

# PROJECT DRAWINGS

## for

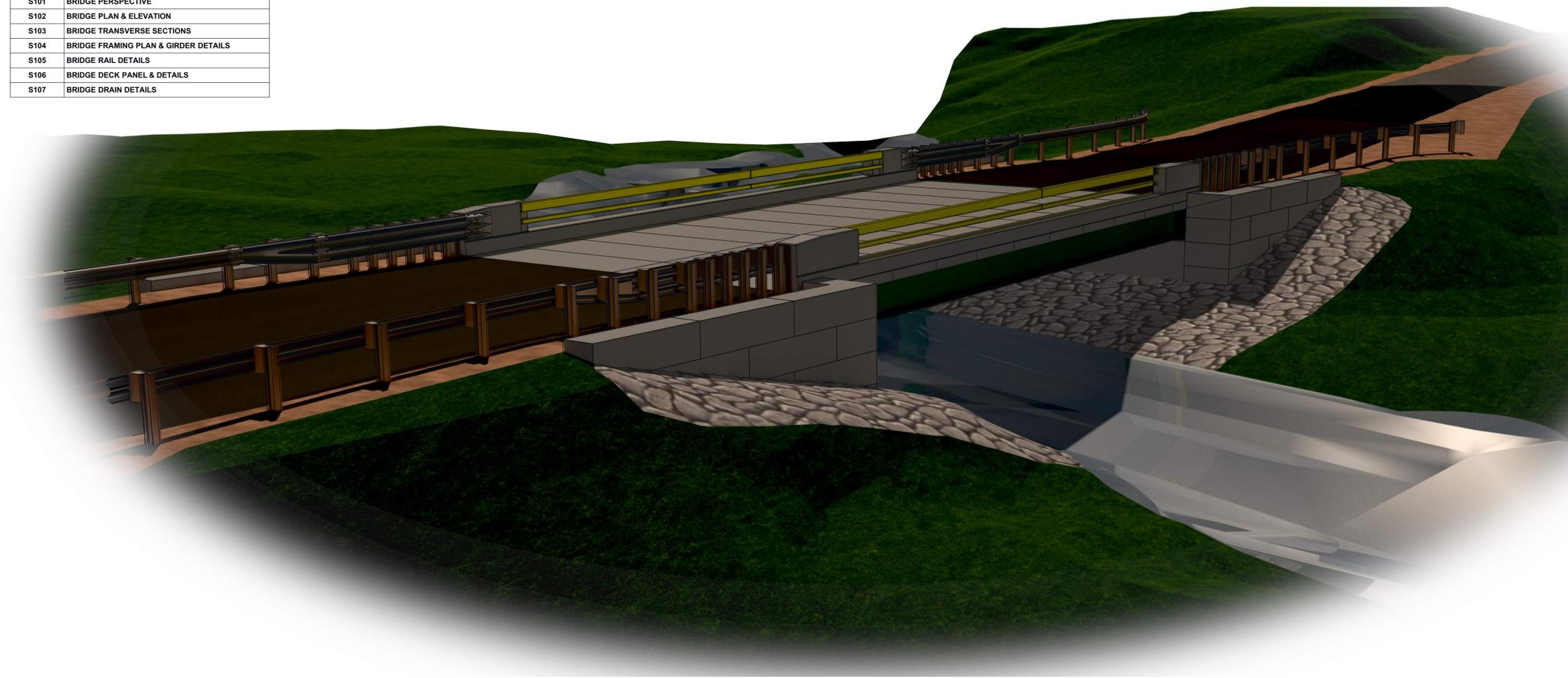
# LAKEVIEW ROAD

## @

# ALDER BROOK

CROSSING IDENTIFICATION
MAINE STREAM HABITAT VIEWER SITE ID: 2559
IPAC PROJECT CODE: 2023-0114516

DRAWING INDEX	
SHT. NO.	DESCRIPTION
G001	TITLE SHEET
G002	LOCATION MAPS
G003	SITE PHOTOS
G004	STREAM ASSESSMENT
G005	STREAM ASSESSMENT
G006	STREAM PROFILE
G007	HYDRAULIC ANALYSIS
C001	GENERAL NOTES & SPECIFICATIONS
C101	EXISTING SITE PLAN
C102	SEDIMENTATION & DEWATERING PLAN
C103	DEWATERING & SILT FENCE DETAILS
C104	CONSTRUCTION LAYOUT PHASE 1
C105	CONSTRUCTION LAYOUT PHASE 2
C106	PROPOSED SITE PLAN PHASE 3
C107	ROAD PROFILE
C108	BRIDGE ABUTMENT PERSPECTIVES
C109	LEFT BRIDGE ABUTMENT
C110	RIGHT BRIDGE ABUTMENT
C111	FOUNDATION DETAILS - PHASE 1
C112	FOUNDATION DETAILS - PHASE 2
C113	FOUNDATION PERSPECTIVE & COLUMN TIE LAYOUT
C114	BRIDGE ABUTMENT DETAILS
C115	GUARDRAIL PLAN & ELEVATION
C116	GUARDRAIL DETAILS
S001	GENERAL NOTES
S002	GENERAL NOTES
S101	BRIDGE PERSPECTIVE
S102	BRIDGE PLAN & ELEVATION
S103	BRIDGE TRANSVERSE SECTIONS
S104	BRIDGE FRAMING PLAN & GIRDER DETAILS
S105	BRIDGE RAIL DETAILS
S106	BRIDGE DECK PANEL & DETAILS
S107	BRIDGE DRAIN DETAILS



PROJECT  
**LAKEVIEW ROAD  
BRIDGE**  
  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD  
@ ALDER BROOK  
BROWNVILLE, ME 04414**  
  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature  
Conservancy**  
  
  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

 **WENTWORTH  
PARTNERS & ASSOCIATES**  
*A Maine Corporation*  
31 COMMERCIAL STREET V: 207.858.8010  
SKOWHEGAN, ME 04976 F: 978.462.5822  
www.wpa-design.com  
*A Gold Standard Company*

ENGINEER'S CERTIFICATION  


PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

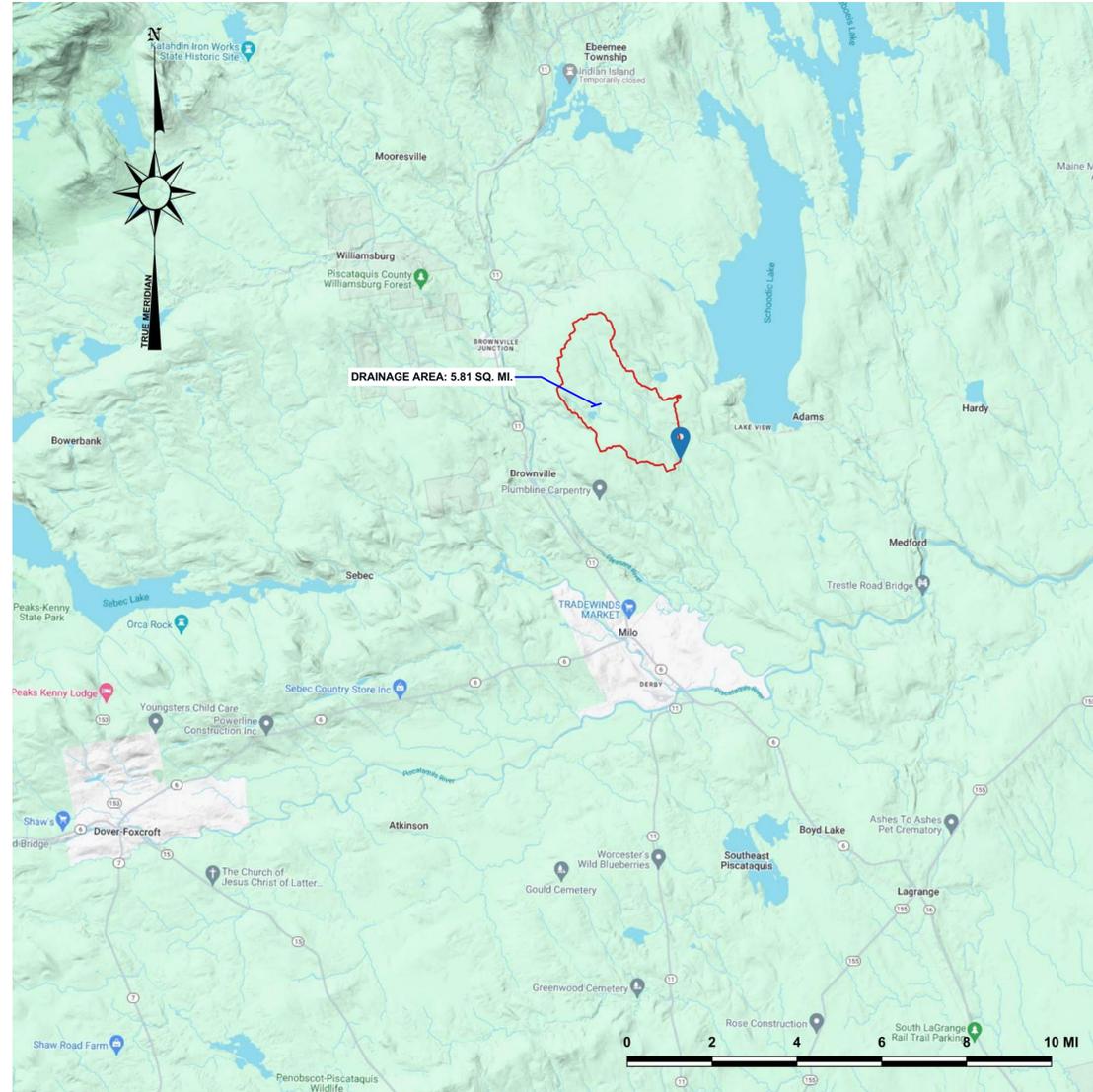
SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO  
HS25 RATED  
BRIDGE  
STRUCTURE**

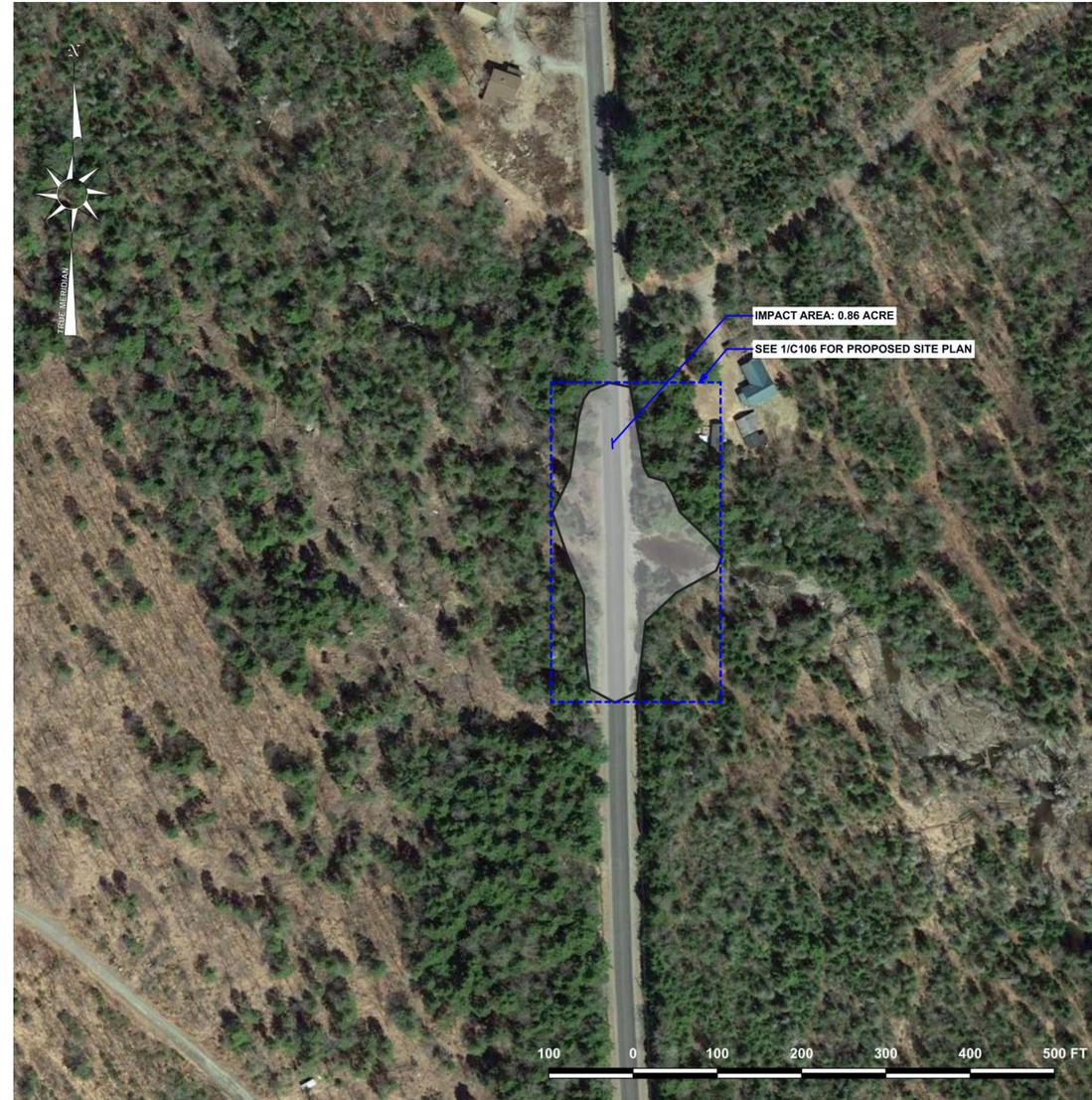
SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**G001**



**VICINITY MAP / DRAINAGE BASIN**  
SCALE = 1:125000

1  
G002



**SITE LOCATION**  
SCALE: 1" = 100'

2  
G002

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
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ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

**SUBMITTALS**

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**LOCATION MAPS**

SHEET NUMBER  
**G002**



**UPSTREAM (FAR)** 1  
NOT TO SCALE G003



**UPSTREAM (CLOSE)** 2  
NOT TO SCALE G003



**INLET** 3  
NOT TO SCALE G003



**OUTLET** 4  
NOT TO SCALE G003



**OUTLET SCOUR POOL** 5  
NOT TO SCALE G003



**DOWNSTREAM** 6  
NOT TO SCALE G003

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BRUNSVILLE, ME 04414**  
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45°08'56.72"N  
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**SUBMITTALS**

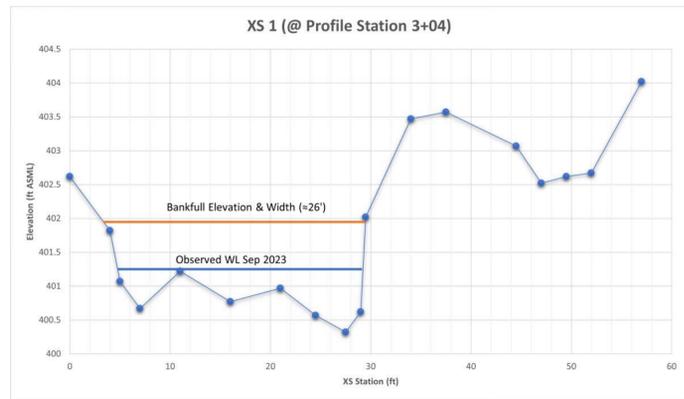
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**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**SITE PHOTOS**

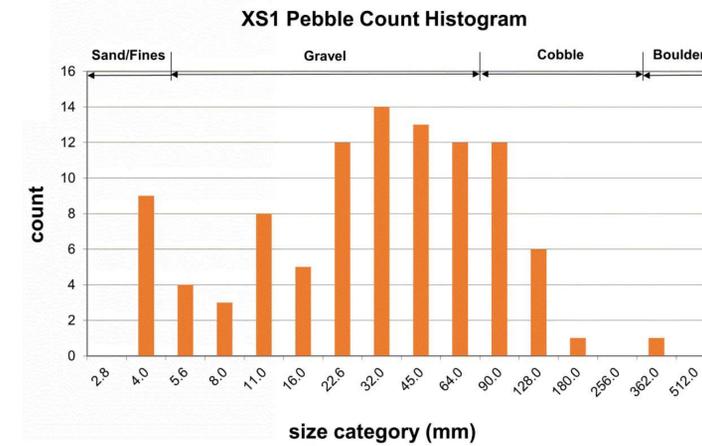
SHEET NUMBER  
**G003**



**XS1 DATAPOINTS** 1  
NOT TO SCALE G004



**XS1 UPSTREAM VIEW** 2  
NOT TO SCALE G004



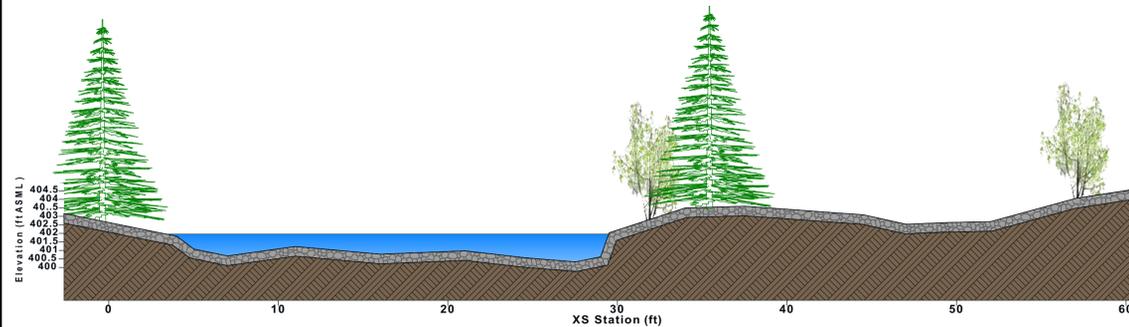
**XS1 SUBSTRATE DISTRIBUTION** 3  
NOT TO SCALE G004



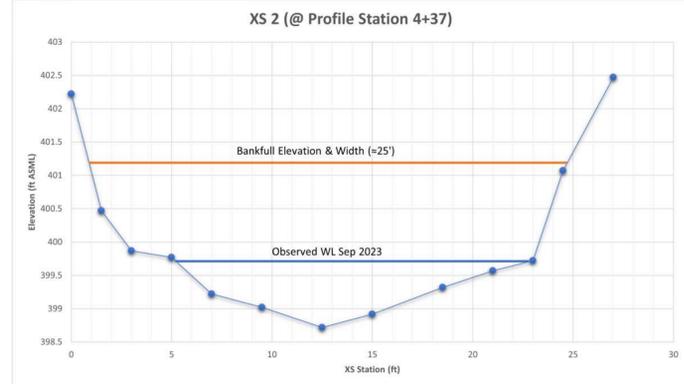
**XS1 DOWNSTREAM VIEW** 5  
NOT TO SCALE G004

XS1 Particle Size Determination	
Common Percentiles	
D <sub>xx</sub>	ds, mm
D95	109.00
D84	72.67
D50	28.64
D16	8.00

**XS1 SUBSTRATE DISTRIBUTION** 6  
NOT TO SCALE G004



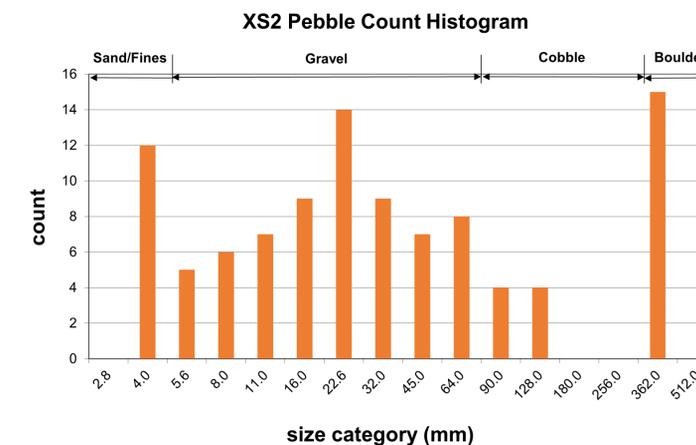
**XS1 SKETCH** 4  
SCALE: 1" = 5' G004



**XS2 DATAPOINTS** 7  
NOT TO SCALE G004



**XS2 UPSTREAM VIEW** 8  
NOT TO SCALE G004



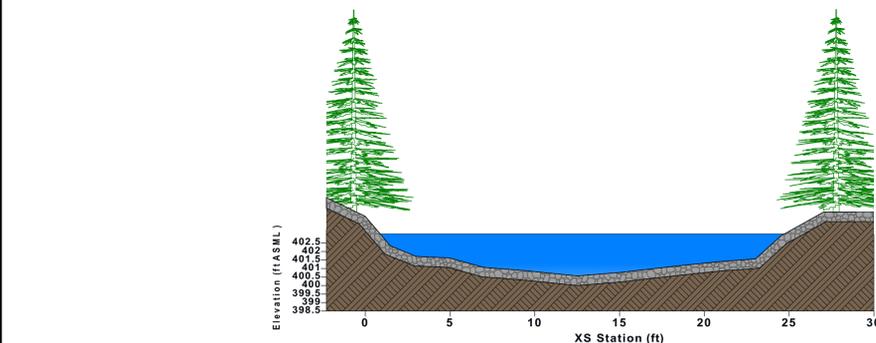
**XS2 SUBSTRATE DISTRIBUTION** 9  
NOT TO SCALE G004



**XS2 DOWNSTREAM VIEW** 11  
NOT TO SCALE G004

XS2 Particle Size Determination	
Common Percentiles	
D <sub>xx</sub>	ds, mm
D95	326.67
D84	118.50
D50	21.19
D16	5.28

**XS2 SUBSTRATE DISTRIBUTION** 12  
NOT TO SCALE G004



**XS2 SKETCH** 10  
SCALE: 1" = 5' G004

PROJECT  
**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**

COORDINATES  
45°08'56.72"N  
69°06'52.13"W

CLIENT  
**The Nature Conservancy**

14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

**SUBMITTALS**

REV.	DATE	DESCRIPTION
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**STREAM ASSESSMENT**

SHEET NUMBER  
**G004**

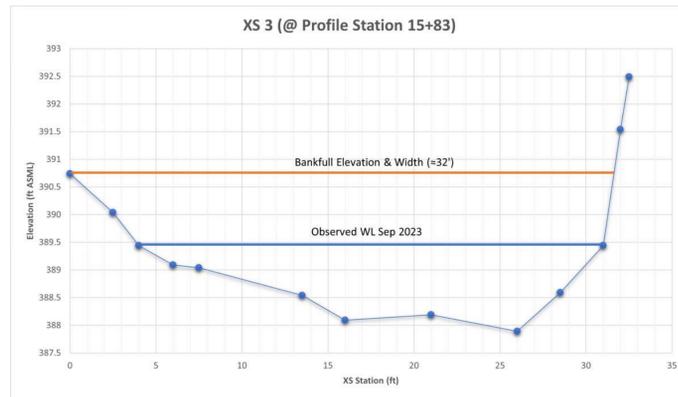


**BOULDER CASCADE UPSTREAM**  
NOT TO SCALE **1**  
G005



**BOULDER CASCADE DOWNSTREAM**  
NOT TO SCALE **2**  
G005

XS3 ORIGINALLY TAKEN ALONG DASHED LINE IN SEP 2023. THE RIGHT BANK HAS SLOUGHED AND THE STREAM SOMEWHAT REROUTED SINCE THEN, LIKELY DURING DEC 2023 FLOODING. THE RIFLE THAT PREVIOUSLY WAS AT XS3 IS NOW SLIGHTLY FURTHER DOWNSTREAM AND RUNS ALMOST PARALLEL TO THE STREAM AS SEEN IN THE PHOTOS.



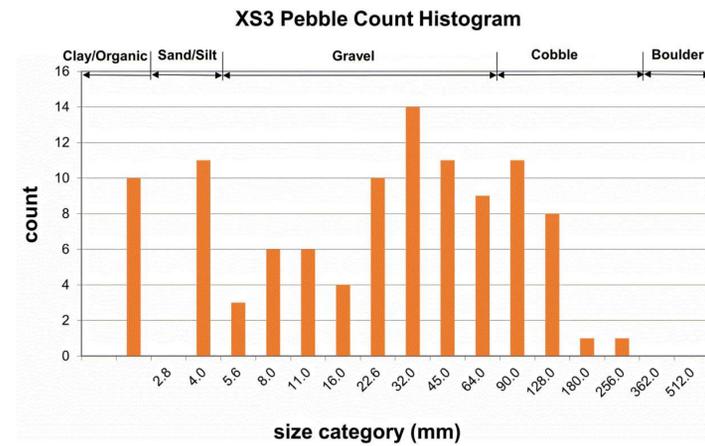
**XS3 DATAPOINTS**  
NOT TO SCALE **3**  
G005



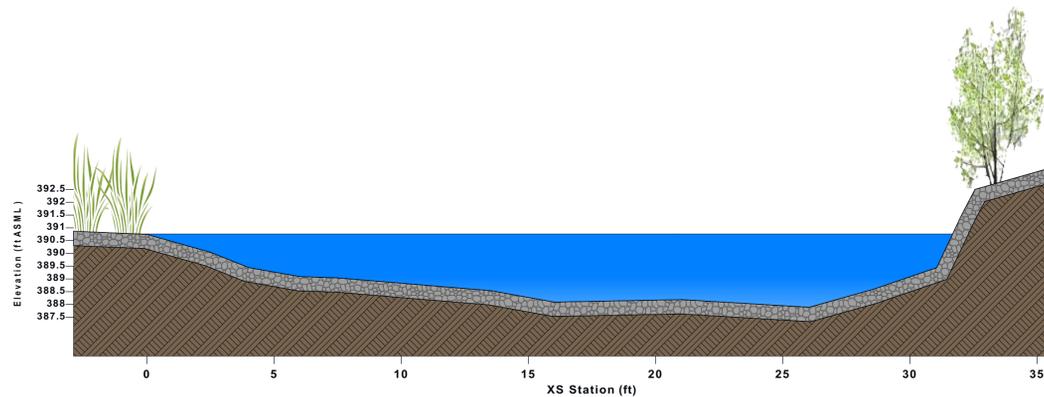
**NEW BANK SLOUGHING**  
NOT TO SCALE **5**  
G005



**XS3 UPSTREAM VIEW**  
NOT TO SCALE **6**  
G005



**XS3 SUBSTRATE DISTRIBUTION**  
NOT TO SCALE **8**  
G005



**XS3 SKETCH**  
SCALE: 1:40 **4**  
G005



**XS3 DOWNSTREAM VIEW**  
NOT TO SCALE **7**  
G005

Common Percentiles	
D <sub>xx</sub>	ds, mm
D95	112.56
D84	73.93
D50	24.28
D16	3.54

**XS3 SUBSTRATE DISTRIBUTION**  
NOT TO SCALE **9**  
G005

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
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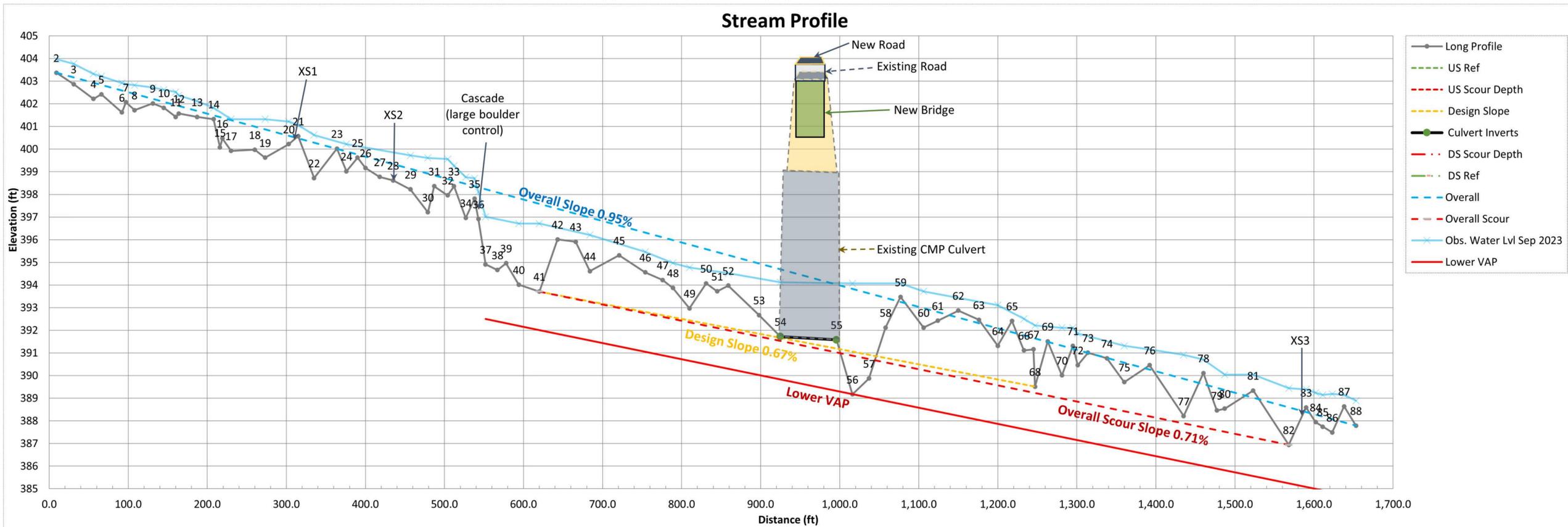
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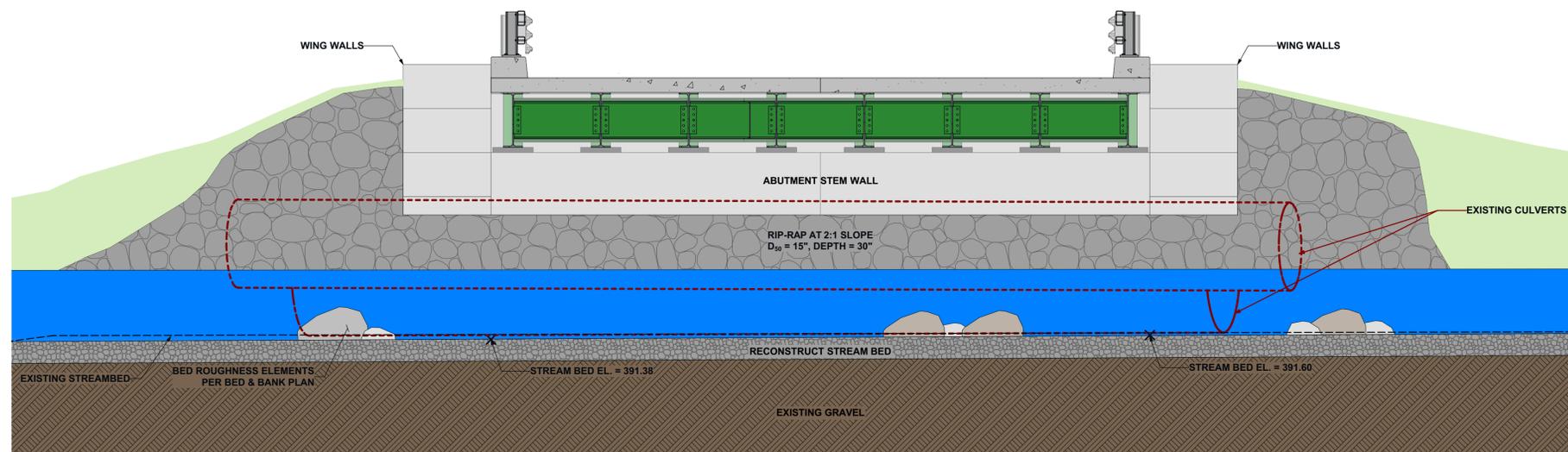
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**STREAM ASSESSMENT**

SHEET NUMBER  
**G005**



**STREAM PROFILE** 1  
NOT TO SCALE G006



**STRUCTURE PROFILE (LOOKING SOUTH)** 2  
SCALE: 1:40 G006

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

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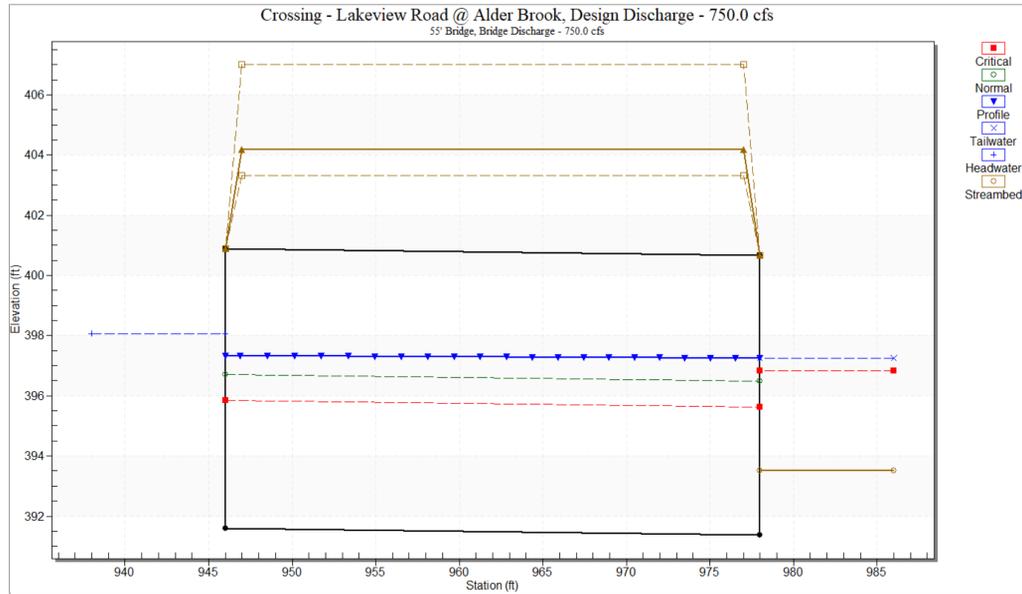
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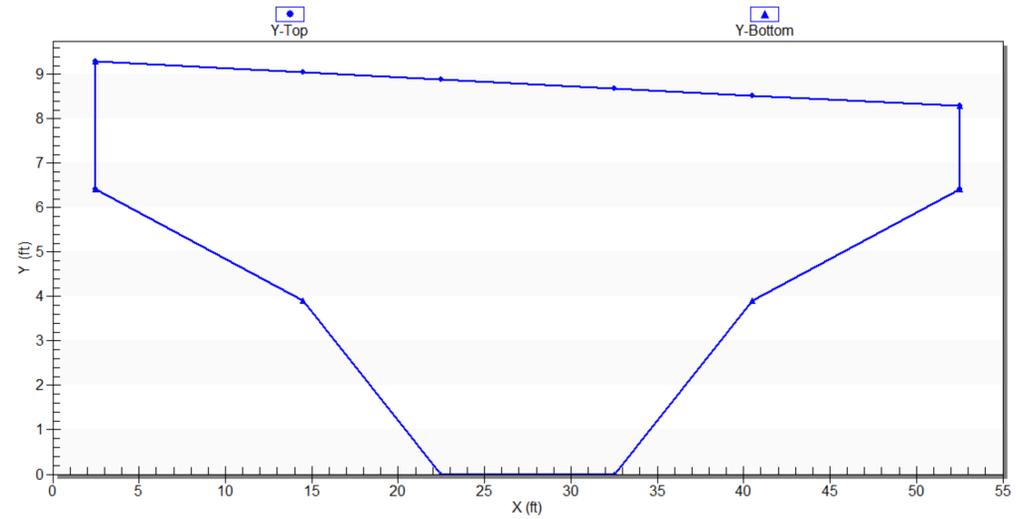
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**STREAM PROFILE**

SHEET NUMBER  
**G006**



**DESIGN DISCHARGE GRAPHIC** 1  
NOT TO SCALE G007



**HYDRAULIC SHAPE MODEL** 2  
NOT TO SCALE G007

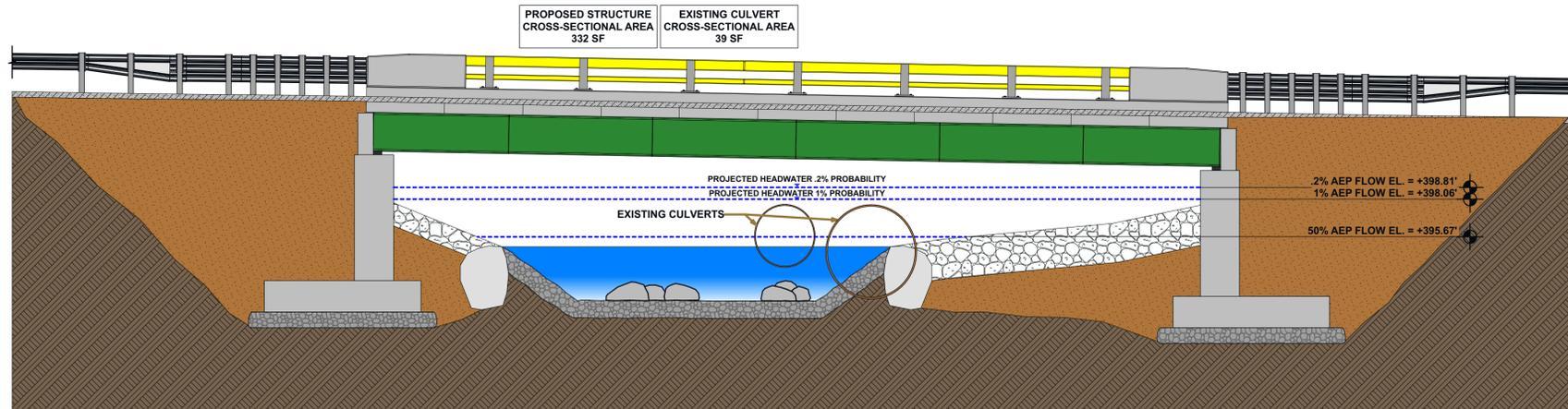
**Crossing: Lakeview Road @ Alder Brook**

**Summary Table - 55' Bridge**

Annual Probability of Exceedance (%)	Bridge Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth(ft)	Outlet Control Depth(ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
50	231.00	395.67	1.97	4.07	3-MIt	2.73	2.18	3.98	1.86	3.19	5.68
20	353.00	396.37	2.52	4.77	3-MIt	3.41	2.78	4.52	2.40	4.01	6.58
10	442.00	396.82	2.86	5.22	3-MIt	3.83	3.15	4.86	2.74	4.44	7.10
4	561.00	397.34	3.27	5.74	3-MIt	4.40	3.59	5.28	3.16	4.88	7.68
2	655.00	397.72	3.56	6.12	3-MIt	4.78	3.90	5.58	3.46	5.14	8.07
1	750.00	398.06	3.91	6.46	3-MIt	5.10	4.26	5.87	3.75	5.36	8.43
0.5	847.00	398.39	4.22	6.79	3-MIt	5.40	4.57	6.14	4.02	5.55	8.76
0.2	982.00	398.81	4.58	7.21	3-MIt	5.77	4.94	6.51	4.39	5.76	9.18

Road Elevation = 403.69' @ Right Abutment with 46" combined Bridge Superstructure, Deck Panels, and Finish Wearing Surface  
 Bridge Clear Span = 50.0'  
 Rise from Inlet Stream Bed = 8.29' (to Top of Right Abutment)  
 Stream Inlet Elevation = 391.60' (Restored Stream Channel)  
 1% AEP Flow (DESIGN FLOW) = 750 cfs  
 0.2% AEP Flow = 982 cfs  
 Outlet & Tailwater Control = 393.5' (Stream Profile Point 59)  
 Headwater Ratio = (398.06' - 391.60') / 8.29' = 0.78 (~1.8')  
 Headwater Ratio = (398.81' - 391.60') / 8.29' = 0.87 (~1.1')

**HYDRAULIC OUTPUT TABLE** 3  
NOT TO SCALE G007



**BRIDGE SECTION @ INLET** 4  
SCALE: 1" = 5' G007

PROJECT  
**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE  
LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**HYDRAULIC ANALYSIS**

SHEET NUMBER  
**G007**

**GENERAL NOTES:**

- GEN-1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED STATE RIDGE CODE AND ANY LOCAL, REGIONAL, STATE, and/or FEDERAL REGULATIONS or LAWS.
- GEN-2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK. WHERE DIMENSIONS, ELEVATIONS, AND/OR FEATURES OF EXISTING CONDITIONS COULD AFFECT THE NEW CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE FIELD MEASUREMENTS IN TIME FOR THEIR INCORPORATION IN THE SHOP DRAWINGS. THE PROJECT ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES THAT MAY EXIST.
- GEN-3. FURNISH AND PLACE ALL SUPPORTS, TEMPORARY AND PERMANENT, WHETHER SHORING, BRACING, NEEDLING, UNDERPINNING, OR SHEET PILING, NECESSARY TO BRACE EXISTING CONDITIONS TO REMAIN, SO THAT NO HORIZONTAL OR VERTICAL SETTLEMENT OCCURS TO THE EXISTING STRUCTURES or SURROUNDING AREA. TEMPORARY SUPPORTS SHALL BE MAINTAINED IN PLACE UNTIL PERMANENT SUPPORTS ARE INSTALLED. DESIGN OF THESE SUPPORTS SHALL BE BY A LICENSED ENGINEER IN THE EMPLOY OF THE CONTRACTOR.
- GEN-4. ALTERNATE CONNECTION DETAILS MAY BE APPROVED IF SUCH DETAILS ARE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE IS GRANTED. HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTABILITY AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL or CIVIL ENGINEER TO BE RESPONSIBLE FOR THE DESIGN OF ANY PROPOSED ALTERNATE DETAILS.
- GEN-5. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES, SHALL BE INCLUDED IN THE CONTRACTOR'S WORK.
- GEN-6. THE CONTRACTOR IS REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.

**CONTAMINATION PREVENTION:**

- WCP-1. **PREVENTING DIRECT WATER CONTAMINATION**  
REFUELING CONSTRUCTION EQUIPMENT OUTSIDE 100 YEAR FLOODPLAIN, OR AT LEAST 200 FEET FROM ALL WATER BODIES (WHICHEVER DISTANCE IS GREATER), AND PROTECTING THE REFUELING AREA WITH SECONDARY CONTAINMENT.
- WCP-2. STORING HAZARDOUS MATERIALS, FUEL, LUBRICATING OILS, OR OTHER CHEMICALS OUTSIDE OF THE 100 YEAR FLOODPLAIN, OR AT LEAST 200 FEET FROM ALL WATER BODIES (WHICHEVER DISTANCE IS GREATER) AT AN UPLAND MOBILIZATION AREA.
- WCP-3. INSPECTING AND MAINTAINING EQUIPMENT DAILY TO PREVENT THE CONTAMINATION OF SURFACE WATERS FROM LEAKING FUELS, LUBRICANTS, HYDRAULIC FLUIDS OR OTHER TOXIC MATERIALS.
- WCP-4. KEEPING EQUIPMENT OUT OF STREAMS BY OPERATING FROM THE BANKS IN A FASHION THAT MINIMIZES DISTURBANCE TO WOODY VEGETATION.
- WCP-5. CLEANING AND CHECKING EQUIPMENT FOR LEAKS OF HYDRAULIC FLUIDS, COOLING SYSTEM LIQUIDS, AND FUEL BEFORE FORDING ANY STREAM.
- WCP-6. WET CONCRETE NOT CONTACTING WATER ENTERING OR FLOWING IN THE RIVER.
- WCP-7. NOT USING FERTILIZERS AND PESTICIDES NEAR STREAMS OR WETLANDS.
- WCP-8. HAVING LINES CROSS STREAMS PERPENDICULARLY TO STREAM FLOW.
- WCP-9. MAINTAINING AND OPERATING SEWER LINES ACROSS STREAMS AT ALL TIMES TO PREVENT DISCHARGE TO LAND OR SURFACE WATERS.
- WCP-10. USING AERIAL CROSSINGS (ELEVATED SUFFICIENTLY TO REDUCE THE RISK OF FLOOD DAMAGE) OR DIRECTIONAL BORING UNDER THE STREAM TO AVOID IMPACTS TO THE STREAM AT THE POINT OF CROSSING.

**PROTECTING THE FLOODPLAIN AND STREAMSIDE FOREST**  
STREAMSIDE FORESTS PROVIDE TRAVEL CORRIDORS AND HABITAT FOR WILDLIFE AND PROTECT WATER QUALITY BY STABILIZING STREAM BANKS AND FILTERING STORMWATER RUNOFF. DEVELOPMENT IN THE FLOODPLAIN INCREASES THE POTENTIAL FOR FLOODING ADJACENT AND DOWNSTREAM PROPERTIES AND INTERFERES WITH NATURAL HYDROLOGICAL PROCESSES. FLOODPLAIN FILL ALTERS THE VOLUME OF WATER THE FLOODPLAIN WILL HOLD, THIS ALTERING THE EXTENT OF THE FLOODPLAIN. THIS WILL: (1) LEAD TO A FLOODPLAIN THAT CONTAINS PROPERTY AND FACILITIES PREVIOUSLY NOT IN THE FLOODPLAIN, (2) CAUSE FLOODING IN NEW AREAS, AND (3) HAVE NEGATIVE IMPACTS ON FISH AND WILDLIFE RESOURCES. IN ORDER TO PROTECT THESE IMPORTANT AND SENSITIVE STREAM-SIDE AREAS, THEREFORE:

- WCP-11. CONTRACTOR SHALL LIMIT ACTIVITIES IN THE FLOODPLAIN TO THOSE ABSOLUTELY NECESSARY FOR CONSTRUCTION.
- WCP-12. CONTRACTOR SHALL MAINTAIN RIPARIAN VEGETATION TO THE MAXIMUM EXTENT POSSIBLE, ESPECIALLY LARGE TREES.
- WCP-13. IF RIPARIAN AREAS ARE DISTURBED, CONTRACTOR SHALL REVEGETATE THOSE AREAS WITH NATIVE SPECIES AS SOON AS POSSIBLE.
- WCP-14. CONTRACTOR SHALL LOCATE AREAS USED FOR BORROW OR CONSTRUCTION BY PRODUCTS AWAY FROM WETLANDS AND OUT OF THE 100-YEAR FLOOD PLAIN.
- WCP-15. CONTRACTOR SHALL MAINTAIN FORESTED WETLAND / STREAM BUFFERS (A MINIMUM OF 100 FEET WIDE ON PERENNIAL STREAMS AND 50 FEET WIDE ON INTERMITTENT STREAMS; 200 AND 100 FEET, RESPECTIVELY, IN WATERSHEDS THAT ARE HOME TO FEDERALLY THREATENED OR ENDANGERED AQUATIC SPECIES) THROUGHOUT THE PROJECT AREA.

**CONSTRUCTION NOTES:**

- SGD-1. **SUBGRADE PREPARATION**  
CONSTRUCTION PREPARATION SHOULD BE IN ACCORDANCE WITH MaineDOT ENGINEER'S RECOMMENDATIONS.
- SGD-2. ALL TOPSOIL, PAVEMENTS, DEBRIS, FROZEN SOILS, LOOSE or DISTURBED SOILS, and/or NON-SUITABLE SOILS SHALL BE REMOVED FROM AREAS RECEIVING NEW CONSTRUCTION.
- SGD-3. THE SUBGRADE BENEATH THE PROPOSED WORK ZONE SHALL BE COMPACTED WITH AT LEAST FOUR COMPLETE PASSES OF A 15-TON VIBRATORY DRUM ROLLER IN DIRECTIONS PERPENDICULAR TO THE PREVIOUS PASS. SILTY SUBGRADES WHICH ARE SATURATED OR ARE OBSERVED TO PUMP AND WEAVE DURING ROLLING SHALL BE ROLLED STATICALLY.
- SGD-4. ANY UNSTABLE AREAS IDENTIFIED SHOULD BE UNDERCUT AT LEAST TWELVE INCHES, OR TO COMPETENT SOIL, AND REPLACED WITH ACCEPTABLE, COMPACTED STRUCTURAL FILL, CRUSHED STONE, OR COMMON FILL. THE DEPTH OF THE UNDERCUTTING AND TYPE OF BACKFILL MATERIAL SHALL BE SELECTED WITH CONSIDERATION OF PROPOSED USE (I.E. ROADBED, BUILDING FOOTING, ETC.) AND SOIL AND WEATHER CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
- SGD-5. AGGREGATE FOR CRUSHED STONE ¾-INCH SHALL BE OF QUARRIED STONE AND HAVE A MICRO-DEVAL VALUE OF 18.0 PERCENT OR LESS AS DETERMINED BY AASHTO T 327. THE AGGREGATE SHALL MEET THE GRADING REQUIREMENTS OF THE FOLLOWING TABLE:

MDOT STANDARD SPECIFICATION 703.13		
SIEVE DESIGNATION	PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVES	
1 INCH	100	
¾ INCH	90-100	
½ INCH	20-55	
¾ INCH	0-15	
NO. 4	0-5	

**BACKFILL AND COMPACTION**  
STRUCTURAL FILL SHALL BE USED FOR ENGINEERING FILLS WITHIN STRUCTURE'S FOOTPRINT, BEARING & STABILITY ZONES. STRUCTURAL FILL SHALL COMPLY WITH THE FOLLOWING GRADATION:

MDOT STANDARD SPECIFICATION 703.06, TYPE C		
SIEVE SIZE	% PASSING	
¾" (75MM)	100	
½" (6.3MM)	25-70	
NO. 40 (425mm)	0-30	
NO. 200 (75 mm)	0-5	

BFC-2. SUB-BASE COURSE FILL SHALL BE USED FOR ENGINEERING FILLS BELOW THE ROADWAY, PARKING, and/or ACCESS WAY BEARING & STABILITY ZONES. SUBBASE COURSE FILL SHALL COMPLY WITH THE FOLLOWING GRADATION:

MDOT STANDARD SPECIFICATION 703.06, TYPE B		
SIEVE SIZE	% PASSING	
¾" (75MM)	100	
½" (12.7MM)	20-70	
NO. 40 (425mm)	0-30	
NO. 200 (75 mm)	0-7	

BFC-3. BASE COURSE FILL SHALL BE USED FOR ENGINEERING FILLS BELOW THE ROADWAY, PARKING, and/or ACCESS WAY BEARING & STABILITY ZONES. BASE COURSE FILL SHALL COMPLY WITH THE FOLLOWING GRADATION:

MDOT STANDARD SPECIFICATION 703.06, TYPE A		
SIEVE SIZE	% PASSING	
¾" (75MM)	100	
½" (6.3MM)	30-55	
¼" (12.7MM)	45-70	
NO. 40 (425mm)	0-20	
NO. 200 (75 mm)	0-5	

BFC-4. COMMON FILL SHALL BE USED FOR ENGINEERING FILLS OUTSIDE OF THE ROADWAY, PARKING, and/or ACCESS WAY BEARING & STABILITY ZONES. COMMON FILL SHALL COMPLY WITH THE FOLLOWING GRADATION:

MDOT STANDARD SPECIFICATION 703.06, TYPE A		
SIEVE SIZE	% PASSING	
¾" (75MM)	95	
NO. 40 (425mm)	10-30	
NO. 200 (75 mm)	0-15	

BFC-5. GRANULAR BORROW SHALL CONSIST OF SAND OR GRAVEL OF HARD DURABLE PARTICLES FREE FROM VEGETABLE MATTER, LUMPS OR BALLS OF CLAY, FROZEN MATERIAL AND OTHER DELETERIOUS SUBSTANCES. THE GRADATION OF THAT PORTION PASSING A 3 INCH SIEVE SHALL MEET THE GRADATION REQUIREMENTS OF THE FOLLOWING TABLE:

MDOT STANDARD SPECIFICATION 703.19			
SIEVE DESIGNATION	MATERIAL FOR UNDERWATER BACKFILL	MATERIAL FOR EMBANKMENT CONSTRUCTION	
NO. 40	0-7	0-70	
NO. 200	0-7.0	0-20.0	

- BFC-6. ALL GRANULAR FILLS SHALL BE PLACED IN 8 INCH MAXIMUM LOOSE LIFTS AND COMPACTED TO A MINIMUM 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D 1557 (MODIFIED PROCTOR TEST) AND FIELD DENSITY TESTING (ASTM D 2922 or EQUIVALENT) IN PAVED AREAS or BELOW STRUCTURES. COMPACTION TO A MINIMUM OF 90% OF THE MATERIAL'S MAXIMUM DRY DENSITY IN NON-STRUCTURAL, LANDSCAPED AREAS IS ACCEPTABLE. LIFT THICKNESS SHALL BE A MAXIMUM 6 INCH LOOSE LIFT WHEN COMPACTED USING HAND-GUIDED EQUIPMENT.
- BFC-7. WHERE SUBGRADE BECOME SATURATED, UNSTABLE, and/or DIFFICULT TO COMPACT, CRUSHED STONE SHALL BE PLACED AND COMPACTED IN LIEU OF STRUCTURAL FILL. CRUSHED STONE, WHEN USED, SHALL BE WRAPPED IN A GEOTEXTILE FILTER FABRIC SUCH AS MARIFI 140n or EQUIVALENT.
- BFC-8. BEDDING PLACED BELOW UTILITIES SHALL BE IN ACCORDANCE WITH UTILITY AND MANUFACTURER REQUIREMENTS. IN GENERAL, UTILITIES MAY BE SUPPORTED DIRECTLY ON A MINIMUM 6 INCH THICK LAYER OF COMPACTED STRUCTURAL FILL, CRUSHED STONE, or OTHER SUITABLE PIPE BEDDING MATERIAL. FILL PLACED AS BACKFILL FOR UTILITY TRENCHES OR EXCAVATIONS SHALL MEET THE MINIMUM REQUIREMENTS OF COMMON FILL.
- BFC-9. MATERIALS USED AS STRUCTURAL FILL, AGGREGATE SUB-BASE AND BASE, and/or COMMON FILL SHALL MEET THE REQUIREMENTS ABOVE. MATERIALS IMPORTED TO THE SITE TO MEET THOSE REQUIREMENTS SHALL HAVE REPRESENTATIVE SAMPLES SUBMITTED FOR TESTING TO COMPARE THEIR GRADATION CHARACTERISTICS TO THE PROJECT SPECIFICATIONS AS WELL AS TO ESTABLISH THEIR OPTIMUM WATER CONTENTS AND MAXIMUM DRY DENSITIES (ASTM D 1557). USE OF FILLS ASSUMES THAT THE MOISTURE CONTENT OF THE MATERIAL(S) WILL BE STRICTLY CONTROLLED IN ORDER TO ALLOW FOR PROPER PLACEMENT AND COMPACTION.
- BFC-10. RE-USE OF EXISTING SOILS or NATIVE ON-SITE BORROW SOILS IS PERMITTED SO LONG AS THOSE SOILS MEET THE GRADATION REQUIREMENTS IDENTIFIED ABOVE AND PROVIDED THAT THEY ARE FREE FROM DELETERIOUS MATERIALS AND CAN BE ADEQUATELY COMPACTED. SATURATED SILTY and/or CLAY SOILS ARE NOT ACCEPTABLE. REPRESENTATIVE SAMPLES OF RE-USE or NATIVE SOILS SHALL BE SUBMITTED FOR TESTING TO COMPARE THEIR GRADATION CHARACTERISTICS TO THE PROJECT SPECIFICATIONS AS WELL AS TO ESTABLISH THEIR OPTIMUM WATER CONTENTS AND MAXIMUM DRY DENSITIES (ASTM D 1557).

**STAGED CONSTRUCTION:**

- PART 1 - PROTECTING THE NATURAL RESOURCE AREAS**
  - CONTRACTOR SHALL ESTABLISH LIMITS OF WORK NECESSARY TO COMPLETE ALL WORK.
  - CONTRACTOR SHALL INSTALL SEDIMENTATION BARRIER FOR ALL WORK, INCLUDING MOBILIZATION, WITHIN 25' OF A PROTECTED RESOURCE AREA, INCLUDING BUT NOT LIMITED, A GREAT POND RESOURCE AREA, A STREAM RESOURCE AREA, and/or ANY WETLAND RESOURCE AREA.
  - CONTRACTOR SHALL INSTALL EROSION CONTROL INCLUDING FLOATING SILT FENCE 10' DOWNSTREAM OF ALL LIMITS OF WORK ALONG STREAM.
- PART 2 - CUTTING & GRUBBING ALONG ROAD SWALE & EQUIPMENT ACCESS AREAS.**
  - CONTRACTOR SHALL REMOVE THE MINIMUM AMOUNT OF VEGETATION ALONG ANY NEEDED EQUIPMENT ACCESS AREAS. SPECIAL CARE SHALL BE APPLIED NOT TO DAMAGE THE ROOT SYSTEMS OF LARGER TREES LOCATED OUTSIDE OF THE CLEARING ZONE.
  - CONTRACTOR SHALL REMOVE ALL ORGANIC DEBRIS, INCLUDING STUMPS, TO A PROPER DISPOSAL AREA.
- PART 3 - ISOLATE STREAM RESOURCE AREA**
  - CONTRACTOR SHALL INSTALL SAND BAG/SHEETING BARRIER TO ISOLATE STREAM FROM CONSTRUCTION ZONE. CONTRACTOR SHALL CARRY BARRIER LINE FROM A PRE-DETERMINED UPSTREAM LOCATION TO A PRE-DETERMINED DOWNSTREAM LOCATION ALONG THE SHORELINE ON EITHER SIDE OF WORK ZONE.
- PART 4 - EXCAVATION**
  - EXCAVATION SHALL BE LIMITED TO ONLY THOSE AREAS NEEDED TO COMPLETE THE PROJECT. ALL STRUCTURALLY SUITABLE SOILS SHALL BE MOVED TO DESIGNATED MOBILIZATION AREA FOR REUSE AS FILL. ALL NON-SUITABLE AND/OR ORGANIC SOILS SHALL BE MOVED TO DESIGNATED MOBILIZATION AREA FOR SCREENING AND REUSE AS TOPSOIL.
  - CONTRACTOR SHALL EXCAVATE EXISTING MATERIALS FROM SCOPE OF WORK AREA.
- PART 5 - SHORING STABILITY & DEWATERING**
  - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS & METHODS, STABILIZATION AND SHORING OF THE EXCAVATION AREAS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - DEWATERING OF THE EXCAVATION SHALL BE MAINTAINED THROUGHOUT THE EXCAVATION, MATERIAL PLACEMENT AND CURING PROCESS.
  - CONTRACTOR SHALL SEPARATE SEDIMENT AND SUSPENDED SOLIDS UP TO 250 MICRONS IN DIAMETER FROM DISCHARGE WATER THROUGH FILTERING SYSTEM. DISCHARGE WATER SHALL BE RELEASED BELOW WORK AREA SO AS NOT TO DAMAGE or SCOUR NEW WORK.

**EROSION CONTROL:**

- ECL-1. ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED AND MULCHED IMMEDIATELY AFTER WORK PER THE FOLLOWING:
  - TOPSOIL DEPTH: 4"
  - LIME: 130 LBS. PER 1000 S.F.
  - 12-12-12 FERTILIZER: 12 LBS. PER 1000 S.F.
  - SEED (NON-LAWN AREAS): 1.25 LBS. PER 1000 S.F.
    - 55% TALL FESCUE
    - 40% CREEPING RED FESCUE
    - 5% RED TOP MULCH:
    - MULCH: 3 BALES PER 1000 S.F.

**CONCRETE:**

- CON-1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE MAINE DEPARTMENT OF TRANSPORTATION (MaineDOT), IN CASE OF CONFLICT, MaineDOT SHALL GOVERN.
- CON-2. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY.
- CON-3. FOR LOCATIONS LISTED BELOW, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F<sub>c</sub>) IN 28 DAYS OF 4350 PSI AND SHALL BE NORMAL WEIGHT CONCRETE WITH SAND GRAVEL AGGREGATE AS FOLLOWS:
 

STRUCTURAL WEARING SURFACE.....	CLASS LP
BARRIERS, CURBS, SIDEWALKS, END POSTS.....	CLASS LP
SEALS.....	CLASS S
PRECAST.....	CLASS P
FILL.....	FILL
ALL OTHER.....	CLASS A
- CON-4. ALL CONCRETE EXPOSED TO THE WEATHER OR POSSIBLE FREEZE/THAW ACTION SHALL CONTAIN AN AIR ENTRAINMENT ADMIXTURE. AIR CONTENT TO BE 6% ±1½%.
- CON-5. GROUT UNDER COLUMN BASE PLATES AND UNDER OTHER BEARING PLATES SHALL BE NON-SHRINK, NONMETALLIC GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 3 DAYS.
- CON-6. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.
- CON-7. NO CONCRETE SHALL BE CAST BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ARCHITECT, OR HIS DESIGNATED REPRESENTATIVE.
- CON-8. ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED ¾" UNLESS SHOWN OTHERWISE ON ARCHITECTURAL DRAWINGS.
- CON-9. CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28-DAYS COMPRESSIVE STRENGTH (F<sub>c</sub>) BEFORE FORMS OR SHORES MAY BE REMOVED:
 

FOOTINGS.....	20%
WALLS AND BEAM SIDES.....	20%
- CON-10. REFER TO SPECIFICATION DRAWINGS FOR CONCRETE FINISHES.
- CON-11. THE PLACEMENT OF SLEEVES, OUTLET BOXES, BOX-OUTS, ANCHORS, ETC., FOR THE MECHANICAL, ELECTRICAL AND PLUMBING TRADES IS THE RESPONSIBILITY OF THE TRADE INVOLVED. HOWEVER, ANY BOX-OUTS NOT COVERED BY TYPICAL DETAILS IN THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.
- CON-12. AT SAWCUTTING OF EXISTING CONCRETE, EXCLUDING SLABS ON GRADE, NO OVERCUT AT CORNERS IS ALLOWED. ALL CORNERS SHALL HAVE A CORE HOLE OF SUFFICIENT DIAMETER MADE PRIOR TO CUTTING AT ADJACENT SIDES TO PREVENT CUT BEYOND THE REQUIRED DIMENSION.

**REINFORCING:**

- REI-1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 EXCEPT WHERE NOTED. ALL REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING BARS MAY NOT BE WELDED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- REI-2. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM 185. (FY=65 KSI MIN.)
- REI-3. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH THE AASHTO SPECIFICATION.
- REI-4. PROVIDE AND SCHEDULE WITH THE SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE:
  - HIGH CHAIRS..... 4'-0" O.C.
  - SLAB BOLSTERS..... 1'-0" O.C.
  - SUPPORT BARS FOR HIGH CHAIRS NO. 5
- REI-5. ALL CONTINUOUS REINFORCEMENT SHALL HAVE A MINIMUM LAP AS REQUIRED FOR A CLASS A SPLICE.

TABLE 7 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS, SLABS AND FOOTINGS (ACI 25.4.2.3) (f<sub>c</sub>' = 3000 psi)

BAR SIZE	LAP CLASS	CONCRETE COVER 1.50 IN.		CONCRETE COVER 2.00 IN.		CONCRETE COVER 3.00 IN.	
		TOP	OTHER	TOP	OTHER	TOP	OTHER
		#3	A	13	12	13	12
	B	17	13	17	13	17	13
#4	A	17	13	17	13	17	13
	B	23	17	23	17	23	17
#5	A	22	17	22	17	22	17
	B	28	22	28	22	28	22
#6	A	26	20	26	20	26	20
	B	34	26	34	26	34	26
#7	A	43	33	38	29	38	29
	B	55	43	49	38	49	38
#8	A	54	41	43	33	43	33
	B	70	54	56	43	56	43
#9	A	66	51	53	41	48	37
	B	86	66	69	53	63	48
#10	A	81	62	66	51	55	42
	B	105	81	85	66	71	55
#11	A	97	74	79	61	61	47
	B	125	97	102	79	79	61

- REI-6. ALL LAPS IN W.W.F. SHALL BE ONE MESH PLUS 2" AT SPLICES.
- REI-7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED PER TABLE 5.12.3-1, UNLESS NOTED OTHERWISE.
- REI-8. ALL HOOKS SHOWN ON DRAWINGS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.
- REI-9. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND BE LAPPED AT NECESSARY SPLICES, OR HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE. LAP BEAM TOP BARS AT MID-SPAN AND BEAM BOTTOM BARS AT SUPPORTS, UNLESS OTHERWISE NOTED.

PROJECT

**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE

LOCATION

**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**

COORDINATES  
45°08'56.72"N  
69°06'52.13"W

CLIENT

**The Nature Conservancy**

**14 MAINE STREET, SUITE 401 BRUNSWICK, ME 04011**

**WENTWORTH PARTNERS & ASSOCIATES**  
*A Maine Corporation*

31 COMMERCIAL STREET  
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*A Gold Standard Company*

**ENGINEER'S CERTIFICATION**

19MAR24

PROJECT NO: **103-23**

DRAWN BY: **JJC**

CHECKED BY: **SCG**

**SUBMITTALS**

REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE

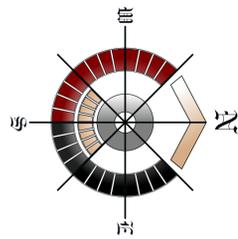
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE

**GENERAL NOTES & SPECIFICATIONS**

SHEET NUMBER

**C001**



LEGEND	
	EXISTING MINOR GRADE LINE
	EXISTING MAJOR GRADE LINE
	APPROX. WORK LIMIT
	LIMIT OF TOPO GRAPHICAL SURVEY
	TREE LINE

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
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ENGINEER'S CERTIFICATION

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

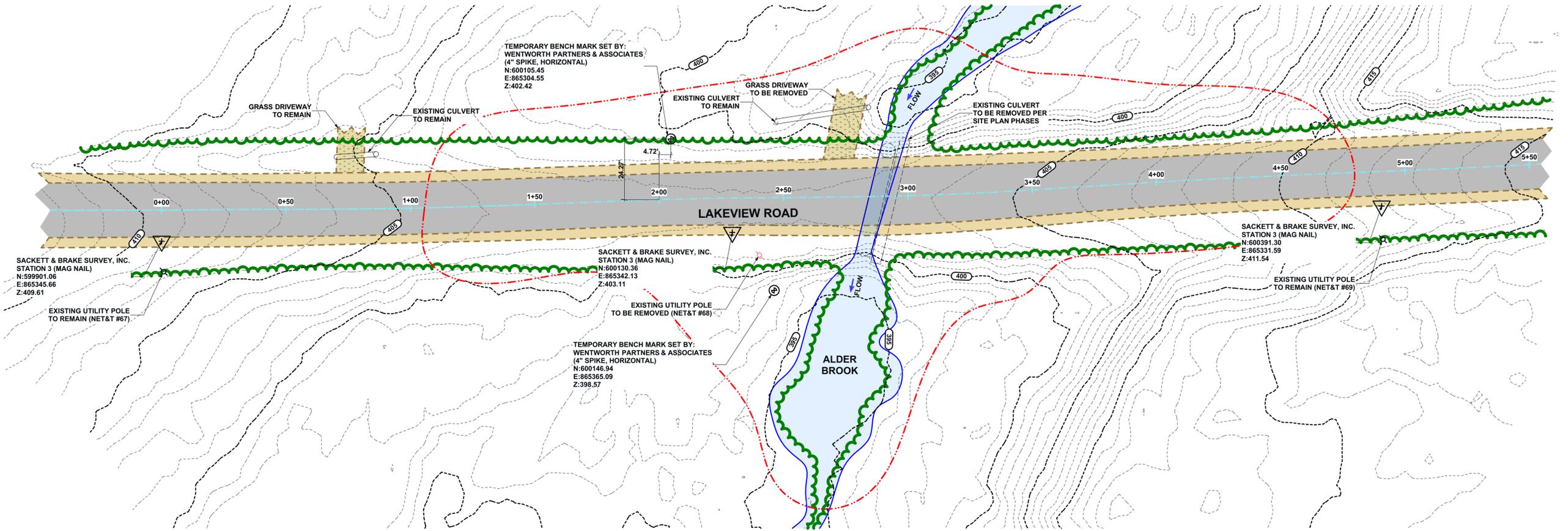
SUBMITTALS		
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A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**EXISTING SITE PLAN**

SHEET NUMBER  
**C101**



SACKETT & BRAKE SURVEY, INC.  
STATION 3 (MAG NAIL)  
N:599901.06  
E:865345.66  
Z:409.61

GRASS DRIVEWAY TO REMAIN

EXISTING CULVERT TO REMAIN

TEMPORARY BENCH MARK SET BY:  
WENTWORTH PARTNERS & ASSOCIATES  
(4" SPIKE, HORIZONTAL)  
N:600105.45  
E:865304.55  
Z:402.42

EXISTING CULVERT TO REMAIN

GRASS DRIVEWAY TO BE REMOVED

EXISTING CULVERT TO BE REMOVED PER SITE PLAN PHASES

LAKEVIEW ROAD

SACKETT & BRAKE SURVEY, INC.  
STATION 3 (MAG NAIL)  
N:600130.36  
E:865342.13  
Z:403.11

TEMPORARY BENCH MARK SET BY:  
WENTWORTH PARTNERS & ASSOCIATES  
(4" SPIKE, HORIZONTAL)  
N:600146.94  
E:865365.09  
Z:398.57

ALDER BROOK

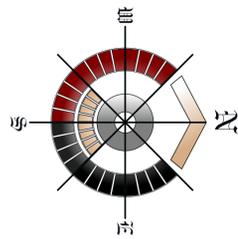
SACKETT & BRAKE SURVEY, INC.  
STATION 3 (MAG NAIL)  
N:600391.30  
E:865331.59  
Z:411.54

EXISTING UTILITY POLE TO REMAIN (NET&T #69)

EXISTING UTILITY POLE TO REMAIN (NET&T #67)

EXISTING UTILITY POLE TO BE REMOVED (NET&T #68)

EXISTING SITE PLAN 1 C101  
SCALE: 1:250



LEGEND	
---	EXISTING MINOR GRADE LINE
- - - -	EXISTING MAJOR GRADE LINE
—●—●—	SILT FENCE
- · - · -	APPROX. WORK LIMIT
- - - -	LIMIT OF TOPOGRAPHICAL SURVEY
~ ~ ~ ~	TREE LINE

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DRAWN BY: JJC  
CHECKED BY: SCG

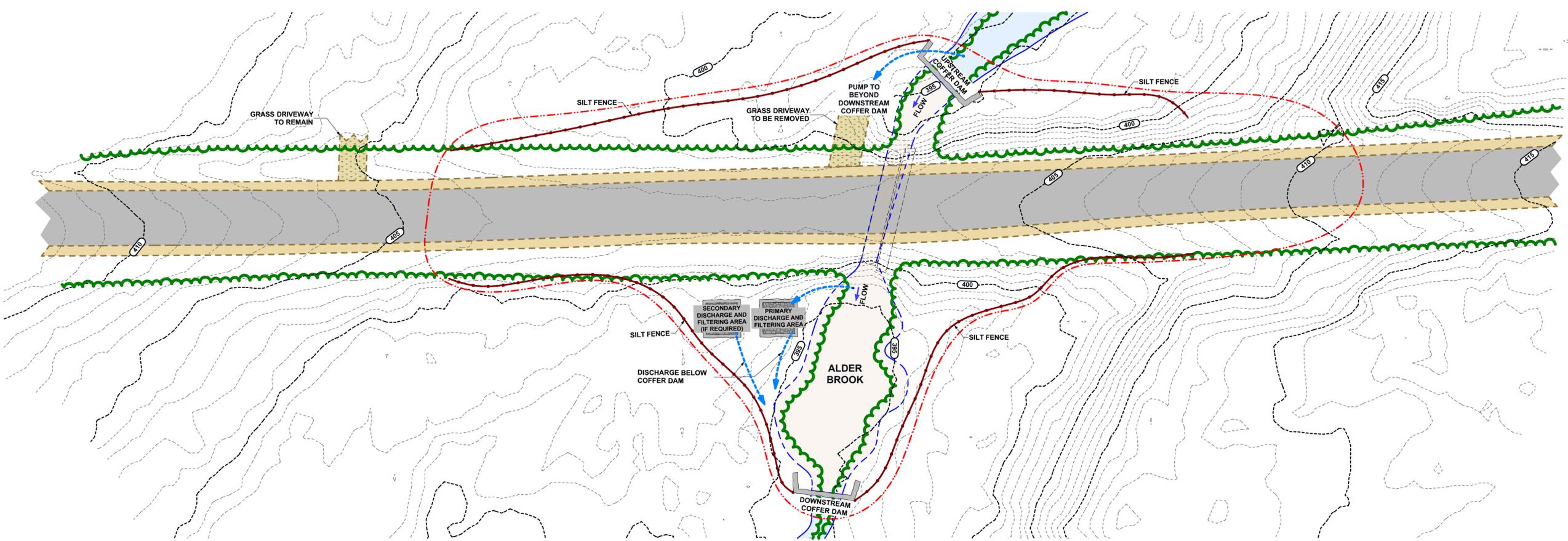
SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

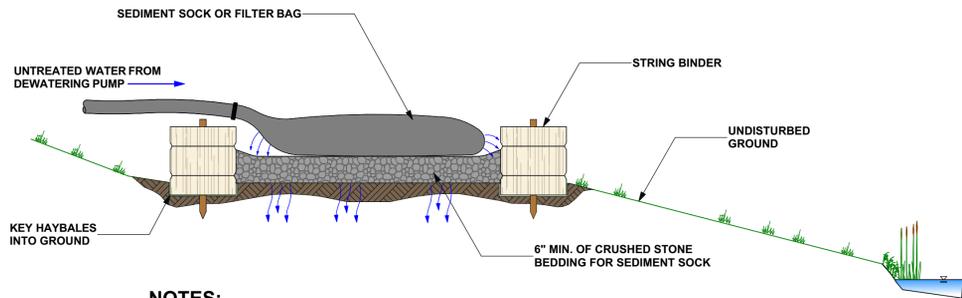
SHEET TITLE  
**SEDIMENTATION & DEWATERING PLAN**

SHEET NUMBER  
**C102**



**SEDIMENTATION & DEWATERING PLAN** 1  
SCALE: 1:250 C102

NO TREE WITH A GIRTH OF 3" OR MORE SHALL BE REMOVED WITHOUT INSPECTION & APPROVAL

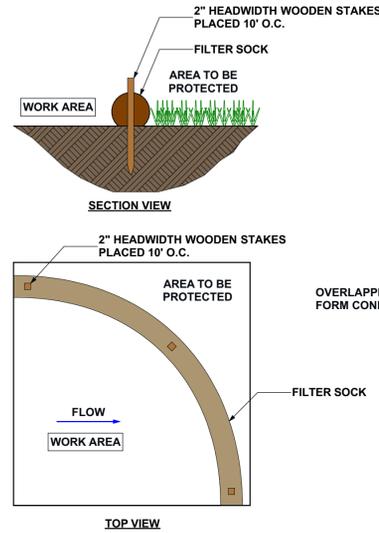


**NOTES:**

- DESIGN INTENT FOR TEMPORARY DEWATERING FILTER PAD IS TO ENHANCE PUMP WATER QUALITY PRIOR TO INFILTRATION INTO UNDISTURBED GROUND.
- CONTRACTOR TO OPERATE PUMPS AND SIZE TEMPORARY DEWATERING FILTER PAD TO ENCOURAGE INFILTRATION AND PREVENT DISCHARGE TO SURFACE WATERS OR WETLANDS. USE ADDITIONAL SEDIMENT CONTROLS AS NEEDED

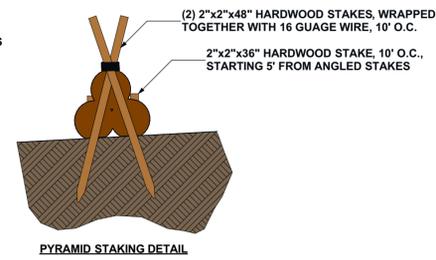
**TEMPORARY DEWATERING FILTER PAD DETAIL**

1  
C103  
NOT TO SCALE

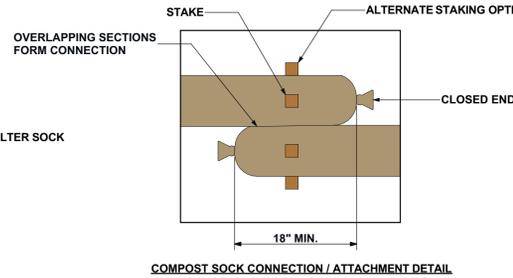


**FILTER SOCK DETAILS**

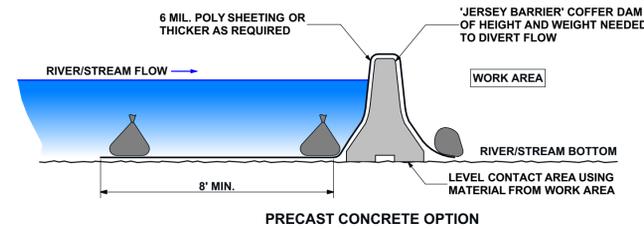
2  
C103  
NOT TO SCALE



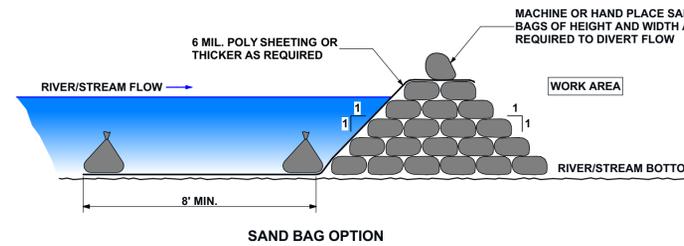
PYRAMID STAKING DETAIL



COMPOST SOCK CONNECTION / ATTACHMENT DETAIL



PRECAST CONCRETE OPTION



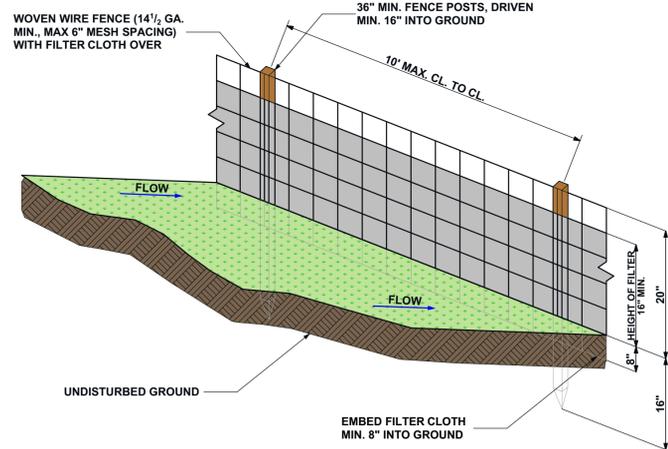
SAND BAG OPTION

**NOTE**

- CONTRACTOR MAY PROPOSED OTHER METHODS AND MATERIALS FOR COFFERDAMS
- COFFERDAMS MUST BE DESIGNED TO RESIST THE BANKFULL STORM EVENT

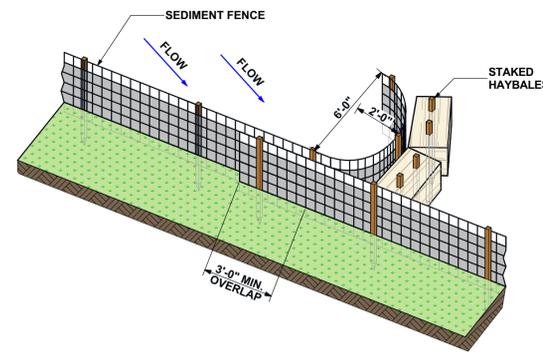
**TEMPORARY COFFERDAMS / DIVERSION**

3  
C103  
NOT TO SCALE



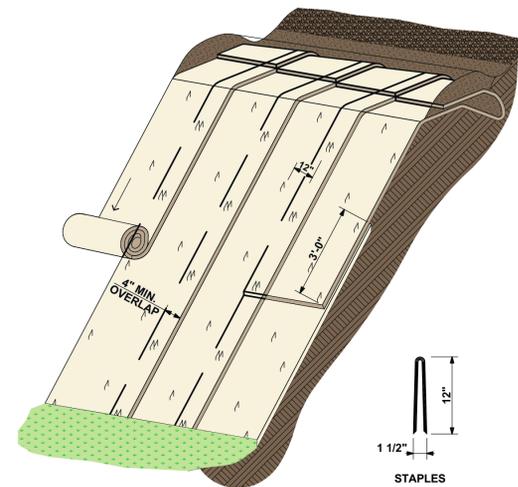
**SEDIMENT FENCE**

5  
C103  
NOT TO SCALE



**SEDIMENT FENCE POCKET**

6  
C103  
NOT TO SCALE



**NOTES:**

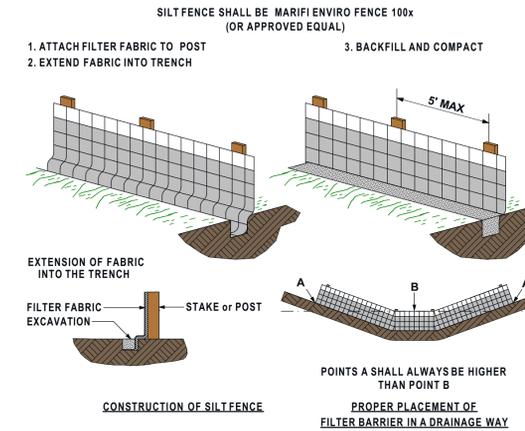
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
- APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
- CHOOSE MATERIAL BASED ON SLOPE, SOILS, AND APPLICATION.

**TYPICAL SLOPE SOIL STABILIZATION (TRM)**

7  
C103  
NOT TO SCALE

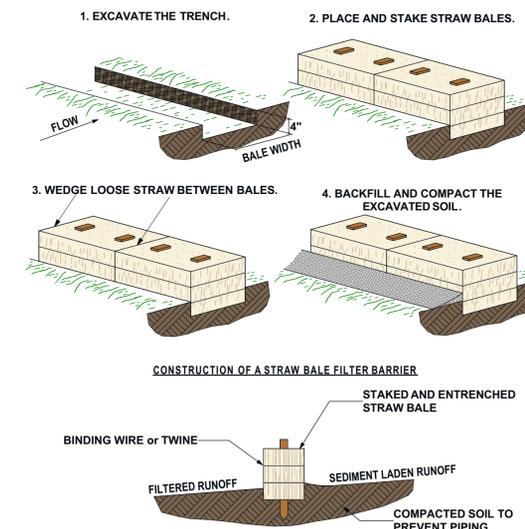
**EROSION CONTROL NOTES:**

- THE EROSION CONTROL BARRIERS DEPICTED FOR THE SITE PLANS ARE MINIMUM STANDARDS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO ENSURE SEDIMENT ISN'T TRANSPORTED OFF SITE.
- PRIOR TO THE ONSET OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL EROSION CONTROL BARRIERS AS SHOWN AS THE FIRST ORDER OF WORK.
- CONTRACTOR SHALL INSTALL INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCHBASIN INLETS WITHIN THE WORK LIMITS. THE CONTRACTOR SHALL INSPECT THE INLET PROTECTION AFTER STORM EVENTS AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED
- INSPECT INLET PROTECTION AND ANY SILT FENCES WEEKLY AND AFTER EACH RAIN STORM OF 0.5 INCHES OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
- ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 4\"/>



**SILT FENCE INSTALLATION DETAILS**

4  
C103  
NOT TO SCALE

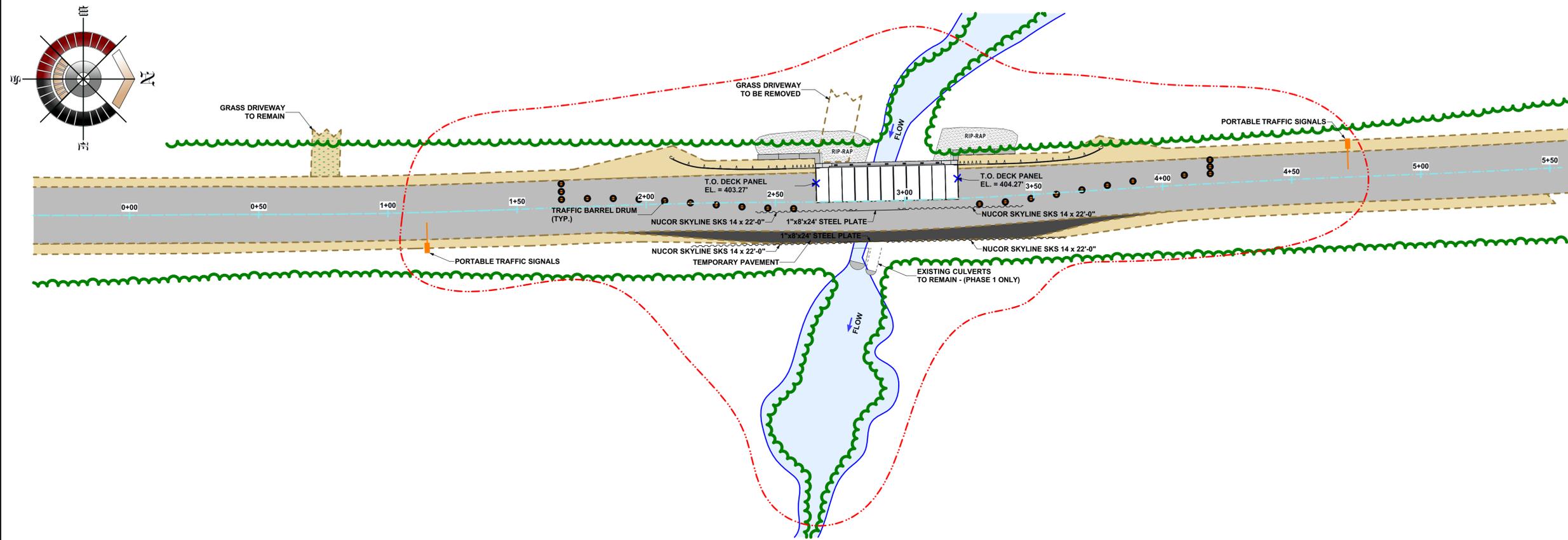


**STRAW BALE INSTALLATION DETAILS**

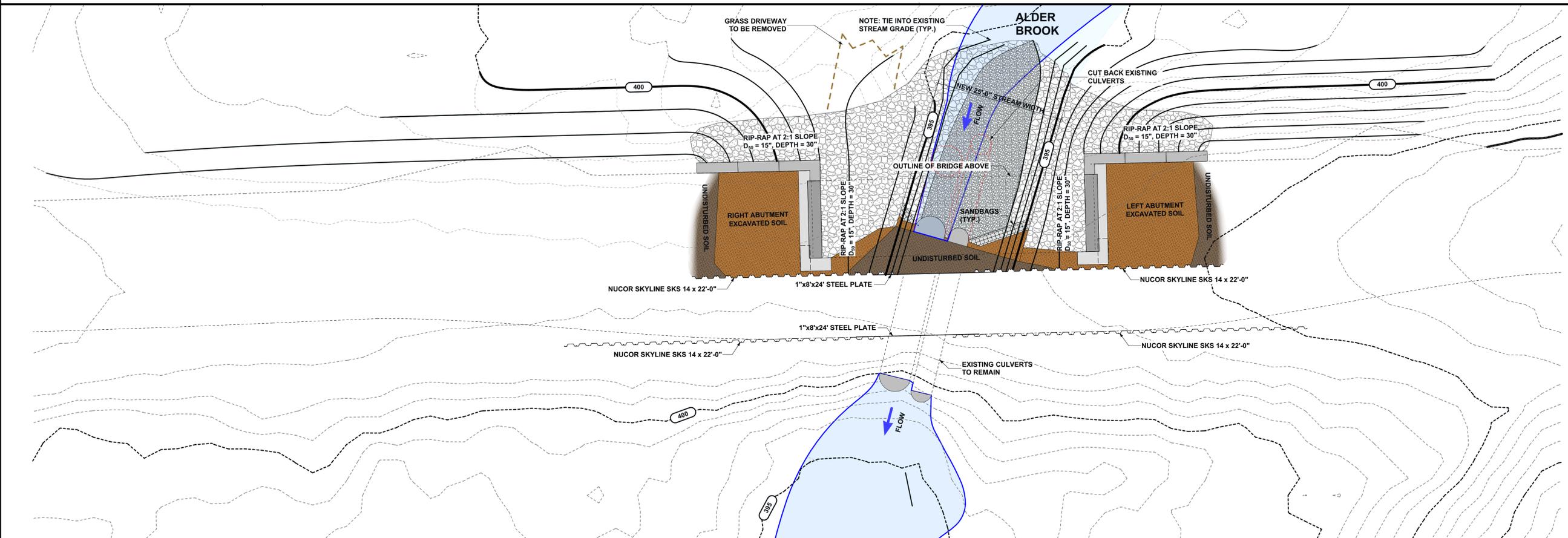
8  
C103  
NOT TO SCALE

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72\"/>



**CONSTRUCTION LAYOUT - PHASE 1** 1  
SCALE: 1:250 C104



**GRADING PLAN - PHASE 1** 2  
SCALE: 1" = 10' C104

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BRUNSVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

**WENTWORTH PARTNERS & ASSOCIATES**  
A Maine Corporation  
31 COMMERCIAL STREET  
SKOWHEGAN, ME 04976  
V: 207.858.8010  
F: 978.462.5822  
www.wpa-design.com  
A Gold Standard Company



PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

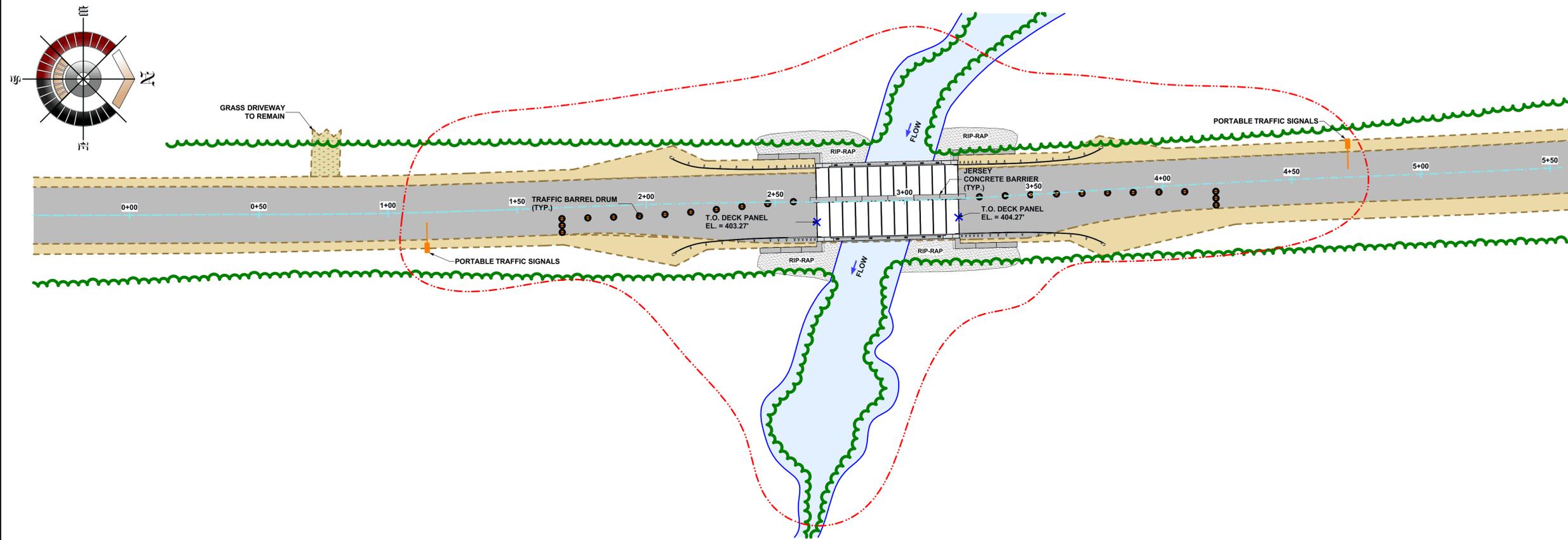
SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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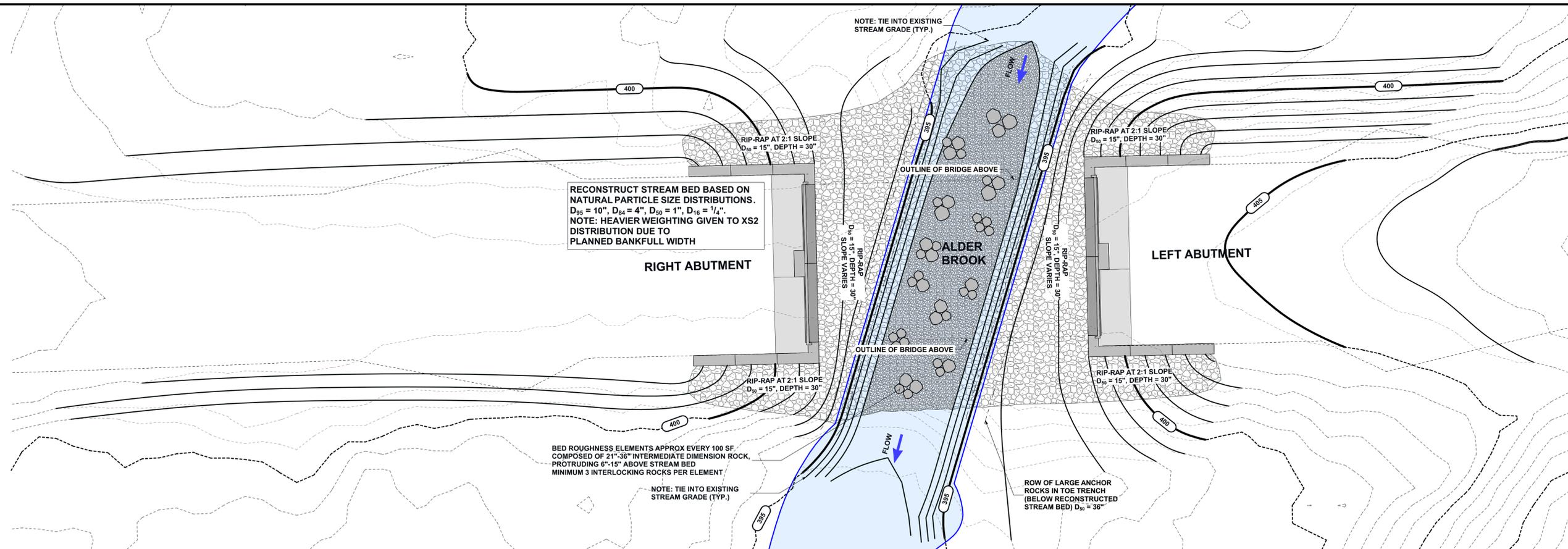
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**CONSTRUCTION LAYOUT PHASE 1**

SHEET NUMBER  
**C104**



**CONSTRUCTION LAYOUT - PHASE 2** 1  
SCALE: 1:250 C105



**BED & BANK PLAN - PHASE 2** 2  
SCALE: 1" = 10' C105

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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31 COMMERCIAL STREET V: 207.858.8010  
SKOWHEGAN, ME 04976 F: 978.462.5822  
www.wpa-design.com  
A Gold Standard Company

ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

**SUBMITTALS**

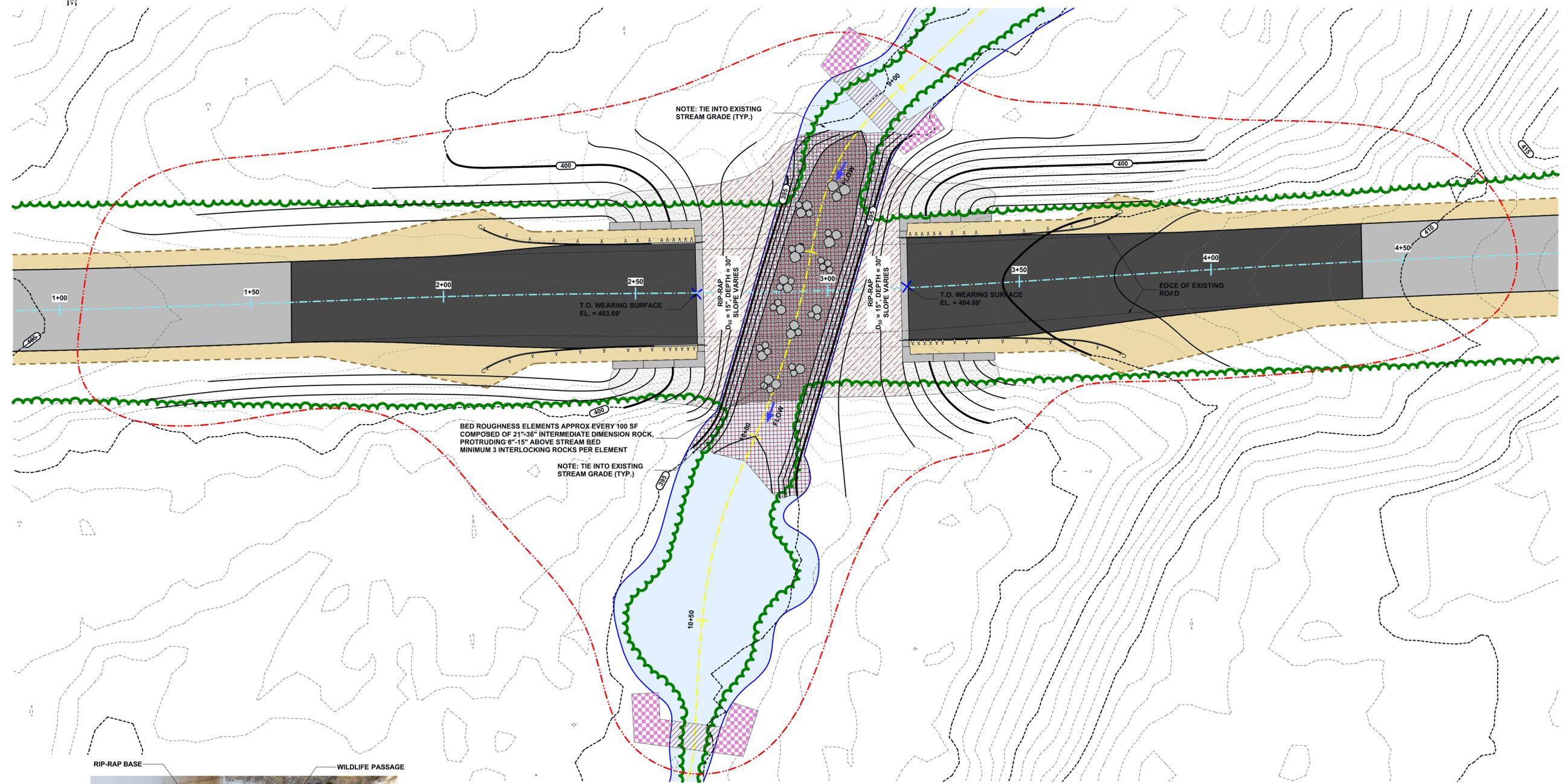
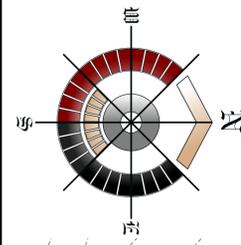
REV.	DATE	DESCRIPTION
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**CONSTRUCTION LAYOUT PHASE 2**

SHEET NUMBER  
**C105**



**TYPICAL RIP-RAP CONFIGURATION**  
NOT TO SCALE

2  
C106

**SITE PLAN - PHASE 3**  
SCALE: 1:160  
1  
C106

IMPACT AREAS	
	TEMPORARY DISTURBANCE TO WETLANDS = 348 S.F. TEMPORARY COFFER DAMS = 7 CU. YDS.
	TEMPORARY DISTURBANCE TO LAND BELOW WATER = 242 S.F. TEMPORARY COFFER DAMS = 18 CU. YDS.
	PERMANENT ALTERATION TO WETLANDS = 1559 S.F. RIP-RAP = 145 CU. YDS.
	PERMANENT ALTERATION TO LAND BELOW WATER = 2357 S.F. STREAM RESTORATION = 250 CU. YDS.

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72" N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

**WENTWORTH PARTNERS & ASSOCIATES**  
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www.wpa-design.com  
A Gold Standard Company

ENGINEER'S CERTIFICATION

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

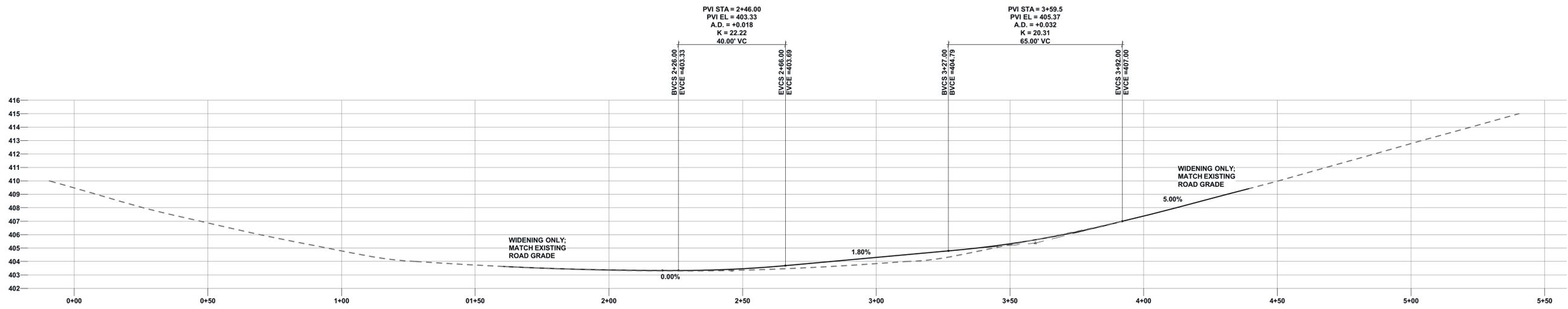
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

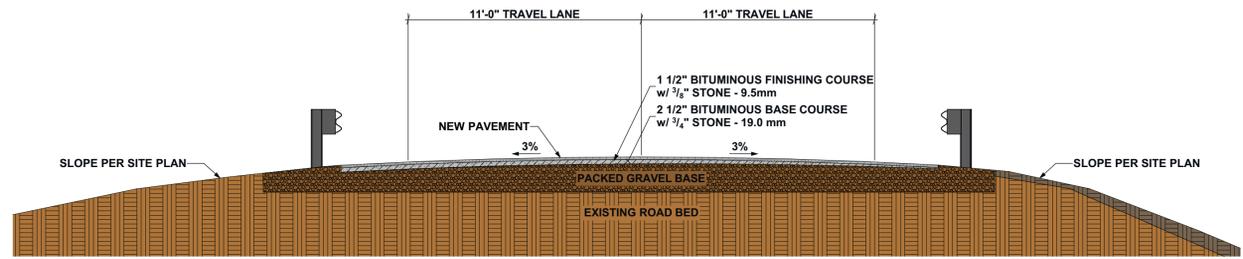
SHEET TITLE  
**PROPOSED SITE PLAN PHASE 3**

SHEET NUMBER  
**C106**

KEY	
---	EXISTING CENTERLINE ROAD GRADE
- - -	PROPOSED VC TANGENTS
—	PROPOSED CENTERLINE ROAD GRADE



**ROAD PROFILE 1**  
SCALE: 1:230 **C107**



**ROAD SECTION 2**  
SCALE: 1/4" = 1'-0" **C107**

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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A Gold Standard Company



PROJECT NO:	103-23
DRAWN BY:	JJC
CHECKED BY:	SCG

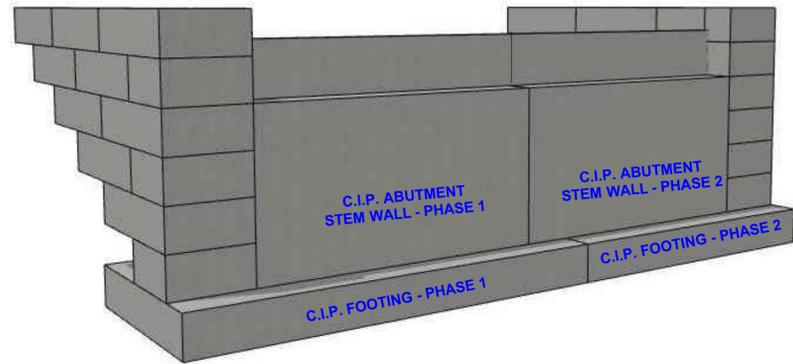
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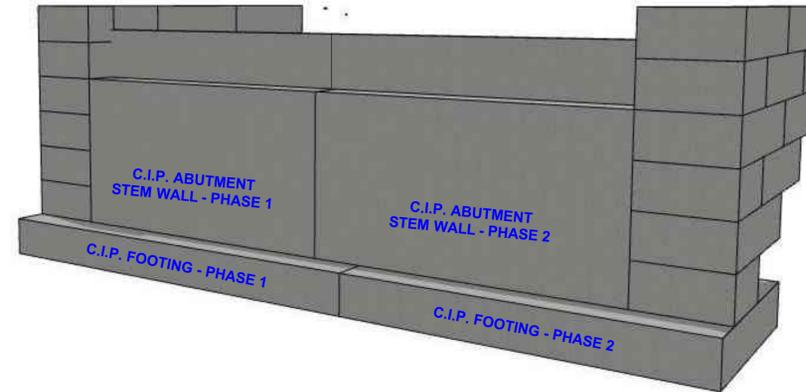
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**ROAD PROFILE**

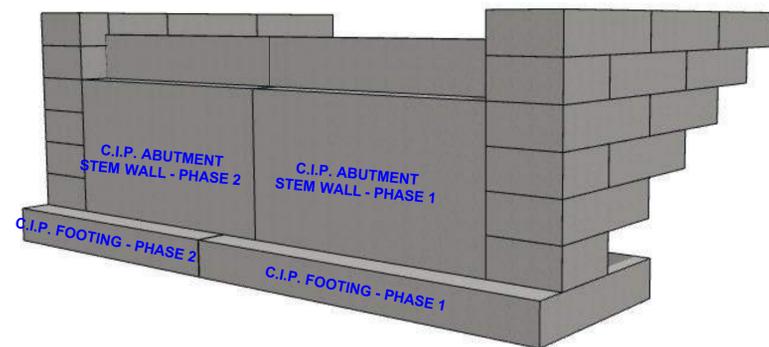
SHEET NUMBER  
**C107**



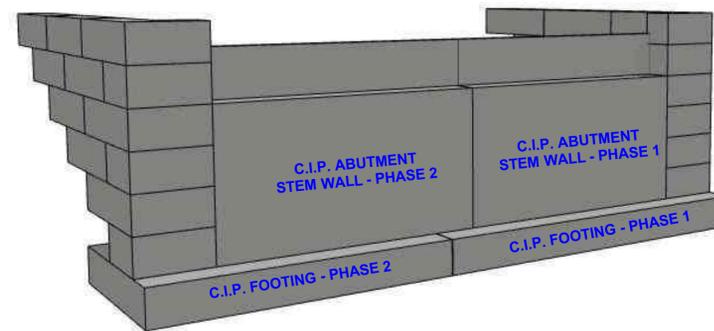
**LEFT ABUTMENT (UPSTREAM VIEW)** 1  
NOT TO SCALE C108



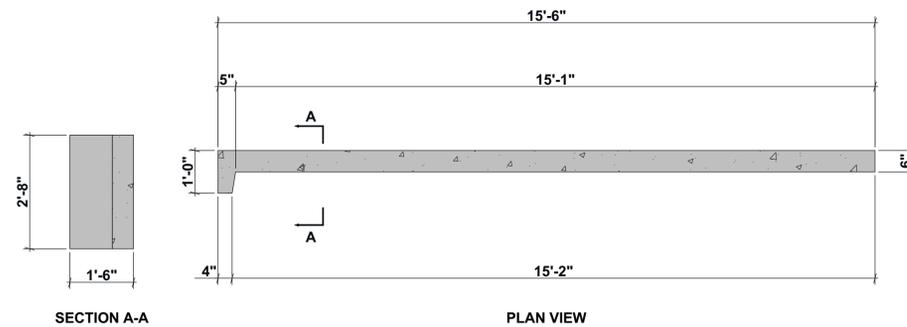
**LEFT ABUTMENT (DOWNSTREAM VIEW)** 2  
NOT TO SCALE C108



**RIGHT ABUTMENT (UPSTREAM VIEW)** 3  
NOT TO SCALE C108



**RIGHT ABUTMENT (DOWNSTREAM VIEW)** 4  
NOT TO SCALE C108



**HEADWALL DETAIL** 5  
SCALE: 1/2" = 1'-0" C108

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

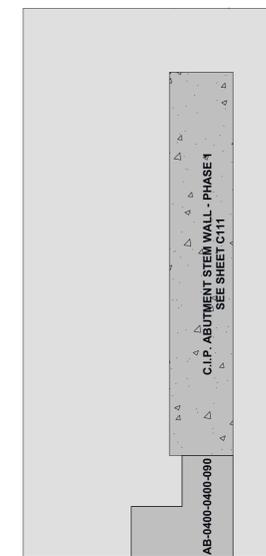
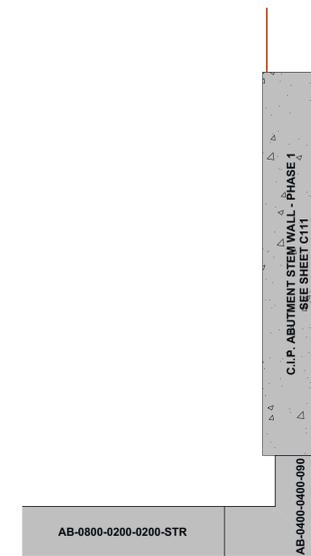
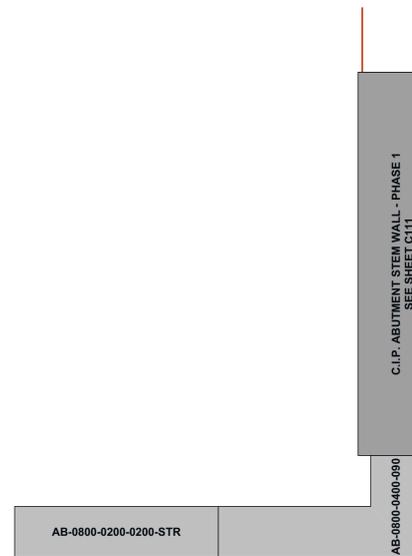
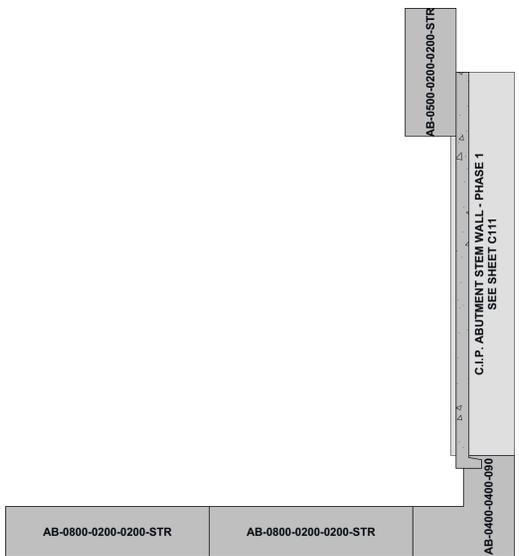
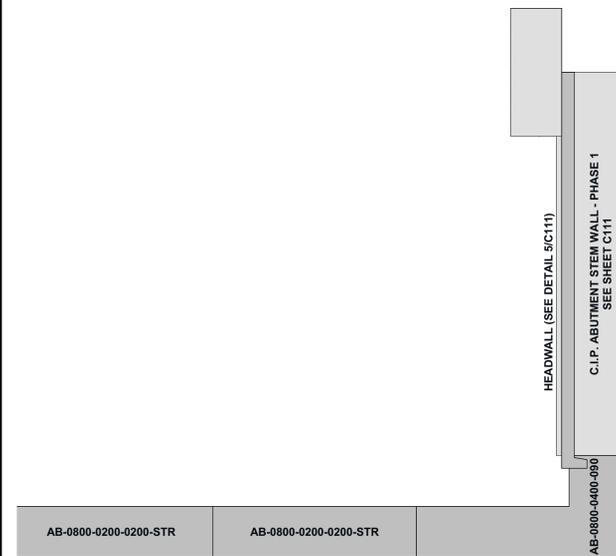
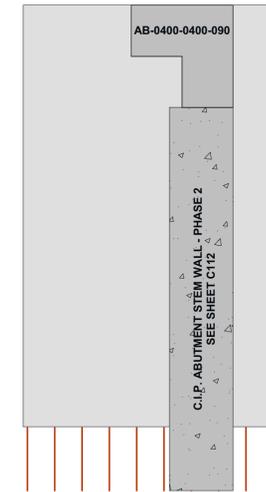
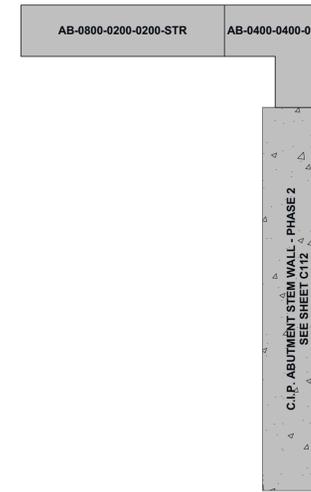
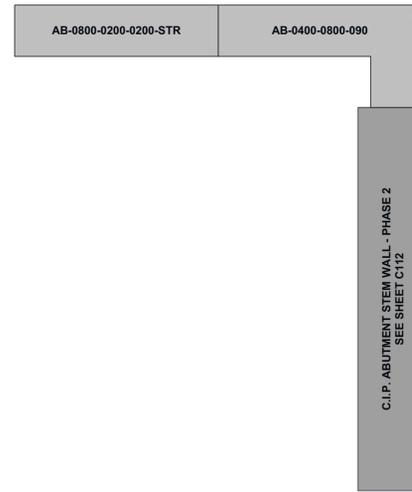
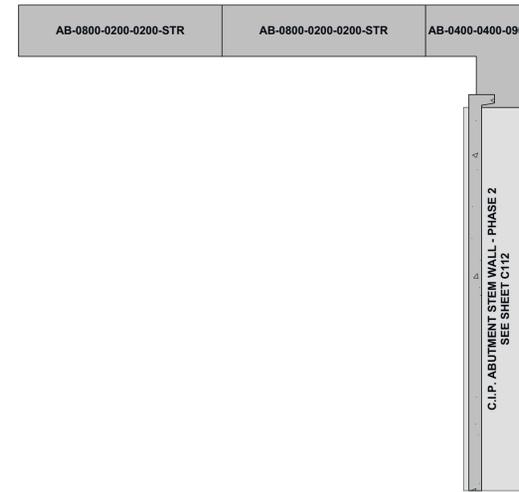
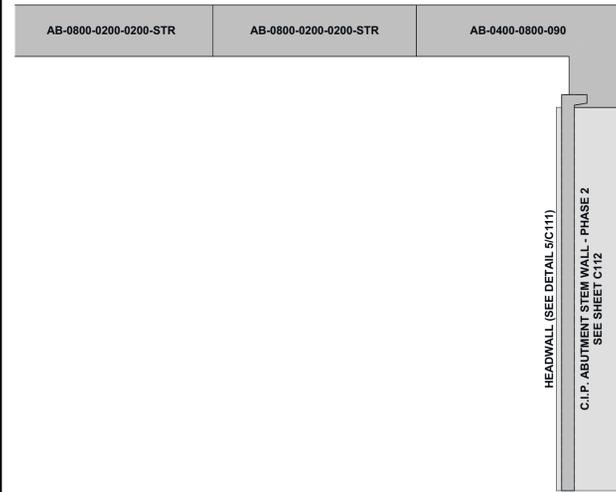
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE ABUTMENT PERSPECTIVES**

SHEET NUMBER  
**C108**



TOP LAYER OF BLOCKS  
B.O. BLOCK EL. = ±402.89

FIFTH LAYER OF BLOCKS  
B.O. BLOCK EL. = ±400.89

FOURTH LAYER OF BLOCKS  
B.O. BLOCK EL. = ±398.89

THIRD LAYER OF BLOCKS  
B.O. BLOCK EL. = ±396.89

SECOND LAYER OF BLOCKS  
B.O. BLOCK EL. = ±394.89

FIRST LAYER OF BLOCKS  
B.O. BLOCK EL. = ±392.89

LEFT BRIDGE ABUTMENT 1  
SCALE: 1:30 C109

PHASE 2

PHASE 1

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

SUBMITTALS		
REV.	DATE	DESCRIPTION
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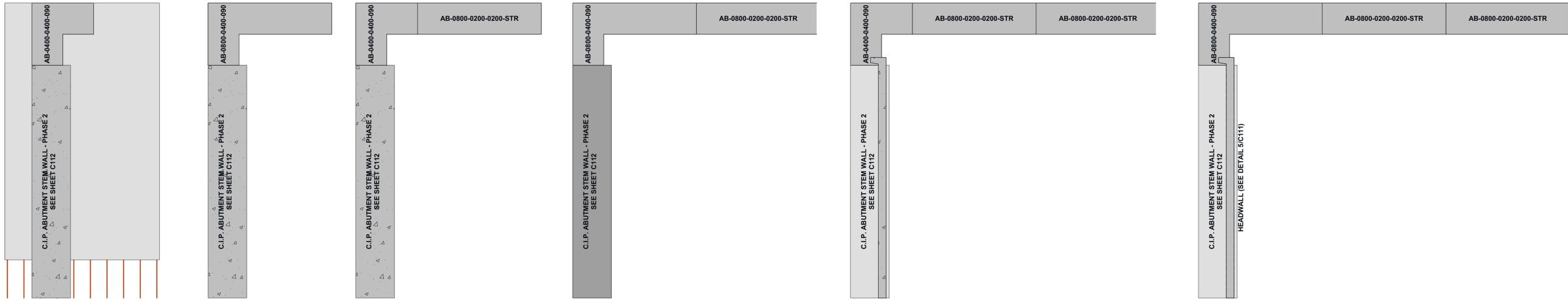
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

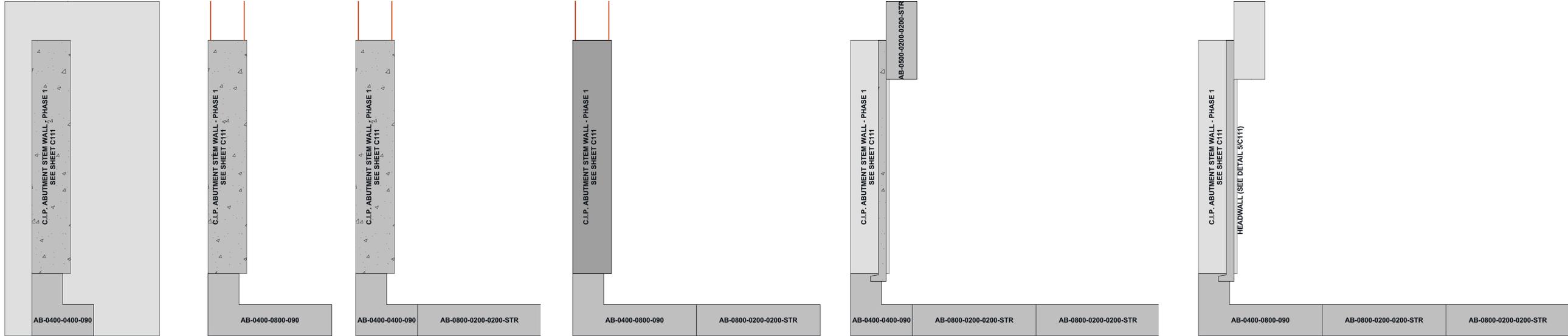
SHEET TITLE  
**LEFT BRIDGE ABUTMENT**

SHEET NUMBER  
**C109**

PHASE 2



PHASE 1



FIRST LAYER OF BLOCKS  
B.O. BLOCK EL. = ±391.89

SECOND LAYER OF BLOCKS  
B.O. BLOCK EL. = ±393.89

THIRD LAYER OF BLOCKS  
B.O. BLOCK EL. = ±395.89

FOURTH LAYER OF BLOCKS  
B.O. BLOCK EL. = ±397.89

FIFTH LAYER OF BLOCKS  
B.O. BLOCK EL. = ±399.89

TOP LAYER OF BLOCKS  
B.O. BLOCK EL. = ±401.89

RIGHT BRIDGE ABUTMENT

SCALE: 1:30

1  
C110

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

**WENTWORTH PARTNERS & ASSOCIATES**  
A Maine Corporation  
31 COMMERCIAL STREET  
SKOWHEGAN, ME 04976  
V: 207.858.8010  
F: 978.462.5822  
www.wpa-design.com  
A Gold Standard Company

ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

SUBMITTALS

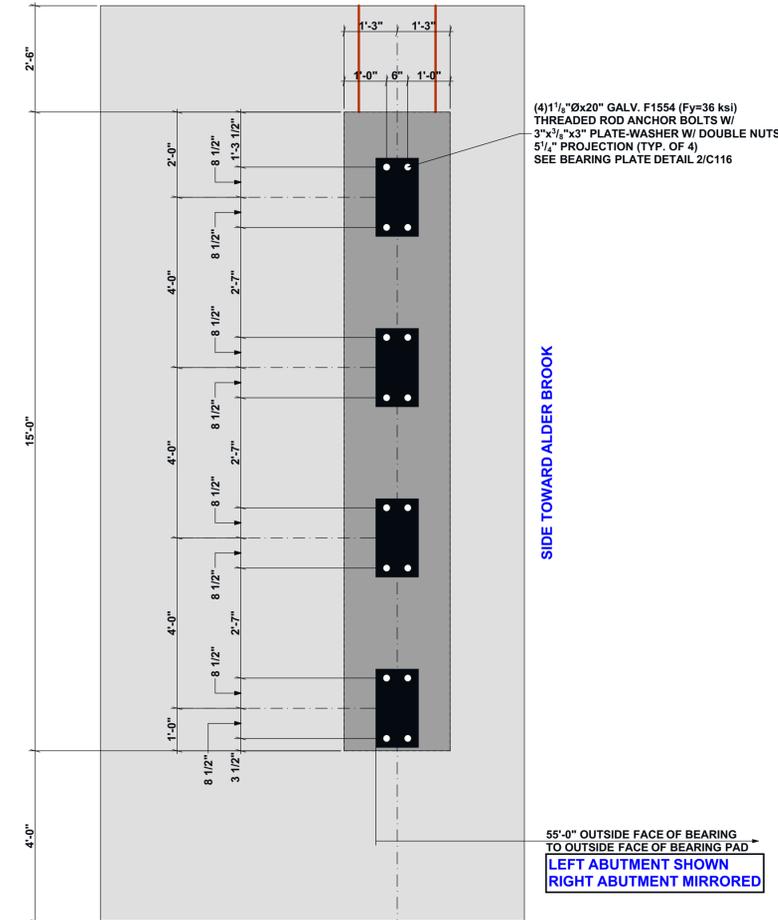
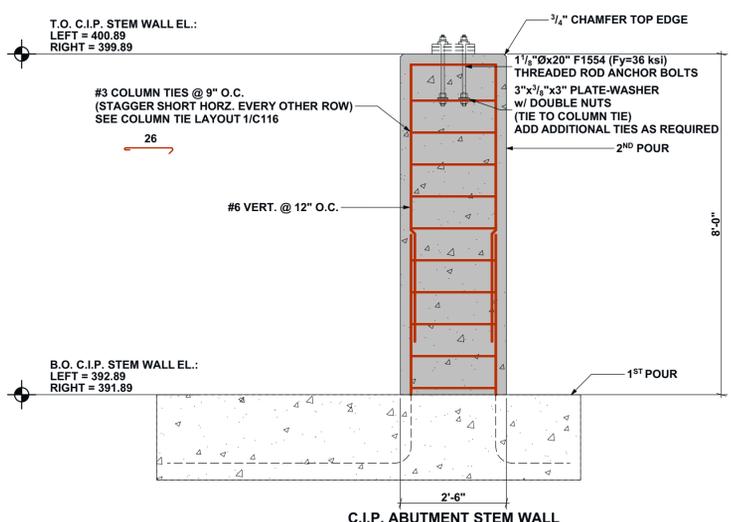
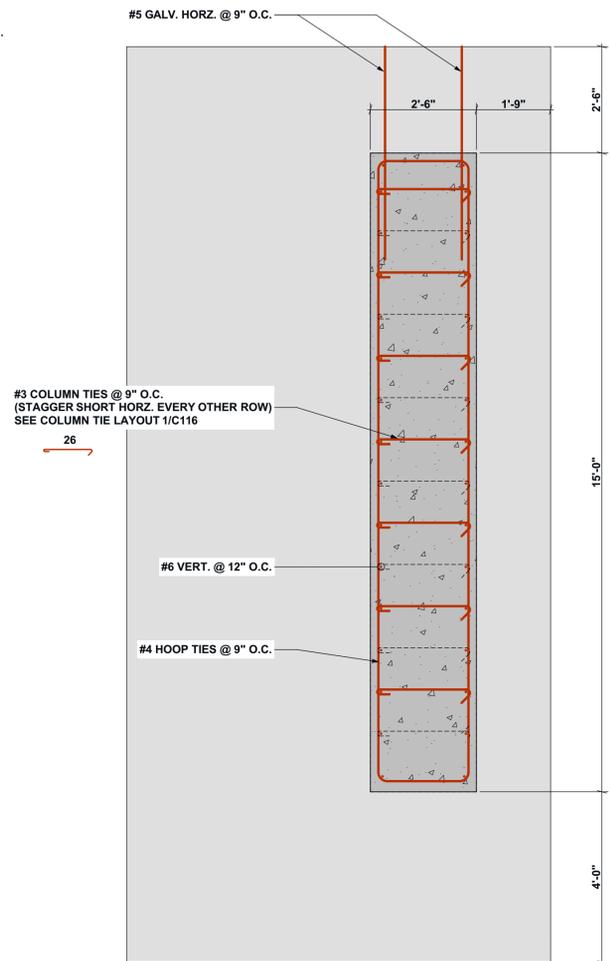
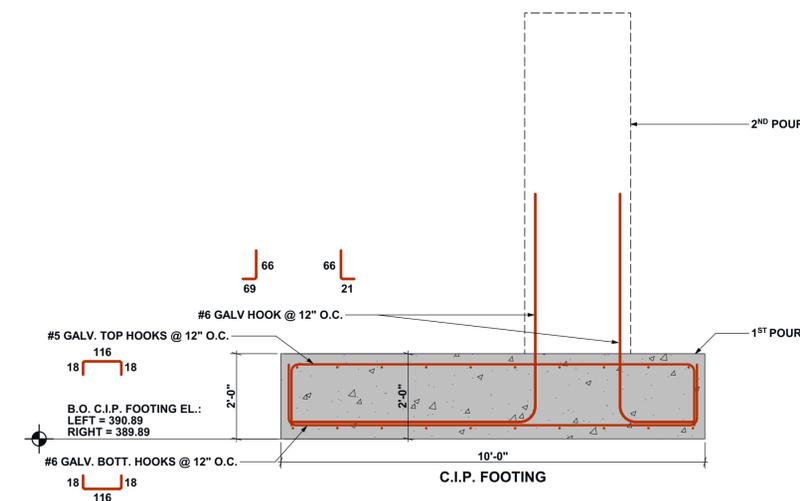
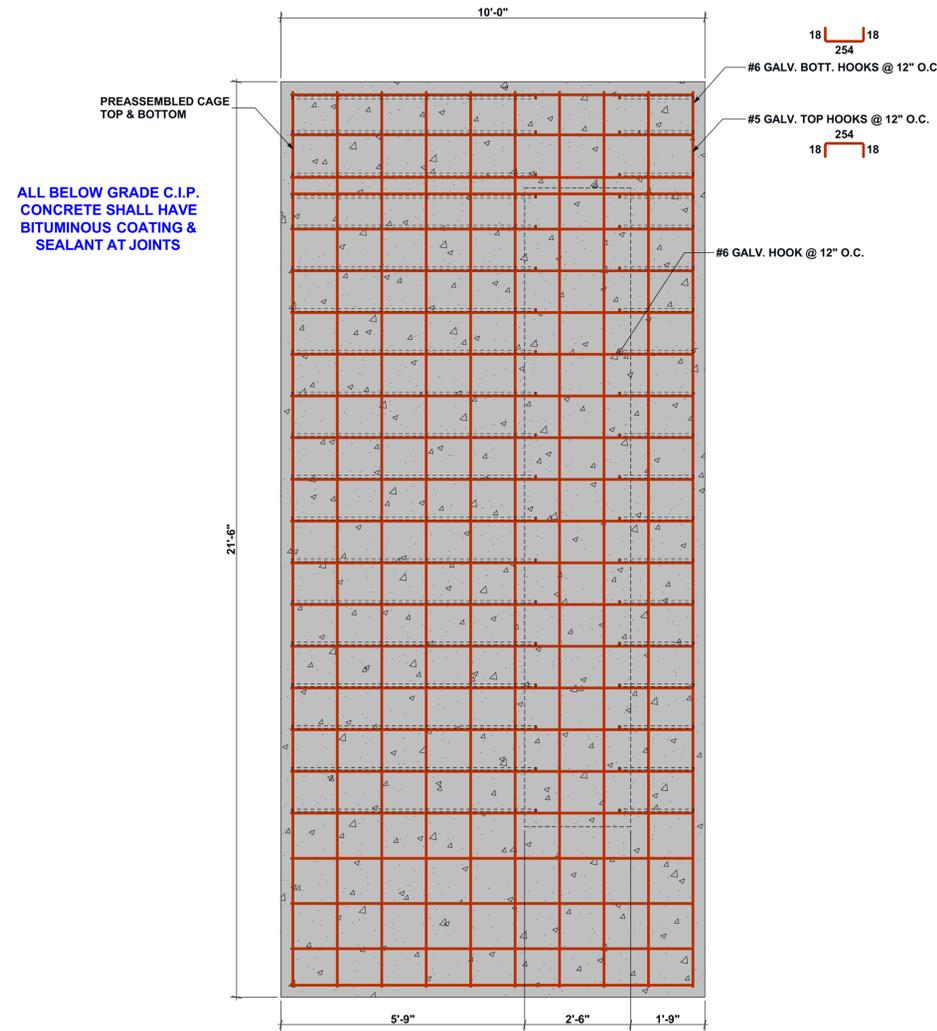
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**RIGHT BRIDGE ABUTMENT**

SHEET NUMBER  
**C110**



**FOUNDATION DETAILS - PHASE 1**  
SCALE: 1/2" = 1'-0"

1  
C111

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
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BROWNVILLE, ME 04414**  
COORDINATES  
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STATE OF MAINE  
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PROJECT NO: 103-23  
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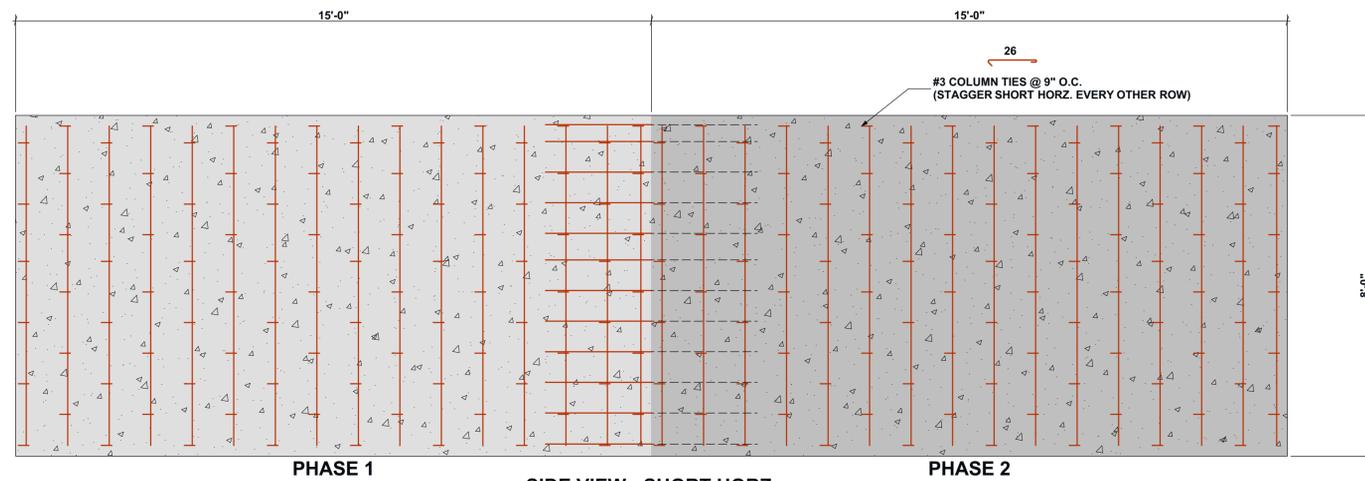
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PROJECT TYPE  
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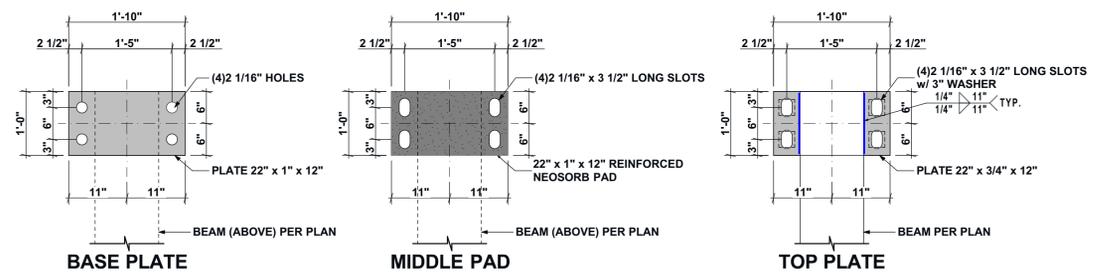
SHEET TITLE  
**FOUNDATION DETAILS - PHASE 1**

SHEET NUMBER  
**C111**





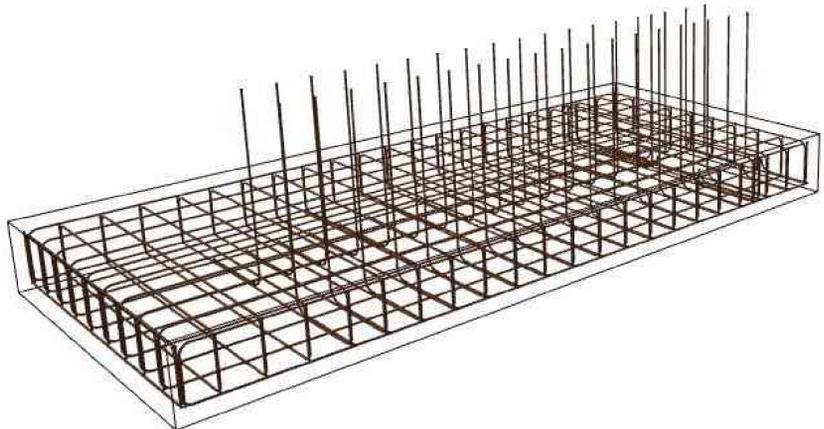
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**C113**  
SCALE: 1/2" = 1'-0"



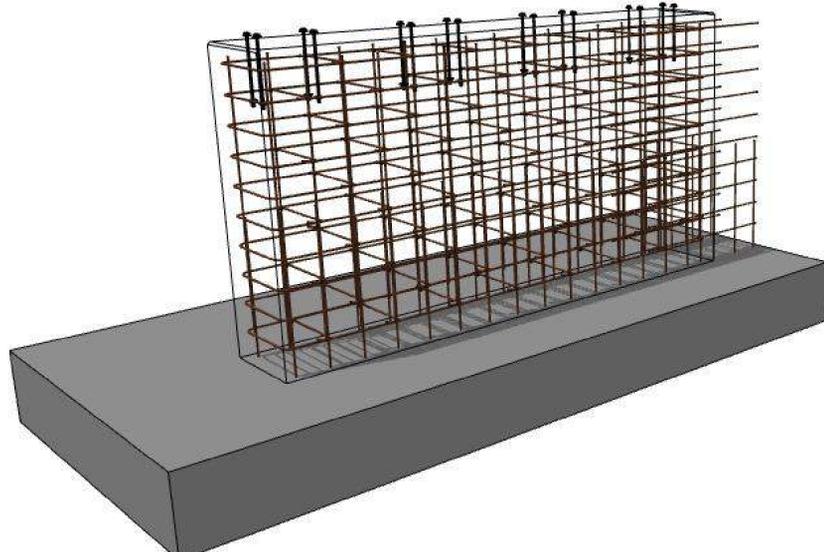
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**C113**  
SCALE: 3/4" = 1'-0"

LEFT ABUTMENT SHOWN  
RIGHT ABUTMENT MIRRORED

PHASE 1

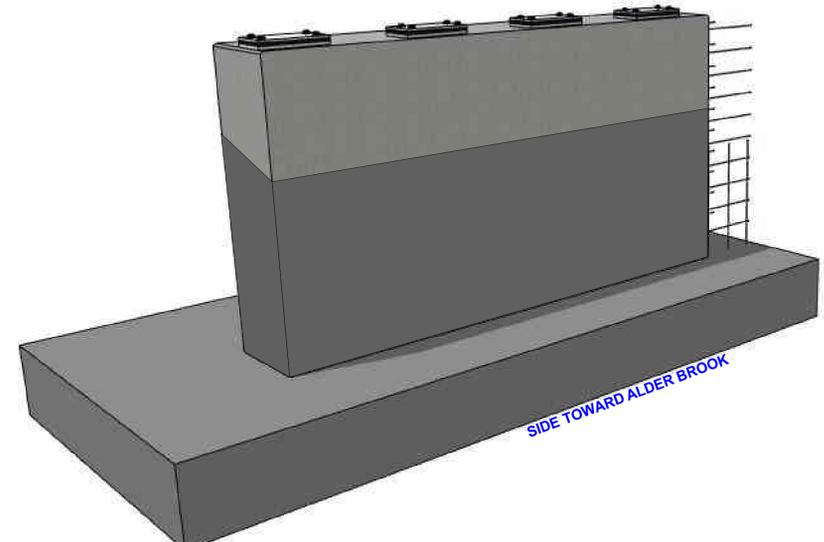


**3**  
**C113**  
NOT TO SCALE



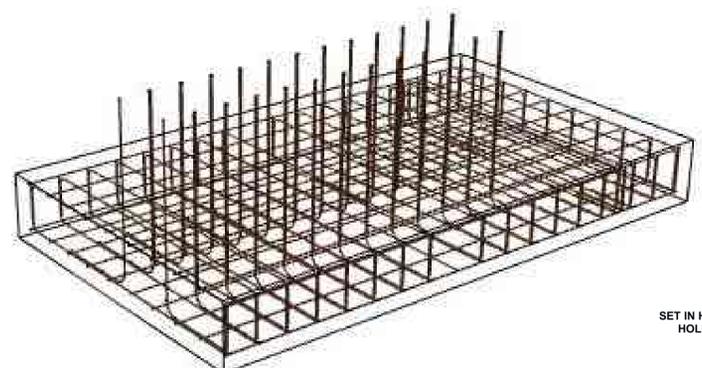
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**C113**  
NOT TO SCALE

ALL BELOW GRADE C.I.P. CONCRETE SHALL HAVE BITUMINOUS COATING & SEALANT AT JOINTS



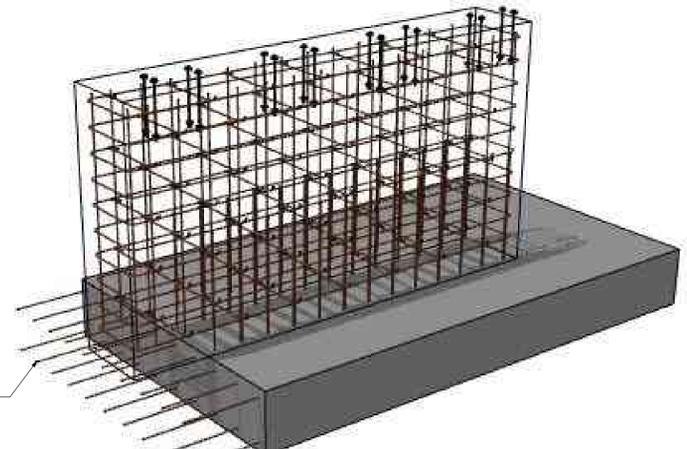
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**C113**  
NOT TO SCALE

PHASE 2

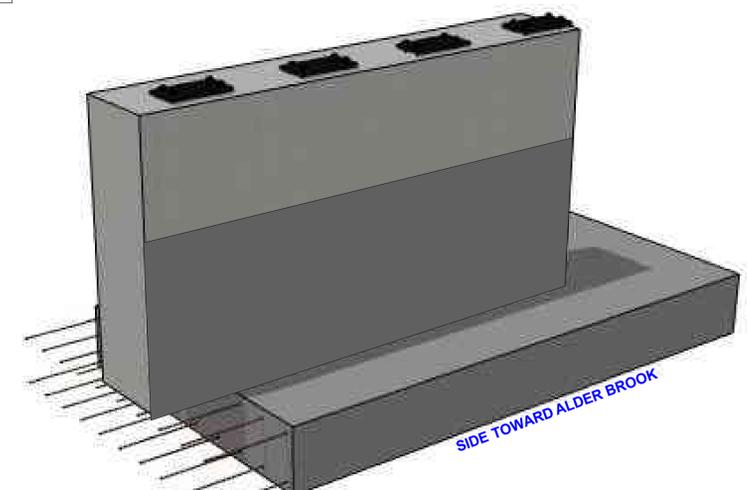


**6**  
**C113**  
NOT TO SCALE

DRILL & PIN #6 GALV. TOP & BOTT. SET IN MILITARY HY 270. CLEAN & PREPARE HOLES PER MANF. RECOMMENDATIONS



**7**  
**C113**  
NOT TO SCALE



**8**  
**C113**  
NOT TO SCALE

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

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STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
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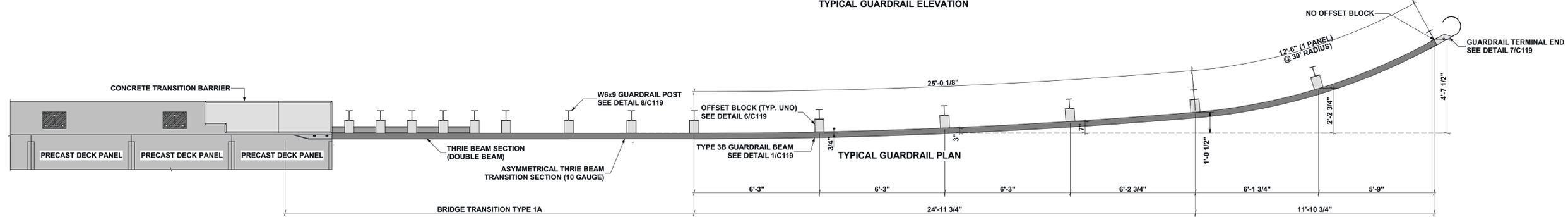
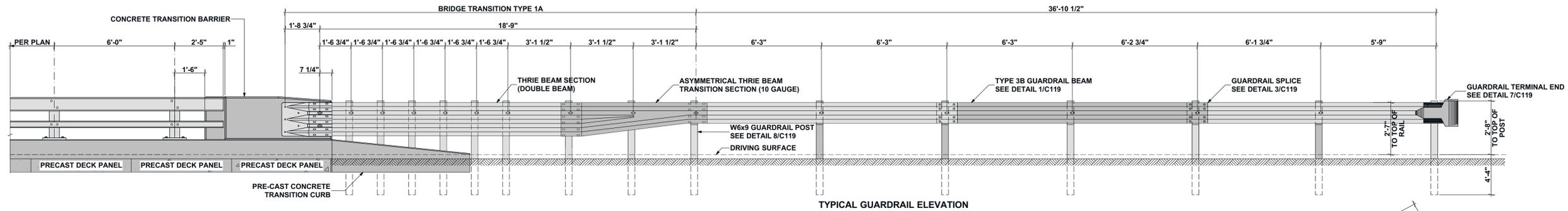
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

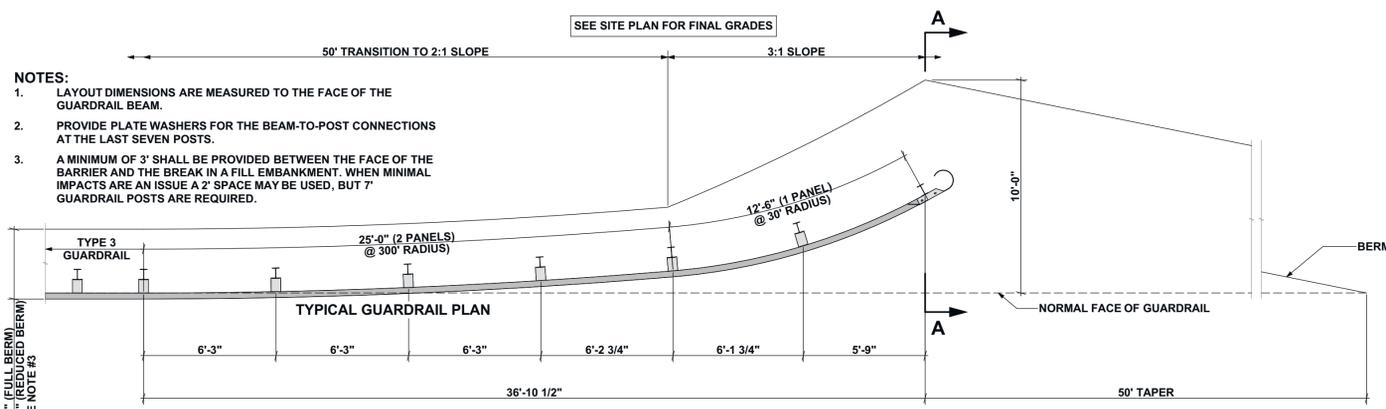
SHEET TITLE  
**FOUNDATION PERSPECTIVE & COLUMN TIE LAYOUT**

SHEET NUMBER  
**C113**



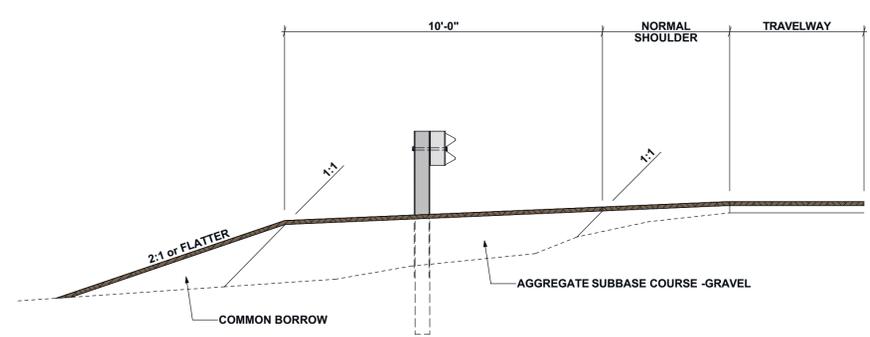


**GUARDRAIL PLAN & ELEVATION** 1 C115  
SCALE: 3/8" = 1'-0"



- NOTES:**
- LAYOUT DIMENSIONS ARE MEASURED TO THE FACE OF THE GUARDRAIL BEAM.
  - PROVIDE PLATE WASHERS FOR THE BEAM-TO-POST CONNECTIONS AT THE LAST SEVEN POSTS.
  - A MINIMUM OF 3" SHALL BE PROVIDED BETWEEN THE FACE OF THE BARRIER AND THE BREAK IN A FILL EMBANKMENT. WHEN MINIMAL IMPACTS ARE AN ISSUE A 2" SPACE MAY BE USED, BUT 7" GUARDRAIL POSTS ARE REQUIRED.

**LOW VOLUME GUARDRAIL END** 4 C115  
SCALE: 1/4" = 1'-0"



**SECTION A-A** 5 C115  
SCALE: 3/8" = 1'-0"

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
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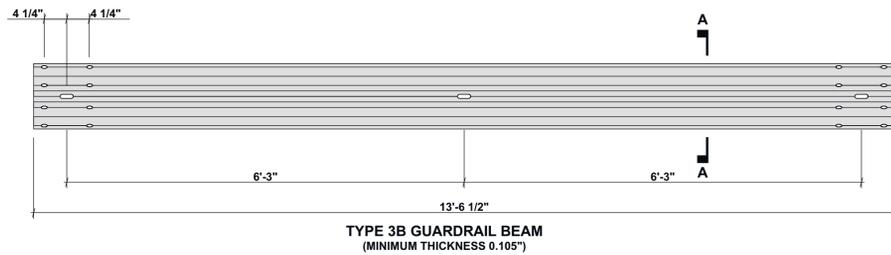
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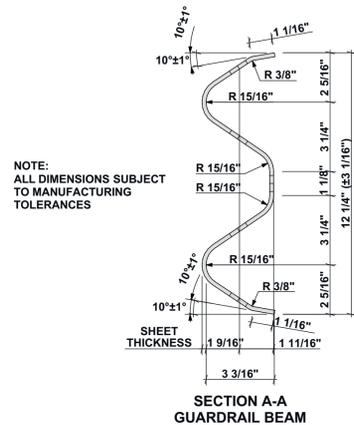
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**GUARDRAIL PLAN & ELEVATION**

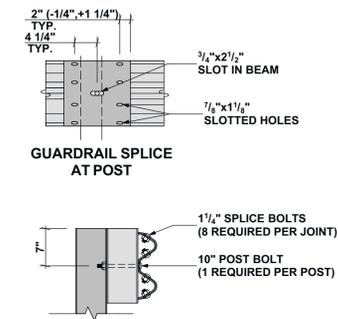
SHEET NUMBER  
**C115**



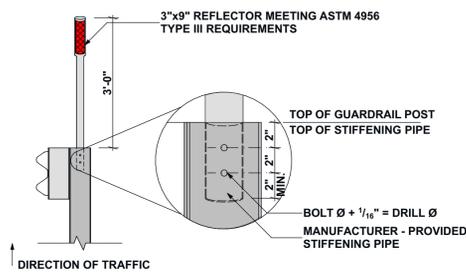
**TYPE 3B GUARDRAIL BEAM** 1  
SCALE: 3/4" = 1'-0" C116



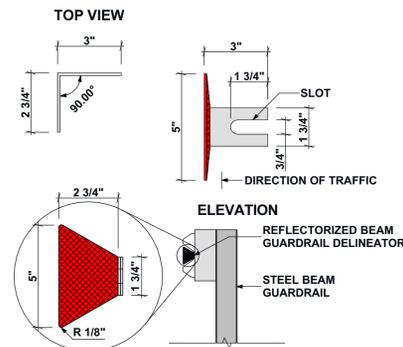
**SECTION A-A GUARDRAIL BEAM** 2  
SCALE: 3/4" = 1'-0" C116



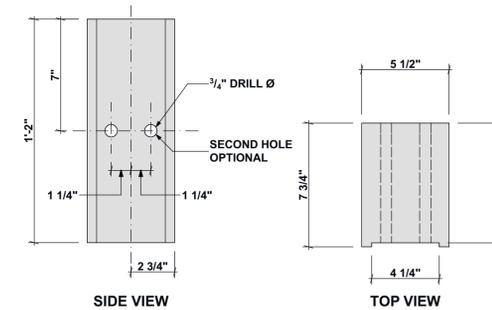
**GUARDRAIL SPLICE** 3  
SCALE: 3/4" = 1'-0" C116



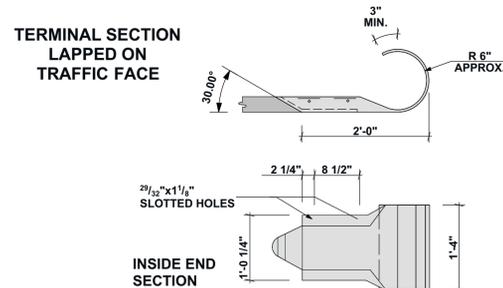
**POST GUARDRAIL MARKER DETAIL** 4  
SCALE: 3/4" = 1'-0" C116



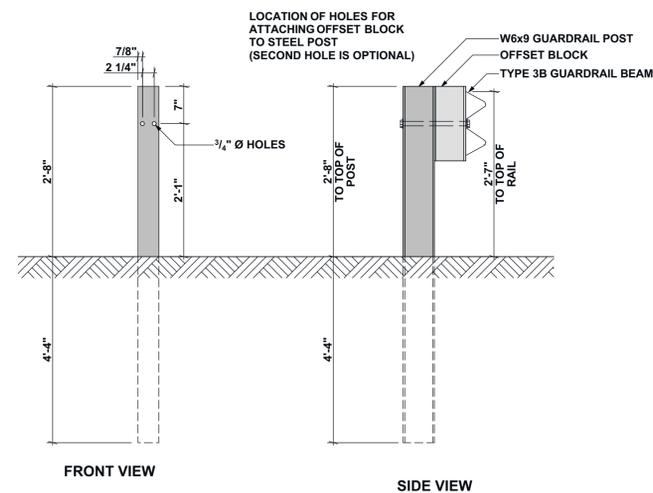
**BEAM GUARDRAIL MARKER DETAIL** 5  
SCALE: 3/4" = 1'-0" C116



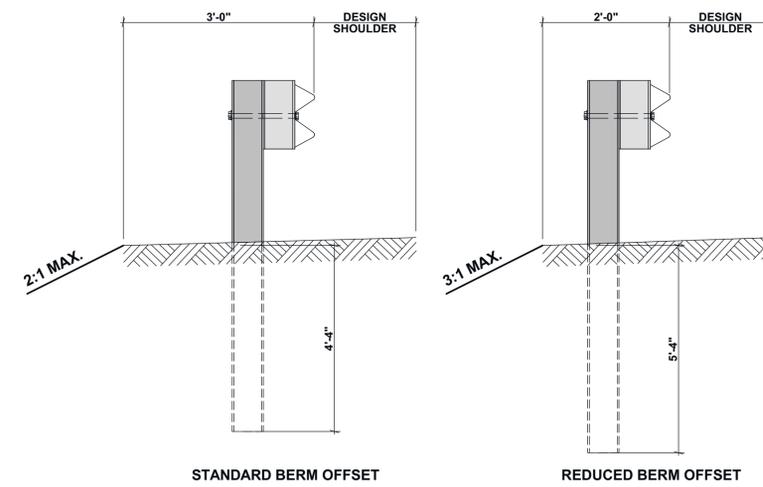
**OFFSET BLOCK DETAIL** 6  
SCALE: 3/4" = 1'-0" C116



**GUARDRAIL TERMINAL END** 7  
SCALE: 3/4" = 1'-0" C116



**STEEL GUARDRAIL POST** 8  
SCALE: 3/4" = 1'-0" C116



**BERM OFFSET** 9  
SCALE: 3/4" = 1'-0" C116

PROJECT  
**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**

COORDINATES  
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ENGINEER'S CERTIFICATION



PROJECT NO: 103-23

DRAWN BY: JJC

CHECKED BY: SCG

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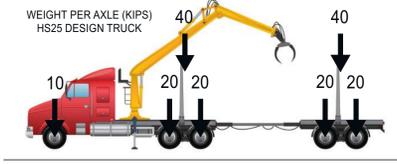
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**GUARDRAIL DETAILS**

SHEET NUMBER  
**C116**

**DESIGN CRITERIA:**

- DES-1. GOVERNING CODE:  
2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS  
MaineDOT BRIDGE GUIDE (JUNE 2020)
- DES-2. LIMIT STATES:  
DUCTILITY FACTOR = 1.00  
REDUNDANCY FACTOR = 1.00  
OPERATIONAL FACTOR = 0.95
- DESIGN LOADS: STRENGTH 1 (HL-93 MODIFIED)  
DESIGN LANE LOAD = 0.64 KSF/LANE  
DESIGN TRUCK LOAD = HS25  
FRONT TRACTOR AXLE = 10 KIP  
REAR TRACTOR AXLES = 40 KIP  
REAR TRAILER AXLES = 40 KIP  
DESIGN TANDEM LOAD = 1.00  
TANDEM AXLE = 31 KIP
- DC FACTOR = 1.25  
DW FACTOR = 1.50  
LL FACTOR = 1.75  
IM FACTOR = 1.33



**NOTE: ALL STEEL AND HARDWARE SHALL BE GALVANIZED OR OTHERWISE PROTECTED FROM THE ELEMENTS SEE NOTES STL-3 & STL-4**

**CONCRETE:**

- CON-1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE MAINE DEPARTMENT OF TRANSPORTATION (MaineDOT). IN CASE OF CONFLICT, MaineDOT SHALL GOVERN.
- CON-2. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY.
- CON-3. FOR LOCATIONS LISTED BELOW, CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F<sub>c</sub>) IN 28 DAYS OF 4350 PSI AND SHALL BE NORMAL WEIGHT CONCRETE WITH SAND GRAVEL AGGREGATE AS FOLLOWS:  
STRUCTURAL WEARING SURFACE..... CLASS LP  
BARRIERS, CURBS, SIDEWALKS, END POSTS..... CLASS LP  
SEALS..... CLASS S  
PRECAST..... CLASS P  
FILL..... FILL  
ALL OTHER..... CLASS A
- CON-4. ALL CONCRETE EXPOSED TO THE WEATHER OR POSSIBLE FREEZE/THAW ACTION SHALL CONTAIN AN AIR ENTRAINMENT ADMIXTURE. AIR CONTENT TO BE 6% ±1½%.
- CON-5. GROUT UNDER COLUMN BASE PLATES AND UNDER OTHER BEARING PLATES SHALL BE NON-SHRINK, NONMETALLIC GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 3 DAYS.
- CON-6. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.
- CON-7. NO CONCRETE SHALL BE CAST BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ARCHITECT, OR HIS DESIGNATED REPRESENTATIVE.
- CON-8. ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED ¾" UNLESS SHOWN OTHERWISE ON ARCHITECTURAL DRAWINGS.
- CON-9. CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28-DAYS COMPRESSIVE STRENGTH (F<sub>c</sub>) BEFORE FORMS OR SHORES MAY BE REMOVED:  
FOOTINGS.....20%  
WALLS AND BEAM SIDES.....20%
- CON-10. REFER TO SPECIFICATION DRAWINGS FOR CONCRETE FINISHES.
- CON-11. THE PLACEMENT OF SLEEVES, OUTLET BOXES, BOX-OUTS, ANCHORS, ETC., FOR THE MECHANICAL, ELECTRICAL AND PLUMBING TRADES IS THE RESPONSIBILITY OF THE TRADE INVOLVED. HOWEVER, ANY BOX-OUTS NOT COVERED BY TYPICAL DETAILS IN THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.
- CON-12. AT SAWCUTTING OF EXISTING CONCRETE, EXCLUDING SLABS ON GRADE, NO OVERCUT AT CORNERS IS ALLOWED. ALL CORNERS SHALL HAVE A CORE HOLE OF SUFFICIENT DIAMETER MADE PRIOR TO CUTTING AT ADJACENT SIDES TO PREVENT CUT BEYOND THE REQUIRED DIMENSION.

**STRUCTURAL STEEL:**

- STL-1. STRUCTURAL STEEL DESIGN CONFORMS TO "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" (AISC, THIRTEENTH EDITION), UNLESS OTHERWISE NOTED.
- STL-2. STRUCTURAL STEEL ROLLED SHAPES, PLATES, AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:  
ASTM A709, GRADE 50W (UNPAINTED)..... ALL MATERIAL (U.N.O.)  
ASTM A709, GRADE 50 (PAINTED)..... ALL MATERIAL (U.N.O.)  
ASTM A325, TYPE 3..... ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS  
ASTM F1554, GRADE 55..... ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
- STL-3. ALL STEEL HARDWARE SHALL BE HOT DIP GALVANIZED
- STL-4. ALL STEEL EXCEPT HARDWARE SHALL BE HOT DIP GALVANIZED AFTER FABRICATION OR PAINTED USING A NEPCOAT ORG APPROVED SYSTEM (SEE NOTE PNT-1) OR BE WEATHERING STEEL (ASTM A709, GRADE 50W).
- STL-5. SHOP CONNECTIONS SHALL BE MADE BY WELDING OR ¾" Ø HIGH STRENGTH BOLTS, MINIMUM, SNUG TIGHT FIT; UNLESS OTHERWISE NOTED.
- STL-6. ALL SHOP AND FIELD WELDS SHALL BE MADE BY CERTIFIED WELDERS, AND SHALL CONFORM TO "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1-15)
- STL-7. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL CONFORM TO AWS E-70 SERIES. VERIFY COMPATIBILITY OF ELECTRODES WITH EXISTING STEEL.
- STL-8. BOLTED FIELD CONNECTIONS SHALL BE MADE WITH ¾" DIAMETER A325 BOLTS, MINIMUM, UNLESS OTHERWISE NOTED.
- STL-9. DETAILS AND CONNECTIONS COMPLETELY DETAILED IN THE CONTRACT DRAWINGS MAY NOT BE ALTERED WITHOUT WRITTEN APPROVAL BY THE ENGINEER. WHERE APPROVED, ALTERED CONNECTIONS SHALL BE COMPLETELY DETAILED BY THE FABRICATOR'S ENGINEER CLEARLY ON THE SHOP DRAWINGS.
- STL-10. MINIMUM CONNECTION PLATE THICKNESS SHALL BE ¾", UNLESS OTHERWISE INDICATED IN THE CONTRACT DRAWINGS.
- STL-11. ALL MOMENT PLATE CONNECTIONS SHALL BE DESIGNED FOR THE FULL MOMENT CAPACITY (AS TABULATED BY THE MANUAL OF STEEL CONSTRUCTION, PART 2, 14TH EDITION) OF THE BEAM, UNLESS NOTED OTHERWISE. LOCAL STRESSES AT BOLT HOLES DO NOT GOVERN.
- STL-12. SPLICING OF STRUCTURAL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- STL-13. CUTS, HOLES, COPING, ETC. REQUIRED FOR WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED, UNLESS SPECIFICALLY APPROVED IN EACH CASE BY THE STRUCTURAL ENGINEER.
- STL-14. ALL WELD SIZES NOT SHOWN IN DETAILS HEREIN SHALL BE THE MINIMUM REQUIRED SIZE BASED ON THICKNESS OF THICKER PART AS PER AISC 13th. ED., TABLES J2.3 & J2.4. EXCEPTION: AT MEMBER SPLICES, WELDS OR BOLTS SHALL DEVELOP FULL STRENGTH OF THE MEMBER OR COMPONENTS BEING CONNECTED.

**REINFORCING:**

- REI-1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 EXCEPT WHERE NOTED. ALL REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING BARS MAY NOT BE WELDED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- REI-2. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM 185. (FY=65 KSI MIN.)
- REI-3. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH THE AASHTO SPECIFICATION.
- REI-4. PROVIDE AND SCHEDULE WITH THE SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE:  
HIGH CHAIRS..... 4'-0" O.C.  
SLAB BOLSTERS..... 4'-0" O.C.  
SUPPORT BARS FOR HIGH CHAIRS NO. 5
- REI-5. ALL CONTINUOUS REINFORCEMENT SHALL HAVE A MINIMUM LAP AS REQUIRED FOR A CLASS A SPLICE.
- REI-6. ALL LAPS IN W.W.F. SHALL BE ONE MESH PLUS 2" AT SPLICES.
- REI-7. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED PER TABLE 5.12.3-1, UNLESS NOTED OTHERWISE.
- REI-8. ALL HOOKS SHOWN ON DRAWINGS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.
- REI-9. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND BE LAPPED AT NECESSARY SPLICES, OR HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE. LAP BEAM TOP BARS AT MID-SPAN AND BEAM BOTTOM BARS AT SUPPORTS, UNLESS OTHERWISE NOTED.

TABLE 7 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS, SLABS AND FOOTINGS (ACI 25.4.2.3) f<sub>c</sub>' = 3000 psi

BAR SIZE	LAP CLASS	CONCRETE COVER 1.50 IN.		CONCRETE COVER 2.00 IN.		CONCRETE COVER 3.00 IN.	
		TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	13	12	13	12	13	12
	B	17	13	17	13	17	13
#4	A	17	13	17	13	17	13
	B	23	17	23	17	23	17
#5	A	22	17	22	17	22	17
	B	28	22	28	22	28	22
#6	A	26	20	26	20	26	20
	B	34	26	34	26	34	26
#7	A	43	33	38	29	38	29
	B	55	43	49	38	49	38
#8	A	54	41	43	33	43	33
	B	70	54	56	43	56	43
#9	A	66	51	53	41	48	37
	B	86	66	69	53	63	48
#10	A	81	62	66	51	55	42
	B	105	81	85	66	71	55
#11	A	97	74	79	61	61	47
	B	125	97	102	79	79	61

TABLE 5.12.3-1 - COVER FOR UNPROTECTED MAIN REINFORCING STEEL

SITUATION	COVER (IN.)
DIRECT EXPOSURE TO SALT WATER	4.0
CAST AGAINST EARTH	3.0
COASTAL	3.0
EXPOSURE TO DEICING SALTS	2.5
DECK SURFACES SUBJECT TO TIRE STUD OR CHAIN WEAR	2.5
EXTERIOR OTHER THAN ABOVE	2.0
INTERIOR OTHER THAN ABOVE	1.5
• UP TO NO. 11 BAR	2.0
• NO. 14 AND NO. 18 BARS	2.0
BOTTOM OF CAST-IN-PLACE SLABS	1.0
• UP TO NO. 11 BAR	2.0
• NO. 14 AND NO. 18 BARS	2.0
PRECAST SOFFIT FORM PANELS	0.8
PRECAST REINFORCED PILES	2.0
• NONCORROSIVE ENVIRONMENTS	3.0
• CORROSIVE ENVIRONMENTS	3.0
PRECAST PRESTRESSED PANELS	2.0
CAST-IN-PLACE PILES	2.0
• NONCORROSIVE ENVIRONMENTS	3.0
• CORROSIVE ENVIRONMENTS	3.0
-GENERAL	3.0
PROTECTED	3.0
• SHELLS	2.0
• AUGER-CAST, TREMIE CONCRETE, OR SLURRY CONSTRUCTION	3.0

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
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**WENTWORTH PARTNERS & ASSOCIATES**  
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A Gold Standard Company

ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

**SUBMITTALS**

REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**S001**

**INSPECTION:**

**INS-1.** GENERAL: TESTING AND INSPECTION WILL BE MADE BY AN APPROVED TESTING LABORATORY SELECTED AND PAID BY THE OWNER. CONTRACTOR SHALL FURNISH TESTING AGENCY ACCESS TO WORK, FACILITIES AND INCIDENTAL LABOR REQUIRED FOR TESTING AND INSPECTION. RETENTION BY THE OWNER OF AN INDEPENDENT TESTING AGENCY SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING ALL WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.

**INS-2.** STRUCTURAL STEEL:

A. FURNISH THE TESTING AGENCY WITH THE FOLLOWING:

A-1. A COMPLETE SET OF SHOP AND ERECTION DRAWINGS.

A-2. FULL AND AMPLE MEANS AND ASSISTANCE FOR TESTING ALL MATERIAL.

A-3. PROPER FACILITIES, INCLUDING SCAFFOLDING, TEMPORARY WORK PLATFORMS, ETC., FOR INSPECTION OF THE WORK IN THE MILLS, SHOP AND FIELD.

B. EACH PERSON INSTALLING CONNECTIONS SHALL BE ASSIGNED AN IDENTIFYING SYMBOL OR MARK, AND ALL SHOP AND FIELD CONNECTIONS SHALL BE IDENTIFIED SO THAT THE INSPECTOR CAN REFER BACK TO THE INSTALLER MAKING THE CONNECTION.

C. THE TESTING AGENCY'S INSPECTOR SHALL PERFORM THE ASSIGNED DUTIES IN SUCH A WAY THAT NEITHER FABRICATION NOR ERECTION IS UNNECESSARILY DELAYED OR IMPEDED. IN NO CASE WILL THE INSPECTOR RECOMMEND OR PRESCRIBE THE METHOD OR REPAIR OF A DEFECT.

D. FIELD INSPECTION BY THE TESTING AGENCY OF ERECTED STEEL WILL BE SUCH AS TO ASSURE THAT THE WORK CONFORMS TO SPECIFIED REQUIREMENTS AND WILL INCLUDE:

D-1. INSPECTION OF FIELD WELDING AS REQUIRED HEREIN.

D-2. ASCERTAINMENT THAT THE WELDING IS PERFORMED ONLY BY WELDING OPERATORS AND WELDERS WHO ARE PROPERLY CERTIFIED. THE TESTING AGENCY SHALL WITNESS SUCH QUALIFICATION TESTING OF WELDING OPERATORS AND WELDERS AS MAY BE REQUIRED.

D-3. ASCERTAINMENT OF PROPER INSTALLATION AND TENSIONING OF BOLTS

E. WELDING AND MATERIALS: INSPECTION OF WELDING BY THE TESTING AGENCY WILL BE SUCH AS TO ASSURE THAT THE WORK CONFORMS TO SPECIFIED REQUIREMENTS, AND WILL INCLUDE:

E-1. ASCERTAINMENT THAT ELECTRODES USED FOR MANUAL SHIELDED METAL-ARC WELDING AND ELECTRODES AND FLUX USED FOR SUBMERGED ARE WELDING CONFORM TO THE REQUIREMENTS OF THIS SECTION.

E-2. ASCERTAINMENT THAT THE APPROVED WELDING PROCEDURE AND THE APPROVED WELDING SEQUENCE IS FOLLOWED.

E-3. ASCERTAINMENT THAT THE WELDING IS PERFORMED ONLY BY WELDING OPERATORS AND WELDERS WHO ARE PROPERLY CERTIFIED. THE TESTING AGENCY SHALL WITNESS SUCH QUALIFICATION TESTING OF WELDING OPERATORS AND WELDERS AS MAY BE REQUIRED.

E-4. ASCERTAINMENT THAT THE FIT-UP, JOINT PREPARATION, SIZE, CONTOUR, EXTENT OF REINFORCEMENT, AND LENGTH AND LOCATION OF WELDS CONFORM TO SPECIFIED REQUIREMENTS AND THE CONTRACT DRAWINGS, AND THAT NO SPECIFIED WELDS ARE OMITTED OR UNSPECIFIED WELDS ADDED WITHOUT APPROVAL.

F. THE TESTING AGENCY SHALL TEST FIELD WELDS IN ACCORDANCE WITH AWS D1.1 AS FOLLOWS:

F-1. ALL WELDS 100% VISUAL

F-2. FULL PENETRATION WELDS: MAGNETIC PARTICLE ALL WELDS

**INSPECTION CONT.:**

G. THE WELDING INSPECTOR WILL HAVE THE AUTHORITY TO REJECT WELDMENTS. SUCH REJECTION MAY BE BASED ON VISUAL INSPECTION WHERE IN THE INSPECTOR'S OPINION THE WELDMENT WOULD NOT PASS A MORE DETAILED INVESTIGATION.

H. REPORTS BY THE TESTING AGENCY'S INSPECTOR WILL CONTAIN, AS A MINIMUM, AN ADEQUATE DESCRIPTION OF EACH WELD TESTED, THE IDENTIFYING MARK OF THE WELDER RESPONSIBLE FOR THE WELD, A CRITIQUE OF ANY DEFECTS NOTED BY VISUAL INSPECTION OR TESTING, AND A STATEMENT REGARDING THE ACCEPTABILITY OF THE WELD TESTED, AS JUDGED BY CURRENT A.W.S. STANDARDS. REPORTS SHALL BE DISTRIBUTED AS EARLY AS POSSIBLE BUT NOT LATER THAN ONE WORK WEEK AFTER THE TESTS HAVE BEEN PERFORMED. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED BY PHONE IF, IN THE JUDGMENT OF THE INSPECTOR, TEST RESULTS REQUIRE IMMEDIATE COMMENT.

I. HIGH STRENGTH BOLTS

I-1. THE INSPECTOR SHALL DETERMINE THE APPROPRIATE REQUIREMENTS OF SECTIONS J3 AND M2 OF THE AISC "SPECIFICATION" ARE MET.

I-2. STANDARD BOLTS:  
(1) VERIFY CONTRACTOR'S TESTING OF INSTALLATION PROCEDURES (TURN OF THE NUT) TO ACHIEVE SPECIFIED BOLT TENSIONS FOR EACH LOT OF BOLTS. CONTRACTOR TO PROVIDE A CALIBRATED DEVICE CAPABLE OF INDICATING BOLT TENSION.  
(2) IF REJECTABLE BOLTS ARE FOUND IN ANY CONNECTION ALL THE REMAINING BOLTS IN THAT CONNECTION SHALL BE INSPECTED FOR COMPLIANCE. INSPECTION PROCEDURE SHALL BE IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" APPROVED BY RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERED FOUNDATION (RESEARCH COUNCIL ON STRUCTURAL CONNECTION). COST OF ADDITIONAL INSPECTION REQUIRED BY THIS PARAGRAPH SHALL BE RESPONSIBILITY OF THE CONTRACTOR.

I-3. TENSION CONTROL:  
(1) VERIFY CONTRACTOR'S TESTING OF BOLT CAPACITY TO ACHIEVE SPECIFIED TENSIONS FOR EACH LOT OF BOLTS.  
(2) PERFORM A VISUAL INSPECTION OF ALL HIGH STRENGTH BOLTED CONNECTIONS TO ASSURE THAT ALL TORQUE-OFF SPLINES HAVE BEEN SHEARED.

**INS-3.** CONCRETE

A. CONCRETE INSPECTION AND TESTING WILL BE MADE IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS, AND CONTRACT DOCUMENTS, AND WILL INCLUDE THE FOLLOWING:

A-1. TESTING CONCRETE FOR STRENGTH, SLUMP, AIR CONTENT, TEMPERATURE, AND UNIT WEIGHT.

B. TEST SPECIMENS: THE TESTING LABORATORY WILL TAKE SPECIMENS OF EACH CLASS OF CONCRETE FROM DIFFERENT LOCATIONS ON THE JOB AS FOLLOWS: AT LEAST ONE SET OF FOUR CYLINDERS FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF OF EACH CLASS OF CONCRETE.

C. REINFORCING STEEL INSPECTION: CONCRETE REINFORCING SHALL BE INSPECTED PRIOR TO CLOSING OF CONCRETE FORM WORK OR PLACING OF CONCRETE. INSPECTOR TO VERIFY SIZE, SPACING, QUANTITY OF REINFORCING PER LATEST CONTRACT DOCUMENTS.

**SUBMITTALS:**

**SUB-1.** SUBMIT SUBSTANTIATING DATA FOR EACH CONCRETE MIX DESIGN CONTEMPLATED FOR USE TO THE STRUCTURAL ENGINEER NOT LESS THAN SIX WEEKS PRIOR TO FIRST CONCRETE PLACEMENT. DATA FOR EACH MIX SHALL, AS A MINIMUM, INCLUDE THE FOLLOWING:

1-A. MIX IDENTIFICATION DESIGNATION (UNIQUE FOR EACH MIX SUBMITTED).

1-B. STATEMENT OF INTENDED USE FOR MIX.

1-C. MIX PROPORTIONS, INCLUDING ALL ADMIXTURES USED.

1-D. MANUFACTURER'S DATA AND/OR CERTIFICATIONS VERIFYING CONFORMANCE OF ALL MIX MATERIALS, INCLUDING ADMIXTURES, WITH SPECIFIED REQUIREMENTS.

1-E. WET AND DRY UNIT WEIGHT.

1-F. ENTRAINED AIR CONTENT.

1-G. DESIGN SLUMP

**SUB-2.** SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT.

**SUB-3.** SUBMIT STRUCTURAL STEEL SHOP DRAWINGS. CLEARLY INDICATE PROFILES, SIZES, SPACING AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTIONS, ATTACHMENTS, ANCHORAGES, FRAMED OPENINGS, SIZE AND TYPE OF FASTENERS, CAMBERS, AND CLEARANCES. INDICATE WELDED CONNECTIONS USING STANDARD AWS WELDING SYMBOLS. CLEARLY INDICATE NET WELD LENGTHS, SIZES, AND WELDING SEQUENCES. CLEARLY IDENTIFY ALL HIGH STRENGTH BOLTS NOT REQUIRED TO BE TENSIONED (INSTALLED "SNUG TIGHT" AND DEFINED BY AISC).

**PAINT SPECIFICATIONS**

PNT-1.	NTPPE SYSTEM NO.	COATS	SLIP COEF CLASS	MANUFR DFT (MIN/MAX) MIL MICRON	VOC TESTED g/L	QPL ACCEPTED DATES
--------	------------------	-------	-----------------	---------------------------------	----------------	--------------------

**3-COAT SYSTEM TESTED AND ACCEPTED**

NEPCOAT LIST **A** - INORGANIC ZINC RICH PRIMER / EPOXY OR URETHANE INTERMEDIATE / ALIPHATIC URETHANE FINISH

SSC(12)-03	PRIMER	CARBOLINE COMPANY CARBOZINC® 11 HS INORGANIC ZINC PRIMER	B <sup>1</sup>	2-6	50-150	267	FROM 04/14/14
	INTERM	CARBOGUARD® 893 EPOXY INTERMEDIATE		3-6	75-150	198	UNTIL MTG. SPRING 2021
	TOPCOAT	CARBOthane 133 LV ALIPHATIC POLYURETHANE		3-5	50-125	245	
	FOOTNOTE	6 MILS MAX DFT, 19 HRS MIN CURE, 12% MAX THINNER					

SSC(17)-03 *	PRIMER	INTERNATIONAL PAINT INC INTERZINC® 22HS INORGANIC ZINC RICH	B <sup>1</sup>	2.5-3	62-75	311	FROM 04/02/19
	INTERM	INTERGARD 475HS EPOXY		4-8	100-200	188	UNTIL MTG. SPRING 2023
	TOPCOAT	INTERTHANE® 870 UHS POLYURETHANE		3-5	75-125	257 es	
	FOOTNOTE	5 MILS MAX DFT, 24 HOURS MIN CURE, ZERO THINNER					

NEPCOAT LIST **B** - ORGANIC ZINC RICH PRIMER / EPOXY OR URETHANE INTERMEDIATE / ALIPHATIC URETHANE FINISH

SSC(10)-05	PRIMER	WASSER HIGH TECH COATINGS MC-ZINC 100	Ø	3-5	75-125	115 es	FROM 04/03/12
	INTERM	MC-MIOMASTIC 100	NO	3-5	75-125	173 es	UNTIL MTG. FALL 2019
	TOPCOAT	MC-FERROX A 100	REPORT	2-4	50-100	144 es	
	FOOTNOTE	NO DATA REPORTED					

SSC(11)-01	PRIMER	SHERWIN WILLIAMS COMPANY ZINC CLAD® III HS ORGANIC ZINC RICH EPOXY PRIMER	A <sup>1</sup>	3-5	75-125	337	FROM 10/02/12
	INTERM	STEEL SPEC EPOXY INTERMEDIATE		3-8	75-200	293	UNTIL MTG. FALL 2019
	TOPCOAT	HI-SOLIDS POLYURETHANE		3-5	75-125	288	
	FOOTNOTE	5 MILS MAX DFT, 7 DAYS MIN CURE, ZERO THINNER					

SSC(11)-02	PRIMER	INTERNATIONAL PAINT INC INTERZINC® 315B EPOXY ZINC RICH	B <sup>1</sup>	2-6	50-150	304	FROM 10/02/12
	INTERM	INTERGARD 475HS EPOXY		4-8	100-200	187	UNTIL MTG. FALL 2019
	TOPCOAT	INTERTHANE® 870 UHS		3-5	75-125	242 es	
	FOOTNOTE	4 MILS MAX DFT, 48 HOURS MIN CURE, ZERO THINNER					

SSC(04)-03	PRIMER	SHERWIN WILLIAMS COMPANY ZINC CLAD® III HS ORGANIC ZINC RICH EPOXY PRIMER	A <sup>1</sup>	3-5	75-125	329	FROM 10/03/12
	INTERM	MACROPOXY® 646 FAST CURE EPOXY		3-10	75-250	238	UNTIL MTG. FALL 2019
	TOPCOAT	ACROLON™ 218 HS ACRYLIC POLYURETHANE		3-6	75-150	263	
	FOOTNOTE	5 MILS MAX DFT, 7 DAYS MIN CURE, ZERO THINNER					

SSC(12)-04	PRIMER	CARBOLINE COMPANY CARBOZINC® 859 ORGANIC ZINC RICH EPOXY PRIMER	B <sup>1</sup>	3-10	75-250	322	FROM 04/14/14
	INTERM	CARBOGUARD® 893 EPOXY INTERMEDIATE		3-6	75-150	207	UNTIL MTG. SPRING 2021
	TOPCOAT	CARBOthane 133 VOC ALIPHATIC POLYURETHANE		3-5	76-127	185 es	
	FOOTNOTE	6 MILS MAX DFT, 4 DAYS MIN CURE, 10% VOL MAX THIN					

SSC(15)-07	PRIMER	SHERWIN WILLIAMS COMPANY ZINC CLAD® III HS ORGANIC ZINC RICH EPOXY PRIMER	B <sup>1</sup>	3-5	75-125	319	FROM 10/03/17
	INTERM	MACROPOXY® 646 FAST CURE EPOXY		3-10	75-250	265	UNTIL MTG. FALL 2021
	TOPCOAT	HI-SOLIDS POLYURETHANE 250		3-4	75-100	234 es	
	FOOTNOTE	5 MILS MAX DFT, 72 HOURS MIN CURE, 5% MAX THINNER					

**2-COAT SYSTEM TESTED AND ACCEPTED**

NEPCOAT LIST **C** - ORGANIC ZINC RICH PRIMER / ----- / TOPCOAT

SSC(18)-03	PRIMER	SHERWIN WILLIAMS COMPANY ZINC CLAD® 4100 ORGANIC ZINC RICH EPOXY PRIMER	B <sup>1</sup>	3-5	75-125	318	FROM 04/02/19
	INTERM	---		---	---	---	UNTIL MTG. SPRING 2023
	TOPCOAT	SHER-LOXANE 800 POLYSILOXANE		4-6	100-150	122	
	FOOTNOTE	5 MILS MAX DFT, 72 HOURS MIN CURE, 5% THINNER					

NEPCOAT LIST **D** - INORGANIC ZINC RICH PRIMER / ----- / TOPCOAT

SSC(18)-02 *	PRIMER	SHERWIN WILLIAMS COMPANY ZINC CLAD® II PLUS INORGANIC ZINC RICH EPOXY	B <sup>1</sup>	2-4	50-100	325	FROM 04/02/19
	INTERM	---		---	---	---	UNTIL MTG. SPRING 2023
	TOPCOAT	SHER-LOXANE 800 POLYSILOXANE		4-6	100-150	119	
	FOOTNOTE	5 MILS MAX DFT, 72 HOURS MIN CURE, 5% THINNER					

PNT-2. BRIDGE SUPERSTRUCTURE, INCLUDING GIRDERS, DIAPHRAGMS, ANGLES, STIFFNERS, BOLTS, WASHERS, NUTS, ETC., ALSO INCLUDING BRIDGE RAIL POSTS, SHALL BE COLOR MATCHED TO SHERWIN-WILLIAMS SW 4071 "RAIN FOREST"

PNT-3. BRIDGE RAIL, INCLUDING EACH TEIR OF RAIL, TERMINATION CAPS, AND SPLICE INSERTS, SHALL BE COLOR MATCHED TO SHERWIN-WILLIAMS SW 4033 "BRASS".

PROJECT

**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE

LOCATION

**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**

COORDINATES  
45°08'56.72"N  
69°06'52.13"W

CLIENT

**The Nature Conservancy**

14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

**WENTWORTH PARTNERS & ASSOCIATES**  
A Maine Corporation

31 COMMERCIAL STREET  
SKOWHEGAN, ME 04976

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A Gold Standard Company

ENGINEER'S CERTIFICATION

STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23

DRAWN BY: JJC

CHECKED BY: SCG

**SUBMITTALS**

REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE

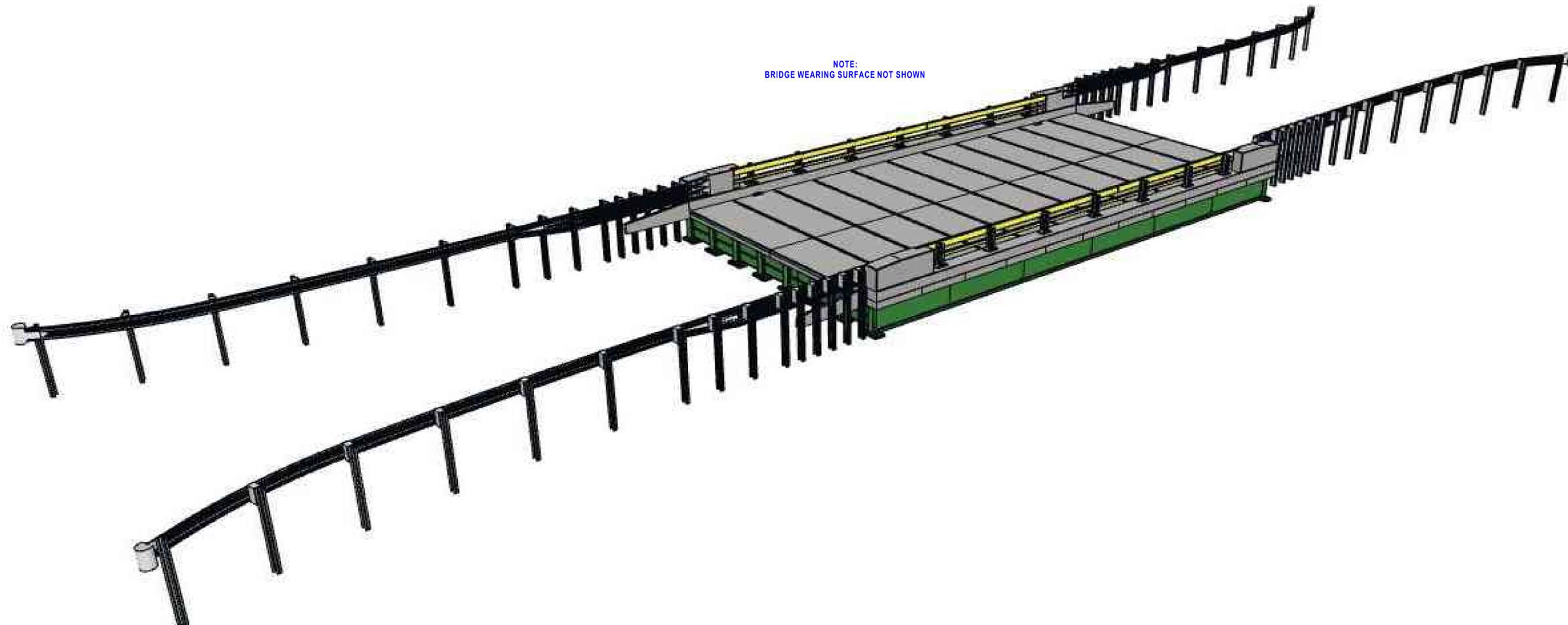
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE

**GENERAL NOTES**

SHEET NUMBER

**S002**



NOTE:  
BRIDGE WEARING SURFACE NOT SHOWN

BRIDGE SUPERSTRUCTURE PERSPECTIVE 1  
NOT TO SCALE S101

PROJECT

LAKEVIEW ROAD  
BRIDGE

STATE OF MAINE

LOCATION

LAKEVIEW ROAD  
@ ALDER BROOK  
BROWNVILLE, ME 04414

COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT



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ENGINEER'S CERTIFICATION



PROJECT NO: 103-23

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PROJECT TYPE

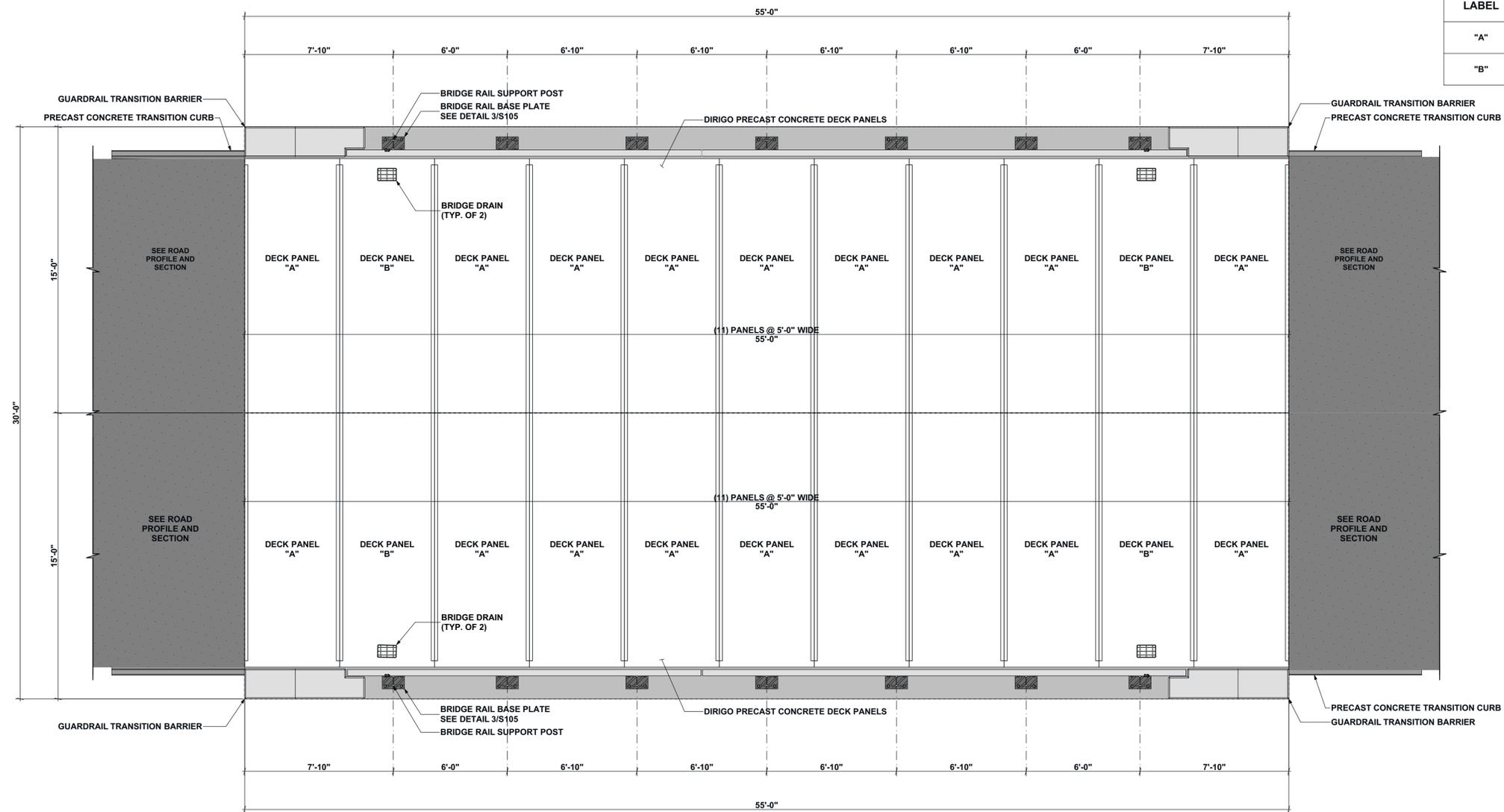
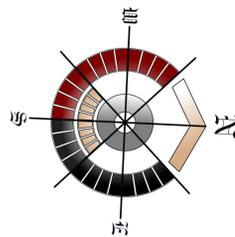
AASHTO  
HS25 RATED  
BRIDGE  
STRUCTURE

SHEET TITLE

BRIDGE PERSPECTIVE

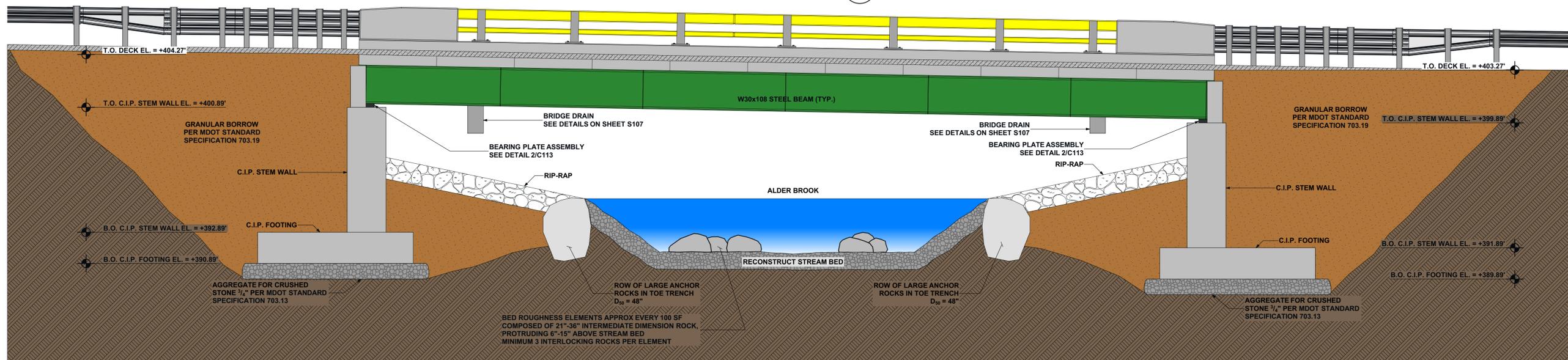
SHEET NUMBER

S101



DECK PANELS		
LABEL	PART NUMBER	QUANTITY
"A"	DP1500-0500-0400-RLI-PN-SP	18
"B"	DP1500-0500-0400-RLI-PD-SP	4

**BRIDGE PLAN - PHASE 3** 1  
SCALE: 1:40 S102



**BRIDGE ELEVATION** 2  
SCALE: 1:40 S102

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK**  
BROWNVILLE, ME 04414  
COORDINATES  
45°08'56.72"N  
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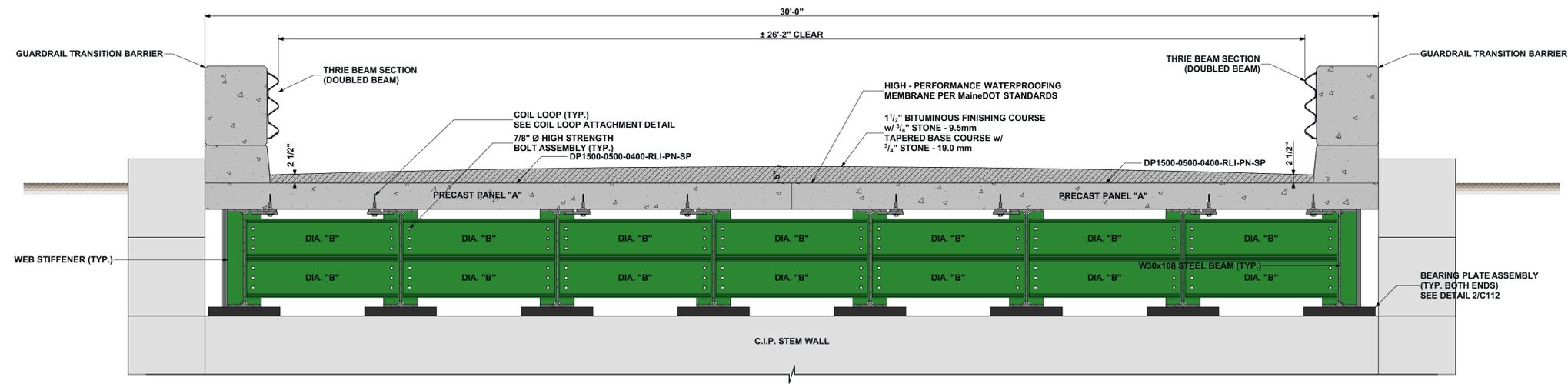
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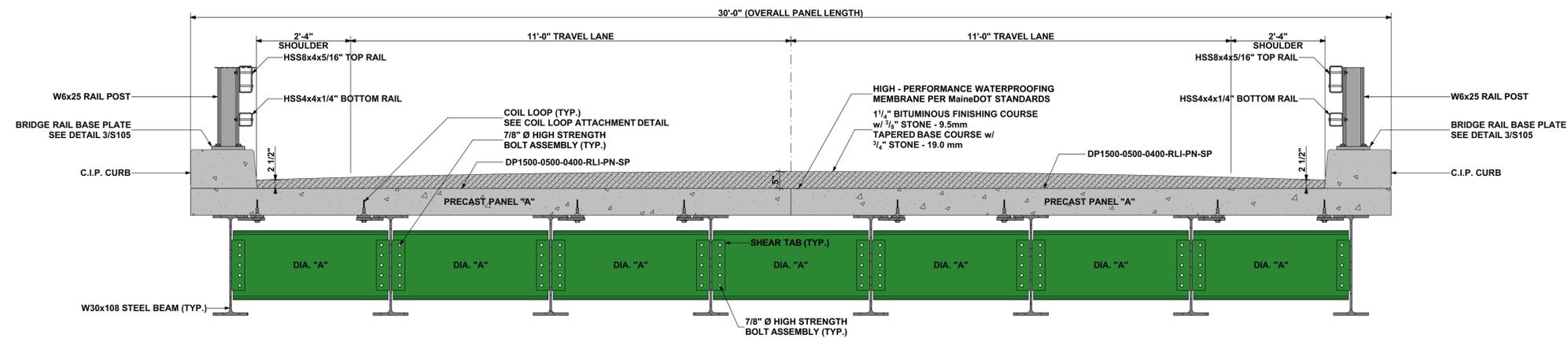
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE PLAN & ELEVATION**

SHEET NUMBER  
**S102**



**SECTION @ END OF BRIDGE DIAPHRAGM** 1  
SCALE: 1:20 S103



**SECTION @ DIAPHRAGMS** 2  
SCALE: 1:20 S103

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72\"/>

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

**WENTWORTH PARTNERS & ASSOCIATES**  
A Maine Corporation  
31 COMMERCIAL STREET  
SKOWHEGAN, ME 04976  
V: 207.858.8010  
F: 978.462.5822  
www.wpa-design.com  
A Gold Standard Company



PROJECT NO:	103-23
DRAWN BY:	JJC
CHECKED BY:	SCG

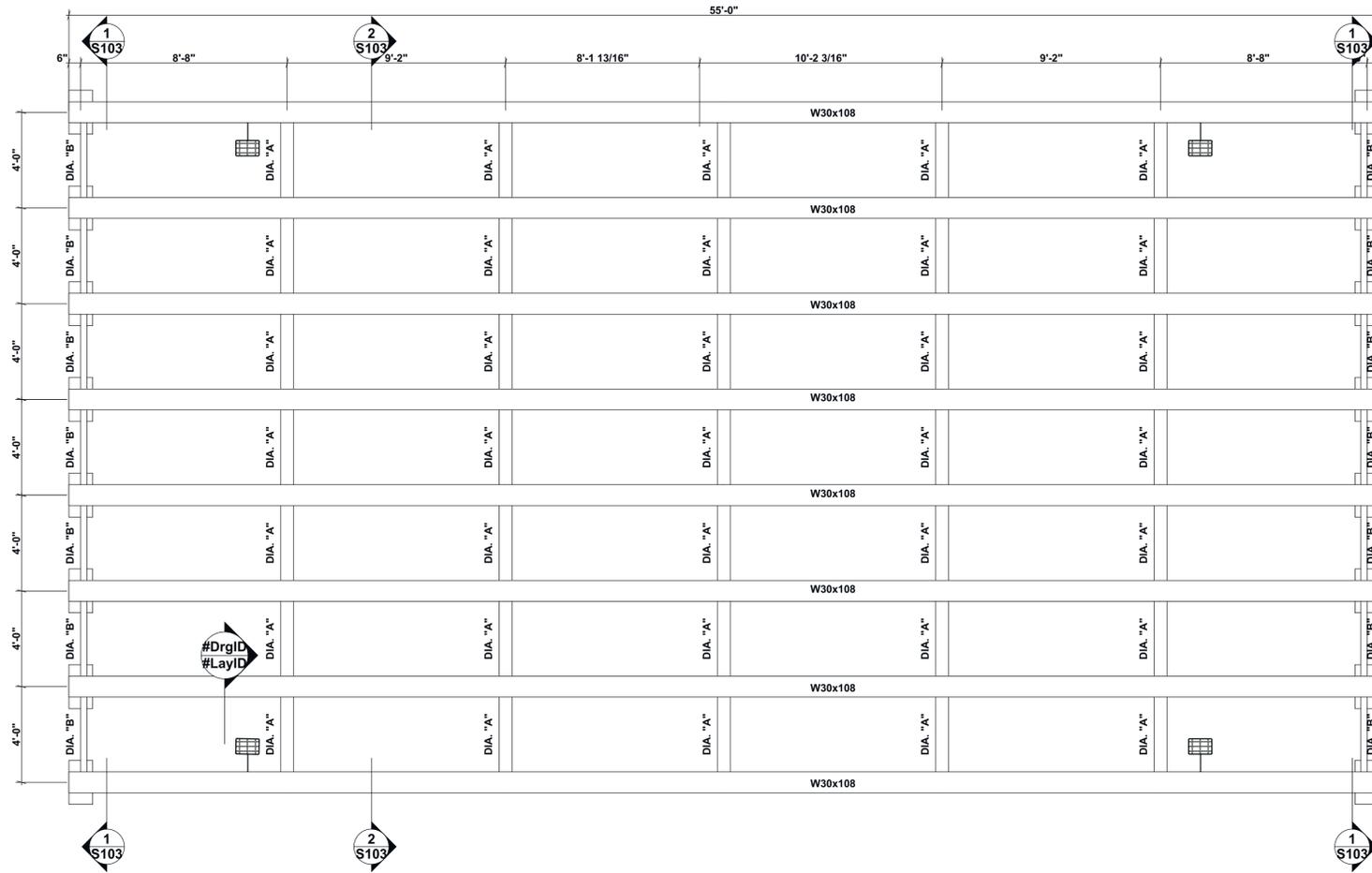
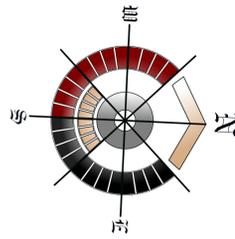
SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
0	09JAN24	ISSUED FOR PERMITTING
A	10NOV23	75% REVIEW SET

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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE TRANSVERSE SECTIONS**

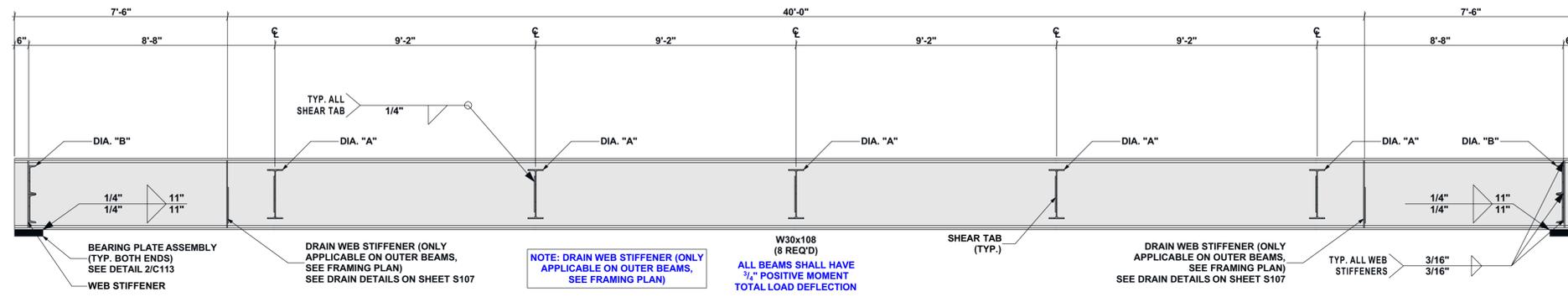
SHEET NUMBER  
**S103**



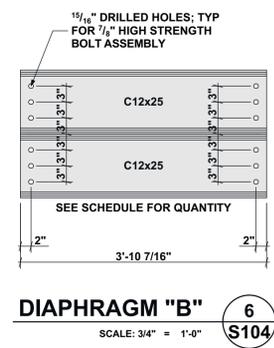
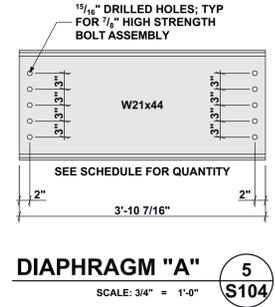
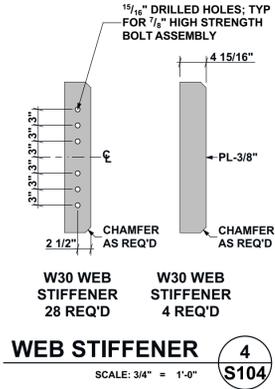
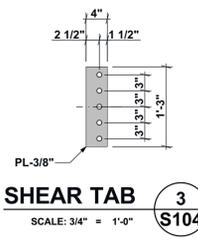
NOTE: ALL STEEL AND HARDWARE SHALL BE GALVANIZED OR OTHERWISE PROTECTED FROM THE ELEMENTS SEE NOTES STL-3 & STL-4

DIAPHRAGM SCHEDULE		
MARK	SHAPE	QUANTITY
DIA. "A"	W21x44	35
DIA. "B"	C12x25	28

**BRIDGE FRAMING PLAN** 1  
SCALE: 1:40 S104



**GIRDER ELEVATION** 2  
SCALE: 1:30 S104



PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

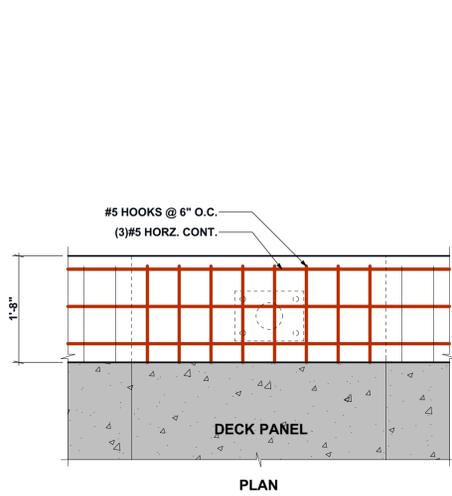
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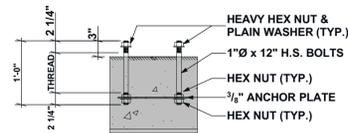
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE FRAMING PLAN & GIRDER DETAILS**

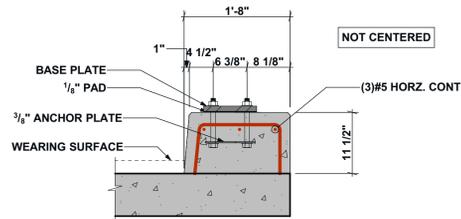
SHEET NUMBER  
**S104**



**STEEL RAIL BAR - BRIDGE MOUNTED DETAIL** 1  
SCALE: 3/4" = 1'-0" S105

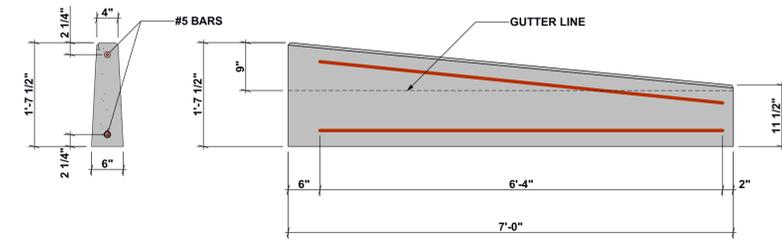


ANCHOR BOLT DETAIL

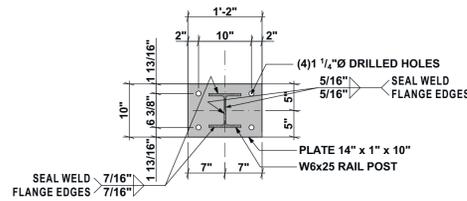


SECTION

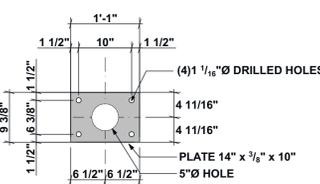
NOTE: ALL STEEL AND HARDWARE SHALL BE GALVANIZED OR OTHERWISE PROTECTED FROM THE ELEMENTS  
SEE NOTES STL-3 & STL-4



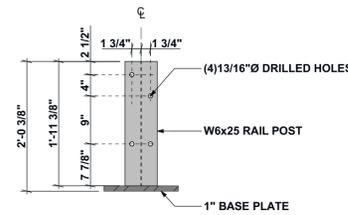
**PRECAST CONCRETE TRANSITION CURB** 2  
SCALE: 3/4" = 1'-0" S105



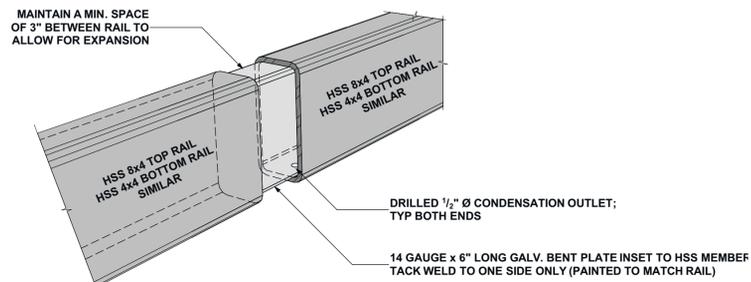
**BRIDGE RAIL POST BASE DETAIL** 3  
SCALE: 3/4" = 1'-0" S105



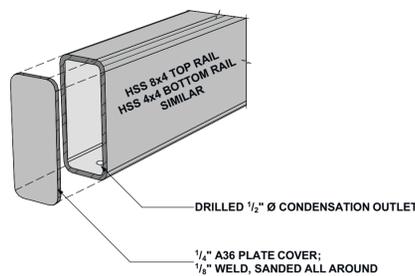
**BRIDGE RAIL ANCHOR PLATE DETAIL** 4  
SCALE: 3/4" = 1'-0" S105



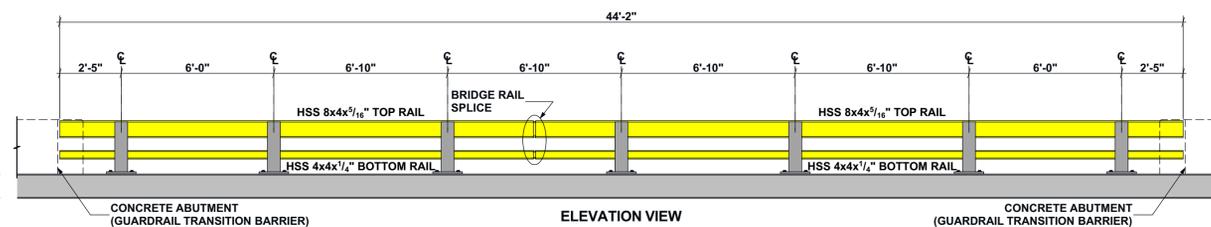
**BRIDGE RAIL POST ELEVATION DETAIL** 5  
SCALE: 3/4" = 1'-0" S105



**BRIDGE RAIL SPLICE** A  
SCALE: 1/2" = 1'-0" S105



**BRIDGE RAIL TERMINATION** B  
SCALE: 1/2" = 1'-0" S105



ELEVATION VIEW



PLAN VIEW

**BRIDGE RAIL LAYOUT** 6  
SCALE: 1:40 S105

HSS 8x4x5/16" @ 25'-5 1/2" TOP RAIL (2 REQUIRED)  
HSS 8x4x5/16" @ 18'-7 1/2" TOP RAIL (2 REQUIRED)

HSS 4x4x1/2" @ 25'-5 1/2" BOTTOM RAIL (2 REQUIRED)  
HSS 4x4x1/2" @ 18'-7 1/2" BOTTOM RAIL (2 REQUIRED)

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
**The Nature Conservancy**  
14 MAINE STREET, SUITE 401  
BRUNSWICK, ME 04011

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V: 207.858.8010  
F: 978.462.5822  
www.wpa-design.com  
A Gold Standard Company

ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVERN  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

SUBMITTALS		
REV.	DATE	DESCRIPTION
1	19MAR24	ISSUED FOR PERMITTING
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A	10NOV23	75% REVIEW SET

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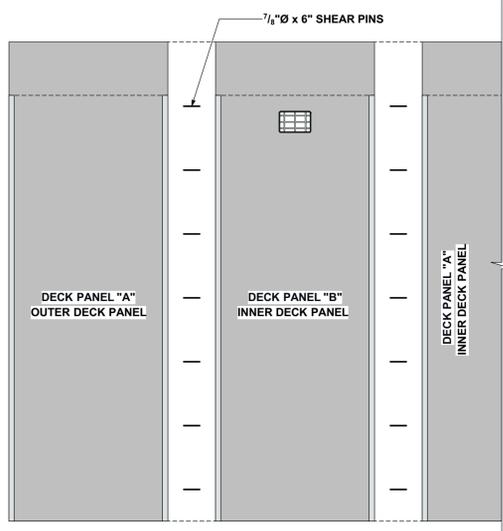
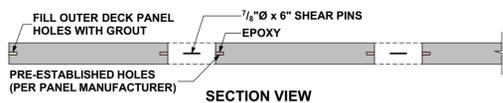
PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE RAIL DETAILS**

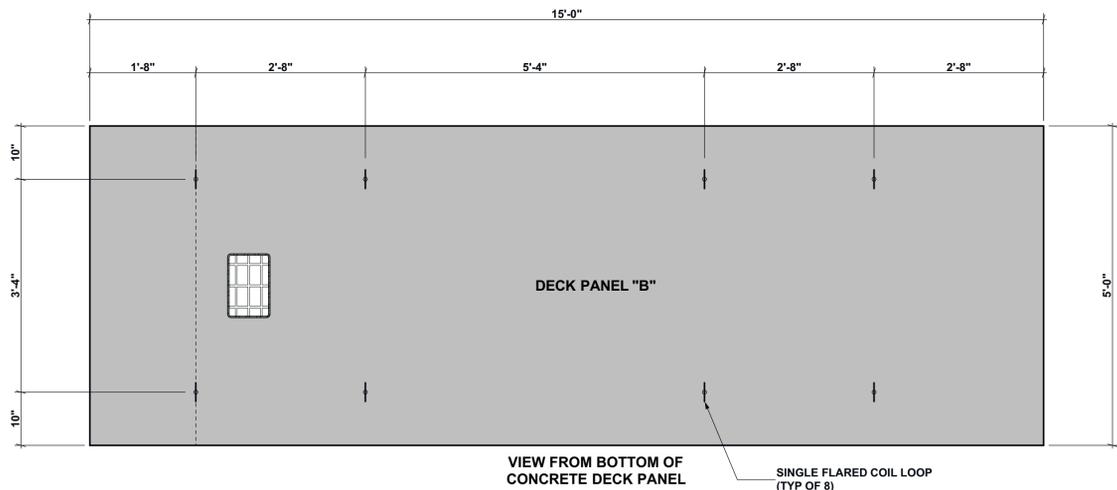
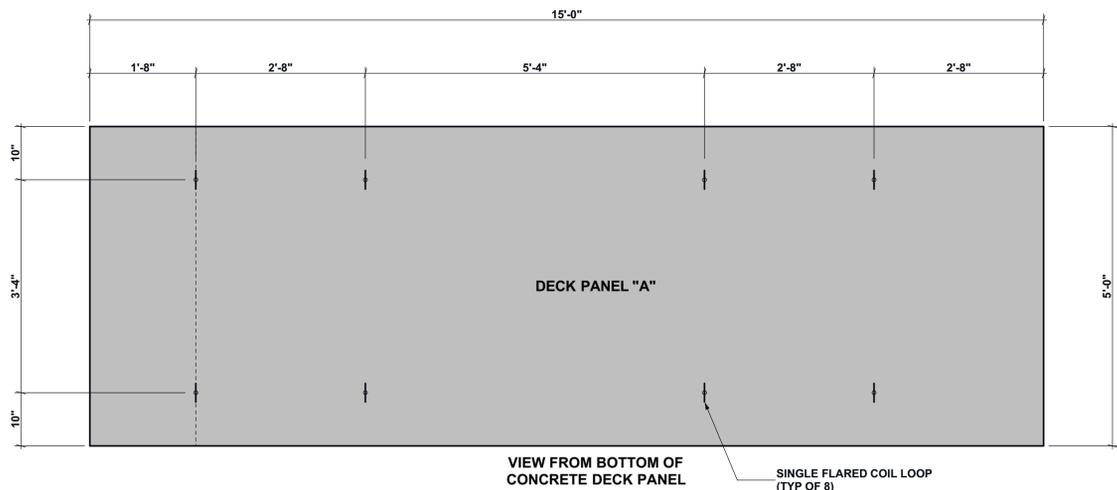
SHEET NUMBER  
**S105**

DECK PANELS SHALL BE INTERLOCKED w/ SHEAR PIN CONNECTORS IN AN EPOXY ANCHORING SYSTEM

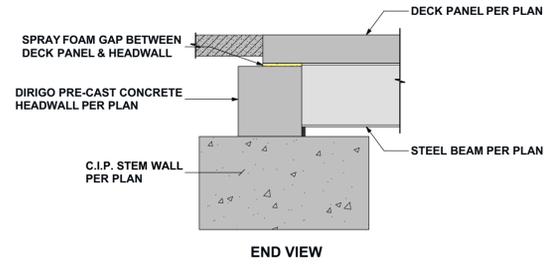
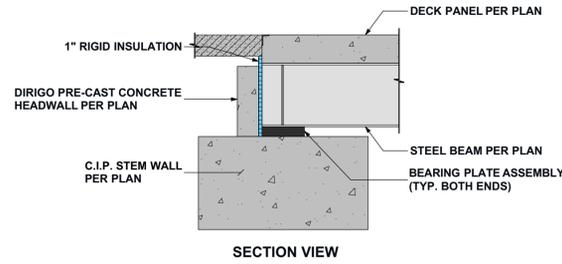
CONTRACTOR TO CLEAN & EPOXY FILL PER MANUFACTURER SPECIFICATIONS



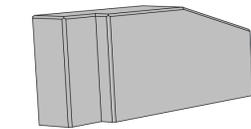
**EXPLODED DECK PANEL INSTALLATION VIEW** 1  
SCALE: 3/8" = 1'-0" S106



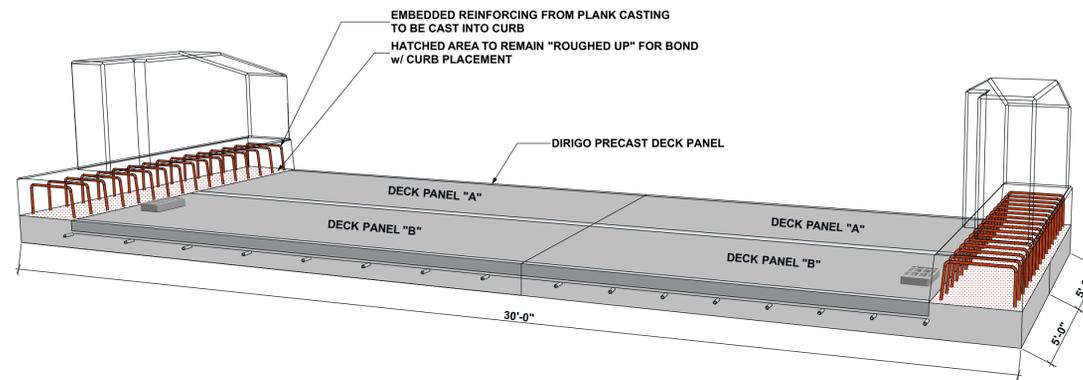
**DECK PANEL COIL LOOP LOCATIONS** 4  
SCALE: 3/4" = 1'-0" S106



**HEADWALL** 2  
SCALE: 1/2" = 1'-0" S106

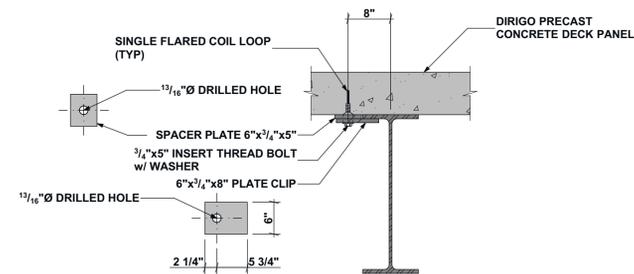


GUARDRAIL TRANSITION BARRIER



**PRECAST CONCRETE DECK ISOMETRICS** 3  
NOT TO SCALE S106

NOTE: ALL STEEL AND HARDWARE SHALL BE GALVANIZED OR OTHERWISE PROTECTED FROM THE ELEMENTS SEE NOTES STL-3 & STL-4



**COIL LOOP ATTACHMENT DETAIL** 5  
SCALE: 3/4" = 1'-0" S106

PROJECT  
**LAKEVIEW ROAD BRIDGE**  
STATE OF MAINE

LOCATION  
**LAKEVIEW ROAD @ ALDER BROOK  
BROWNVILLE, ME 04414**  
COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT  
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ENGINEER'S CERTIFICATION  
STATE OF MAINE  
STEVEN C. GOVONI  
No. 13428  
LICENSED PROFESSIONAL ENGINEER  
19MAR24

PROJECT NO: 103-23  
DRAWN BY: JJC  
CHECKED BY: SCG

**SUBMITTALS**

REV.	DATE	DESCRIPTION
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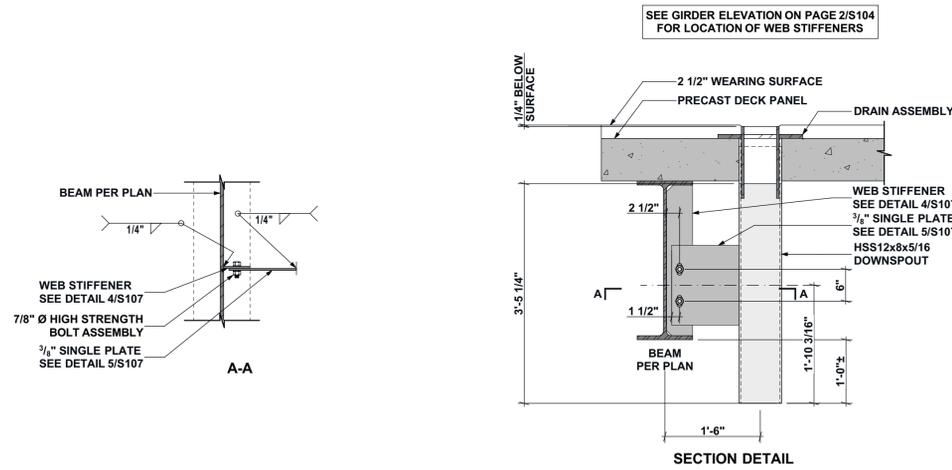
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PROJECT TYPE  
**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE  
**BRIDGE DECK PANEL & DETAILS**

SHEET NUMBER  
**S106**

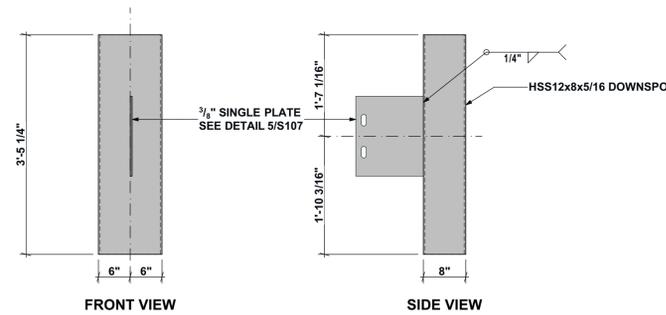
NOTE: DRAIN ASSEMBLY & DOWNSPOUT STEEL TO BE GALVANIZED



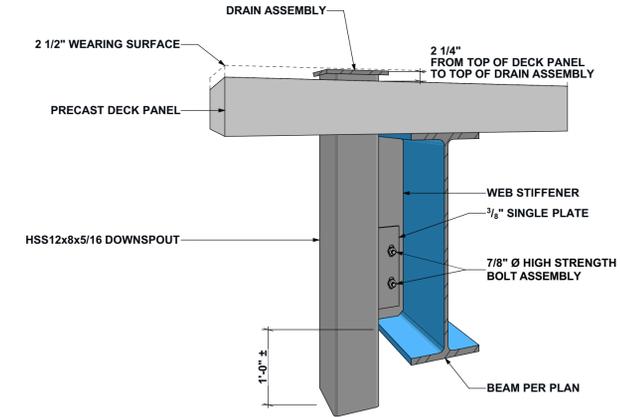
**DOWNSPOUT CONNECTION DETAIL**

SCALE: 3/4" = 1'-0"

1  
S107



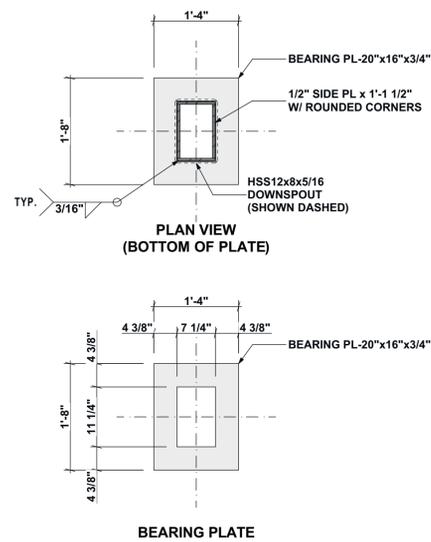
**DOWNSPOUT DETAIL**



**DOWNSPOUT PERSPECTIVE**

SCALE: 3/4" = 1'-0"

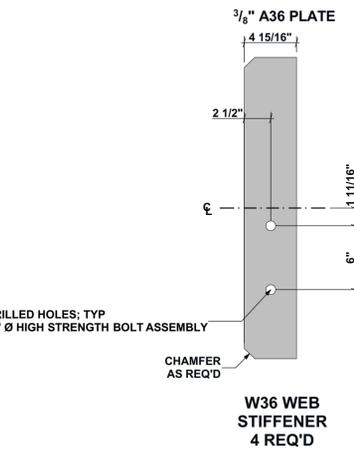
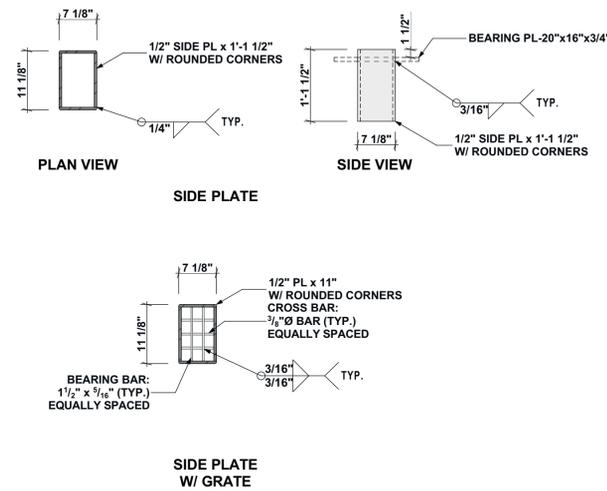
2  
S107



**DRAIN ASSEMBLY DETAIL**

SCALE: 3/4" = 1'-0"

3  
S107



**WEB STIFFENER DETAIL**

SCALE: 1 1/2" = 1'-0"

4  
S107

**IMPACT AREA LEGEND**

SCALE: 1 1/2" = 1'-0"

5  
S107

PROJECT

**LAKEVIEW ROAD BRIDGE**

STATE OF MAINE

LOCATION

**LAKEVIEW ROAD @ ALDER BROOK  
BRUNSVILLE, ME 04414**

COORDINATES  
45°08'56.72"N  
69°06'52.13" W

CLIENT

**The Nature Conservancy**

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ENGINEER'S CERTIFICATION



PROJECT NO: 103-23

DRAWN BY: JJC

CHECKED BY: SCG

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PROJECT TYPE

**AASHTO HS25 RATED BRIDGE STRUCTURE**

SHEET TITLE

**BRIDGE DRAIN DETAILS**

SHEET NUMBER

**S107**