Transport Canada Transports Canada

Navigation Protection Program
Programs Group
Transport Canada

Our file:
2019-500334

APPROVAL

APPLICANT:	BC Hydro Ste 600, Four Bentall Centre, 1055 Dunsmuir St. PO Box 49260 Vanouver, British Columbia V7X 1V5
WORK:	Embankment Causeway
SITE LOCATION:	Located at approximately 56.10676, -121.80776, Peace River, located on unsurveyed Crown Lands including the beds, foreshore of the Peace River and the Peace River within Section 10, Section 11, Section 13, Section 14 and Section 15, Township 82, Range 25, Peace River District in the province of British Columbia

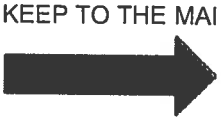
As per the application (detailed above) to the Minister of Transport, submitted pursuant to the *Canadian Navigable Waters Act*, for an approval of the work per the fourteen (14) attached plan(s), the Minister hereby approves the work pursuant to subsection 7(6) for the construction of the above mentioned work, in accordance with the following terms and conditions:

1. The CNWA Approval and its Terms and Conditions shall be posted at an easily accessible place at the worksite, and be provided to the contractor conducting the work.

2. The owner shall provide information about the causeway location and side channel obstruction using the Boater Communications Protocol, and post the information on the owner website, on a page related to the project.

3. Upon commencement of the construction of the causeways, install and maintain warning signs, advising of the obstruction of the side channel and an arrow indicating the direction of the main channel. Signs shall be a minimum of 72" x 48", a white background with black lettering, the size of the text shall be at least 15cm tall with the word "WARNING" at 1.5 times the size of the message text. Signs shall be placed on either side of the side channel at the upstream and downstream confluence with the main Peace River channel.

   WARNING
   OBSTRUCTION AHEAD
   KEEP TO THE MAIN CHANNEL



4. During construction, the outermost extent of each causeway above the surface shall be marked with orange Hi-visibility markers on the upstream and downstream corners.

5. During construction, the outermost extent of each causeway above the surface shall be marked with a flashing yellow light on the upstream and downstream corners.

6. During construction of the causeways, machinery left in the water during periods of darkness or limited visibility shall be marked with a flashing yellow light, visible to upstream and downstream traffic.

7. Post construction, the causeways shall be marked with orange Hi-visibility markers, evenly spaced every 20m on the upstream side of causeway #1, and downstream sides of causeways #2 and #3, until the causeways are submerged due to inundation.

8. Post construction, the causeways shall be marked with flashing yellow lights, evenly spaced every 40m on the upstream side of causeway #1, and at midspan on downstream sides of causeways #2 and #3, until the causeways are submerged due to inundation.

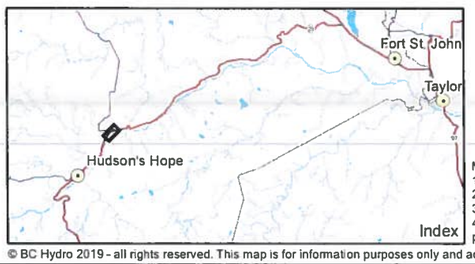
9. Once the causeways are submerged due to inundation, yellow buoys shall be placed and maintained at the location of the causeways. Buoys are to be no more than 20 metres apart and no less than 0.6 metres in diameter. Horizontal bands of yellow reflective tape, not less than 10 cm in width and 15 cm in length, shall be either placed at intervals around the horizontal circumference of the buoys or displayed from suitable topmarks that are visible from all directions. Buoys shall remain in place until the water elevation at the causeway location reaches 5m greater than the top in-river elevation of the causeway.

SIGNED on December 2, 2019 in Pacific

Jonn Leeden
Navigation Protection Program
Programs Group
Transport Canada
Pacific Region
For the Minister of Transport

/sp

Reviewed / Examiné
Page 1 of/de 14
2019-50633
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program /
Programme de protection de la navigation



Map Notes
1. Datum NAD83
2. Projection UTM Zone 10N
3. Base Data Province of B.C.
4. Orthophotos created from 1:40,000 photos taken Sep. 10th 2007.

© BC Hydro 2019 - all rights reserved. This map is for information purposes only and accuracy is not guaranteed.

Legend

- Highway Realignment Centerline
- Highway Realignment Right-of-Way
- Causeway
- High Water Mark (445.8masl)

1:8,000 0 500 m

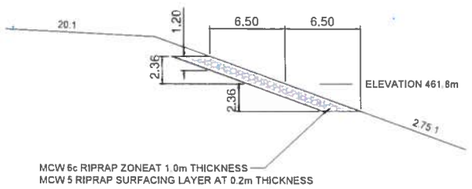
BC Hydro

Highway 29 Realignment
Lynx Creek East

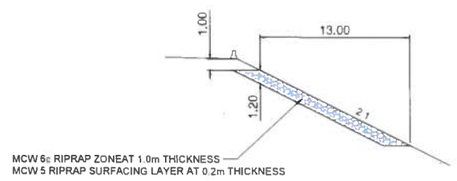
Date	Jun 27, 2019	DWG NO	1016-N11-00556	R 0

Construction of the Site C Clean Energy Project is subject to required regulatory and permitting approvals.

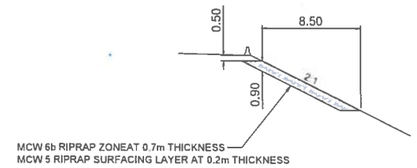
Path: X:\ArcGIS\Projects\Permitting\Construction\Highways\Lynx_Creek\Hwy29_Realignment_LynxCreek_East_1016_N11_00556.mxd



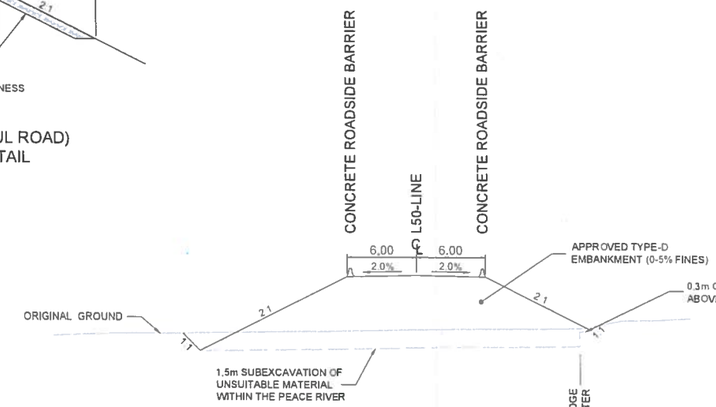
L1000-LINE (HWY 29)
RIPRAP DETAIL
STA. 1006+904.429 TO STA. 1007+120.000



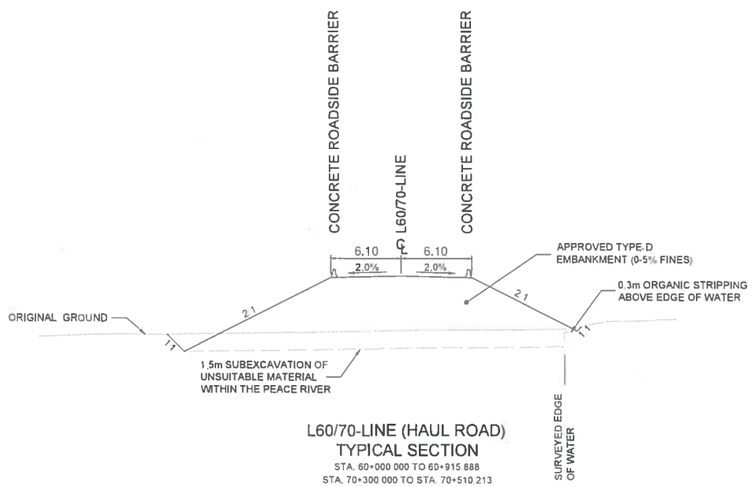
L50-LINE (CAUSEWAY)
RIPRAP DETAIL



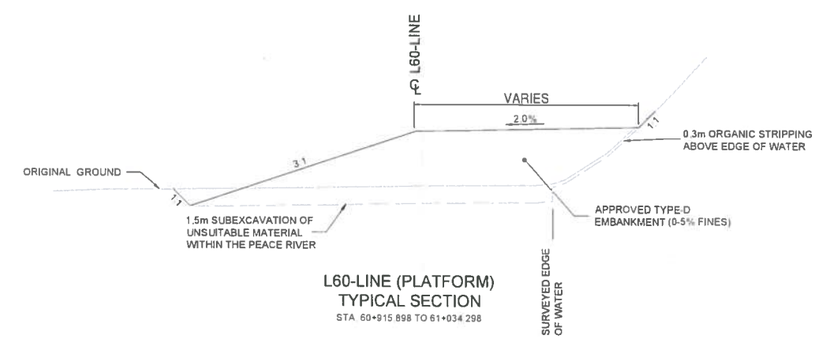
L60/70-LINE (HAUL ROAD)
RIPRAP DETAIL



L50-LINE (CAUSEWAY)
TYPICAL SECTION
STA. 50+000.000 TO STA. 50+340.000



L60/70-LINE (HAUL ROAD)
TYPICAL SECTION
STA. 60+000.000 TO 60+915.888
STA. 70+300.000 TO STA. 70+510.213



L60-LINE (PLATFORM)
TYPICAL SECTION
STA. 60+915.898 TO 61+034.298

NOTE: EMBANKMENT SLOPES SHOWN ARE ANTICIPATED CONSTRUCTION SLOPES AND ARE SUBJECT TO CHANGE WITH GEOTECHNICAL RECOMMENDATIONS

FOR REFERENCE ONLY

DRAFT

FOR INFORMATION ONLY - JUNE 25, 2019

Reviewed / Examiné
Page 2 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

BINNIE
Your Challenges. Our Solutions. Build with Binnie.

R.F. BINNIE & ASSOCIATES LTD.
205 - 4946 Canada Way,
Burnaby, BC V5G 4H7
TEL 604 420 1721
BINNIE.com

SCALE 0 2 1:250 12m
CAD FILENAME L1000A21-TS.DWG
DATE 2019-06-24

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

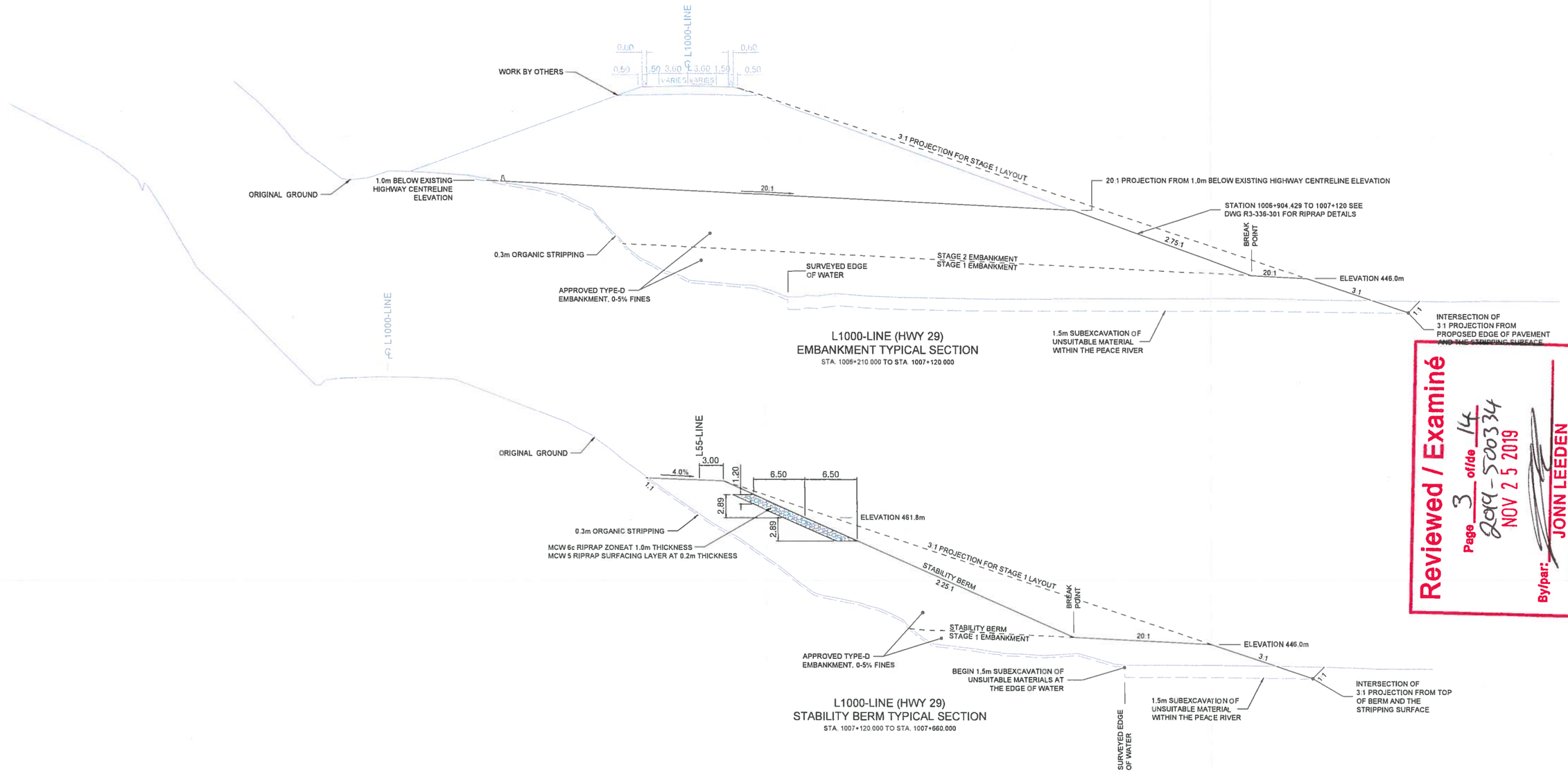
TYPICAL SECTIONS
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	-R3-336-302	

Jun. 24, 2019 - 08:48 PM P:\CAD Projects\TC\2019\19-0288\00 - CAD Files\00-Lynx\CAD\Drawing\Production\300 Typ-Sections\L1000A21.TS



NOTE: EMBANKMENT SLOPES SHOWN ARE ANTICIPATED CONSTRUCTION SLOPES AND ARE SUBJECT TO CHANGE WITH GEOTECHNICAL RECOMMENDATIONS

FOR REFERENCE ONLY

DRAFT

FUNCTIONAL DESIGN - JULY 4, 2019

Reviewed / Examiné
Page 3 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

BINNIE
Your Challenges. Our Solutions. Build with Binnie.

R.F. BINNIE & ASSOCIATES LTD.
205 -4946 Canada Way,
Burnaby, BC V5G 4H7
TEL 604 420 1721
BINNIE.com

SCALE 0 2 1:250 12m
CAD FILENAME L1000A21-TS.DWG
DATE 2019-07-03

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

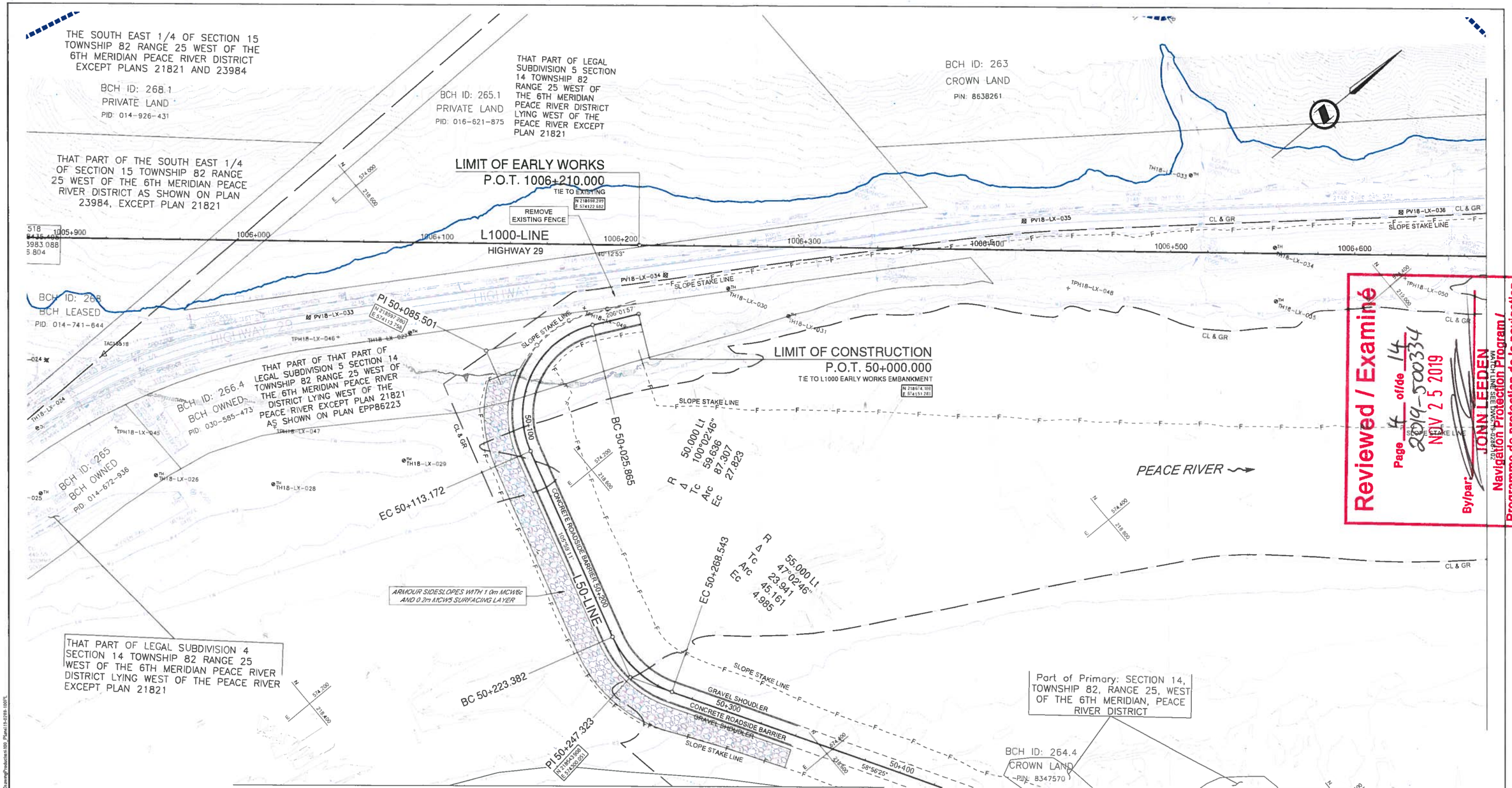
TYPICAL SECTIONS
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JULY 2019
QUALITY CONTROL R MANKOWSKE DATE JULY 2019
QUALITY ASSURANCE J NORRIS DATE JULY 2019
DRAWN Z RICKETTS DATE JULY 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	-R3-346-301	

Jul 2, 2019 - 01:48 PM P:\CAD_Projects_TC\2019\19-0288\00 - CAD File\004-Lynx_Cr\Drawing\Production\200_TypicalSections\L1000A21-TS



Reviewed / Examiné
Page 14 of/de 14
2019-500334
NOV 25 2019
By/par JOHN LEEDEN
TRANSPORT CANADA
WATERWAYS AND WATERWAY DEVELOPMENT
Navigation Protection Program /
Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

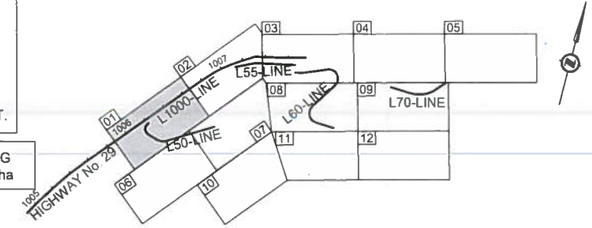
NOTES:

1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND
- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 7.73 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m
CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

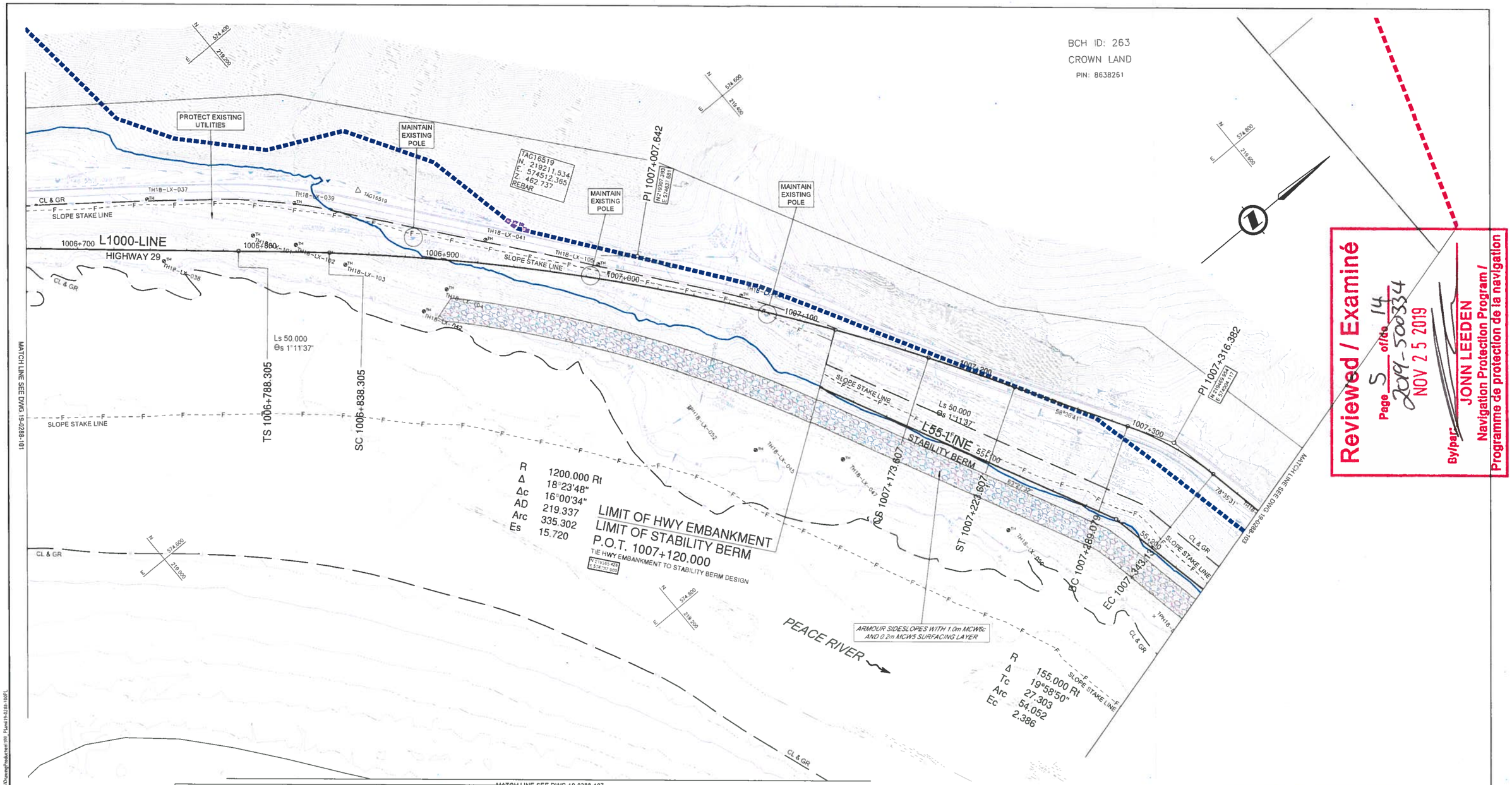
BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-101	



Reviewed / Examiné
Page 5 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

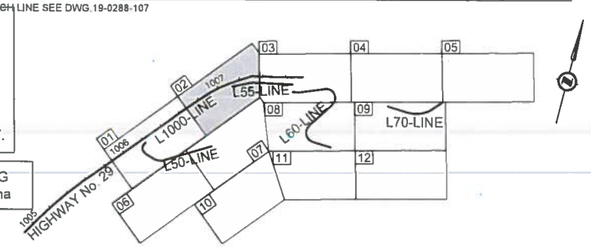
NOTES:

1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND
- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 8.36 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m
CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

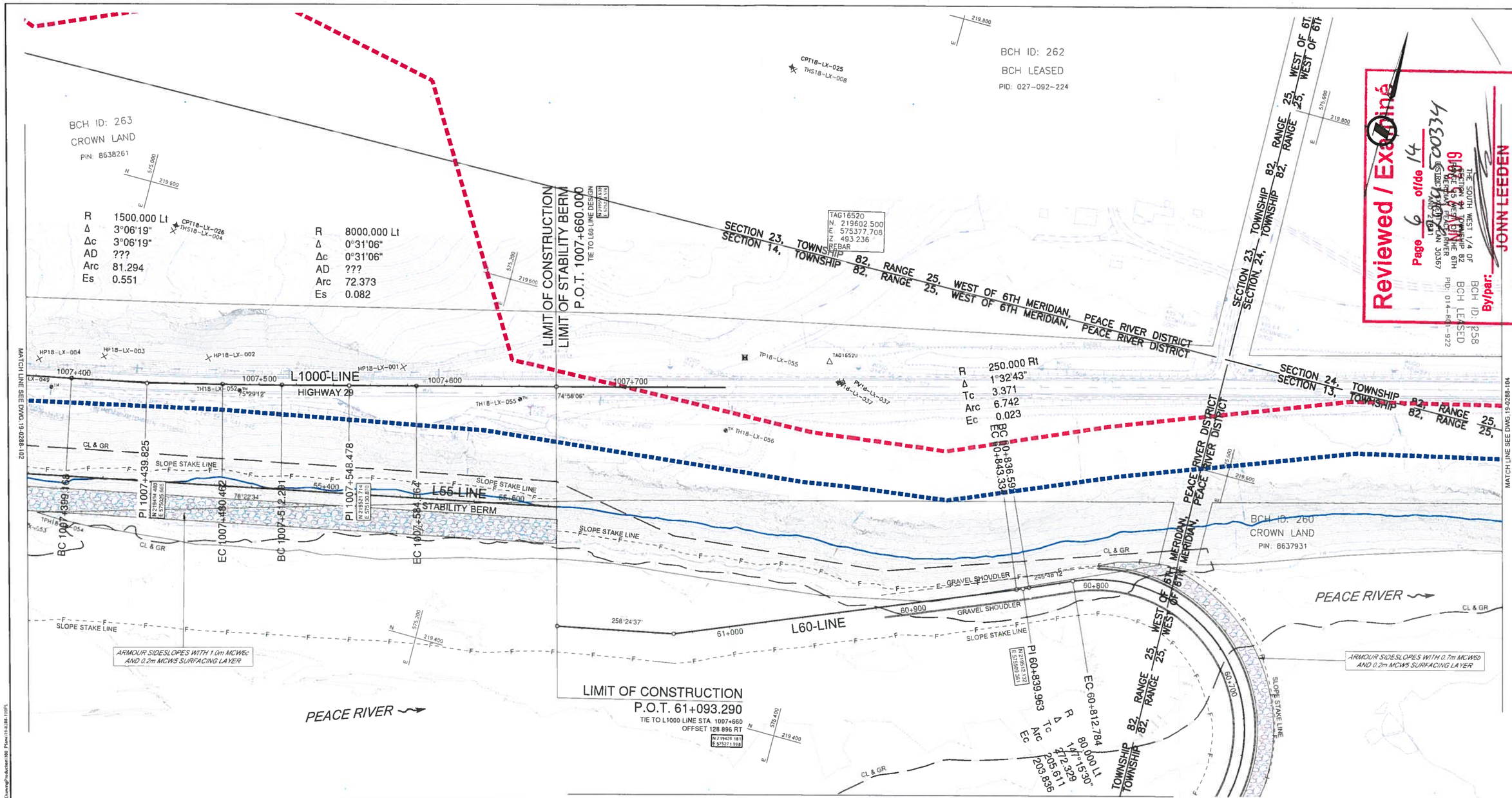
BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-102	



FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

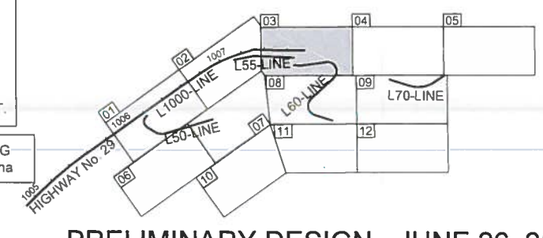
NOTES:

1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND
- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 3.82 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m
CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

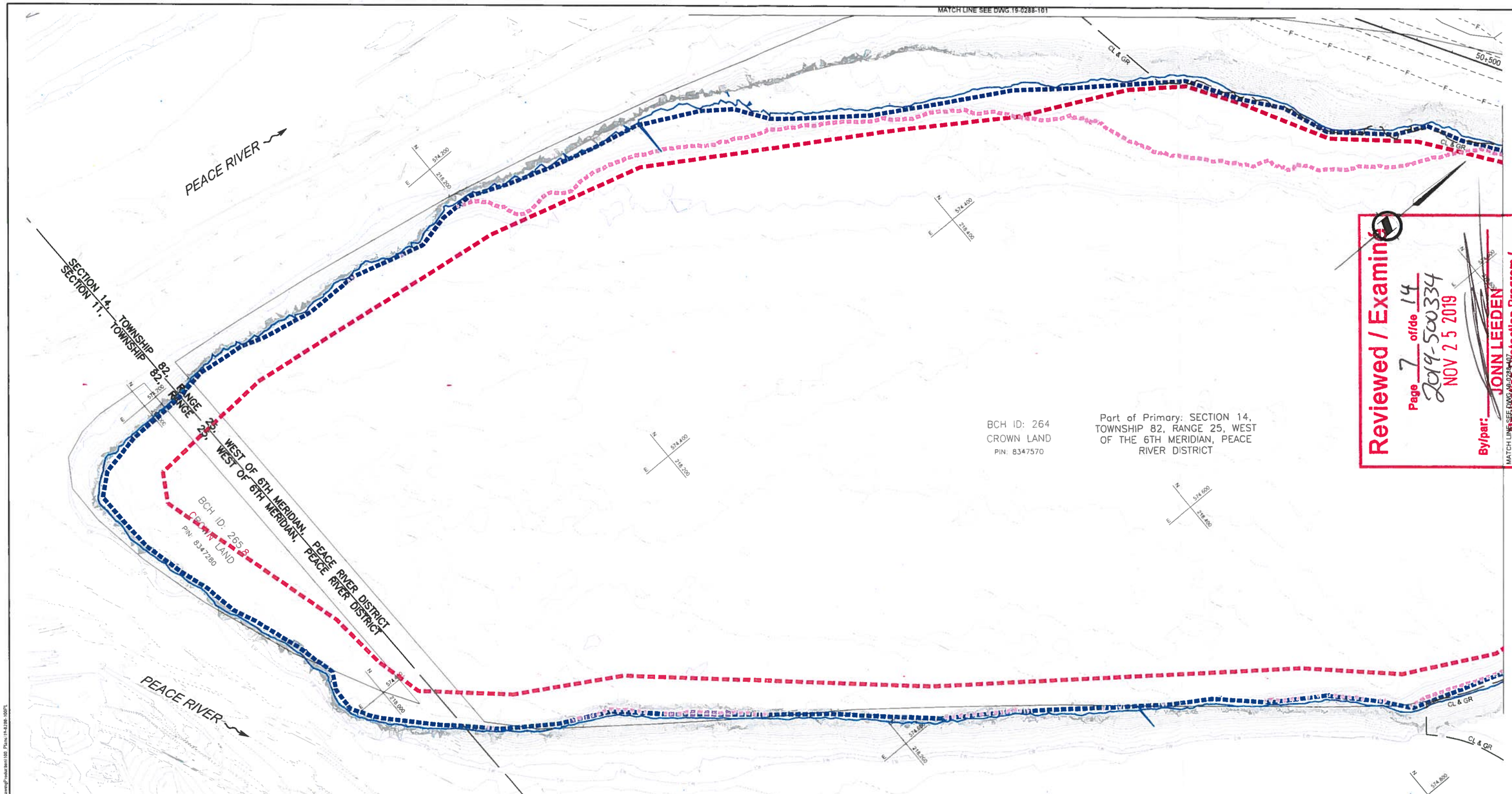
BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-103	



Reviewed / Examiné
Page 7 of/de 14
2019-500334
NOV 25 2019
By/par: JOHN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

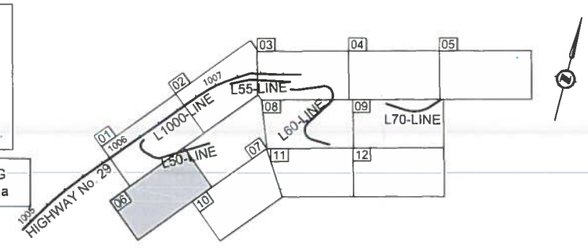
NOTES:

1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND
- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 1.18 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m
CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-106	

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

NOTES:

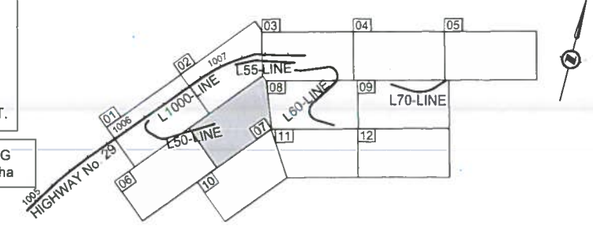
1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND

- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 22.9 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m

CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE

HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

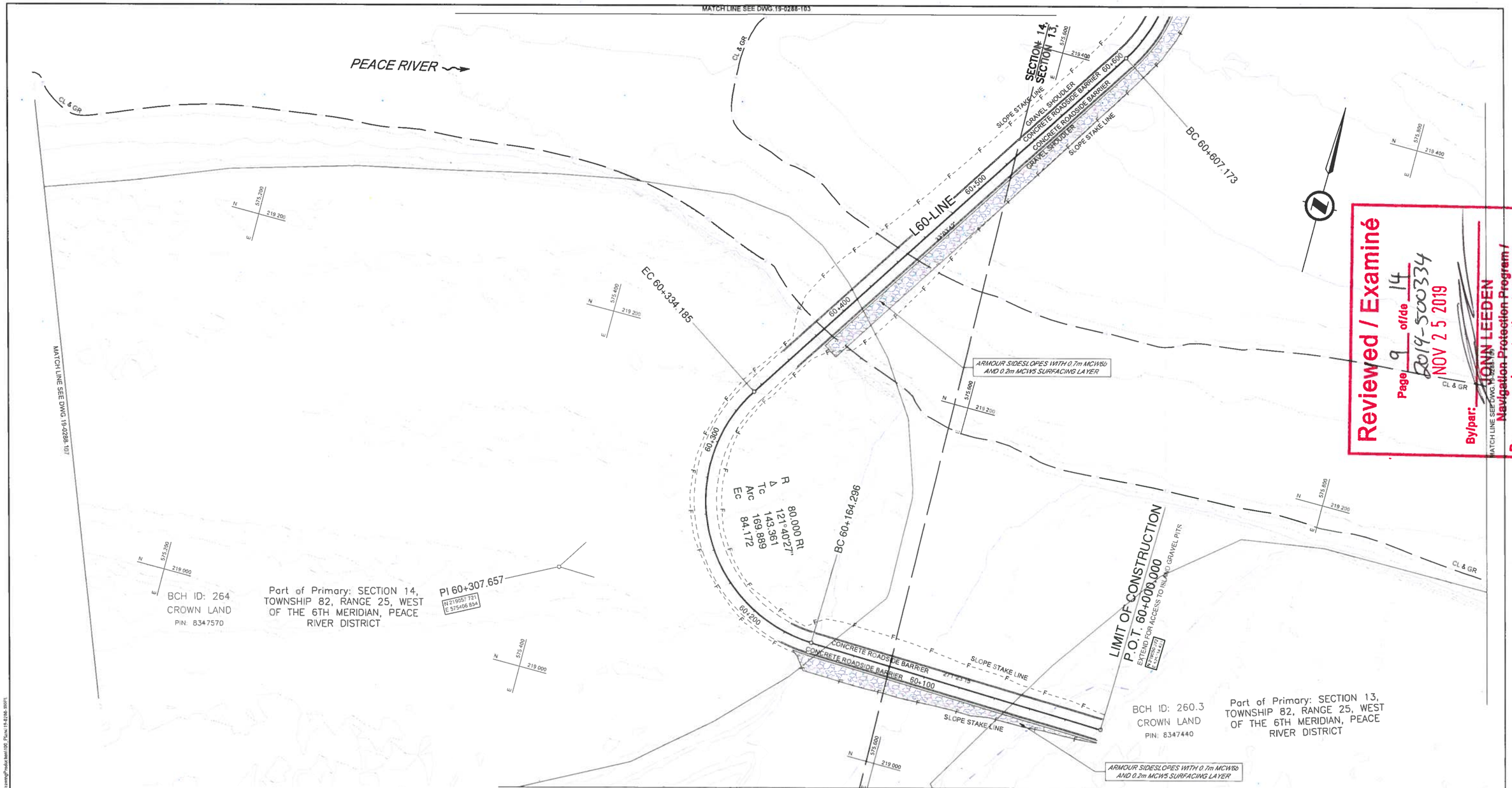
SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-107	

Reviewed / Examiné
Page 8 of/de 14
2019-500334
NOV 25 2019
By/par: JOHN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

Jun. 26, 2019 - 10:09 AM P:\CAD Projects_TO20\1916-038\00 CAD Files\Mkt\rwy CAD\Drawing\Project\001_Plans\19-0288-100PL



Reviewed / Examiné
Page 9 of/de 14
2019-500334
NOV 2 5 2019
By/par: HONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

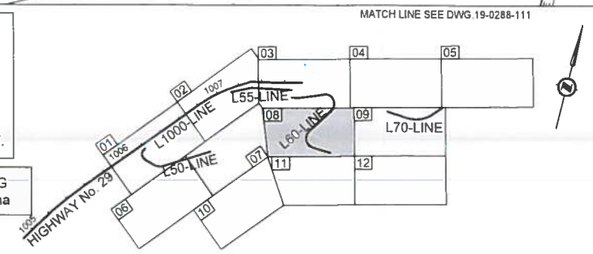
NOTES:

1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND
- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 26.5 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m
CAD FILENAME 19-0288-100PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

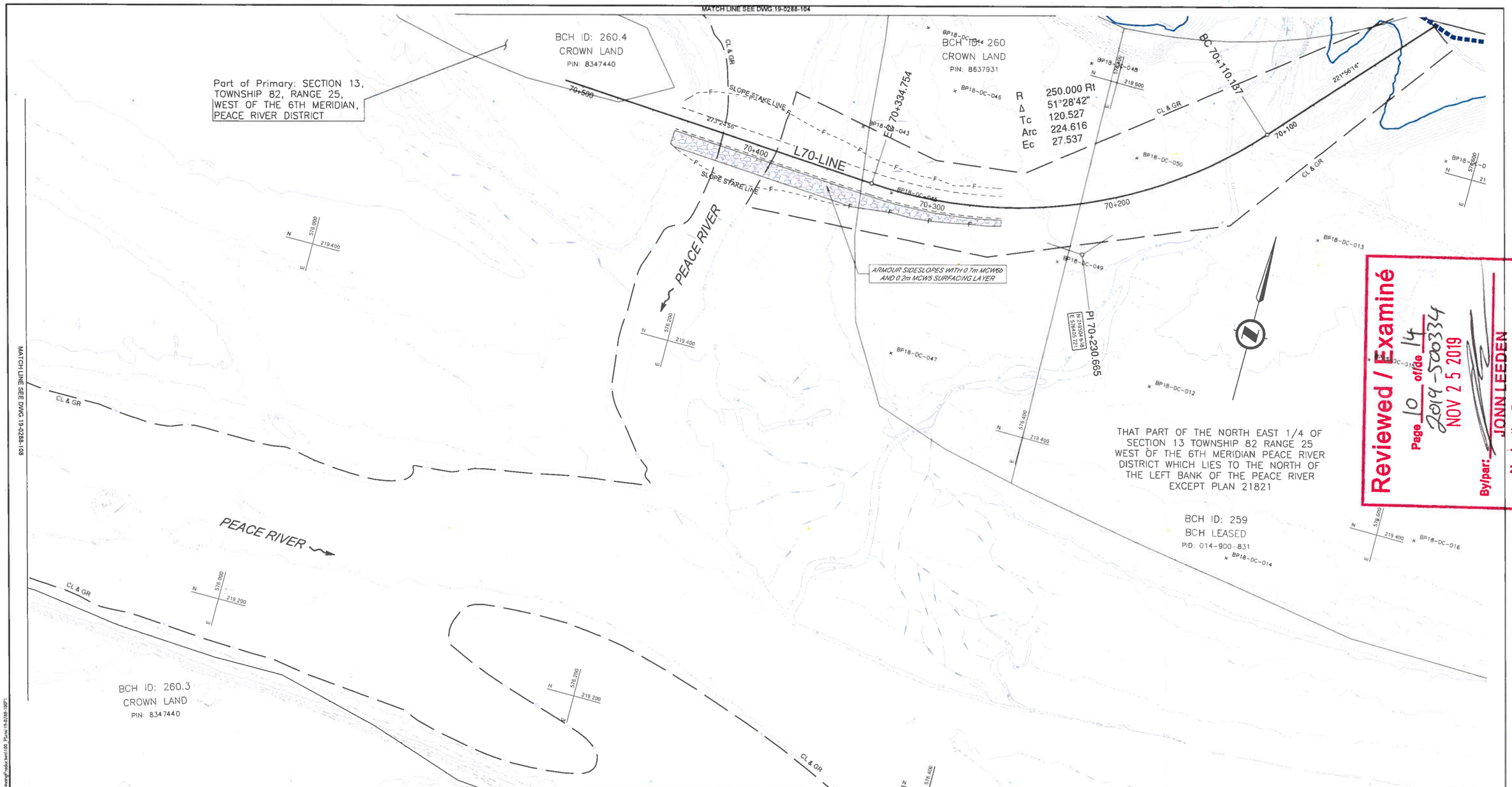
BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-108	



FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

NOTES:

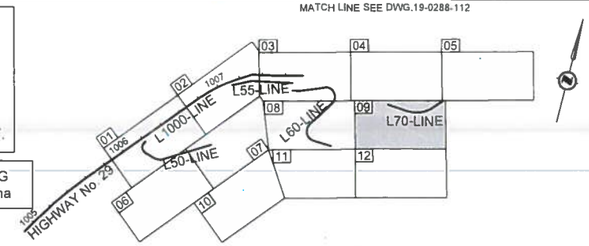
1. CLEARING AND GRUBBING BETWEEN THE SOUTH EXISTING EDGE OF PAVEMENT AND THE EDGE OF WATER UNLESS OTHERWISE SHOWN. CLEARING AND GRUBBING ON ISLANDS TO BE COMPLETE FROM THE EDGE OF WATER TO A MAX ELEVATION OF 463.0m.
2. EXTEND ALL EXISTING CULVERTS THROUGH PROPOSED EMBANKMENT.

LEGEND

- MAXIMUM NORMAL RESERVOIR LINE (MNRL)
- STABILITY IMPACT LINE (SIL)
- EROSION IMPACT LINE (EIL)
- FLOOD IMPACT LINE (FIL)
- (WIL BASED ON PRELIMINARY 1:10 000 YR LANDSLIDE)

CLEARING AND GRUBBING TOTAL THIS SHEET: 13.1 ha

DRAFT



PRELIMINARY DESIGN - JUNE 26, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
300 - 4940 Canada Way,
Burnaby, BC V5G 4K6
TEL 604 420 1721
BINNIE.com

SCALE 0 10 1:1000 50m

CAD FILENAME 19-0288-109PL.DWG
DATE 2019-06-26

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

PLANS AND DRAINAGE

HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

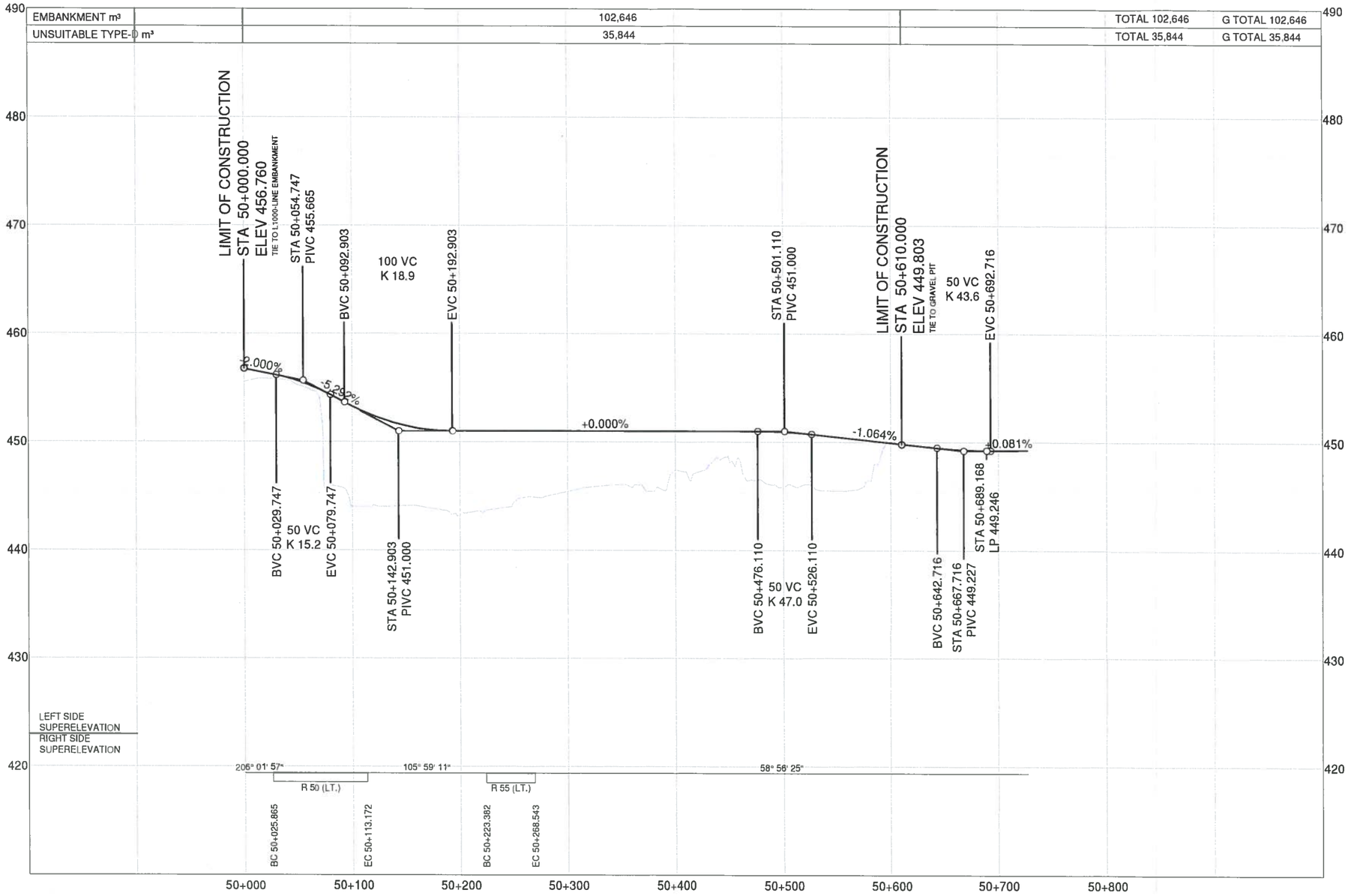
SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JUNE 2019
QUALITY CONTROL R MANKOWSKE DATE JUNE 2019
QUALITY ASSURANCE J NORRIS DATE JUNE 2019
DRAWN Z RICKETTS DATE JUNE 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-336-109	

Jun. 26, 2019 - 10:00 AM P:\ CAD Projects TOPS\19-0288000 - CAD Files\Civil\Lynx - Fish\Drawing\Index.bmi\100 Plans\19-0288-109PL

EMBANKMENT m³	102,646	TOTAL 102,646	G TOTAL 102,646
UNSUITABLE TYPE-D m³	35,844	TOTAL 35,844	G TOTAL 35,844



Reviewed / Examiné
Page 11 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL
FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL
SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

DRAFT

L50-LINE (CAUSEWAY) - DESIGN SPEED 40km/h

FUNCTIONAL DESIGN - JULY 4, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
101 - 1577 7th Avenue,
Prince George, BC V2L 3P5
TEL 250 563 7274
BINNIE.com

SCALE 0 20 H 1:2000 100m / 0 2 V 1:200 10m

CAD FILENAME 190288-200PR.DWG
DATE 2019-07-02

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

L50-LINE PROFILE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

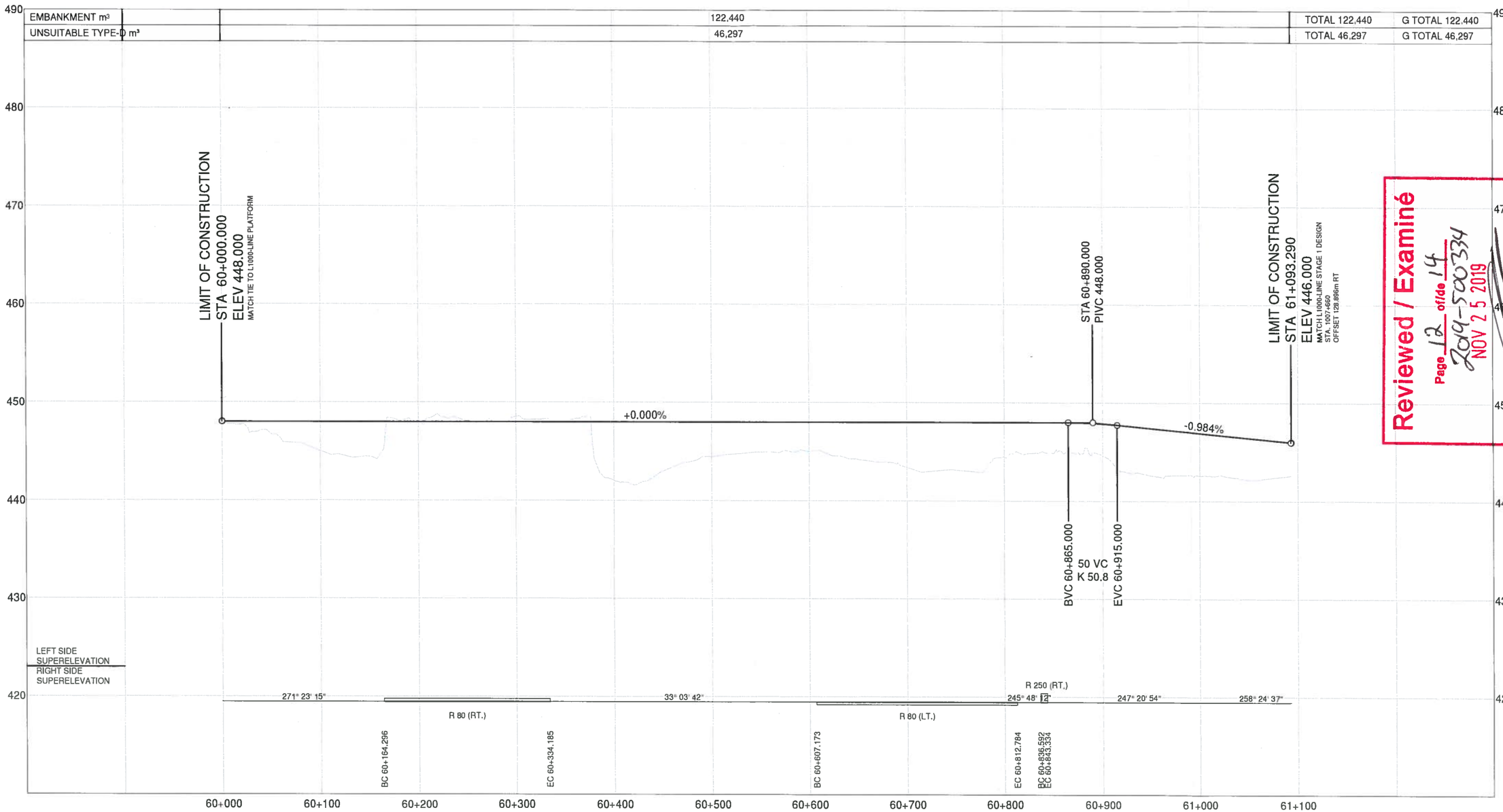
SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JULY 2019
QUALITY CONTROL R MANKOWSKE DATE JULY 2019
QUALITY ASSURANCE J NORRIS DATE JULY 2019
DRAWN Z RICKETTS DATE JULY 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-346-203	

Jul 2, 2019 - 01:45 PM P:\CAD_Projects_TC\2019\19-0288\00 - CAD Files\004-1.rvm, C:\HQ\Jobs\Production\200_Profiles\190288-200PR

EMBANKMENT m³	122,440	TOTAL 122,440	G TOTAL 122,440
UNSUITABLE TYPE-0 m³	46,297	TOTAL 46,297	G TOTAL 46,297



Reviewed / Examiné
Page 12 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program /
Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL
FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL
SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

DRAFT

L60-LINE (HAUL ROAD) - DESIGN SPEED 40 km/h

FUNCTIONAL DESIGN - JULY 4, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
101 - 1577 7th Avenue,
Prince George, BC V2L 3P5
TEL 250 562 7274
BINNIE.com

SCALE 0 20 H 1:2000 100m
0 2 V 1:200 10m

CAD FILENAME 190288-700PR.DWG
DATE 2019-07-02

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

L60-LINE PROFILE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

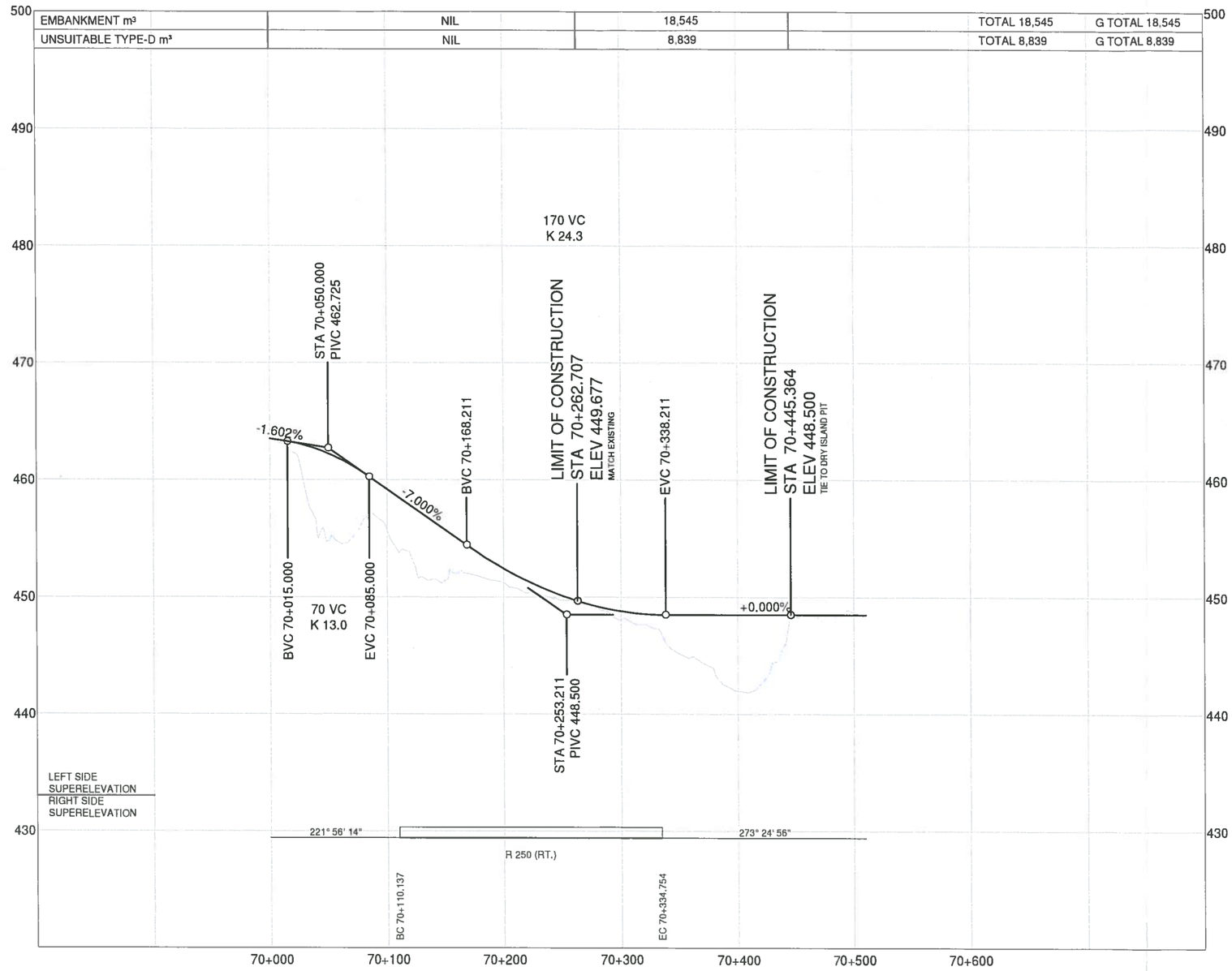
SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JULY 2019
QUALITY CONTROL R MANKOWSKE DATE JULY 2019
QUALITY ASSURANCE J NORRIS DATE JULY 2019
DRAWN Z RICKETTS DATE JULY 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-346-205	

JUL 2, 2019 01:49 PM P:\ CAD Projects\ TO\2019\19-0288\00 - CAD File\06-Lynx_CAD\Drawing\Production\200\ Prefix\190288-300PR

EMBANKMENT m³	NIL	18,545		TOTAL 18,545	G TOTAL 18,545
UNSUITABLE TYPE-D m³	NIL	8,839		TOTAL 8,839	G TOTAL 8,839



Reviewed / Examiné
Page 13 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program /
Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL
FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL
SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

DRAFT

L70-LINE (ISLAND ACCESS) - DESIGN SPEED 40 km/h

FUNCTIONAL DESIGN - JULY 4, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
101 - 1577 7th Avenue,
Prince George, BC V2L 3P5
TEL 250 563 7274
BINNIE.com

SCALE 0 20 H 1:2000 100m / 0 2 V 1:200 10m

CAD FILENAME 190288-200PR.DWG
DATE 2019-07-02

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

L70-LINE PROFILE
HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

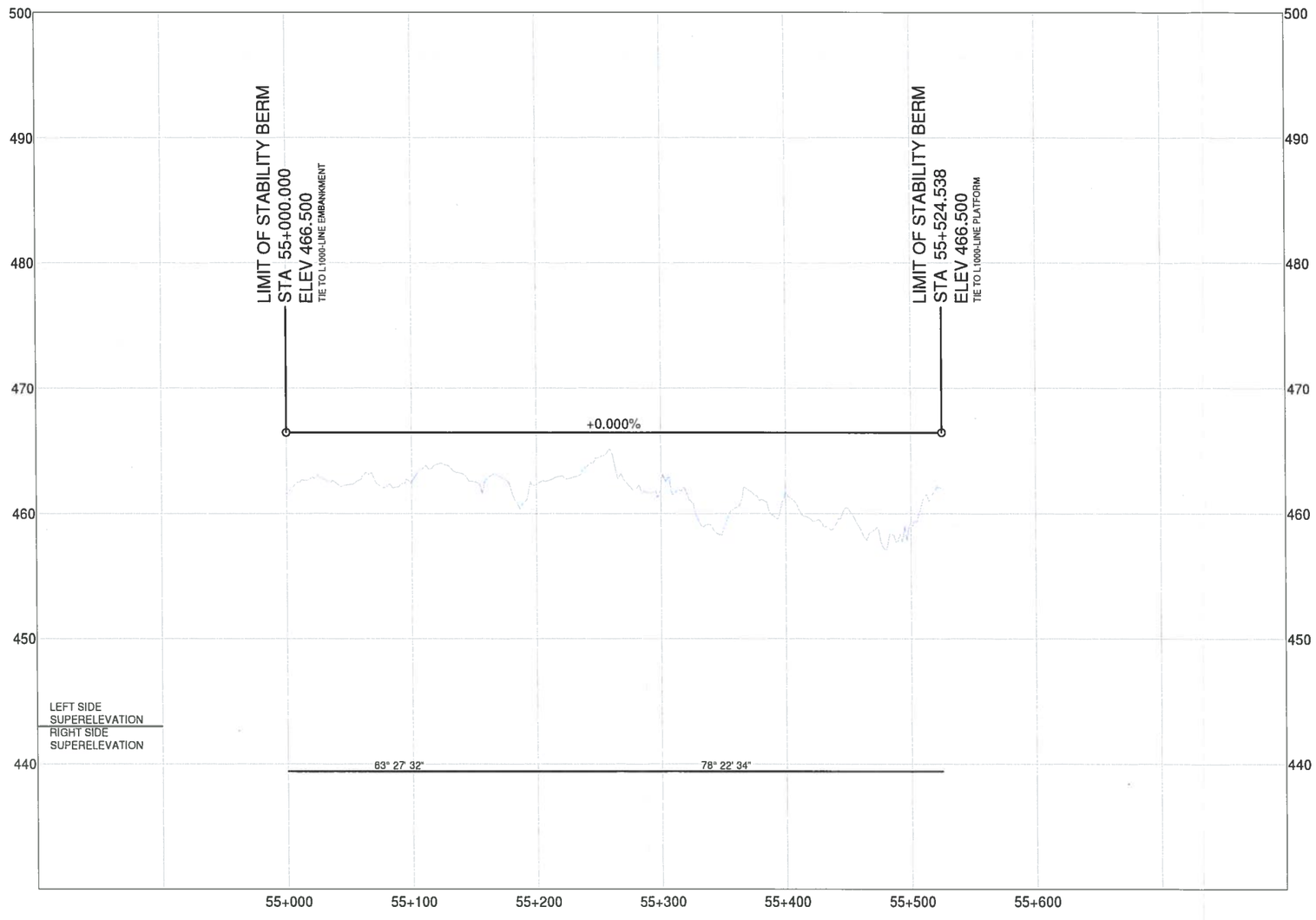
SENIOR DESIGNER
DATE

DESIGNED Z RICKETTS DATE JULY 2019
QUALITY CONTROL R MANKOWSKE DATE JULY 2019
QUALITY ASSURANCE J NORRIS DATE JULY 2019
DRAWN Z RICKETTS DATE JULY 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-346-206	

Jul 2, 2019 - 01:49 PM P:_CAD_Projects_TGD\BI19-0288\00 - CAD Files\004_yrm_C-NO-zxmg\Production\200_Profiles\190288-200PR

ALIGNMENT USED FOR L1000-LINE OFFSET GEOMETRY ONLY
SEE L1000-LINE PROFILE FOR EMBANKMENT QUANTITIES



Reviewed / Examiné
Page 14 of/de 14
2019-500334
NOV 25 2019
By/par: JONN LEEDEN
Navigation Protection Program / Programme de protection de la navigation

FOR PLANS
SEE DWG. R3-336-101 TO 112

FOR ARCHAEOLOGICAL PLANS
SEE DWG. R3-336-101ARC TO 112ARC

FOR ENVIRONMENTAL
FEATURE PLANS
SEE DWG. R3-336-101ENV TO 112ENV

FOR PROFILES
SEE DWG. R3-336-201 TO 206

FOR TYPICAL
SECTIONS AND DETAILS
SEE DWG. R3-336-301 TO 302

DRAFT

L55-LINE (STABILITY BERM)

FUNCTIONAL DESIGN - JULY 4, 2019

BINNIE
The people behind your infrastructure.

R.F. BINNIE & ASSOCIATES LTD.
101 - 1577 7th Avenue,
Prince George, BC V2L 3P5
TEL 250 561 7274
BINNIE.com

SCALE 0 20 H 1:2000 100m
0 2 V 1:200 10m

CAD FILENAME 190288-200PR.DWG
DATE 2019-07-02

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY ENGINEERING
NORTHERN REGION

L55-LINE PROFILE

HIGHWAY NO. 29
LYNX CREEK EAST EARLY WORKS

SENIOR DESIGNER
DATE

DESIGNED Z PICKETTS DATE JULY 2019
QUALITY CONTROL R MANKOWSKE DATE JULY 2019
QUALITY ASSURANCE J NORRIS DATE JULY 2019
DRAWN Z PICKETTS DATE JULY 2019

FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
19-0288	37504-0000	3	R3-346-204	

Jul 2, 2019 - 01:49 PM P:\CAD_Projects\TODB\19\19-0288\00 - CAD Files\00-Lynx CK\Drawing\Production\200 Profiles\190288-200PR