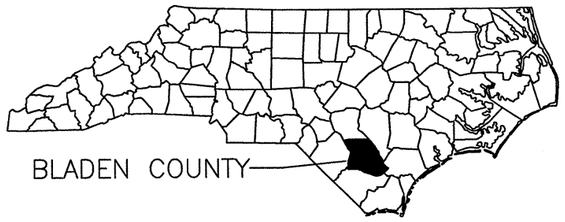
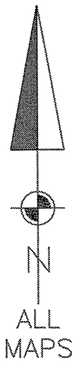
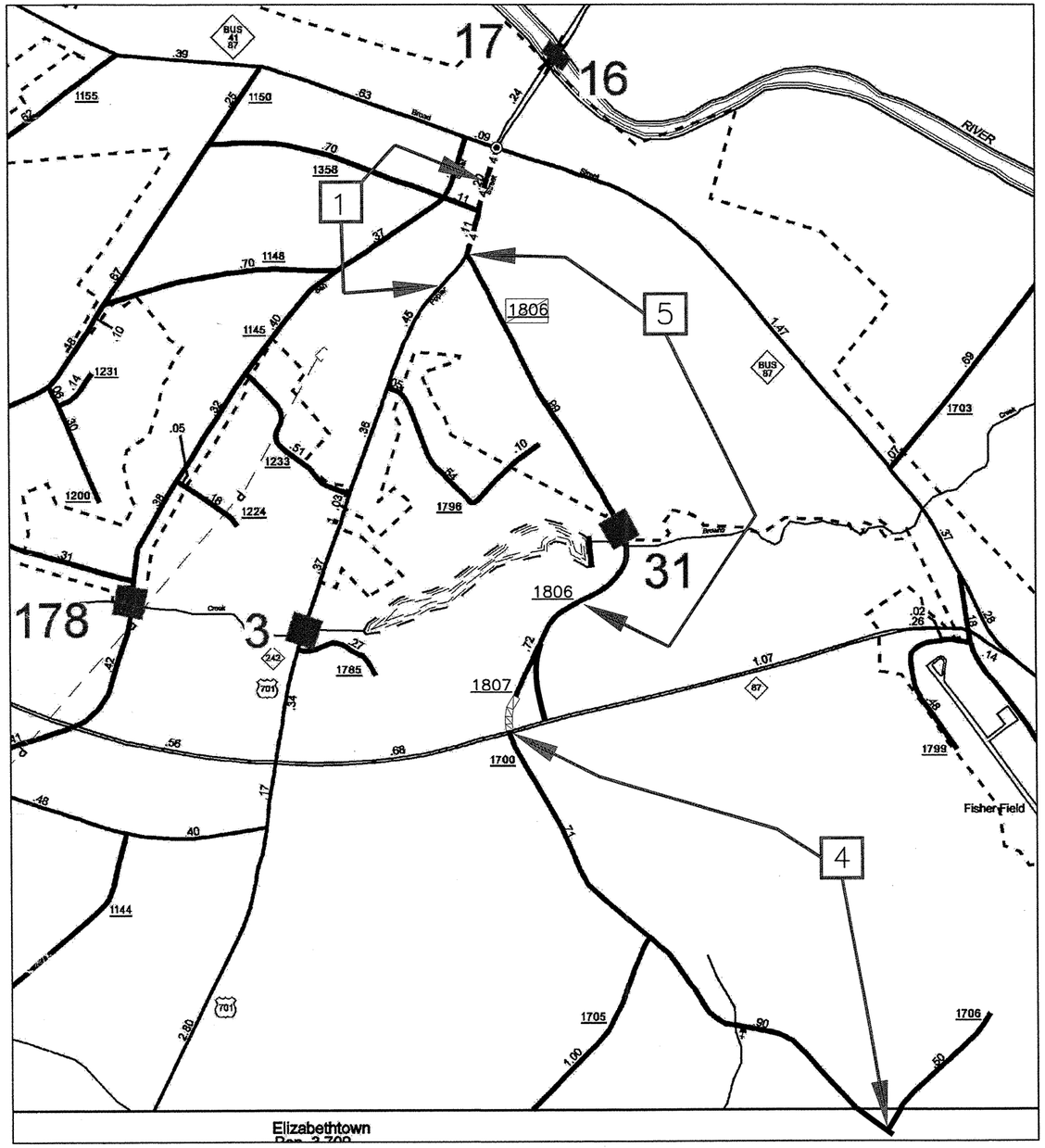
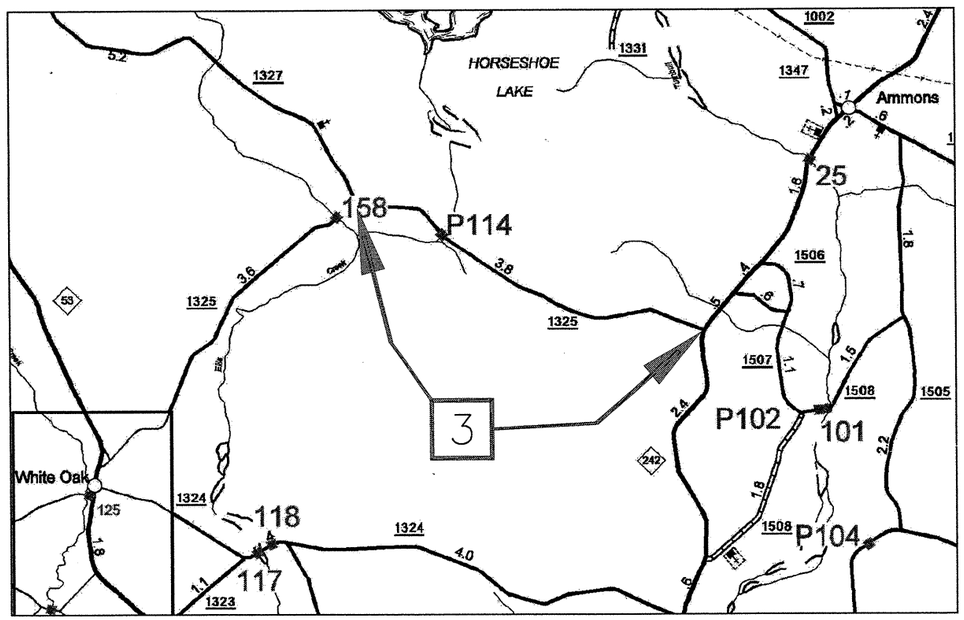
PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	1

RESURFACING MAPS – BLADEN COUNTY





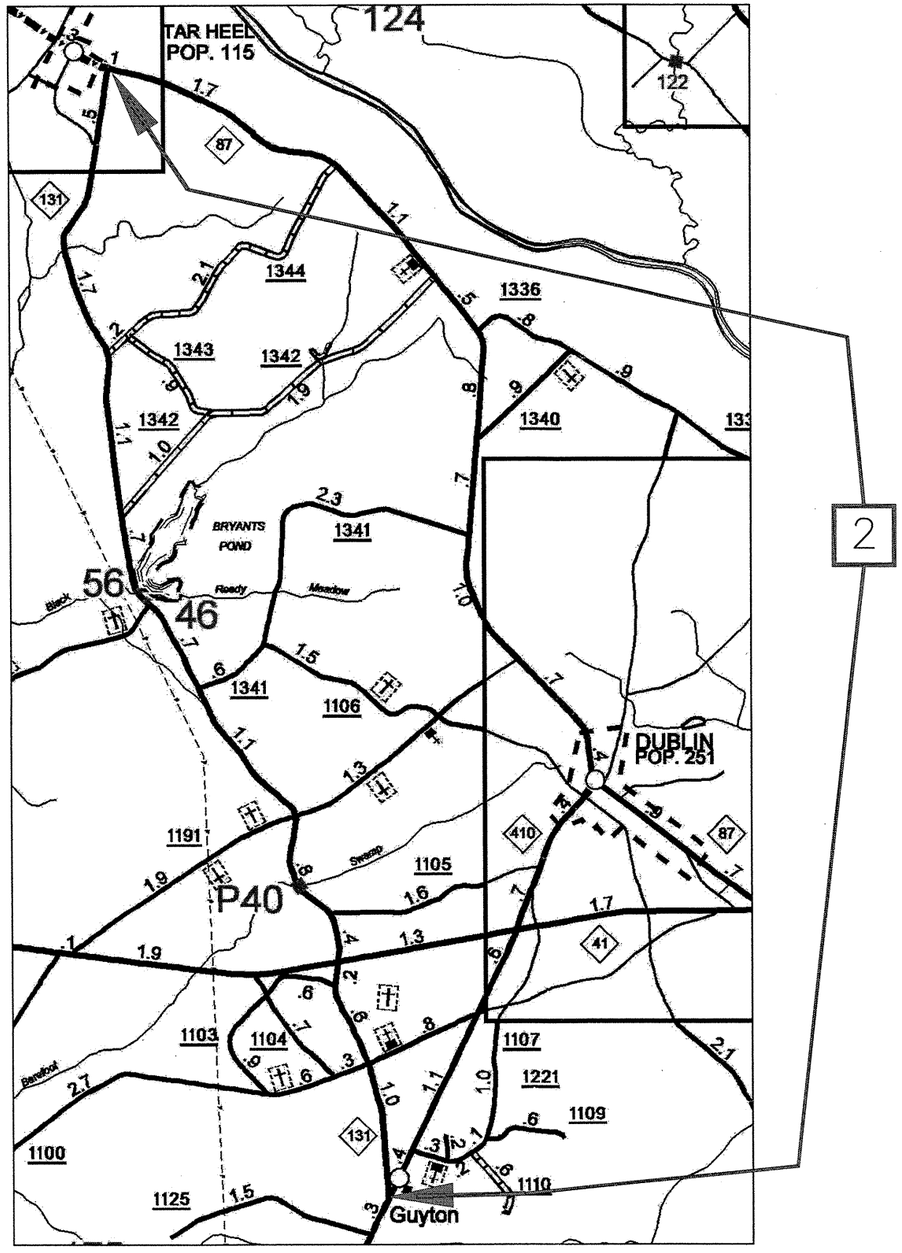




PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	2

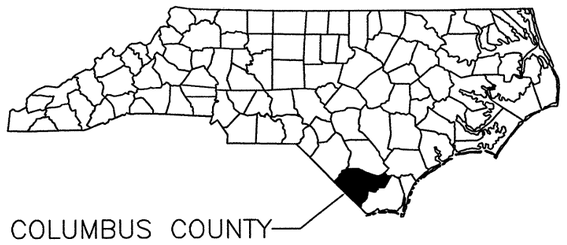
RESURFACING MAPS – BLADEN COUNTY

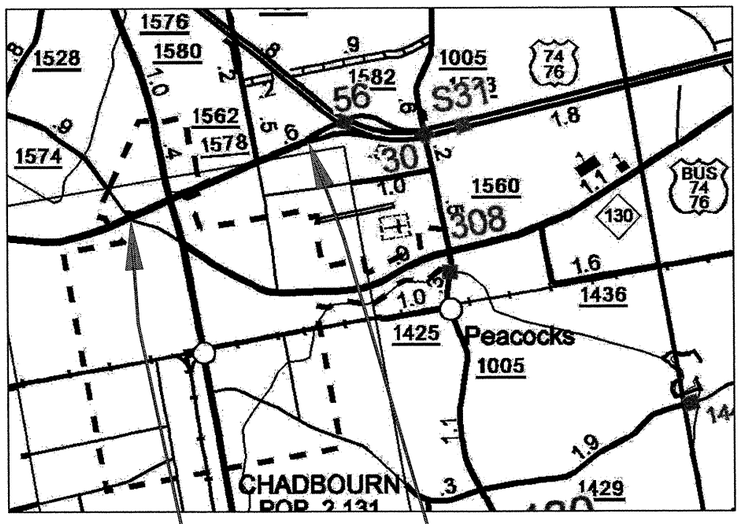
N
ALL MAPS

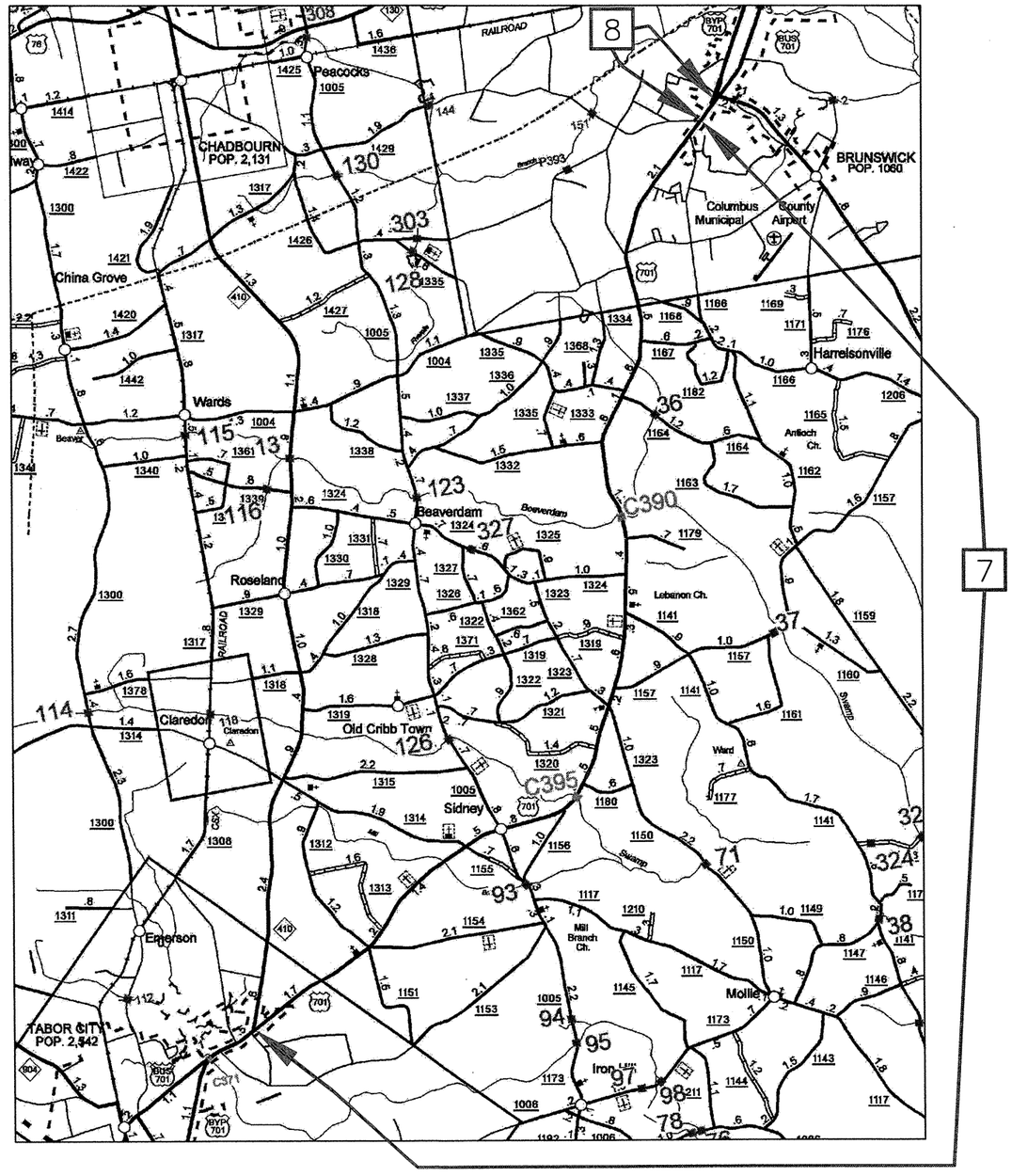


PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	3

RESURFACING MAPS – COLUMBUS COUNTY



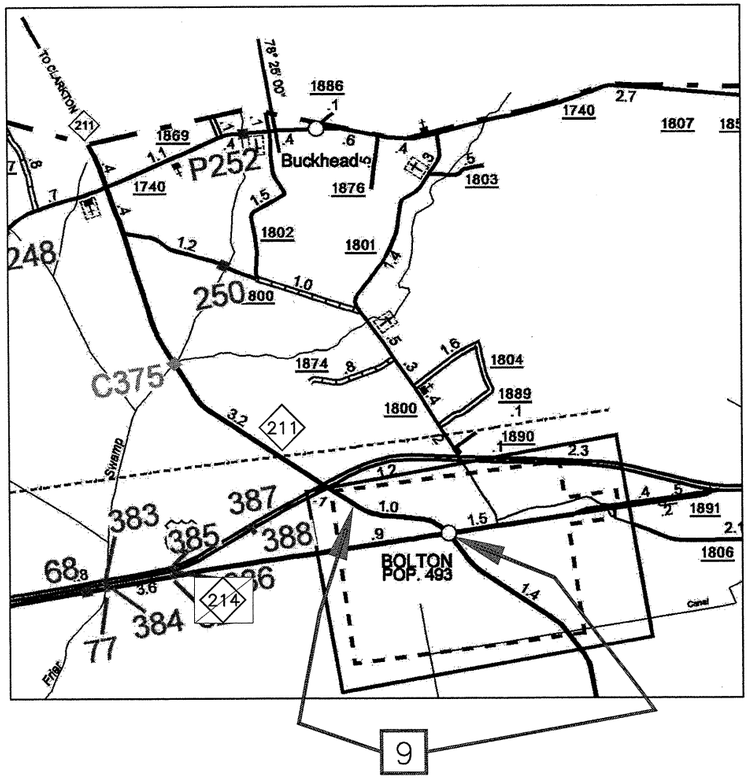


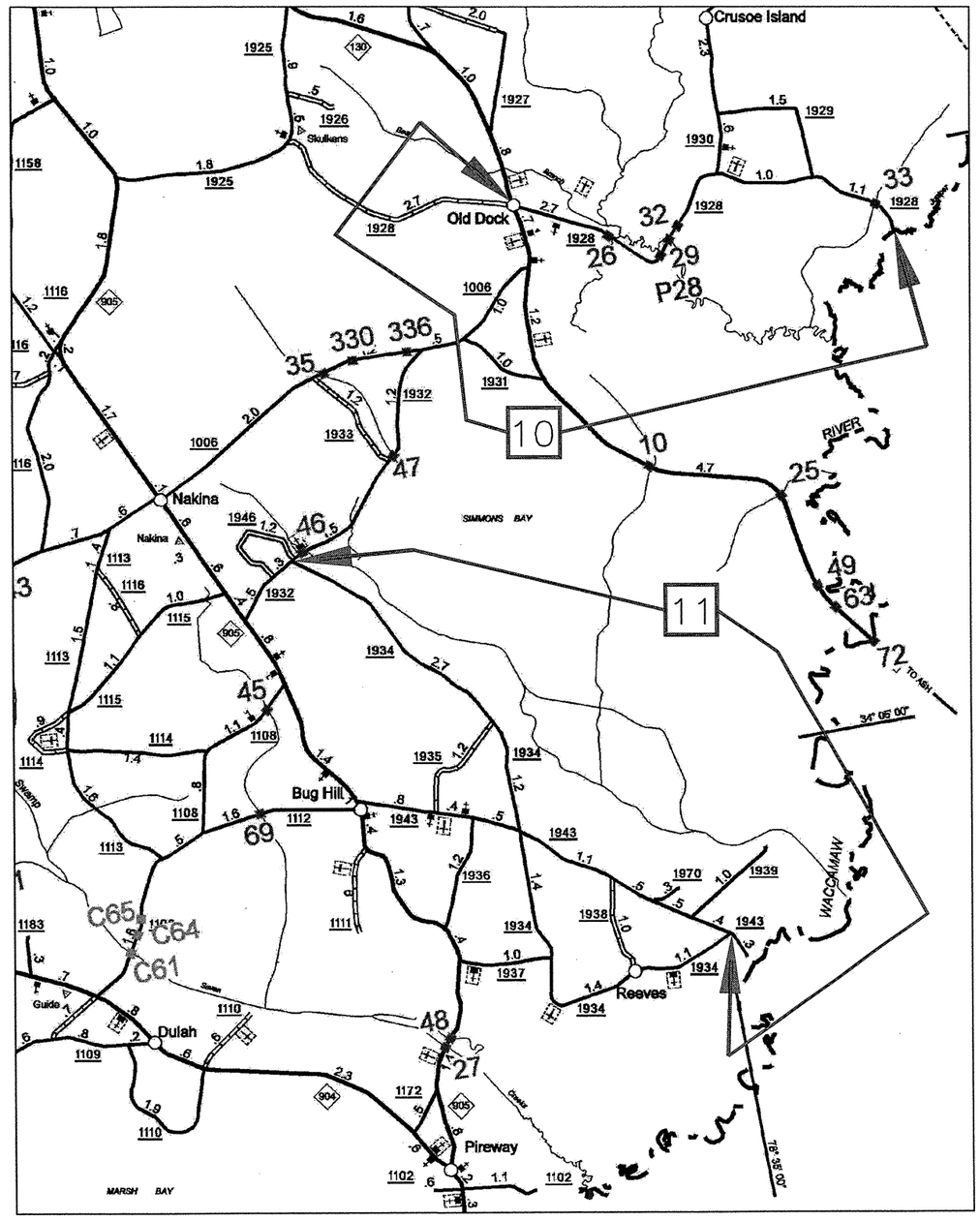


PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	4

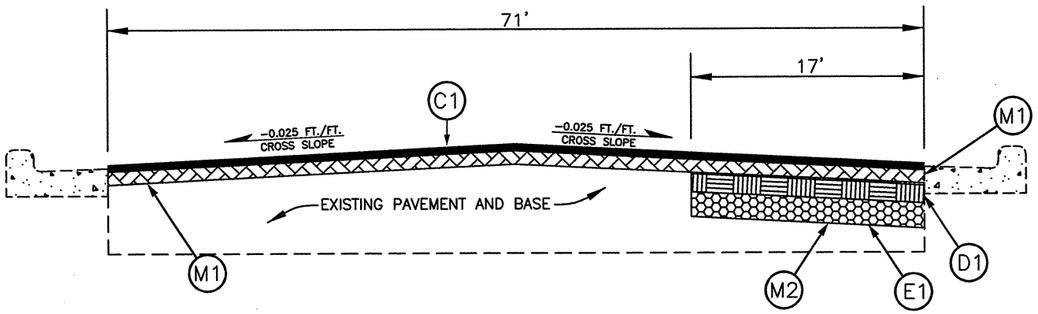
RESURFACING MAPS – COLUMBUS COUNTY

N
ALL MAPS



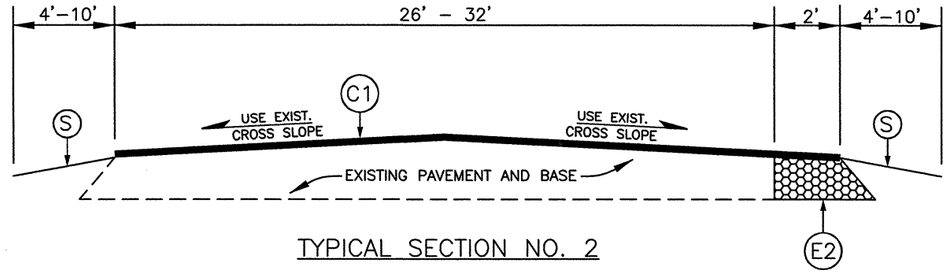


PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	5



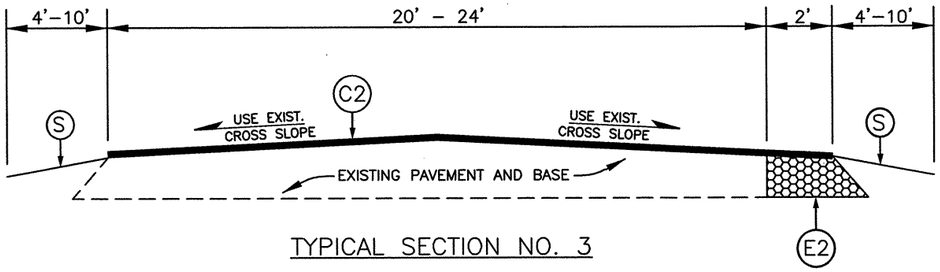
TYPICAL SECTION NO. 1

NOTES:
1. 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 4.
2. INCLUDES DISTRESSED AREAS TO BE MILL & FILL PATCHED. THOSE AREAS SHALL BE DESIGNATED BY THE ENGINEER.
3. FILL MILLED AREAS WITH 5½" ASPHALT BASE COURSE, AND 3½" ASPHALT INTERMEDIATE COURSE, BACK FLUSH WITH THE EXISTING ASPHALT LEFT IN PLACE AFTER FULL WIDTH MILLING, BUT PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.



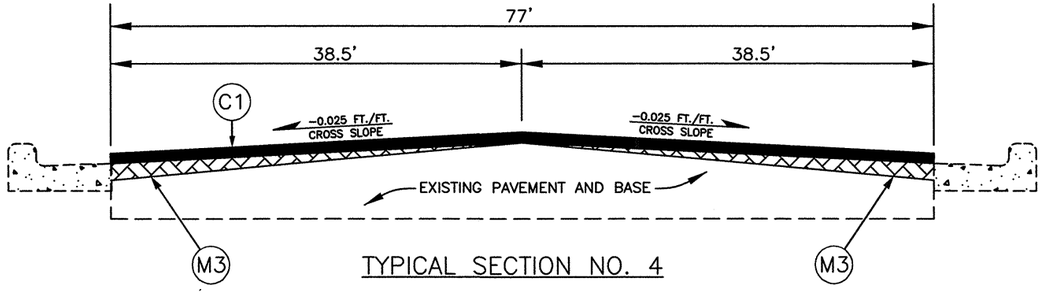
TYPICAL SECTION NO. 2

NOTES:
1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 1.
2. INCLUDES MILL & FILL PATCHING WHERE IDENTIFIED BY ENGINEER. SEE DETAIL 3.
3. 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 4.
4. INCLUDES MILLING ON ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 5.



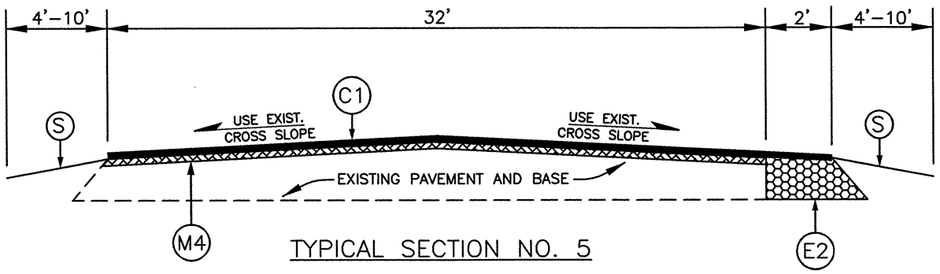
TYPICAL SECTION NO. 3

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 4.
3. INCLUDES MILLING ON ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 5.



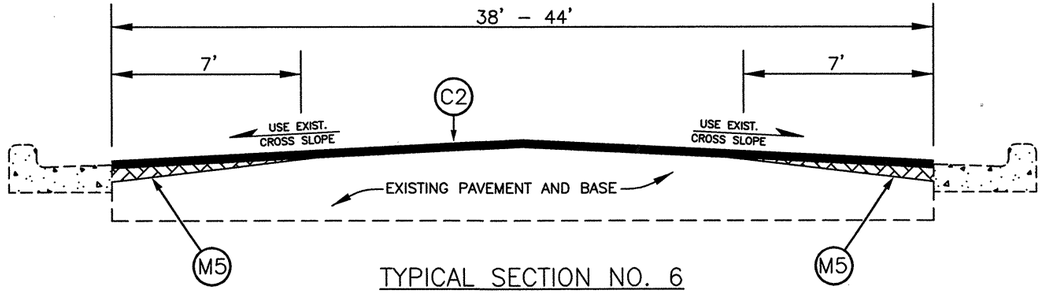
TYPICAL SECTION NO. 4

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 4.



TYPICAL SECTION NO. 5

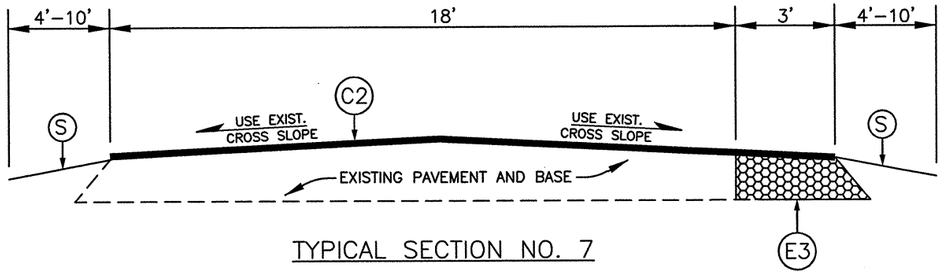
NOTES:
1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 1.
2. INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 4.
3. INCLUDES MILLING ON ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 5.



TYPICAL SECTION NO. 6

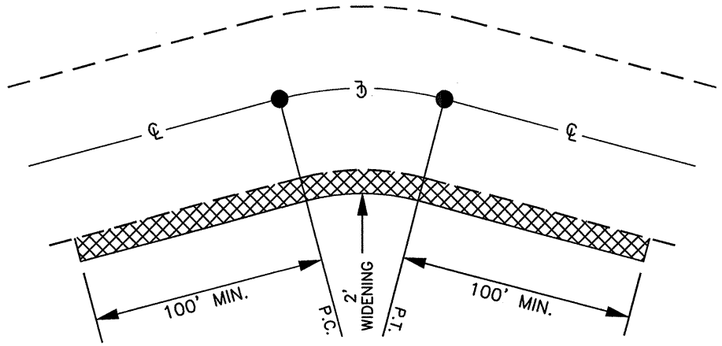
NOTE: INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 4.

PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	6

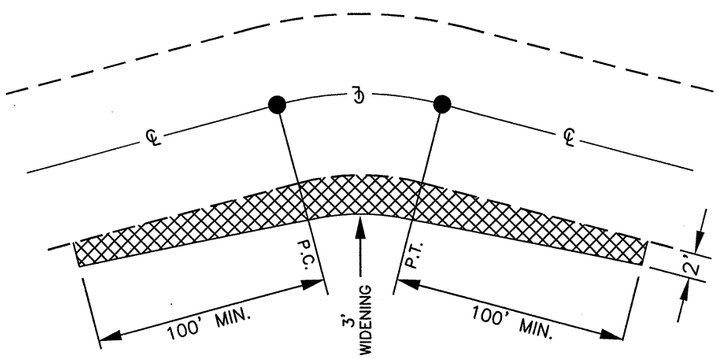


TYPICAL SECTION NO. 7

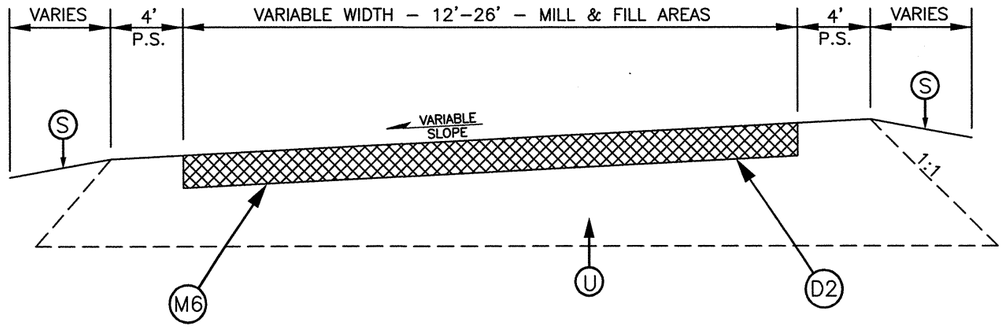
NOTES:
1. INCLUDES 3' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 2.
2. INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE–INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 4.
3. INCLUDES MILLING ON ASPHALT BRIDGE DECKS & BRIDGE APPROACHES, AS NEEDED, OR AS DIRECTED BY THE ENGINEER. SEE DETAIL 5.



DETAIL 1
2' INSIDE CURVE WIDENING

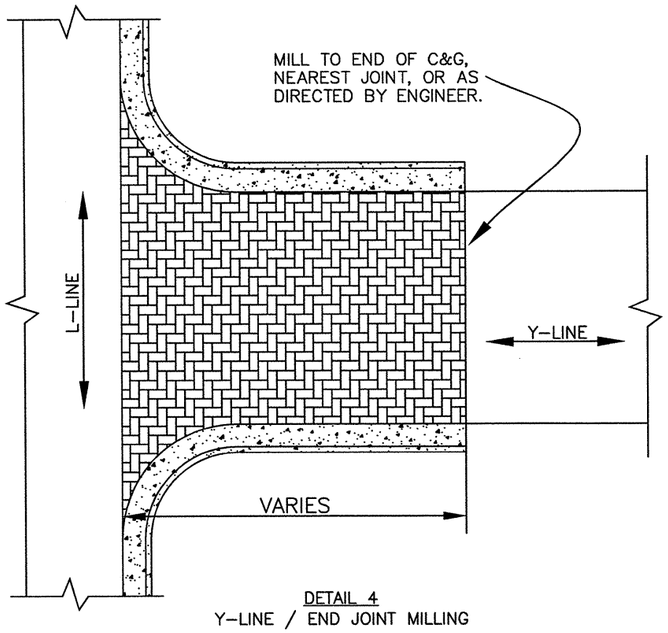


DETAIL 2
3' INSIDE CURVE WIDENING



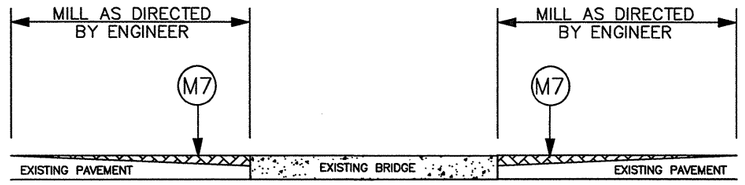
DETAIL 3
MILL & FILL PATCHING

NOTES:
1. DISTRESSED AREAS TO BE MILL & FILL PATCHED SHALL BE DESIGNATED BY THE ENGINEER.
2. FILL MILLED AREAS WITH ASPHALT INTERMEDIATE COURSE BACK FLUSH WITH THE EXISTING ASPHALT LEFT IN PLACE, PRIOR TO PLACEMENT OF PROPOSED ASPHALT SURFACE COURSE.



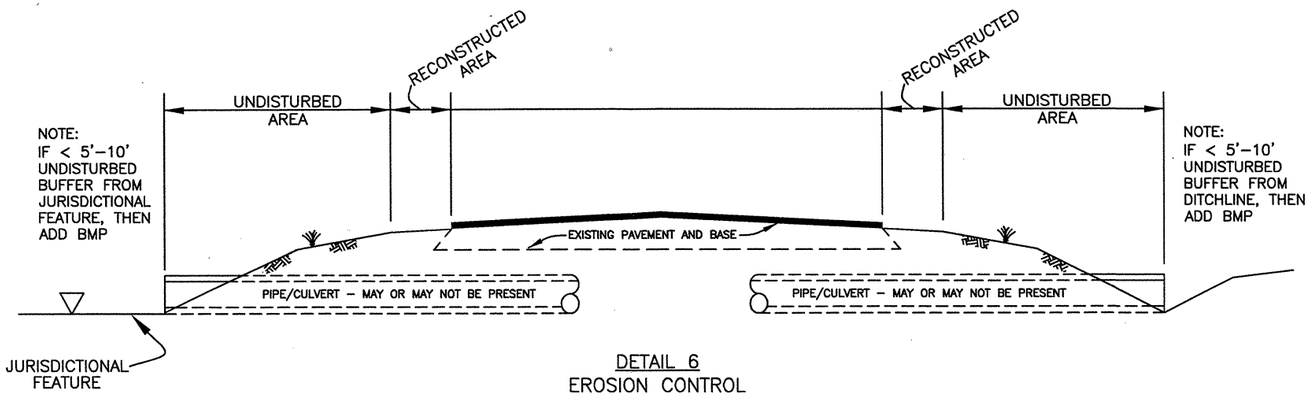
DETAIL 4
Y-LINE / END JOINT MILLING

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.



DETAIL 5
MILLING APPROACHES

NOTE:
MILLING SHALL BE PERFORMED AT BRIDGES AND RAILROAD APPROACHES AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THIS DETAIL.



DETAIL 6
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).

PROJECT REFERENCE NO.	SHEET NO.
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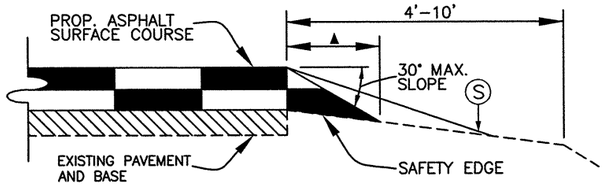
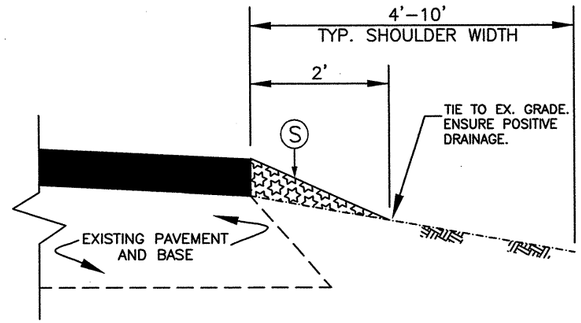


DETAIL 7
SHOULDER WEDGE / SAFETY EDGE

NOTE:

1. SAFETY EDGE SHALL BE CONSTRUCTED AS PART OF THE ROADWAY PAVEMENT. A SHOULDER WEDGE DEVICE SHALL BE ADDED TO THE SCREED OF THE PAVING MACHINE.
2. SAFETY EDGE SHALL BE INCLUDED ON ALL TYPICALS EXCEPT FOR CURB & GUTTER SECTIONS, OR AS DIRECTED OTHERWISE BY ENGINEER.
3. SAFETY EDGE SHALL BE USED ON THE SURFACE LAYER ONLY.
4. SAFETY EDGE MAY BE CONSTRUCTED BY HAND WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS.
5. THE CONSTRUCTION OF THE SAFETY EDGE, AS WELL AS ANY ADDITIONAL SITE PREPARATION OR EARTHWORK REQUIRED, WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE ASPHALT CONCRETE SURFACE COURSE.



DETAIL 8
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 PLACMENT.
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.

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.
E2	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.
E3	Proposed approximately 5½" of Asphalt Concrete Base Course, Type B–25.0–B, at an average rate of 627 pounds per square yard for 3' widening at inside curve radii, as Directed by the Engineer.
D1	Proposed approximately 3½" of Asphalt Concrete Intermediate Course, Type I–19.0–B, at an average rate of 399 pounds per square yard.
D2	Proposed approximately 3" of Asphalt Concrete Intermediate Course, Type I–19.0–B, at an average rate of 342 pounds per square yard.
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 3" for the entire width of the roadway, or as Directed by the Engineer.
M2	Milling Depth of an additional 9" for a width of 17' from the edge of the Gutter Pan, or as Directed by the Engineer.
M3	Milling Depth 0" – 1½" 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.
M4	Milling Depth 1" for the entire width of the roadway for Profile Milling, or as Directed by the Engineer.
M5	Milling Depth 0" – 1½" at the edge of Curb & Gutter. Milling shall extend below the lip of the Curb & Gutter by the thickness of the Proposed Overlay, or as Directed by the Engineer.
M6	Milling Depth 3" at all designated Mill & Fill Patch Areas, with a variable width from 12' to 26', or as Directed by the Engineer.
M7	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.
U	Existing Pavement and Base
DRAWINGS NOT TO SCALE	

		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4	TYPICAL NO. 5	TYPICAL NO. 6	TYPICAL NO. 7
COLUMBUS	PRIMARY		US 76 & US 701–A		US 701–B	NC 211		
	SECONDARY			SR 1934				SR 1928
		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4	TYPICAL NO. 5	TYPICAL NO. 6	TYPICAL NO. 7
BLADEN	PRIMARY	US 701 Bus.	NC 131					
	SECONDARY			SR 1325, SR 1700 & SR 1806–A			SR 1806–B	

PROJECT REFERENCE NO.	SHEET NO.
6CR.10091.74, ETC.	9

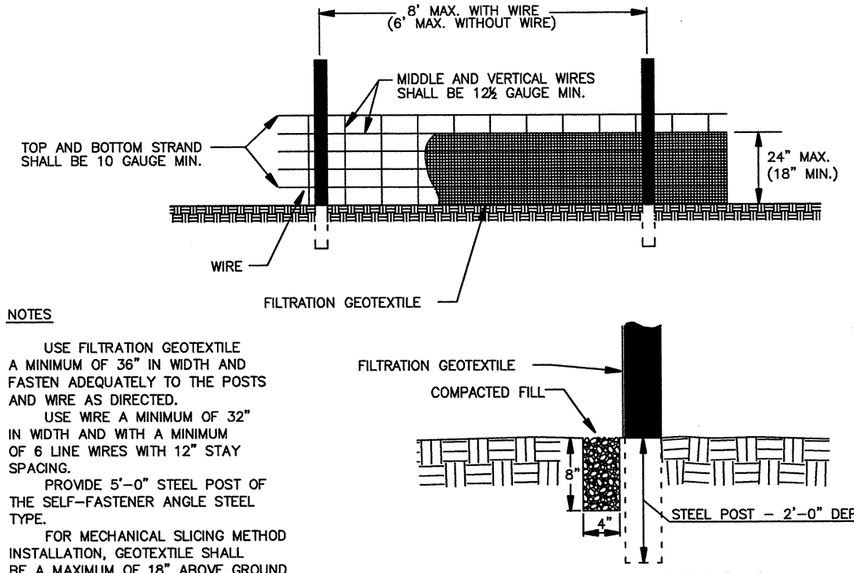
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

I-12

ENGLISH STANDARD DRAWING FOR TEMPORARY SILT FENCE

SHEET 1 OF 1

1605.01



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.

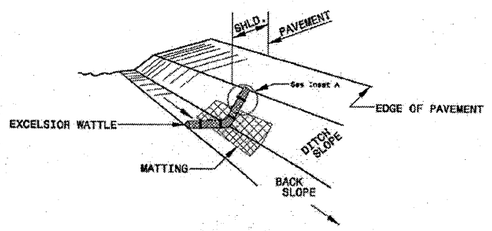
I-12

ENGLISH STANDARD DRAWING FOR TEMPORARY SILT FENCE

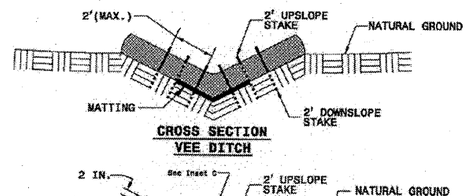
SHEET 1 OF 1

1605.01

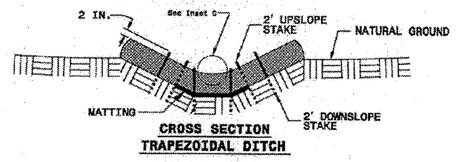
WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

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

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

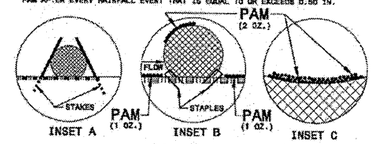
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

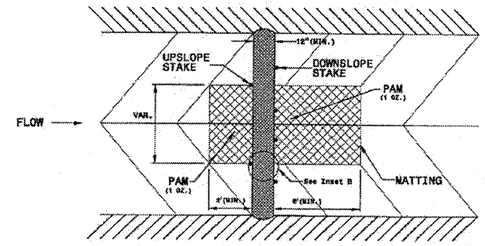
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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 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.





TOP VIEW

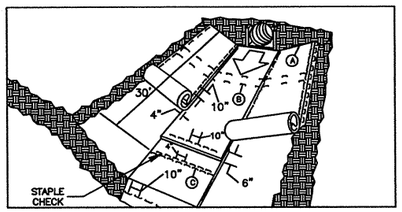
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

I-12

ENGLISH STANDARD DRAWING FOR MATTING INSTALLATION

SHEET 1 OF 1

1631.01



MATTING IN DITCHES

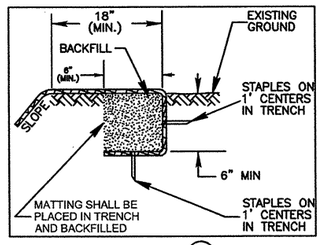
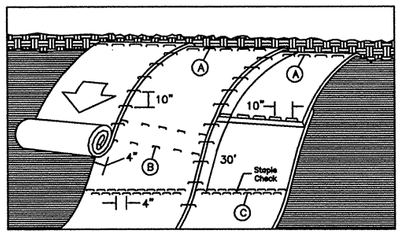


DIAGRAM (A)



MATTING ON SLOPES

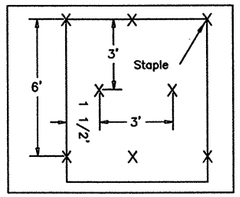


DIAGRAM (B)

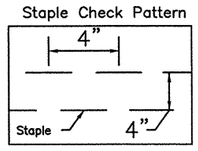


DIAGRAM (C)

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

PROJECT NO.	SHEET NO.	TOTAL NO.
6CR.10091.74, etc.	10	

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 RECON-STRUCTION SMI	3" MILLING SY	9" MILLING SY	1" MILLING SY	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B (MILL & FILL) TONS	BASE COURSE, B25.0B TONS	INTER-MEDIATE COURSE, I19.0B (MILL & FILL) 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	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	TEMP. SILT FENCE LF	MATTING FOR EROSION CONTROL SY	WATTLE LF	POLYACRY LAMIDE (PAM) LB	SEED & MULCHING AC	PAVED TRENCHING (1CONDUIT, 2") LF	UNPAVED TRENCHING (1CONDUIT, 2") LF	JUNCTION BOX (STANDARD SIZE) EA	JUNCTION BOX (OVER-SIZED, HEA-VY DUTY) EA	2" RISER WITH WEATHERH EAD EA	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (14-2)(FT) LF
6CR.10091.74	Bladen	1	US 701 BUS	FROM DUNHAM ST (MP 11.29) TO KING ST (MP 11.61)	1	NO	0.32	71			13,329	997			356	328		209	1,276	30			103	30	6	10						30	300	3	3	3	1,725	300
TOTAL FOR MAP NO. 1							**0.32**				**13,329**	**997**			**356**	**328**		**209**	**1,276**	**30**			**103**	**30**	**6**	**10**						**30**	**300**	**3**	**3**	**3**	**1,725**	**300**
6CR.10091.74	Bladen	2	NC 131	FROM NC 410 (MP 11.48) TO NC 87 (MP 20.14)	2	NO	8.36	26	201	16.72	35,083				533		769	5,999	11,069	59			990	167			1,254	334	602	25	20.27	10	100	1	1	1	800	100
TOTAL FOR MAP NO. 2							**8.36**		**201**	**16.72**	**35,083**				**533**		**769**	**5,999**	**11,069**	**59**			**990**	**167**			**1,254**	**334**	**602**	**25**	**20.27**	**10**	**100**	**1**	**1**	**1**	**800**	**100**
TOTAL FOR PROJ NO. 6CR.10091.74							**8.68**		**201**	**16.72**	**48,412**	**997**			**889**	**328**	**769**	**6,208**	**12,345**	**89**			**1,093**	**197**	**6**	**10**	**1,254**	**334**	**602**	**25**	**20.27**	**40**	**400**	**4**	**4**	**4**	**2,525**	**400**
																1,097																						
6CR.10091.74	Columbus	6	US 76	FROM SR 1574 (MP 15.04) TO BEGIN DIVIDED @ FLYOVER (MP 16.19)	2	NO	1.15	32	28	2.30					133		85		1,874	30			118	23			173	46	83	4	2.79	10	100	1	1	1	200	100
TOTAL FOR MAP NO. 6							**1.15**		**28**	**2.30**					**133**		**85**		**1,874**	**30**			**118**	**23**			**173**	**46**	**83**	**4**	**2.79**	**10**	**100**	**1**	**1**	**1**	**200**	**100**
6CR.10091.74	Columbus	7	US 701-A	FROM NC 410 (MP2.56) TO SR 1429 (MP 15.85)	2	NO	13.29	28	319	26.58					1,289		978		21,164	266			1,330	133			1,994	532	957	40	32.22	10	100	1	1	1	200	100
TOTAL FOR MAP NO. 7							**13.29**		**319**	**26.58**					**1,289**		**978**		**21,164**	**266**			**1,330**	**133**			**1,994**	**532**	**957**	**40**	**32.22**	**10**	**100**	**1**	**1**	**1**	**200**	**100**
6CR.10091.74	Columbus	8	US 701-B	FROM SR 1429 (MP 15.85) TO CONST JT NORTH OF SR 1429 (MP 16.04)	4	NO	0.19	77						8,583	44				734	30			46	10	5	4						10	100	1	1	1	200	100
TOTAL FOR MAP NO. 8							**0.19**							**8,583**	**44**				**734**	**30**			**46**	**10**	**5**	**4**						**10**	**100**	**1**	**1**	**1**	**200**	**100**
6CR.10091.74	Columbus	9	NC 211	FROM NC 214 (MP 9.49) TO CONST JT @ US 74 (MP 10.41)	5	NO	0.92	32	22	1.84			17,271		356		66		1,569	24			99	18			138	37	66	3	2.23							
TOTAL FOR MAP NO. 9							**0.92**		**22**	**1.84**			**17,271**		**356**		**66**		**1,569**	**24**			**99**	**18**			**138**	**37**	**66**	**3**	**2.23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL FOR PROJ NO. 6CR.10241.74							**15.55**		**369**	**30.72**			**17,271**	**8,583**	**1,822**		**1,129**		**25,341**	**350**			**1,593**	**184**	**5**	**4**	**2,305**	**615**	**1,106**	**47**	**37.24**	**30**	**300**	**3**	**3**	**3**	**600**	**300**
																1,129																						
6CR.10091.74	Bladen	3	SR 1325	FROM SR 1327 (MP 3.72) TO NC 242 (MP 7.44)	3	NO	3.72	22	89	7.44					89		272					4,259	46	300	74			558	149	268	11	9.02							
TOTAL FOR MAP NO. 3							**3.72**		**89**	**7.44**					**89**		**272**					**4,259**	**46**	**300**	**74**			**558**	**149**	**268**	**11**	**9.02**							
6CR.10091.74	Bladen	4	SR 1700	FROM SR 1706 9MP 7.49) TO NC 87 (MP9.15)	3	NO	1.66	24	40	3.32					89		121					2,083	29	147	33			249	66	268	5	4.02	10	100	1	1	1	200	100
TOTAL FOR MAP NO. 4							**1.66**		**40**	**3.32**					**89**		**121**					**2,083**	**29**	**147**	**33**			**249**	**66**	**268**	**5**	**4.02**	**10**	**100**	**1**	**1**	**1**	**200**	**100**
6CR.20091.74	Bladen	5	SRS 1806-A	CONST JT. OF BRIDGE 31 (MP9.5) TO SMITH CIRCLE (MP 10.18)	3	NO	0.68	24	16	1.36				704	89		51					868	17	61	14			65	17	31	1	1.65							
		"	"	FROM SMITH CIRCLE (MP 10.18) TO US 701 (MP 10.76)	6	NO	0.24	38						1,971	89							488	35	35	15	5	5												
		"	"	FROM SMITH CIRCLE (MP 10.18) TO US 701 (MP 10.76)	6	NO	0.34	44						2,793	89							785		53		5	5												
TOTAL FOR MAP NO. 5							**1.26**		**16**	**1.36**				**5,468**	**267**		**51**					**2,141**	**52**	**149**	**29**	**10**	**10**	**65**	**17**	**31**	**1**	**1.65**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL FOR PROJ NO. 6CR.20091.74							**6.64**		**145**	**12.12**				**5,468**	**445**		**444**					**8,483**	**127**	**596**	**136**	**10**	**10**	**872**	**232**	**567**	**17**	**14.69**	**10**	**100**	**1**	**1**	**1**	**200**	**100**
																444																						
6CR.10091.74	Columbus	10	SR 1928	FROM NC 130 (MP 2.67) TO BRUNSWICK COUNTY LINE (MP 7.47)	7	NO	4.8	18	115	9.60				2,534	178		530					4,587	174	341	96			720	192	346	14	11.64							
TOTAL FOR MAP NO. 10							**4.8**		**115**	**9.60**				**2,534**	**178**		**530**					**4,587**	**174**	**341**	**96**			**720**	**192**	**346**	**14**	**11.64**							
6CR.10091.74	Columbus	11	SR 1934	FROM SR 1932 (MP 0.0) TO SR 1943 (MP 7.64)	3	NO	7.64	20	183	15.28					267		563					7,995	232	576	153			1,146	306	550	23	18.52							
TOTAL FOR MAP NO. 11							**7.64**		**183**	**15.28**					**267**		**563**					**7,995**	**232**	**576**	**153**			**1,146**	**306**	**550**	**23**	**18.52**							
TOTAL FOR PROJ NO. 6CR.20241.74							**12.44**		**298**	**24.88**				**2,534**	**445**		**1,093**					**12,582**	**406**	**917**	**249**			**1,866**	**498**	**896**	**37**	**30.16**							
GRAND TOTAL							**43.31**		**1,013**	**84.44**	**48,412**	**997**	**17,271**	**16,585**	**3,601**	**328**	**3,435**	**6,208**	**37,686**	**439**		**21,065**	**533**	**4,199**	**766**	**21**	**24**	**6,297**	**1,679**	**3,171**	**126**	**102.36**	**80**	**800**	**8**	**8**	**8**	**3,325**	**800**
																3,763																						

PROJECT NO.	SHEET NO.	TOTAL NO.
6CR.10091.74, etc.	11	

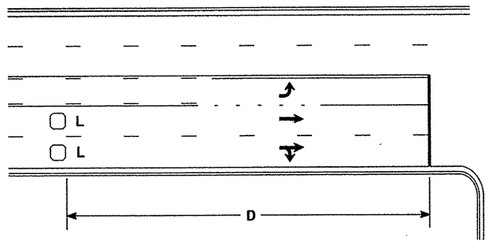
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4399000000-N TEMP. TRAFFIC CONTROL LS	4685000000-E 4" X 90 M WHITE THERMO LF	4686000000-E 4" X 120 M WHITE THERMO LF	4686000000-E 4" X 120 M YELLOW THERMO LF	4695000000-E 8" X 90 M WHITE THERMO LF	4697000000-E 8" X 120 M WHITE THERMO LF	4697000000-E 8" X 120 M YELLOW THERMO LF	4710000000-E 24" X 120 M WHITE THERMO LF	4721000000-E THERMO MSG ONLY 120 M EA	4721000000-E THERMO MSG STOP 120 M EA	4721000000-E THERMO MSG AHEAD 120 M EA	4721000000-E THERMO MSG SIGNAL 120 M EA	4721000000-E THERMO MSG SCHOOL 120 M EA	4725000000-E THERMO LT ARROW 90 M EA	4725000000-E THERMO RT ARROW 90 M EA	4725000000-E THERMO STR ARROW 90 M EA	4725000000-E THERMO STR & LT ARROW 90 M EA	4725000000-E THERMO STR & RT ARROW 90 M EA	4810000000-E 4" WHITE PAINT LF	4810000000-E 4" YELLOW PAINT LF	4820000000-E 8" WHITE PAINT LF	4820000000-E 8" YELLOW PAINT LF	4900000000-N CRYSTAL & RED MARKERS EA	4900000000-N YELLOW & YELLOW MARKERS EA
6cr.10091.74	Bladen	1	US 701 BUS	FROM DUNHAM ST (MP 11.29) TO KING ST (MP 11.61)	0.32	71	LS		1,410	2,175				230	20					14	8	8	2	13	1,410	2,175			120	30
TOTAL FOR MAP NO. 1					**0.32**				**1,410**	**2,175**				**230**	**20**					**14**	**8**	**8**	**2**	**13**	**1,410**	**2,175**			**120**	**30**
6cr.10091.74	Bladen	2	NC 131	FROM NC 410 (MP 11.48) TO NC 87 (MP 20.14)	8.36	26	LS	89,600		76,160				70		4	5								24,400	20,740				575
TOTAL FOR MAP NO. 2					**8.36**			**89,600**		**76,160**				**70**		**4**	**5**								**24,400**	**20,740**				**575**
TOTAL FOR PROJ NO. 6cr.10091.74					**8.68**			**89,600**	**1,410**	**78,335**				**300**	**20**	**4**	**5**			**14**	**8**	**8**	**2**	**13**	**25,810**	**22,915**			**120**	**605**
								79,745									**29**					**45**			**48,725**				**725**	
6cr.10241.74	Columbus	6	US 76	FROM SR 1574 (MP 15.04) TO BEGIN DIVIDED @ FLYOVER (MP 16.19)	1.15	32	LS	10,000	150	4,250	600			30			10	12			3		4							40	70
TOTAL FOR MAP NO. 6					**1.15**			**10,000**	**150**	**4,250**	**600**			**30**			**10**	**12**			**3**		**4**							**40**	**70**
6cr.10241.74	Columbus	7	US 701-A	FROM NC 410 (MP2.56) TO SR 1429 (MP 15.85)	13.29	28	LS	131,000	4,415	121,825		2,595		385					24	60	30	6							250	950
TOTAL FOR MAP NO. 7					**13.29**			**131,000**	**4,415**	**121,825**		**2,595**		**385**					**24**	**60**	**30**	**6**							**250**	**950**
6cr.10241.74	Columbus	8	US 701-B	FROM SR 1429 (MP 15.85) TO CONST JT NORTH OF SR 1429 (MP 16.04)	0.19	77	LS		1,150	2,300			15	150						8	5	12			1,150				60	15
TOTAL FOR MAP NO. 8					**0.19**				**1,150**	**2,300**			**15**	**150**						**8**	**5**	**12**			**1,150**				**60**	**15**
6cr.10241.74	Columbus	9	NC 211	FROM NC 214 (MP 9.49) TO CONST JT @ US 74 (MP 10.41)	0.92	32	LS	9,600		10,000	400		50							1		1		1	9,600	10,000	400	50	25	70
TOTAL FOR MAP NO. 9					**0.92**			**9,600**		**10,000**	**400**		**50**							**1**		**1**		**1**	**9,600**	**10,000**	**400**	**50**	**25**	**70**
TOTAL FOR PROJ NO. 6cr.10241.74					**15.55**			**150,600**	**5,715**	**138,375**	**1,000**	**2,595**	**65**	**565**			**10**	**12**	**24**	**69**	**38**	**19**	**4**	**1**	**10,750**	**10,000**	**400**	**50**	**375**	**1,105**
								144,090			**2,660**						**46**					**131**			**20,750**		**450**		**1,480**	
6CR.20091.74	Bladen	3	SR 1325	FROM SR 1327 (MP 3.72) TO NC 242 (MP 7.44)	3.72	22	LS																		80,000	68,000				250
TOTAL FOR MAP NO. 3					**3.72**																				**80,000**	**68,000**				**250**
6CR.20091.74	Bladen	4	SR 1700	FROM SR 1706 9MP 7.49) TO NC 87 (MP9.15)	1.66	24	LS									4	5								32,000	28,000				125
TOTAL FOR MAP NO. 4					**1.66**											**4**	**5**								**32,000**	**28,000**				**125**
6CR.20091.74	Bladen	5	SRS 1806-A	CONST JT. OF BRIDGE 31 (MP9.5) TO SMITH CIRCLE (MP 10.18)	0.68	24	LS	4,400	140	4,800			100							2									8	45
		"	"	FROM SMITH CIRCLE (MP 10.18) TO US 701 (MP 10.76)	0.24	38	LS		225	6,550				100	4				12	20	2		2						13	80
		"	"	FROM SMITH CIRCLE (MP 10.18) TO US 701 (MP 10.76)	0.34	44	LS																							
TOTAL FOR MAP NO. 5					**1.26**			**4,400**	**365**	**11,350**			**100**	**100**	**4**				**12**	**22**	**2**		**2**						**21**	**125**
TOTAL FOR PROJ NO. 6CR.20091.74					**6.64**			**4,400**	**365**	**11,350**			**100**	**100**	**4**	**4**	**5**		**12**	**22**	**2**		**2**		**112,000**	**96,000**			**21**	**500**
									11,715			**100**					**25**					**26**			**208,000**				**521**	
6cr.20241.74	Columbus	10	SR 1928	FROM NC 130 (MP 2.67) TO BRUNSWICK COUNTY LINE (MP 7.47)	4.8	18	LS																		102,600	87,210				325
TOTAL FOR MAP NO. 10					**4.8**																				**102,600**	**87,210**				**325**
6cr.20241.74	Columbus	11	SR 1934	FROM SR 1932 (MP 0.0) TO SR 1943 (MP 7.64)	7.64	20	LS																		160,000	136,000				515
TOTAL FOR MAP NO. 11					**7.64**																				**160,000**	**136,000**				**515**
TOTAL FOR PROJ NO. 6cr.20241.74					**12.44**																				**262,600**	**223,210**				**840**
																										485,810				**840**
GRAND TOTAL					**43.31**		**1**	**244,600**	**7,490**	**228,060**	**1,000**	**2,595**	**165**	**965**	**24**	**8**	**20**	**12**	**36**	**105**	**48**	**27**	**8**	**14**	**411,160**	**352,125**	**400**	**50**	**516**	**3,050**
									235,550			**2,760**					**100**					**202**			**763,285**		**450**		**3,566**	

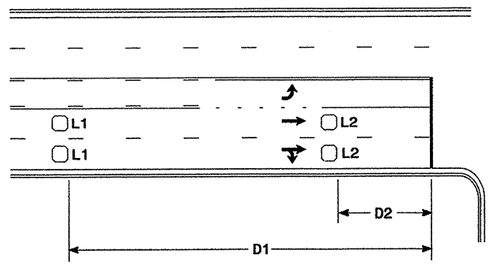
PROJECT REFERENCE NO.	SHEET NO.
SEE BELOW	SIG 1

6CR.10091.74, 6CR.10241.74, 6CR.20091.74 & 6CR.20241.74

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



OR



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

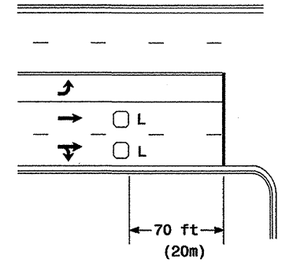
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

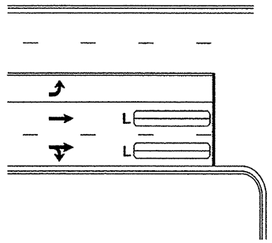
L2 = 6ft X 6ft (1.8m X 1.8m) Wired in series

"Stretch" Operation

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



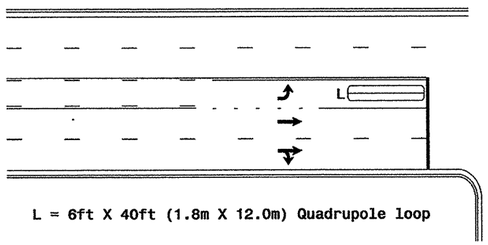
OR



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

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

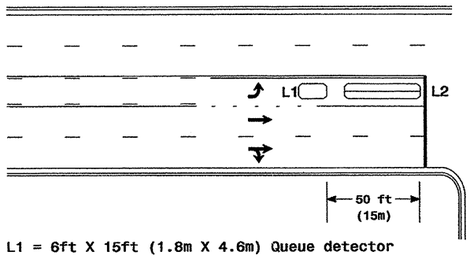
Left Turn Lane Detection



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

Presence Loop Detection

OR



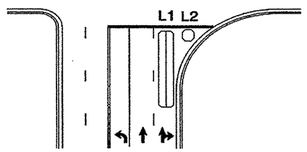
L1 = 6ft X 15ft (1.8m X 4.6m) Queue detector
L2 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

Queue Loop Detection

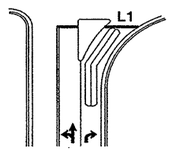
Right Turn Lane Detection

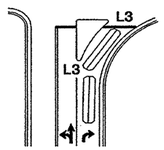
Standard Turn

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



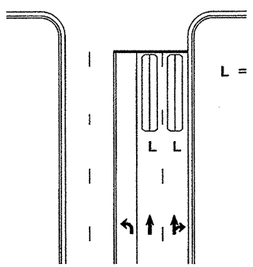
Wide Radius Turn





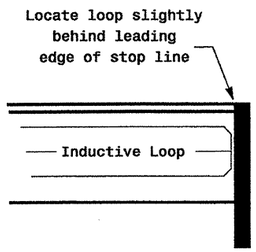
Channelized Turn

Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop Wired to separate detectors/channels

Presence Loop Placement at Stop Lines



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

Quadrupole 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

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
Traffic Engineering Section
Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE:	June 2006	REVIEWED BY:	
PREPARED BY:	P L Alexander	REVIEWED BY:	

REVISIONS	INIT.	DATE
▽Revise pavement markings	AO	12/19/06

SCALE: N/A

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23488 PAUL L. ALEXANDER
SIGNATURE
DATE 6/6/07
SIG. INVENTORY NO.

19-DEC-2006 14:29
s:\sts_signals\lib turn inmise\looptypical2006.dgn
palexander