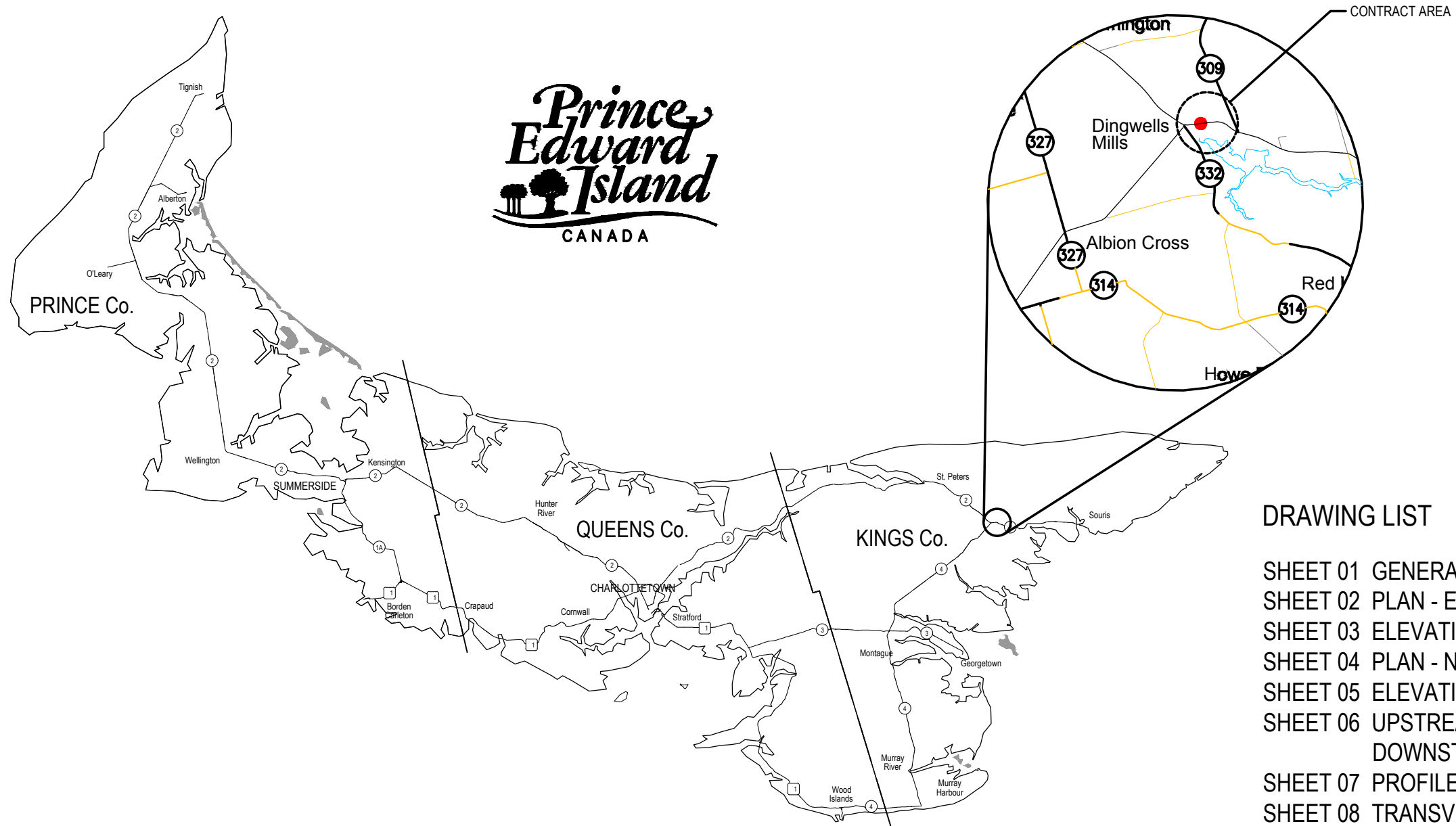


PROVINCE OF PRINCE EDWARD ISLAND DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE



DRAWING LIST

- SHEET 01 GENERAL NOTES
- SHEET 02 PLAN - EXISTING
- SHEET 03 ELEVATION - EXISTING
- SHEET 04 PLAN - NEW
- SHEET 05 ELEVATION - NEW
- SHEET 06 UPSTREAM AND
DOWNSTREAM PROTECTION
- SHEET 07 PROFILE
- SHEET 08 TRANSVERSE SLOPE AND
EDGE OF PAVE
- SHEET 09 ROAD REPORT
- SHEET 10 PHASE 1
- SHEET 11 PHASE 2
- SHEET 12 PHASE 3
- SHEET 13 PHASE 4
- SHEET 14 PHASE 1 & 2 PROFILE
- SHEET 15 PHASE 1 & 2 REPORTS

DINGWELLS MILLS STRUCTURE REPLACEMENT

STATION 16+668 - 16+780

ISSUED FOR TENDER
JUNE 17, 2021

1. THE INTENT OF THE WORK IS TO PROVIDE A THE NEW STRUCTURE ON ROUTE 2, IN DINGWELLS MILLS, TO REPLACE THE EXISTING STRUCTURE.
2. BOREHOLE DATA AND GEOTECHNICAL REPORT BY HARBOURSIDE ENGINEERING. THE DEPARTMENT DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION IN THE REPORT.
3. ALL ELEVATIONS ARE RELATED TO PEI SMARTNET. RTCM-REF 3537, N701127.970, E457649.489, ELEV 39.829M. COORDINATES ARE BASED ON NAD83.
4. ALL ELEVATIONS IN METRES. ALL DIMENSIONS IN MILLIMETRES U.N.O.
5. DO NOT SCALE DRAWINGS.

SCOPE

THE SCOPE OF THE WORK INCLUDES BUT IS NOT LIMITED TO REMOVAL OFF SITE OF EXISTING BRIDGE ELEMENTS, THE EXCAVATION AND REMOVALS OF MATERIALS, INCLUDING EXISTING FILL, EXISTING STRUCTURE, AND ALL OTHER MATERIALS INTENDED FOR REMOVAL, THE SUPPLY AND INSTALLATION OF NEW STRUCTURE SUPPLY AND PLACEMENT OF EARTH,AND ALL ROAD WORK, BACKFILL, GRANULARS,COMPACTION, AND ALL OTHER ANCILLARIES REQUIRED TO COMPLETE THE WORK AS INTENDED.

MATERIALS

ALL MATERIALS SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF CSA S6-19 (CHBDC) AND THE SPECIFICATIONS AS OUTLINED BELOW. IN THE EVENT OF CONFLICT, THE MOST STRINGENT CLAUSES SHALL APPLY.

CONCRETE:

1. ALL CONCRETE MATERIALS, METHODS, CONSTRUCTION PRACTICES, ETC., SHALL CONFORM TO CSA STANDARDS A23.1 AND A23.2.
2. PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH A23.1. CEMENT SHALL BE TYPE SILICA FUME BLENDED, MIN. 28 DAY COMPRESSIVE STRENGTH SHALL BE 35MPa UNLESS NOTED OTHERWISE IN SCHEDULE 'A'. DURABILITY DESIGN IN ACCORDANCE WITH C1.8.11 OF CHBDC. CLASS OF EXPOSURE IS C-1. NOMINAL AGGREGATE SIZE SHALL BE 20 mm. SLUMP AT POINT OF DISCHARGE SHALL BE 180 mm +/- 20 mm (WITH THE AID OF SUPERPLASTICIZER). AIR CONTENT SHALL BE 7% +/- 1.5%. MAXIMUM WATER/CEMENT RATIO SHALL BE 0.4.
3. ADMIXTURES USED SHALL BE IN ACCORDANCE WITH ASTM C494 AND SHALL BE IDENTIFIED IN THE MIX DESIGN. NO WATER SHALL BE ADDED ON SITE.

REINFORCING STEEL:

1. CONCRETE REINFORCING STEEL SHALL CONFORM TO CSA STANDARD G30.18, GRADE 400W BARS AND SHALL MEET THE MINIMUM REQUIREMENTS OF CHBDC S6-19.
 2. STEEL WIRES AND WELDED WIRE FABRIC SHALL CONFORM TO CSA STANDARDS G30.3, G30.5, G30.14 AND G30.15.
 3. THE YIELD STRENGTH OF REINFORCING, f_y , SHALL BE MIN 400 MPa.
 4. CONCRETE COVER AND TOLERANCES SHALL BE AS OUTLINED ON THE DRAWINGS AND IN ACCORDANCE WITH CHBDC.
 5. QUANTITY OF BARS TO BE DETERMINED BY ASSOCIATED TEXT NOTE.
- STEEL:**
1. ALL BOLTED CONNECTIONS (TIMBER TO TIMBER OR STEEL TO STEEL) TO BE NEW MATERIAL GRADE A307 HOT DIPPED GALVANIZED MINIMUM 720 AS PER ASTM A123/A123M.
 2. ALL BARRIER STEEL MEMBERS TO BE NEW MATERIAL GRADE 350W. HOT DIPPED GALVANIZED MINIMUM 720 AS PER ASTM A123/A123M.
 3. ALL STEEL PLATE TO BE NEW MATERIAL GRADE 300W. HOT DIPPED GALVANIZED MINIMUM 720 AS PER ASTM A123/A123M.

EXECUTION

DEMOLITION:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE EXISTING STRUCTURE IN ITS ENTIRETY FROM THE SITE AND DISPOSED OF IN AN ENVIRONMENTALLY ACCEPTABLE MANNER. THIS INCLUDES REMOVAL OF ALL CONCRETE AND TIMBER BELOW THE MUD LINE, RAILINGS, GUARD RAILS, CONNECTIONS, AND ALL OTHER ITEMS ASSOCIATED WITH THE EXISTING STRUCTURE. REFER TO SCHEDULE 'A' SPECIAL PROVISIONS FOR ANY ITEMS TO BE DISMANTLED AND SALVAGED.
2. THE CONTRACTOR SHALL ENSURE THE SAFETY OF THE PUBLIC AND HIS EMPLOYEES DURING DEMOLITION WORK AS WELL AS OTHER CONSTRUCTION WORK. AT NO TIME SHALL ANY DEBRIS FROM NEITHER THE DEMOLITION PORTION NOR CONSTRUCTION BE ALLOWED TO ENTER THE WATER COURSE.

EXCAVATION AND BACKFILL:

1. ALL EXCAVATION AND BACKFILL WORK SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH THE DEPARTMENTS STANDARD SPECIFICATIONS.
2. MAINTAIN ALL ENVIRONMENTAL CONTROLS AS REQUIRED BY THE DEPARTMENT'S ENVIRONMENTAL PROTECTION PLAN (EPP) OR AS INSTRUCTED ON SITE. AT A MINIMUM, A SILT BOOM AND TYPE 1 SILT FENCES ARE REQUIRED.

CONCRETE:

1. VERIFY LINES, GRADES AND REINFORCING DETAILS PRIOR TO FABRICATION OF FORMWORK. FABRICATE AND ERECT FORMWORK IN ACCORDANCE WITH S269.1.
2. FORM TIES SHALL BE REMOVABLE TIES, FREE OF DEVICES LEAVING HOLES LARGER THAN 25 mm DIAMETER.
3. CLEAN FORMWORK IN ACCORDANCE WITH A23.1 PRIOR TO PLACEMENT OF CONCRETE. LEAVE FORMWORK IN PLACE FOR AT LEAST 48 HOURS AFTER PLACEMENT OF CONCRETE. RE-USE OF FORMS SUBJECT TO REVIEW BY THE ENGINEER.
4. FABRICATE REINFORCING STEEL IN ACCORDANCE WITH CSA-A23.1, ANSI/ACI 315 AND REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY THE REINFORCING STEEL INSTITUTE OF CANADA.
5. OBTAIN APPROVAL FOR LOCATIONS OF SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS. LAPS TO BE 30 BAR DIAMETERS UNO.
6. PLACE REINFORCING STEEL AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH A23.1. REMOVE ALL MILL SCALE, OIL, GREASE OR OTHER DELETERIOUS MATERIALS BEFORE AND AFTER PLACEMENT. SECURE REINFORCING WITH ANNEALED WIRE OR APPROVED CLIPS AND CHAIRS. TAKE CARE TO ENSURE POSITION OF BARS AND CONCRETE COVER REMAINS UNALTERED DURING CONCRETING PROCEDURES.
7. ALLOW THE ENGINEER TO REVIEW THE REINFORCING STEEL PLACEMENT PRIOR TO PLACING CONCRETE.
8. PLACE CONCRETE IN ACCORDANCE WITH A23.1. DO NOT PLACE CONCRETE WHEN IT IS RAINING OR LIKELY TO RAIN. NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO PLACEMENT OF CONCRETE.
9. DO NOT PERMIT VERTICAL FREE FALL OF MORE THAN 1.5 m. TAKE SPECIAL PRECAUTIONS TO PREVENT SEGREGATION OF CONCRETE, HONEYCOMBING AND VOIDS.
10. USE INTERNAL VIBRATORS TO ENSURE CONSOLIDATION OF CONCRETE. USE OF FORM VIBRATORS NOT PERMITTED.
11. TOOLS USED SHALL BE FREE OF RUST AND OTHER DELETERIOUS MATERIALS TO AVOID EFFLORESCENCE AND STAINING OF CONCRETE.
12. CONCRETE TOLERANCES SHALL BE IN ACCORDANCE WITH A23.1, STRAIGHT EDGE METHOD.
13. FINISH CONCRETE IN ACCORDANCE WITH A23.1. USE SMOOTH FORM FINISH FOR ALL CONCRETE SURFACES. REMOVE FINIS AND PATCH HOLES AND DEFECTS AS INSTRUCTED.
14. REMOVE TIE CONES AND PATCH HOLES WITH LATEX MODIFIED CONCRETE. MIX TO BE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
15. CONCRETE SHALL BE PROTECTED FROM FREEZING, DRYING, HIGH TEMPERATURE AND MOISTURE LOSS FOR AT LEAST SEVEN DAYS OR FOR SUFFICIENT TIME TO ACHIEVE DESIRABLE PROPERTIES OF THE CONCRETE.
16. CURING SHALL BE ACHIEVED BY MOIST CURING WITH BURLAP COVERING FOR A MINIMUM OF THREE (3) DAYS. THE BURLAP SHALL BE KEPT CONTINUOUSLY MOIST FOR THIS CURING PERIOD.
17. FOR CONCRETE PLACED AGAINST HARDENED CONCRETE: CLEAN SURFACE OF LATENCE AND ROUGHEN SURFACE TO 5 mm ± APLITUDE, 15mm ± SPACING U.N.O.
18. ALL FRESHLY PLACED CONCRETE SHALL BE PROTECTED FROM THE ELEMENTS AND FROM DEFACEMENT DUE TO CONSTRUCTION OPERATIONS, TRAFFIC AND VANDALS. THE EFFECTS OF DIRECT SUNSHINE, DRYING WINDS, COLD, EXCESSIVE HEAT AND RUNNING WATER ARE PARTICULARLY HARMFUL. THE CONCRETE SHALL BE PROTECTED BY THE USE OF ADEQUATE TARPULINS OR OTHER SUITABLE MATERIAL TO COMPLETELY COVER OR ENCLOSE ALL FRESHLY FINISHED CONCRETE.
19. THE CONTRACTOR SHALL PROVIDE COLD WEATHER CURING AS REQUIRED BY CSA A23.1. THIS MAY INCLUDE THE PROVISION OF INSULATED TARPS, ENCLOSURES AND EXTERNAL HEAT SOURCE AS REQUIRED TO MEET THE SPECIFIED LIMITS OF A23.1. THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE MEASURED OR PAID FOR.
20. TESTING SHALL BE CONDUCTED BY THE DEPARTMENT FOR THE DEPARTMENT. ANY TESTING CARRIED OUT DOES NOT RELIEVE THE CONTRACTOR IN ANY WAY TO ENSURE QUALITY CONTROL AND QUALITY ASSURANCE FOR THE MATERIALS OR CONSTRUCTION PROCEDURES.

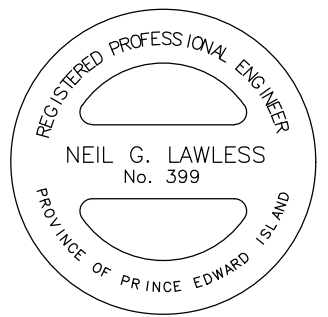
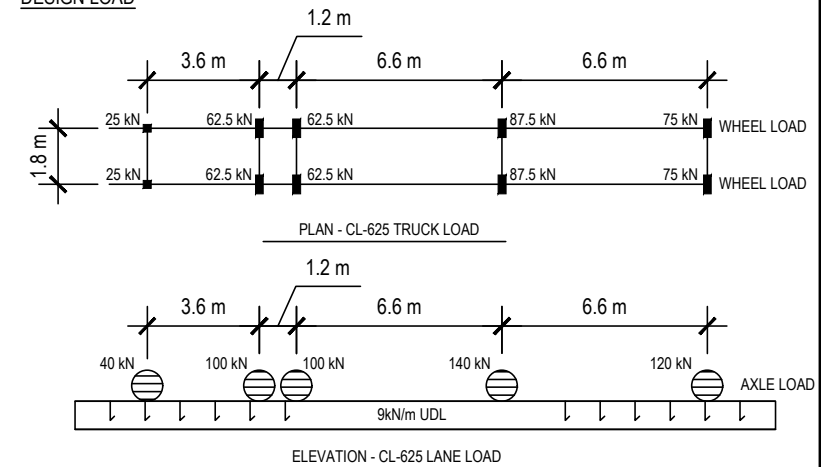
ANY MATERIAL (CONCRETE, GRANULARS, ETC.) FOUND TO BE DEFECTIVE OR DOES NOT MEET THE SPECIFIED REQUIREMENTS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE.

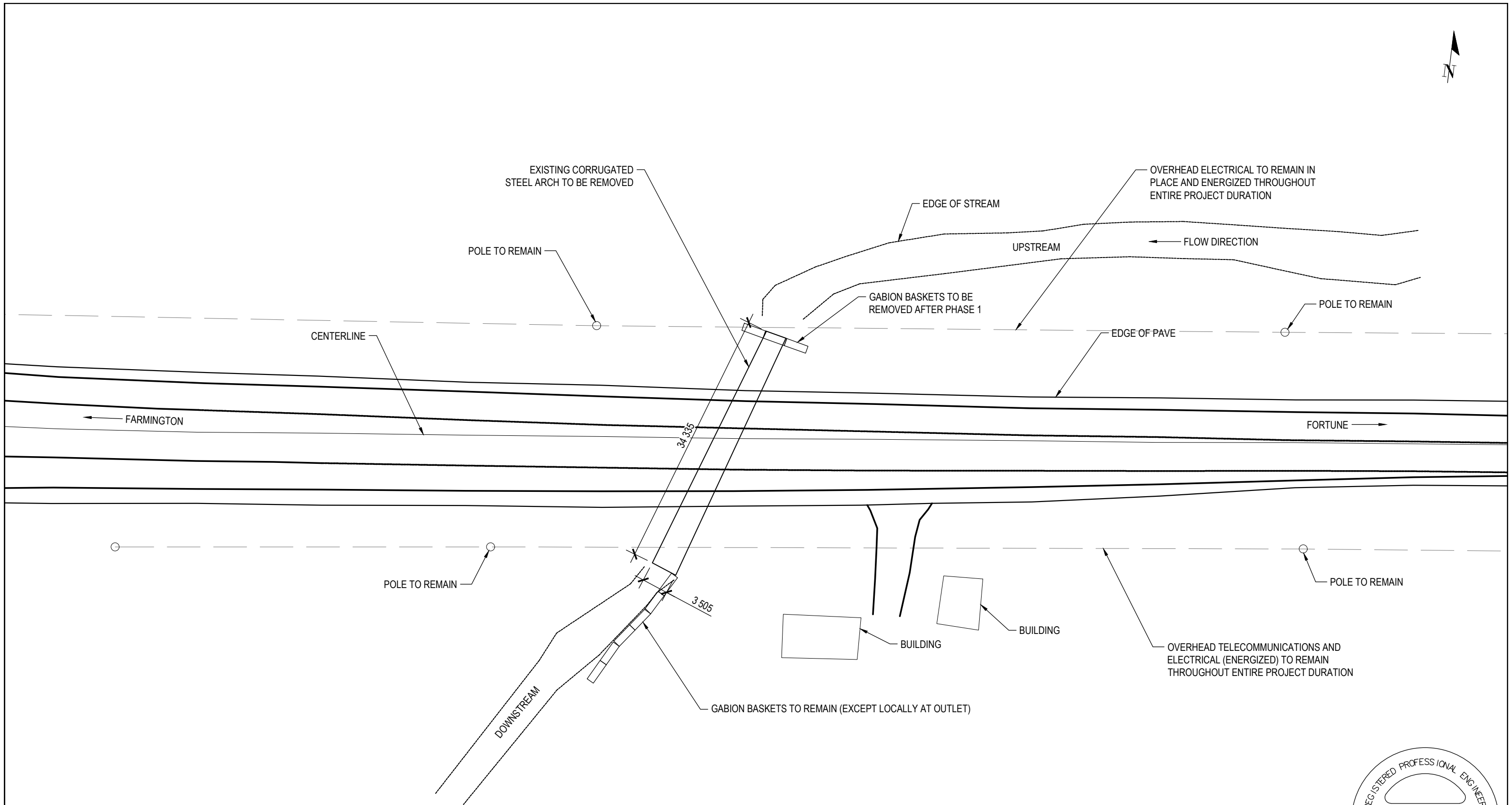
21. CONCRETE COVERS AND TOLERANCES SHALL BE AS FOLLOWS:
- FORMED AND TOP SURFACES: 70mm +/- 10mm
- CAST AGAINST EARTH:100mm +/- 25mm
22. ALL REINFORCING STEEL TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING UP FORMWORK AND PLACING CONCRETE. LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONCRETE PLACEMENT TO BE APPROVED BY THE ENGINEER.

PRE-CAST CONCRETE INSTALL:

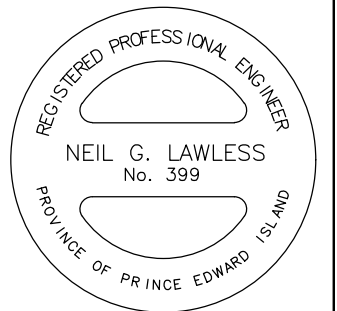
1. PRE-CAST CONCRETE STRUCTURE INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED AND STANDARD DETAILS.

DESIGN LOAD





1 PLAN - EXISTING
S2 1:500




 DEPT OF TRANSPORTATION AND INFRASTRUCTURE
 Tel 902 368 5100 PO Box 2000
 Fax 902 368 5395 Charlottetown
 http://www.gov.pe.ca/ Prince Edward Island
 Canada C1A 7N8

ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL PROTECTION PLAN (EPP).
 MAINTAIN ENVIRONMENTAL CONTROLS UNTIL VEGETATION HAS ESTABLISHED OR AS INSTRUCTED ON SITE.
 ALL DRIVEWAY CULVERTS AND SIDE SLOPES SHALL BE MIN. 3H:1V

SURVEY BY: T.I.E. SCALE: AS NOTED
 DRAWN BY: K. MACEACHERN COUNTY: ----
 APPROVED BY: N. LAWLESS
 PROJECT No.: 2021

No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

STATIONING:
 CONTROL SECTION:

JOB: DINGWELLS MILLS STRUCTURE REPLACEMENT
 SHEET NAME: PLAN - EXISTING

SHEET No.
 S2 OF 15

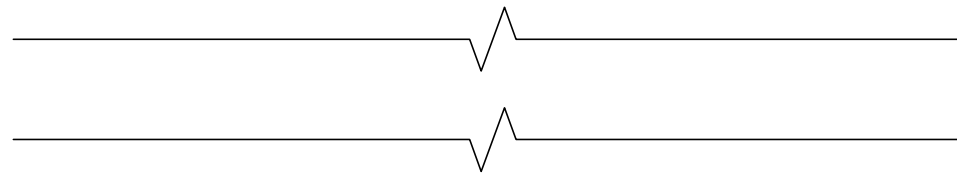
NOTE:

1. EXISTING STRUCTURE'S MATERIAL, FRAMING SYSTEM, AND EXTENT IS NOT NECESSARILY INDICATED ON TIE DRAWINGS. BIDDERS TO ACCOUNT FOR SUCH DURING TENDER. NO ADDITIONAL COSTS RELATED TO DEMOLITION NOR ANY EFFECTS ON ANY CONSTRUCTION ACTIVITY AS A RESULT OF THE EXISTING CONDITIONS SHALL BE CONSIDERED.
2. ALL DIMENSIONS FOR EXISTING STRUCTURE ARE APPROXIMATE. CONTRACTOR TO VERIFY ON SITE.
3. ALL DIMENSIONS IN MILLIMETRES
ALL ELEVATIONS IN METRES.
4. ELEVATIONS ARE APPROXIMATE.

← FARMINGTON

FORTUNE →

5.22m
TOP OF ASPHALT



CORRUGATED STEEL ARCH

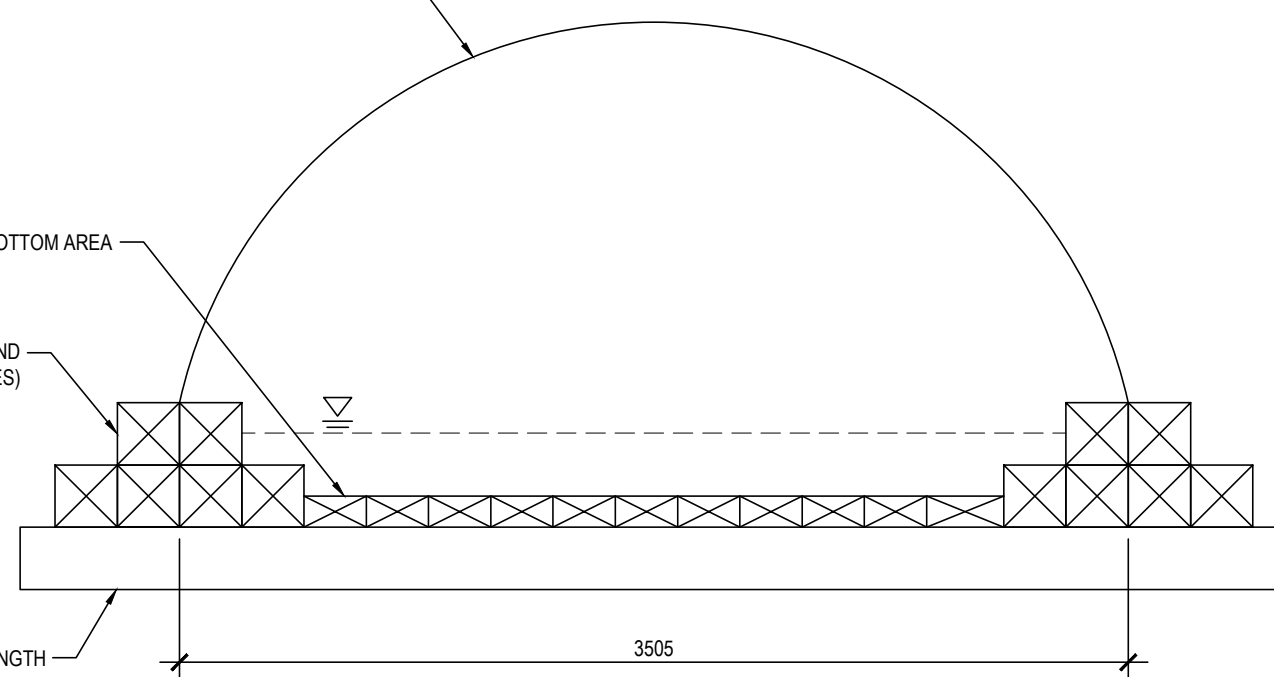
2.562m
TOP OF ARCH

TIMBER FLOOR THROUGHOUT ENTIRE BOTTOM AREA

TIMBER STOPS CONTINUOUS INSIDE AND OUTSIDE (ACTUAL QUANTITY VARIES)

0.899m
TOP OF WATER

0.696m
TOP OF FLOOR

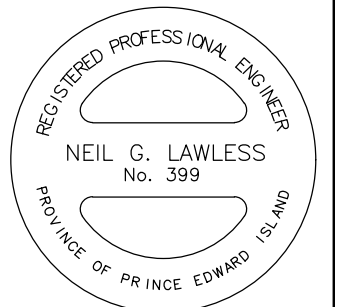


TIMBER MUDSILL SPACED OUT ALONG ARCH LENGTH

3505

** VIEWED FROM DOWNSTREAM

1 ELEVATION - EXISTING
S3 1:25



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MAINTAIN ENVIRONMENTAL CONTROLS UNTIL VEGETATION HAS ESTABLISHED OR AS INSTRUCTED ON SITE.
ALL DRIVEWAY CULVERTS AND SIDE SLOPES SHALL BE MIN. 3H:1V

SURVEY BY: T.I.E. SCALE: AS NOTED
DRAWN BY: K. MACEACHERN COUNTY: ----
APPROVED BY: N. LAWLESS
PROJECT No.: 2021

No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

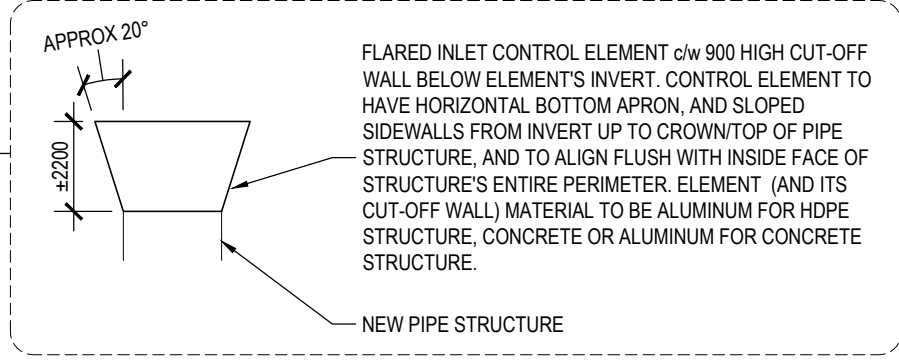
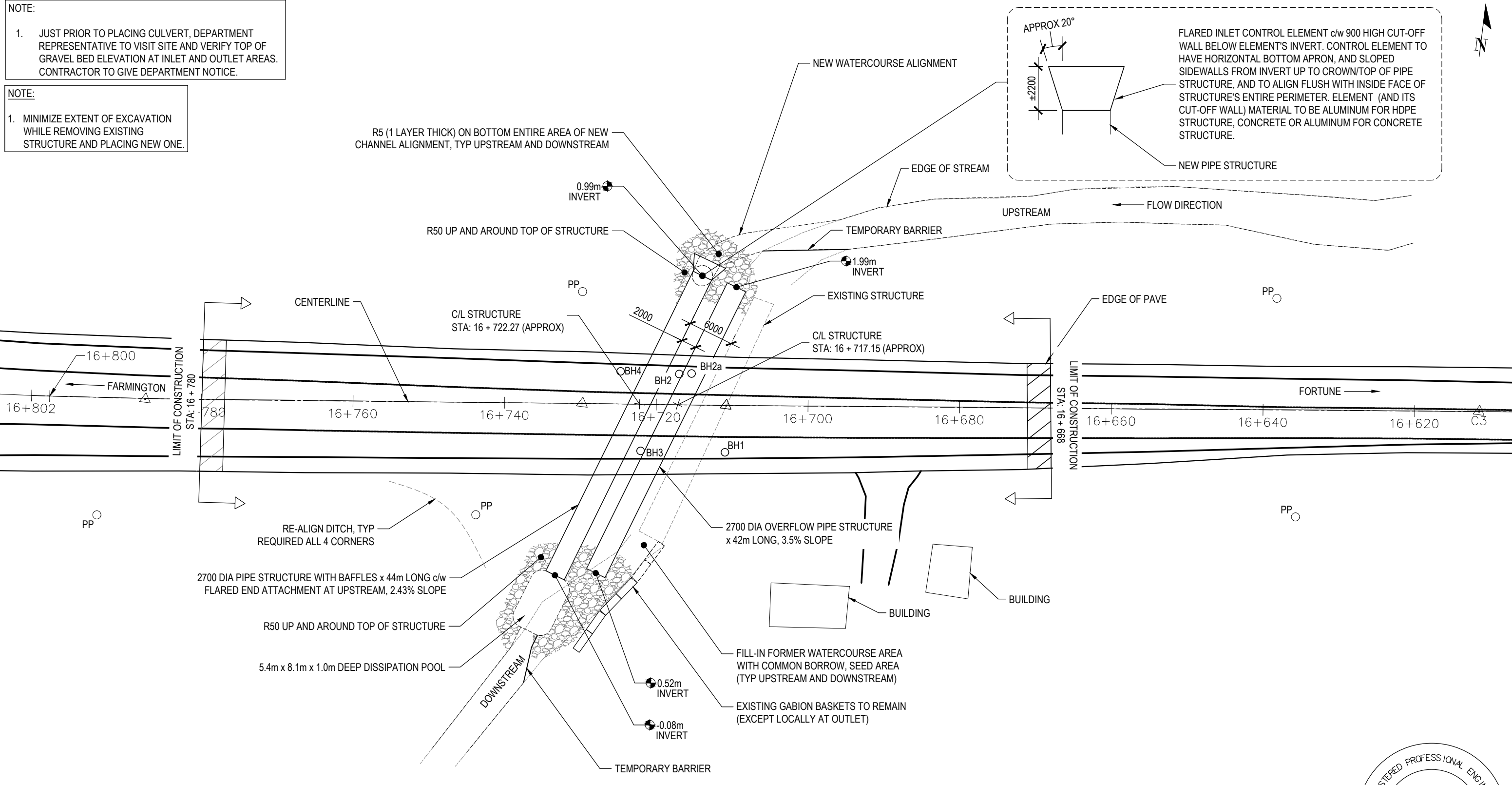
STATIONING:
CONTROL SECTION:

JOB: DINGWELLS MILLS STRUCTURE REPLACEMENT
SHEET NAME: ELEVATION - EXISTING

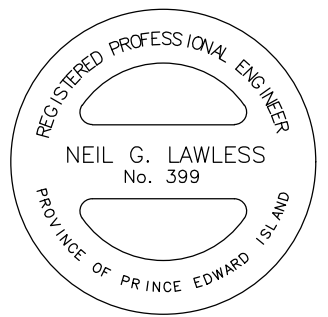
SHEET No. S3 OF 15

NOTE:
1. JUST PRIOR TO PLACING CULVERT, DEPARTMENT REPRESENTATIVE TO VISIT SITE AND VERIFY TOP OF GRAVEL BED ELEVATION AT INLET AND OUTLET AREAS. CONTRACTOR TO GIVE DEPARTMENT NOTICE.

NOTE:
1. MINIMIZE EXTENT OF EXCAVATION WHILE REMOVING EXISTING STRUCTURE AND PLACING NEW ONE.



1 PLAN - NEW
S4 1:500



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MAINTAIN ENVIRONMENTAL CONTROLS UNTIL VEGETATION HAS ESTABLISHED OR AS INSTRUCTED ON SITE.
ALL DRIVEWAY CULVERTS AND SIDE SLOPES SHALL BE MIN. 3H:1V

SURVEY BY: T.I.E. SCALE: AS NOTED
DRAWN BY: K. MACEACHERN COUNTY: ----
APPROVED BY: N. LAWLESS
PROJECT No.: 2021

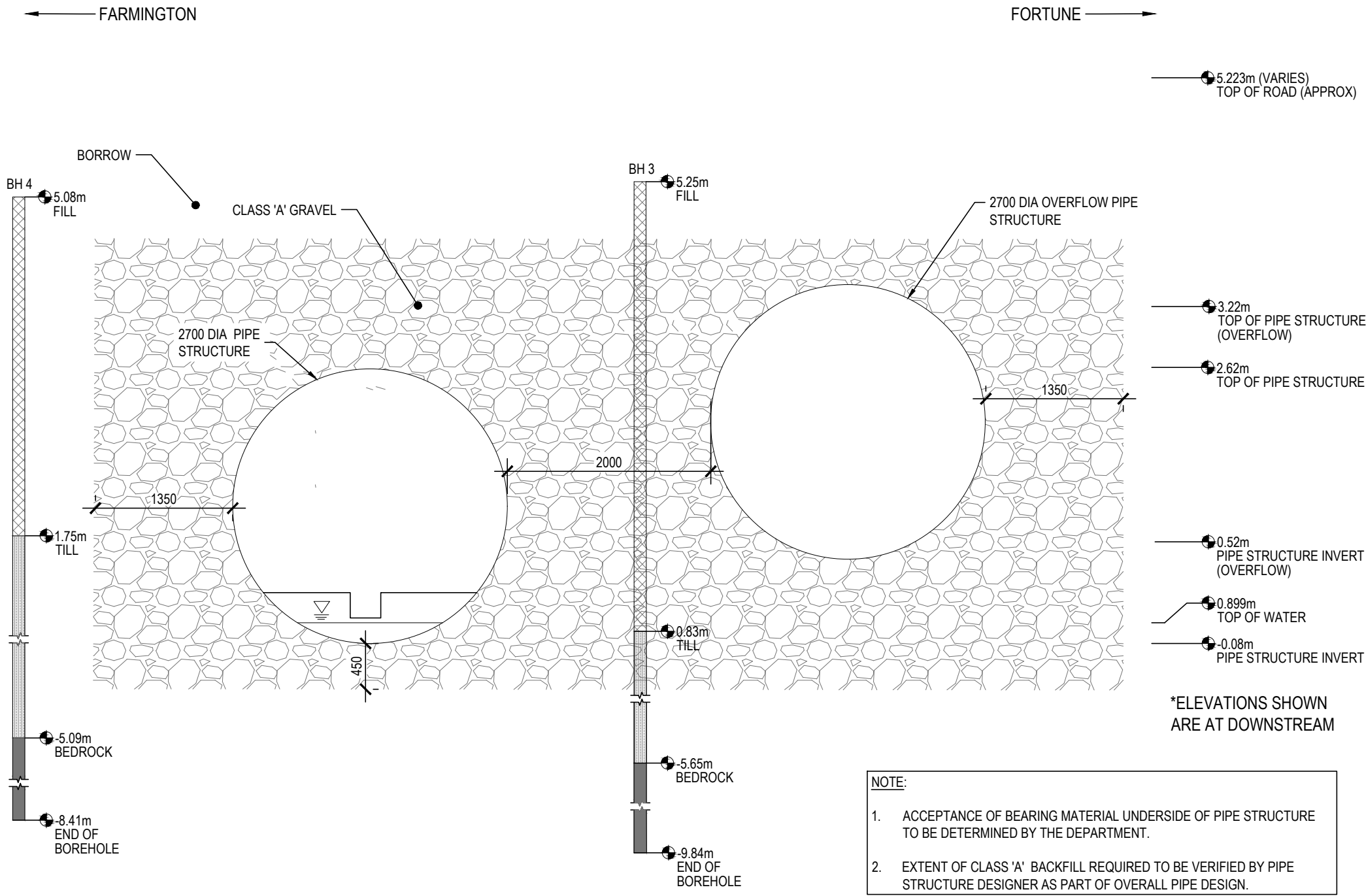
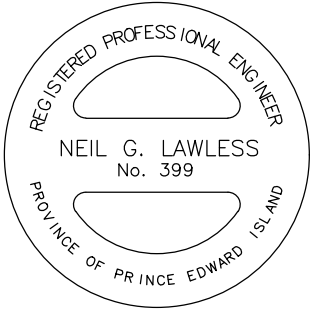
No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

STATIONING:
CONTROL SECTION:

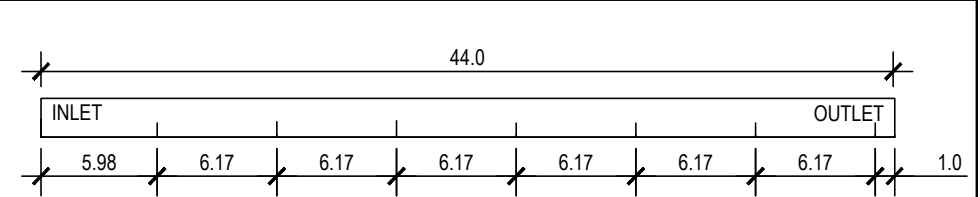
JOB: DINGWELLS MILLS STRUCTURE REPLACEMENT
SHEET NAME: PLAN - NEW

SHEET No. S4 OF 15

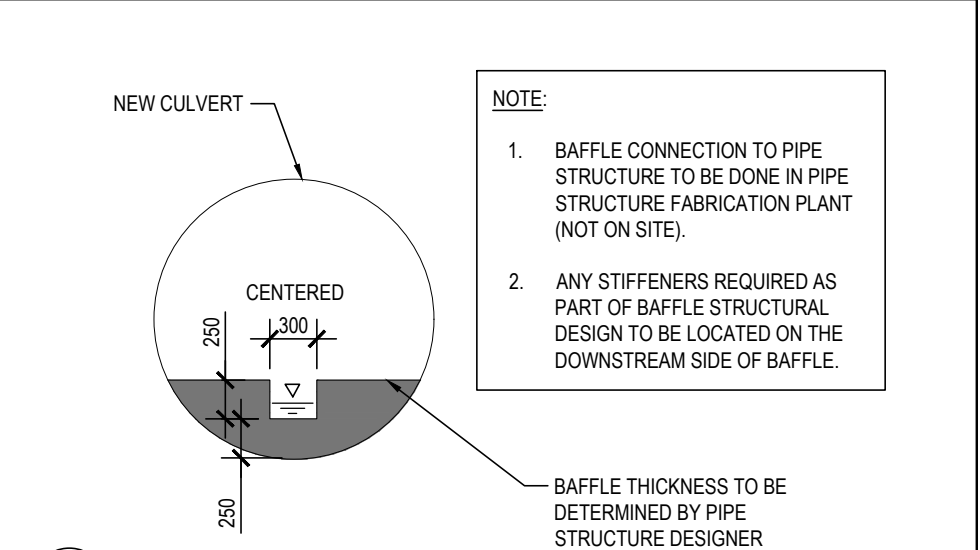
- NOTE:**
1. ALL CONSTRUCTION (FROM PROJECT START TO COMPLETION) SHALL BE PERFORMED WHILE WATERCOURSE REMAINS LIVE (I.E. UNOBSTRUCTED FLOWING WATER).
 2. REFER TO PLAN VIEW DRAWING FOR BH LOCATION RELATIVE TO STRUCTURE.
 3. REFER TO GEOTECH REPORT FOR MORE EXACT BOREHOLE DATA AND ELEVATIONS.
 4. REFER TO SEPARATE DRAWING FOR ROAD CONSTRUCTION.



- NOTE:**
1. ACCEPTANCE OF BEARING MATERIAL UNDERSIDE OF PIPE STRUCTURE TO BE DETERMINED BY THE DEPARTMENT.
 2. EXTENT OF CLASS 'A' BACKFILL REQUIRED TO BE VERIFIED BY PIPE STRUCTURE DESIGNER AS PART OF OVERALL PIPE DESIGN.



2 ELEVATION - BAFFLE LOCATIONS
S5 1:50



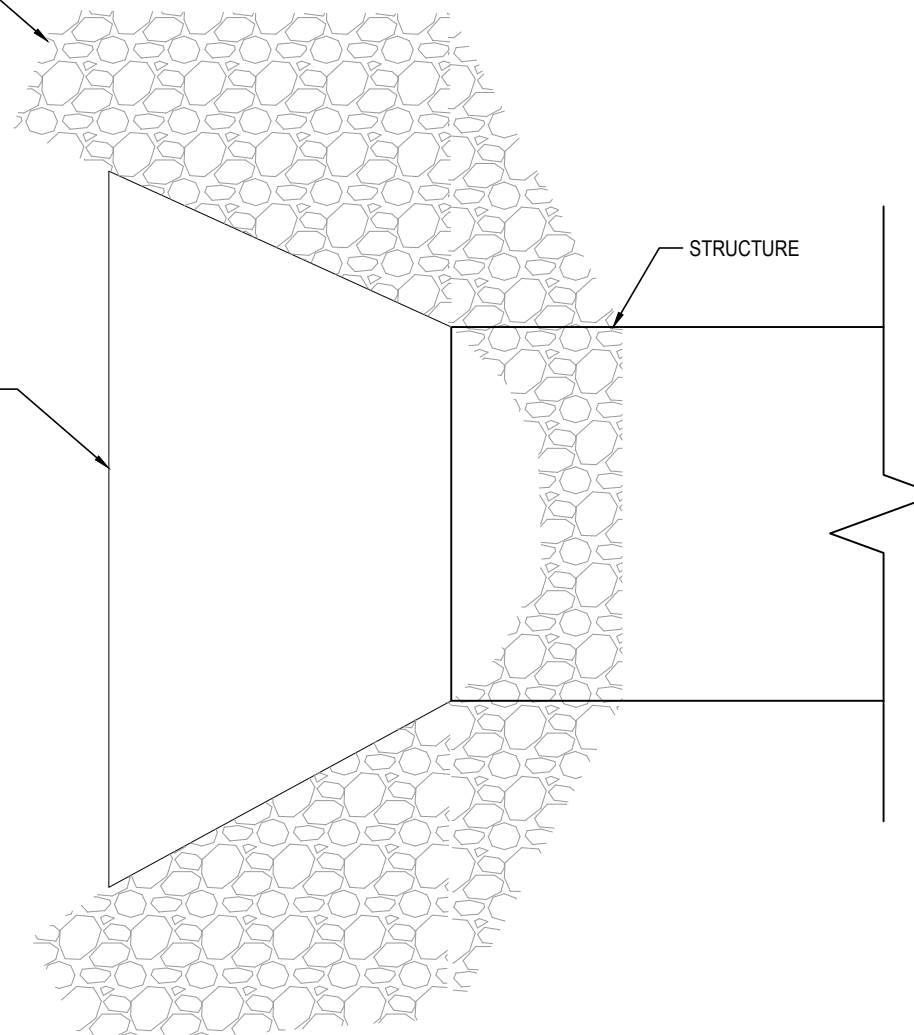
3 SECTION - BAFFLE
S5 1:50

1 ELEVATION - NEW
S5 1:50

TOE OF ROCK TO EXTEND OUT PAST THE INLET CONTROL ELEMENT (TYP)

INLET CONTROL ELEMENT

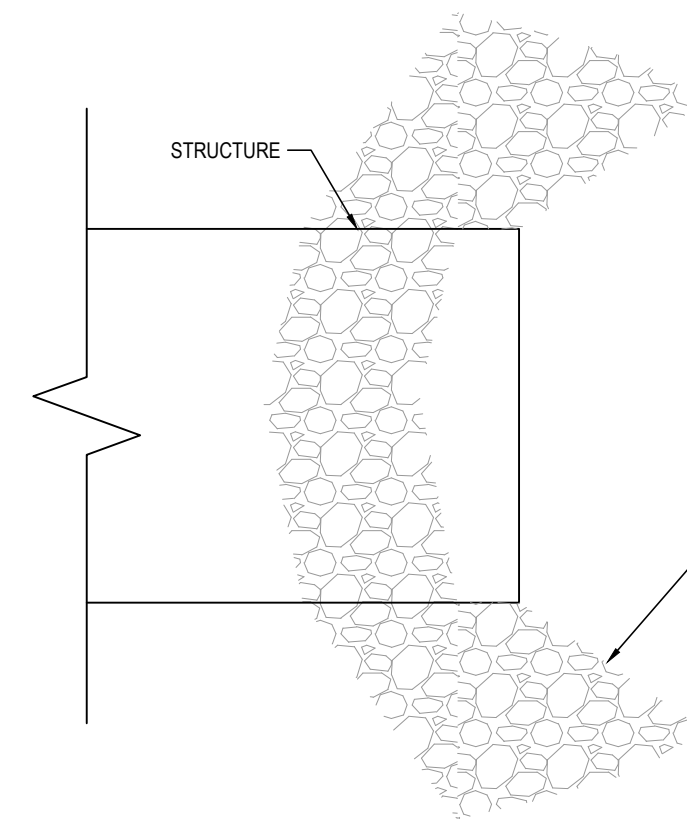
STRUCTURE



1 PLAN - UPSTREAM
S6 1:50

STRUCTURE

TOE OF ROCK TO EXTEND OUT PAST THE STRUCTURE END (TYP)

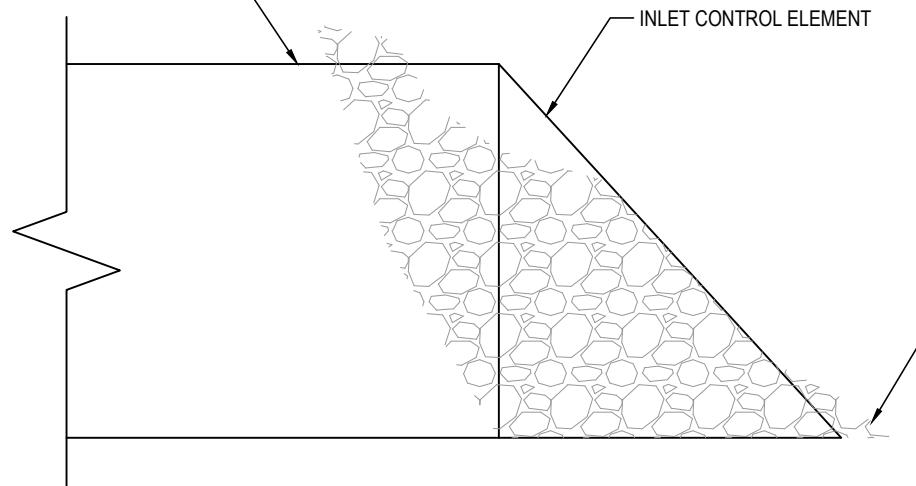


2 PLAN - DOWNSTREAM
S6 1:50

STRUCTURE

INLET CONTROL ELEMENT

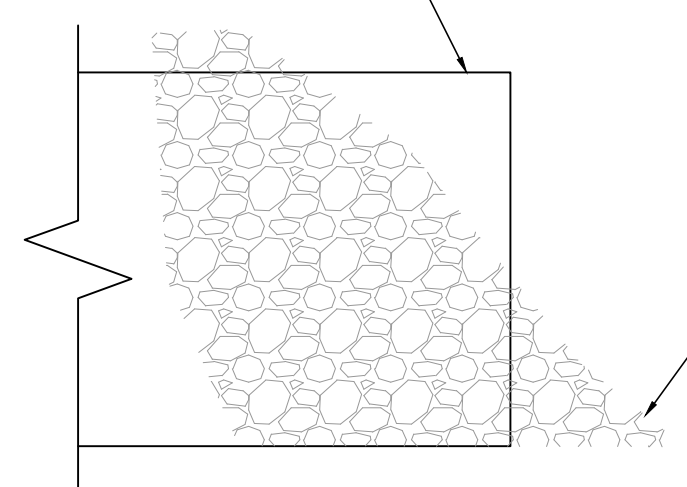
TOE OF ROCK TO EXTEND OUT PAST THE INLET CONTROL ELEMENT



3 SECTION - UPSTREAM
S6 1:50

STRUCTURE

TOE OF ROCK TO EXTEND OUT PAST THE STRUCTURE END

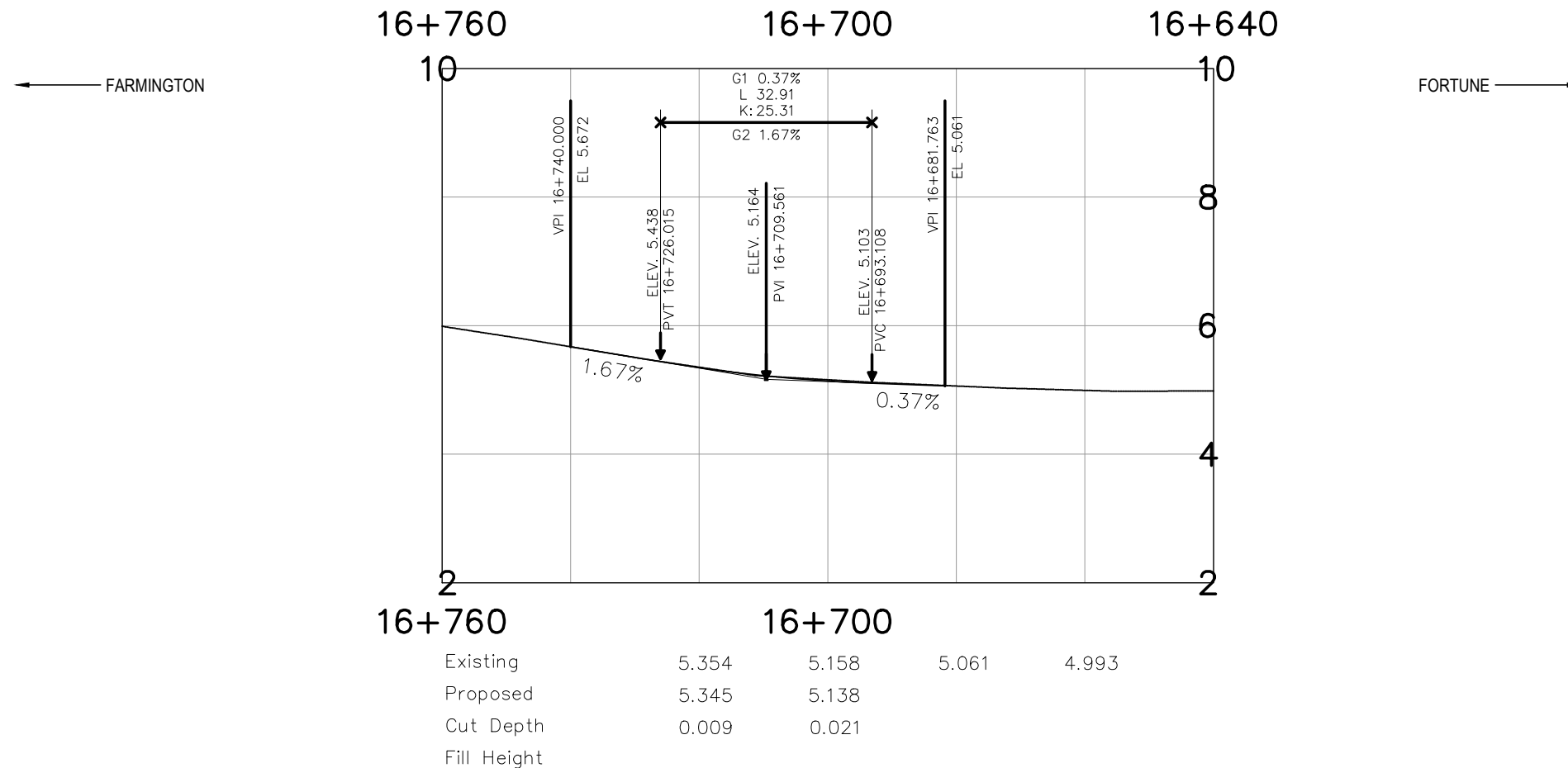


4 SECTION - DOWNSTREAM
S6 1:50



No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

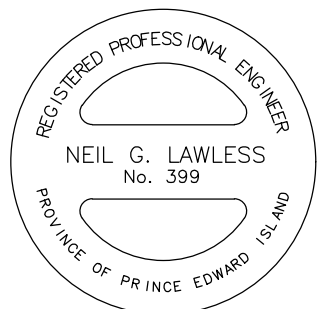
STATIONING:	
CONTROL SECTION:	



1 VERTICAL PROFILE AT CENTERLINE
S7 1:1000

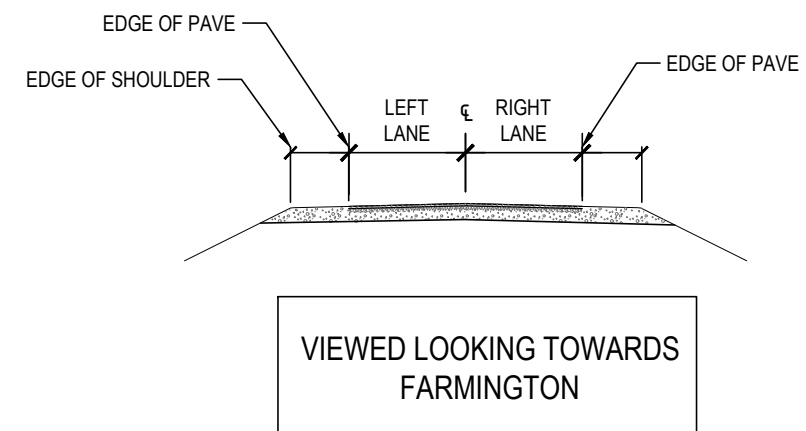
No.	Type	Profile Curve Type	Length	Total Curve Length	Grade	K Value	Start Station	Start Elevation	End Station	End Elevation	Grade In	Grade Out	Grade Change	PVI Station	PVI Elevation
1	Tangent		11.345m		0.37%		16+680.00m	5.061m	16+691.35m	5.103m					
2	Symmetric Parabola	Sag	32.908m	32.908m		27.219	16+691.35m	5.103m	16+724.25m	5.423m	0.37%	1.58%	1.21%	16+707.80m	5.164m
3	Tangent		15.747m		1.58%		16+724.25m	5.423m	16+740.00m	5.672m					

2 VERTICAL ALIGNMENT REPORT AT CENTERLINE
S7 N.T.S.



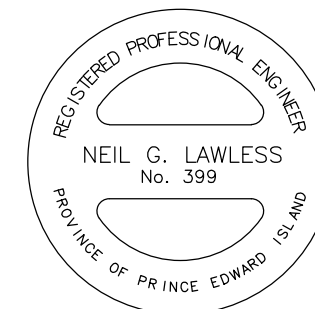
TRANSVERSE SLOPE AND EDGE OF PAVE LOCATION				
STATION	LEFT LANE		RIGHT LANE	
	C/L TO EDGE OF PAVE	TRANSVERSE SLOPE	TRANSVERSE SLOPE	C/L TO EDGE OF PAVE
STA: 16 + 668 - FORTUNE (LIMIT)	TO MATCH EXISTING	TO MATCH EXISTING	TO MATCH EXISTING	TO MATCH EXISTING
STA: 16 + 700	8800mm	-0.25%	-1.9%	6200mm
STA: 16 + 722.27 - C/L OF STRUCTURE	9250mm	+1.7%	-2.9%	6600mm
STA: 16 + 750	9400mm	+1.0%	-4.5%	7100mm
STA: 16 + 780 - FARMINGTON (LIMIT)	TO MATCH EXISTING	TO MATCH EXISTING	TO MATCH EXISTING	TO MATCH EXISTING

NOTE:
1. VIEWED TOWARDS FARMINGTON



1 TRANSVERSE SLOPE AND EDGE OF PAVE LOCATION
S8 N.T.S.

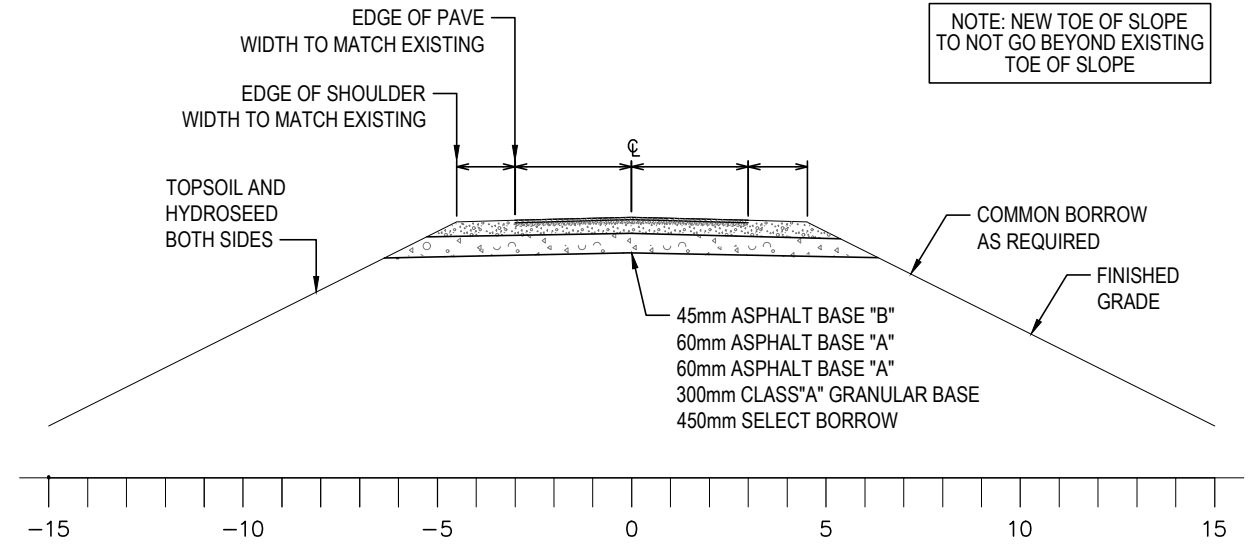
2 SECTION - EDGE OF PAVE
S8 N.T.S.



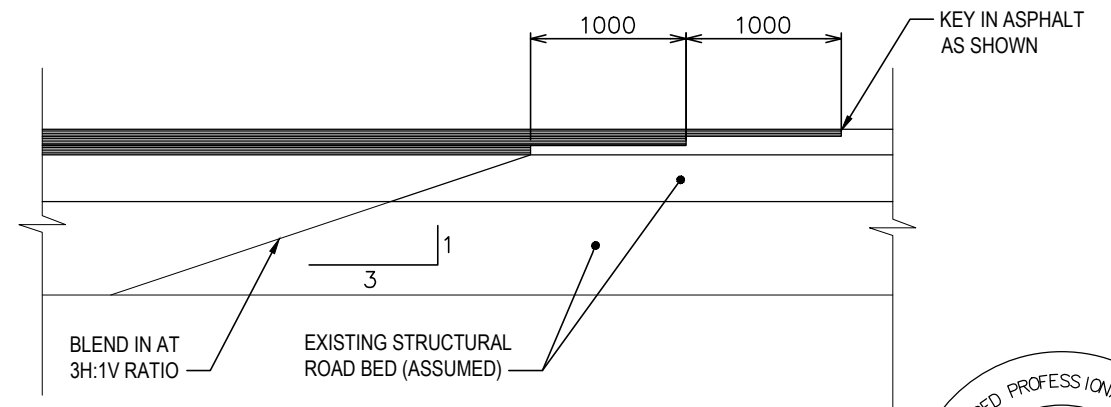
Alignment Report: DINGWELL MILLS

TAG No	STATION	CURVE/SPIRAL/TANGENT DATA	NORTHING	EASTING
L4	16+554.850 16+609.417	LENGTH: 54.567	701177.826 701171.431	442820.123 442765.932
			TANGENT DIRECTION: 263°16'11"	
C3	16+611.516	LENGTH: 4.199 RADIUS: 1246.184 DELTA: 0°11'35" DEGREE OF CURVATURE (ARC): 1°22'46" CHORD: 4.199 MID-ORDINATE: 0.002	701171.185	442763.847
			TANGENT DIRECTION: 263°16'11"	
L5	16+613.616 16+710.819	LENGTH: 97.203	701170.946 701159.879	442761.761 442665.190
			TANGENT DIRECTION: 263°27'46"	
C4	16+710.819	LENGTH: 0.000 RADIUS: 0.000 DELTA: 359°38'22" DEGREE OF CURVATURE (ARC): 154318809°11'16" CHORD: 0.000 MID-ORDINATE: 0.000	701159.879	442665.190
			TANGENT DIRECTION: 263°27'46"	
L6	16+710.819 16+729.338	LENGTH: 18.519	701159.879 701157.887	442665.190 442646.778
			TANGENT DIRECTION: 263°49'24"	
C5	16+729.775	LENGTH: 0.873 RADIUS: 200.000 DELTA: 0°15'00" DEGREE OF CURVATURE (ARC): 8°35'40" CHORD: 0.873 MID-ORDINATE: 0.000	701157.840	442646.344
			TANGENT DIRECTION: 263°49'24"	
L7	16+730.211 16+775.296	LENGTH: 45.085	701157.791 701152.744	442645.911 442601.109
			TANGENT DIRECTION: 263°34'24"	
C6	16+787.399	LENGTH: 24.204 RADIUS: 1116.556 DELTA: 1°14'31" DEGREE OF CURVATURE (ARC): 1°32'22" CHORD: 24.204 MID-ORDINATE: 0.066	701151.390	442589.083
			TANGENT DIRECTION: 263°34'24"	
L8	16+799.500 16+802.389	LENGTH: 2.889	701150.296 701150.035	442577.030 442574.153
			TANGENT DIRECTION: 264°48'55"	

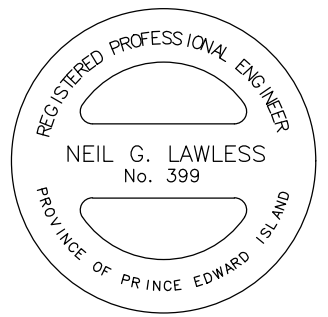
1 HORIZONTAL ALIGNMENT REPORT AT CENTERLINE
S9 N.T.S.



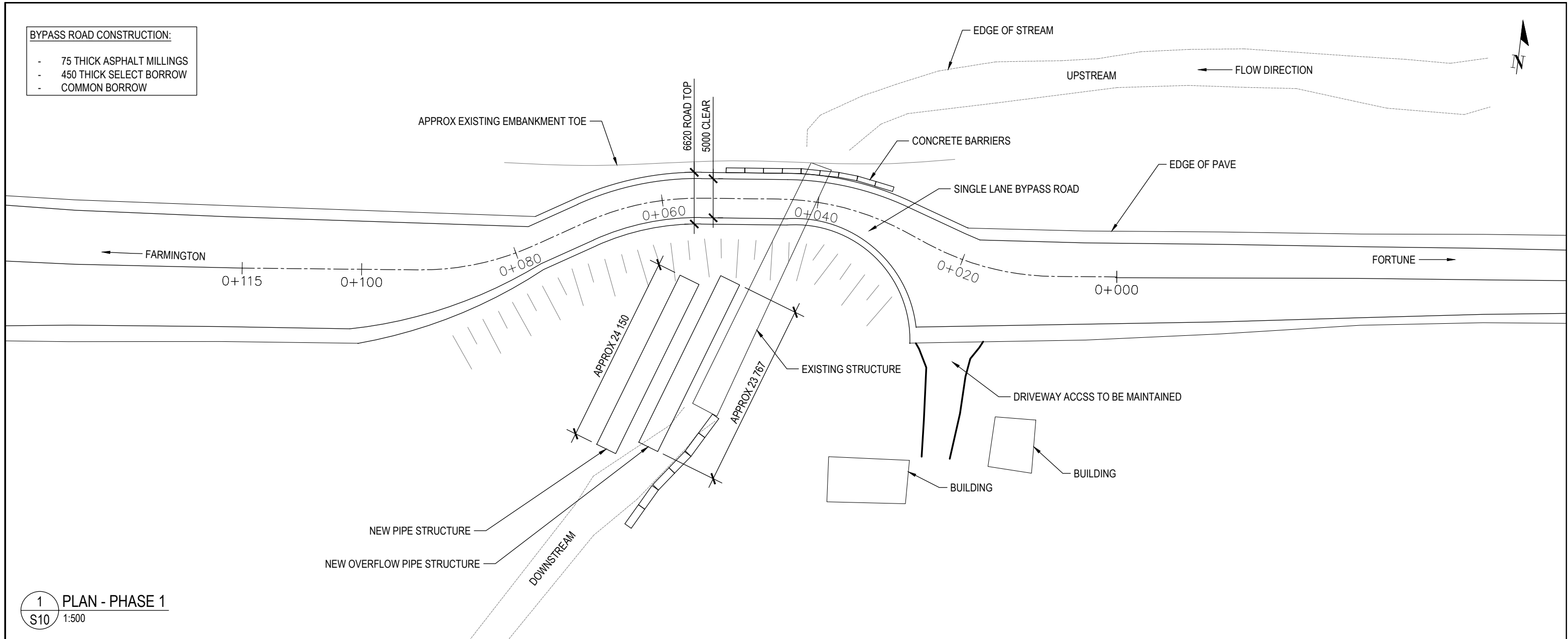
2 TYPICAL ROAD SECTION
S9 N.T.S.



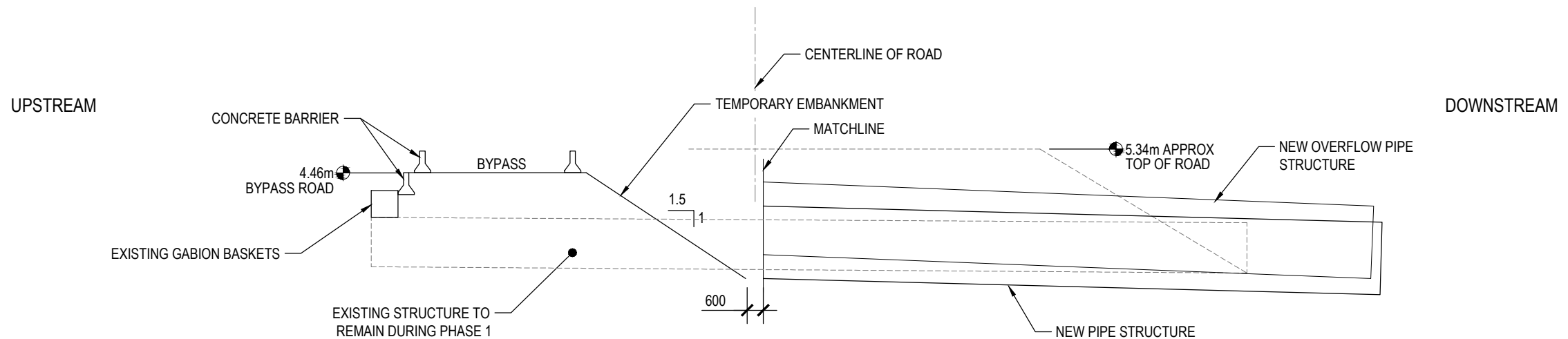
3 TYPICAL BLEND-IN
S9 N.T.S.



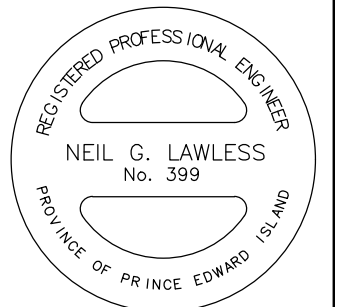
- BYPASS ROAD CONSTRUCTION:**
- 75 THICK ASPHALT MILLINGS
 - 450 THICK SELECT BORROW
 - COMMON BORROW



1 PLAN - PHASE 1
S10 1:500



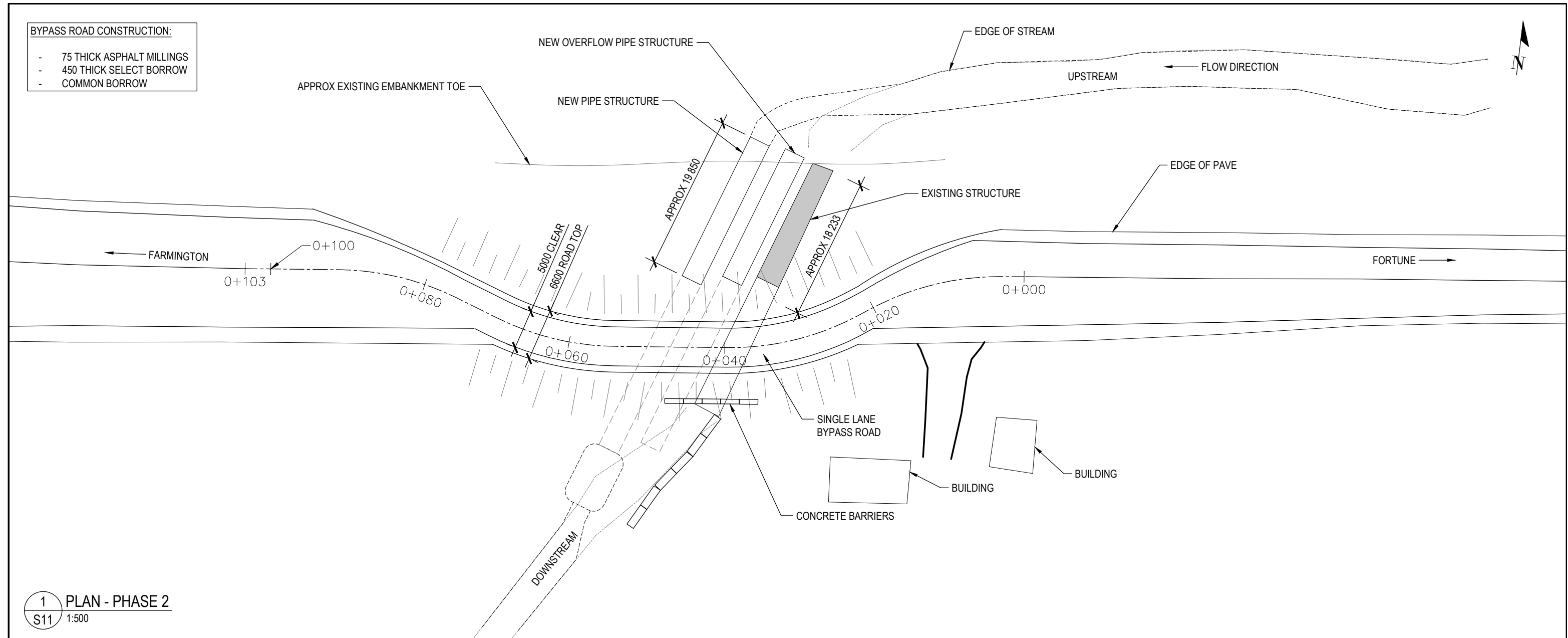
2 SECTION - PHASE 1
S10 1:200



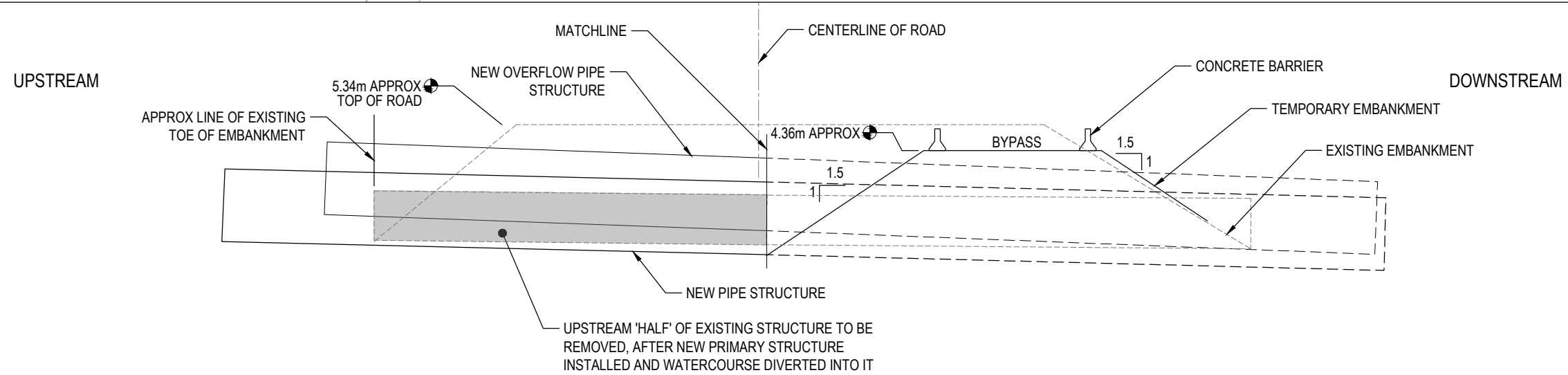
No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

STATIONING:	
CONTROL SECTION:	

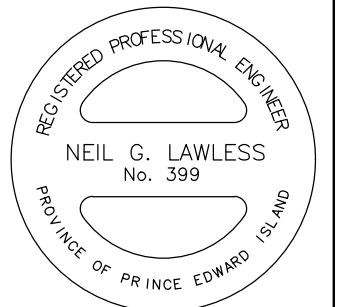
- BYPASS ROAD CONSTRUCTION:**
- 75 THICK ASPHALT MILLINGS
 - 450 THICK SELECT BORROW
 - COMMON BORROW



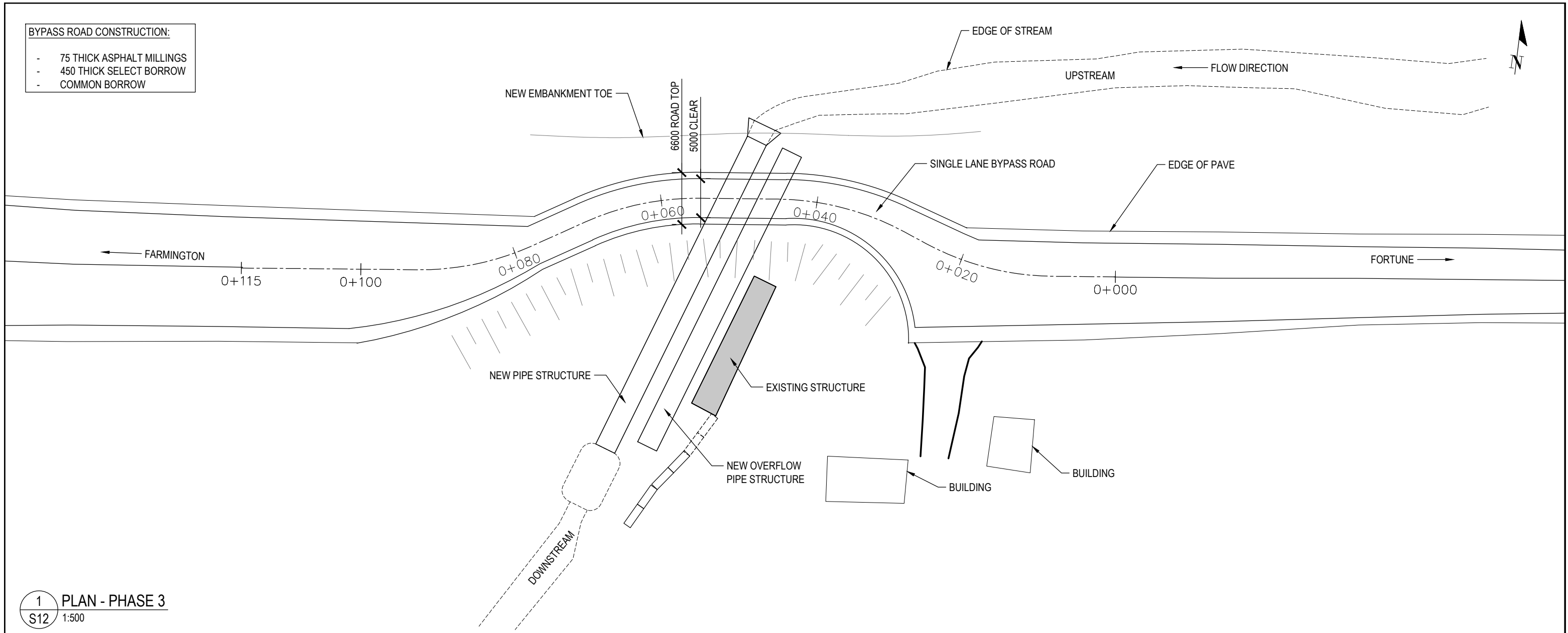
1 PLAN - PHASE 2
S11 1:500



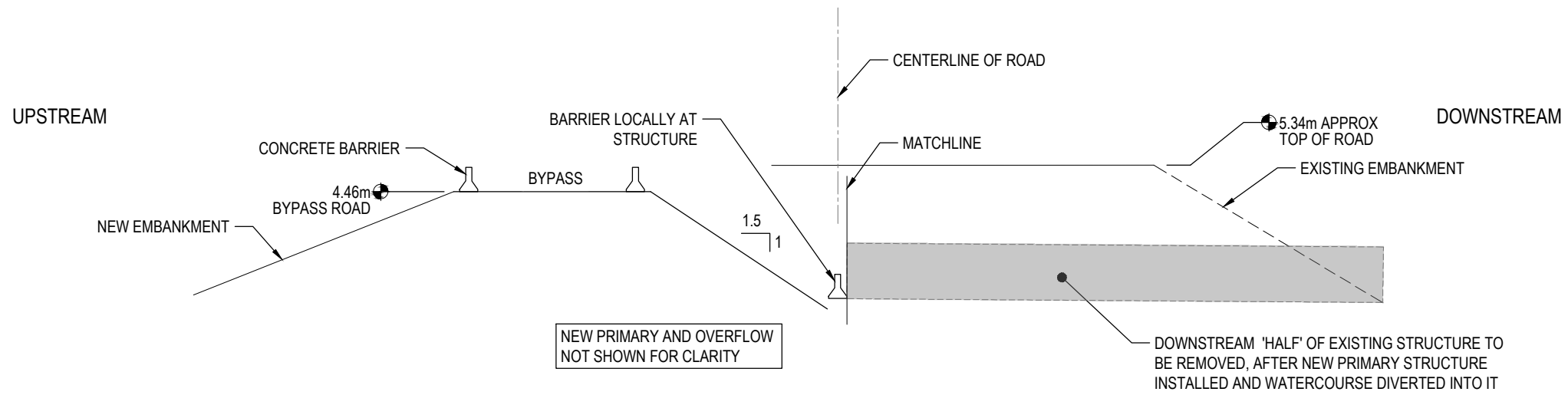
2 SECTION - PHASE 2
S11 1:200



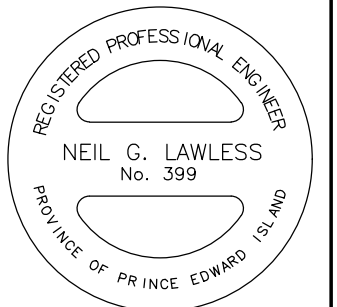
- BYPASS ROAD CONSTRUCTION:**
- 75 THICK ASPHALT MILLINGS
 - 450 THICK SELECT BORROW
 - COMMON BORROW



1 PLAN - PHASE 3
S12 1:500

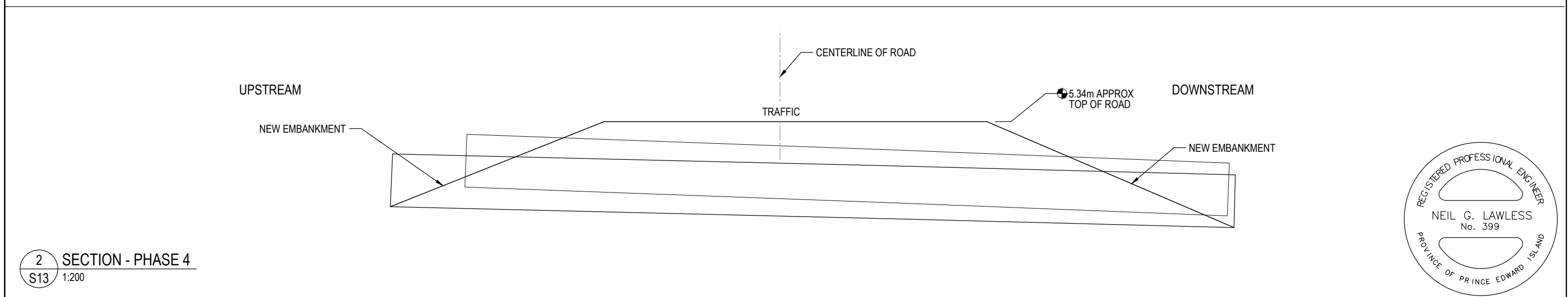
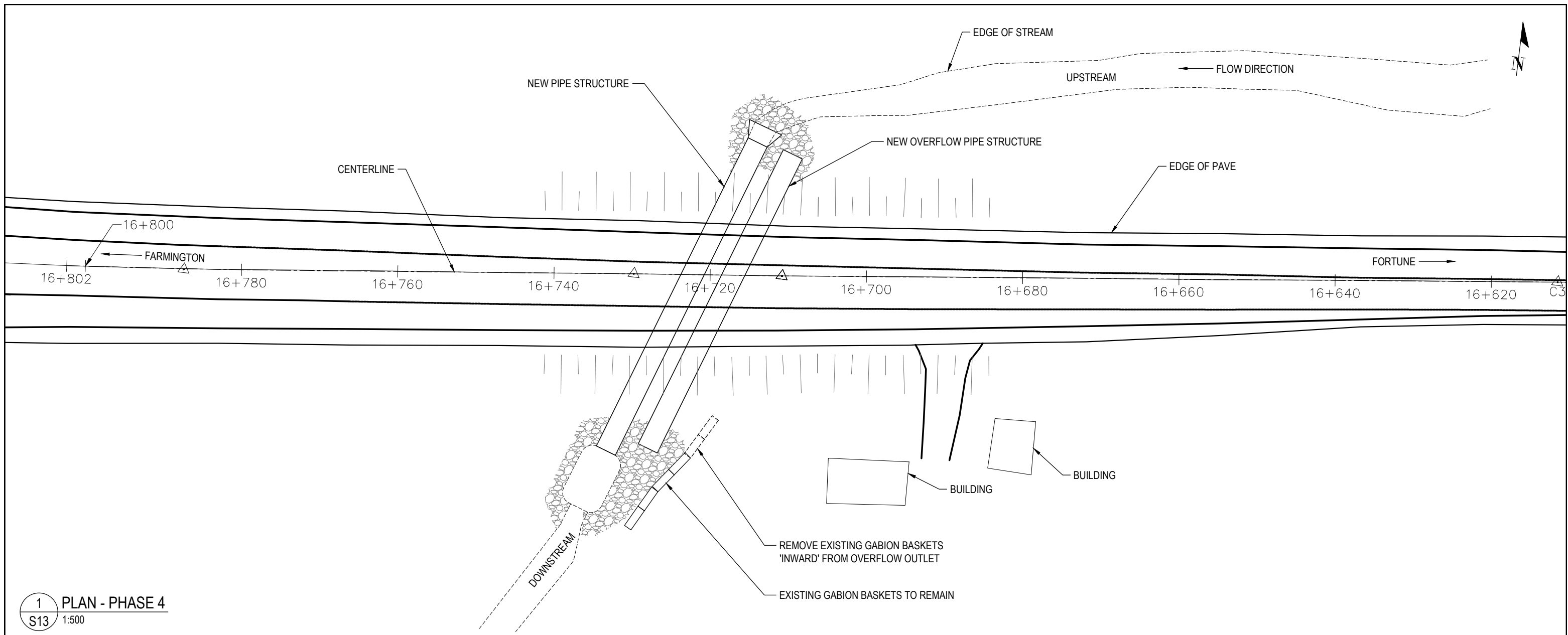


2 SECTION - PHASE 3
S12 1:250

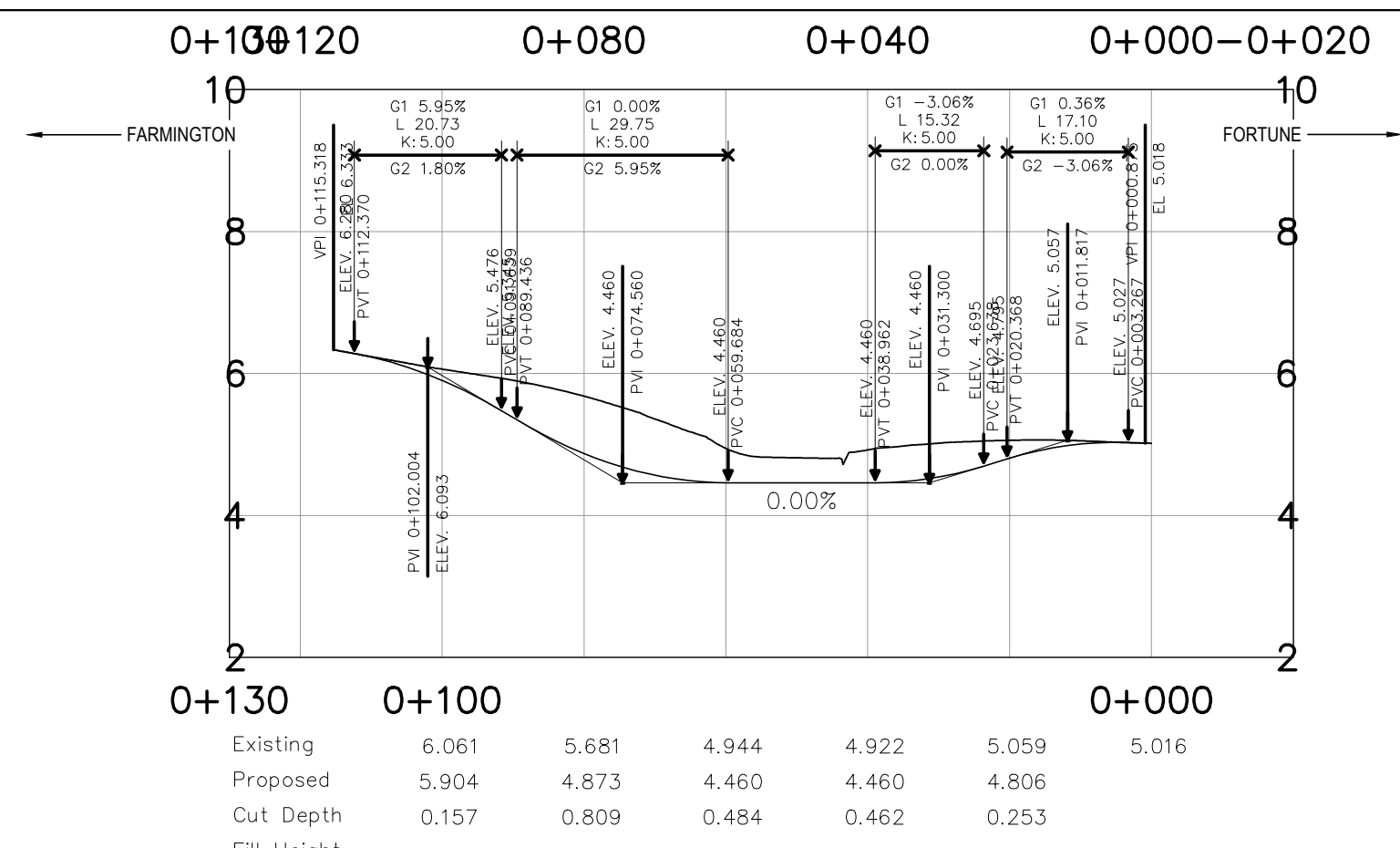


No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

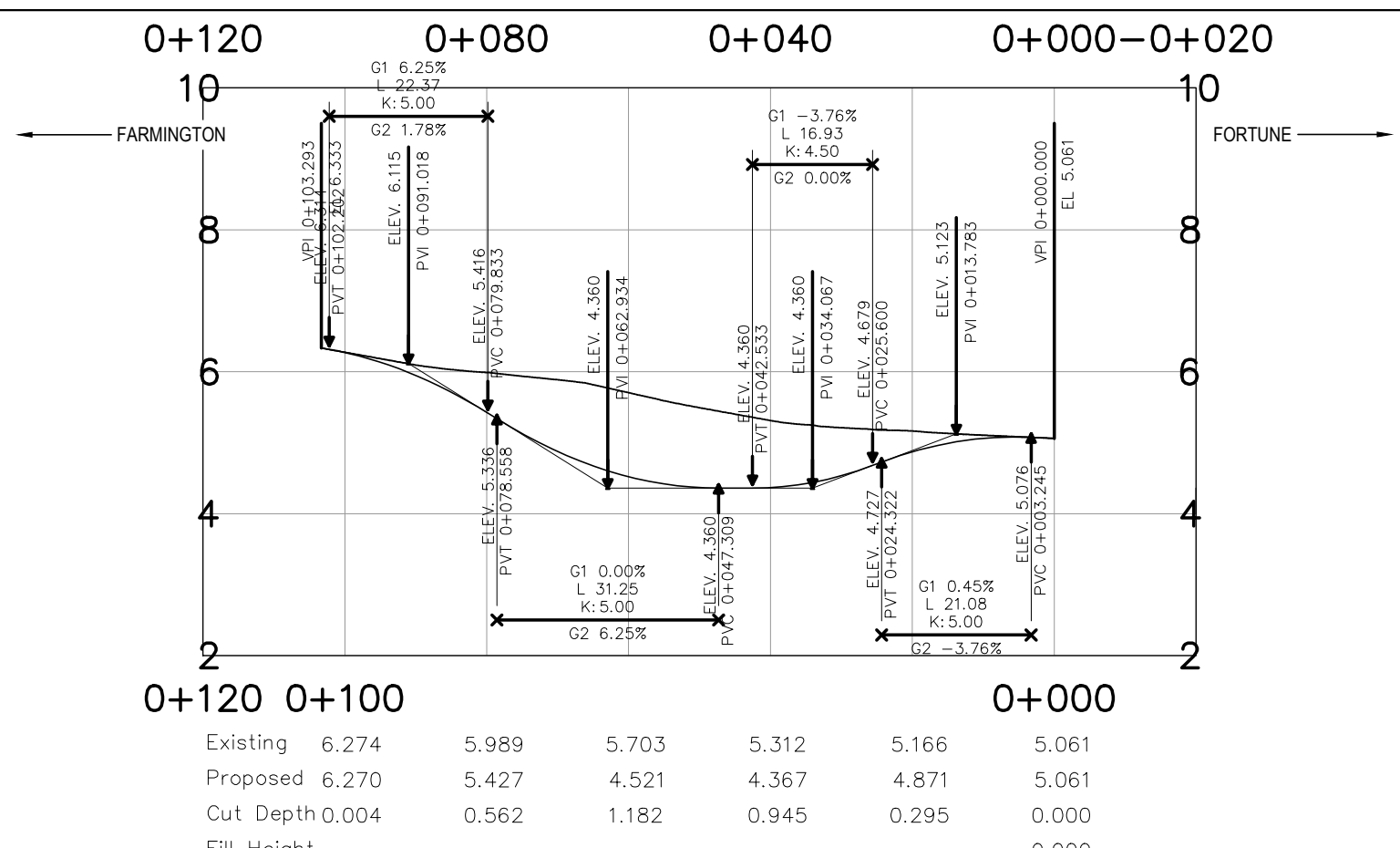
STATIONING:	
CONTROL SECTION:	



DEPT OF TRANSPORTATION AND INFRASTRUCTURE Tel 902 368 5100 PO Box 2000 Fax 902 368 5395 Charlottetown http://www.gov.pe.ca/ Prince Edward Island Canada C1A 7N8	ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH TIE'S STANDARD SPECIFICATIONS AND ENVIRONMENTAL PROTECTION PLAN (EPP). MAINTAIN ENVIRONMENTAL CONTROLS UNTIL VEGETATION HAS ESTABLISHED OR AS INSTRUCTED ON SITE. ALL DRIVEWAY CULVERTS AND SIDE SLOPES SHALL BE MIN. 3H:1V	SURVEY BY: T.I.E. SCALE: AS NOTED DRAWN BY: K. MACEACHERN COUNTY: ---- APPROVED BY: N. LAWLESS PROJECT No.: 2021	No. 0 REVISIONS ISSUED FOR TENDER DATE: JUNE 17, 2021	STATIONING: CONTROL SECTION:	JOB: DINGWELLS MILLS STRUCTURE REPLACEMENT SHEET NAME: PHASE 4	SHEET No. S13 OF 15
		SHEET No. S13 OF 15				



1 PHASE 1 - VERTICAL PROFILE AT CENTERLINE
S14 1:1000



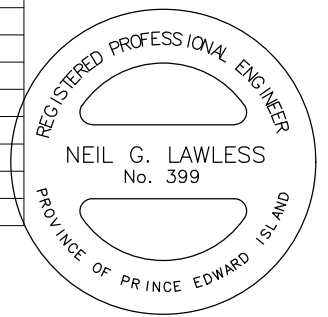
2 PHASE 2 - VERTICAL PROFILE AT CENTERLINE
S14 1:1000

No.	Type	Profile Curve Type	Length	Total Curve Length	Grade	K Value	Start Station	Start Elevation	End Station	Grade In	Grade Out	Grade Change	PVI Station	PVI Elevation
1	Tangent		2.392m		0.36%		0+000.88m	5.018m	0+003.27m					
2	Symmetric Parabola	Crest	17.101m	17.101m		5	0+003.27m	5.027m	0+020.37m	0.36%	-3.06%	-3.42%	0+011.82m	5.057m
3	Tangent		3.270m		-3.06%		0+020.37m	4.795m	0+023.64m					
4	Symmetric Parabola	Sag	15.324m	15.324m		5	0+023.64m	4.695m	0+038.96m	-3.06%	0.00%	3.06%	0+031.30m	4.460m
5	Tangent		20.723m		0.00%		0+038.96m	4.460m	0+059.68m					
6	Symmetric Parabola	Sag	29.752m	29.752m		5	0+059.68m	4.460m	0+089.44m	0.00%	5.95%	5.95%	0+074.56m	4.460m
7	Tangent		2.203m		5.95%		0+089.44m	5.345m	0+091.64m					
8	Symmetric Parabola	Crest	20.731m	20.731m		5	0+091.64m	5.476m	0+112.37m	5.95%	1.80%	-4.15%	0+102.00m	6.093m
9	Tangent		2.948m		1.80%		0+112.37m	6.280m	0+115.32m					

3 PHASE 1 - VERTICAL ALIGNMENT REPORT AT CENTERLINE
S14 1:1000

No.	Type	Profile Curve Type	Length	Total Curve Length	Grade	K Value	Start Station	Start Elevation	End Station	End Elevation	Grade In	Grade Out	Grade Change	PVI Station	PVI Elevation
1	Tangent		3.245m		0.45%		0+000.00m	5.061m	0+003.25m	5.076m					
2	Symmetric Parabola	Crest	21.077m	21.077m		5	0+003.25m	5.076m	0+024.32m	4.727m	0.45%	-3.76%	-4.22%	0+013.78m	5.123m
3	Tangent		1.279m		-3.76%		0+024.32m	4.727m	0+025.60m	4.679m					
4	Symmetric Parabola	Sag	16.933m	16.933m		4.5	0+025.60m	4.679m	0+042.53m	4.360m	-3.76%	0.00%	3.76%	0+034.07m	4.360m
5	Tangent		4.776m		0.00%		0+042.53m	4.360m	0+047.31m	4.360m					
6	Symmetric Parabola	Sag	31.248m	31.248m		5	0+047.31m	4.360m	0+078.56m	5.336m	0.00%	6.25%	6.25%	0+062.93m	4.360m
7	Tangent		1.275m		6.25%		0+078.56m	5.336m	0+079.83m	5.416m					
8	Symmetric Parabola	Crest	22.370m	22.370m		5	0+079.83m	5.416m	0+102.20m	6.314m	6.25%	1.78%	-4.47%	0+091.02m	6.115m
9	Tangent		1.091m		1.78%		0+102.20m	6.314m	0+103.29m	6.333m					

4 PHASE 2 - VERTICAL ALIGNMENT REPORT AT CENTERLINE
S14 1:1000



Alignment Report: PHASE1

TAG No	STATION	CURVE/SPIRAL/TANGET DATA	NORTHING	EASTING
L9	0+000.000 0+007.926	LENGTH: 7.926	701164.757 701163.854	442707.751 442699.877
			TANGENT DIRECTION: 263°27'46"	
C7	0+016.617	LENGTH: 17.036 RADIUS: 35.000 DELTA: 27°53'20" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 16.869 MID-ORDINATE: 1.031	701162.865	442691.243
			TANGENT DIRECTION: 263°27'46"	
L10	0+024.962 0+028.141	LENGTH: 3.178	701166.029 701167.186	442683.149 442680.189
			TANGENT DIRECTION: 291°21'05"	
C8	0+036.765	LENGTH: 16.912 RADIUS: 35.000 DELTA: 27°41'09" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 16.748 MID-ORDINATE: 1.017	701170.326	442672.156
			TANGENT DIRECTION: 291°21'05"	
L11	0+045.053 0+055.020	LENGTH: 9.967	701169.375 701168.275	442663.584 442653.678
			TANGENT DIRECTION: 263°39'56"	
C9	0+062.735	LENGTH: 15.187 RADIUS: 35.000 DELTA: 24°51'42" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 15.068 MID-ORDINATE: 0.821	701167.424	442646.010
			TANGENT DIRECTION: 263°39'56"	
L12	0+070.207 0+077.605	LENGTH: 7.398	701163.428 701159.596	442639.410 442633.082
			TANGENT DIRECTION: 238°48'14"	
C10	0+085.288	LENGTH: 15.127 RADIUS: 35.000 DELTA: 24°45'45" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 15.009 MID-ORDINATE: 0.814	701155.616	442626.510
			TANGENT DIRECTION: 238°48'14"	
L13	0+092.731 0+115.318	LENGTH: 22.586	701154.755 701152.224	442618.875 442596.432
			TANGENT DIRECTION: 263°33'59"	

1 PHASE 1 - HORIZONTAL ALIGNMENT REPORT AT CENTERLINE

S15 1:1000

Alignment Report: PHASE2

TAG No	STATION	CURVE/SPIRAL/TANGET DATA	NORTHING	EASTING
L14	0+000.000 0+003.005	LENGTH: 3.005	701163.389 701163.037	442695.809 442692.824
			TANGENT DIRECTION: 263°17'10"	
C11	0+011.833	LENGTH: 17.296 RADIUS: 35.000 DELTA: 28°18'52" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 17.121 MID-ORDINATE: 1.063	701162.005	442684.056
			TANGENT DIRECTION: 263°17'10"	
L15	0+020.301 0+022.223	LENGTH: 1.922	701156.938 701155.835	442676.827 442675.253
			TANGENT DIRECTION: 234°58'17"	
C12	0+031.175	LENGTH: 17.528 RADIUS: 35.000 DELTA: 28°41'39" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 17.346 MID-ORDINATE: 1.092	701150.696	442667.922
			TANGENT DIRECTION: 234°58'17"	
L16	0+039.752 0+054.065	LENGTH: 14.313	701149.708 701148.129	442659.025 442644.799
			TANGENT DIRECTION: 263°39'56"	
C13	0+062.032	LENGTH: 15.667 RADIUS: 35.000 DELTA: 25°38'50" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 15.536 MID-ORDINATE: 0.873	701147.250	442636.881
			TANGENT DIRECTION: 263°39'56"	
L17	0+069.732 0+075.566	LENGTH: 5.835	701149.885 701151.815	442629.363 442623.856
			TANGENT DIRECTION: 289°18'46"	
C14	0+083.556	LENGTH: 15.710 RADIUS: 35.000 DELTA: 25°43'02" DEGREE OF CURVATURE (ARC): 49°06'38" CHORD: 15.578 MID-ORDINATE: 0.878	701154.457	442616.316
			TANGENT DIRECTION: 289°18'46"	
L18	0+091.276 0+103.293	LENGTH: 12.017	701153.566 701152.226	442608.376 442596.434
			TANGENT DIRECTION: 263°35'44"	

2 PHASE 2 - HORIZONTAL ALIGNMENT REPORT AT CENTERLINE

S15 1:1000



DEPT OF TRANSPORTATION AND INFRASTRUCTURE
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http://www.gov.pe.ca/ Prince Edward Island
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ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND ENVIRONMENTAL PROTECTION PLAN (EPP).
MAINTAIN ENVIRONMENTAL CONTROLS UNTIL VEGETATION HAS ESTABLISHED OR AS INSTRUCTED ON SITE.
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SURVEY BY: T.I.E. SCALE: AS NOTED
DRAWN BY: K. MACEACHERN COUNTY: ----
APPROVED BY: N. LAWLESS
PROJECT No.: 2021

No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JUNE 17, 2021

STATIONING:
CONTROL SECTION:

JOB: DINGWELLS MILLS STRUCTURE REPLACEMENT
SHEET NAME: PHASE 1 & 2 ROAD REPORT

SHEET No.
S15 OF 15