STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Fifth Edition 2010 and interim specifications through 2011.

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2010) AADT	2900
Future (2030) AADT	3480
DHV - % of AADT	13
Design Hour Volume	452
Heavy Trucks (% of AADT)	11
Heavy Trucks (% of DHV)	9
Directional Distribution (% of DHV)	60
18 kip Equivalent P 2.0	260
18 kip Equivalent P 2.5	247
Design Speed (mph)	40

HYDROLOGIC DATA

Drainage Area	1557.9 sq mi
Design Discharge (Q50)	32,132 cfs
Check Discharge (Q100)	36,122 cfs
Headwater Elevation (Q50)	220.6 ft
Headwater Elevation (Q100)	222.4 ft
Discharge Velocity (Q50)	10.1 fps
Discharge Velocity (Q100)	10.3 fps
Headwater Elevation (Q1.1)	212.4 ft
Discharge Velocity (Q1.1)	9.2 fps

HOLLIS, YORK COUNTY
STANDISH, CUMBERLAND CTY.
BONNY EAGLE COVERED BRIDGE
OVER
SACO RIVER
STATE ROUTE 35 (BONNY EAGLE ROAD)
FEDERAL AID PROJECT NO. BR-1670(400)X
PROJECT LENGTH 0.208 mi.
BRIDGE REPLACEMENT
BRIDGE NO. 2190

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MATERIALS

Concrete:	
Seal	Class "S"
Fill	"Fill"
Curbs & Transition Barriers	Class "LP"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Structural Steel:	
All Material (except as noted)	ASTM A 709, Grade 50W (unpainted)
High Strength Bolts	ASTM A 325, Type 3

BASIC DESIGN STRESSES

Concrete	f 'c = 4,350 psi
Reinforcing Steel	f y = 60,000 psi
Structural Steel:	
ASTM A 709, Grade 50W	F y = 50,000 psi
ASTM A 709, Grade 36	F y = 36,000 psi
ASTM A 325	F μ = 120,000 psi

UTILITIES

Central Maine Power Company
FPL Energy Maine
Oxford Networks
Pine Tree Networks
Standish Telephone
Time Warner Cable

MAINTENANCE OF TRAFFIC

Two - way traffic will be maintained on the existing bridge during construction.

PROJECT LOCATION:	On the Hollis and Standish town line, on State Route 35 (Bonny Eagle Road), over the Saco River. Lat./Long. 43°41'22.13" N 70°36'41.51" W
PROGRAM AREA:	Highway Bridges - Traditional
OUTLINE OF WORK:	Bridge replacement with 1225 feet of approach work and improvement of adjacent intersection.

WIN 16704.00

BR-1670(400)X

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED — DATE 3/1/12
COMMISSIONER: [signature] — DATE 3/1/12
CHIEF ENGINEER: Kenneth J. Sizemore — DATE 3/1/12

STATE OF MAINE ★ ENGINEER ★ Nathaniel D. Benoit 10651 Licensed PROFESSIONAL

PROJECT INFORMATION

PROGRAM	BRIDGE PROGRAM
PROJECT MANAGER	MARK PARLIN
DESIGNER	DEVAN EATON
CONSULTANT	N/A
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

SIGNATURE Nate Benoit
P.E. NUMBER 10651
DATE 2-27-2012

HOLLIS / STANDISH
BONNY EAGLE COVERED BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 69

Filename: \00\BRIDGE\WSTA\001_Title.dgn Division: BRIDGE Username: dana.damren Date: 2/27/2012

Filename: ...\bridge\mslo\002_Estimate.dgn Username: alan.nadeau Division: BRIDGE Date:3/23/2012

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
201.23	REMOVING SINGLE TREE TOP ONLY	10	EA
201.24	REMOVING STUMP	10	EA
202.19	REMOVING EXISTING BRIDGE (1105 TONS)	1	LS
203.20	COMMON EXCAVATION	6320	CY
203.21	ROCK EXCAVATION	10	CY
203.24	COMMON BORROW	2350	CY
203.25	GRANULAR BORROW	975	CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	420	CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES	555	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	5103	CY
403.207	HOT MIX ASPHALT 19.0 MM HMA	625	T
403.208	HOT MIX ASPHALT 12.5 MM HMA SURFACE	495	T
403.209	HOT MIX ASPHALT 9.5 MM HMA (SIDEWALKS, DRIVES, INCIDENTALS)	65	T
403.213	HOT MIX ASPHALT 12.5 MM BASE	572	T
409.15	BITUMINOUS TACK COAT - APPLIED	260	G
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	73	CY
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (400 CY)	1	LS
502.22	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (PLACED UNDER WATER)	184	CY
502.26	STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES (153 CY)	1	LS
502.31	STRUCTURAL CONCRETE APPROACH SLABS (24 CY)	1	LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALK (20 CY)	1	LS
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	40,500	LB
503.13	REINFORCING STEEL, PLACING	40,500	LB
504.702	STRUCTURAL STEEL FABRICATED AND DELIVERED, WELDED (269,645 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (269,645 LB)	1	LS
505.08	SHEAR CONNECTORS (1755 EA)	1	LS
507.0831	STEEL BRIDGE RAILING, 4 BAR (315 LF)	1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (570 SY)	1	LS
511.07	COFFERDAM: Abutment No. 1	1	LS
512.081	FRENCH DRAINS (172 LF)	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES (177 SY)	1	LS
520.21	EXPANSION DEVICE - GLAND SEAL	1	EA
520.22	EXPANSION DEVICE - COMPRESSION SEAL	1	EA
523.52	BEARINGS INSTALLATION	10	EA
523.5401	LAMINATED ELASTOMERIC BEARINGS, FIXED	5	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION	5	EA
526.301	TEMPORARY CONCRETE BARRIER TYPE 1 (100 LF)	1	LS
526.34	PERMANENT CONCRETE TRANSITION BARRIER	2	EA
526.3401	PERMANENT CONCRETE TRANSITION BARRIER - MODIFIED	2	EA
603.16	15 INCH CULVERT PIPE OPTION 1	86	LF
603.179	18 INCH CULVERT PIPE OPTION III	140	LF
606.1721	BRIDGE TRANSITION - TYPE 1	4	EA
606.23	GUARDRAIL TYPE 3C - SINGLE RAIL	238	LF
606.231	GUARDRAIL TYPE 3C - 15 FOOT RADIUS AND LESS	50	LF
606.232	GUARDRAIL TYPE 3C - OVER 15 FOOT RADIUS	50	LF
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	2	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8	EA
606.47	SINGLE WOOD POST	5	EA
606.79	GUARDRAIL 350 FLARED TERMINAL	2	EA
609.31	CURB TYPE 3	75	LF
610.18	STONE DITCH PROTECTION	55	CY
613.319	EROSION CONTROL BLANKET	580	SY
615.07	LOAM	295	CY
618.1401	SEEDING METHOD NUMBER 2 - PLAN QUANTITY	51	UN
619.1201	MULCH - PLAN QUANTITY	51	UN
619.1401	EROSION CONTROL MIX	50	CY
620.58	EROSION CONTROL GEOTEXTILE	110	SY
627.733	4 INCH WHITE OR YELLOW PAINTED PAVE MRK LINE	4425	LF
627.75	WHITE OR YELLOW PAVEMENT AND CURB MARKING	24	SF
629.05	HAND LABOR, STRAIGHT TIME	80	HR
631.111	TRACTOR MOUNTED HYDRAULIC HAMMER	10	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	80	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	40	HR
639.18	FIELD OFFICE TYPE A	1	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUM	10	EA
652.34	CONE	30	EA
652.35	CONSTRUCTION SIGNS	260	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (400 CD)	1	LS
652.38	FLAGGER	360	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. For easements, construction limits and right of way lines, refer to Right of Way Map.

2. The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.

3. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

4. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

5. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.

6. All embankment material, except as otherwise shown, placed below EL. 212.4 shall be Granular Borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.

7. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.

8. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Item No. 619.1401, Erosion Control Mix.

9. Place a 24-in. wide strip of Temporary Erosion Control Blanket on the behind the wingwalls.

10. An NCHRP350 compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.

11. Place a 4-ft wide strip of Extended Use Erosion Control Blanket along the bottom of all ditches.

12. Extended Use Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under the appropriate Contract items.

13. Protective Coating for Concrete Surfaces shall be applied to the following areas:

All exposed surfaces of concrete curbs.
Fascias down to the drip notch.
All exposed surfaces of Concrete Transition Barriers.
Top of abutment backwalls and to one foot below the top of backwalls on the back side.

14. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/contractors/*projecttbl .

15. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

16. The hydrologic report of the bridge site may be accessed at the MaineDOT web address. The hydrologic report is based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.

17. The project geotechnical report titled: Geotechnical Design Report For the Replacement of: Bonny Eagle Covered Bridge Over Saco River, Hollis and Standish, Maine, Soils Report No. 2011-05, March 2, 2011, may be accessed at the MaineDOT web address.

18. Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.

19. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.

20. The existing superstructure shall be completely removed. The existing westerly abutment shall be removed to a minimum of 2 feet below the surrounding finished terrain. The backwall and tops of wingwalls at the the existing easterly abutment shall be removed to the level of the bridge seat by saw cutting or other method approved by the Resident. Payment will be made under Item No. 202.19, Removing Existing Bridge.

21. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

22. The existing bridge shall be removed by and become the property of the Contractor. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal pay item.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

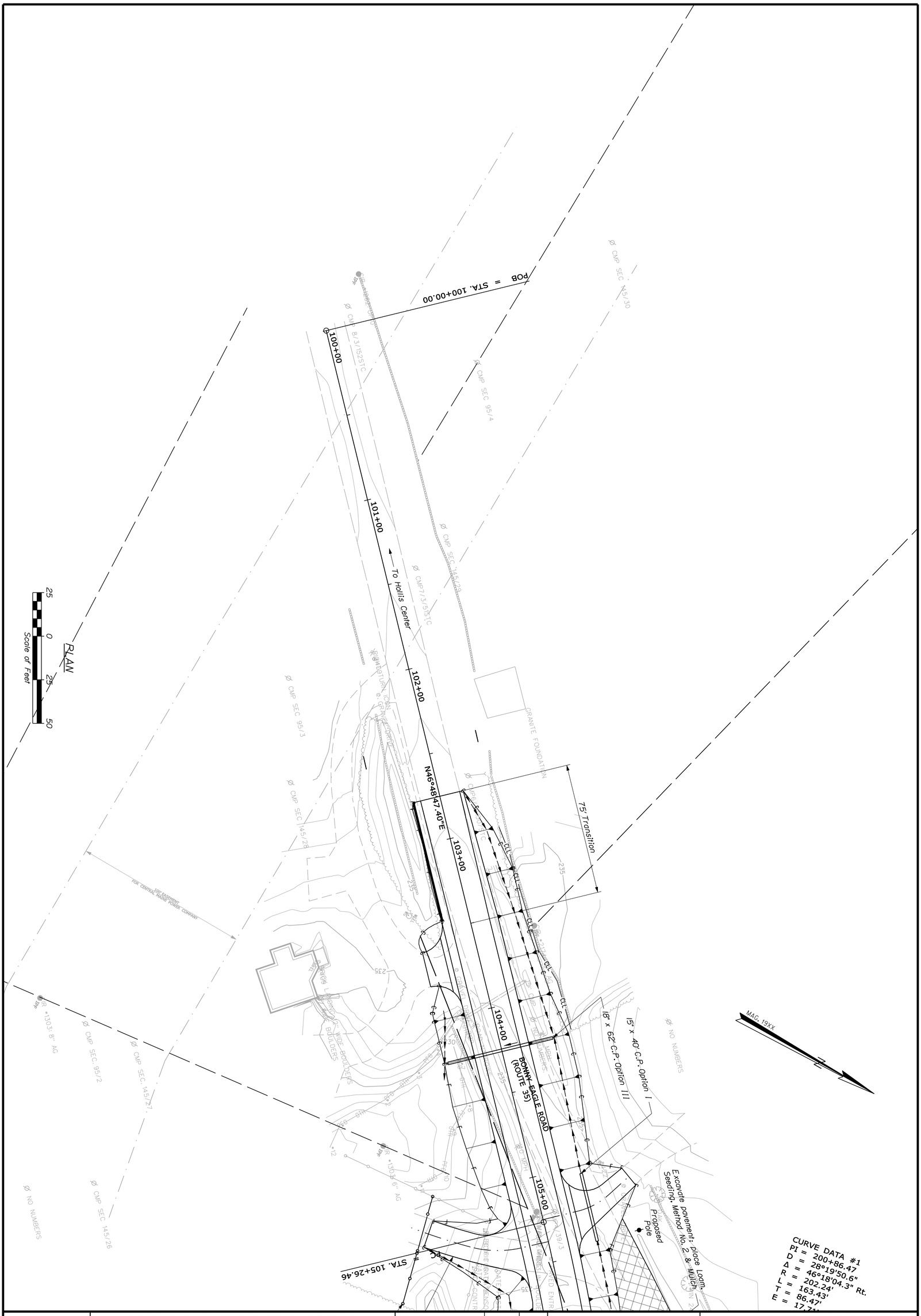
ESTIMATED QUANTITIES

SHEET NUMBER

2

OF 69

Filename: ...\msta\003_General Plan.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

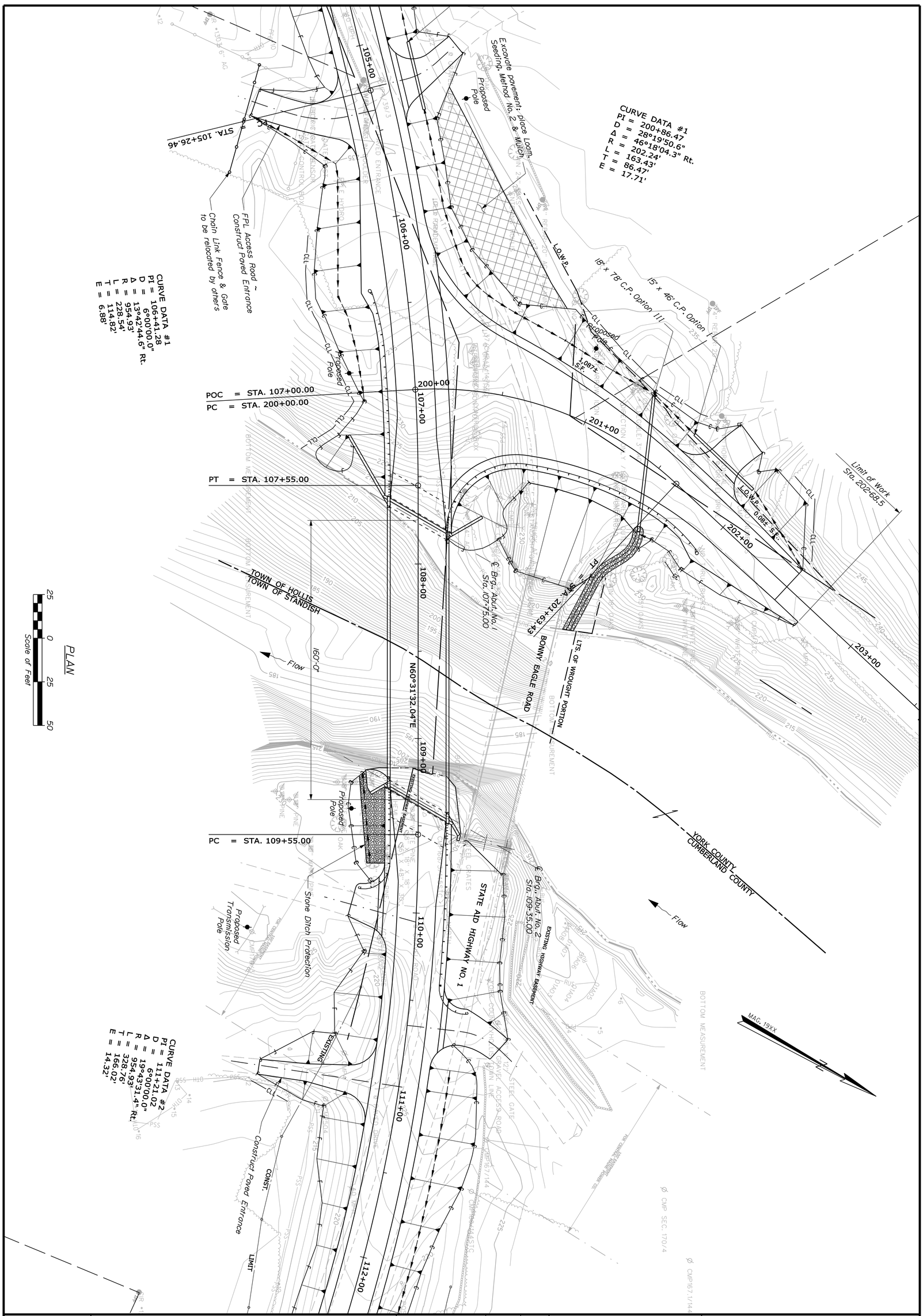


SHEET NUMBER 3 OF 69	BONNY EAGLE COVERED BRIDGE SACO RIVER HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY. GENERAL PLAN	PROJ. MANAGER M. Porlin BY DATE DESIGN-DETAILED D. Eaton D. Domren CHECKED-REVIEWED E. Caswell DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	SIGNATURE P.E. NUMBER DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



SHEET NUMBER 4 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

GENERAL PLAN

PROJ. MANAGER	M. Porlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

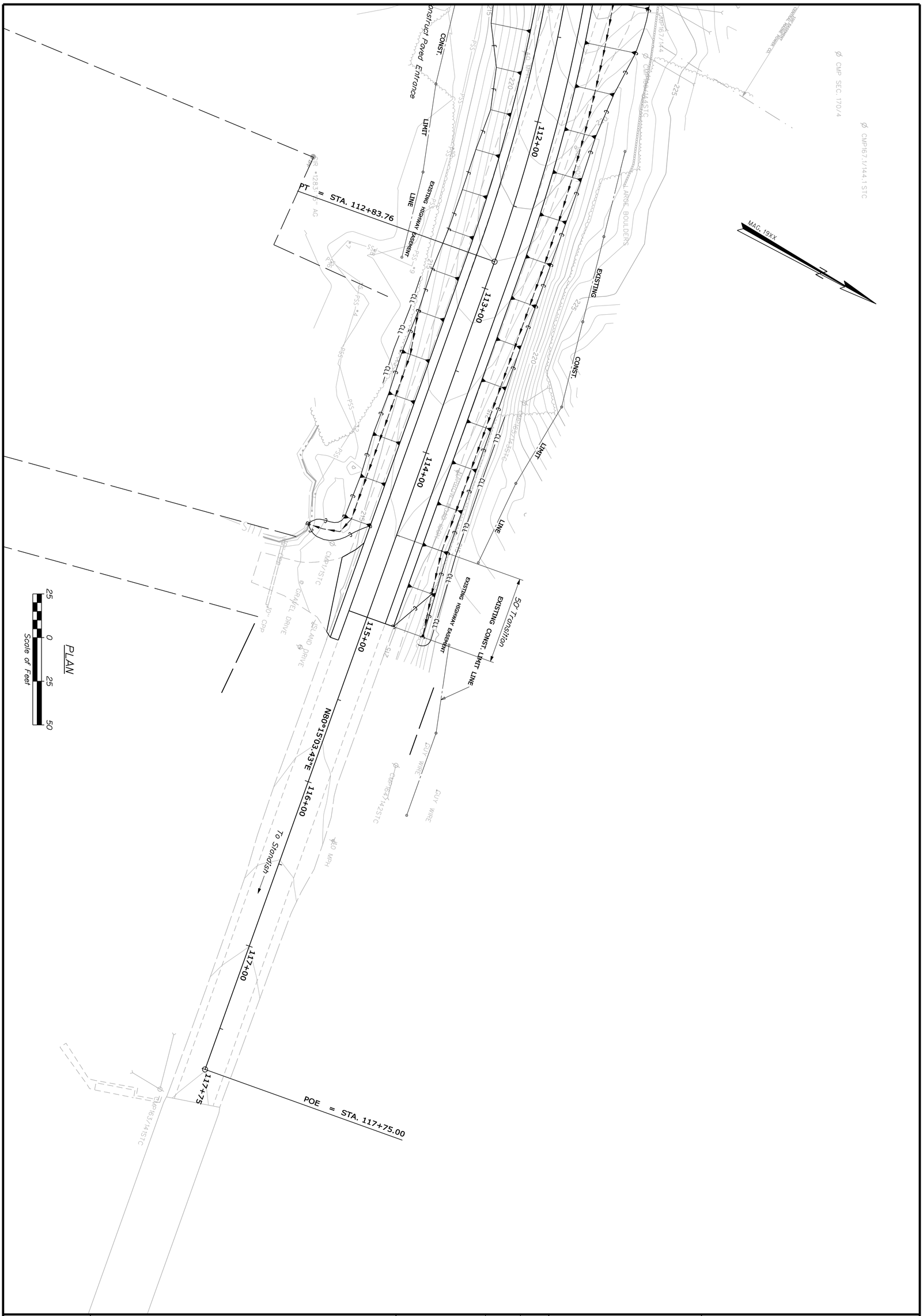
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS

Filename: ...\msta\005_GeneralPlan.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

GENERAL PLAN

PROJ. MANAGER	M. Parlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Damren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

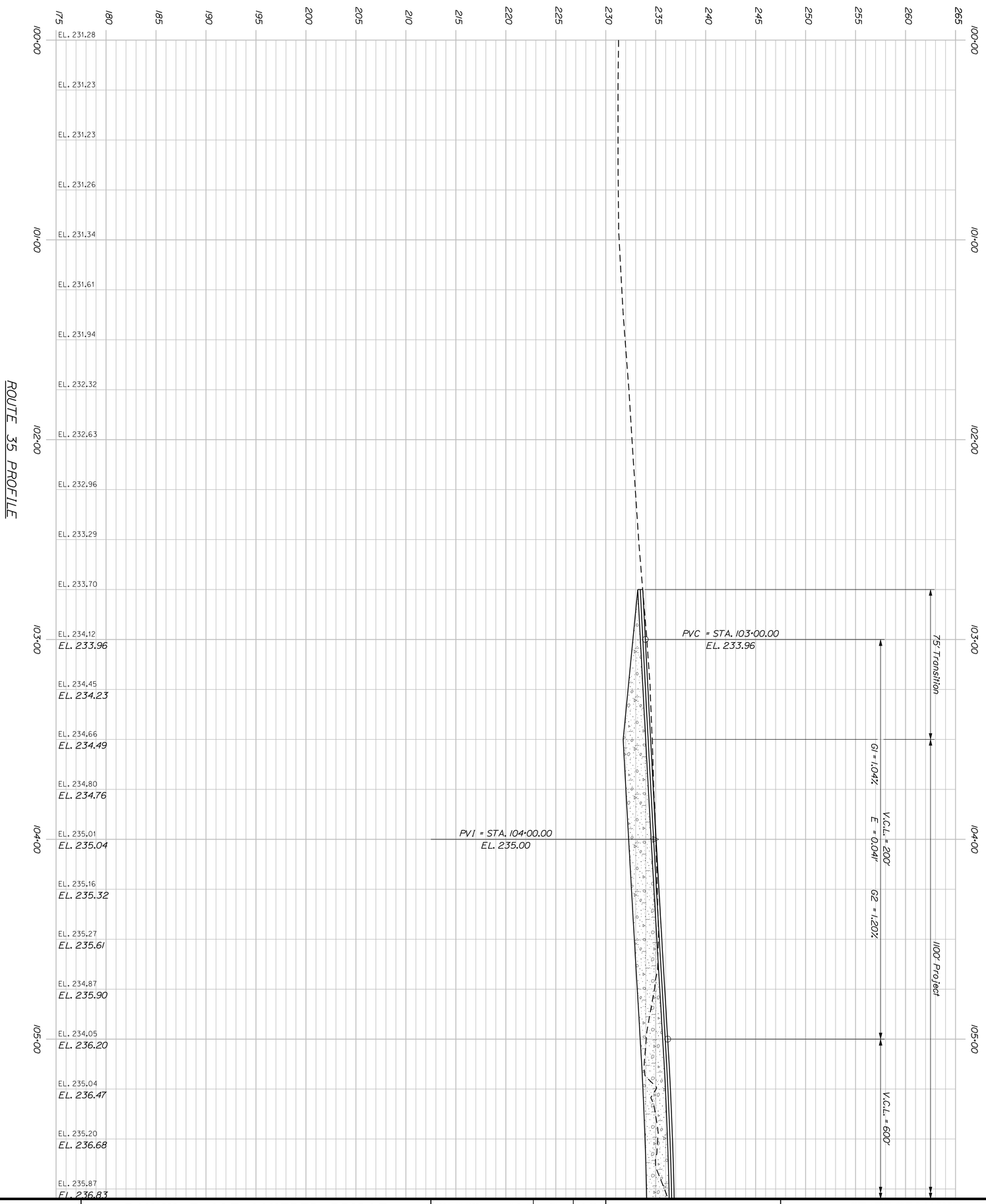
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN
BRIDGE NO. 2190 16704.00 BRIDGE PLANS

SHEET NUMBER 5 OF 69



SHEET NUMBER 6 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ROUTE 35 PROFILE

	PROJ. MANAGER	M. Parlin	BY	DATE
	DESIGN-DETAILED	D. Eaton	D. Domren	
	CHECKED-REVIEWED	E. Caswell		
	DESIGN2-DETAILED2			
	DESIGN3-DETAILED3			
	REVISIONS 1			
	REVISIONS 2			
	REVISIONS 3			
	REVISIONS 4			
	FIELD CHANGES			

SIGNATURE

P.E. NUMBER

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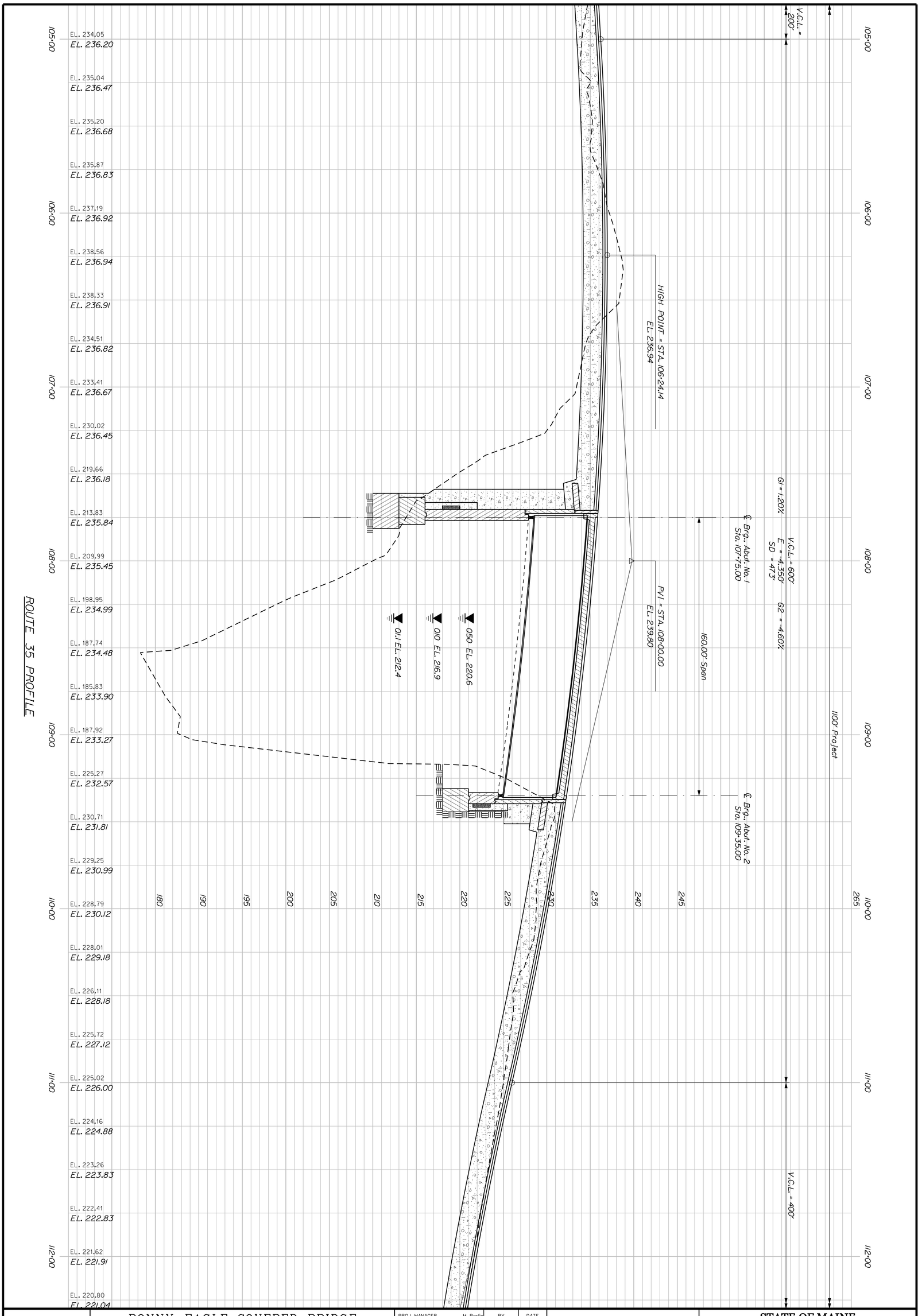
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



SHEET NUMBER 7 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ROUTE 35 PROFILE

PROJ. MANAGER	M. Parlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
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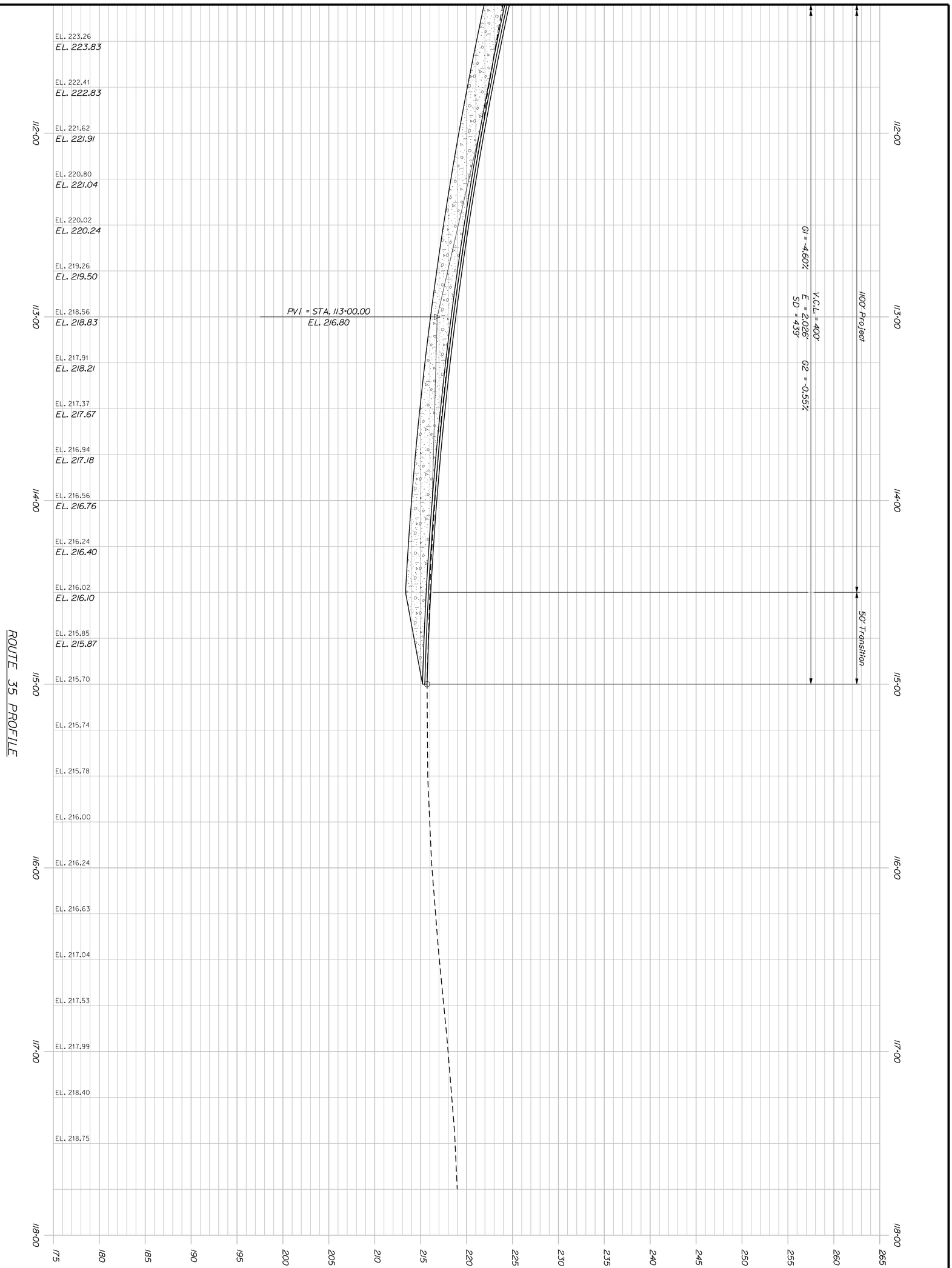
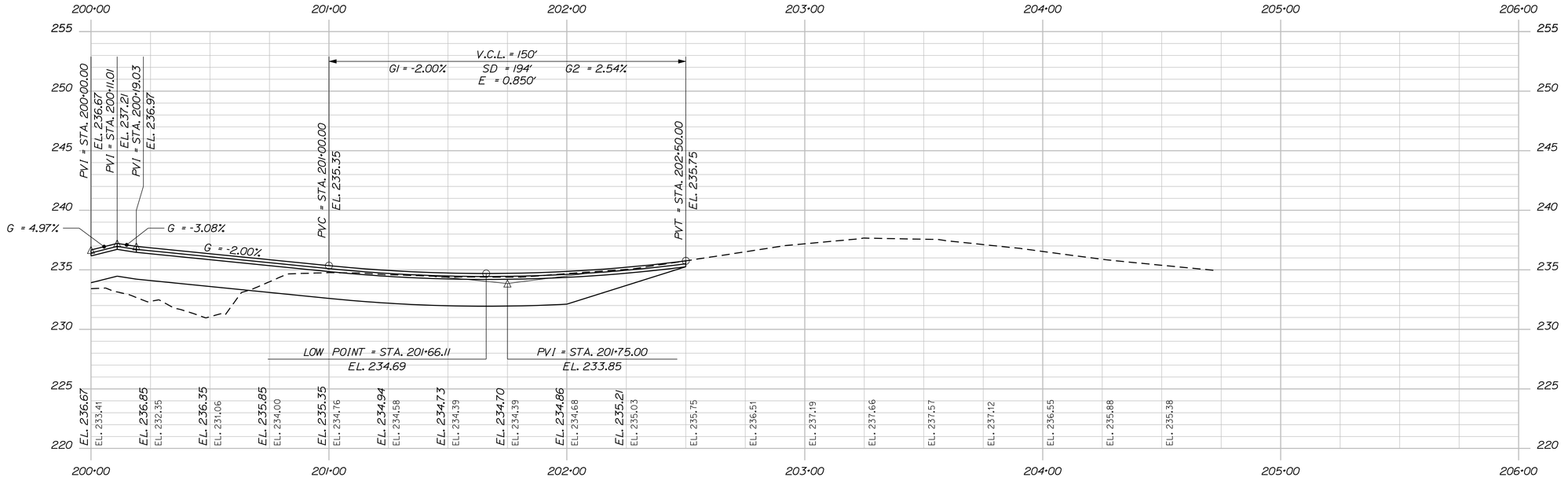
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

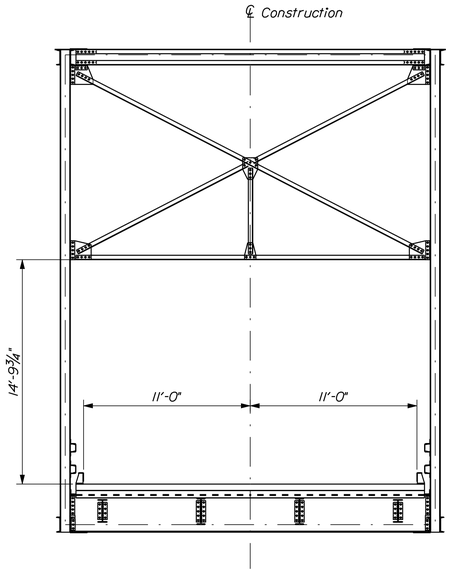
BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



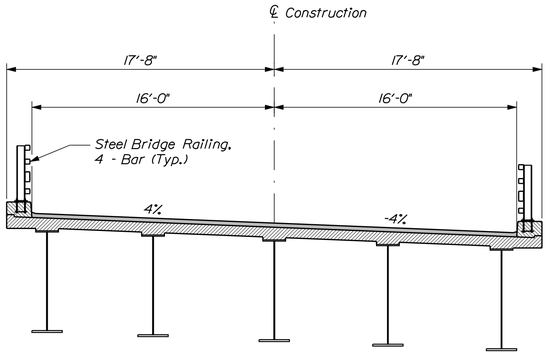
SHEET NUMBER 8 OF 69	BONNY EAGLE COVERED BRIDGE SACO RIVER HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY. ROUTE 35 PROFILE	PROJ. MANAGER M. Porlin / BY / DATE DESIGN-DETAILED D. Eaton / D. Domren CHECKED-REVIEWED E. Caswell DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	SIGNATURE P.E. NUMBER DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION BR-1670(400)X BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



SAND POND ROAD PROFILE

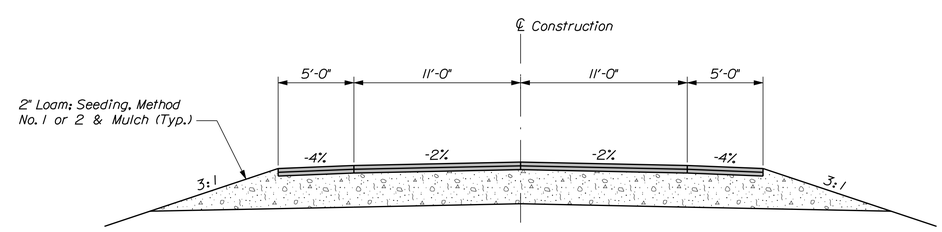


EXISTING BRIDGE SECTION



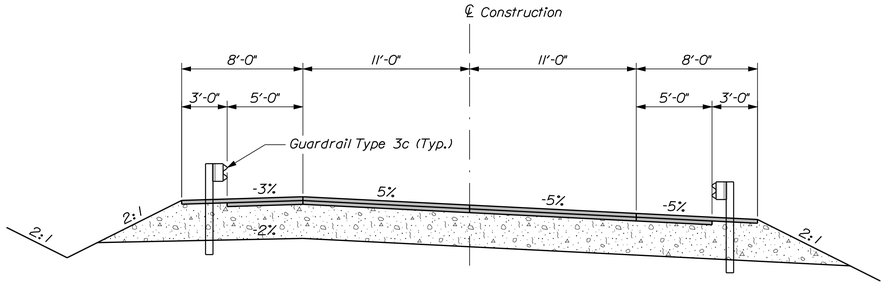
PROPOSED BRIDGE SECTION

3" HMA Pavement with H/P W.P. Membrane
8" Structual Concrete Slab
A588 Welded Steel Girders



PROPOSED APPROACH SECTION

Bonney Eagle Road: 6" HMA Pavement
Sand Pond Road: 4" HMA Pavement
27" ASC Gravel



PROPOSED SUPERELEVATED APPROACH SECTION

Bonney Eagle Road: 6" HMA Pavement
27" ASC Gravel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

SAND POND ROAD PROFILE

SHEET NUMBER

9

OF 69

Filename: ...\009_Sand Pond Road Profile.dgn Division: BRIDGE Username: dona.domren Date:3/26/2012

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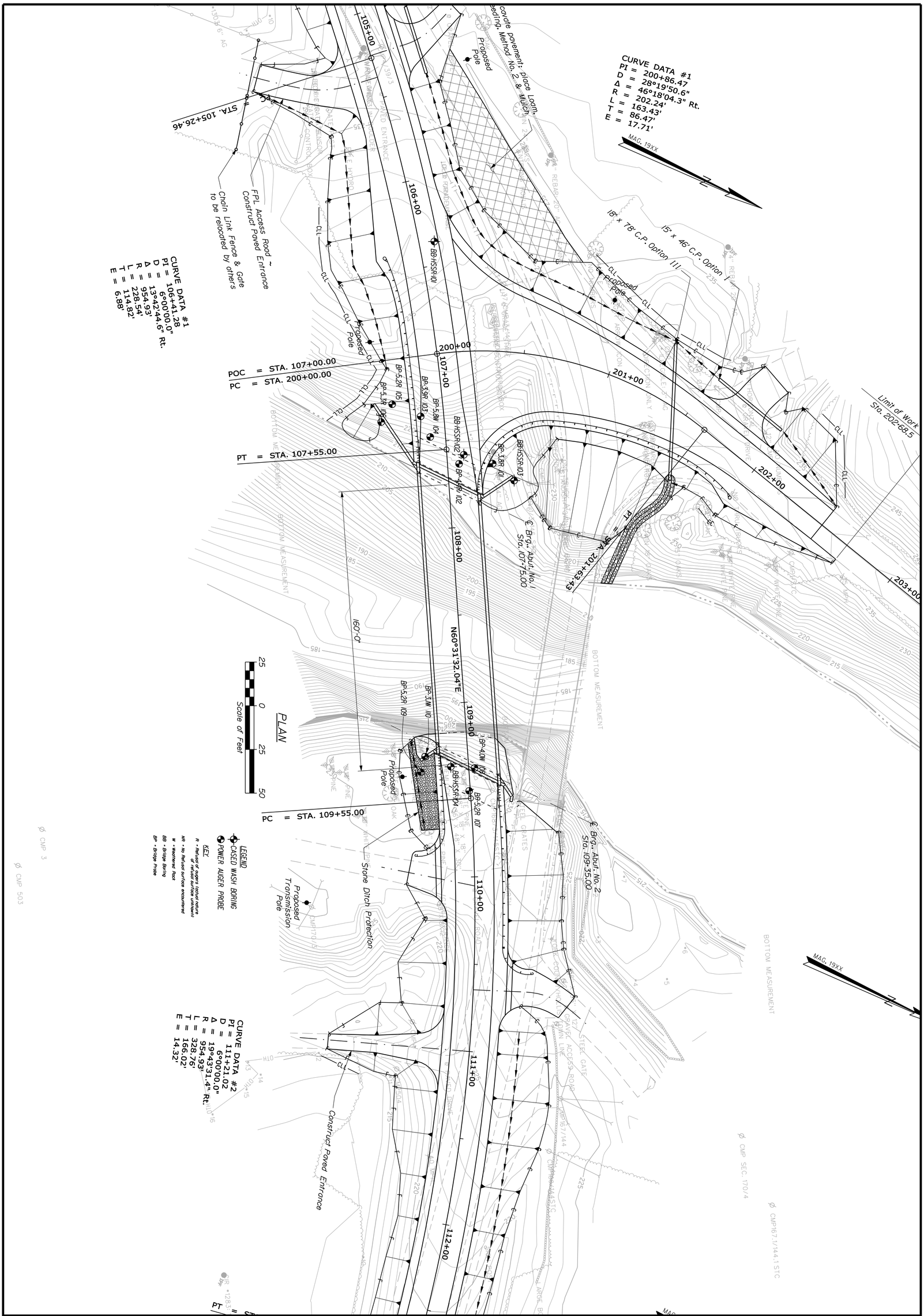


SHEET NUMBER 10 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS \ STANDISH YORK COUNTY

BORING LOCATION PLAN

PROJ. MANAGER	R. Nimon	BY	DATE
DESIGN-DETAILED	K.MAGUIRE	T.WHITE	
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

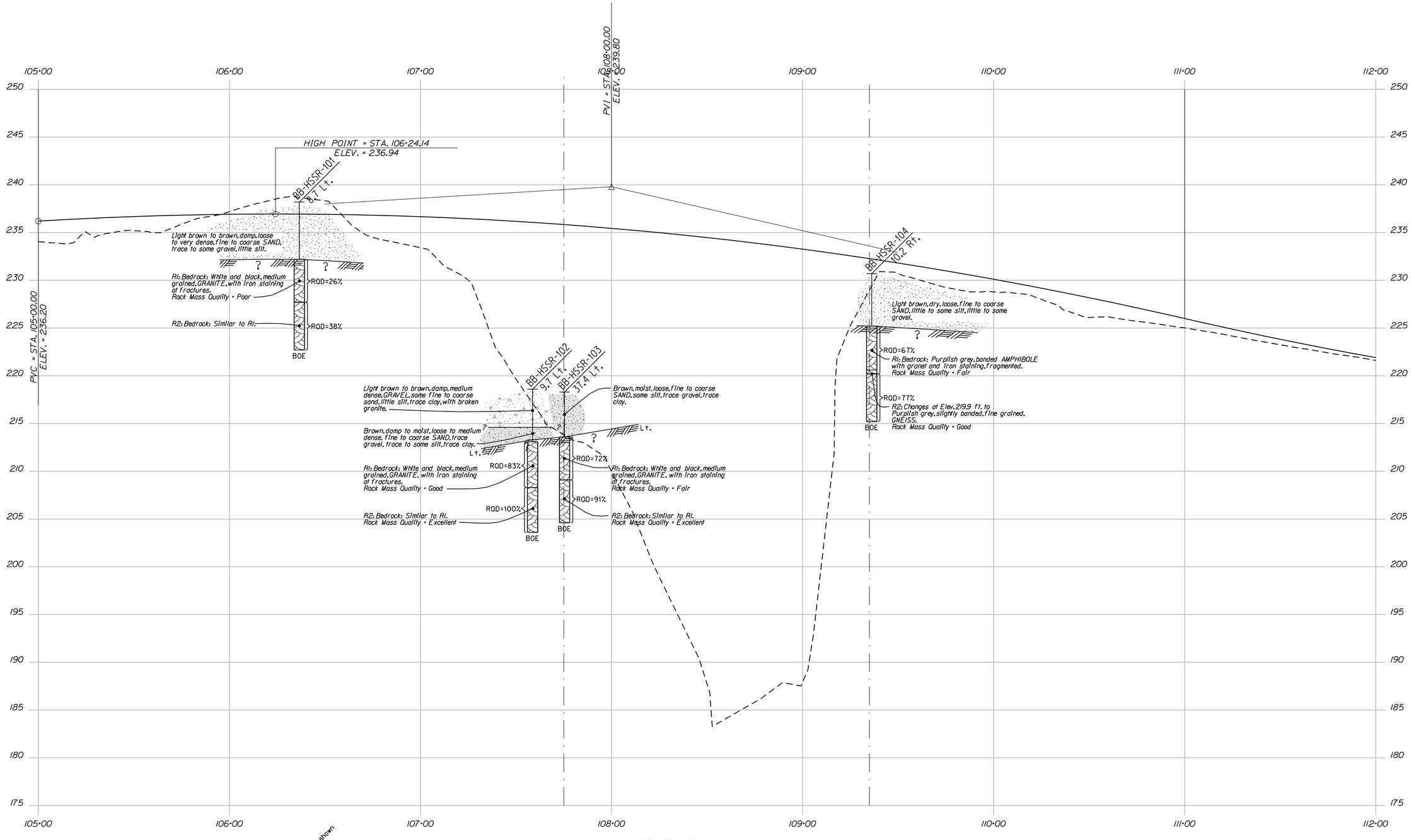
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS

Filename: ...\00\GEOTECH\MSTA\011_ISP1.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



Boring No.
Offset, if shown
Boring
Strata Interface
ROD= Rock Quality Designation for Rock Core Sample
BOE= Bottom Of Exploration

PROFILE

HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		DATE
PROJ. MANAGER	R. Nemon	BY
DESIGN-DETAILED	K.MAGUIRE	T. WHITE
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS \ STANDISH YORK COUNTY

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

11

OF 69

Filename: ...\MSTA\012_BORING LOGS1.dgn   Division: BRIDGE   Username: alan.nadeau   Date:3/23/2012

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Bonny Eagle Covered Bridge #2190 carries Route 35 over Saco River
Location: Hollis-Standish, Maine
Boring No.: BB-HSSR-101
PIN: 16704.00

Driller:	MaineDOT	Elevation (ft.)	238.8	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Giles/Daggett	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	10/13/2010	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	106+36.6, 8.7 Lt.	Casing ID/OD:	HW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/16	0.00 - 2.00	1/2/2/4	4	6	SSA	238.50		Grass and Sod. 0.30 Light brown, damp, loose, fine to coarse SAND, little silt, trace gravel.	G#240089 A-2-4, SM WC=13.8%
4								233.80		5.00 Brown, damp, very dense, fine to coarse SAND, some gravel, little silt, rock fragments in tip of spoon.	G#240090 A-1-b, SM WC=2.7%
	2D	12/8	5.00 - 6.00	20/50	---		100	232.80		6.00	
	R1	54/51	6.00 - 10.50	RQD = 26%			NQ-2			Top of Bedrock at Elev. 232.8 ft. R1: Bedrock: White and black, medium grained, GRANITE with iron staining at fractures. Rock Mass Quality = Poor. R1:Core Times (min:sec) 6.0-7.0 ft (2:20) 7.0-8.0 ft (2:00) 8.0-9.0 ft (5:40) 9.0-10.0 ft (1:00) 10.0-10.5 ft (3:10) 37% Recovery Core Blocked	
8											
	R2	60/48	10.50 - 15.50	RQD = 38%						R2: Bedrock: Similar to above Rock Mass Quality = Poor. R2:Core Times (min:sec) 10.5-11.5 ft (2:00) 11.5-12.5 ft (1:50) 12.5-13.5 ft (3:30) 13.5-14.5 ft (3:00) 14.5-15.5 ft (3:30) 80% Recovery	
12											
16								223.30		15.50 Bottom of Exploration at 15.50 feet below ground surface.	
20											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: BB-HSSR-101

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Bonny Eagle Covered Bridge #2190 carries Route 35 over Saco River
Location: Hollis-Standish, Maine
Boring No.: BB-HSSR-102
PIN: 16704.00

Driller:	Northern Test Boring	Elevation (ft.)	218.6	Auger ID/OD:	5" Solid Stem
Operator:	Nick	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	K. Maguire	Rig Type:	Diedrich D-50 Track	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/1/2010	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	107+58.7, 9.7 Lt.	Casing ID/OD:	HW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.678		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/12	0.00 - 2.00	2/7/17/14	24	27	SSA	218.30		Surface: Leaves, forest floor. 0.30 Light brown to brown, damp, medium dense, GRAVEL, some fine to coarse sand, little silt, trace clay, with broken granite rock. Augered though rocky soils.	G#240059 A-1-b, GC-GM WC=13.2%
4								214.60		4.00	
								213.30		Brown, damp, medium dense, fine to coarse SAND, trace silt. 5.30	
	2D R1	3.6/1 57.6/48	5.00 - 5.30 5.30 - 10.30	50(3.6") RQD = 83%	---		NQ-2			Top of Bedrock at Elev. 213.3 ft. R1: Bedrock: White and black, medium grained, GRANITE with iron staining at fractures. Rock Mass Quality = Good. R1:Core Times (min:sec) 5.5-6.5 ft (7:40) 6.5-7.5 ft (4:38) 7.5-8.5 ft (5:58) 8.5-9.5 ft (5:30) 9.5-10.3 ft (3:50) 83% Recovery	
8											
	R2	56.4/58.8	10.30 - 15.00	RQD = 100%						R2: Bedrock: Similar to R1. Rock Mass Quality = Excellent. R2:Core Times (min:sec) 10.3-11.3 ft (4:30) 11.3-12.3 ft (4:37) 12.3-13.3 ft (4:40) 13.3-14.3 ft (4:57) 14.3-15.0 ft (3:50) 104% Recovery	
12											
								203.60		15.00 Bottom of Exploration at 15.00 feet below ground surface.	
16											
20											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: BB-HSSR-102

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Bonny Eagle Covered Bridge #2190 carries Route 35 over Saco River
Location: Hollis-Standish, Maine
Boring No.: BB-HSSR-103
PIN: 16704.00

Driller:	Northern Test Boring	Elevation (ft.)	218.3	Auger ID/OD:	5" Solid Stem
Operator:	Nick	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	K. Maguire	Rig Type:	Diedrich D-50 Track	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	11/1/2010	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	107+75.4, 37.4 Lt.	Casing ID/OD:	HW	Water Level*:	2.7 ft bgs.
Hammer Efficiency Factor: 0.678		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D		0.30 - 2.30	1/3/2/4	5	6	SSA	218.00		Surface: Leaves, forest floor. 0.30 Brown, moist, loose, fine to coarse SAND, some silt, trace gravel, trace clay.	G#240058 A-2-4, SC-SM WC=21.8%
4	R1	54/48	4.70 - 9.20	RQD = 72%			NQ-2	213.60		4.70 Top of Bedrock at Elev. 213.6 ft. R1: Bedrock: White and black, medium grained, GRANITE, with iron staining at fractures. Rock Mass Quality = Fair. R1:Core Times (min:sec) 4.7-5.7 ft (2:39) 5.7-6.7 ft (1:50) 6.7-7.7 ft (2:55) 7.7-8.7 ft (3:10) 8.7-9.2 ft (3:10) 89% Recovery	
8											
	R2	54/54	9.20 - 13.70	RQD = 91%						R2: Bedrock: Same as R1. Rock Mass Quality = Excellent. R2:Core Times (min:sec) 9.2-10.2 ft (5:40) 10.2-11.2 ft (2:30) 11.2-12.2 ft (2:50) 12.2-13.2 ft (2:40) 13.2-13.7 ft (2:30) 100% Recovery	
12								204.60		13.70 Bottom of Exploration at 13.70 feet below ground surface.	
16											
20											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: BB-HSSR-103

Maine Department of Transportation — Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: Bonny Eagle Covered Bridge #2190 carries Route 35 over Saco River
Location: Hollis-Standish, Maine
Boring No.: BB-HSSR-104
PIN: 16704.00

Driller:	MaineDOT	Elevation (ft.)	230.7	Auger ID/OD:	5" Solid Stem
Operator:	Giguere/Giles/Daggett	Datum:	NAVD 88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	10/13/2010	Drilling Method:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	109+36.2, 10.2 Rt.	Casing ID/OD:	HW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.84		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample attempt
V = Insitu Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Insitu Vane Shear Test attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = weight of 140lb. hammer
WOR/C = weight of rods or casing
WO1P = Weight of one person
S_u = Insitu Field Vane Shear Strength (psf)
T_v = Pocket Torvane Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw field SPT N-value
Hammer Efficiency Factor = Annual Calibration Value
N_{60} = SPT N-uncorrected corrected for hammer efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
$S_{u(lab)}$ = Lab Vane Shear Strength (psf)
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	1D	24/16	0.00 - 2.00	1/2/4/4	6	8	SSA	230.40		Grass and Sod. 0.30 Light brown, dry, loose, fine to coarse SAND, some silt, little gravel.	G#240091 A-2-4, SM WC=6.2%
4										Light brown, dry, loose, fine to coarse SAND, some gravel, little silt.	G#240092 A-1-b, SM WC=1.9%
	2D R1	6/6 60/60	5.00 - 5.50 5.50 - 10.50	50 RQD = 67%	---		NQ-2	225.20		5.50 Top of Bedrock at Elev. 225.2 ft. R1: Bedrock: Purplish grey, banded AMPHIBOLE with garnets and iron staining, fragmented. Rock Mass Quality = Fair. R1:Core Times (min:sec) 5.5-6.5 ft (2:30) 6.5-7.5 ft (2:10) 7.5-8.5 ft (2:10) 8.5-9.5 ft (2:05) 9.5-10.5 ft (2:00) 100% Recovery	
8											
	R2	60/60	10.50 - 15.50	RQD = 77%				219.90		10.80 R2: Bedrock: Purplish grey, slightly banded, fine grained, GNEISS. Rock Mass Quality = Good. R2:Core Times (min:sec) 10.5-11.5 ft (2:10) 11.5-12.5 ft (2:00) 12.5-13.5 ft (2:20) 13.5-14.5 ft (2:15) 14.5-15.5 ft (2:15) 100% Recovery	
12											
16								215.20		15.50 Bottom of Exploration at 15.50 feet below ground surface.	
20											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: BB-HSSR-104

State of Maine - Department of Transportation

Power Auger Probe Summary Sheet

Town(s): Hollis-Standish   **Work Number: 16704.00**

Station (Feet)	Offset (Feet)	Weathered Rock (Feet)	Refusal (Feet)	Rock Core (Feet)	Elevation (Feet)	Comments / Date 3/13/2012
107+64.9	25.8 Lt.		3.8		214.1	BP-3.8R 101
107+63.7	6.6 Lt.		4.4		213.2	BP-4.4R 102
107+34.8	13.2 Rt.		3.9		219.4	BP-3.9R 103
107+47.1	8.7 Rt.	5.8	7.4	7.4-11.4	214.3	BP-5.8W 104
107+26.2	28.8 Rt.		5.2		219.0	BP-5.2R 105
107+36.1	36.0 Rt.		5.3		214.4	BP-5.3R 106
109+50.7	0.7 Rt.		5.2		225.4	BP-5.2R 107
109+37.8	3.4 Lt.	4.0	6.4		223.6	BP-4.0W 108
109+38	27.6 Rt.		5.2		225.4	BP-5.2R 109
109+29.4	24.5 Rt.	3.1	5.8		225.0	BP-3.1W 110
Borings are not in Station order.						

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BR-1670(400)X
WIN 16704.00
BRIDGE NO. 2190
BRIDGE PLANS

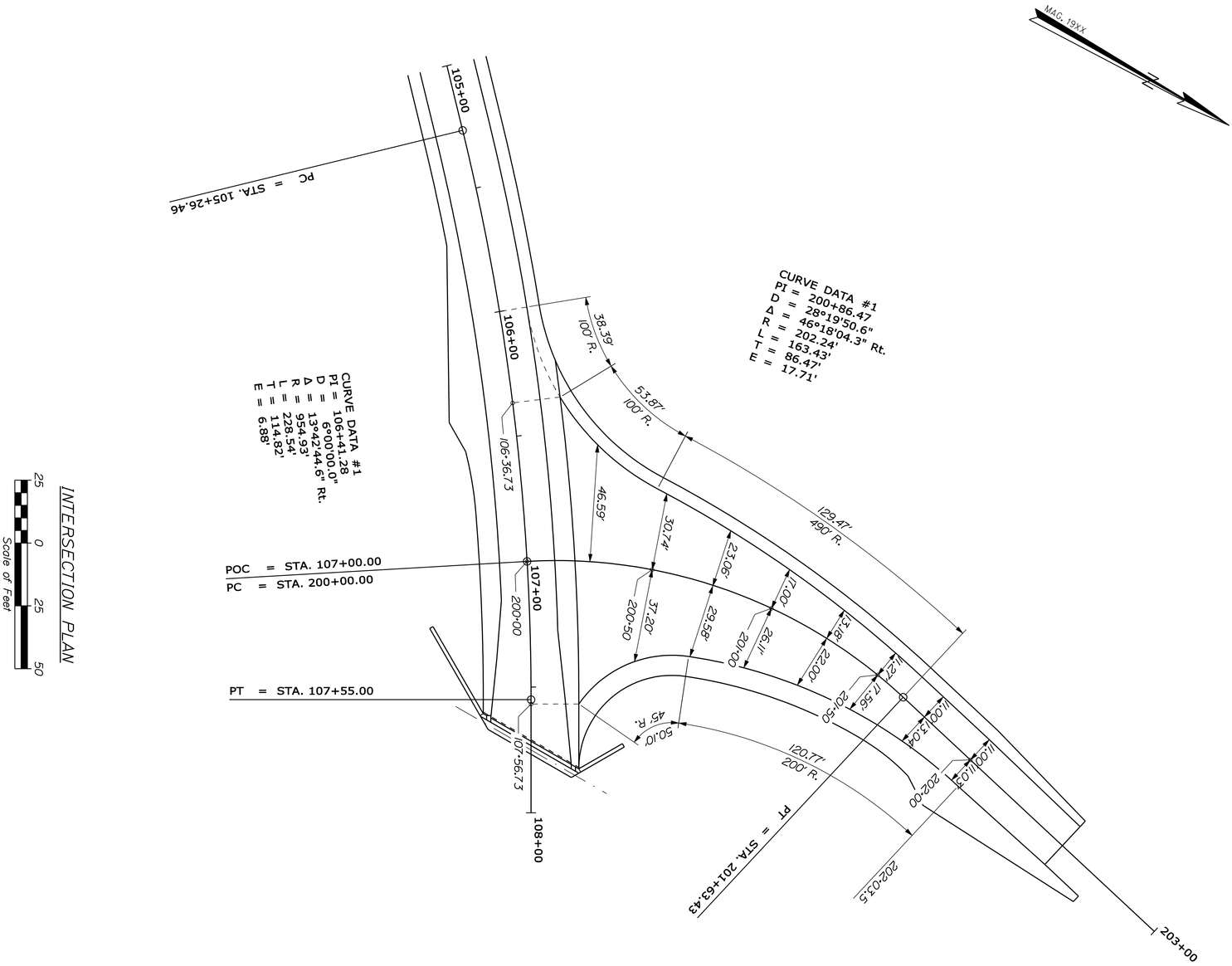
	BY	DATE
PROJ. MANAGER	R. Nimon	
DESIGN-DETAILED	K.MAGUIRE	T.WHITE
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
P.E. NUMBER
DATE

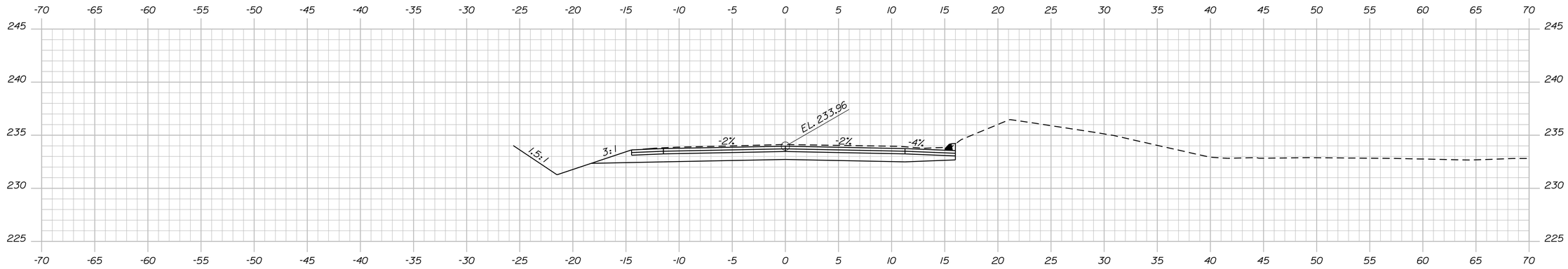
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS \ STANDISH YORK COUNTY

BORING LOGS

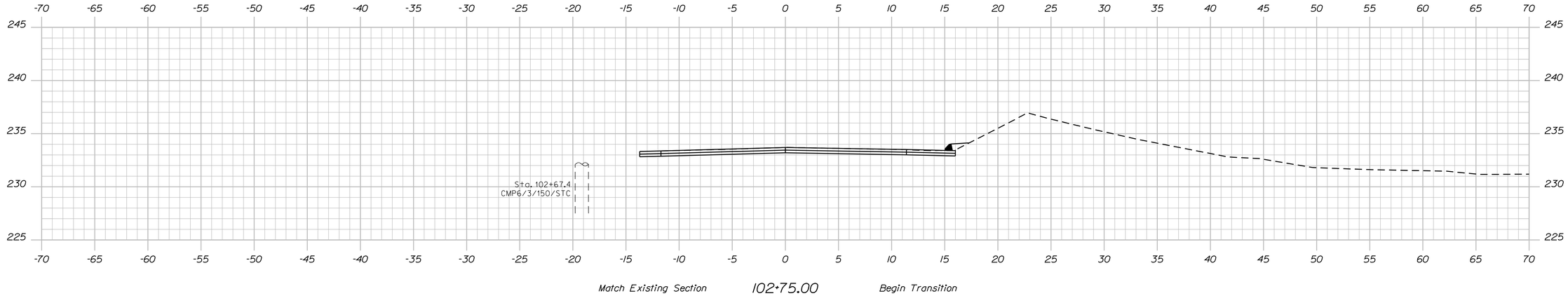
SHEET NUMBER
12
OF 69



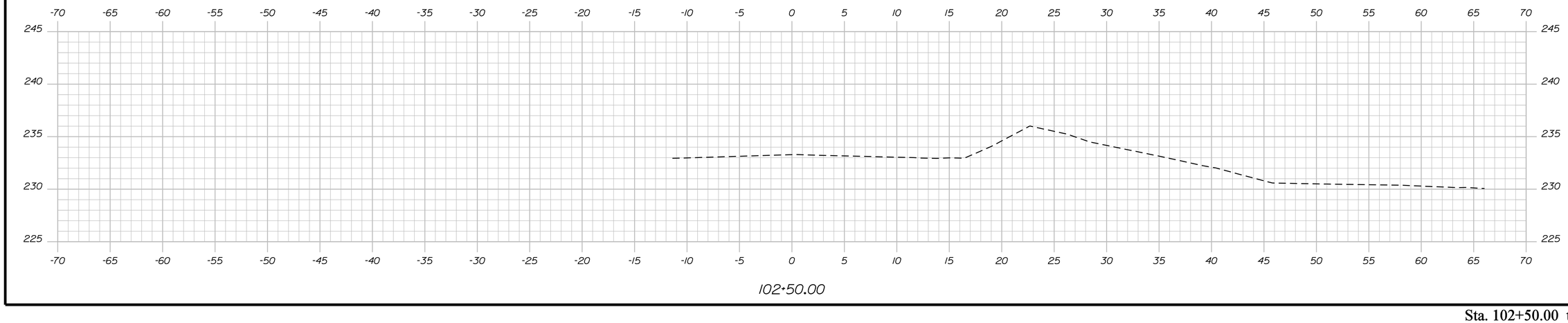
SHEET NUMBER 13 OF 69	BONNY EAGLE COVERED BRIDGE SACO RIVER HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY. INTERSECTION PLAN	PROJ. MANAGER M. Porlin BY DATE DESIGN-DETAILED D. Eaton D. Domren CHECKED-REVIEWED E. Caswell DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	SIGNATURE P.E. NUMBER DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION BR-1670(400)X BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



103+00.00



Match Existing Section 102+75.00 Begin Transition



102+50.00

Sta. 102+50.00 to Sta. 103+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

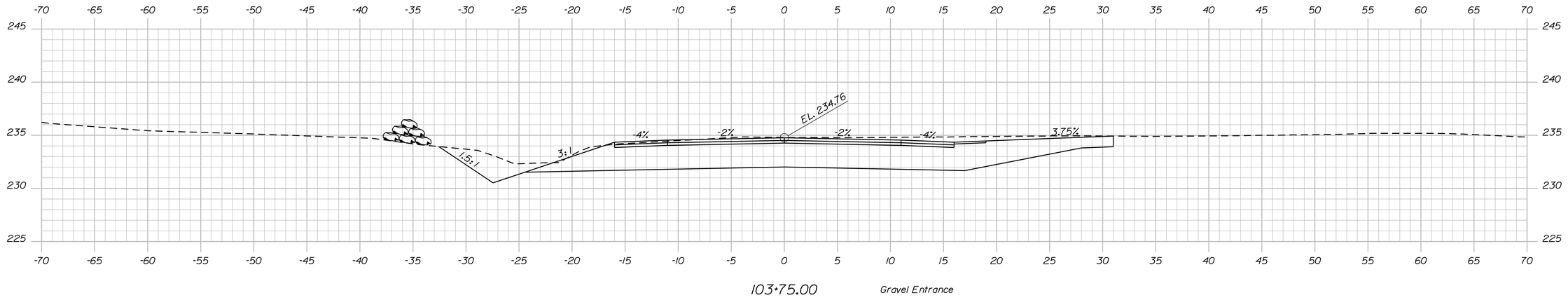
DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

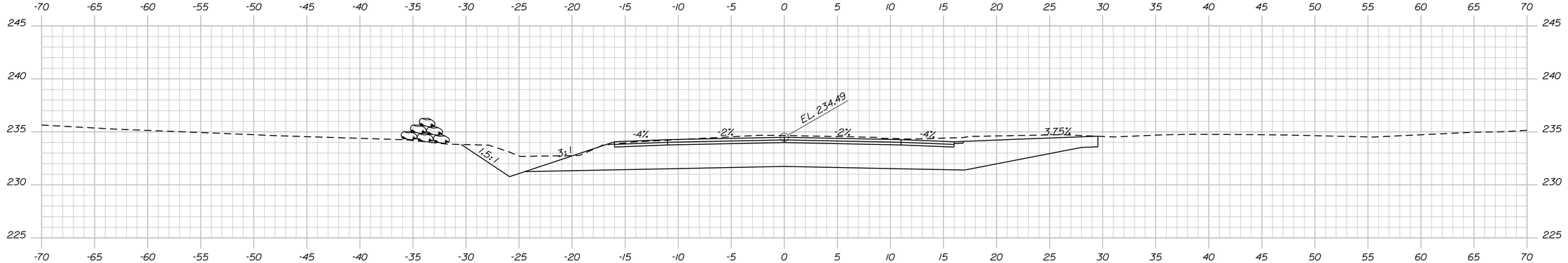
CROSS SECTIONS

SHEET NUMBER
14
OF 69

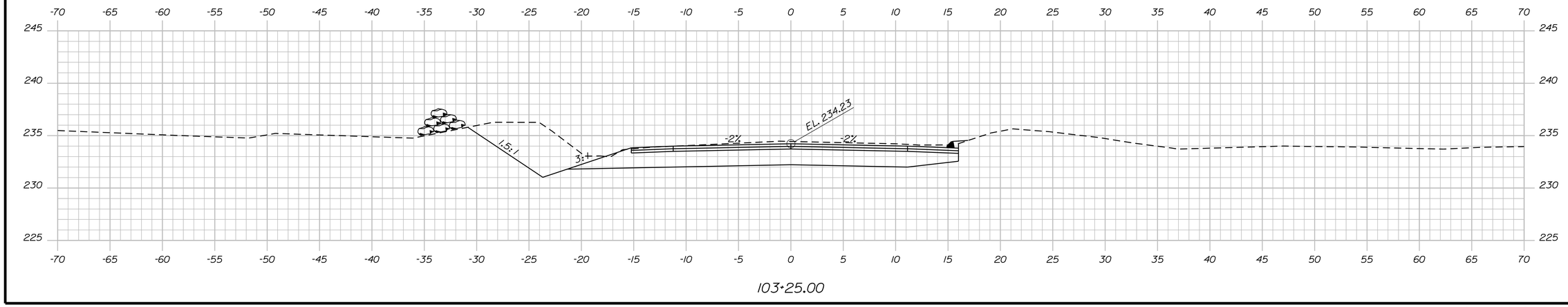
Filename: ...\mslo\014_Xsect_102+50_001.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



103+75.00 Gravel Entrance



End Transition 103+50.00 Begin Project



103+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190 BRIDGE PLANS

SIGNATURE			
P.E. NUMBER			
DATE			

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

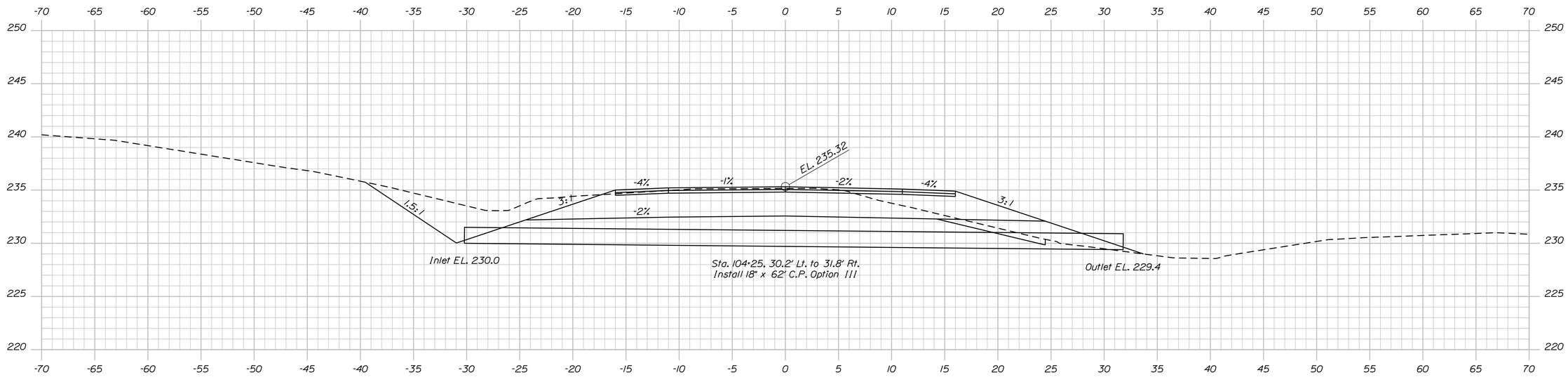
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

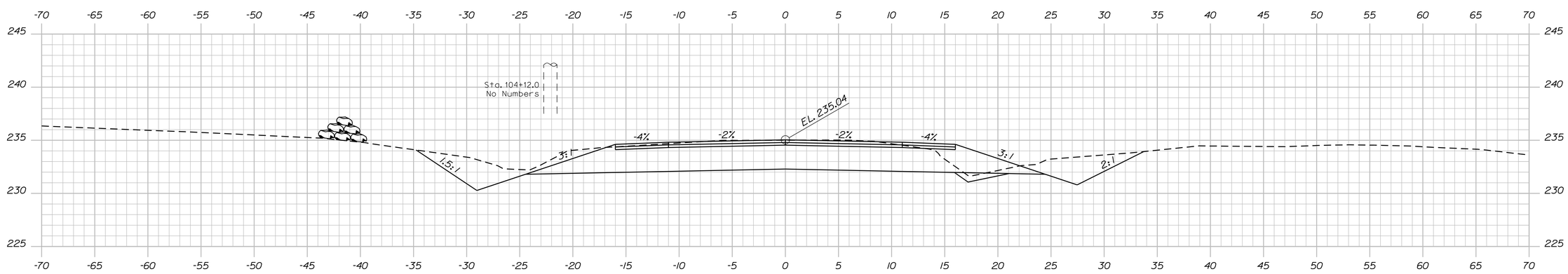
SHEET NUMBER
15
OF 69

Sta. 103+25.00 to Sta. 103+75.00

Filename: ...\mst01\015_Xsect_103+25_002.dgn Division: BRIDGE Date:3/23/2012 Username: alan.nadeau



104+25.00



104+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

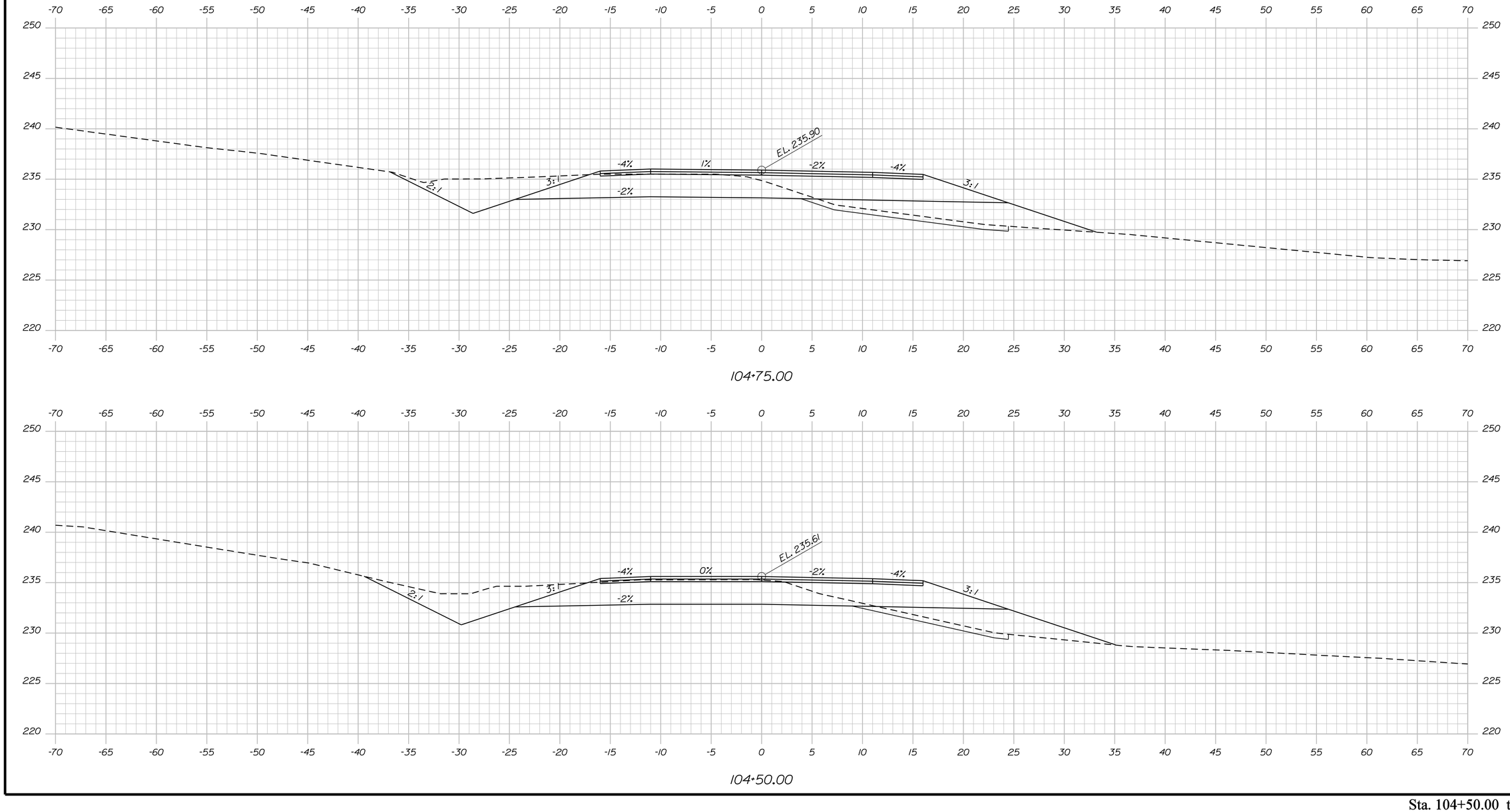
SHEET NUMBER

16

OF 69

Sta. 104+00.00 to Sta. 104+25.00

Filename: ...\msta\016_Xsect_104+00_003.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



Sta. 104+50.00 to Sta. 104+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190 BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Parlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

SHEET NUMBER

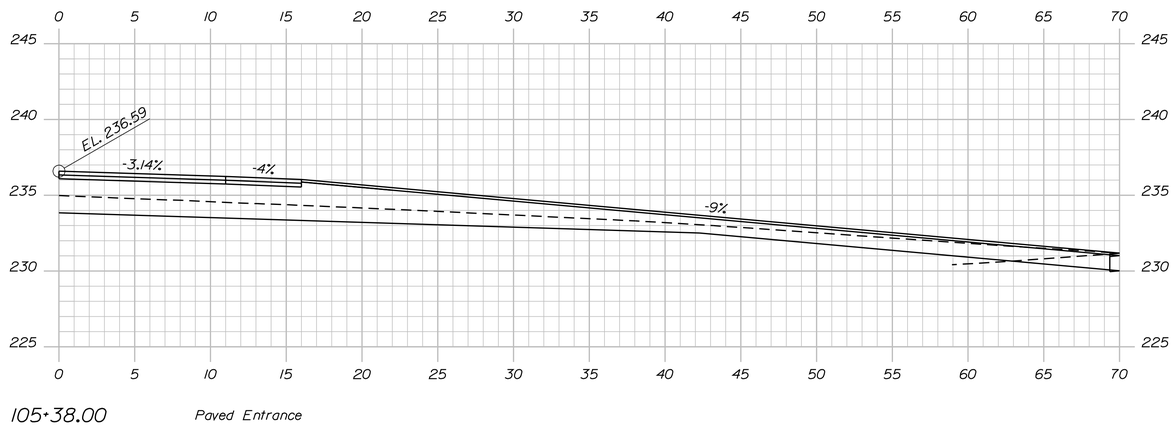
17

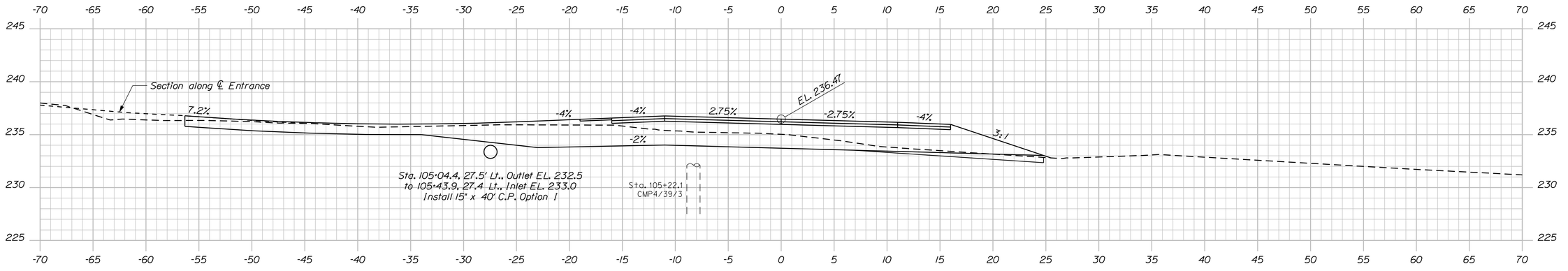
OF 69

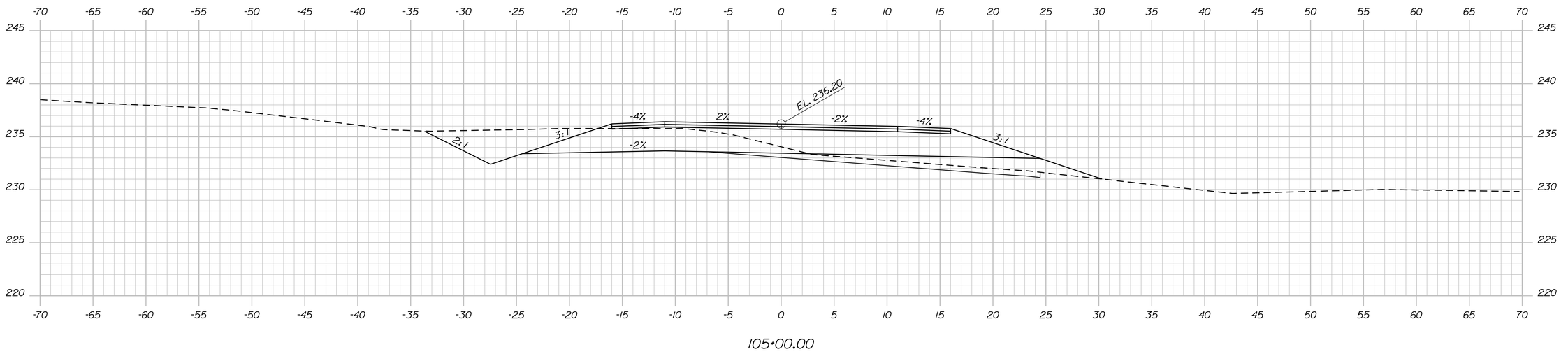
Username: alan.nadeau Date:3/23/2012

Division: BRIDGE

Filename: ...\msta\017_Xsect_104+50_004.dgn







STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

	NAME	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	D. Eaton	
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY: D. Domren

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

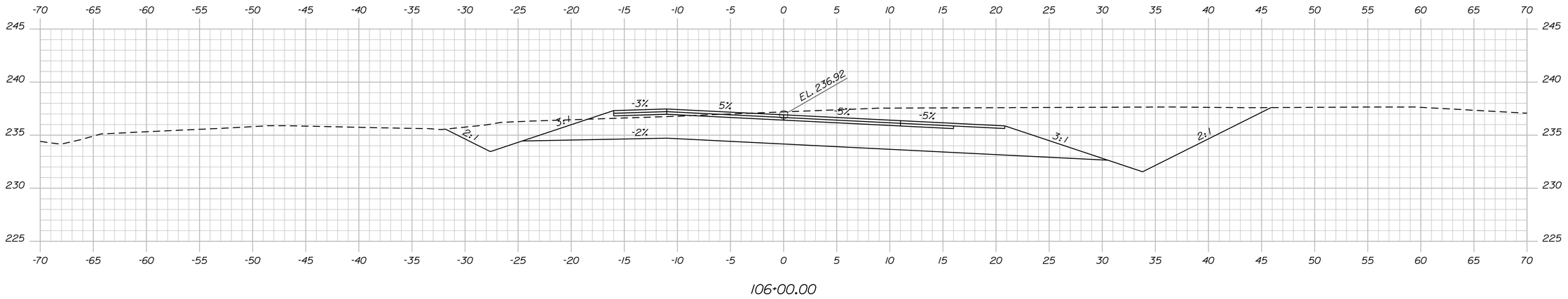
SHEET NUMBER

18

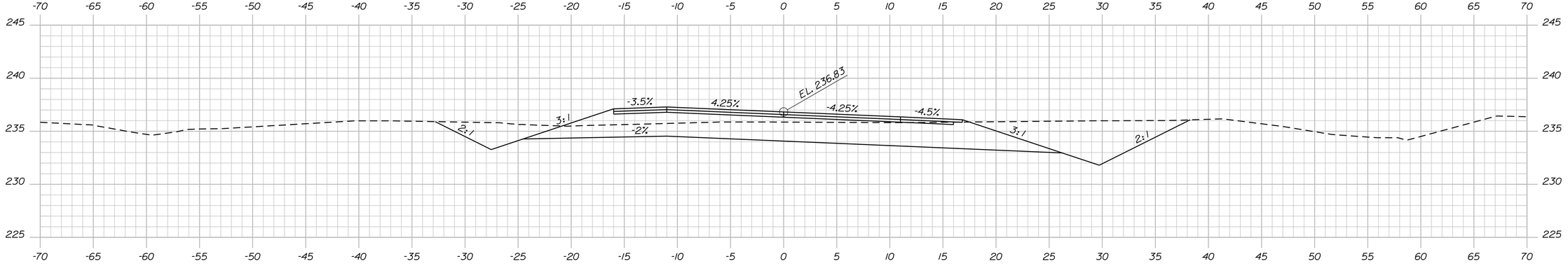
OF 69

Sta. 105+00.00 to Sta. 105+35.00

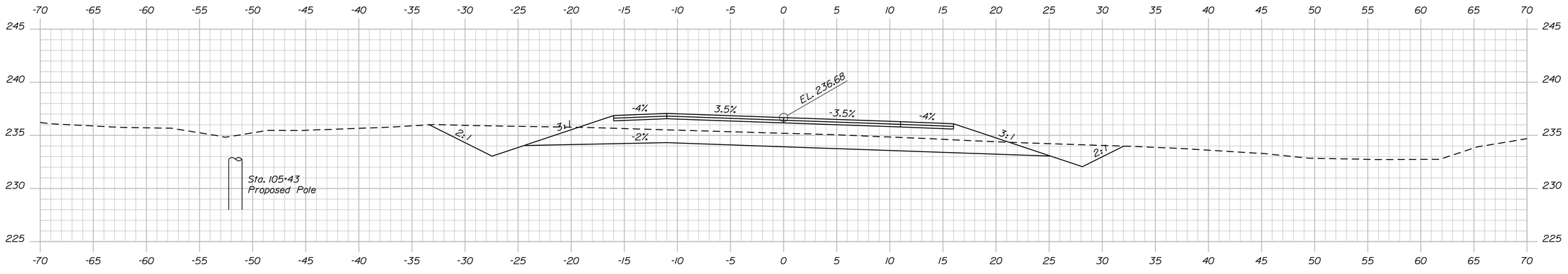
Filename: ...\mslo\018_Xsect_105+00_005.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



106+00.00



105+75.00



105+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

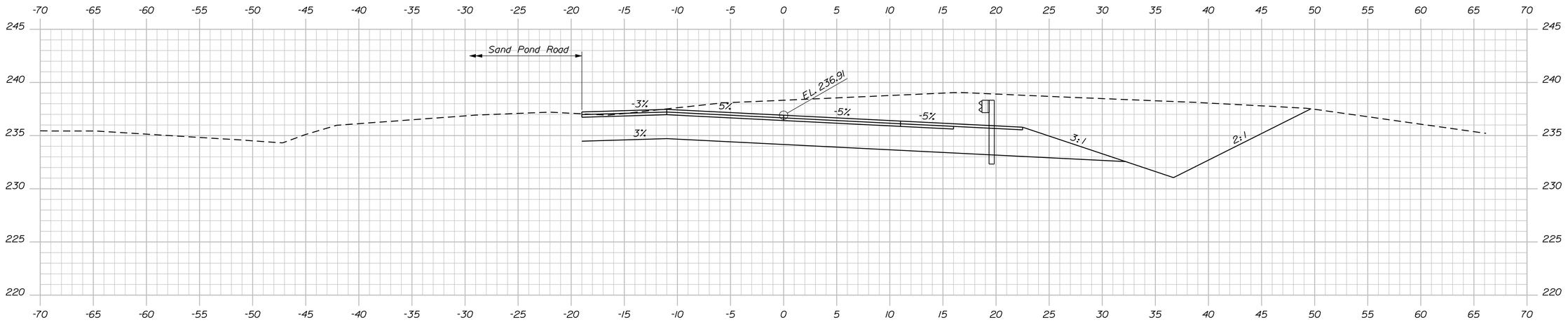
SHEET NUMBER

19

OF 69

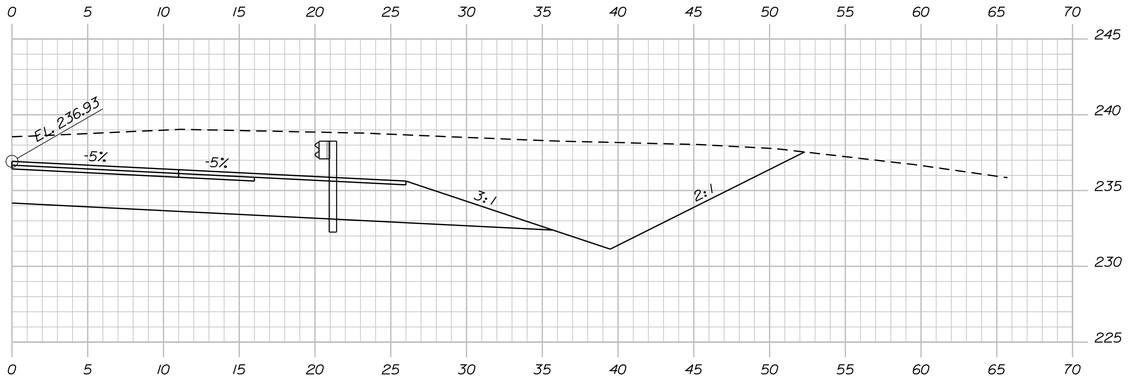
Sta. 105+50.00 to Sta. 106+00.00

Filename: ...\mslo\019_Xsect_105+50_006.dgn Username: alan.nadeau Division: BRIDGE Date:3/23/2012

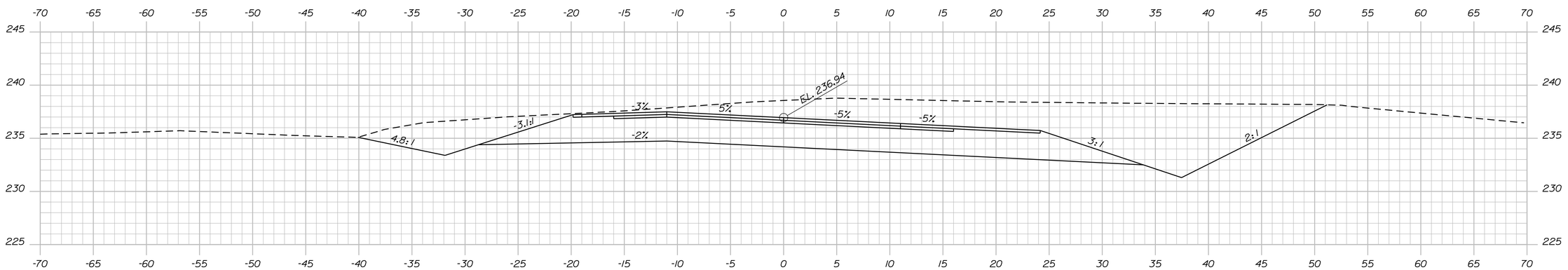


106+50.00

Sta. 106+41.5 to 106+79.4
Install GR 350 Flared Terminal



106+41.52



106+25.00

Sta. 106+25.00 to Sta. 106+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

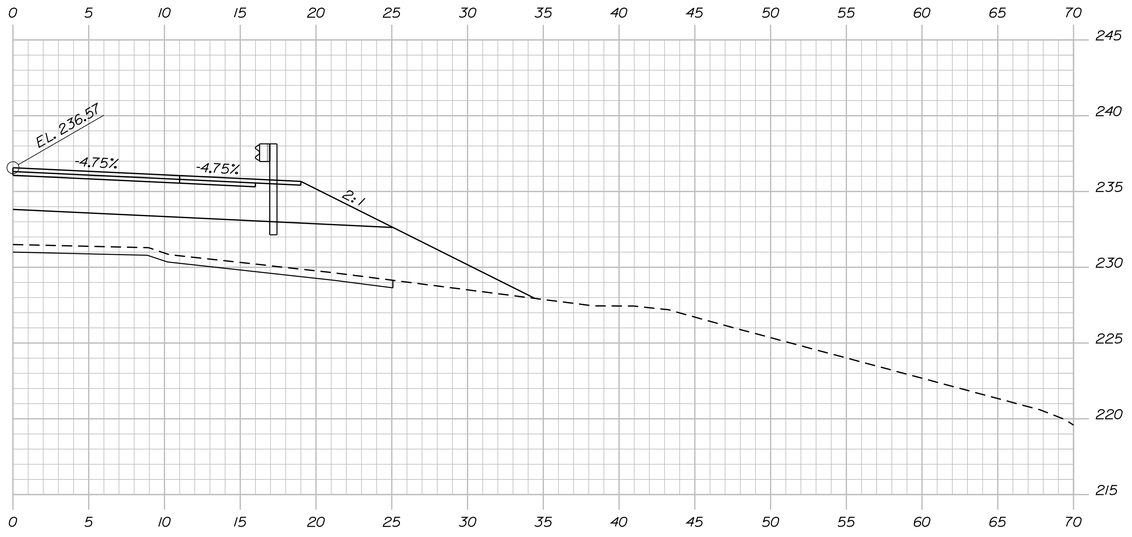
	SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton		
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

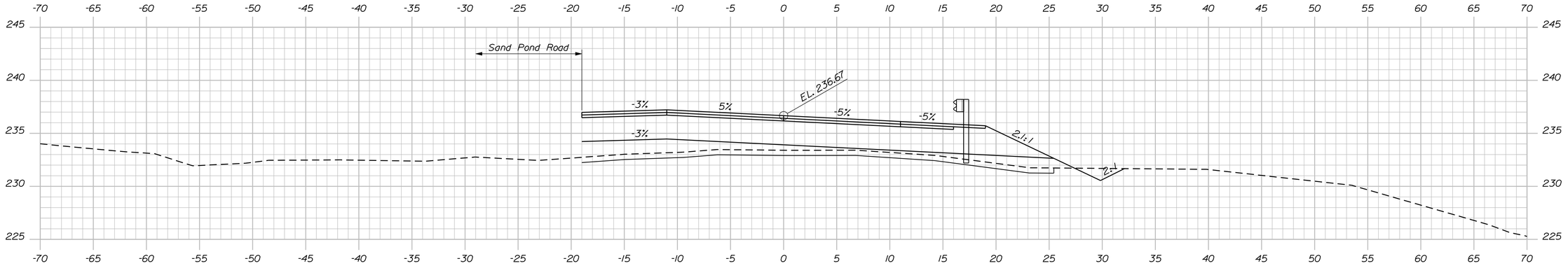
CROSS SECTIONS

SHEET NUMBER
20
OF 69

Filename: ...\ms1o\020_Xsect_106+25_007.dgn Division: BRIDGE Username: dana.damren Date:3/26/2012

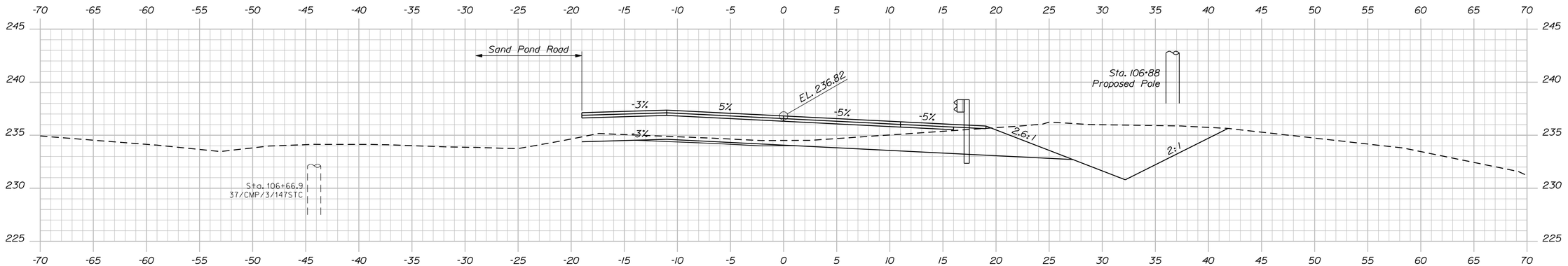


107+12.50



107+00.00

Sta. 106+79.4 to 107+43.0
Install 62.5 L.F. GR Type 3c



106+75.00

Sta. 106+75.00 to Sta. 107+12.50

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

P.E. NUMBER

SIGNATURE

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

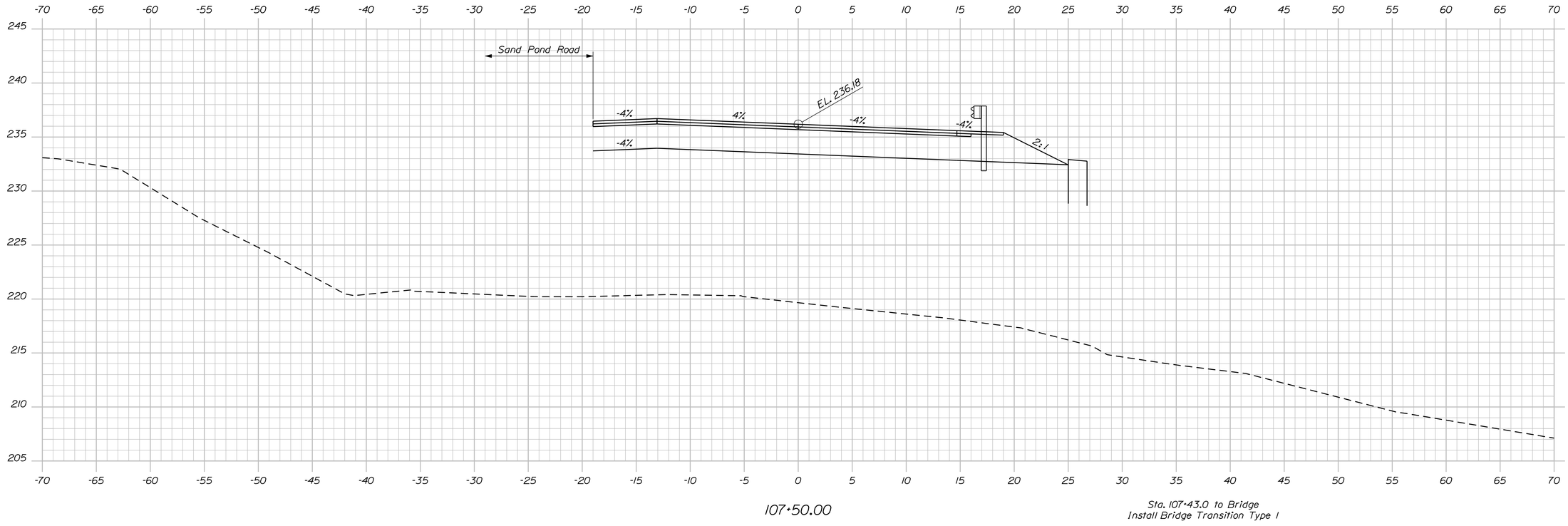
CROSS SECTIONS

SHEET NUMBER

21

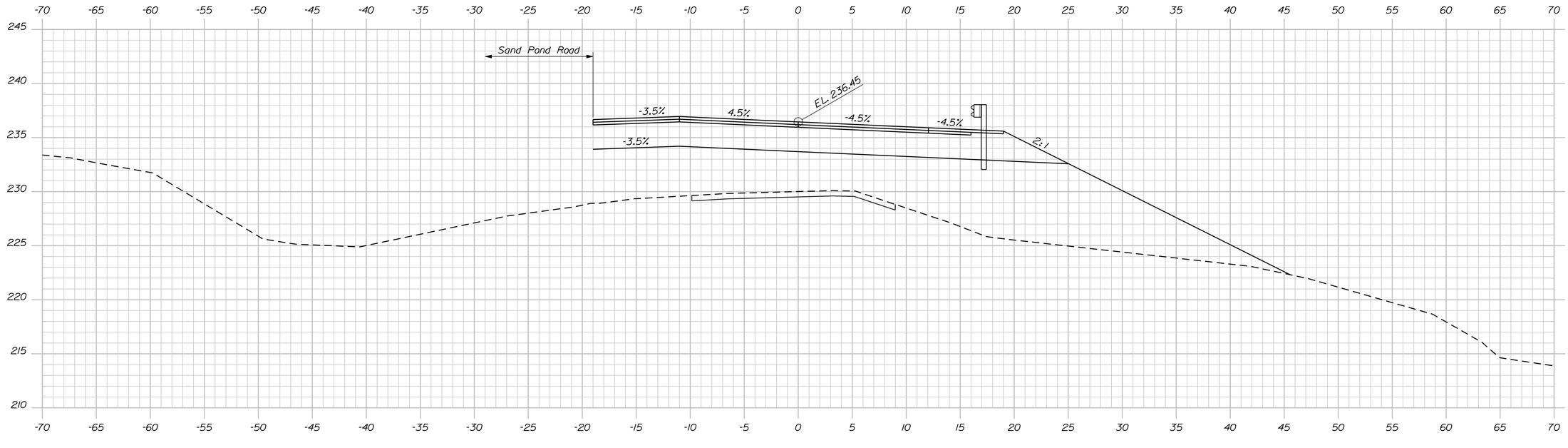
OF 69

Filename: ...\msta\021_Xsect_106+75_008.dgn Division: BRIDGE Username: dana.domren Date:3/26/2012



107+50.00

Sta. 107+43.0 to Bridge
Install Bridge Transition Type 1



107+25.00

Sta. 107+25.00 to Sta. 107+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	D. Eaton	BY	DATE
CHECKED-REVIEWED	E. Caswell	D. Domren	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

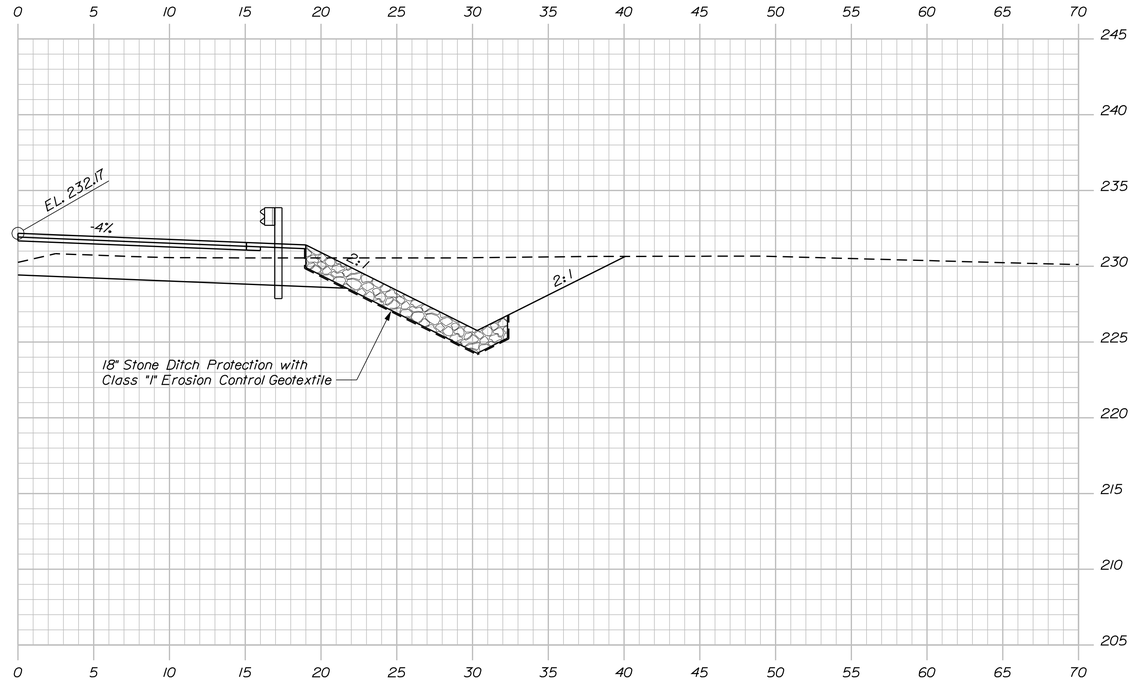
CROSS SECTIONS

SHEET NUMBER

22

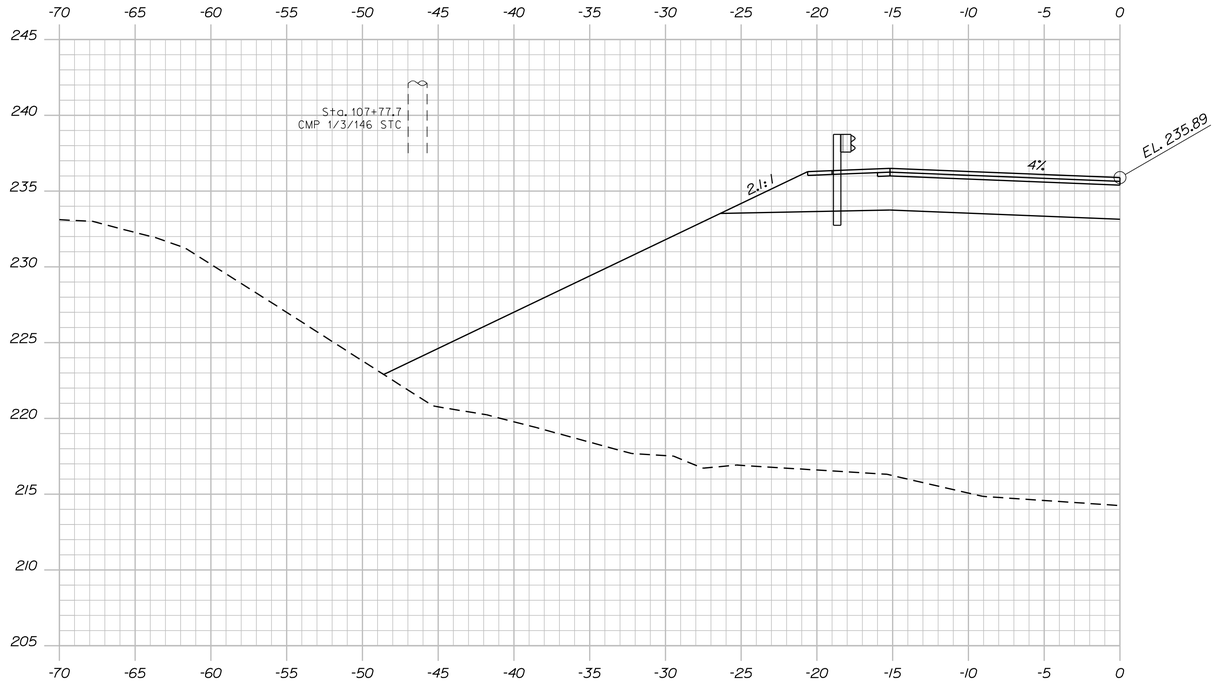
OF 69

Filename: ...\msto\022_Xsect_107+25_009.dgn Division: BRIDGE Username: dona.domren Date:3/26/2012



109+38.46

Bridge to Sta. 109+46.4
Install Bridge Transition Type I



Sta. 107+64.3 to Bridge
Install Bridge Transition Type I @ 40' R.

107+71.54

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	BY	DATE
CHECKED-REVIEWED	E. Caswell	D. Damren	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

SHEET NUMBER

23

OF 69

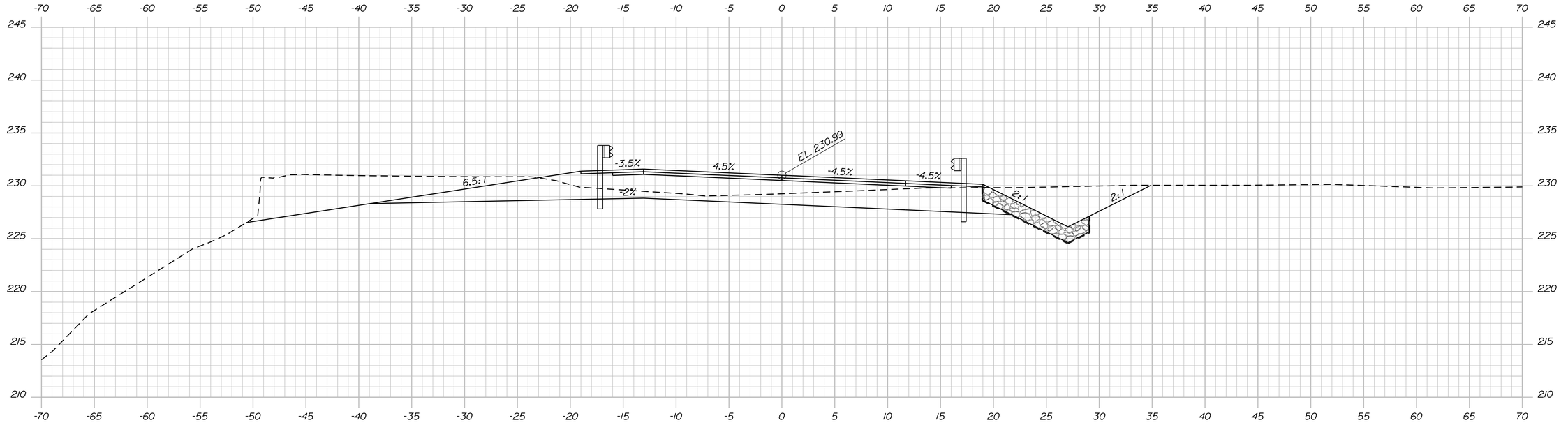
Username: alan.nadeau Date:3/23/2012

Division: BRIDGE

Filename: ...\msta\023_Xsect_107+71_010.dgn

Sta. 107+71.54 and Sta. 109+38.46

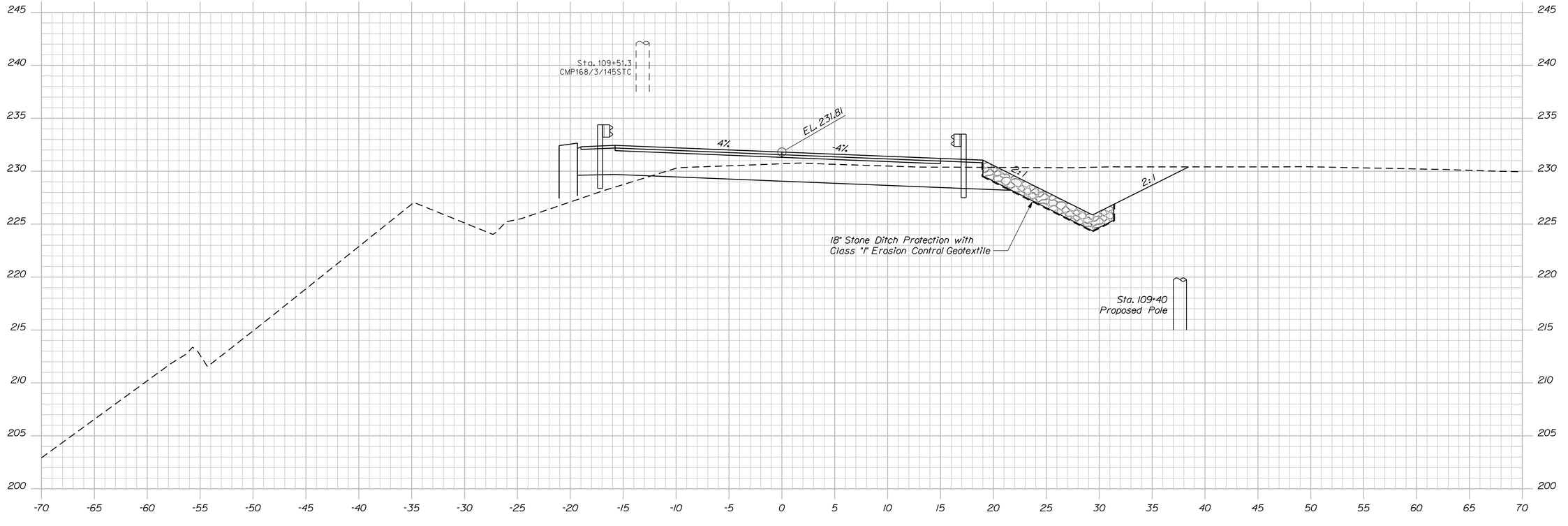
Username: alan.nadeau Date:3/23/2012
Filename: ...\mst\024_Xsect_109+50_011.dgn Division: BRIDGE



Sta. 109+66.6 to 110+40.4
Install 75 L.F. GR Type 3c

109+75.00

Sta. 109+71.7 to 109+87.2
Install 25 L.F. GR Type 3c @ 30' R.
with Terminal End



109+50.00

Sta. 109+46.4 to 109+71.7
Install 25 L.F. GR Type 3c

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		DATE
DESIGN-DETAILED	D. Eaton	BY	D. Domren
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

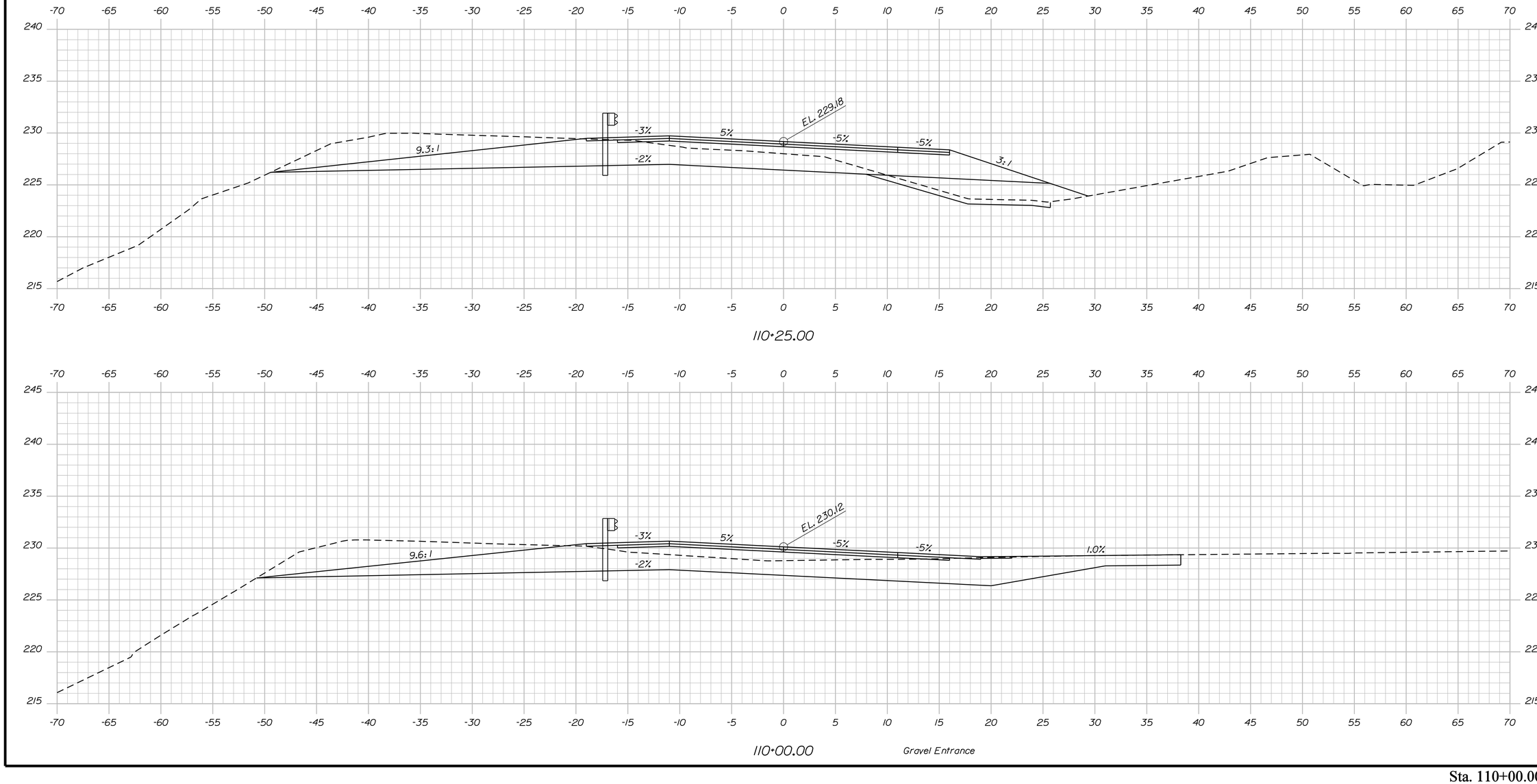
CROSS SECTIONS

SHEET NUMBER

24

OF 69

Sta. 109+50.00 to Sta. 109+75.00



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	D. Eaton	BY
CHECKED-REVIEWED	E. Caswell	D. Domren
DESIGN2-DETAILED2	ED2	
DESIGN3-DETAILED3	ED3	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

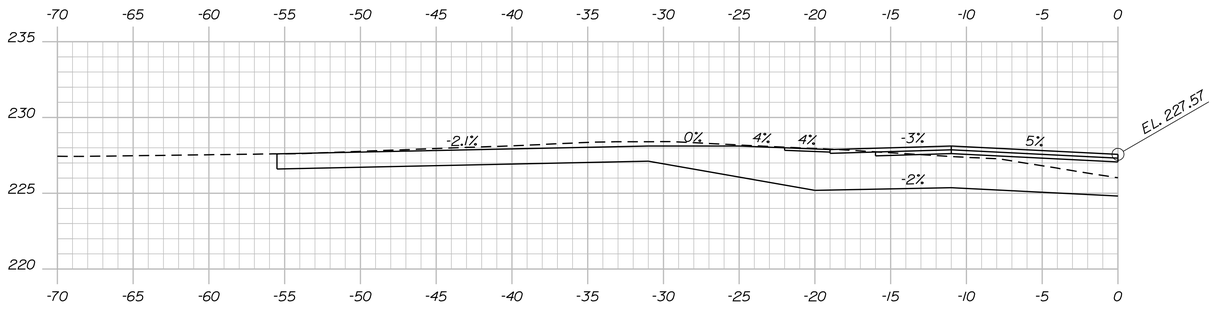
SHEET NUMBER

25

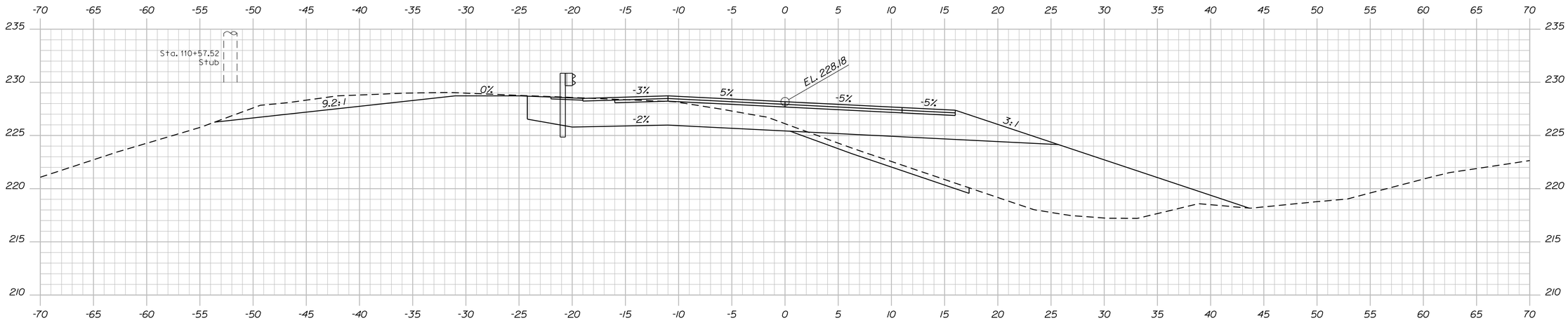
OF 69

Sta. 110+00.00 to Sta. 110+25.00

Filename: ...\mslo\025_Xsect_110+00_012.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

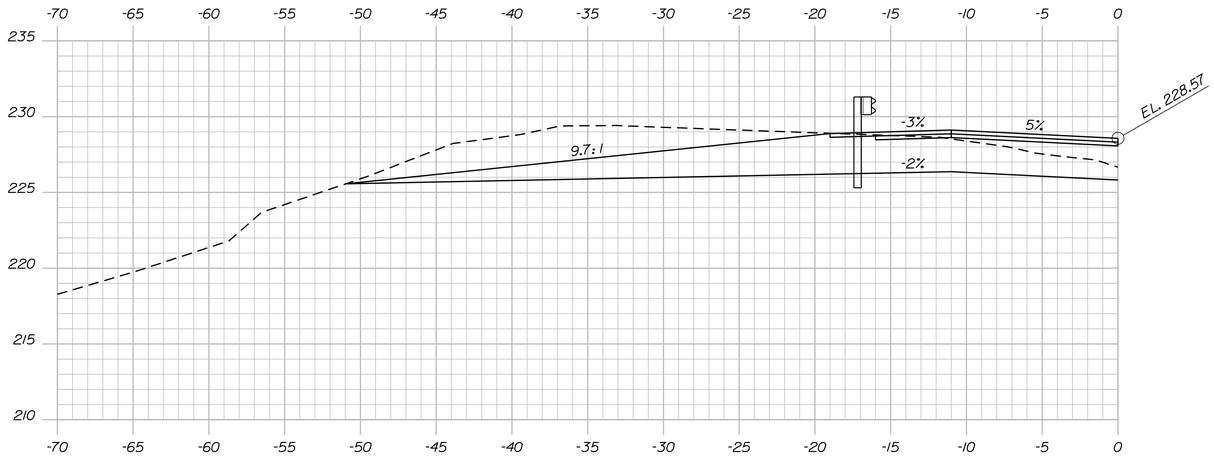


Gravel Entrance 110+64.60



Sta. 109+71.7 to 109+87.2
Install 25 L.F. GR Type 3c @ 30' R.
with Terminal End

Gravel Entrance 110+50.00



110+40.38

Sta. 110+40.38 to Sta. 110+64.60

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

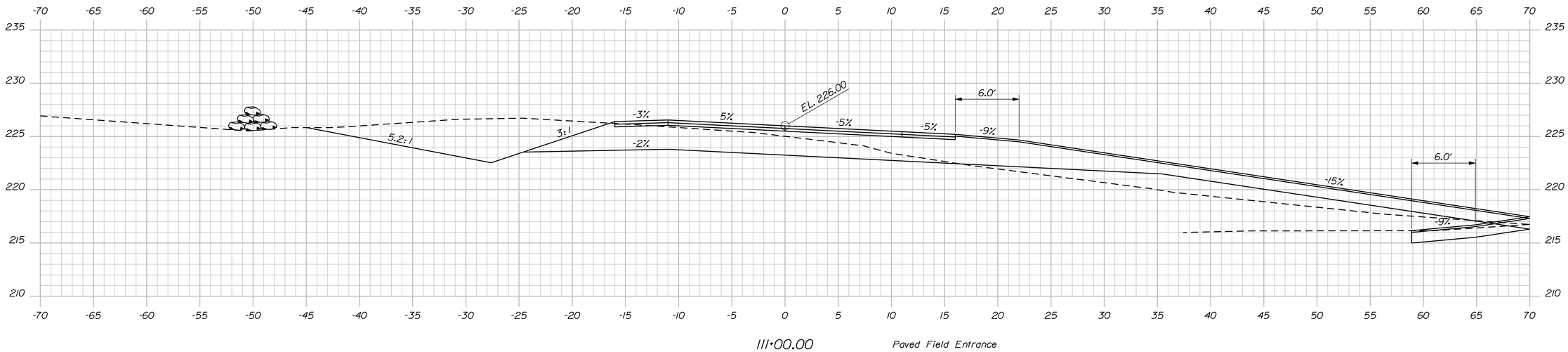
PROJ. MANAGER	M. Perlin		DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			SIGNATURE
DESIGN3-DETAILED3			
REVISIONS 1			P.E. NUMBER
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			DATE
FIELD CHANGES			

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

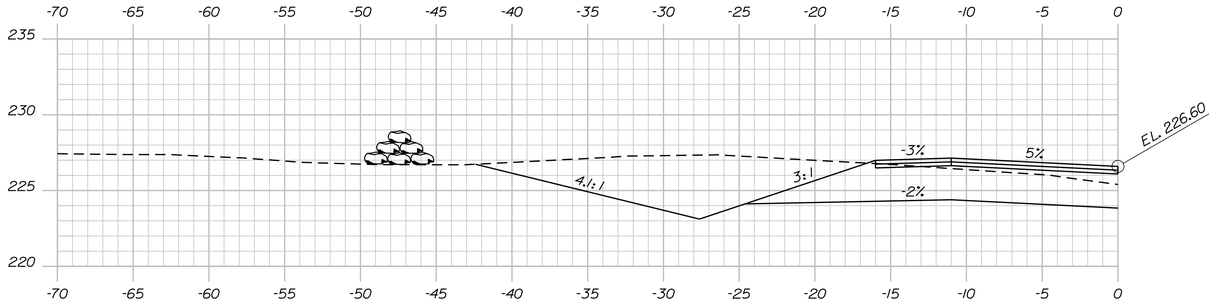
CROSS SECTIONS

SHEET NUMBER
26
OF 69

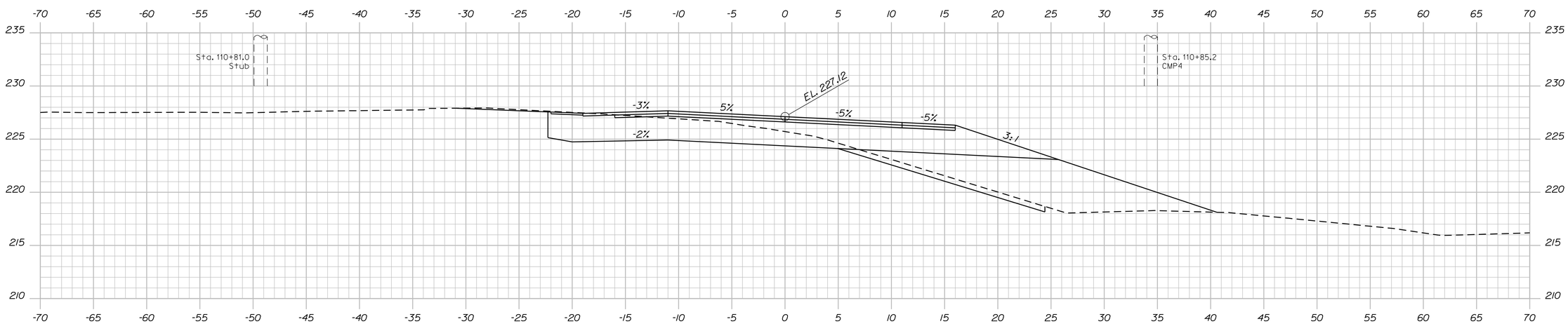
Filename: ...\mstoV026_Xsect_110+40_013.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



111+00.00 Paved Field Entrance



110+86.87



Gravel Entrance 110+75.00

Sta. 110+75.00 to Sta. 111+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

	SIGNATURE	DATE
P.E. NUMBER		

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	D. Eaton	
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

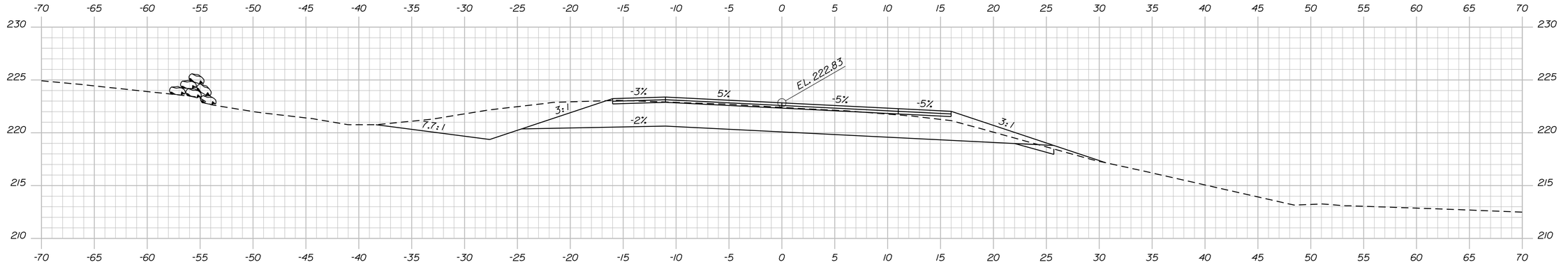
CROSS SECTIONS

SHEET NUMBER

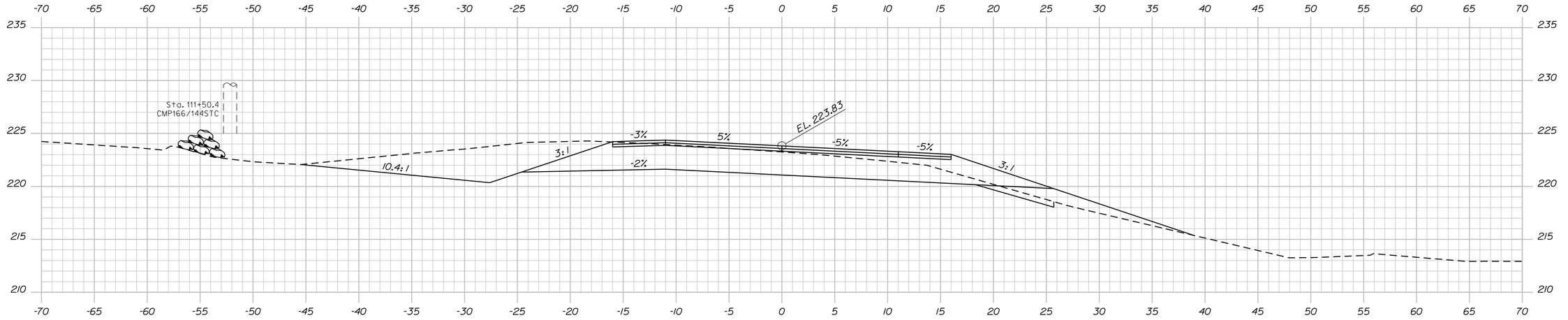
27

OF 69

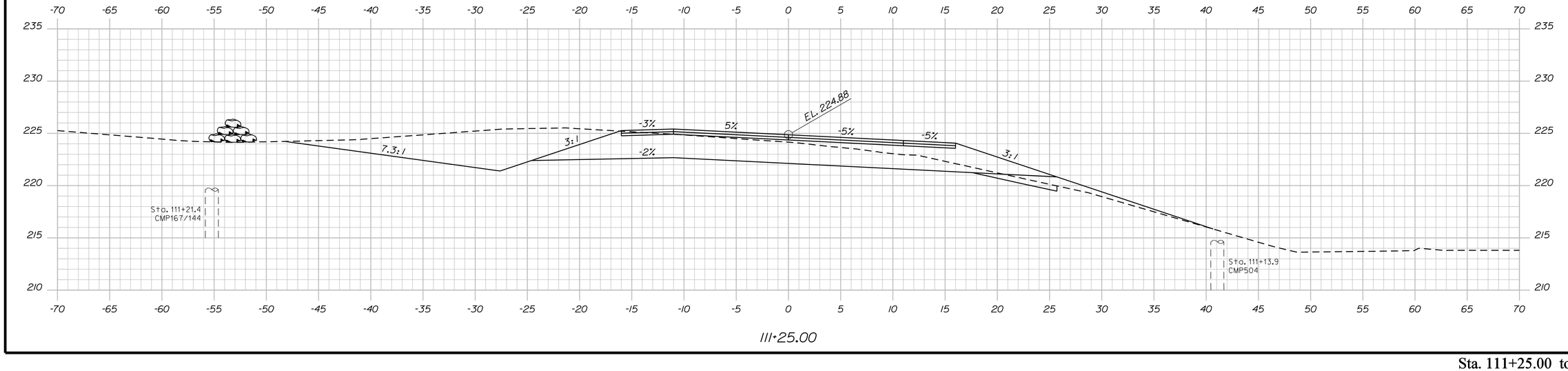
Filename: ...\mst0\027_Xsect_110+75_014.dgn Username: alan.nadeau Division: BRIDGE Date:3/23/2012



111+75.00



111+50.00



111+25.00

Sta. 111+25.00 to Sta. 111+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

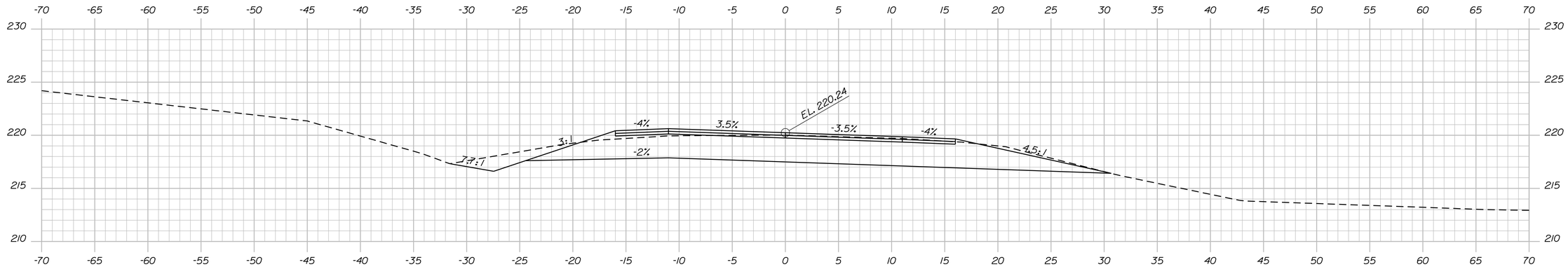
SHEET NUMBER

28

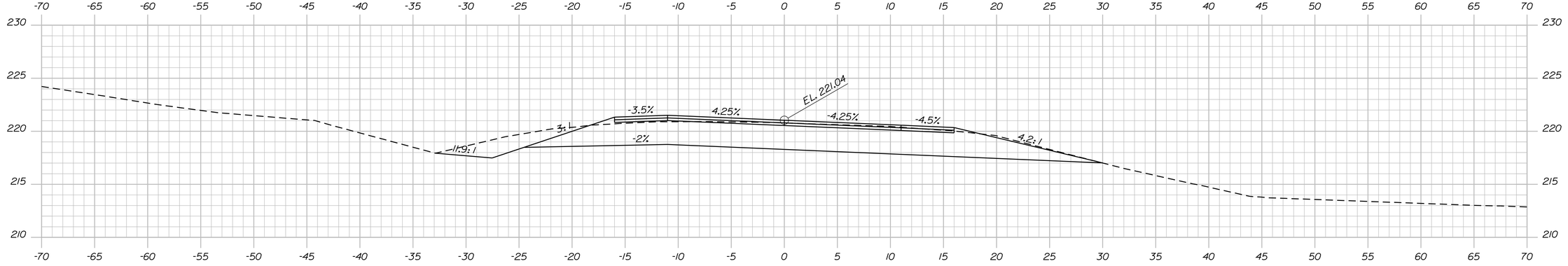
OF 69

Username: alan.nadeau Date:3/23/2012

Filename: ...\ms1a\028_Xsect_111+25_015.dgn Division: BRIDGE



112+50.00



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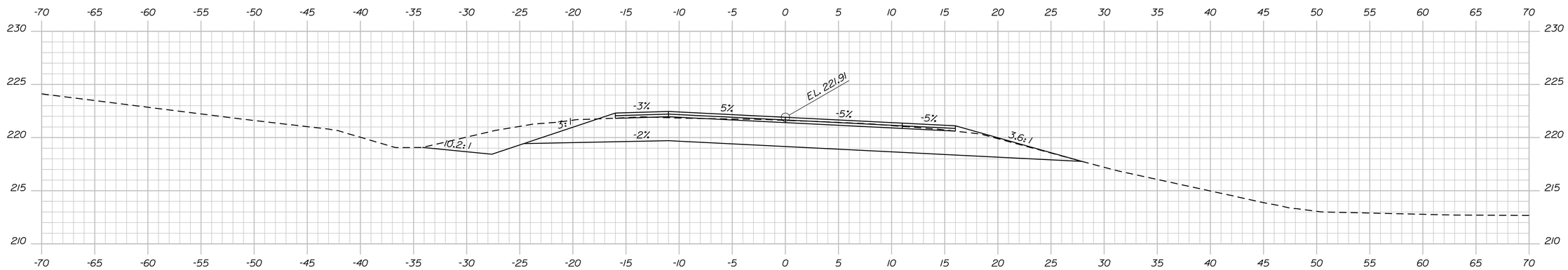


112+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	D. Damren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

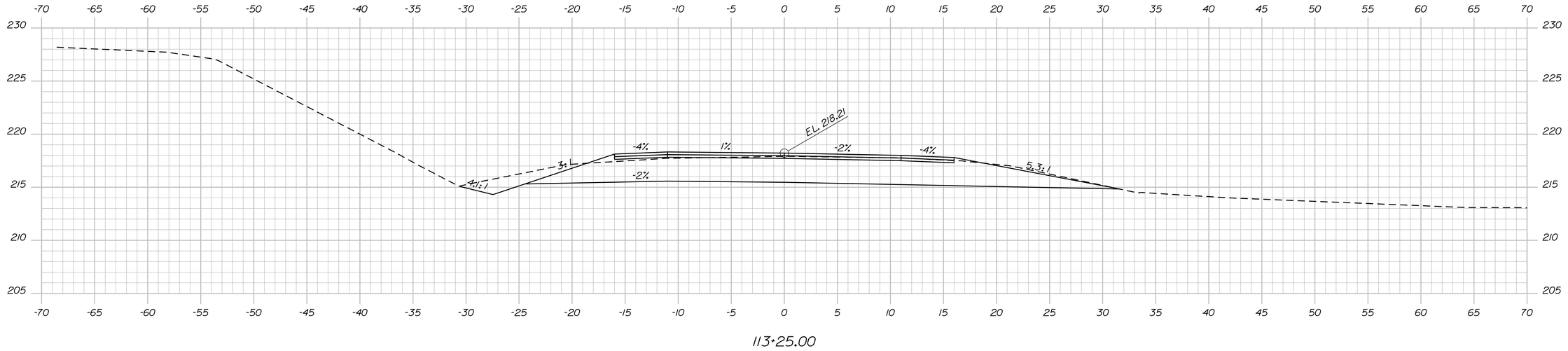
SHEET NUMBER

29

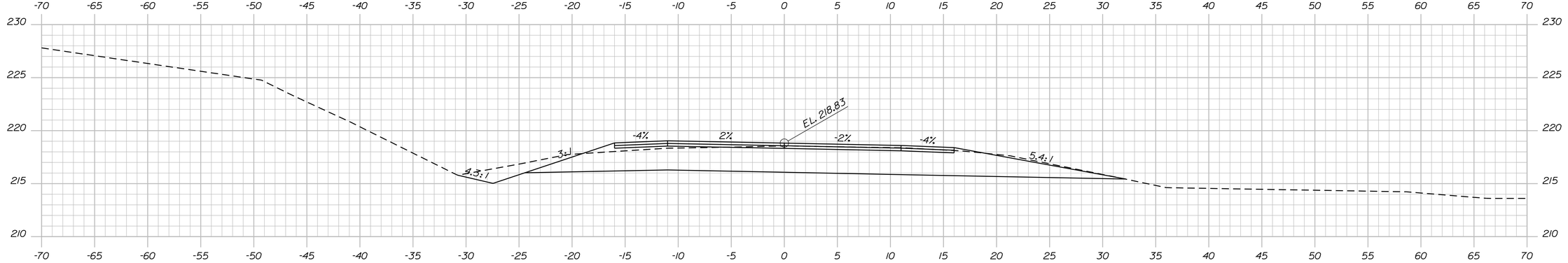
OF 69

Sta. 112+00.00 to Sta. 112+50.00

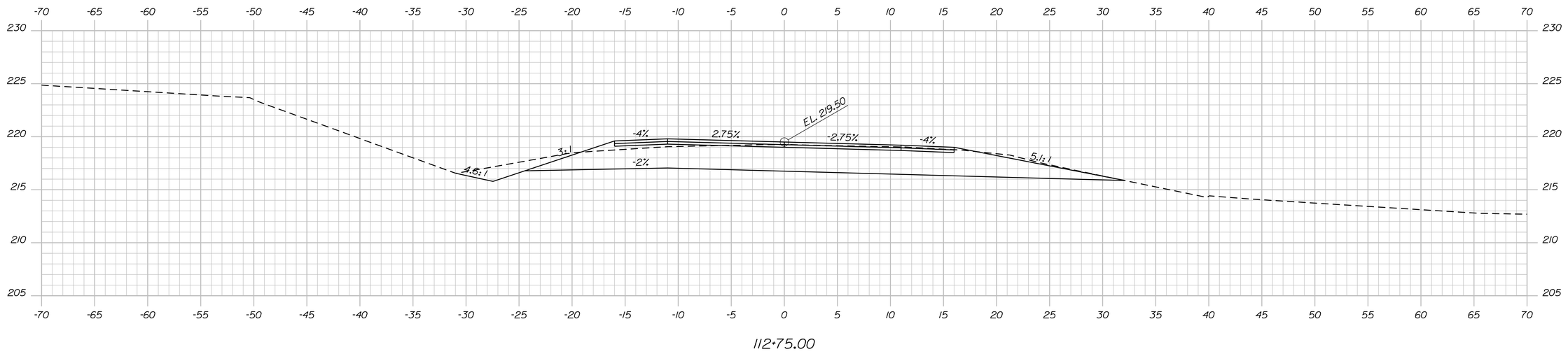
Filename: ...\msta\029_Xsect_112+00_016.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



113+25.00



113+00.00



112+75.00

Sta. 112+75.00 to Sta. 113+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	DATE	
DESIGN-DETAILED	D. Eaton	BY	D. Domren
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

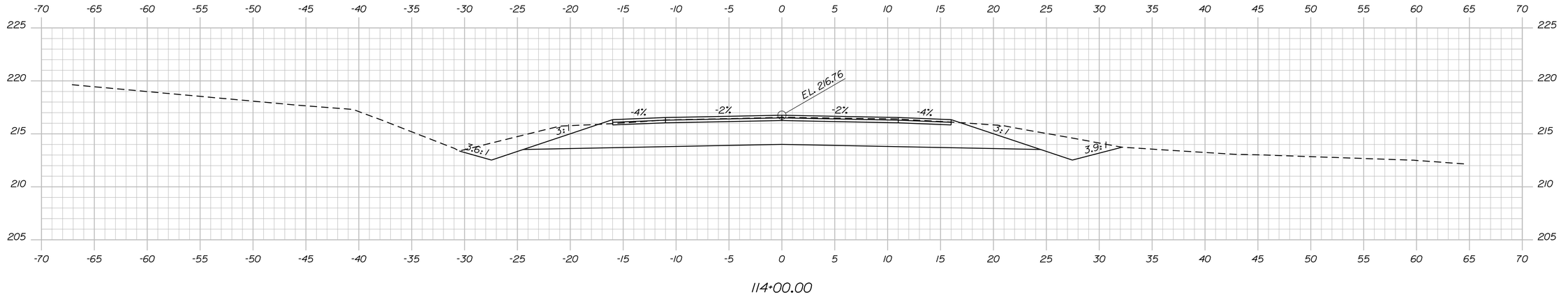
CROSS SECTIONS

SHEET NUMBER

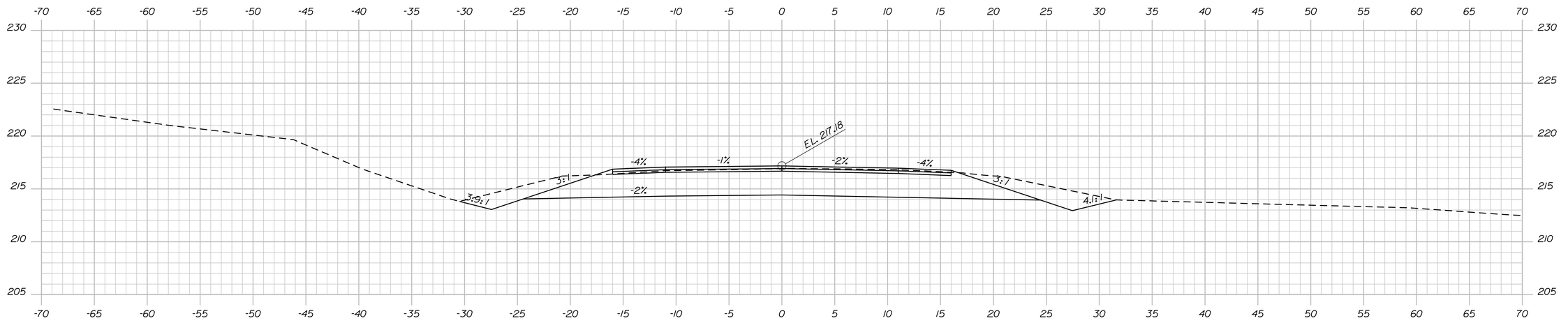
30

OF 69

Filename: ...\mslo\030_Xsect_112+75_017.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



114+00.00



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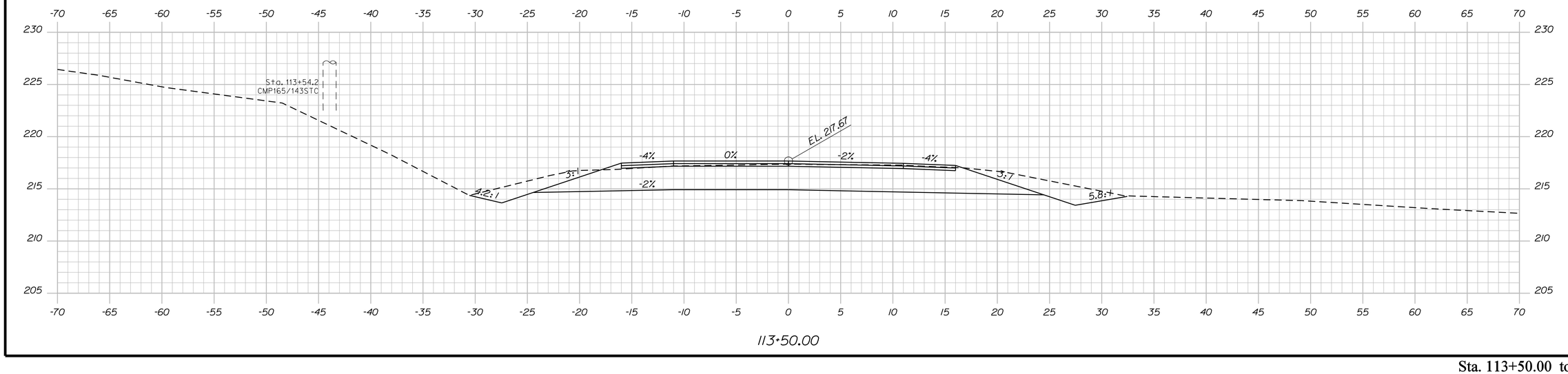


113+50.00

Sta. 113+50.00 to Sta. 114+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER	M. Perlin			
DESIGN-DETAILED	D. Eaton			
CHECKED-REVIEWED	E. Caswell			
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

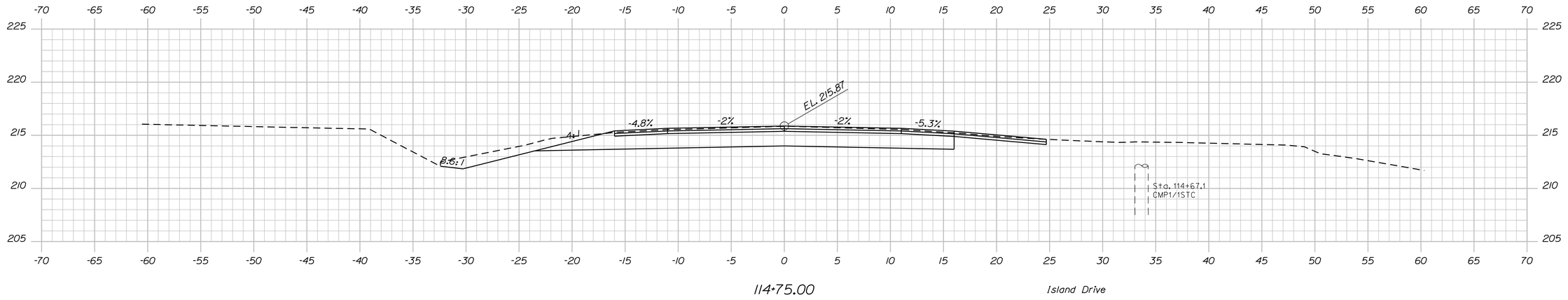
CROSS SECTIONS

SHEET NUMBER

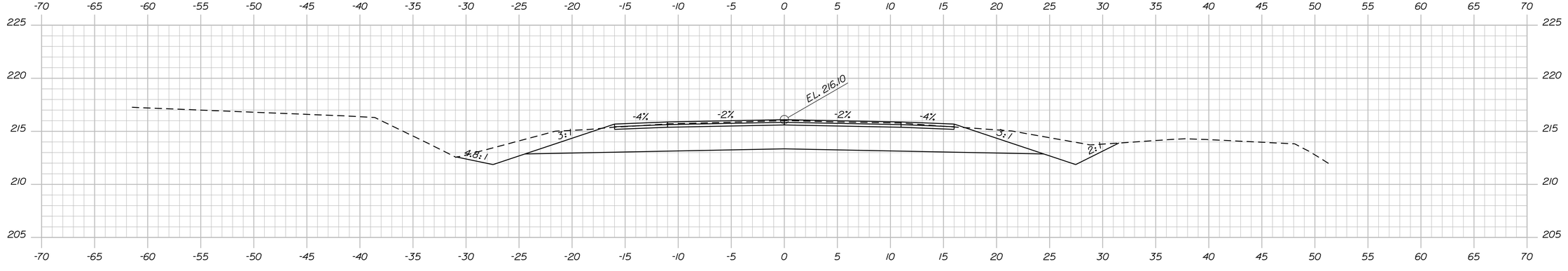
31

OF 69

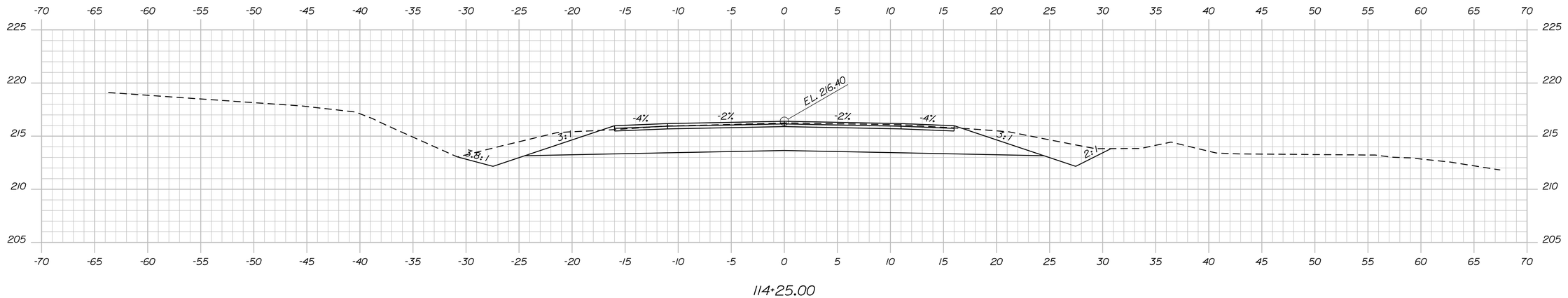
Filename: ...\msla\031_Xsect_113+50_018.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



114+75.00 Island Drive



End Project 114+50.00 Begin Transition



114+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2		ED2	
DESIGN3-DETAILED3		ED3	
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

SHEET NUMBER

32

OF 69

Sta. 114+25.00 to Sta. 114+75.00

Filename: ...\mslo\032_Xsect_114+25_019.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

Sta. 115+00.00 to Sta. 115+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		DATE
DESIGN-DETAILED	D. Eaton	BY	D. Domren
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

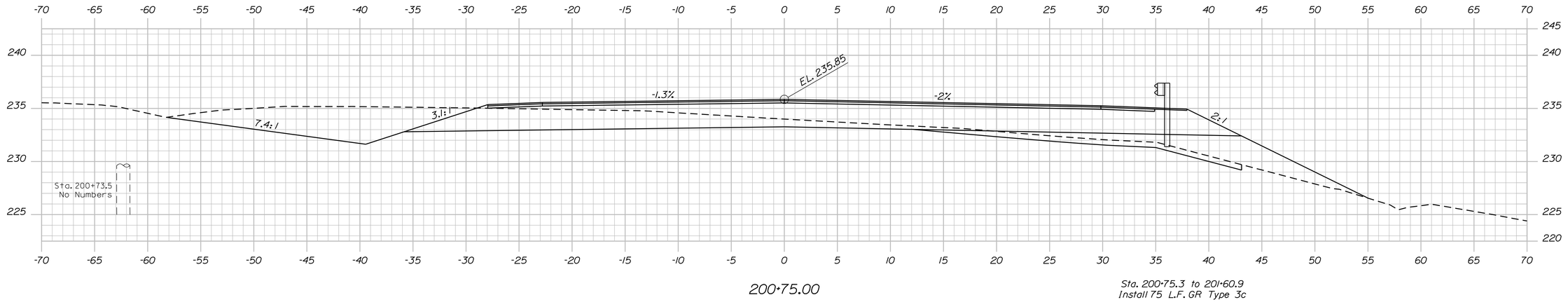
CROSS SECTIONS

SHEET NUMBER

33

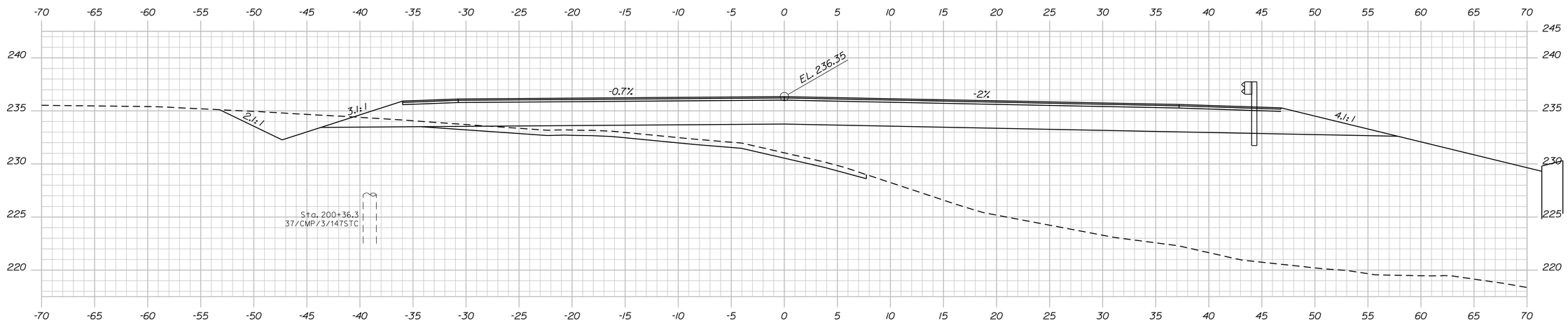
OF 69

Filename: ...\mst0\033_Xsect_115+00_020.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



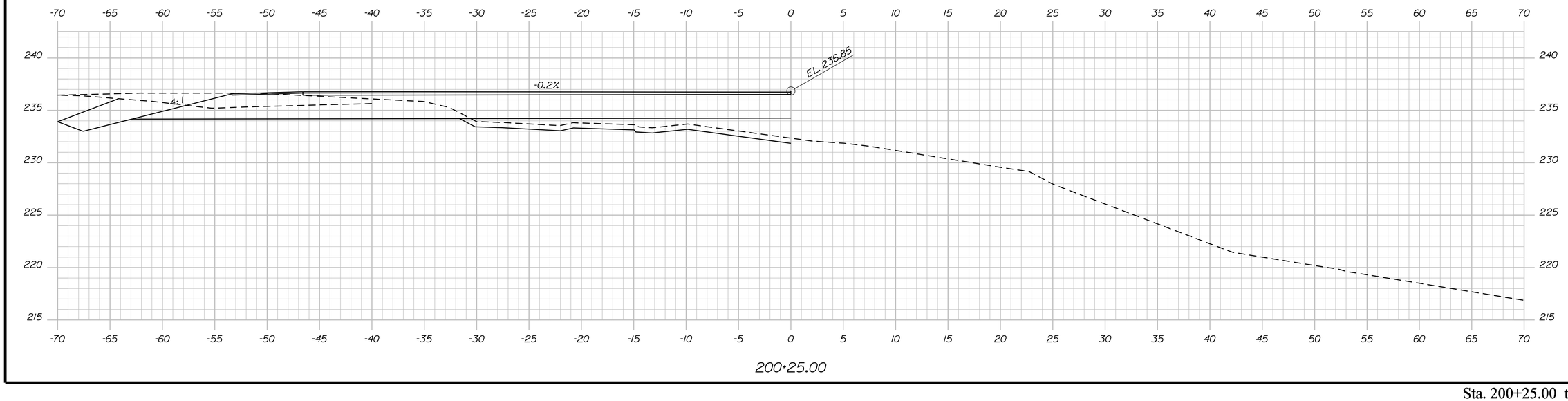
200+75.00

Sta. 200+75.3 to 201+60.9
Install 75 L.F. GR Type 3c



200+50.00

Sta. 200+26.7 to 200+75.3
Install 50 L.F. GR Type 3c @ 40' R.



200+25.00

Sta. 200+25.00 to Sta. 200+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

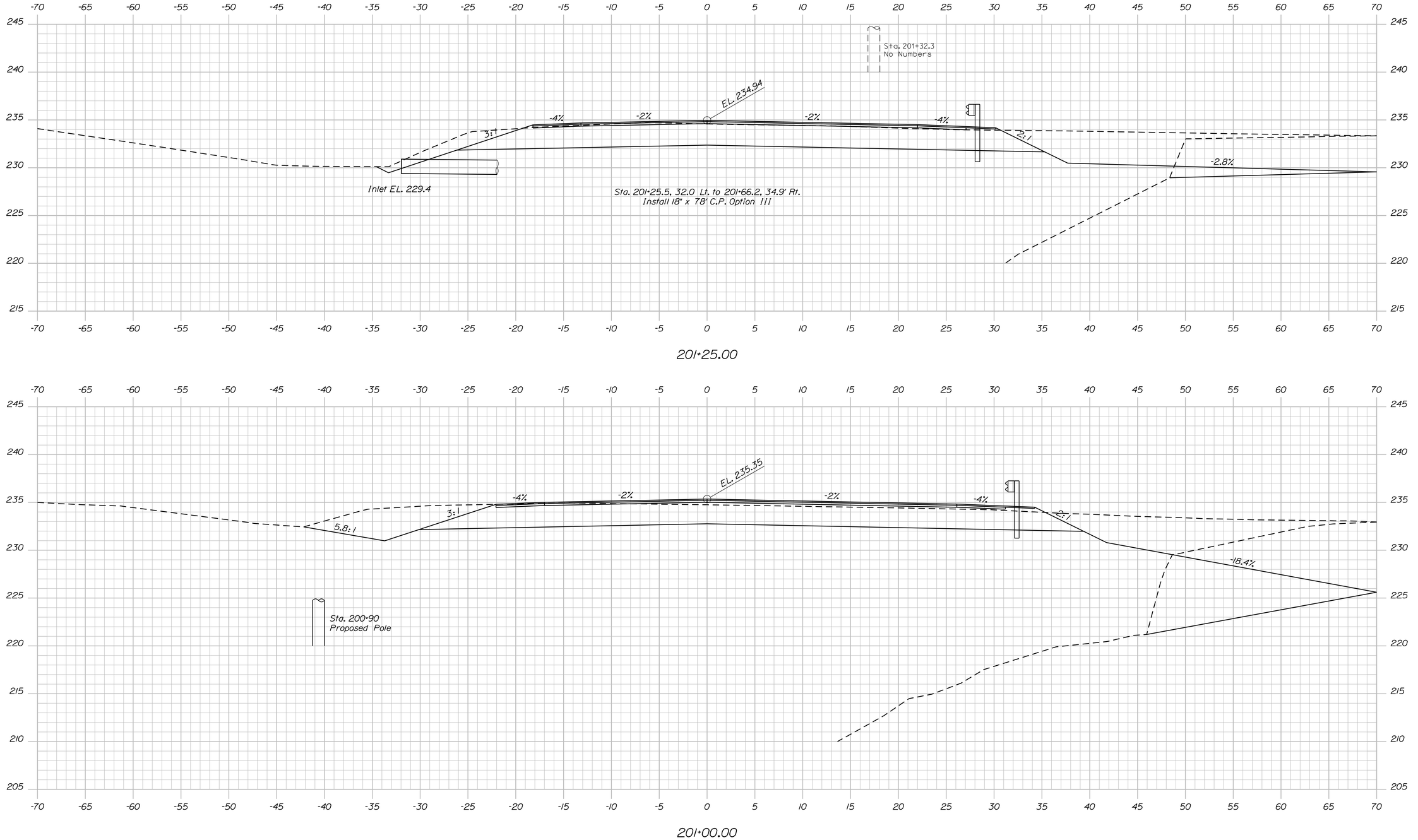
SHEET NUMBER

34

OF 69

Username: alan.nadeau Date:3/23/2012

Filename: ...\mst0\034_Xsect_200+25_021.dgn Division: BRIDGE



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

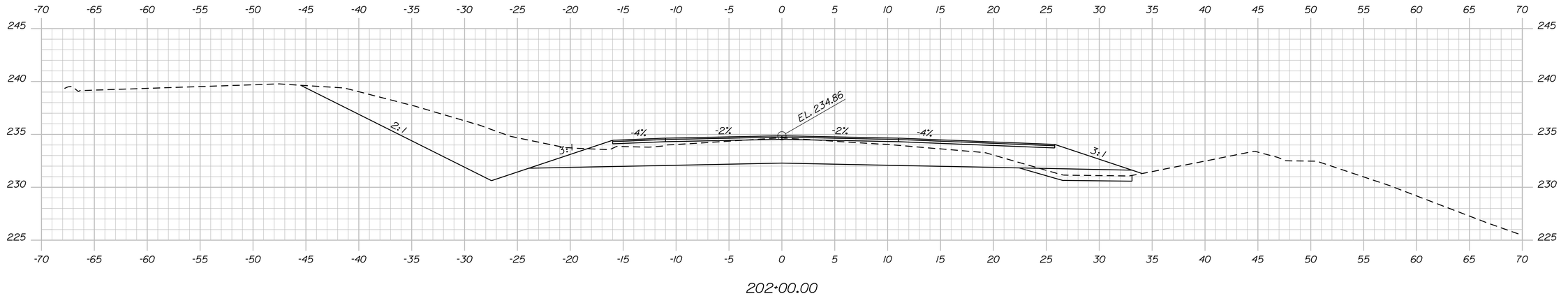
SHEET NUMBER

35

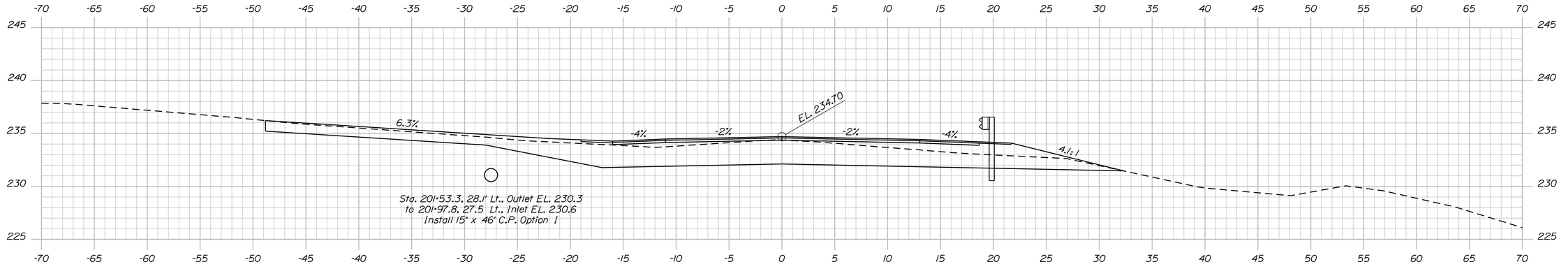
OF 69

Sta. 201+00.00 to Sta. 201+25.00

Filename: ...\msta\035_Xsect_201+00_022.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



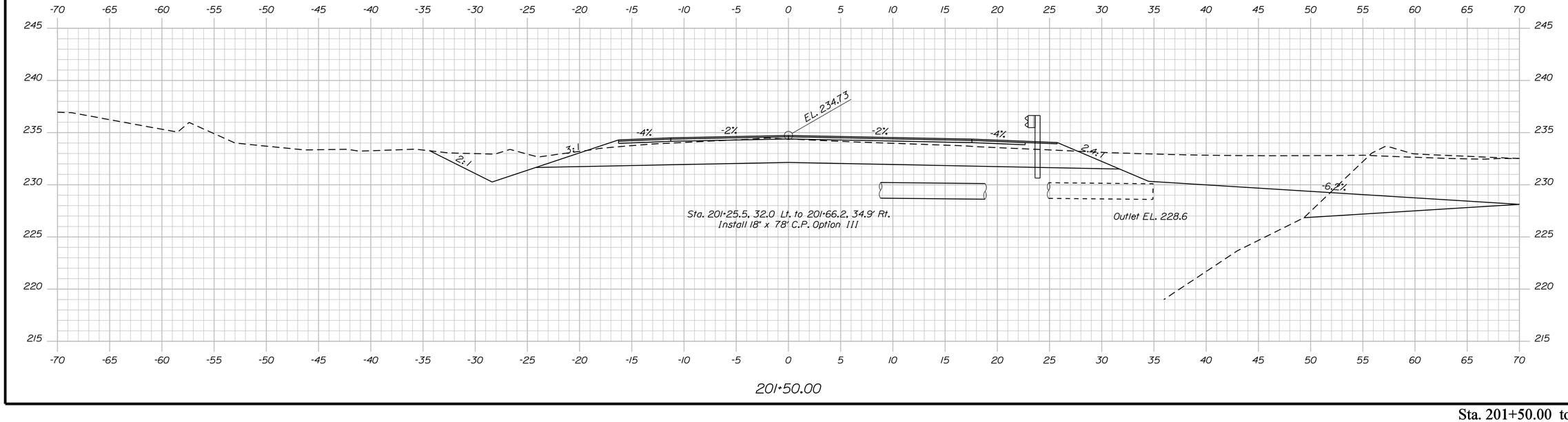
202+00.00



Gravel Entrance

201+75.00

Sta. 201+60.9 to 201+98.4
Install GR 350 Flared Terminal



201+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin
DESIGN-DETAILED	D. Eaton
CHECKED-REVIEWED	E. Caswell
DESIGN2-DETAILED2	ED2
DESIGN3-DETAILED3	ED3
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
D. Domren	

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

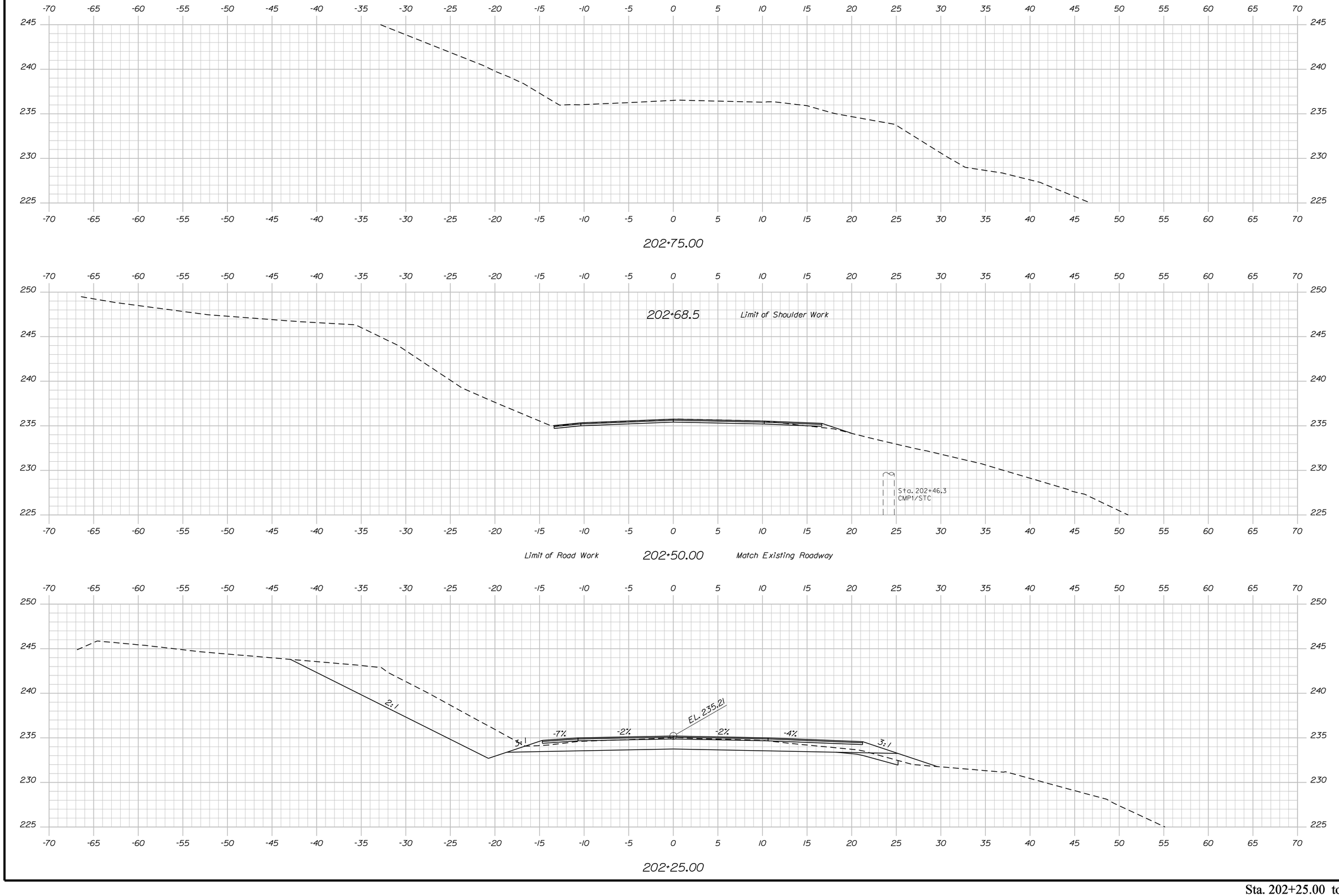
SHEET NUMBER

36

OF 69

Sta. 201+50.00 to Sta. 202+00.00

Filename: ...\msto\036_Xsect_201+50_023.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



Sta. 202+25.00 to Sta. 202+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

CROSS SECTIONS

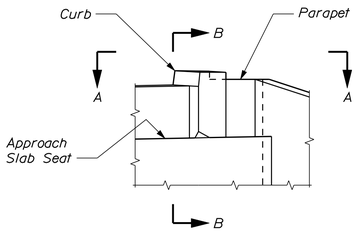
SHEET NUMBER

37

OF 69

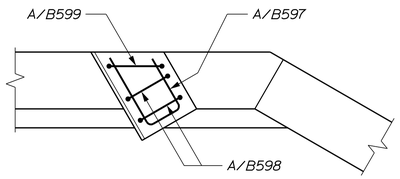
Username: alan.nadeau Date:3/23/2012

Filename: ...\mslo\037_Xsect_202+25_024.dgn Division: BRIDGE

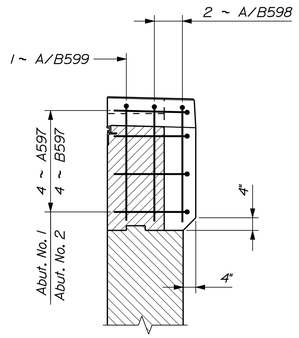


TYPICAL CURB DETAIL

Rear Elevation of Backwall



VIEW A - A



SECTION B - B

FOUNDATION NOTES

1. The bedrock will vary in nature, slope, and degree of fracturing. After the foundation excavations are completed and all unsound bedrock removed, the Contractor shall survey the foundation bedrock and provide the exact bedrock elevations to the Resident.

2. If the bedrock elevations vary from the elevations assumed in the development of the plan set, the abutment and/or wing walls may need to be modified. The Contractor shall grant the Department seven Calendar Days to modify the plans from the date the Resident accepts the bedrock survey.

3. When bedrock protrudes above the bottom of the footing/seal, the footing/seal may be raised and vertical reinforcing may be cut in the field with the approval of the Resident. The minimum allowable footing thickness is shown on the plans. Payment for adjusting footing depth and adjusting reinforcing steel will be considered incidental to related contract items. No separate payment will be made.

4. At the option of the Resident, bedrock that protrudes above the bottom of footing/seal elevation may be removed. Payment for bedrock removal will be made under Item No. 206.092, Structural Rock Excavation - Major Structures.

5. Foundation concrete shall be placed on sound bedrock cleaned of all weathered or fractured rock or loose soil. Prior to placing the footing, the bearing surface shall be washed with high pressure water and air, and smooth bedrock shall be roughened. Where the bedrock surface slope exceeds 4H:1V the bedrock surface shall be benched in level steps or made completely level. The bedrock bearing surface beneath the near face of abutments and walls shall have a level surface of 3 feet minimum, measured perpendicular to the face.

SEAL COFFERDAM NOTES

1. The Contractor shall notify Next Era Energy 30 days prior to cofferdam installation.

2. When sheet piling is used for seal cofferdams, appropriate rolled corners shall be used, and the inside face of the sheet piling shall be at or outside of the seal concrete dimensions shown.

3. The seal concrete placement dimensions shown represent the minimum seal size necessary to meet design requirements and are not based on the use of any particular sheet pile section.

4. The horizontal pay limit for seal concrete will be to the dimensions shown on the plans. No additional payment will be made for concrete placed outside these limits.

5. The depth of the seal is set for a water elevation of 216.9. If the water elevation at the time of construction is higher, the depth of the seal shall be adjusted.

6. The method of placing dowels in the seal concrete shall be approved by the Resident.

ABUTMENT NOTES

1. The maximum factored applied footing pressure is 10.5 ksf.

2. Structural Earth Excavation, Abutments and Retaining Walls, required more than 12 inches below the bottom of the structure, will be paid for in accordance with Standard Specifications Section 206, Structural Excavation.

3. The Contractor shall field verify in the presence of the Resident the dimensions and location of existing abutment 2 and the rebar layout for matching into the existing abutment

4. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.

5. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.

6. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

7. Construct French Drains behind the abutments and wingwalls in accordance with Standard Specifications Section 512, French Drains.

8. Abutments, wingwalls and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.

9. Abutment No. 2 Footing will be paid for under Item No. 502..21, Structural Concrete Abutments and Retaining Walls (C.Y.).

10. Abutment No. 1 Seal will be paid for under Item No. 502..22, Structural Concrete Abutments and Retaining Walls (Placed Under Water).

LEGEND

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Parlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

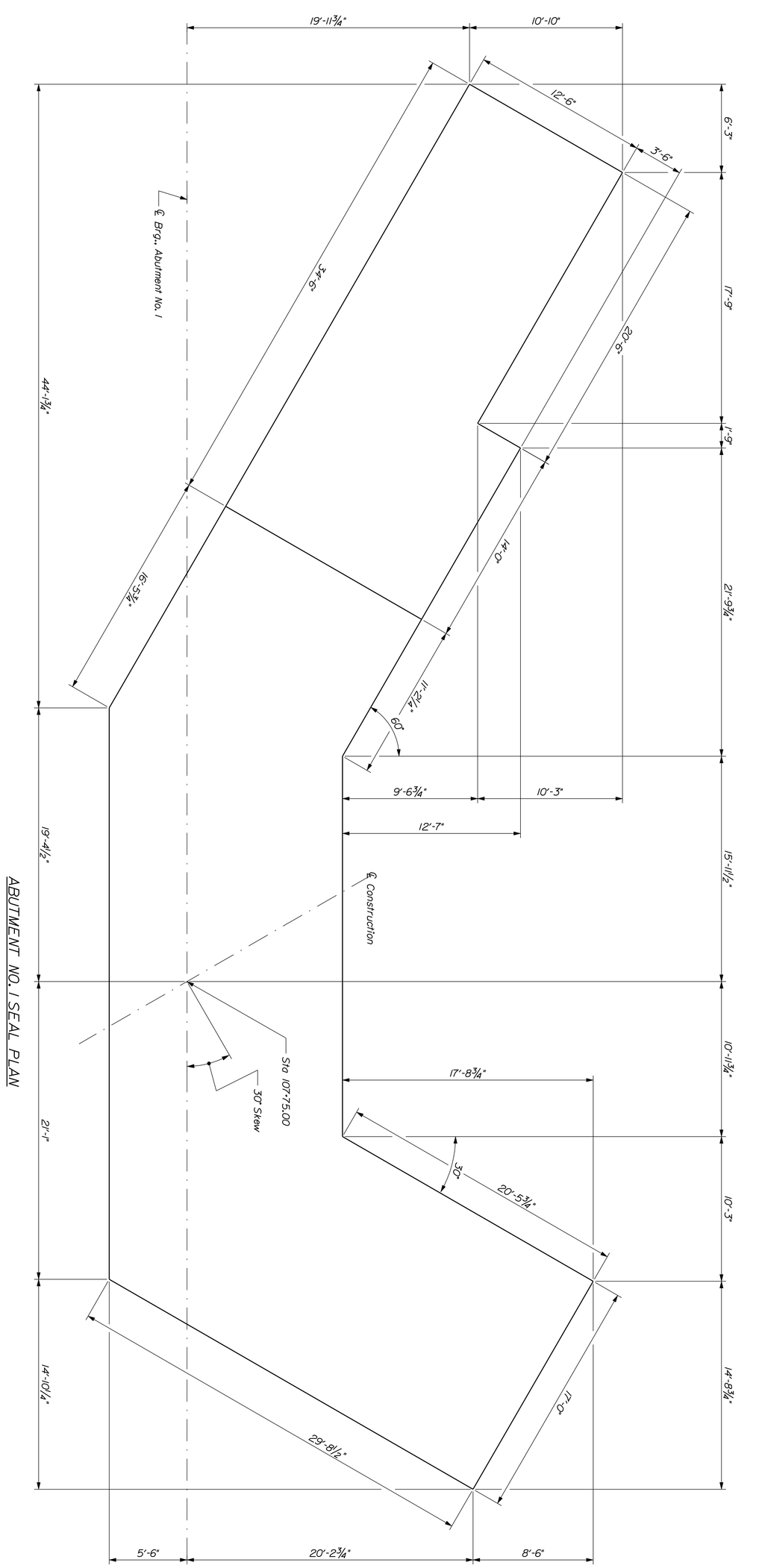
ABUTMENT DETAILS

SHEET NUMBER

38

OF 69

Filename: ...\mst0\038_Abutment_Details.dgn Division: BRIDGE Date:3/23/2012 Username: alan.nadeau



ABUTMENT NO. 1 SEAL PLAN

SHEET NUMBER 39 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMENT NO. 1 SEAL PLAN

PROJ. MANAGER	M. Porlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Damren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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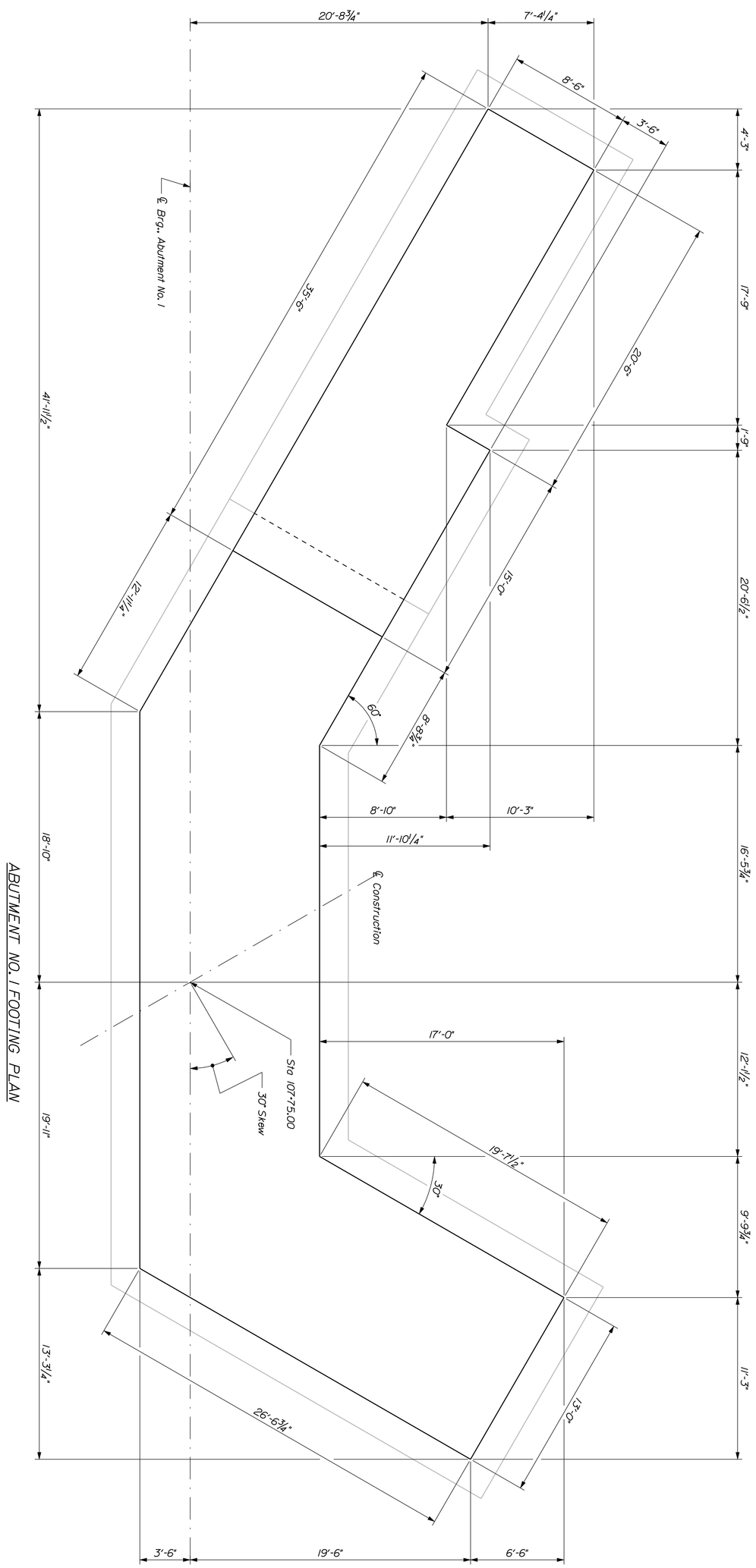
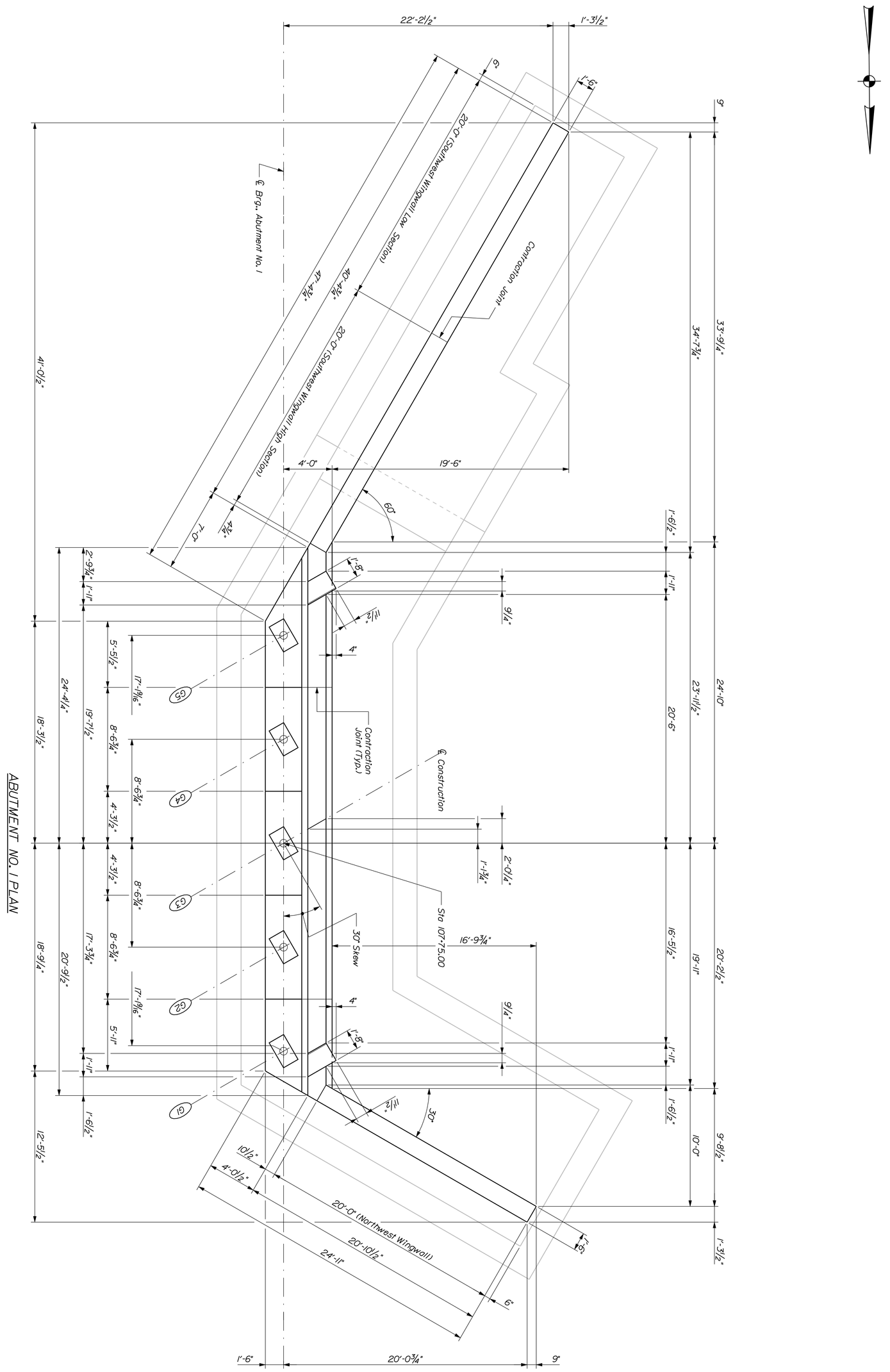
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



SHEET NUMBER 40 OF 69	BONNY EAGLE COVERED BRIDGE SACO RIVER HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.	PROJ. MANAGER M. Porlin / BY / DATE DESIGN-DETAILED D. Eaton / D. Damren CHECKED-REVIEWED E. Caswell DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	STATE OF MAINE DEPARTMENT OF TRANSPORTATION BR-1670(400)X BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS
	ABUT. NO. 1 FOOTING PLAN	SIGNATURE P.E. NUMBER DATE	



ABUTMENT NO. 1 PLAN

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMTENT NO. 1 PLAN

PROJ. MANAGER	M. Parlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

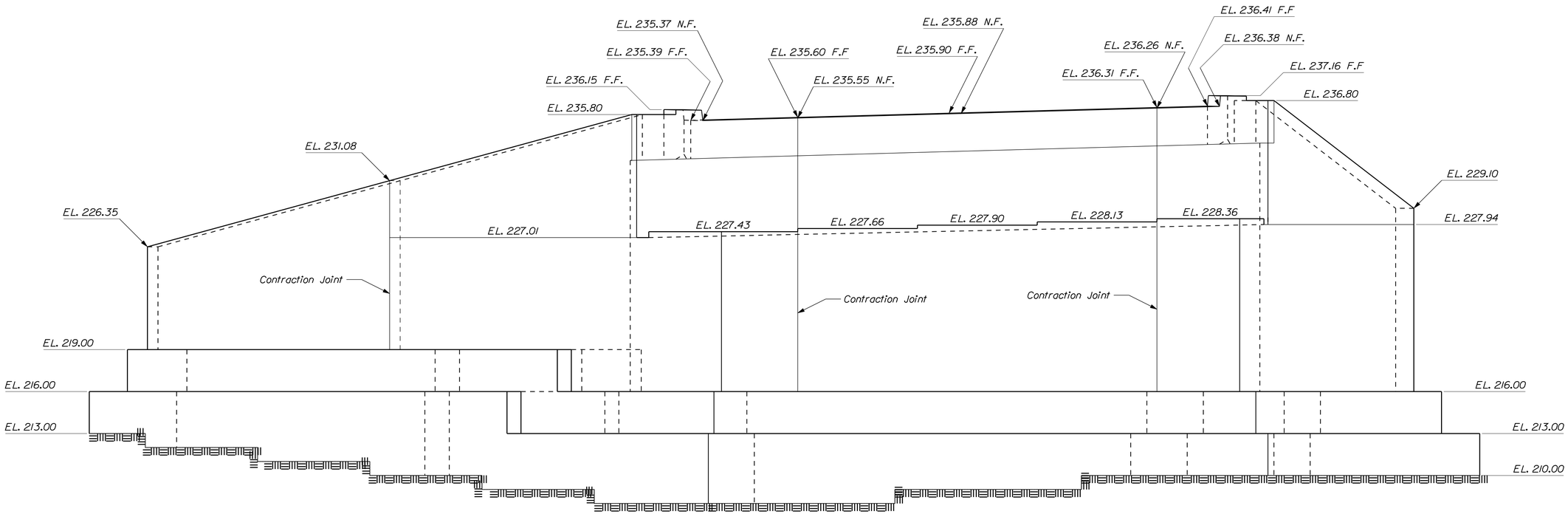
DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS

SHEET NUMBER 41 OF 69



ABUTMENT NO. 1 ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER	M. Perlin			
DESIGN-DETAILED	D. Eaton			
CHECKED-REVIEWED	E. Caswell			
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

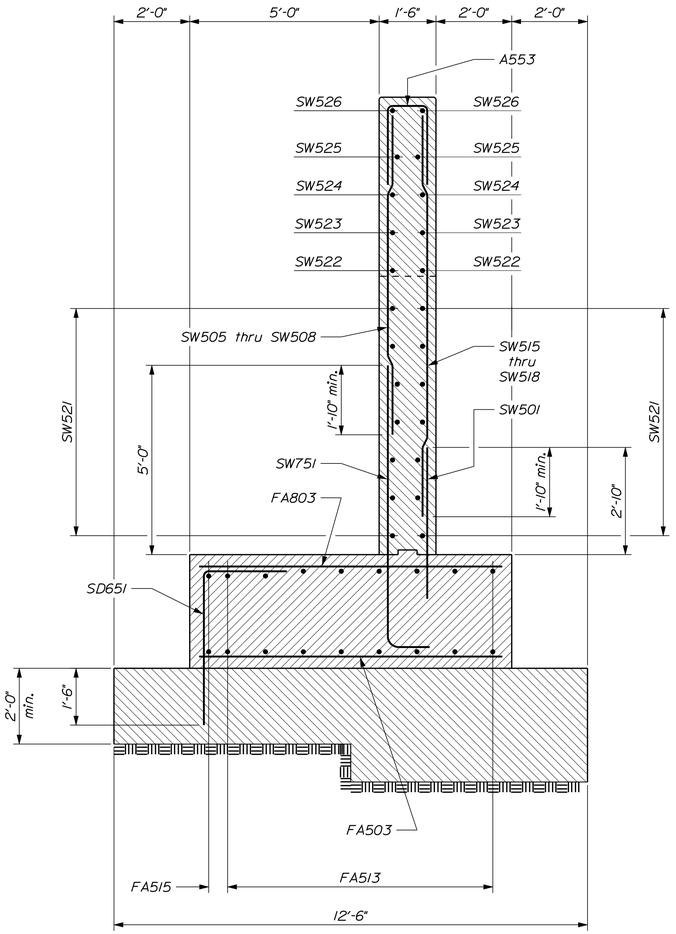
ABUTMENT NO. 1 ELEVATION

SHEET NUMBER

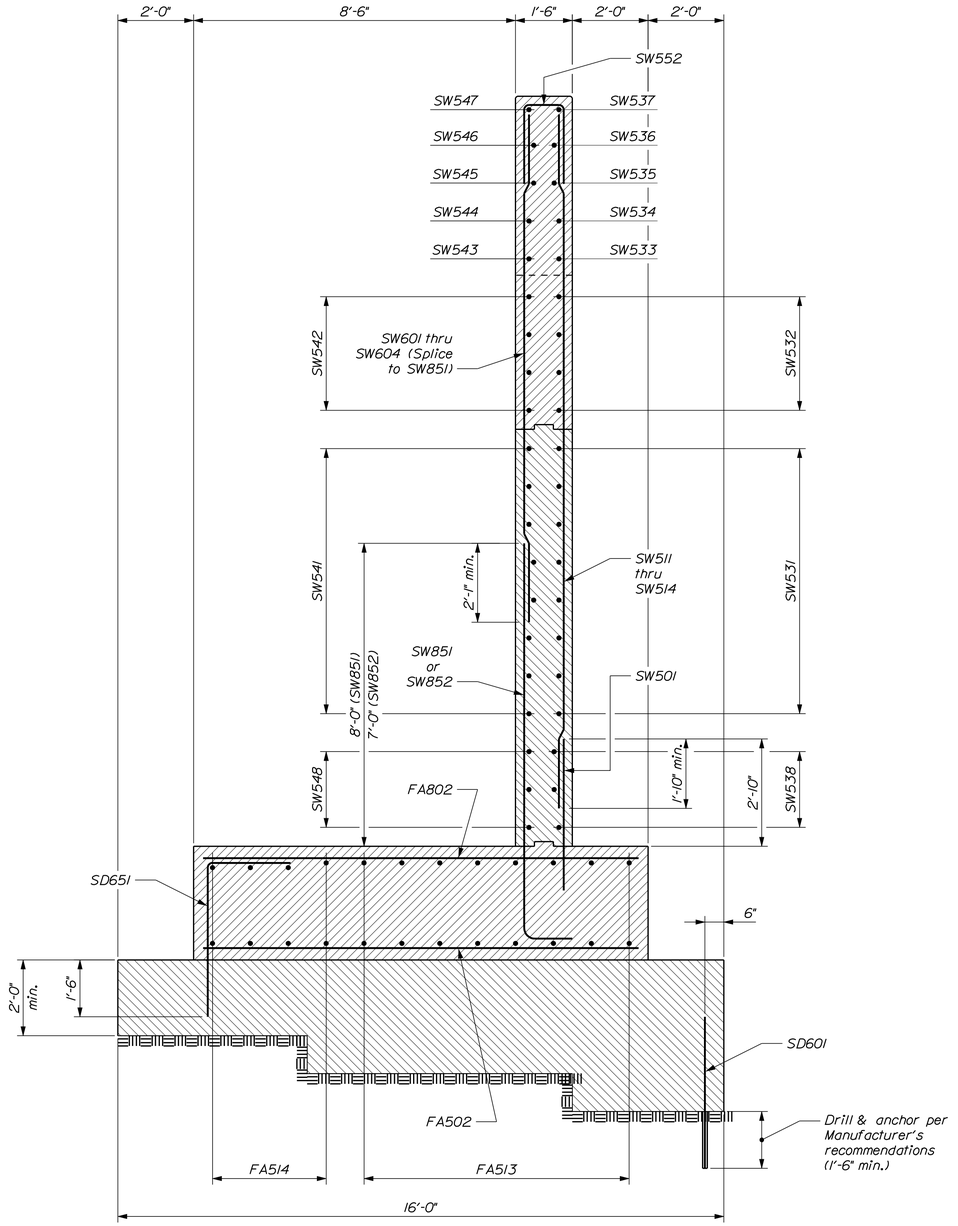
42

OF 69

Filename: ...\042_Abutment_No. 1 Elevation.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



ABUTMENT NO. 1 SOUTHWEST WINGWALL LOW SECTION



ABUTMENT NO. 1 SOUTHWEST WINGWALL HIGH SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parkin		
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	D. Eaton	E. Caswell	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

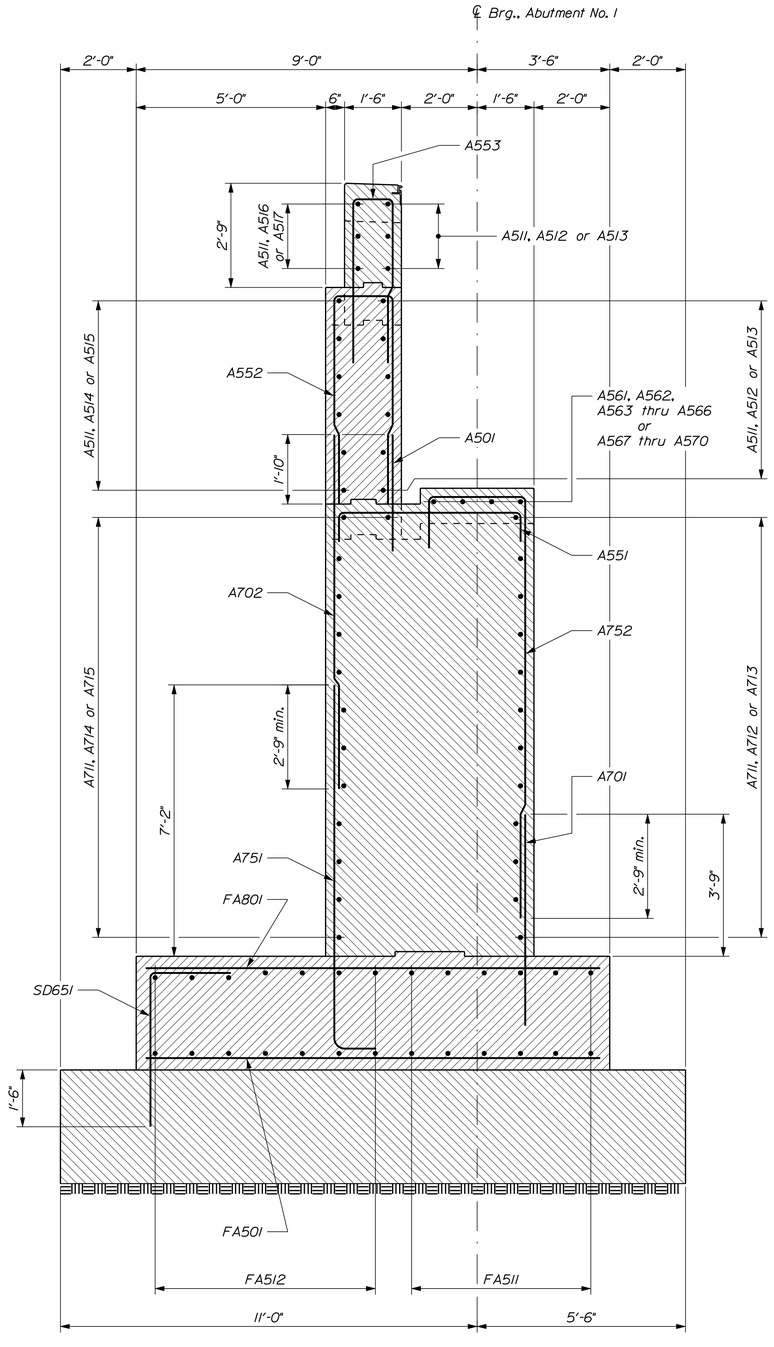
ABUTMENT NO. 1 SECTIONS

SHEET NUMBER

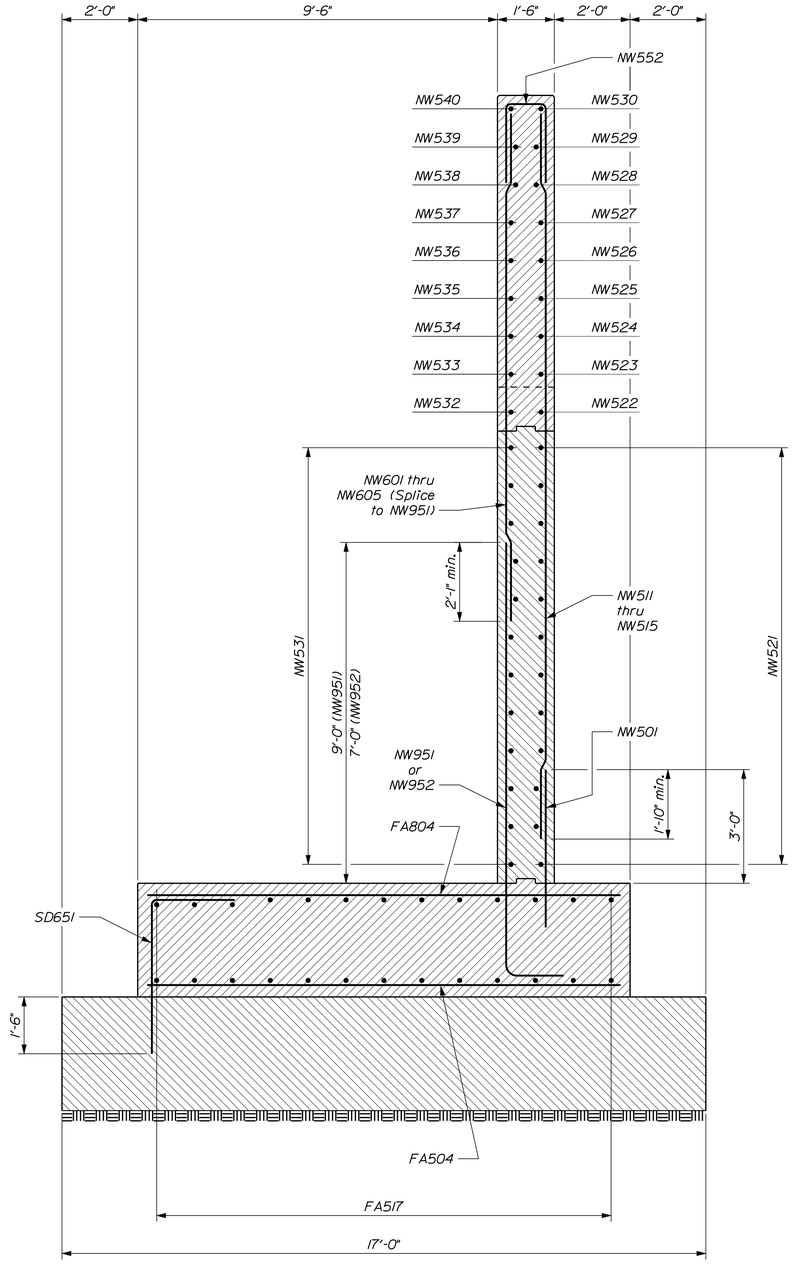
43

OF 69

Filename: ...\043_Abutment_No. 1 Sections.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



ABUTMENT NO. 1 BREASTWALL SECTION



ABUTMENT NO. 1 NORTHWEST WINGWALL SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Perlin	
DESIGN-DETAILED	D. Eaton	D. Domren
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

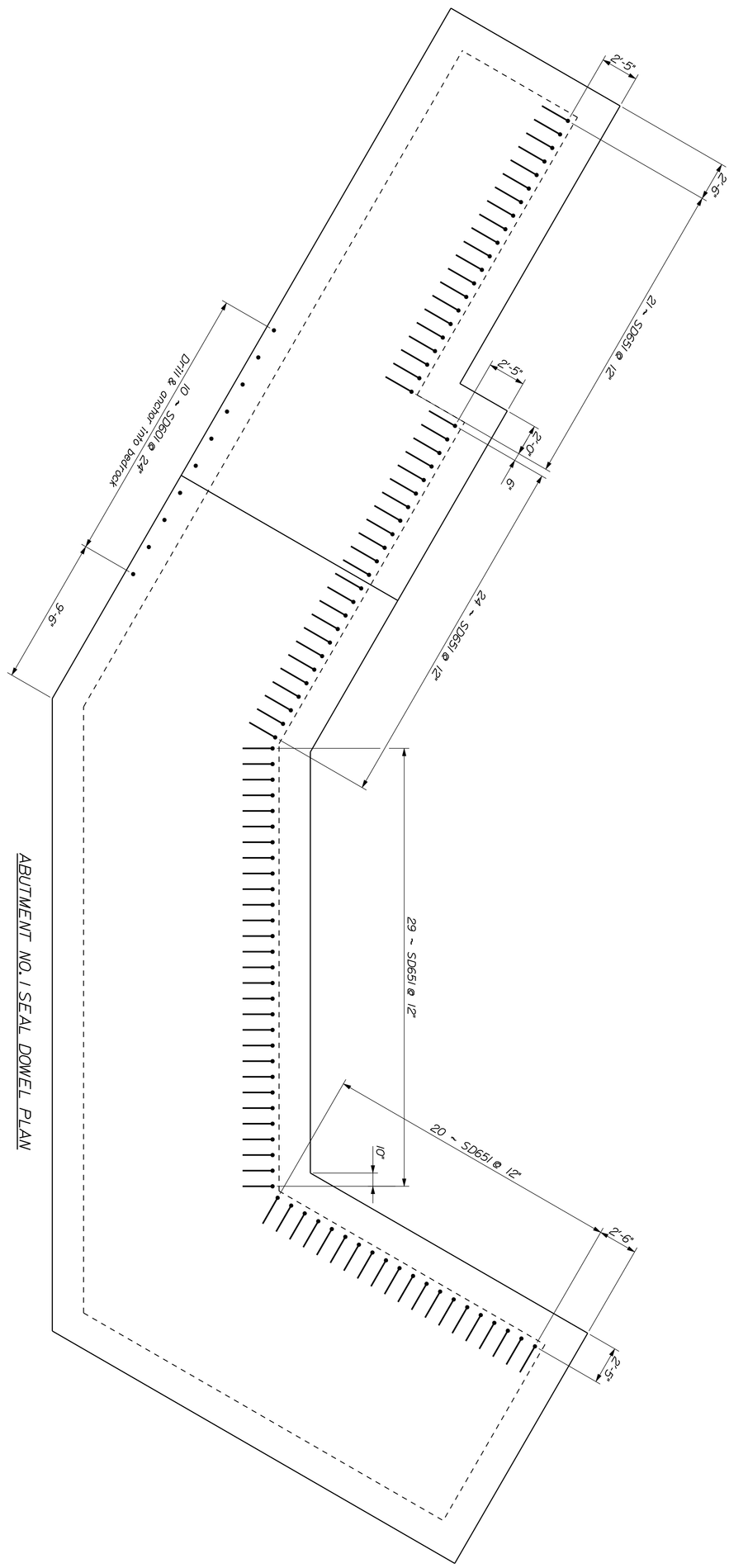
ABUTMENT NO. 1 SECTIONS

SHEET NUMBER

44

OF 69

Filename: ...\044_Abutment_No. 1 Sections.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



ABUTMENT NO. 1 SEAL DOWEL PLAN

SHEET NUMBER 45 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUT. NO. 1 SEAL DOWELS

PROJ. MANAGER	M. Porlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

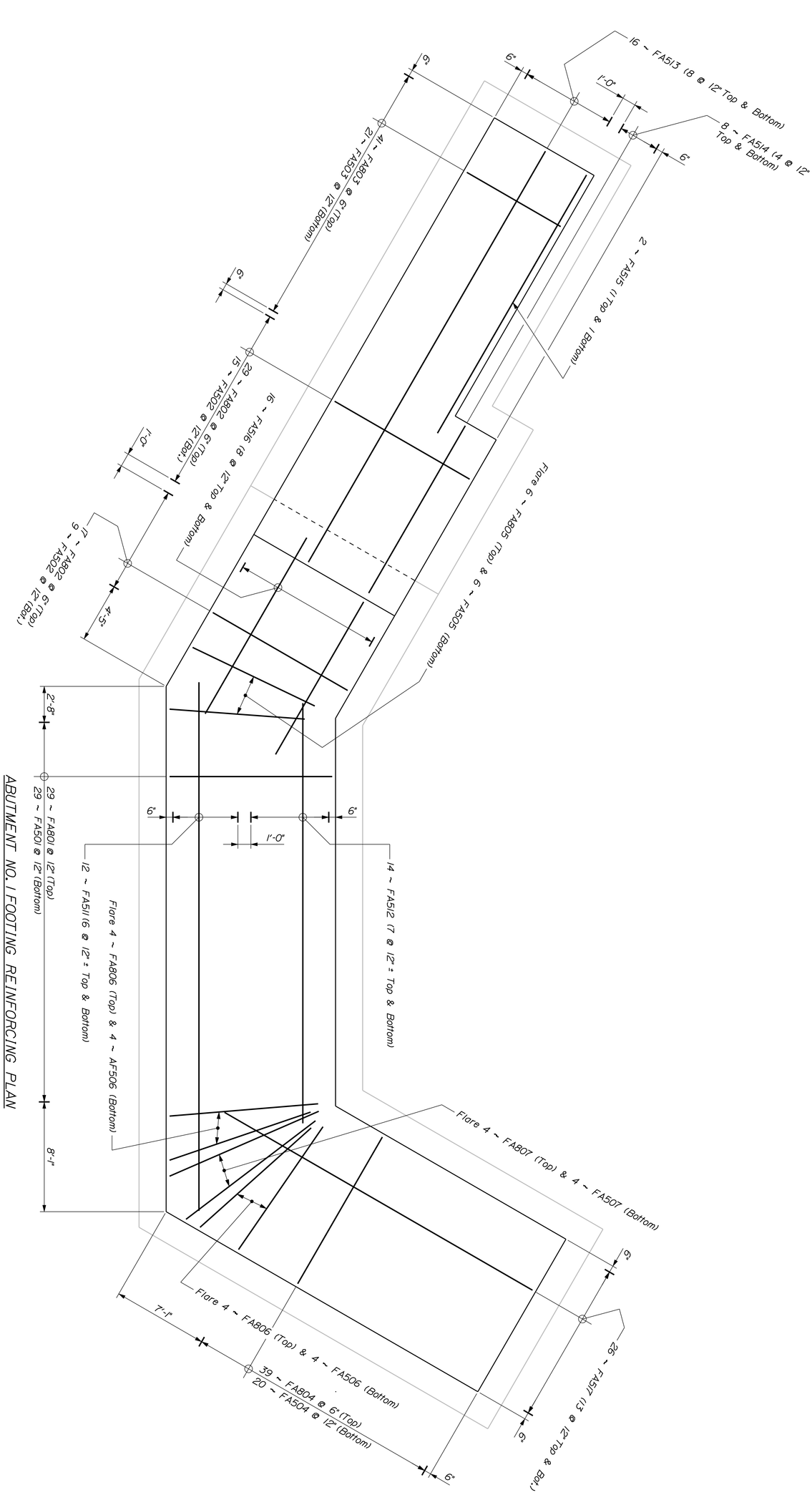
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



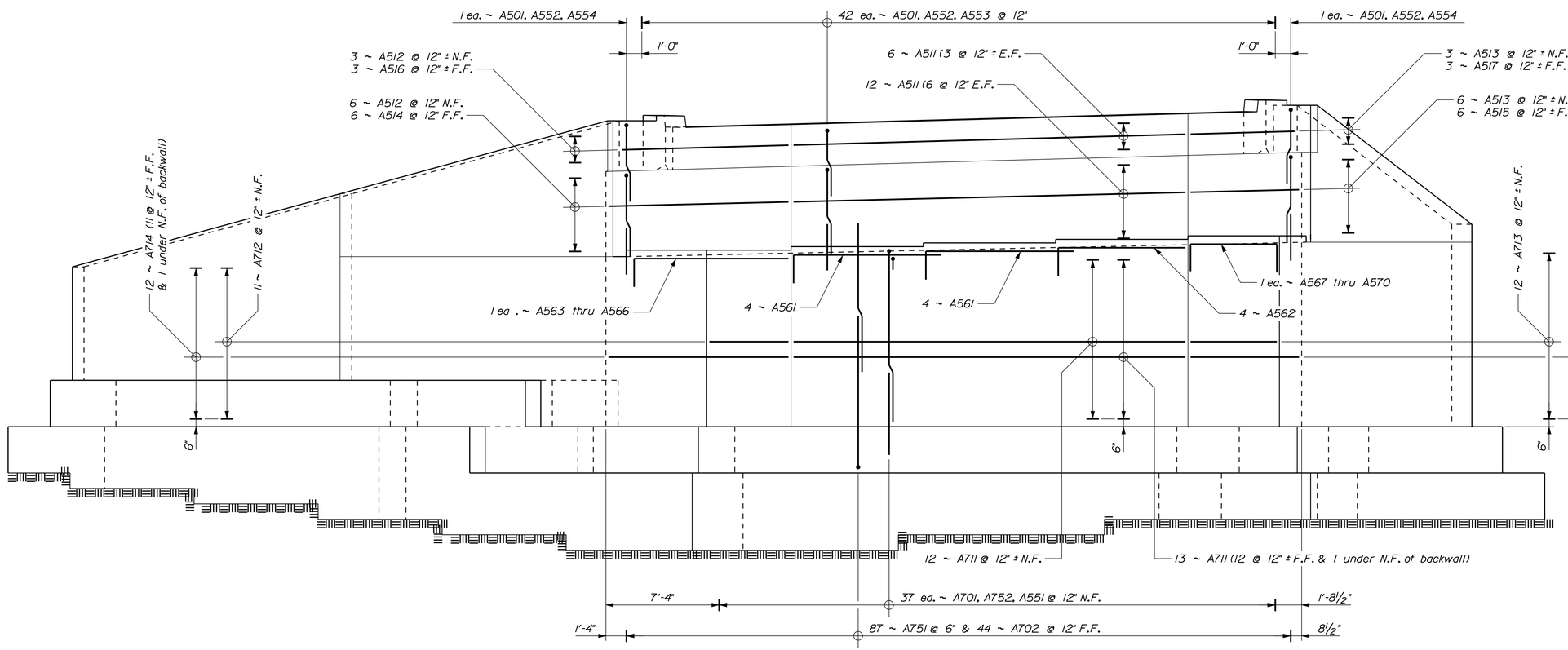
SHEET NUMBER 46 OF 69	BONNY EAGLE COVERED BRIDGE SACO RIVER HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY. ABUT. NO. 1 FOOTING REINF.	PROJ. MANAGER M. Porlin / BY / DATE DESIGN-DETAILED D. Eaton / D. Damren CHECKED-REVIEWED E. Caswell DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	SIGNATURE P.E. NUMBER DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS

Filename: ...\047_Abutment_No.1 Reinforcing Elevation.dgn Design: BRIDGE Username: alan.nadeau Date:3/23/2012



ABUTMENT NO. 1 BREASTWALL REINFORCING ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190 — BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

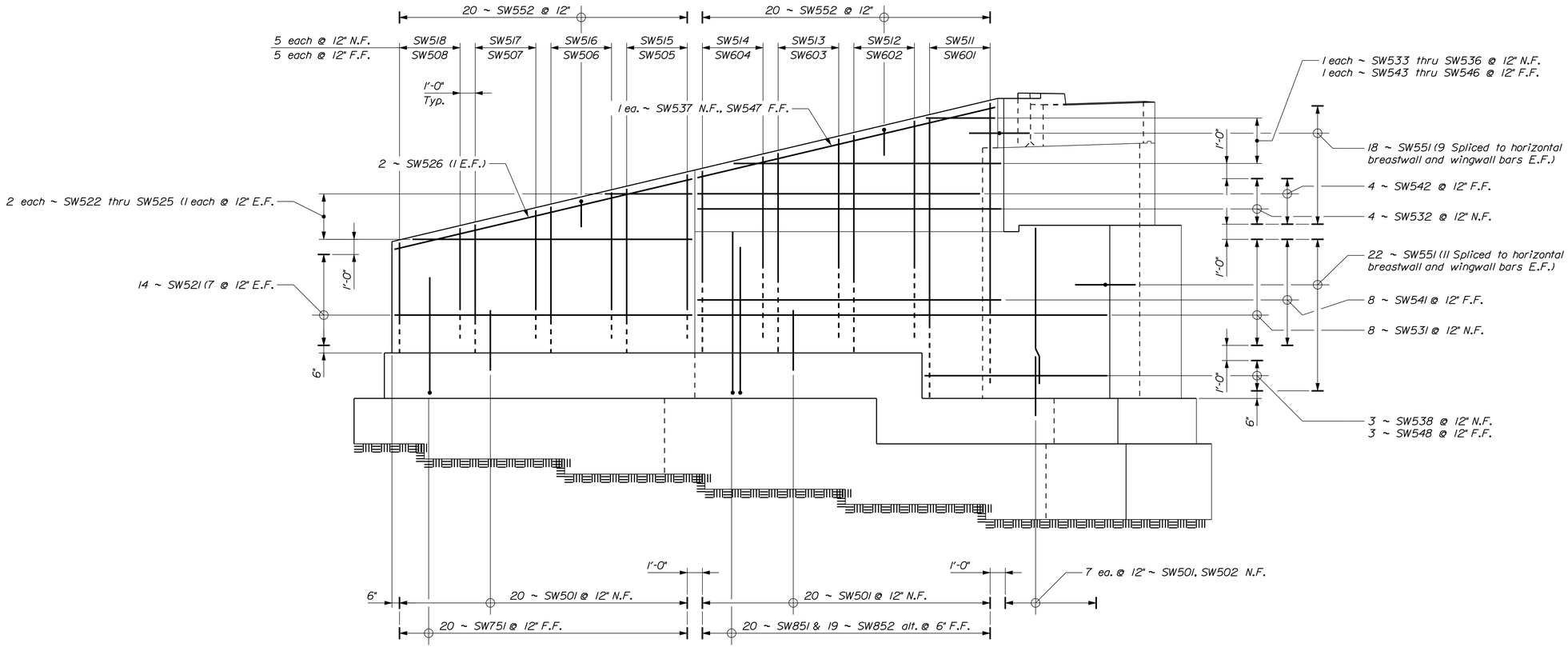
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUT. NO. 1 REINFORCING

SHEET NUMBER

47

OF 69



ABUTMENT NO. 1 SOUTHWEST WINGWALL REINFORCING ELEVATION

Filename: ...\048_Abutment_No.1 Southwest Wingwall Reinforcing Elevation.dgn Username: alan.nadeau Date:3/23/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin		
DESIGN-DETAILED	D. Eaton		
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

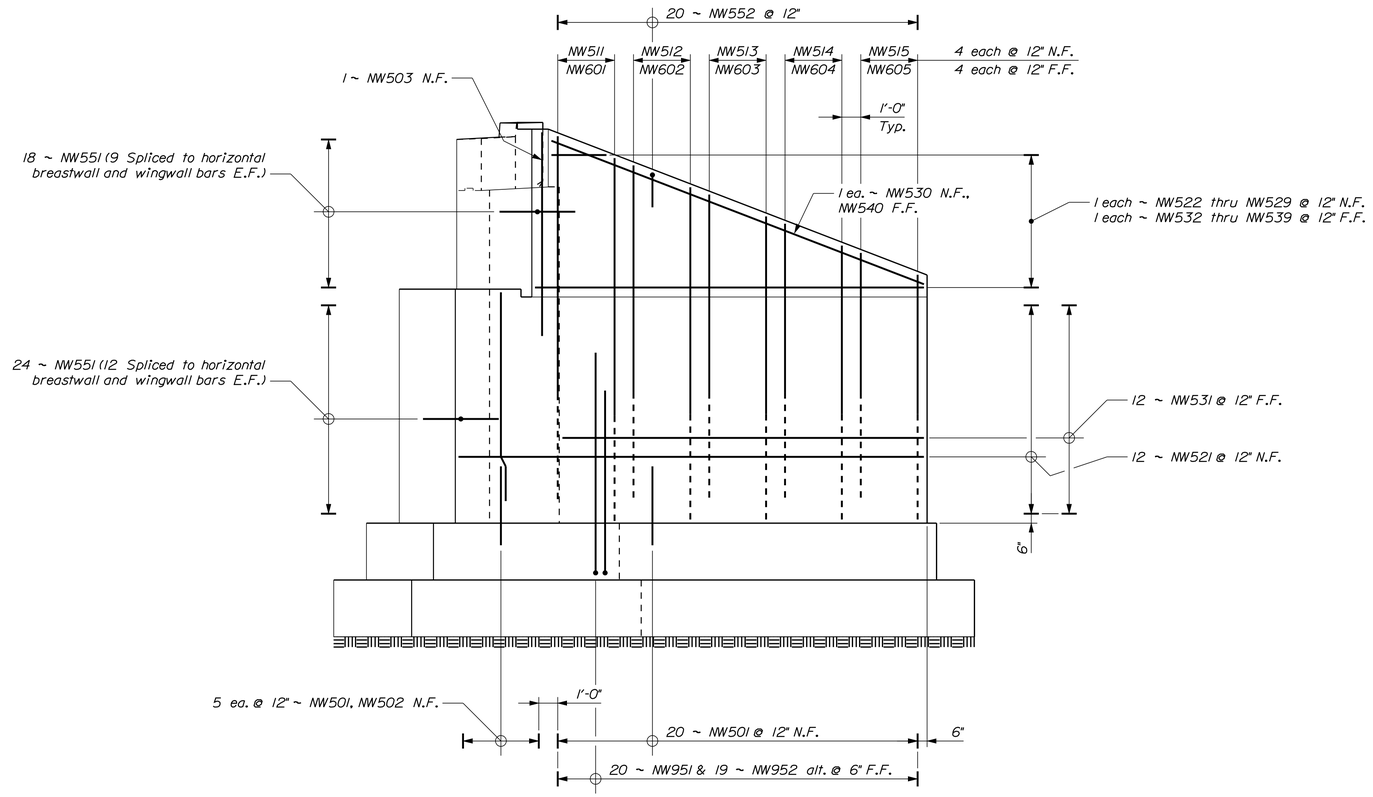
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUT. NO. 1 S.W. WINGWALL REINF.

SHEET NUMBER

48

OF 69



ABUTMENT NO. 1 NORTHWEST WINGWALL REINFORCING ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			SIGNATURE
DESIGN3-DETAILED3			
REVISIONS 1			P.E. NUMBER
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			DATE
FIELD CHANGES			

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

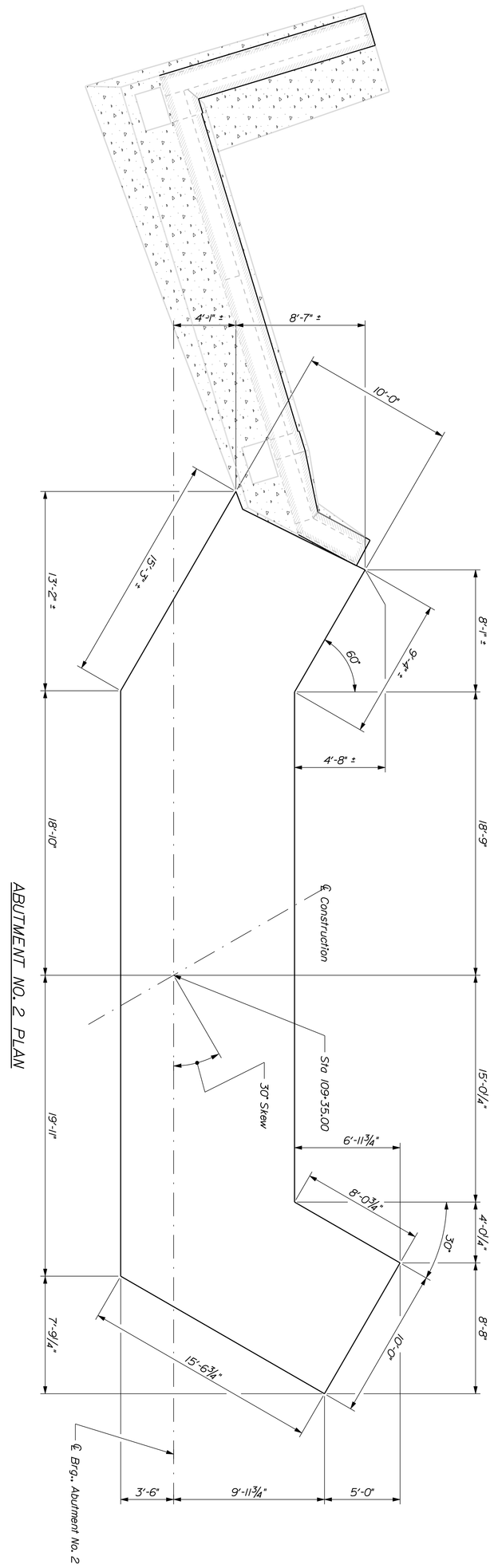
ABUT. NO. 1 N.W. WINGWALL REINF.

SHEET NUMBER

49

OF 69

Filename: ...\049_Abutment_No. 1 Northwest Wingwall Reinforcing Elevation.dgn Username: alan.nadeau Date:3/23/2012



ABUTMENT NO. 2 PLAN

SHEET NUMBER 50 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUT. NO. 2 FOOTING PLAN

	PROJ. MANAGER	M. Porlin	BY	DATE
	DESIGN-DETAILED	D. Eaton	D. Damren	
	CHECKED-REVIEWED	E. Caswell		
	DESIGN2-DETAILED2			
	DESIGN3-DETAILED3			
	REVISIONS 1			
	REVISIONS 2			
	REVISIONS 3			
	REVISIONS 4			
	FIELD CHANGES			

SIGNATURE

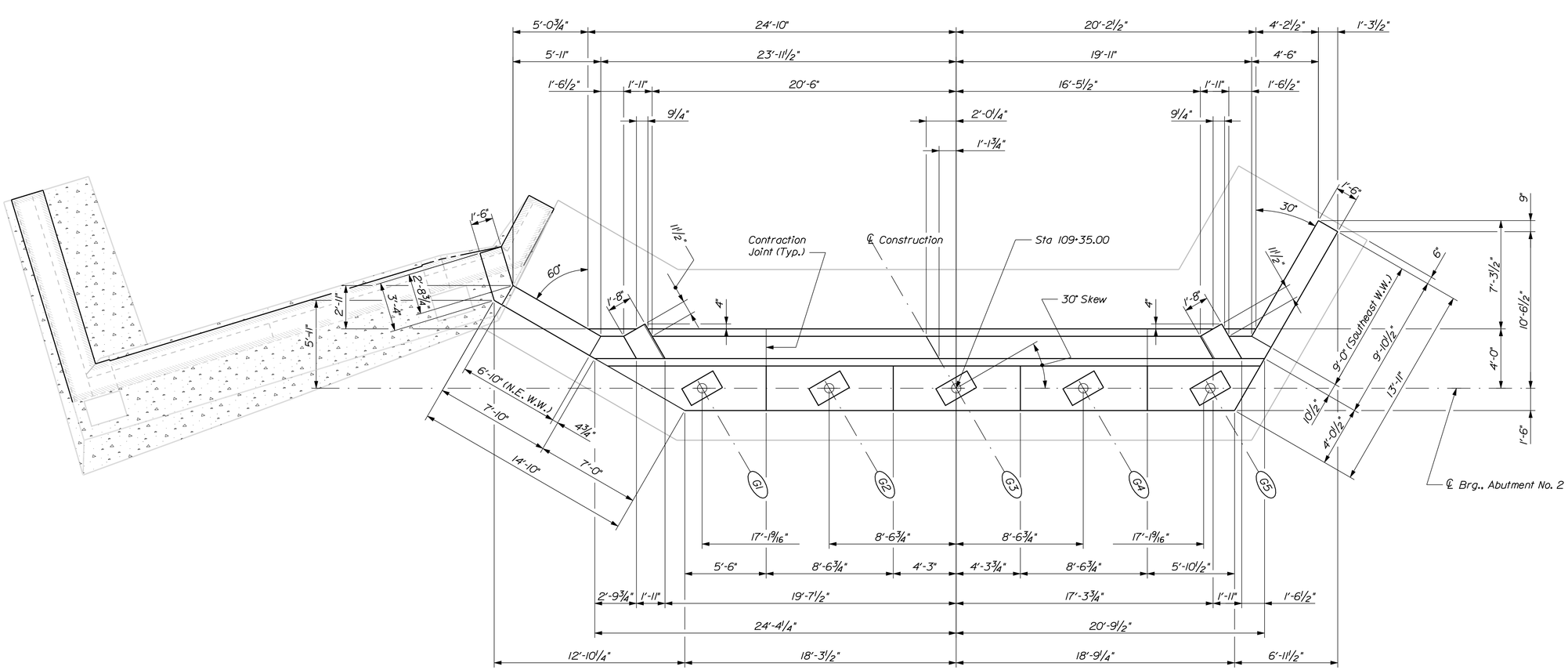
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190 — BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	D. Domreis	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMENT NO. 2 PLAN

SHEET NUMBER

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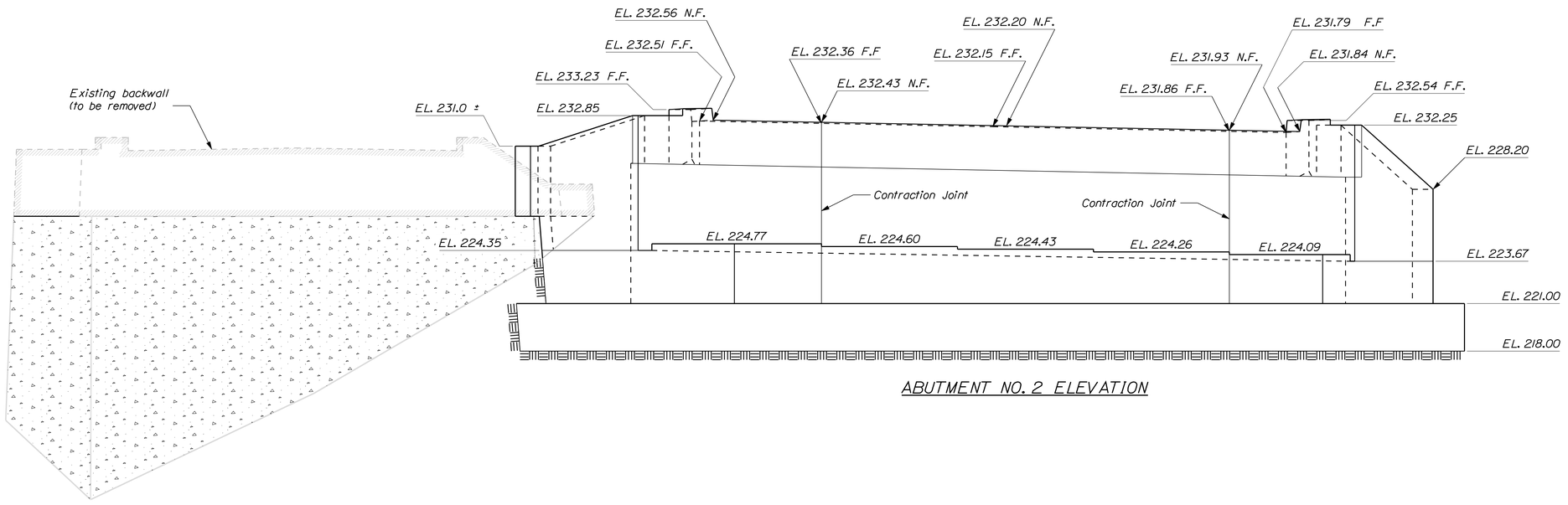
OF 69



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Filename: ...\052_Abutment_No. 2 Elevation.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Perlin	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

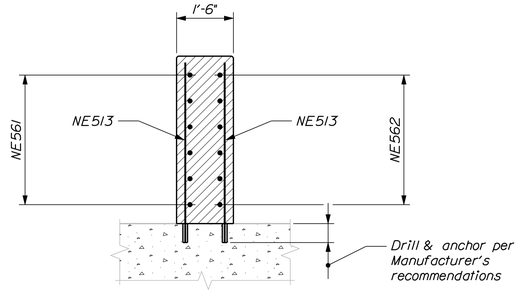
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMENT NO. 2 ELEVATION

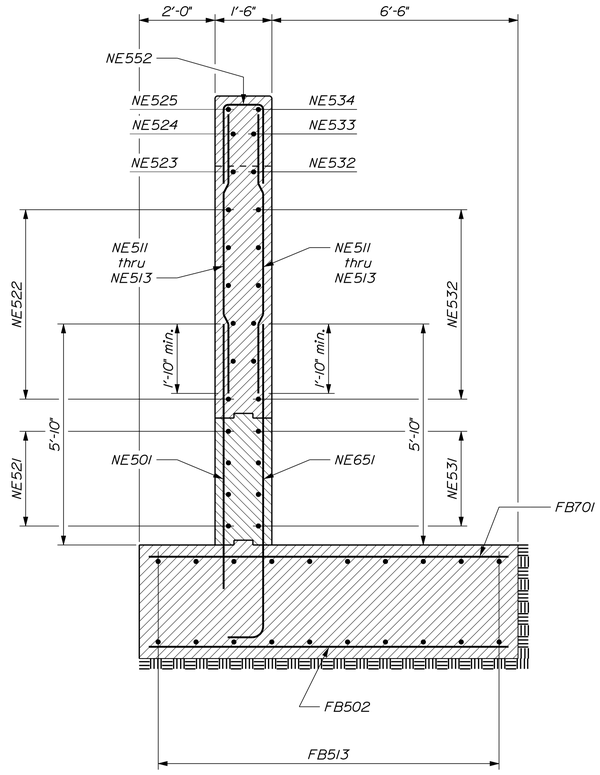
SHEET NUMBER

52

OF 69



END OF NORTHEAST WINGWALL SECTION



ABUTMENT NO. 2 NORTHEAST WINGWALL SECTION

Filename: ...\053_Abutment_No. 2 Sections.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	D. Eaton	
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

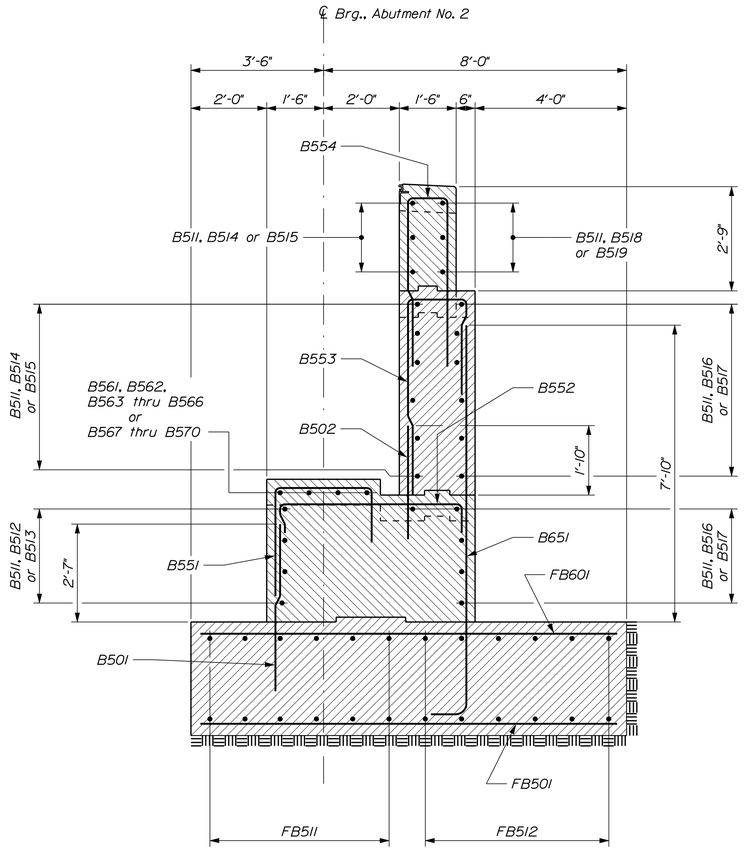
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMENT NO. 2 SECTIONS

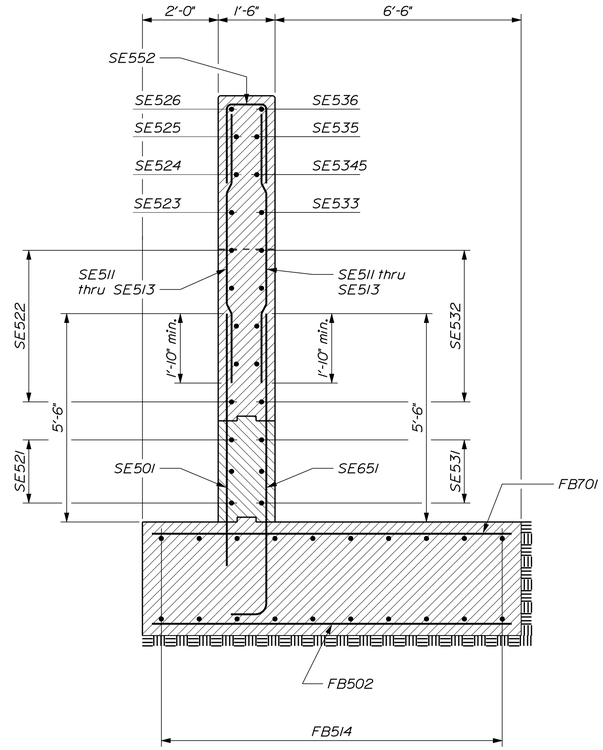
SHEET NUMBER

53

OF 69



ABUTMENT NO. 2 BREASTWALL SECTION



ABUTMENT NO. 2 SOUTHEAST WINGWALL SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

BRIDGE NO. 2190 | WIN 16704.00 | BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	M. Parlin		
DESIGN-DETAILED	D. Eaton	D. Damren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

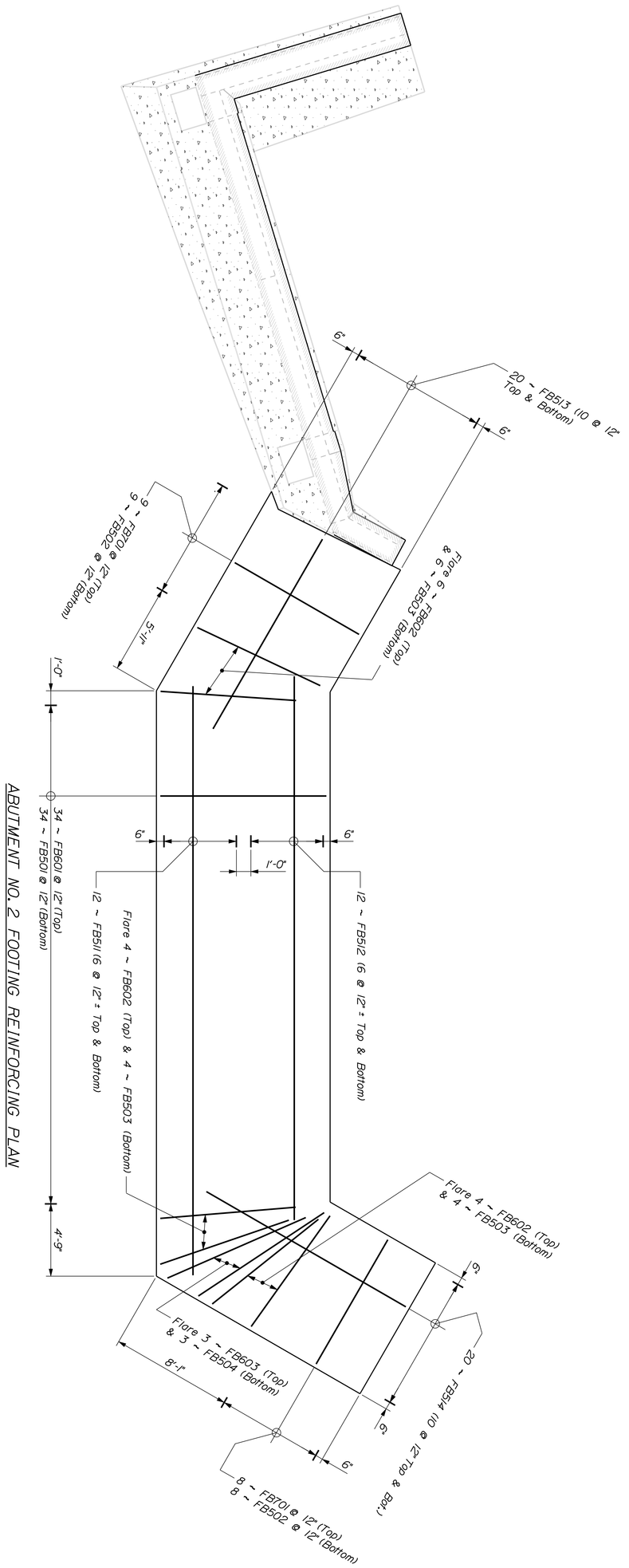
DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUTMENT NO. 2 SECTIONS

SHEET NUMBER
54
OF 69

Filename: ...\054_Abutment_No. 2 Sections.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



SHEET NUMBER 55 OF 69

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

ABUT. NO. 2 FOOTING REINF.

PROJ. MANAGER	M. Porlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Damren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

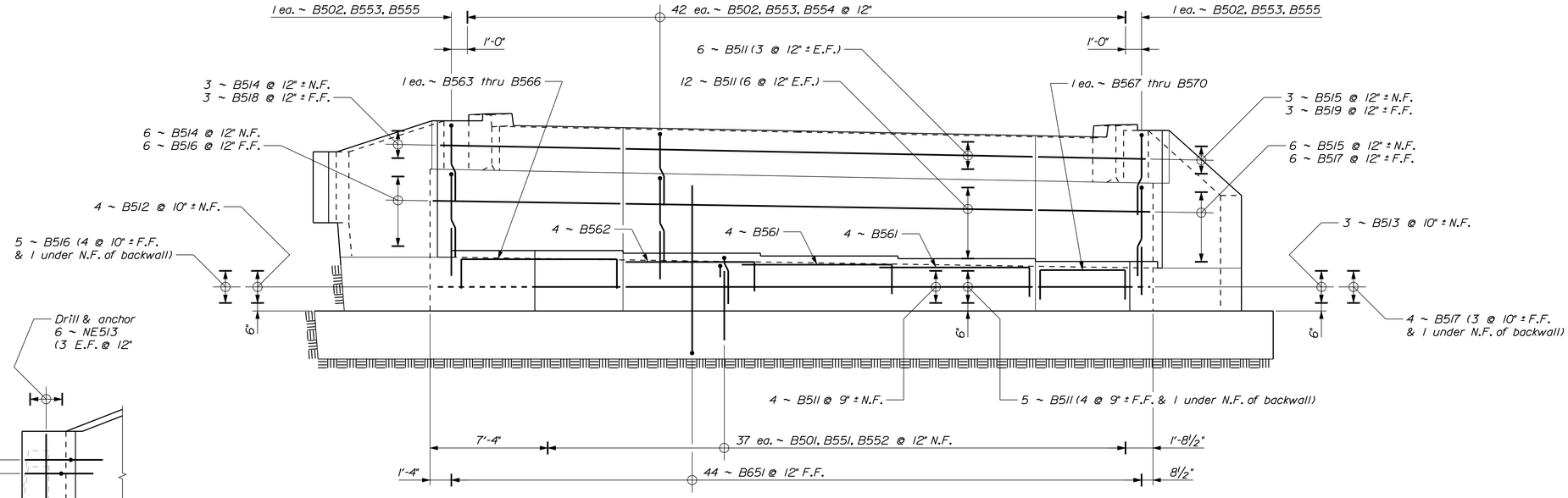
P.E. NUMBER

DATE

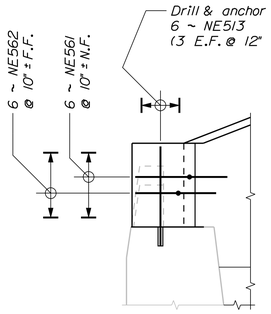
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

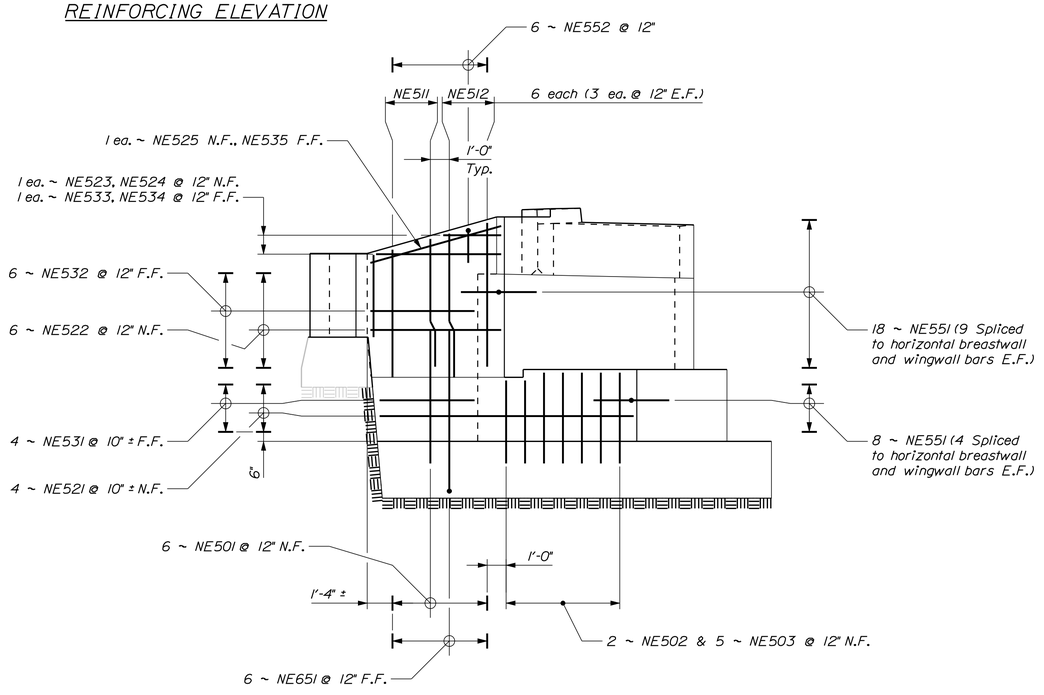
BRIDGE NO. 2190 WIN 16704.00 BRIDGE PLANS



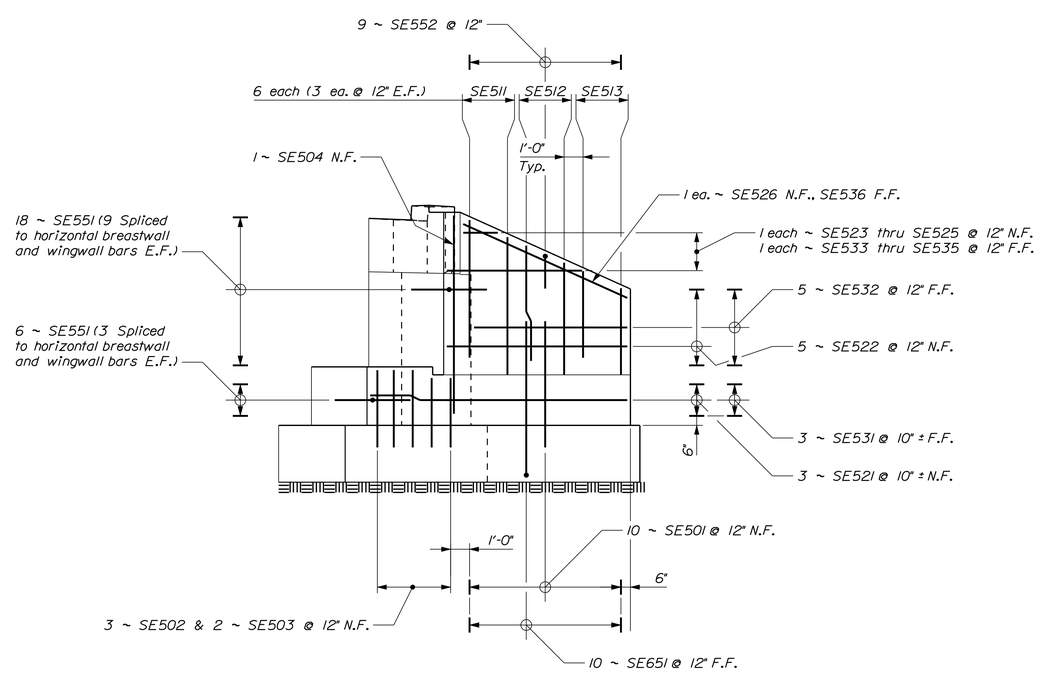
ABUTMENT NO. 2 BREASTWALL REINFORCING ELEVATION



END OF NORTHEAST WINGWALL
REINFORCING ELEVATION



ABUTMENT NO. 2 NORTHEAST WINGWALL REINFORCING ELEVATION



ABUTMENT NO. 2 SOUTHEAST WINGWALL REINFORCING ELEVATION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	D. Eaton	
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

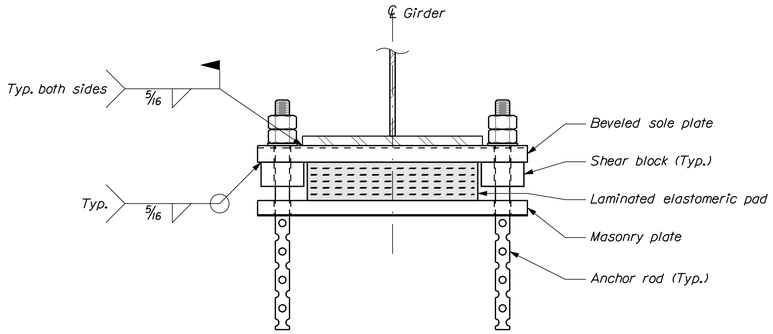
ABUT. NO. 2 REINF. ELEV.

SHEET NUMBER

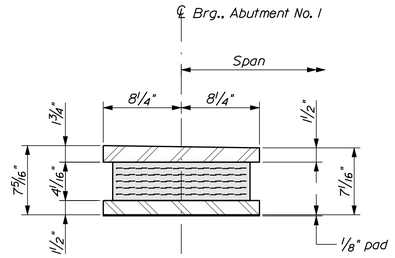
56

OF 69

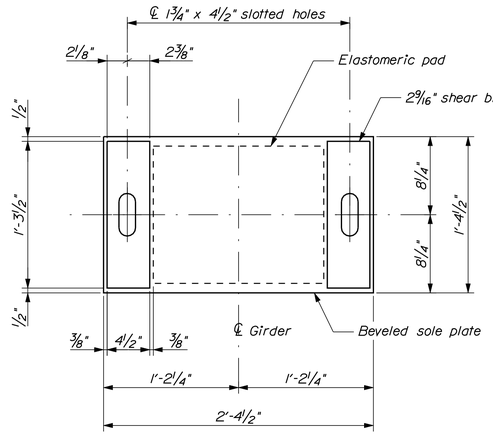
Filename: ...\056_Abutment_No. 2 Reinforcing Elevations.dgn Username: alan.nadeau Date:3/23/2012



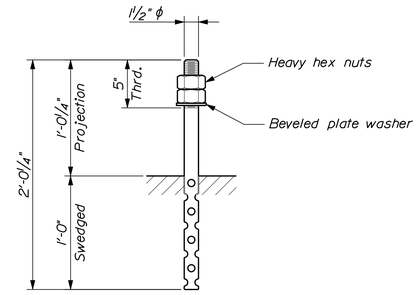
EXPANSION BEARING ELEVATION



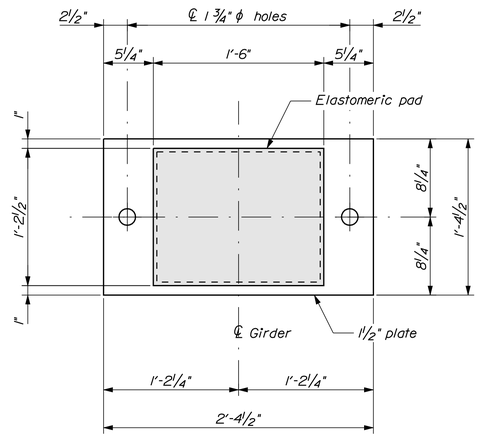
EXPANSION BEARING SECTION



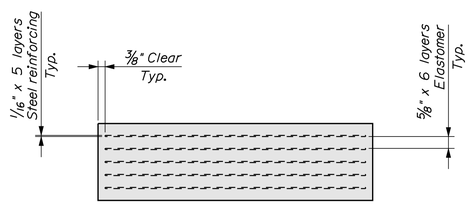
EXPANSION SOLE PLATE PLAN
Looking up at bottom of Beveled Sole Plate



EXPANSION ANCHOR ROD DETAIL



EXPANSION MASONRY PLATE PLAN
Showing laminated elastomeric pad



ELASTOMERIC PAD SECTION

ELASTOMERIC BEARING NOTES

1. The elastomer shall be 100% neoprene.

2. The shear modulus of the elastomer shall be 150 lb/in² +/- 15%.

3. Masonry plates shall meet the requirements of ASTM A 709/A 709M, Grade 50.

4. Sole plates, shear blocks and plate washers shall meet the requirements of ASTM A 709/A 709M, Grade 50W.

5. Anchor rods shall meet the requirements of ASTM F 1554, Grade 105 and shall be swedged on the embedded portion of the rod.

6. Heavy hex nuts for anchor rods shall meet the requirements of ASTM A 563M, Class 5.

7. Masonry and sole plates shall be galvanized in accordance with Section 506. Anchor rods, washers, nuts and shear pins shall be galvanized to ASTM A 153 or ASTM B 695, Class 50, Type I. Payment for galvanizing will be considered incidental to the elastomeric bearing pay items.

8. Vulcanizing of the elastomer to the steel plates shall be done during the primary mold process.

9. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed.

10. Bearings shall be covered during transit.

11. The bearings are designed so that the superstructure may be erected when the ambient air temperature is within the range of 65 °F and 90 °F. If the ambient air temperature is outside this range, the bearings shall be reset as directed by the Resident.

12. Bearings shall be reset after the full dead load placement (slab, curb, rail and wearing surface). The bridge shall be jacked to allow each bearing to return to its neutral position.

13. All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200 °F. The temperature shall be verified by the use of temperature indicating crayons or other suitable means.

14. After the sole plate has been welded to the structural steel, the shear blocks, the top 5 inches of the anchor rods, the plate washers and the exposed surface of the sole plates, including the anchor bolt holes, shall be treated with a dielectric material as approved by the Resident.
15. Upset the threads on the anchor rods after assembly of the bearing.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

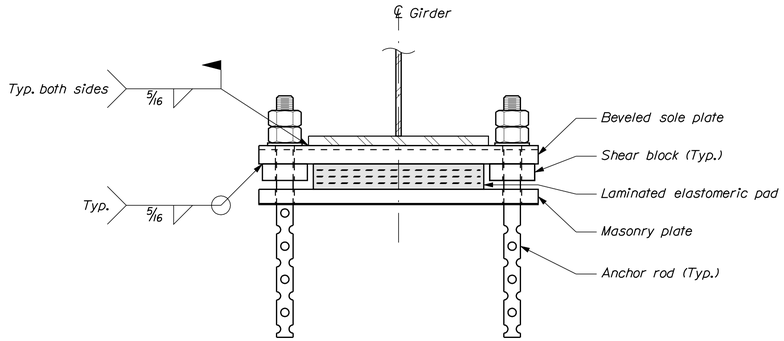
DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

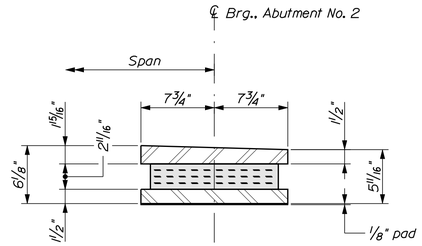
EXPANSION BEARINGS

SHEET NUMBER
57
OF 69

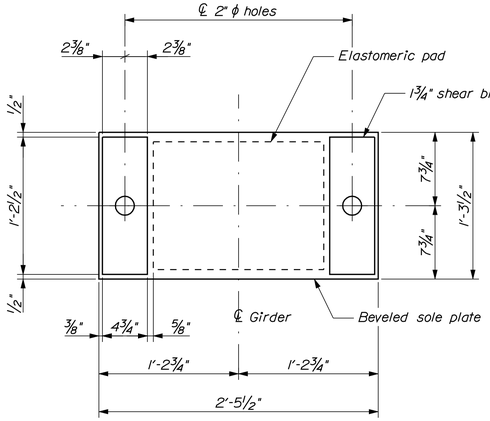
Filename: ...\057_Bearings_Expansion.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



FIXED BEARING ELEVATION

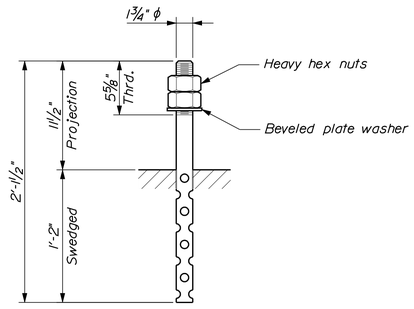


FIXED BEARING SECTION

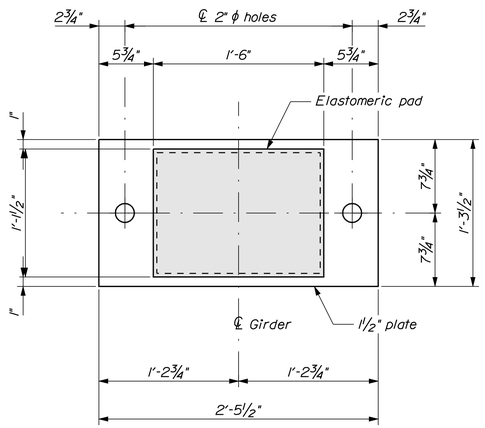


FIXED SOLE PLATE PLAN

Looking up at bottom of Beveled Sole Plate

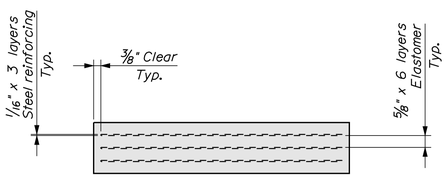


FIXED ANCHOR ROD DETAIL



FIXED MASONRY PLATE PLAN

Showing laminated elastomeric pad



ELASTOMERIC PAD SECTION

Filename: ...\mst\v058_Bearings_Fixed.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190 BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
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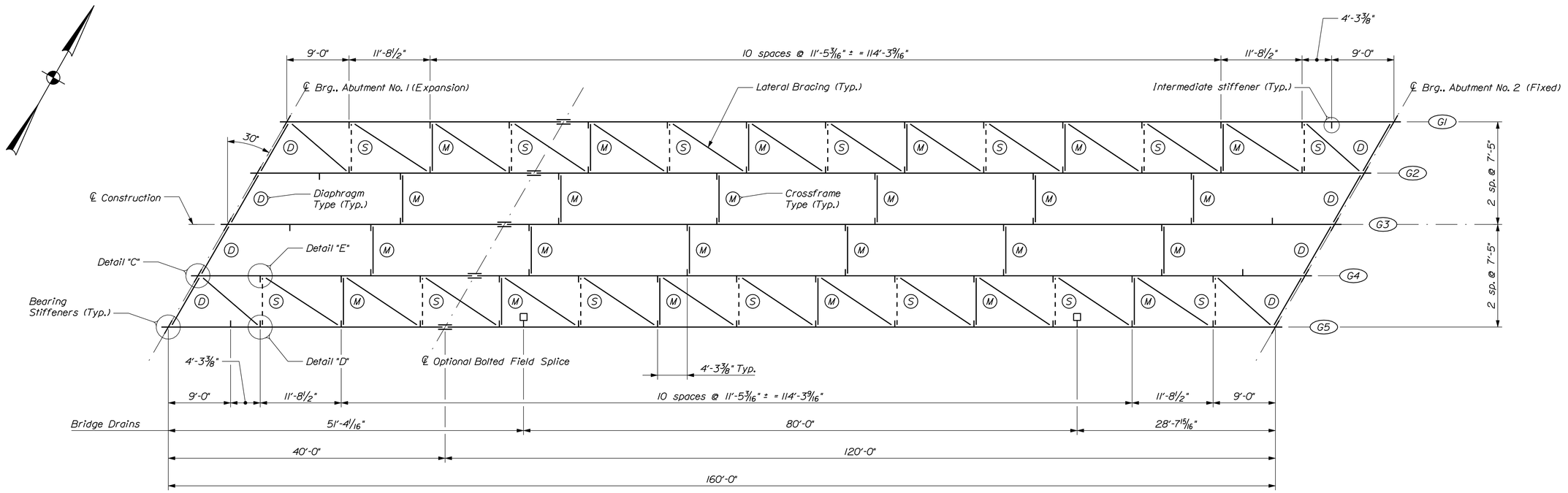
BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

FIXED BEARINGS

SHEET NUMBER

58

OF 69

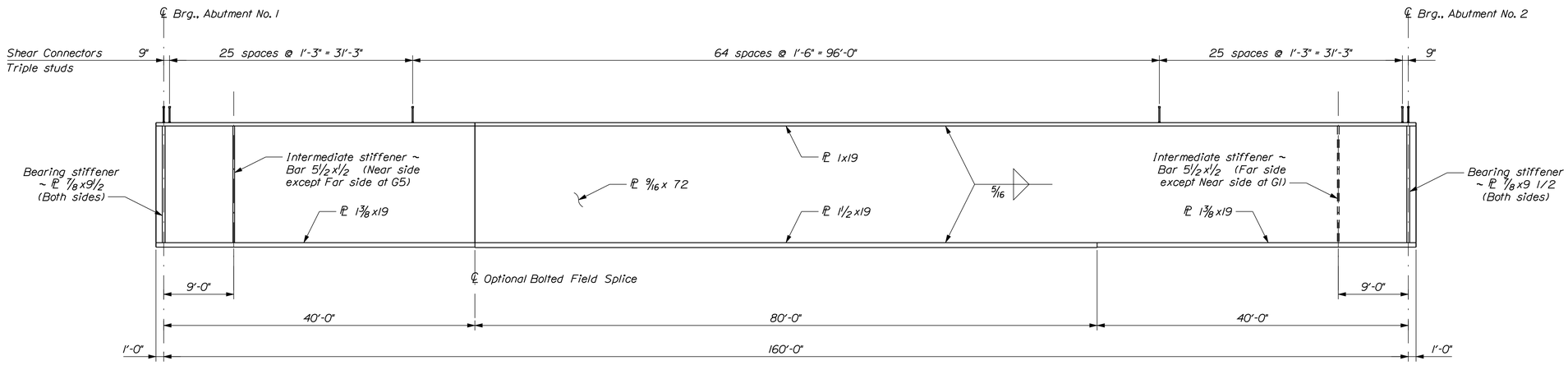


FRAMING PLAN

Dimensions are horizontal

BOTTOM OF SLAB ELEVATIONS

Girder	℄ Brg., Abut. No. 1	•16'	•32'	•48'	•64'	•80'	•96'	•112'	•128'	•144'	℄ Brg., Abut. No. 2
G1	235.38	235.28	235.13	234.94	234.67	234.34	233.93	233.45	232.91	232.31	231.67
G2	235.14	235.06	234.94	234.76	234.51	234.18	233.79	233.31	232.76	232.15	231.50
G3	234.90	234.84	234.72	234.54	234.30	233.98	233.59	233.12	232.58	231.98	231.33
G4	234.68	234.61	234.49	234.33	234.09	233.78	233.39	232.93	232.39	231.80	231.17
G5	234.44	234.36	234.25	234.08	233.85	233.54	233.16	232.71	232.18	231.61	231.00



GIRDER ELEVATION

351 studs per beam x 5 beams = 1755 studs

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

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BRIDGE NO. 2190

BRIDGE PLANS

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DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
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FIELD CHANGES			

SIGNATURE

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BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

STRUCTURAL STEEL

SHEET NUMBER

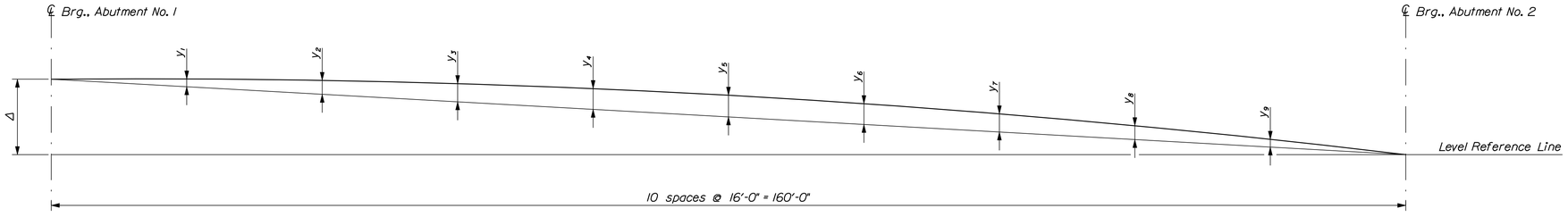
59

OF 69

Username: alan.nadeau Date:3/23/2012

Division: BRIDGE

Filename: ...\msta\059_Structural Steel.dgn



CAMBER DIAGRAM

CAMBER DIMENSIONS										
Girder	Δ	y_1	y_2	y_3	y_4	y_5	y_6	y_7	y_8	y_9
G1	3'-8 1/2"	3 15/16"	7 3/16"	9 13/16"	11 5/16"	11 13/16"	11 5/16"	9 11/16"	7 1/4"	3 7/8"
G2	3'-7 11/16"	4 1/8"	7 9/16"	10 3/16"	11 13/16"	12 3/8"	11 7/8"	10 5/16"	7 9/16"	4 1/8"
G3	3'-6 13/16"	4 1/8"	7 5/8"	10 3/16"	11 13/16"	12 7/16"	11 7/8"	10 5/16"	7 5/8"	4 1/8"
G4	3'-6 1/8"	4 1/16"	7 1/2"	10 1/8"	11 3/4"	12 5/16"	11 13/16"	10 1/8"	7 9/16"	4 1/16"
G5	3'-5 1/4"	3 13/16"	7 1/4"	9 5/8"	11 5/16"	11 7/8"	11 5/16"	9 3/4"	7 3/16"	3 7/8"

TABLE OF DEFLECTIONS										
	℄ Brg., Abut. No. 1	·16′	·32′	·48′	·64′	·80′	·96′	·112′	·128′	·144′	℄ Brg., Abut. No. 2
Steel Dead Load	0.00"	0.64"	1.21"	1.65"	1.93"	2.03"	1.93"	1.65"	1.21"	0.64"	0.00"
Fluid Dead Load (Interior)	0.00"	1.60"	3.02"	4.13"	4.82"	5.06"	4.82"	4.13"	3.02"	1.60"	0.00"
Fluid Dead Load (Exterior)	0.00"	1.42"	2.69"	3.67"	4.29"	4.50"	4.29"	3.67"	2.69"	1.42"	0.00"
Superimposed Dead Load	0.00"	0.51"	0.97"	1.32"	1.55"	1.62"	1.55"	1.32"	0.97"	0.51"	0.00"

STRUCTURAL STEEL NOTES

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.

2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt weld splices in flanges shall be not less than one foot from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within one foot of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt weld splices will be allowed in areas of stress reversal.

3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 20 feet in length unless otherwise shown on the plans.

4. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.

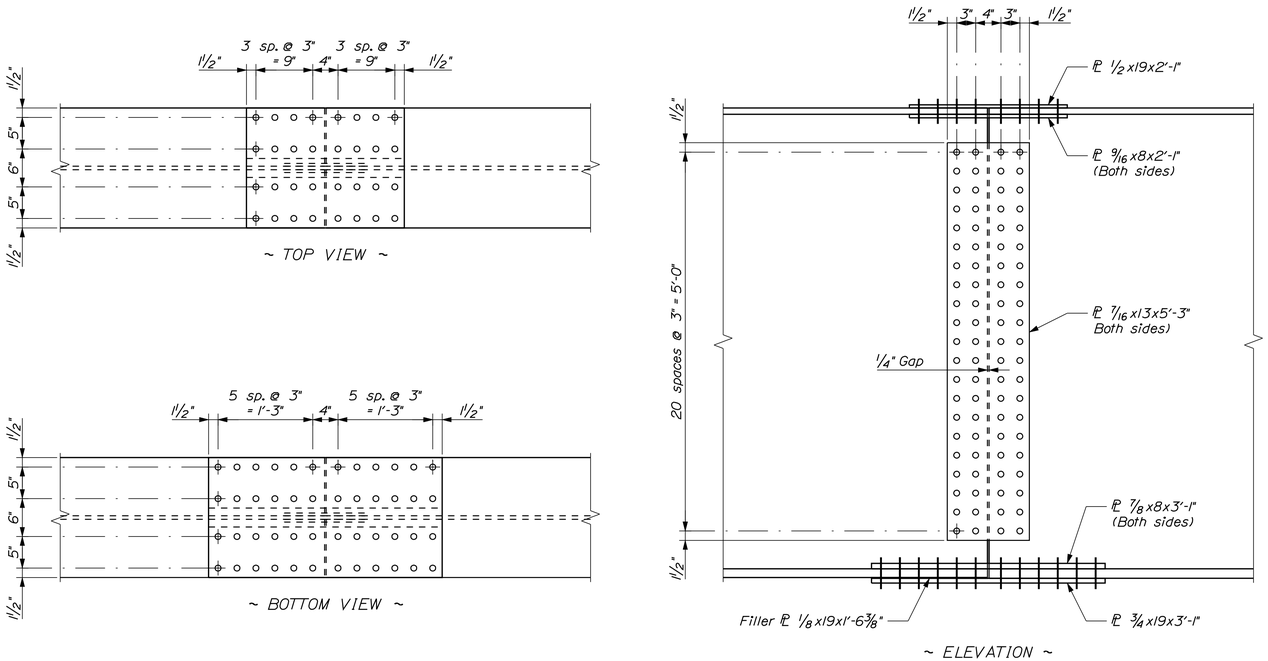
5. Connection plates for all Type "M" crossframes shall have a thickness of 1/2 inch.

6. Crossframe or diaphragm connection plates may be either plumb or normal to the top flange.

7. All connection plates and stiffeners shall be welded to the top and bottom flanges using a 9/16-in. weld.

8. Optional bolted field splce connections shall be made using 7/8-in. ASTM A 325 H.S. bolts. Hole size shall be 15/16 inch diameter. Bolt threads shall be excluded from the shear plane of the filed splice connections.

9. Girder ends and end diaphragms shall be coated to a distance of 10 feet from the centerline of bearing at the abutments in accordance with Special Provisions Section 506, Protective Coating - Steel (Zinc Rich Coating System).



OPTIONAL BOLTED FIELD SPLICE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

			DATE
PROJ. MANAGER	M. Perkins	BY	
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

STRUCTURAL STEEL

SHEET NUMBER

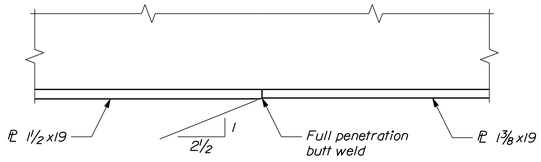
60

OF 69

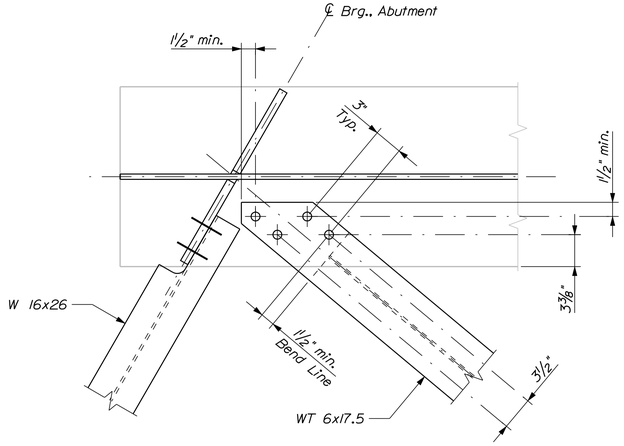
Username: alan.nadeau Date:3/23/2012

Division: BRIDGE

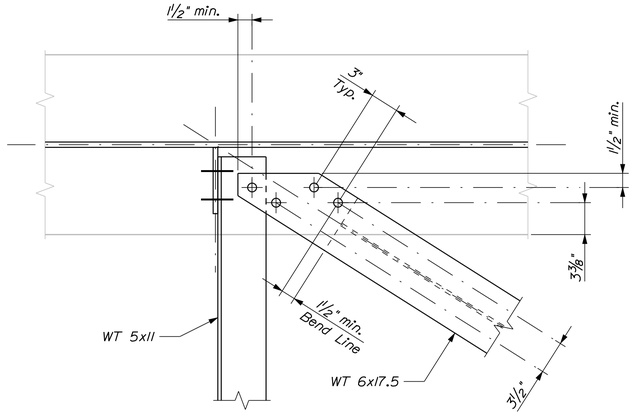
Filename: ...\msto\060_StructuralSteel.dgn



BOTTOM FLANGE TRANSITION DETAIL



DETAIL "C"



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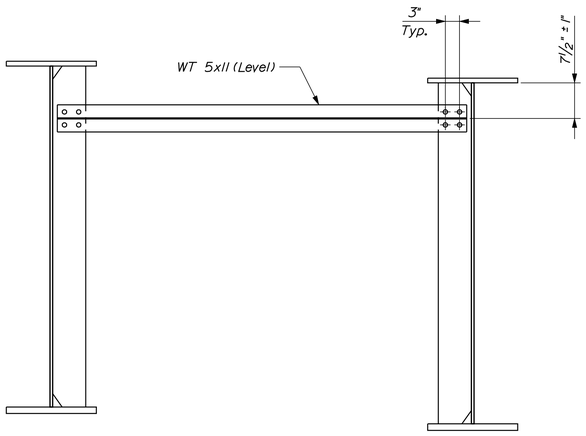

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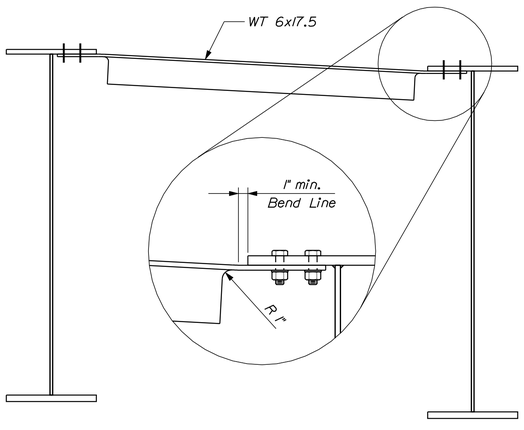
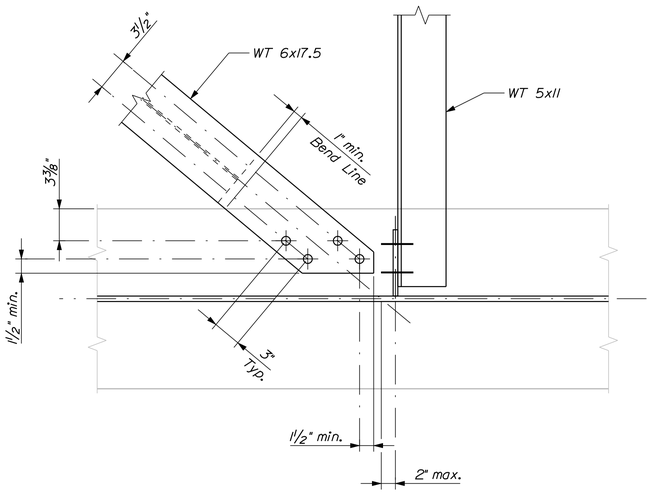


LATERAL BRACING



DETAIL "D"

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
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REVISIONS 4			
FIELD CHANGES			

SIGNATURE

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DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

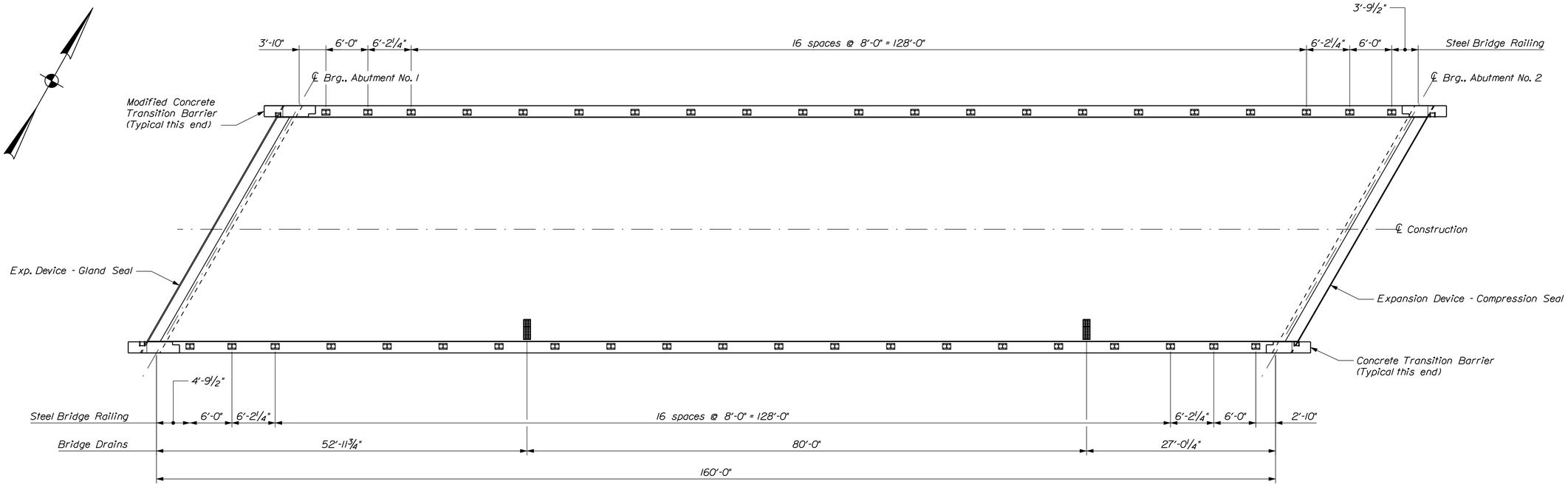
STRUCTURAL STEEL

SHEET NUMBER

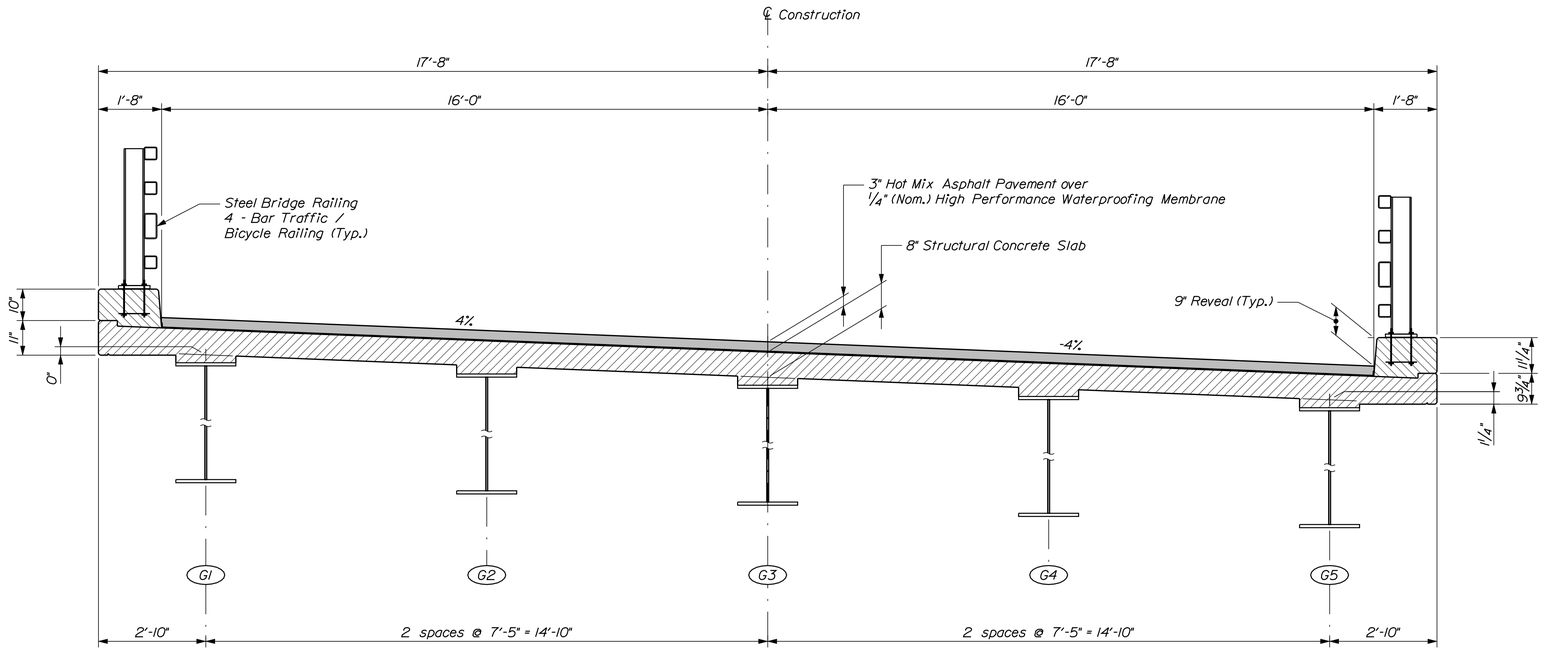
61

OF 69

Filename: ...\mslo\061_Structural Steel.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



SUPERSTRUCTURE PLAN



TRANSVERSE SECTION

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 3½ inches (2½ inches clear) at the centerline of bearing of the abutments. Refer to Standard Detail 502(02) for blocking details.

2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.

3. Adjust reinforcing steel to fit around the bridge drains in a manner approved by the Resident. Do not cut transverse reinforcing bars.

4. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.

5. The superstructure slab concrete shall be placed in one continuous operation and the concrete shall be kept plastic until the placement has been completed.

6. At the Contractor's option, Precast Deck Panels may be used in place of the full depth cast-in-place deck slab, in accordance with Special Provisions Section 502, Structural Concrete - Precast Deck Panels, and in accordance with the Standard Details.

7. Payment for all reinforcing steel fabricated, delivered, and placed in the structural concrete slab and curbs will be considered incidental to the appropriate Standard Specifications Section 502 pay item.

8. The compression seal to be furnished shall have a minimum Movement Rating of ½ inch. No adjustment for temperature is required.

9. The Resident shall approve the compression seal prior to fabrication of the Expansion Device.

10. Provide 3 additional stirrups in the curbs at each Transition Barrier location.

11. The Contractor shall install Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526 and in the Modified Transition Barrier Details, prior to the placement of the curb concrete.

STATE OF MAINE
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BRIDGE PLANS

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CHECKED-REVIEWED	E. Caswell	D. Domren	
DESIGN2-DETAILED2			
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FIELD CHANGES			

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BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

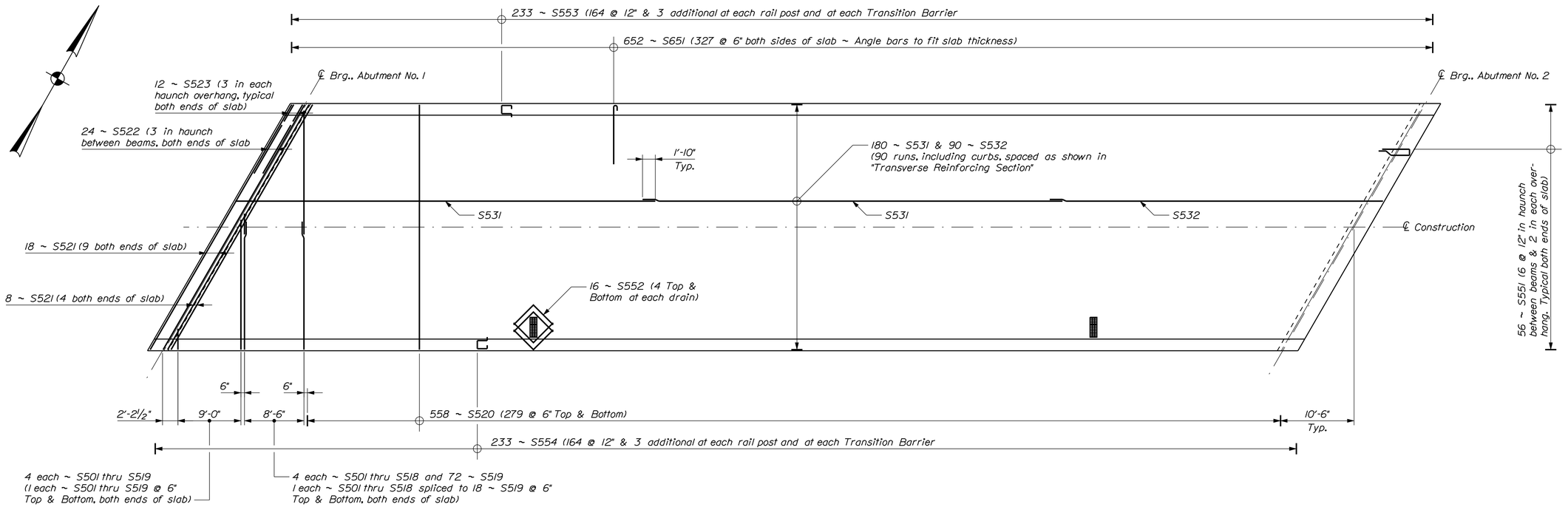
SUPERSTRUCTURE

SHEET NUMBER

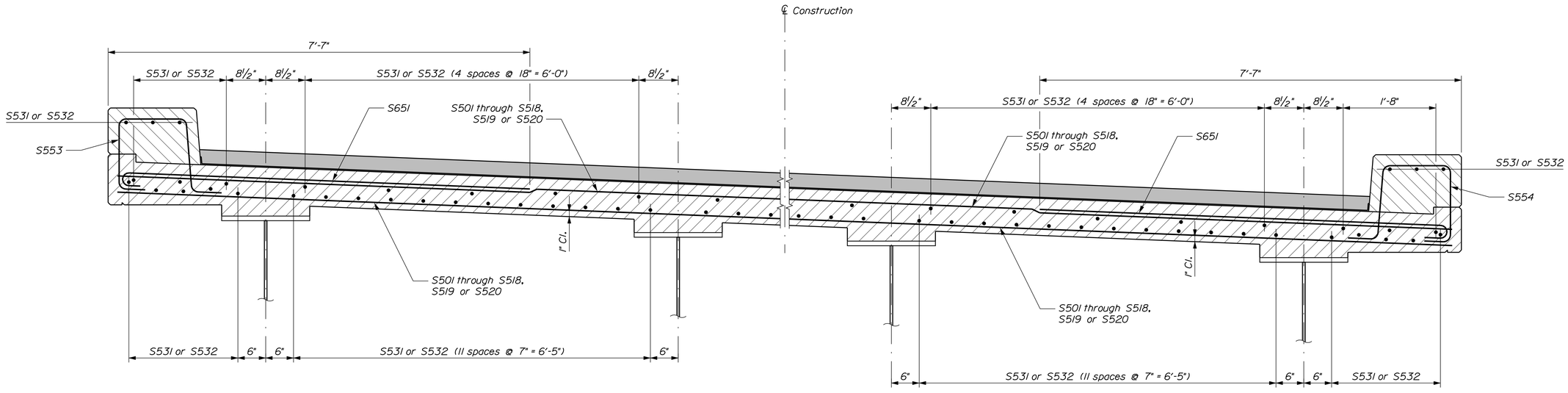
62

OF 69

Filename: ...\msta\062_Superstructure.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



SUPERSTRUCTURE REINFORCING PLAN



TRANSVERSE REINFORCING SECTION

STATE OF MAINE
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BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perin		DATE
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BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

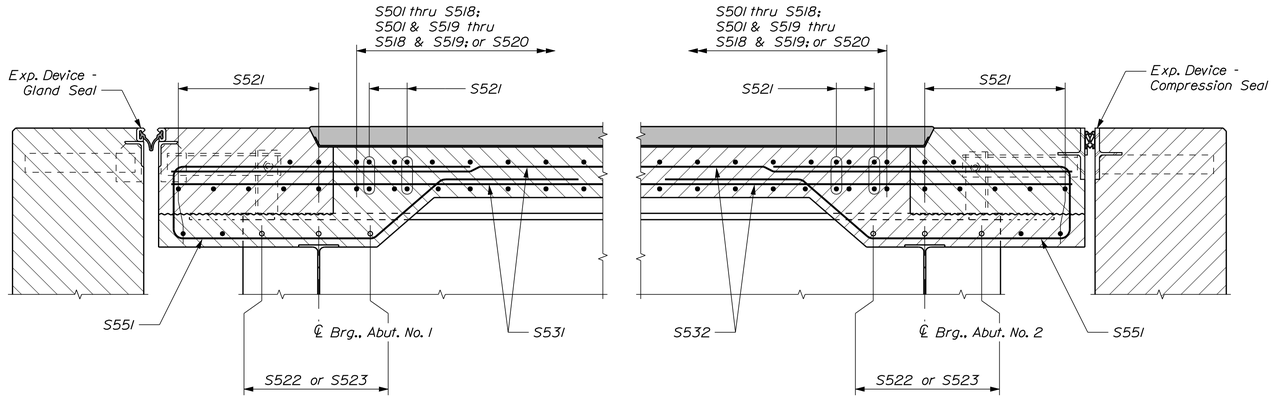
SUPERSTRUCTURE REINFORCING

SHEET NUMBER

63

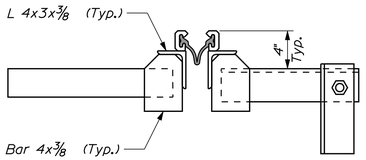
OF 69

Filename: ...\063_Superstructure_Reinforcing.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

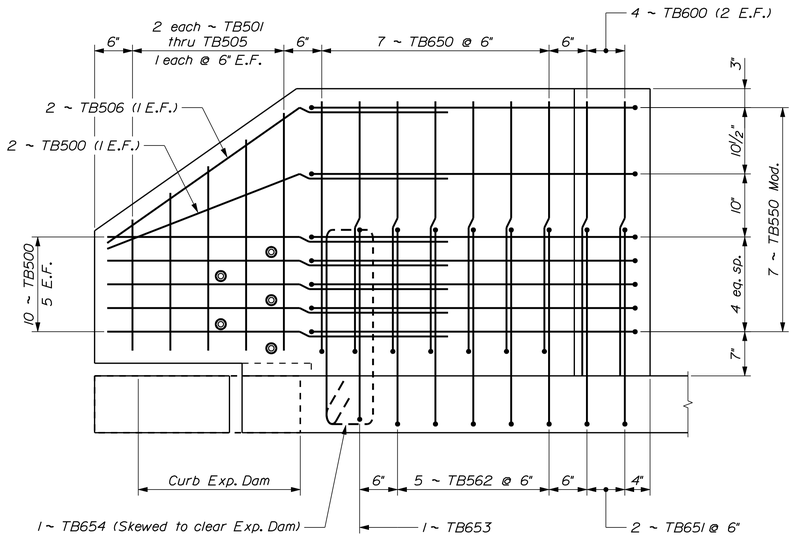


LONGITUDINAL SECTION AT ABUTMENT NO. 1

LONGITUDINAL SECTION AT ABUTMENT NO. 2

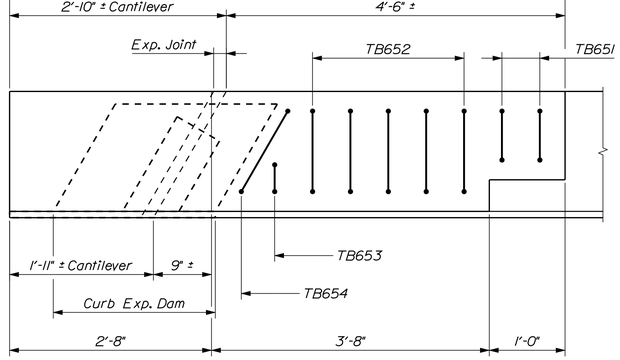


GLAND SEAL MODIFICATION



MODIFIED TRANSITION BARRIER ELEVATION

Left side barrier shown; right side similar

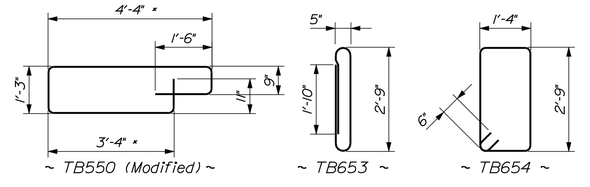


MODIFIED TRANSITION BARRIER PLAN

Left side barrier shown; right side similar

MODIFIED TRANSITION BARRIER REINFORCING STEEL SCHEDULE

Mark	Qty.	Length
TB500	12	4'-6"
TB501	2	3'-2"
TB502	2	2'-10"
TB503	2	2'-6"
TB504	2	2'-2"
TB505	2	1'-10"
TB506	2	5'-1"
TB550	7	12'-2" *
TB600	4	3'-7"
TB650	7 *	7'-10"
TB651	2	7'-11"
TB652	5	8'-9"
TB653 *	1 *	8'-2" *
TB654 *	1 *	9'-2" *



Notes: * Modified from standard barrier. Quantities are for one modified barrier.
Refer to Standard Details for reinforcing bends not shown.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

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DESIGN-DETAILED	D. Eaton	P.E. NUMBER	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1	D. Domren		
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

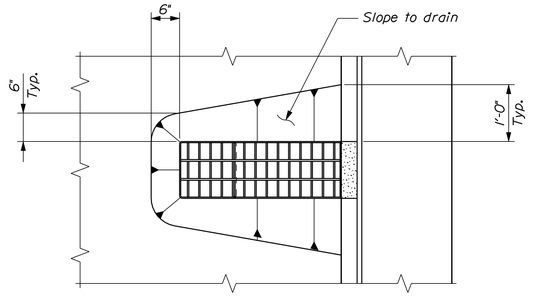
SUPERSTRUCTURE DETAILS

SHEET NUMBER

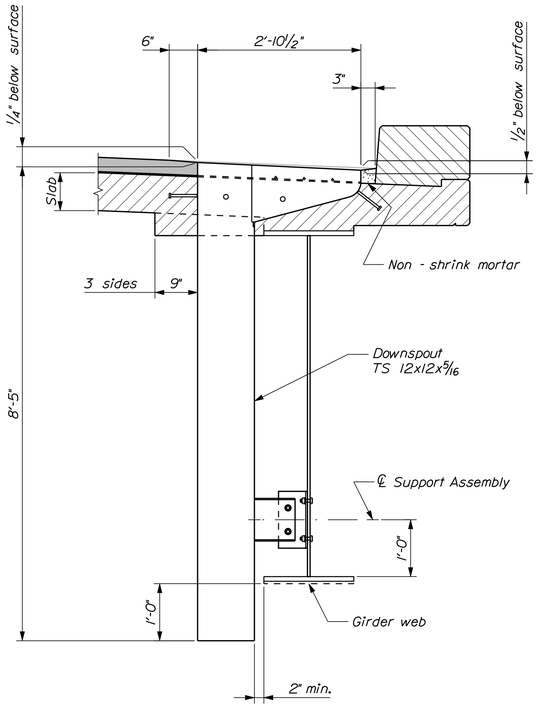
64

OF 69

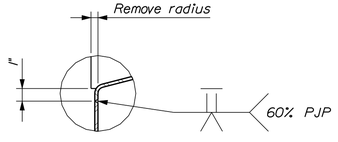
Filename: ...\064_Superstructure_Details.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012



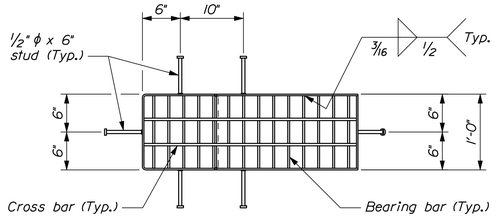
BRIDGE DRAIN PLAN



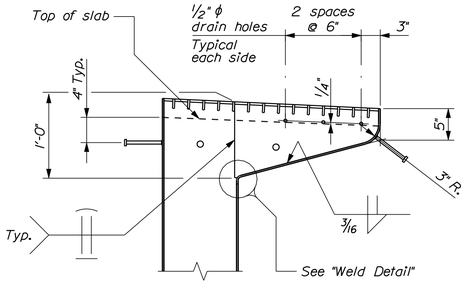
BRIDGE DRAIN ELEVATION



WELD DETAIL

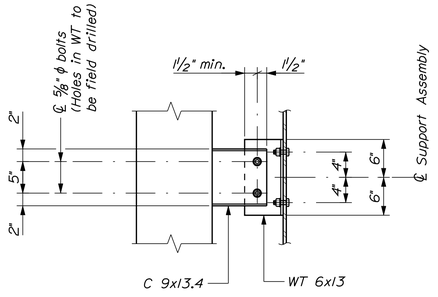


~ DRAIN TOP VIEW ~

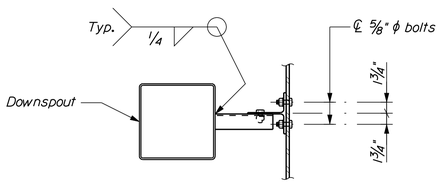


~ DRAIN SECTION ~

BRIDGE DRAIN



~ SUPPORT ASSEMBLY DETAIL~



~ SUPPORT ASSEMBLY TOP VIEW ~

SUPPORT ASSEMBLY

BRIDGE DRAIN NOTES

1. All plates shall be 1/4 inch thick.

2. The grating shall be a commercial heavy - duty grating with 1 1/2" x 5/16" bearing bars spaced at 2 3/8 inches and 3/8" ϕ cross bars spaced at 4 inches. The grating shall be centered in the drain top.

3. Drains, including the support assembly, shall be blast cleaned to the requirements of SSPC-SP6/NACE 3 and galvanized in accordance with ASTM A 123.

4. Shear connectors welded to the top flange of steel beams may require adjustment to clear the bridge drains.

5. Payment for bridge drains will be as specified under Subsection 502.19 of the Standard Specifications.

BRIDGE DRAIN MATERIALS

Downspout	ASTM A 500, Grade B.
Shapes & plates	AASHTO M 270M/M 270, Grade 50
Bolts and nuts	AASHTO A 307, Grade C

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

PROJ. MANAGER	M. Perlin	BY	DATE
DESIGN-DETAILED	D. Eaton	D. Domren	
CHECKED-REVIEWED	E. Caswell		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

BRIDGE DRAINS

SHEET NUMBER

65

OF 69

Filename: ...\mslo\065_Bridge_Drains.dgn Division: BRIDGE Username: alan.nadeau Date:3/23/2012

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION
		Abutment No. 1 Seal				Abutment No. 1	
SD601	10	4'-0"	Seal Dowels	A501	44	3'-0"	Vertical - Backwall
				A511	18	25'-4"	Horizontal - Backwall
				A512	9	11'-3"	Horizontal - Backwall
				A513	9	7'-7"	Horizontal - Backwall
				A514	6	11'-10"	Horizontal - Backwall
		Abutment No. 1 Footing		A515	6	7'-4"	Horizontal - Backwall
				A516	3	11'-0"	Horizontal - Backwall
FA501	29	12'-0"	Horizontal - Bottom	A517	3	7'-0"	Horizontal - Backwall
FA502	24	11'-6"	Horizontal - Bottom				
FA503	21	8'-0"	Horizontal - Bottom				
FA504	20	12'-6"	Horizontal - Bottom	A701	37	5'-7"	Vertical - Breastwall
FA505	6	10'-0"	Horizontal - Bottom	A702	44	9'-6"	Vertical - Breastwall
FA506	8	11'-0"	Horizontal - Bottom				
FA507	4	12'-0"	Horizontal - Bottom	A711	25	25'-4"	Horizontal - Breastwall
				A712	11	5'-3"	Horizontal - Breastwall
FA511	12	39-0"	Horizontal - Top & Bottom	A713	12	5'-7"	Horizontal - Breastwall
FA512	14	31'-0"	Horizontal - Top & Bottom	A714	12	11'-10"	Horizontal - Breastwall
FA513	16	48'-6"	Horizontal - Top & Bottom	A715	13	7'-4"	Horizontal - Breastwall
FA514	8	28'-0"	Horizontal - Top & Bottom				
FA515	2	22'-0"	Horizontal - Top & Bottom				
FA516	16	15'-0"	Horizontal - Top & Bottom				
FA517	26	26'-3"	Horizontal - Top & Bottom				
						Abutment No. 1	Southwest Wingwall
FA801	29	12'-0"	Horizontal - Top				
FA802	46	11'-6"	Horizontal - Top	SW501	47	4'-0"	Vertical
FA803	41	8'-0"	Horizontal - Top	SW502	7	10'-5"	Vertical
FA804	39	12'-6"	Horizontal - Top				
FA805	6	10'-0"	Horizontal - Top	SW505	5	8'-8"	Vertical - Low Section
FA806	8	11'-0"	Horizontal - Top	SW506	5	7'-6"	Vertical - Low Section
FA807	4	12'-0"	Horizontal - Top	SW507	5	6'-3"	Vertical - Low Section
				SW508	5	5'-1"	Vertical - Low Section
				SW511	5	18'-7"	Vertical - High Section
				SW512	5	14'-5"	Vertical - High Section
				SW513	5	13'-3"	Vertical - High Section
		Abutment No. 1	Northwest Wingwall	SW514	5	15'-0"	Vertical - High Section
				SW515	5	12'-10"	Vertical - Low Section
NW501	25	4'-2"	Vertical	SW516	5	10'-8"	Vertical - Low Section
NW502	5	11'-3"	Vertical	SW517	5	8'-6"	Vertical - Low Section
NW503	1	10'-9"	Vertical	SW518	5	7'-4"	Vertical - Low Section
NW511	4	19'-4"	Vertical	SW521	14	19'-8"	Horizontal - Low Section
NW512	4	17'-9"	Vertical	SW522	2	18'-6"	Horizontal - Low Section
NW513	4	16'-2"	Vertical	SW523	2	14'-3"	Horizontal - Low Section
NW514	4	14'-8"	Vertical	SW524	2	10'-0"	Horizontal - Low Section
NW515	4	13'-1"	Vertical	SW525	2	5'-9"	Horizontal - Low Section
				SW526	2	20'-3"	Horizontal - Low Section
NW521	12	24'-6"	Horizontal				
NW522	1	20'-6"	Horizontal	SW531	8	27'-0"	Horizontal - High Section
NW523	1	19'-4"	Horizontal	SW532	4	20'-0"	Horizontal - High Section
NW524	1	16'-9"	Horizontal	SW533	1	17'-7"	Horizontal - High Section
NW525	1	14'-2"	Horizontal	SW534	1	13'-4"	Horizontal - High Section
NW526	1	11'-6"	Horizontal	SW535	1	8'-9"	Horizontal - High Section
NW527	1	9'-0"	Horizontal	SW536	1	4'-6"	Horizontal - High Section
NW528	1	5'-6"	Horizontal	SW537	1	20'-3"	Horizontal - High Section
NW529	1	3'-0"	Horizontal	SW538	3	12'-0"	Horizontal - High Section
NW530	1	21'-0"	Horizontal				
NW531	12	19'-5"	Horizontal	SW541	8	18'-10"	Horizontal - High Section
NW532	1	19'-5"	Horizontal	SW542	4	18'-10"	Horizontal - High Section
NW533	1	18'-3"	Horizontal	SW543	1	16'-5"	Horizontal - High Section
NW534	1	15'-8"	Horizontal	SW544	1	12'-2"	Horizontal - High Section
NW535	1	13'-0"	Horizontal	SW545	1	8'-9"	Horizontal - High Section
NW536	1	10'-6"	Horizontal	SW546	1	4'-6"	Horizontal - High Section
NW537	1	7'-10"	Horizontal	SW547	1	20-'3"	Horizontal - High Section
NW538	1	5'-6"	Horizontal	SW548	3	4-'0"	Horizontal - High Section
NW539	1	3'-0"	Horizontal				
NW540	1	21'-0"	Horizontal				
				SW601	5	13'-7"	Vertical
				SW602	5	9'-5"	Vertical
NW601	4	13'-8"	Vertical	SW603	5	8'-3"	Vertical
NW602	4	12'-0"	Vertical	SW604	5	7'-0"	Vertical
NW603	4	10'-6"	Vertical				
NW604	4	8'-11"	Vertical				
NW605	4	7'-5"	Vertical				
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
							Abutment No. 1 Seal							
SD651	94	6'-6"	L	4'-3"	2'-3"	--	--	--	--	--	--	--	--	Footing Dowels
								Abutment No. 1						
A551	37	6'-10"	S	0	0'-10"	5'-2"	0'-10"	--	--	0	--	--	--	Horizontal - Breastwall
A552	44	12'-8"	S	0	5'-6"	1'-8"	5'-6"	--	--	0	--	--	--	Vertical - Backwall
A553	42	10'-0"	S	0	4'-5"	1'-2"	4'-5"	--	--	0	--	--	--	Vertical - Backwall
A554	2	11'-4"	S	0	5'-1"	1'-2"	5'-1"	--	--	0	--	--	--	Vertical - Backwall
A561	8	10'-4"	L	9'-6"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A562	4	9'-0"	L	8'-2"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A563	1	10'-3"	L	9'-5"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A564	1	8'-11"	L	8'-1"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A565	1	7'-7"	L	6'-9"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A566	1	6'-3"	L	5'-5"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
A567	1	8'-8"	S	0	0'-10"	7'-0"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
A568	1	8'-3"	S	0	0'-10"	6'-7"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
A569	1	7'-9"	S	0	0'-10"	6'-1"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
A570	1	7'-4"	S	0	0'-10"	5'-8"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
A597	8	4'-9"	S	0	2'-1"	1'-2"	1'-6"	--	--	0	--	--	--	Curbs
A598	4	7'-3"	S	0	3'-0"	1'-3"	3'-0"	--	--	0	--	--	--	Curbs
A599	2	7'-5"	S	0	3'-0"	1'-5"	3'-0"	--	--	0	--	--	--	Curbs
A751	87	11'-0"	L	9'-10"	1'-2"	--	--	--	--	--	--	--	--	Vertical - Breastwall
A752	37	15'-6"	S	0	1'-7"	2'-8"	11'-3"	--	--	0	--	--	--	Vertical - Breastwall
						Abutment No. 1 Southwest Wingwall								
SW551	40	5'-0"	V	--	--	--	2'-6"	2'-6"	--	--	1'-3"	--	--	Horizontal - Corners
SW552	40	5'-0"	S	0	1'-11"	1'-2"	1'-11"	--	--	0	--	--	--	Vertical - Top of Wingwall
SW751	20	8'-10"	L	7'-8"	1'-2"	--	--	--	--	--	--	--	--	Vertical - Low Section
SW851	20	12'-0"	L	10'-8"	1'-4"	--	--	--	--	--	--	--	--	Vertical - High Section
SW852	19	11'-0"	L	9'-8"	1'-4"	--	--	--	--	--	--	--	--	Vertical - High Section
						Abutment No. 1 Northwest Wingwall								
NW551	42	5'-0"	V	--	--	--	2'-6"	2'-6"	--	--	2'-2"	--	--	Horizontal - Corners
NW552	20	5'-0"	S	0	1'-11"	1'-2"	1'-11"	--	--	0	--	--	--	Vertical - Top of Wingwall
NW951	20	13'-3"	L	11'-8"	1'-7"	--	--	--	--	--	--	--	--	Vertical
NW952	19	11'-3"	L	9'-8"	1'-7"	--	--	--	--	--	--	--	--	Vertical
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

TYPE - BENDING DIAGRAMS

All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A 615/A 615M, Grade 60

GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

Mark "A502" = bar size #5
Mark "P805" = bar size #8
Mark "S650" = bar size #6

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case will be based on crank bars as scheduled on the plans.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE PLANS

BRIDGE NO. 2190

SIGNATURE | P.E. NUMBER | DATE

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	D. Eaton	D. Damren
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

REINFORCING STEEL SCHEDULE

SHEET NUMBER

66

OF 69

Filename: ...\00\bridge\msta\066_Rebar.dgn Division: BRIDGE Username: alan.nadeau Date: 3/23/2012

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
		Abutment No. 2	
B501	37	4'-5"	Vertical - Breastwall
B502	44	3'-0"	Vertical - Backwall
B511	27	25'-4"	Horiz. - Breastwall & Backwall
B512	4	5'-3"	Horizontal - Breastwall
B513	3	5'-7"	Horizontal - Breastwall
B514	9	11'-3"	Horizontal - Backwall
B515	9	7'-7"	Horizontal - Backwall
B516	11	11'-10"	Horiz. - Breastwall & Backwall
B517	10	7'-3"	Horiz. - Breastwall & Backwall
B518	3	11'-0"	Horizontal - Backwall
B519	3	7'-0"	Horizontal - Backwall
	Abutment No. 2		Northeast Wingwall
NE501	6	7'-0"	Vertical
NE502	2	4'-4"	Vertical
NE503	5	4'-9"	Vertical
NE511	3	6'-9"	Vertical
NE512	3	7'-7"	Vertical
NE513	6	5'-3"	Vertical
NE521	4	13'-6"	Horizontal
NE522	6	6'-10"	Horizontal
NE523	1	6'-7"	Horizontal
NE524	1	3'-0"	Horizontal
NE525	1	7'-2"	Horizontal
NE531	4	5'-0"	Horizontal
NE532	6	5'-6"	Horizontal
NE533	1	6'-3"	Horizontal
NE534	1	2'-8"	Horizontal
NE535	1	7'-2"	Horizontal
	Abutment No. 2		Southeast Wingwall
SE501	10	6'-8"	Vertical
SE502	3	4'-1"	Vertical
SE503	2	3'-8"	Vertical
SE504	1	10'-6"	Vertical
SE511	6	7'-4"	Vertical
SE512	6	6'-0"	Vertical
SE513	6	4'-7"	Vertical
SE521	3	13'-7"	Horizontal
SE522	5	9'-6"	Horizontal
SE523	1	7'-0"	Horizontal
SE524	1	5'-0"	Horizontal
SE525	1	2'-8"	Horizontal
SE526	1	9'-6"	Horizontal
SE531	3	8'-5"	Horizontal
SE532	5	8'-5"	Horizontal
SE533	1	6'-0"	Horizontal
SE534	1	4'-4"	Horizontal
SE535	1	2'-0"	Horizontal
SE536	1	9'-6"	Horizontal

MARK	QTY.	LENGTH	LOCATION
		Abutment No. 2 Footing	
FB501	34	11'-0"	Horizontal - Bottom
FB502	17	9'-6"	Horizontal - Bottom
FB503	14	11'-0"	Horizontal - Bottom
FB504	3	10'-0"	Horizontal - Bottom
FB511	12	39-0"	Horizontal - Top & Bottom
FB512	12	36'-0"	Horizontal - Top & Bottom
FB513	20	14'-6"	Horizontal - Top & Bottom
FB514	20	15'-3"	Horizontal - Top & Bottom
FB601	34	11'-0"	Horizontal - Top
FB602	14	11'-0"	Horizontal - Top
FB603	3	11'-0"	Horizontal - Top
FB701	17	9'-6"	Horizontal - Top
		Superstructure	
S501	8	3'-0"	Transverse - End Tapers
S502	8	3'-10"	Transverse - End Tapers
S503	8	4'-9"	Transverse - End Tapers
S504	8	5'-7"	Transverse - End Tapers
S505	8	6'-5"	Transverse - End Tapers
S506	8	7'-4"	Transverse - End Tapers
S507	8	8'-2"	Transverse - End Tapers
S508	8	9'-1"	Transverse - End Tapers
S509	8	9'-11"	Transverse - End Tapers
S510	8	10'-9"	Transverse - End Tapers
S511	8	11'-8"	Transverse - End Tapers
S512	8	12'-6"	Transverse - End Tapers
S513	8	13'-4"	Transverse - End Tapers
S514	8	14'-3"	Transverse - End Tapers
S515	8	15'-1"	Transverse - End Tapers
S516	8	16'-0"	Transverse - End Tapers
S517	8	16'-10"	Transverse - End Tapers
S518	8	17'-8"	Transverse - End Tapers
S519	76	18'-4"	Transverse - End Tapers
S520	558	35'-0"	Transverse
S521	26	40'-5"	Transverse - Ends (Skewed)
S522	24	8'-0"	Trans. - End Haunches (Skewed)
S523	12	2'-9"	Trans. - Hnch. Overhang (Skewed)
S531	180	60'-0"	Longitudinal
S532	90	48'-0"	Longitudinal
		Approach Slabs	
AS500	32	30'-0"	Transverse
AS501	32	9'-6"	Transverse
AS600	132	15'-0"	Longitudinal

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
							Abutment No. 2							
B551	37	7'-2"	S	0	2'-11"	2'-8"	1'-7"	--	--	0	--	--	--	Vertical - Breastwall
B552	37	6'-10"	S	0	0'-10"	5'-2"	0'-10"	--	--	0	--	--	--	Horizontal - Breastwall
B553	44	12'-0"	S	0	5'-2"	1'-8"	5'-2"	--	--	0	--	--	--	Vertical - Backwall
B554	42	10'-0"	S	0	4'-5"	1'-2"	4'-5"	--	--	0	--	--	--	Vertical - Backwall
B555	2	11'-4"	S	0	5'-1"	1'-2"	5'-1"	--	--	0	--	--	--	Vertical - Backwall
B561	8	10'-4"	L	9'-6"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B562	4	9'-0"	L	8'-2"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B563	1	10'-3"	L	9'-5"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B564	1	8'-11"	L	8'-1"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B565	1	7'-7"	L	6'-9"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B566	1	6'-3"	L	5'-5"	0'-10"	--	--	--	--	--	--	--	--	Horizontal - Bridge Seat
B567	1	8'-8"	S	0	0'-10"	7'-0"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
B568	1	8'-3"	S	0	0'-10"	6'-7"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
B569	1	7'-9"	S	0	0'-10"	6'-1"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
B570	1	7'-4"	S	0	0'-10"	5'-8"	0'-10"	--	--	0	--	--	--	Horizontal - Bridge Seat
B597	8	4'-9"	S	0	2'-1"	1'-2"	1'-6"	--	--	0	--	--	--	Curbs
B598	4	7'-3"	S	0	3'-0"	1'-3"	3'-0"	--	--	0	--	--	--	Curbs
B599	2	7'-5"	S	0	3'-0"	1'-5"	3'-0"	--	--	0	--	--	--	Curbs
B651	44	11'-6"	L	10'-6"	1'-0"	--	--	--	--	--	--	--	--	Vertical - Breastwall
							Abutment No. 2 Northeast Wingwall							
NE551	26	5'-0"	V	--	--	--	2'-6"	2'-6"	--	--	1'-3"	--	--	Horizontal - Corners
NE552	6	5'-0"	S	0	1'-11"	1'-2"	1'-11"	--	--	0	--	--	--	Vertical - Top of Wingwall
NE561	6	6'-0"	V	--	--	--	3'-0"	3'-0"	--	--	1'-3"	--	--	Horizontal - End Corners
NE562	6	5'-4"	V	--	--	--	2'-8"	2'-8"	--	--	1'-3"	--	--	Horizontal - End Corners
NE651	6	9'-6"	L	8'-6"	1'-0"	--	--	--	--	--	--	--	--	Vertical
							Abutment No. 2 Southeast Wingwall							
SE551	24	5'-0"	V	--	--	--	2'-6"	2'-6"	--	--	2'-2"	--	--	Horizontal - Corners
SE552	9	5'-0"	S	0	1'-11"	1'-2"	1'-11"	--	--	0	--	--	--	Vertical - Top of Wingwall
SE651	10	9'-2"	L	8'-2"	1'-0"	--	--	--	--	--	--	--	--	Vertical
							Superstructure							
S551	56	10'-4"	SJ	1'-10"	0'-11"	2'-8"	0'-11"	4'-0"	--	--	--	--	--	Longitudinal - End Haunches
S552	16	8'-0"	L	4'-0"	4'-0"	--	--	--	--	--	--	--	--	Drains
S553	233	5'-1"	SC	0'-6"	1'-4 1/2"	1'-3"	1'-5"	--	--	0'-6"	--	1'-4 1/2"	--	Left (High Side) Curb
S554	233	5'-2"	SC	0'-6"	1'-5 1/2"	1'-3"	1'-5"	--	--	0'-6"	--	1'-4 1/2"	--	Right (Low Side) Curb
S651	652	8'-1"	C	0'-8"	7'-5"	0	--	--	--	--	--	--	--	Transverse - Slab Overhangs

TYPE - BENDING DIAGRAMS

All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A 615/A 615M, Grade 60

GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

Mark "A502" = bar size #5
Mark "P805" = bar size #8
Mark "S650" = bar size #6

2. Each crank bar, Type B, may be replaced by two (2) straight bars (one top and one bottom) of the same bar size as the crank bar. Payment in either case will be based on crank bars as scheduled on the plans.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BR-1670(400)X

WIN 16704.00

BRIDGE NO. 2190

BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

	BY	DATE
PROJ. MANAGER	M. Parlin	
DESIGN-DETAILED	D. Eaton	D. Damren
CHECKED-REVIEWED	E. Caswell	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BONNY EAGLE COVERED BRIDGE
SACO RIVER
HOLLIS, YORK CTY. STANDISH, CUMBERLAND CTY.

REINFORCING STEEL SCHEDULE

SHEET NUMBER
67
OF 69

Filename: ...\00\bridge\msta\067_Rebar.dgn
Division: BRIDGE
Username: alan.nadeau
Date:3/23/2012

Filename: ...\00\ROW\MSTA\068_RWPLAN1.dgn Username: alan.nadeau Date:3/23/2012 Division: BRIDGE

EXISTING RIGHT OF WAY REFERENCES

TOWN OF STANDISH
ROUTE 35
1.) STATE OF MAINE - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY MAP FOR STATE AID HIGHWAY NO. 1
FEDERAL AID PROJECT NO. BH-000S(116)
PLAN DATE - OCTOBER 1989
D.O.T. FILE NO. 3-372
C.C.R.D PLAN BOOK 198 PAGE 320 & 321
CONDEMNATION DOCUMENT
A.) C.C.R.D. BOOK 9154 PAGE 116
DATE - APRIL 30, 1990
B.) C.C.R.D. BOOK 9164 PAGE 162
DATE - MAY 8, 1990
2.) CUMBERLAND COUNTY COMMISSIONERS
SUPREME JUDICIAL RECORDS
VOLUME 8 PAGE 108
1827 4 RODS WIDE
3.) PRESCRIPTIVE EASEMENT FOR
HIGHWAY PURPOSES WITHIN LIMITS OF
WROUGHT PORTION (L.O.W.P.)

TOWN OF HOLLIS
ROUTE 35
1.) CUMBERLAND COUNTY COMMISSIONERS
SUPREME JUDICIAL RECORDS
VOLUME 8 PAGE 108
1827 4 RODS WIDE
2.) YORK COUNTY COMMISSIONERS
VOLUME 13 PAGE 127
1794 3 RODS WIDE
3.) PRESCRIPTIVE EASEMENT FOR
HIGHWAY PURPOSES WITHIN LIMITS OF
WROUGHT PORTION (L.O.W.P.)
SAND POND ROAD
1.) YORK COUNTY COMMISSIONERS
VOLUME 15 PAGE 46
1822 4 RODS WIDE
2.) YORK COUNTY COMMISSIONERS
VOLUME 13 PAGE 127
1794 3 RODS WIDE
3.) PRESCRIPTIVE EASEMENT FOR
HIGHWAY PURPOSES WITHIN LIMITS OF
WROUGHT PORTION (L.O.W.P.)

STANDARD BOUNDARY SURVEY
PLAN OF PROPERTY
FOR NICHOLAS C. ACETO
BY STEPHEN J. MARTIN, PLS
DATE - JULY 20, 1998

CONTROL INFORMATION

HORIZONTAL DATUM - US STATE PLANE NAD83(1996)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD 88
COMBINED SCALE FACTOR - 0.9999735

GRID
MAINE 2000 WEST ZONE

STEPHAN G. PELLETIER
HOLLIS TAX MAP/LOT - 13/24B

JOSHUA J. SZAFRANSKI
PARCEL NO. (2)
LAND TAKEN = 1,087± S.F. (PRESC. EASE.)
LAND TAKEN = 8± S.F. (OTHER)
TOTAL LAND TAKEN = 1,095± S.F.
SLOPE EASE. = 544± S.F. (1)
TOTAL AREA = 5.50± AC.
REM. AREA = 5.47± AC.
HOLLIS TAX MAP/LOT - 13/24A

NOTE:
SUBJECT TO POSSIBLE WATER RIGHTS MENTIONED IN
Y.C.R.D. BOOK 873, PAGE 264

CURVE DATA #1
PI = 200+86.47
D = 28°19'50.6"
Δ = 46°18'04.3" Rt.
R = 202.24'
L = 163.43'
T = 86.47'
E = 17.71'

YVES J. VACHON
SANDRA G. VACHON
PARCEL NO. (4)
LAND TAKEN = 0.08± AC. (PRESC. EASE.)
LAND TAKEN = 1,678± S.F. (OTHER)
TOTAL LAND TAKEN = 0.12± AC.
SLOPE EASE. = 1, 544± S.F. (1)
TEMP. CONST. RIGHTS = 550± S.F. (1)
TOTAL AREA = 13.91± AC.
REM. AREA = 13.79±
HOLLIS TAX MAP/LOT - 13/24

NOTE:
SUBJECT TO POSSIBLE WATER RIGHTS MENTIONED IN
Y.C.R.D. BOOK 873, PAGE 264

KEITH DAVID GRAY
PARCEL NO. (1)
LAND TAKEN = 0.05± AC.
DRAINAGE EASEMENT = (1)
SLOPE EASE. = 1,152± S.F. (1)
TEMP. CONST. RIGHTS = 120± S.F. (1)
TOTAL AREA. = 1.72± AC. (PER SURVEY)
REM. AREA = 1.67± AC.
HOLLIS TAX MAP/LOT - 14/2,3,4

STANDARD BOUNDARY SURVEY
PLAN OF PROPERTY
FOR NICHOLAS C. ACETO
BY STEPHEN J. MARTIN, PLS
DATE - JULY 20, 1998

SKETCH PLAN
BETWEEN KEITH DAVID GRAY &
FPL ENERGY
BY MAINE BOUNDARY CONSULTANTS

FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (3)
LAND = 0.41± AC. (EASE. FOR HIGHWAY PURPOSES)
SLOPE EASE. = 0.08± AC. (3)
DRAINAGE EASE. = (1)
TEMP. CONST. RIGHTS = 1,575± S.F. (1)
TOTAL AREA = 10.0± AC. (PER TOWN)
HOLLIS TAX MAP/LOT - 14/1

CURVE DATA #1
PI = 106+41.28
D = 6°00'00.0"
Δ = 13°42'44.6" Rt.
R = 954.93'
L = 228.54'
T = 114.82'
E = 6.88'

TOE OF SLOPE DITCH
STA. 105+95± RT. TO STA 106+70± RT.

DRAINAGE OUTLET
STA. 104+22± RT.

DRAINAGE OUTLET
STA. 107+28± RT.

BONNY EAGLE PROJECT
FERC NO. 2529
PROJECT BOUNDARY IS AT ELEVATION 218'

20' X 20' LICENSE FOR STANDISH TELEPHONE
SEE PLAN Y.C.R.D. PLAN BOOK 247, PAGE 25
SEE PLAN C.C.R.D. PLAN BOOK 299, PAGE 187

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (5)
OMITTED
HOLLIS TAX MAP/LOT - 13/22

FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (6)
LAND = 0.17± AC. (EASE. FOR HIGHWAY PURPOSES)
SLOPE EASE. = 360± S.F. (1)
TEMP. CONST. RIGHTS = 0.05± AC. (1)
TOTAL AREA = 28.0± AC. (PER TOWN)

BONNY EAGLE COVERED BRIDGE
OVER
SACO RIVER

BRIDGE NO. 2190 WIN 16704.00

SYMBOLS
○WELL (WELL)
IP or ●IPF (IRON PIPE or PIN FOUND)
S.T. (SEPTIC TANK)
(ROW MONUMENT)
(TRAVERSE POINT)
GRADING LIMIT LINE
CONSTRUCTION LIMIT LINE
PROPERTY LINE
LIMITS OF WROUGHT PORTION (L.O.W.P.)
EXISTING RIGHT OF WAY
NEW RIGHT OF WAY
NEW ROW WITHIN EXIST. ROW
CONTROL OF ACCESS
WATER LINE
GAS LINE
ELECTRIC LINE
TELEPHONE LINE
SEWER LINE

ITEM	CHECKED	
BASE MAP		
EXIST. R/W	G.L.L.	C.W.K.
PROP. LINES	G.L.L.	G.L.L.
AREAS	G.L.L.	N.T.A.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016
HOLLIS\STANDISH
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
	YORK COUNTY R.O.D.	COND.	2/13/12	16261	110
	CUMBERLAND COUNTY R.O.D.	COND.	2/13/12	29345	306

DAVID BERNHARDT
COMMISSIONER
KENNETH L. SWEENEY
CHIEF ENGINEER
DATE

STATE OF MAINE
CHRISTOPHER W. KNIGHT 2257
PROFESSIONAL LAND SURVEYOR

STATE AID HIGHWAY NO. 1
BONNY EAGLE ROAD
HOLLIS\STANDISH YORK\CUMBERLAND CO.
FEDERAL AID PROJECT NO. BR-1670(400)X

AUGUST 2011 | RIGHT-OF-WAY MAP | D.O.T. FILE NOS. 16-474\3-573
SCALE 1"= 25' | SHEET 1 OF 2

SHEET NUMBER
68
OF 69

Filename: ...\00\ROW\MSTA\069_RWPLAN2.dgn Username: alan.nadeau Date:3/23/2012 Division: BRIDGE

CONTROL INFORMATION

HORIZONTAL DATUM - US STATE PLANE NAD83(1996)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - NAVD 88
COMBINED SCALE FACTOR - 0.9999735

PLAN OF BONNY EAGLE PROJECT
DETAIL MAP - RESERVOIR
OWNER RECORD - CENTRAL MAINE POWER CO.
Y.C.R.D. PLAN BOOK 247, PAGES 24-26
C.C.R.D. PLAN BOOK 199, PAGE 186-188

EXISTING RIGHT OF WAY REFERENCES

TOWN OF STANDISH
ROUTE 35
1.) STATE OF MAINE - DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY MAP FOR STATE AID HIGHWAY NO. 1
FEDERAL AID PROJECT NO. BH-000S(116)
PLAN DATE - OCTOBER 1989
D.O.T. FILE NO. 3-372
C.C.R.D PLAN BOOK 198 PAGE 320 & 321
CONDEMNATION DOCUMENT
A.) C.C.R.D. BOOK 9154 PAGE 116
DATE - APRIL 30, 1990
B.) C.C.R.D. BOOK 9164 PAGE 162
DATE - MAY 8, 1990
2.) CUMBERLAND COUNTY COMMISSIONERS
SUPREME JUDICIAL RECORDS
VOLUME 8 PAGE 108
1827 4 RODS WIDE
3.) PRESCRIPTIVE EASEMENT FOR
HIGHWAY PURPOSES WITHIN LIMITS OF
WROUGHT PORTION (L.O.W.P.)

TOWN OF HOLLIS
ROUTE 35
1.) CUMBERLAND COUNTY COMMISSIONERS
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1827 4 RODS WIDE
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HIGHWAY PURPOSES WITHIN LIMITS OF
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SAND POND ROAD
1.) YORK COUNTY COMMISSIONERS
VOLUME 15 PAGE 46
1822 4 RODS WIDE
2.) YORK COUNTY COMMISSIONERS
VOLUME 13 PAGE 127
1794 3 RODS WIDE
3.) PRESCRIPTIVE EASEMENT FOR
HIGHWAY PURPOSES WITHIN LIMITS OF
WROUGHT PORTION (L.O.W.P.)

FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (7)
OMITTED
STANDISH TAX MAP/LOT - 3/2

SAND POND ROAD
FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (5)
OMITTED
HOLLIS TAX MAP/LOT - 13/22
YORK COUNTY
CUMBERLAND COUNTY
SACO RIVER FLOW
APPROX. LOCATION
EASTERLY BANK OF THE SACO RIVER
SEE D.O.T. FILE NO. 3-372
EXISTING HIGHWAY EASEMENT
LTS. OF WROUGHT PORTION
764'±
BONNY EAGLE ROAD
STATE AID HIGHWAY NO. 1
201+63.43
112+00
328.76'
BONNY EAGLE ROAD
(ROUTE 35)
113+00
N80°15'03.4"E
114+00
266.24'
115+00
END B.L.
STA. 115+50.00
EXISTING CONST. LIMIT LINE
EXISTING CONST. LIMIT LINE
764'±
EXISTING HIGHWAY EASEMENT
111+00
110+00
109+00
108+00
N60°31'32.0"E
200.00'
189'±
60'±
12'±
237'±
147'±
440'±
4'±
51'±
160'±
118'±
EXISTING
CONST. LIMIT LINE
TEMP. CONST. LIMITS
0.05± AC.
SLOPE EASE. LIMITS
0.17± AC.
0.41± AC.
73'±
200.00'
127'±
70'±
50'
33'
48'
50'
59'±
100' EASEMENT
FOR CENTRAL MAINE POWER CO.
CMP167.1/144.1STC
CMP SEC. 170/4
CMP165/143STC
CMP1/1STC
BOTTOM MEASUREMENT
LARGE BOULDERS
STEEL GATE
GRAVEL ACCESS ROAD
TOWN LINE
WORK COMPLETED
STEEL GRATES
GRAVEL DRIVE
ISLAND DRIVE
NARROW ROAD ICON
DRAINAGE OUTLET
STA. 114+61± RT.
PT = STA. 112+83.76
P.I.
P.L.
STA. 101+55.69 = PC
FOR HIGHWAY PURPOSES)
TOWN OF HOLLIS
TOWN OF STANDISH
SACO RIVER FLOW

FPL ENERGY MAINE HYDRO LLC
PARCEL NO. (6)
LAND = 0.17± AC. (EASE. FOR HIGHWAY PURPOSES)
SLOPE EASE. = 360± S.F. (1)
TEMP. CONST. RIGHTS = 0.05± AC. (1)
TOTAL AREA = 28.0± AC. (PER TOWN)
STANDISH TAX MAP/LOT - 3/1

CURVE DATA #2
PI = 111+21.02
D = 6°00'00.0"
Δ = 19°43'31.4" Rt.
R = 954.93'
L = 328.76'
T = 166.02'
E = 14.32'

PEGGY S. YORK
LISA LENNAN
ITEM NO. (8)
DRAINAGE EASE. = (1)
TOTAL AREA = 2.9± AC.
(PER SUBDIVISION PLAN)
TAX MAP/LOT - 3/1B-1-1

PLAN SHOWING SUBDIVISION OF LAND
OF DAVID D. & JEANNE M. GRAY
BY DIRIGO LAND SERVICES, INC.
DATE - DEC. 7, 1992
REVISED DATE - DEC. 8, 1992
C.C.R.D. PLAN BOOK 192 PAGE 345

BONNY EAGLE PROJECT
FERC NO. 2529
PROJECT BOUNDARY IS AT ELEVATION 218'

PLAN OF BONNY EAGLE PROJECT
DETAIL MAP - RESERVOIR
OWNER RECORD - CENTRAL MAINE POWER CO.
Y.C.R.D. PLAN BOOK 247, PAGES 24-26
C.C.R.D. PLAN BOOK 199, PAGE 186-188

STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and recorded in
Plan Book _____, Page _____
Attest: _____
REGISTER

BONNY EAGLE COVERED BRIDGE
OVER
SACO RIVER
BRIDGE NO. 2190
WIN 16704.00

SYMBOLS
○MELL (MELL)
MELL - GRADING LIMIT LINE
CONSTRUCTION LIMIT LINE
PROPERTY LINE - PL
LIMITS OF WROUGHT PORTION (L.O.W.P.)
EXISTING RIGHT OF WAY
NEW RIGHT OF WAY
NEW ROW WITHIN EXIST. ROW
CONTROL OF ACCESS
• IP or ■ IP/P (IRON PIPE or PIN FOUND)
S.T. (SEPTIC TANK)
(ROW MONUMENT)
(TRAVERSE POINT)
WATER LINE
GAS LINE
ELECTRIC LINE
TELEPHONE LINE
SEWER LINE

ITEM	TECH	CHECKED
BASE MAP		C.W.K.
EXIST. R/W	G.L.L.	G.L.L.
PROP. LINES	G.L.L.	G.L.L.
AREAS	G.L.L.	N.T.A.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016
HOLLIS\STANDISH
RIGHT OF WAY MAP

REVISIONS

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	YORK COUNTY R.O.D.	COND.	2/13/12	16261	110
	CUMBERLAND COUNTY R.O.D.	COND.	2/13/12	29345	306

DAVID BERNHARDT
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DATE

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CHRISTOPHER W. KNIGHT 2257
PROFESSIONAL LAND SURVEYOR

STATE AID HIGHWAY NO. 1
BONNY EAGLE ROAD
HOLLIS\STANDISH YORK\CUMBERLAND CO.
FEDERAL AID PROJECT NO. BR-1670(400)X

AUGUST 2011 | RIGHT-OF-WAY MAP | D.O.T. FILE NOS. 16-474\3-573
SCALE 1" = 25' | SHEET 2 OF 2

SHEET NUMBER
69
OF 69