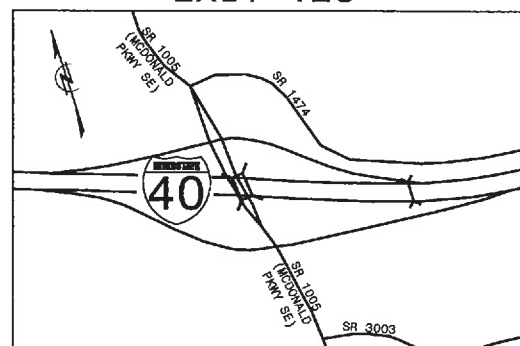


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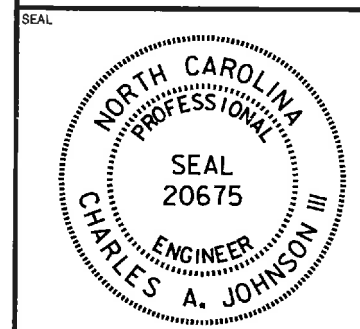
GAS, FOOD, AND LODGING SERVICES
 I-40 AT SR 1005
 (MCDONALD PKWY SE)
 EXIT 126



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION

LOGO SIGNING PLANS
 CATAWBA COUNTY

LOGO NO. L-12-140-E126 SHEET NO. SIGN-1
 APPROVED: [Signature]
 DATE: 9-21-2016



L-12-140-E126

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
0001000000	800	MOBILIZATION	1	L.S.
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATIONS	4	C.Y.
4054000000	902	PLAIN CONCRETE SIGN FOUNDATIONS	1	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM	3949	LB.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	16	EA.
4116300000	904	SIGN ERECTION, LOGO TO PANEL	48	EA.
4138000000	907	DISPOSAL OF SUPPORT, STEEL BEAM	6	EA.
4152000000	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	2	EA.
4236000000	907	DISPOSAL OF SIGN, A OR B (GROUND MOUNTED)	10	EA.
S	SP	SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN	24	EA.
S	SP	TRAFFIC CONTROL	1	L.S.

PROJECT NOTES

- A PAY ITEM NOTE 2 ON THIS PROJECT MAY REFER TO RELOCATION OF LOGO PANELS, WHICH INCLUDES DETACHING THE PANELS FROM EXISTING SIGNS AS WELL AS ERECTING THEM ON NEW SIGNS. DO NOT RELOCATE MILEAGE PANELS.
- B ERECT PROPOSED BOTTOM OF SIGN ON EXISTING BREAKAWAY SUPPORTS AT HINGE OR ON EXISTING SIMPLE SUPPORTS AT 7' VERTICAL CLEARANCE. WHERE APPLICABLE, CUT AND DISPOSE OF SUPPORTS ABOVE TOP OF SIGN (SEE PAY ITEM NOTE 3). SEE NCDOT STANDARD SPECIFICATIONS, SECTION 1076-6 FOR REPAIR OF GALVANIZING.

GENERAL NOTES

- . SIGNS FURNISHED BY THE STATE.
- . CONTRACTOR SHALL OBSERVE: STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DIVISION 9, SECTIONS 900 THRU 907 UNLESS SPECIFICALLY WAIVED BY THE ENGINEER.
- . WORK ZONE TRAFFIC CONTROL DEVICES PROVISIONS APPLY.
- . SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/ OR STAKES. IF PRESENT, STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.10 AND ALL OTHER APPLICABLE STANDARDS.
- . CLEARING MAY BE REQUIRED FOR SIGHT DISTANCE. IF NEEDED, CLEAR VEGETATION ACCORDING TO SECTION 903-3 OF THE SPECIFICATIONS. CLEARING IS INCIDENTAL TO SIGN SUPPORTS.

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
901.50	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 (EXCEPT SHEETS 1 OF 3 AND 2 OF 3 WHICH ARE REPLACED WITH SHEET SIGN-2A AND SIGN-2B IN PLANS)
904.10	ORIENTATION OF GROUND MOUNTED SIGNS

PAY ITEM NOTES

- 1 SIGN ERECTION, TYPE A (GROUND MOUNTED)
- 2 SIGN ERECTION, LOGO TO PANEL
- 3 DISPOSAL OF SUPPORT, STEEL BEAM
- 4 DISPOSAL OF SIGN SYSTEM, STEEL BEAM
- 5 DISPOSAL OF SIGN, A OR B (GROUND MOUNTED)
- 6 SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN

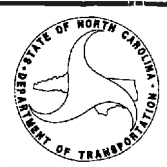
STATE FURNISHED SIGNS ITEM DESCRIPTIONS	QUANTITY	UNIT
TYPE A LOGO SIGNS.....	1560	S.F.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2-2B	SUPPORT INFORMATION
SIGN-3-6	SIGNING PLAN SHEETS
TCP-1-2	TRAFFIC CONTROL PLANS

PLANS PREPARED FOR: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN JORDAN SIGNING & DELINEATION WESTERN REGIONAL ENGINEER
 SCOTT POSTON DIVISION 12 LOGO COORDINATOR



PLAN PREPARED BY :
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 C.A. JOHNSON, III, PE SIGNING PROJECT ENGINEER
 A.D. KLINSIEK, PE, PTOE SIGNING DESIGN ENGINEER
 N.K. VLANICH SIGNING DESIGN TECHNICIAN

LOGO NO. L-12-140-E726 SHEET NO. SIGN-2

APPROVED: *[Signature]*

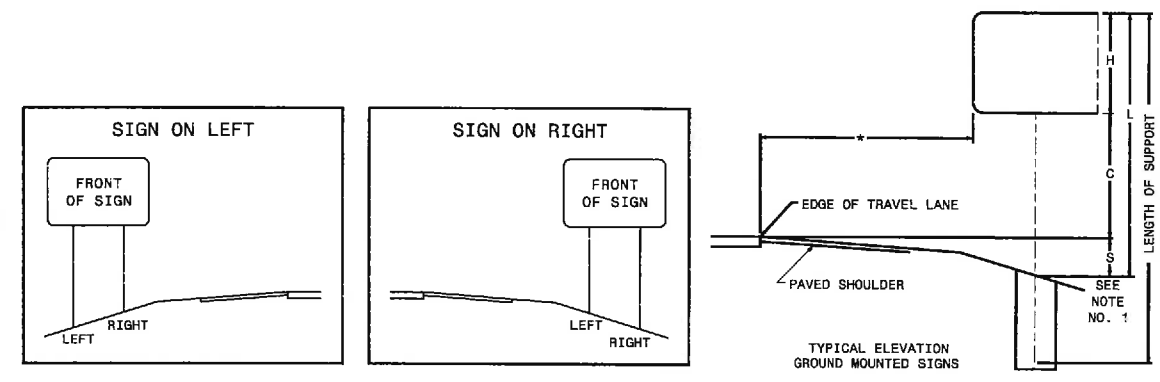
DATE: 9-21-2016

SEAL

Version: 3.0 Posted: 8/13/2016

NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	OMNI COUPLER	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			SUPPORT WEIGHTS		FOOTINGS				FIELD VERIFIED (mm/dd/yy)												
		w	x	h										SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH	B/A (lbs.)	SIMPLE (lbs.)	DIAMETER (ft.)	DEPTH (ft.)	REINFORCED (c.y.)	PLAIN (c.y.)													
		"H"	"C"																																									
101	A	180	x	120	I-40 EB	2	W6x16	BA	N/A	N/A	N/A	25.00	8.79	10.00	7.00	4.5	1.80	18.80	23.30	0.00	0.00	0.00	1.70	18.70	23.20	838.00	0	1.5	5	0.65	0.00	7/27/2016												
102	A	180	x	120	I-40 EB	2	W8x18	BA	N/A	N/A	N/A	28.00	8.79	10.00	7.00	4.0	4.40	21.40	25.40	0.00	0.00	0.00	4.20	21.20	25.20	1050.80	0	2.0	4.5	1.05	0.00	7/27/2016												
103	A	90	x	72	EB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	1.30	14.30	17.30	0.00	0.00	0.00	1.00	14.00	17.00	304.11	0	1.0	3.5	0.00	0.20	7/27/2016												
104	A	90	x	72	WB Ramp	2	W6x9	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	1.00	14.00	17.00	0.00	0.00	0.00	4.00	17.00	20.00	397.00	0	1.5	3.5	0.46	0.00	7/27/2016												
105	A	90	x	72	WB Ramp Lt	2	W6x9	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	3.80	16.80	19.80	0.00	0.00	0.00	2.70	15.70	18.70	410.50	0	1.5	3.5	0.46	0.00	7/27/2016												
106	A	180	x	120	I-40 WB	2	W8x18	BA	N/A	N/A	N/A	30.00	8.79	10.00	7.70	4.0	2.20	19.90	23.90	0.00	0.00	0.00	-0.70	17.00	21.00	948.20	0	2.0	4.5	1.05	0.00	7/27/2016												
701	A	180	x	120	I-40 EB	2	W6x20	BA	N/A	N/A	N/A	30.00	8.95	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
702	A	180	x	120	I-40 EB	2	W6x20	BA	N/A	N/A	N/A	29.00	8.80	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
703	A	90	x	72	EB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	16.75	5.00	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
704	A	90	x	72	EB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	16.25	5.00	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
705	A	90	x	72	EB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	16.75	4.90	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
706	A	90	x	72	WB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	16.25	5.00	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
707	A	90	x	72	WB Ramp	2	S5x10	S	N/A	N/A	N/A	17.75	5.00	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
708	A	180	x	120	I-40 WB	2	W6x15	BA	N/A	N/A	N/A	30.00	8.75	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
709	A	180	x	120	I-40 WB	2	W6x15	BA	N/A	N/A	N/A	30.00	8.75	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016
710	A	180	x	120	I-40 WB	2	W6x20	BA	N/A	N/A	N/A	30.00	8.70	ERECT PROPOSED SIGN ON EXSITING SUPPORTS																														7/27/2016


	TOTAL	TOTAL	TOTAL	TOTAL
	3948.61	0.00	3.67	0.20
USE:	3949.00	0.00	4.00	1.00



- NOTES
- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL WAY.
 - PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND 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.
 - SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/OR STAKES. IF PRESENT, FIELD STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.1 AND ALL OTHER APPLICABLE STANDARDS.

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

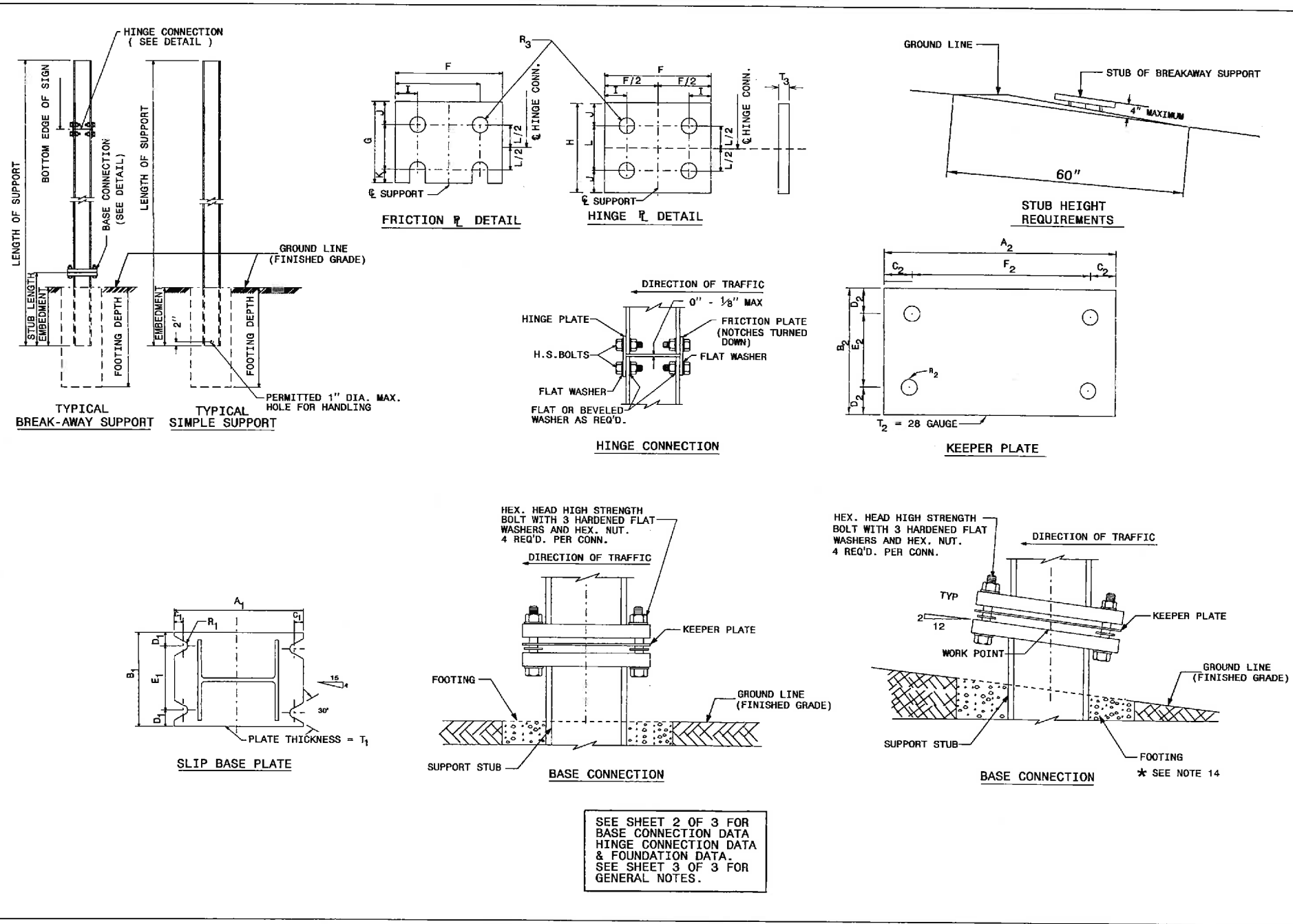
**TYPE 'A' AND 'B'
 GROUND MOUNTED SIGNS
 I-40 AT SR 1005
 (MCDONALD PKWY SE) EXIT 126**

TIP NO. L-12-40-E126	SHEET NO. SIGN-2A
APPROVED: <i>[Signature]</i>	
DATE: 7/26/13	
SEAL	
	

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

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10



SEE SHEET 2 OF 3 FOR
 BASE CONNECTION DATA
 HINGE CONNECTION DATA
 & FOUNDATION DATA.
 SEE SHEET 3 OF 3 FOR
 GENERAL NOTES.


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

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10

**REVISED SIGNING
ROADWAY STANDARD DRAWING**

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APPROVED: <i>[Signature]</i>	
DATE: 7/26/13	
SEAL	
	

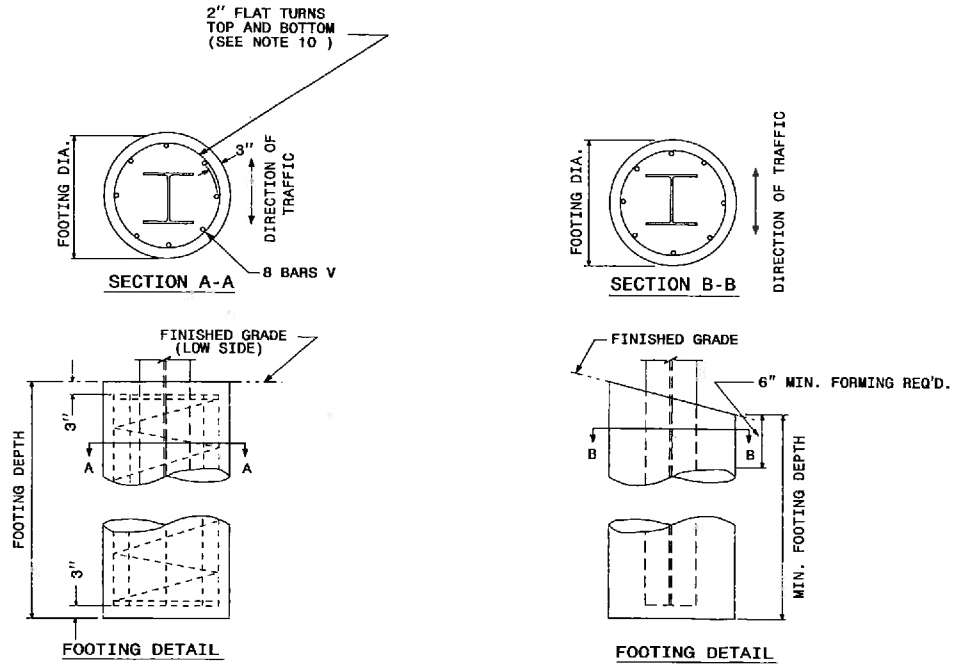
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

1-12

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	T ₂	BOLT SIZE	F	G	H	I	J	K	L		R ₃	T ₃	
S3X5.7	1/2"DIA. X 3 1/4"	7"	4"	1"	3/4"	2 1/2"	1"	9/32"	7"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 1/4"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	9/8"	18
S4X7.7	1/2"DIA. X 3 1/4"	8"	4"	1"	3/4"	2 1/2"	1"	9/32"	8"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	9/8"	20
W6X9	1/2"DIA. X 3 1/4"	10"	5"	1"	3/4"	3 1/2"	1"	9/32"	10"	5"	1"	3/4"	3 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	9/32"	9/8"	32
W6X12	5/8"DIA. X 4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	11/32"	11"	5"	1 1/4"	7/8"	3 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	9/8"	39
W6X16	5/8"DIA. X 4 1/2"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	11/32"	12"	6"	1 1/4"	7/8"	4 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	1 1/2"	47
W8X18	5/8"DIA. X 4 1/2"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/2"	11/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/4"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	11/32"	1 1/2"	70
W8X21	3/4"DIA. X 4 1/2"	14"	7"	1 1/2"	1"	5"	1 1/2"	13/32"	14"	7"	1 1/2"	1"	5"	13/32"	28 GAUGE	3/4"DIA. X 2 1/2"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1 1/2"	73
W10X22	3/4"DIA. X 4 1/2"	16"	8"	1 1/2"	1"	6"	1 1/2"	13/32"	16"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA. X 2 1/2"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1 1/2"	119
W10X26	3/4"DIA. X 5 1/2"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	13/32"	16 1/2"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	9/8"	140
W12X26	3/4"DIA. X 5 1/2"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	13/32"	18 1/2"	9"	1 1/2"	1"	7"	13/32"	28 GAUGE	3/4"DIA. X 2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	9/8"	176
W14X30	1"DIA. X 6"	22"	9"	2"	1 1/2"	6"	2"	17/32"	22"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	17/32"	9/8"	205
W16X31	1"DIA. X 6"	24"	9"	2"	1 1/2"	6"	2"	17/32"	24"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	223
W18X35	1"DIA. X 6"	25"	9"	2"	1 1/2"	6"	2"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	243
W18X40	1"DIA. X 6 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	17/32"	26"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 1/2"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	278
W21X44	1"DIA. X 7"	29"	9"	2"	1 1/2"	6"	2 1/2"	17/32"	29"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 1/2"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	310



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1'-6"	8 # 6 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.

1-12

ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 2 OF 3
903D10

**REVISED SIGNING
 ROADWAY STANDARD DRAWING**

26-JUL-2013 09:50 SA\S&D\Standards Group NEWS\Standards and Drawings\Drawings\2012 Standard Dwg\Division 9 Final\0903D10_sgn_sht02.gm support_Revise.dwg 7-3-13.dgn

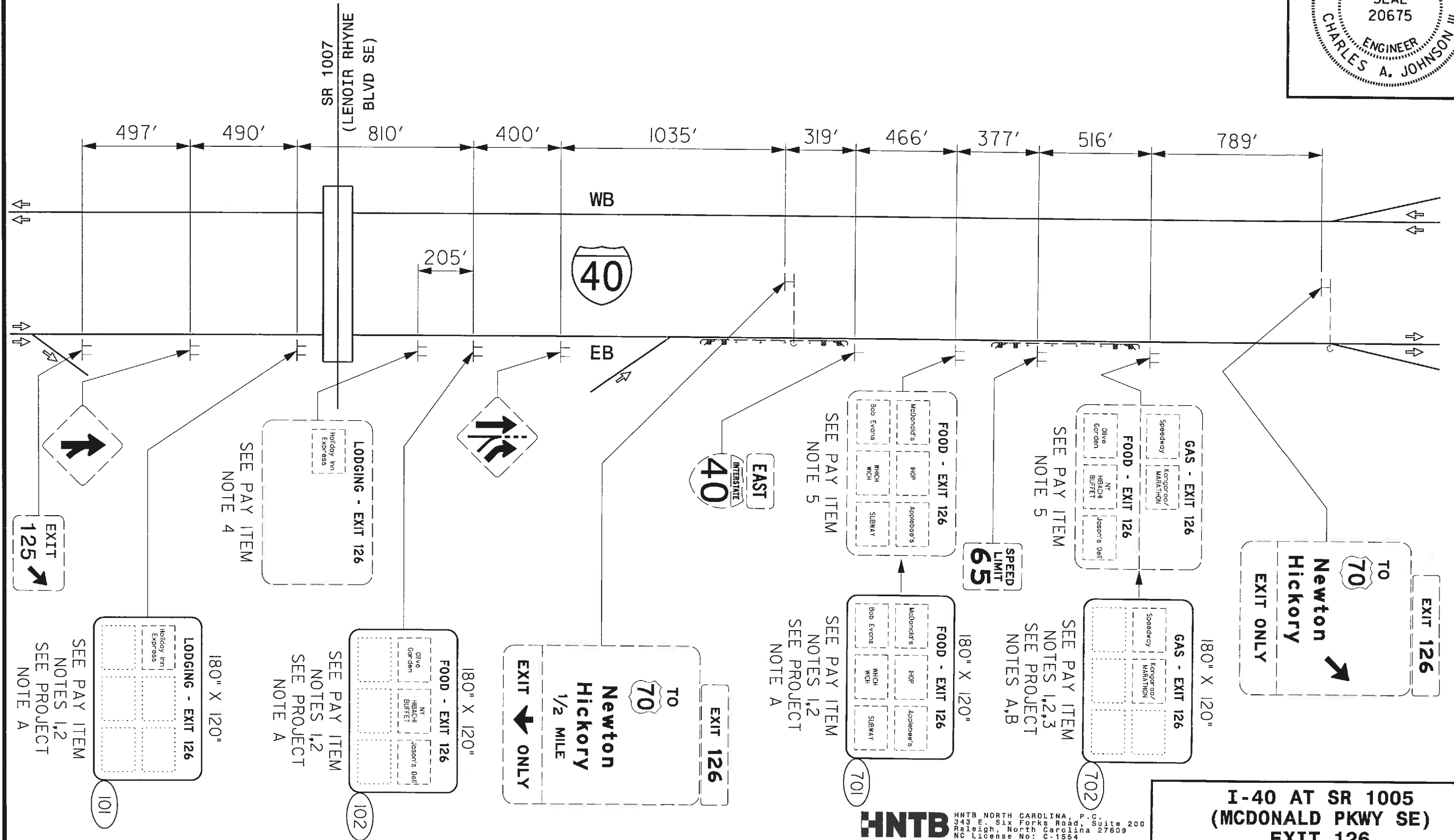
LOGO NO. L-12-140-E126 SHEET NO. SIGN-3

APPROVED: *[Signature]*

DATE: 9-21-2016

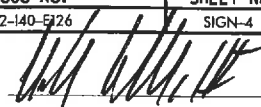
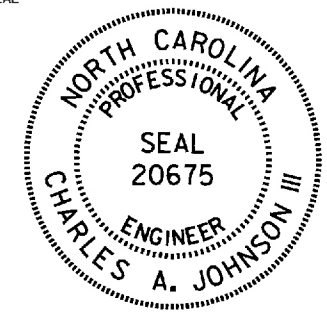
SEAL

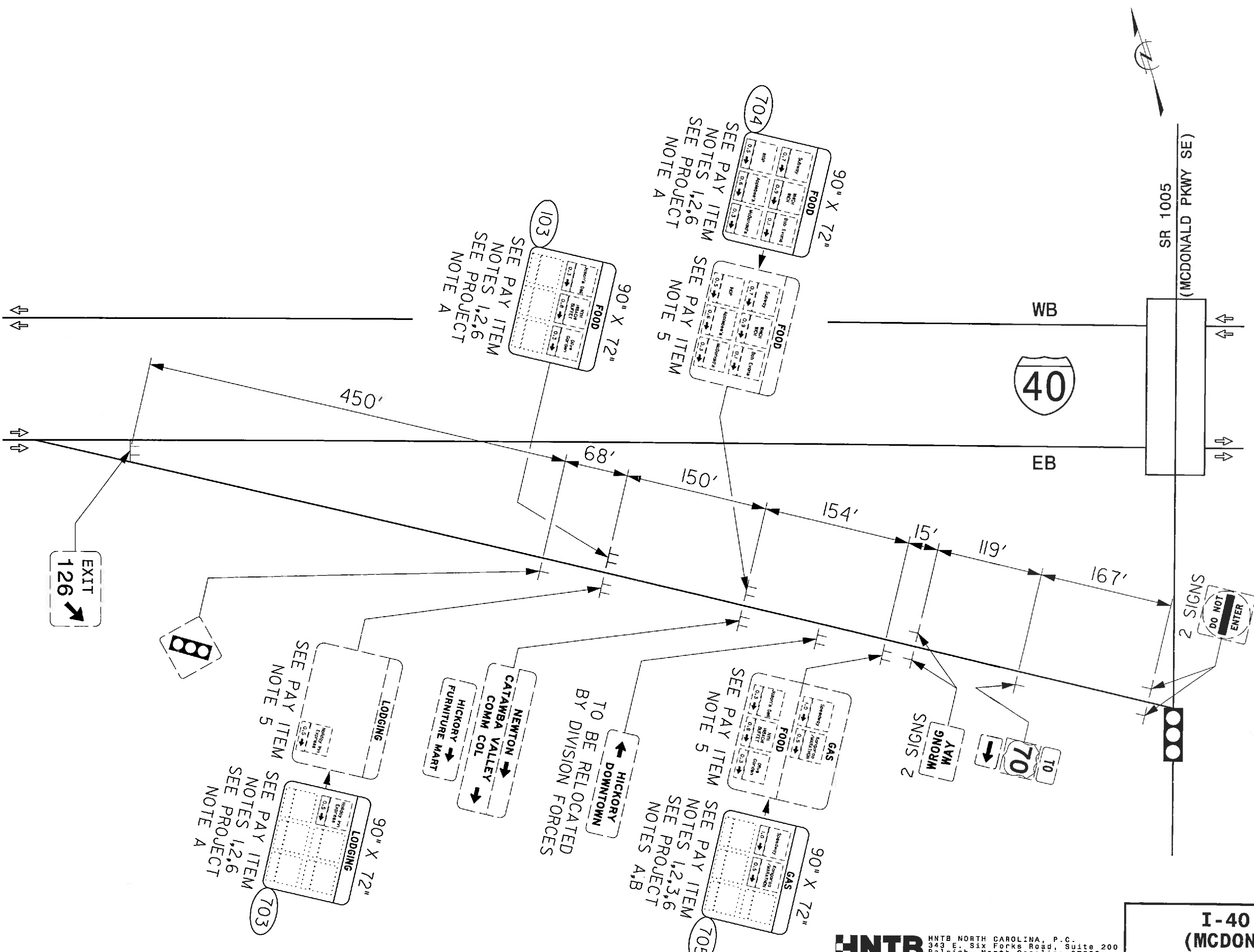
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20675 CHARLES A. JOHNSON III



I-40 AT SR 1005
(MCDONALD PKWY SE)
EXIT 126

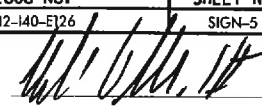
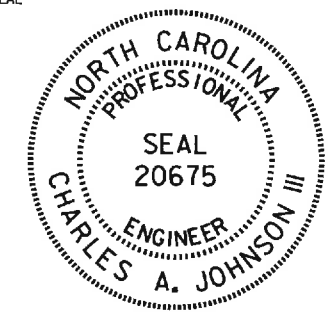
HNTB HNTB NORTH CAROLINA, P.C.
443 E. SIX FOCKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC License No: C-1554

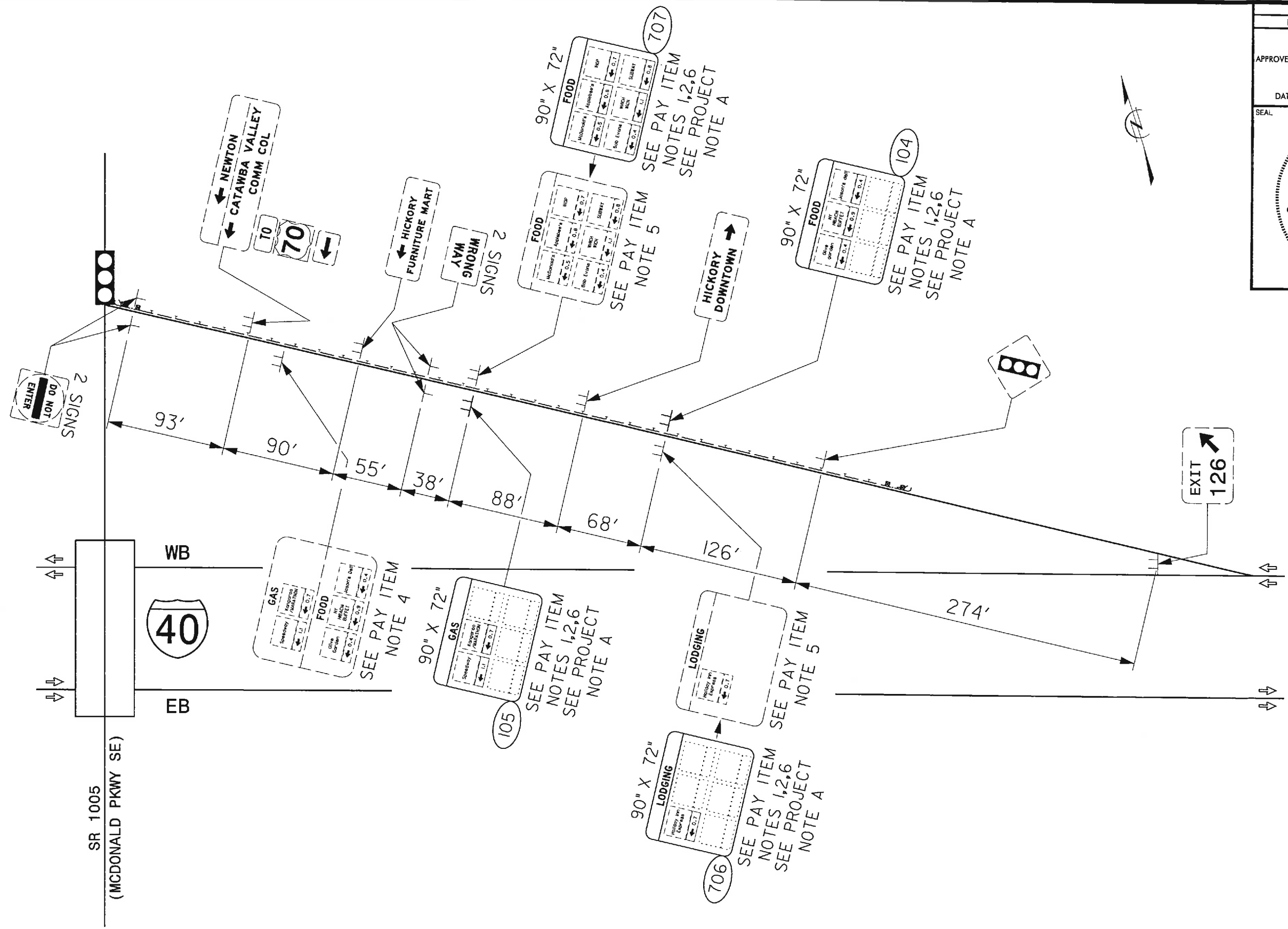
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APPROVED: 	
DATE: 9-21-2016	
SEAL	
	



HNTB HNTB NORTH CAROLINA, P.C.
 343 E. SIX FORKS ROAD, SUITE 200
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO: C-1554

**I-40 AT SR 1005
 (MCDONALD PKWY SE)
 EXIT 126**

LOGO NO. L-12-140-EJ26	SHEET NO. SIGN-5
APPROVED: 	
DATE: 9-21-2016	
SEAL	
	



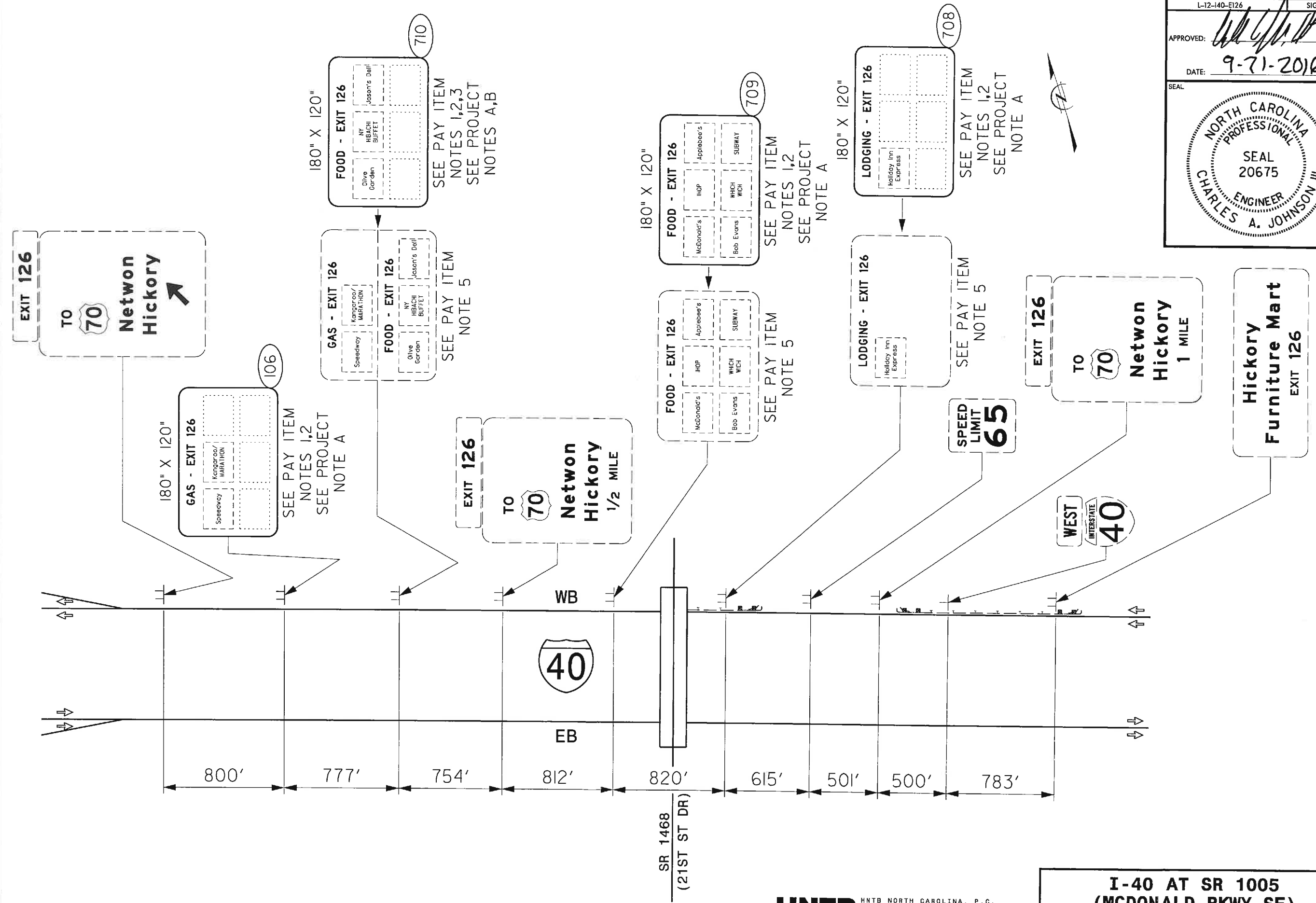
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APPROVED: *[Signature]*

DATE: 9-7-2016

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 20675 ENGINEER CHARLES A. JOHNSON III



I-40 AT SR 1005 (MCDONALD PKWY SE) EXIT 126

HNTB HNTB NORTH CAROLINA, P.C. 343 E. SIX FORKS ROAD, SUITE 200 REIDLEIGH, NORTH CAROLINA 27608 NC LICENSE NO: C-1554

SHOULDER CLOSURE ON CONTROLLED ACCESS FACILITY

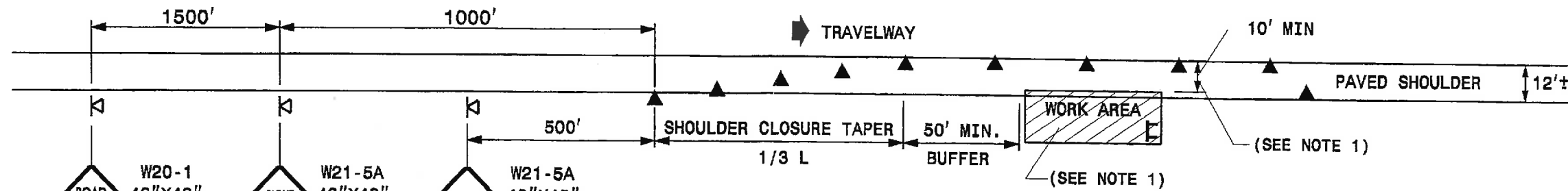
SHEET NO. TCP-1

APPROVED: *[Signature]*

DATE: 7/10/17

SEAL

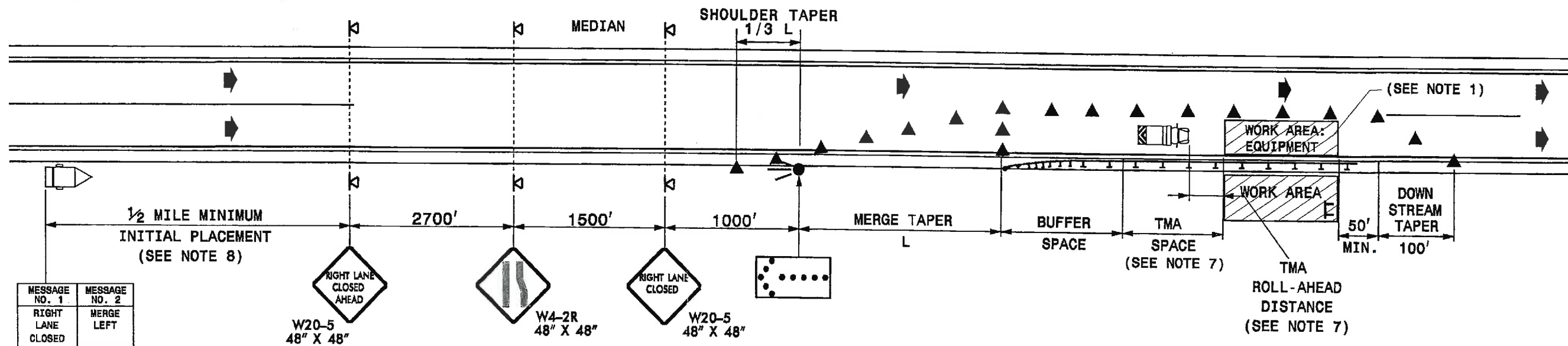
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
022959
RONALD W. KING



GENERAL NOTES

- 1- SHOULDER CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS 10' OR MORE (BUT LESS THAN 15') FROM THE TRAVEL LANE. IF EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' FROM THE TRAVEL LANE, SEE LANE CLOSURE TYPICAL BELOW.
- 2- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- 3- PLACE 36" CONES IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF CONES ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEET 1 FOR "L" DISTANCE.
- 5- DRUMS MAY BE USED IN LIEU OF CONES.

RIGHT LANE CLOSURE ON CONTROLLED ACCESS FACILITY



GENERAL NOTES

- 1- LANE CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' OF THE TRAVEL LANE.
- 2- PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW PANELS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW PANEL LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW PANEL IS MET. (SEE STD. 1101.11 SHEET 2)
- 3- PLACE 36" CONES IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE CONES ALONG THE BUFFER SPACE AND WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEETS 1 & 2 FOR "L" DISTANCE AND BUFFER SPACE.
- 5- REFER TO STD. 1101.02 SHEETS 9 & 10 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- 6- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 7- TMA'S ARE REQUIRED REGARDLESS OF WHETHER BUFFER SPACE CAN BE ATTAINED. POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER. TMA'S ARE ALSO TO BE USED TO AID INSTALLATION OF THE LANE CLOSURE AND MUST BE EQUIPPED WITH A TYPE C FLASHING ARROW PANEL.
- 8- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC, MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.
- 9- DRUMS MAY BE USED IN LIEU OF CONES.

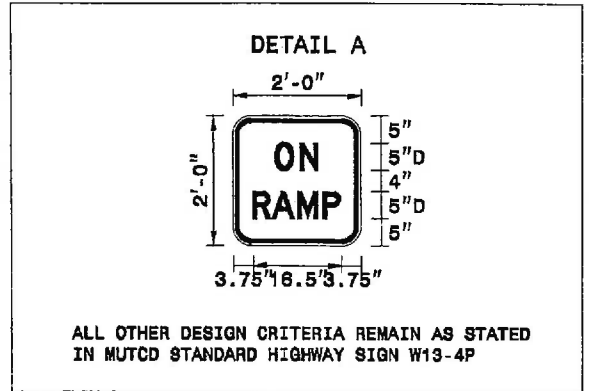
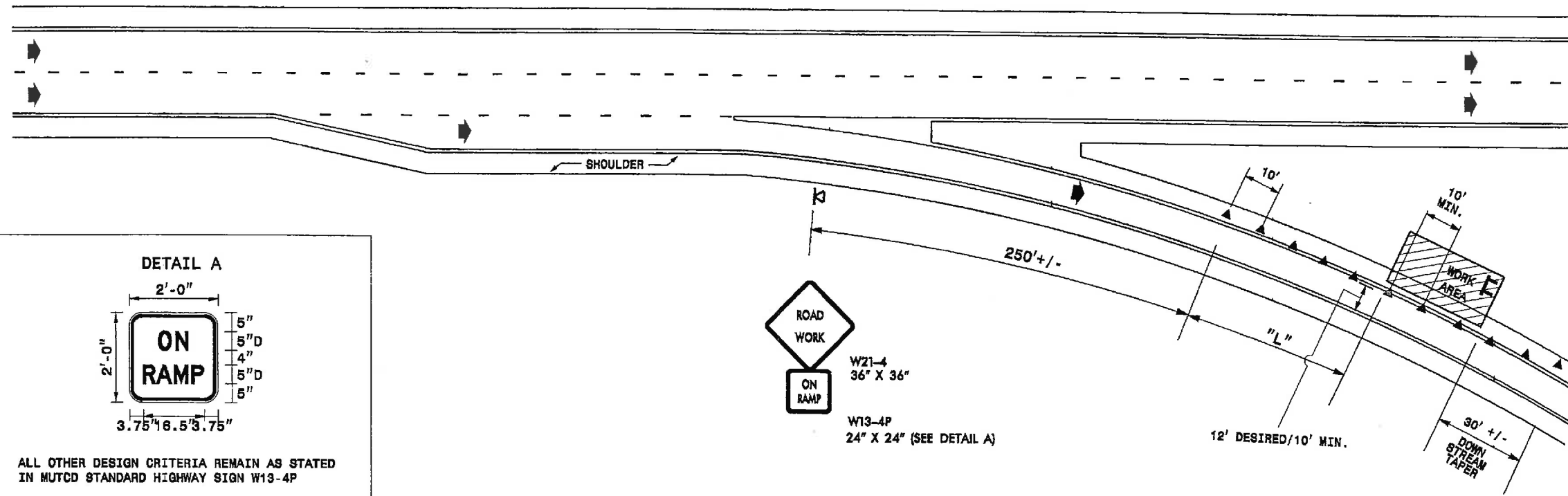
LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN (CMS)
- CONE (36" MINIMUM HEIGHT)
- PORTABLE SIGN
- LOGO SIGN
- DIRECTION OF TRAFFIC FLOW

MAINLINE SHOULDER CLOSURE AND LANE CLOSURE TYPICALS FOR LOGO SIGN INSTALLATION

03-01-2012 15:52 S:\XDC\Programs\1000\Signing Projects\STANDARD\Traffic Control Sheets\cloures.dgn

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (LEFT)



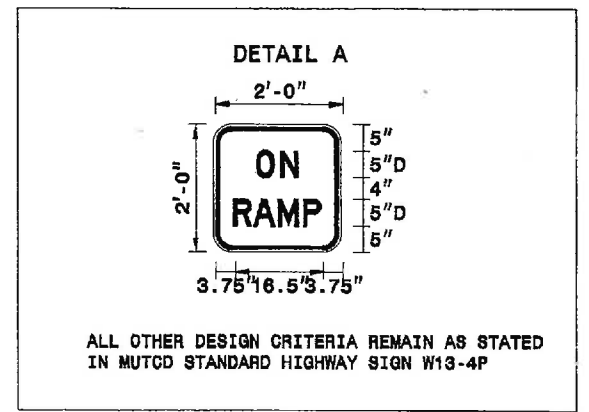
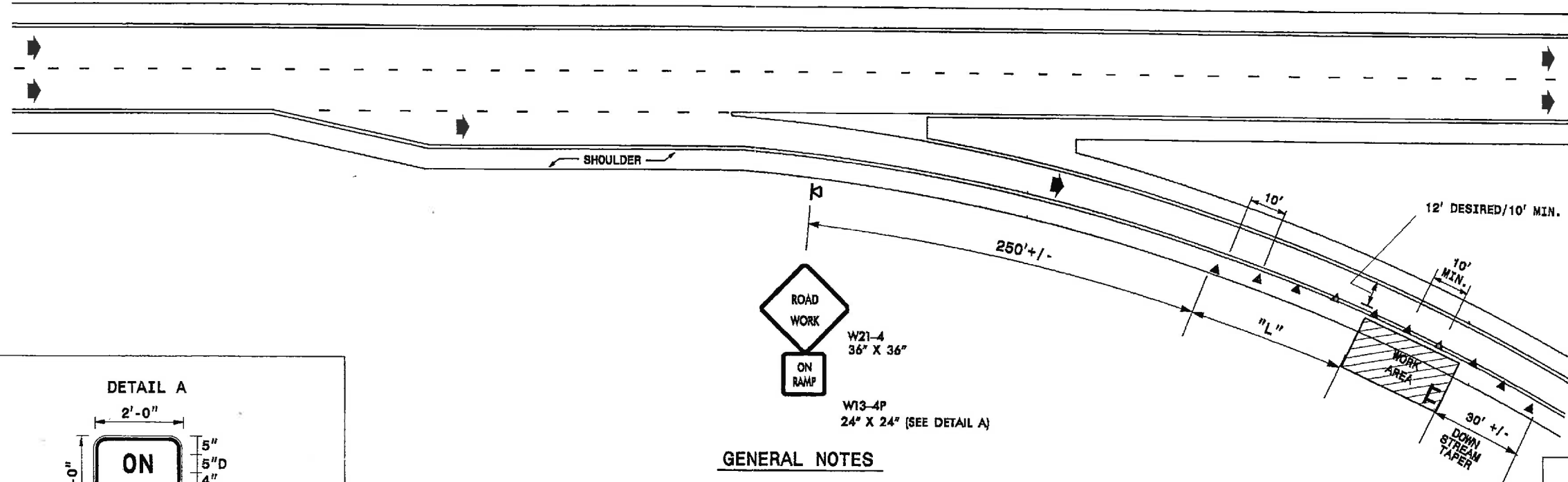
SHEET NO. TCF-2

APPROVED: *[Signature]*

DATE: 7/10/12

SEAL

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (RIGHT)



GENERAL NOTES

- SEE MUTCD SECTION 6F.25
- SIGNS SHALL NOT BE DISPLAYED WHEN WORK IS NOT IN EFFECT.
- FOR NIGHT OPERATIONS, USE CONES WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- THE CONTRACTOR SHALL NOT CROSS MEDIANS, RAMPS, OR LOOPS WITH WORK VEHICLES UNLESS A LOCATION HAS BEEN APPROVED BY THE ENGINEER.
- PLACE CONES IN TAPERS AT 10' SPACING. PLACE CONES ALONG THE WORK AREA AS SHOWN.
- REFER TO STD. 1101.11 SHEET 1 OF 4. USE 1/2 POSTED MAINLINE SPEED FOR (S) VALUE. USE THE LANE ENCROACHMENT DISTANCE AS THE LATERAL WIDTH (W) TO DETERMINE "L".
- INSTALL DEVICES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE DEVICES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM OF TRAFFIC.

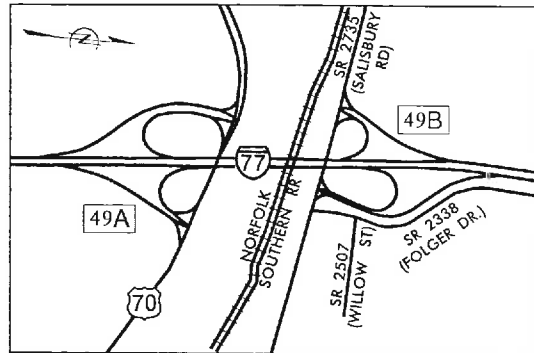
LEGEND

	LOGO SIGN
	CONE (36" MINIMUM HEIGHT)
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL ON RAMP FOR LOGO SIGN INSTALLATION

09-JUL-2012 16:30 S:\S&B\Projects\099_Signing Projects\STANDARDS\Traffic Control Standard Sheets\closures.dgn

GAS, FOOD, LODGING, AND
 ATTRACTION SERVICES
 I-77 AT US 70 EXIT 49A AND
 SR 2735 (SALISBURY RD)
 EXIT 49B



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION

LOGO SIGNING PLANS
 IREDELL COUNTY

LOGO NO. L-12-177-E49 SHEET NO. SIGN-1
 APPROVED: [Signature]
 DATE: 12-16-2016
 SEAL
 NORTH CAROLINA PROFESSIONAL SEAL 20675 ENGINEER CHARLES A. JOHNSON III

L-12-177-E49

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
0001000000	800	MOBILIZATION	1	L.S.
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATIONS	2	C.Y.
4054000000	902	PLAIN CONCRETE SIGN FOUNDATIONS	1	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM	2155	LB.
4072000000	903	SUPPORTS, 3-LB STEEL U-CHANNEL	41	L.F.
4082000000	903	SUPPORTS, WOOD	40	L.F.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	13	EA.
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	2	EA.
4116300000	904	SIGN ERECTION, LOGO TO PANEL	47	EA.
4116100000	904	SIGN ERECTION, RELOCATE, TYPE B (GROUND MOUNTED)	2	EA.
4116100000	904	SIGN ERECTION, RELOCATE, TYPE D (GROUND MOUNTED)	1	EA.
4141000000	907	DISPOSAL OF SUPPORT, WOOD	2	EA.
4152000000	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	2	EA.
4192000000	907	DISPOSAL OF SUPPORT, U-CHANNEL	2	EA.
4236000000	907	DISPOSAL OF SIGN, A, B OR C (GROUND MOUNTED)	10	EA.
S	SP	SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN	24	EA.
S	SP	TRAFFIC CONTROL	1	L.S.

PROJECT NOTES

- A PAY ITEM NOTE 3 ON THIS PROJECT MAY REFER TO RELOCATION OF LOGO PANELS, WHICH INCLUDES DETACHING THE PANELS FROM EXISTING SIGNS AS WELL AS ERECTING THEM ON NEW SIGNS. DO NOT RELOCATE MILEAGE PANELS.
- B MOUNT PROPOSED SIGN AT TOP OF EXISTING SUPPORTS.

GENERAL NOTES

- SIGNS FURNISHED BY THE STATE.
- CONTRACTOR SHALL OBSERVE: STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DIVISION 9, SECTIONS 900 THRU 907 UNLESS SPECIFICALLY WAIVED BY THE ENGINEER.
- WORK ZONE TRAFFIC CONTROL DEVICES PROVISIONS APPLY.
- SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/ OR STAKES. IF PRESENT, STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.10 AND ALL OTHER APPLICABLE STANDARDS.
- CLEARING MAY BE REQUIRED FOR SIGHT DISTANCE. IF NEEDED, CLEAR VEGETATION ACCORDING TO SECTION 903-3 OF THE SPECIFICATIONS. CLEARING IS INCIDENTAL TO SIGN SUPPORTS.

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
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS (EXCEPT SHEETS 1 OF 3 AND 2 OF 3 WHICH ARE REPLACED WITH SHEET SIGN-2A AND SIGN-2B IN PLANS)
903.20	MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNS ON WOOD POSTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.20	SECONDARY SIGN MOUNTING
904.30	SUPPLEMENTAL SIGN MOUNTING
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

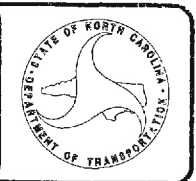
PAY ITEM NOTES

- SIGN ERECTION, TYPE A (GROUND MOUNTED)
- SIGN ERECTION, TYPE B (GROUND MOUNTED)
- SIGN ERECTION, LOGO TO PANEL
- SIGN ERECTION, RELOCATE, TYPE B (GROUND MOUNTED)
- SIGN ERECTION, RELOCATE, TYPE D (GROUND MOUNTED)
- DISPOSAL OF SUPPORT, WOOD
- DISPOSAL OF SIGN SYSTEM, STEEL BEAM
- DISPOSAL OF SUPPORT, U-CHANNEL
- DISPOSAL OF SIGN, A, B OR C (GROUND MOUNTED)
- SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN

STATE FURNISHED SIGNS ITEM DESCRIPTIONS	QUANTITY	UNIT
TYPE A LOGO SIGNS	1410	S.F.
TYPE B SIGNS	60	S.F.

PLANS PREPARED FOR: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN JORDAN SIGNING & DELINEATION WESTERN REGIONAL ENGINEER
 BYRON ENGLE, PE DIVISION 12 TRAFFIC ENGINEER



PLAN PREPARED BY :

INTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

C.A. JOHNSON, III, PE SIGNING PROJECT ENGINEER
 A.D. KLINKSIEK, PE, PTOE SIGNING DESIGN ENGINEER
 E.T. BRIGHAM, EI SIGNING DESIGN ENGINEER

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2-2B	SUPPORT INFORMATION
SIGN-3-10	SIGNING PLAN SHEETS
TCP-1-2	TRAFFIC CONTROL PLANS

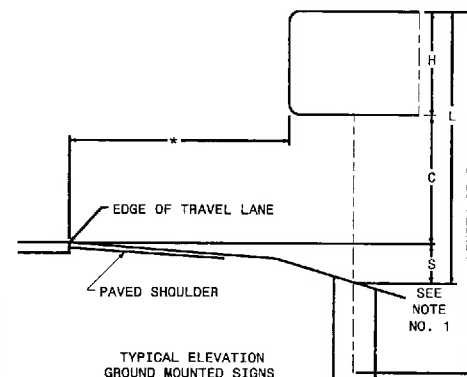
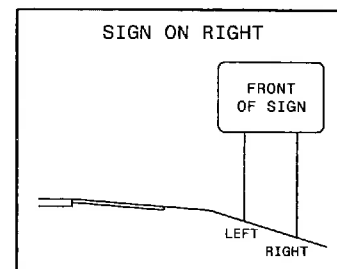
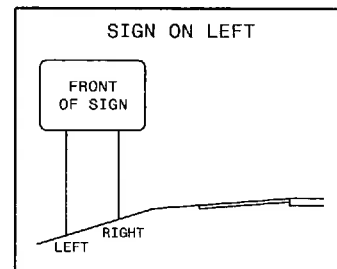
LOGO NO. L-12-177-E49 SHEET NO. SIGN-2

APPROVED: *[Signature]*

DATE: 12-16-2016

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 20675 ENGINEER CHARLES A. JOHNSON III



NOTES

- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL WAY.
- PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND 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.
- SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/OR STAKES. IF PRESENT, FIELD STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.1 AND ALL OTHER APPLICABLE STANDARDS.

STEEL SUPPORT CHART

Version: 3.0 Posted: 6/13/2016

NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	OMNI COUPLER	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			SUPPORT WEIGHTS		FOOTINGS				FIELD VERIFIED (mm/dd/yy)											
		w	x	h										SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH	B/A (lbs.)	SIMPLE (lbs.)	DIAMETER (ft.)	DEPTH (ft.)	REINFORCED (c.y.)	PLAIN (c.y.)												
		"H"	"C"																																								
101	A	180	x	120	I-77 NB	2	W8x18	BA	N/A	N/A	N/A	28.00	8.79	10.00	8.70	4.5	1.60	20.30	24.80	0.00	0.00	0.00	-1.70	17.00	21.50	973.40	0	2.0	5	1.16	0.00	8/16/2016											
102	B	90	x	48	NB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	4.00	7.00	3.0	1.90	12.90	15.90	0.00	0.00	0.00	1.80	12.80	15.80	284.09	0	1.0	3.5	0.00	0.20	8/16/2016											
103	B	90	x	48	SB Loop	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	4.00	7.00	3.0	1.20	12.20	15.20	0.00	0.00	0.00	1.80	12.80	15.80	278.70	0	1.0	3.5	0.00	0.20	8/16/2016											
104	A	90	x	72	SB Loop	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	1.10	14.10	17.10	0.00	0.00	0.00	1.70	14.70	17.70	307.96	0	1.0	3.5	0.00	0.20	8/16/2016											
105	A	90	x	72	SB Loop	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	1.20	14.20	17.20	0.00	0.00	0.00	1.90	14.90	17.90	310.27	0	1.0	3.5	0.00	0.20	8/16/2016											
701	A	180	x	138	I-77 NB	2	W8x18	S	N/A	N/A	N/A	19.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
702	A	180	x	120	I-77 NB	2	W6x20	BA	N/A	N/A	N/A	28.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
703	A	180	x	120	I-77 NB	2	W6x20	S	N/A	N/A	N/A	15.70	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
704	A	180	x	138	I-77 NB	2	W6x20	S	N/A	N/A	N/A	17.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
705	A	90	x	72	NB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	15.00	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
706	A	90	x	72	NB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	14.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
707	A	90	x	72	NB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	15.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
708	A	90	x	72	SB Loop	2	S4x7.7	BA	N/A	N/A	N/A	18.00	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
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710	A	180	x	138	I-77 SB	2	W6x20	BA	N/A	N/A	N/A	9.50	ERECT PROPOSED SIGN ON EXISTING SUPPORTS																														8/16/2016
													TOTAL			TOTAL			TOTAL			TOTAL																					
													2154.42			0.00			1.16			0.81																					
													USE: 2155.00			0.00			2.00			1.00																					

WOOD SUPPORT CHART

Version: 3.0 Posted: 6/13/2016

NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			WOOD SUPPORT (LF)	FIELD VERIFIED (mm/dd/yy)
		w	x	h									SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH		
		"H"	"C"																							
901A	B	138	x	18	I-77 NB	2	6in x 8in	BA	II	N/A	27.50	7.75	5.50	9.40	6.00	0.50	15.40	21.40	0.00	0.00	0.00	-2.40	12.50	18.50	39.90	8/16/2016
901B	B	138	x	48																						

TOTAL 39.90

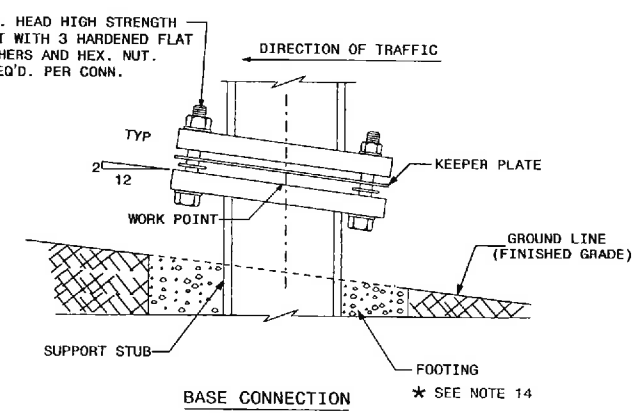
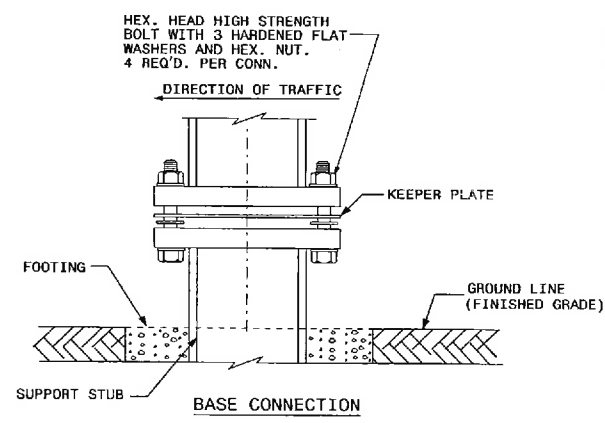
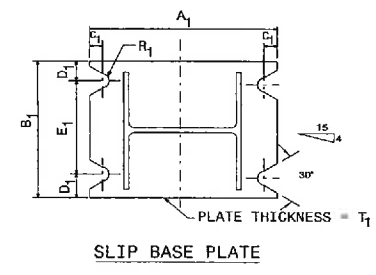
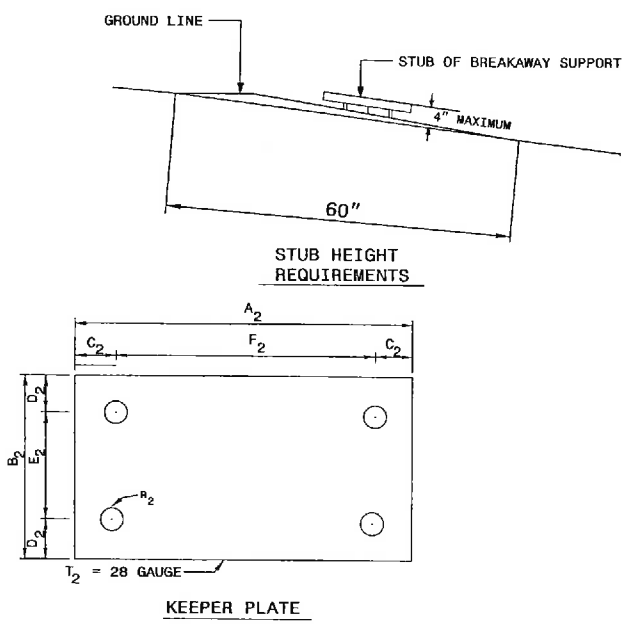
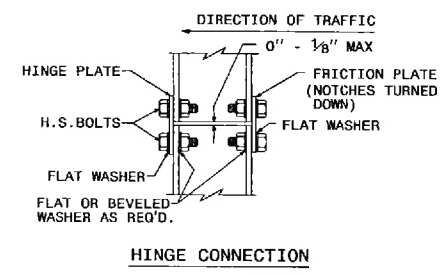
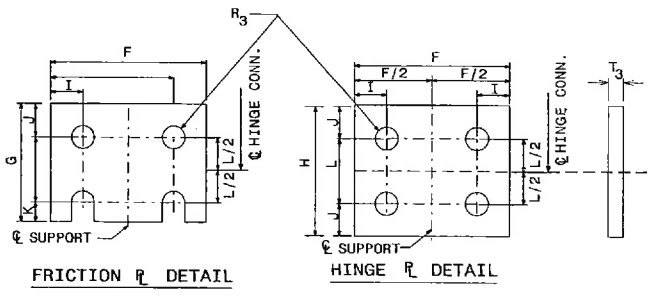
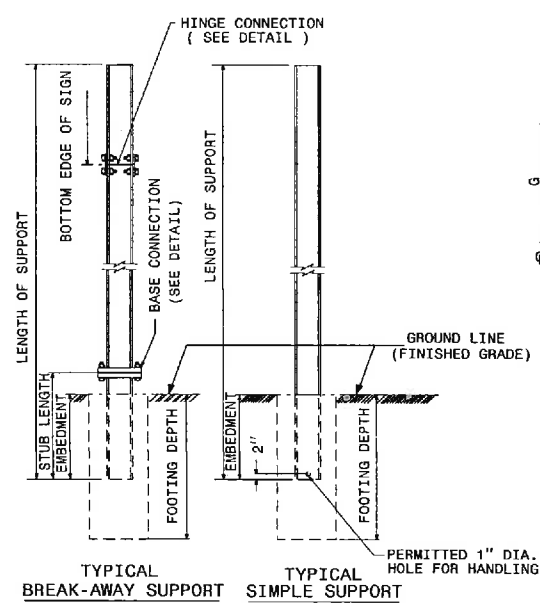
USE: 40.00

TIP NO. L-12-177-E49	SHEET NO. SIGN-2A
APPROVED: <i>R.W.K.</i>	
DATE: 7/26/13	
SEAL	

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

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10



SEE SHEET 2 OF 3 FOR
BASE CONNECTION DATA
HINGE CONNECTION DATA
& FOUNDATION DATA.
SEE SHEET 3 OF 3 FOR
GENERAL NOTES.

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

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10

REVISED SIGNING
ROADWAY STANDARD DRAWING

26-JUL-2013 09:37 S:\S&B\Drawings\Standards and Drawings\Drawings\2012 Standard Dwg\U\Division 9 Final\903D10.dgn support-1_Revise.dwg AT 12:28:59

TIP NO. L-12-177-E49 SHEET NO. SIGN-2B

APPROVED: *R. W. King*

DATE: 7/26/13

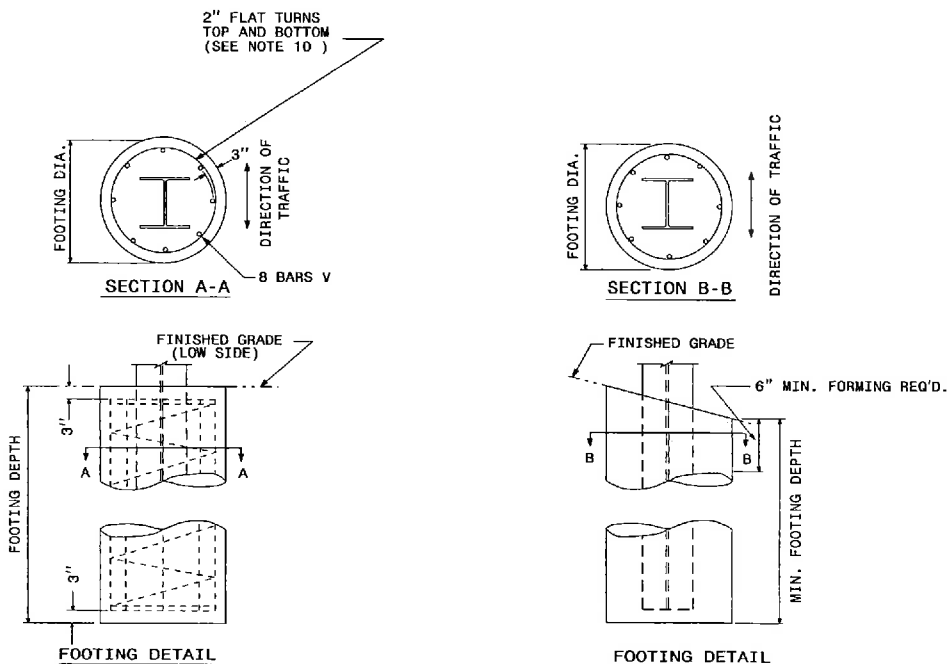
SEAL

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	
S3X5.7	1/2" DIA. X 3/4"	7"	4"	1"	3/4"	2 1/2"	1"	9/32"	7"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2" DIA. X 1 3/4"	2 1/4"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	3/8"	18
S4X7.7	1/2" DIA. X 3/4"	8"	4"	1"	3/4"	2 1/2"	1"	9/32"	8"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2" DIA. X 1 3/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	3/8"	20
W6X9	1/2" DIA. X 3/4"	10"	5"	1"	3/4"	3 1/2"	1"	9/32"	10"	5"	1"	3/4"	3 1/2"	9/32"	28 GAUGE	1/2" DIA. X 1 3/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	9/32"	3/8"	32
W6X12	5/8" DIA. X 4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	11/32"	11"	5"	1 1/4"	7/8"	3 1/4"	11/32"	28 GAUGE	5/8" DIA. X 2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	39
W6X16	5/8" DIA. X 4 1/2"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	11/32"	12"	6"	1 1/4"	7/8"	4 1/4"	11/32"	28 GAUGE	5/8" DIA. X 2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	47
W8X18	5/8" DIA. X 4 1/2"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/2"	11/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	11/32"	28 GAUGE	5/8" DIA. X 2 1/4"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	70
W8X21	3/4" DIA. X 4 1/2"	14"	7"	1 1/2"	1"	5"	1 1/2"	13/32"	14"	7"	1 1/2"	1"	5"	13/32"	28 GAUGE	3/4" DIA. X 2 1/2"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	3/8"	73
W10X22	3/4" DIA. X 4 1/2"	16"	8"	1 1/2"	1"	6"	1 1/2"	13/32"	16"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4" DIA. X 2 1/2"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	3/8"	119
W10X26	3/4" DIA. X 5 1/2"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	13/32"	16 1/2"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4" DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	3/8"	140
W12X26	3/4" DIA. X 5 1/2"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	13/32"	18 1/2"	9"	1 1/2"	1"	7"	13/32"	28 GAUGE	3/4" DIA. X 2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	3/8"	176
W14X30	1" DIA. X 6"	22"	9"	2"	1 1/2"	6"	2"	17/32"	22"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1" DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/8"	205
W16X31	1" DIA. X 6"	24"	9"	2"	1 1/2"	6"	2"	17/32"	24"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1" DIA. X 3"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/8"	223
W18X35	1" DIA. X 6"	25"	9"	2"	1 1/2"	6"	2"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1" DIA. X 3"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/8"	243
W18X40	1" DIA. X 6 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	17/32"	26"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1" DIA. X 3 1/2"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	278
W21X44	1" DIA. X 7"	29"	9"	2"	1 1/2"	6"	2 1/2"	17/32"	29"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1" DIA. X 3 1/2"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	310



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1'-6"	8 # 6 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

REVISED SIGNING
ROADWAY STANDARD DRAWING

26-JUL-2013 09:50 SA\SAD\Standards Group NEWS\Standards and Drawings\Drawings\2012 Standard Dwg\Division 9 Final\903D10_sgn_sht02-gm_support_Rev1.seg 7-3-13.dgn AT T226381g

7-3-13

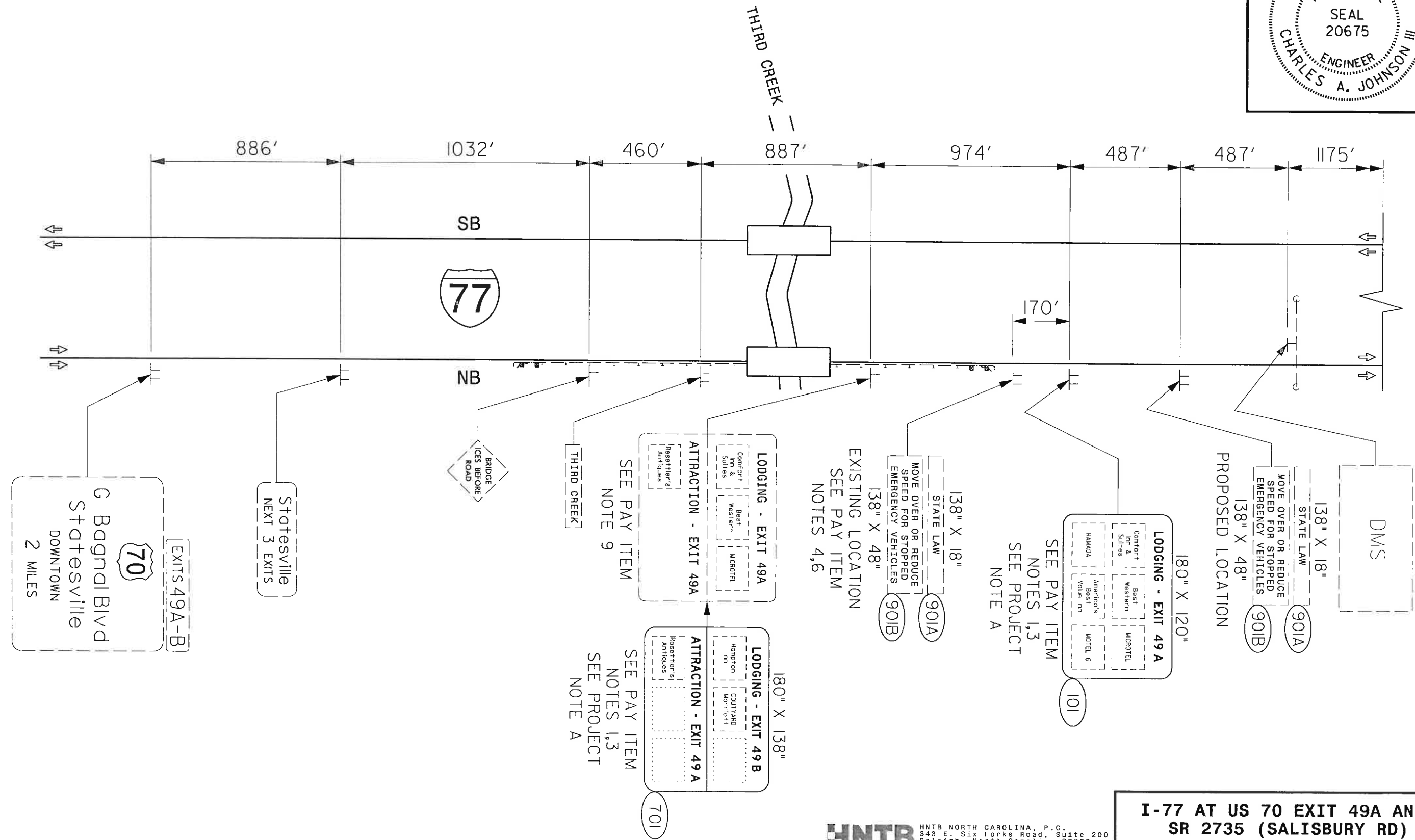
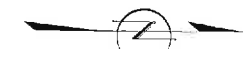
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DATE: 12-16-2016

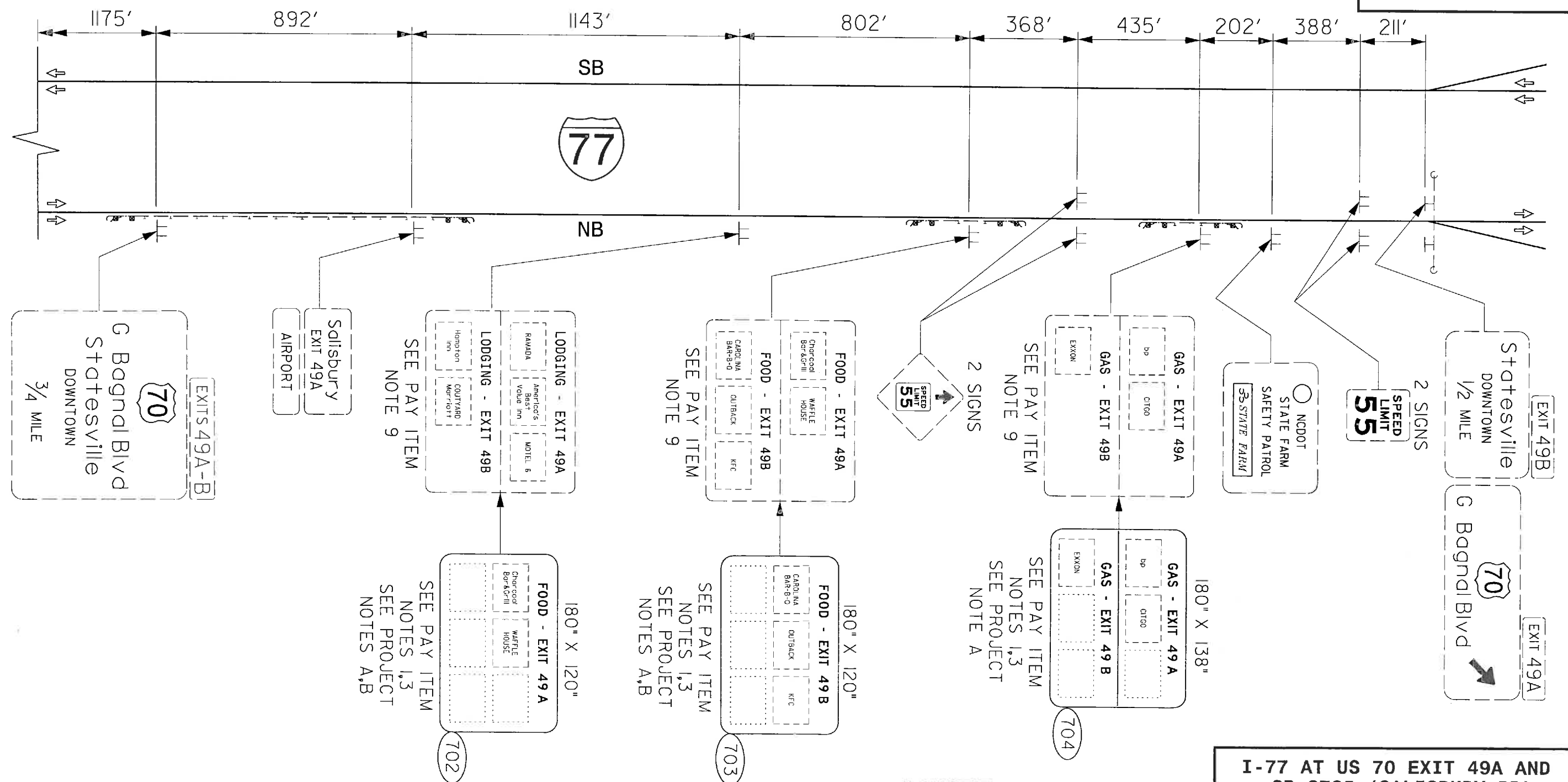
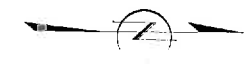
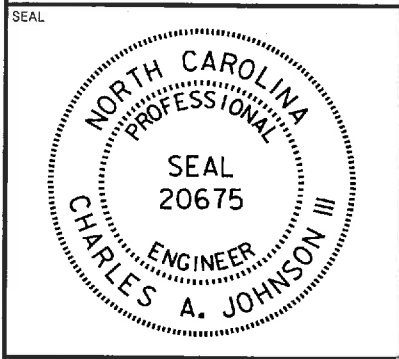
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 20675
 CHARLES A. JOHNSON III



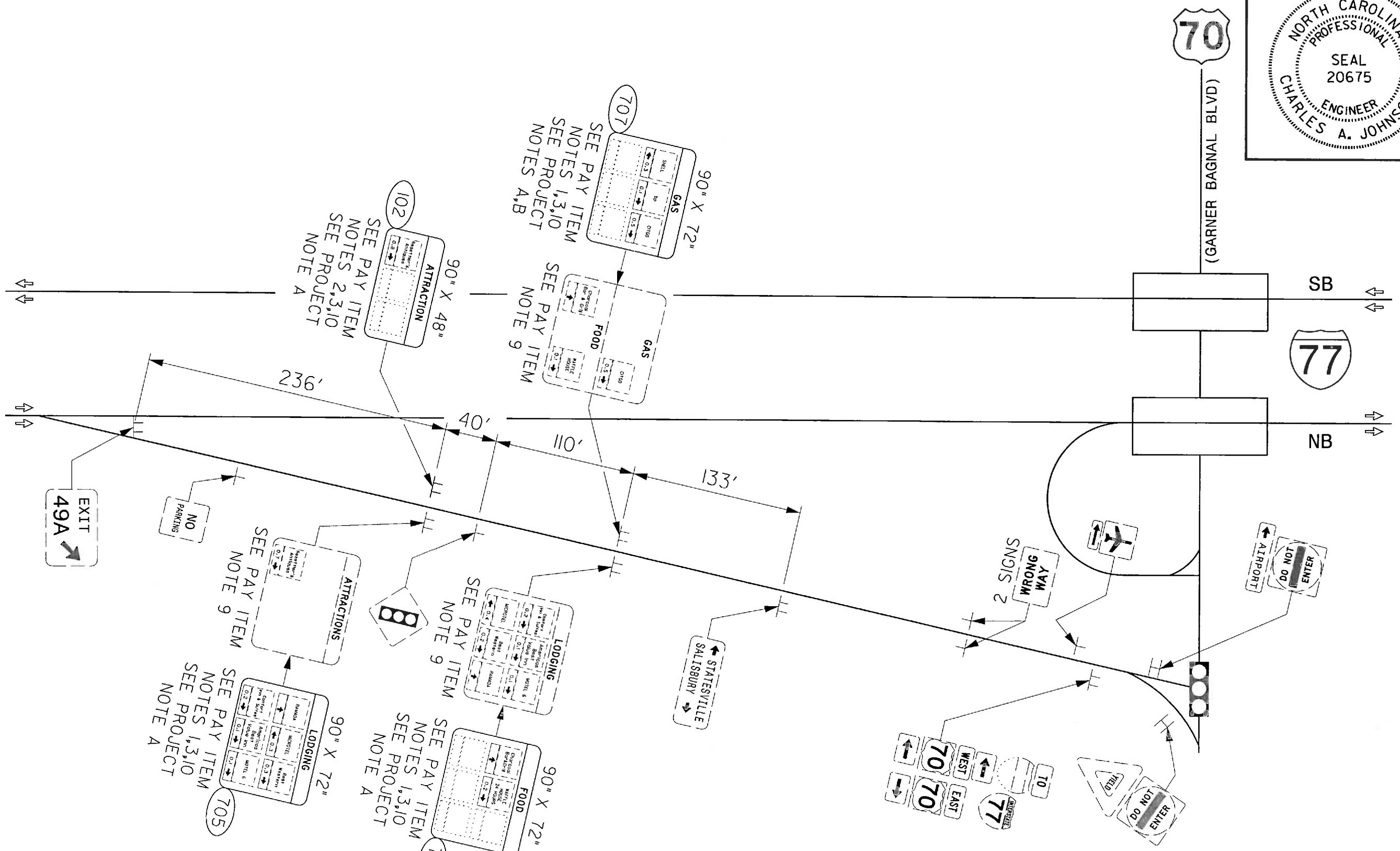
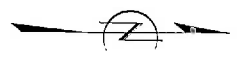
I-77 AT US 70 EXIT 49A AND SR 2735 (SALISBURY RD) EXIT 49B

APPROVED: *[Signature]*
 DATE: 12-16-2016



**I-77 AT US 70 EXIT 49A AND
 SR 2735 (SALISBURY RD)
 EXIT 49B**

LOGO NO. L-12-177-E49	SHEET NO. SIGN-5
APPROVED: <i>[Signature]</i>	
DATE: 12.16.2016	
SEAL	



HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

**I-77 AT US 70 EXIT 49A AND
 SR 2735 (SALISBURY RD)
 EXIT 49B**

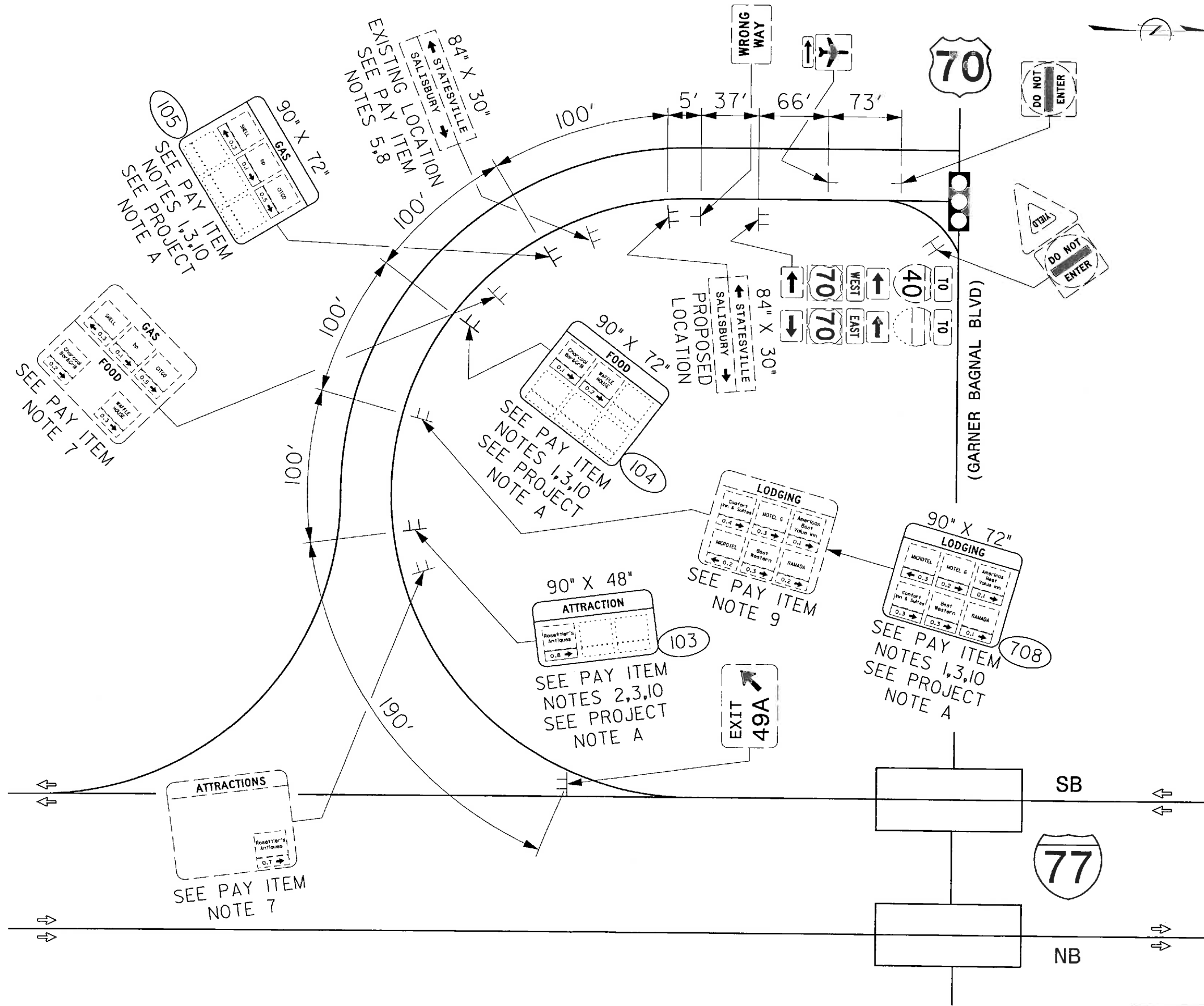
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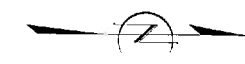
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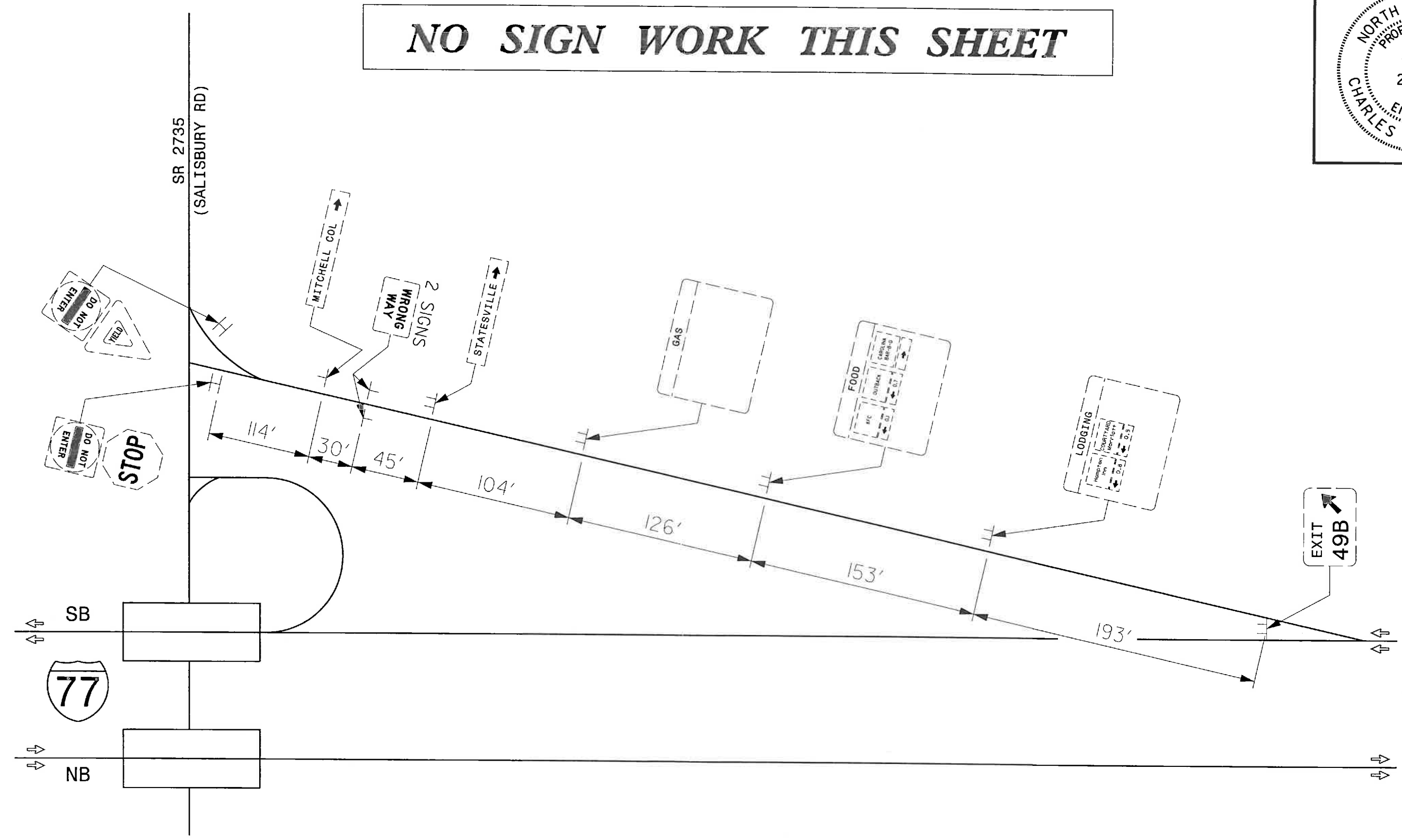
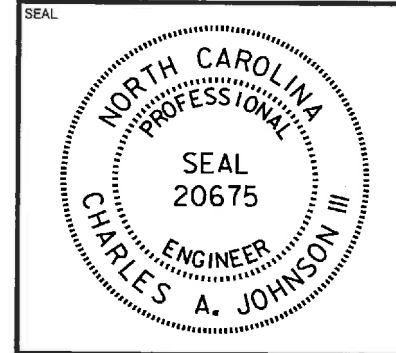
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NORTH CAROLINA PROFESSIONAL SEAL 20675 ENGINEER CHARLES A. JOHNSON III

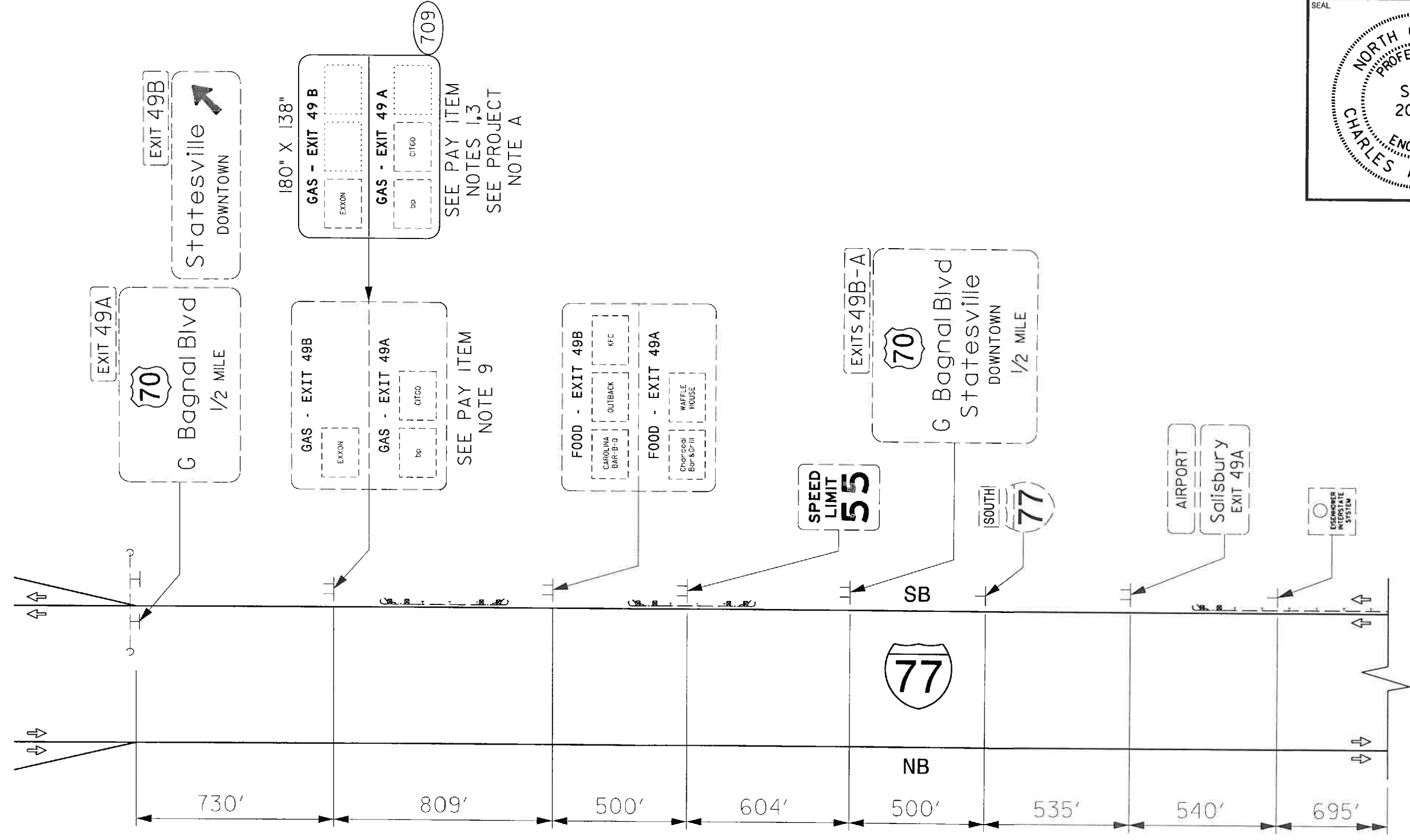
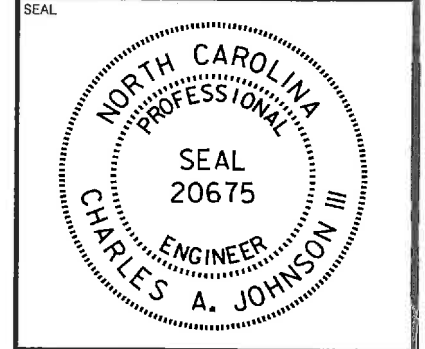




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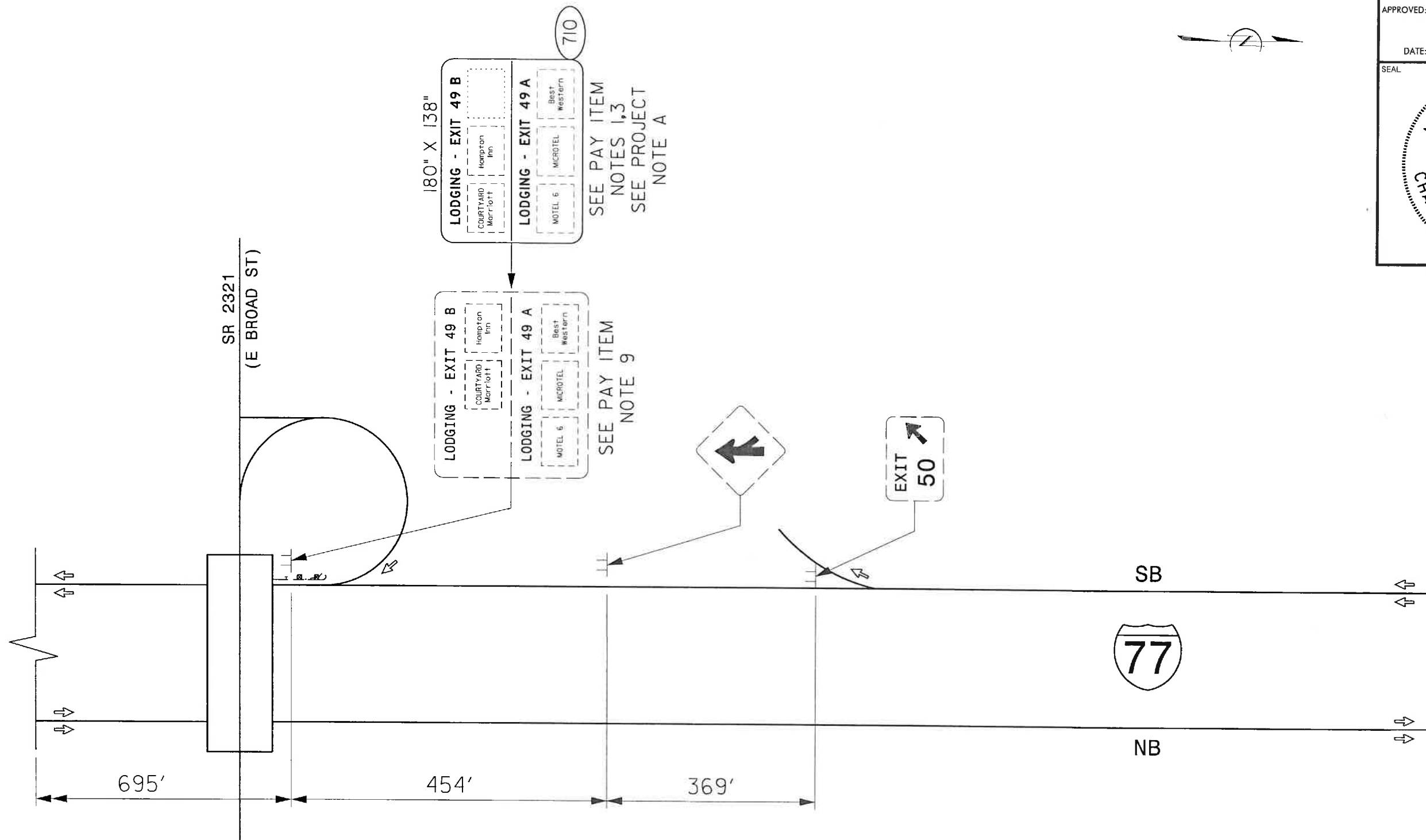
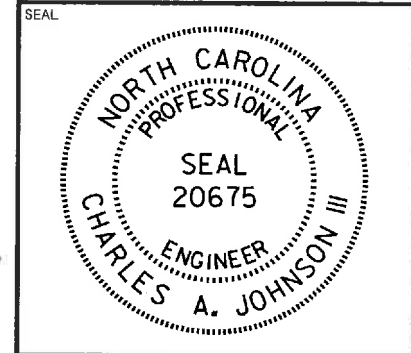


APPROVED: *[Signature]*
 DATE: 12-16-2014



SEE PAY ITEM
 NOTES 1,3
 SEE PROJECT
 NOTE A

SEE PAY ITEM
 NOTE 9



SEE PAY ITEM
NOTES 1,3
SEE PROJECT
NOTE A

SEE PAY ITEM
NOTE 9

180" X 138"

710

**I-77 AT US 70 EXIT 49A AND
SR 2735 (SALISBURY RD)
EXIT 49B**

SHOULDER CLOSURE ON CONTROLLED ACCESS FACILITY

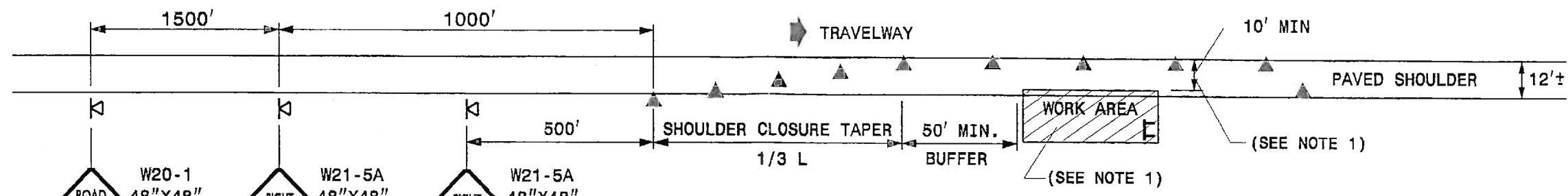
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APPROVED: *R.W.K.*

DATE: 7/10/17

SEAL

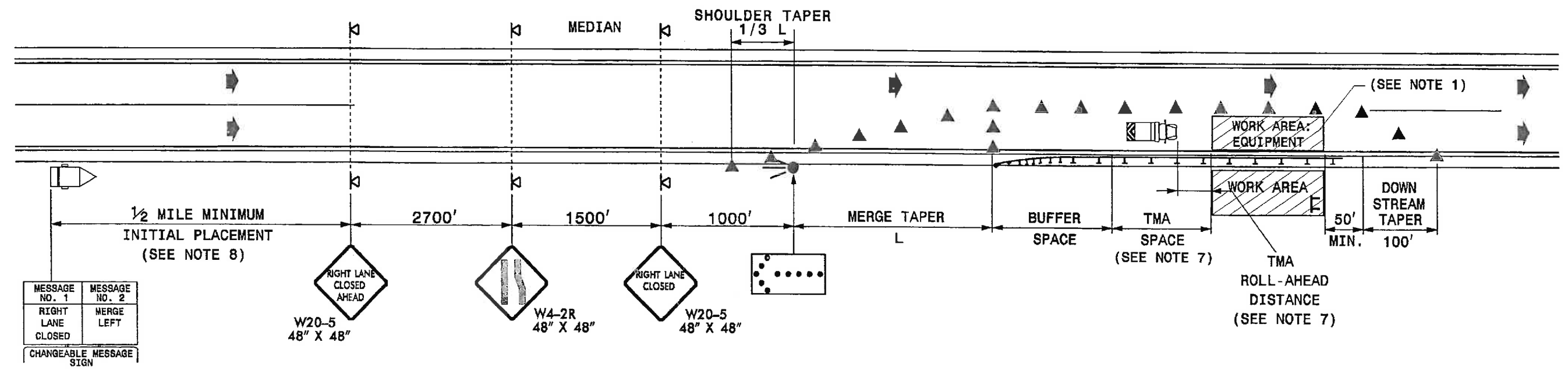
NORTH CAROLINA
PROFESSIONAL
SEAL
022959
ENGINEER
RONALD W. KING



GENERAL NOTES

- 1- SHOULDER CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS 10' OR MORE (BUT LESS THAN 15') FROM THE TRAVEL LANE. IF EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' FROM THE TRAVEL LANE, SEE LANE CLOSURE TYPICAL BELOW.
- 2- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- 3- PLACE 36" CONES IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF CONES ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEET 1 FOR "L" DISTANCE.
- 5- DRUMS MAY BE USED IN LIEU OF CONES.

RIGHT LANE CLOSURE ON CONTROLLED ACCESS FACILITY



GENERAL NOTES

- 1- LANE CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' OF THE TRAVEL LANE.
- 2- PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW PANELS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW PANEL LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW PANEL IS MET. (SEE STD. 1101.11 SHEET 2)
- 3- PLACE 36" CONES IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE CONES ALONG THE BUFFER SPACE AND WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEETS 1 & 2 FOR "L" DISTANCE AND BUFFER SPACE.
- 5- REFER TO STD. 1101.02 SHEETS 9 & 10 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- 6- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 7- TMA'S ARE REQUIRED REGARDLESS OF WHETHER BUFFER SPACE CAN BE ATTAINED. POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER. TMA'S ARE ALSO TO BE USED TO AID INSTALLATION OF THE LANE CLOSURE AND MUST BE EQUIPPED WITH A TYPE C FLASHING ARROW PANEL.
- 8- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC, MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.
- 9- DRUMS MAY BE USED IN LIEU OF CONES.

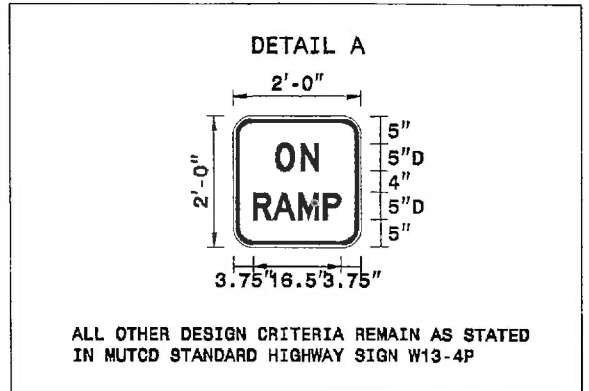
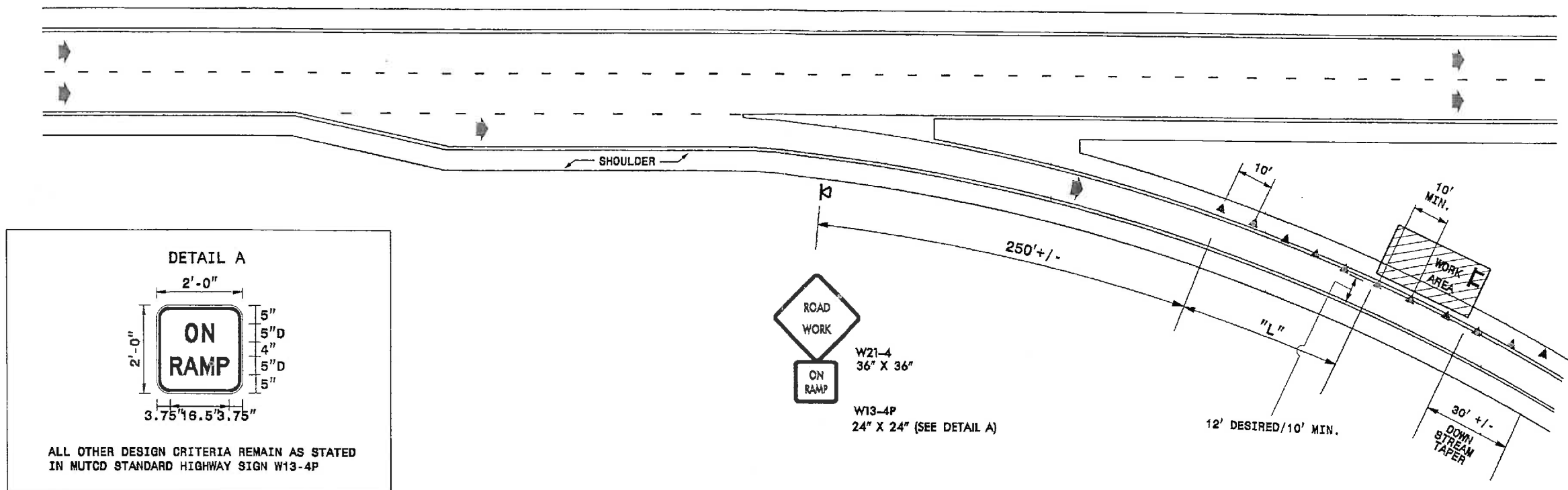
LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN (CMS)
- CONE (36" MINIMUM HEIGHT)
- PORTABLE SIGN
- LOGO SIGN
- DIRECTION OF TRAFFIC FLOW

MAINLINE SHOULDER CLOSURE AND LANE CLOSURE TYPICALS FOR LOGO SIGN INSTALLATION

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 11/15/17

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (LEFT)



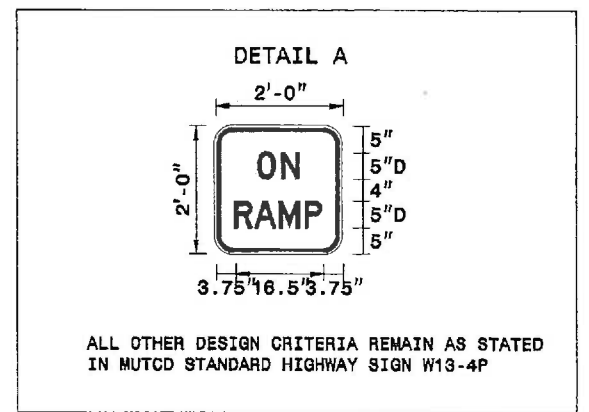
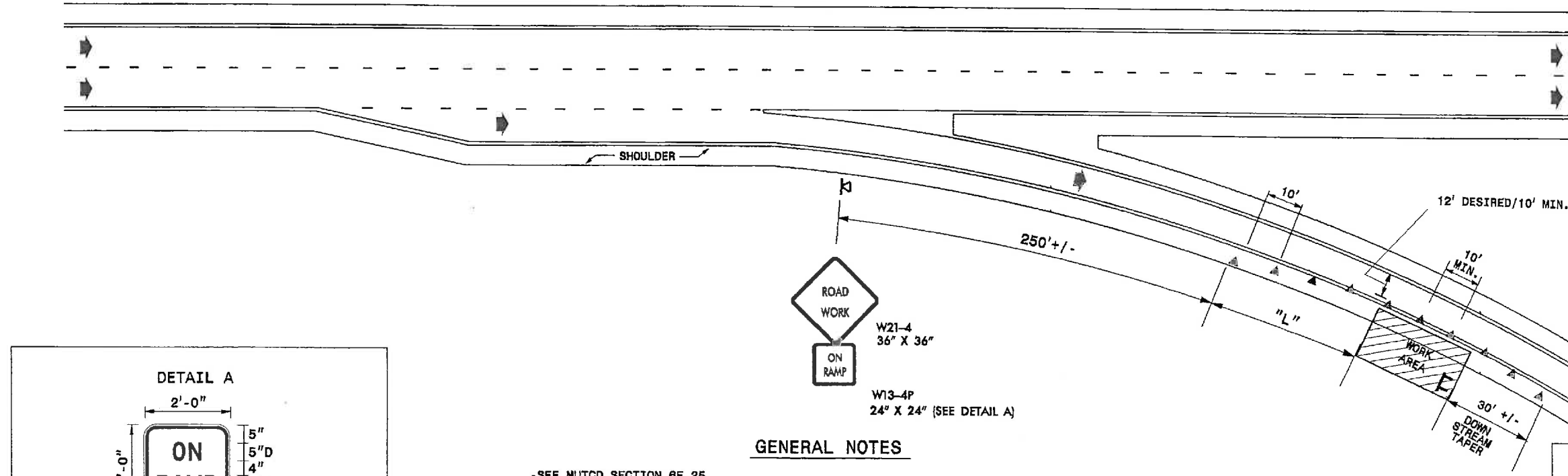
SHEET NO. TCP-2

APPROVED: *[Signature]*

DATE: 7/10/12

SEAL

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (RIGHT)



GENERAL NOTES

- SEE MUTCD SECTION 6F.25
- SIGNS SHALL NOT BE DISPLAYED WHEN WORK IS NOT IN EFFECT.
- FOR NIGHT OPERATIONS, USE CONES WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- THE CONTRACTOR SHALL NOT CROSS MEDIANS, RAMPS, OR LOOPS WITH WORK VEHICLES UNLESS A LOCATION HAS BEEN APPROVED BY THE ENGINEER.
- PLACE CONES IN TAPERS AT 10' SPACING. PLACE CONES ALONG THE WORK AREA AS SHOWN.
- REFER TO STD. 1101.11 SHEET 1 OF 4. USE 1/2 POSTED MAINLINE SPEED FOR (S) VALUE. USE THE LANE ENCROACHMENT DISTANCE AS THE LATERAL WIDTH (W) TO DETERMINE "L".
- INSTALL DEVICES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE DEVICES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM OF TRAFFIC.

LEGEND

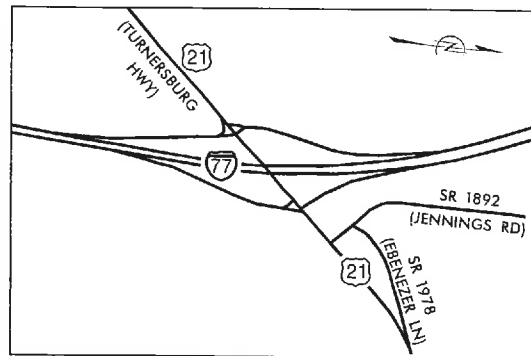
	LOGO SIGN
	CONE (36" MINIMUM HEIGHT)
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL ON RAMP FOR LOGO SIGN INSTALLATION

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GAS, FOOD AND ATTRACTION SERVICES
I-77 AT US-21 (TURNERSBURG HWY)
EXIT 54

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION



LOGO NO. L-12-I77-E54	SHEET NO. SIGN-1
APPROVED:	DATE: 11-7-2016

LOGO SIGNING PLANS
IREDELL COUNTY

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
0001000000	800	MOBILIZATION	1	L.S.
4048000000	902	REINFORCED CONCRETE SIGN FOUNDATIONS	2	C.Y.
4054000000	902	PLAIN CONCRETE SIGN FOUNDATIONS	1	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM	1856	LB.
4110000000	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	5	EA.
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	2	EA.
4116300000	904	SIGN ERECTION, LOGO TO PANEL	16	EA.
4116100000	904	SIGN ERECTION, RELOCATE, TYPE A (GROUND MOUNTED)	1	EA.
4138000000	907	DISPOSAL OF SUPPORT, STEEL BEAM	4	EA.
4236000000	907	DISPOSAL OF SIGN, A, B OR C (GROUND MOUNTED)	4	EA.
S	SP	SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN	8	EA.
S	SP	TRAFFIC CONTROL	1	L.S.

PROJECT NOTES

- A PAY ITEM NOTE 3 ON THIS PROJECT MAY REFER TO RELOCATION OF LOGO PANELS, WHICH INCLUDES DETACHING THE PANELS FROM EXISTING SIGNS AS WELL AS ERECTING THEM ON NEW SIGNS. DO NOT RELOCATE MILEAGE PANELS.
- B ERECT TOP OF PROPOSED SIGN AT TOP OF EXISTING SIMPLE SUPPORTS.
- C ERECT PROPOSED BOTTOM OF SIGN ON EXISTING BREAKAWAY SUPPORTS AT HINGE. CUT AND DISPOSE OF SUPPORTS ABOVE TOP OF SIGN (SEE PAY ITEM NOTE 5). SEE NCDOT STANDARD SPECIFICATIONS, SECTION 1076-6 FOR REPAIR OF GALVANIZING.

GENERAL NOTES

- SIGNS FURNISHED BY THE STATE.
- CONTRACTOR SHALL OBSERVE: STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DIVISION 9, SECTIONS 900 THRU 907 UNLESS SPECIFICALLY WAIVED BY THE ENGINEER.
- WORK ZONE TRAFFIC CONTROL DEVICES PROVISIONS APPLY.
- SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/ OR STAKES. IF PRESENT, STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.10 AND ALL OTHER APPLICABLE STANDARDS.
- CLEARING MAY BE REQUIRED FOR SIGHT DISTANCE. IF NEEDED, CLEAR VEGETATION ACCORDING TO SECTION 903-3 OF THE SPECIFICATIONS. CLEARING IS INCIDENTAL TO SIGN SUPPORTS.

PAY ITEM NOTES

- SIGN ERECTION, TYPE A (GROUND MOUNTED)
- SIGN ERECTION, TYPE B (GROUND MOUNTED)
- SIGN ERECTION, LOGO TO PANEL
- SIGN ERECTION, RELOCATE, TYPE A (GROUND MOUNTED)
- DISPOSAL OF SUPPORT, STEEL BEAM
- DISPOSAL OF SIGN, A, B OR C (GROUND MOUNTED)
- SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN

STATE FURNISHED SIGNS ITEM DESCRIPTIONS	QUANTITY	UNIT
TYPE A LOGO SIGNS	502.5	S.F.
TYPE B SIGNS	60	S.F.

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
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS (EXCEPT SHEETS 1 OF 3 AND 2 OF 3 WHICH ARE REPLACED WITH SHEET SIGN-2A AND SIGN-2B IN PLANS)
904.10	ORIENTATION OF GROUND MOUNTED SIGNS

L-12-I77-E54

PLANS PREPARED FOR: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN JORDAN SIGNING & DELINEATION WESTERN REGIONAL ENGINEER
SCOTT POSTON DIVISION 12 LOGO COORDINATOR

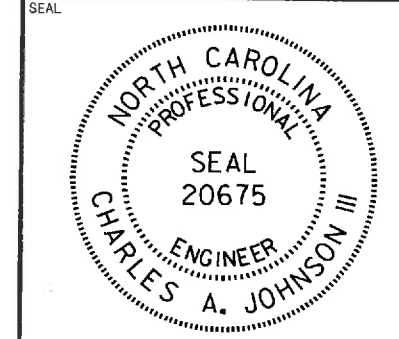


PLAN PREPARED BY :

HNTB HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554
C.A. JOHNSON, III, PE SIGNING PROJECT ENGINEER
A.D. KLINKSIEK, PE, PTOE SIGNING DESIGN ENGINEER
E.T. BRIGHAM, EI SIGNING DESIGN ENGINEER

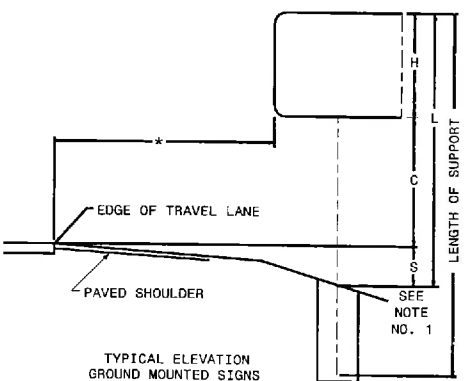
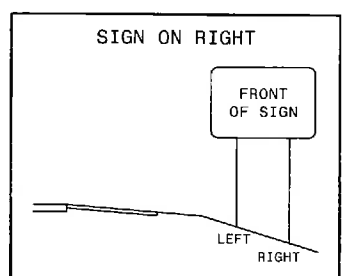
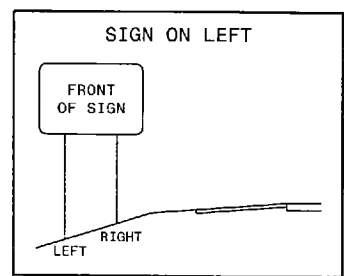
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2-2B	SUPPORT INFORMATION
SIGN-3-7	SIGNING PLAN SHEETS
TCP-1-2	TRAFFIC CONTROL PLANS



Version: 3.0 Posted: 6/13/2016


SIGN NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	OMNI COUPLER	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft.)			LEFT SUPPORT (ft.)			CENTER SUPPORT (ft.)			RIGHT SUPPORT (ft.)			SUPPORT WEIGHTS		FOOTINGS				FIELD VERIFIED (mm/dd/yy)
		w	x	h										SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH	B/A (lbs.)	SIMPLE (lbs.)	DIAMETER (ft.)	DEPTH (ft.)	REINFORCED (c.y.)	PLAIN (c.y.)	
		"H"	"C"																													
101	B	90	x	48	NB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	17.00	4.40	4.00	7.00	3.0	0.90	11.90	14.90	0.00	0.00	0.00	1.50	12.50	15.50	274.08	0	1.0	3.5	0.00	0.20	8/17/2016
102	A	90	x	72	SB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	6.00	7.00	3.0	2.40	15.40	18.40	0.00	0.00	0.00	1.80	14.80	17.80	318.74	0	1.0	3.5	0.00	0.20	8/17/2016
103	A	180	x	72	I-77 SB	2	W8x18	BA	N/A	N/A	N/A	18.00	8.79	6.00	7.00	4.5	2.40	15.40	19.90	0.00	0.00	0.00	6.30	19.30	23.80	926.60	0	2.0	5	1.16	0.00	8/17/2016
701	A	180	x	138	I-77 NB	2	W6x20	S	N/A	N/A	N/A	17.00	8.75	11.50	5.00	ERECT PROPOSED SIGN ON EXISTING SUPPORTS												8/17/2016				
702	A	90	x	72	NB Ramp	2	S4x7.7	S	N/A	N/A	N/A	16.50	4.43	6.00	7.20	ERECT PROPOSED SIGN ON EXISTING SUPPORTS												8/17/2016				
703	B	90	x	48	SB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	16.50	4.42	4.00	7.00	ERECT PROPOSED SIGN ON EXISTING SUPPORTS												8/17/2016				
704	A	180	x	120	I-77 SB	2	W6x20	BA	N/A	N/A	N/A	30.00	8.77	10.00	7.30	ERECT PROPOSED SIGN ON EXISTING SUPPORTS												8/17/2016				
901	A	90	x	84	SB Ramp Lt	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	7.00	7.00	3.0	2.50	16.50	19.50	0.00	0.00	0.00	2.00	16.00	19.00	336.45	0	1.0	3.5	0.00	0.20	8/17/2016
												TOTAL			TOTAL			TOTAL				TOTAL										
												1855.87			0.00			1.16				0.61										
USE:												1856.00			0.00			2.00				1.00										



- NOTES
1. DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL WAY.
 2. PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND 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.
 3. SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/OR STAKES. IF PRESENT, FIELD STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.1 AND ALL OTHER APPLICABLE STANDARDS.

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

TYPE 'A' AND 'B' GROUND MOUNTED SIGNS
I-77 AT US-21 (TURNERSBURG HWY) EXIT 54

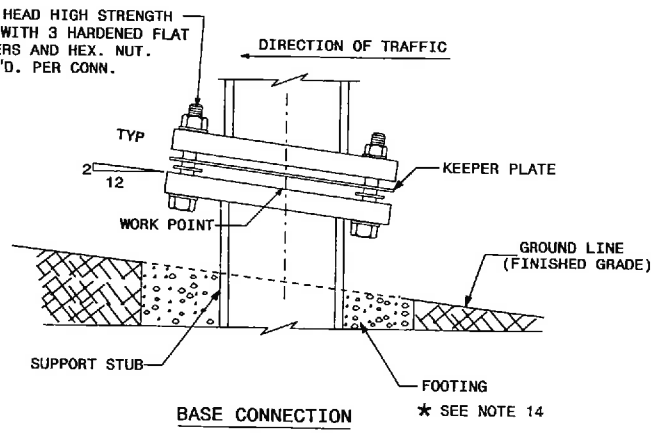
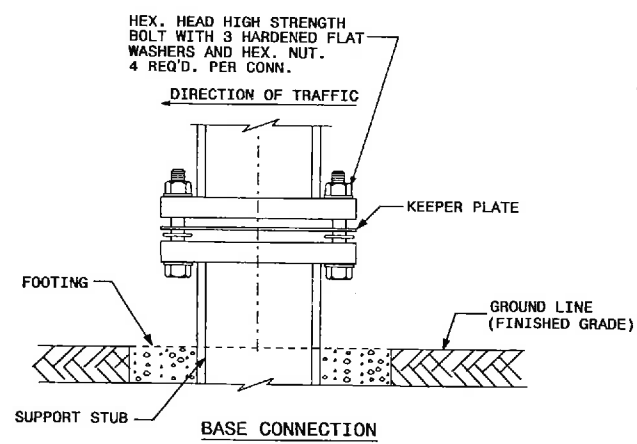
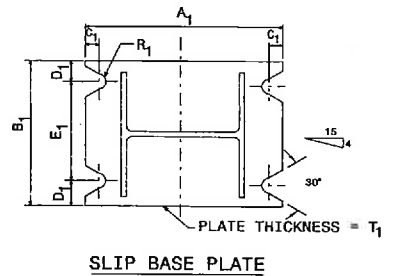
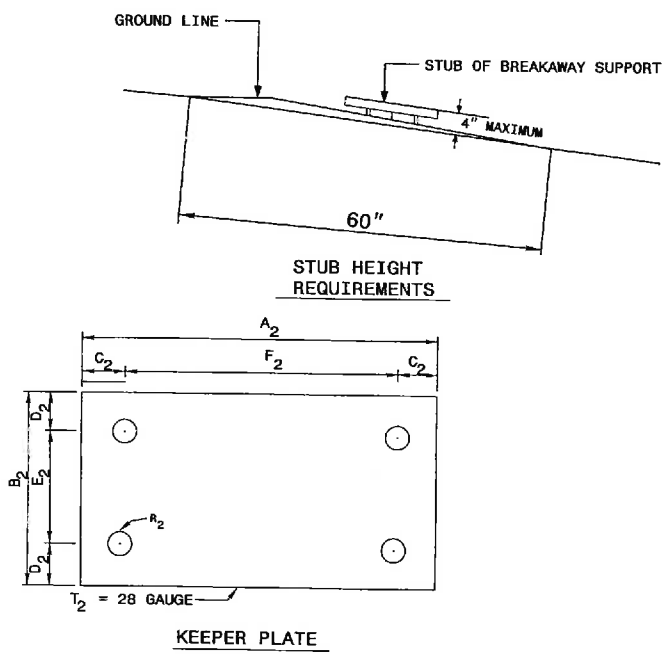
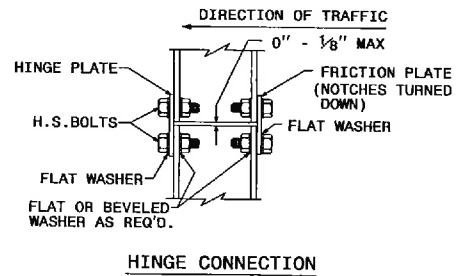
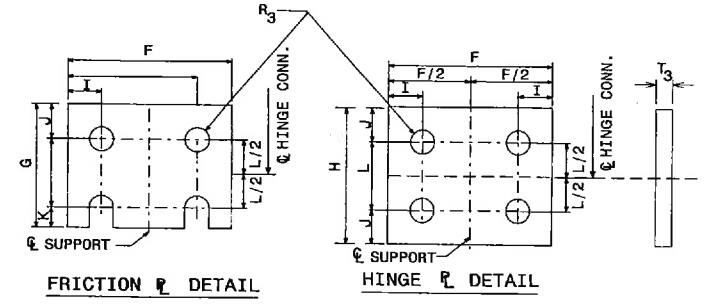
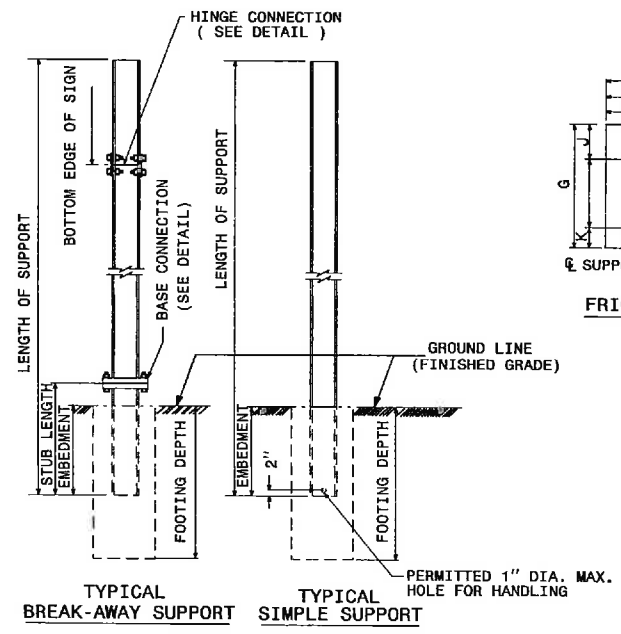
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DATE: 7/26/13	
SEAL	
	

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

1-12

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10



SEE SHEET 2 OF 3 FOR
BASE CONNECTION DATA
HINGE CONNECTION DATA
& FOUNDATION DATA.
SEE SHEET 3 OF 3 FOR
GENERAL NOTES.

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


1-12

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3
903D10

**REVISED SIGNING
ROADWAY STANDARD DRAWING**

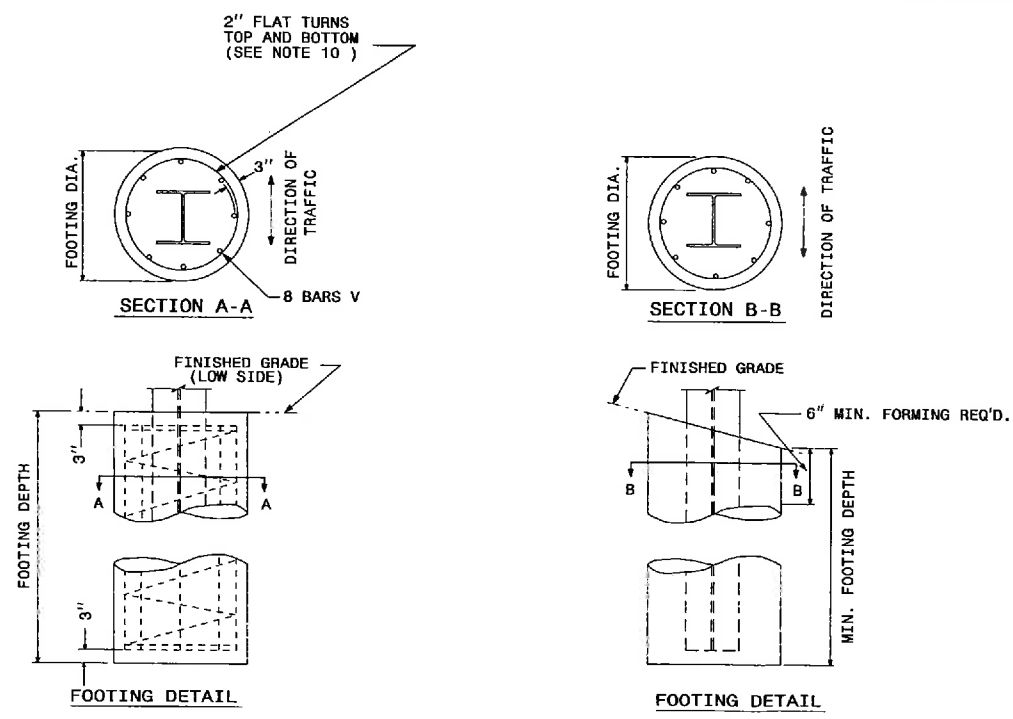
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TIP NO. L-12-177-E54	SHEET NO. SIGN-2B
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DATE: 7/26/13	
SEAL	
	

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

ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

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	
S3X5.7	1/2"DIA. X 3/4"	7"	4"	1"	3/4"	2 1/2"	1"	9/32"	7"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 1/4"	3 1/2"	4"	1 1/2"	1"	1 1/2"	2"	9/32"	3/8"	18
S4X7.7	1/2"DIA. X 3/4"	8"	4"	1"	3/4"	2 1/2"	1"	9/32"	8"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 5/8"	3 1/2"	4"	1 1/2"	1"	1 1/2"	2"	9/32"	3/8"	20
W6X9	1/2"DIA. X 3/4"	10"	5"	1"	3/4"	3 1/2"	1"	9/32"	10"	5"	1"	3/4"	3 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	4"	3 1/2"	4"	3/4"	1"	1 1/2"	2"	9/32"	3/8"	32
W6X12	5/8"DIA. X 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"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	3/8"	39
W6X16	5/8"DIA. X 4 1/2"	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 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	1 1/32"	1/2"	47
W8X18	5/8"DIA. X 4 1/2"	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 1/4"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	1 1/32"	1/2"	70
W8X21	3/4"DIA. X 4 1/2"	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 1/2"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	1/2"	73
W10X22	3/4"DIA. X 4 1/2"	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 1/2"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	1/2"	119
W10X26	3/4"DIA. X 5 1/2"	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"	5/8"	140
W12X26	3/4"DIA. X 5 1/2"	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"	5/8"	176
W14X30	1"DIA. X 6"	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"	5/8"	205
W16X31	1"DIA. X 6"	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"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	223
W18X35	1"DIA. X 6"	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"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	243
W18X40	1"DIA. X 6 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 1/2"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	278
W21X44	1"DIA. X 7"	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 1/2"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	310



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1'-6"	8 # 6 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
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 RALEIGH, N.C.

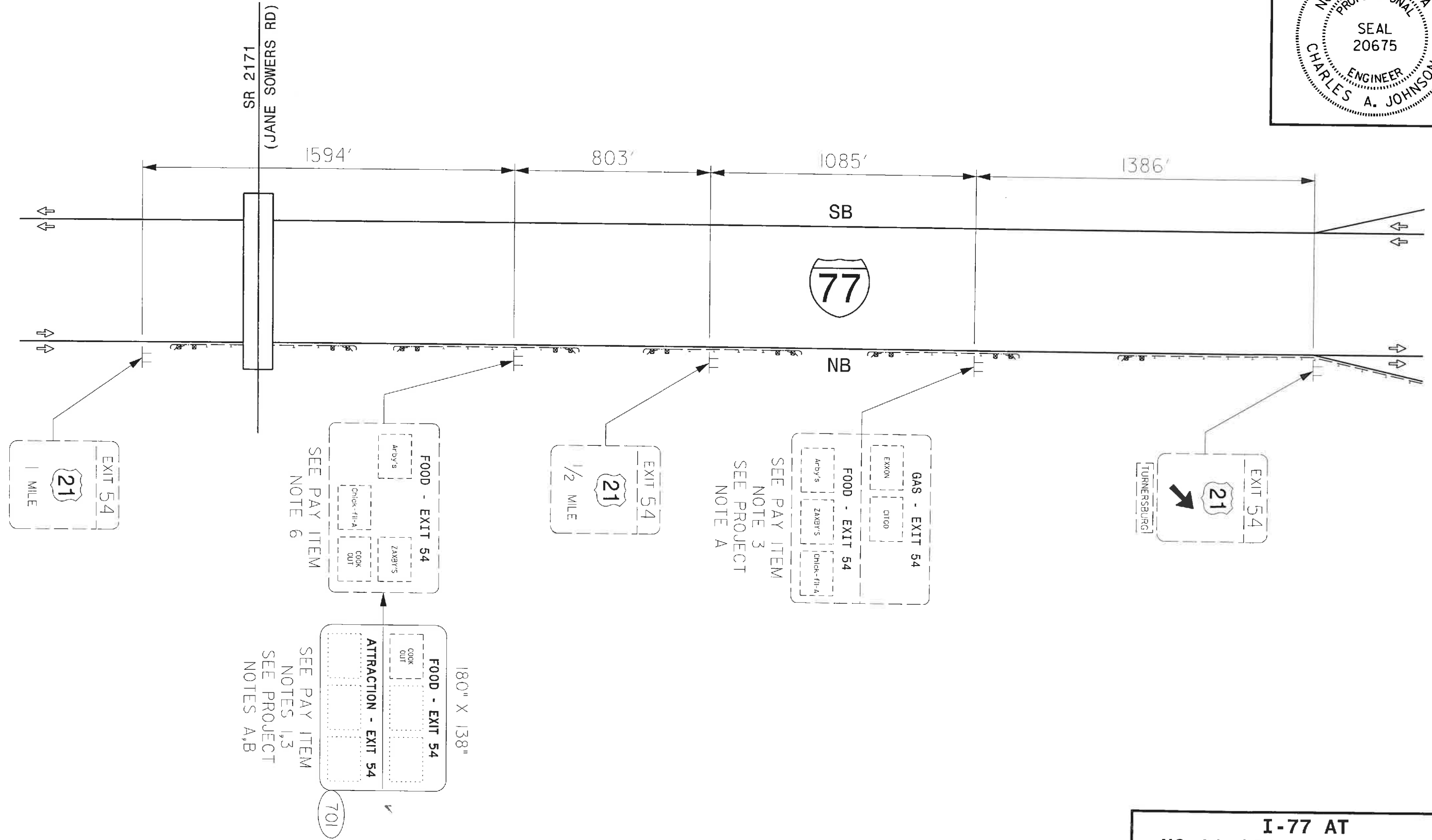
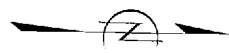
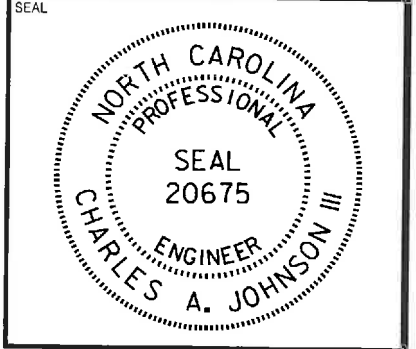
ENGLISH DETAIL DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 2 OF 3
903D10

SHEET 2 OF 3
903D10

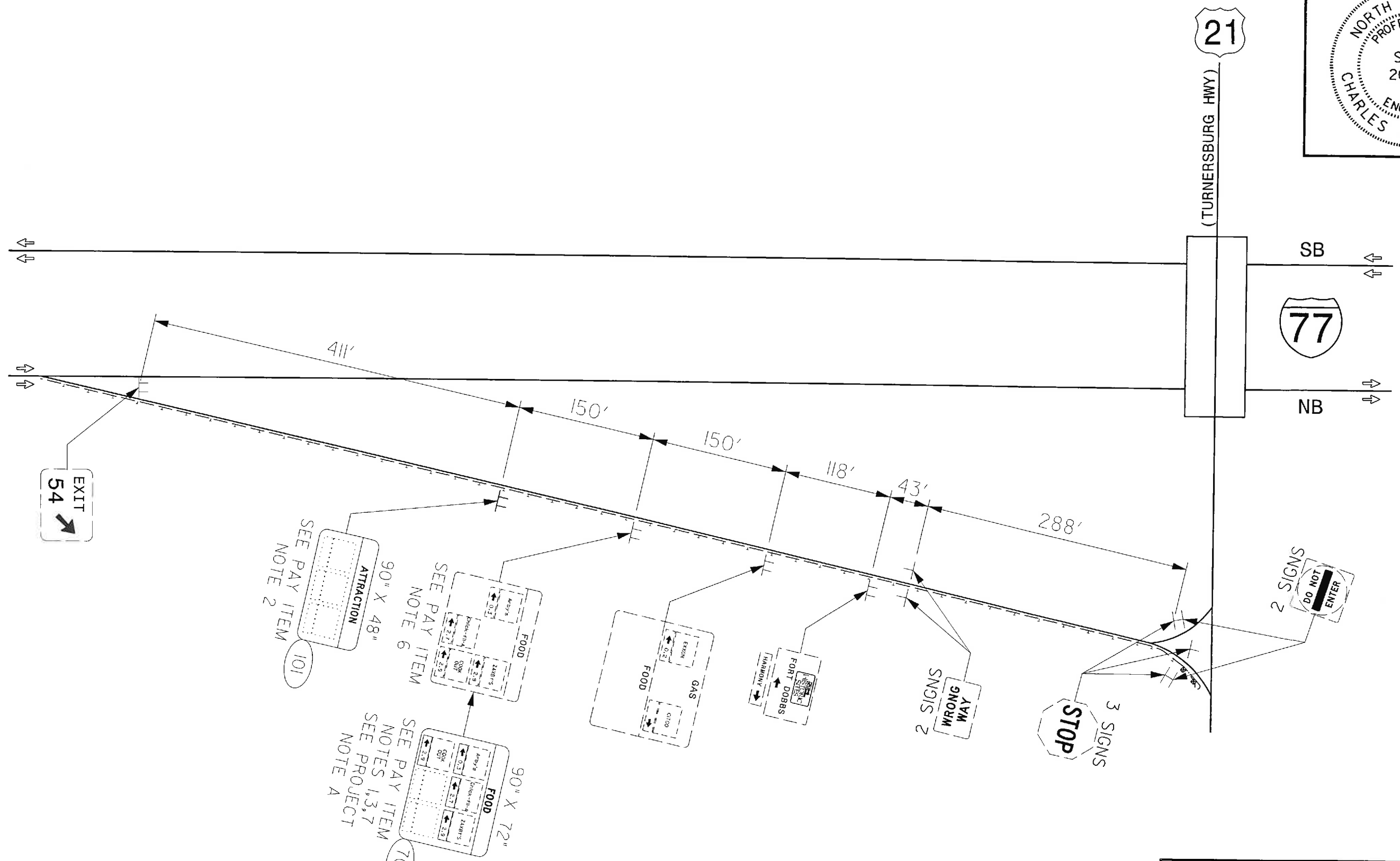
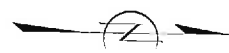
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 ROADWAY STANDARD DRAWING**

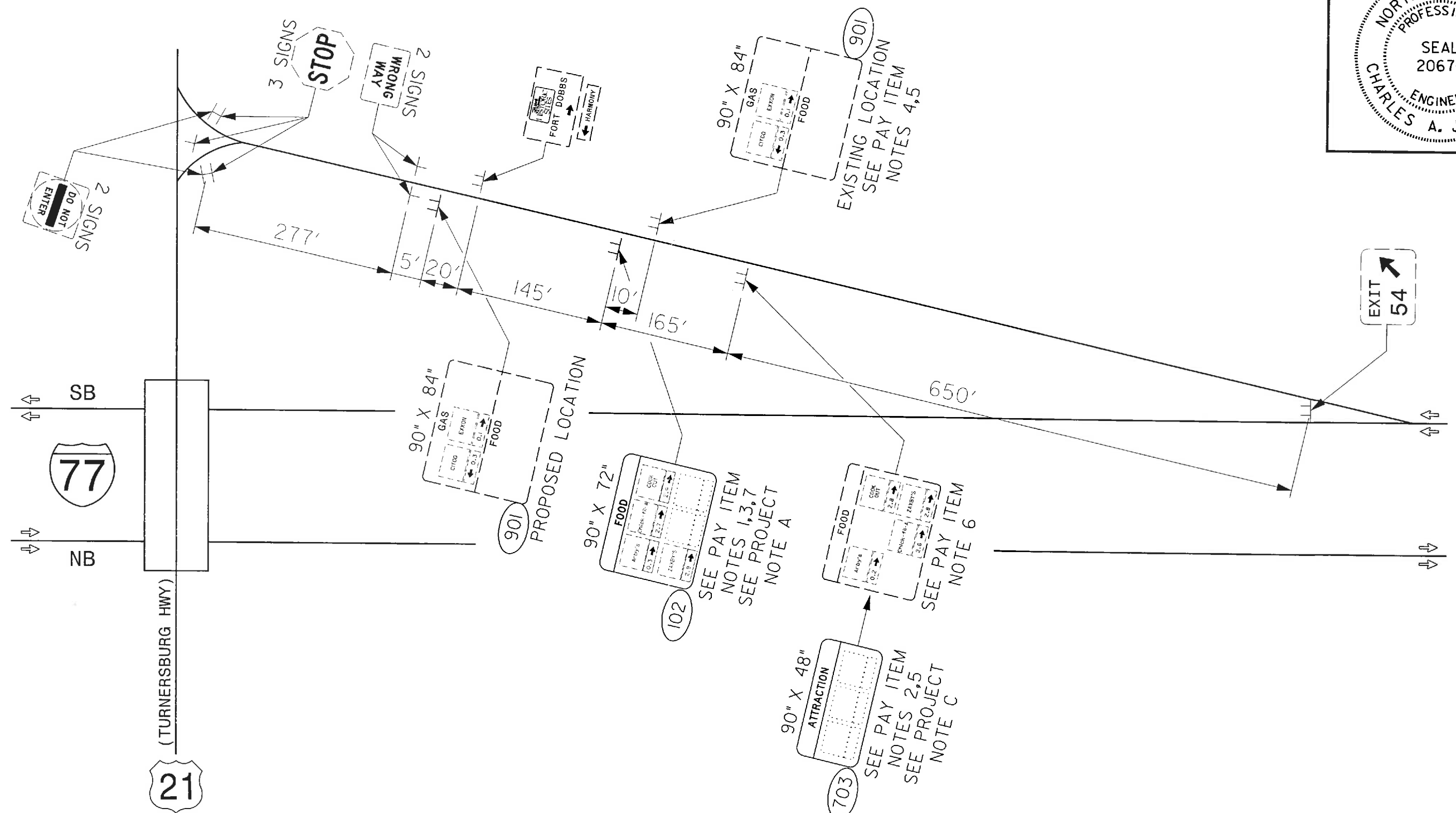
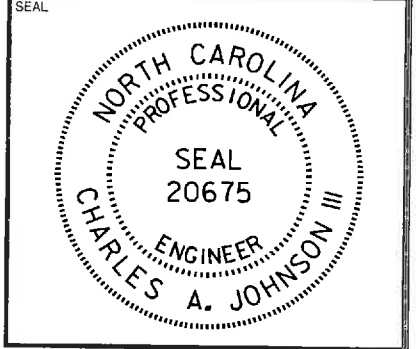
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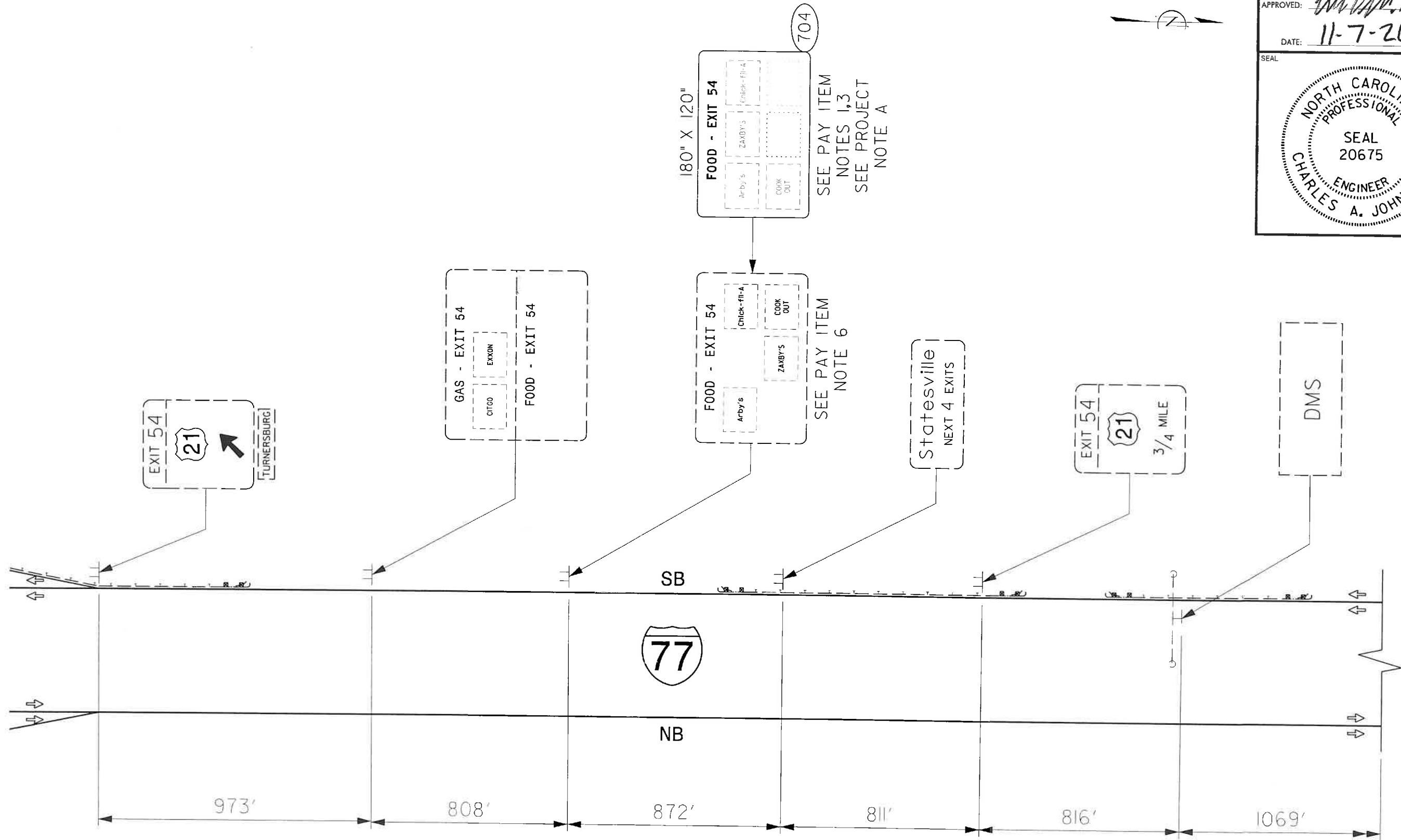
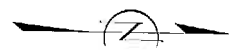
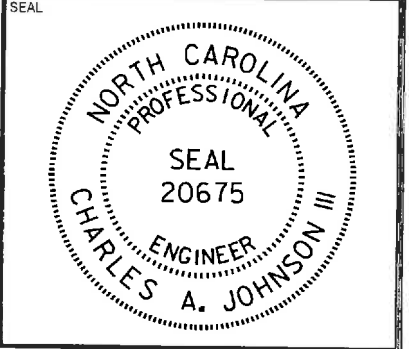
**I-77 AT
US-21 (TURNERSBURG HWY)
EXIT 54**

LOGO NO. L-12-177-54	SHEET NO. SIGN-4
APPROVED: <i>[Signature]</i>	
DATE: 11-7-2016	
SEAL	





APPROVED: *[Signature]*
 DATE: 11-7-2016



180" X 120"

FOOD - EXIT 54

Arby's

ZAXBY'S

Chick-fil-A

COOK OUT

SEE PAY ITEM NOTES 1,3 SEE PROJECT NOTE A

704

FOOD - EXIT 54

Arby's

Chick-fil-A

ZAXBY'S

COOK OUT

SEE PAY ITEM NOTE 6

GAS - EXIT 54

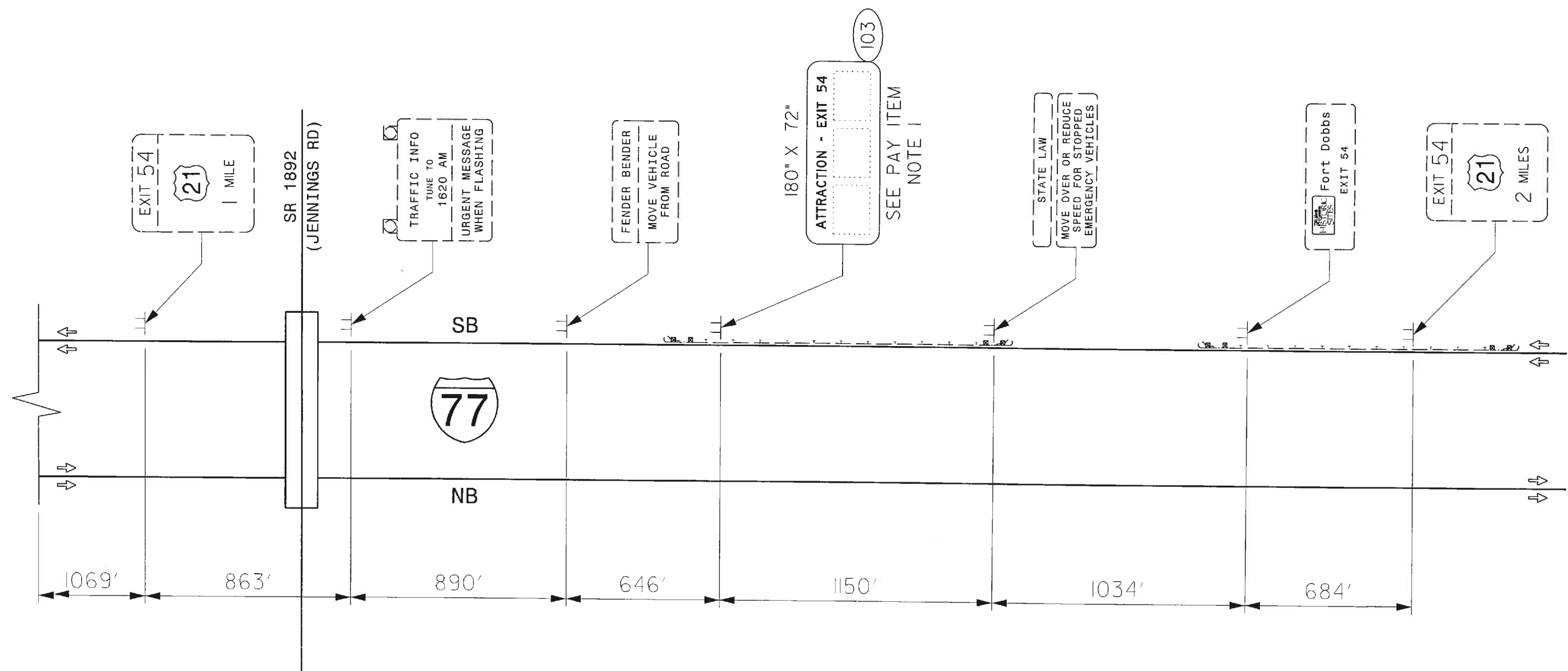
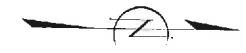
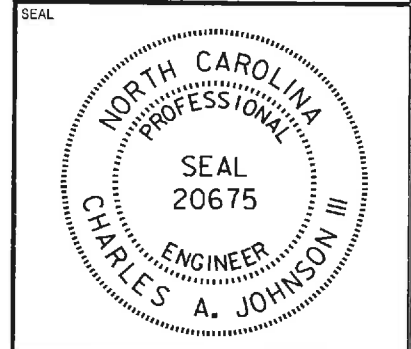
EXXON

FOOD - EXIT 54

Statesville
NEXT 4 EXITS

EXIT 54
21
3/4 MILE

DMS



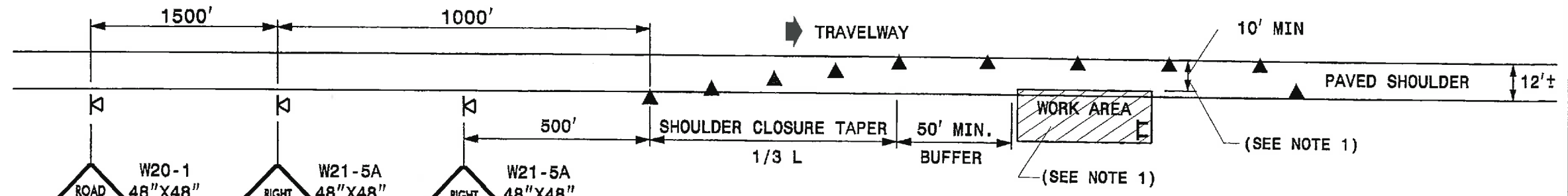
SHOULDER CLOSURE ON CONTROLLED ACCESS FACILITY

SHEET NO. TCP-1

APPROVED: *[Signature]*

DATE: 7/10/12

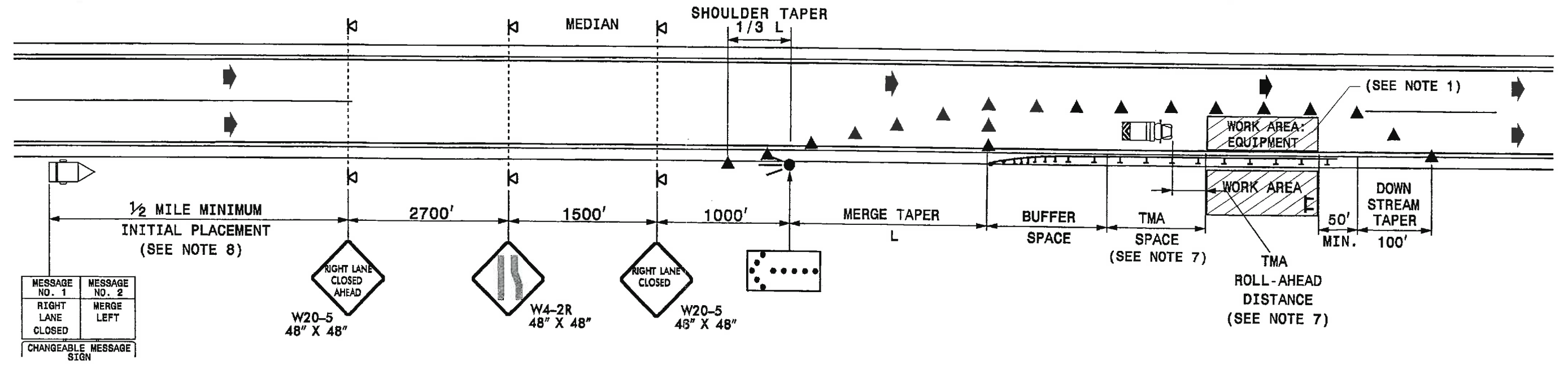
SEAL



GENERAL NOTES

- SHOULDER CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS 10' OR MORE (BUT LESS THAN 15') FROM THE TRAVEL LANE. IF EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' FROM THE TRAVEL LANE, SEE LANE CLOSURE TYPICAL BELOW.
- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- PLACE 36" CONES IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF CONES ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- REFER TO STD. 1101.11 SHEET 1 FOR "L" DISTANCE.
- DRUMS MAY BE USED IN LIEU OF CONES.

RIGHT LANE CLOSURE ON CONTROLLED ACCESS FACILITY



GENERAL NOTES

- LANE CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' OF THE TRAVEL LANE.
- PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW PANELS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW PANEL LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW PANEL IS MET. (SEE STD. 1101.11 SHEET 2)
- PLACE 36" CONES IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE CONES ALONG THE BUFFER SPACE AND WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- REFER TO STD. 1101.11 SHEETS 1 & 2 FOR "L" DISTANCE AND BUFFER SPACE.
- REFER TO STD. 1101.02 SHEETS 9 & 10 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- TMA'S ARE REQUIRED REGARDLESS OF WHETHER BUFFER SPACE CAN BE ATTAINED. POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER. TMA'S ARE ALSO TO BE USED TO AID INSTALLATION OF THE LANE CLOSURE AND MUST BE EQUIPPED WITH A TYPE C FLASHING ARROW PANEL.
- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC, MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.
- DRUMS MAY BE USED IN LIEU OF CONES.

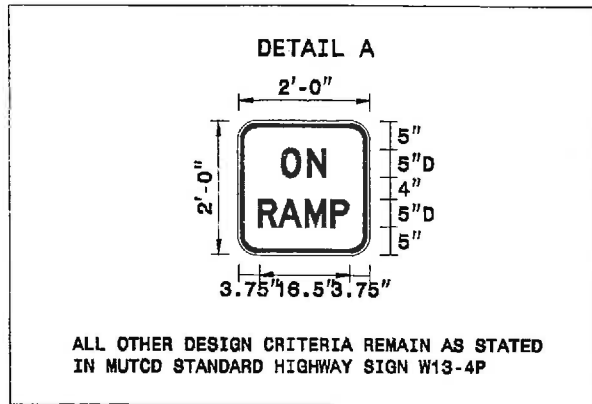
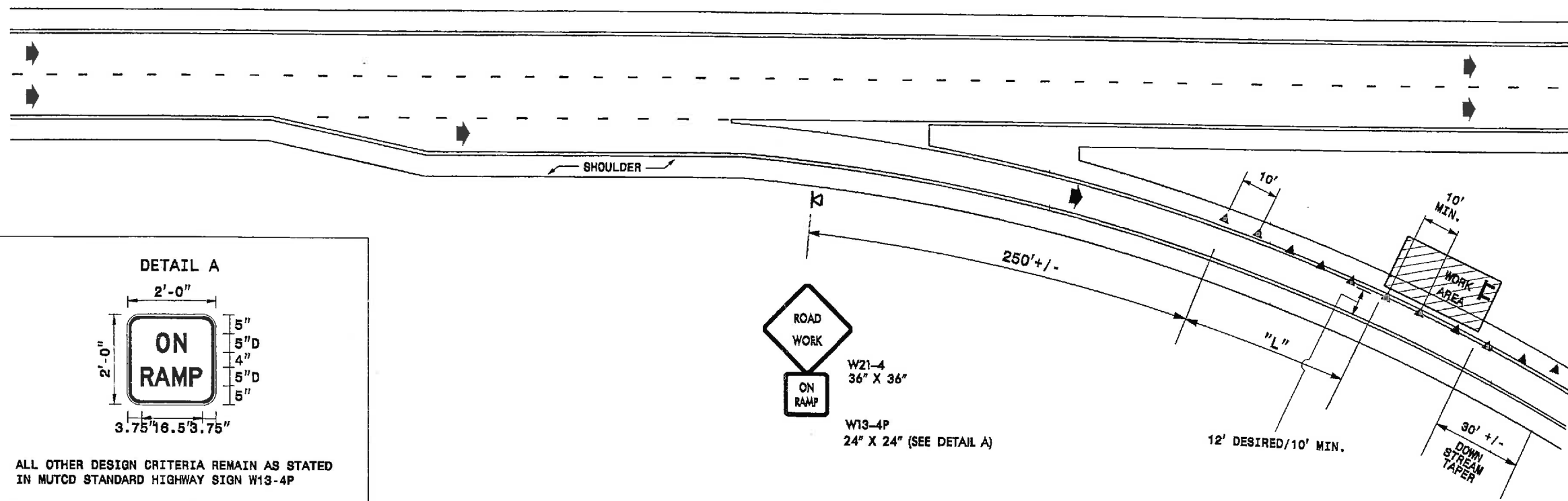
LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN (CMS)
- CONE (36" MINIMUM HEIGHT)
- PORTABLE SIGN
- LOGO SIGN
- DIRECTION OF TRAFFIC FLOW

MAINLINE SHOULDER CLOSURE AND LANE CLOSURE TYPICALS FOR LOGO SIGN INSTALLATION

C:\Users\jking\Documents\Projects\STANDARDOS\Traffic Control Standard Sheets\velures.dgn
 03-JUL-2012 15:52
 jking

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (LEFT)



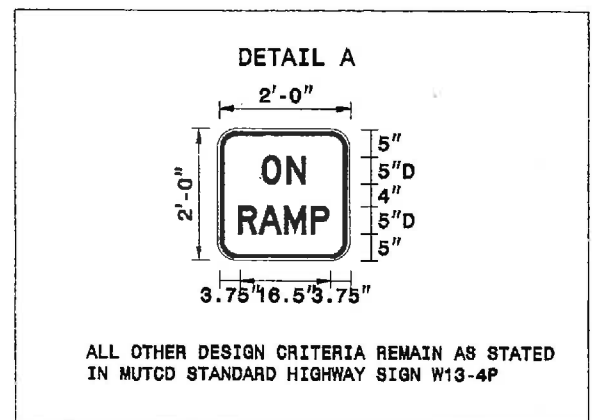
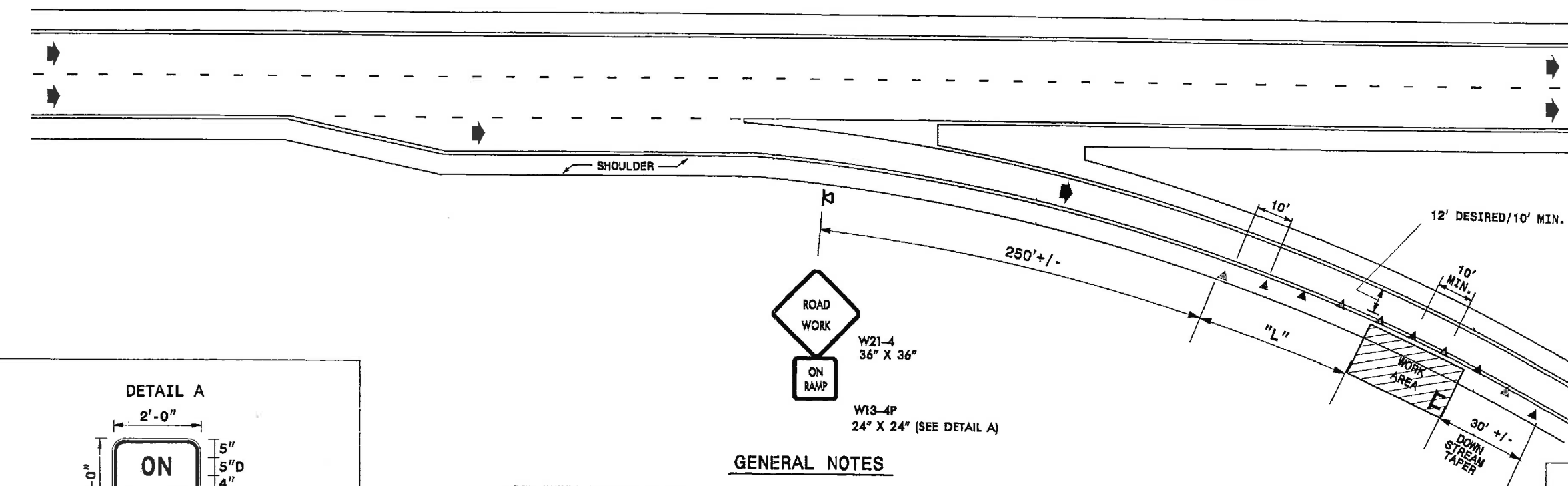
SHEET NO. TCP-2

APPROVED: *[Signature]*

DATE: 7/10/12

SEAL

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (RIGHT)



GENERAL NOTES

- SEE MUTCD SECTION 6F.25
- SIGNS SHALL NOT BE DISPLAYED WHEN WORK IS NOT IN EFFECT.
- FOR NIGHT OPERATIONS, USE CONES WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- THE CONTRACTOR SHALL NOT CROSS MEDIANS, RAMP, OR LOOPS WITH WORK VEHICLES UNLESS A LOCATION HAS BEEN APPROVED BY THE ENGINEER.
- PLACE CONES IN TAPERS AT 10' SPACING. PLACE CONES ALONG THE WORK AREA AS SHOWN.
- REFER TO STD. 1101.11 SHEET 1 OF 4. USE 1/2 POSTED MAINLINE SPEED FOR (S) VALUE. USE THE LANE ENCROACHMENT DISTANCE AS THE LATERAL WIDTH (W) TO DETERMINE "L".
- INSTALL DEVICES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE DEVICES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM OF TRAFFIC.

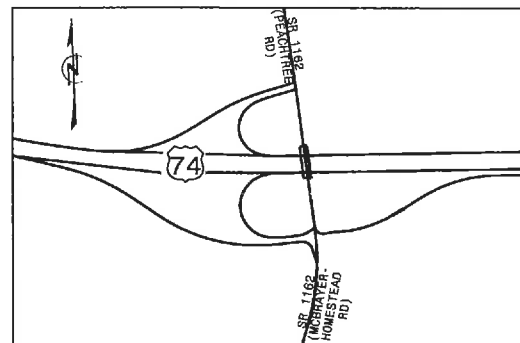
LEGEND

	LOGO SIGN
	CONES (36" MINIMUM HEIGHT)
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL ON RAMP FOR LOGO SIGN INSTALLATION

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 09/20/12 15:30
 jking
 11/10/12

GAS SERVICES
 US-74 AT SR 1162 (PEACHTREE
 RD/MCBRAYER HOMESTEAD RD)
 EXIT 193



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION

LOGO SIGNING PLANS
 CLEVELAND COUNTY

LOGO NO. L-12-US74-E193	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	DATE: 9-21-2016
SEAL	

L-12-US74-E193

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
0001000000	800	MOBILIZATION	1	L.S.
4054000000	902	PLAIN CONCRETE SIGN FOUNDATIONS	1	C.Y.
4060000000	903	SUPPORTS, BREAKAWAY STEEL BEAM	556	LB.
4110000000	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	2	EA.
4116300000	904	SIGN ERECTION, LOGO TO PANEL	2	EA.
S	SP	SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN	2	EA.
S	SP	TRAFFIC CONTROL	1	L.S.

GENERAL NOTES

- SIGNS FURNISHED BY THE STATE.
- CONTRACTOR SHALL OBSERVE: STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DIVISION 9, SECTIONS 900 THRU 907 UNLESS SPECIFICALLY WAIVED BY THE ENGINEER.
- WORK ZONE TRAFFIC CONTROL DEVICES PROVISIONS APPLY.
- SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/ OR STAKES. IF PRESENT, STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.10 AND ALL OTHER APPLICABLE STANDARDS.
- CLEARING MAY BE REQUIRED FOR SIGHT DISTANCE. IF NEEDED, CLEAR VEGETATION ACCORDING TO SECTION 903-3 OF THE SPECIFICATIONS. CLEARING IS INCIDENTAL TO SIGN SUPPORTS.

PAY ITEM NOTES

- SIGN ERECTION, TYPE B (GROUND MOUNTED)
- SIGN ERECTION, LOGO TO PANEL
- SIGN ERECTION, LOGO MILEAGE PANEL TO SIGN

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
901.20	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 (EXCEPT SHEETS 1 OF 3 AND 2 OF 3 WHICH ARE REPLACED WITH SHEET SIGN-2A AND SIGN-2B IN PLANS)
904.10	ORIENTATION OF GROUND MOUNTED SIGNS

STATE FURNISHED SIGNS ITEM DESCRIPTIONS	QUANTITY	UNIT
TYPE B SIGNS	60	S.F.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2-2B	SUPPORT INFORMATION
SIGN-3-6	SIGNING PLAN SHEETS
TCP-1-2	TRAFFIC CONTROL PLANS

PLANS PREPARED FOR: N.C.D.O.T. SIGNING AND DELINEATION UNIT

KELVIN JORDAN SIGNING & DELINEATION WESTERN REGIONAL ENGINEER
 SCOTT POSTON DIVISION 12 LOGO COORDINATOR



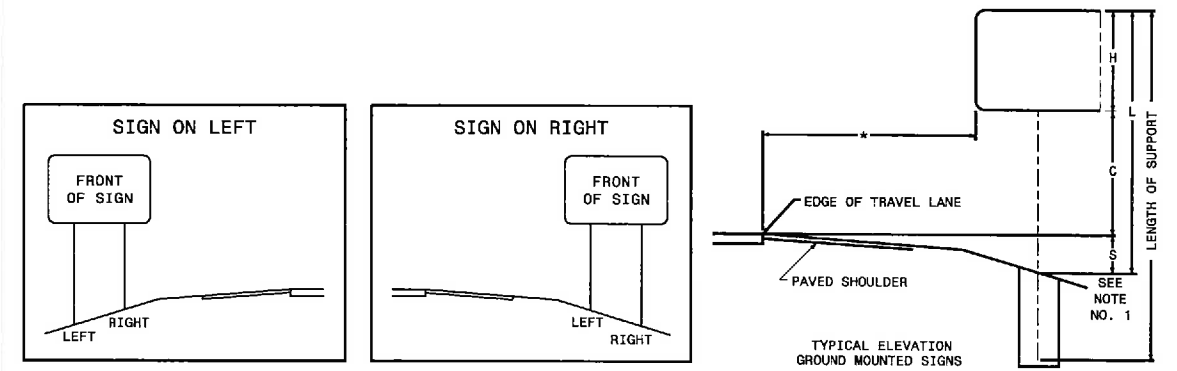
PLAN PREPARED BY :
HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 C.A. JOHNSON, III, PE SIGNING PROJECT ENGINEER
 A.D. KLINSIEK, PE, PTOE SIGNING DESIGN ENGINEER
 N.K. VLANICH SIGNING DESIGN TECHNICIAN

LOGO NO. L-12-US74-F193	SHEET NO. SIGN-2
APPROVED: <i>[Signature]</i>	
DATE: 9-21-2016	

Version: 3.0 Posted: 6/13/2016

NUMBER	SIGN TYPE	SIGN SIZE (in.)			ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	OMNI COUPLER	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			SUPPORT WEIGHTS		FOOTINGS				FIELD VERIFIED (mm/dd/yy)
		w	x	h										SNS HT	MTG HT	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH	B/A (lbs.)	SIMPLE (lbs.)	DIAMETER (ft.)	DEPTH (ft.)	REINFORCED (c.y.)	PLAIN (c.y.)	
		"H"	"C"																													
101	B	90	x	48	EB Ramp	2	S4x7.7	BA	N/A	N/A	N/A	18.00	4.40	4.00	7.00	3.0	1.90	12.90	15.90	0.00	0.00	0.00	2.90	13.90	16.90	292.56	0	1.0	3.5	0.00	0.20	7/27/2016
102	B	90	x	48	WB Loop	2	S4x7.7	BA	N/A	N/A	N/A	16.00	4.40	4.00	9.80	3.0	-1.80	12.00	15.00	0.00	0.00	0.00	-2.80	11.00	14.00	263.30	0	1.0	3.5	0.00	0.20	7/27/2016


TOTAL	TOTAL	TOTAL	TOTAL
555.86	0.00	0.00	0.41
USE:	556.00	0.00	1.00



- NOTES
- DIMENSION "S" REPRESENTS AN INCREASE (+), OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL WAY.
 - PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND 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.
 - SIGN LOCATIONS ARE MARKED IN THE FIELD BY PAINT AND/OR STAKES. IF PRESENT, FIELD STAKES MARK APPROXIMATE LOCATIONS OF SUPPORTS. IT IS INCUMBENT UPON THE CONTRACTOR TO LOCATE SUPPORTS ACCORDING TO ROADWAY STANDARD DRAWING 904.1 AND ALL OTHER APPLICABLE STANDARDS.

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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

TYPE 'A' AND 'B' GROUND MOUNTED SIGNS US-74 AT SR 1162 (PEACHTREE RD/MC BRAYER HOMESTEAD RD) EXIT 193

TIP NO. L-12-US74-E193	SHEET NO. SIGN-2A
APPROVED: <i>RW</i>	
DATE: 7/26/13	
SEAL	
	

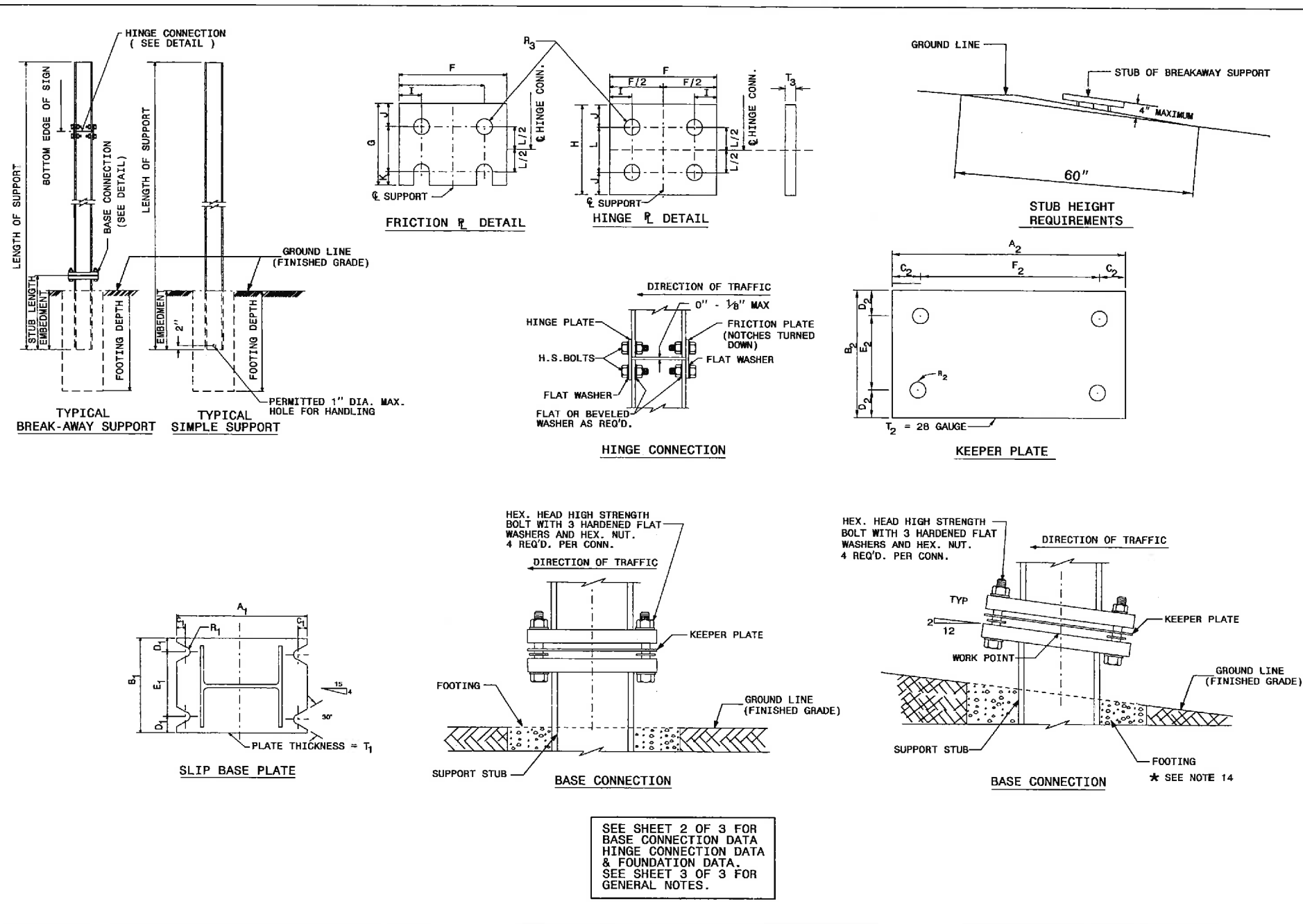
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3

903D10



SEE SHEET 2 OF 3 FOR
BASE CONNECTION DATA
HINGE CONNECTION DATA
& FOUNDATION DATA.
SEE SHEET 3 OF 3 FOR
GENERAL NOTES.

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

1-12

ENGLISH STANDARD DRAWING FOR
GROUND MOUNTED SIGN SUPPORTS

SHEET 1 OF 3

903D10

REVISED SIGNING
ROADWAY STANDARD DRAWING

26-JUL-2013 09:37
S:\8801\Standards and Drawings\Drawings\2012 Standard Dwg\Division 9 Final\090310.dgn support-1.dgn Revised: 7-3-13.dgn
AT 1228589

TIP NO. L-12-US74-E193 SHEET NO. SIGN-2B

APPROVED: *R. W. King*

DATE: 7/26/13

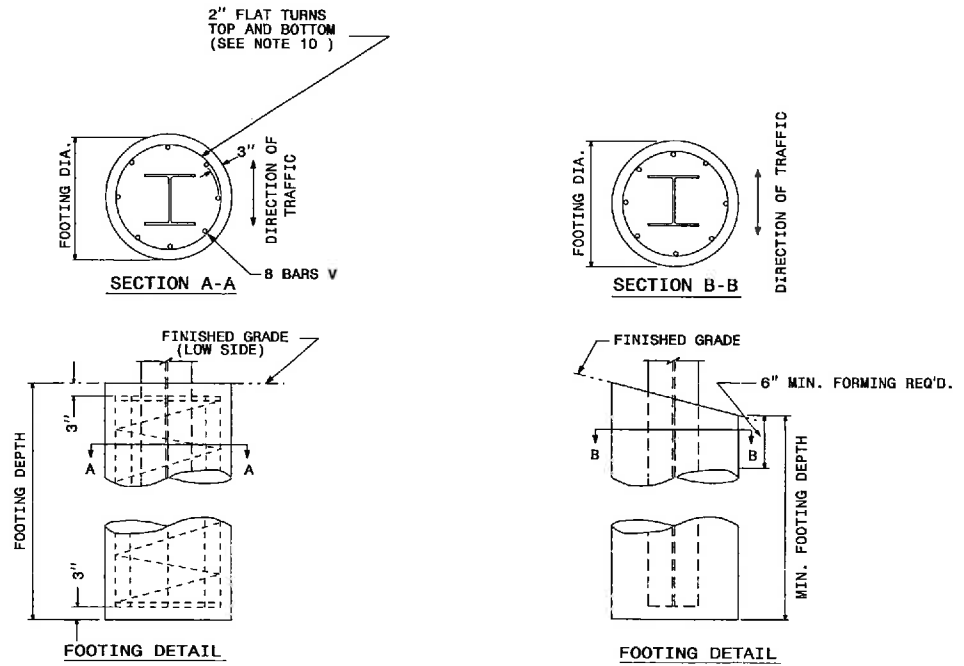
SEAL

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			
S3X5.7	1/2"DIA. X 3/4"	7"	4"	1"	3/4"	2 1/2"	1"	9/32"	7"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 1/4"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	3/8"	18		
S4X7.7	1/2"DIA. X 3/4"	8"	4"	1"	3/4"	2 1/2"	1"	9/32"	8"	4"	1"	3/4"	2 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	3/8"	20		
W6X9	1/2"DIA. X 3/4"	10"	5"	1"	3/4"	3 1/2"	1"	9/32"	10"	5"	1"	3/4"	3 1/2"	9/32"	28 GAUGE	1/2"DIA. X 1 3/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	9/32"	3/8"	32		
W6X12	5/8"DIA. X 4"	11"	5"	1 1/4"	7/8"	3 1/4"	1 1/4"	11/32"	11"	5"	1 1/4"	7/8"	3 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	3/8"	39		
W6X16	5/8"DIA. X 4 1/2"	12"	6"	1 1/4"	7/8"	4 1/4"	1 1/2"	11/32"	12"	6"	1 1/4"	7/8"	4 1/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/4"	4"	4"	4 1/2"	3/4"	1 1/8"	5/8"	2 1/4"	11/32"	1/2"	47		
W8X18	5/8"DIA. X 4 1/2"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	1 1/2"	11/32"	13 1/2"	6 1/2"	1 1/4"	7/8"	4 3/4"	11/32"	28 GAUGE	5/8"DIA. X 2 1/4"	5 1/4"	4"	4 1/2"	1"	1 1/8"	5/8"	2 1/4"	11/32"	1/2"	70		
W8X21	3/4"DIA. X 4 1/2"	14"	7"	1 1/2"	1"	5"	1 1/2"	13/32"	14"	7"	1 1/2"	1"	5"	13/32"	28 GAUGE	3/4"DIA. X 2 1/2"	5 1/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1/2"	73		
W10X22	3/4"DIA. X 4 1/2"	16"	8"	1 1/2"	1"	6"	1 1/2"	13/32"	16"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA. X 2 1/2"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	1/2"	119		
W10X26	3/4"DIA. X 5 1/2"	16 1/2"	8"	1 1/2"	1"	6"	1 3/4"	13/32"	16 1/2"	8"	1 1/2"	1"	6"	13/32"	28 GAUGE	3/4"DIA. X 2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	5/8"	140		
W12X26	3/4"DIA. X 5 1/2"	18 1/2"	9"	1 1/2"	1"	7"	1 3/4"	13/32"	18 1/2"	9"	1 1/2"	1"	7"	13/32"	28 GAUGE	3/4"DIA. X 2 3/4"	6 1/2"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	13/32"	5/8"	176		
W14X30	1"DIA. X 6"	22"	9"	2"	1 1/2"	6"	2"	17/32"	22"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	17/32"	5/8"	205		
W16X31	1"DIA. X 6"	24"	9"	2"	1 1/2"	6"	2"	17/32"	24"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	223		
W18X35	1"DIA. X 6"	25"	9"	2"	1 1/2"	6"	2"	17/32"	25"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	3/4"	243		
W18X40	1"DIA. X 6 1/2"	26"	9"	2"	1 1/2"	6"	2 1/4"	17/32"	26"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 1/2"	6"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	278		
W21X44	1"DIA. X 7"	29"	9"	2"	1 1/2"	6"	2 1/2"	17/32"	29"	9"	2"	1 1/2"	6"	17/32"	28 GAUGE	1"DIA. X 3 1/2"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	17/32"	7/8"	310		



FOUNDATION DATA *		
FOOTING DIAMETER	REINFORCEMENT	SPIRAL BAR
1'-6"	8 # 6 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

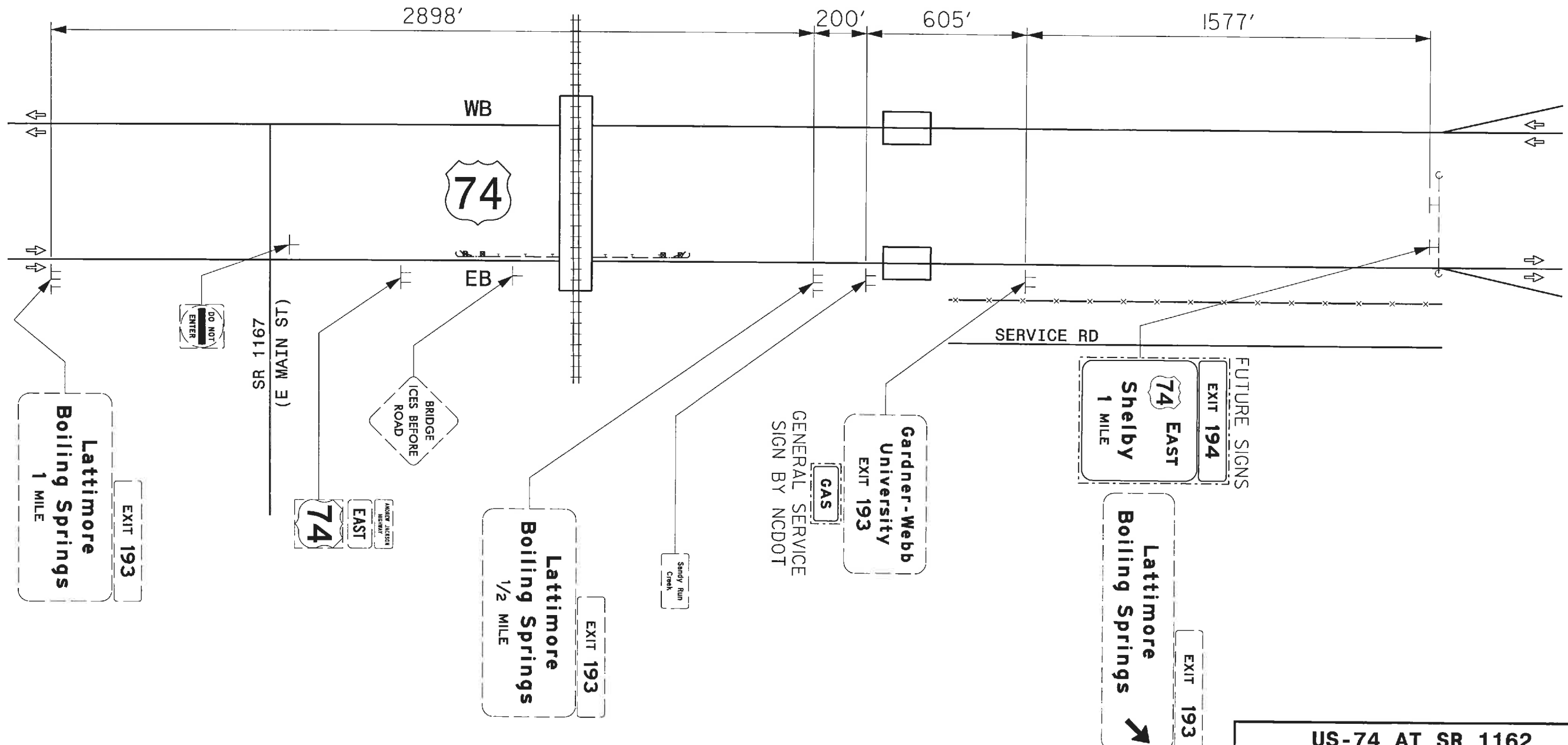
SHEET 2 OF 3
903D10

**REVISED SIGNING
ROADWAY STANDARD DRAWING**

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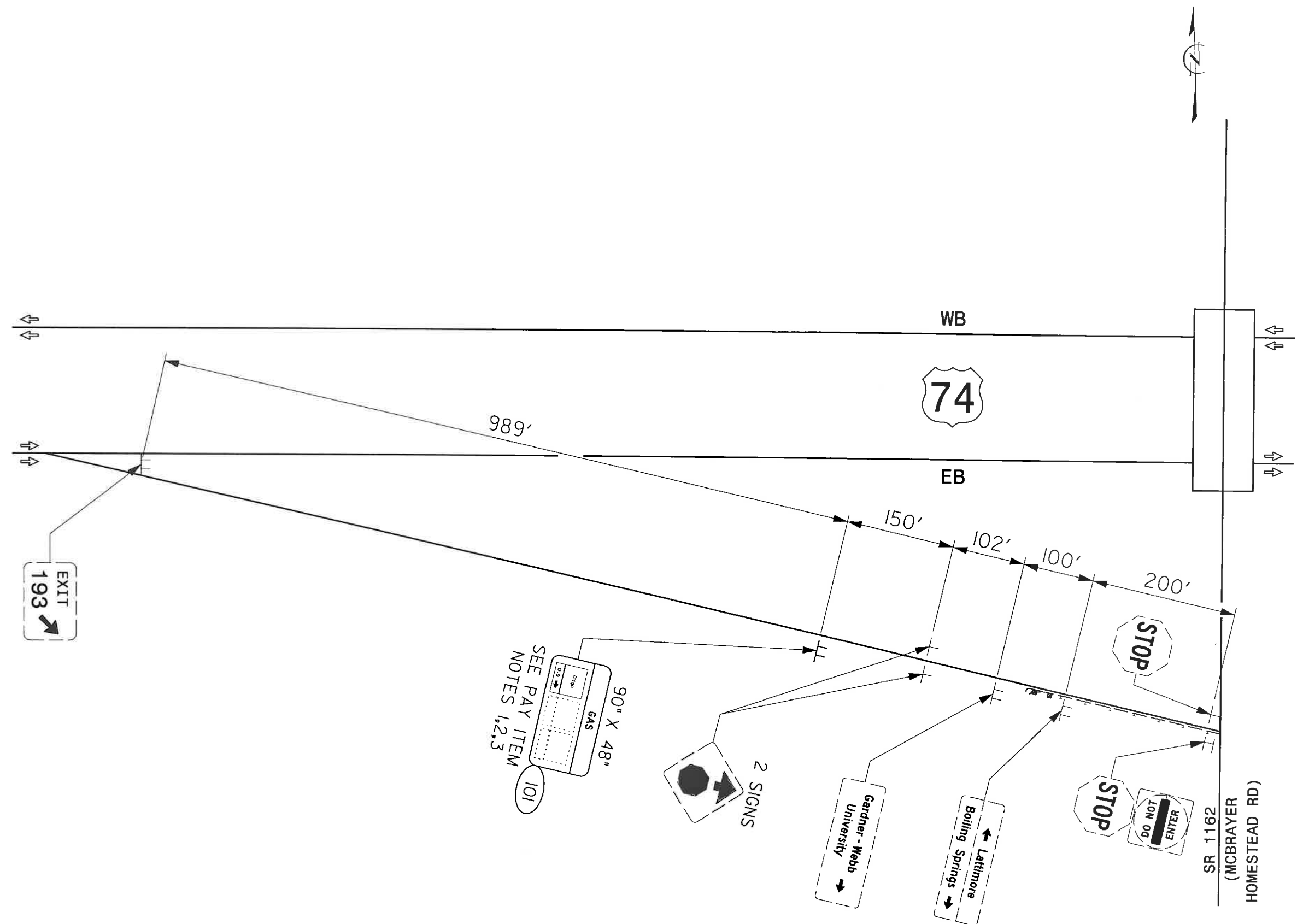
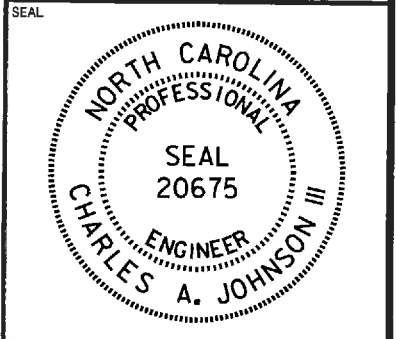
LOGO NO. L-12-US74-193	SHEET NO. SIGN-3
APPROVED: <i>[Signature]</i>	
DATE: 9-21-2016	
SEAL	



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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

**US-74 AT SR 1162
 (PEACHTREE RD/MCBRAYER
 HOMESTEAD RD) EXIT 193**

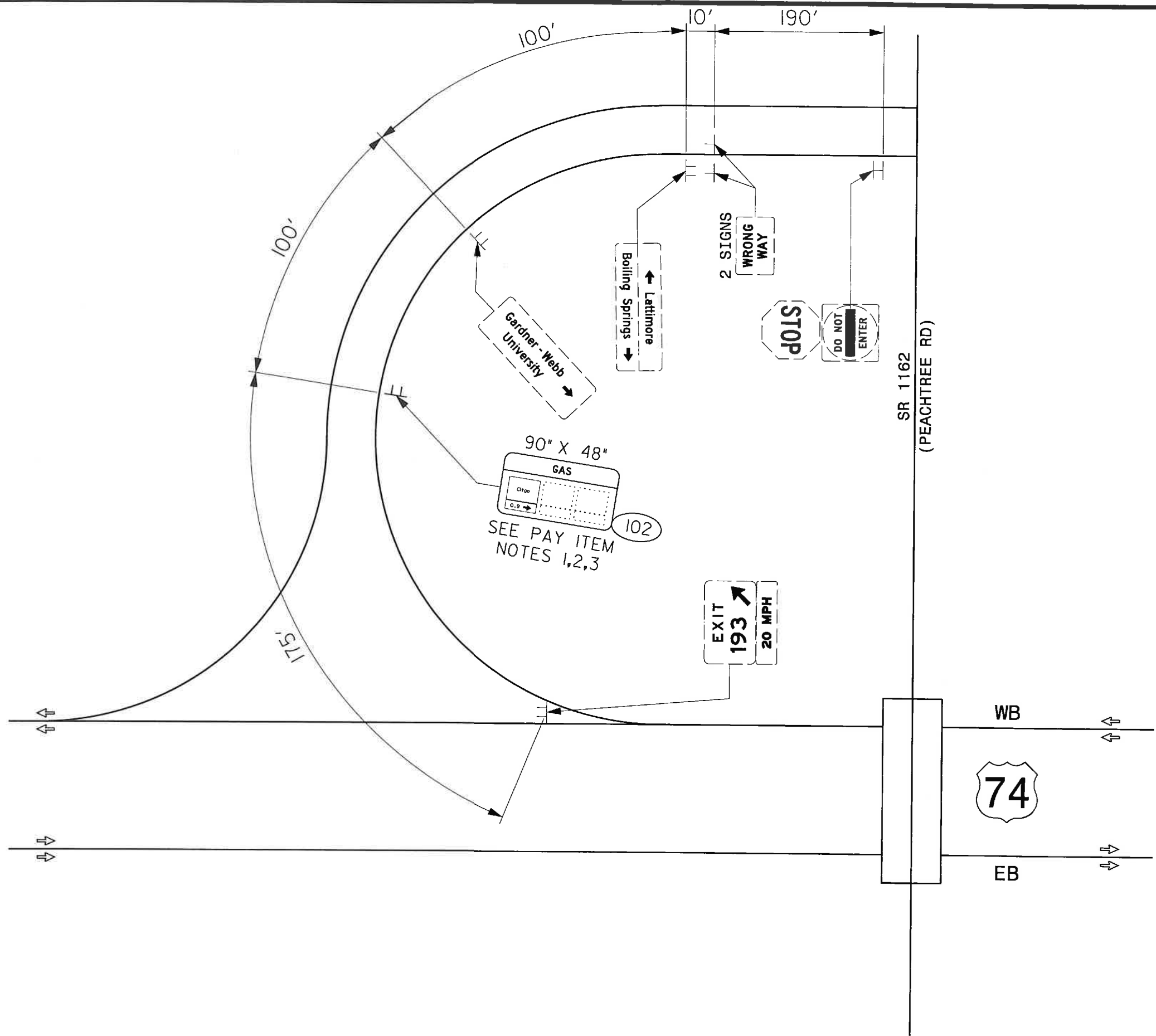
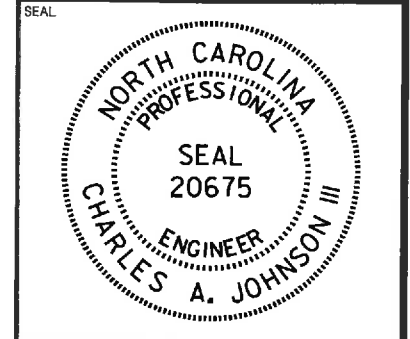
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 APPROVED: *[Signature]*
 DATE: 9-21-2016



**US-74 AT SR 1162
 (PEACHTREE RD/MCBRAYER
 HOMESTEAD RD) EXIT 193**

HNTB HNTB NORTH CAROLINA, P.C.
 343 E. SIX FORKS ROAD, SUITE 200
 RALEIGH, NORTH CAROLINA 27609
 NC LICENSE NO: C-1554

LOGG NO. SHEET NO.
 I-12-US74-E193 SIGN-5
 APPROVED: *[Signature]*
 DATE: 9-21-2016

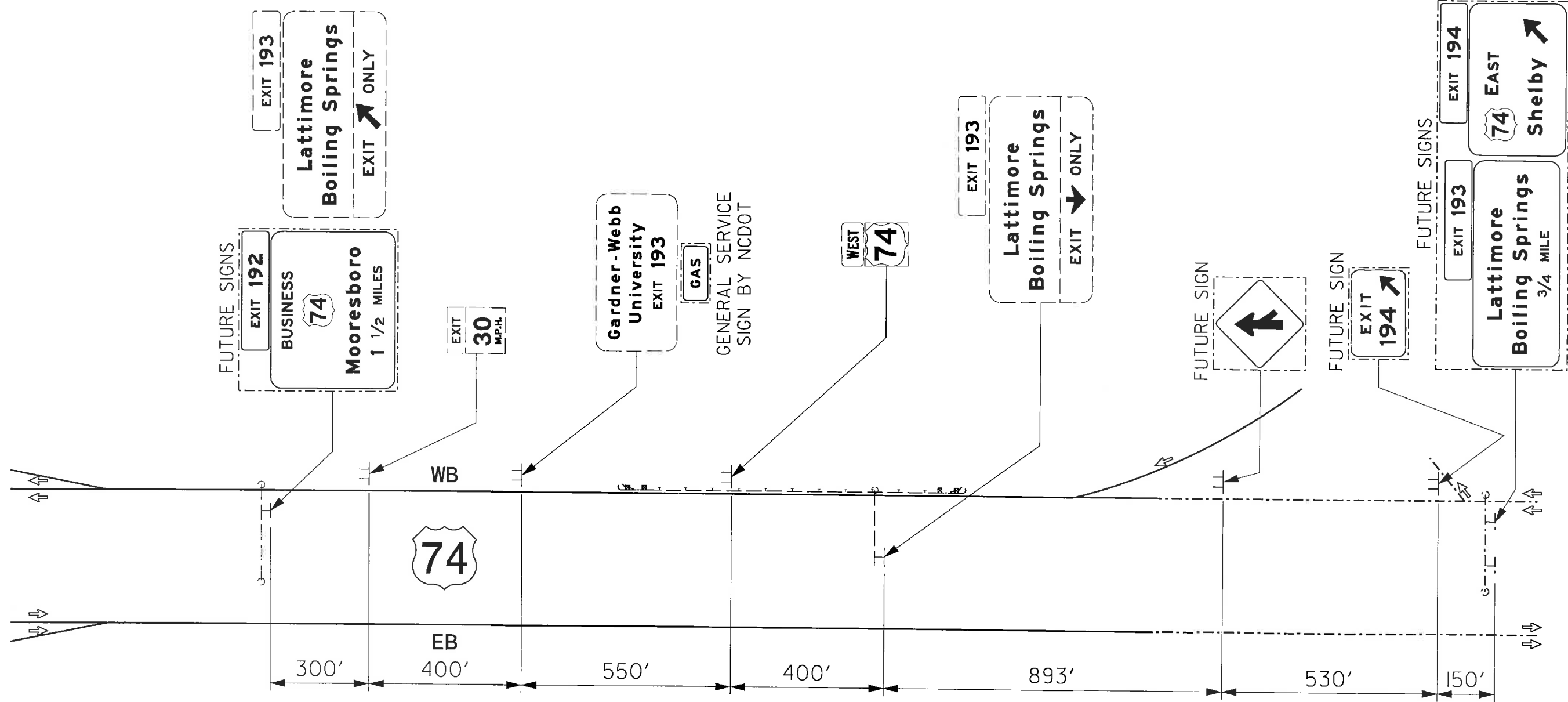


HNTB HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

**US-74 AT SR 1162
 (PEACHTREE RD/MCBRAYER
 HOMESTEAD RD) EXIT 193**

NO SIGN WORK THIS SHEET

LOGO NO. L-12-US74-193	SHEET NO. SIGN-6
APPROVED: <i>[Signature]</i>	
DATE: 9-21-2016	
SEAL	



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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

**US-74 AT SR 1162
(PEACHTREE RD/MCBRAYER
HOMESTEAD RD) EXIT 193**

SHOULDER CLOSURE ON CONTROLLED ACCESS FACILITY

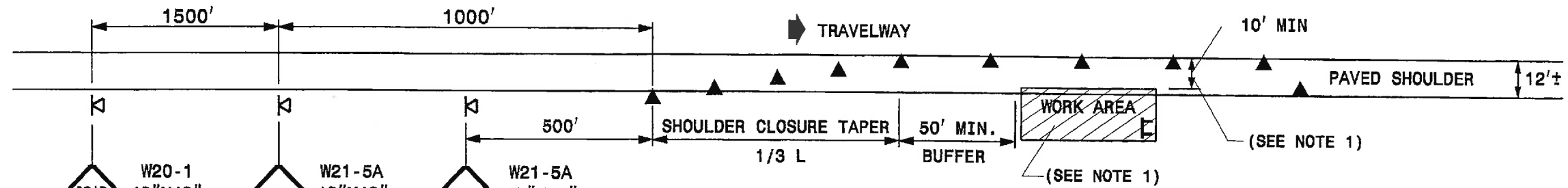
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APPROVED: *[Signature]*

DATE: 7/10/12

SEAL

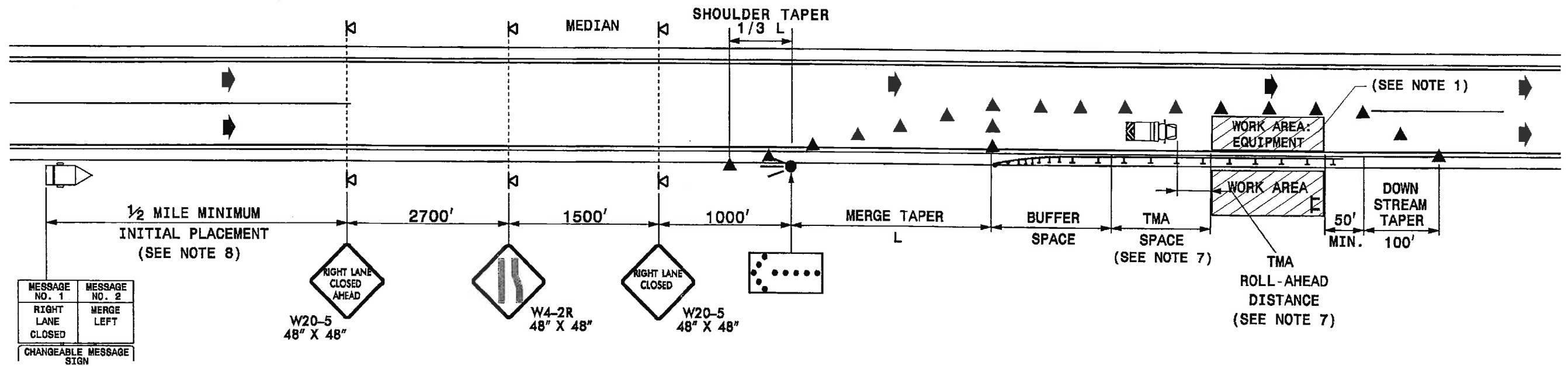
NORTH CAROLINA
PROFESSIONAL
SEAL
022959
ENGINEER
RONALD W. KING



GENERAL NOTES

- 1- SHOULDER CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS 10' OR MORE (BUT LESS THAN 15') FROM THE TRAVEL LANE. IF EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' FROM THE TRAVEL LANE, SEE LANE CLOSURE TYPICAL BELOW.
- 2- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- 3- PLACE 36" CONES IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF CONES ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEET 1 FOR "L" DISTANCE.
- 5- DRUMS MAY BE USED IN LIEU OF CONES.

RIGHT LANE CLOSURE ON CONTROLLED ACCESS FACILITY



GENERAL NOTES

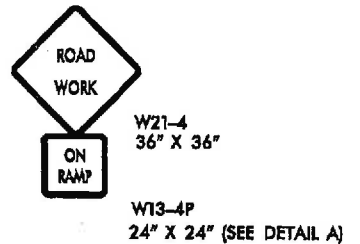
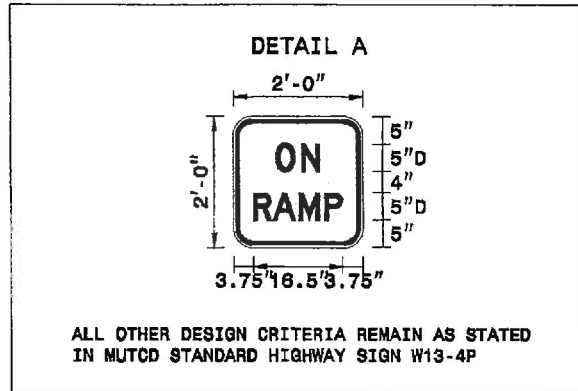
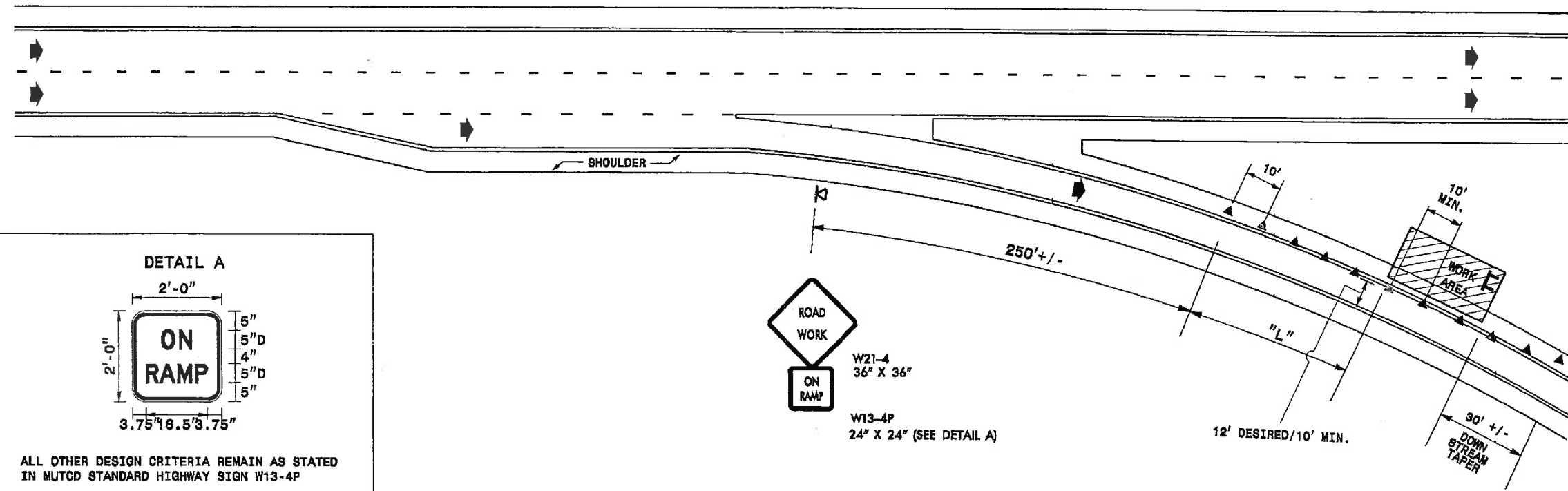
- 1- LANE CLOSURE IS REQUIRED WHEN EQUIPMENT AND/OR SIGN WORK AREA IS WITHIN 10' OF THE TRAVEL LANE.
- 2- PLACE ARROW PANELS ON THE SHOULDER (PAVED OR UNPAVED). PLACE ARROW PANELS WITHIN THE TAPER IF SHOULDERS DO NOT EXIST. MEET THE REQUIREMENTS FOR STOPPING SIGHT DISTANCE AT THE ARROW PANEL LOCATION. IF NEEDED, EXTEND LANE CLOSURES AT THE BUFFER SPACE, SUCH THAT STOPPING SIGHT DISTANCE TO THE ARROW PANEL IS MET. (SEE STD. 1101.11 SHEET 2)
- 3- PLACE 36" CONES IN TAPERS AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. PLACE CONES ALONG THE BUFFER SPACE AND WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT. FOR NIGHT OPERATIONS, CONES SHALL BE PROVIDED WITH REFLECTIVE COLLARS. (ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- 4- REFER TO STD. 1101.11 SHEETS 1 & 2 FOR "L" DISTANCE AND BUFFER SPACE.
- 5- REFER TO STD. 1101.02 SHEETS 9 & 10 FOR TREATMENT OF LANE CLOSURES THRU INTERCHANGES.
- 6- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC. REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
- 7- TMA'S ARE REQUIRED REGARDLESS OF WHETHER BUFFER SPACE CAN BE ATTAINED. POSITION THE TMA TO MAINTAIN A ROLL-AHEAD DISTANCE AS RECOMMENDED BY THE MANUFACTURER. TMA'S ARE ALSO TO BE USED TO AID INSTALLATION OF THE LANE CLOSURE AND MUST BE EQUIPPED WITH A TYPE C FLASHING ARROW PANEL.
- 8- PLACE CHANGEABLE MESSAGE SIGN (CMS) ON THE OUTSIDE OF THE TRAVELWAY AS DIRECTED BY THE ENGINEER. PLACE CMS APPROXIMATELY 1/2 MILE IN ADVANCE OF THE W20-5 SIGNS. IF TRAFFIC BACKS UP TO WHERE THE CMS IS INITIALLY PLACED, RELOCATE CMS 1/2 MILE FROM ANTICIPATED BACKUP. CONTINUE TO MONITOR TRAFFIC, MOVE CMS APPROXIMATELY 1/2 MILE IN CONJUNCTION WITH ANTICIPATED BACKUP.
- 9- DRUMS MAY BE USED IN LIEU OF CONES.

LEGEND

- FLASHING ARROW PANEL (TYPE C)
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN (CMS)
- CONE (36" MINIMUM HEIGHT)
- PORTABLE SIGN
- LOGO SIGN
- DIRECTION OF TRAFFIC FLOW

**MAINLINE SHOULDER CLOSURE
AND LANE CLOSURE TYPICALS
FOR LOGO SIGN INSTALLATION**

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (LEFT)



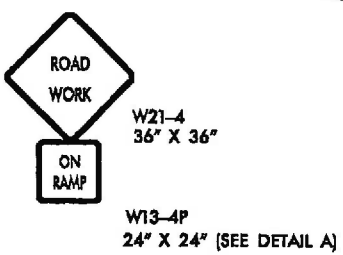
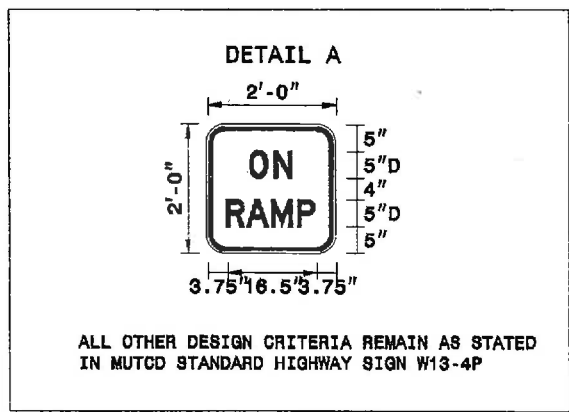
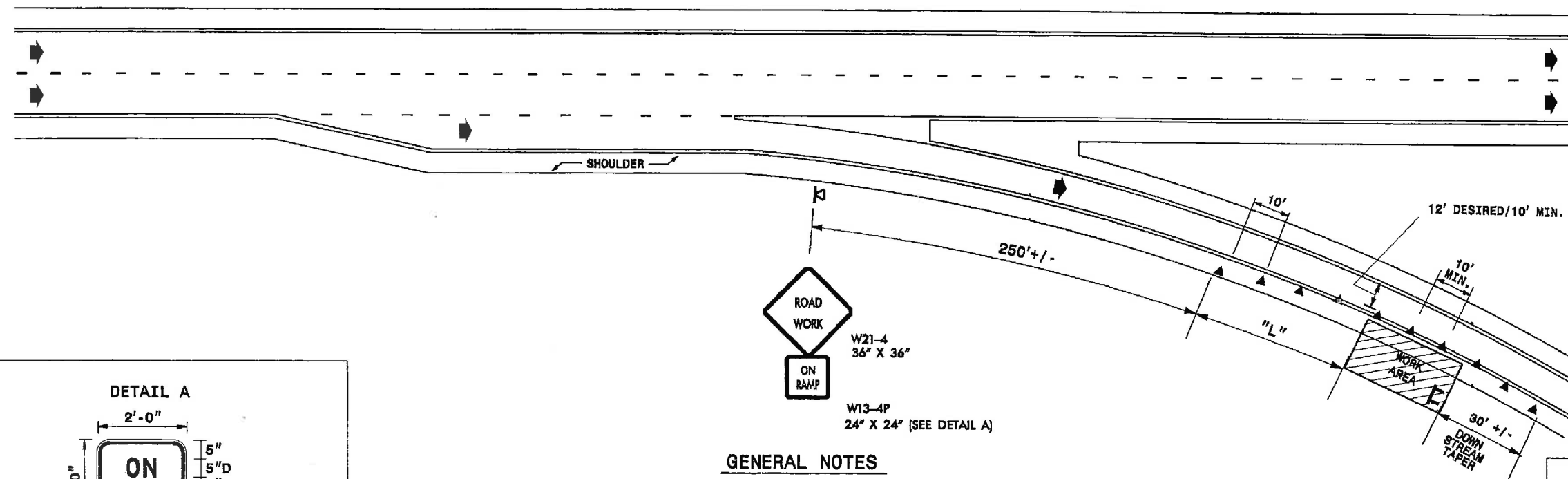
SHEET NO. TCP-2

APPROVED: *[Signature]*

DATE: 8/7/10/12

BEAL

RAMP REMAINS OPEN - WORK ENCROACHES ON RAMP LANE (RIGHT)



GENERAL NOTES

- SEE MUTCD SECTION 6F.25
- SIGNS SHALL NOT BE DISPLAYED WHEN WORK IS NOT IN EFFECT.
- FOR NIGHT OPERATIONS, USE CONES WITH REFLECTIVE COLLARS.
(ONLY APPLICABLE IF NIGHT WORK IS REQUIRED BY PLANS OR APPROVED BY ENGINEER)
- THE CONTRACTOR SHALL NOT CROSS MEDIANS, RAMPS, OR LOOPS WITH WORK VEHICLES UNLESS A LOCATION HAS BEEN APPROVED BY THE ENGINEER.
- PLACE CONES IN TAPERS AT 10' SPACING. PLACE CONES ALONG THE WORK AREA AS SHOWN.
- REFER TO STD. 1101.11 SHEET 1 OF 4. USE 1/2 POSTED MAINLINE SPEED FOR (S) VALUE.
USE THE LANE ENCROACHMENT DISTANCE AS THE LATERAL WIDTH (W) TO DETERMINE "L".
- INSTALL DEVICES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
REMOVE DEVICES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM OF TRAFFIC.

LEGEND

	LOGO SIGN
	CONE (36" MINIMUM HEIGHT)
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

**TRAFFIC CONTROL ON RAMP
FOR LOGO SIGN INSTALLATION**

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