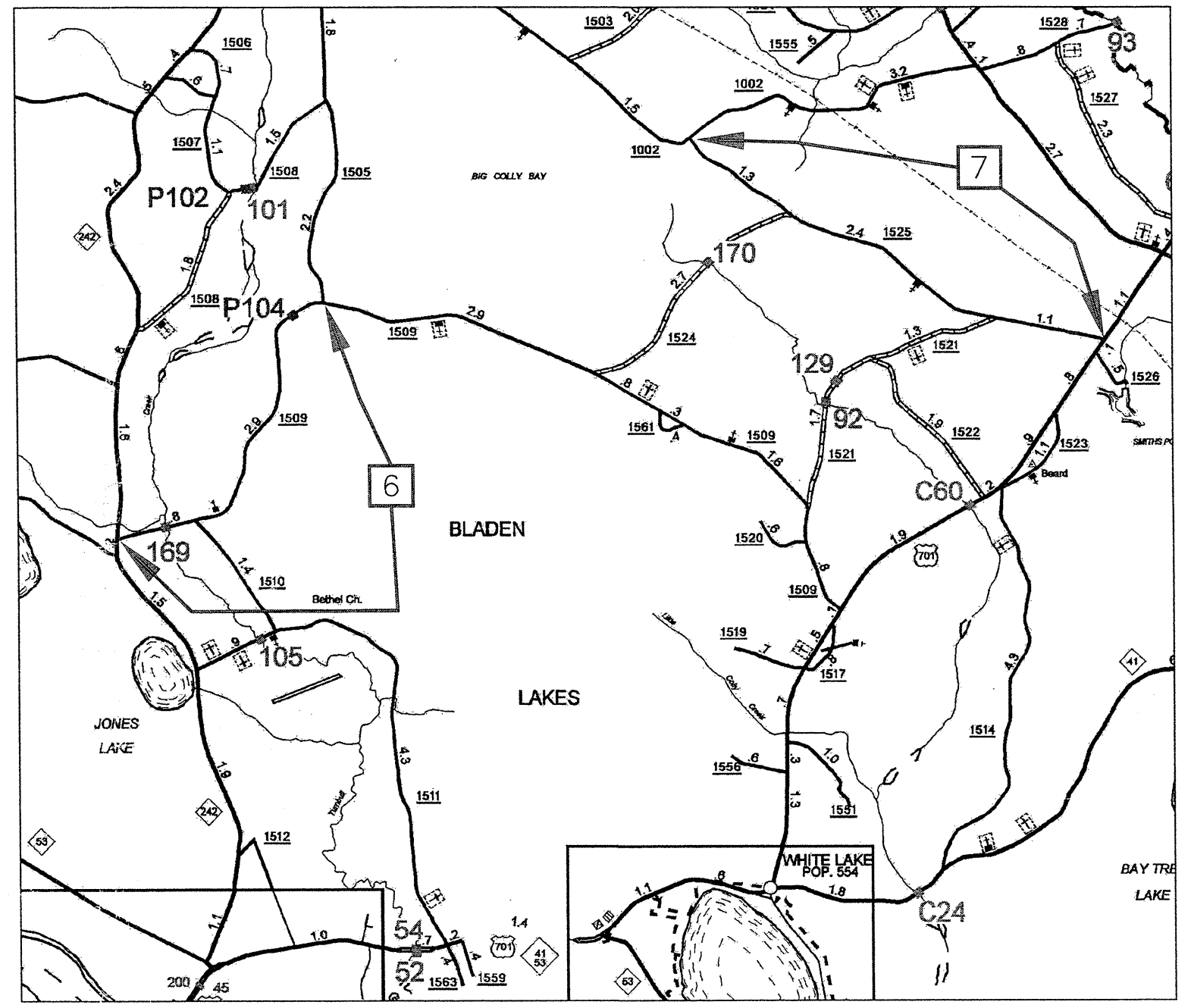
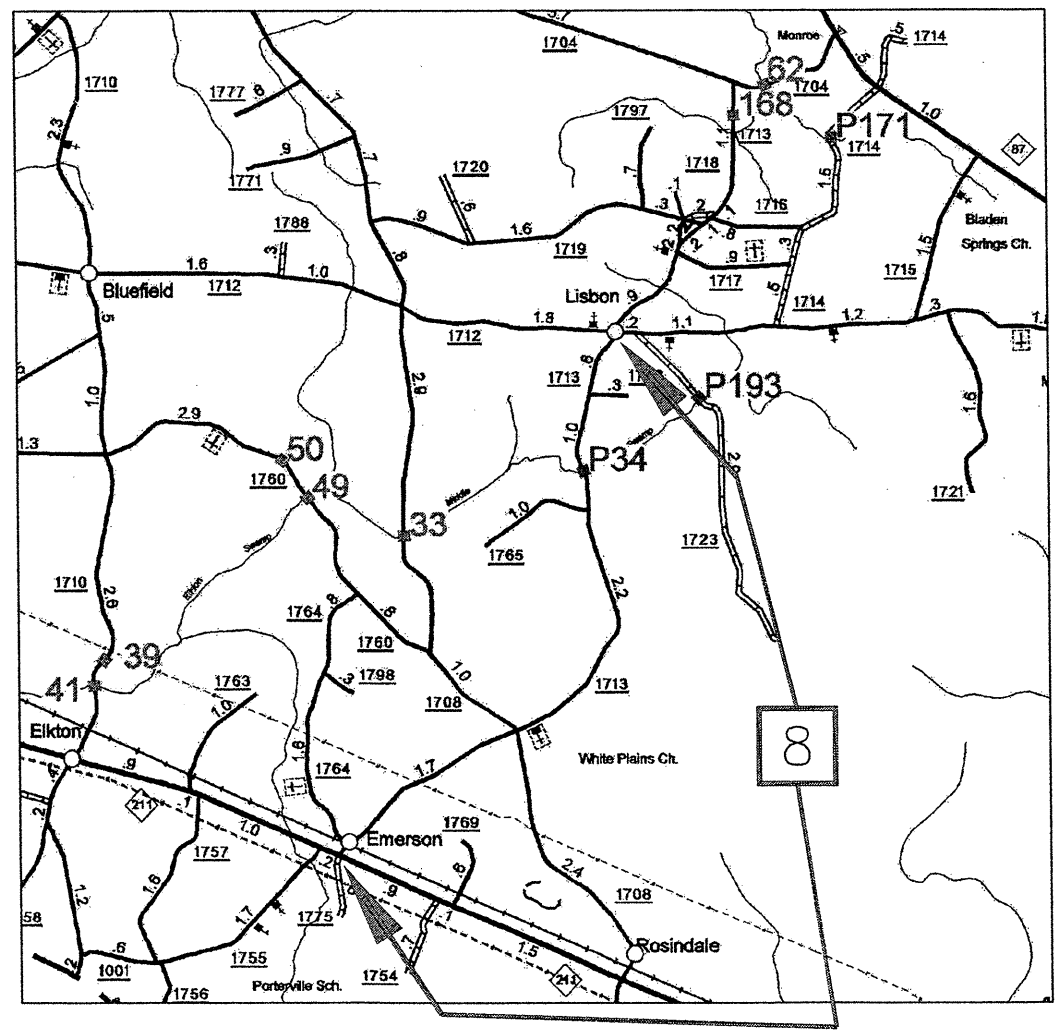
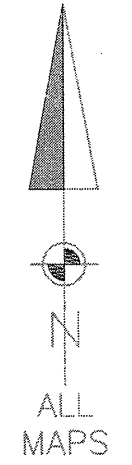
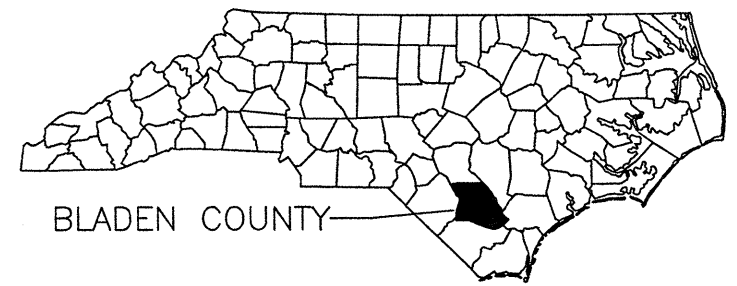
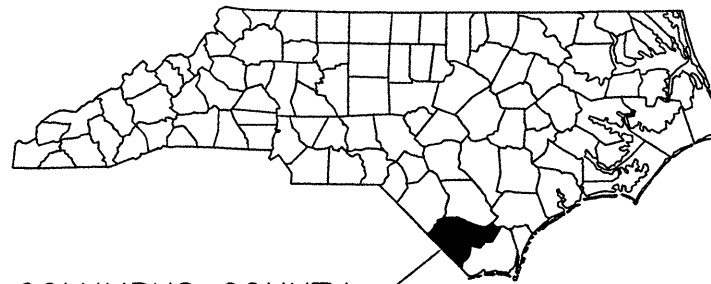


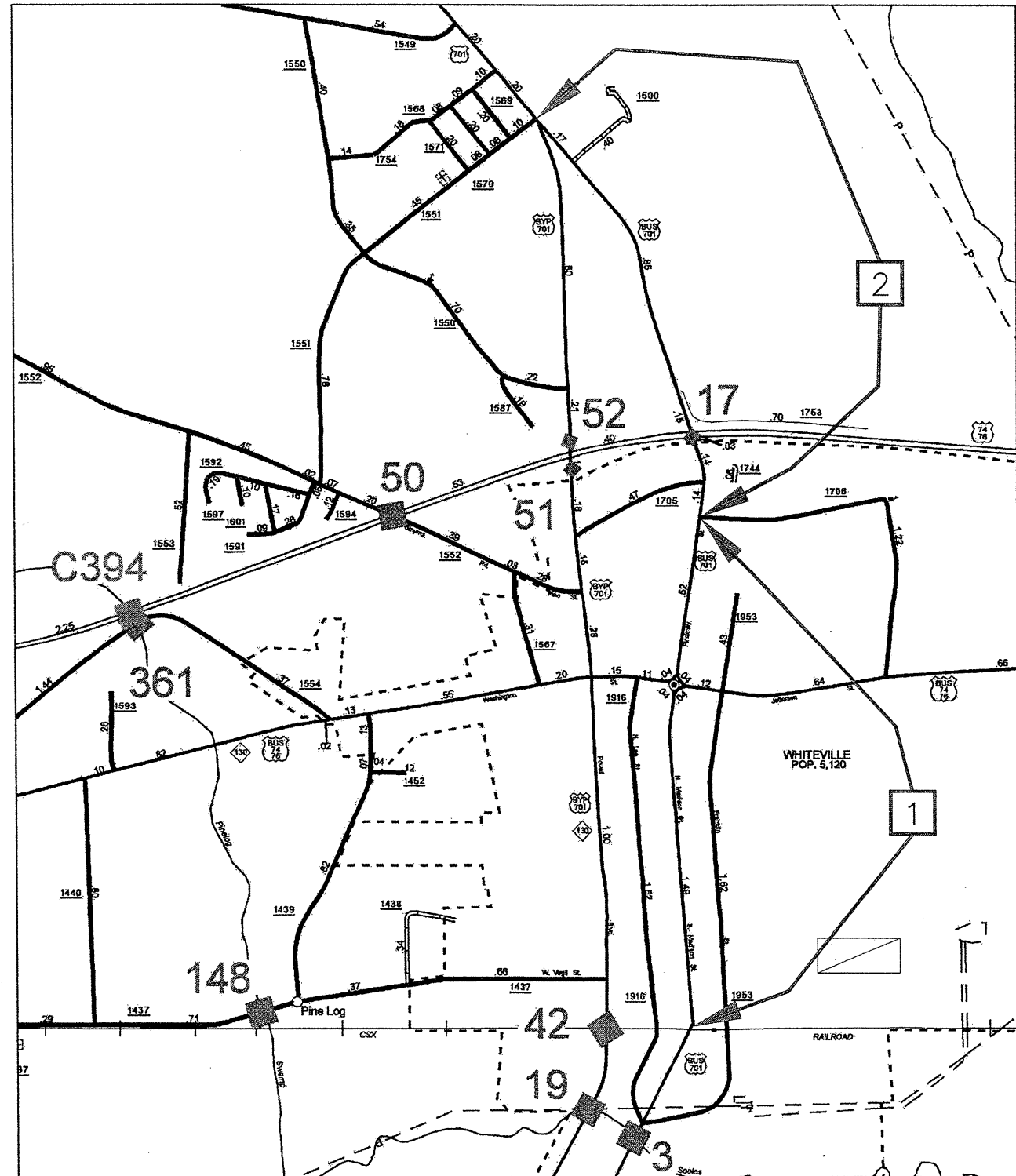
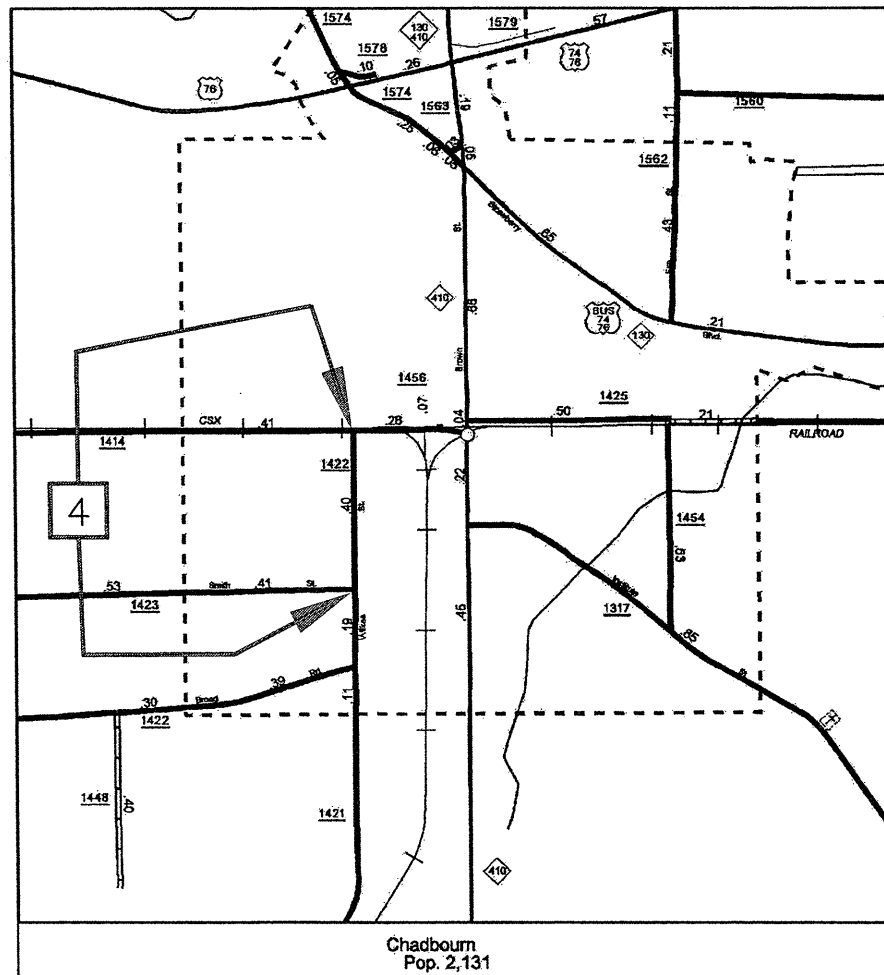
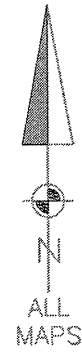
# RESURFACING MAPS — BLADEN COUNTY



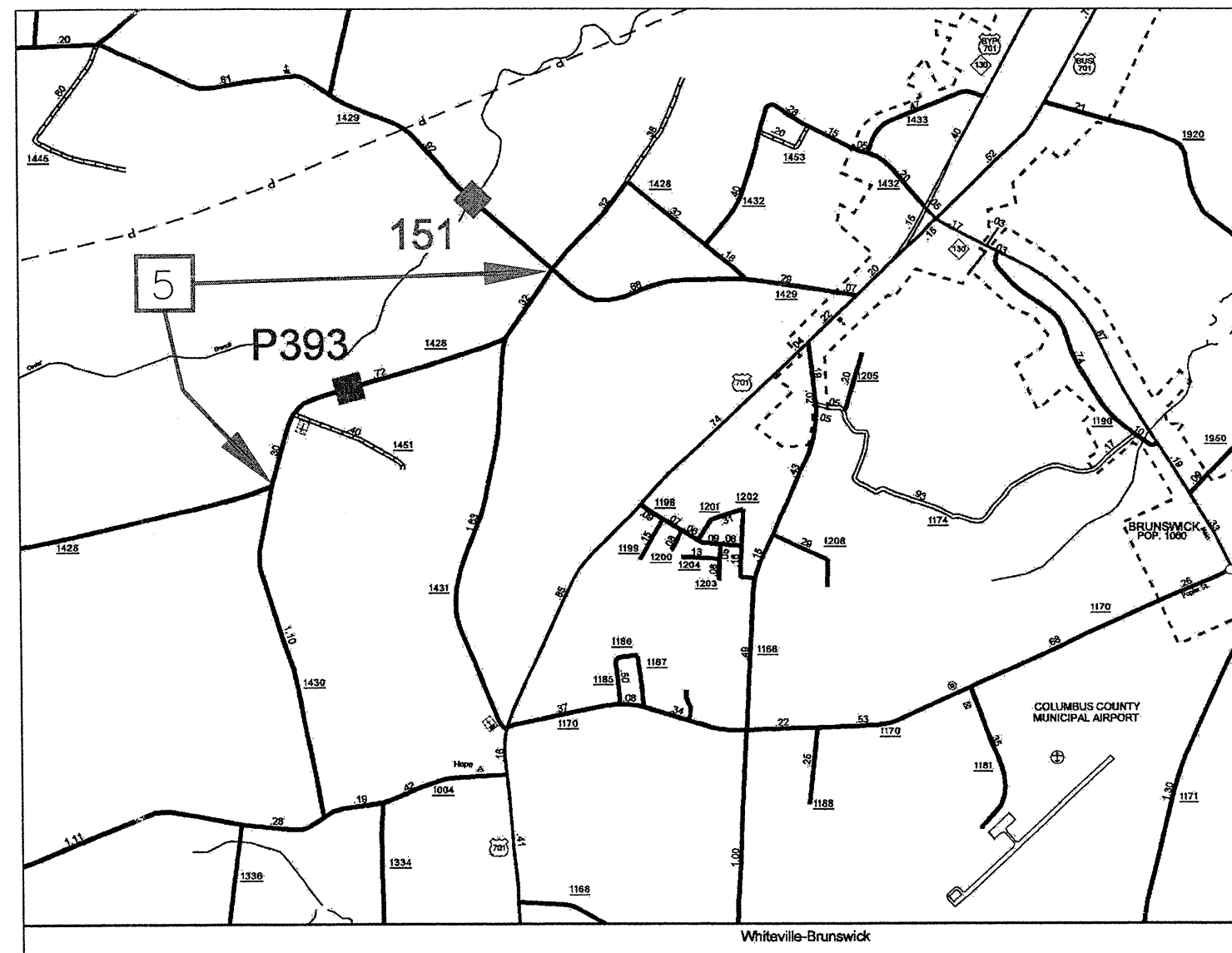
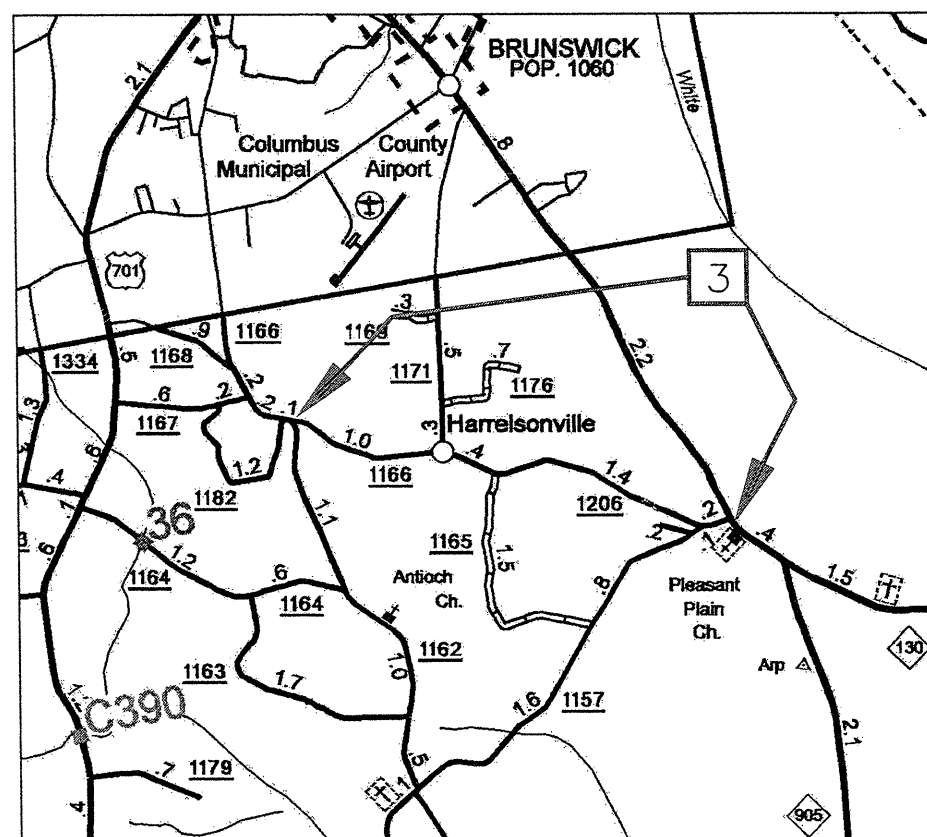
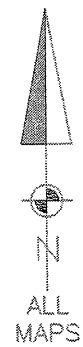
# RESURFACING MAPS — COLUMBUS COUNTY

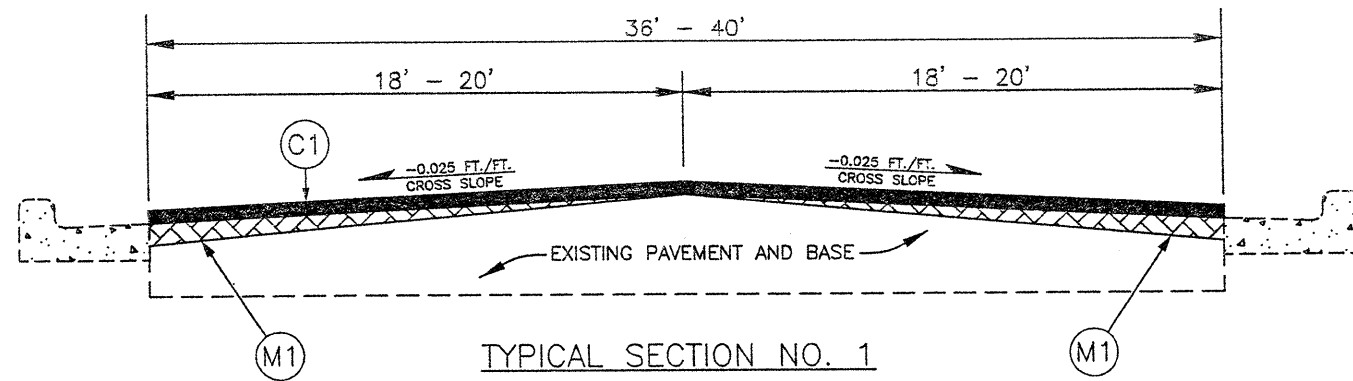


COLUMBUS COUNTY

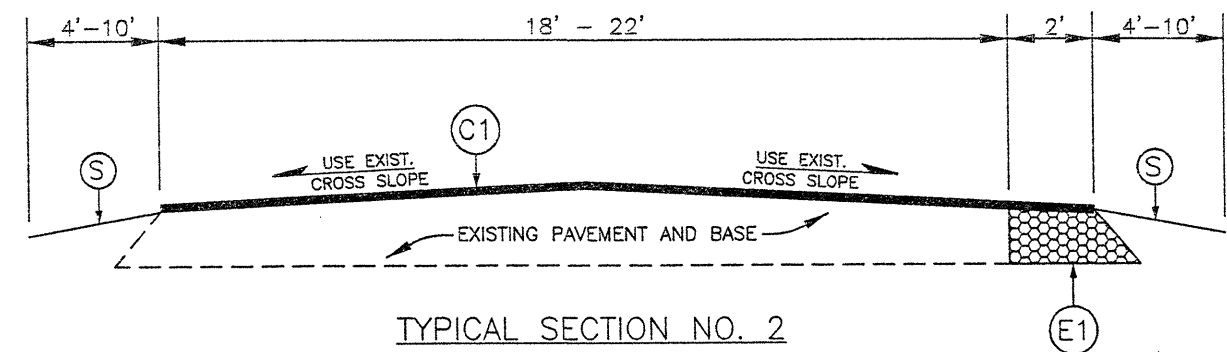


# RESURFACING MAPS – COLUMBUS COUNTY

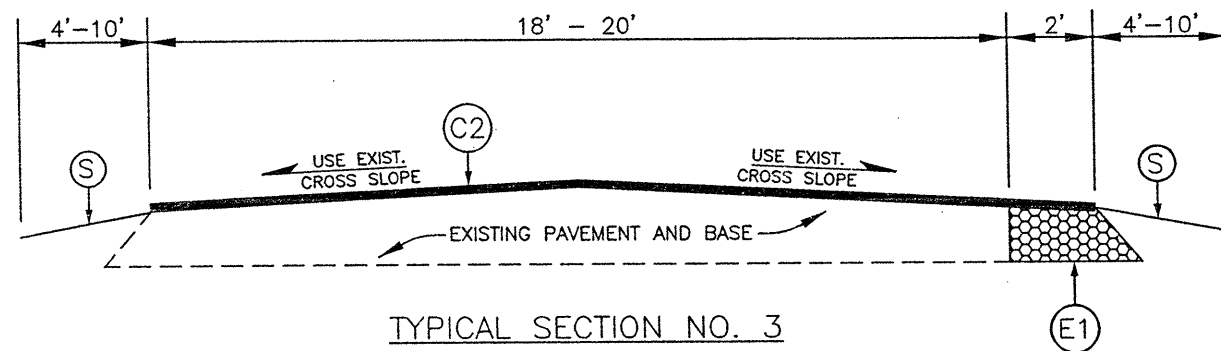




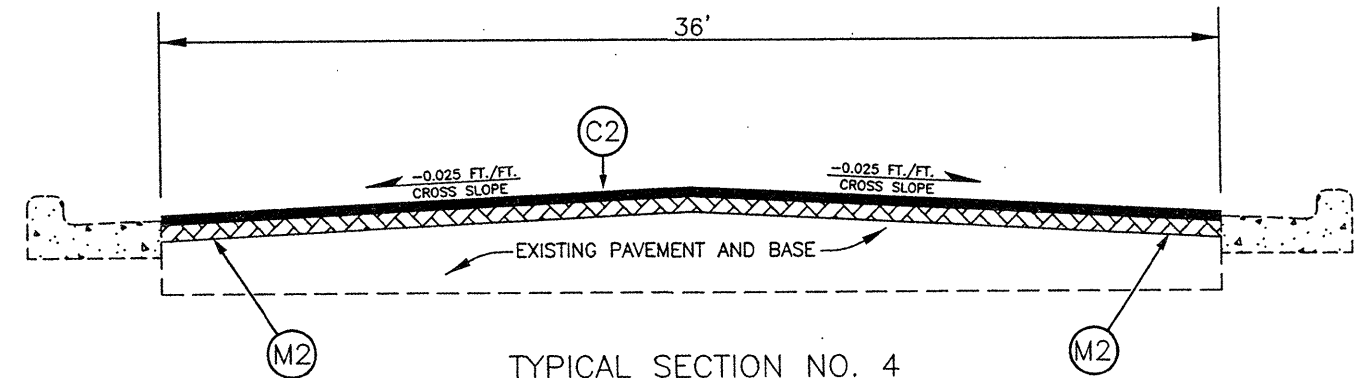
NOTE: INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 2.



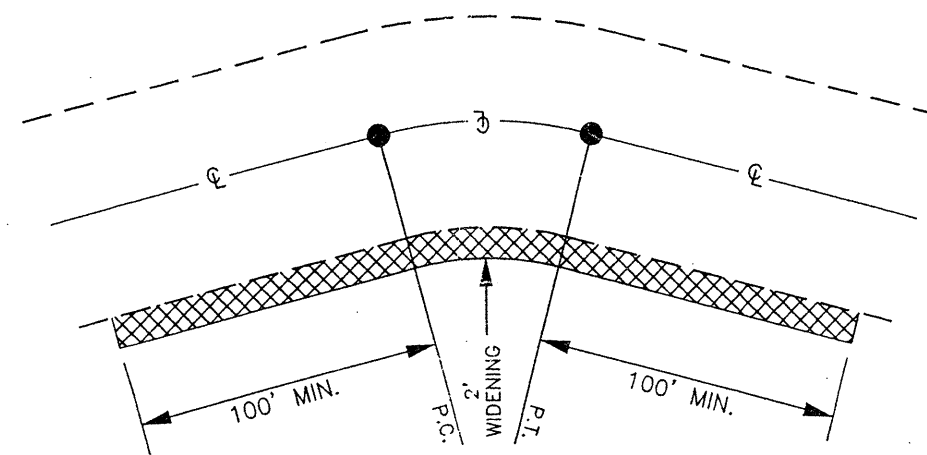
- NOTES:
1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 1.
  2. INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 2.
  3. INCLUDES MILLING ON ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 3.



- NOTES:
1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 1.
  2. INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 2.
  3. INCLUDES MILLING ON RAILROAD CROSSINGS, ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 3.



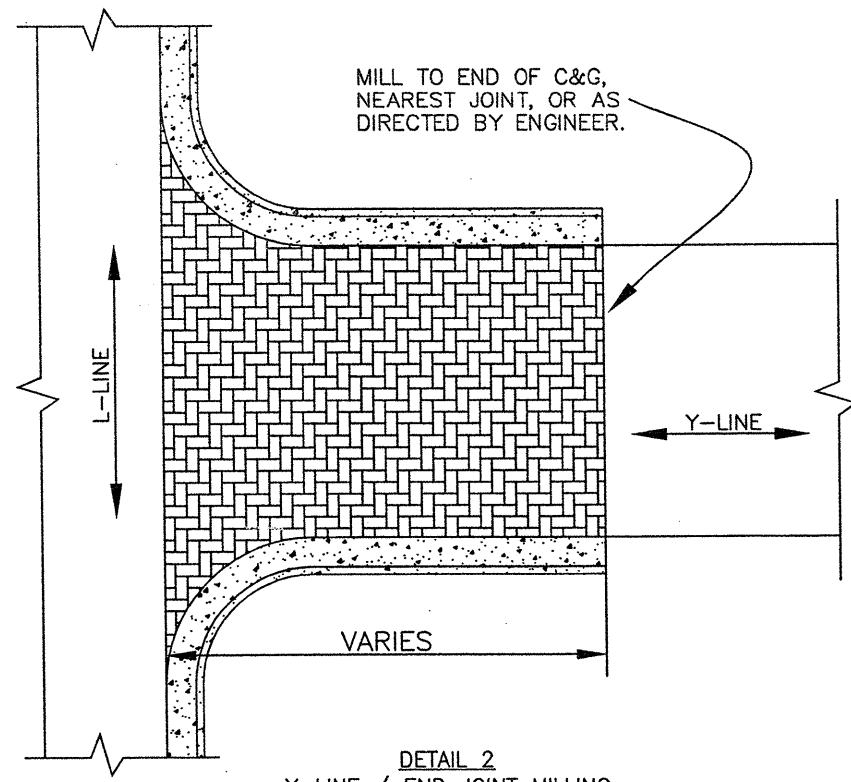
NOTE: INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 2.



DETAIL 1  
2' INSIDE CURVE WIDENING

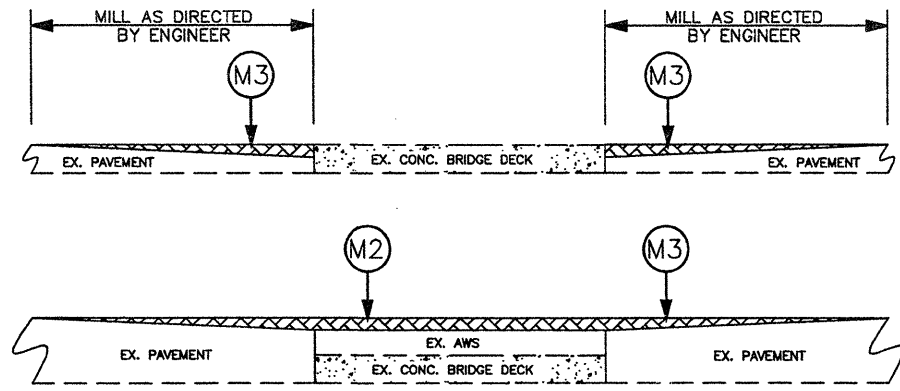
PAVEMENT SCHEDULE	
E1	Proposed approximately 5½" of Asphalt Concrete Base Course, Type B-25.0-B, at an average rate of 627 pounds per square yard for 2' widening at inside curve radii, as Directed by the Engineer.
C1	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type S-9.5-B, at an average rate of 168 pounds per square yard.
C2	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type SF-9.5-A, at an average rate of 165 pounds per square yard.
M1	Milling Depth 0" - 3" from the centerline of roadway to the edge of Curb & Gutter. Milling shall extend below the lip of the Gutter Pan by the thickness of the Proposed Overlay, or as Directed by the Engineer.
M2	Milling Depth 1½" for the entire width of the roadway, or as Directed by the Engineer.
M3	Milling Depth 0" - 1½" at all Bridge and Railroad Approaches, for the entire width of the roadway, or as Directed by the Engineer.
S	Shoulder Reconstruction as directed by the Engineer.

DRAWINGS NOT TO SCALE

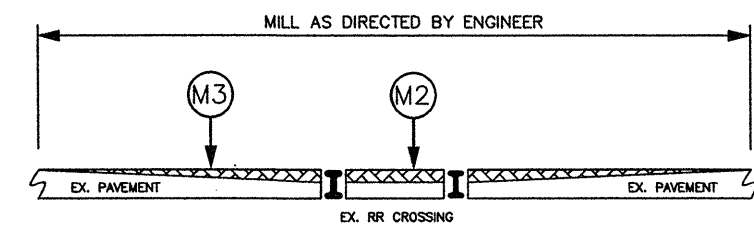


DETAIL 2  
Y-LINE / END JOINT MILLING

NOTE: INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THIS DETAIL.



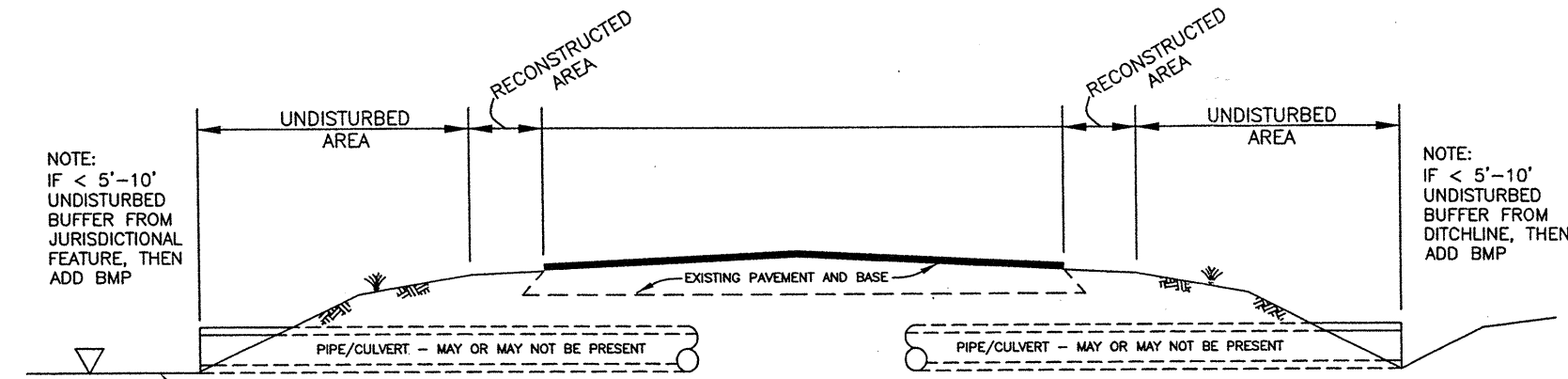
BRIDGE MILLING



RAILROAD TRACKS MILLING

DETAIL 3  
MILLING APPROACHES

NOTE: MILLING SHALL BE PERFORMED AT RR CROSSINGS, BRIDGE DECKS AND BRIDGE APPROACHES AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH THIS DETAIL.

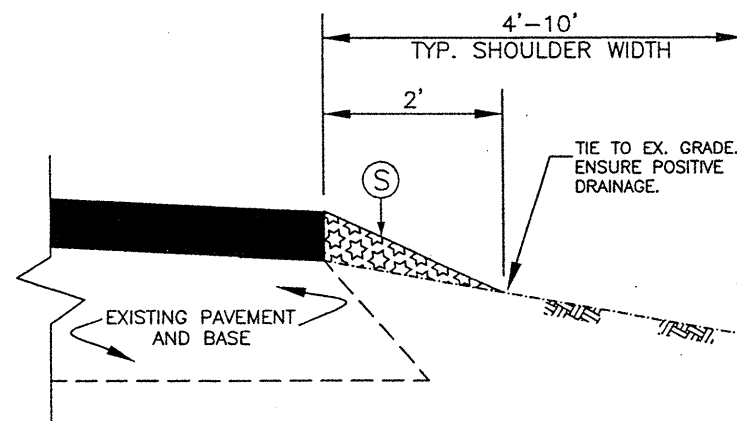


DETAIL 4  
EROSION CONTROL

NOTES:

1. IF A 5'-10' VEGETATED, UNDISTURBED BUFFER FROM ROW, DITCHLINE, WATER FEATURE OR DRAINAGE INLET CAN BE MAINTAINED, THEN NO BMP'S NEEDED.
2. IF < 5'-10' UNDISTURBED BUFFER FROM ROW, DITCHLINE, WATER FEATURE OR DRAINAGE INLET, THEN ADD BMP'S.
3. BMP OPTIONS:
  - a. MATTING MAY BE APPLIED AS SHOWN IN NCDOT STD. DWG. 1631.01 TO ESTABLISH BUFFER.
  - b. IF MATTING IS NOT PRACTICAL, OR THERE IS NOT ENOUGH SHOULDER WIDTH, THEN INSTALL TEMPORARY SILT FENCE AS SHOWN IN NCDOT STD. DWG. 1605.01, AND WATTLES WITH POLYACRYLAMIDE (PAM).

PAVEMENT SCHEDULE	
E1	Proposed approximately 5½" of Asphalt Concrete Base Course, Type B-25.0-B, at an average rate of 627 pounds per square yard for 2' widening at inside curve radii, as Directed by the Engineer.
C1	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type S-9.5-B, at an average rate of 168 pounds per square yard.
C2	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type SF-9.5-A, at an average rate of 165 pounds per square yard.
M1	Milling Depth 0" - 3" from the centerline of roadway to the edge of Curb & Gutter. Milling shall extend below the lip of the Gutter Pan by the thickness of the Proposed Overlay, or as Directed by the Engineer.
M2	Milling Depth 1½" for the entire width of the roadway, or as Directed by the Engineer.
M3	Milling Depth 0" - 1½" at all Bridge and Railroad Approaches, for the entire width of the roadway, or as Directed by the Engineer.
S	Shoulder Reconstruction as directed by the Engineer.
DRAWINGS NOT TO SCALE	



**DETAIL 6**  
SHOULDER RECONSTRUCTION

**NOTES:**

1. SHOULDER SHALL BE RECONSTRUCTED FROM THE EDGE OF PAVEMENT OUT TO A WIDTH OF 2'. ENSURE POSITIVE DRAINAGE AWAY FROM ROADWAY.
2. THE EXISTING SHOULDER SHALL BE SCARIFIED PRIOR TO ADDING BORROW MATERIAL TO PROVIDE A GOOD BOND BETWEEN LAYERS. SHOULDER SHALL BE PROPERLY COMPACTED AFTER SOIL PLACEMENT.
3. BORROW MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE.
4. A VEGETATIVE BUFFER SHALL BE MAINTAINED BETWEEN THE DISTURBED AREA ALONG THE EDGE OF PAVEMENT AND THE DITCH SHOULDER POINT TO MINIMIZE EROSION. PULLING DITCHES OR CUTTING SHOULDERS TO GENERATE BORROW MATERIAL WILL NOT BE ALLOWED.
5. REQUIRED BORROW MATERIAL MAY BE OBTAINED FROM WIDENING OPERATIONS WITHIN THE PROJECT LIMITS, OR FROM NCDOT STOCKPILES. ANY EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN APPROVED DISPOSAL SITE.

COLUMBUS		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4
	PRIMARY	US 701 Bus.-A	US 701 Bus.-B & SR 1428		
SECONDARY			SR 1166	SR 1422	
-----					
BLADEN		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4
	PRIMARY				
SECONDARY			SR 1509, SR 1525 & SR 1713		

PROJECT NO.	SHEET NO.	TOTAL NO.
6cr.10241.76, 6cr.20091.76, 6cr.20241.76,	7	

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1 1/2" MILLING SY	0" TO 3" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	ASPHALT CONC SURFACE COURSE, TYPE S9.5B (LEVELING COURSE) TON	SURFACE COURSE, SF9.5A TONS	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A (LEVELING COURSE) TON	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	
6cr.10241.76	Columbus	1	US 701BUS-A	FROM MAIN STREET (MP18.08) TO SR 1706 (MP19.8)	1	NO	1.62	40				36,773		1,556		3,561				214	32	
		2	US 701BUS-B	FROM SR1706(MP19.8) TO US 701(MP21.26)	2	NO	1.46	22	35	2.92			516	489	162	1,765	29			115	29	
<b>TOTAL FOR PROJ NO. 6cr.10241.76</b>							<b>3.08</b>		<b>35</b>	<b>2.92</b>		<b>36,773</b>	<b>516</b>	<b>2,045</b>	<b>162</b>	<b>5,326</b>	<b>29</b>			<b>329</b>	<b>61</b>	
6cr.20091.76	Bladen	6	SR 1509	FROM SR 1505 (MP6.63) TO NC 242 (MP10.34)	3	NO	3.71	20	89	7.42			815	89	272				3,871	32	273	74
		7	SR1525	FROM SR 1002 (MP0.00) TO US 701 (MP4.82)	3	NO	4.82	20	116	9.64				133	353				5,034	32	355	96
		8	SR 1713	FROM SR 1712 (MP2.44) TO NC 211 (MP7.98)	3	NO	5.54	18	133	11.08				222	408				5,242	29	371	200
<b>TOTAL FOR PROJ NO. 6cr.20091.76</b>							<b>14.07</b>		<b>338</b>	<b>28.14</b>			<b>815</b>	<b>444</b>	<b>1,033</b>				<b>14,147</b>	<b>93</b>	<b>999</b>	<b>370</b>
6cr.20241.76	Columbus	3	SR 1166	FROM NC 130 (MP0.00) TO SR 1162 (MP2.89)	3	NO	2.89	18	69	5.78				133	213				2,740	1,104	259	20
		4	SR 1422	FROM SR 1421 (MP1.56) TO SR 1414 (MP2.15)	4	NO	0.59	36			12,461			833					1,141		76	12
		5	SR 1428	FROM SR 1429 (MP0.86) TO SR 1430 (MP2.12)	2	NO	1.26	18	30	2.52				667	92	1,250			58	83	25	
<b>TOTAL FOR PROJ NO. 6cr.20241.76</b>							<b>4.74</b>		<b>99</b>	<b>8.30</b>	<b>12,461</b>			<b>1,633</b>	<b>305</b>	<b>1,250</b>			<b>3,881</b>	<b>1,162</b>	<b>418</b>	<b>57</b>
<b>GRAND TOTAL</b>							<b>21.89</b>		<b>472</b>	<b>39.36</b>	<b>12,461</b>	<b>36,773</b>	<b>1,331</b>	<b>4,122</b>	<b>1,500</b>	<b>6,576</b>	<b>29</b>		<b>18,028</b>	<b>1,255</b>	<b>1,746</b>	<b>488</b>

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	MATTING FOR EROSION CONTROL SY	WATTLE LF	POLYACRYLAMIDE (PAM) LB	SEED & MULCHING AC	PAVED TRENCHING (1CONDUIT, 2") LF	UNPAVED TRENCHING (1CONDUIT, 2") LF	JUNCTION BOX (STANDARD SIZE) EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY) EA	2" RISER WITH WEATHERHEAD EA	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (14-2)(FT) LF	
6cr.10241.76	Columbus	1	US 701BUS-A	FROM MAIN STREET (MP18.08) TO SR 1706 (MP19.8)	1	NO	1.62	40	12	29						30.00	300.00	3.00	3.00	3.00	1,700.00	300.00	
		2	US 701BUS-B	FROM SR1706(MP19.8) TO US 701(MP21.26)	2	NO	1.46	22	4	4	219	58	105	4	3.54								
<b>TOTAL FOR PROJ NO. 6cr.10241.76</b>							<b>3.08</b>		<b>16</b>	<b>33</b>	<b>219</b>	<b>58</b>	<b>105</b>	<b>4</b>	<b>3.54</b>	<b>30.00</b>	<b>300.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>1,700.00</b>	<b>300.00</b>	
6cr.20091.76	Bladen	6	SR 1509	FROM SR 1505 (MP6.63) TO NC 242 (MP10.34)	3	NO	3.71	20			557	148	267	11	8.99								
		7	SR1525	FROM SR 1002 (MP0.00) TO US 701 (MP4.82)	3	NO	4.82	20			723	193	347	15	11.68								
		8	SR 1713	FROM SR 1712 (MP2.44) TO NC 211 (MP7.98)	3	NO	5.54	18			831	222	399	17	13.43								
<b>TOTAL FOR PROJ NO. 6cr.20091.76</b>							<b>14.07</b>				<b>2,111</b>	<b>563</b>	<b>1,013</b>	<b>43</b>	<b>34.10</b>								
6cr.20241.76	Columbus	3	SR 1166	FROM NC 130 (MP0.00) TO SR 1162 (MP2.89)	3	NO	2.89	18			434	116	208	9	7.01								
		4	SR 1422	FROM SR 1421 (MP1.56) TO SR 1414 (MP2.15)	4	NO	0.59	36	8	10													
		5	SR 1428	FROM SR 1429 (MP0.86) TO SR 1430 (MP2.12)	2	NO	1.26	18			129	34	62	3	3.05								
<b>TOTAL FOR PROJ NO. 6cr.20241.76</b>							<b>4.74</b>		<b>8</b>	<b>10</b>	<b>563</b>	<b>150</b>	<b>270</b>	<b>12</b>	<b>10.06</b>								
<b>GRAND TOTAL</b>							<b>21.89</b>		<b>24</b>	<b>43</b>	<b>2,893</b>	<b>771</b>	<b>1,388</b>	<b>59</b>	<b>47.70</b>	<b>30.00</b>	<b>300.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>1,700.00</b>	<b>300.00</b>	

PROJECT NO.	SHEET NO.	TOTAL NO.
6cr.10241.76, 6cr.20091.76 6cr.20241.76,	8	

**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	439900000-E	468500000-E	468600000-E	469500000-E	469700000-E	470500000-E	471000000-E	472100000-E						481000000-E		490000000-N					
							TEMPORARY TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	8" X 90 M YELLOW THERMO	8" X 120 M WHITE THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO RXR 120 M	THERMO MSG SCHOOL 120 M	THERMO LT ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	CRYSTAL & RED MARKERS	YELLOW & YELLOW MARKERS		
NO		NO					LS	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA			
6cr.10241.76	Columbus	1	US 701BUS-A	FROM MAIN STREET (MP18.08) TO SR 1706 (MP19.8)	1.62	40	1	60	210	18,500		725	50	575	2		2	1	2					10	145		
		2	US 701BUS-B	FROM SR1706(MP19.8) TO US 701(MP21.26)	1.46	22	*	15,500	450	17,200	650								5	2					145		
<b>TOTAL FOR PROJ NO. 6cr.10241.76</b>					<b>3.08</b>			<b>15,560</b>	<b>660</b>	<b>35,700</b>	<b>650</b>	<b>725</b>	<b>50</b>	<b>575</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>2</b>			<b>10</b>	<b>290</b>			
								<b>36,360</b>							<b>2</b>			<b>12</b>						<b>300</b>			
6cr.20091.76	Bladen	6	SR 1509	FROM SR 1505 (MP6.63) TO NC 242 (MP10.34)	3.71	20	*						80		12								80,000	68,000			
		7	SR1525	FROM SR 1002 (MP0.00) TO US 701 (MP4.82)	4.82	20	*																104,000	88,400			
		8	SR 1713	FROM SR 1712 (MP2.44) TO NC 211 (MP7.98)	5.54	18	*					100	80	4									120,000	102,000	400		
<b>TOTAL FOR PROJ NO. 6cr.20091.76</b>					<b>14.07</b>							<b>100</b>	<b>160</b>	<b>4</b>	<b>12</b>	<b>16</b>							<b>304,000</b>	<b>258,400</b>	<b>400</b>		
																							<b>562,400</b>		<b>400</b>		
6cr.20241.76	Columbus	3	SR 1166	FROM NC 130 (MP0.00) TO SR 1162 (MP2.89)	2.89	18	*																64,000	54,400	225		
		4	SR 1422	FROM SR 1421 (MP1.56) TO SR 1414 (MP2.15)	0.59	36	*																	13,000			
		5	SR 1428	FROM SR 1429 (MP0.86) TO SR 1430 (MP2.12)	1.26	18	*																28,000	23,800			
<b>TOTAL FOR PROJ NO. 6cr.20241.76</b>					<b>4.74</b>		<b>1</b>																<b>92,000</b>	<b>91,200</b>	<b>225</b>		
																							<b>183,200</b>		<b>225</b>		
<b>GRAND TOTAL</b>					<b>21.89</b>		<b>1</b>	<b>15,560</b>	<b>660</b>	<b>35,700</b>	<b>650</b>	<b>725</b>	<b>150</b>	<b>735</b>	<b>6</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>2</b>		<b>396,000</b>	<b>349,600</b>	<b>10</b>	<b>915</b>	
								<b>36,360</b>							<b>18</b>			<b>12</b>						<b>745,600</b>		<b>925</b>	



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. SHEET NO.  
6CR.10241.76 9  
6ER.20091.76  
6CR.20241.76

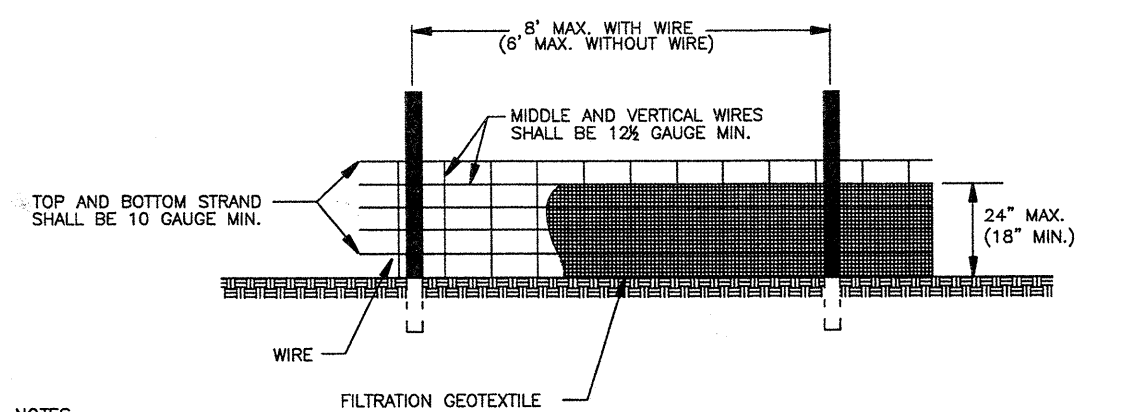
**SOIL STABILIZATION TIMEFRAMES**

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 HOW ZONES.

6CR.20091.76  
6CR.20241.76

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

ENGLISH STANDARD DRAWING FOR  
TEMPORARY SILT FENCE



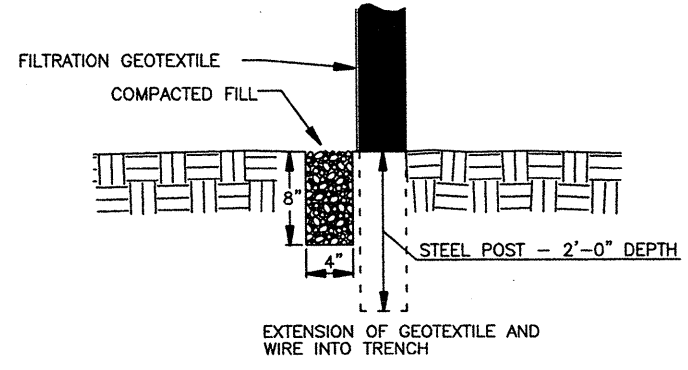
**NOTES**

USE FILTRATION GEOTEXTILE A MINIMUM OF 36" IN WIDTH AND FASTEN ADEQUATELY TO THE POSTS AND WIRE AS DIRECTED.

USE WIRE A MINIMUM OF 32" IN WIDTH AND WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.

PROVIDE 5'-0" STEEL POST OF THE SELF-FASTENER ANGLE STEEL TYPE.

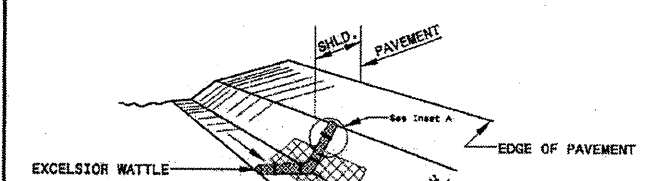
FOR MECHANICAL SLICING METHOD INSTALLATION, GEOTEXTILE SHALL BE A MAXIMUM OF 18" ABOVE GROUND SURFACE.



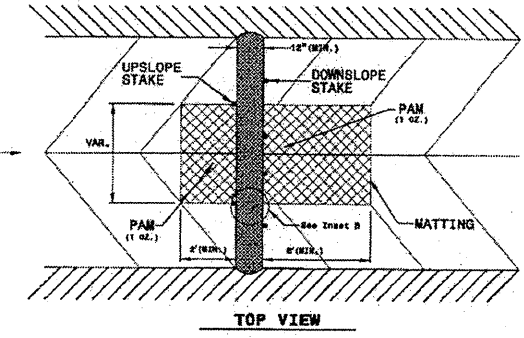
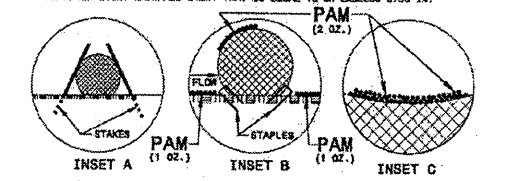
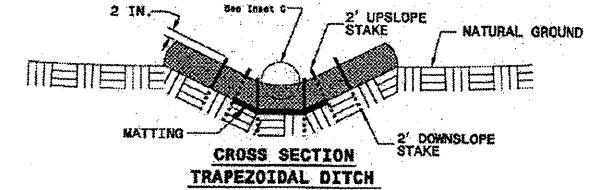
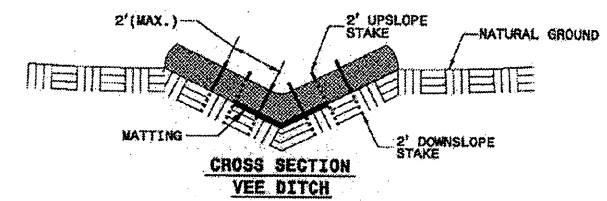
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
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**WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL**



**ISOMETRIC VIEW**



**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 WATTLES 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.

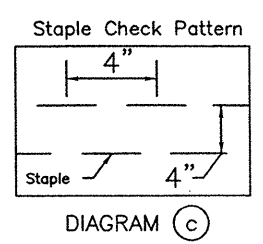
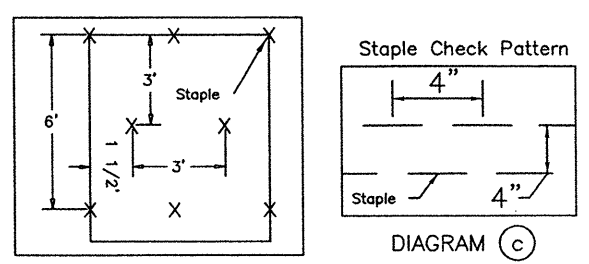
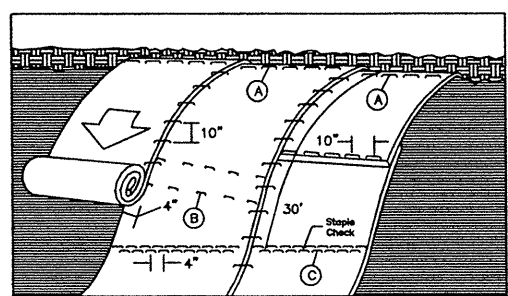
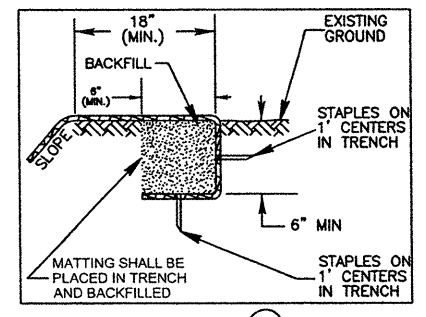
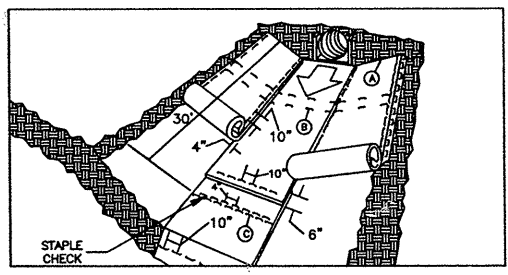
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

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ENGLISH STANDARD DRAWING FOR  
MATTING INSTALLATION



**NOTES:**

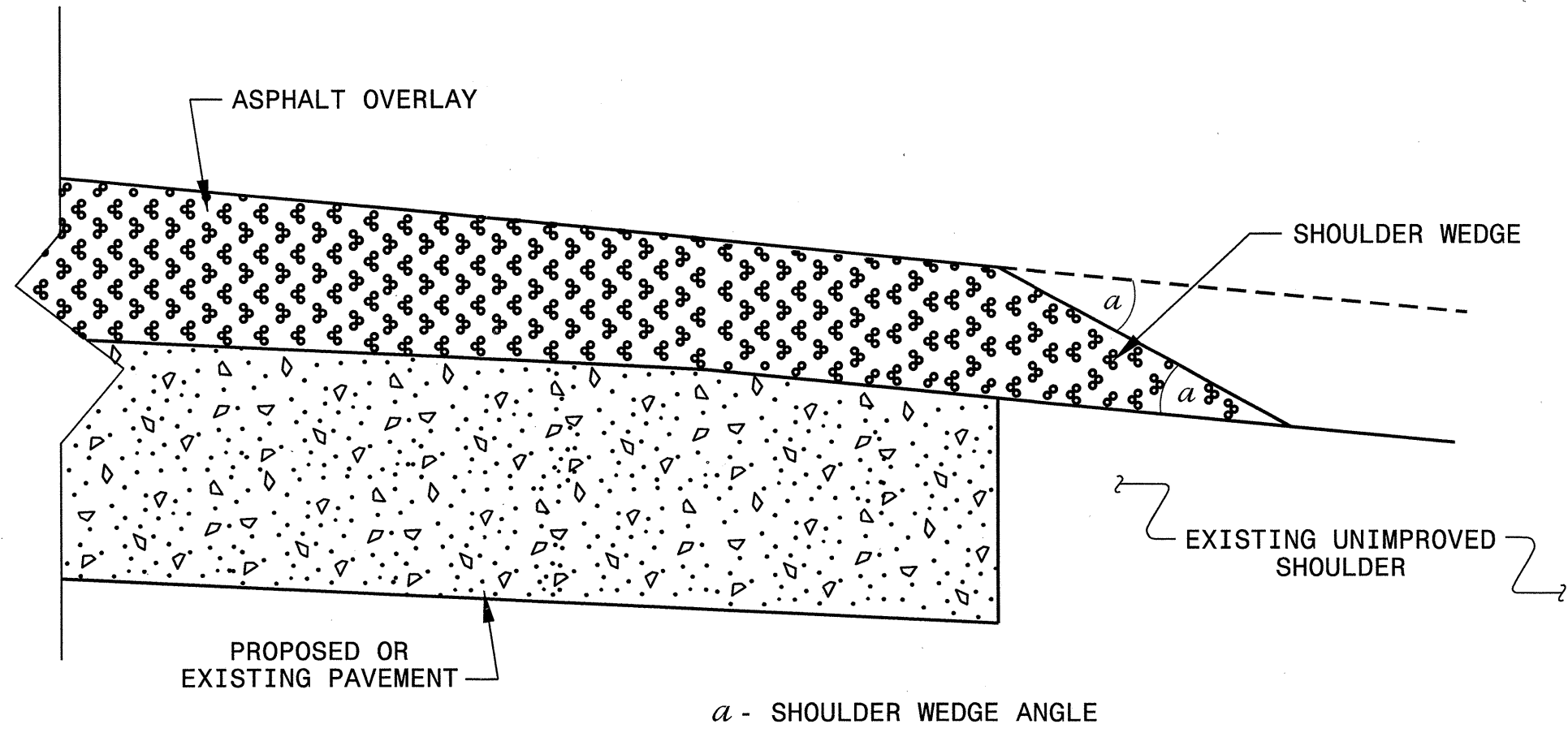
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, COIR FIBER MAT AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION AND AS DIRECTED.

STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

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ENGLISH STANDARD DRAWING FOR  
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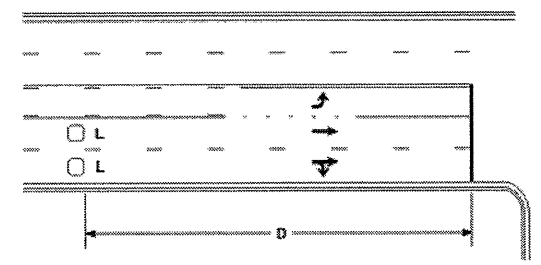


# SHOULDER WEDGE DETAIL

C:\APR-2012\1208\Projects\Special\_Details\Jhoverton\shoulderwedgedetail.dgn  
 TSP  
 TSP

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b> Office 919-707-6950 FAX 919-250-4119	
<b>SHOULDER WEDGE DETAIL</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn	

### High Speed Detection [≥40 mph (64 km/hr)]

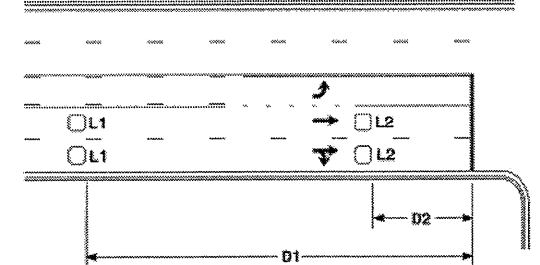


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

L = 6ft X 6ft (1.8m X 1.8m)  
 Wired in series for TS1  
 Controllers  
 Wired separately for TS2,  
 170, and 2070L Controllers

Volume Density Operation

OR

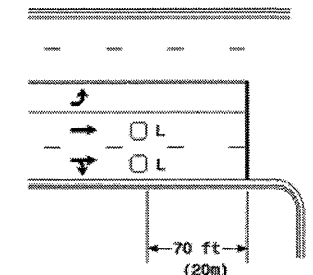


Speed Limit mph (km/hr)	D1 (m)	D2 (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft  
 (1.8m X 1.8m)  
 Wired in series  
 L2 = 6ft X 6ft  
 (1.8m X 1.8m)  
 Wired in series

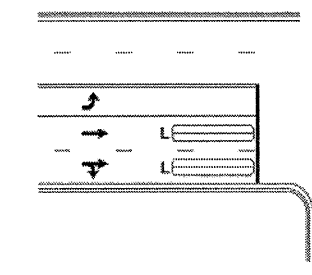
"Stretch" Operation

### Low Speed Detection [≤35 mph (56 km/hr)]



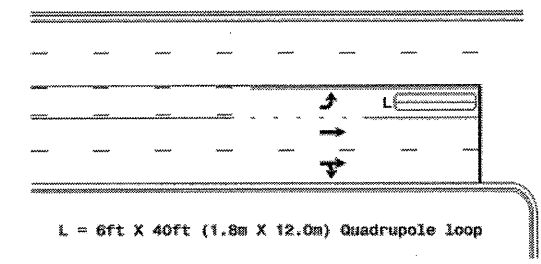
L = 6ft X 6ft (1.8m X 1.8m)  
 Wired in series

OR



L = 6ft X 40ft (1.8m X 12.0m)  
 Quadropole loop, wired separately

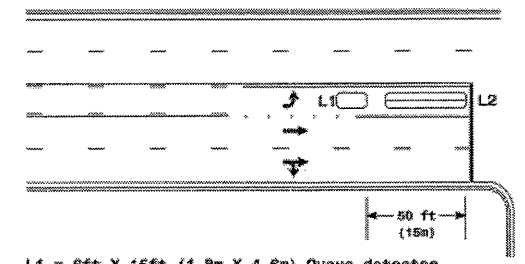
### Left Turn Lane Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadropole loop

Presence Loop Detection

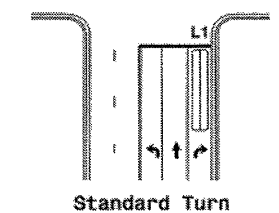
OR



L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector  
 L2 = 6ft X 40ft (1.8m X 12.0m) Quadropole loop

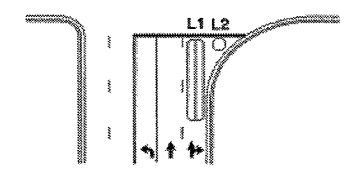
Queue Loop Detection

### Right Turn Lane Detection

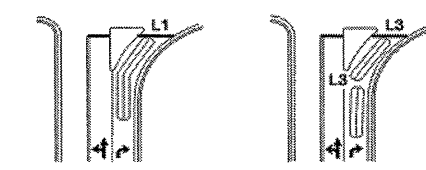


Standard Turn

L1 = 6ft X 40ft (1.8m X 12.0m) Quadropole loop  
 L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop  
 Wired separately  
 L3 = 6ft X 20ft (1.8m X 6.0m) Quadropole loop  
 Wired in series

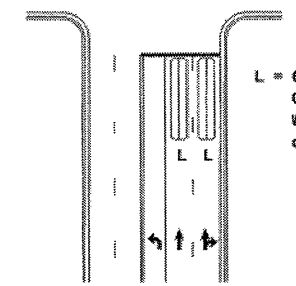


Wide Radius Turn



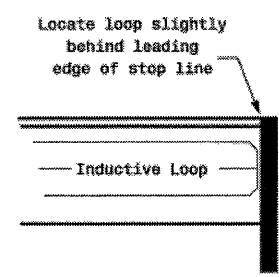
Channelized Turn

### Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)  
 Quadropole 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 when stop line is  
 greater than 15' (4.5m) from edge  
 of intersecting roadway; or, when  
 loop detects a permissive or  
 protected/permissive left turn.

### Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)  
 loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadropole loops: Use 2-4-2 turns

6' X 15' (1.8m X 4.6m) Loops:  
 Lead-in < 150' (45 m), use 2 turns  
 Lead-in > 150' (45 m), use 3 turns

	<b>Typical Loop Locations</b>		
	SCALE N/A	PREPARED BY: P. I. Alexander REVIEWED BY:	

6CR-2009-01-76-01  
 06/15/2006 10:00 AM  
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 06/15/2006 10:00 AM