WBS Number	Sheet No.
2027CPT.12.03.10231	1

CLEVELAND CO. RESURFACING MAP 1

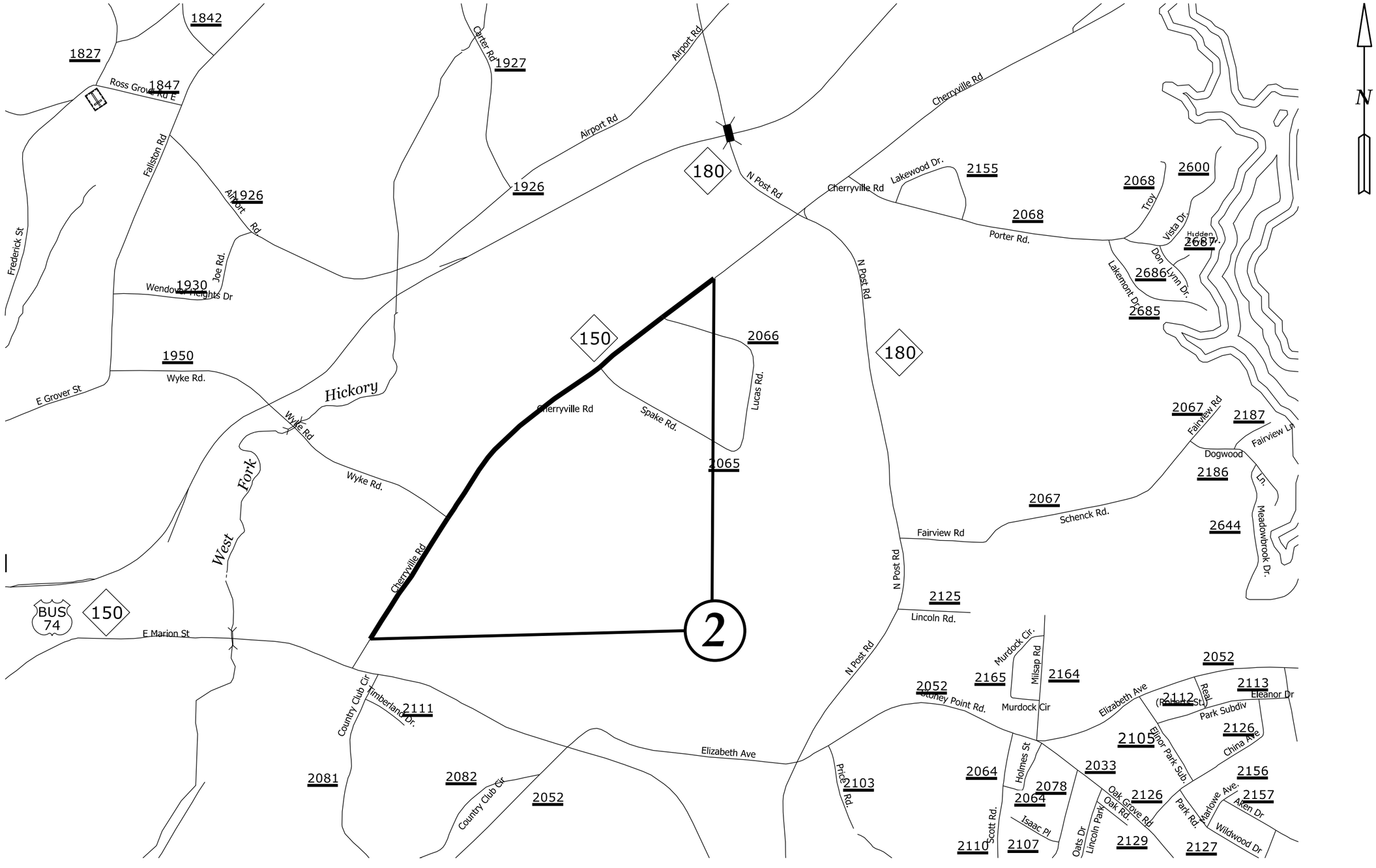
NC-226 (Polkville Rd)


1
Lee's Chapel
226
FIRST
RIVER
Murffs
Clover Hill Ch
Crooked
Eakers Corner
10
Dawson's
Creek
Dawson's
Creek
Brooks Ch
Fork of Hinton
Creek
Hinton
Creek
Fork of Hinton
Creek
Shufords Lake Dam
Polkville pop 537
182
Oak Grove Meth Ch
Grassy
Elliot Mem Ch
FIRST
Fork of Hinton
Jackson Hollow Rd
Oak Grove Meth Church Rd
Gus Wallace Rd
Walker Rd
Oak Grove Church Rd
Pleasant Grove Church Rd
Mount Olivet Church Rd
Mount Zion Church Rd
Mount Pleasant Church Rd
Mount Harmony Church Rd
Brooks Chapel Rd
Brooks Chapel Rd
Brooks Chapel

WBS Number	Sheet No.
2027CPT.12.03.10231	2

CLEVELAND CO. RESURFACING MAP 2

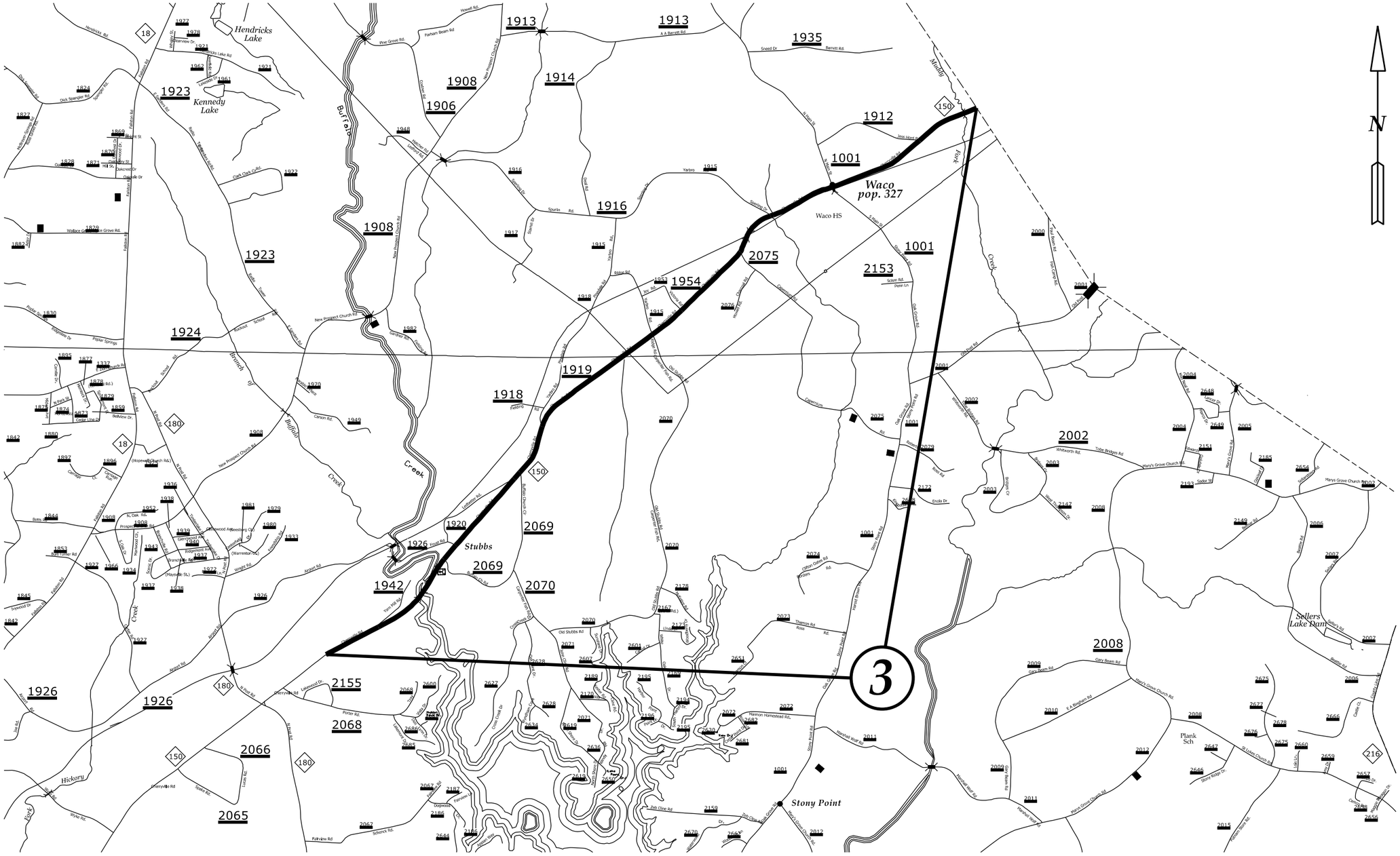
NC-150 (Cherryville Rd)



CLEVELAND CO. RESURFACING MAP 3

NC-150 (Cherryville Rd)

WBS Number	Sheet No.
2027CPT.12.03.10231	3



CLEVELAND CO. RESURFACING MAP 4

NC-182 (E. Stagecoach Trail)

WBS Number	Sheet No.
2027CPT.12.03.10231	4

N

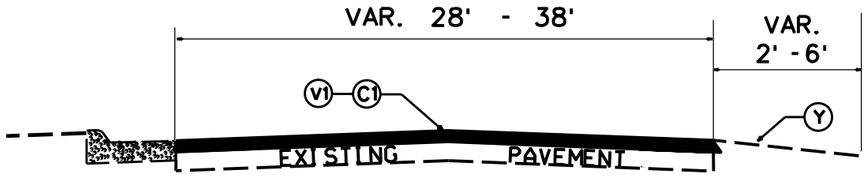
Fallston
pop 612

1637
1650
1649
1677
Kendrick Rd.
Wilson Dr
Wilson Rd
Fallston Rd
N Main St
Stroup Rd.
1654
Dickson Rd
1656
Cap Wright Rd
Buffalo
1658
Sugarhill Rd
Bingham Rd
1657
E Stagecoach Trl
Stage Coach Trl
Fallston Elem Sch
18
1001
1900
Pony Barn Rd
182
Plainsview Church Rd
Creek
Jim Cline Rd
1800
Fallston-Waco Rd
1901
Charolais Rd
Hull Rd.
1902
Church Rd
1967
Royster Rd
Petty Rd.
4

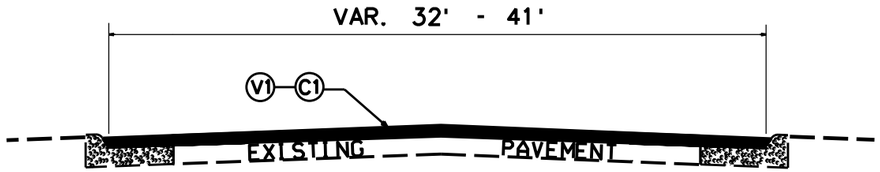
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
2027CPT.12.03.10231	5	

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	MILL ASPHALT PAVEMENT APPROX. 1-1/2" AS DIRECTED BY ENGINEER
Y	SHOULDER RECONSTRUCTION AS DIRECTED BY THE ENGINEER
Z	INCIDENTAL MILLING AS DIRECTED BY THE ENGINEER
Z1	SINUSOIDAL MILLED RUMBLE STRIPS 8"
Z2	SINUSOIDAL MILLED RUMBLE STRIPS 18"

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. MILL BRIDGE APPROACHES & RXR APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.
3. MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.
4. MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.

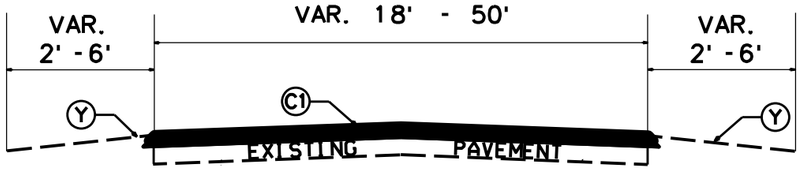


TYPICAL SECTION NO. 2
MAP 2 FROM 24+75 TO 36+96



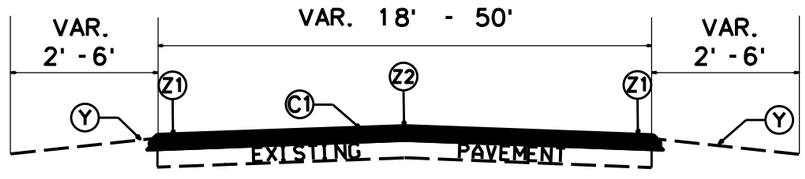
TYPICAL SECTION NO. 3

Map 1 - FROM 10+00 TO 35+50
Map 2 - FROM 20+72 TO 24+75
Map 4 FROM 10+00 TO 37+64



TYPICAL SECTION NO. 1

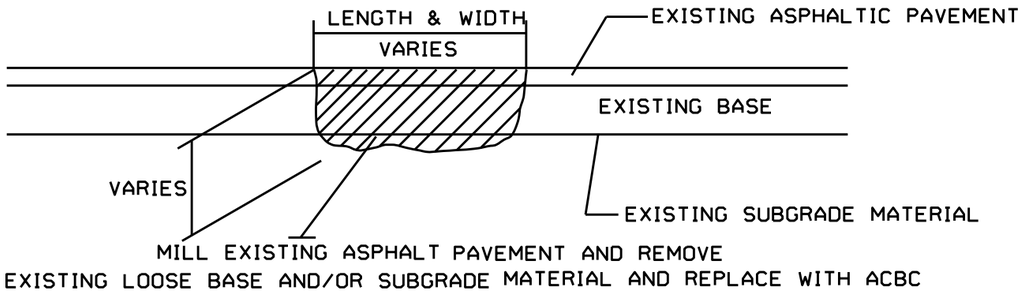
Map 1 - FROM 35+50 TO 318+35
Map 2 - FROM 10+00 TO 20+72 AND FROM 36+96 TO 78+11
Map 4 - FROM 37+64 TO 153+61



TYPICAL SECTION NO. 4

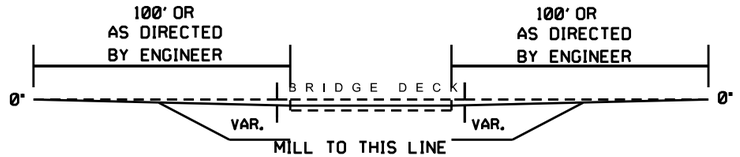
Map 3 - FROM 10+00 TO 298+55

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
CLEV COUNTY 2026		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
2027CPT.12.03.10231	6	

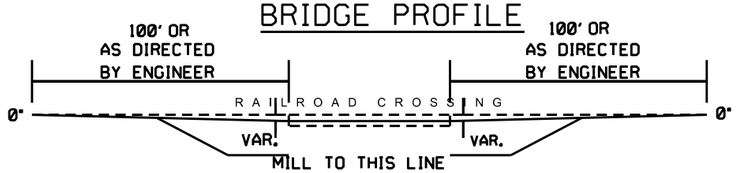


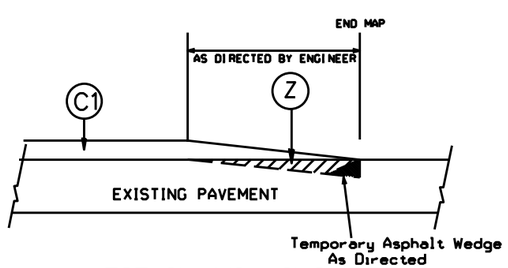
PATCHING EXISTING PAVEMENT

INCIDENTAL MILLING DETAILS

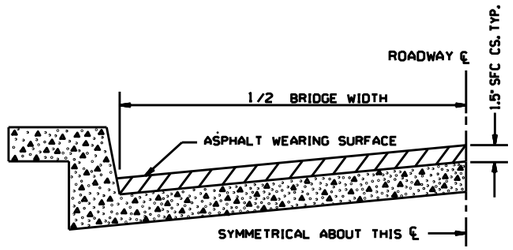


BRIDGE PROFILE





TIE-IN MILLING DETAIL



BRIDGE HALF TYPICAL SECTION

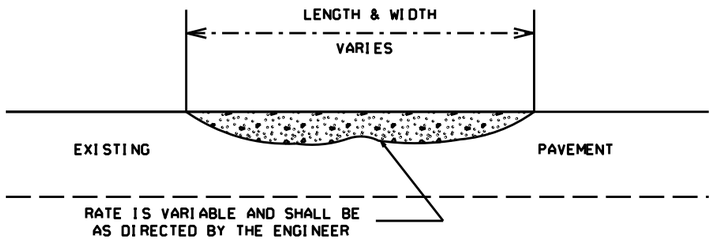
FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 1.00" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1.5" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

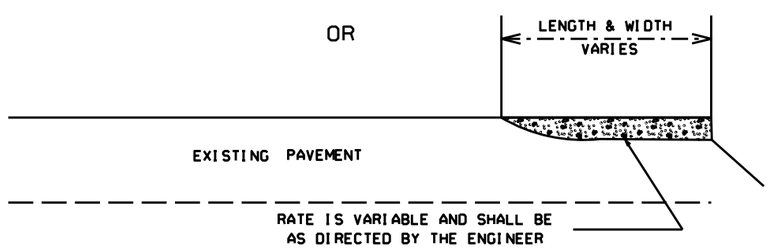
NOTES

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

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. MILL BRIDGE APPROACHES & RXR APPROACHES 100' TO PROVIDE A SMOOTH TRANSITION AS DIRECTED.
3. MILL INTO GUTTER LINE WHERE SHOWN AND AS DIRECTED.
4. MAINTAIN PROPER CROWN FOR DRAINAGE OF THE ROAD SURFACE.



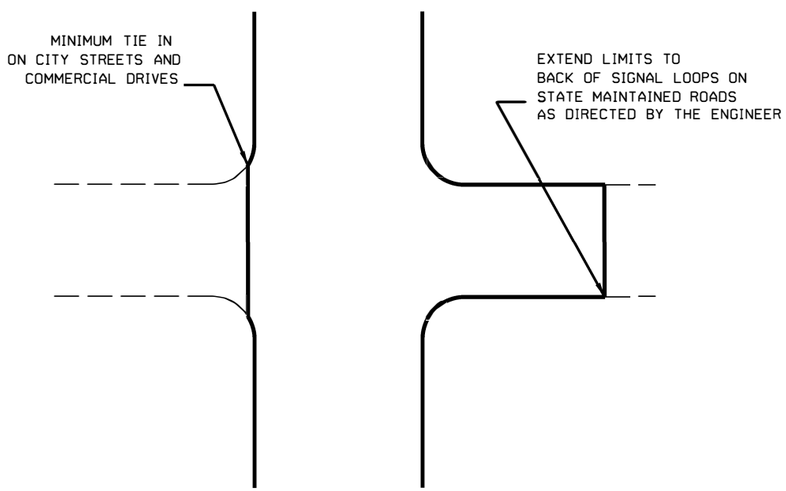
OR



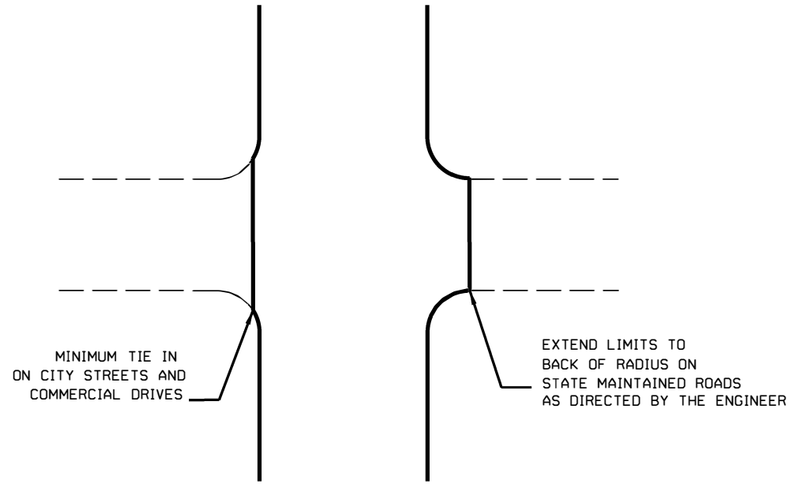
ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5C (LEVELING COURSE)

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
V1	MILL ASPHALT PAVEMENT APPROX. 1-1/2" AS DIRECTED BY ENGINEER
Y	SHOULDER RECONSTRUCTION AS DIRECTED BY THE ENGINEER
Z	INCIDENTAL MILLING AS DIRECTED BY THE ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	7



TYPICAL DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES

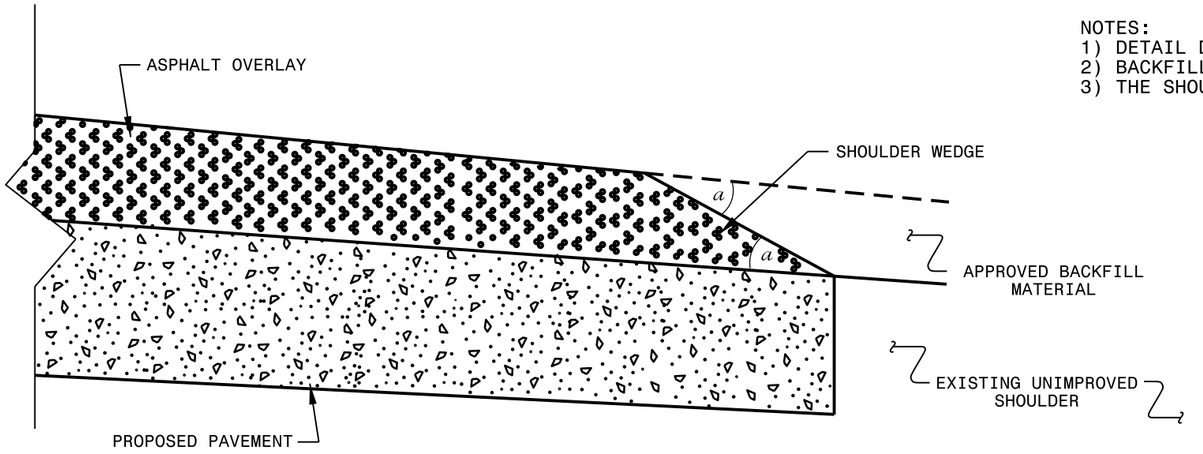


TYPICAL DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

ADDITIONAL INTERSECTIONS (NON-TYPICAL)		
Extend paving limits to back of radius or loop on the following intersections:		
MAP#	STREET NAME	COMMENTS

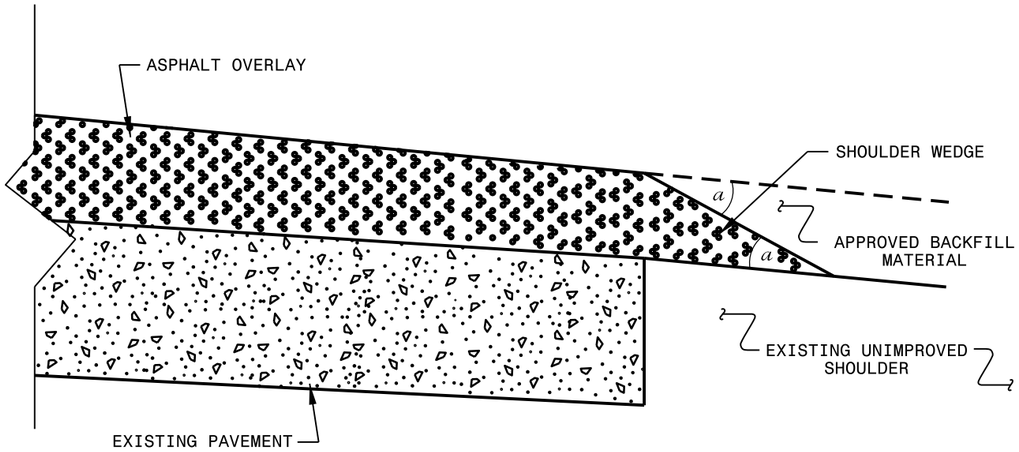
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	8

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.



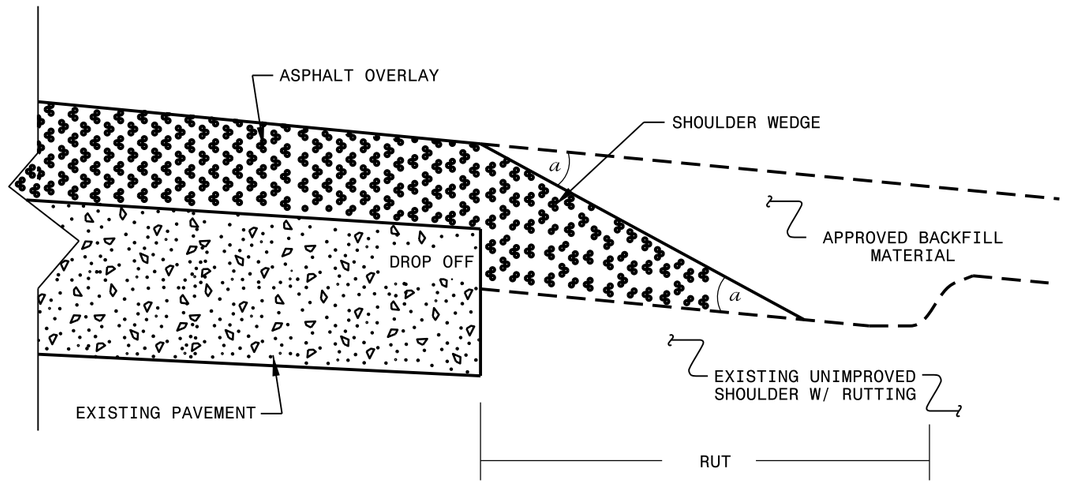
SHOULDER WEDGE DETAIL

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



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
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SHOULDER WEDGE DETAILS

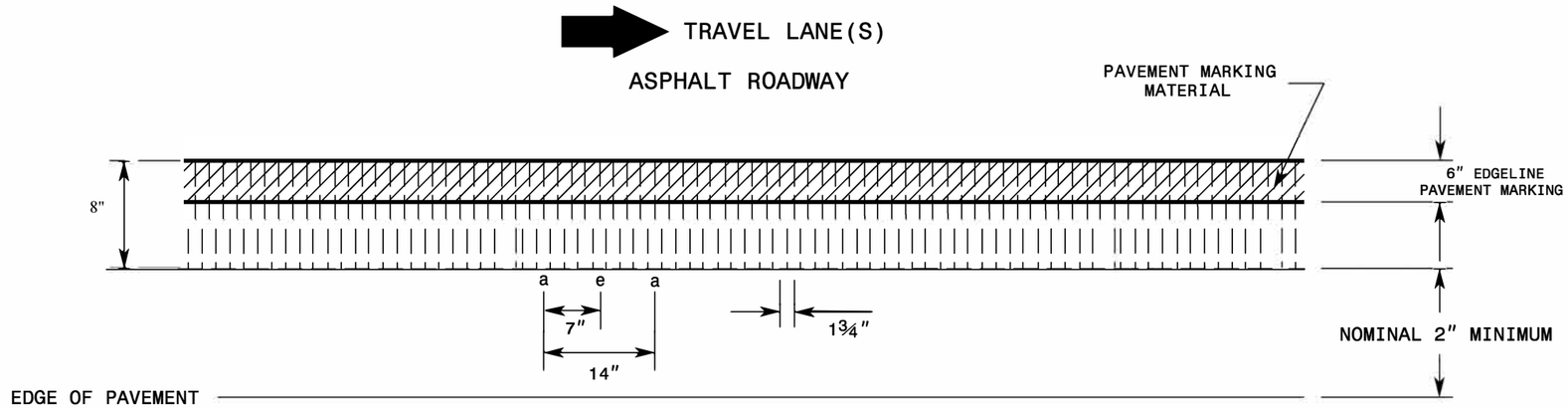
ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: _____ DATE: 10/16/12
CHECKED BY: _____ DATE: _____
FILE SPEC.: $:usr/details/stand/shoulderwedgedetail.dgn

$$$$$$SYSTIME$$$$$
$$$$$$USERNAME$$$$$

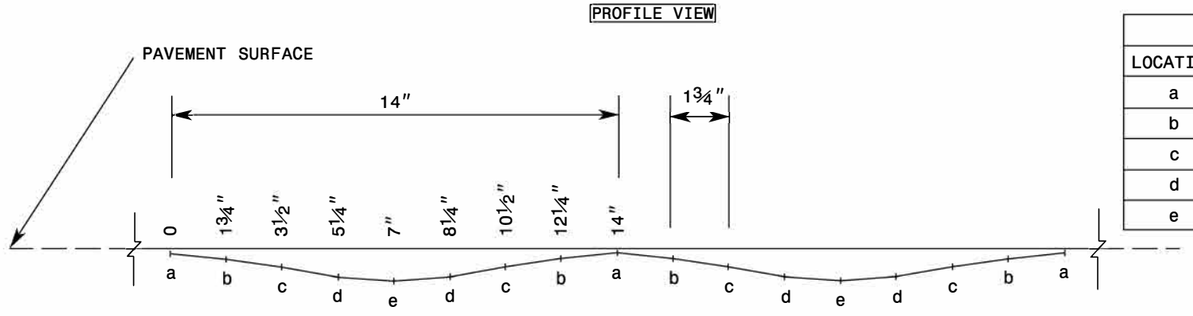
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	9

See Table 1 within Rumble Strip Policy for Design Guidance

PLAN VIEW



PROFILE VIEW



	DEPTH	
LOCATION	MIL	INCHES
a	62.5	1/16"
b	125	1/8"
c	219	7/32"
d	344	11/32"
e	375	3/8"

REFERENCE DRAWING ID: Sin.Stripe

NOTES:

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

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

ROADWAY DETAIL DRAWING FOR

RUMBLE STRIPS / STRIPES

SINUSOIDAL EDGELINE RUMBLE STRIPE

SHEET 4 OF 9

NORTH CAROLINA PROFESSIONAL SEAL 28385 ENGINEER JOSHUA B. WHITE

10/14/2026

Signed by: Joshua B. White
F0C9A3DDAD5640C...

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: C. SIMPSON DATE: 04-24-2025
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	10

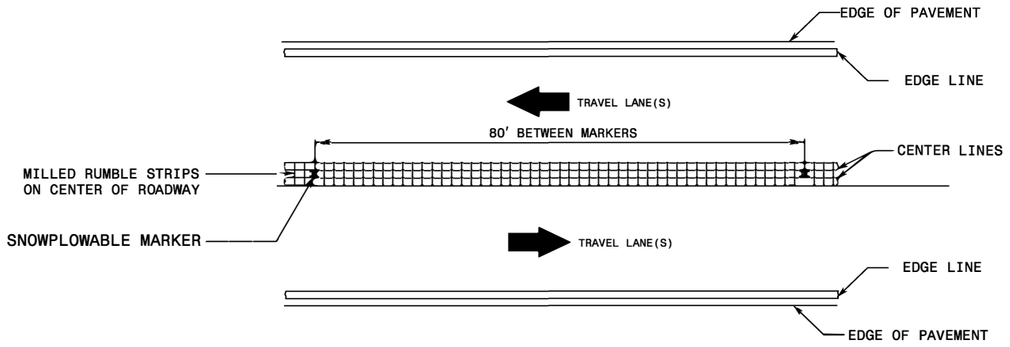


10/14/2026

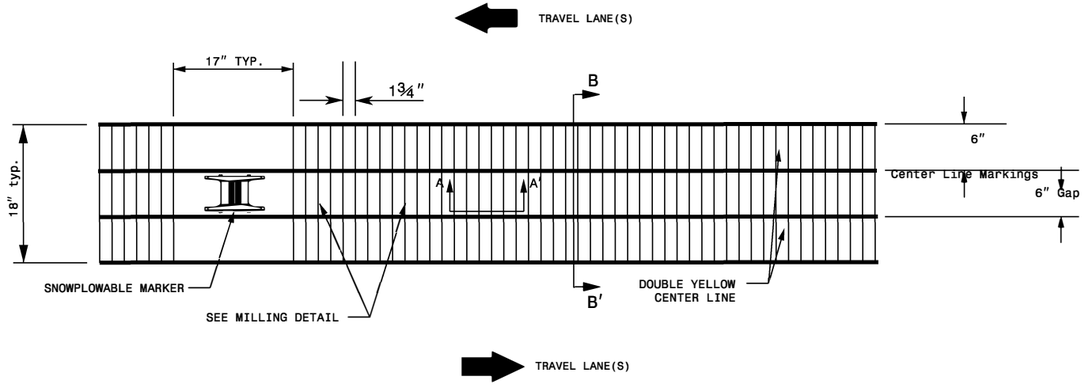
Signed by:
Joshua B. White
F0C9A3DDAD5640C...

See Table 2 within Rumble Strip Policy for Design Guidance

LANE TREATMENT



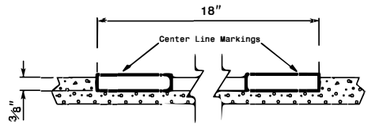
CENTER LINE



MILLING DETAIL

See Sheet 6 for profile.

SECTION A-A'



SECTION B-B'

REFERENCE DRAWING ID: Sin.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.

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

ROADWAY DETAIL DRAWING FOR

RUMBLE STRIPS / STRIPES

SINUSOIDAL CENTERLINE RUMBLE STRIPE WITH SNOWPLOWABLE MARKERS

SHEET 8 OF 9

CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: C. SIMPSON DATE: 04-24-2025
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.12.03.10231	11	

SUMMARY OF QUANTITIES

												126000000-E	122000000-E	1245000000-E	1297000000-E	1330000000-E	1523000000-E	1524000000-E	1575000000-E	1704000000-E	1881000000-E	1881000000-E	2830000000-N	2845000000-N	2846000000-N	5255000000-N	7324000000-N	7444000000-E	7456100000-E
PROJECT NO	**COUNTY**	**MAP NO**	**ROUTE**	**DESCRIPTION**	**TYP NO**	**LANES**	**LENGTH**	**WIDTH**	**BEGIN MP**	**END MP**	**AGGREGATE SHOULDER BORROW**	**INCIDENTAL STONE BASE**	**SHOULDER RECONSTRUCTION**	**1½" MILLING**	**INCIDENTAL MILLING**	**SURFACE COURSE, S9.5C**	**LEVELING COURSE, S9.5C**	**ASPHALT BINDER FOR PLANT MIX**	**PATCHING EXISTING PAVEMENT**	**SINUSOIDAL MILLED RUMBLE STRIP 8"**	**SINUSOIDAL MILLED RUMBLE STRIP 18"**	**ADJ. OF MANHOLES**	**ADJ. OF METER OR VALVE BOX**	**ADJUSTMENT OF OVERSIZED MANHOLES**	**PORTABLE LIGHTING**	**JUNCTION BOX (STD)**	**INDUCTIVE LOOP**	**LEAD IN CABLE (14-2)**
							MI	**FT**			**TONS**	**TON**	**SMI**	**SY**	**SY**	**TONS**	**TONS**	**TONS**	**TONS**	**LF**	**LF**	**EA**	**EA**	**EA**	**LS**	**EA**	**LF**	**LF**
2027CPT.12.03.10231	Cleveland	1	NC-226 POLKVILLE RD	FROM NC-182 TO RUTHERFORD COUNTY LINE (EXCEPTING THE PROJECT LIMITS FOR BRIDGE REPLACEMENT PROJECT BP12.R002)	1,3	2	5.840	24-38	23.230	29.070	2,044	20	10.76	11,870	2,125	8,116	486	587	1,650								1	792	50
TOTAL FOR MAP NO. 1							**5.840**				**2,044**	**20**	**10.76**	**11,870**	**2,125**	**8,116**	**486**	**587**	**1,650**							**1**	**792**	**50**
2027CPT.12.03.10231	Cleveland	2	NC-150 CHERRYVILLE RD	FROM PVMT JOINT 1025' EAST OF US74B TO PVMT JOINT 890' WEST OF NC180	1,2,3	2	1.290	24-36	16.410	17.700	431	10	2.27	6,821	390	2,022	122	150	483						*	1	660	100
TOTAL FOR MAP NO. 2							**1.290**				**431**	**10**	**2.27**	**6,821**	**390**	**2,022**	**122**	**150**	**483**							**1**	**660**	**100**
2027CPT.12.03.10231	Cleveland	3	NC-150 CHERRYVILLE RD	FROM PVMT JOINT 880' EAST OF SR-2155 TO GASTON CO LINE	4	2	5.465	24-50	18.525	23.990	2,077	20	10.93		1,545	7,577	715	592	2,150	56,300	28,150				*	1	528	50
TOTAL FOR MAP NO. 3							**5.465**				**2,077**	**20**	**10.93**		**1,545**	**7,577**	**715**	**592**	**2,150**	**56,300**	**28,150**					**1**	**528**	**50**
2027CPT.12.03.10231	Cleveland	4	NC-182 E STAGECOACH TRAIL	FROM NC-18 TO LINCOLN COUNTY LINE	1,3	2	2.720	24-36	8.570	11.290	836	10	4.40	11,376	360	3,895	390	304	1,060			1	2	2			132	25
TOTAL FOR MAP NO. 4							**2.720**				**836**	**10**	**4.40**	**11,376**	**360**	**3,895**	**390**	**304**	**1,060**			**1**	**2**	**2**			**132**	**25**
TOTAL FOR PROJ NO. 2027CPT.12.03.10231							**15.315**				**5,388**	**60**	**28.36**	**30,067**	**4,420**	**21,610**	**1,713**	**1,633**	**5,343**	**56,300**	**28,150**	**1**	**2**	**2**	**1**	**3**	**2,112**	**225**
GRAND TOTAL							**15.315**				**5,388**	**60**	**28.36**	**30,067**	**4,420**	**21,610**	**1,713**	**1,633**	**5,343**	**56,300**	**28,150**	**1**	**2**	**2**	**1**	**3**	**2,112**	**225**

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.12.03.10231	12	

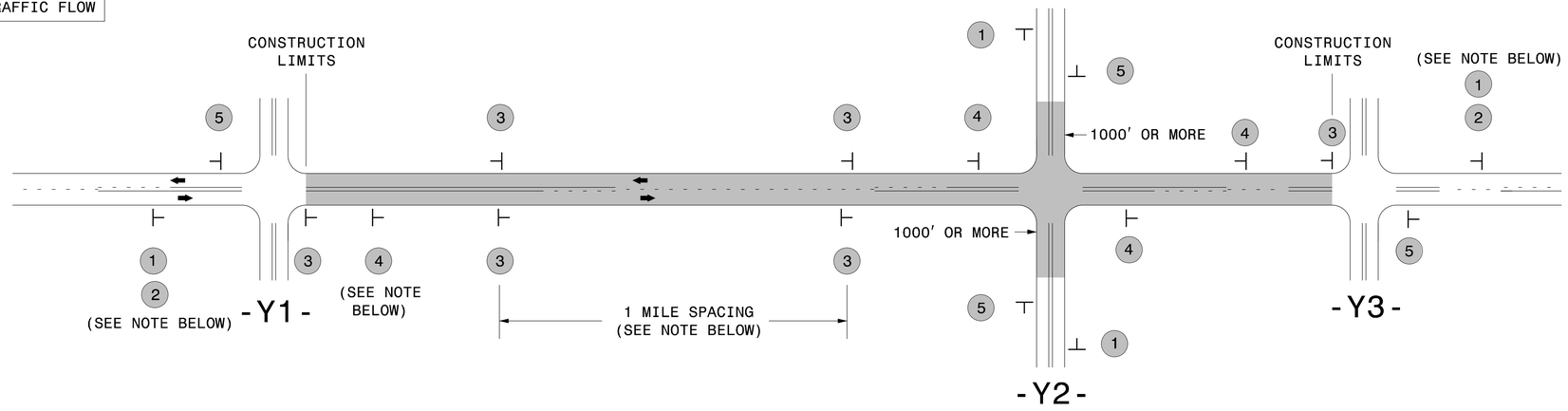
THERMOPLASTIC AND PAINT QUANTITIES

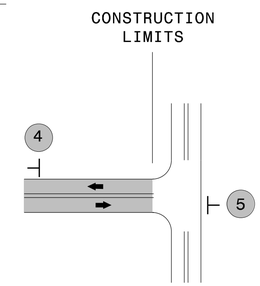
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PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	BEGIN MP	END MP		WORK ZONE ADVANCE/GENERAL WARNING SIGNING	TEMPORARY TRAFFIC CONTROL	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	6" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	12" X 90 M YELLOW THERMO	24" X 90 M WHITE THERMO	THERMO MSG SCHOOL (90 MILS)	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	H-SHAPED POLYCARBONATE MARKERS
							MI	FT				SF	LS	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA
2027CPT.12.03.10231	Cleveland	1	NC-226 POLKVILLE RD	FROM NC-182 TO RUTHERFORD COUNTY LINE (EXCEPTING THE PROJECT LIMITS FOR BRIDGE REPLACEMENT PROJECT BP12.R002)	1,3	2	5.84	24-38	23.23	29.07		160		62,305	56,813				28		16		418
TOTAL FOR MAP NO. 1							**5.84**					**160**		**62,305**	**56,813**				**28**		**16**		**418**
2027CPT.12.03.10231	Cleveland	2	NC-150 CHERRYVILLE RD	FROM PVMT JOINT 1025' EAST OF US74B TO PVMT JOINT 890' WEST OF NC180	1,2,3	2	1.29	24-36	16.41	17.7		160	*	14,397	14,212			109	94		14	2	102
TOTAL FOR MAP NO. 2							**1.29**					**160**		**14,397**	**14,212**			**109**	**94**		**14**	**2**	**102**
2027CPT.12.03.10231	Cleveland	3	NC-150 CHERRYVILLE RD	FROM PVMT JOINT 880' EAST OF SR-2155 TO GASTON CO LINE	4	2	5.465	24-50	18.525	23.99		160				56,300	57,500	108	110		3	1	372
TOTAL FOR MAP NO. 3							**5.465**					**160**				**56,300**	**57,500**	**108**	**110**		**3**	**1**	**372**
2027CPT.12.03.10231	Cleveland	4	NC-182 E STAGECOACH TRAIL	FROM NC-18 TO LINCOLN COUNTY LINE	1,3	2	2.72	24-36	8.57	11.29		160		28,724	23,202				98	12			180
TOTAL FOR MAP NO. 4							**2.72**					**160**		**28,724**	**23,202**				**98**	**12**			**180**
TOTAL FOR PROJ NO. 2027CPT.12.03.10231							**15.315**					**640**	**1**	**105,426**	**94,227**	**56,300**	**57,500**	**217**	**330**	**12**	**33**	**3**	**1072**
														199,653		**113,800**					**36**		
GRAND TOTAL							**15.315**					**640**	**1**	**105,426**	**94,227**	**56,300**	**57,500**	**217**	**330**	**12**	**33**	**3**	**1072**
														199,653		**113,800**					**36**		

PROJ. REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	TMP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

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 CONSTRUCTION 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 ½ 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.

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.

-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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.



PLACED 500′ IN ADVANCE OF FLAGGER.



PLACED 250′ IN ADVANCE OF FLAGGER.

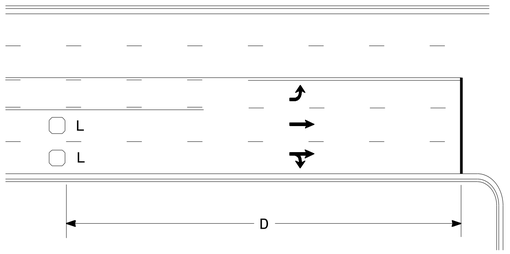
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

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

5/15/2017
SATMU\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn
User:kedavis

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.12.03.10231	SIG-1

High Speed Detection
(≥35 mph)

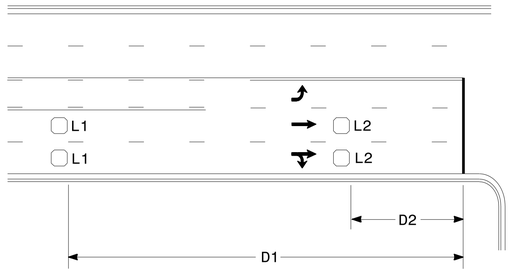


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



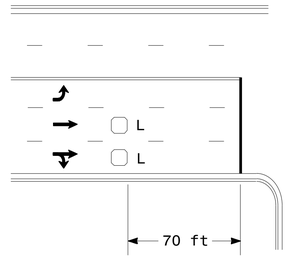
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

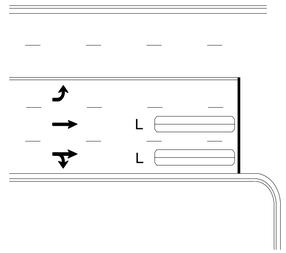
"Stretch" Operation

Low Speed Detection
(≤35 mph)



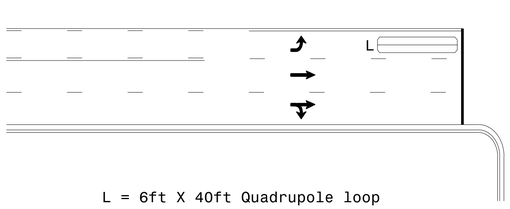
L = 6ft X 6ft
Wired in series

OR



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

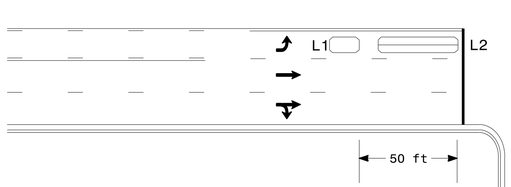
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

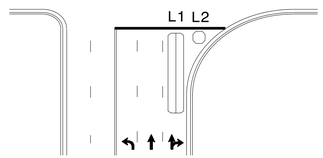
OR



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

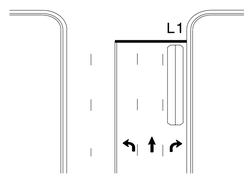
Queue Loop Detection

Right Turn Lane Detection

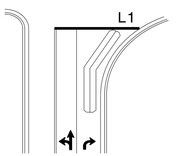


Shared Lane/
Wide Radius Turn

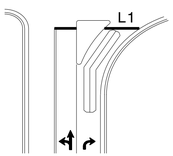
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

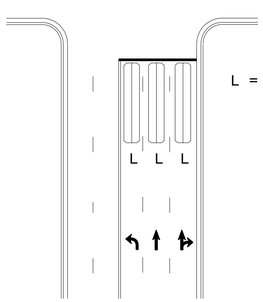


Wide Radius Turn



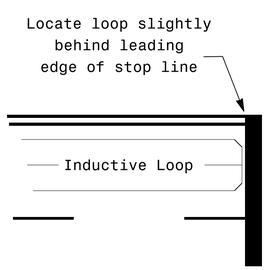
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



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
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE: September 2025 | REVIEWED BY:
PREPARED BY: J.A. Lohr | REVIEWED BY:

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL 026486
ENGINEER
ROBERT J. ZIEMBA
DocuSigned by:
11/25/2025
DATE

SIG. INVENTORY NO.

17-NOV-2025 07:35
S:\TSG\Traffic Signals\Signal Design Section\Eastern Region\Loop Typical\Loop_Typical_2025.dgn
jalohr