



Navigation Protection Program
Suite 610, 800 Burrard Street
Vancouver B.C. V6Z 2J8

Your file

Our file
2016-500310

May 9, 2017

BC Hydro
Suite 600 - Four Bentall Ctr, 1055 Dunsmuir St.
PO Box 49260
Vancouver, BC V7X 1V5

Attention: Karen von Muehldorfer

RE: Notice to the Minister\permission to proceed under the *Navigation Protection Act* for the Bridge, located at 56° 13' 17.68" N x 121° 03' 54.07" W, Peace River, Peace River Side Channel (Water Crossing #9 – Field I.D. Side Channel 1) - The Theoretical Unsurveyed Portions of the bed of the Peace River fronting Section 27, Township 83, Range 20, West of the 6th Meridian, Peace River District, in the Province of British Columbia

The Minister of Transport has determined that your work is not likely to substantially interfere with navigation.

Therefore, your work is permitted under the NPA s.9(1) Construction, and you may proceed pursuant to the attached plans (3) in accordance with the following terms and conditions:

1. Upon termination or decommissioning of the above works, all structures and associated equipment shall be completely removed without delay, including all piles. Bridge components must be removed prior to reservoir flooding.
2. Bridge components shall be removed prior to the filling of the reservoir.
3. The NPA Approval and its Terms and Conditions shall be posted at the dam site office.
4. In the event that the operation of the above works is terminated prior to completion, it will be the proponent's responsibility to remove the works and associated equipment in its entirety from the waterway including any anchors and pilings. The banks and bed of the waterway disturbed by the works shall be contoured to match the local conditions as required.
5. If the side channels are ice free while the bridge is in place, install and maintain warning signs on the bank of the side channels at locations approximately 50m, upstream of the bridge site. The Signs shall state:

**RIVER BLOCKED
WARNING BRIDGE AHEAD**

The owner is responsible to ensure the temporary construction works are designed and maintained to withstand local weather conditions and the wash of vessels transiting the area.

Pursuant to Sec. 34 of the Navigation Protection Act, the owner shall provide unimpeded access to the Minister or their representatives for inspection purposes.

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Pursuant to Sec. 5 of the Navigable Waters Works Regulations, no person shall permit any tools, equipment, vehicles, temporary structures or parts thereof used or maintained for the purpose of building or placing a work in a navigable water to remain in such water after the completion of the project.

Pursuant to Sec. 6 of the Navigable Waters Works Regulations, where a work or a portion of a work that is being constructed or maintained in a navigable water causes debris or other material to accumulate on the bed or the surface of such water, the owner of that work or portion of that work shall cause the debris or other material to be removed to the satisfaction of the minister.

This permission relates only to the effect of your work on navigation under the NPA and does not grant any rights related to the ownership of the bed of the waterway.

It is the owner's responsibility to comply with any other applicable laws and regulations.

Please note that the NPA, amongst other obligations, requires the owner to immediately notify the Minister if his work causes or is likely to cause serious or imminent danger to navigation and take reasonable measures to remediate the danger to navigation (section 12 of the NPA).

Should you have any questions, please do not hesitate to contact our office in Vancouver by phone at (604) 775-8867 or by e-mail at NPPAC-PPNPAC@tc.gc.ca.

Respectfully,




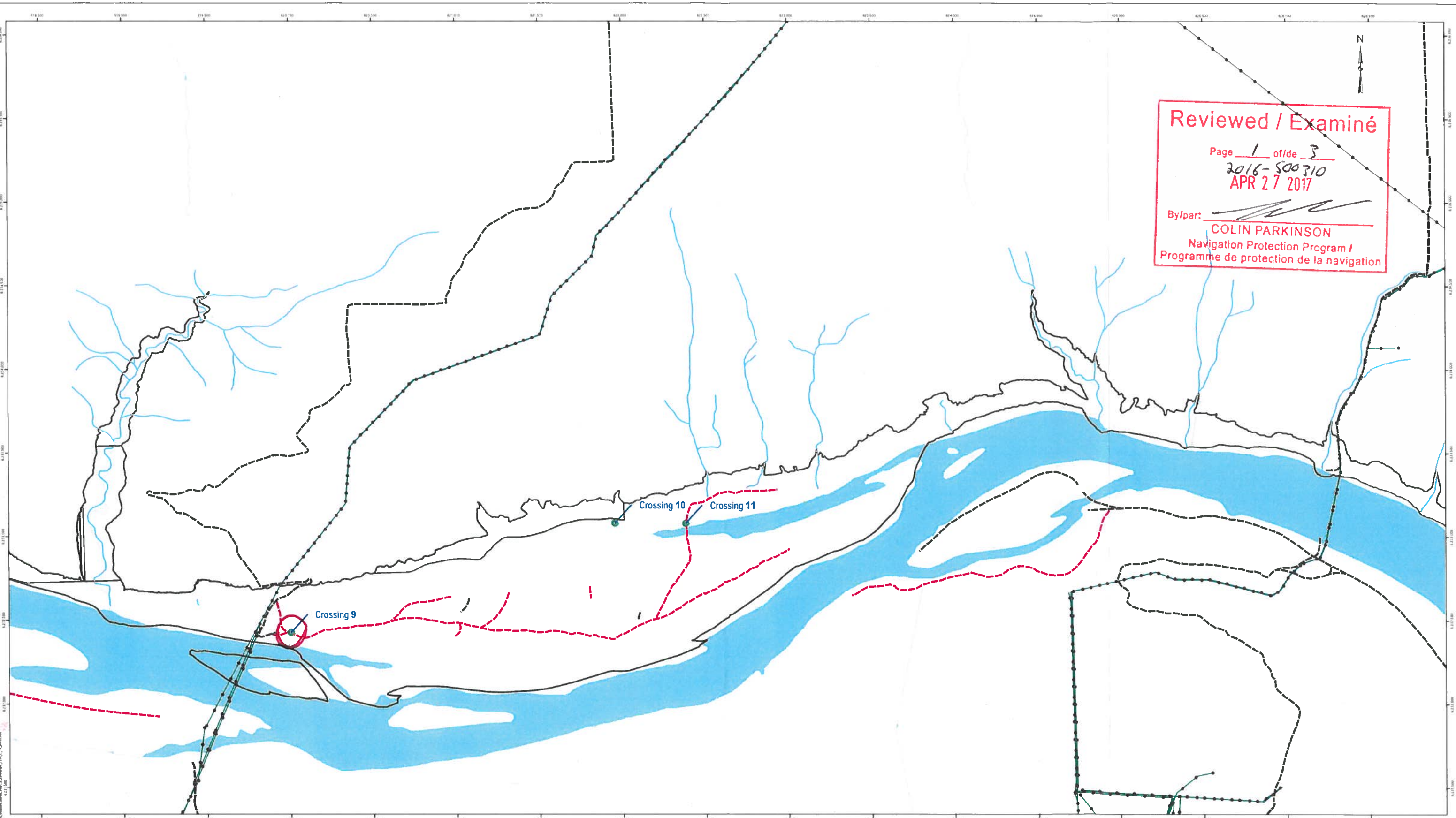
Colin Parkinson
Navigation Protection Program Officer
Programs Group
Transport Canada
Pacific Region

CP/co

cc: Via Email

DFO Brian Naito
FLNRO
CEAA
FN's

Reviewed / Examiné
 Page 1 of 3
 2016-500310
 APR 27 2017
 By/par: 
COLIN PARKINSON
 Navigation Protection Program /
 Programme de protection de la navigation



- Legend
- Proposed Bridge Site
 - - - Proposed Roads
 - Existing Roads
 - - - Pipeline
 - - - Pipeline/OGC Pipelines Dec 30/13
 - Clearing Boundary

1:10,000

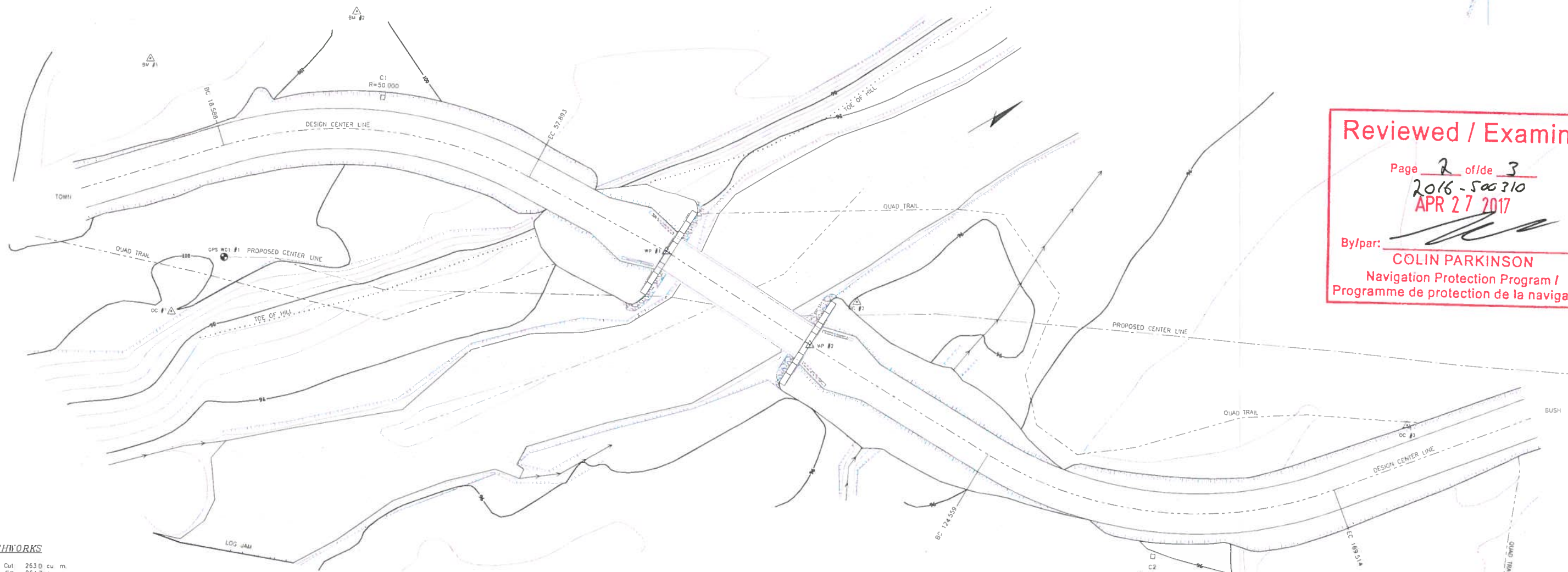
BC Hydro


Stream Crossing Overview Map
 Map 3 of 3

Date	June 8 2016	DWG NO	1016-C14-07111	R 1
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Construction of the Site C Clean Energy Project is subject to required regulatory approvals including environmental certification.

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 Page 2 of 3
 2016-500710
 APR 27 2017
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EARTHWORKS

1. Town Cut 263.0 cu m
Fill 264.7 cu m
2. Bush Cut 215.5 cu m
Fill 480.8 cu m
3. Endfill of approaches shall be placed in layers not exceeding 300mm in loose thickness. Each layer shall be compacted to a minimum 95% standard proctor over the entire surface for each layer.
4. Rip Rap String (if required)
 - C50 Nominal Size=300mm
 - Equivalent Mass=10kg
 - Vmax Allowable=2.5m/s
 - Rock Gradation
 - 85% greater than 1.0kg
 - 50% greater than 10.0kg
 - 15% greater than 30.0kg
 - Volume: 15.0cu m

DESIGN NOTES

1. Notes
- Temporary bridge crossing
 - The protection blanket must be extended around the abutments (if required). The blanket must be keyed into native soil to protect against erosion
 - Lock blocks must extend at abutments to prevent endfills from enter stream.

SURVEY TABLE

STATION	STATION	COMPOSITE	LEV.(m)
OC #1	5030 000	400 000	100 000
OC #2	5031 525	485 593	98 055
OC #3	4988 022	354 293	98 031
-	BM #1	5031 348	397 448
-	BM #2	5037 272	423 179
-	BM #3	4959 031	540 582
-	BM #4	4963 929	559 388
-	WP #1	5027 688	461 743
-	WP #2	4926 176	479 716

ALTERNATE FOOTING ARRANGEMENT

- If ground conditions are encountered where subgrade is not capable of 200 KPa bearing pressure, excavate 1.00m deeper at the footing location and place large rock on top of geo-textile followed by smaller rock to achieve the desired grade. Use granular material to build the 150mm leveling course.

REVISIONS

NO.	DATE	DESCRIPTION

IFS
 INDUSTRIAL FORESTRY SERVICE LTD.
 1281 Fern Street
 Prince George, B.C.
 V2L 3J3
 Ph: (250) 584-4115 Fax: (250) 583-9879




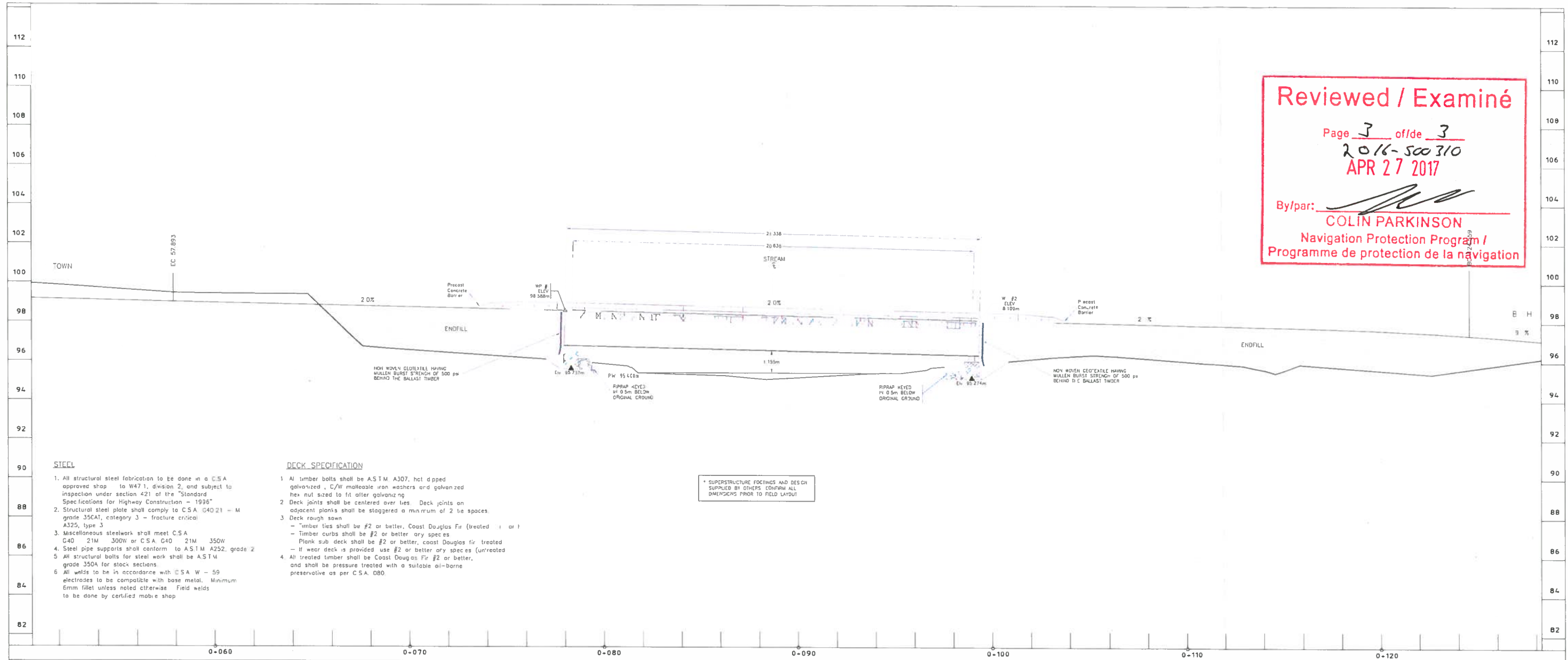
GENERAL ARRANGEMENT
DRAWING Fig 15 (1 of 2)
 LOCATION: SITE C / WILDER / Crossing 9

DESIGNED: S WILSON EIT	DATE: OCT 31, 2012
DRAWN: D MASSON	DESC: PLAN VIEW FINISH CROSSING
CHECKED: B PAROLIN P ENG	FILE # 4-1202ED_WILDER_RTG-36 DWG
JOB #: 120260	LOCATION: PEACE RIVER / WILDER
MAP REFERENCE: 94 A 025	Scale: 1 : 250

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Page 3 of de 3
2016-500310
APR 27 2017

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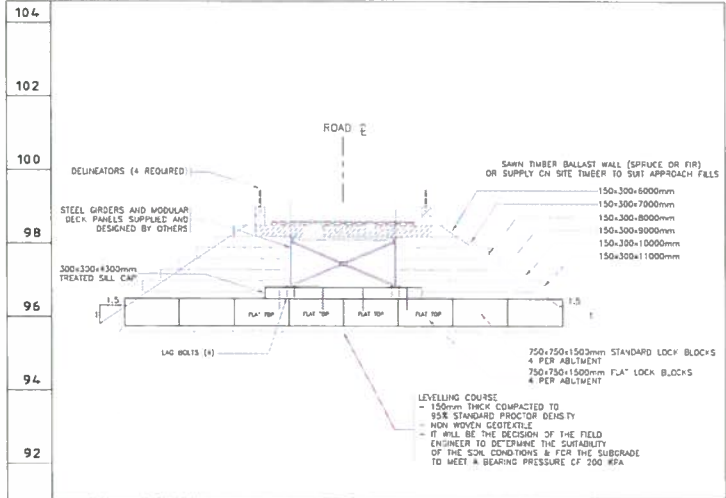


ROAD DESIGN CENTERLINE PROFILE
 SCALE 1:100

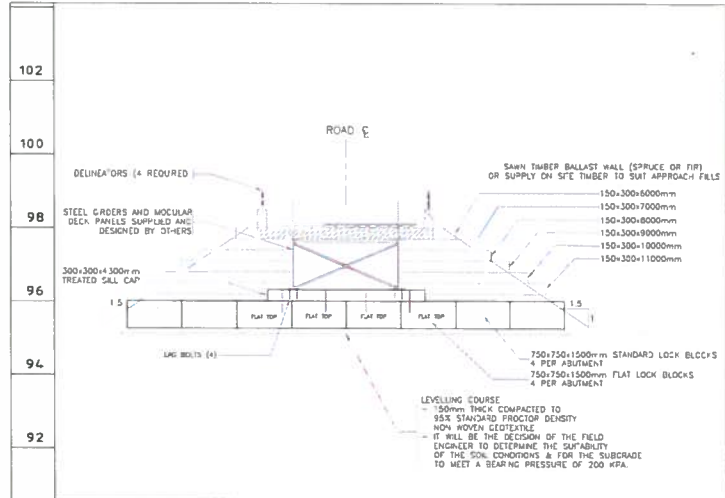
- STEEL**
- All structural steel fabrication to be done in a C.S.A approved shop to W47.1, division 2, and subject to inspection under section 421 of the "Standard Specifications for Highway Construction - 1996"
 - Structural steel plate shall conform to C.S.A. G40.21 - M grade 355AT, category 3 - fracture critical A325, type 3
 - Miscellaneous steelwork shall meet C.S.A. G40 21M 300W or C.S.A. G40 21M 350W
 - Steel pipe supports shall conform to A.S.T.M. A252, grade 2
 - All structural bolts for steel work shall be A.S.T.M. grade 350A for stock sections
 - All welds to be in accordance with C.S.A. W - 59 electrodes to be compatible with base metal. Minimum 6mm fillet unless noted otherwise. Field welds to be done by certified mobile shop

- DECK SPECIFICATION**
- All timber bolts shall be A.S.T.M. A307, hot dipped galvanized, C/W malleable iron washers and galvanized hex nut sized to fit after galvanizing
 - Deck joints shall be centered over ties. Deck joints on adjacent planks shall be staggered a minimum of 2 tie spaces
 - Deck rough sawn
 - timber ties shall be #2 or better, Coast Douglas Fir (treated or untreated)
 - Timber curbs shall be #2 or better dry species
 - Plank sub deck shall be #2 or better, coast Douglas fir treated
 - If wear deck is provided use #2 or better dry species (untreated)
 - All treated timber shall be Coast Douglas Fir #2 or better, and shall be pressure treated with a suitable oil-borne preservative as per C.S.A. D80

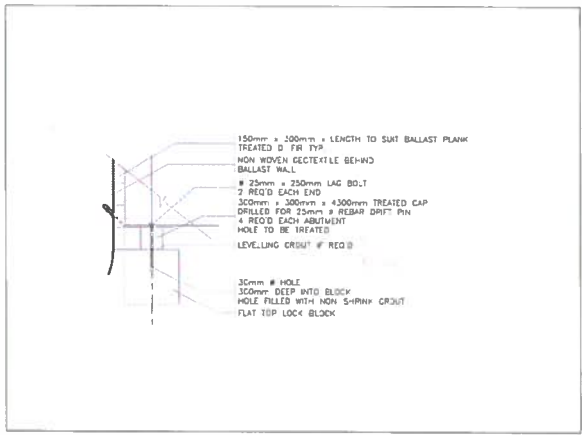
* SUPERSTRUCTURE FOOTINGS AND DECK CH SUPPLIED BY OTHERS. CONFIRM ALL DIMENSIONS PRIOR TO FIELD LAYOUT



TOWN LOCK BLOCK ABUTMENT
 SCALE 1:100



BUSH LOCK BLOCK ABUTMENT
 SCALE 1:100



ABUTMENT CONNECTION DETAIL
 SCALE 1:50

REVISIONS		
NO.	DATE	DESCRIPTION

INDUSTRIAL FORESTRY SERVICE LTD.
 5555 Fife Ave.
 Prince George BC
 PH (250) 564 4115 AX (250) 56 98 9



GENERAL ARRANGEMENT
 DRAWING Fig15(2 of 2)

DESIGNED S. WILSON ET	DATE OCT 31, 2012
DRAWN B. JASSON	DESC PROFILE & ABUTMENTS ARRANGEMENTS
CHECKED B. PAROLIN P. ENG	FILE # S-120260_WILDER_RTG-36 DWG
JOB # 12026	LOCATION PEACE RIVER / WILDER
MAP REFERENCE 94 A 025	Scale 1:100