

STATE OF MAINE DEPARTMENT OF TRANSPORTATION

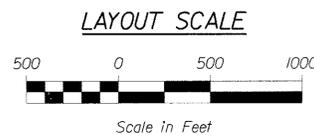
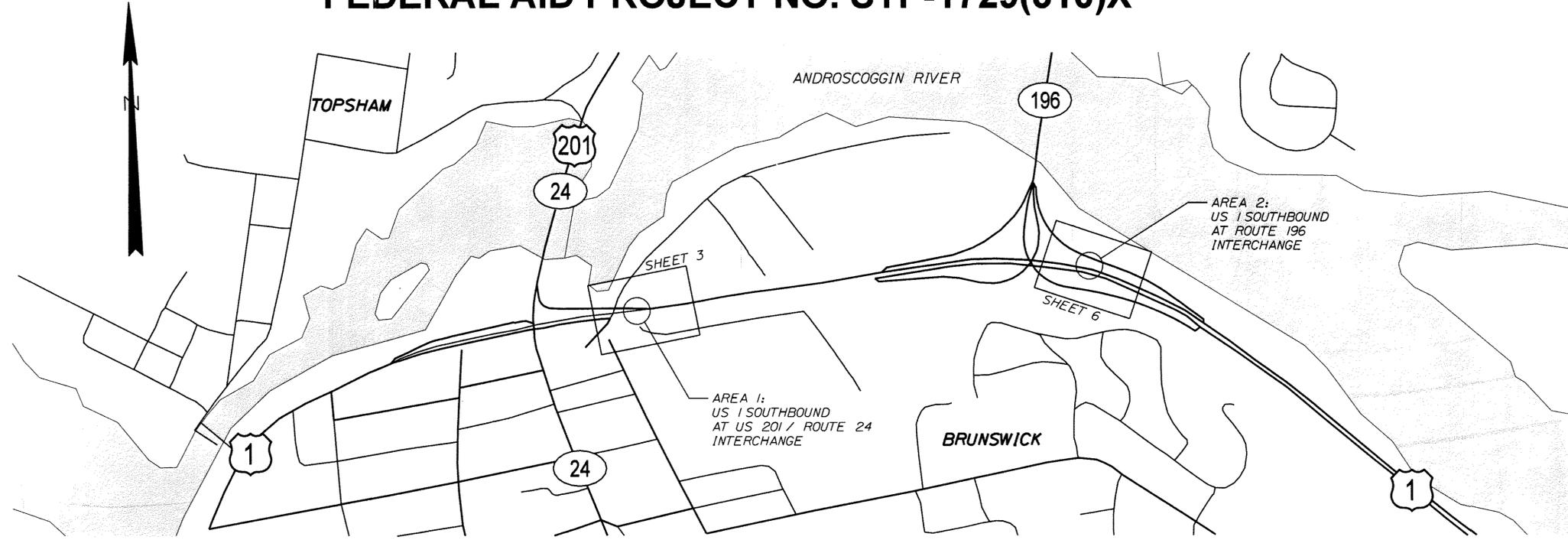


BRUNSWICK INSTALLATION OF OVERHEAD ADVANCED GUIDE SIGNS

U.S. ROUTE 1
FEDERAL AID PROJECT NO. STP-1729(310)X

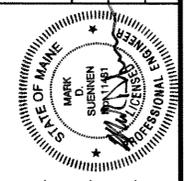
PLAN LEGEND		
Existing	Proposed	
Overhead Sign Structure		
Cantilever Sign Structure		
Sign Post		
Delineator		
Boring Location		
Luminaire		
Utility Pole		
Overhead Utility Wires		
Approx. Wetland Area		
Underground Gas Line		
Cable Guardrail		
Beam Guardrail		

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PROJECT LOCATION:	In the town of Brunswick along U.S. Route 1 Southbound: Area 1) Approximately 200 feet north of Water St. overpass Area 2) Approximately 875 feet north of Route 196 overpass
PROGRAM AREA:	Traffic Program
OUTLINE OF WORK:	Installation of two new overhead advanced guide signs

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
		6/28/11
COMMISSIONER:	CHIEF ENGINEER:	6-27-11



SIGNATURE	P.E. NUMBER	DATE
	1481	06/09/2011
PROGRAM MANAGER	DESIGNER	CONSULTANT
J. MANSUR	M. SUENMEN	VHB

PROJECT INFORMATION	TRAFFIC
PROGRAM	J. MANSUR
PROJECT MANAGER	M. SUENMEN
DESIGNER	VHB
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

**BRUNSWICK
INSTALLATION OF OVERHEAD
ADVANCED GUIDE SIGNS**

TITLE SHEET

SHEET NUMBER	1
OF 11	

WIN 17293.10 STP-1729(310)X

Date: 6/9/2011

Username: JROBERT

Division:

Filename: 001_COVER.dgn

GENERAL NOTES:

- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES.
- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF MAINEDOT STANDARD DETAILS FOR HIGHWAY AND BRIDGES.
- ALL PROPOSED WORK SHALL CONFORM TO THE 2003 EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE CONTRACTOR SHALL CONTACT DIG-SAFE PRIOR TO ANY EXCAVATION WORK.
- ALL CLEARING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. THE ACTUAL LINES FOR CLEARING SHALL BE ESTABLISHED IN THE FIELD BY THE RESIDENT ENGINEER.
- SELECTIVE CLEARING AND TREE-TRIMMING MAY BE REQUIRED TO PROVIDE PROPER SIGHT LINES TO NEW SIGN INSTALLATIONS. AT SIGN STRUCTURE FOUNDATIONS, THE LIMITS OF INCIDENTAL CLEARING SHALL NOT EXCEED THE LIMITS OF ROW PROVIDED FOR THIS PROJECT.
- ALL SIGNING MATERIALS DEMOUNTED BUT NOT REINSTALLED SHALL REMAIN THE PROPERTY OF MAINEDOT INCLUDING ALL ALUMINUM EXTRUDED PANELS, ZEE BAR TUBE POSTS, STEEL H-BEAMS, BREAKAWAY DEVICES, AND SIGN HANGERS. ALUMINUM PANEL SIGNS SHALL BE DISASSEMBLED INTO 1-FOOT SECTIONS AND DELIVERED TO THE BELGRADE MAINTENANCE LOT (BEHIND THE BUILDING WHERE OTHER ALUMINUM EXTRUSIONS ARE LOCATED). BEFORE EACH DELIVERY, THE CONTRACTOR SHALL CONTACT THE INTERSTATE SIGNING SUPERVISOR. ALL OTHER REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVAL, DISMANTLING, STOCKPILING, DELIVERY, AND DISPOSAL OF THE ABOVE MENTIONED MATERIALS SHALL BE INCIDENTAL TO THE APPROPRIATE DEMOUNTING ITEMS.
- EQUIPMENT REMOVED AND DESIGNATED TO BECOME PROPERTY OF THE CONTRACTOR SHALL BE REMOVED FROM THE HIGHWAY RIGHT-OF-WAY AND DISPOSED OF IN A MANNER ACCEPTABLE TO THE RESIDENT ENGINEER AND IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
- DAMAGES ATTRIBUTED TO THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT ENGINEER. ALL WORK, EQUIPMENT, AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE. REPAIR WORK, IF NECESSARY, SHALL NOT BE DONE ON OR ADJACENT TO A LANE CARRYING TRAFFIC.
- ALTHOUGH NO KNOWN CONTAMINATION EXISTS ON THE PROJECT, THERE ARE POTENTIAL SOURCES ADJACENT TO THE PROJECT DUE TO ACCIDENTS INVOLVING THE RELEASE OF PETROLEUM PRODUCTS. THE CONTRACTOR SHALL REMAIN ALERT FOR EVIDENCE OF CONTAMINATION AND SHALL EMPLOY APPROPRIATE HEALTH AND SAFETY MEASURES TO PROTECT ITS WORKERS AGAINST HAZARDS ASSOCIATED WITH WORKING NEAR PETROLEUM IMPACTED SOILS. IF THE CONTRACTOR ENCOUNTERS EVIDENCE OF SOIL OR GROUNDWATER CONTAMINATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION, STOP WORK IN THE CONTAMINATED AREA, AND IMMEDIATELY NOTIFY THE RESIDENT ENGINEER. THE RESIDENT ENGINEER WILL CONTACT THE HYDROGEOLOGIST IN MAINEDOT'S ENVIRONMENTAL OFFICE AT 207-624-3100 AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 800-482-0777. WORK MAY ONLY CONTINUE WITH AUTHORIZATION FROM THE RESIDENT ENGINEER.

UTILITIES:

- THE LOCATION OF THE EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS WERE COMPILED FROM LIMITED FIELD SURVEY AND AERIAL PHOTOGRAMMETRY. LOCATIONS ARE APPROXIMATE AND ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UNDERGROUND UTILITIES AND EQUIPMENT ARE SHOWN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. THEREFORE, THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH EACH PROJECT LOCATION AND UNDERSTAND THE UTILITY ISSUES PERTINENT TO EACH SITE
- IF PROPER CLEARANCE FROM EXISTING UTILITIES CANNOT BE ACHIEVED AS NOTED IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL STOP WORK ON THAT LOCATION AND CONTACT THE RESIDENT ENGINEER FOR FURTHER DIRECTION.

MAINTENANCE OF TRAFFIC:

- MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE MUTCD AND THE TYPICAL APPLICATIONS SHOWN IN CHAPTER 6H. WHERE APPLICABLE, THE MAINTENANCE OF TRAFFIC SHOULD CONSIDER BOTH THE 2003 AND 2009 EDITIONS OF THE MUTCD. WHERE CONFLICTS OCCUR, THE 2003 EDITION SHALL GOVERN.
- ALL SIGNS, SIGN SUPPORTS, CHANNELIZING DEVICES, ARROW PANELS AND OTHER TRAFFIC CONTROL EQUIPMENT SHALL MEET NCHRP 350 TL-3 CRITERIA.
- CONSTRUCTION SIGNS AND CHANNELIZING DEVICES SHALL BE SPACED IN ACCORDANCE WITH THE TABLES ON CONSTRUCTION DETAIL 652(17).
- SHORT TERM ROADWAY CLOSURES FOR THE INSTALLATION OF OVERHEAD SIGN STRUCTURES AND SIGNS SHALL BE ACCOMPLISHED WITH UNIFORMED TRAFFIC CONTROL OFFICERS. THE SCHEDULING AND PAYMENT FOR THE USE OF UNIFORMED TRAFFIC CONTROL OFFICERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SHORT TERM ROADWAY CLOSURES SHALL NOT OCCUR BEFORE 10 PM AND SHALL BE COMPLETED BY 5 AM. NO LANE CLOSURES OR ROADWAY CLOSURES WILL BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE RESIDENT ENGINEER AND THE TOWN OF BRUNSWICK POLICE.

MAINTENANCE OF TRAFFIC: (CONT.)

- NO DAYTIME LANE CLOSURES SHALL BE PERMITTED AT THE CANTILEVER SIGN STRUCTURE LOCATION. DAYTIME LANE CLOSURES FOR THE OVERHEAD TRUSS LOCATION MAY BE PERMITTED WITH THE APPROVAL OF THE RESIDENT ENGINEER. DAYTIME LANE CLOSURES SHALL NOT BEGIN BEFORE 9AM AND SHALL BE CLEARED FROM THE ROADWAY BY 3:30 PM. NIGHTTIME LANE CLOSURES SHALL NOT BEGIN BEFORE 8 PM AND ALL LANES MUST BE REOPENED TO TRAFFIC BY 5 AM. ROADWAY CLOSURES SHALL ONLY OCCUR AT NIGHT WITH THE APPROVAL OF THE RESIDENT ENGINEER. ROADWAY CLOSURES SHALL NOT EXCEED 15 MINUTES PER OCCASION. NO MORE THAN FOUR ROADWAY CLOSURES SHALL BE PERMITTED PER NIGHT. UPON WRITTEN REQUEST AND AT THE DISCRETION OF THE RESIDENT ENGINEER, ALTERATIONS TO THE START TIMES FOR LANE CLOSURES AND ROADWAY CLOSURES WILL BE CONSIDERED BASED ON ACTUAL TRAFFIC CONDITIONS. SEE SPECIAL PROVISION 107 FOR ADDITIONAL NOTES REGARDING WORK TIMES FOR SIGN STRUCTURES.
- THE RULES FOR ROADWAY CLOSURES AND LANE CLOSURES SHALL BE STRICTLY ENFORCED. VIOLATION OF THESE RULES SHALL BE SUBJECT TO SUPPLEMENTAL LIQUIDATED DAMAGES.
- PLACEMENT OF CONSTRUCTION SIGNS SHALL BE ADJUSTED TO AVOID OBSTRUCTING EXISTING SIGNS AND TO ENSURE PROPER SIGHT LINES TO THE CONSTRUCTION SIGN AS DETERMINED BY THE RESIDENT ENGINEER.
- ALL CONSTRUCTION SIGNING, EQUIPMENT AND DEVICES SHALL BE IN PLACE PRIOR TO STARTING WORK. ALL NON-APPLICABLE SIGNING, EQUIPMENT AND DEVICES SHALL BE REMOVED, TURNED AWAY FROM TRAFFIC OR COVERED AT THE END OF EACH WORK PERIOD.
- ALL CONSTRUCTION SIGNING, EQUIPMENT AND DEVICES SHALL BE MAINTAINED IN LIKE-NEW CONDITION. ANY SIGNS, EQUIPMENT OR DEVICES FOUND TO BE DAMAGED OR UNSERVICABLE SHALL BE REPLACED. ALL CONSTRUCTION SIGNS SHALL BE OF TYPE III OR TYPE VI SHEETING OR APPROVED EQUIVALENT; NO TYPE I OR TYPE II SHEETING WILL BE PERMITTED.
- ANY WORK IN THE ROADWAY OR SIDEWALK ADJACENT TO AN ACTIVE LANE OF TRAVEL SHALL HAVE A MINIMUM LATERAL OFFSET OF 6'-0" OR 2'-0" IN THE PRESENCE OF A UNIFORMED TRAFFIC CONTROL OFFICER.
- WORK ALONG THE MEDIAN AT THE OVERHEAD TRUSS LOCATION MAY INCLUDE A LONG TERM STATIONARY SHOULDER CLOSURE USING BARRIER WALL AND A LANE SHIFT ONTO THE RIGHT SHOULDER. THE CONTRACTOR SHALL SUBMIT A TOP PLAN FOR THE SHOULDER CLOSURE AND LANE SHIFT TO THE RESIDENT ENGINEER FOR APPROVAL. A MINIMUM OF 2-FEET SHALL BE MAINTAINED BETWEEN THE EDGE OF THE TRAVELED WAY AND THE BARRIER WALLS ON THE LEFT AND RIGHT SIDES. LANES SHALL BE A MINIMUM OF 11 FEET WIDE.

EROSION AND SEDIMENT CONTROL:

- EROSION AND SEDIMENT CONTROLS SHALL BE GOVERNED BY THE MAINE EROSION AND SEDIMENT CONTROLS BMPs MANUAL, PUBLISHED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. PAYMENT FOR EROSION AND SEDIMENT CONTROL MEASURES SHALL BE SUBSIDIARY TO OTHER CONTRACT ITEMS.
- SEDIMENT BARRIERS SHALL BE INSTALLED AT THE BASE OF A SLOPE PRIOR TO ANY SOIL DISTURBANCE IN THE CONTRIBUTING DRAINAGE AREA.
- STRAW OR HAY BALE BARRIERS SHALL NOT BE USED FOR EROSION AND SEDIMENT CONTROL FOR LONGER THAN 60 DAYS.
- ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED UNLESS OTHERWISE DIRECTED BY THE RESIDENT. LOAM, SEEDING AND MULCH SHALL BE INCIDENTAL TO THE INSTALLATION OF THE SIGN STRUCTURES.
- TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED UPON PERMANENT SLOPE STABILIZATION ESTABLISHMENT. REMOVAL SHALL BE INCIDENTAL TO OTHER CONTRACT ITEMS. PERMANENT SLOPE STABILIZATION, INCLUDING SEED, MULCH AND TOP SOIL AS REQUIRED SHALL BE INCIDENTAL TO THE INSTALLATION OF THE FOUNDATIONS.

GEOTECHNICAL/FOUNDATIONS:

- A FOUNDATION DESIGN MEETING THE REQUIREMENTS OF THE 2009 AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS" AND THE EXISTING SOIL CONDITIONS FROM THE GEOTECHNICAL SUBSURFACE EXPLORATION HAS BEEN PROVIDED BY MAINEDOT FOR THIS PROJECT. THE DESIGN WAS BASED ON AN ASSUMED SIGN STRUCTURE WITH ASSUMED LOADS. THE CONTRACTOR SHALL SUBMIT THE ACTUAL SIGN STRUCTURE LOADINGS TO THE FABRICATION ENGINEER IN ACCORDANCE WITH SPECIAL PROVISION 645. ALTERNATIVELY, THE CONTRACTOR MAY ELECT TO PROVIDE HIS OWN SIGN STRUCTURE FOUNDATION DESIGNS IN ACCORDANCE WITH THE ACTUAL SIGN STRUCTURE LOADS AND THE EXISTING SOIL CONDITIONS AT NO ADDITIONAL COST TO THE DEPARTMENT. IF THE ACTUAL SIGN STRUCTURE LOADS EXCEED THE ASSUMED LOADS SHOWN ON THE PROPOSED FOUNDATION DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND REQUEST NEW FOUNDATION DESIGNS BASED ON THE FINAL APPROVED SIGN STRUCTURE LOADS.
- ANY NECESSARY FINE GRADING AROUND SIGN STRUCTURE FOUNDATIONS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE FOUNDATION.
- THE FOOTPRINT OF THE DESIGNED FOUNDATIONS SHALL NOT EXTEND INTO THE TRAVELED LANES OF THE ROADWAY AND SHALL BE TEMPORARILY OR PERMANENTLY CASED.
- THE FOOTPRINT OF THE DESIGNED FOUNDATIONS SHALL FIT WITHIN THE STATE RIGHT-OF-WAY.
- THE TOP OF SIGN STRUCTURE FOUNDATIONS SHALL BE AT LEAST 3 INCHES BUT NO MORE THAN 9 INCHES ABOVE THE SURROUNDING GRADE. MEASUREMENT SHALL BE MADE FROM THE HORIZONTAL FOUNDATION FACE LEAST EXPOSED ON A SLOPE.
- NEW FOUNDATIONS SHALL BE INSTALLED SUCH THAT THE MINIMUM VERTICAL CLEARANCE TO THE BOTTOM OF THE LOWEST SIGN IS AT LEAST 18'-0" FROM THE HIGH POINT OF THE ROADWAY. THE MAXIMUM VERTICAL CLEARANCE TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT EXCEED 20'-6".

GEOTECHNICAL/FOUNDATIONS (CONT.):

- ANY NECESSARY DEWATERING OF FOUNDATION EXCAVATIONS SHALL NOT BE PAID BUT SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE FOUNDATIONS.
- IF SOIL CONDITIONS DIFFER MATERIALLY FROM THOSE SHOWN ON THE GEOTECHNICAL BORING LOGS, THE CONTRACTOR SHALL STOP WORK ON THAT FOUNDATION AND CONTACT THE RESIDENT ENGINEER.

GUARDRAIL:

- TWO REFLECTORIZED FLEXIBLE GUARDRAIL MARKERS SHALL BE INSTALLED AT EACH LEADING GUARDRAIL END AND ONE AT EACH TRAILING END AS SHOWN ON THE PLANS. GUARDRAIL MARKERS OF THE COLOR NOTED (G=GREEN, R=RED, W=WHITE, Y=YELLOW) SHALL BE INSTALLED AS SHOWN ON STANDARD DETAIL 606(34). PAYMENT FOR ALL TIME, MATERIAL, EQUIPMENT AND LABOR TO INSTALL GUARDRAIL MARKERS SHALL BE PAID FOR UNDER ITEM 606.353.
- GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF GUARDRAIL. AT NO TIME SHALL UNPROTECTED GUARDRAIL END SECTIONS BE EXPOSED TO TRAFFIC.
- NO SLOPE OR GUARDRAIL WORK SHALL BE DONE ON OR ADJACENT TO AN ACTIVE LANE CARRYING TRAFFIC. ALL SLOPE AND GUARDRAIL WORK ADJACENT TO A LANE CARRYING TRAFFIC MUST PROVIDE A LANE CLOSURE TO PROVIDE A LATERAL BUFFER TO THE WORK AREA.
- BARRIER OFFSET INFORMATION IS MEASURED TO THE FACE OF THE RAIL OR BARRIER.

STRUCTURAL NOTES:

- ALL SIGN STRUCTURE DESIGN SHALL CONFORM TO THE 2009 EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO), WITH ALL PUBLISHED INTERIMS.
- NEW SIGN ATTACHMENT HARDWARE SHALL BE PROVIDED TO ATTACH NEW AND RELOCATED SIGNS TO THE NEW SIGN STRUCTURE.
- DESIGN, FABRICATION, AND INSTALLATION FOR ALL OVERHEAD SIGN SUPPORTS INCLUDING THE STEEL TRUSS, FOUNDATIONS, AND ATTACHMENT HARDWARE SHALL BE INCLUDED IN THE LUMP SUM ITEM COST FOR THE NEW SIGN STRUCTURE.

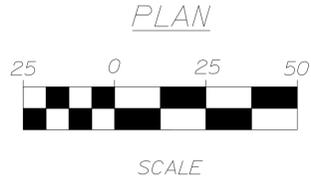
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-1729(310)X		WIN	
GENERAL NOTES		CANTILEVER GUIDE SIGN		SHEET NUMBER		2	
OF 11							
PROJ. MANAGER	J. MANIER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	
DESIGN-DETAILED	M. SIEMEN	J. ROBERT	3/7/11				
CHECKED-REVIEWED	M. GRAHAM	M. SIEMEN	6/9/11				
DESIGN-DETAILED							
DESIGN-DETAILED							
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							

TOWN:
BRUNSWICK

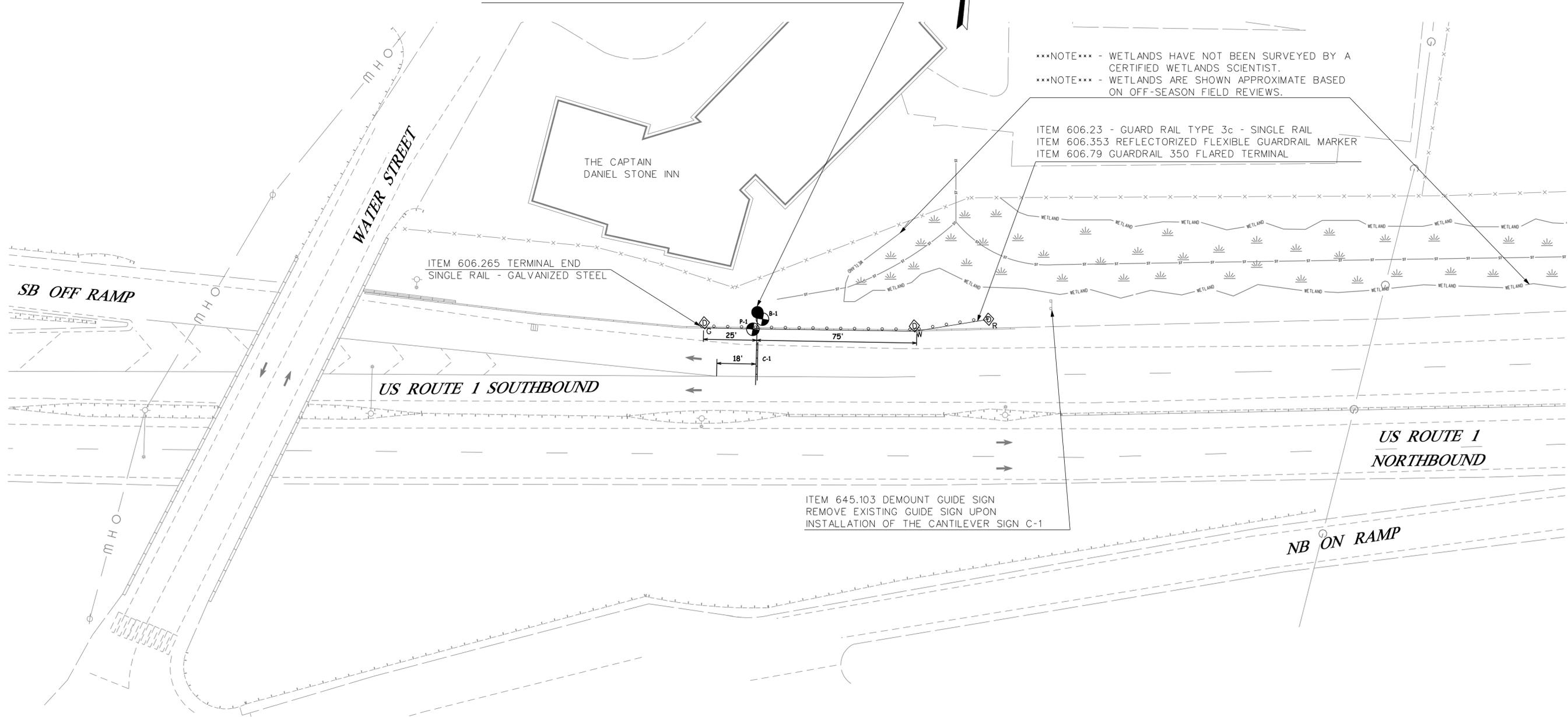
DESCRIPTION:
US 1 SOUTHBOUND
AT US 201/ROUTE 24
INTERCHANGE

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING UTILITIES IN THE WORK AREA BY CONTACTING DIG-SAFE AND OTHER APPROPRIATE AUTHORITIES. THE CONTRACTOR IS ADVISED TO USE CAUTION WHEN WORKING NEAR UNDERGROUND AND OVERHEAD POWER DISTRIBUTION AND SERVICE WIRES. CONTACT THE APPROPRIATE UTILITY FOR THE PRECAUTIONARY MEASURES REQUIRED.
2. THE EXISTING CROSS-SECTION INFORMATION, SIGN TRUSS LENGTH, AND SUPPORT HEIGHT ARE SHOWN FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL CONFIRM THE ACCURACY OF THIS INFORMATION PRIOR TO FINALIZING THE DESIGN FOR THE PROPOSED SIGN STRUCTURE AND FOUNDATIONS.
3. SIGN STRUCTURE FOUNDATIONS HAVE BEEN PREPARED BY THE DEPARTMENT BASED ON ASSUMED SIGN STRUCTURE LOADS. THE CONTRACTOR SHALL VERIFY THAT THE ACTUAL SIGN STRUCTURE LOADS ARE LESS THAN OR EQUIVALENT TO THE ASSUMED LOADS AS SHOWN ON SHEETS 9-11.
4. NEW SIGNS SHALL BE MOUNTED TO THE PROPOSED TRUSS PRIOR TO ERECTION AND PLACEMENT ON THE SIGN STRUCTURE SUPPORT.
5. EXPOSED EDGES OF NEW FOUNDATIONS SHALL INCLUDE A ¼ INCH CHAMFER.



ITEM 645.15 CANTILEVER GUIDE SIGN (US 1 EXIT RAMP TO MAIN ST/MAINE ST)
INSTALL NEW CANTILEVER SIGN STRUCTURE ON NEW FOUNDATION
INSTALL NEW C-1 TO NEW STRUCTURE
SEE SHEET 9 FOR PROPOSED FOUNDATION DESIGN



NOTE - WETLANDS HAVE NOT BEEN SURVEYED BY A CERTIFIED WETLANDS SCIENTIST.
NOTE - WETLANDS ARE SHOWN APPROXIMATE BASED ON OFF-SEASON FIELD REVIEWS.

ITEM 606.23 - GUARD RAIL TYPE 3c - SINGLE RAIL
ITEM 606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER
ITEM 606.79 GUARDRAIL 350 FLARED TERMINAL

ITEM 606.265 TERMINAL END
SINGLE RAIL - GALVANIZED STEEL

ITEM 645.103 DEMOUNT GUIDE SIGN
REMOVE EXISTING GUIDE SIGN UPON
INSTALLATION OF THE CANTILEVER SIGN C-1

Date: 7/18/2011

Username: JROBERT

Division:

Filename: 003_Sign.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

PROJ. MANAGER	J. MANSIR	BY	J. ROBERT	DATE	3/7/11	SIGNATURE	P.E. NUMBER	DATE
DESIGN DETAILED	M. SIEMEN	CHECKED/REVIEWED	M. SIEMEN	6/9/11				
DESIGN DET AILED	M. GRAHAM	DESIGN DET AILED						
REVISIONS 1		REVISIONS 1						
REVISIONS 2		REVISIONS 2						
REVISIONS 3		REVISIONS 3						
REVISIONS 4		REVISIONS 4						
FIELD CHANGES								

BRUNSWICK
US 1 SB AT ROUTE 24
CANTILEVER GUIDE SIGN

SHEET NUMBER
3
OF 11

Date: 7/1/2011

Username: JROBERT

Division:

Filename: 005_Sign.dgn

		Overhead Sign Foundation, Route 1S at Route 24N		Boring No. B-1	
		Brunswick, Maine		Page 1 of 1	
		MaineDOT PIN 17293.10		File No. 2010-025	
				Check IVS	
Contractor Maine Test Borings		Auger/Casing		Date	
Foreman Rich Leonard/Terry Ripley		Type HSA		Time	
Logged by Be Schonewald		Sampler Split Spoon		Depth (ft.)	
Date Start/Finish 2/15/11		I.D. 3-1/2 in.		Ref. GS	
Boring Location see note 1		Hammer Wt. 140 lbs.		Stab.	
GS Elev. Datum MSL/NGVD		Hammer Fall 30 inches			
		Other see notes		safety hammer	

Sample Information							Sample Description & Classification	Stratum Description	Notes
Depth BGS (ft.)	Casing Blows	No.	Pen/Rec (in.)	Depth (ft.)	Blows/6"	N Value or % RGD			
5 (1.5 m)		1D	24/14	2-4	4-5	13	Top 6 inches of sample: Topsoil/Subsoil. 1D: M. dense, brownish-gray, mottled, silt, trace to little fine sand, trace organics, appears reworked. (MISC FILL)	MISC. FILL	1
		2D	24/20	4-6	5-7	16	Top 7 inches of sample: Same as 1D. 2D: M. dense, grayish-brown, fine SAND, little to some silt, few 1/4-inch seams of silt, little fine sand. Moist.	4.8'	
					9-13				
10 (3.0 m)		3D	24/16	9-11	3-9	16	3D: M. dense, brown, fine SAND, little to some silt, with 2-inch seam of Gravelly SAND at 10.0 feet underlain by fine SAND, trace to little silt. Wet.	SILTY FINE SAND	
					7-11			13.0'	
15 (4.6 m)		4D	3/3	14-14.3	50/3"	>50	4D: Gray, fine SAND, little to some silt, trace medium to coarse sand, trace fine gravel. Wet.	GLACIAL TILL	2, 3
							Bottom of boring at 14.3 ft.	14.3' PROBABLE ROCK	4
20 (6.1 m)									
25 (7.6 m)									
30 (9.1 m)									

REMARKS

- Boring located 7.0 feet behind curb and within 3 feet of approximate station of overhead sign.
- Difficult drilling at 13.0 feet indicating a likely stratum change.
- Drilling behavior suggests cobbles and boulders at approximately 13.5 feet.
- Boring terminated at 14.3 feet, at split-spoon refusal.

D = split-spoon sample (blow counts provided if SPT test conducted); U = thin-wall Shelby tube sample (hydraulic-actuated, fixed piston sampler utilized); V = in-situ vane shear test (undisturbed and remolded); R = rock core; WH = Weight of hammer; WR = Weight of rods; WC = Weight of casing

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

Boring No.: **B-1**

		Overhead Sign Foundation, Route 1S at Route 24N		Boring No. P-1	
		Brunswick, Maine		Page 1 of 1	
		MaineDOT PIN 17293.10		File No. 2010-025	
				Check IVS	
Contractor Maine Test Borings		Auger/Casing		Date	
Foreman Rich Leonard/Terry Ripley		Type HSA		Time	
Logged by Be Schonewald		Sampler Split Spoon		Depth (ft.)	
Date Start/Finish 2/15/11		I.D. 3-1/2 in.		Ref. GS	
Boring Location see note 1		Hammer Wt. 140 lbs.		Stab.	
GS Elev. Datum MSL/NGVD		Hammer Fall 30 inches			
		Other see notes		safety hammer	

Sample Information							Sample Description & Classification	Stratum Description	Notes
Depth BGS (ft.)	Casing Blows	No.	Pen/Rec (in.)	Depth (ft.)	Blows/6"	N Value or % RGD			
5 (1.5 m)							Probe advanced using hollow-stem augers to confirm refusal depth of test boring B-1; no testing or sampling completed.		1
10 (3.0 m)									
15 (4.6 m)							Bottom of boring at 15.1 ft. at auger refusal.	15.1' PROBABLE ROCK	2, 3
20 (6.1 m)									
25 (7.6 m)									
30 (9.1 m)									

REMARKS

- Boring located 5.0 feet behind curb and within 3 feet of approximate station of overhead sign. Ground surface approximately 1 foot higher than at test boring B-1.
- Difficult drilling at 14.0 feet indicating a likely stratum change.
- Boring terminated at 15.1 feet, at auger refusal.

D = split-spoon sample (blow counts provided if SPT test conducted); U = thin-wall Shelby tube sample (hydraulic-actuated, fixed piston sampler utilized); V = in-situ vane shear test (undisturbed and remolded); R = rock core; WH = Weight of hammer; WR = Weight of rods; WC = Weight of casing

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

Boring No.: **P-1**

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1729(310)X

WIN
17293.10

	DATE	BY	SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER	J. MANSIR	J. ROBERT			
DESIGN-DETAILED	M. SIENEN	J. ROBERT			
CHECKED-REVIEWED	M. GRAHAM	M. SIENEN			
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

BRUNSWICK

US 1 SB AT ROUTE 24

CANTILEVER GUIDE SIGN

SHEET NUMBER

5

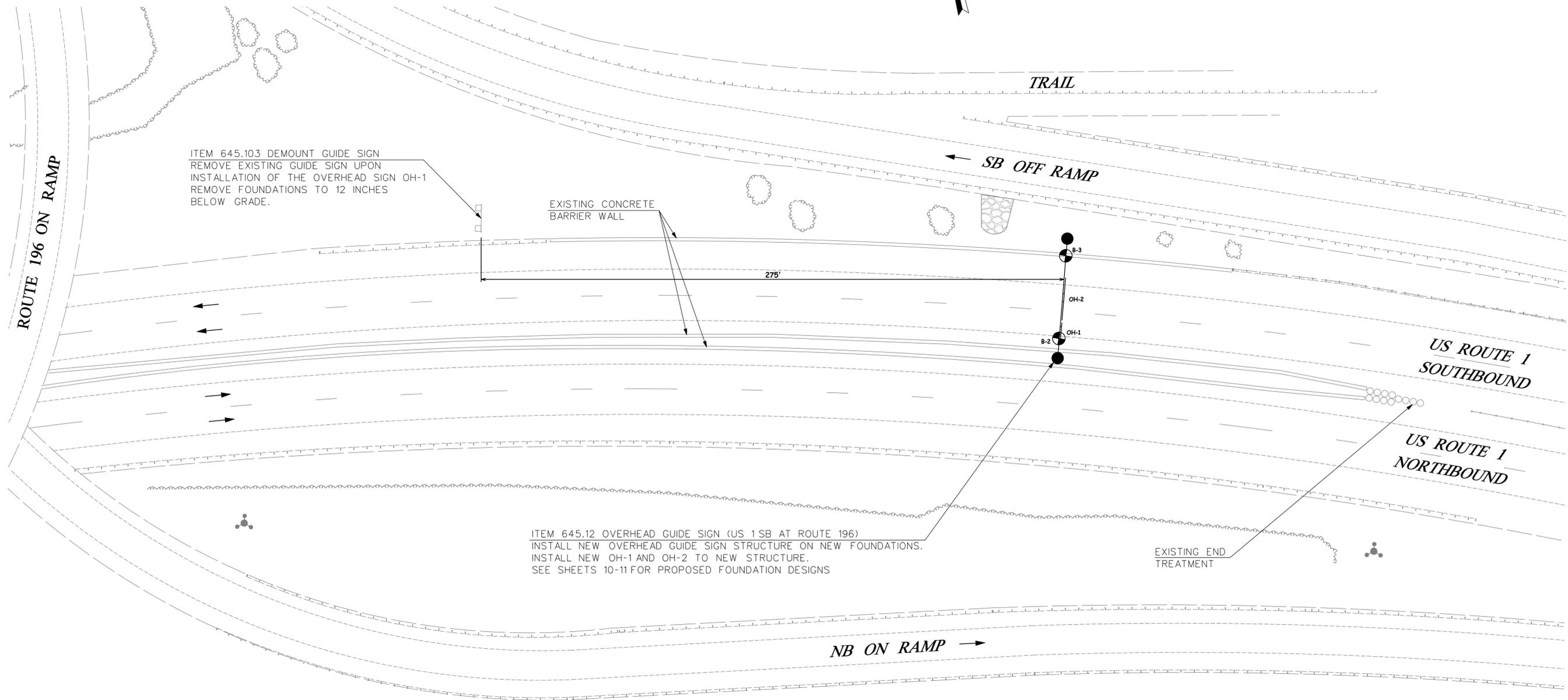
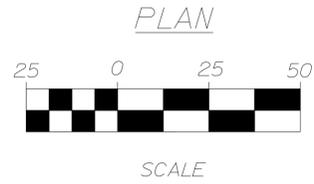
OF 11

TOWN:
BRUNSWICK

DESCRIPTION:
US 1 SOUTHBOUND
AT ROUTE 196
INTERCHANGE

CONSTRUCTION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING UTILITIES IN THE WORK AREA BY CONTACTING DIG-SAFE AND OTHER APPROPRIATE AUTHORITIES. THE CONTRACTOR IS ADVISED TO USE CAUTION WHEN WORKING NEAR UNDERGROUND AND OVERHEAD POWER DISTRIBUTION AND SERVICE WIRES. CONTACT THE APPROPRIATE UTILITY FOR THE PRECAUTIONARY MEASURES REQUIRED.
2. THE EXISTING CROSS-SECTION INFORMATION, SIGN TRUSS LENGTH, AND SUPPORT HEIGHT ARE SHOWN FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL CONFIRM THE ACCURACY OF THIS INFORMATION PRIOR TO FINALIZING THE DESIGN FOR THE PROPOSED SIGN STRUCTURE AND FOUNDATIONS.
3. SIGN STRUCTURE FOUNDATIONS HAVE BEEN PREPARED BY THE DEPARTMENT BASED ON ASSUMED SIGN STRUCTURE LOADS. THE CONTRACTOR SHALL VERIFY THAT THE ACTUAL SIGN STRUCTURE LOADS ARE LESS THAN OR EQUIVALENT TO THE ASSUMED LOADS AS SHOWN ON SHEETS 9-11.
4. NEW SIGNS SHALL BE MOUNTED TO THE PROPOSED TRUSS PRIOR TO ERECTION AND PLACEMENT ON THE SIGN STRUCTURE SUPPORT.
5. EXPOSED EDGES OF NEW FOUNDATIONS SHALL INCLUDE A 3/8 INCH CHAMFER.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
J. MANSIR	J. ROBERT	3/7/11			
DESIGN DETAILED	M. SIEMEN	6/9/11			
CHECKED-REVIEWED	M. GRAHAM				
DESIGN DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

BRUNSWICK
US 1 SB AT ROUTE 196
OVERHEAD GUIDE SIGN

SHEET NUMBER
6
OF 11

Date: 7/1/2011

Username: JROBERT

Division:

Filename: 006_Sign.dgn

ITEM #	IDENT #	SIGN SIZE		TEXT	TEXT DIMENSIONS			SHIELD SIZE (INCH)	ARROW (INCH)	NUMERAL (INCH)	# SIGNS REQ'D	SIGN AREA (SQ. FT.)		REMARKS
		WIDTH (FT-IN)	HEIGHT (FT-IN)		LETTER HEIGHT (INCH)							NOM AREA	TOTAL AREA	
		UC	LC		CAPS									
645.12	OH-1	14'-0"	11'-6"		16EM	12EM	15E/12E 12E 12E	36"X36" 45"X36"			1	161	161	
645.12	OH-2	17'-0"	15'-0"		16EM 16EM	12EM 12EM	15E/12E 10E 12E	36"X36" 45"X36"	23.3"X16"	15E	1	255	255	

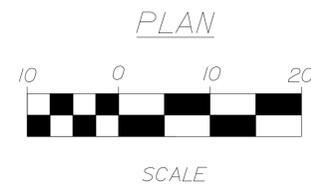
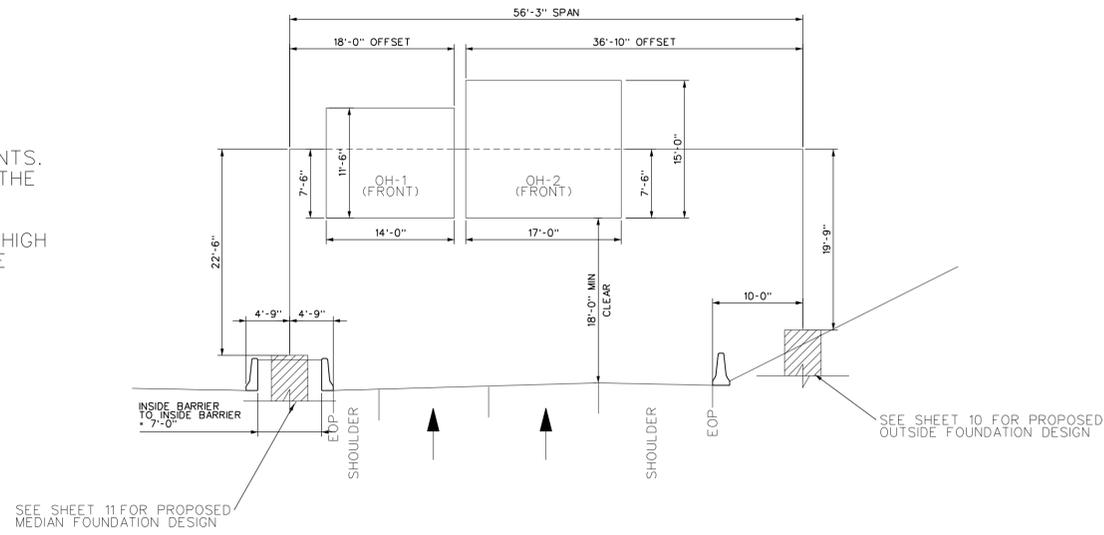


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

PROJ. MANAGER: J. MANIER
DESIGN-DETAILED: M. SIENEN
CHECKED-REVIEWED: J. ROBERT
DESIGN-DETAILED: M. SIENEN
CHECKED-REVIEWED: M. GRAHAM
DESIGN-DETAILED: M. SIENEN
CHECKED-REVIEWED: M. GRAHAM
DESIGN-DETAILED: M. SIENEN
CHECKED-REVIEWED: M. GRAHAM
DATE: 3/7/11
SIGNATURE: _____
P.E. NUMBER: _____
DATE: _____

APPROXIMATE CROSS-SECTION

CROSS-SECTION IS ESTIMATED BASED ON FIELD MEASUREMENTS. CONTRACTOR SHALL CONDUCT HIS OWN FIELD SURVEY OF THE SLOPES, MEDIAN, AND ROADWAY GEOMETRY PRIOR TO DEVELOPMENT OF THE STRUCTURAL SHOP DRAWINGS. SIGN PLACEMENT SHALL BE A MINIMUM OF 18'-0" CLEAR OF THE HIGH POINT OF THE PAVEMENT. THE RIGHT SIGN (OH-2) SHALL BE CENTERED OVER THE RIGHT LANE AS SHOWN.



BRUNSWICK
US 1 SB AT ROUTE 196
OVERHEAD GUIDE SIGN

SHEET NUMBER
7
OF 11

Date: 7/11/2011

Username: JROBERT

Division:

Filename: 008_Sign.dgn

Sample Information		Sample Description & Classification	Stratum Description	Notes
Depth BGS (ft.)	Casing Blows			
		0.35 ft (4 in) ASPHALT, underlain by AGGREGATE BASE/SUBBASE	ROAD GRAVELS	1
5	1D 24/17 2-4 13-15 32	1D: 2.0 to 3.5 ft: Brown, dense, Gravely fine to coarse SAND, trace silt, AGGREGATE BASE/SUBBASE 3.5 to 4.0 ft: Brown, fine to medium SAND, trace silt, with a few clumps of silt-clay. GRANULAR FILL	ROAD GRAVELS	2
10	2D 24/13 5-7 42-39 69	2D: Brown, v. dense, fine to medium SAND, trace fine Gravel, trace silt, Moist GRANULAR FILL. (Refer to Note #2.)	COMPACTED GRANULAR FILL	2
15	3D 24/16 10-12 21-23 43	3D: Brown, dense, fine to coarse SAND, trace silt, with one clump of silt-clay, Wet. GRANULAR FILL	COMPACTED GRANULAR FILL	2
20	4D 24/17 15-17 8-8 17	4D: Gray, m. dense, very fine SAND, trace to some silt, sample is somewhat layered w/ silt content, with layers 3 to 5 inches thick, wood in top of sample, Wet.	SAND (ALLUVIUM)	3
25	5D 24/21 20-22 1-1 2	5D: Gray, v. loose, very fine SAND, little silt; Wet. Organic odor noted.	SAND (ALLUVIUM)	3
30	6D 24/21 25-27 2-8 17	6D: Tan, m. dense, fine to coarse SAND, trace silt, changing at 26.6 ft. to fine SAND, trace silt; Wet. One piece of gravel at transition.	SAND (ALLUVIUM)	3
30		Bottom of boring at 30.0 ft.; no refusal.		4, 5

R 1. Boring located in median-side (inside) shoulder, approx. 9.0 ft. from stake marking sign location. Boring advanced using hollow-stem augers.
E 2. Appears that large piece of gravel was driven in front of spoon.
M 3. Augers dropping under own weight at 20 feet BGS.
A 4. Unable to sample or advance augers at 30 feet due to blowing sand (5 ft inside of augers). Boring terminated at 30 feet; no refusal encountered. Groundwater measured in augers at end of drilling.
R 5. No equipment installed. Borehole backfilled using drill spoils; pavement patched.
K BOS = belowground surface; D = split-spoon sample (blowcounts provided if SPT conducted); U = thin-wall Shelby tube sample (hydraulic-actuated, fixed piston sampler utilized); V = in-situ vane shear test (undisturbed and remolded); WH = Weight of hammer; WR = Weight of rods; WC = Weight of casing.
S Stratification lines represent approximate boundaries between soil types; transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

Sample Information		Sample Description & Classification	Stratum Description	Notes
Depth BGS (ft.)	Casing Blows			
		0.3 ft (3.5 in) ASPHALT, underlain by AGGREGATE BASE/SUBBASE	ROAD GRAVELS	1, 2
5	1D 24/16 2-4 22-28 57	1D: 2.0 to 3.5 ft: Brown, v. dense, Gravely fine to coarse SAND, trace silt, AGGREGATE BASE/SUBBASE 3.5 to 4.0 ft: Brown, fine to medium SAND, trace fine Gravel, trace silt; Damp. GRANULAR FILL	ROAD GRAVELS	2
10	2D 24/18 5-7 13-24 46	2D: Brown, dense, fine to medium SAND, trace coarse Sand, trace silt; Damp. GRANULAR FILL	COMPACTED GRANULAR FILL	2
15	3D 24/20 10-12 20-21 63	3D: Brown, v. dense, fine to medium SAND, trace coarse Sand, trace silt, with one piece of Gravel and two clumps of silt-clay, Moist to Wet. GRANULAR FILL. Changing at 11.5 ft. to 3D-A grayish-brown, fine to coarse SAND, some Gravel, trace silt, Moist to Wet.	COMPACTED GRANULAR FILL	2
20	4D 24/19 15-17 3-6 12	4D: Brownish-gray, m. dense, very fine SAND, some silt grading to very fine SAND, trace silt, top inch of sample organics, Wet.	SAND (ALLUVIUM)	3
25	5D 24/22 20-22 1-1 2	5D: Gray, v. loose, very fine SAND, trace to some silt, varying throughout sample, Wet.	SAND (ALLUVIUM)	3
30	6D 24/24 25-27 2-4 12	6D: Grayish-brown changing at 26 ft. to red, m. dense, fine to medium SAND, trace silt; Wet.	SAND (ALLUVIUM)	3
30	7D 24/24 30-32 (7-8 9-11)	Note 3 7D: Reddish-brown, fine to medium SAND, trace silt, changing at 31.4 ft. to grayish-brown, fine SAND, little silt with one 2-inch layer of silt, some fine Sand at 31.4 ft.		3

R 1. Boring located in outside shoulder, approx. 13.0 ft. from stake marking sign location. Ground surface approximately 3.5 feet lower at boring than at stake marking sign location, which is on the slope that runs from Route 1 southbound up to the Route 196 off-ramp.
E 2. Boring advanced using hollow-stem augers.
M 3. Blow counts likely affected by blowing sand, approximately 12 inches up into augers.
A 4. No equipment installed. Borehole backfilled using drill spoils; pavement patched.
R 5. No equipment installed. Borehole backfilled using drill spoils; pavement patched.
K BOS = belowground surface; D = split-spoon sample (blowcounts provided if SPT conducted); U = thin-wall Shelby tube sample (hydraulic-actuated, fixed piston sampler utilized); V = in-situ vane shear test (undisturbed and remolded); WH = Weight of hammer; WR = Weight of rods; WC = Weight of casing.
S Stratification lines represent approximate boundaries between soil types; transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

Sample Information		Sample Description & Classification	Stratum Desc.	Notes	Equipment Installed
Depth BGS (ft.)	Casing Blows				
35	8D 24/24 35-37 1-3 9	8D: Brown, loose, fine to medium SAND, trace silt, Wet.	SAND (ALLUVIUM)		
40		Bottom of boring at 37.0 ft.; no refusal.		4, 5	

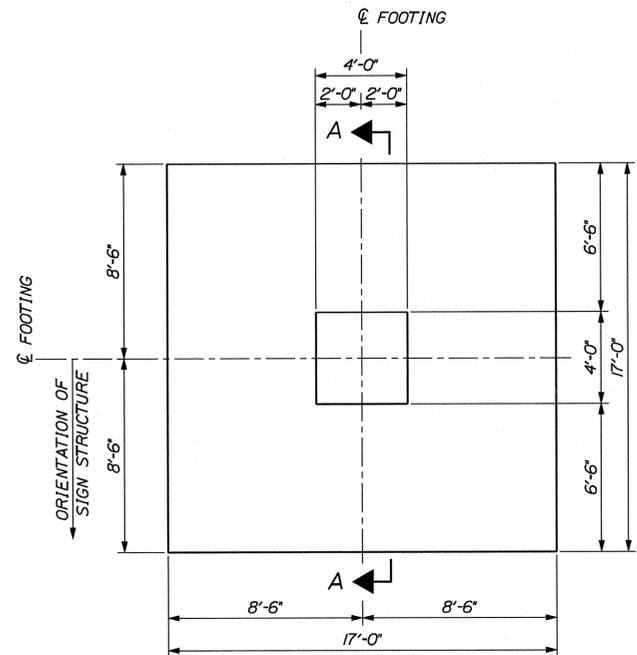
R 4. Boring terminated at 37 feet; no refusal encountered. Groundwater measured in augers at end of drilling and again after augers removed.
E 5. No equipment installed. Borehole backfilled using drill spoils; pavement patched.
M
A
R
K BOS = belowground surface; D = split-spoon sample (blowcounts provided if SPT conducted); U = thin-wall Shelby tube sample (hydraulic-actuated, fixed piston sampler utilized); V = in-situ vane shear test (undisturbed and remolded); WH = Weight of hammer; WR = Weight of rods; WC = Weight of casing.
S Stratification lines represent approximate boundaries between soil types; transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

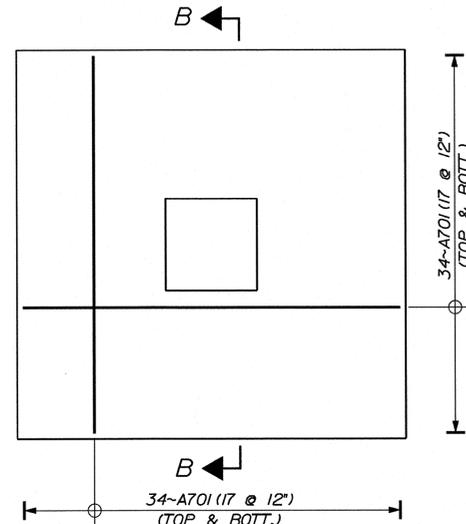
PROJ. MANAGER: J. MANIAR
BY: J. ROBERT
DATE: 3/7/11
DESIGN-DETAILED: M. SIEMEN
CHECKED-REVIEWED: J. ROBERT
DESIGN-DETAILED: M. GRAHAM
DESIGN-DETAILED: M. SIEMEN
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BRUNSWICK
US 1 SB AT ROUTE 196
OVERHEAD GUIDE SIGN

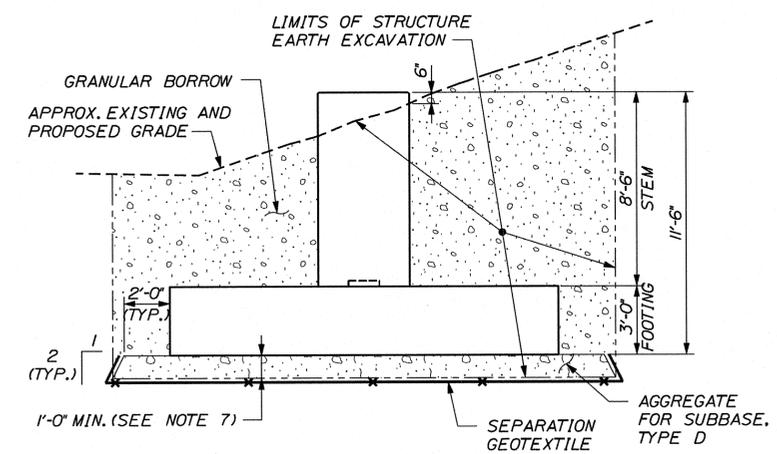
SHEET NUMBER
8
OF 11



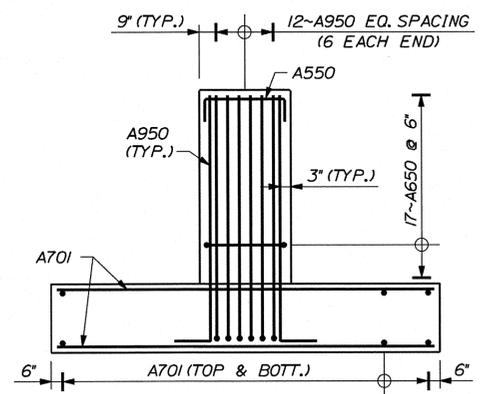
SIGN FOOTING MASONRY PLAN
SCALE: 1/4" = 1'-0"



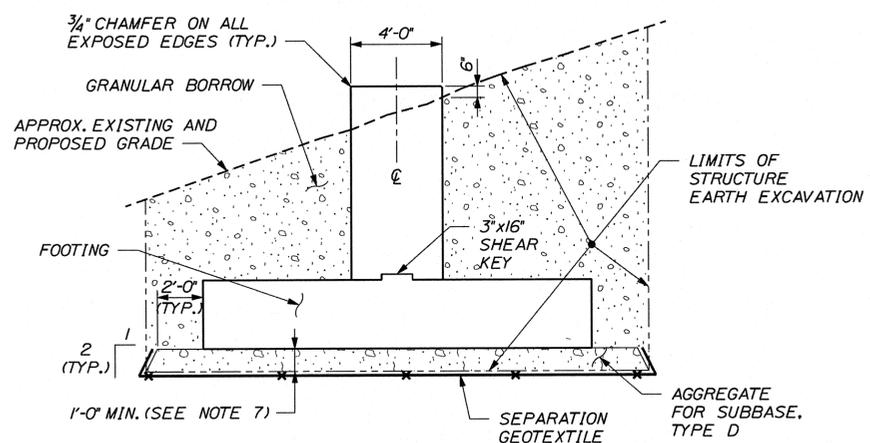
REINFORCING PLAN
SCALE: 1/4" = 1'-0"



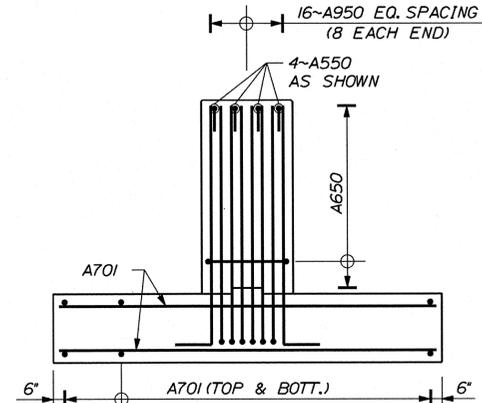
ELEVATION
SCALE: 1/4" = 1'-0"



REINFORCING ELEVATION
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 1/4" = 1'-0"



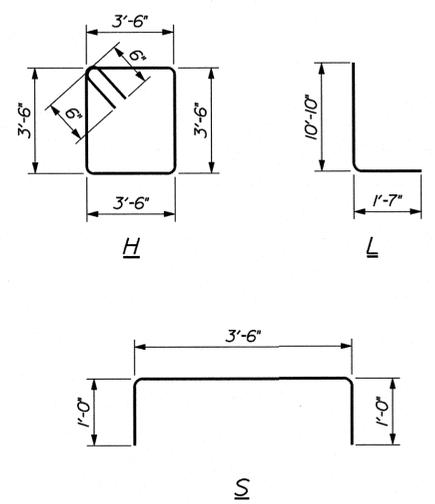
SECTION B-B
SCALE: 1/4" = 1'-0"

FOUNDATION NOTES:

1. CONCRETE SHALL BE CLASS LP IN ACCORDANCE WITH SECTION 502 - STRUCTURAL CONCRETE. MINIMUM SPECIFIED COMPRESSIVE STRENGTH = 5,075 PSI.
2. REINFORCING STEEL SHALL BE PLAIN AASHTO M31 (ASTM A615), GRADE 60 IN ACCORDANCE WITH SECTION 503 - REINFORCING STEEL.
3. ALL REINFORCING SHALL HAVE 3" CLEAR COVER FROM CONCRETE SURFACES.
4. FOOTING SHALL BE BACKFILLED TO FINISHED GRADE BEFORE THE SIGN SUPPORT STRUCTURE IS INSTALLED.
5. FINISHED GRADES SHOWN ARE BASED ON LIMITED FIELD MEASUREMENTS. IF THE ACTUAL FINISHED GROUND DIFFERS SIGNIFICANTLY, THEN A COMPLETE REDESIGN OF THE SIGN FOOTING WILL BE REQUIRED.
6. ANCHOR BOLTS SHALL BE PER THE SIGN STRUCTURE MANUFACTURER'S DESIGN. SEE THE SIGN STRUCTURE FABRICATION DRAWINGS.
7. AGGREGATE FOR SUBBASE, TYPE D SHALL BE PLACED FROM THE BOTTOM OF THE FOOTING TO SUITABLE BEARING MATERIAL, AS DETERMINED BY THE RESIDENT.
8. THE FOUNDATION DESIGN SHOWN ON THIS SHEET WAS DEVELOPED USING ASSUMED SIGN STRUCTURE GEOMETRY AND LOADS. SIGN STRUCTURE SUBMISSION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 645 - HIGHWAY SIGNING FOUNDATIONS.

ESTIMATED LOADS AT TOP OF FOUNDATION	
AXIAL LOAD (KIPS)	12
SHEAR NORMAL TO SIGNS (KIPS)	22
SHEAR TRANSVERSE TO SIGNS (KIPS)	1
MOMENT NORMAL TO SIGNS (KIP-FT)	615
MOMENT TRANSVERSE TO SIGNS (KIP-FT)	155
TORSIONAL MOMENT (KIP-FT)	575

REINFORCING STEEL SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	BEND TYPE
A701	#7	68	16'-6"	STRAIGHT
A550	#5	4	5'-6"	S
A650	#6	17	15'-0"	H
A950	#9	28	12'-5"	L



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

Michael J. Mozer
SIGNATURE
12.5.24
P.E. NUMBER
7-1-2011
DATE

PROJ. MANAGER
J. WANSIR
DESIGN-DETAILED
G. EDINGTON
CHECKED-REVIEWED
M. MOZER
DESIGN-2
M. MOZER
DESIGN-3
M. MOZER
REVISIONS 1
REVISIONS 2
REVISIONS 3
FIELD CHANGES

DATE
6/29/11
6/30/11

BRUNSWICK
US 1 SB AT ROUTE 24
CANTILEVER FOUNDATION DETAILS

SHEET NUMBER
9
OF 11

Date: 7/1/2011

Username: JROBERT

Division:

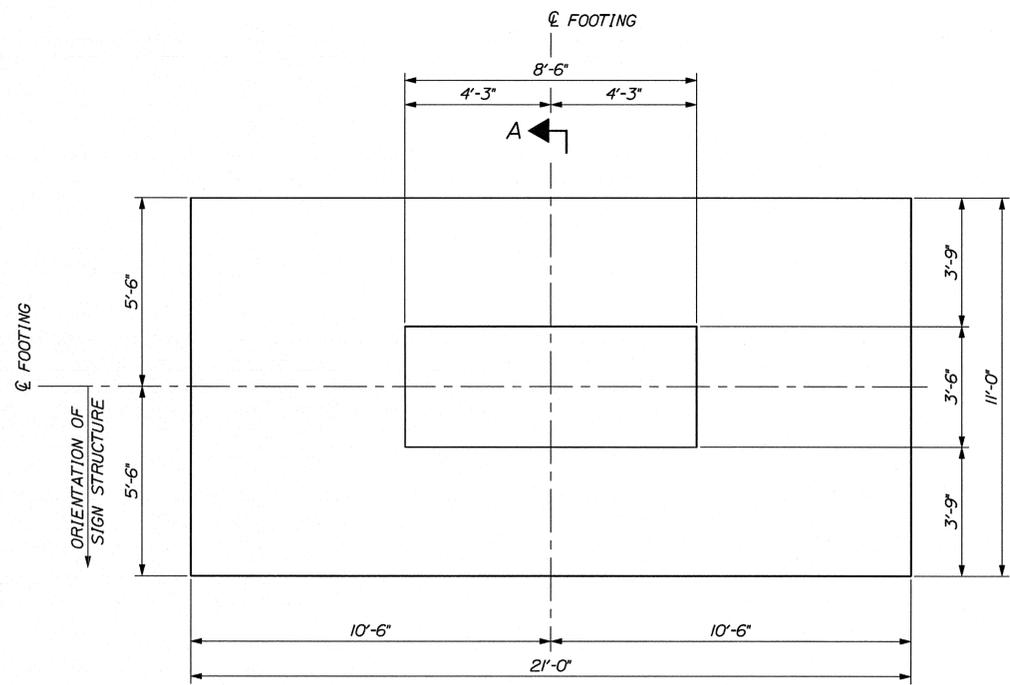
Filename: 009_Fnd+Det1.dgn

Date: 7/11/2011

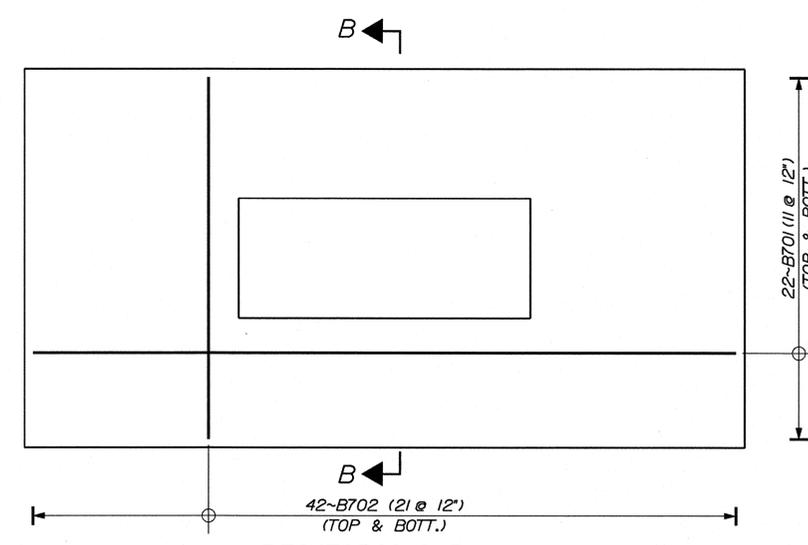
Username: JROBERT

Division:

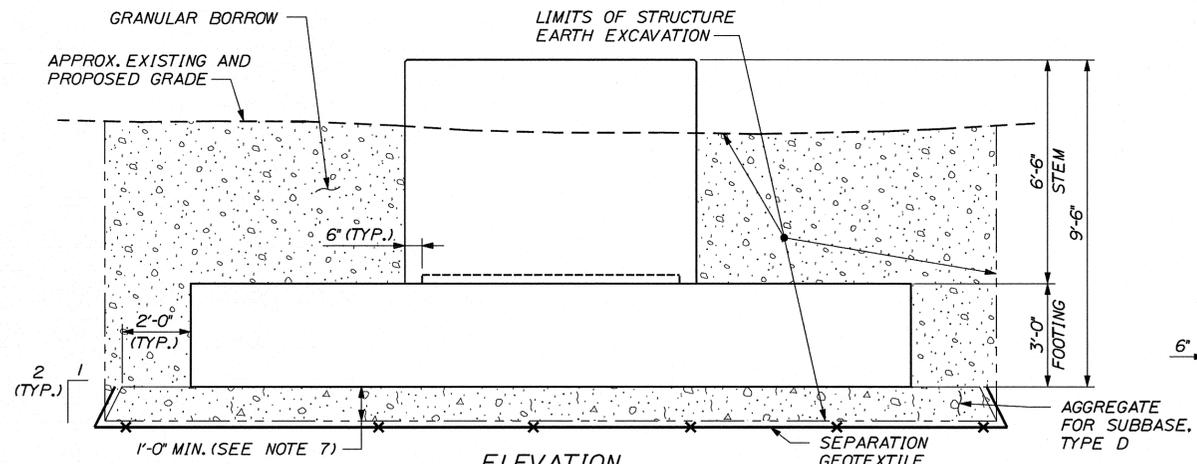
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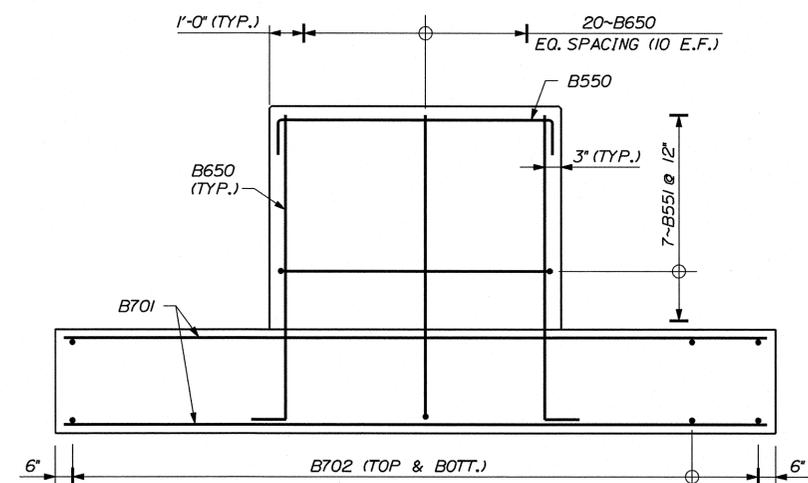
SIGN FOOTING MASONRY PLAN
SCALE: 3/8" = 1'-0"



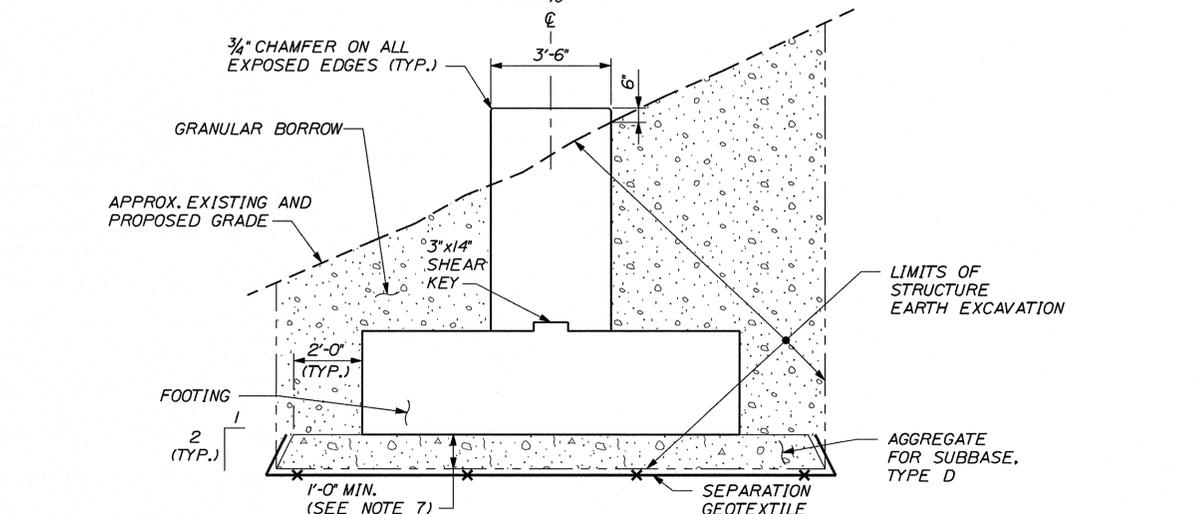
REINFORCING PLAN
SCALE: 3/8" = 1'-0"



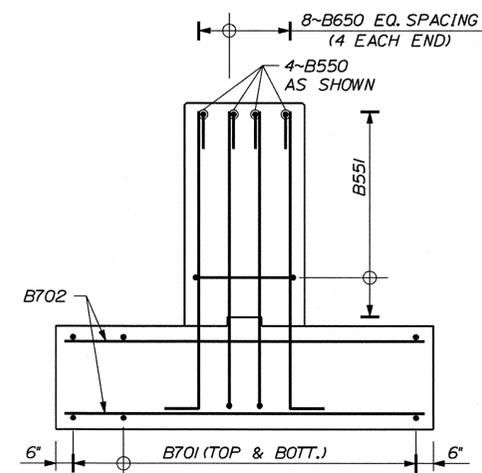
ELEVATION
SCALE: 3/8" = 1'-0"



REINFORCING ELEVATION
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"



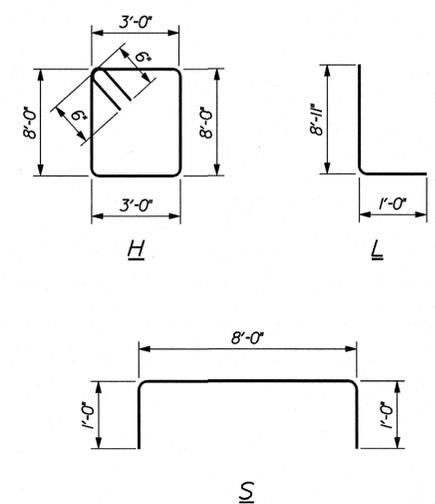
SECTION B-B
SCALE: 3/8" = 1'-0"

FOUNDATION NOTES:

1. CONCRETE SHALL BE CLASS LP IN ACCORDANCE WITH SECTION 502 - STRUCTURAL CONCRETE. MINIMUM SPECIFIED COMPRESSIVE STRENGTH = 5,075 PSI.
2. REINFORCING STEEL SHALL BE PLAIN AASHTO M31 (ASTM A615), GRADE 60 IN ACCORDANCE WITH SECTION 503 - REINFORCING STEEL.
3. ALL REINFORCING SHALL HAVE 3" CLEAR COVER FROM CONCRETE SURFACES.
4. FOOTING SHALL BE BACKFILLED TO FINISHED GRADE BEFORE THE SIGN SUPPORT STRUCTURE IS INSTALLED.
5. FINISHED GRADES SHOWN ARE BASED ON LIMITED FIELD MEASUREMENTS. IF THE ACTUAL FINISHED GROUND DIFFERS SIGNIFICANTLY, THEN A COMPLETE REDESIGN OF THE SIGN FOOTING WILL BE REQUIRED.
6. ANCHOR BOLTS SHALL BE PER THE SIGN STRUCTURE MANUFACTURER'S DESIGN. SEE THE SIGN STRUCTURE FABRICATION DRAWINGS.
7. AGGREGATE FOR SUBBASE, TYPE D SHALL BE PLACED FROM THE BOTTOM OF THE FOOTING TO SUITABLE BEARING MATERIAL, AS DETERMINED BY THE RESIDENT.
8. THE FOUNDATION DESIGN SHOWN ON THIS SHEET WAS DEVELOPED USING ASSUMED SIGN STRUCTURE GEOMETRY AND LOADS. SIGN STRUCTURE SUBMISSION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 645 - HIGHWAY SIGNING FOUNDATIONS.
9. THE CONTRACTOR SHALL PROVIDE EXCAVATION SUPPORT SUCH THAT THE PAVED ROADWAY SURFACE WILL NOT BE IMPACTED. ALL COSTS SHALL BE INCLUDED IN ITEM 645.12, OVERHEAD GUIDE SIGN (US 1 SB @ ROUTE 196).

ESTIMATED LOADS AT TOP OF FOUNDATION	
AXIAL LOAD (KIPS)	10
SHEAR NORMAL TO SIGNS (KIPS)	25
SHEAR TRANSVERSE TO SIGNS (KIPS)	1
MOMENT NORMAL TO SIGNS (KIP-FT)	510
MOMENT TRANSVERSE TO SIGNS (KIP-FT)	10

REINFORCING STEEL SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	BEND TYPE
B701	#7	22	20'-6"	STRAIGHT
B702	#7	42	10'-6"	STRAIGHT
B550	#5	4	10'-0"	S
B551	#5	7	23'-0"	H
B650	#6	28	9'-11"	L



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN 17293.10

Michael J. Mozer
Professional Engineer
No. 12824
7-1-2011

BRUNSWICK
US 1 SB AT ROUTE 196
OUTSIDE FOUNDATION DETAILS

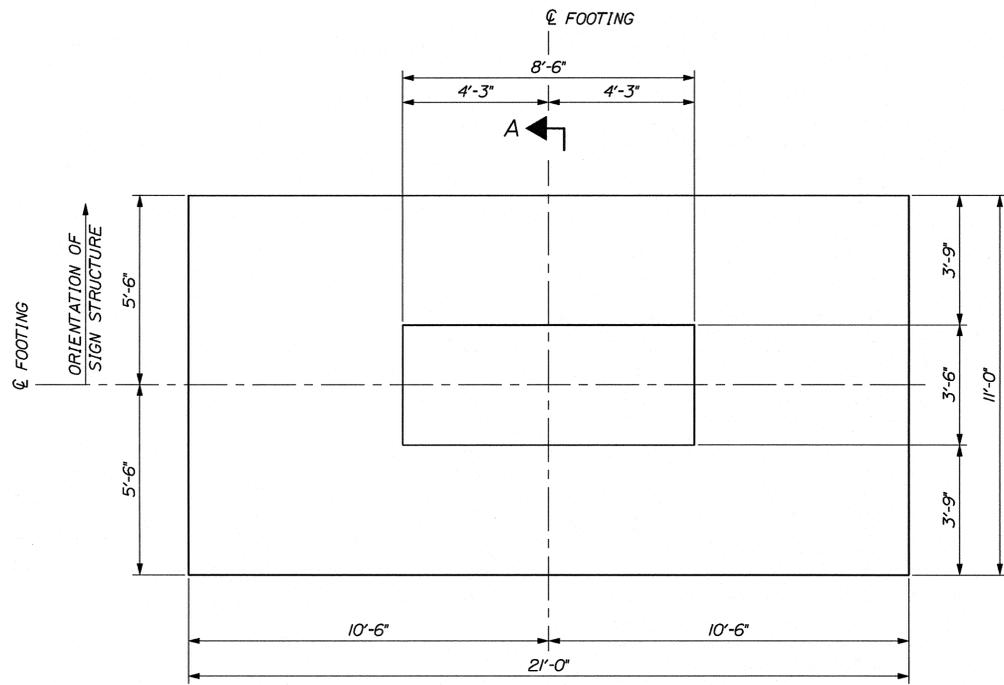
SHEET NUMBER
10
OF 11

Date: 7/1/2011

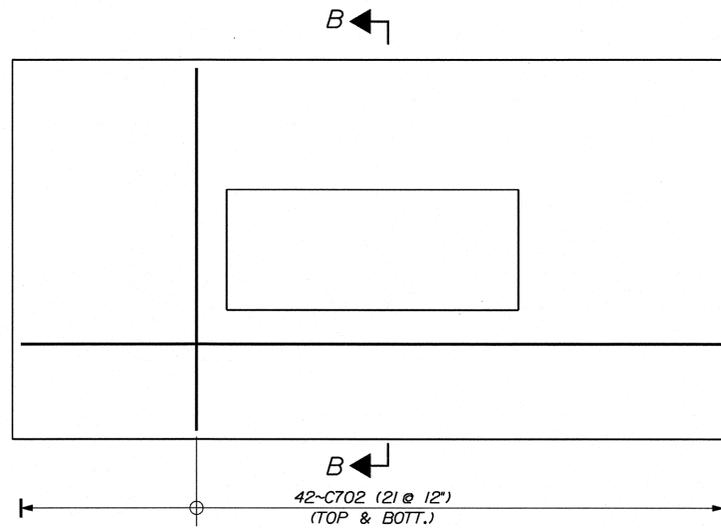
Username: JROBERT

Division:

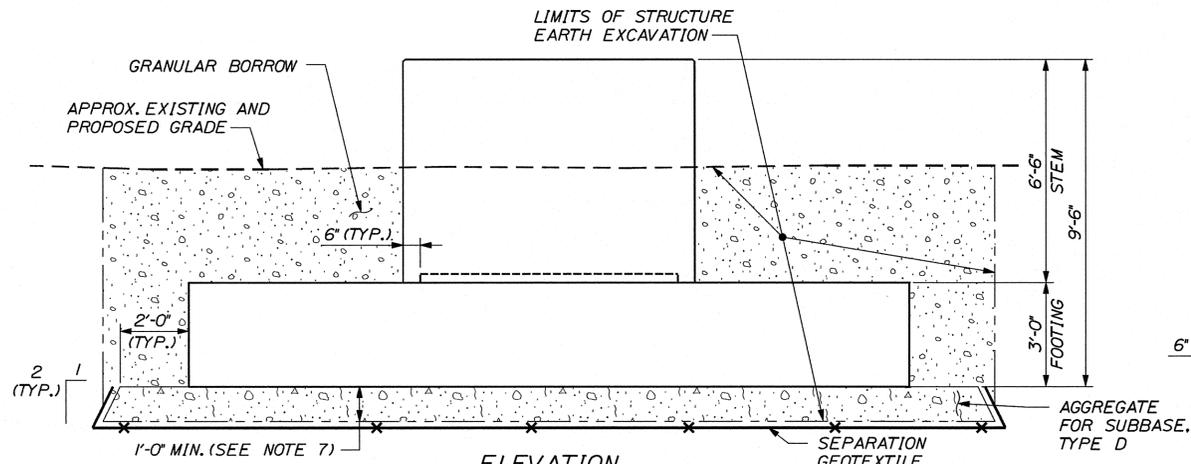
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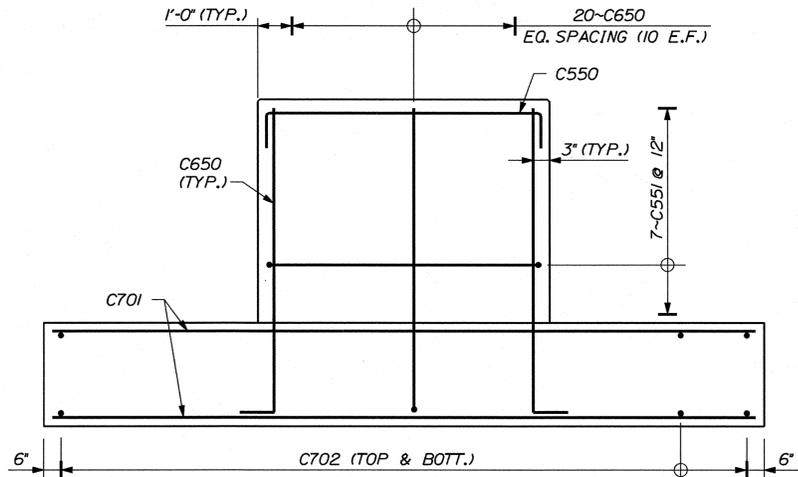
SIGN FOOTING MASONRY PLAN
SCALE: 3/8" = 1'-0"



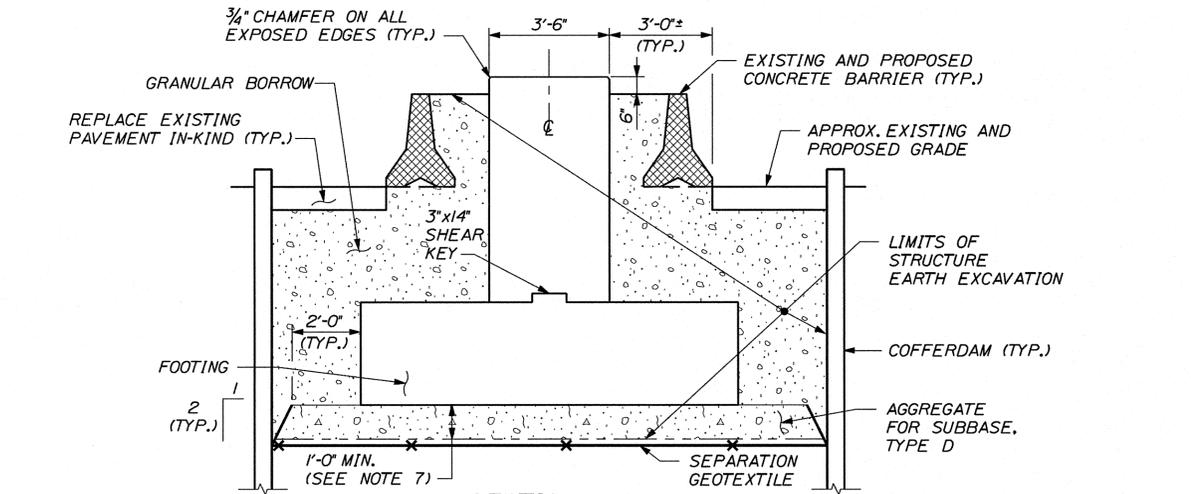
REINFORCING PLAN
SCALE: 3/8" = 1'-0"



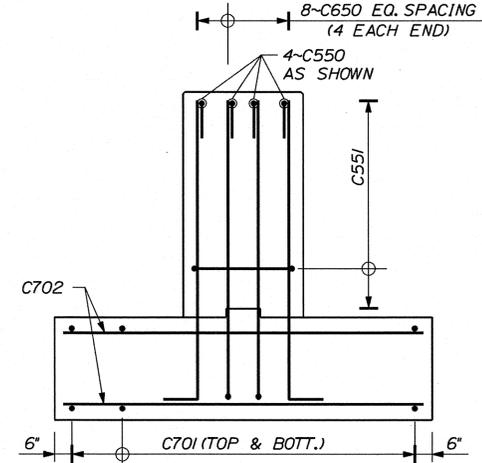
ELEVATION
(TRAFFIC BARRIER NOT SHOWN FOR CLARITY)
SCALE: 3/8" = 1'-0"



REINFORCING ELEVATION
SCALE: 3/8" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"



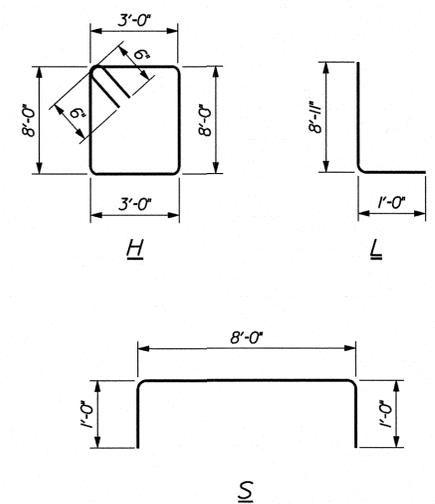
SECTION B-B
SCALE: 3/8" = 1'-0"

FOUNDATION NOTES:

1. CONCRETE SHALL BE CLASS LP IN ACCORDANCE WITH SECTION 502 - STRUCTURAL CONCRETE. MINIMUM SPECIFIED COMPRESSIVE STRENGTH = 5,075 PSI.
2. REINFORCING STEEL SHALL BE PLAIN AASHTO M31 (ASTM A615), GRADE 60 IN ACCORDANCE WITH SECTION 503 - REINFORCING STEEL.
3. ALL REINFORCING SHALL HAVE 3" CLEAR COVER FROM CONCRETE SURFACES.
4. FOOTING SHALL BE BACKFILLED TO FINISHED GRADE BEFORE THE SIGN SUPPORT STRUCTURE IS INSTALLED.
5. FINISHED GRADES SHOWN ARE BASED ON LIMITED FIELD MEASUREMENTS. IF THE ACTUAL FINISHED GROUND DIFFERS SIGNIFICANTLY, THEN A COMPLETE REDESIGN OF THE SIGN FOOTING WILL BE REQUIRED.
6. ANCHOR BOLTS SHALL BE PER THE SIGN STRUCTURE MANUFACTURER'S DESIGN. SEE THE SIGN STRUCTURE FABRICATION DRAWINGS.
7. AGGREGATE FOR SUBBASE, TYPE D SHALL BE PLACED FROM THE BOTTOM OF THE FOOTING TO SUITABLE BEARING MATERIAL, AS DETERMINED BY THE RESIDENT.
8. THE FOUNDATION DESIGN SHOWN ON THIS SHEET WAS DEVELOPED USING ASSUMED SIGN STRUCTURE GEOMETRY AND LOADS. SIGN STRUCTURE SUBMISSION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 645 - HIGHWAY SIGNING FOUNDATIONS.

ESTIMATED LOADS AT TOP OF FOUNDATION	
AXIAL LOAD (KIPS)	10
SHEAR NORMAL TO SIGNS (KIPS)	30
SHEAR TRANSVERSE TO SIGNS (KIPS)	1
MOMENT NORMAL TO SIGNS (KIP-FT)	690
MOMENT TRANSVERSE TO SIGNS (KIP-FT)	10

REINFORCING STEEL SCHEDULE				
MARK	SIZE	NO.	UNBENT LENGTH	BEND TYPE
C701	#7	22	20'-6"	STRAIGHT
C702	#7	42	10'-6"	STRAIGHT
C550	#5	4	10'-0"	S
C551	#5	7	23'-0"	H
C650	#6	28	9'-11"	L



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STP-1729(310)X
WIN
17293.10

Michael J. Mozer
Professional Engineer
No. 12624
7-1-2011

PROJ. MANAGER	J. MANAIR	DATE
DESIGN-DETAILED	C. EDINGTON	6/27/11
CHECKED-REVIEWED	C. COLLEY	6/29/11
DESIGN-DETAILED	M. MOZER	
DESIGN-DETAILED	M. MOZER	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BRUNSWICK
US 1 SB AT ROUTE 196
MEDIAN FOUNDATION DETAILS

SHEET NUMBER
11
OF 11