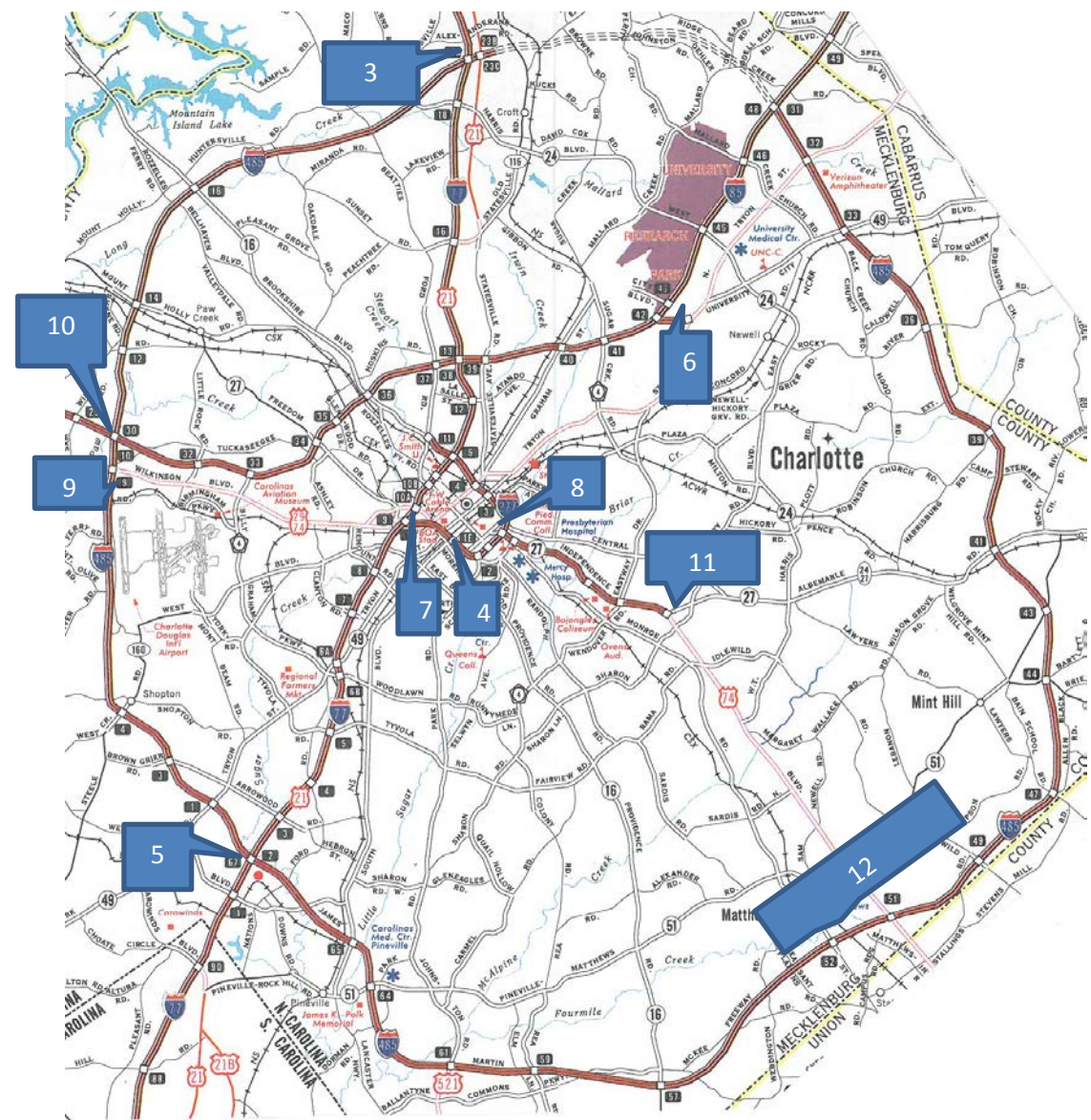


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SIGNING AND PAVEMENT
MARKING PLAN



MECKLENBURG COUNTY

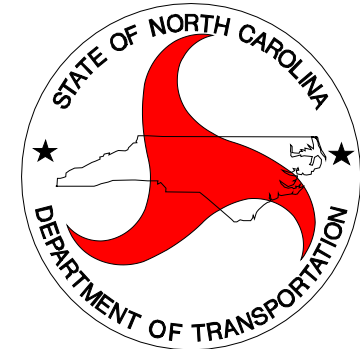
INDEX OF SHEETS

SHEET NO
1

<u>SHEET NO.</u>	<u>TITLE</u>
1	TITLE SHEET AND INDEX OF SHEETS
2A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL AND LOCAL NOTES, ETC.
2B	SUMMARY OF QUANTITIES
3A THRU 3G	I-485 TO I-77 RAMP SIGNING IN N. MECK
3H THRU 3J	I-485 TO I-77 RAMP PAVEMENT MARKING IN N. MECK
4	I-277 INNER TO SOUTH BLVD/CALDWELL ST.
5	I-77 SB EXIT 1 TO I-485
6	I-85 NB EXIT 42
7A THRU 7B	I-277 INNER EXIT 1
8	I-277 INNER EXIT 2 TO US 74
9	I-485 OUTSIDE LANE AT EXIT 9
10	I-485 OUTSIDE LANE AT EXIT 10
11	US 74 EB EXIT 246 TO NC 27
12A-12K	I-485 SIGNING IN VICINITY OF EXIT 52

Division 10

Bid Opening:
September 18th, 2013



Division Purchase Order Project

ROADWAY STANDARD DRAWINGS

- 901.10 TYPE 'A' SIGNS – WELDED STUD CONSTRUCTION
- 901.20 TYPE 'B' SIGNS – WELDED STUD CONSTRUCTION
- 901.50 ARROWS AND SHIELDS
- 901.60 RIVET SPACING FOR OVERLAYED SIGNS
- 901.70 SIGN STRINGERS AND SUPPORT SPACING
- 901.80 SIGN MOUNTING DETAILS – TYPE 'A' AND 'B' SIGNS
- 903.10 GROUND MOUNTED SIGN SUPPORTS
- 904.10 ORIENTATION OF GROUND MOUNTED SIGNS
- 904.20 SECONDARY SIGN MOUNTING
- 904.50 MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
- 1101.02 TEMPORARY LANE CLOSURES
- 1101.03 TEMPORARY LANE CLOSURES
- 1101.04 TEMPORARY SHOULDER CLOSURES
- 1101.11 TRAFFIC CONTROL DESIGN TABLES
- 1110.02 PORTABLE WORK ZONE SIGNS
- 1115.01 FLASHING ARROW BOARDS
- 1130.01 DRUM
- 1130.01 CONES
- 1160.01 TRUCK MOUNTED ATTENUATOR – DELINEATION
- 1180.01 SKINNY DRUM
- 1205.01 PAVEMENT MARKINGS – LINE TYPES AND OFFSETS
- 1205.02 PAVEMENT MARKINGS – DIVIDED AND UNDIVIDED ROADWAYS
- 1205.03 PAVEMENT MARKINGS – INTERCHANGES
- 1205.04 PAVEMENT MARKINGS - INTERSECTIONS
- 1205.05 PAVEMENT MARKINGS – TURN LANES
- 1205.06 PAVEMENT MARKINGS – THRU LANE DROPS
- 1205.08 PAVEMENT MARKINGS – SYMBOLS AND WORD MESSAGES
- 1205.09 PAVEMENT MARKINGS – PAINTED ISLANDS
- 1205.12 PAVEMENT MARKINGS – BRIDGES
- 1250.01 RAISED PAVEMENT MARKERS – INSTALLATION SPACING
- 1251.01 RAISED PAVEMENT MARKERS –PERMANENT AND TEMPORARY
- 1253.01 RAISED PAVEMENT MARKERS – SNOWPLOWABLE

GENERAL NOTES

SHEET NO
2A

CHANGES MAY BE REQUIRED WHEN THE PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY STANDARD DRAWINGS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE PROJECT EXCEPT WHEN OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.

- 1) ALL SIGNS SHALL BE FURNISHED BY THE CONTRACTOR
- 2) WHEN NOT STATIONED OR DIMENSIONED, ALL SIGNS SHALL BE FIELD VERIFIED BY THE ENGINEER
- 3) WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL
- 4) THE BACKGROUND SHEETING FOR TYPES E AND F SIGNS SHALL BE REFLECTIVE
- 5) DO NOT BEGIN FABRICATION FOR TYPES A AND B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL "S" DIMENSIONS HAVE BEEN FIELD VERIFIED.
- 6) TIE PROPOSED MARKINGS TO EXISTING
- 7) REMOVE / REPLACE ANY DAMAGED AND OR CONFLICTING PAVEMENT MARKINGS AND/OR MARKERS
- 8) WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- 9) NOTIFY THE ENGINEER (WHO WILL ALSO NOTIFY PUBLIC INFORMATION AND TMC) 7 DAYS PRIOR OF ANY CLOSURE.
- 10) PROVIDE SIGNING AND DEVICES TO INSTALL SHOULDER OR LANE CLOSURES. ENSURE ALL TEMPORARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN
- 11) WORK LIGHTING FOR NIGHT OPERATIONS SHALL BE PLACED AND DIRECTED SO AS NOT TO OBSTRUCT MOTORIST'S VISION
- 12) CONTRACTOR SHALL COORDINATE OPERATIONS WITH ADJOINING CONTRACTORS AND MAINTENANCE CREWS TO PROVIDE SEAMLESS TRANSITIONS BETWEEN WORKZONES.

PAVEMENT MARKINGS

SHEET NO
2B

DESC NO	SECT			TOTAL	3-PMP2	3-PMP3	4-PMP1	5-PMP1	6-PMP10	7-PMP1&2	8-PMP1
4785000000	1205 CU	COLD APPLIED PLASTIC (12")	WHITE DIAGONAL	107		107					
4702000000	1205 T14	THERMO (12", 120 MILS)	3FT-9FT/ SP WHITE MINISKIP	LF 170	170						
4702000000	1205 TT	THERMO (12", 120 MILS)	WHITE SOLID LANE LINE	LF 300	300						
4700000000	1205 TS	THERMO (12", 90 MILS)	WHITE GORELINE	LF 1075	950	125					
4700000000	1205 TU	THERMO (12", 90 MILS)	WHITE DIAGONAL	LF 590		590					
4775000000	1205 C6	COLD APPLIED PLASTIC (6")	WHITE EDGELINE	LF 325		325					
4688000000	1205 T6	THERMO (6", 90 MILS)	WHITE EDGELINE	LF 2250		2250					
4865000000	1205 V1	POLYUREA (12")	WIDE SOLID WHITE LANE LINE	LF 6387				440	800	1425	522
4865000000	1205 V2	POLYUREA (12")	3 FT - 9 FT/ SP WHITE SKIP	LF 3689				140	250	1167	97
4855000000	1205 VJ	POLYUREA (6")	10 FT. WHITE SKIP	LF 80			80				
4855000000	1205 VK	POLYUREA (6")	3 FT - 9 FT/ SP WHITE SKIP	LF 39			39				
4725000000	1205 UA	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	LEFT TURN ARROW	EA 12			3				
4725000000	1205 UB	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	RIGHT TURN ARROW	EA 7			1			3	3
4725000000	1205 UC	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	STRAIGHT ARROW	EA 3			3				
4725000000	1205 UD	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. STRAIGHT/LEFT	EA 9							
4725000000	1205 UE	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. STRAIGHT/ RIGHT	EA 12			3			6	3
4725000000	1205 UF	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	COMBO. LEFT/ RIGHT ARROW	EA 1			1				
4725000000	1205 UI	THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	ALPHANUMERIC CHARACTERS	EA 24						8	4

SIGNING

ITEM NO.		ITEM DESCRIPTION		LOCATION 3				LOCATION 12									
DESC. NO.	SECT NO.	QUAN	UNIT	SIGN NO.	TYPE	SF	U POSTS	FOUND.	STEEL	REMOVAL	SIGN NO.	TYPE	SF	U POSTS	FOUND.	STEEL	REMOVAL
0000100000	800	MOBILIZATION	1.00 LS	1A	B	23.75 SF				+							
4025000000	901	CONTRACTOR FURNISHED, TYPE A SIGN	1050.33 SF	1B	A	140 SF				1							
4025000000	901	CONTRACTOR FURNISHED, TYPE B SIGN	150.00 SF	2A	B	23.75 SF				+	WELCOME TO MATTHEWS MATTHEWS, STALLINGS, INDIAN TRAIL EXIT 52	101	A	49.5 SF	2	2	313
4025000000	901	CONTRACTOR FURNISHED, TYPE E SIGN	109.25 LF	2B	A	120 SF				1	SP12316	A	106.3 SF	2	2	962	
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATION	9.00 CY	101	A	62.33 SF		2	490		EXIT 52	SP12310	B	20.5 SF			
4066000000	903	SUPPORTS, SIMPLE STEEL BEAMS	2948.00 LB	1 EA	W13-3	401	E	12 SF	2		E John 1/4 Mile EXIT ONLY	SP12313	A	116 SF			1
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	232.00 LF	1 EA	W1-13	402	E	16 SF	2		EXIT 52	SP12310	B	20.5 SF			
4102000000	904	SIGN ERECTION, TYPE E	14.00 EA	1 EA	W13-1P	403	E	6.25 SF	0		E John EXIT ONLY	SP12312	A	96 SF			1
4109000000	904	SIGN ERECTION, TYPE A (OVERHEAD)	5.00 EA								EXIT 52	SP12310	B	20.5 SF			
4109000000	904	SIGN ERECTION, TYPE B (OVERHEAD)	5.00 EA	R3-8R	30"x30"	1 EA	AREA 5				E John St ↗	SP12311	A	56 SF			1
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	7.00 EA			2 EA	AREA 6				MATTHEWS, STALLINGS, INDIAN TRAIL EXIT 52	SP12316	A	106.3 SF	2	2	879
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	2.00 EA			4 EA	AREA 7				EXIT 52	SP12310	B	20.5 SF			
4234000000	907	DISPOSAL OF SIGN, A OR B (OVERHEAD)	5.00 EA			1 EA	AREA 8				E John 1 Mile	SP12315	A	74.25 SF			1
4236000000	907	DISPOSAL OF SIGN, A OR B (GROUND MOUNTED)	2.00 EA			2 EA	AREA 9				WELCOME TO MATTHEWS	101	A	49.5 SF	2	2	305
						2 EA	AREA 10				EXIT 52	SP12310	B	20.5 SF			
											E John 2 Mile	SP12314	A	74.25 SF			1

QUANTITIES PAID WILL BE FOR QUANTITIES INSTALLED AND MEASURED

SUMMARY OF QUANTITIES

T.I.P.: SS-4910BH

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO. SS-4910BH	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 5/2/13	
	

SIGNING PLAN
MECKLENBURG COUNTY

LOCATION: SIGNING AND MARKING PROJECT
FOR RAMP FROM I-485 TO I-77

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
901.10	TYPE 'A' SIGNS
901.20	TYPE 'B' SIGNS
901.50	ARROWS AND SHIELDS
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.20	SECONDARY SIGN MOUNTING
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . DO NOT BEGIN FABRICATION FOR TYPES A & B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL "S" DIMENSIONS HAVE BEEN FIELD VERIFIED.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATION	1	C.Y.
4066000000	903	SUPPORTS, SIMPLE STEEL BEAM	490	LB.
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	63	L.F.
4102000000	904	SIGN ERECTION, TYPE E	2	EA.
4109000000	904	SIGN ERECTION, TYPE A (OVERHEAD)	2	EA.
4109000000	904	SIGN ERECTION, TYPE B (OVERHEAD)	2	EA.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	1	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	3	EA.
4234000000	907	DISPOSAL OF SIGN, A OR B (OVERHEAD)	2	EA.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2 & 2A	SUPPORT INFORMATION
SIGN-3-5	OVERHEAD DETAILS AND SIGN DESIGNS
SIGN-6-7	TYPE 'E' SHEET AND EXISTING AND PROPOSED SIGNS

30-APR-2013 15:27
C:\JUNK\SS-485-1-77_Charlotte\NEW-R2248D-SIGN -2.dgn
dhbeard

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER

DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER

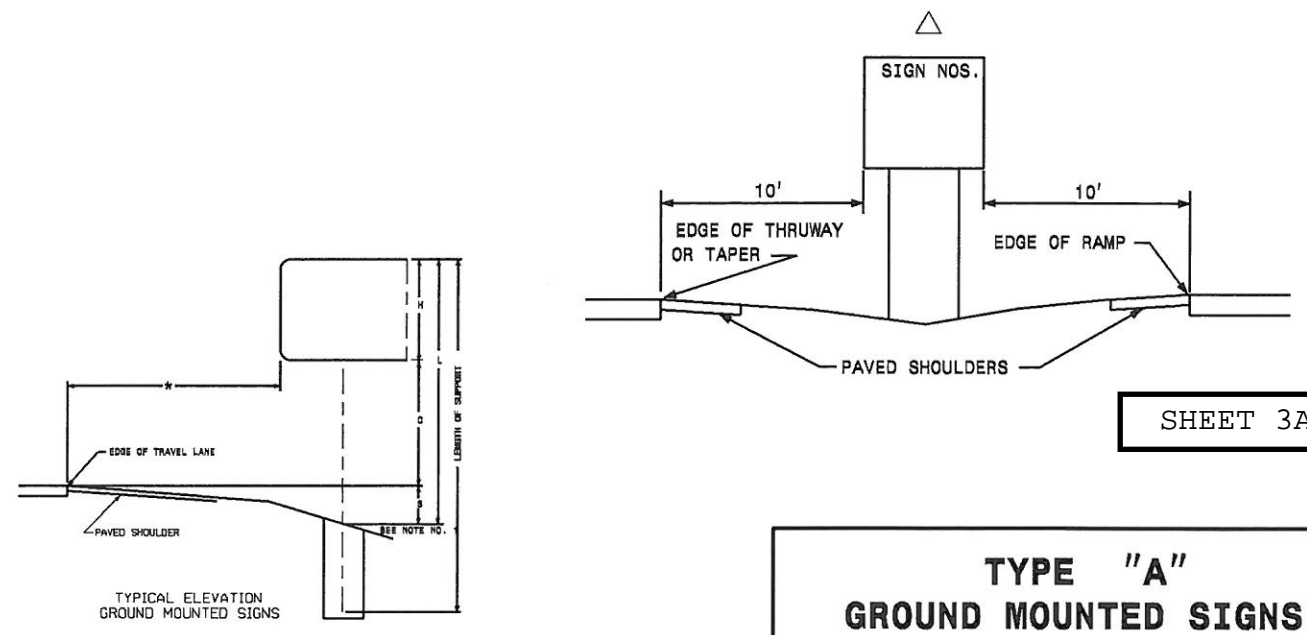


TIP NO.	SHEET NO.
SS-4910BH	SIGN-2
APPROVED:	<i>[Signature]</i>
DATE:	5/2/13
SEAL	

SIGN NO.	SIGN TYPE	SIGN SIZE (in. w x h)	ROADWAY STATION	NO. OF SUP.	BEAM SECTION	SUPPORT TYPE	ATTACH METHOD	MOUNTING METHOD	HORIZ. CLR. (ft.)	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			FOOTING DIAMETER (ft.)	FOOTING DEPTH (ft.)	B/A SUPPORT WEIGHTS (lbs.)	SIMPLE SUPPORT WEIGHTS (lbs.)	REINF. FTGS. (c.y.)	PLAIN FTGS. (c.y.)	FIELD VERIFIED (mm/dd/yy)														
										SNS HT	MTG HT	EMBED-MENT	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH																					
101	A	144 X72	See Plans	2	W6x12	S	N/A	N/A	20.00	6.00	7.00	4.5	2.10	15.10	19.60	0.00	0.00	0.00	3.70	16.70	21.20	1.5	5	0.00	489.60	0.65	0.00															
																							TOTAL	TOTAL	TOTAL	TOTAL																
																							0.00	489.60	0.65	0.00																
																							USE:	0	490	1																

NOTES

- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF PAVEMENT.
- FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (*) ARTICLE 1072-1. (*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES
- PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.



SHEET 3A-2

TYPE "A" GROUND MOUNTED SIGNS

20-Apr-2013 15:06:17 Charlotte\NEW-R2248D-SIGN -2.dgn
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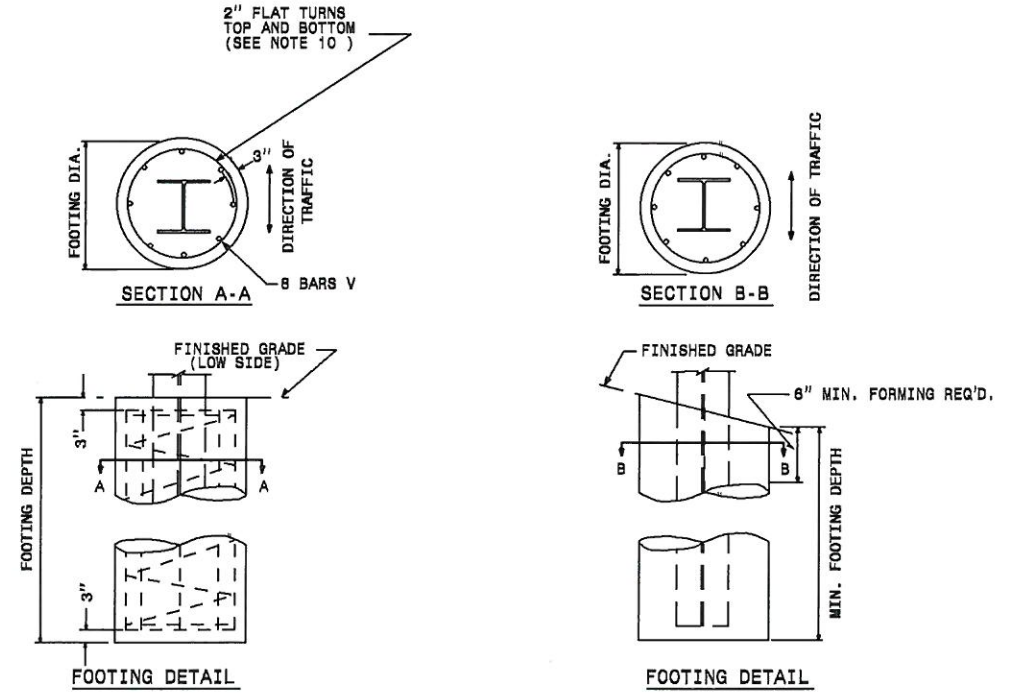
TIP NO.	SHEET NO.
SS-4910BH	SIGN-2A
APPROVED:	<i>[Signature]</i>
DATE:	5/21/13
SEAL	

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

ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 2 OF 3
903D10

BEAM SHAPE	BOLT SIZE	SLIP BASE PLATE DATA							KEEPER PLATE DATA							HINGE CONNECTION DATA							BREAK AWAY SUPPORT WEIGHT CONSTANT LBS.			
		A ₁	B ₁	C ₁	D ₁	E ₁	T ₁	R ₁	A ₂	B ₂	C ₂	D ₂	E ₂	R ₂	T ₂	BOLT SIZE	F	G	H	I	J	K		L	R ₃	T ₃
S8X6.7	1/2" DIA. X 3"	7"	4"	1"	3/4"	2 1/2"	1"	5/32"	7"	4"	1"	3/4"	2 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	2 1/4"	3 1/2"	4"	1/2"	1"	1/2"	2"	5/32"	3/8"	18
S4X7.7	1/2" DIA. X 3"	8"	4"	1"	3/4"	2 1/2"	1"	5/32"	8"	4"	1"	3/4"	2 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	5/32"	3/8"	20
W8X9	1/2" DIA. X 3"	10"	5"	1"	3/4"	3 1/2"	1"	5/32"	10"	5"	1"	3/4"	3 1/2"	5/32"	28 GAUGE	1/2" DIA. X 1 1/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	5/32"	3/8"	32
W8X12	5/8" DIA. X 3 3/4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	1 1/32"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/4"	4"	4 1/2"	3 1/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	3/8"	39	
W8X16	5/8" DIA. X 3 3/4"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	1 1/32"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/2"	4"	4 1/2"	3 1/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	3/8"	47	
W8X18	5/8" DIA. X 4 1/4"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/2"	1 1/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/32"	28 GAUGE	5/8" DIA. X 2 1/2"	5 1/4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	1 1/32"	3/8"	70	
W8X21	3/4" DIA. X 4 1/4"	14"	7"	1 1/2"	1"	5"	1 1/2"	1 3/32"	14"	7"	1 1/2"	1"	5"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	3/8"	73
W10X22	3/4" DIA. X 4 1/4"	16"	8"	1 1/2"	1"	6"	1 1/2"	1 3/32"	16"	8"	1 1/2"	1"	6"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	3/8"	119
W10X28	3/4" DIA. X 4 3/4"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	1 3/32"	16 1/2"	8"	1 1/2"	1"	6"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	3/8"	140
W12X26	3/4" DIA. X 4 3/4"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	1 3/32"	18 1/2"	9"	1 1/2"	1"	7"	1 3/32"	28 GAUGE	3/4" DIA. X 2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	3/8"	176
W14X30	1" DIA. X 5"	22"	9"	2"	1 1/2"	6"	2"	1 7/32"	22"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/8"	205
W16X31	1" DIA. X 5"	24"	9"	2"	1 1/2"	6"	2"	1 7/32"	24"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 1/4"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/8"	223
W18X35	1" DIA. X 5"	25"	9"	2"	1 1/2"	6"	2"	1 7/32"	25"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 1/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/8"	243
W18X40	1" DIA. X 5 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	1 7/32"	26"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 3/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/8"	278
W21X44	1" DIA. X 5 1/2"	29"	9"	2"	1 1/2"	6"	2 1/2"	1 7/32"	29"	9"	2"	1 1/2"	6"	1 7/32"	28 GAUGE	1" DIA. X 3 3/4"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/8"	310



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1' 6"	8 # 8 BARS	#3 BAR, 6" PITCH
2'	8 # 7 BARS	#3 BAR, 6" PITCH
2' 6"	8 # 9 BARS	#3 BAR, 6" PITCH
3'	8 # 11 BARS	#3 BAR, 6" PITCH
3' 6"	8 # 12 BARS	#3 BAR, 6" PITCH
4'	8 # 14 BARS	#3 BAR, 6" PITCH

* FOUNDATION DIMENSIONS ARE SHOWN IN PLANS

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


ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 2 OF 3
903D10

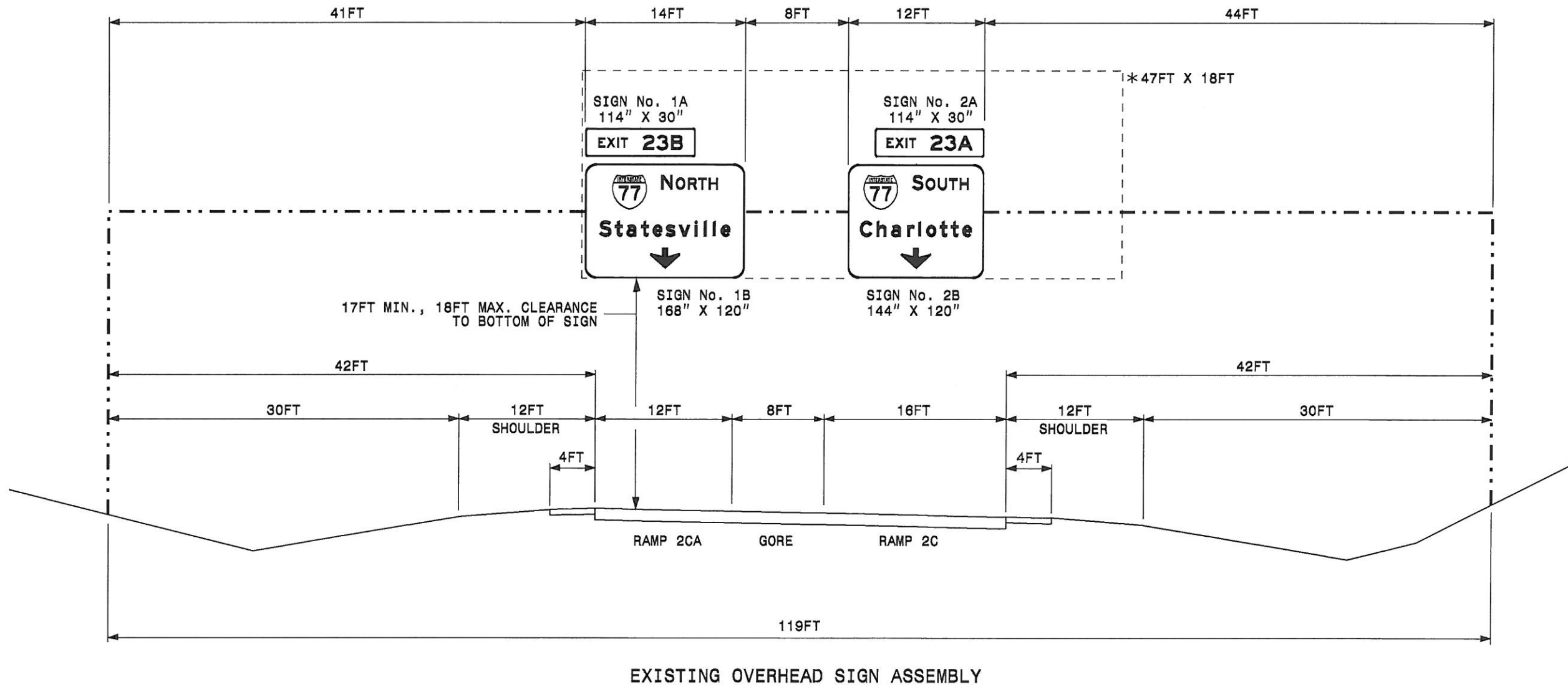
SHEET 3B

**REVISED SIGNING
ROADWAY STANDARD DRAWING**

30-APR-2013 15:24
 C:\JUNK\SS-1-485-1-17-Char101\NEW-R2248D-SIGN -2.dgn
 dhbeard AT TE265832

TIP NO. SS-4910BH	SHEET NO. SIGN-3
APPROVED: <i>[Signature]</i>	
DATE: 5/2/13	
SEAL	
	

* THESE DIMENSIONS SHALL BE USED FOR WIND LOAD AND DEAD LOAD COMPUTATIONS IN DESIGN OF STRUCTURE AND FOOTING. DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF 90 M.P.H.



EXISTING OVERHEAD SIGN ASSEMBLY

30-APR-2013 15:51:40 E:\177-Charlotte\OH-21.dgn

PROJECT NOTES

1. THE BOTTOM EDGE OF ALL SIGNS IN EACH ASSEMBLY SHALL BE LOCATED ON A HORIZONTAL PLANE.

SHEET 3C

EXISTING OVERHEAD SIGN ASSEMBLY



SIGN NUMBER: 1A TYPE: B QUANTITY: 1 SIGN WIDTH: 9'-6" HEIGHT: 2'-6" TOTAL AREA: 23.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: 2 LENGTH: 106.0 BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
E	X	I	T	2	3	B					Text Length
13.4	8.9	10.7	5.5	7.5	18	14.3	18.2	12.2	13.4		E 2000
											87.2

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2A TYPE: B QUANTITY: 1 SIGN WIDTH: 9'-6" HEIGHT: 2'-6" TOTAL AREA: 23.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0" RADII: 0" NO. Z BARS: 2 LENGTH: 106.0 BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
E	X	I	T	2	3	A					Text Length
12.5	8.9	10.7	5.5	7.5	18	14.3	13.8	13.3	12.5		E 2000
											88

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 1B TYPE: A QUANTITY: 1 SIGN WIDTH: 14'-0" HEIGHT: 10'-0" TOTAL AREA: 140.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 3 LENGTH: 180.0 BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT N1_1 26.8 72 36 36 ARDOWN 68 10 32.1 22 NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size	
N	O	R	T	H							Text Length	
79.8	12.2	3.1	12.8	11	11	9.7	28.5					E 2000
											88.8	
											E 2000	
											138.1	

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2B TYPE: A QUANTITY: 1 SIGN WIDTH: 12'-0" HEIGHT: 10'-0" TOTAL AREA: 120.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12" NO. Z BARS: 3 LENGTH: 138.0 BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT N1_1 16.8 72 36 36 ARDOWN 86 10 32.1 22 NAT'L: 0.128" (3.2 mm) ALUMINUM	DESIGN BY: DHB PROJECT ID: 88-4910BH CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
--	---

USE NOTES:
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

LETTER POSITIONS

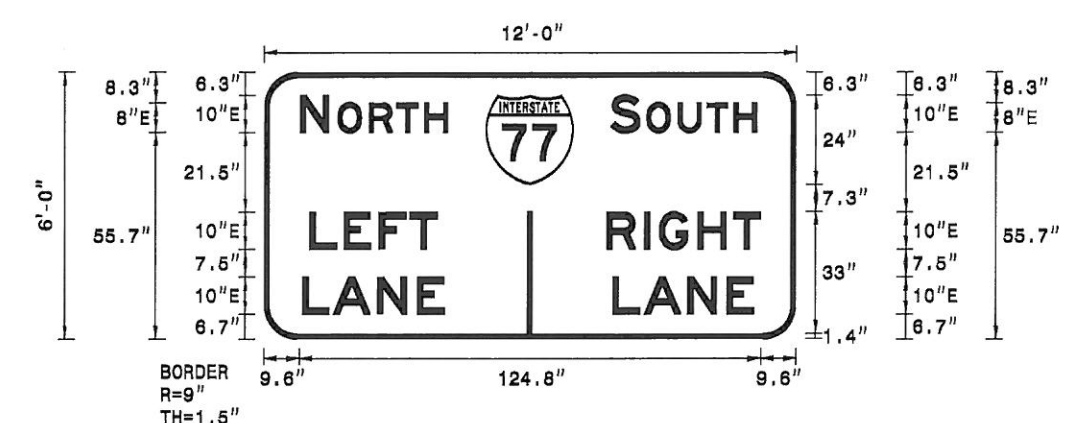
Letter spacings are to start of next letter											Series/Size	
S	O	U	T	H							Text Length	
87.8	12.2	2.2	12.8	11.6	11	9.7	16.6					E 2000
											88.8	
											E 2000	
											118.6	

FILENAME: R-2248D_SGN_Detail NORTH CAROLINA D.O.T. SIGN DETAIL

20 APR 2013 15:33
 chbeard AT 11255832
 20 APR 2013 15:33
 chbeard AT 11255832

TIP NO. SS-4910BH	SHEET NO. SIGN-5
APPROVED: <i>[Signature]</i>	
DATE: 5/2/13	
	

SIGN NUMBER: 101 TYPE: A QUANTITY: 1 SIGN WIDTH: 12'-0" HEIGHT: 6'-0" TOTAL AREA: 72.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 1.5" RADII: 9" NO. Z BARS: 2 LENGTH: 136.0	BACKG COLOR: Green COPY COLOR: White <table border="1" style="width: 100%; text-align: center;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr> <td>M1_1</td> <td>59.5</td> <td>41.8</td> <td>24</td> <td>24</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> MAT'L: 0.125" (3.2 mm) ALUMINUM	SYMBOL	X	Y	WID	HT	M1_1	59.5	41.8	24	24																															DESIGN BY: DHB PROJECT ID: SS-4910BH	CHECKED BY: KLJ DIV: 10 DATE: Mar 12, 2013
SYMBOL	X	Y	WID	HT																																							
M1_1	59.5	41.8	24	24																																							



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

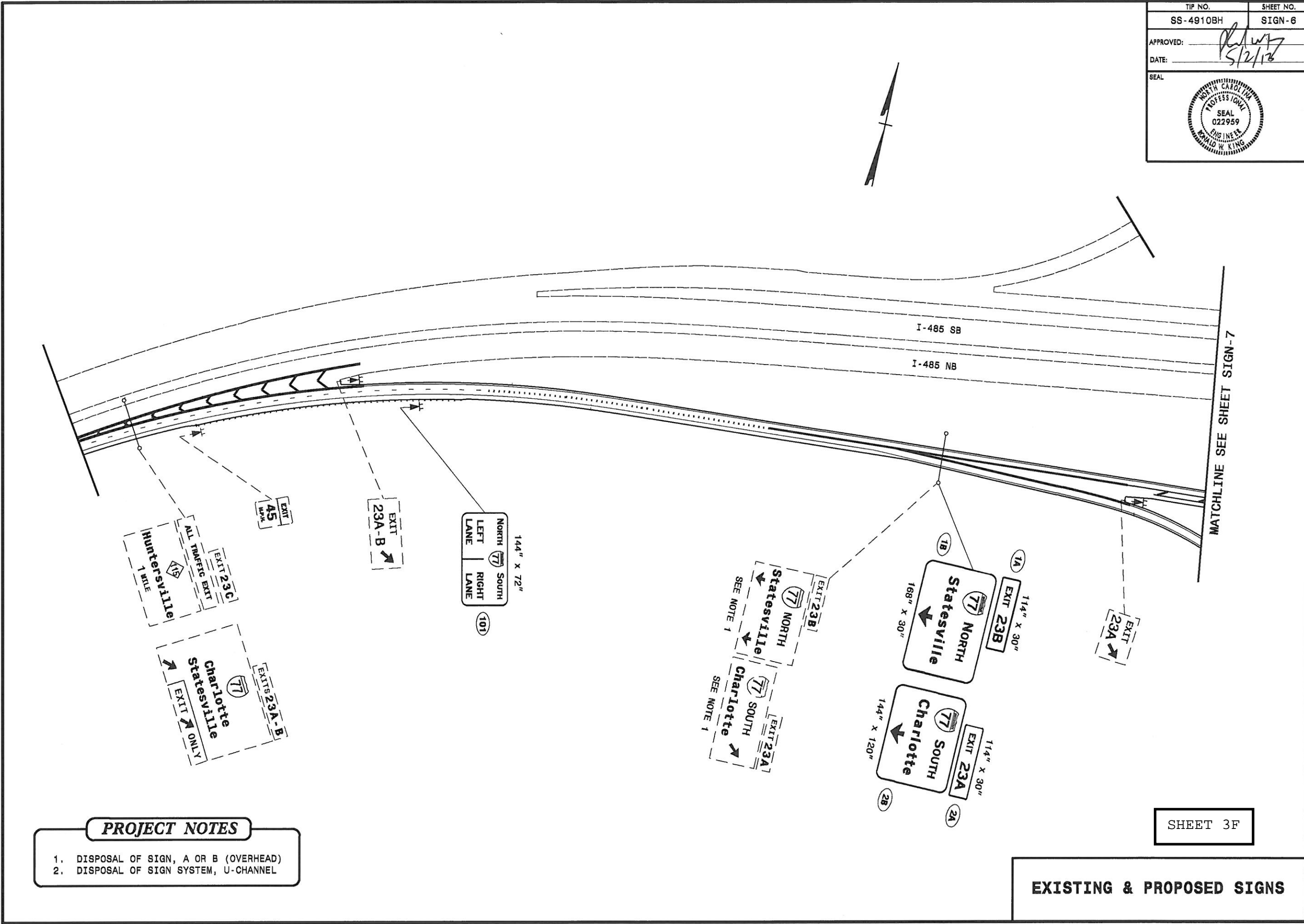
	N	O	R	T	H																Series/Size Text Length
	9.6	8.1	2.1	8.6	7.4	7.4	6.5	94.5													E 2000 40
	93.5	8.1	1.5	8.6	7.8	7.4	6.5	10.6													E 2000 39.8
	12.3	9.2	9.5	8.3	7.5	97.2															E 2000 34.5
	92.5	10.1	4.1	10.4	9.8	7.5	9.6														E 2000 41.9
	10.4	8.3	11.9	10.7	7.5	95.2															E 2000 38.4
	94.3	8.3	11.9	10.7	7.5	11.3															E 2000 38.4

FILENAME: I-5000
NORTH CAROLINA D.O.T. SIGN DETAIL

20-APR-2013 15:56
 chboard AT 122658
 1-77-Chorlotte-VR-2248D-SGN_Design.dgn

SHEET 3E

SIGN DESIGNS



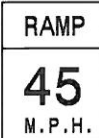


PROJECT NOTES

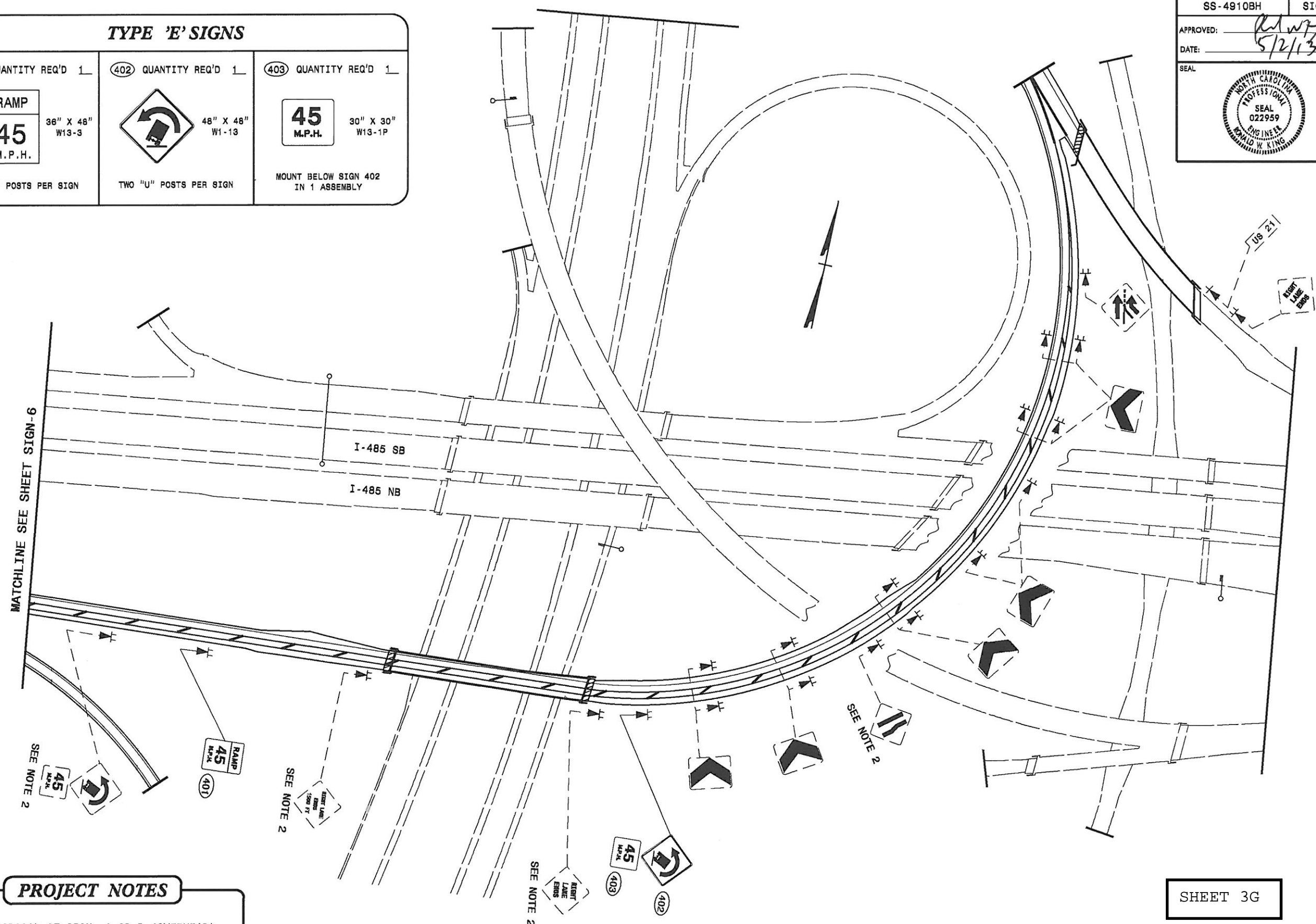
- DISPOSAL OF SIGN, A OR B (OVERHEAD)
- DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SHEET 3F

EXISTING & PROPOSED SIGNS

30-APR-2013 15:50
 I:\Projects\SS-4910BH\77-Charlotte\NEW-R2248D-SIGN-I.dgn
 User: dking
 Plot: 1
 Plot Scale: 1.00
 Plot Date: 5/2/13 11:26:58 AM

TYPE 'E' SIGNS		
(401) QUANTITY REQ'D 1  36" X 48" W13-3 TWO "U" POSTS PER SIGN	(402) QUANTITY REQ'D 1  48" X 48" W1-13 TWO "U" POSTS PER SIGN	(403) QUANTITY REQ'D 1  30" X 30" W13-1P MOUNT BELOW SIGN 402 IN 1 ASSEMBLY



PROJECT NOTES

- DISPOSAL OF SIGN, A OR B (OVERHEAD)
- DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SHEET 3G

EXISTING & PROPOSED SIGNS

TO: APR-2013 15:56
 C:\JUNK\SS-4910BH-T7 Charlotte\NEW-R2248D-SIGN-2.dgn
 dbbeard

T.I.P.: SS-4910BH

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
MECKLENBURG COUNTY**

**LOCATION: SIGNING AND MARKING PROJECT
FOR RAMP FROM I-485 TO I-77**

<small>TIP NO.</small> SS-4910BH	<small>SHEET NO.</small> PMP-1
<small>APPROVED:</small>	
<small>DATE:</small> 5/2/13	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWFLOWABLE

FINAL PAVEMENT MARKING SCHEDULE

<u>SYMB</u>	<u>DESCRIPTION</u>
	FINAL PAVEMENT MARKINGS
	COLD APPLIED PLASTIC (12") Type 2 - Permanent High Performance
CU	WHITE DIAGONAL
	THERMO (12", 120 MILS)
T14	3 FT. - 9 FT./SP WHITE MINISKIP
TT	WHITE SOLID LANE LINE
	THERMO (12", 90 MILS)
TS	WHITE GORELINE
TU	WHITE DIAGONAL
	COLD APPLIED PLASTIC (6") Type 2 - Permanent High Performance
C6	WHITE EDGELINE
	THERMO (6", 90 MILS)
T6	WHITE EDGELINE

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
RAMP	THERMOPLASTIC	
BRIDGE	COLD APPLIED PLASTIC	
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING COLD APPLIED PLASTIC PAVEMENT MARKING MATERIAL.
- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
- F) TYPE III COLD APPLIED PLASTIC MAY BE USED IN LIEU OF TYPE II COLD APPLIED PLASTIC. IF TYPE III COLD APPLIED PLASTIC IS USED, IT SHALL BE PAID FOR USING THE TYPE II COLD APPLIED PLASTIC PAY ITEM.

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2-3	PAVEMENT MARKING DETAIL


PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER

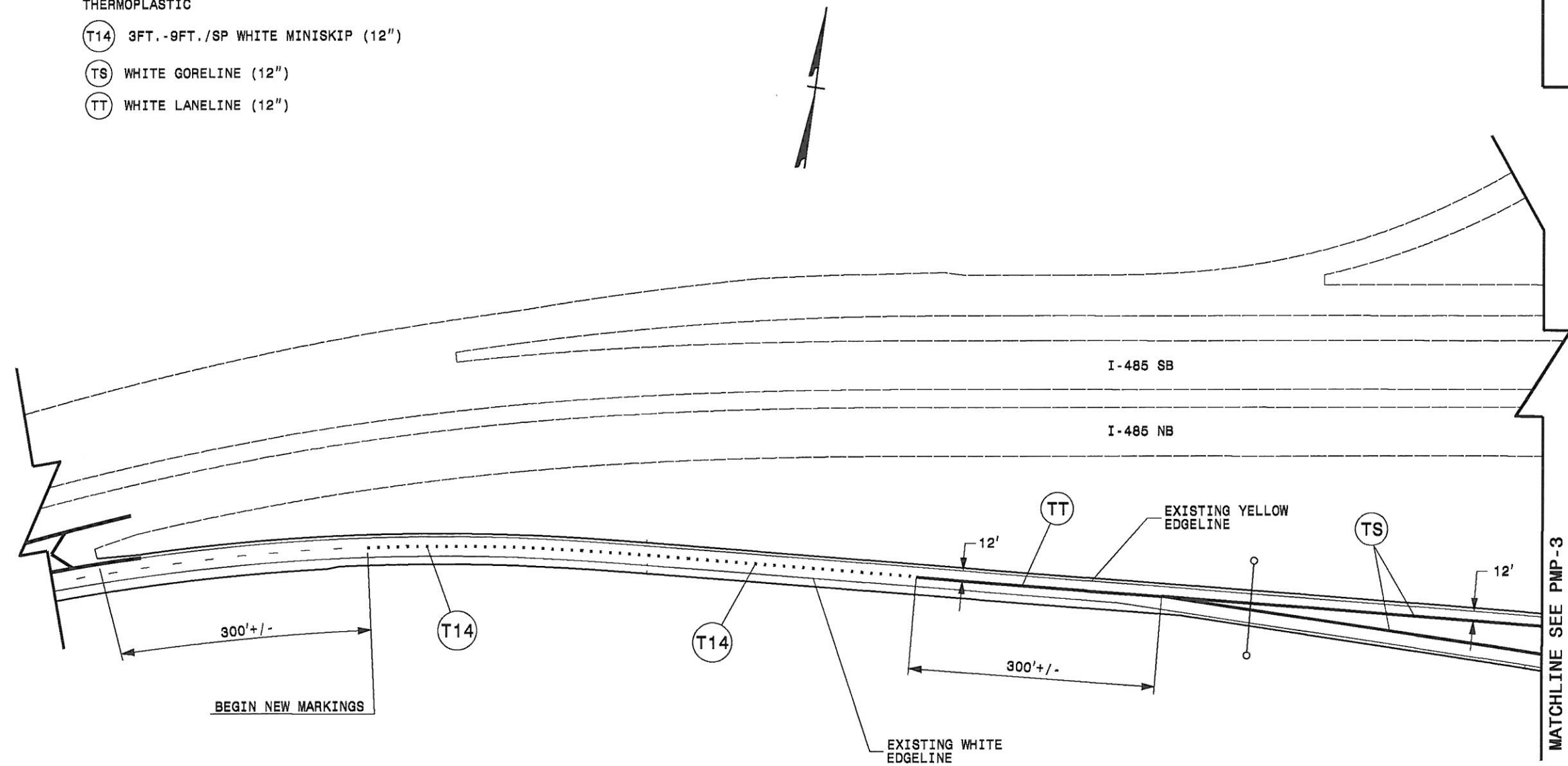
DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



20-Apr-2013 14:47
C:\Users\SS-4910BH\Desktop\AT-12255832\Char-Lotte\NEW-R22480-PMP-1.dgn

TIP NO.	SHEET NO.
SS-4910BH	PMP-2
APPROVED:	<i>[Signature]</i>
DATE:	5/21/13
SEAL	

- THERMOPLASTIC
- (T14) 3FT.-9FT./SP WHITE MINISKIP (12")
 - (TS) WHITE GORELINE (12")
 - (TT) WHITE LANELINE (12")




NOTE:
 1) REMOVE ANY SNOWPLOWABLE PAVEMENT MARKER AFFECTED BY THE PROPOSED MARKINGS AND REFILL HOLES WITH EPOXY.

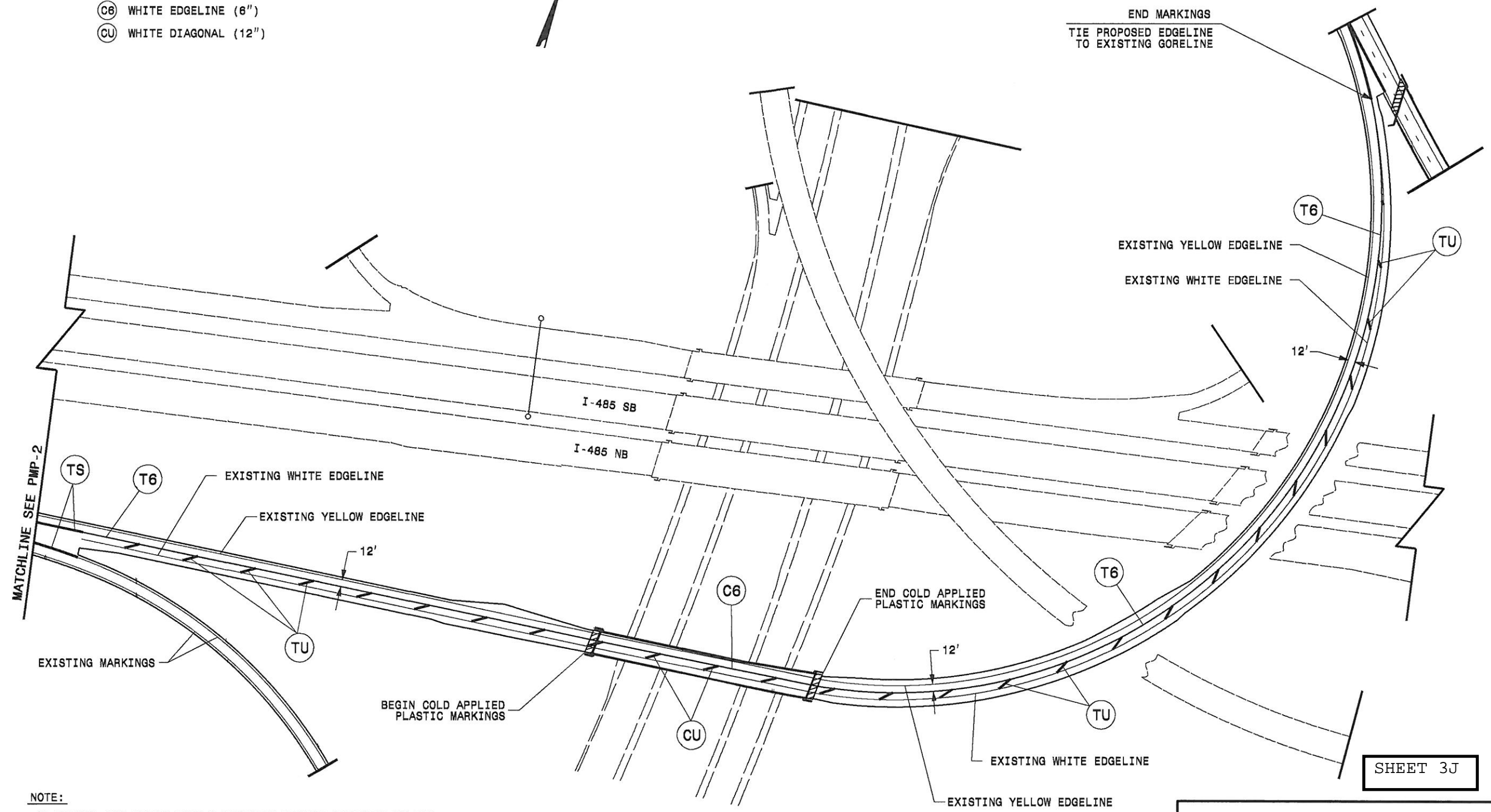
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 dbbeard

SHEET 3I

PAVEMENT MARKING DETAIL

TIP NO. SS-4910BH	SHEET NO. PMP-3
APPROVED: <i>[Signature]</i>	
DATE: <i>[Date]</i>	
SEAL	
	

- THERMOPLASTIC
- (T6) WHITE EDGELINE (8")
 - (TS) WHITE GORELINE (12")
 - (TU) WHITE DIAGONAL (12")
- COLD APPLIED PLASTIC
- (C6) WHITE EDGELINE (8")
 - (CU) WHITE DIAGONAL (12")



MATCHLINE SEE PMP-2

NOTE:
1) REMOVE ANY SNOWPLOWABLE PAVEMENT MARKER AFFECTED BY THE PROPOSED MARKINGS AND REFILL HOLES WITH EPOXY.

SHEET 3J

PAVEMENT MARKING DETAIL


30-APR-2013 14:46
C:\JUNK\SS-4910BH-17-Charlotte\NEW-R22480-PMP-2.dgn
dhbeard

T.I.P.: SS-4910BH

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
MECKLENBURG COUNTY**

LOCATION: RAMP OFF OF I-277 TO SOUTH BLVD/CALDWELL ST.

TIP NO. SS-4910BH	SHEET NO. PMP-1
APPROVED: <i>[Signature]</i>	
DATE: 5/21/13	
	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES

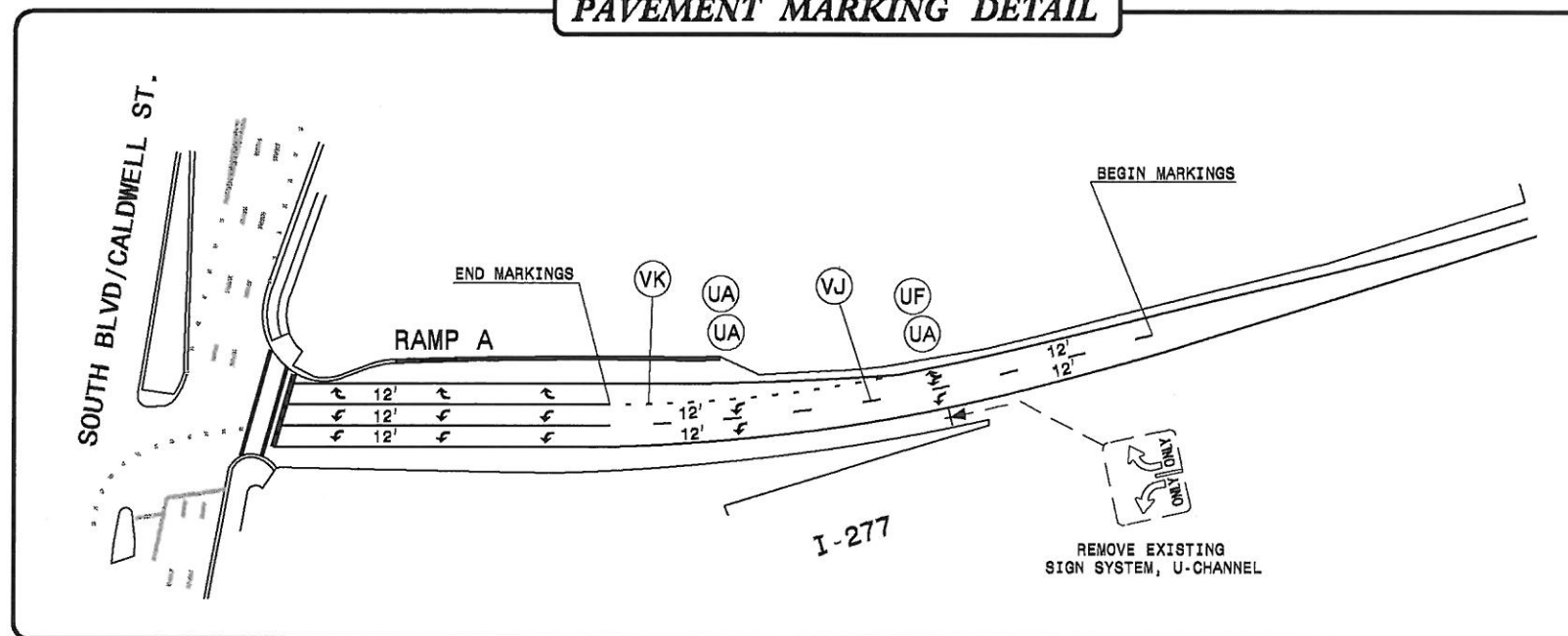
GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
RAMP A	POLYUREA	NONE
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

PAVEMENT MARKING DETAIL



PAVEMENT MARKING SCHEDULE

SYMB	DESCRIPTION
FINAL PAVEMENT MARKINGS	
POLYUREA (6") Highly Reflective Elements	
VJ	10 FT. WHITE SKIP
VK	3 FT. - 9 FT./SP WHITE MINISKIP
THERMO PAVEMENT MARKING SYMBOLS (90 MILS)	
UA	LEFT TURN ARROW
UF	COMBO. LEFT/RIGHT ARROW

SHEET 4

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET & PAVEMENT MARKING DETAIL

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

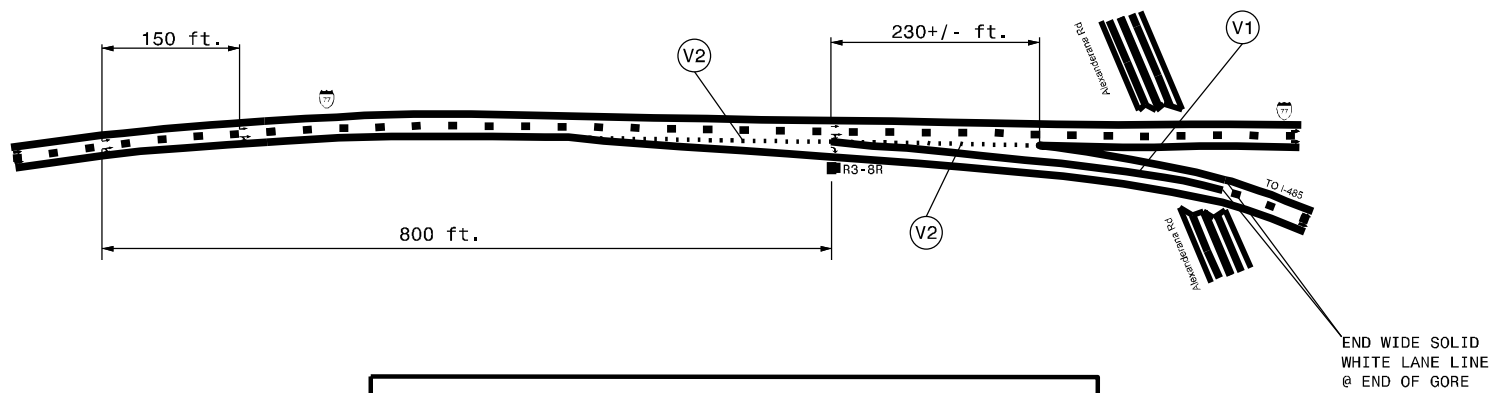
KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER
 DERRICK H. BEARD SIGNING & DELINEATION PROJECT DESIGN ENGINEER



D:\M\2013\1646\1-277 CharLotte\RAMP_CHARLOTTE.dgn
 AT: 12285632
 chbeard

I-77 SB EXIT 1 TO I-485

APPROVED: _____
 DATE: _____
 SEAL



EXISTING MARKINGS

PROPOSED MARKINGS

TRAFFIC FLOW

V2 WIDE DOTTED WHITE LINE

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	440 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	140 ft

HEATED - IN PLACED THERMOPLASTIC (90 MIL)

UB	RIGHT TURN ARROW	1 ea
UE	COMBO. STRAIGHT/RIGHT	3 ea
UC	STRAIGHT ARROW (OPTIONAL)	3 ea

SIGN MATERIAL: GRADE C SHEETING

R3-8	SIGN (30"X30")	1 ea
------	----------------	------



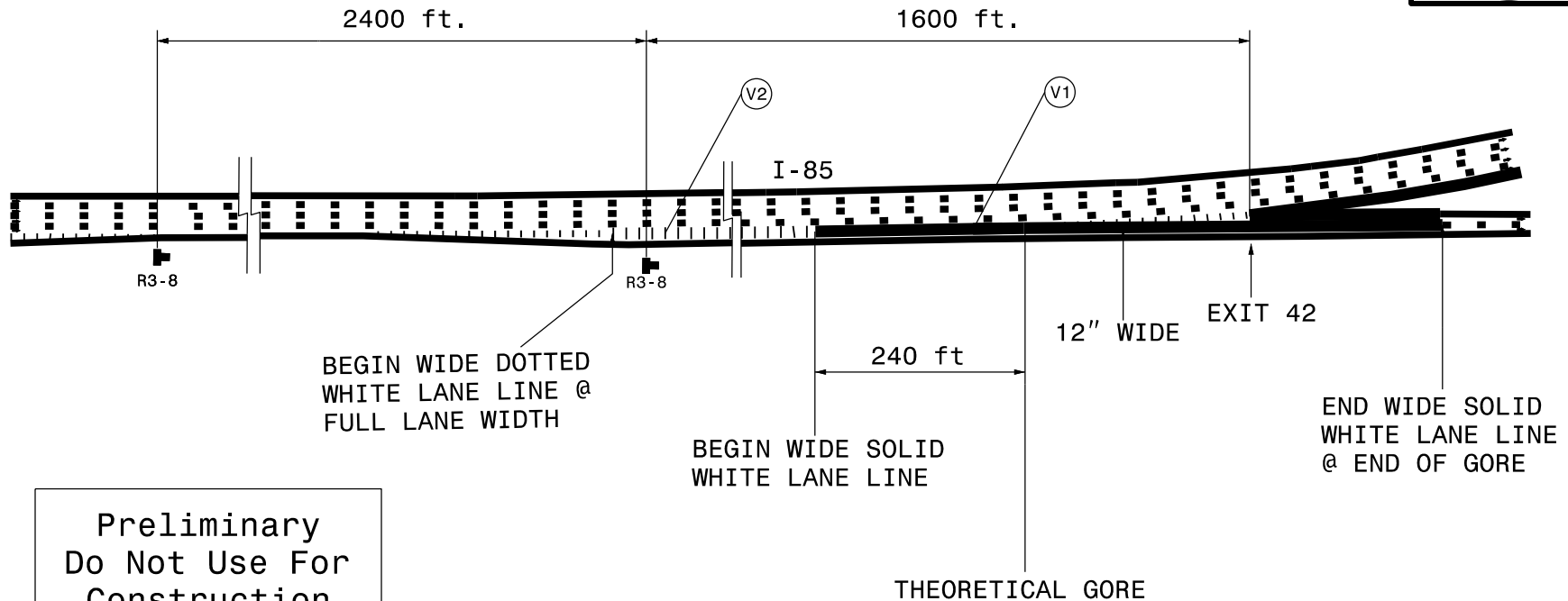
R3-8R

SHEET 5

REPRODUCTION OF THIS SHEET IS PROHIBITED WITHOUT THE WRITTEN PERMISSION OF THE CONSULTING ENGINEER

I-85 NB EXIT 42 @ US29/NC49

APPROVED: _____
 DATE: _____
 SEAL



**Preliminary
Do Not Use For
Construction**

EXISTING MARKINGS

PROPOSED MARKINGS

TRAFFIC FLOW

WIDE DOTTED MARKINGS

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	WIDE SOLID WHITE LANE LINE	800 ft
V2	WIDE DOTTED WHITE LANE LINE	250 ft

SIGNING MATERIAL: GRADE C SHEETING

R3-8	SIGN (30"X30")	2 ea
------	----------------	------

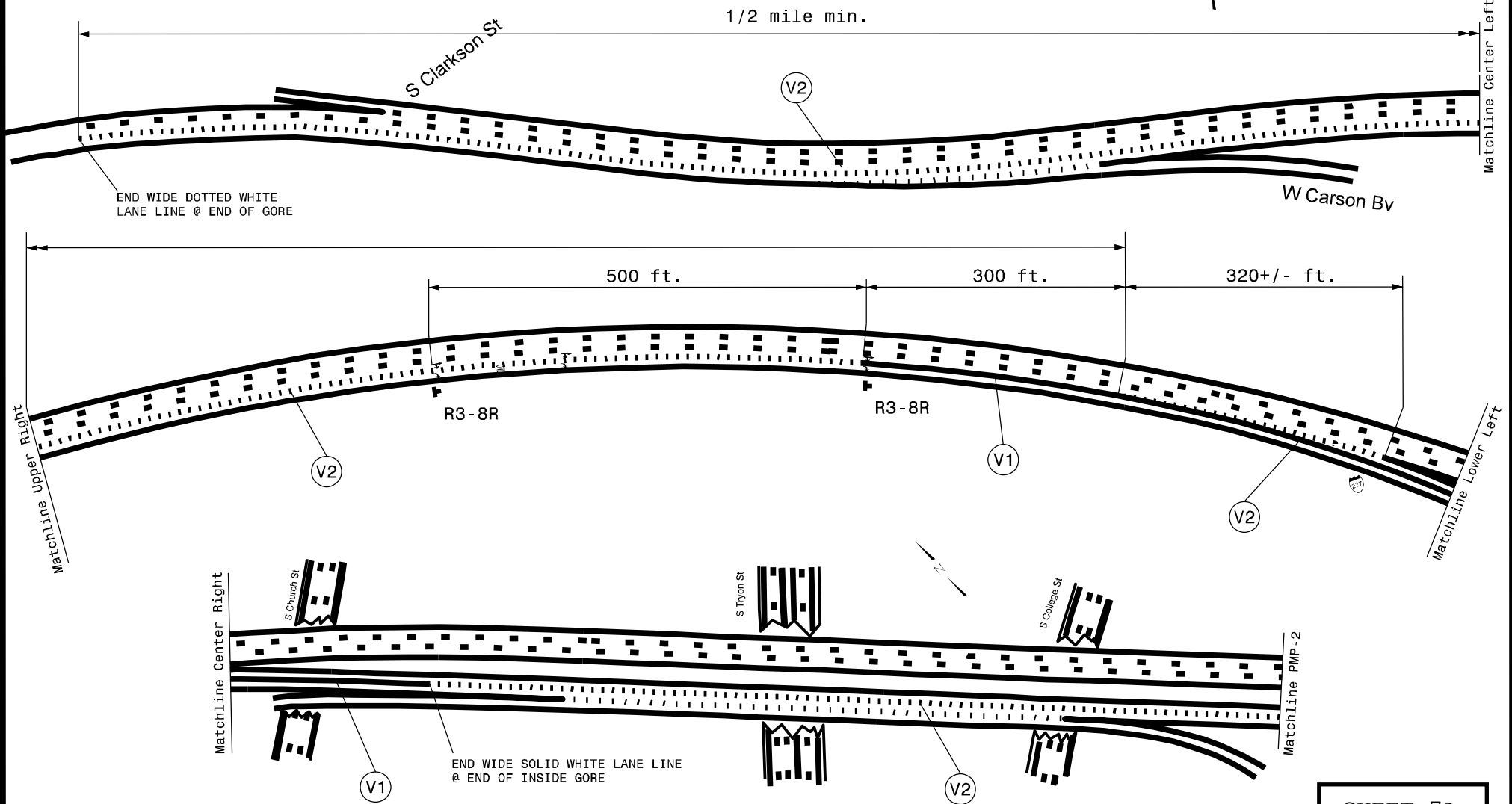


R3-8
SHEET 6

DIVISION 10 MUTCD UPGRADES

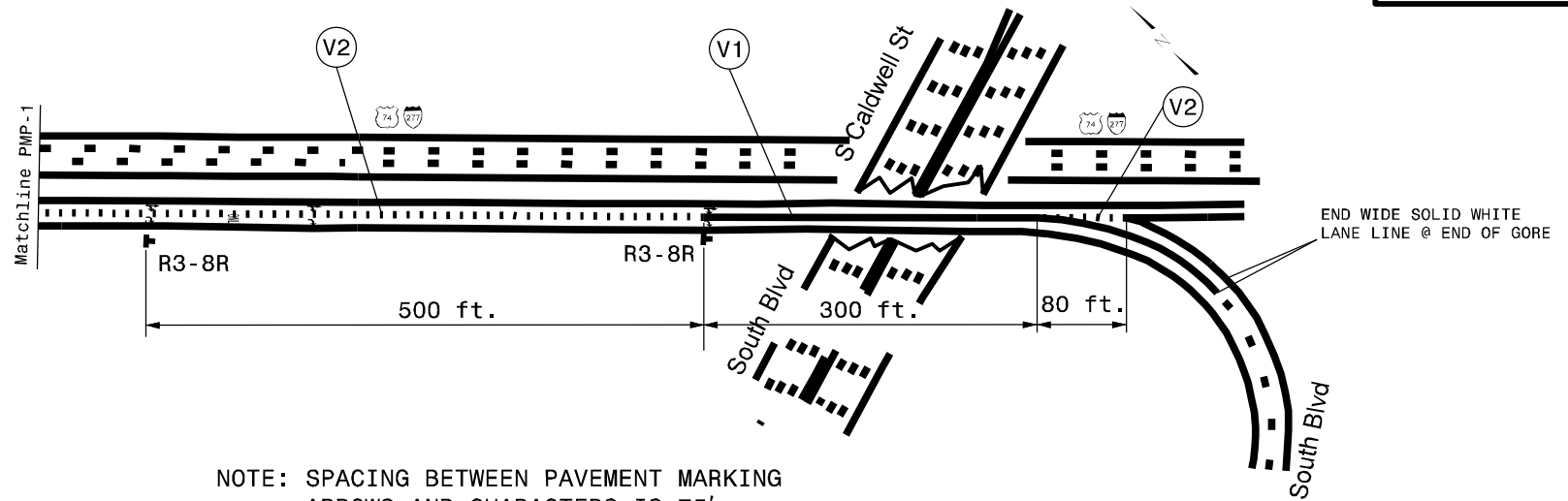
I-277 INNER EXIT 1 TO SOUTH BLVD

DATE:	
APPROVED:	
SEAL	

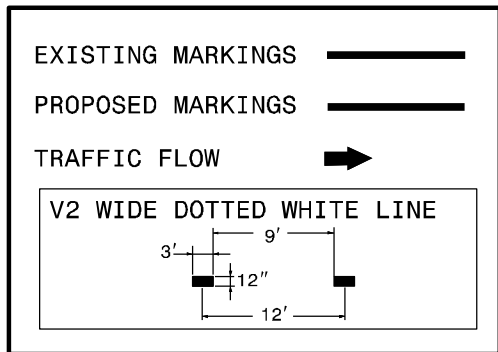


I-277 INNER EXIT 1 TO SOUTH BLVD

APPROVED: _____
 DATE: _____
 SEAL: _____

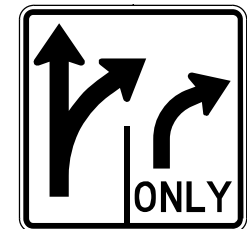



NOTE: SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'



PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

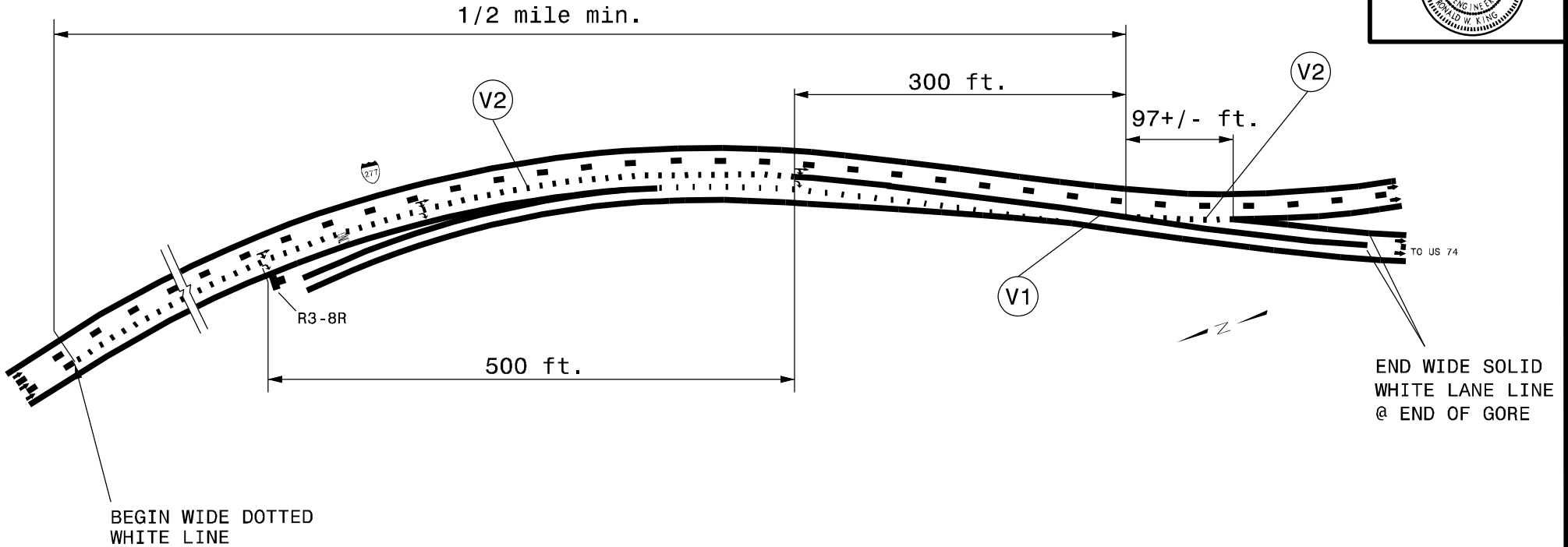
SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	1425 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	1167 FT
HEATED -IN PLACED THERMOPLASTIC (90 MIL)		
UB	RIGHT TURN ARROW	6 ea
UE	COMBO. STRAIGHT/RIGHT	6 ea
UI	ALPHANUMERIC CHARACTERS	8 ea
SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"X30")	4 ea



R3-8R

I-277 INNER EXIT 2 TO US 74

APPROVED: _____
 DATE: _____
 SEAL



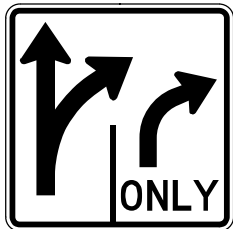
PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	522 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	97 ft

HEATED -IN PLACED THERMOPLASTIC (90 MIL)

UB	RIGHT TURN ARROW	3 ea
UE	COMBO.STRAIGHT/RIGHT	3 ea
UI	ALPHANUMERIC CHARACTER	4 ea

SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"X30")	1 ea



R3-8R

NOTE:
 SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'.

EXISTING MARKINGS

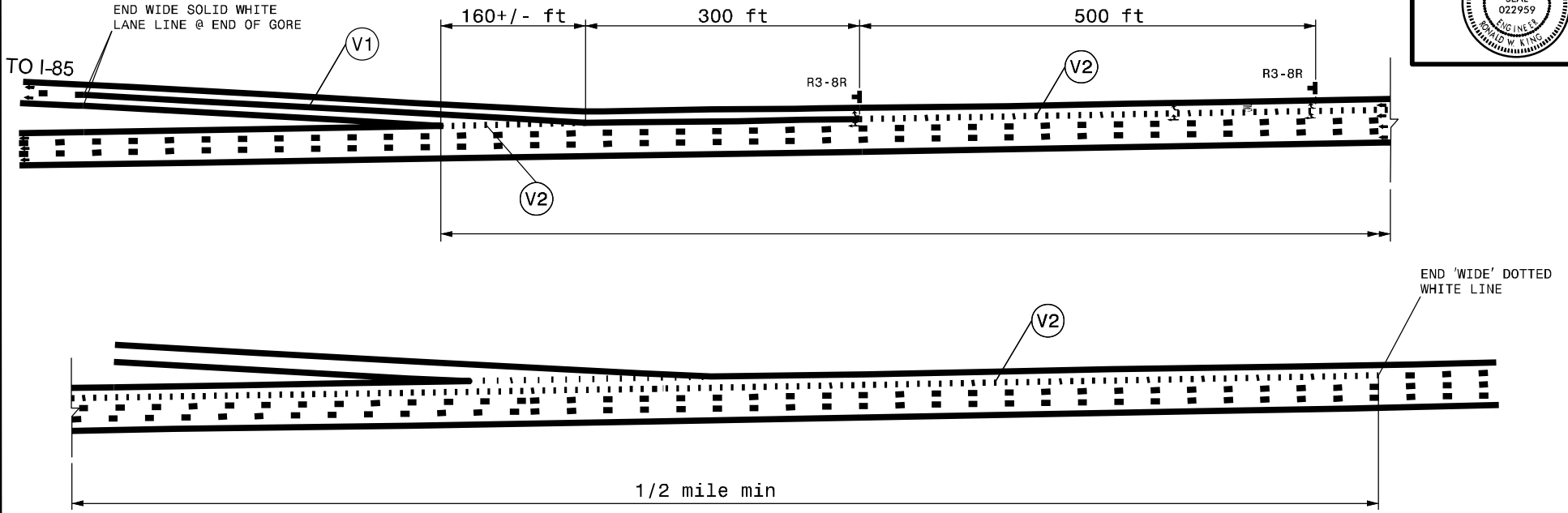
PROPOSED MARKINGS

TRAFFIC FLOW

V2 WIDE DOTTED WHITE LINE

I-485 OUTSIDE LANE EXIT 9

APPROVED: _____
 DATE: _____
 SEAL



EXISTING MARKINGS

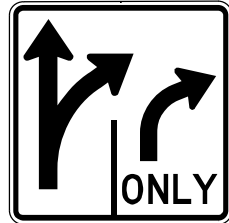
PROPOSED MARKINGS

TRAFFIC FLOW

V2 WIDE DOTTED WHITE LINE

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	850 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	710 ft
HEATED -IN PLACED THERMOPLASTIC (90 MIL)		
UA	LEFT TURN ARROW	3 ea
UD	COMBO.STRAIGHT/LEFT	3 ea
UI	ALPHANUMERIC CHARACTERS	4 ea
SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"X30")	2 ea



R3-8R

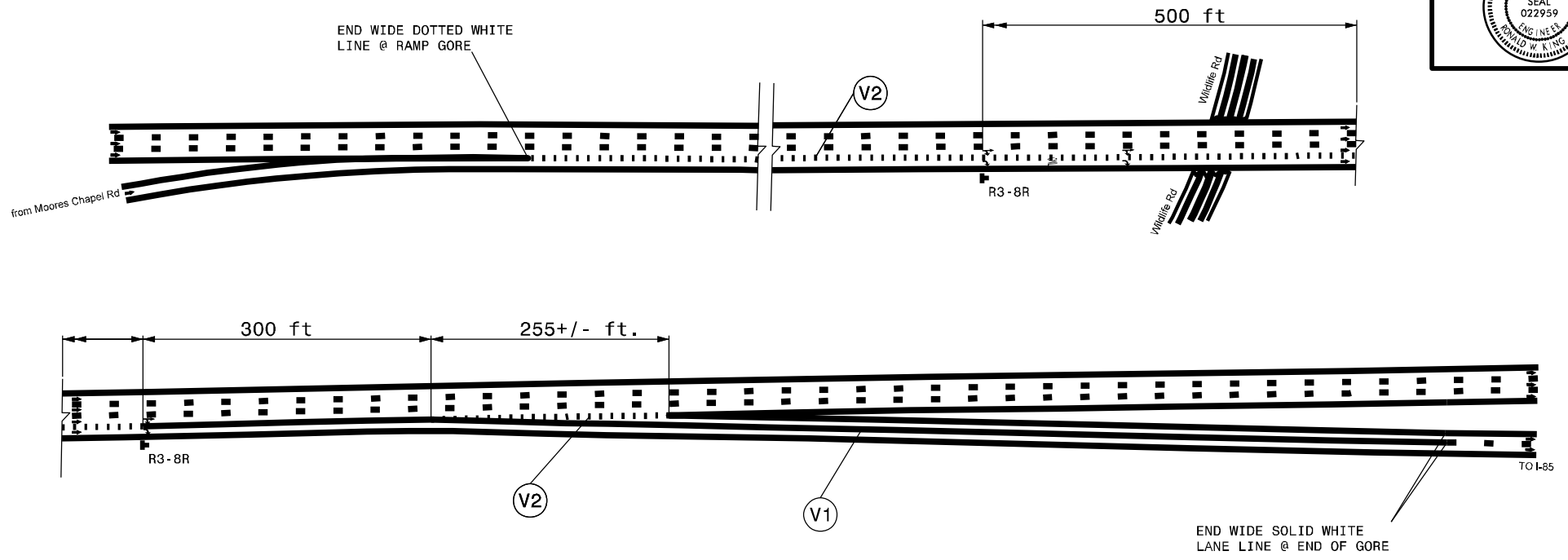
SHEET 9

NOTE: SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'.

DATE PLOTTED: 05/14/2008 10:53:11 AM

I-485 OUTSIDE LANE EXIT 10

APPROVED: _____ PMP-2
 DATE: _____
 SEAL
 PROFESSIONAL SEAL
 ENGINEER
 RANDOLPH W. KINGS



EXISTING MARKINGS

PROPOSED MARKINGS

TRAFFIC FLOW

WIDE DOTTED WHITE LANE LINE

PM MATERIAL: POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS

SYMBOL	DESCRIPTION	TOTAL
V1	12" WIDE SOLID WHITE LANE LINE	1400 ft
V2	12" WIDE 3 ft - 9ft/SP WHITE MINISKIP	625 ft
HEATED -IN PLACED THERMOPLASTIC (90 MIL)		
UA	LEFT TURN ARROW	3 ea
UD	COMBO.STRAIGHT/LEFT	3 ea
UI	ALPHANUMERIC CHARACTERS	4 ea
SIGN MATERIAL: GRADE C SHEETING		
R3-8	SIGN (30"x30")	2 ea

R3-8R

SHEET 10

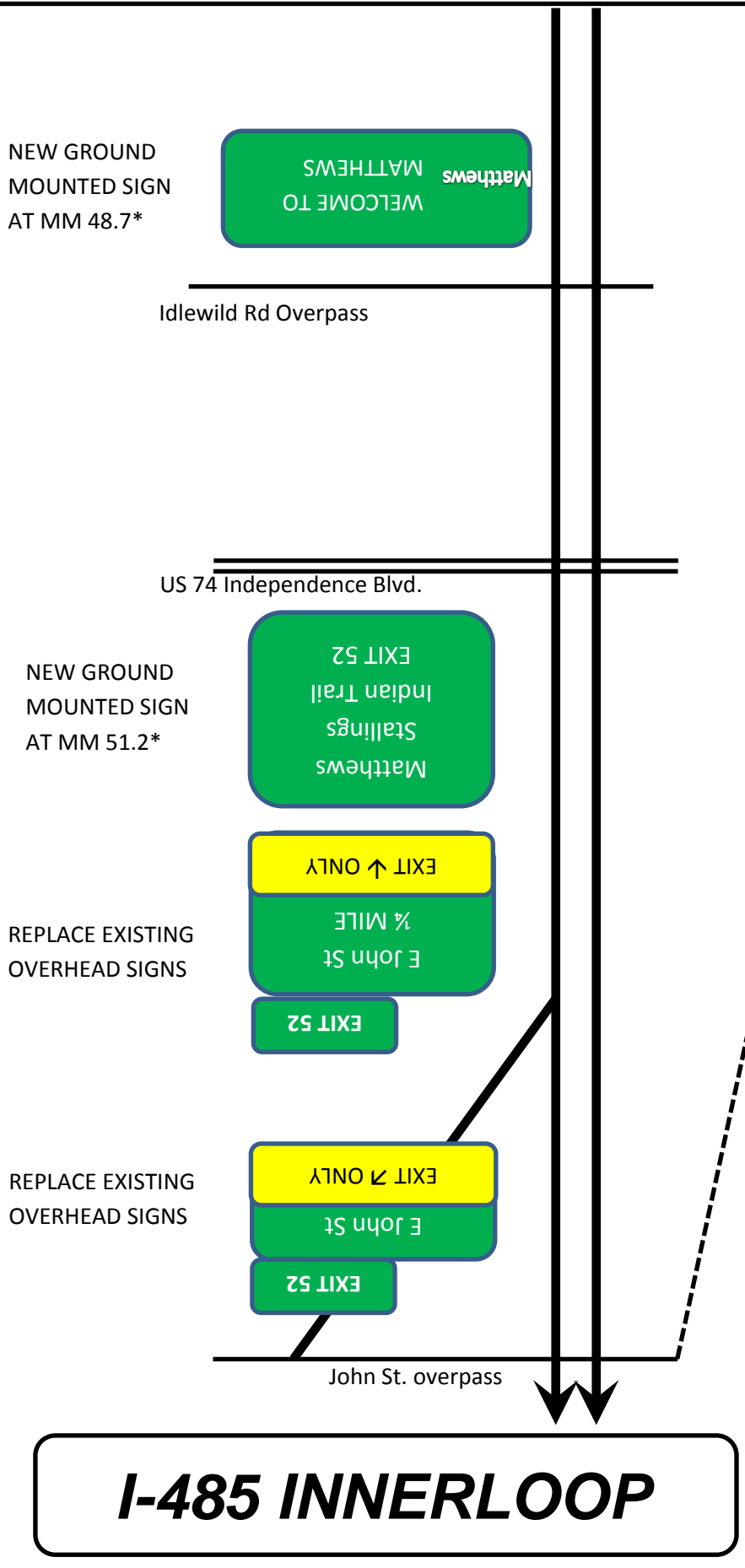
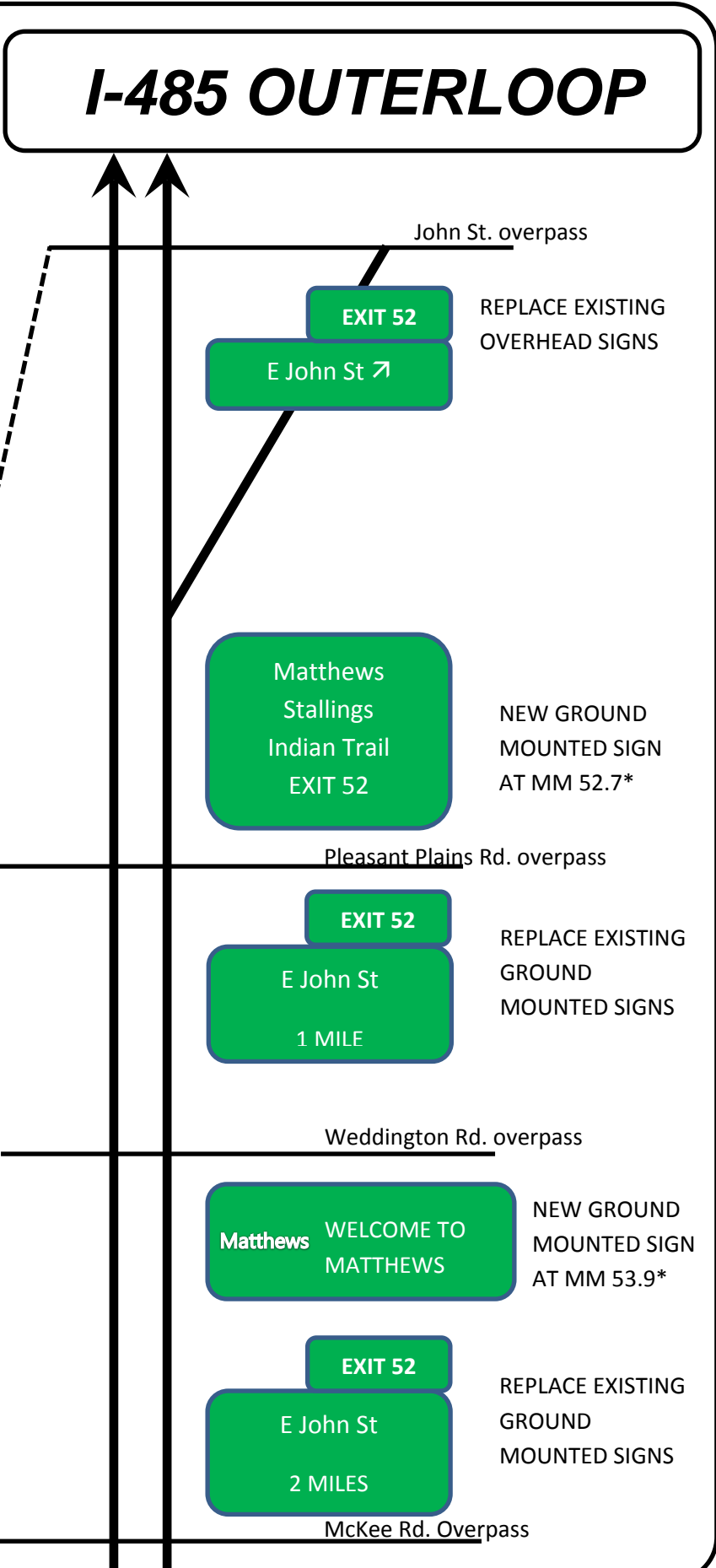
NOTE: SPACING BETWEEN PAVEMENT MARKING ARROWS AND CHARACTERS IS 75'.

SYSTEMS

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
12A	OVERVIEW AND INDEX OF SHEETS
12B	MATTHEWS, STALLINGS, INDIAN TRAIL SIGN
12C	WELCOME TO MATTHEWS SIGN
12D	TOWN OF MATTHEWS LOGO
12E	NEW GROUND MOUNTED SIGN "S" DIMENSIONS
12F	EXIT 52 PANEL
12G	E John St ↗ PANEL
12H	E John St EXIT ↗ ONLY PANEL
12I	E John St ¼ MILE EXIT ↓ ONLY PANEL
12J	E John St 2 MILES
12K	E John St 1 MILE

*Traffic Services Personnel will verify sign locations prior to new installations



← TO CHARLOTTE

SIGN NUMBER: SP12316

BACKG COLOR: Green

DESIGN BY: MT

CHECKED BY:

DATE: Oct 11, 2012

TYPE: A

COPY COLOR: White

PROJECT ID:

DIV: 10

QUANTITY: 2

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 12'-6"

HEIGHT: 8'-6"

TOTAL AREA: 106.3 Sq.Ft.

BORDER TYPE: FLUSH

RECESS: 0"

WIDTH: 2"

RADII: 12"

MAT'L: 0.125" (3.2 mm) ALUMINUM

NO. Z BARS: 3

LENGTH: 142.0

USE NOTES:

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																				Series/Size Text Length
	M	a	t	t	h	e	w	s												EM 2000
25.7	15.7	12.8	9.8	11.2	12.9	11.4	16	8.8	25.7											98.6
	S	t	a	l	l	i	n	g	s											EM 2000
27.1	13.6	10	14.1	8	8	8	12.9	12.6	8.8	27.1										95.9
	I	n	d	i	a	n		T	r	a	i	l								EM 2000
13.9	7.2	12.9	14.1	6.8	14.1	8.8	12	13	8.6	14.1	8	2.7	13.9							122.3
	E	X	I	T		5	2													E 2000
46.2	7.1	8.6	2.8	6	12	11.4	9.7	46.2												57.6

SIGN NUMBER: 101,102
 TYPE: B
 QUANTITY: 2

BACKG COLOR: Green
 COPY COLOR: White

DESIGN BY: W. Johnson
 PROJECT ID: Matthews

CHECKED BY:
 DIV: 10

DATE: Jun 10, 2013

SIGN WIDTH: 11'-0"
 HEIGHT: 4'-6"
 TOTAL AREA: 49.5 Sq.Ft.

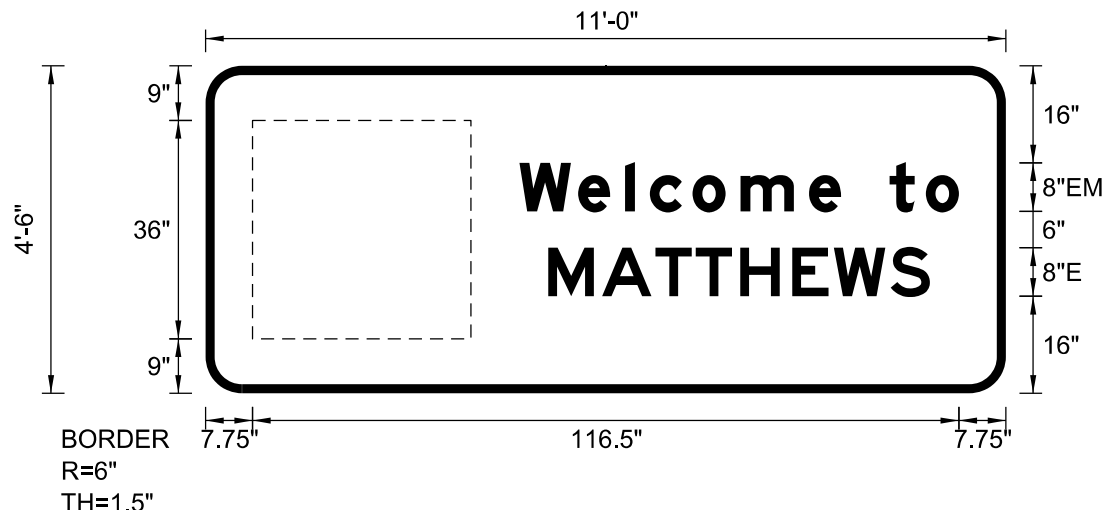
SYMBOL	X	Y	WID	HT
36in x 36in	7.8	9	36	36

MAT'L: 0.125" (3.2 mm) ALUMINUM

BORDER TYPE: FLUSH
 RECESS: 0"
 WIDTH: 1.5"
 RADII: 6"
 NO. Z BARS: 2
 LENGTH: 124.0

USE NOTES: 1,2

- 1. Legend and border(except those that are colored black) shall be direct applied Grade B sheeting.
- 2. Background shall be Grade A, B, or C reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter																			Series/Size
																			Text Length
		W	e	l	c	o	m	e		t	o								EM 2000
	51.8	9.7	7.8	4.1	7	7.9	11.3	5.3	8	6	5.4	7.8							72.5
		M	A	T	T	H	E	W	S										E 2000
	56.5	8.9	8.8	6.6	7.4	8.6	6.9	9.4	6.5	12.5									63

Town of

MatthewsTM
North Carolina

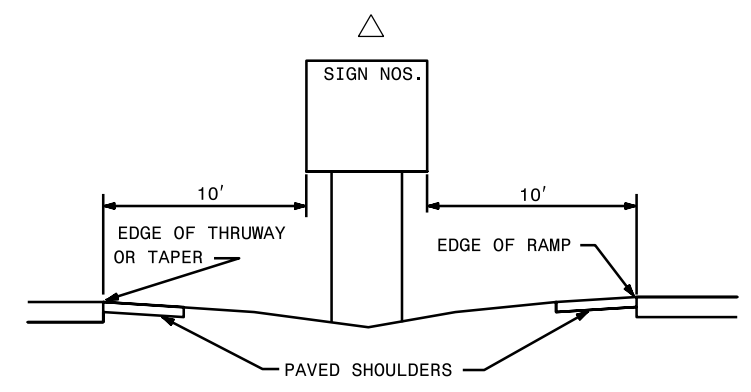
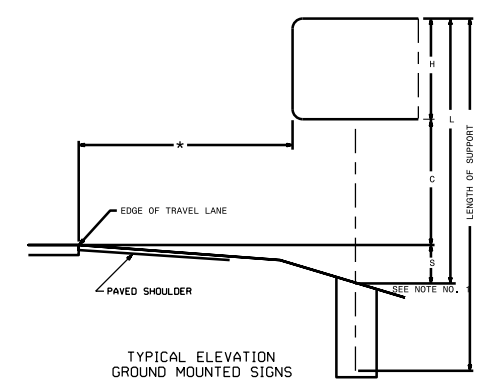
Matthews LOGO shall be white on green.

TIP NO.	SHEET NO.
R-XXXX	SIGN-2
APPROVED: _____	
DATE: _____	
SEAL	

SIGN NO.	SIGN TYPE	SIGN SIZE (in. w x h)	ROADWAY STATION	NO. OF SECTIONS	BEAM SECTION	SUPPORT TYPE	ATTACH METHOD	MOUNTING METHOD	HORIZ. CLR. (ft.)	SNS HT (ft.)	MTG HT (ft.)	EMBED- S	LENGTH (ft.)			TOTAL S	TOTAL L	TOTAL S	TOTAL L	DIAMETER (ft.)	DEPTH (ft.)	WEIGHTS (lbs.)	WEIGHTS (lbs.)	FTGS. (c.y.)	FTGS. (c.y.)	SEE NOTE 2 (mm/dd/yy)		
													LEFT SUPPORT	CENTER SUPPORT	RIGHT SUPPORT													
101	A	132 X54	485 IL MM 48	2	S4x7.7	BA	N/A	N/A	30.00	4.50	7.00	4	2.15	13.65	17.65	0.00	0.00	0.00	1.12	12.62	16.62	1	4.5	304.49	0.00	0.00	0.26	5/30/2013
102	A	132 X54	485 OL MM 53	2	S4x7.7	BA	N/A	N/A	30.00	4.50	7.00	4.5	2.50	14.00	18.50	0.00	0.00	0.00	0.82	12.32	16.82	1	5	312.57	0.00	0.00	0.29	5/30/2013
SP12316	A	150 X102	485 OL X52	2	W6x16	BA	N/A	N/A	30.00	8.50	7.00	5	3.24	18.74	23.74	0.00	0.00	0.00	2.39	17.89	22.89	1.5	5.5	878.46	0.00	0.72	0.00	5/30/2013
SP12316	A	150 X102	485 IL X52	2	W6x16	BA	N/A	N/A	30.00	8.50	7.00	5	4.67	20.17	25.17	0.00	0.00	0.00	6.20	21.70	26.70	1.5	5.5	962.30	0.00	0.72	0.00	5/30/2013

TOTAL TOTAL TOTAL TOTAL
2457.82 0.00 1.44 0.55
USE: 2458 0 2 1

- NOTES
- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF PAVEMENT.
 - FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (*) ARTICLE 1072-1. (*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES
 - PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.



SHEET 12D

TYPE "A" AND TYPE "B" GROUND MOUNTED SIGNS

C:\Users\wjohnson\Documents\Welcome to Matthews Support Char.t.dgn
1612
wjohnson
1/24/13

SIGN NUMBER: SP12310
 TYPE: B
 QUANTITY: 3

BACKG COLOR: Green
 COPY COLOR: White

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 8'-6"
 HEIGHT: 2'-6"
 TOTAL AREA: 21.3 Sq.Ft.

BORDER TYPE: FLUSH
 RECESS: 0"
 WIDTH: 2"
 RADII: 6"

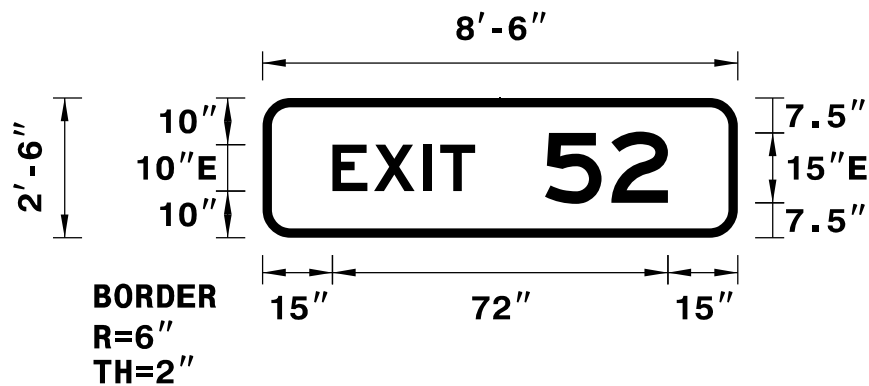
NO. Z BARS: 2
 LENGTH: 94.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: MT
 PROJECT ID:

CHECKED BY:
 DIV: 10

DATE: Oct 11, 2012



USE NOTES:

- Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size Text Length				
	E	X	I	T		5	2												E 2000
15	8.9	10.7	3.5	7.5	15	14.3	12.2	15											72

SIGN NUMBER: SP12311 **BACKG COLOR:** Green
TYPE: A **COPY COLOR:** White
QUANTITY: 1

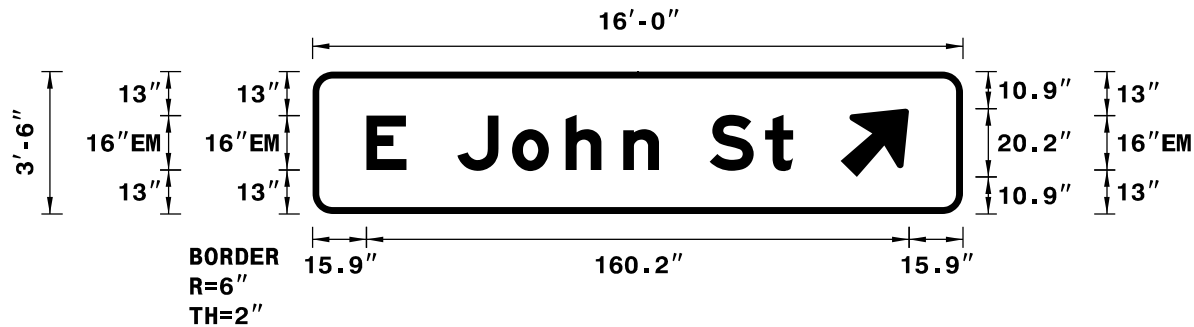
SYMBOL	X	Y	WID	HT
AR_Type B	155.9	10.9	21.8	24.8

SIGN WIDTH: 16'-0"
HEIGHT: 3'-6"
TOTAL AREA: 56.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADII: 6"

NO. Z BARS: 2 **MAT'L:** 0.125" (3.2 mm) ALUMINUM
LENGTH: 184.0

DESIGN BY: MT **CHECKED BY:**
PROJECT ID: **DIV:** 10 **DATE:** Oct 11, 2012



USE NOTES:

- Legend and border (except those that are colored black) shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.
- A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size	
	E	J	o	h	n	S	t					Text Length
	15.9	11.8	15	16.2	15.8	17	10.6	15	16.3	8.3	50.1	EM 2000
												126

SIGN NUMBER: SP12312

BACKG COLOR: Green

DESIGN BY: MT

CHECKED BY:

DATE: Oct 11, 2012

TYPE: A

COPY COLOR: White

PROJECT ID:

DIV: 10

QUANTITY: 1

SYMBOL	X	Y	WID	HT
AR_Type A	78	6.6	20	31.5

SIGN WIDTH: 16'-0"

HEIGHT: 6'-0"

TOTAL AREA: 96.0 Sq.Ft.

BORDER TYPE: FLUSH

RECESS: 0"

WIDTH: 2"

RADII: 9"

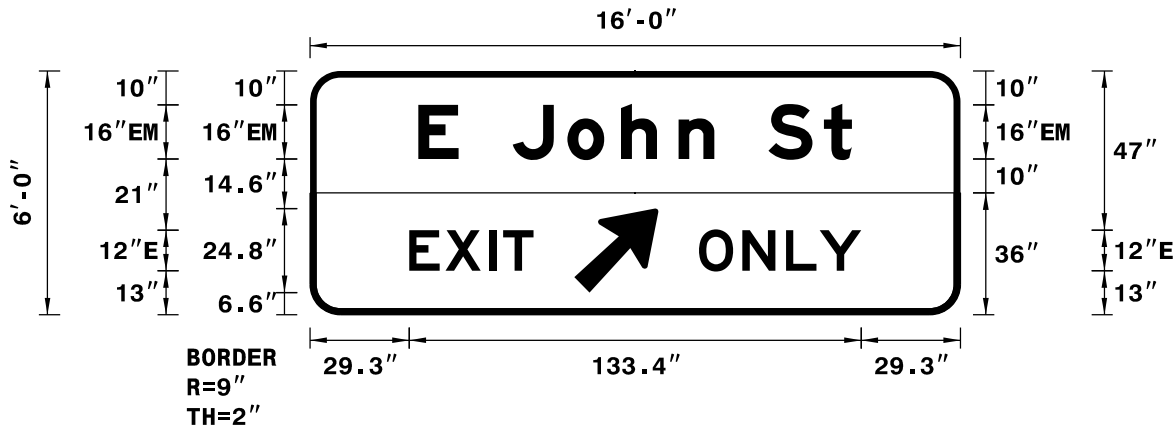
MAT'L: 0.125" (3.2 mm) ALUMINUM

NO. Z BARS: 2

LENGTH: 184.0

USE NOTES:

- Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.
- A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is: 184" X 32"



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter												Series/Size
												Text Length
	E	J	o	h	n	S	t					EM 2000
32	11.8	16	16.2	15.8	17	10.6	16	16.3	8.3	32		128
	E	X	I	T								E 2000
29.3	10.7	12.8	4.2	9	126							36.7
	O	N	L	Y								E 2000
114.8	12.8	12.8	10	12.2	29.3							47.9

SIGN NUMBER: SP12313

BACKG COLOR: Green

TYPE: A

COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARNDOWN	66.4	8.7	30	20.6

SIGN WIDTH: 14'-6"

HEIGHT: 8'-0"

TOTAL AREA: 116.0 Sq.Ft.

BORDER TYPE: FLUSH

RECESS: 0"

WIDTH: 2"

RADII: 12"

MAT'L: 0.125" (3.2 mm) ALUMINUM

NO. Z BARS: 3

LENGTH: 166.0

USE NOTES:

- Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.
- A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum and demountable.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is: 166" X 32"

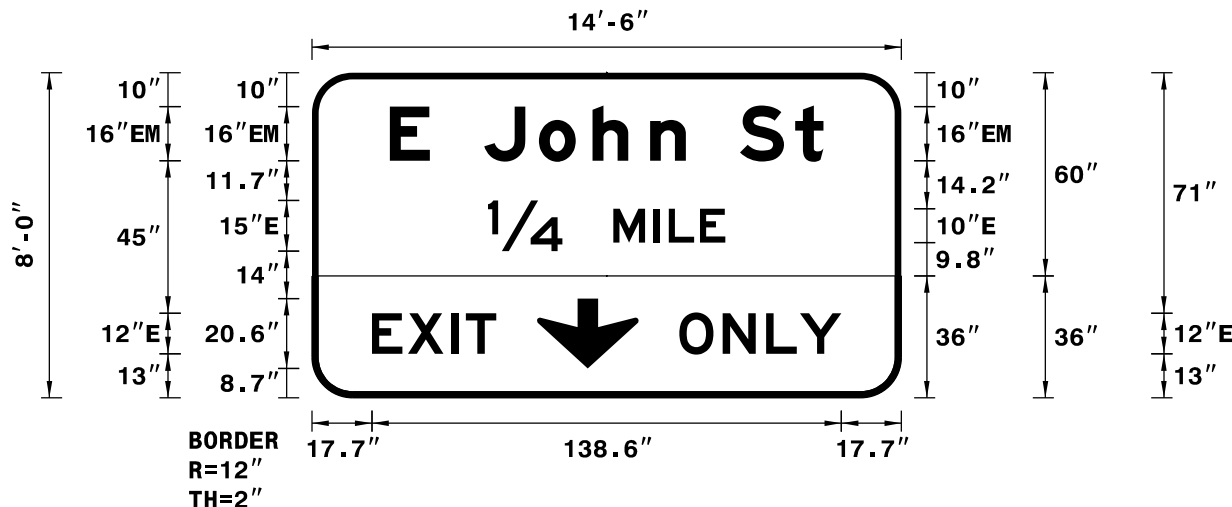
DESIGN BY: MT

CHECKED BY:

DATE: Oct 11, 2012

PROJECT ID:

DIV: 10



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter												Series/Size	
												Text Length	
	E	J	o	h	n	S	t						EM 2000
23	11.8	16	16.2	15.8	17	10.6	16	16.3	8.3	23			128
	1/4	M	I	L	E								E 2000
52	22	15	12	4.4	9.2	7.5	52						70.1
	E	X	I	T									E 2000
17.7	10.7	12.8	4.2	9	119.6								36.7
	O	N	L	Y									E 2000
108.4	12.8	12.8	10	12.2	17.7								47.9

SIGN NUMBER: SP12314
 TYPE: A
 QUANTITY: 1

BACKG COLOR: Green
 COPY COLOR: White

DESIGN BY: MT
 PROJECT ID:

CHECKED BY:
 DIV: 10

DATE: Oct 11, 2012

SIGN WIDTH: 13'-6"
 HEIGHT: 5'-6"
 TOTAL AREA: 74.3 Sq.Ft.

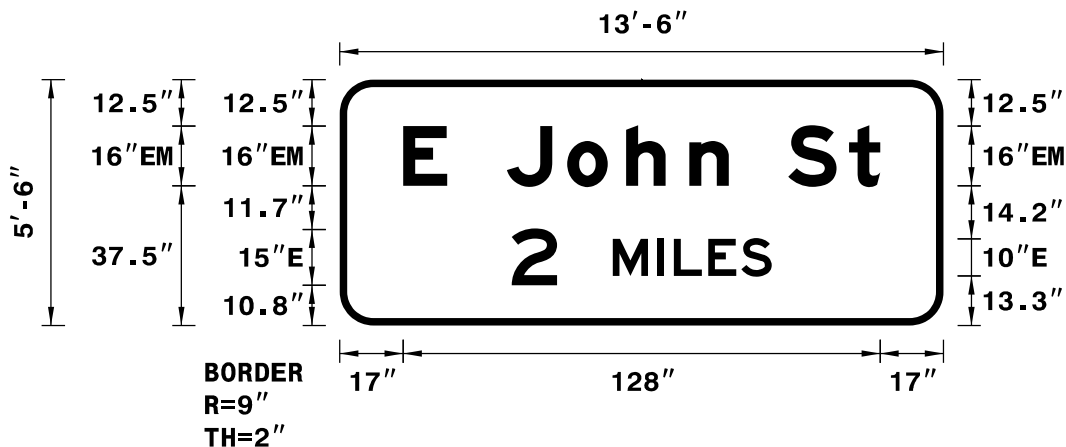
SYMBOL	X	Y	WID	HT

BORDER TYPE: FLUSH
 RECESS: 0"
 WIDTH: 2"
 RADII: 9"
 NO. Z BARS: 2
 LENGTH: 154.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

												Series/Size	
												Text Length	
	E	J	o	h	n		S	t					EM 2000
17	11.8	16	16.2	15.8	17	10.6	16	16.3	8.3	17		128	
	2	M	I	L	E	S						E 2000	
46.1	12.2	15	12	4.4	9.2	8.9	8.1	46.1				69.8	

SIGN NUMBER: SP12315

BACKG COLOR: Green

TYPE: A

COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 13'-6"

HEIGHT: 5'-6"

TOTAL AREA: 74.3 Sq.Ft.

BORDER TYPE: FLUSH

RECESS: 0"

WIDTH: 2"

RADII: 9"

NO. Z BARS: 2

LENGTH: 154.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES:

- 1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- 2. Background shall be Grade C reflective sheeting.

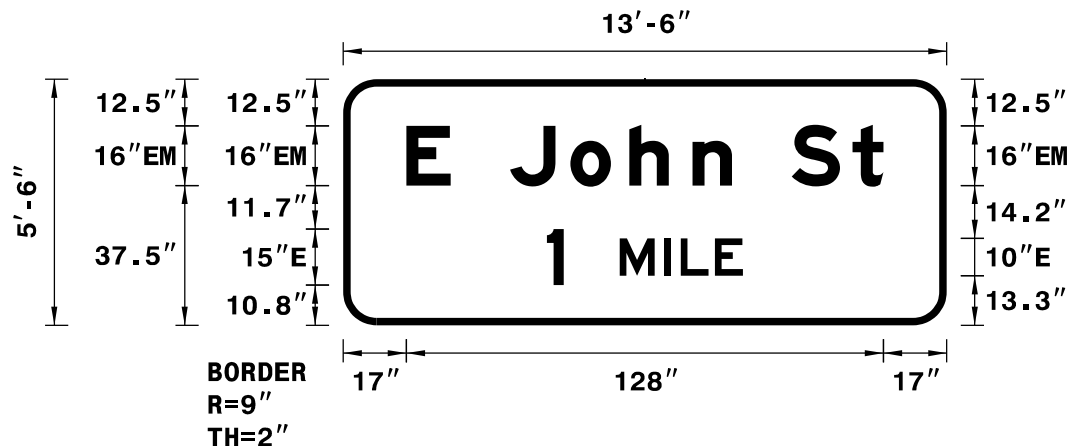
DESIGN BY: MT

CHECKED BY:

DATE: Oct 11, 2012

PROJECT ID:

DIV: 10



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size
Text Length

	E	J	o	h	n	S	t																		EM 2000
17	11.8	16	16.2	15.8	17	10.6	16	16.3	8.3	17														128	
	1	M	I	L	E																				E 2000
54.7	4.5	15	12	4.4	9.2	7.5	54.7																	52.6	