

09/08/99

NCMA PROJECT: MA01004R
WBS # : 39415

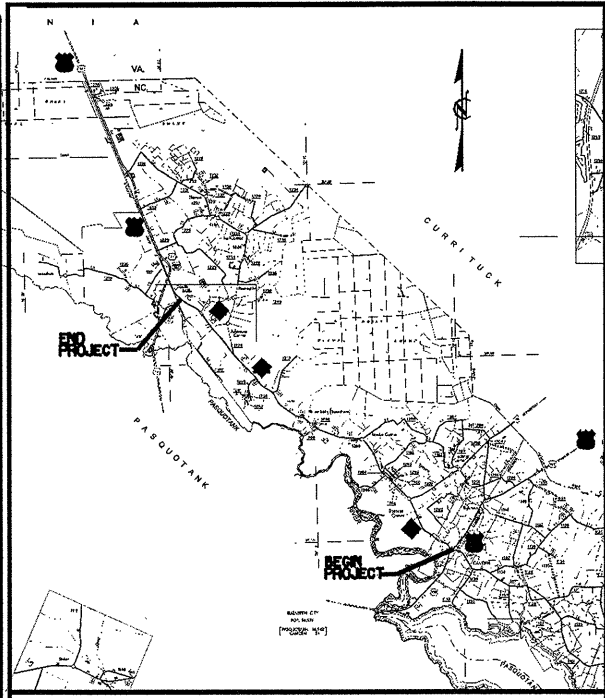
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CAMDEN COUNTY

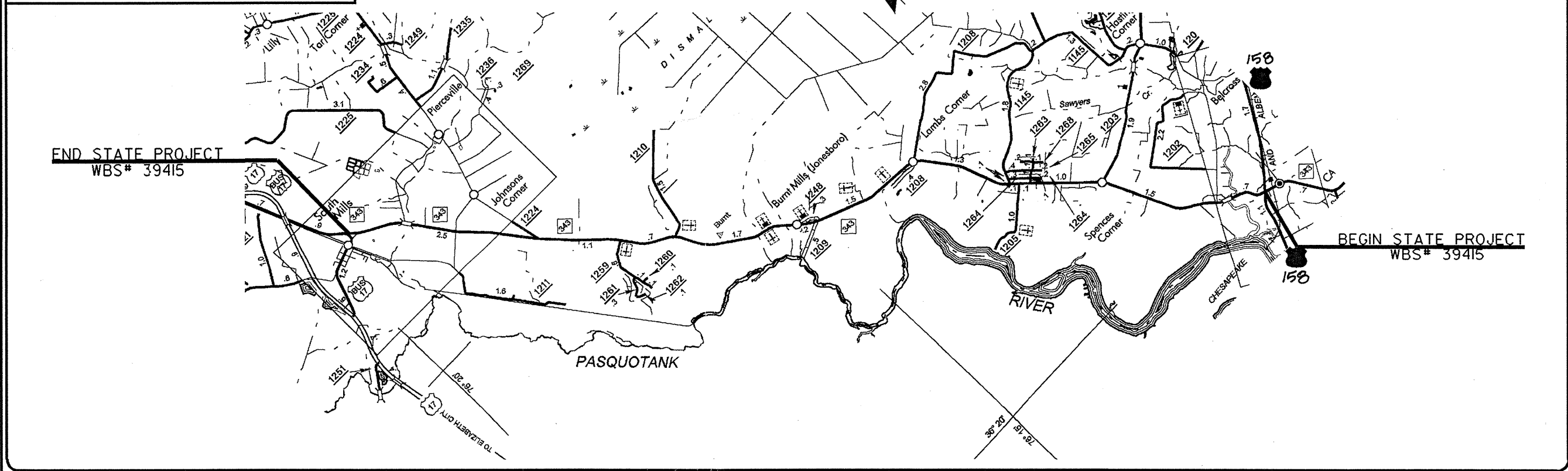
LOCATION: NC 343 FROM US 158 TO US 17 BUSINESS

TYPE OF WORK: MILLING, WIDENING, AND RESURFACING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	39415	1	1
STATE PROJ. NO.	NCMA PROJ. NO.	DESCRIPTION	
	MA01004R		



VICINITY MAP



GRAPHIC SCALES

NTS

PROJECT LENGTH

LENGTH ROADWAY STATE PROJECT 39415 = 12.56 MILES
 LENGTH STRUCTURES STATE PROJECT 39415 = 00.04 MILES
 TOTAL LENGTH STATE PROJECT 39415 = 12.60 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
 113 Airport Dr., Edenton NC, 27610

2006 STANDARD SPECIFICATIONS

LETTING DATE: _____

J.D. JENNINGS, P.E.
 DIVISION OPERATIONS ENGINEER

S. P. FENWICK, PLS
 DIVISION DESIGN-CONST. ENGINEER

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

5/28/99
SYSTEMS DESIGN CONSULTANTS INC.

PROPOSED CONSTRUCTION SEQUENCE:

- 1) MILL FULL WIDTH AND RESTORE CENTERLINE WHERE IT IS OBLITERATED WITHIN FIVE CALENDAR DAYS.
- 2) WIDEN ONE SIDE AT A TIME USING B25.0B UP TO ELEVATION OF MILLED PAVEMENT.
- 3) PLACE I19.0B ON FULL WIDTH AND RESTORE CENTERLINE WHERE IT IS OBLITERATED WITHIN FIVE CALENDAR DAYS.
- 4) RECONSTRUCT SHOULDERS.
- 5) PLACE S9.5B, APPLY THERMOPLASTIC AND RAISED PAVEMENT MARKERS.

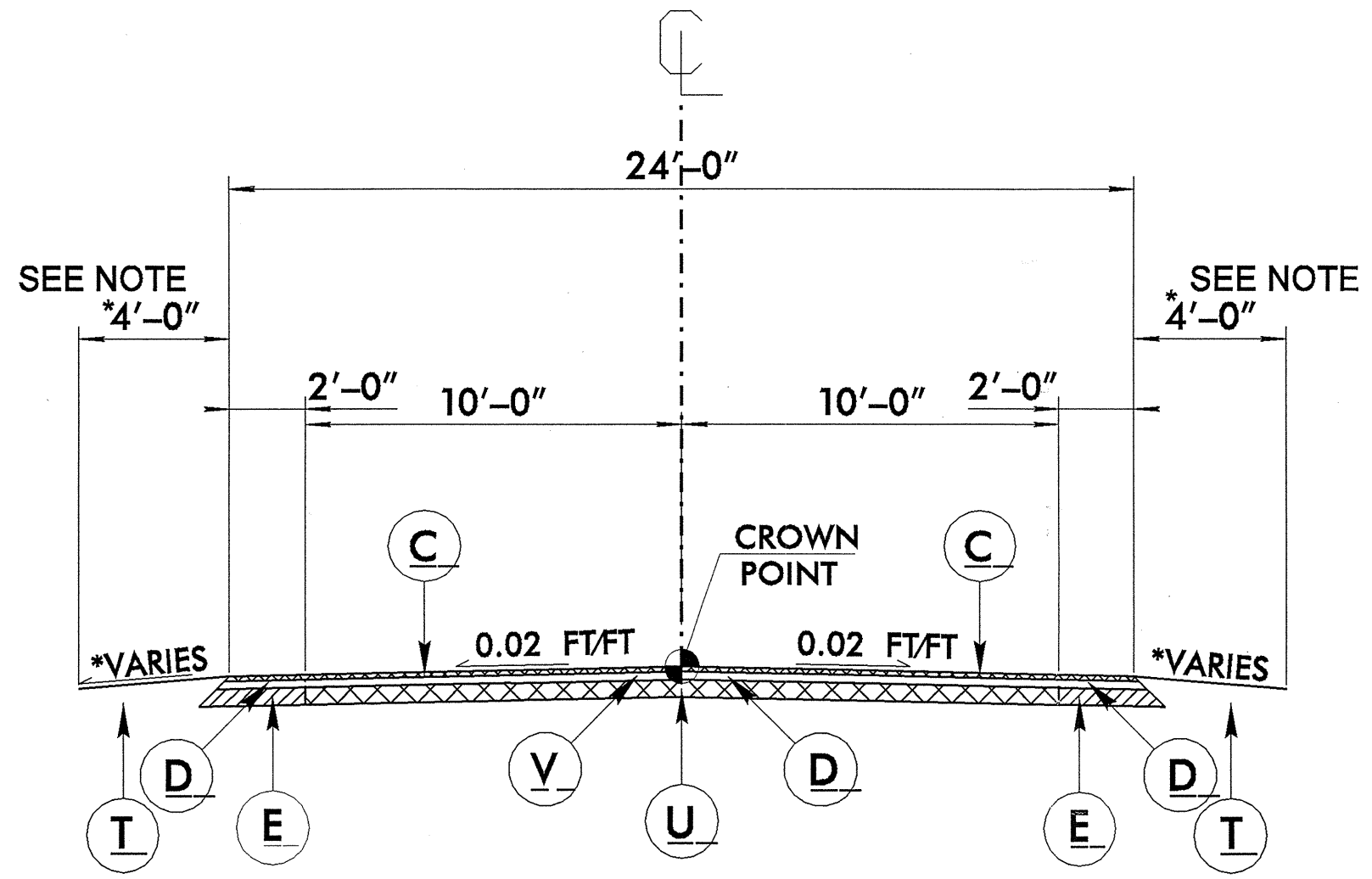
NOTE:

* WIDTH OF PROPOSED SHOULDER IS APPROXIMATELY 4 FEET. RECONSTRUCT SHOULDER FROM PROPOSED EDGE OF PAVEMENT TO EXISTING SHOULDER POINT.

IN AREAS OF PROPOSED GUARDRAIL, THE SHOULDER MAY NEED TO BE WIDENED TO 7 FEET BEYOND THE PROPOSED EDGE OF PAVEMENT PER ROADWAY STANDARD DRAWINGS AND PROJECT ENGINEER. THIS SHOULDER CONSTRUCTION MAY INCLUDE MOVING THE SHOULDER POINT AND REGRADING THE DITCH AND DITCH SLOPES IN PROPOSED GUARDRAIL LOCATIONS.

BRIDGE #20 WILL NOT BE PAVED.

BRIDGE #21 WILL BE MILLED AND PAVED WITH 1.5 INCHES OF TYPE S9.5B SURFACE COURSE ONLY.



TYPICAL SECTION NO. 1

NTS

PAVEMENT SCHEDULE

C_	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D_	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E_	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T_	EARTH MATERIAL.
U_	EXISTING PAVEMENT.
V_	MILLING BITUMINOUS PAVEMENT. 2½" DEPTH.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT NO.	SHEET NO.	TOTAL NO.
39415	3	10
MA010045		

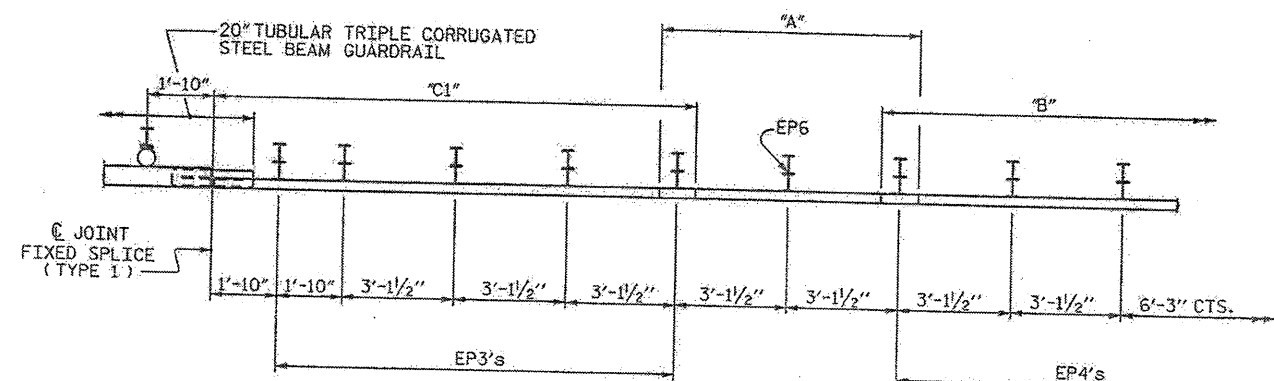
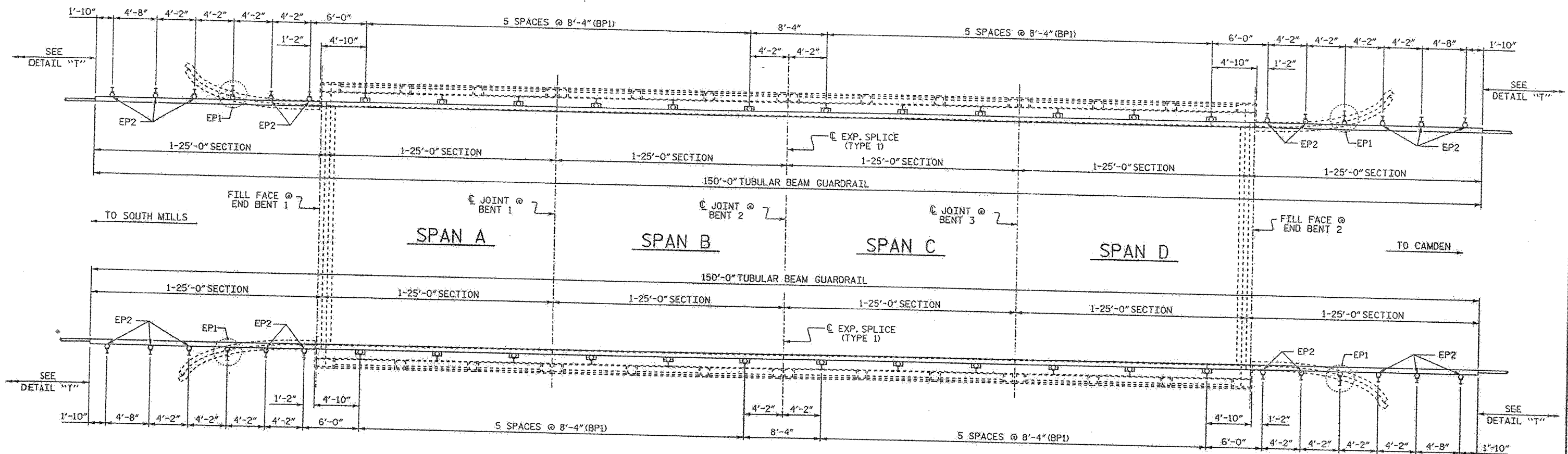
SUMMARY OF QUANTITIES

PROJECT NO.	COUNTY	MAP NO.	ROUTE	DESCRIPTION	TYP NO.	LENGTH MI.	WIDTH FT.	INCIDENTAL STONE BASE TONS	SHOULDER CONSTRUCT. SMI	SHOULDER RECON. SMI	1.5" MILLING SY	2.5" MILLING SY	BASE COURSE, B25.0B TONS	INTER. COURSE, I19.0B TONS	SURFACE COURSE, S9.5B TONS	PG 64-22 PLANT MIX TONS	6" CONCRETE DRIVEWAYS SY	5" MONOLITHIC CONCRETE ISLAND SY	METER OR VALVE BOX ADJUST. EA	STEEL BEAM GUARDRAIL LF	STL BM GR, SHOP CURVED LF	TRIPLE CORRUGATED STEEL BEAM GUARDRAIL LF	20" TUBULAR TRI COR STL BM GR LF	W-TR STL BM GR TRANS SECTION EA	GRAU, TYPE 350 EA	GRAU, TYPE AT-1 EA	TEMP. SILT FENCE LF	SEED & MULCH. AC
39415	Camden	1	NC 343	MILL, WIDEN, RESURFACE, DRAINAGE	1	12.6	24	1260	0.4	24.8	400	147,440	13,064	28,340	16,478	2,882	1,050	110	2	862.5	150	55	300	4	21	3	1,500	12.6
TOTAL FOR PROJ NO. 39415						12.6	24	1260	0.4	24.8	400	147,440	13,064	28,340	16,478	2,882	1,050	110	2	862.5	150	55	300	4	21	3	1,500	12.6
GRAND TOTAL						12.6	24	1260	0.4	24.8	400	147,440	13,064	28,340	16,478	2,882	1,050	110	2	862.5	150	55	300	4	21	3	1,500	12.6

PROJECT NO.	SHEET NO.	TOTAL NO.
39415	5	10
MA01004R		

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M	4" X 120 M	24" X 120 M	THERMO	4" WHITE	4" YELLOW	24" X 120 M	PAINT MSG	YELLOW &
					WHITE THERMO	YELLOW THERMO	WHITE THERMO	MSG SCHOOL	PAINT	PAINT	WHITE PAINT	SCHOOL	YELLOW MARKERS
					LF	LF	LF	120 M EA	LF	LF	LF	EA	EA
39415	Camden	1	NC 343	MILL, WIDEN, RESURFACE, DRAINAGE	135,576	83,160	62	12	271,152	166,320	124	24	832
TOTAL FOR PROJ NO. NC 343					135,576	83,160	62	12	271,152	166,320	124	24	832
					437,472								
39415	Camden	1	NC 343	PIPE REPLACEMENT									
TOTAL FOR PROJ NO. 39415													
GRAND TOTAL					135,576	83,160	62	12	271,152	166,320	124	24	832
					437,472								



LEGEND

- USE BP1
- USE EP1
- USE EP2
- USE EP3 (EXCEPT AS NOTED)
- USE EP5
- "A" --- USE W-TR GUARDRAIL TRANSITIONAL SECTION
- "B" --- USE STANDARD GUARDRAIL
- "C1" --- USE 20" TRIPLE CORRUGATED STEEL BEAM GUARDRAIL
- "C2" --- USE 20" TRIPLE CORRUGATED STEEL BEAM GUARDRAIL
- "D" --- USE TRIPLE CORRUGATED GUARDRAIL TERMINAL SECTION

PROJECT NO. 39415
 CAMDEN COUNTY
 STATION: _____
 SHEET 1 OF 5

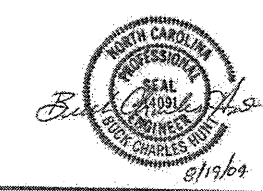
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

RAIL RETROFIT OF EXISTING BRIDGE NO. 21

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			
2			4			

DRAWN BY: S.H. SOCKWELL DATE: 08/04
 CHECKED BY: B.C. HUNT DATE: 08/04

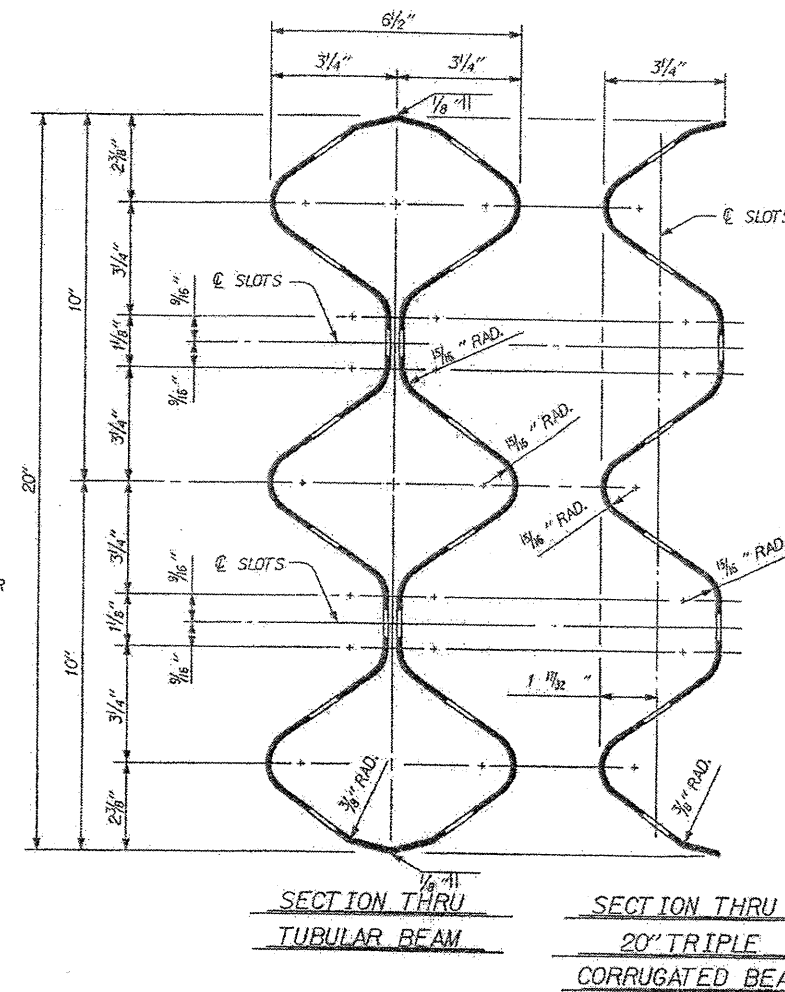
19-AUG-2004 09:12
 W:\Retrofit\camden retrofit\RETROFIT.dgn
 ssockwell



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N. C.	39415	7	10
F. A. PROJ. NO.			

GENERAL NOTES :

- THE 20' TRIPLE TUBULAR CORRUGATED BEAM RAIL SECTION SHALL BE FABRICATED BY WELDING TWO (2) 20' TRIPLE CORRUGATED BEAM RAIL ELEMENTS AS SHOWN AND THE GUARDRAIL SHALL CONFORM TO THE NCDOT STANDARD SPECIFICATIONS EXCEPT AS NOTED AND SHOWN ON THE PLANS.
- 20' TRIPLE TUBULAR CORRUGATED BEAM RAIL SHALL BE 10 GAGE.
- POSTS, BASE ANGLES AND/OR BASE PLATES, 6" DIA. TUBES, AND OFFSET BLOCKS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36. SHIMS SHALL MEET THE REQUIREMENTS OF ASTM A-570 GRADE 33 OR A-611 GRADE C.
- POSTS, BASE ANGLES AND/OR BASE PLATES, TUBES, BLOCKS AND SHIMS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123.
- POSTS ARE TO BE PLUMB. SHIMS MAY BE USED BENEATH THE ROADWAY EDGE OF THE BASE ANGLES AND/OR BASE PLATES AS NECESSARY FOR POST ALIGNMENT. PROVIDE ONE 1/8" AND TWO 1/16" STEEL SHIMS FOR 25% OF THE POSTS ON THE BRIDGE.
- 8' POST HEIGHT TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- PROPOSED RAIL POST MAY BE SHIFTED SLIGHTLY TO CLEAR REINFORCING STEEL. STANDARD SLOTS MAY BE USED IN THE RAIL TO ALLOW ADJUSTMENT.
- HOLES SHALL BE DRILLED HORIZONTAL OR VERTICAL USING A ROTARY DRILL OR A ROTARY IMPACT DRILL. IMPACT TOOLS WILL NOT BE PERMITTED. CARBIDE TIPPED BITS SHALL BE USED UNLESS REINFORCING STEEL IS ENCOUNTERED. AN APPROPRIATE BIT FOR DRILLING THROUGH REINFORCING STEEL SHALL BE USED WHEN NECESSARY. THE CONTRACTOR SHALL BE PREPARED TO DRILL THROUGH REINFORCING STEEL AT TIMES.
- POST SPACINGS AS SHOWN ON THE PLANS SHALL BE CHECKED BEFORE HOLES ARE DRILLED IN THE 20' TRIPLE TUBULAR CORRUGATED BEAM RAIL. STANDARD SLOTS WILL BE ALLOWED. FIELD PUNCHING OF THE HOLES OR SLOTS WILL NOT BE PERMITTED.
- A SEALANT WILL BE REQUIRED IN THE AREA OF THE ANCHOR BOLTS AND WILL BE PLACED IN THE FOLLOWING MANNER:
 - BEFORE THE BASE PLATE HAS BEEN SET IN PLACE, IF THE GROUT DOES NOT COMPLETELY FILL THE ANCHOR HOLE, SEAL THE AREA AROUND EACH CONCRETE ANCHOR BOLT TO KEEP MOISTURE FROM ENTERING THE HOLE.
 - AFTER THE BASE PLATE HAS BEEN SET IN PLACE AND BEFORE THE WASHERS AND NUTS HAVE BEEN PLACED ON THE BOLT, SEAL THE HOLE REMAINING AROUND THE ANCHOR BOLT. THE SEALANT SHALL BE A ONE-COMPONENT POLYSULFIDE GUN GRADE MEETING FEDERAL SPECIFICATION TT-S-230. SEALANT SHALL BE GRAY IN COLOR AND APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION. THE FOLLOWING SEALANTS MEET THE ABOVE REQUIREMENTS:
 - *SONOLASTIC ONE PART, MANUFACTURED BY SONNEBORN-DESOTO CO., DES PLAINES, ILLINOIS, 60018.
 - *THORSPAN ONE COMPONENT, MANUFACTURED BY STANDARD DRY WALL PRODUCTS, INC., MIAMI, FLORIDA, 33166.
 - *HORNFLIX ONE COMPONENT, MANUFACTURED BY W. R. GRACE AND CO., CAMBRIDGE, MASSACHUSETTS, 02140.
- ALL CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.
- VERTICAL SLOTS IN THE 6" TUBE ALLOW FOR SOME VERTICAL ADJUSTMENT OF RAIL HEIGHT IN ORDER TO OBTAIN THE CENTERLINE OF RAIL HEIGHT OF 1'-10" ABOVE RIDING SURFACE.
- THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. ELECTROSLAG WELDING WILL NOT BE PERMITTED.
- LAP BEAM RAIL JOINTS IN DIRECTION OF TRAFFIC.
- CURVED RAIL USAGE: CURVED RAILS ARE TO BE USED ON BRIDGES WITH HORIZONTAL AND/OR VERTICAL CURVES. THE CONTRACTOR MAY AT HIS OPTION HAVE THE REQUIRED CURVATURE IN THE RAIL FORMED IN THE SHOP OR IN THE FIELD. THE RAIL SHALL CONFORM WITHOUT BUCKLING OR KINKING TO THE REQUIRED CURVATURE IN A UNIFORM MANNER ACCEPTABLE TO THE ENGINEER.



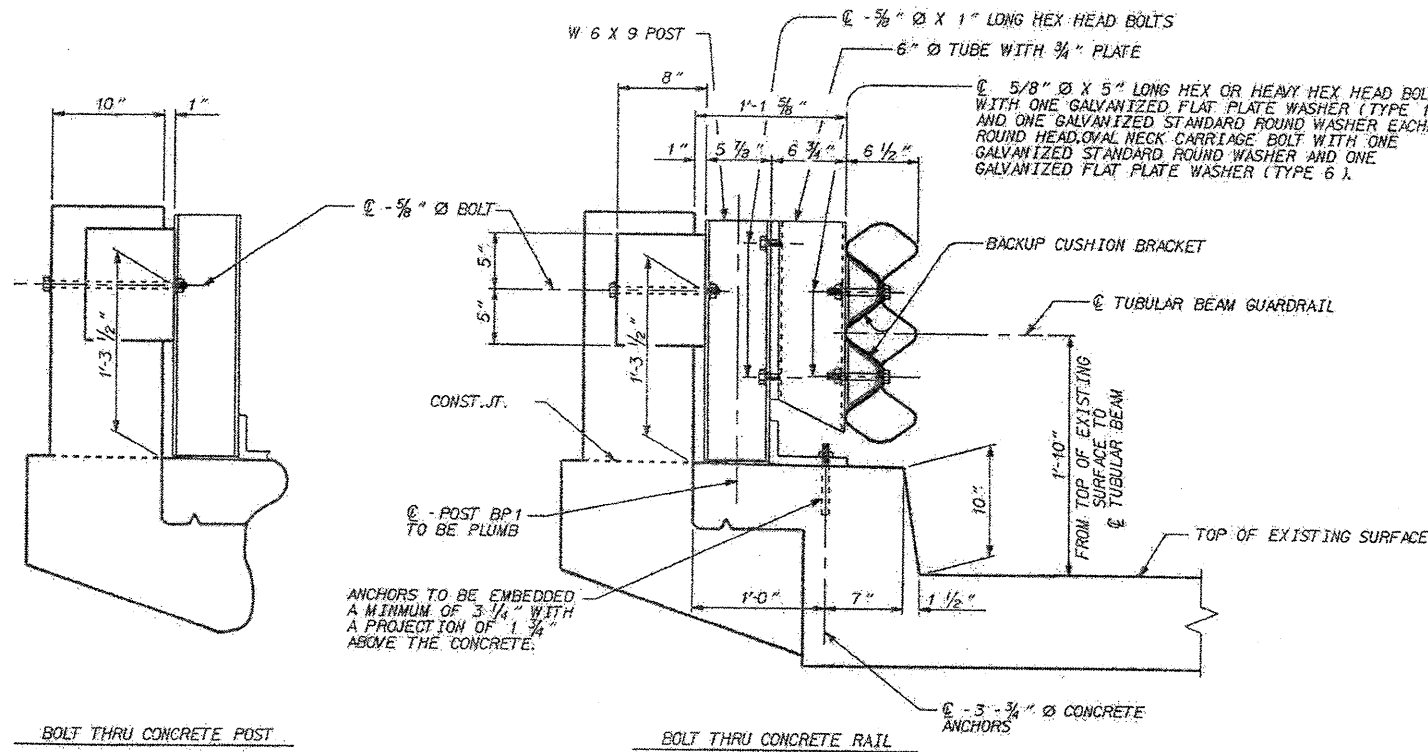
CONCRETE ANCHOR NOTES :

- FOR ADHESIVELY ANCHORED BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.
- THE CONCRETE ANCHORS SHALL BE TESTED AS FOLLOWS :
 - THE CONTRACTOR SHALL TEST 5% OF THE TOTAL NUMBER OF BOLTS PER SPAN IN THE AREA OF THE CURB.
 - THE ANCHOR BEING TESTED SHALL WITHSTAND A LOAD EQUAL TO 4220 POUNDS.
 - THE SUCCESSFULLY TESTED ANCHOR MAY BE USED IN THE FINAL RAIL ASSEMBLY, IF APPROPRIATELY LOCATED. IF NOT SO LOCATED, OR IF THE ANCHOR FAILS THE TEST, THE TEST AREA SHALL BE REPAIRED AS DAMAGED CONCRETE. SEE 'GENERAL NOTES'.
- EMBEDMENT SHOWN ON THE PLANS IS A MINIMUM, BUT THE MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.
- THE 3/4" DIAMETER CONCRETE ANCHOR SHALL CONSIST OF A STUD, THREADED ON ONE END, WITH NUT AND WASHERS. THE ANCHOR SHALL BE GALVANIZED TO CONFORM TO THE REQUIREMENTS OF ASTM A-153.
- AT THE CONTRACTOR'S OPTION, STAINLESS STEEL ANCHORS MAY BE USED AS AN ALTERNATE FOR THE GALVANIZED CONCRETE ANCHORS. THEY SHALL MEET OR EXCEED THE MECHANICAL REQUIREMENTS FOR THE GALVANIZED ANCHORS. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.
- EXPANSION ANCHORS WILL NOT BE PERMITTED.

NOTES :

TUBULAR BEAM POSTS ARE TO BE MOUNTED AGAINST THE EXISTING CONCRETE RAIL. HOLES FOR THE 5/8" DIAMETER BOLTS, THRU THE EXISTING CONCRETE RAIL OR POST, SHALL BE 3/4" DIAMETER.

5/8" DIAMETER BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-307 AND SHALL BE GALVANIZED TO CONFORM TO THE REQUIREMENTS OF ASTM A-153.



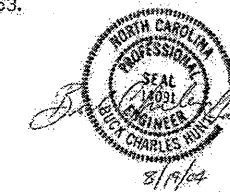
RETROFIT EXISTING RAIL WITH TUBULAR BEAM GUARDRAIL
(WITHOUT WEARING SURFACE)

BP1

PROJECT NO. 39415
CAMDEN COUNTY
STATION: _____

SHEET 2 OF 5

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RAILROAD					
DETAILS FOR RETROFIT OF EXISTING BRIDGE RAIL WITH TUBULAR BEAM GUARDRAIL					
MAY 1988					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO.
					TOTAL SHEETS
					10

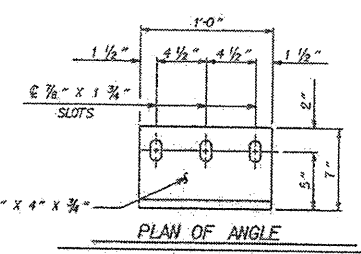
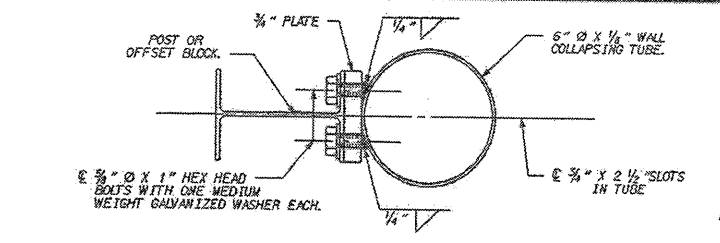


ADDED TO CADD 5/88 BY: NWR CHECKED BY:

ASSEMBLED BY: S.H. SOCKWELL	DATE: 08/04	SPECIAL
CHECKED BY: B.C. HUNT	DATE: 08/04	
DRAWN BY: N.M. RUEFFIN	DATE: 5/88	STANDARD
CHECKED BY:	DATE:	

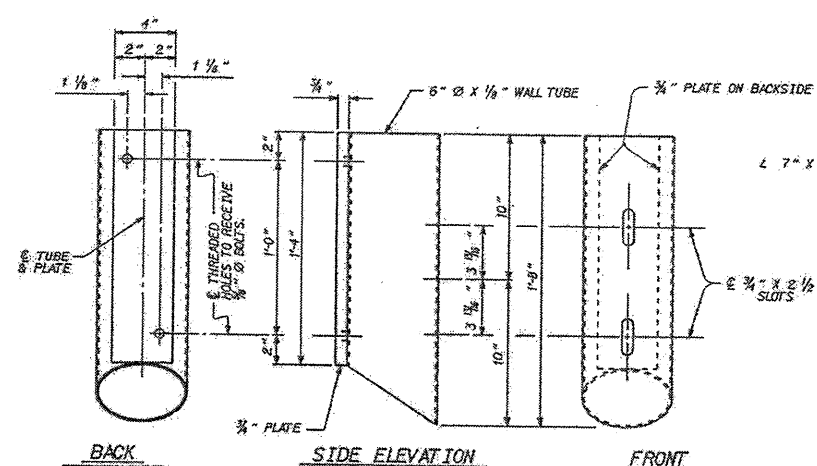
19-AUG-2004 09:52
S:\S\SOCKWELL

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	39415	8	10
F.A. PROJ. NO.			

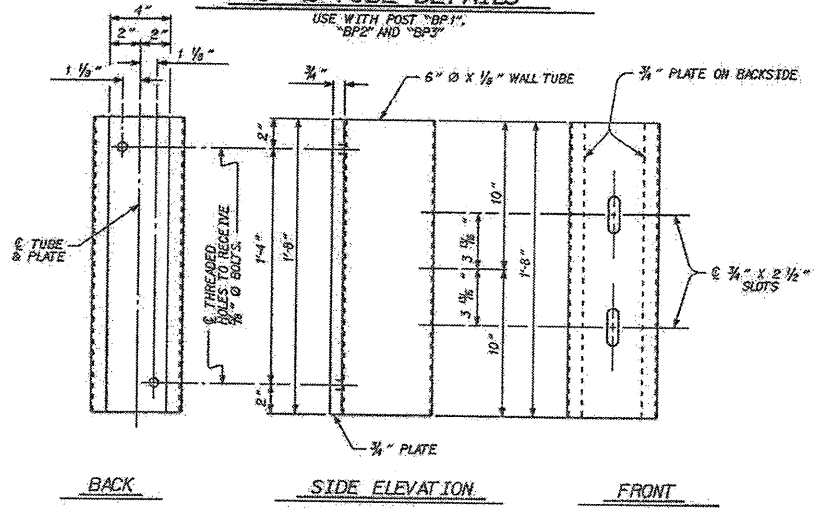


NOTE A: HEIGHT OF POST BP1 (DIMENSION A) SHALL BE DETERMINED IN THE FIELD SO THAT THE 5' OF THE TUBULAR BEAM IS 1'-10" ABOVE TOP OF SLAB OR TOP OF WEARING SURFACE.
NOTE B: SLOT TO BE DRILLED ON SIDE OF WEB FACING "ONCOMING TRAFFIC".

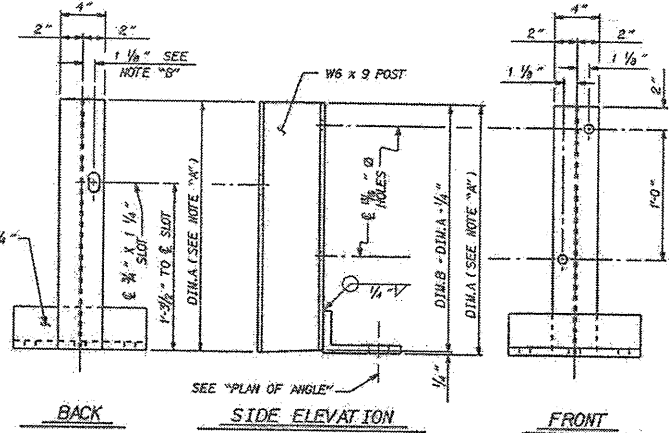
DETAIL SHOWING CONNECTION OF 6" Ø TUBE TO POST OR OFFSET BLOCK



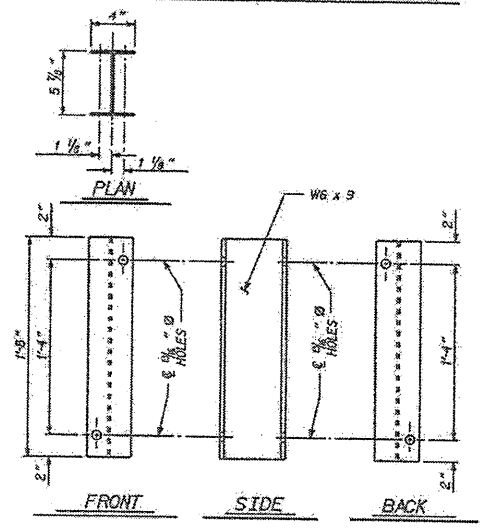
6" Ø TUBE DETAILS



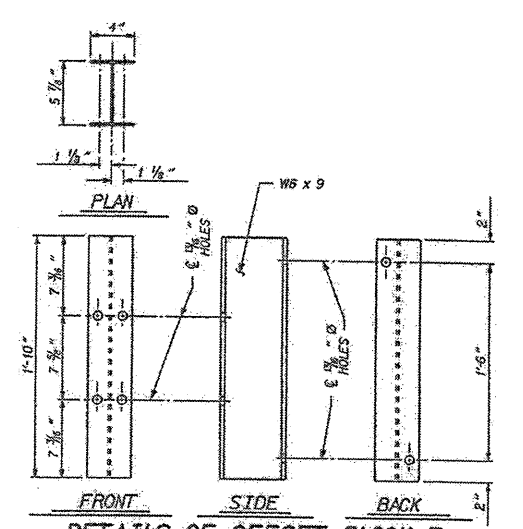
6" Ø TUBE DETAILS



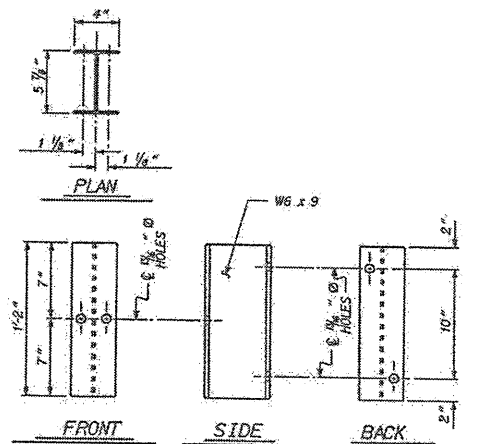
BP1 POST DETAILS



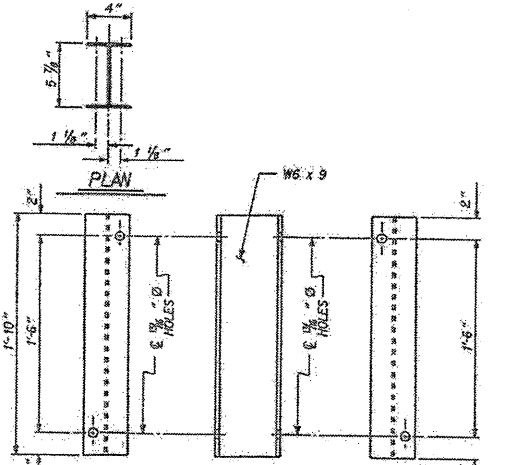
DETAILS OF OFFSET BLOCK 1



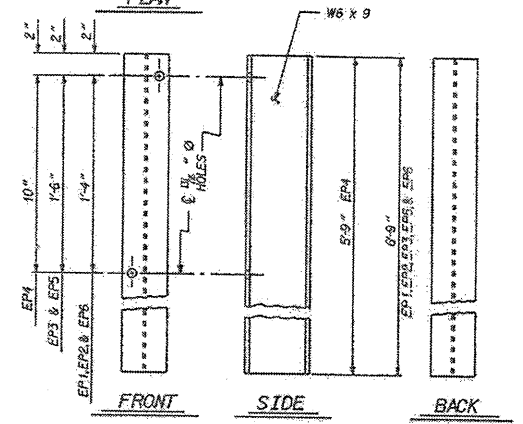
DETAILS OF OFFSET BLOCK 3



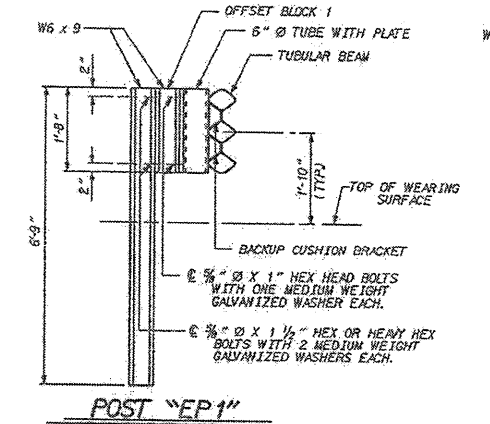
DETAILS OF OFFSET BLOCK 4



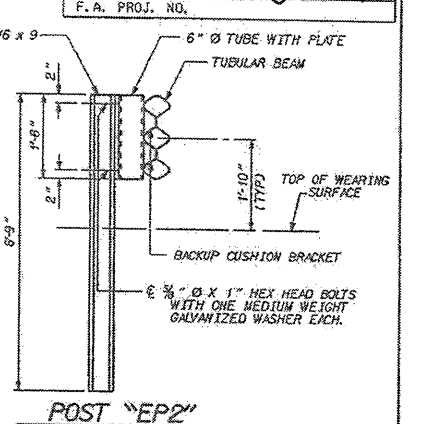
DETAILS OF OFFSET BLOCK 5



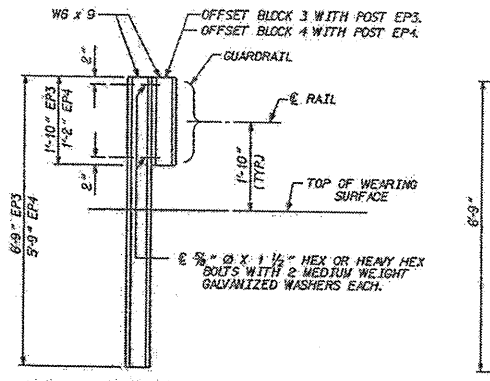
DETAIL OF POST EP1, EP2, EP3, EP4, EP5, & EP6



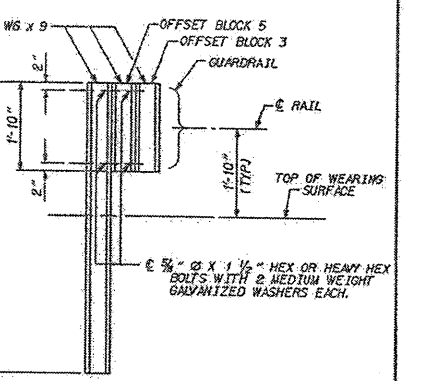
POST "EP1"



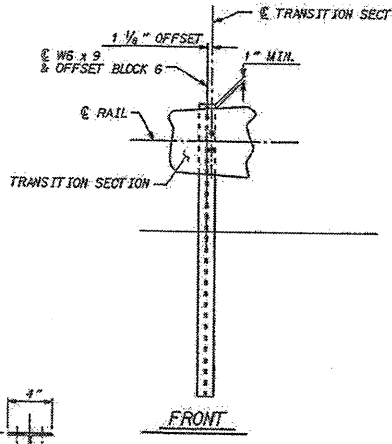
POST "EP2"



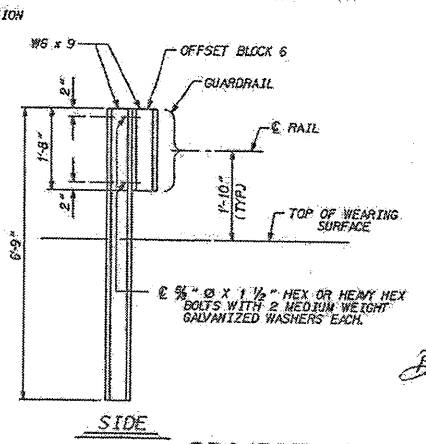
POST "EP3" & "EP4"



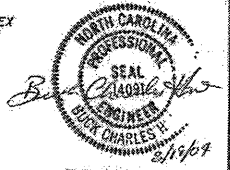
POST "EP5"



POST "EP6"



POST "EP6"



PROJECT NO. 39415

CAMDEN COUNTY

STATION:

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
DETAILS FOR RETROFIT OF
EXISTING BRIDGE RAIL WITH
TUBULAR BEAM GUARDRAIL

JAN.	REVISIONS				1983
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS

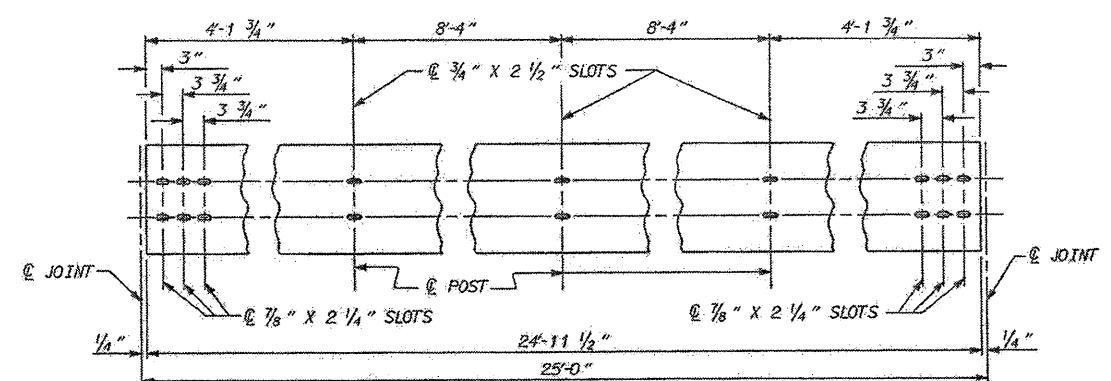
GAR1.RRF

ADDED TO CADD 5/88 BY: MHR. CHECKED BY:

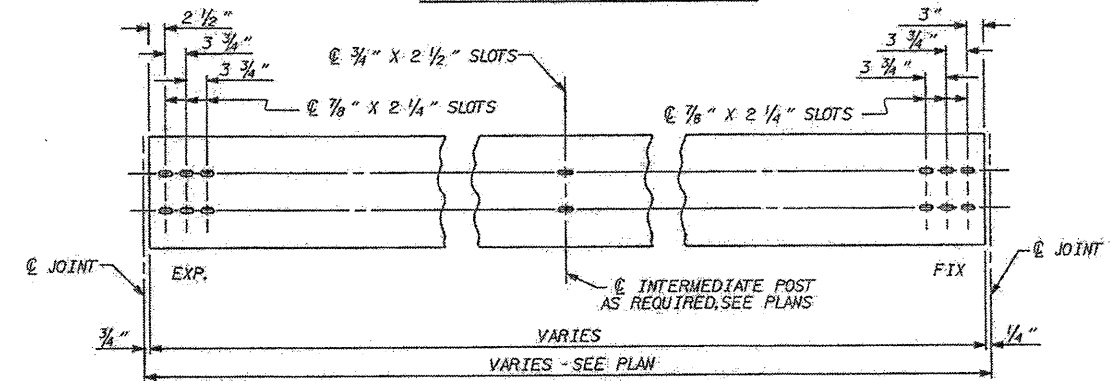
ASSEMBLED BY:	S.J.L. SOCKWELL	DATE:	08/04	SPECIAL
CHECKED BY:	B.C. HUNT	DATE:	08/04	
DRAWN BY:	N.M. RUFFIN	DATE:	5/88	STANDARD
CHECKED BY:		DATE:		

19-AUG-2004 09:42
 *****DON*****
 SSOCKWELL

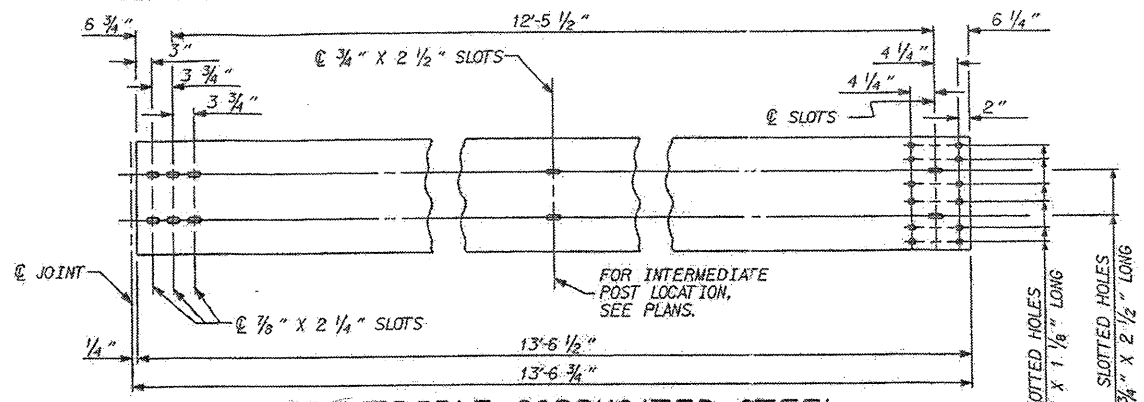
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N. C.	39415	9	10
F. A. PROJ. NO.			



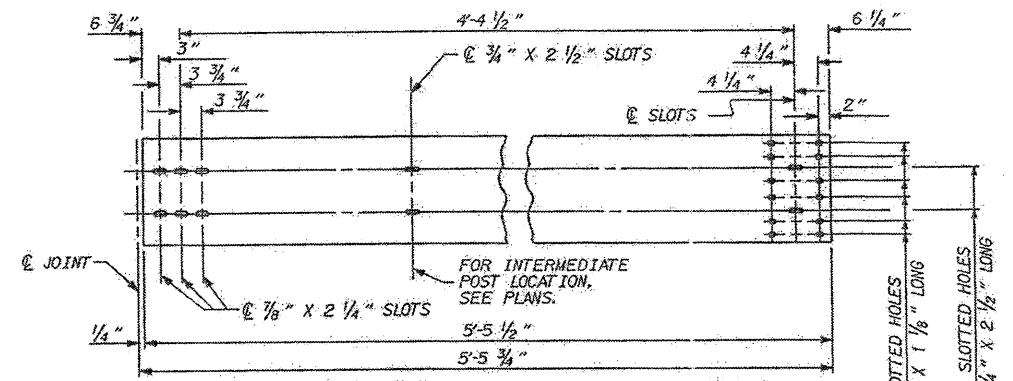
**ELEVATION TUBULAR BEAM
STANDARD RAIL**



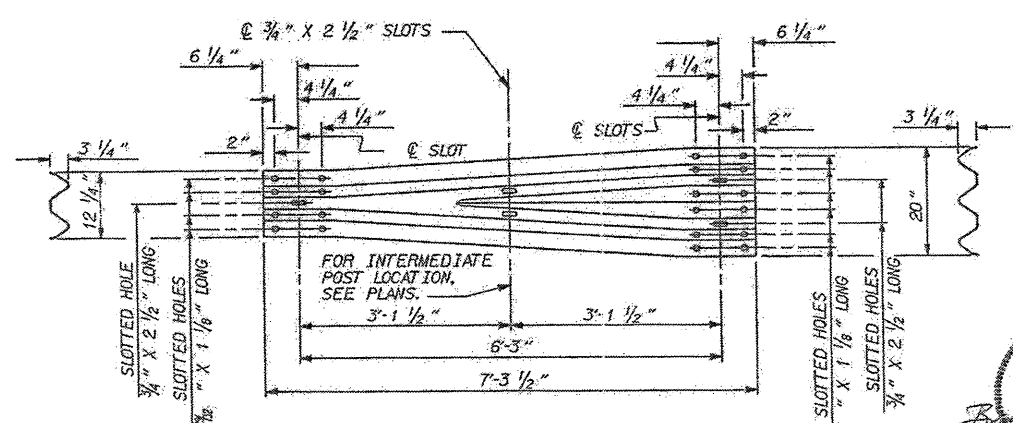
**ELEVATION TUBULAR BEAM
EXPANSION RAIL FOR TYPE 1 SPLICE**



**20" TRIPLE CORRUGATED STEEL
BEAM GUARDRAIL - "C1"**



**20" TRIPLE CORRUGATED STEEL
BEAM GUARDRAIL - "C2"**



W-T-R GUARDRAIL TRANSITIONAL SECTION

PROJECT NO. 39415
CAMDEN COUNTY
 STATION: _____

SHEET 4 OF 5
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DETAILS FOR RETROFIT
 OF EXISTING BRIDGE
 RAIL WITH TUBULAR
 BEAM GUARDRAIL**



ASSEMBLED BY: S.H. SOCKWELL	DATE: 08/04	SPECIAL
CHECKED BY: B.D. HUNT	DATE: 08/04	
DRAWN BY: N.M. RUFFIN	DATE: 5/02	STANDARD
CHECKED BY:	DATE:	

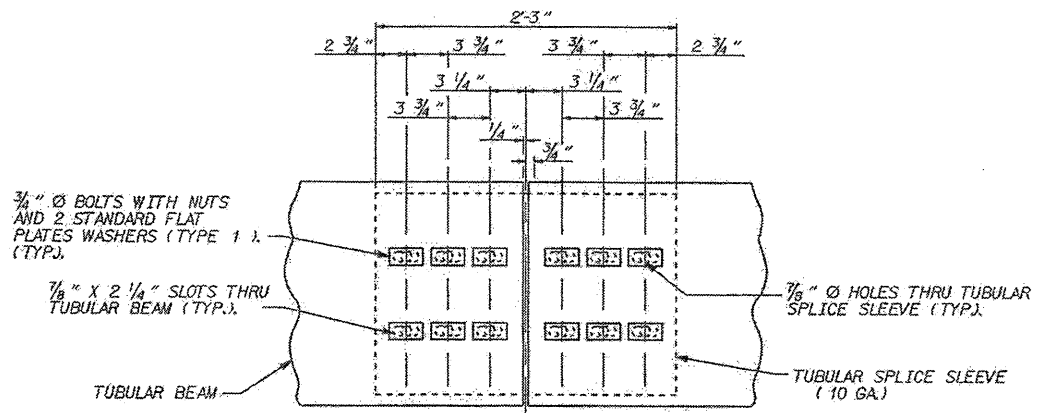
MAY 2004						1998
REVISIONS						SHEET NO. TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

GAR2 RRF

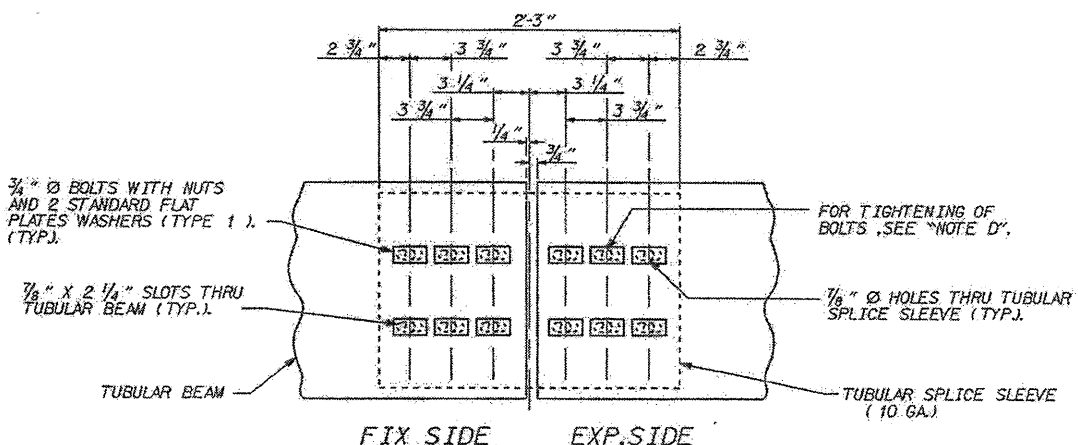
19-AUG-2004 09:13

 S SOCKWELL

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N. C.	39415	10	10
F. A. PROJ. NO.			

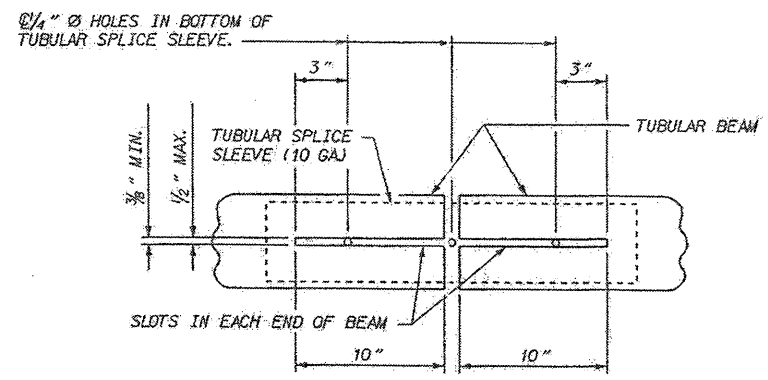


FIXED SPLICE BETWEEN POST (TYPE 1)
 TUBULAR BEAM SPLICE

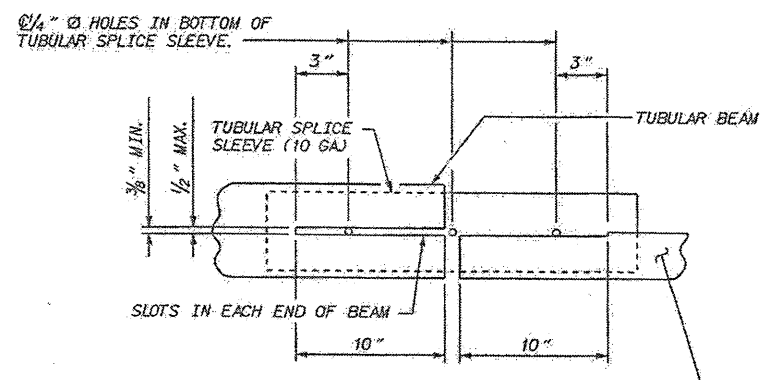


EXPANSION SPLICE BETWEEN POST (TYPE 1)
 TUBULAR BEAM SPLICE

NOTE D: BOLTS ON EXPANSION SIDE OF TUBULAR BEAM SPLICE SHALL BE TIGHTENED FINGER TIGHT, DOUBLE NUTS SHALL BE USED AND TIGHTENED AGAINST EACH OTHER TO PREVENT THE NUTS FROM BECOMING LOOSE ON THE BOLT.



BOTTOM VIEW OF TUBULAR BEAM SPLICE



**BOTTOM VIEW OF TUBULAR AND 20\"/>
 TRIPLE CORRUGATED STEEL BEAM SPLICE**

PROJECT NO. 39415
CAMDEN COUNTY

STATION: _____
 SHEET 5 OF 5



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DETAILS FOR RETROFIT
 OF EXISTING BRIDGE
 RAIL WITH TUBULAR
 BEAM GUARDRAIL**

ASSEMBLED BY: <u>S.H. SOCKWELL</u>	DATE: <u>08/04</u>	SPECIAL
CHECKED BY: <u>B.C. HUNT</u>	DATE: <u>08/04</u>	
DRAWN BY: <u>N.M. RUFFIN</u>	DATE: <u>5/98</u>	STANDARD
CHECKED BY: <u>S.B. WILLIAMS</u>	DATE: <u>5/92</u>	

APRIL		1980	
REVISIONS			
NO.	BY:	DATE:	NO. BY: DATE:
1			3
2			4

ADDED TO CADD 5/98 BY: NMR CHECKED BY: SBW 5/92

TWO LANE, TWO WAY WORK ZONE (L-LINES)

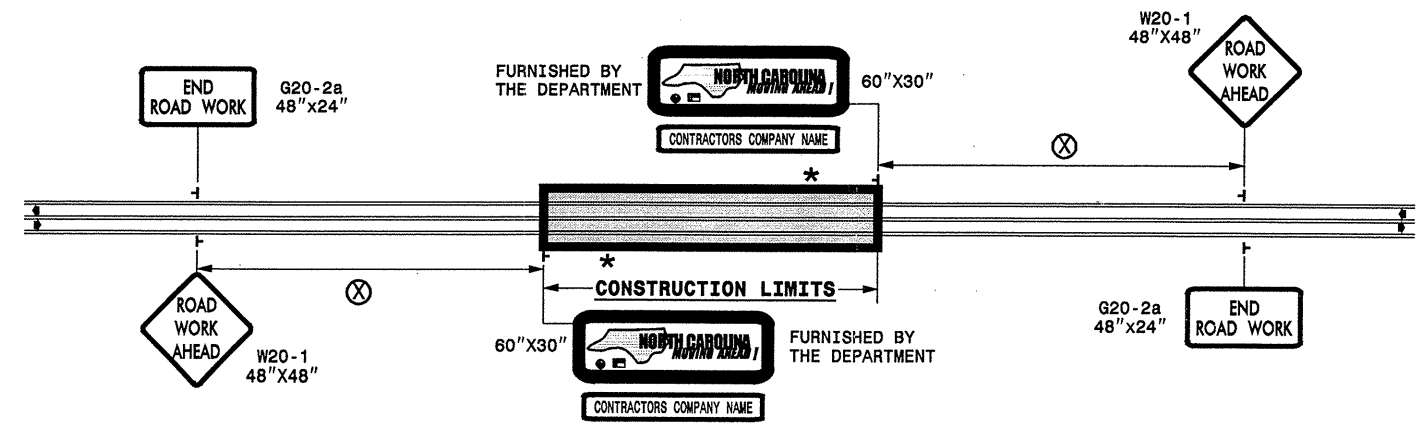
FURNISHED BY THE DEPARTMENT



60"X30"

CONTRACTORS COMPANY NAME

60" Max. X 12"



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
P.S.L. ≤ 50	350'
P.S.L. ≥ 55	500'

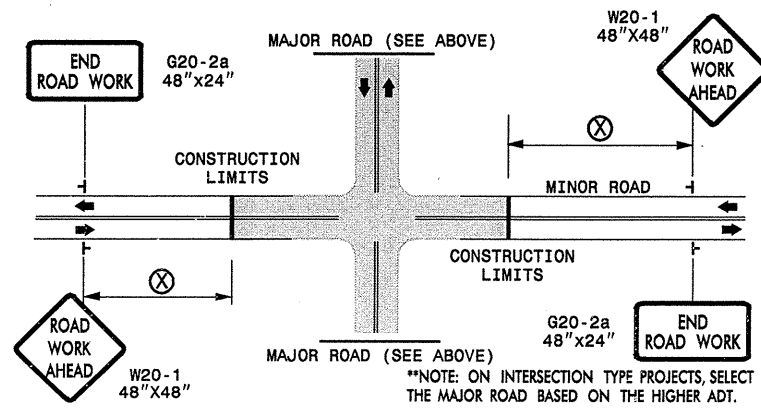
*** ROAD WORK NEXT XX MILES** G20-1A 60"x24"

THIS SIGN TO BE USED ON PROJECTS LONGER THAN 2 MILES. THE NUMBER DISPLAYED ON THE SIGN IS TO BE A WHOLE NUMBER ROUNDED UP TO THE NEXT MILE. IT'S TO BE LOCATED 1,500 FEET INSIDE OF THE CONSTRUCTION LIMITS.

PROJ. REFERENCE NO. WBS 39415	SHEET NO. NCMA-1
----------------------------------	---------------------

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

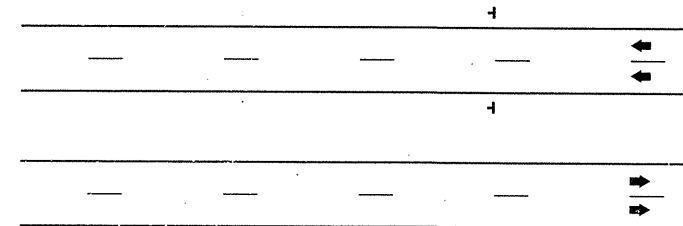
INTERSECTIONS (-Y- LINES)



FREEWAYS/INTERSTATES

DUAL MOUNT "ROAD WORK AHEAD" SIGNS 1,000' IN ADVANCE OF PROJECT LIMITS

DUAL MOUNT "MOVING AHEAD" SIGNS 500' IN ADVANCE OF PROJECT LIMITS



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED. USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

LEGEND

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING FOR ADVANCE WARNING WORK ZONE SIGNS

SHEET 1 OF 1

APPROVED: _____ DATE: _____	ADVANCE WARNING WORK ZONE SIGNS FOR "MOVING AHEAD"	SCALE: NONE	REVISIONS
		DATE: 07/03	11/04
	DWG. BY: JSK	12/04	
	DESIGN BY: JSK		
	REVIEWED BY: SK		