STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition 2017.

DESIGN LOADING

Live Load ..... HL - 93 Modified for Strength I

TRAFFIC DATA

Current (2020) AADT	7760
Future (2040) AADT	8540
DHV - % of AADT	10
Design Hour Volume	854
Heavy Trucks (% of AADT)	8
Heavy Trucks (% of DHV)	5
Directional Distribution (% of DHV)	54
18 kip Equivalent P 2.0	571
18 kip Equivalent P 2.5	544
Design Speed (mph)	50

HYDROLOGIC DATA

Drainage Area	2.00 sq mi
Design Discharge (Q50)	336.5 cfs
Check Discharge (Q100)	393.8 cfs
Headwater Elevation (Q1.1)	51.7 ft
Headwater Elevation (Q25)	52.9 ft
Headwater Elevation (Q50)	53.1 ft
Headwater Elevation (Q100)	53.3 ft
Discharge Velocity (Q1.1)	7.1 fps
Discharge Velocity (Q50)	10.6 fps
Discharge Velocity (Q100)	11.1 fps

MATERIALS

Concrete:	
Precast	Class "P"
Fill	"Fill"
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60
Welded Wire Reinforcement	ASTM A1064/A1064M

BASIC DESIGN STRESSES

Concrete	f 'c = 4,000 psi
Precast Concrete	f 'c = 5,000 psi
Reinforcing Steel	f y = 60,000 psi
Welded Wire Reinforcement	f y = 65,000 psi

CAMDEN
KNOX COUNTY
SPRING BROOK BRIDGE
OVER
SPRING BROOK
US ROUTE 1
PROJECT NO. NHPP-2260(800)
PROJECT LENGTH 1.54 mi.
BRIDGE NO. 2794

LIST OF DRAWINGS

UTILITIES

Central Maine Power Company
Fairpoint Communications
Lincolnville Telephone Company
Charter communications (TWC)
Maine Fiber Company

MAINTENANCE OF TRAFFIC

Traffic will be maintained with staged construction using one lane of alternation one-way traffic.

PROJECT LOCATION	Route 1 in Camden, approx. 0.9 miles southerly of Lincolnville T/L. Lat./Long. 44° 14' 20" N, 69° 02' 22" W
PROGRAM AREA	Highway Bridges - Traditional
OUTLINE OF WORK	Bridge replacement coinciding with 1.54 miles of roadway rehabilitation.

WIN 22608.00

NHPP-2260(800)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER: Paul Merrill	1-30-2020
CHIEF ENGINEER: Kyle Noll Taylor	1-28-2020

STATE OF MAINE · LICENSED PROFESSIONAL ENGINEER
Kendra C.P. Nash
15874

PROJECT INFORMATION		
PROGRAM	BRIDGE	
PROJECT MANAGER	ANDREW LATHE	
DESIGNER	KENDRA NASH	
CONSULTANT		
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

	SIGNATURE	P.E. NUMBER	DATE
DESIGNED		15874	1/23/2020
DRAWN			
CHECKED			
QUANTITIES CHECKED			

CAMDEN
SPRING BROOK BRIDGE

TITLE SHEET

SHEET NUMBER
A1
OF A 25

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.2318	DISPOSAL OF SPECIAL WASTE	20	T
203.33	SPECIAL FILL	350	CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES	80	CY
502.22	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (PLACED UNDER WATER)	145	CY
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT	1	LS
526.301	TEMPORARY CONCRETE BARRIER TYPE 1 (200 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	2	UN
531.51	BRIDGE STRUCTURE - DETAIL BUILD	1	LS
610.16	HEAVY RIPRAP	398	CY
610.18	STONE DITCH PROTECTION	10	CY
610.210	STREAM CHANNEL ROCK	400	CY
610.212	STREAMBED ROCK FEATURES	320	CY
613.319	EROSION CONTROL BLANKET	10	SY
620.58	EROSION CONTROL GEOTEXTILE	443	SY
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	9	EA
652.33	DRUM	20	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES (150 CD)	1	LS
652.38	FLAGGER	120	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
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 the Right of Way Map in the Highway Plans.

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

3. All embankment material, except as otherwise shown, placed below EL. 53.1 shall be Granular Borrow meeting the requirements of Standard Specifications Subsection 703.19, Material for Underwater Backfill.

4. Place a 24 inch wide strip of Temporary Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.

5. Where it is apparent that runoff will cause continual erosion, 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. Payment will be made under the appropriate Contract items.

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

   On all concrete headwalls and concrete wall surfaces that are exposed and to limit lines, one foot beyond intersections of concrete surfaces with the ground.

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

8. 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.

9. The hydrologic report of the bridge site may be accessed at the MaineDOT web address. The hydrologic report is based on Maine DOT 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.

10. The project geotechnical report titled: Geotechnical Design Report for the Replacement of: Spring Brook Bridge Camden Maine, Soils Report 2020-04, January 17, 2020 may be accessed at the MaineDOT web address.

11. 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.

12. 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 and Time.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2		------	------
DESIGN3-DETAILED3		------	------
REVISIONS 1		------	------
REVISIONS 2		------	------
REVISIONS 3		------	------
REVISIONS 4		------	------
FIELD CHANGES		------	------

SIGNATURE

P.E. NUMBER

DATE

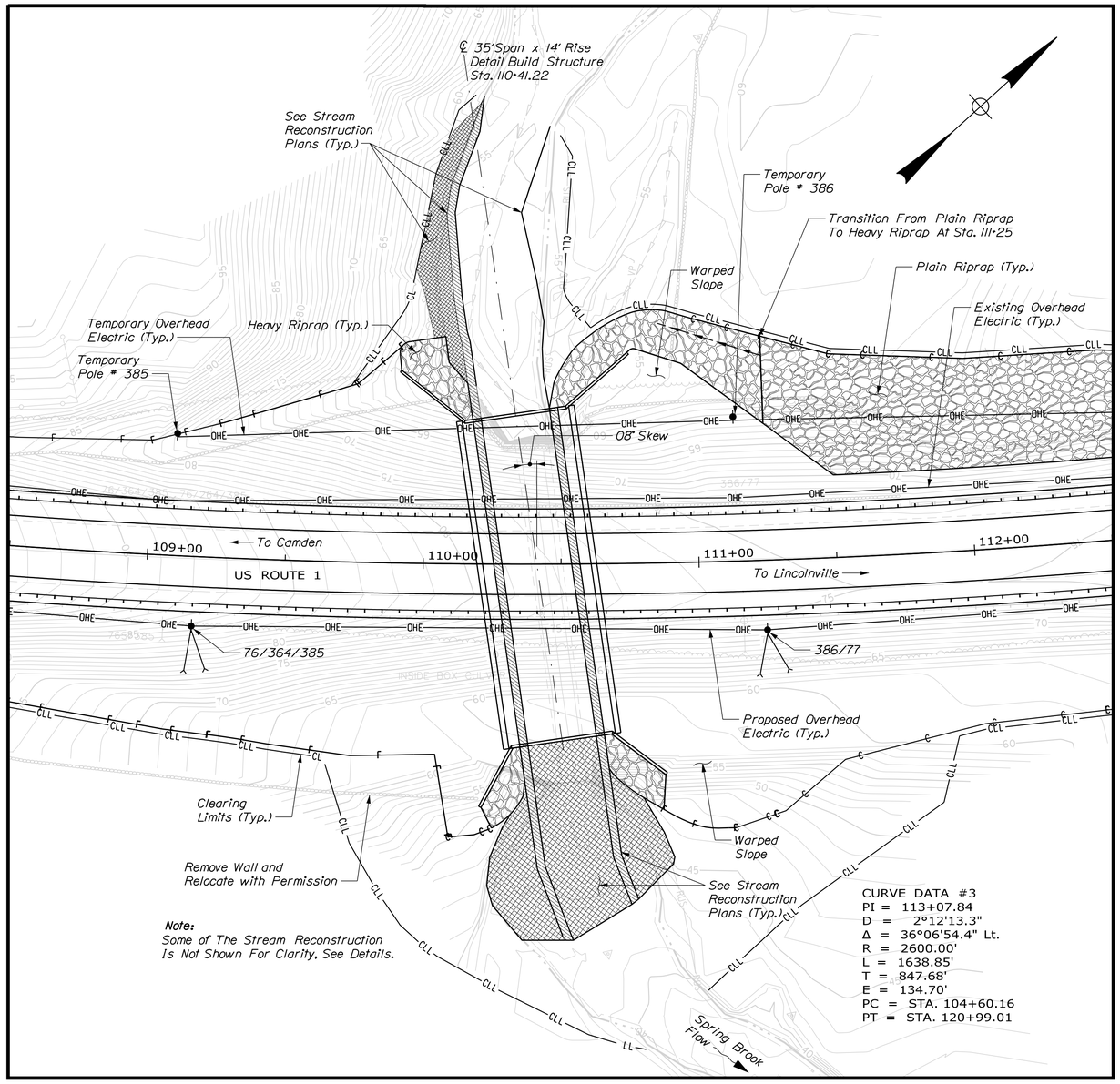
SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

ESTIMATED QUANTITIES &
GENERAL CONSTRUCTION NOTES

SHEET NUMBER

A2

OF A 25



PLAN

25 0 25 50

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER ANDREW LATHE		
DESIGN-DETAILED	KCN	
CHECKED-REVIEWED	GAC	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	J. Brunelle	01/2020
REVISIONS 2	MRP	01/2020
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

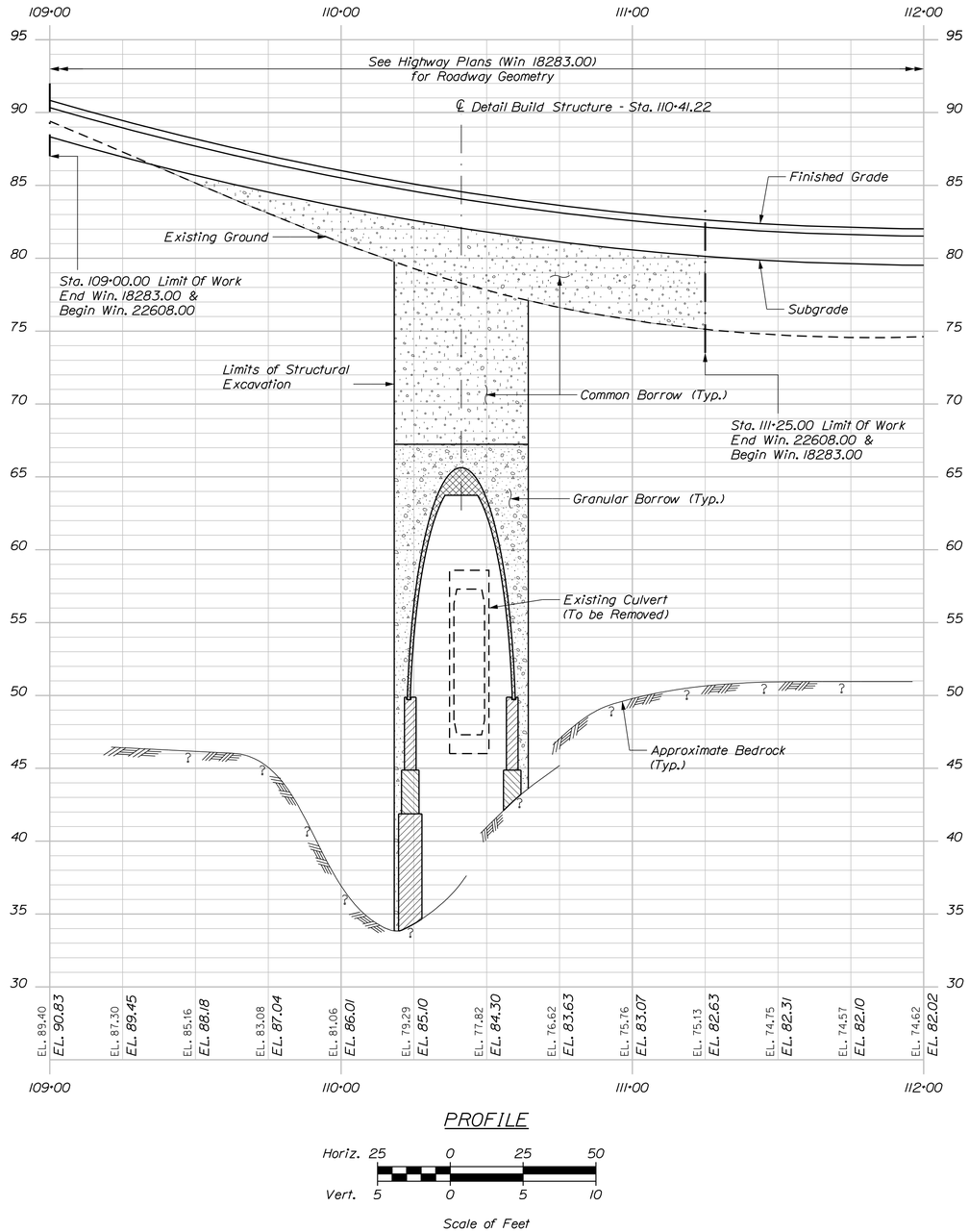
SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

GENERAL PLAN

SHEET NUMBER

A3

OF A 25



PROFILE

Horiz. 25 0 25 50

Vert. 5 0 5 10

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE		
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BY DATE

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

PROFILE

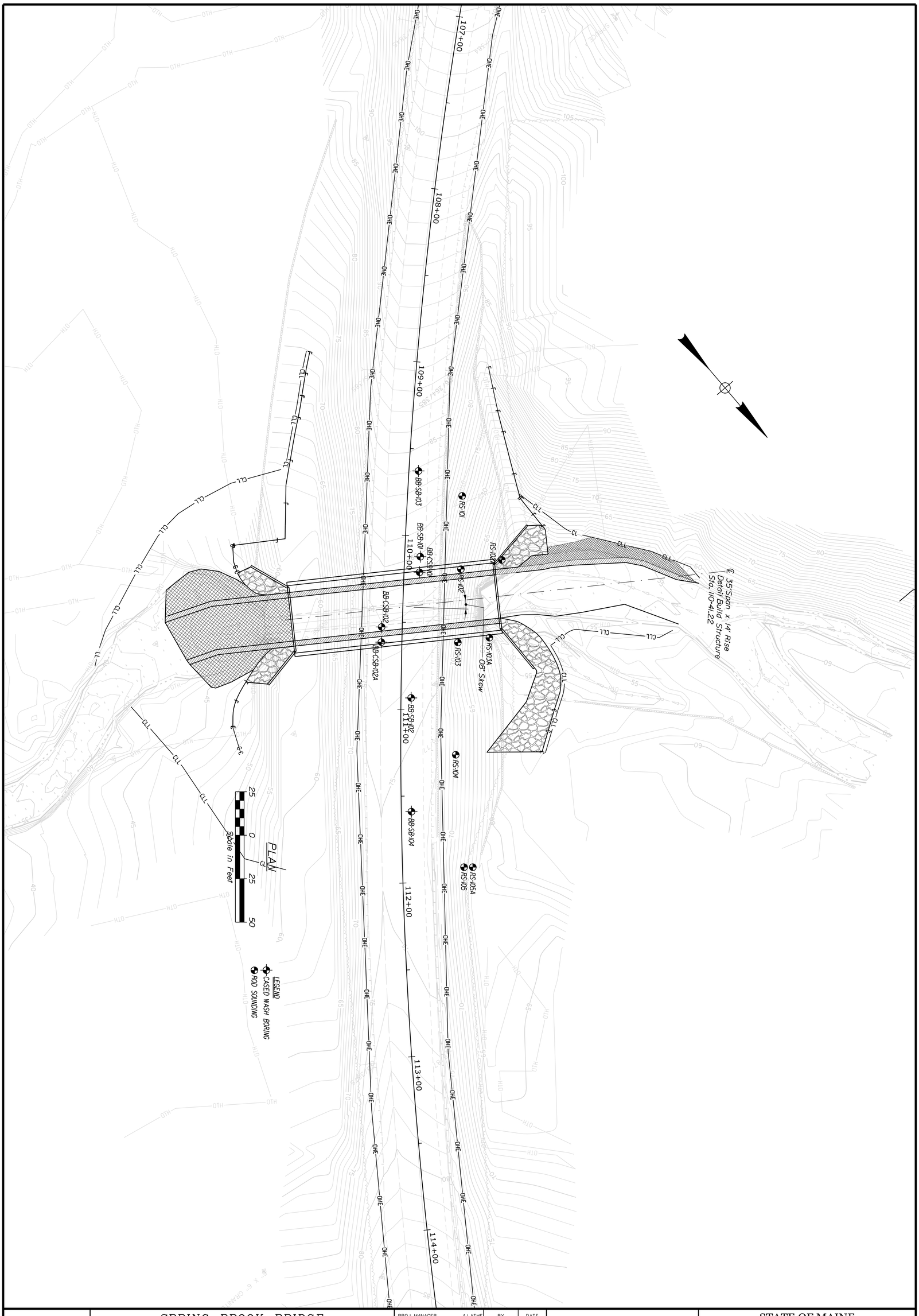
SHEET NUMBER

A4

OF A 25

Filename: ...\00\BRIDGE\MSTA\004_Profile.dgn Division: BRIDGE Username: Jeremiah.Brunelle Date:1/23/2020

Filename: ...\00\GEOTECH\MSTA\005_BLP1.dgn Division: BRIDGE Username: Jeremiah.Brunelle Date:1/23/2020



SHEET NUMBER A5 OF A25

SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

BORING LOCATION PLAN

PROJ. MANAGER	A.LATHE	BY	DATE
DESIGN-DETAILED	KCN	JAB	03.07.2018
CHECKED-REVIEWED	_____	_____	_____
DESIGN2-DETAILED2	L.KRUSINSKI	T.WHITE	DEC 2019
DESIGN3-DETAILED3	_____	_____	_____
REVISIONS 1	_____		_____
REVISIONS 2	_____		_____
REVISIONS 3	_____		_____
REVISIONS 4	_____		_____
FIELD CHANGES	_____		_____

SIGNATURE

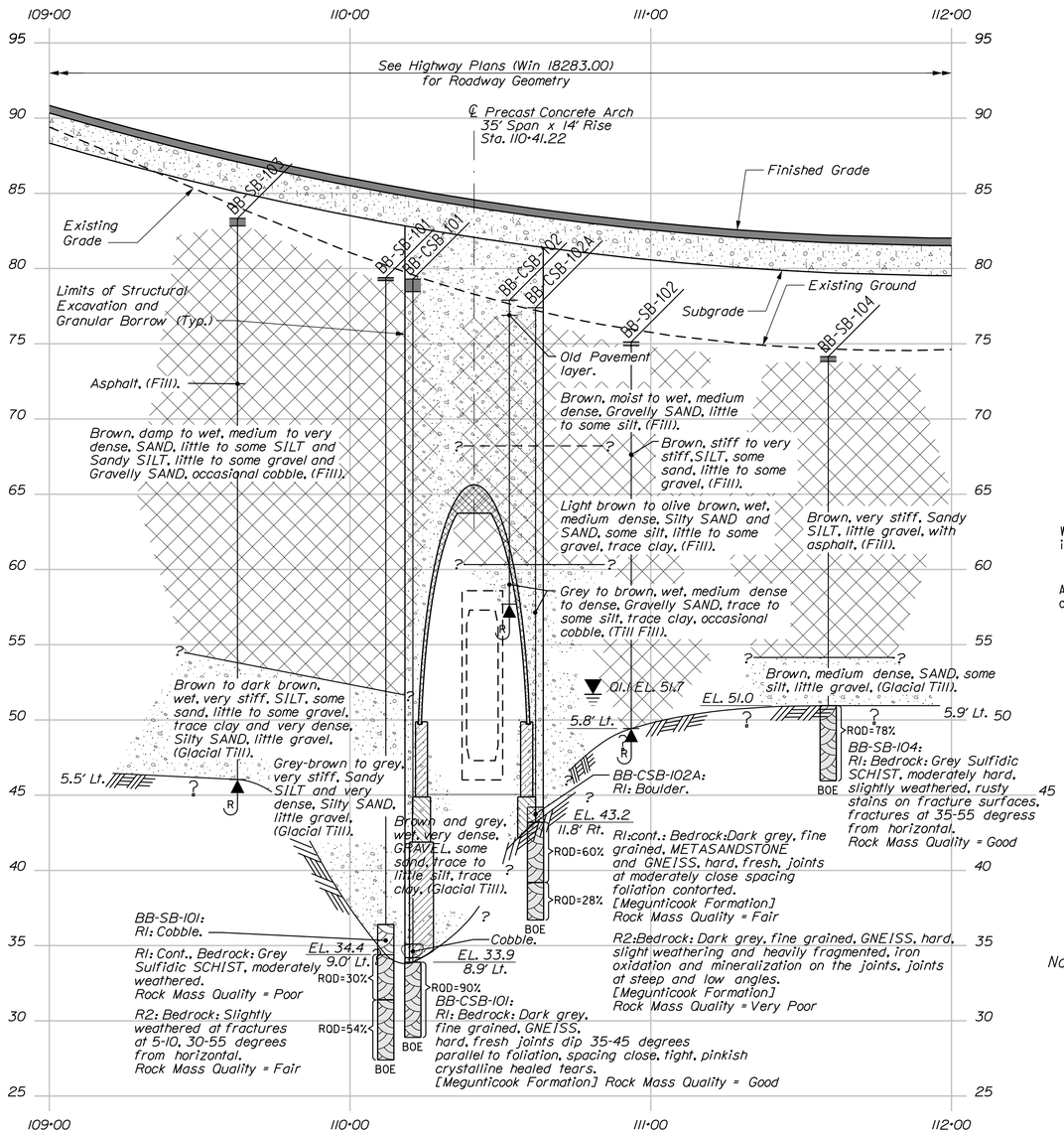
P.E. NUMBER

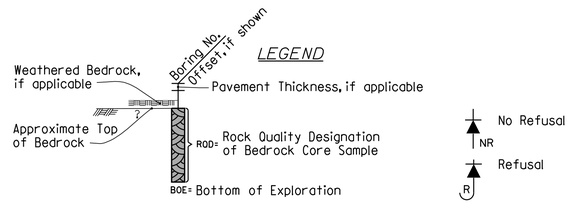
DATE

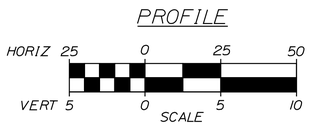
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

BRIDGE NO. 2794 WIN 22608.00 BRIDGE PLANS







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 and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794 — BRIDGE PLANS

	A.LATHE	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	KCN	JAB	03.07.2018
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	J.KRUSINSKI	T. WHITE	DEC 2019
DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER

A6

OF A25

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Spring Brook Bridge #2784 carries US Route 1 over Spring Brook
Location: Camden, Maine

Boring No.: BB-CSB-101
WIN: 22608.00

Drillers:	MaineDOT	Elevation (ft.):	79.3	Auger ID/OD:	5" Solid Stem
Operator:	Giles/Daggett/Giles	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/24/2015 0630-1230	Drilling Methods:	Cased Wash Boring	Core Barrel:	NQ-2"
Boring Location:	110+20.7, 8.3 ft Lt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.908		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 = Field Vane Shear Test. PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
HSA = Hollow Stem Auger
RC = Roller Cone
MOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOH = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), S_r = Pocket Torvane Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
$N_{uncorrected}$ = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor(60%)•$N_{uncorrected}$
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. Sample 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							55A	78.5		10" Pavement	
	10	24/12	1.00 - 3.00	9/13/16/10	29	44				Brown, damp, dense, SAND, some gravel, little silt. (Fill).	
								77.7		0.8	
5	20	24/15	5.00 - 7.00	4/6/7/9	13	20				Brown, moist, very stiff, Sandy SILT, little gravel. (Fill).	GM264783 A-4, SM WC=11.6%
10	30	24/13	10.00 - 12.00	3/3/4/6	7	11	11			Brown, moist, stiff, SILT, some sand, some gravel, trace clay. (Fill).	GM264784 A-4, SC-SM WC=12.4%
							15				
							36				
							37				
15	40	24/14	15.00 - 17.00	6/5/8/9	13	20	38			Brown, wet, medium dense, SAND, some gravel, little silt (Fill).	GM264785 A-1-b, SM WC=15.2%
							13				
							33				
							51				
							53				
20	50	24/13	20.00 - 22.00	14/7/6/14	13	20	55			Brown, wet, very stiff, SILT, some sand, some gravel, trace clay.	GM264786 A-4, SC-SM WC=14.5%
							28				
							42				
							43				
							51				
							174				
25	60	24/10	25.50 - 27.50	9/12/27/18	39	59	79				
							62			Roller Cored ahead to 25.5 ft bgs.	
							57			Similar to above, except very dense and occasional cobble.	
							40	50.8		Roller Cored ahead to 30.0 ft bgs.	
30	70	24/14	30.00 - 32.00	11/19/19/19	38	58	46			28.5	
							43			Brown, wet, very dense, GRAVEL, some sand, trace silt. (Glacial Till).	GM264787 A-1-a, GW-GM WC=7.3%
							82				
							80				
							78				
35	80	24/16	35.00 - 37.00	17/15/13/9	28	42	36				
							40			Similar to above, except dense.	
							86			Roller Cored ahead to 40.0 ft bgs.	
							66				
							94				
40	90	8.4/6	40.00 - 40.70	57/40(2.4")	---		48			Grey, wet, very dense, GRAVEL, some sand, little silt, trace clay. (Glacial Till).	GM264788 A-1-a, GC-GM WC=6.0%
							64				
							73			Roller Cored ahead to 45.4 ft bgs.	
							75				
							040			040 blows for 0.2 ft. Cobble from 44.2-45.1 ft bgs.	
45	R1	60/60	45.40 - 50.40	RQD = 90%			NQ-2	33.9		45.4	
										Top of Bedrock at Elev. 33.9 ft. Rlt Bedrock: Dark grey, fine grained, GNEISS, hard, fresh joints dip 35-45 degrees parallel to foliation, spacing close, tight, pinkish crystalline healed tears, iron staining on some joints. [Meguntcook Formation] Rock Mass Quality = Good Rlt:Core Times (minssec) 45.4-46.4 ft (4134) 46.4-47.4 ft (3131) 47.4-48.4 ft (3138) 49.4-50.4 ft (3150) 100% Recovery Bent Casing	
								28.9			
50										50.4	
										Bottom of Exploration at 50.4 feet below ground surface.	
55											
60											
65											
70											

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-CSB-101

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Spring Brook Bridge #2784 carries US Route 1 over Spring Brook
Location: Camden, Maine

Boring No.: BB-CSB-102
WIN: 22608.00

Drillers:	MaineDOT	Elevation (ft.):	77.9	Auger ID/OD:	5" Solid Stem
Operator:	Giles/Daggett/Giles	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/24/2015 1230-1630	Drilling Methods:	Cased Wash Boring	Core Barrel:	N/A
Boring Location:	110+43.1, 11.8 ft Rt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.908		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 = Field Vane Shear Test. PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
HSA = Hollow Stem Auger
RC = Roller Cone
MOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOH = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), S_r = Pocket Torvane Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
$N_{uncorrected}$ = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor(60%)•$N_{uncorrected}$
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. Sample 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	10	24/16	0.00 - 2.00	8/4/5/4	9	14	55A			Brown, moist, medium dense, Gravelly, SAND, little silt. (Fill). Old pavement layer at 1.0 ft bgs.	
5	20	24/8	5.00 - 7.00	3/4/5/6	9	14				Brown, wet, medium dense, Gravelly, SAND, some silt. (Fill).	GM264789 A-1-b, SM WC=8.1%
10	30	24/14	10.00 - 12.00	4/5/7/4	12	18	28			Light brown, wet, medium dense, Silty SAND, little gravel, trace clay. (Fill).	GM264790 A-4, SC-SM WC=15.6%
							26				
							23				
							37				
15	40	24/15	14.00 - 16.00	12/6/5/13	11	17	22			Olive-brown, wet, medium dense, GRAVEL, some silt, some sand, trace clay. (Fill).	GM264791 A-2-4, GC-GM WC=16.0%
							65				
							160			Roller Coned ahead to 17.0-19.0 ft bgs. 17.5	
							83	60.4			
							22			Grey, wet, very dense, GRAVEL, some sand, some silt, trace clay, occasional cobble. (Fill).	GM264792 A-2-4, GC-GM WC=10.5%
20	50	14.4/10	19.00 - 20.20	8/4/50(2.4")	---			57.7		20.2	
										Bottom of Exploration at 20.2 feet below ground surface. Top of Concrete Box, moved to BB-CSB-102A	

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-CSB-102

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Spring Brook Bridge #2784 carries US Route 1 over Spring Brook
Location: Camden, Maine

Boring No.: BB-CSB-102A
WIN: 22608.00

Drillers:	MaineDOT	Elevation (ft.):	77.4	Auger ID/OD:	5" Solid Stem
Operator:	Giles/Daggett/Giles	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	6/24/2015 1230-1630	Drilling Methods:	Cased Wash Boring	Core Barrel:	N/A
Boring Location:	110+43.1, 11.8 ft Rt.	Casing ID/OD:	NW	Water Level*:	None Observed
Hammer Efficiency Factor: 0.908		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 = Field Vane Shear Test. PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
HSA = Hollow Stem Auger
RC = Roller Cone
MOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WOH = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), S_r = Pocket Torvane Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
$N_{uncorrected}$ = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = Hammer Efficiency Factor(60%)•$N_{uncorrected}$
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. Sample 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							55A			Auger to 20.0 ft bgs and set in NW Casing. No soil samples recovered. Soils similar to BB-CSB-102.	
5											
10											
15											
20	10	24/14	20.00 - 22.00	22/14/9/6	23	35	10	57.4		20.0	
							13			Brown, wet, dense, Gravelly, SAND, some silt, occasional cobble. (Till Fill).	
							9				
							14				
							36				
25	20	24/4	25.00 - 27.00	12/8/9/11	17	26	20			Similar to above, except medium dense.	
							36				
							61				
							112				
							89				
30	30	24/10	30.00 - 32.00	3/7/12/13	19	29	27			Brown, wet, medium dense, Gravelly, SAND, trace silt. (Till Fill).	GM264793 A-1-a, SW-SM WC=13.4%
							65				
							141				
35	R1	60/60	33.20 - 38.20	RQD = 60%			NQ-2	44.2		33.2	
								43.2		Rlt:Boulder. Rlt:Core Times (minssec) (33.2-34.2 ft (1:152)	
										34.2	
	R2	30/30	38.20 - 40.70	RQD = 11%						Top of Bedrock at Elev. 43.2 ft. Rlt:Bedrock: Dark grey, fine grained, METASANDSTONE and GNEISS, hard, fresh, joints at moderately close spacing, foliation contorted. [Meguntcook Formation]. Rock Mass Quality = Fair Rlt:Core Times (minssec) 34.2-35.2 ft (3:122) 35.2-36.2 ft (2:45) 36.2-37.2 ft (2:17) 37.2-38.2 ft (2:28) 100% Recovery R2: Bedrock: Dark grey, fine grained, GNEISS, hard, slight weathering and heavily fragmented, iron oxidation and mineralization on the joints, joints at steep and low angles. [Meguntcook Formation] Rock Mass Quality = Very Poor R2:Core Times (minssec) 38.2-39.2 ft (3:10) 39.2-40.2 ft (3:05) 40.2-40.7 ft (5:00) 100% Recovery Core Blocked	
40								36.7		40.7	
										Bottom of Exploration at 40.7 feet below ground surface.	
45											
50											
55											
60											
65											
70											

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-CSB-102A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

	BY	DATE
ALATHE	JAB	03.07.2018
KCN	-----	-----
L.KRUSINSKI	T.WHITE	DEC 2019
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-----	-----	-----

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

SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

BORING LOGS

SHEET NUMBER
A7
OF A25

Filename: ...\MSTA\008_BORING LOGS2.dgn Username: Jeremiah.Brunelle Date:1/23/2020 Division: BRIDGE

Maine Department of Transportation — Boring No.: BB-SB-103

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: US RT. 1 SPRING BROOK SLOPE REHABILITATIONS
Location: RT. 1, CAMDEN, MAINE
WIN: 22608.00

Driller:	MAINE TEST BORING, INC.	Elevation (ft.): 83.34	Auger ID/OD:
Operators:	MEL COFFIN	Datum:	Sampler: SS
Logged By:	TAMMY GRENIER	Rig Type: TRAILER MOUNT	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	04-01-03	Drilling Method: CASING	Core Barrel:
Boring Location:	109+62.6, 5.5 ft LEFT	Casing ID/OD: NW	Water Level*: CAVED TO 22.3 ft. WET

Definitions: D = Split Spoon Sample S = Sample off Auger Flight; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger; B = Bucket Sample off Auger Flight; S_u = Insitu Field Vane Shear Strength (psf); T_v = Pocket Torvane Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); $S_{ur(lab)}$ = Lab Vane Shear Strength (psf); WOH = weight of 140lb. hammer; WOR = weight of rods; MC = water content, percent; I = Similar or Equal too; LL = Liquid Limit; RC = Roller Cone ahead; 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.) Pen. Resistance Strength, Qp or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							82.84		BITUMINOUS PAVEMENT — 0.50	
									- VERY DENSE -	
5	10	24/8	4.20 - 6.20	29-26-17-14	43	24				
						29				
						30				
						22				
						80				
10	20	24/8	10.00 - 12.00	17-16-22-35	38	52			BROWN SAND, SOME GRAVEL, LITTLE SILT, WITH ASPHALT (FILL) — wn=15.7%	
						16			- DENSE -	
						15				
						20				
15	30	24/5	15.00 - 17.00	16-11-8-10	19	32			- MEDIUM DENSE -	
						21				
						19				
						40				
						74				
20	40	24/2	20.00 - 22.00	42-26-20-16	46	52			BROWN SAND, SOME GRAVEL, SOME SILT (FILL)	
						20			- DENSE -	
						30				
						48				
						43				
25						40				
	50	24/1	25.00 - 27.00	15-13-22-55	35	19				
						28				
						56				
						314				
30	60	24/12	29.50 - 31.50	6-12-14-16	28	102 12	53.84		DARK BROWN SILT, SOME SAND, LITTLE GRAVEL — 29.50	
						22				
						40				
						21				
						30				
35	70	16/12	35.00 - 36.33	17-30-100/.3"		54			GRAY-BROWN SANDY SILT, LITTLE GRAVEL (TILL)	
						236			- VERY DENSE -	
							46.04		Bottom of Exploration at 37.30 feet below ground surface. REFUSAL ON PROBABLY BEDROCK — 37.30	
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil typest 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-SB-103

Maine Department of Transportation — Boring No.: BB-SB-101

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: US RT. 1 SPRING BROOK SLOPE REHABILITATIONS
Location: RT. 1, CAMDEN, MAINE
WIN: 22608.00

Driller:	MAINE TEST BORING, INC.	Elevation (ft.): 79.4	Auger ID/OD:
Operators:	MEL COFFIN	Datum:	Sampler: SS
Logged By:	TAMMY GRENIER	Rig Type: TRAILER MOUNT	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	3-26-03	Drilling Method: CASING	Core Barrel: B
Boring Location:	110+11.9, 9.0 ft LEFT	Casing ID/OD: NW	Water Level*: CAVED TO 28.0 ft. DRY

Definitions: D = Split Spoon Sample S = Sample off Auger Flight; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger; B = Bucket Sample off Auger Flight; S_u = Insitu Field Vane Shear Strength (psf); T_v = Pocket Torvane Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); $S_{ur(lab)}$ = Lab Vane Shear Strength (psf); WOH = weight of 140lb. hammer; WOR = weight of rods; MC = water content, percent; I = Similar or Equal too; LL = Liquid Limit; RC = Roller Cone ahead; 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.) Pen. Resistance Strength, Qp or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							79.20		BITUMINOUS PAVEMENT — 0.20	
	10	24/18	4.00 - 6.00	47-26-14-14	40	27	75.40		BROWN SAND, SOME SILT, LITTLE GRAVEL (FILL) — 4.00	wn=16.1%
5						22			- DENSE -	
						16				
						18				
						16				
10	20	24/9	10.00 - 12.00	6-8-6-6	14	8			- MEDIUM DENSE -	
						11				
						20				
						32				
15	30	24/9	15.00 - 17.00	15-8-12-9	20	31				
						N/A				
						15				
						15				
20	40	24/7	20.00 - 22.00	45-16-28-33	44	38			- DENSE -	
						22				
						47				
						53				
25	50	24/0	25.00 - 27.00	41-39-40-24		44				
						15				
						33				
						232	51.90		PUSHED COBBLE — 27.50	
						237				
30	60	24/8	30.00 - 32.00	4-5-97-75	102	73			BROWN SILTY SAND, LITTLE GRAVEL	
						21			- VERY DENSE -	
						128				
						80				
						75				
35	70	0/0	35.00 - 35.00	53/0"		20	44.00		CORED THROUGH COBBLE — 35.40	
						300+				
						223				
						400				
						33				
						48				
40	80	1/1	40.00 - 40.08	100/1"					GRAY SILTY SAND, LITTLE GRAVEL (TILL)	
									- VERY DENSE -	
	1R	60/38	43.00 - 48.00						CORED THROUGH COBBLES 43'-45'	
45				30%			34.40		GRAY SULFIDIC SCHIST MODERATELY HARD, MODERATELY WEATHERED, RUSTY STAINS VISIBLE ON FRACTURE SURFACES — 45.00	
	2R	48/44.4	48.00 - 52.00	54%					SMALL MICA CRYSTALS ABUNDANT, BECOMING SLIGHTLY WEATHER FRACTURES AT 5°-10°, 30°-55° FROM HORIZONTAL	
50							27.40		Bottom of Exploration at 52.00 feet below ground surface. — 52.00	
55										
60										
65										
70										
75										

Remarks:

COULD NOT FIT N CORE BARREL PAST 25.0 ft.

Stratification lines represent approximate boundaries between soil typest 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-SB-101

Maine Department of Transportation — Boring No.: BB-SB-102

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: US RT. 1 SPRING BROOK SLOPE REHABILITATIONS
Location: RT. 1, CAMDEN, MAINE
WIN: 22608.00

Driller:	MAINE TEST BORING, INC.	Elevation (ft.): 75.13	Auger ID/OD:
Operators:	DARREL MCKEEN	Datum:	Sampler: SS
Logged By:	TAMMY GRENIER	Rig Type: TRAILER MOUNT	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	3-28-03	Drilling Method: CASING	Core Barrel:
Boring Location:	110+93.5, 5.8 ft LEFT	Casing ID/OD: NW	Water Level*: CAVED TO 8.5 ft. DRY

Definitions: D = Split Spoon Sample S = Sample off Auger Flight; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger; B = Bucket Sample off Auger Flight; S_u = Insitu Field Vane Shear Strength (psf); T_v = Pocket Torvane Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); $S_{ur(lab)}$ = Lab Vane Shear Strength (psf); WOH = weight of 140lb. hammer; WOR = weight of rods; MC = water content, percent; I = Similar or Equal too; LL = Liquid Limit; RC = Roller Cone ahead; 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.) Pen. Resistance Strength, Qp or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						N	74.88		BITUMINOUS PAVEMENT — 0.25	
									BROWN SILT, SOME GRAVEL, SOME SAND (FILL)	
5	10	24/9	5.00 - 7.00	9-10-8-6	18	12			- MEDIUM DENSE -	
						11				
						37				
						53				
10	20	24/8	10.00 - 12.00	18-29-17-28	46	29				
						20			- DENSE -	
						12				
						26				
15	30	11/6	15.00 - 15.92	61-165/5"		20				
						22				
						66			- VERY DENSE -	
						195			COBBLES	
20	40	19/4	20.10 - 21.68	6-9-3-110/1"	12	38				
						36				
						29			BROWN SILT, SOME SAND, LITTLE GRAVEL (FILL)	
25	50	8/2	25.00 - 25.67	78-127/3"		21			- MEDIUM DENSE -	
						17			COBBLES	
						700				
						106				
						61	49.43		Bottom of Exploration at 25.70 feet below ground surface. REFUSAL ON PROBABLE BEDROCK — 25.70	
30										
35										
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil typest 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-SB-102

Maine Department of Transportation — Boring No.: BB-SB-104

Soil/Rock Exploration Log — US CUSTOMARY UNITS

Project: US RT. 1 SPRING BROOK SLOPE REHABILITATIONS
Location: RT. 1, CAMDEN, MAINE
WIN: 22608.00

Driller:	MAINE TEST BORING, INC.	Elevation (ft.): 74.15	Auger ID/OD:
Operators:	MEL COFFIN	Datum:	Sampler: SS
Logged By:	TAMMY GRENIER	Rig Type: TRAILER MOUNT/MOBILE	Hammer Wt./Fall: 140#/30"
Date Start/Finish:	04-01-03	Drilling Method: CASING	Core Barrel: N
Boring Location:	111+59, 5.9 ft LEFT	Casing ID/OD: NW	Water Level*: 27.0 ft. CAVED TO 22.6 ft.

Definitions: D = Split Spoon Sample S = Sample off Auger Flight; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger; B = Bucket Sample off Auger Flight; S_u = Insitu Field Vane Shear Strength (psf); T_v = Pocket Torvane Shear Strength (psf); q_p = Unconfined Compressive Strength (ksf); $S_{ur(lab)}$ = Lab Vane Shear Strength (psf); WOH = weight of 140lb. hammer; WOR = weight of rods; MC = water content, percent; I = Similar or Equal too; LL = Liquid Limit; RC = Roller Cone ahead; 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.) Pen. Resistance Strength, Qp or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							73.82		BITUMINOUS PAVEMENT — 0.33	
5						32				
						11				
						7				
						6				
10	10	24/3	10.00 - 12.00	15-14-10-32	24	18			BROWN SANDY SILT, LITTLE GRAVEL, WITH ASPHALT (FILL) — wn=15.5%	
						14			- MEDIUM DENSE -	
						22				
						47				
15						62				
						31				
	20	24/2	15.00 - 17.00	19-10-13-8	23	8				
						9				
						19				
						30				
20						14	54.15		BROWN SAND, SOME SILT, LITTLE GRAVEL (TILL) — 20.00	
	30	24/1	20.00 - 22.00	5-8-9-8	17	7			- MEDIUM DENSE -	
						9				
						25				
	1R	60/60	23.20 - 28.20	78%			50.95		GRAY SULFIDIC SCHIST MODERATELY HARD, SLIGHTLY WEATHERED, RUSTY STAINS ON FRACTURE SURFACES FRACTURES AT 35°-45°,55° FROM HORIZONTAL — 23.20	
25										
30										
35										
40										
45							45.95		Bottom of Exploration at 28.20 feet below ground surface. — 28.20	
50										

Remarks:

OUTCROPS ABOUT 300.0 ft TO THE NE OF RT. 1.

Stratification lines represent approximate boundaries between soil typest 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-SB-104

Rod Sounding Probe Summary Sheet

Town(s): Camden — **Project Number: 22608.00**

Sounding Number	Station (Feet)	Offset (Feet)	Refusal (Feet)	No Refusal (Feet)	Water Elev.(ft)	Ground Surface Elevation (Feet)
RS-101	109+75.6	31.4 Lt.		6.0		76
RS-102	110+18.2	32.6 Lt.		6.0		71.1
RS-102A	110+11.8	55.9 Lt.		6.0		68.9
RS-103	110+60.9	32.2 Lt.		6.0		58.7
RS-103A	110+57.8	50.3 Lt.	3.6			58.5
RS-104	111+26.3	31.6 Lt.		6.0		69.5
RS-105	111+91.8	35.4 Lt.	3.7			65.9
RS-105A	111+92	40.3 Lt.	5.1			63.7

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP-2260(800)
WIN 22608.00
BRIDGE NO. 2794
BRIDGE PLANS

PROJ. MANAGER	ALATHE	BY	DATE
DESIGN-DETAILED	KCN	JAB	03.07.2018
CHECKED-REVIEWED	-----	-----	-----
DESIGN2-DETAILED2	L.KRUSINSKI	T. WHITE	DEC 2019
DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
REVISIONS 4	-----	-----	-----
FIELD CHANGES	-----	-----	-----

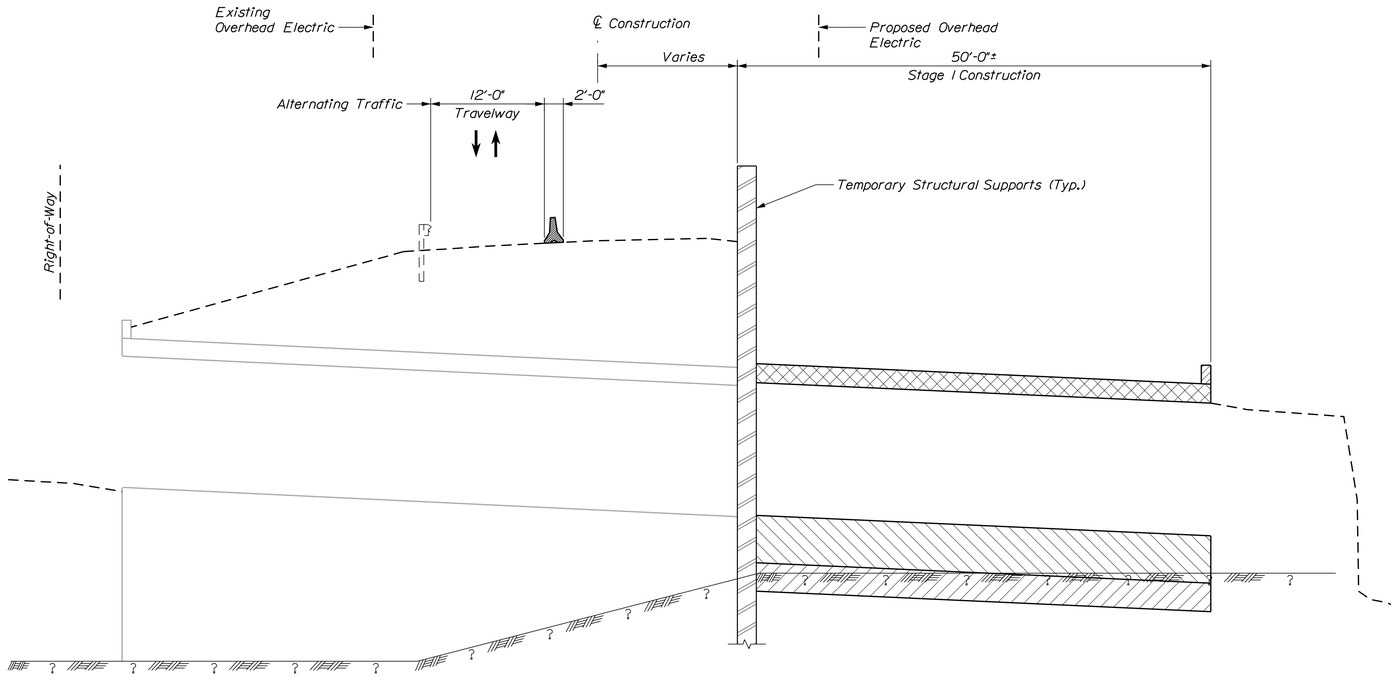
SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK KNOX COUNTY
CAMDEN
BORING LOGS

SHEET NUMBER
A8
OF A25

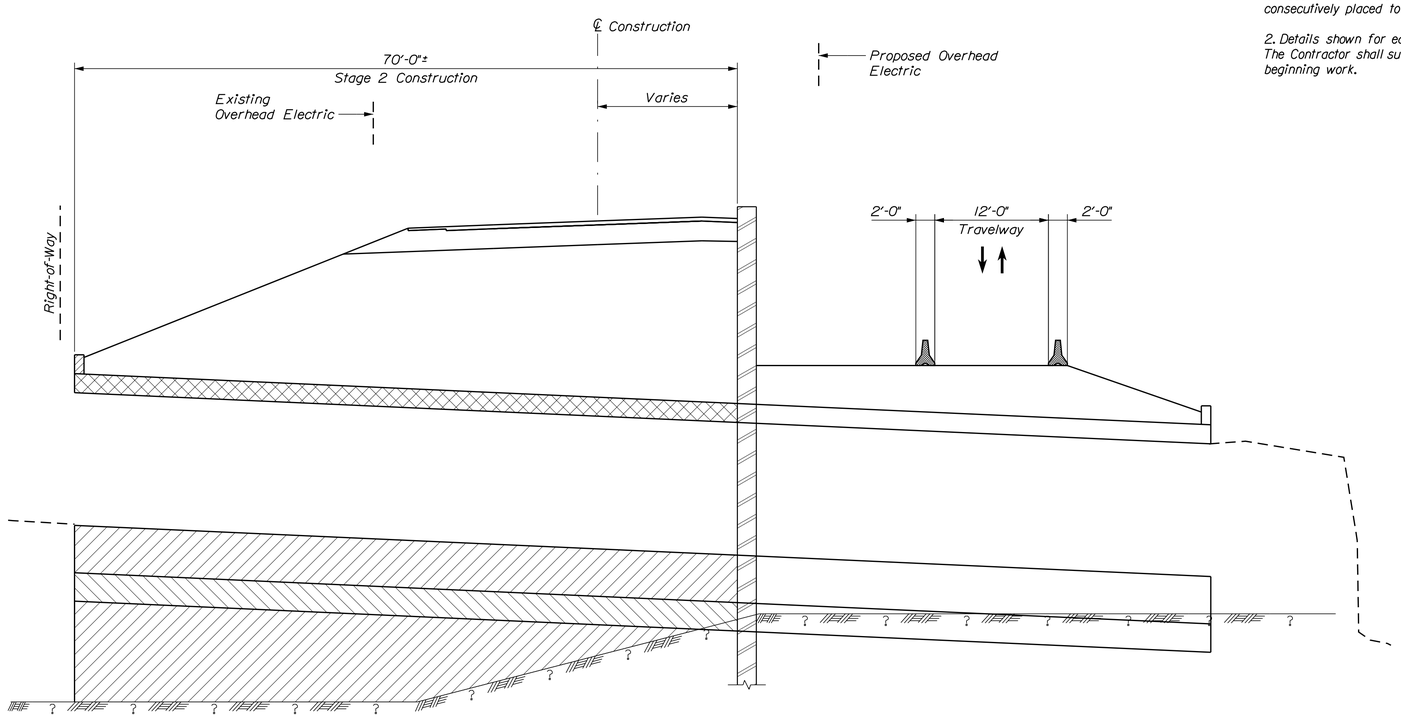


STAGE 1 CONSTRUCTION

STAGED CONSTRUCTION NOTES

1. Placement of the buried structure shall begin at the downstream end and be consecutively placed to the upstream end.

2. Details shown for each stage of construction are for illustrative purposes only. The Contractor shall submit a traffic maintenance plan to the Resident before beginning work.



STAGE 2 CONSTRUCTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	ANDREW LATHE	
DESIGN-DETAILED	KCN	01/2020
CHECKED-REVIEWED	CAG	01/2020
DESIGN2-DETAILED2	MRP	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

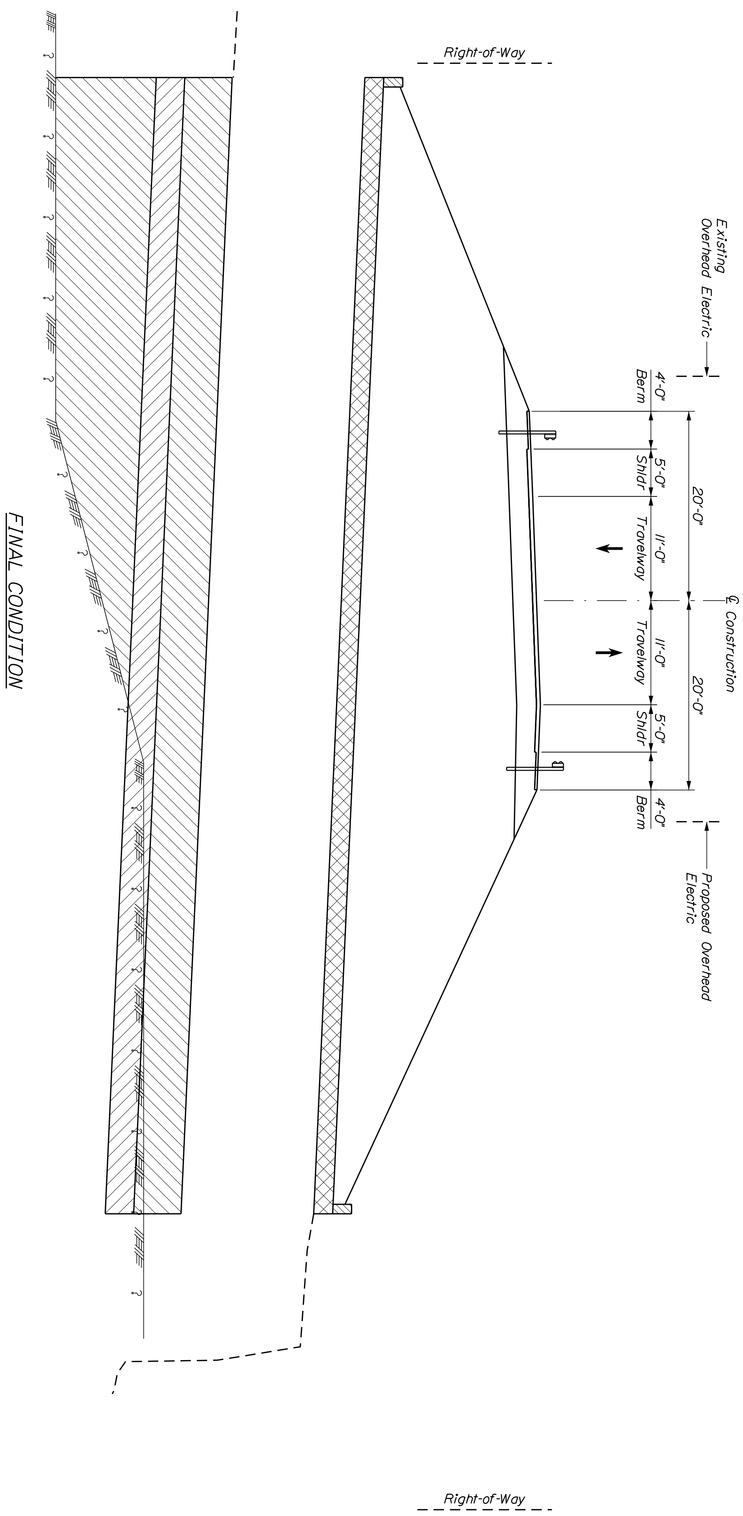
CONCEPTUAL STAGED
CONSTUCTION PLANS 1 OF 2

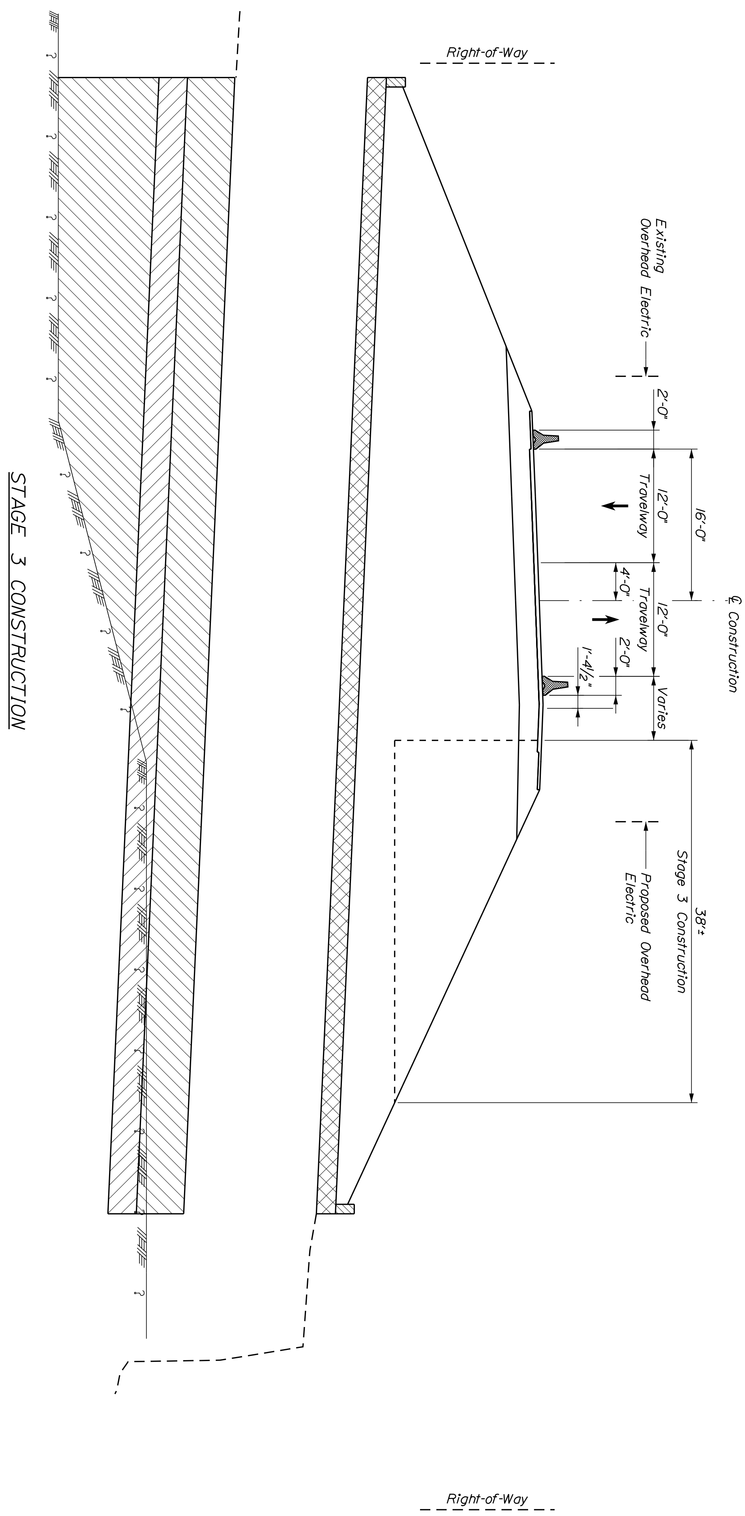
SHEET NUMBER

A9

OF A 25

Filename: ...\MSTA\009_StageConstr_01.dgn Division: BRIDGE Username: Jeremiah.Brunelle Date:1/23/2020





SHEET NUMBER A10 OF A 25

SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

CONCEPTUAL STAGED CONSTUCTION PLANS 2 OF 2

PROJ. MANAGER ANDREW LATHE		BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

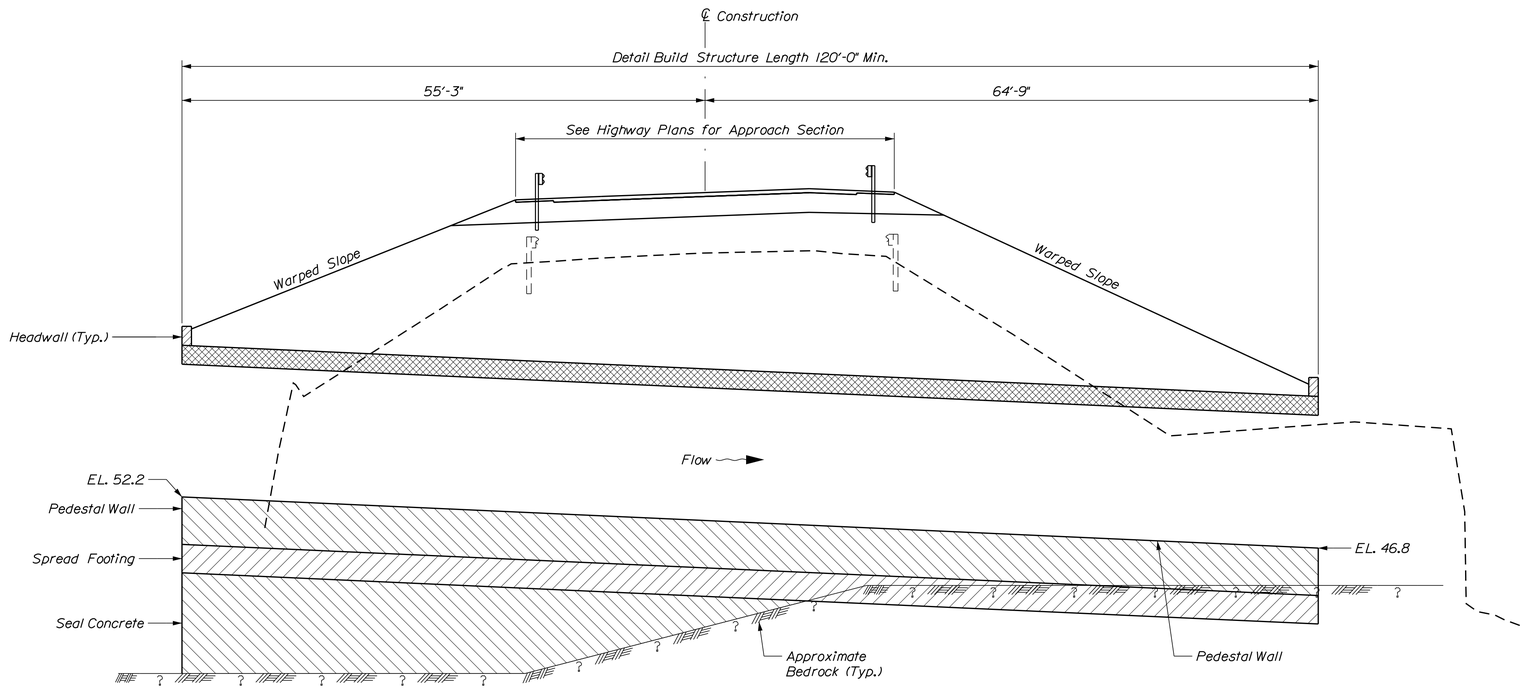
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

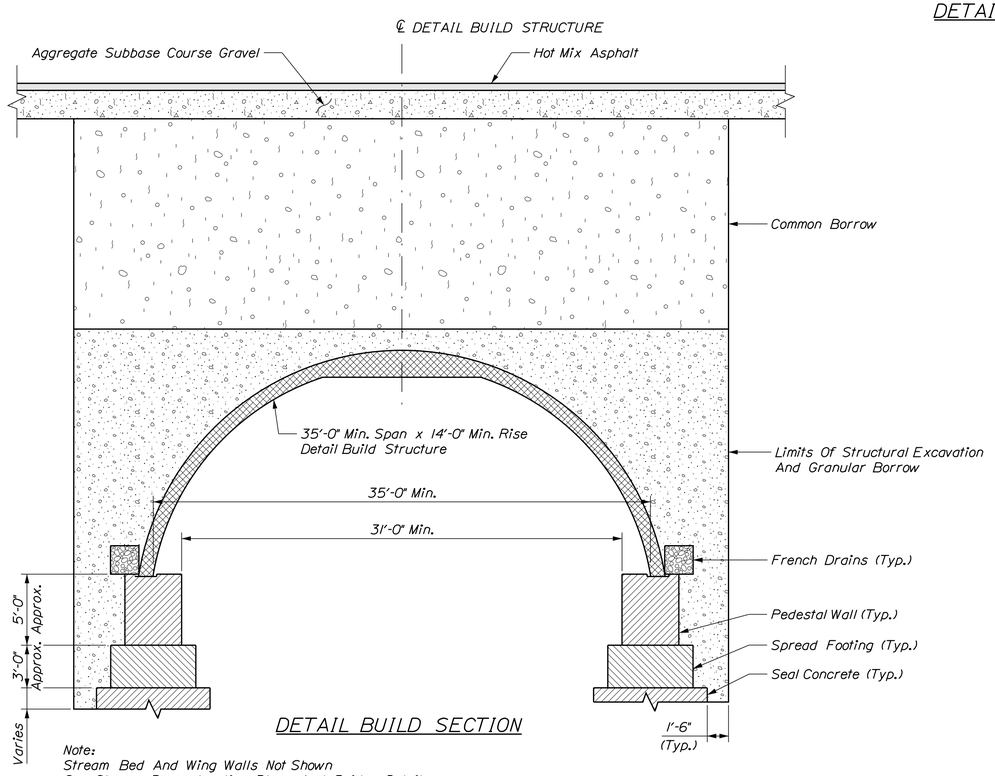
NHPP-2260(800)

BRIDGE NO. 2794 **WIN 22608.00** BRIDGE PLANS



DETAIL BUILD LONGITUDINAL SECTION

Wing Walls Not Shown For Clarity



DETAIL BUILD SECTION

Note:
Stream Bed And Wing Walls Not Shown
See Stream Reconstruction Plans And Bridge Details.

DETAIL BUILD BRIDGE STRUCTURE NOTES:

1. Structure and foundation are shown for illustrative purposes only. See Special Provision 531.

2. Construct French Drains behind each base of the Structure Detail Build and wingwalls in accordance with Standard Specification Section 512, French Drains. Daylight french drains through weepholes in the wingwalls. Coordinate daylight locations with Resident in field.

3. Foundations for detail build structure are shown for illustrative purposes only. Actual dimensions will vary based on the Contractor's proposed design concept. See Special Provision 531 and Project Geotechnical Report for additional information and design requirements.

4. Foundation concrete shall be placed on bedrock, cleaned of all loose rock or soil. The bedrock subgrade shall be confirmed to be relatively level. Where the bedrock slope exceeds 4H:1V, the bedrock shall be benched to make level steps or made completely level. When prepared bedrock surface is below the bottom of the footing, concrete seal may be placed to fill the void.

5. Concrete seal shown for illustrative purposes only. Actual height of the seal will vary based on the field verified bedrock elevations. Concrete seal shall be paid under Item No. 502.22 Structural Concrete, Abutments and Retaining Walls (Placed Under Water). Seal concrete shall be Class FIII.

6. The depth, nature, slope and degree of fracturing in the bedrock is unknown and will not be known until excavations are made.

STATE OF MAINE
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NHPP-2260(800)

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BRIDGE NO. 2794 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	ANDREW LATHE	
DESIGN-DETAILED	KCN	01/2020
CHECKED-REVIEWED	CAG	01/2020
DESIGN2-DETAILED2	MRP	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

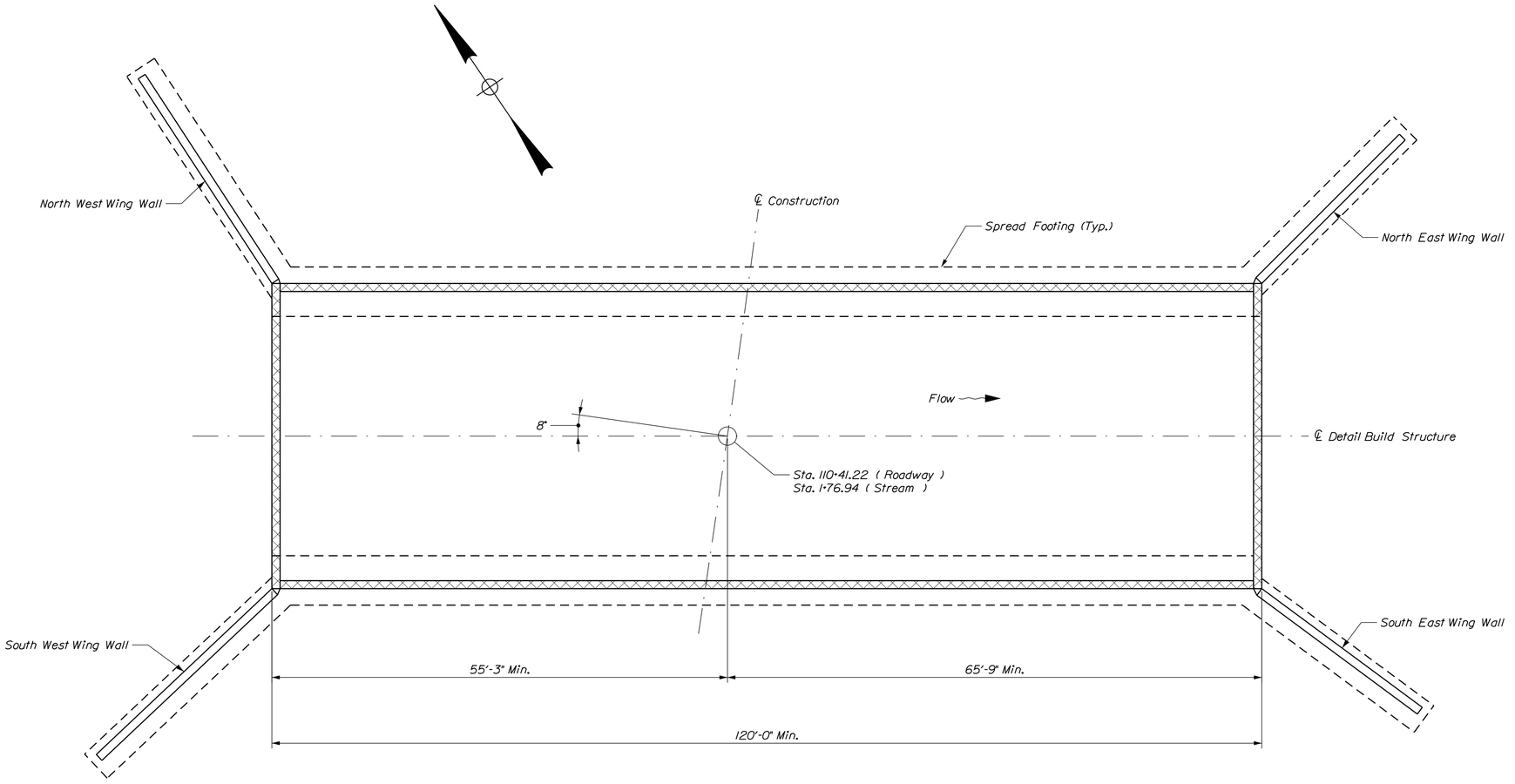
SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

BRIDGE DETAILS 1 OF 3

SHEET NUMBER

A11

OF A 25



DETAIL BUILD STRUCTURE PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	ANDREW LATHE		
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2	------	------	------
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

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DATE

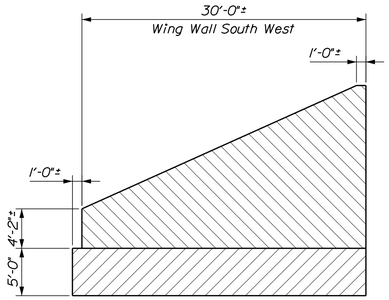
SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

BRIDGE DETAILS 2 OF 3

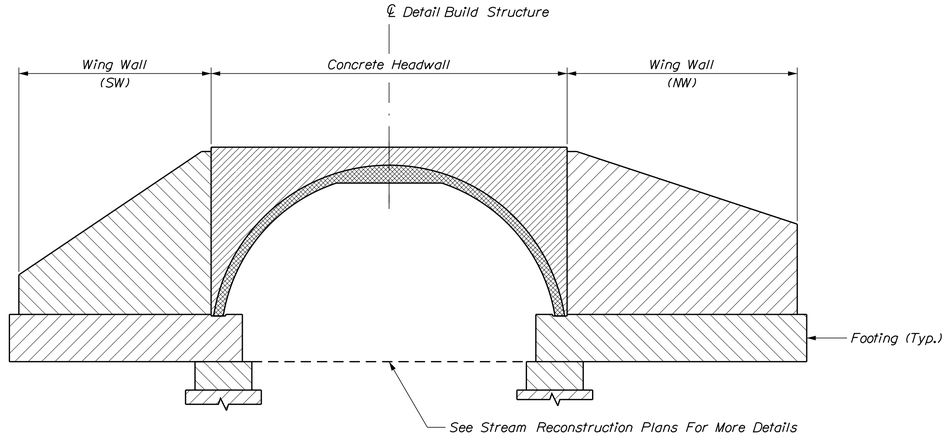
SHEET NUMBER

A12

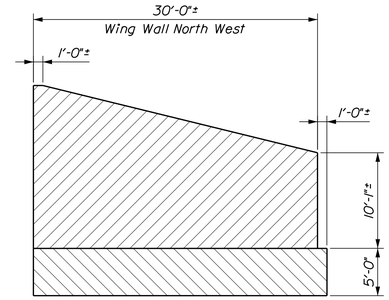
OF A 25



SOUTH WEST WING WALL



WEST HEADWALL



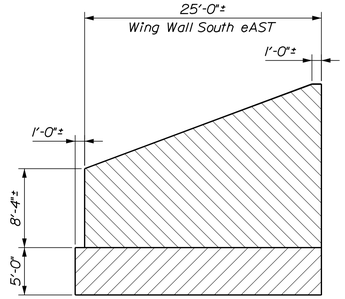
NORTH WEST WING WALL

DETAIL BUILD BRIDGE HEADWALL AND WING WALL NOTES:

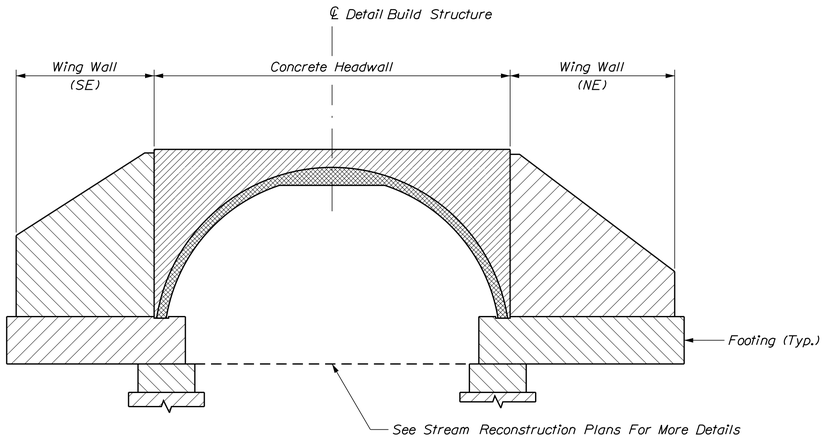
1. Detail build headwall and wingwall structure shown is for illustrative purposes only. See Special Provision 531 and Project Geotechnical Report.

2. Wingwalls and their footings shall be backfilled with Granular Borrow. Backfill will not be measured for payment, but shall be included in the Detail Build Structure Pay Item.

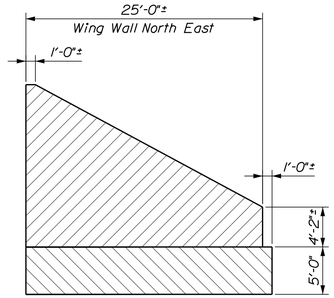
3. Refer to the Project Geotechnical Report for detail build wingwall geotechnical design requirements.



SOUTH EAST WING WALL



EAST HEADWALL



NORTH EAST WING WALL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2		------	------
DESIGN3-DETAILED3		------	------
REVISIONS 1		------	------
REVISIONS 2		------	------
REVISIONS 3		------	------
REVISIONS 4		------	------
FIELD CHANGES		------	------

SIGNATURE

P.E. NUMBER

DATE

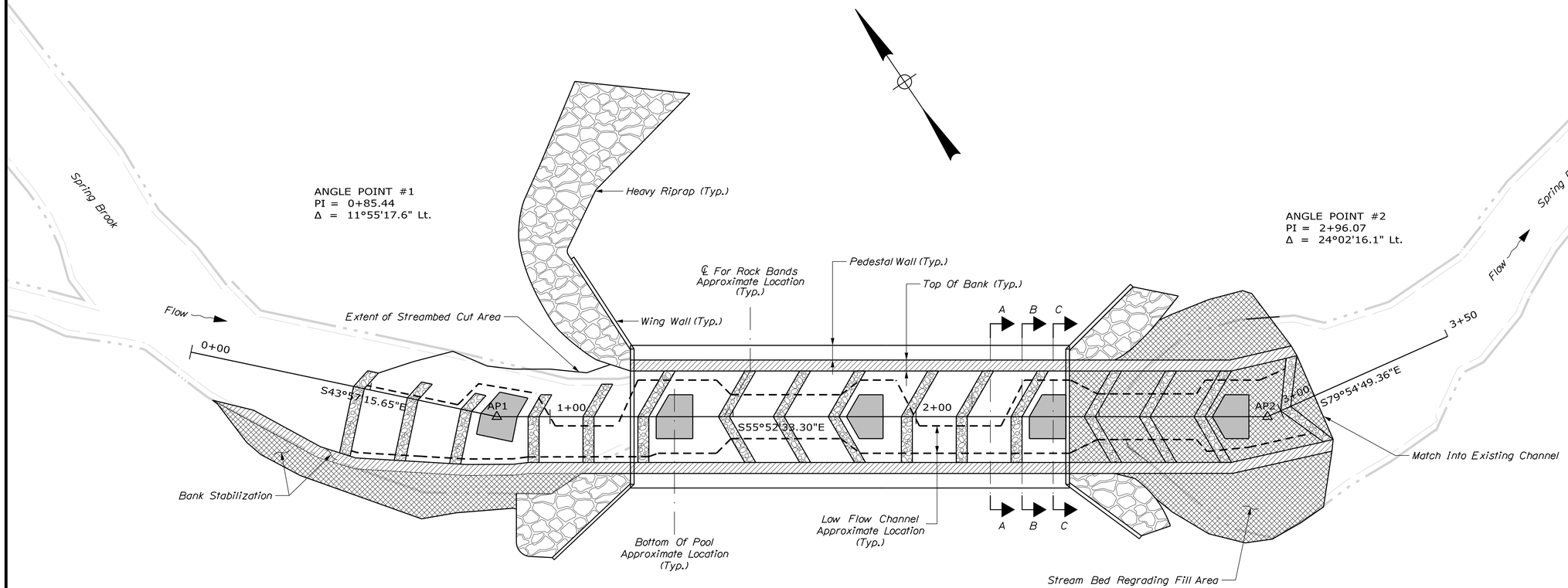
SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

BRIDGE DETAILS 3 OF 3

SHEET NUMBER

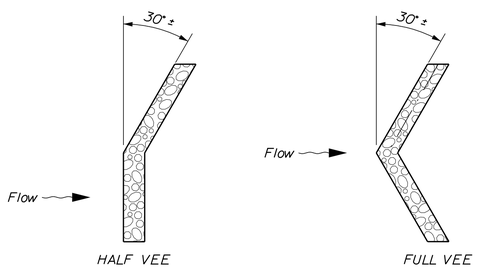
A13

OF A 25



STREAM RECONSTRUCTION PLAN

Note:
Sections A-A, B-B and C-C are Shown on the Typical In-Structure Cross-Sections page.



TYPICAL ROCK BAND PLAN

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794 — BRIDGE PLANS

	BY	DATE
PROJ. MANAGER ANDREW LATHE	J. Brunelle	01/2020
DESIGN-DETAILED	KCN	01/2020
CHECKED-REVIEWED	CAG	------
DESIGN2-DETAILED2	M. Lickus	------
DESIGN3-DETAILED3	------	------
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	------
REVISIONS 4	------	------
FIELD CHANGES	------	------

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P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

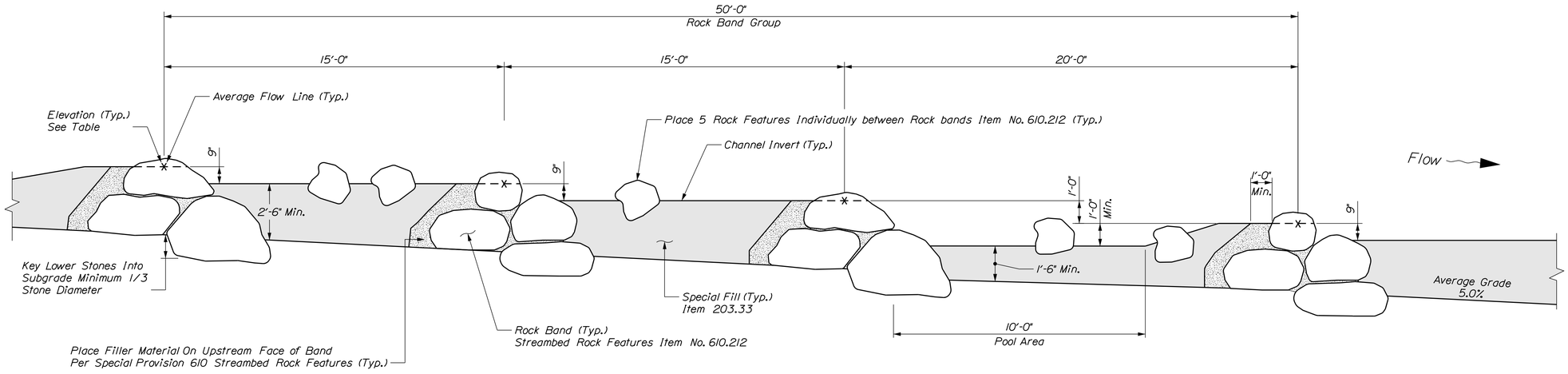
STREAM RECONSTRUCTION PLAN

SHEET NUMBER

A14

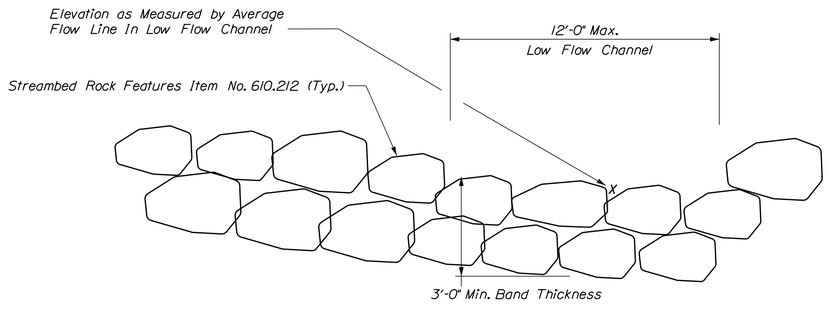
OF A 25

Note
All Dimensions are Approximate



TYPICAL ROCK BAND AND POOL GROUP DETAIL

(TOTAL OF 5 GROUPS REQUIRED)



ROCK BAND SECTION

Only Rock Band element shown.
Other streambed elements omited
for clarity.

ROCK BAND NOTES

1. Place Stones to Form low Flow Channel with Minimum Depth as Shown.

2. Maintain Effective Low Flow Opening Width of 6ft Min Between Rocks.

3. Key Rock Band Stones into Banklines.

4. Filler Material shall be paid under Item No. 203.33 Special Fill. See Special Provision 203 Special Fill for Material Requirements.

Station	Elevation	Feature	Group
0+50	53.8	Rock Band 16	5
0+65	53.1	Rock Band 15	
0+80	52.3	Rock Band 14	
0+90	50.3	Pool 5	
1+00	51.3	Rock Band 13	4
1+15	50.6	Rock Band 12	
1+30	49.8	Rock Band 11	
1+40	47.8	Pool 4	
1+50	48.8	Rock Band 10	3
1+65	48.1	Rock Band 9	
1+80	47.3	Rock Band 8	
1+90	45.3	Pool 3	
2+00	46.3	Rock Band 7	2
2+15	45.6	Rock Band 6	
2+30	44.8	Rock Band 5	
2+40	42.8	Pool 2	
2+50	43.8	Rock Band 4	1
2+65	43.1	Rock Band 3	
2+80	42.3	Rock Band 2	
2+90	40.3	Pool 1	
3+00	41.3	Rock Band 1	

STATE OF MAINE
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BRIDGE NO. 2794 BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2	M. Lickus	------	01/2020
DESIGN3-DETAILED3	------	------	------
REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

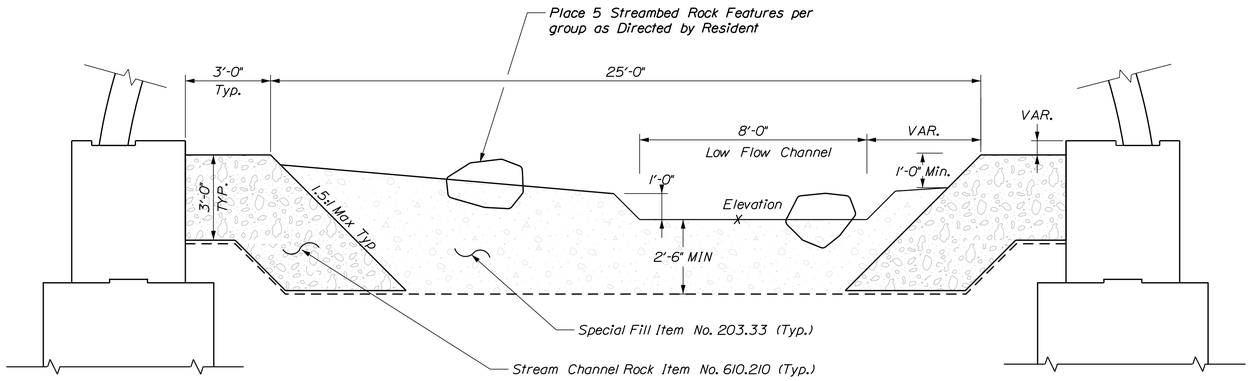
SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

STREAM TYPICAL PROFILE

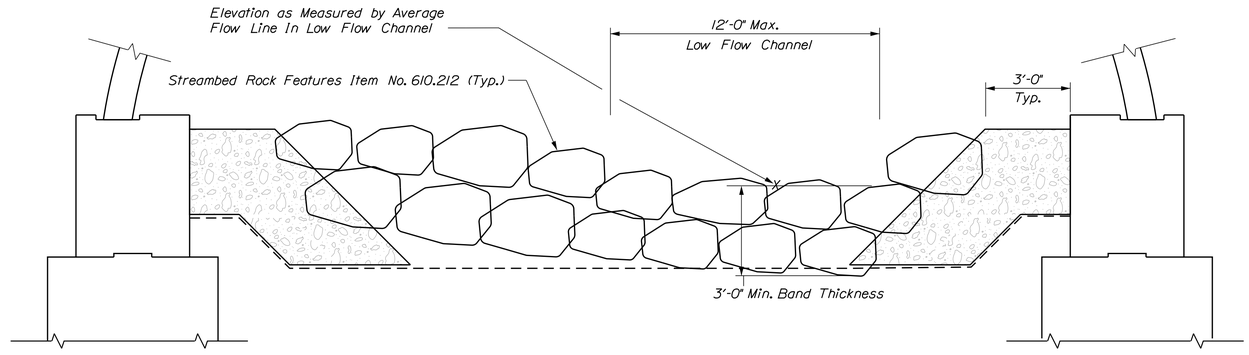
SHEET NUMBER

A15

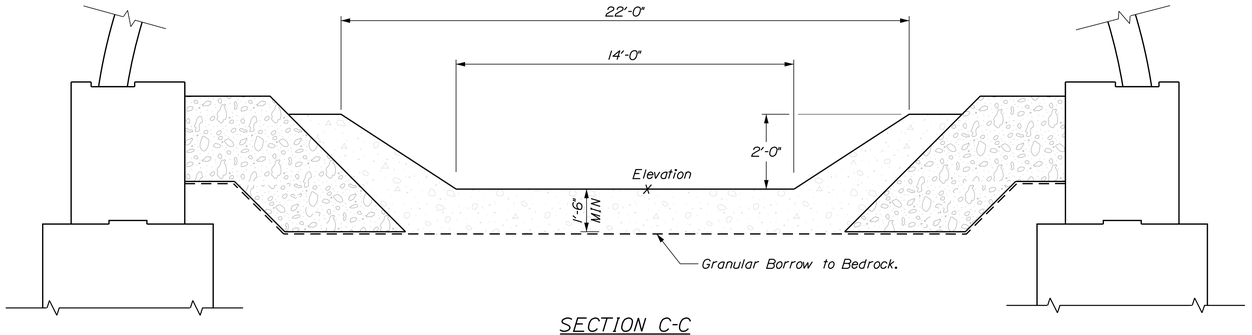
OF A 25



SECTION A-A
Between Rock Bands (Typ.)



SECTION B-B
Rock Bands (Typ.)



SECTION C-C
Pool (Typ.)

STATE OF MAINE
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NHPP-2260(800)

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BRIDGE NO. 2794

BRIDGE PLANS

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DESIGN2-DETAILED2	M. Lickus	------
DESIGN3-DETAILED3	------	------
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	------
REVISIONS 4	------	------
FIELD CHANGES	------	------

J. Brunelle
MRP

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

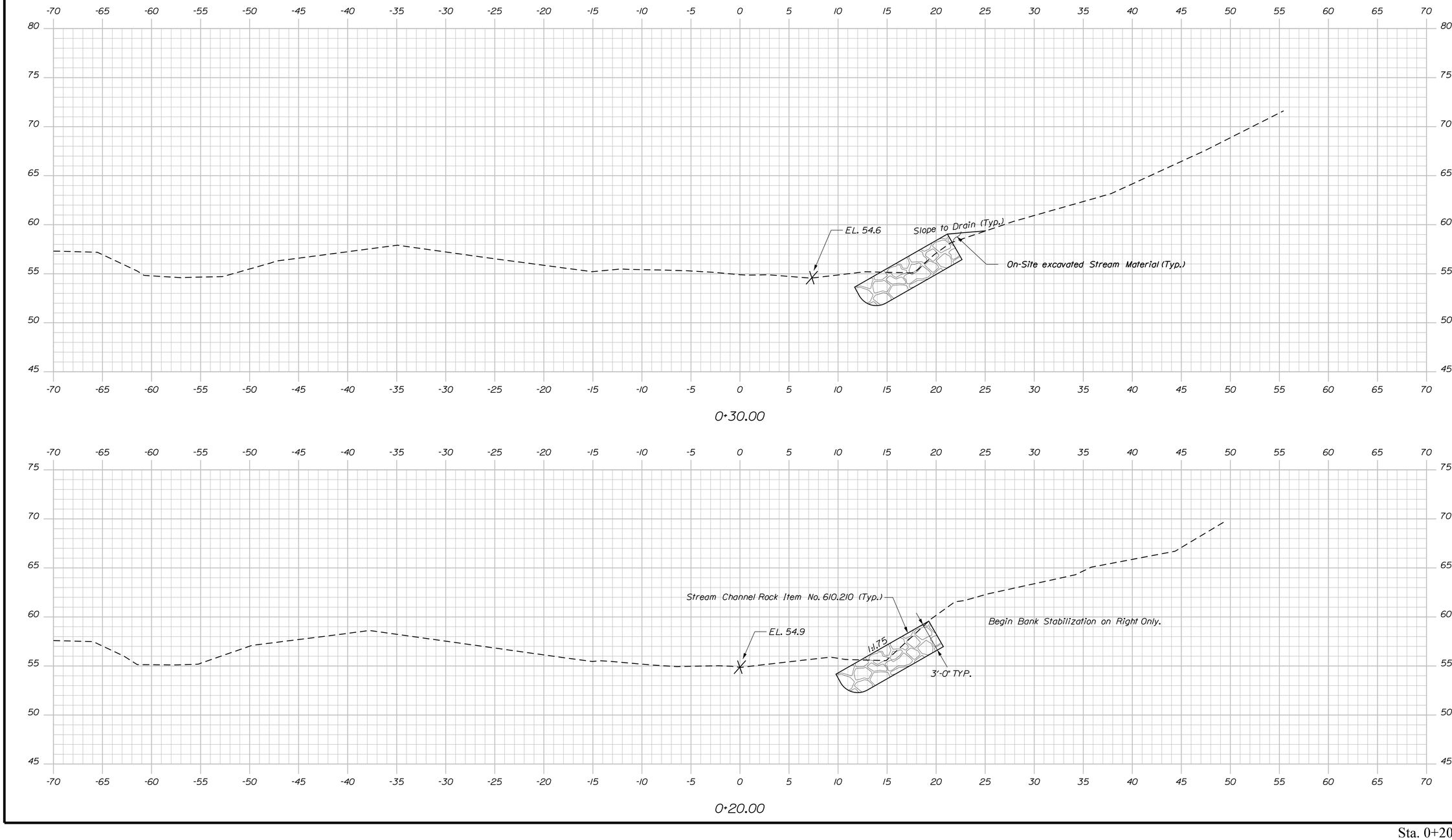
TYPICAL IN-STRUCTURE CROSS SECTIONS

SHEET NUMBER

A16

OF A 25

Filename: ...\016_Typical_Rock_Bond_Steps.dgn Division: BRIDGE Username: Jeremiah.Brunelle Date:1/23/2020



Sta. 0+20.00 to Sta. 0+30.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794 — BRIDGE PLANS

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DESIGN2-DETAILED2	M. Lickus	-----	-----
DESIGN3-DETAILED3	-------	-------	-------
REVISIONS 1	------	------	------
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REVISIONS 3	------	------	------
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FIELD CHANGES	------	------	------

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P.E. NUMBER

DATE

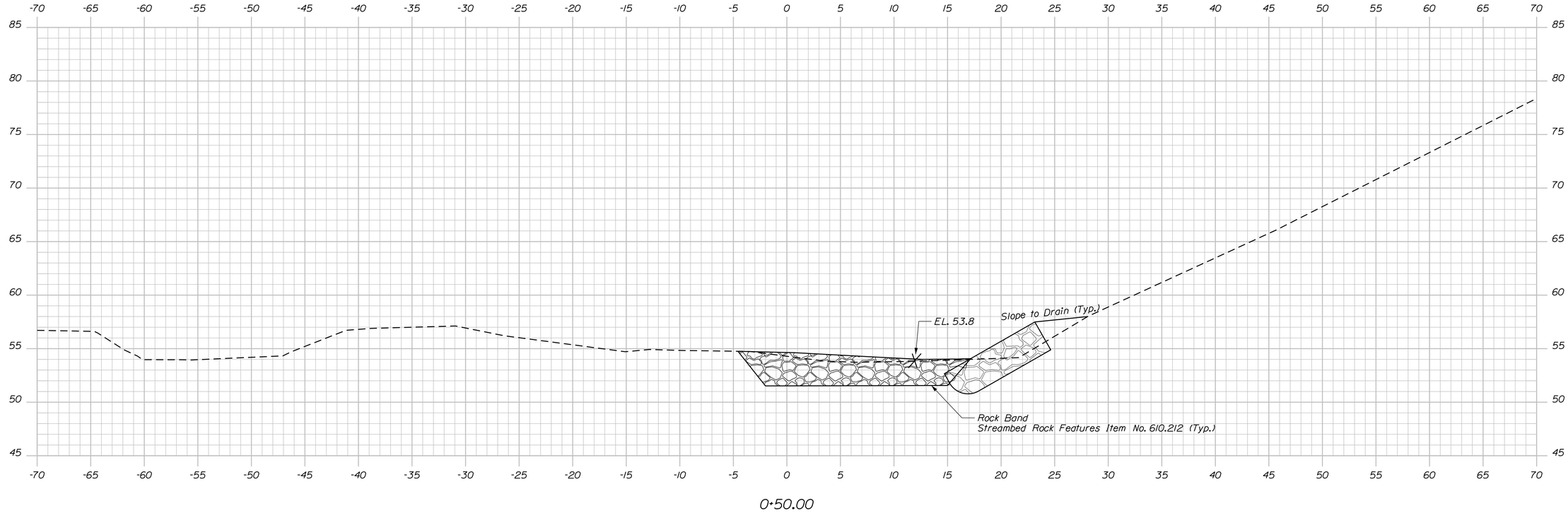
SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN — KNOX COUNTY

STREAM CROSS SECTIONS

SHEET NUMBER

A17

OF A 25



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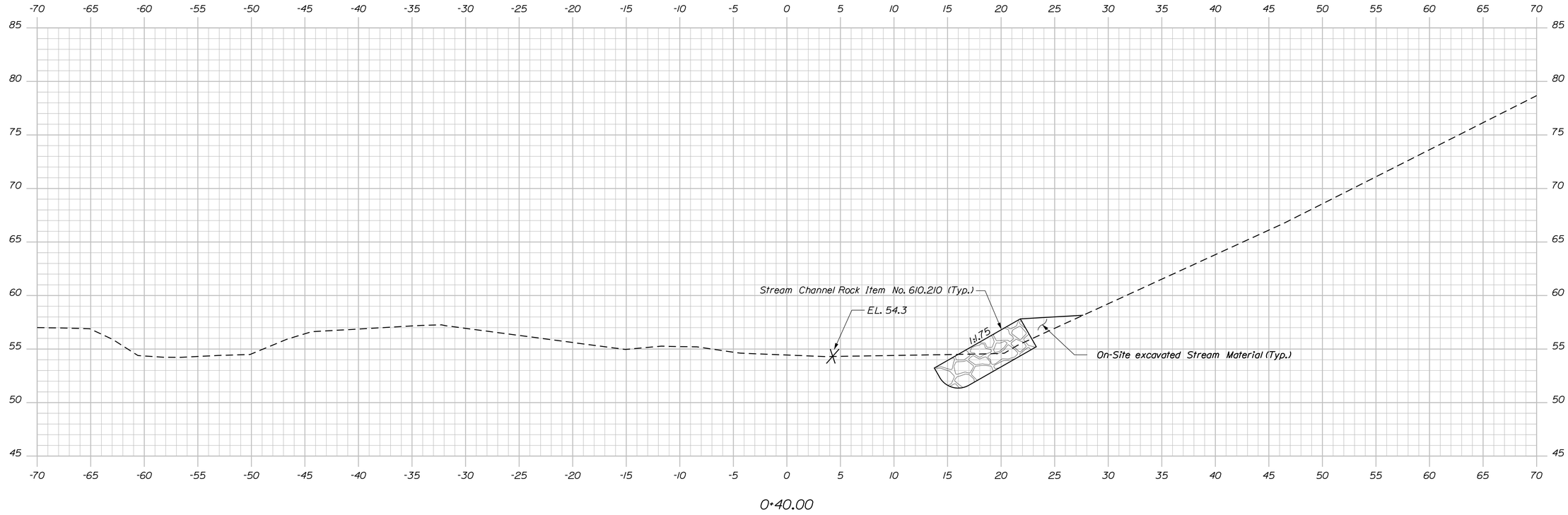

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	CAG	MRP	01/2020
DESIGN2-DETAILED2	M. Lickus	-----	-----
DESIGN3-DETAILED3	----------	----------	----------
REVISIONS 1	------	------	------
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REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

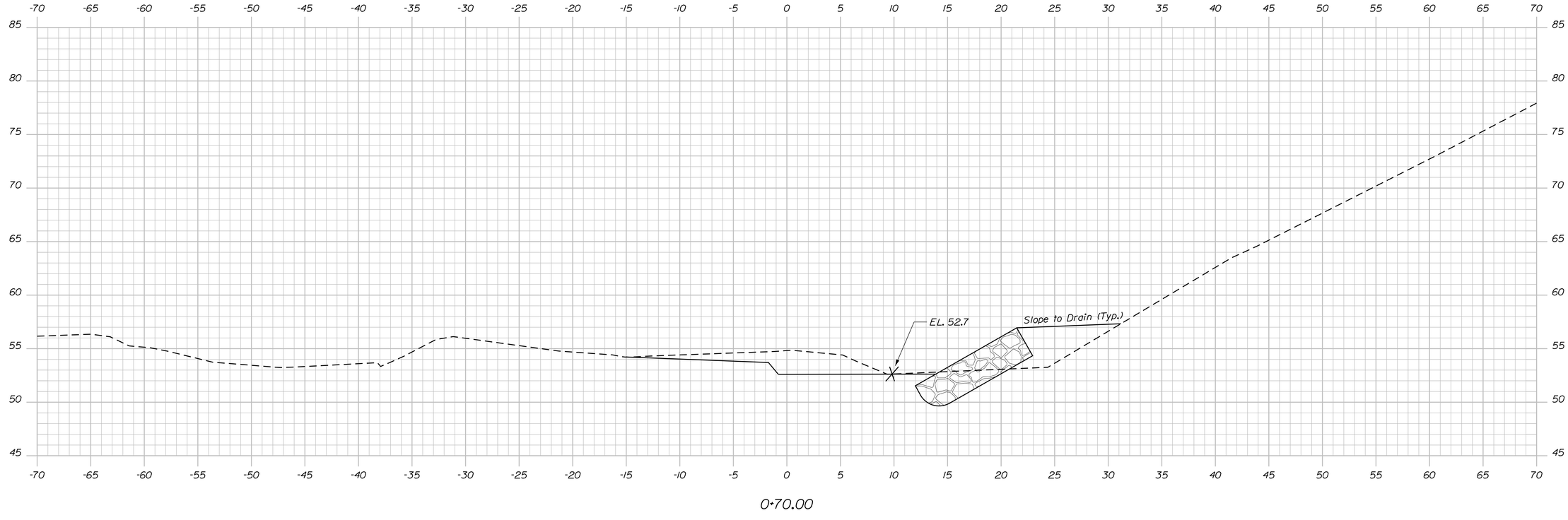
STREAM CROSS SECTIONS

SHEET NUMBER

A18

OF A 25

Sta. 0+40.00 to Sta. 0+50.00



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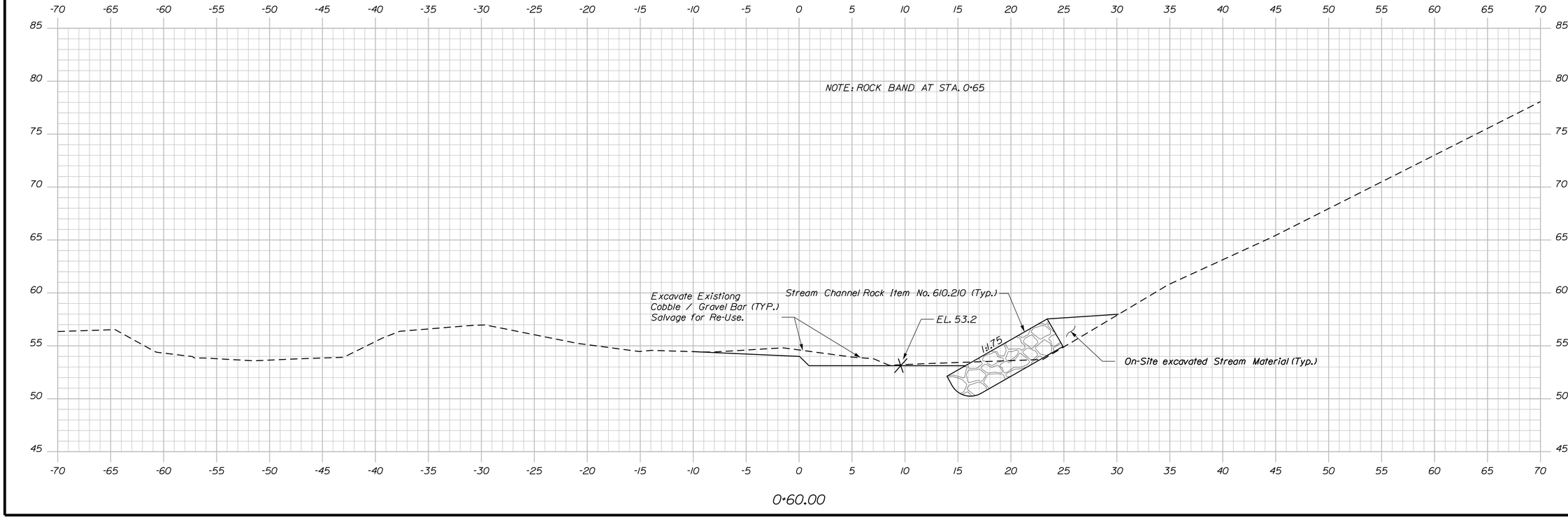

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE		
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DESIGN2-DETAILED2	M. Lickus	-----	01/2020
DESIGN3-DETAILED3	-----	-----	-----
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FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

STREAM CROSS SECTIONS

SHEET NUMBER

A19

OF A 25

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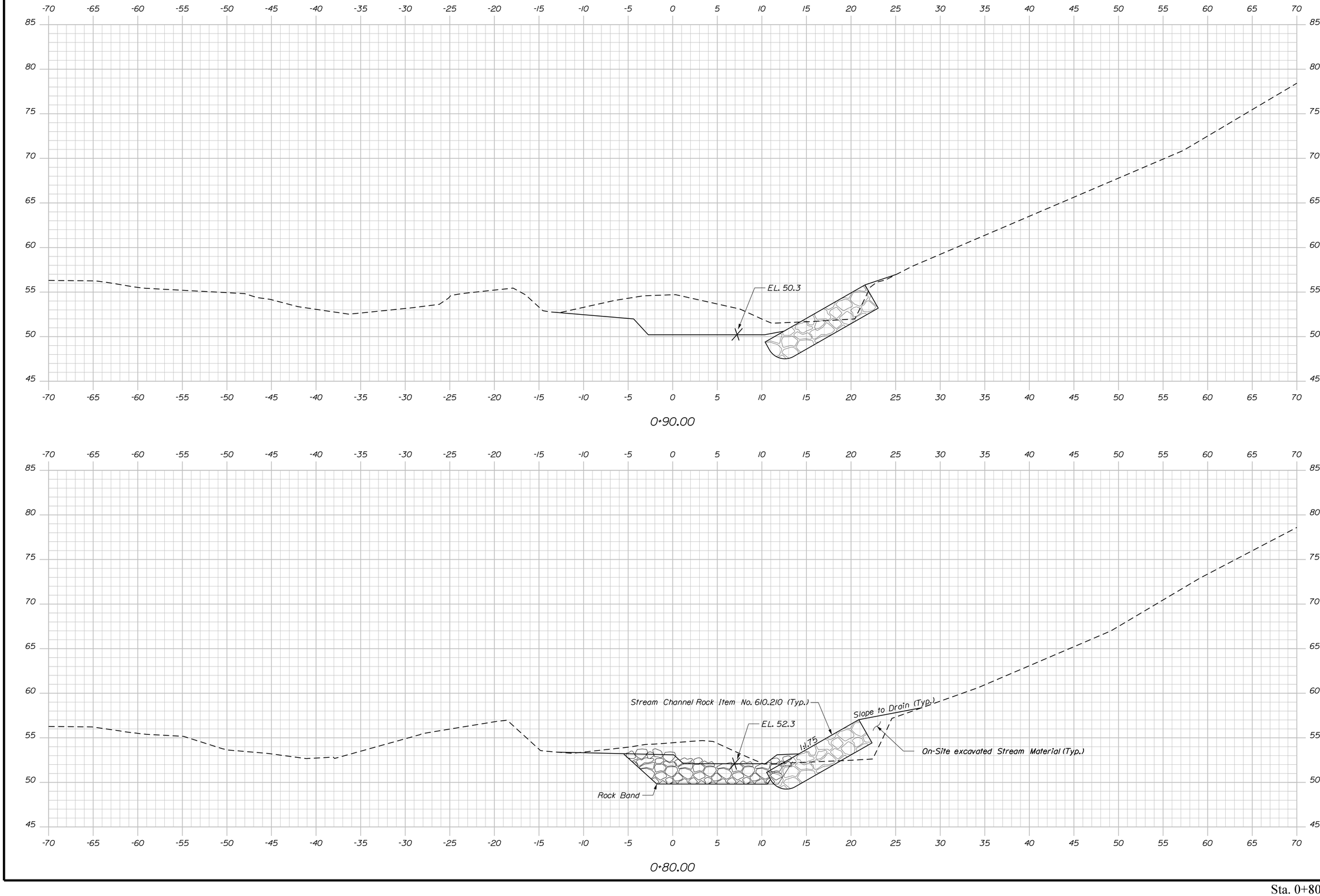

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

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BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE		
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FIELD CHANGES	-----	-----	-----

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SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

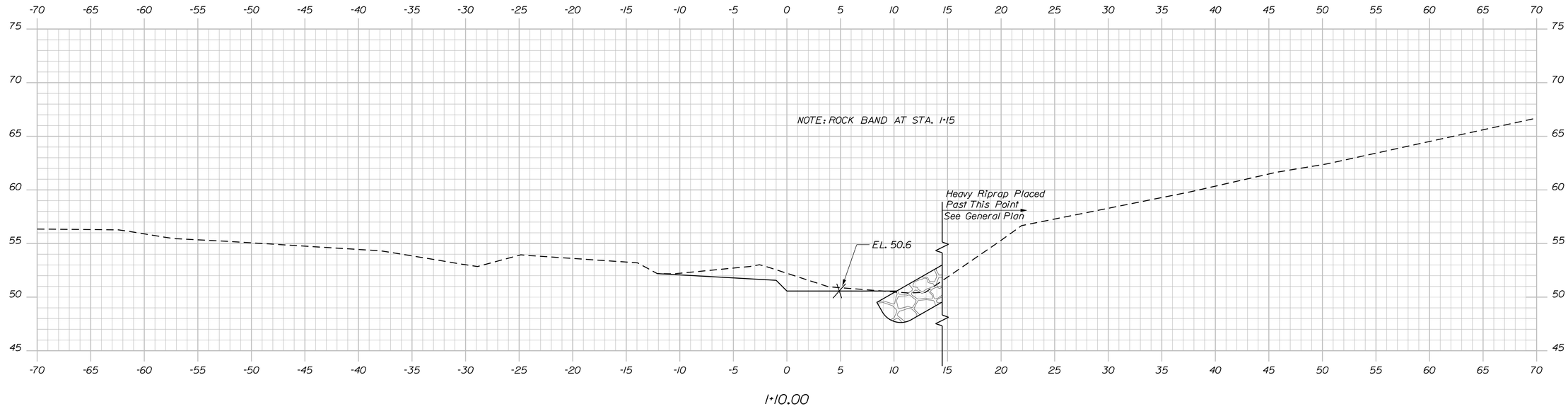
STREAM CROSS SECTIONS

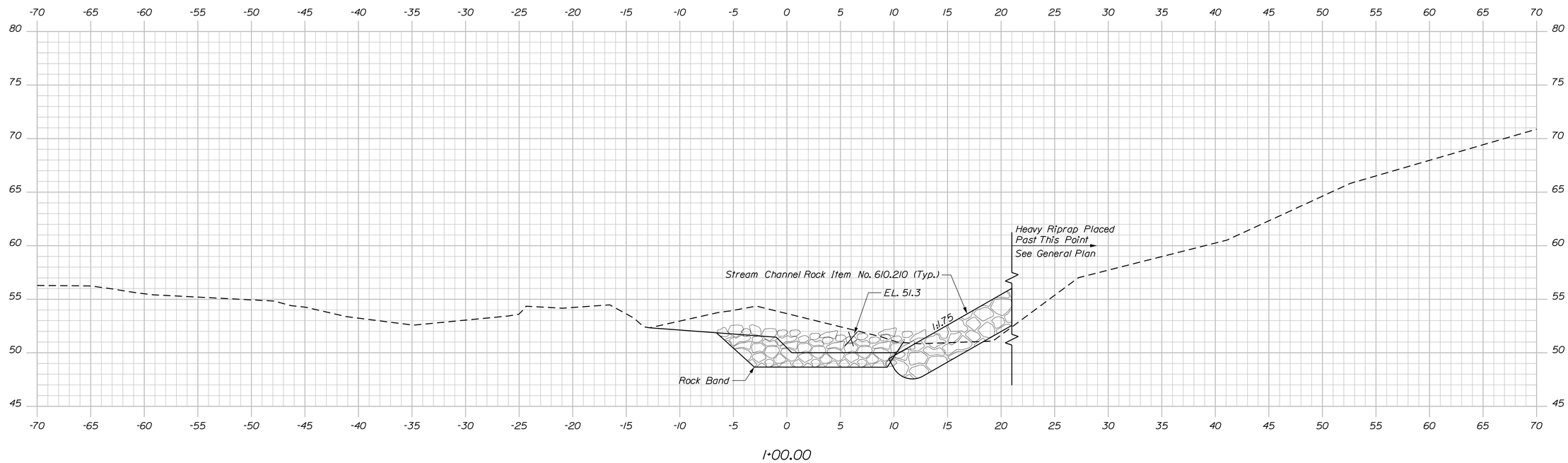
SHEET NUMBER

A20

OF A 25

Sta. 0+80.00 to Sta. 0+90.00





STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

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REVISIONS 1	------	------	------
REVISIONS 2	------	------	------
REVISIONS 3	------	------	------
REVISIONS 4	------	------	------
FIELD CHANGES	------	------	------

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
CAMDEN KNOX COUNTY

STREAM CROSS SECTIONS

SHEET NUMBER

A21

OF A 25

Sta. 1+00.00 to Sta. 1+10.00

Username: Jeremiah.Brunelle Date:1/23/2020

Division: BRIDGE

Filename: ...\MSTA\021_XSECT_1+00_005.dgn

Username: Jeremiah.Brunelle Date:1/23/2020

Division: BRIDGE

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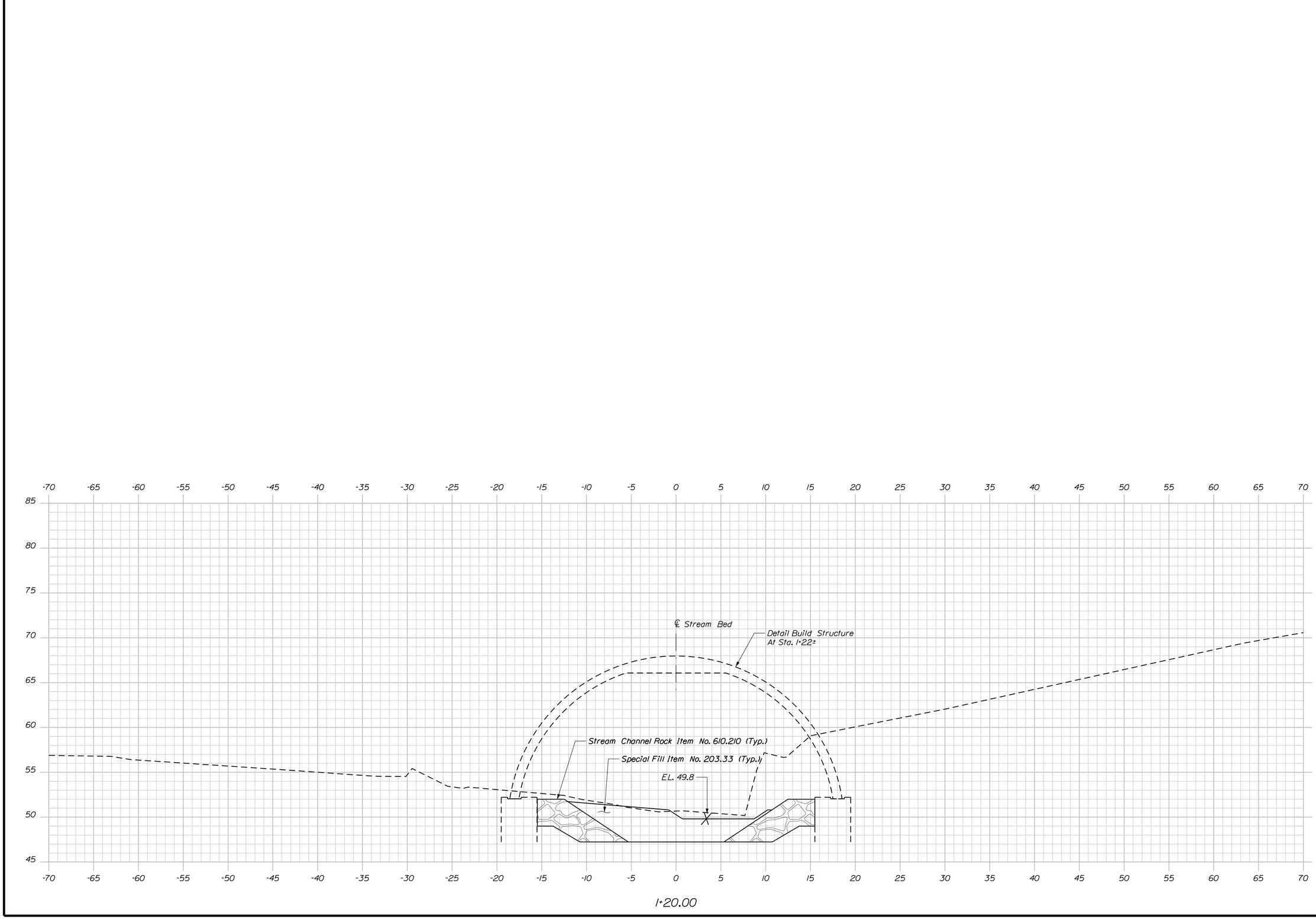

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PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2	M. Lickus	------	01/2020
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FIELD CHANGES	------	------	------

SIGNATURE

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN
BRIDGE NO. 2794 **22608.00** BRIDGE PLANS

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

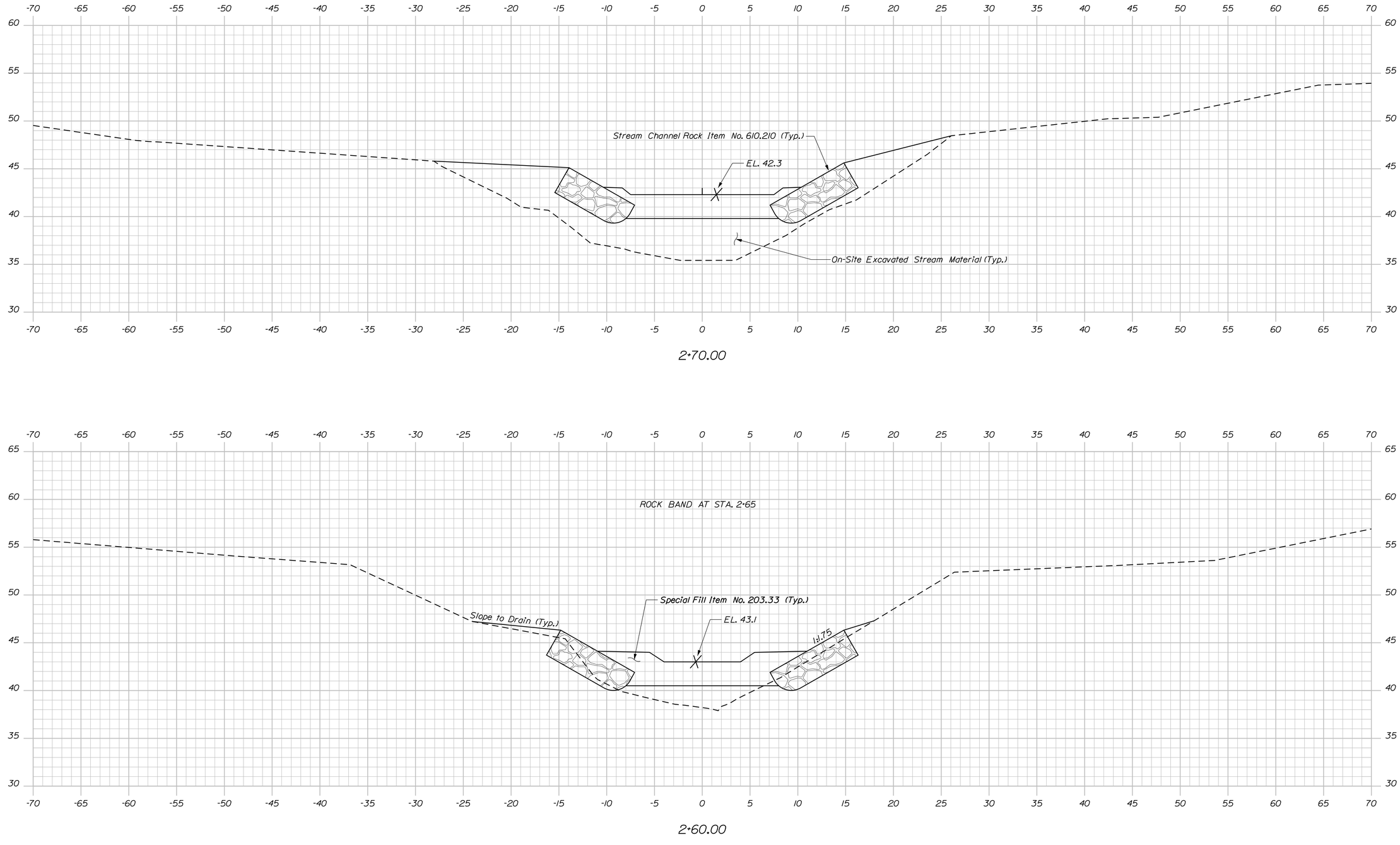
STREAM CROSS SECTIONS

SHEET NUMBER

A22

OF A 25

Sta. 1+20.00 to Sta. 1+30.00



Sta. 2+60.00 to Sta. 2+70.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
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DESIGN3-DETAILED3	-----	-----	-----
REVISIONS 1	-----	-----	-----
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FIELD CHANGES	-----	-----	-----

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DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

STREAM CROSS SECTIONS

SHEET NUMBER

A23

OF A 25

Username: Jeremiah.Brunelle Date:1/23/2020

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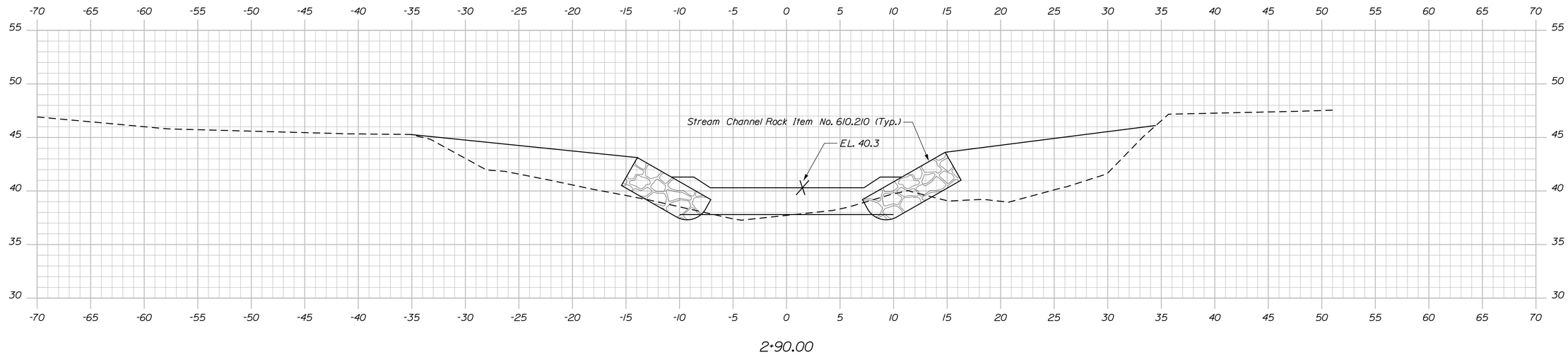

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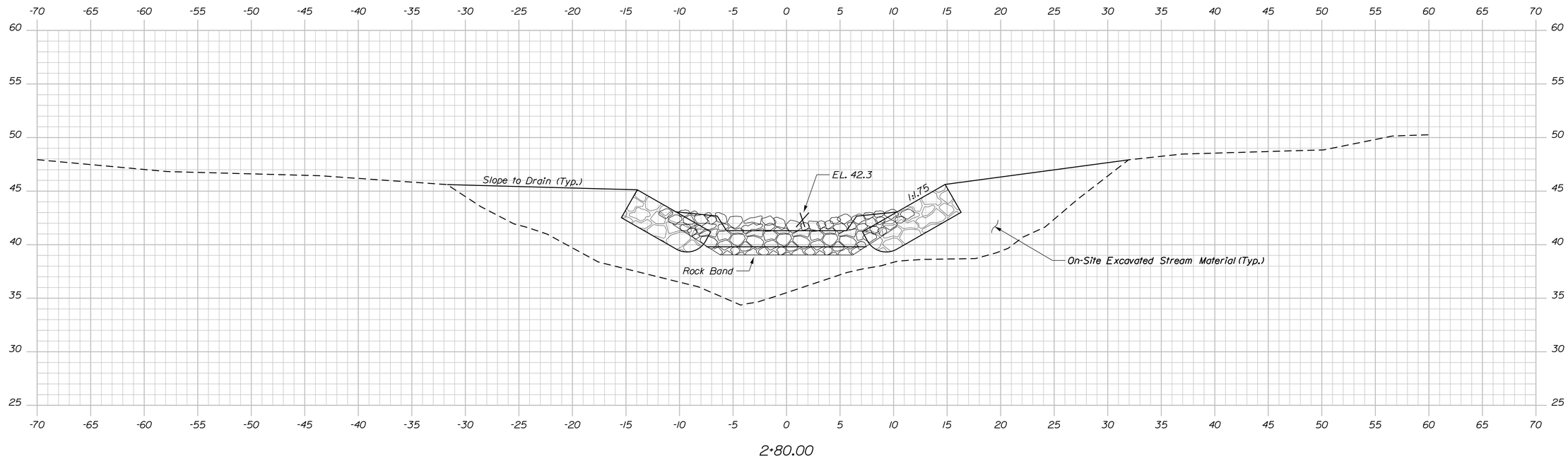

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Sta. 2+80.00 to Sta. 2+90.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NHPP-2260(800)

WIN 22608.00

BRIDGE NO. 2794

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
CHECKED-REVIEWED	GAG	MRP	01/2020
DESIGN2-DETAILED2	M. Lickus	------	------
DESIGN3-DETAILED3	----------	----------	------
REVISIONS 1	----------	----------	------
REVISIONS 2	----------	----------	------
REVISIONS 3	----------	----------	------
REVISIONS 4	----------	----------	------
FIELD CHANGES	----------	----------	------

SIGNATURE

P.E. NUMBER

DATE

SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

STREAM CROSS SECTIONS

SHEET NUMBER

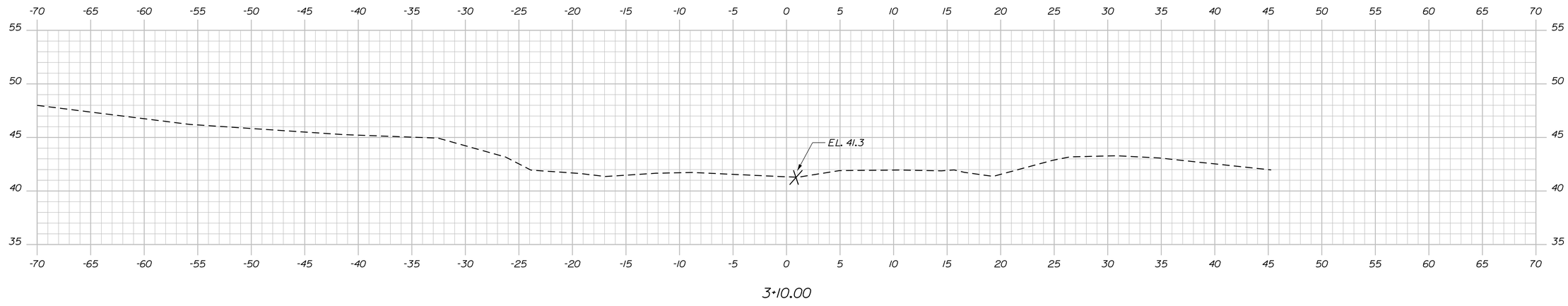
A24

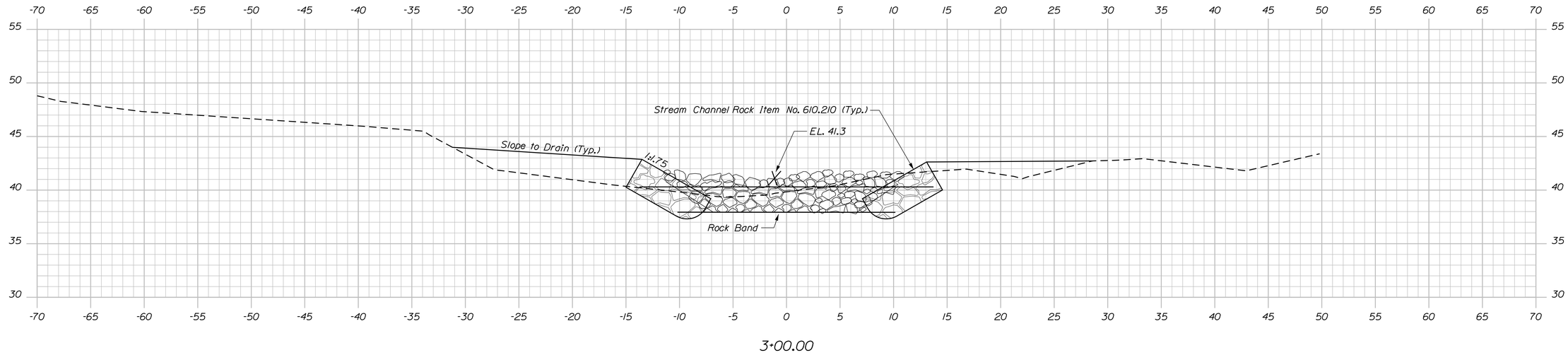
OF A 25

Username: Jeremiah.Brunelle Date:1/23/2020

Division: BRIDGE

Filename: ...\MSTA\024_XSECT_2+70_008.dgn





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PROJ. MANAGER	ANDREW LATHE		
DESIGN-DETAILED	KCN	J. Brunelle	01/2020
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REVISIONS 2	-----	-----	-----
REVISIONS 3	-----	-----	-----
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FIELD CHANGES	-----	-----	-----

SIGNATURE

P.E. NUMBER

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SPRING BROOK BRIDGE
SPRING BROOK
KNOX COUNTY
CAMDEN

STREAM CROSS SECTIONS

SHEET NUMBER

A25

OF A 25

Sta. 3+00.00 to Sta. 3+10.00