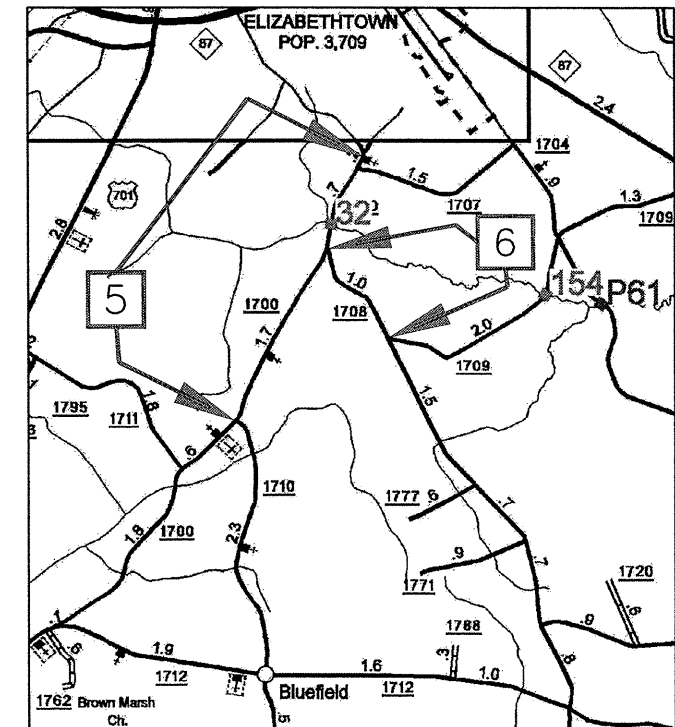
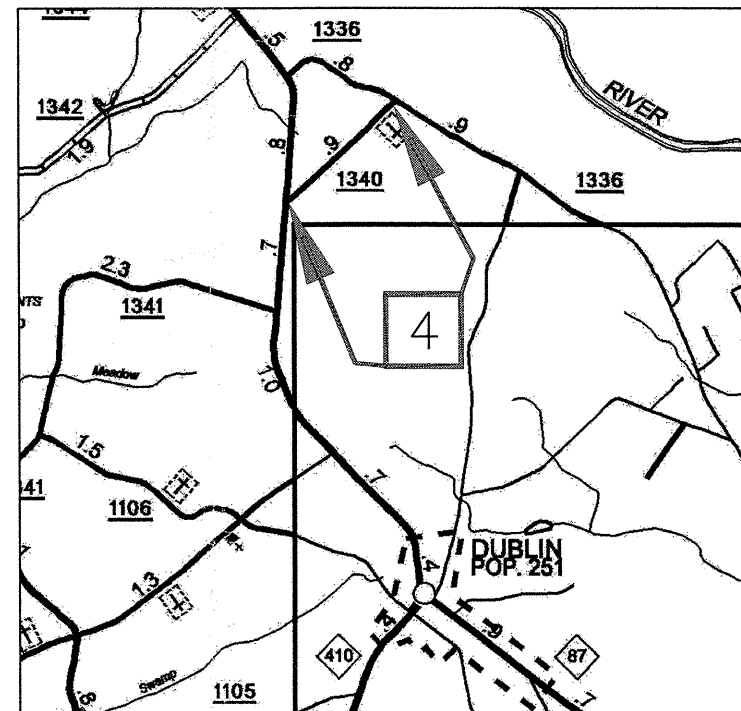
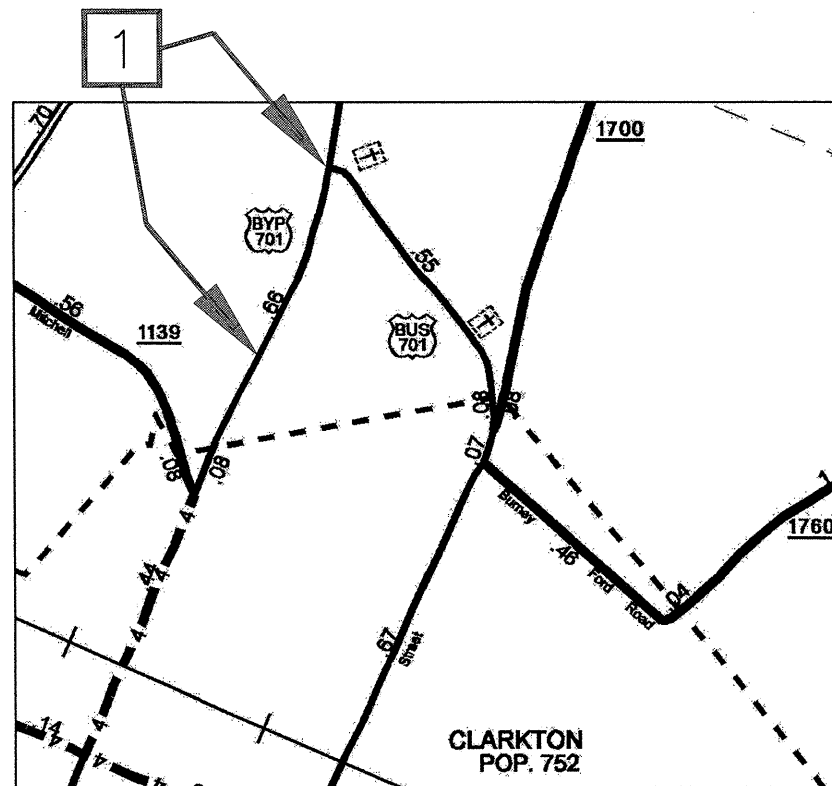
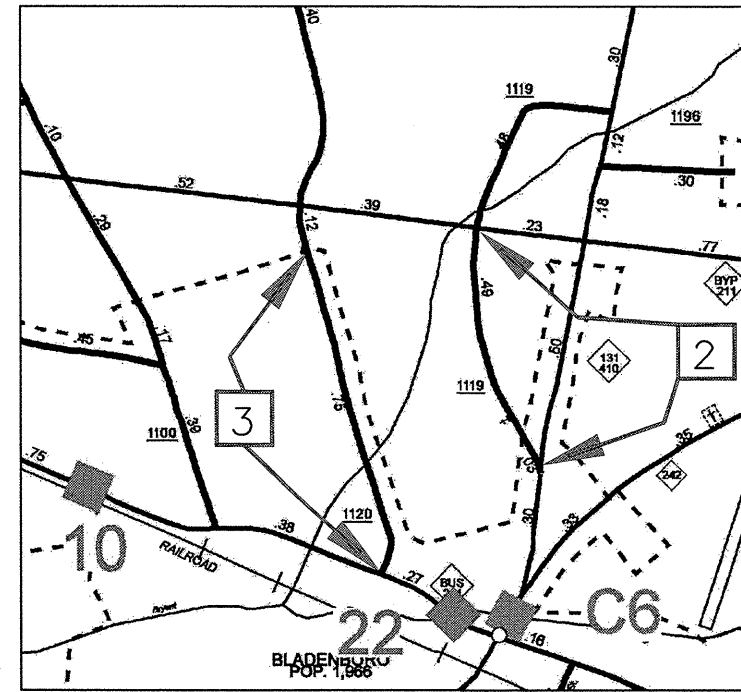
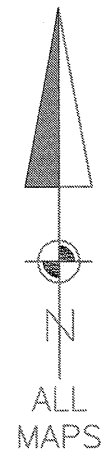
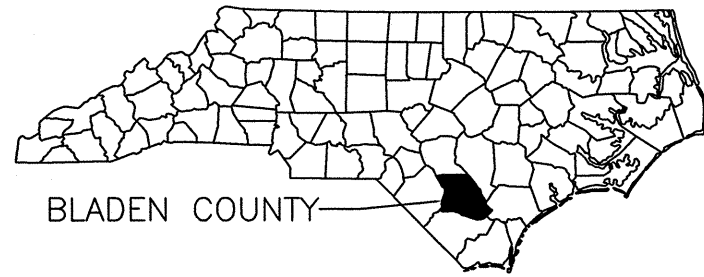
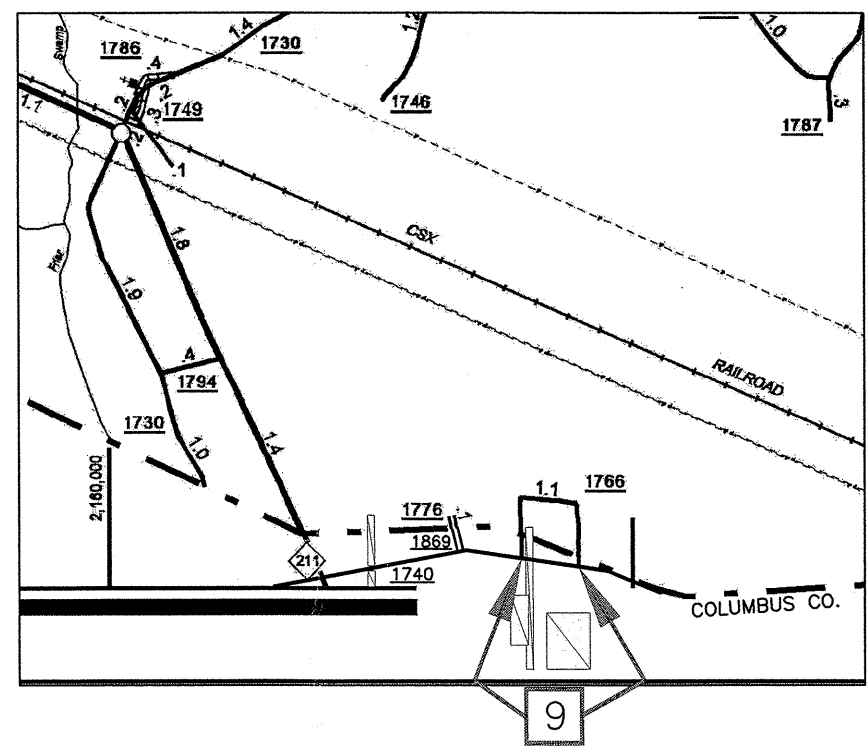
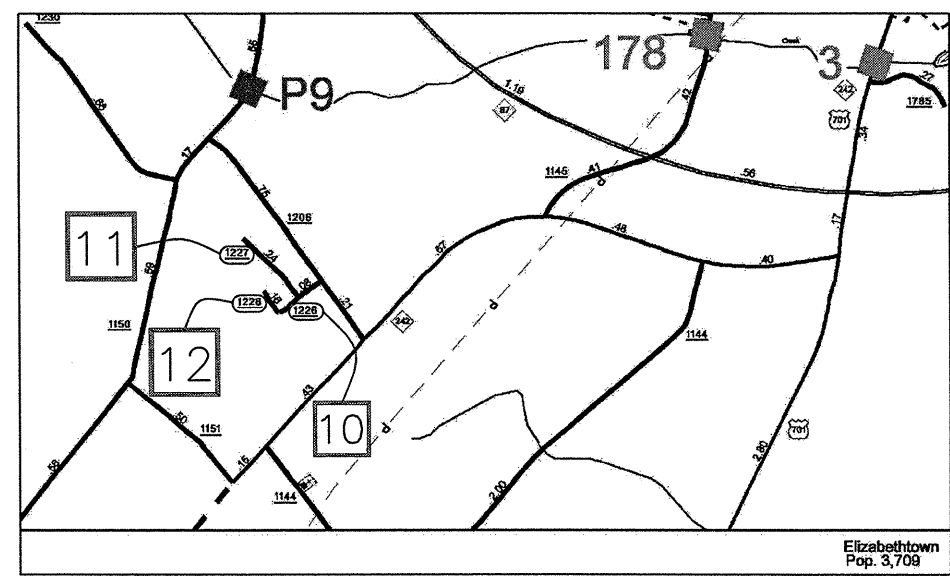
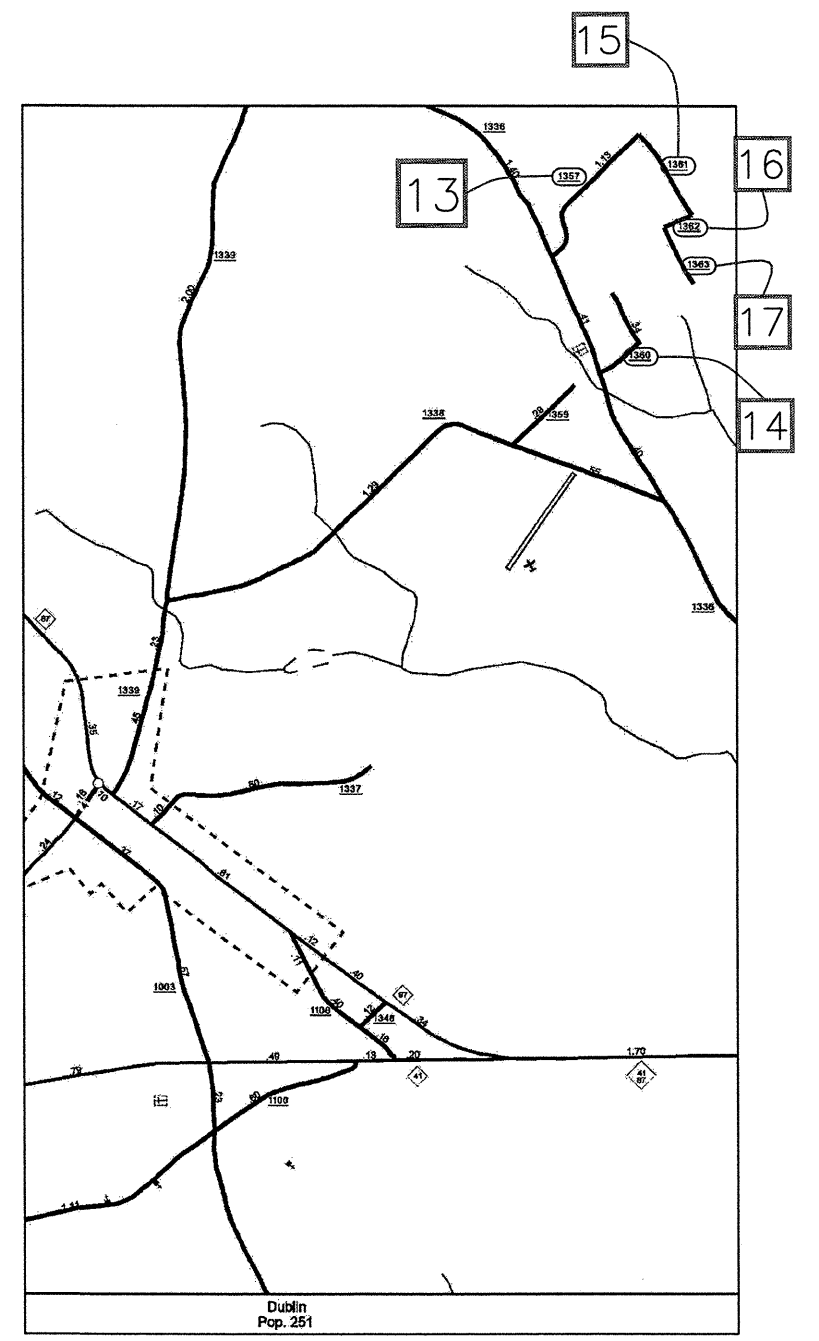
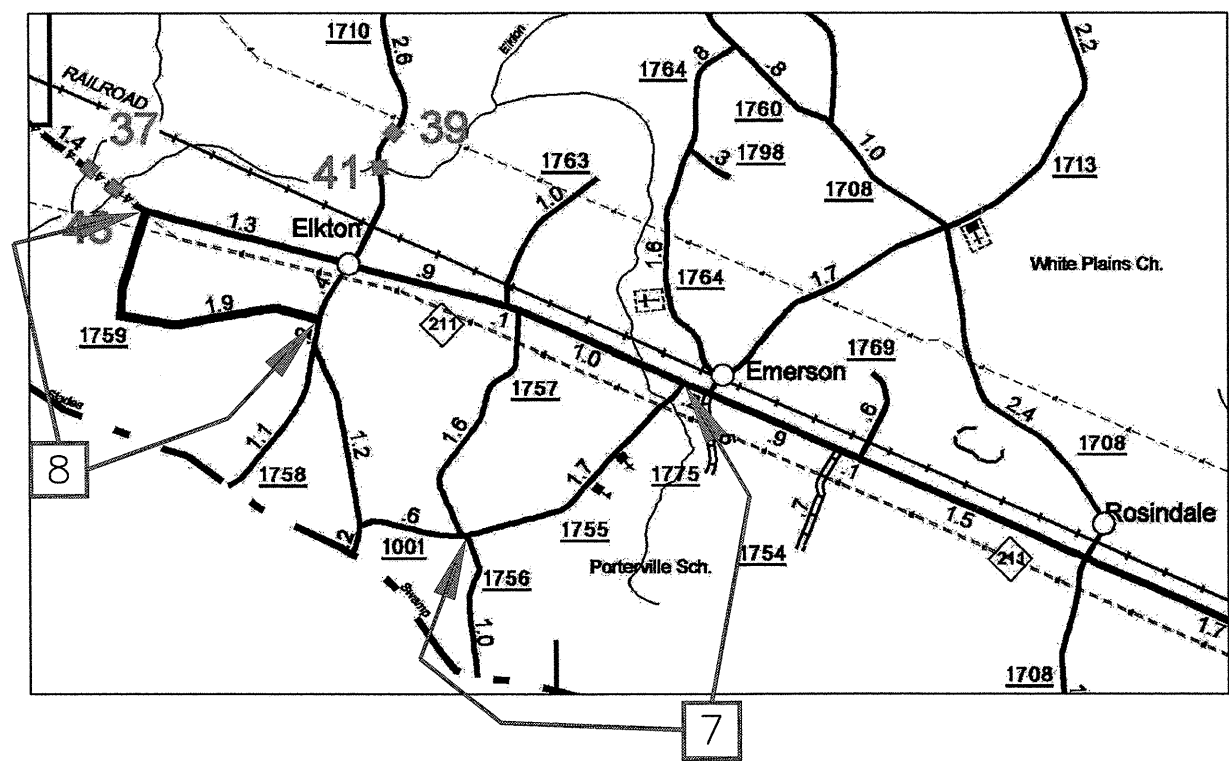
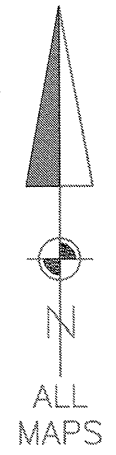
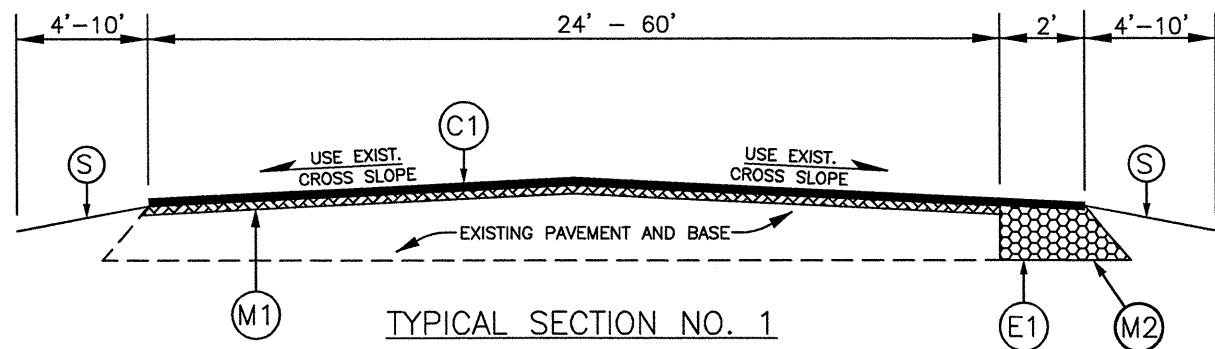


RESURFACING MAPS — BLADEN COUNTY



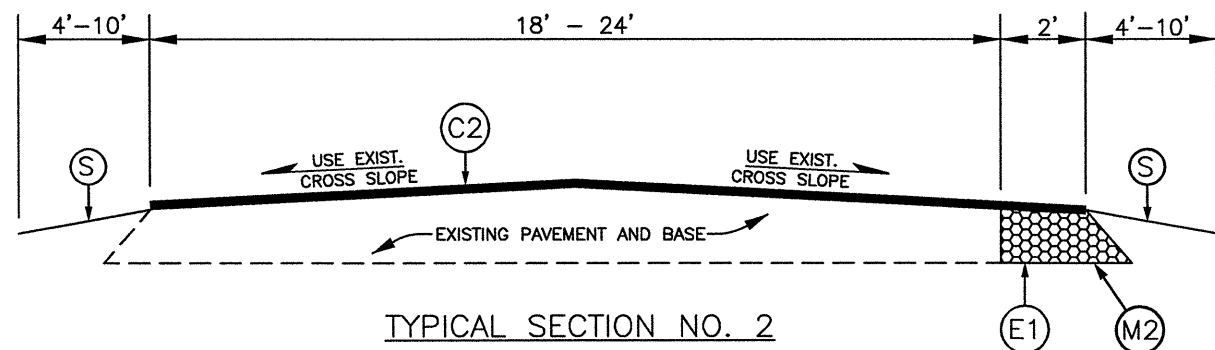
RESURFACING MAPS – BLADEN COUNTY





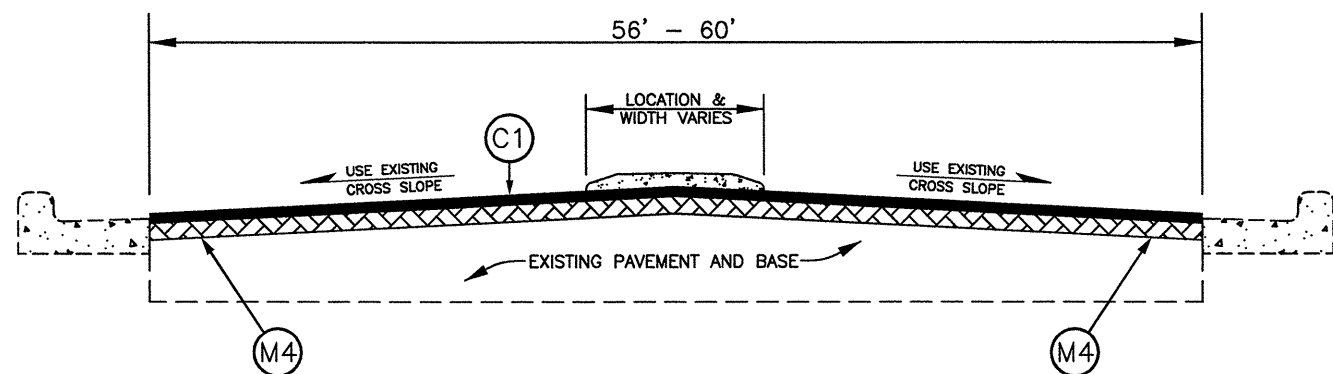
NOTES:

1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, PROVIDED ADEQUATE SHOULDER WIDTH EXISTS. ENGINEER WILL IDENTIFY CURVES TO BE WIDENED IN THE FIELD. 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.
4. INCLUDES MILL & FILL WHERE IDENTIFIED BY ENGINEER. SEE DETAIL 4.



NOTES:

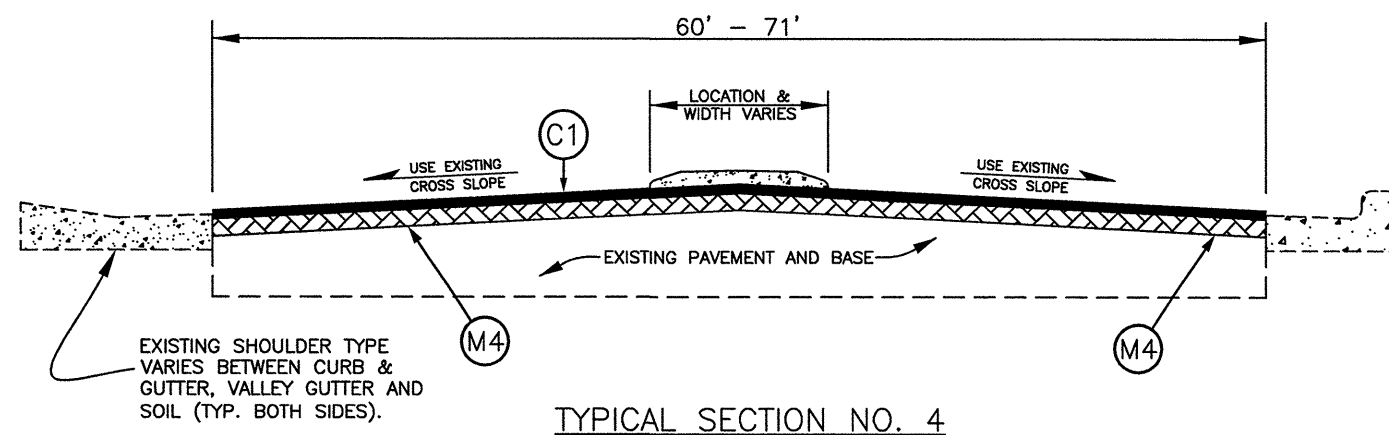
1. INCLUDES 2' WIDENING ON THE INSIDE RADIUS OF ALL CURVES, PROVIDED ADEQUATE SHOULDER WIDTH EXISTS. ENGINEER WILL IDENTIFY CURVES TO BE WIDENED IN THE FIELD. SEE DETAIL 1.
2. INCLUDES INCIDENTAL MILLING AT THE ENDS OF SECTIONS FOR SMOOTH TIE-INS, CURB RADII, AND STREET INTERSECTIONS, AS NEEDED, OR AS 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.



TYPICAL SECTION NO. 3

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 2.
2. INCLUDES MILL & FILL WHERE IDENTIFIED BY ENGINEER. SEE DETAIL 4.
3. WHERE CONCRETE MONOLITHIC ISLANDS OCCUR, MILL FROM THE EDGE OF THE ISLAND TO THE OUTSIDE EDGE OF PAVEMENT. OTHERWISE MILL THE ENTIRE WIDTH OF PAVEMENT.



TYPICAL SECTION NO. 4

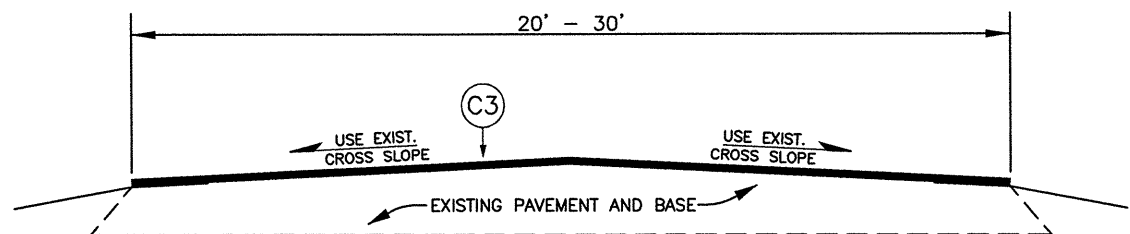
NOTES:

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 2.
2. INCLUDES MILL & FILL WHERE IDENTIFIED BY ENGINEER. SEE DETAIL 4.
3. SHOULDER RECONSTRUCTION REQUIRED WHERE SOIL SHOULDER SECTIONS EXIST.
4. WHERE CONCRETE MONOLITHIC ISLANDS OCCUR, MILL FROM THE EDGE OF THE ISLAND TO THE OUTSIDE EDGE OF PAVEMENT. OTHERWISE MILL THE ENTIRE WIDTH OF PAVEMENT.

PAVEMENT SCHEDULE

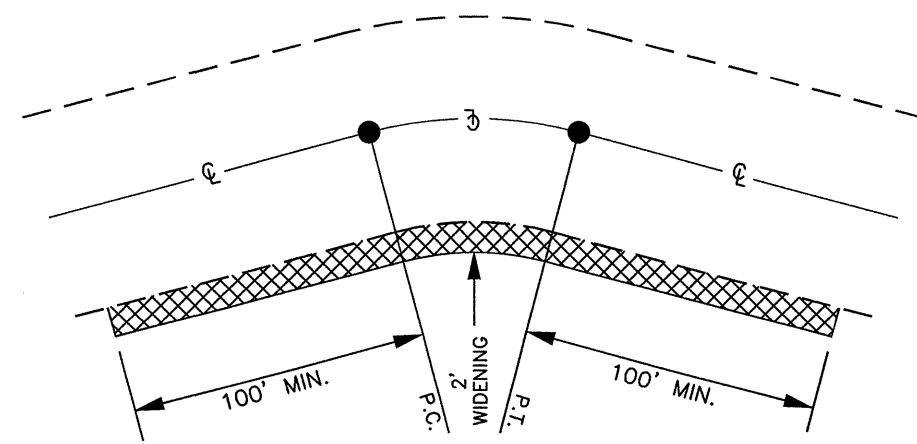
C1	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type S-9.5-B, at an average rate of 168 pounds per square yard.
C2	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type SF-9.5-A, at an average rate of 165 pounds per square yard.
C3	Proposed approximately 1" of Asphalt Concrete Surface Course, Type SA-1 at an average rate of 100 pounds per square yard.
D1	Proposed approximately 2½" of Asphalt Concrete Intermediate Course, Type I-19.0-C, at an average rate of 285 pounds per square yard.
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.
M1	Milling existing asphalt to a depth of ½" for the entire width of the roadway, or as Directed by the Engineer, for roadway profile correction.
M2	Milling existing soil shoulder, to a depth of 5½", with a width of 2' where indicated by Typical, for symmetrical & inside curve widening.
M3	Incidental Milling 0" - 1½" at all Bridge Decks, Bridge Approaches and Railroad Tracks & Approaches, for the entire width of the roadway, or as Directed by the Engineer.
M4	Milling Depth 1½" for the entire width of the roadway, or as Directed by the Engineer.
M5	Milling Depth 2½" at all designated distressed areas, with a variable width from 9' to 12', or as Directed by the Engineer.
S	Shoulder Reconstruction as directed by the Engineer.

DRAWINGS NOT TO SCALE

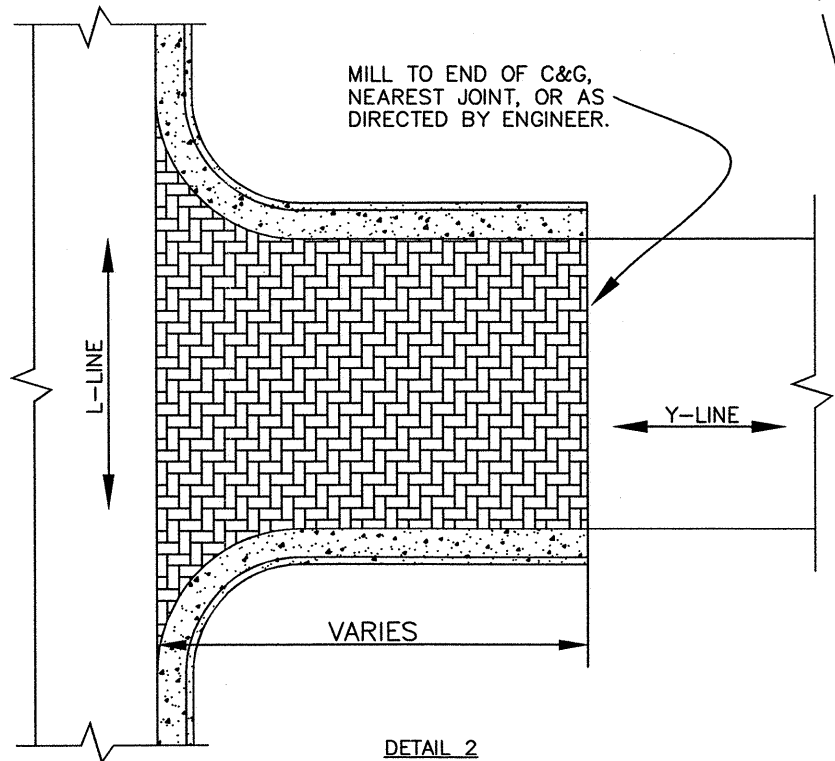


TYPICAL SECTION NO. 5

NOTE:
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 2.



DETAIL 1
2' INSIDE CURVE WIDENING



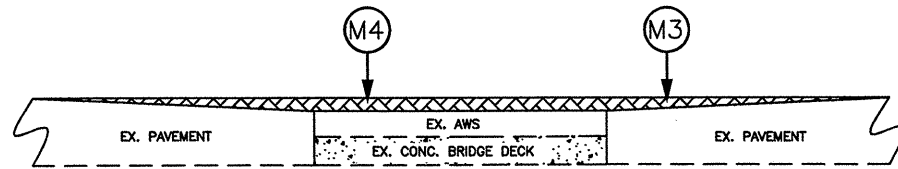
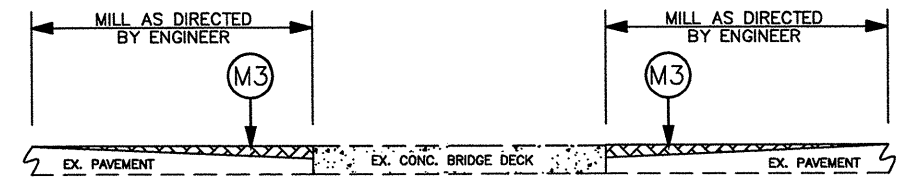
DETAIL 2
Y-LINE / END JOINT MILLING

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.

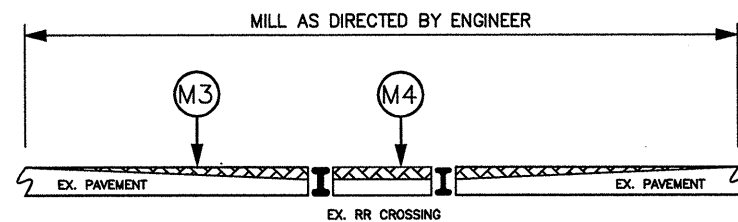
PAVEMENT SCHEDULE	
C1	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type S-9.5-B, at an average rate of 168 pounds per square yard.
C2	Proposed approximately 1½" of Asphalt Concrete Surface Course, Type SF-9.5-A, at an average rate of 165 pounds per square yard.
C3	Proposed approximately 1" of Asphalt Concrete Surface Course, Type SA-1 at an average rate of 100 pounds per square yard.
D1	Proposed approximately 2½" of Asphalt Concrete Intermediate Course, Type I-19.0-C, at an average rate of 285 pounds per square yard.
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.
M1	Milling existing asphalt to a depth of ½" for the entire width of the roadway, or as Directed by the Engineer, for roadway profile correction.
M2	Milling existing soil shoulder, to a depth of 5½", with a width of 2' where indicated by Typical, for symmetrical & inside curve widening.
M3	Incidental Milling 0" - 1½" at all Bridge Decks, Bridge Approaches and Railroad Tracks & Approaches, for the entire width of the roadway, or as Directed by the Engineer.
M4	Milling Depth 1½" for the entire width of the roadway, or as Directed by the Engineer.
M5	Milling Depth 2½" at all designated distressed areas, with a variable width from 9' to 12', or as Directed by the Engineer.
S	Shoulder Reconstruction as directed by the Engineer.

DRAWINGS NOT TO SCALE

COLUMBUS		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4	TYPICAL NO. 5
	PRIMARY	US 701 BYP.-A, US 701 BYP.-C, US 701 BYP.-E & US 701-F		US 701 BYP.-B	US 701 BYP.-D	
	SECONDARY		SR 1005, SR 1156, SR 1164, SR 1433 & SR 1546			
BLADEN		TYPICAL NO. 1	TYPICAL NO. 2	TYPICAL NO. 3	TYPICAL NO. 4	TYPICAL NO. 5
	PRIMARY	US 701-A				
	SECONDARY		SR 1119, SR 1120, SR 1340, SR 1700, SR 1708, SR 1755, SR 1759 & SR 1766			SR 1226, SR 1227, SR 1228, SR 1357, SR 1360, SR 1361, SR 1362 & SR 1363



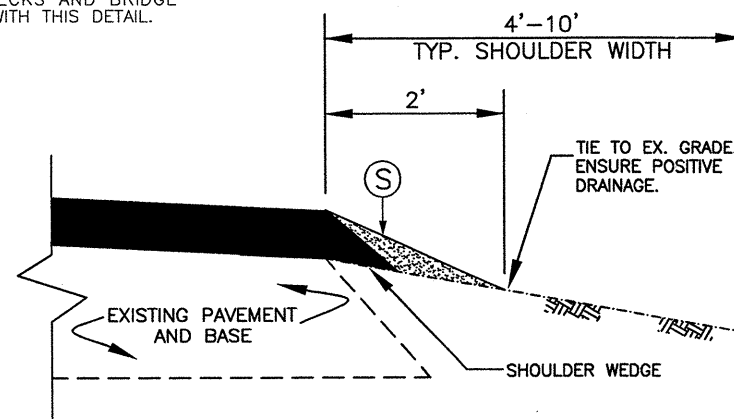
BRIDGE MILLING



RAILROAD TRACKS MILLING

DETAIL 3
MILLING APPROACHES

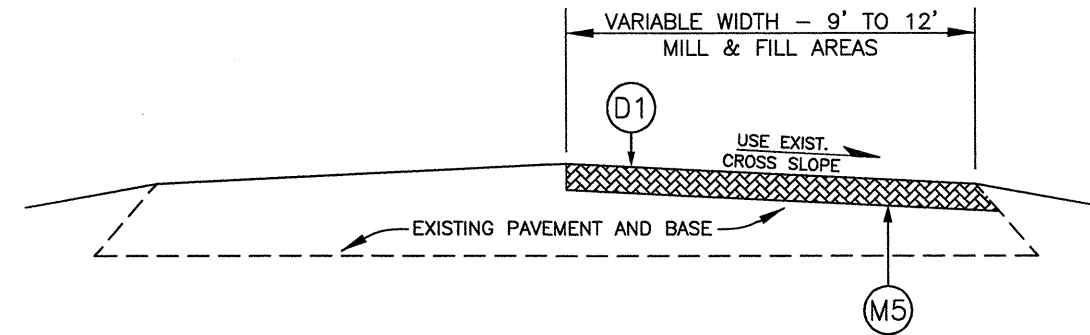
NOTE:
MILLING SHALL BE PERFORMED AT RR CROSSINGS, BRIDGE DECKS AND BRIDGE APPROACHES AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH THIS DETAIL.



DETAIL 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. AGGREGATE SHOULDER BORROW (ASB) MATERIAL SHALL BE PLACED USING A WIDENING MACHINE OR SIMILAR DEVICE.
3. 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.
4. 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.



DETAIL 4
MILL & FILL PAVEMENT REPAIR

NOTES:

1. DISTRESSED AREAS TO BE REPAIRED BY MILL & FILL 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.

PAVEMENT SCHEDULE

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.
C3	Proposed approximately 1" of Asphalt Concrete Surface Course, Type SA-1 at an average rate of 100 pounds per square yard.
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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.
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M2	Milling existing soil shoulder, to a depth of 5½", with a width of 2' where indicated by Typical, for symmetrical & inside curve widening.
M3	Incidental Milling 0" - 1½" at all Bridge Decks, Bridge Approaches and Railroad Tracks & Approaches, for the entire width of the roadway, or as Directed by the Engineer.
M4	Milling Depth 1½" for the entire width of the roadway, or as Directed by the Engineer.
M5	Milling Depth 2½" at all designated distressed areas, with a variable width from 9' to 12', or as Directed by the Engineer.
S	Shoulder Reconstruction as directed by the Engineer.

DRAWINGS NOT TO SCALE

SUMMARY OF QUANTITIES

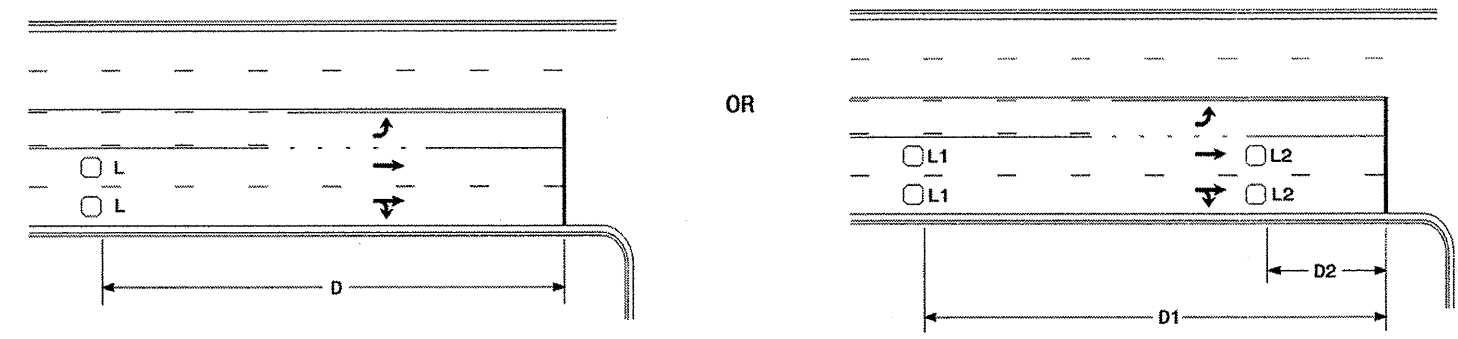
PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	INCIDENTAL STONE BASE TONS	0.5" MILLING SY	2.5" MILLING SY	1 1/2" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A (LEVELING COURSE) TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ASPHALT CONCRETE SURFACE COURSE, TYPE SA-1 TON	ASPHALT CONCRETE SURFACE COURSE, TYPE SA-1 (LEVELING COURSE) TON	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PAVED TRENCHING (1 CONDUIT-2") LF	UNPAVED TRENCHING (1 CONDUIT-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) LF			
6cr.10091.78	Bladen	1	US 701 BYP	FROM CONST JT @ CLARKTON NCL(MP 2.01) TO US 701 BUS. (MP 2.43)	1	NO	NO	0.42	28	32	4	6,899			89	40			622	12			40	4													
TOTAL FOR PROJ NO. 6cr.10091.78								0.42	28	32	4	6,899			89	40			622	12			40	4													
6cr.10241.78	Columbus	18	US 701 BYP -A	SR 1433(MP 16.60) TO SR 1437 (MP 17.80)	1	NO	NO	0.73	40	55	7	18,539			356			1,530					92	15			1	2									
				FROM SR 1433 (MP 16.60) TO SR 1437 (MP 17.80)	1	NO	NO	0.47	28	36	5	9,692	704		1,596			100		828	59			58	9												
TOTAL FOR MAP NO. 18								1.2	68	91	12	28,231	704		1,952			100		2,358	59			150	24	1	2										
6cr.10241.78	Columbus	19	US 701 BYP -B	SR 1437(MP 17.80) TO END C&G (MP 18.90)	3	NO	NO	1	56			8,213	704	32,853	978			100		3,054	59			192	20			21	11								
				FROM SR 1437 TO END C&G	3	NO	NO	0.1	60					3,520						311				19													
TOTAL FOR MAP NO. 19								1.1	116			8,213	704	36,373	978			100		3,365	59			211	20	21	11										
6cr.10241.78	Columbus	20	US 701 BYP -C	FROM END C&G (MP 18.90) TO BEGIN US 74 INTRCHG. (MP 19.41)	1	NO	NO	0.14	60	11	1	4,928			267				697				46	3			1	1									
				FROM END C&G TO BEGIN US 74 INTRCHG.	1	NO	NO	0.28	50	21	3	8,213							735				44	6			1	1	30.00	300.00	3.00	3.00	3.00	3,300.00	300.00		
				FROM END C&G TO BEGIN US 74 INTRCHG.	1	NO	NO	0.09	36	7	1	1,901	704					100		187			16	2			1	1									
TOTAL FOR MAP NO. 20								0.51	146	39	5	15,042	704		267			100		1,619	59			106	11	3	3	30.00	300.00	3.00	3.00	3.00	3,300.00	300.00			
6cr.10241.78	Columbus	21	US 701 BYP -D	FROM BEGIN US 74 INTRCHG. (MP 19.41) TO END US 74 INTRCHG. (MP19.88)	4	NO	NO	0.94	30	72			352	16,544	178			50		1,530	30			97	18					10.00	100.00	1.00	1.00	1.00	1,300.00	100.00	
TOTAL FOR MAP NO. 21								0.94	30	72			352	16,544	178			50		1,530	30			97	18			10.00	100.00	1.00	1.00	1.00	1,300.00	100.00			
6cr.10241.78	Columbus	22	US 701 BYP -E	FROM END US 74 INTRCHG. (MP 19.88) TO US 701 BUS. (MP 20.65)	1	NO	NO	0.58	24	44	6	8,166	352		89			50		706	47			48	12												
				FROM END US 74 INTRCHG. TO US 701 BUS.	1	NO	NO	0.19	40	14	2	4,459							391				23	4													
TOTAL FOR MAP NO. 22								0.77	64	58	8	12,625	352		89			50		1,097	47			71	16												
6cr.10241.78	Columbus	23	US 701 - F	FROM US 701 BUS. (MP 20.65) TO BLADEN CL (MP 30.33)	1	NO	NO	0.85	40	65	9	19,947	2,112		578	886	301		2,002	89			179	398													
				FROM US 701 BUS. TO BLADEN CL	1	NO	NO	8.8	28	668	88	154,880							12,585				755	88													
TOTAL FOR MAP NO. 23								9.65	68	733	97	174,827	2,112		578	886	301		14,587	89			934	486													
TOTAL FOR PROJ NO. 6cr.10241.78								14.17	136	993	122	238,938	4,928	52,917		4,042	886	701		24,556	343			1,569	575			25	16	40.00	400.00	4.00	4.00	4.00	4,600.00	400.00	
6cr.20091.78	Bladen	2	SR 1119	NC 211 (MP 0.48) TO NC 131 (MP1.06)	2	NO	NO	0.58	20	44	6				89	44								604	15			43	12								
		3	SR 1120	FROM NC 211 BUS (MP 0.00) TO NCL BLADENBORO (MP 0.79)	2	NO	NO	0.79	20	60	8				89	59								736	13			53	16								
		4	SR 1340	FROM NC 87 (MP 0.04) TO SR 1336 (MP0.90)	2	NO	NO	0.86	20	65	9				89	62								880	24			63	26								
		5	SR 1700	FROM SR 1710 (MP 4.98) TO SR 1706 (MP 7.496)	2	NO	NO	1.65	22	125	17				1,023	184								1,848	29			134	33								
				FROM SR 1710 TO SR 1706	2	NO	NO	0.866	24	66	9													1,041	70			70	17								
TOTAL FOR MAP NO. 5								2.516	191	26				1,023	184					2,889	29			2,889	29			204	50								
6cr.20091.78	Bladen	6	SR 1708	FROM SR 1700 (MP 0.00) TO SR 1709 (MP 0.97)	2	NO	NO	0.97	22	74	10				89	70								1,087	24			77	19								
		7	SR 1755	FROM NC 211 (MP 0.00) TO SR 1756 (MP 1.67)	2	NO	NO	1.67	18	127	17				89	121								1,527	31			109	33								
		8	SR 1759	FROM SR 1001(MP 0.00) TO NC 211 (MP 1.88)	2	NO	NO	1.88	20	143	19				89	140								1,900	24			135	38								
		9	SR 1766	FROM SR 1740 COLUMBUS CO (MP -0.17) TO SR 1740 COLUMBUS CO. (MP 1.11)	2	NO	NO	1.28	20	97	13				89	96								1,302	24			93	26								
		10	SR 1226	FROM SR 1206 (MP 0.00) TO SR 1228 (MP 0.15)	5	NO	NO	0.15	20		2				44										12	3			100	6							
		11	SR 1227	FROM SR 1226 (MP0.00) TO DEAD END (MP0.24)	5	NO	NO	0.24	20		2				44										19	5			155	6							
		12	SR 1228	FROM SR 1226 (MP0.00) TO DEAD END (MP 0.08)	5	NO	NO	0.08	20		1				44										7	2			57	3							
		13	SR 1357	FROM SR 1336 (MP 0.00) TO SR 1361 (MP 0.53)	5	NO	NO	0.53	20						44										60	11			497	12							
		14	SR 1360	FROM SR 1336 (MP 0.00) TO DEAD END (MP0.35)	5	NO	NO	0.35	20						44										28	7			223	9							
		15	SR 1361	FROM SR 1357 (MP 0.00) TO SR 1362 (MP 0.32)	5	NO	NO	0.11	30						44										14	2			109	12							
				FROM SR 1357 TO SR 1362	5	NO	NO	0.21	20						44										15	2			129	12							
TOTAL FOR MAP NO. 15								0.32	140						44									29	2			238	12								
		16	SR 1362	FROM SR 1361 (MP 0.00) TO SR 1363 (MP 0.10)	5	NO	NO	0.1	20						44										4	2			69	3							
		17	SR 1363	FROM SR 1362 (MP 0.00) TO DEAD END (MP 0.21)	5	NO	NO	0.21	20						44										7	4			137	6							

PROJECT NO.	SHEET NO.	TOTAL NO.
6cr.10091.78, 6cr.10241.78 6cr.20091.78, ETC.	/ D	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4399000000-N	4685000000-E		4686000000-E		4685000000-E		4697000000-E	4710000000-E	4721000000-E		4725000000-E			4810000000-E		4820000000-E	4900000000-N								
										TEMP. TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO MSG SCHOOL 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO STR ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE 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	EA	EA						
6cr.10091.78	Bladen	1	US 701BYP	FROM CONST JT @ CLARKTON NCL(MP 2.01) TO US 701 BUS. (MP 2.43)	1	2	0.42	28		1	5,400		6,700	265	455						4				265	6,700		12	65						
TOTAL FOR PROJ NO. 6cr.10091.78											5,400		6,965		455					4			4			6,965			77						
6cr.10241.78	Columbus	18	US 701 BYP -A	SR 1433(MP 16.60) TO SR 1437 (MP 17.80)	1	4	0.73	40		*	13,000		15,900	1,035	490						26	8	2		1,035	15,900		65	190						
TOTAL FOR MAP NO. 18											13,000		15,900	1,035	490					26	8	2				1,035	15,900		65	190					
6cr.10241.78	Columbus	19	US 701 BYP -B	FROM SR 1433 (MP 16.60) TO SR 1437 (MP 17.80)	1	2	0.47	28		*																									
6cr.10241.78	Columbus	19	US 701 BYP -B	SR 1437(MP 17.80) TO END C&G (MP 18.90)	3	2	1	56		*		1,600	12,000	4,585	280	485	390	365	8	12	45	3	10	6	4,585	12,000	485	200	160						
TOTAL FOR MAP NO. 19												1,600	12,000	4,585	280	485	390	365	8	12	45	3	10	6			4,585	12,000	485	200	160				
6cr.10241.78	Columbus	20	US 701 BYP -C	FROM END C&G (MP 18.90) TO BEGIN US 74 INTRCHG. (MP 19.41)	1	2	0.14	60		*	6,000		5,900	1,575	100						17	13			1,575	5,900		90	60						
TOTAL FOR MAP NO. 20											6,000		5,900	1,575	100				100	8	17	13			4		1,575	5,900		90	60				
6cr.10241.78	Columbus	21	US 701 BYP -D	FROM BEGIN US 74 INTRCHG. (MP 19.41) TO END US 74 INTRCHG. (MP19.88)	4	2	0.94	30		*	5,400	4,900	1,000	1,300	175	1,495					12	10	10		7	1,300	1,000	1,495	125	40					
TOTAL FOR MAP NO. 21											5,400	4,900	1,000	1,300	175	1,495				12	10	10		7	1,300	1,000	1,495	125	40						
6cr.10241.78	Columbus	22	US 701 BYP -E	FROM END US 74 INTRCHG. (MP 19.88) TO US 701 BUS. (MP 20.65)	1	2	0.58	24		*	7,200		6,920	125	500										125	6,920		10	57						
TOTAL FOR MAP NO. 22											7,200		6,920	125	500												125	6,920		10	57				
6cr.10241.78	Columbus	23	US 701 - F	FROM US 701 BUS. (MP 20.65) TO BLADEN CL (MP 30.33)	1	2	0.85	40		*	103,400		96,000	650	1,640	100									650	96,000	100	52	770						
TOTAL FOR MAP NO. 23											103,400		96,000	650	1,640	100												650	96,000	100	52	770			
TOTAL FOR PROJ NO. 6cr.10241.78											141,500	6,500	137,720	9,270	3,185	2,080	390	490	28	40	12	134	34	12	17			9,270	137,720	2,080	542	1,277			1,819
6cr.20091.78	Bladen	2	SR 1119	NC 211 (MP 0.48) TO NC 131 (MP1.06)	2	2	0.58	20		*															11,600	11,600									
		3	SR 1120	FROM NC 211 BUS (MP 0.00) TO NCL BLADENBORO (MP 0.79)	2	2	0.79	20		*															18,000	18,000									
		4	SR 1340	FROM NC 87 (MP 0.04) TO SR 1336 (MP0.90)	2	2	0.86	20		*															18,400	7,360									
		5	SR 1700	FROM SR 1710 (MP 4.98) TO SR 1706 (MP 7.496)	2	2	1.65	22		*															52,000	44,200									
TOTAL FOR MAP NO. 5																												52,000	44,200						
		6	SR 1708	FROM SR 1700 (MP 0.00) TO SR 1709 (MP 0.97)	2	2	0.97	22		*															22,000	17,600									
		7	SR 1755	FROM NC 211 (MP 0.00) TO SR 1756 (MP 1.67)	2	2	1.67	18		*															34,800	27,840									
		8	SR 1759	FROM SR 1001(MP 0.00) TO NC 211 (MP 1.88)	2	2	1.88	20		*															40,000	32,000									
		9	SR 1766	FROM SR 1740 COLUMBUS CO (MP 0.17) TO SR 1740 COLUMBUS CO (MP 1.11)	2	2	1.28	20		*															24,000	19,200									
		10	SR 1226	FROM SR 1206 (MP 0.00) TO SR 1228 (MP 0.15)	5	2	0.15	20		*																									
		11	SR 1227	FROM SR 1226 (MP0.00) TO DEAD END (MP0.24)	5	2	0.24	20		*																									
		12	SR 1228	FROM SR 1226 (MP0.00) TO DEAD END (MP 0.08)	5	2	0.08	20		*																									
		13	SR 1357	FROM SR 1336 (MP 0.00) TO SR 1361 (MP 0.53)	5	2	0.53	20		*																									
		14	SR 1360	FROM SR 1336 (MP 0.00) TO DEAD END (MP0.35)	5	2	0.35	20		*																									
		15	SR 1361	FROM SR 1357 (MP 0.00) TO SR 1362 (MP 0.32)	5	2	0.11	30		*																									
TOTAL FOR MAP NO. 15																																			
6cr.20091.78	Bladen	16	SR 1362	FROM SR 1361 (MP 0.00) TO SR 1363 (MP 0.10)	5	2	0.1	20		*																									
		17	SR 1363	FROM SR 1362 (MP 0.00) TO DEAD END (MP 0.21)	5	2	0.21	20		*																									
TOTAL FOR PROJ NO. 6cr.20091.78																													220,800	177,800			398,600		
6cr.20241.78	Columbus	24	SR 1005	FROM NC 904 (MP 0.16) TO US 701 (MP 6.6)	2	2	6.6	22		*	70,000		59,500																450						
		25	SR 1156	FROM SR 1005 (MP 0.00) TO US 701 (MP1.01)	2	2	1.01	20		*															23,400	19,800									
		26	SR 1164	FROM US 701 (MP 0.00) TO SR 1162 (MP 1.8)	2	2	1.8	20		*															38,000	32,300									
		27	SR 1433	FROM US 701 (MP 0.00) TO SR 1432 (MP 0.46)	2	2	0.46	18		*															10,000	10,000									
		28	SR 1546	FROM US 701 (MP 0.00) TO SR 1005 (MP1.74)	2	2	1.74	18		*															36,000	30,600									
TOTAL FOR PROJ NO. 6cr.20241.78											70,000		59,500																107,400	92,700		450			
GRAND TOTAL											38,726	1	210,400	6,500	203,920	9,535	3,640	2,080	390	490	28	40	12	138	34	12	17	337,735	414,920	2,080	554	1,792	2,346		
											216,900		213,455		5,720											752,655									

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

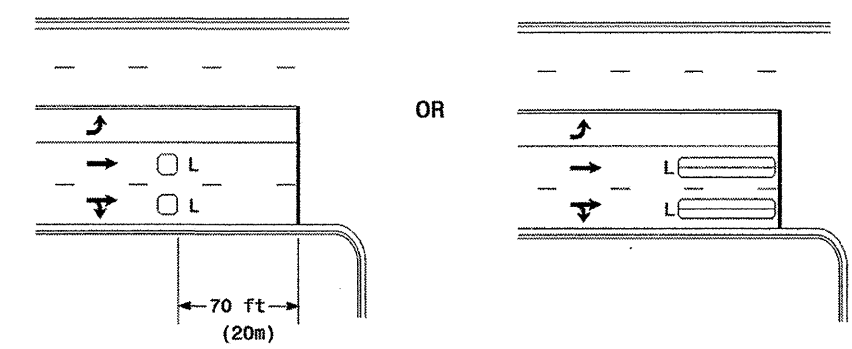
Volume Density Operation

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

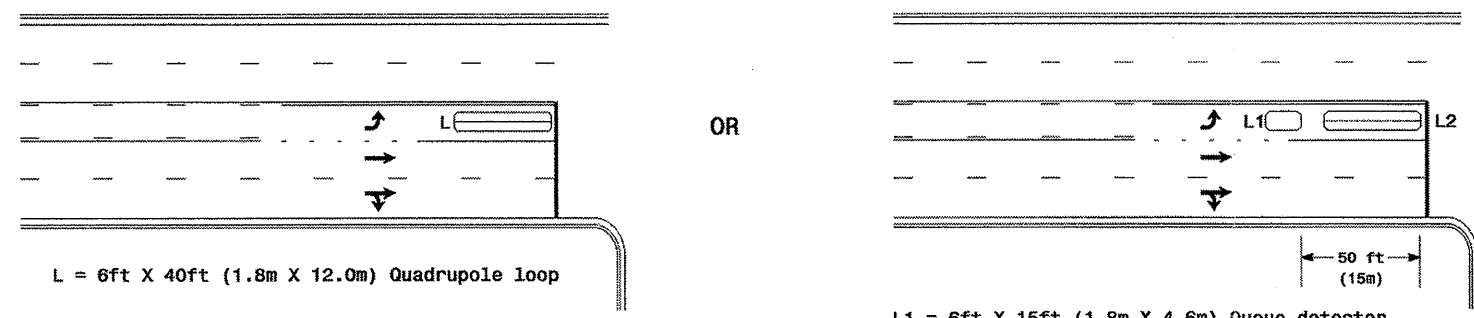
Low Speed Detection [≤35 mph (56 km/hr)]



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

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

Left Turn Lane Detection



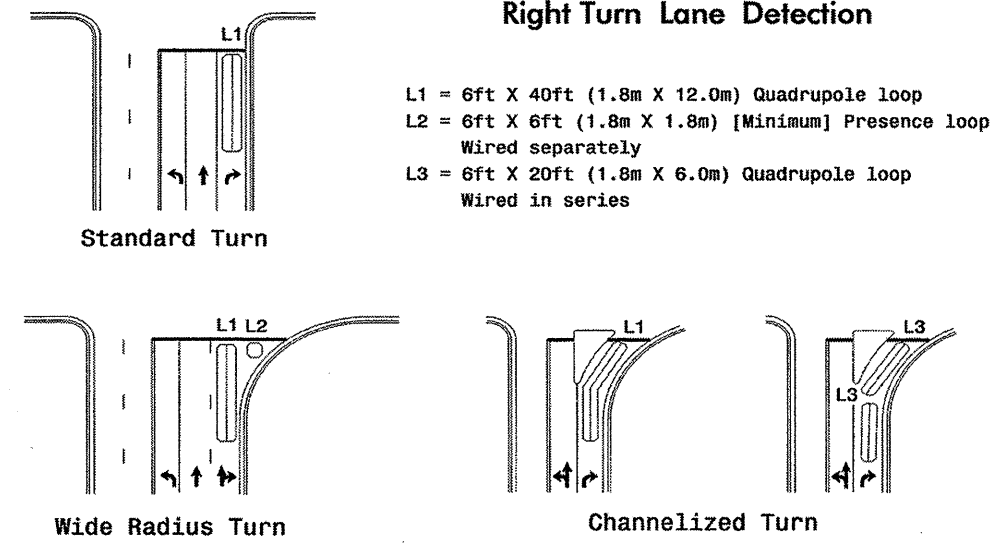
L = 6ft X 40ft (1.8m X 12.0m) Quadrapole loop

Presence Loop Detection

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

Queue Loop Detection

Right Turn Lane Detection



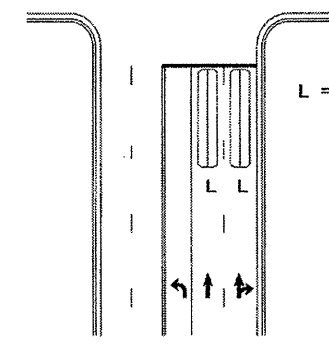
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrapole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrapole loop
Wired in series

Standard Turn

Wide Radius Turn

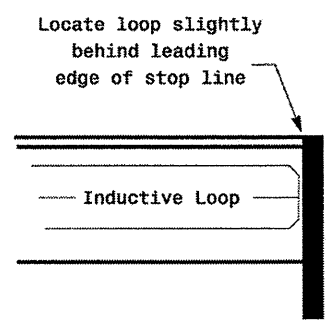
Channelized Turn

Side Street Detection



L = 6ft X 40ft (1.8m X 12.0m)
Quadrapole 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

Quadrapole 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

	Typical Loop Locations		
	PLAN DATE: June 2006 PREPARED BY: P. L. Alexander	REVIEWED BY: REVIEWED BY:	