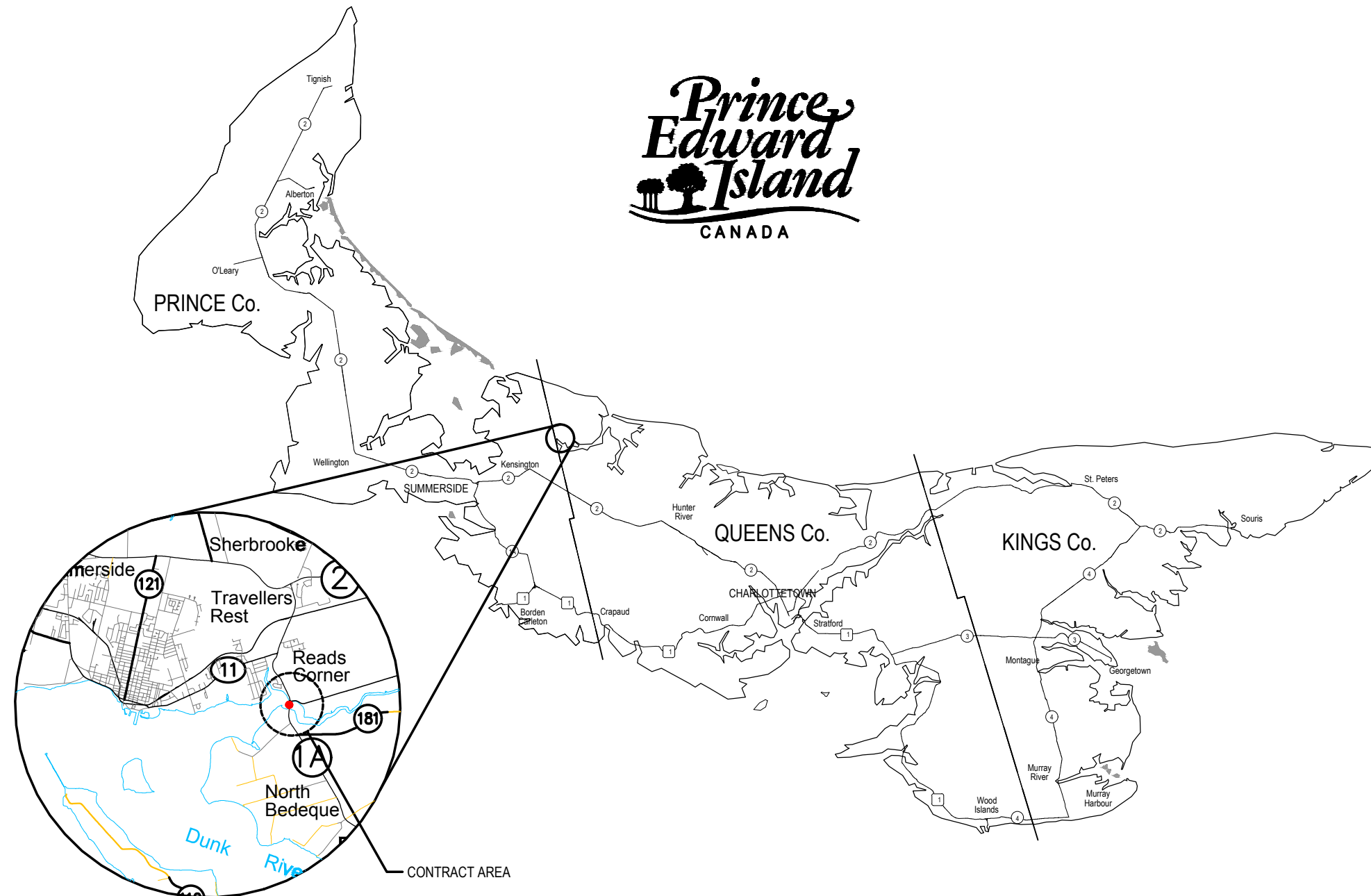


PROVINCE OF PRINCE EDWARD ISLAND DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE AND ENERGY



WILMOT RIVER BRIDGE REHABILITATION

STATION 4+493 - 4+588

DRAWING LIST

- SHEET 01 GENERAL NOTES
- SHEET 02 PLAN - PHASE 1
- SHEET 03 PLAN - PHASE 2
- SHEET 04 SECTION AND DETAILS
- SHEET 05 SECTION AND DETAILS 2

ISSUED FOR TENDER
JULY 29, 2021

1. THE INTENT OF THE WORK IS TO REHABILITATE THE EXISTING STRUCTURE ON ROUTE 1A, IN READS CORNER.
2. ALL ELEVATIONS ARE RELATED TO PEI SMARTNET. RTCM-REF 3532, N689253.790, E347125.861, ELEV 16.765M. COORDINATES ARE BASED ON NAD83.
3. ALL ELEVATIONS IN METRES. ALL DIMENSIONS IN MILLIMETRES U.N.O.
4. DO NOT SCALE DRAWINGS.

SCOPE

THE SCOPE OF THE WORK INCLUDES; BUT, IS NOT LIMITED TO: SET UP, MAINTENANCE, RELOCATION AND REMOVAL OF TRAFFIC CONTROL DEVICES, BARRIERS, SIGNS, ETC.; REMOVAL OF DISPOSAL OF ASPHALT WEARING SURFACE AND WATERPROOF MEMBRANE; CLEANING OF THE DECK; REMOVAL OF CONCRETE END DAMS AND EXISTING EXPANSION JOINTS; CONCRETE DECK REPAIRS AS INSTRUCTED; GRIT BLASTING OF EXISTING STEEL TRAFFIC BARRIERS; PRIMING AND PAINTING OF STEEL TRAFFIC BARRIERS; SUPPLY AND PLACEMENT OF WATERPROOFING MEMBRANE AND ASPHALT WEARING SURFACE; SITE CLEAN UP; AND ALL OTHER ANCILLARIES REQUIRED TO COMPLETE THE WORKS.

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

MATERIAL REMOVALS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF REMOVALS AND DISPOSALS OF ASPHALT, CONCRETE AND GRIT BLAST MATERIAL FROM THE EXISTING STRUCTURE IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.
2. THE CONTRACTOR SHALL ENSURE THE SAFETY OF THE PUBLIC AND HIS EMPLOYEES DURING THE 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.

CONCRETE:

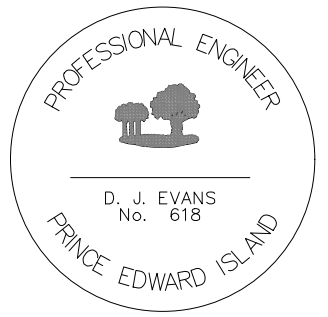
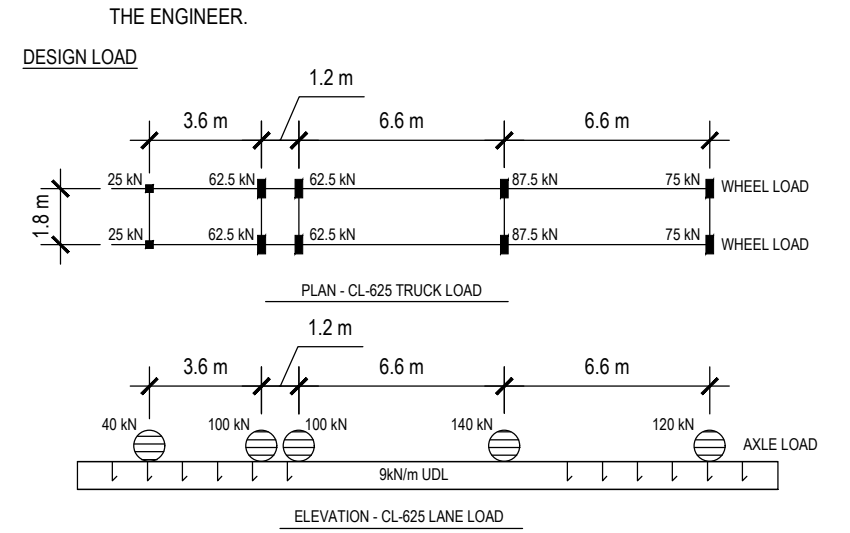
1. VERIFY LINES, GRADES AND REINFORCING DETAILS PRIOR TO FABRICATION OF FORMWORK. FABRICATE AND ERECT FORMWORK IN ACCORDANCE WITH S269.1.
2. FORM TIES SHALL BE REMOVABLE TIES, FREE OF

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 FINS AND PATCH HOLES AND DEFECTS AS INSTRUCTED.
14. REMOVE TIE CONES AND PATCH HOLES WITH LATEX MODIFIED CONCRETE. MIX TO BE IN

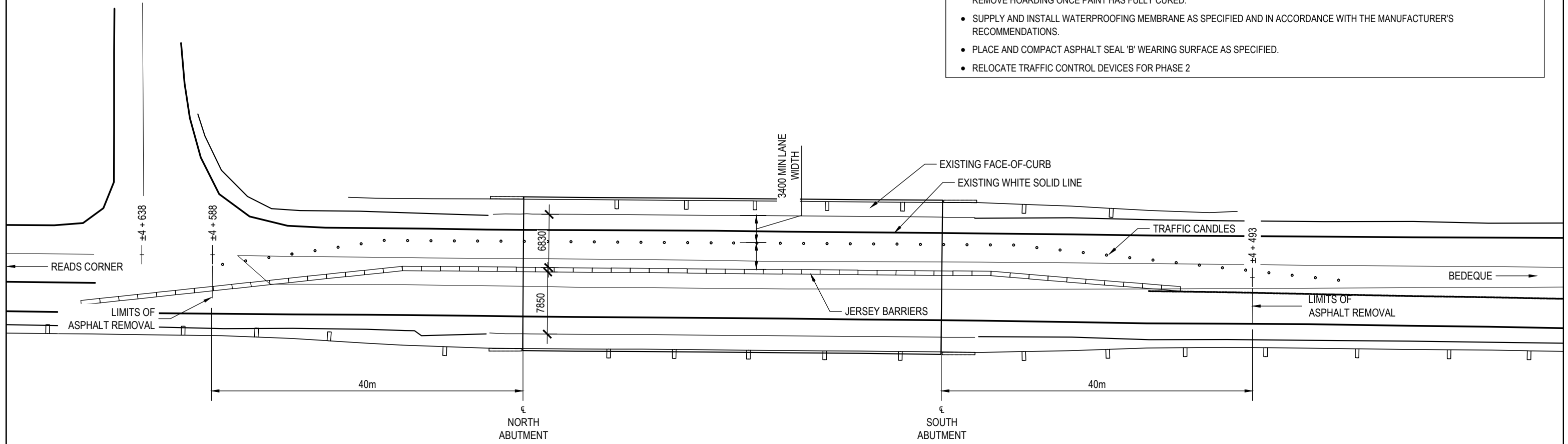
STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

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: 50mm +/- 10mm (TO MATCH EXISTING)
 - 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

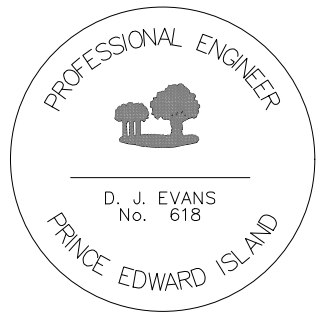




- PHASE 1 NOTES:**
- INSTALL TRAFFIC CONTROL DEVICES, BARRIERS, SIGNS, ETC..
 - REMOVAL ASPHALT AND WATERPROOFING MEMBRANE AND CLEAN DECK TO BARE CONCRETE. DO NOT DAMAGE THE DECK (IE. MILLING IS NOT PERMITTED). ALLOW THE DEPARTMENT TO CONDUCT A DECK CONDITION SURVEY
 - REMOVE CONCRETE END DAMS AND REMOVE THE EXPANSION JOINTS AND COVER PLATES FROM THE DECK AND SIDEWALKS.
 - CONDUCT ANY CONCRETE REPAIRS IDENTIFIED BY THE DEPARTMENT AS A RESULT OF THE DECK CONDITION SURVEY.
 - DRILL AND GROUT REINFORCEMENT STEEL AS REQUIRED FOR THE END DAMS, INSTALL NEW EXPANSION JOINTS AND COVER PLATES AND POUR BACK END DAMS AS INDICATED.
 - DESIGN, FABRICATE AND ERECT HOARDING OVER STEEL TRAFFIC BARRIERS.
 - GRIT BLAST EXISTING BARRIERS TO BARE METAL SSPC 6. DISPOSE OF GRIT AND PAINT MATERIAL IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.
 - APPLY PRIMER AND RE-COAT TRAFFIC BARRIERS AS SPECIFIED. COLOR TO MATCH EXISTING. CLEAN UP ALL OVERSPRAY AREAS AND REMOVE HOARDING ONCE PAINT HAS FULLY CURED.
 - SUPPLY AND INSTALL WATERPROOFING MEMBRANE AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - PLACE AND COMPACT ASPHALT SEAL 'B' WEARING SURFACE AS SPECIFIED.
 - RELOCATE TRAFFIC CONTROL DEVICES FOR PHASE 2



1 PLAN - PHASE 1 REHAB
S2 1:250




 DEPT OF TRANSPORTATION, INFRASTRUCTURE, AND ENERGY
 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: D. EVANS
 PROJECT No.: 2021

No.	REVISIONS	DATE
0	ISSUED FOR TENDER	JULY 29, 2021

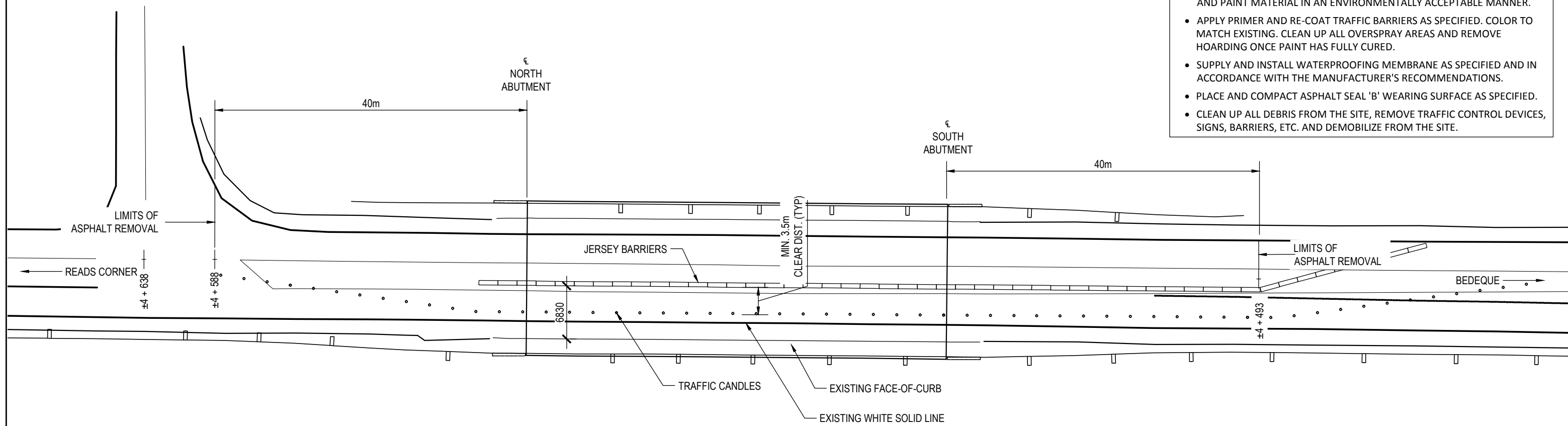
STATIONING:
 CONTROL SECTION:

JOB: WILMOT RIVER BRIDGE REHABILITATION
 SHEET NAME: PLAN - PHASE 1

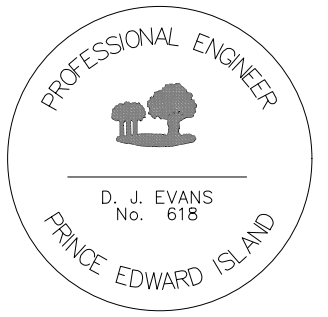
SHEET No. S2 OF 5



- PHASE 2 NOTES:**
- SET UP RELOCATED TRAFFIC CONTROL DEVICES, BARRIERS, SIGNS, ETC. FROM PHASE 1.
 - REMOVAL ASPHALT AND WATERPROOFING MEMBRANE AND CLEAN DECK TO BARE CONCRETE. DO NOT DAMAGE THE DECK (IE. MILLING IS NOT PERMITTED). ALLOW THE DEPARTMENT TO CONDUCT A DECK CONDITION SURVEY
 - REMOVE CONCRETE END DAMS AND REMOVE THE EXPANSION JOINTS AND COVER PLATES FROM THE DECK AND SIDEWALKS.
 - CONDUCT ANY CONCRETE REPAIRS IDENTIFIED BY THE DEPARTMENT AS A RESULT OF THE DECK CONDITION SURVEY.
 - DRILL AND GROUT REINFORCEMENT STEEL AS REQUIRED FOR THE END DAMS, INSTALL NEW EXPANSION JOINTS AND COVER PLATES AND POUR BACK END DAMS AS INDICATED.
 - DESIGN FABRICATE AND ERECT HOARDING OVER STEEL TRAFFIC BARRIERS.
 - GRIT BLAST EXISTING BARRIERS TO BARE METAL SSPC 6. DISPOSE OF GRIT AND PAINT MATERIAL IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.
 - APPLY PRIMER AND RE-COAT TRAFFIC BARRIERS AS SPECIFIED. COLOR TO MATCH EXISTING. CLEAN UP ALL OVERSPRAY AREAS AND REMOVE HOARDING ONCE PAINT HAS FULLY CURED.
 - SUPPLY AND INSTALL WATERPROOFING MEMBRANE AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - PLACE AND COMPACT ASPHALT SEAL 'B' WEARING SURFACE AS SPECIFIED.
 - CLEAN UP ALL DEBRIS FROM THE SITE, REMOVE TRAFFIC CONTROL DEVICES, SIGNS, BARRIERS, ETC. AND DEMOBILIZE FROM THE SITE.



1 PLAN - PHASE 2 REHAB
S3 1:250



Prince Edward Island
CANADA

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

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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

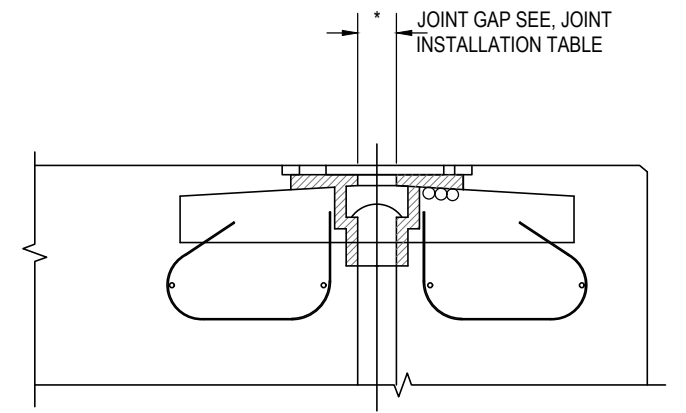
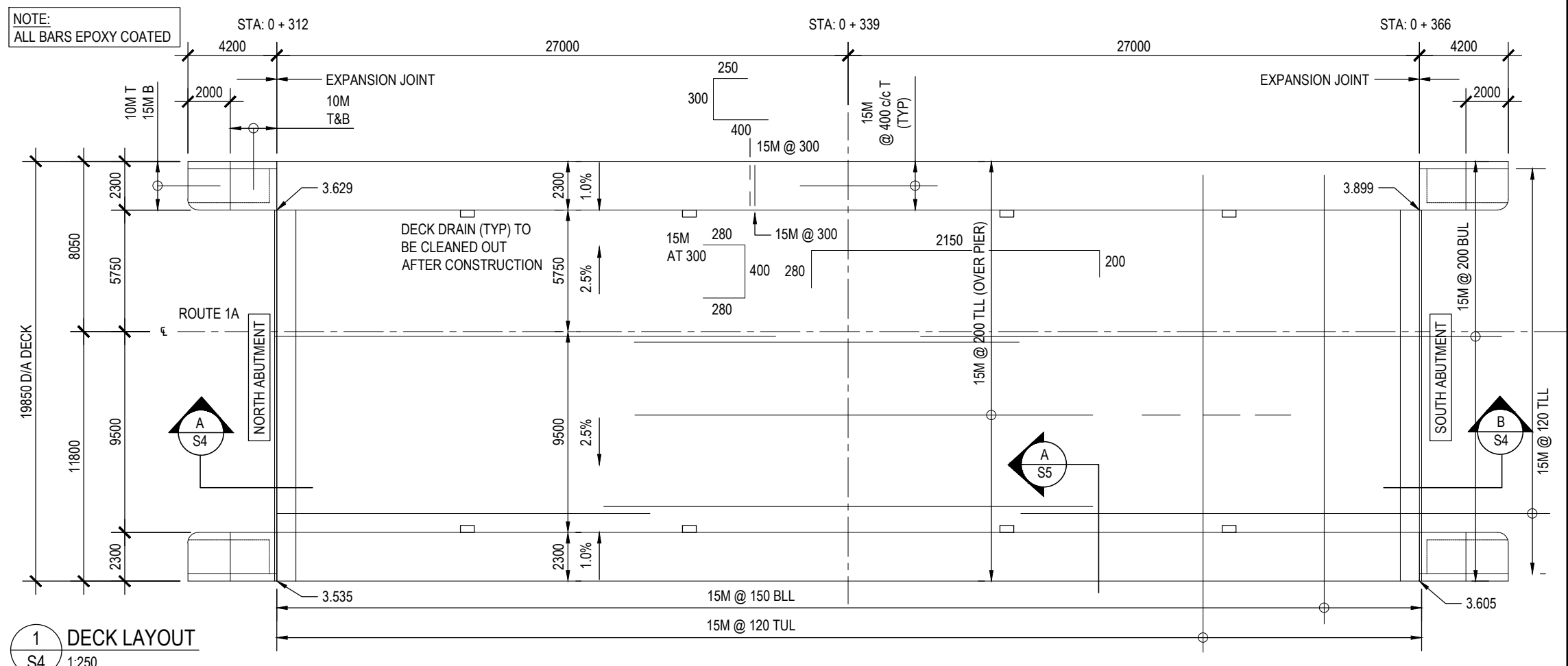
SURVEY BY: T.J.E. SCALE: AS NOTED
DRAWN BY: K. MACEACHERN COUNTY: ----
APPROVED BY: D. EVANS
PROJECT No: 2021

No.	REVISIONS	DATE
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STATIONING:
CONTROL SECTION:

JOB: WILMOT RIVER BRIDGE REHABILITATION
SHEET NAME: PLAN - PHASE 2

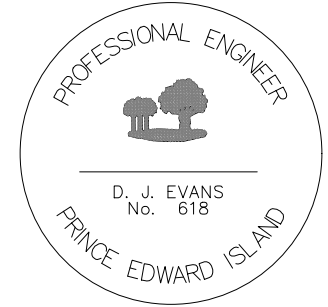
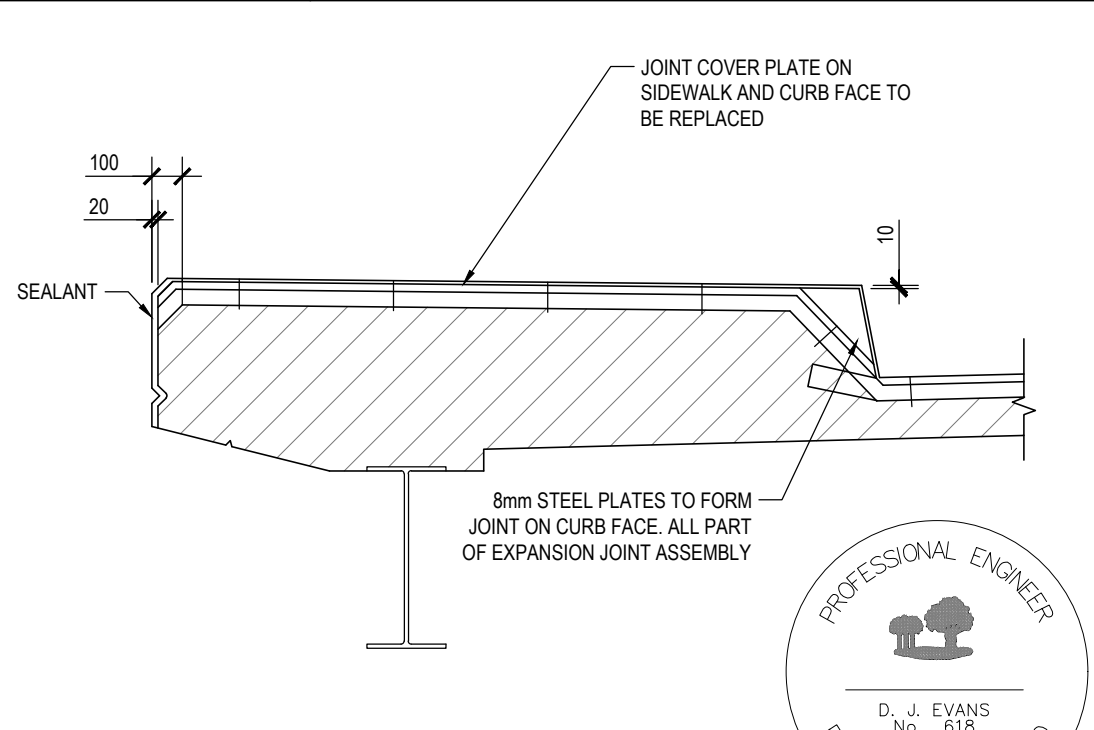
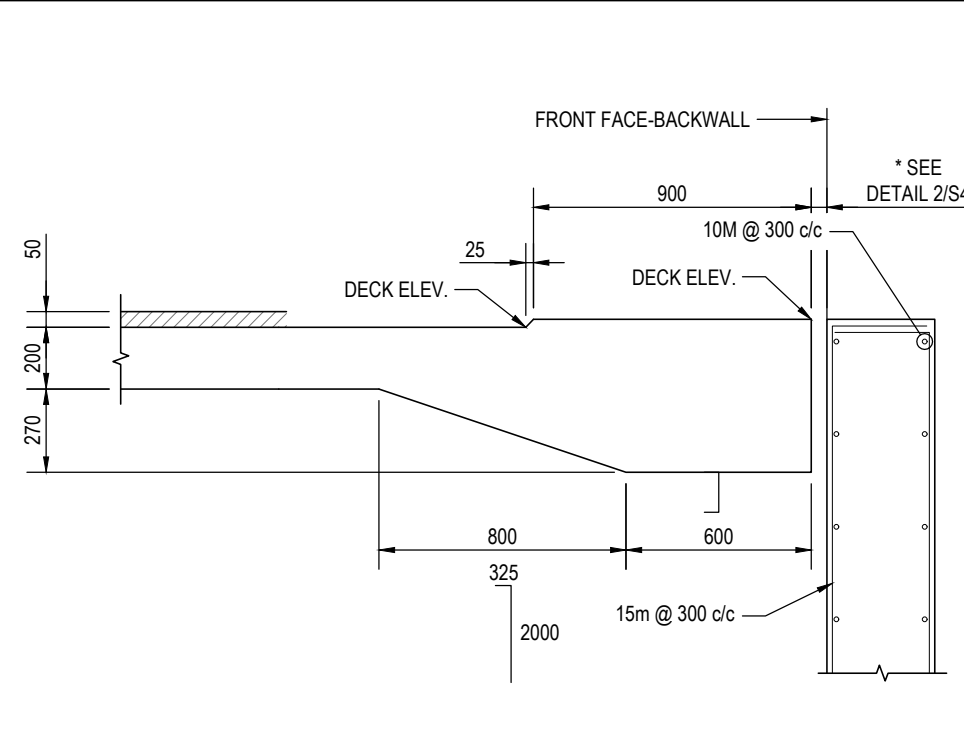
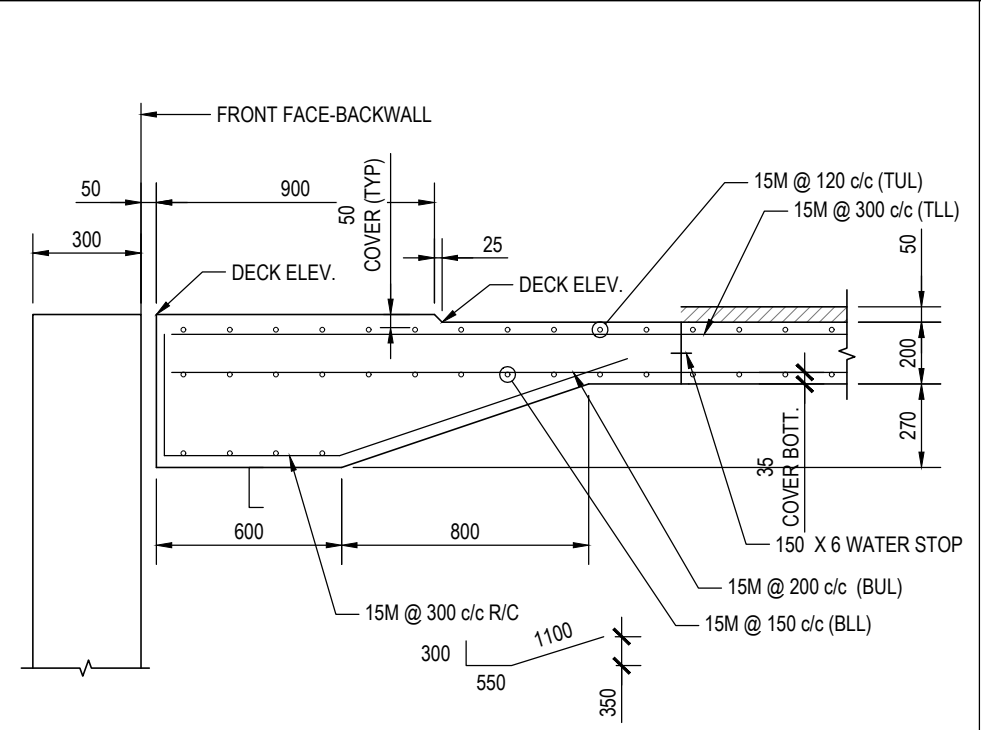
SHEET No. S3 OF 5

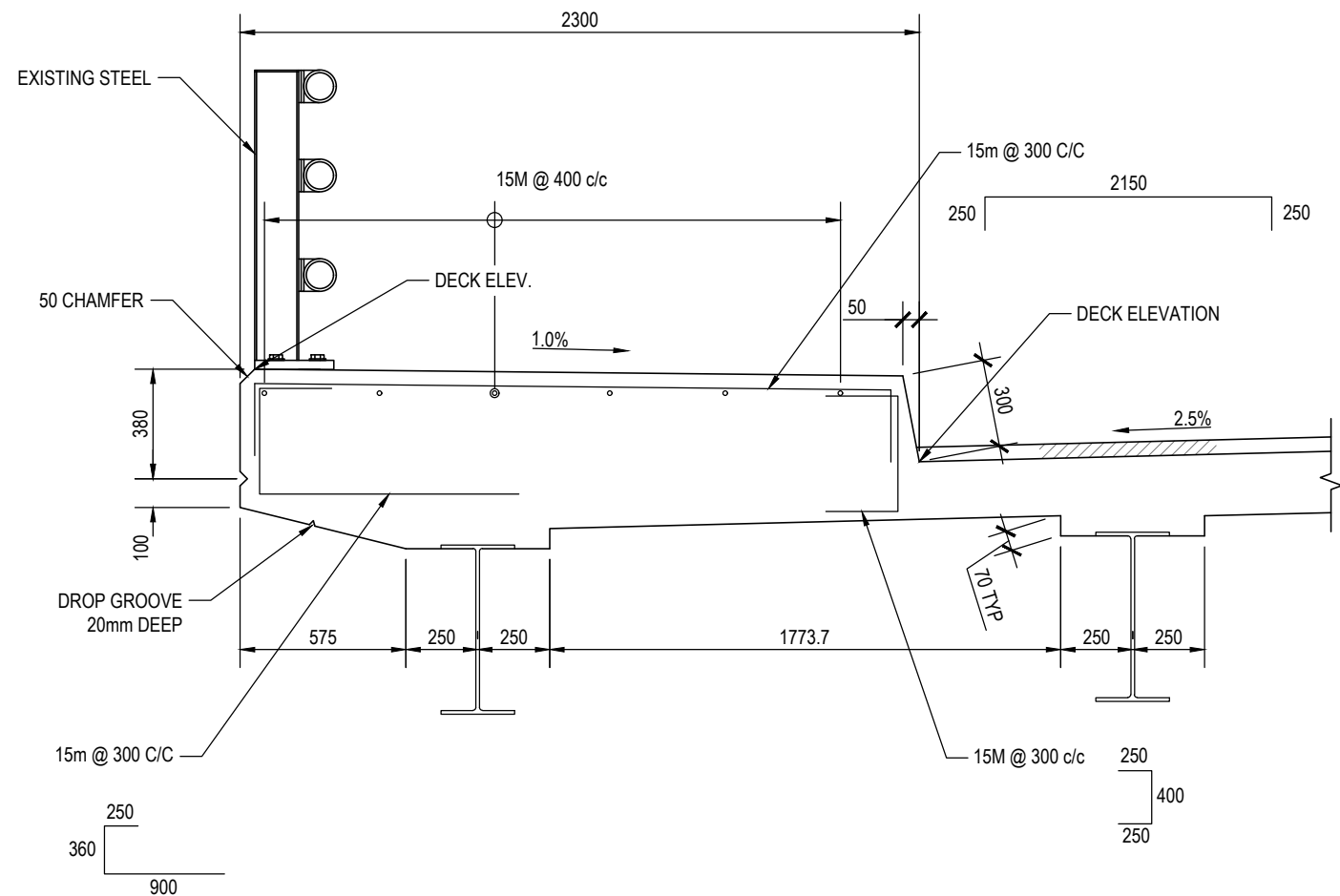


NOTE:
CONTRACTOR TO SUBMIT DETAILED SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, IDENTIFYING ALL FABRICATIONS AND INSTALLATION DETAILS RELATED TO THE NEW EXP. JOINT.

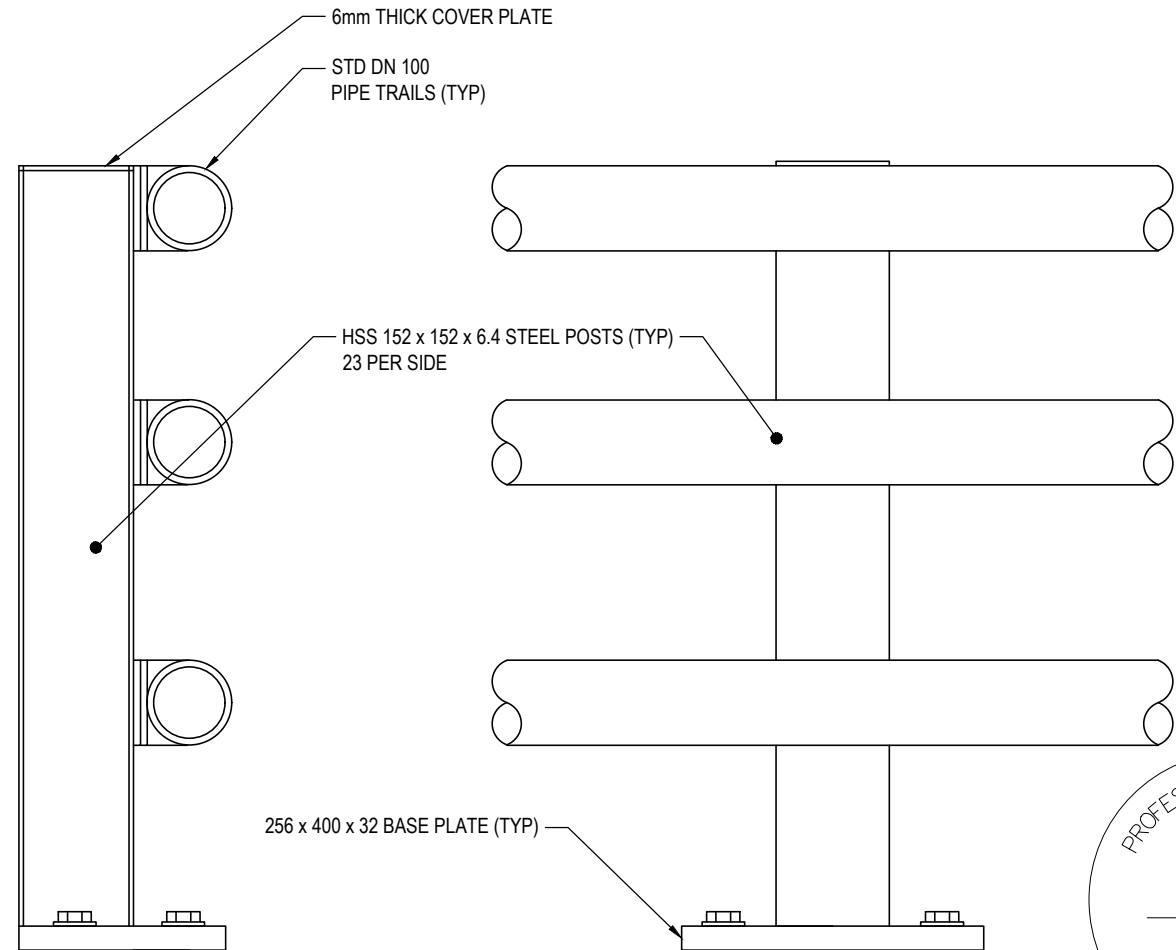
*JOINT INSTALLATION TABLE	
AIR TEMP (C°)	*
-29	95
-15	85
0	75
15	65
20	60
28	55

2 DECK JOINT - DETAIL (SCHEMATIC ONLY)
S4 NTS

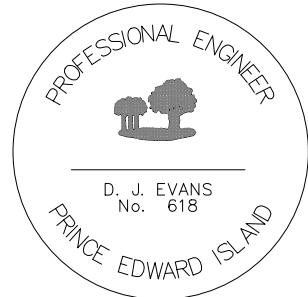




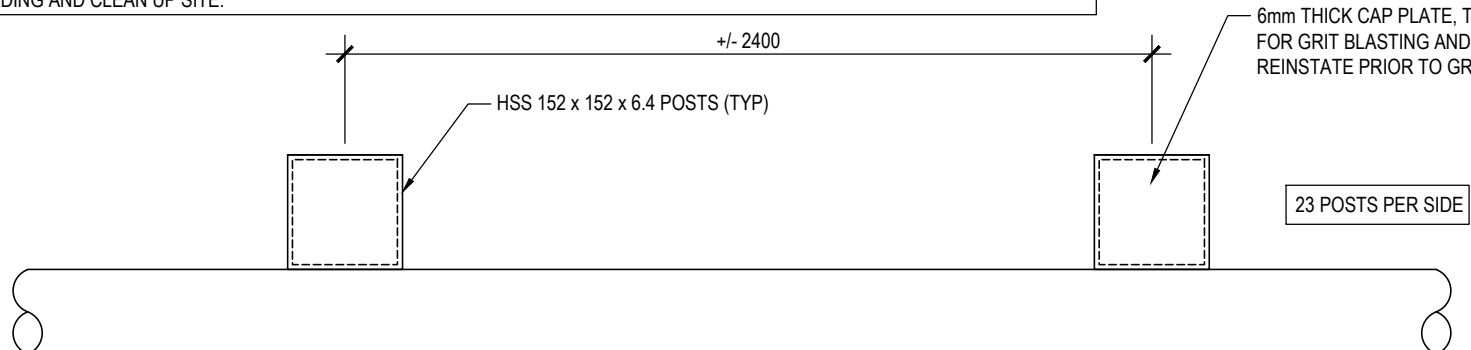
A SECTION
S5 1:25



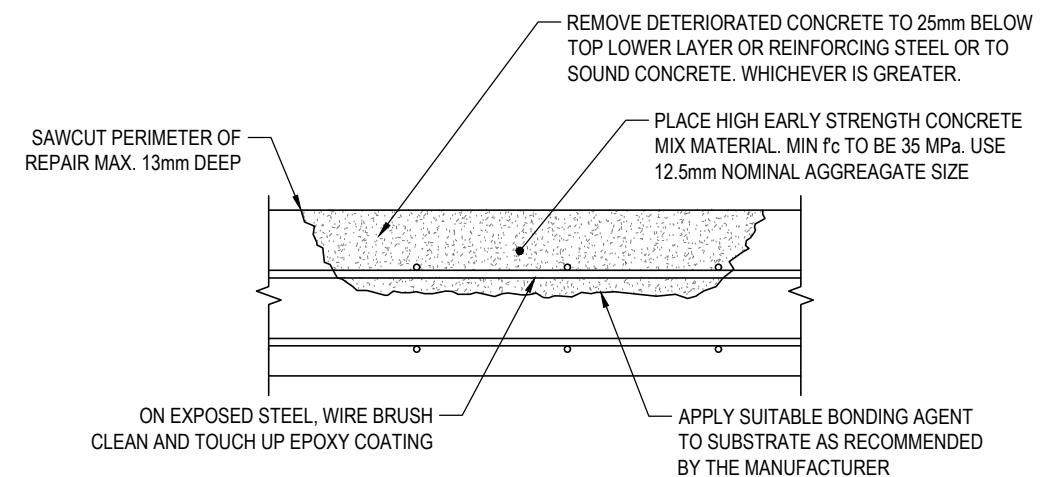
1 ELEVATION - TRAFFIC BARRIER
S5 1:10



- NOTES:**
- CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL HOARDING TO COMPLETELY ENCLOSE STEEL BARRIER.
 - GRIT BLAST ENTIRE STEEL BARRIER TO BARE STEEL SSPC 6. DISPOSE OF ALL MATERIAL IN ENVIRONMENTAL ACCEPTABLE MANNER.
 - SUPPLY AND INSTALL COATING SYSTEM ACCORDING TO SPECIFICATION/MANUFACTURE'S STRICT RECOMMENDATIONS. COLOR TO MATCH EXISTING.
 - REMOVE HOARDING AND CLEAN UP SITE.



2 PLAN - TRAFFIC BARRIER
S5 1:10



3 DECK REPAIR DETAIL
S5 1:25

	DEPT OF TRANSPORTATION, INFRASTRUCTURE, AND ENERGY Tel 902 368 5100 Fax 902 368 5395 http://www.gov.pe.ca/	PO Box 2000 Charlottetown 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: D. EVANS PROJECT No.: 2021	No. 0 REVISIONS ISSUED FOR TENDER DATE JULY 29, 2021	STATIONING: CONTROL SECTION:	JOB: WILMOT RIVER BRIDGE REHABILITATION SHEET NAME: DETAILS - TRAFFIC BARRIER	SHEET No. S5 OF 5
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