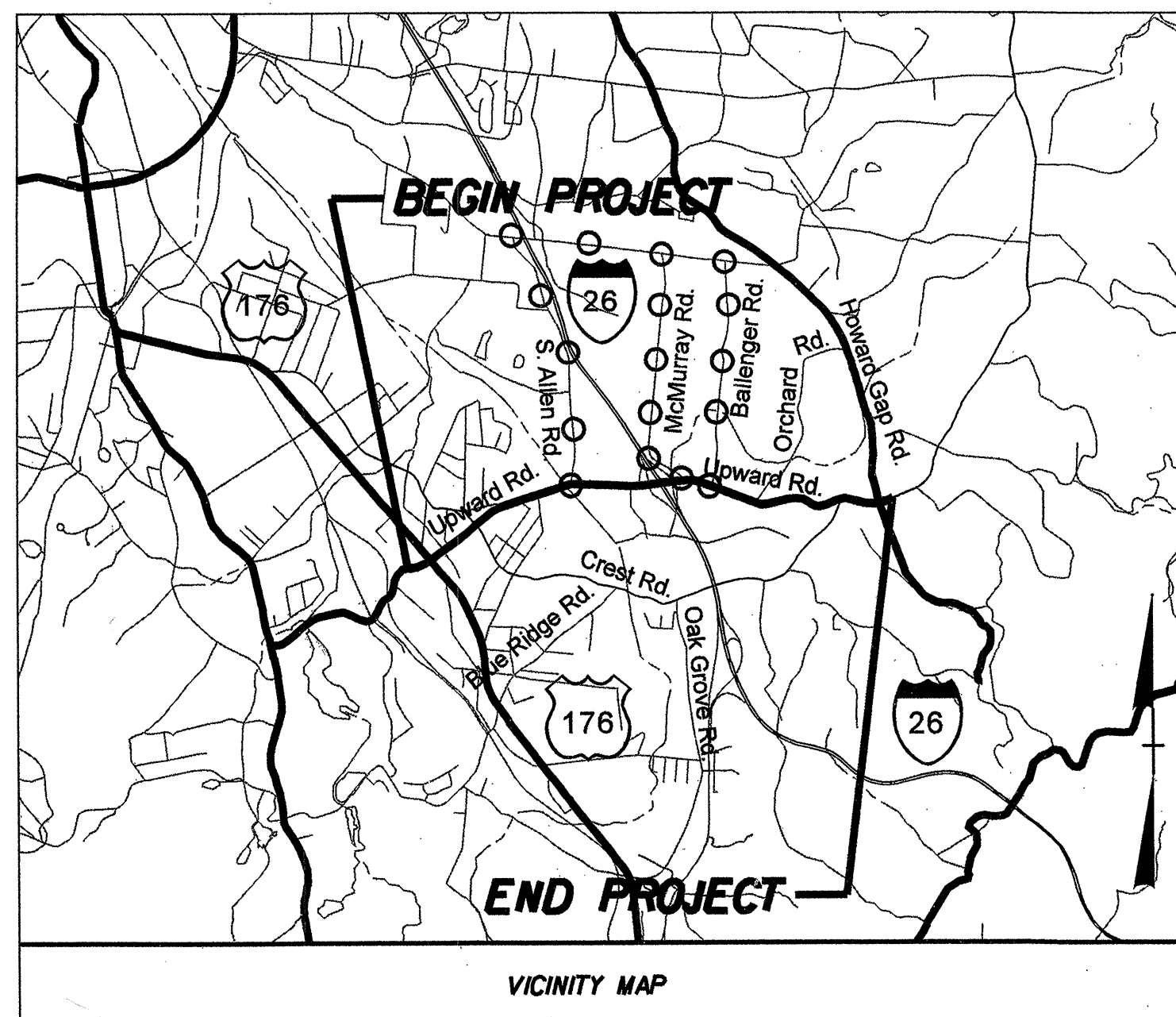


TIP PROJECT: R-4430

CONTRACT: C202067

SEE SHEET 1-A FOR INDEX OF SHEETS
SEE SHEET 1-B FOR CONVENTIONAL PLAN SHEET SYMBOLS



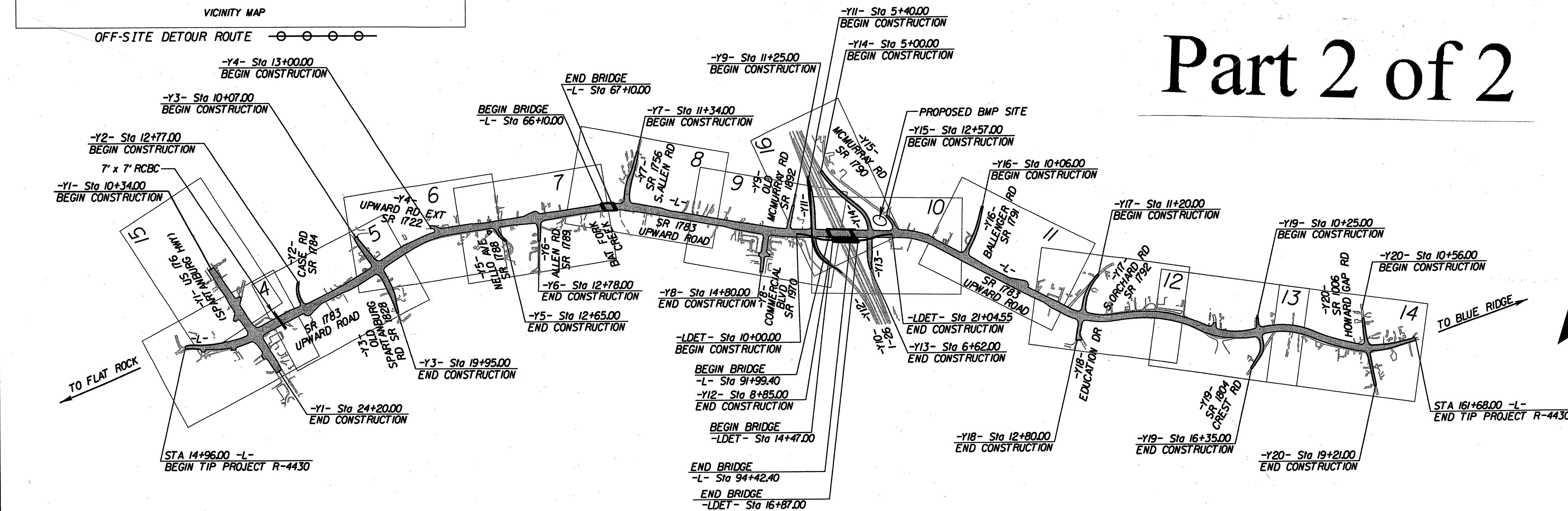
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
HENDERSON COUNTY

LOCATION: SR 1783 (UPWARD ROAD) FROM US 176 (SPARTANBURG HWY) TO SR 1006 (HOWARD GAP ROAD)

TYPE OF WORK: WIDENING, GRADING, DRAINAGE, PAVING, SIGNALS, AND STRUCTURES

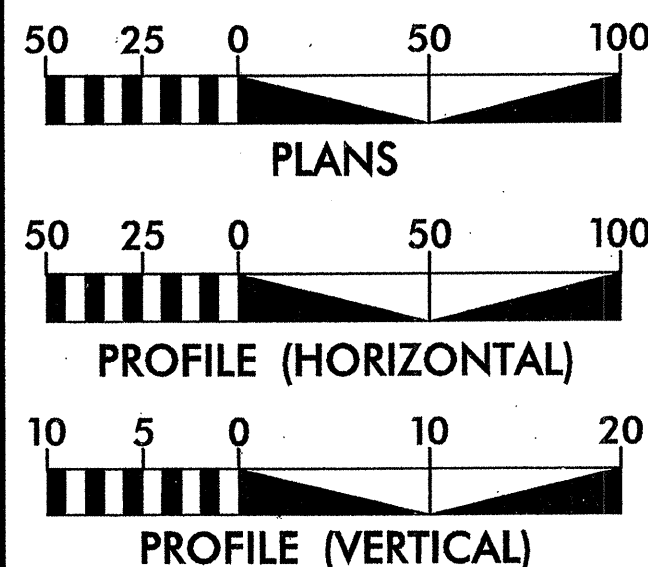
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4430	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34623.1.1	STP-1783 (1)	P.E.	
34623.3.1	STP-1783 (1)	R / W	
34623.3.1	STP-1783 (1)	UTILITIES	
34623.2.2	STP-1783 (3)	CONSTRUCTION	

Part 2 of 2



NCDOT CONTACT: B.D. TAYLOR, P.E.
PROJECT ENGINEER
ROADWAY DESIGN UNIT

GRAPHIC SCALE



DESIGN DATA

ADT 2009 = 21,400 VPD
ADT 2030 = 35,800 VPD
DHV = 10%
D = 55%
T = 5% *
V = 50 mph

VERTICAL CURVE DESIGN EXCEPTIONS

FUNCTIONAL CLASSIFICATION: URBAN ARTERIAL

* (TTST 3% + DUAL 2%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-4430 = 2.714 MILES
LENGTH STRUCTURE TIP PROJECT R-4430 = 0.065 MILES
TOTAL LENGTH TIP PROJECT R-4430 = 2.779 MILES

PLANS PREPARED FOR NCDOT BY:



2006 STANDARD SPECIFICATIONS

RIGHT-OF-WAY DATE:
DECEMBER 29, 2006

LETTING DATE:
MARCH 16, 2010

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

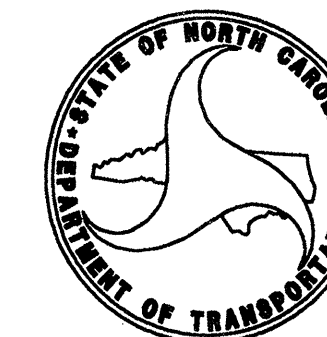
J. JASON PACE, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: *[Signature]*
ROADWAY DESIGN ENGINEER

SIGNATURE: *[Signature]*
STATE HIGHWAY DESIGN ENGINEER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA



[Signature]
STATE HIGHWAY DESIGN ENGINEER

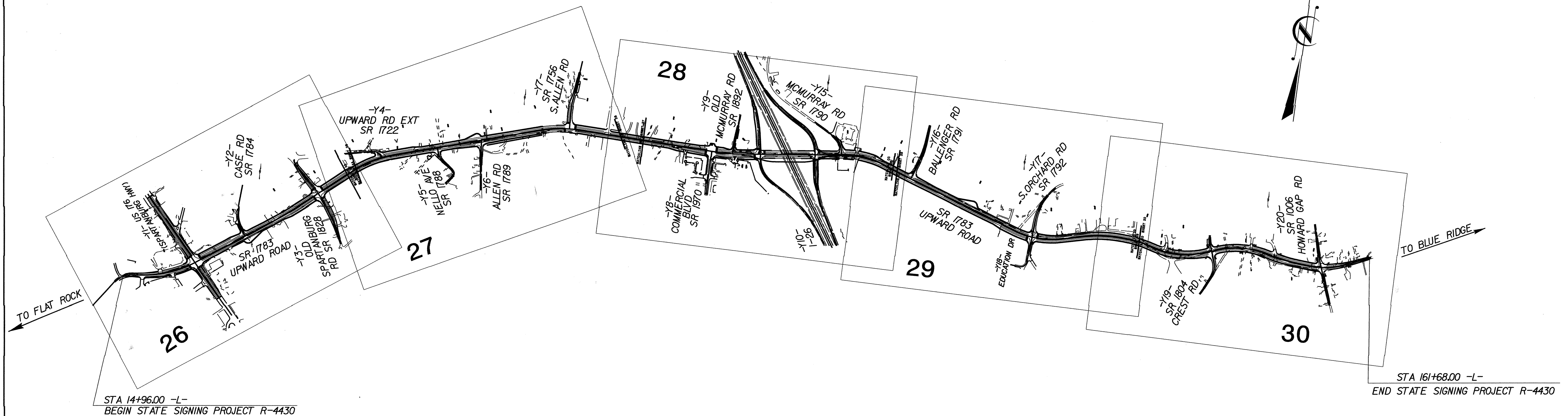


TIP NO. R-4430	SHEET NO. SIGN-1
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLANS
HENDERSON COUNTY**

**LOCATION: SR 1783 (UPWARD ROAD) FROM US 176 (SPARTANBURG HWY) TO
SR 1006 (HOWARD GAP ROAD)**



T.I.P.: R-4430

CONTRACT: C202067


07-NOV-2008 08:49
p:\projects\4430\trg\signing\cadd\signing_layout_plans\engseed.dgn
jsmartinez AT TCC221650

PLAN PREPARED BY: N.C.D.O.T. SIGNING SECTION

_____ RON KING SIGNING ENGINEER
 _____ AYMAN ALQUODWAH SIGNING PROJECT ENGINEER
 _____ JOSE MARTINEZ SIGNING PROJECT DESIGN ENGINEER
 _____ WALTER JOHNSON SIGNING DESIGN ENGINEER
 _____ SIGNING DESIGNER

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUMMARY OF QUANTITIES
3	NOTES
4 - 6	OVERHEADS
7	SUPPORT INFORMATION
8 - 11	MOUNTING DETAILS
12 and 13	E and F SHEETS
14 - 19	SIGN DESIGN SHEETS
20 - 30	SIGN ROADWAY SHEETS

TIP NO. R-4430	SHEET NO. SIGN-3
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

Pay Item Notes:

1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
2	RELOCATE SIGN, TYPE E
3	RELOCATE SIGN, TYPE A (GROUND MOUNTED)
4	RELOCATE SIGN, TYPE B (GROUND MOUNTED)
5	DISPOSAL OF SUPPORT, U-CHANNEL
6	DISPOSAL OF SUPPORT, STEEL BEAM

General Notes:

. SIGNS FURNISHED BY STATE

. ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.

. IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.

. SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC CONTROL PLANS.

. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.

. ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.

. 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 III 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.

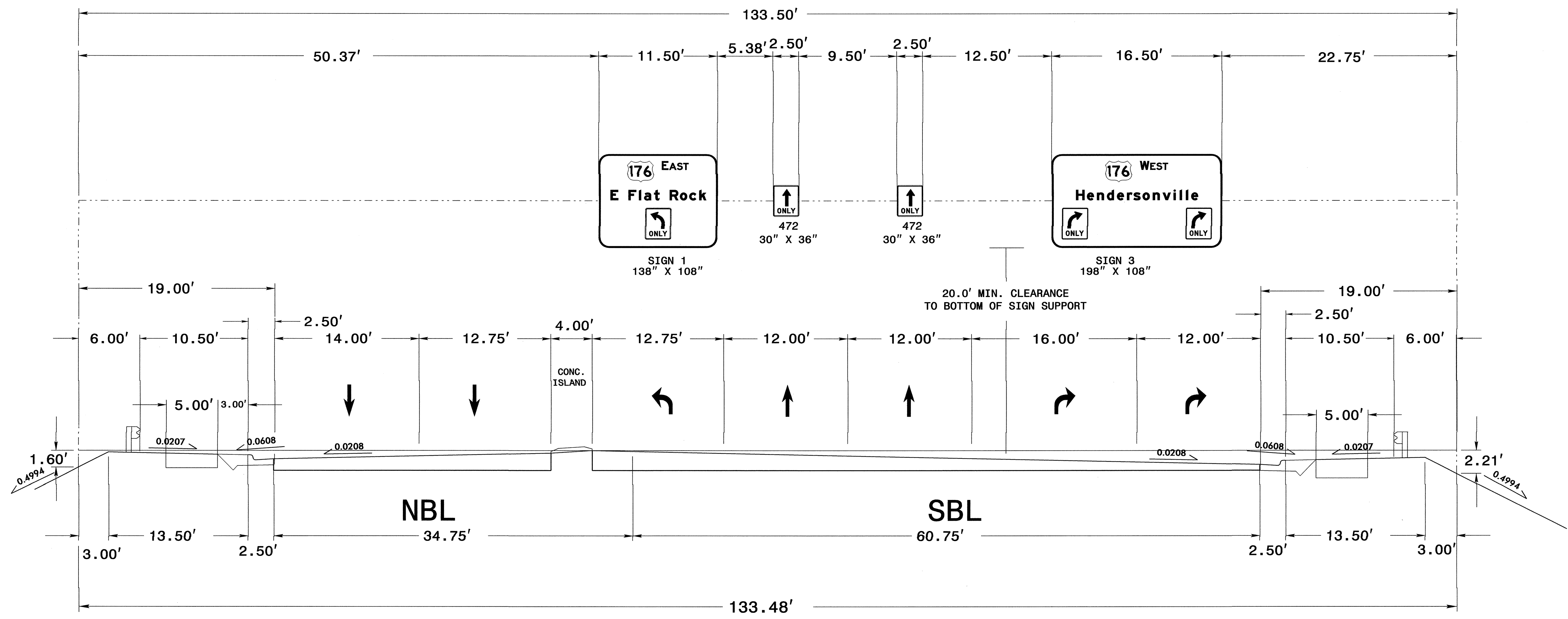
. SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

Project Notes:

NOTES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHTS.
N.C.	R-4430	SIGN-4	


APPROVED: *[Signature]*
DATE: 11/18/08

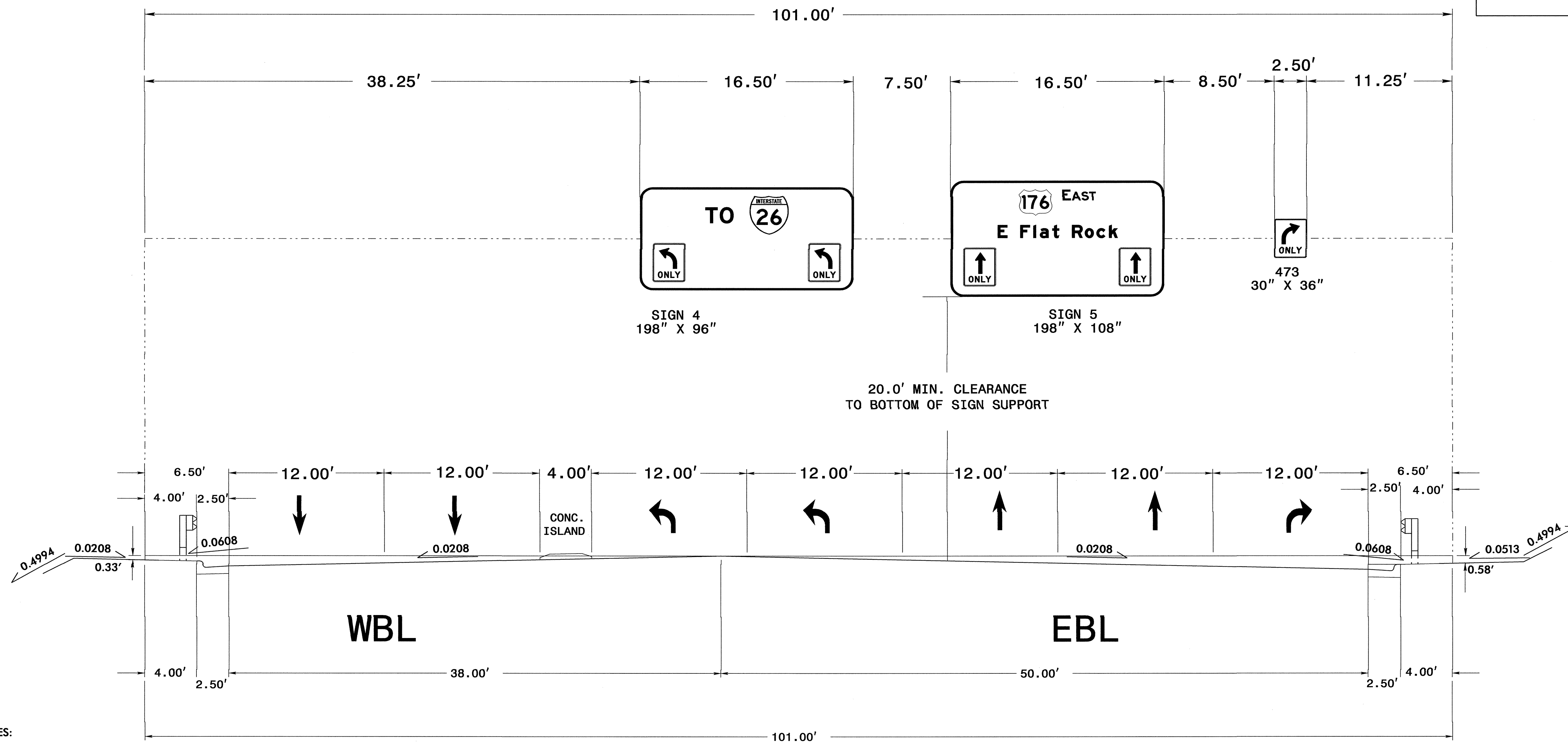


NOTES:

- IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
- MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
- FIELD VERIFICATION SHALL BE REQUIRED FOR ALL FOOTING ELEVATIONS, PER THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. PROVIDE FIELD VERIFICATION TO THE SIGNING SECTION.
- THE TOP OF THE FOOTING SHALL EXTEND AT LEAST 4 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
- SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
- DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF XX M.P.H.

OVERHEAD SIGN ASSEMBLY "A"
AT STA. 27+00 -L-

STATE	PROJECT NO.	SHEET NO.	TOTAL SHTS.
N. C.	R-4430	SIGN-5	
APPROVED: <i>[Signature]</i>			
DATE: 11/18/08			
SEAL			
			



NOTES:


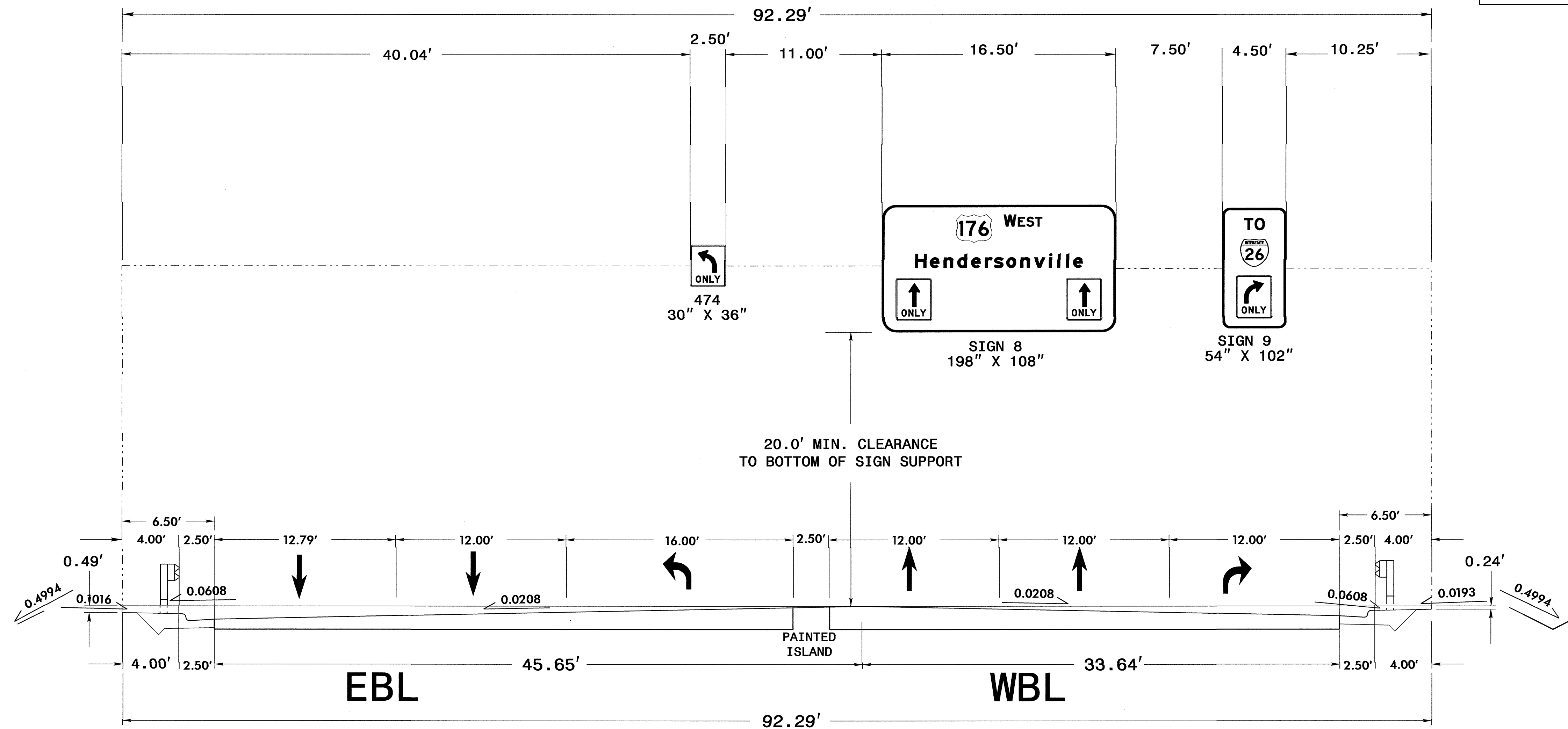
- IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
- MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
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- SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
- DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF XX M.P.H.

OVERHEAD SIGN ASSEMBLY "B"
AT STA. 16+00 -Y1-

STATE	PROJECT NO.	SHEET NO.	TOTAL SHTS.
N. C.	R-4430	SIGN-6	

APPROVED: *[Signature]*
DATE: 11/18/08

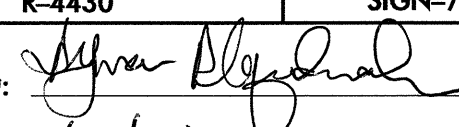
SEAL





NOTES:

- IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
- MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
- FIELD VERIFICATION SHALL BE REQUIRED FOR ALL FOOTING ELEVATIONS, PER THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. PROVIDE FIELD VERIFICATION TO THE SIGNING SECTION.
- THE TOP OF THE FOOTING SHALL EXTEND AT LEAST 4 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
- SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
- DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF XX M.P.H.

OVERHEAD SIGN ASSEMBLY "C"
AT STA. 22+70 - Y1-

TIP NO. R-4430	SHEET NO. SIGN-7
APPROVED: 	
DATE: 11/7/08	
SEAL	



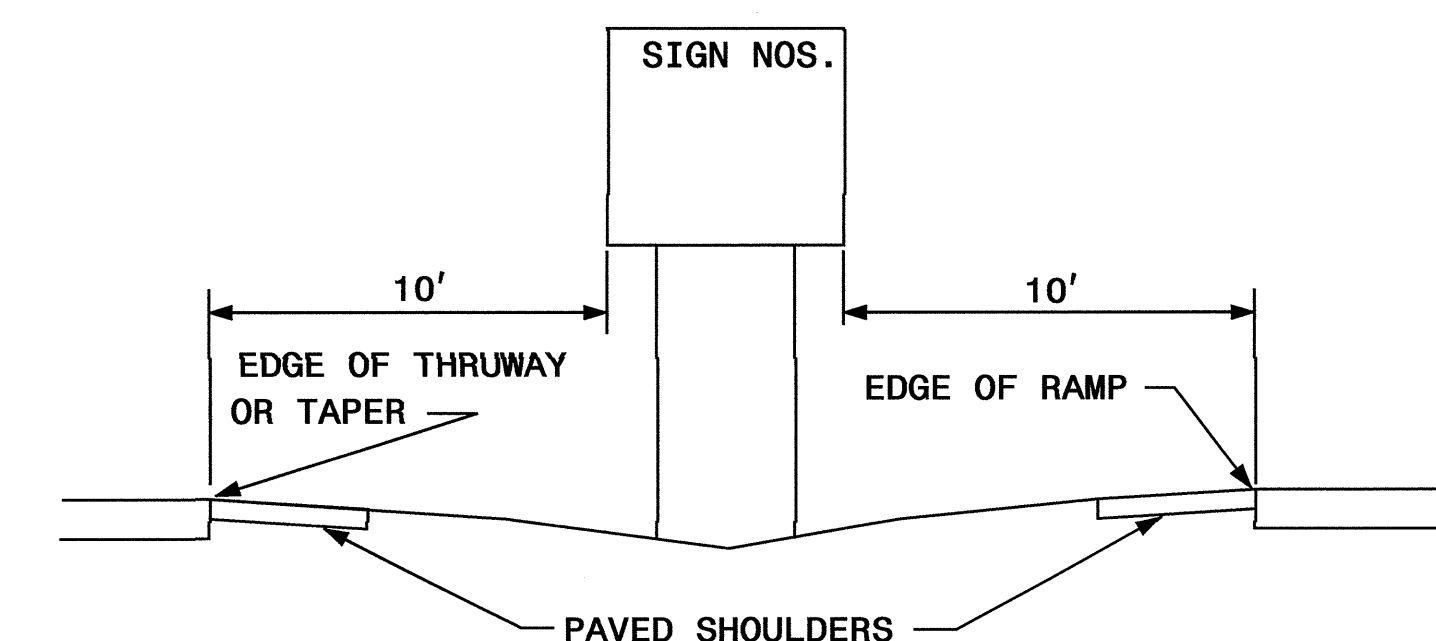
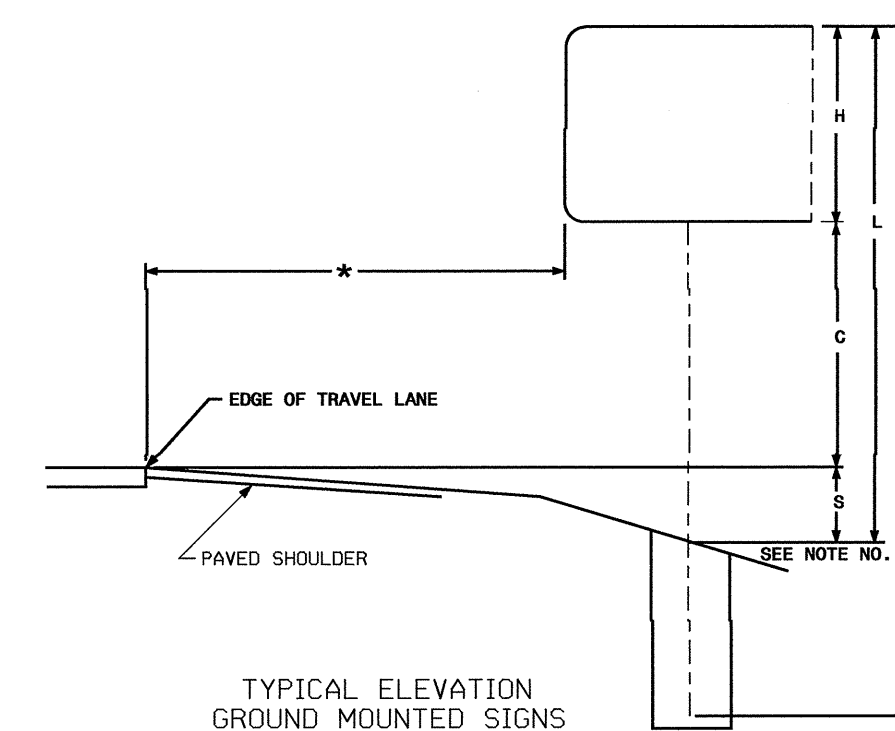
SIGN NO.	SIGN TYPE	SIGN SIZE (in.) w x h	ROADWAY STATION	NO. OF SUP.	BEAM SECTION	SUPPORT TYPE BA or S	ATTACH METHOD	MOUNTING METHOD	HORIZ. CLR.* (ft.)	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			FOOTING DIAMETER (ft.)	FOOTING DEPTH (ft.)	B/A SUPPORT WEIGHTS (lbs.)	SIMPLE SUPPORT WEIGHTS (lbs.)	REINF. FTGS. (c.y.)	FIELD VERIFIED SEE NOTE 2 (mm/dd/yy)
										SNS H	MTG H	EMBED- MENT	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH	S	L	TOTAL LENGTH						
101	A	162 X 90	83+60	2	W6x9	BA	N/A	N/A	2.00	7.50	8.10	5	0.60	16.20	21.20	0.00	0.00	0.00	-1.10	14.50	19.50	1.5	5.5	429.42	0.00	0.72	
102	A	126 X 90	86+50	2	W6x9	BA	N/A	N/A	2.00	7.50	7.57	4.5	-0.57	14.50	19.00	0.00	0.00	0.00	0.78	15.84	20.34	1.5	5	417.22	0.00	0.65	
103	A	162 X 138	89+70	2	W6x16	BA	N/A	N/A	2.00	11.50	7.29	6	-0.29	18.50	24.50	0.00	0.00	0.00	0.66	19.45	25.45	1.5	6.5	931.60	0.00	0.85	
104	A	144 X 72	95+00	2	W6x9	S	N/A	N/A	8.00	6.00	7.00	4.5	1.15	14.15	18.65	0.00	0.00	0.00	4.67	17.67	22.17	1.5	5	0.00	367.34	0.65	
105	A	126 X 90	101+65	2	W6x9	BA	N/A	N/A	2.00	7.50	8.24	4.5	-1.24	14.50	19.00	0.00	0.00	0.00	-0.94	14.80	19.30	1.5	5	407.79	0.00	0.65	
106	A	162 X 90	100+00	2	W6x9	BA	N/A	N/A	2.00	7.50	7.58	5	-0.58	14.50	19.50	0.00	0.00	0.00	0.91	15.99	20.99	1.5	5.5	427.50	0.00	0.72	
107	A	162 X 138	97+20	2	W8x18	S	N/A	N/A	8.00	11.50	7.00	6	2.01	20.51	26.51	0.00	0.00	0.00	5.78	24.28	30.28	2	6.5	0.00	1022.09	1.51	
108	A	162 X 72	91+00	2	W6x9	S	N/A	N/A	8.00	6.00	7.00	5	1.30	14.30	19.30	0.00	0.00	0.00	5.26	18.26	23.26	1.5	5.5	0.00	383.11	0.72	
109	B	114 X 36	65+00	2	S3x5.7	BA	N/A	N/A	2.00	3.00	7.00	3	0.26	10.26	13.26	0.00	0.00	0.00	0.16	10.16	13.16	1	3.5	186.13	0.00	0.20	
110	B	114 X 36	70+70	2	S3x5.7	BA	N/A	N/A	2.00	3.00	7.00	3	0.96	10.96	13.96	0.00	0.00	0.00	1.07	11.07	14.07	1	3.5	195.30	0.00	0.20	
111	B	126 X 42	21+00	2	S4x7.7	BA	N/A	N/A	8.00	3.50	9.41	4	-2.13	10.78	14.78	0.00	0.00	0.00	-2.41	10.50	14.50	1.00	4.5	266.09	0.00	0.26	
901	A	90 X 72	6+50	2	S4x7.7	BA	N/A	N/A	18.00	6.00	7.00	4	2.98	15.98	19.98	0.00	0.00	0.00	2.53	15.53	19.53	1	4.5	344.77	0.00	0.26	
902	A	90 X 72	7+00	2	S4x7.7	BA	N/A	N/A	18.00	6.00	7.00	4.5	3.41	16.41	20.91	0.00	0.00	0.00	1.33	14.33	18.83	1	5	346.65	0.00	0.29	
903	A	90 X 72	7+50	2	S4x7.7	BA	N/A	N/A	6.00	6.00	7.00	4.5	3.54	16.54	21.04	0.00	0.00	0.00	6.47	19.47	23.97	1	5	387.19	0.00	0.29	
904	A	90 X 102	8+70	2	W6x9	BA	N/A	N/A	18.00	8.50	7.00	4.5	2.58	18.08	22.58	0.00	0.00	0.00	3.69	19.19	23.69	1.5	5	479.52	0.00	0.65	
905	A	90 X 72	6+20	2	S4x7.7	BA	N/A	N/A	18.00	6.00	7.00	4	1.48	14.48	18.48	0.00	0.00	0.00	1.92	14.92	18.92	1	4.5	328.61	0.00	0.26	

TOTAL 5147.78 TOTAL 1772.55 TOTAL 8.92

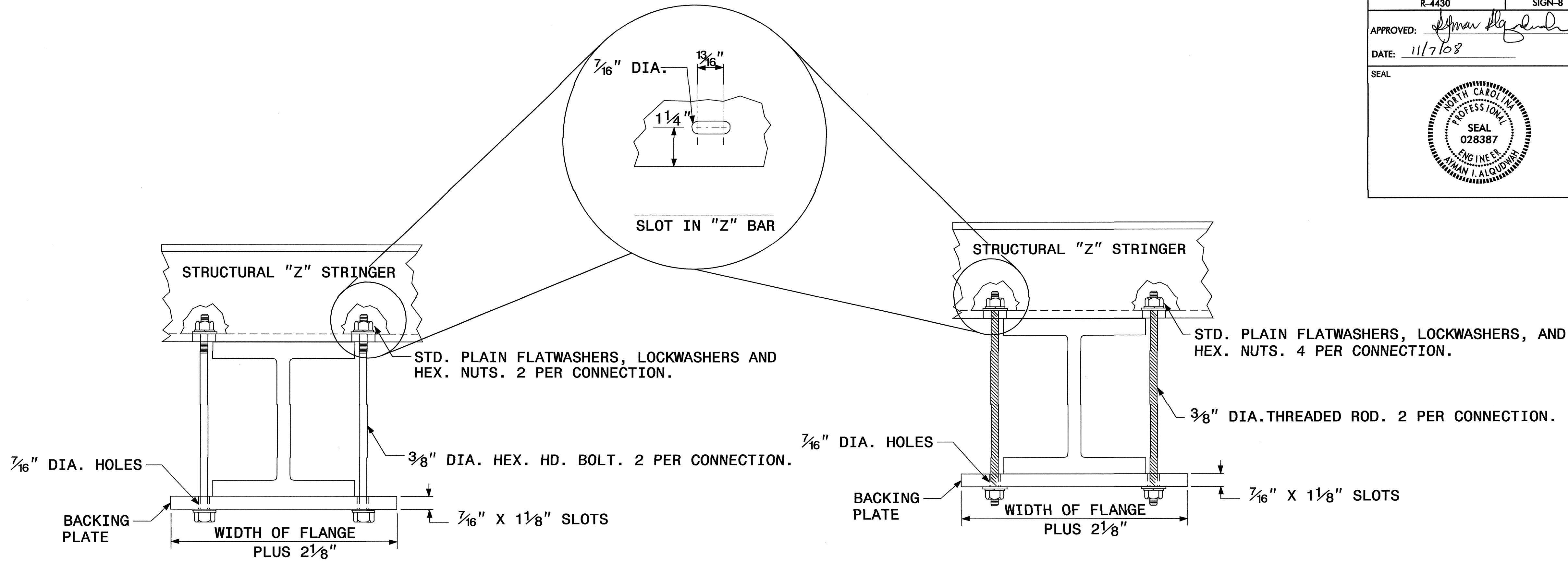
USE: 5148 1773 9

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.



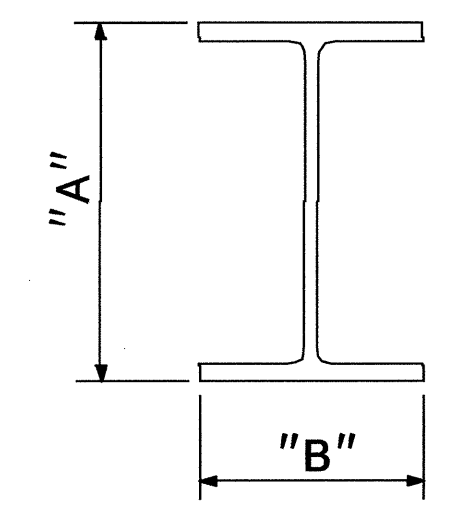
TYPE "A" AND TYPE "B" GROUND MOUNTED SIGNS



SUPPORT MOUNTING DETAIL

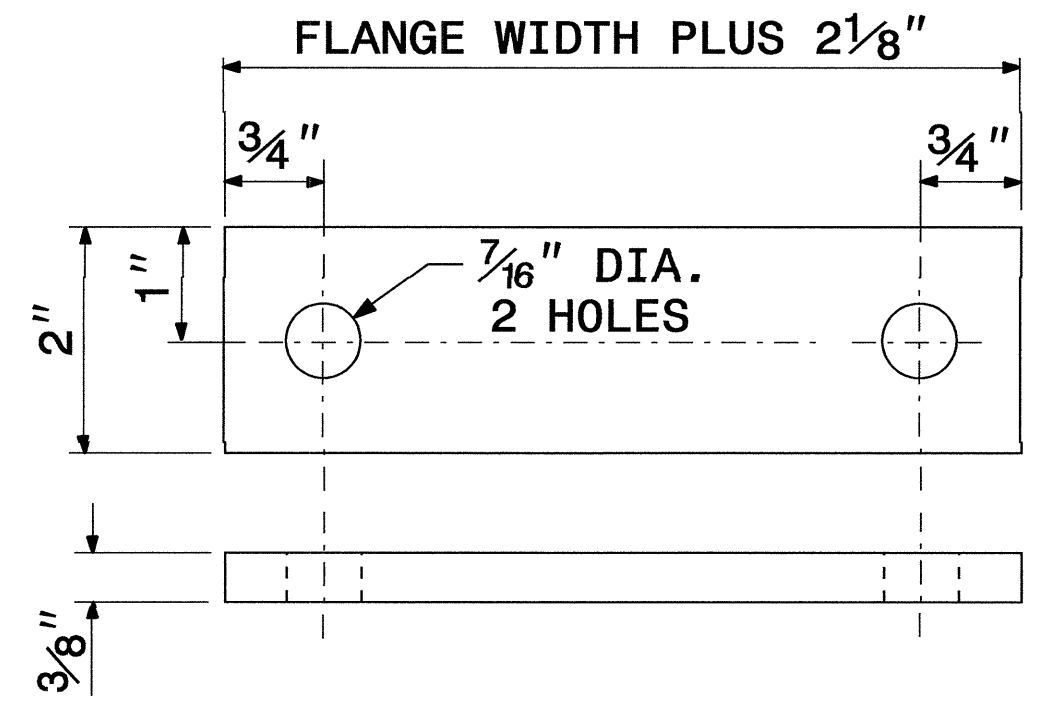
ALTERNATIVE SUPPORT MOUNTING DETAIL

SIGN SUPPORTS SECTION DIMENSIONS




SECTION	A	B
S3 X 5.7	3"	2 3/8"
S4 X 7.7	4"	2 5/8"
W6 X 9	6"	4"
W6 X 12	6"	4"
W6 X 16	6 1/4"	4"
W8 X 18	8 1/8"	5 1/4"
W8 X 21	8 1/4"	5 1/4"
W10 X 22	10 1/8"	5 3/4"
W10 X 26	10 3/8"	5 3/4"
W12 X 26	12 1/4"	6 1/2"
W14 X 30	13 7/8"	6 3/4"
W16 X 31	15 7/8"	5 1/2"
W18 X 35	17 3/4"	6"
W18 X 40	17 7/8"	6"
W21 X 44	20 5/8"	6 1/2"

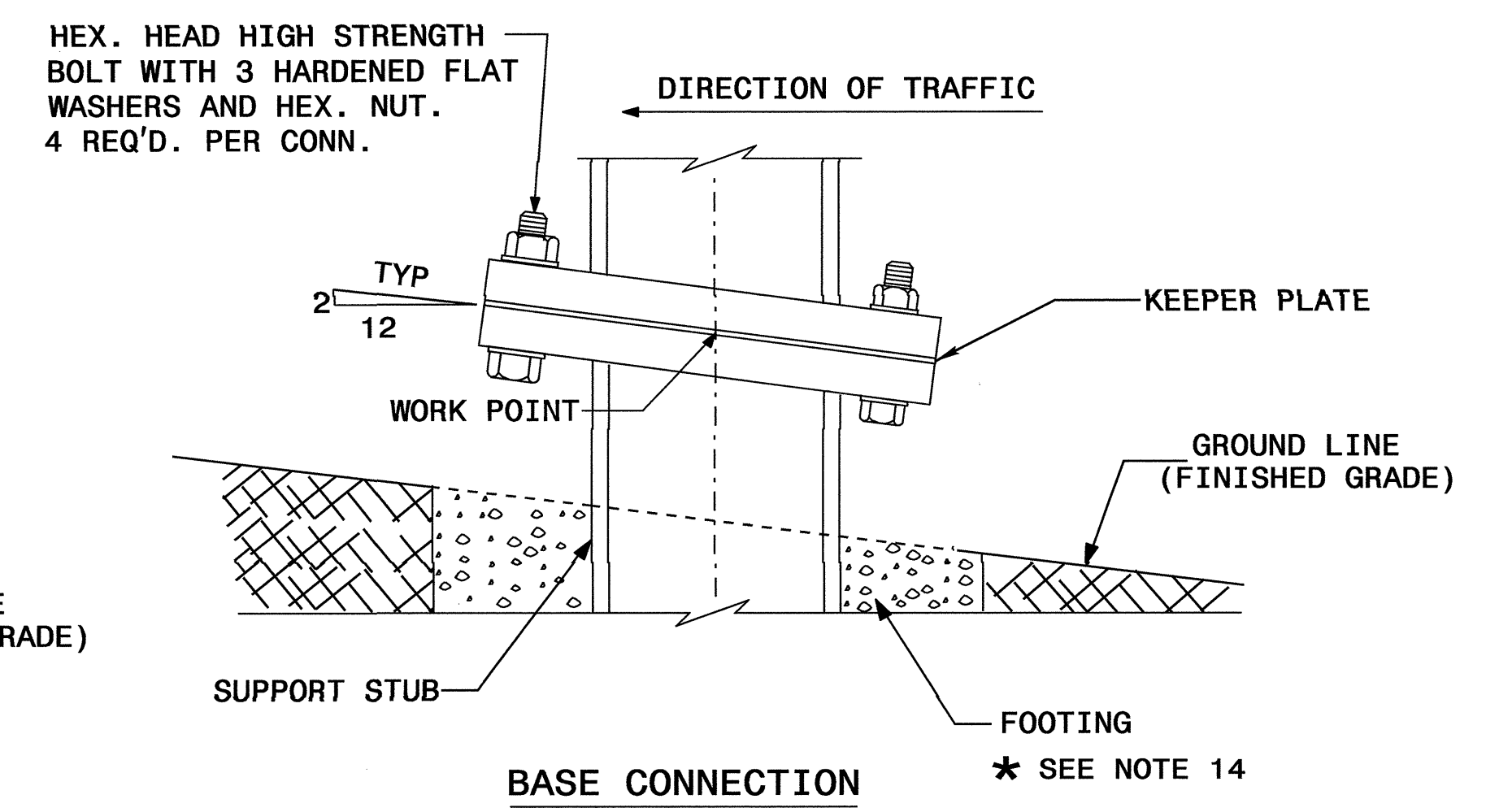
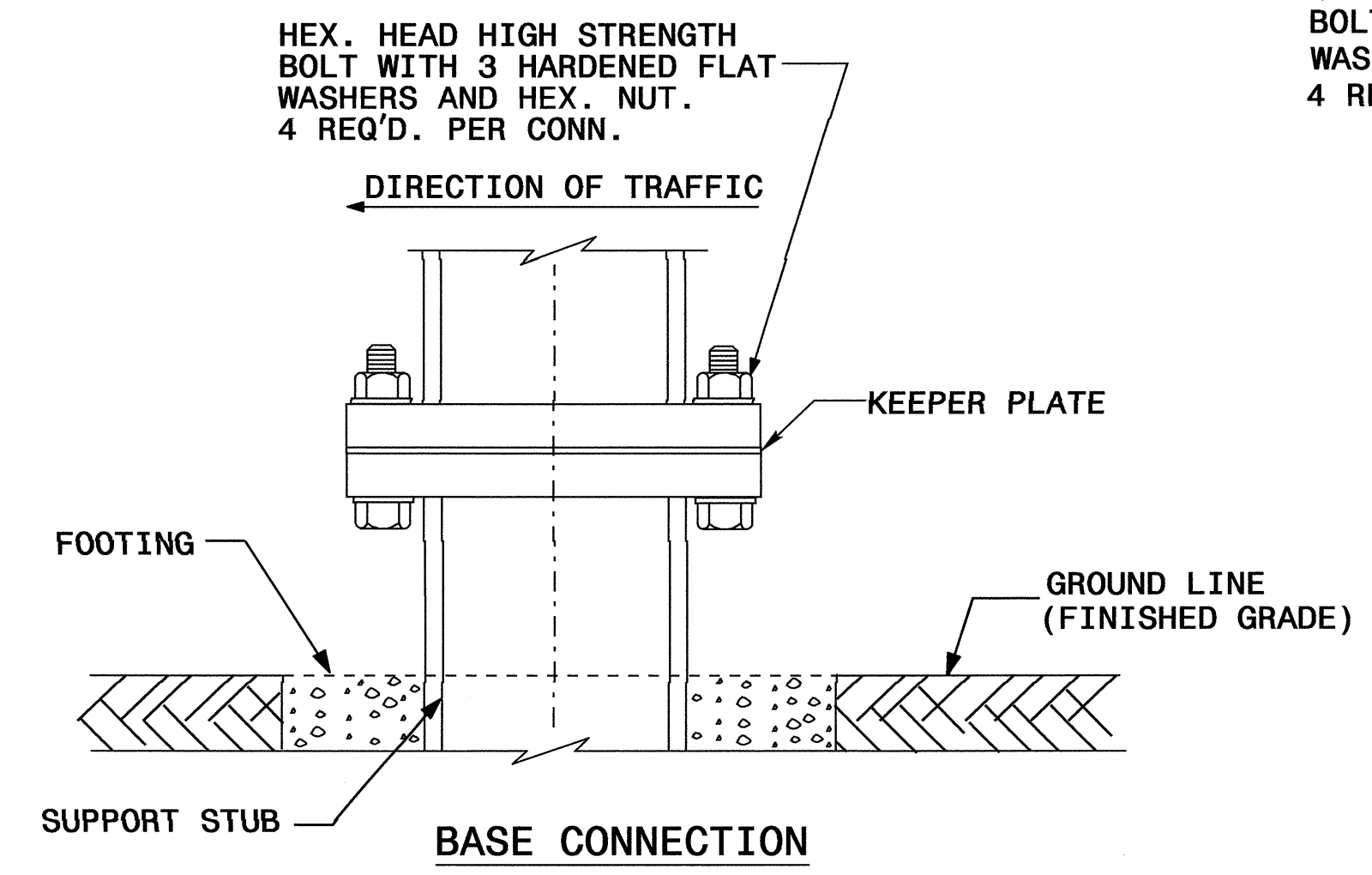
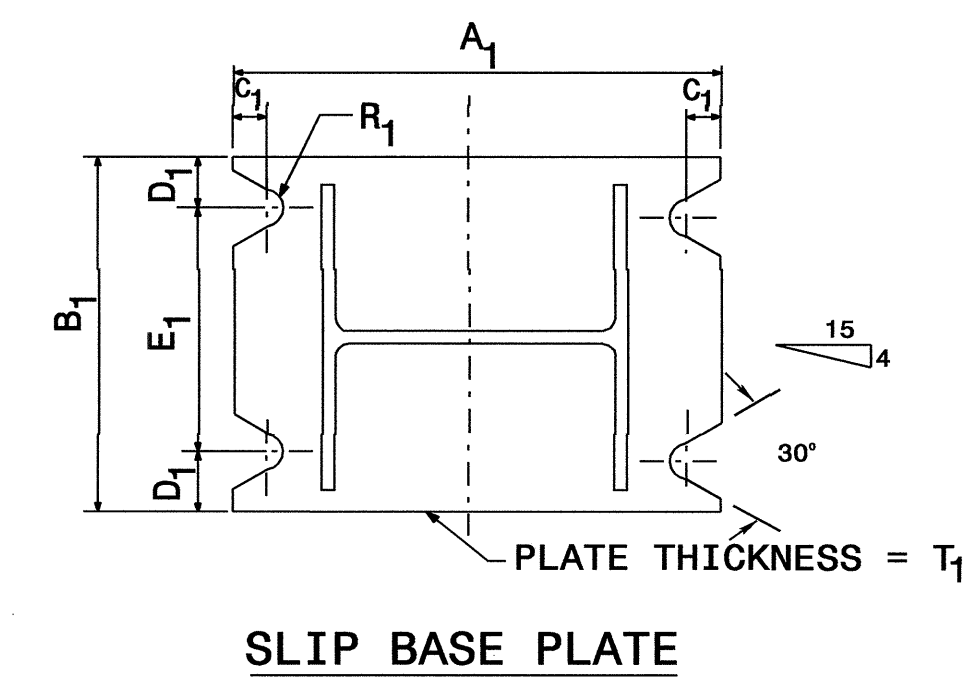
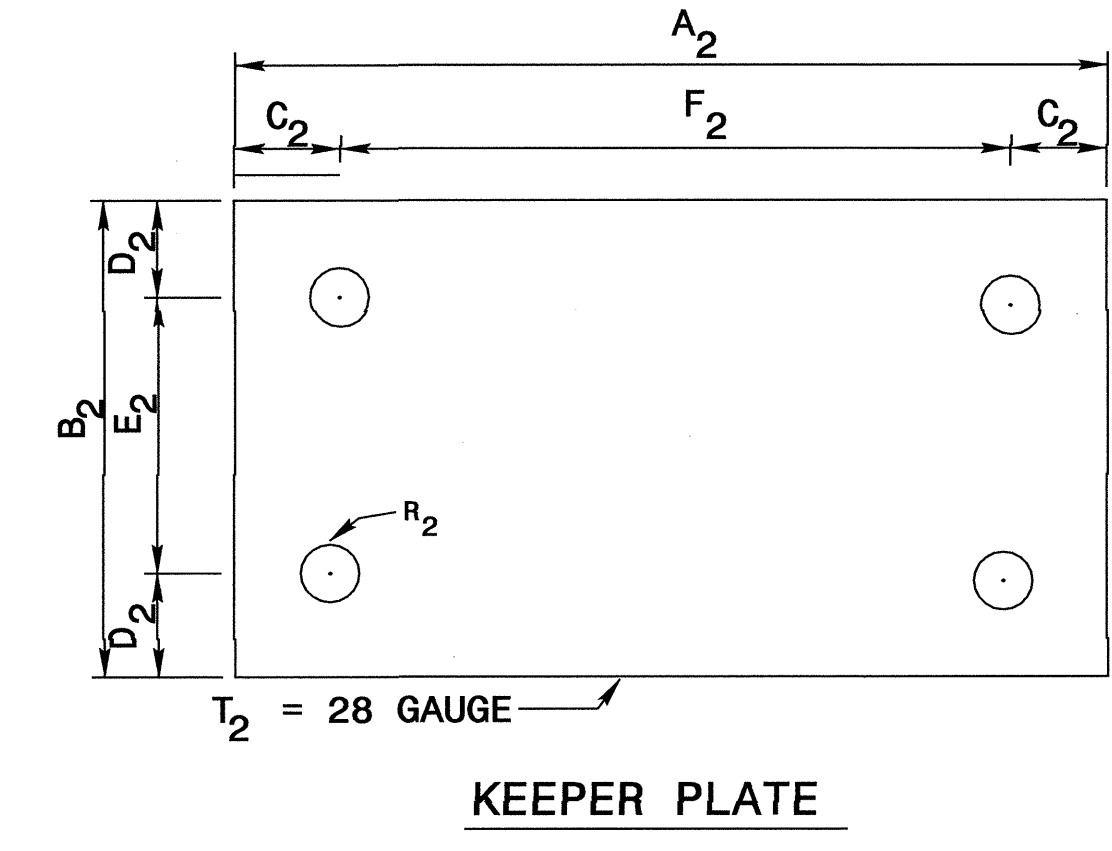
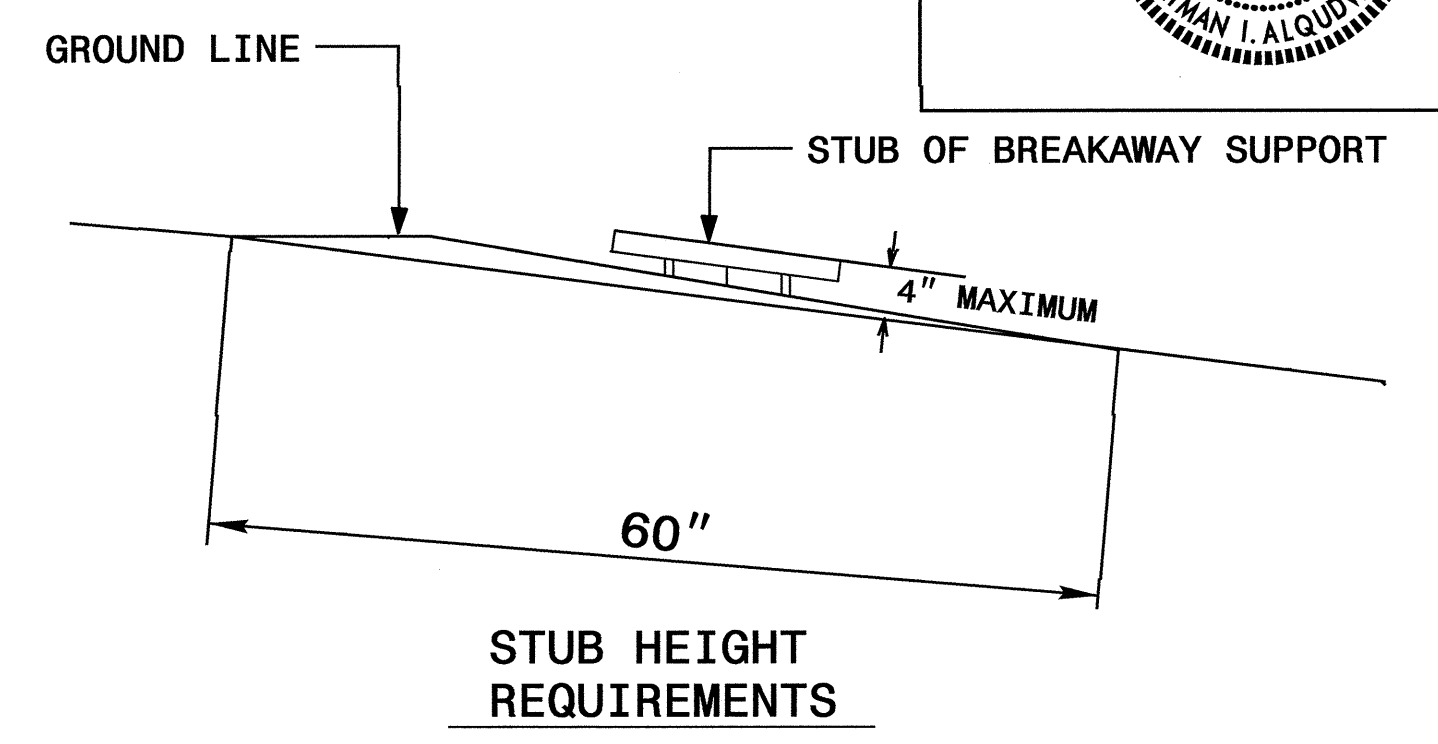
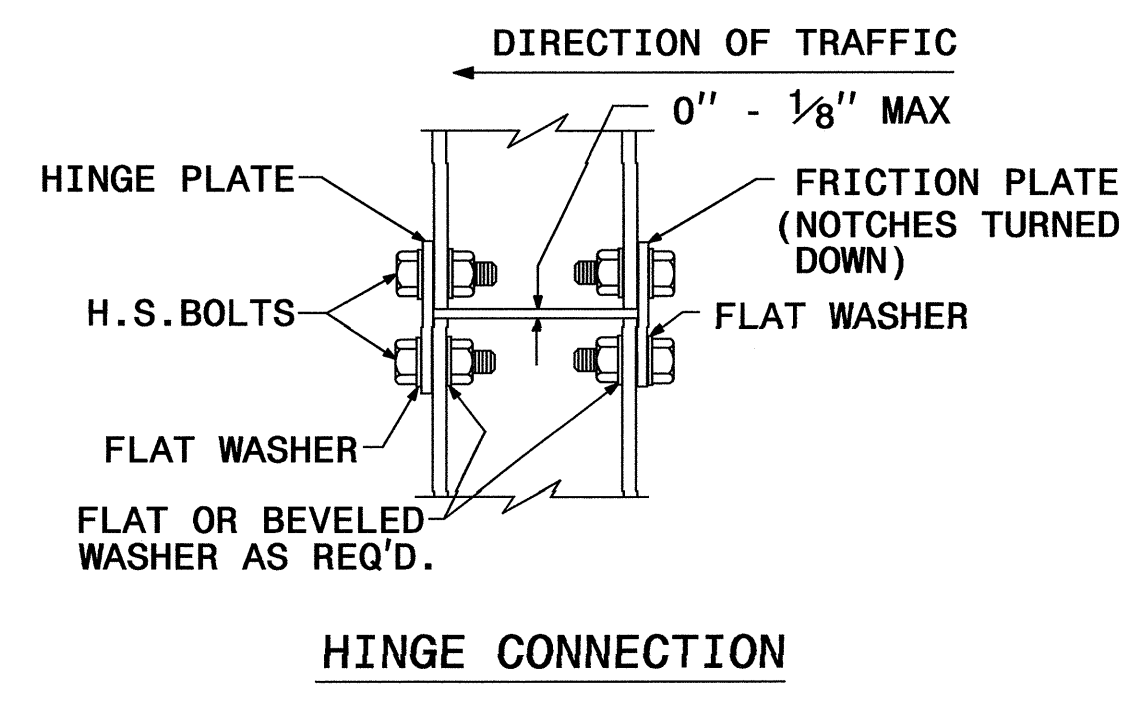
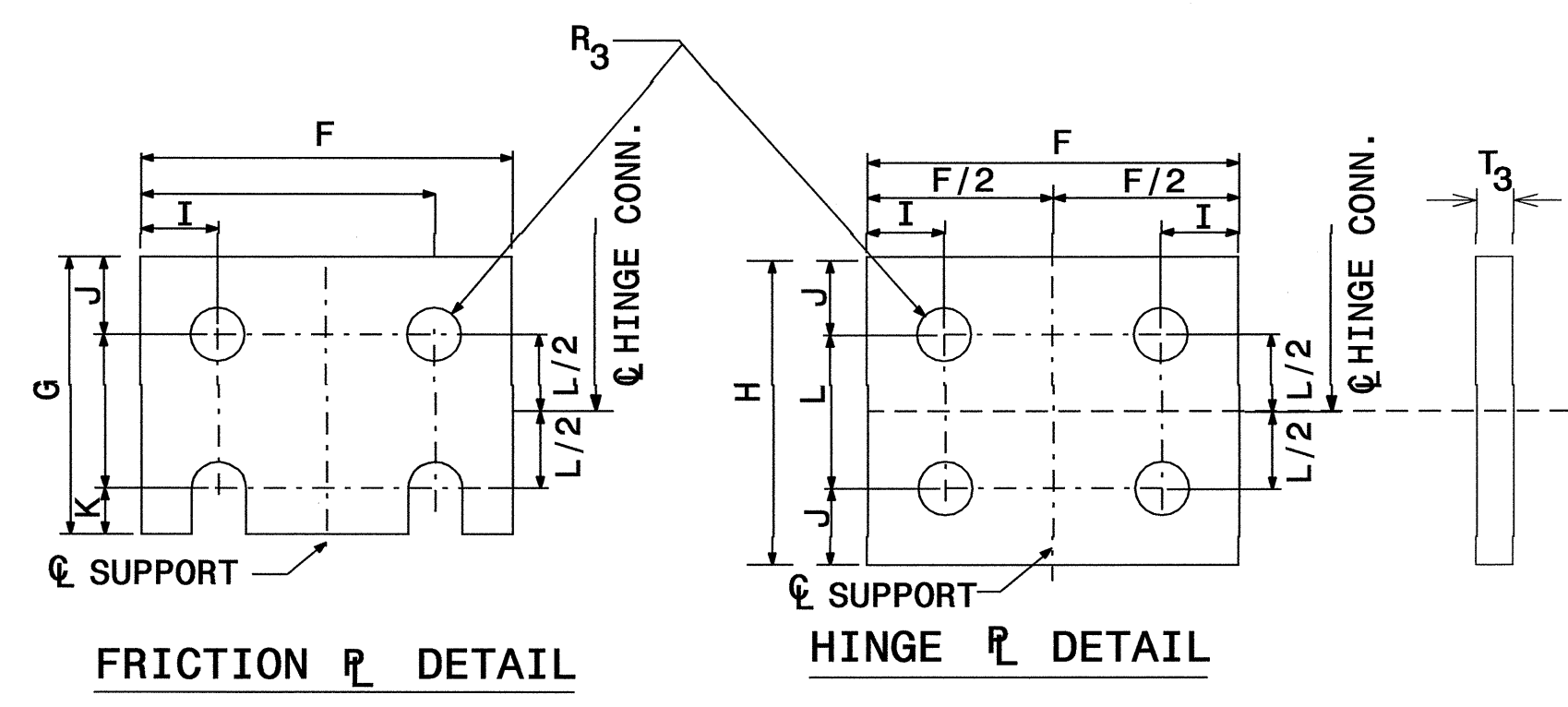
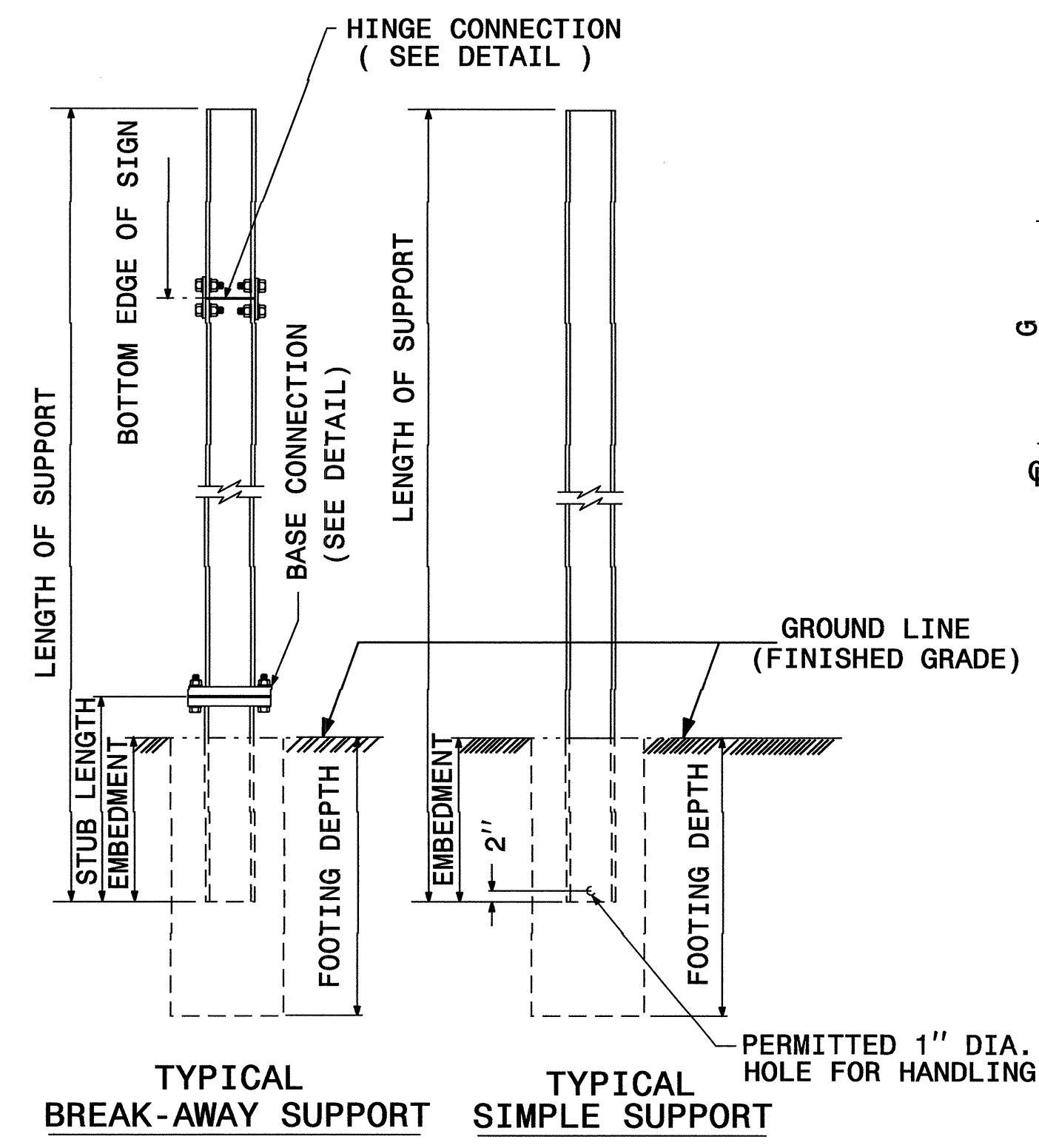
BACKING PLATE DETAIL



1. THE SUPPORT MOUNTING DETAIL SHOWS A "W" OR "S" BEAM. THIS DETAIL IS ALSO USED FOR MOUNTING SIGNS TO WOOD OR SQUARE TUBE SUPPORTS.
2. USE GALVANIZED STEEL FOR BACKING PLATES AND MOUNTING BOLTS IN ACCORDANCE WITH ASTM A123.
3. SEE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES FOR TYPE OF MATERIAL TO BE USED FOR SIGN HANGER ASSEMBLIES AND SUPPORTS.
4. USE GALVANIZED STEEL FOR MOUNTING BOLTS AND THREADED RODS IN COMPLIANCE WITH ASTM A307 AND ASTM A153.

SIGN MOUNTING DETAILS


TIP NO. R-4430	SHEET NO. SIGN-9
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	



GROUND MOUNTED SIGN SUPPORT

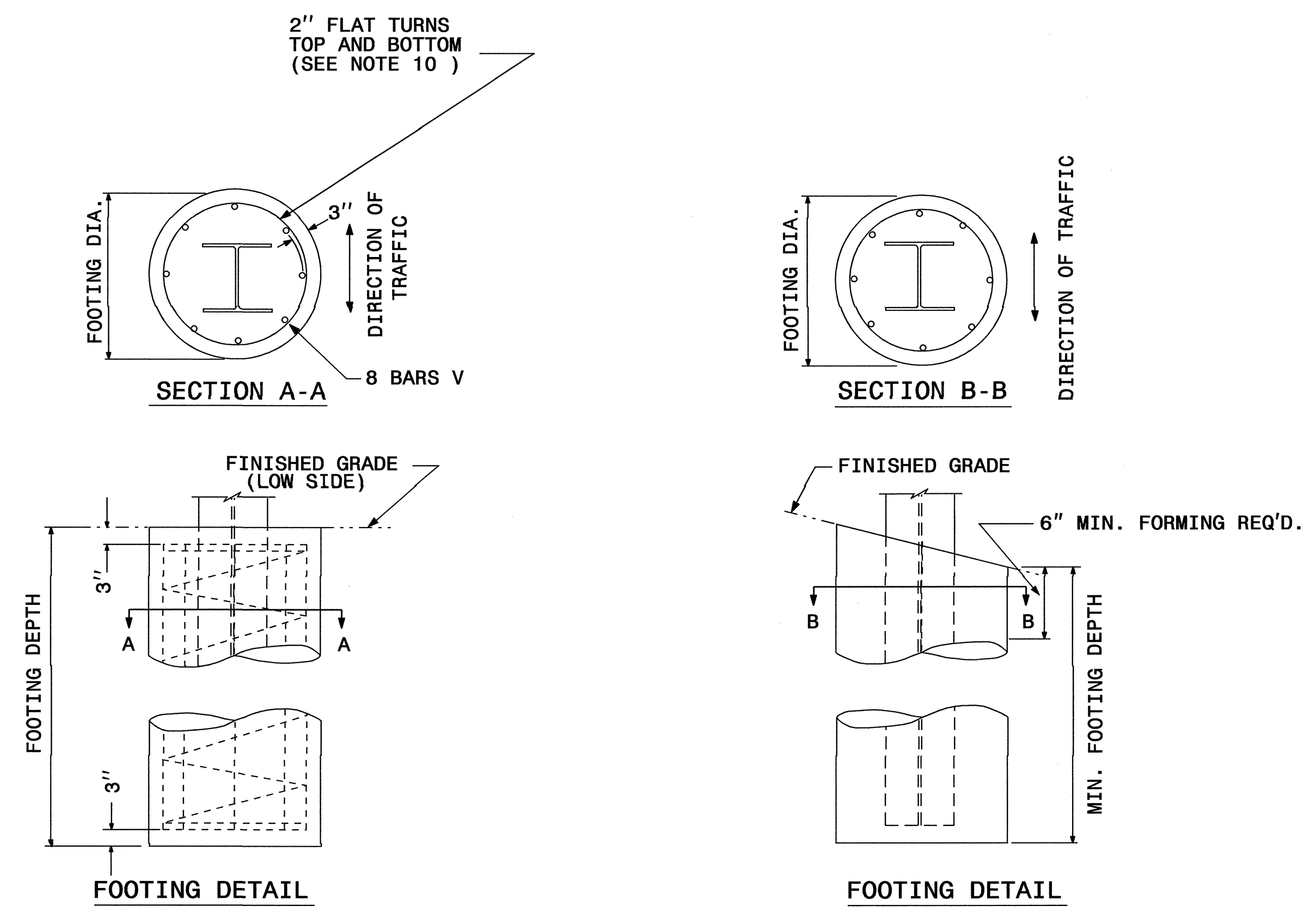
SEE SHEET SIGN-7 FOR DIMENSIONS.
SEE SHEET SIGN-8 FOR NOTES.

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d:\y4430\traffic\signing layout\plans\engseed.dgn
welter johnson AT 11/21/08

TIP NO. R-4430	SHEET NO. SIGN-10
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

BEAM SHAPE	SLIP BASE PLATE DATA								KEEPER PLATE DATA							HINGE CONNECTION DATA							BREAK AWAY SUPPORT WEIGHT CONSTANT LBS.			
	BOLT SIZE	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"	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.X1 1/4"	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"	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.X1 1/4"	2 5/8"	3 1/2"	4"	1/2"	1"	1/2"	2"	9/32"	3/8"	20
W6X9	1/2"DIA.X 3"	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.X1 1/4"	4"	3 1/2"	4"	3/4"	1"	1/2"	2"	9/32"	3/8"	32
W6X12	5/8"DIA.X3 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.X2 1/4"	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.X3 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.X2 1/2"	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 1/4"	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.X2 1/2"	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 1/4"	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.X2 3/4"	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 1/4"	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.X2 3/4"	5 3/4"	6"	7"	1"	1 3/4"	3/4"	3 1/2"	1 3/32"	1/2"	119
W10X26	3/4"DIA.X4 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.X2 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.X4 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.X2 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 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.X3"	6 3/4"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	5/8"	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.X3 1/4"	5 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	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.X3 1/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	3/4"	243
W18X40	1"DIA.X5 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.X3 3/4"	6"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	278
W21X44	1"DIA.X5 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.X3 3/4"	6 1/2"	7"	8"	1 1/4"	2"	1"	4"	1 7/32"	7/8"	310

2" FLAT TURNS
TOP AND BOTTOM
(SEE NOTE 10)




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

* FOUNDATION DIMENSIONS ARE SHOWN IN PLANS
SEE SHEET SIGN-8 FOR NOTES.

GROUND MOUNTED SIGN SUPPORT

06-NOV-2008 07:45
d:\r4430\traffic\signing\padd\signing layout plans\engseed.dgn
walter johnson

TIP NO. R-4430	SHEET NO. SIGN-11
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

NOTES:


1. DESIGN CONFORMS WITH THE SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS - A.A.S.H.T.O.
2. USE MATERIALS, FABRICATE AND ERECT SIGNS AND SUPPORTS THAT CONFORM TO THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
3. USE HIGH STRENGTH BOLTS, NUTS AND WASHERS THAT CONFORM TO A.S.T.M. A-325 AND THAT ARE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153.
4. USE BACKING PLATES, SLIP BASE PLATES, FRICTION PLATES, AND HINGE PLATES THAT CONFORM TO A.S.T.M. A-36 AND THAT ARE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-123 PRIOR TO GALVANIZING, GRIND SMOOTH ANY METAL PROJECTION BEYOND THE PLATE FACE. KEEPER PLATES SHALL BE MANUFACTURED FROM 28 GAUGE SHEET STEEL THAT CONFORMS TO A.S.T.M. A-36 AND IS GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-123
5. ASSEMBLE HINGE CONNECTIONS IN THE SHOP. SHOP TIGHTEN BOLTS BY USE OF EITHER A CALIBRATED POWER WRENCH OR A MANUAL TORQUE WRENCH. TIGHTEN EACH HINGE CONNECTION BOLT TO 1/3 PAST SNUG.
6. BASE PLATES DETAILS ARE FOR INSTALLATIONS ON THE RIGHT SHOULDER AND IN GORE AREAS.
7. ASSEMBLE UPPER SUPPORT TO STUB AS SHOWN IN DETAIL. SLIP BASE PLATES SHALL BE FILLET WELDED ONTO POSTS ALL AROUND THE STRUCTURAL SHAPE SO AS TO INSURE NO LOSS OF STRENGTH. ASSEMBLE IN EITHER SHOP OR FIELD. 28 GAUGE KEEPER PLATE IS PLACED BETWEEN SLIP BASE PLATES TO PREVENT BOLT SLIPPING. TIGHTEN BOLTS TO THE FOLLOWING PRESCRIBED TORQUE:

BOLT DIAMETER	TORQUE (LB. FT.)
1/2"	9
5/8"	22
3/8"	37
1"	48

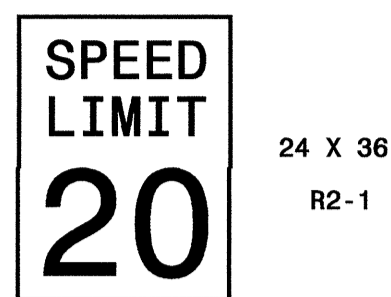
COMPLETELY ASSEMBLE B/A POSTS PRIOR TO ERECTION. B/A POST TO BE SET IN ONE PIECE. AFTER SUPPORT HAS BEEN ERECTED AND THE CONCRETE FOOTINGS HAS CURED AT LEAST 48 HRS., CLEAN CONCRETE FROM BASE CONNECTION BOLTS THEN LOOSEN AND RETIGHTEN EACH BOLT IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. DO NOT OVERTIGHTEN. BURR ALL BOLT THREADS OF BASE CONNECTIONS TO PREVENT LOOSENING.

8. USE REINFORCED FOOTINGS WITH DIMENSIONS AS SHOWN IN PLANS. WHERE SOLID ROCK IS ENCOUNTERED, THE ENGINEER DIRECTS WHETHER TO PLACE THE FOOTING AT THE PRESCRIBED DEPTH OR EXTEND IT AT LEAST TWO FEET INTO THE ROCK. CONSTRUCT ALL FOOTINGS OF CLASS A CONCRETE.
9. FORM TOP 6" OF FOOTINGS. ENGINEER APPROVES THE METHOD USED.
10. THE FINAL FLAT TURN OF SPIRAL OR HOOPS NO. 3 OR LARGER PLACED 3" FROM TOP AND BOTTOM OF FOOTING MAY BE WELDED TO VERTICAL REINFORCING BARS. NO OTHER WELDING WILL BE PERMITTED.
11. ELIMINATE HINGE CONNECTION FOR ALL SINGLE SUPPORT SIGNS.
12. DETAIL IS FOR ONE DIRECTION BREAKAWAY. WHEN PLANS REQUIRE A TWO DIRECTION BREAKAWAY, TWO FRICTION PLATES SHALL BE USED IN LIEU OF ONE FRICTION PLATE AND ONE HINGE PLATE.
13. SHAPE THE TOPS OF THE FOOTINGS TO CONFORM WITH FINISHED GROUND ELEVATIONS SUCH THAT WATER WILL NOT COLLECT AGAINST THE SUPPORTS.
14. IF THE GROUNDWATER IS ENCOUNTERED AT AN DEPTH SHALLOWER THAN 7 FEET, THE SIGN FOUNDATION MUST BE REDESIGNED BASED UPON THE ACTUAL FIELD CONDITIONS. THE FOUNDATION DESIGN DOES NOT APPLY TO VERY SOFT OR LOOSE SOIL, MUCK, WEATHERED ROCK, OR HARD ROCK.

GROUND MOUNTED SIGN SUPPORT

TIP NO. R-4430	SHEET NO. SIGN-12
APPROVED: <i>[Signature]</i>	
DATE: 11/18/08	
SEAL	
	

402 QUANTITY REQ'D 1



24 X 36
R2-1

TWO "U" POSTS PER SIGN

411 QUANTITY REQ'D 24



30 X 30
R5-1

ONE "U" POST PER SIGN

421 QUANTITY REQ'D 2



36 X 36
S1-1

YELLOW/GREEN REFLECTIVE SHEETING

ONE "U" POSTS PER SIGN

460 QUANTITY REQ'D 2

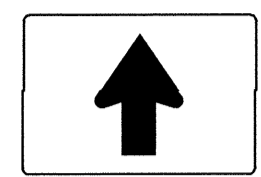


36 X 36
S4-5

YELLOW/GREEN REFLECTIVE SHEETING

TWO "U" POSTS PER SIGN

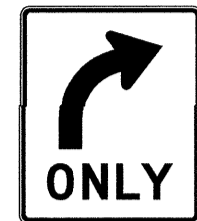
468 QUANTITY REQ'D 1



21 X 15
M6-3

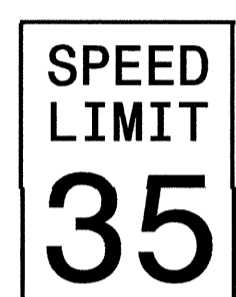
MOUNT BELOW SIGN 469
IN 1 INSTALLATIONS

473 QUANTITY REQ'D 1



30 X 36
R3-5R

403 QUANTITY REQ'D 6



36 X 48
R2-1

TWO "U" POSTS PER SIGN

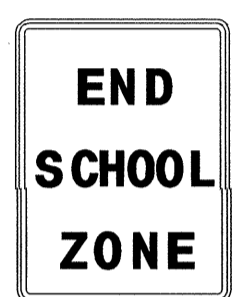
413 QUANTITY REQ'D 6



54 X 18
R6-1 (R)

TWO "U" POSTS PER SIGN

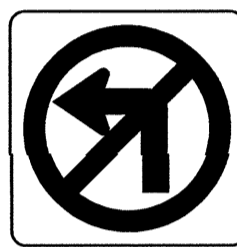
423 QUANTITY REQ'D 2



24 X 30
S5-2

ONE "U" POSTS PER SIGN

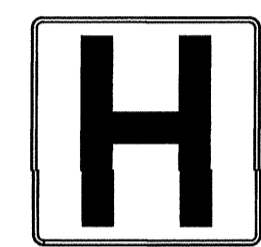
464 QUANTITY REQ'D 7



30 X 30
R3-2

MOUNT BELOW SIGN 408
IN 7 INSTALLATIONS

469 QUANTITY REQ'D 1



30 X 30
D9-2

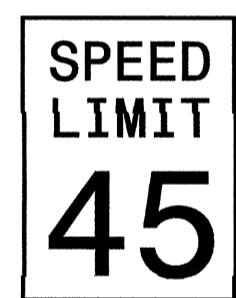
ONE "U" POSTS PER SIGN

474 QUANTITY REQ'D 1



30 X 36
R3-5L

404 QUANTITY REQ'D 8



36 X 48
R2-1

TWO "U" POSTS PER SIGN

MOUNT BELOW SIGN 423
IN 2 INSTALLATIONS

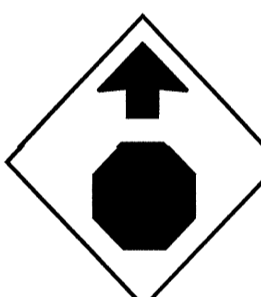
414 QUANTITY REQ'D 5



54 X 18
R6-1 (L)

TWO "U" POSTS PER SIGN

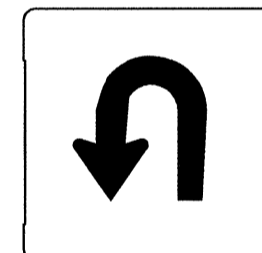
439 QUANTITY REQ'D 3



36 X 36
W3-1a

ONE "U" POST PER SIGN

465 QUANTITY REQ'D 6



30 X 30
R3-4

ONE "U" POSTS PER SIGN

470 QUANTITY REQ'D 1



30 X 30
W14-12

ONE "U" POSTS PER SIGN

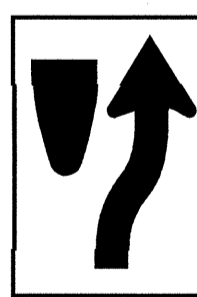
408 QUANTITY REQ'D 17



36 X 36
R1-1

ONE "U" POST PER SIGN

416 QUANTITY REQ'D 19



24 X 30
R4-7

ONE "U" POST PER SIGN

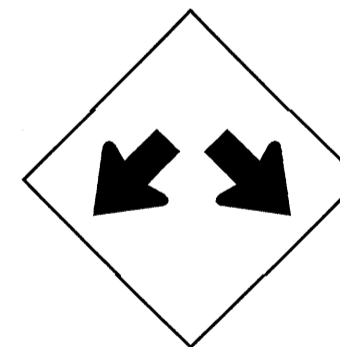
453 QUANTITY REQ'D 2



36 X 36
W3-5

TWO "U" POSTS PER SIGN

466 QUANTITY REQ'D 8



24 X 24
W12-1

ONE "U" POSTS PER SIGN

471 QUANTITY REQ'D 1



36 X 36
M1-80

ONE "U" POSTS PER SIGN

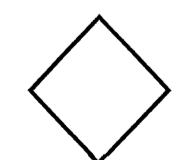
410 QUANTITY REQ'D 19



36 X 24
R5-1a

ONE "U" POST PER SIGN

417 QUANTITY REQ'D 19



18 X 18
W23-15

MOUNT BELOW SIGN 416
IN 19 INSTALLATIONS

459 QUANTITY REQ'D 3



24 X 12
W16-9p

MOUNT BELOW SIGN 465
IN 3 INSTALLATIONS

467 QUANTITY REQ'D 2



36 X 36
M1-80

ONE "U" POSTS PER SIGN


472 QUANTITY REQ'D 2



30 X 36
R3-5a

TYPE "E" SIGNS

18-NOV-2008 14:36
 p:\projects\4430\trf\cadd\signing\layout\plans\eng\eeddgn
 walter.johnson AT 11/22/08

TIP NO. R-4430	SHEET NO. SIGN-13
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

501 505

JCT 1-21" X 15"

176 1-30" X 24"

ONE "U" POST PER SIGN

507

WEST 1-24" X 12"

INTERSTATE 26 1-24" X 24"

← 1-21" X 15"

ONE "U" POST PER SIGN

502

TO 1-24" X 12"

INTERSTATE 26 1-24" X 24"

↑ 1-21" X 15"

WEST EAST 2-24" X 12"

176 176 2-30" X 24"

← → 2-21" X 15"

TWO "U" POSTS PER SIGN

508

TO 1-24" X 12"

176 1-30" X 24"

← 1-21" X 15"

MOUNT BELOW SIGN 301
IN 1 INSTALLATIONS

503

EAST 1-24" X 12"

176 1-30" X 24"

ONE "U" POST PER SIGN

510

EAST TO 2-24" X 12"

INTERSTATE 26 176 1-24" X 24"

1-30" X 24"

← ↑ 2-21" X 15"

TWO "U" POSTS PER SIGN

504

WEST 1-24" X 12"

176 1-30" X 24"

ONE "U" POST PER SIGN

511

TO 1-24" X 12"

176 1-30" X 24"

→ 1-21" X 15"

MOUNT BELOW SIGN 302
IN 1 INSTALLATIONS

506 509

JCT 1-21" X 15"

INTERSTATE 26 1-24" X 24"

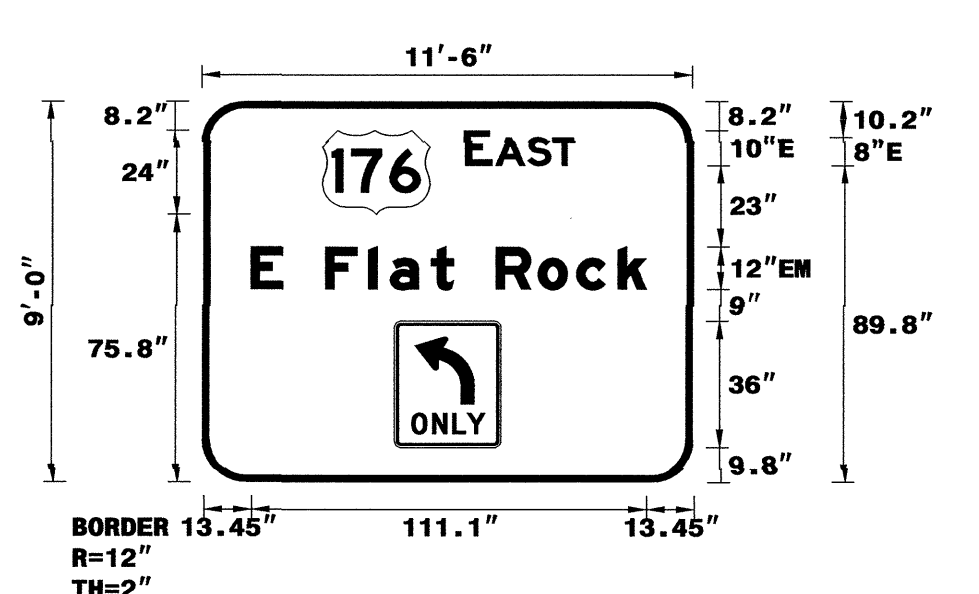
ONE "U" POST PER SIGN

TYPE "F" SIGNS

10-NOV-2008 13:35
 p:\projects\4430\ref\c\signing\cadd\signing Layout Plans\Engseed.dgn
 Walter Johnson AT 1E221737

SIGN NUMBER: 1 TYPE: A BACKG COLOR: Green COPY COLOR: White
 QUANTITY: 1
 SIGN WIDTH: 11'-6" HEIGHT: 9'-0" TOTAL AREA: 103.5 Sq.Ft.
 BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12"
 NO. Z BARS: 3 LENGTH: 130.0
 MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: W. Johnson PROJECT ID: R-4430 CHECKED BY: DIV: 14 DATE: Oct 20, 2008



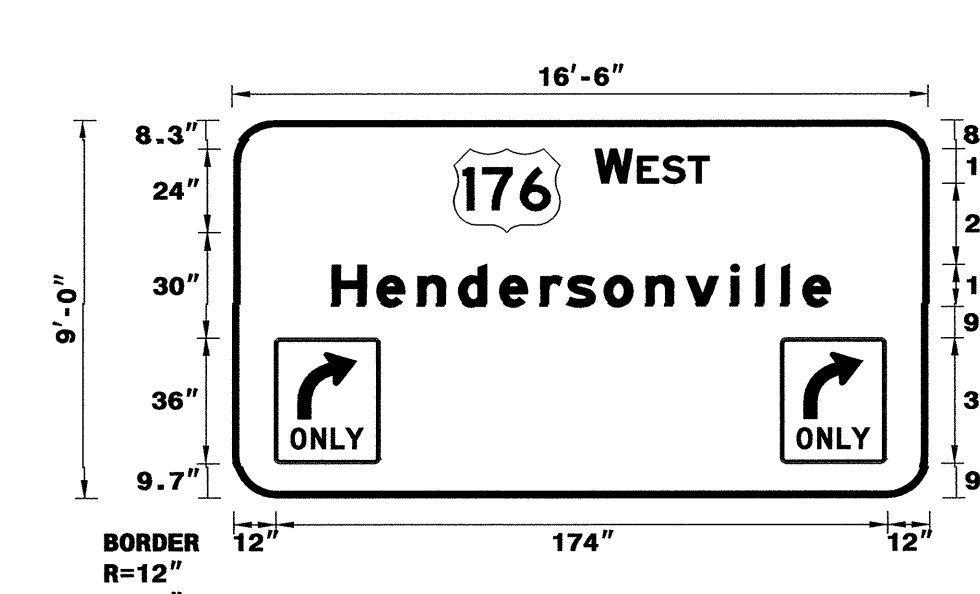
USE NOTES: 1,2,3,4
 1. Legend and border shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
 4. Shields shall be Grade A sheeting.
 5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Letter spacings are to start of next letter										Series/Size			
										Text Length			
E	A	S	T							E 2000			
73.7	7.5	1	9	7.4	6	33.4				30.9			
E	F	I	A	T			R	O	C	K	EM 2000		
13.4	8.9	12	12.1	6.1	11.5	6.2	12	11.9	10.8	11.6	7.9	13.4	111.1

FILENAME: Sign Design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2 TYPE: A BACKG COLOR: Green COPY COLOR: White
 QUANTITY: 1
 SIGN WIDTH: 16'-6" HEIGHT: 9'-0" TOTAL AREA: 149.5 Sq.Ft.
 BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12"
 NO. Z BARS: 3 LENGTH: 190.0
 MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: W. Johnson PROJECT ID: R-4430 CHECKED BY: DIV: 14 DATE: Oct 20, 2008



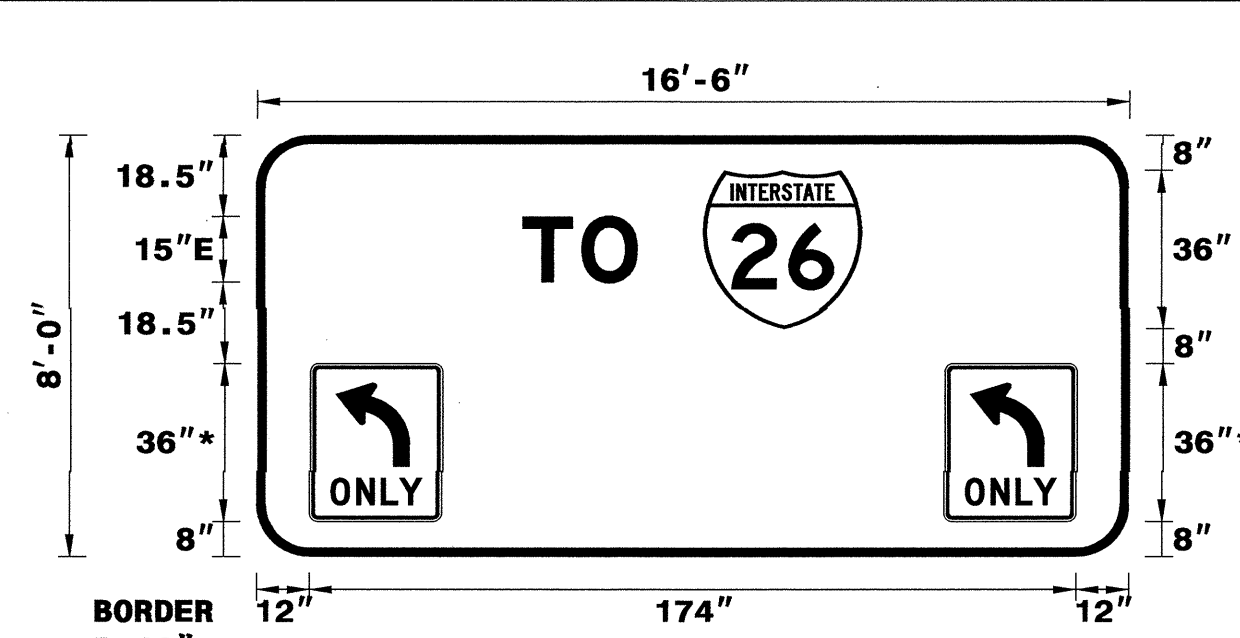
USE NOTES: 1,2,3,4
 1. Legend and border shall be direct applied Grade A sheeting.
 2. Background shall be Grade C reflective sheeting.
 3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
 4. Shields shall be Grade A sheeting.
 5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Letter spacings are to start of next letter										Series/Size						
										Text Length						
W	E	S	T							E 2000						
102.9	10.6	1.4	7.1	7.4	6	62.6				32.5						
H	E	N	D	E	R	S	O	N	V	I	L	L	E	EM 2000		
28.1	12.7	11.6	11.6	11.6	11.6	7.6	10.6	11.9	11.4	12.7	7.2	7.2	6.1	7.9	28.1	141.8

FILENAME: Sign Design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 3 TYPE: A BACKG COLOR: Green COPY COLOR: White
 QUANTITY: 1
 SIGN WIDTH: 16'-6" HEIGHT: 8'-0" TOTAL AREA: 132.0 Sq.Ft.
 BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 12"
 NO. Z BARS: 3 LENGTH: 190.0
 MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: DESIGNED PROJECT ID: R-4430 CHECKED BY: CHECKED DIV: 14 STD #: \$STN DATE: Nov 07, 2008




USE NOTES: 1,3,4
 1. Legend and border shall be direct applied Grade A sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Grade A sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Grade C reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

Letter spacings are to start of next letter					Series/Size
					Text Length
T	O				E 2000
60.5	13.4	12.6	111.5		26

FILENAME: sign design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

OVERHEAD

18-NOV-2008 14:35
 p:\paper\projects-r-r-4430\tr\off\signing\layout_plans\eng\sead.dgn
 walter.johnson AT 12/22/07

TIP NO. R-4430	SHEET NO. SIGN-15
APPROVED: <i>[Signature]</i>	
DATE: 11/18/08	
SEAL	
	

SIGN NUMBER: 4 BACKG COLOR: Green
TYPE: A COPY COLOR: White

DESIGN BY: W. Johnson CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: R-4430 DIV: 14

SYMBOL	X	Y	WID	HT
R1_4	63.4	75.8	30.3	24
R3_5a	12	9.8	30	36
R3_5a	156	9.8	30	36

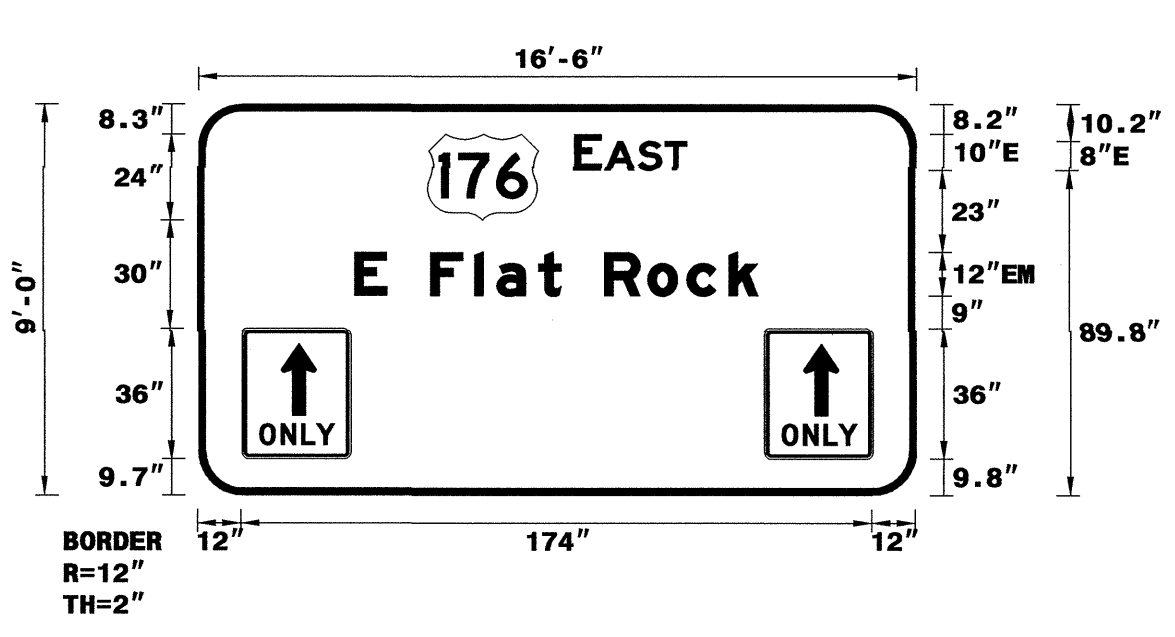
SIGN WIDTH: 16'-6"
HEIGHT: 9'-0"
TOTAL AREA: 148.5 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"

NO. Z BARS: 3 MAT'L: 0.125" (3.2 mm) ALUMINUM
LENGTH: 190.0

USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade A sheeting.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

	E	A	S	T																		Series/Size Text Length
	103.7	7.5	1	9	7.4	6	63.4															E 2000 30.9
	E	F	l	a	t			R	o	c	k											EM 2000 111.1
	43.4	8.9	12	12.1	6.1	11.5	6.2	12	11.9	10.8	11.6	7.9	43.4									

FILENAME: Sign Design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 5 BACKG COLOR: Green
TYPE: A COPY COLOR: White

DESIGN BY: W. Johnson CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: R-4430 DIV: 14

SYMBOL	X	Y	WID	HT
R1_4	62.6	75.8	30.3	24
R3_5a	12	9.8	30	36
R3_5a	156	9.8	30	36

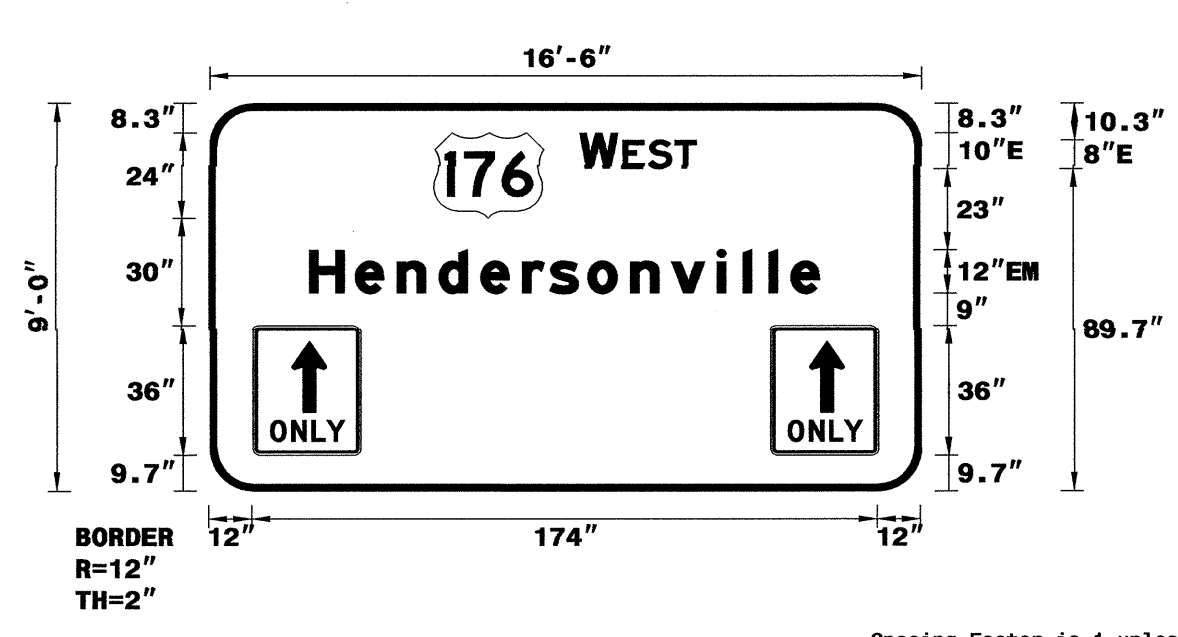
SIGN WIDTH: 16'-6"
HEIGHT: 9'-0"
TOTAL AREA: 148.5 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"

NO. Z BARS: 3 MAT'L: 0.125" (3.2 mm) ALUMINUM
LENGTH: 190.0

USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade A sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade A sheeting.
- Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS


Letter spacings are to start of next letter

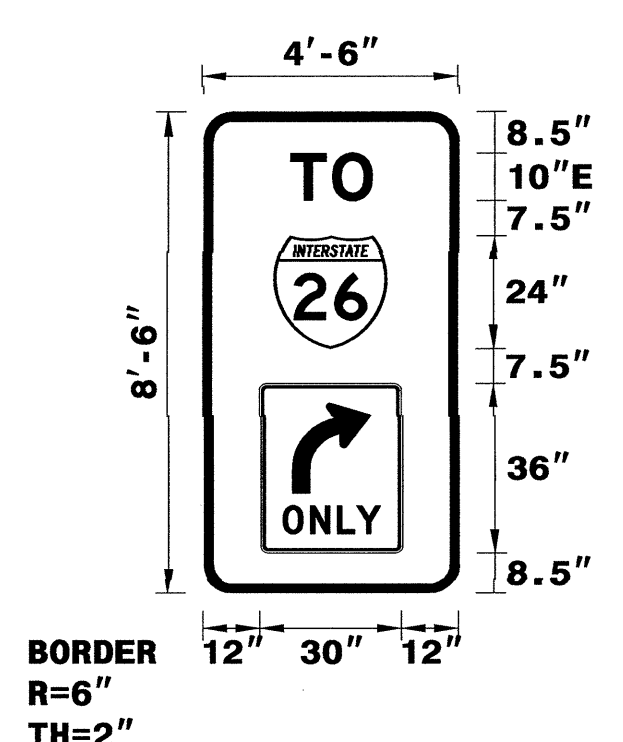
	W	E	S	T																		Series/Size Text Length
	102.9	10.6	1.4	7.1	7.4	6	62.6															E 2000 32.5
	H	e	n	d	e	r	s	o	n	v	i	l	l	e								EM 2000 141.8
	28.1	12.7	11.6	11.6	11.6	11.6	7.6	10.6	11.9	11.4	12.7	7.2	7.2	6.1	7.9	28.1						

FILENAME: Sign Design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

18-NOV-2008 14:35
 p:\tip\projects-r-4430\signing\cadd\signing layout plans\engsecd.dgn
 walter johnson AT 12/21/07

OVERHEAD


TIP NO. R-4430	SHEET NO. SIGN-16
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

SIGN NUMBER: 9 TYPE: A QUANTITY: 1 SIGN WIDTH: 4'-6" HEIGHT: 8'-6" TOTAL AREA: 38.3 Sq.Ft.	BACKG COLOR: Green COPY COLOR: White	DESIGN BY: none PROJECT ID: ID	CHECKED BY: DIV: DIV	DATE: Oct 09, 2008																																				
BORDER TYPE: FLUSH RECESS: 0" WIDTH: 2" RADII: 6" NO. Z BARS: 3 LENGTH: 46.0	<table border="1"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr> <td>M1_1</td> <td>15</td> <td>52</td> <td>24</td> <td>24</td> </tr> <tr> <td>R3_SR</td> <td>12</td> <td>8.5</td> <td>30</td> <td>36</td> </tr> </tbody> </table>	SYMBOL	X	Y	WID	HT	M1_1	15	52	24	24	R3_SR	12	8.5	30	36				Spacing Factor is 1 unless specified otherwise																				
SYMBOL	X	Y	WID	HT																																				
M1_1	15	52	24	24																																				
R3_SR	12	8.5	30	36																																				
USE NOTES: 1,2,3,4 1. Legend and border shall be direct applied Grade A sheeting. 2. Background shall be Grade C reflective sheeting. 3. Shields shall be on 0.032" (0.8mm) aluminum and demountable. 4. Shields shall be Grade A sheeting. 5. Bottom panel shall be yellow Grade C sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:																																								
LETTER POSITIONS <table border="1"> <thead> <tr> <th colspan="8">Letter spacings are to start of next letter</th> <th>Series/Size</th> </tr> <tr> <th>T</th> <th>O</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Text Length</th> </tr> </thead> <tbody> <tr> <td>18.4</td> <td>8.9</td> <td>8.4</td> <td>18.4</td> <td></td> <td></td> <td></td> <td></td> <td>E 2000</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>17.3</td> </tr> </tbody> </table>					Letter spacings are to start of next letter								Series/Size	T	O							Text Length	18.4	8.9	8.4	18.4					E 2000									17.3
Letter spacings are to start of next letter								Series/Size																																
T	O							Text Length																																
18.4	8.9	8.4	18.4					E 2000																																
								17.3																																
FILENAME: sign design_2			NORTH CAROLINA D.O.T. SIGN DETAIL																																					

OVERHEAD

D

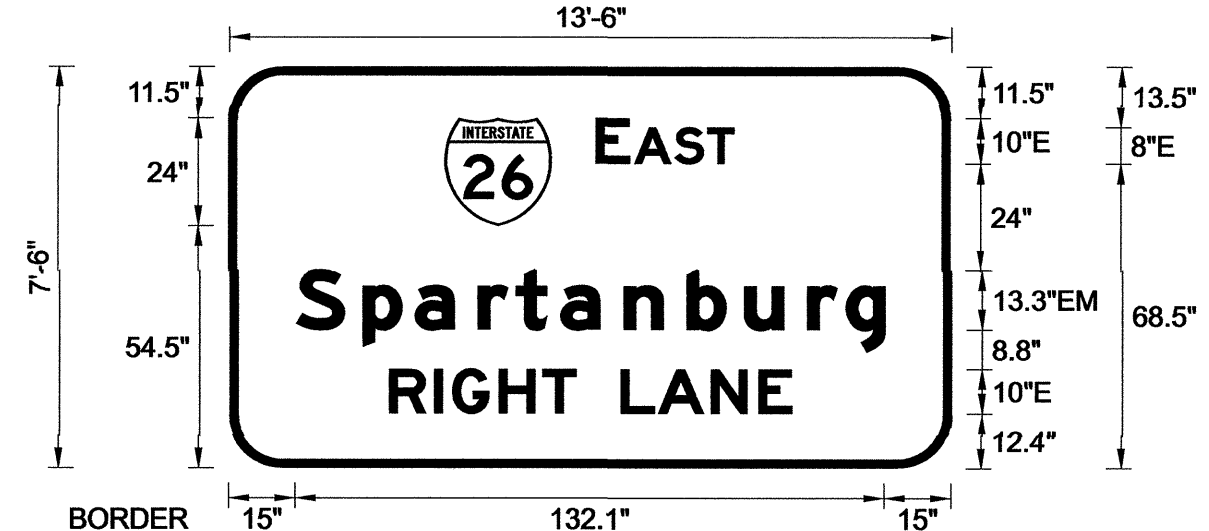
D

TIP NO. R-4430	SHEET NO. SIGN-17
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

SIGN NUMBER: 101
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-6"
HEIGHT: 7'-6"
TOTAL AREA: 101.3 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 154.0

BACKG COLOR: Green
COPY COLOR: White
SYMBOL X Y WID HT
M1_1 48.5 54.5 24 24
MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Sep 22, 2008



USE NOTES: 1,2,3,4
1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

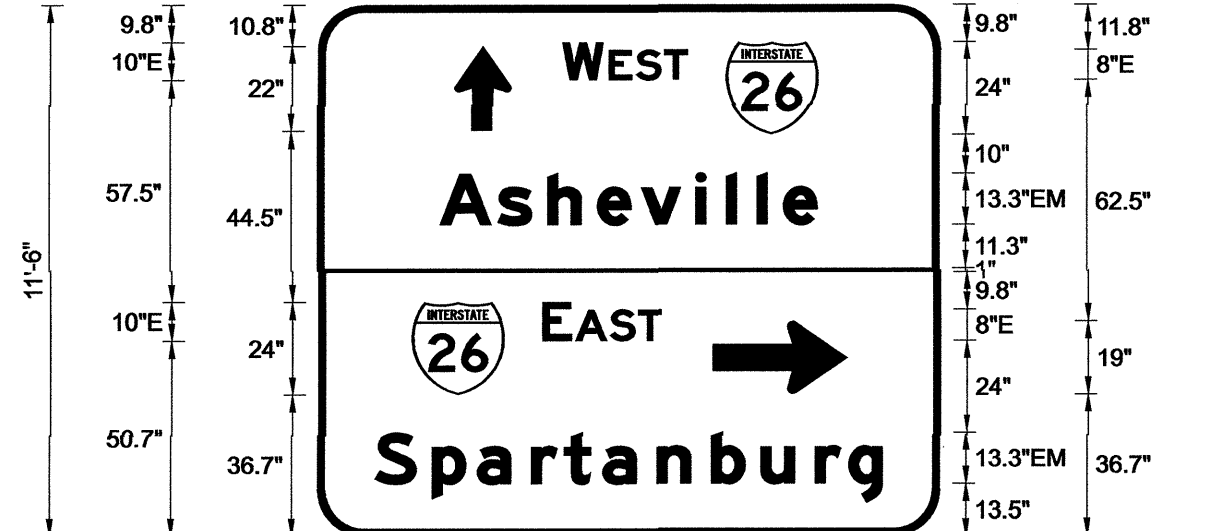
Series/Size	Text Length
E 2000	30.9
EM 2000	132.1
E 2000	90.3

FILENAME: sign design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 103
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-6"
HEIGHT: 11'-6"
TOTAL AREA: 155.3 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 154.0

BACKG COLOR: Green/Green
COPY COLOR: White
SYMBOL X Y WID HT
ARUP 35.5 105.2 14.7 22
M1_1 106.1 104.2 24 24
M1_1 24.3 36.7 24 24
ARUP 102.7 36.7 19 35
MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Sep 22, 2008



USE NOTES: 1,2,3,4
1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

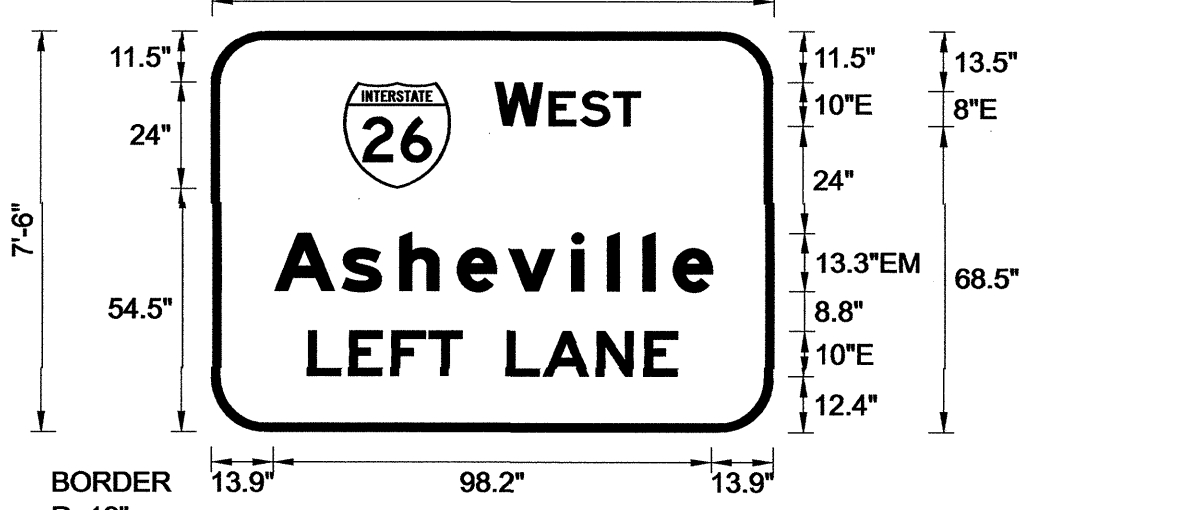
Series/Size	Text Length
E 2000	32.5
EM 2000	98.2
E 2000	30.9
EM 2000	132.1

FILENAME: sign design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 102
TYPE: A
QUANTITY: 1
SIGN WIDTH: 10'-6"
HEIGHT: 7'-6"
TOTAL AREA: 78.8 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 118.0

BACKG COLOR: Green
COPY COLOR: White
SYMBOL X Y WID HT
M1_1 29.7 54.5 24 24
MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Sep 22, 2008



USE NOTES: 1,2,3,4
1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter


Series/Size	Text Length
E 2000	32.5
EM 2000	98.2
E 2000	82.9

FILENAME: sign design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 104
TYPE: A
QUANTITY: 1
SIGN WIDTH: 12'-0"
HEIGHT: 6'-0"
TOTAL AREA: 72.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 9"
NO. Z BARS: 2
LENGTH: 136.0

BACKG COLOR: Green
COPY COLOR: White
SYMBOL X Y WID HT
ARUP 14.5 39.9 19 35
M1_1 62.9 37.4 24 24
MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Sep 22, 2008



USE NOTES: 1,2,3,4
1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS


Letter spacings are to start of next letter

Series/Size	Text Length
E 2000	32.5
EM 2000	98.2

FILENAME: sign design_2 NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED

05-NOV-2008 07:48
C:\4430\trac\fig\at\signing\cadd\signing layout\plans\engseed.dgn
Walter Johnson

TIP NO. R-4430	SHEET NO. SIGN-18
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	


SIGN NUMBER: 105
TYPE: A
QUANTITY: 1
SIGN WIDTH: 10'-6"
HEIGHT: 7'-6"
TOTAL AREA: 78.8 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 118.0

BACKG COLOR: Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT
M1_1	30.5	54.5	24	24

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Oct 01, 2008



USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size	Text Length
E 2000	32.5
EM 2000	90.2
E 2000	90.3

FILENAME: sign design_2
NORTH CAROLINA D.O.T. SIGN DETAIL

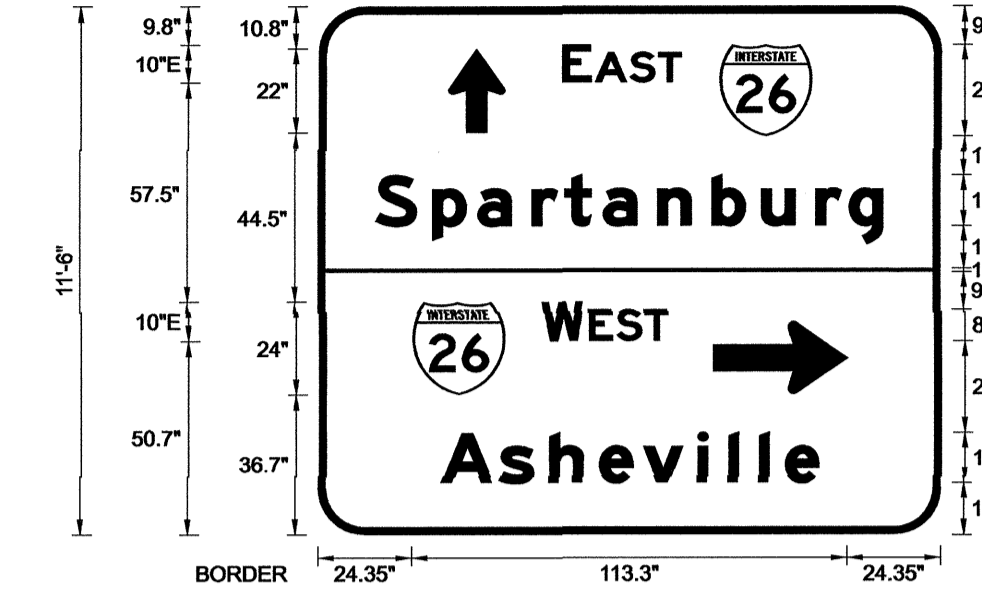
SIGN NUMBER: 107
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-6"
HEIGHT: 11'-6"
TOTAL AREA: 155.3 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 154.0

BACKG COLOR: Green/Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT
ARUP	33.7	105.2	14.7	22
M1_1	104.3	104.2	24	24
M1_1	24.3	36.7	24	24
ARUP	102.7	36.7	19	35

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Oct 01, 2008



USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size	Text Length
E 2000	30.9
EM 2000	132.1
E 2000	32.5
EM 2000	98.2

FILENAME: sign design_2
NORTH CAROLINA D.O.T. SIGN DETAIL

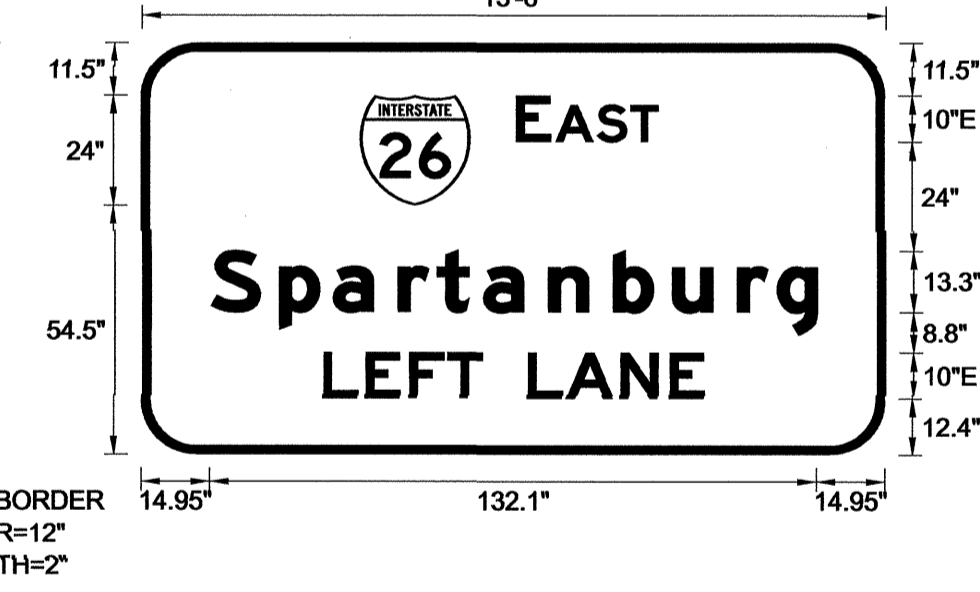
SIGN NUMBER: 106
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-6"
HEIGHT: 7'-6"
TOTAL AREA: 101.3 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 12"
NO. Z BARS: 3
LENGTH: 154.0

BACKG COLOR: Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT
M1_1	47.7	54.5	24	24

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Oct 01, 2008



USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size	Text Length
E 2000	30.9
EM 2000	132.1
E 2000	82.9

FILENAME: sign design_2
NORTH CAROLINA D.O.T. SIGN DETAIL

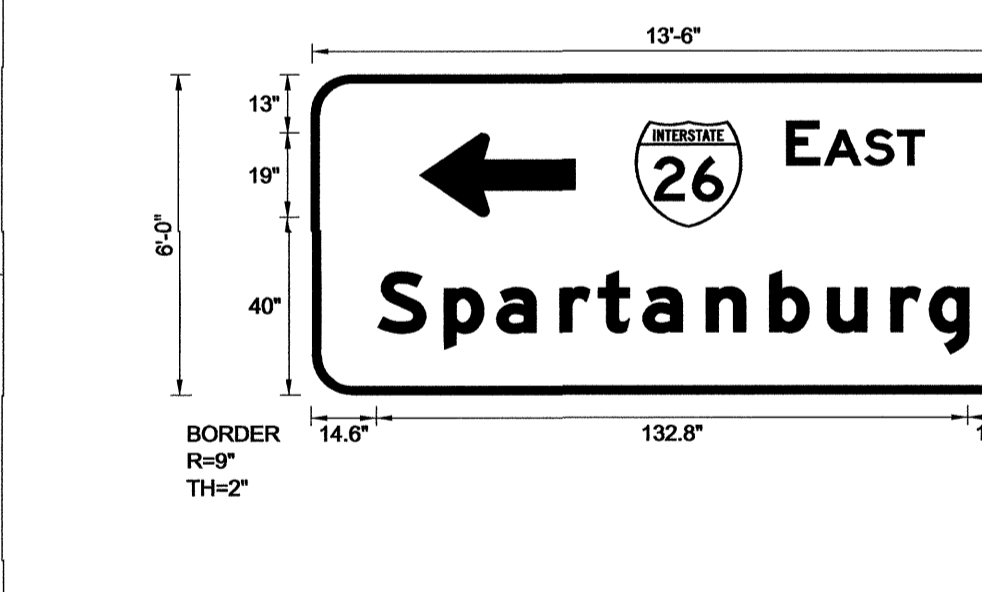
SIGN NUMBER: 108
TYPE: A
QUANTITY: 1
SIGN WIDTH: 13'-6"
HEIGHT: 6'-0"
TOTAL AREA: 81.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 2"
RADIUS: 9"
NO. Z BARS: 2
LENGTH: 154.0

BACKG COLOR: Green
COPY COLOR: White

SYMBOL	X	Y	WID	HT
ARUP	24.3	40	19	35
M1_1	72.7	37.5	24	24

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: none
PROJECT ID: ID
CHECKED BY: DIV: DIV
DATE: Sep 22, 2008



USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

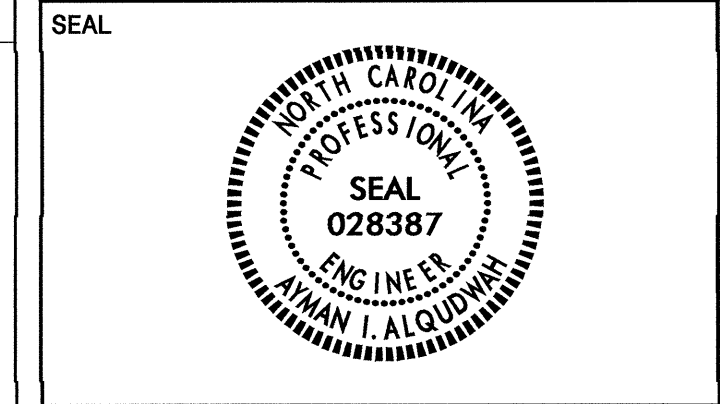
Series/Size	Text Length
E 2000	30.9
EM 2000	132.8

FILENAME: sign design_2
NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED

05-NOV-2008 07:48
ds-r4430\traffic\signing\layout\plans\engseadgn
walter.johnson

APPROVED: *[Signature]*
DATE: 11/7/08



SIGN NUMBER: 109 BACKG COLOR: Green
TYPE: B COPY COLOR: White
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	6	14	8	12

SIGN WIDTH: 9'-6"
HEIGHT: 3'-0"
TOTAL AREA: 28.5 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1"
RADIUS: 3"

NO. Z BARS: 2 MAT'L: 0.125" (3.2 mm) ALUMINUM
LENGTH: 106.0

DESIGN BY: none CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: ID DIV: DIV

USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size	Text Length
D 2000	62.5
D 2000	82

FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 301 BACKG COLOR: Green
TYPE: D COPY COLOR: White
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	6.7	9	6	9

SIGN WIDTH: 7'-6"
HEIGHT: 2'-0"
TOTAL AREA: 15.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0.75"
RADIUS: 3"

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

DESIGN BY: none CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: ID DIV: DIV

USE NOTES: 1,2

- Legend and border shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

Series/Size	Text Length
D 2000	46.9
D 2000	61.5

FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 110 BACKG COLOR: Green
TYPE: B COPY COLOR: White
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	96	14	8	12

SIGN WIDTH: 9'-6"
HEIGHT: 3'-0"
TOTAL AREA: 28.5 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 1"
RADIUS: 3"

NO. Z BARS: 2 MAT'L: 0.125" (3.2 mm) ALUMINUM
LENGTH: 106.0

DESIGN BY: none CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: ID DIV: DIV

USE NOTES: 1,2,3,4

- Legend and border shall be direct applied Grade B sheeting.
- Background shall be Grade C reflective sheeting.
- Shields shall be on 0.032" (0.8mm) aluminum and demountable.
- Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

Series/Size	Text Length
D 2000	62.5
D 2000	82

FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 302 BACKG COLOR: Green
TYPE: D COPY COLOR: White
QUANTITY: 1

SYMBOL	X	Y	WID	HT
ARUP	74.3	9	6	9

SIGN WIDTH: 7'-6"
HEIGHT: 2'-0"
TOTAL AREA: 15.0 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0"
WIDTH: 0.75"
RADIUS: 3"

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

DESIGN BY: none CHECKED BY: DATE: Oct 20, 2008
PROJECT ID: ID DIV: DIV

USE NOTES: 1,2

- Legend and border shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS


Letter locations are panel edge to lower left corner

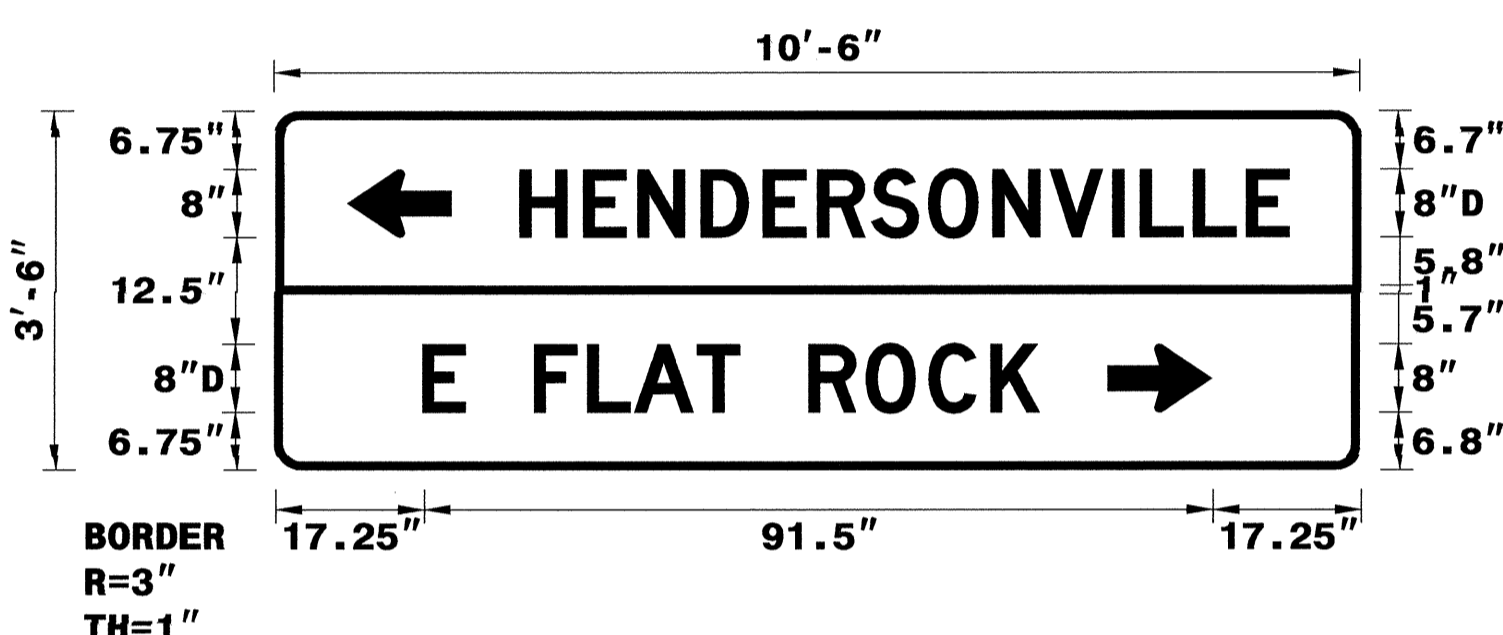
Series/Size	Text Length
D 2000	46.9
D 2000	61.5

FILENAME: Sign Design NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED

06-NOV-2008 07:49
d:\r4430\traffic\signing\layout_plans\engseed.dgn
walter.johnson - AT E221737

TIP NO. R-4430	SHEET NO. SIGN-19a
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

SIGN NUMBER: 111 TYPE: B QUANTITY: 1 SIGN WIDTH: 10'-6" HEIGHT: 3'-6" TOTAL AREA: 36.8 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 1" RADII: 3" NO. Z BARS: 2 LENGTH: 118.0	BACKG COLOR: Green/Green COPY COLOR: White <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr> <td>ARUP</td> <td>8.4</td> <td>27.3</td> <td>8</td> <td>12</td> </tr> <tr> <td>ARUP</td> <td>96.8</td> <td>6.8</td> <td>8</td> <td>12</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> </tbody> </table> MAT'L: 0.125" (3.2 mm) ALUMINUM	SYMBOL	X	Y	WID	HT	ARUP	8.4	27.3	8	12	ARUP	96.8	6.8	8	12																										DESIGN BY: none PROJECT ID: ID CHECKED BY: DIV: DIV DATE: Nov 10, 2008	
SYMBOL	X	Y	WID	HT																																							
ARUP	8.4	27.3	8	12																																							
ARUP	96.8	6.8	8	12																																							

USE NOTES: 1,2,3,4

1. Legend and border shall be direct applied Grade B sheeting.
2. Background shall be Grade C reflective sheeting.
3. Shields shall be on 0.032" (0.8mm) aluminum and demountable.
4. Shields shall be Grade B sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size	
															Text Length	
	H	E	N	D	E	R	S	O	N	V	I	L	L	E		D 2000
28.4	7.4	6.3	7.4	7.2	6.3	6.2	6.6	7.4	6.6	7.3	3.2	6.2	6.2	5	8.4	89.3
	E		F	L	A	T		R	O	C	K					D 2000
17.2	5	8	6.2	5.4	7.3	5	8	6.6	7.3	7.2	5.6	37.2				71.5

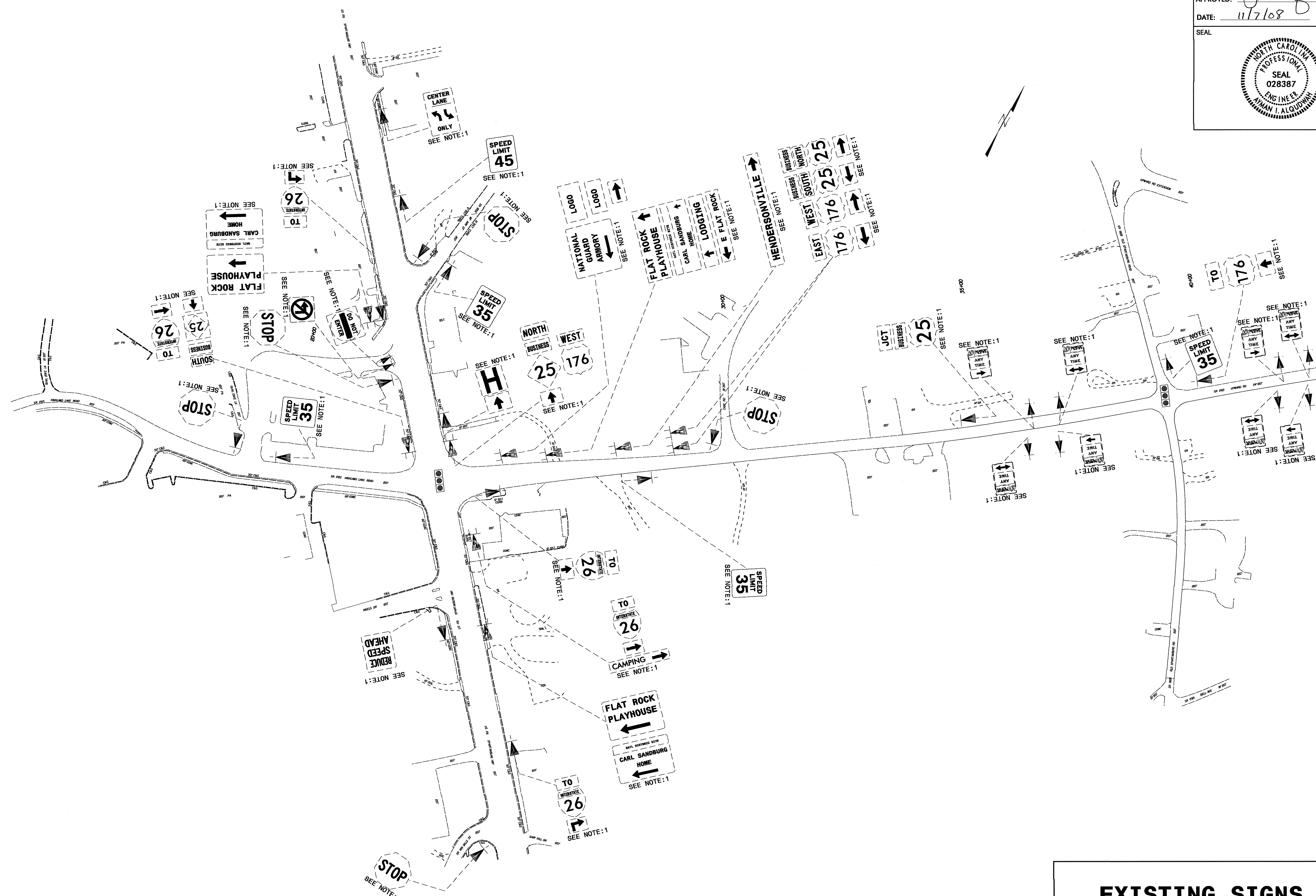
FILENAME: sign design

NORTH CAROLINA D.O.T. SIGN DETAIL

GROUND MOUNTED

10-NOV-2008 13:33
 p:\toprojects\4430\signing\cedd\signing Layout Plans\Engseed.dgn
 Walter Johnson AT 1E221737

TIP NO. R-4430	SHEET NO. SIGN-20
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	

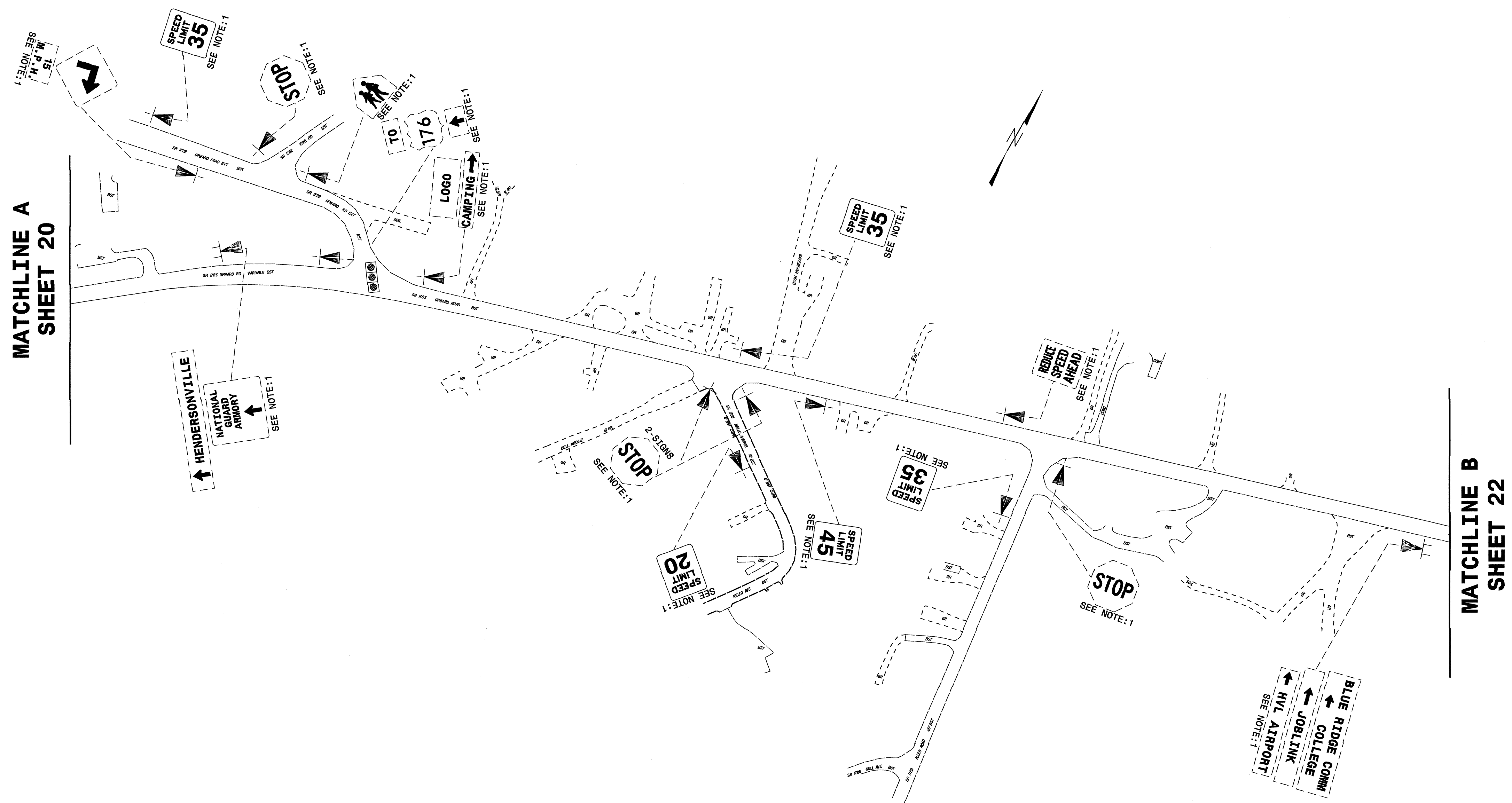


MATCHLINE A
SHEET 21

EXISTING SIGNS

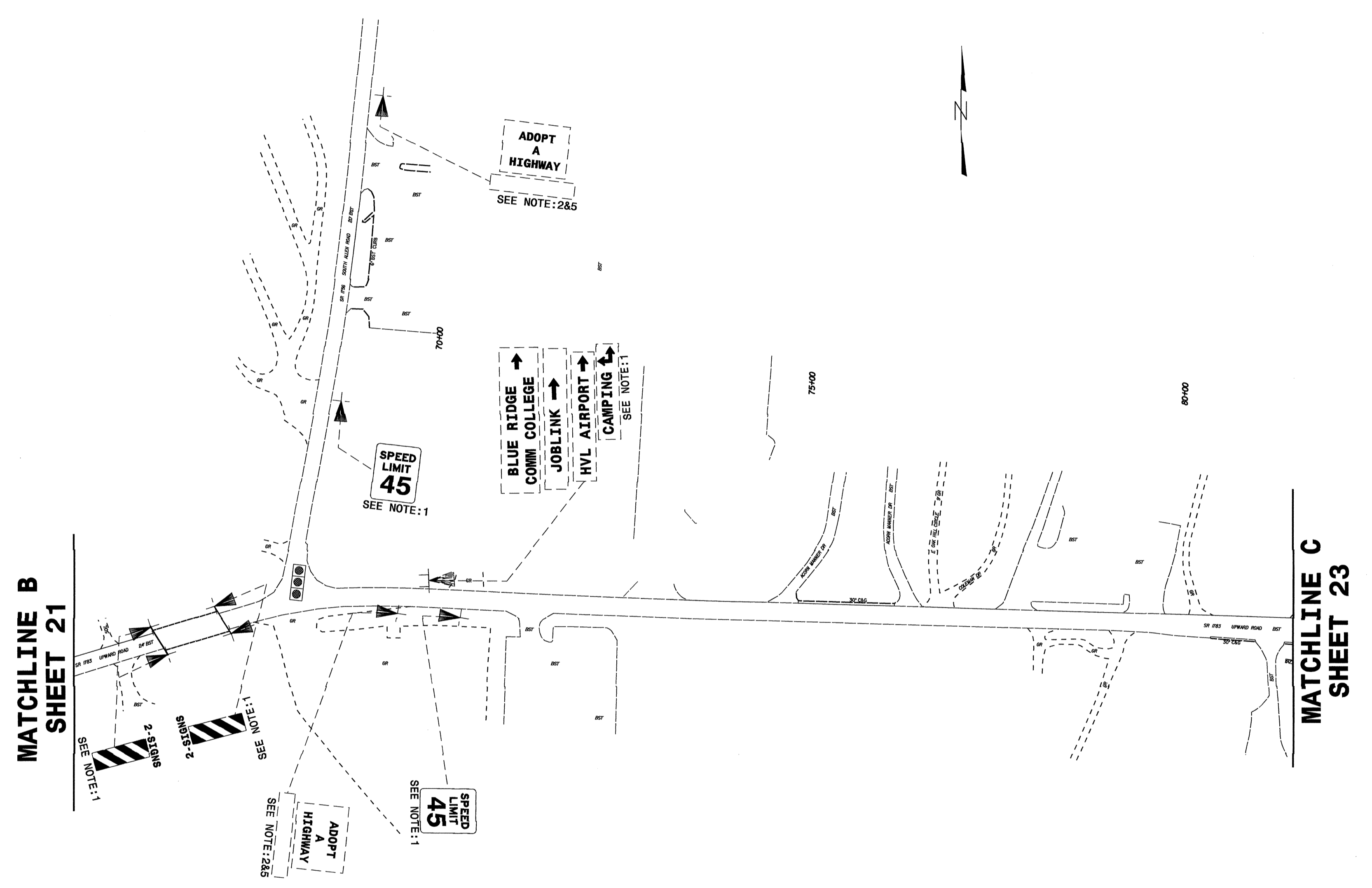
06-NOV-2008 09:04
ds_4430\traffic\signing\Layout_Plans\R-4430_Sgn_Existing_Sheet_20.dgn
walter.johnson

TIP NO. R-4430	SHEET NO. SIGN-21
APPROVED: <i>Ayman L. Alquodmani</i>	
DATE: 11/7/08	
SEAL	



EXISTING SIGNS

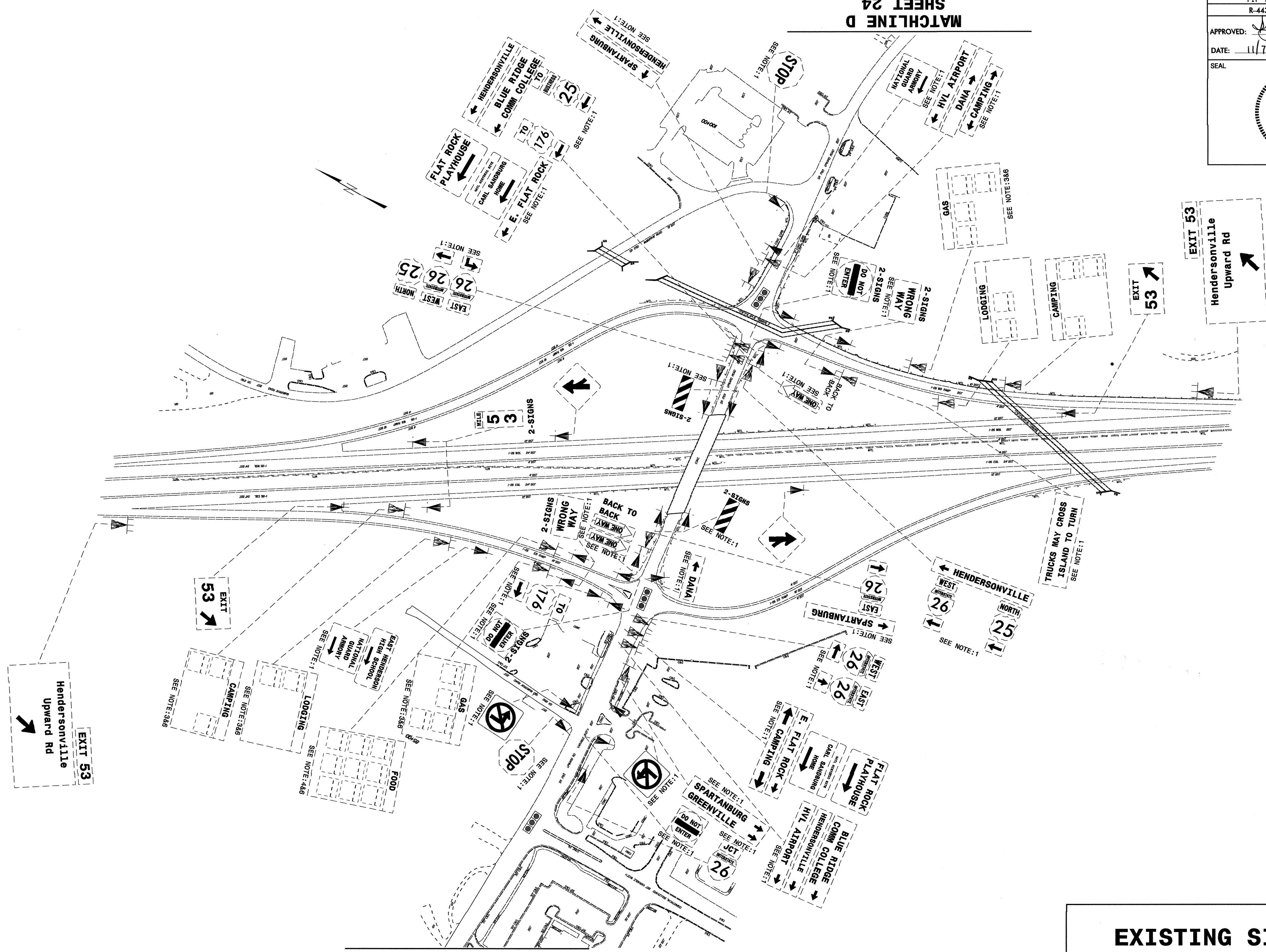
TIP NO. R-4430	SHEET NO. SIGN-22
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	



EXISTING SIGNS

TIP NO. R-4430	SHEET NO. SIGN-23
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	


MATCHLINE D SHEET 24



MATCHLINE C SHEET 22

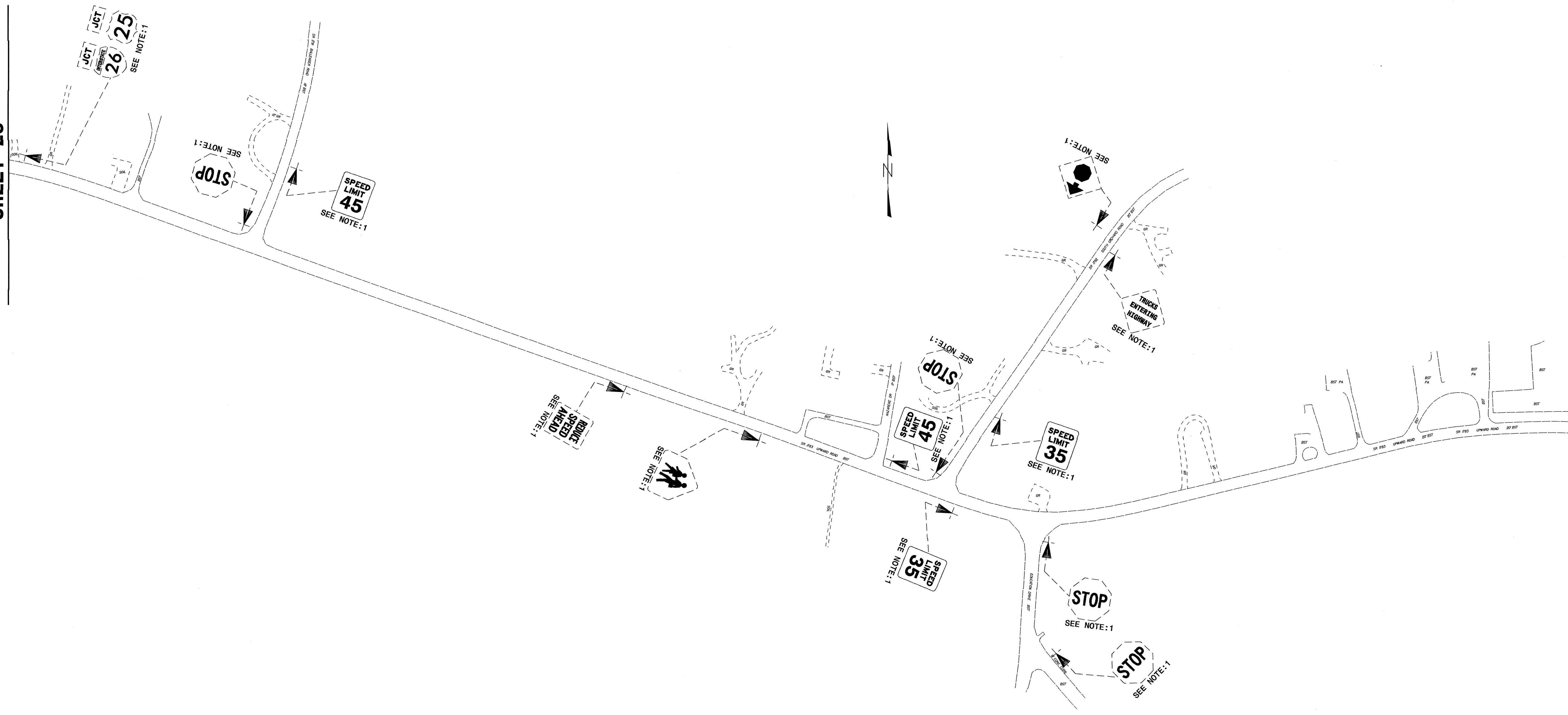
EXISTING SIGNS

06-NOV-2008 09:05
 d:\r4430\traffic\signing\egdd\Signing Layout Plans\R-4430_Sgn_Existing_Sheet_23.dgn
 At 11/22/08
 walker.johnson

TIP NO. R-4430	SHEET NO. SIGN-24
APPROVED: <i>[Signature]</i>	
DATE: 11/9/08	
SEAL	
	

MATCHLINE D
SHEET 23

MATCHLINE E
SHEET 25

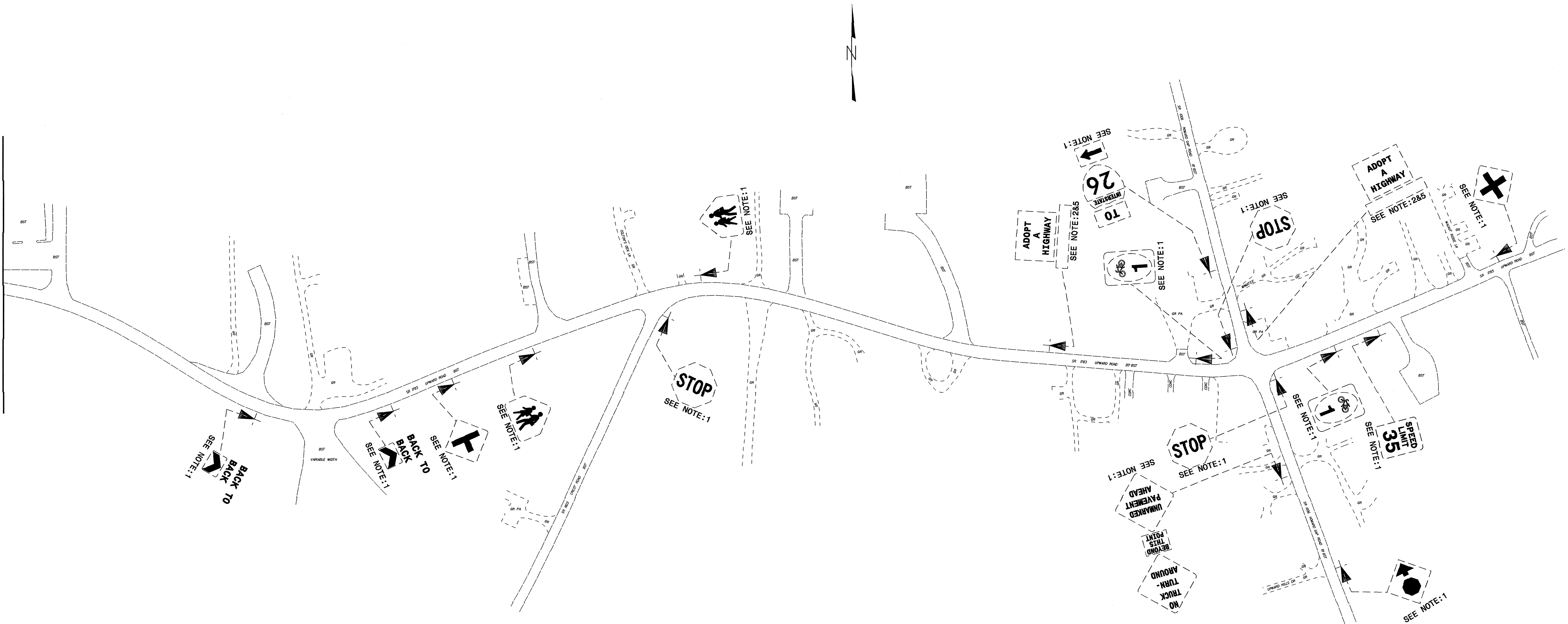


EXISTING SIGNS

06-NOV-2008 08:08
d:\r4430\traffic\signing\Layout Plans\R-4430_Sgn_Existing Sheet 24.dgn
walter.johnson A11E221737

06-Nov-2008 08:09
C:\p1\signing\25\d\Signing Layout Plans\R-4430-Sgn-Existing Sheet 25.dgn
At: E221737
Walter Johnson

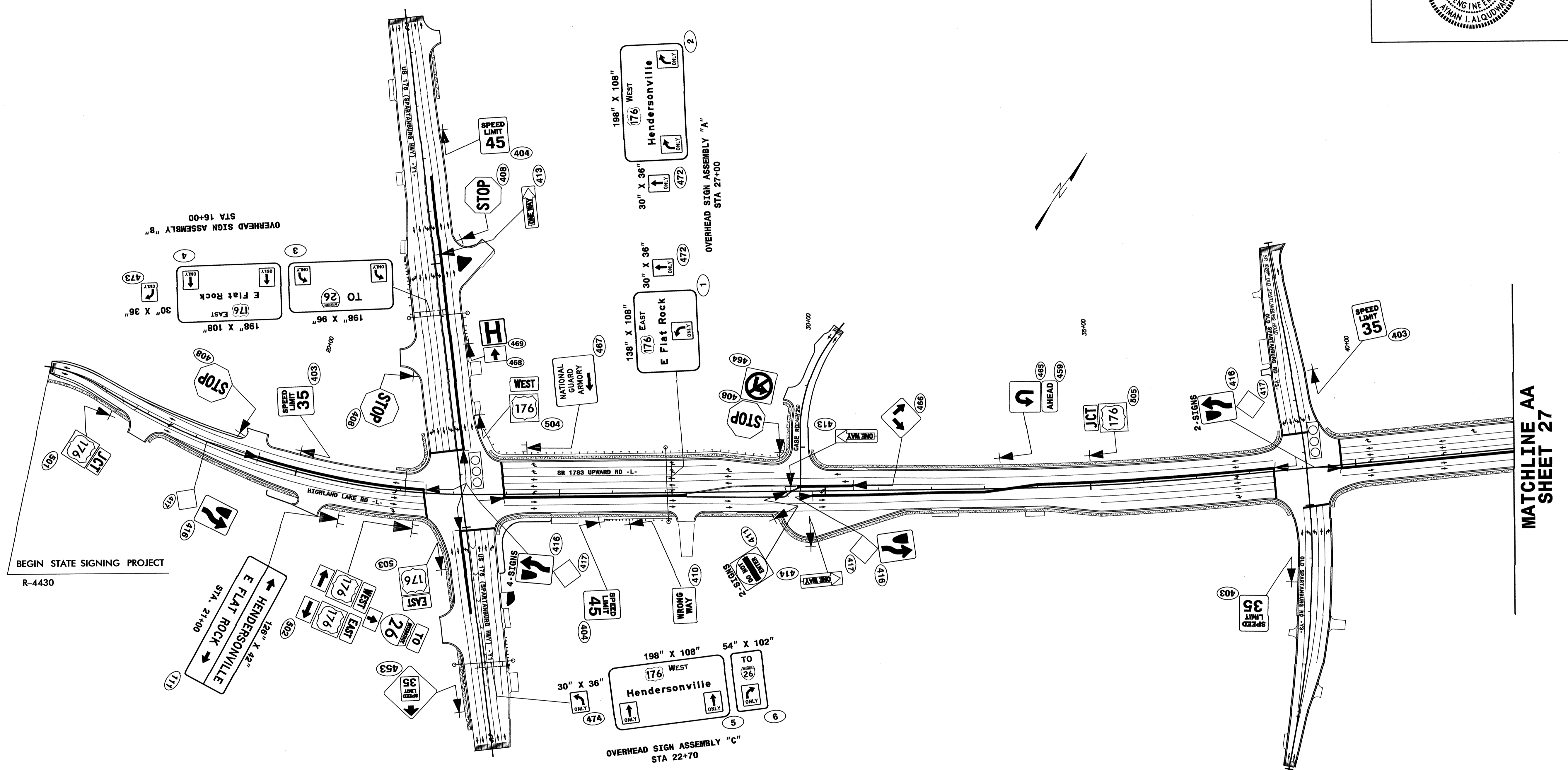
MATCHLINE E SHEET 24



EXISTING SIGNS

TIP NO. R-4430	SHEET NO. SIGN-25
APPROVED: <i>Walter Johnson</i>	
DATE: 11/7/08	
SEAL	

TIP NO. R-4430	SHEET NO. SIGN-26
APPROVED: <i>[Signature]</i>	
DATE: 11/18/08	
SEAL	



PROPOSED SIGNS

MATCHLINE AA
SHEET 27

18-NOV-2008 15:52
C:\projects-r-4430\traffic\signing\Layout Plans\R-4430_Sgn-Proposed Sheet 26.dgn
walterjohnson AT 11/22/08

BEGIN STATE SIGNING PROJECT
R-4430

OVERHEAD SIGN ASSEMBLY "B"
STA 16+00

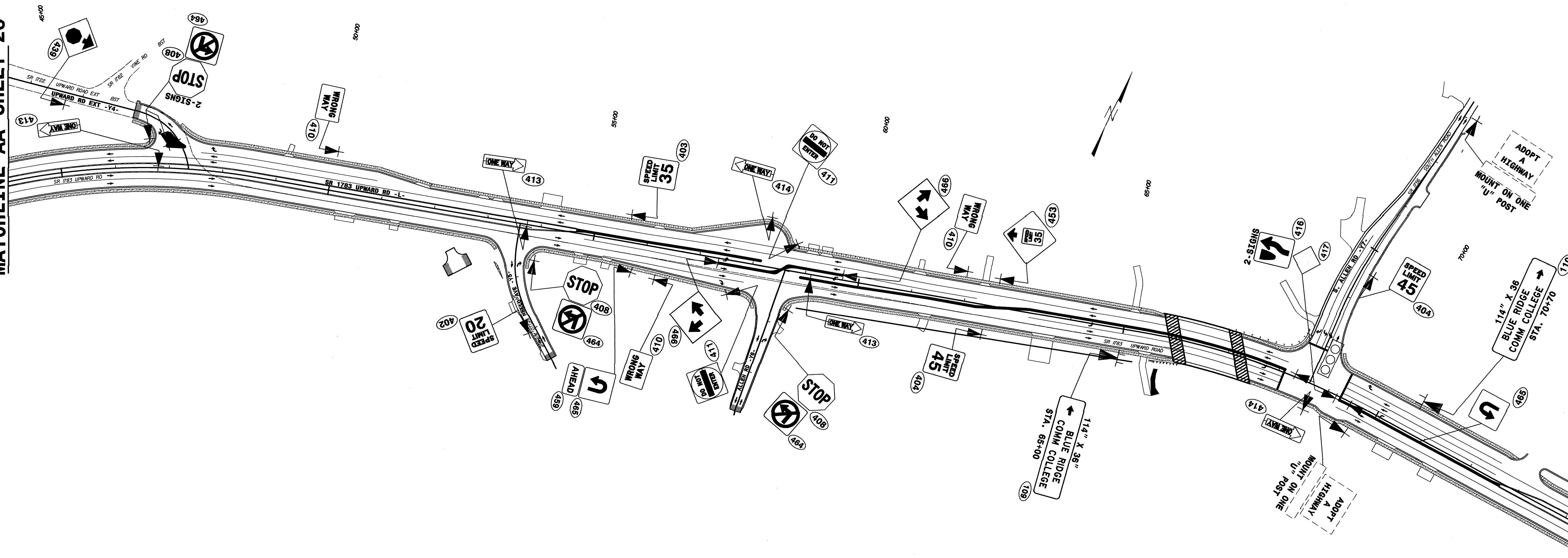
OVERHEAD SIGN ASSEMBLY "C"
STA 22+70

OVERHEAD SIGN ASSEMBLY "A"
STA 27+00

TIP NO. R-4430	SHEET NO. SIGN-27
APPROVED: <i>Amman DePaul</i>	
DATE: 11/7/08	
SEAL	

MATCHLINE AA SHEET 26


MATCHLINE BB SHEET 28



PROPOSED SIGNS

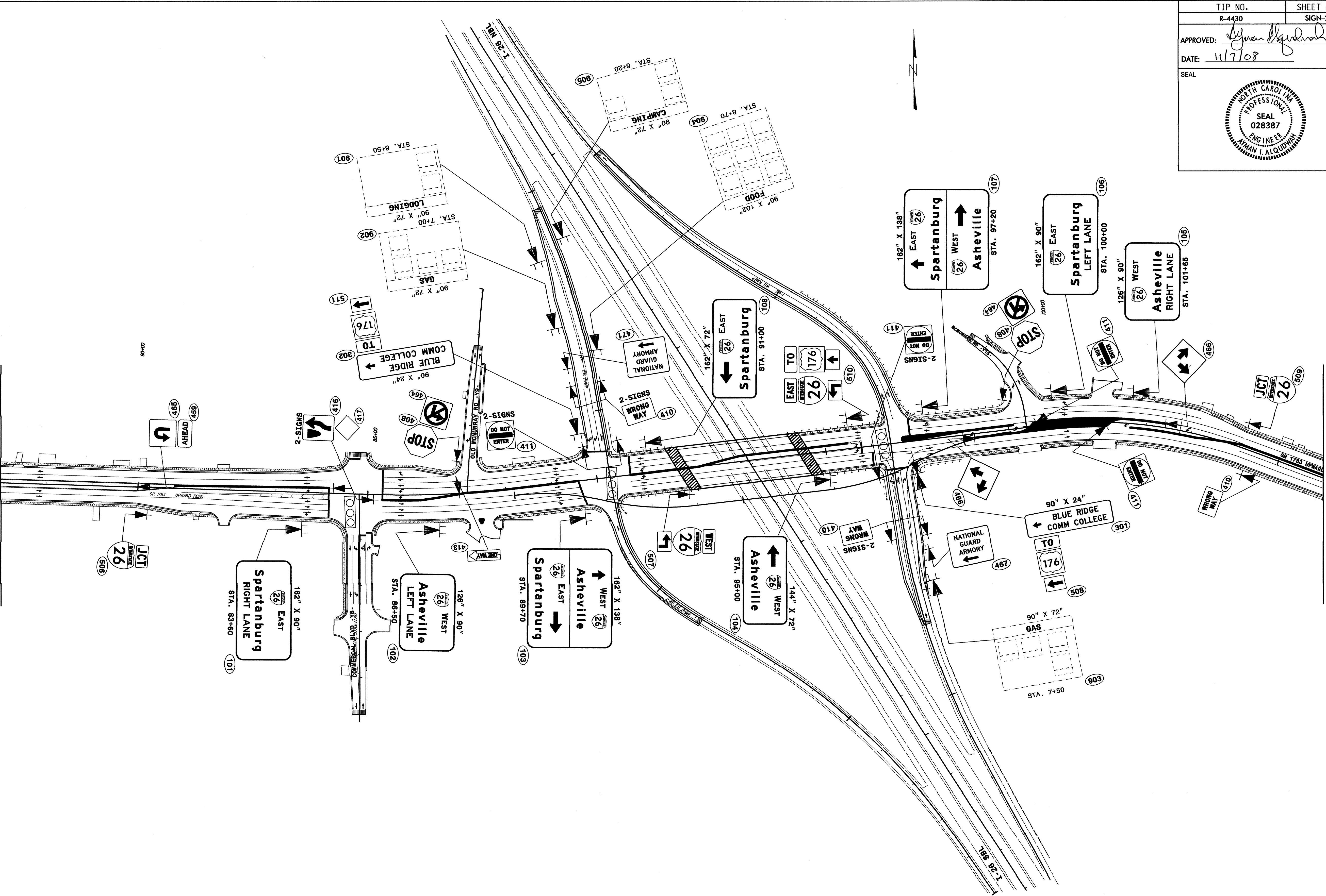
06-NOV-2008 08:11
d:\r4430\traffic\signing\Layout Plans\R-4430_Sgn_Proposed Sheet 27.dgn
walter.johnson A11E221737

10-NOV-2008 13:31
p:\tippro\projects-r\4430\signing\cadd\Signing Layout Plans\R-4430_Sgn_Proposed Sheet 28.dgn
walter.johnson AT 11/22/08


TIP NO. R-4430	SHEET NO. SIGN-28
APPROVED: <i>Syvan Elgord</i>	
DATE: 11/7/08	
SEAL	
	

MATCHLINE BB SHEET 27

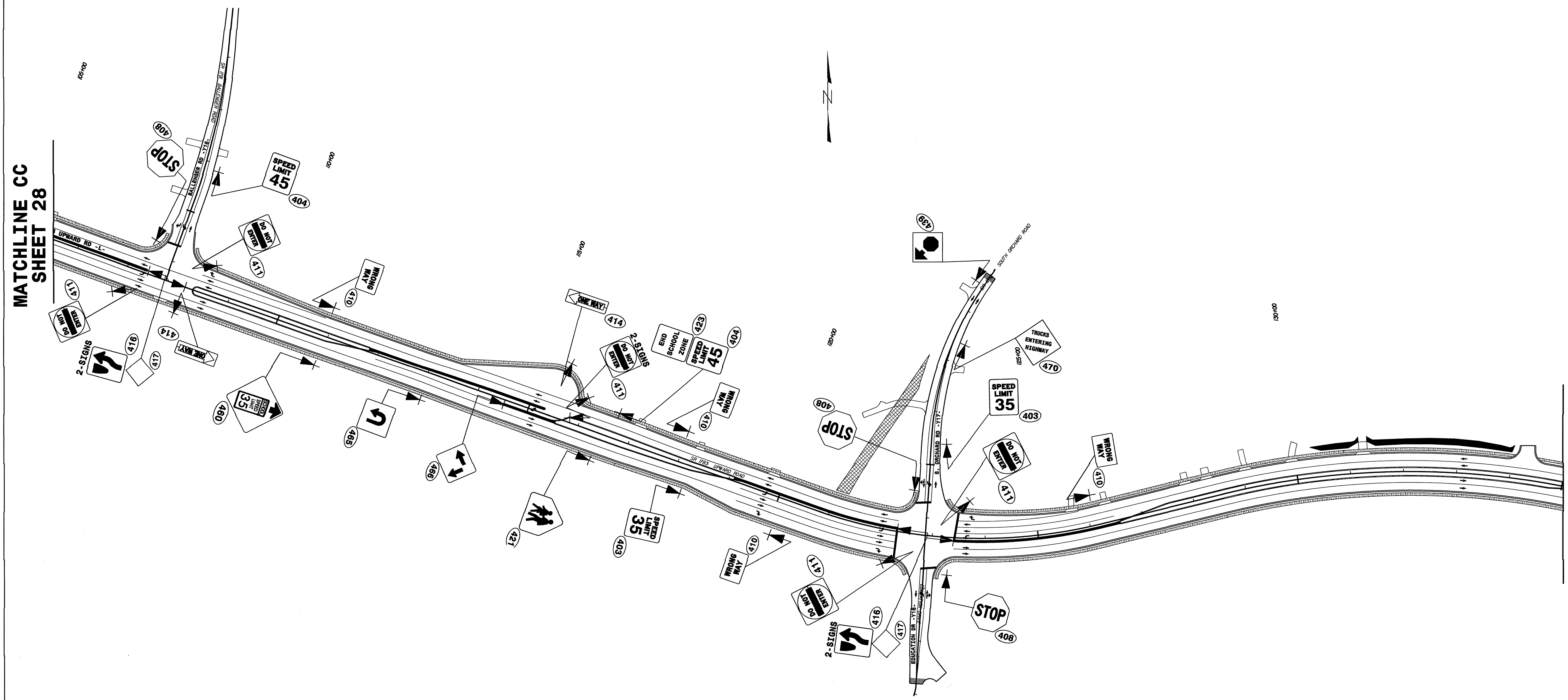
MATCHLINE CC SHEET 29



PROPOSED SIGNS

TIP NO. R-4430	SHEET NO. SIGN-29
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	


10-NOV-2008 14:2
 p:\p\projects-r\4430\ref\signing\cadd\signing layout plans\R-4430_5gn-Proposed Sheet 29.dgn
 Walter Johnson A1 1E221737



MATCHLINE CC
SHEET 28

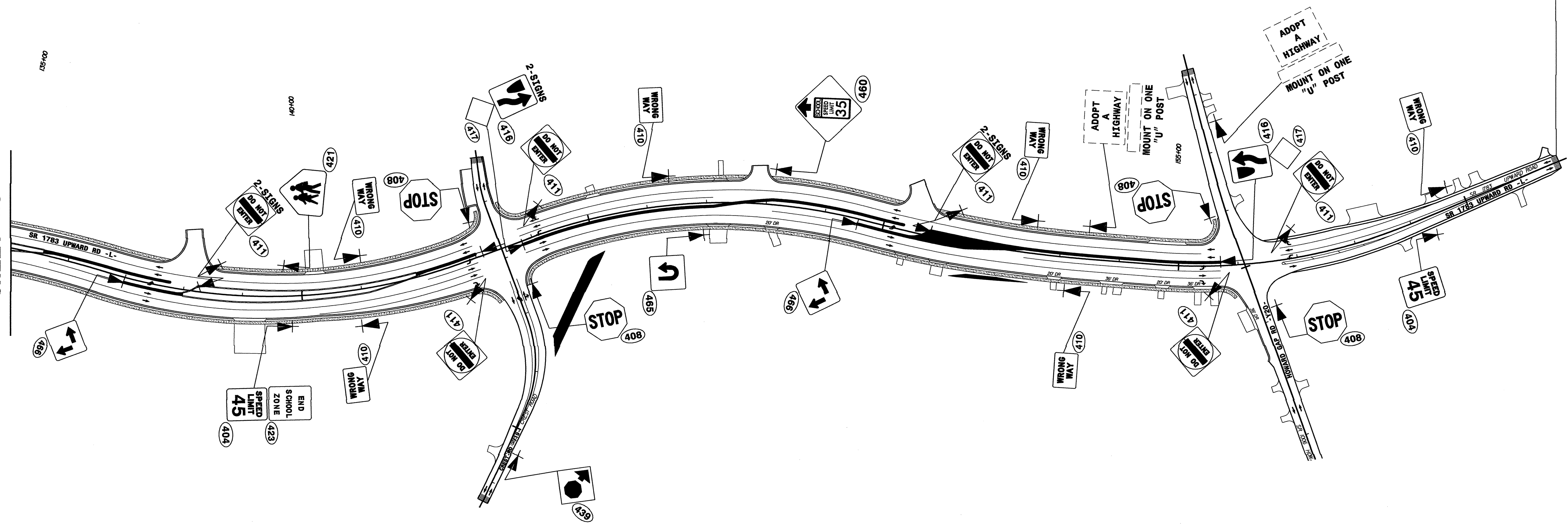
MATCHLINE DD SHEET 30

PROPOSED SIGNS

TIP NO. R-4430	SHEET NO. SIGN-30
APPROVED: <i>[Signature]</i>	
DATE: 11/7/08	
SEAL	
	

END STATE SIGNING PROJECT
R-4430

MATCHLINE DD
SHEET 29



PROPOSED SIGNS

06-NOV-2008 08:13
d:\r-4430\traffic\signing\Layout Plans\R-4430_Sgn-Proposed Sheet 30.dgn
walter.johnson Alt 11/22/08