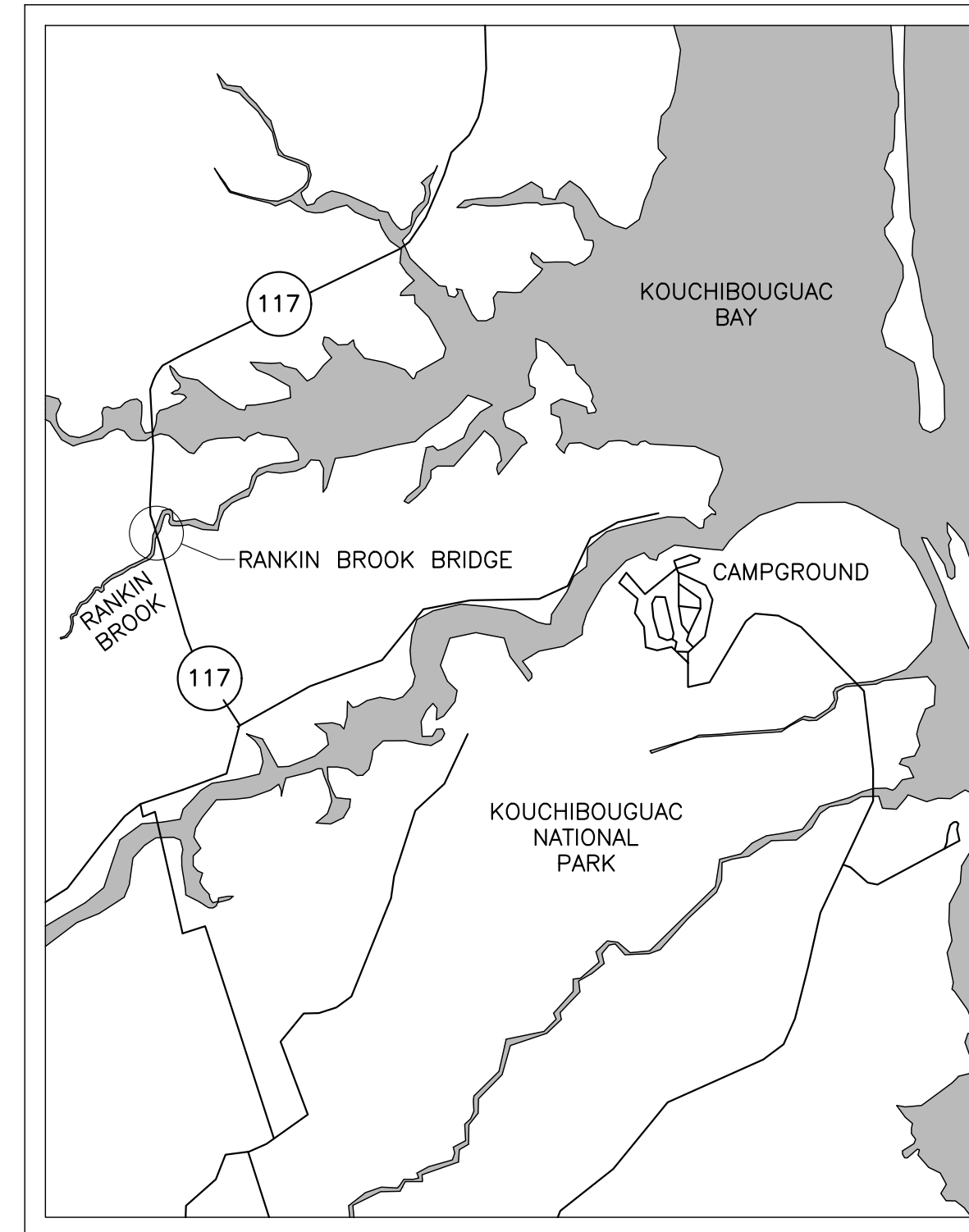
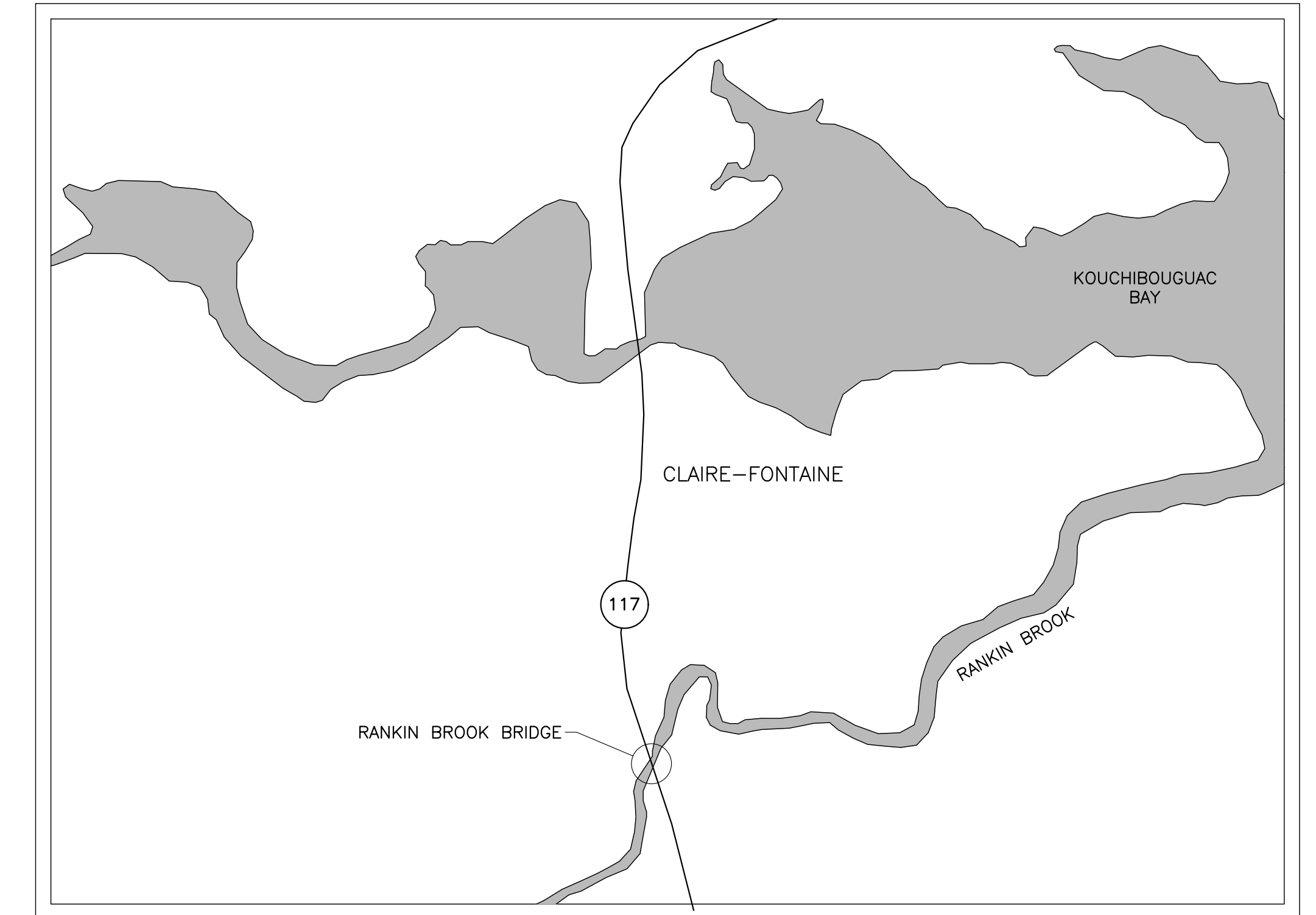


Parcs  
Canada

Parks  
Canada



KEY PLAN  
NOT TO SCALE



SITE PLAN  
NOT TO SCALE

# RANKIN BROOK BRIDGE REPLACEMENT KOUCHIBOUGUAC NATIONAL PARK

NEW BRUNSWICK

PROJECT NO. 1620

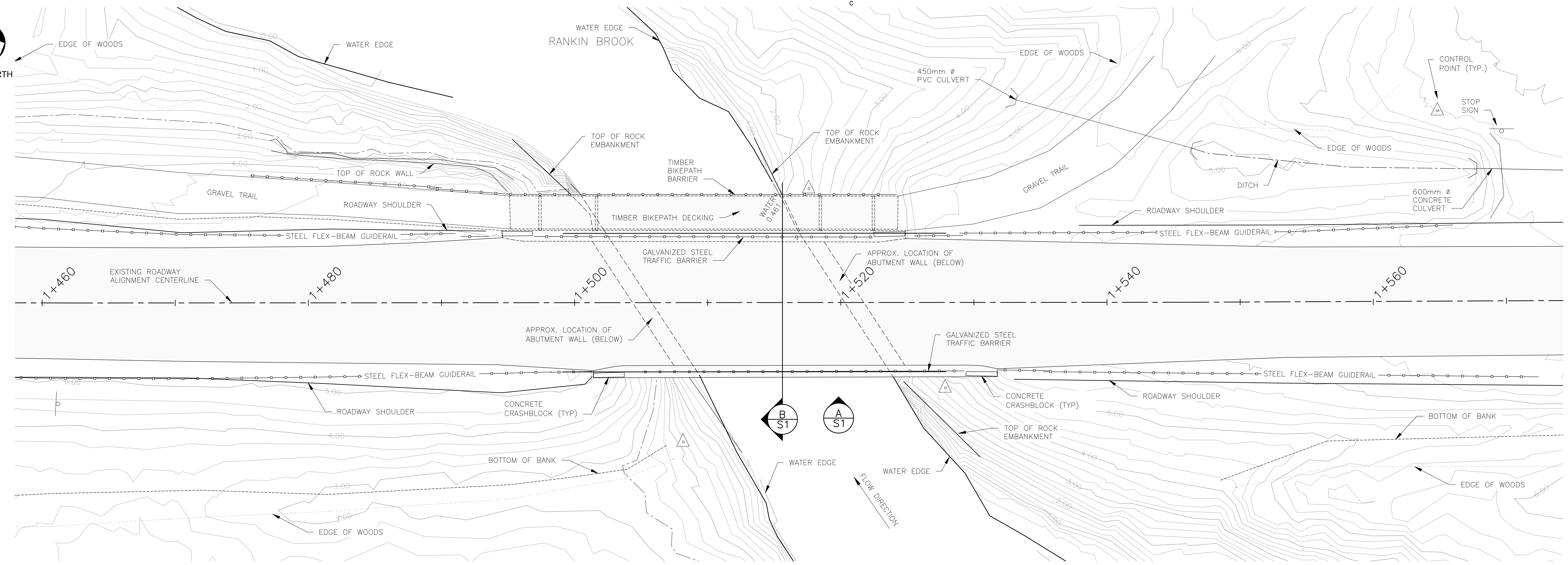
## DRAWING LIST

DRAWING NO.	TITLE
S1 OF 18	EXISTING CONDITONS – GENERAL ARRANGEMENT
S2 OF 18	NEW BRIDGE GENERAL ARRANGEMENT – PLAN AND PROFILE
S3 OF 18	NEW BRIDGE GENERAL ARRANGEMENT – CROSS SECTION AND NOTES
S4 OF 18	DETOUR STRUCTURE LAYOUT AND CROSS-SECTION
S5 OF 18	NORTH ABUTMENT PLANS
S6 OF 18	SOUTH ABUTMENT PLANS
S7 OF 18	ABUTMENT BACKFILLING AND PILE DETAILS
S8 OF 18	ABUTMENT AND WINGWALL ELEVATIONS
S9 OF 18	ABUTMENT SECTIONS AND DETAILS
S10 OF 18	GIRDER LAYOUT AND DETAILS
S11 OF 18	DECK PLAN AND SCREED ELEVATIONS PLAN
S12 OF 18	BRIDGE BARRIER AND CRASHBLOCK DETAILS
S13 OF 18	TYPICAL DETAILS
S14 OF 18	ABUTMENT REINFORCEMENT ELEVATIONS
S15 OF 18	ABUTMENT REINFORCEMENT SECTIONS AND DETAILS
S16 OF 18	WINGWALL REINFORCEMENT DETAILS
S17 OF 18	DECK REINFORCEMENT DETAILS
S18 OF 18	BOREHOLE DATA
C1 OF 12	ROUTE 117 RANKIN BRIDGE REPLACEMENT PLAN AND PROFILE
C2 OF 12	MULTI-USE TRAIL PLAN AND PROFILE
C3 OF 12	PARKING LOT ENTRANCE PLAN AND PROFILE
C4 OF 12	DETOUR ROAD PLAN AND PROFILE
C5 OF 12	TYPICAL SECTIONS
C6 OF 12	NOTES AND DETAILS
C7 OF 12	ROUTE 117 CROSS SECTIONS
C8 OF 12	ROUTE 117 CROSS SECTIONS
C9 OF 12	ROUTE 117 CROSS SECTIONS
C10 OF 12	DETOUR ROAD CROSS SECTIONS
C11 OF 12	DETOUR ROAD CROSS SECTIONS
C12 OF 12	DETOUR ROAD CROSS SECTIONS

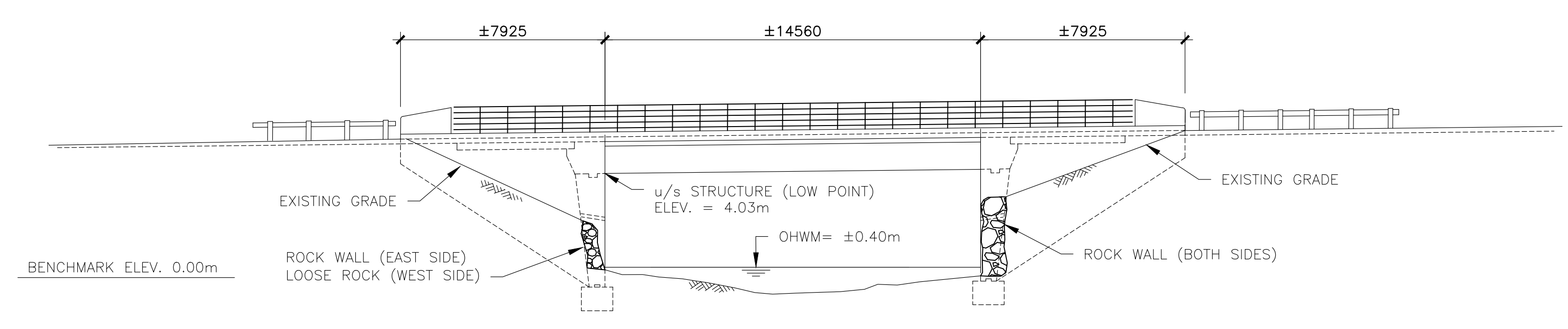




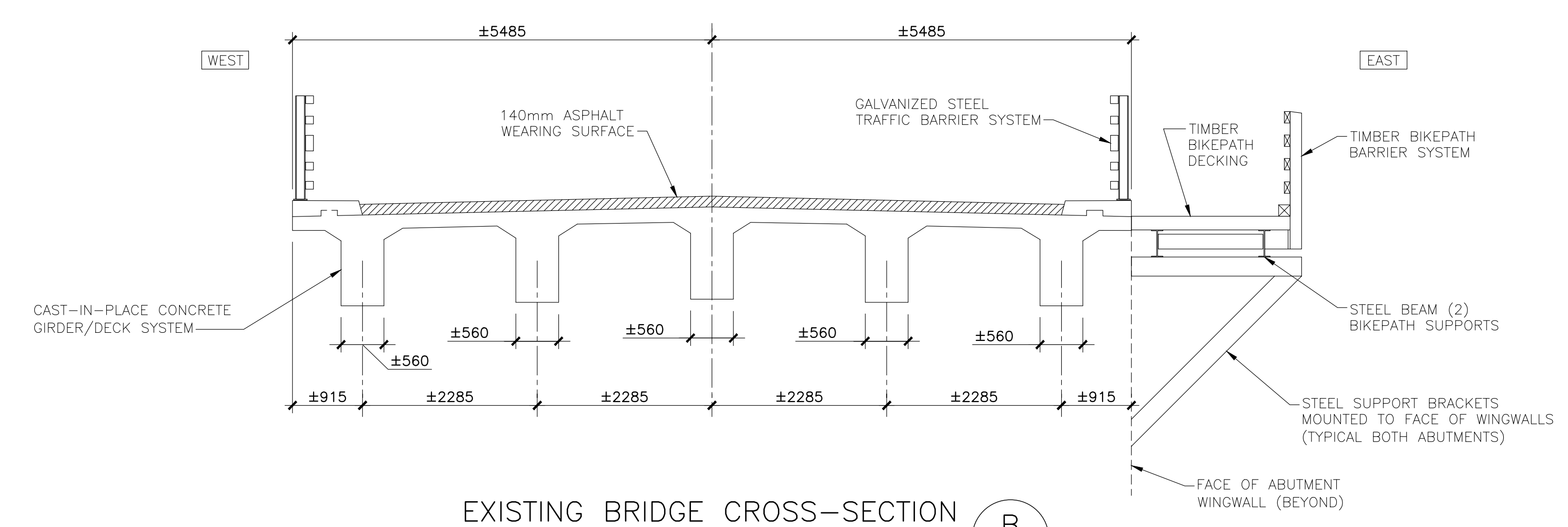
PLAN NORTH



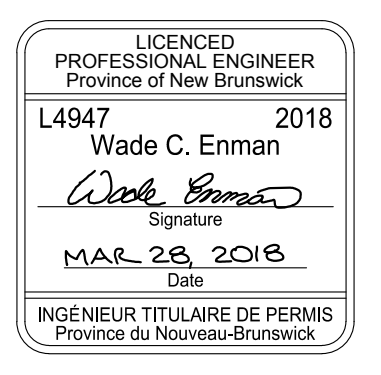
EXISTING BRIDGE PLAN  
SCALE: 1:150  
0m 5m 10m 15m



EXISTING BRIDGE PROFILE  
SCALE: 1:150  
0m 5m 10m 15m



EXISTING BRIDGE CROSS-SECTION  
SCALE: 1:50  
0m 1m 2m 3m 4m 5m



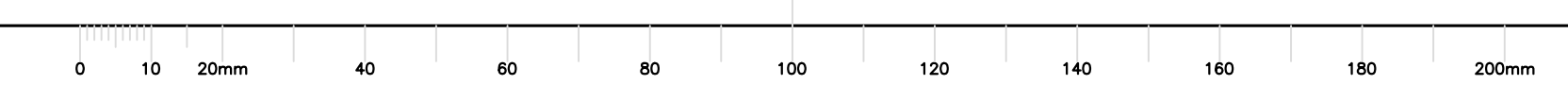
WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project BRIDGE REPLACEMENT  
RANKIN BROOK BRIDGE  
KOUCHIBOUGUAC NATIONAL PARK

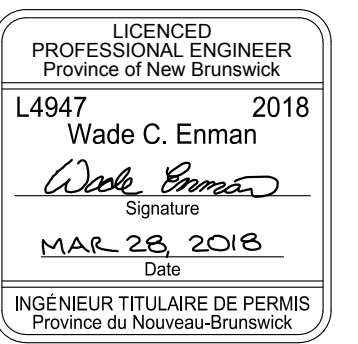
EXISTING CONDITIONS  
GENERAL ARRANGEMENT

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager		Administrateur de projets
project number	1620	no. du projet
drawing no.	S1	no. du dessin

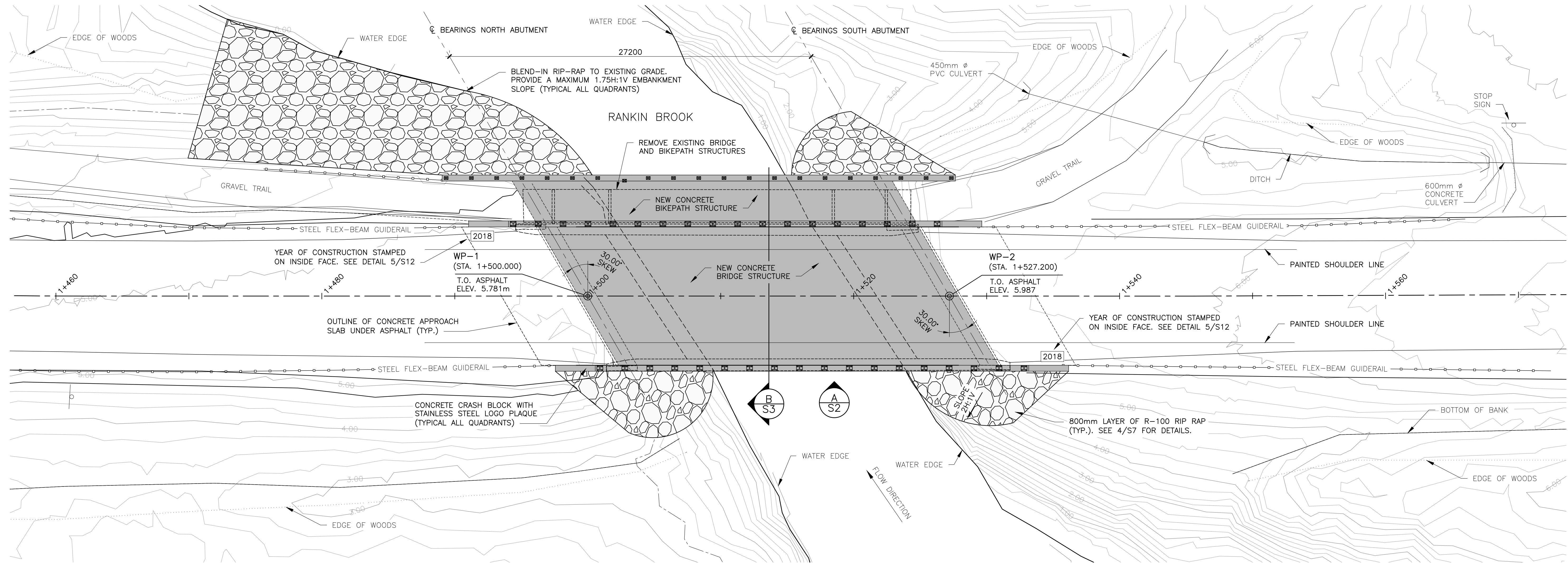




PLAN NORTH

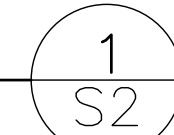


WSP Canada Inc.  
125 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



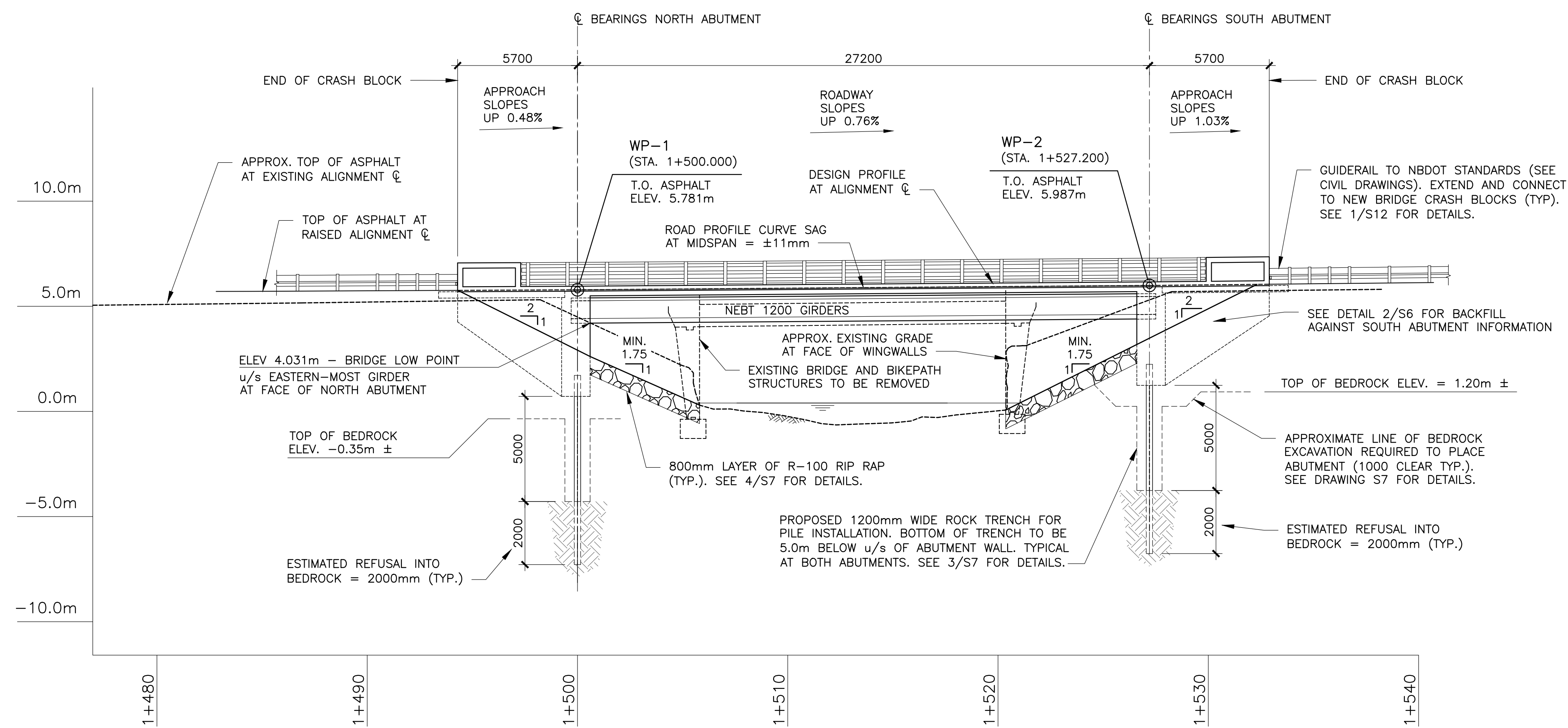
NEW BRIDGE LAYOUT

SCALE : 1:150



BRIDGE WORKING POINTS

WORKING POINT	ALIGNMENT STATION	ELEV. TOP OF ASPHALT	NORTHING	EASTING
WP-1	1+500.000	5.781m	7537903.518	2615061.665
WP-2	1+527.200	5.987m	7537878.162	2615071.509



BRIDGE PROFILE - LOOKING EAST

SCALE : 1:150



0 ISSUED FOR TENDER MR 28 2018

revisions date

project projet

BRIDGE REPLACEMENT RANKIN BROOK BRIDGE

KOUCHIBOUGUAC NATIONAL PARK

drawing dessin

NEW BRIDGE GENERAL ARRANGEMENT PLAN AND PROFILE

designed W. ENMAN conçu

date OCTOBER, 2017

drawn D. BEAMAN dessiné

date OCTOBER, 2017

approved approuvé

date

Tender Submission

Project Manager Administrateur de projets

project number no. du projet

1620

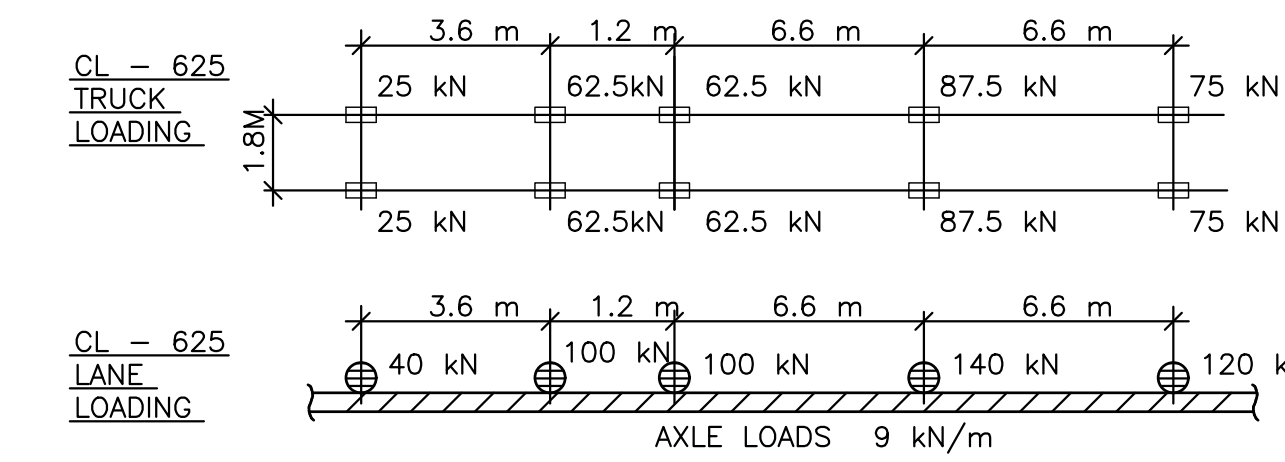
drawing no. no. du dessin

S2

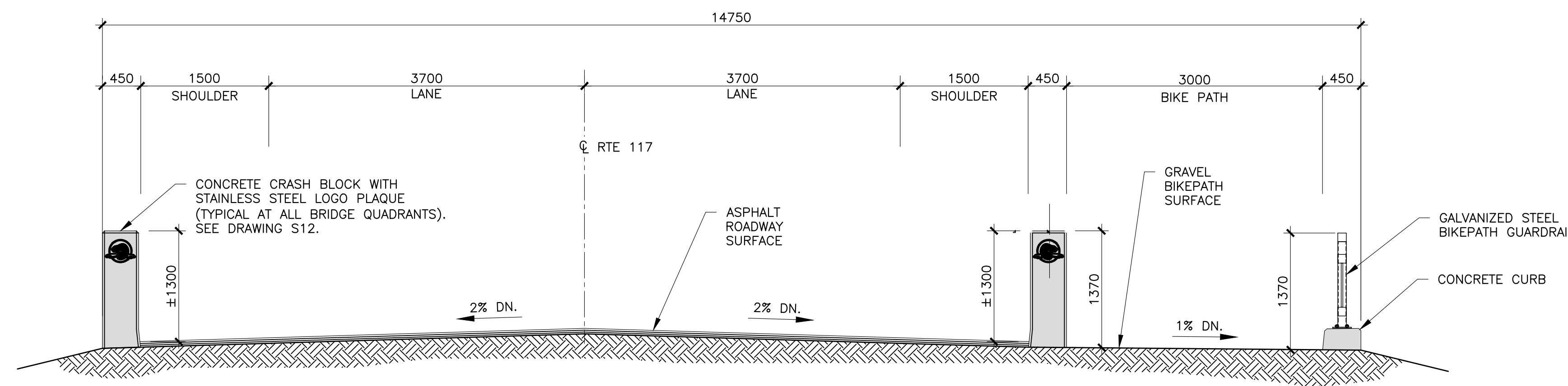


**GENERAL NOTES:**

- GENERAL REQUIREMENTS GOVERNING DESIGN, MATERIALS, AND CONSTRUCTION ARE AS FOLLOWS:
  - LOADING AND GENERAL DESIGN TO CAN/CSA-S6-14, WITH LATEST REVISIONS
  - CONCRETE MATERIALS AND METHODS OF CONSTRUCTION TO CSA - A23.1, AND METHODS OF TEST FOR CONCRETE TO CSA - A23.2
  - CONCRETE (MINIMUM 28 DAY COMP. STRENGTH)
    - PRECAST GIRDERS: HIGH PERFORMANCE CONCRETE,  $f'c = 55 \text{ MPa}$ , AIR CONTENT  $6\% \pm 1\%$  (AIR VOID SPACING REQUIREMENTS STD. SPEC.),  $W/C = 0.35 \text{ MAX.}$
    - DECK, BARRIERS, ABUTMENTS, & APPROACH SLABS: HIGH PERFORMANCE CONCRETE,  $f'c = 45 \text{ MPa}$ , AIR CONTENT  $6\% \pm 1\%$  (AIR VOID SPACING REQUIREMENTS STD. SPEC.),  $W/C = 0.35 \text{ MAX.}$
  - REINFORCING STEEL TO STD. SPECIFICATIONS WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
- ALL DIMENSIONS SHOWN IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- ALL SPECIFICATION NOTES TO REFLECT THE "LATEST EDITION" AT TIME OF TENDER.
- LIVE LOADS CL-625



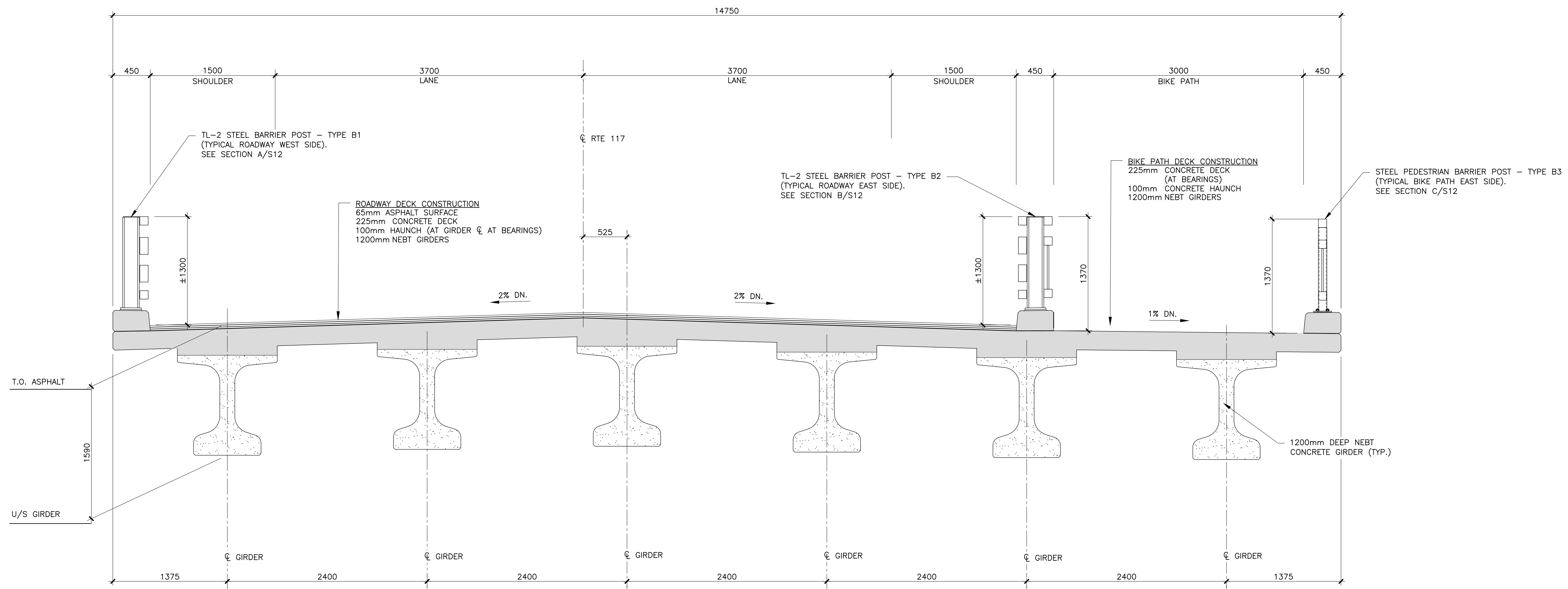
- FOUNDATION DESIGN BASED ON INFORMATION PROVIDED IN GEOTECHNICAL REPORT
- ALL STANDARDS TO REFLECT "LATEST EDITION".
- REFERENCE ROAD CONSTRUCTION DRAWINGS FOR ROAD ALIGNMENT OVER BRIDGE STRUCTURE.
- CONSTRUCTION SHALL BE CARRIED OUT AS PER CAN/CSA-S6-14.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND THE FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN TEMPORARY BRACING, SHORING AND FORMWORK OF ALL STRUCTURAL ELEMENTS FOR STABILITY AND SAFETY WHERE REQUIRED DURING CONSTRUCTION.
- CONTRACTOR IS TO ENSURE THAT ALL WORK IS CARRIED OUT IN ACCORDANCE WITH NEW BRUNSWICK OCCUPATIONAL HEALTH AND SAFETY REGULATIONS.



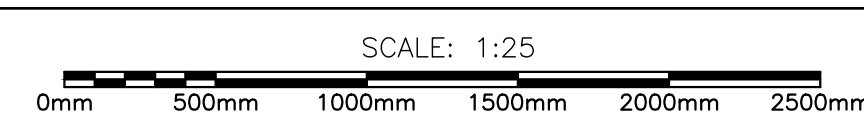
TYPICAL BRIDGE APPROACH VIEW



1  
S3



TYPICAL BRIDGE CROSS SECTION



B  
S3

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project	projet
---------	--------

BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE

KOUCHIBOUGUAC  
 NATIONAL PARK

drawing	dessin
---------	--------

NEW BRIDGE  
 GENERAL ARRANGEMENT  
 CROSS SECTION  
 AND NOTES

designed	W. ENMAN	conçu
----------	----------	-------

date	OCTOBER, 2017
------	---------------

drawn	D. BEAMAN	dessiné
-------	-----------	---------

date	OCTOBER, 2017
------	---------------

approved		approuvé
----------	--	----------

date	
------	--

Tender	Submission
--------	------------

Project Manager	Administrateur de projets
-----------------	---------------------------

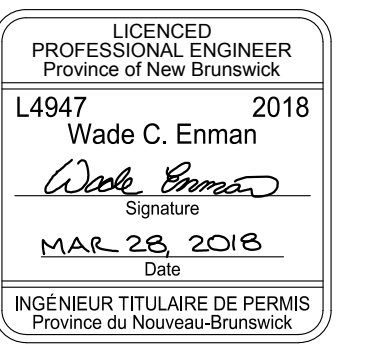
project number	no. du projet
----------------	---------------

1620

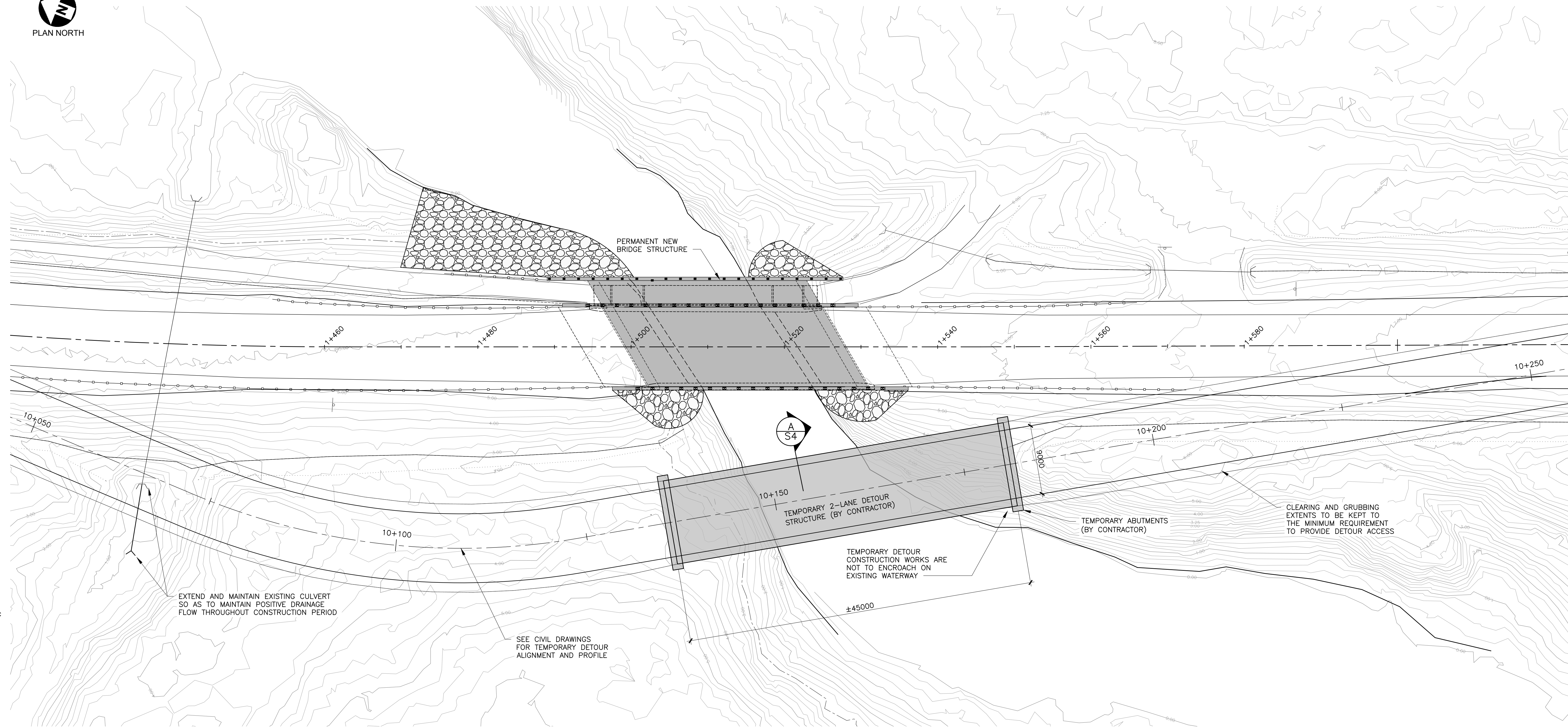
drawing no.	no. du dessin
-------------	---------------

S3





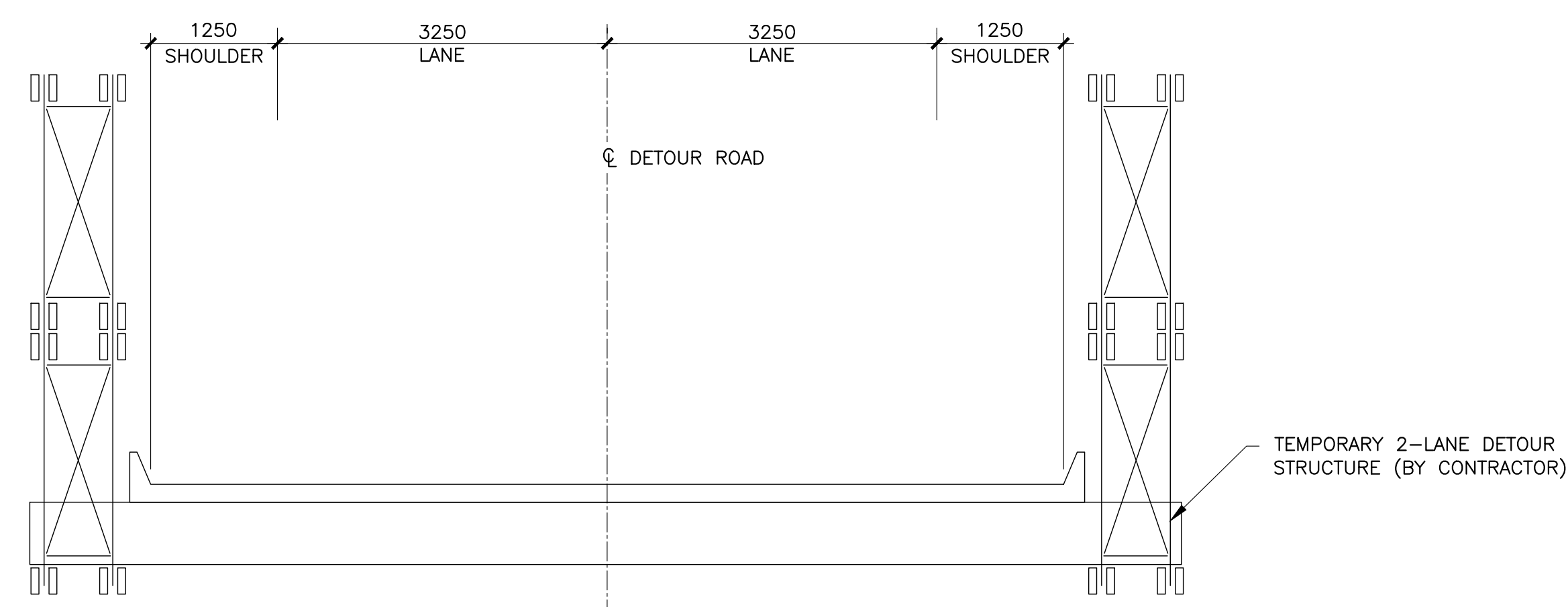
WSP Canada Inc.  
135 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



TEMPORARY DETOUR PLAN



1  
S4



TEMPORARY BRIDGE CROSS-SECTION



A  
S4

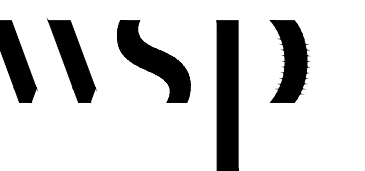
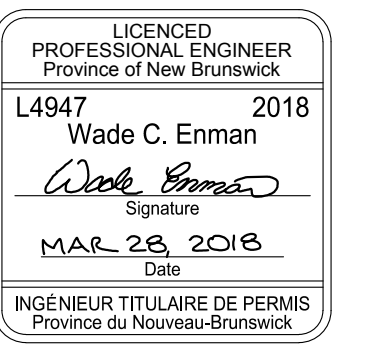
0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project  
BRIDGE REPLACEMENT  
RANKIN BROOK BRIDGE  
KOUCHIBOUGUAC  
NATIONAL PARK

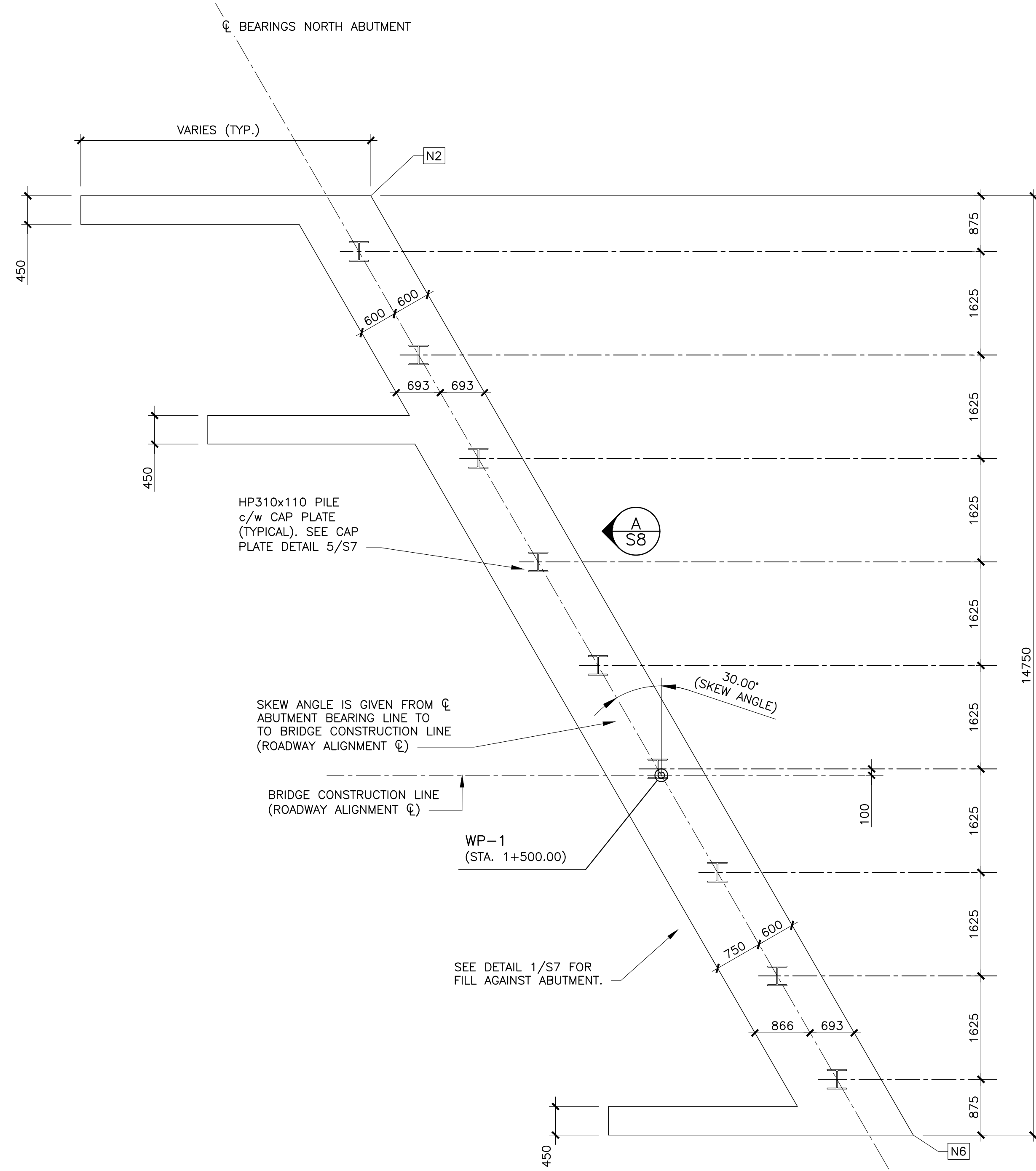
drawing  
TEMPORARY DETOUR  
STRUCTURE  
GENERAL ARRANGEMENT

designed W. ENMAN  
date OCTOBER, 2017  
drawn D. BEAMAN  
date OCTOBER, 2017

approved  
Tender  
Project Manager  
project number 1620  
drawing no. S4



WSP Canada Inc.  
135 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



NORTH ABUTMENT PILE PLAN

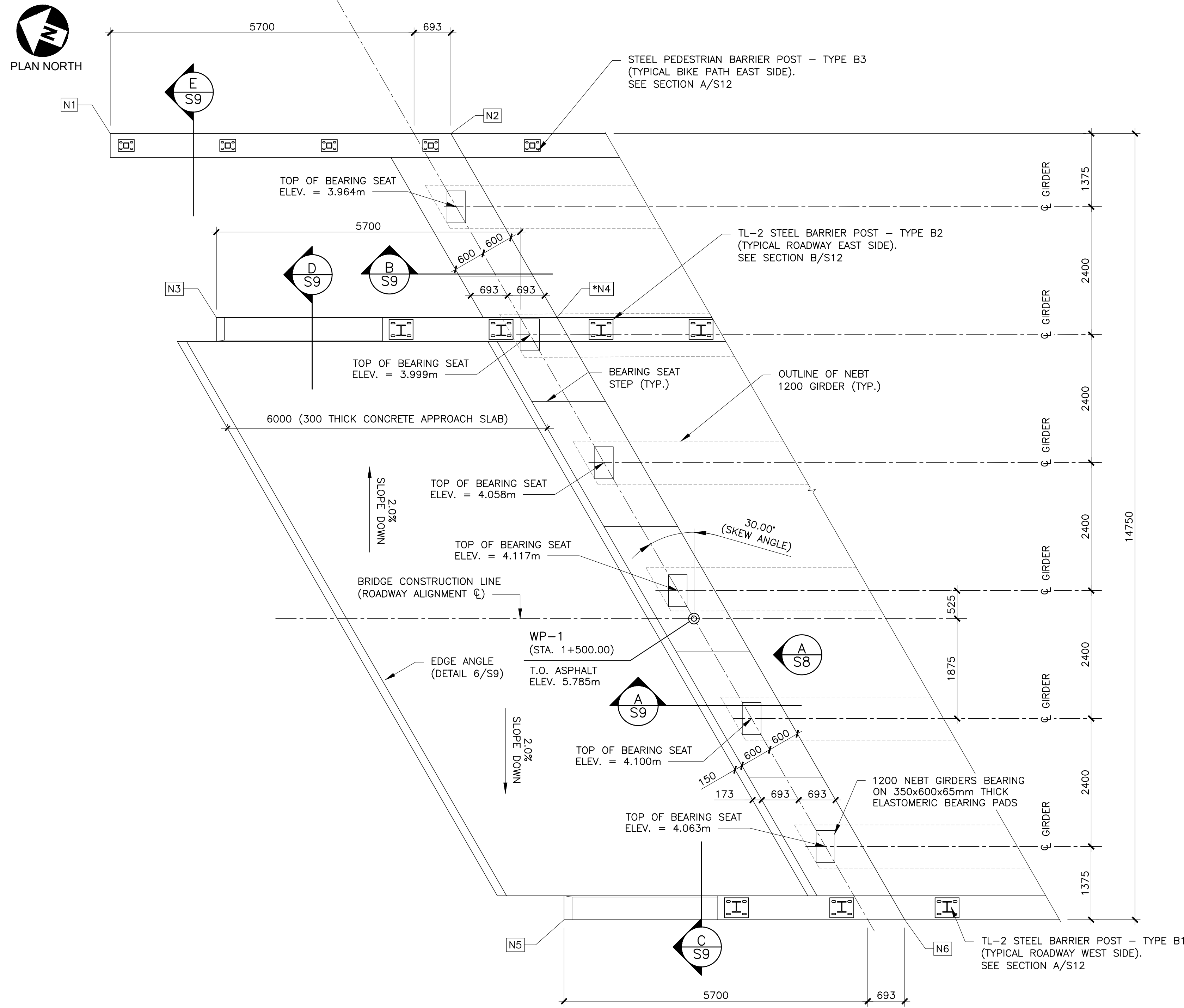
SCALE: 1:50

1  
S5

NORTH ABUTMENT LAYOUT COORDINATES

LAYOUT POINT	NORTHING	EASTING
WP-1	7537903.518	2615061.665
N1	7537917.022	2615066.183
N2	7537911.063	2615068.497
N3	7537913.917	2615063.688
* N4	7537907.958	2615066.002
N5	7537903.745	2615055.515
N6	7537897.786	2615057.829

\* GIVEN FOR REFERENCE ONLY; FACE OF ABUTMENT WALL TO BE STRAIGHT LINE BETWEEN POINTS N2 & N6



NORTH ABUTMENT TOP PLAN

SCALE: 1:50

2  
S5

C.I.P. CONCRETE NOTES

- ALL CAST-IN-PLACE CONCRETE SHALL CONFORM TO CSA STANDARD A23.1, AND TEST METHODS FOR CONCRETE TO CSA STANDARD A23.2.
- ALL EXPOSED CORNERS OF CONCRETE TO HAVE 25mm CHAMFERS.
- LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONCRETE PLACEMENT TO BE APPROVED BY THE ENGINEER.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:  
A) ABUTMENTS, WINGWALLS, APPROACH SLABS AND BARRIERS; 45 MPa WITH 20mm MAX. AGGREGATE SIZE AND 6% ± 1% AIR ENTRAINMENT, MAX. WATER-CEMENT RATIO 0.35
- CONCRETE COVER TO REINFORCEMENT AS NOTED ON DRAWINGS.
- REINFORCING STEEL TO BE GALVANIZED WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
- BENT REINFORCING BAR TYPES IN SCHEDULE REFER TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS.
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING PILES, FORMWORK OR PLACING CONCRETE.
- EACH PHASE OF WORK TO BE INSPECTED BY THE ENGINEER PRIOR TO PROCEEDING TO THE NEXT PHASE OF WORK.
- BACKFILL PLACED IMMEDIATELY BEHIND ABUTMENTS TO BE "FILL AGAINST STRUCTURES" MATERIAL AS PER DETAILS SHOWN ON THESE DRAWINGS AND AS PER SPECIFICATIONS.
- BACKFILLING BEHIND ABUTMENTS SHALL NOT BE UNDERTAKEN UNTIL ABUTMENT CAP AND DECK IS CAST AND STRENGTH REACHES 35 MPa. BACKFILLING SHALL BE ACCOMPLISHED IN EQUAL LIFTS BEHIND EACH ABUTMENT TO ENSURE DIFFERENTIAL IN FILL HEIGHTS BEHIND EACH ABUTMENT DOES NOT EXCEED 1000mm.

PILE NOTES

- SEE DRAWING S7 FOR PILE NOTES.

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

BRIDGE REPLACEMENT  
RANKIN BROOK BRIDGE

KOUCHIBOUGUAC  
NATIONAL PARK

drawing design

NORTH ABUTMENT  
PLANS

designed W. ENMAN conçu

date OCTOBER, 2017

drawn D. BEAMAN dessiné

date OCTOBER, 2017

approved approuvé

date

Tender Soumission

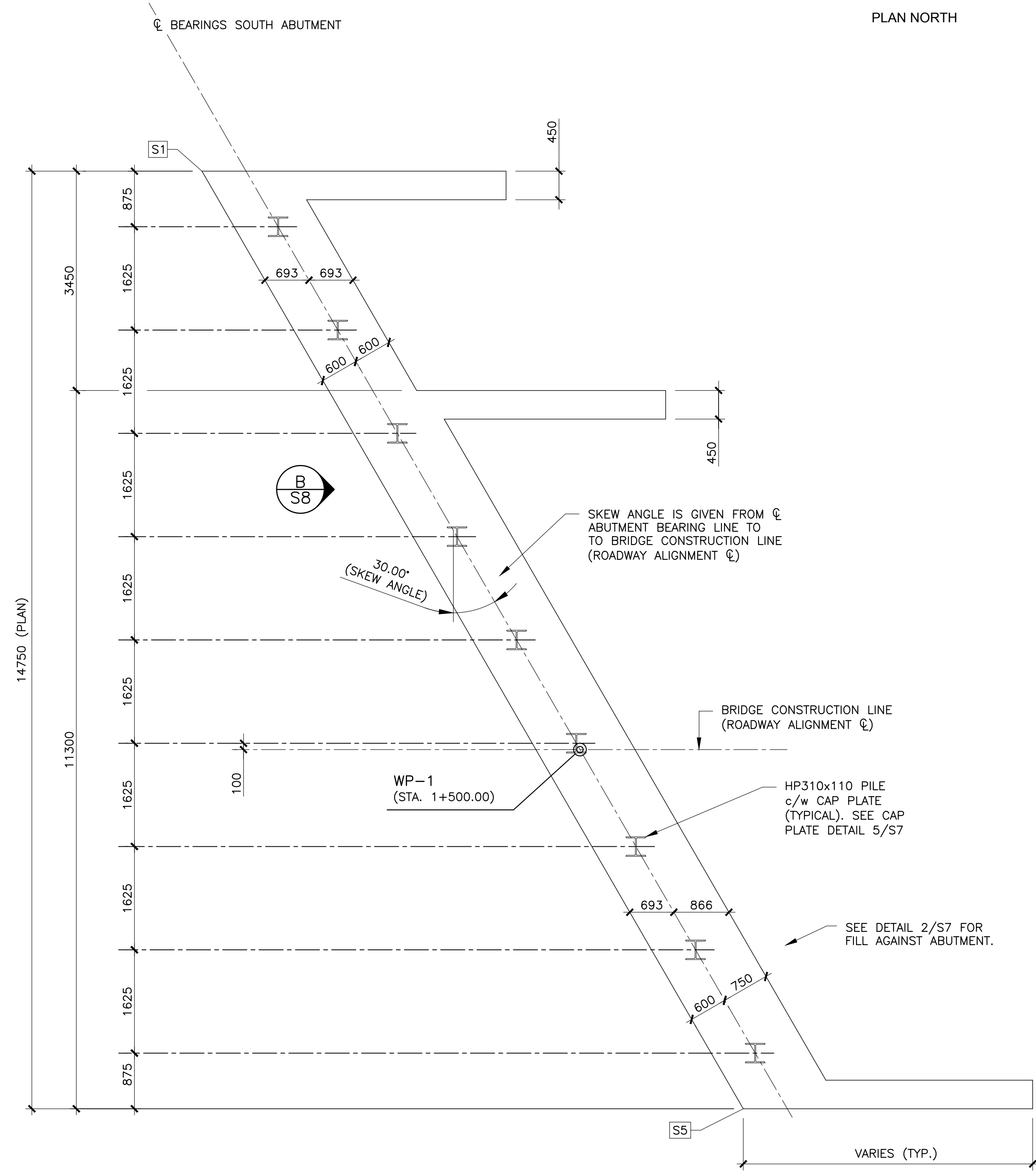
Project Manager Administrateur de projets

project number no. du projet

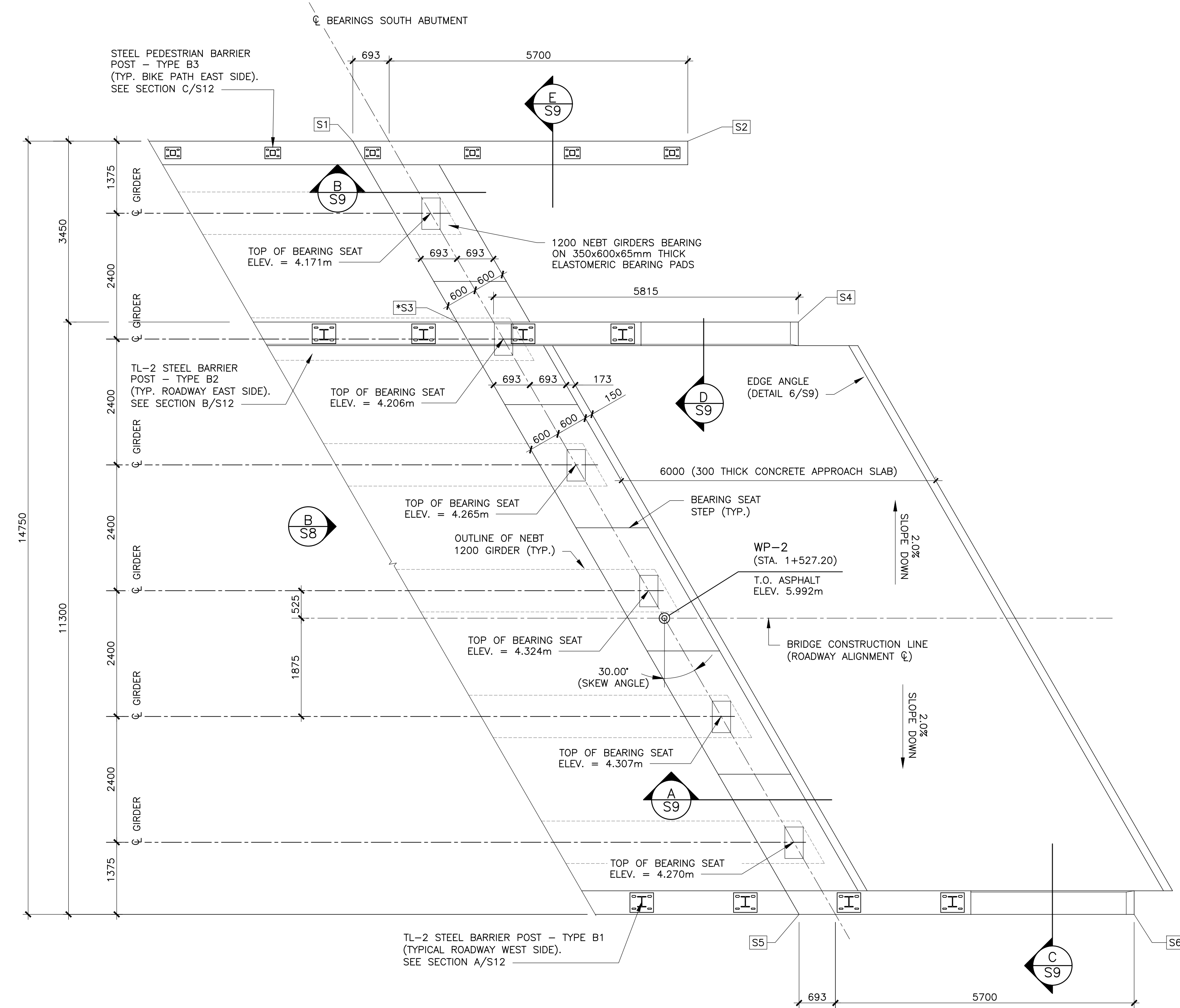
1620

drawing no. no. du dessin

S5



SOUTH ABUTMENT PILE PLAN  
 BEARINGS NORTH ABUTMENT  
 SCALE: 1:50  
 1/S6



SOUTH ABUTMENT TOP PLAN  
 SCALE: 1:50  
 2/S6

SOUTH ABUTMENT LAYOUT COORDINATES

LAYOUT POINT	NORTHING	EASTING
WP-2	7537878.162	2615071.509
S1	7537886.999	2615077.840
S2	7537881.039	2615080.154
* S3	7537883.893	2615075.345
S4	7537877.934	2615077.659
S5	7537873.722	2615067.172
S6	7537867.762	2615069.486

\* GIVEN FOR REFERENCE ONLY. FACE OF ABUTMENT WALL TO BE STRAIGHT LINE BETWEEN POINTS S1 & S5

C.I.P. CONCRETE NOTES

- SEE DRAWING S5 FOR C.I.P. CONCRETE NOTES.

PILE NOTES

- SEE DRAWING S7 FOR PILE NOTES.

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK BRIDGE

project KOUCHIBOUGUAC NATIONAL PARK

drawing SOUTH ABUTMENT PLANS

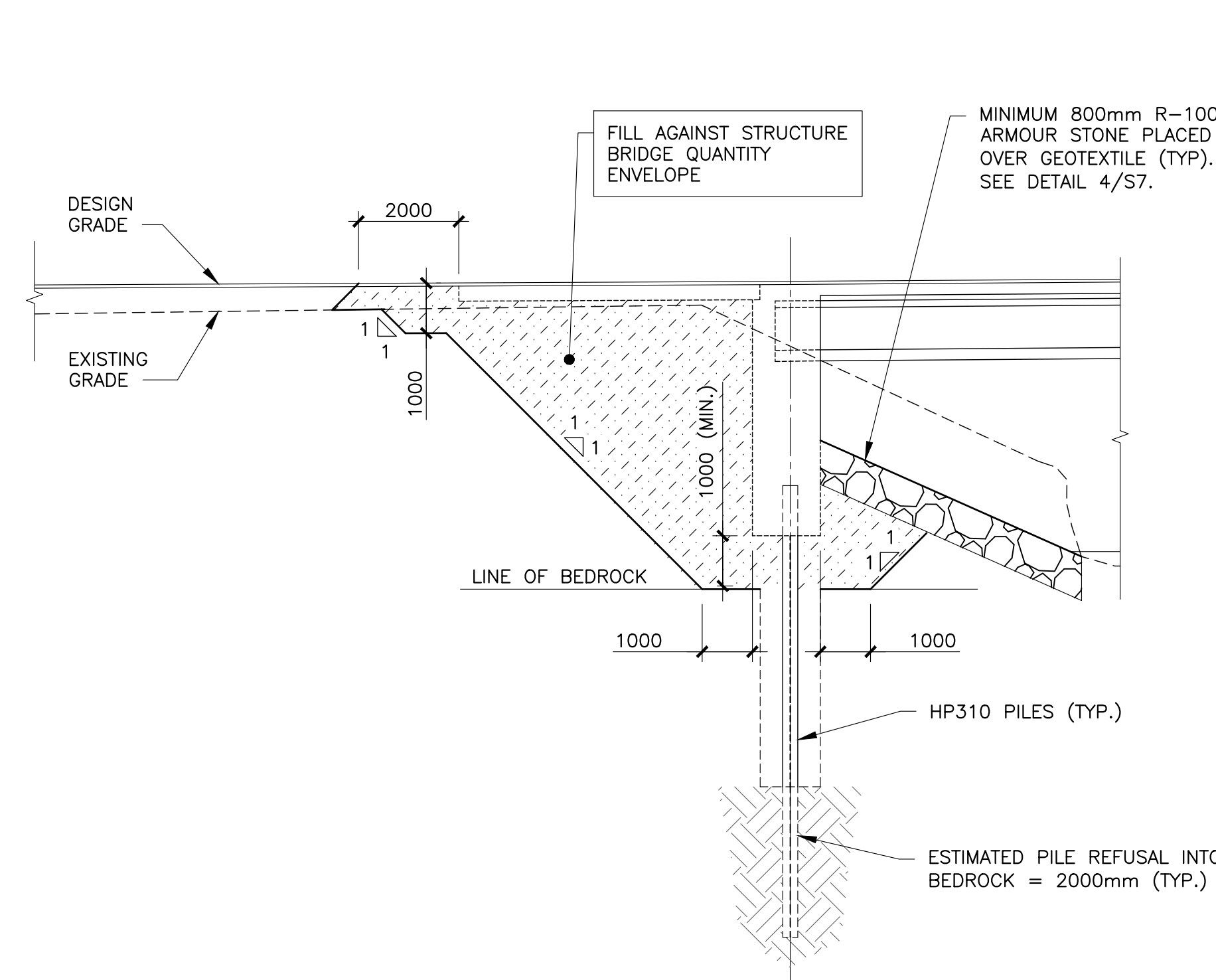
designed W. ENMAN  
 date OCTOBER, 2017  
 drawn D. BEAMAN  
 date OCTOBER, 2017  
 approved

Project Manager Administrator de projets  
 project number 1620  
 drawing no. S6

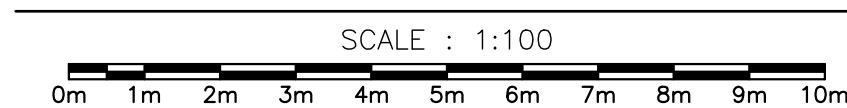


**PILE NOTES**

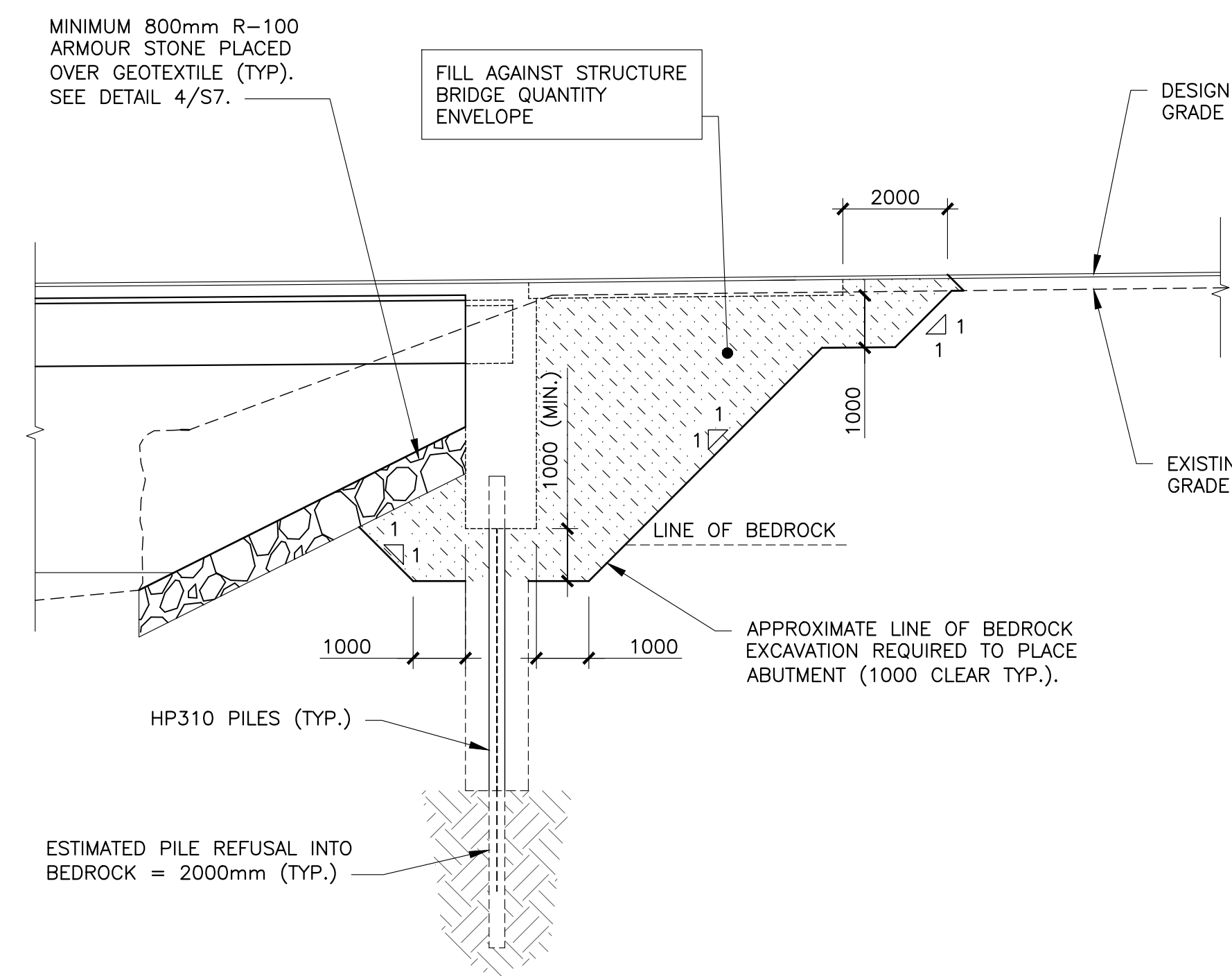
- PILE MATERIAL
  - STEEL H-PILES IN ABUTMENT, HP310x110,  $F_y = 350$  MPa (MIN.)
  - CAP PLATE,  $F_y = 350$  MPa MINIMUM
  - WELDING MATERIAL TO CSA G40.1 – LATEST EDITION
  - WELDING TO BE IN ACCORDANCE TO CSA W59 – LATEST EDITION
- EXCAVATION OF OBSTRUCTIONS IN THE OVERBURDEN SOILS MAY BE REQUIRED TO ALLOW DRIVING OF THE PILES TO SUFFICIENT DEPTH TO ACHIEVE PILE CAPACITY AND FIXITY. REFER TO GEOTECHNICAL REPORT PREPARED BY WSP FOR FURTHER INFORMATION.
- PILE SET CRITERIA AS PER GEOTECHNICAL REPORT PREPARED BY WSP:
  - RATED HAMMER ENERGY OF AT LEAST 400 (AND LESS THAN 600) J/cm sq. OF STEEL PILE CROSS SECTION-SECTIONAL AREA.
  - REFUSAL TAKEN AS PILE PENETRATION OF LESS THAN 25mm FOR 15 BLOWS. ALL PILES SHALL BE DRIVEN TO REFUSAL AT THE SPECIFIED DEPTH.
  - ALL PILES SHALL BE DRIVEN WITH A PROTECTIVE H-PILE POINT SHOE SUCH AS APF HARD-BITE POINTS, MODELS HP-7570/HP-75600, O.A.E. ALL POINTS SHALL MATCH PILE SIZE AND SHALL BE WELDED TO PILE TIP AS PER MANUFACTURERS RECOMMENDATIONS. PILE TIP DETAILS SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO DRIVING PILES. WELDED STEEL PLATES WILL NOT BE ACCEPTED.
  - RE-STRIKING OF AT LEAST TWO REPRESENTATIVE PILES PER ABUTMENT SHALL BE UNDERTAKEN TO ASSESS THE EFFECTS OF SOIL SET-UP AND RELAXATION, AS PER GEOTECHNICAL ENGINEER RECOMMENDATIONS. A WAITING PERIOD OF AT LEAST 24 HOURS SHALL BE ALLOWED BEFORE RE-STRIKING OPERATIONS ARE UNDERTAKEN
  - THE REQUIRED FACTORED PILE COMPRESSION LOAD OF 1100 kN SHALL BE CONFIRMED BY PDA TESTING. REFERENCE SPECIAL PROVISIONS FOR PDA TESTING REQUIREMENTS
  - FULL TIME INSPECTION SHALL BE UNDERTAKEN DURING PILE DRIVING AND COMPLETE DRIVING RECORDS SHALL BE KEPT.



BACKFILL AGAINST NORTH ABUTMENT



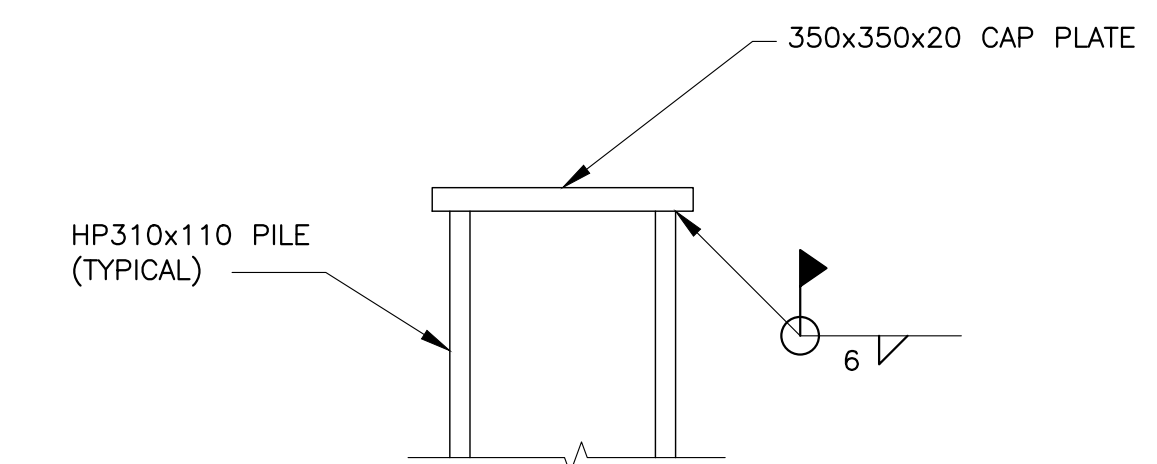
1  
S7



BACKFILL AGAINST SOUTH ABUTMENT



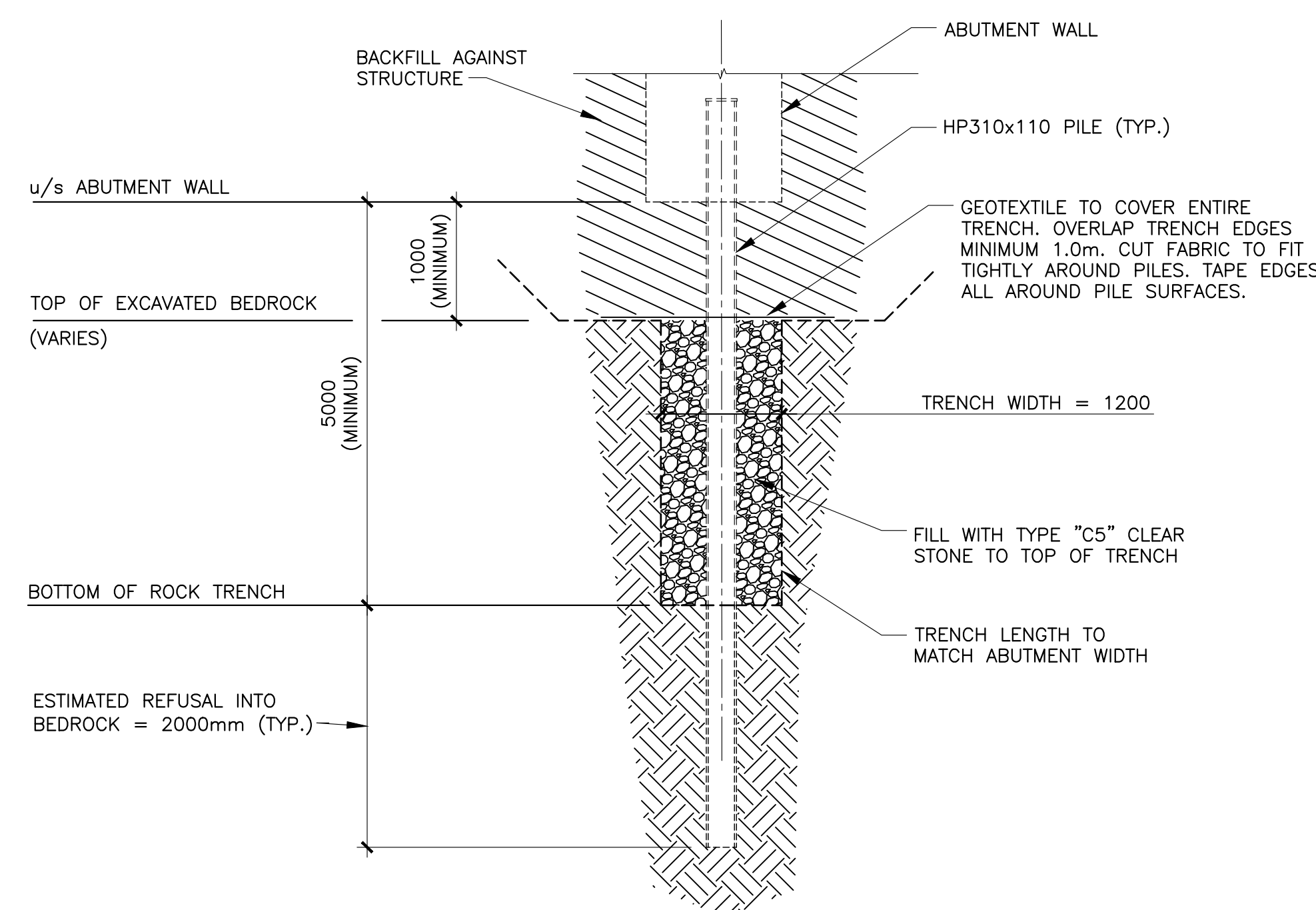
2  
S7



TYPICAL PILE CAP DETAIL

NOT TO SCALE

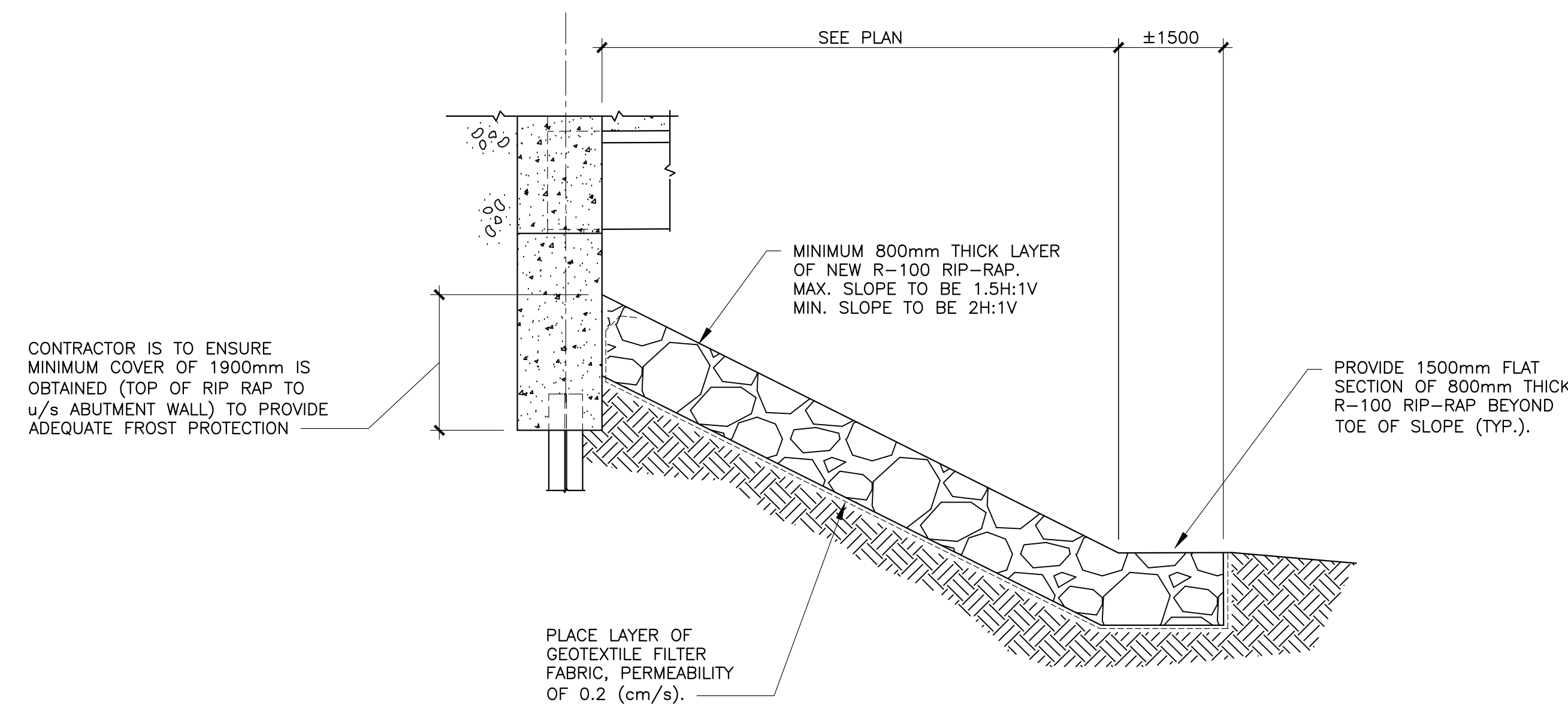
5  
S7



ROCK TRENCH DETAIL AT ABUTMENT PILES

NOT TO SCALE

3  
S7



ABUTMENT RIP RAP SLOPE PROTECTION

NOT TO SCALE

4  
S7

0	ISSUED FOR TENDER	MAR 28 2018
---	-------------------	-------------

revisions	date
-----------	------

project	projet
---------	--------

BRIDGE REPLACEMENT RANKIN BROOK BRIDGE

KOUCHIBOUGUAC NATIONAL PARK

drawing	dessin
---------	--------

ABUTMENT BACKFILLING AND PILE DETAILS

designed	W. ENMAN	conçu
----------	----------	-------

date	OCTOBER, 2017
------	---------------

drawn	D. BEAMAN	dessiné
-------	-----------	---------

date	OCTOBER, 2017
------	---------------

approved	approved
----------	----------

date	
------	--

Tender	Submission
--------	------------

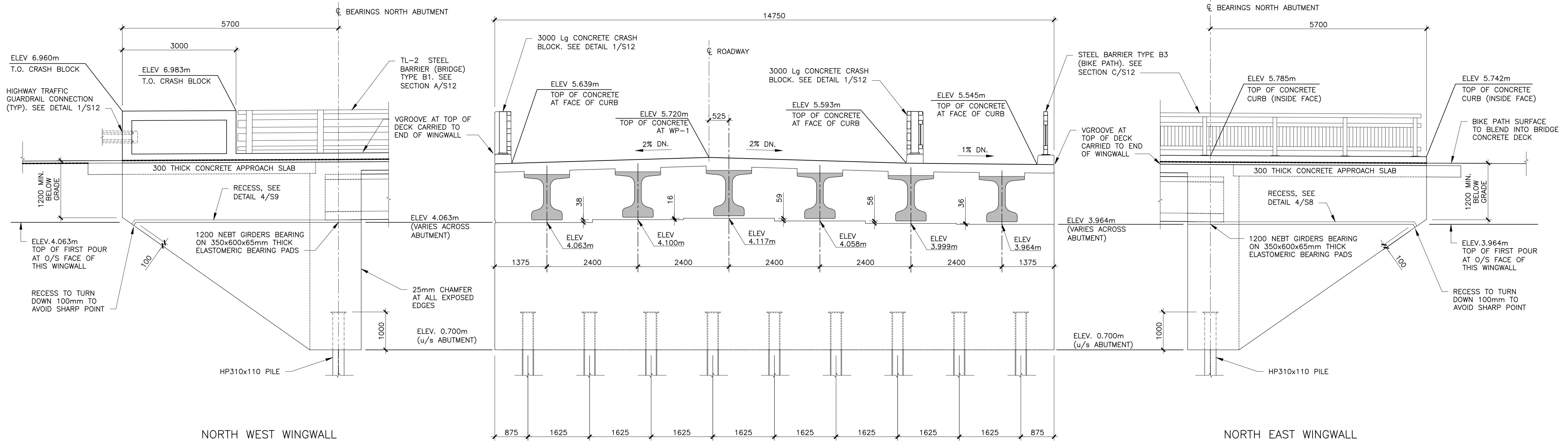
Project Manager	Administrateur de projets
-----------------	---------------------------

project number	no. du projet
----------------	---------------

1620

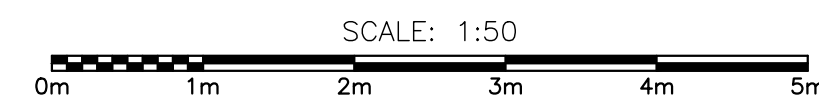
drawing no.	no. du dessin
-------------	---------------

S7



FRONT ELEVATION – FACING NORTH

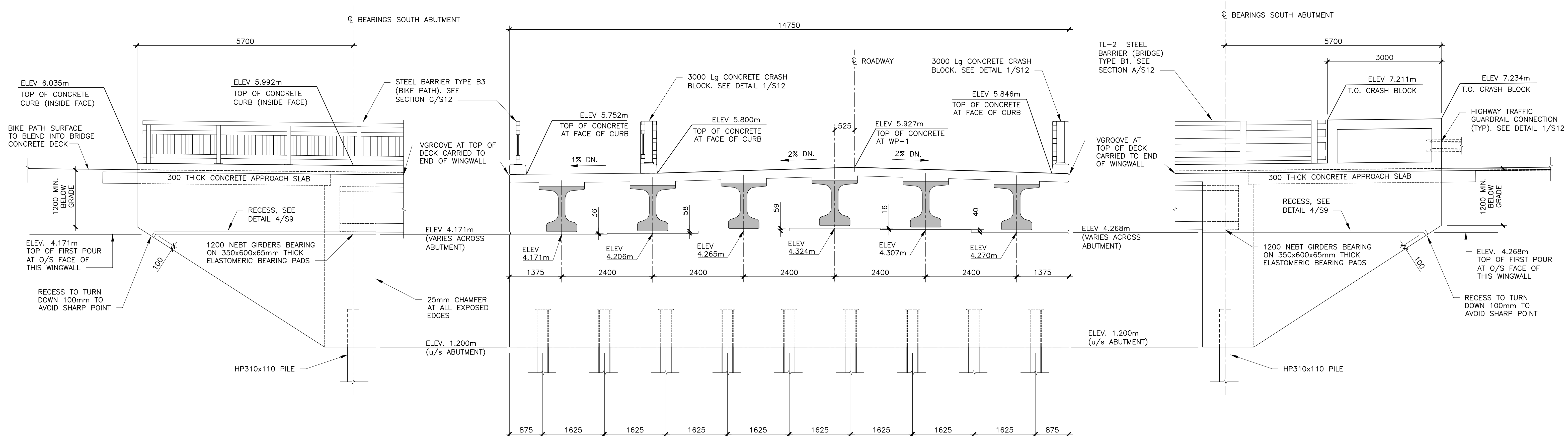
NORTH ABUTMENT ELEVATIONS



A  
S7

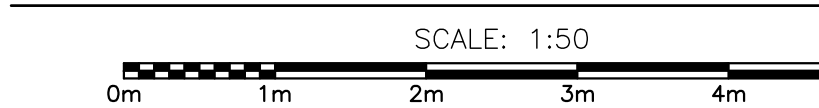
ABUTMENT DIMENSION NOTES:

1. ABUTMENT WALLS TO BE CONSTRUCTED ON 30.00° SKEW FROM LINE PERPENDICULAR TO BRIDGE CONSTRUCTION CENTERLINE (SEE ABUTMENT PLANS).
2. WINGWALLS TO BE ALIGNED PARALLEL WITH ROADWAY ALIGNMENT  $\phi$ .
3. ALL FRONT ELEVATION DIMENSIONS ARE GIVEN PERPENDICULAR TO BRIDGE CONSTRUCTION CENTERLINE.
4. ALL WINGWALL DIMENSIONS ARE GIVEN ALONG OUTSIDE FACE OF WINGWALL.
5. ALL ABUTMENT ELEVATIONS ARE GIVEN ALONG CENTERLINE OF GIRDER BEARINGS.
6. ALL CRASH BLOCK ELEVATIONS GIVEN ALONG OUTSIDE FACE OF WINGWALLS.



FRONT ELEVATION – FACING SOUTH

SOUTH ABUTMENT ELEVATIONS



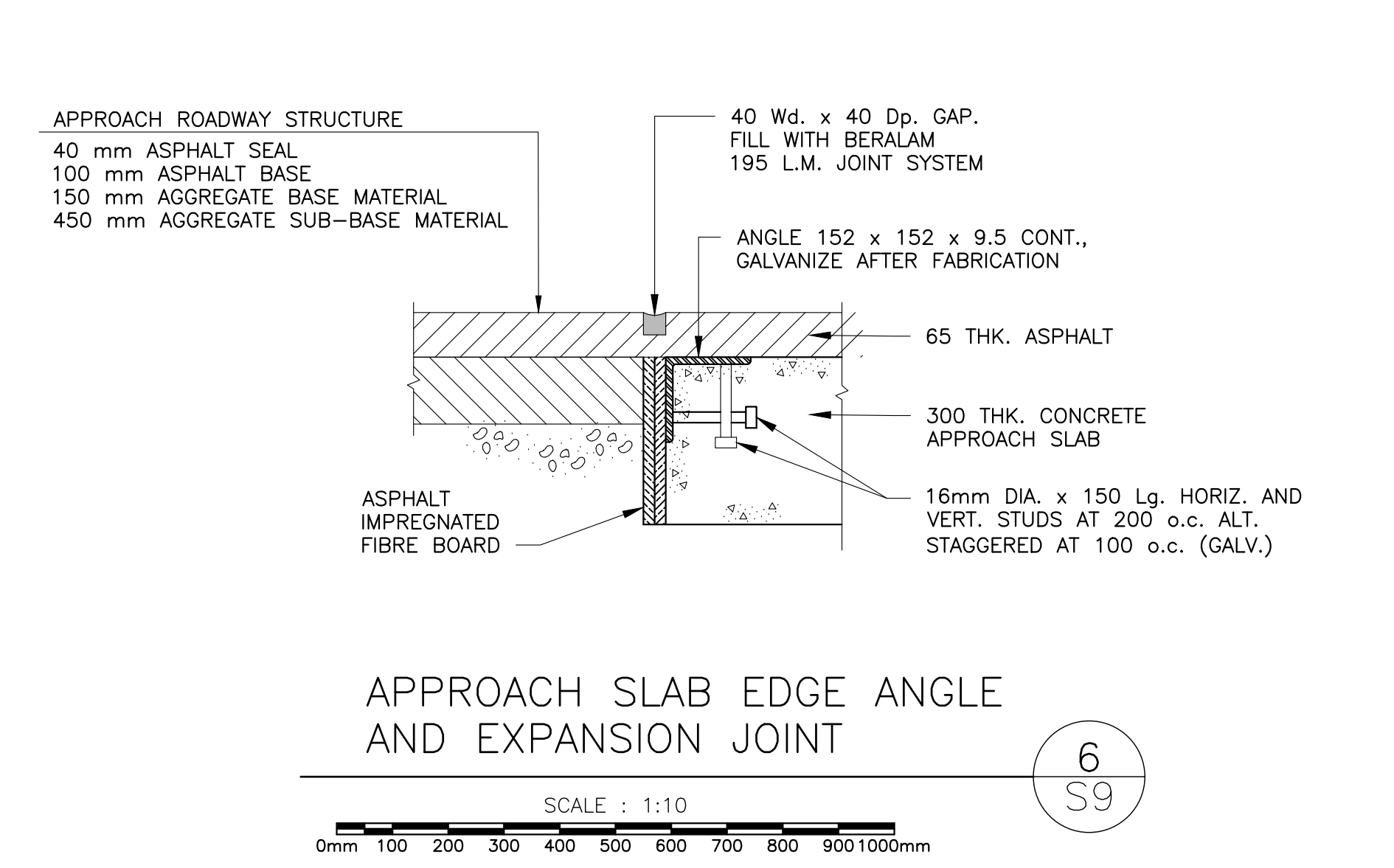
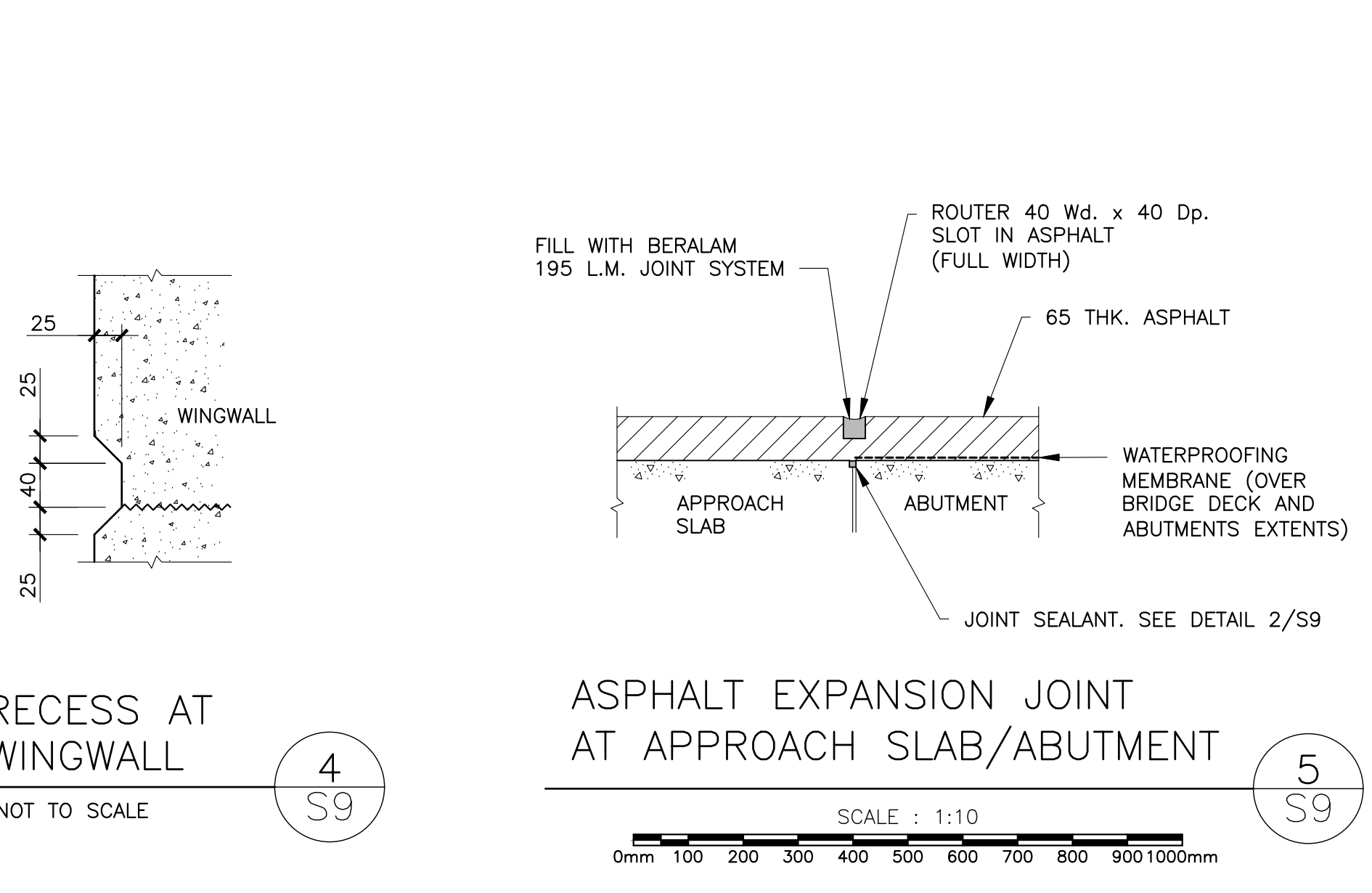
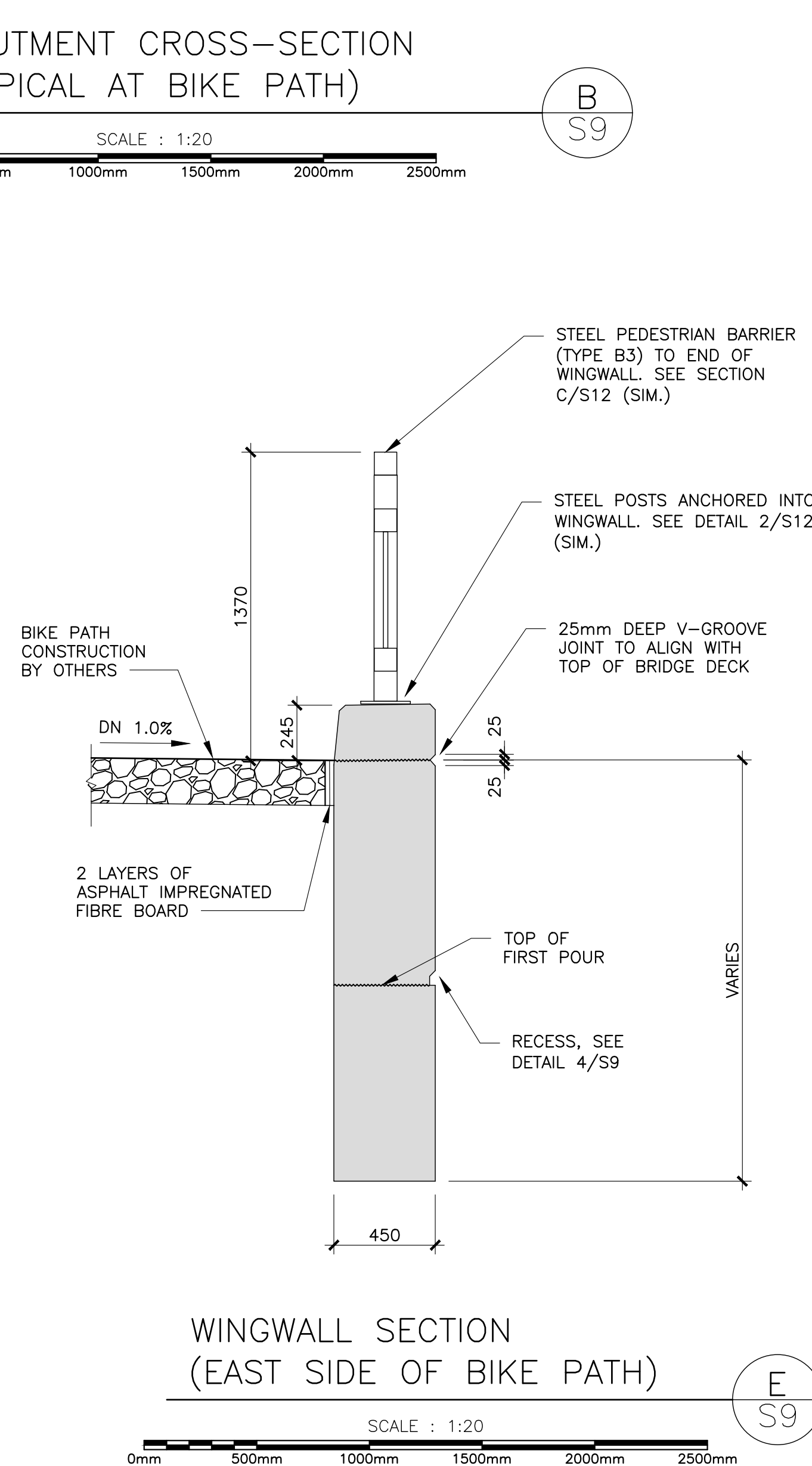
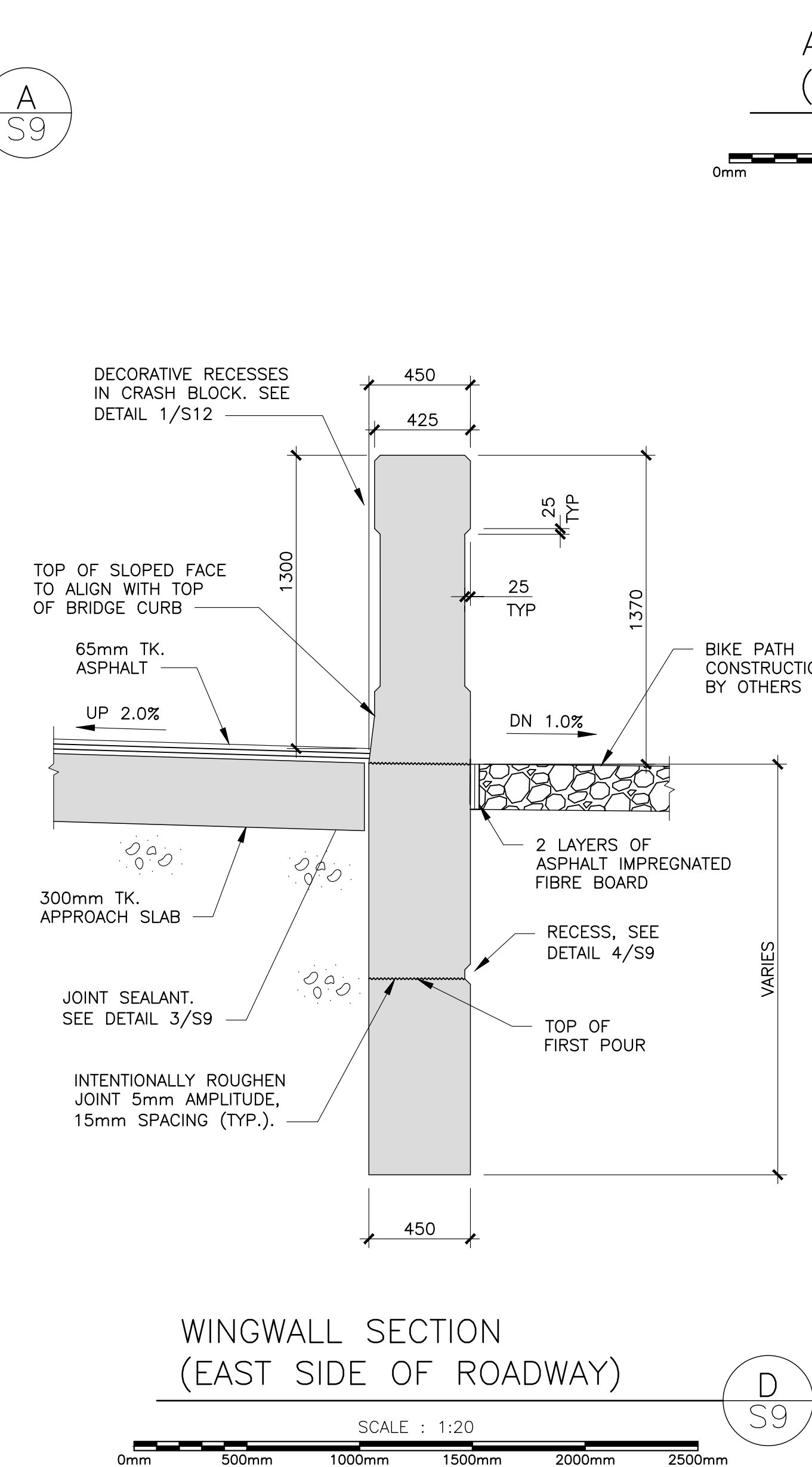
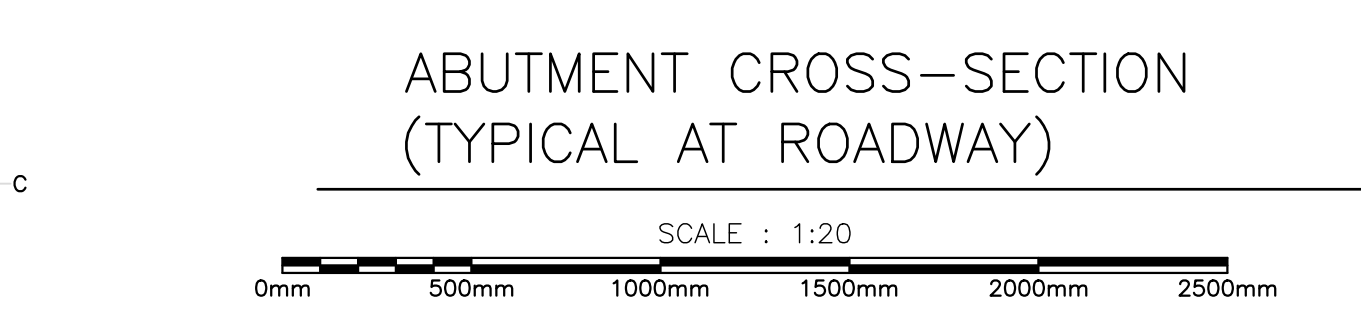
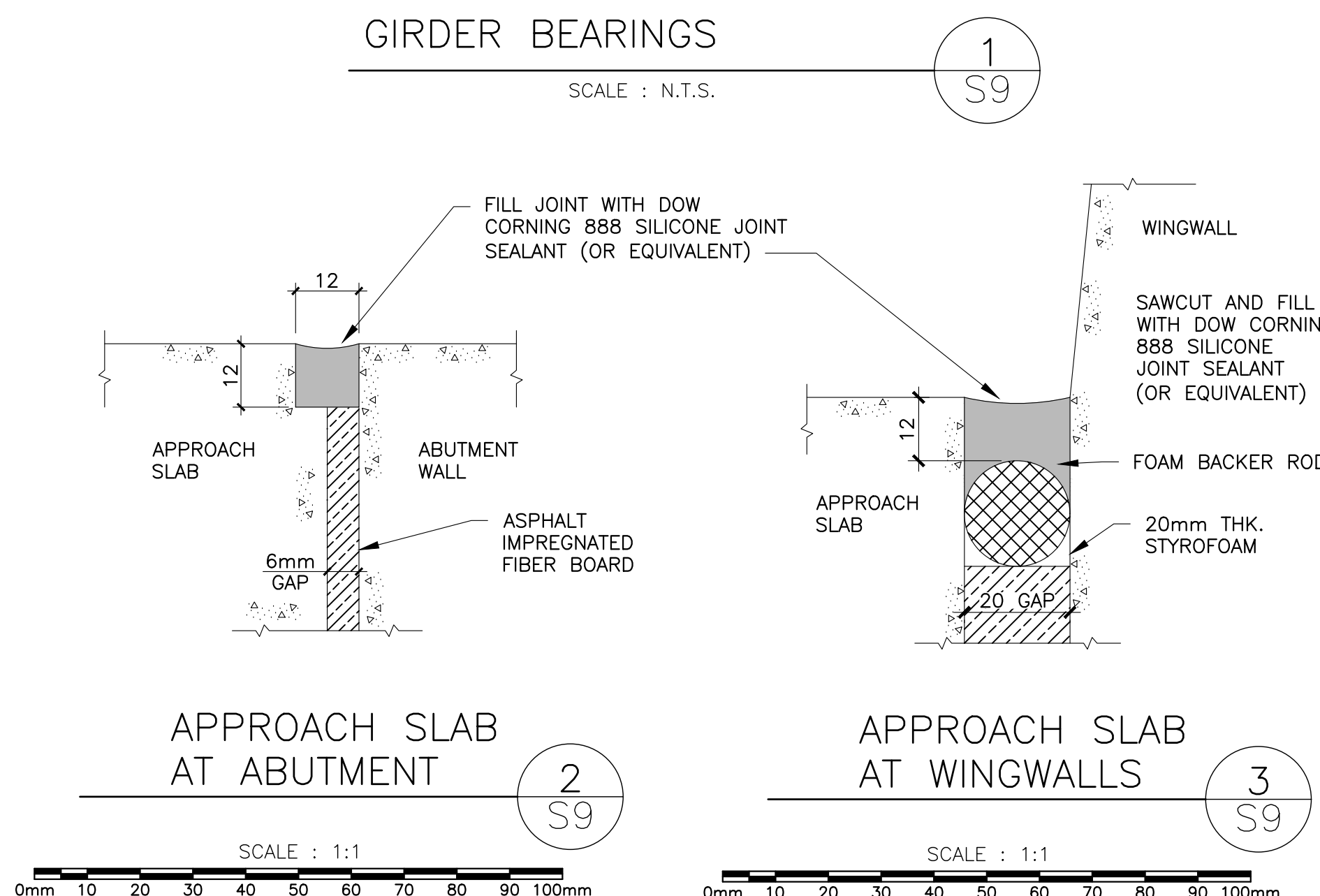
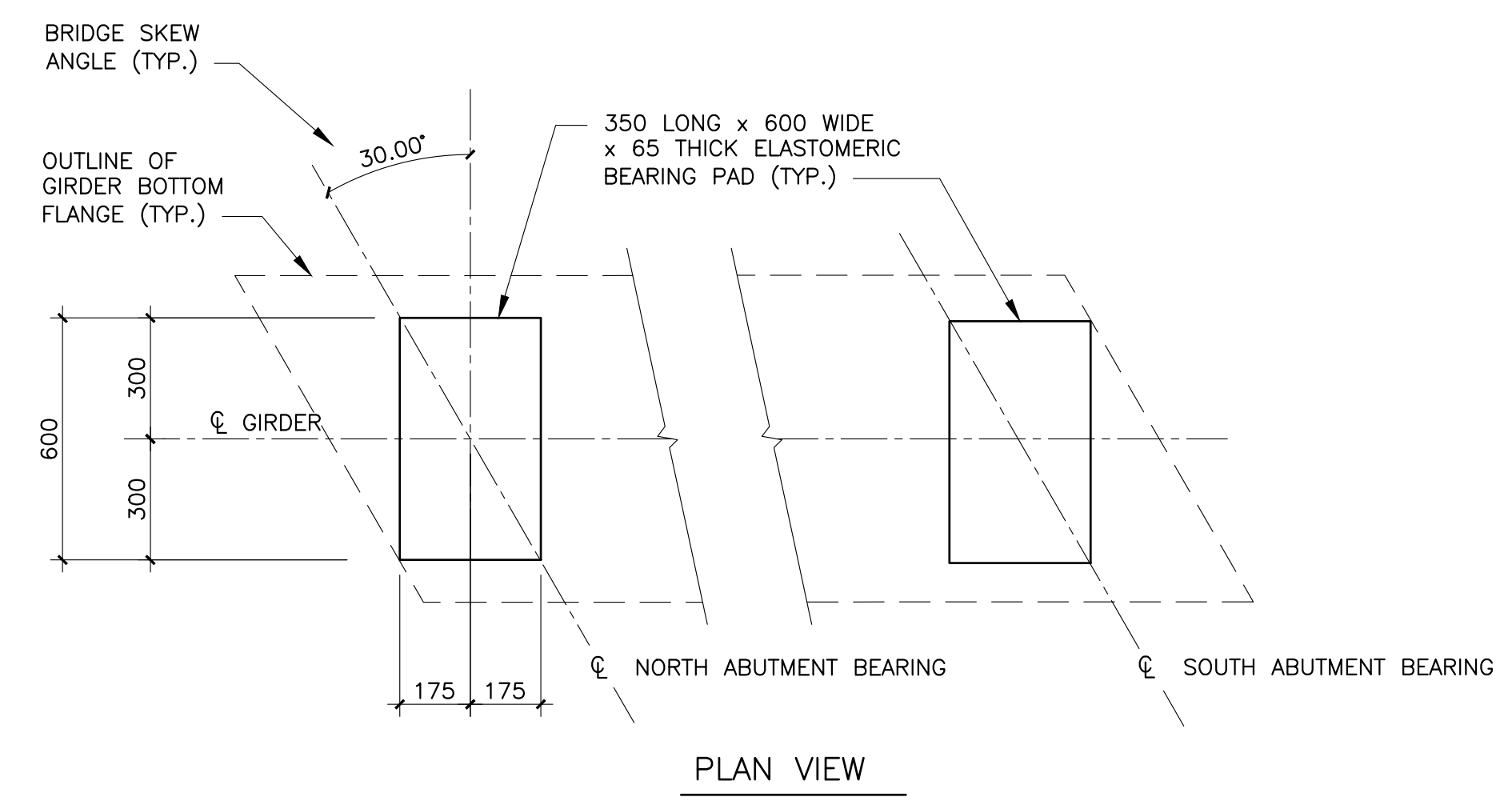
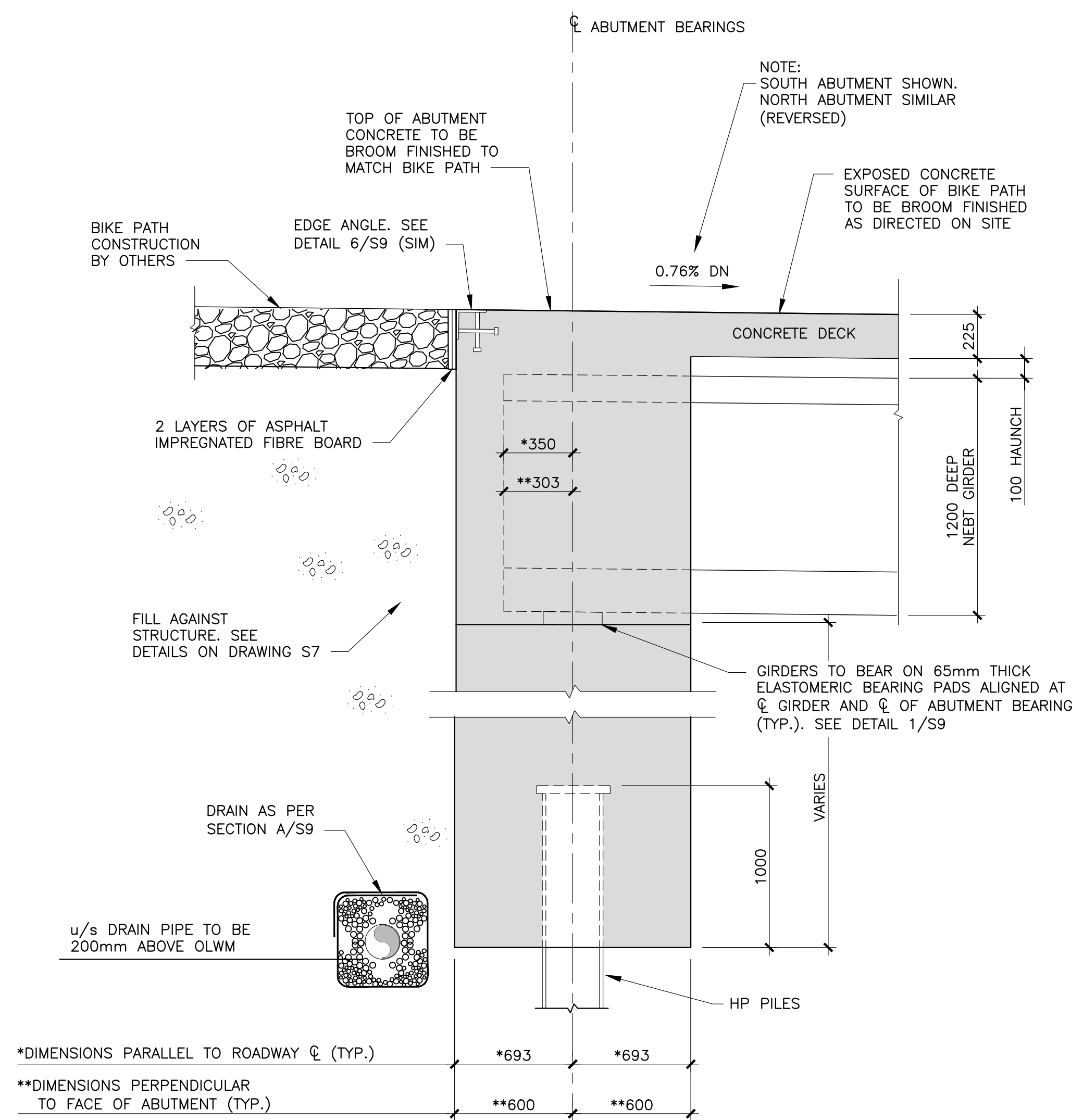
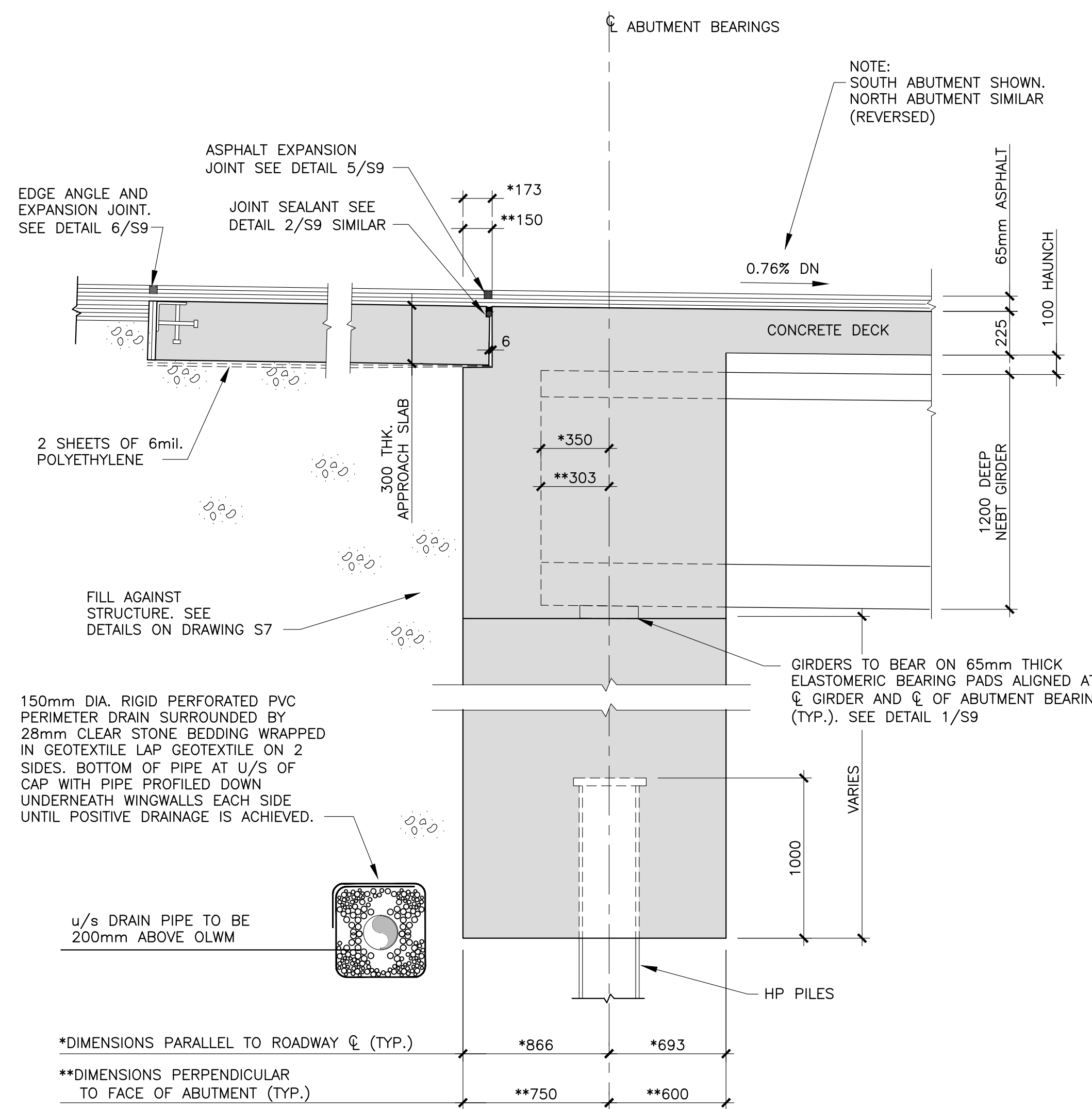
B  
S8

0	ISSUED FOR TENDER	MAR 28 2018
revisions		date

BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE  
 KOUCHIBOUGUAC  
 NATIONAL PARK

ABUTMENT AND  
 WINGWALL ELEVATIONS

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager	Administrateur de projets	
project number	1620	no. du projet
drawing no.	S8	no. du dessin



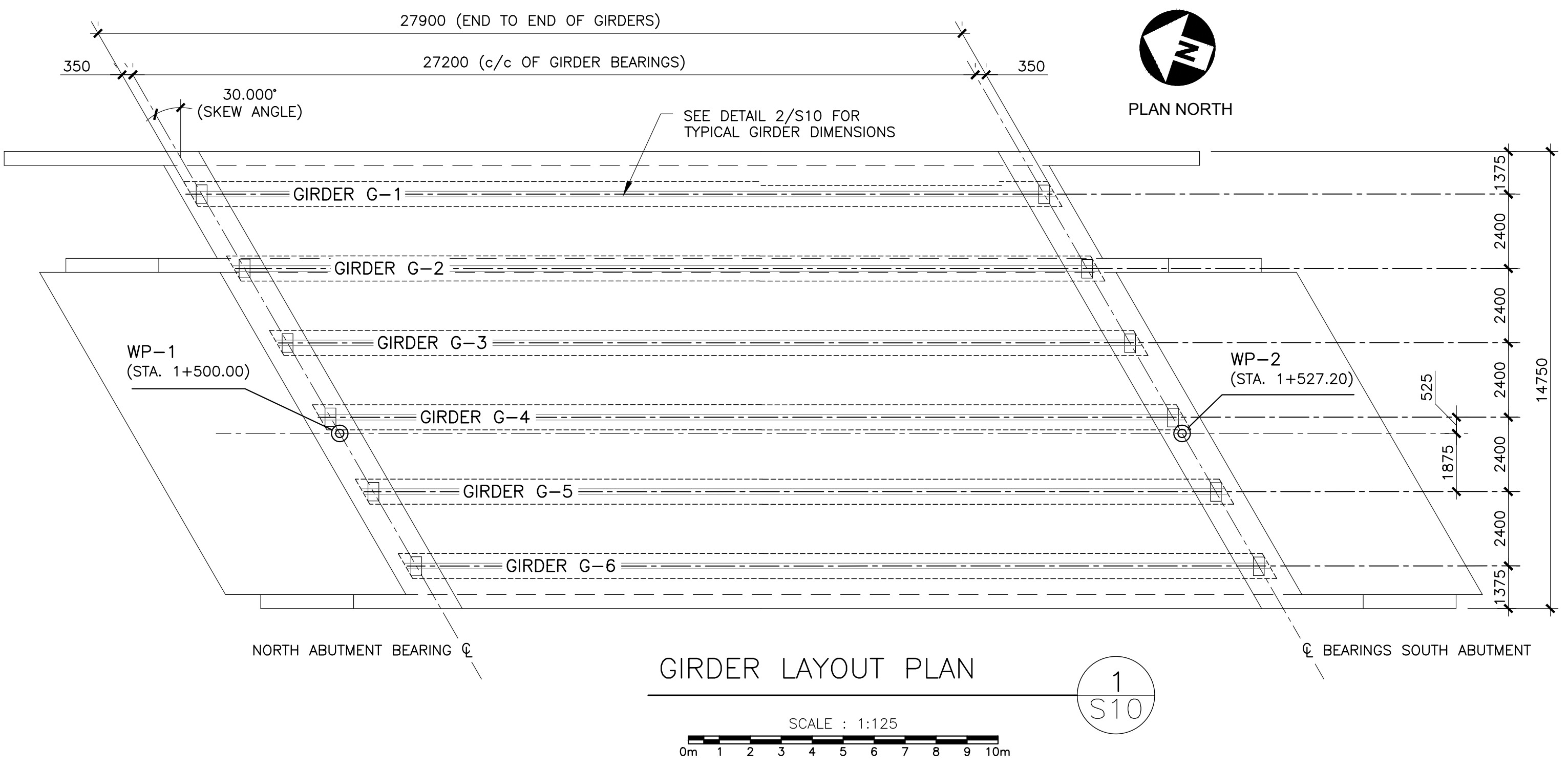
0	ISSUED FOR TENDER	MR 28 2018
revisions		date

BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE  
 KOUCHIBOUGUAC NATIONAL PARK

ABUTMENT SECTIONS AND DETAILS

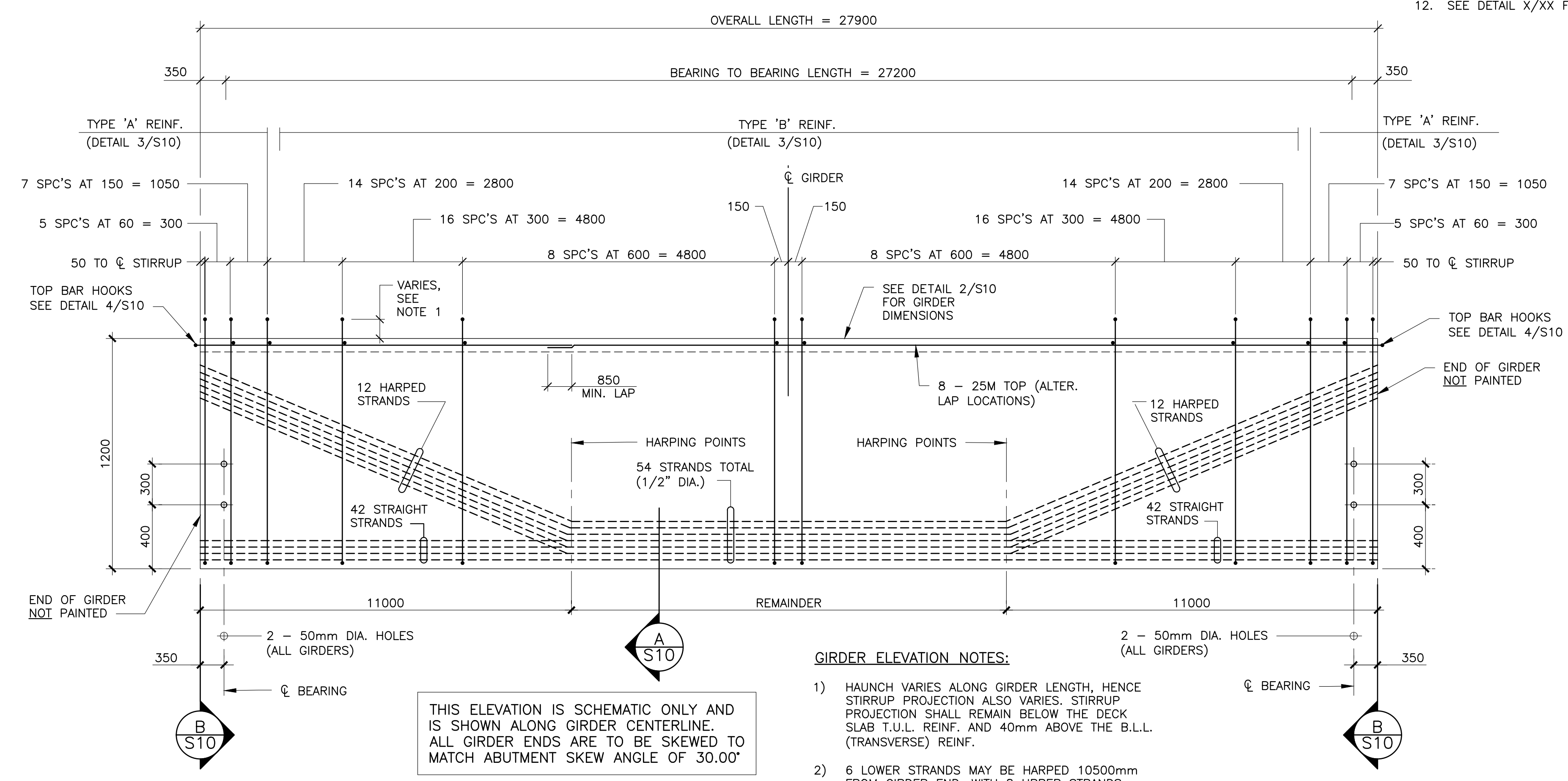
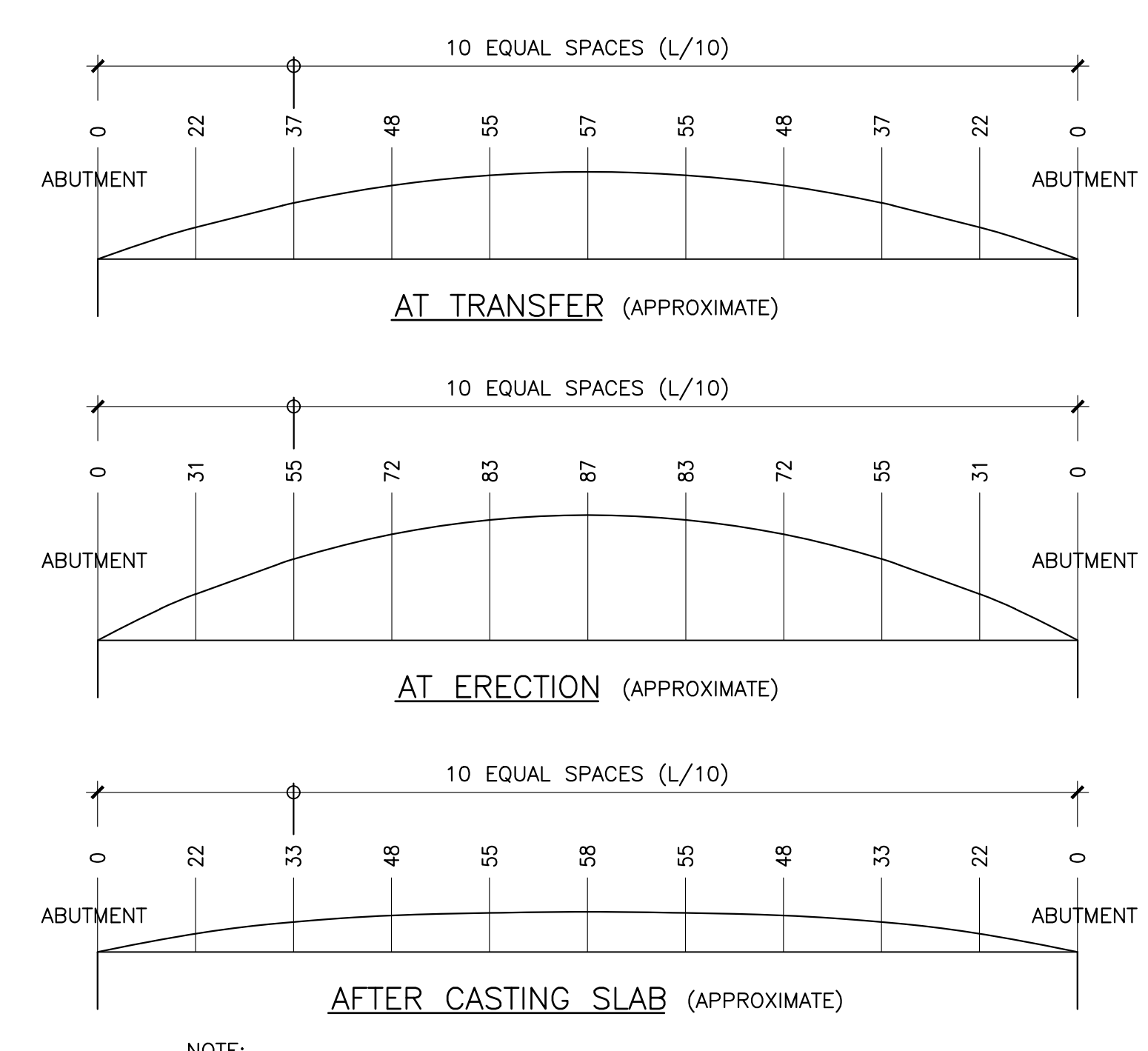
designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager		Administrateur de projets
project number	1620	no. du projet
drawing no.	S9	no. du dessin





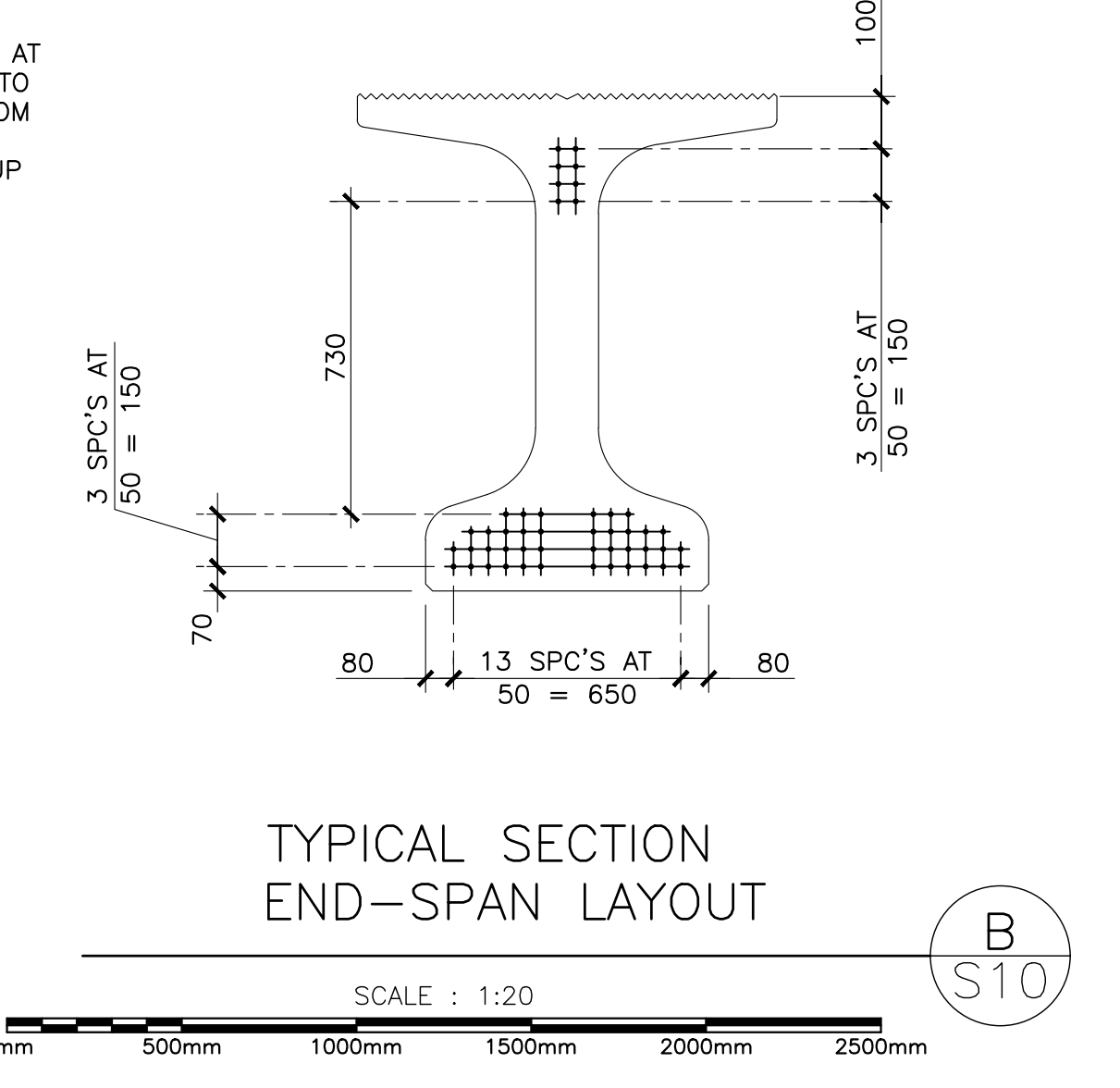
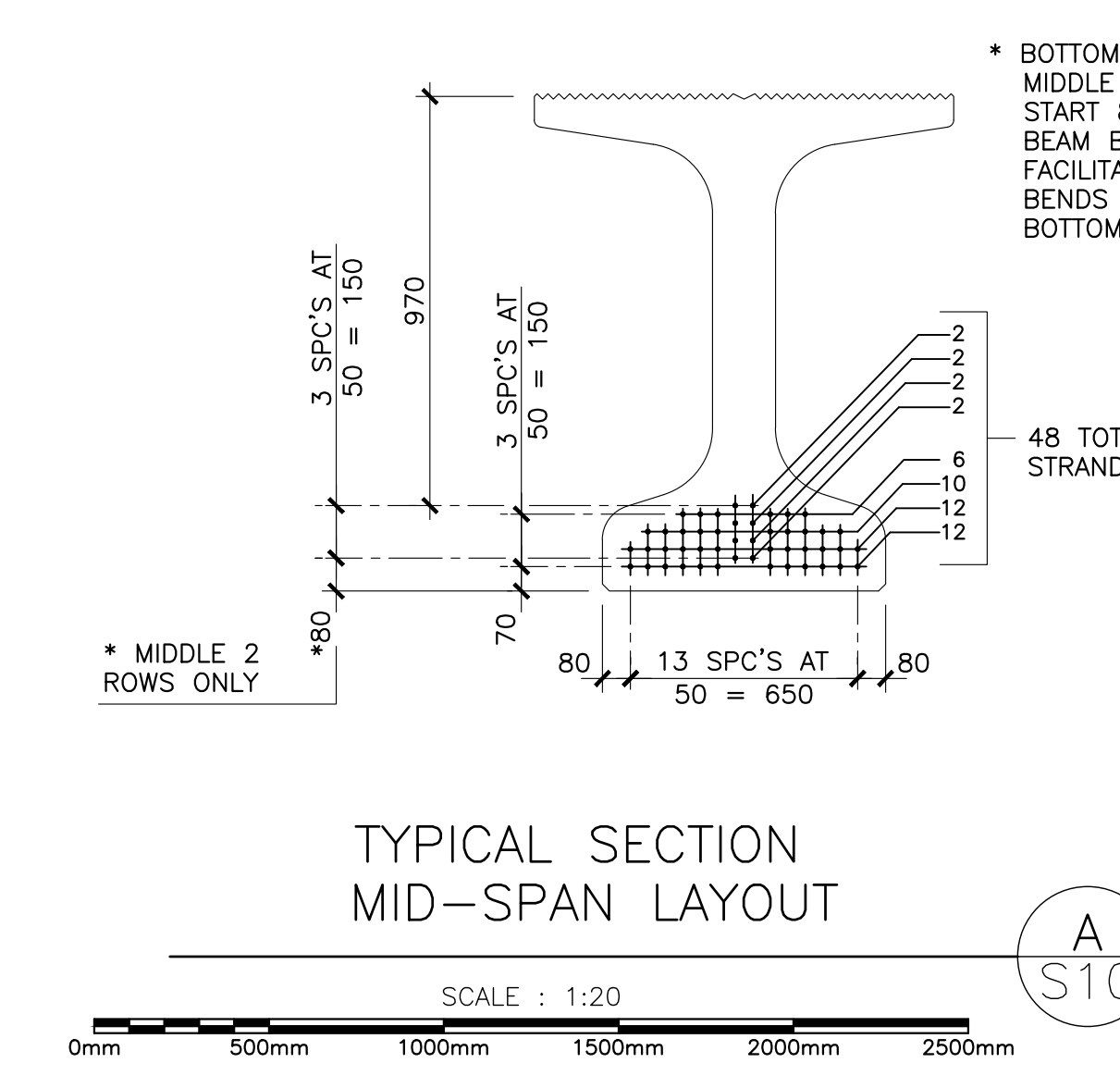
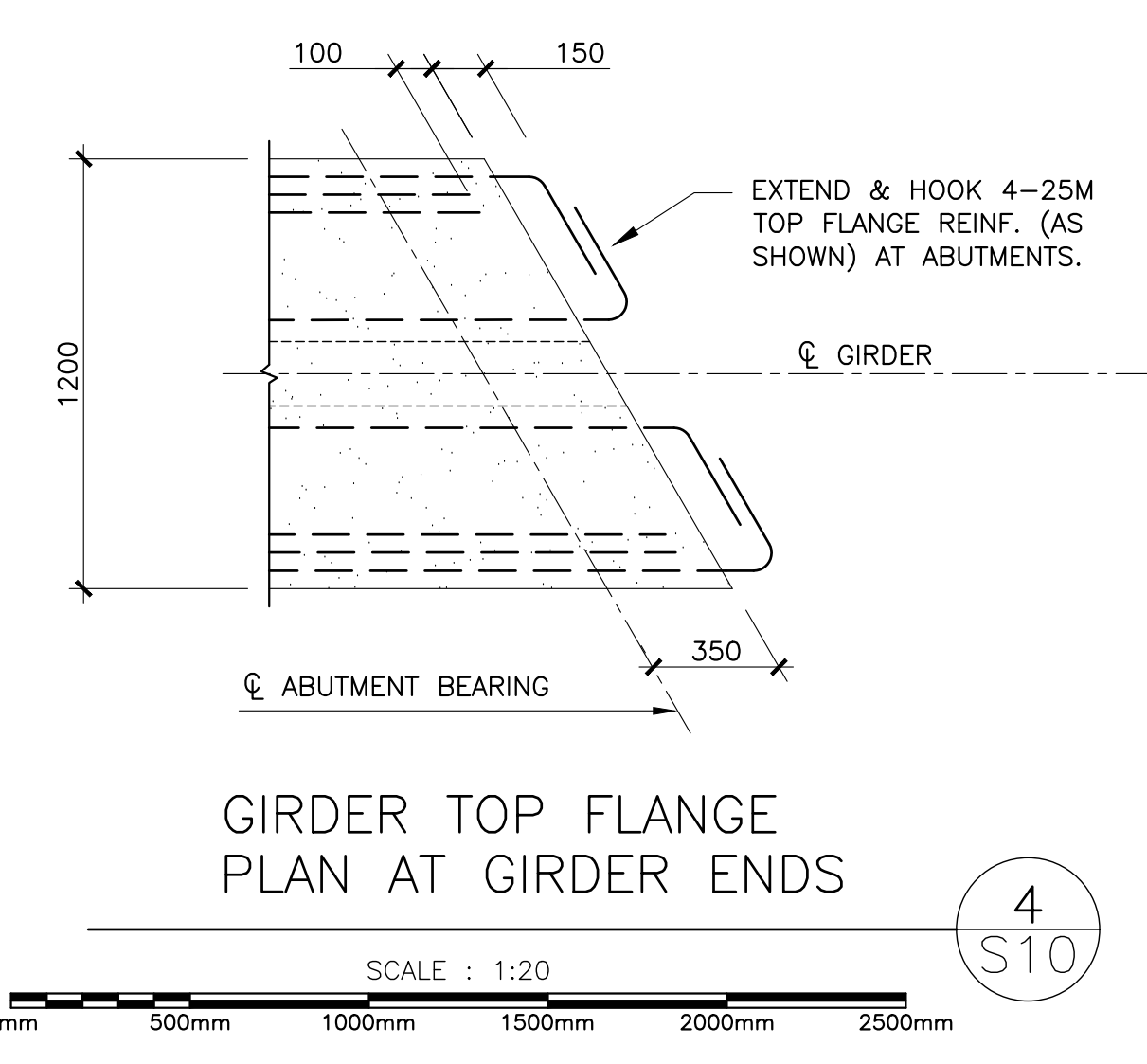
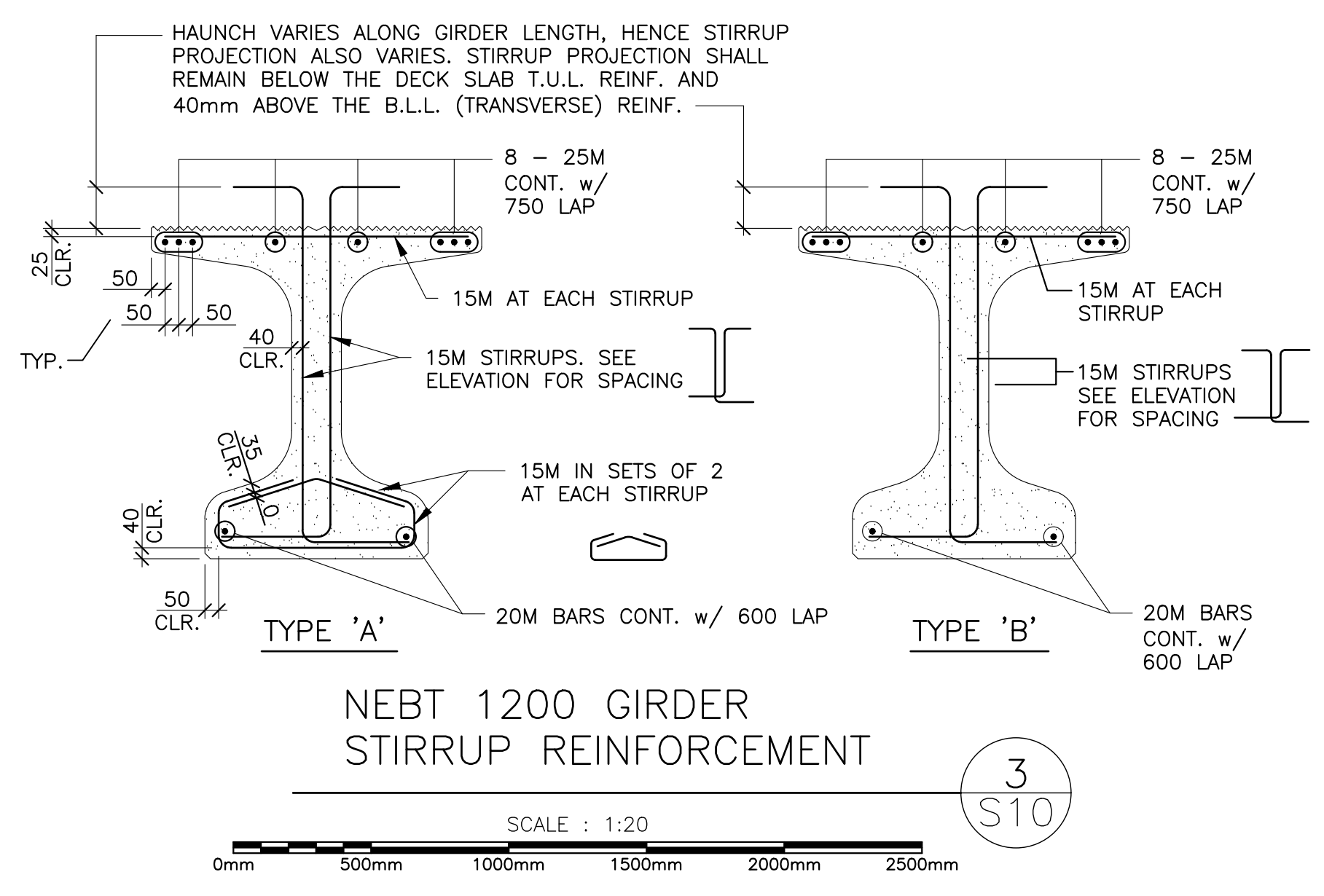
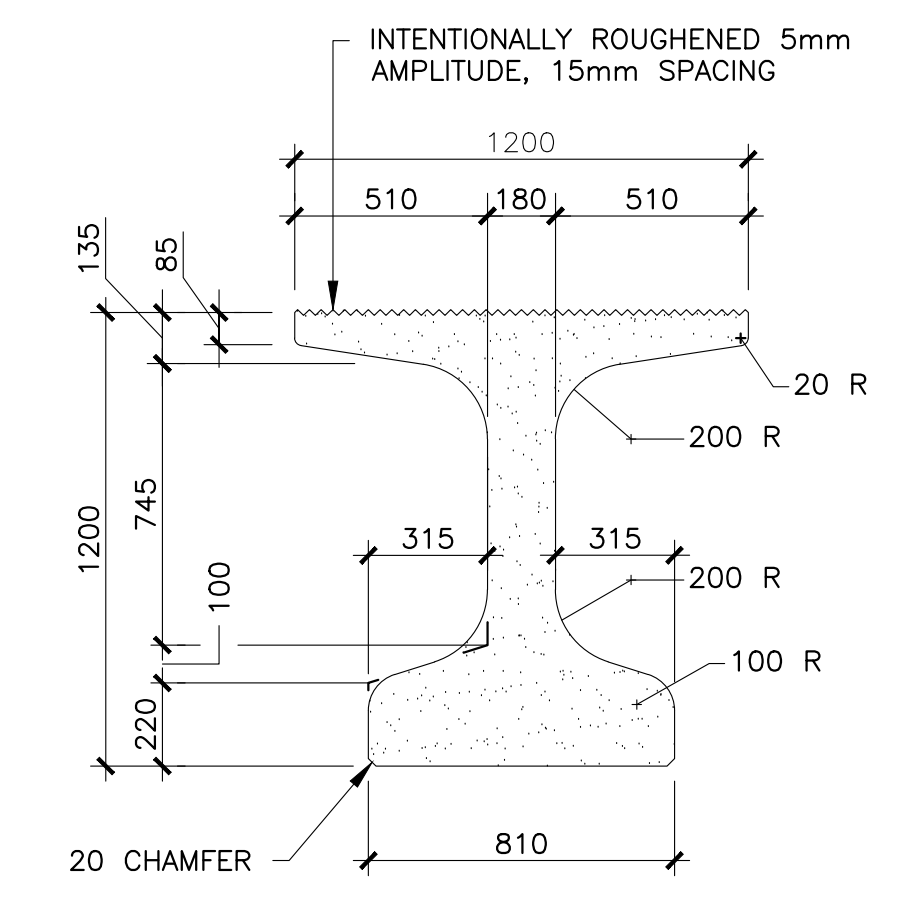
**PRECAST GIRDER NOTES:**

- ALL GIRDERS TO BE NE BULB TEE 1200 STANDARD SECTIONS.
- CONCRETE COMPRESSIVE STRENGTH:  
 A) AT 28 DAYS = 55 MPa  
 B) AT TIME OF PRESTRESS TRANSFER = 38 MPa
- PRESTRESSING STEEL: SEVEN WIRE LOW RELAXATION STRANDS (GRADE 1860), SIZE 13 WITH ULTIMATE STRENGTH OF 1860 MPa. STRANDS TO CONFORM TO A.S.T.M. A416.
- STRAND FORCES:  
 A) AT JACKING (0.78 fpu) = 144 kN
- TRANSFER OF PRESTRESS RELEASE SEQUENCE:  
 A) DEFLECTED STRANDS  
 B) HOLD DOWN DEVICES  
 C) STRAIGHT STRANDS
- LIFTING DEVICES TO BE LOCATED AT THE GIRDER BEARING POINTS AND SHALL MEET ENGINEERS APPROVAL.
- CONCRETE COVER TO STIRRUPS AS NOTED ON DETAIL 3/SB.
- ROUGHEN TOP OF GIRDER WHERE IT WILL CONTACT HAUNCH TO 5MM AMPLITUDE, SPACING OF 15mm± & REMOVE LAITANCE PRIOR TO CASTING DECK AND HAUNCHES.
- NO BITUMINOUS OR ASPHALT COATING TO BE APPLIED TO EITHER END OF NEB GIRDERS.
- CONTRACTOR TO ENSURE GIRDER STABILITY DURING ALL PHASES OF CONSTRUCTION.
- AFTER ALL GIRDERS ARE ERECTED, AND PRIOR TO COMMENCEMENT OF FORMWORK CONSTRUCTION, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE CENTERLINE OF ALL GIRDERS AT THE LOCATIONS WHERE SCREED ELEVATIONS ARE SHOWN ON THE PLANS. THE PROFILES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE ENGINEER SHALL ADVISE THE CONTRACTOR (WITHIN THREE WORKING DAYS OF RECEIVING THE GIRDER PROFILES) THAT THE SCREED ELEVATIONS AND GIRDER PROFILES ARE CORRECT, OR THE CONTRACTOR WILL BE PROVIDED WITH REVISED SCREED ELEVATIONS AT THAT TIME.
- SEE DETAIL X/XX FOR LATERAL STABILITY TIES FOR GIRDERS.



**GIRDER ELEVATION NOTES:**

- HAUNCH VARIES ALONG GIRDER LENGTH, HENCE STIRRUP PROJECTION ALSO VARIES. STIRRUP PROJECTION SHALL REMAIN BELOW THE DECK SLAB T.U.L. REINF. AND 40mm ABOVE THE B.L.L. (TRANSVERSE) REINF.
- 6 LOWER STRANDS MAY BE HARPED 10500mm FROM GIRDER END, WITH 8 UPPER STRANDS HARPED 11500mm FROM GIRDER END.



0	ISSUED FOR TENDER	MAR 28 2018
revisions		date

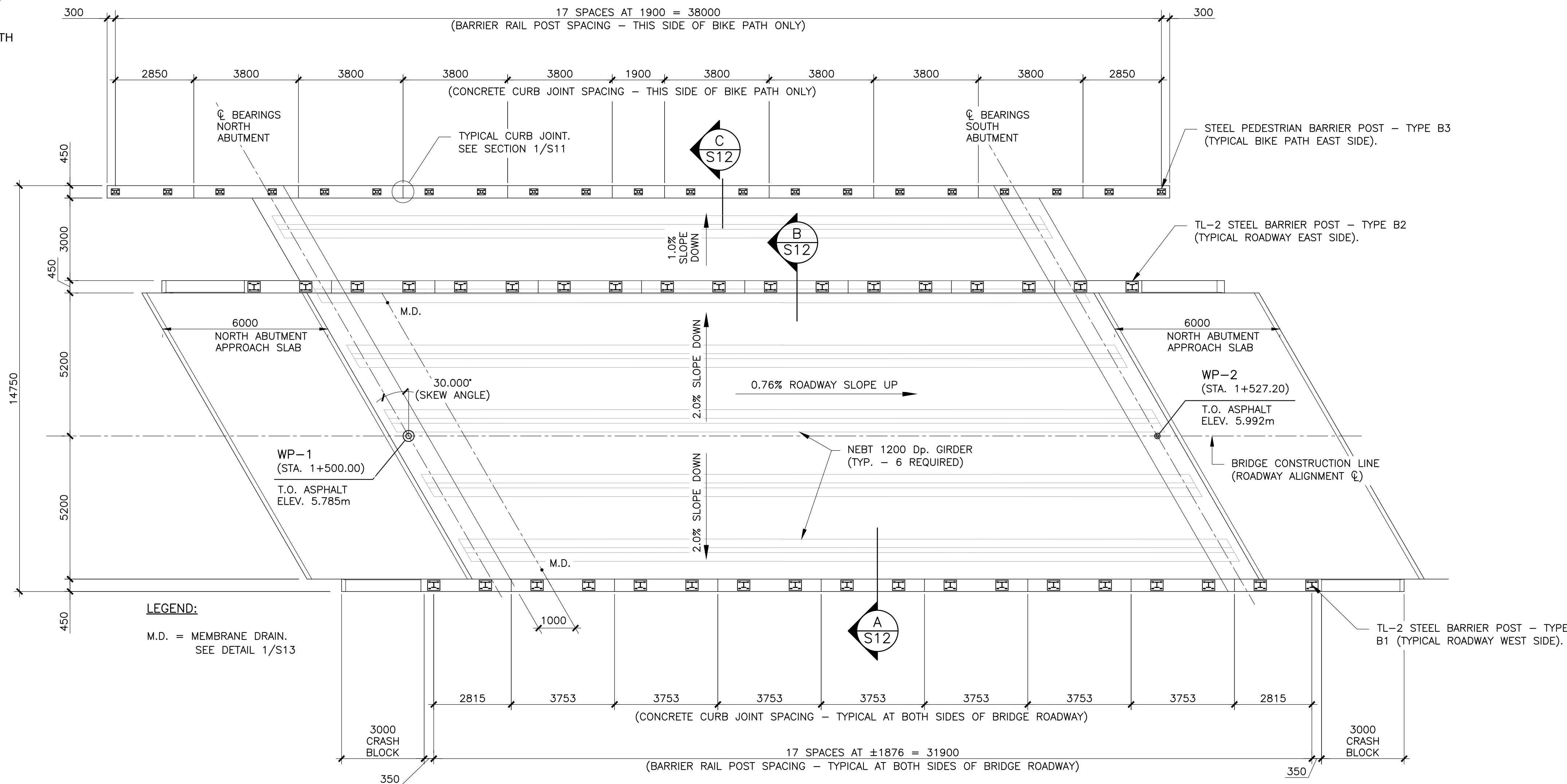
BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE  
 KOUCHIBOUGUAC NATIONAL PARK

GIRDER LAYOUT AND DETAILS

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager	Administrateur de projets	
project number	1620	no. du projet
drawing no.	S10	no. du dessin

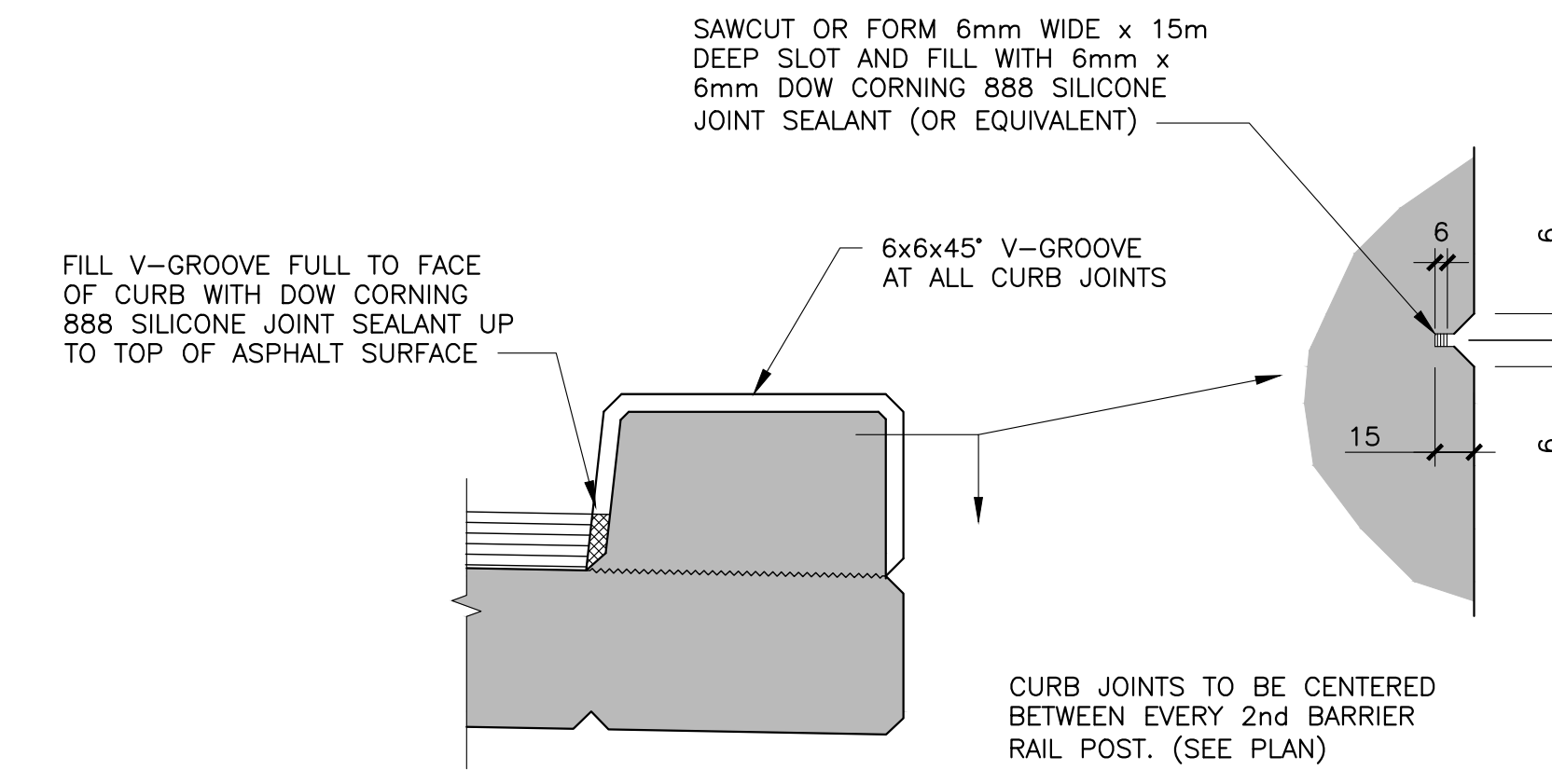
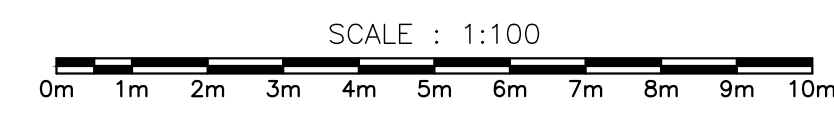


PLAN NORTH

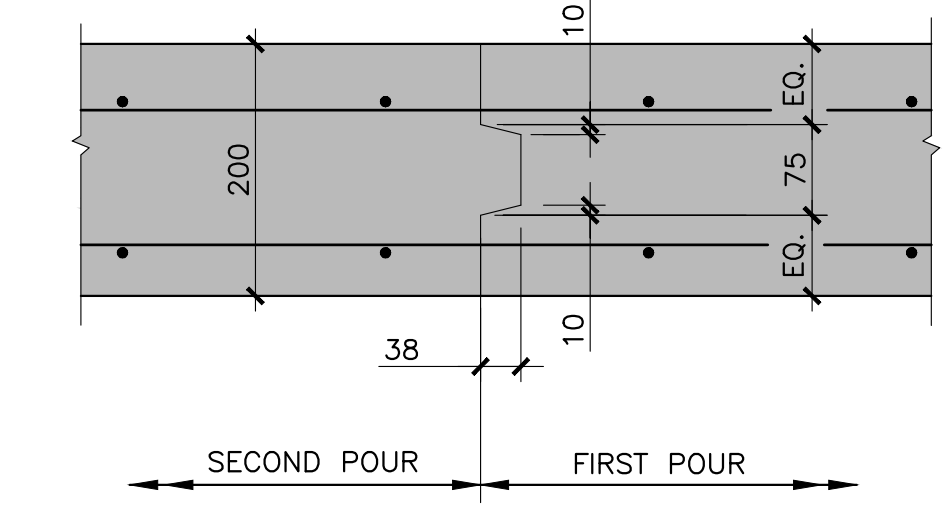
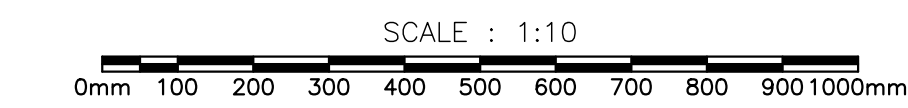


**LEGEND:**  
M.D. = MEMBRANE DRAIN.  
SEE DETAIL 1/S13

### BRIDGE DECK PLAN



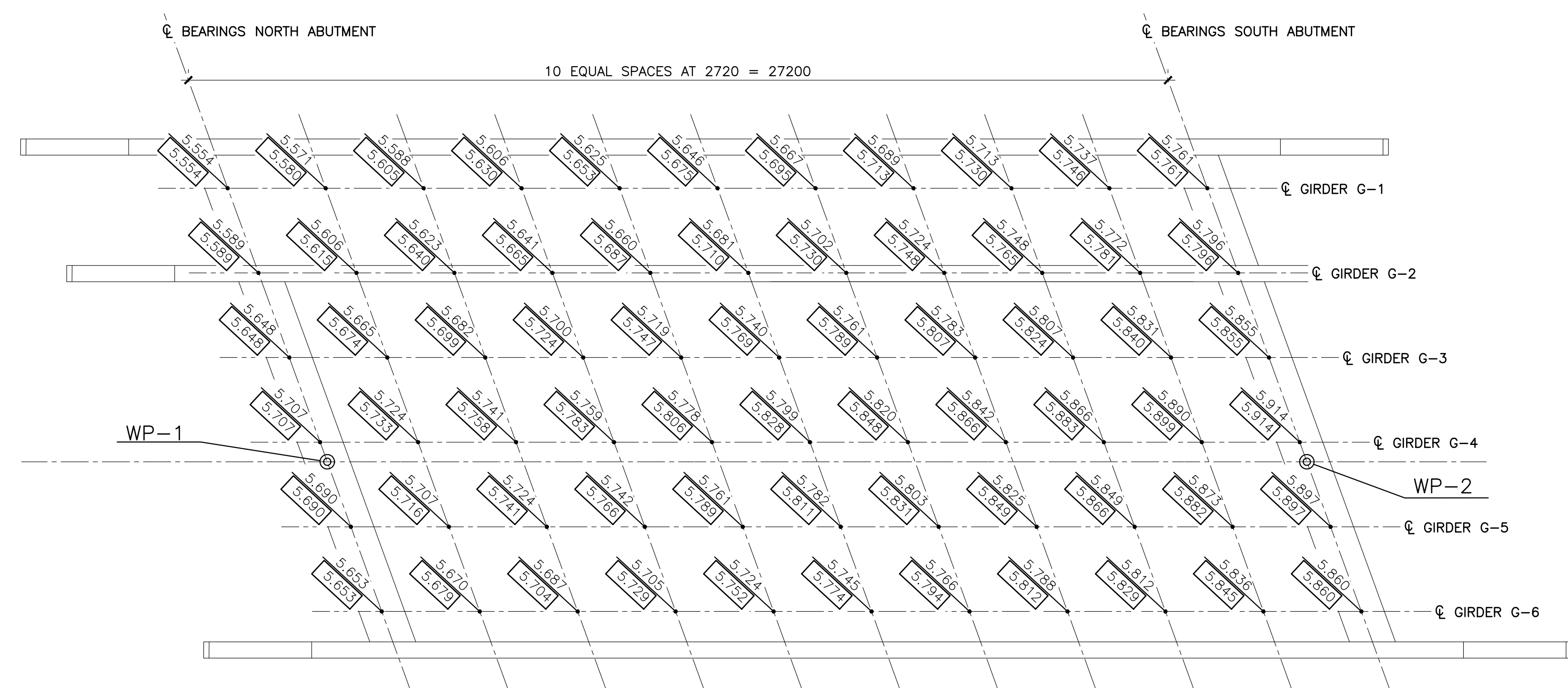
### TYPICAL CURB JOINT



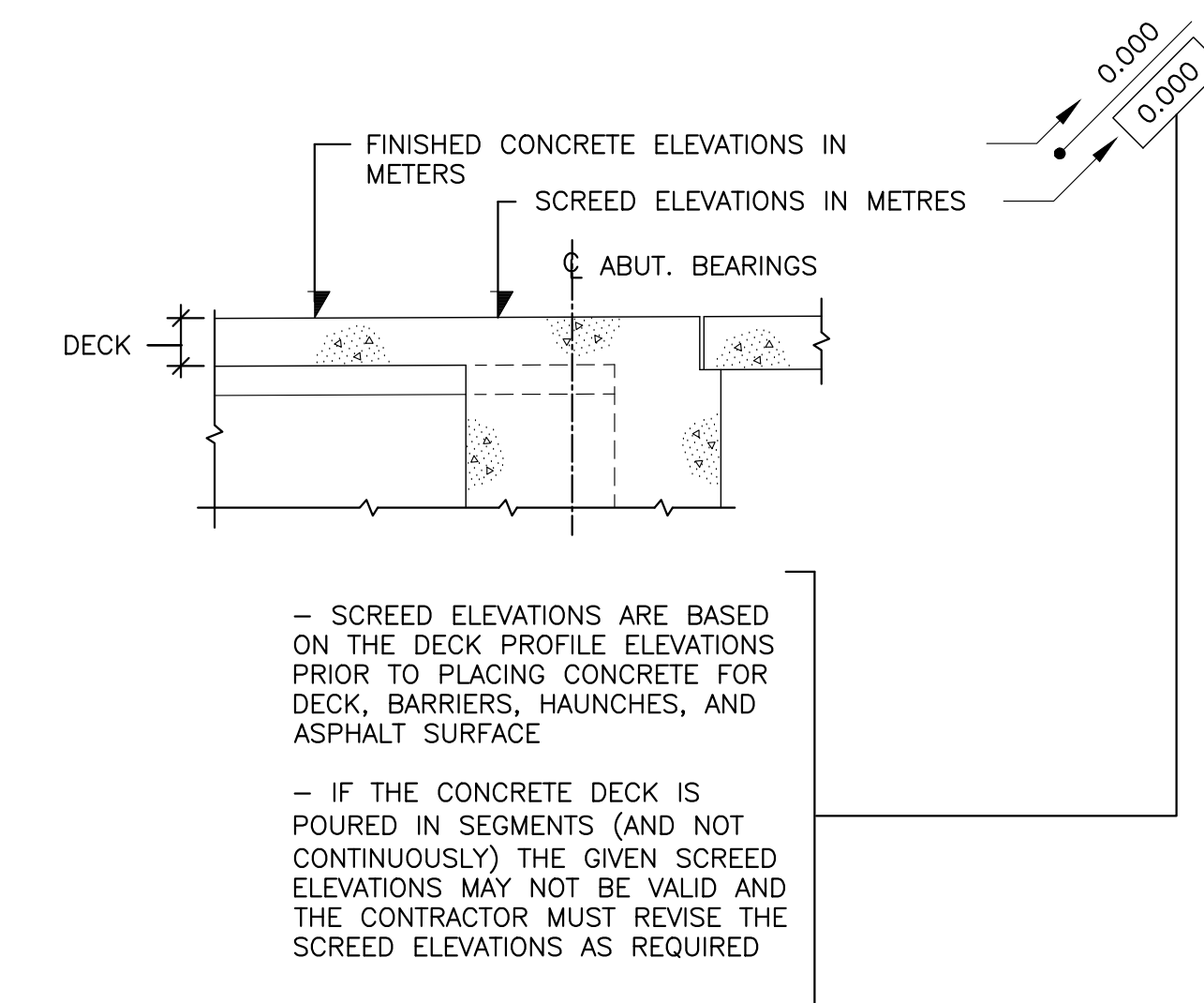
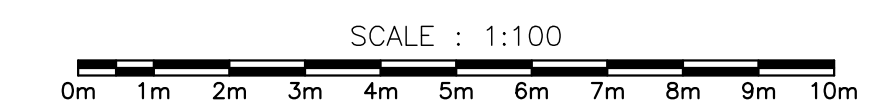
**NOTE:**  
TERMINATE KEY 75mm IN FROM  
EDGE OF DECK (BOTH SIDES)

### TYPICAL BRIDGE DECK CONSTRUCTION JOINT

NOT TO SCALE

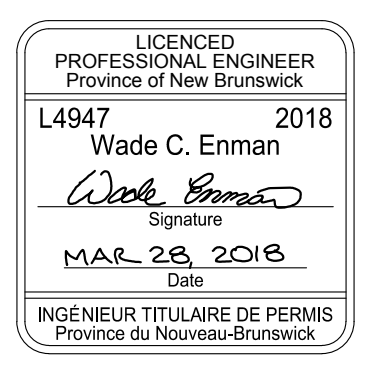


### SCREED ELEVATIONS LAYOUT



### BRIDGE DECK CAST-IN-PLACE CONCRETE NOTES

- ALL CAST-IN-PLACE CONCRETE SHALL CONFORM TO CSA STANDARD A23.1, AND TEST METHODS FOR CONCRETE TO CSA STANDARD A23.2.
- ALL EXPOSED CORNERS OF CONCRETE TO HAVE 25mm CHAMFERS.
- LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONCRETE PLACEMENT TO BE APPROVED BY THE ENGINEER.
- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS: ALL CAST-IN-PLACE CONCRETE; 45 MPa WITH 20mm MAX. AGGREGATE SIZE AND 5% TO 8% AIR ENTRAINMENT. MAXIMUM WATER-CEMENT RATIO 0.40.
- ALL REINFORCEMENT OF CONCRETE DECK, CURBS, AND CRASH BLOCKS TO BE GLASS-FIBER REINFORCED POLYMER BARS (GFRP). SEE REINFORCEMENT DRAWINGS FOR DETAILS.
- CONCRETE COVER TO REINFORCEMENT AS NOTED ON REINFORCEMENT DRAWINGS.
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.



WSP Canada Inc.  
195 MacEwan Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

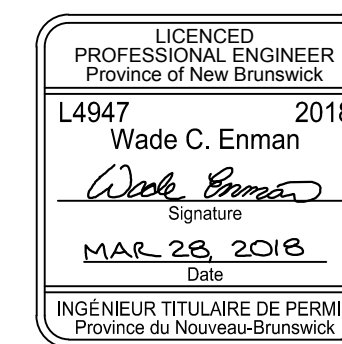
0	ISSUED FOR TENDER	MR 28 2018
---	-------------------	------------

revisions: project: **BRIDGE REPLACEMENT RANKIN BROOK BRIDGE** projet: **KOUCHIBOUGUAC NATIONAL PARK**

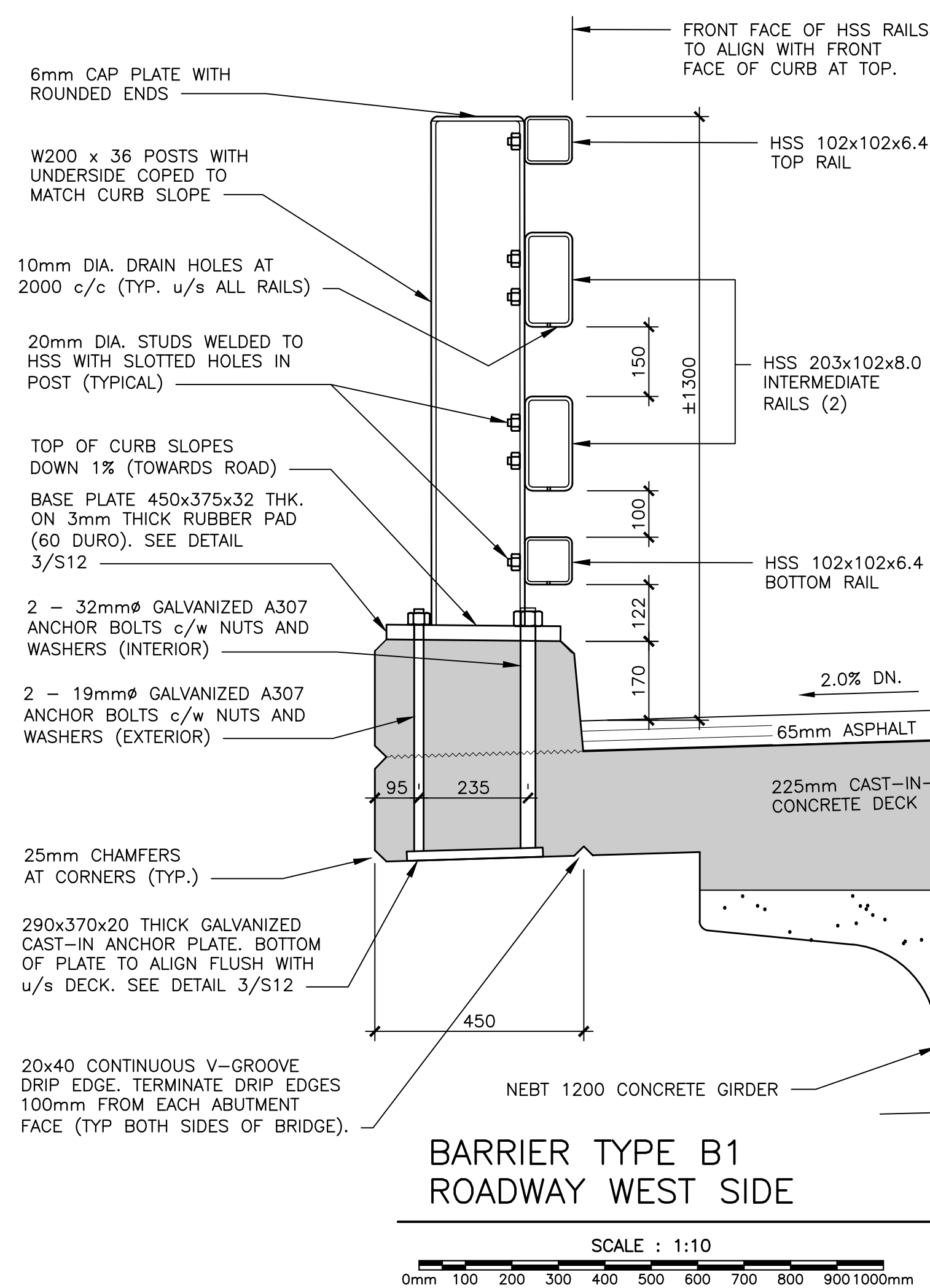
### DECK PLAN AND SCREED ELEVATIONS PLAN

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager	Administrateur de projets	
project number	1620	no. du projet
drawing no.	S11	no. du dessin



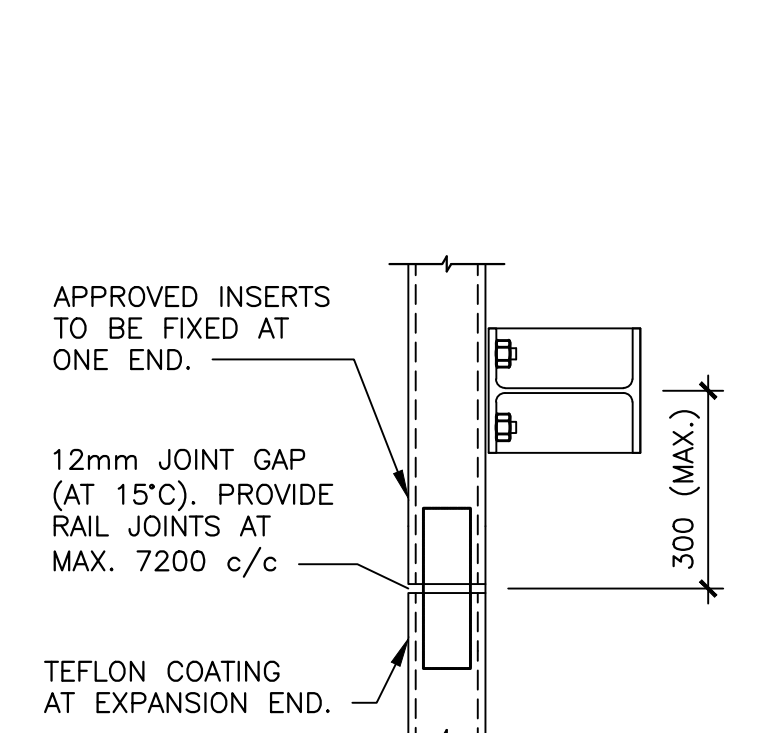


WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8011 www.wsp.com



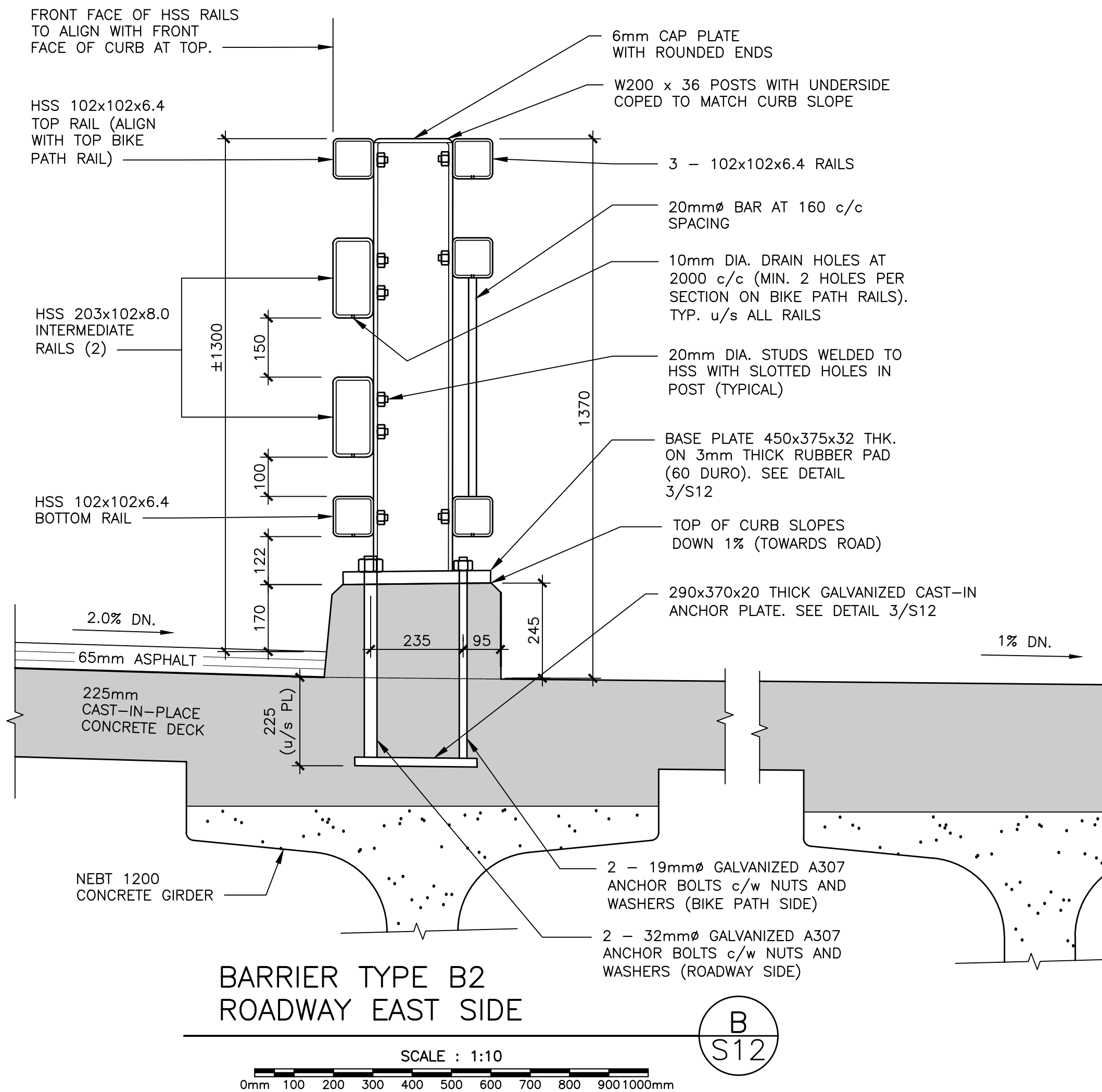
**BARRIER TYPE B1  
ROADWAY WEST SIDE**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm



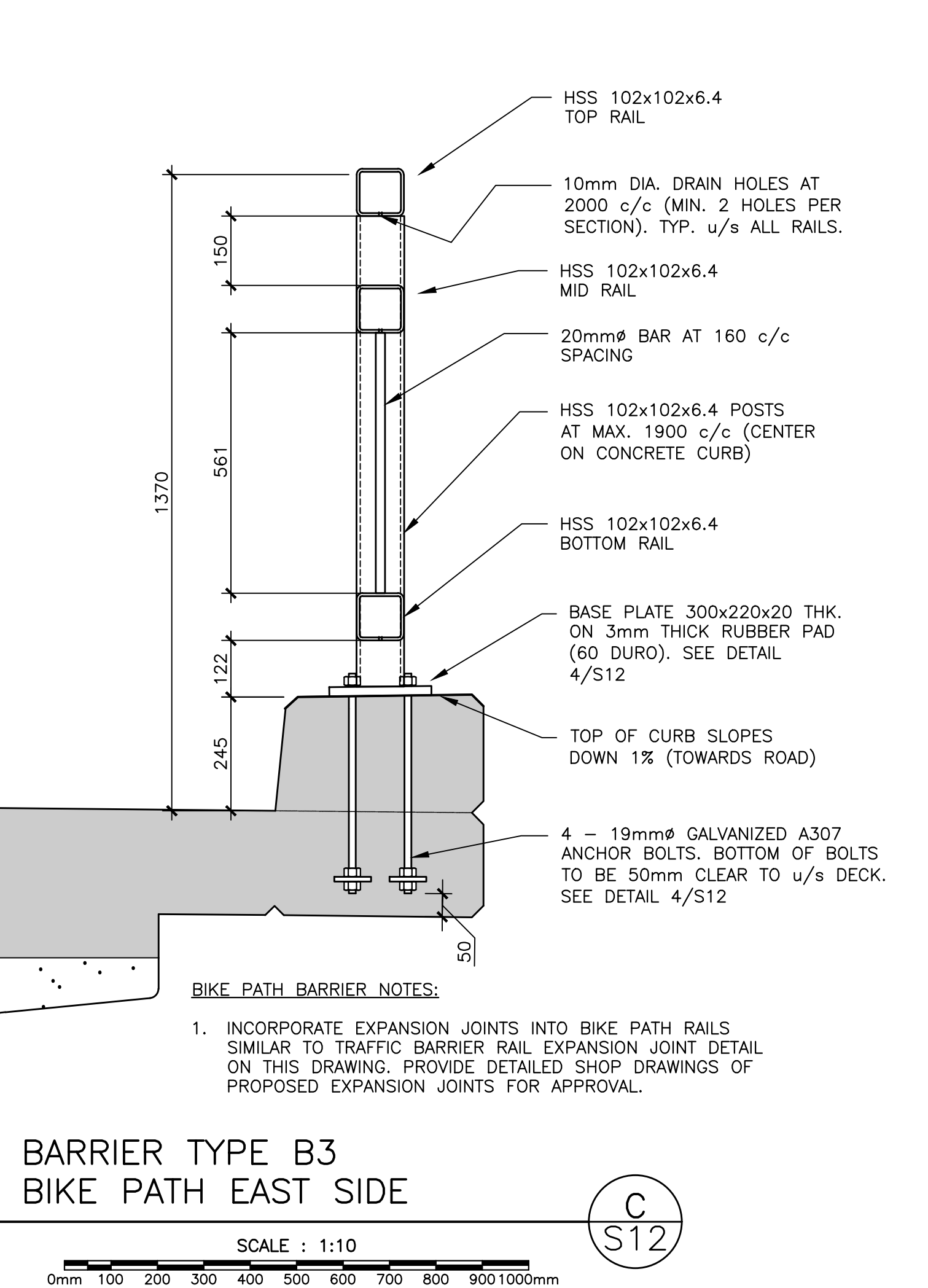
**TYPICAL TRAFFIC BARRIER  
RAIL EXPANSION JOINT**

- BARRIER SYSTEM NOTES:**
1. ALL STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21
  2. INSIDE FACE OF ALL BARRIER RAILS TO ALIGN WITH INSIDE FACE OF CRASH BLOCKS. KINK RAIL EXTENSIONS (BEYOND LAST POST) AS REQUIRED.
  3. ALL ASSEMBLIES (RAILS, POSTS, HARDWARE, ETC.) TO BE GALVANIZED TO G164 AFTER FABRICATION.
  4. FABRICATE ASSEMBLIES IN LARGEST SECTIONS PRACTICAL. GRIND SMOOTH ALL WELDS AND CLEAN ASSEMBLIES AS REQUIRED TO FACILITATE HOT-DIP GALVANIZING PROCESS.
  5. SHOP DRILL ALL HOLES FOR DRAINAGE (u/s ALL RAILS) AS WELL AS ANY VENTING HOLES REQUIRED FOR GALVANIZING PROCESS PRIOR TO SHIPPING. ALL VENTING HOLES TO BE IN LEAST CONSPICUOUS AREAS POSSIBLE. TORCH-CUTTING OF VENTING OR DRAINAGE HOLES IS NOT ACCEPTABLE.



**BARRIER TYPE B2  
ROADWAY EAST SIDE**

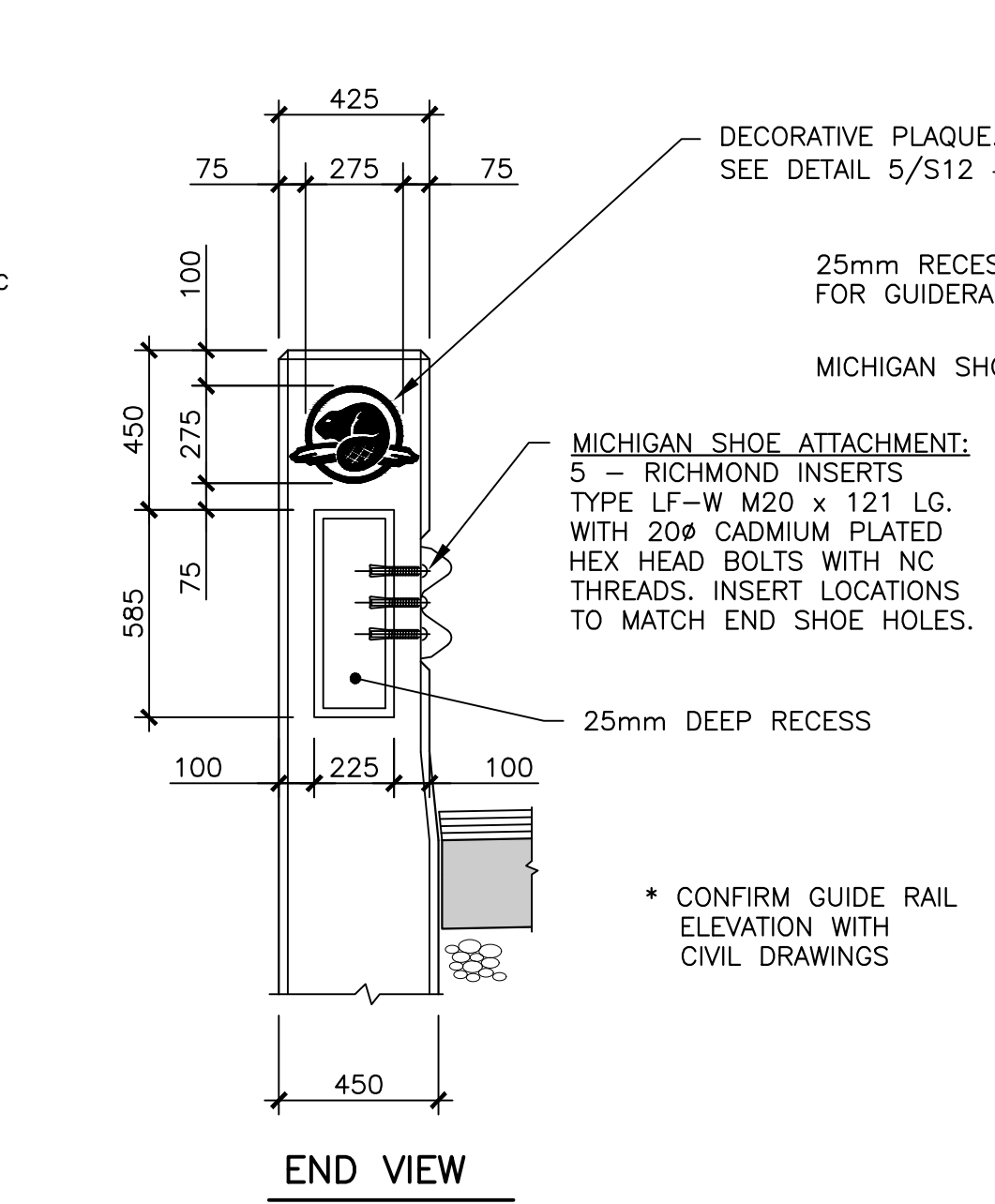
SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm



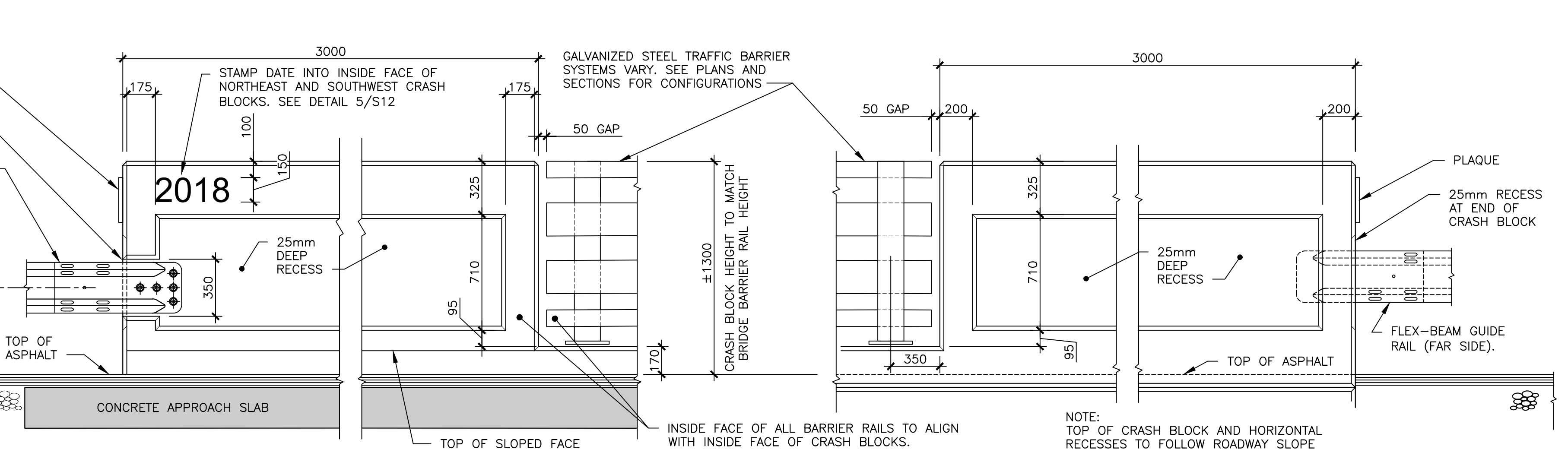
**BARRIER TYPE B3  
BIKE PATH EAST SIDE**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm

- BIKE PATH BARRIER NOTES:**
1. INCORPORATE EXPANSION JOINTS INTO BIKE PATH RAILS SIMILAR TO TRAFFIC BARRIER RAIL EXPANSION JOINT DETAIL ON THIS DRAWING. PROVIDE DETAILED SHOP DRAWINGS OF PROPOSED EXPANSION JOINTS FOR APPROVAL.



**END VIEW**

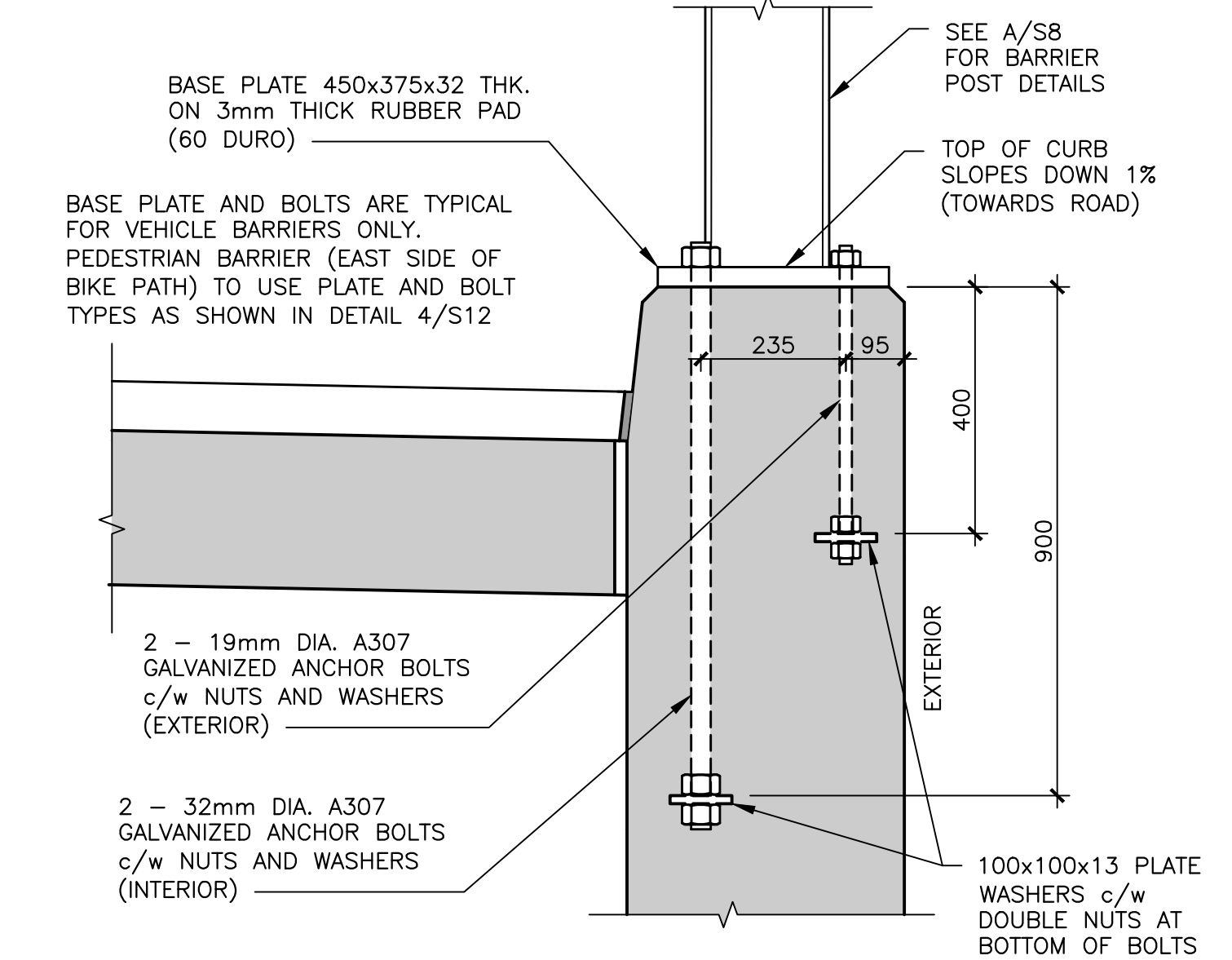


**BARRIER INSIDE FACE ELEVATION (BOTH SIDES OF ROADWAY)**

**BARRIER OUTSIDE FACE ELEVATION (BOTH SIDES OF ROADWAY)**

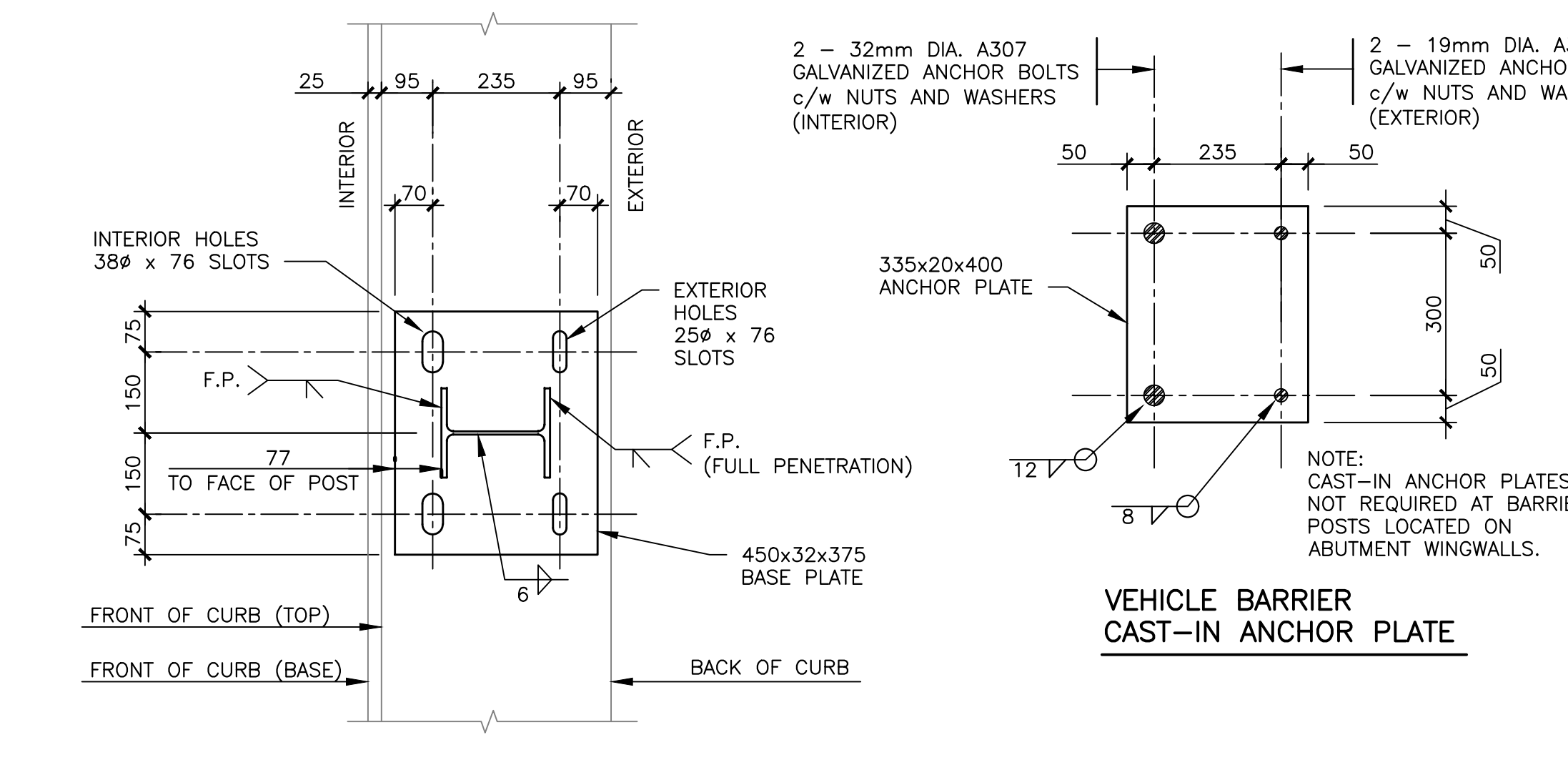
**TYPICAL CRASH BLOCK DETAILS**

SCALE: 1:20  
0mm 500mm 1000mm 1500mm 2000mm 2500mm



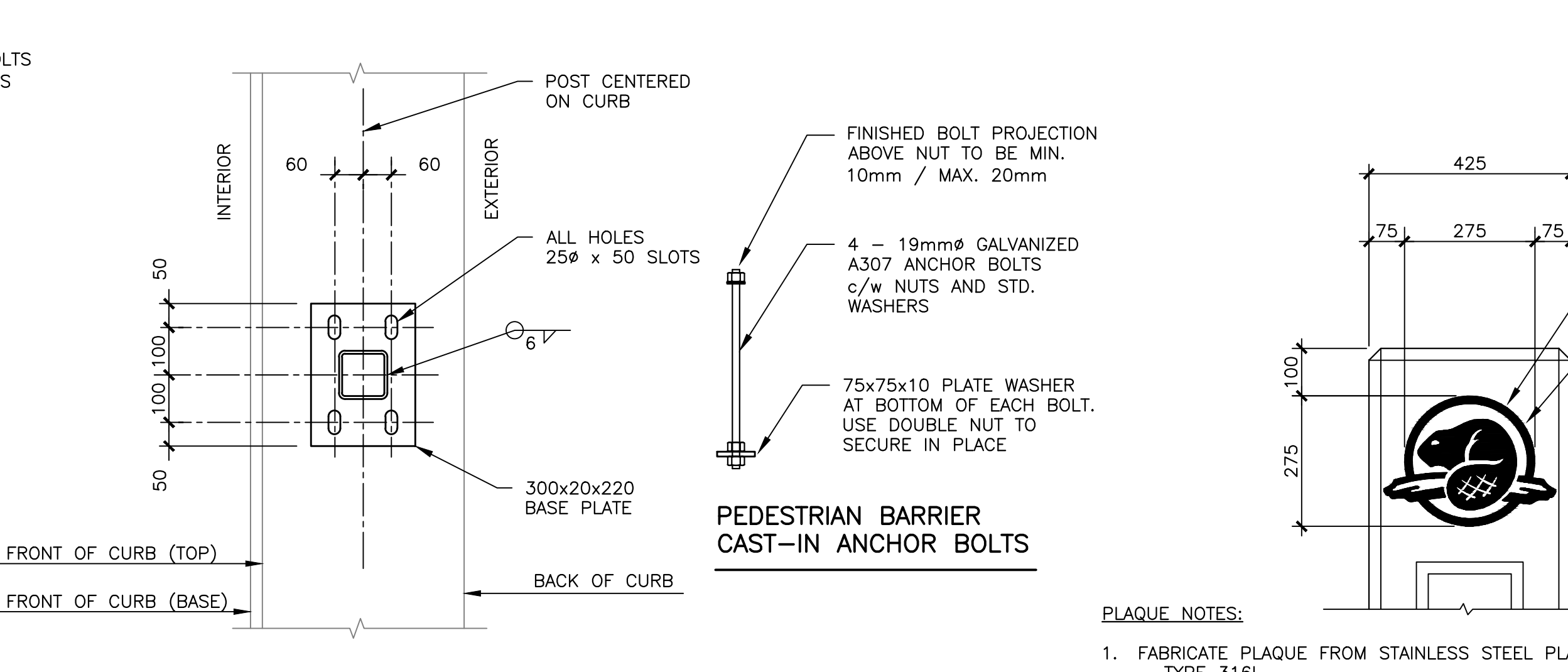
**BARRIER POST ANCHORAGE  
AT ABUTMENT WINGWALL**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm



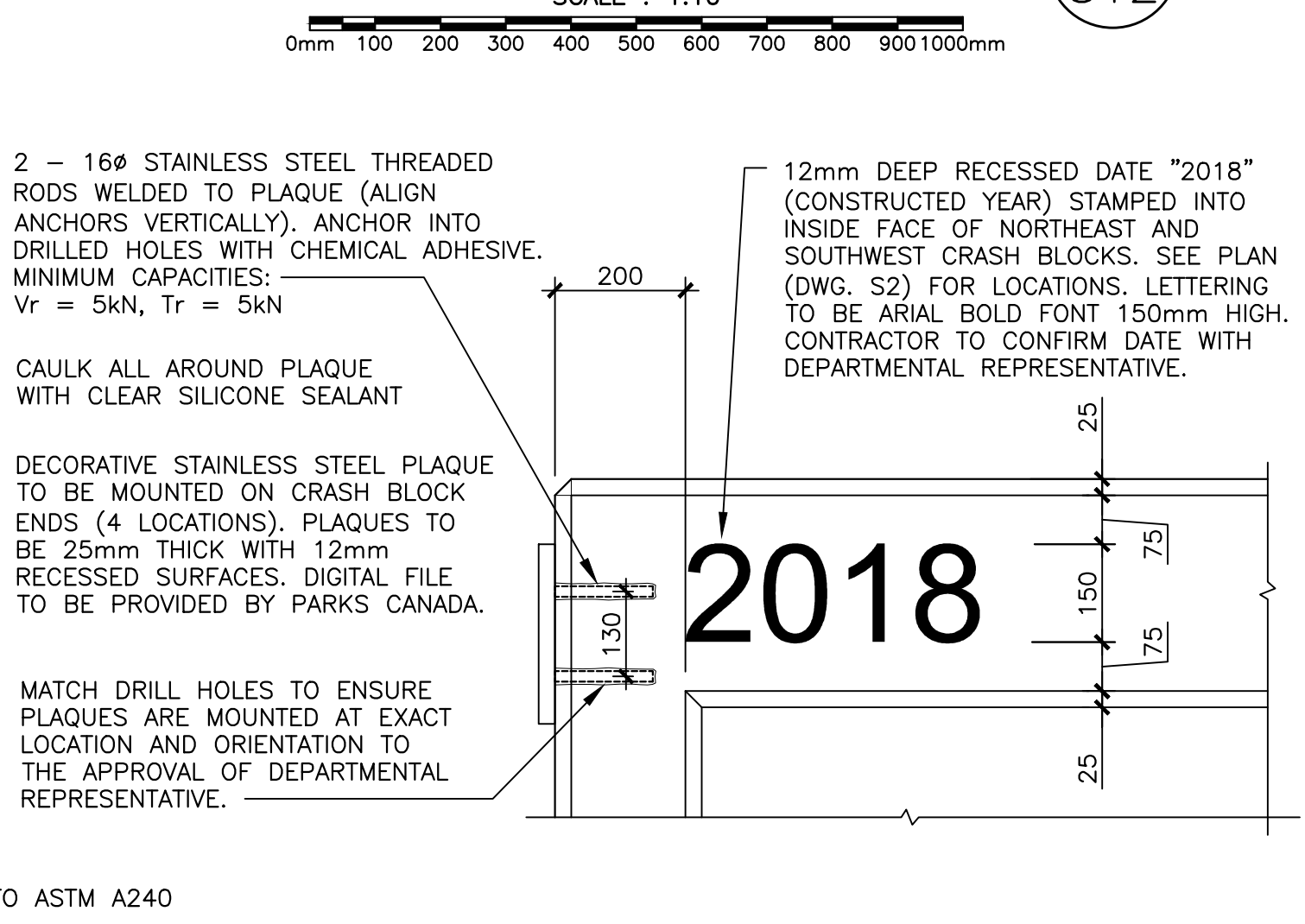
**VEHICLE BARRIER POST  
ANCHORAGE ALONG BRIDGE DECK**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm



**PEDESTRIAN BARRIER POST  
ANCHORAGE ALONG BRIDGE DECK**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm



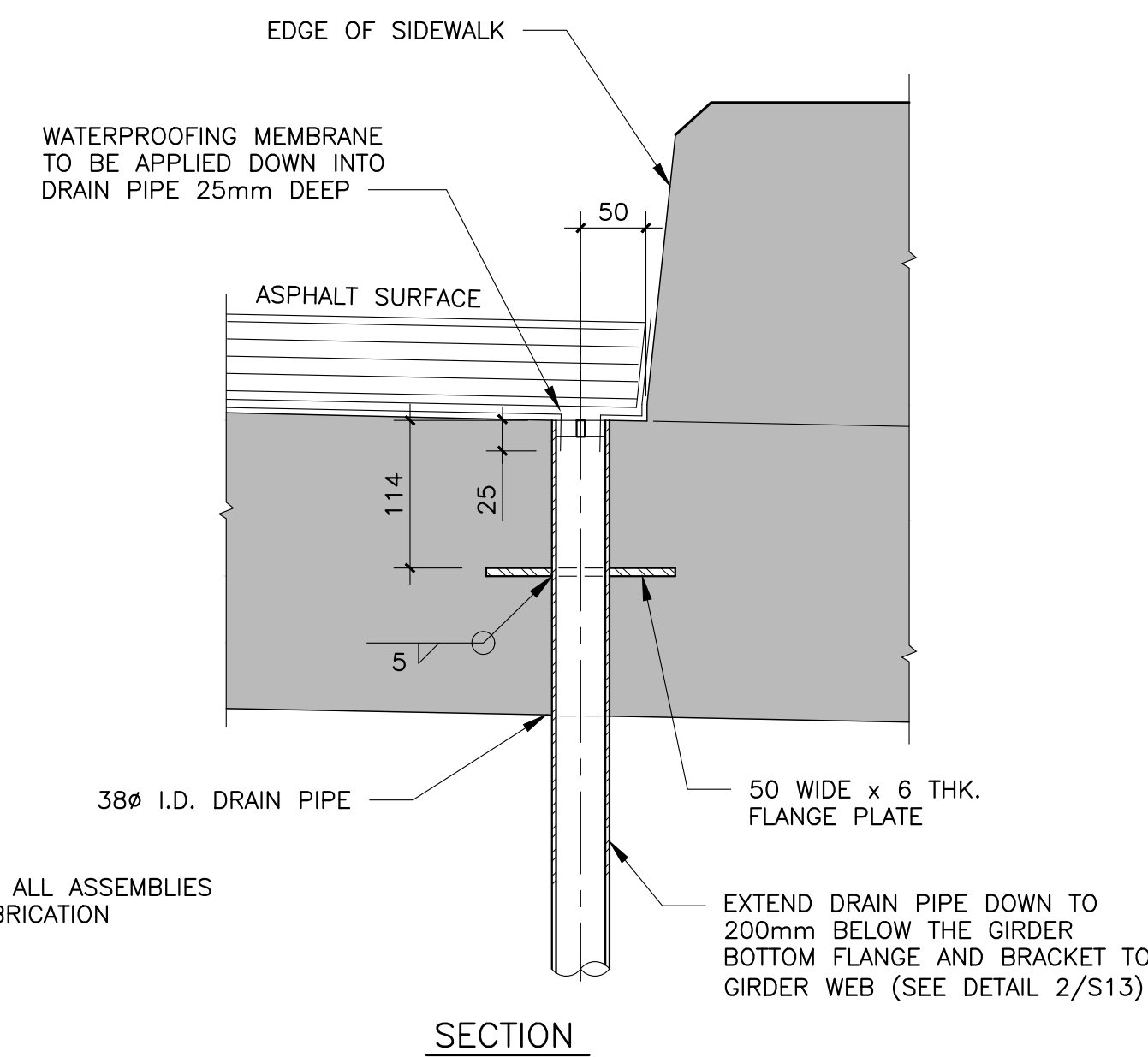
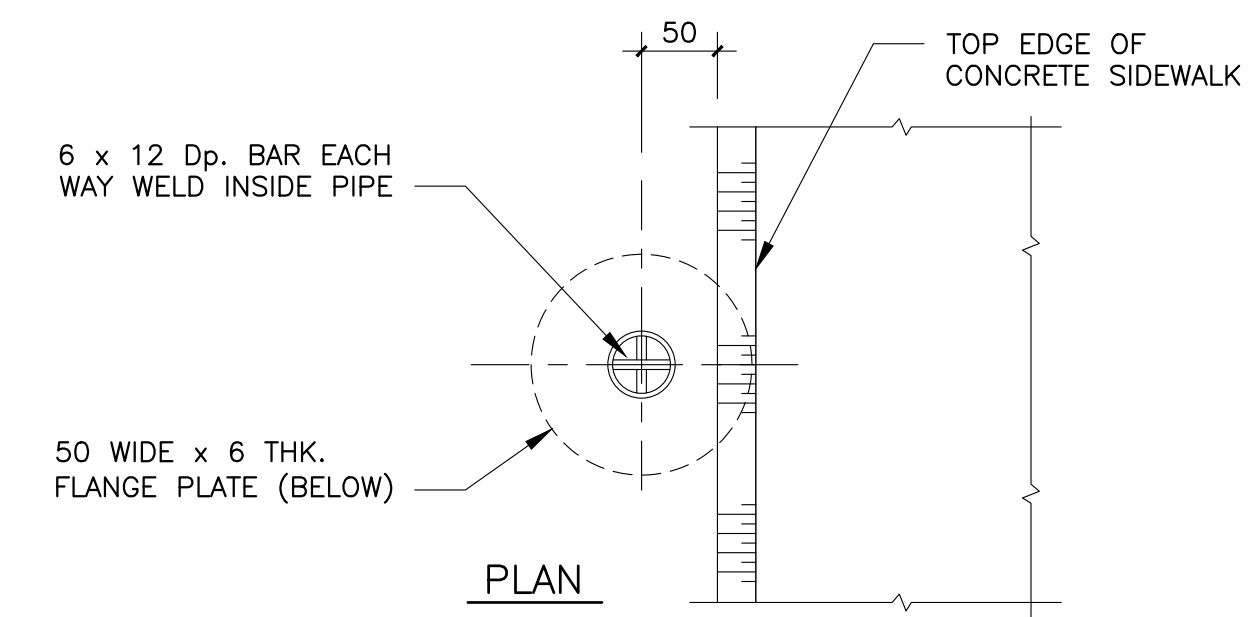
**DECORATIVE PLAQUE DETAILS  
AT ABUTMENT CRASH BLOCKS**

SCALE: 1:10  
0mm 100 200 300 400 500 600 700 800 900 1000mm

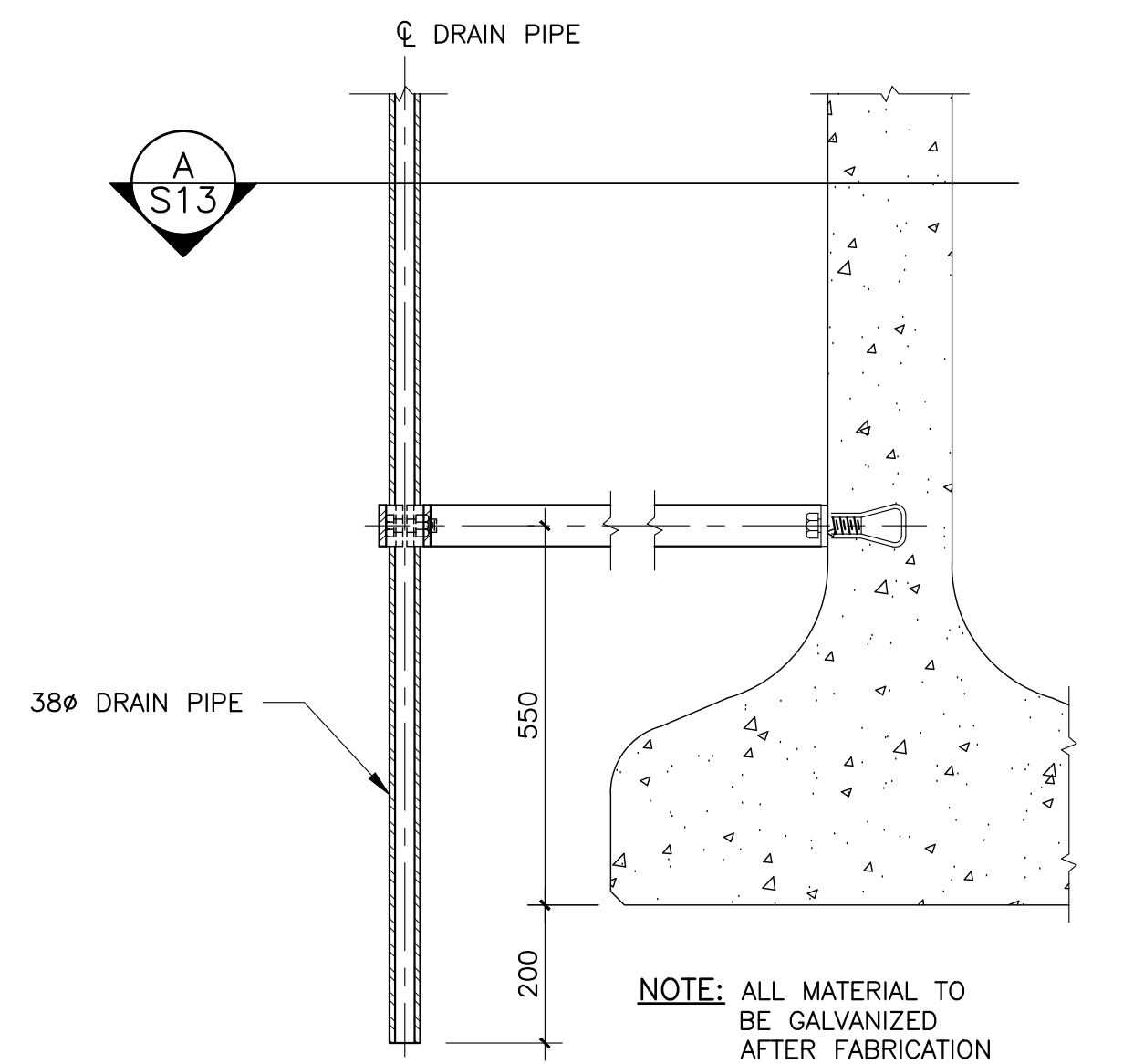
- PLAQUE NOTES:**
1. FABRICATE PLAQUE FROM STAINLESS STEEL PLATE TO ASTM A240 - TYPE 316L.
  2. STAINLESS STEEL THREADED RODS TO ASTM F593 - TYPE 316L.
  3. WELDING TO CSA W59 LATEST EDITION.
  4. ANCHORAGE HOLES TO BE DRILLED AND CLEANED AS PER CHEMICAL ADHESIVE MANUFACTURERS INSTRUCTIONS.
  5. PAINTING AND LACQUER FINISHING OF PLAQUE AS DIRECTED BY PARKS CANADA.

0	ISSUED FOR TENDER	MAR 28 2018
revisions		date
project	BRIDGE REPLACEMENT RANKIN BROOK BRIDGE	project
	KOUCHIBOUGUAC NATIONAL PARK	
drawing	BRIDGE BARRIER AND CRASH BLOCK DETAILS	design
designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager		Administrateur de projets
project number	1620	no. du projet
drawing no.	S12	no. du dessin

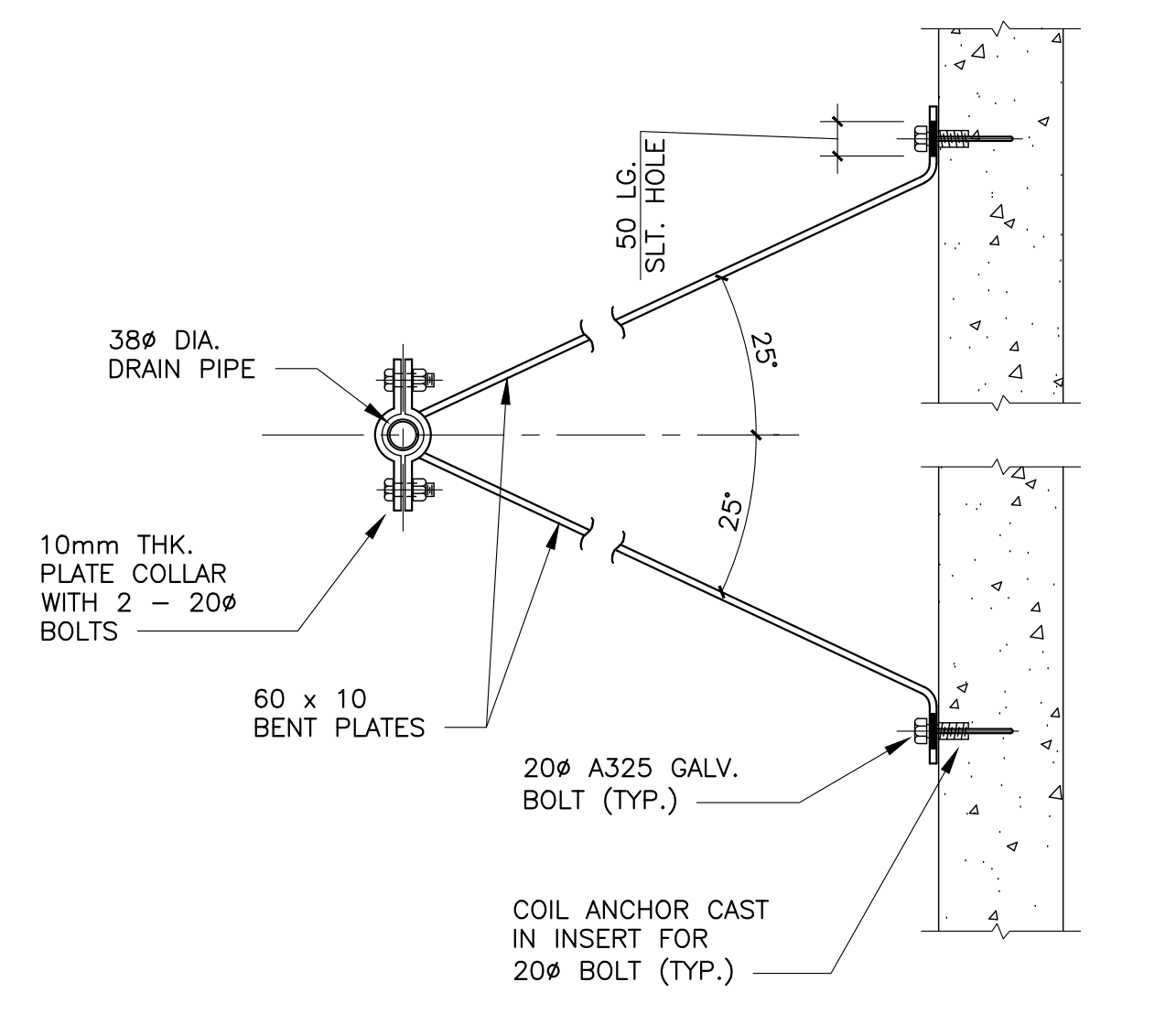




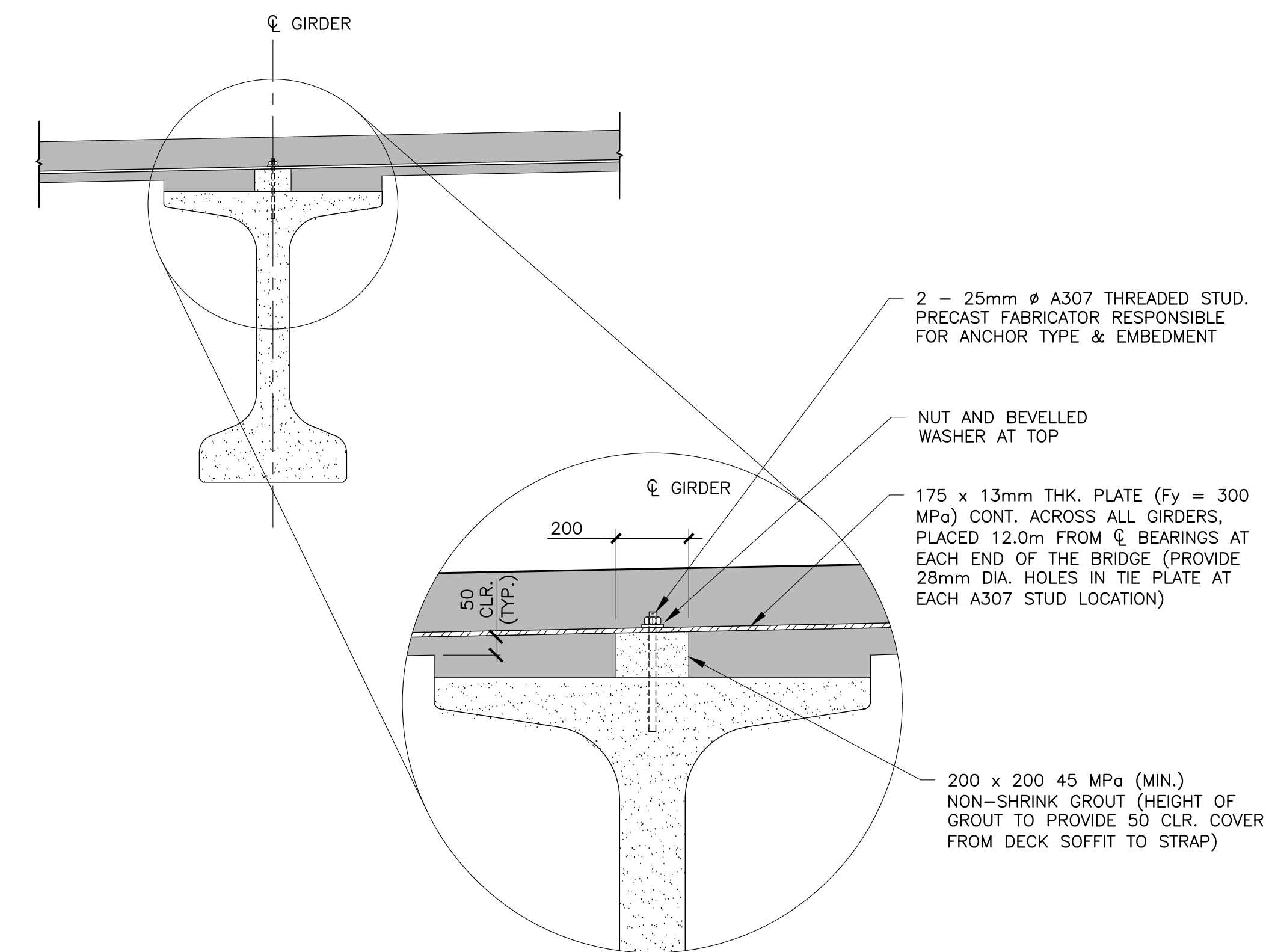
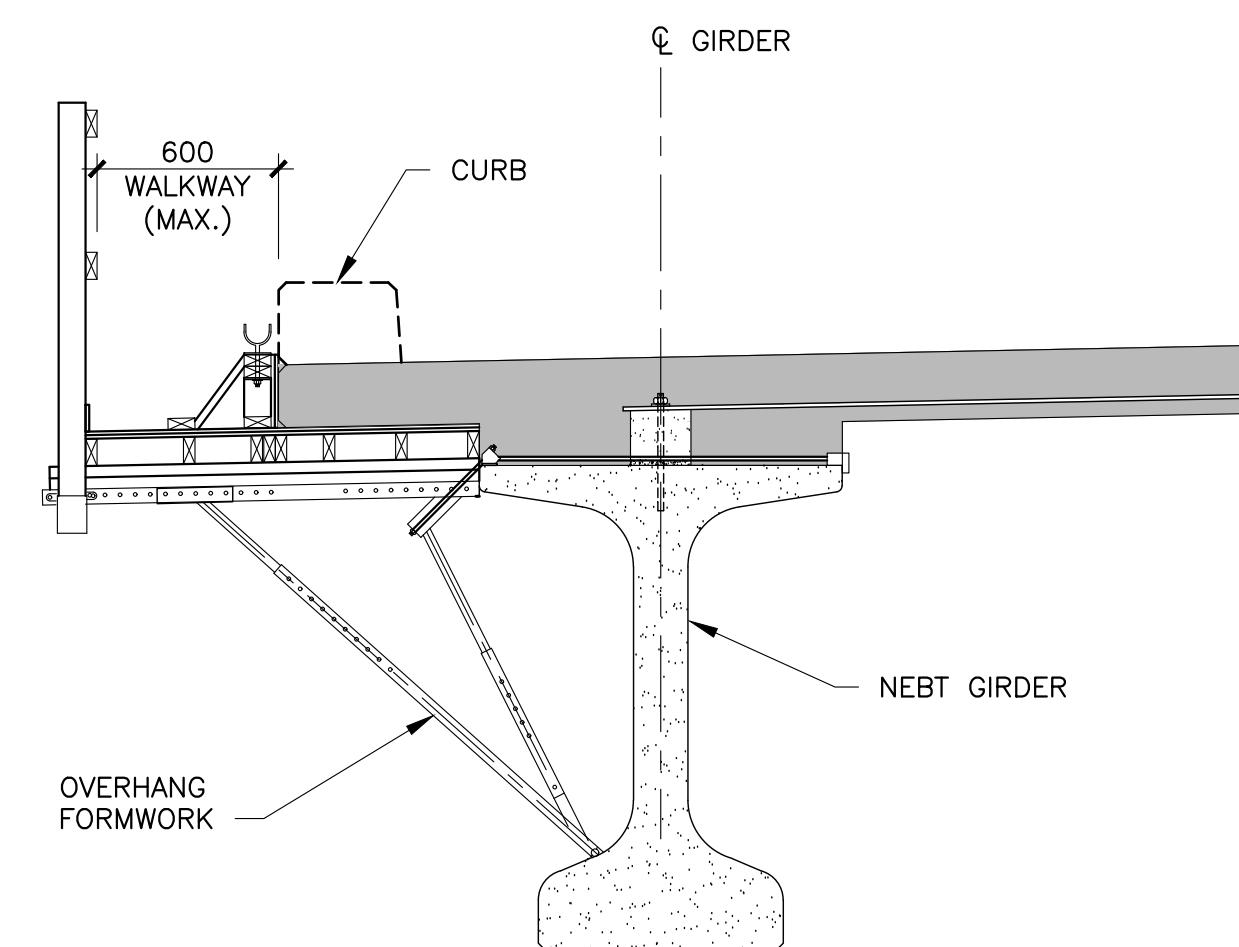
MEMBRANE DRAIN DETAIL  
 SCALE : 1:5  
 0mm 100 200 300 400 500mm



MEMBRANE DRAIN DOWNSPOUT DETAIL  
 SCALE : 1:10  
 0mm 100 200 300 400 500 600 700 800 900 1000mm



MEMBRANE DRAIN DOWNSPOUT SECTION  
 SCALE : 1:10  
 0mm 100 200 300 400 500 600 700 800 900 1000mm



TYP. GIRDER STABILITY TIE CONNECTION  
 N.T.S.

**NOTES**

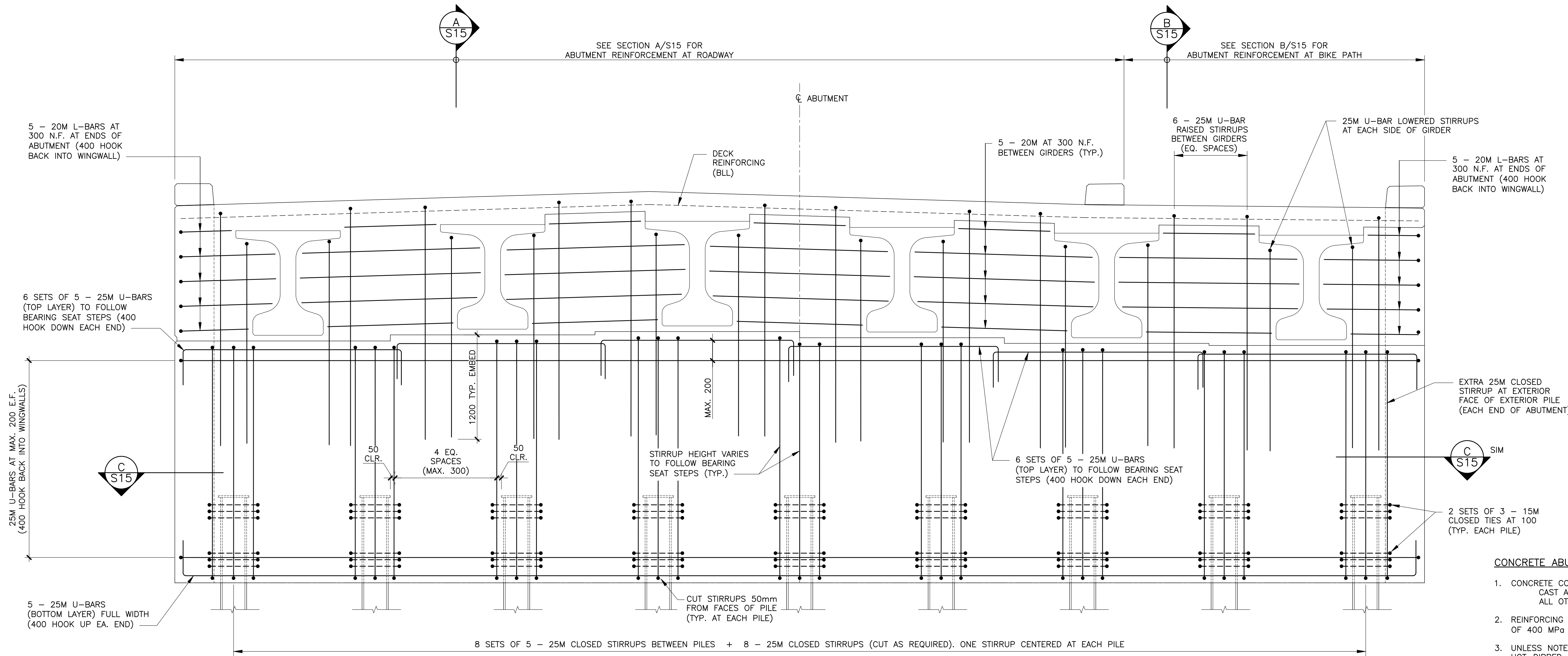
- ALL DECK FORMWORK SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN NEW BRUNSWICK FOR THE CURRENT CALENDAR YEAR.
- THE OVERHANG BRACKETS SHALL BE ORIENTED AS INDICATED UNLESS AN ALTERNATE DETAIL IS ACCEPTED IN WRITING BY THE ENGINEER.
- OVERHANG BRACKET SPACING SHALL BE LESS THAN OR EQUAL TO 1200mm o.c.
- TOP FLANGE LATERAL TIES SHALL BE FULLY INSTALLED AS SHOWN PRIOR TO CASTING ANY DECK CONCRETE.
- MAXIMUM FACTORED SCREED LOAD PER SIDE OF BRIDGE ASSUMED TO BE 15kN.
- DECK CASTING SHALL PROGRESS IN A BALANCED FASHION BY ESSENTIALLY BALANCING THE WET CONCRETE WEIGHT ON EACH SIDE OF THE GIRDERS. TO ACCOMPLISH THIS, CASTING SHALL PROGRESS ACROSS THE FULL WIDTH OF THE BRIDGE DECK WITH CASTING ADVANCING A MAXIMUM OF 3.0m± ON ONE SIDE OF A GIRDER VERSUS THE OTHER SIDE OF THE SAME GIRDER. THIS BALANCED PROCEDURE IS ESSENTIAL TO PREVENT OVER TURNING EFFECTS RESULTING FROM OVERHANG LOADS.
- THESE DETAILS ARE PROVIDED TO THE CONTRACTOR FOR GUIDANCE ONLY. AS STATED ON GIRDER DRAWINGS, THE STABILITY OF GIRDERS DURING ALL PHASES OF CONSTRUCTION REMAINS THE CONTRACTOR'S RESPONSIBILITY.
- ALL STABILITY TIE ASSEMBLIES SHALL BE GALVANIZED AFTER FABRICATION AS PER THE NBDOT STANDARD SPECIFICATION.

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK BRIDGE  
 projet  
 KOUCHIBOUGUAC NATIONAL PARK

drawing TYPICAL DETAILS  
 dessin

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager		Administrateur de projets
project number	1620	no. du projet
drawing no.	S13	no. du dessin



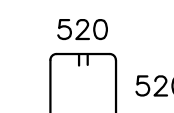
TYPICAL ABUTMENT FRONT ELEVATION  
 SHOWING NEAR FACE REINFORCEMENT

1  
 S14



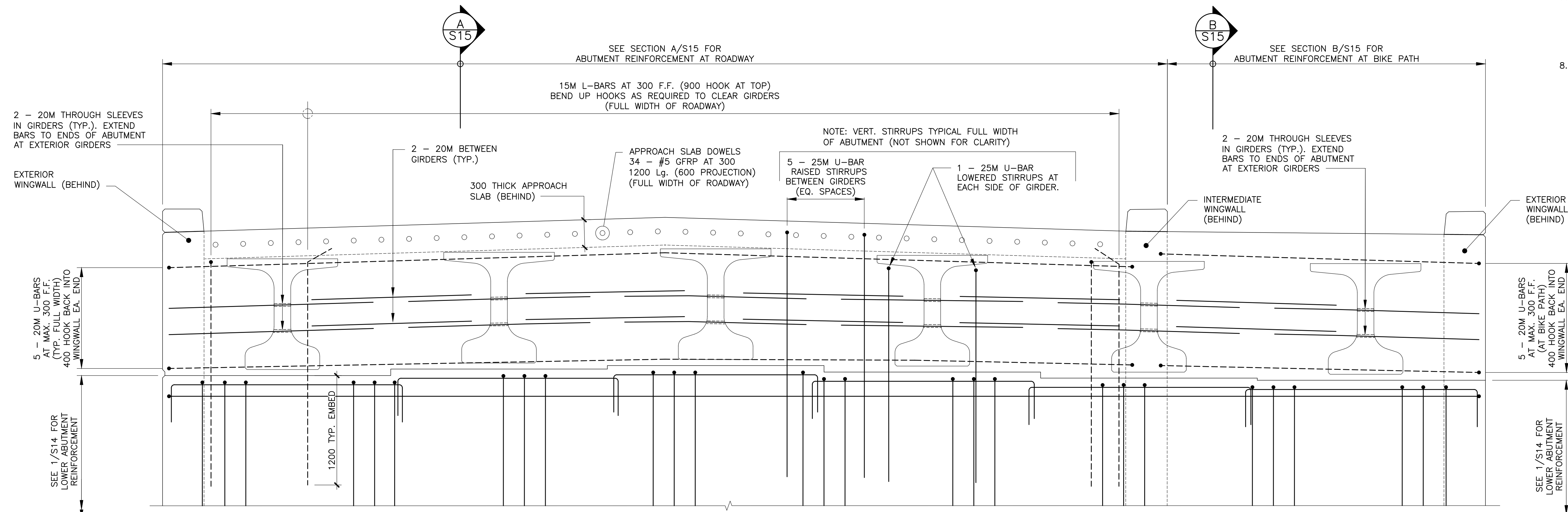
**CONCRETE ABUTMENT REINFORCEMENT NOTES:**

1. CONCRETE COVER TO REINFORCING STEEL TO BE AS FOLLOWS:  
 CAST AGAINST EARTH - 100mm  
 ALL OTHER - 70mm
2. REINFORCING STEEL TO SPECIFICATIONS WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
3. UNLESS NOTED OTHERWISE, ALL C.I.P. REINFORCING TO BE HOT-DIPPED GALVANIZED STEEL DEFORMED BARS.
4. ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING FORMWORK OR PLACING CONCRETE.
5. BEND REINFORCING BARS TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS.
6. REINFORCING BARS SPLICE AND EMBEDMENT LENGTHS TO BE CLASS "B" AS PER THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
7. ANY ADDITIONAL LAPS NOT SHOWN ON DRAWINGS WHICH ARE REQUIRED FOR CONSTRUCTION PURPOSES ARE TO BE CLASS "B" TENSION SPLICES DESIGNED BY THE CONTRACTOR AS PER THE LATEST EDITION OF THE CHBDC AND ARE TO BE DESIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
8. ALL SPLICE AND EMBEDMENT INFORMATION SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.



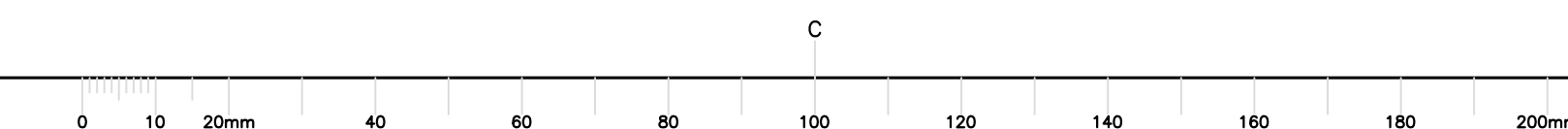
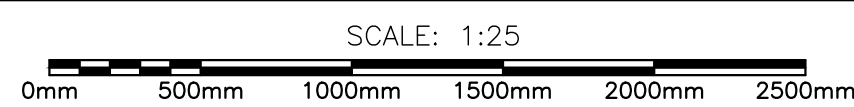
**REINFORCING LEGEND:**

- N.F. — NEAR FACE
- F.F. — FAR FACE
- E.F. — EACH FACE
- E.W. — EACH WAY
- I.F. — INSIDE FACE
- O.F. — OUTSIDE FACE
- T.U.L. — TOP UPPER LAYER
- T.L.L. — TOP LOWER LAYER
- B.U.L. — BOTTOM UPPER LAYER
- B.L.L. — BOTTOM LOWER LAYER
- CVR. — COVER
- CLR. — CLEAR



TYPICAL ABUTMENT FRONT ELEVATION  
 SHOWING MIDDLE & FAR FACE REINFORCEMENT

1A  
 S14



0	ISSUED FOR TENDER	MR 28 2018
revisions		date

project	BRIDGE REPLACEMENT RANKIN BROOK BRIDGE	projet
project	KOUCHIBOUGUAC NATIONAL PARK	projet

drawing	ABUTMENT REINFORCEMENT ELEVATIONS	dessin
---------	---	--------

designed **W. ENMAN** conçu

date **OCTOBER, 2017**

drawn **D. BEAMAN** dessiné

date **OCTOBER, 2017**

approved \_\_\_\_\_ approuvé

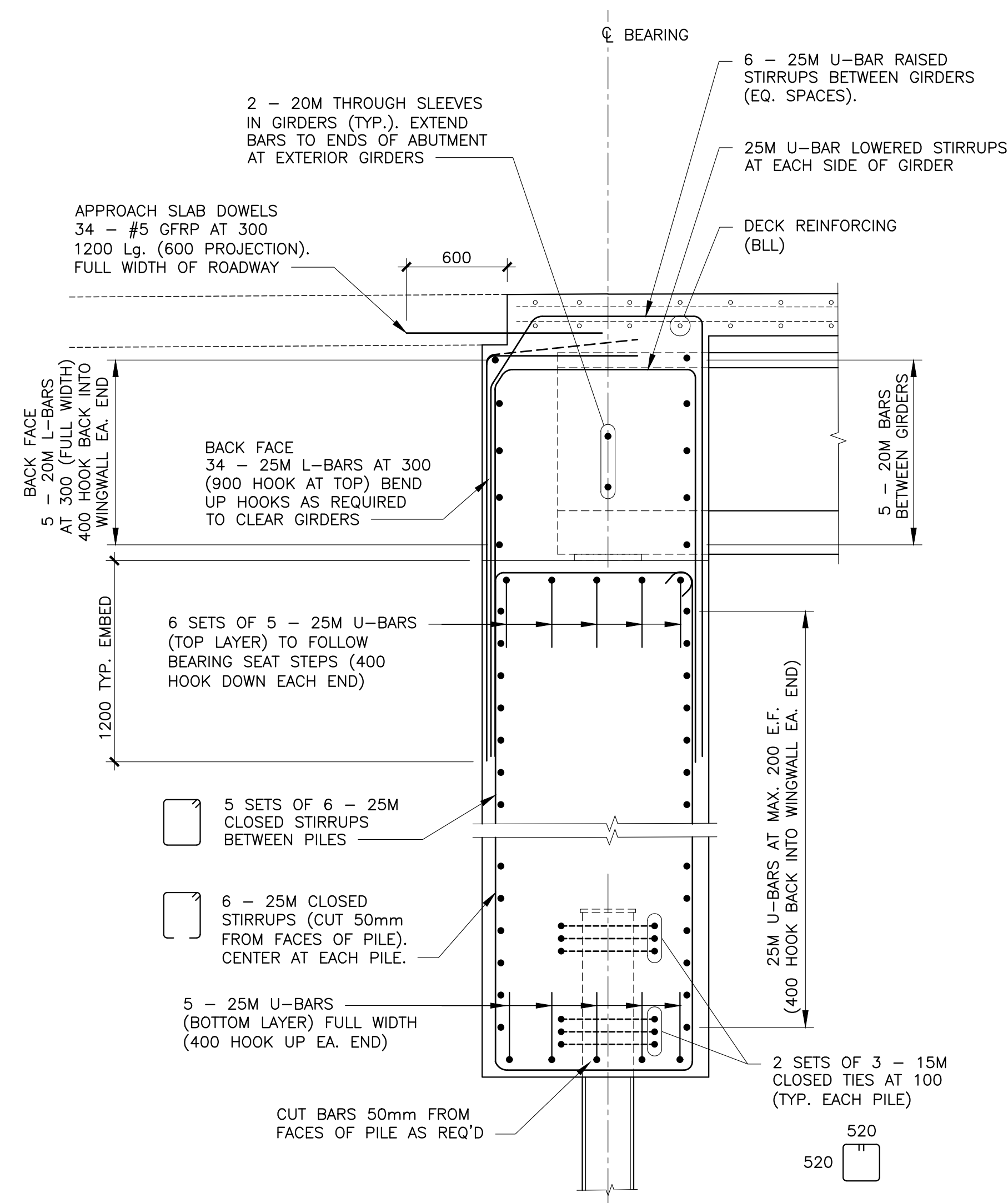
date \_\_\_\_\_

Tender \_\_\_\_\_ Soumission

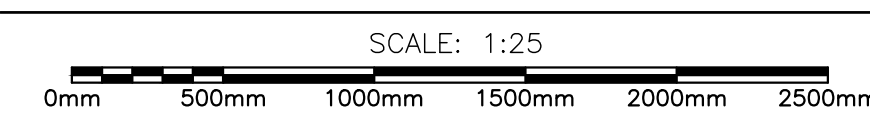
Project Manager \_\_\_\_\_ Administrateur de projets

project number **1620** no. du projet

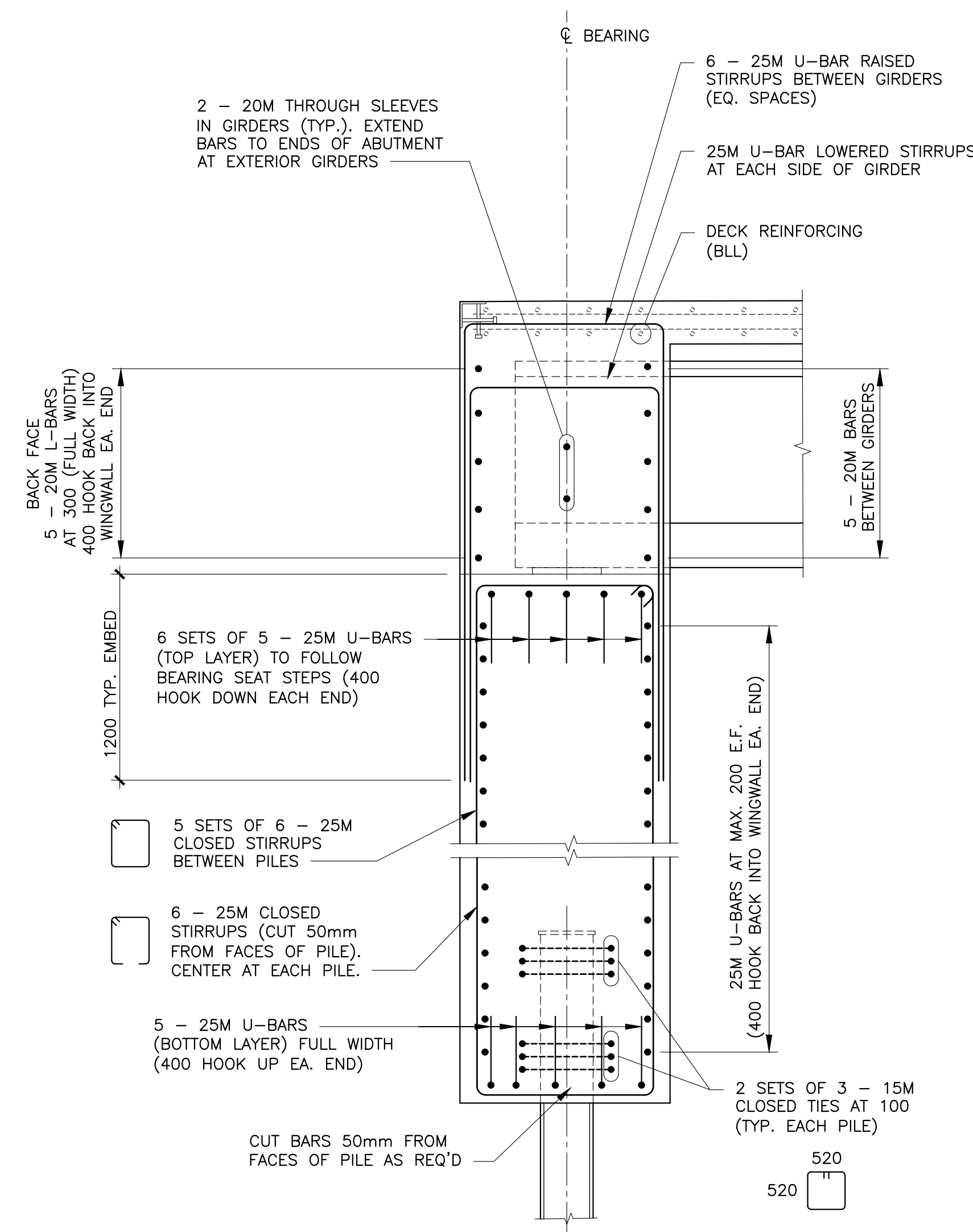
drawing no. **S14** no. du dessin



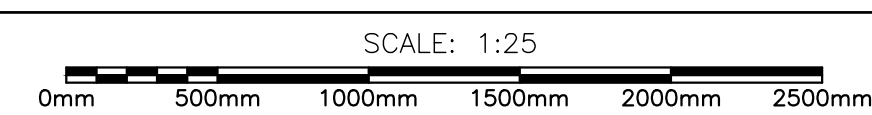
ABUTMENT SECTION TYPICAL THROUGH ROADWAY



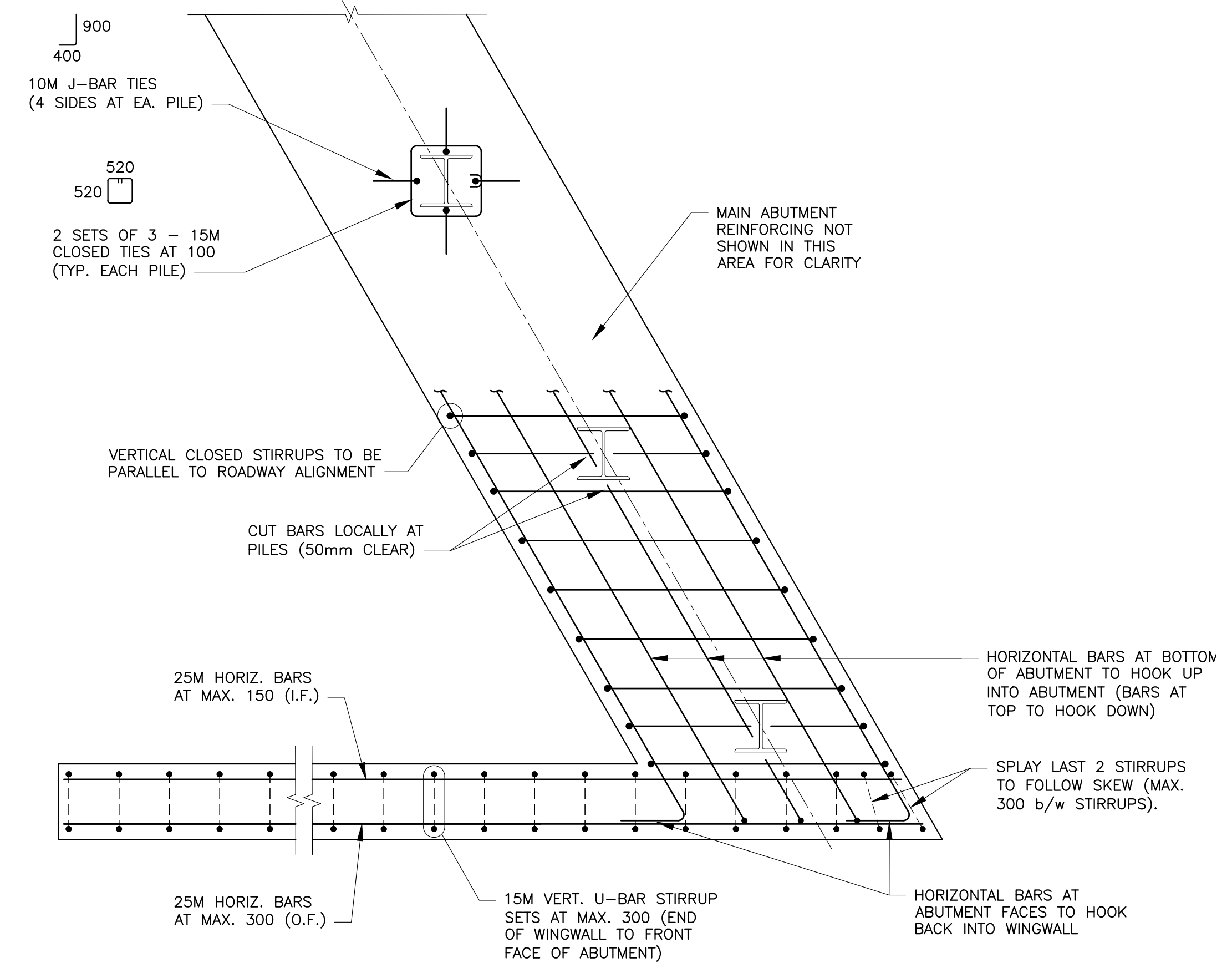
A S15



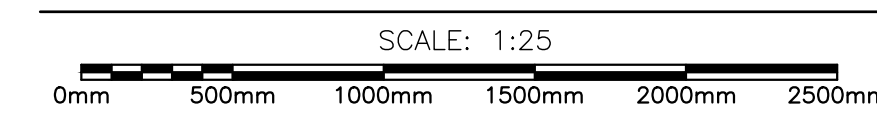
ABUTMENT SECTION TYPICAL THROUGH BIKE PATH



B S15



WINGWALL / ABUTMENT INTERFACE LAYOUT PLAN



C S15

REINFORCING LEGEND:

- N.F. — NEAR FACE
- F.F. — FAR FACE
- E.F. — EACH FACE
- E.W. — EACH WAY
- I.F. — INSIDE FACE
- O.F. — OUTSIDE FACE
- T.U.L. — TOP UPPER LAYER
- T.L.L. — TOP LOWER LAYER
- B.U.L. — BOTTOM UPPER LAYER
- B.L.L. — BOTTOM LOWER LAYER
- CVR. — COVER
- CLR. — CLEAR

0	ISSUED FOR TENDER	MR 28 2018
---	-------------------	------------

revisions		date
-----------	--	------

project		project
---------	--	---------

BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE  
 KOUCHIBOUGUAC  
 NATIONAL PARK

drawing		dessin
---------	--	--------

ABUTMENT REINFORCEMENT SECTIONS AND DETAILS

designed	W. ENMAN	conçu
----------	----------	-------

date	OCTOBER, 2017	
------	---------------	--

drawn	D. BEAMAN	dessiné
-------	-----------	---------

date	OCTOBER, 2017	
------	---------------	--

approved		approuvé
----------	--	----------

date		
------	--	--

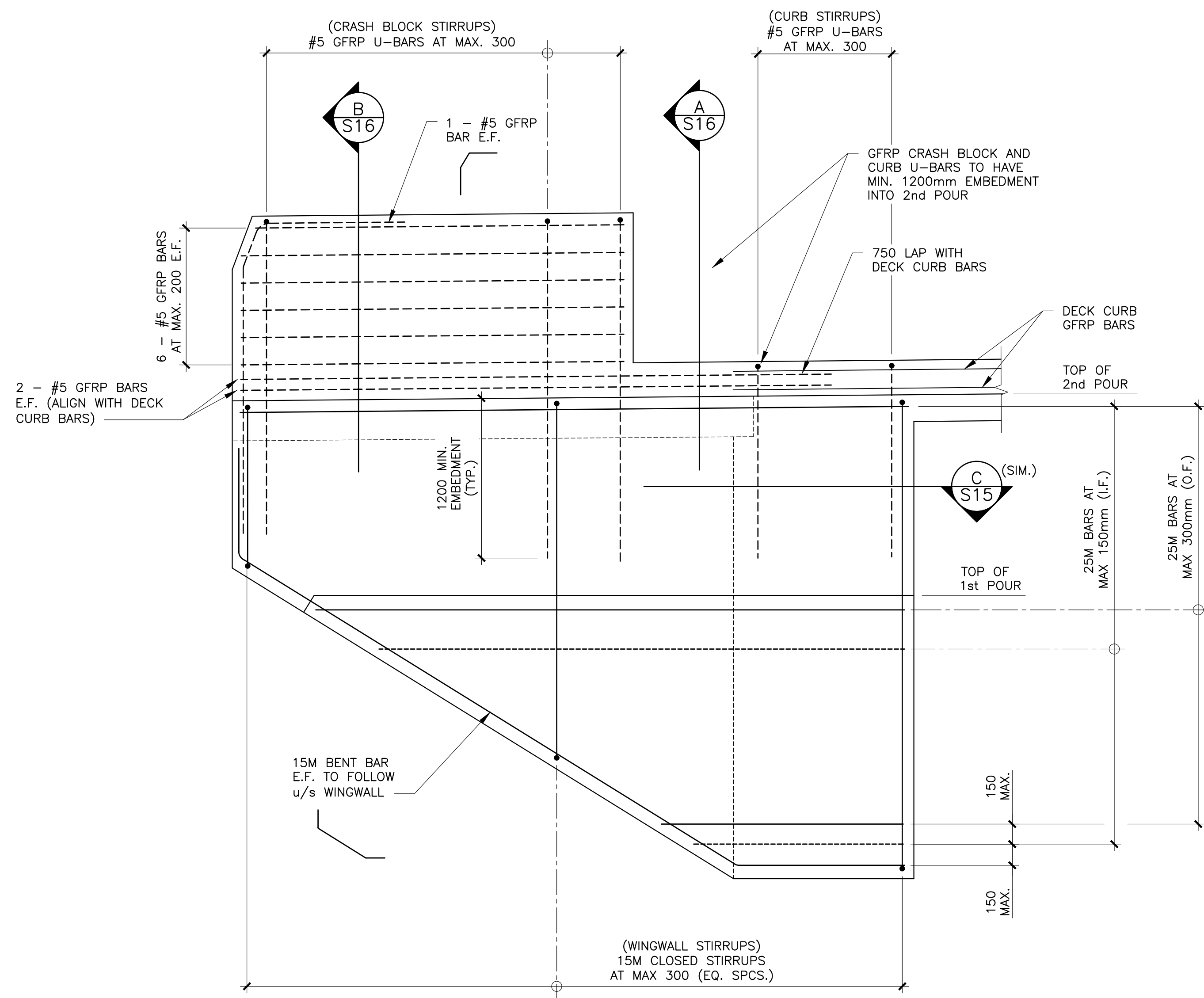
Tender		Submission
--------	--	------------

Project Manager		Administrateur de projets
-----------------	--	---------------------------

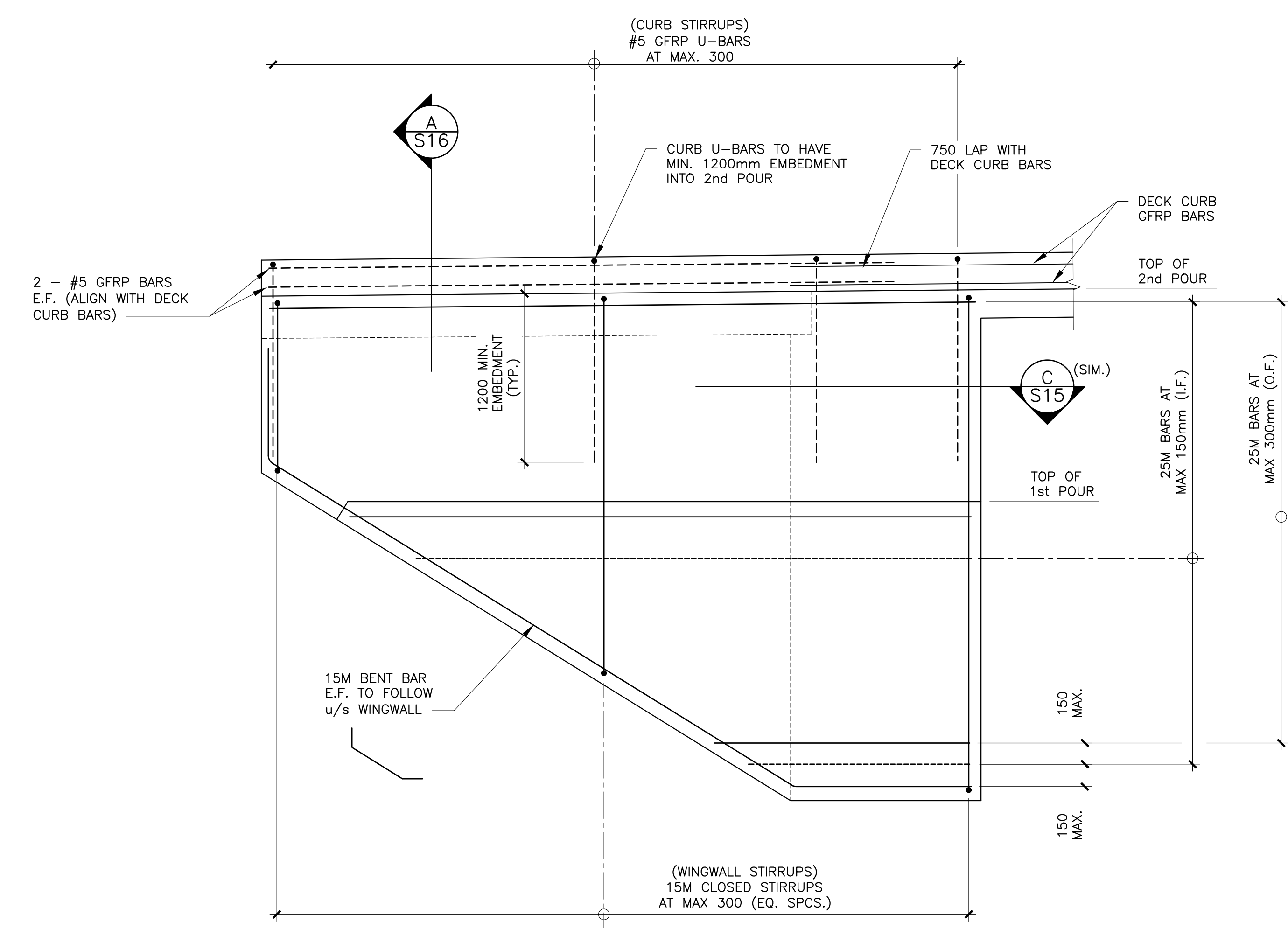
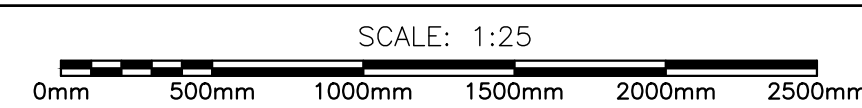
project number	1620	no. du projet
----------------	------	---------------

drawing no.	S15	no. du dessin
-------------	-----	---------------

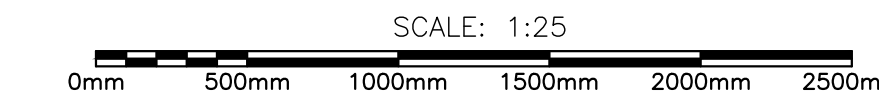




WINGWALL w/ CRASH BLOCK REINFORCEMENT  
TYPICAL EACH SIDE OF ROADWAY



WINGWALL w/ CURB REINFORCEMENT  
BIKE PATH EXTERIOR (EAST SIDE)

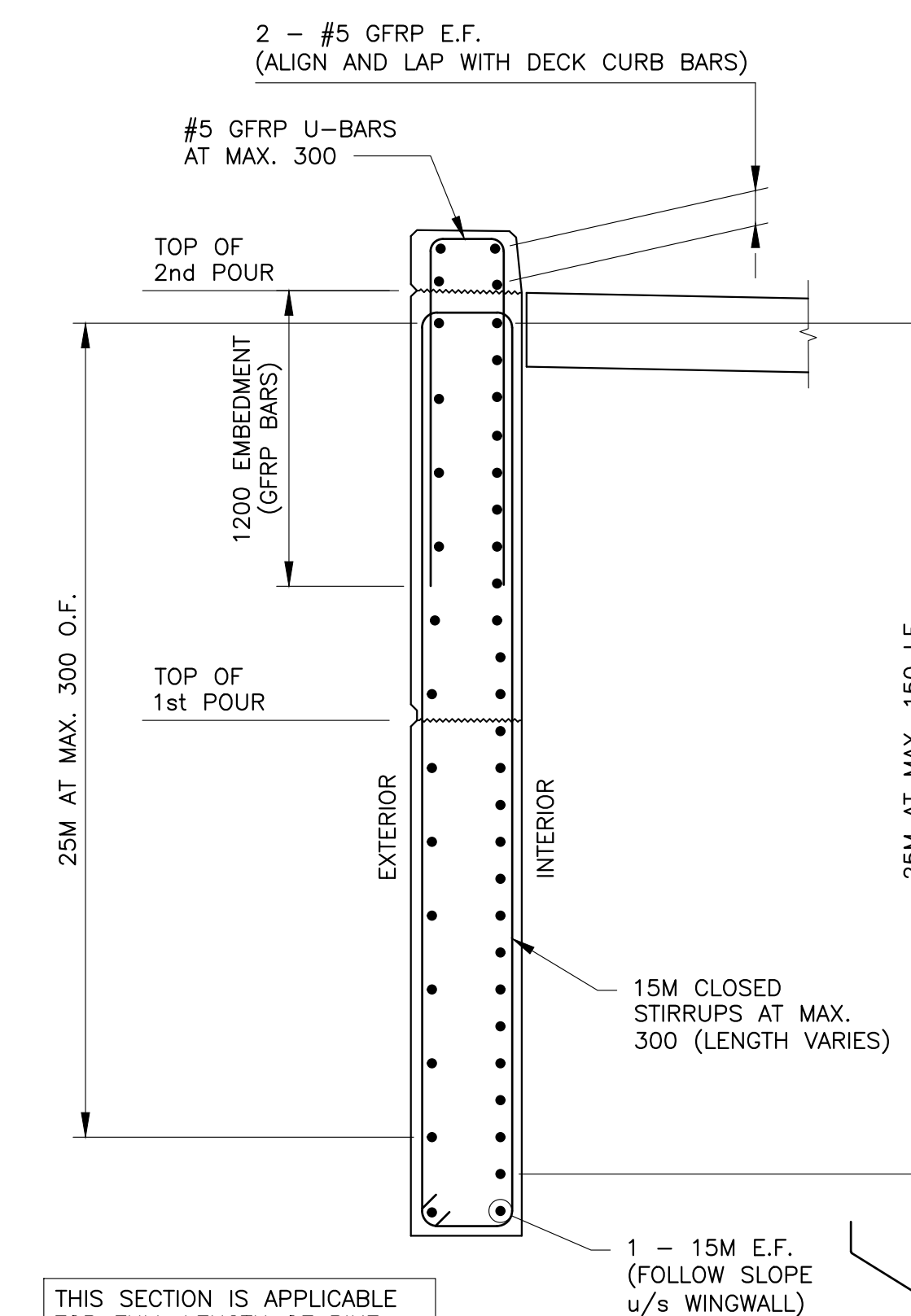


**CONCRETE WINGWALL/CRASH BLOCK REINFORCEMENT NOTES:**

- CONCRETE COVER TO REINFORCING BARS TO BE AS FOLLOWS:  
CAST AGAINST EARTH - 100mm  
ALL OTHER - 70mm
- REINFORCING (STEEL BARS) TO NBDOT STANDARD SPECIFICATIONS WITH YIELD STRENGTH OF 400 MPa (WELDABLE).
- BEND STEEL REINFORCING BARS TO R.S.I.C. "STEEL MANUAL OF STANDARD PRACTICE" TYPICAL BAR BENDS EXCEPT BAR BEND DIAMETERS AS PER TABLE 5.1, DIVISION 5 SECTION 5 OF NBDOT STANDARD SPECIFICATIONS (U.N.O.).
- UNLESS NOTED OTHERWISE, ALL STEEL REINFORCING BARS TO BE HOT-DIPPED GALVANIZED STEEL DEFORMED BARS TO NBDOT STANDARD SPECIFICATIONS.
- GLASS-FIBER REINFORCED POLYMER BAR PROPERTIES ARE TO BE AS FOLLOWS:  
BAR SIZE G10 YIELD (FRPU) MODULUS OF ELASTICITY  
ALL 1000 MPa 60.0 GPa
- FOR ALL BENT GFRP BARS, THE MINIMUM FRPU = 445 MPa AND MINIMUM MODULUS OF ELASTICITY = 50 GPa AT BEND LOCATIONS ONLY. FOR STRAIGHT SECTIONS OF BENT BARS, SEE NOTE 5 ABOVE.
- ALL REINFORCEMENT IS TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING FORMWORK OR PLACING CONCRETE.
- GFRP AND STEEL REINFORCEMENT SUPPLIERS TO PROVIDE MINIMUM CLASS "B" TENSION SPLICES AND EMBEDMENT LENGTHS AS PER THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC). EMBEDMENT LENGTHS AND SPLICE LENGTHS TO BE STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
- ANY ADDITIONAL LAPS NOT SHOWN ON DRAWINGS WHICH ARE REQUIRED FOR CONSTRUCTION PURPOSES ARE TO BE CLASS "B" TENSION SPLICES DESIGNED BY THE CONTRACTOR AS PER THE LATEST EDITION OF THE CHBDC AND ARE TO BE DESIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
- ALL SPLICES AND EMBEDMENT INFORMATION TO BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.

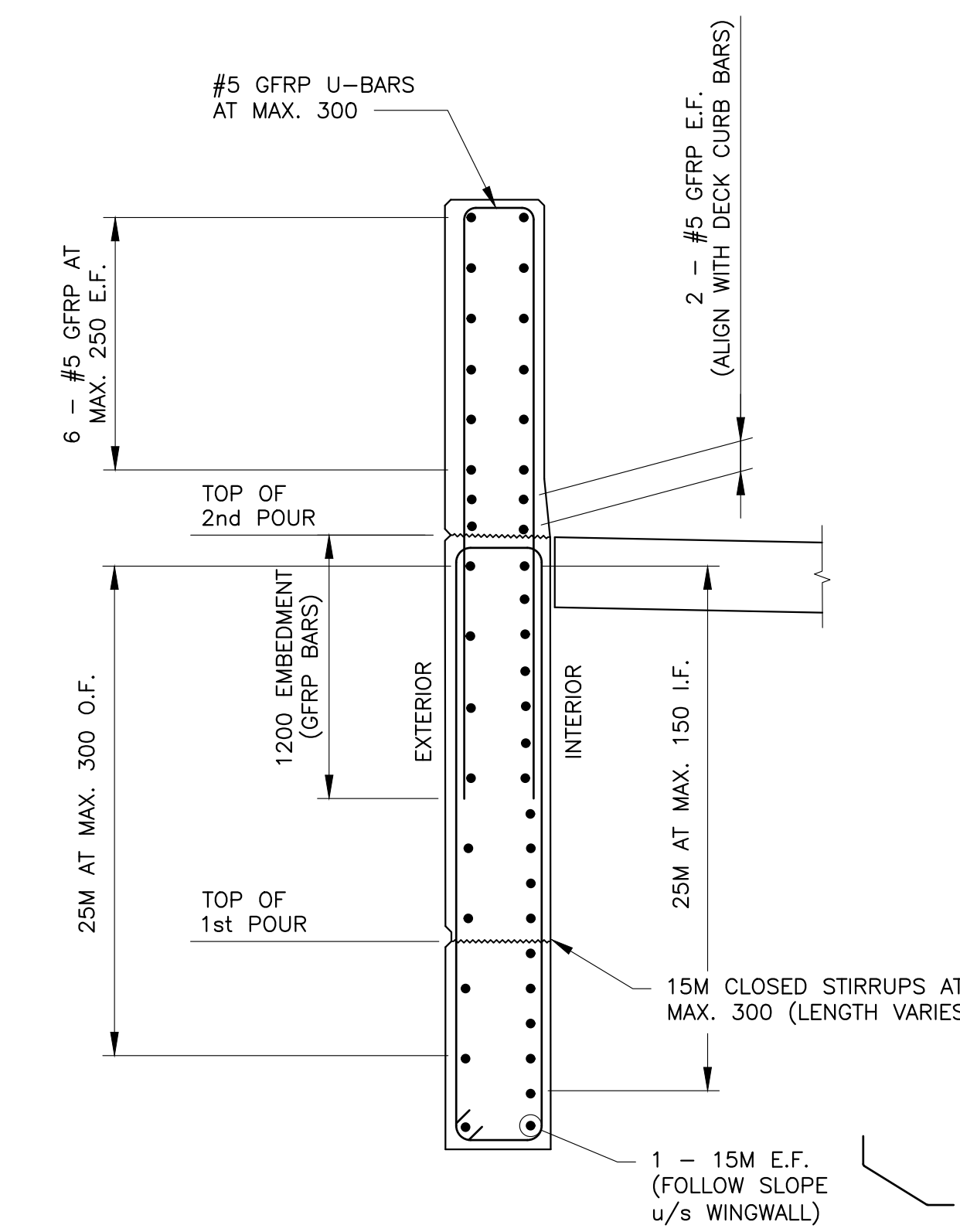
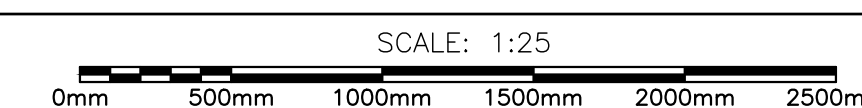
**REINFORCING LEGEND:**

- N.F. — NEAR FACE
- F.F. — FAR FACE
- E.F. — EACH FACE
- E.W. — EACH WAY
- I.F. — INSIDE FACE
- O.F. — OUTSIDE FACE
- T.U.L. — TOP UPPER LAYER
- T.L.L. — TOP LOWER LAYER
- B.U.L. — BOTTOM UPPER LAYER
- B.L.L. — BOTTOM LOWER LAYER
- CVR. — COVER
- CLR. — CLEAR

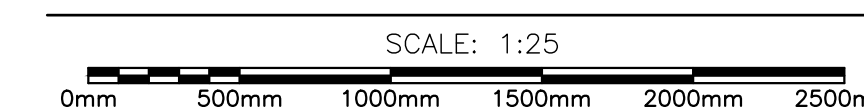


THIS SECTION IS APPLICABLE FOR FULL LENGTH OF BIKE PATH WINGWALLS AT EAST SIDE OF BRIDGE (BOTH ABUTMENTS)

WINGWALL SECTION AT CURB



WINGWALL SECTION AT CRASH BLOCK



0	ISSUED FOR TENDER	MR 28 2018
---	-------------------	------------

revisions		date
-----------	--	------

project		projet
---------	--	--------

BRIDGE REPLACEMENT  
RANKIN BROOK BRIDGE

KOUCHIBOUGUAC  
NATIONAL PARK

WINGWALL  
REINFORCEMENT  
DETAILS

designed	W. ENMAN	conçu
----------	----------	-------

date	OCTOBER, 2017	
------	---------------	--

drawn	D. BEAMAN	dessiné
-------	-----------	---------

date	OCTOBER, 2017	
------	---------------	--

approved		approuvé
----------	--	----------

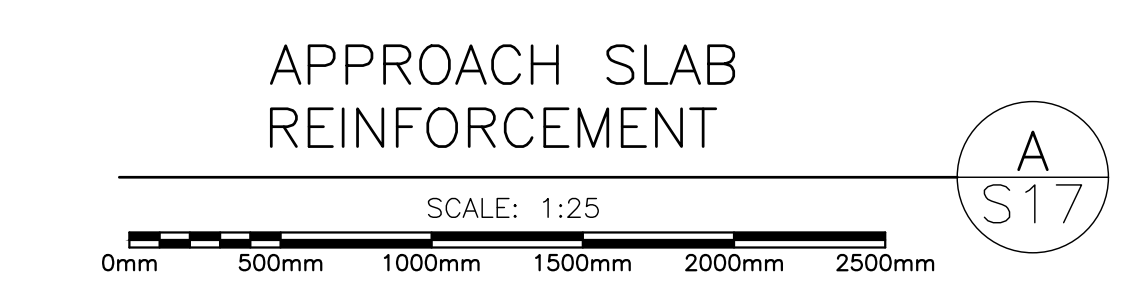
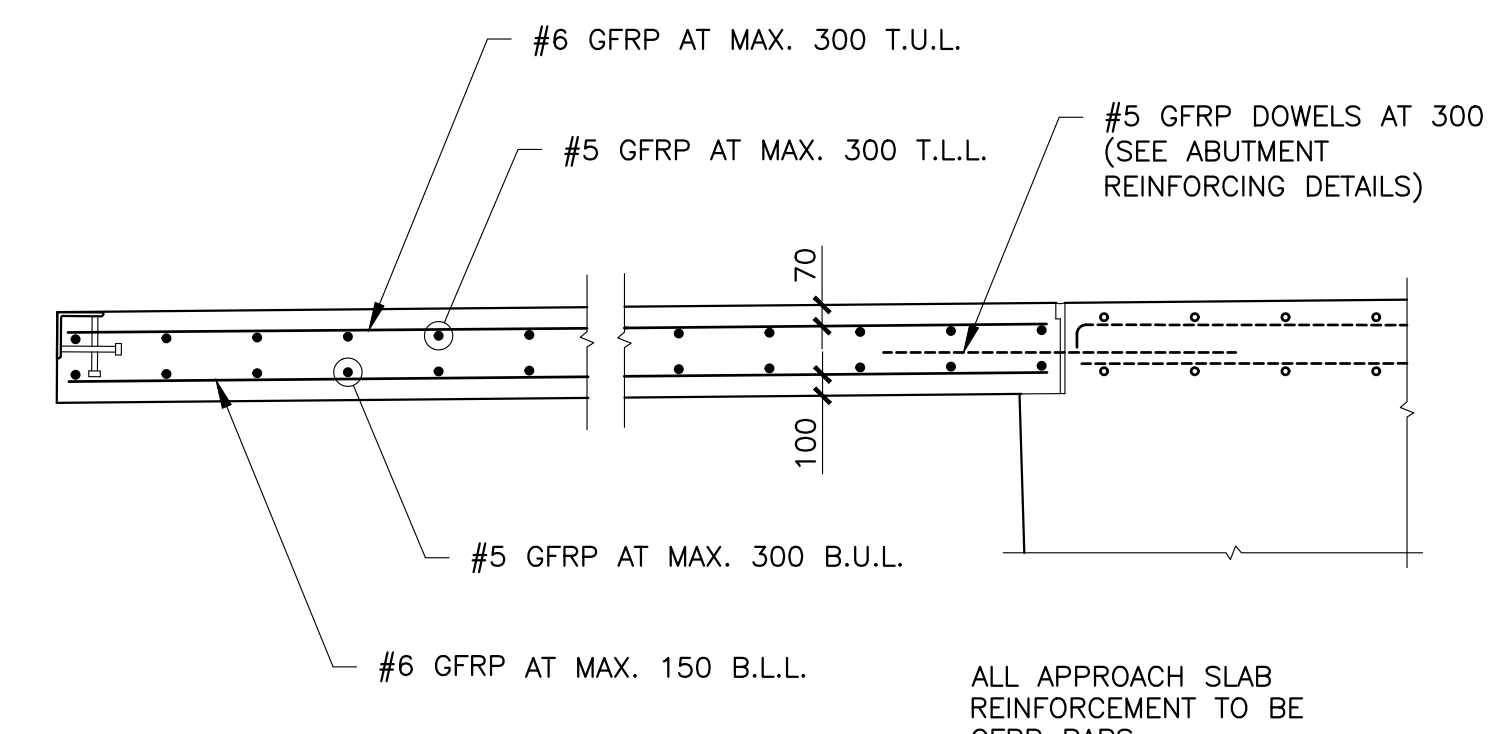
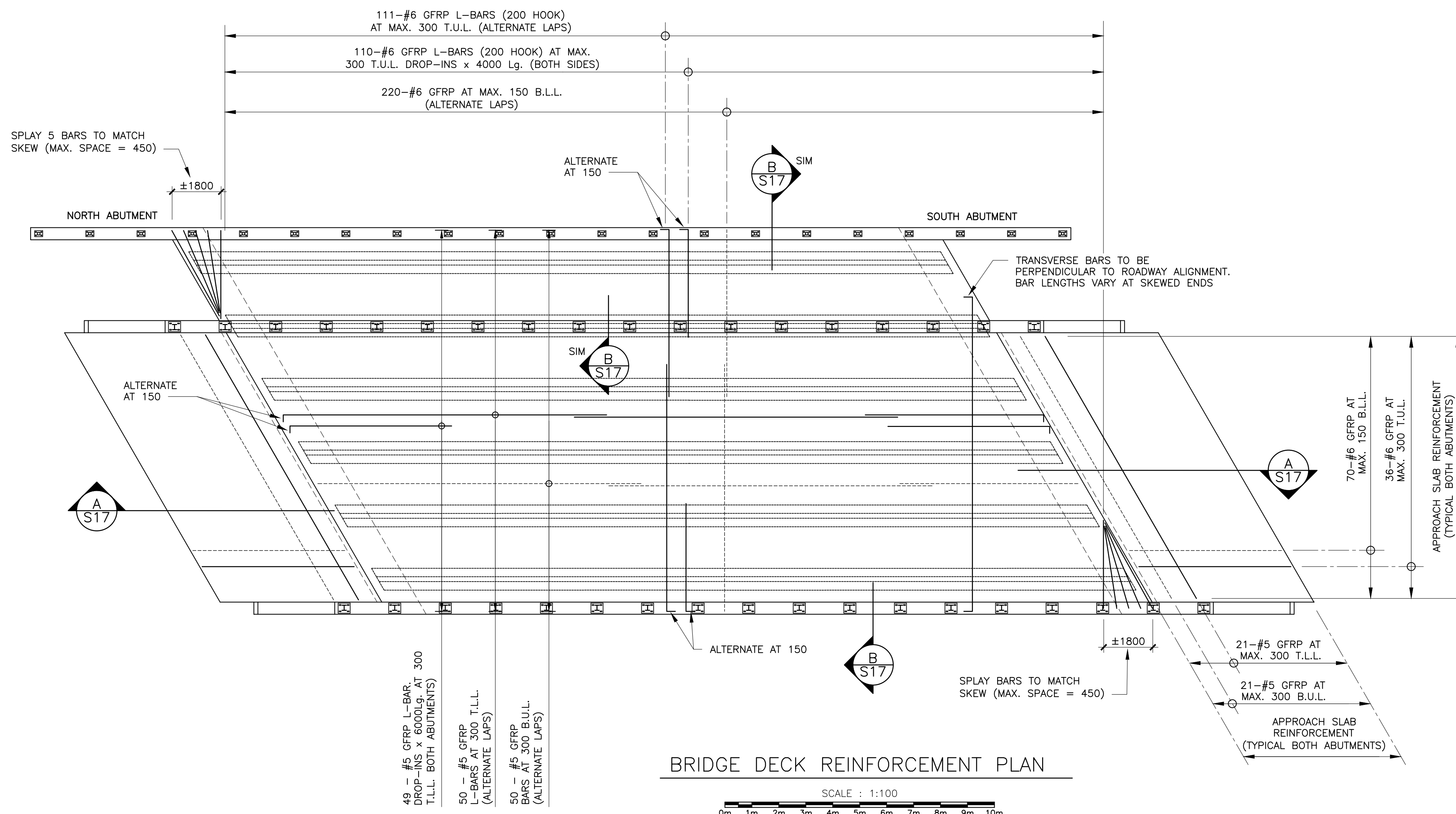
date		
------	--	--

Tender		Submission
--------	--	------------

Project Manager	Administrateur de projets	
-----------------	---------------------------	--

project number	1620	no. du projet
----------------	------	---------------

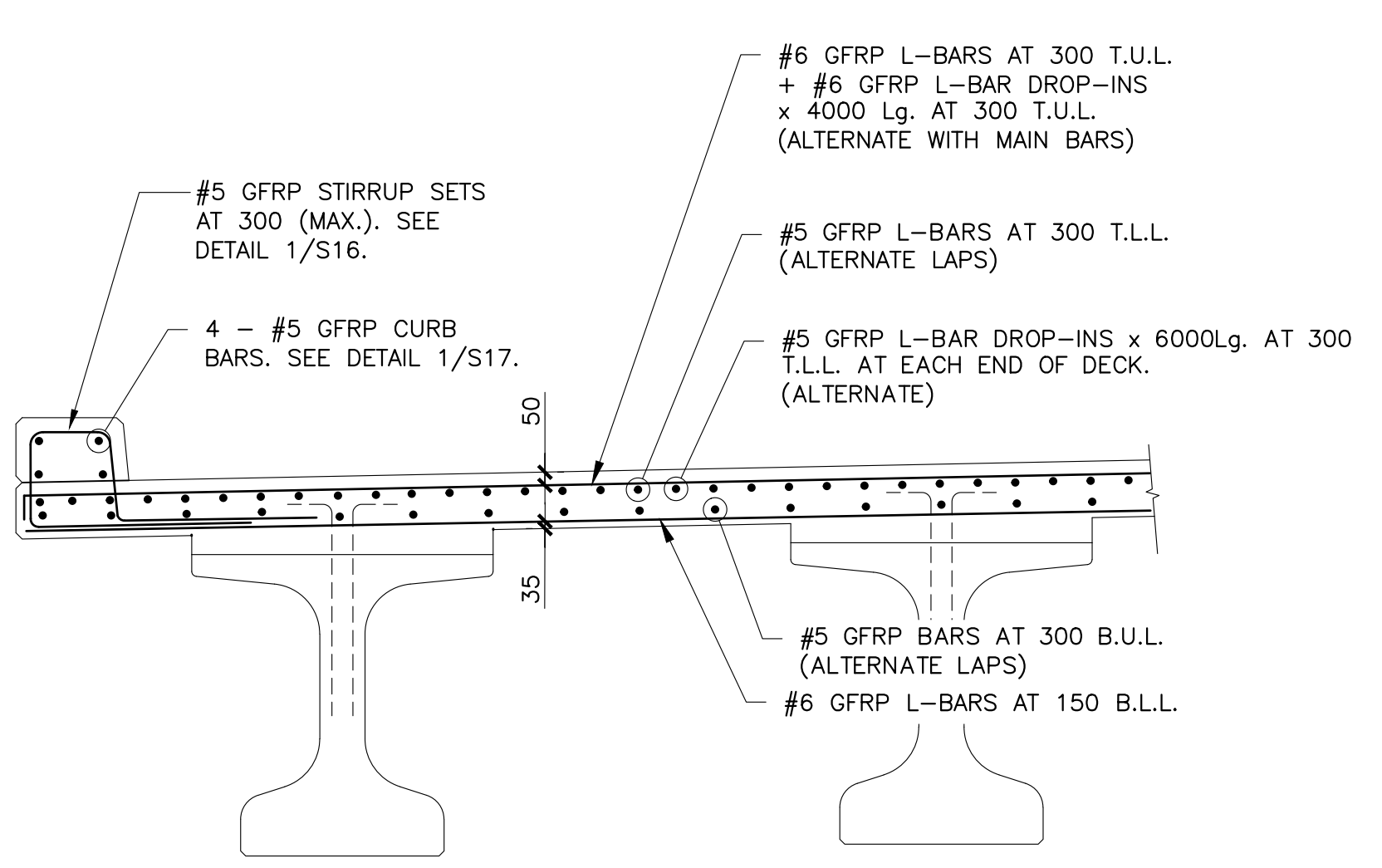
drawing no.	S16	no. du dessin
-------------	-----	---------------



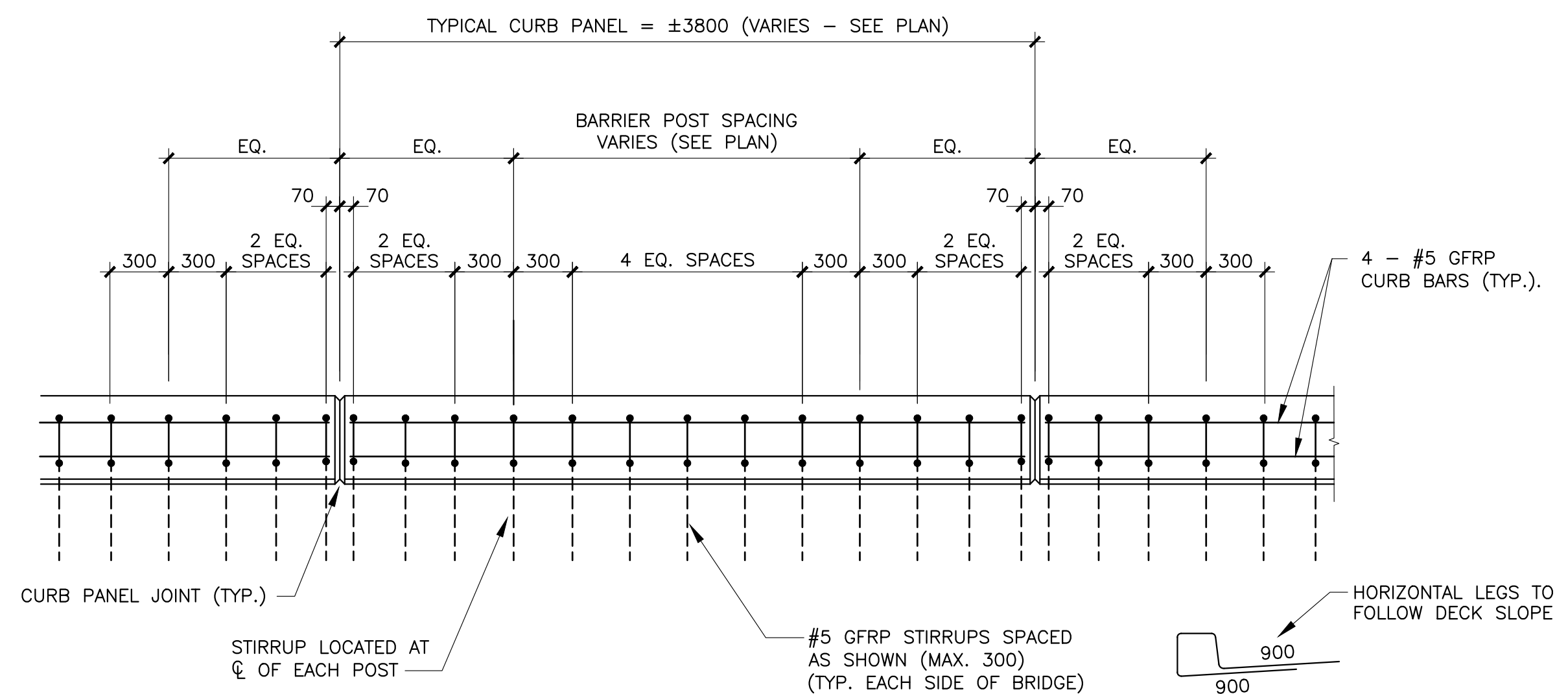
**CONCRETE DECK REINFORCEMENT NOTES**

- ALL CONCRETE DECK, CURB AND APPROACH SLAB REINFORCEMENT TO BE GLASS-FIBER REINFORCED POLYMER BARS (GFRP).
- CONCRETE COVER TO REINFORCING BARS TO BE AS FOLLOWS:  
 TOP OF DECK - 50mm  
 u/s DECK - 35mm  
 ALL OTHER - 50mm
- GLASS-FIBER REINFORCED POLYMER BAR PROPERTIES ARE TO BE AS FOLLOWS:  

BAR SIZE	GID_YIELD (FRPU)	MODULUS OF ELASTICITY
#5	1000 MPa	60.0 GPa
#6	1000 MPa	60.0 GPa
#8	1000 MPa	60.0 GPa
- FOR ALL BENT GFRP BARS, THE MINIMUM FRPU = 445 MPa AND MINIMUM MODULUS OF ELASTICITY = 50 GPa AT BEND LOCATIONS ONLY. FOR STRAIGHT SECTIONS OF BENT BARS, SEE NOTE 3 ABOVE.
- ALL REINFORCEMENT TO BE INSPECTED BY THE ENGINEER PRIOR TO CLOSING FORMWORK OR PLACING CONCRETE.
- GFRP SUPPLIER TO PROVIDE MINIMUM CLASS "B" TENSION SPLICES AND EMBEDMENT LENGTHS AS PER THE CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC). EMBEDMENT LENGTHS AND SPLICE LENGTHS TO BE STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
- ANY ADDITIONAL LAPS NOT SHOWN ON DRAWINGS WHICH ARE REQUIRED FOR CONSTRUCTION PURPOSES ARE TO BE CLASS "B" TENSION SPLICES DESIGNED BY THE CONTRACTOR AS PER THE LATEST EDITION OF THE CHBDC AND ARE TO BE DESIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE PROVINCE OF NEW BRUNSWICK.
- ALL SPLICES AND EMBEDMENT INFORMATION TO BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.



TYPICAL DECK AND CURB REINFORCEMENT  
 SCALE: 1:25  
 B S17



TYPICAL CURB REINFORCEMENT LAYOUT  
 SCALE: 1:25  
 1 S17

**REINFORCING LEGEND:**

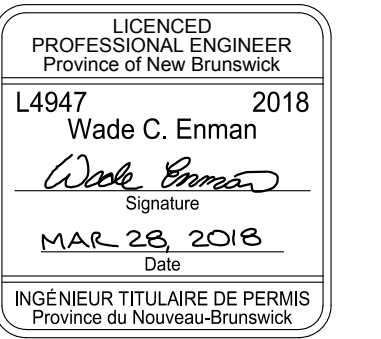
N.F.	NEAR FACE
F.F.	FAR FACE
E.F.	EACH FACE
E.W.	EACH WAY
I.F.	INSIDE FACE
O.F.	OUTSIDE FACE
T.U.L.	TOP UPPER LAYER
T.L.L.	TOP LOWER LAYER
B.U.L.	BOTTOM UPPER LAYER
B.L.L.	BOTTOM LOWER LAYER
CVR.	COVER
CLR.	CLEAR

0	ISSUED FOR TENDER	MR 28 2018
revisions		date

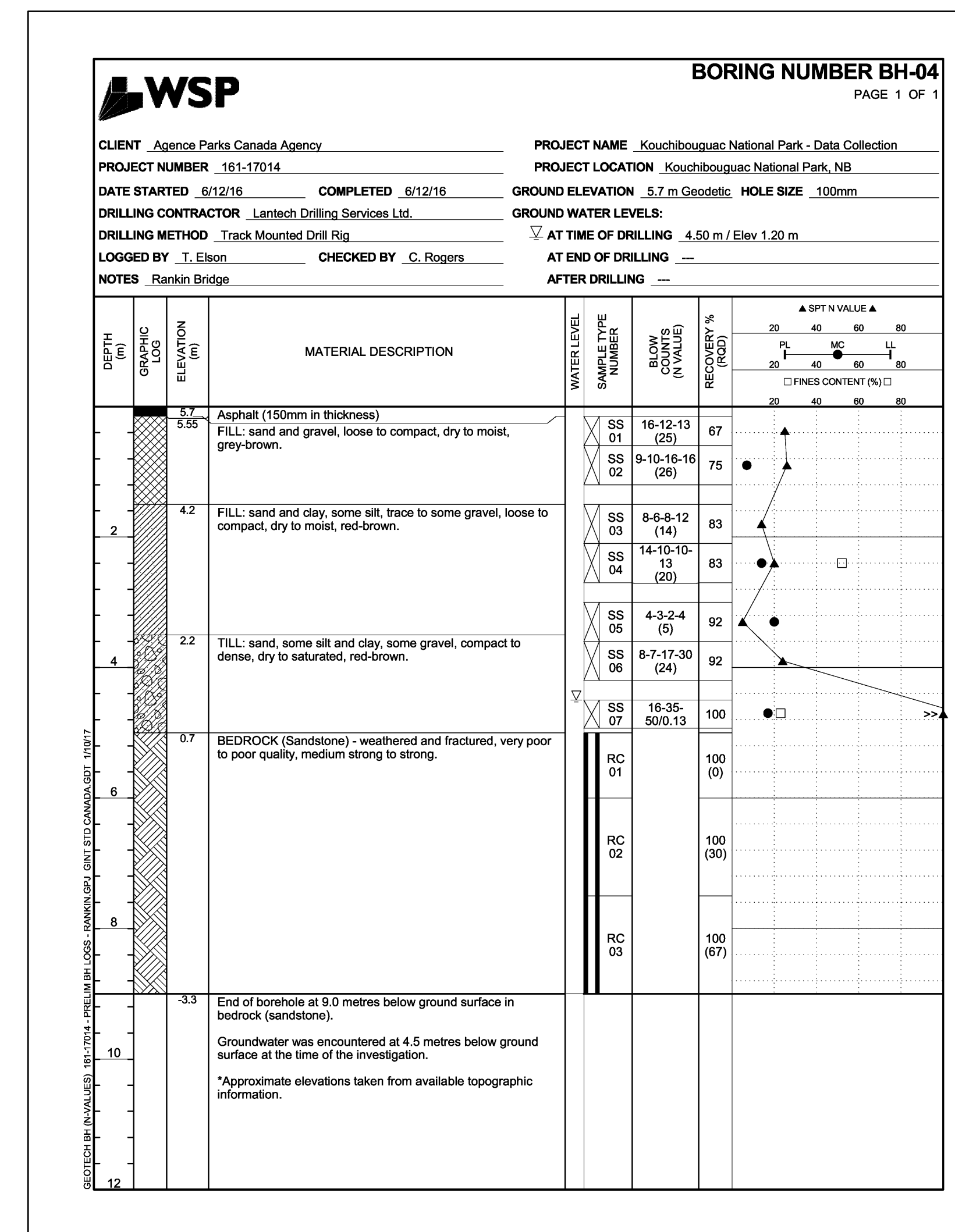
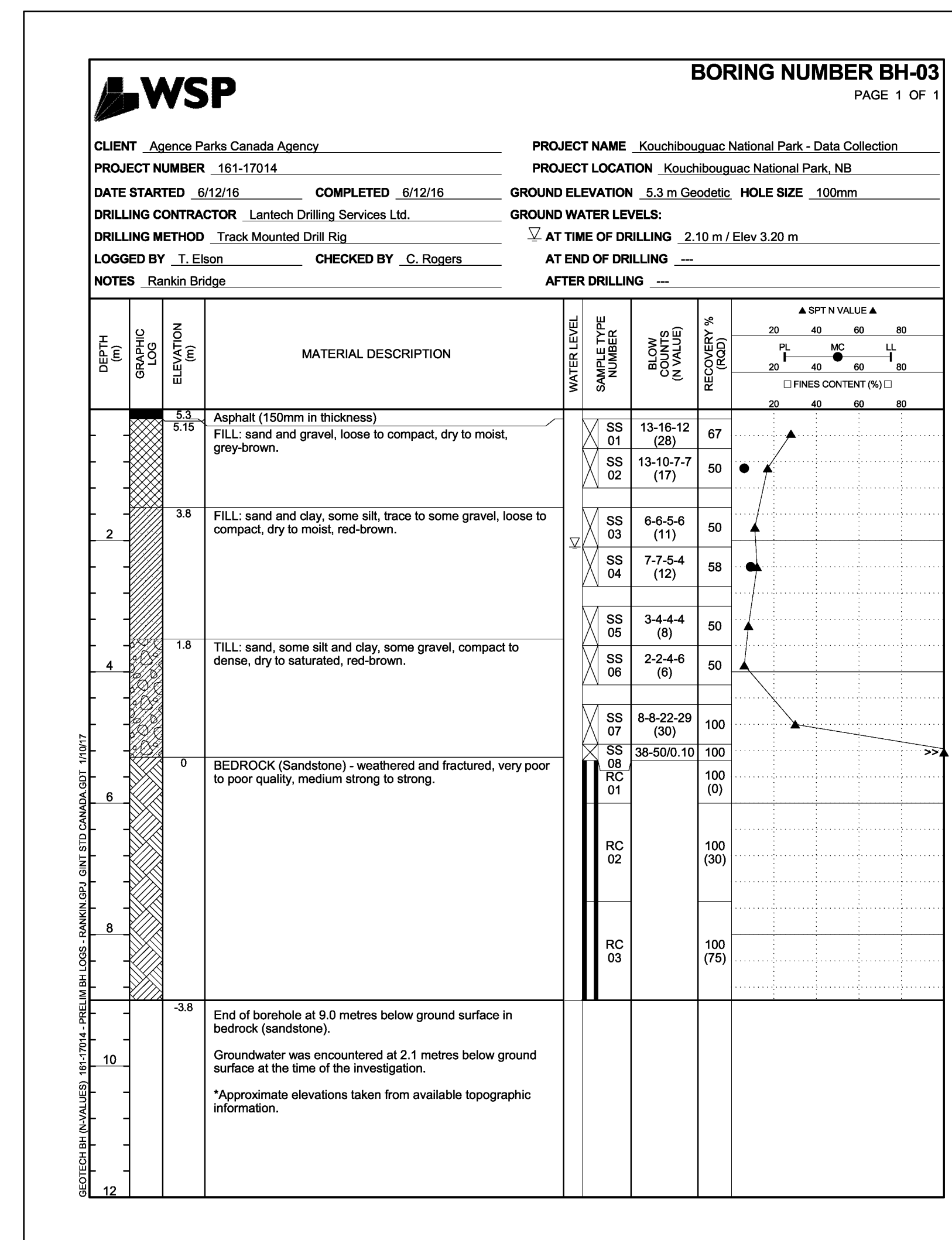
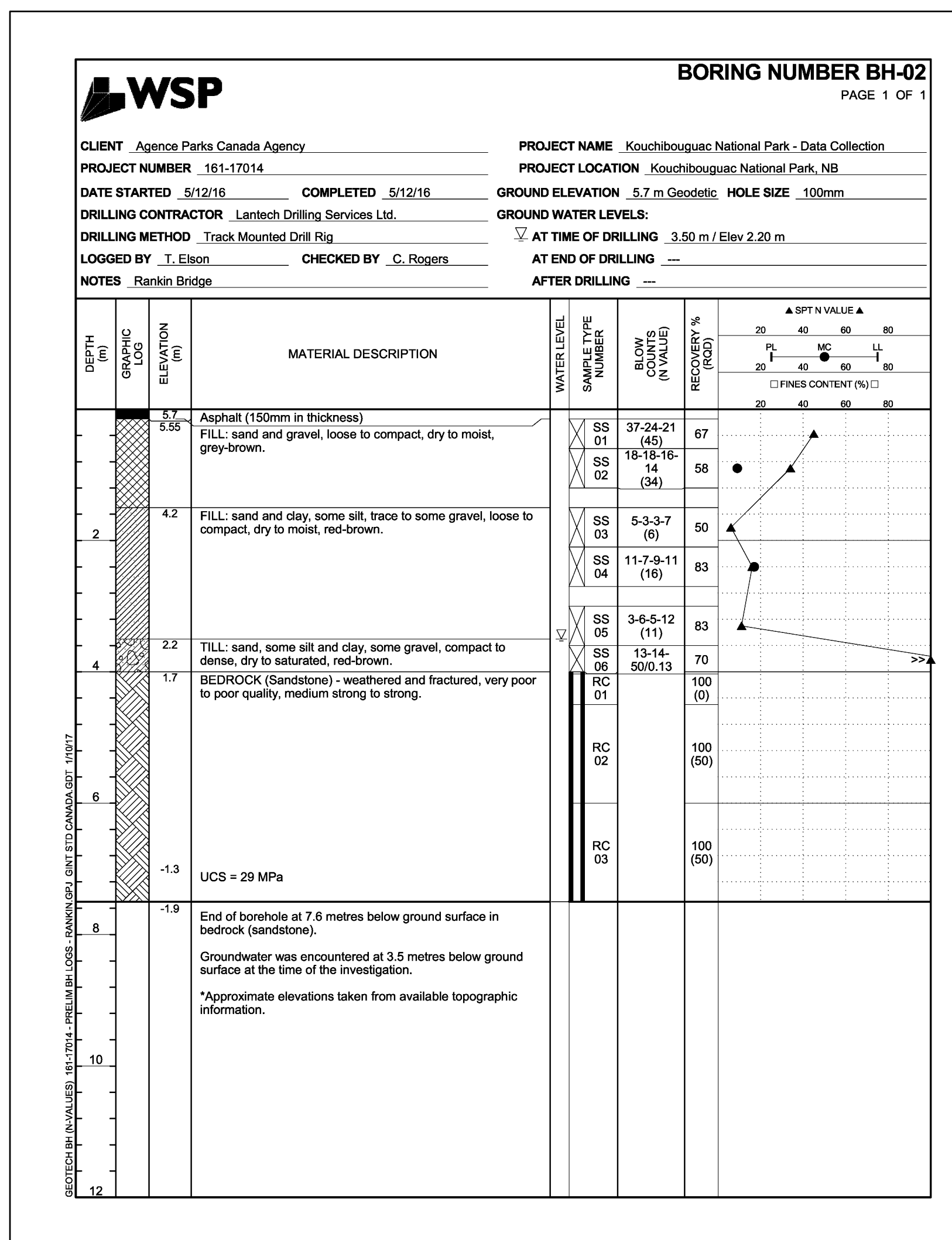
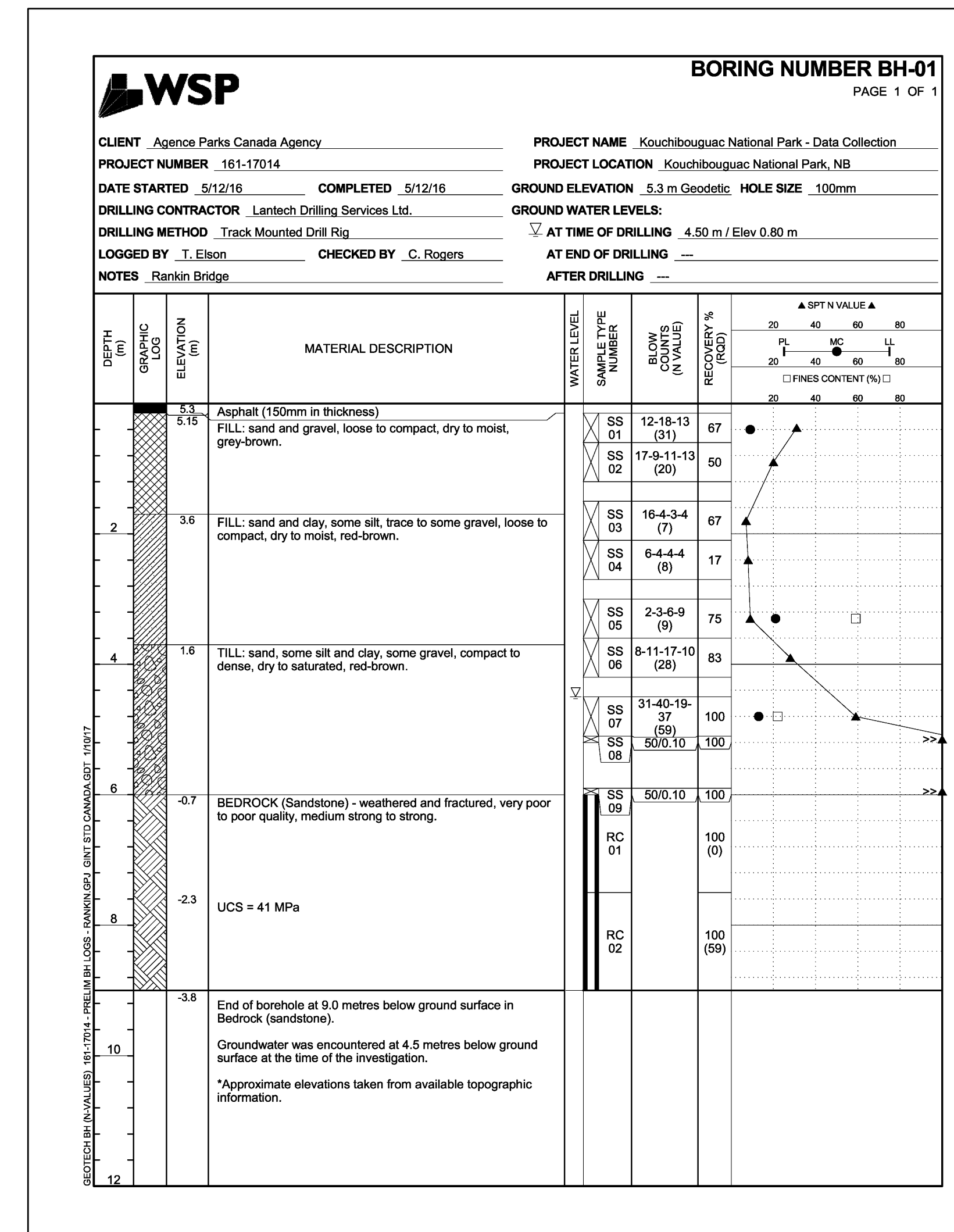
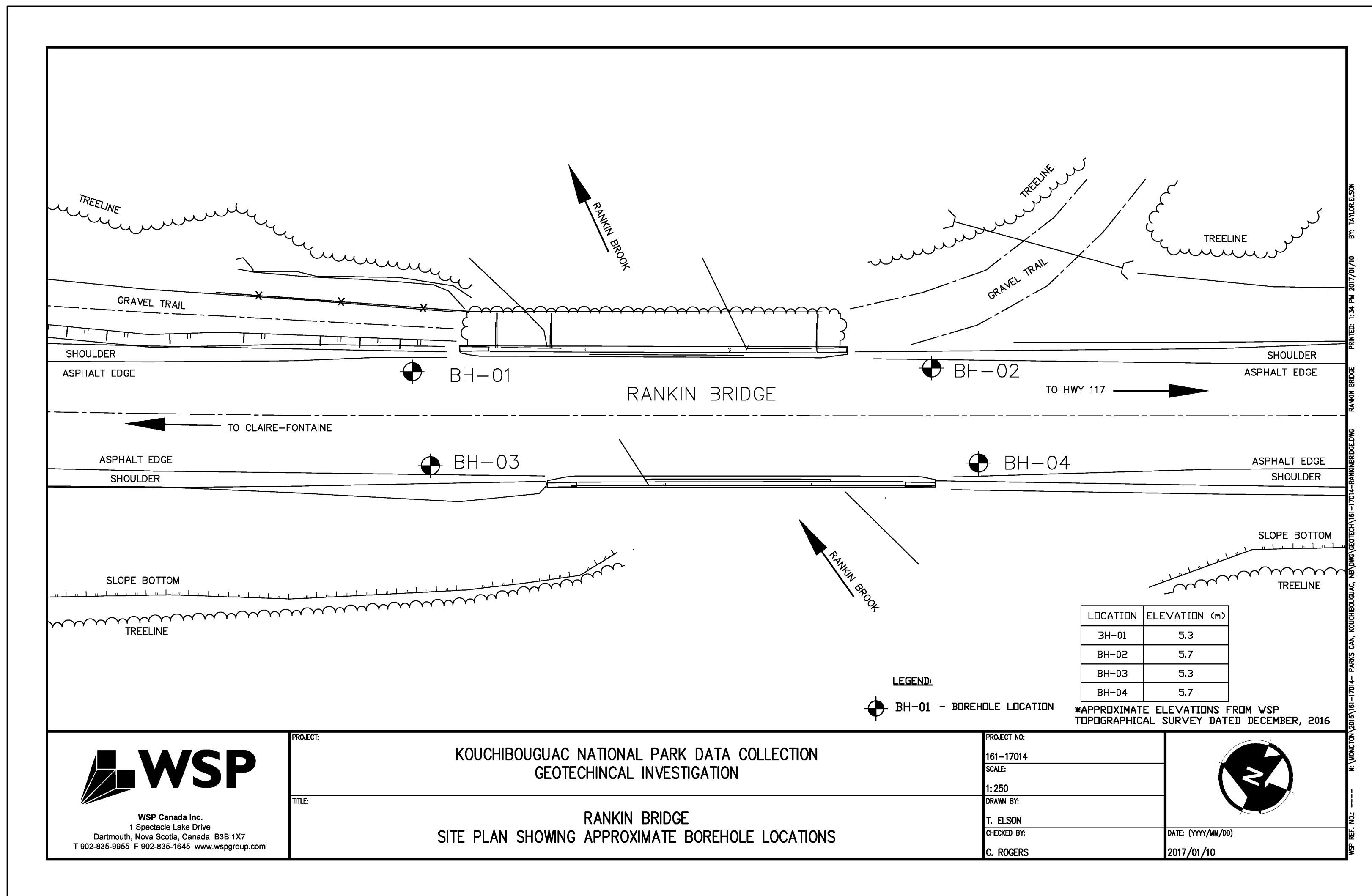
project  
**BRIDGE REPLACEMENT  
 RANKIN BROOK BRIDGE**  
 KOUCHIBOUGUAC  
 NATIONAL PARK

drawing  
**DECK  
 REINFORCEMENT  
 DETAILS**  
 design

designed	W. ENMAN	conçu
date	OCTOBER, 2017	
drawn	D. BEAMAN	dessiné
date	OCTOBER, 2017	
approved		approuvé
date		
Tender		Submission
Project Manager		Administrateur de projets
project number	1620	no. du projet
drawing no.	S17	no. du dessin



WSP Canada Inc.  
135 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



0	ISSUED FOR TENDER	MAR 28 2018
---	-------------------	-------------

revisions		date
-----------	--	------

project  
BRIDGE REPLACEMENT  
RANKIN BROOK BRIDGE

project  
KOUCHIBOUGUAC  
NATIONAL PARK

drawing  
BOREHOLE DATA

designed W. ENMAN conçu

date OCTOBER, 2017

drawn D. BEAMAN dessiné

date OCTOBER, 2017

approved approved

date

Tender Soumission

Project Manager Administrateur de projets

project number 1620 no. du projet

drawing no. S18 no. du dessin





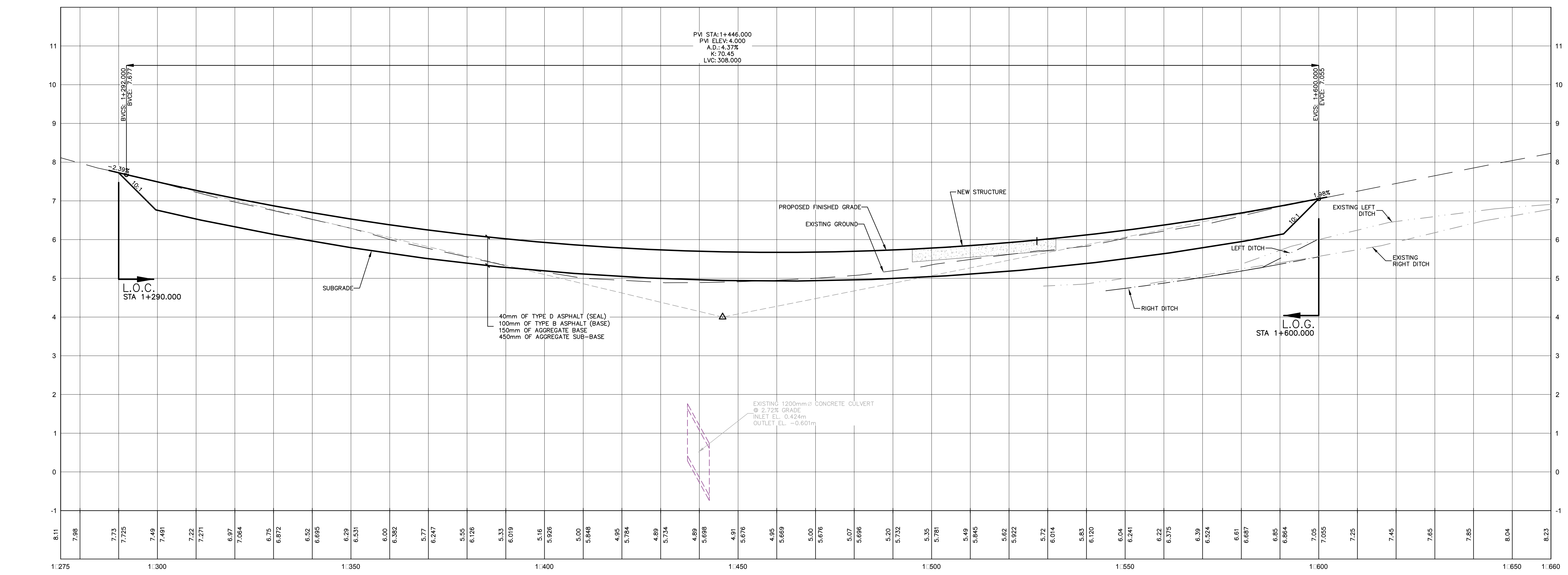
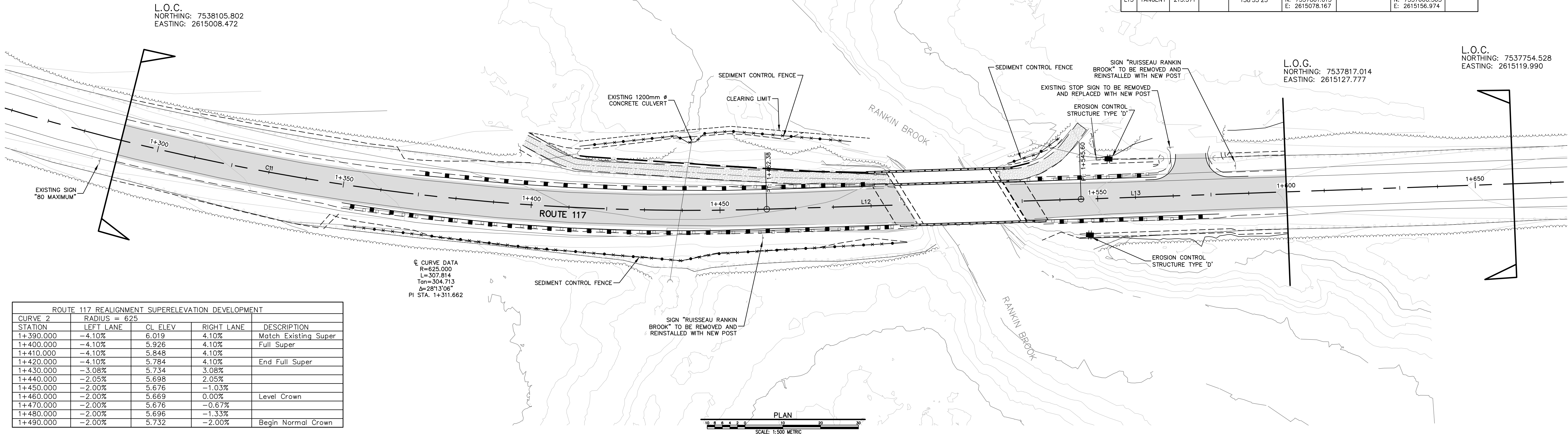
WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-6901 www.wsp.com

**LEGEND**

ROAD CENTRELINE	---
TOP OF SLOPE	-----
BOTTOM OF SLOPE	-----
EXISTING SIGN	+
EXISTING CULVERT	▭
NEW CULVERT	▭
NEW TIMBER PEDESTRIAN FENCE	▭
NEW GUIDE RAIL	▭
L.O.C.	---
L.O.G.	---

**ROUTE 117 ALIGNMENT GEOMETRY**

ID	SEGMENT TYPE	Length	Radius	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI or A	END STATION	DELTA
L11	TANGENT	150.451		187°00'02"	STA: 1+004.116 N: 7538390.287 E: 2615028.678		STA: 1+154.567 N: 7538240.957 E: 2615010.342	
C11	CURVE	307.814	625.000	172°53'29"	STA: 1+154.567 N: 7538240.957 E: 2615010.342	STA: 1+311.662 N: 7538085.033 E: 2614991.195	STA: 1+462.381 N: 7537938.587 E: 2615048.050	28°13'06"
L12	TANGENT	83.215		158°46'56"	STA: 1+462.381 N: 7537938.587 E: 2615048.050		STA: 1+545.596 N: 7537861.013 E: 2615078.187	
L13	TANGENT	215.571		158°33'25"	STA: 1+545.596 N: 7537861.013 E: 2615078.187		STA: 1+761.167 N: 7537660.363 E: 2615156.974	



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project: BRIDGE REPLACEMENT RANKIN BROOK  
KOUCHIBOUGUAC NATIONAL PARK

**ROUTE 117 PLAN AND PROFILE**

designed S. WELLS/J. AUBE  
date MARCH, 2018  
drawn S. WELLS  
date MARCH, 2018

approved  
date  
Tender  
Project Manager  
project number

1620

C1

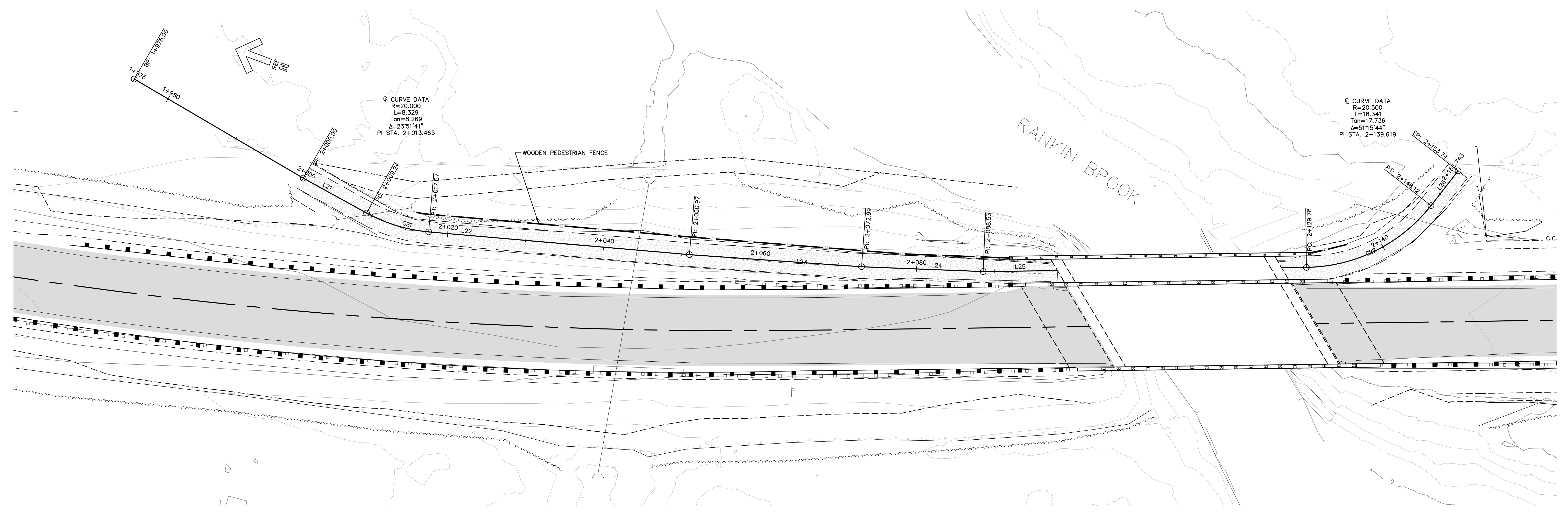




WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

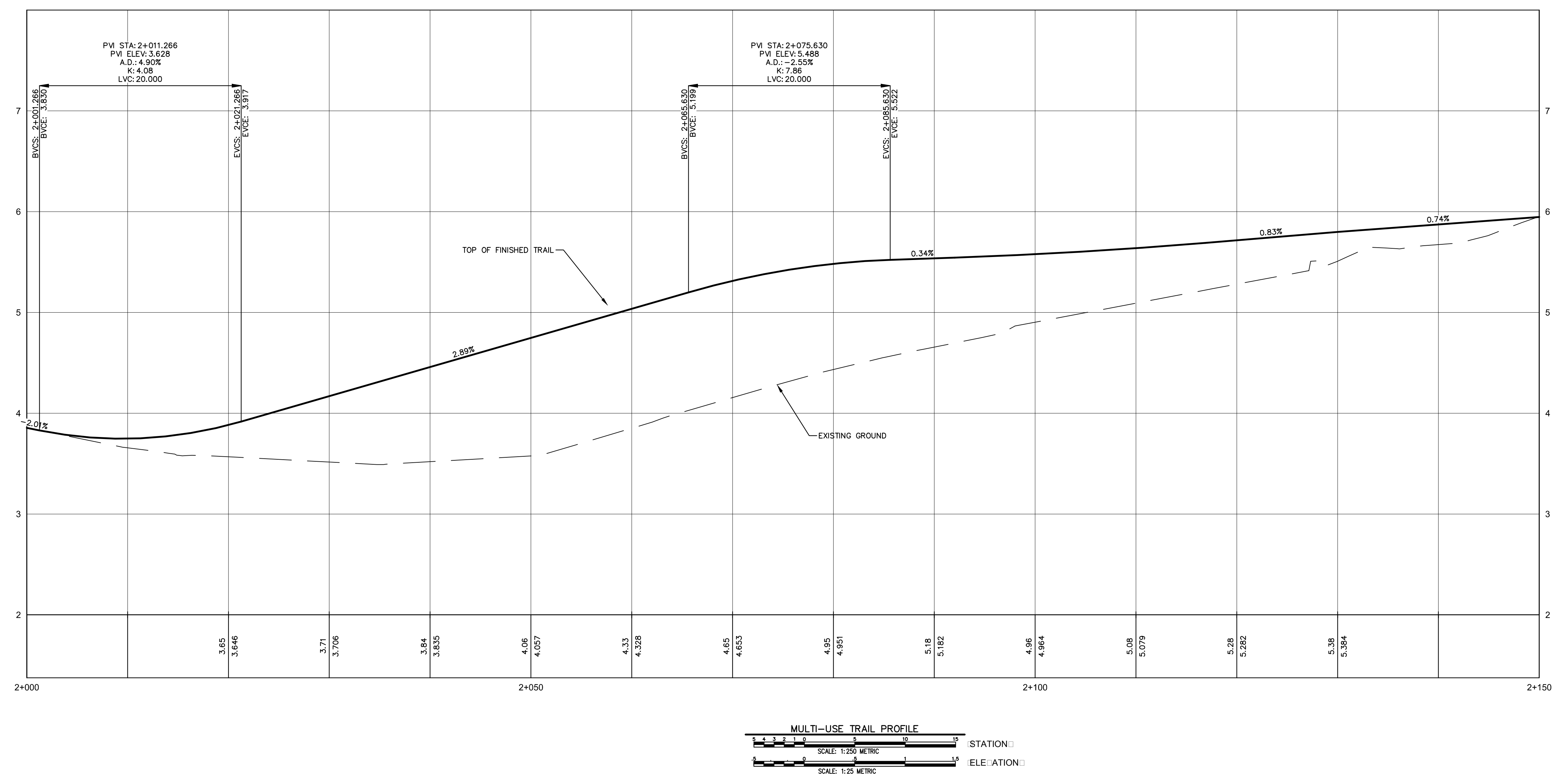
LEGEND

- ROAD CENTRELINE
- TOP OF SLOPE
- BOTTOM OF SLOPE
- EXISTING SIGN
- EXISTING CULVERT
- NEW CULVERT
- NEW TIMBER PEDESTRIAN FENCE
- NEW GUIDE RAIL

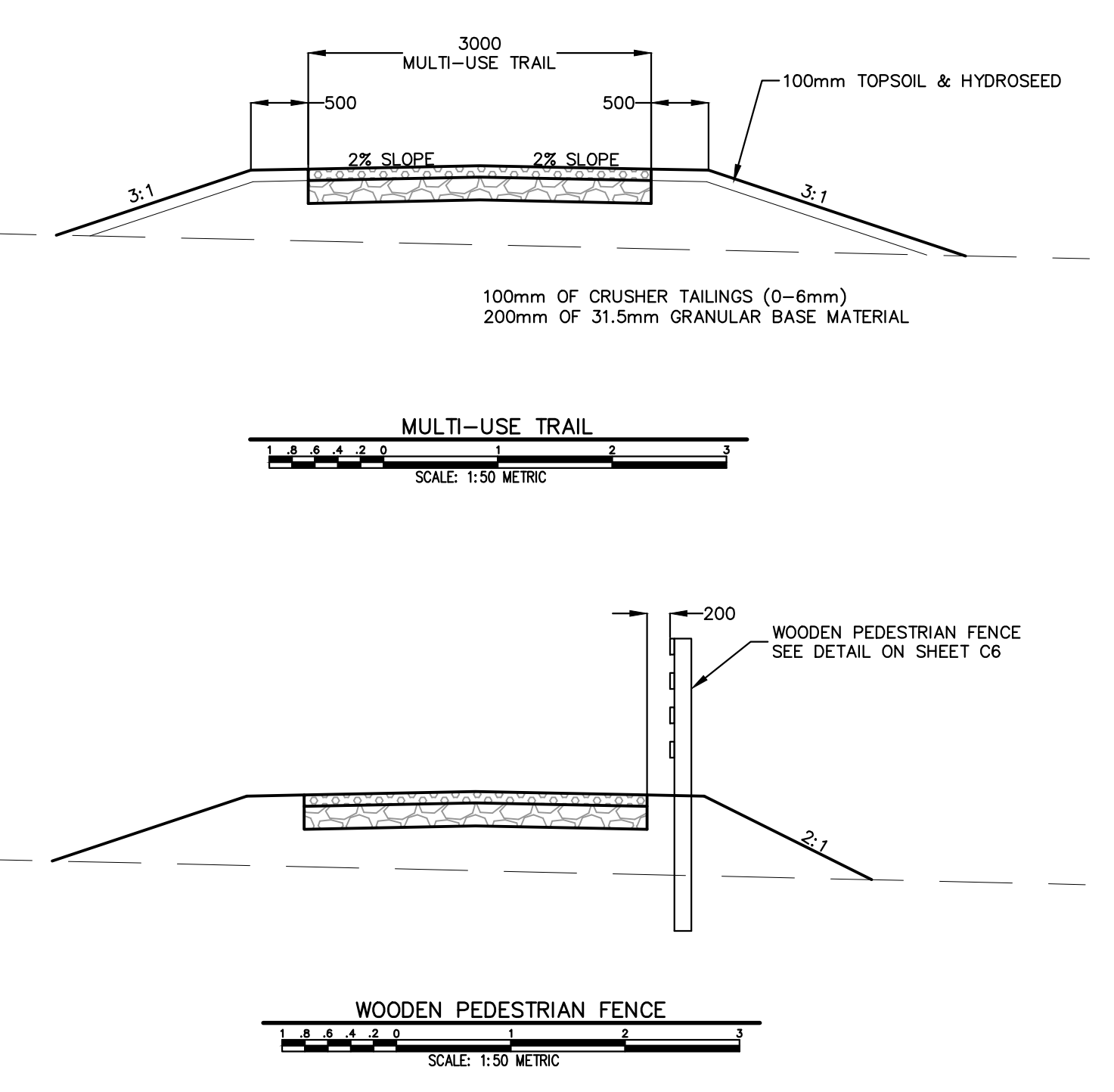


PLAN  
SCALE: 1:250 METRIC

ID	SEGMENT TYPE	Length	Radius	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI or A	END STATION	DELTA
L21	TANGENT	9.239		188°22'03"	STA: 2+000 N: 7538004.936 E: 2615044.001		STA: 2+009.239 N: 7537995.795 E: 2615042.656	
C21	CURVE	8.329	20.000	176°26'13"	STA: 2+009.239 N: 7537995.795 E: 2615042.656	STA: 2+013.465 N: 7537991.614 E: 2615042.041	STA: 2+017.569 N: 7537987.542 E: 2615043.170	23°51'41"
L22	TANGENT	33.397		164°30'22"	STA: 2+017.569 N: 7537987.542 E: 2615043.170		STA: 2+050.966 N: 7537955.358 E: 2615052.092	
L23	TANGENT	22.028		163°33'18"	STA: 2+050.966 N: 7537955.358 E: 2615052.092		STA: 2+072.994 N: 7537934.231 E: 2615058.328	
L24	TANGENT	15.531		161°48'27"	STA: 2+072.994 N: 7537934.231 E: 2615058.328		STA: 2+088.525 N: 7537919.476 E: 2615063.177	
L25	TANGENT	41.258		158°46'56"	STA: 2+088.525 N: 7537919.476 E: 2615063.177		STA: 2+129.783 N: 7537881.015 E: 2615078.109	
C22	CURVE	18.341	20.500	133°09'04"	STA: 2+129.783 N: 7537881.015 E: 2615078.109	STA: 2+139.619 N: 7537871.847 E: 2615081.668	STA: 2+148.124 N: 7537867.194 E: 2615091.048	51°15'44"
L26	TANGENT	5.619		107°31'12"	STA: 2+148.124 N: 7537867.194 E: 2615091.048		STA: 2+153.743 N: 7537867.194 E: 2615096.406	



MULTI-USE TRAIL PROFILE  
SCALE: 1:250 METRIC  
SCALE: 1:25 METRIC



0	ISSUED FOR TENDER	MAR 2018
revisions		date
project	BRIDGE REPLACEMENT RANKIN BROOK	
project	KOUCHIBOUGUAC NATIONAL PARK	
drawing	MULTI-USE TRAIL PLAN AND PROFILE	
designed	S. WELLS/J. AUBE	conçu
date	MARCH, 2018	
drawn	S. WELLS	dessiné
date	MARCH, 2018	
approved		approuvé
date		
Tender		Submission
Project Manager	Administrateur de projets	
project number	1620	no. du projet
drawing no.	C2	no. du dessin

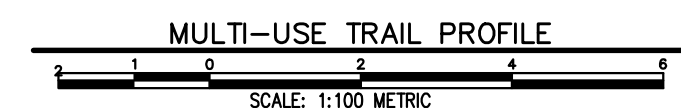
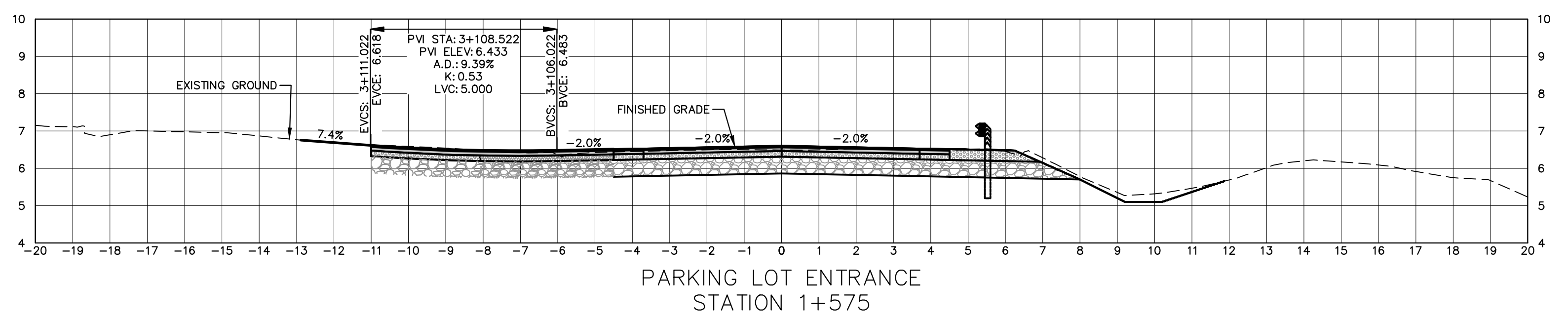
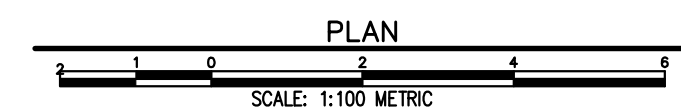
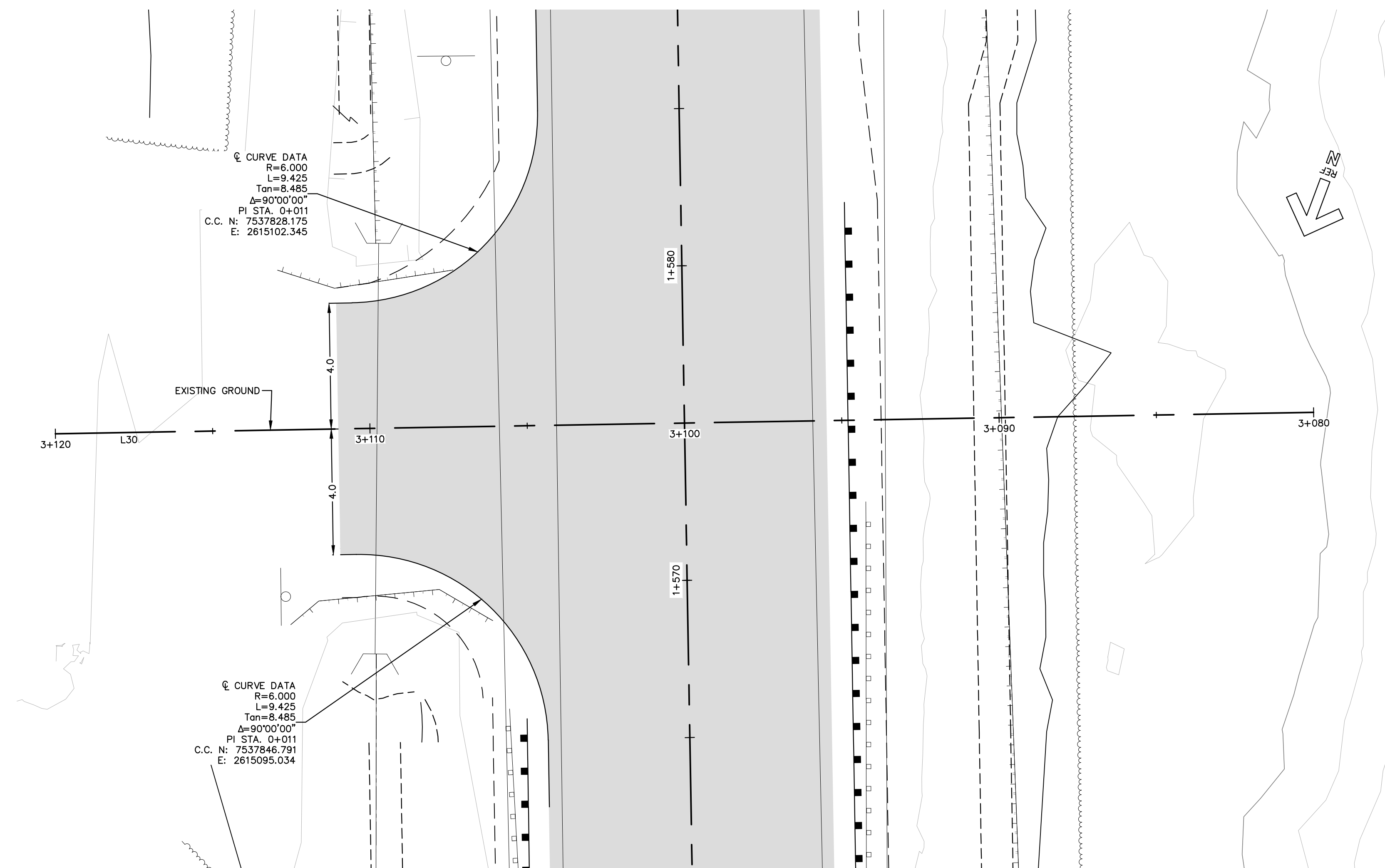


WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

LEGEND

ROAD CENTRELINE	---
TOP OF SLOPE	---
BOTTOM OF SLOPE	---
EXISTING SIGN	---
EXISTING CULVERT	---
NEW CULVERT	---
NEW TIMBER	---
PEDESTRIAN FENCE	---
NEW GUIDE RAIL	---

PARKING ENTRANCE ALIGNMENT GEOMETRY							
ID	SEGMENT TYPE	Length	Radius	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI or A	END STATION
L30	TANGENT	40.000		68°33'25"	STA: 3+080 N: 7537826.333 E: 2615070.301		STA: 3+120 N: 7537840.956 E: 2615107.532



0	ISSUED FOR TENDER	MAR 2018
revisions		date

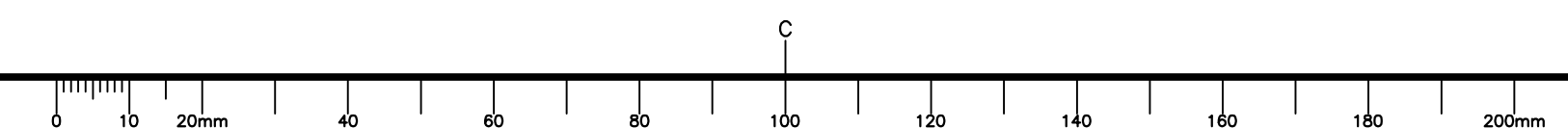
project: BRIDGE REPLACEMENT RANKIN BROOK  
KOUCHIBOUGUAC NATIONAL PARK

drawing: PARKING LOT ENTRANCE PLAN AND PROFILE

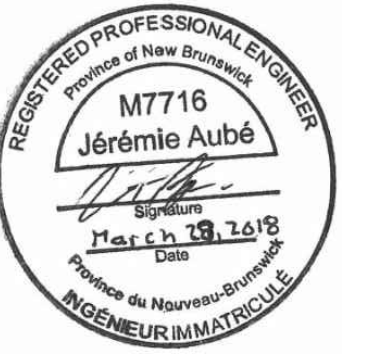
designed	S. WELLS/J. AUBE	conçu
date	MARCH, 2018	
drawn	S. WELLS	dessiné
date	MARCH, 2018	
approved		approuvé

Tender	Submission
Project Manager	Administrateur de projets
project number	1620
no. du projet	

drawing no. C3  
no. du dessin





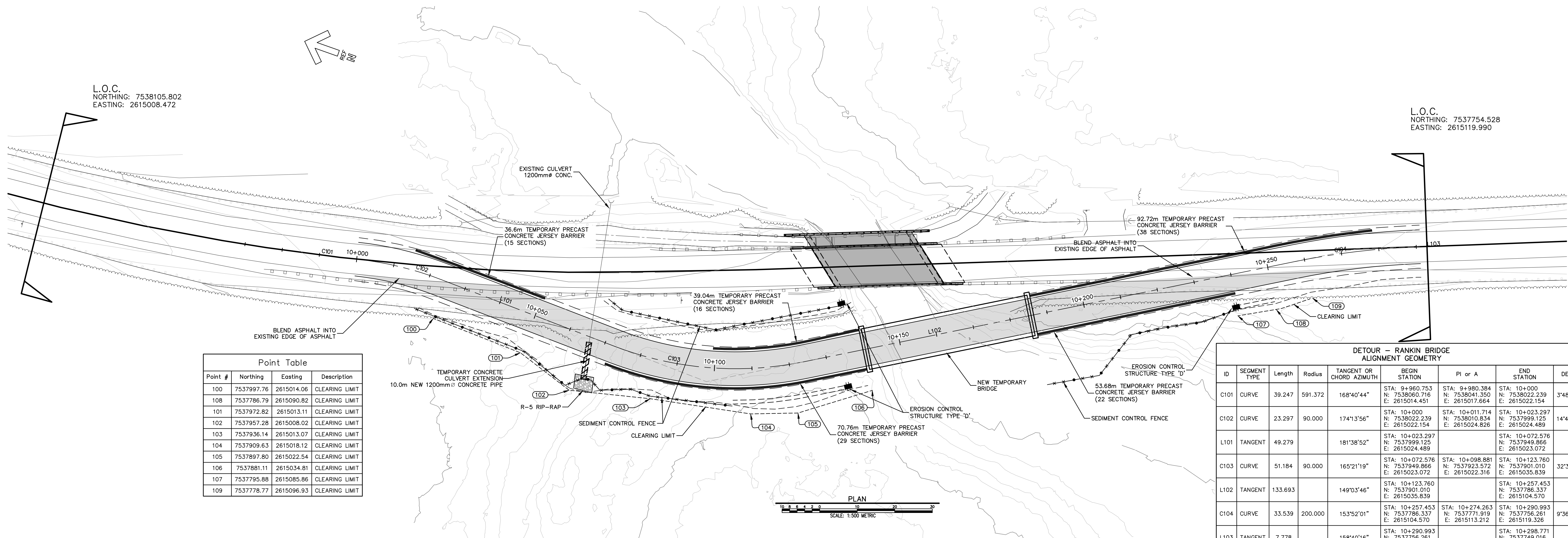


WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

**LEGEND**  
ROAD CENTRELINE  
TOP OF SLOPE  
BOTTOM OF SLOPE  
EXISTING SIGN  
EXISTING CULVERT  
NEW CULVERT  
NEW TIMBER  
PEDESTRIAN FENCE  
NEW GUIDE RAIL  
L.O.C.  
LIMIT OF CONTRACT

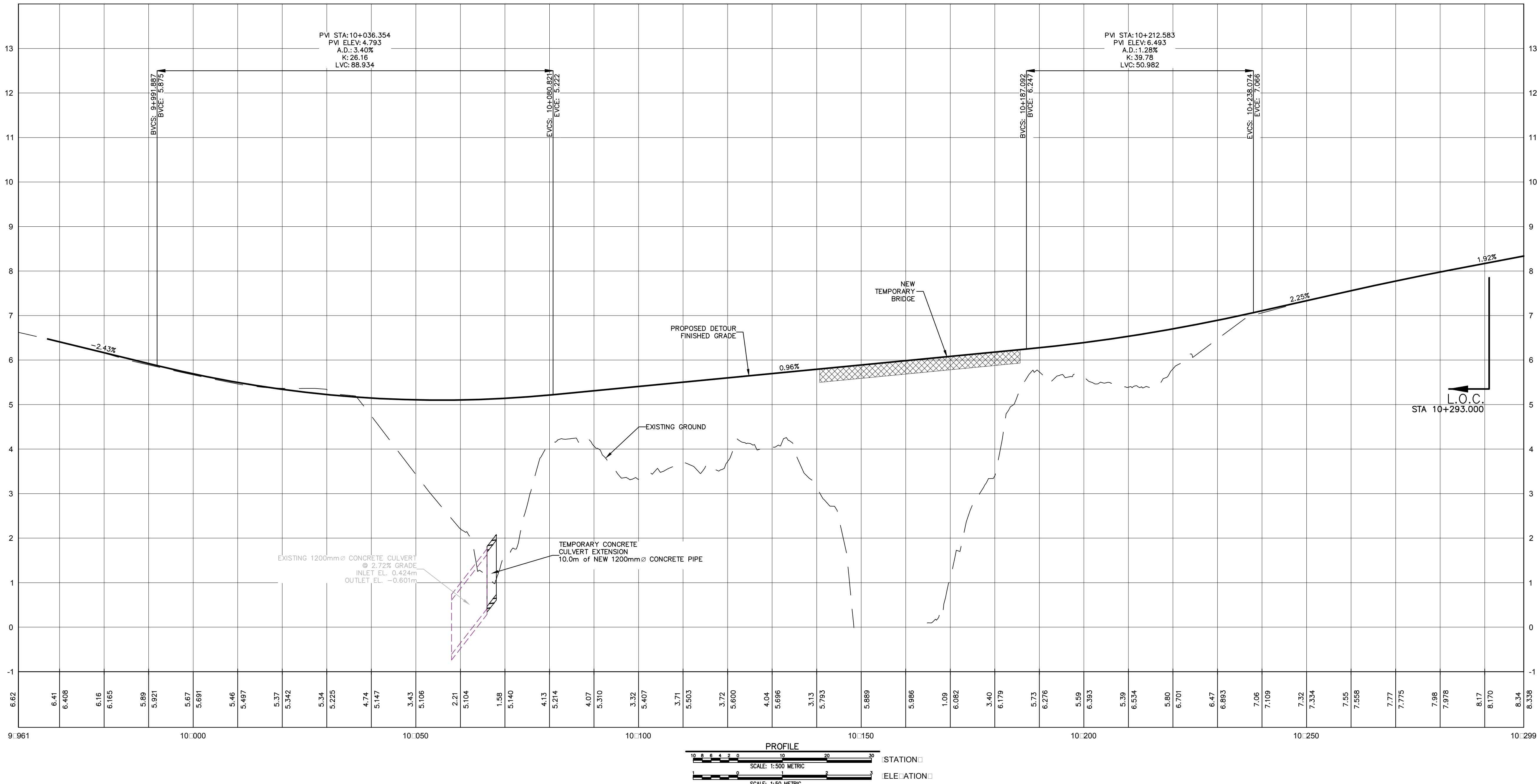
L.O.C.  
NORTHING: 7538105.802  
EASTING: 2615008.472

L.O.C.  
NORTHING: 7537754.528  
EASTING: 2615119.990



Point #	Northing	Easting	Description
100	7537997.76	2615014.06	CLEARING LIMIT
108	7537786.79	2615090.82	CLEARING LIMIT
101	7537972.82	2615013.11	CLEARING LIMIT
102	7537957.28	2615008.02	CLEARING LIMIT
103	7537936.14	2615013.07	CLEARING LIMIT
104	7537909.63	2615018.12	CLEARING LIMIT
105	7537897.80	2615022.54	CLEARING LIMIT
106	7537881.11	2615034.81	CLEARING LIMIT
107	7537795.88	2615085.86	CLEARING LIMIT
109	7537778.77	2615096.93	CLEARING LIMIT

ID	SEGMENT TYPE	Length	Radius	TANGENT OR CHORD AZIMUTH	BEGIN STATION	Pi or A	END STATION	DELTA
C101	CURVE	39.247	591.372	168°40'44"	STA: 9+960.753 N: 7538060.716 E: 2615014.451	STA: 9+980.384 N: 7538041.350 E: 2615017.684	STA: 10+000 N: 7538022.239 E: 2615022.154	3°48'09"
C102	CURVE	23.297	90.000	174°13'56"	STA: 10+000 N: 7538022.239 E: 2615022.154	STA: 10+011.714 N: 7538010.834 E: 2615024.826	STA: 10+023.297 N: 7537949.866 E: 2615023.072	14°49'53"
L101	TANGENT	49.279		181°38'52"	STA: 10+023.297 N: 7537949.866 E: 2615023.072		STA: 10+123.760 N: 7537901.010 E: 2615035.839	
C103	CURVE	51.184	90.000	165°21'19"	STA: 10+072.576 N: 7537949.866 E: 2615023.072	STA: 10+098.881 N: 7537923.572 E: 2615022.316	STA: 10+123.760 N: 7537901.010 E: 2615035.839	32°35'06"
L102	TANGENT	133.693		149°03'46"	STA: 10+123.760 N: 7537901.010 E: 2615035.839		STA: 10+257.453 N: 7537786.337 E: 2615104.570	
C104	CURVE	33.539	200.000	153°52'01"	STA: 10+257.453 N: 7537786.337 E: 2615104.570	STA: 10+274.263 N: 7537771.919 E: 2615113.212	STA: 10+290.993 N: 7537756.261 E: 2615119.326	9°36'30"
L103	TANGENT	7.778		158°40'16"	STA: 10+290.993 N: 7537756.261 E: 2615119.326		STA: 10+298.771 N: 7537749.016 E: 2615122.155	



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK  
project KOUCHIBOUGUAC NATIONAL PARK

drawing DETOUR ROAD PLAN AND PROFILE

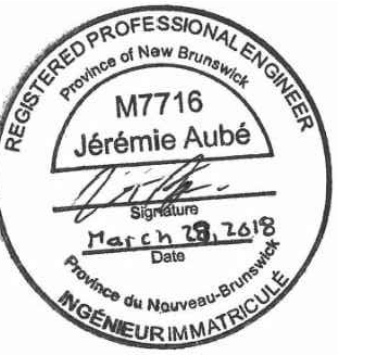
designed S. WELLS/J. AUBE  
date MARCH, 2018  
drawn S. WELLS  
date MARCH, 2018

approved  
date  
Tender

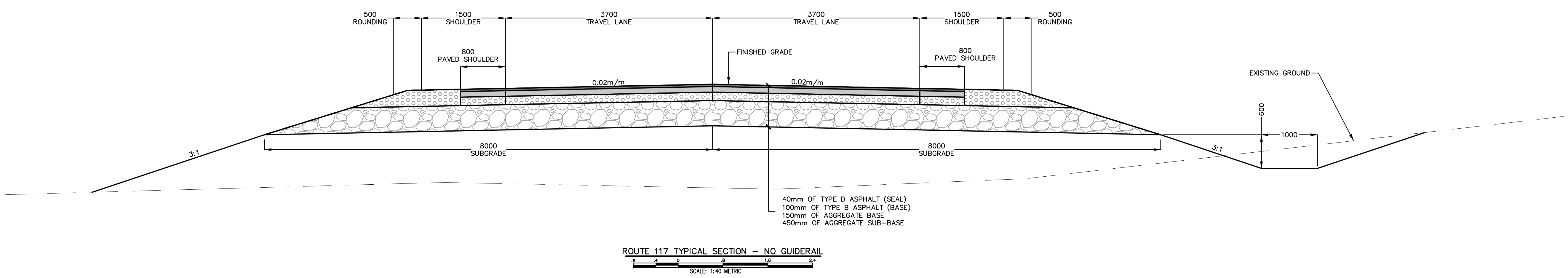
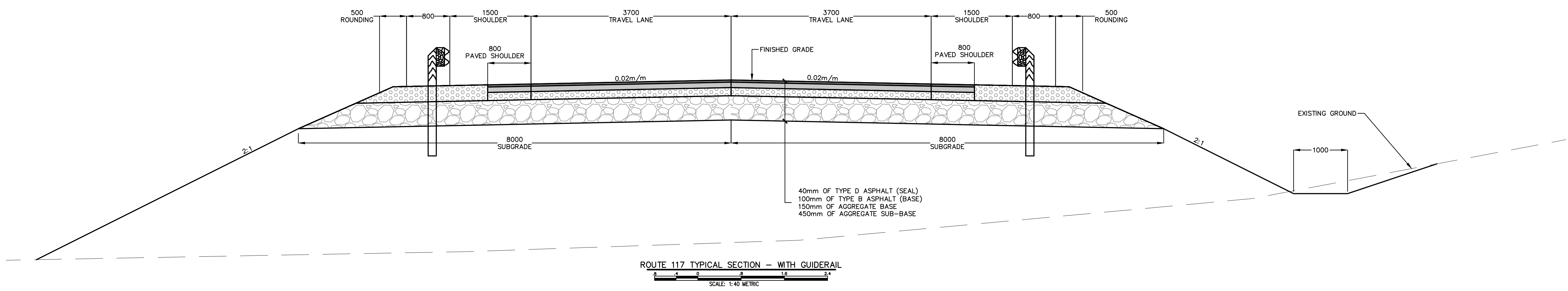
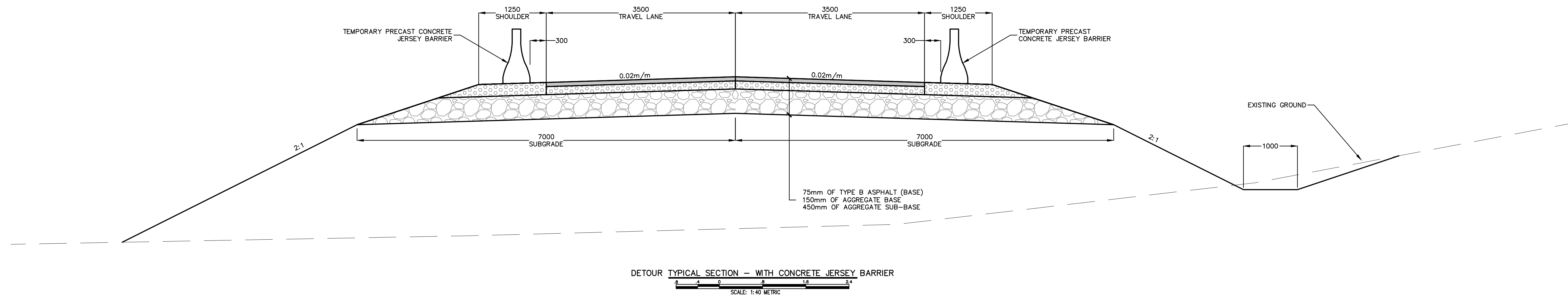
Project Manager Administrateur de projets  
project number no. du projet

1620

drawing no. C4  
no. du dessin



WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-6901 www.wsp.com

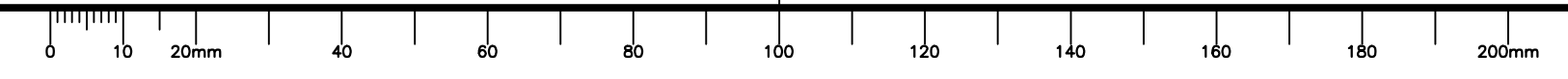


0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK  
project KOUCHIBOUGUAC NATIONAL PARK

drawing TYPICAL SECTIONS

designed S. WELLS/J. AUBE	conçu
date MARCH, 2018	
drawn S. WELLS	dessiné
date MARCH, 2018	
approved	approuvé
date	
Tender	Soumission
Project Manager	Administrateur de projets
project number 1620	no. du projet
drawing no. C5	no. du dessin





**GENERAL**

- ELEVATIONS ARE EXPRESSED IN METRES.
- EXISTING GROUND ELEVATIONS ARE BASED ON FIELD SURVEY DATA COLLECTED BY WSP GROUP INC. AND LIDAR SURVEY BY PARKS CANADA.
- ALL DIMENSIONS ARE EXPRESSED IN MILLIMETERS UNLESS OTHERWISE NOTED.
- STATIONING IS EXPRESSED IN METRES.
- VERIFY ALL ELEVATIONS AND DIMENSIONS OF EXISTING STRUCTURES AND FEATURES IN THE FIELD.
- COMPLY WITH ALL REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS BOUND SEPARATELY.
- ALL SIGNS TO BE RELOCATED AS PER DEPARTMENTAL REPRESENTATIVE DIRECTIVES.

**ENVIRONMENTAL**

- WORK OPERATIONS SHALL BE CARRIED OUT AT ALL TIMES AS PER PCA BMP'S.
- USE SILT FENCE AND ALL OTHER APPROPRIATE MEANS TO PREVENT SEDIMENT FROM DISTURBED AREAS FROM ENTERING ANY WATERCOURSE. LOCATE AS REQUIRED AND AS DIRECTED.
- MONITOR EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES DURING AND AFTER RAINFALL EVENTS. REPAIR AND REPLACE AS NECESSARY.

**CLEARING**

- CLEARING LIMITS TO BE 2m BEYOND THE TOP OF THE BACKSLOPE (IN DITCHED AREAS) AND TO THE TOE OF SLOPE (IN EMBANKMENT AREAS).
- DEPARTMENTAL REPRESENTATIVE TO IDENTIFY EXTENTS IN FIELD.

**CONTROL POINTS**

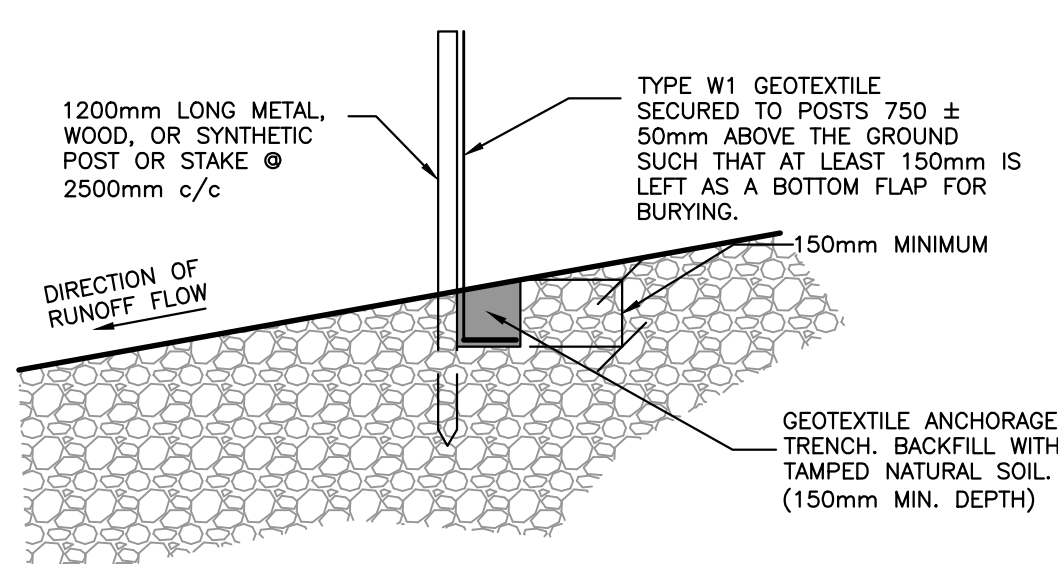
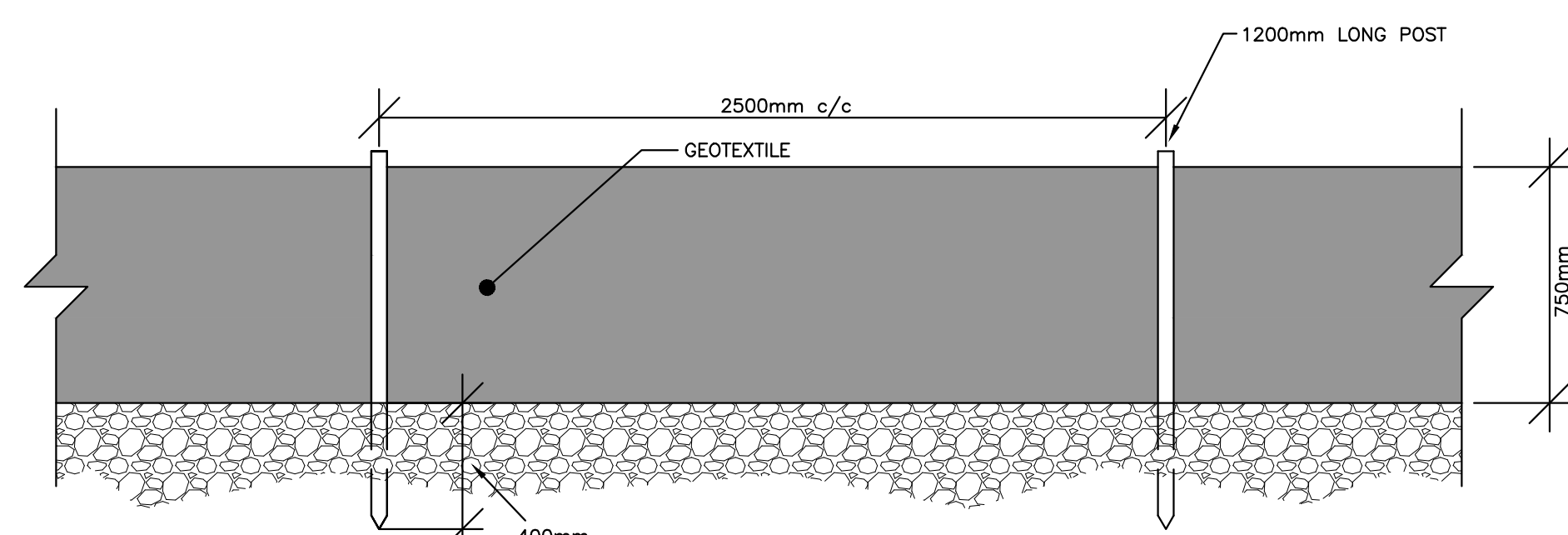
PT	#NORTHING	EASTING	ELEV.	DESC.
5000	7537100.554	2615322.875	9.534	Grid-Mon-7416
5001	7538372.477	2615042.004	10.206	Grid-Mon-7413

**GUIDE RAIL AND POSTS**

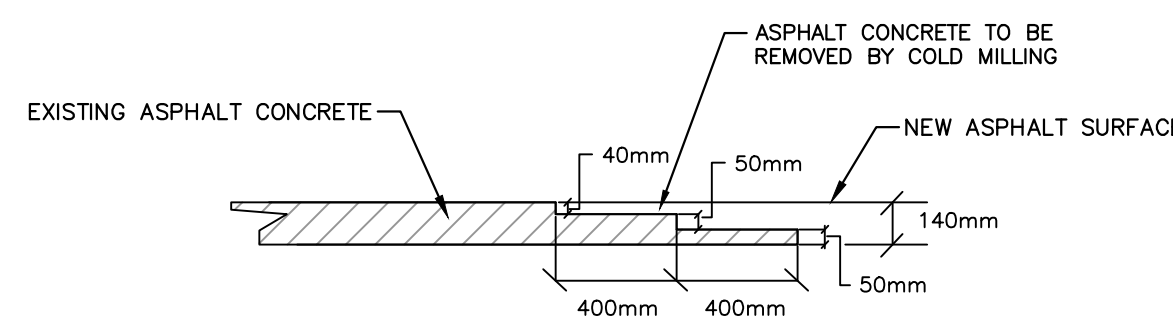
- ALL EXISTING GUIDE RAIL AND POSTS TO BE REMOVED PRIOR TO GRADING OPERATIONS. PLACE FLEXIBLE DRUMS @ 6m SPACINGS IN AREAS WHERE GUIDE RAIL SYSTEM HAS BEEN REMOVED. MAINTAIN UNTIL NEW GUIDE RAIL SYSTEM IS INSTALLED.

**CONCRETE HERSEY BARRIER**

- THIS ITEM CONSISTS OF THE SUPPLY, DELIVERY TO THE WORK SITE, INSTALLATION, MAINTENANCE, RELOCATION WITHIN THE WORK AND REMOVAL OF 2.44 m LONG TEMPORARY PRECAST CONCRETE TRAFFIC BARRIERS, TOGETHER WITH APPURTENANCES, FOR THE CONSTRUCTION OF DETOURS, AS SHOWN ON THESE DRAWINGS.
- KEY PLATE CONNECTORS SHALL BE CAN/CSA G40.21M GRADE 300W STEEL AND SHALL HAVE A THICKNESS OF 12 MM.
- RETRO-REFLECTIVE MARKINGS SHALL CONFORM TO ASTM TYPE III, OR DEPARTMENTAL REPRESENTATIVE APPROVED EQUIVALENT.
- BARRIERS DEEMED TO BE DAMAGED BY THE DEPARTMENTAL REPRESENTATIVE SHALL NOT BE USED.
- THE CONTRACTOR SHALL MAINTAIN THE BARRIERS AND REARRANGE THEM AS NECESSARY TO COMPLETE THE WORK.



**SILT FENCE DETAIL**  
NTS

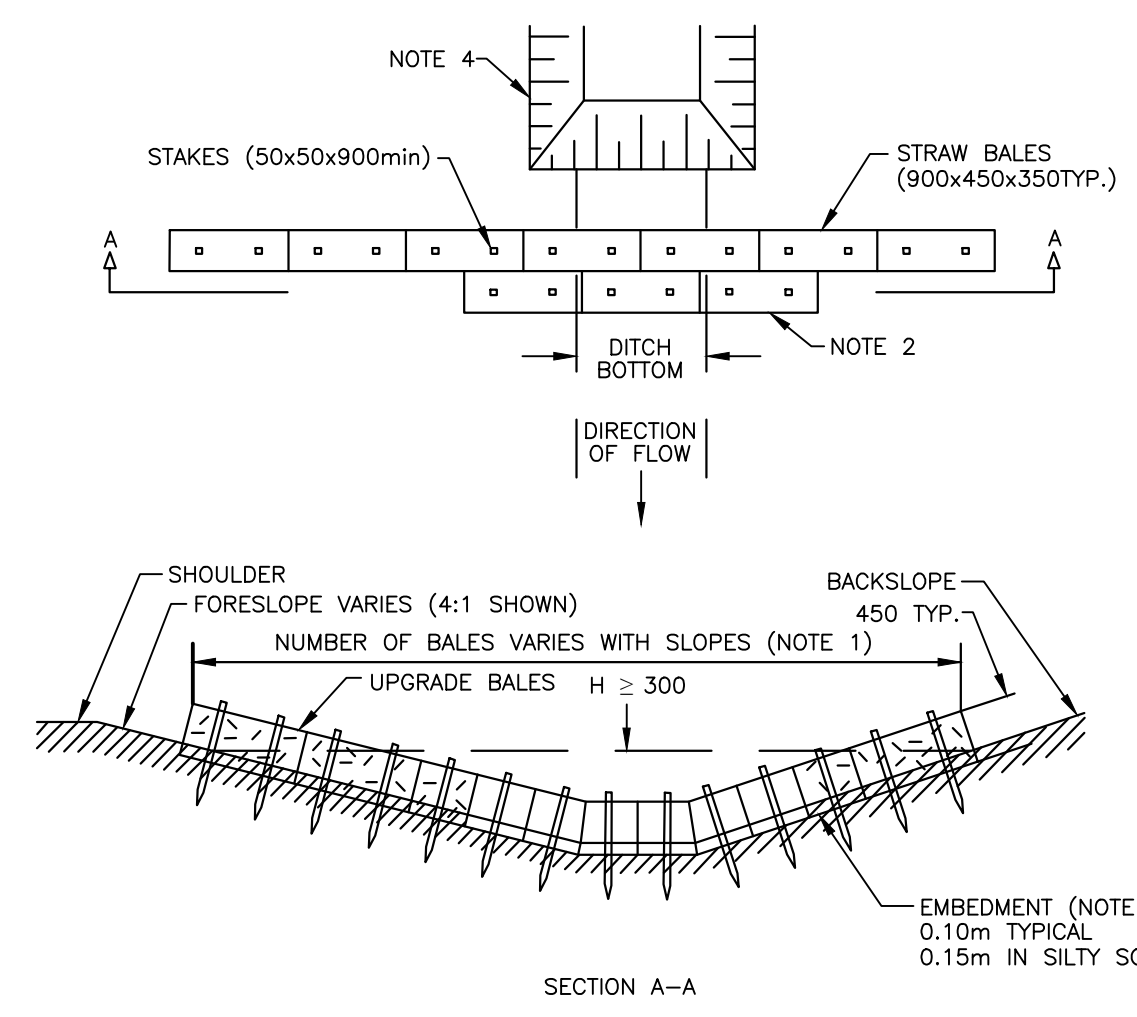


**ASPHALT OVERLAY JOINT DETAIL**  
NTS

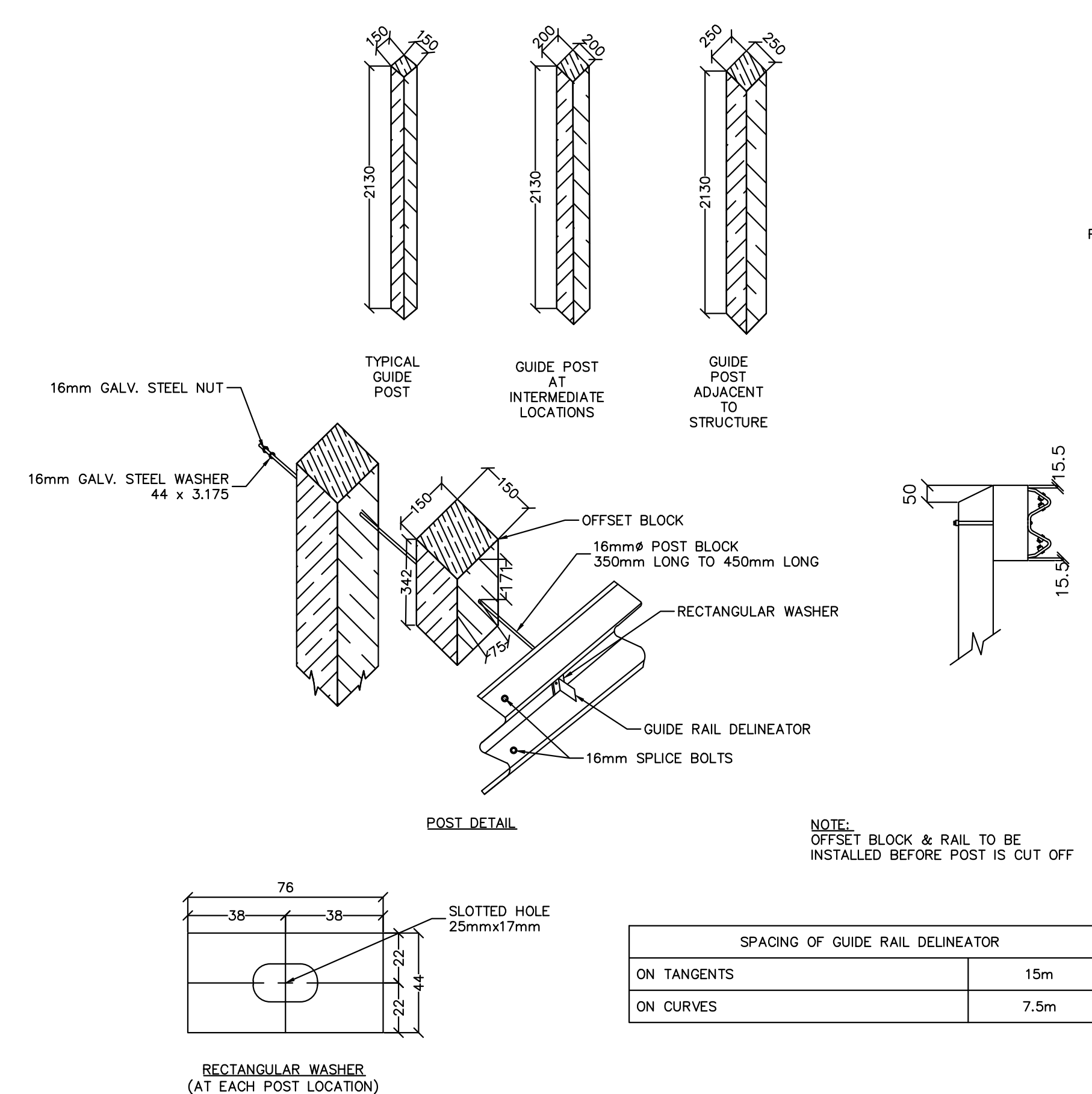
FORESLOPE/BACKSLOPE	Nb. OF BALES	FS	BS
2:1 / 2:1	2	2	
3:1 / 2:1	3	2	
3:1 / 3:1	3	3	
4:1 / 3:1	4	3	
6:1 / 3:1	5	3	

**NOTES:**

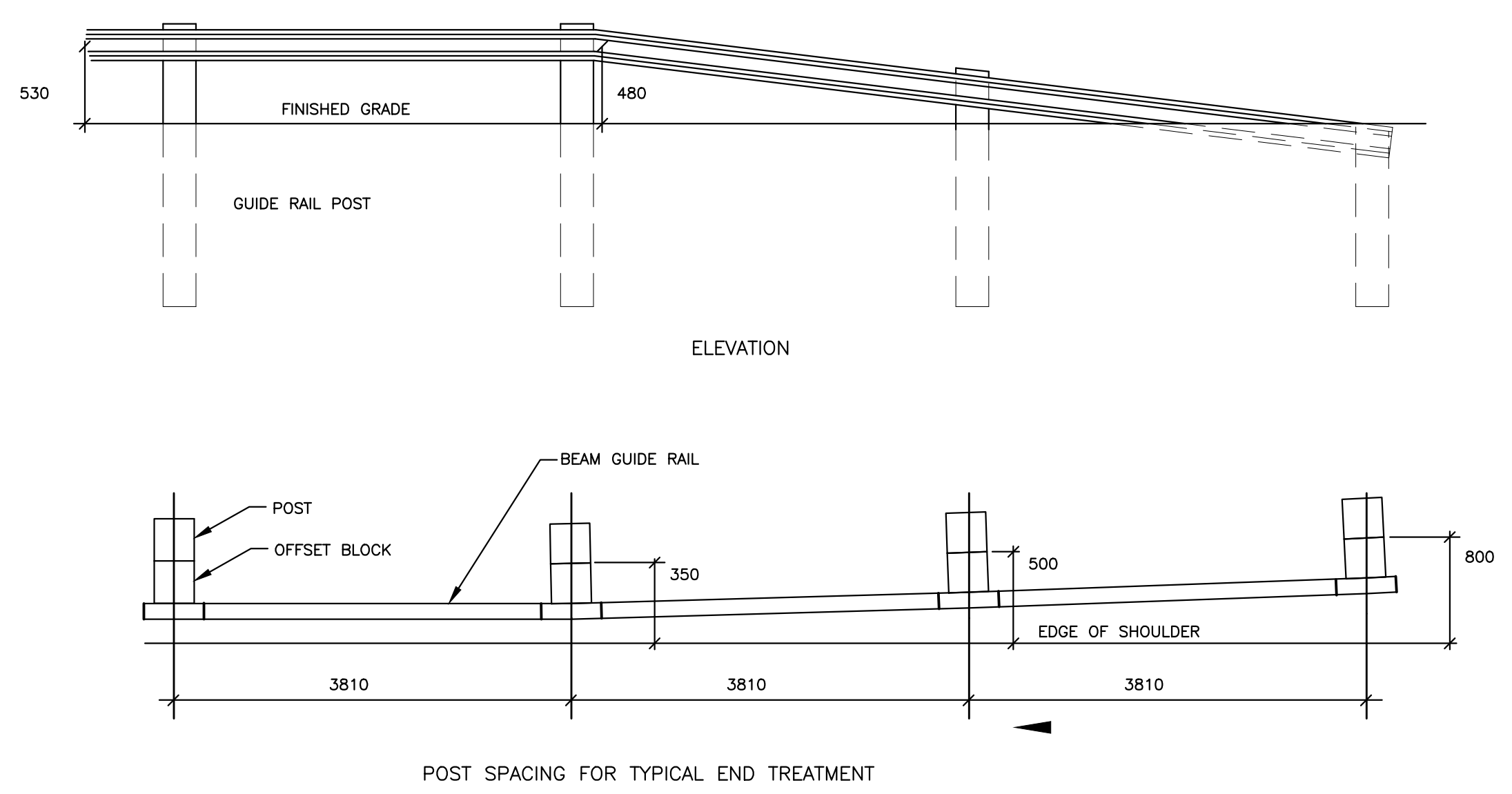
- SEE TABLE FOR TYPICAL NUMBER OF UPSTREAM BALES WHICH ARE REQUIRED TO ENSURE MIN. 300mm FOR HEIGHT 'H' (FROM TOP OF BALES AT DITCH CENTRE TO POINT WHERE HIGHEST BALES INTERCEPT SLOPES).
- INSTALL MINIMUM OF 3 BALES DOWNGRADE AS REINFORCEMENT. JOINTS OF DOWNGRADE BALES SHOULD BE STAGGERED FROM UPSTREAM BALES.
- IF TRENCH FOR BALE EMBEDMENT IS EXCAVATED WIDER THAN BALES, BACKFILL WITH EXCAVATED MATERIAL.
- THE SEDIMENT PIT OF NB01 STANDARD DWGS 605-5 and 605-6 IS REQUIRED FOR TYPE 'D' STRUCTURE.



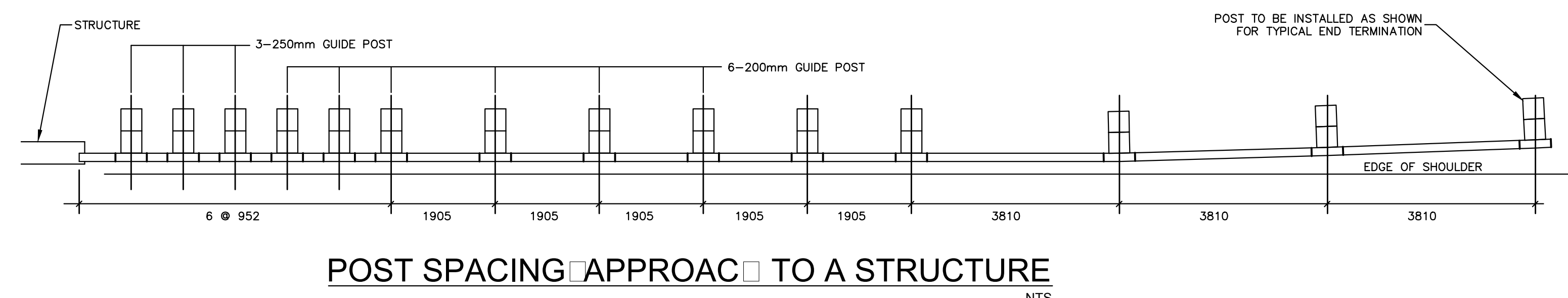
**EROSION CONTROL STRUCTURE TYPE D**  
NTS



**GUIDE POST DETAILS**  
NTS

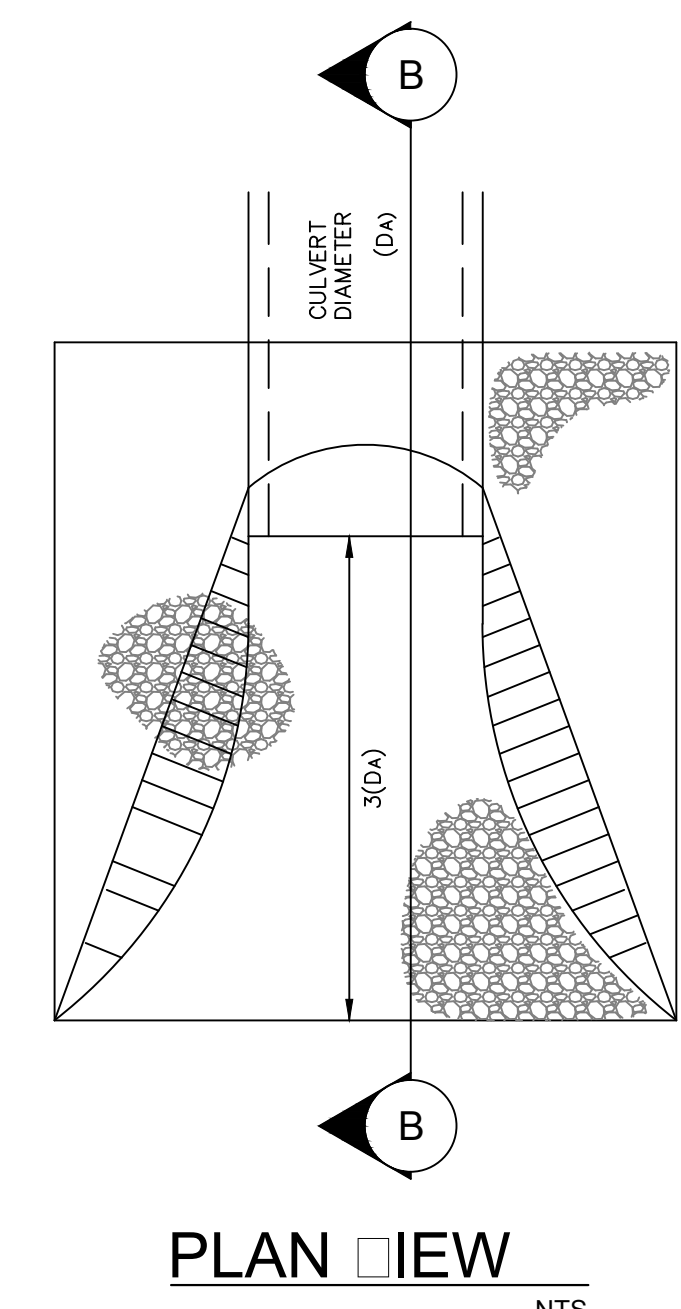


**POST SPACING FOR TYPICAL END TERMINATION**  
NTS



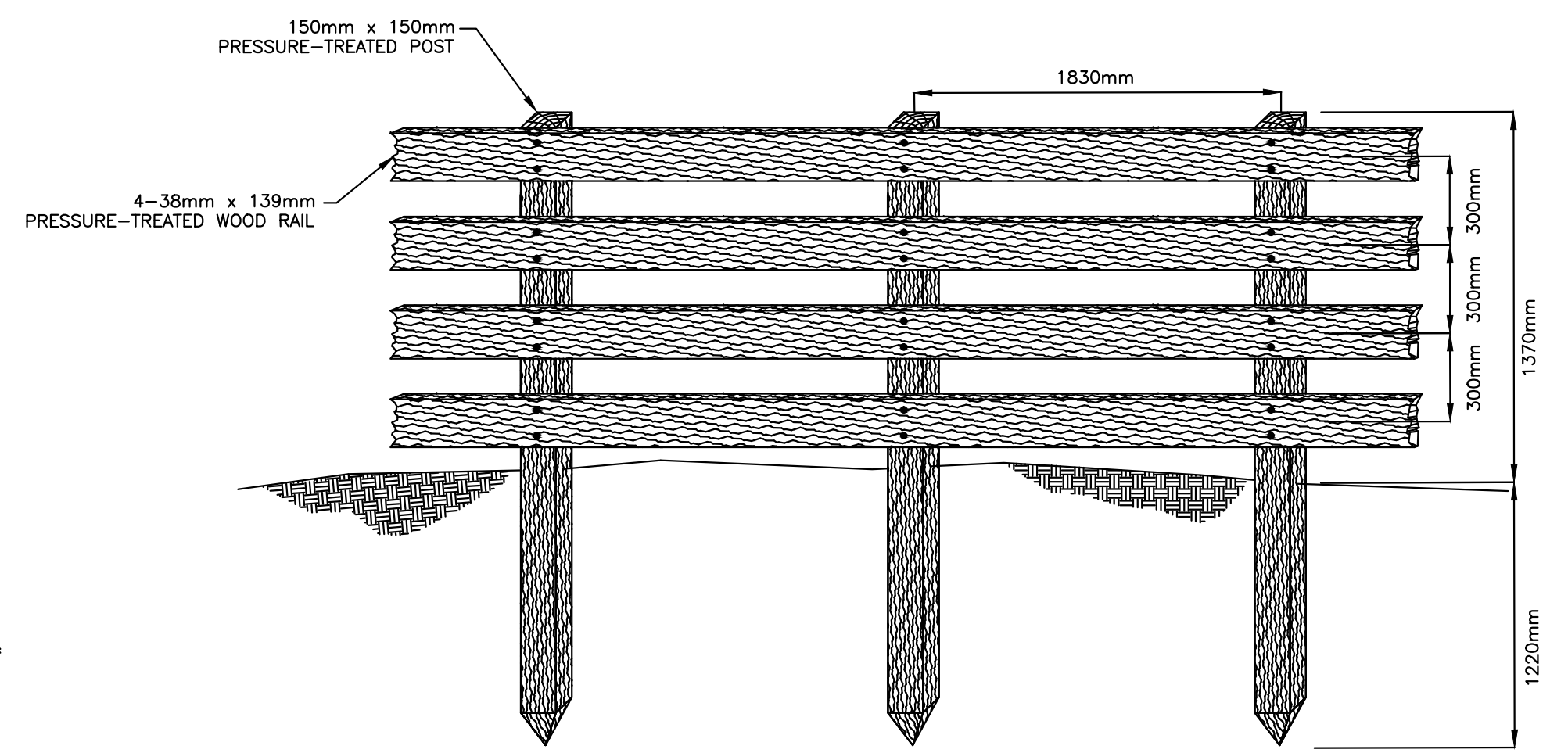
**POST SPACING APPROACH TO A STRUCTURE**  
NTS

**CULVERT END TREATMENT DETAIL**  
NTS



**PLAN VIEW**  
NTS

**WOODEN PEDESTRIAN FENCE DETAIL**  
NTS



**GENERAL**

ALL HARDWARE SHALL BE SUITABLE FOR OUTDOOR USE WITH PRESSURE-TREATED WOOD.

EXACT LOCATION OF THE FENCE WILL BE DETERMINED IN THE FIELD BY THE DEPARTMENTAL REPRESENTATIVE. DETAILS OF CONSTRUCTION ARE TO BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS. ALL PHASES OF THE WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, DETAILS AND REQUIREMENTS OF THE WORK PRIOR TO INSTALLATION, IN ORDER TO PROVIDE A QUALITY FINISHED WOODEN FENCE. ALL FENCE COMPONENTS SHALL BE INSTALLED SECURELY.

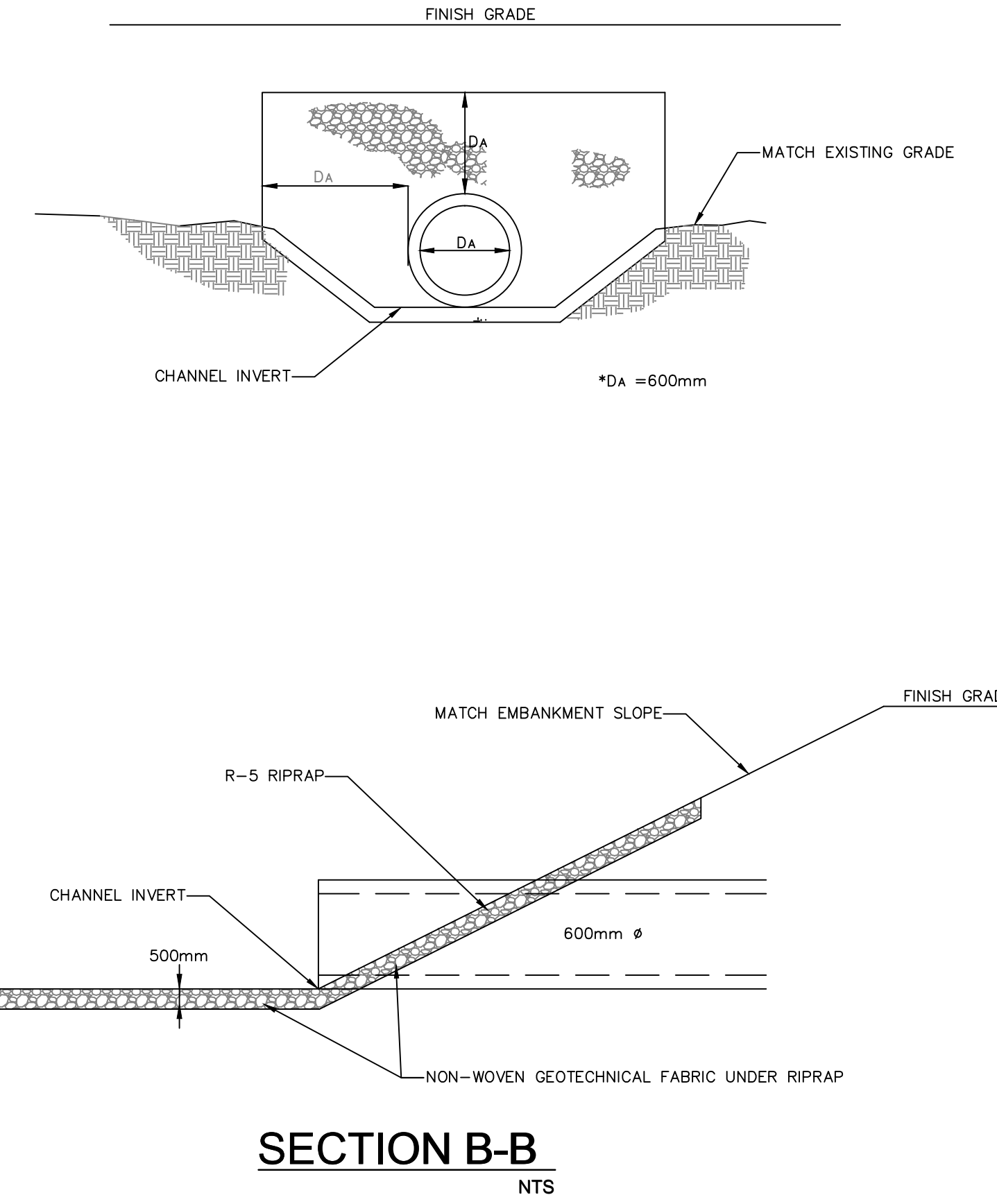
**GRADE AND LINE**

PRIOR TO THE CONSTRUCTION OF THE FENCE, THE CONTRACTOR SHALL REMOVE ANY DEBRIS AND CORRECT ANY MINOR GROUND ELEVATION PROBLEMS WHICH WOULD INTERFERE WITH THE PROPER CONSTRUCTION OF THE FENCE IN ITS DESIGNATED LOCATION. ALL FENCE GRADES AND LINE SHALL BE SUBJECT TO THE APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE. GRADING SHALL BE DONE ANTICIPATING THE LOCATION OF POSTS SO THE GROUND PROFILE IS UNIFORM BETWEEN POSTS. COMPACTION OF THE GROUND ALONG THE FENCE LINE MUST BE COMPLETED BEFORE FENCE ERECTION STARTS.

**INSTALLATION**

IF AN OBSTRUCTION OR MAJOR GROUND ELEVATION DIFFERENCE PREVENTS PLACING A POST AT 1.83m FROM AN ADJACENT POST, THE POST MAY BE PLACED NOT LESS THAN 1.5m FROM THE NEXT POST AND IN NO CASE MORE THAN 2.1m. THE POSTS SHALL BE CENTERED IN THE GROUND AND SHALL BE PLUMB AND IN LINE WITHIN 5mm.

**FRONT VIEW**  
NTS



**SECTION B-B**  
NTS



WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com

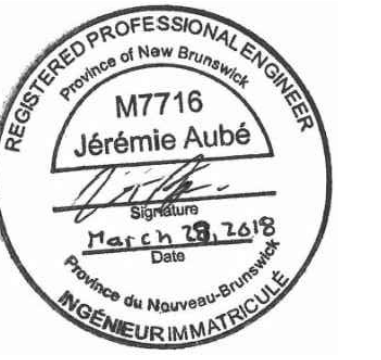
0	ISSUED FOR TENDER	MAR 2018
revisions		date

project  
**BRIDGE REPLACEMENT RANKIN BROOK**  
**KOUCHIBOUGUAC NATIONAL PARK**

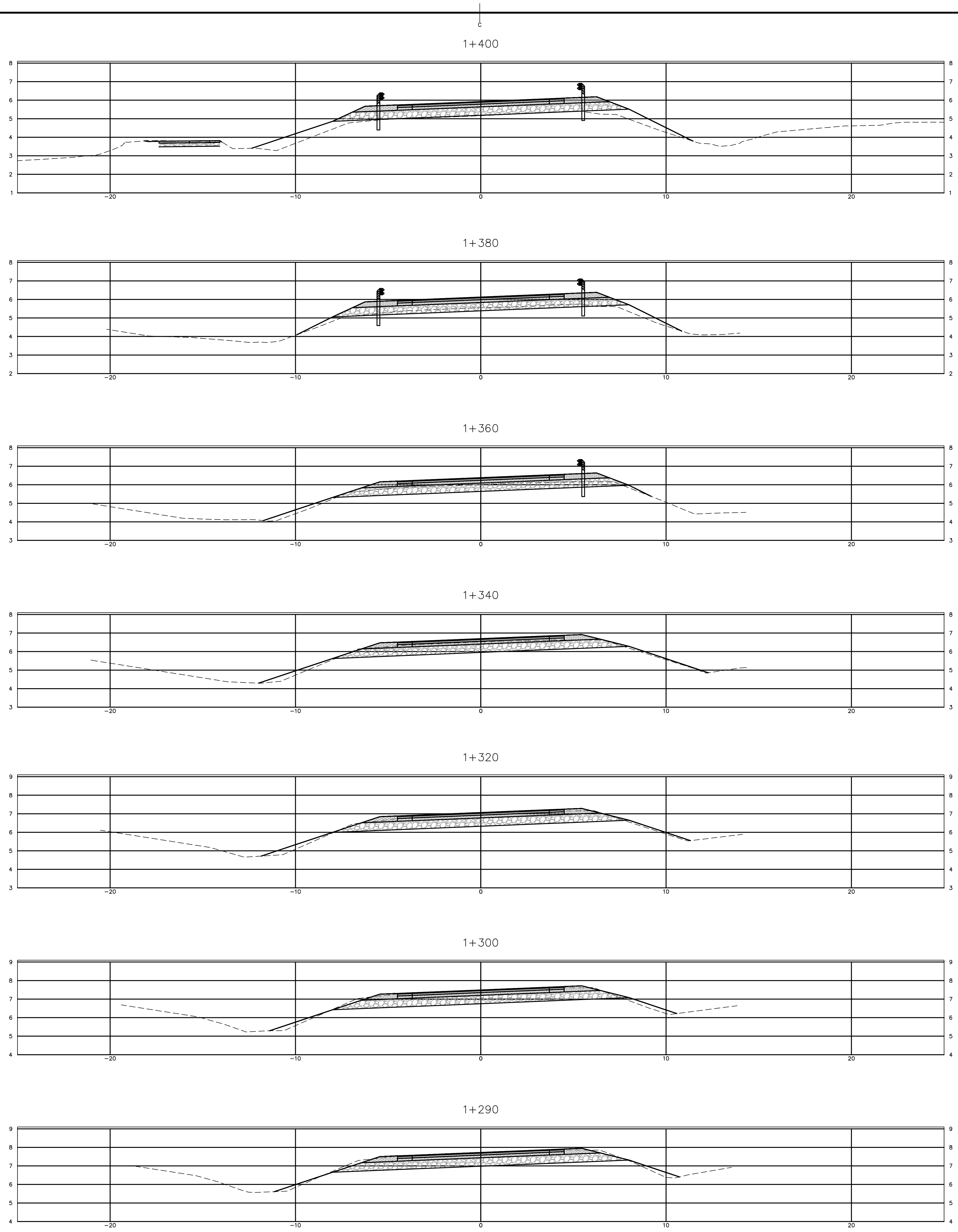
designed S. WELLS/J. AUBE  
date MARCH, 2018  
drawn S. WELLS  
date MARCH, 2018  
approved  
date  
Tender  
Project Manager  
project number  
**1620**

conçu  
dessiné  
approuvé  
Soumission  
Administrateur de projets  
no. du projet  
**1620**  
drawing no.  
**C6**  
no. du dessin





WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-6901 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK

project KOUCHIBOUGUAC NATIONAL PARK

drawing ROUTE 117 CROSS SECTIONS

designed S. WELLS/J. AUBE conçu

date MARCH, 2018

drawn S. WELLS dessiné

date MARCH, 2018

approved approuvé

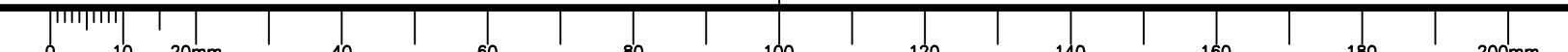
date

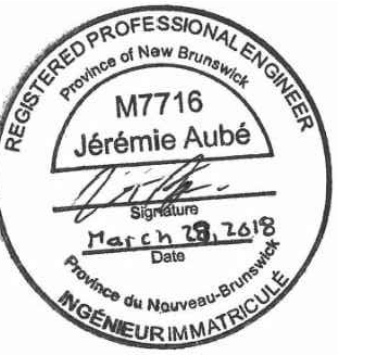
Tender Soumission

Project Manager Administrateur de projets

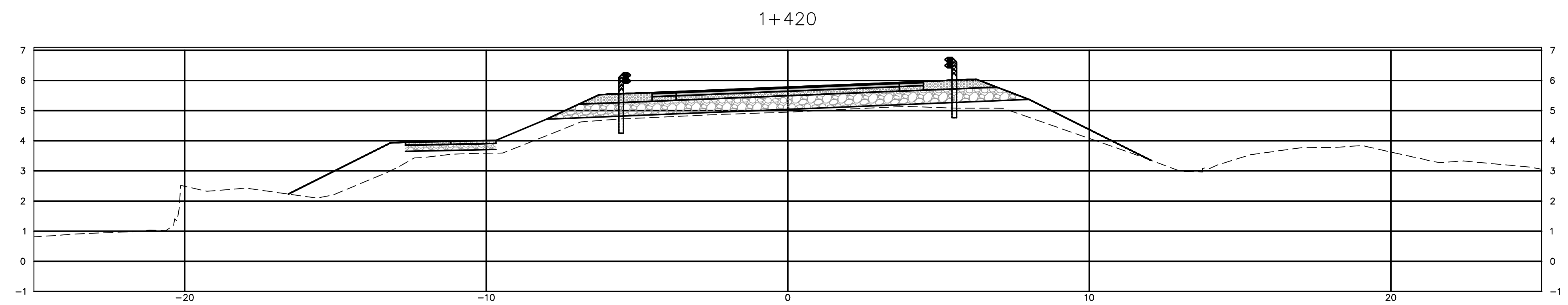
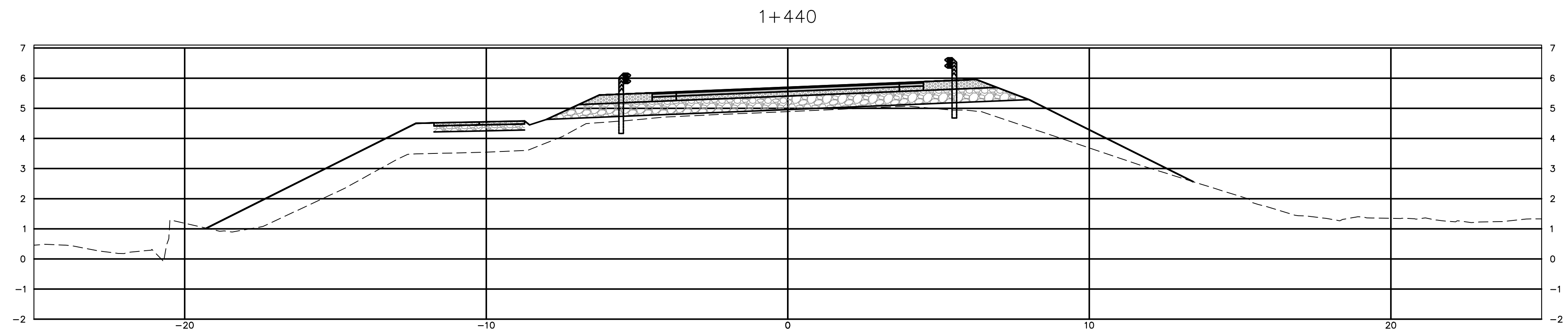
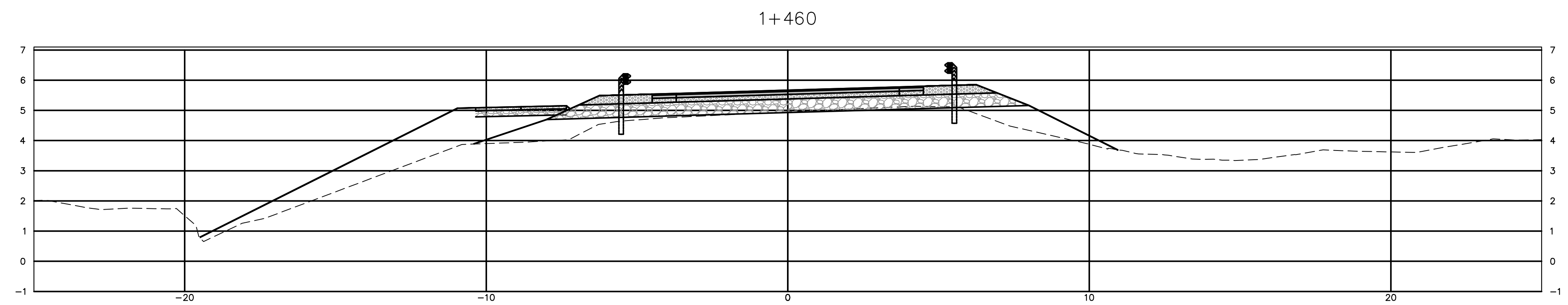
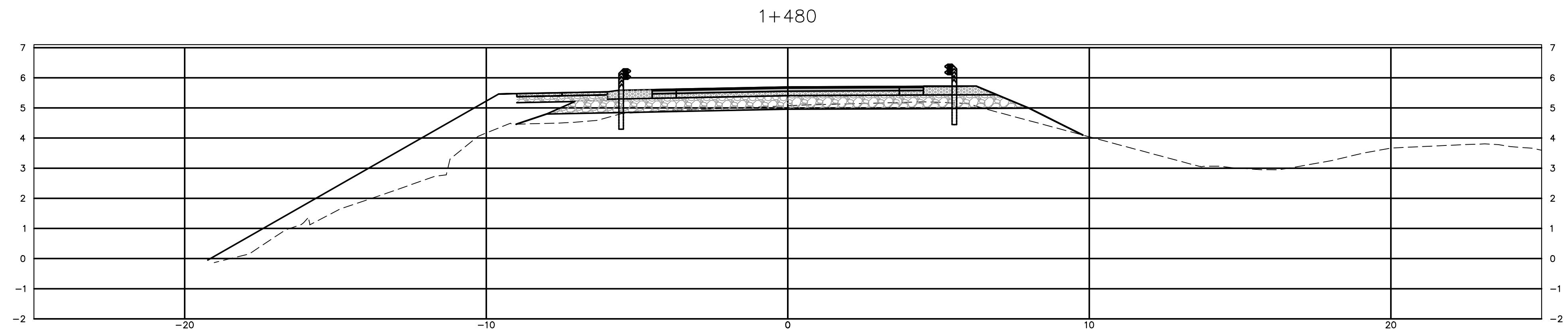
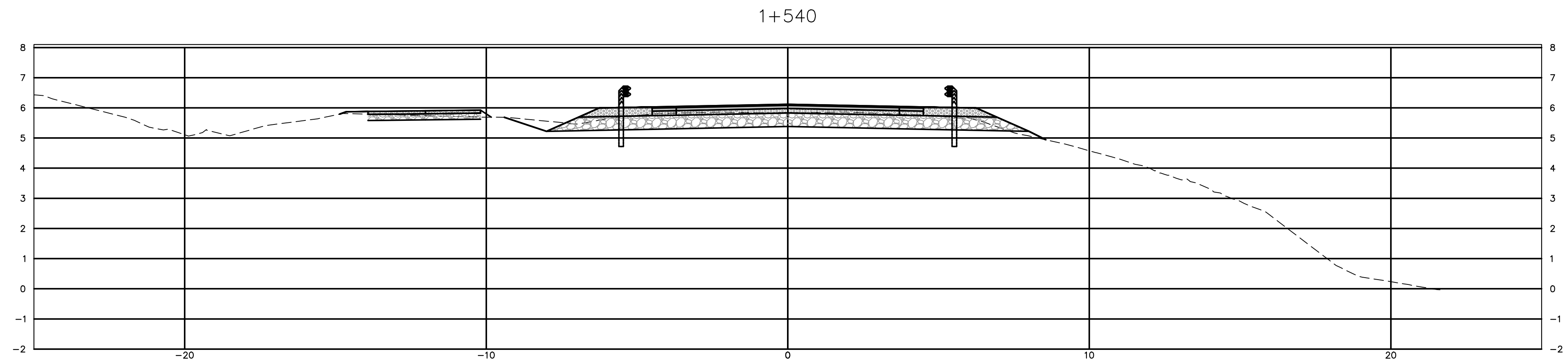
project number 1620 no. du projet

drawing no. C7 no. du dessin





WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-6901 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK

project BRIDGE REPLACEMENT RANKIN BROOK  
KOUCHIBOUGUAC NATIONAL PARK

drawing ROUTE 117 CROSS SECTIONS

designed S. WELLS/J. AUBE conçu

date MARCH, 2018

drawn S. WELLS dessiné

date MARCH, 2018

approved

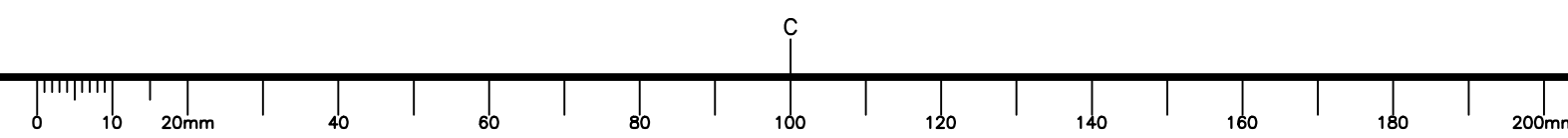
date

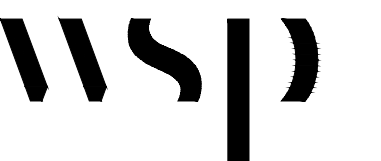
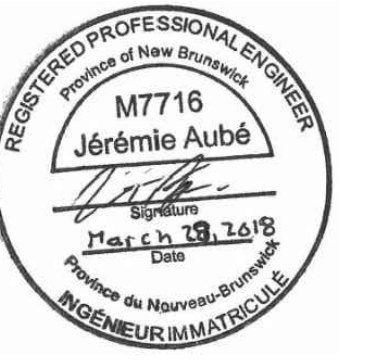
Tender Soumission

Project Manager Administrateur de projets

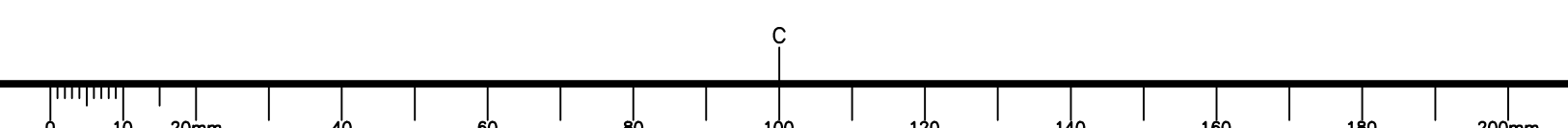
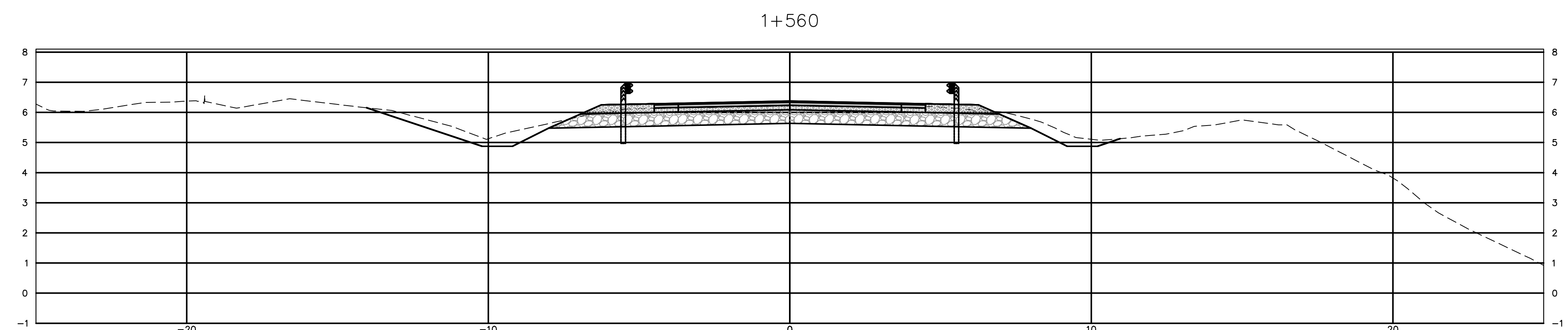
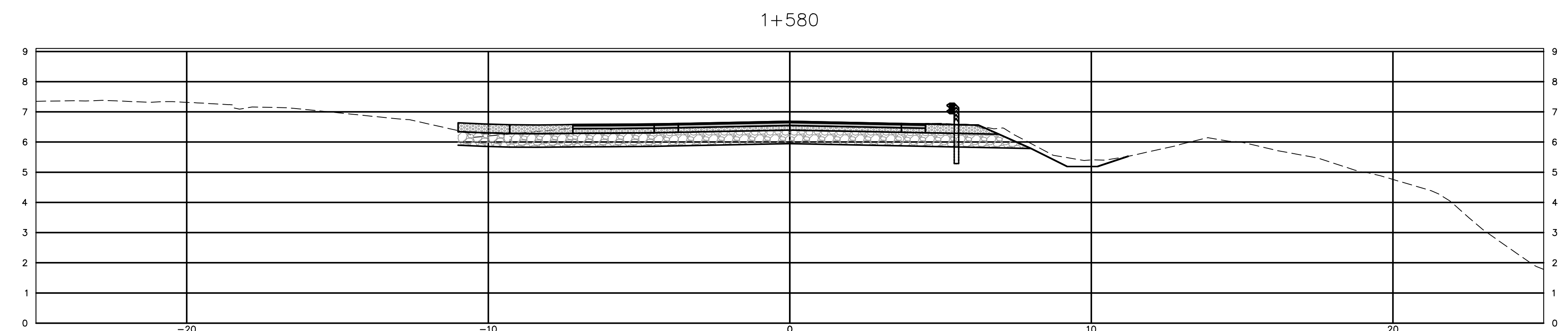
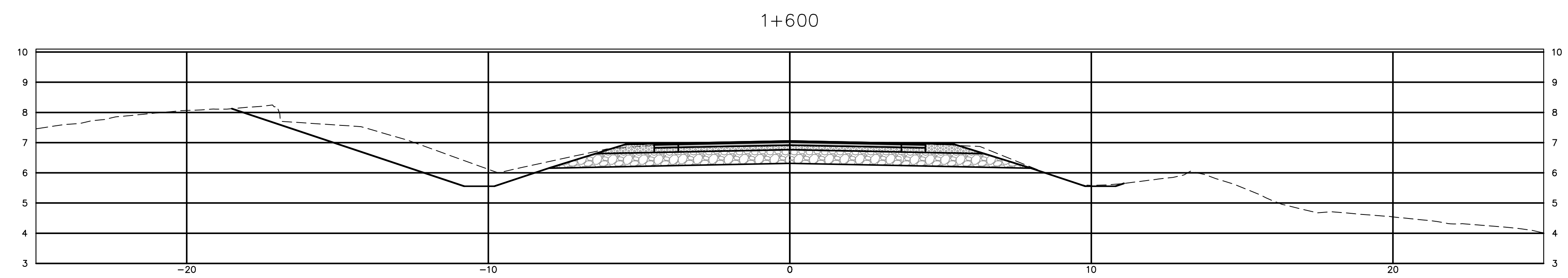
project number 1620 no. du projet

drawing no. C8 no. du dessin





**WSP Canada Inc.**  
 195 MacEwen Road  
 Summerside, Prince Edward Island, Canada C1N 5Y4  
 T 902-436-2669 F 902-436-6901 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project  
**BRIDGE REPLACEMENT  
 RANKIN BROOK**  
**KOUCHIBOUGUAC  
 NATIONAL PARK**

drawing  
**ROUTE 117  
 CROSS SECTIONS**

designed S. WELLS/J. AUBE conçu

date MARCH, 2018

drawn S. WELLS dessiné

date MARCH, 2018

approved approuvé

date

Tender Soumission

Project Manager Administrateur de projets

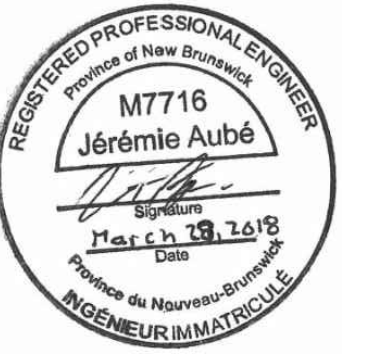
project number no. du projet

**1620**

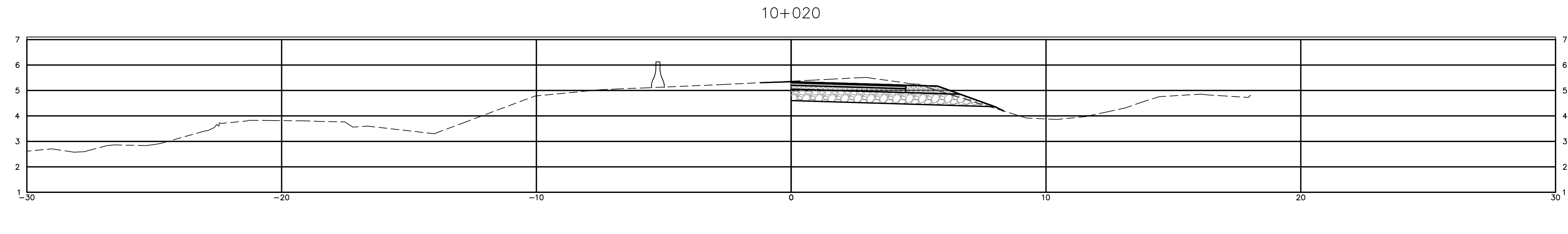
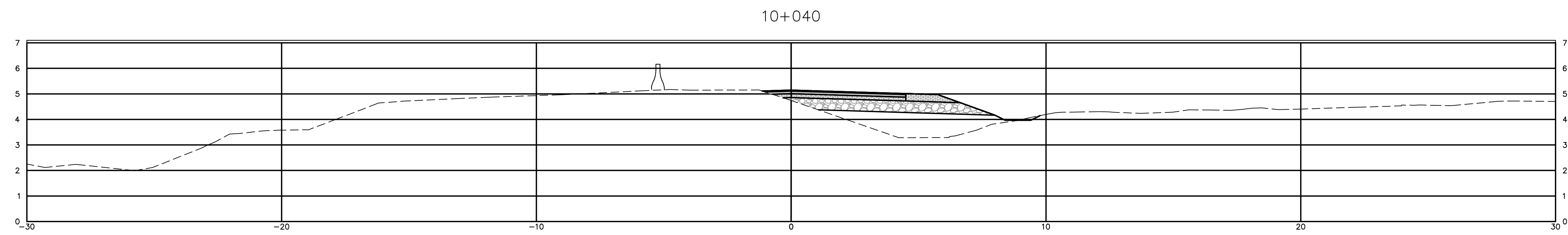
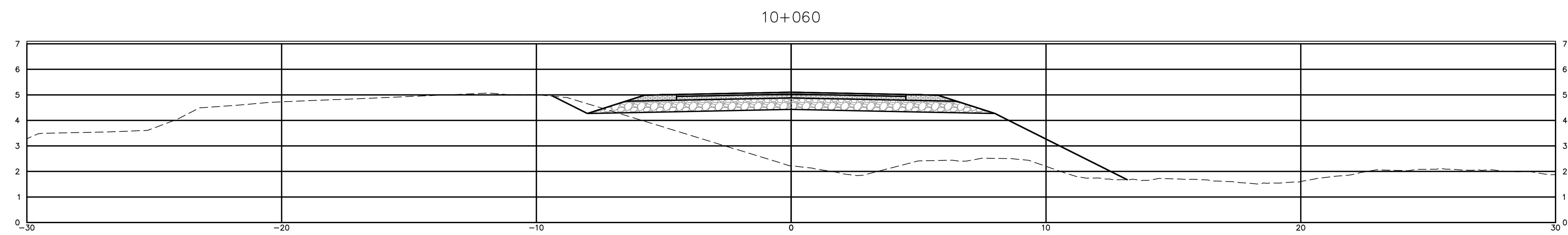
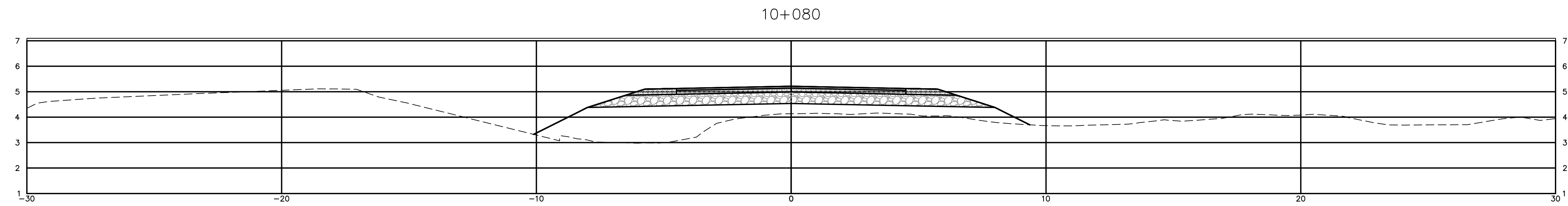
drawing no. no. du dessin

**C9**





WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK  
project KOUCHIBOUGUAC NATIONAL PARK

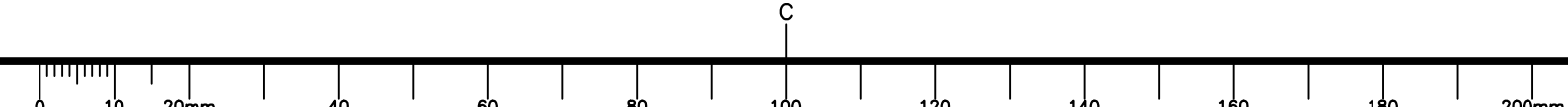
drawing DETOUR ROAD CROSS SECTIONS

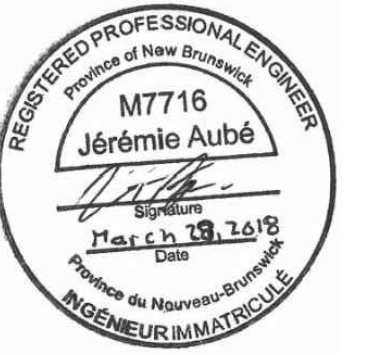
designed S. WELLS/J. AUBE  
date MARCH, 2018  
drawn S. WELLS  
date MARCH, 2018

approved  
date  
Tender

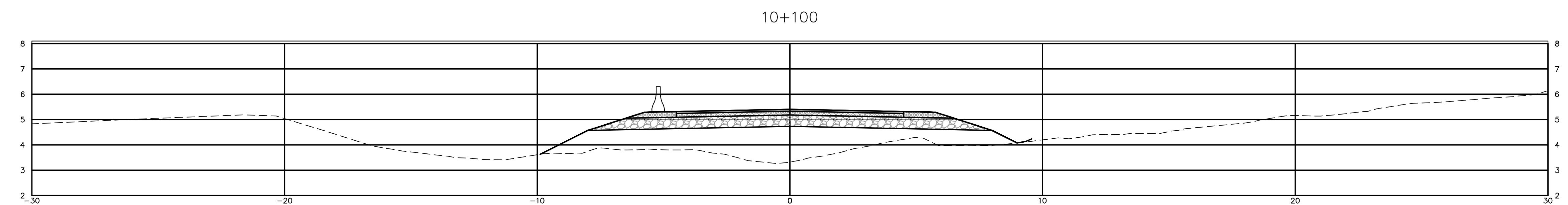
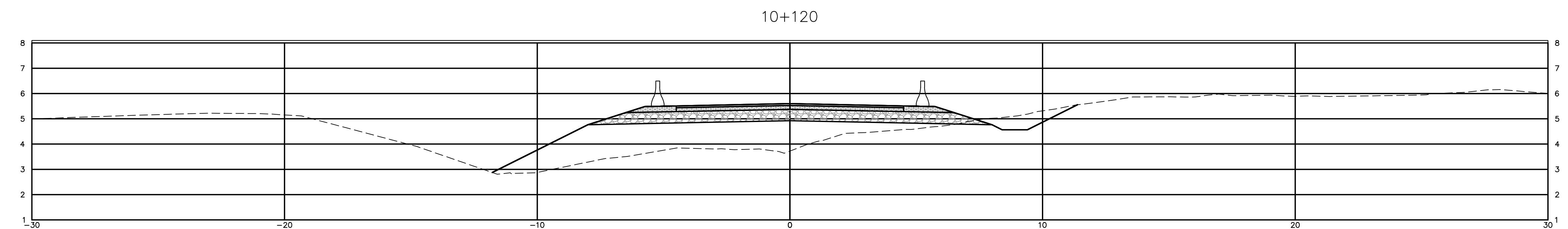
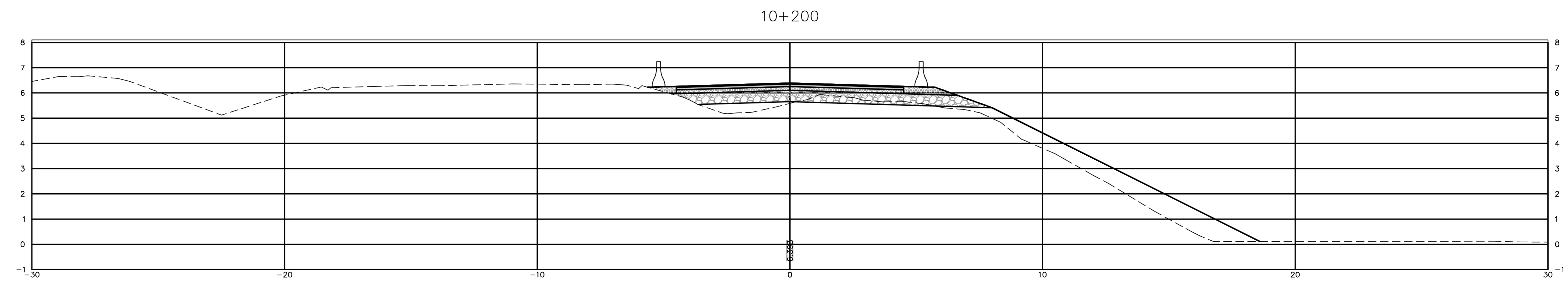
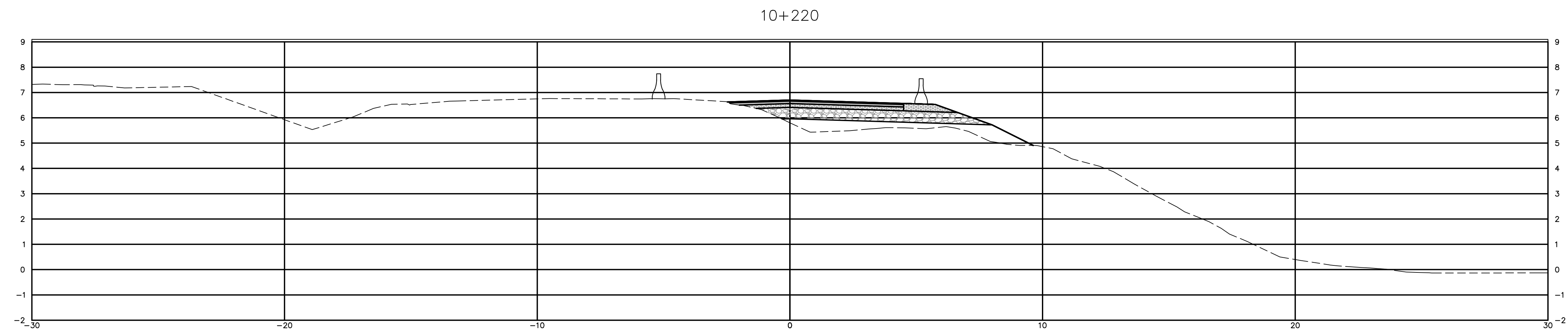
Project Manager Administrateur de projets  
project number 1620  
no. du projet

drawing no. C10  
no. du dessin





WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK  
project KOUCHIBOUGUAC NATIONAL PARK

drawing DETOUR ROAD CROSS SECTIONS  
dessin

designed S. WELLS/J. AUBE conçu

date MARCH, 2018

drawn S. WELLS dessiné

date MARCH, 2018

approved approuvé

date

Tender Soumission

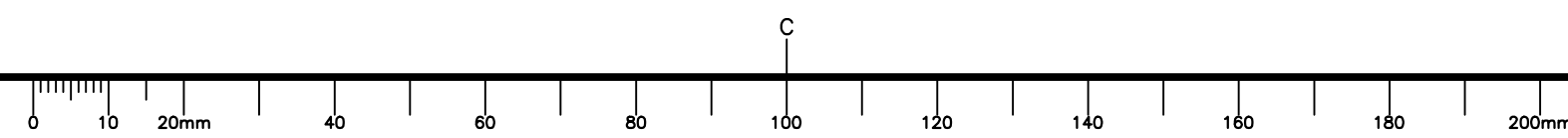
Project Manager Administrateur de projets

project number no. du projet

1620

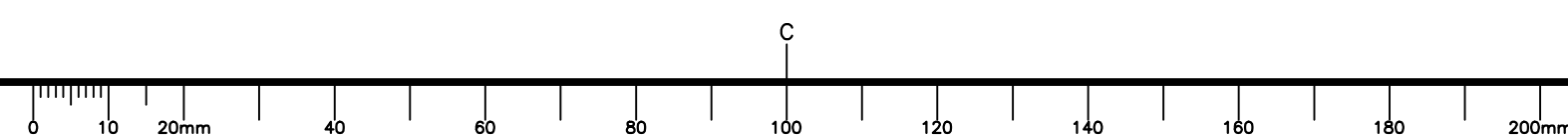
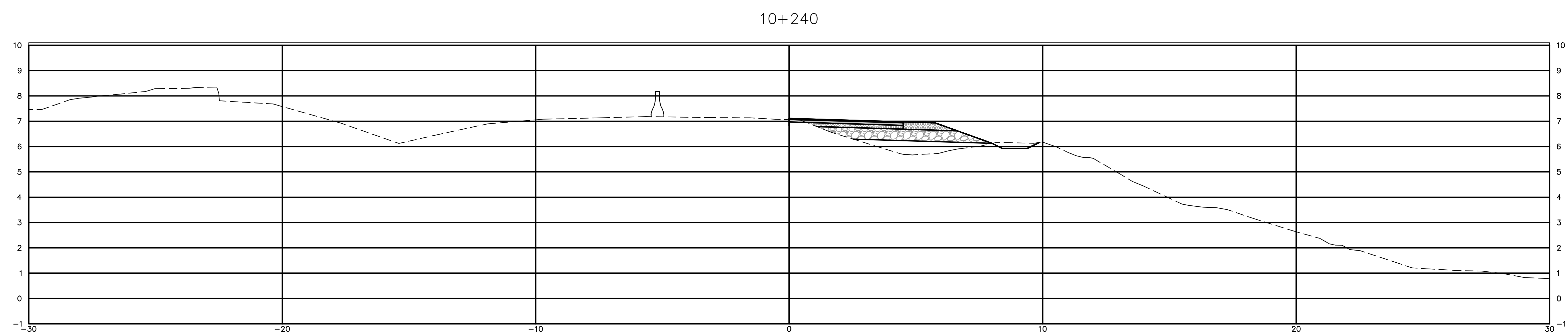
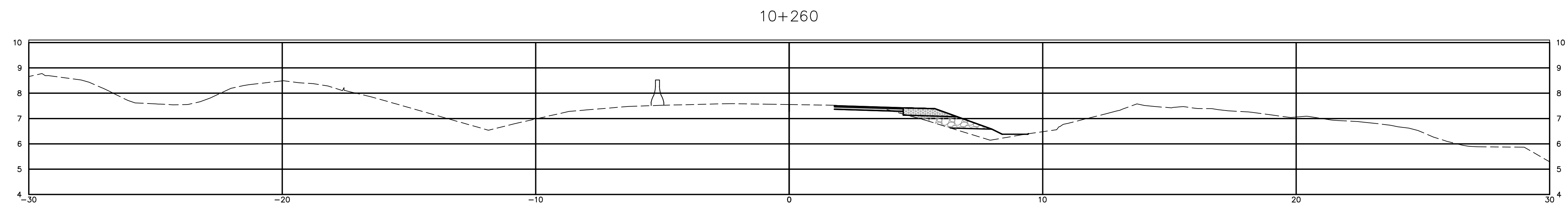
drawing no. no. du dessin

C11





WSP Canada Inc.  
195 MacEwen Road  
Summerside, Prince Edward Island, Canada C1N 5Y4  
T 902-436-2669 F 902-436-8601 www.wsp.com



0	ISSUED FOR TENDER	MAR 2018
revisions		date

project BRIDGE REPLACEMENT RANKIN BROOK

project KOUCHIBOUGUAC NATIONAL PARK

drawing DETOUR ROAD CROSS SECTIONS

designed S. WELLS/J. AUBE conçu

date MARCH, 2018

drawn S. WELLS dessiné

date MARCH, 2018

approved approuvé

date

Tender Soumission

Project Manager Administrateur de projets

project number 1620 no. du projet

drawing no. C12 no. du dessin