

FILE: C:\pw_workdir\jacobs-us-va-pw-02\dms92398\SC-INF01-6081-C001.dwg
PLOTTED : Wednesday, December 4, 2024

GENERAL NOTES:

1.

ALL WORK SHALL CONFORM TO THE GNWT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (SSHC), CONTRACT, AND DRAWINGS.
2.

THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS PRIOR TO COMMENCEMENT OF WORK.
3.

THE CONTRACTOR SHALL ENSURE ALL PERMITS AND APPROVALS REQUIRED FOR THE PROPOSED WORK HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
4.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT CURRENT RELEVANT COPIES OF ALL DRAWINGS AND CONTRACT DOCUMENTS ARE FORWARDED TO SURVEYORS, TESTING AGENCIES, SUBCONTRACTORS, SUPERINTENDENTS, ESTIMATORS, PROJECT MANAGERS, SITE STAFF AND ANY OTHER RELEVANT PARTIES.
5.

THE CONTRACTOR SHALL CONSTRUCT ALL WORKS TO THE SATISFACTION OF THE ENGINEER AND ANY RELEVANT REGULATORY AUTHORITY. CONTRACTOR TO GIVE TIMELY NOTICE TO RELEVANT INSPECTOR TO ALLOW FOR INSPECTION ON WORKS AND UPDATE ENGINEER ON SAME.
6.

THE CONTRACTOR SHALL PERFORM AT HIS OWN COST ALL THE TESTING REQUIRED BY THE CONTRACT SPECIFICATIONS AND THE ENGINEER. TESTING SHALL BE DONE BY AN INDEPENDENT SPECIALTY TESTING FIRM. CONTRACTOR TO GIVE THE ENGINEER 72 HOURS NOTICE ON ALL TESTING. COPIES OF TESTS TO BE FORWARDED DIRECTLY TO THE ENGINEER.
7.

PROPERTY LINES SHOWN ON CONTRACT DRAWINGS ARE APPROXIMATE ONLY. THE 60m HIGHWAY RIGHT-OF-WAY LIMITS FOR HWY 1 ARE BASED ON MACKENZIE VALLEY LAND AND WATER BOARD (MVLWB) LAND USE PERMIT, No MV2023E0012 DATED MAY 31, 2023.
8.

LOCATIONS OF EXISTING UTILITIES HAVE BEEN COMPILED FROM OWNER AND UTILITY SUPPLIED RECORD DRAWINGS AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SERVICES AND NOTIFY ENGINEER OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS PRIOR TO BEGINNING OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF ANY DAMAGE TO EXISTING UTILITIES TO THE SATISFACTION OF THE ENGINEER AND/OR APPROPRIATE UTILITY OWNER.
9.

THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR EXISTING SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THERE IS NO DISRUPTION TO SERVICE. IF DISRUPTION IS ANTICIPATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND APPROPRIATE UTILITY OWNER A MINIMUM OF 72 HOURS PRIOR AND OBTAIN APPROVAL FOR THE DISRUPTION.
10.

CONTRACTOR SHALL RESTORE ALL AFFECTED SIGNS, UTILITIES, LANDSCAPING AND FEATURES OUTSIDE OF CONSTRUCTION AREAS THAT MAY BE DAMAGED DURING CONSTRUCTION TO ORIGINAL OR BETTER CONDITION AT THEIR COST.
11.

CONTRACTOR IS RESPONSIBLE FOR HAULING AND PROPER DISPOSAL OF ALL EXCESS MATERIAL UNSUITABLE FOR REUSE OFF SITE TO AN APPROVED DISPOSAL AREA, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND THE CONTRACT DOCUMENTS.
12.

WHERE NO IMPROVEMENTS ARE PROPOSED UNDER THIS CONTRACT, THE EXISTING SECTION(S) OF ROADWAY SHALL BE KEPT CLEAN AND CLEAR FOR THE DURATION OF CONSTRUCTION AND LEFT IN THE SAME CONDITION AS PRIOR TO CONSTRUCTION.
13.

CONTRACTOR SHALL KEEP PROPER AS-BUILT INFORMATION DURING CONSTRUCTION. THE CONTRACTOR'S SURVEYOR SHALL RECORD AND CERTIFY ALL INFORMATION REQUIRED TO PROVIDE THE ENGINEER A COMPLETE SET OF AS-BUILT DRAWINGS.
14.

ALL TRAFFIC CONTROL SHALL CONFORM WITH THE CONTRACT DOCUMENTS AND THE TRANSPORTATION ASSOCIATION OF CANADA "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CANADA" LATEST EDITION. CONTRACTOR SHALL SUBMIT TRAFFIC MANAGEMENT PLAN AND LANE CLOSURE REQUESTS FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
15.

VEHICULAR ACCESS TO EXISTING PROPERTIES SHALL BE MAINTAINED 24 HOURS PER DAY BY THE CONTRACTOR FOR THE DURATION OF THE CONTRACT.
16.

PEDESTRIANS SHALL BE PROTECTED AT ALL TIMES. ANY CLOSURES OF SHOULDERS, OR LANES TO BE COORDINATED WITH AND APPROVED BY THE ENGINEER. CONTRACTOR TO PROVIDE REQUIRED WRITTEN NOTICES TO RESIDENTS DIRECTLY AFFECTED BY CONSTRUCTION AND TO ALL EMERGENCY SERVICES.
17.

ALL DIMENSIONS AND ELEVATIONS IN METRES UNLESS OTHERWISE NOTED.
18.

REFER TO CONTRACT SPECIFICATIONS FOR OTHER REQUIREMENTS. IN CASE OF CONFLICTS BETWEEN THIS DRAWING AND CONTRACT SPECIFICATIONS, CONTRACT SPECIFICATIONS WILL PREVAIL.

ROADWORKS NOTES:

1.

THE CONTRACTOR SHALL GIVE THE ENGINEER 48 HOURS NOTICE PRIOR TO THE SUBGRADE PROOF ROLL, BASE AND SUBBASE COMPACTION, AND PAVING.
2.

CHANGES IN GRADE TO BE FORMED WITH SMOOTH CURVES.
3.

ROAD APPROACH CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT.
4.

REFER TO THE LATEST HYDROTECHNICAL REPORT PREPARED BY MATRIX SOLUTIONS INC.
5.

REFER TO THE LATEST GEOTECHNICAL REPORT PREPARED BY MASKWA ENGINEERING LTD.

SURVEY NOTES:

1.

COORDINATES ARE UTM ZONE 10N NAD83(CSRS).
2.

ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM BENCHMARK #1 (ELEVATION = 206.55m)

BENCHMARK POINT TABLE			
DESCRIPTION	NORTHING	EASTING	ELEVATION
BM1	6813590.94	593981.66	206.55
BM2	6813676.41	593990.85	208.56
WSC 209	6813636.61	593979.31	205.21
WSC 210	6813600.75	593980.07	205.16

3.

LOT BOUNDARIES SHOWN HEREON ARE DERIVED FROM TIES TO EXISTING SURVEY EVIDENCE AND CANADA LAND SURVEY RECORDS. LOT BOUNDARIES ARE SUBJECT TO CHANGE UPON LEGAL SURVEY.

LEGEND

SYMBOLS – EXISTING		SYMBOLS – PROPOSED	
CATCH BASIN		CATCH BASIN	
POWER POLES		PROPOSED RETAINING WALL	
ROAD SIGN		ROAD SIGN	
EDGE OF TREE LINE		SURVEY CONTROL POINT	
HIGH WATER MARK		SPILLWAY	
EDGE OF WATER		RIPRAP	
MAJOR CONTOUR		ASPHALTIC SURFACE TREATMENT	
MINOR CONTOUR		GRAVEL ACCESS ROAD	
FIBRE OPTIC CABLE (BURIED)		UTILITY VAULT	
FIBRE OPTIC CABLE (OVERHEAD)			
FIBRE OPTIC MARKER			
LINETYPES – EXISTING		LINETYPES – PROPOSED	
CONTROL LINES			
EDGE OF PAVED SHOULDER			
EDGE OF GRAVEL SHOULDER			
CULVERT			
DRAINAGE DITCH			
CLEARING & GRUBBING			
GUARDRAIL			
TOE LINE			
HIGHWAY RIGHT OF WAY (R.O.W.)			
PRE-CAST CONCRETE BARRIER			

Consultant Logo

Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories

HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2

JEAN MARIE RIVER BRIDGE

GENERAL NOTES AND LEGEND

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	AS SHOWN		

PERMIT TO PRACTICE

SHARON CANADA INC. OJA

JACOBS CONSULTANT CANADA INC.

Signature:

DATE: 1 Nov 2024

PERMIT NUMBER: P 1453

NTNU Association of Professional Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE: 2024-12-06

PROJECT No.

CE857700

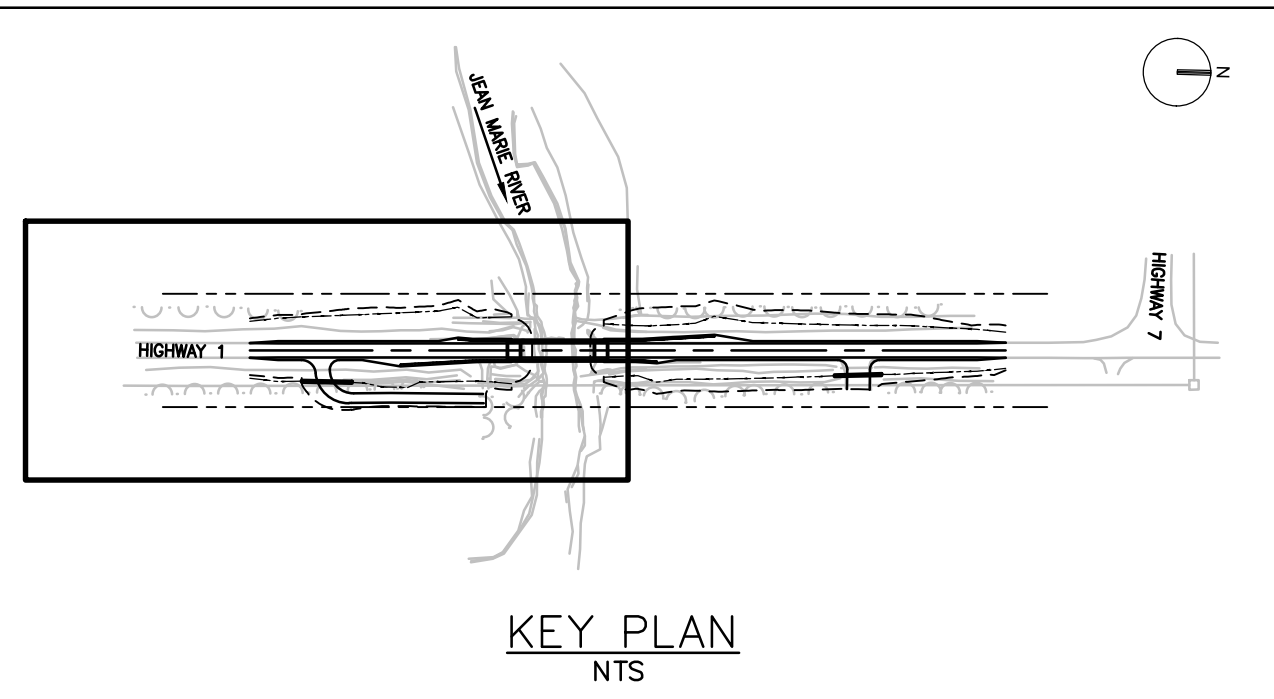
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3 OF 55

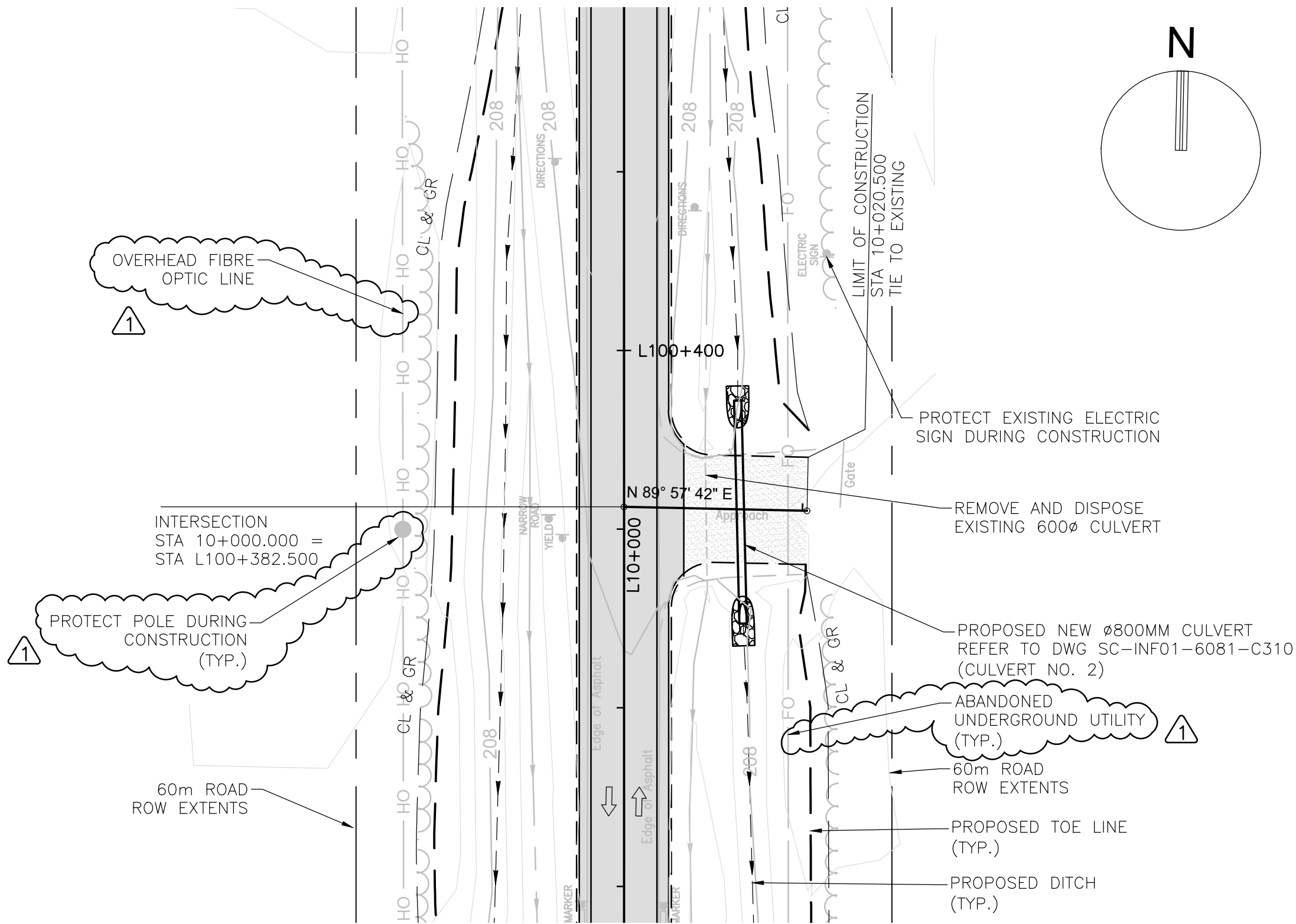
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SC-INF01-6081-C001

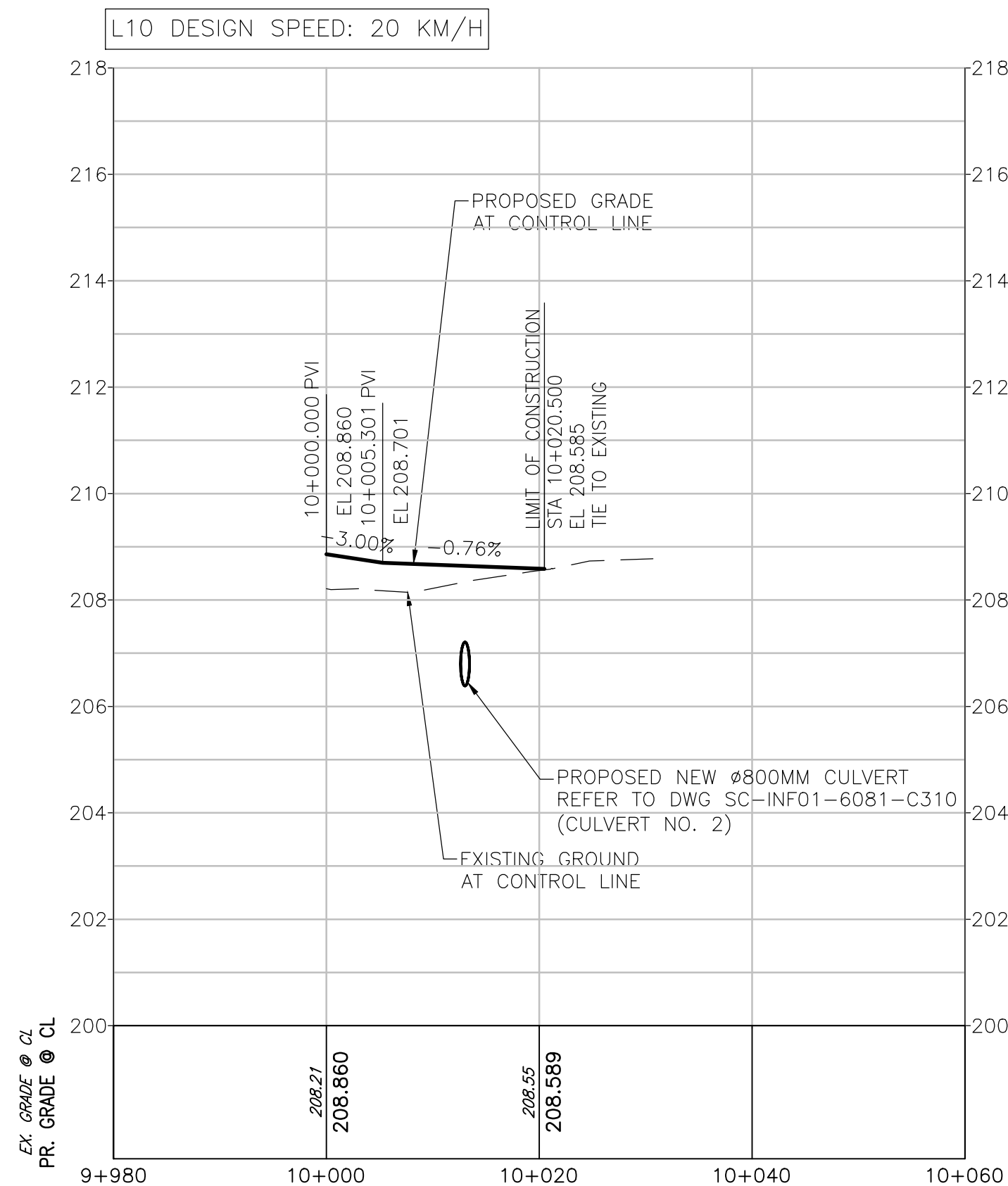
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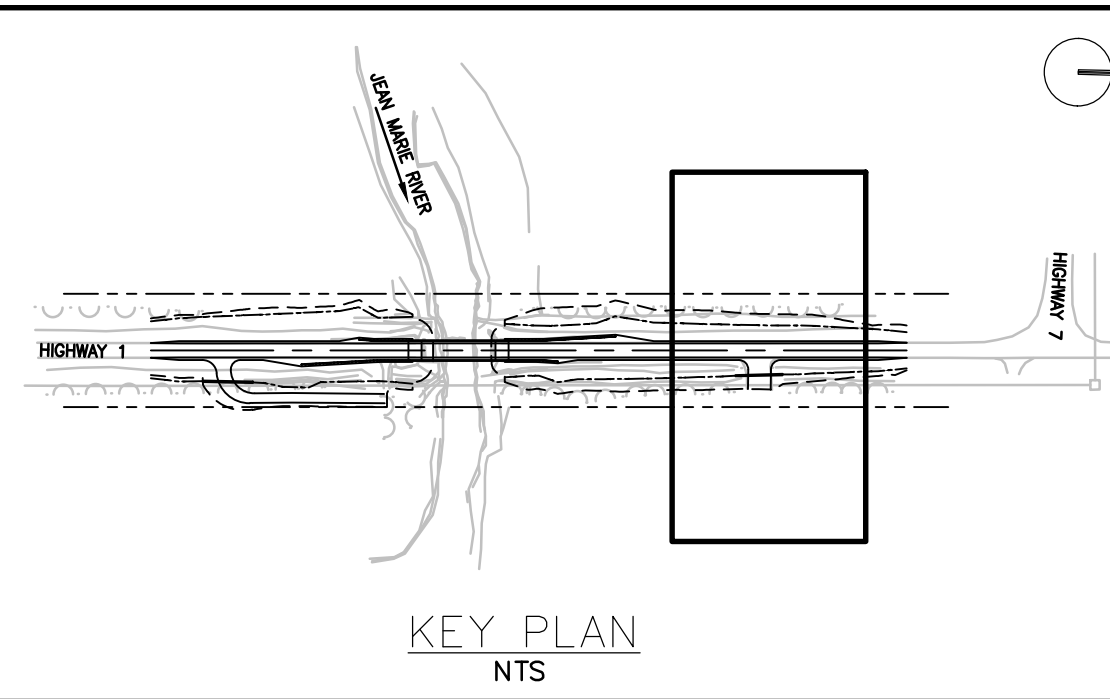
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PLOTTED : Wednesday, December 4, 2024



L10 PLAN
1:500




L10 PROFILE
HOR 1:500 VER 1:100




NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. DESIGN IS BASED ON SITE SURVEY BY STANTEC CONSULTING LTD IN 2019. SUPPLEMENTAL TOPOGRAPHICAL SURVEY WAS COMPLETED BY MASKWA ENGINEERING LTD. IN JUNE 2023.
3. COORDINATES ARE UTM NAD 83 ZONE 10N. ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM BENCHMARK #1 (ELEVATION = 206.55m).
4. INFORMATION ON EXISTING UTILITIES MAY NOT BE COMPLETE OR ACCURATE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES AND NOTIFY THE APPROPRIATE UTILITY COMPANIES AND THE ENGINEER IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.
5. HOLLOW ARROWS SHOW TRAFFIC DIRECTION ONLY AND ARE NOT TO BE PAINTED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL THROUGH THE SITE 24 HOURS PER DAY DURING CONSTRUCTION.
7. CLEARING AND GRUBBING LIMITS TO BE OFFSET 2.0m FROM TOP OF CUT AND 5.0m FROM BOTTOM OF FILL UNLESS OTHERWISE SPECIFIED. CLEARING AND GRUBBING IS NECESSARY ONLY IF CLEARING AND GRUBBING LIMITS ENTER INTO TREE LINES.



Consultant Logo



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REVISIONS

Government of Northwest Territories

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JEAN MARIE RIVER BRIDGE

L10 PLAN AND PROFILE

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	AS SHOWN		

PERMIT TO PRACTICE

SHARON CANADA INC. OIA

JACOBS CONSULTANCY CANADA INC.

Signature: [Signature] ID: 1-1571

Exp: 1-15-24

PERMIT NUMBER: P 1453

NTNU Association of Professional Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE 2024-12-06

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CE857700

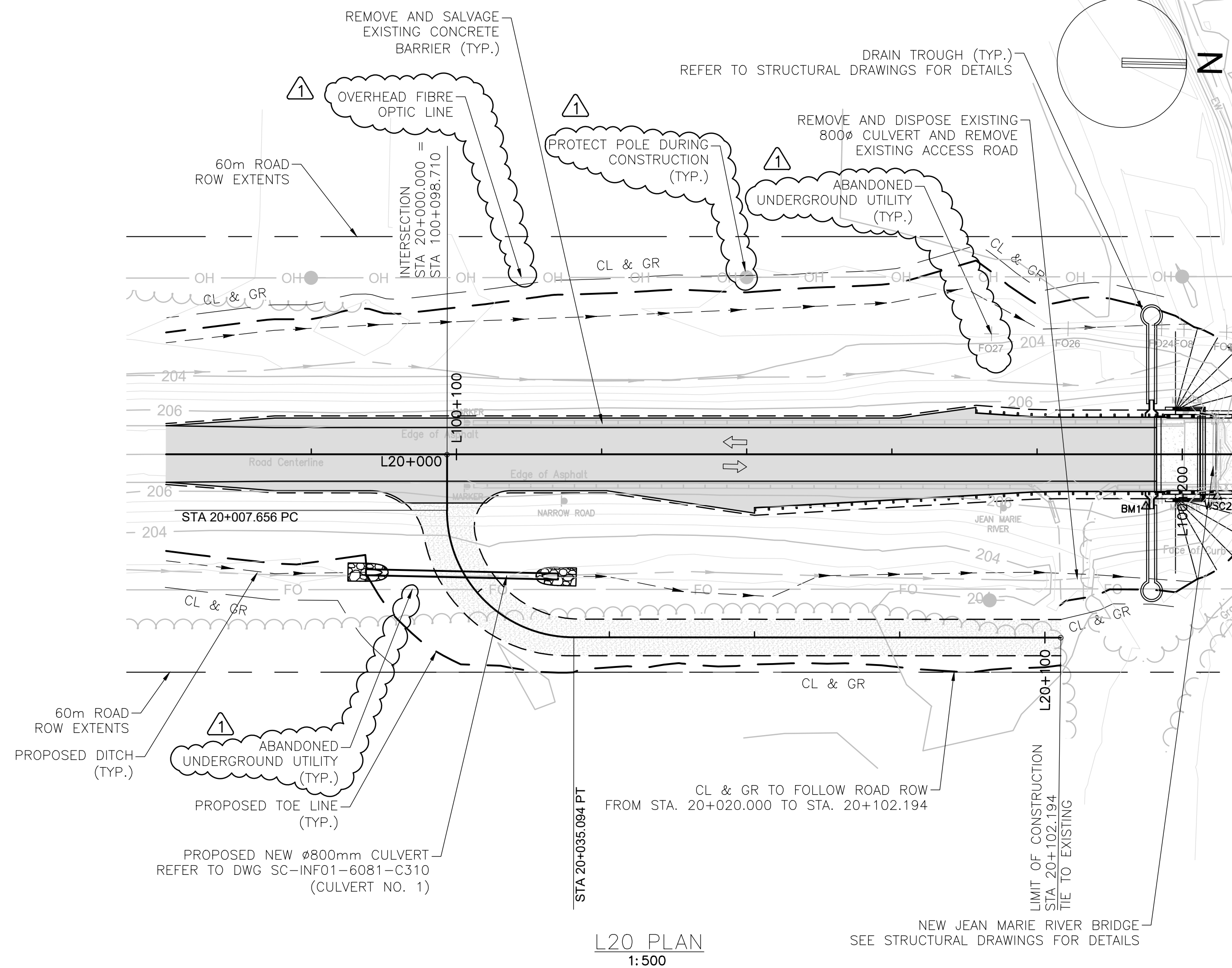
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6 OF 55

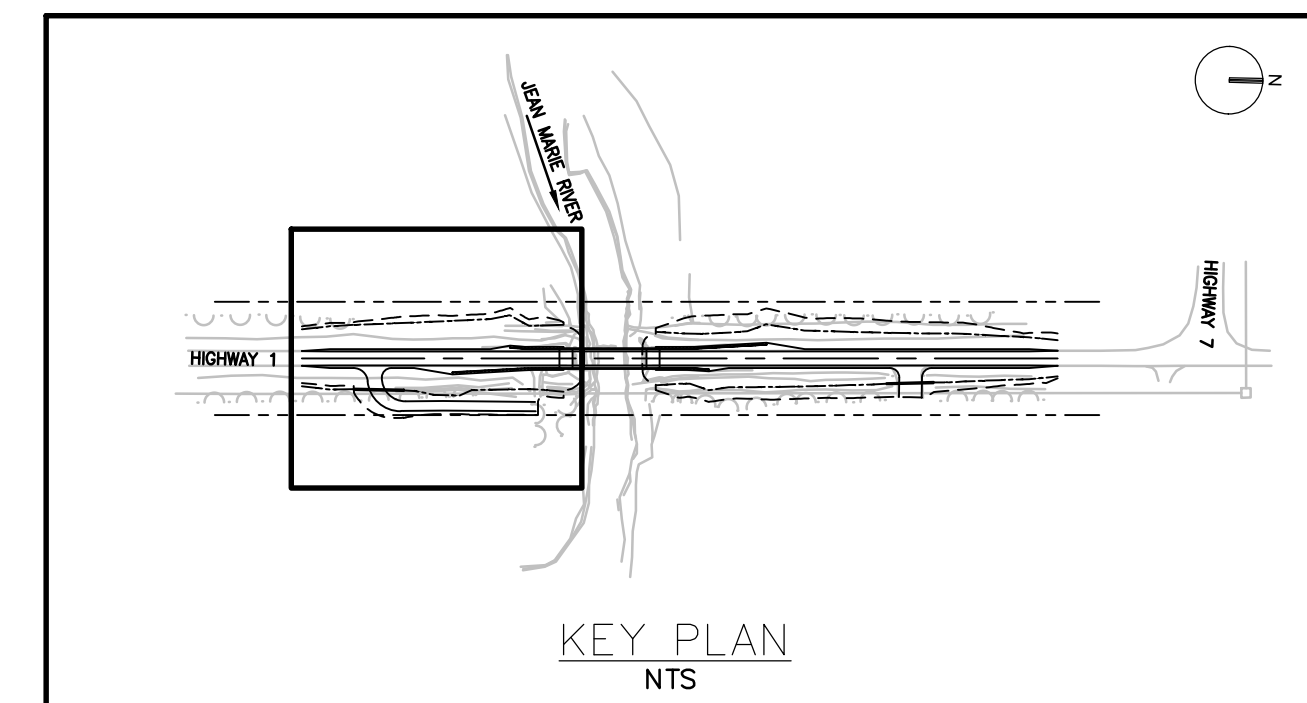
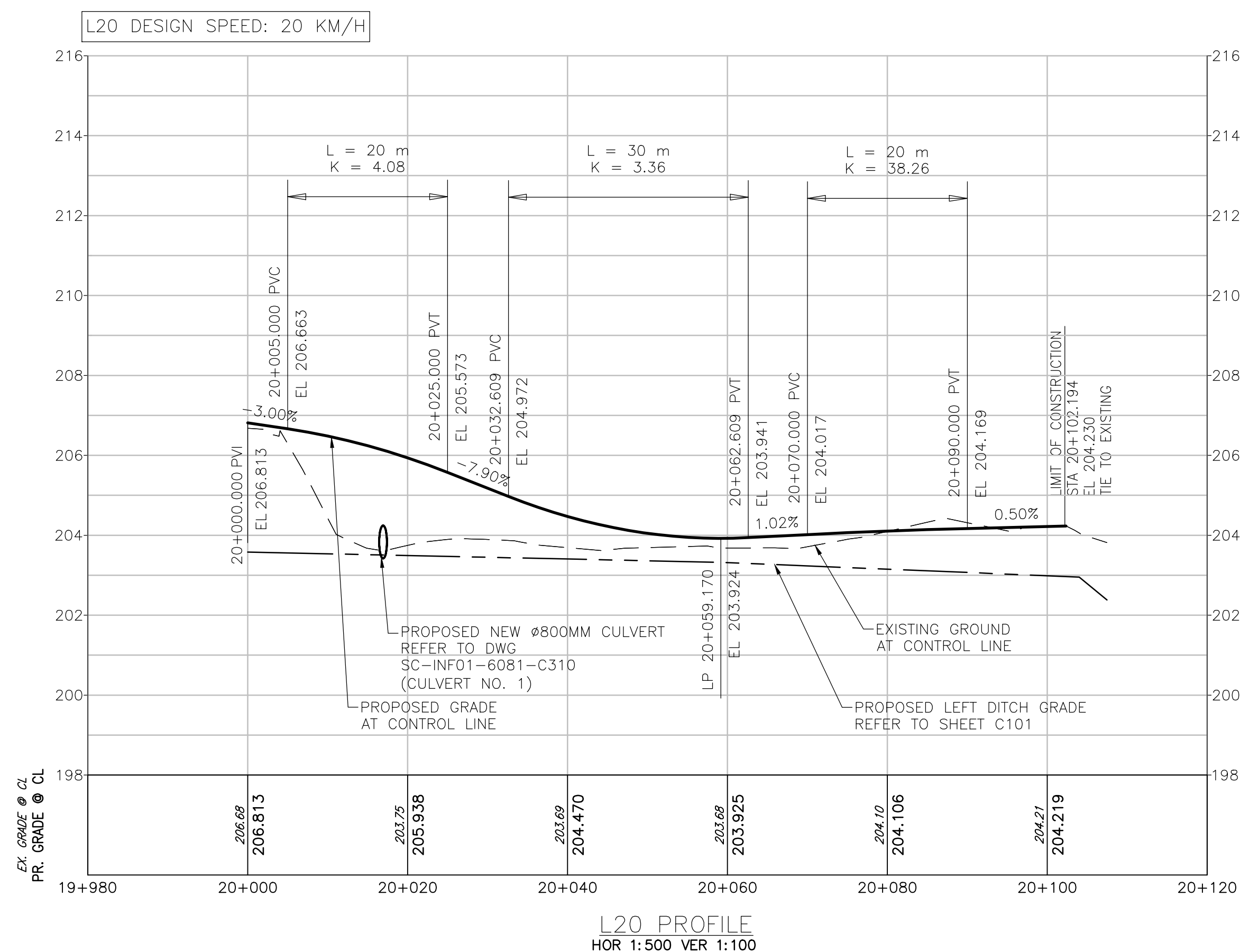
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SC-INF01-6081-C110

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



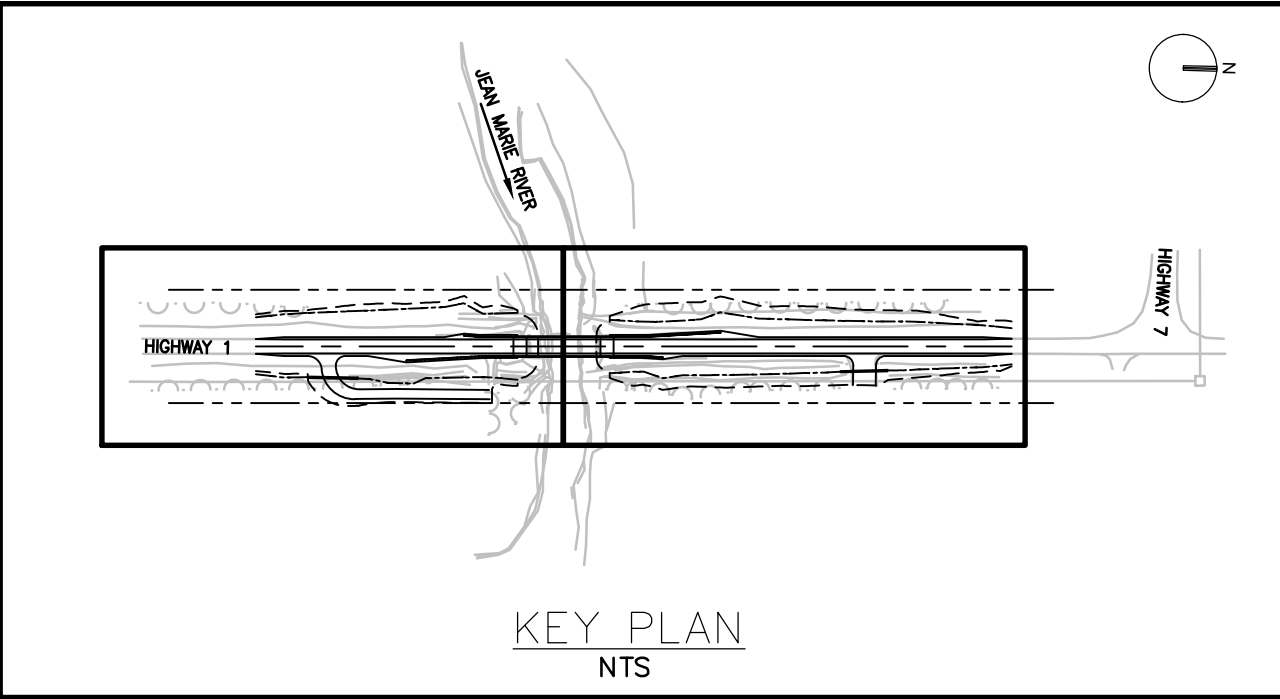
FIBRE OPTIC MARKER POST (WEST SIDE ONLY)			
Point #	Elevation	Northing	Easting
F04	206.37	6813351.68	593962.24
F07	202.52	6813603.31	593957.74
F08	202.50	6813595.67	593957.32
F010	209.99	6813671.19	593950.88
F011	208.42	6813656.39	593951.75
F012	209.58	6813660.99	593951.02
F013	210.04	6813684.52	593952.37
F014	209.63	6813883.65	593947.79
F024	202.53	6813592.58	593957.32
F025	202.74	6813601.54	593957.60
F026	203.08	6813579.69	593957.60
F027	203.25	6813569.16	593958.54



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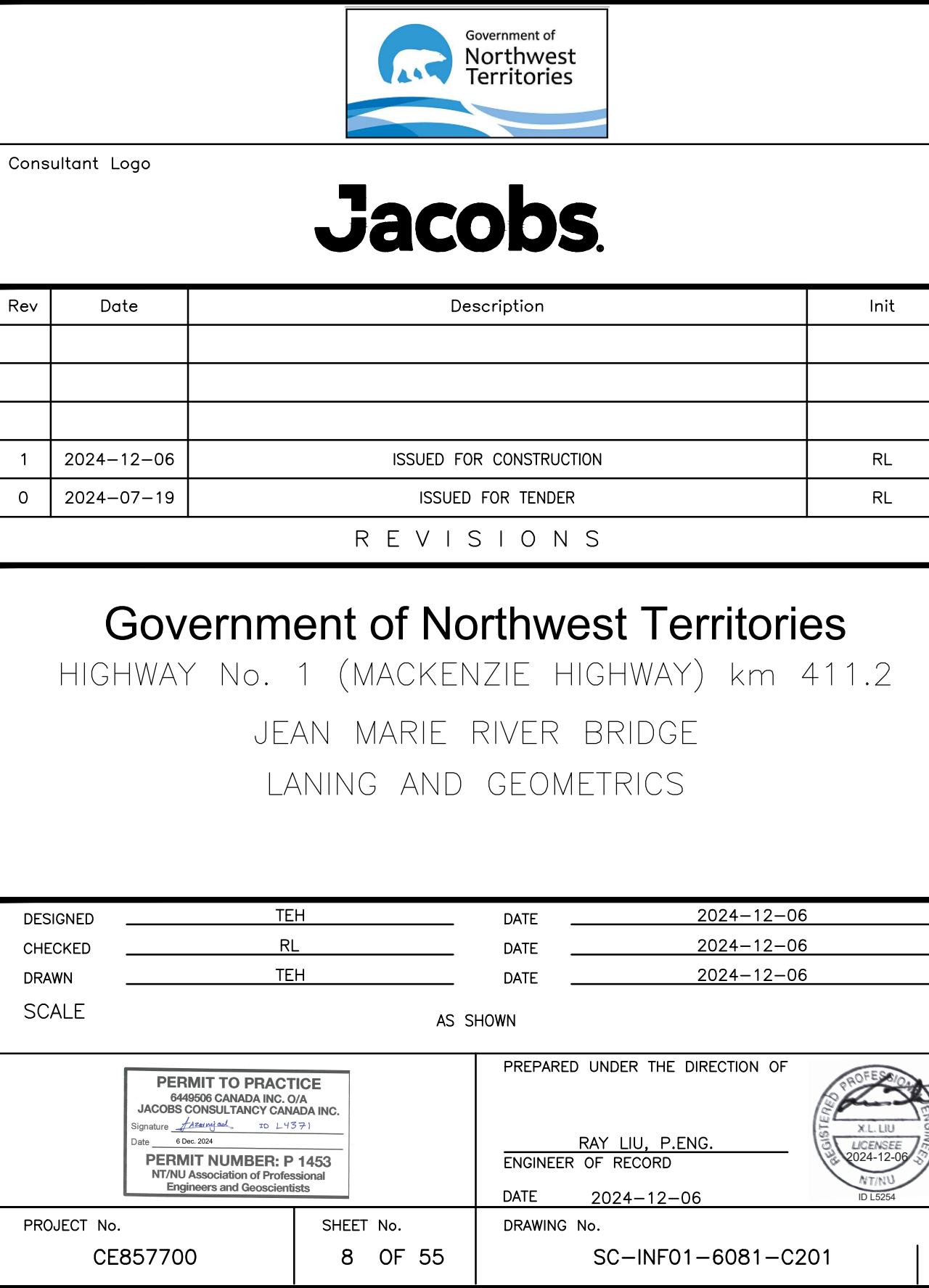
			
Consultant Logo <div style="font-size: 48px; font-weight: bold; margin-top: 20px;">Jacobs.</div>			
Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL
R E V I S I O N S			
<div style="font-size: 24px; font-weight: bold; margin-bottom: 10px;">Government of Northwest Territories</div> <div style="font-size: 18px; margin-bottom: 10px;">HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2</div> <div style="font-size: 18px; margin-bottom: 10px;">JEAN MARIE RIVER BRIDGE</div> <div style="font-size: 18px;">L2O PLAN AND PROFILE</div>			
DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE		AS SHOWN	
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> PERMIT TO PRACTICE <small>685930 CANADA INC. O/A JACOBS CONSULTANCY CANADA INC.</small> <small>Signature:  No. 1-175 713</small> <small>Date: 6 Dec 2024</small> </div> <div style="border: 1px solid black; padding: 5px;"> PERMIT NUMBER: P 1453 <small>NTWT Association of Professional Engineers and Geoscientists</small> </div>		PREPARED UNDER THE DIRECTION OF <div style="text-align: center; margin-bottom: 5px;"> RAY LIU, P.ENG. ENGINEER OF RECORD </div> <div style="display: flex; justify-content: space-between;"> <div>DATE</div> <div>2024-12-06</div> </div> <div style="text-align: right; margin-top: 10px;">  </div>	
PROJECT No.	SHEET No.	DRAWING No.	
CE857700	7 OF 55	SC-INF01-6081-C111	



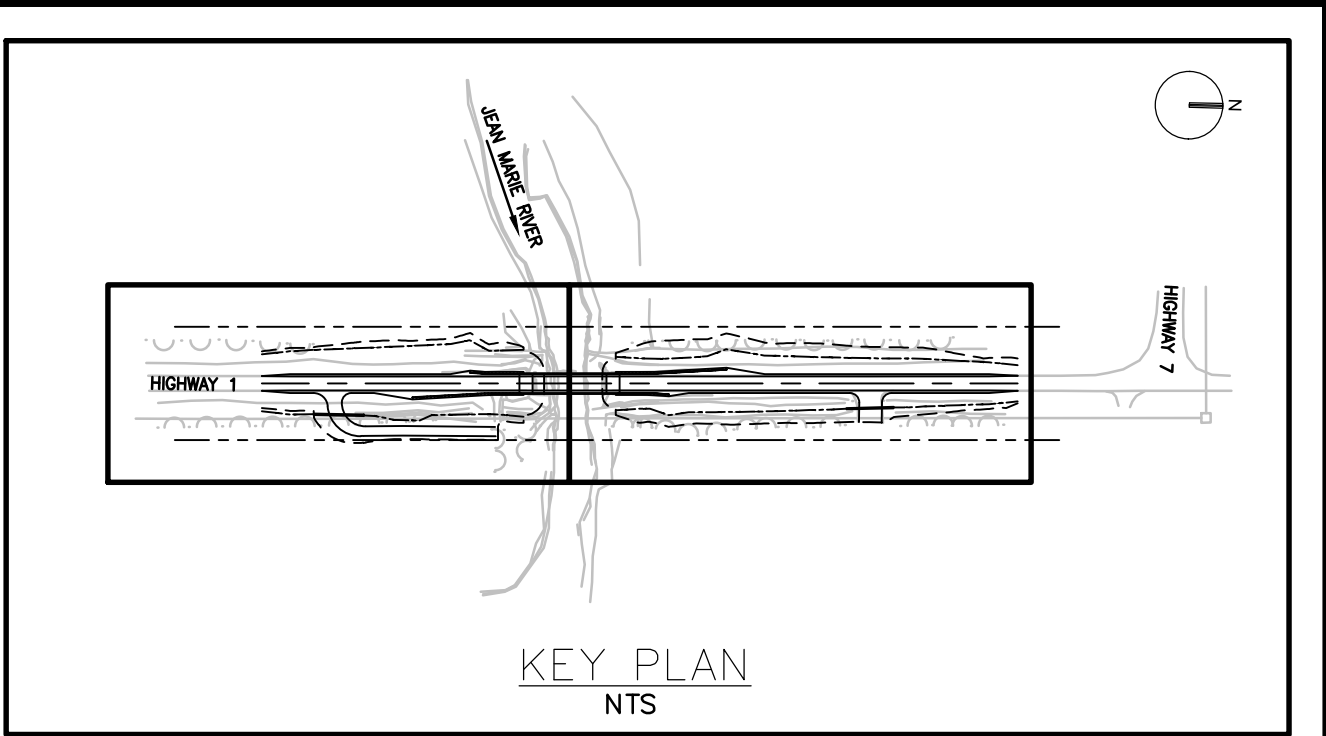
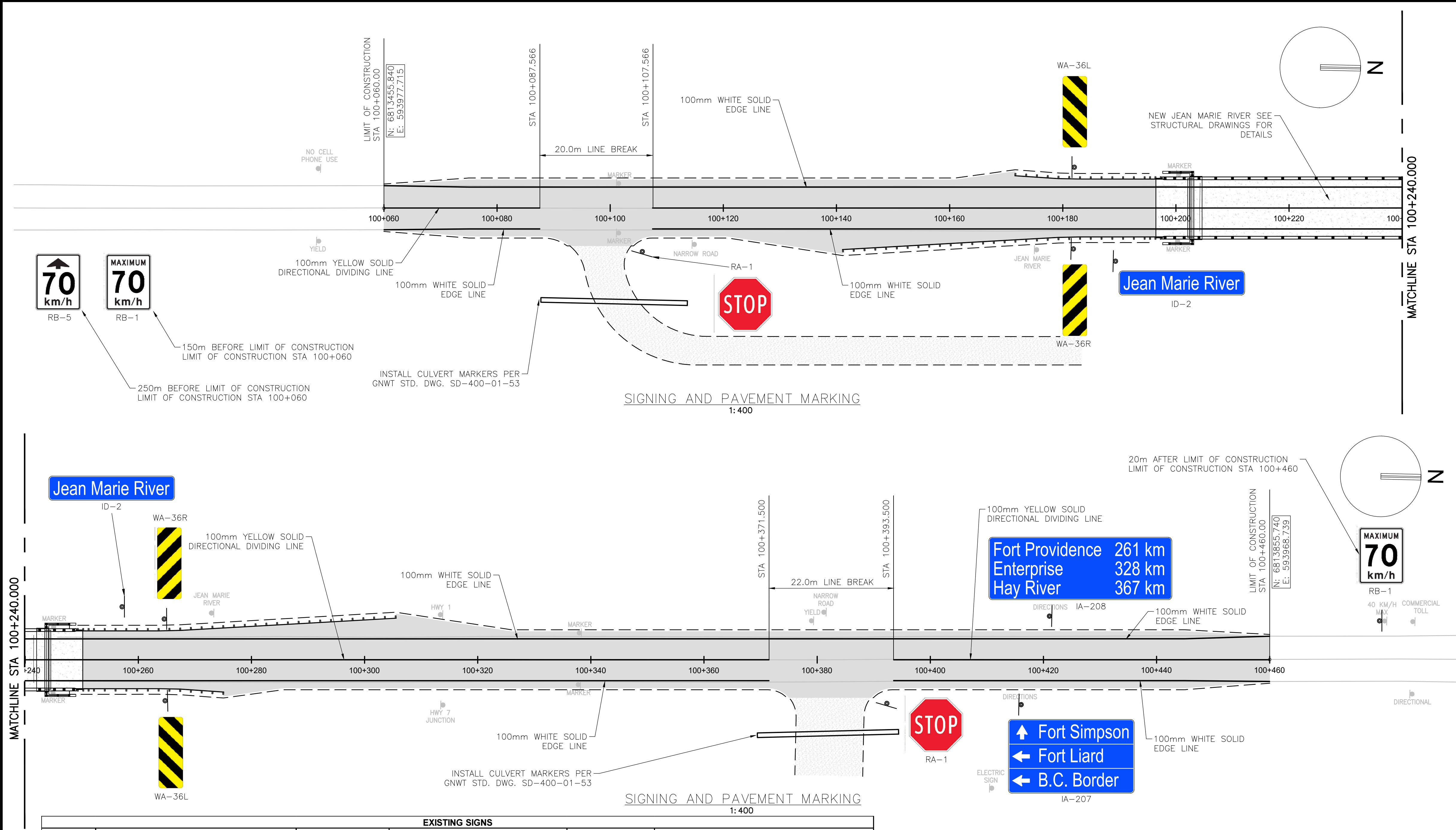
L20						
No.	L	START STA	NORTHING	EASTING	R	LINE/CHORD DIRECTION
L3	7.657	L20+000.000	6813494.541	593976.844		088° 43' 43.00"
C1	27.479	L20+007.657	6813494.711	593984.499	17.500	
L4	67.074	L20+035.136	6813512.584	594001.607		358° 45' 44.08"

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3. COORDINATES ARE UTM NAD 83 ZONE 10N. ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM BENCHMARK #1 (ELEVATION = 206.55m).
4. THE GUARDRAIL BURIED TERMINAL SHALL BE AS PER GNWT STD DWG SD-700-04-05 AT THE END OF GUARDRAIL FLARES. THE TOTAL TURNDOWN LENGTH SHALL BE 11.43M AS PER THE STD DWG.
5. REFER TO STRUCTURAL DRAWINGS FOR GUARDRAIL TRANSITION AND CONNECTION DETAILS WITH BRIDGE PARAPET.
6. SEE PLAN AND PROFILE DRAWINGS SC-INF01-6081-C101 AND C102 FOR CROSS FALL AND CROSS FALL TRANSITIONS.
7. CURVE RADIUS REFERS TO EDGE OF ASPHALTIC SURFACE TREATMENT (IF PRESENT) OR EDGE OF GRAVEL.




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PLOTTED : Wednesday, December 4, 2024



- NOTES:
- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
 - ALL SIGNS AND PAVEMENT MARKINGS SHALL BE AS PER TAC MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR CANADA, LATEST EDITION.
 - PLACEMENT OF NEW SIGNS AS PER GNWT STANDARD DRAWING SD-200-02-12.
 - ALL NEW SIGN POSTS SHOULD BE BREAKAWAY EXCEPT WHEN SIGN POST IS BEHIND PROTECTION SUCH AS CONCRETE BARRIER OR GUARDRAIL. BREAKAWAY SIGN POSTS SHALL BE AS PER GNWT STD. DWG. SD-200-02-13.
 - SURVEY BY STANTEC CONSULTING LTD IN 2019 DOES NOT INCLUDE EXISTING SIGNS. EXISTING SIGN INFORMATION ON THIS DRAWING IS BASED ON SITE REVIEWS AND ADDITIONAL TOPOGRAPHICAL SURVEY FOR THIS PROJECT. CONTRACTOR TO VERIFY EXISTING SIGNS ON SITE PRIOR TO CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY ROADWAY LINE MARKINGS FOR THE SAFE OPERATION OF TRAFFIC BEFORE APPLICATION OF PERMANENT ROADWAY LINE MARKINGS AS SHOWN ON THIS DRAWING BY GNWT.



Consultant Logo



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1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories

HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2

JEAN MARIE RIVER BRIDGE

SIGNING AND PAVEMENT MARKING

DESIGNED: TEH

CHECKED: RL

DRAWN: TEH

SCALE: AS SHOWN

DATE: 2024-12-06

DATE: 2024-12-06

DATE: 2024-12-06

PERMIT TO PRACTICE

JACOBS CONSULTING CANADA INC.

PERMIT NUMBER: P 1453

PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE: 2024-12-06

PROJECT No. CE857700

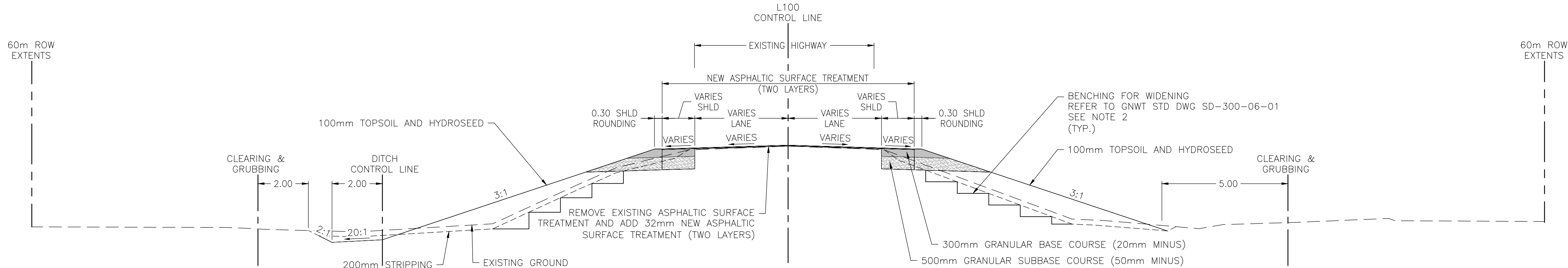
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DRAWING No. SC-INF01-6081-C211

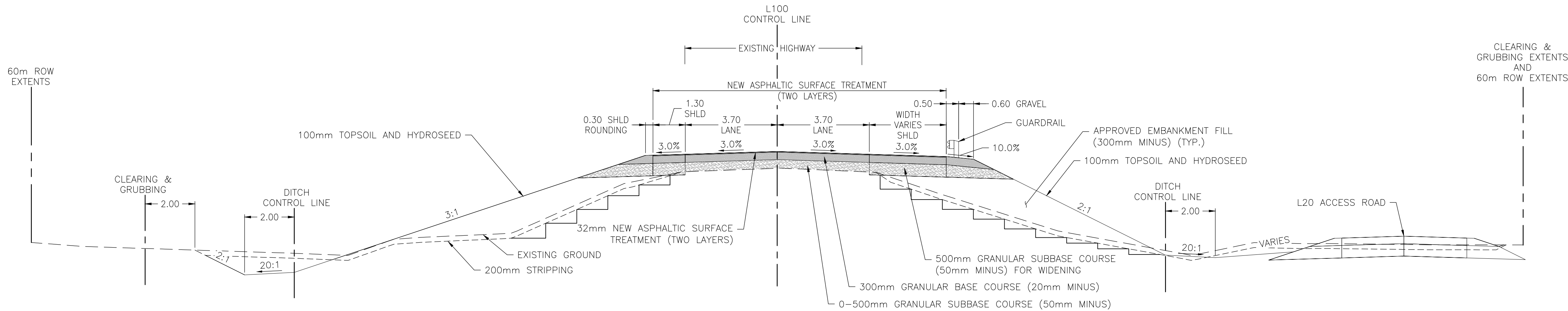
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EXISTING SIGNS					
DIRECTION	TYPE OF SIGN	NUMBER OF POSTS	APPROX. LOCATION	APPROX. STATION	NOTE
NB	MAX. SPEED AHEAD (40 KM/H)	ONE POST			REMOVE AND DISPOSE/SALVAGE SIGN
NB	MAX. SPEED (40 KM/H)	ONE POST			REMOVE AND DISPOSE/SALVAGE SIGN
NB	YIELD TO ONCOMING TRAFFIC	ONE POST			REMOVE AND DISPOSE/SALVAGE SIGN
NB	OBJECT MARKER SIGN RIGHT	ONE POST	AT THE START OF CONCRETE BARRIER	100+101	REMOVE AND DISPOSE/SALVAGE SIGN
NB	OBJECT MARKER SIGN LEFT	ONE POST	AT THE START OF CONCRETE BARRIER	100+101	REMOVE AND DISPOSE/SALVAGE SIGN
NB	NARROW ROAD	ONE POST	BEFORE THE BRIDGE	100+114	REMOVE AND DISPOSE/SALVAGE SIGN
NB	JEAN MARIE RIVER	TWO POST	BEFORE RIVER ACCESS	100+175	REMOVE AND DISPOSE SIGN
NB	OBJECT MARKER SIGN RIGHT	ONE POST	BEFORE THE BRIDGE	100+200	REMOVE AND DISPOSE/SALVAGE SIGN
NB	OBJECT MARKER SIGN LEFT	ONE POST	BEFORE THE BRIDGE	100+200	REMOVE AND DISPOSE/SALVAGE SIGN
NB	HWY 7 JCT	ONE POST	BEFORE HWY 7 JCT	100+313	REMAIN AND PROTECT DURING CONSTRUCTION
NB	ELECTRIC SIGN	ONE POST	BEFORE HWY 7 JCT	100+410	REMAIN AND PROTECT DURING CONSTRUCTION
NB	DIRECTIONAL SIGN	TWO POST	BEFORE HWY 7 JCT	100+415	REMOVE AND DISPOSE SIGN
NB	DIRECTIONAL SIGN (HWY 7 AND HWY 1)	ONE POST	AT HWY 7 JCT		REMAIN AND PROTECT DURING CONSTRUCTION
NB	LIARD TRAIL LEFT	TWO POST	AT HWY 7 JCT		REMAIN AND PROTECT DURING CONSTRUCTION
SB	COMMERCIAL TOLL ON HWY 3 INFO SIGN	TWO POST	AFTER HWY 7 JCT		REMAIN AND PROTECT DURING CONSTRUCTION
SB	MAX. SPEED (40 KM/H)	ONE POST			REMOVE AND DISPOSE/SALVAGE SIGN
SB	DIRECTIONAL SIGN	THREE POST	AFTER HWY 7 JCT	100+421	REMOVE AND DISPOSE SIGN
SB	NARROW ROAD	ONE POST	ACROSS FROM B&B ACCESS	100+381	REMOVE AND DISPOSE/SALVAGE SIGN
SB	YIELD TO ONCOMING TRAFFIC	ONE POST	BEFORE THE BRIDGE	100+380	REMOVE AND DISPOSE/SALVAGE SIGN
SB	OBJECT MARKER SIGN RIGHT	ONE POST	BEFORE CONCRETE BARRIER	100+338	REMOVE AND DISPOSE/SALVAGE SIGN
SB	OBJECT MARKER SIGN LEFT	ONE POST	BEFORE CONCRETE BARRIER	100+338	REMOVE AND DISPOSE/SALVAGE SIGN
SB	HWY 1 SIGN	ONE POST	BEFORE THE BRIDGE	100+313	REMAIN AND PROTECT DURING CONSTRUCTION
SB	JEAN MARIE RIVER SIGN	TWO POST	BEFORE THE BRIDGE	100+273	REMOVE AND DISPOSE SIGN
SB	OBJECT MARKER SIGN RIGHT	ONE POST	BEFORE THE BRIDGE	100+245	REMOVE AND DISPOSE/SALVAGE SIGN
SB	OBJECT MARKER SIGN LEFT	ONE POST	BEFORE THE BRIDGE	100+245	REMOVE AND DISPOSE/SALVAGE SIGN
SB	NO CELL PHONE USE SIGN	ONE POST	AFTER BRIDGE		REMAIN AND PROTECT DURING CONSTRUCTION
SB	WATERFALL ROUTE/MACKENZIE HWY EAST	THREE POST	ON LEFTHAND (EAST) SIDE		REMAIN AND PROTECT DURING CONSTRUCTION
SB	MAX. SPEED (90 KM/H)	ONE POST			REMAIN AND PROTECT DURING CONSTRUCTION
SB	SEAT BELT SIGN - IT'S THE LAW	ONE POST			REMAIN AND PROTECT DURING CONSTRUCTION

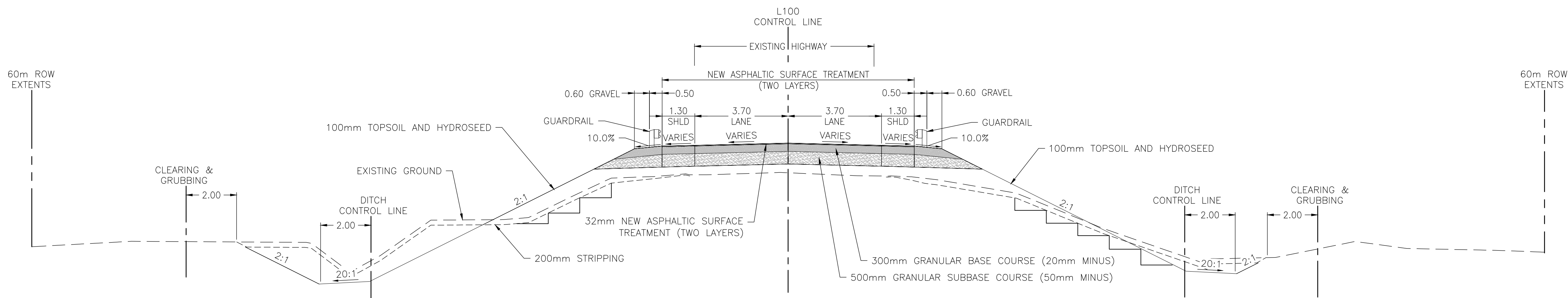
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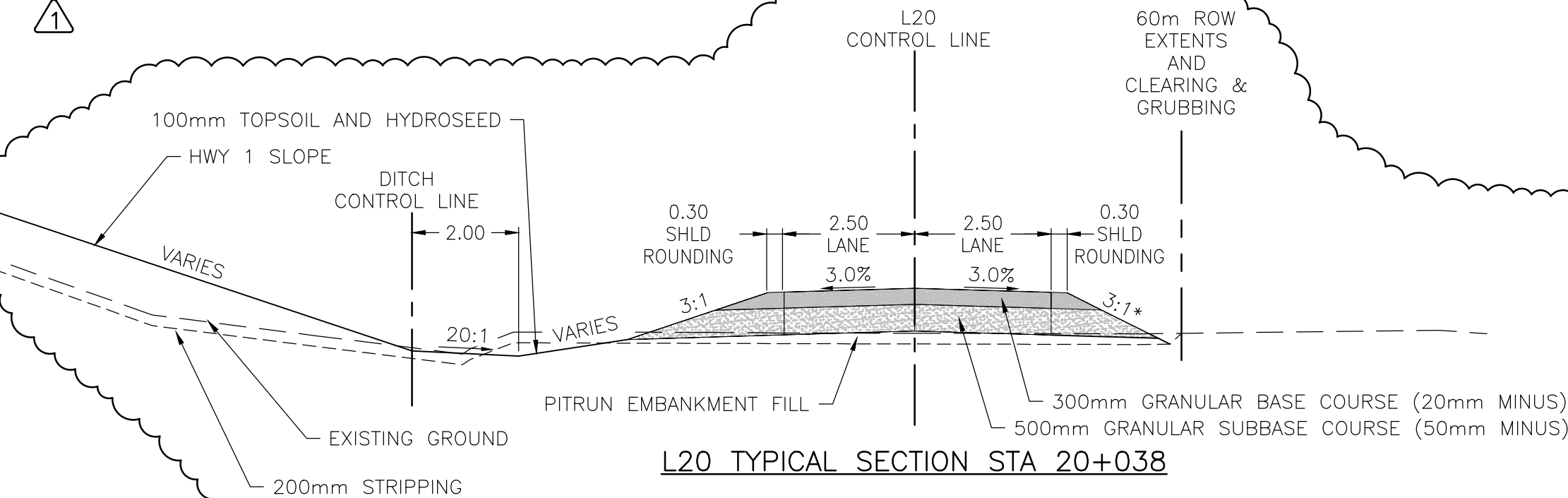
L100 TYPICAL SECTION AT STA 100+072



L100 TYPICAL SECTION AT STA 100+150

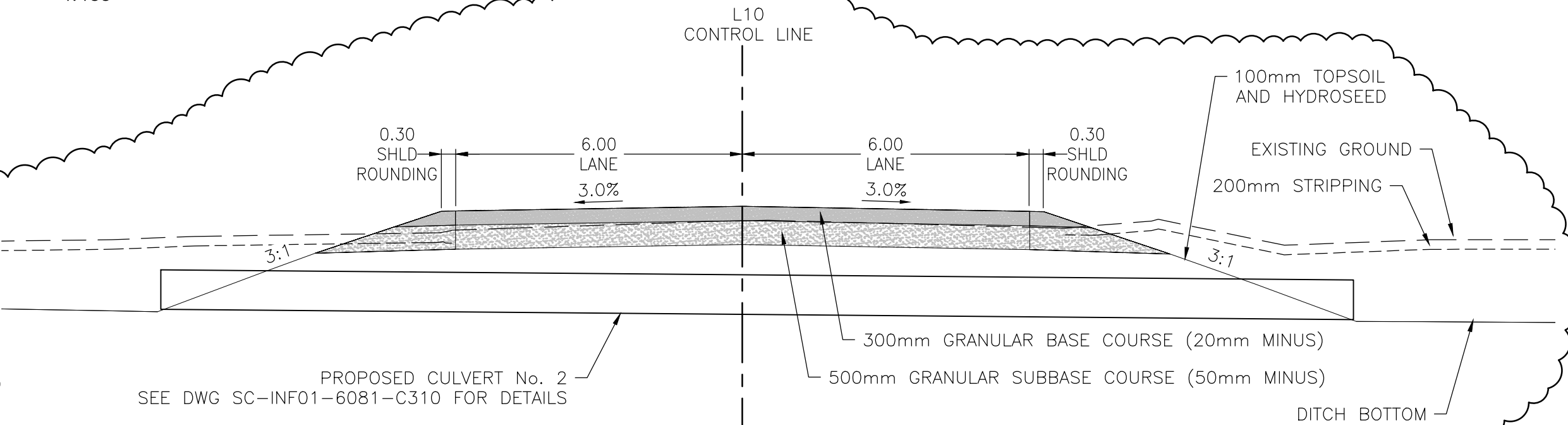


L100 TYPICAL SECTION AT STA 100+190



L20 TYPICAL SECTION STA 20+038

1. TYPICAL SIDESLOPE 3H:1V
2. 2H:1V SIDE SLOPE FROM STA. 20+024.00 TO STA. 20+036.00 TO ACCOMMODATE TIGHT ROAD RIGHT-OF-WAY
3. CLEARING & GRUBBING TO FOLLOW ROAD RIGHT-OF-WAY AS REQUIRED



L10 TYPICAL SECTION STA 10+013

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. IF EXISTING SLOPE 2H:1V, USE BENCH WIDTH OF 0.6M. IF EXISTING SLOPE FLATTER THAN 2H:1V, USE BENCH WIDTH OF 1.25M PER GNWT STD. DWG SD-300-06-01.
3. CONTRACTOR NOT TO STRIP PAST THE TOP OF THE BACKSLOPE AND LEAVE THE EXISTING GROUND COVER IN PLACE TO REDUCE EROSION ON THE BACKSLOPE.
4. NORMAL CROSS SLOPE FOR ASPHALTIC TREATMENT SURFACE AND GRAVEL IS 3%.
5. SEE PLAN AND PROFILE DRAWINGS SC-INF01-6081-C101 AND C102 FOR CROSS FALL AND CROSS FALL TRANSITIONS.
6. SEE LANING AND GEOMETRICS DRAWING SC-INF01-6081-C201 FOR DETAILED LANE AND SHOULDER DIMENSIONS.
7. CLEARING AND GRUBBING LIMITS TO BE OFFSET 2.0m FROM TOP OF CUT AND 5.0m FROM BOTTOM OF FILL UNLESS OTHERWISE SPECIFIED. CLEARING AND GRUBBING IS NECESSARY ONLY IF CLEARING AND GRUBBING LIMITS ENTER INTO TREE LINES.
8. GUARDRAIL SHALL BE AS PER GNWT STANDARD DRAWINGS SD-700-04-01, 02, 04 AND 05.
9. SEE PLAN AND PROFILE DRAWINGS SC-INF01-6081-C101 AND C-102 FOR PAVEMENT CONSTRUCTION.
10. UTILITIES NOT SHOWN ON TYPICAL SECTIONS FOR CLARITY.



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Jacobs

Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories

HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2

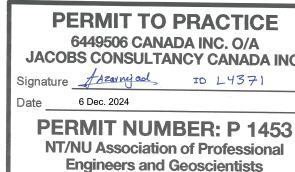
JEAN MARIE RIVER BRIDGE

TYPICAL SECTIONS

SHEET 1 OF 2

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
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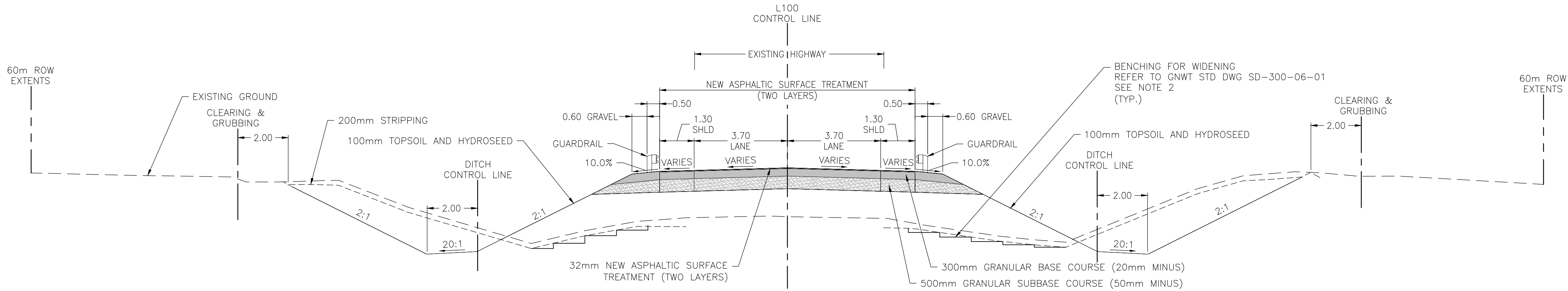
RAY LIU, P.ENG.

ENGINEER OF RECORD

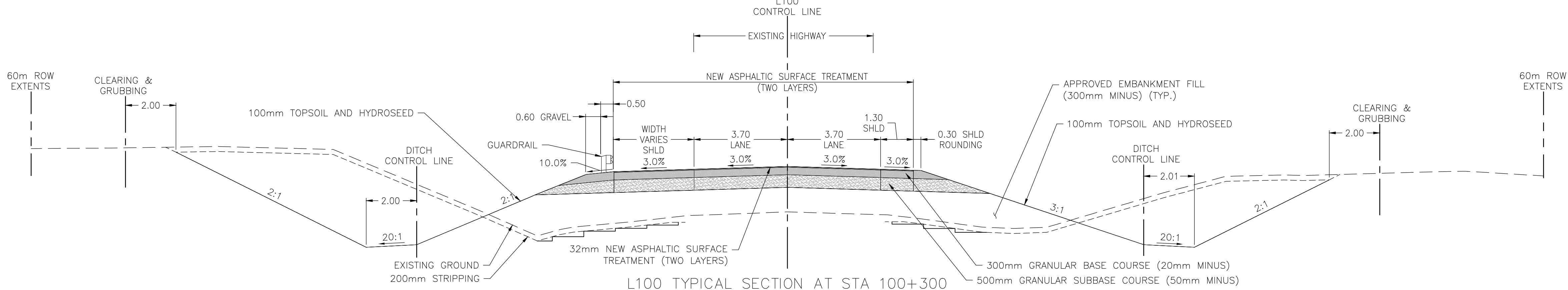
DATE 2024-12-06

PROJECT No.	CE857700	SHEET No.	10 OF 55	DRAWING No.	SC-INF01-6081-C301	1
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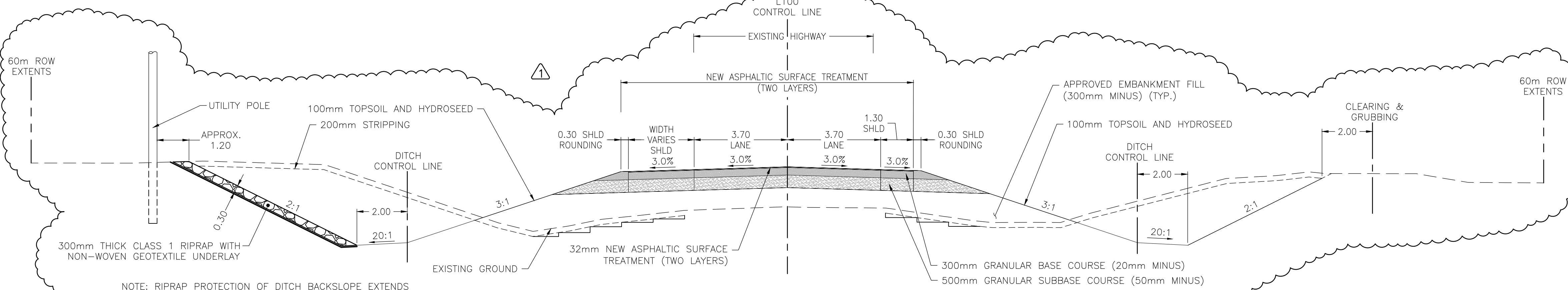
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PLOTTED : Wednesday, December 4, 2024



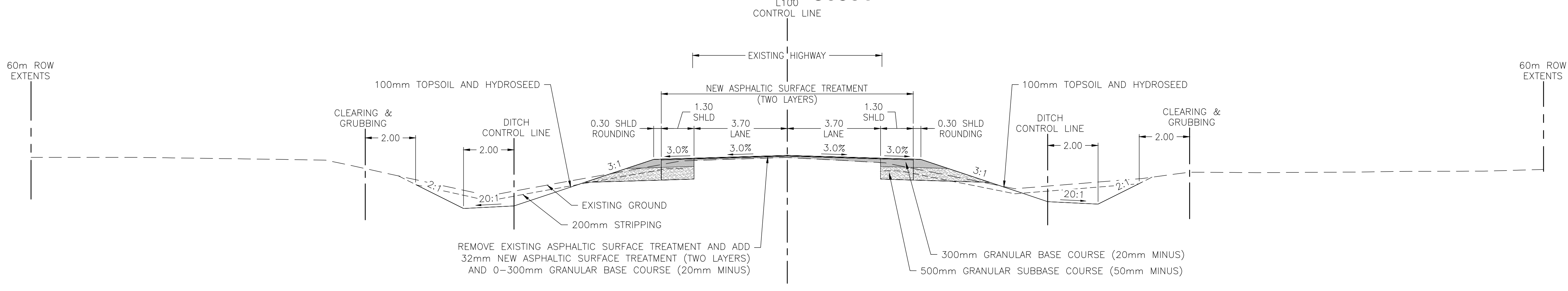
L100 TYPICAL SECTION AT STA 100+260
1:100



L100 TYPICAL SECTION AT STA 100+300
1:100



L100 TYPICAL SECTION AT STA 100+320
1:100



L100 TYPICAL SECTION AT STA 100+432
1:100

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. IF EXISTING SLOPE 2H:1V, USE BENCH WIDTH OF 0.6M. IF EXISTING SLOPE FLATTER THAN 2H:1V, USE BENCH WIDTH OF 1.25M PER GNWT STD. DWG SD-300-06-01.
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5. SEE PLAN AND PROFILE DRAWINGS SC-INF01-6081-C101 AND C102 FOR CROSS FALL AND CROSS FALL TRANSITIONS.
6. SEE LANING AND GEOMETRICS DRAWING SC-INF01-6081-C201 FOR DETAILED LANE AND SHOULDER DIMENSIONS.
7. CLEARING AND GRUBBING LIMITS TO BE OFFSET 2.0m FROM TOP OF CUT AND 5.0m FROM BOTTOM OF FILL UNLESS OTHERWISE SPECIFIED. CLEARING AND GRUBBING IS NECESSARY ONLY IF CLEARING AND GRUBBING LIMITS ENTER INTO TREE LINES.
8. GUARDRAIL SHALL BE AS PER GNWT STANDARD DRAWINGS SD-700-04-01, 02, 04 AND 05.
9. SEE PLAN AND PROFILE DRAWINGS SC-INF01-6081-C101 AND C-102 FOR PAVEMENT CONSTRUCTION.
10. UTILITIES NOT SHOWN ON TYPICAL SECTIONS FOR CLARITY.

Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories

HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2

JEAN MARIE RIVER BRIDGE

TYPICAL SECTIONS

SHEET 2 OF 2

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100 0 2 4 m		

PERMIT TO PRACTICE

SHARON CANADA INC. OIA

JACOBS CONSULTANCY CANADA INC.

Signature: [Signature]

Permit Number: P 1453

NTNU Association of Professional Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

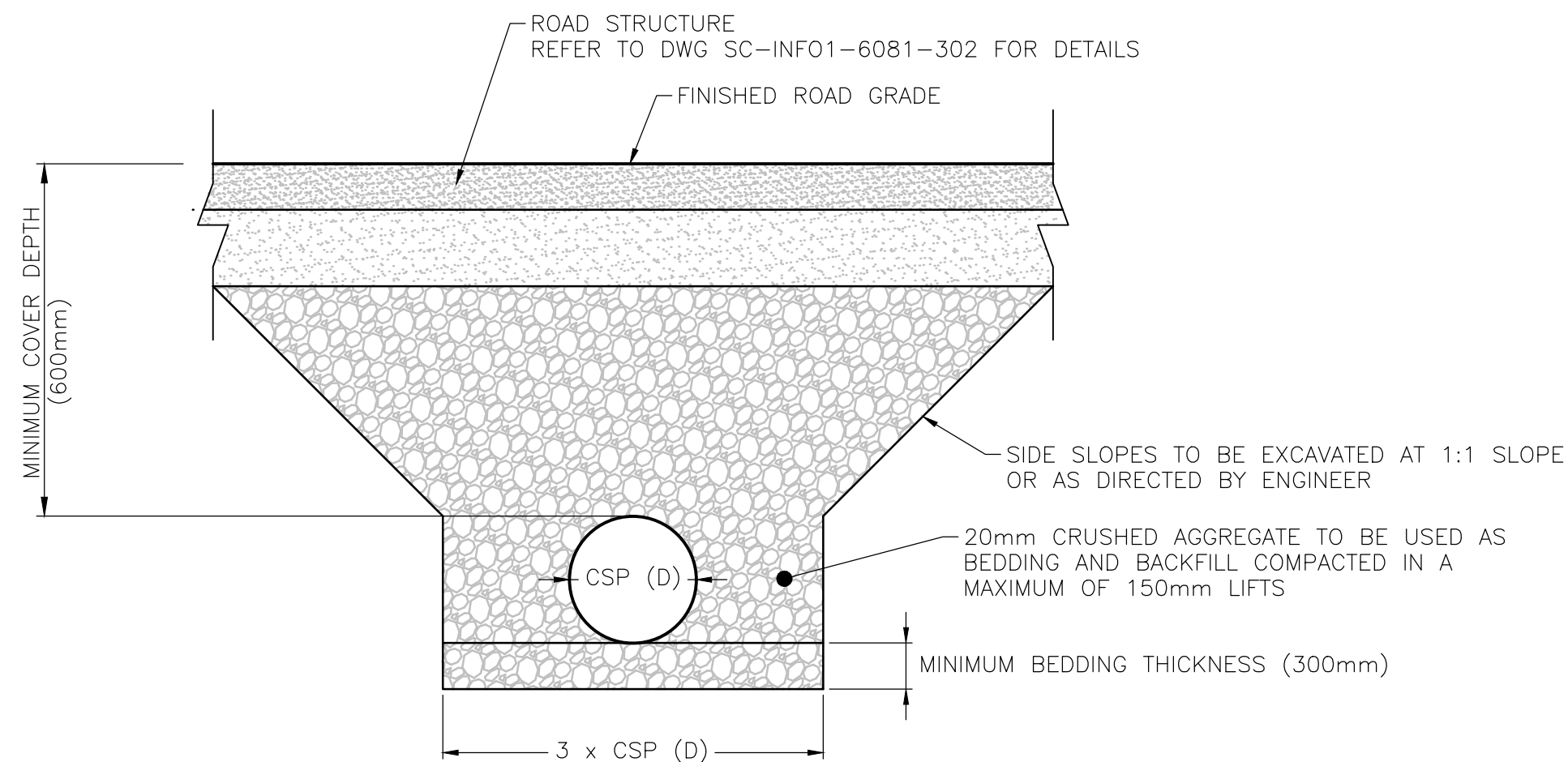
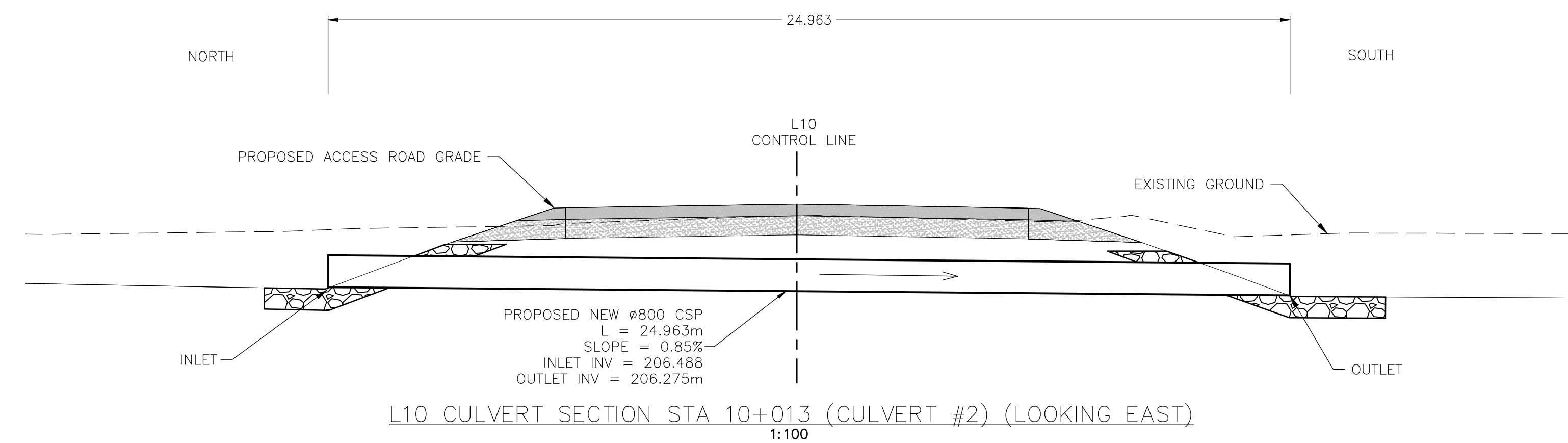
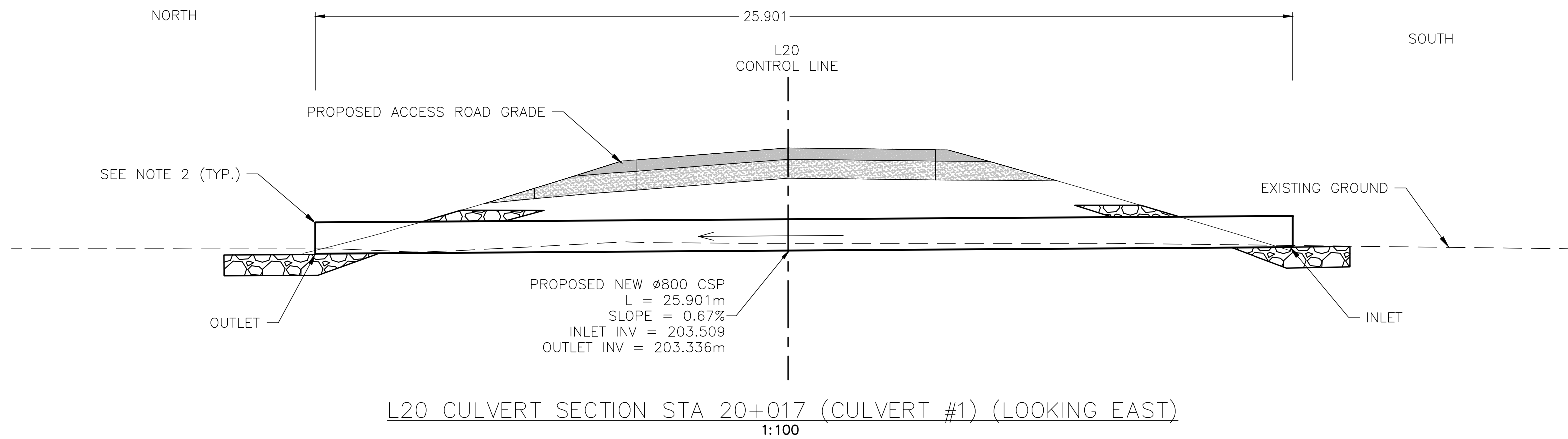
ENGINEER OF RECORD

DATE

2024-12-06

PROJECT No.	SHEET No.	DRAWING No.
CE857700	11 OF 55	SC-INF01-6081-C302

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CULVERT INSTALLATION DETAIL

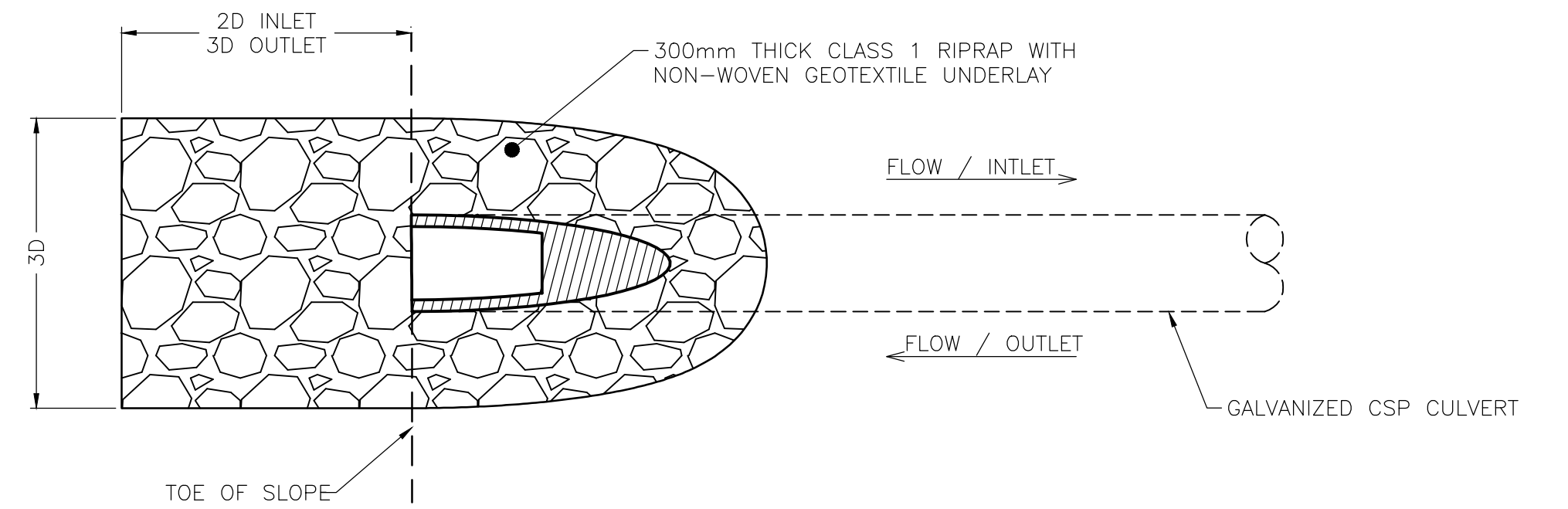
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CULVERT INSTALLATION NOTES:

- CSP (D) = CORRUGATED STEEL PIPE DIAMETER.
- AN ENGINEER MUST INSPECT THE EXCAVATION PRIOR TO BACKFILL.
- A NON-WOVEN GEOTEXTILE SHALL BE USED AT THE BASE OF THE EXCAVATION.
- CSP BEDDING TO BE AT 100% OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D698 STANDARD PROCTOR VALUE PRIOR TO INSTALLATION.
- FILL MUST BE BROUGHT UP SIMULTANEOUSLY ON EITHER SIDE OF THE CSP IN MAXIMUM LIFTS OF 150mm COMPACTED TO 100% OF THE STANDARD PROCTOR VALUE.
- 300mm THICK ROCK APRON TO BE PLACED ON NON-WOVEN GEOTEXTILE FILTER FABRIC ON EITHER END OF CSP FOR EROSION CONTROL.
- ROCK APRON TO FOLLOW ROCK RIPRAP CLASS 1.
- GEOTEXTILE TO BE KEYED INTO NATIVE SOIL 300mm.

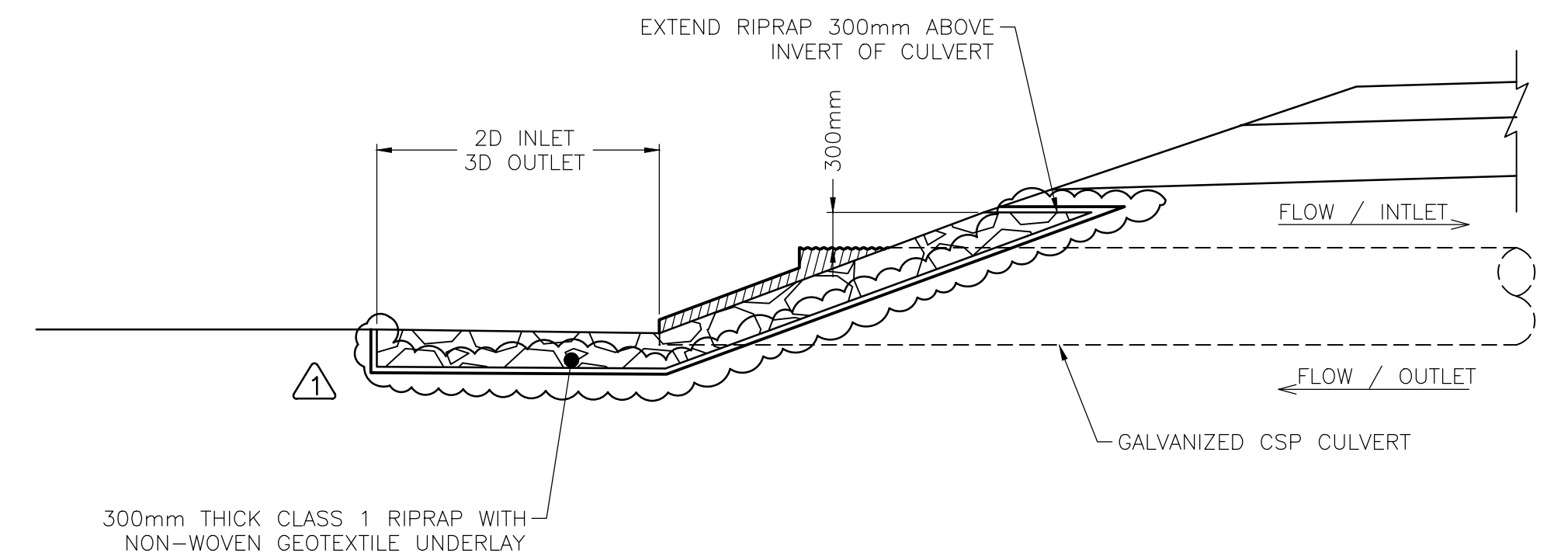
ROCK RIPRAP CLASS 1:

NOMINAL MASS: 40KG
NOMINAL DIAMETER: 300mm
NONE GREATER THAN: 130KG / 450mm
20% TO 50%: 70KG / 350mm
50% TO 80%: 40KG / 300mm
100% GREATER THAN: 10KG / 200mm



TYPICAL INLET / OUTLET RIPRAP PROTECTION - PLAN

1:50



TYPICAL INLET / OUTLET RIPRAP PROTECTION - SECTION

1:50

NOTES:

- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
- SLOPED CULVERT SECTIONS PER GNWT STD DWG SD-400-01-51.
- UTILITY NOT SHOWN ON SECTIONS FOR CLARITY.



Consultant Logo

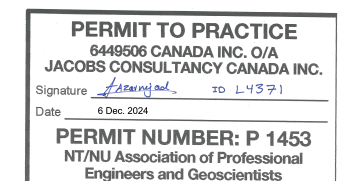
Jacobs

Rev	Date	Description	Init
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0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

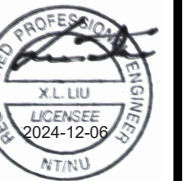
Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
CULVERT SECTIONS AND DETAILS

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CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE			



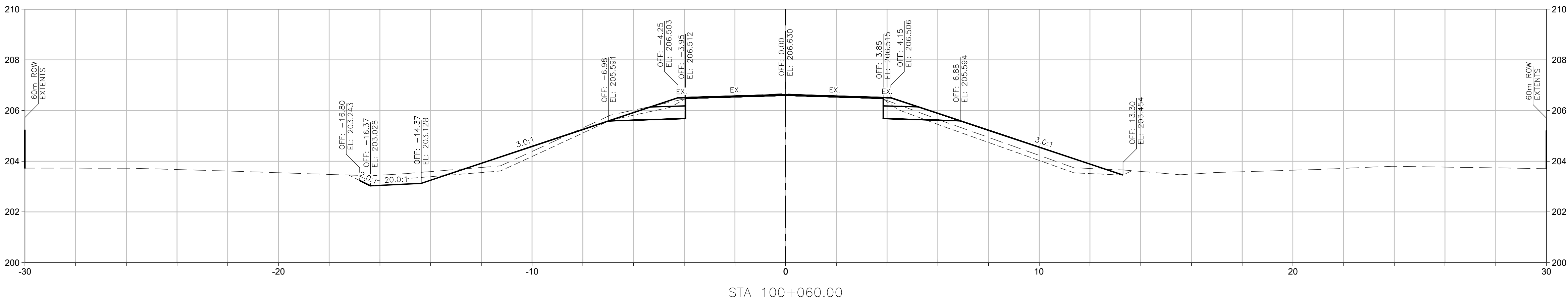
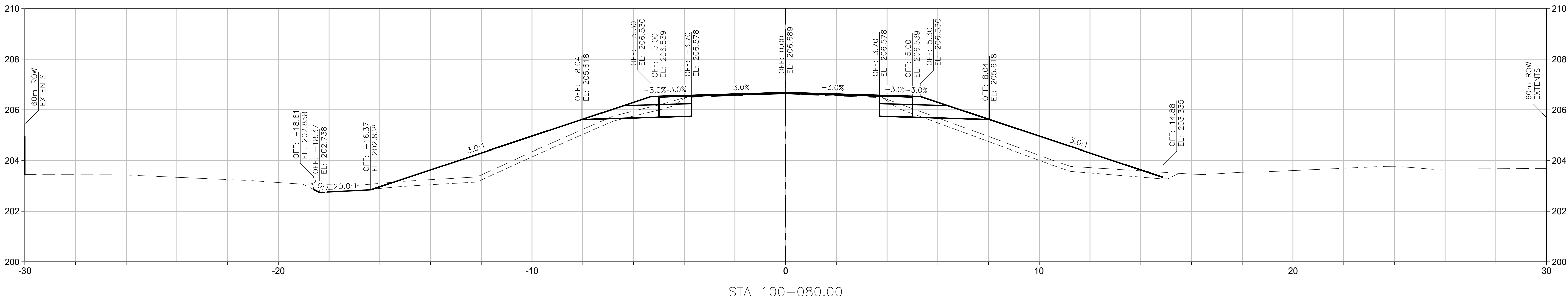
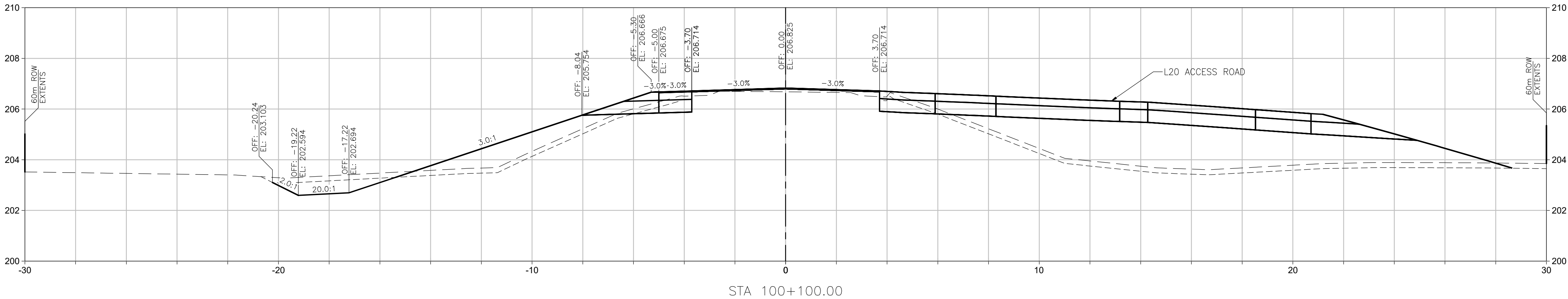
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.
ENGINEER OF RECORD
DATE 2024-12-06



PROJECT No.	CE857700	SHEET No.	12 OF 55	DRAWING No.	SC-INF01-6081-C310	1
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PLOTTED : Wednesday, December 4, 2024



- NOTES:
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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 1 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100 0 2 4 m		

PERMIT TO PRACTICE
SHARON CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] No. 1-15 P.1
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

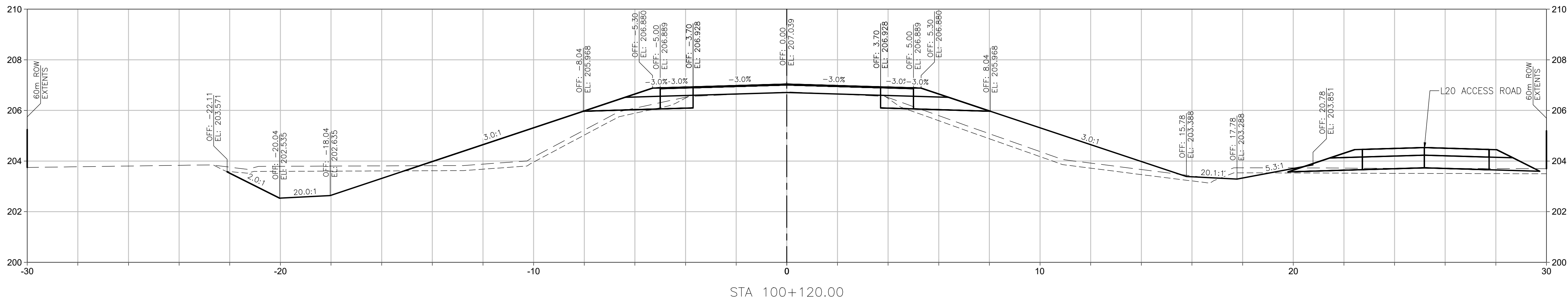
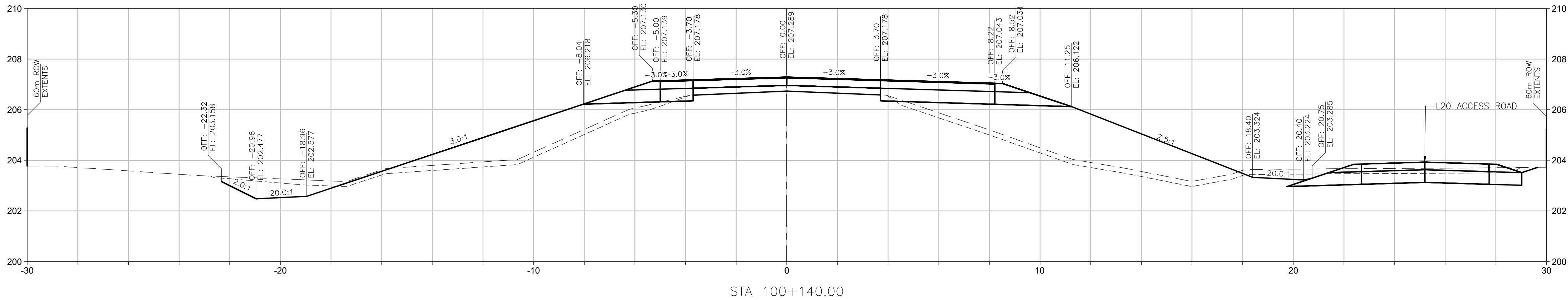
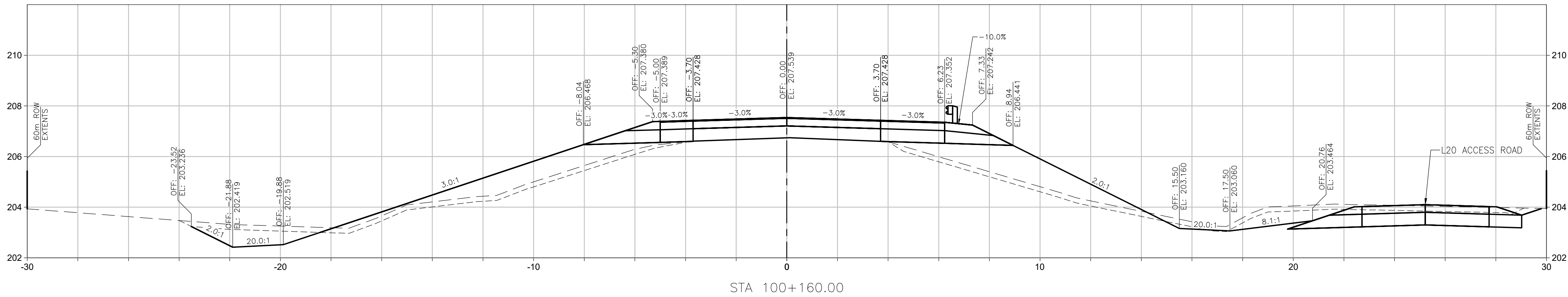
RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
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PLOTTED : Friday, December 6, 2024



NOTES:

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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 2 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100		

PERMIT TO PRACTICE
JACOBS CONSULTANCY CANADA INC.
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

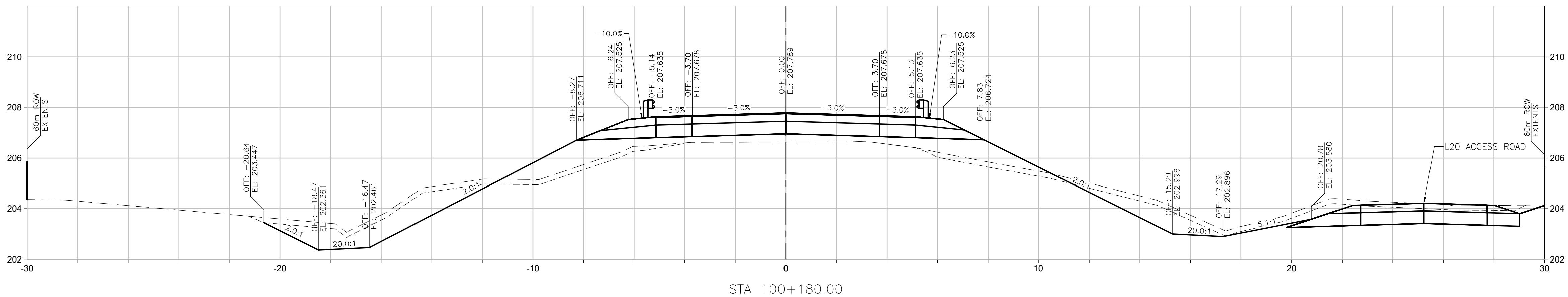
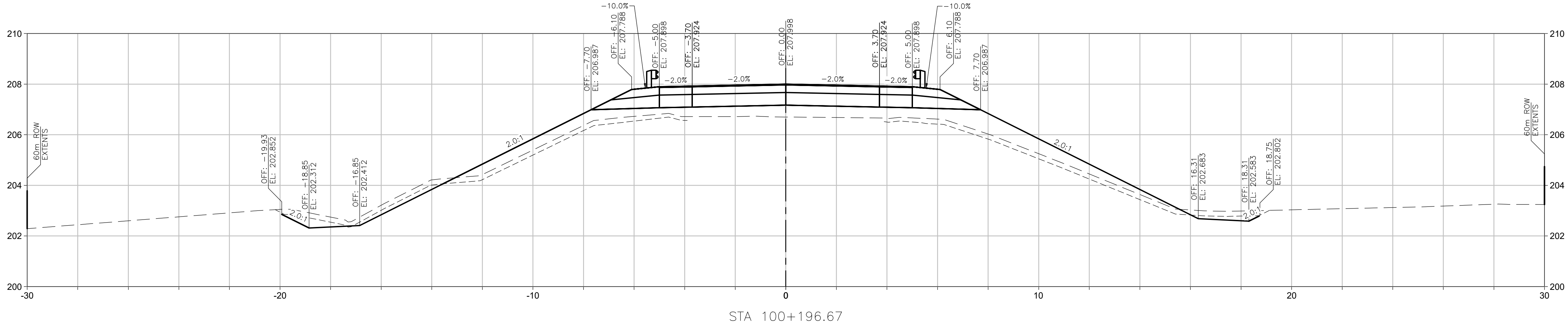
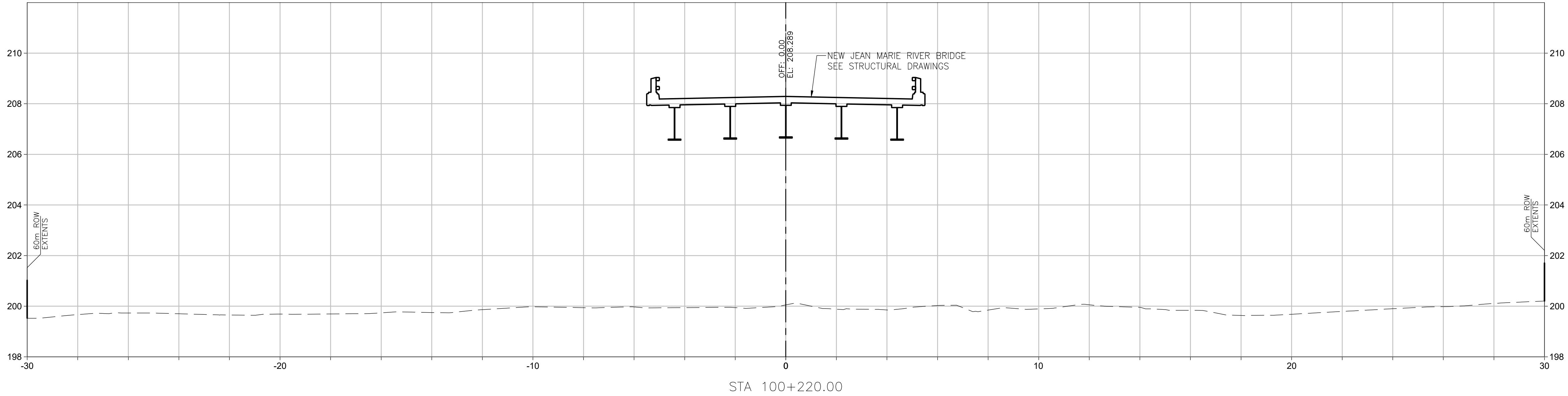
RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
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PLOTTED : Friday, December 6, 2024



NOTES:

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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 3 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
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PERMIT TO PRACTICE
SHARON CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] Date: 11/15/24
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

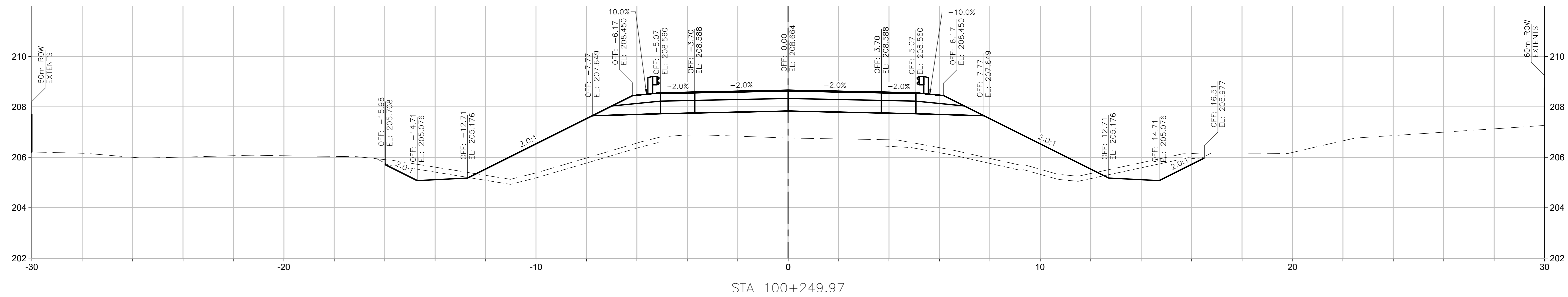
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	15 OF 55	SC-INFO1-6081-C603	1



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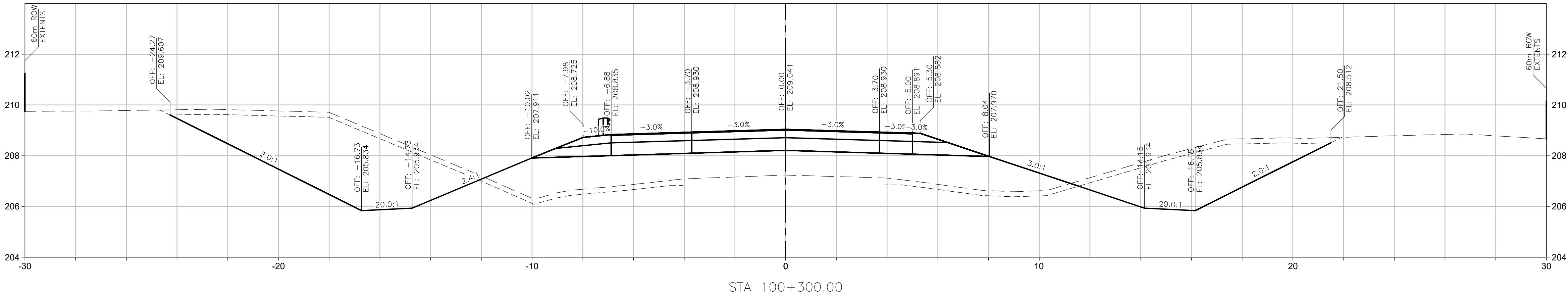
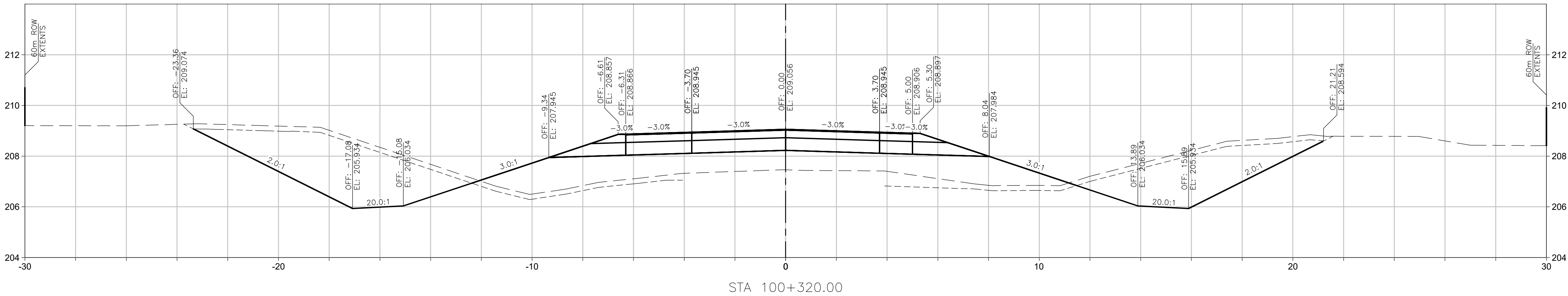
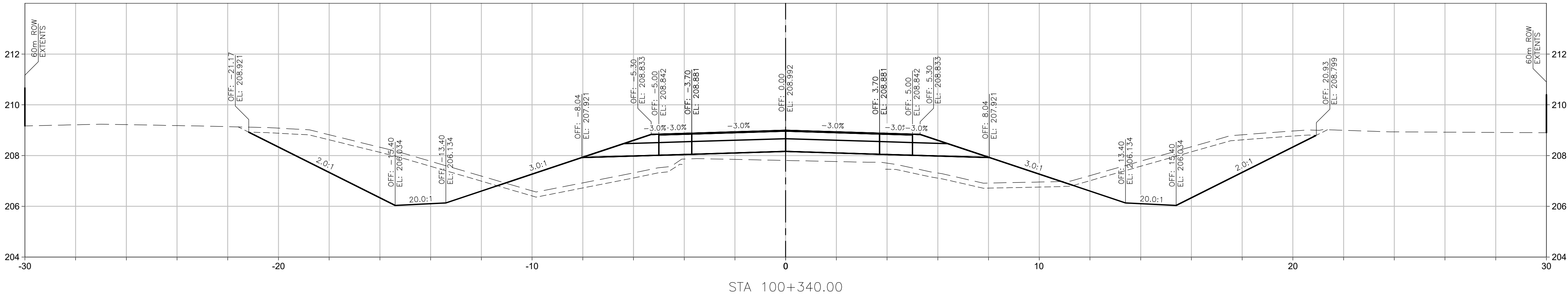
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REVISIONS

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE			

DRAWING No.
SC-INFO1-6081-C604

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PLOTTED : Friday, December 6, 2024



NOTES:

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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 5 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
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PERMIT TO PRACTICE
948608 CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] ID: 11531
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

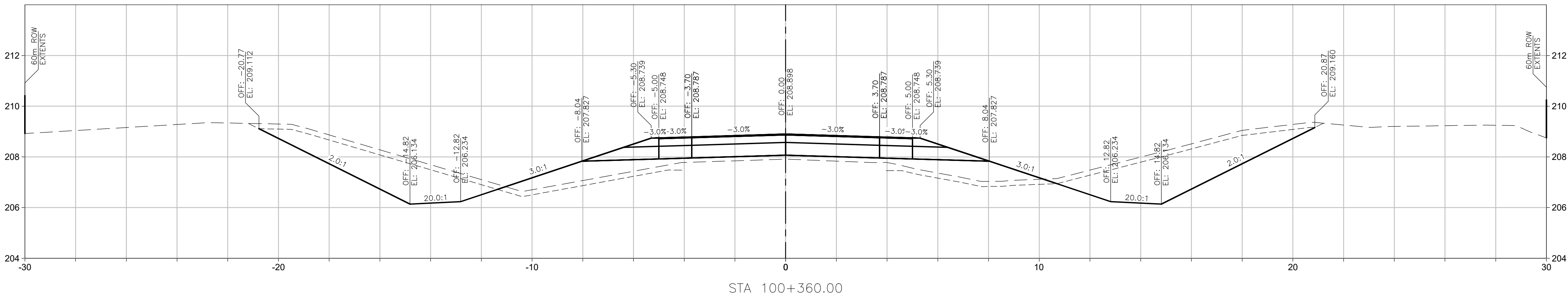
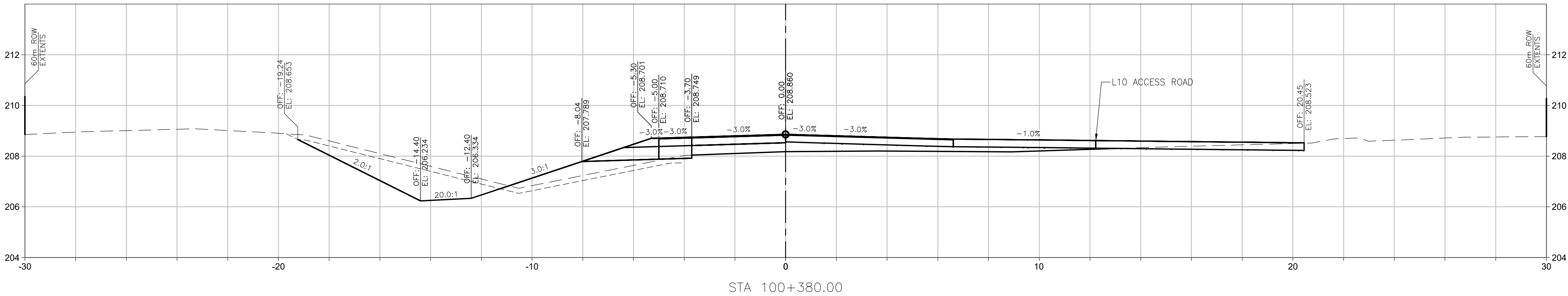
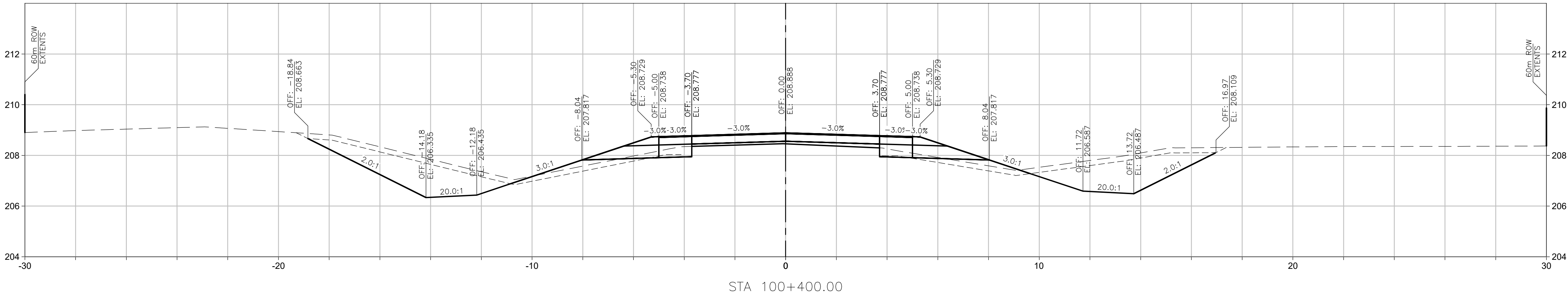
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.
ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	17 OF 55	SC-INF01-6081-C605	1

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PLOTTED : Friday, December 6, 2024



- NOTES:
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Consultant Logo

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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 6 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100 0 2 4 m		

PERMIT TO PRACTICE
RAYMOND CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] ID: 1-1571
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

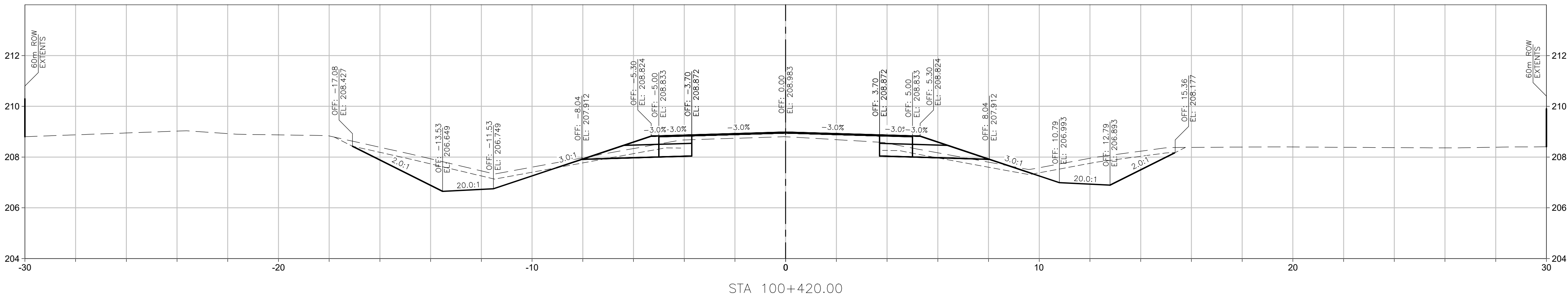
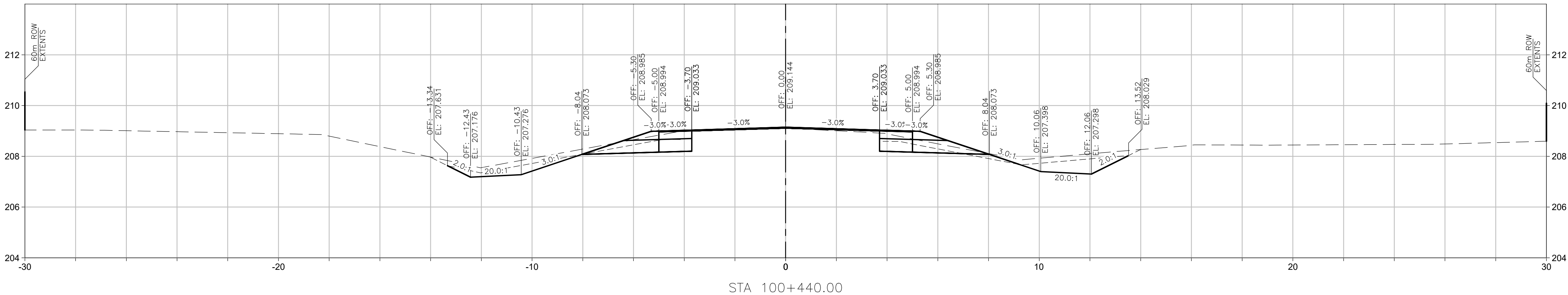
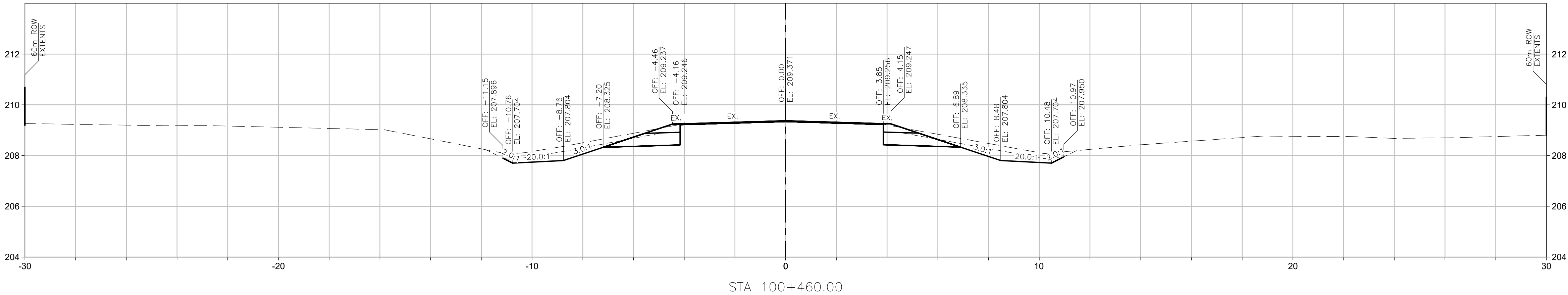
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RAY LIU, P.ENG.
ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	18 OF 55	SC-INF01-6081-C606	1

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PLOTTED : Friday, December 6, 2024



NOTES:

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Consultant Logo

Jacobs

Rev	Date	Description	Init
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0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L100 CROSS SECTIONS
SHEET 7 OF 7

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100		

PERMIT TO PRACTICE
944808 CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] ID: 1-15 P.1
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

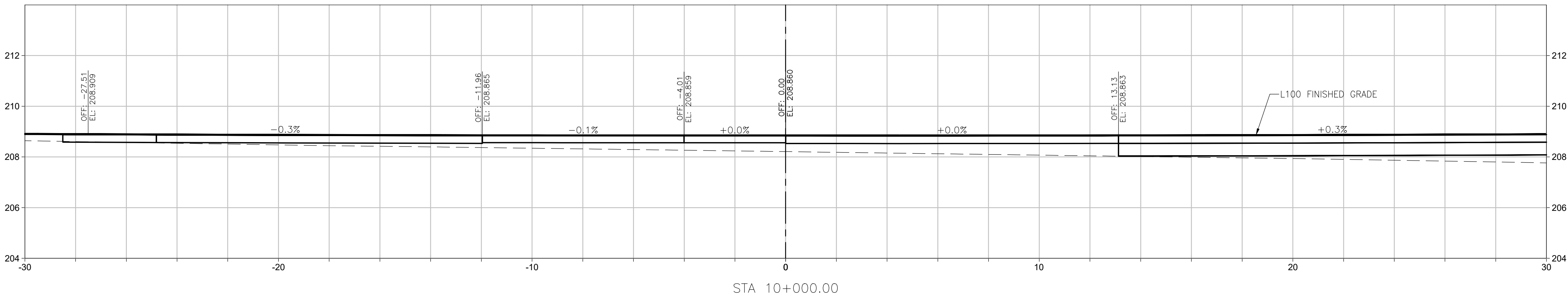
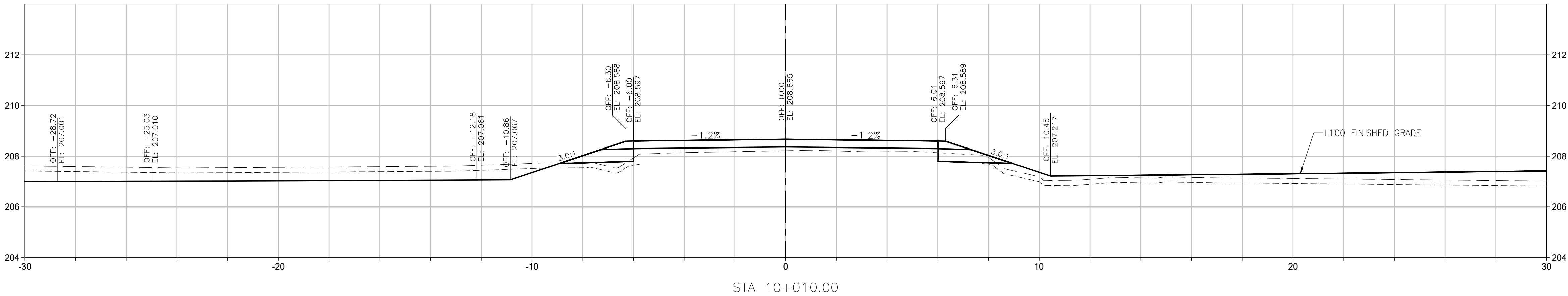
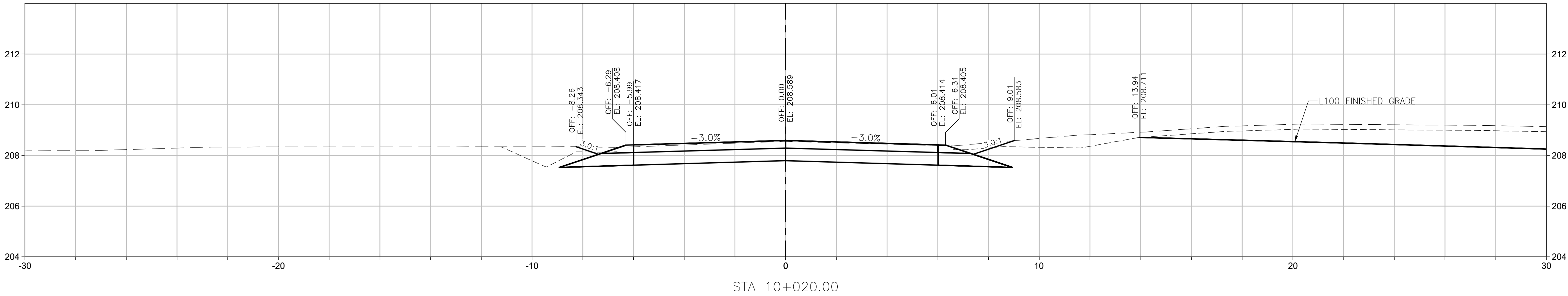
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.
ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	19 OF 55	SC-INFO1-6081-C607	1

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PLOTTED : Friday, December 6, 2024



NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. CROSS SECTIONS ARE FOR INFORMATION ONLY. REFER TO PLAN & PROFILE, LANING & GEOMETRICS, AND TYPICAL SECTIONS DRAWINGS FOR DETAILS.



Consultant Logo

Jacobs

Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L10 CROSS SECTIONS

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100 0 2 4 m		

PERMIT TO PRACTICE
SHARON CANADA INC. OIA
JACOBS CONSULTANT CANADA INC.
Signature: [Signature] Date: 11/05/24
PERMIT NUMBER: P 1453
NTNU Association of Professional Engineers and Geoscientists

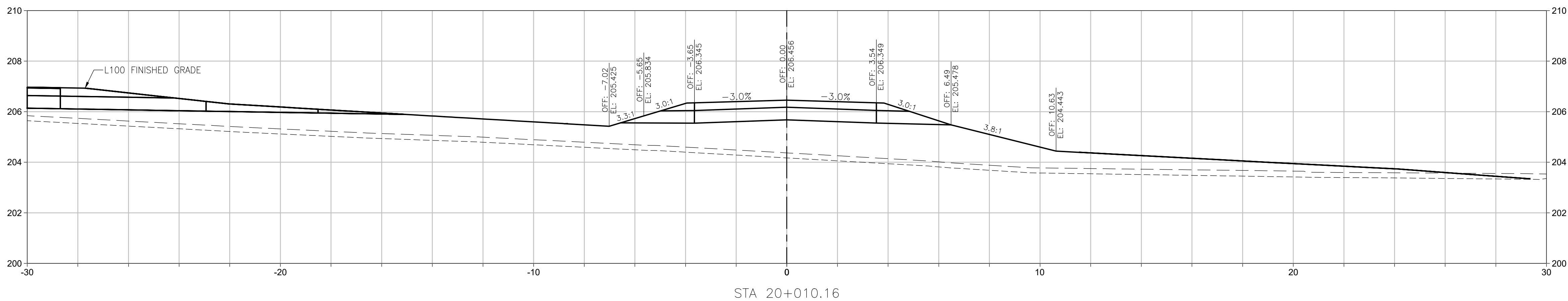
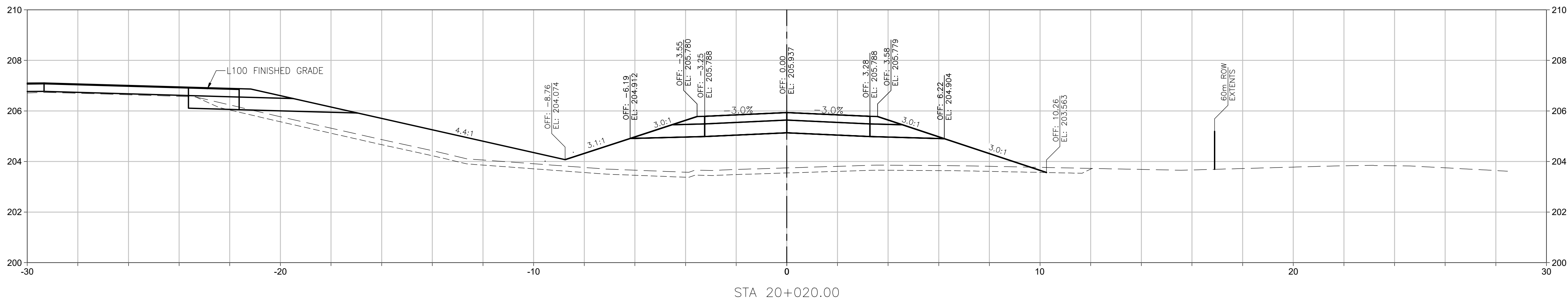
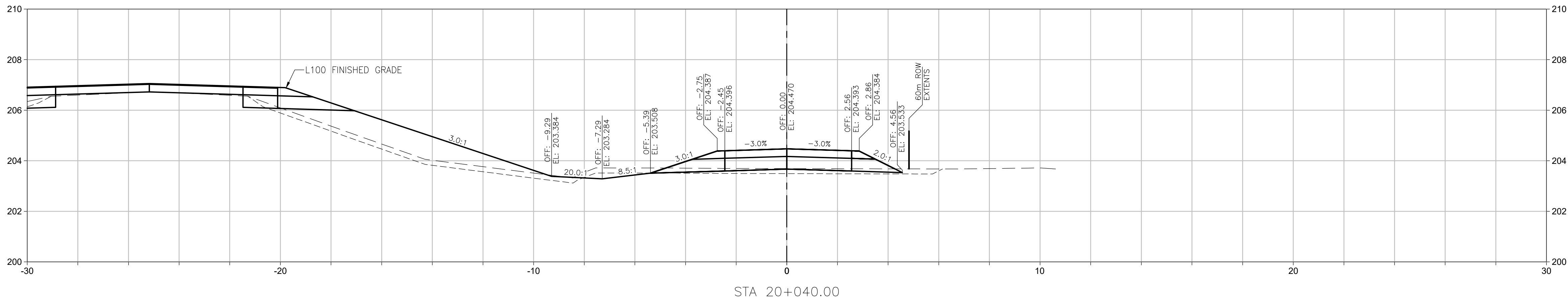
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.
ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	20 OF 55	SC-INFO1-6081-C610	1

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PLOTTED : Friday, December 6, 2024



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REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L20 CROSS SECTIONS
SHEET 1 OF 2

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100 0 2 4 m		

PERMIT TO PRACTICE
SHARON CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] ID: 1-15 P
PERMIT NUMBER: P 1453
NTNU Association of Professional
Engineers and Geoscientists

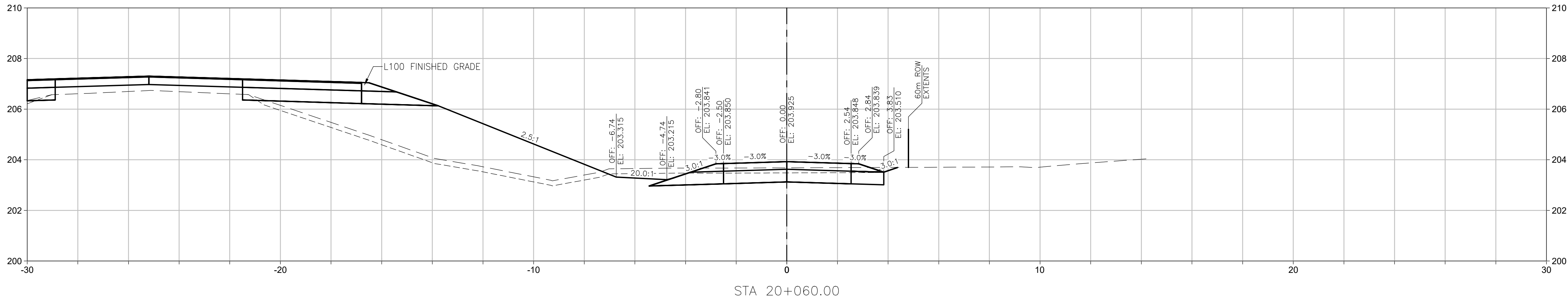
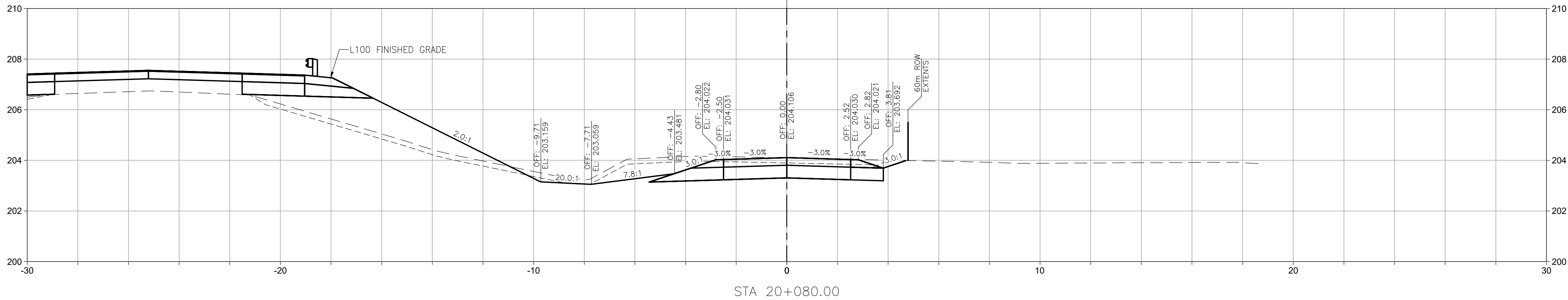
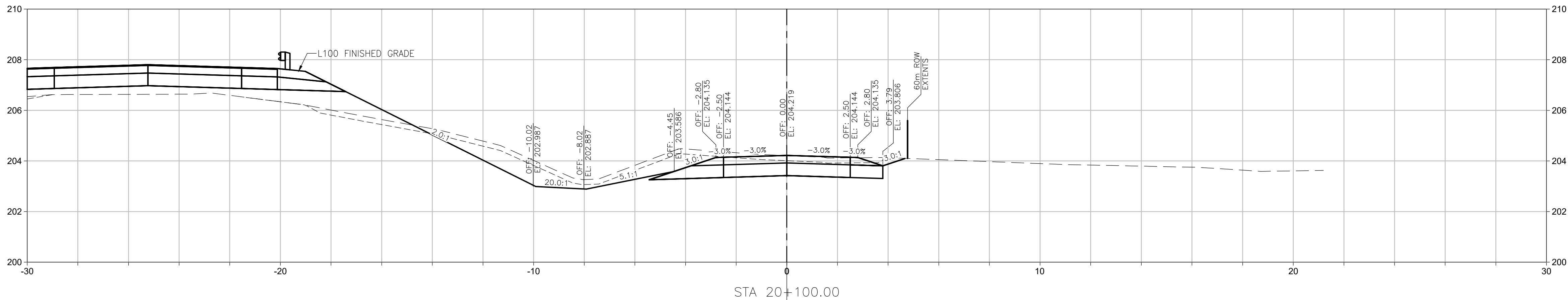
PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.
ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
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PLOTTED : Friday, December 6, 2024



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Rev	Date	Description	Init
1	2024-12-06	ISSUED FOR CONSTRUCTION	RL
0	2024-07-19	ISSUED FOR TENDER	RL

REVISIONS

Government of Northwest Territories
HIGHWAY No. 1 (MACKENZIE HIGHWAY) km 411.2
JEAN MARIE RIVER BRIDGE
L20 CROSS SECTIONS
SHEET 2 OF 2

DESIGNED	TEH	DATE	2024-12-06
CHECKED	RL	DATE	2024-12-06
DRAWN	TEH	DATE	2024-12-06
SCALE	1:100	0 2 4 m	

PERMIT TO PRACTICE
SHARON CANADA INC. OIA
JACOBS CONSULTANCY CANADA INC.
Signature: [Signature] Date: 2024-12-06
PERMIT NUMBER: P 1453
NTNU Association of Professional Engineers and Geoscientists

PREPARED UNDER THE DIRECTION OF

RAY LIU, P.ENG.

ENGINEER OF RECORD

DATE 2024-12-06

PROJECT No.	SHEET No.	DRAWING No.	
CE857700	22 OF 55	SC-INF01-6081-C621	1