Parcs Canada

Parks Canada

NORTH ASPY RIVER SOUTH BRANCH BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS NATIONAL PARK
NOVA SCOTIA

PROJECT NO. 666

DRAWING LIST

STRUCTURAL DRAWINGS

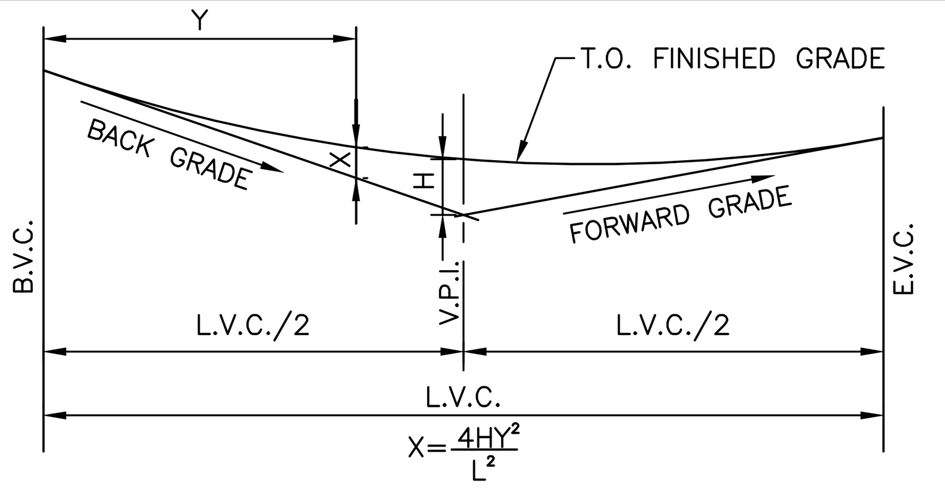
CIVIL DRAWINGS

Stantec

Canada

VERTICAL CURVE INFORMATION

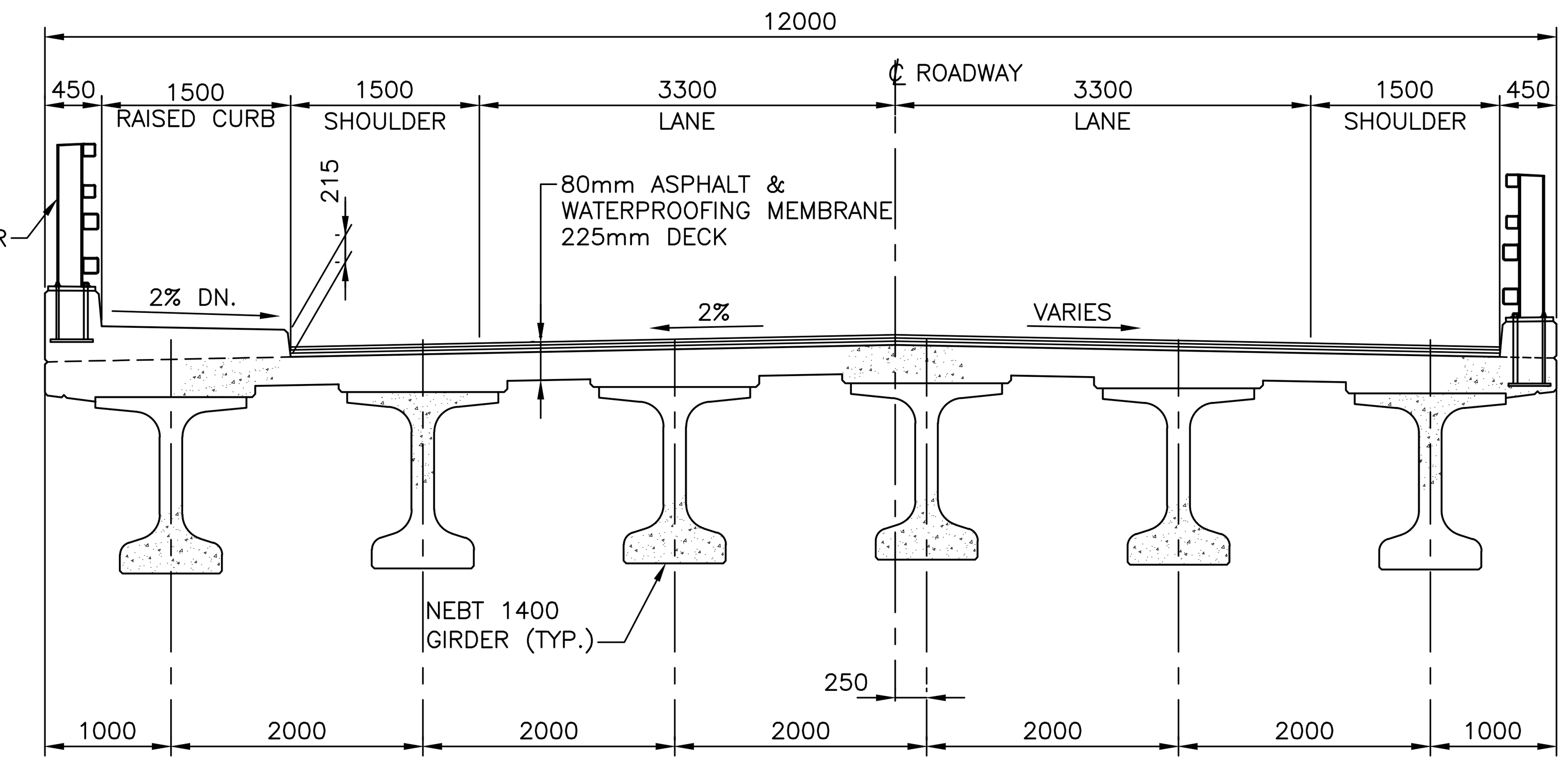
145.769 VC
P.V.I. STATION = 2+385.733
EL. P.V.I. = 41.209
LOW POINT STATION = 2+312.849
EL. LOW POINT = 40.625
K = 22.600
B.V.C.S. = 2+312.849
B.V.C.E. = 40.625
E.V.C.S. = 2+458.618
E.V.C.E. = 46.493
GRADE IN = 0.800%
GRADE OUT = 7.250%
TANGENT OFFSET AT P.V.I. = 1.175



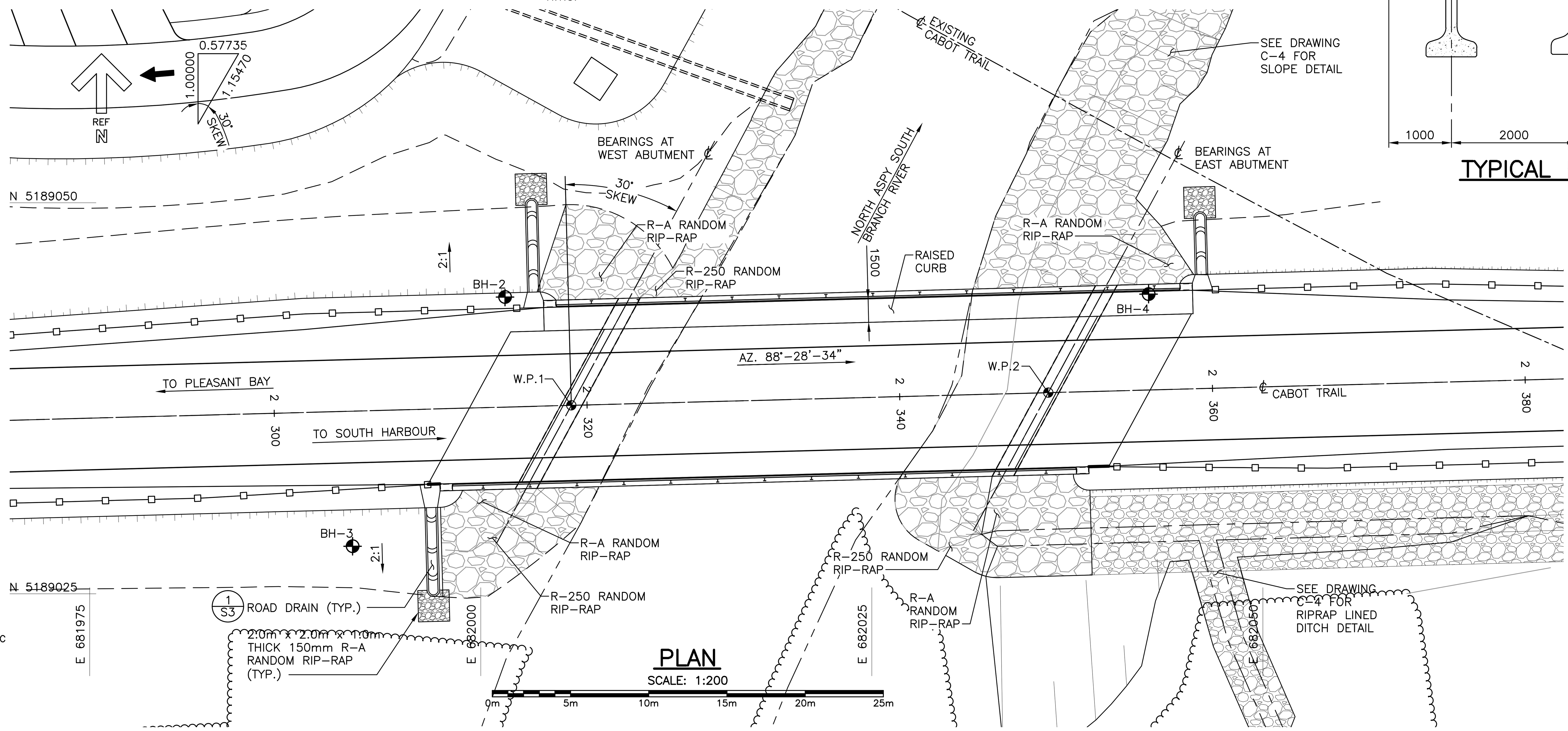
VERTICAL CURVE LAYOUT
N.T.S.

WP COORDINATES

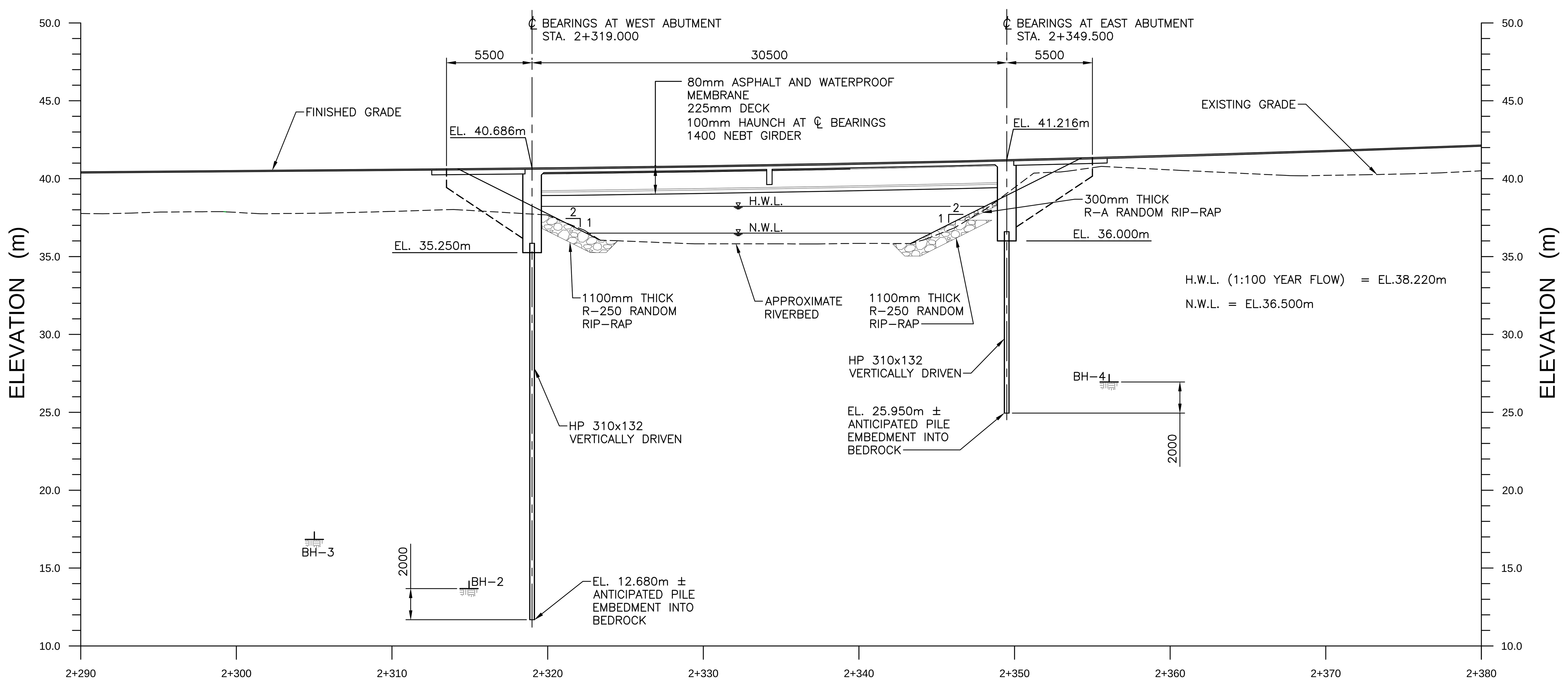
W.P.	STATION	NORTHING	EASTING	ELEVATION
1	2+319.000	5189037.047	682005.786	40.686
2	2+349.500	5189037.858	682036.275	41.216



TYPICAL BRIDGE SECTION (LOOKING UP CHAINAGE)
SCALE: 1:50



PLAN
SCALE: 1:200



CENTERLINE PROFILE
SCALE: 1:200

NOTES:

1. ALL DIMENSIONS SHOWN IN MILLIMETERS (mm).
2. ALL STATIONS AND ELEVATIONS ARE SHOWN IN METERS.
3. ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DEPARTMENTAL REPRESENTATIVE PRIOR TO PROCEEDING WITH CONSTRUCTION.
4. REFERENCE CIVIL DRAWINGS FOR ROAD ALIGNMENT AND DEMOLITION OF EXISTING STRUCTURE.
5. CONSTRUCTION SHALL BE CARRIED OUT AS PER CAN.CSA-S6-14.
6. FULL WIDTH OF EXISTING STRUCTURE AND APPROACHES TO REMAIN IN-SERVICE UNTIL THE END OF CONSTRUCTION WHEN TRAFFIC IS DIVERTED ONTO THE NEW STRUCTURE (REFERENCE PROJECT SPECIFICATIONS).
7. CONTRACTOR IS TO ENSURE THAT ALL WORK IS CARRIED OUT IN ACCORDANCE WITH NOVA SCOTIA OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS.
8. BACKFILL IMMEDIATELY BEHIND ABUTMENT WALLS AND WINGWALLS TO BE "FILL AGAINST STRUCTURE" MATERIAL AS PER NOVA SCOTIA DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE RENEWAL (NSTIR) STANDARDS.
9. EACH PHASE OF WORK TO BE INSPECTED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO PROCEEDING TO THE NEXT PHASE OF WORK.
10. CONTRACTOR TO COORDINATE WITH DEPARTMENTAL REPRESENTATIVE.
11. CONTRACTOR SHALL ENSURE STABILITY OF ALL COMPONENTS DURING ALL PHASES OF CONSTRUCTION. CONTRACTOR SHALL DESIGN, INSTALL, AND MAINTAIN TEMPORARY BRACING, SHORING AND FORMWORK OF ALL STRUCTURAL ELEMENTS FOR STABILITY AND SAFETY WHERE REQUIRED DURING CONSTRUCTION. TO BE APPROVED BY DEPARTMENTAL REPRESENTATIVE.
12. FOR COMPLETE INFORMATION ON BOREHOLE DATA AND GEOTECHNICAL CONDITIONS REFER TO STANTEC CONSULTING LTD. GEOTECHNICAL INVESTIGATION REPORT NORTH ASPY BRIDGE REPLACEMENT, CAPE BRETON HIGHLANDS NATIONAL PARK, NOVA SCOTIA, DATED 2016/03/10.
13. FOR BOREHOLE DATA SEE DRAWINGS S-32 AND S-33.
14. ONCE FORMWORK HAS BEEN REMOVED, IMMEDIATELY BACKFILL ADJACENT TO WALL IN LIFTS NOT EXCEEDING 200mm COMPACTED. USE ONLY LIGHT COMPACTING EQUIPMENT. BACKFILLING BEHIND EACH ABUTMENT SHALL BE DONE SIMULTANEOUSLY SO THAT THERE IS NO MORE THAN 200mm DIFFERENCE IN ELEVATION BETWEEN ABUTMENT FILL HEIGHTS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD) TO ASTM D698. ANY WHEEL LOAD AND HEAVY EQUIPMENT SHALL BE KEPT A DISTANCE OF 6.0m AWAY FROM ABUTMENT WALLS AT ALL TIMES OF CONSTRUCTION.

DESIGN CRITERIA

- BRIDGE DESIGN CODE IS CSA-S6-14.
- LIVE LOAD IS CL-625.
- CONCRETE DESIGN STRENGTH AT 28 DAYS FOR: ABUTMENTS – f'c = 45 MPa. DECK, CURB AND CRASH BLOCK – f'c = 45 MPa. PRESTRESSED BEAMS – f'c = 50 MPa.
- REINFORCING STEEL TO CONFORM TO CSA G30.18-09 (R2014) GRADE 400W.
- BARS IN DECK/APPROACH SLAB LABELLED "F" TO BE GLASS FIBRE REINFORCED POLYMER (GFRP).
- TENSILE STRENGTH OF PRESTRESSING STEEL Fpu = 1860 MPa.
- SEISMIC DESIGN CLASSIFICATION: MAJOR-ROUTE SEISMIC PERFORMANCE CATEGORY = 1
- ROAD CLASSIFICATION IS RCU 60.
- ALL DIMENSIONS ARE EXPRESSED IN MILLIMETERS.
- ALL STATIONS AND ELEVATIONS ARE EXPRESSED IN METRES.

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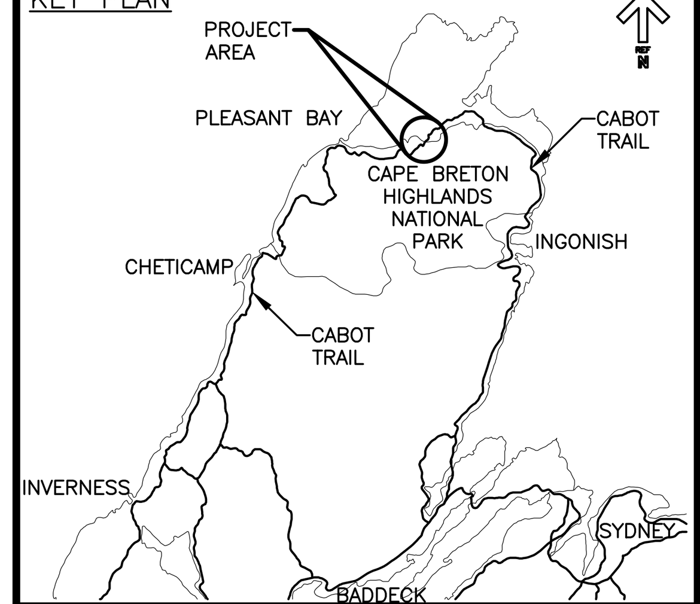
KEY PLAN



Stantec

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

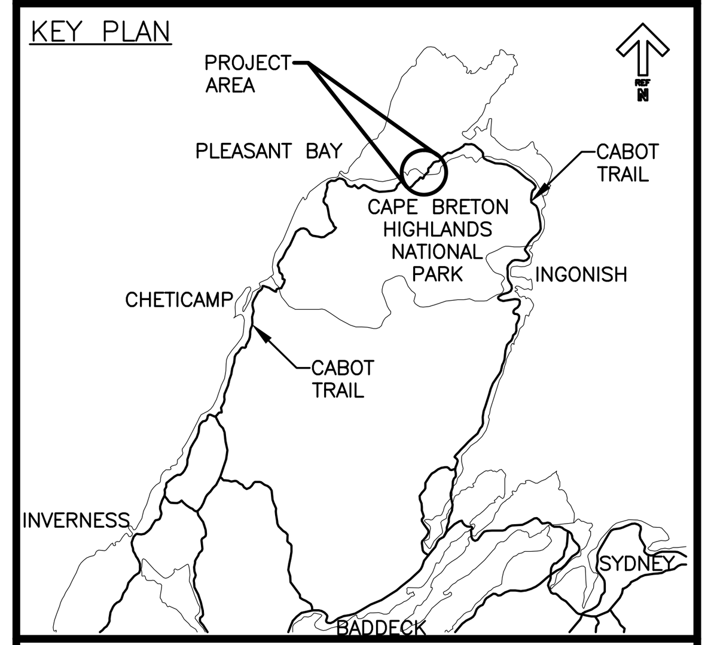
drawing / dessin

GENERAL ARRANGEMENT PLAN, SECTION AND CENTERLINE PROFILE

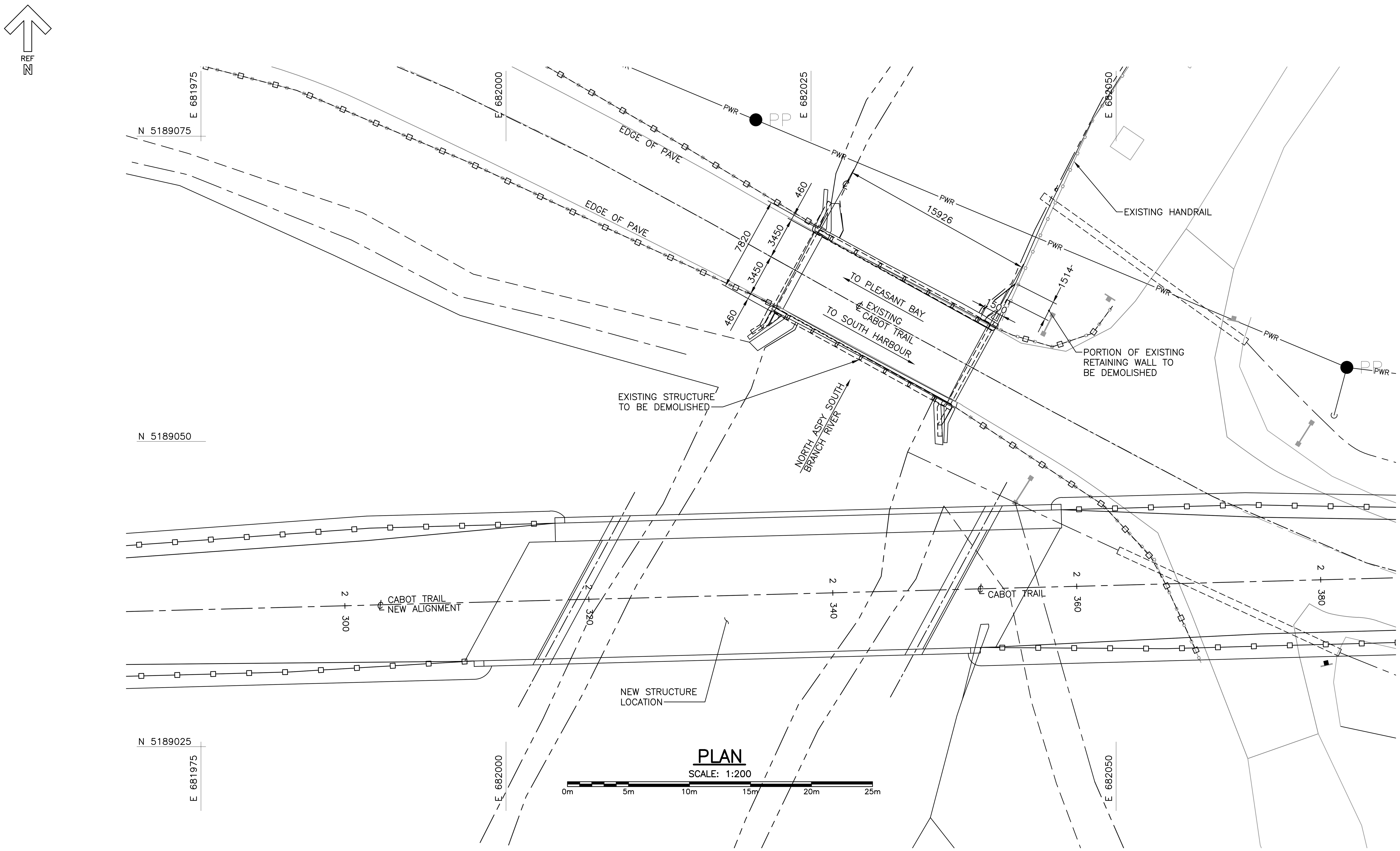
designed / conçu: SOV
date:
drawn / dessiné: CRM
date: 2016-01-08
approved / approuvé: GL
date: 2017-07-06
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet: 666
drawing no. / no. du dessin: S-1

Parcs Canada | Parks Canada

KEY PLAN

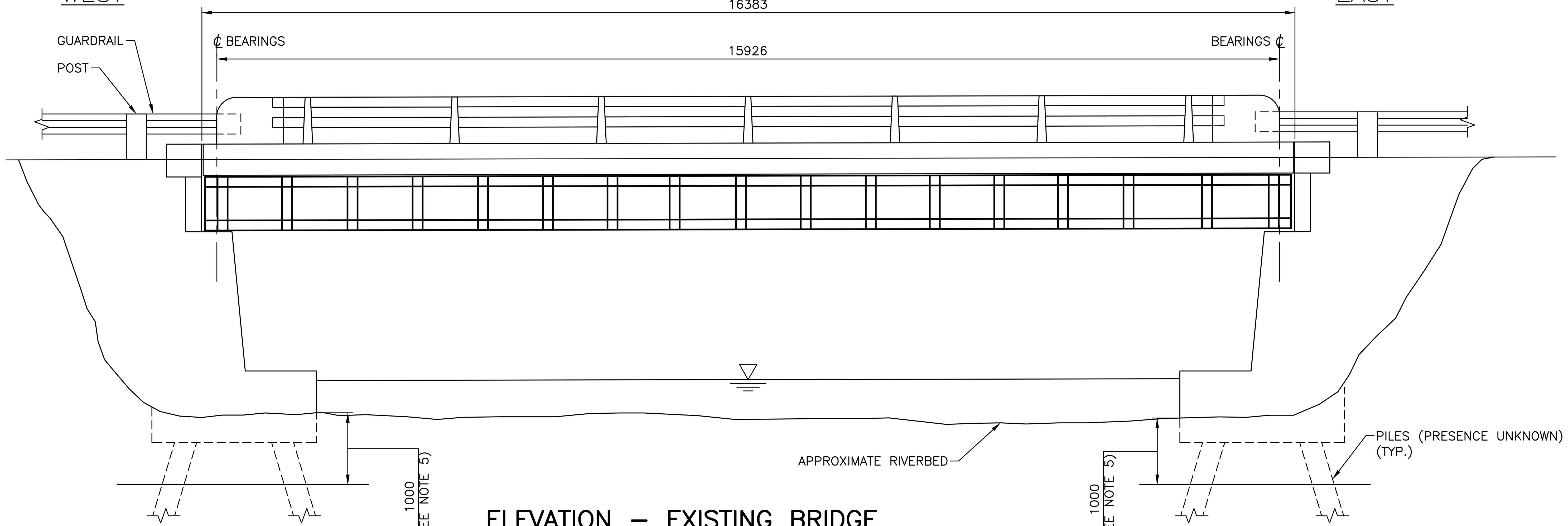


Stantec



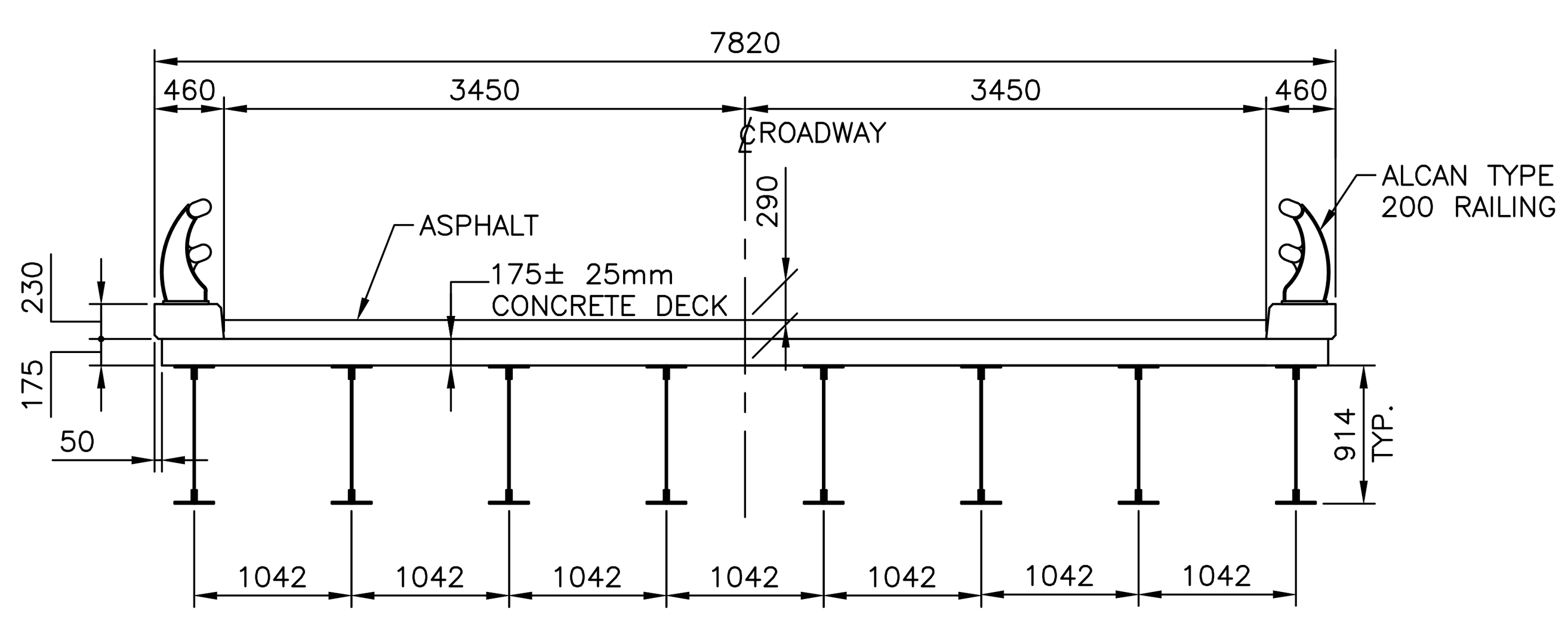
PLAN

SCALE: 1:200



ELEVATION – EXISTING BRIDGE

SCALE: 1:50



TYPICAL EXISTING BRIDGE SECTION

SCALE: 1:50

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

EXISTING STRUCTURE DEMOLITION PLAN

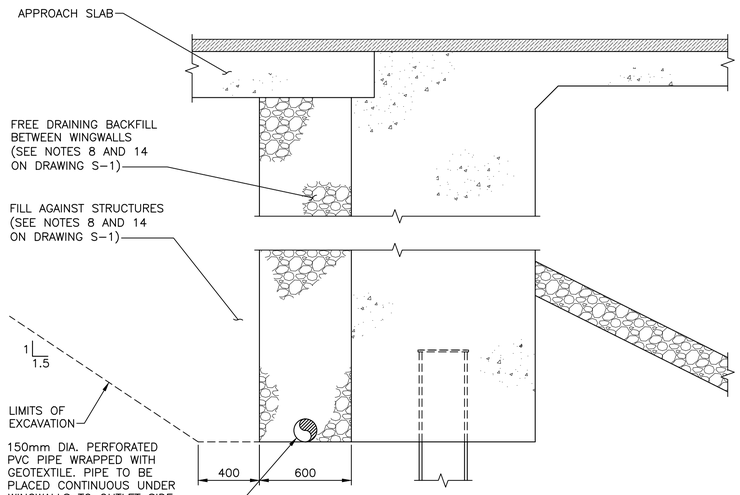
designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016-01-08	
approved	GL	approuvé
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S–2	no. du dessin

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-2.dwg

PLOTTED: Jul 07, 2017 9:54am jldoigle

PWGSC A1 (2004)

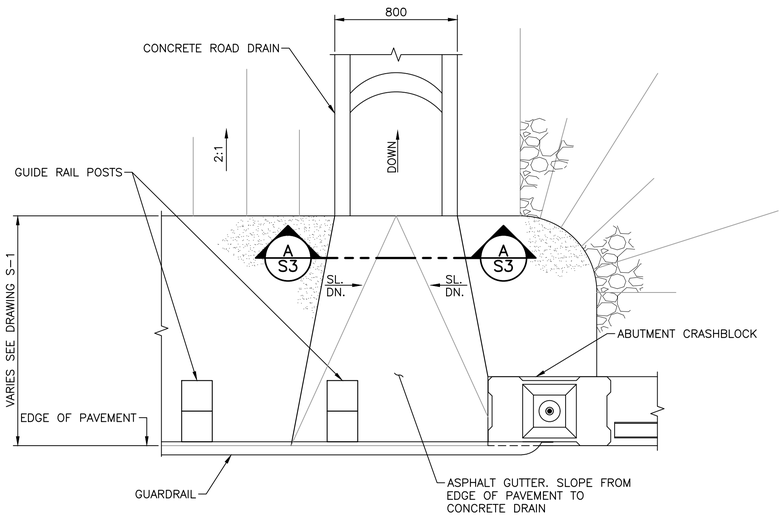
E-DRM/GDD-E:



TYPICAL ABUTMENT DRAINAGE

SCALE : 1:20

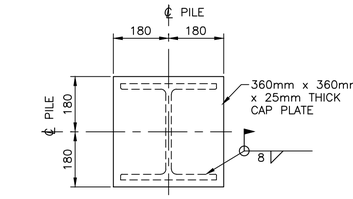
0mm 500mm 1000mm 1500mm 2000mm 2500mm



ROAD DRAIN CONNECTION

SCALE : 1:20

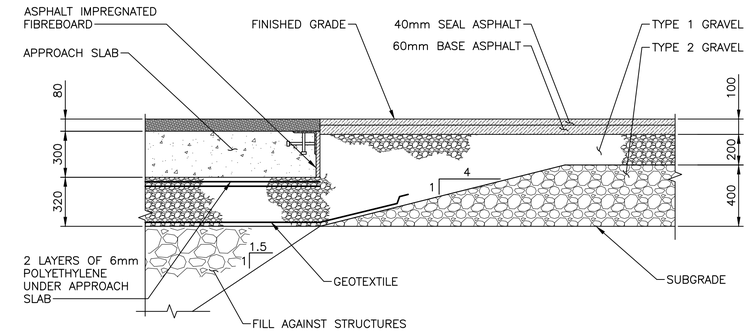
0mm 500mm 1000mm 1500mm 2000mm 2500mm



PILE CAP DETAIL

SCALE : 1:10

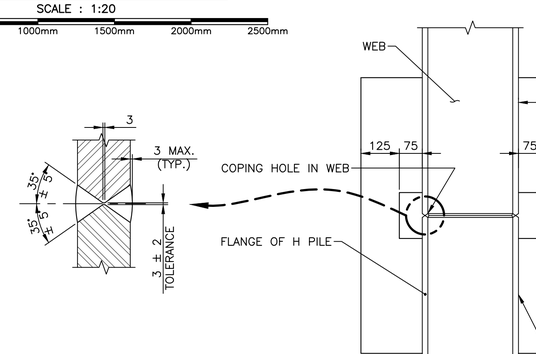
0mm 100 200 300 400 500 600 700 800 900 1000mm



APPROACH SLAB BACKFILL (TYPICAL WEST AND EAST ABUTMENTS)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

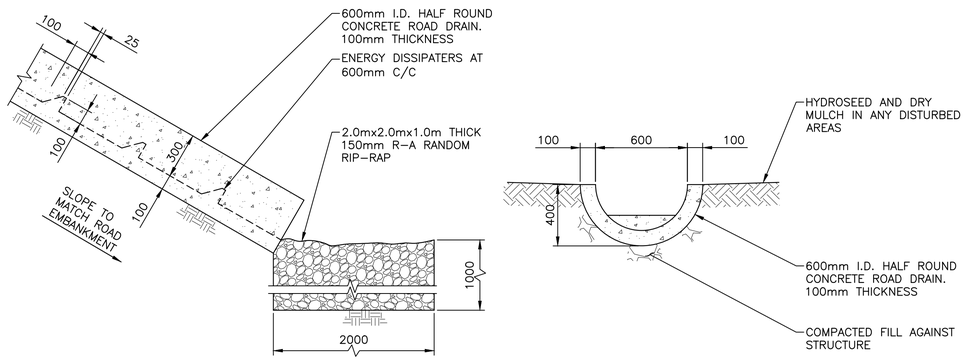


*- REMOVE AFTER SPLICE IS FINISHED AND GRIND FLUSH

VERTICAL ALIGNMENT FOR H PILE SPLICING

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



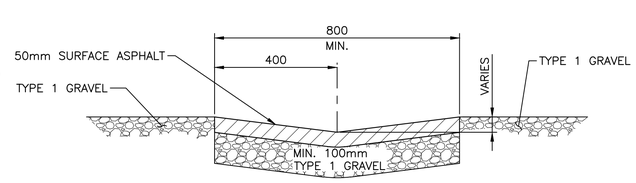
ELEVATION SECTION

ROAD DRAINS

1 / S1

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

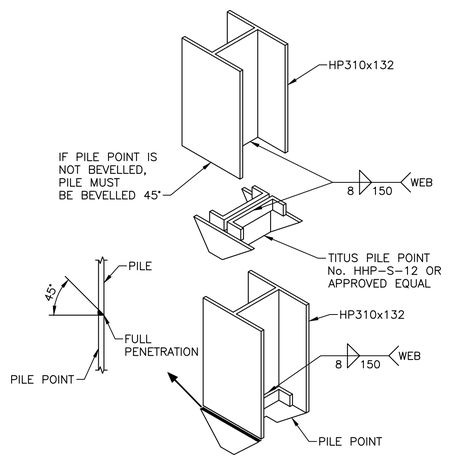


TAPERED GUTTER SECTION

A / S3

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



HP310x132 - PILE POINT DETAILS

SCALE : 1:20

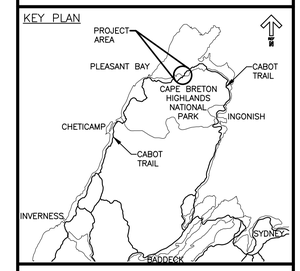
0mm 500mm 1000mm 1500mm 2000mm 2500mm

C

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

0	ISSUED FOR TENDER	07/06 2017
revisions		date

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

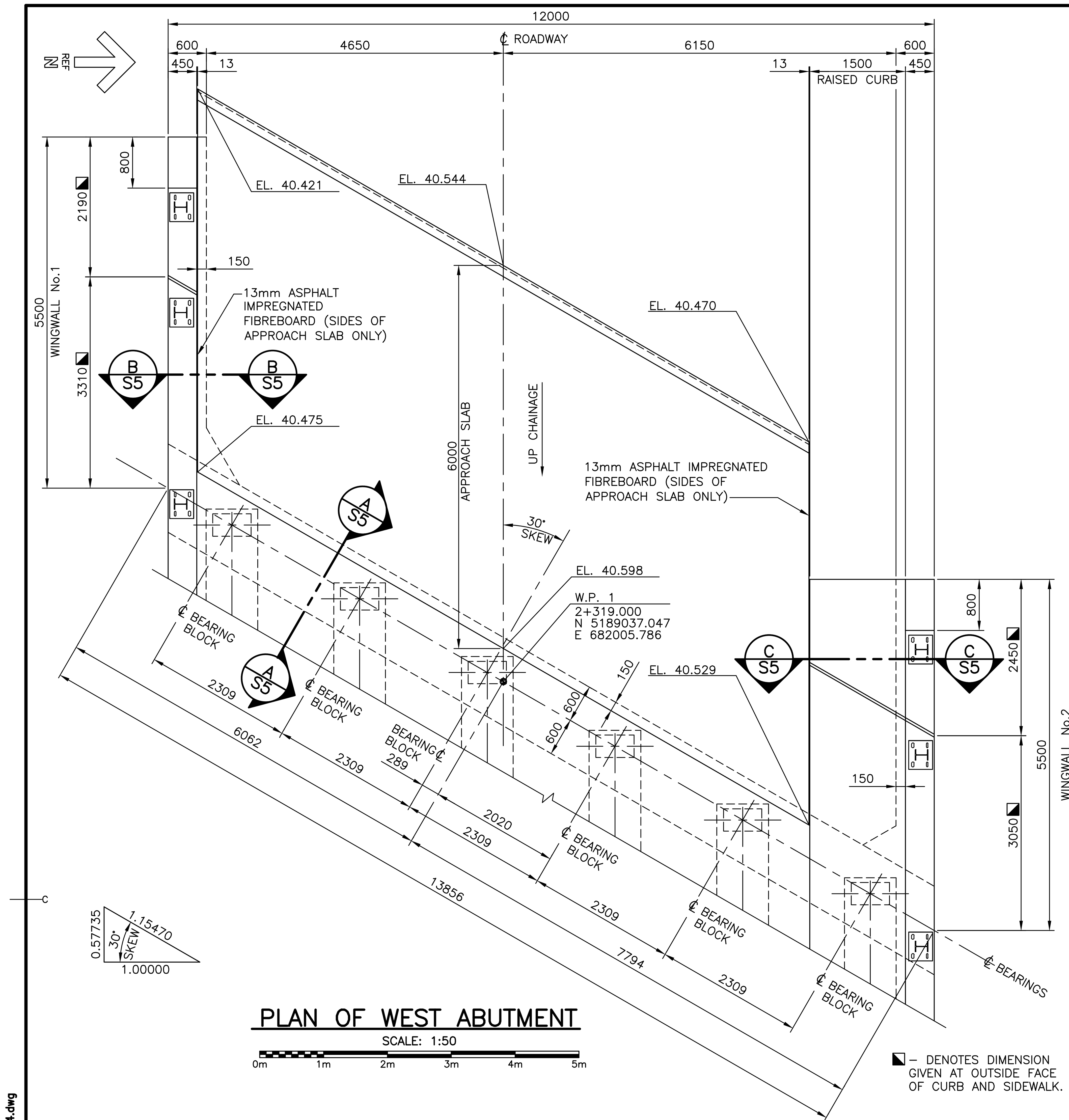
drawing / dessin

MISCELLANEOUS SECTIONS AND DETAILS

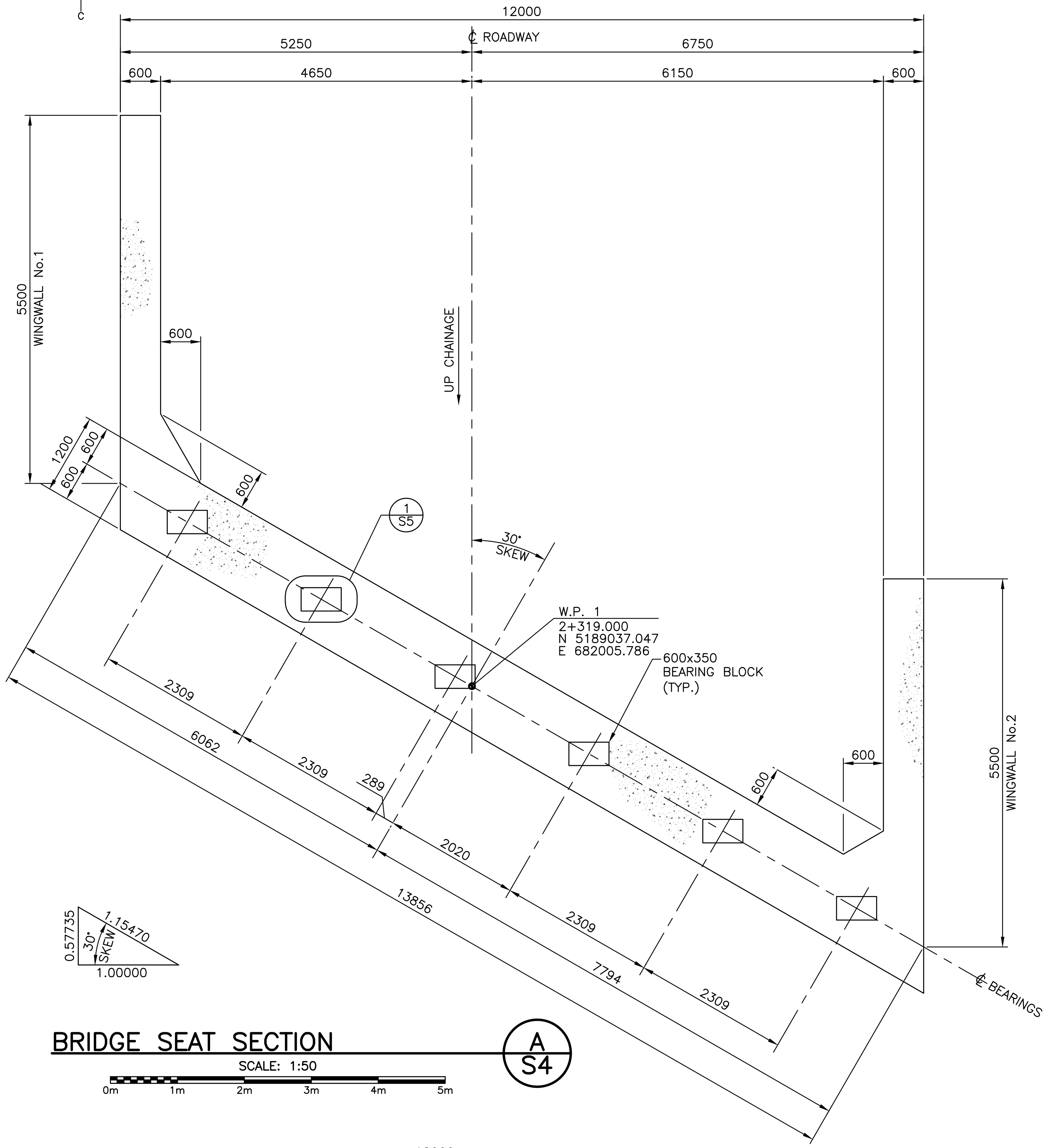
designed / conçu	SOV
date	
drawn / dessiné	CRM
date	2016-01-08
approved / approuvé	GL
date	2017-07-06
Tender	Soumission
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	S-3

PWGSC A1 (2004)

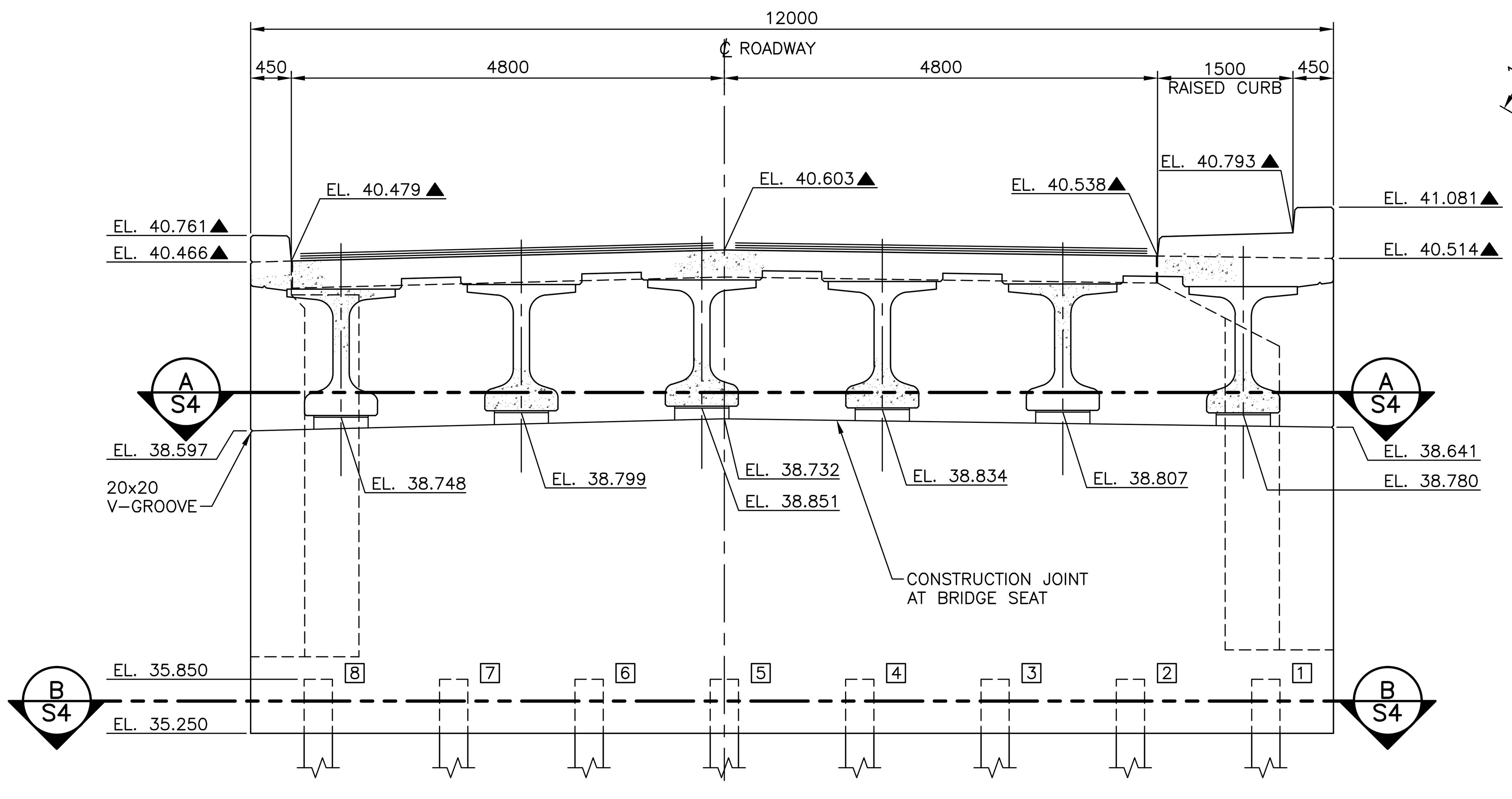
E-DRM/GDD-E:



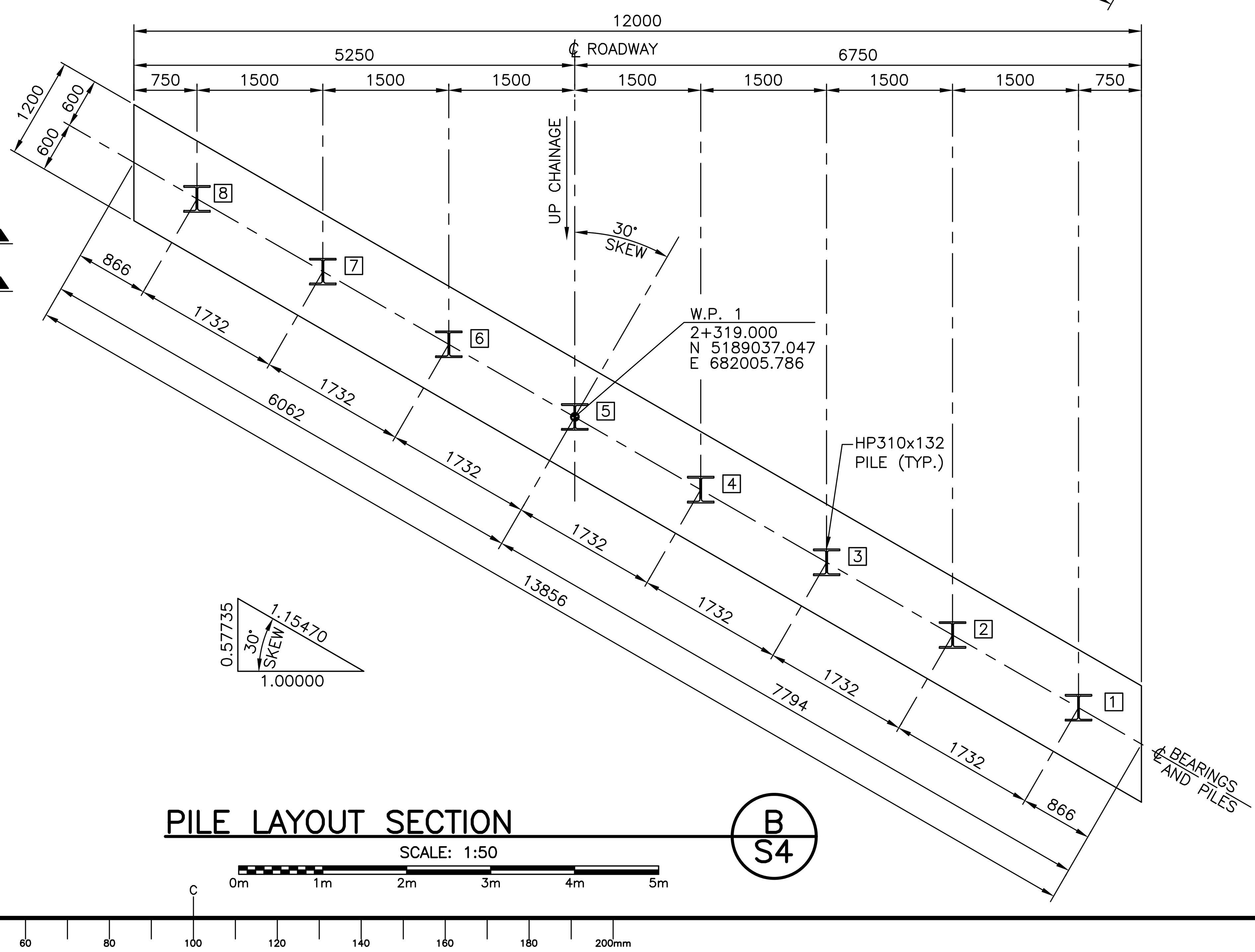
PLAN OF WEST ABUTMENT
SCALE: 1:50



BRIDGE SEAT SECTION
SCALE: 1:50
A / S4



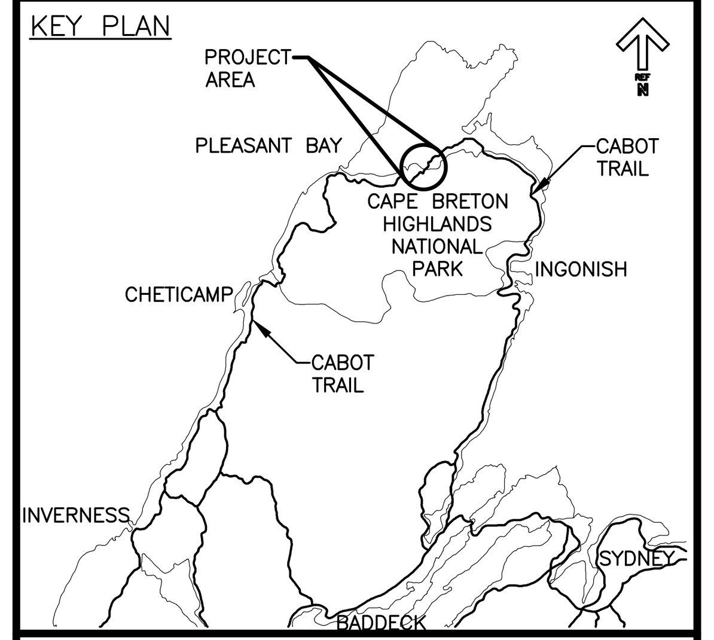
ELEVATION OF WEST ABUTMENT
SCALE: 1:50



PILE LAYOUT SECTION
SCALE: 1:50
B / S4

Parcs Canada | Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK, DIAPHRAGMS AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

1. ALL EXPOSED EDGES TO HAVE 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
2. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. ALL ELEVATIONS ARE IN METERS.
5. ALL PILES TO BE HP310x132. SEE DRAWING S–3 FOR PILE CAP PLATE, PILE SPLICE AND PILE POINT DETAILS.
6. REQUIRED FACTORED AXIAL COMPRESSIVE LOAD CAPACITY OF PILE AT ULS: 1430kN

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

WEST ABUTMENT PLAN, ELEVATION AND SECTIONS

designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016–01–08	
approved	GL	approuvé
date	2017–07–06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S–4	no. du dessin

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-4.dwg

PLOTTED: Jul 06, 2017 8:52am mcouellette

PWGSC A1 (2004)

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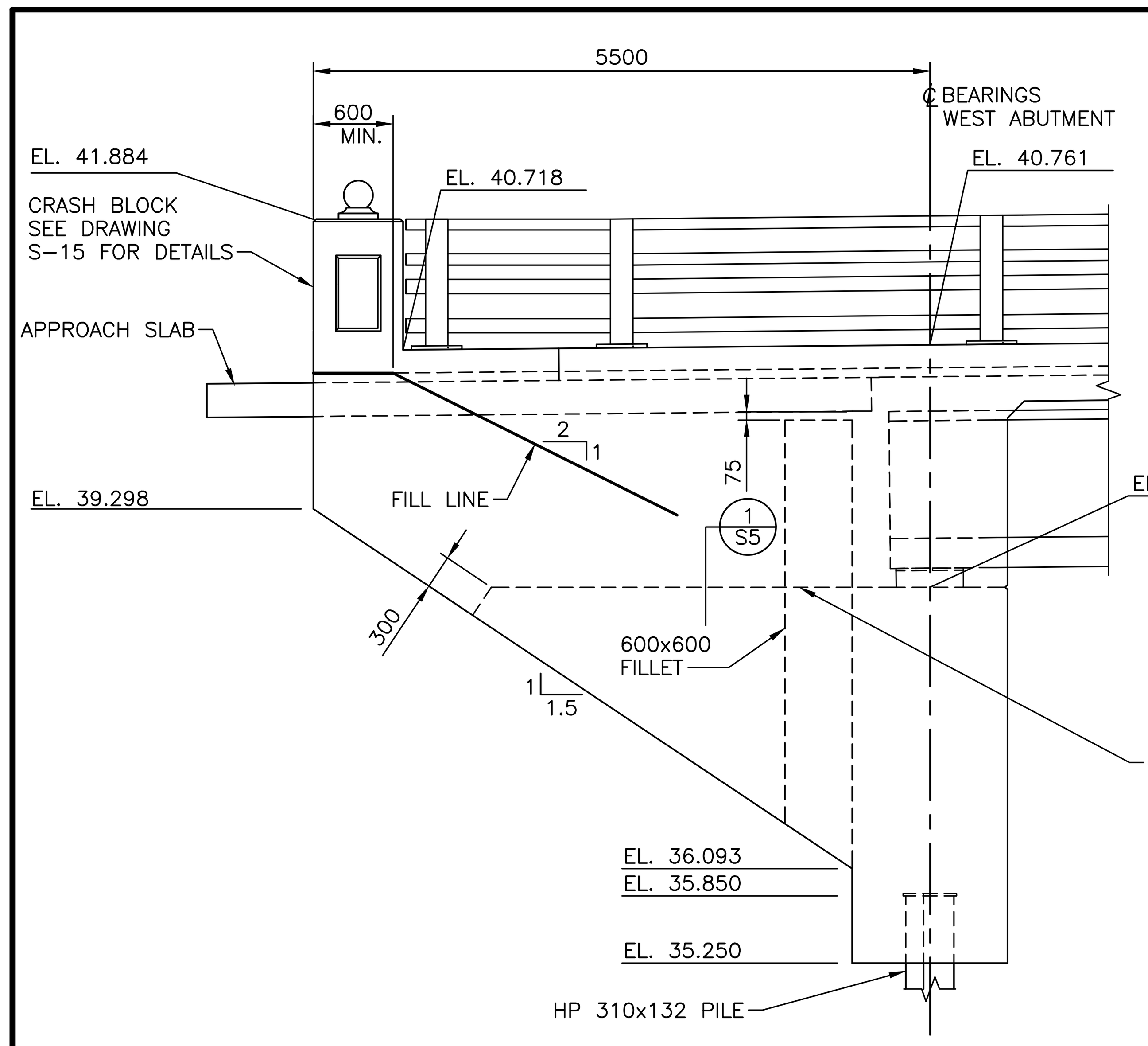
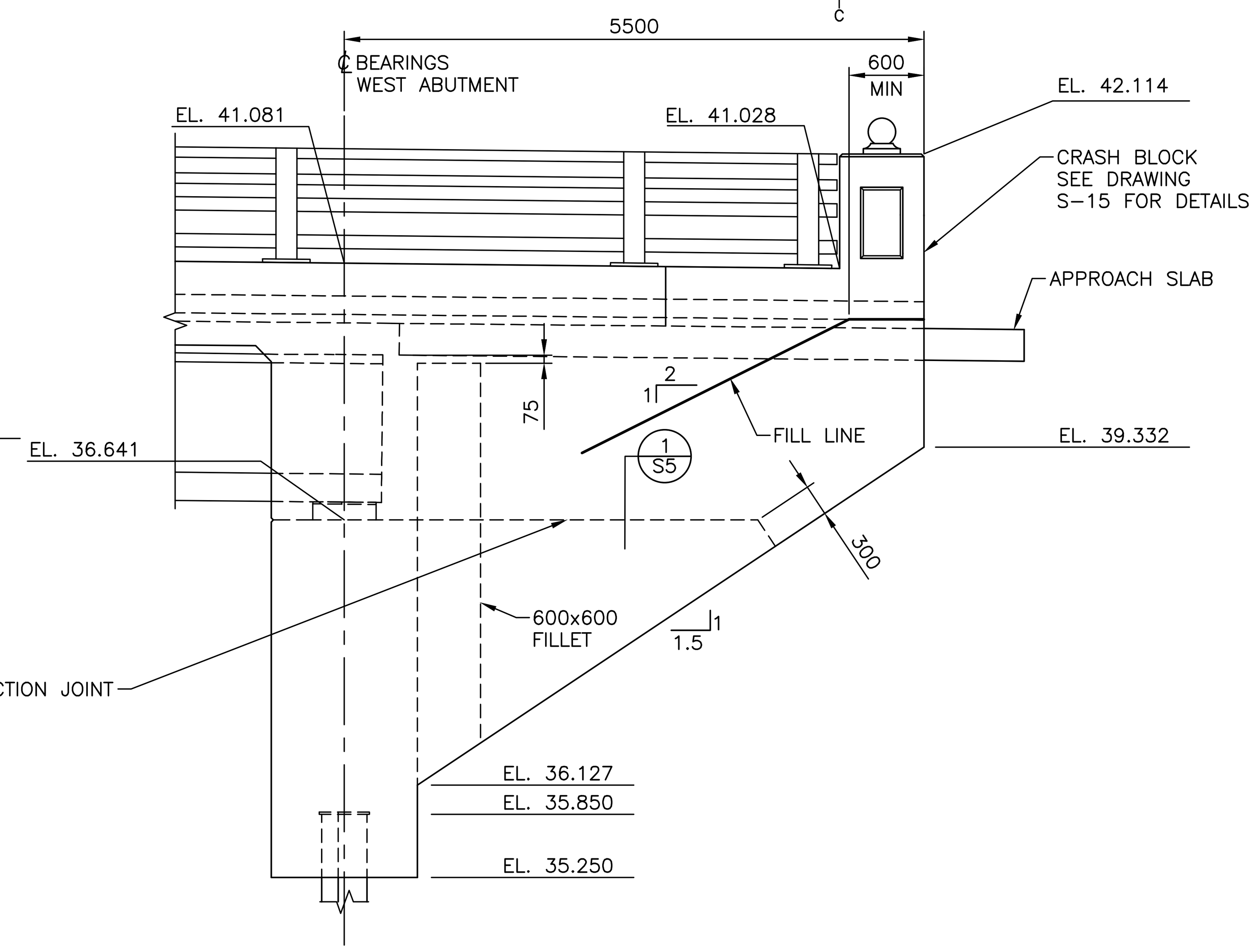
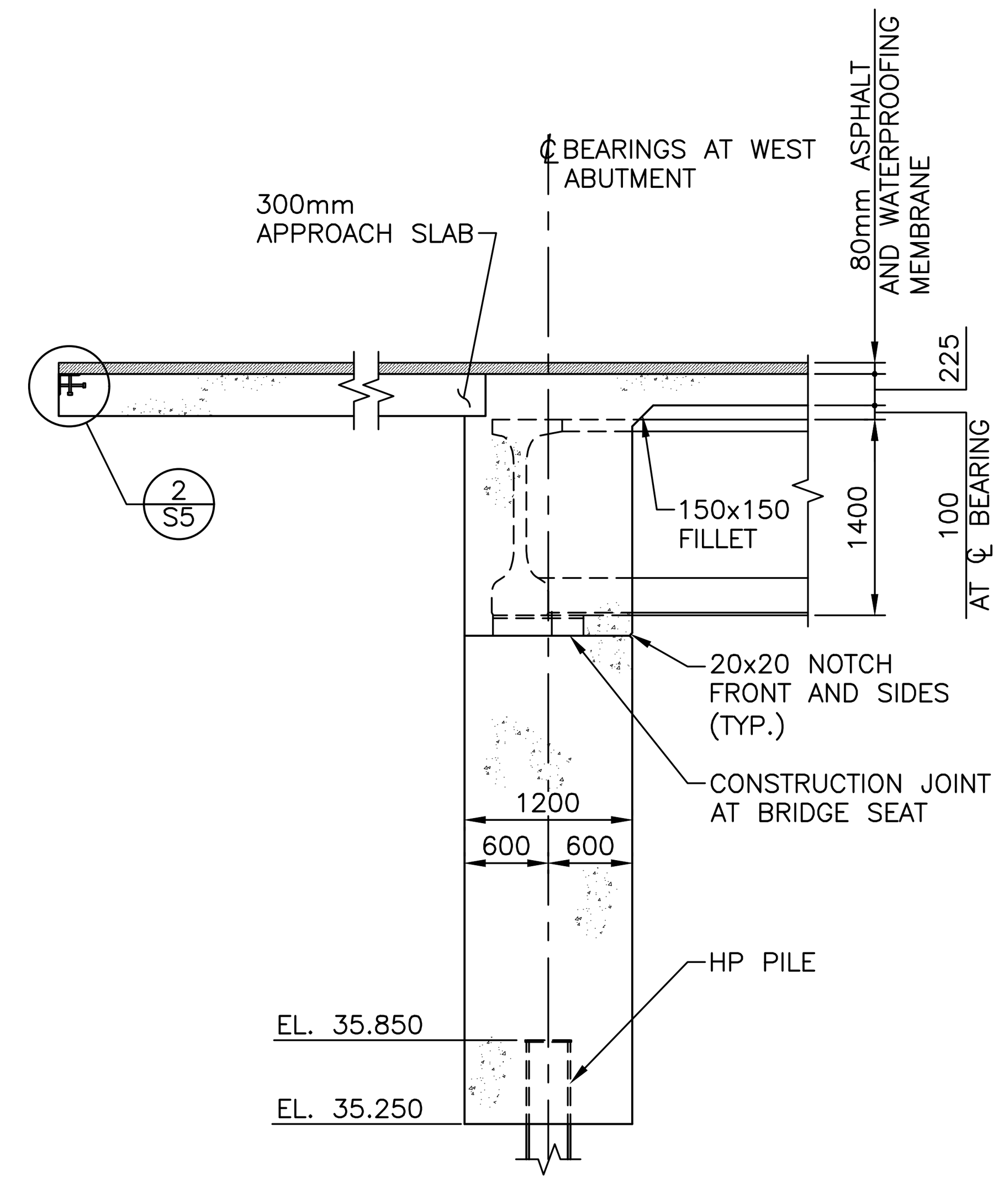


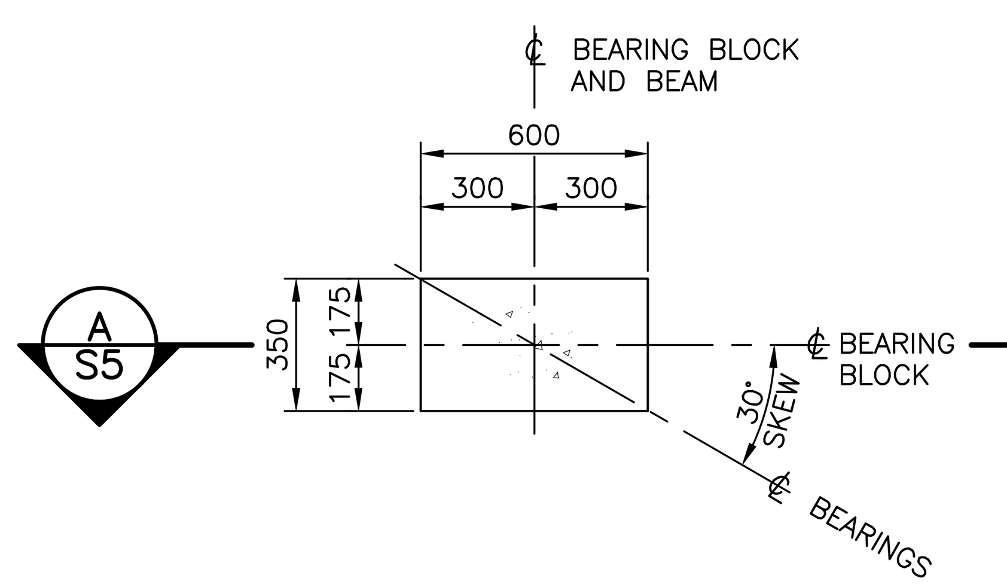
SIDE ELEVATION (WINGWALL No.1)
SCALE: 1:50



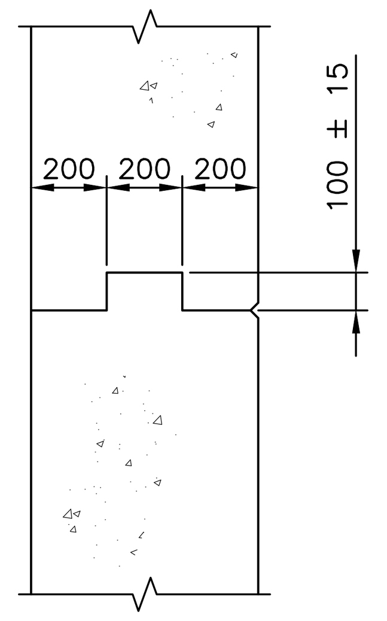
SIDE ELEVATION (WINGWALL No.2)
SCALE: 1:50



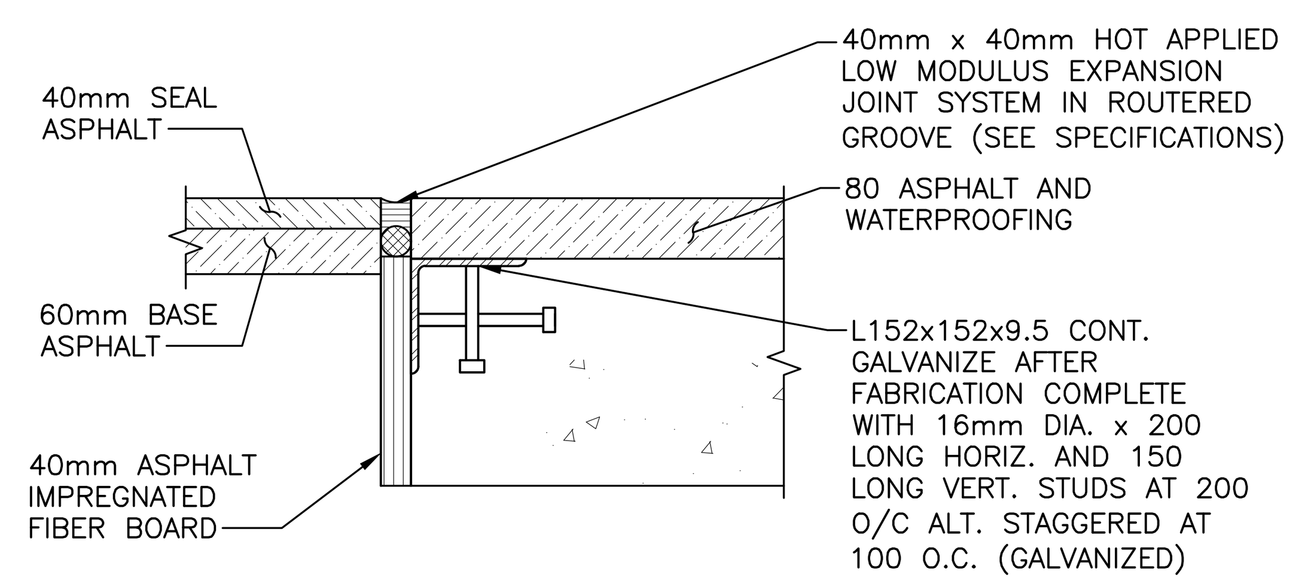
WEST ABUTMENT SECTION A/S4
SCALE: 1:50



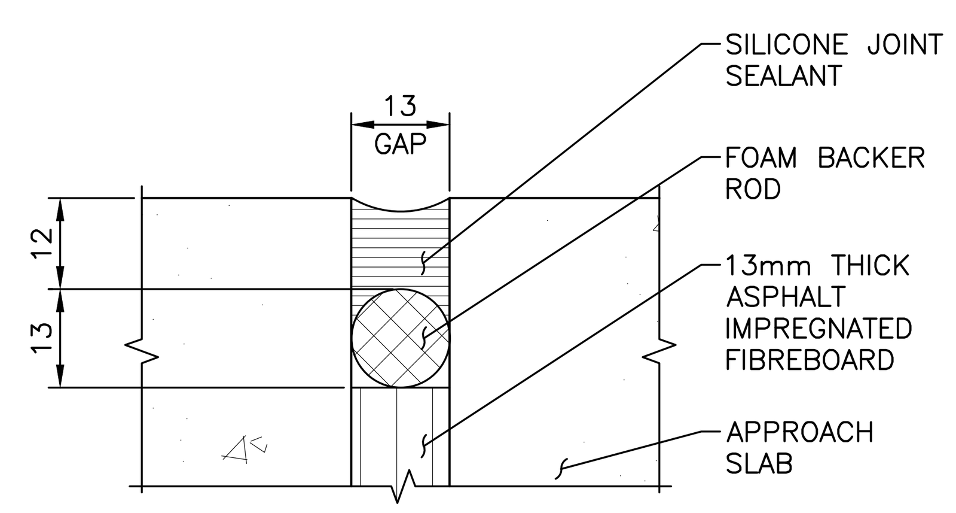
BEARING BLOCK DETAIL 1/S4
SCALE : 1:20



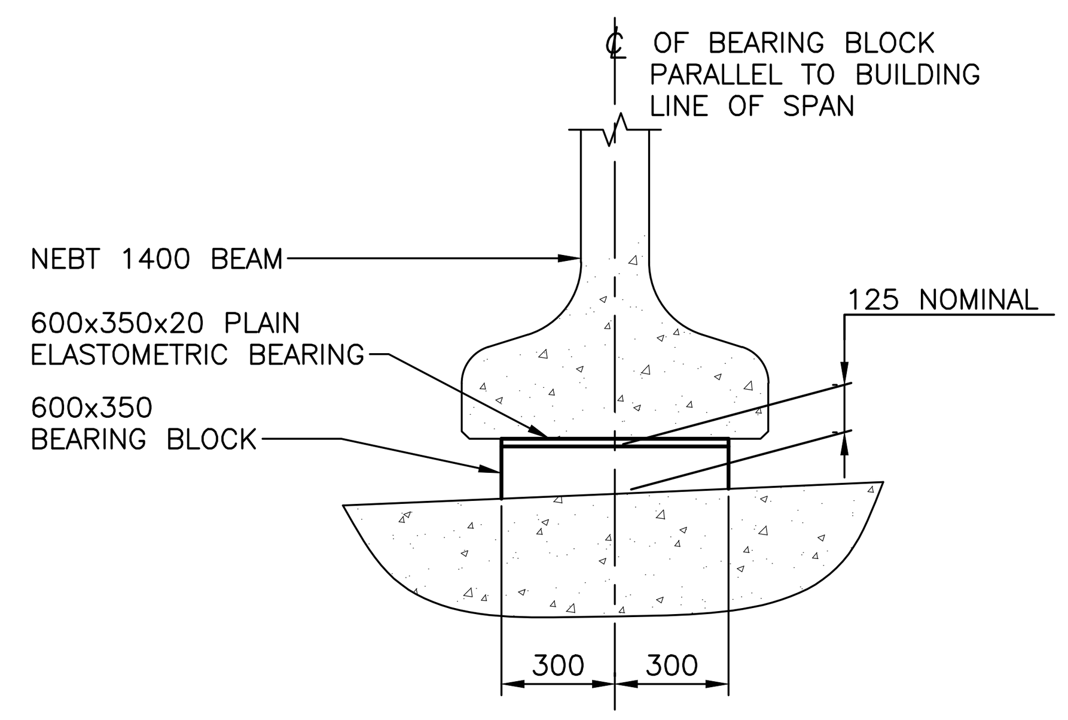
CONSTRUCTION JOINT IN WINGWALL 1/S5
SCALE : 1:20



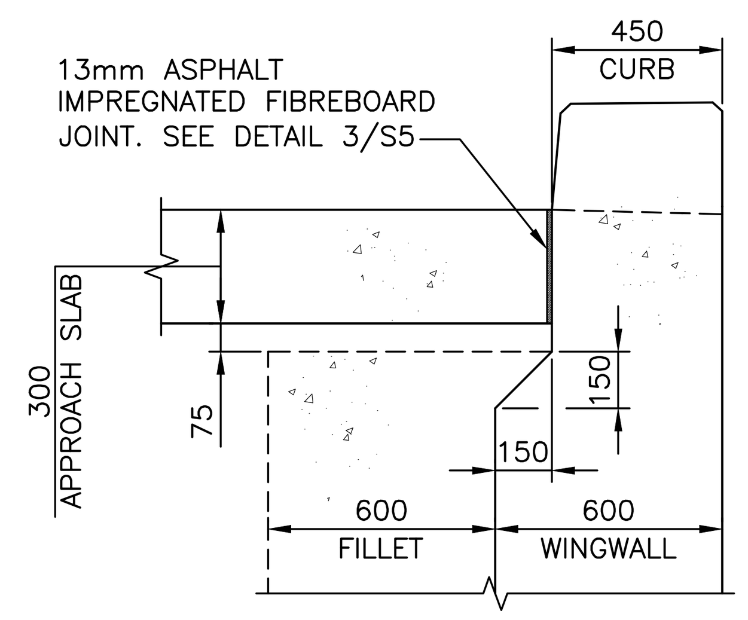
APPROACH SLAB EDGE ANGLE DETAIL 2/S5
SCALE : 1:10



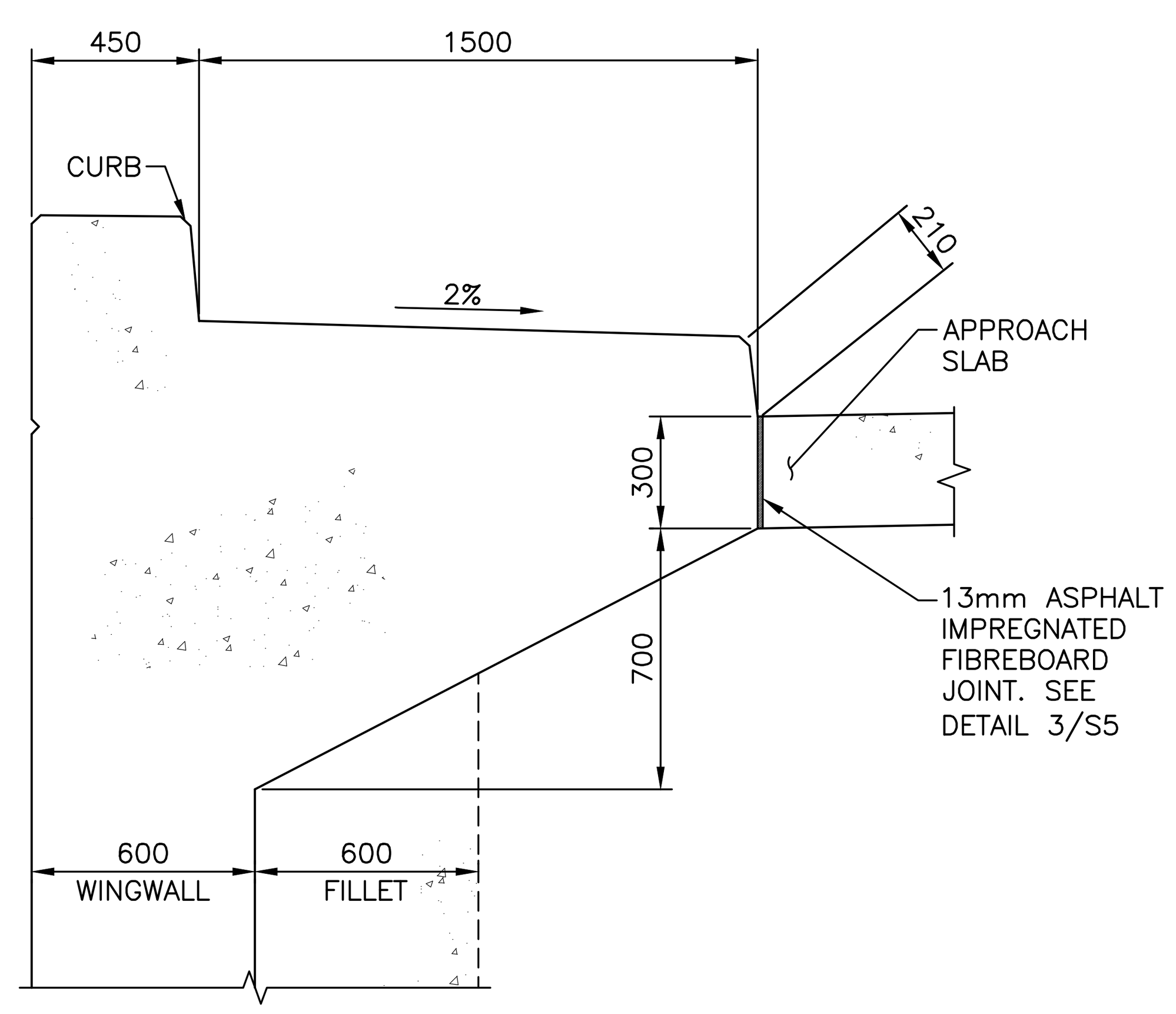
EXPANSION JOINT 3/S5
SCALE : 1:1



BEARING BLOCK SECTION A/S5
SCALE : 1:20



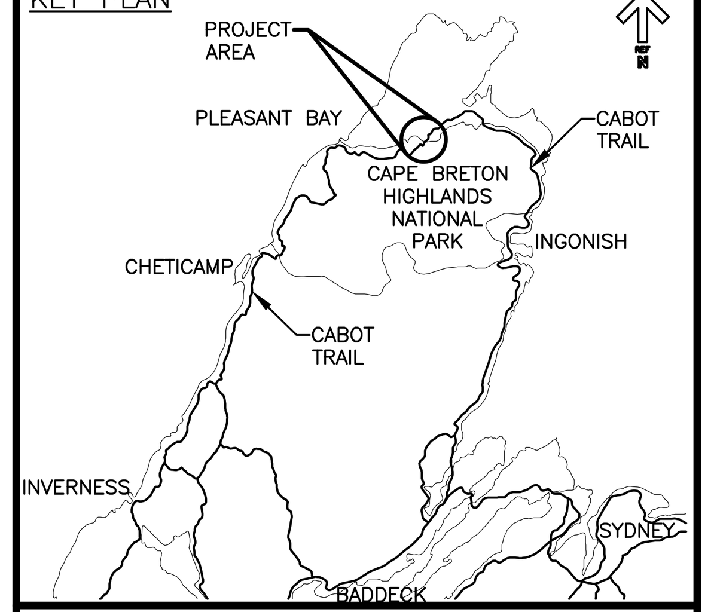
BREASTWALL HAUNCH SECTION B/S4
SCALE : 1:20



RAISED CURB AT WINGWALL C/S4
SCALE : 1:20

Parcs Canada Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK, DIAPHRAGMS AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

1. ALL EXPOSED EDGES TO HAVE 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
2. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.
3. THE DEPARTMENTAL REPRESENTATIVE WILL INFORM THE CONTRACTOR AS TO THE SIZE AND LOCATION OF THE DATE ON THE BARRIER WALL.
4. ALL DIMENSIONS ARE IN MILLIMETERS.
5. ALL ELEVATIONS ARE IN METERS.
6. REQUIRED FACTORED AXIAL COMPRESSIVE LOAD CAPACITY OF PILES AT ULS: 1430kN

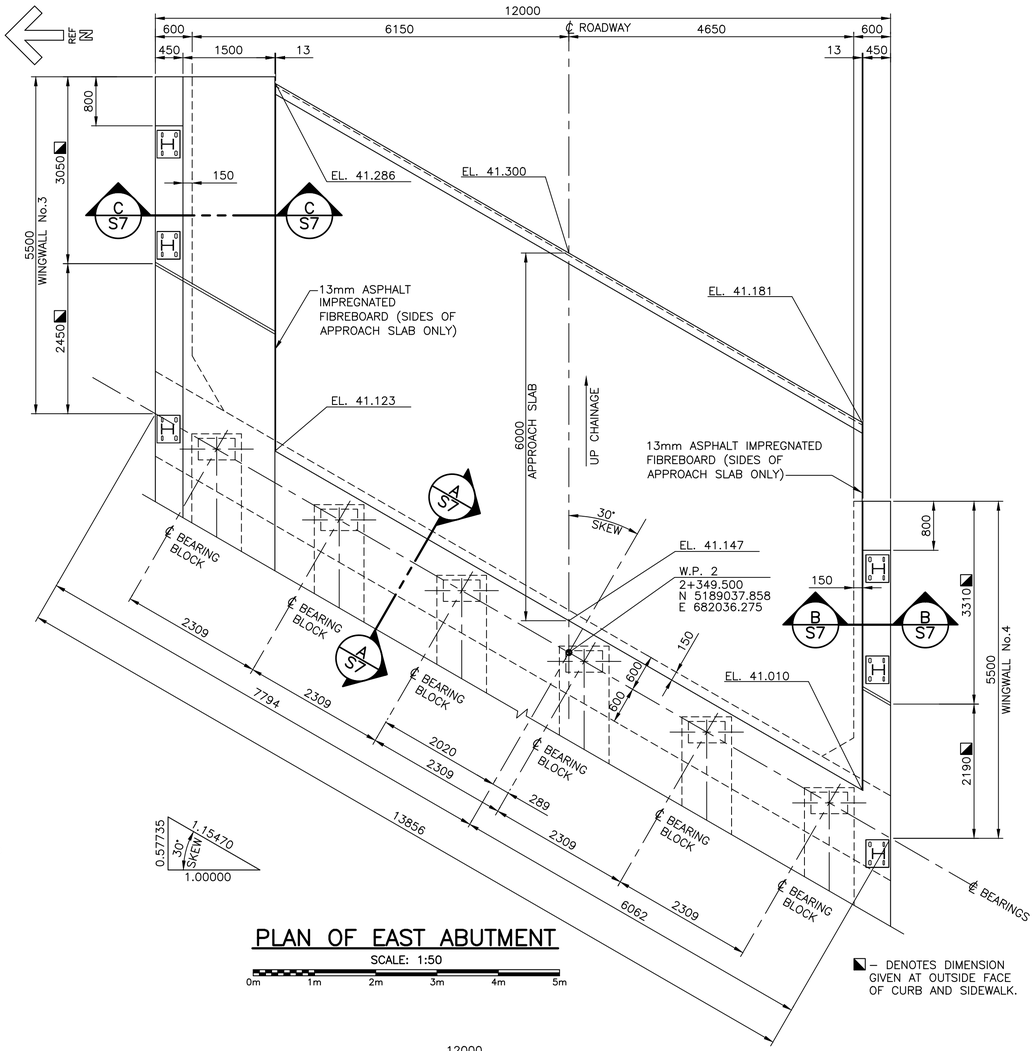
revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet: NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin: WEST ABUTMENT ELEVATIONS, SECTIONS AND DETAILS

designed / conçu: SOV
date
drawn / dessiné: CRM
date: 2016-01-08
approved / approuvé: GL
date: 2017-07-06
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet: 666
drawing no. / no. du dessin: S-5

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-5.dwg
PLOTTED: Jul 06, 2017 9:00am mcouellette
PWGSC A1 (2004)
E-DRM/GDD-E:

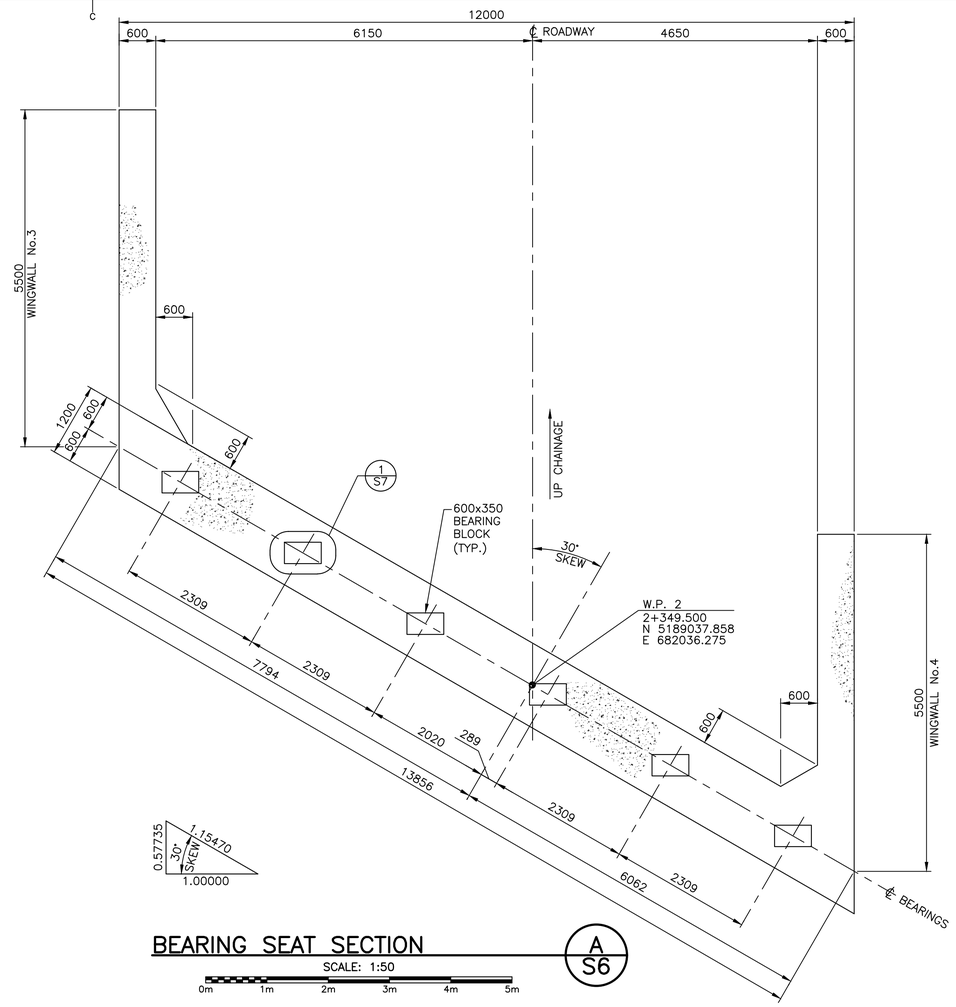


PLAN OF EAST ABUTMENT

SCALE: 1:50

0m 1m 2m 3m 4m 5m

▬ – DENOTES DIMENSION GIVEN AT OUTSIDE FACE OF CURB AND SIDEWALK.

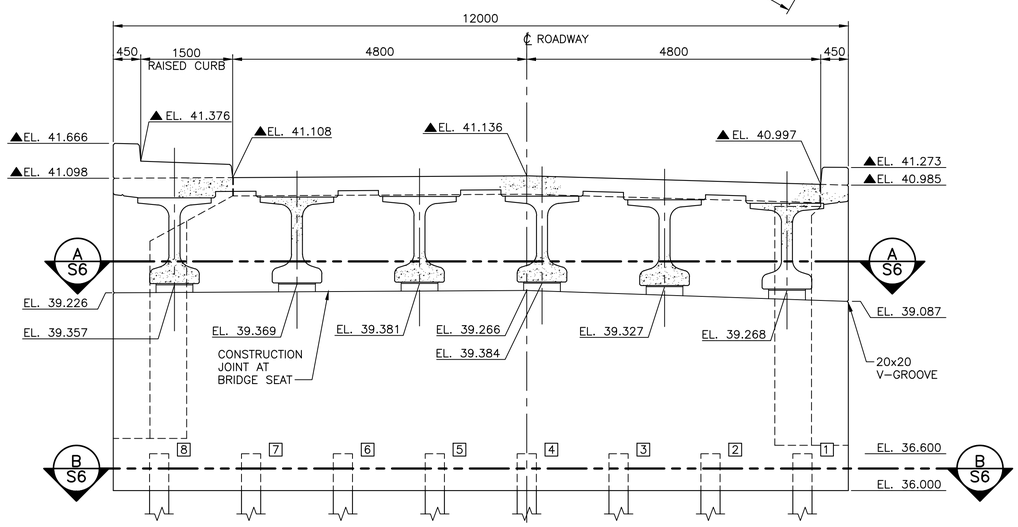


BEARING SEAT SECTION

A
S6

SCALE: 1:50

0m 1m 2m 3m 4m 5m

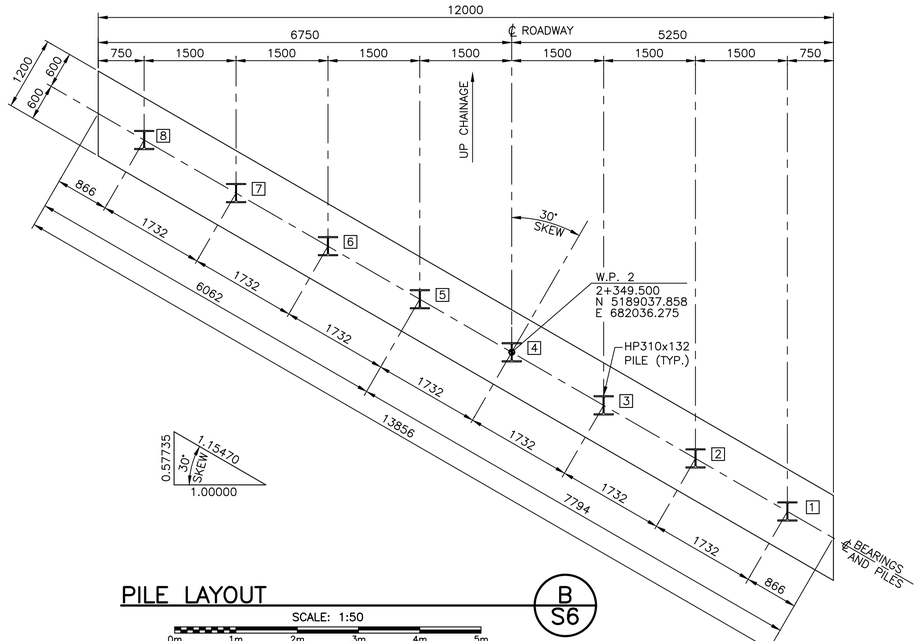


▲ – DENOTES ELEVATION GIVEN AT CENTERLINE OF BEARINGS.

ELEVATION OF EAST ABUTMENT

SCALE: 1:50

0m 1m 2m 3m 4m 5m



PILE LAYOUT

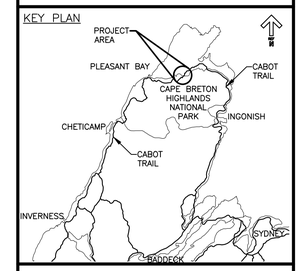
B
S6

SCALE: 1:50

0m 1m 2m 3m 4m 5m

Parcs Canada Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK, DIAPHRAGMS AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

1. ALL EXPOSED EDGES TO HAVE 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
2. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE IN MILLIMETERS.
4. ALL ELEVATIONS ARE IN METERS.
5. ALL PILES TO BE HP310x132. SEE DRAWING S–3 FOR PILE CAP PLATE, PILE SPLICE AND PILE POINT DETAILS.
6. REQUIRED FACTORED AXIAL COMPRESSIVE LOAD CAPACITY OF PILE AT ULS: 1430kN

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

EAST ABUTMENT PLAN, ELEVATION AND SECTIONS

designed / conçu	SOV	
date		
drawn / dessiné	CRM	
date	2016–01–08	
approved / approuvé	GL	
date	2017–07–06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number / no. du projet	666	
drawing no. / no. du dessin	S–6	

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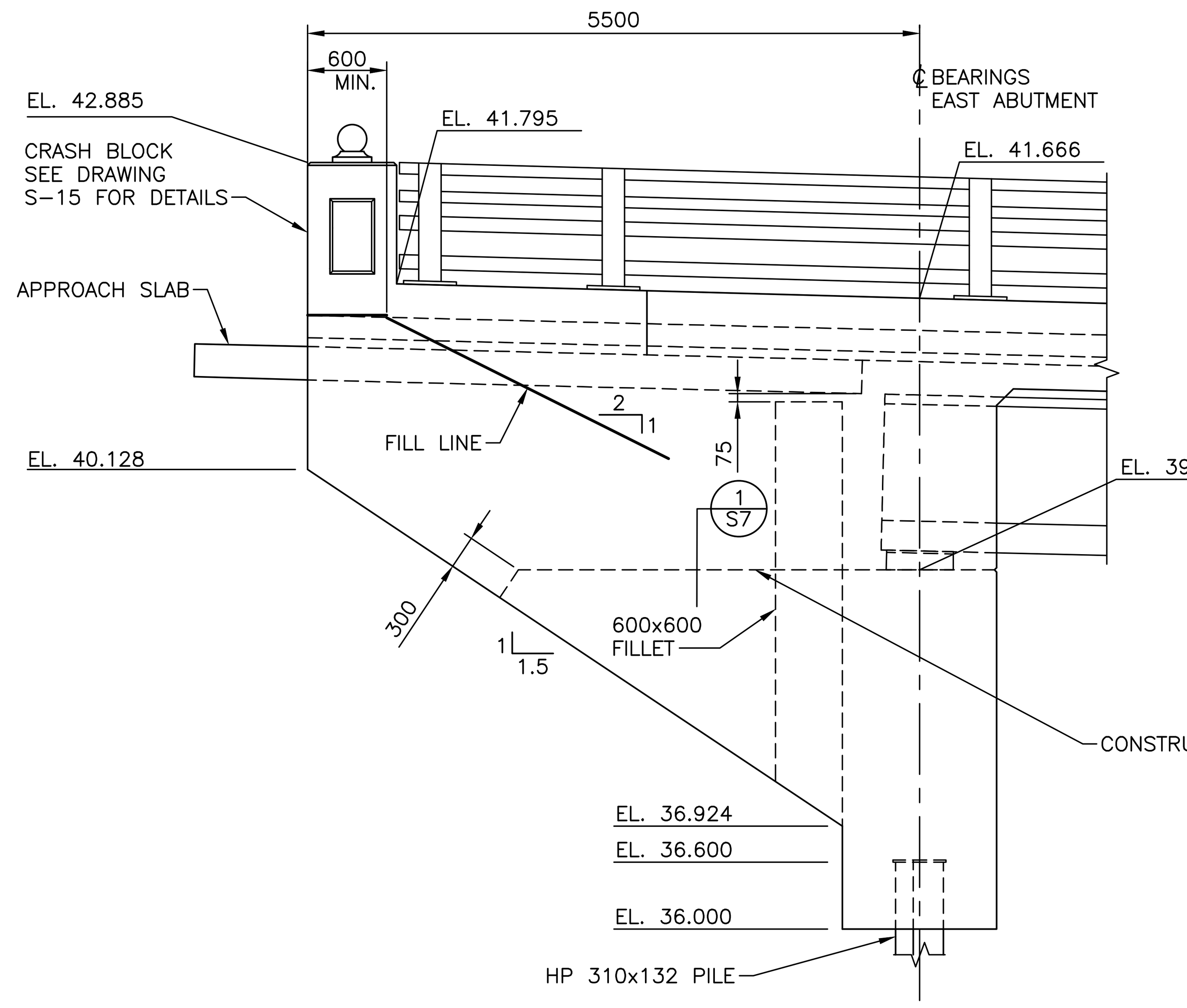
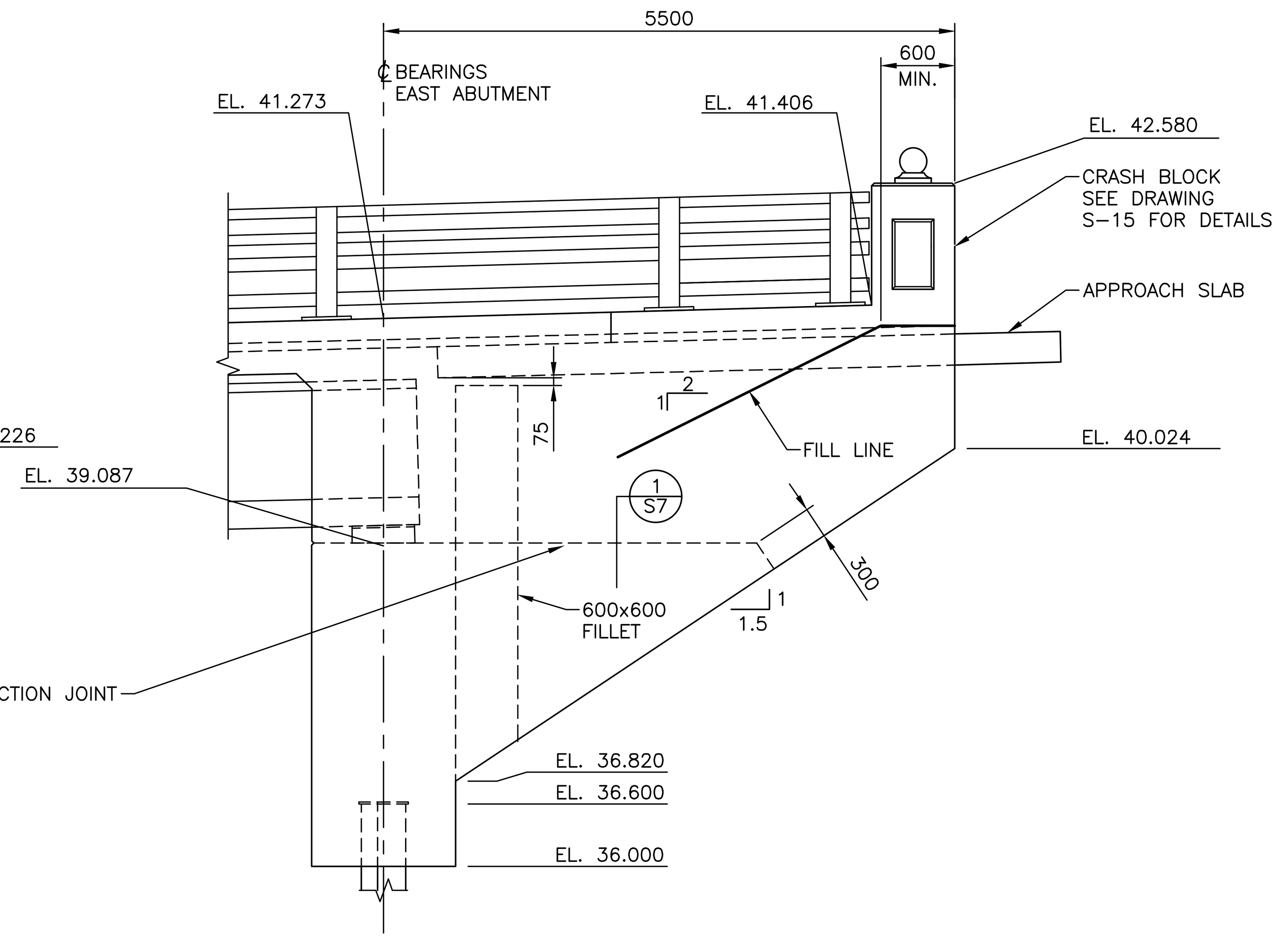
PLOTTED: Jul 06, 2017 9:00am mouellette
PWGSC A1 (2004)
E–DRM/GDD–E:



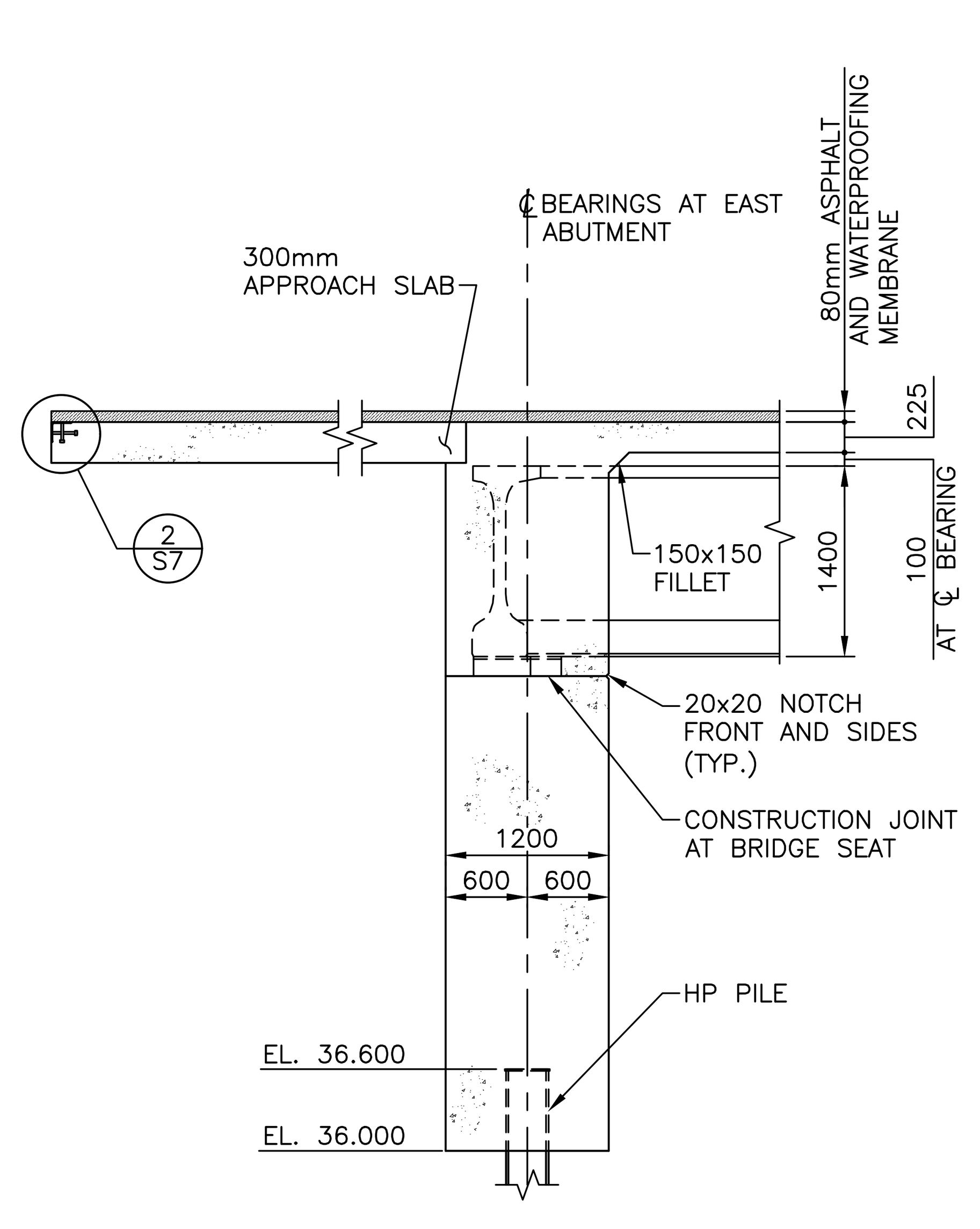
SIDE ELEVATION (WINGWALL No.3)

SCALE: 1:50



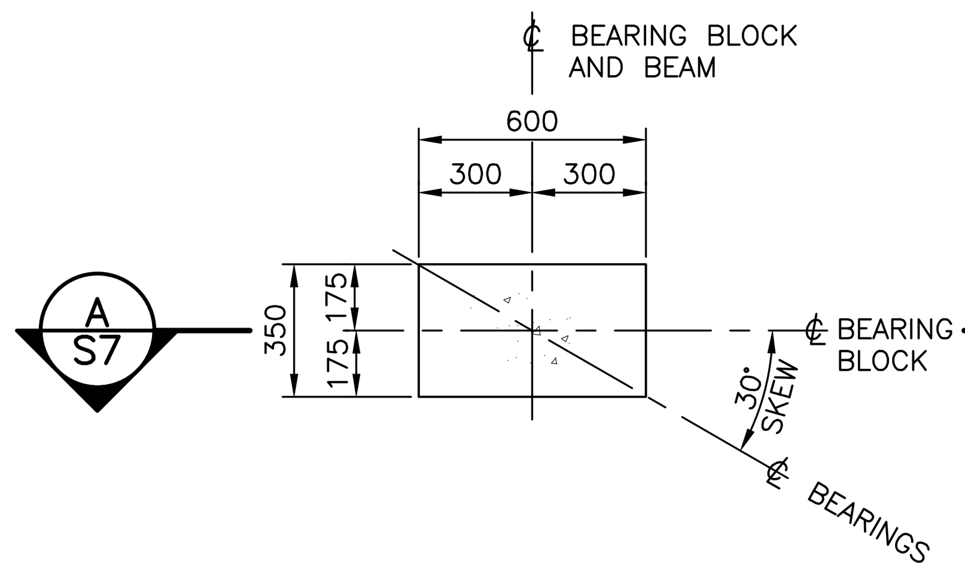
SIDE ELEVATION (WINGWALL No.4)

SCALE: 1:50



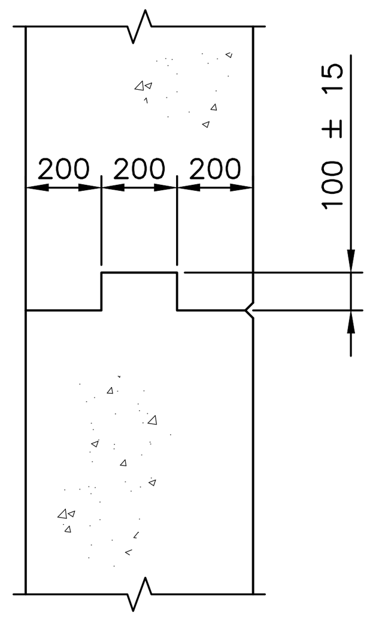
EAST ABUTMENT SECTION (A / S6)

SCALE: 1:50



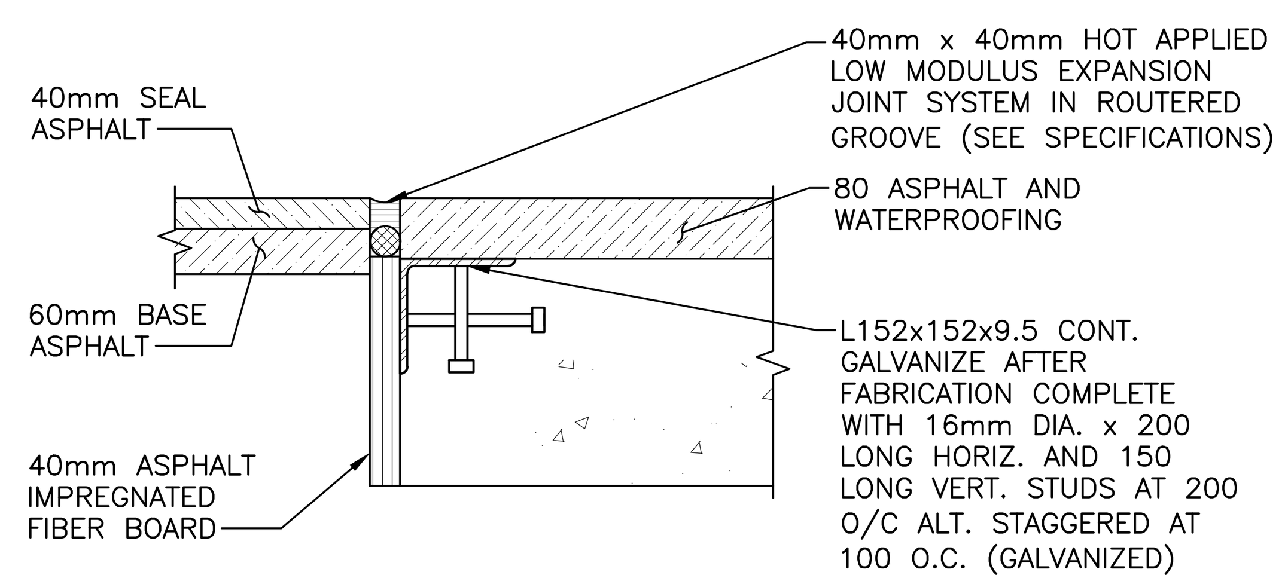
BEARING BLOCK DETAIL (1 / S6)

SCALE : 1:20



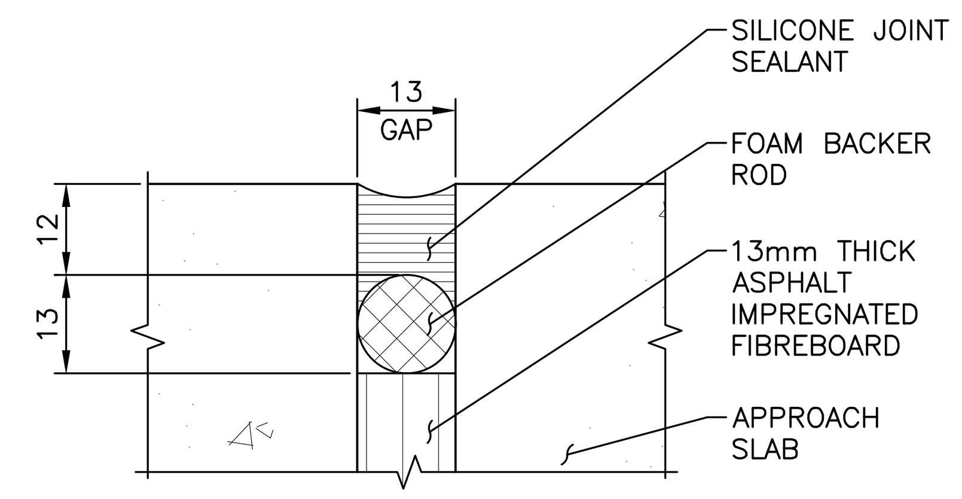
CONSTRUCTION JOINT IN WINGWALL (1 / S7)

SCALE : 1:20



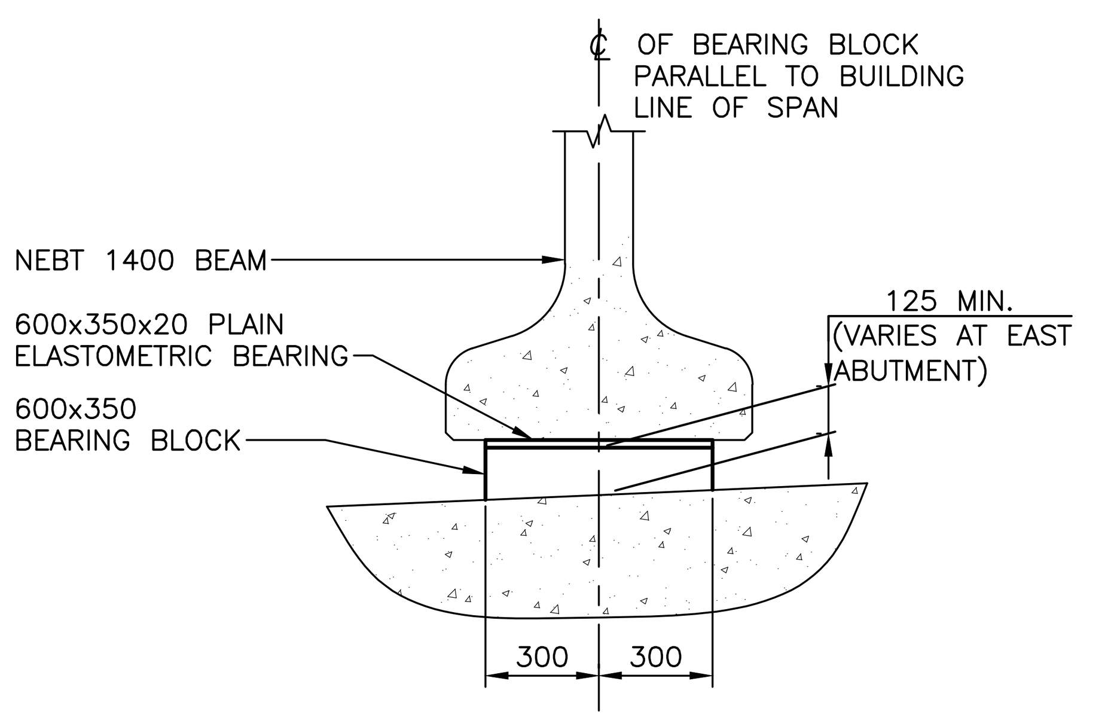
APPROACH SLAB EDGE ANGLE DETAIL (2 / S7)

SCALE : 1:10



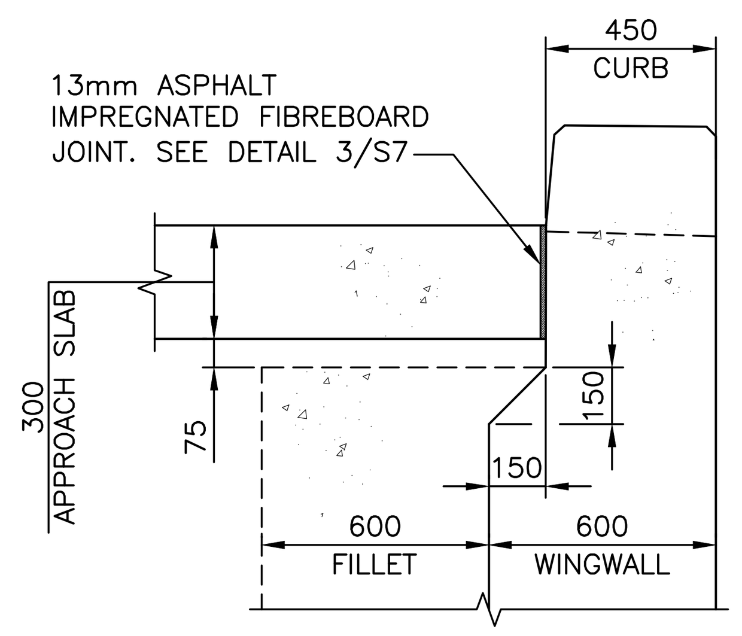
EXPANSION JOINT (3 / S7)

SCALE : 1:1



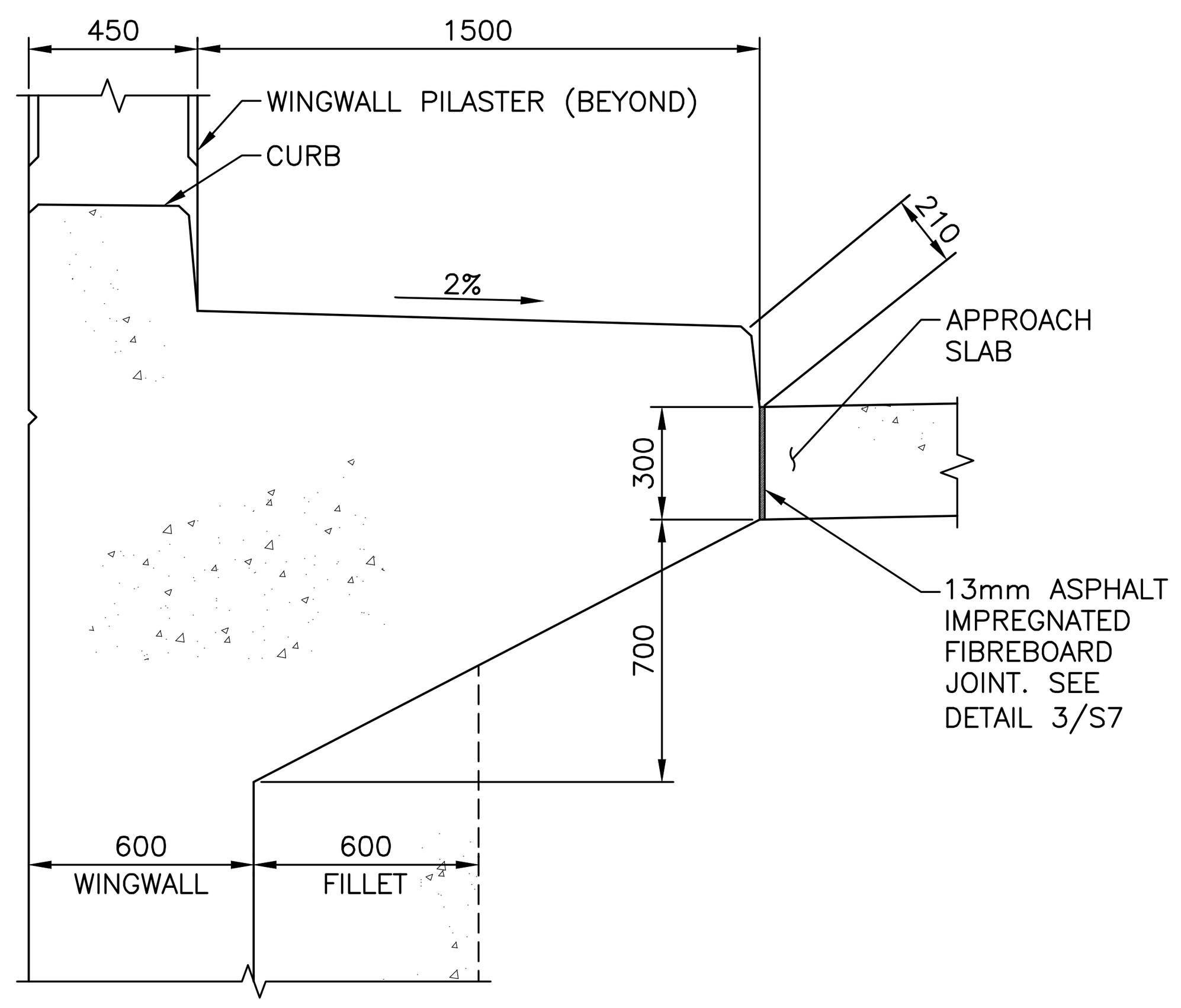
BEARING BLOCK SECTION (A / S7)

SCALE : 1:20



BREASTWALL HAUNCH SECTION (B / S6)

SCALE : 1:20

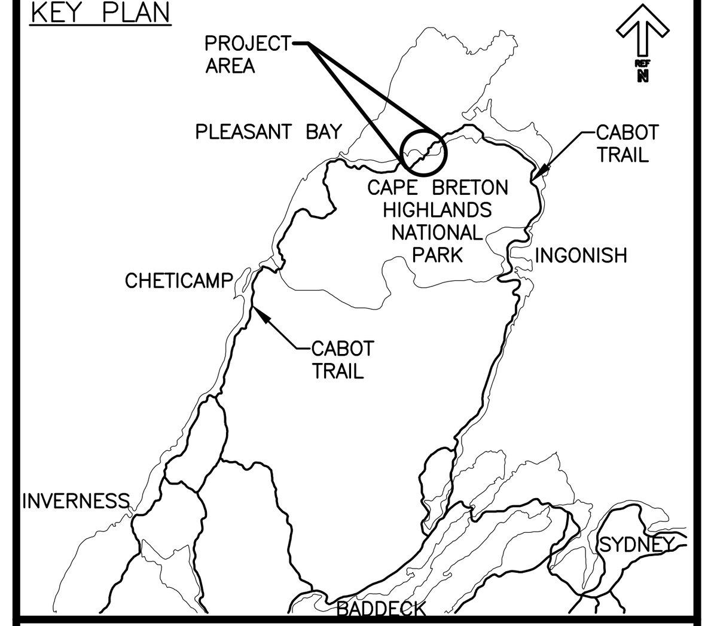


RAISED CURB AT WINGWALL (C / S6)

SCALE : 1:20

Parcs Canada / Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK, DIAPHRAGMS AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

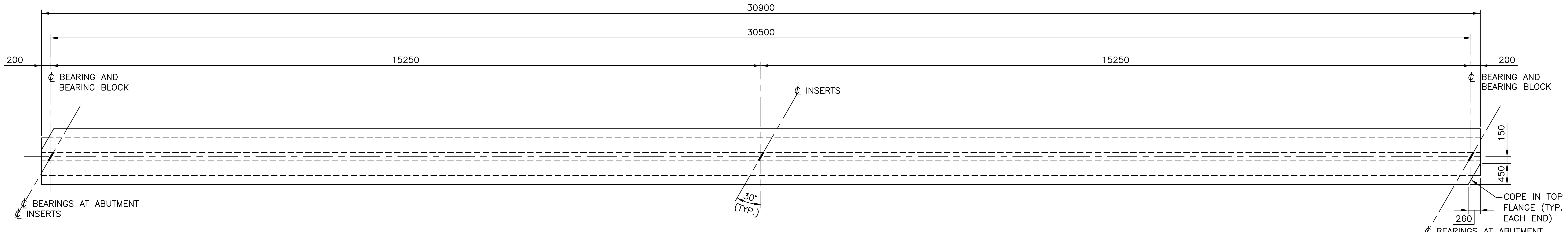
1. ALL EXPOSED EDGES TO HAVE 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
2. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.
3. THE DEPARTMENTAL REPRESENTATIVE WILL INFORM THE CONTRACTOR AS TO THE SIZE AND LOCATION OF THE DATE ON THE BARRIER WALL.
4. ALL DIMENSIONS ARE IN MILLIMETERS.
5. ALL ELEVATIONS ARE IN METERS.
6. REQUIRED FACTORED AXIAL COMPRESSIVE LOAD CAPACITY OF PILES AT ULS: 1430kN

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet: NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin: EAST ABUTMENT ELEVATIONS, SECTIONS AND DETAILS

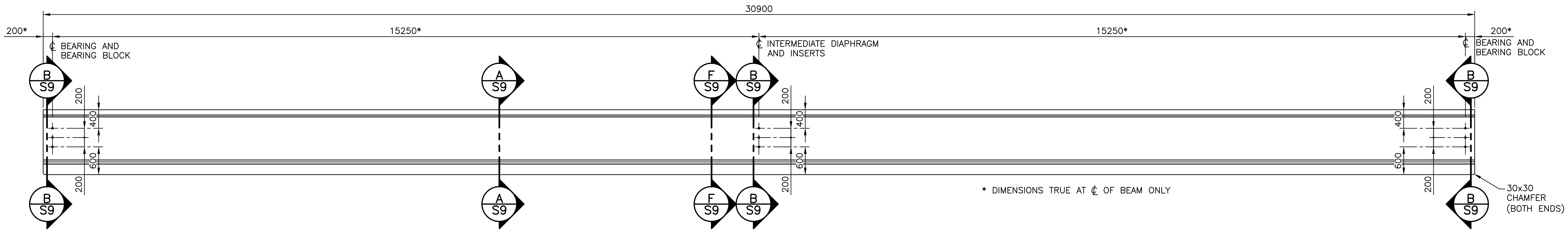
designed / conçu	SOV
drawn / dessiné	CRM
date	2016-01-08
approved / approuvé	GL
date	2017-07-06
Tender / Soumission	
PCA Project Manager / Administrateur de projets PCA	
project number / no. du projet	666
drawing no. / no. du dessin	S-7



PLAN

SCALE: 1:50

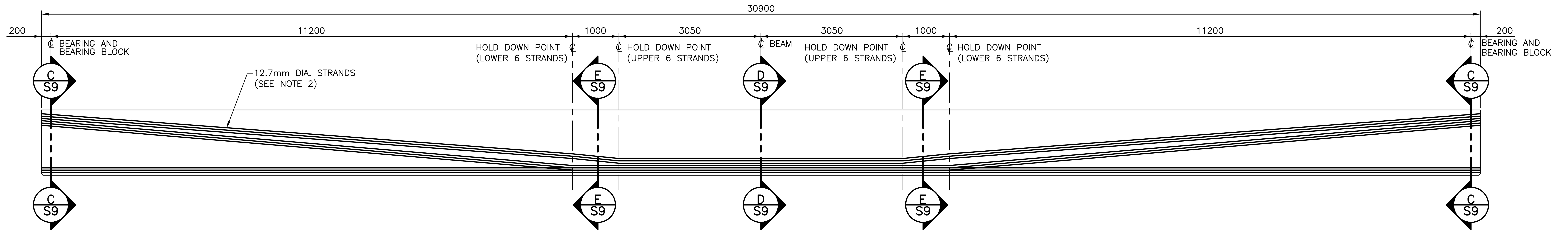
0m 1m 2m 3m 4m 5m



ELEVATION

SCALE: 1:50

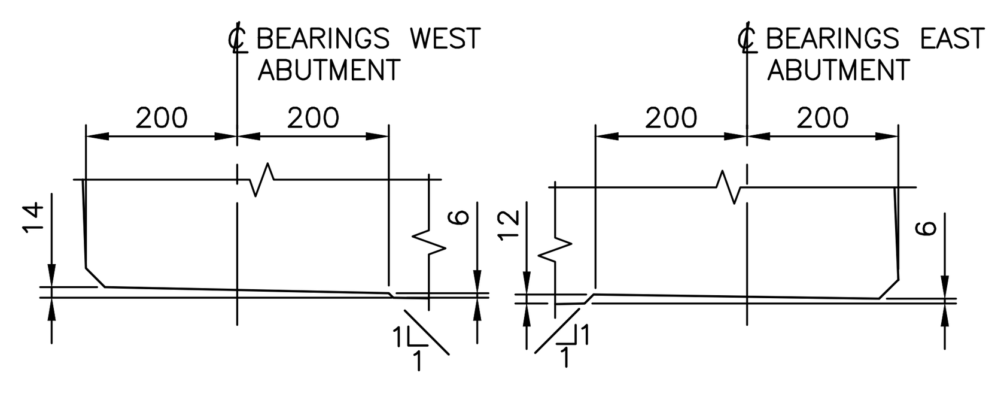
0m 1m 2m 3m 4m 5m



ELEVATION SHOWING CABLE PROFILE

SCALE: 1:50

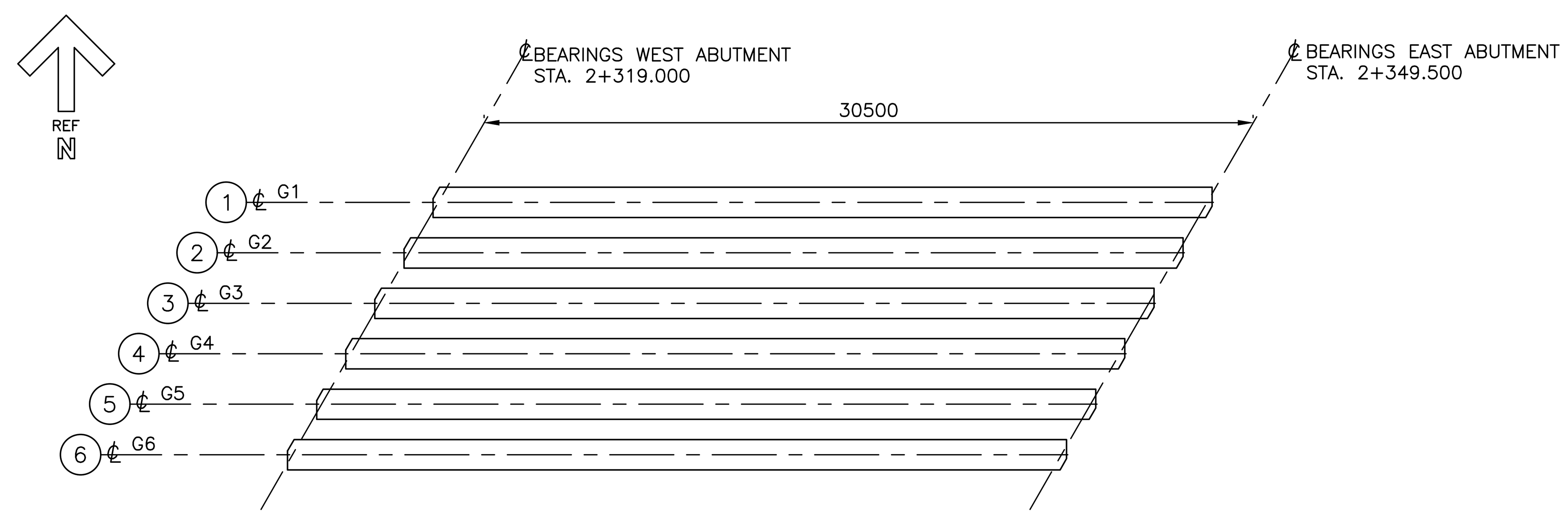
0m 1m 2m 3m 4m 5m



WEST AND EAST INSET DETAIL

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



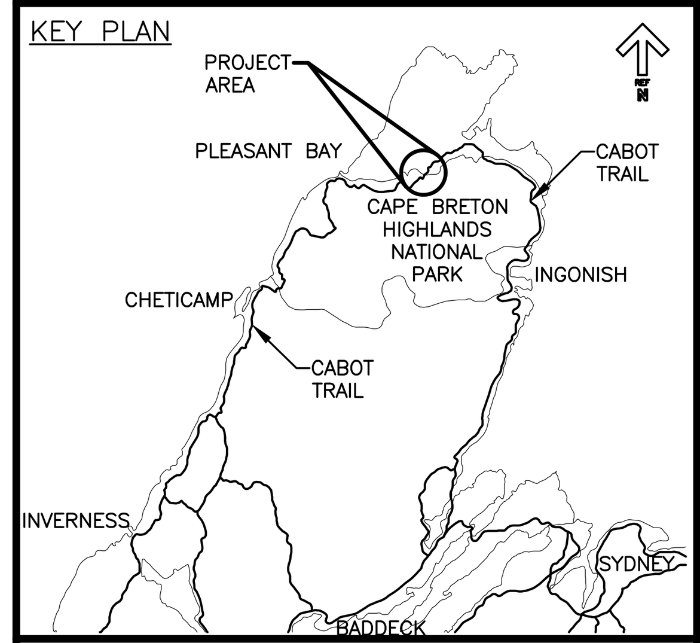
BEAM LAYOUT DIAGRAM

SCALE: 1:200

0m 5m 10m 15m 20m 25m

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. USE 25mm DIA. APPROVED THREADED INSERTS FOR EXTERIOR BEAMS AT DIAPHRAGM. USE 32mm I.D. APPROVED SLEEVES ELSEWHERE.
2. PRESTRESSING CABLE SHALL BE LOW-RELAXATION SEVEN WIRE STRANDS SIZE DESIGNATION 13, GRADE 1860.
3. MAXIMUM JACKING TENSION PER CABLE TO BE 138kN.
4. MINIMUM FORCE PER CABLE AFTER ALL LOSSES TO BE 111kN.
5. CONCRETE SHALL HAVE A DESIGN STRENGTH OF 50MPa (MIN.). STRENGTH AT TIME OF RELEASE SHALL BE 35MPa (MIN.).
6. HARPED CABLES MAY BE FANNED BY BEAM MANUFACTURER, PROVIDING THAT THE SAME CENTER OF GRAVITY OF HARPED CABLE GROUP AS SHOWN ON DRAWING IS MAINTAINED.
7. NO BITUMINOUS OR ASPHALT COATING TO BE APPLIED TO ENDS OF BEAMS.
8. ZINC GALVANIZING COMPOUND SHALL BE APPLIED TO EXPOSED STRANDS AT ENDS OF BEAMS TO PREVENT CORROSION.

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

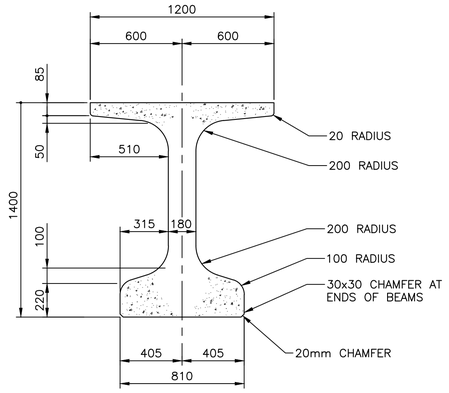
BEAM LAYOUT

designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016-01-08	
approved	GL	approuvé
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S-8	no. du dessin

PLOTTED: Jul 06, 2017 9:01am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833S-8.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:

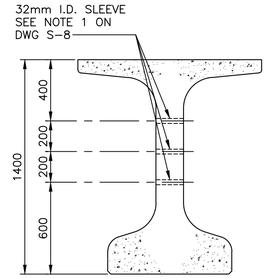


NEBT 1400 BEAM

BEAM SECTION — A S8

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



INSERT – DIAPHRAMS AT INTERIOR BEAMS — B S8

SCALE : 1:20

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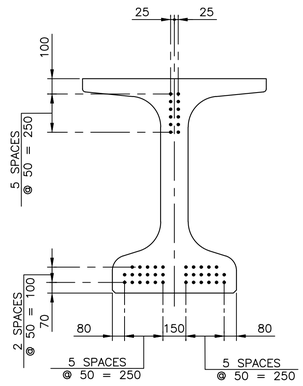
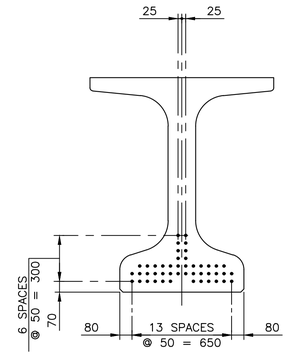


46 STRANDS TOTAL

STRANDS AT BEARINGS — C S8

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

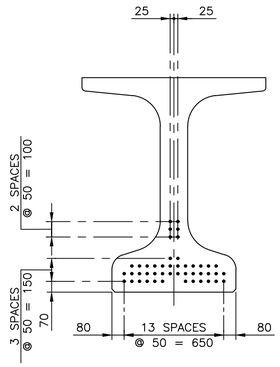


46 STRANDS TOTAL

STRANDS AT CENTER OF BEAM — D S8

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

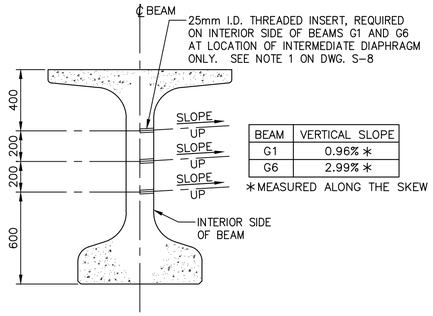


46 STRANDS TOTAL

STRANDS AT HOLD DOWN POINTS — E S8

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



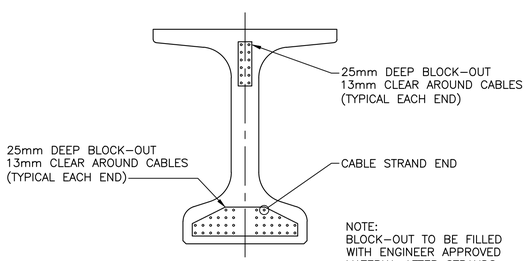
BEAM	VERTICAL SLOPE
G1	0.96% *
G6	2.99% *

*MEASURED ALONG THE SKEW

THREADED INSERT – INTERMEDIATE DIAPHRAGMS – EXTERIOR BEAMS — F S8

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



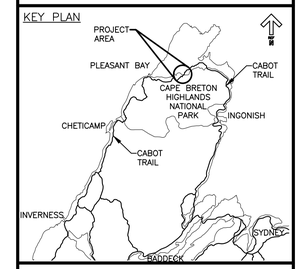
BEAM END BLOCK-OUT DETAIL

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

BEAM DETAILS

designed SOV / conçu
date

drawn CRM / dessiné
date 2016-01-08

approved GL / approuvé
date 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

project number / no. du projet
666

drawing no. / no. du dessin
S-9

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PWGSC A1 (2004)

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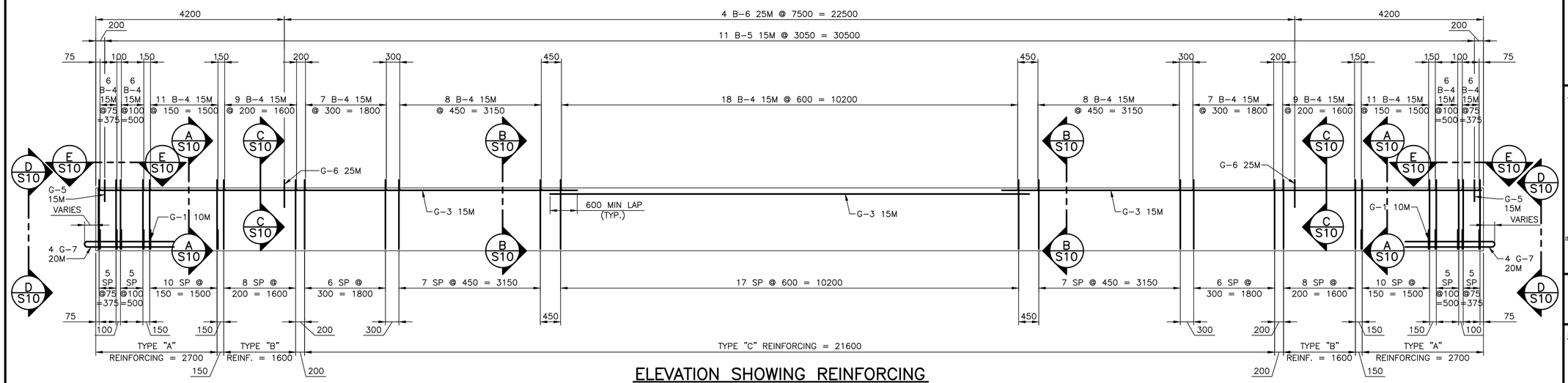
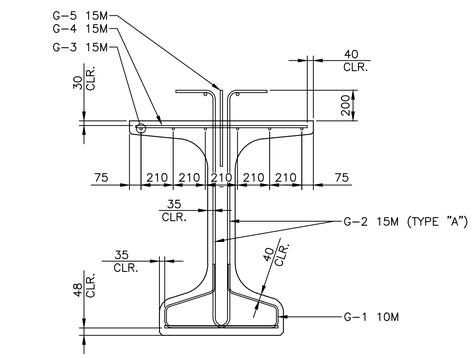


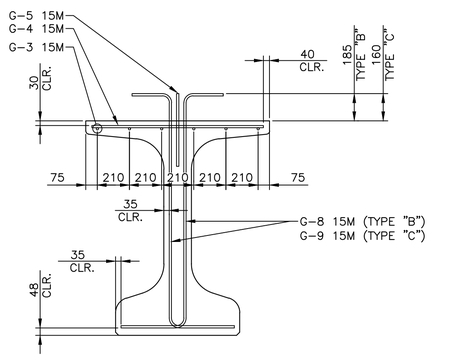
ELEVATION SHOWING REINFORCING

SCALE: 1:50



SECTION – TYPE "A" REINFORCING (A S10)

SCALE : 1:20



SECTION – TYPE "B"/"C" REINF. (B S10)

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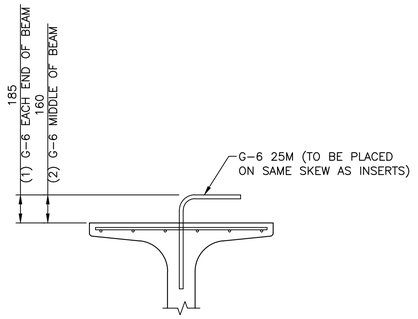
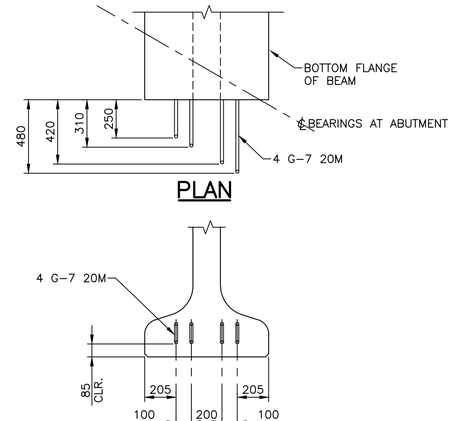


SECTION – VERTICAL DOWELS (C S10)

SCALE : 1:20

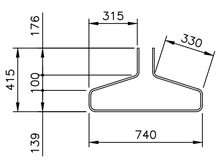


PLAN

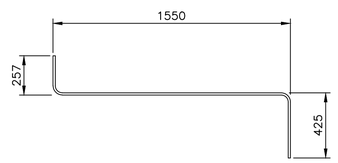
SECTION – BOTTOM DOWELS (D S10)

SCALE : 1:20

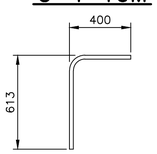
BAR SCHEDULE – ONE BEAM						
MARK	SIZE	QUANT.	LENGTH	SHAPE	MASS	LOCATION AND REMARKS
G-1	10M	46	1950		71	VERTICAL STIRRUP IN BOTTOM (TYPE "A")
G-2	15M	92	2155		312	VERTICAL STIRRUP (TYPE "A")
G-3	15M	18	10670	STR	302	LONGITUDINAL IN TOP FLANGE
G-4	15M	112	1120	STR	197	TRANSVERSE IN TOP FLANGE
G-5	15M	11	475	STR	9	VERTICAL DOWEL IN TOP
G-6	25M	4	950		15	VERTICAL DOWEL IN TOP
G-7	20M	8	4050		77	DOWELS AT END IN BOTTOM FLANGE
G-8	15M	36	2140		121	VERTICAL STIRRUP (TYPE "B")
G-9	15M	96	2115		319	VERTICAL STIRRUP (TYPE "C")
G-10	25M	3	920	STR	11	INTERMEDIATE DIAPHRAGM LONGITUDINAL INSERT BARS @ EXT. BEAMS
					1423	TOTAL MASS (Kg) PER INTERIOR BEAM
					1434	TOTAL MASS (Kg) PER EXTERIOR BEAM



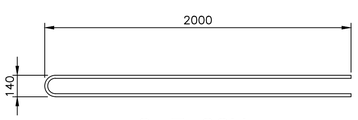
G-1 10M



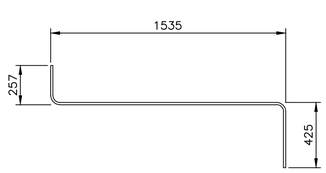
G-2 15M



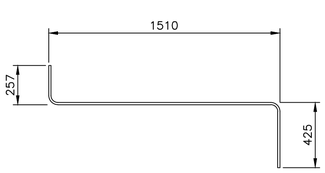
G-6 25M



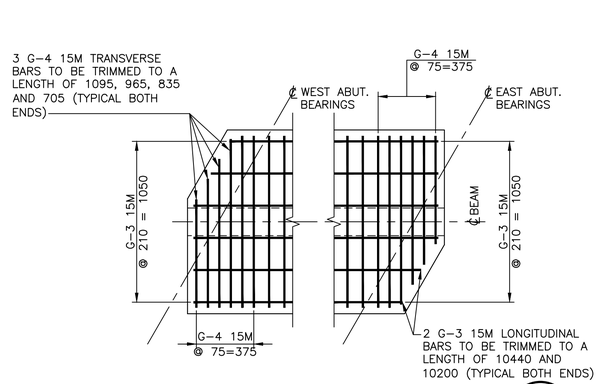
G-7 20M



G-8 15M



G-9 15M

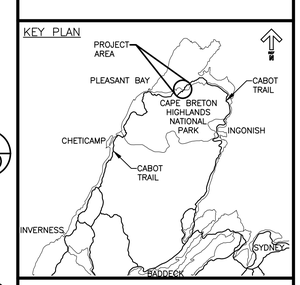


BEAM END REINFORCING (E S10)

SCALE : 1:20

NOTES:

1. ALL CLEARANCES TO BE 40mm PERPENDICULAR TO FACE OF CONCRETE, UNLESS NOTED OTHERWISE.



Parcs Canada Parks Canada

Stantec

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

BEAM REINFORCING

designed SOV / conçu

date

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date 2016-01-08

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date 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

project number / no. du projet

666

drawing no. / no. du dessin

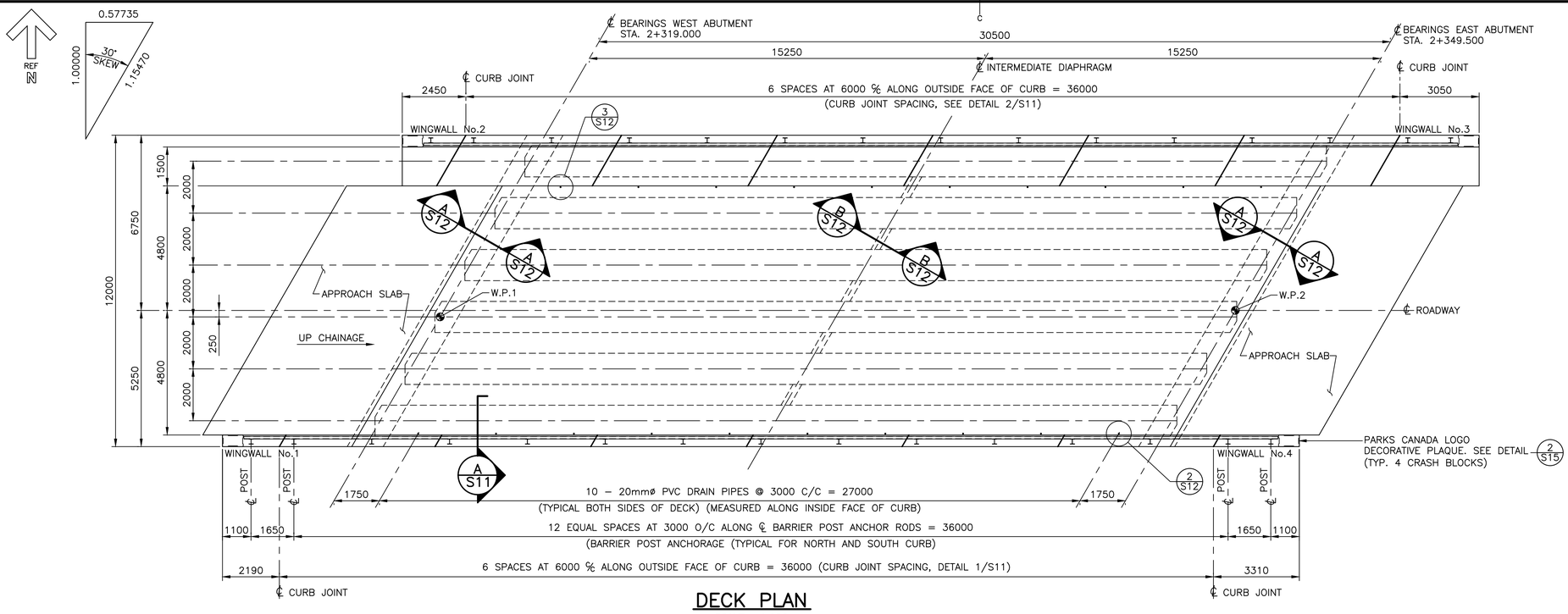
S-10

PLOTTED: Jul 06, 2017 9:05am meouellette

FILE: u:\133346833\18_structural\4_North Aspy\133346833S-10.dwg

PWGSC A1 (2004)

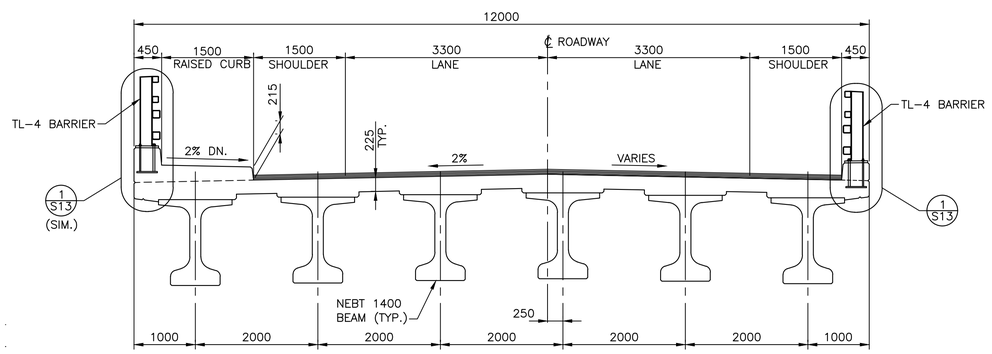
E-DRM/GDD-E:



DECK PLAN

SCALE : 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



TYPICAL SECTION THRU DECK (LOOKING UP CHAINAGE)

SCALE: 1:50

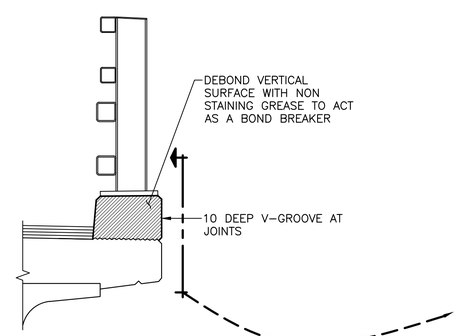
0m 1m 2m 3m 4m 5m

*– MAINTAIN DIMENSION FOR FULL LENGTH OF THE STRUCTURE, UNLESS BOTTOM OF DECK DOES NOT MEET SIDE OF BEAM TOP FLANGE. IN THIS CASE, BOTTOM OF DECK SHALL MATCH TOP OR BOTTOM OF BEAM'S TOP FLANGE, WHICHEVER IS CLOSEST.

SECTION – DECK OVERHANG A S11

SCALE : 1:20

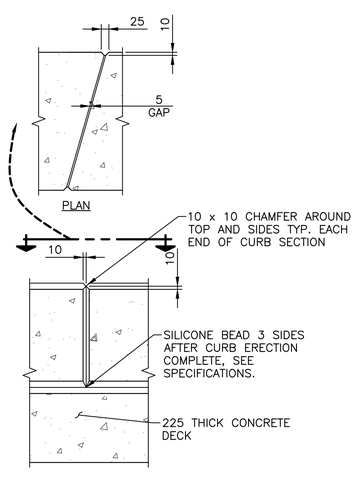
0mm 500mm 1000mm 1500mm 2000mm 2500mm

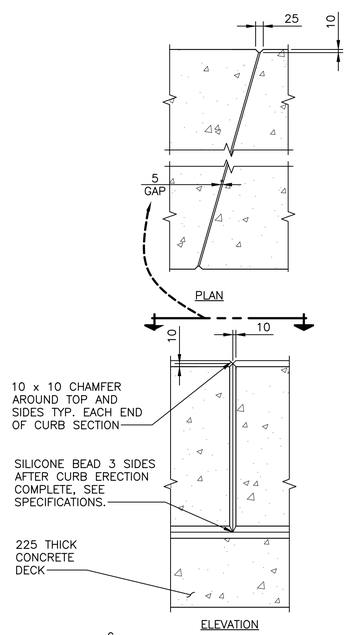


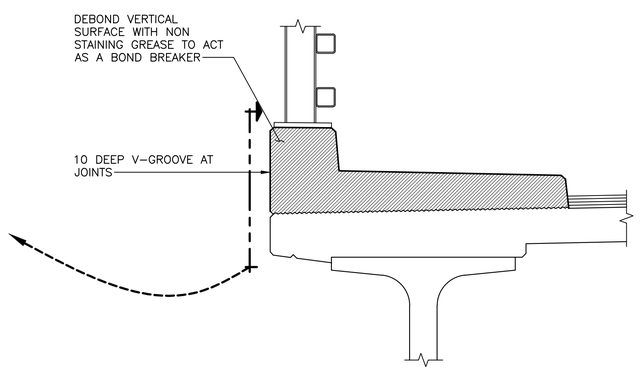
CURB CONTROL JOINT 1 S11

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm







RAISED CURB CONTROL JOINT 2 S11

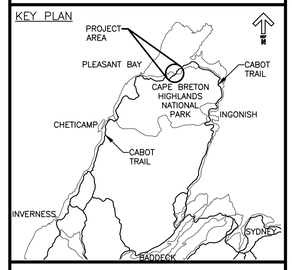
SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK DIAPHRAGM AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

1. SEE DRAWING S–14 FOR DECK SLAB ELEVATIONS.
2. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
3. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.
4. FOR DECK REINFORCING SEE DRAWINGS S–22 AND S–23.

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DECK PLAN, SECTIONS AND DETAILS

designed / conçu	SOV
date	
drawn / dessiné	CRM
date	2016–01–08
approved / approuvé	GL
date	2017–07–06
Tender	Soumission
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	S–11

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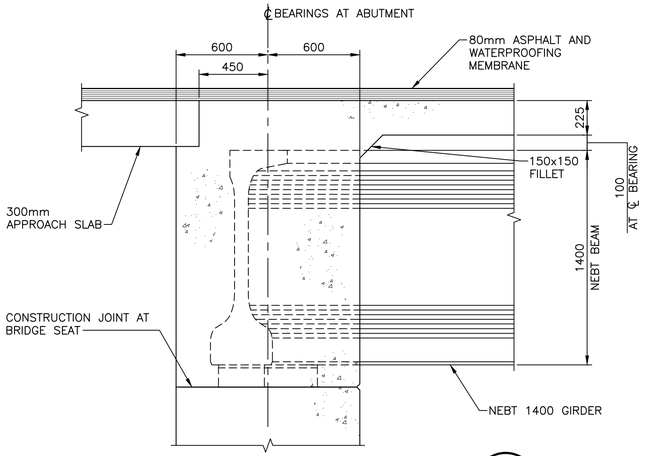
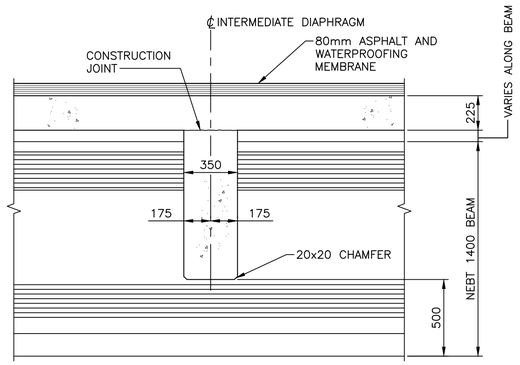
FILE: u:\133346833\18_structural\4_North Aspy\133346833S–11.dwg
PWGSC A1 (2004)
E–DRM/GDD–E:



END DIAPHRAGM SECTION — A / S11

SCALE : 1:20

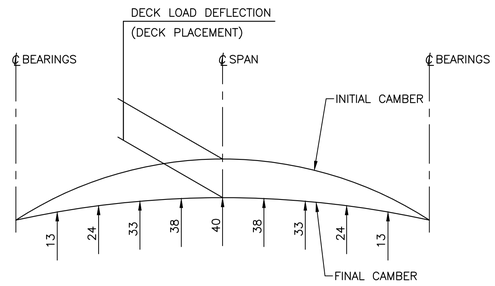
0mm 500mm 1000mm 1500mm 2000mm 2500mm



INTERMEDIATE DIAPHRAGM SECTION — B / S11

SCALE : 1:20

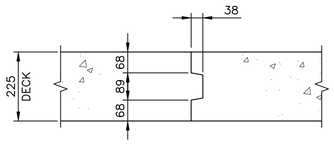
0mm 500mm 1000mm 1500mm 2000mm 2500mm



DEAD LOAD DEFLECTION DIAGRAM (AT 1/10TH POINTS)

SCALE : 1:20

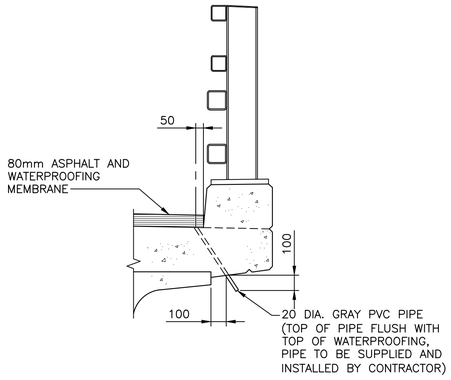
0mm 500mm 1000mm 1500mm 2000mm 2500mm



DECK SLAB CONSTRUCTION JOINT DETAIL — 1 / S12

SCALE : 1:10

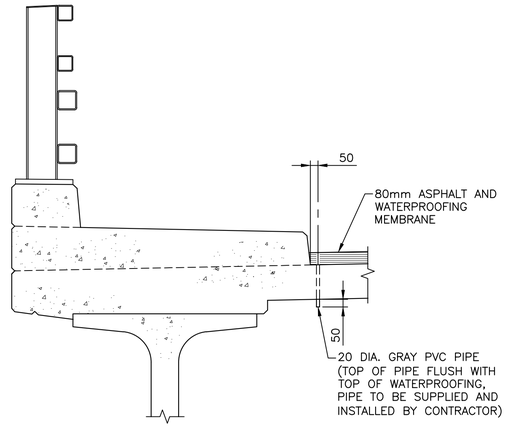
0mm 100 200 300 400 500 600 700 800 900 1000mm



DECK DRAIN DETAIL — 2 / S11

SCALE : 1:20

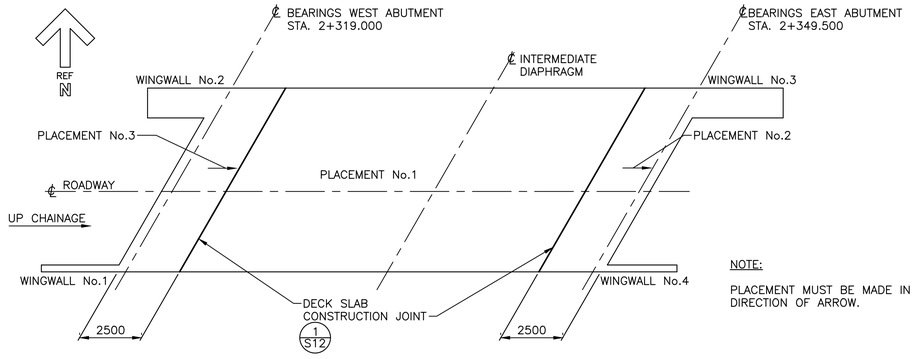
0mm 500mm 1000mm 1500mm 2000mm 2500mm



DECK DRAIN DETAIL — 3 / S11

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



NOTE:

PLACEMENT MUST BE MADE IN DIRECTION OF ARROW.

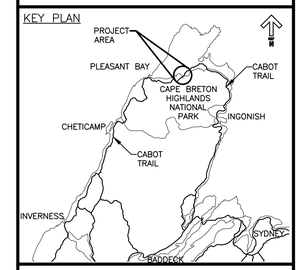
DECK SLAB PLACEMENT SEQUENCE

SCALE: 1:200

0m 5m 10m 15m 20m 25m

Parcs Canada Parks Canada

KEY PLAN



Stantec

CONSTRUCTION SEQUENCE:

1. ABUTMENTS, INCLUDING WINGWALLS TO BE CAST TO THE TOP OF BRIDGE SEAT AND BEARING BLOCKS.
2. DECK DIAPHRAGM AND REMAINING PORTION OF ABUTMENT AND WINGWALLS TO BE CAST INTEGRALLY WITH BEAMS.

NOTES:

1. ALL EXPOSED EDGES TO HAVE A 20mm x 20mm CHAMFER UNLESS NOTED OTHERWISE.
2. ALL NOTCHES TO BE 20mm x 20mm UNLESS NOTED OTHERWISE.

REGISTERED PROFESSIONAL ENGINEER — DATE — 11294 — PROVINCE OF NOVA SCOTIA

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DECK DETAILS

designed / conçu	SOV
date	
drawn / dessiné	CRM
date	2016-01-08
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date	2017-07-06
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PCA Project Manager	Administrateur de projets PCA
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drawing no. / no. du dessin	S-12

PLOTTED: Jul 06, 2017 9:07am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833-12.dwg

PWGSC A1 (2004)

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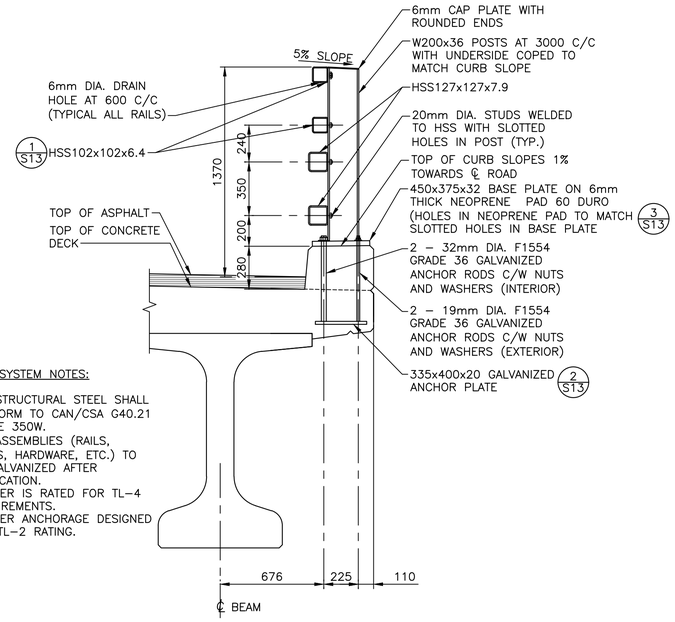


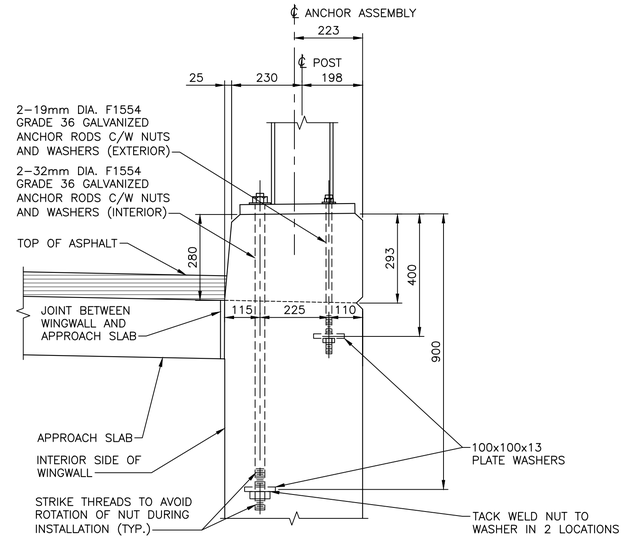
BARRIER SYSTEM NOTES:

1. ALL STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21 GRADE 350W.
2. ALL ASSEMBLIES (RAILS, POSTS, HARDWARE, ETC.) TO BE GALVANIZED AFTER FABRICATION.
3. BARRIER IS RATED FOR TL-4 REQUIREMENTS.
4. BARRIER ANCHORAGE DESIGNED FOR TL-2 RATING.

BARRIER RAIL DETAIL — 1/S11

SCALE : 1:20

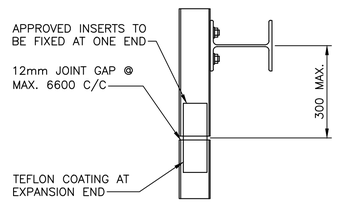
0mm 500mm 1000mm 1500mm 2000mm 2500mm



ARRIER POST ANCHORAGE AT ABUTMENT WINGWALL

SCALE : 1:10

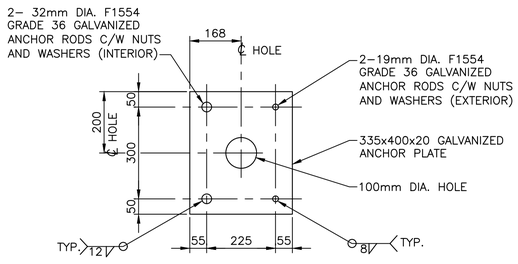
0mm 100 200 300 400 500 600 700 800 900 1000mm



BARRIER RAILS CONNECTION DETAIL — 1/S13

SCALE : 1:10

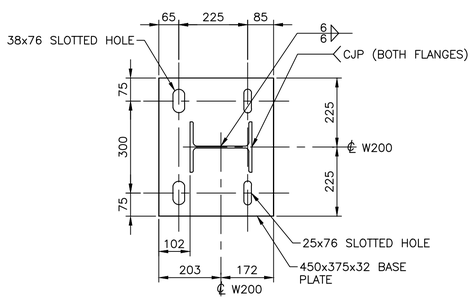
0mm 100 200 300 400 500 600 700 800 900 1000mm



CAST-IN ANCHOR PLATE DETAIL — 2/S13

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



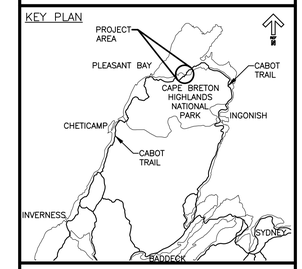
POST BASE PLATE DETAIL AT BRIDGE DECK — 3/S13

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE JULY 6, 2017 — G. Jamieson 11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

BARRIER SYSTEM DETAILS

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date	
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date	2016-01-08
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drawing no. / no. du dessin	S-13

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PLOTTED: Jul 06, 2017 9:08am mouellette

PWGSC A1 (2004)

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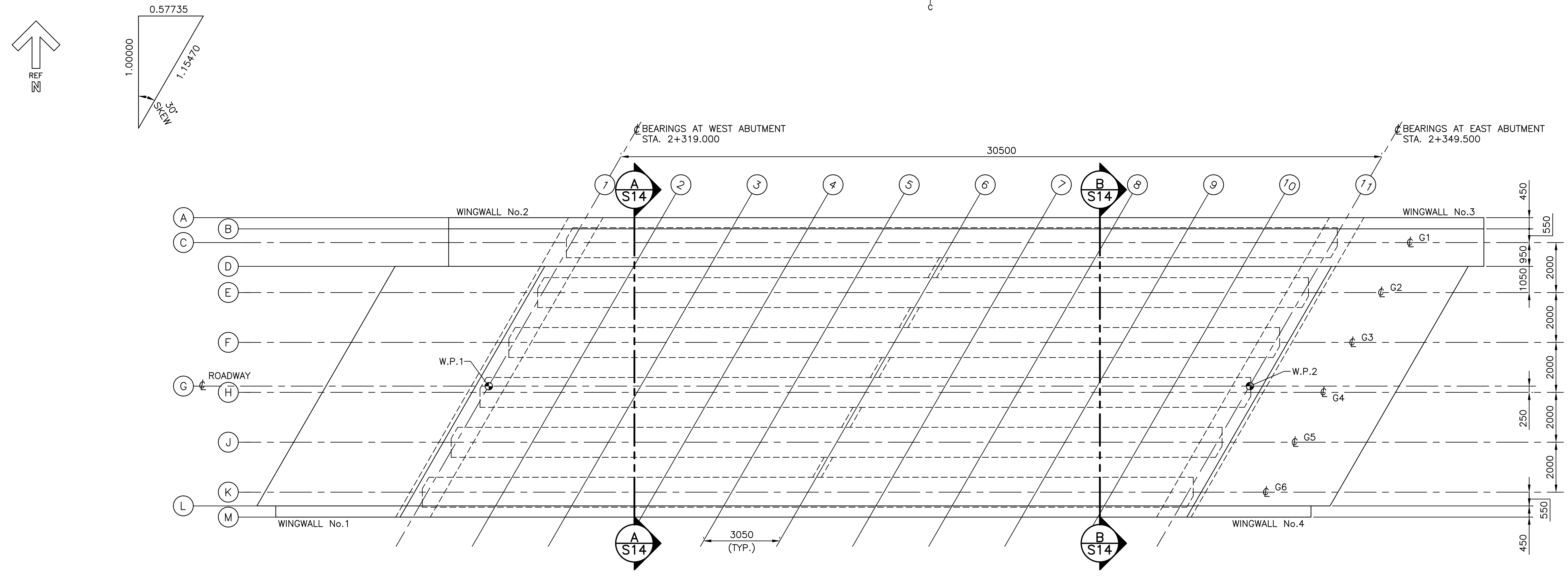
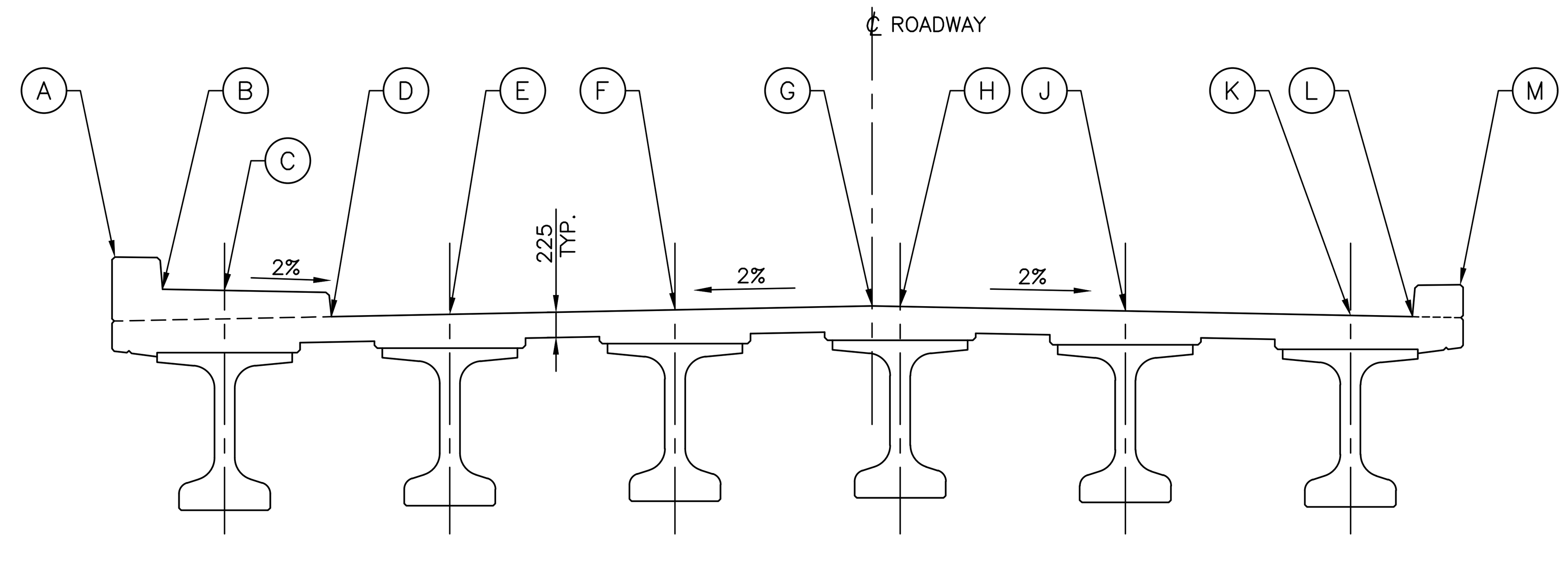


PLAN SHOWING LOCATION OF DECK SLAB ELEVATIONS

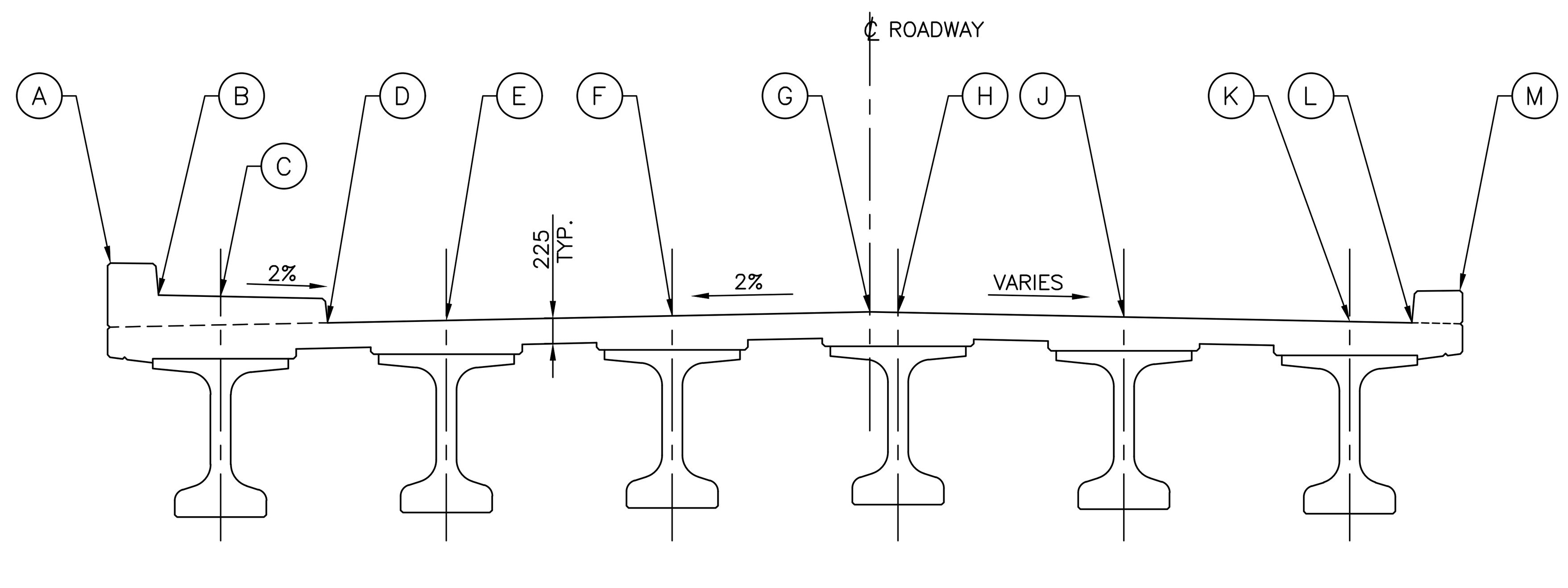
SCALE : 1:100

TABLE OF ELEVATIONS											
	1	2	3	4	5	6	7	8	9	10	11
A	41.081	41.121	41.165	41.213	41.266	41.322	41.383	41.447	41.516	41.589	41.666
B	40.793	40.833	40.877	40.925	40.977	41.033	41.093	41.158	41.226	41.299	41.376
C	40.779	40.818	40.861	40.909	40.960	41.016	41.076	41.140	41.208	41.280	41.356
D	40.538	40.577	40.620	40.666	40.717	40.772	40.831	40.894	40.962	41.033	41.108
E	40.552	40.590	40.632	40.678	40.728	40.782	40.840	40.902	40.969	41.040	41.114
F	40.579	40.615	40.655	40.700	40.748	40.801	40.858	40.918	40.983	41.052	41.126
G	40.603	40.638	40.677	40.720	40.767	40.818	40.873	40.933	40.996	41.064	41.136
H	40.596	40.631	40.670	40.712	40.759	40.810	40.866	40.925	40.989	41.057	41.129
J	40.544	40.577	40.615	40.656	40.701	40.751	40.804	40.864	40.929	40.998	41.072
K	40.493	40.524	40.560	40.600	40.644	40.691	40.743	40.801	40.867	40.937	41.013
L	40.479	40.510	40.545	40.584	40.628	40.675	40.727	40.783	40.850	40.920	40.997
M	40.761	40.791	40.826	40.865	40.908	40.955	41.007	41.062	41.128	41.198	41.273



SECTION (LOOKING UP CHAINAGE) A/S14

SCALE: 1:50

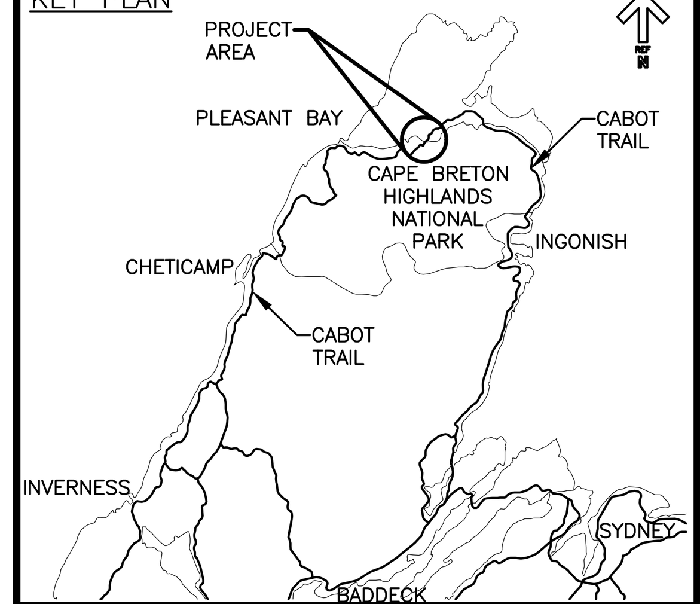


SECTION (LOOKING UP CHAINAGE) B/S14

SCALE: 1:50

Parcs Canada / Parks Canada

KEY PLAN



Stantec

NOTES:

1. ELEVATIONS ARE GIVEN AT 1/10TH POINTS ALONG SPAN.
2. ALL ELEVATIONS ARE GIVEN AT TOP OF FINISHED CONCRETE.

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet: NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin: DECK ELEVATIONS

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date:

drawn / dessiné: CRM

date: 2016-01-08

approved / approuvé: GL

date: 2017-07-06

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project number / no. du projet: 666

drawing no. / no. du dessin: S-14

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PWGSC A1 (2004)

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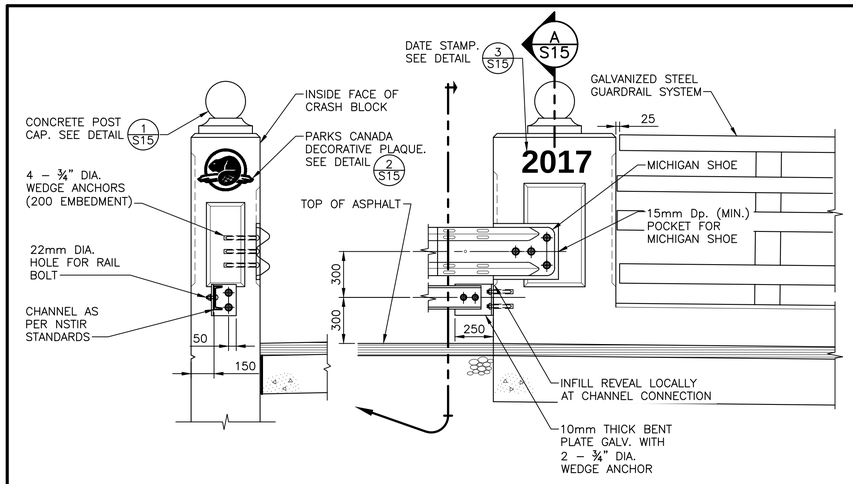
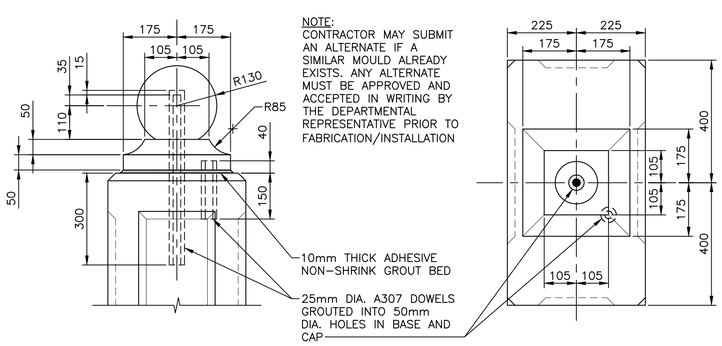


GUARDRAIL TO CRASH BLOCK CONNECTION

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

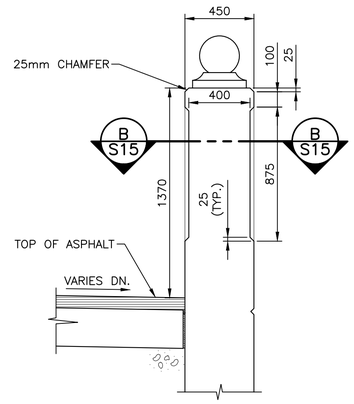


ELEVATION PLAN

TYPICAL CRASH BLOCK SECTION A S15

SCALE : 1:20

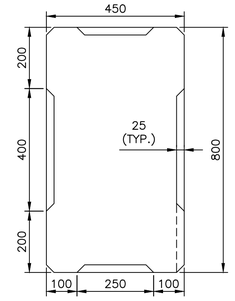
0mm 500mm 1000mm 1500mm 2000mm 2500mm



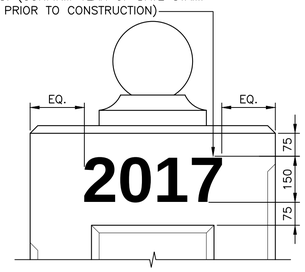
CRASH BLOCK SECTION B S15

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



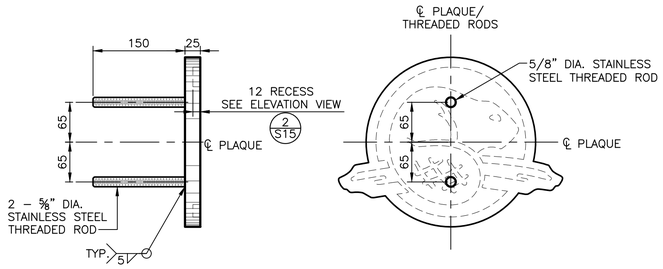
12mm DEEP RECESSED DATE STAMP (ARIAL FONT) PLACED ON INSIDE FACE OF SOUTH WEST AND NORTH EAST CRASH BLOCKS. (CONFIRM YEAR OF DATE STAMP WITH PARK CANADA PRIOR TO CONSTRUCTION)



DATE STAMP REVEAL DETAIL 3 S15

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



THREADED ROD CONNECTION DETAIL 4 S15

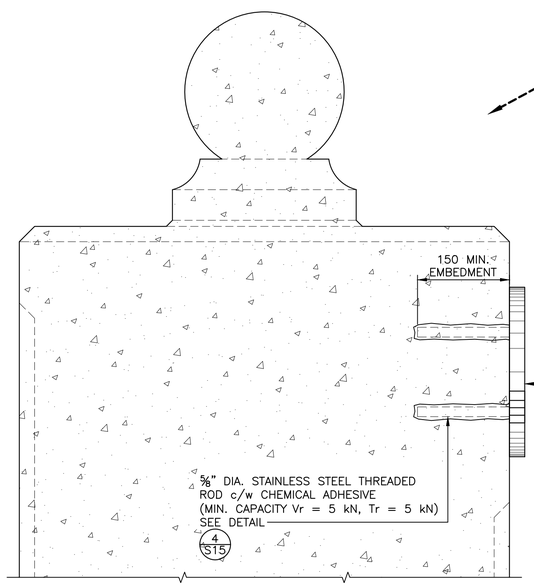
SCALE: 1:5

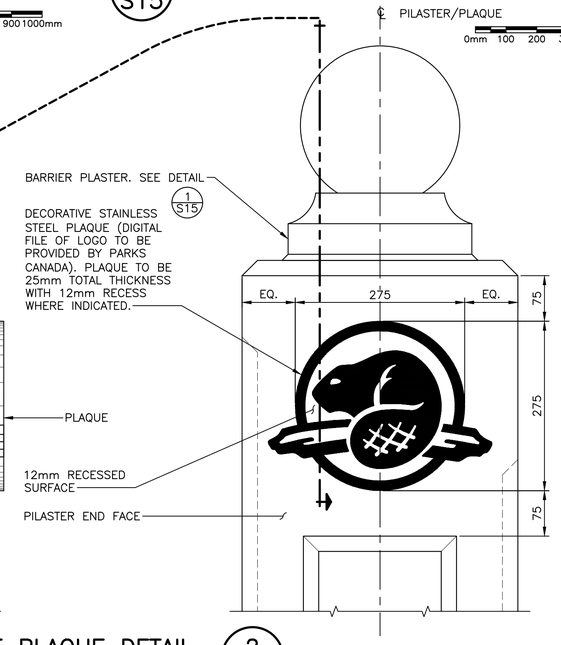
0mm 100mm 200mm 300mm 400mm 500mm

TYPICAL CONCRETE POST CAP DETAIL 1 S15

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm





DECORATIVE PLAQUE DETAIL 2 S15

SCALE: 1:5

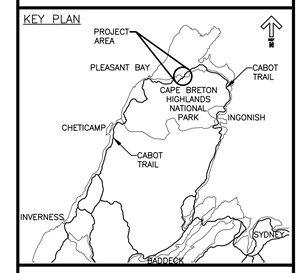
0mm 100mm 200mm 300mm 400mm 500mm

PLAQUE NOTES:

1. DIGITAL FILE OF LOGO TO BE PROVIDED BY PARKS CANADA.
2. PLAQUE TO BE FABRICATED FROM STAINLESS STEEL PLATE TO ASTM A240 – TYPE 316L.
3. STAINLESS STEEL THREADED RODS TO ASTM F593 – TYPE 316L.
4. ALL WELDING IN ACCORDANCE WITH CSA STANDARD W59 LATEST EDITION.
5. HOLES IN PILASTER FOR THREADED ROD ANCHORS SHALL BE DRILLED AND CLEANED AS PER THE CHEMICAL ADHESIVE MANUFACTURER'S RECOMMENDATIONS.
6. CARE SHALL BE TAKEN WHEN DRILLING HOLES IN PILASTER TO ENSURE THE HOLE LOCATIONS ON THE PILASTER MATCH THE AS–BUILT PLAQUE THREADED RODS TO ENSURE CONNECTED PLAQUE IS ORIENTATED ON PILASTER AS SHOWN IN DETAIL.
7. PROVIDE CLEAR CAULKING AROUND PERIMETER OF PLAQUE AFTER INSTALLATION.

Parcs Canada Parks Canada

KEY PLAN



Stantec

0	ISSUED FOR TENDER	07/06 2017
revisions		date

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

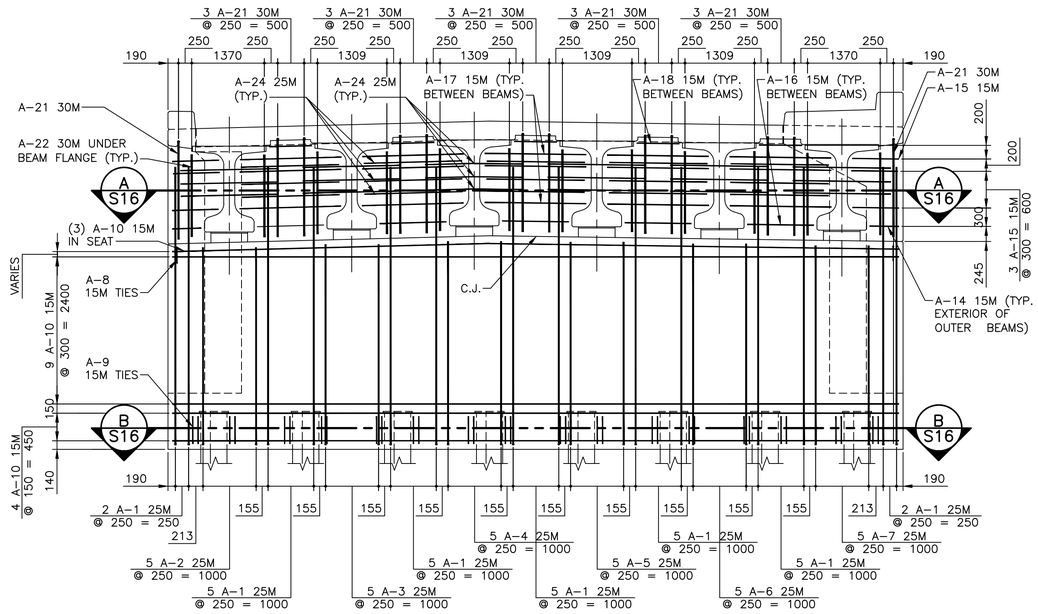
WINGWALL PILASTERS SECTIONS AND DETAILS

designed SOV	conçu
date	
drawn CRM	dessiné
date 2016–01–08	
approved GL	approuvé
date 2017–07–06	
Tender	Soumission
PCA Project Manager	Administrateur de projets PCA
project number	no. du projet
666	
drawing no.	no. du dessin
S–15	

PLOTTED: Jul 06, 2017 4:13pm meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833–15.dwg

PWGSC A1 (2004)

E–DRM/GDD–E:

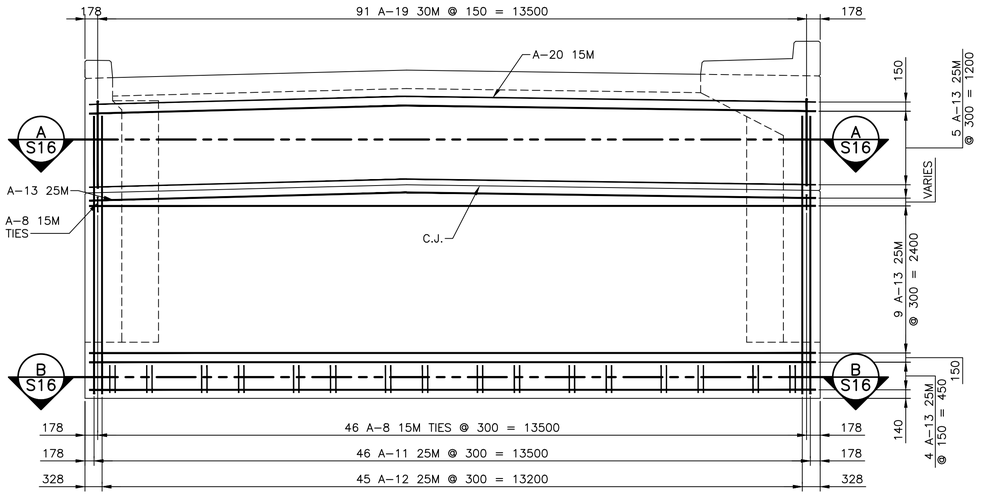


FRONT ELEVATION OF WEST ABUTMENT SHOWING REINFORCING IN NEAR FACE

SCALE: 1:50

0m 1m 2m 3m 4m 5m

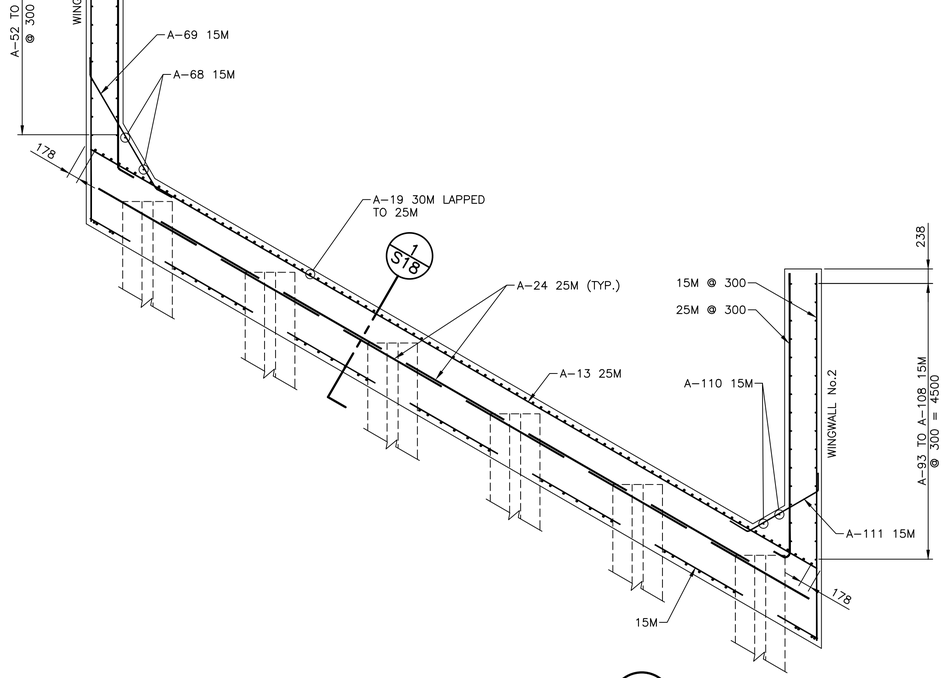
NOTE:
VERTICAL REINFORCING SPACING MEASURED ALONG FACE OF BREASTWALL.



FRONT ELEVATION OF WEST ABUTMENT SHOWING REINFORCING IN FAR FACE

SCALE: 1:50

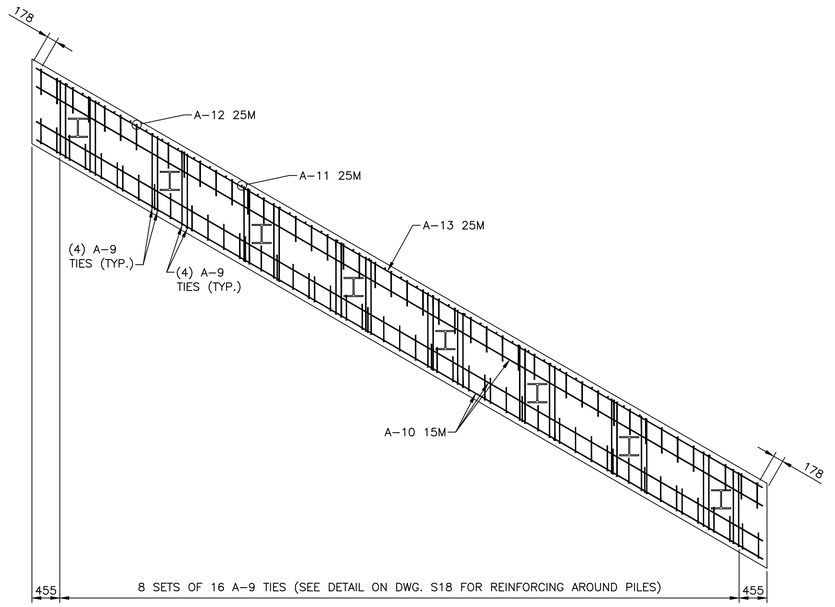
0m 1m 2m 3m 4m 5m



BREASTWALL REINFORCING SECTION A S16

SCALE: 1:50

0m 1m 2m 3m 4m 5m



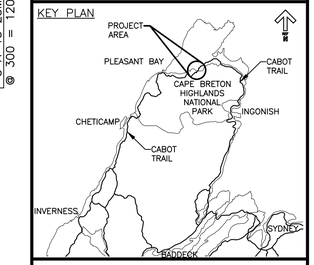
ABUTMENT REINFORCING SECTION B S16

SCALE: 1:50

0m 1m 2m 3m 4m 5m

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL REINFORCING DETAILS, SEE DWG. S17 AND 18.
3. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L. – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA 11294 DATE JULY 6, 2017

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

WEST ABUTMENT
REINFORCING
SHEET 1 OF 3

designed / conçu	SOV	
date		
drawn / dessiné	CRM	
date	2016–01–08	
approved / approuvé	GL	
date	2017–07–06	
Tender / Soumission		
PCA Project Manager / Administrateur de projets PCA		
project number / no. du projet	666	
drawing no. / no. du dessin	S–16	

PLOTTED: Jul 06, 2017 9:19am meouellette FILE: u:\133346833\18_structural\4_North Aspy\133346833S–16.dwg

PWGSC A1 (2004)

E–DRM/GDD–E:

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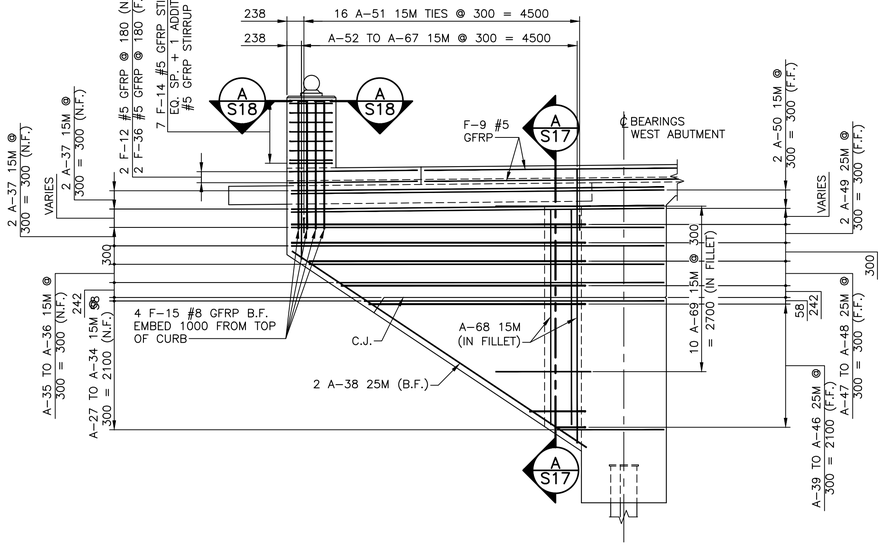
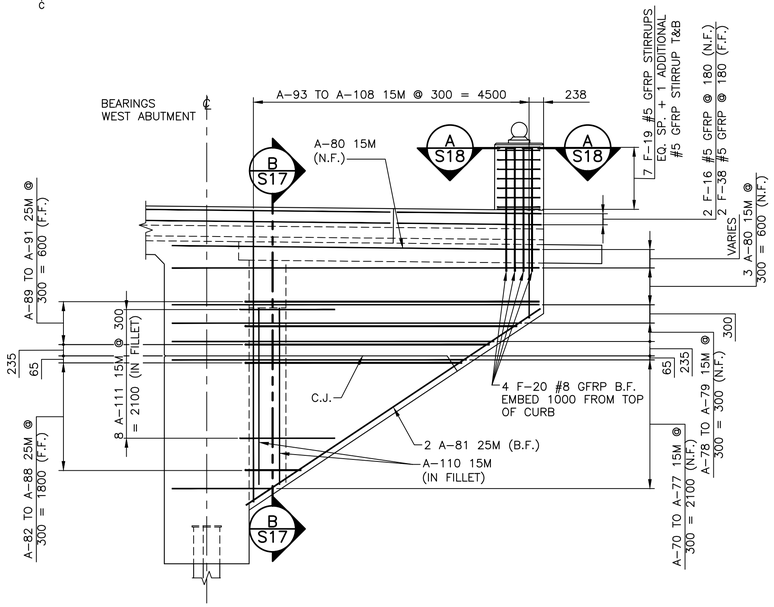


SIDE ELEVATION (WINGWALL No.1)

SCALE: 1:50

0m 1m 2m 3m 4m 5m

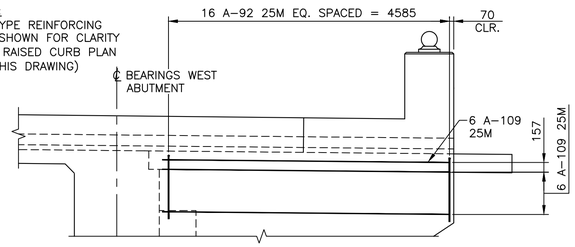


SIDE ELEVATION (WINGWALL No.2)

SCALE: 1:50

0m 1m 2m 3m 4m 5m

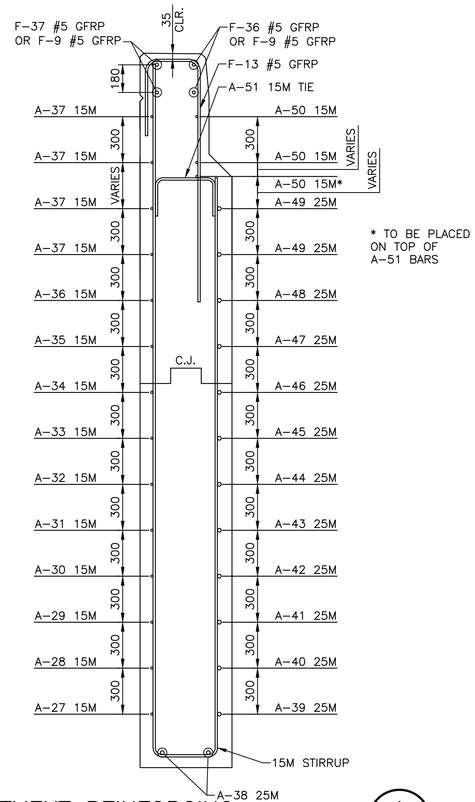
NOTE:
"F" TYPE REINFORCING NOT SHOWN FOR CLARITY (SEE RAISED CURB PLAN ON THIS DRAWING)



RAISED CURB FAR FACE ELEVATION (WINGWALL No.2)

SCALE: 1:50

0m 1m 2m 3m 4m 5m



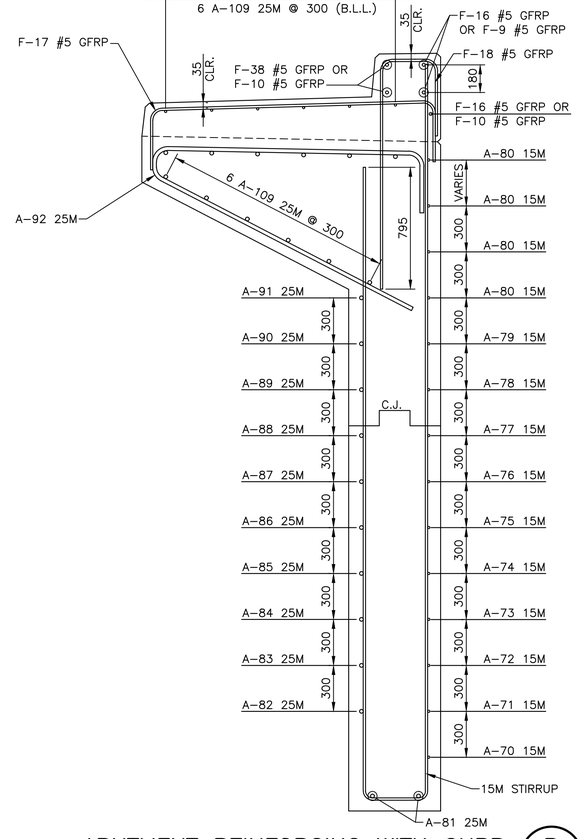
* TO BE PLACED ON TOP OF A–51 BARS

ABUTMENT REINFORCING

A S17

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



ABUTMENT REINFORCING WITH CURB

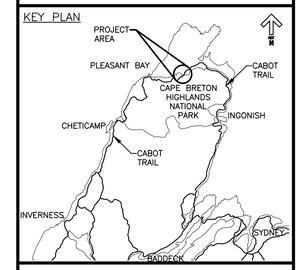
B S17

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L. – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

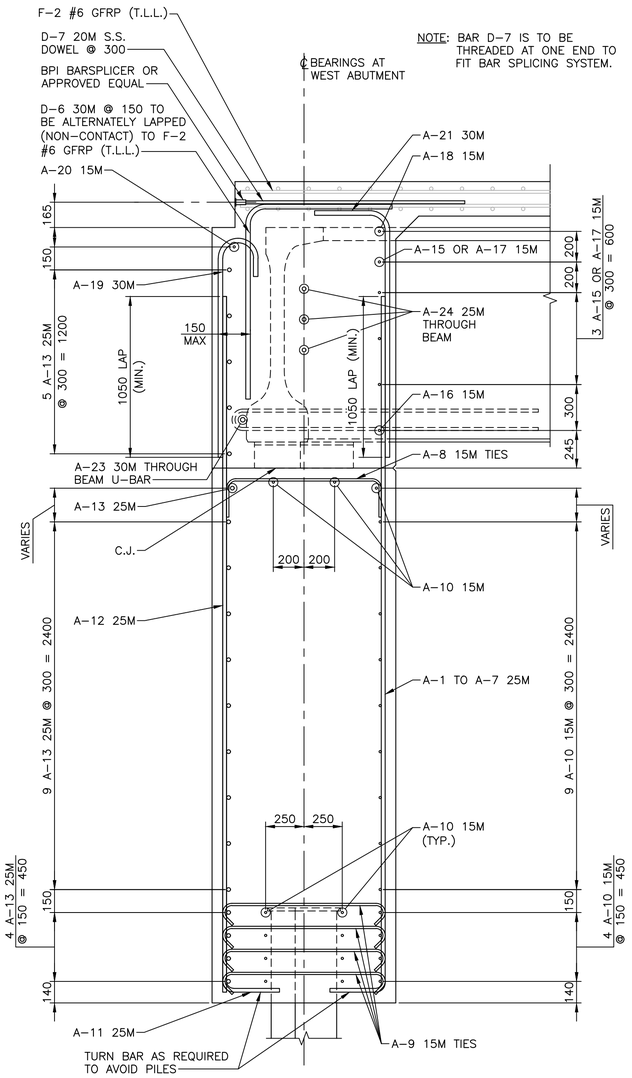
NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

WEST ABUTMENT REINFORCING SHEET 2 OF 3

designed / conçu	SOV
date	
drawn / dessiné	CRM
date	2016–01–08
approved / approuvé	GL
date	2017–07–06
Tender	Soumission
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	S–17

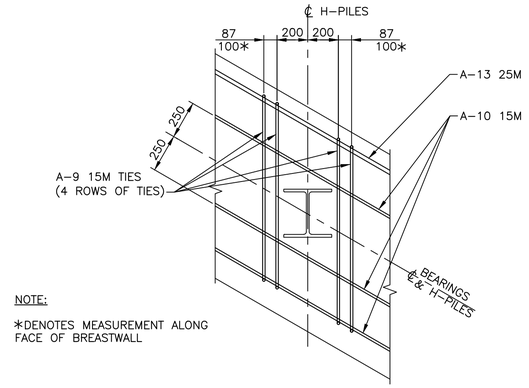
FILE: U:\133346833\18_structural\4_North Aspy\133346833S–17.dwg
PLOTTED: Jul 06, 2017 9:20am meouellette
PWGSC A1 (2004)
E–DRM/GDD–E:



ABUTMENT REINFORCING DETAIL (1 / S16)

SCALE : 1:20

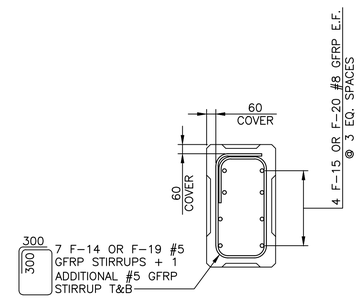
0mm 500mm 1000mm 1500mm 2000mm 2500mm



TYPICAL REINFORCING DETAIL AROUND PILES

SCALE : 1:20

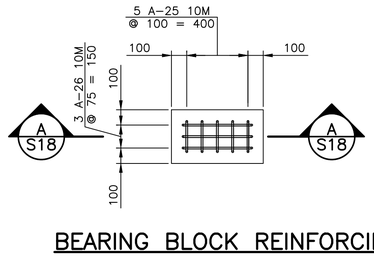
0mm 500mm 1000mm 1500mm 2000mm 2500mm



CRASH BLOCK REINFORCING (A / S17)

SCALE : 1:20

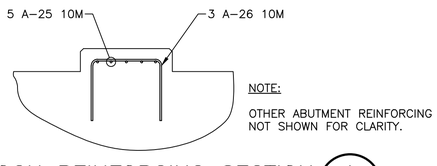
0mm 500mm 1000mm 1500mm 2000mm 2500mm



BEARING BLOCK REINFORCING

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



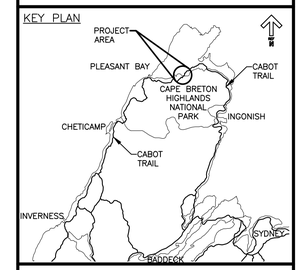
BEARING BLOCK REINFORCING SECTION (A / S18)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — 11294 — DATE JULY 6, 2017

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

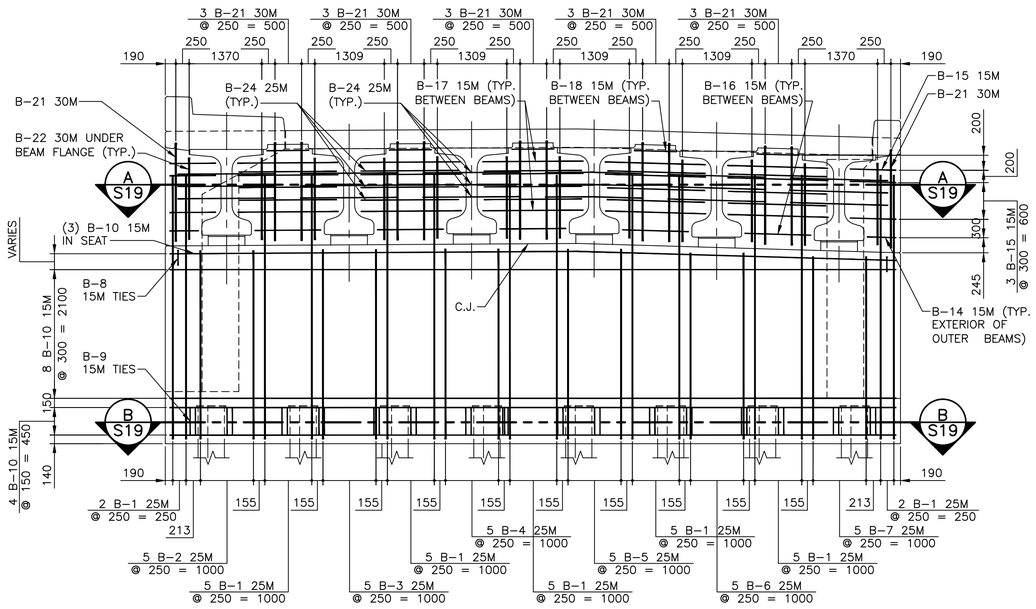
WEST ABUTMENT
REINFORCING
SHEET 3 OF 3

designed / conçu	SOV	
date		
drawn / dessiné	CRM	
date	2016-01-08	
approved / approuvé	GL	
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number / no. du projet	666	
drawing no. / no. du dessin	S-18	

PLOTTED: Jul 06, 2017 9:20am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833-18.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:

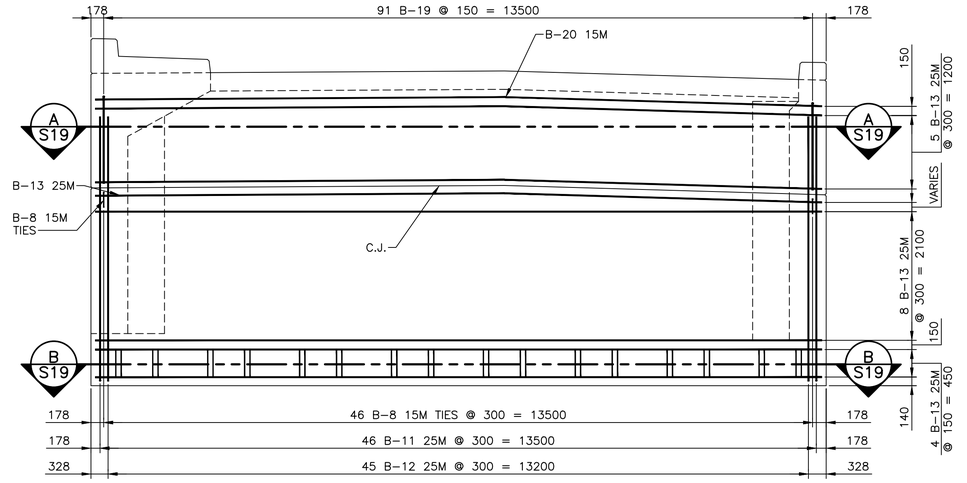


FRONT ELEVATION OF EAST ABUTMENT SHOWING REINFORCING IN NEAR FACE

SCALE: 1:50

0m 1m 2m 3m 4m 5m

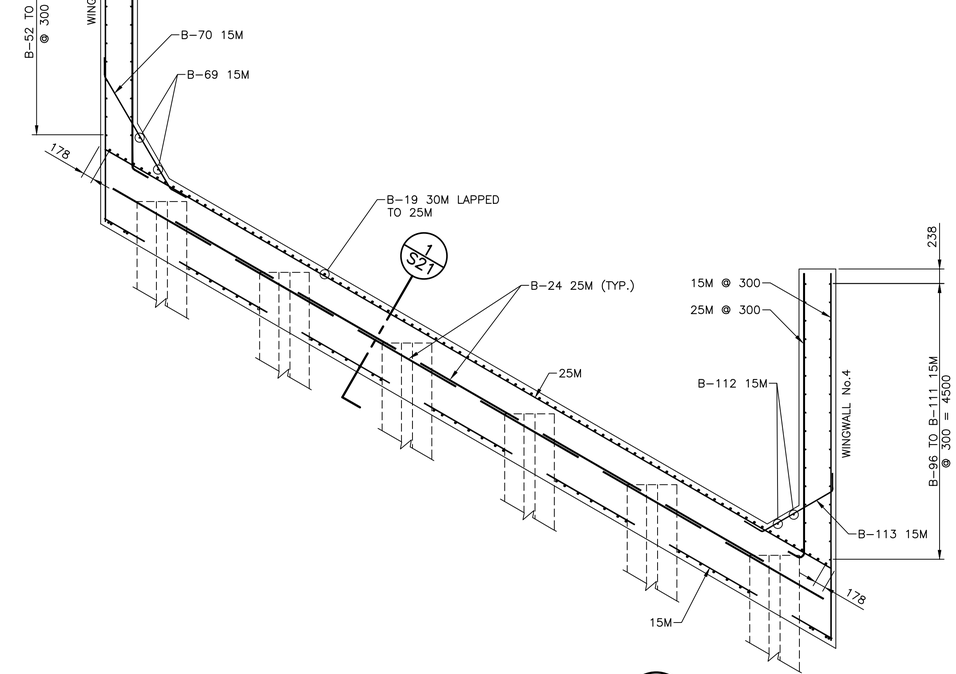
NOTE:
VERTICAL REINFORCING SPACING MEASURED ALONG FACE OF BREASTWALL.



FRONT ELEVATION OF EAST ABUTMENT SHOWING REINFORCING IN FAR FACE

SCALE: 1:50

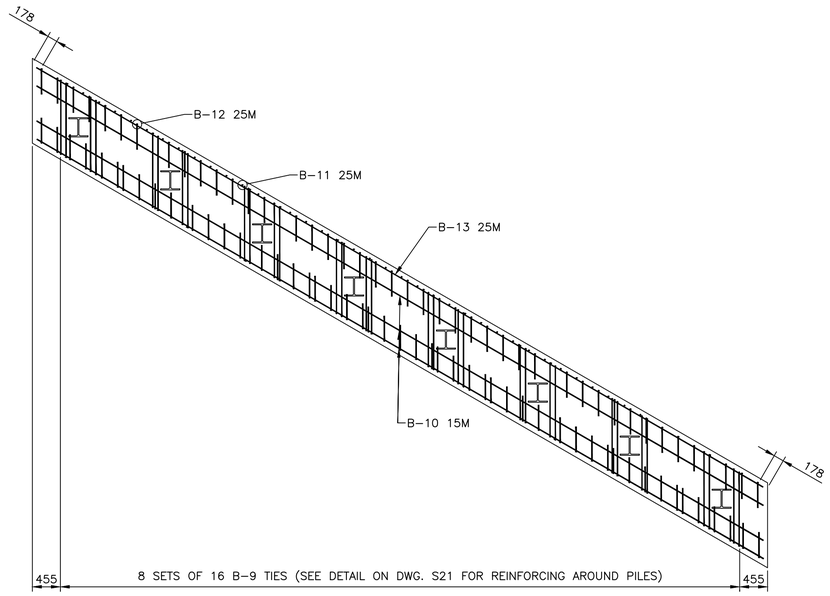
0m 1m 2m 3m 4m 5m



BREASTWALL REINFORCING SECTION A S19

SCALE: 1:50

0m 1m 2m 3m 4m 5m



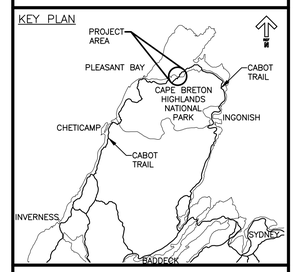
ABUTMENT REINFORCING SECTION B S19

SCALE: 1:50

0m 1m 2m 3m 4m 5m

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL REINFORCING DETAILS, SEE DWG. S20 AND S21.
3. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L. – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE JULY 6, 2017 — G. MEOUELLETTE — 11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

EAST ABUTMENT
REINFORCING
SHEET 1 OF 3

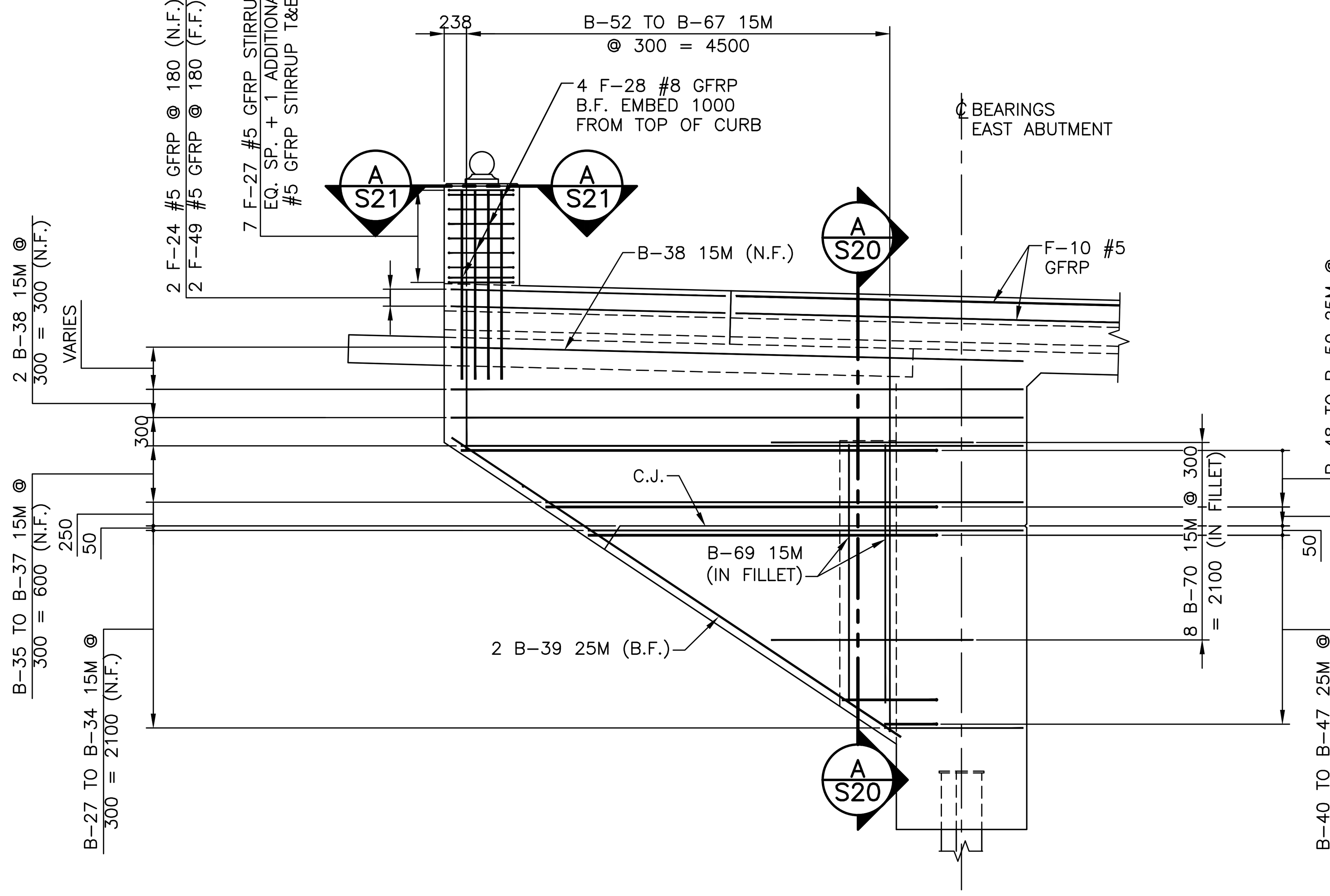
designed / conçu	SOV
date	
drawn / dessiné	CRM
date	2016–01–08
approved / approuvé	GL
date	2017–07–06
Tender	Soumission
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	S–19

PLOTTED: Jul 06, 2017 9:20am meouellette FILE: u:\133346833\18_structural\4_North Aspy\133346833S-19.dwg

PWGSC A1 (2004)

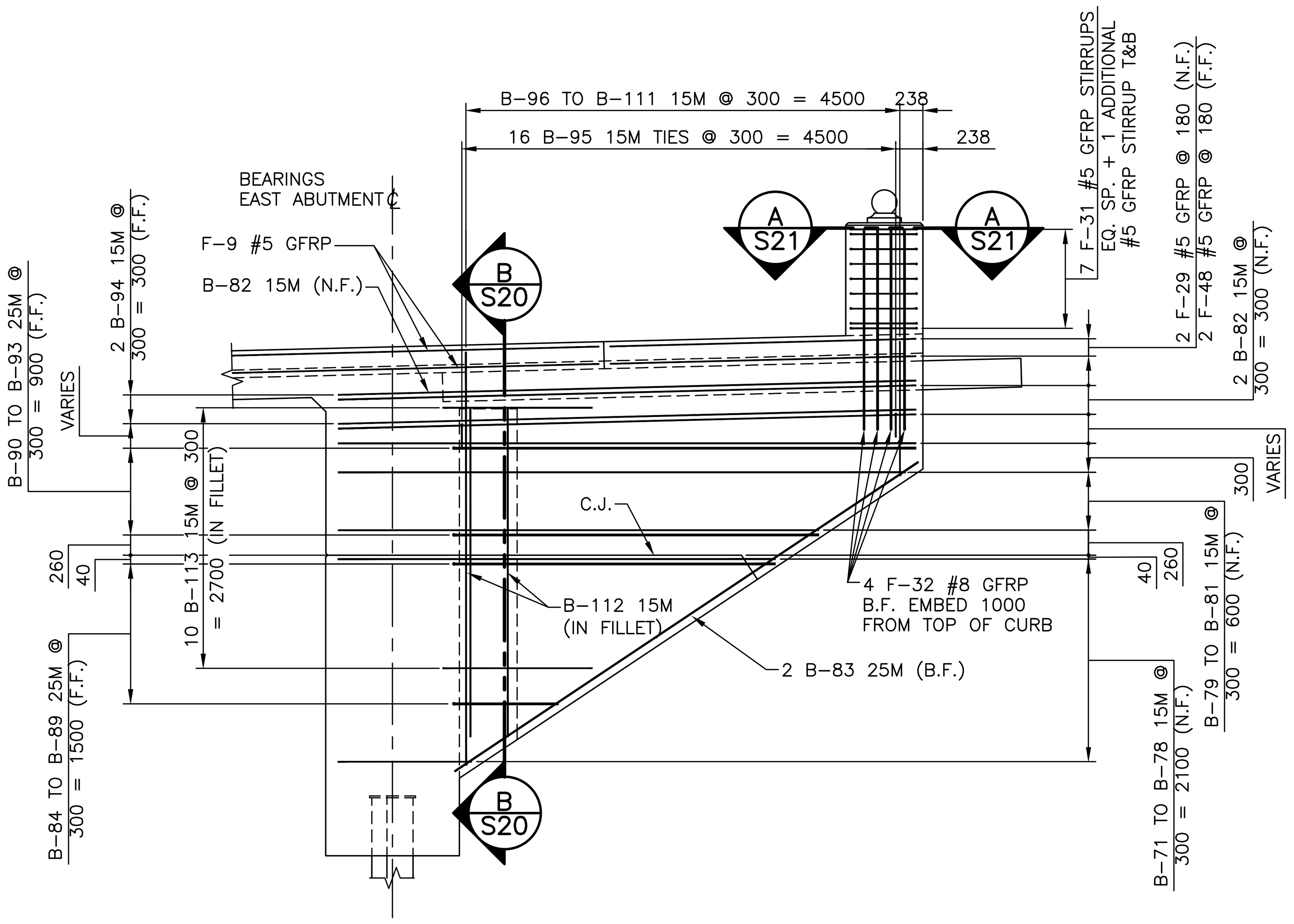
0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E:



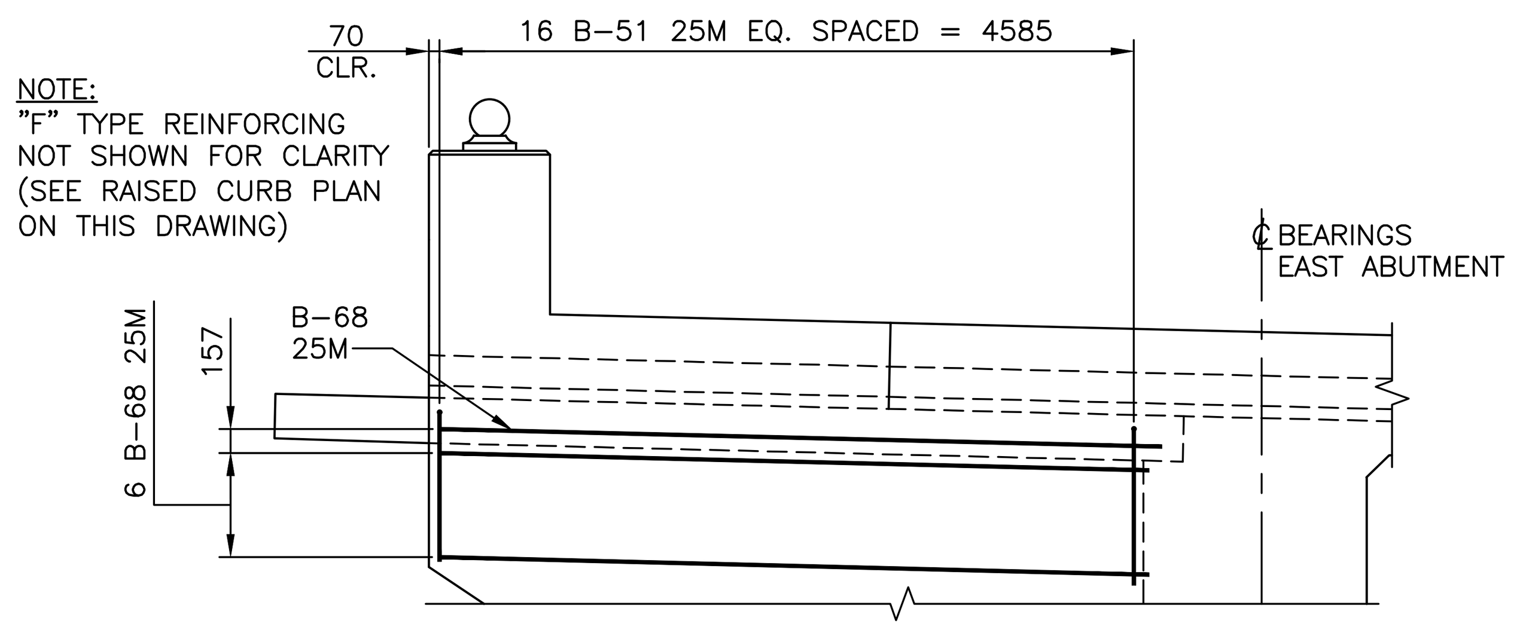
SIDE ELEVATION (WINGWALL No.3)

SCALE: 1:50



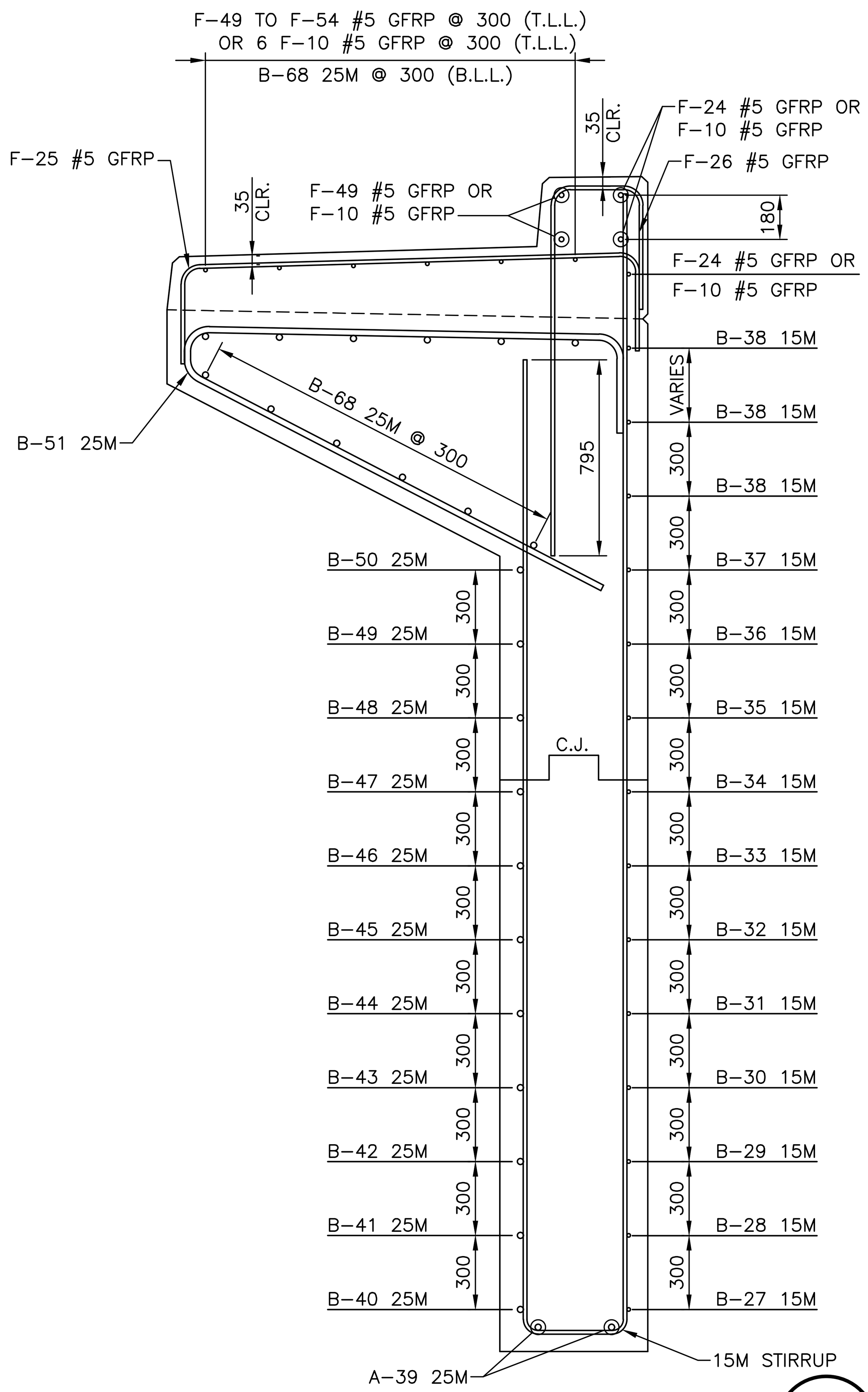
SIDE ELEVATION (WINGWALL No.4)

SCALE: 1:50



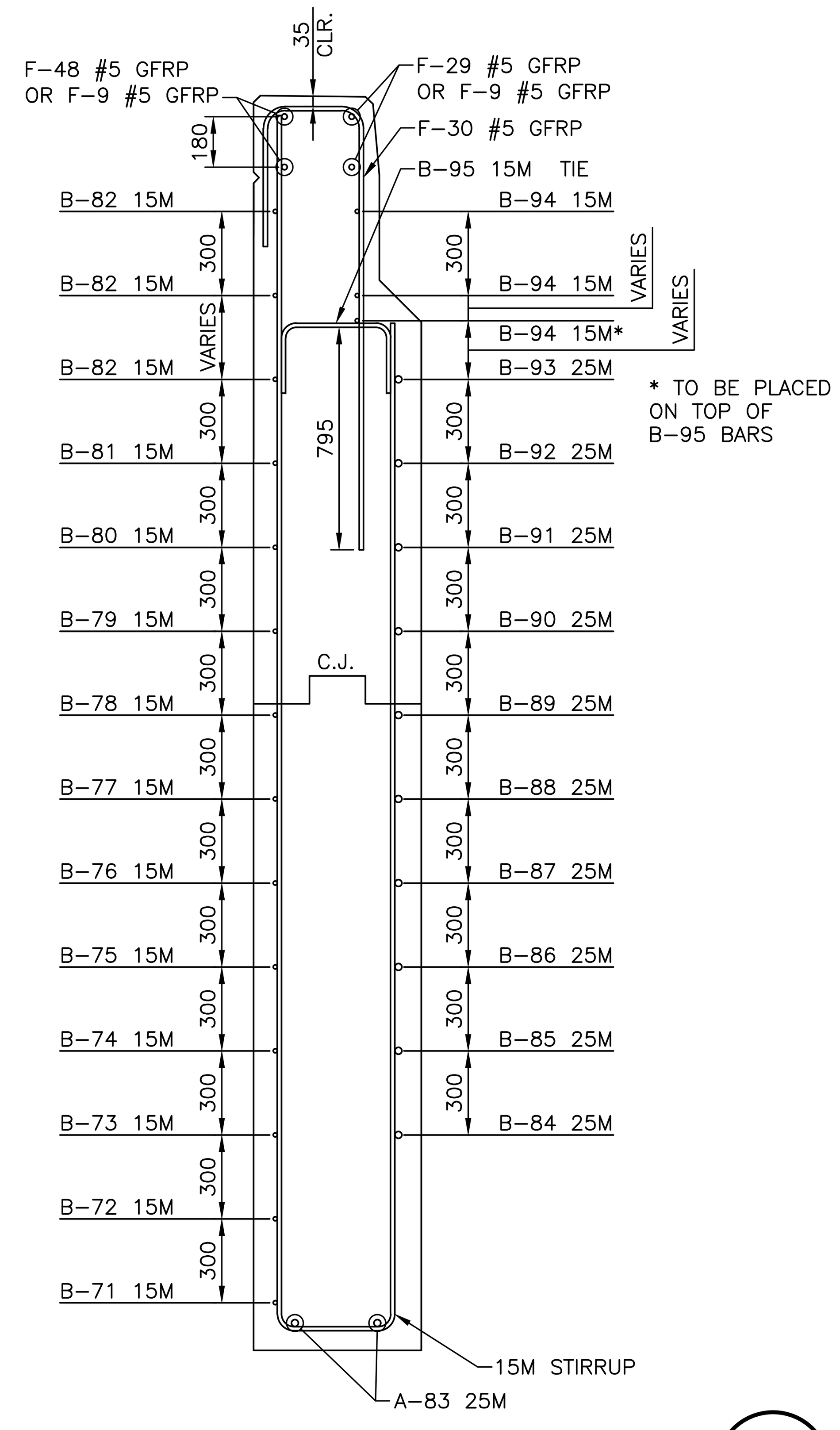
RAISED CURB FAR FACE ELEVATION (WINGWALL NO.3)

SCALE: 1:50



ABUTMENT REINFORCING WITH CURB (A / S20)

SCALE : 1:20

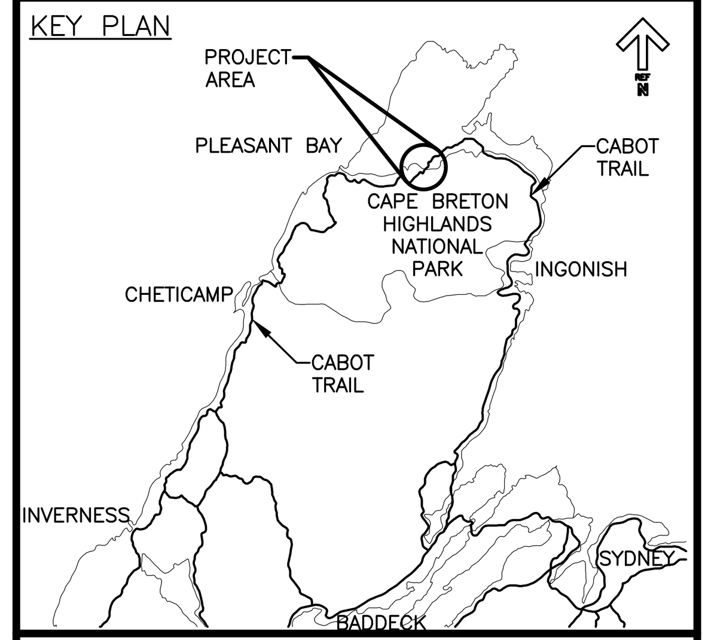


ABUTMENT REINFORCING (B / S20)

SCALE : 1:20

Parcs Canada | Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
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   - B.F. – BOTH FACES
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   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
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   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

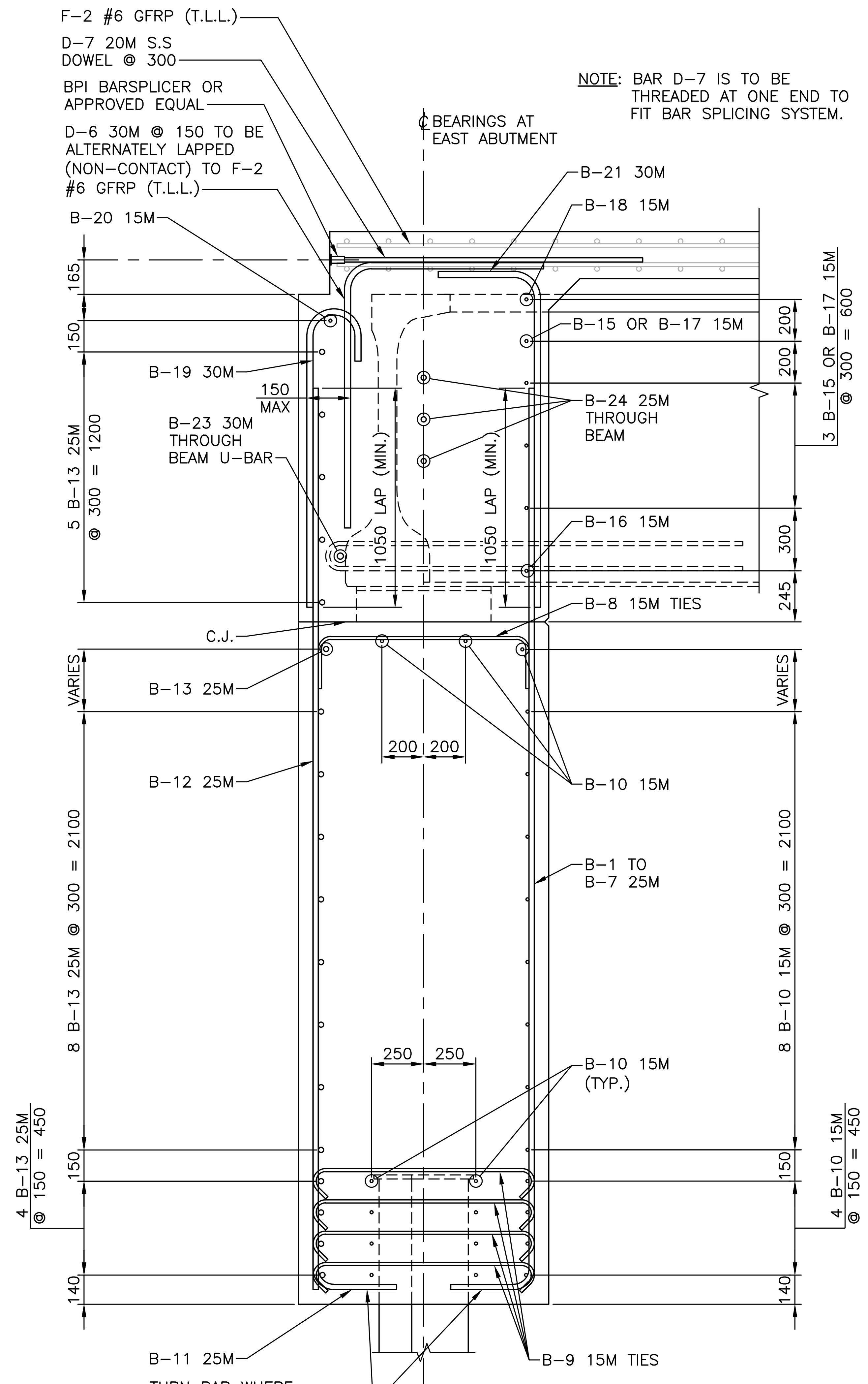
EAST ABUTMENT REINFORCING SHEET 2 OF 3

designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016-01-08	
approved	GL	approuvé
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S-20	no. du dessin

PLOTTED: Jul 06, 2017 9:22am mcouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833S-20.dwg

PWGSC A1 (2004)

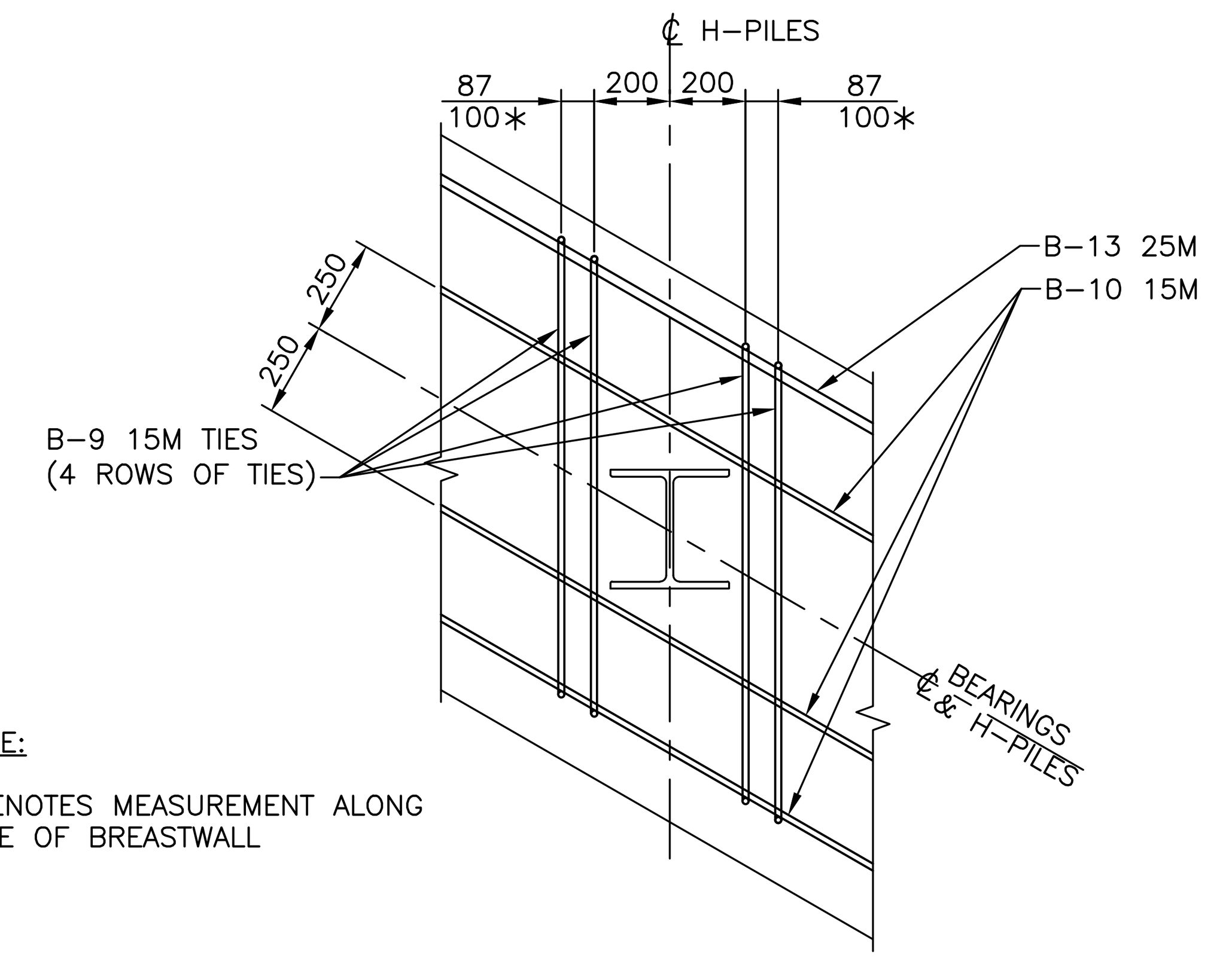
E-DRM/GDD-E:



ABUTMENT REINFORCING DETAIL (1 / S19)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



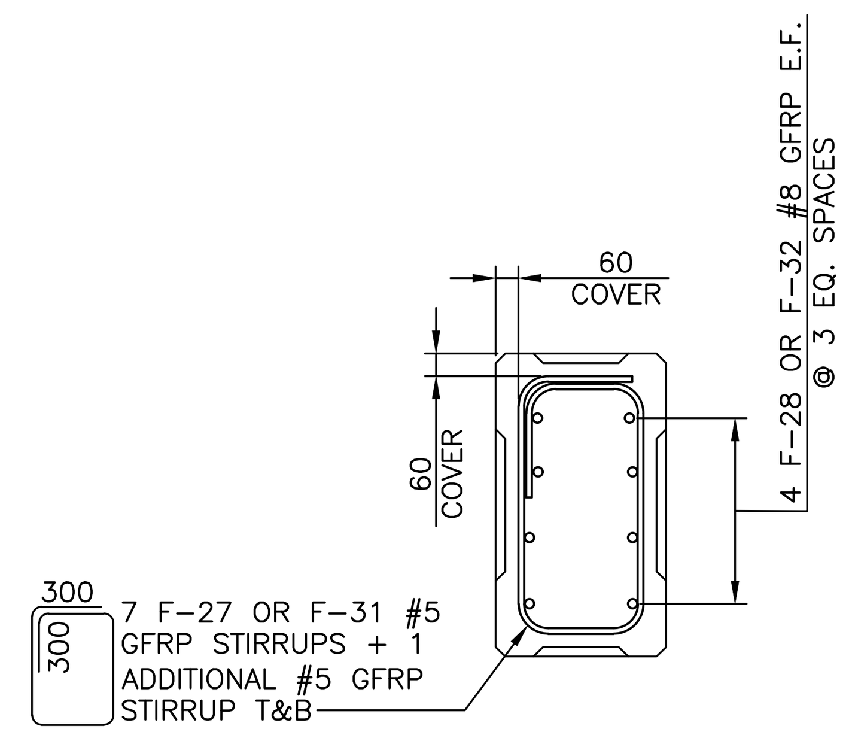
NOTE:

*DENOTES MEASUREMENT ALONG FACE OF BREASTWALL

TYPICAL REINFORCING DETAIL AROUND PILES

SCALE : 1:20

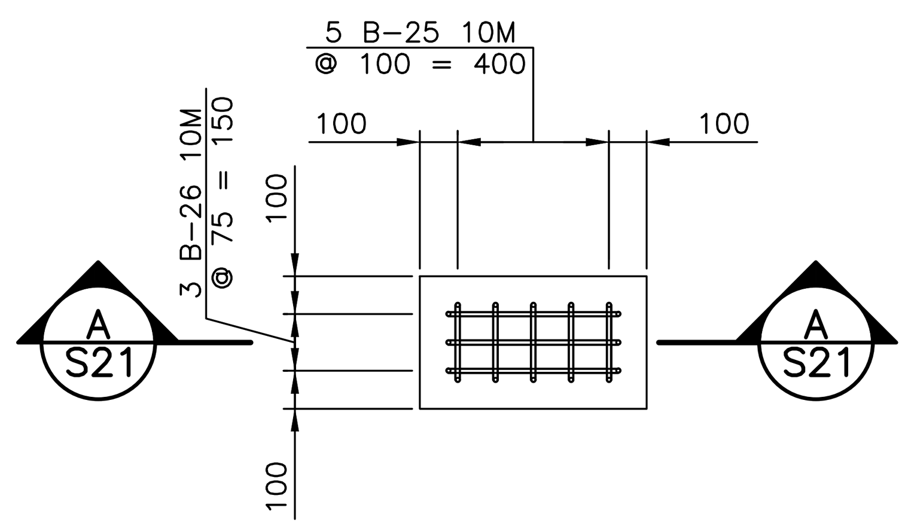
0mm 500mm 1000mm 1500mm 2000mm 2500mm



CRASH BLOCK REINFORCING (A / S20)

SCALE : 1:20

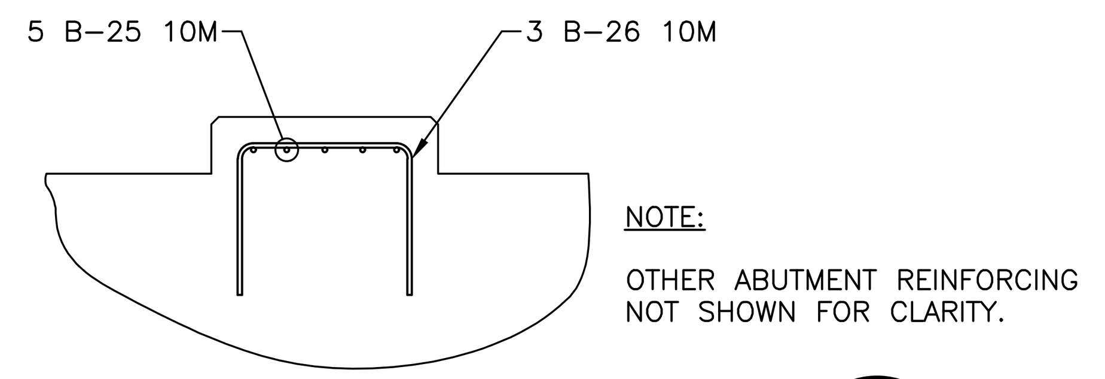
0mm 500mm 1000mm 1500mm 2000mm 2500mm



BEARING BLOCK REINFORCING

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



NOTE:

OTHER ABUTMENT REINFORCING NOT SHOWN FOR CLARITY.

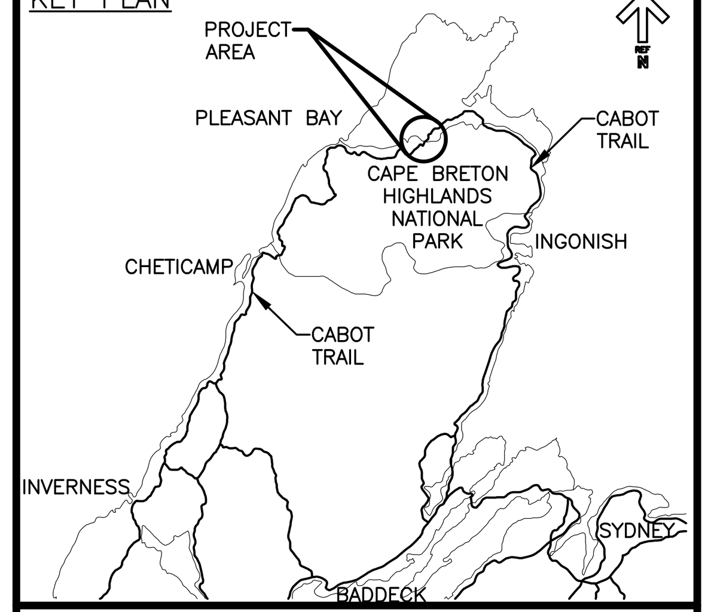
BEARING BLOCK REINFORCING SECTION (A / S21)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada | Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL CLEARANCES TO BE 70mm PERPENDICULAR TO THE FACE OF CONCRETE UNLESS NOTED OTHERWISE.
2. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

REGISTERED PROFESSIONAL ENGINEER — G. Langois — 11294 — PROVINCE OF NOVA SCOTIA

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

EAST ABUTMENT REINFORCING SHEET 3 OF 3

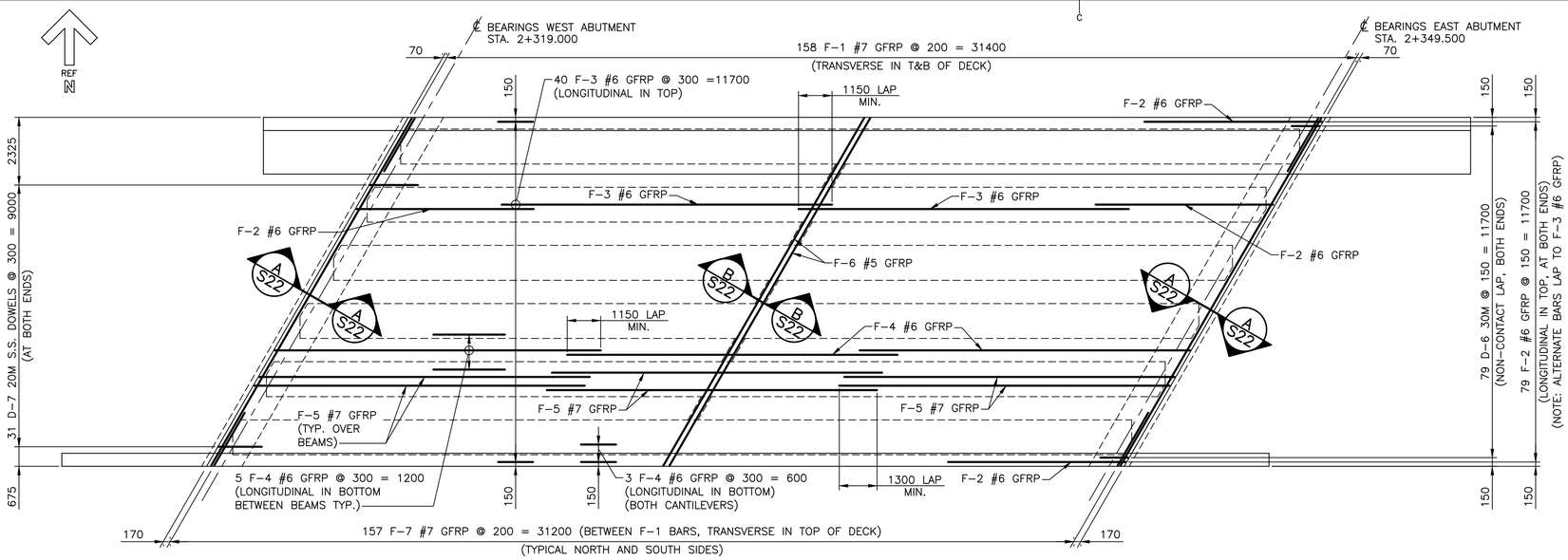
designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016-01-08	
approved	GL	approuvé
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S-21	no. du dessin

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-21.dwg

PLOTTED: Jul 06, 2017 9:23am mcouellette

PWGSC A1 (2004)

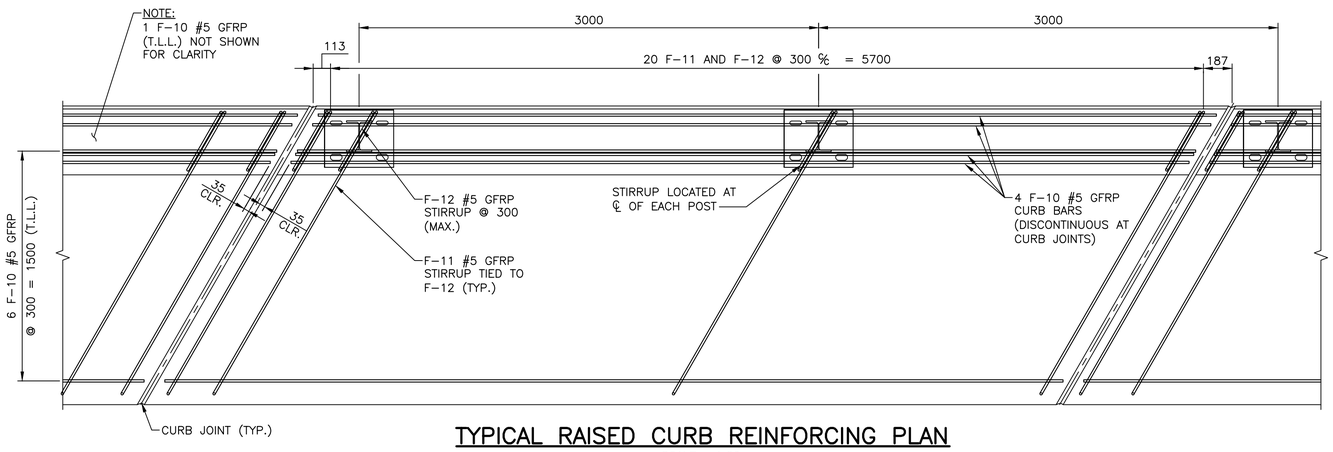
E-DRM/GDD-E:



PLAN OF DECK SHOWING REINFORCING

SCALE : 1:100

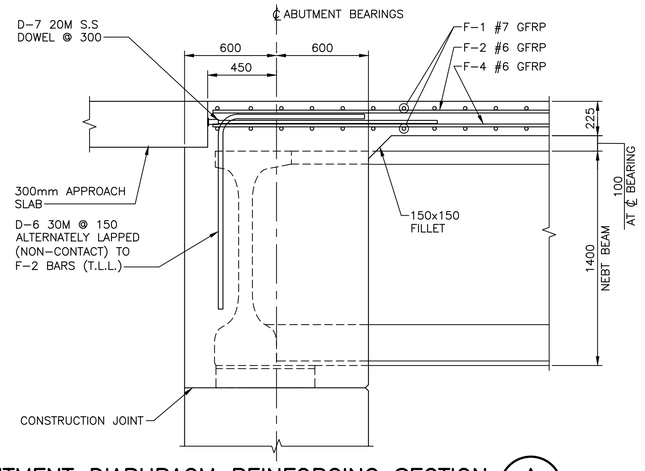
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



TYPICAL RAISED CURB REINFORCING PLAN

SCALE : 1:20

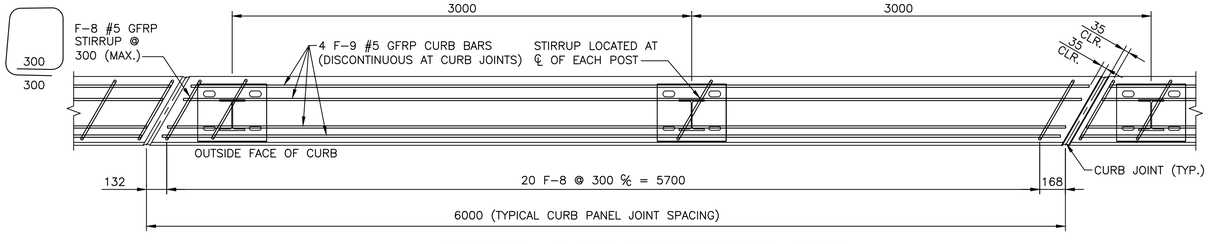
0mm 500mm 1000mm 1500mm 2000mm 2500mm



ABUTMENT DIAPHRAGM REINFORCING SECTION A S22

SCALE : 1:20

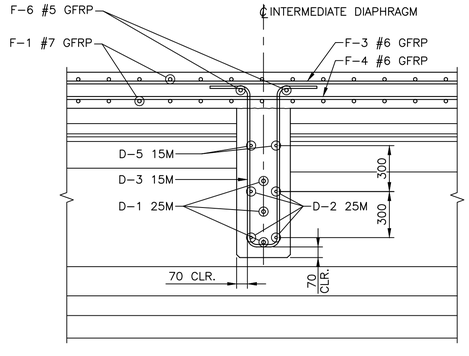
0mm 500mm 1000mm 1500mm 2000mm 2500mm



TYPICAL CURB REINFORCING PLAN

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



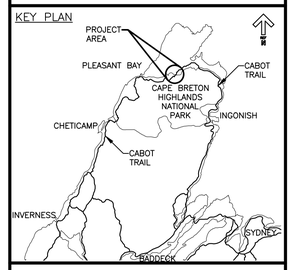
INTERMEDIATE DIAPHRAGM REINFORCING SECTION B S22

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL DECK REINFORCING TO BE GLASS FIBRE REINFORCED POLYMER (GFRP) UNLESS NOTED OTHERWISE.
2. ALL GFRP CLEARANCES TO BE 35mm PERPENDICULAR TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
3. FOR ADDITIONAL DECK REINFORCING SEE DRAWING S-23.
4. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

revisions		date
0	ISSUED FOR TENDER	07/06 2017

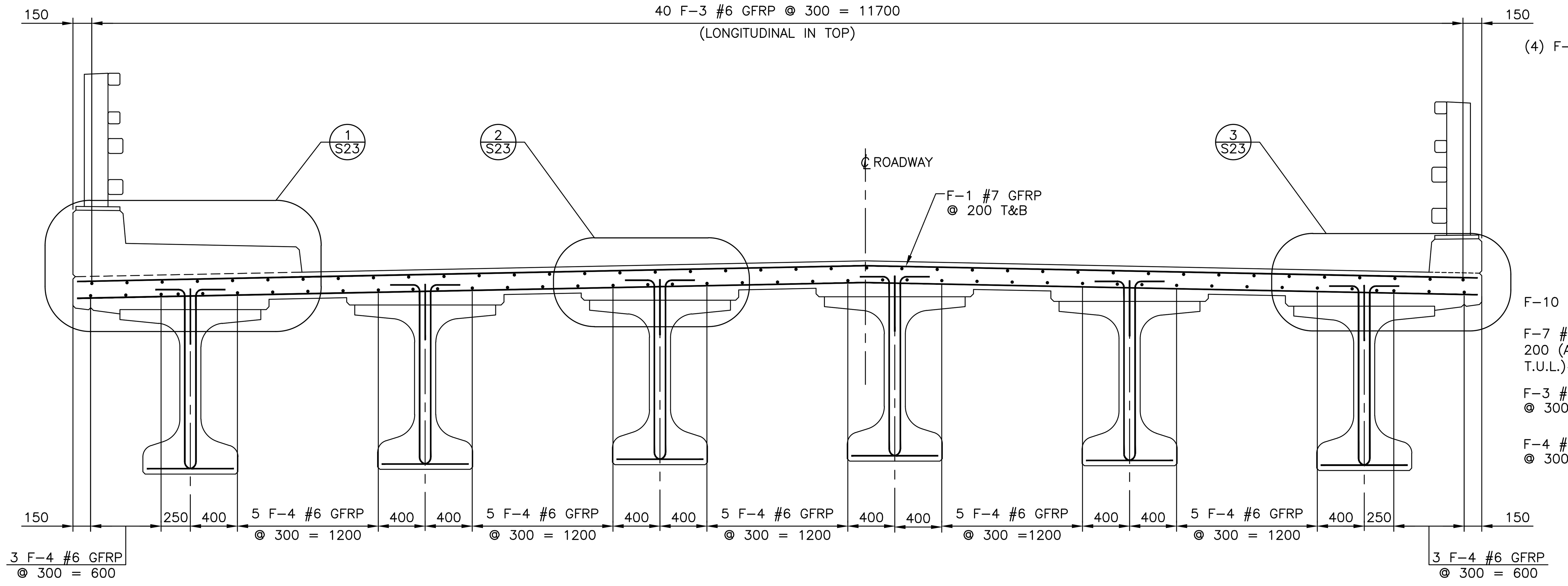
project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

DECK REINFORCING PLAN

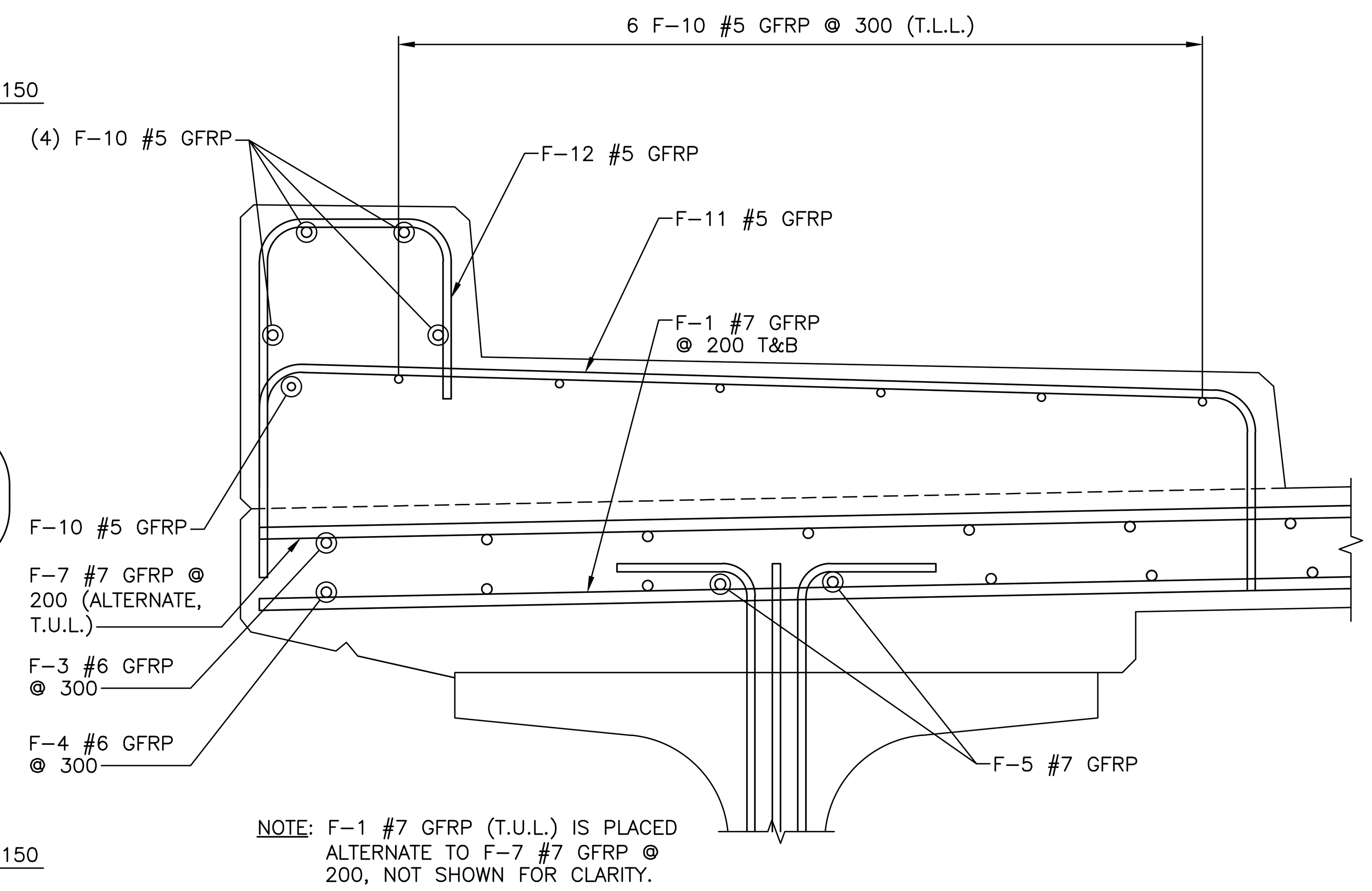
designed / conçu: SOV
date:
drawn / dessiné: CRM
date: 2016-01-08
approved / approuvé: GL
date: 2017-07-06
Tender / Soumission:
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet: 666
drawing no. / no. du dessin: S-22



TYPICAL SECTION THRU DECK SHOWING REINFORCING (LOOKING UP CHAINAGE)

SCALE : 1:30

0mm 500mm 1000mm 1500mm 2000mm 2500mm 3000mm

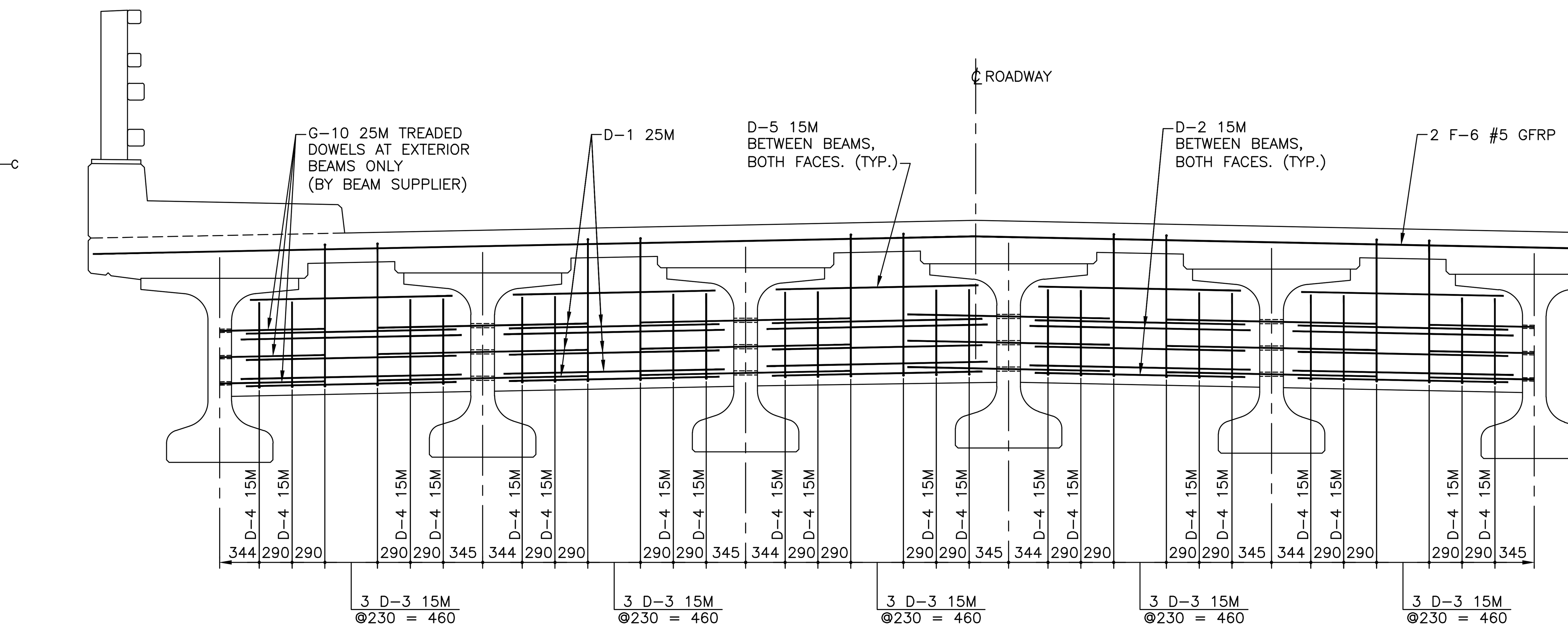


NOTE: F-1 #7 GFRP (T.U.L.) IS PLACED ALTERNATE TO F-7 #7 GFRP @ 200, NOT SHOWN FOR CLARITY.

SIDEWALK REINFORCING DETAIL 1/S23

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

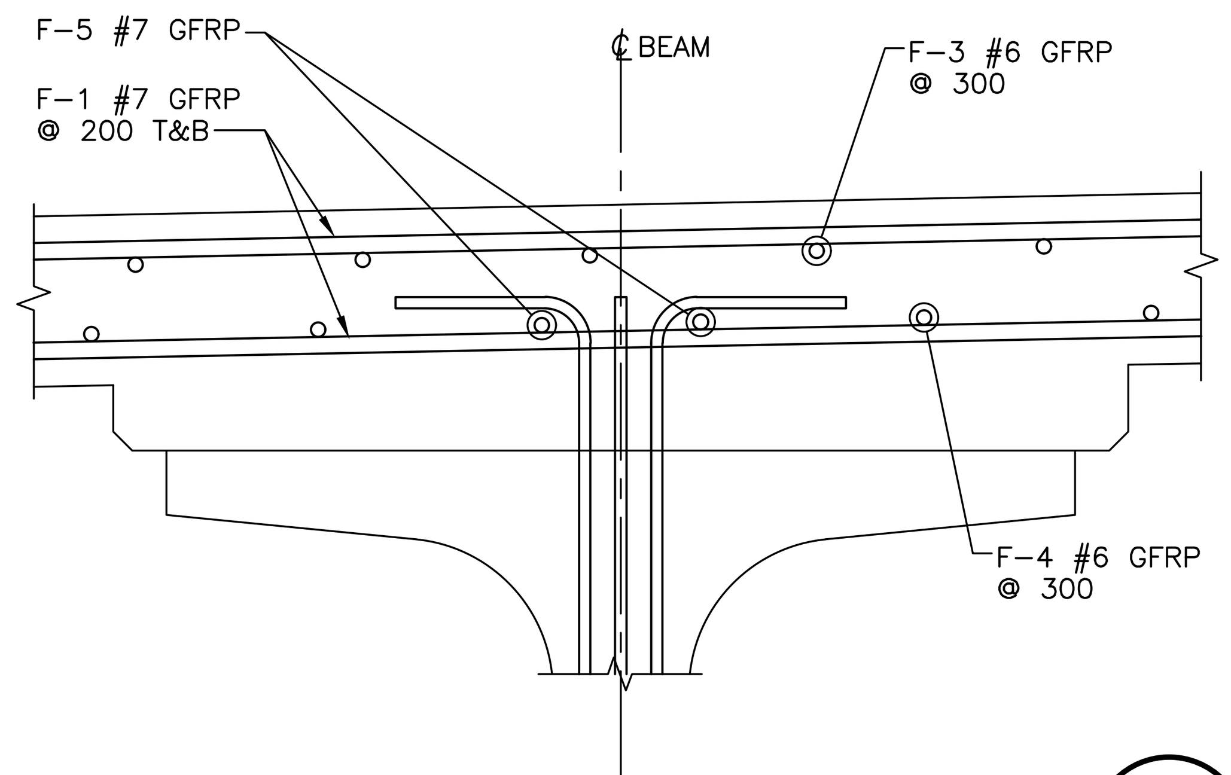


INTERMEDIATE DIAPHRAGM REINFORCING (LOOKING UP CHAINAGE)

SCALE : 1:30

0mm 500mm 1000mm 1500mm 2000mm 2500mm 3000mm

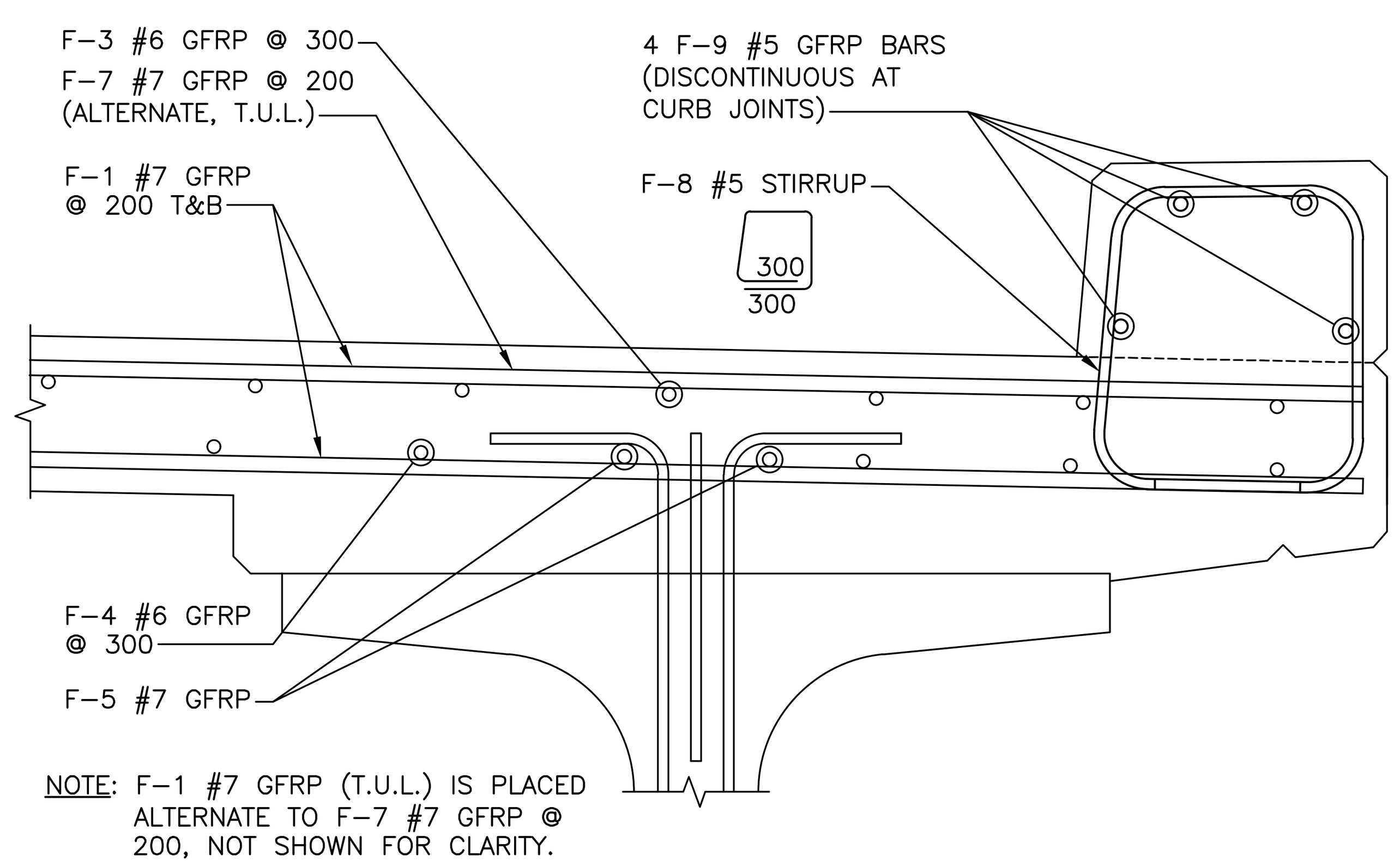
ALL STIRRUPS IN DIAPHRAGM ARE TO BE PLACED PARALLEL TO CENTERLINE OF ROADWAY WITH SPACING MEASURED ALONG CENTERLINE OF DIAPHRAGM.



DECK REINFORCING DETAIL 2/S23

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm



NOTE: F-1 #7 GFRP (T.U.L.) IS PLACED ALTERNATE TO F-7 #7 GFRP @ 200, NOT SHOWN FOR CLARITY.

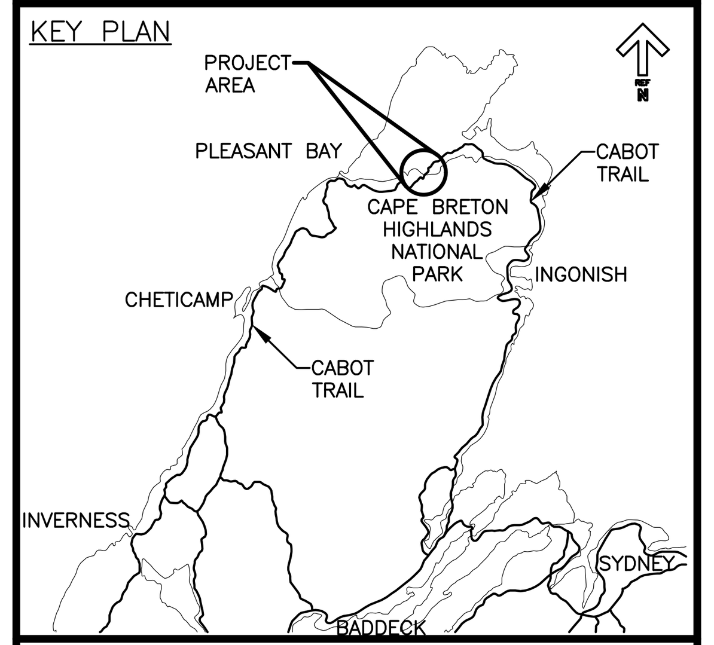
CURB REINFORCING DETAIL 3/S23

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

Parcs Canada | Parks Canada

KEY PLAN



Stantec

NOTES:

1. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
2. ALL DECK REINFORCING TO BE GLASS FIBRE REINFORCED POLYMER (GFRP) UNLESS NOTED OTHERWISE.
3. GFRP CLEARANCES TO BE 35mm PERPENDICULAR TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
4. DIAPHRAGM REINFORCING TO HAVE CLEARANCE OF 70mm PERPENDICULAR TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.

11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DECK REINFORCING INTERMEDIATE DIAPHRAGMS, TYPICAL SECTIONS AND DETAILS

designed / conçu: SOV

date:

drawn / dessiné: CRM

date: 2016-01-08

approved / approuvé: GL

date: 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

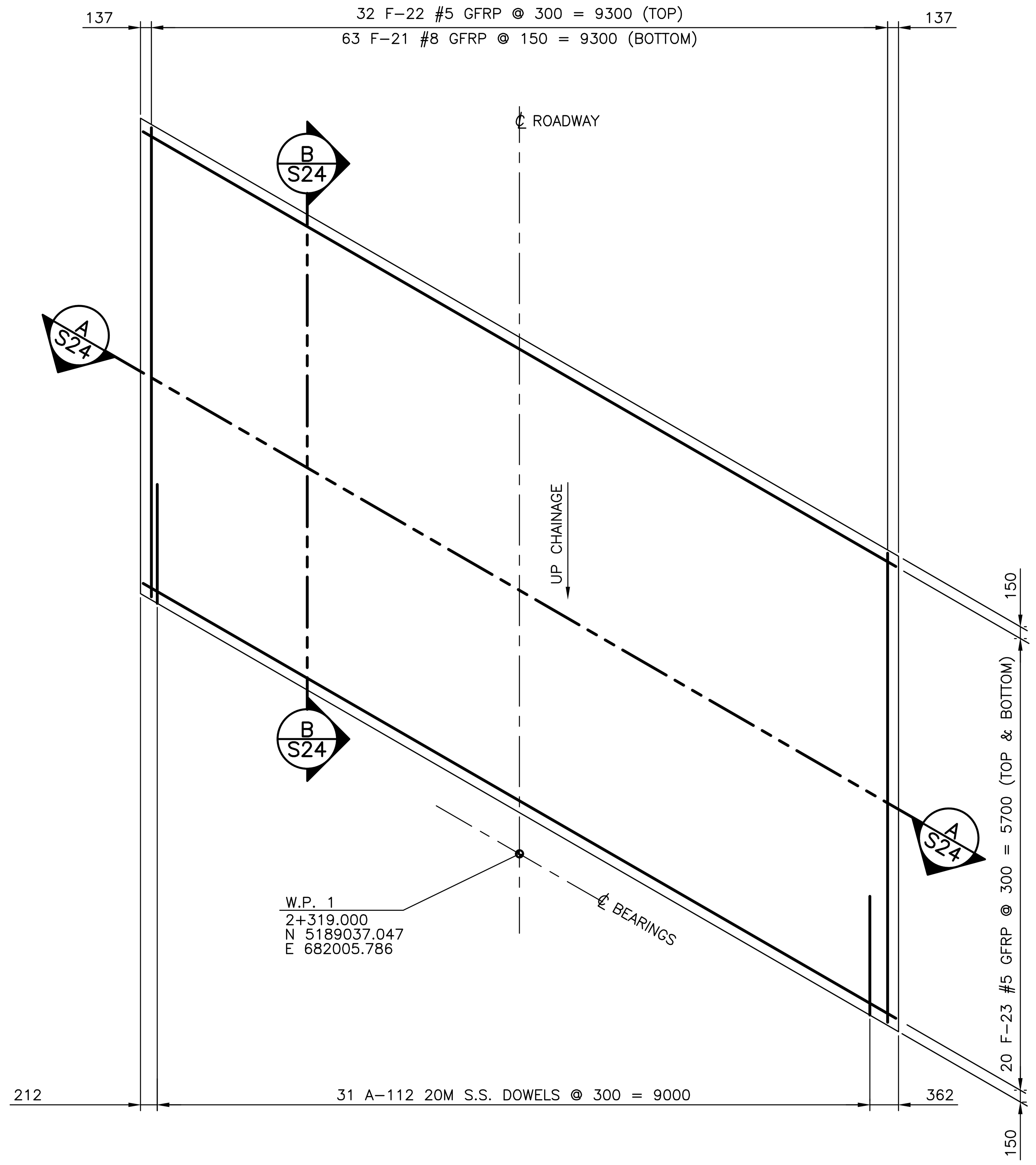
drawing no. / no. du dessin: S-23

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-23.dwg

PLOTTED: Jul 06, 2017 9:24am mcouellette

PWGSC A1 (2004)

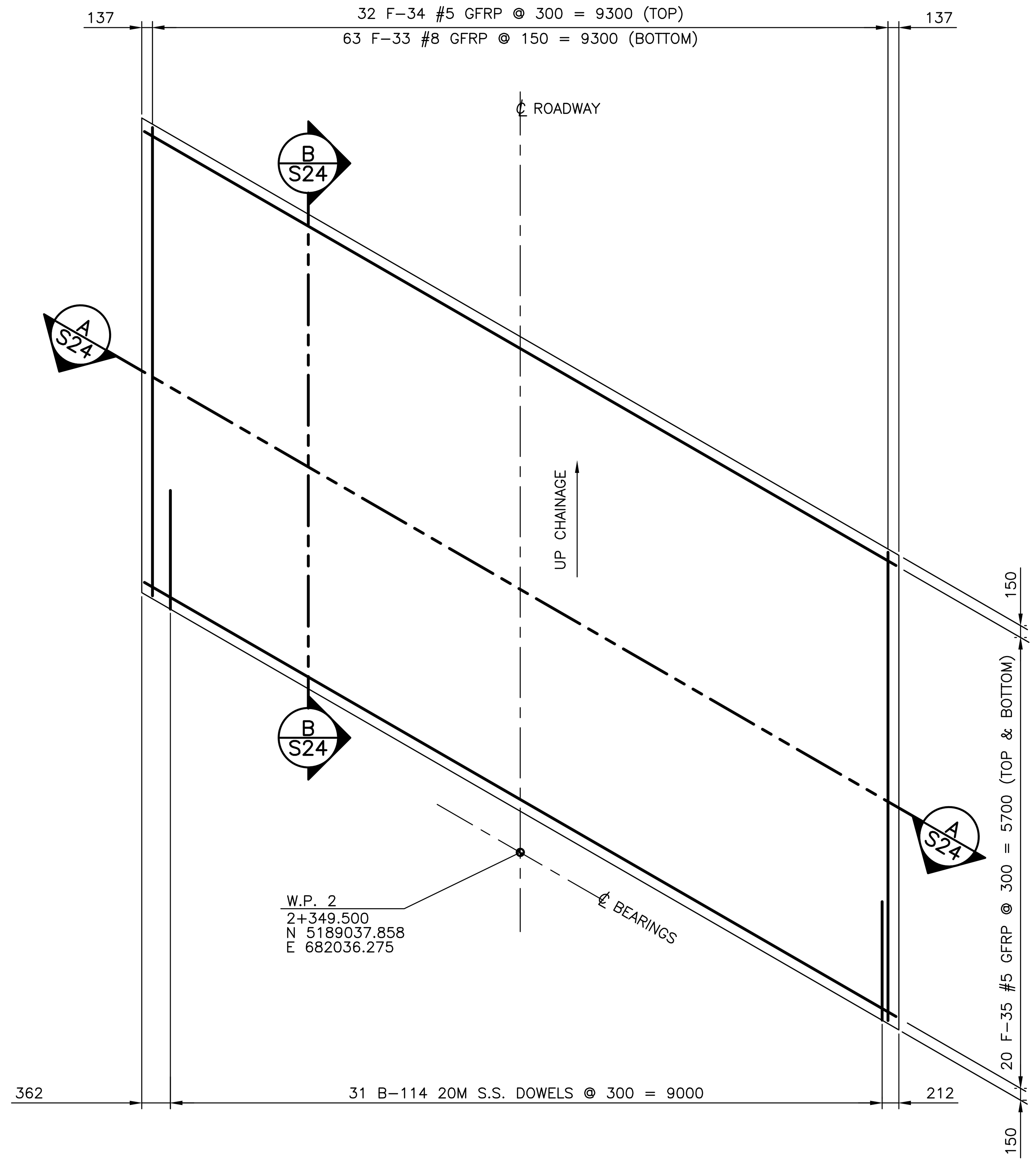
E-DRM/GDD-E:



PLAN OF WEST APPROACH SLAB

SCALE: 1:50

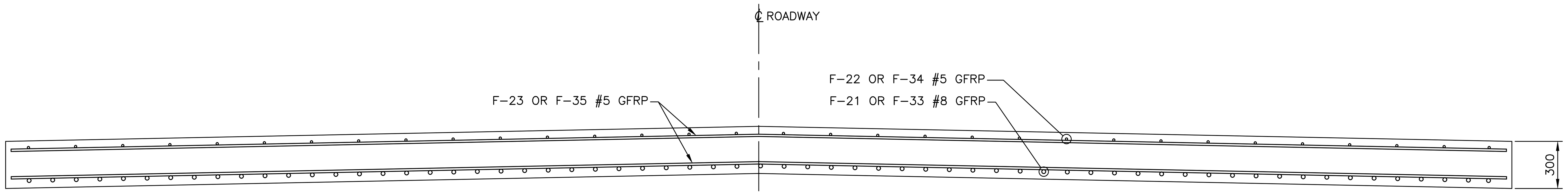
0m 1m 2m 3m 4m 5m



PLAN OF EAST APPROACH SLAB

SCALE: 1:50

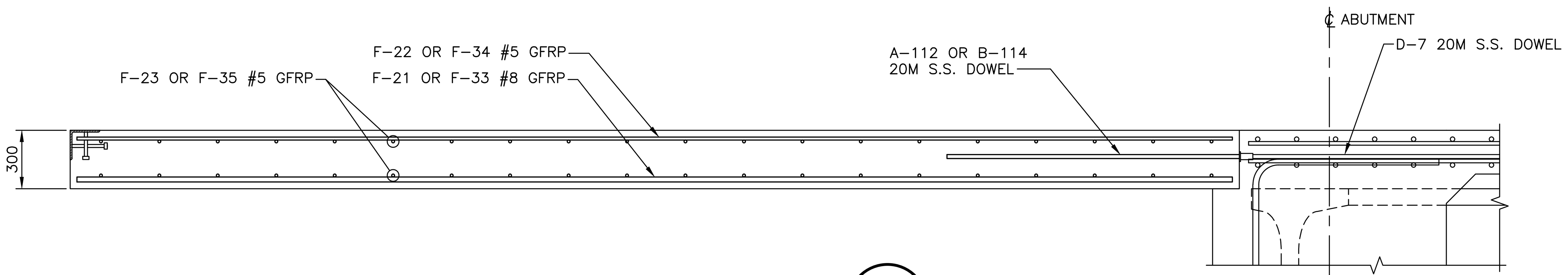
0m 1m 2m 3m 4m 5m



APPROACH SLAB SECTION (A / S24)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



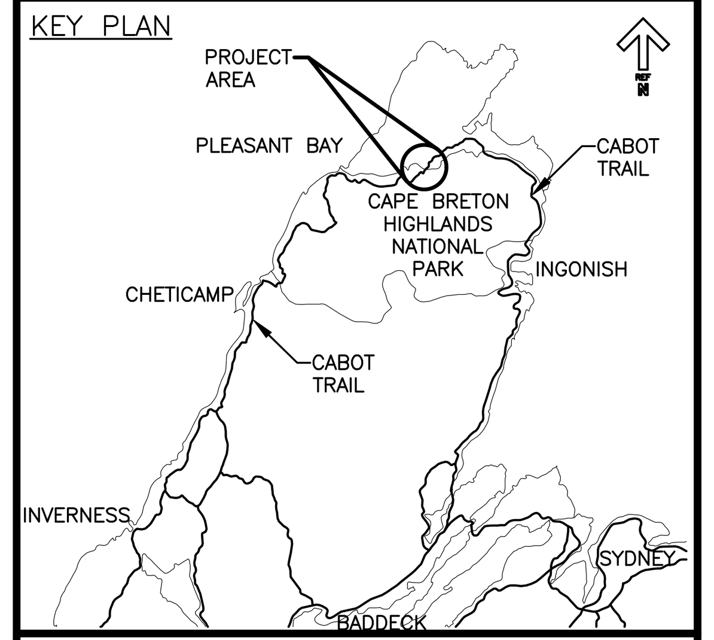
APPROACH SLAB SECTION (B / S24)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTE:

1. ALL APPROACH SLAB REINFORCING TO BE GLASS FIBRE REINFORCED POLYMER (GFRP) UNLESS NOTED OTHERWISE.
2. ALL GFRP CLEARANCES TO BE 35mm PERPENDICULAR TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
3. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

WEST AND EAST APPROACH SLAB REINFORCING

designed	SOV	conçu
date		
drawn	CRM	dessiné
date	2016-01-08	
approved	GL	approuvé
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number	666	no. du projet
drawing no.	S-24	no. du dessin

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-24.dwg

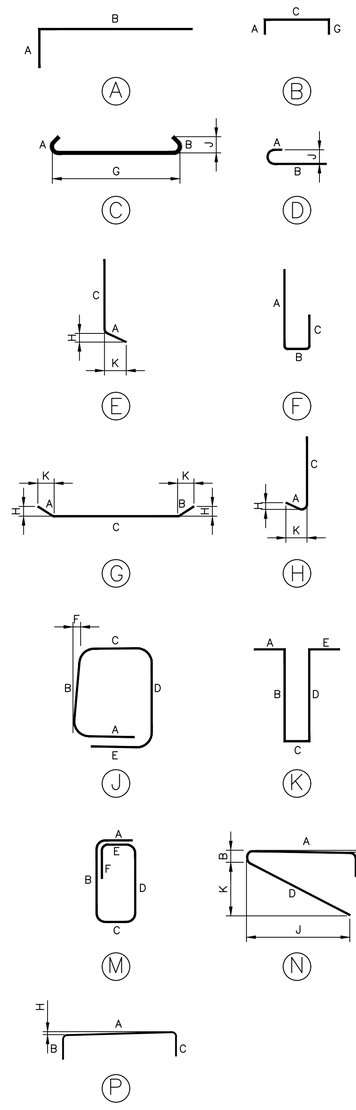
PLOTTED: Jul 06, 2017 9:25am meouellette

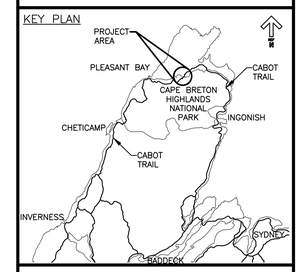
PWGSC A1 (2004)

E-DRM/GDD-E:

WEST ABUTMENT STEEL REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	MASS
A–1	25M	29	4935	A	400	4535												VERTICAL IN NEAR FACE	562
A–2	25M	5	3625	A	400	3225												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	71
A–3	25M	5	3675	A	400	3275												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	72
A–4	25M	5	3725	A	400	3325												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	73
A–5	25M	5	3715	A	400	3315												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	73
A–6	25M	5	3685	A	400	3285												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	72
A–7	25M	5	3655	A	400	3255												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	72
A–8	15M	46	1560	B	250		1060				250							HORIZONTAL IN BREAST WALL	113
A–9	15M	128	1470	C	205	205					1060		145					HORIZONTAL TIES AROUND H–PILES	295
A–10	15M	24	13695	STR														HORIZONTAL IN BREASTWALL	516
A–11	25M	46	4935	A	400	4535												VERTICAL IN BREASTWALL (F.F.)	891
A–12	25M	45	4535	STR														VERTICAL IN BREASTWALL (F.F.)	801
A–13	25M	19	13695	STR														HORIZONTAL IN BREASTWALL (F.F.)	1021
A–14	15M	2	545	STR														HORIZONTAL IN BREASTWALL (N.F.)	2
A–15	15M	8	870	STR														HORIZONTAL IN BREASTWALL (N.F.)	11
A–16	15M	5	1250	STR														HORIZONTAL IN BREASTWALL (N.F.)	10
A–17	15M	20	1910	STR														HORIZONTAL IN BREASTWALL (N.F.)	60
A–18	15M	5	800	STR														HORIZONTAL IN BREASTWALL (N.F.)	6
A–19	30M	91	1680	D	250	1430							260					VERTICAL IN BREASTWALL (F.F.)	840
A–20	15M	1	13695	STR														HORIZONTAL IN BREASTWALL (F.F.)	22
A–21	30M	17	2100	A	490	1610												VERTICAL IN BREASTWALL (N.F.)	196
A–22	30M	12	1350	STR														VERTICAL IN BREASTWALL UNDER BEAM FLANGE (N.F.)	89
A–23	30M	1	13695	STR														HORIZONTAL IN BREASTWALL THROUGH BEAM U–BAR	75
A–24	25M	33	2025	STR														HORIZONTAL BEAM INSERT BARS	262
A–25	10M	30	1010	B	400		210				400							BEARING BLOCK	24
A–26	10M	18	1260	B	400		460				400							BEARING BLOCK	18
A–27	15M	1	1745	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	3
A–28	15M	1	2195	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	3
A–29	15M	1	2645	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	4
A–30	15M	1	3095	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	5
A–31	15M	1	3545	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	6
A–32	15M	1	3995	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	6
A–33	15M	1	4445	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	7
A–34	15M	1	4895	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	8
A–35	15M	1	5345	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	8
A–36	15M	1	5795	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	9
A–37	15M	4	6085	STR														HORIZONTAL IN WINGWALL No.1 (N.F.)	38
A–38	25M	2	5775	STR														SLOPED IN WINGWALL No.1 (B.F.)	45
A–39	25M	1	1305	E	400		905					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	5
A–40	25M	1	1725	E	400		1325					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	7
A–41	25M	1	2175	E	400		1775					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	9
A–42	25M	1	2625	E	400		2225					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	10
A–43	25M	1	3075	E	400		2675					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	12
A–44	25M	1	3525	E	400		3125					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	14
A–45	25M	1	3975	E	400		3575					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	16
A–46	25M	1	4425	E	400		4025					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	17
A–47	25M	1	4875	E	400		4475					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	19
A–48	25M	1	5325	E	400		4902					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	21
A–49	25M	2	5630	E	400		5230					190		350				HORIZONTAL IN WINGWALL No.1 (F.F.)	44
A–50	15M	3	6085	STR														HORIZONTAL IN WINGWALL No.1 (F.F.)	29
A–51	15M	16	920	B	250		420				250							TIE IN WINGWALL No.1	23
A–52	15M	1	2585	F	1420	420	745											VERTICAL STIRRUP IN WINGWALL No.1	4
A–53	15M	1	2990	F	1620	420	950											VERTICAL STIRRUP IN WINGWALL No.1	5
A–54	15M	1	3395	F	1825	420	1150											VERTICAL STIRRUP IN WINGWALL No.1	5
A–55	15M	1	3800	F	2025	420	1355											VERTICAL STIRRUP IN WINGWALL No.1	6
A–56	15M	1	4205	F	2230	420	1550											VERTICAL STIRRUP IN WINGWALL No.1	7
A–57	15M	1	4610	F	2430	420	1760											VERTICAL STIRRUP IN WINGWALL No.1	7
A–58	15M	1	5015	F	2635	420	1960											VERTICAL STIRRUP IN WINGWALL No.1	8
A–59	15M	1	5420	F	2835	420	2165											VERTICAL STIRRUP IN WINGWALL No.1	9
A–60	15M	1	5825	F	3040	420	2365											VERTICAL STIRRUP IN WINGWALL No.1	9
A–61	15M	1	6235	F	3245	420	2570											VERTICAL STIRRUP IN WINGWALL No.1	10
A–62	15M	1	6640	F	3445	420	2755											VERTICAL STIRRUP IN WINGWALL No.1	10
A–63	15M	1	7045	F	3650	420	2975											VERTICAL STIRRUP IN WINGWALL No.1	11
A–64	15M	1	7450	F	3850	420	3180											VERTICAL STIRRUP IN WINGWALL No.1	12
A–65	15M	1	7855	F	4055	420	3380											VERTICAL STIRRUP IN WINGWALL No.1	12
A–66	15M	1	8260	F	4255	420	3585											VERTICAL STIRRUP IN WINGWALL No.1	13
A–67	15M	1	8665	F	4460	420	3785											VERTICAL STIRRUP IN WINGWALL No.1	14
A–68	15M	2	3520	STR														VERTICAL IN FILLET WINGWALL No.1	11





Parcs Canada Parks Canada

Stantec

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

WEST ABUTMENT
REINFORCING SCHEDULE
SHEET 1 OF 3

designed / conçu: SOV
date:
drawn / dessiné: CRM
date: 2016–01–08
approved / approuvé: GL
date: 2017–07–06
Tender / Soumission:
PCA Project Manager / Administrateur de projets PCA:
project number / no. du projet: 666
drawing no. / no. du dessin: S–25

PLOTTED: Jul 06, 2017 9:26am meouellette
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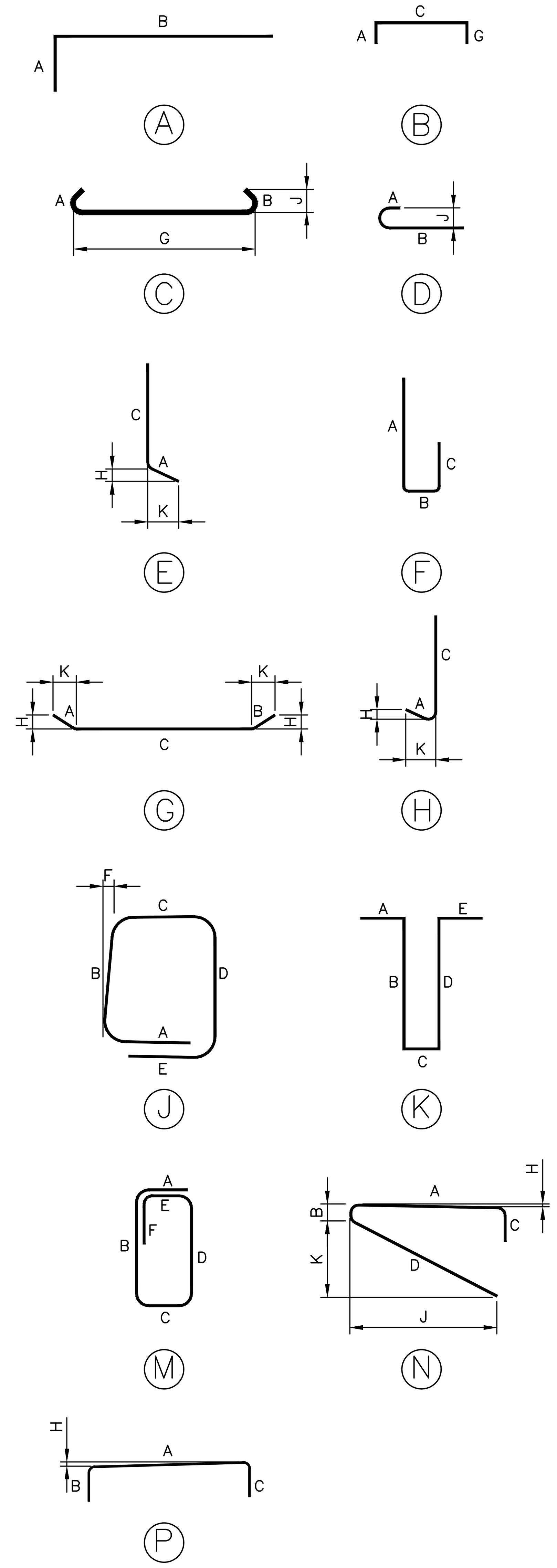
PWGSC A1 (2004)

E–DRM/GDD–E:

WEST ABUTMENT STEEL REINFORCING BAR SCHEDULE

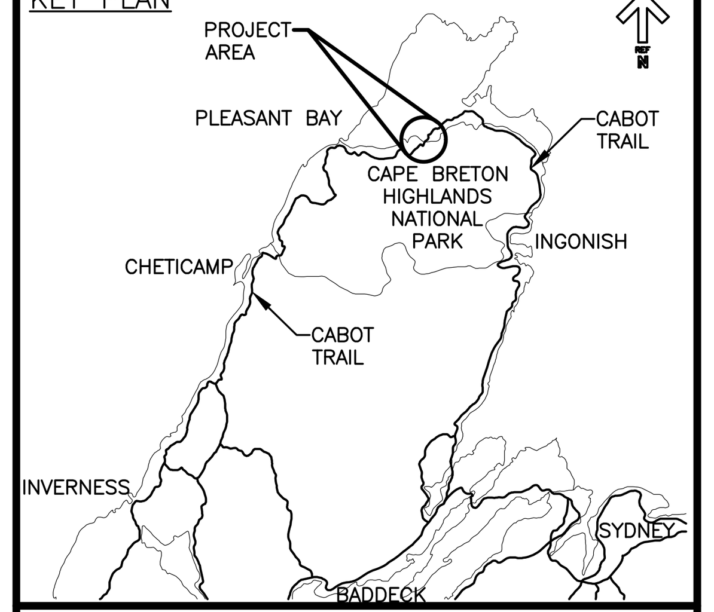
MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	MASS
A-69	15M	10	2655	G	300	300	2055					150		260				HORIZONTAL IN FILLET WINGWALL No.1	42
A-70	15M	1	1655	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	3
A-71	15M	1	2105	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	3
A-72	15M	1	2555	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	4
A-73	15M	1	3005	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	5
A-74	15M	1	3455	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	5
A-75	15M	1	3905	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	6
A-76	15M	1	4355	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	7
A-77	15M	1	4805	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	8
A-78	15M	1	5255	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	8
A-79	15M	1	5705	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	9
A-80	15M	4	5995	STR														HORIZONTAL IN WINGWALL No.2 (N.F.)	38
A-81	25M	2	5775	STR														SLOPED IN WINGWALL No.2 (B.F.)	45
A-82	25M	1	1085	H	400		685					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	4
A-83	25M	1	1535	H	400		1135					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	6
A-84	25M	1	1985	H	400		1585					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	8
A-85	25M	1	2435	H	400		2035					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	10
A-86	25M	1	2885	H	400		2485					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	11
A-87	25M	1	3335	H	400		2935					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	13
A-88	25M	1	3785	H	400		3385					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	15
A-89	25M	1	4235	H	400		3835					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	17
A-90	25M	1	4685	H	400		4285					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	18
A-91	25M	1	4995	H	400		4595					200		345				HORIZONTAL IN WINGWALL No.2 (F.F.)	20
A-92	25M	16	4280	N	1795	195	400	1900				35	1685	875				HORIZONTAL IN WINGWALL No.2 RAISED CURB HAUNCH	269
A-93	15M	1	9230	F	4740	420	4070											VERTICAL STIRRUP IN WINGWALL No.2	14
A-94	15M	1	8825	F	4540	420	3865											VERTICAL STIRRUP IN WINGWALL No.2	14
A-95	15M	1	8420	F	4335	420	3665											VERTICAL STIRRUP IN WINGWALL No.2	13
A-96	15M	1	8015	F	4135	420	3460											VERTICAL STIRRUP IN WINGWALL No.2	13
A-97	15M	1	7605	F	3930	420	3255											VERTICAL STIRRUP IN WINGWALL No.2	12
A-98	15M	1	7200	F	3725	420	3055											VERTICAL STIRRUP IN WINGWALL No.2	11
A-99	15M	1	6795	F	3525	420	2850											VERTICAL STIRRUP IN WINGWALL No.2	11
A-100	15M	1	6385	F	3320	420	2645											VERTICAL STIRRUP IN WINGWALL No.2	10
A-101	15M	1	5980	F	3115	420	2445											VERTICAL STIRRUP IN WINGWALL No.2	9
A-102	15M	1	5575	F	2915	420	2240											VERTICAL STIRRUP IN WINGWALL No.2	9
A-103	15M	1	5170	F	2710	420	2040											VERTICAL STIRRUP IN WINGWALL No.2	8
A-104	15M	1	4760	F	2505	420	1835											VERTICAL STIRRUP IN WINGWALL No.2	7
A-105	15M	1	4355	F	2305	420	1630											VERTICAL STIRRUP IN WINGWALL No.2	7
A-106	15M	1	3950	F	2100	420	1430											VERTICAL STIRRUP IN WINGWALL No.2	6
A-107	15M	1	3545	F	1900	420	1225											VERTICAL STIRRUP IN WINGWALL No.2	6
A-108	15M	1	3135	F	1695	420	1020											VERTICAL STIRRUP IN WINGWALL No.2	5
A-109	25M	12	4685	STR														HORIZONTAL IN WINGWAILL No.2 RAISED CURB HAUNCH	221
A-110	15M	2	2880	STR														VERTICAL IN FILLET WINGWALL No.2	9
A-111	15M	8	1870	G	300	300	1270					260		150				HORIZONTAL IN FILLET WINGWALL No.2	23
* A-112	20M	31	1500	STR														HORIZONTAL S.S. DOWEL IN APPROACH SLAB	110
A-113	25M	1	3990	N	1640	195	400	1720				35	1530	790				HORIZONTAL IN WINGWALL No.2 AT END OF CURB	16
A-114	25M	1	4595	N	1925	195	400	2040				35	1815	940				HORIZONTAL IN WINGWALL No.2 AT END OF CURB	18
A-115	25M	1	3740	N	1520	195	400	1590				35	1410	730				HORIZONTAL IN WINGWALL No.2 AT END OF CURB	15
A-116	25M	1	4435	N	1850	195	400	1955				35	1740	900				HORIZONTAL IN WINGWALL No.2 AT END OF CURB	17
																		TOTAL MASS FOR WEST ABUTMENT (Kg)	7924

*– ONE END OF BAR TO BE THREADED TO FIT BPI BAR SPLICER COUPLER



Parcs Canada Parks Canada

KEY PLAN



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0	ISSUED FOR TENDER	07/06 2017
revisions		date

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

WEST ABUTMENT
REINFORCING SCHEDULE
SHEET 2 OF 3

designed / conçu: SOV
date

drawn / dessiné: CRM
date: 2016-01-08

approved / approuvé: GL
date: 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: S-26

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-26.dwg

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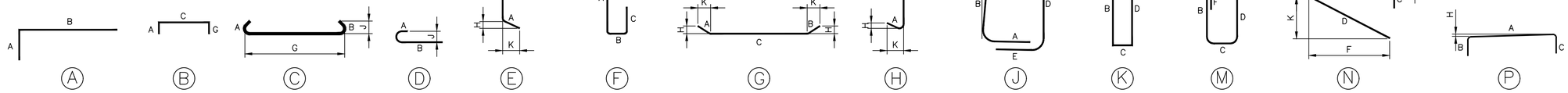
PWGSC A1 (2004)

E-DRM/GDD-E:

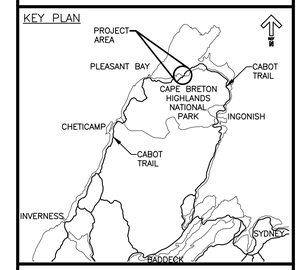
GFRP WEST ABUTMENT REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	TOTAL LENGTH #5 BAR (m)	TOTAL LENGTH #8 BAR (m)
F-13	#5	14	2405	F	1580	415	500											VERTICAL STIRRUP IN CURB WINGWALL No.1	34	
F-14	#5	9	2350	M	330	680	330	680	220									HORIZONTAL STIRRUP IN CRASH BLOCK WINGWALL No.1	22	
F-15	#8	8	2110	STR														VERTICAL IN CRASH BLOCK WINGWALL No.1		17
F-16	#5	3	2290	STR														LONGITUDINAL IN CURB AND RAISED CURB WINGWALL No.2	7	
F-17	#5	12	2850	P	2145	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.2	35	
F-18	#5	12	2320	F	1500	415	500											VERTICAL STIRRUP IN CURB WINGWALL No.2	28	
F-19	#5	9	2350	M	330	680	330	680	220									HORIZONTAL STIRRUP IN CRASH BLOCK WINGWALL No.2	22	
F-20	#8	8	2110	STR														VERTICAL IN CRASH BLOCK WINGWALL No.2		17
F-21	#8	63	5930	STR														TRANSVERSE IN BOTTOM OF APPROACH SLAB		378
F-22	#5	32	5930	STR														TRANSVERSE IN TOP OF APPROACH SLAB	192	
F-23	#5	40	10975	STR														LONGITUDINAL IN TOP AND BOTTOM OF APPROACH SLAB	439	
F-36	#5	2	2290	STR														LONGITUDINAL IN CURB WINGWALL No.1, (N.F.)	5	
F-37	#5	2	2145	STR														LONGITUDINAL IN CURB WINGWALL No.1, (F.F.)	5	
F-38	#5	3	2140	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	7	
F-39	#5	1	2000	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	2	
F-40	#5	1	1830	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	2	
F-41	#5	1	1655	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	2	
F-42	#5	1	1480	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	2	
F-43	#5	1	1310	STR														LONGITUDINAL IN RAISED CURB WINGWALL No.2	2	
F-44	#5	1	2345	P	1640	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.2	3	
F-45	#5	1	2635	P	1925	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.2	3	
F-46	#5	1	2225	P	1520	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.2	3	
F-47	#5	1	2560	P	1850	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.2	3	
																		TOTAL LENGTH OF BARS FOR DECK (m)	818	412



Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA
DATE
11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

WEST ABUTMENT
REINFORCING SCHEDULE
SHEET 3 OF 3

designed SOV / conçu
date
drawn CRM / dessiné
date 2016-01-08
approved GL / approuvé
date 2017-07-06
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet
666
drawing no. / no. du dessin
S-27

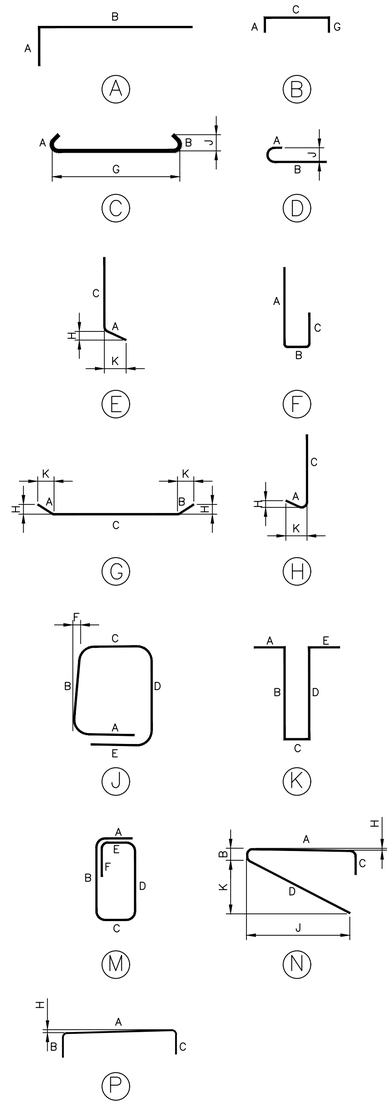
PLOTTED: Jul 06, 2017 9:28am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833S-27.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:

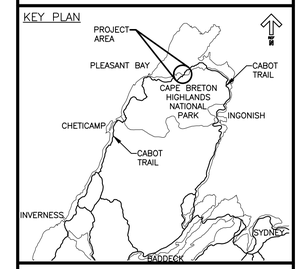
EAST ABUTMENT STEEL REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	MASS
B–1	25M	29	4715	A	400	4315												VERTICAL IN NEAR FACE	537
B–2	25M	5	3485	A	400	3085												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	68
B–3	25M	5	3500	A	400	3100												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	69
B–4	25M	5	3510	A	400	3110												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	69
B–5	25M	5	3505	A	400	3105												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	69
B–6	25M	5	3445	A	400	3045												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	68
B–7	25M	5	3385	A	400	2985												VERTICAL IN NEAR FACE (UNDERNEATH BEAMS)	66
B–8	15M	46	1560	B	250		1060				250							HORIZONTAL IN BREAST WALL	113
B–9	15M	128	1460	C	145	145					1170							HORIZONTAL TIES AROUND H–PILES	193
B–10	15M	23	13695	STR														HORIZONTAL IN BREASTWALL (N.F.)	495
B–11	25M	46	4720	A	400	4320												VERTICAL IN BREASTWALL (F.F.)	852
B–12	25M	45	4320	STR														VERTICAL IN BREASTWALL (F.F.)	763
B–13	25M	18	13695	STR														HORIZONTAL IN BREASTWALL (F.F.)	968
B–14	15M	2	545	STR														HORIZONTAL IN BREASTWALL (N.F.)	2
B–15	15M	8	870	STR														HORIZONTAL IN BREASTWALL (N.F.)	11
B–16	15M	5	1250	STR														HORIZONTAL IN BREASTWALL (N.F.)	10
B–17	15M	20	1900	STR														HORIZONTAL IN BREASTWALL (N.F.)	60
B–18	15M	5	800	STR														HORIZONTAL IN BREASTWALL (N.F.)	6
B–19	30M	91	1680	D	250	1430							260					VERTICAL IN BREASTWALL (F.F.)	840
B–20	15M	1	13695	STR														HORIZONTAL IN BREASTWALL (F.F.)	22
B–21	30M	17	2100	A	490	1610												VERTICAL IN BREASTWALL (N.F.)	196
B–22	30M	12	1350	STR														VERTICAL IN BREASTWALL UNDER BEAM FLANGE (N.F.)	88
B–23	30M	1	13695	STR														HORIZONTAL IN BREASTWALL THROUGH BEAM U–BAR	75
B–24	25M	33	1845	STR														HORIZONTAL BEAM INSERT BARS	239
B–25	10M	30	1035	B	400		235				400							BEARING BLOCK	24
B–26	10M	18	1260	B	400		460				400							BEARING BLOCK	18
B–27	15M	1	1475	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	2
B–28	15M	1	1925	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	3
B–29	15M	1	2375	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	4
B–30	15M	1	2825	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	4
B–31	15M	1	3275	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	5
B–32	15M	1	3725	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	6
B–33	15M	1	4175	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	7
B–34	15M	1	4625	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	7
B–35	15M	1	5075	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	8
B–36	15M	1	5525	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	9
B–37	15M	1	5975	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	9
B–38	15M	3	6085	STR														HORIZONTAL IN WINGWALL No.3 (N.F.)	29
B–39	25M	2	5740	STR														SLOPED IN WINGWALL No.3 (B.F.)	45
B–40	25M	1	1110	E	400		710					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	4
B–41	25M	1	1580	E	400		1180					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	6
B–42	25M	1	2030	E	400		1630					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	8
B–43	25M	1	2480	E	400		2080					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	10
B–44	25M	1	2930	E	400		2530					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	12
B–45	25M	1	3380	E	400		2980					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	13
B–46	25M	1	3830	E	400		3430					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	15
B–47	25M	1	4280	E	400		3880					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	17
B–48	25M	1	4730	E	400		4330					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	19
B–49	25M	1	5180	E	400		4780					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	20
B–50	25M	1	5630	E	400		5230					190		350				HORIZONTAL IN WINGWALL No.3 (F.F.)	22
B–51	25M	16	4290	N	1795	195	400	1900				35	1690	875				HORIZONTAL IN WINGWALL No.3 RAISED CURB HAUNCH	269
B–52	15M	1	3115	F	1685	420	1010											VERTICAL STIRRUP IN WINGWALL No.3	5
B–53	15M	1	3505	F	1880	420	1205											VERTICAL STIRRUP IN WINGWALL No.3	6
B–54	15M	1	3890	F	2070	420	1400											VERTICAL STIRRUP IN WINGWALL No.3	6
B–55	15M	1	4275	F	2265	420	1590											VERTICAL STIRRUP IN WINGWALL No.3	7
B–56	15M	1	4660	F	2455	420	1785											VERTICAL STIRRUP IN WINGWALL No.3	7
B–57	15M	1	5045	F	2650	420	1975											VERTICAL STIRRUP IN WINGWALL No.3	8
B–58	15M	1	5430	F	2840	420	2170											VERTICAL STIRRUP IN WINGWALL No.3	9
B–59	15M	1	5820	F	3035	420	2365											VERTICAL STIRRUP IN WINGWALL No.3	9
B–60	15M	1	6200	F	3225	420	2555											VERTICAL STIRRUP IN WINGWALL No.3	10
B–61	15M	1	6585	F	3420	420	2745											VERTICAL STIRRUP IN WINGWALL No.3	10
B–62	15M	1	6970	F	3610	420	2940											VERTICAL STIRRUP IN WINGWALL No.3	11
B–63	15M	1	7355	F	3805	420	3130											VERTICAL STIRRUP IN WINGWALL No.3	12
B–64	15M	1	7745	F	4000	420	3325											VERTICAL STIRRUP IN WINGWALL No.3	12
B–65	15M	1	8125	F	4190	420	3515											VERTICAL STIRRUP IN WINGWALL No.3	13
B–66	15M	1	8515	F	4385	420	3710											VERTICAL STIRRUP IN WINGWALL No.3	13
B–67	15M	1	8900	F	4575	420	3905											VERTICAL STIRRUP IN WINGWALL No.3	14
B–68	25M	12	4685	STR														HORIZONTAL IN WINGWAILL No.3 RAISED CURB HAUNCH	221



Parcs Canada Parks Canada

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — DATE — 11294 — PROVINCE OF NOVA SCOTIA

revisions		date
0	ISSUED FOR TENDER	07/06/2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

EAST ABUTMENT
REINFORCING SCHEDULE
SHEET 1 OF 3

designed SOV — conçu
date
drawn CRM — dessiné
date 2016–01–08
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date 2017–07–06
Tender — Soumission
PCA Project Manager — Administrateur de projets PCA
project number — no. du projet
666
drawing no. — no. du dessin
S–28

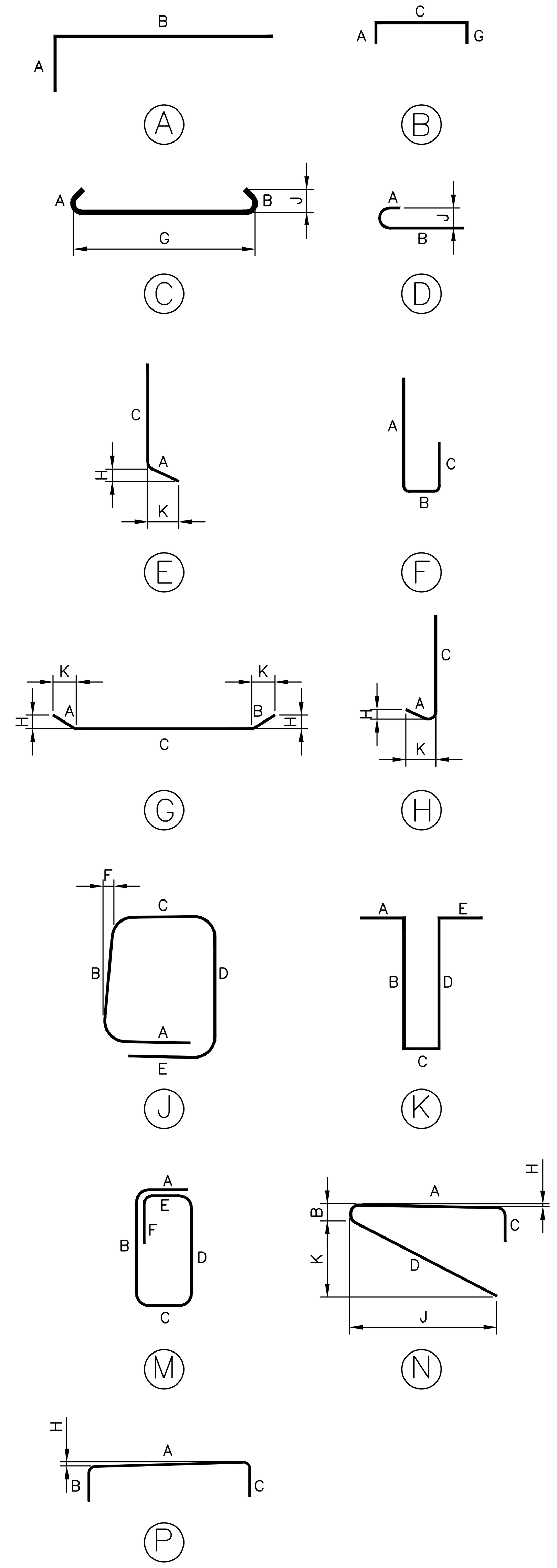
PWGSC A1 (2004)

E–DRM/GDD–E:

EAST ABUTMENT STEEL REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	MASS
B-69	15M	2	2750	STR														VERTICAL IN FILLET WINGWALL No.3	9
B-70	15M	8	2655	G	300	300	2055					150		260				HORIZONTAL IN FILLET WINGWALL No.3	33
B-71	15M	1	1385	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	2
B-72	15M	1	1835	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	3
B-73	15M	1	2285	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	4
B-74	15M	1	2735	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	4
B-75	15M	1	3185	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	5
B-76	15M	1	3635	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	6
B-77	15M	1	4085	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	6
B-78	15M	1	4535	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	7
B-79	15M	1	4985	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	8
B-80	15M	1	5435	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	9
B-81	15M	1	5885	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	9
B-82	15M	3	5995	STR														HORIZONTAL IN WINGWALL No.4 (N.F.)	28
B-83	25M	2	5740	STR														SLOPED IN WINGWALL No.4 (B.F.)	44
B-84	25M	1	1415	H	400		1015					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	6
B-85	25M	1	1715	H	400		1315					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	7
B-86	25M	1	2165	H	400		1765					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	8
B-87	25M	1	2615	H	400		2215					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	10
B-88	25M	1	3065	H	400		2665					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	12
B-89	25M	1	3515	H	400		3115					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	14
B-90	25M	1	3965	H	400		3565					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	16
B-91	25M	1	4415	H	400		4015					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	17
B-92	25M	1	4865	H	400		4465					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	19
B-93	25M	1	4995	H	400		4595					200		345				HORIZONTAL IN WINGWALL No.4 (F.F.)	20
B-94	15M	3	5995	STR														HORIZONTAL IN WINGWALL No.4 (F.F.)	26
B-95	15M	16	920	B	250		420				250							TIE IN WINGWALL No.4	23
B-96	15M	1	8320	F	4285	420	3615											VERTICAL STIRRUP IN WINGWALL No.4	13
B-97	15M	1	7935	F	4095	420	3420											VERTICAL STIRRUP IN WINGWALL No.4	12
B-98	15M	1	7550	F	3900	420	3230											VERTICAL STIRRUP IN WINGWALL No.4	12
B-99	15M	1	7165	F	3710	420	3035											VERTICAL STIRRUP IN WINGWALL No.4	11
B-100	15M	1	6780	F	3515	420	2845											VERTICAL STIRRUP IN WINGWALL No.4	11
B-101	15M	1	6395	F	3325	420	2650											VERTICAL STIRRUP IN WINGWALL No.4	10
B-102	15M	1	6010	F	3130	420	2460											VERTICAL STIRRUP IN WINGWALL No.4	9
B-103	15M	1	5625	F	2940	420	2265											VERTICAL STIRRUP IN WINGWALL No.4	9
B-104	15M	1	5240	F	2745	420	2075											VERTICAL STIRRUP IN WINGWALL No.4	8
B-105	15M	1	4855	F	2555	420	1880											VERTICAL STIRRUP IN WINGWALL No.4	8
B-106	15M	1	4470	F	2360	420	1690											VERTICAL STIRRUP IN WINGWALL No.4	7
B-107	15M	1	4085	F	2170	420	1495											VERTICAL STIRRUP IN WINGWALL No.4	6
B-108	15M	1	3700	F	1975	420	1305											VERTICAL STIRRUP IN WINGWALL No.4	6
B-109	15M	1	3315	F	1785	420	1110											VERTICAL STIRRUP IN WINGWALL No.4	5
B-110	15M	1	2930	F	1590	420	920											VERTICAL STIRRUP IN WINGWALL No.4	5
B-111	15M	1	2545	F	1400	420	725											VERTICAL STIRRUP IN WINGWALL No.4	4
B-112	15M	2	3400	STR														VERTICAL IN FILLET WINGWALL No.4	11
B-113	15M	10	1870	G	300	300	1270					260		150				HORIZONTAL IN FILLET WINGWALL No.4	29
* B-114	20M	31	1500	STR														HORIZONTAL S.S. DOWEL IN APPROACH SLAB	110
B-115	25M	1	3930	N	1610	195	400	1690				35	1500	780				HORIZONTAL IN WINGWALL No.3 AT END OF CURB	15
B-116	25M	1	4600	N	1925	195	400	2045				35	1815	940				HORIZONTAL IN WINGWALL No.3 AT END OF CURB	18
B-117	25M	1	3685	N	1495	195	400	1560				35	1385	720				HORIZONTAL IN WINGWALL No.3 AT END OF CURB	14
B-118	25M	1	4315	N	1850	195	400	1835				35	1630	845				HORIZONTAL IN WINGWALL No.3 AT END OF CURB	17
																		TOTAL MASS FOR WEST ABUTMENT (Kg)	7650

*– ONE END OF BAR TO BE THREADED TO FIT BPI BAR SPLICER COUPLER



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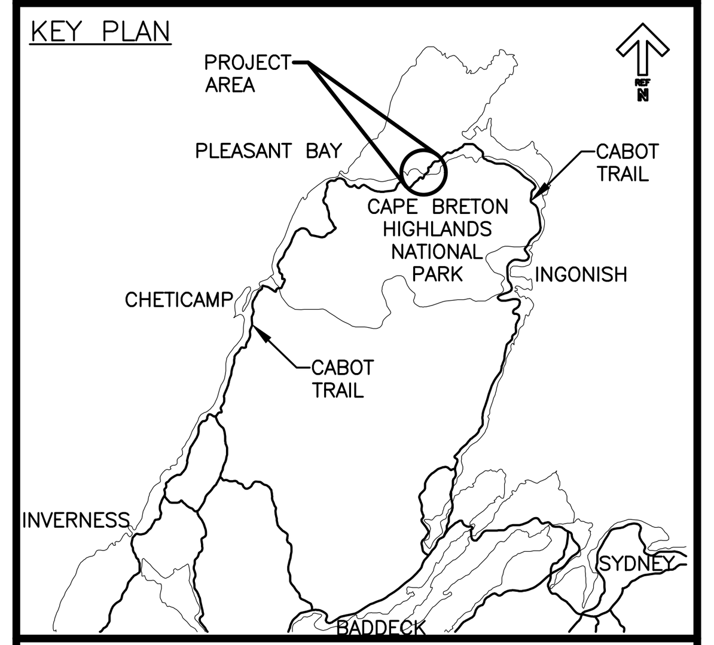

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revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

EAST ABUTMENT REINFORCING SCHEDULE SHEET 2 OF 3

designed SOV conçu
date
drawn CRM dessiné
date 2016-01-08
approved GL approuvé
date 2017-07-06
Tender Soumission
PCA Project Manager Administrateur de projets PCA
project number no. du projet 666
drawing no. no. du dessin S-29

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-29.dwg

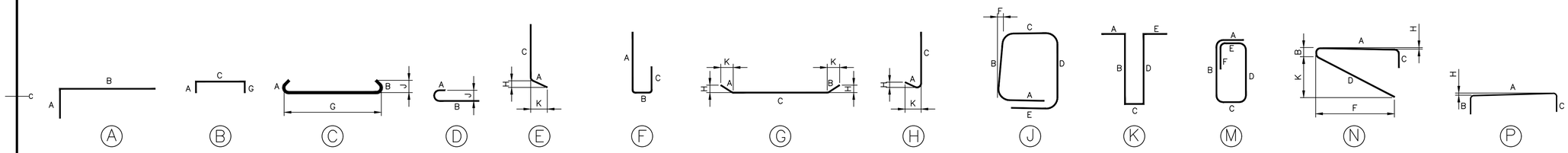
PLOTTED: Jul 06, 2017 9:29am mcouellette

PWGSC A1 (2004)

E-DRM/GDD-E:

GFRP EAST ABUTMENT REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	TOTAL LENGTH #5 BAR (m)	TOTAL LENGTH #8 BAR (m)
F-24	#5	3	2980	STR														LONGITUDINAL IN CURB AND RAISED CURB WINGWALL No.3	9	
F-25	#5	15	2850	P	2145	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.3	45	
F-26	#5	13	2320	F	1500	415	500											VERTICAL STIRRUP IN CURB WINGWALL No.3	30	
F-27	#5	9	2350	M	330	680	330	680	220									HORIZONTAL STIRRUP IN CRASH BLOCK WINGWALL No.3	22	
F-28	#8	8	2110	STR														VERTICAL IN CRASH BLOCK WINGWALL No.3		17
F-29	#5	2	2980	STR														LONGITUDINAL IN CURB WINGWALL No.4, (F.F.)	6	
F-30	#5	14	2405	F	1580	415	500											VERTICAL STIRRUP IN CURB WINGWALL No.4	34	
F-31	#5	9	2350	M	330	680	330	680	220									HORIZONTAL STIRRUP IN CRASH BLOCK WINGWALL No.4	22	
F-32	#8	8	2110	STR														VERTICAL IN CRASH BLOCK WINGWALL No.4		17
F-33	#8	63	5930	STR														TRANSVERSE IN BOTTOM OF APPROACH SLAB		378
F-34	#5	32	5930	STR														TRANSVERSE IN TOP OF APPROACH SLAB	192	
F-35	#5	40	10975	STR														LONGITUDINAL IN TOP AND BOTTOM OF APPROACH SLAB	439	
F-48	#5	2	3115	STR														LONGITUDINAL IN CURB WINGWALL No.4, (N.F.)	6	
F-49	#5	3	3115	STR														LONGITUDINAL IN CURB WINGWALL No.3	10	
F-50	#5	1	3290	STR														LONGITUDINAL IN CURB WINGWALL No.3	4	
F-51	#5	1	3460	STR														LONGITUDINAL IN CURB WINGWALL No.3	4	
F-52	#5	1	3635	STR														LONGITUDINAL IN CURB WINGWALL No.3	4	
F-53	#5	1	3810	STR														LONGITUDINAL IN CURB WINGWALL No.3	4	
F-54	#5	1	3980	STR														LONGITUDINAL IN CURB WINGWALL No.3	4	
F-55	#5	1	2320	P	1610	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.3	3	
F-56	#5	1	2635	P	1925	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.3	3	
F-57	#5	1	2205	P	1495	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.3	3	
F-58	#5	1	2560	P	1850	400	400					50						VERTICAL STIRRUP IN RAISED CURB WINGWALL No.3	3	
																		TOTAL LENGTH OF BARS FOR DECK (m)	847	412



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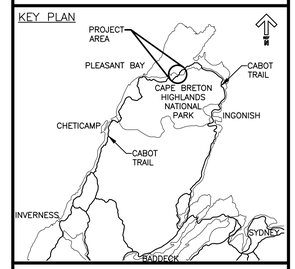
KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA
DATE JULY 6, 2017
G. Lafontaine
11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

EAST ABUTMENT
REINFORCING SCHEDULE
SHEET 3 OF 3

designed SOV / conçu
date

drawn CRM / dessiné
date 2016-01-08

approved GL / approuvé
date 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

project number / no. du projet
666

drawing no. / no. du dessin
S-30

PLOTTED: Jul 06, 2017 9:31am meouellette
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PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E:

STEEL DECK REINFORCING BAR SCHEDULE

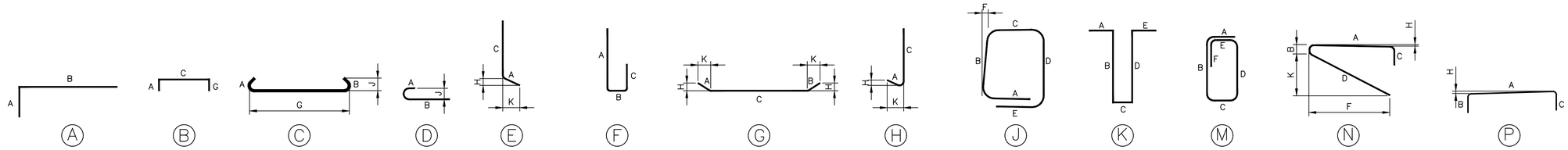
	MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	MASS
	D-1	25M	27	2025	STR														INTERMEDIATE DIAPHRAGM LONGITUDINAL INSERT BARS	215
	D-2	15M	20	2025	STR														INTERMEDIATE DIAPHRAGM LONGITUDINAL BARS BETWEEN BEAMS	64
	D-3	15M	15	3120	K	250	1070	240	1070	250									INTERMEDIATE DIAPHRAGM VERTICAL STIRRUPS BETWEEN BEAMS	73
	D-4	15M	20	1670	B	680		240				680							INTERMEDIATE DIAPHRAGM VERTICAL STIRRUPS UNDER BEAM FLANGES	52
	D-5	15M	5	1780	STR														INTERMEDIATE DIAPHRAGM UPPER LONGITUDINAL BARS BETWEEN BEAMS	14
*	D-6	30M	158	2475	A	955	1270												LONGITUDINAL IN DECK AT BOTH ENDS LAPPED TO F-4 (T.L.L.)	2149
**	D-7	20M	62	1500	STR														DOWEL AT END OF DECK (STAINLESS STEEL)	219
																			TOTAL MASS (Kg)	2786

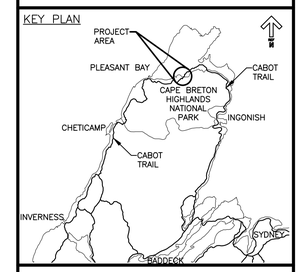
* - ALTERNATE BARS LAPPED (NON-CONTACT) TO F-2 (T.L.L.).

** - 1 END OF BAR TO BE THREADED TO FIT BPI BAR SPLICER COUPLER.

GFRP DECK REINFORCING BAR SCHEDULE

MARK	SIZE	QUANT.	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K	O	R	SHAPE	LOCATION AND REMARKS	TOTAL LENGTH #5 BAR (m)	TOTAL LENGTH #6 BAR (m)	TOTAL LENGTH #7 BAR (m)
F-1	#7	316	13775	STR														TRANSVERSE IN TOP AND BOTTOM OF DECK			4353
F-2	#6	158	6100	STR														LONGITUDINAL IN TOP OF DECK AT BOTH ENDS		964	
F-3	#6	80	11355	STR														LONGITUDINAL IN TOP OF DECK CENTERED ON BRIDGE		909	
F-4	#6	93	11255	STR														LONGITUDINAL IN BOTTOM OF DECK (BETWEEN BEAMS AND AT CANTILEVERS)		1048	
F-5	#7	36	11355	STR														LONGITUDINAL OVER BEAMS			409
F-6	#5	2	13775	STR														TRANSVERSE OVER DIAPHRAGMS	28		
F-7	#7	314	2100	STR														TRANSVERSE DROP IN BARS AT NORTH AND SOUTH SIDES OF DECK			660
F-8	#5	106	1845	J	300	440	360	445	300	30								VERTICAL STIRRUPS IN CURB (NORTH)	190		
F-9	#5	24	5900	STR														LONGITUDINAL IN CURB (NORTH)	142		
F-10	#5	66	5900	STR														LONGITUDINAL IN CURB AND RAISED CURB (SOUTH)	389		
F-11	#5	106	2660	P	1860	400	400					50						VERTICAL STIRRUP IN RAISED CURB (SOUTH)	282		
F-12	#5	106	1340	F	670	355	335											VERTICAL STIRRUP IN CURB (SOUTH)	142		
																		TOTAL LENGTH OF BARS FOR DECK (m)	1173	2921	5422





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0	ISSUED FOR TENDER	07/06 2017
revisions		date

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

DECK REINFORCING SCHEDULE

designed SOV / conçu
date

drawn CRM / dessiné
date 2016-01-08

approved GL / approuvé
date 2017-07-06

Tender / Soumission

PCA Project Manager / Administrateur de projets PCA

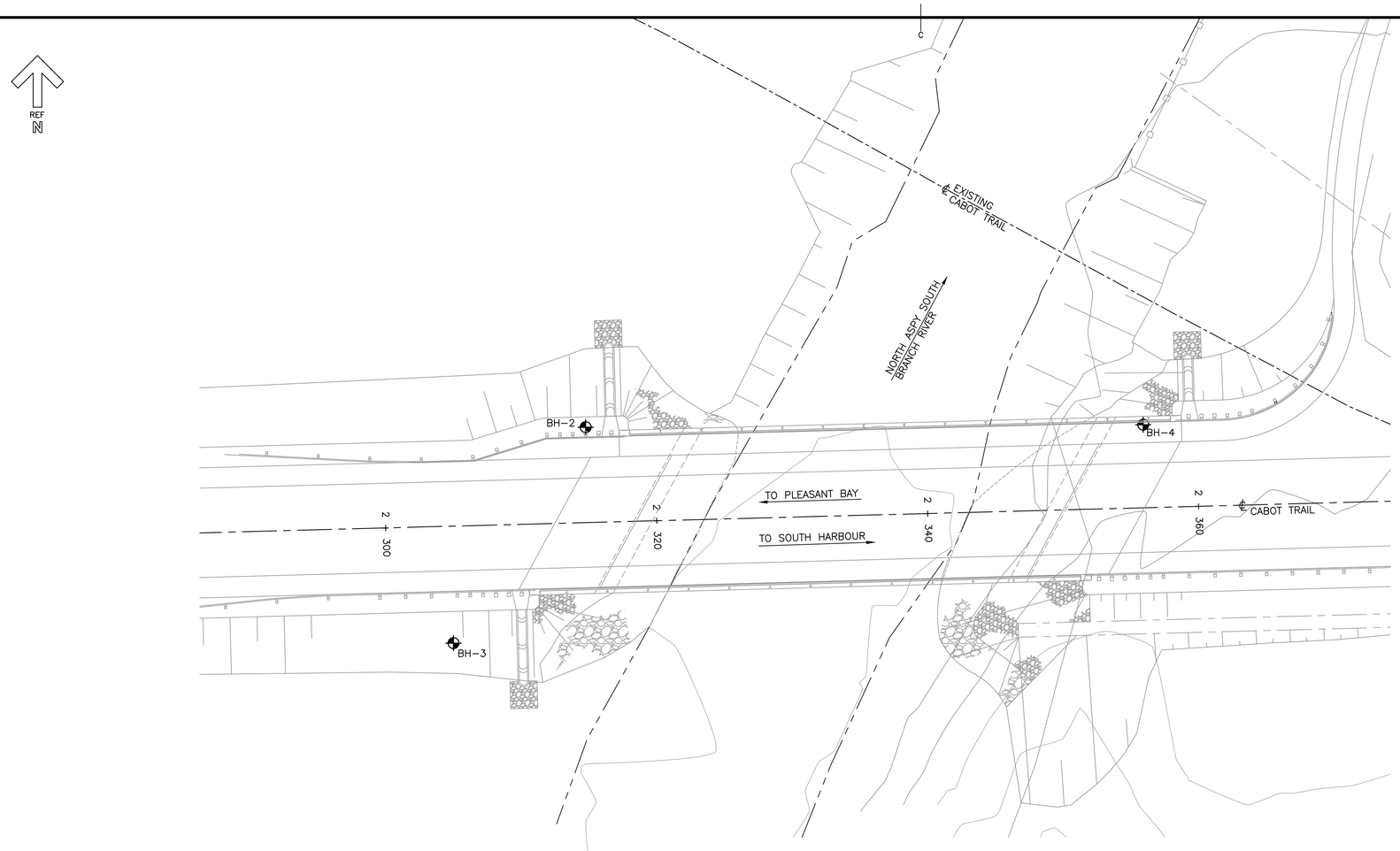
project number / no. du projet
666

drawing no. / no. du dessin
S-31

PLOTTED: Jul 06, 2017 9:31am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833S-31.dwg

PWGSC A1 (2004)

E-DRM/GDD-E:



BOREHOLE PLAN

SCALE: 1:200

0m 5m 10m 15m 20m 25m

Page 1 of 3

Stantec **BOREHOLE RECORD** **BH 2**

CLIENT PARKS CANADA — PROJECT No. 133346833
LOCATION NORTH ASPY BRIDGE, CABOT TRAIL, NS — BH SIZE HW
DATES: BORING 2015/11/26 — WATER LEVEL 2015/12/5 — DATUM GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR RQD %	OTHER TESTS
0	38.06	TOPSOIL - brown silty SAND - with organics			SS	1	500	3	
1	37.30	Compact to dense SAND with silt and gravel - trace silt - occasional cobbles			SS	2	400	26	
2					SS	3	400	28	S
3					SS	4	450	25	
4		- occasional cobbles from a depth of 3 to 6 meters			SS	5	200	13	
5					SS	6	250	64	
6					SS	7	200	43	
7					SS	8	500	48	
8					SS	9	500	26	
9					SS	10	475	52	
10					SS	11	425	56	S
					SS	12	500	38	

UNDRAINED SHEAR STRENGTH - kPa (20 40 60 80)
WATER CONTENT & ATTERBERG LIMITS (W_P W W_L)
DYNAMIC PENETRATION TEST, BLOWS/0.3m
STANDARD PENETRATION TEST, BLOWS/0.3m
(10 20 30 40 50 60 70 80 90)

App'd LF Feb 23 2016 12:27:51

Page 2 of 3

Stantec **BOREHOLE RECORD** **BH 2**

CLIENT PARKS CANADA — PROJECT No. 133346833
LOCATION NORTH ASPY BRIDGE, CABOT TRAIL, NS — BH SIZE HW
DATES: BORING 2015/11/26 — WATER LEVEL 2015/12/5 — DATUM GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR RQD %	OTHER TESTS
10		Cont'd: SAND with silt and gravel			SS	13	425	42	
11					SS	14	525	30	
12					SS	15	400	30	
13					SS	16	475	21	
14					SS	17	400	16	
15					SS	18	350	24	
16	23.73	Compact brown SAND - occasional gravel seams			SS	19	250	14	
17					SS	20	600	18	S
18									
19					SS	21	400	11	
20					SS	22	400	15	

UNDRAINED SHEAR STRENGTH - kPa (20 40 60 80)
WATER CONTENT & ATTERBERG LIMITS (W_P W W_L)
DYNAMIC PENETRATION TEST, BLOWS/0.3m
STANDARD PENETRATION TEST, BLOWS/0.3m
(10 20 30 40 50 60 70 80 90)

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Page 3 of 3

Stantec **BOREHOLE RECORD** **BH 2**

CLIENT PARKS CANADA — PROJECT No. 133346833
LOCATION NORTH ASPY BRIDGE, CABOT TRAIL, NS — BH SIZE HW
DATES: BORING 2015/11/26 — WATER LEVEL 2015/12/5 — DATUM GEODETIC

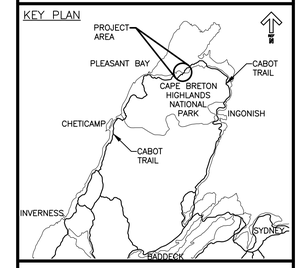
DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR RQD %	OTHER TESTS
20		Cont'd: SAND							
21	17.34	Compact brown SAND with silt and gravel			SS	23	400	14	
22									
23									
24					SS	24	200	28	
25	13.68	Very poor to poor quality, grey LIMESTONE - slightly weathered			HQ	25	100%	RQD 43%	
26					HQ	26	100%	13%	
27	10.63	End of Borehole - standpipe installed							
28									
29									
30									

UNDRAINED SHEAR STRENGTH - kPa (20 40 60 80)
WATER CONTENT & ATTERBERG LIMITS (W_P W W_L)
DYNAMIC PENETRATION TEST, BLOWS/0.3m
STANDARD PENETRATION TEST, BLOWS/0.3m
(10 20 30 40 50 60 70 80 90)

App'd LF Feb 23 2016 12:27:51

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE — 11294

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

BOREHOLE LOGS SHEET 1 OF 2

designed / conçu	SOV	
date		
drawn / dessiné	CRM	
date	2016-01-08	
approved / approuvé	GL	
date	2017-07-06	
Tender		Soumission
PCA Project Manager		Administrateur de projets PCA
project number / no. du projet	666	
drawing no. / no. du dessin	S-32	

PLOTTED: Jul 06, 2017 9:32am meouellette FILE: U:\133346833\18_structural\4_North Aspy\133346833S-32.dwg

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E:

BOREHOLE RECORD — BH 3

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/11/29 | WATER LEVEL: N/A | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
0	37.87	TOPSOIL - brown silty SAND - with organics	SS	1	500	3	
	37.41	Compact brown SAND with silt and gravel	SS	2	200	24	
			SS	3	300	20	S
	33.30	- sand seam	SS	4	350	9	
		Compact to dense brown SAND with silt and gravel - frequent cobbles	SS	5	300	49	S
			SS	6	150	50	
10			SS	7	175	48	

App'd LF Feb 23 2016 12:27:54

BOREHOLE RECORD — BH 3

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/11/29 | WATER LEVEL: N/A | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
10		Cont'd: SAND with silt and gravel	SS	8	150	24	
			SS	9	100	16	
			SS	10	175	28	
			SS	11	100	19	
	21.11	Compact brown SAND	SS	12	100	15	
	19.58	Dense brown SAND with silt and gravel - occasional cobbles	SS	13	250	42	
20							

App'd LF Feb 23 2016 12:27:54

BOREHOLE RECORD — BH 3

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/11/29 | WATER LEVEL: N/A | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
20		Cont'd: SAND with silt and gravel	SS	14	400	40	
21	16.84	Poor to excellent quality, grey LIMESTONE - slightly weathered	HQ	15	100%	RQD 100%	
			HQ	16	92%	40%	
			HQ	17	88%	58%	
	13.49	End of Borehole					
30							

App'd LF Feb 23 2016 12:27:54

BOREHOLE RECORD — BH 4

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/12/02 | WATER LEVEL: 2015/12/5 | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
0	38.68	TOPSOIL - brown silty SAND - with organics	SS	1	350	12	
	38.07	Compact to dense brown SAND with silt and gravel	SS	2	400	23	
			SS	3	350	40	
			SS	4	425	45	
			SS	5	475	39	S
			SS	6	350	49	
			SS	7	400	35	
			SS	8	450	33	S
		- silty sand layer at a depth of 8 meters	SS	9	475	24	
10			SS	10	300	57	

App'd LF Feb 23 2016 12:27:57

BOREHOLE RECORD — BH 4

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/12/02 | WATER LEVEL: 2015/12/5 | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
10		Cont'd: SAND with silt and gravel	SS	11	275	33	
	26.95	Very poor to poor quality, grey LIMESTONE - moderately weathered	HQ	12	100%	RQD 0%	
			HQ	13	57%	23%	
			HQ	14	67%	50%	
	23.44	End of Borehole					
20							

App'd LF Feb 23 2016 12:27:57

BOREHOLE RECORD — BH 5

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/12/03 | WATER LEVEL: N/A | DATUM: GEODETIC

DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
0	47.00	TOPSOIL - brown silty SAND - with organics	SS	1	300	4	
	46.39	Compact to very dense brown to grey SAND with silt and gravel - occasional cobbles from a depth of 1 to 4 meters	SS	2	475	78	
			SS	3	250	66	
			SS	4	400	29	
			SS	5	250	22	
			SS	6	300	18	
			SS	7	250	36	
10			SS	8	300	43	

App'd LF Feb 23 2016 12:27:59

BOREHOLE RECORD — BH 5

CLIENT: PARKS CANADA | PROJECT No. 133346833
LOCATION: NORTH ASPY BRIDGE, CABOT TRAIL, NS | BH SIZE: HW
DATES: BORING 2015/12/03 | WATER LEVEL: N/A | DATUM: GEODETIC

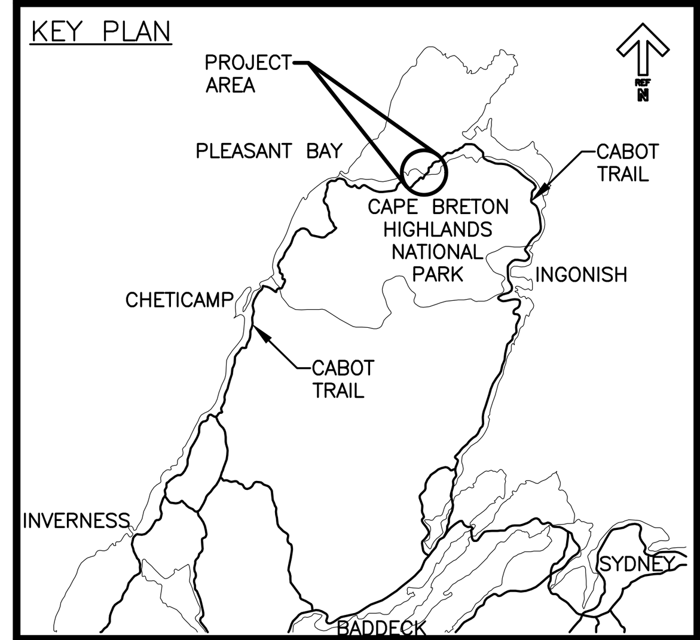
DEPTH (m)	ELEVATION (m)	SOIL DESCRIPTION	TYPE	NUMBER	RECOVERY (mm)	N-VALUE OR-RQD %	OTHER TESTS
10		Cont'd: SAND with silt and gravel	SS	9	350	33	
			SS	10	150	42	
	32.83	End of Borehole	SS	11	300	29	
20							

App'd LF Feb 23 2016 12:27:59

Legend (all logs): UNDRAINED SHEAR STRENGTH - kPa; WATER CONTENT & ATTERBERG LIMITS (W_P, W, W_L); DYNAMIC PENETRATION TEST, BLOWS/0.3m ★; STANDARD PENETRATION TEST, BLOWS/0.3m ●

Parcs Canada | Parks Canada

KEY PLAN



Stantec

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet: NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin: BOREHOLE LOGS SHEET 2 OF 2

designed / conçu: SOV
drawn / dessiné: CRM — date 2016-01-08
approved / approuvé: GL — date 2017-07-06
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA
project number / no. du projet: 666
drawing no. / no. du dessin: S-33

FILE: U:\133346833\18_structural\4_North Aspy\133346833S-33.dwg

PLOTTED: Jul 06, 2017 9:33am meouellette

PWGSC A1 (2004)

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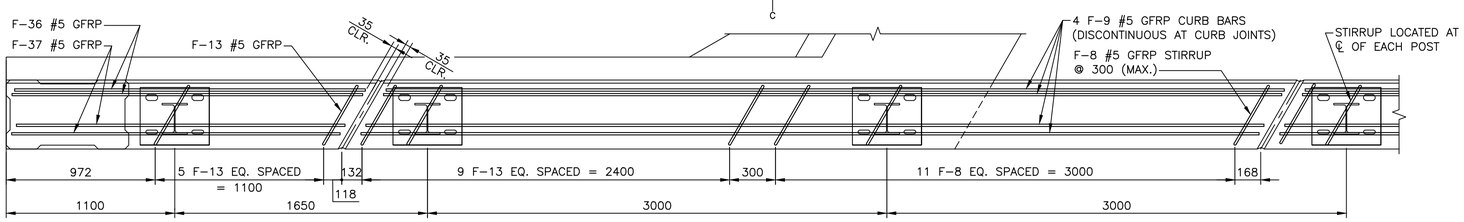
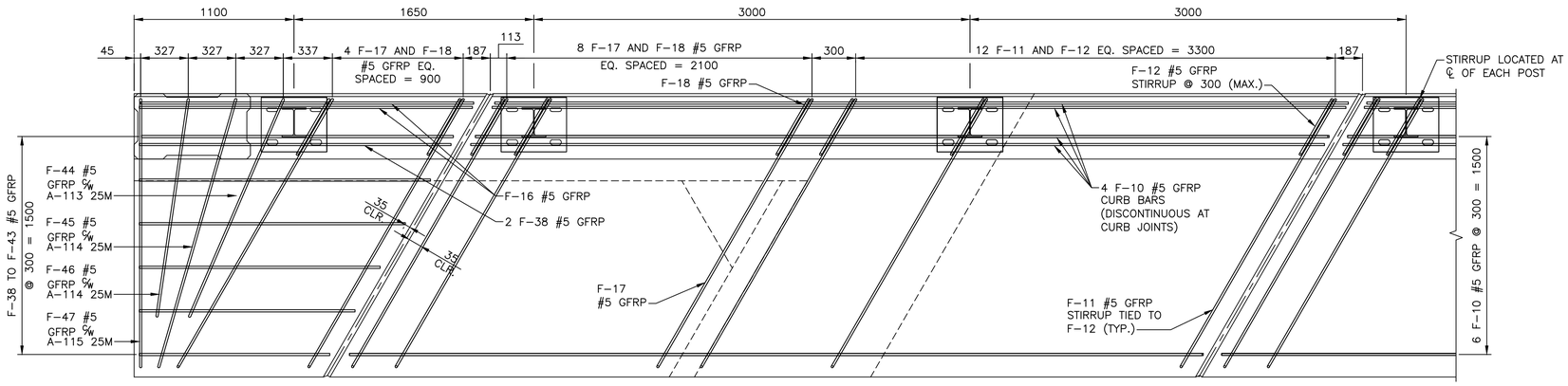


CURB REINFORCING PLAN (WINGWALL No.1)

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm



RAISED CURB REINFORCING PLAN (WINGWALL No.2)

SCALE : 1:20

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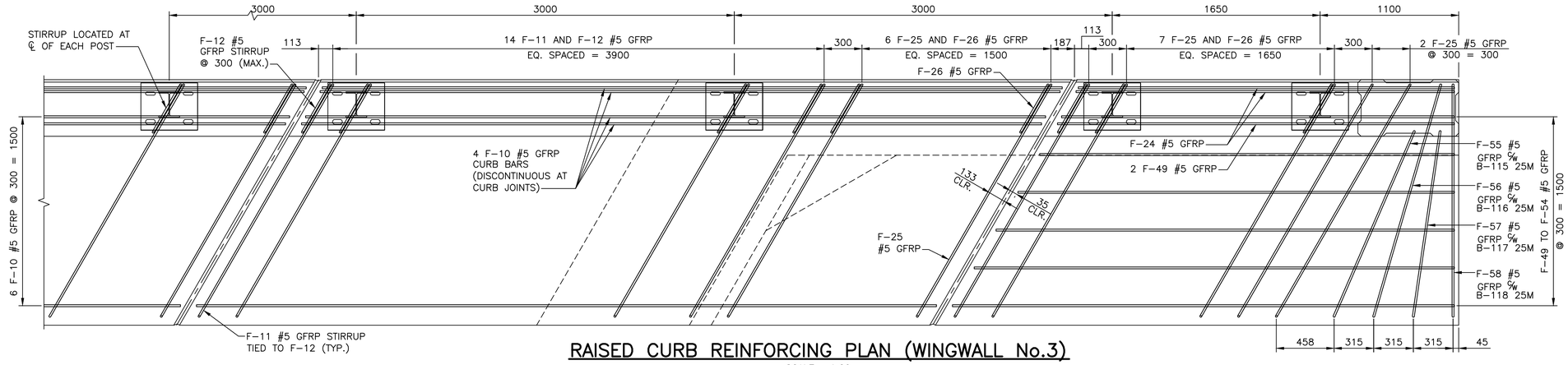

RAISED CURB REINFORCING PLAN (WINGWALL No.3)

SCALE : 1:20

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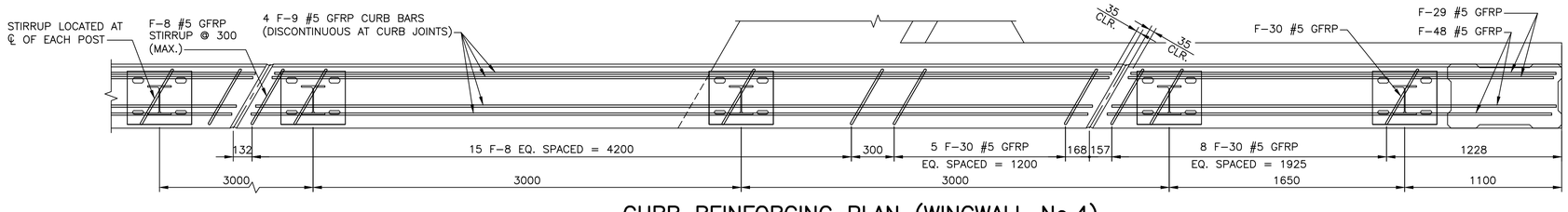


CURB REINFORCING PLAN (WINGWALL No.4)

SCALE : 1:20

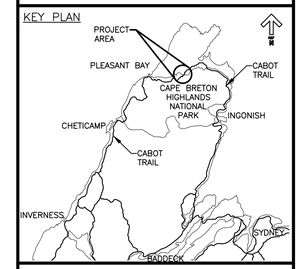
0mm 500mm 1000mm 1500mm 2000mm 2500mm

0 10 20mm 40 60 80 100 120 140 160 180 200mm

REF N

Parcs Canada Parks Canada

KEY PLAN



Stantec

NOTES:

1. ALL DECK REINFORCING TO BE GLASS FIBRE REINFORCED POLYMER (GFRP) UNLESS NOTED OTHERWISE.
2. ALL GFRP CLEARANCES TO BE 35mm PERPENDICULAR TO FACE OF CONCRETE UNLESS NOTED OTHERWISE.
3. REBAR DENOTATION AS FOLLOWS:
   - N.F. – NEAR FACE
   - F.F. – FAR FACE
   - B.F. – BOTH FACES
   - T.U.L – TOP UPPER LAYER
   - T.L.L. – TOP LOWER LAYER
   - B.U.L. – BOTTOM UPPER LAYER
   - B.L.L. – BOTTOM LOWER LAYER
   - C.J. – CONSTRUCTION JOINT
   - S.S. – STAINLESS STEEL
   - CLR. – CLEAR CONCRETE COVER TO REINFORCING BARS.
   - GFRP – GLASS FIBRE REINFORCED POLYMER

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA 11294 DATE

revisions		date
0	ISSUED FOR TENDER	07/06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

CURB AND SIDEWALK REINFORCING PLANS

designed / conçu	SOV	
date		
drawn / dessiné	CRM	
date	2016-01-08	
approved / approuvé	GL	
date	2017-07-06	
Tender	Soumission	
PCA Project Manager	Administrateur de projets PCA	
project number / no. du projet	666	
drawing no. / no. du dessin	S-34	

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PLOTTED: Jul 06, 2017 9:34am meouellette

PWGSC A1 (2004)

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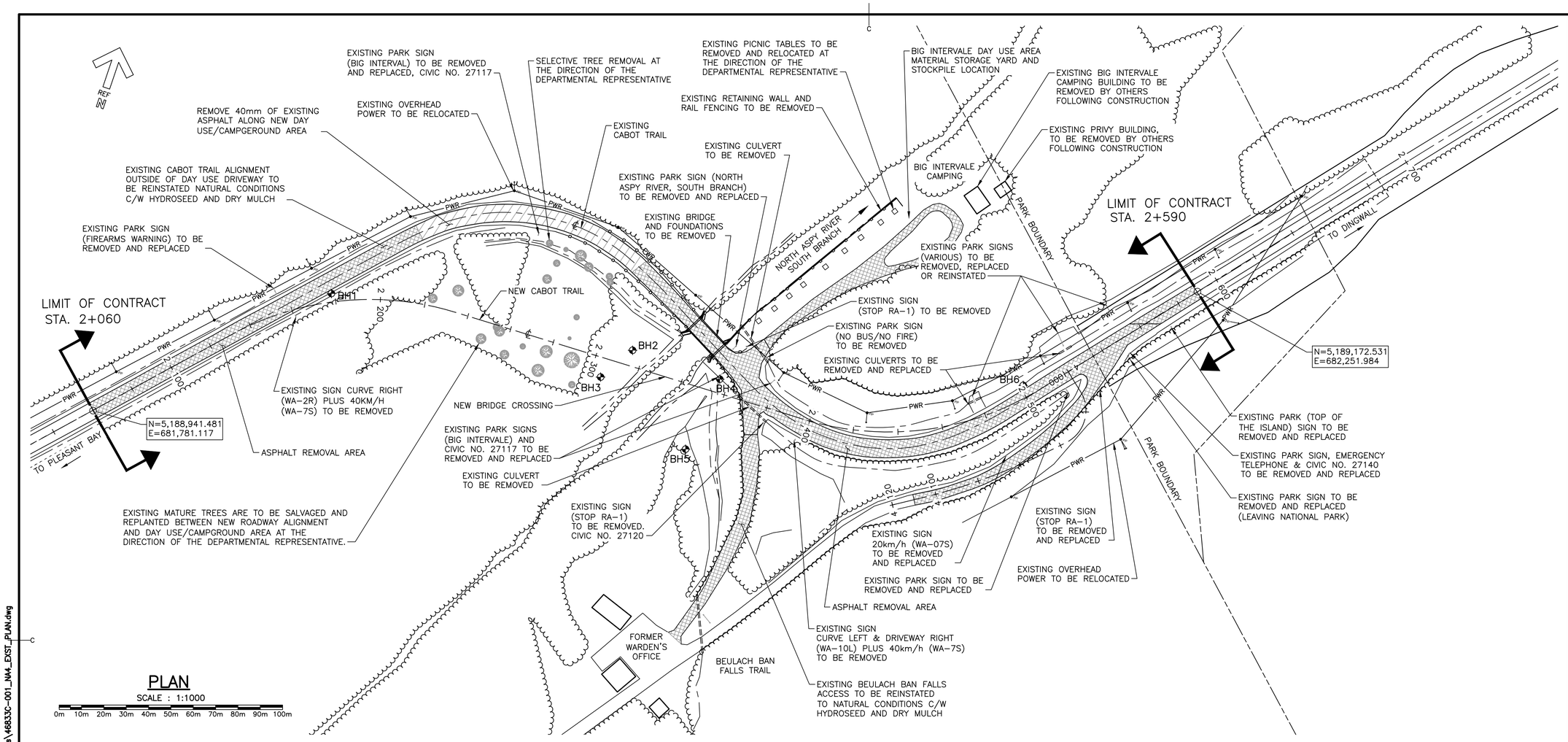


PLAN
SCALE : 1:1000
0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

GENERAL NOTES

GENERAL

1. ELEVATIONS ARE EXPRESSED IN METRES.
2. EXISTING GROUND ELEVATIONS ARE BASED ON LIDAR SURVEY DATA COLLECTED BY LEADING EDGE GEOMATICS IN JUNE, 2015.
3. SURVEY CONTROL IS BASED ON THE CAN-NET (www.can-netgps.ca), NOVA SCOTIA ACTIVE CONTROL NETWORK AT CAN-NET STATIONS NHBR (NEILS HARBOUR) AND CHET (CHETICAMP).
4. ELEVATIONS SHOWN ARE GEODETIC, AND ARE REFERENCED TO UTM20 NAD83 CSRS CGVD28 VIA HT2. NSSDA Z ACCURACY OF 9.9 CM'S (95 PERCENT).
5. IN ADDITION TO THE LIDAR SURVEY, A TOPOGRAPHIC SURVEY BY ATTWOOD SURVEYS LTD. (NOVEMBER, 2015) WAS COMPLETED TO CONFIRM BRIDGE DETAILS AND SUPPLEMENT THE LIDAR DATA. 2 BENCHMARK POINTS ARE IDENTIFIED ON THE PLANS, THE STATUS OF THESE BENCHMARKS CANNOT BE CONFIRMED.
6. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS INDICATED OTHERWISE.
7. STATIONING IS EXPRESSED IN METRES.
8. HORIZONTAL AND VERTICAL ALIGNMENT GEOMETRY ARE A BEST FIT BASED ON THE 2015 LIDAR SURVEY.
9. VERIFY ALL ELEVATIONS AND DIMENSIONS OF EXISTING STRUCTURES AND FEATURES IN THE FIELD.
10. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL BUILDING CODE OF CANADA, CANADIAN CONSTRUCTION SAFETY CODE, NSTIR'S TEMPORARY WORKPLACE TRAFFIC CONTROL MANUAL (TWTCM) AND ALL REGULATIONS AS SET OUT BY LOCAL AUTHORITIES HAVING JURISDICTION.
11. COMPLY WITH ALL REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS BOUND SEPARATELY.

ENVIRONMENTAL

1. WORK OPERATIONS SHALL BE CARRIED OUT AT ALL TIMES SO AS TO CAUSE A MINIMUM OF DISTURBANCE AND SILTATION TO WATERCOURSES.
2. USE SILT FENCE AND ALL OTHER APPROPRIATE MEANS TO PREVENT SEDIMENT FROM DISTURBED AREAS FROM ENTERING ANY WATERCOURSE. LOCATE AS REQUIRED AND AS DIRECTED.
3. MONITOR EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES DURING AND AFTER RAINFALL EVENTS. REPAIR AND REPLACE AS NECESSARY.
4. REVEGETATE ALL DISTURBED AREAS WITH APPROVED HYDROSEED MIX AND DRY MULCH TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.

EXCAVATION

1. PROVIDE ADEQUATE PROTECTION TO ALL SURVEY AND LAYOUT MARKERS, INCLUDING BENCH MARKS AND EXISTING FACILITIES, EQUIPMENT, ETC.
2. EXCAVATE TO ELEVATIONS INDICATED AND TO WELL DEFINED LINES SUFFICIENT TO ALLOW INSTALLATION, CONSTRUCTION AND INSPECTION OF WORK WITH MINIMUM FILL.
3. EXCAVATIONS SHALL BE DRY, FREE OF LOOSE OR ORGANIC MATTER.
4. PROTECT BOTTOM OF EXCAVATION FROM SOFTENING. SOFTENED SOIL SHALL BE REMOVED AND REPLACED WITH DENSE STRUCTURAL FILL COMPACTED AS SPECIFIED AND REQUIRED.
5. STOCKPILE EXCAVATED MATERIAL SO AS TO NOT INTERFERE WITH SITE OPERATIONS OR DRAINAGE.
6. CORRECT UNAUTHORIZED EXCAVATION UNDER BEARING SURFACES AND OTHER AREAS WITH DENSE STRUCTURAL FILL COMPACTED TO 95% OF MODIFIED PROCTOR, OR TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE, AT NO EXTRA COST.
7. DO NOT PROCEED WITH FURTHER WORK UNTIL EXCAVATION HAS BEEN INSPECTED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.

FOUNDATIONS

1. ALL FOUNDATIONS AND SUBGRADE SURFACES SHALL BE FOUNDED ON UNDISTURBED NATIVE SOILS, BEDROCK, OR APPROVED FILL MATERIAL.

DRAINAGE

1. POSITIVE DRAINAGE TO ALL DRAINAGE STRUCTURES MUST BE COMPLETED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.

BACKFILL

1. DO NOT COMMENCE BACKFILLING UNTIL AREAS OF WORK TO BE BACKFILLED HAVE BEEN INSPECTED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
2. AREAS TO BE BACKFILLED SHALL BE FREE OF DEBRIS, SNOW, ICE, WATER OR FROZEN GROUND.
3. BACKFILL ONLY WITH MATERIAL APPROVED BY THE DEPARTMENTAL REPRESENTATIVE IN CONTINUOUS HORIZONTAL LAYERS NOT EXCEEDING SPECIFIED THICKNESS AND COMPACT AS SPECIFIED AND REQUIRED.
4. BACKFILL SIMULTANEOUSLY EACH SIDE OF PIPE OR WALLS. BRACE OR SHORE TO COUNTERACT UNBALANCED PRESSURES. DO NOT REMOVE UNTIL AUTHORIZED BY THE DEPARTMENTAL REPRESENTATIVE.
5. COMPACT MATERIALS AS SPECIFIED.

SIGNAGE

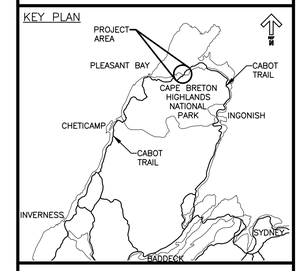
1. SIGNS IDENTIFIED FOR REMOVAL AND REINSTATEMENT ARE TO BE REPLACED WITH THE IDENTIFIED POST CONSTRUCTION MATERIAL AND FOOTINGS AS SHOWN ON THE PLANS PROVIDED IN THE CONSTRUCTION DOCUMENTS.
2. PARK INFORMATION SIGNS TO BE SUPPLIED BY PARKS CANADA, CONTRACTOR TO INSTALL.
3. REGULATORY AND WARNING SIGNS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
4. ALL REGULATORY AND WARNING SIGNS ARE TO BE INSTALLED c/w NEW POSTS (PRESSURE TREATED WOOD POSTS).
5. ALL PARK INFORMATION SIGNS ARE TO REMOVED, STORED AND REINSTATED ON NEW POSTS AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.
6. ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE TRANSPORTATION ASSOCIATION OF CANADA (TAC) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SPECIFICATIONS.

PAVEMENT MARKINGS

1. CONTRACTOR IS RESPONSIBLE TO SURVEY EXISTING PAVEMENT MARKINGS PRIOR TO MILLING/ASPHALT REMOVAL.
2. CONTRACTOR TO SUPPLY AND INSTALL ALL PAVEMENT LINE MARKINGS TO PRE-CONSTRUCTION MARKINGS.
4. PAVEMENT MARKINGS ARE APPROXIMATE AND SHALL BE CONFIRMED AND APPROVED ON SITE BY THE DEPARTMENTAL REPRESENTATIVE. PRE-MARKING IS REQUIRED.
5. ALL PAVEMENT MARKINGS TO CONFORM TO NSTIR STANDARD SPECIFICATION – (LATEST EDITION) – DIVISION 6 – SECTION 6.
6. ALL TRAFFIC MARKINGS SHALL BE IN ACCORDANCE WITH THE TRANSPORTATION ASSOCIATION OF CANADA (TAC) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SPECIFICATIONS.

Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND EXISTING

- CONTOUR & ELEVATION
- ℄ ROADWAY
- EDGE OF PAVE
- GUARD RAIL
- ℄ OF DITCH
- DAYLIGHT
- EDGE OF GRAVEL
- EDGE OF TREES
- WATERCOURSE BOUNDARY
- CULVERT
- ORIGINAL GRADE CL PROFILE
- SIGN
- BUILDING
- CONTROL MONUMENT (N.S.C.M. 00000)
- BOREHOLE (BH-01)
- POWER POLE (PP)
- POWER LINES (PWR)

LEGEND NEW

- EDGE OF PAVE
- ℄ ROADWAY
- EDGE OF PAVE
- SHOULDER
- GUARD RAIL
- DITCH LINE
- DAYLIGHT (TOP)
- DAYLIGHT (TOE)
- EDGE OF GRAVEL
- CLEARING LIMIT
- CULVERT
- PRECAST BARRIER
- RIP-RAP

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
D. L. Flower
9947
DATE July 6/17

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

EXISTING CONDITIONS AND REMOVALS PLAN

designed / conçu	DSC
date	JUL. 06, 2017
drawn / dessiné	JLD
date	JUL. 06, 2017
approved / approuvé	RMB
date	JUL. 06, 2017
Tender	Soumission
PCA Project Manager	JUL. 06, 2017 Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	C-1

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

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PLOTTED: Jul 06, 2017 4:05pm jldoigle
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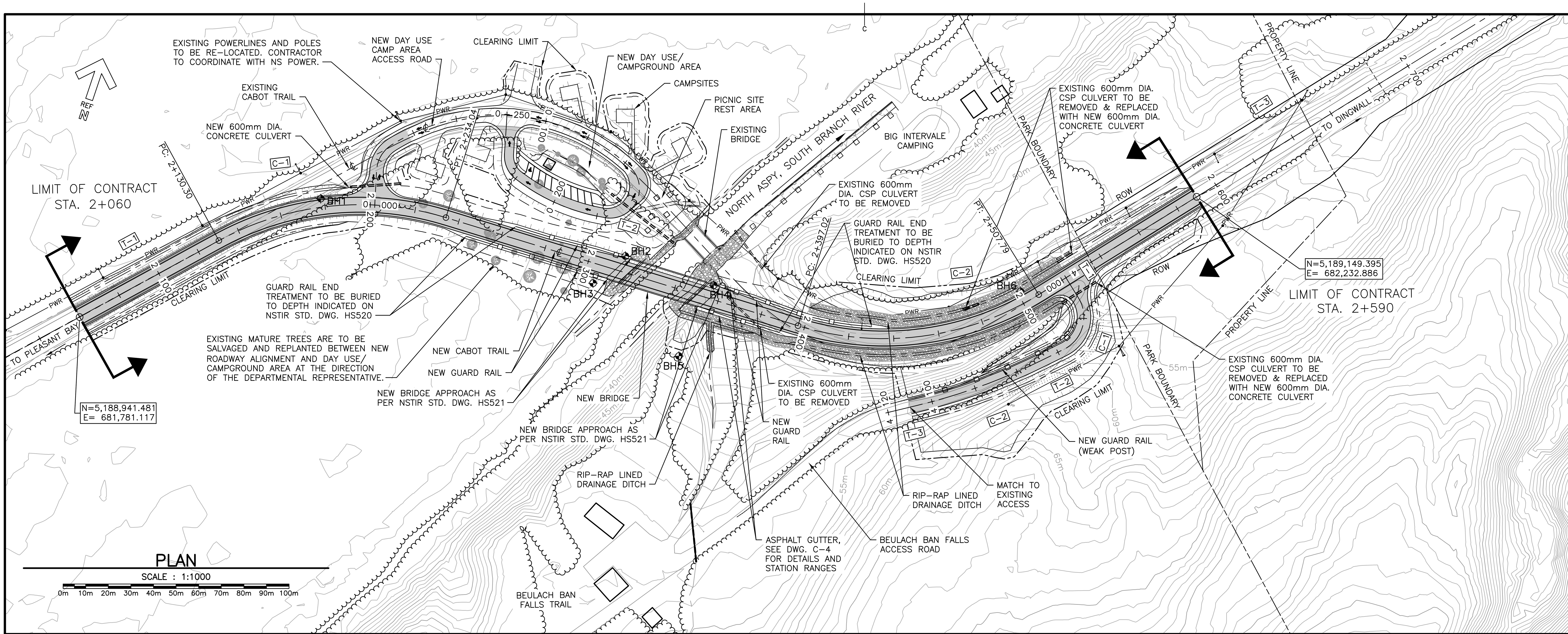
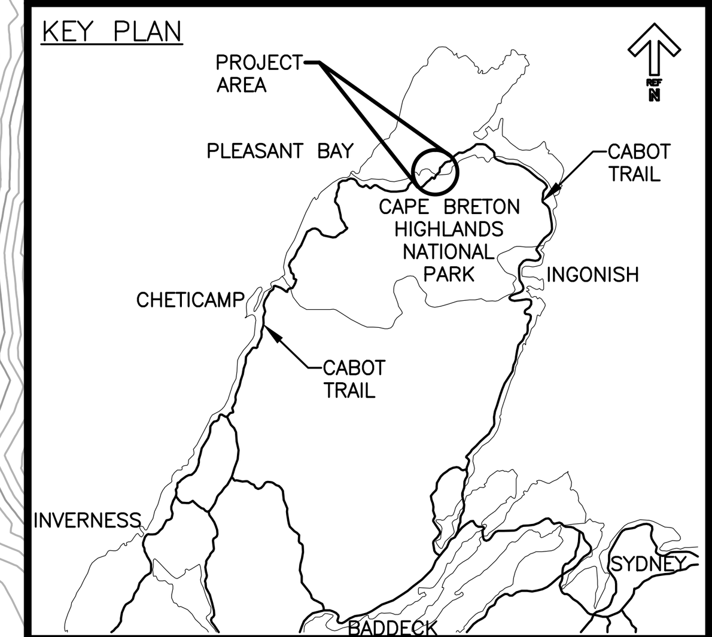


Parcs Canada Parks Canada



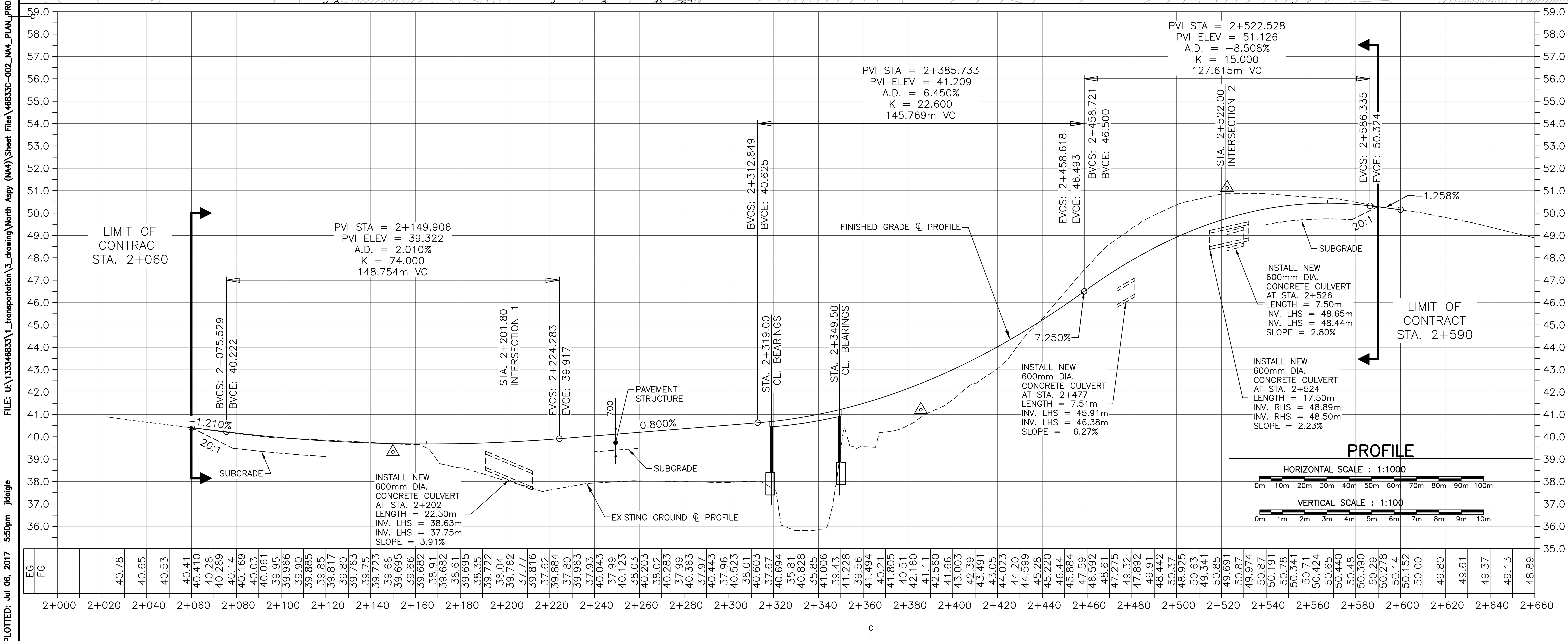
Stantec

LEGEND EXISTING

8m	CONTOUR & ELEVATION
	℄ ROADWAY
	EDGE OF PAVE
	GUARD RAIL
	℄ OF DITCH
	DAYLIGHT
	EDGE OF GRAVEL
	EDGE OF TREES
	WATERCOURSE BOUNDARY
	CULVERT
	ORIGINAL GRADE CL PROFILE
	SIGN
	BUILDING
N.S.C.M. 00000	CONTROL MONUMENT
BH-01	BOREHOLE
PP	POWER POLE
PWR	POWER LINES

LEGEND NEW

EDGE OF PAVE
℄ ROADWAY
EDGE OF PAVE
SHOULDER
GUARD RAIL
DITCH LINE
DAYLIGHT (TOP)
DAYLIGHT (TOE)
EDGE OF GRAVEL
CLEARING LIMIT
CULVERT
PRECAST BARRIER
RIP-RAP



REGISTERED PROFESSIONAL ENGINEER, PROVINCE OF NOVA SCOTIA — P. J. Flower 9947 — DATE July 6/17

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

PLAN AND PROFILE STA. 2+060 TO STA. 2+590

designed / conçu: DSC — date: JUL. 06, 2017

drawn / dessiné: JLD — date: JUL. 06, 2017

approved / approuvé: RMB — date: JUL. 06, 2017

Tender / Soumission: JUL. 06, 2017 — PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C-2

FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-002_NA4_PLAN_PROF.dwg

PLOTTED: Jul 06, 2017 5:50pm jldaigle

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E: NOT IN SYSTEM

EXISTING CABOT TRAIL ALIGNMENT ALONG DAY USE/CAMPGROUND AREA TO RECEIVE 40mm ASPHALT SURFACE LIFT, D–HF

BACK–IN CAMP SITE 2

BACK–IN CAMP SITE 1

FUTURE CAMPSITE ACCESS

WALK–IN CAMP SITE 3

RELOCATED PICNIC TABLES FROM BIG INTERVALE CAMPING AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.

WALK–IN CAMP SITE 4

WALK–IN CAMP SITE 5

NEW ACCESS ROAD

EP: 0+250.00

PCC: 0+018.95

PC: 0+015.26

EL.38.720

PT: 0+232.45

EL.38.670

EX. CABOT TRAIL

PCC: 0+142.94

EL. 39.335

EL. 39.040

EL. 39.275

INSTALL NEW 600mm DIA. CONCRETE CULVERT AT STA. 0+164 LENGTH = 35.00m INV. RHS = 37.55m INV. LHS = 36.45m SLOPE = 3.14%

NEW PRIVY BUILDING SEE APPENDIX G FOR DRAWINGS AND SPECIFICATIONS

NEW ACCESS ROAD

DAY USE PARKING

3m

6m

RV LAYBY AREA

PCC: 0+219.74

PICNIC AREA

300mm BASE GRAVEL, TYPE 1 FOR NEW 1.5m WIDE PATHWAY TO RIVER. SEE TIMBER RAILING DETAIL ON DWG. NO. C–5

NORTH ASPY, SOUTH BRANCH RIVER

EXISTING BRIDGE

EXISTING STEEL RETAINING WALL AND FENCE TO BE REMOVED. RECONSTRUCT RIVERBANK WITH 2:1 SLOPES AND R–250 & R–A RIP–RAP. INCORPORATE PLANTS USING ALDER AND ELDERBERRY AT 5 PLANTS PER 10m² AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.

TREE/SHRUB PLANTING AREA AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.

BP: 0+000.00

PCC: 0+176.07

NEW CABOT TRAIL

INSTALL NEW 600mm DIA. CONCRETE CULVERT AT STA. 0+009 LENGTH = 22.50m INV. LHS = 38.63m INV. RHS = 37.75m SLOPE = 3.91%

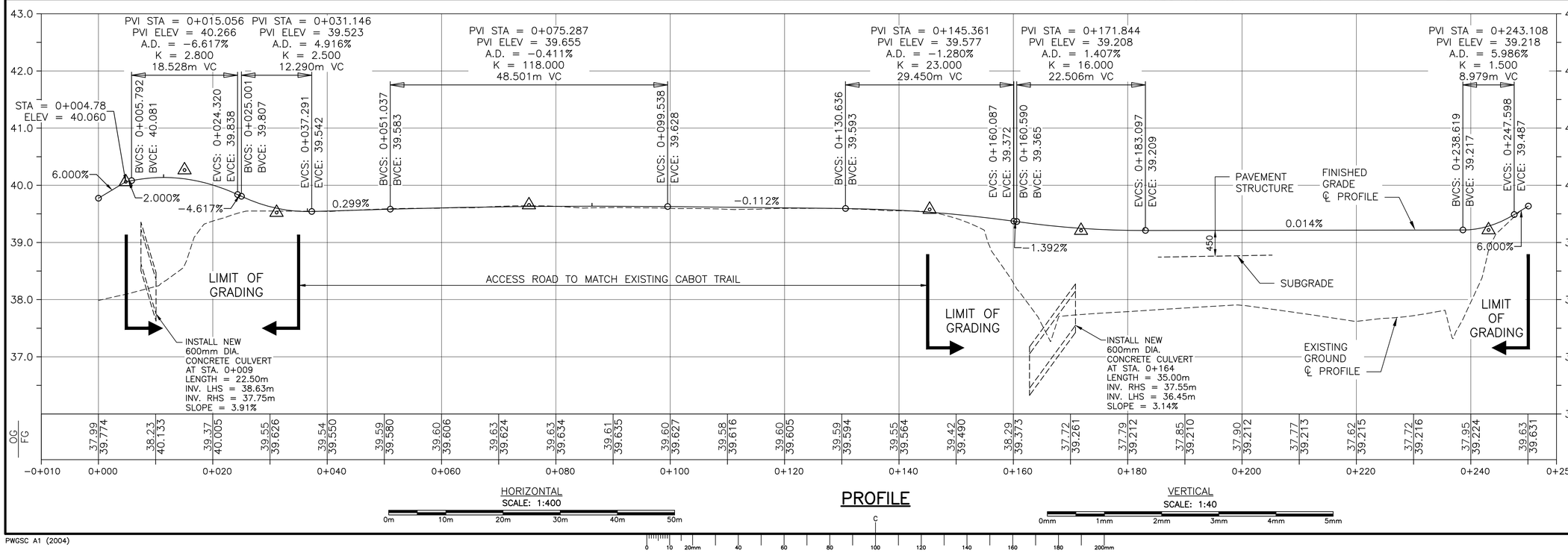
300mm BASE GRAVEL, TYPE 1 FOR RV LAYBY AREA AND PARKING STALLS.

NEW BRIDGE

PLAN

SCALE: 1:400

0m 10m 20m 30m 40m 50m



PROFILE

HORIZONTAL SCALE: 1:400

0m 10m 20m 30m 40m 50m

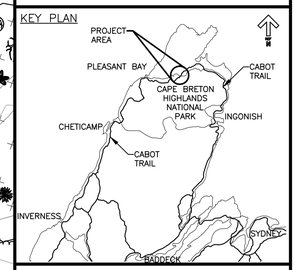
VERTICAL SCALE: 1:40

0mm 1mm 2mm 3mm 4mm 5mm

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND EXISTING

- CONTOUR & ELEVATION (8m)
- ℄ ROADWAY
- EDGE OF PAVE
- GUARD RAIL
- ℄ OF DITCH
- DAYLIGHT
- EDGE OF GRAVEL
- EDGE OF TREES
- WATERCOURSE BOUNDARY
- CULVERT
- ORIGINAL GRADE CL PROFILE
- SIGN
- BUILDING
- CONTROL MONUMENT (N.S.C.M. 00000)
- BOREHOLE (BH–01)
- POWER POLE (PP)
- POWER LINES (PWR)

LEGEND NEW

- EDGE OF PAVE
- ℄ ROADWAY
- EDGE OF PAVE
- SHOULDER
- GUARD RAIL
- DITCH LINE
- DAYLIGHT (TOP)
- DAYLIGHT (TOE)
- EDGE OF GRAVEL
- CLEARING LIMIT
- CULVERT
- PRECAST BARRIER
- RIP–RAP

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA — DATE July 6/17 — D.J. Flower — 9947

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

PROPOSED DAY USE/ CAMPGROUND AREA PLAN AND PROFILE

designed	DSC	conçu
date	JUL. 06, 2017	
drawn	JLD	dessiné
date	JUL. 06, 2017	
approved	RMB	approuvé
date	JUL. 06, 2017	
Tender		Soumission
PCA Project Manager		JUL. 06, 2017 Administrateur de projets PCA

project number / no. du projet: 666

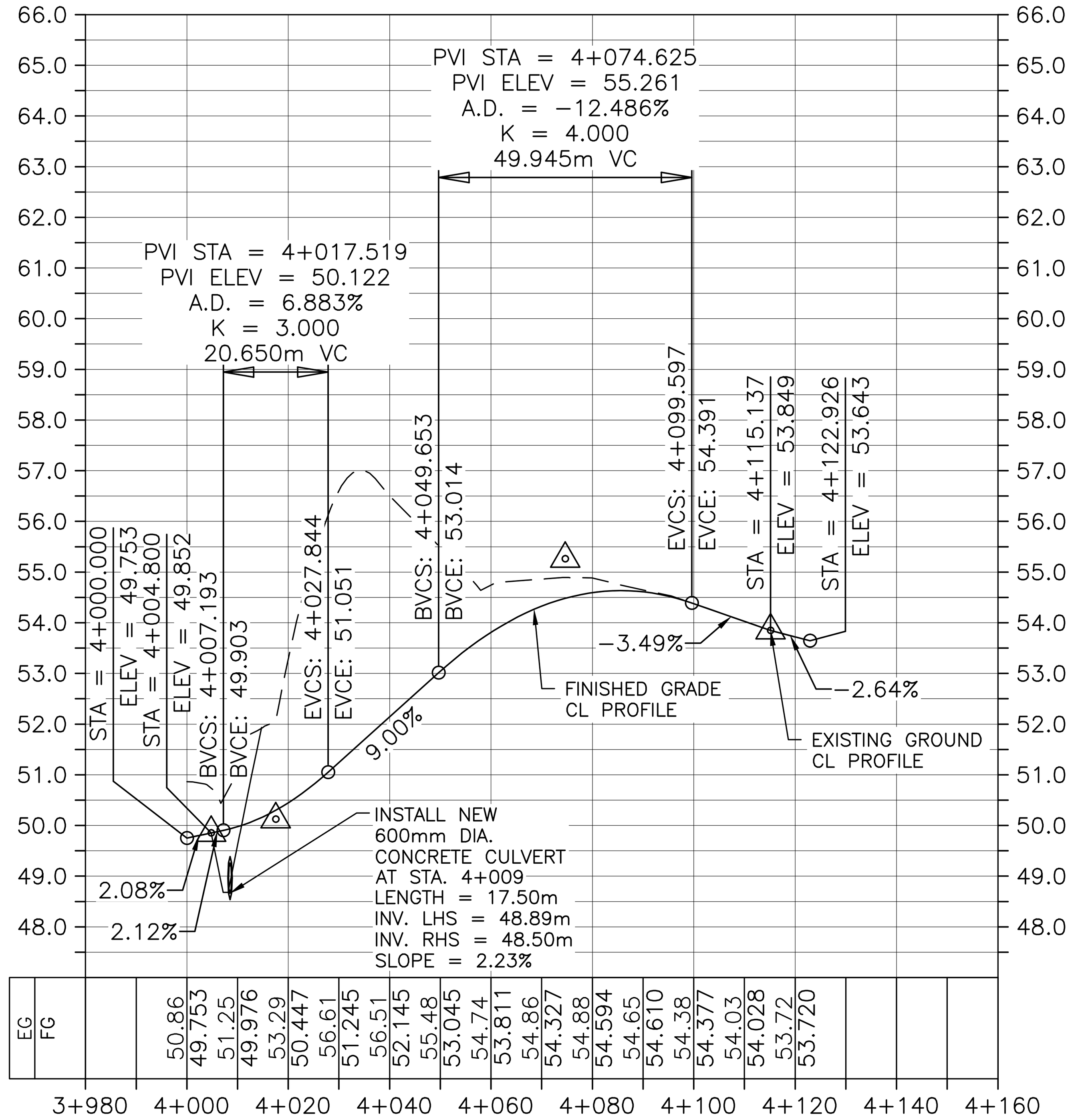
drawing no. / no. du dessin: C–3

E–DRM/GDD–E: NOT IN SYSTEM

PWGSC A1 (2004)

FILE: u:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C–003_NA4_PARK–CAMP_PLAN.dwg

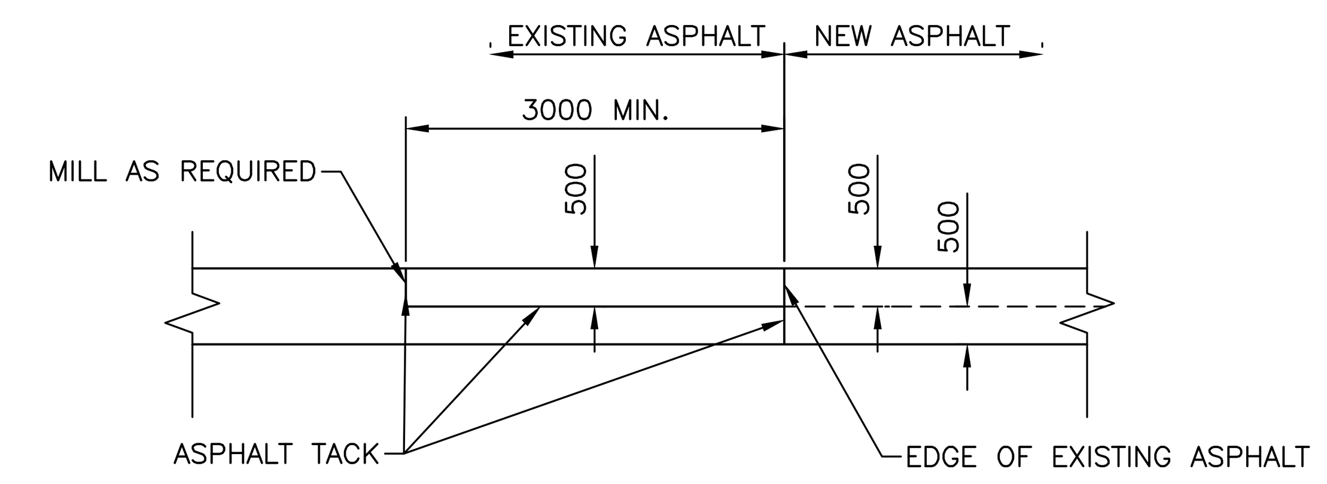
PLOTTED: Jul 06, 2017 5:52pm jdoigle



BEULACH BAN FALLS ACCESS ROAD PROFILE

SCALE : 1:1000 SCALE : 1:100

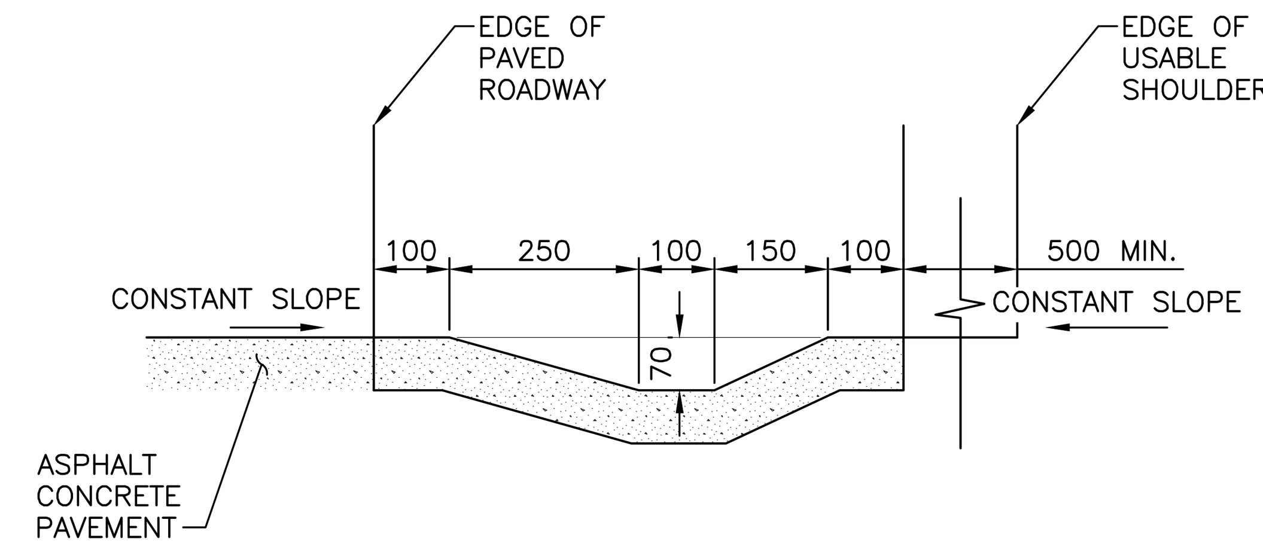
NOTE:
SAWCUT EXISTING ASPHALT TO MAKE VERTICAL CLEAN JOINT, MILL 50 x 3000 KEY, PLACE AND COMPACT NEW GRAVELS. MILLED EDGES FOR KEYED JOINTS AT START AND END OF PROJECT TO RECEIVE ASPHALT TACK. NEW ASPHALT TO DEPARTMENTAL REPRESENTATIVE'S FULL SATISFACTION. MATCHING EXISTING.



ASPHALT TRANSITION DETAIL

SCALE : 1:100

NOTE:
1. ASPHALT GUTTER REQUIRED: LHS – STA. 2+350 TO 2+520 AND RHS – STA. 2+350 TO 2+400
2. 3m OFFTAKES REQUIRED EVERY 40m OR AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE.

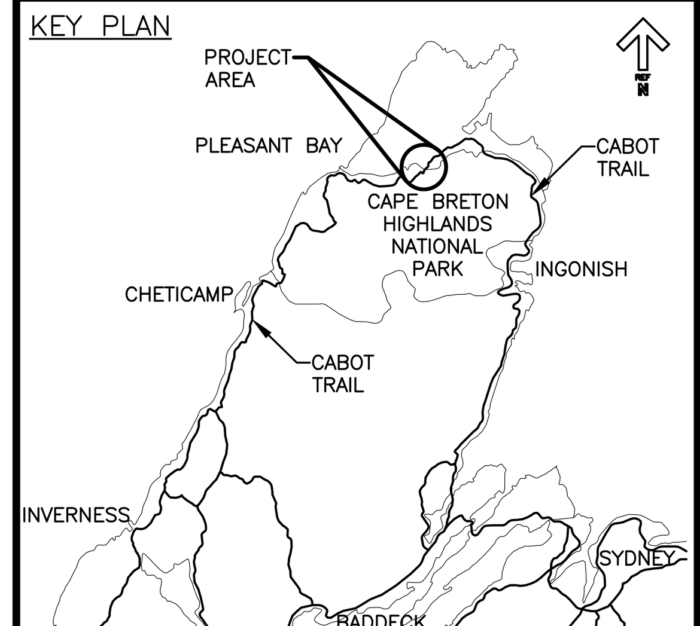


ASPHALT CONCRETE GUTTER DETAIL

SCALE : 1:10

Parcs Canada Parks Canada

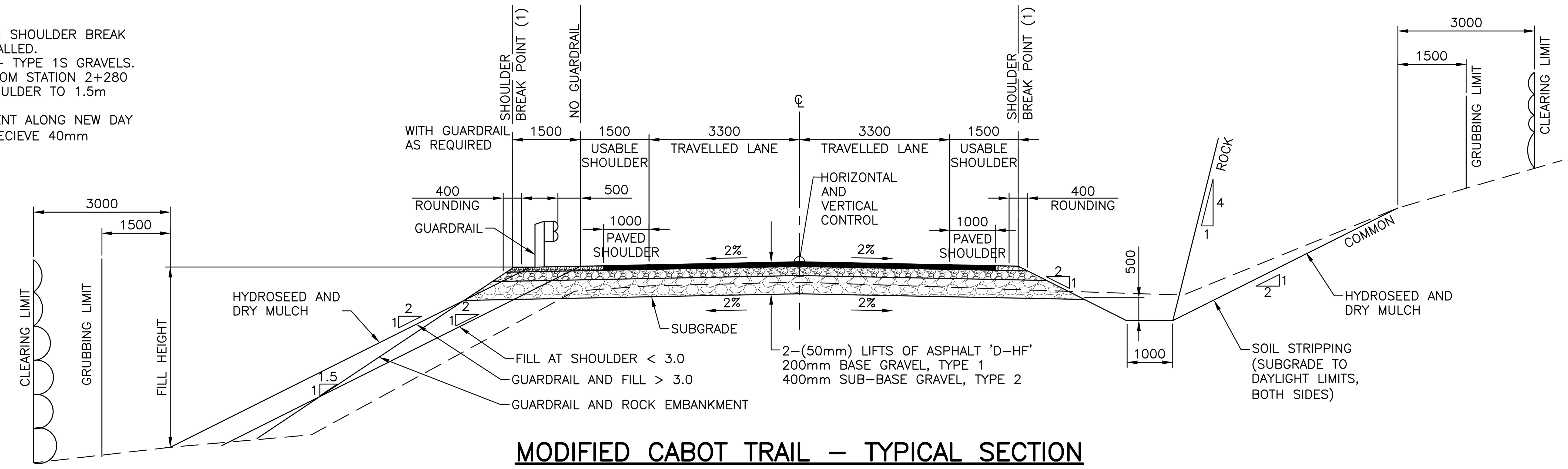
KEY PLAN



Stantec

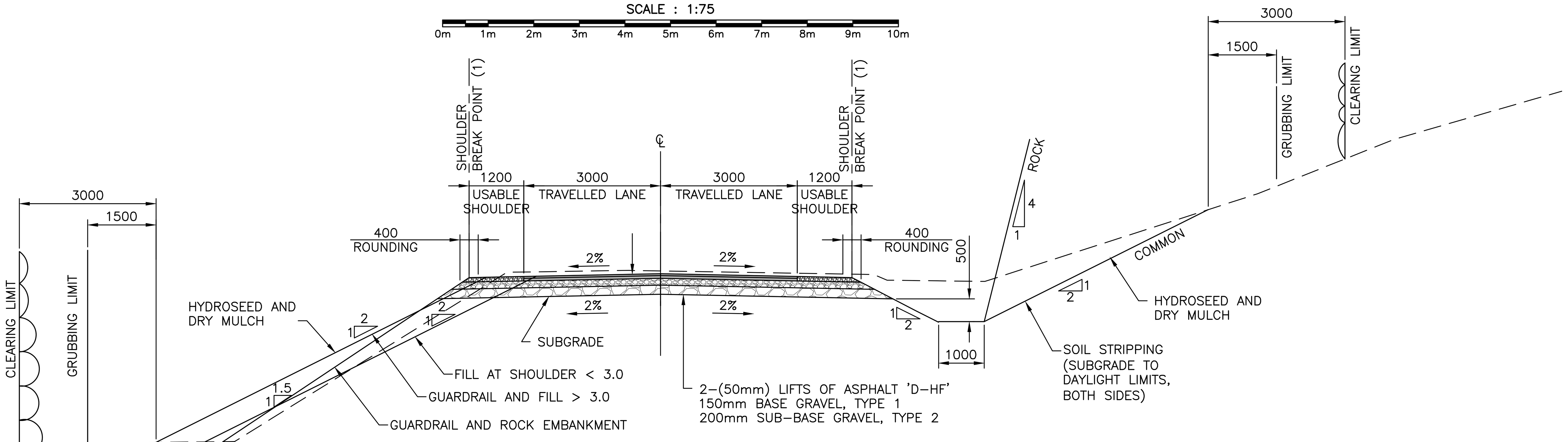
LEGEND EXISTING	LEGEND NEW
CONTOUR & ELEVATION	EDGE OF PAVE
℄ ROADWAY	℄ ROADWAY
EDGE OF PAVE	EDGE OF PAVE
GUARD RAIL	SHOULDER
℄ OF DITCH	GUARD RAIL
DAYLIGHT	DITCH LINE
EDGE OF GRAVEL	DAYLIGHT (TOP)
EDGE OF TREES	DAYLIGHT (TOE)
WATERCOURSE BOUNDARY	EDGE OF GRAVEL
CULVERT	CLEARING LIMIT
ORIGINAL GRADE CL PROFILE	CULVERT
SIGN	PRECAST BARRIER
BUILDING	RIP-RAP
CONTROL MONUMENT	
BOREHOLE	
POWER POLE	
POWER LINES	

NOTES:
1. 0.4m ROUNDING CENTERED ON SHOULDER BREAK POINT IF GUARDRAIL NOT INSTALLED.
2. 100mm SHOULDER MATERIAL – TYPE 1S GRAVELS.
3. WIDEN ROADWAY LEFT SIDE FROM STATION 2+280 TO 2+300, MATCH PAVED SHOULDER TO 1.5m RAISED CURB AT STRUCTURE.
4. EXISTING CABOT TRAIL ALIGNMENT ALONG NEW DAY USE/CAMPGROUND AREA TO RECIEVE 40mm ASPHALT SURFACE LIFT, D-HF



MODIFIED CABOT TRAIL – TYPICAL SECTION

SCALE : 1:75



MODIFIED LOCAL TYPE G – ACCESS ROAD TYPICAL SECTION

SCALE : 1:75

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

BEULACH BAN FALLS ACCESS ROAD PROFILE, TYPICAL SECTIONS AND DETAILS

designed / conçu: DSC — date JUL. 06, 2017
drawn / dessiné: JLD — date JUL. 06, 2017
approved / approuvé: RMB — date JUL. 06, 2017
Tender / Soumission: PCA Project Manager — JUL. 06, 2017 Administrateur de projets PCA

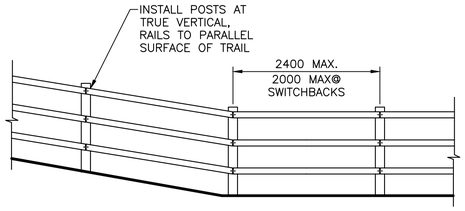
project number / no. du projet: 666

drawing no. / no. du dessin: C-4

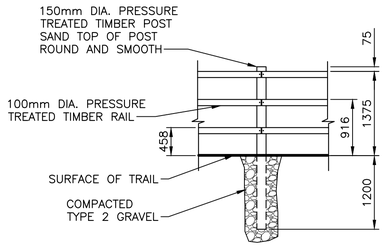
PWGSC A1 (2004)

E-DRM/GDD-E: NOT IN SYSTEM

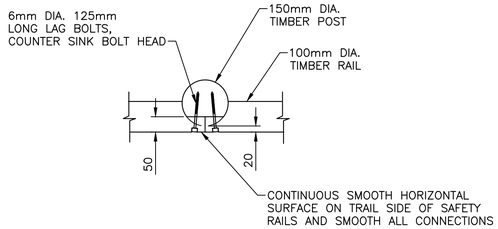
NOTE:
1. ALL WOOD TO BE PRESSURE TREATED WITH (ACQ) ALKALINE COPPER QUATERNARY COMPOUND TO THE FOLLOWING NET RETENTION.
   1 POSTS 0.18 LBS/CU. FT.
   2 RAILS 0.04 LBS/CU. FT.
2. ALL WOOD TO HAVE SMOOTH SURFACES WITH NO ROUGH EDGES OR SPLINTERS.
3. ALL METAL TO BE GALVANIZED.
4. NOTCH POST AND RAILS TO CREATE TIGHT FITTING CONNECTION.



ELEVATION
SCALE: 1:50
0m 1m 2m 3m 4m 5m



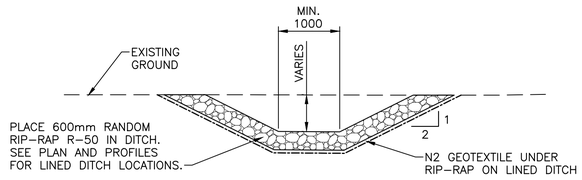
SECTION
SCALE: 1:50
0m 1m 2m 3m 4m 5m



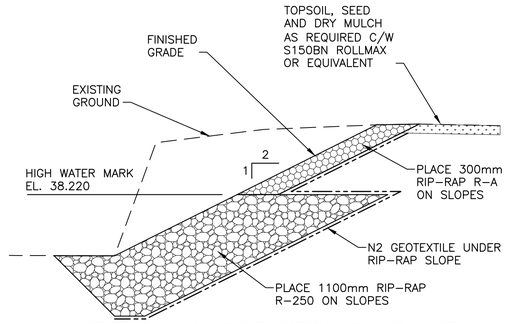
PLAN VIEW RAIL CONNECTION
SCALE : 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm

NOTES:

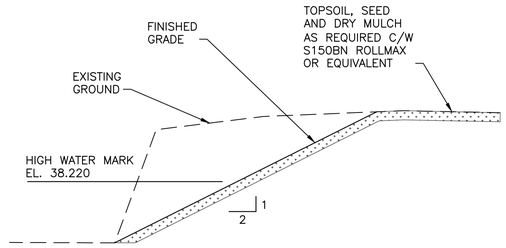
1. LINED DITCH REQUIRED BETWEEN STATION 2+350 TO 2+400 (RIGHT SIDE) AND STATION 2+400 TO 2+520 (BOTH SIDES), AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.



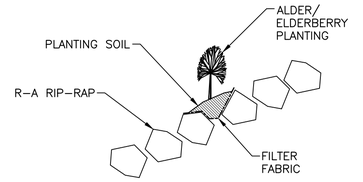
TYPICAL LINED DITCH SECTION RIP-RAP PROTECTION DETAILS
SCALE: 1:50
0m 1m 2m 3m 4m 5m



TYPICAL SLOPE RESHAPING WITH RIP-RAP SLOPE PROTECTION DETAIL
SCALE: 1:50
0m 1m 2m 3m 4m 5m

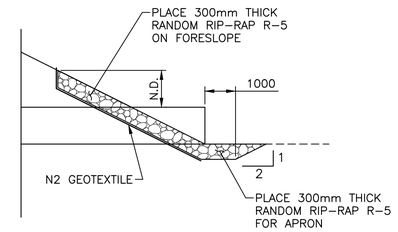


TYPICAL SLOPE RESHAPING WITH EARTH SLOPE PROTECTION DETAIL
SCALE: 1:50
0m 1m 2m 3m 4m 5m

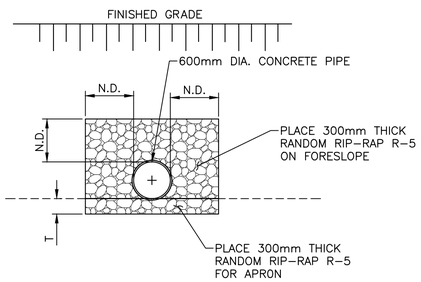


NOTES: MIN. DEPTH OF SOIL 300mm

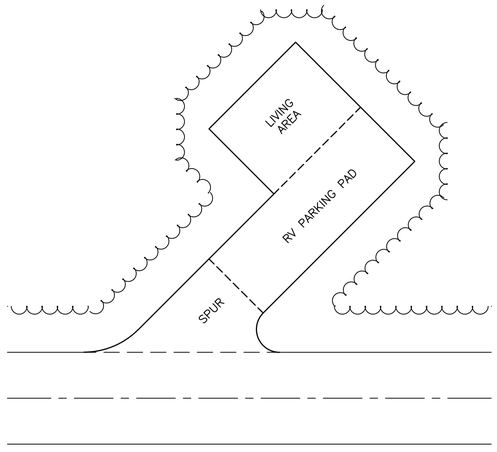
TYPICAL SLOPE PLANTING DETAIL
SCALE: N.T.S.



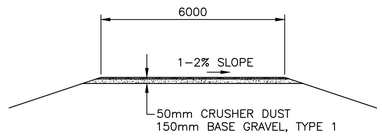
SECTION OF CULVERT RIP-RAP INLET AND OUTLET APRON
SCALE: 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



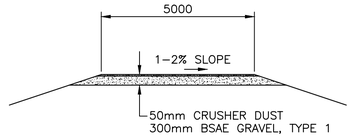
ELEVATION OF CULVERT RIP-RAP INLET AND OUTLET APRON
SCALE: 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



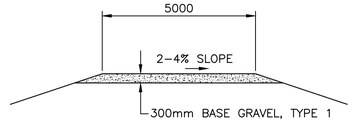
TYPICAL BACK-IN CAMPSITE LAYOUT PLAN
SCALE: 1:200
0m 5m 10m 15m 20m 25m



LIVING AREA SECTION



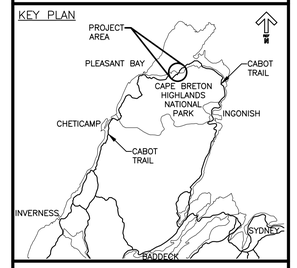
RV PARKING PAD SECTION



SPUR SECTION
SCALE: 1:100
0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND EXISTING

- 8m — CONTOUR & ELEVATION
- ℄ ROADWAY
- EDGE OF PAVE
- GUARD RAIL
- ℄ OF DITCH
- DAYLIGHT
- EDGE OF GRAVEL
- EDGE OF TREES
- WATERCOURSE BOUNDARY
- CULVERT
- ORIGINAL GRADE CL PROFILE
- SIGN
- BUILDING
- N.S.C.M. 00000 — CONTROL MONUMENT
- BH-01 — BOREHOLE
- PP — POWER POLE
- PWR — POWER LINES

LEGEND NEW

- EDGE OF PAVE
- ℄ ROADWAY
- EDGE OF PAVE
- SHOULDER
- GUARD RAIL
- DITCH LINE
- DAYLIGHT (TOP)
- DAYLIGHT (TOE)
- EDGE OF GRAVEL
- CLEARING LIMIT
- CULVERT
- PRECAST BARRIER
- RIP-RAP

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA — DATE July 6/17 — P.J. Flower — 9947

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

TYPICAL DETAILS

designed	DSC (conçu)
date	JUL. 06, 2017
drawn	JLD (dessiné)
date	JUL. 06, 2017
approved	RMB (approuvé)
date	JUL. 06, 2017
Tender	Soumission
PCA Project Manager	JUL. 06, 2017 Administrateur de projets PCA
project number	666 (no. du projet)
drawing no.	C-5 (no. du dessin)

WORKING POINTS		
ID	Northing	Easting
WP01	5,189,030.064	681,875.797
WP02	5,189,043.288	681,882.415
WP03	5,189,040.321	681,871.823
WP04	5,189,037.045	681,900.718
WP05	5,189,044.906	681,888.192
WP06	5,189,047.873	681,898.785

INTERSECTION PLAN OF DAY USE/ CAMPGROUND AREA ACCESS ROAD

SCALE: 1:200

0m 5m 10m 15m 20m 25m

INSTALL NEW
600mm DIA.
CONCRETE CULVERT
AT STA. 0+009
LENGTH = 22.50m
INV. LHS = 38.63m
INV. RHS = 37.75m
SLOPE = 3.91%

REF N

WP03 WP06 WP05 WP02 WP04 WP01

R=11.00 R=11.00

PCC 0+020 DAY USE/CAMPGROUND AREA ACCESS ROAD PTC 0+240

CAMP SITE 1 CAMP SITE 2

NEW CABOT TRAIL ℄ 0+000 PCC 0+220

2+180 2+200 2+220 2+240 2+160

TO PLEASANT BAY TO DINGWALL

INTERSECTION 1
N=5,189,030.015
E=681,889.248

INTERSECTION 2
N=5,189,097.054
E= 682,189.476

PARK BOUNDARY LIMIT OF ROW

TO PLEASANT BAY

2+480 2+500 2+520 2+540 2+560 2+580 2+600

℄ PT CABOT TRAIL WP07 WP10 TO DINGWALL

R=6.50 R=15.00

WP09 WP08 WP11 WP12 OPC

NEW GUARD RAIL
(WEAK POST)

4+060 4+040 4+020 BEULACH BAN FALLS ACCESS ROAD ℄ PCC PTC

INSTALL NEW
600mm DIA.
CONCRETE CULVERT
AT STA. 4+009
LENGTH = 17.50m
INV. LHS = 48.89m
INV. RHS = 48.50m
SLOPE = 2.23%

WORKING POINTS		
ID	Northing	Easting
WP07	5,189,086.991	682,186.719
WP08	5,189,087.650	682,196.098
WP09	5,189,082.843	682,191.724
WP10	5,189,107.276	682,203.534
WP11	5,189,089.026	682,202.847
WP12	5,189,097.704	682,215.082

INTERSECTION PLAN OF BEULACH BAN FALLS ACCESS ROAD

SCALE: 1:200

0m 5m 10m 15m 20m 25m

Parcs Canada Parks Canada

KEY PLAN

PROJECT AREA, PLEASANT BAY, CAPE BRETON HIGHLANDS NATIONAL PARK, CABOT TRAIL, INGONISH, CHETICAMP, CABOT TRAIL, INVERNESS, SYDNEY, BADDECK

Stantec

LEGEND EXISTING

- CONTOUR & ELEVATION
- ℄ ROADWAY
- EDGE OF PAVE
- GUARD RAIL
- ℄ OF DITCH
- DAYLIGHT
- EDGE OF GRAVEL
- EDGE OF TREES
- WATERCOURSE BOUNDARY
- CULVERT
- ORIGINAL GRADE CL PROFILE
- SIGN
- BUILDING
- N.S.C.M. 00000 CONTROL MONUMENT
- BH-01 BOREHOLE
- PP POWER POLE
- PWR POWER LINES

LEGEND NEW

- EDGE OF PAVE
- ℄ ROADWAY
- EDGE OF PAVE
- SHOULDER
- GUARD RAIL
- DITCH LINE
- DAYLIGHT (TOP)
- DAYLIGHT (TOE)
- EDGE OF GRAVEL
- CLEARING LIMIT
- CULVERT
- PRECAST BARRIER
- RIP-RAP

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA — P. J. Flower 9947 — DATE July 6/17

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

INTERSECTION PLANS

designed DSC / conçu
date JUL. 06, 2017
drawn JLD / dessiné
date JUL. 06, 2017
approved RMB / approuvé
date JUL. 06, 2017
Tender / Soumission
PCA Project Manager / Administrateur de projets PCA — JUL. 06, 2017

project number / no. du projet: 666

drawing no. / no. du dessin: C-6

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

PLOTTED: Jul 06, 2017 5:55pm jldigle

FILE: U:\333346833\1_transportation\3_drawing\North Aspy (N44)\Sheet Files\46833C-006_N44_INTERSECTION_PLAN.dwg

CABOT TRAIL – NORTH ASPY RIVER, SOUTH BRANCH

SEGMENT	LENGTH (m)	RADIUS (m)	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI OR A	END STATION	DELTA △
T–1	130.302		42° 45' 15.70"	STA: 2+000.000 E: 681,740.403 N: 5,188,897.408		STA: 2+130.302 E: 681,828.859 N: 5,188,993.085	
C–1	103.739	130.0	65° 36' 54.72"	STA: 2+130.302 E: 681,828.859 N: 5,188,993.085	E: 681,866.067 N: 5,189,033.330	STA: 2+234.041 E: 681,920.857 N: 5,189,034.788	45° 43' 18.0"
T–2	162.979		88° 28' 33.73"	STA: 2+234.041 E: 681,920.857 N: 5,189,034.788		STA: 2+397.020 E: 682,083.779 N: 5,189,039.122	
C–2	110.772	130.0	64° 03' 55.22"	STA: 2+397.020 E: 682,083.779 N: 5,189,039.122	E: 682,142.758 N: 5,189,040.691	STA: 2+507.792 E: 682,180.409 N: 5,189,086.116	48° 49' 17.0"
T–3	192.208		39° 39' 16.71"	STA: 2+507.792 E: 682,180.409 N: 5,189,086.116		STA: 2+700.000 E: 682,303.068 N: 5,189,234.097	

CABOT TRAIL – NORTH ASPY RIVER, SOUTH BRANCH SUPERELEVATION DEVELOPMENT

CURVE C–1	RADIUS = 130.000			Emax = 0.060 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
2+060.00	–0.020	40.410	–0.020	MATCH EXISTING CABOT TRAIL
2+066.70	–0.020	40.329	–0.020	NORMAL CROWN
2+096.70	0.000	39.996	–0.030	LEVEL CROWN
2+115.37	0.020	39.847	–0.030	REVERSE CROWN
2+152.70	0.060	39.690	–0.060	BEGIN FULL SUPER
2+211.64	0.060	39.827	–0.060	END FULL SUPER
2+248.97	0.020	40.114	–0.020	REVERSE CROWN
2+267.64	0.000	40.264	–0.020	LEVEL CROWN
2+297.64	–0.020	40.504	–0.020	NORMAL CROWN
CURVE C–2	RADIUS = 130.00			Emax = 0.060 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
2+337.30	–0.020	40.953	–0.020	NORMAL CROWN
2+346.10	–0.020	41.097	–0.016	MANUAL STATION
2+354.90	–0.020	41.354	–0.009	MANUAL STATION
2+363.70	–0.020	41.604	0.000	LEVEL CROWN
2+382.09	–0.020	42.240	0.020	REVERSE CROWN
2+419.30	–0.060	43.984	0.060	BEGIN FULL SUPER
2+485.39	–0.060	48.197	0.060	END FULL SUPER
2+522.73	–0.020	49.775	0.020	REVERSE CROWN
2+541.39	–0.020	50.216	0.000	LEVEL CROWN
2+571.39	–0.020	50.437	–0.020	NORMAL CROWN
2+590.00	–0.020	50.278	–0.020	MATCH EXISTING CABOT TRAIL

DAY USE/CAMPGROUND AREA ACCESS ROAD ALIGNMENT GEOMETRY

ID	SEGMENT TYPE	LENGTH (m)	RADIUS (m)	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI OR A	END STATION	DELTA △
T–1	TANGENT	15.261		344° 21' 04.34"	STA: 0+000.000 E: 681,889.248 N: 5,189,030.015		STA: 0+015.261 E: 681,885.132 N: 5,189,044.711	
C–1	CURVE	13.691	14.300	11° 46' 47.14"	STA: 0+015.261 E: 681,885.132 N: 5,189,044.711	E: 681,883.130 N: 5,189,051.857	STA: 0+028.953 E: 681,887.821 N: 5,189,057.608	54° 51' 25.6"
C–2	CURVE	113.983	87.000	76° 44' 29.04"	STA: 0+028.953 E: 681,887.821 N: 5,189,057.608	E: 681,930.072 N: 5,189,109.397	STA: 0+142.936 E: 681,991.000 N: 5,189,081.920	75° 03' 58.2"
C–3	CURVE	33.130	13.000	187° 16' 53.49"	STA: 0+142.936 E: 681,991.000 N: 5,189,081.920	E: 682,029.779 N: 5,189,064.431	STA: 0+176.066 E: 681,987.848 N: 5,189,057.255	146° 00' 50.7"
C–4	CURVE	43.676	87.000	274° 40' 14.07"	STA: 0+176.066 E: 681,987.848 N: 5,189,057.255	E: 681,965.859 N: 5,189,053.492	STA: 0+219.742 E: 681,944.773 N: 5,189,060.774	28° 45' 50.5"
C–5	CURVE	12.706	13.000	317° 03' 12.54"	STA: 0+219.742 E: 681,944.773 N: 5,189,060.774	E: 681,938.239 N: 5,189,063.031	STA: 0+232.448 E: 681,936.456 N: 5,189,069.710	56° 00' 06.5"
T–2	TANGENT	17.552		345° 03' 15.77"	STA: 0+232.448 E: 681,936.456 N: 5,189,069.710		STA: 0+250.000 E: 681,931.930 N: 5,189,086.667	

DAY USE/CAMPGROUND AREA ACCESS ROAD SUPERELEVATION DEVELOPMENT

CURVE C–1	RADIUS = 14.300			Emax = 0.060 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
0+000.00	–0.005	39.774	0.005	MATCH EXISTING CABOT TRAIL
0+008.692	0.007	40.124	–0.007	TRANSITION
0+035.000	0.060	39.545	–0.060	BEGIN FULL SUPER
CURVE C–3	RADIUS = 13.000			Emax = 0.060 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
0+142.936	0.060	39.546	–0.060	END FULL SUPER
0+176.066	0.020	39.224	–0.020	BEGIN FULL SUPER
CURVE C–5	RADIUS = 13.000			Emax = 0.060 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
0+240.666	0.020	39.232	–0.020	END FULL SUPER
0+246.537	0.007	39.427	–0.007	TRANSITION
0+249.773	–0.001	39.618	0.001	MATCH EXISTING CABOT TRAIL

BEULACH BAN FALLS ACCESS ROAD ALIGNMENT GEOMETRY

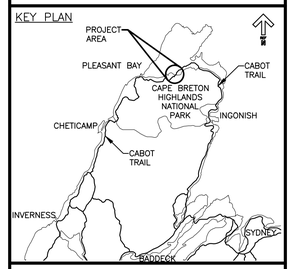
ID	SEGMENT TYPE	LENGTH (m)	RADIUS (m)	TANGENT OR CHORD AZIMUTH	BEGIN STATION	PI OR A	END STATION	DELTA △
T–1	TANGENT	10.500		129° 39' 16.71"	STA: 4+000.000 E: 682,189.475 N: 5,189,097.054		STA: 4+010.500 E: 682,197.559 N: 5,189,090.353	
C–1	CURVE	26.670	16.000	177° 24' 28.07"	STA: 4+010.500 E: 682,197.559 N: 5,189,090.353	E: 682,211.123 N: 5,189,079.111	STA: 4+037.170 E: 682,198.631 N: 5,189,066.690	95° 30' 22.7"
T–2	TANGENT	10.843		225° 09' 39.43"	STA: 4+037.170 E: 682,198.631 N: 5,189,066.690		STA: 4+048.014 E: 682,190.942 N: 5,189,059.044	
C–2	CURVE	59.161	266.470	231° 31' 16.60"	STA: 4+048.014 E: 682,190.942 N: 5,189,059.044	E: 682,169.880 N: 5,189,038.100	STA: 4+107.175 E: 682,144.723 N: 5,189,022.308	12° 43' 14.3"

BEULACH BAN FALLS ACCESS ROAD SUPERELEVATION DEVELOPMENT

CURVE C–1	RADIUS = 16.000			Emax = 0.030 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
4+000.000		49.753		BEGIN ALIGNMENT
4+004.300	0.032	49.842	–0.032	MATCH CABOT TRAIL
4+008.520	0.030	49.934	–0.030	BEGIN FULL SUPER
4+034.199	0.030	51.623	–0.030	END FULL SUPER
CURVE C–2	RADIUS = 266.470			Emax = 0.020 m/m
STATION	LEFT LANE	CL ELEV.	RIGHT LANE	DESCRIPTION
4+042.344	0.020	52.356	–0.020	BEGIN FULL SUPER
4+103.460	0.020	54.256	–0.020	END FULL SUPER
4+111.075	0.000	53.990	–0.020	TRANSITION
4+120.00	–0.020	53.720	–0.020	MATCH EXISTING ACCESS ROAD

Parcs Canada Parks Canada

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
9947
B.A. Flower
DATE July 6/17

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

ALIGNMENT GEOMETRY AND SUPERELEVATION DEVELOPMENT TABLES

designed DSC / conçu
date JUL. 06, 2017
drawn JLD / dessiné
date JUL. 06, 2017
approved RMB / approuvé
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JUL. 06, 2017
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project number / no. du projet: 666

drawing no. / no. du dessin: C–7

E–DRM/GDD–E: NOT IN SYSTEM

PWGSC A1 (2004)

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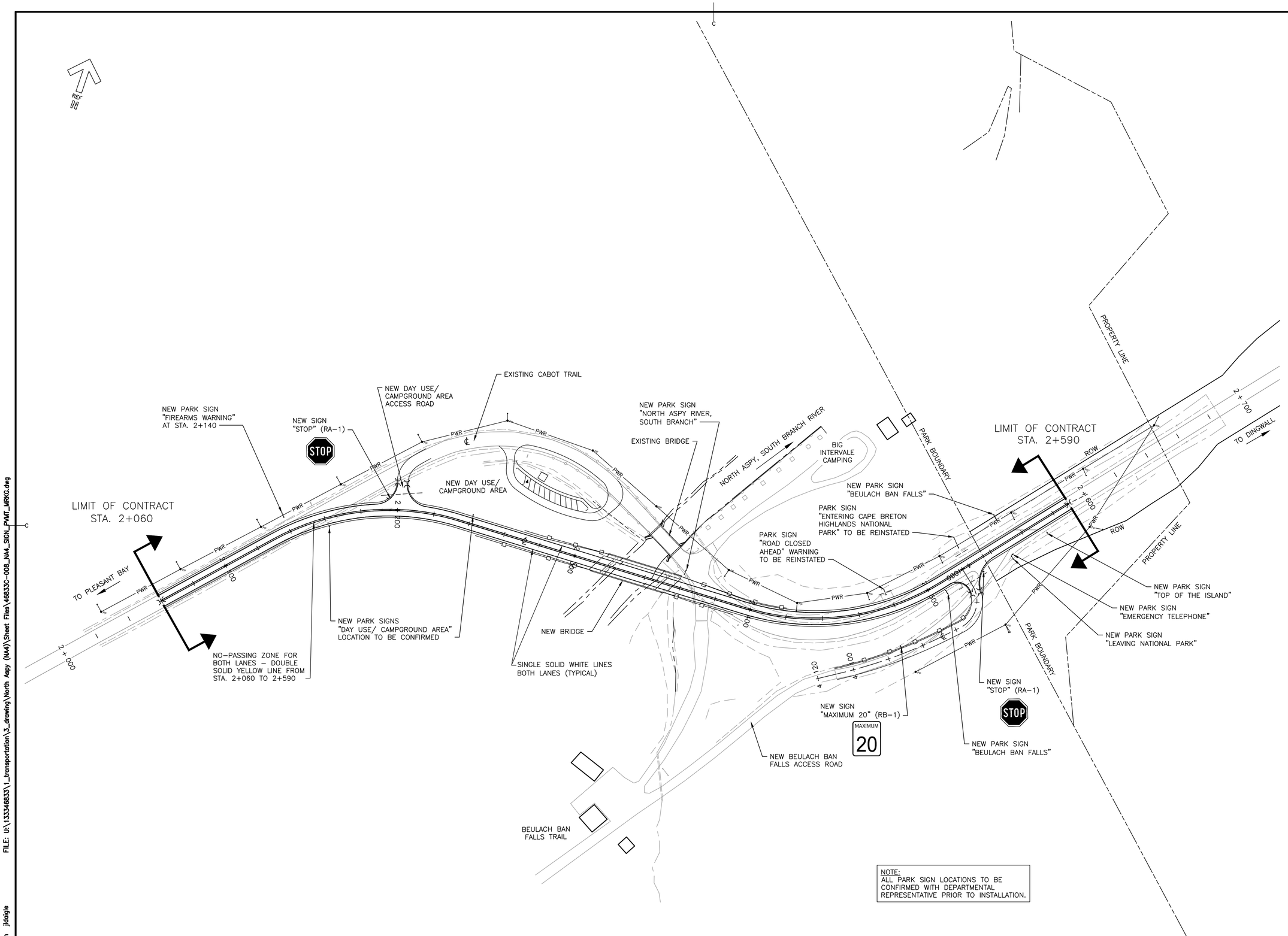

NOTE:
ALL PARK SIGN LOCATIONS TO BE CONFIRMED WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO INSTALLATION.

PLAN

SCALE : 1:1000

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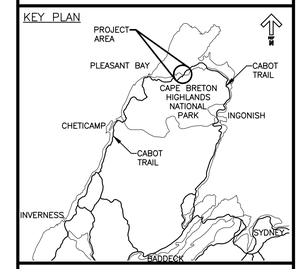
0 10 20mm 40 60 80 100 120 140 160 180 200mm

Parcs Canada Parks Canada

KEY PLAN



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LEGEND

LIMIT OF MARKINGS

NOTES:

1. PARK INFORMATION SIGNS TO BE SUPPLIED BY PARKS CANADA, CONTRACTOR TO INSTALL.
2. REGULATORY AND WARNING SIGNS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
3. ALL REGULATORY AND WARNING SIGNS ARE TO BE REMOVED AND REPLACED c/w NEW POSTS.
4. ALL PARK INFORMATION SIGNS ARE TO REMOVED, STORED AND REINSTATED ON NEW POSTS AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.
5. CONTRACTOR TO SUPPLY AND INSTALL ALL PAVEMENT LINE MARKINGS
6. ALL PAVEMENT MARKINGS TO CONFORM TO NSTIR STANDARD SPECIFICATION – (LATEST EDITION) – DIVISION 6 – SECTION 6.
7. PAVEMENT MARKINGS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED AND APPROVED ON SITE BY THE DEPARTMENTAL REPRESENTATIVE.
8. ALL TRAFFIC MARKINGS SHALL BE IN ACCORDANCE WITH THE TRANSPORTATION ASSOCIATION OF CANADA (TAC) MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SPECIFICATIONS.

REGISTERED PROFESSIONAL ENGINEER
DATE July 6/17
B.C. Flower
9947
PROVINCE OF NOVA SCOTIA

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

SIGNAGE AND PAVEMENT MARKING PLAN

designed	JLD	conçu
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date	JUL. 06, 2017	
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PCA Project Manager		JUL. 06, 2017 Administrateur de projets PCA

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E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

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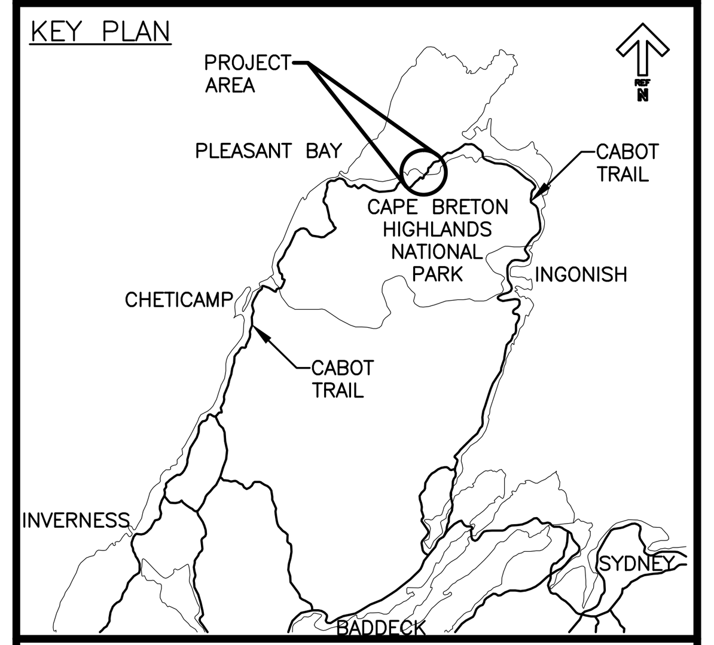

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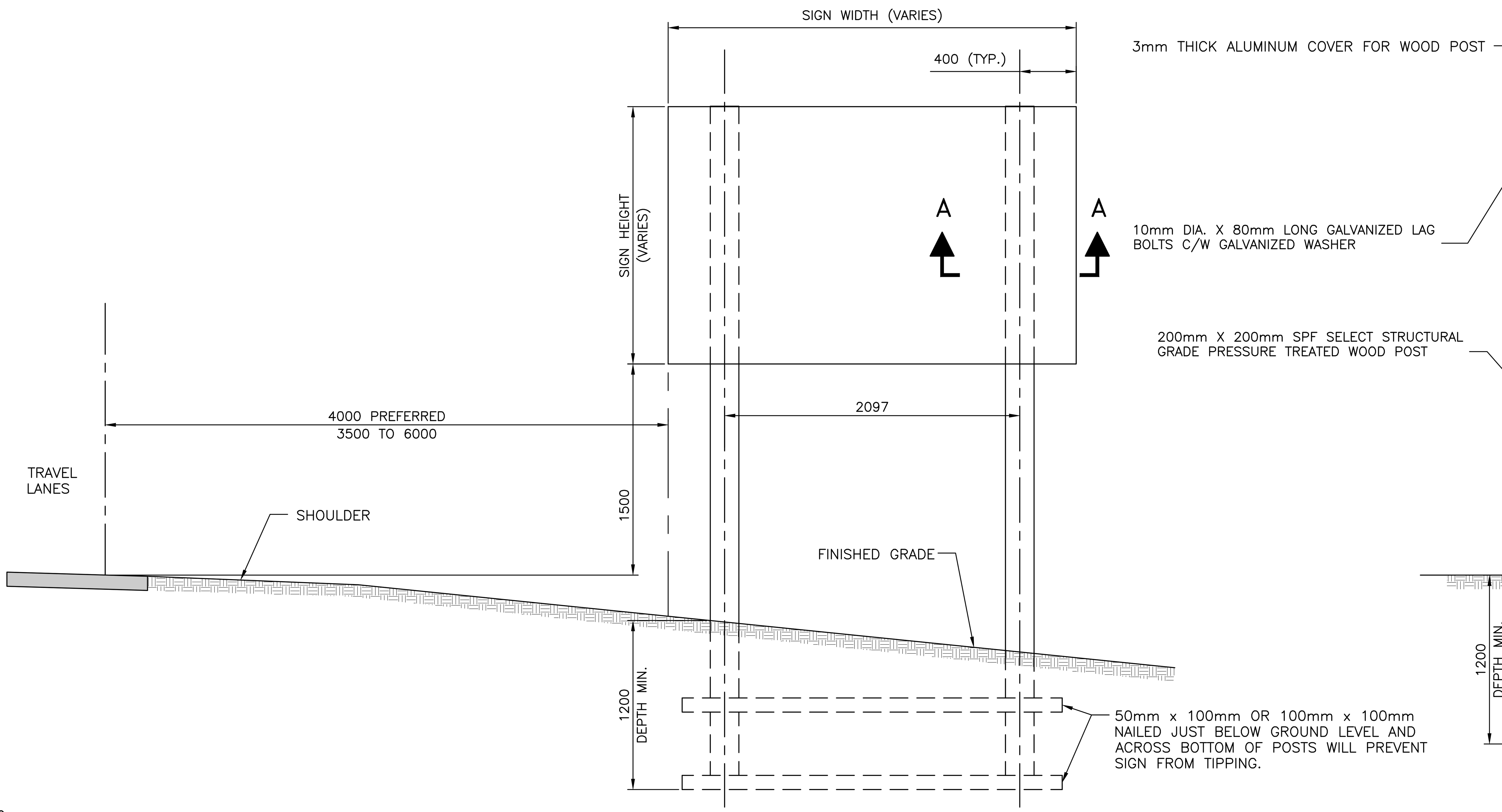

TYPICAL TWO POST SIGN FRONT AND SIDE ELEVATION VIEW

SCALE: 1:25

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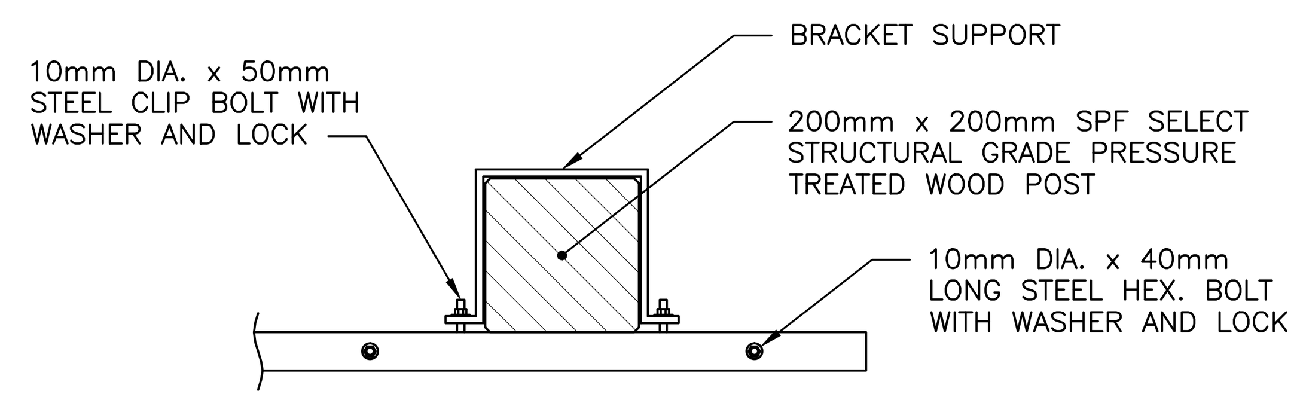

SECTION A–A

SCALE : 1:10

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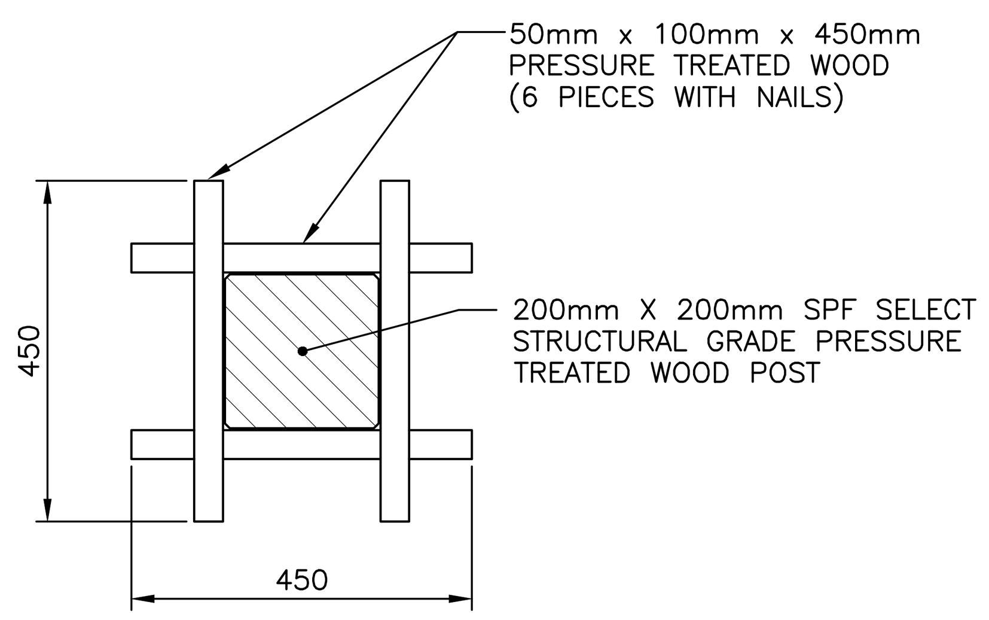

SECTION B–B

SCALE : 1:10

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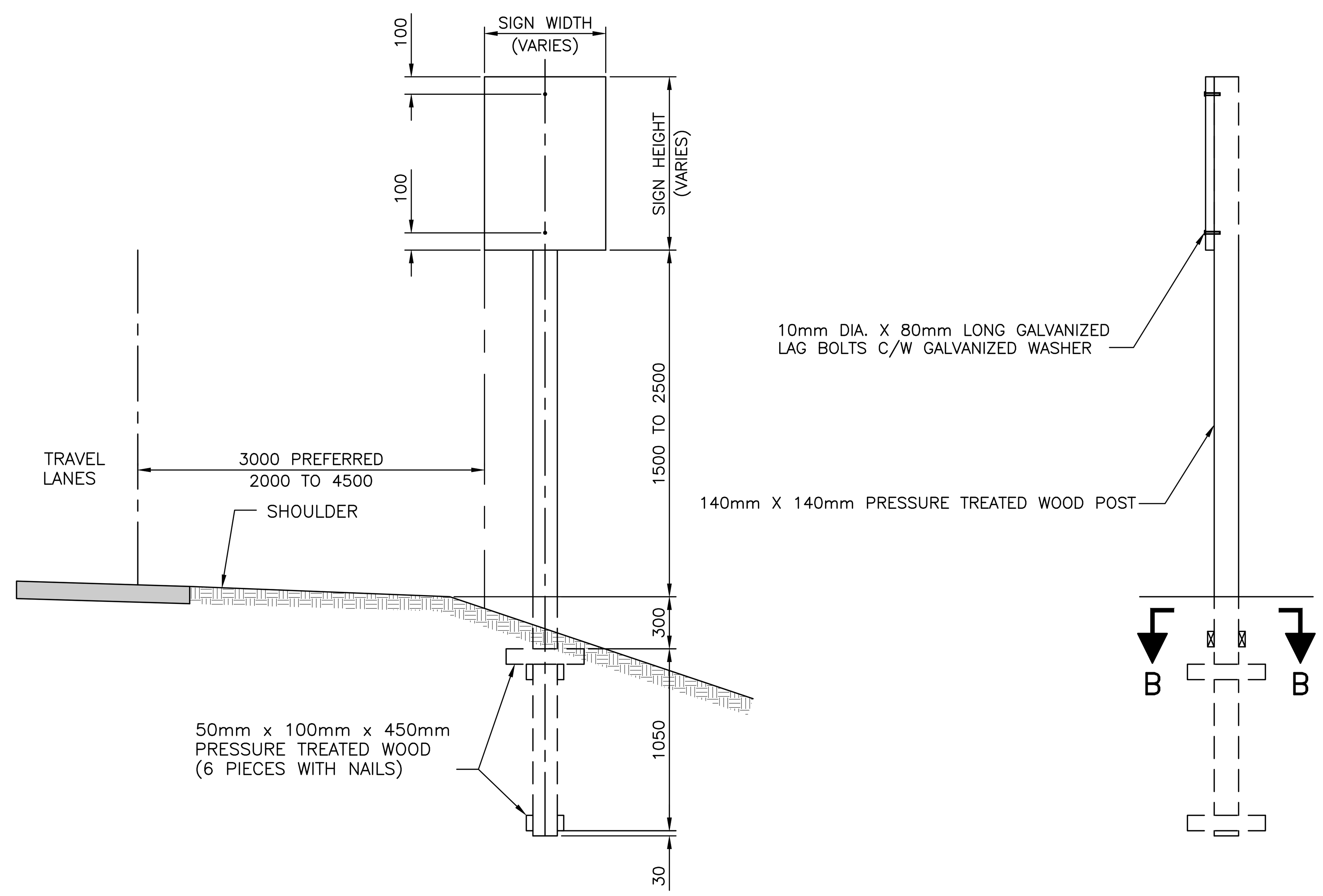

TYPICAL ONE POST SIGN FRONT AND SIDE ELEVATION VIEW

SCALE: 1:25

0mm 500mm 1000mm 1500mm 2000mm 2500mm

LONGITUDINAL MARKINGS		
NAME OF LINE	LENGTH DIMENSIONS (m) AND WIDTH DIMENSIONS (m)	USE
SOLID	100	EDGE LINES/PARKING STALLS (WHITE) DIRECTIONAL DIVIDING LINES (YELLOW) LANE LINES PROHIBITING LANE CHANGES (WHITE)
BROKEN	3000 6000 3000 100	DIRECTIONAL DIVIDING LINES (YELLOW) LANE LINES (WHITE)
SIMULTANEOUS SOLID AND BROKEN	3000 6000 3000 100 100 100	DIRECTIONAL DIVIDING LINES (YELLOW) TWO-WAY LEFT TURN LANES (YELLOW) LANE LINES WHERE LANE CHANGES FROM ONE SIDE ARE PROHIBITED (WHITE)
DOUBLE SOLID	100 100 100	DIRECTIONAL DIVIDING LINES (YELLOW)

PAVEMENT MARKINGS

(MUTCD – FIGURE C1-1)

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

SIGNAGE AND PAVEMENT MARKING DETAILS

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drawn / dessiné: JLD
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date: JUL. 06, 2017
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PCA Project Manager / Administrateur de projets PCA
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drawing no. / no. du dessin: C-9

NOTES

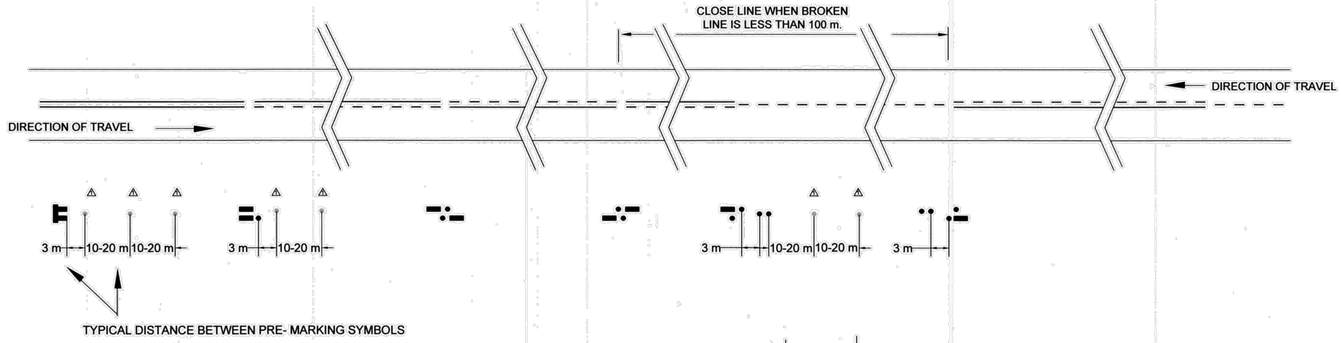
1. Use posted speed limit or 85th percentile speed whichever is higher.
2. Sight distance is based on a measurement from an eye height of 115 cm to an object height of 115 cm.
3. Mark a no-passing zone when the sight distance for the speed on the curve (measured in the field) is less than minimum sight distance listed in this Table 1.
4. Also see S-2013-312 Highway Signage and Pavement Markings - Railway Crossings

TABLE 1
NO-PASSING ZONE REQUIREMENT FOR VERTICAL OR HORIZONTAL CURVES

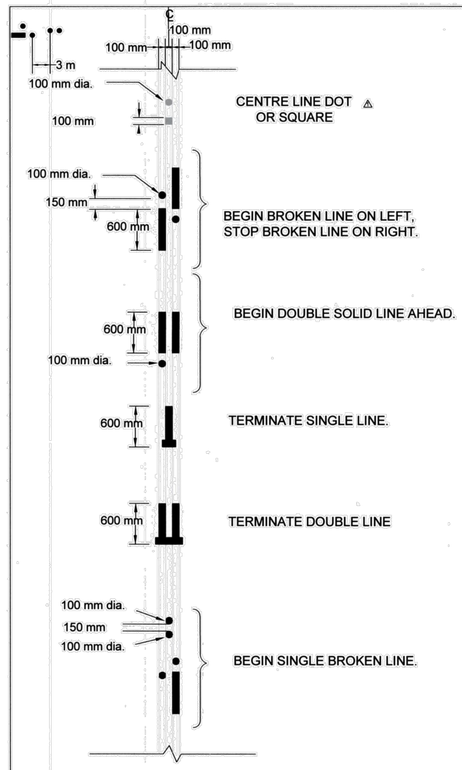
SPEED LIMIT (km/h) SEE NOTE 1	MINIMUM SIGHT DISTANCE (m) SEE NOTES 2 AND 3
50	160
60	200
70	240
80	275
90	330
100	400
110	475
120	565

TABLE 2
SOLID LINE LENGTH ON APPROACHES TO INTERSECTIONS AND RAILWAY CROSSINGS

SPEED LIMIT (km/h) SEE NOTE 1	SOLID LINE LENGTH (m)
50	80
60	100
70	120
80	140
90	165
100	200
110	240
120	285



TYPICAL PRE-MARKING SCENARIOS

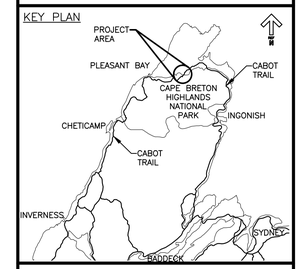


LEGEND FOR PRE-MARKING SYMBOLS

No.	Sign Classification	Description	Side (looking up chainage)	Station	Sign Dimensions (Regulatory & Warning Only)	MUTCD Sign ID (mm)	No. of Posts
1	Park	Park Sign - "Firearms Warning"	Left	2+140	N/A	-	3
2	Park	Park Sign - "Day Use/Campground Area"	Right	2+162	N/A	-	2
3	Regulatory	Stop Sign	Left	2+200	600 x 600	RA-1	1
4	Park	Park Sign - "Day Use/Campground Area"	Left	2+240	N/A	-	2
5	Park	Park Sign - "North Aspy River South Branch"	Left	2+360	N/A	-	2
6	Park	Park Sign - "Road Closed Ahead Warning"	Left	2+477	N/A	-	2
7	Park	Park Sign - "Beulach Ban Falls"	Right	2+508	N/A	-	3
8	Park	Park Sign - "Entering Cape Breton Highlands National Park"	Left	2+526	N/A	-	2
9	Park	Park Sign - "Leaving National Park"	Right	2+548	N/A	-	2
10	Park	Park Sign - "Emergency Telephone" Kiosk	Right	2+549	N/A	-	1
11	Park	Park Sign - "Top of the Island"	Right	2+571	N/A	-	2
12	Regulatory	Stop Sign	Left	4+007	600 x 600	RA-1	1
13	Regulatory	Speed Limit - "Maximum 20"	Right	4+071	600 x 750	RB-1	1
14	Regulatory	One-Way	Right	B.Ban Falls Parking	900 x 300	RA-1	1
15	Regulatory	Entry Prohibited Sign	Right	B.Ban Falls Parking	600 x 600	RB-23	1

Parcs Canada Parks Canada

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA 9947 July 12/17

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

SIGNAGE AND PAVEMENT PRE–MARKING DETAILS

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PWGSC A1 (2004)

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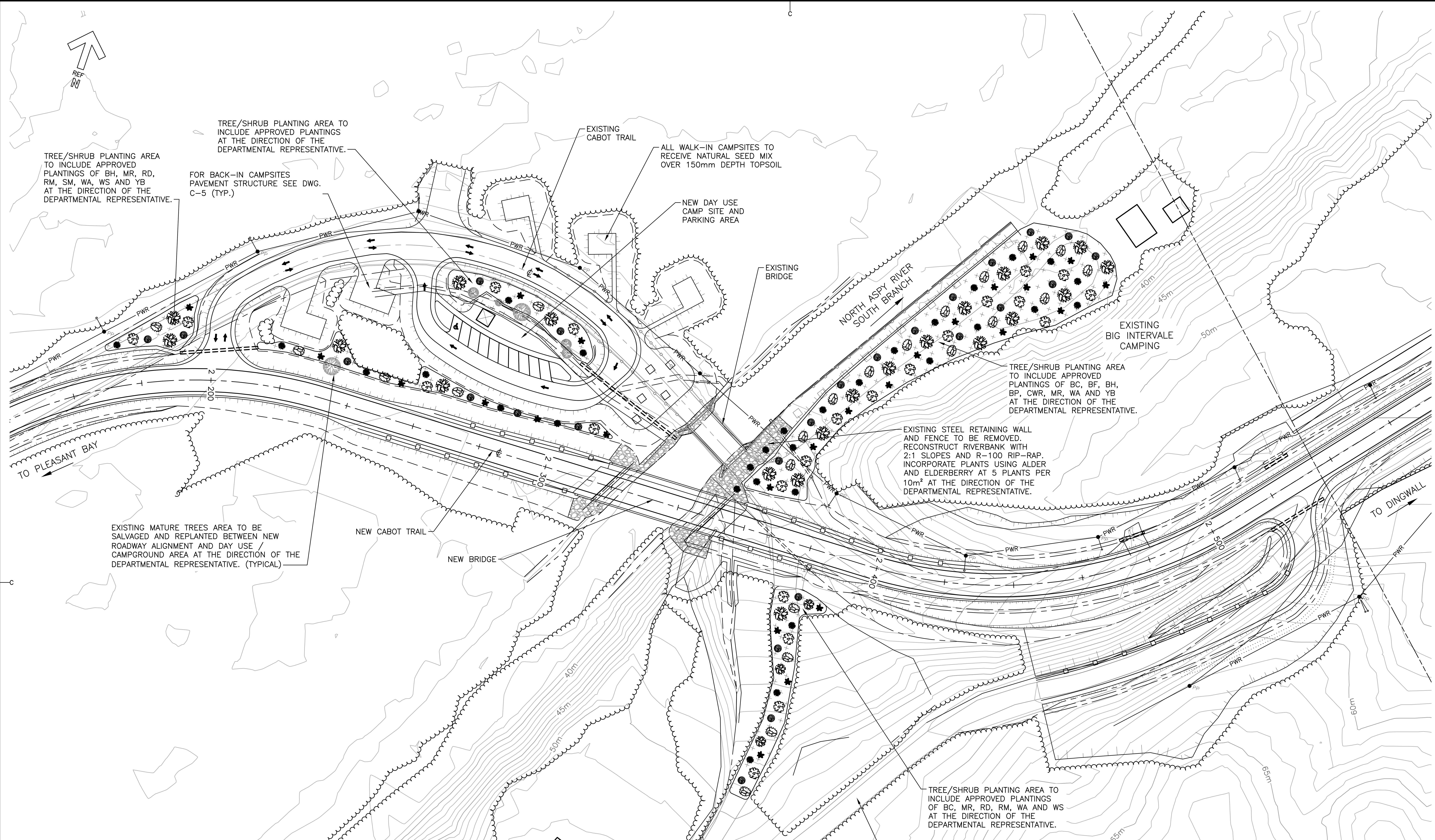

LANDSCAPING NOTES:

1. LOCATION AND PLANTING NUMBER OF EACH PLANT SPECIE TO BE CONFIRMED AND APPROVED BY DEPARTMENTAL REPRESENTATIVE.
2. ALL LANDSCAPED RECLAMATION AREAS TO RECEIVE NATURAL SEED MIX OVER 150mm DEPTH TOPSOIL. THIS INCLUDES AREAS OUTSIDE OF THE ROADWAY RECONSTRUCTION LIMITS. AREA = APPROXIMATELY 5,500 m²
3. SEED MIXTURE TO MEET NOVA SCOTIA HIGHWAY SEED MIX REQUIREMENTS.
4. DRY MULCH SEEDED AREAS WHERE SLOPE IS 3:1 OR STEEPER.
5. ALL NEW TREE PLANTINGS TO BE PROTECTED FROM MOOSE BROWSE BY STAKING EACH TREE WITH 3 TIMBER STAKES (MIN. 50mm x 50mm) AND CHICKEN WIRE TO A MINIMUM HEIGHT OF 1.5m. MIXTURE OF PARTICLES, MICROORGANISMS AND ORGANIC MATTER WHICH PROVIDES SUITABLE MEDIUM FOR SUPPORTING INTENDED PLANT GROWTH.
6. PLANTING SOIL REQUIREMENTS: SOIL TEXTURE BASED ON THE CANADIAN SYSTEM OF SOIL CLASSIFICATION, TO CONSIST OF 20 TO 70% SAND, MINIMUM 7% CLAY, AND CONTAIN 2 TO 10% ORGANIC MATTER BY WEIGHT.
   - CONTAIN NO TOXIC ELEMENTS OR GROWTH INHIBITING MATERIALS.
   - FINISHED SURFACE FREE FROM:
     .1 DEBRIS AND STONES OVER 50mm DIAMETER.
     .2 COURSE VEGETATION MATERIAL, 10mm DIAMETER AND 100mm LENGTH OCCUPYING MORE THAN 2% OF SOIL VOLUME
     .3 CONSISTENCY: FRIABLE WHEN MOIST
     .4 MIN. DEPTH – 300mm FOR SLOPE PLANTING
        – 450mm FOR SHRUBS
        – 600mm FOR TREES.
7. EXISTING TREE/SHRUB VEGETATION IS THE BE RETAINED AS MUCH AS POSSIBLE.

LANDSCAPING PLAN

SCALE: 1:600

0m 5m 10m 20m 30m 40m 50m

APPROVED PLANT LIST

CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY.
WS	PICEA GLAUCA	WHITE SPRUCE	100cm POTTED	4
BF	ABIES VBALSAMIFERA	BALSAM FIR	100cm POTTED	3
WA	FRAXIMUS AMERICANA	WHITE ASH	100cm POTTED	6
RM	ACER RUBRUM	RED MAPLE	100cm POTTED	4
YB	BETULA ALLEGHANIENSIS	YELLOW BIRCH	100cm POTTED	2
BP	POPULUS BALSAMIFERA	BALSAM POPLAR	100cm POTTED	2
BH	DIERVILLA LONICERA	BUSH HONEYSUCKLE	50cm POTTED	12
BC	ARONIA MELANOVARPA	BLACK CHOKECHERRY	40cm POTTED	8
MR	AMELANCHIER BARTRAMIANA	MOUNTAIN SERVICEBERRY	40cm POTTED	12
CWR	ROSA VIRGINIANA	COMMON WILD ROSE	40cm POTTED	10
RD	CORNUS STOLONIFERA	RED OSIER DOGWOOD	40cm POTTED	11
SM	ACER PENSYLVANICUM	STRIPED MAPLE	50cm POTTED	4
GA	ALNUS INCANA	GREY ALDER	200cm POTTED	300
AE	SAMBUCUS CANADENSIS	AMERICAN ELDERBERRY	40cm POTTED	150

Parcs Canada Parks Canada

KEY PLAN: PROJECT AREA, PLEASANT BAY, CABOT TRAIL, CAPE BRETON HIGHLANDS NATIONAL PARK, INGONISH, CHETICAMP, CABOT TRAIL, INVERNESS, SYDNEY, BADDECK

Stantec

LEGEND EXISTING: 8m CONTOUR & ELEVATION; ℄ ROADWAY; EDGE OF PAVE; GUARD RAIL; ℄ OF DITCH; DAYLIGHT; EDGE OF GRAVEL; EDGE OF TREES; WATERCOURSE BOUNDARY; CULVERT; ORIGINAL GRADE CL PROFILE; SIGN; BUILDING; N.S.C.M. 00000 CONTROL MONUMENT; BH-01 BOREHOLE; PP POWER POLE; PWR POWER LINES

LEGEND NEW: EDGE OF PAVE; ℄ ROADWAY; EDGE OF PAVE; SHOULDER; GUARD RAIL; DITCH LINE; DAYLIGHT (TOP); DAYLIGHT (TOE); EDGE OF GRAVEL; CLEARING LIMIT; CULVERT; PRECAST BARRIER; RIP-RAP

REGISTERED PROFESSIONAL ENGINEER — R.J. Flower — 9947 — PROVINCE OF NOVA SCOTIA

revisions		date
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project / projet: NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

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project number / no. du projet: 666

drawing no. / no. du dessin: C-11

DESIGN SECTIONS

SCALE: 1:200

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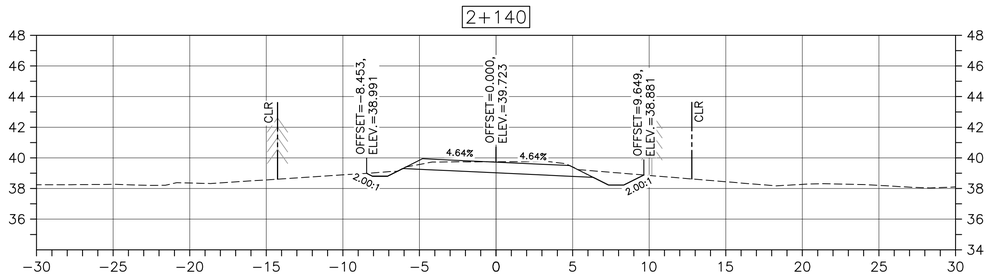
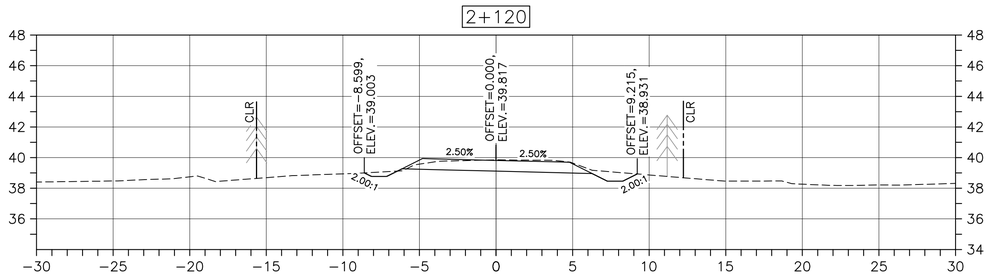
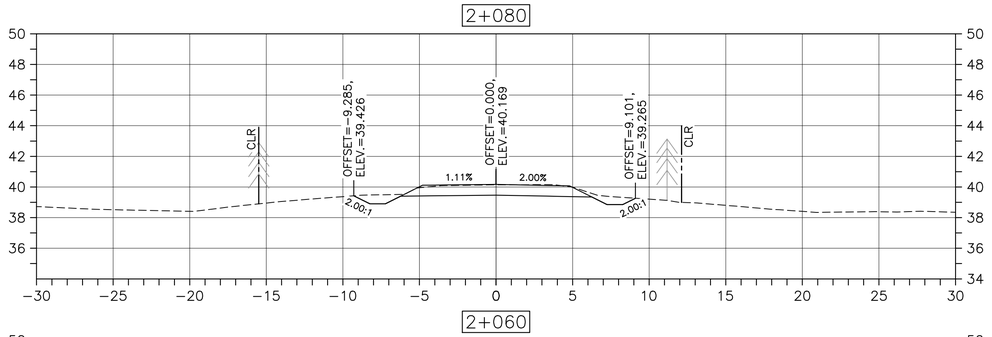
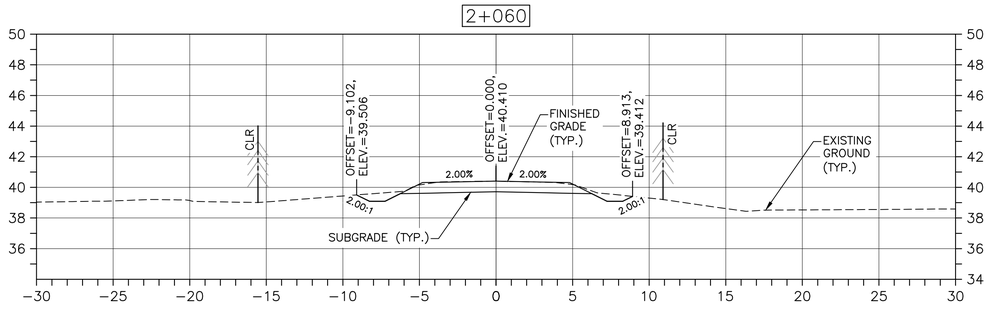
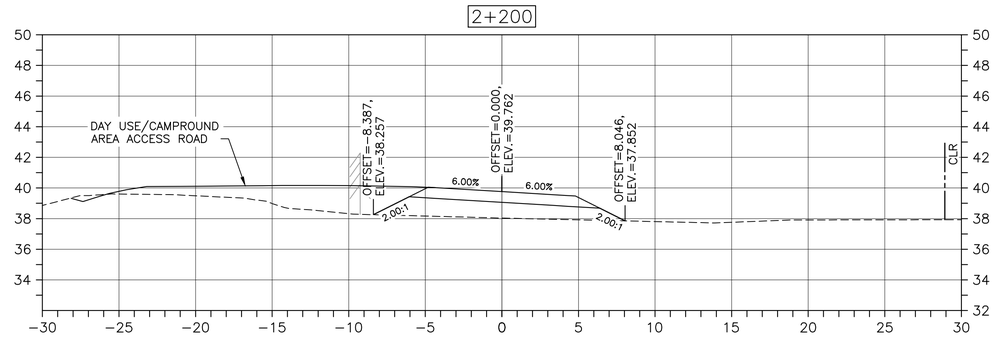
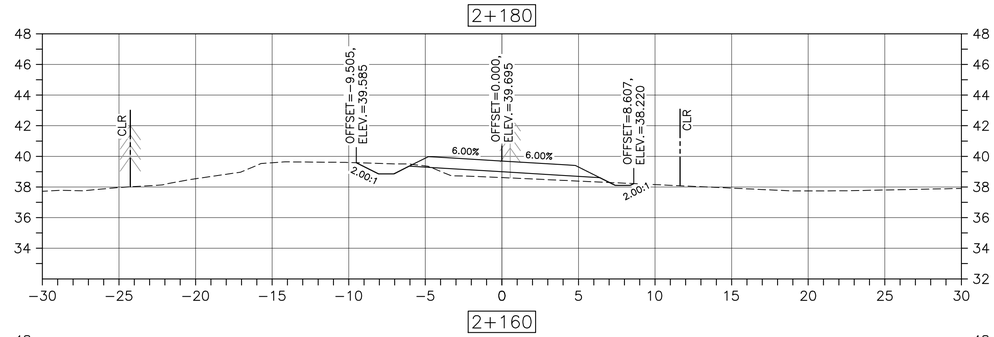


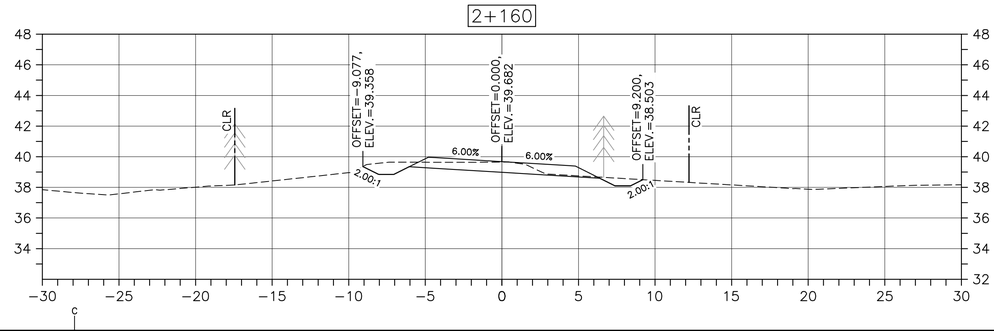






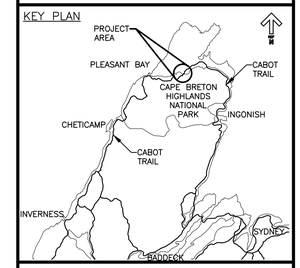






Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE July 6/17 — R.J. Flower — 9947

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DESIGN SECTIONS STA. 2+060 TO STA. 2+200

designed DSC / conçu	
date JUL. 06, 2017	
drawn JLD / dessiné	
date JUL. 06, 2017	
approved RMB / approuvé	
date JUL. 06, 2017	
Tender / Soumission	JUL. 06, 2017
PCA Project Manager	Administrateur de projets PCA
project number / no. du projet	666
drawing no. / no. du dessin	C−12

FILE: u:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

PLOTTED: Jul 06, 2017 4:13pm jdoigle

PWGSC A1 (2004)

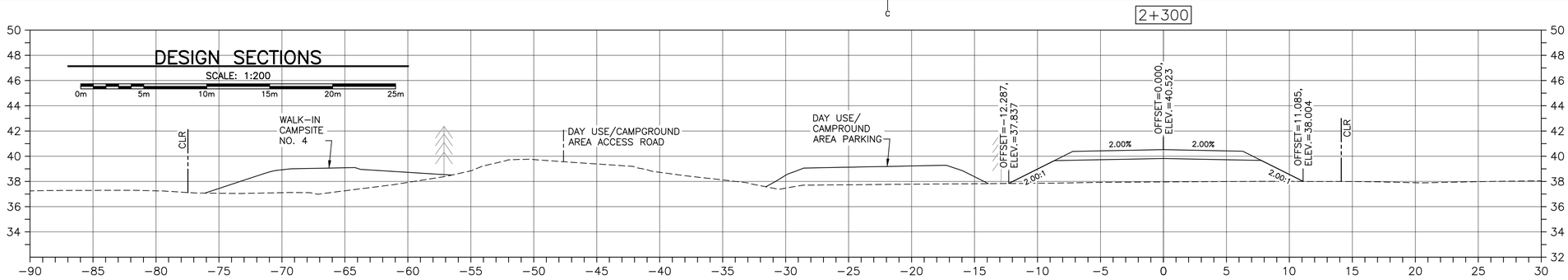
0 10 20mm 40 60 80 100 120 140 160 180 200mm

E-DRM/GDD-E: NOT IN SYSTEM

DESIGN SECTIONS

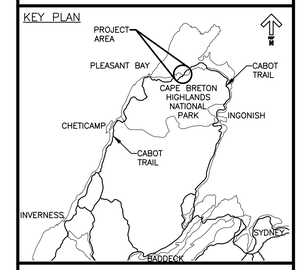
SCALE: 1:200

0m 5m 10m 15m 20m 25m



Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — DATE July 6/17 — R.C. Flower — 9947

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DESIGN SECTIONS STA. 2+220 TO STA. 2+300

designed DSC	conçu
date JUL. 06, 2017	
drawn JLD	dessiné
date JUL. 06, 2017	
approved RMB	approuvé
date JUL. 06, 2017	
Tender	Soumission
PCA Project Manager	JUL. 06, 2017 Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C–13

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

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PLOTTED: Jul 06, 2017 4:14pm jdaigle

FILE: \\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

DESIGN SECTIONS

SCALE: 1:200

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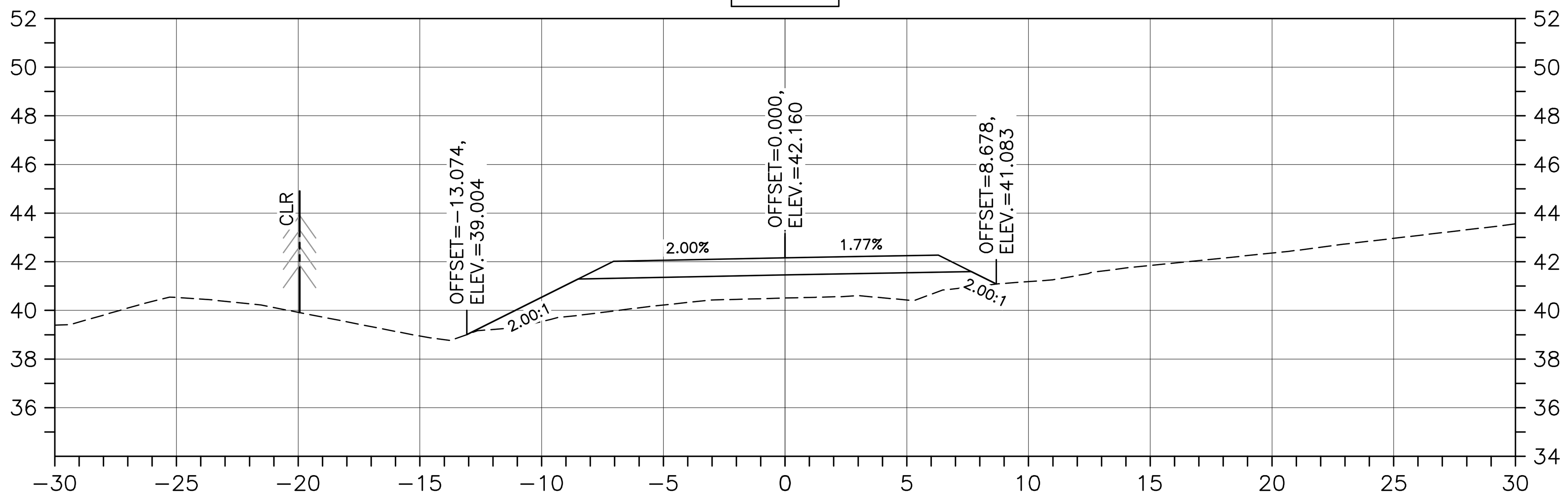
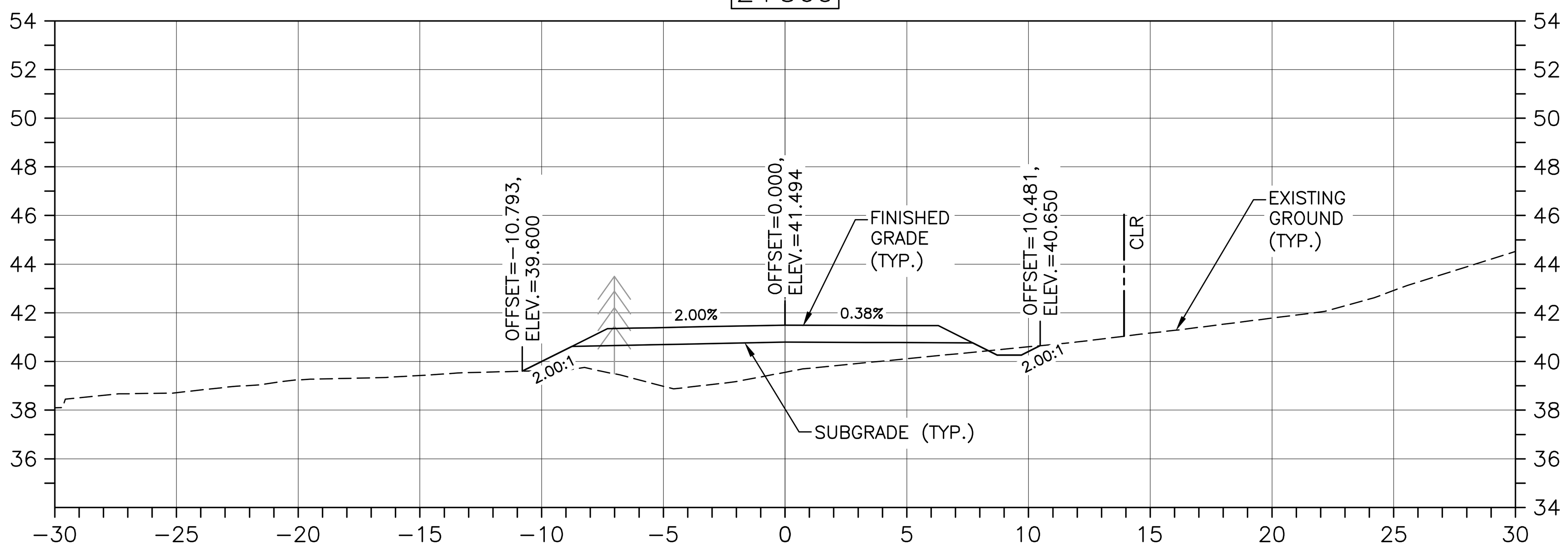
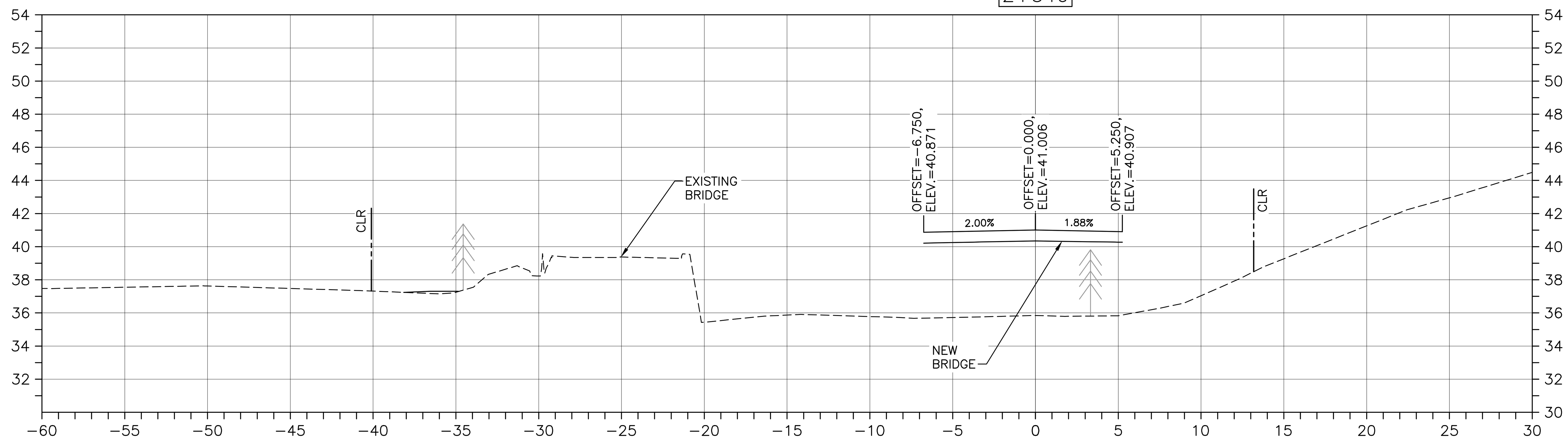
2+380



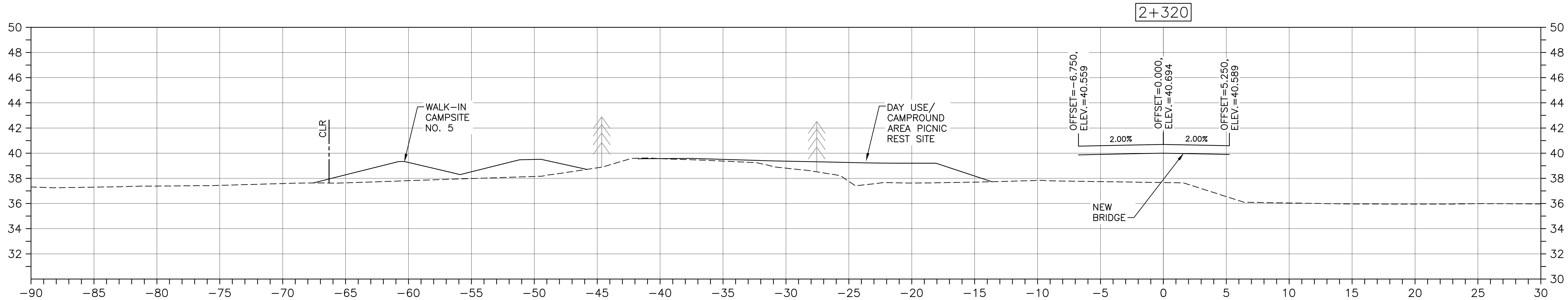
2+360



2+340

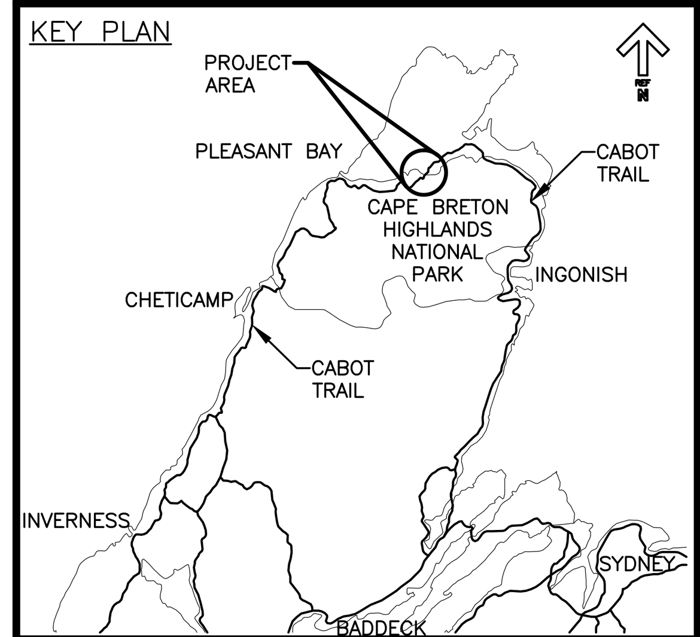


2+320



Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

REGISTERED PROFESSIONAL ENGINEER — R. J. Flower — 9947 — PROVINCE OF NOVA SCOTIA

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DESIGN SECTIONS STA. 2+320 TO STA. 2+380

designed / conçu: DSC — date: JUL. 06, 2017

drawn / dessiné: JLD — date: JUL. 06, 2017

approved / approuvé: RMB — date: JUL. 06, 2017

Tender / Soumission: JUL. 06, 2017 — PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C-14

FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

PLOTTED: Jul 06, 2017 4:14pm jldoigle

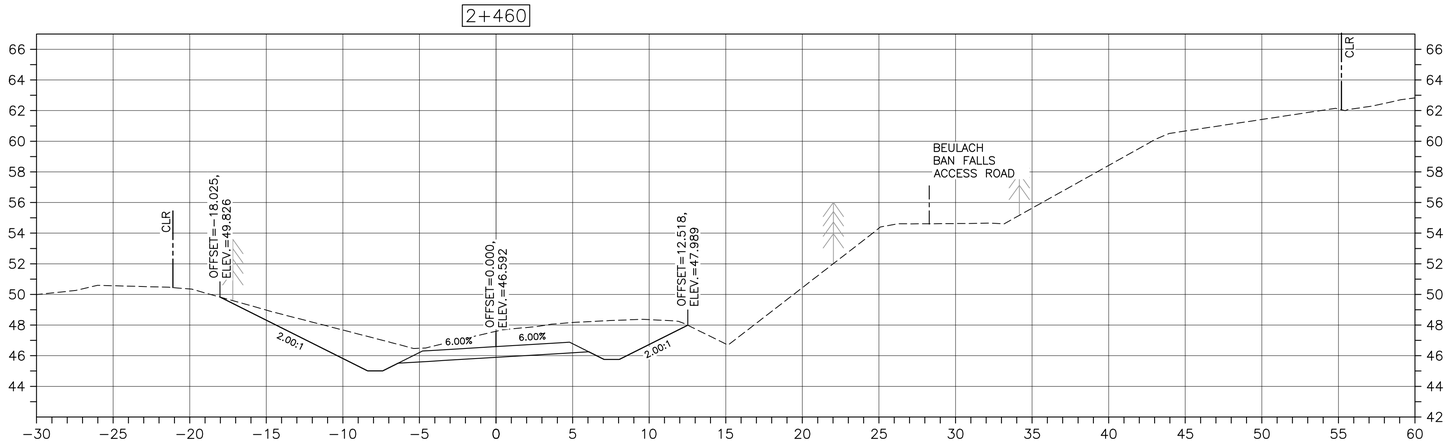
PWGSC A1 (2004)

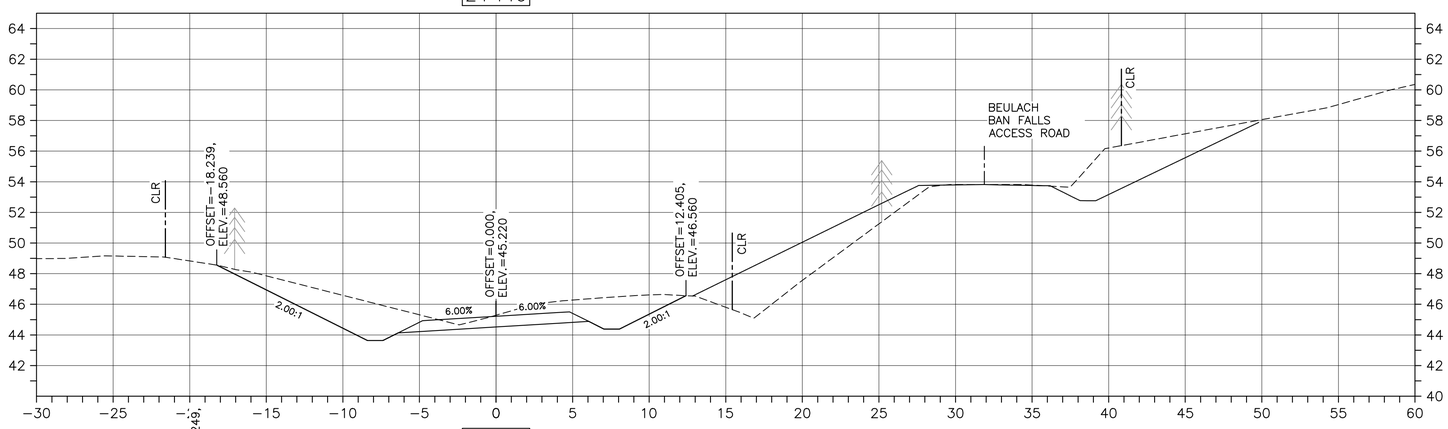
E-DRM/GDD-E: NOT IN SYSTEM

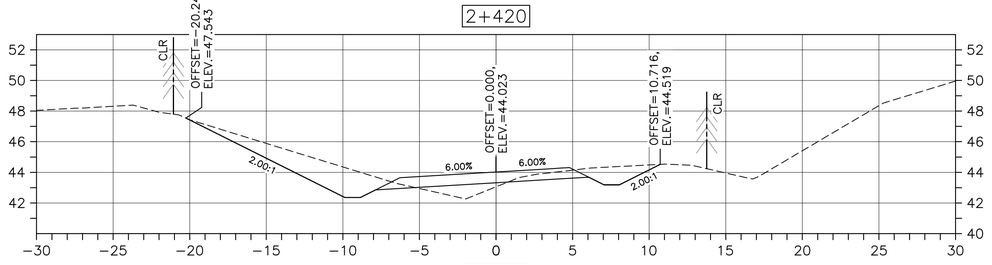
DESIGN SECTIONS

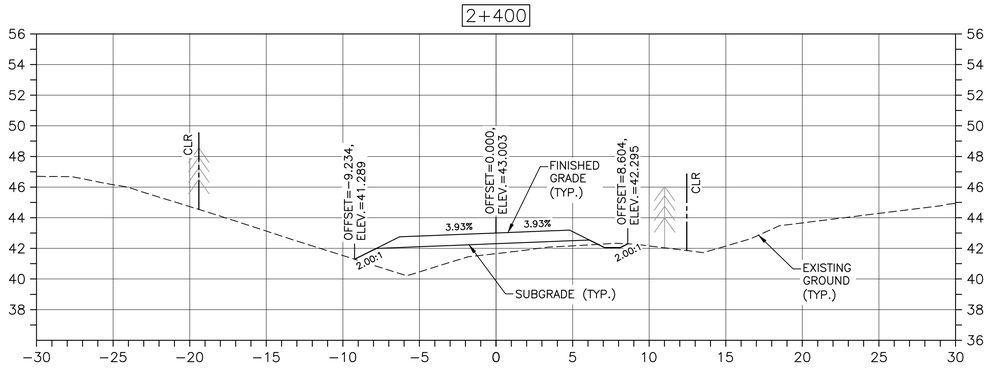
SCALE: 1:200

0m 5m 10m 15m 20m 25m



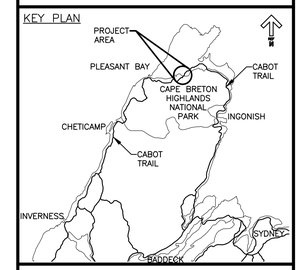






Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

revisions		date
0	ISSUED FOR TENDER	JUL. 06 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

DESIGN SECTIONS
STA. 2+400 TO
STA. 2+460

designed	DSC	conçu
date	JUL. 06, 2017	
drawn	JLD	dessiné
date	JUL. 06, 2017	
approved	RMB	approuvé
date	JUL. 06, 2017	
Tender		Soumission
PCA Project Manager		JUL. 06, 2017 Administrateur de projets PCA
project number		no. du projet
	666	
drawing no.		no. du dessin
	C–15	

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA — DATE July 6/17 — B.J. Flower — 9947

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

PLOTTED: Jul 06, 2017 4:14pm jldoigle

FILE: i:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

DESIGN SECTIONS

SCALE: 1:200

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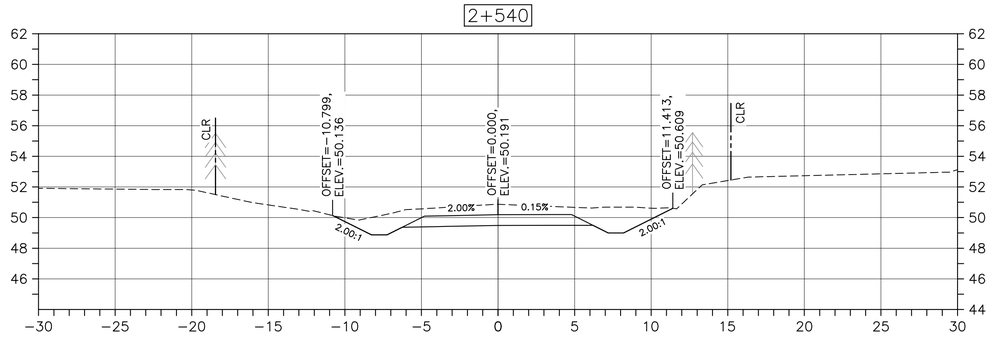
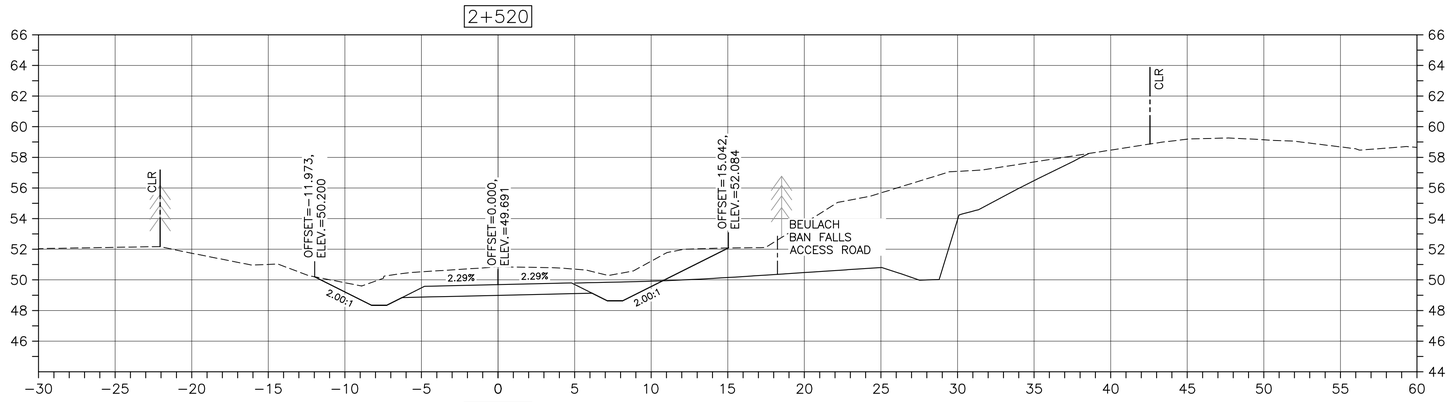
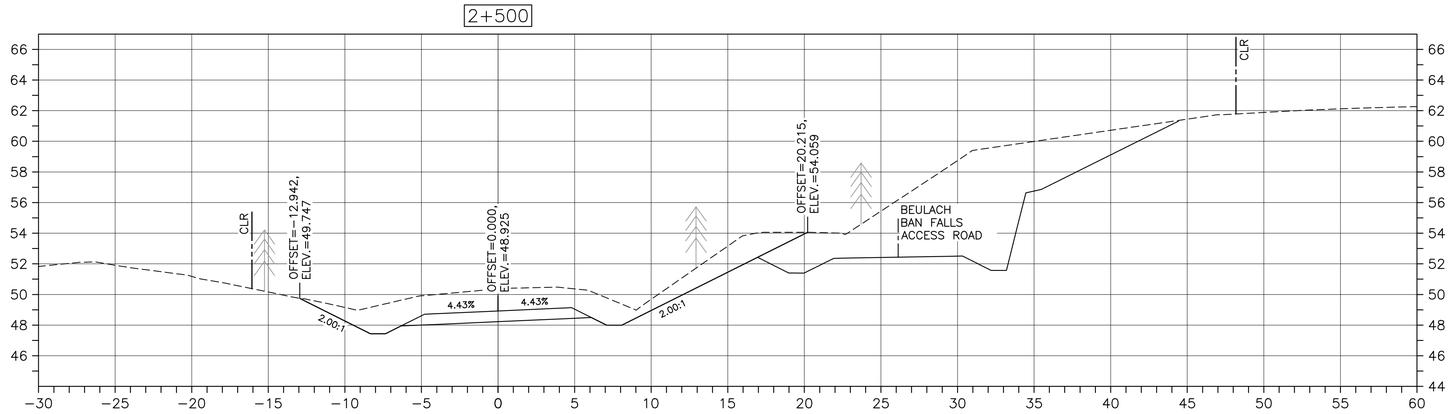
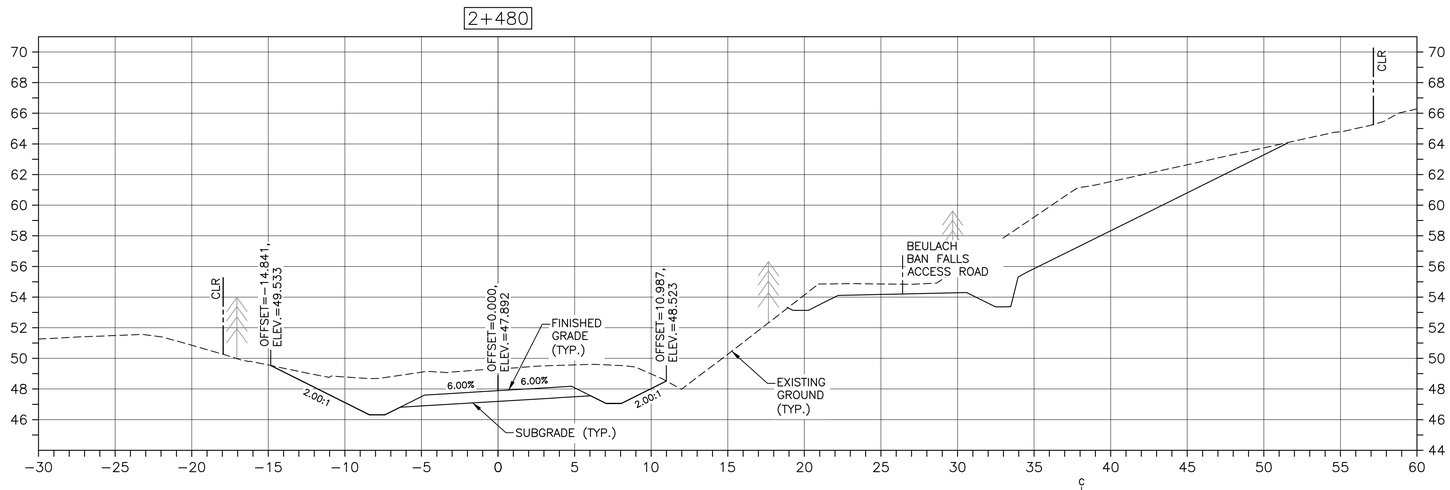


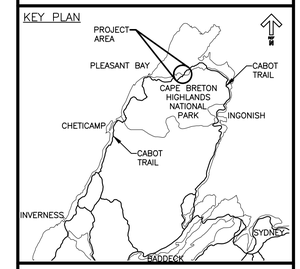






Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

REGISTERED PROFESSIONAL ENGINEER PROVINCE OF NOVA SCOTIA
9947

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

DESIGN SECTIONS STA. 2+480 TO STA. 2+540

designed DSC / conçu
date JUL. 06, 2017
drawn JLD / dessiné
date JUL. 06, 2017
approved RMB / approuvé
date JUL. 06, 2017
Tender / Soumission
JUL. 06, 2017
PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C–16

E–DRM/GDD–E: NOT IN SYSTEM

PWGSC A1 (2004)

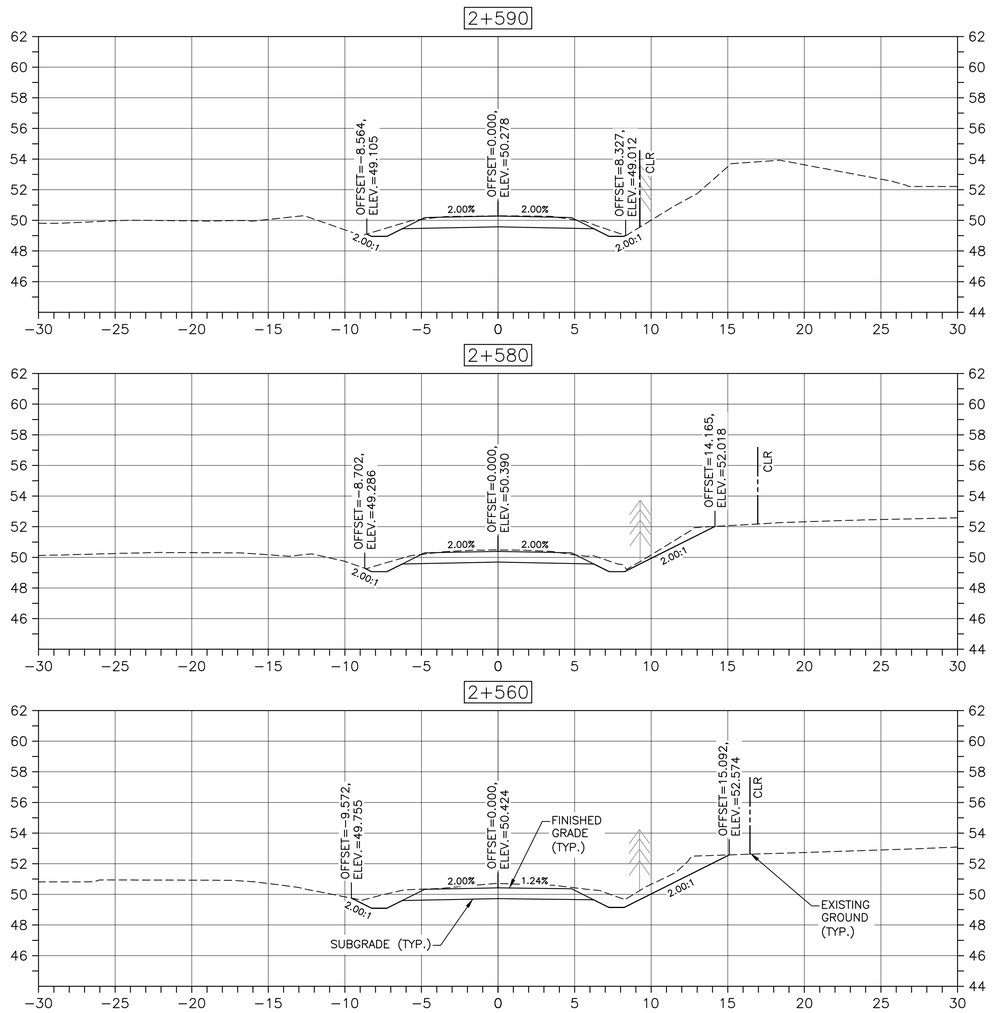
0 10 20mm 40 60 80 100 120 140 160 180 200mm

PLOTTED: Jul 06, 2017 4:14pm jldoigle FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

DESIGN SECTIONS

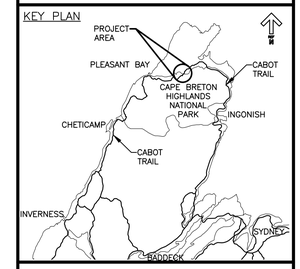
SCALE: 1:200

0m 5m 10m 15m 20m 25m



Parcs Canada Parks Canada

KEY PLAN



Stantec

LEGEND

EXISTING TREELINE

CLR — CLEARING LIMT

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
DATE July 6/17
D.J. Flower
9947

0	ISSUED FOR TENDER	JUL. 06 2017
revisions		date

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

DESIGNN SECTIONS
STA. 2+560 TO
STA. 2+590

designed DSC — conçu
date JUL. 06, 2017
drawn JLD — dessiné
date JUL. 06, 2017
approved RMB — approuvé
date JUL. 06, 2017
Tender — Soumission
JUL. 06, 2017
PCA Project Manager — Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C–17

E-DRM/GDD-E: NOT IN SYSTEM

PLOTTED: Jul 06, 2017 4:14pm jlddigle FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-012_NA4_DSGN_SECT.dwg

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm


NORTH ASPY RIVER, SOUTH BRANCH
EXISTING BEULACH BAN FALLS ACCESS TO BE REINSTATED TO NATURAL CONDITIONS C/W HYDROSEED AND DRY MULCH
CLEARING LIMIT
RIP-RAP R-50 LINED DITCH
PLACE CHECK DAMS EVERY 10m IN DITCHES WITH SLOPES OVER 8% PER NSTIR STANDARD DRAWING HS707
N 5188966.189 E 682094.793 ELEV. 52.597
N 5188956.206 E 682086.839 ELEV. 52.445
TOE OF SLOPE
N 5188959.788 E 682089.259 ELEV. 52.496
ALL EXPOSED SLOPES TO BE HYDROSEEDED AND DRY MULCHED
N 5188952.457 E 682074.993 ELEV. 52.040
N 5188949.129 E 682062.554 ELEV. 51.886
3:1 SLOPES (TYP.)
EXISTING ACCESS ROAD
N 5188949.033 E 682061.845 ELEV. 51.791
REMOVE 60mm OF EXISTING ASPHALT AND REPLACE WITH 60mm OF ASPHALT TYPE D-HF FROM STATION 4+110 OF NEW ACCESS ROAD TO THE EDGE OF NEW PARKING AREA APSHALT LIMITS (APPROX. AREA=350m²)
TREE/SHRUB PLANTING AREA AT THE DIRECTION OF THE DEPARTMENTAL REPRESENTATIVE.
R=11.0m
N 5188963.691 E 682098.779 ELEV. 52.563
N 5188925.949 E 682044.708 ELEV. 52.275
R=6.0m
5m
R=10.0m
6m
NEW SIGN "ONE-WAY" (RB-21)
MATCH PARKING AREA ASPHALT TO EXISTING ACCESS ROAD ASPHALT
BUILDING
N 5188942.178 E 682071.079 ELEV. 52.326
R=15.0m
GRAVEL WALKWAY
N 5188946.240 E 682087.627 ELEV. 52.605
R=1.5m
N 5188943.454 E 682089.456 ELEV. 51.100
4.0% GRADE
2:1 SLOPES (TYP.)
INSTALL NEW 600mm DIA. CONCRETE CULVERT LENGTH = 17.5m INLET INVERT = 51.100 OUTLET INVERT = 50.575m SLOPE = 3.00%
NEW SIGN "ENTRY PROHIBITED" (RB-23)
R=13.0m
2.75m
5.5m
0.5m
N 5188909.860 E 682047.086 ELEV. 52.901
4m
TOP OF SLOPE
1.57% GRADE
EXISTING PARK SIGN TO BE REMOVED AND REPLACED IN A NEW LOCATION
N 5188919.094 E 682053.941 ELEV. 52.735
EXISTING CSP CULVERT TO BE REMOVED
N 5188925.107 E 682072.105 ELEV. 53.150
N 5188923.915 E 682073.711 ELEV. 52.150
BUILDING
R=11.5m
N 5188912.536 E 682062.773 ELEV. 53.175
N 5188907.631 E 682052.934 ELEV. 53.005
N 5188910.021 E 682060.906 ELEV. 53.220
TREE/SHRUB PLANTING AREA AT THE DIRECTIONS OF THE DEPARTMENTAL REPRESENTATIVE.
BEULACH BAN FALLS
BUILDING
CLEARING AREA = 247 sq. m.

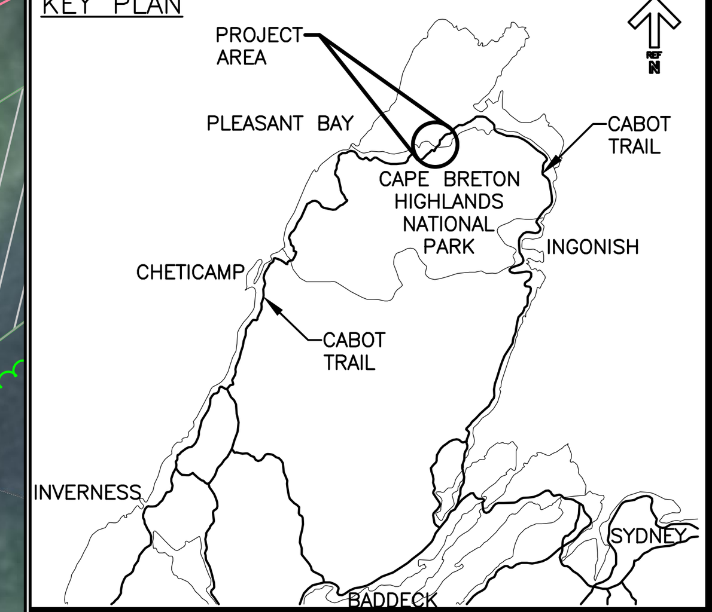
PLAN

SCALE: 1:200

0m 5m 10m 15m 20m 25m

Parcs Canada | Parks Canada

KEY PLAN



Stantec

LEGEND EXISTING	LEGEND NEW
CONTOUR & ELEVATION	EDGE OF PAVE
℄ ROADWAY	℄ ROADWAY
EDGE OF PAVE	EDGE OF PAVE
GUARD RAIL	SHOULDER
℄ OF DITCH	GUARD RAIL
DAYLIGHT	DITCH LINE
EDGE OF GRAVEL	DAYLIGHT (TOP)
EDGE OF TREES	DAYLIGHT (TOE)
WATERCOURSE BOUNDARY	EDGE OF GRAVEL
CULVERT	CLEARING LIMIT
ORIGINAL GRADE CL PROFILE	CULVERT
SIGN	PRECAST BARRIER
BUILDING	RIP-RAP
CONTROL MONUMENT	
BOREHOLE	
POWER POLE	
POWER LINES	

REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF NOVA SCOTIA — 9947

revisions		date
0	ISSUED FOR TENDER	JUL. 17 2017

project / projet

NORTH ASPY SOUTH BRANCH BRIDGE REPLACEMENT CAPE BRETON HIGHLANDS NATIONAL PARK

drawing / dessin

BEULACH BAN FALLS PARKING AREA LAYOUT PLAN

designed / conçu: JLD — date: JUL. 12, 2017

drawn / dessiné: JLD — date: JUL. 12, 2017

approved / approuvé: RMB — date: JUL. 12, 2017

Tender / Soumission: JUL. 17, 2017 — PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

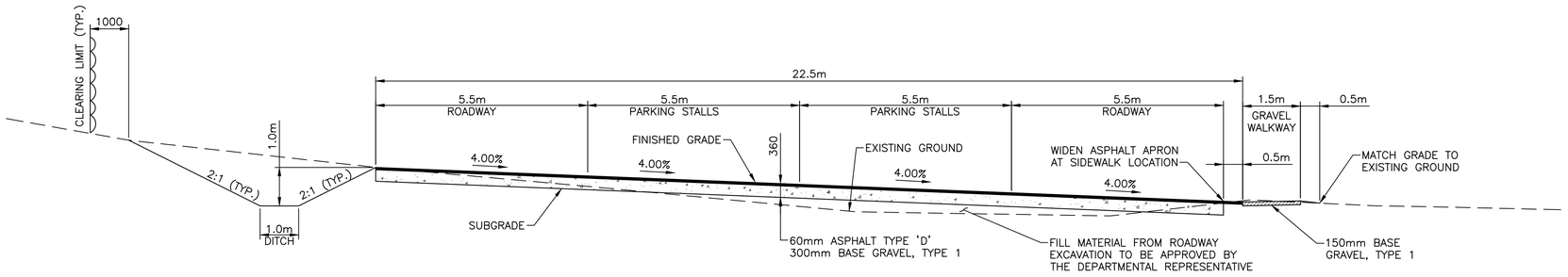
drawing no. / no. du dessin: C-18

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-018_NA4_PARK-FALLS_PLAN.dwg

PLOTTED: Jul 19, 2017 12:42pm jldaigle



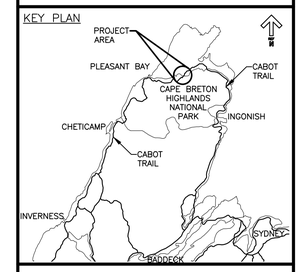
BEULACH BAN FALLS PARKING AREA
TYPICAL SECTION

SCALE : 1:75

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

Parcs Canada Parks Canada

KEY PLAN



Stantec

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA
9947
July 12/17
J. Turner

revisions		date
0	ISSUED FOR TENDER	JUL. 17 2017

project / projet

NORTH ASPY
SOUTH BRANCH
BRIDGE REPLACEMENT
CAPE BRETON HIGHLANDS
NATIONAL PARK

drawing / dessin

BEULACH BAN FALLS
PARKING AREA
TYPICAL SECTION

designed / conçu	JLD	
date	JUL. 12, 2017	
drawn / dessiné	JLD	
date	JUL. 12, 2017	
approved / approuvé	RMB	
date	JUL. 12, 2017	

Tender / Soumission: JUL. 17, 2017
PCA Project Manager / Administrateur de projets PCA

project number / no. du projet: 666

drawing no. / no. du dessin: C–19

E-DRM/GDD-E: NOT IN SYSTEM

PWGSC A1 (2004)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

PLOTTED: Jul 19, 2017 11:26am jldoigle
FILE: U:\133346833\1_transportation\3_drawing\North Aspy (NA4)\Sheet Files\46833C-019_NA4_PARK-FALLS_SECT.dwg