

09/08/19

WBS NO: 3CR.10311.133 & 3CR.20311.133

CONTRACT:

DUPLIN COUNTY



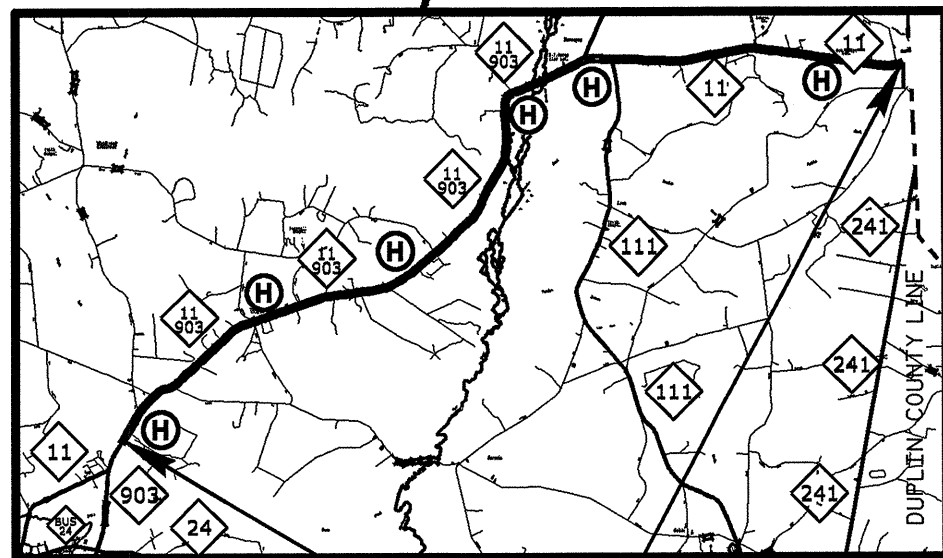
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

DUPLIN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	3CR.10311.133, Etc.	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

LOCATION: DUPLIN CO.: 1 SECTION OF NC 11 / NC 903 / NC 111
 1 SECTION OF NC 41
 1 SECTION OF NC 111
 1 SECTION OF NC 241
 1 SECTION OF SR 1745

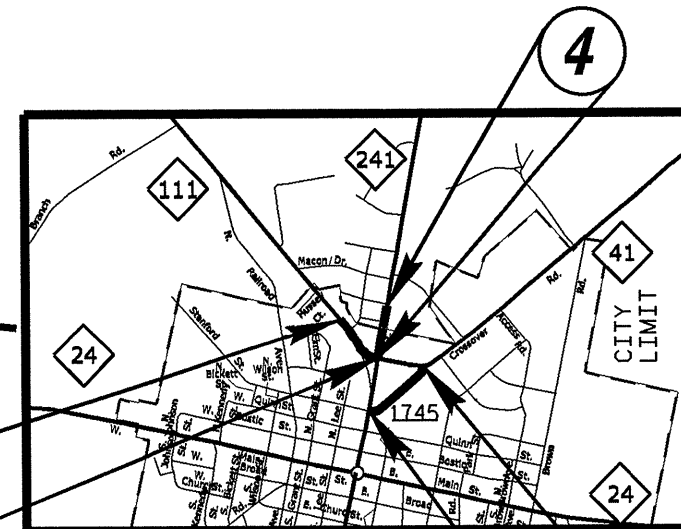
TYPE OF WORK:
 MILLING, WIDENING, RESURFACING, GUARDRAIL ANCHORS,
 PAVEMENT MARKING AND MARKERS, ETC.



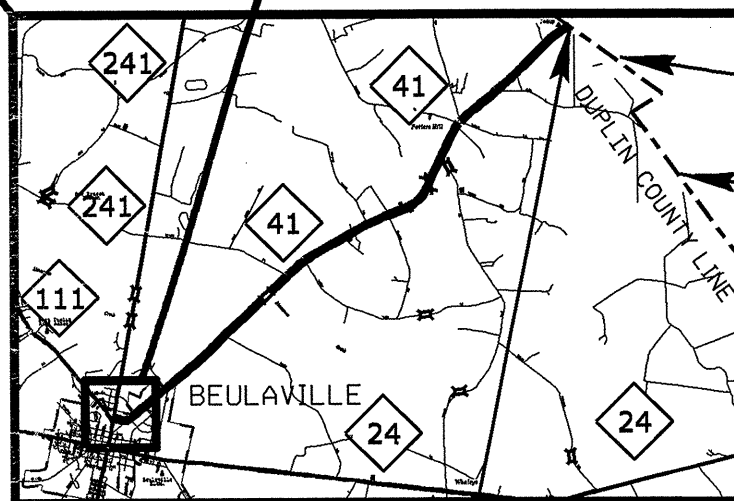
KENANSVILLE

(H) SEE NOTES FOR MAP 1

NOT TO SCALE



BEULAVILLE



BEULAVILLE

JONES COUNTY LINE

ONLOW COUNTY LINE

NOTES FOR MAP 1

(H) CONTRACTOR NEEDS TO BE AWARE OF AREAS WITH HISTORICAL SIGNIFICANCE AND ABIDE BY RESTRICTIONS DETAILED IN THE CONTRACT UNDER "NOTES TO CONTRACTOR".

2012 STANDARD DRAWINGS

848.06
 862.01
 862.02

PROJECT LENGTH

PRIMARY - DUPLIN CO.	SECONDARY - DUPLIN CO.
3CR.10311.133	3CR.20311.133
MAP NO. 1 = 13.13 MI.	MAP NO. 5 = 0.25 MI.
MAP NO. 2 = 7.04 MI.	SUB-TOTAL = 0.25 MI.
MAP NO. 3 = 0.14 MI.	
MAP NO. 4 = 0.14 MI.	
SUB-TOTAL = 20.45 MI.	
TOTAL = 20.70 MI.	

Prepared in the Office of:
DIVISION OF HIGHWAYS

5501 Barbados Blvd., Castle Hayne, NC 28429

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN TECHNICIAN

KLS

SIGNATURE: _____

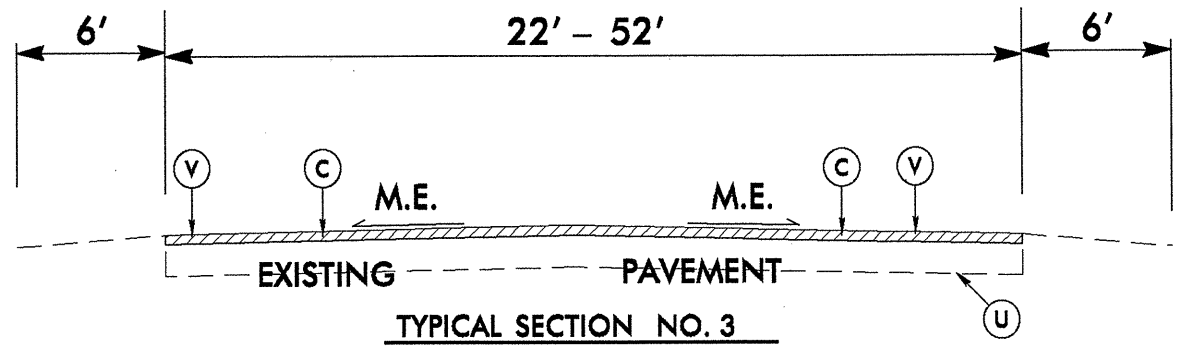
SIGNATURE: _____

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

\$\$\$\$\$SYTIME\$\$\$\$\$
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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
3CR.10311.133, ETC.	3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



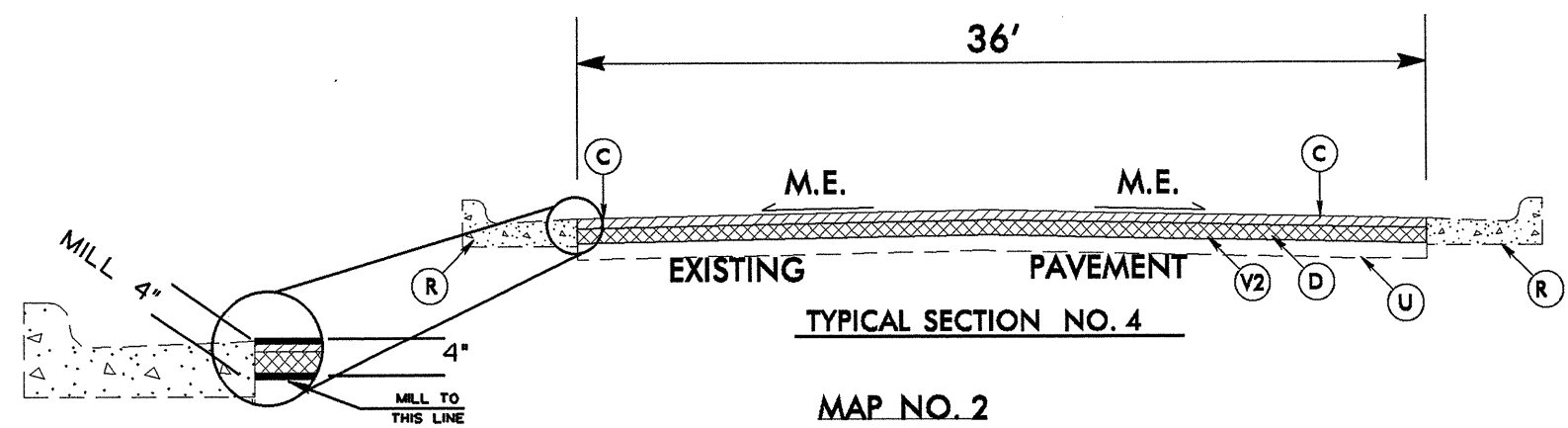
SEQUENCE OF WORK:
 1. MILL AS SHOWN.
 2. RESURFACE ENTIRE ROADWAY.

MAP NO. 1
 NC 11 / NC 903 / NC 111
 MP 26.71 TO MP 26.74
 MP 27.03 TO MP 27.05
 MP 28.75 TO MP 28.77
 MP 28.95 TO MP 28.98

MAP NO. 2
 NC 41
 MP 33.75 TO MP 33.81

MAP NO. 3
 NC 111
 MP 15.19 TO MP 15.33

MAP NO. 4
 NC 241
 MP 0.00 TO MP 0.14



MAP NO. 2
 NC 41
 MP 30.89 (SCL BEULAVILLE) TO MP 31.48 (NC 24)
 (IF WATER MAIN NOT REPLACED PRIOR TO 9/4/2013,
 TYPICAL NUMBER 8 SHALL BE USED.)
 MP 31.48 TO MP 31.56

PAVEMENT SCHEDULE		
C	PROP. APPROX. 1 1/2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.8B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.	U EXISTING PAVEMENT
C1	PROP. APPROX. 2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.8B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	V MILLING BITUMINOUS PAVEMENT 1 1/2" DEPTH
D	PROP. APPROX. 2 1/2" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	V1 MILLING BITUMINOUS PAVEMENT 2 1/2" DEPTH
E	PROP. APPROX. 5 1/2" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.	V2 MILLING BITUMINOUS PAVEMENT. 4" DEPTH.
R	EXISTING 2'-6" CURB & GUTTER	
T	EARTH MATERIAL (SHOULDER RECONSTRUCTION)	

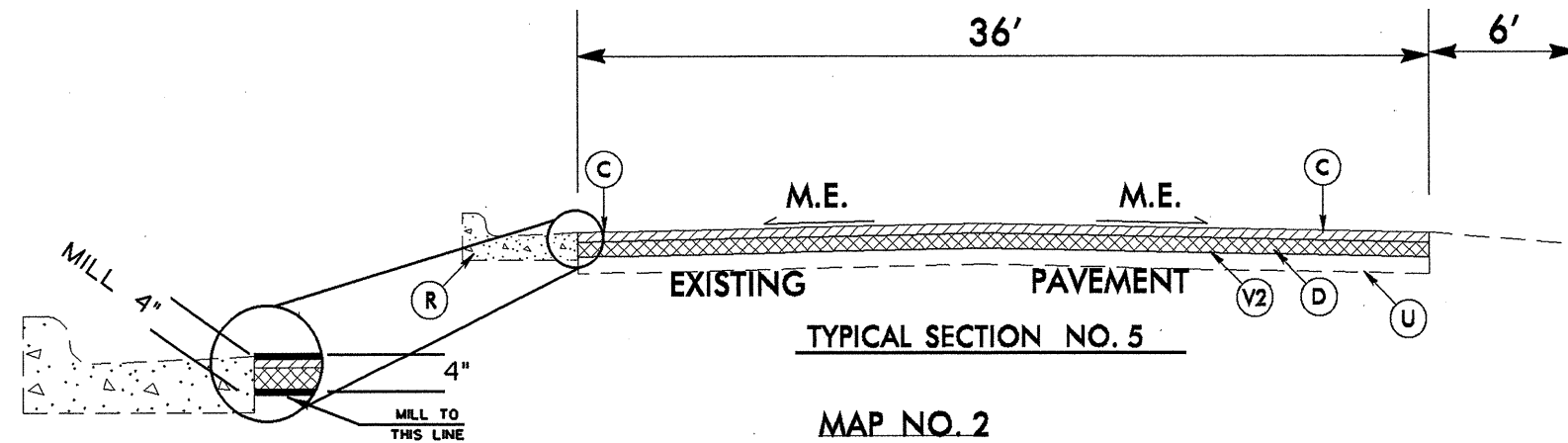
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
 SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.
 M.E. = MATCH EXISTING

NOT TO SCALE

REVISIONS

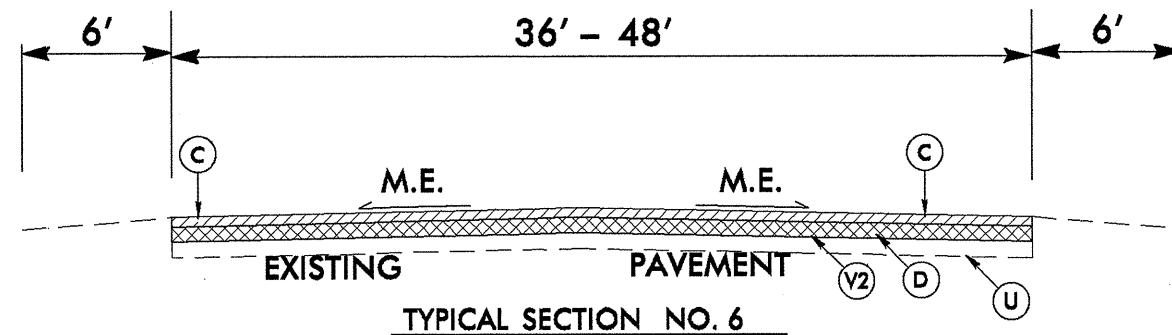
DATE: 8/17/99
 TIME: 10:00 AM
 BY: J. DONNIN
 CHECKED: J. DONNIN
 APPROVED: J. DONNIN

PROJECT REFERENCE NO. 3CR.10311.133, ETC.	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

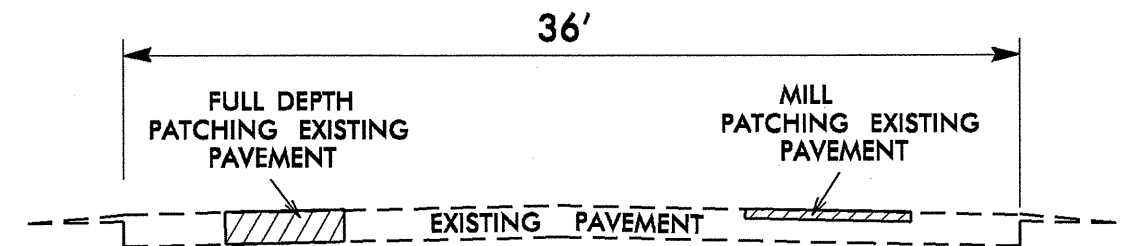


MAP NO. 2
NC 41
MP 31.56 TO MP 31.61

FULL DEPTH AND MILL PATCHING ONLY

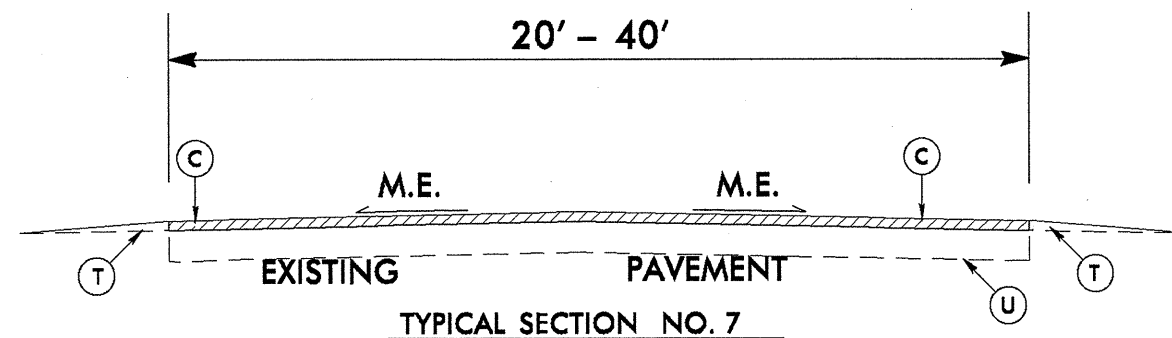


MAP NO. 2
NC 41
MP 31.61 TO MP 31.96



TYPICAL SECTION NO. 8

MAP NO. 2
NC 41
MP 30.89 (SCL BEULAVILLE) TO MP 31.48 (NC 24)
(IF WATER MAIN REPAIRED PRIOR TO 9/4/2013,
TYPICAL NUMBER 4 SHALL BE USED)



MAP NO. 2
NC 41
MP 31.96 TO MP 32.55

PAVEMENT SCHEDULE			
C	PROP. APPROX. 1½" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.0B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
G1	PROP. APPROX. 2" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.0B, AT AN AVERAGE RATE OF 280 LBS. PER SQ. YD.	V	MILLING BITUMINOUS PAVEMENT 1½" DEPTH
D	PROP. APPROX. 2½" DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	V1	MILLING BITUMINOUS PAVEMENT 2½" DEPTH
E	PROP. APPROX. 5½" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.	V2	MILLING BITUMINOUS PAVEMENT, 4" DEPTH.
R	EXISTING 2'-6" CURB & GUTTER		
T	EARTH MATERIAL (SHOULDER RECONSTRUCTION)		

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.
M.E. = MATCH EXISTING

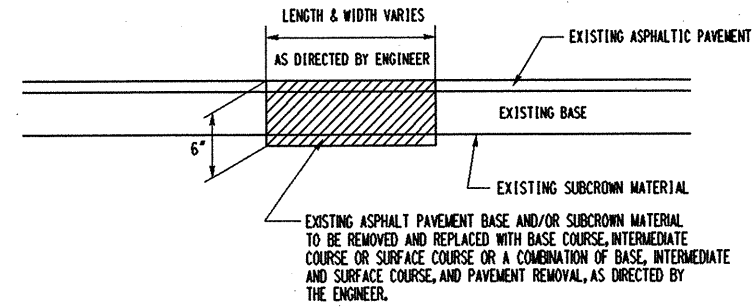
NOT TO SCALE

REVISIONS

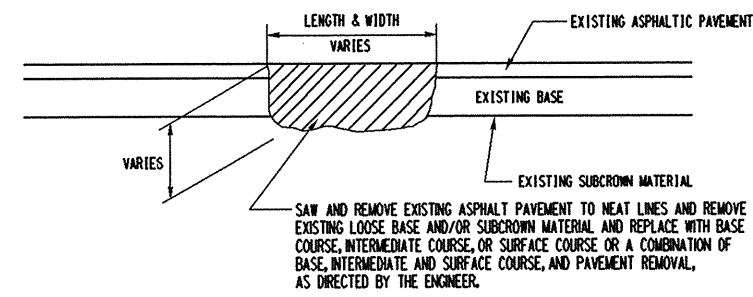
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PROJECT REFERENCE NO. 3CR.10311.133, ETC.	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

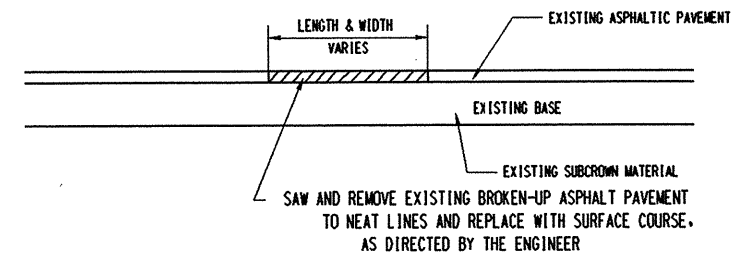
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



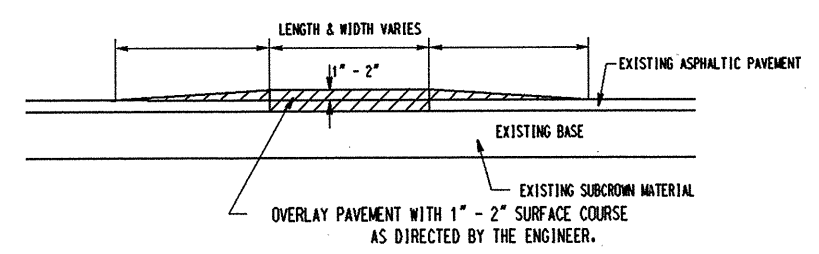
DETAIL NO. 1



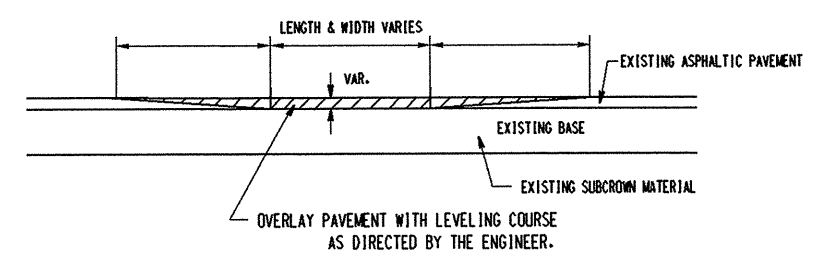
DETAIL NO. 2



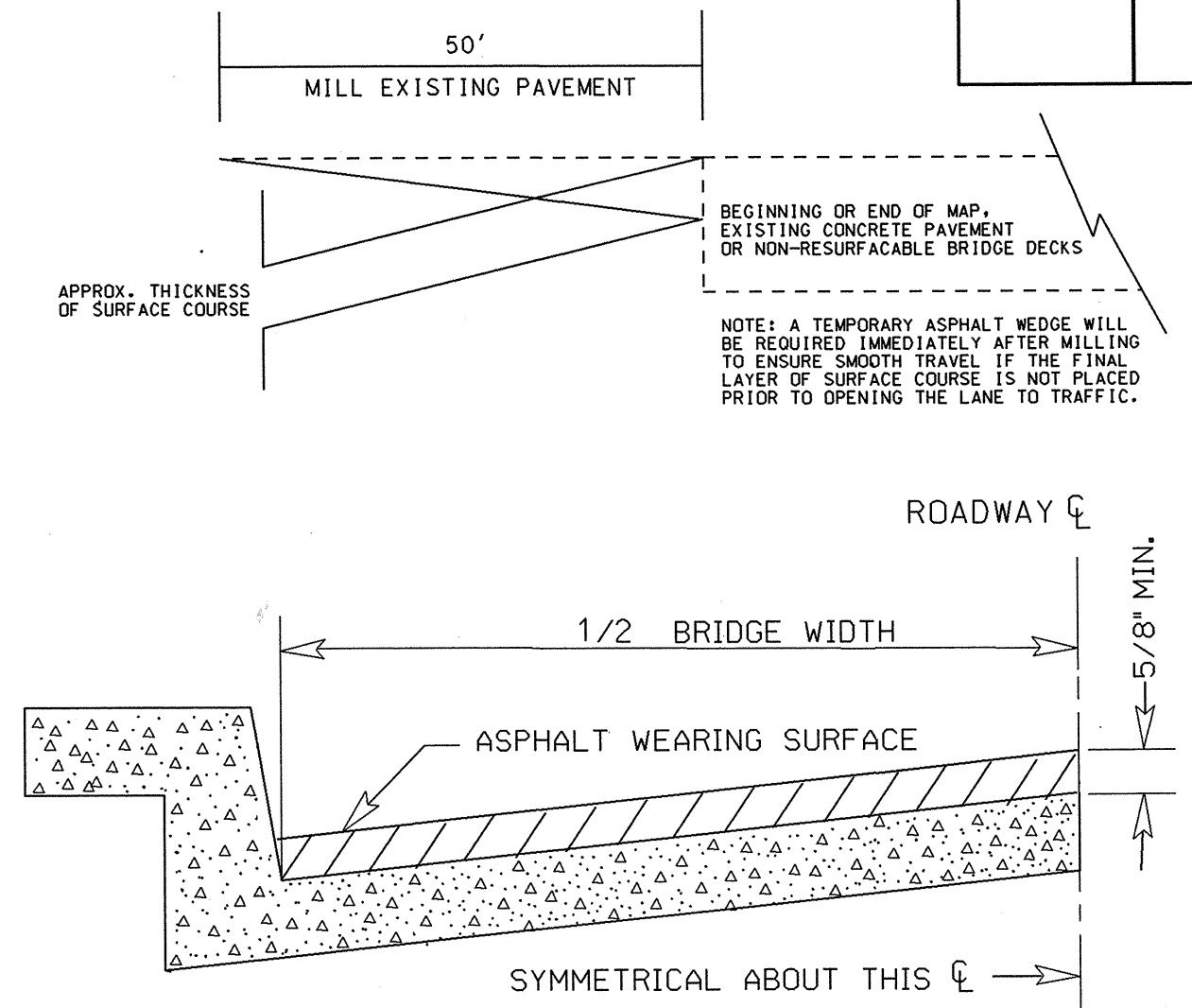
DETAIL NO. 3



DETAIL NO. 4



DETAIL NO. 5



BRIDGE HALF TYPICAL SECTION

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

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

8.672/499
 REVISIONS
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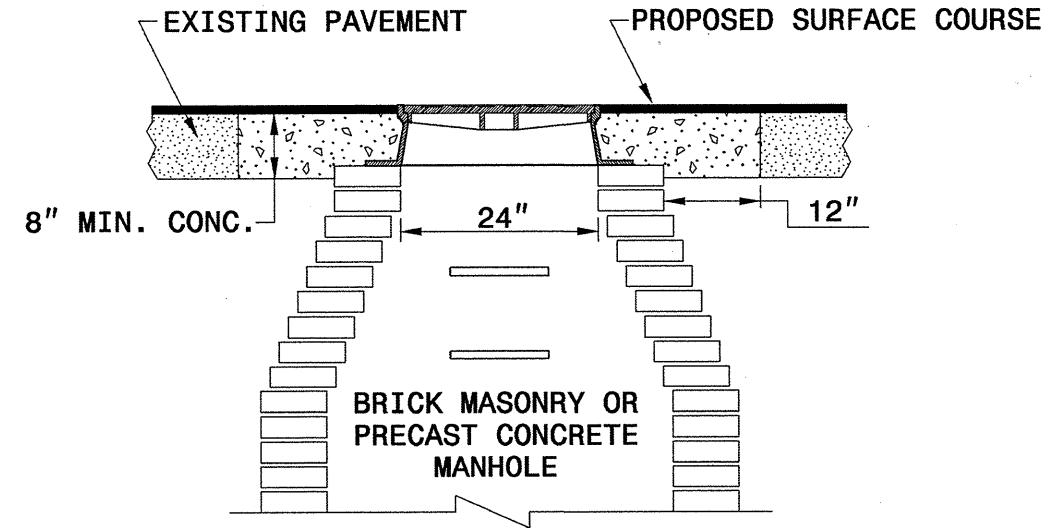
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MANHOLE AND VALVE BOX ADJUSTMENTS

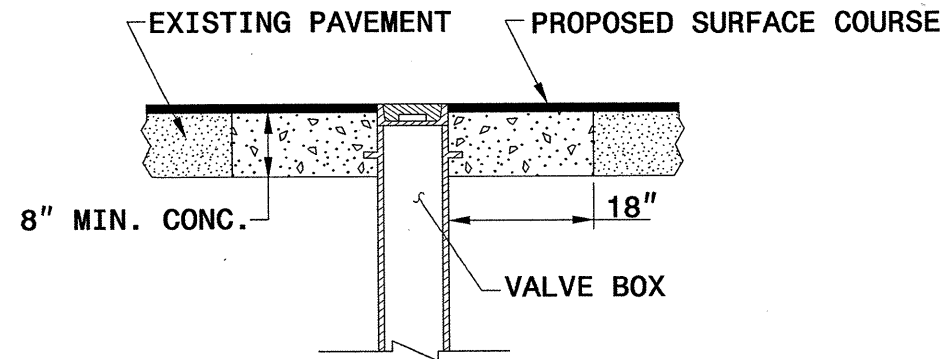
SHEET 1 OF 1
840D55

GENERAL NOTES:

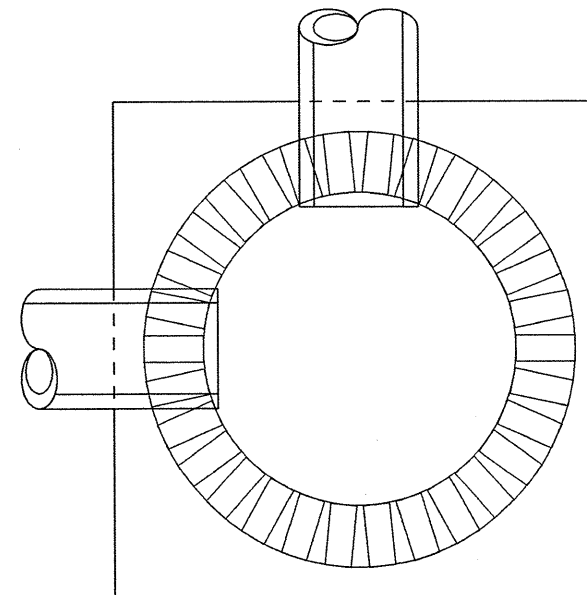
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8" DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS $\frac{1}{2}$ " \pm $\frac{1}{8}$ "



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

PLACE BRICK ACCORDING TO ELEVATION VIEW

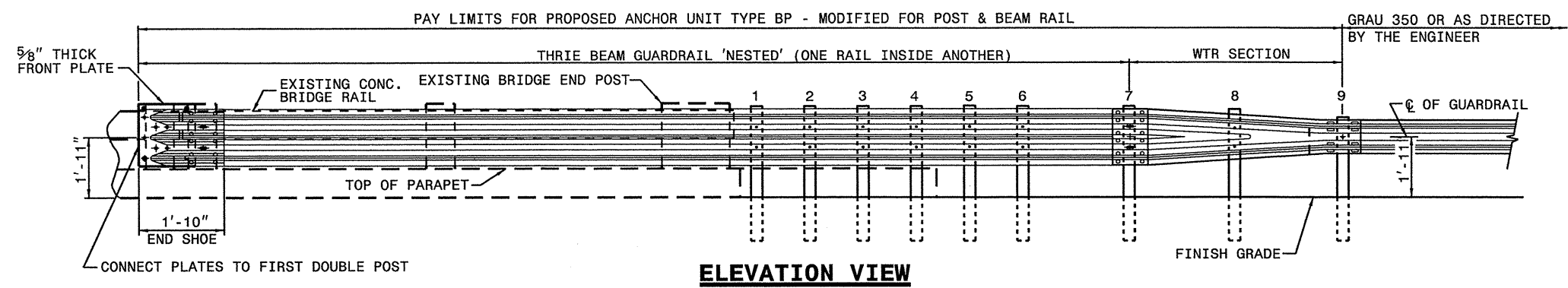
ENGLISH DETAIL DRAWING FOR
MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1
840D55

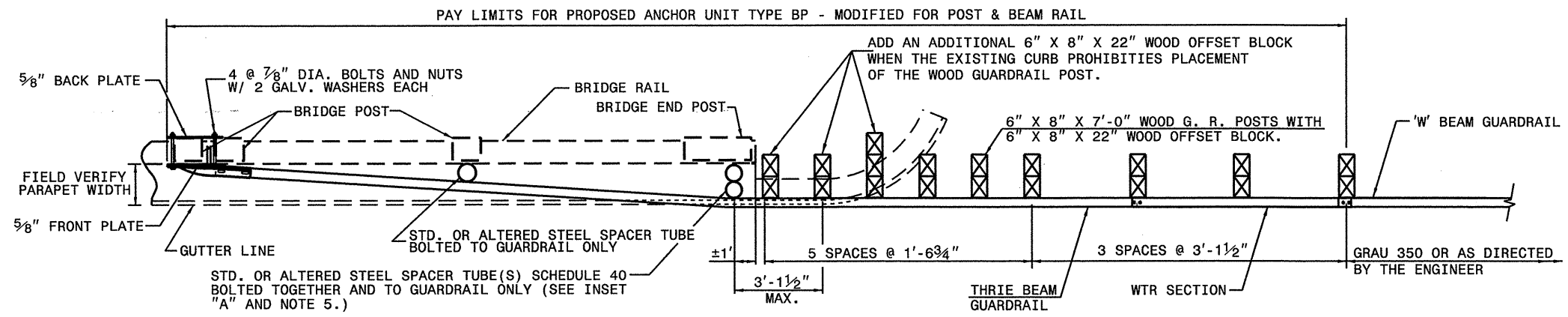
PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

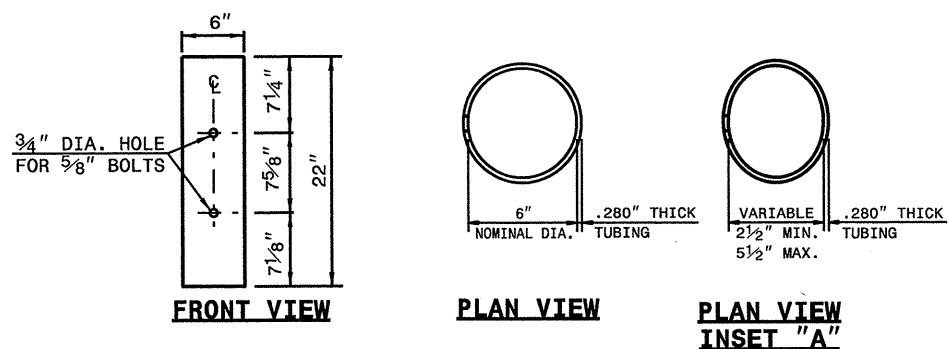
ORIGINAL BY: _____ DATE: _____
MODIFIED BY: E.E. WARD DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: /usr/details/stand/840d55.dgn



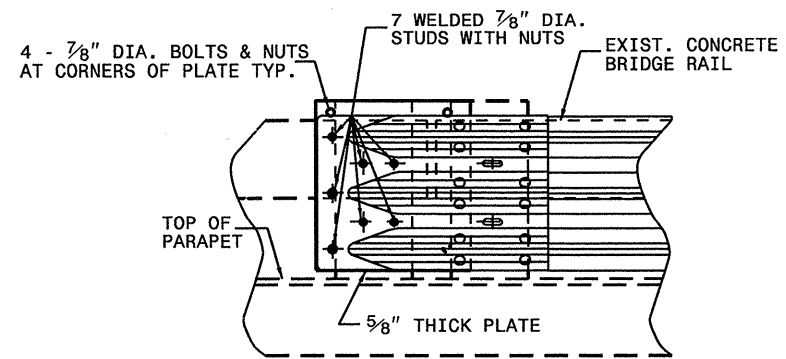
ELEVATION VIEW



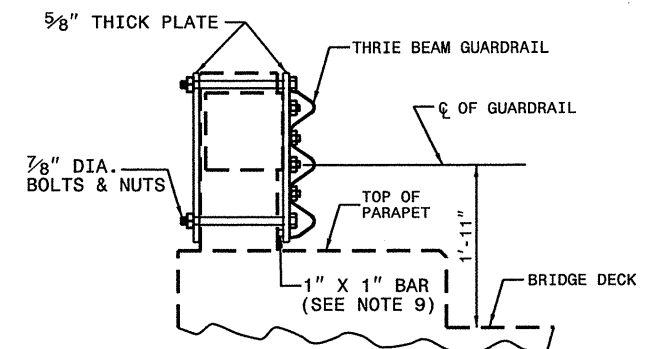
PLAN VIEW



STEEL SPACER TUBE

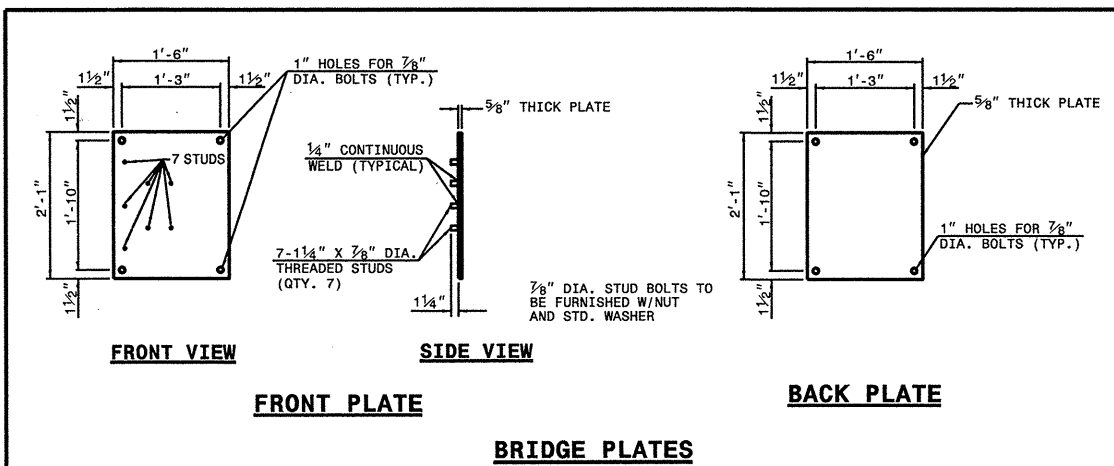


ELEVATION VIEW



SECTION VIEW

- GENERAL NOTES:**
1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
 3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
 4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
 5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
 6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
 7. USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
 8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH 1/4" WELDS ALL AROUND.
 9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
 10. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
 11. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 12. SEE ROADWAY STARDARD DRAWING 862.03 SHEET 3 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT



FRONT VIEW **SIDE VIEW** **FRONT PLATE** **BACK PLATE** **BRIDGE PLATES**

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

TYPE III MODIFIED FOR POST AND BEAM RAIL

ORIGINAL BY: E.E. WARD DATE: 01-03
MODIFIED BY: E.E. WARD DATE: 02-04
CHECKED BY: DATE:
FILE SPEC.: s:details\stand\bp111 original.dgn

07-DEC-2010 09:06 s:\projects\Special Details\viewcard\usr\details\stand\bp 111 original.dgn

SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECONST. SMI	2 1/2" MILLING SY	1 1/2" MILLING SY	4" MILLING SY	INC. MILLING SY	BASE COURSE, B25.0B TONS	INT. COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT (MILL) TON	PATCHING EXISTING PAVEMENT (FULL DEPTH) TONS	6" CONCRETE DRIVEWAYS SY	RETROFIT EXISTING CURB RAMP EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA
3CR.10311.133	Duplin	1	NC 11/NC 903/NC 111	NC 11 FROM MP 20.79 (0.0871 MI EAST OF END DIVIDED HWY) TO MP 33.92 (LENOIR COUNTY LINE)		NO	0.001	1		575					5,300					150	300	90			2
		"	"	WIDEN & RESURFACE FULL WIDTH 23' (MP 20.79 - 21.01, MP 21.38 - 25.76)	1	NO	4.6	23	1,035		9.20					3,385		8,980	688						
		"	"	WIDEN & RESURFACE TAPER FROM 23' TO 33' (MP 21.01 - 21.08, MP 21.27 - 21.38, MP 25.76 - 25.85)	1	NO	0.27	28	61		0.54					200		625	46						
		"	"	WIDEN & RESURFACE FULL WIDTH 33' (MP 21.08 - 21.27, MP 25.85 - 26.15)	1	NO	0.49	33	110		0.98					361		1,310	95						
		"	"	WIDEN & RESURFACE TAPER 33' - 22' (MP 26.15 - 26.22)	1	NO	0.07	27.5	16		0.14					52		160	12						
		"	"	WIDEN & RESURFACE FULL WIDTH 22' (MP 26.22 - 26.71, 26.74 - 27.03, 28.77 - 28.95)	2	NO	0.96	22	216		1.92	12,390				787	2,025	1,146	201						
		"	"	WIDEN & RESF FULL WIDTH 22' (MP 27.05-28.34; 28.62-28.75; 28.98-29.11; 29.71-29.83; 30.06-33.92)	2	YES	5.53	22	1,244		11.06	71,374				4,534	11,165	7,794	1,203						
		"	"	1.5" MILL & RESURFACE FULL WIDTH 22' (MP 26.71-26.74, MP 27.03-27.05, MP 28.75-28.77, MP 28.95-28.98)	3	NO	0.1	22					1,291					120	7						
		"	"	WIDEN & RESF TAPER 22'-33' (MP 28.34-28.42; 28.55-28.62; 29.11-29.17; 29.57-29.71; 29.83-29.90; 30.00-30.06)	2	YES	0.48	27.5	108		0.96	8,026				353	1,201	820	122						
		"	"	WIDEN & RESURF FULL WIDTH 33' (MP 28.42-28.55; 29.17-29.35, 29.51-29.57; 29.90-30.00)	2	YES	0.47	33	106		0.94	9,375				346	1,403	943	139						
		"	"	WIDEN & RESURF FULL WIDTH 44' (MP 29.35 - 29.46)	2	YES	0.11	44	25		0.22	2,904				81	435	286	42						
		"	"	WIDEN & RESURF TAPER 44' - 33' (MP 29.46 - MP 29.51)	2	YES	0.05	38.5	11		0.10	1,159				37	174	115	17						
TOTAL FOR MAP NO. 1								13.131	2,932	575	26.06	105,228	1,291		5,300	10,136	16,403	22,299	2,572	150	300	90			2
3CR.10311.133	Duplin	2	NC 41 (0.04 MILES N OF NC 24)	FROM 0.04 MILES NORTH OF NC 24 TO JONES COUNTY LINE		NO	0.001	1		400					1,200			85	5			90	2	2	3
		"	"	4" MILL & FILL FULL WIDTH 36' MP 30.89 TO MP 31.48	4	NO	0.59	36						12,461			1,875	1,155	159						
		"	"	FULL DEPTH AND MILL PATCHING MP 30.89 TO MP 31.48	8	NO	0.59	36												350	125				
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.48 - MP 31.56)	4	NO	0.08	36						1,690			253	156	22						
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.56 - MP 31.61)	5	NO	0.05	36						1,056			158	98	13						
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.61 - MP 31.66)	6	NO	0.05	36						1,056			158	98	13						
		"	"	4" MILL & FILL TAPER 36' - 48' (MP 31.66 - 31.70)	6	NO	0.04	42						986			148	91	13						
		"	"	4" MILL & FILL FULL WIDTH 48' (MP 31.70 - 31.78)	6	NO	0.08	48						2,253			337	208	29						
		"	"	4" MILL & FILL TAPER 48' - 40' (MP 31.78 - 31.81)	6	NO	0.03	44						775			116	72	10						
		"	"	4" MILL & FILL FULL WIDTH 40' (MP 31.81 - 31.96)	6	NO	0.15	40						3,520			527	325	45						
		"	"	1.5" RESURFACE FULL WIDTH 40' (MP 31.96 - 32.47)	7	NO	0.51	40	324		1.02							1,106	66						
		"	"	1.5" RESURFACE TAPER 40' - 20' (MP 32.47 - 32.55)	7	NO	0.08	30	51		0.16							130	8						
		"	"	WIDEN & RESURFACE FULL WIDTH 20' (MP 32.55 - 33.74, MP 34.26 - 37.93)	2	YES	4.86	20	1,094		9.72	59,875				3,575	8,959	6,323	967						
		"	"	WIDEN & RESURFACE TAPER 20' - 24' (MP 33.74 - 33.75, MP 33.81 - 33.87)	2	YES	0.07	22	16		0.14	945				52	141	99	15						
		"	"	1.5" MILL & FILL FULL WIDTH 24' (MP 33.75 - 33.76)	3	NO	0.01	24					141					13	1						
		"	"	1.5" MILL & FILL TAPER 24' - 39' (MP 33.76 - 33.77, MP 33.78 - 33.81)	3	NO	0.04	31.5					739					68	4						
		"	"	1.5" MILL & FILL FULL WIDTH 39' (MP 33.77 - 33.78)	3	NO	0.01	39					229					21	1						

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.133, 3CR.20311.133	10	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECONST. SMI	2 1/2" MILLING SY	1 1/2" MILLING SY	4" MILLING SY	INC. MILLING SY	BASE COURSE, B25.0B TONS	INT. COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	ASPHALT BINDER FOR PLANT MIX TON	PATCHING EXISTING PAVEMENT (MILL) TON	PATCHING EXISTING PAVEMENT (FULL DEPTH) TONS	6" CONCRETE DRIVEWAYS SY	RETROFIT EXISTING CURB RAMP EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA		
		"	"	WIDEN & RESURFACE TAPER 20' - 34' (MP 33.87 - 33.99, MP 34.11 - 34.26)	2	YES	0.27	27	61		0.54	4,435				199	664	454	68								
		"	"	WIDEN & RESURFACE FULL WIDTH 34' (MP 33.99 - 34.11)	2	YES	0.12	34	27		0.24	2,464				88	369	247	36								
TOTAL FOR MAP NO. 2							7.631		1,573	400	11.82	67,719	1,109	23,797	1,200	3,914	13,705	10,749	1,475	350	125	90	2	2	3		
3CR.10311.133	Duplin	3	NC 111 (FROM NC 41 TO 0.140 MILES NW OF NC 41)	1.5" MILL & FILL (0.140 MILES LONG)		NO	0.001	1		5															1		
		"	"	1.5" MILL & FILL FULL WIDTH 52' (MP 15.19 - 15.23)	3	NO	0.04	52					1,220					113	7								
		"	"	1.5" MILL & FILL TAPER 52' - 46' (MP 15.23 - 15.25)	3	NO	0.02	49					575					53	3								
		"	"	1.5" MILL & FILL TAPER 46' - 42' (MP 15.25 - 15.27)	3	NO	0.02	44					516					48	3								
		"	"	1.5" MILL & FILL TAPER 42' - 34' (MP 15.27 - 15.29)	3	NO	0.02	38					446					41	2								
		"	"	1.5" MILL & FILL TAPER 34' - 25' (MP 15.29 - 15.30)	3	NO	0.01	29.5					173					16	1								
		"	"	1.5" MILL & FILL FULL WIDTH 25' (MP 15.30 - 15.33)	3	NO	0.03	25					440					41	2								
TOTAL FOR MAP NO. 3							0.141			5			3,370					312	18					1			
3CR.10311.133	Duplin	4	NC 241 (FROM NC 111 TO 0.140 MILES N OF NC 111)	1.5" MILL & FILL (0.140 MILES)		NO	0.001	1																			
		"	"	1.5" MILL & FILL FULL WIDTH 40' (MP 0.00 TO MP 0.06)	3	NO	0.06	40					1,408					130	8								
		"	"	1.5" MILL & FILL TAPER 40' - 24' (MP 0.06 TO MP 0.14)	3	NO	0.08	32					1,502					139	8								
TOTAL FOR MAP NO. 4							0.141						2,910					269	16								
TOTAL FOR PROJ NO. 3CR.10311.133							21.044		4,505	980	37.88	172,947	8,680	23,797	6,500	14,050	30,108	33,629	4,081	500	425	180	2	3	5		
3CR.20311.133	Duplin	5	SR 1745 (OLD NC 41 HWY)	WIDEN & RESURFACE FULL WIDTH 20' (MP 0.00 - 0.25)	2	NO	0.25	20	56	35	0.50	3,080				184	461	325	50								
TOTAL FOR MAP NO. 5							0.25		56	35	0.50	3,080				184	461	325	50								
TOTAL FOR PROJ NO. 3CR.20311.133							0.25		56	35	0.50	3,080				184	461	325	50								
GRAND TOTAL							21.294		4,561	1,015	38.38	176,027	8,680	23,797	6,500	14,234	30,569	33,954	4,131	500	425	180	2	3	5		

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.133, 3CR.20311.133	12	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	STEEL BM GR LF	ADD GR POSTS EA	GR ANCHOR UNITS, TYPE III MOD FOR POST & BEAM RAIL EA	GR ANCHOR UNITS, TYPE 350 EA	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	WATTLE LF	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (14-2) LF		
		"	"	WIDEN & RESURFACE TAPER 20' - 34' (MP 33.87 - 33.99, MP 34.11 - 34.26)	2	YES	0.27	27																		
		"	"	WIDEN & RESURFACE FULL WIDTH 34' (MP 33.99 - 34.11)	2	YES	0.12	34																		
TOTAL FOR MAP NO. 2							7.631						591	40	40	5.91	40	296	100	8.60	296	1.48	1,500	175		
3CR.10311.133	Duplin	3	NC 111 (FROM NC 41 TO 0.140 MILES NW OF NC 41)	1.5" MILL & FILL (0.140 MILES LONG)		NO	0.001	1																		
		"	"	1.5" MILL & FILL FULL WIDTH 52' (MP 15.19 - 15.23)	3	NO	0.04	52																		
		"	"	1.5" MILL & FILL TAPER 52' - 46' (MP 15.23 - 15.25)	3	NO	0.02	49																		
		"	"	1.5" MILL & FILL TAPER 46' - 42' (MP 15.25 - 15.27)	3	NO	0.02	44																		
		"	"	1.5" MILL & FILL TAPER 42' - 34' (MP 15.27 - 15.29)	3	NO	0.02	38																		
		"	"	1.5" MILL & FILL TAPER 34' - 25' (MP 15.29 - 15.30)	3	NO	0.01	29.5																		
		"	"	1.5" MILL & FILL FULL WIDTH 25' (MP 15.30 - 15.33)	3	NO	0.03	25																		
TOTAL FOR MAP NO. 3							0.141																			
3CR.10311.133	Duplin	4	NC 241 (FROM NC 111 TO 0.140 MILES N OF NC 111)	1.5" MILL & FILL (0.140 MILES)		NO	0.001	1																		
		"	"	1.5" MILL & FILL FULL WIDTH 40' (MP 0.00 TO MP 0.06)	3	NO	0.06	40																		
		"	"	1.5" MILL & FILL TAPER 40' - 24' (MP 0.06 TO MP 0.14)	3	NO	0.08	32																		
TOTAL FOR MAP NO. 4							0.141																			
TOTAL FOR PROJ NO. 3CR.10311.133							21.044		1,950.00	60.00	12.00	12.00	1,911	100	100	19.11	120	956	300	27.55	956	4.78	1,500	175		
3CR.20311.133	Duplin	5	SR 1745 (OLD NC 41 HWY)	WIDEN & RESURFACE FULL WIDTH 20' (MP 0.00 - 0.25)	2	NO	0.25	20					25	6	6	0.25	10	13	10	0.36	13	0.06				
TOTAL FOR MAP NO. 5							0.25						25	6	6	0.25	10	13	10	0.36	13	0.06				
TOTAL FOR PROJ NO. 3CR.20311.133							0.25						25	6	6	0.25	10	13	10	0.36	13	0.06				
GRAND TOTAL							21.294		1,950.00	60.00	12.00	12.00	1,936	106	106	19.36	130	969	310	27.91	969	4.84	1,500	175		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4685000000-E		4686000000-E			4695000000-E		4700000000-E	4710000000-E	4721000000-E	4725000000-E				4810000000-E		4835000000-E	4840000000-N	
							4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	12" X 90 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SCHOOL 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	24" WHITE PAINT LF	PAINT MSG SCHOOL EA			
3CR.10311.133	Duplin	1	NC 11/NC 903/NC 111	NC 11 FROM MP 20.79 (0.0871 MI EAST OF END DIVIDED HWY) TO MP 33.92 (LENOIR COUNTY LINE)	0.001	1																			
		"	"	WIDEN & RESURFACE FULL WIDTH 23' (MP 20.79 - 21.01, MP 21.38 - 25.76)	4.6	23	49,496	49,496														49,500	49,500		
		"	"	WIDEN & RESURFACE TAPER FROM 23' TO 33' (MP 21.01 - 21.08, MP 21.27 - 21.38, MP 25.76 - 25.85)	0.27	28	2,905	5,702	238			637										2,916	5,724		
		"	"	WIDEN & RESURFACE FULL WIDTH 33' (MP 21.08 - 21.27, MP 25.85 - 26.15)	0.49	33	5,272	5,880	647								20					5,262	5,868		
		"	"	WIDEN & RESURFACE TAPER 33' - 22' (MP 26.15 - 26.22)	0.07	27.5	753	1,484	62			165										753	1,484		
		"	"	WIDEN & RESURFACE FULL WIDTH 22' (MP 26.22 - 26.71, 26.74 - 27.03, 28.77 - 28.95)	0.96	22	10,330	7,603														10,330	7,603		
		"	"	WIDEN & RESURF FULL WIDTH 22' (MP 27.05-28.34; 28.62-28.75; 28.98-29.11; 29.71-29.83; 30.06-33.92)	5.53	22	59,503	43,798														59,503	43,798		
		"	"	1.5" MILL & RESURFACE FULL WIDTH 22' (MP 26.71-26.74, MP 27.03-27.05, MP 28.75-28.77, MP 28.95-28.98)	0.1	22	1,076	1,076														1,087	1,087		
		"	"	WIDEN & RESURF TAPER 22'-33' (MP 28.34-28.42; 28.55-28.62; 29.11-29.17; 29.57-29.71; 29.83-29.90; 30.00-30.06)	0.48	27.5	5,165	10,176	384			1,133	50	6								5,229	10,303	50	6
		"	"	WIDEN & RESURF FULL WIDTH 33' (MP 28.42-28.55; 29.17-29.35, 29.51-29.57; 29.90-30.00)	0.47	33	5,057	5,170	620			50	50	6	17							5,025	5,137	50	6
		"	"	WIDEN & RESURF FULL WIDTH 44' (MP 29.35 - 29.46)	0.11	44	1,184	1,184	290					4	6	4						1,184	1,184		
		"	"	WIDEN & RESURF TAPER 44' - 33' (MP 29.46 - MP 29.51)	0.05	38.5	538	538	132													613	613		
TOTAL FOR MAP NO. 1					13.131		141,279	132,107	2,373			1,985	100	12	41	6	4				141,402	132,301	100	12	
3CR.10311.133	Duplin	2	NC 41 (0.04 MILES N OF NC 24)	FROM 0.04 MILES NORTH OF NC 24 TO JONES COUNTY LINE	0.001	1																			
		"	"	4" MILL & FILL FULL WIDTH 36' MP 30.89 TO MP 31.48	0.59	36		7,788	200					24			9				1	400	15,576	48	
		"	"	FULL DEPTH AND MILL PATCHING MP 30.89 TO MP 31.48	0.59	36																400	15,576	48	
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.48 - MP 31.56)	0.08	36		1,056									4						1,056		
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.56 - MP 31.61)	0.05	36	264	660	66	100												264	660		
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.61 - MP 31.66)	0.05	36	538	660									4					538	660		
		"	"	4" MILL & FILL TAPER 36' - 48' (MP 31.66 - 31.70)	0.04	42	438	422	106													544	422		
		"	"	4" MILL & FILL FULL WIDTH 48' (MP 31.70 - 31.78)	0.08	48	877	845	211					36			3	3	3			1,088	845	36	
		"	"	4" MILL & FILL TAPER 48' - 40' (MP 31.78 - 31.81)	0.03	44	329	396	40					36			3	2	2			329	396	36	
		"	"	4" MILL & FILL FULL WIDTH 40' (MP 31.81 - 31.96)	0.15	40	1,644	1,980	198				354				5		3			1,644	1,980		
		"	"	1.5" RESURFACE FULL WIDTH 40' (MP 31.96 - 32.47)	0.51	40	5,488	10,771	673								8					5,448	10,771		
		"	"	1.5" RESURFACE TAPER 40' - 20' (MP 32.47 - 32.55)	0.08	30	861	1,690	70					189								931	1,690		
		"	"	WIDEN & RESURFACE FULL WIDTH 20' (MP 32.55- 33.74, MP 34.26 - 37.93)	4.86	20	52,294	38,491														52,294	38,491		
		"	"	WIDEN & RESURFACE TAPER 20' - 24' (MP 33.74 - 33.75, MP 33.81 - 33.87)	0.07	22	753	554														753	554		
		"	"	1.5" MILL & FILL FULL WIDTH 24' (MP 33.75 - 33.76)	0.01	24	108	79														108	79		
		"	"	1.5" MILL & FILL TAPER 24' - 39' (MP 33.76 - 33.77, MP 33.78 - 33.81)	0.04	31.5	430	317														430	317		
		"	"	1.5" MILL & FILL FULL WIDTH 39' (MP 33.77 - 33.78)	0.01	39	108	79														108	79		
		"	"	WIDEN & RESURFACE TAPER 20' - 34' (MP 33.87 - 33.99, MP 34.11 - 34.26)	0.27	27	2,905	5,702					637									2,905	5,702		

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.133, 3CR.20311.133	14	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4685000000-E		4686000000-E		4695000000-E		4700000000-E	4710000000-E	4721000000-E	4725000000-E				4810000000-E		4835000000-E	4840000000-N	
							4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	8" X 90 M WHITE THERMO LF	8" X 90 M YELLOW THERMO LF	12" X 90 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SCHOOL 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	24" WHITE PAINT LF	PAINT MSG SCHOOL EA		
		"	"	WIDEN & RESURFACE FULL WIDTH 34' (MP 33.99 - 34.11)	0.12	34	1,291	1,267	634							3		3				12		
TOTAL FOR MAP NO. 2					7.631		68,328	72,757	2,198	100	354	826	108		39	5	11	3	68,184	94,854	180			
3CR.10311.133	Duplin	3	NC 111 (FROM NC 41 TO 0.140 MILES NW OF NC 41)	1.5" MILL & FILL (0.140 MILES LONG)	0.001	1																		
		"	"	1.5" MILL & FILL FULL WIDTH 52' (MP 15.19 - 15.23)	0.04	52	438	422	106							3	2	3				438	422	40
		"	"	1.5" MILL & FILL TAPER 52' - 46' (MP 15.23 - 15.25)	0.02	49	219	211	53													272	211	
		"	"	1.5" MILL & FILL TAPER 46' - 42' (MP 15.25 - 15.27)	0.02	44	219	211	53													272	211	
		"	"	1.5" MILL & FILL TAPER 42' - 34' (MP 15.27 - 15.29)	0.02	38	215	422	53				47									268	422	
		"	"	1.5" MILL & FILL TAPER 34' - 25' (MP 15.29 - 15.30)	0.01	29.5	108	211	13				24									121	211	
		"	"	1.5" MILL & FILL FULL WIDTH 25' (MP 15.30 - 15.33)	0.03	25	323	317														323	317	
TOTAL FOR MAP NO. 3					0.141		1,522	1,794	278			71	40		3	2	3		1,694	1,794	40			
3CR.10311.133	Duplin	4	NC 241 (FROM NC 111 TO 0.140 MILES N OF NC 111)	1.5" MILL & FILL (0.140 MILES)	0.001	1																		
		"	"	1.5" MILL & FILL FULL WIDTH 40' (MP 0.00 TO MP 0.06)	0.06	40	658	634	79							2						738	634	
		"	"	1.5" MILL & FILL TAPER 40' - 24' (MP 0.06 TO MP 0.14)	0.08	32	861	1,690					189									861	1,690	
TOTAL FOR MAP NO. 4					0.141		1,519	2,324	79			189		2		2			1,599	2,324				
TOTAL FOR PROJ NO. 3CR.10311.133					21.044		212,648	208,982	4,928	100	354	3,071	248	12	85	13	18	5	212,879	231,273	320	12		
							213,910			454					121			444,152						
3CR.20311.133	Duplin	5	SR 1745 (OLD NC 41 HWY)	WIDEN & RESURFACE FULL WIDTH 20' (MP 0.00 - 0.25)	0.25	20	2,690	2,640														2,690	2,640	
TOTAL FOR MAP NO. 5					0.25		2,690	2,640											2,690	2,640				
TOTAL FOR PROJ NO. 3CR.20311.133					0.25		2,690	2,640											2,690	2,640				
							2,640											5,330						
GRAND TOTAL					21.294		215,338	211,622	4,928	100	354	3,071	248	12	85	13	18	5	215,569	233,913	320	12		
							216,550			454					121			449,482						

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.133, 3CR.20311.133	15	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4845000000-N				4900000000-N	4905000000-N
							PAINT LT ARROW EA	PAINT RT ARROW EA	PAINT STR ARROW EA	PAINT STR & RT ARROW EA	YELLOW & YELLOW MARKERS EA	SNOW PLOWABLE MARKERS (Y/Y) EA
3CR.10311.133	Duplin	1	NC 11/NC 903/NC 111	NC 11 FROM MP 20.79 (0.0871 MI EAST OF END DIVIDED HWY) TO MP 33.92 (LENOIR COUNTY LINE)	0.001	1						
		"	"	WIDEN & RESURFACE FULL WIDTH 23' (MP 20.79 - 21.01, MP 21.38 - 25.76)	4.6	23						304
		"	"	WIDEN & RESURFACE TAPER FROM 23' TO 33' (MP 21.01 - 21.08, MP 21.27 - 21.38, MP 25.76 - 25.85)	0.27	28						36
		"	"	WIDEN & RESURFACE FULL WIDTH 33' (MP 21.08 - 21.27, MP 25.85 - 26.15)	0.49	33	20					98
		"	"	WIDEN & RESURFACE TAPER 33' - 22' (MP 26.15 - 26.22)	0.07	27.5						9
		"	"	WIDEN & RESURFACE FULL WIDTH 22' (MP 26.22 - 26.71, 26.74 - 27.03, 28.77 - 28.95)	0.96	22						
		"	"	WIDEN & RESF FULL WIDTH 22' (MP 27.05-28.34; 28.62-28.75; 28.98-29.11; 29.71-29.83; 30.06-33.92)	5.53	22						365
		"	"	1.5" MILL & RESURFACE FULL WIDTH 22' (MP 26.71-26.74, MP 27.03-27.05, MP 28.75-28.77, MP 28.95-28.98)	0.1	22						7
		"	"	WIDEN & RESF TAPER 22'-33' (MP 28.34-28.42; 28.55-28.62; 29.11-29.17; 29.57-29.71; 29.83-29.90; 30.00-30.06)	0.48	27.5						64
		"	"	WIDEN & RESURF FULL WIDTH 33' (MP 28.42-28.55; 29.17-29.35, 29.51-29.57; 29.90-30.00)	0.47	33	17					94
		"	"	WIDEN & RESURF FULL WIDTH 44' (MP 29.35 - 29.46)	0.11	44	4	6	4			37
		"	"	WIDEN & RESURF TAPER 44' - 33' (MP 29.46 - MP 29.51)	0.05	38.5						17
TOTAL FOR MAP NO. 1					13.131		41	6	4			1,031
3CR.10311.133	Duplin	2	NC 41 (0.04 MILES N OF NC 24)	FROM 0.04 MILES NORTH OF NC 24 TO JONES COUNTY LINE	0.001	1						
		"	"	4" MILL & FILL FULL WIDTH 36' MP 30.89 TO MP 31.48	0.59	36	9			1		78
		"	"	FULL DEPTH AND MILL PATCHING MP 30.89 TO MP 31.48	0.59	36	9			1		78
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.48 - MP 31.56)	0.08	36	4					11
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.56 - MP 31.61)	0.05	36						7
		"	"	4" MILL & FILL FULL WIDTH 36' (MP 31.61 - MP 31.66)	0.05	36	4					7
		"	"	4" MILL & FILL TAPER 36' - 48' (MP 31.66 - 31.70)	0.04	42						13
		"	"	4" MILL & FILL FULL WIDTH 48' (MP 31.70 - 31.78)	0.08	48	3	3	3			27
		"	"	4" MILL & FILL TAPER 48' - 40' (MP 31.78 - 31.81)	0.03	44	3	2	2			4
		"	"	4" MILL & FILL FULL WIDTH 40' (MP 31.81 - 31.96)	0.15	40	5		3			20
		"	"	1.5" RESURFACE FULL WIDTH 40' (MP 31.96 - 32.47)	0.51	40	8					67
		"	"	1.5" RESURFACE TAPER 40' - 20' (MP 32.47 - 32.55)	0.08	30						27
		"	"	WIDEN & RESURFACE FULL WIDTH 20' (MP 32.55- 33.74, MP 34.26 - 37.93)	4.86	20						321
		"	"	WIDEN & RESURFACE TAPER 20' - 24' (MP 33.74 - 33.75, MP 33.81 - 33.87)	0.07	22						5
		"	"	1.5" MILL & FILL FULL WIDTH 24' (MP 33.75 - 33.76)	0.01	24						1
		"	"	1.5" MILL & FILL TAPER 24' - 39' (MP 33.76 - 33.77, MP 33.78 - 33.81)	0.04	31.5						3
		"	"	1.5" MILL & FILL FULL WIDTH 39' (MP 33.77 - 33.78)	0.01	39						1
		"	"	WIDEN & RESURFACE TAPER 20' - 34' (MP 33.87 - 33.99, MP 34.11 - 34.26)	0.27	27				2		36

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10311.133, 3CR.20311.133	16	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4845000000-N				4900000000-N		4905000000-N
							PAINT LT ARROW	PAINT RT ARROW	PAINT STR ARROW	PAINT STR & RT ARROW	YELLOW & YELLOW MARKERS	SNOW PLOWABLE MARKERS (Y/Y) EA	
							EA	EA	EA	EA	EA	EA	
		"	"	WIDEN & RESURFACE FULL WIDTH 34' (MP 33.99 - 34.11)	0.12	34	3		3				16
TOTAL FOR MAP NO. 2					7.631		48	5	11	4	78	643	
3CR.10311.133	Duplin	3	NC 111 (FROM NC 41 TO 0.140 MILES NW OF NC 41)	1.5" MILL & FILL (0.140 MILES LONG)	0.001	1							
		"	"	1.5" MILL & FILL FULL WIDTH 52' (MP 15.19 - 15.23)	0.04	52	3	2	3				13
		"	"	1.5" MILL & FILL TAPER 52' - 46' (MP 15.23 - 15.25)	0.02	49							7
		"	"	1.5" MILL & FILL TAPER 46' - 42' (MP 15.25 - 15.27)	0.02	44							7
		"	"	1.5" MILL & FILL TAPER 42' - 34' (MP 15.27 - 15.29)	0.02	38							4
		"	"	1.5" MILL & FILL TAPER 34' - 25' (MP 15.29 - 15.30)	0.01	29.5							
		"	"	1.5" MILL & FILL FULL WIDTH 25' (MP 15.30 - 15.33)	0.03	25							8
TOTAL FOR MAP NO. 3					0.141		3	2	3			39	
3CR.10311.133	Duplin	4	NC 241 (FROM NC 111 TO 0.140 MILES N OF NC 111)	1.5" MILL & FILL (0.140 MILES)	0.001	1							
		"	"	1.5" MILL & FILL FULL WIDTH 40' (MP 0.00 TO MP 0.06)	0.06	40	2			2			12
		"	"	1.5" MILL & FILL TAPER 40' - 24' (MP 0.06 TO MP 0.14)	0.08	32							32
TOTAL FOR MAP NO. 4					0.141		2			2		44	
TOTAL FOR PROJ NO. 3CR.10311.133					21.044		94	13	18	6	78	1,757	
							131						
3CR.20311.133	Duplin	5	SR 1745 (OLD NC 41 HWY)	WIDEN & RESURFACE FULL WIDTH 20' (MP 0.00 - 0.25)	0.25	20							17
TOTAL FOR MAP NO. 5					0.25							17	
TOTAL FOR PROJ NO. 3CR.20311.133					0.25							17	
GRAND TOTAL					21.294		94	13	18	6	78	1,774	
							131						

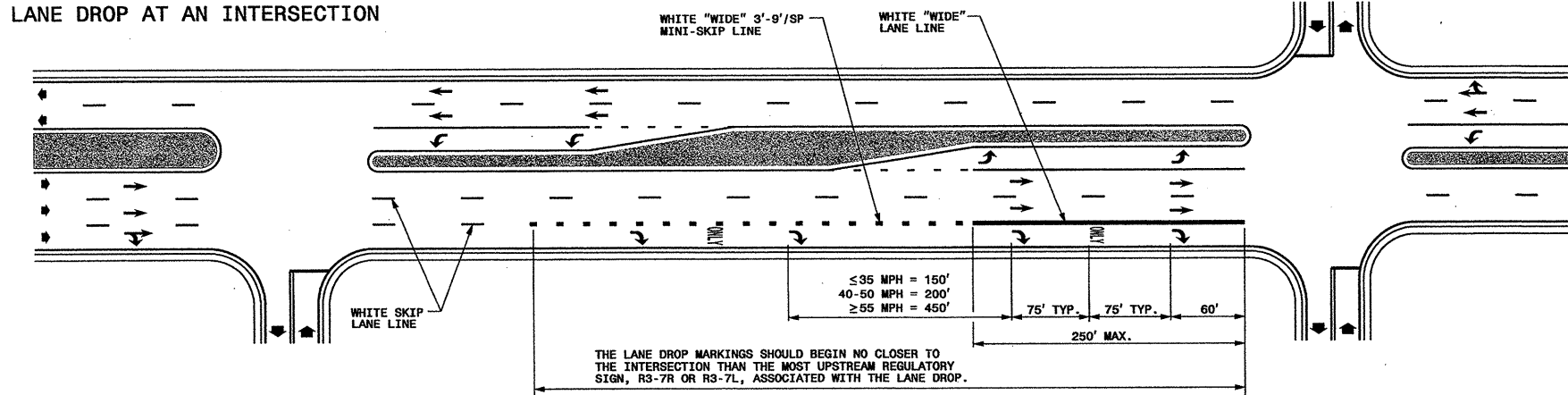
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

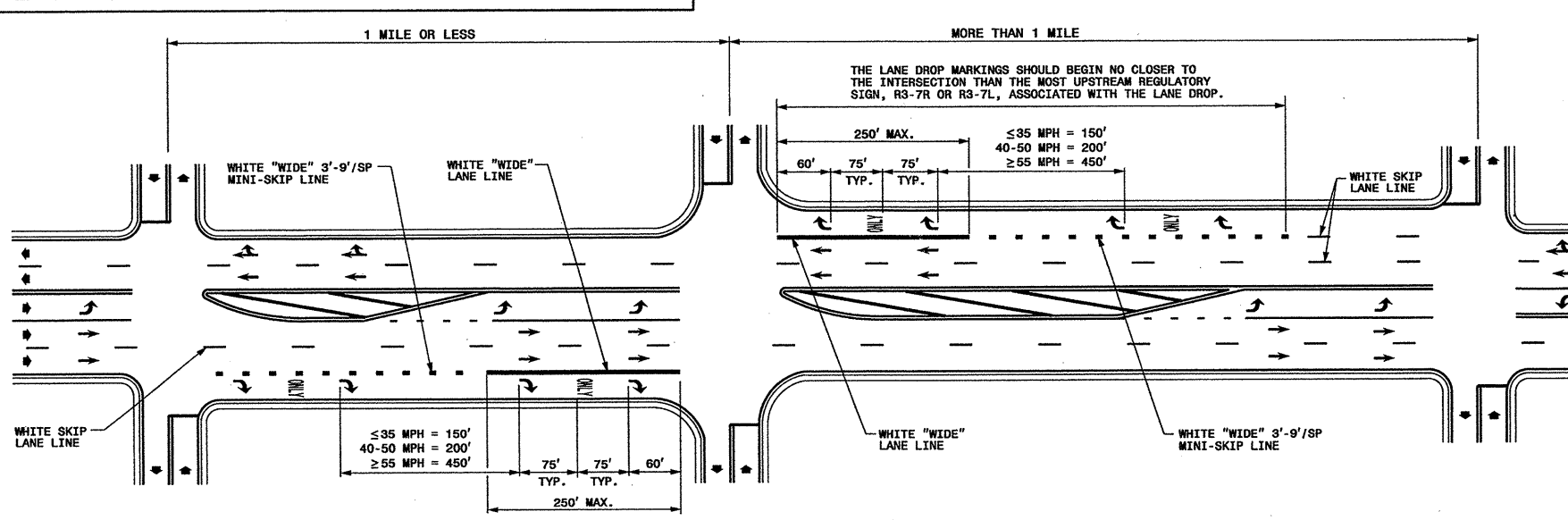
1-12
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3
1205D06

LANE DROP AT AN INTERSECTION



LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



GENERAL NOTES:

- 1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
- 2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

- W = WIDTH OF TRAVEL LANE
- ↔ ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
- ➔ DIRECTION OF TRAFFIC FLOW


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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12
ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

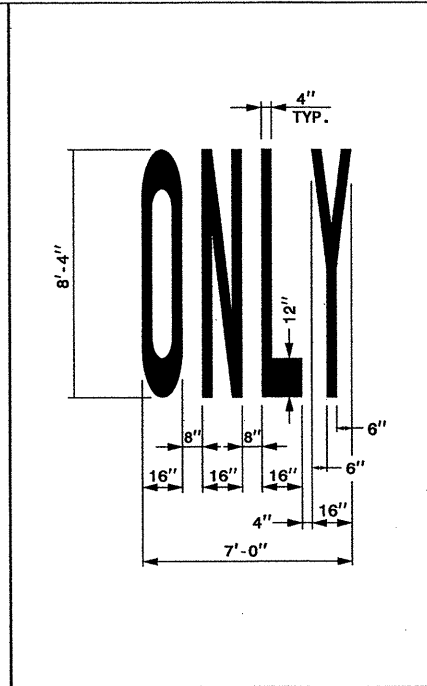
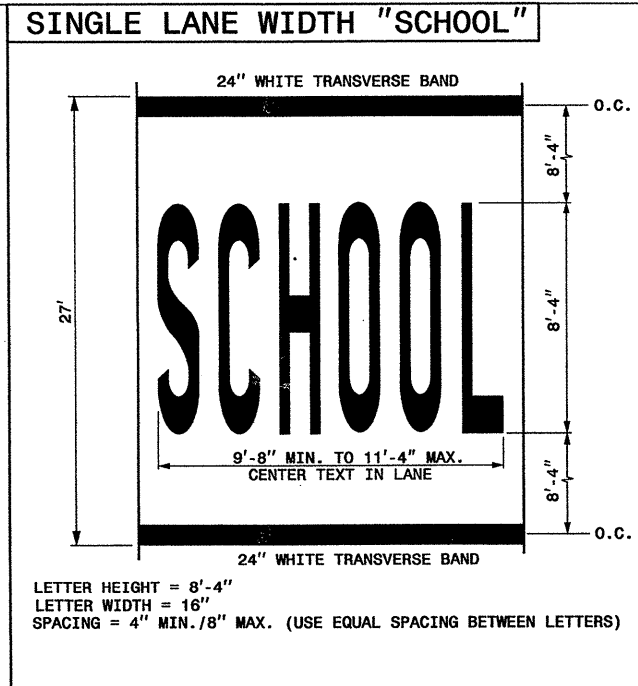
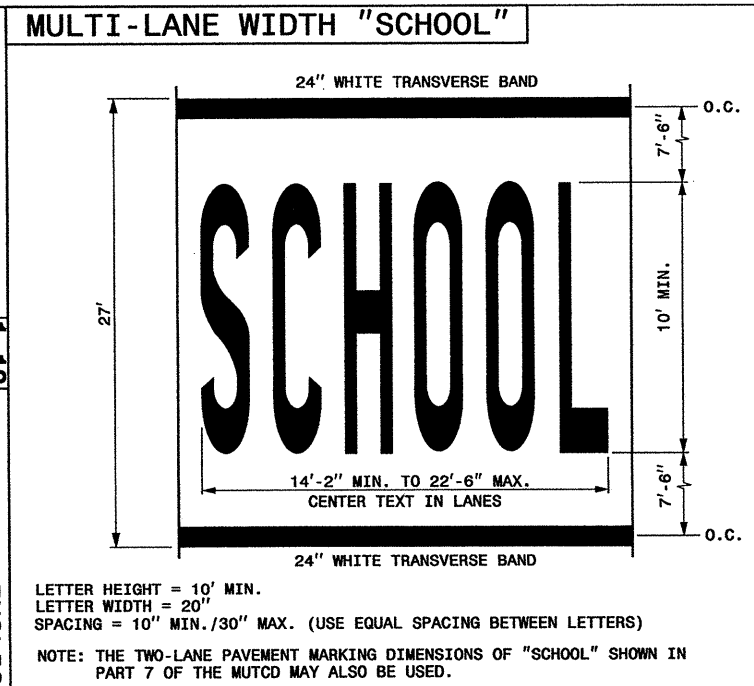
SHEET 1 OF 3
1205D06

TIP NO. 3CR.10311.113, etc	SHEET NO. PMP-1
APPROVED: <i>RW</i>	DATE: 3/6/12
SEAL	

**REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING**

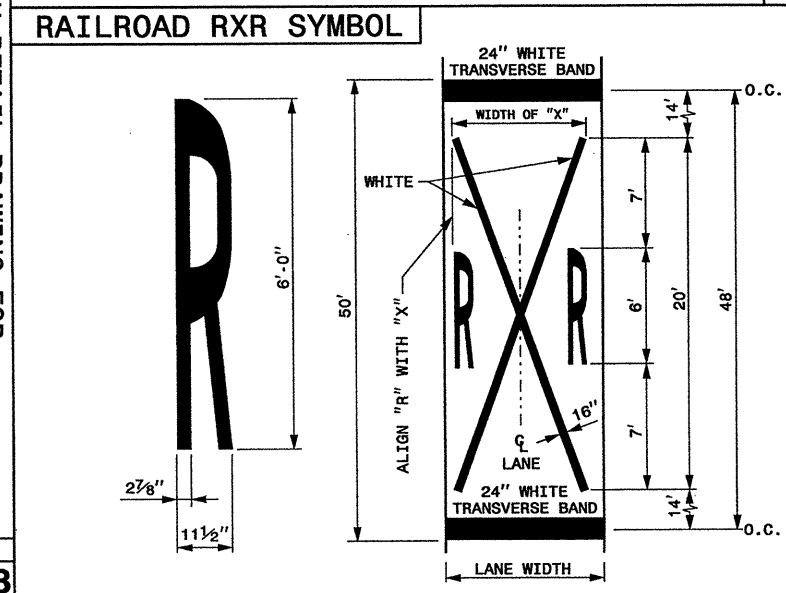
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 SHEET NO. PMP 2
 APPROVED: *RWF*
 DATE: 3/8/12
 SEAL


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 DIVISION OF HIGHWAYS
 RALEIGH, N.C.



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

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
 SYMBOLS AND WORD MESSAGES



LANE WIDTH (FEET)	WIDTH OF "X" (FEET)
8' ≤ W ≤ 9'	7'
9' < W ≤ 12'	8'
W > 12'	10'

GENERAL NOTES:

- 1- THE SCHOOL PAVEMENT MARKING CONSISTS OF SIX (6) CHARACTERS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.10 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 2- PAVEMENT MARKING IN ADVANCE OF A HIGHWAY-RAIL CROSSING SHALL CONSIST OF TWO (2) CHARACTERS AND TWO (2) 16" LINES (FORMING AN X) WHICH ARE PAID FOR UNDER TWO SEPARATE PAY ITEMS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.11 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
 SYMBOLS AND WORD MESSAGES

SHEET 3 OF 8
1205D08

SHEET 3 OF 8
1205D08

08-MAR-2012 12:48
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**REVISED PAVEMENT MARKING
 ROADWAY STANDARD DRAWING**

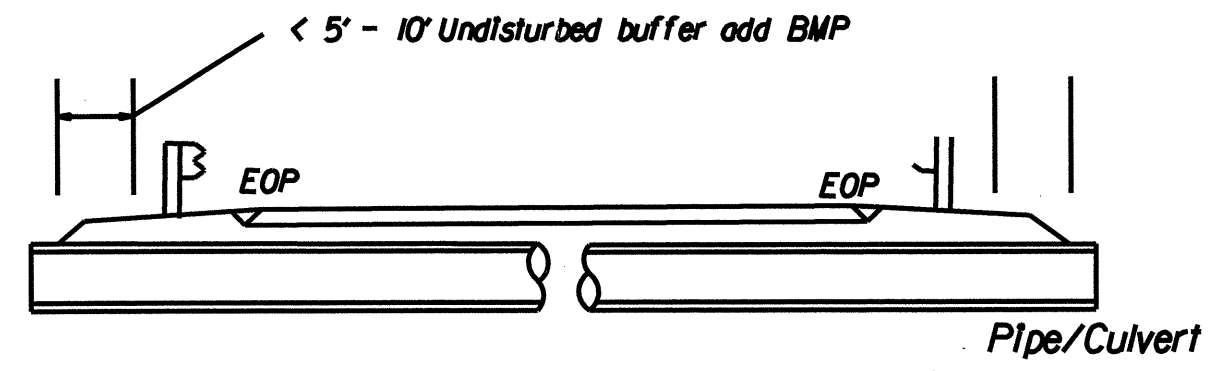
8/17/99

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

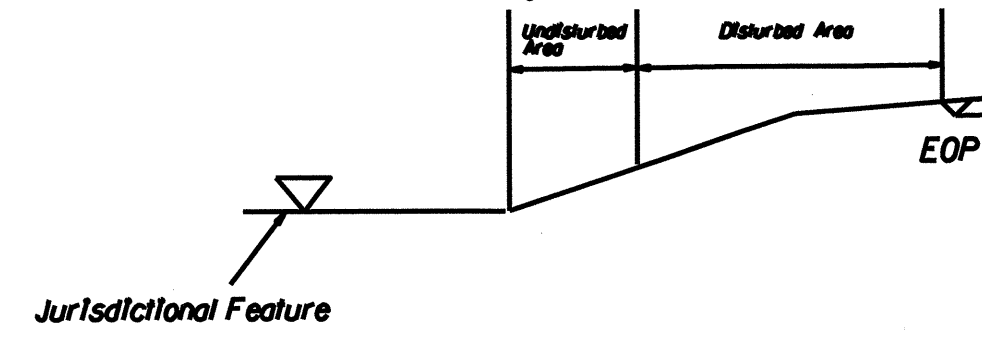
BMP Options: Wattle or Slit Fence

EROSION CONTROL DETAIL

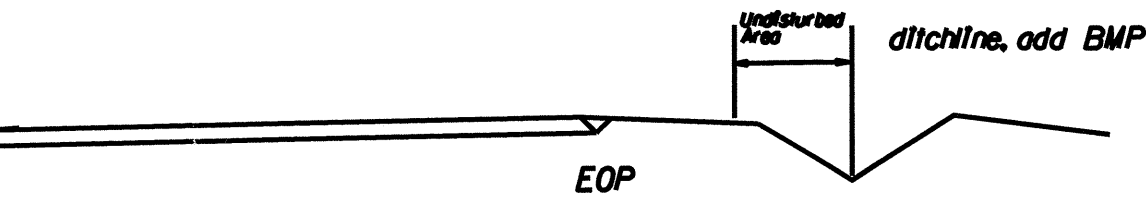
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



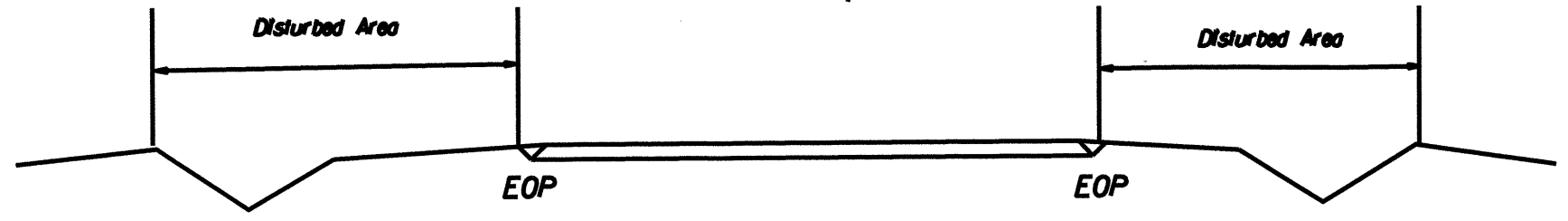
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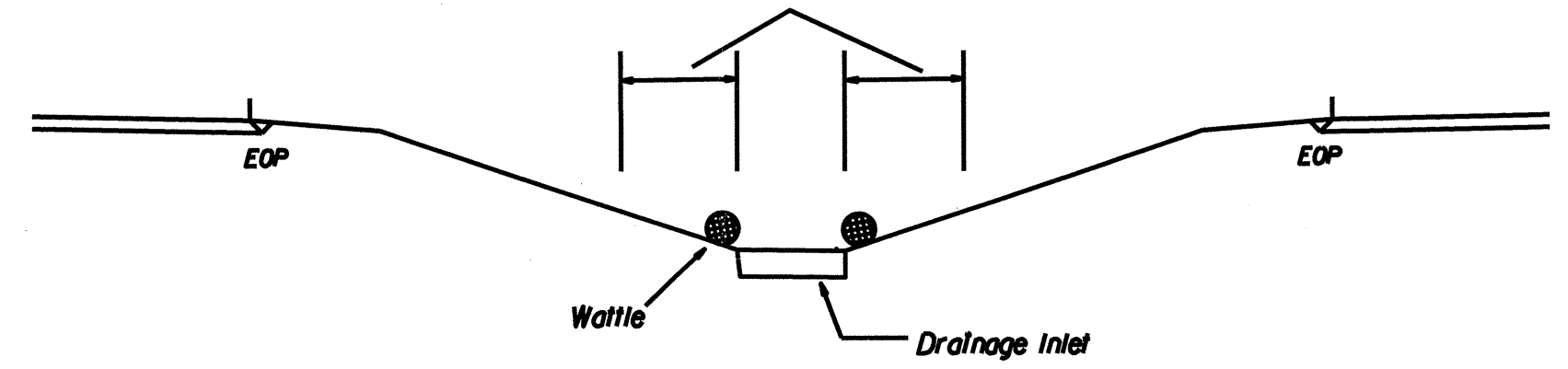
< 5' - 10' Undisturbed buffer from ditchline, add BMP



Use BMP's if shoulders and/or front slopes and/or ditchline and/or backslopes are disturbed



< 5' - 10' Undisturbed buffer from Inlet, add wattle



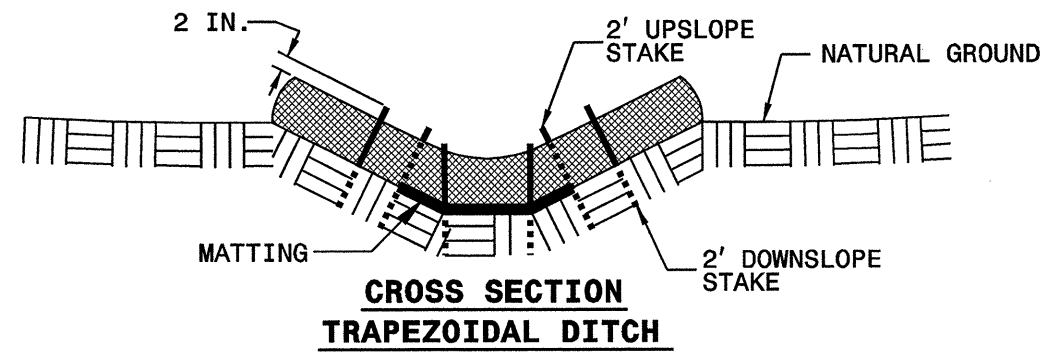
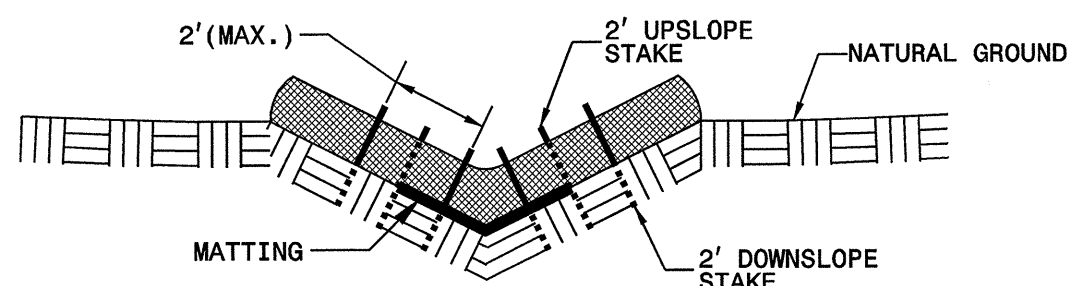
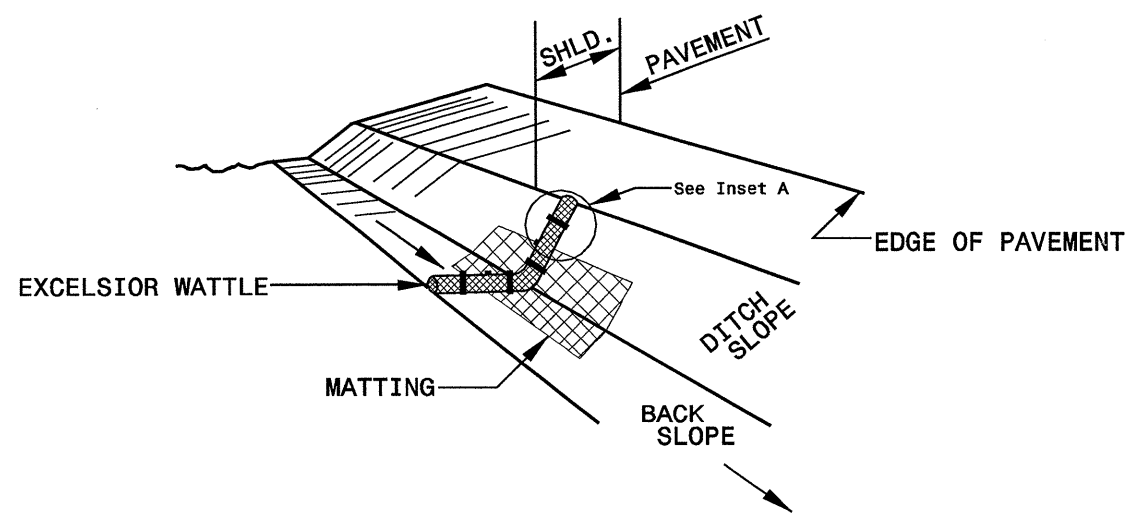
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REVISIONS

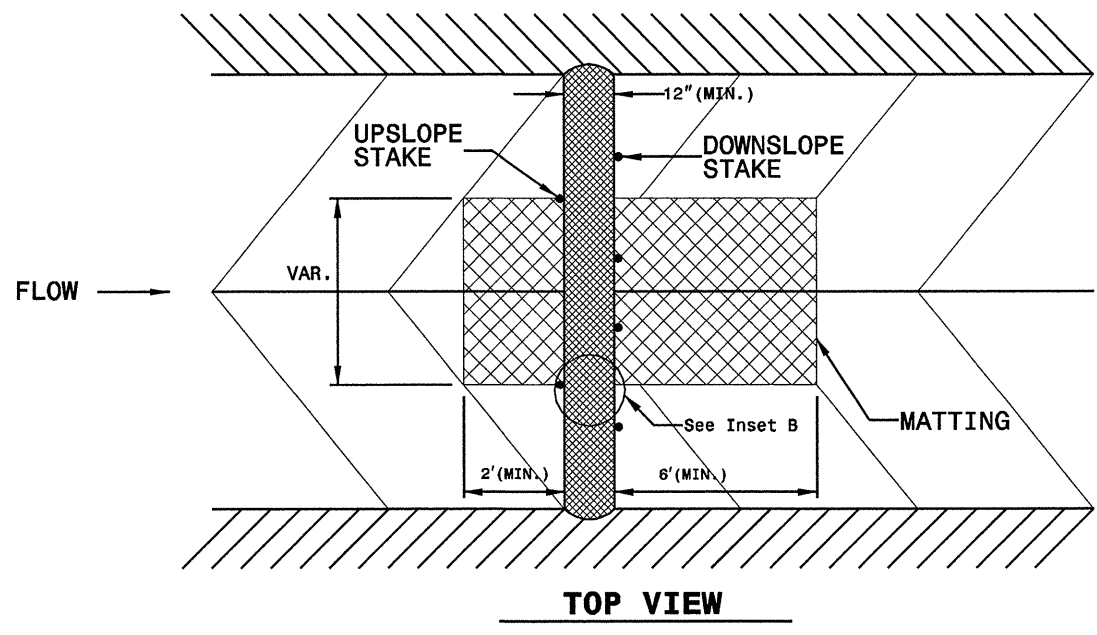
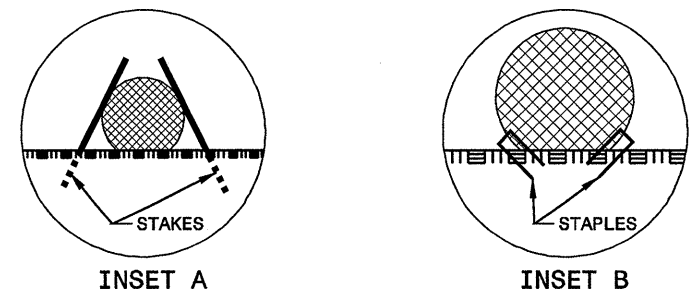
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PROJECT REFERENCE NO.	SHEET NO.
BY: _____	DATE: _____
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

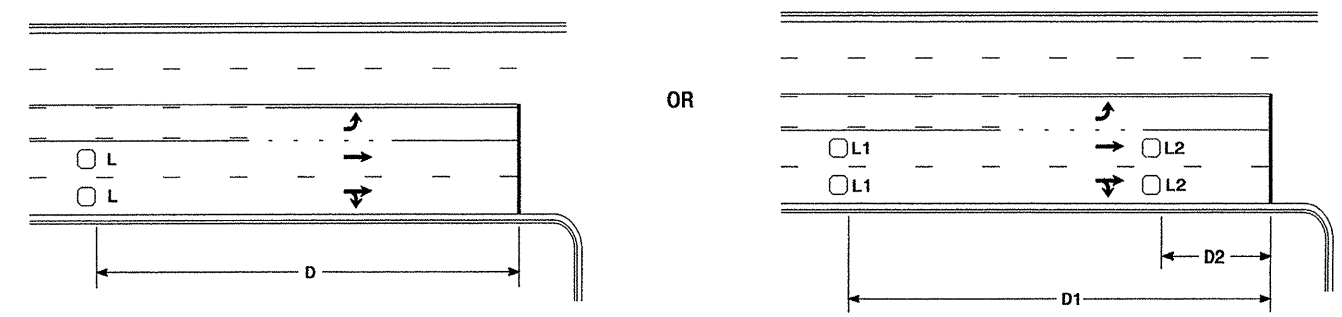
WATTLE DETAIL



- 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.



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

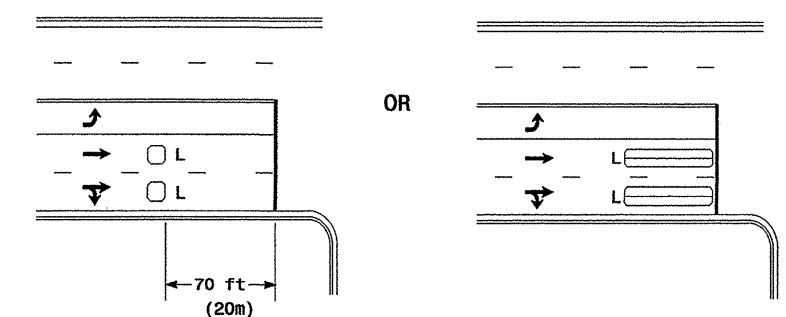
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

Volume Density Operation

"Stretch" Operation

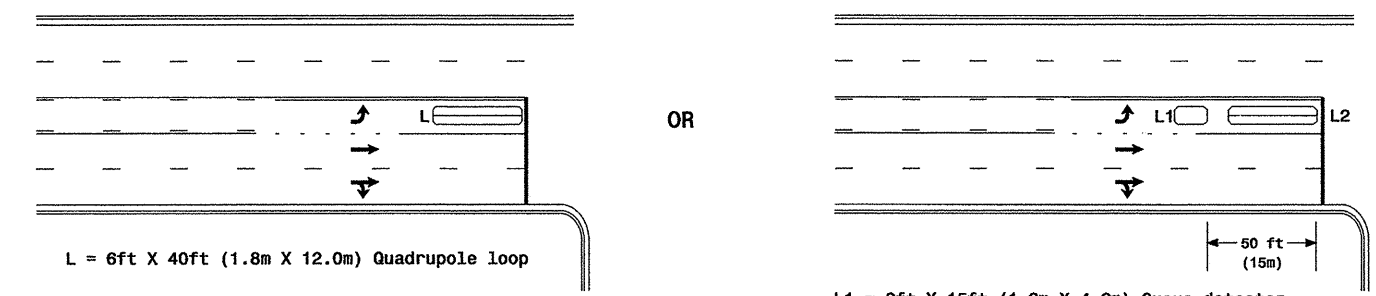
Low Speed Detection [≤35 mph (56 km/hr)]



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

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

Left Turn Lane Detection



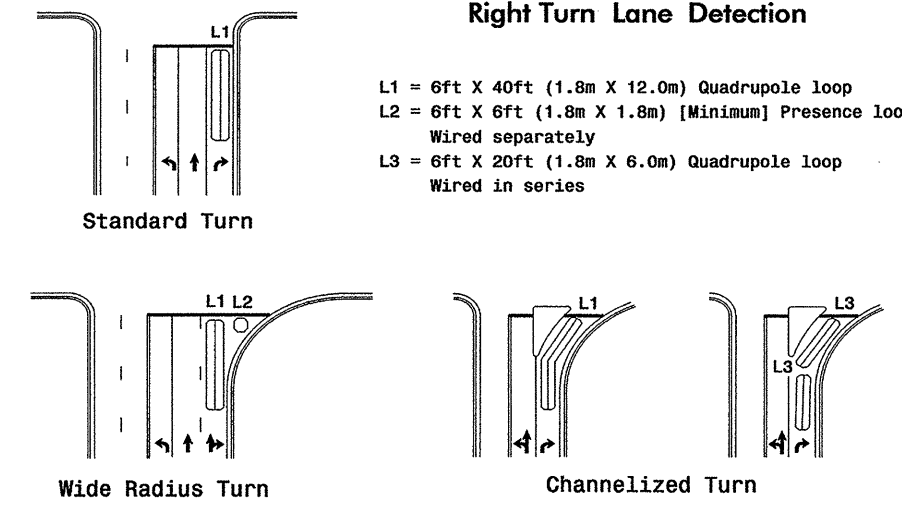
L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

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

Presence Loop Detection

Queue Loop Detection

Right Turn Lane Detection



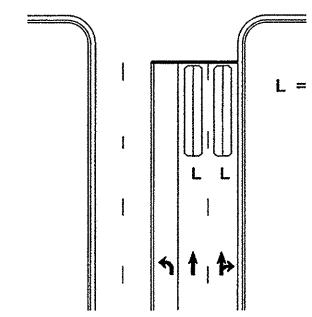
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
Wired separately
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
Wired in series

Standard Turn

Wide Radius Turn

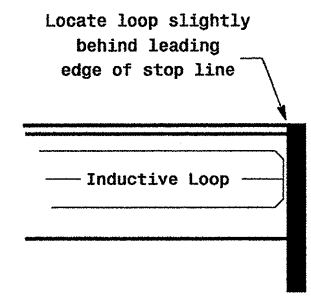
Channelized Turn

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

19-DEC-2005 14:29
seats/signatib
turn (in)wisc/loop/loop/2005.dgn
2/2/2006

122 N. McDowell St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE: June 2006	REVIEWED BY:
PREPARED BY: P L Alexander	REVIEWED BY:
SCALE: N/A	DATE: 12/1/05

SIGNATURE: *P. L. Alexander*
DATE: 12/1/05
SIG. INVENTORY NO.: