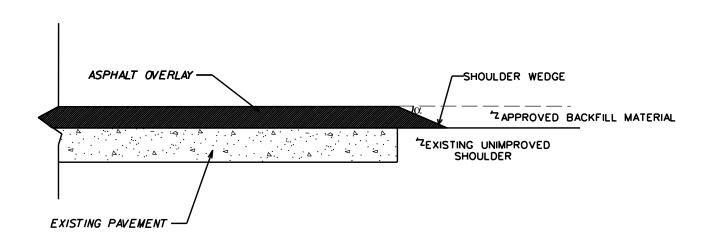




#### NOTES:

- 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 AND SIDE STREETS.

ASPHALT OVERLAY—	SHOULDER WEDGE
	2 APPROVED BACKFILL MATERIAL
	ZEXISTING UNIMPROVED SHOULDER
PROPOSED PAVEMENT —	O.100202.



STATE

N.C.

F.A. PROJECT NO.

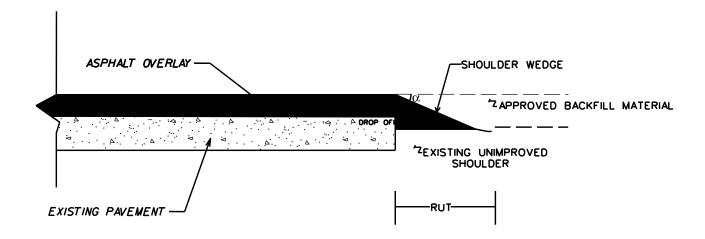
PROJECT NO.

2025CPT.10.15.20901

#### SHOULDER WEDGE DETAIL

(RESURFACING PROJECTS W/ WIDENING OR WITH EXISTING PAVED SHOILDER HAVING NO DROPOFFS)

SHOULDER WEDGE DETAIL
(RESURFACING PROJECTS W/ NO WIDENING)

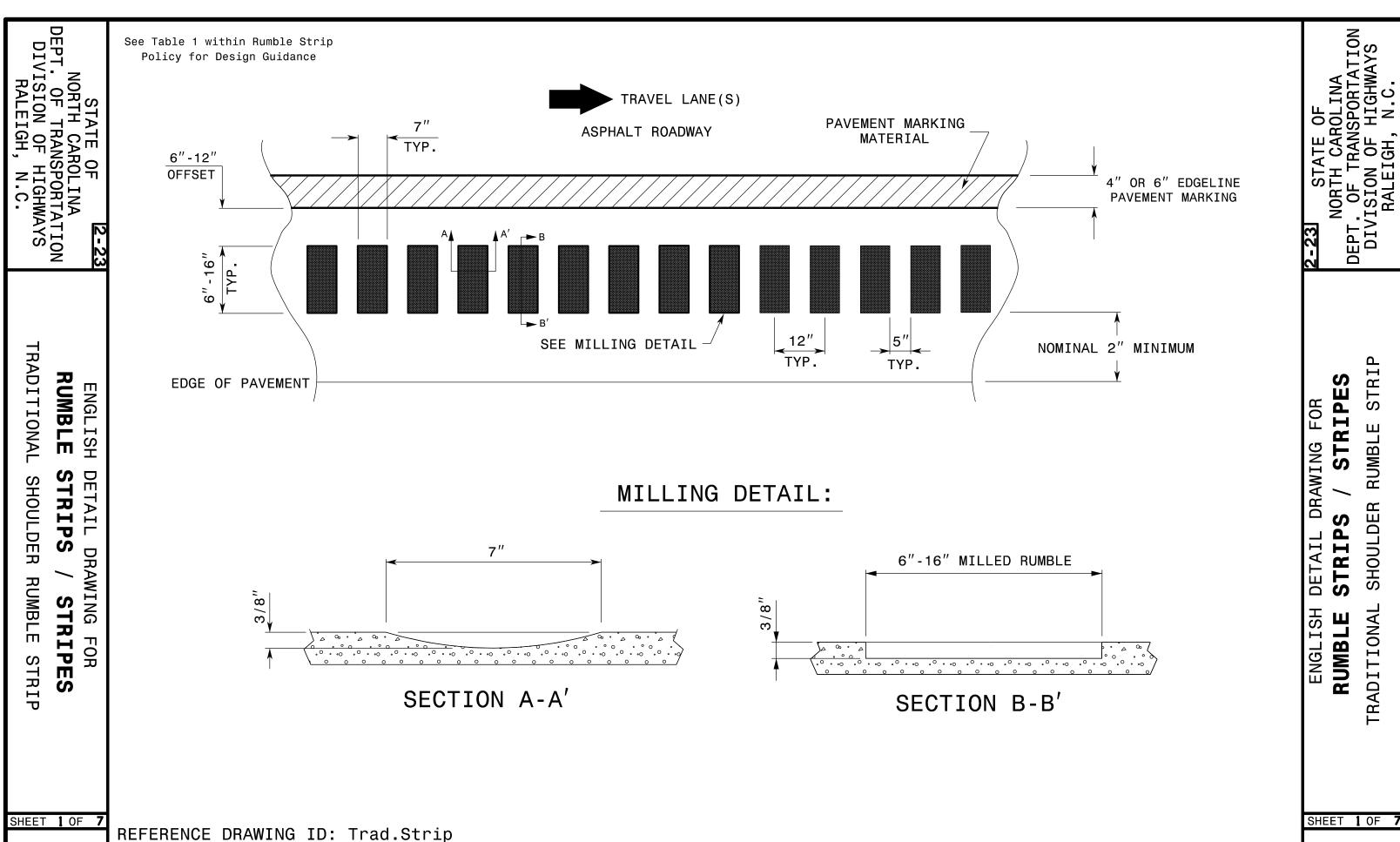


 $\mathbf{C} = 30 \text{ DEGREES}$ 

SHEET NO.

SHOULDER WEDGE DETAIL (RESURFACING ADJACENT TO RUTTED SHOULDER)

	SHO	OULDER WEDGE DET	AILS
SCALE	-NA-	, 0 <b>, 516 ,</b> 4'/,	REVISIONS
DATE	08/18		
DWG. BY	AMO		
DESIGN BY	AMO		
APPROVED	CLA	**************************************	



SHEET 1 OF

DEPT

STRIP

RUMBLE

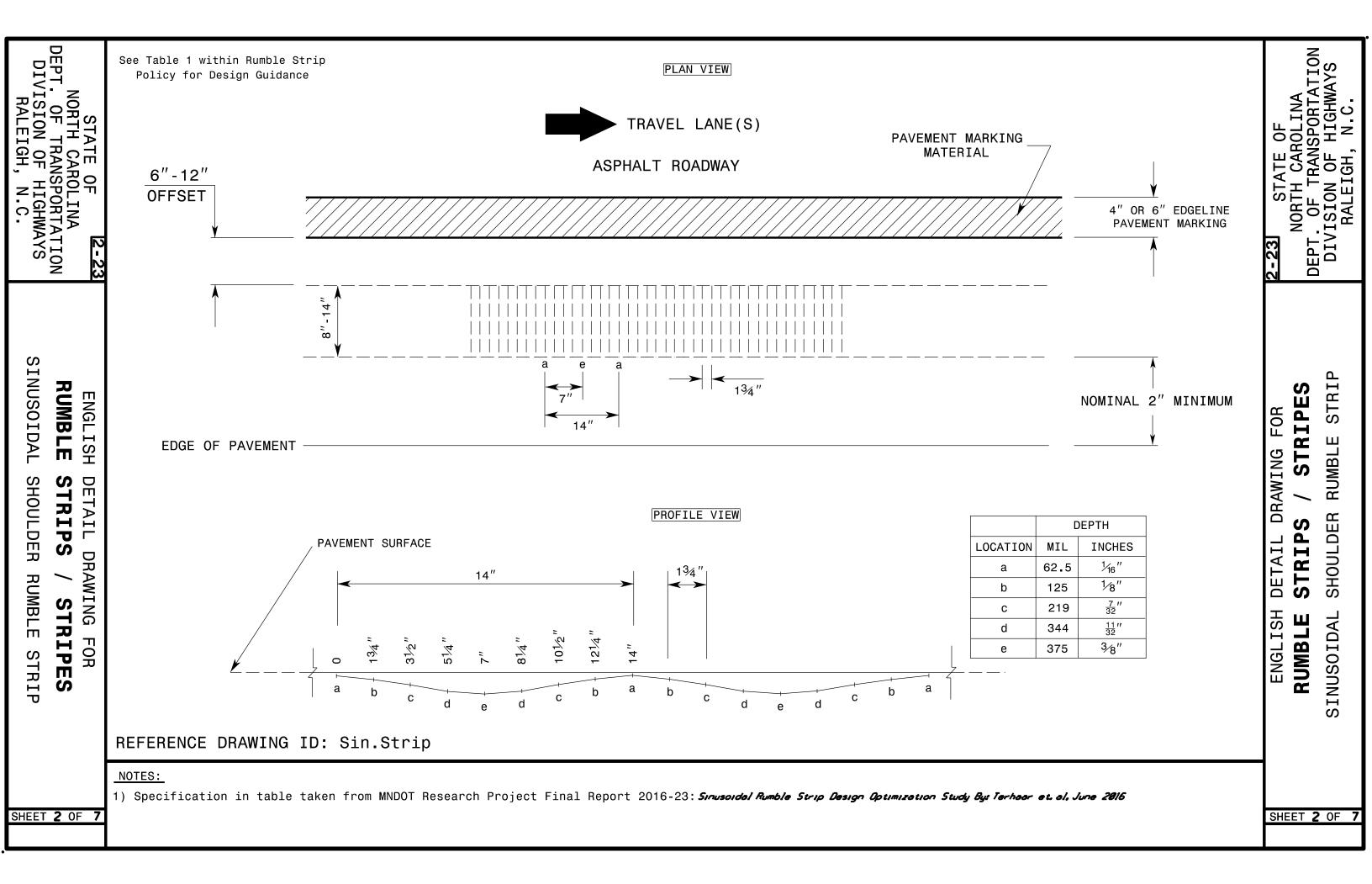
SHOULDER

TRADITIONAL

STRIPES

STRIPS

RUMBLE



STATE OF NORTH CAROLINA

NORTH CAROLINA

DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

RALEIGH, N.C.

RUMBLE **ENGLISH** DETAIL STRIPS DRAWING **STRIPES** 

**FOR** 

TRADITIONAL

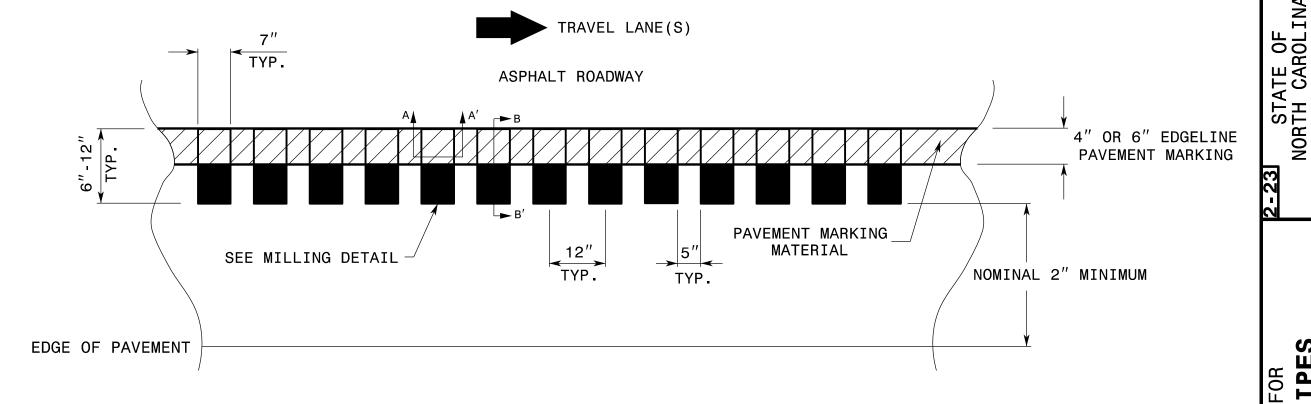
**EDGELINE** 

RUMBLE

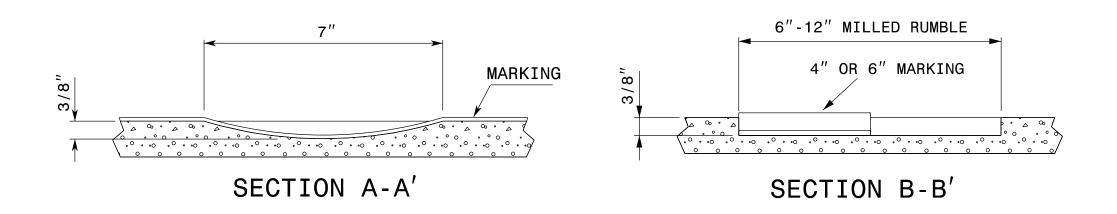
STRIPE

SHEET **3** OF **7** 

See Table 1 within Rumble Strip Policy for Design Guidance



## MILLING DETAIL:



REFERENCE DRAWING ID: Trad Stripe

#### NOTES:

- 1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
- 2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL

STRIPE STRIPES DETAIL DRAWING FOR RUMBLE EDGELINE STRIPS ENGLISH TRADITIONAL RUMBLE

TRANSPORTATION OF HIGHWAYS

DEPT

ISION OF RALEIGH,

SHEET **3** OF **7** 

DIV See Table 1 within Rumble Strip PLAN VIEW Policy for Design Guidance STATE OF LE NORTH CAROLINA

OF TRANSPORTAT:

VISION OF HIGHWAY RALEIGH TRAVEL LANE(S) PAVEMENT MARKING **ASPHALT ROADWAY MATERIAL** 4" OR 6" EDGELINE 8"-14" PAVEMENT MARKING NOMINAL 2" MINIMUM SINUSOIDAL 14" EDGE OF PAVEMENT RUMBLE **ENGLISH** DRAWING FOR PROFILE VIEW EDGELINE STRIP DETAIL DEPTH PAVEMENT SURFACE MIL LOCATION INCHES 1/16" 62.5 а 14" 1/8" 125 b DRAWING  $\frac{7}{32}''$ RUMBLE 219 d 344 101/2 121/4 514" **STRIPES** 81/4" 31/2 375 3/8" е 0

REFERENCE DRAWING ID: Sin Stripe

#### NOTES:

FOR

STRIPE

SHEET 4 OF 7

1) Specification in table taken from MNDOT Research Project Final Report 2016-23: Sinusoidal Rumble Strip Design Optimization Study By: Terhaar et. al., June 2016

d

е

2) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.

d

3) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

SHEET 4 OF 7

NOIL

DIVISION OF RALEIGH,

STRIPE

RUMBLE

**EDGELINE** 

SINUSOIDAL

STRIPES

STRIPS

RUMBLE

DETAIL

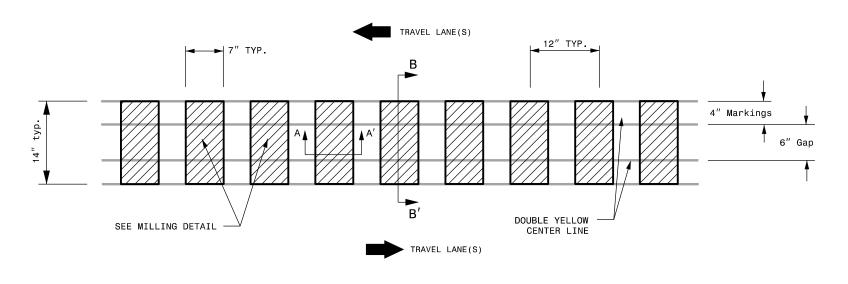
ENGLISH

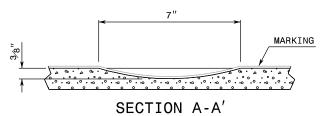
SHEET **5** OF **7** 

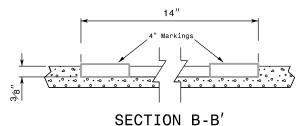
See Table 2 within Rumble Strip Policy for Design Guidance

#### If 4" Markings will be used:

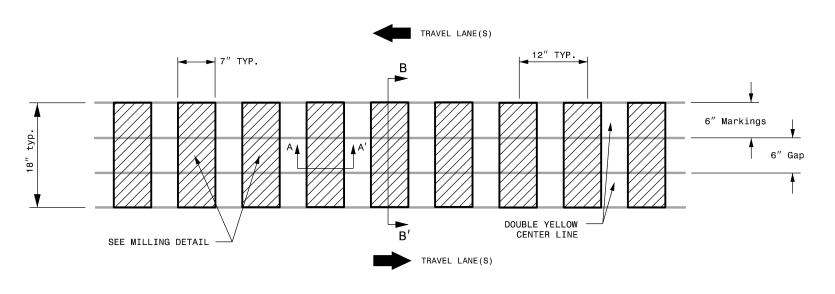
#### MILLING DETAIL - 4" Markings



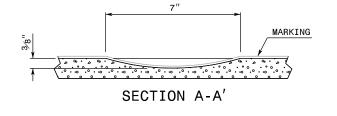


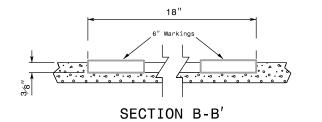


#### If 6" Markings will be used:



#### MILLING DETAIL - 6" Markings





## REFERENCE DRAWING ID: Trad.CL

#### NOTES:

- 1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
- 2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

STRIPE STRIPES DETAIL DRAWING FOR RUMBLE CENTERLINE STRIPS ENGLISH RUMBLE TRADITIONAL

TRANSPORTATION N OF HIGHWAYS IGH, N.C.

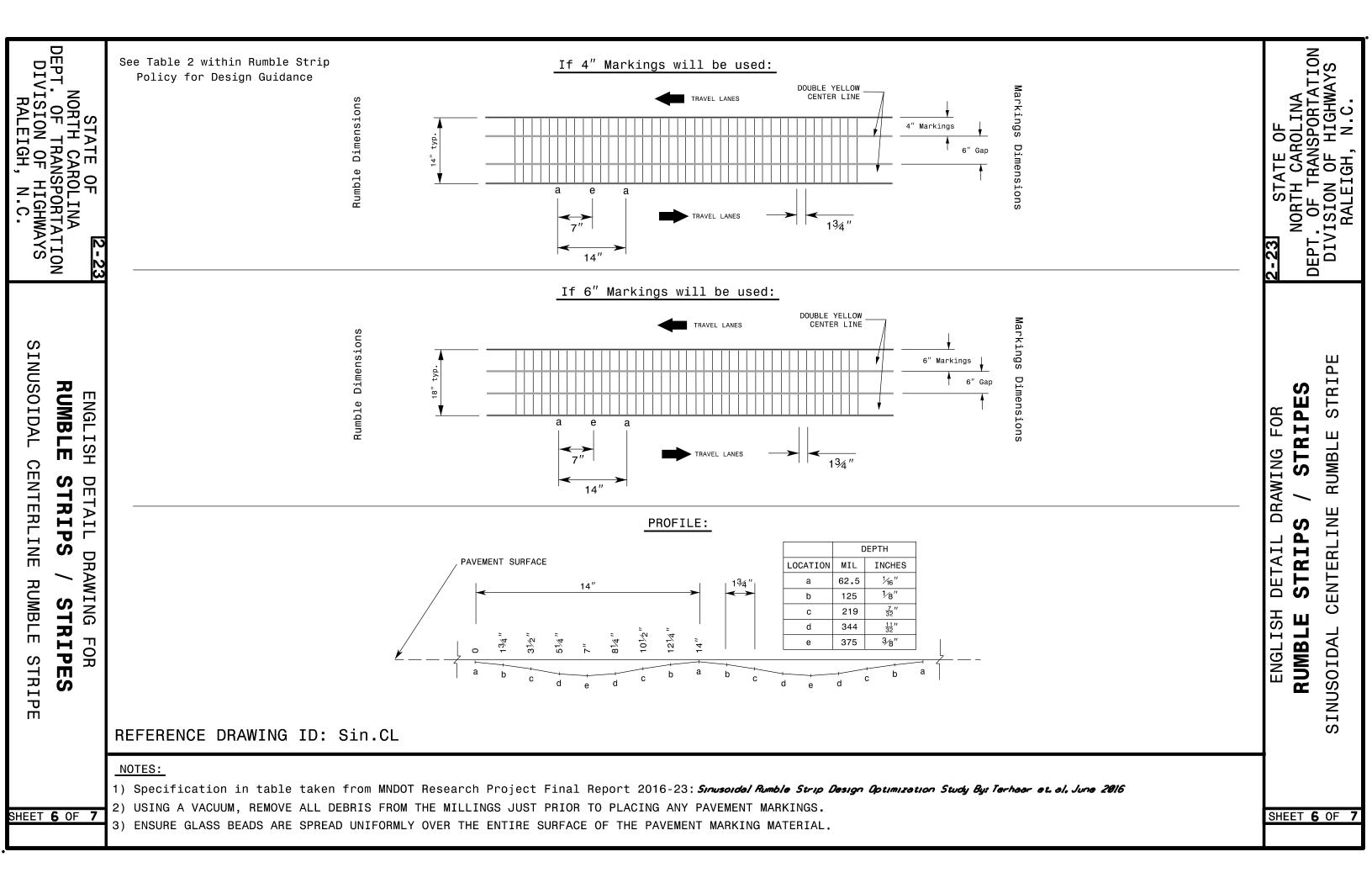
DIVISION OF RALEIGH,

9F

NORTH

DEPT

SHEET 5 OF 7



EPT DI\ RALEIGH TRADITIONAL CENTERLINE RUMBLE STRIPE WITH SNOWPLOWABLE MARKERS

STATE OF
NORTH CAROLINA
EPT. OF TRANSPORTATI
DIVISION OF HIGHWAY

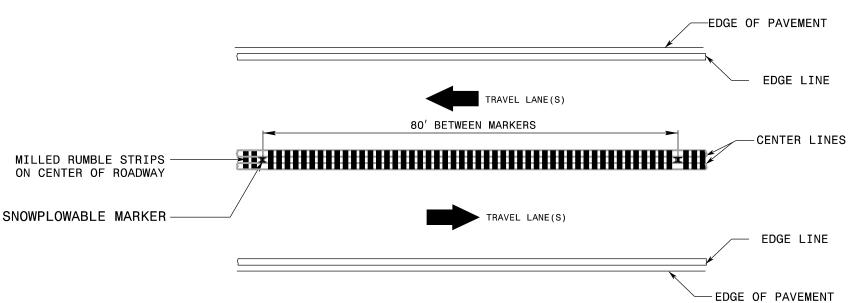
RUMBLE TRIP

**ENGLISH** DE TAIL DRAWING RIPE FOR

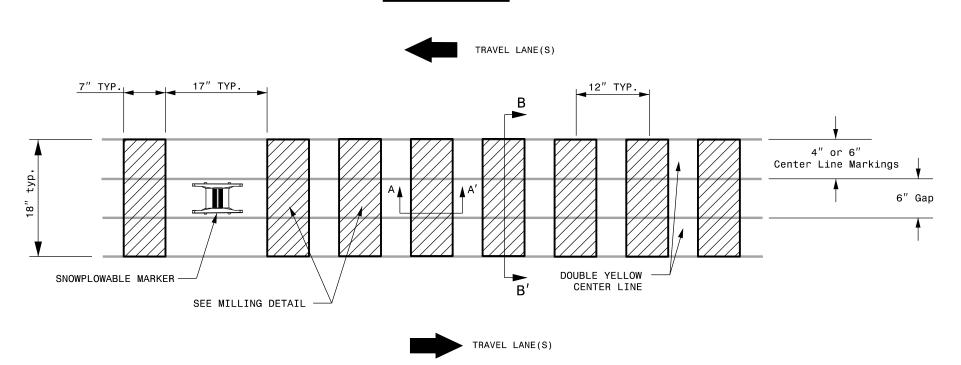
SHEET **7** OF **7** 

Policy for Design Guidance

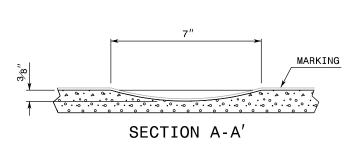
See Table 2 within Rumble Strip



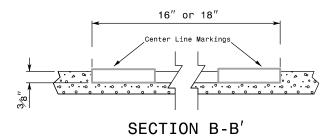
LANE TREATMENT



CENTER LINE



MILLING DETAIL



REFERENCE DRAWING ID: Trad CL with Snowplowable Markers

#### NOTES:

- 1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
- 2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.
- 3) INSTALL SNOWPLOWABLE MARKERS AT APPROXIMATELY 80' INCREMENTS. DO NOT MILL RUMBLE STRIPS IN SECTION WHERE SNOWPLOWABLE MARKERS ARE INSTALLED.

SNOWPLOWABLE STRIPES DRAWING FOR WITH STRIPE STRIP DETAIL RUMBLE ENGLISH RUMBLE CENTERLINE

ATION

ANSPORTATIO F HIGHWAYS

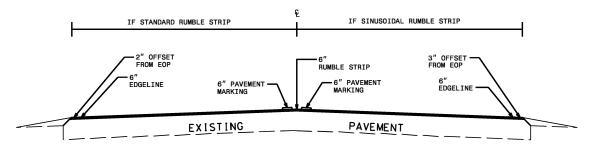
ISION OF RALEIGH,

DI DEP.

MARKERS

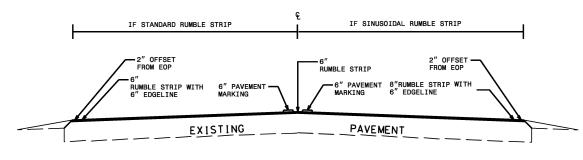
SHEET 7 OF 7

TRADITIONAL

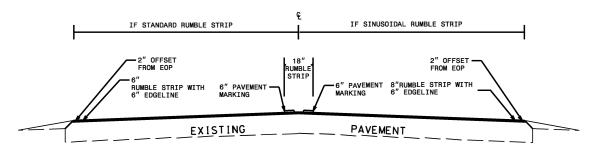


TYPICAL SECTION NO.1 20' ≤ PAVEMENT WIDTH < 22'

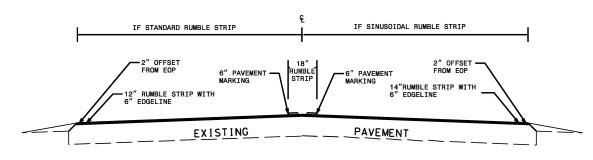
MAPS 1, 4, 9, AND 10



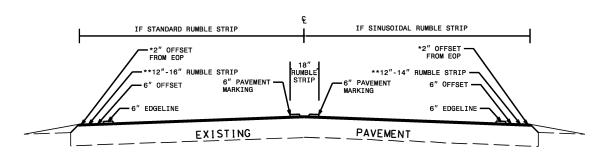
TYPICAL SECTION NO. 2
22' ≤ PAVEMENT WIDTH < 23'



TYPICAL SECTION NO. 3
23' ≤ PAVEMENT WIDTH < 24'



TYPICAL SECTION NO. 4
24' ≤ PAVEMENT WIDTH < 26'



TYPICAL SECTION NO.5

PAVEMENT WIDTH > 26'

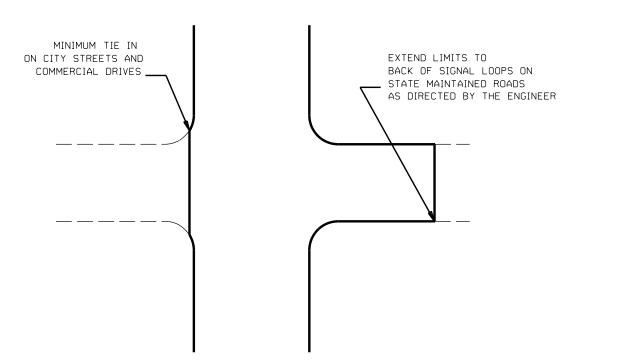
\* INCREASE THIS DISTANCE FOR PAVEMENT WIDTHS > 30' BASED ON A LANE WIDTH OF 12'

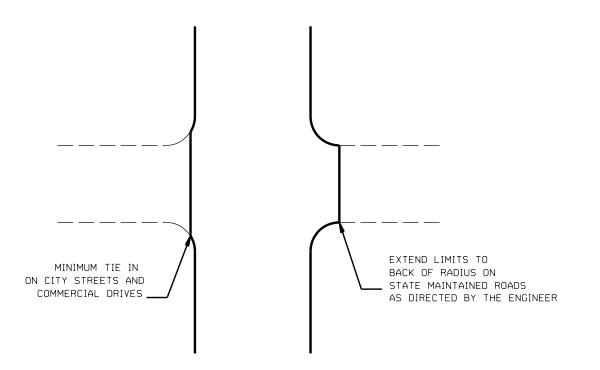
\*\* WIDTH OF RUMBLE STRIP IS BASED ON A LANE WIDTH OF 10'-12'



DDC/RDY/misc/Rumble Strip\_Typicals.dgr susFRNAMFsss

PROJECT REFERENCE NO.	SHEET NO.
CPT2025.10.15.20901	INT TYP 1





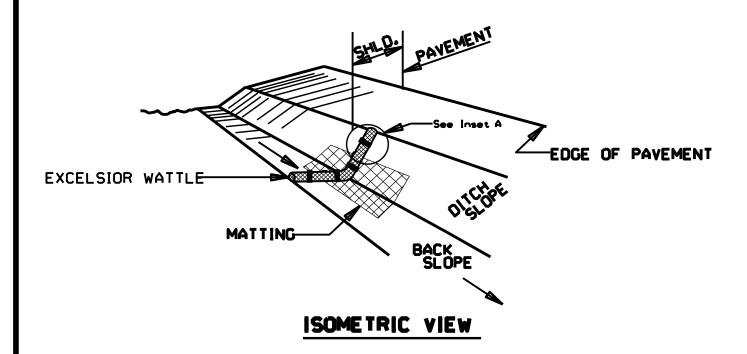
TYPICAL DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

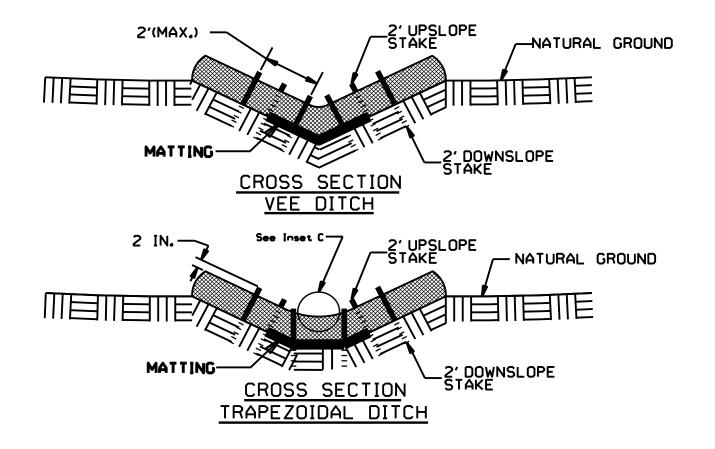
TYPICAL DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

ADDITIONAL INTERSECTIONS (NON-TYPICAL)							
Extend paving limits to back of radius or loop on the following intersections:							
MAP*	STREET NAME	COMMENTS					
MAP 1	SR 2451 TALLWOOD DR						
MAP 1	SR 1549 BLACK RD						
MAP 1	SR 1548 KERR RD						
MAP 2	SR 1533 HOWEY BOTTOMS RD	HOWEY BOTTOMS RD AT W DUCAN RD					
MAP 3	SR 1535 GARRETT RD						
MAP 3	SR 1590 TWIN OAKS RD						
MAP 4	SR 1533 HOWEY BOTTOMS						
MAP 4	SR 1537 NOAH HELMS RD						
MAP 4	SR 1554 WRIGHT RD						
MAP 4	SR 1538 CROWELL DAIRY RD						
MAP 6	SR 1762 BIVENS ST						
MAP 6	SR 1773 FUNDERBURK RD						
MAP 9	SR 1966 CM JAMES RD						
MAP 10	SR 1977 GREEN ACERS RD						

PROJECT REFERENCE NO.	SHEET NO.
2025CPT.10.15.20901	EC1

# WATTLE WITH POLYACRYLAMIDE DETAIL





#### NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

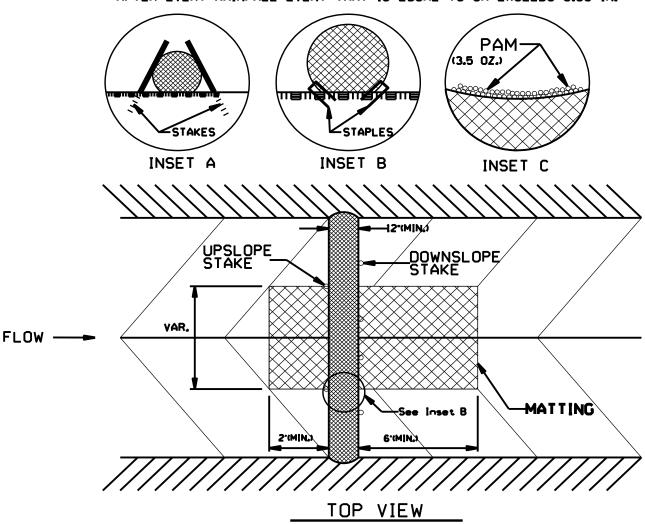
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12 IN LENGTH.

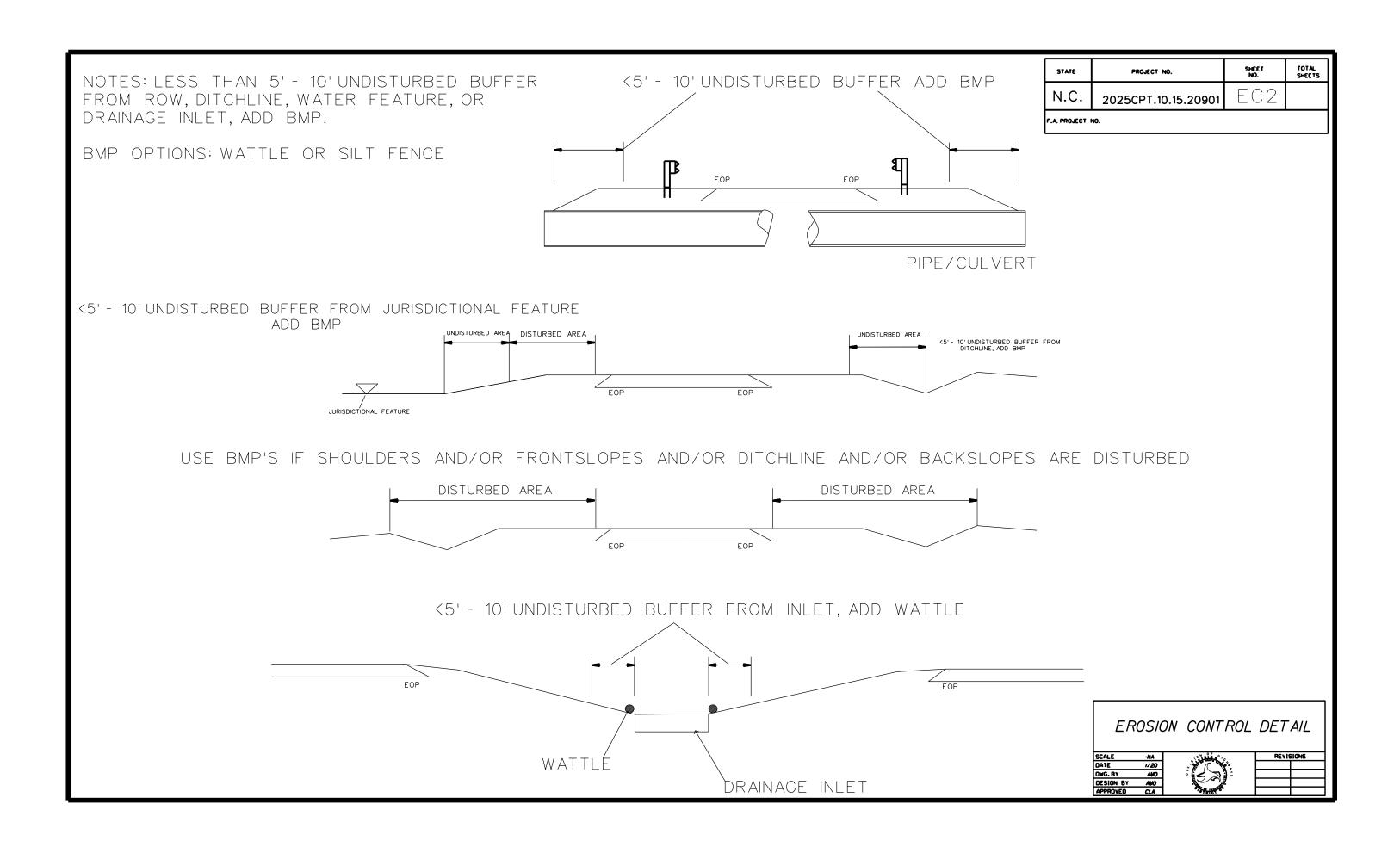
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

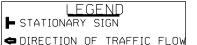
INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.





2025CPT.10.15.20901

#### SIGNING FOR RESURFACING PROJECTS



NOIL

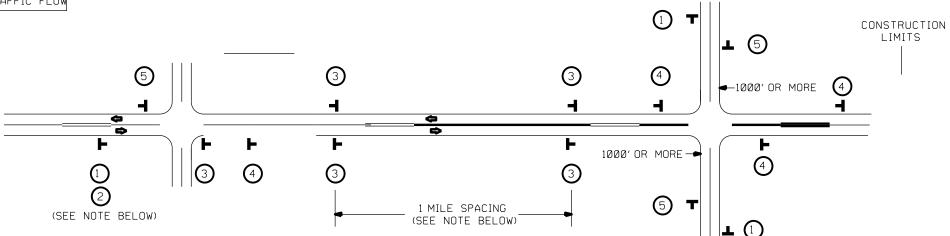
AND REC'

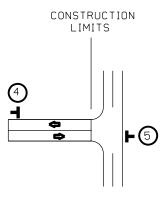
SIGNING

PLA

1

(2)





#### TEE INTERSECTION

#### MAINLINE (-L-) SIGNING

#### HINLING ( L ) SIGNING

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



- 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.



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

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.

#### -Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

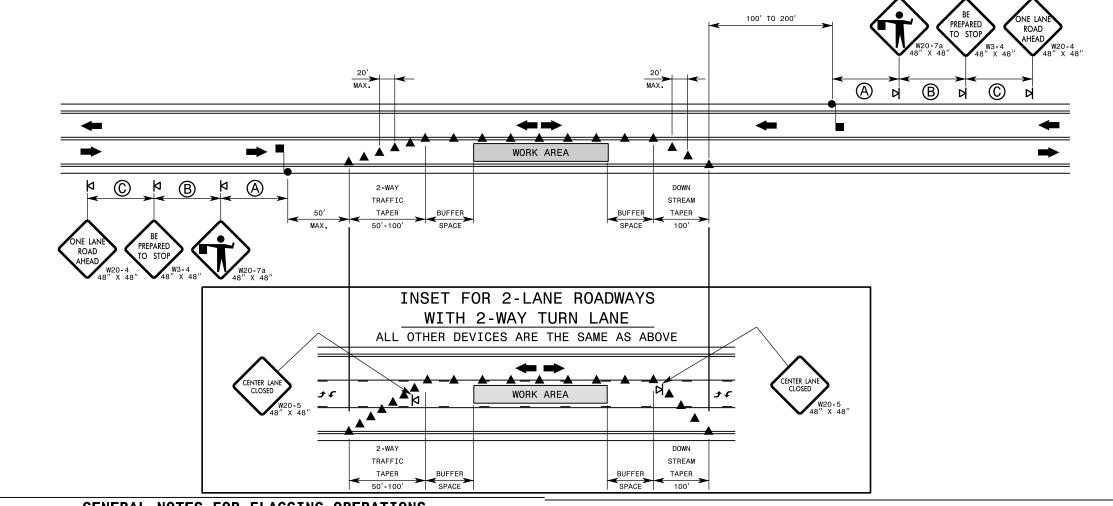
1) LESS THAN 1000'OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS







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



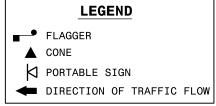
#### GENERAL NOTES FOR FLAGGING OPERATIONS

- 1- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- FOR POSTED SPEED LIMITS BELOW 45 MPH, CHANNELIZING DEVICE SPACING SHALL BE 20 FEET IN THE TAPERS AND THE SHIFTS AND 40 FEET IN THE TANGENTS. FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 MPH, CHANNELIZING DEVICE SPACING SHALL BE 40 FEET IN THE TAPERS AND THE SHIFTS AND 80 FEET IN THE TANGENTS.
- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD. 1101.11, SHEET 2).
- 6- DO NOT STOP ALL DIRECTIONS OF TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME.
- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. FOR SKINNY DRUM REQUIREMENTS. REFER TO RSD. 1180.01
- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE SUPPLEMENT FLAGGERS LOCATED AT INTERSECTIONS WITH FLAGGER AHEAD SIGNS (W20-7A) PLACED APPROXIMATELY 250 FT. IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND USE LAW ENFORCEMENT.
- 9- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

- IF VEHICLE QUEUES WILL REACH WITHIN 100' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER TO PREVENT VEHICLES FROM STOPPING WITHIN THE GRADE CROSSING. PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.
- THIS DETAIL IS APPLICABLE FOR OPERATIONS IN PLACE FOR 72 HOURS OR LESS. FOI DURATION OPERATIONS, SIGNING AND PAVEMENT MARKINGS MAY NEED TO BE ALTERED. FOR LONGER

#### GENERAL NOTES FOR PILOT CAR OPERATIONS

- 1- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.
- 2- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.
- 3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
- 5- UNLESS APPROVED BY THE ENGINEER, DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT



SED 0 FOR S Ш ~ OSU DRAWING S OADWAY Z STANDARD  $\mathbf{\Xi}$ AR TEMPOR, ROADWAY  $\alpha$ ANE  $\alpha$ 

NORTH CAROLINA OF TRANSPORTATION ISION OF HIGHWAYS RALEIGH, N.C.

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PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.10.15.20901	SOQ 1	

#### SUMMARY OF QUANTITIES

1											VIA I I I			1				1	,	,	,			
				1				1245000000-E																
PROJECT NO COUNTY MAP NO	ROUTE	DESCRIPTION	TYP NO LANES LA						AGGREGATE	1½" MILLING	INCIDENTAL	SURFACE	LEVELING	SURFACE	LEVELING	ASPHALT	PATCHING	6" CENTERLINE		ADJ. OF	ADJ. OF METER		FLOCCULANT	WATTLE
			TY	/PE		N MP MP	STONE BASE	RECONSTRUCTI	SHOULDER		MILLING	COURSE, S9.5B	COURSE, S9.5B	COURSE, S9.5C	COURSE, S9.5C	BINDER FOR	EXISTING	MILLED RUMBLE		MANHOLES	OR VALVE BOX	SILT FENCE	1	Í.
								ON	BORROW							PLANT MIX	PAVEMENT	STRIPS	CONCRETE CURE	1				I
																			RAMPS					
				MI	FT		TONS	SMI	TON	SY	SY	TONS	TONS	TONS	TONS	TONS	TONS	LF	EA	EA	EA	LF	LB	LF
		FROM US 601																					1	ĺ
	SR-1547 / W BRIEF RD	TO MECKLENBURG COUNTY LINE																						I
2025CPT.10.15.20901 Union 1	ROUTE ID # 40001547090	MP 6.68 TO MP 8.71	2 2\	NU 2.03	21	6.68 8.71	160	4.06	563		1,625	2,394	711			251	1,015	10,718				304	1	304
	TOTAL FOR MAP NO. 1			2.03			160	4.06	563		1,625	2,394	711			251	1,015	10,718				304	1	304
		FROM SR 1004 LAWYERS RD																					1	ĺ
	SR-1533 / HOWEY BOTTOMS RD	TO SR 1634 WESTS DUCAN RD																					1	ĺ
2025CPT.10.15.20901 Union 2	ROUTE ID # 40001533090	MP 0.0 TO MP 0.87	2 2\	NU 0.87	20	0 0.87	70	1.74	241	400	428			987	305	110	696					131		131
	TOTAL FOR MAP NO. 2			0.87			70	1.74	241	400	428			987	305	110	696					131		131
		FROM SR 1533 HOWEY BOTTOMS RD																					1	ĺ
	SR-1534 / WEST DUNCAN RD	TO SR 1535 GARRETT RD																					1	ĺ
2025CPT.10.15.20901 Union 3	ROUTE ID # 40001534090	MP 0.00 TO MP 0.83	2 2\	NU 2.48	18	0 2.48	170	4.96	688		726			2,614	868	313	2,232					372		372
	TOTAL FOR MAP NO. 3			2.48			170	4.96	688		726			2,614	868	313	2,232					372		372
		FROM SR 1004 LAWYERS RD																						
	SR-1525 / MILL GROVE RD	TO NC 218																						I
2025CPT.10.15.20901 Union 4	ROUTE ID # 40001525090	MP 2.50 TO MP 5.35	2 2\	NU 2.85	19.5	2.5 5.35	30	5.70	790		1,119	3,034	998			330	1,425	15,048				428	1	428
	TOTAL FOR MAP NO. 4			2.85			30	5.70	790		1,119	3,034	998			330	1,425	15,048				428	1	428
		FROM WILSON ST																						
	SR-1758 N MAIN ST	TO PVMT JOINT AT CITYL LIMITS																					1	ĺ
2025CPT.10.15.20901 Union 5	ROUTE ID # 40001758090	MP 3.51 TO MP 2.87	2 2\	NU 0.64	34	3.51 2.87		0.30	42	7,271	183	895				78	400			10	10	96	1	96
	TOTAL FOR MAP NO. 5			0.64				0.30	42	7,271	183	895				78	400			10	10	96		96
		FROM SR 1756 N MAIN ST																						
	SR-1760 / OLD WILLIAMS RD	TO PVMT JOINT AT CUL DE SAC																					1	ĺ
2025CPT.10.15.20901 Union 6	ROUTE ID # 40001260090	MP 0.02 TO MP 1.10	2 2\	WU 1.08	22	0 1.1		1.12	155	8,607	240	1,340	162			116	378		3	2	3	162	1	162
' '	TOTAL FOR MAP NO. 6			1.08				1.12	155	8,607	240	1,340	162			116	378		3	2	3	162		162
		FROM GREENE ST																						ĺ
	SR-1902 / S ELM ST	TO END OF CURB																					1	ĺ
2025CPT.10.15.20901 Union 7	ROUTE ID 40001902090	MP 0.05 TO MP 040	2 2\	NU 0.35	24	0.05 0.4		0.04	6	4,819		437				48	400			5				53
	TOTAL FOR MAP NO. 7			0.35				0.04	6	4,819		437				48	400			5			T	53
		FROM MP 0.40 SR 1902 S ELM ST							_	.,										_			T	i
	SR-1902 / S ELM ST	TO MP 0.65 SR 1902 DR BLAIR RD																					1	ĺ
2025CPT.10.15.20901 Union 8	ROUTE ID # 40001902090	MP .40 TO MP .65	2 2\	NU 0.25	19	0.4 0.65	5	0.50	72		250	301	90			38	250					38		38
	TOTAL FOR MAP NO. 8			0.25			5	0.50	72		250	301	90			38	250					38	T	38
	TOTAL TOTAL NOTO	FROM SR 1740 W MAIN ST		0.20				0.00			200						200							
	SR-1901 / HASTY RD	TO SR 1902 DR BLAIR RD																					1	ĺ
2025CPT.10.15.20901 Union 9	ROUTE ID # 40001901090	MP 0.01 TO MP 0.79	2 21	NU 0.78	18	0.01 0.79	50	1.56	216		239	773	273			88	400	4.324				117	1	117
2023011.10.13.20301 011011 3	TOTAL FOR MAP NO. 9	111 3132 13 111 3173	2 2,	0.78	10	0.01 0.75	50	1.56	216		239	773	273			88	400	4,324				117		117
		FROM SR 1902 DR BLAIR RD		5.70	1									+				7,027					t	
	SR-1901 / HASTY RD	TO SR 1005 WHITE STORE RD																					1	Í.
2025CPT.10.15.20901 Union 10	ROUTE ID # 40001901090	MP .80 TO MP 1.25	2 21	NU 0.45	18	0.8 1.25	15	0.90	125		230	456	158			55	300	2,376				68	1	68
202001 1.10.10.20001 0111011 10	TOTAL FOR MAP NO. 10	111 100 10 111 2.23	2 21	0.45	10	5.0 1.20	15	0.90	125		230	456	158	+	1	55	300	2,376	<u> </u>		1	68	+	68
TOTAL FO	OR PROJ NO. 2025CPT.10.15.20901			11.78			500	20.88	2,898	21,097	5,040	9,630	2,392	3,601	1,173	1,427	7,496	32,466	3	17	13	1,716	2	1,769
IOIAET				11.70			500	20.00	2,000	21,007	5,040	5,000	2,002	0,001	1,170	1,727	7,450	02,400	-		10	1,710		1,700
<del>                                     </del>	GRAND TOTAL			11.78	+ +		500	20.88	2,898	21,097	5,040	9,630	2,392	3,601	1,173	1,427	7,496	32,466	3	17	13	1,716	2	1,769
	ORAND I OTAL			11./0	11	11	500	20.00	2,000	21,007	3,040	3,030	2,002	3,001	1,1/3	1,427	7,400	32,400		1/	13	1,/10		1,700

PROJECT NO.	SHEET NO.	TOTAL NO.
2025CPT.10.15.20901	SOQ 2	

#### THERMOPLASTIC AND PAINT QUANTITIES

											4413000000-E	4457000000-N	46850	00000-E	4687000000-E	46880	00000-E	4695000000-	E 4709000000-E	47200	00000-E	48100	00000-E
PROJECT NO	COUNTY MAP NO	ROUTE	DESCRIPTION	TYP NO L	NES L	LANE LE	ENGTH \	NIDTH I	BEGIN MP			TEMPORARY	4" X 90 M	4" X 90 M		6" X 90 M	6" X 90 M	8" X 90 M			THERMO MSG		4" YELLOW
						TYPE					ADVANCE/GE	TRAFFIC	WHITE	YELLOW	THERMOPLAS	YELLOW	WHITE	WHITE	THERMOPLAS			PAINT	PAINT
											NERAL	CONTROL	THERMO	THERMO	TIC PAVEMENT	THERMO	THERMO	THERMO	TIC PAVEMENT				
											WARNING	CONTINUE	IIILIIIIO	III LIII IO	MARKING	IIILIII IO	IIILIIIIO	111211110	MARKING				
											SIGNING				LINES (4", 240				LINES (24", 90				
															MILS)				MILS)				
						-																	ļ
							MI	FT			SF	LS	LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF
			FROM US 601																				
		SR-1547 / W BRIEF RD	TO MECKLENBURG COUNTY LINE																				
2025CPT.10.15.20901	Union 1	ROUTE ID # 40001547090	MP 6.68 TO MP 8.71		2 2	2WU	2.03	21	6.68	8.71	227	0.10			207	17,234	21,436			8	5		
	TOTA	AL FOR MAP NO. 1					2.03				227	0.10			207	17,234	21,436			8	5		
			FROM SR 1004 LAWYERS RD																				
		SR-1533 / HOWEY BOTTOMS RD	TO SR 1634 WESTS DUCAN RD																				
2025CPT.10.15.20901	Union 2	ROUTE ID # 40001533090	MP 0.0 TO MP 0.87		2 2	2WU	0.87	20	0	0.87	97	0.10										1,844	18,440
		AL FOR MAP NO. 2					0.87				97	0.10										1,844	18,440
			FROM SR 1533 HOWEY BOTTOMS RD		-			1			-		1	İ			1	İ		1		-,	
		SR-1534 / WEST DUNCAN RD	TO SR 1535 GARRETT RD			1					1												1
2025CPT.10.15.20901	Union 3	ROUTE ID # 40001534090	MP 0.00 TO MP 0.83		2 2	2WU	2.48	18	0	2.48	278	0.10										52,376	52,376
2023GF1.10.13.20901			PIF 0.00 TO PIF 0.83	<del>                                     </del>	4 4		2.48	10	U	2.40	278			<b> </b>	+			-	+		-		
<del>                                     </del>	101/	AL FOR MAP NO. 3	FROM CR 1004 L NAVERO RD	<del>                                     </del>			2.48				2/8	0.10	<del>                                     </del>	1	+		<del>                                     </del>	1	1	<del>                                     </del>	1	52,376	52,376
		00 4505 (1411) 0001/500	FROM SR 1004 LAWYERS RD			1		1		l	1	I	İ				İ			İ			I
		SR-1525 / MILL GROVE RD	TO NC 218																				
2025CPT.10.15.20901		ROUTE ID # 40001525090	MP 2.50 TO MP 5.35		2 2			19.5	2.5	5.35	319	0.10				28,000	30,096						
	TOTA	AL FOR MAP NO. 4					2.85				319	0.10				28,000	30,096						
			FROM WILSON ST																				
		SR-1758 N MAIN ST	TO PVMT JOINT AT CITYL LIMITS																				
2025CPT.10.15.20901	Union 5	ROUTE ID # 40001758090	MP 3.51 TO MP 2.87		2 2	2WU	0.64	34	3.51	2.87	72	0.10	846	6,758				120	402				1
	TOTA	AL FOR MAP NO. 5					0.64				72	0.10	846	6,758				120	402				
			FROM SR 1756 N MAIN ST																				1
		SR-1760 / OLD WILLIAMS RD	TO PVMT JOINT AT CUL DE SAC			1					1												1
2025CPT.10.15.20901	Union 6	ROUTE ID # 40001260090	MP 0.02 TO MP 1.10		2 2	2WH	1.08	22	0	1.1	121	0.10										11,664	9,072
202001 1.10.10.20001		AL FOR MAP NO. 6	111 0.02 10 111 2.20				1.08			1.1	121	0.10										11,664	9,072
	101,	ALTON PIAF NO. 0	EDOM CREENE ST	-			1.00	-			121	0.10							-			11,004	3,072
		OD 4000 (O FLM CT	FROM GREENE ST																				
		SR-1902 / S ELM ST	TO END OF CURB		_																		
2025CPT.10.15.20901		ROUTE ID 40001902090	MP 0.05 TO MP 040		2 2		0.35	24	0.05	0.4	39	0.10										720	720
	TOTA	AL FOR MAP NO. 7					0.35				39	0.10										720	720
			FROM MP 0.40 SR 1902 S ELM ST			1					1												1
		SR-1902 / S ELM ST	TO MP 0.65 SR 1902 DR BLAIR RD			1		1		l	1	I	İ				İ			İ			I
2025CPT.10.15.20901	Union 8	ROUTE ID # 40001902090	MP .40 TO MP .65		2 2	2WU	0.25	19	0.4	0.65	29	0.10							1			5,180	5,068
	TOTA	AL FOR MAP NO. 8					0.25				29	0.10										5,180	5,068
			FROM SR 1740 W MAIN ST																				
		SR-1901 / HASTY RD	TO SR 1902 DR BLAIR RD			1					1												1
2025CPT.10.15.20901	Union 9	ROUTE ID # 40001901090	MP 0.01 TO MP 0.79		2 2	2WU	0.78	18	0.01	0.79	87	0.10				16,472	16,472						1
		AL FOR MAP NO. 9		<del>                                     </del>			0.78				87	0.10	<del> </del>	1	+	16,472	16,472	1	†	<del> </del>	1		1
	101,		FROM SR 1902 DR BLAIR RD	$\vdash$	_			-+			<del></del>	U.20	<b> </b>	<del> </del>	+	20,	20,.,2	<del> </del>	+	<b> </b>			+
		SR-1901 / HASTY RD	TO SR 1005 WHITE STORE RD					J			1												1
2025 ORT 10 15 20021	Union 10				2 2	2////	0.45	10	0.0	1.05	F0	0.10				9.504	9,504						1
2025CPT.10.15.20901		ROUTE ID # 40001901090	MP .80 TO MP 1.25	<del>                                     </del>	2 2		0.45	18	8.0	1.25	50	0.10		<b> </b>	+	.,		-	+		-		+
	TOTA	L FOR MAP NO. 10		<b></b>			0.45				50	0.10				9,504	9,504						
	TOTAL FOR PRO	DJ NO. 2025CPT.10.15.20901				1	11.78				1,319	1.00	846	6,758	207	71,210	77,508	120	402	8	5	71,784	
													7,	604		148	,718			L	13	157	7,460
1		GRAND TOTAL				1	11.78				1,319	1.0	846	6,758	207	71,210	77,508	120	402	8	5	71,784	
																							7,460