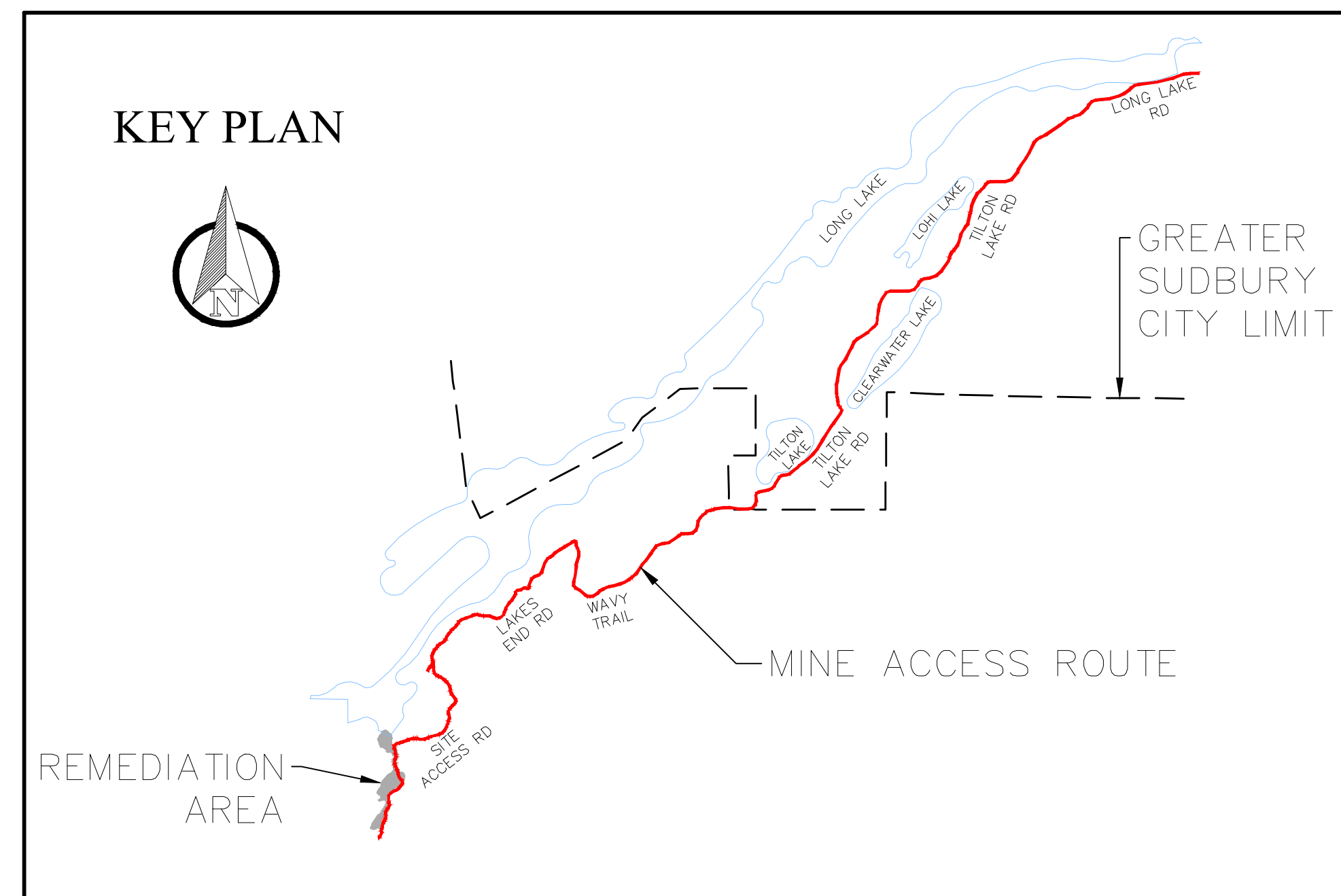


Appendix A

Design Drawings

LONG LAKE GOLD MINE ACCESS ROAD IMPROVEMENTS

CONTRACT No. XXXX
WILLS PROJECT No. 21-20183



DRAWING INDEX

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Ontario



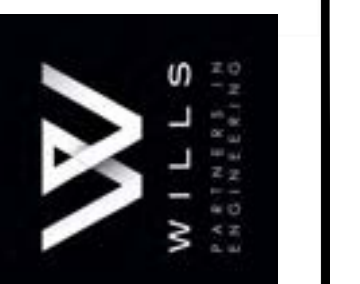
NOT FOR
CONSTRUCTION

90% DESIGN COMPLETE - JUNE 30, 2022

LONG LAKE GOLD MINE ACCESS ROAD IMPROVEMENTS
THE GREATER CITY OF SUDBURY

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CONTRACT No. XXXX WILLS PROJECT No. 21-20183
90% DESIGN COMPLETE - JUNE 30, 2022



DWG NAME: O:\20183-20189\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\20183 CS DT.dwg
 DATE: 2022-09-11
 NOTES: 1. All dimensions are in metres unless otherwise noted.
 PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be updated by an OLC.
 DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind, either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.

NOTES

1.0 SOURCE DATA

- ANY BOUNDARY LINES SHOWN ON DRAWINGS ARE NOT LEGAL BOUNDARIES AND ARE PROVIDED FOR REFERENCE ONLY AND HAVE NOT BEEN VERIFIED BY AN OLS.
- THE ENGINEERING DESIGN ON SITE ACCESS ROAD RELIES ON LIDAR DATA PROVIDED BY NDMNRF (DATE UNKNOWN). THE ENGINEERING DESIGN ON LAKES END ROAD RELIES ON LIDAR DATA PROVIDED BY NDMNRF (DATE UNKNOWN) AND LIDAR DATA OBTAINED AND PREPARED BY MVT GEO-SOLUTIONS INC (NOVEMBER 2021). THE ENGINEERING DESIGN ON LONG LAKE ROAD, TILTON LAKE ROAD AND WAVY TRAIL RELIES ON THE TOPOGRAPHIC SURVEY DATED SEPTEMBER 2021, PREPARED BY D.M. WILLS ASSOCIATES LTD.
- THE ENGINEERING DESIGN RELIES ON THE GEOTECHNICAL INVESTIGATION REPORT DATED FEBRUARY 24, 2022, PREPARED BY REDSTONE ENGINEERING INC.
- THE LOCATION OF EXISTING UNDERGROUND ELECTRIC, GAS, DATA TRANSMISSION, TELEPHONE AND CABLE TELEVISION IDENTIFIED ON THE CONTRACT DRAWINGS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL LOCATE ALL UTILITIES HORIZONTALLY AND VERTICALLY PRIOR TO COMMENCEMENT

2.0 GENERAL - CONSTRUCTION

- REFERENCES WITHIN THESE CONTRACT DOCUMENTS TO AN OPSS SHALL BE DEEMED TO MEAN OPSS.PROV UNLESS USE OF A MUNICIPAL-ORIENTED SPECIFICATION IS SPECIFIED IN THE CONTRACT DOCUMENTS. WHEN THERE IS NOT A CORRESPONDING PROVINCIAL ORIENTED SPECIFICATION, THE REFERENCES BELOW SHALL BE CONSIDERED TO BE THE OPSS.COMM.
- THE WORK IS TO BE COMPLETED IN ACCORDANCE WITH OPSS.PROV 100 GENERAL CONDITIONS OF CONTRACT.
- THE CONTRACTOR SHALL UNDERTAKE ALL LAYOUT REQUIRED TO FACILITATE THE CONSTRUCTION OF THIS CONTRACT.
- WITH THE EXCEPTION OF THE REFERENCED LOCAL CONTROL POINTS SPECIFICALLY PROVIDED IN THE CONTRACT DRAWINGS, NO ELEVATION WITHIN THE CONTRACT DRAWINGS ARE TO BE USED AS A REFERENCE FOR LAYOUT.
- THE REPLACEMENT OF DISTURBED OR OTHERWISE DAMAGED CONTROL POINTS BY AN OLS SURVEYOR WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.
- ANY DISCREPANCY BETWEEN THE SITE CONDITIONS AND THE CONTRACT DRAWINGS SHALL IMMEDIATELY BE REPORTED TO THE CONTRACT ADMINISTRATOR.
- THE CONTRACTOR SHALL OBTAIN AND MAINTAIN COPIES OF ALL REFERENCED STANDARD DOCUMENTS AND DRAWINGS ON SITE FOR THE DURATION OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS, AND BARRIERS. ALL SIGNS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS IN THE ONTARIO TRAFFIC MANUAL, BOOK 7, TEMPORARY CONDITIONS. A TOP SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW.
- THE CONTRACTOR WILL MAINTAIN ACCESS TO PRIVATE PROPERTIES FOR VEHICULAR AND PEDESTRIAN ACCESS UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.
- ALL DIMENSIONS ARE PROVIDED IN METRIC UNITS, UNLESS SPECIFIED OTHERWISE.
- THE LOCATION OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR THE FIELD LOCATION OF ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR IS TO CONFIRM THE LOCATION OF EXISTING UTILITIES AND ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONTRACT ADMINISTRATOR.
- THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR ALL UTILITY RELOCATIONS ACCORDINGLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THEIR ACTIVITIES SO AS NOT TO CONFLICT WITH THE UTILITY COMPANIES.
- THE CONTRACT ADMINISTRATOR MUST AUTHORIZE ANY STOCKPILE LOCATIONS PROPOSED BY THE CONTRACTOR, PRIOR TO THE IMPORT OF ANY MATERIAL TO BE STOCKPILED.
- SEED SHALL BE STANDARD ROADSIDE MIX AS PER OPSS.PROV 803.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY RELOCATION OF ALL COMMERCIAL SIGNS (EXCLUDING TOD SIGNS) LOCATED WITHIN THE RIGHT-OF-WAY AS MAY BE REQUIRED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL ENSURE THAT CIVIC ADDRESS SIGNS (911 IDENTIFICATION NUMBERS) ARE IN PLACE AT ALL TIMES. TEMPORARY RELOCATION DUE TO CONSTRUCTION OPERATIONS WILL BE PERMITTED BUT THE ADDRESS NUMBERS MUST BE IN THE PROXIMITY OF THE ENTRANCE AND BE MADE VISIBLE THROUGHOUT THE DURATION OF THE CONTRACT. ANY DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE

3.0 EROSION AND SEDIMENT CONTROL

- EROSION AND SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING CONSTRUCTION TO PREVENT ENTRY OF SEDIMENT LADEN WATER INTO EXISTING INFRASTRUCTURE, WATERBODIES OR ONTO ADJACENT LANDS. ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF INSPECTION.
- DISTURBANCE TO EXISTING VEGETATED AREAS WITHIN THE WORK AREA SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. NO ADDITIONAL PAYMENT WILL BE MADE FOR RESTORATION OF AREAS DISTURBED BY CONSTRUCTION UNLESS NOTED IN THE CONTRACT DOCUMENTS.
- THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED / AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREA. ADDITIONAL OR ALTERNATIVE CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY UPON DIRECTION FROM THE CONTRACT ADMINISTRATOR. ADDITIONAL MATERIALS SHALL BE KEPT ON SITE TO BE USED AS NECESSARY.
- ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, SHALL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES ONTO ROADS OR ADJACENT PROPERTIES, OR INTO SEWERS OR ADJACENT WATERBODIES.
- ALL EROSION AND SEDIMENT CONTROL AND TREE PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE CONTRACT ADMINISTRATOR.

4.0 GRADING AND EARTHWORKS

- TOPSOIL STRIPPING QUANTITIES HAVE BEEN CALCULATED USING AN ASSUMED AVERAGE DEPTH OF TOPSOIL OF 200 mm FOR LAKES END ROAD AND 300 mm FOR SITE ACCESS ROAD. THE ASSUMED AVERAGE DEPTH OF TOPSOIL IS BASED ON THE DEPTHS TOPSOIL RECORDED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR IMMEDIATELY IF THE TOPSOIL DEPTHS ENCOUNTERED VARY FROM THE ANTICIPATED AVERAGE DEPTH.

5.0 CULVERTS

- EXCAVATION, EMBEDMENT AND BACKFILL FOR FLEXIBLE PIPES SHALL BE AS PER OPSD 802.010, 802.013, AND 802.014. SOIL ABOVE THE WATER TABLE IS CLASSED AS TYPE 3 SOIL. SOIL BELOW THE WATER TABLE IS CLASSED AS TYPE 4 SOIL.
- BEDDING AND EMBEDMENT MATERIALS FOR CENTRELINER CULVERTS SHALL BE GRANULAR A UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. BEDDING AND EMBEDMENT MATERIALS FOR ENTRANCE CULVERTS CAN BE NATIVE MATERIAL.
- COVER MATERIAL FOR CENTRELINER CULVERTS SHALL BE GRANULAR A OR GRANULAR B TYPE I, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. COVER MATERIAL FOR ENTRANCE CULVERTS CAN BE NATIVE MATERIAL.
- BACKFILL MATERIAL FOR CENTRELINER CULVERTS SHALL BE GRANULAR A OR GRANULAR B TYPE I, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. BACKFILL MATERIAL FOR ENTRANCE CULVERTS CAN BE NATIVE MATERIAL.
- BACKFILL AND COVER FOR THE LUKE CREEK CONCRETE BOX CULVERT SHALL BE AS PER OPSD 803.010. THE BEDDING PLUS ELEVATION COURSE SHALL COMPRISE OF 100mm OF 19.0mm CLEAR STONE. ANY REQUIRED SUBEXCAVATION OF UNSUITABLE MATERIAL BELOW THE BEDDING, AS DIRECTED BY THE CONTRACT ADMINISTRATOR, SHALL BE BACKFILLED WITH 19.0mm CLEAR STONE.
- FROST TAPERS FOR CENTRELINER CULVERTS SHALL BE AS PER OPSD 803.010, 803.030 AND 803.031. THE FROST PENETRATION DEPTH IS 1.8m.

6.0 INSPECTION AND DOCUMENTATION REQUIREMENTS

- SUBMIT SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR PROMPTLY AND IN ORDERLY SEQUENCE TO NOT CAUSE DELAY IN WORK. FAILURE TO SUBMIT IN AMPLE TIME IS NOT CONSIDERED SUFFICIENT REASON FOR EXTENSION OF CONTRACT TIME AND NO CLAIM FOR EXTENSION BY REASON OF SUCH DEFAULT WILL BE ALLOWED. DO NOT PROCEED WITH WORK AFFECTED BY SUBMITTAL UNTIL REVIEW IS COMPLETE. REVIEW SHOP DRAWINGS PRIOR TO SUBMISSION. THIS REVIEW REPRESENTS THAT NECESSARY REQUIREMENTS HAVE BEEN DETERMINED AND VERIFIED, OR WILL BE, AND THAT EACH SUBMITTAL HAS BEEN CHECKED AND CO-ORDINATED WITH REQUIREMENTS OF WORK AND CONTRACT DOCUMENTS. SUBMITTALS NOT STAMPED, SIGNED, DATED AND IDENTIFIED AS TO SPECIFIC PROJECT WILL BE RETURNED WITHOUT BEING EXAMINED AND CONSIDERED REJECTED. ALLOW 5 BUSINESS DAYS FOR THE FIRST, AND 3 BUSINESS DAYS FOR RESUBMITTED SHOP DRAWING REVIEW.
 - THE CONTRACTOR SHALL CONTACT THE CONTRACT ADMINISTRATOR A MINIMUM OF 2 BUSINESS DAYS IN ADVANCE OF THE FOLLOWING ACTIVITIES IN ORDER FOR THE CONTRACT ADMINISTRATOR TO ARRANGE FOR THE PROPER INSPECTION OF THE RELATED CONSTRUCTION ACTIVITIES. IF THE REQUIRED NOTICE IS NOT PROVIDED, THE CONTRACTOR MAY BE REQUIRED TO UNDERTAKE ADDITIONAL WORKS, AT THE SOLE EXPENSE OF THE CONTRACTOR, TO PERMIT THE CONTRACT ADMINISTRATOR TO INSPECT AND / OR VERIFY THAT THE WORKS HAVE CONSTRUCTED IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
 - MOBILIZATION DATE, PROPOSED CONSTRUCTION SCHEDULE AND CONTRACTOR CONTACT INFORMATION.
 - VERIFY SITE CONTROL POINTS PRIOR TO LAYOUT.
 - UPON COMPLETION OF ALL EROSION AND SEDIMENT CONTROL WORKS.
 - PRIOR TO THE PLACEMENT OF ANY ROAD GRANULAR BASE.
 - PRIOR TO THE DEMOBILIZATION OF THE SERVICING CONTRACTOR FROM THE SITE.

7.0 ENVIRONMENTAL REQUIREMENTS

- IN-WATER OR IN-WETLAND WORK IN THE VICINITY OF LUKE CREEK (SITE ACCESS ROAD STA. 62+120 TO STA. 62+220) SHALL BE PROHIBITED BETWEEN SEPTEMBER 1 AND JUNE 15 IN ANY CALENDAR YEAR.
- TREE REMOVAL ACTIVITIES SHALL BE PROHIBITED BETWEEN MAY 1 AND AUGUST 31 IN ANY CALENDAR YEAR. IN THE EVENT THAT TREE REMOVAL MUST OCCUR WITHIN THIS WINDOW, THE CONTRACTOR SHALL RETAIN A QUALIFIED AVIAN BIOLOGIST TO CONDUCT A NESTING SURVEY PRIOR TO CLEARING.
- LIGHT DUTY SILT FENCE SHALL BE PLACED AT THE LIMITS OF GRADING ALONG THE ENTIRETY OF WORKS ON LAKES END ROAD AND SITE ACCESS ROAD. THIS FENCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF WORK AND REMAIN IN PLACE UNTIL THE ACCEPTANCE OF FINAL COVER. THE CONTRACTOR SHALL MAINTAIN THIS SILT FENCE AND REPAIR OR REPLACE ANY SECTIONS OF DAMAGED SILT FENCE WITHIN 48 HOURS OF INSPECTION.

LEGEND

NEW CONSTRUCTION - PLAN

- ROADWAY CENTRELINER
- EDGE OF PAVEMENT
- EDGE OF GRAVEL SHOULDER/ROAD
- DITCH
- FLAT BOTTOM DITCH
- 1m BENCH AT TOP OF ROCK CUT
- LIMIT OF GRADING
- GUIDE RAIL
- RIP RAP

NEW CONSTRUCTION - PROFILE

- PROPOSED CENTRELINER GRADE
- ORIGINAL GROUND
- DITCH LEFT
- DITCH RIGHT

REMOVALS AND EROSION & SEDIMENT CONTROL - PLAN

- CLOSE CUT CLEARING
- REMOVAL OF ASPHALT PAVEMENT, FULL DEPTH
- REMOVAL OF OBJECT
- EXTENT OF CLEARING AND GRUBBING
- SILT FENCE

REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

GENERAL NOTES & LEGEND

SCALE:
CONTRACT NO.:
CAD/FILE NUMBER: 20183
SHEET NO.: 001

NOTES: 1. All dimensions are in metres unless otherwise noted.

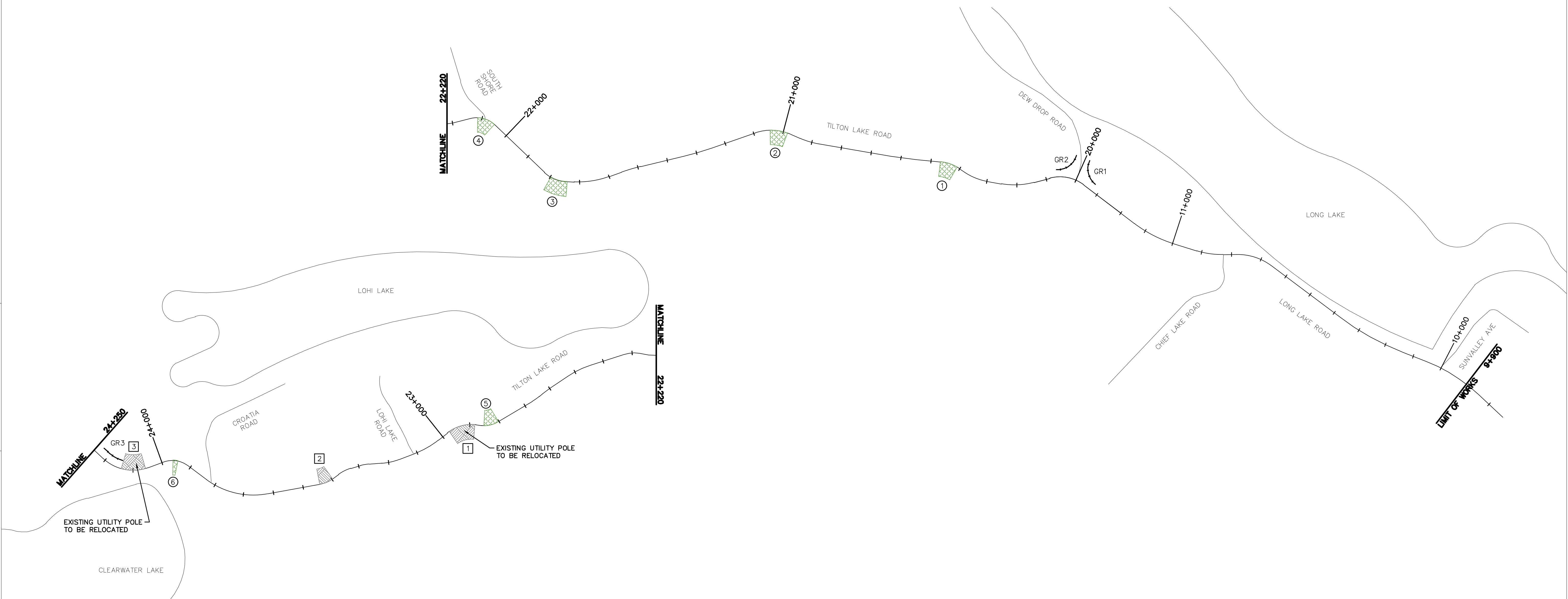
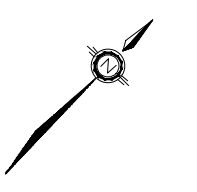
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VEGETATION REMOVAL ON CURVES			
SECTION	START STATION	END STATION	WORK SUMMARY
①	20+411	20+469	SEE DETAIL ON SHEET 400
②	20+986	21+045	SEE DETAIL ON SHEET 400
③	21+740	21+798	SEE DETAIL ON SHEET 400
④	22+053	22+115	SEE DETAIL ON SHEET 400
⑤	22+802	22+853	SEE DETAIL ON SHEET 400
⑥	23+947	23+964	SEE DETAIL ON SHEET 400

ROCK REMOVAL ON CURVES			
SECTION	START STATION	END STATION	WORK SUMMARY
①	22+883	22+972	SEE DETAIL ON SHEET 402
②	23+396	23+444	SEE DETAIL ON SHEET 402
③	24+058	24+139	SEE DETAIL ON SHEET 402

GUIDE RAIL SCHEDULE			
ID	STATIONING	ROAD	DESCRIPTION OF WORKS
GR1	11+356-11+381 RT	LONG LAKE ROAD	SEE DETAIL SHEET 404
GR2	20+006-20+034 RT	TILTON LAKE ROAD	SEE DETAIL SHEET 404
GR3	24+132-24+234 RT	TILTON LAKE ROAD	SEE DETAIL SHEET 404



REVISIONS		
DATE	DETAILS	BY
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APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

LOCATION PLAN
LONG LAKE ROAD STA. 9+990 TO
TILTON LAKE ROAD STA. 24+250

SCALE:	NOT TO SCALE
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	002

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DATE: 2022-02-11

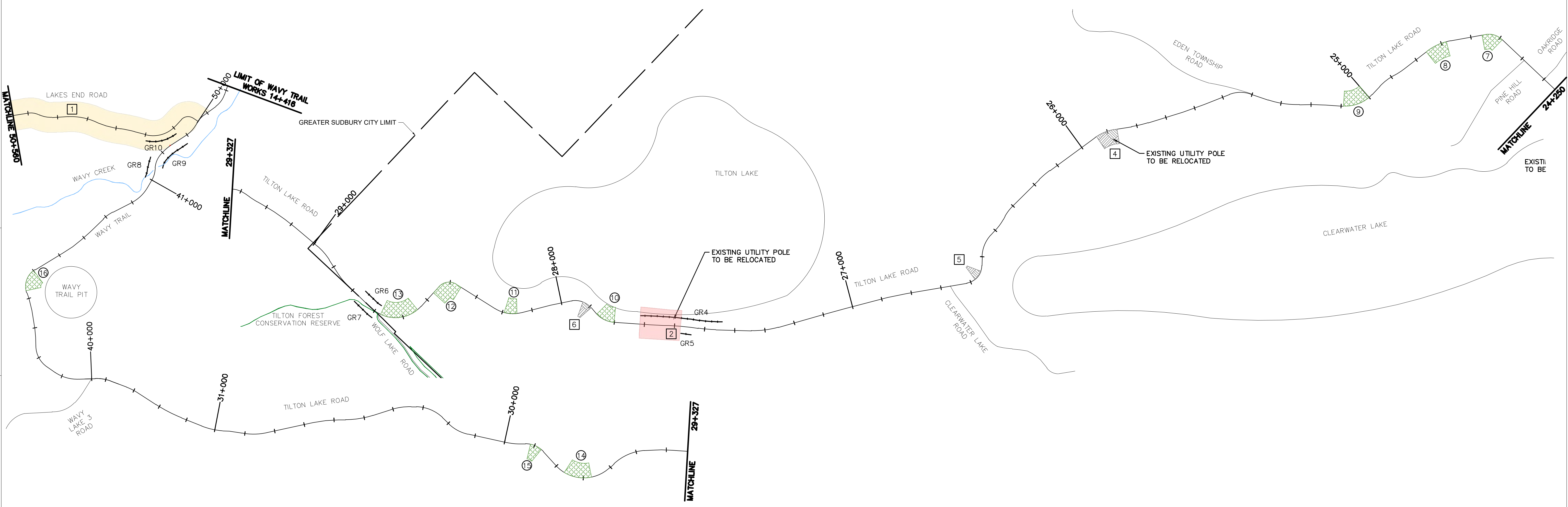
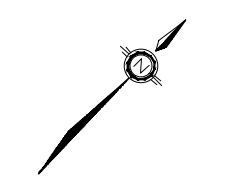
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ROAD WORKS			
SECTION	START STATION	END STATION	TREATMENT DESCRIPTION
1	50+000 LAKES END ROAD	50+560 LAKES END ROAD	ROADWAY REALIGNMENT OR RECONSTRUCTION. SEE PLAN/PROFILE SHEETS.
2	27+580 TILTON LAKE ROAD	27+640 TILTON LAKE ROAD	SHOULDER RESHAPING AND GUIDE RAIL EXTENSION. SEE SHEET 403.

VEGETATION REMOVAL ON CURVES			
SECTION	START STATION	END STATION	WORK SUMMARY
7	24+490	24+562	SEE DETAIL ON SHEET 400
8	24+682	24+757	SEE DETAIL ON SHEET 400
9	25+000	25+095	SEE DETAIL ON SHEET 400
10	27+796	27+864	SEE DETAIL ON SHEET 401
11	28+151	28+193	SEE DETAIL ON SHEET 401
12	28+359	28+468	SEE DETAIL ON SHEET 401
13	28+544	28+677	SEE DETAIL ON SHEET 401
14	29+671	29+765	SEE DETAIL ON SHEET 401
15	29+873	29+913	SEE DETAIL ON SHEET 401
16	40+427	40+501	SEE DETAIL ON SHEET 401

ROCK REMOVAL ON CURVES			
SECTION	START STATION	END STATION	WORK SUMMARY
4	25+867	25+940	SEE DETAIL ON SHEET 402
5	26+549	26+583	SEE DETAIL ON SHEET 402
6	27+895	27+927	SEE DETAIL ON SHEET 402

GUIDE RAIL SCHEDULE			
ID	STATIONING	ROAD	DESCRIPTION OF WORKS
GR4	27+441-27+715 RT	TILTON LAKE ROAD	SEE DETAIL SHEETS 403 AND 404
GR5	27+541-27+578 LT	TILTON LAKE ROAD	SEE DETAIL SHEET 404
GR6	28+678-28+764 RT	TILTON LAKE ROAD	SEE DETAIL SHEET 404
GR7	28+695-28+768 LT	TILTON LAKE ROAD	SEE DETAIL SHEET 404
GR8	40+992-41+062 LT	WAVY TRAIL	SEE DETAIL SHEET 404
GR9	41+024-41+195 RT	WAVY TRAIL	SEE DETAIL SHEET 404
GR10	50+111 - 50+195 LT	LAKES END ROAD	SEE PLAN/PROFILE SHEET 100 AND DETAIL SHEET 404



REVISIONS		
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LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

LOCATION PLAN
TILTON LAKE ROAD STA. 24+250 TO
LAKES END ROAD STA. 50+560

SCALE: NOT TO SCALE

CONTRACT NO.:

CAD/FILE NUMBER: 20183

SHEET NO.: 003

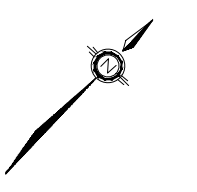
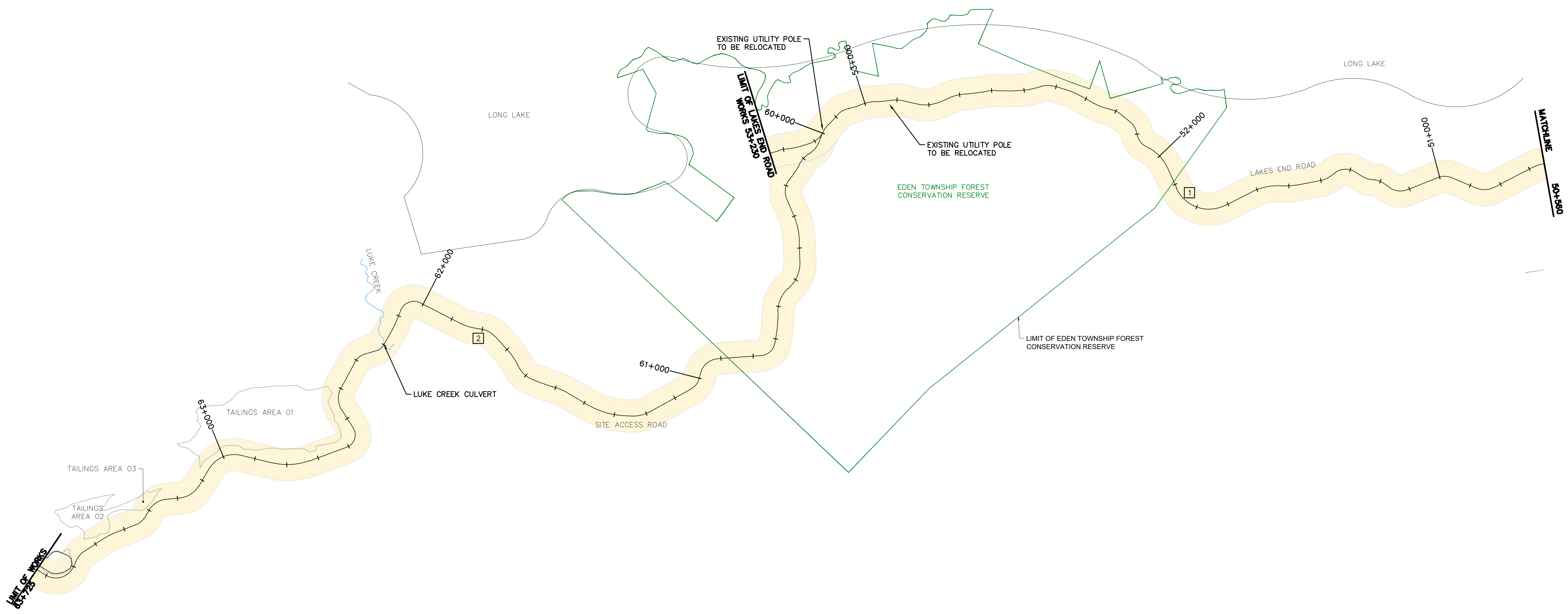
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DATE: 2022-02-11

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ROAD WORKS			
SECTION	START STATION	END STATION	TREATMENT DESCRIPTION
1	50+560 LAKES END ROAD	53+230 LAKES END ROAD	ROADWAY REALIGNMENT OR RECONSTRUCTION. SEE PLAN/PROFILE SHEETS.
2	60+000 SITE ACCESS ROAD	63+725 SITE ACCESS ROAD	ROADWAY REALIGNMENT OR RECONSTRUCTION. SEE PLAN/PROFILE SHEETS.



REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

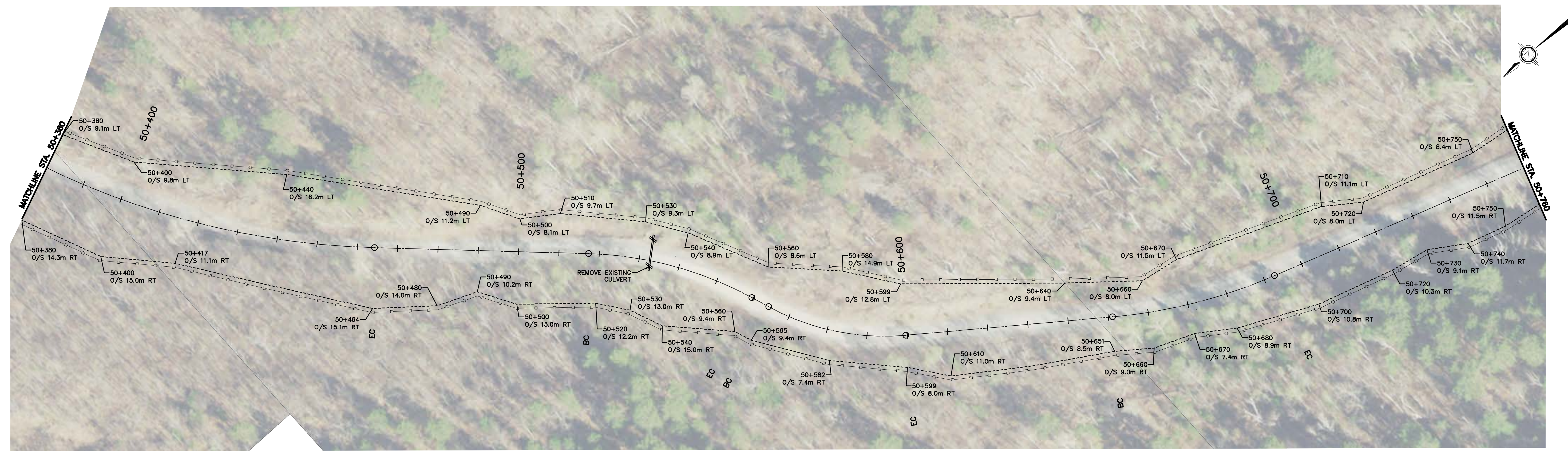
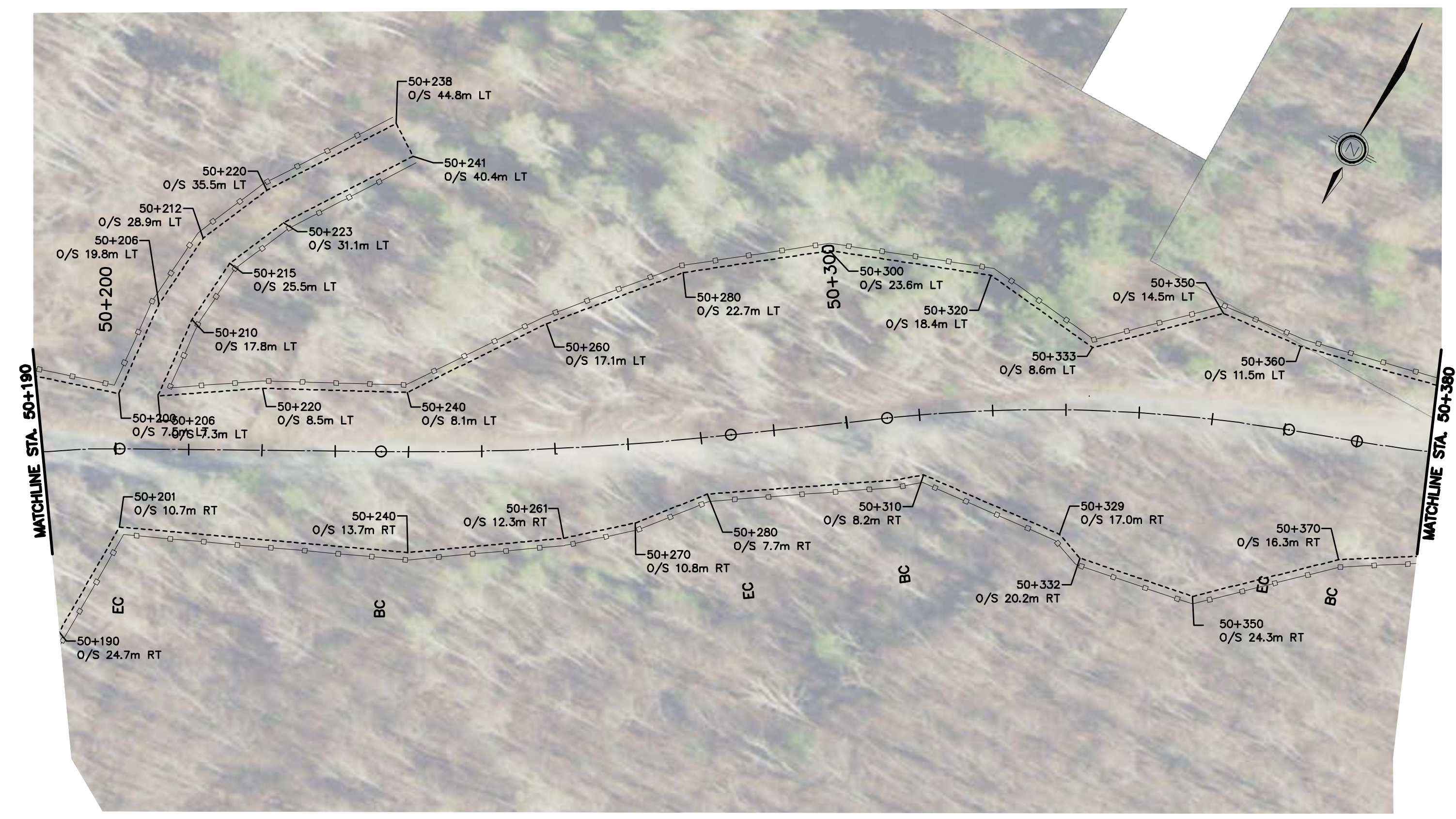
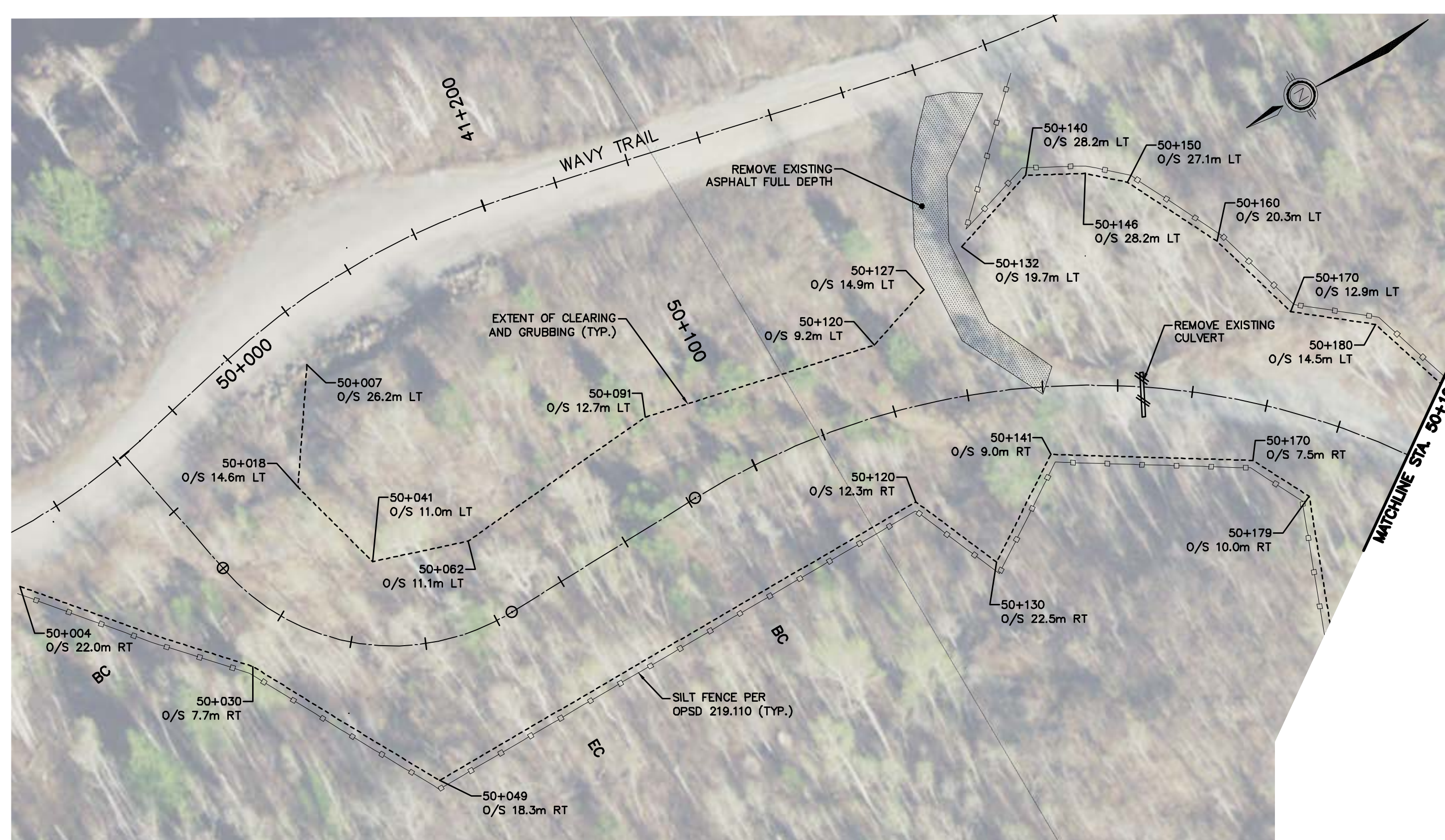
LOCATION PLAN
LAKES END ROAD STA. 50+560 TO
SITE ACCESS ROAD STA. 63+740

SCALE: NOT TO SCALE

CONTRACT NO.:

CAD/FILE NUMBER: 20183

SHEET NO.: 004



REVISIONS

DATE	DETAILS	BY
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CAUTION

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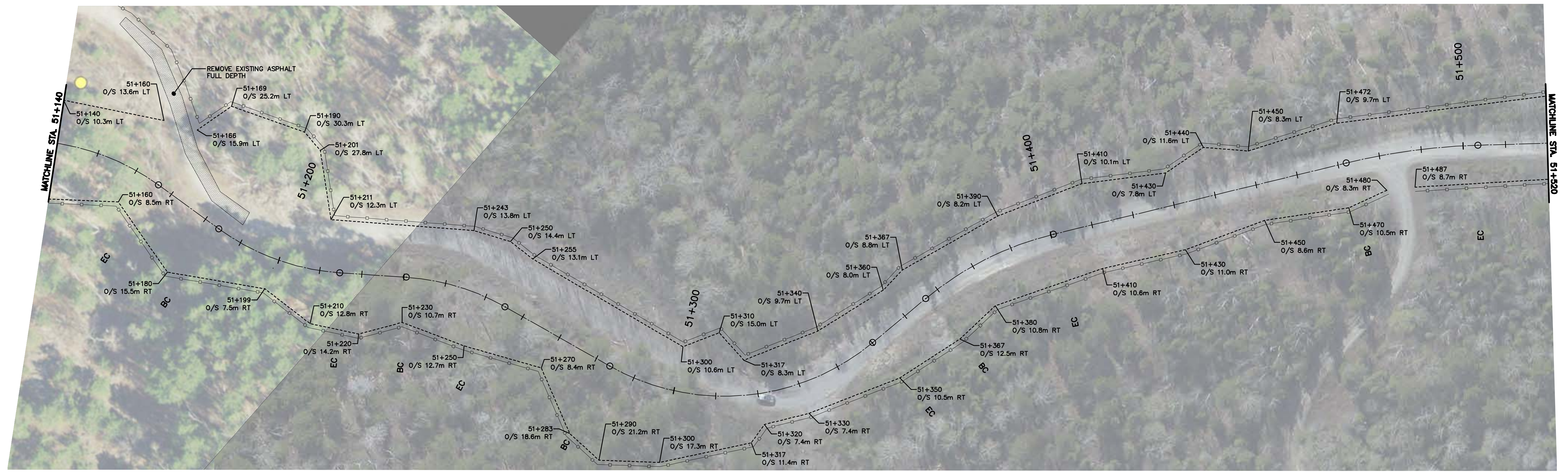
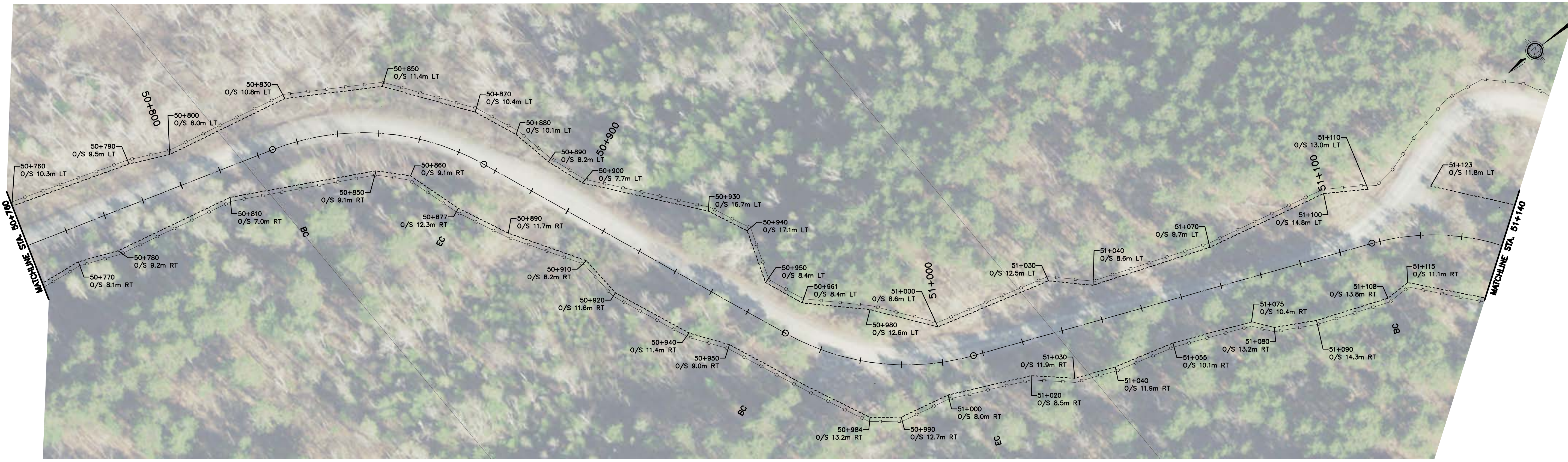
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ENGINEER:	
APPROVED:	



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS		SCALE: HOR: 1:500 VERT: 1:100
REMOVALS & ESC LAKES END ROAD STA. 50+000 TO STA. 50+760		CONTRACT NO.:
		CAD/FILE NUMBER: 20183
		SHEET NO.: 050



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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APPROVED:	

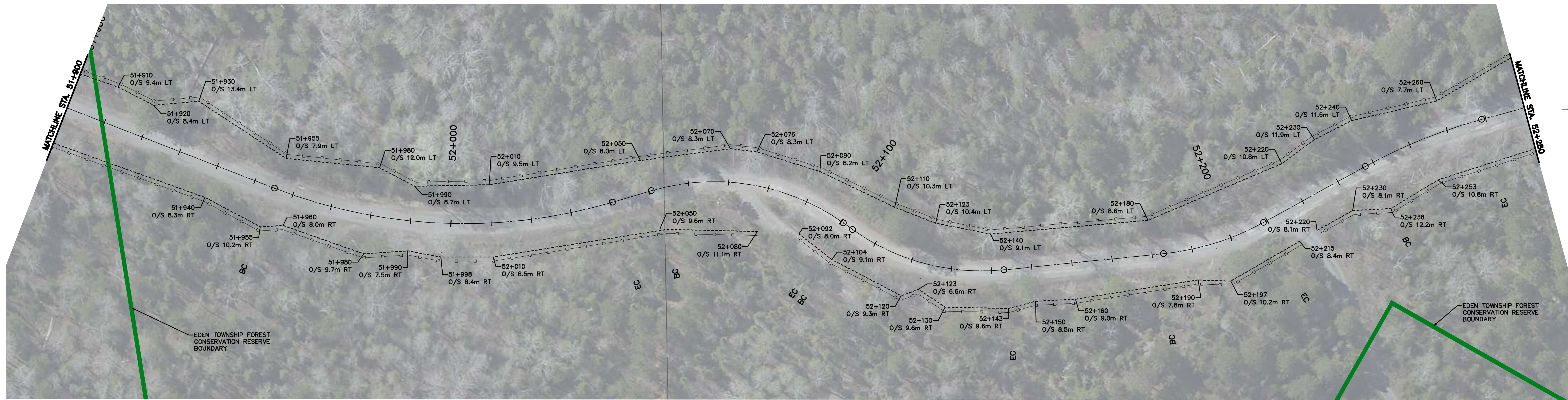
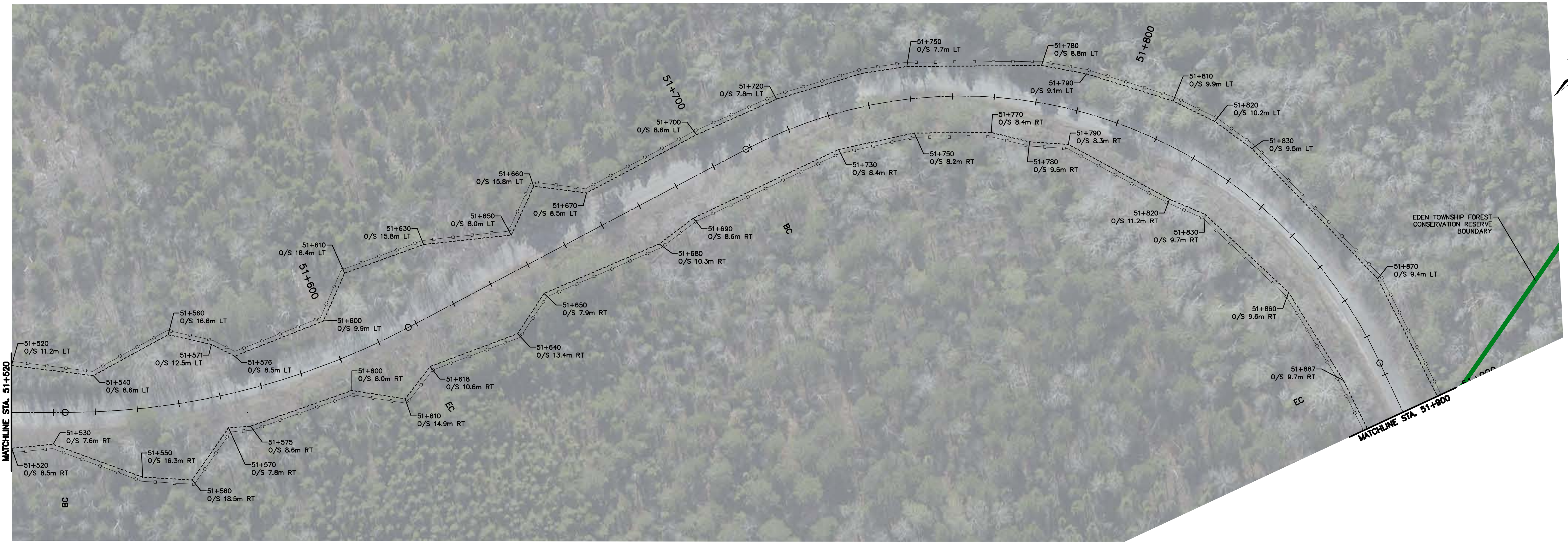


LONG LAKE GOLD MINE ACCESS ROUTE
 ROADWAY IMPROVEMENTS
 REMOVALS & ESC
 LAKES END ROAD
 STA. 50+760 TO STA. 51+520

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	051

NOTES: 1. All dimensions are in metres unless otherwise noted.
 PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an O.C.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

- ALL UTILITIES ARE NOT NECESSARILY SHOWN ON THIS DRAWING.
- WHERE UTILITIES ARE SHOWN, LOCATIONS ARE NOT GUARANTEED
- LOCATION & SIZE OF ALL UTILITIES MUST BE VERIFIED IN THE FIELD.

NOT FOR CONSTRUCTION



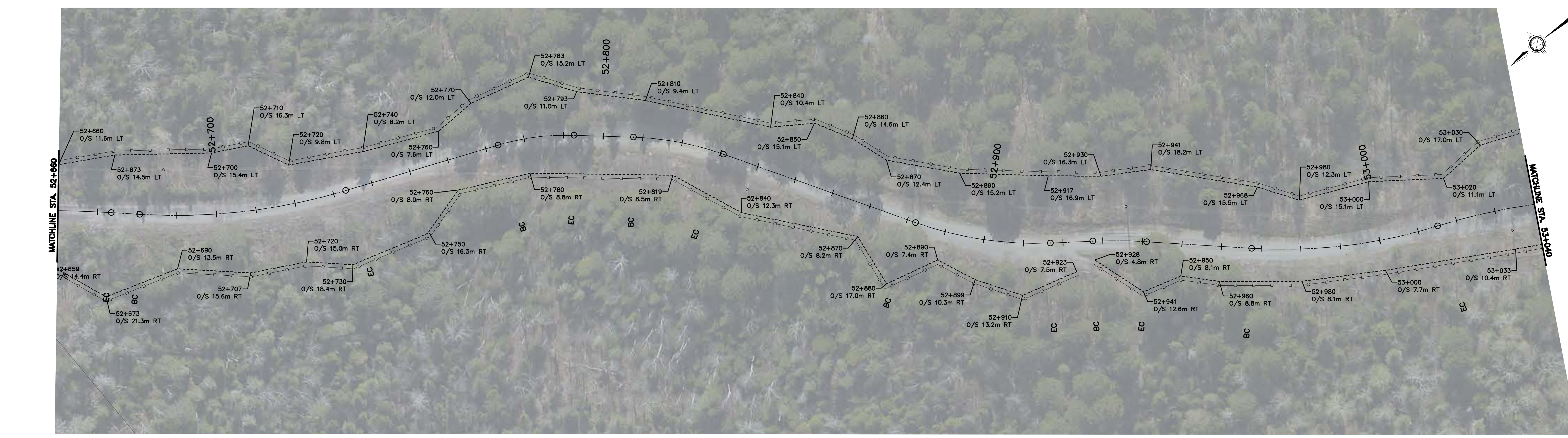
DATE:	
DRAWN:	
DESIGNED:	
CHECKED:	
ENGINEER:	
APPROVED:	



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

REMOVALS & ESC
LAKES END ROAD
STA. 51+520 TO STA. 52+280

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	052



REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

REMOVALS & ESC
LAKES END ROAD
STA. 52+280 TO STA. 53+040

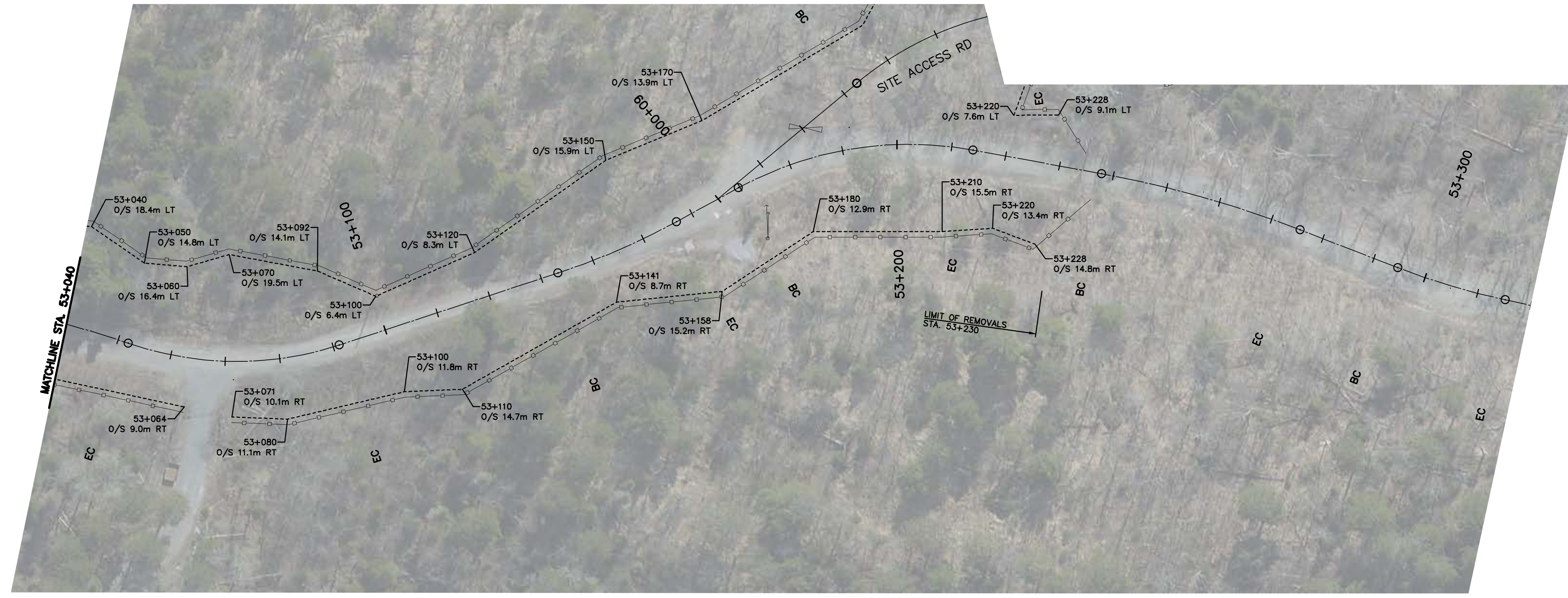
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CONTRACT NO.:
CAD/FILE NUMBER: 20183
SHEET NO.: 053

DWG NAME: O:\20100-20199\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\20183 REM LAKES END RD DATE: 2022-08-24.dwg

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by a QCS.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

REMOVALS & ESC
LAKES END ROAD
STA. 53+040 TO STA. 53+344

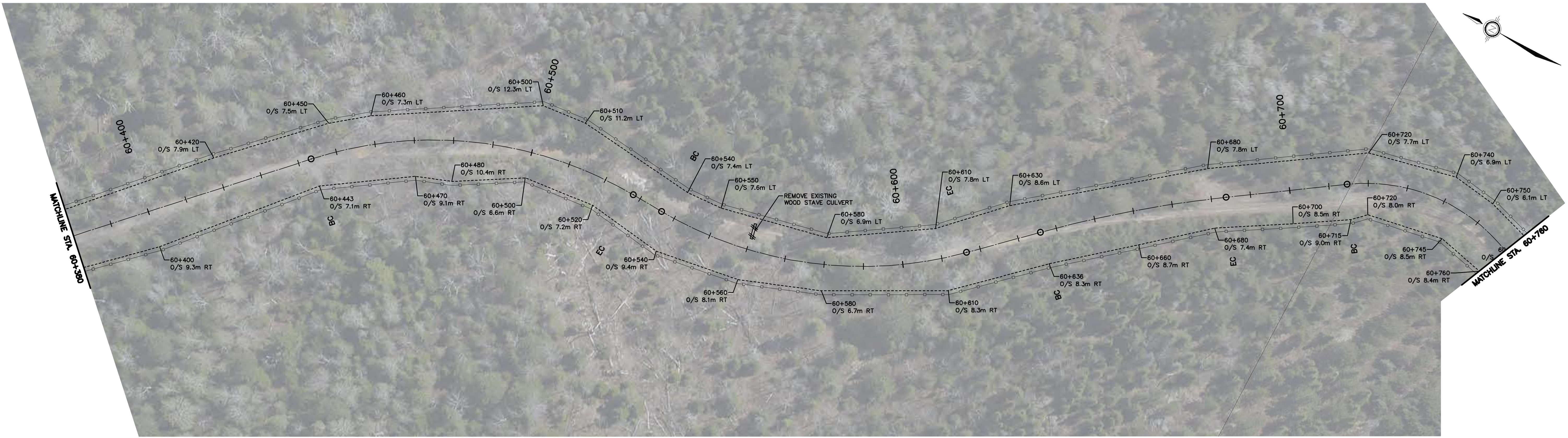
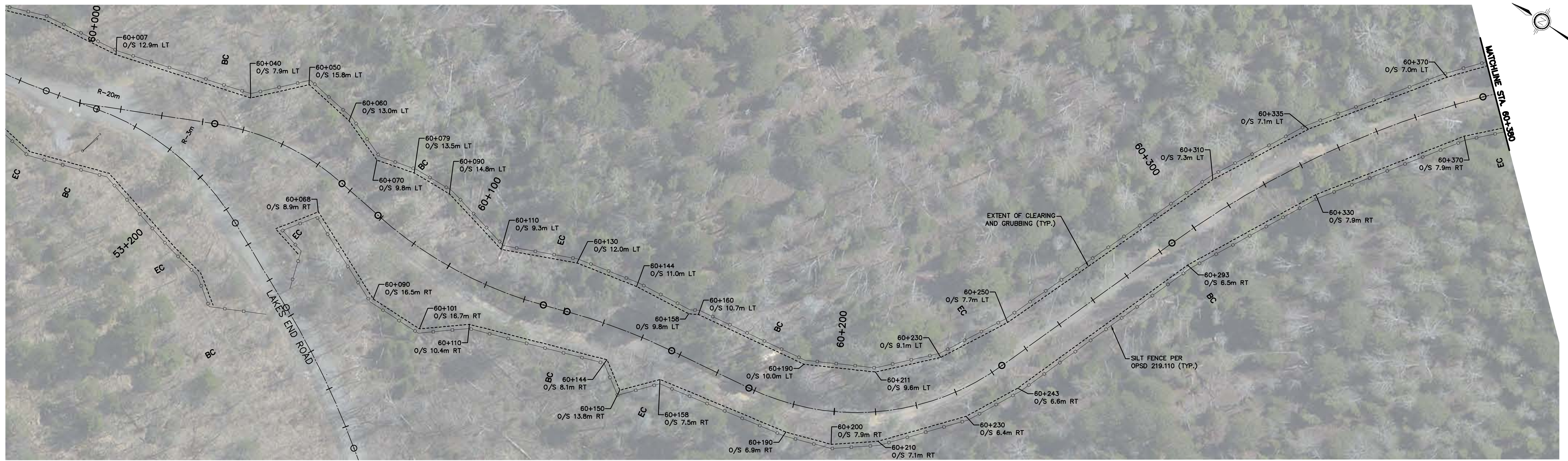
SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	054	

DWG NAME: 05\20100-2019\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\20183 REM SITE ACCESS RD DATE: 2022-08-04.dwg

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an OAC.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, injury or defect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

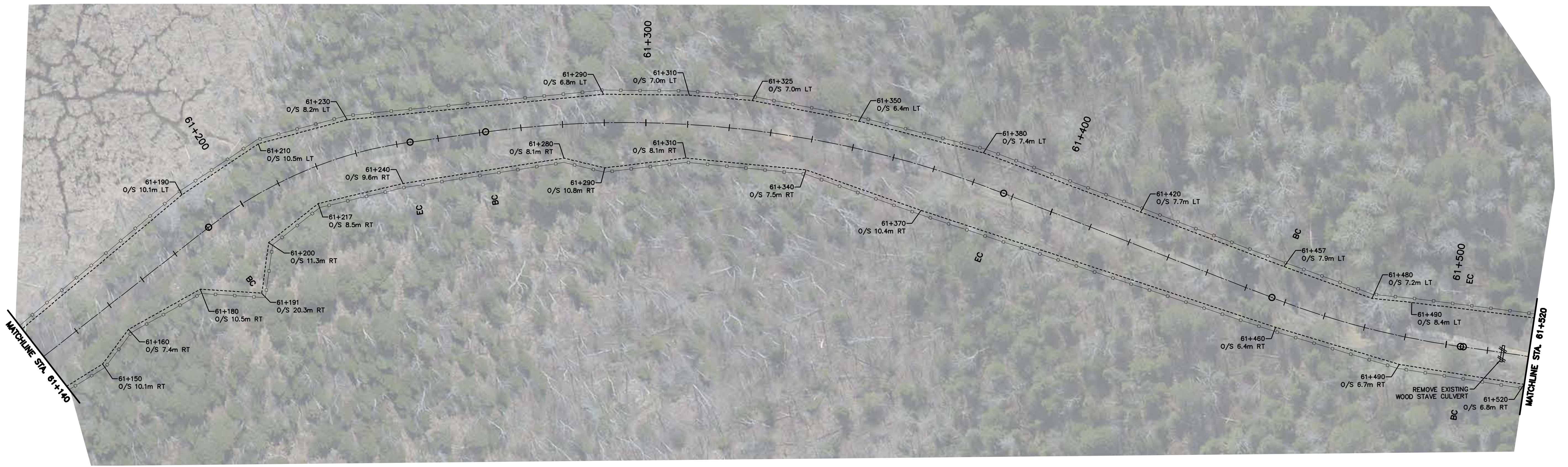
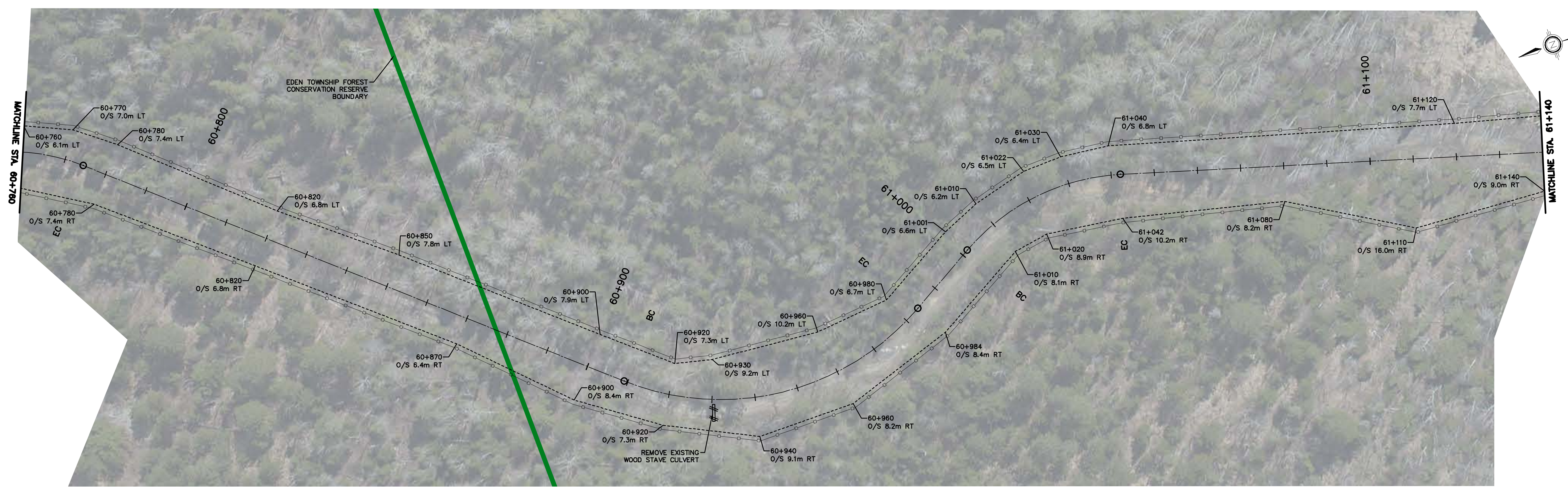
REMOVALS & ESC
SITE ACCESS ROAD
STA. 60+000 TO STA. 60+760

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	060	

NOTES: 1. All dimensions are in metres unless otherwise noted.

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REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

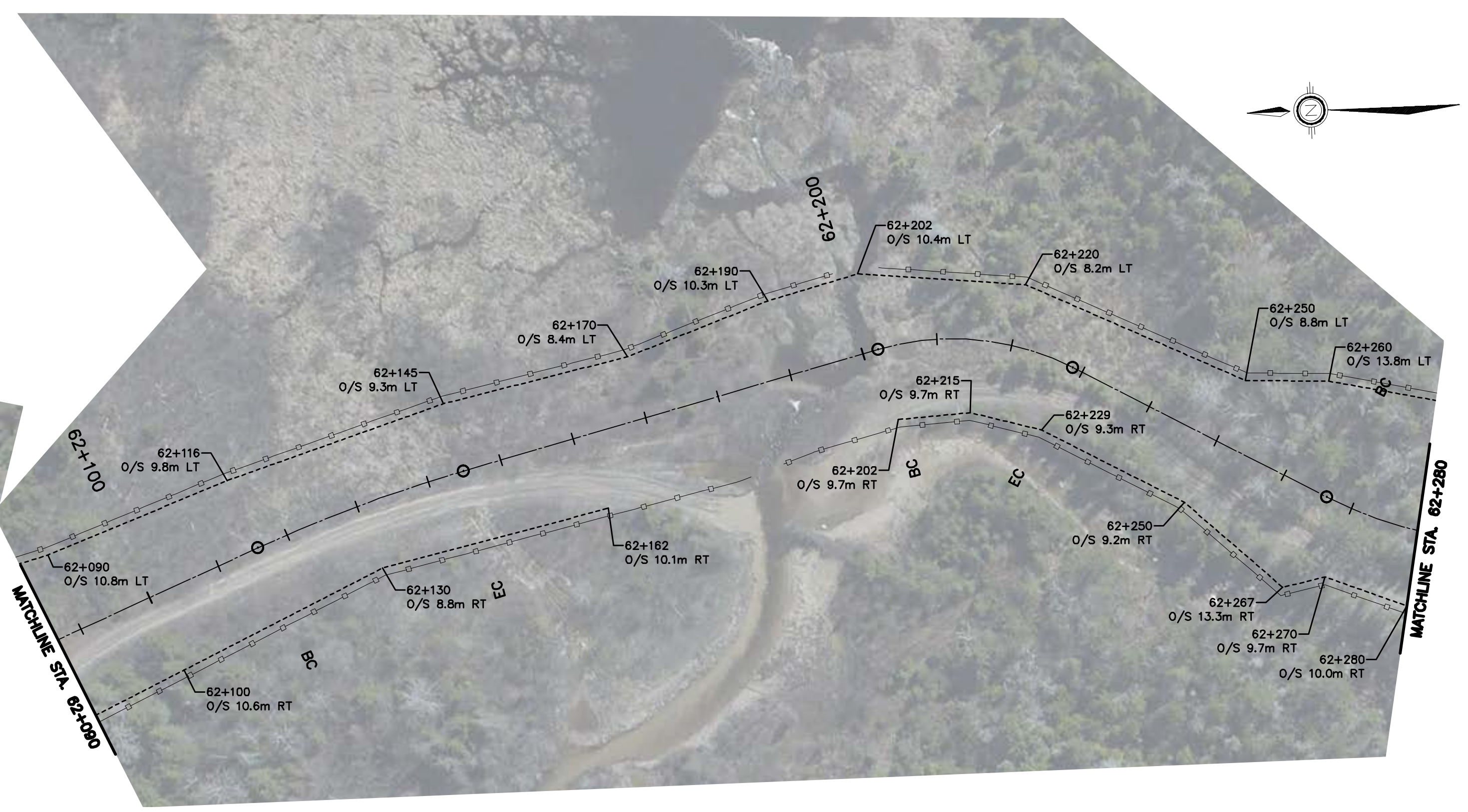
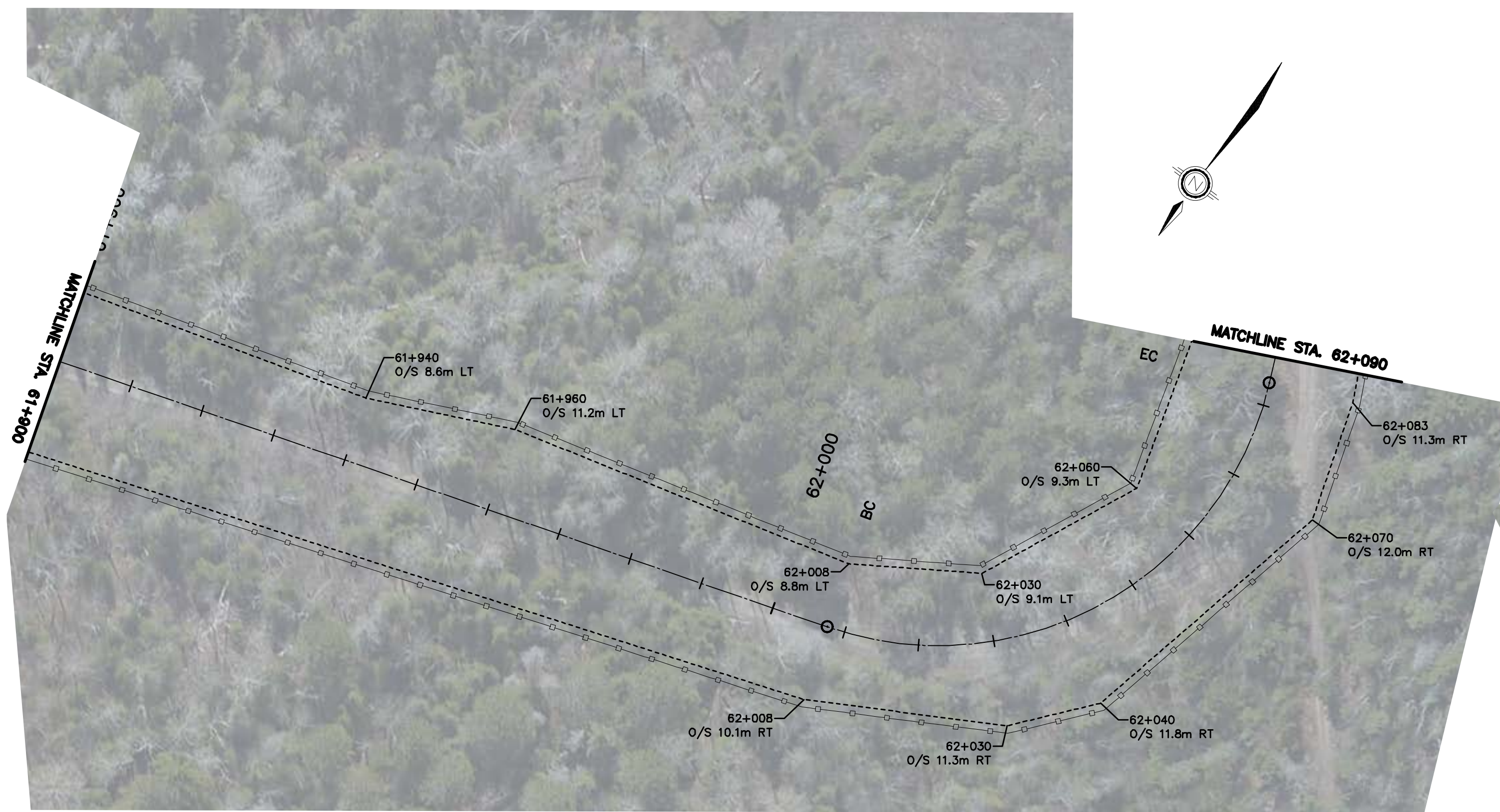
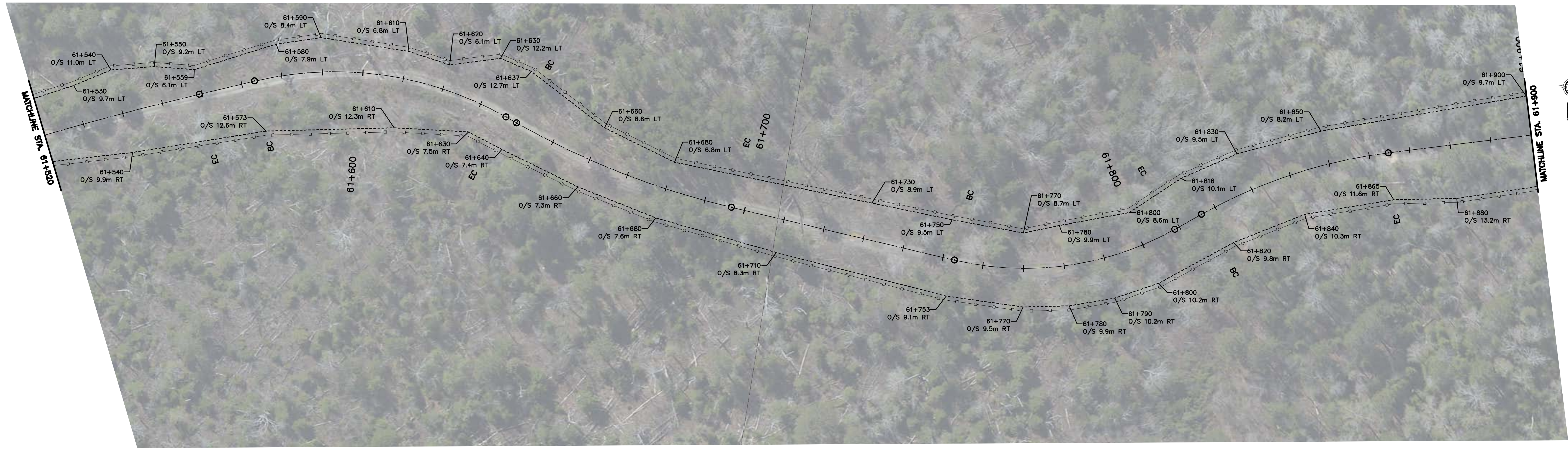
REMOVALS & ESC
SITE ACCESS ROAD
STA. 60+760 TO STA. 61+520

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	061	

DWG NAME: 03\20100-20193\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\20183 REM SITE ACCESS RD DATE: 2022-08-04.dwg

NOTES: 1. All dimensions are in metres unless otherwise noted.
 PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an OAC.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



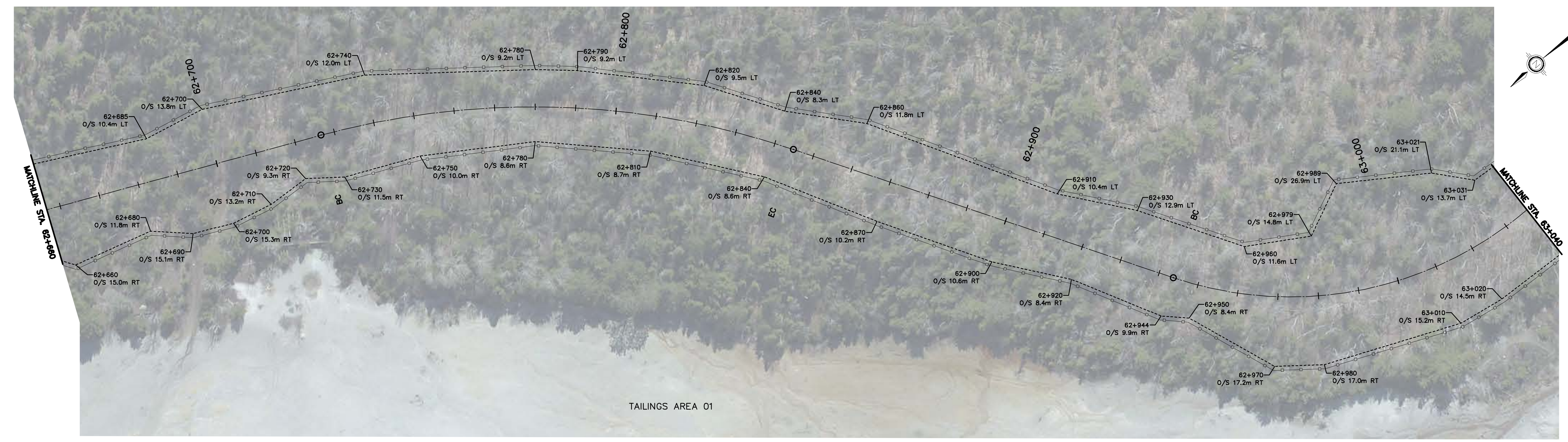
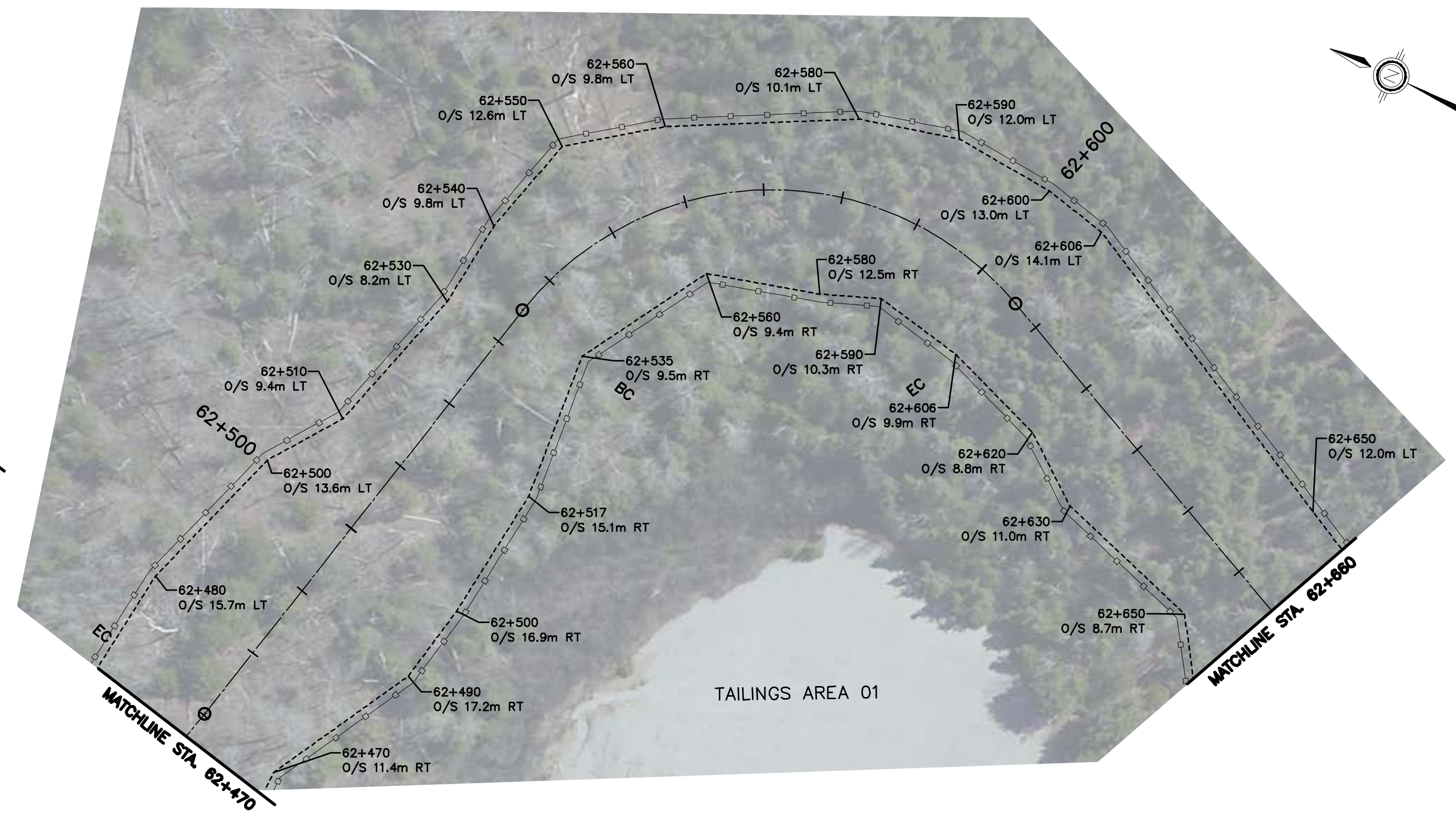
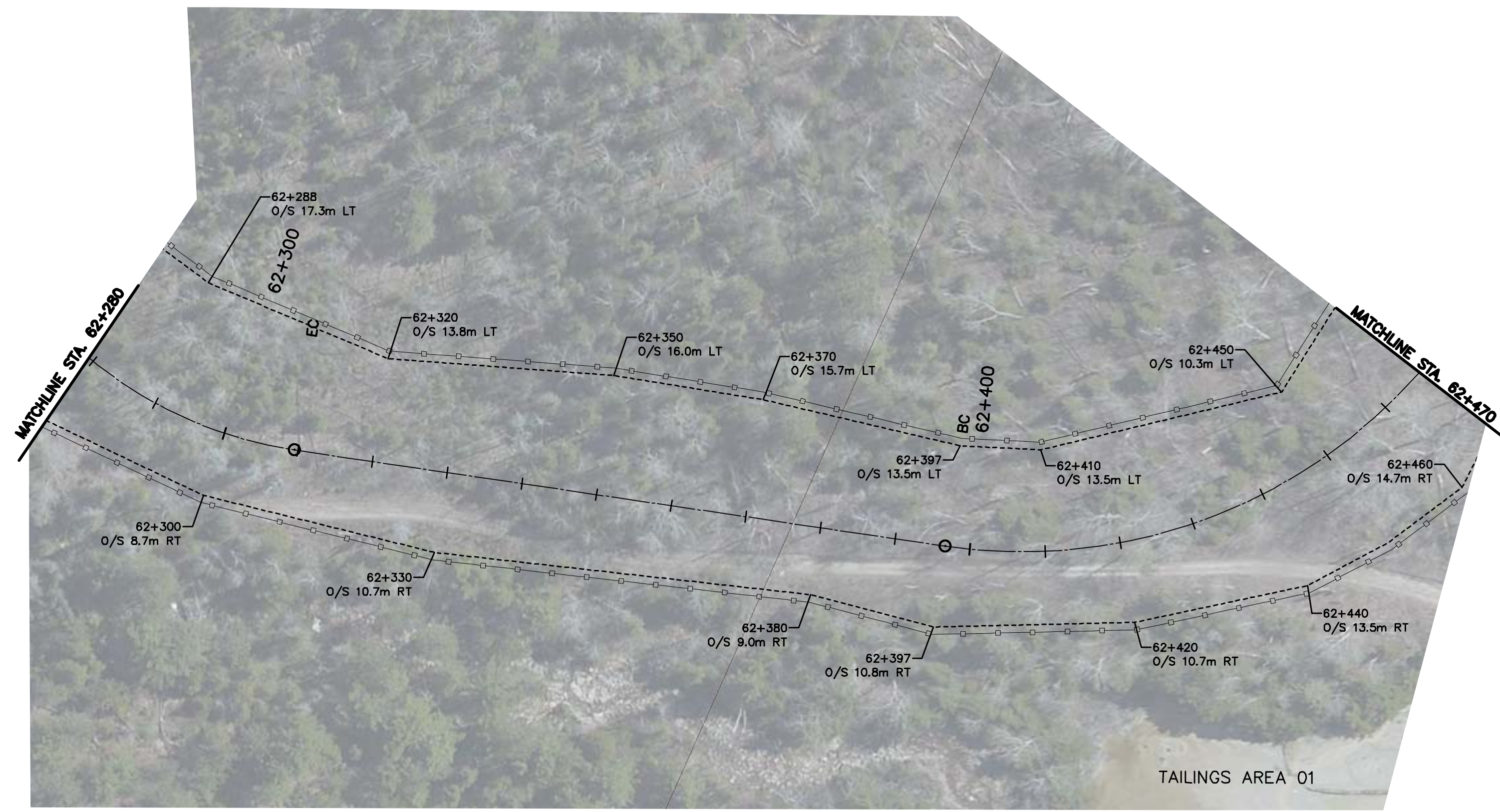
DATE:
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 CHECKED:
 ENGINEER:
 APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

REMOVALS & ESC
 SITE ACCESS ROAD
 STA. 61+520 TO STA. 62+280

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	062	



NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an A.C.S.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the full and sole responsibility of the user.

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

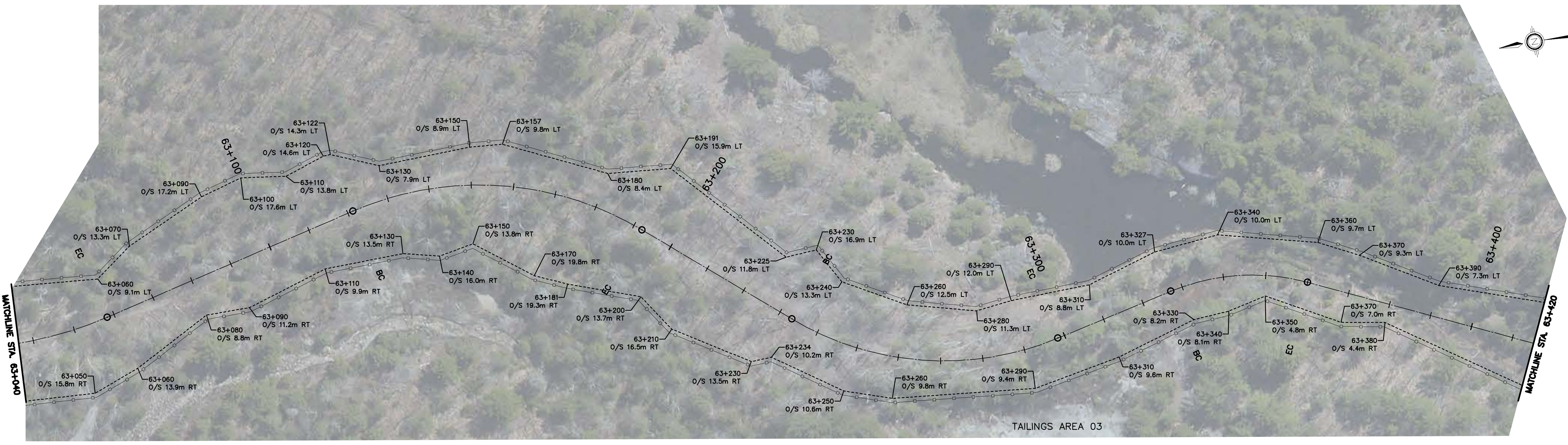
REMOVALS & ESC
SITE ACCESS ROAD
STA. 62+280 TO STA. 63+040

SCALE: HOR: 1:500 VERT: 1:100

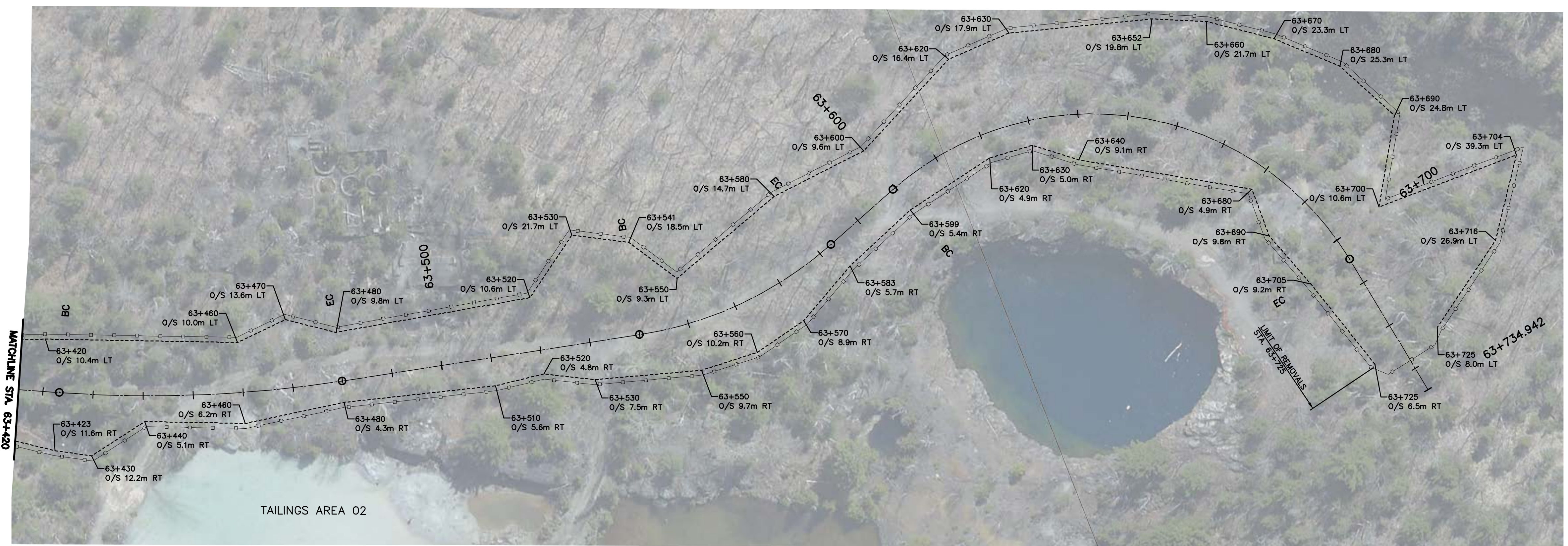
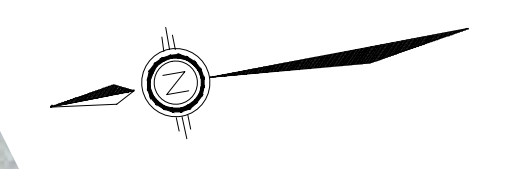
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CAD/FILE NUMBER: 20183

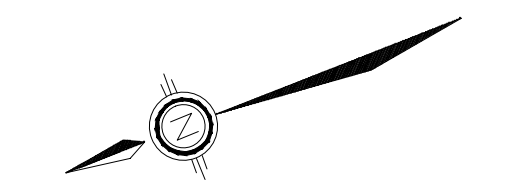
SHEET NO.: 063



TAILINGS AREA 03



TAILINGS AREA 02



REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



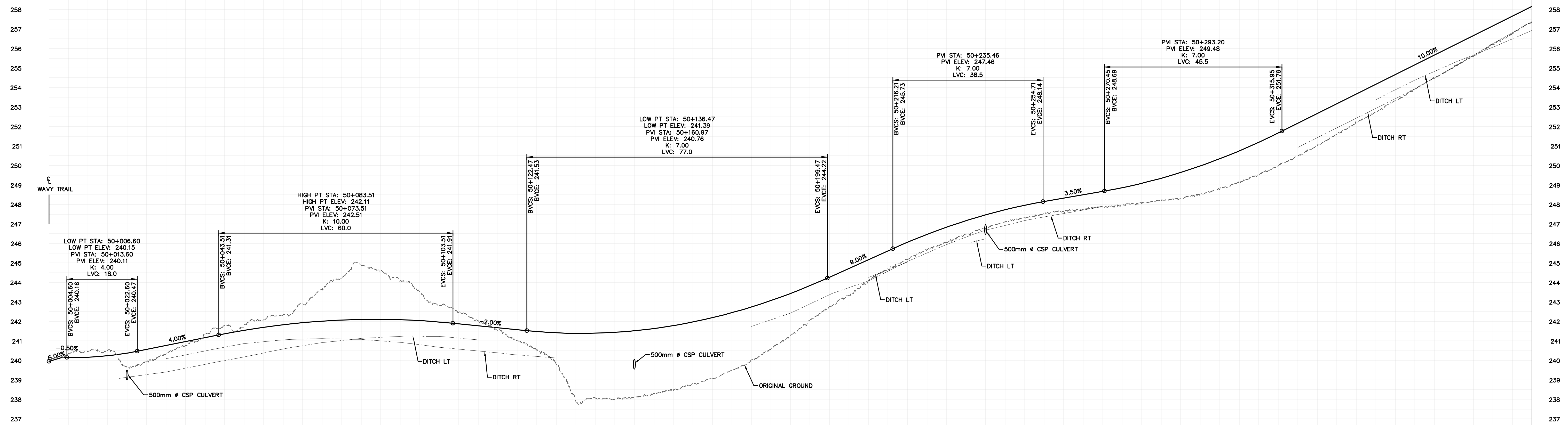
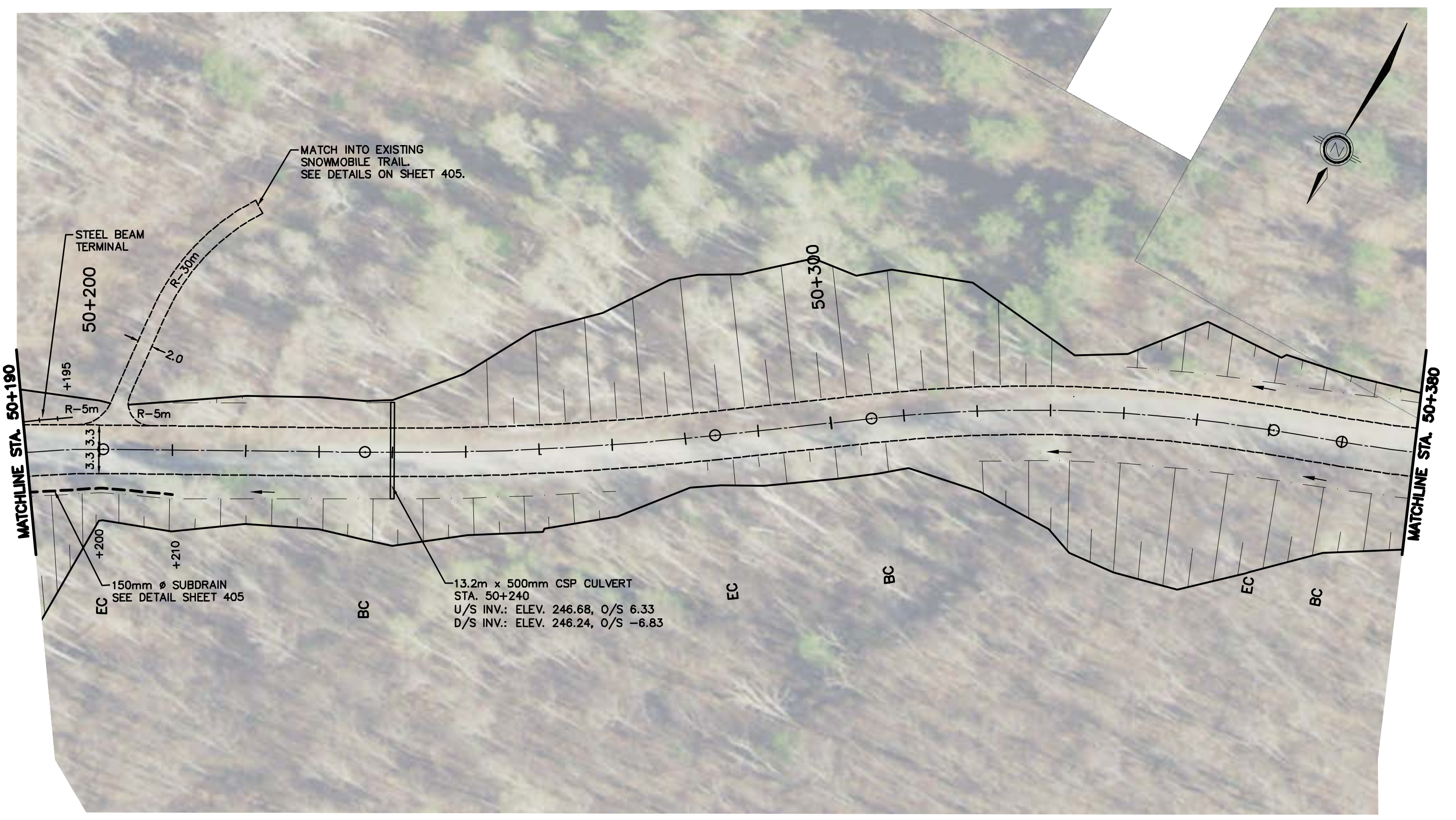
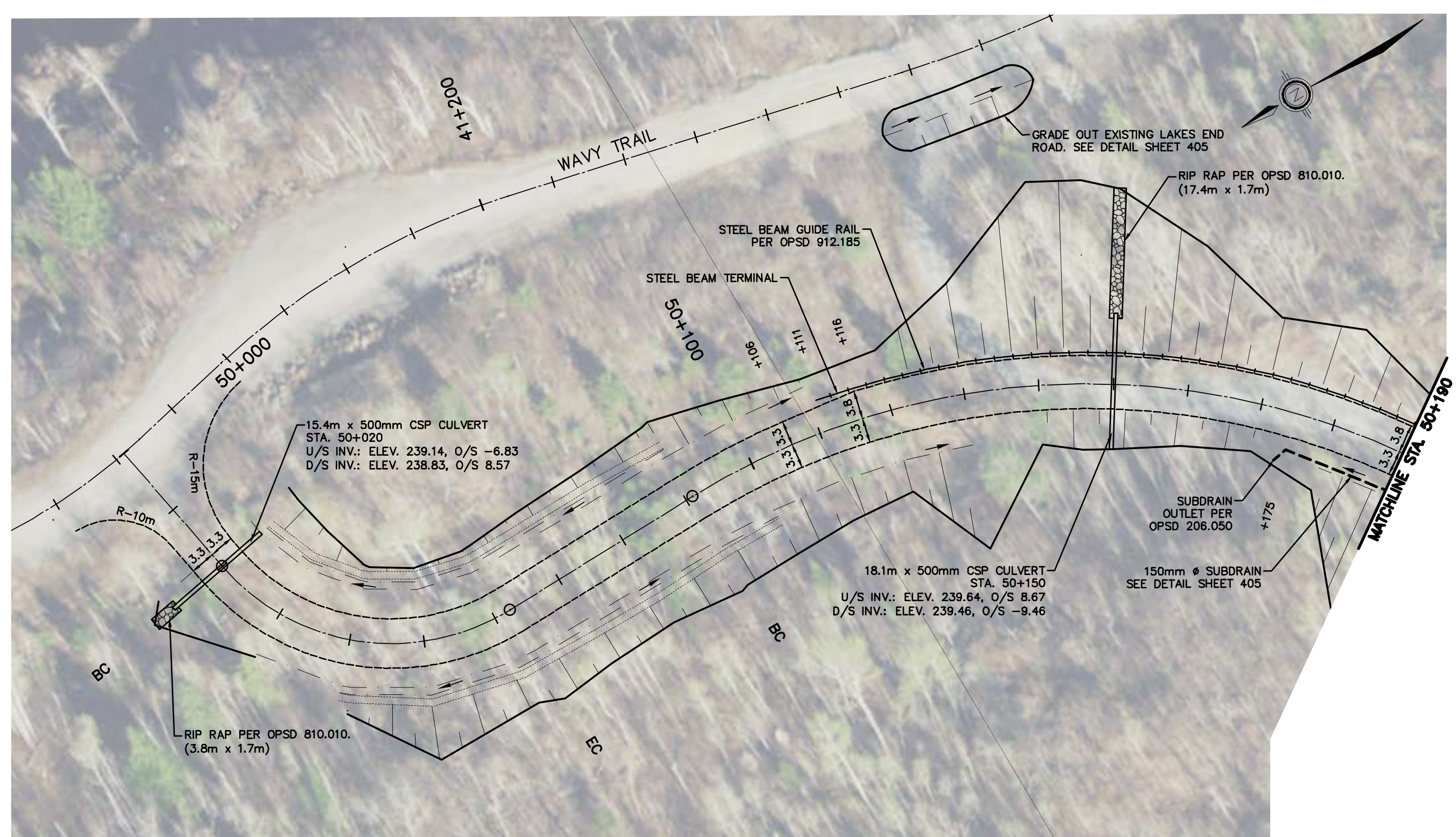
LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

REMOVALS & ESC
SITE ACCESS ROAD
STA. 63+040 TO STA. 63+725

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	064	

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by a surveyor.
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CHAINAGE/ PR. ELEV.	50+000 239.97	50+020 240.38	50+040 241.38	50+060 241.83	50+080 242.10	50+100 241.97	50+120 241.58	50+140 241.40	50+160 241.78	50+180 242.74	50+200 244.27	50+220 246.06	50+240 247.47	50+260 248.32	50+280 249.09	50+300 250.35	50+320 252.16	50+340 254.16	50+360 256.16	50+380 258.16
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REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



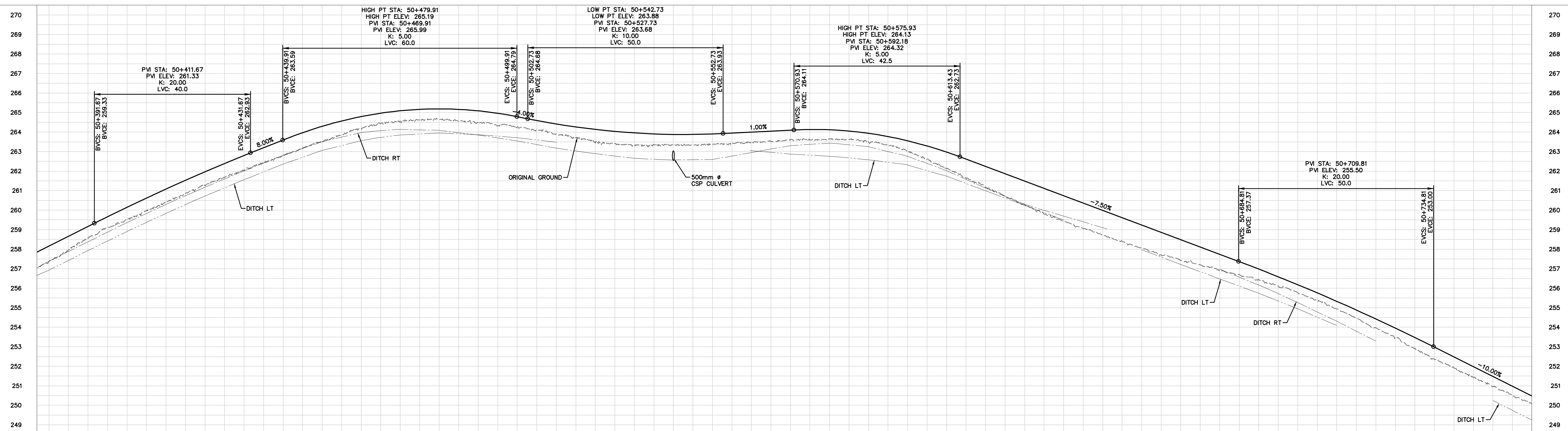
LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS
NEW CONSTRUCTION
LAKES END ROAD
STA. 50+000 TO STA. 50+380

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	100

NOTES: 1. All dimensions are in metres unless otherwise noted.

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CHAINAGE/PR. ELEV.	PR. ELEV.
50+380	258.16
50+400	260.15
50+420	261.96
50+440	263.60
50+460	264.79
50+480	265.19
50+500	264.79
50+520	264.14
50+540	263.88
50+560	264.00
50+580	264.12
50+600	263.56
50+620	262.24
50+640	260.74
50+660	259.24
50+680	257.74
50+700	256.19
50+720	254.43
50+740	252.48
50+760	250.00

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

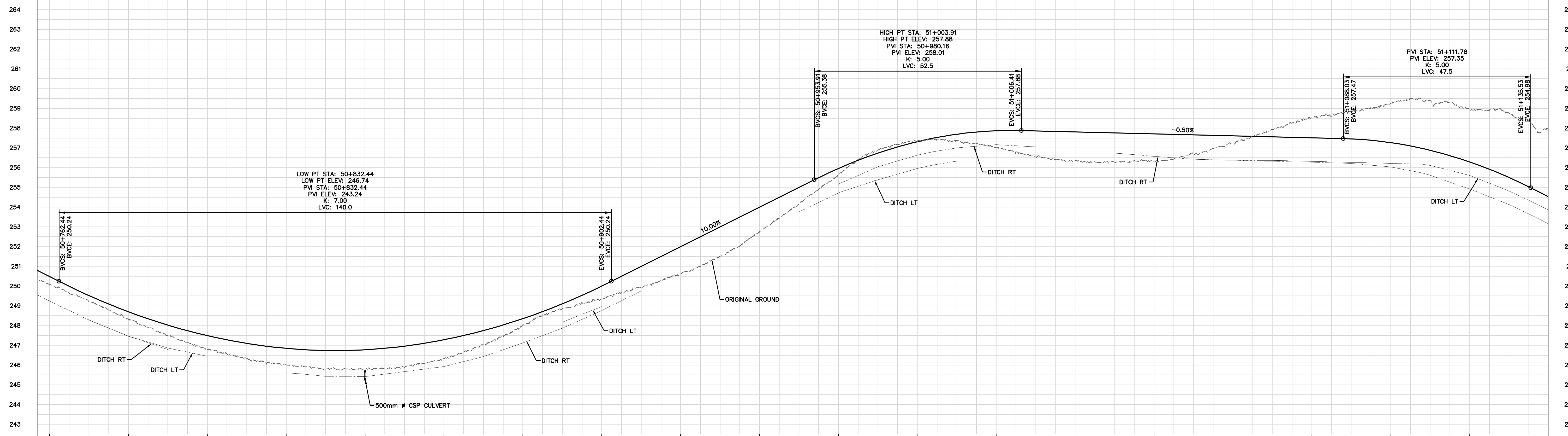
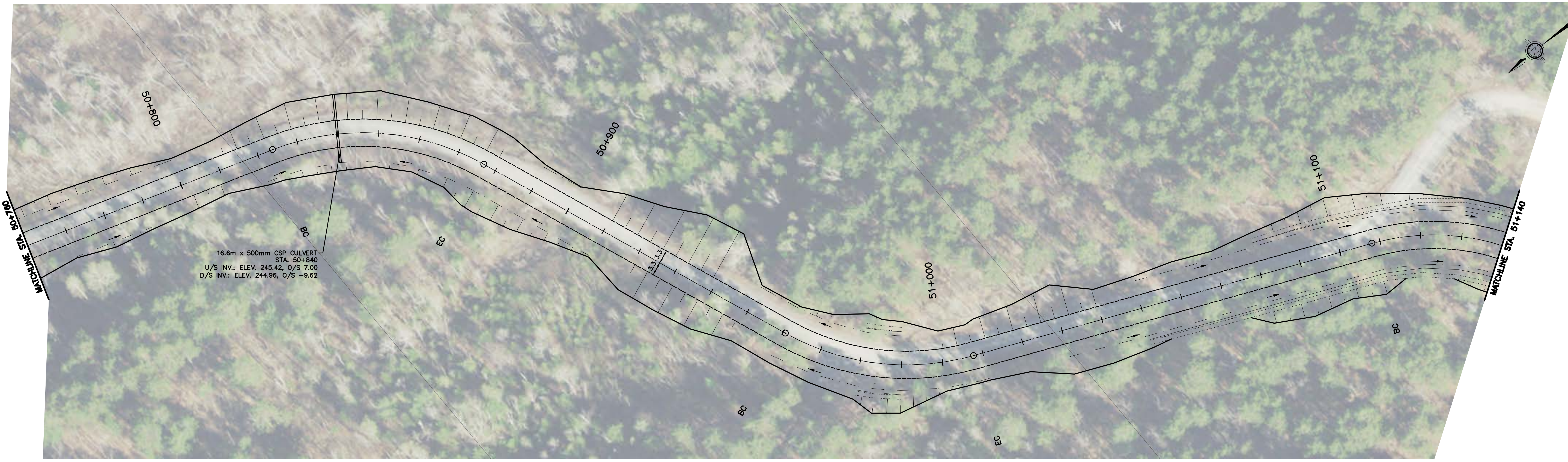
NEW CONSTRUCTION
LAKES END ROAD
STA. 50+380 TO STA. 50+760

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	101

NOTES: 1. All dimensions are in metres unless otherwise noted.

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DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE / PR. ELEV.	50+760 250.07	50+780 248.31	50+800 247.49	50+820 246.85	50+840 246.78	50+860 247.28	50+880 248.35	50+900 250.00	50+920 251.99	50+940 253.99	50+960 255.96	50+980 257.31	51+000 257.87	51+020 257.81	51+040 257.71	51+060 257.61	51+080 257.51	51+100 257.27	51+120 256.29	51+140 254.98
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REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

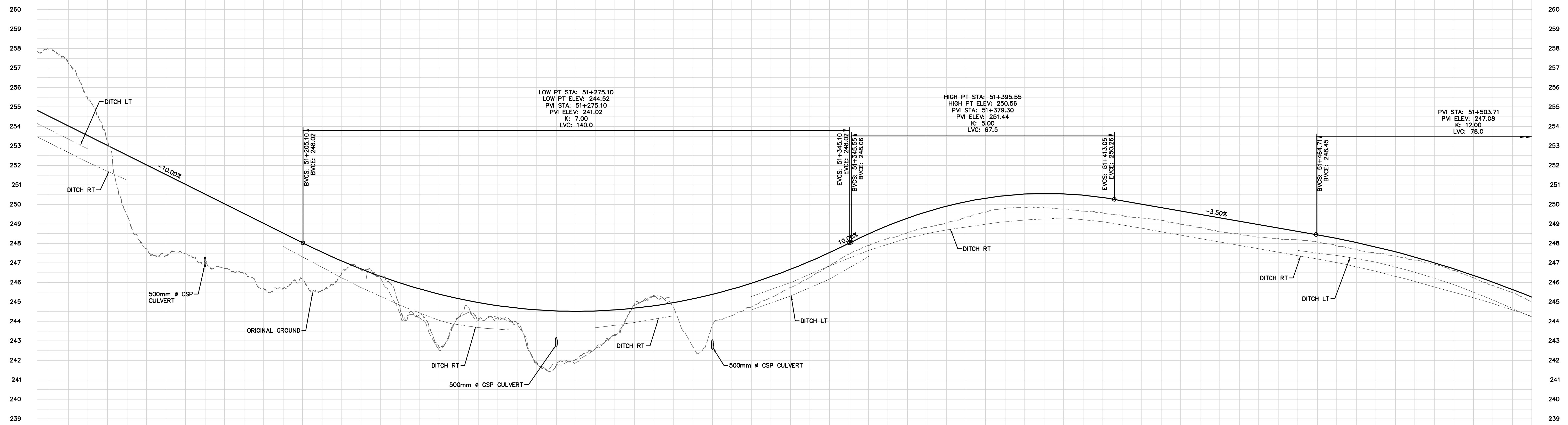
NEW CONSTRUCTION
LAKES END ROAD
STA. 50+760 TO STA. 51+140

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	102	

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an LDC.

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CHAINAGE/PR. ELEV.	51+140 254.53	51+160 252.53	51+180 250.53	51+200 248.53	51+220 246.69	51+240 245.40	51+260 244.68	51+280 244.54	51+300 244.96	51+320 245.96	51+340 247.53	51+360 249.30	51+380 250.32	51+400 250.54	51+420 250.01	51+440 249.31	51+460 248.61	51+480 247.82	51+500 246.69	51+520 246.62	CHAINAGE/PR. ELEV.
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REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

NEW CONSTRUCTION
LAKES END ROAD
STA. 51+140 TO STA. 51+520

SCALE: HOR: 1:500 VERT: 1:100

CONTRACT NO.:

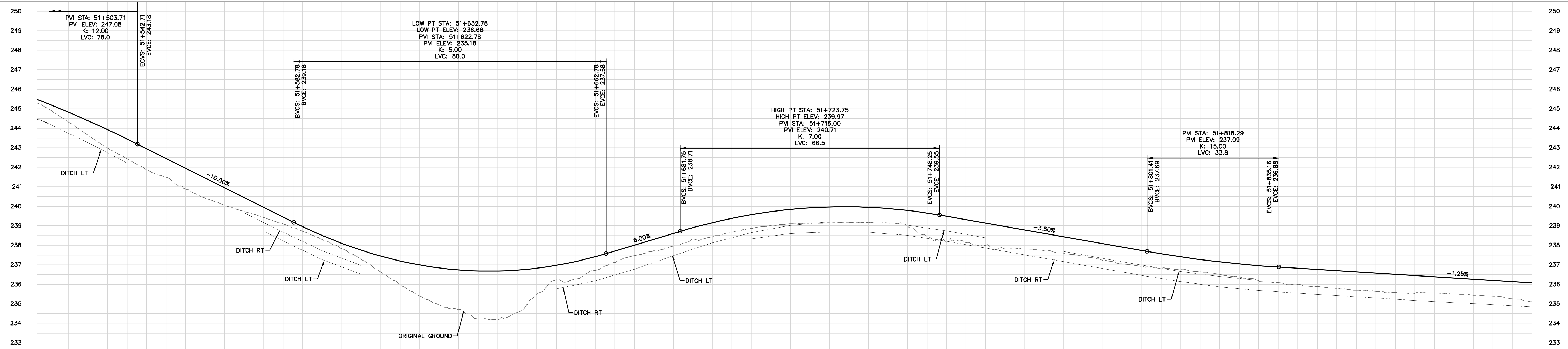
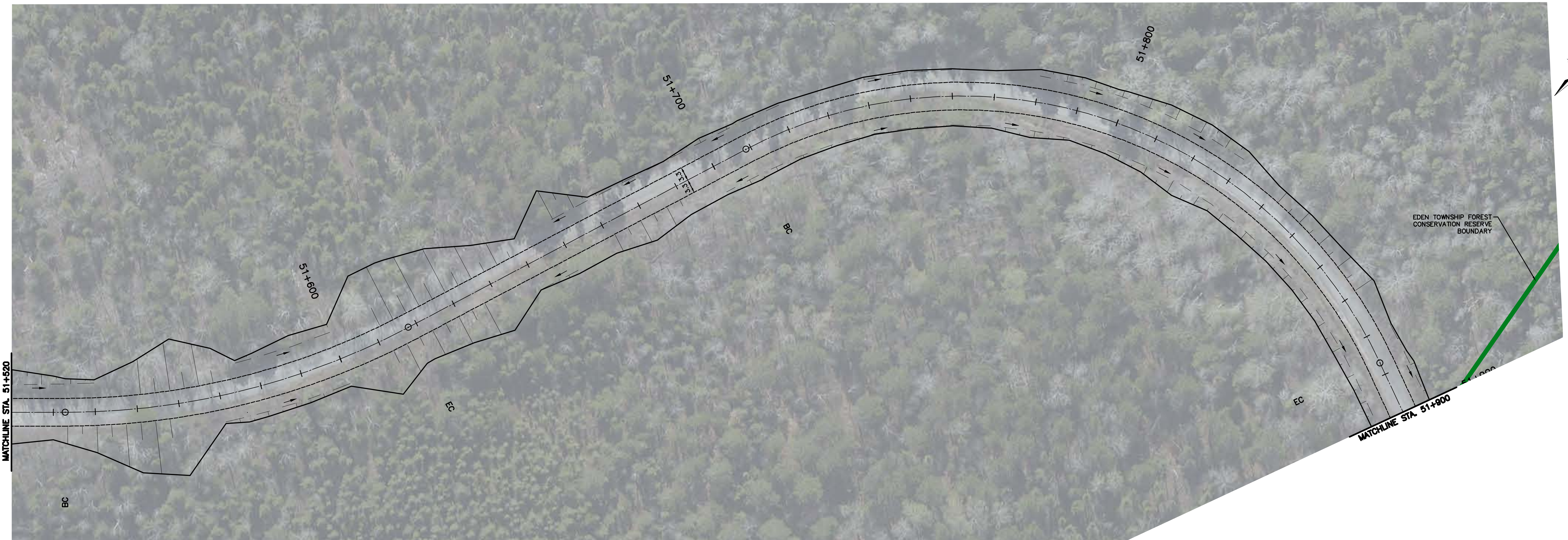
CAD/FILE NUMBER: 20183

SHEET NO.: 103

NOTES: 1. All dimensions are in metres unless otherwise noted.

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DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE/ PR. ELEV. EX. ELEV.	51+520 245.24 244.97	51+540 243.45 242.44	51+560 241.45 240.42	51+580 239.45 239.11	51+600 237.75 237.26	51+620 236.84 234.94	51+640 236.73 234.56	51+660 237.42 236.71	51+680 238.61 237.97	51+700 239.57 238.86	51+720 239.96 239.15	51+740 239.79 238.99	51+760 239.13 237.99	51+780 238.43 237.80	51+800 237.73 236.95	51+820 237.15 236.50	51+840 236.82 236.00	51+860 236.57 235.64	51+880 236.32 235.57	51+900 236.00 235.57	CHAINAGE/ PR. ELEV. EX. ELEV.
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REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

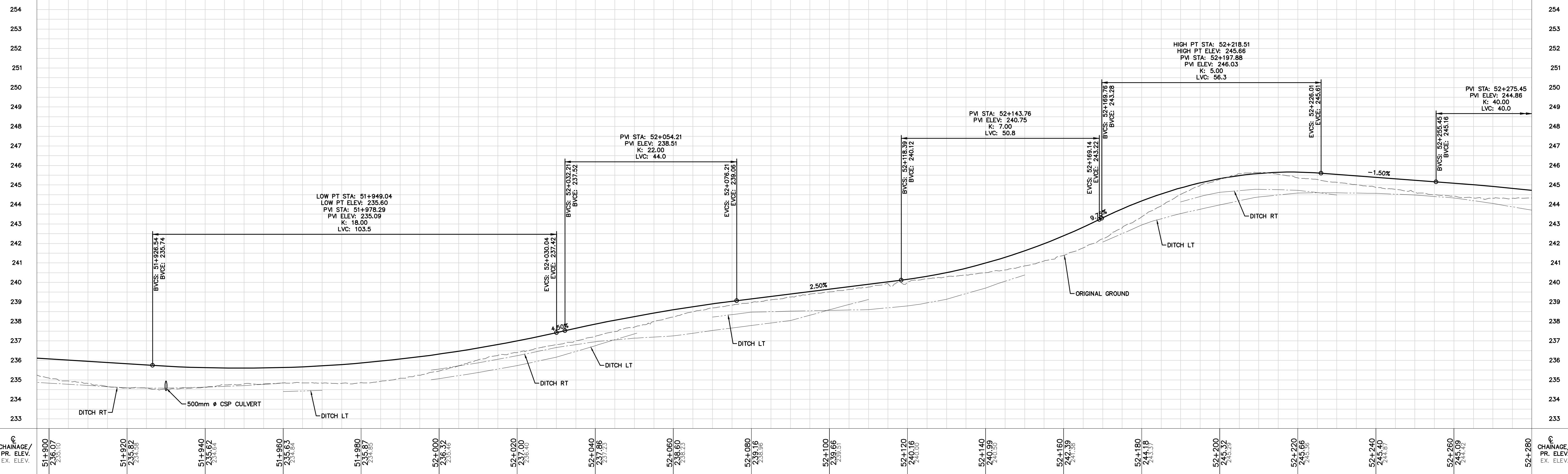
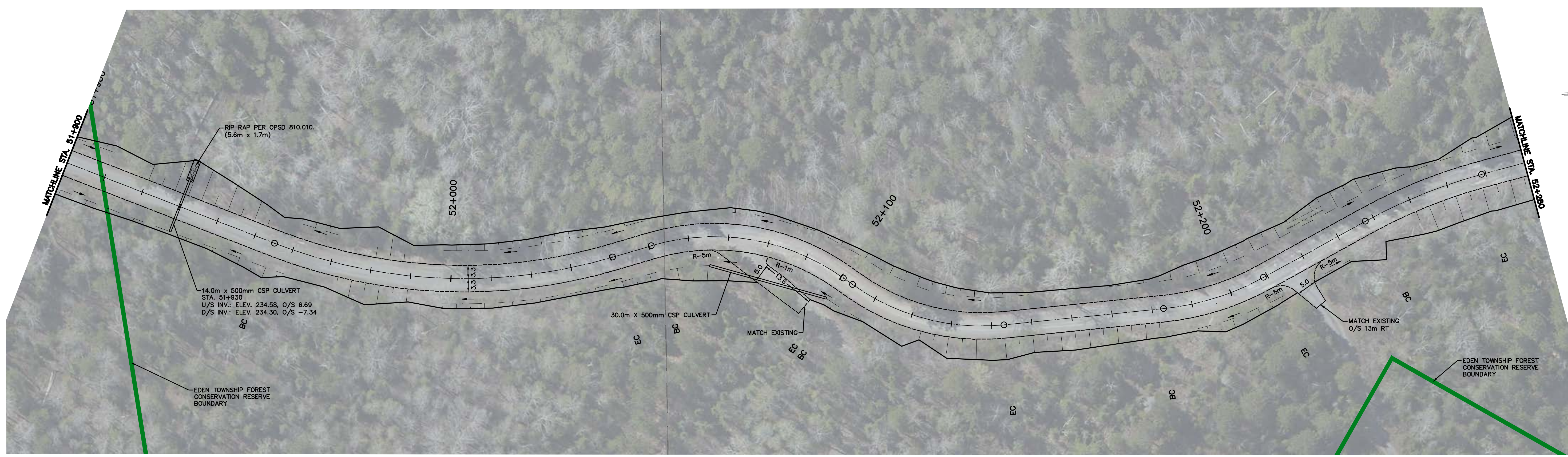
NEW CONSTRUCTION
LAKES END ROAD
STA. 51+520 TO STA. 51+900

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	104	

NOTES: 1. All dimensions are in metres unless otherwise noted.

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DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

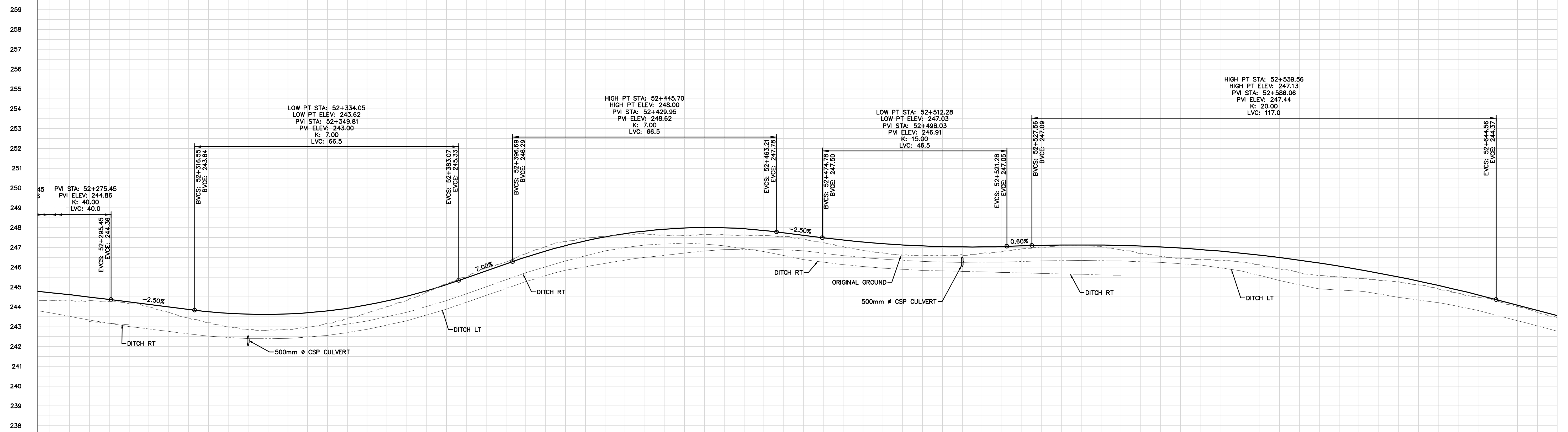
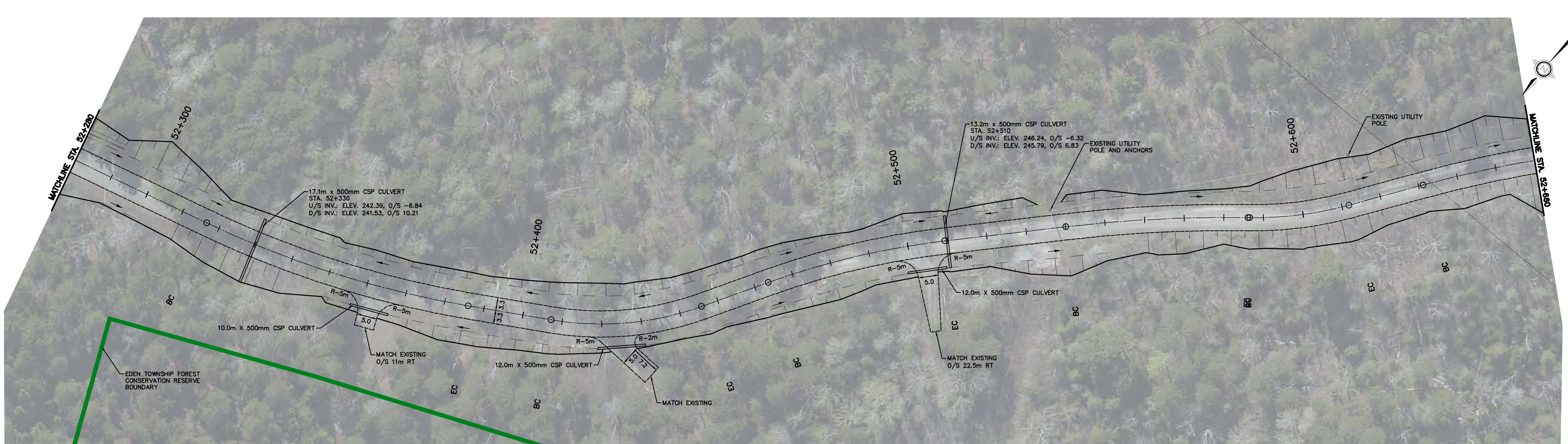
NEW CONSTRUCTION
LAKES END ROAD
STA. 51+900 TO STA. 52+280

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	105

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by a surveyor.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.
52+280	244.35	52+300	244.25	52+320	243.76	52+340	243.64	52+360	244.10	52+380	245.13	52+400	246.51	52+420	247.53
52+280	244.35	52+300	244.25	52+320	243.76	52+340	243.64	52+360	244.10	52+380	245.13	52+400	246.51	52+420	247.53
52+440	247.98	52+460	247.86	52+480	247.37	52+500	247.08	52+520	247.05	52+540	247.13	52+560	246.55	52+580	246.72
52+440	247.98	52+460	247.86	52+480	247.37	52+500	247.08	52+520	247.05	52+540	247.13	52+560	246.55	52+580	246.72
52+600	245.59	52+620	245.27	52+640	244.61	52+660	244.46								
52+600	245.59	52+620	245.27	52+640	244.61	52+660	244.46								

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

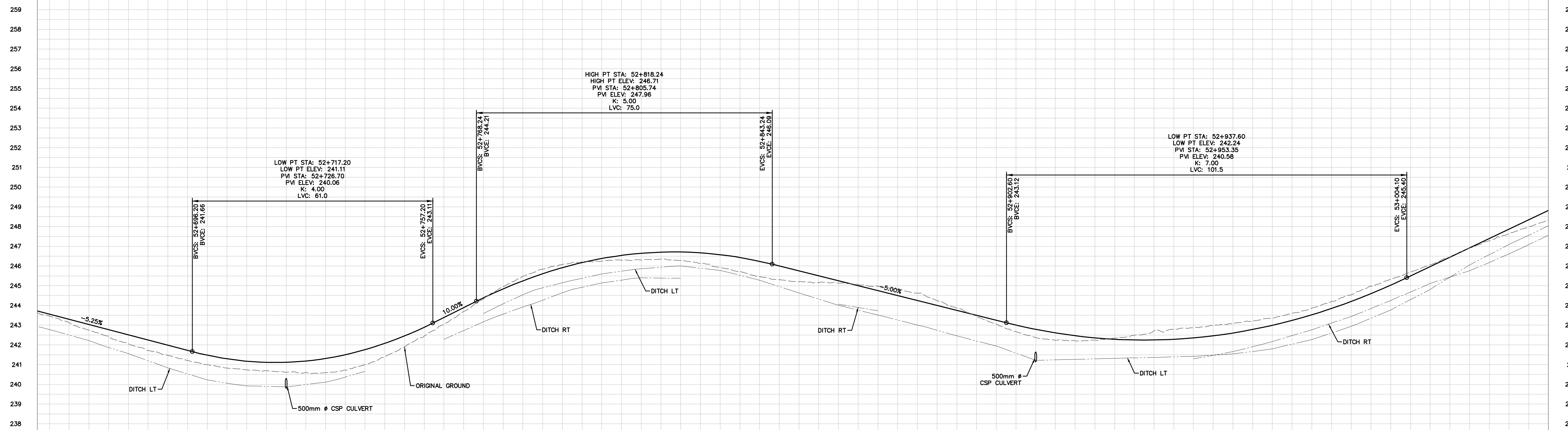
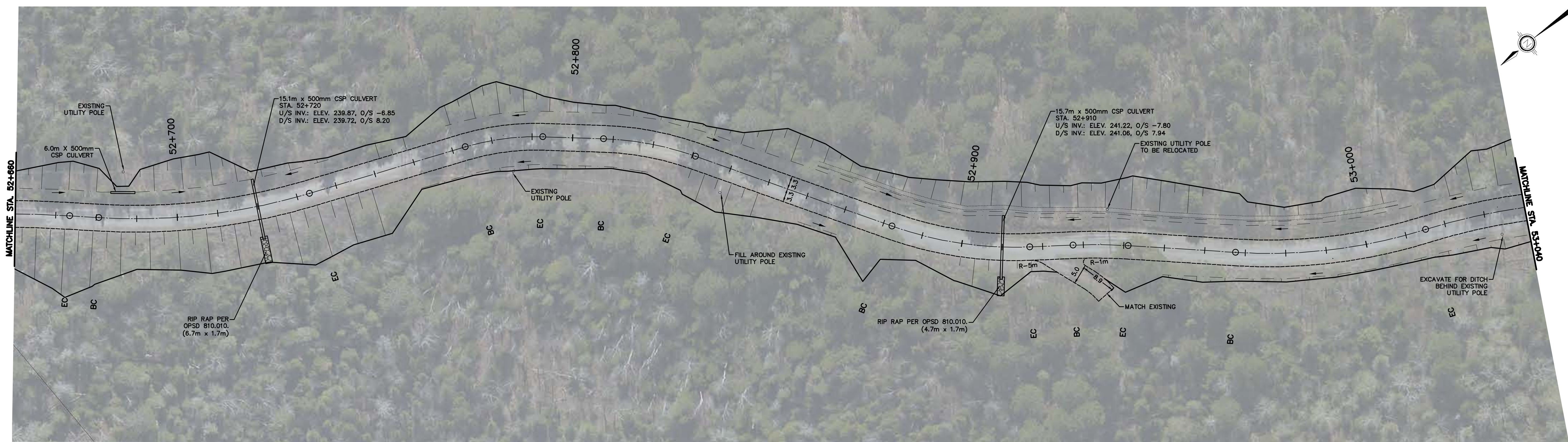
NEW CONSTRUCTION
LAKES END ROAD
STA. 52+280 TO STA. 52+660

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	106	

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an LDC.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE/PR. ELEV.	52+660 243.56	52+680 242.51	52+700 241.48	52+720 240.52	52+740 241.01	52+760 243.39	52+780 245.25	52+800 246.38	52+820 246.71	52+840 246.24	52+860 245.25	52+880 244.65	52+900 243.25	52+920 242.47	52+940 242.75	52+960 242.08	52+980 243.53	53+000 245.03	53+020 246.91	53+040 248.51
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REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



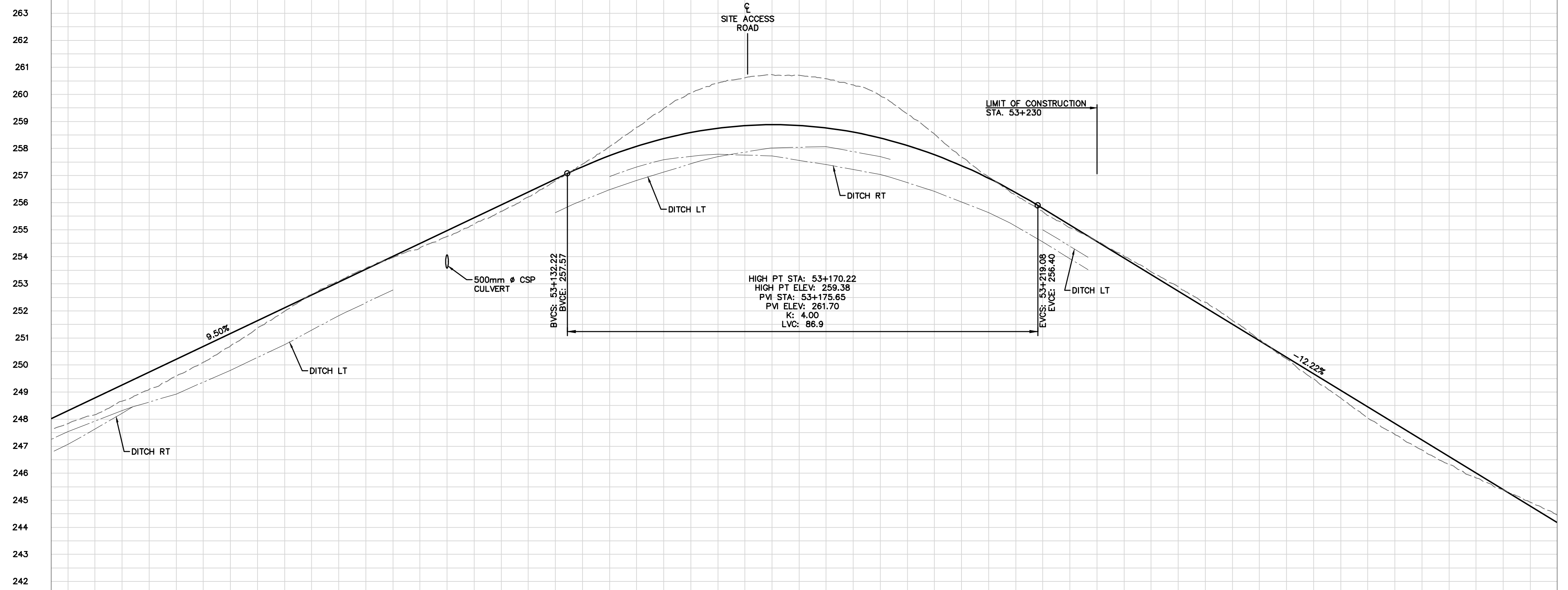
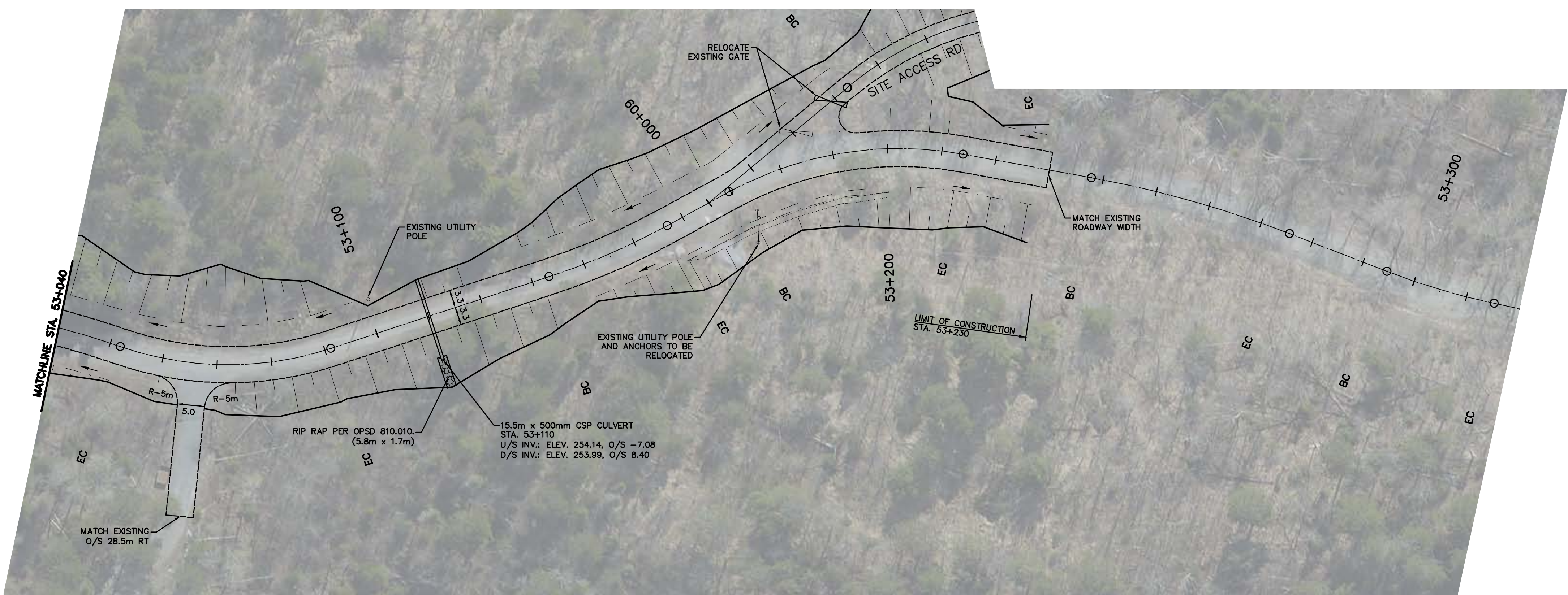
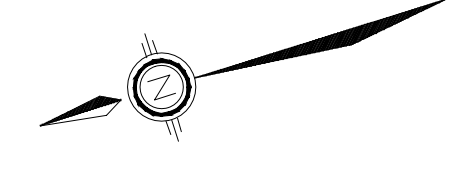
DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

NEW CONSTRUCTION
LAKES END ROAD
STA. 52+660 TO STA. 53+040

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	107	



CHAINAGE / PR. ELEV.	PR. ELEV.
53+040	248.81
53+060	250.09
53+080	252.61
53+100	254.51
53+120	256.41
53+140	258.24
53+160	259.25
53+180	259.26
53+200	258.04
53+220	256.17
53+240	253.84
53+260	251.45
53+280	248.95
53+300	246.33

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DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

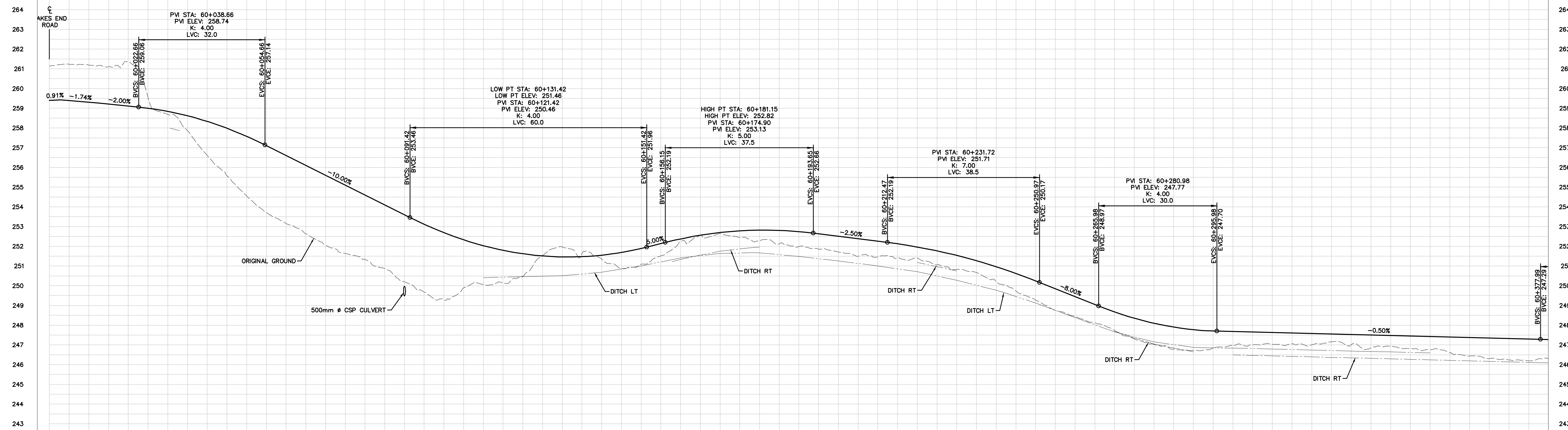
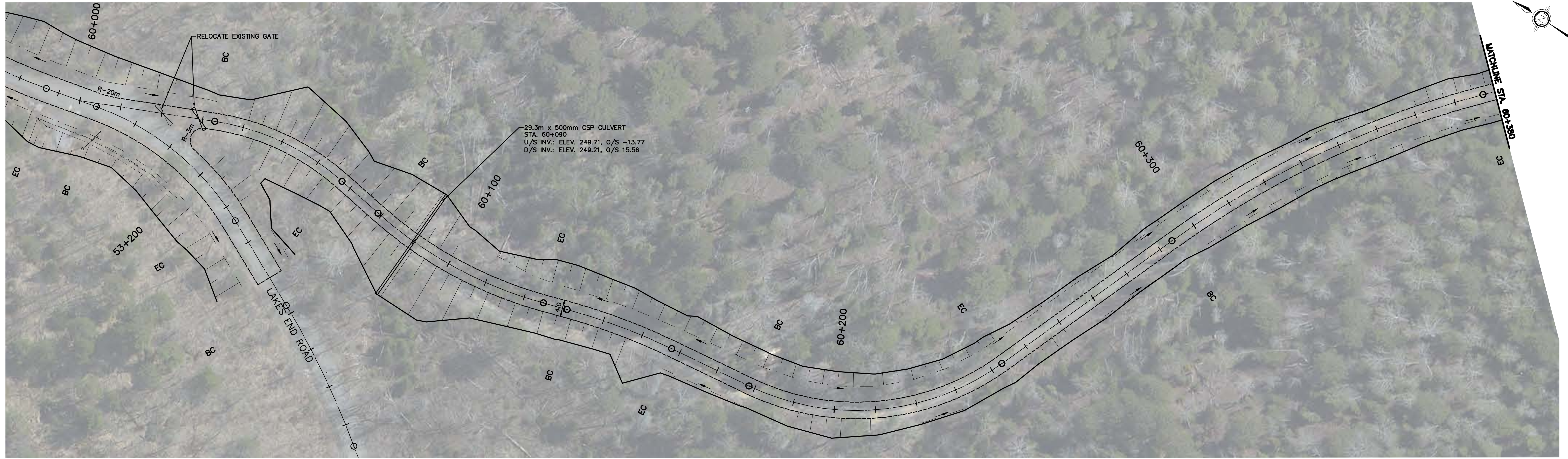
NEW CONSTRUCTION
LAKES END ROAD
STA. 53+040 TO STA. 53+344

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	108	

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CHAINAGE/PR. ELEV.	PR. ELEV.
60+000	259.40
60+020	259.11
60+040	258.33
60+060	256.60
60+080	254.60
60+100	252.69
60+120	251.62
60+140	251.55
60+160	252.37
60+180	252.82
60+200	252.50
60+220	251.96
60+240	250.96
60+260	249.45
60+280	248.10
60+300	247.68
60+320	247.58
60+340	247.48
60+360	247.38
60+380	247.25

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

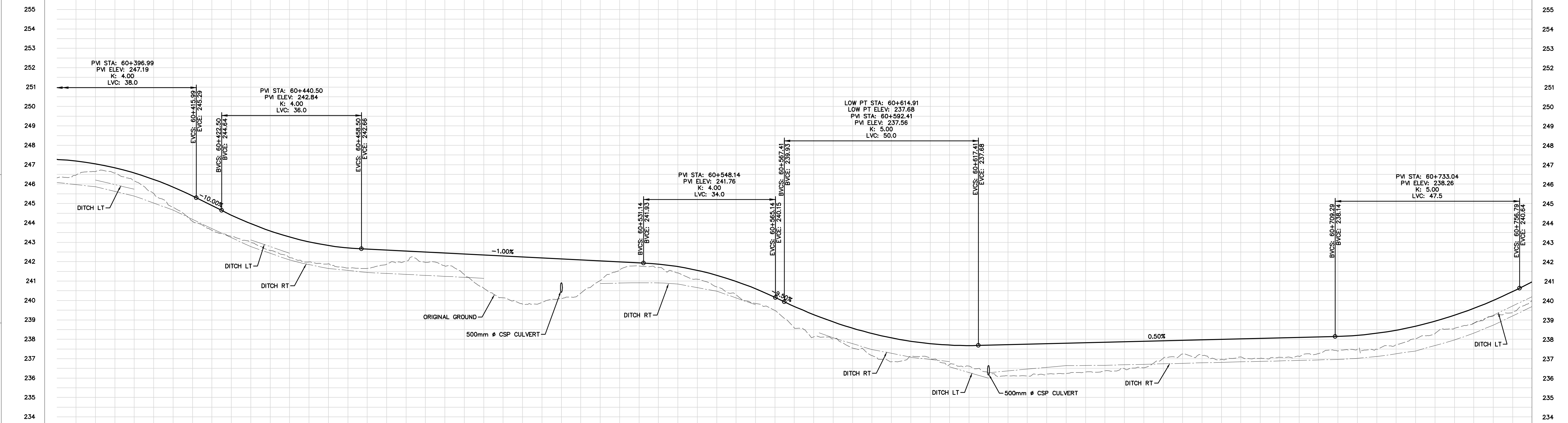
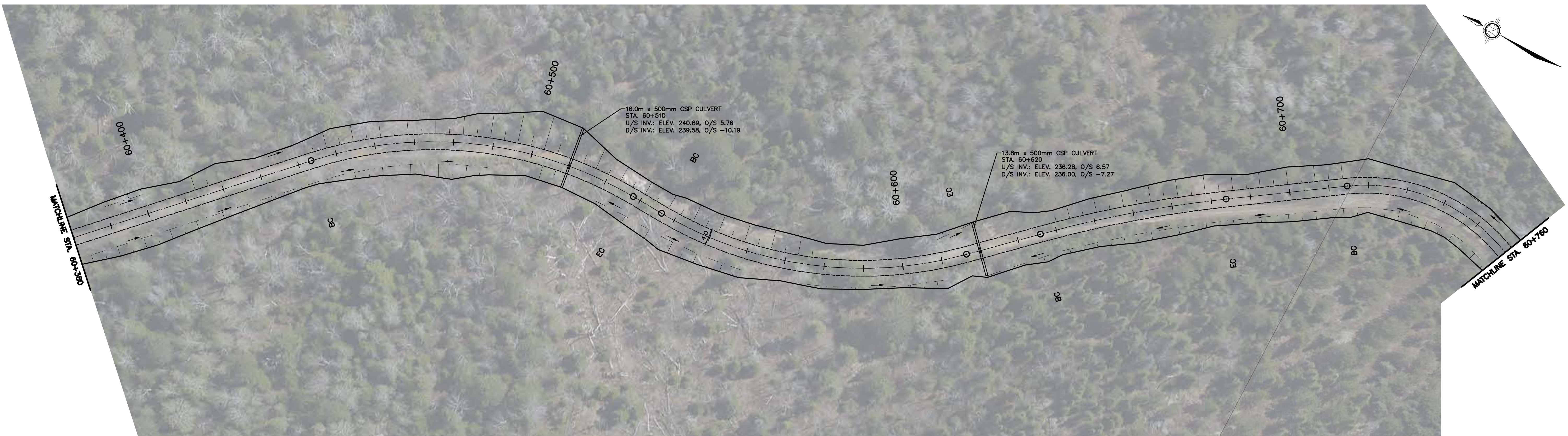
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 60+000 TO STA. 60+380

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	200

NOTES: 1. All dimensions are in metres unless otherwise noted.

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CHAINAGE/PR. ELEV.	60+380	60+400	60+420	60+440	60+460	60+480	60+500	60+520	60+540	60+560	60+580	60+600	60+620	60+640	60+660	60+680	60+700	60+720	60+740	60+760	CHAINAGE/PR. ELEV.
TR. ELEV.	247.27	246.57	244.89	243.27	242.65	242.45	242.25	242.05	241.75	240.60	238.90	237.90	237.70	237.60	237.90	238.00	239.10	238.31	239.24	238.57	238.57

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

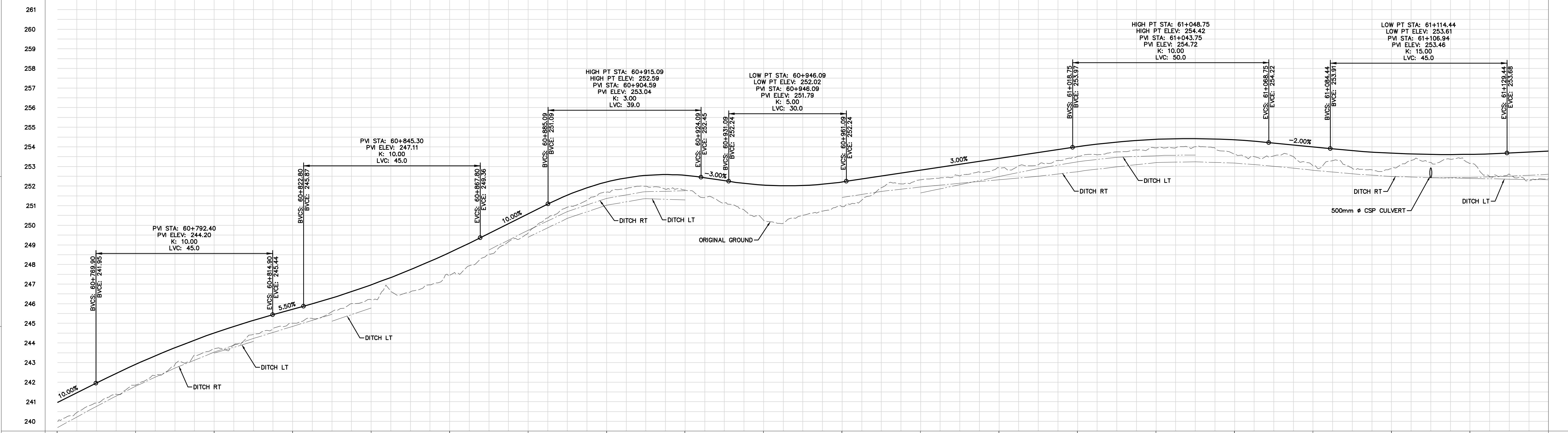
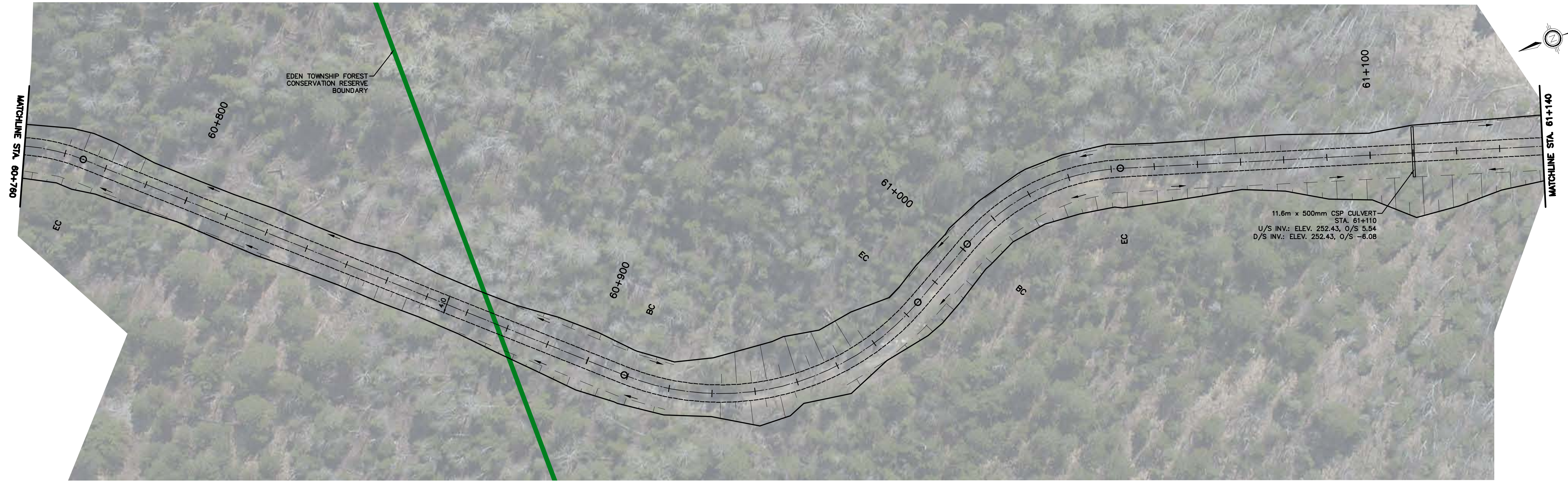
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 60+380 TO STA. 60+760

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	201	

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by a L.S.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE/PR. ELEV.	PR. ELEV.
60+760	240.96
60+780	242.91
60+800	244.50
60+820	245.72
60+840	246.96
60+860	248.61
60+880	250.58
60+900	252.21
60+920	252.55
60+940	252.05
60+960	252.21
60+980	252.81
61+000	253.41
61+020	254.01
61+040	254.38
61+060	254.36
61+080	254.00
61+100	253.68
61+120	253.62
61+140	253.15

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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DATE:
DRAWN:
DESIGNED:
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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

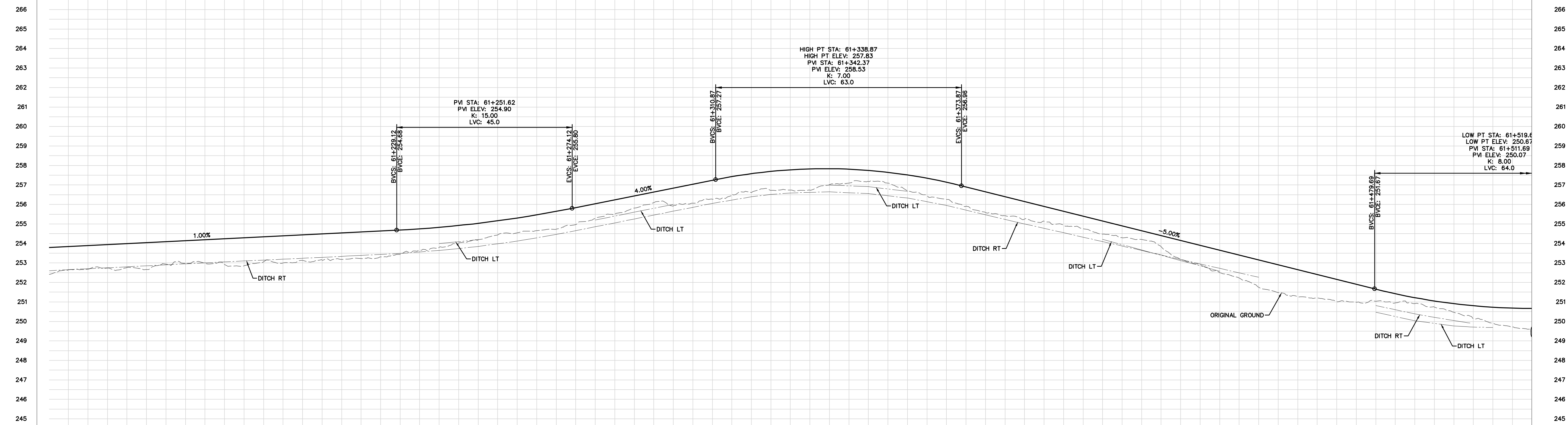
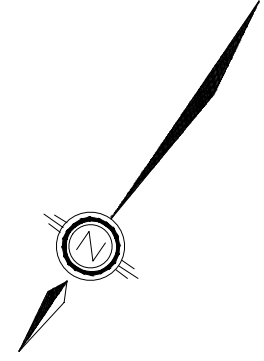
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 60+760 TO STA. 61+140

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	202

NOTES: 1. All dimensions are in metres unless otherwise noted.

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CHAINAGE/PR. ELEV.	PR. ELEV.
61+140	253.79
61+160	253.99
61+180	254.19
61+200	254.39
61+220	254.59
61+240	254.83
61+260	255.31
61+280	256.04
61+300	256.84
61+320	257.58
61+340	257.83
61+360	257.51
61+380	256.65
61+400	255.65
61+420	254.65
61+440	253.65
61+460	252.65
61+480	251.65
61+500	250.91
61+520	250.16

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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NOT FOR CONSTRUCTION



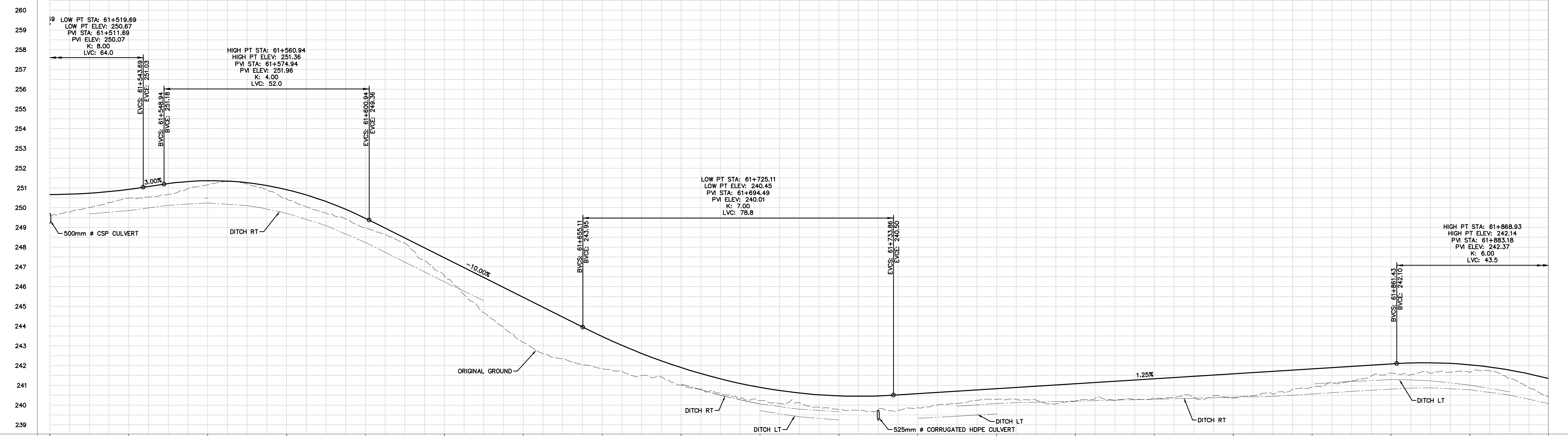
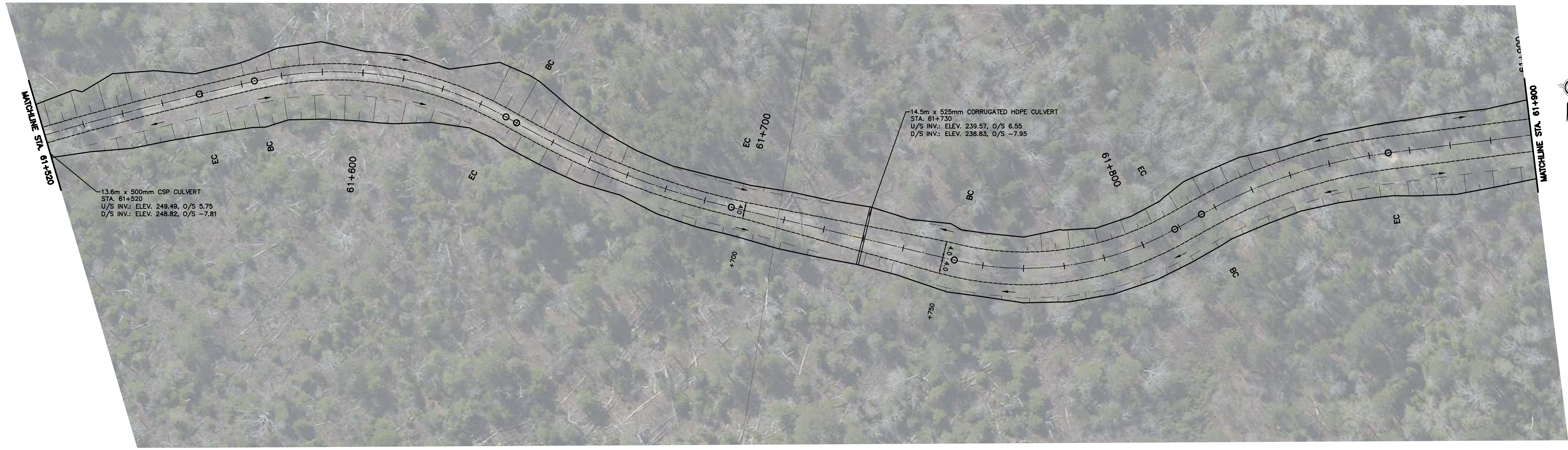
DATE:
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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 61+140 TO STA. 61+520

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	203



CHAINAGE/PR. ELEV.	PR. ELEV.	CHAINAGE/PR. ELEV.	PR. ELEV.
61+520 249.67	249.67	61+580 250.91	250.91
61+540 250.93	250.93	61+600 249.46	249.46
61+560 251.36	251.36	61+620 247.46	247.46
61+640 245.46	245.46	61+660 243.48	243.48
61+680 241.90	241.90	61+700 240.90	240.90
61+720 240.47	240.47	61+740 240.58	240.58
61+760 240.83	240.83	61+780 241.08	241.08
61+800 241.33	241.33	61+820 241.58	241.58
61+840 241.83	241.83	61+860 242.08	242.08
61+880 242.04	242.04	61+900 241.67	241.67

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

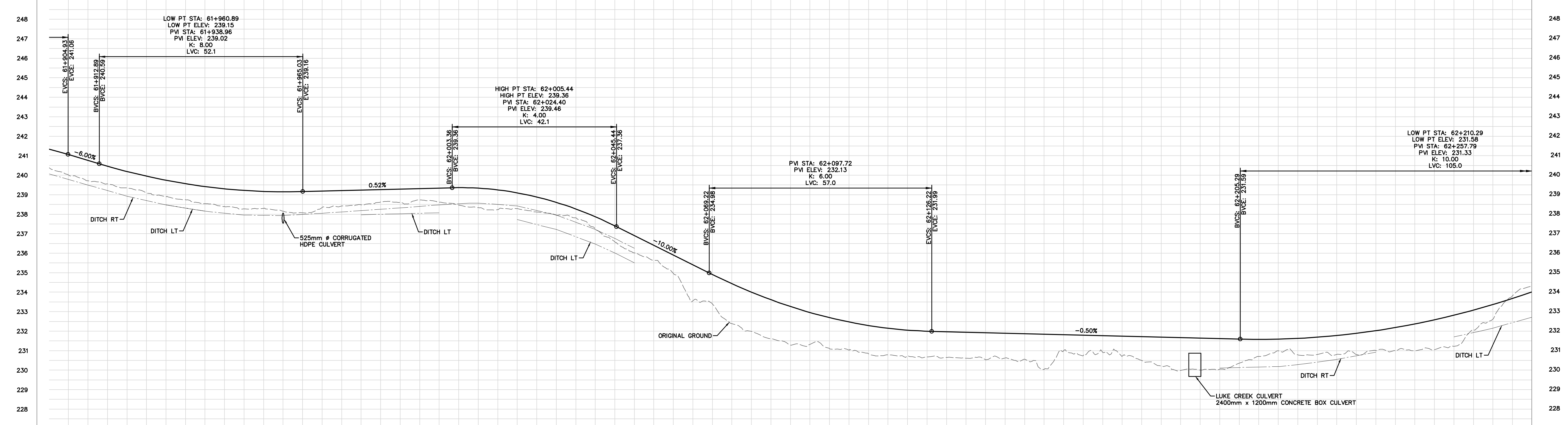
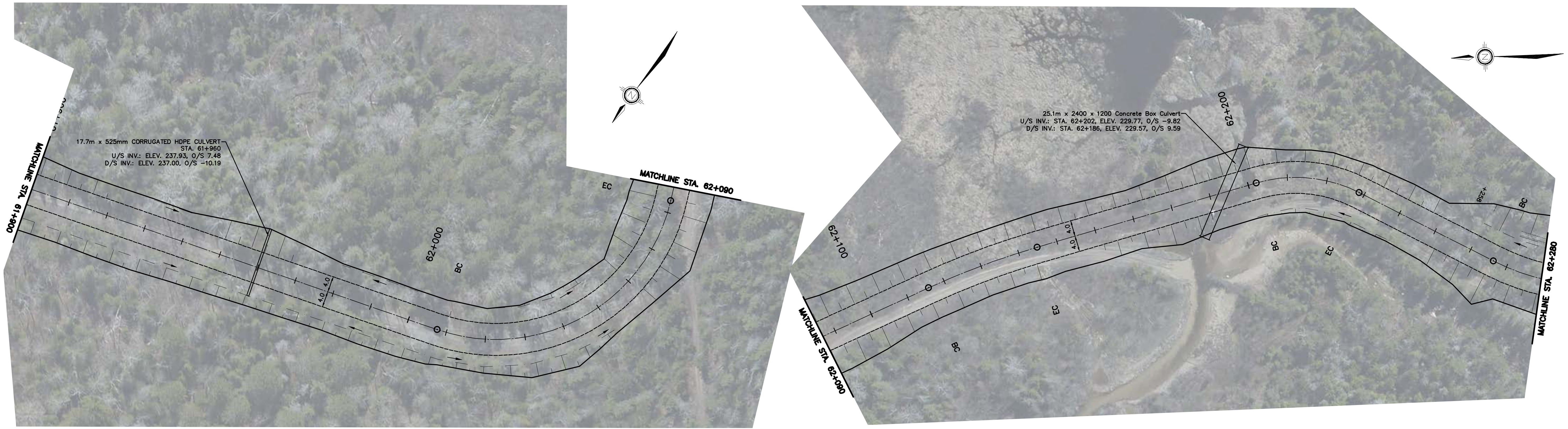
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 61+520 TO STA. 61+900

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	204

NOTES: 1. All dimensions are in metres unless otherwise noted.

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CHAINAGE/PR. ELEV.	PR. ELEV.
61+900	240.39
61+920	239.35
61+940	238.54
61+960	238.15
61+980	238.48
62+000	238.62
62+020	238.29
62+040	237.87
62+060	235.90
62+080	234.00
62+100	232.69
62+120	232.05
62+140	231.92
62+160	231.82
62+180	231.72
62+200	231.62
62+220	231.63
62+240	232.02
62+260	232.82
62+280	231.00

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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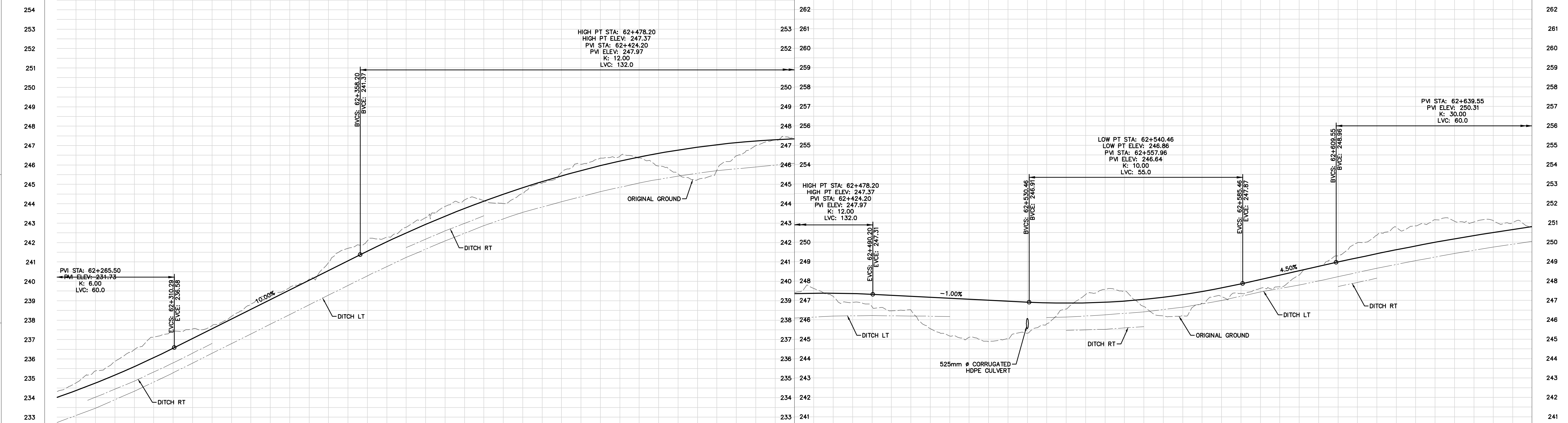
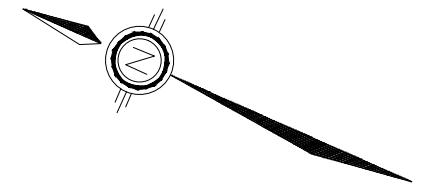
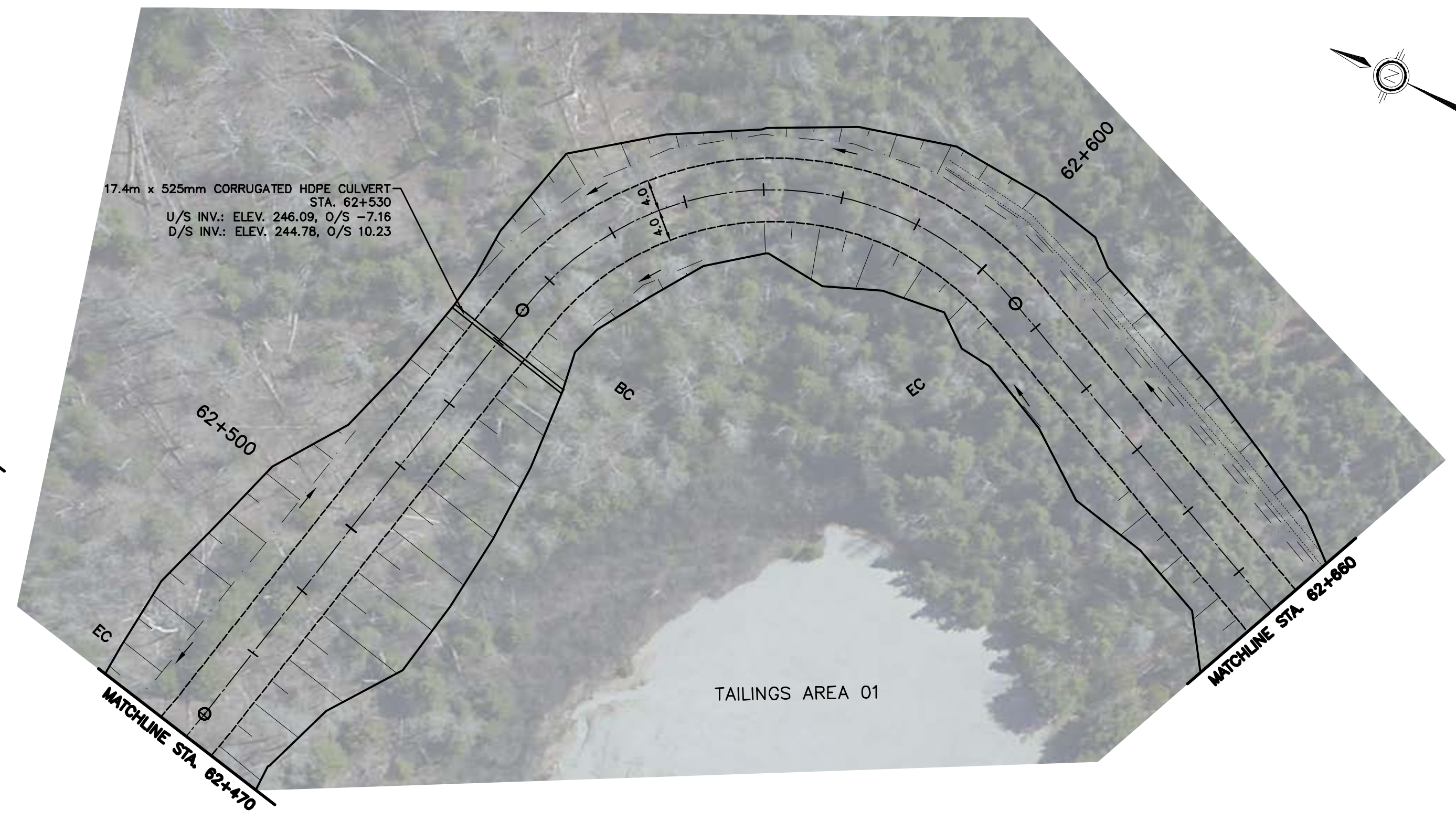
LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 61+900 TO STA. 62+280

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	205

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CHAINAGE/ PR. ELEV.	62+280 234.01	62+300 235.61	62+320 237.55	62+340 239.55	62+360 241.55	62+380 243.35	62+400 244.82	62+420 245.96	62+440 246.76	62+460 247.23	62+480 247.37	62+500 247.21	62+520 247.01	62+540 246.86	62+560 247.05	62+580 247.64	62+600 248.53	62+620 249.41	62+640 250.17	62+660 250.97
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REVISIONS		
DATE	DETAILS	BY
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LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

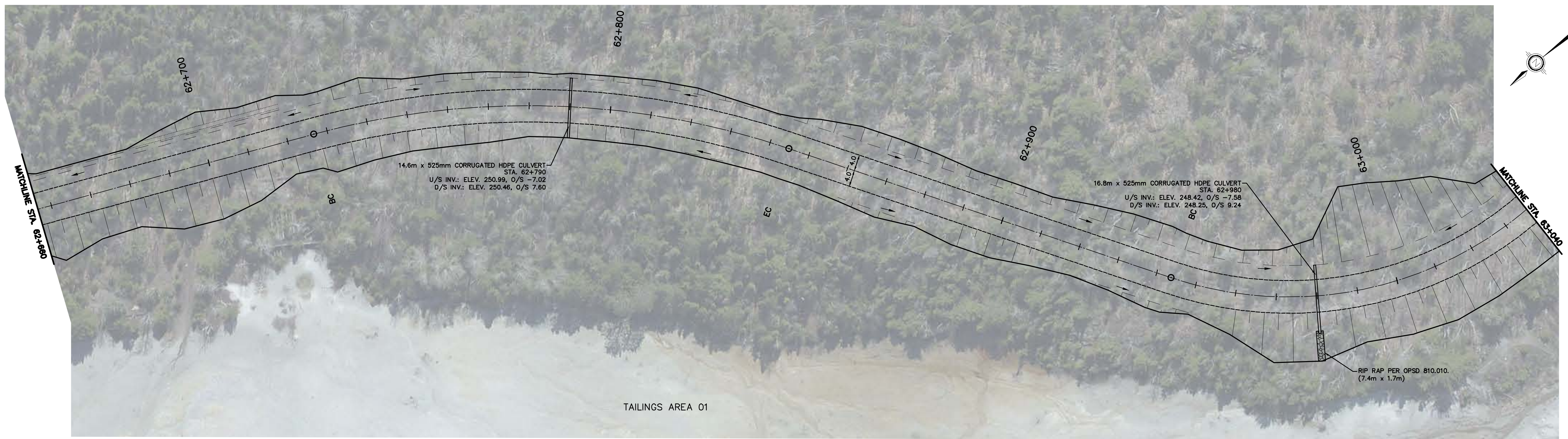
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 62+280 TO STA. 62+660

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	206	

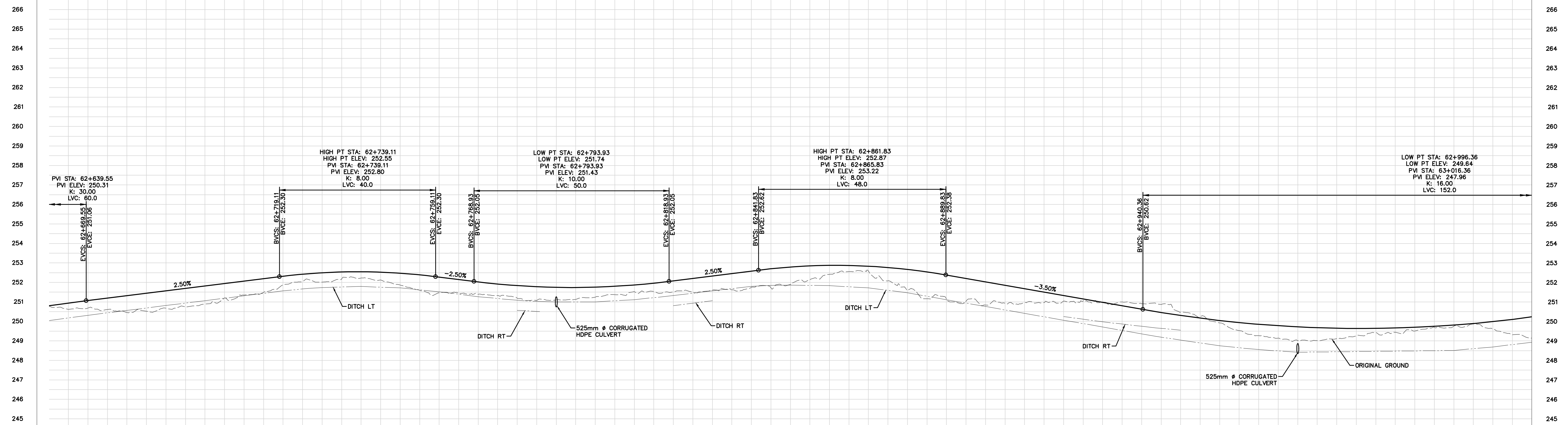
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TAILINGS AREA 01



CHAINAGE/PR. ELEV.	PR. ELEV.
62+660	250.80
62+680	251.32
62+700	251.82
62+720	252.32
62+740	252.82
62+760	253.32
62+780	253.82
62+800	254.32
62+820	254.82
62+840	255.32
62+860	255.82
62+880	256.32
62+900	256.82
62+920	257.32
62+940	257.82
62+960	258.32
62+980	258.82
63+000	259.32
63+020	259.82
63+040	260.32

REVISIONS		
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LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

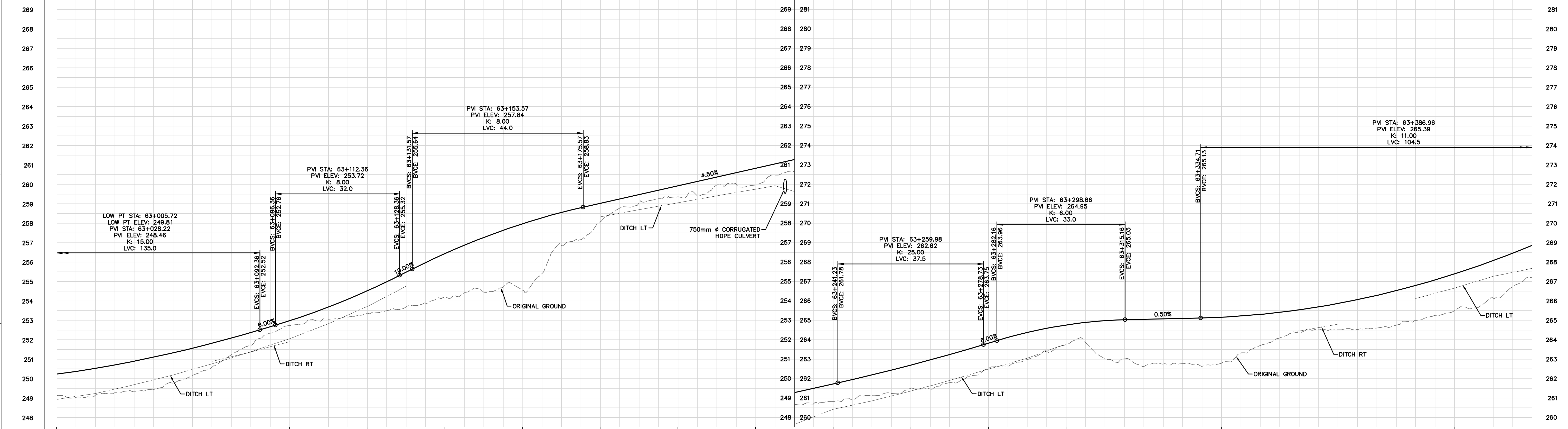
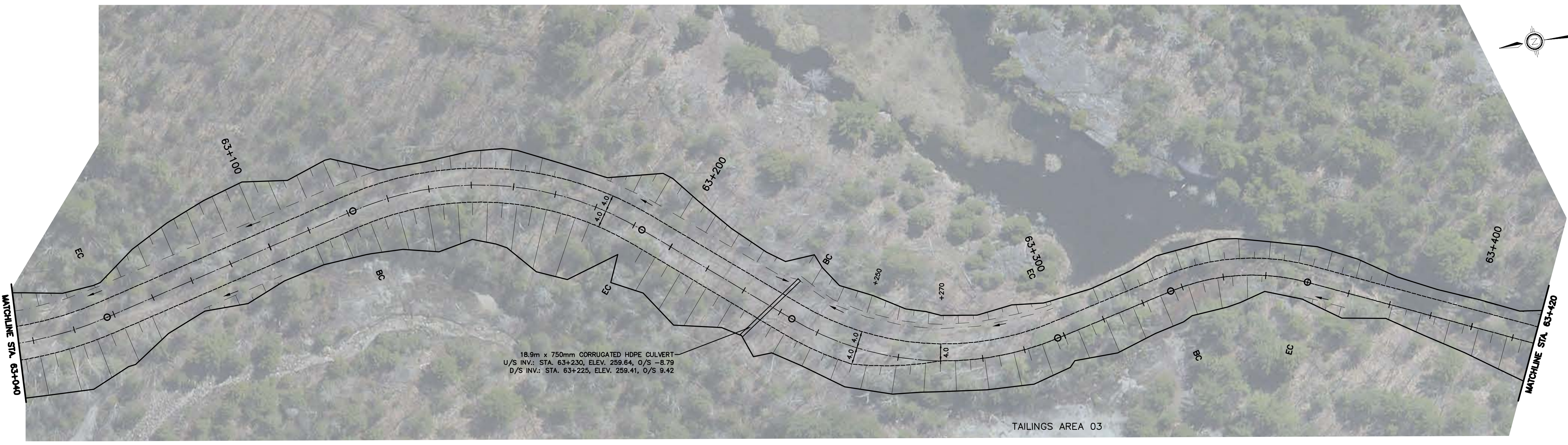
NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 62+660 TO STA. 63+040

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	207

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by a P.E.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied. Any and all liabilities for damage, direct or indirect, however caused, and resulting in any way by use of the supplied data is the user and not responsibility of the user.



CHAINAGE/PR. ELEV.	PR. ELEV.
63+040	250.23
63+060	250.90
63+080	251.82
63+100	252.98
63+120	254.52
63+140	256.43
63+160	257.97
63+180	259.03
63+200	259.93
63+220	260.83
63+240	261.73
63+260	262.70
63+280	263.83
63+300	264.76
63+320	265.05
63+340	265.16
63+360	265.54
63+380	266.28
63+400	267.39
63+420	268.16

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



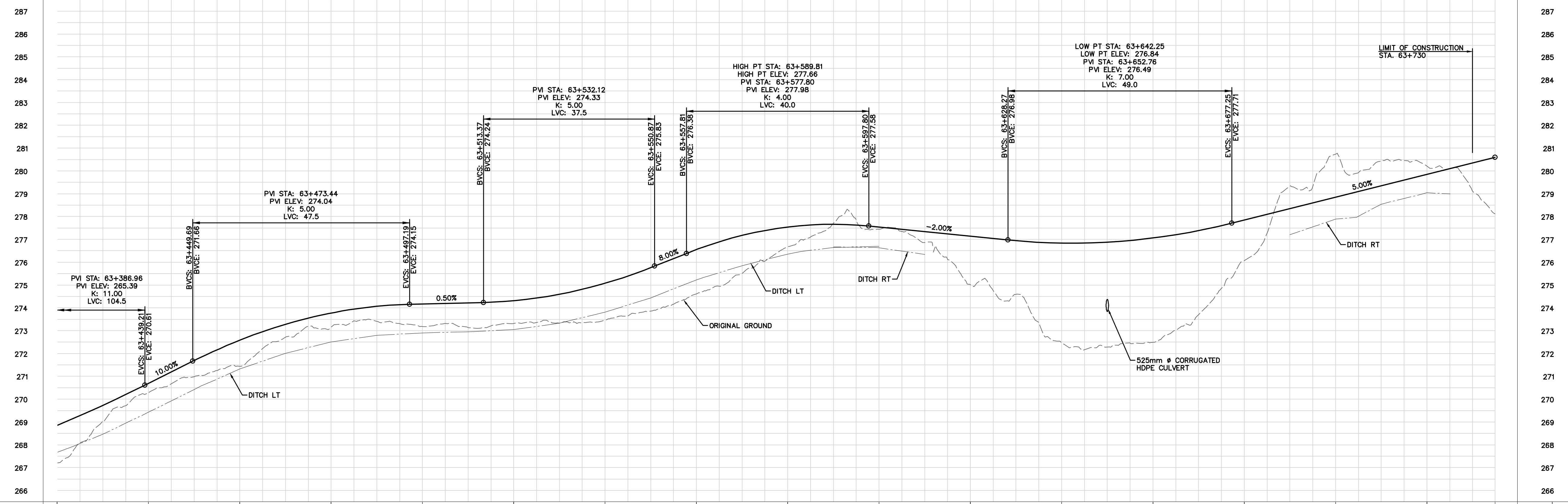
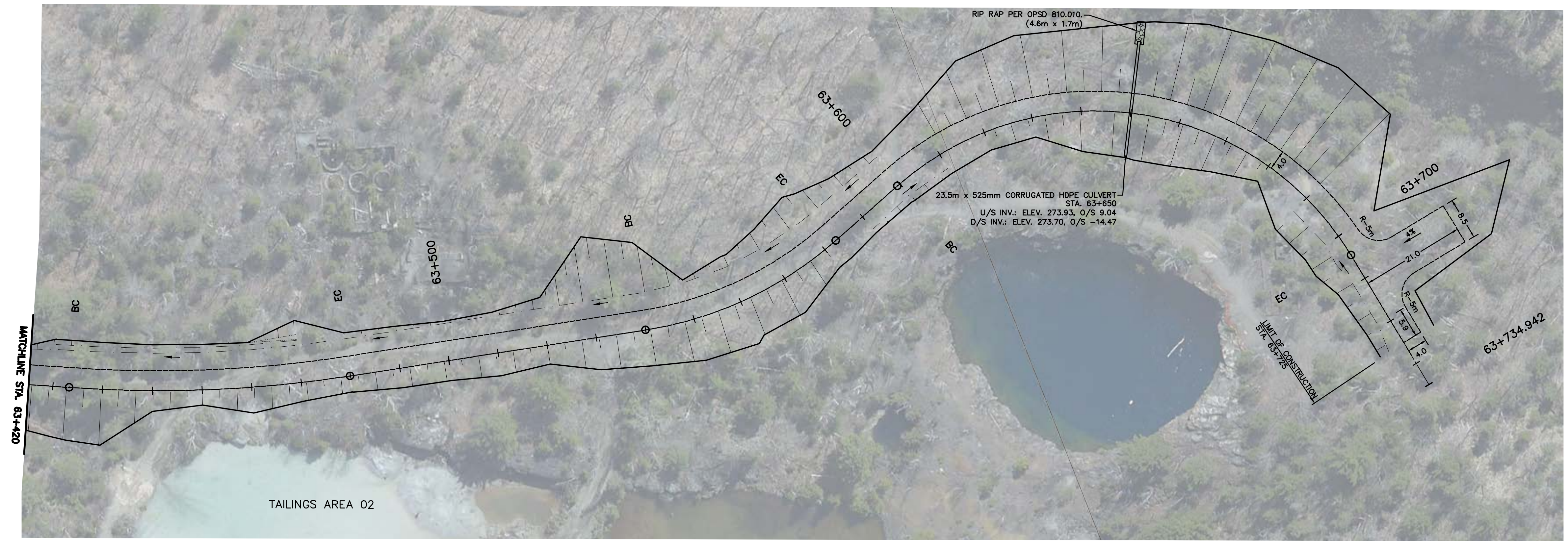
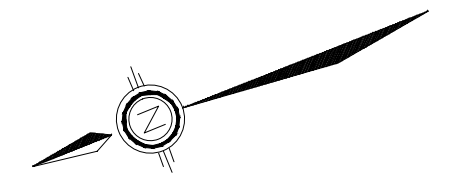
DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 63+040 TO STA. 63+420

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	208



CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.	CHAINAGE/ PR. ELEV.
63+420 268.86	63+440 270.69	63+460 272.59	63+480 273.77	63+500 274.17	63+520 274.31	63+540 275.08	63+560 276.55	63+580 277.54	63+600 277.54	63+620 277.14	63+640 276.84	63+660 277.06	63+680 277.85	63+700 278.85	63+720 280.21	63+735 280.75	63+735 280.75

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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ENGINEER:
APPROVED:

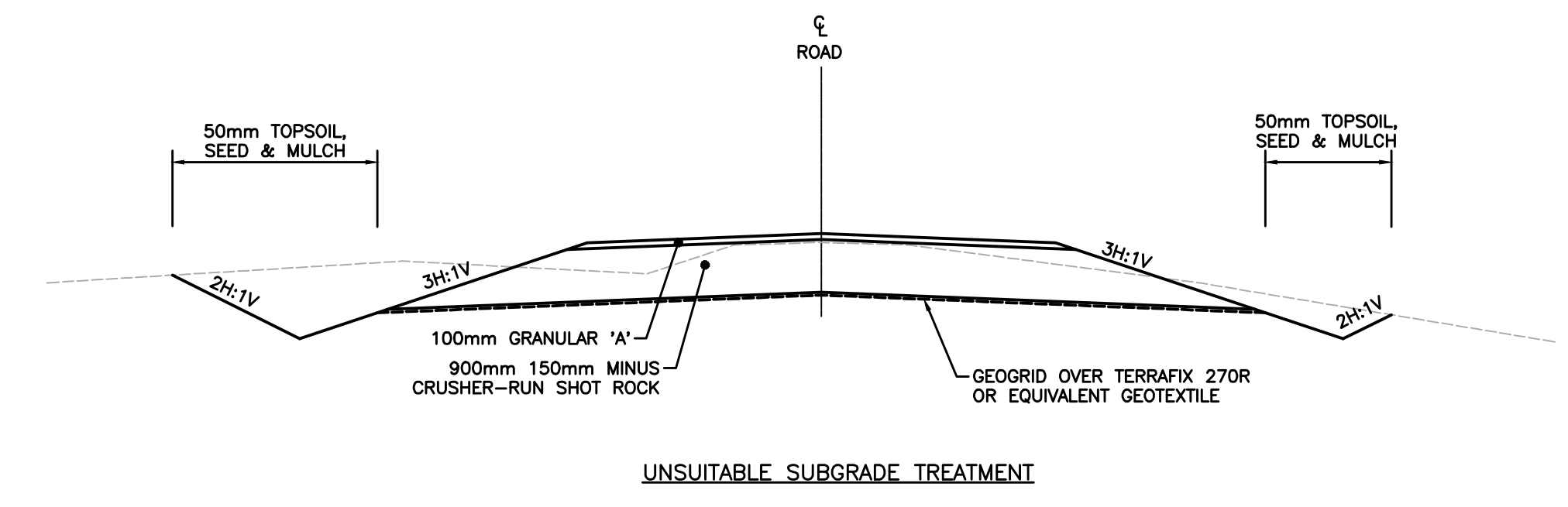
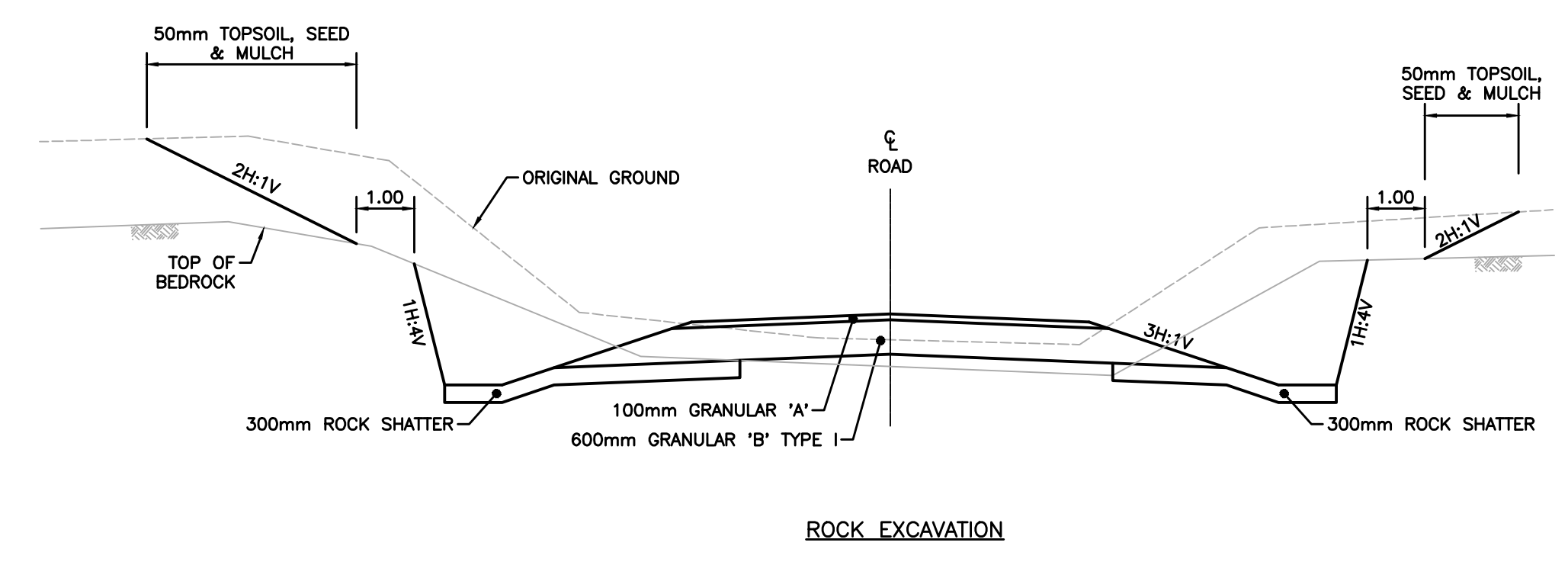
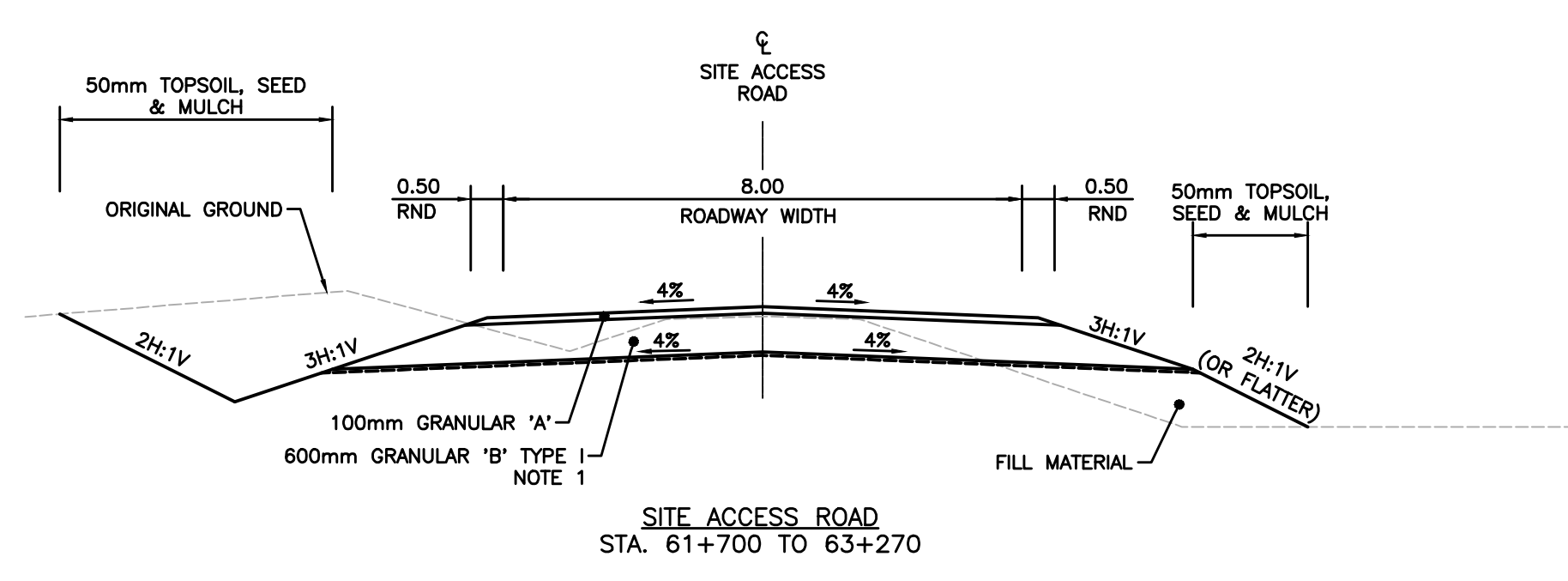
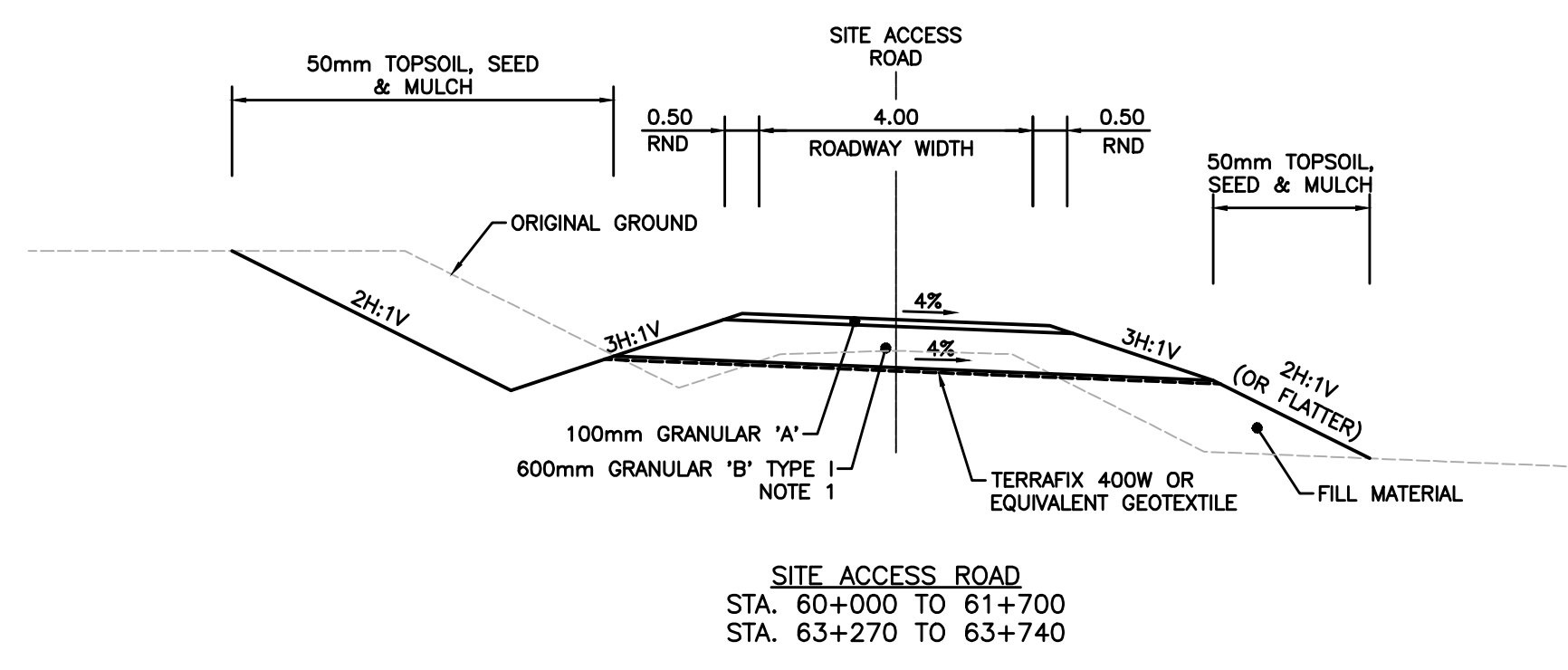
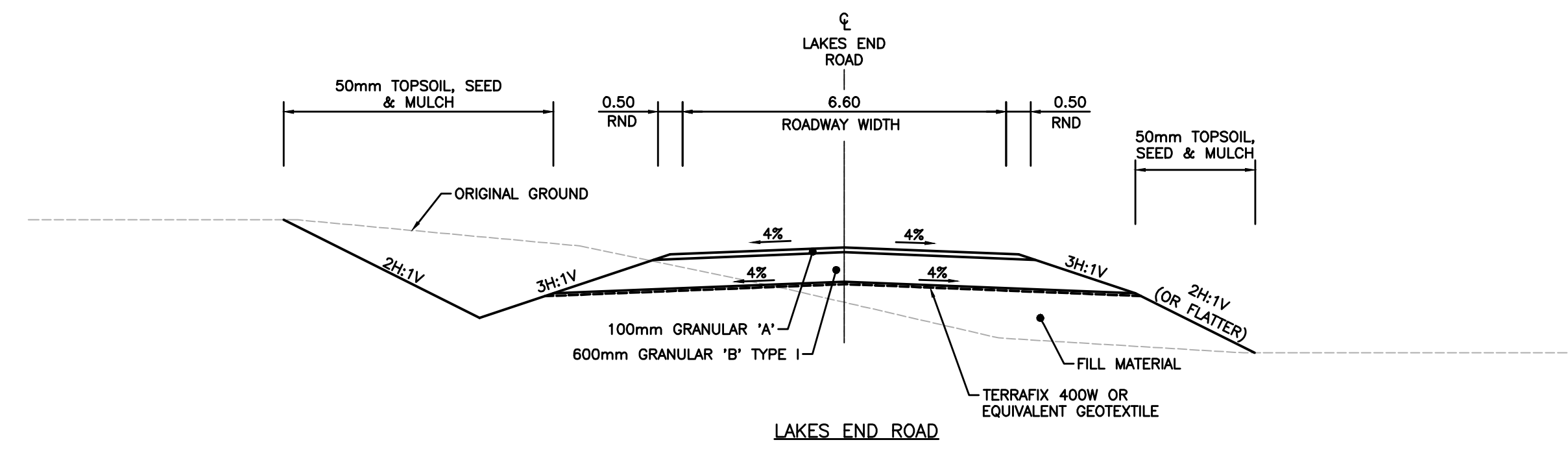


LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

NEW CONSTRUCTION
SITE ACCESS ROAD
STA. 63+420 TO STA. 63+740

SCALE:	HOR: 1:500	VERT: 1:100
CONTRACT NO.:		
CAD/FILE NUMBER:	20183	
SHEET NO.:	209	

NOTES: 1. All dimensions are in metres unless otherwise noted.
 PROPERTY DISCLAIMER: The underlying parcel fabric represents approximate measurements only and should be verified by an LDC.
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- NOTES**
- WHERE THE SUBGRADE IS OVERLY LOOSE, SOFT AND/OR WET OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR, THE GRANULAR 'B' TYPE I SHALL BE REPLACED WITH 900mm DEPTH OF 150mm MINUS CRUSHER-RUN SHOT ROCK PLACED OVER GEOGRID AND TERRAFIX 270R OR EQUIVALENT GEOTEXTILE AS PER THE UNSUITABLE SUBGRADE TREATMENT DETAIL.
 - WHERE THE SUBGRADE IS OVERLY WET OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR, SUBCAVATION OF UNSUITABLE MATERIAL SHALL BE AS PER OPSD 203.010 AND 203.030. BACKFILL SHALL BE 150mm MINUS CRUSHER-RUN SHOT ROCK OR GRANULAR 'B' TYPE I, AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
 - WHERE GUIDE RAIL IS SPECIFIED, ROADWAY WIDTH SHALL BE INCREASED BY 0.5m ON THE SIDE OF THE GUIDE RAIL.
 - WHERE STEEL BEAM GUIDE RAIL IS SPECIFIED, ROUNDING WIDTH SHALL BE INCREASED TO 1.0m.
 - THE CONTRACTOR SHALL STRIP THE TOPSOIL WITHIN THE LIMITS OF GRADING.
 - A MID-SLOPE BENCH SHALL BE CONSTRUCTED ON ALL FILLS OVER 5.5m IN HEIGHT AS PER THE MID-SLOPE BENCH DETAIL ON SHEET 405.

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

CAUTION

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NOT FOR CONSTRUCTION



DATE:
 DRAWN:
 DESIGNED:
 CHECKED:
 ENGINEER:
 APPROVED:



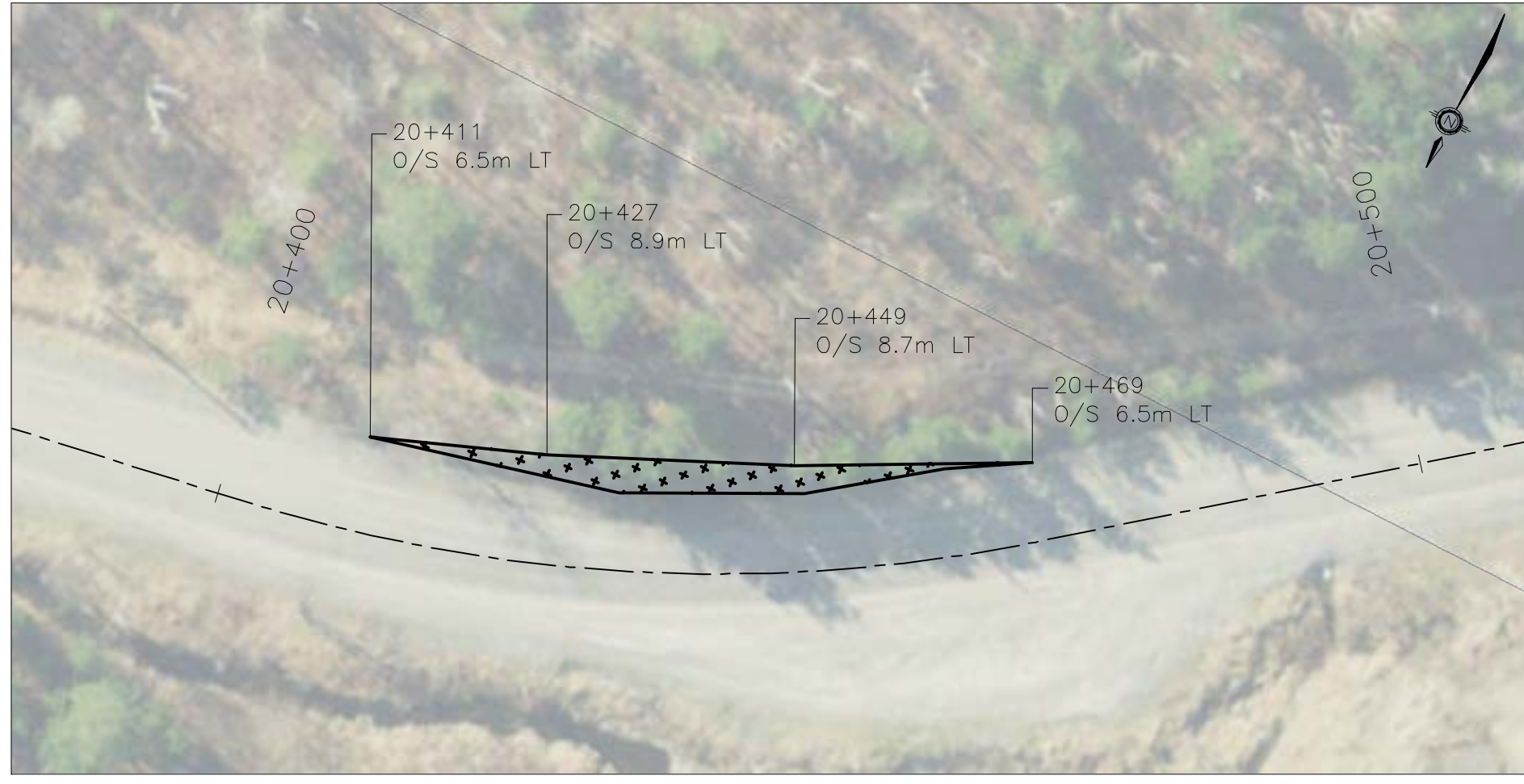
LONG LAKE GOLD MINE ACCESS ROUTE
 ROADWAY IMPROVEMENTS

TYPICAL SECTIONS

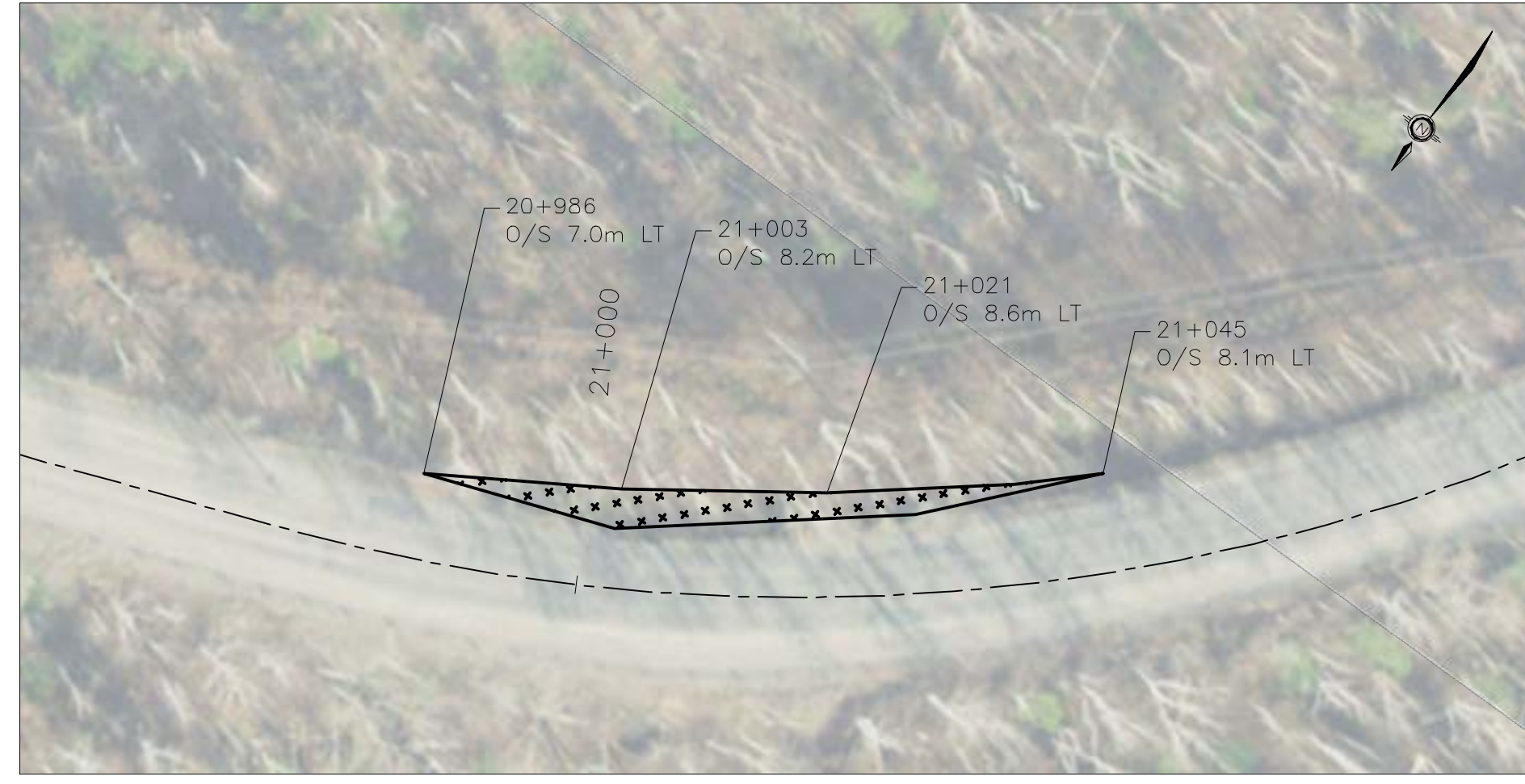
SCALE: NOT TO SCALE
CONTRACT NO.:
CAD/FILE NUMBER: 20183
SHEET NO.: 300

NOTES: 1. All dimensions are in metres unless otherwise noted.

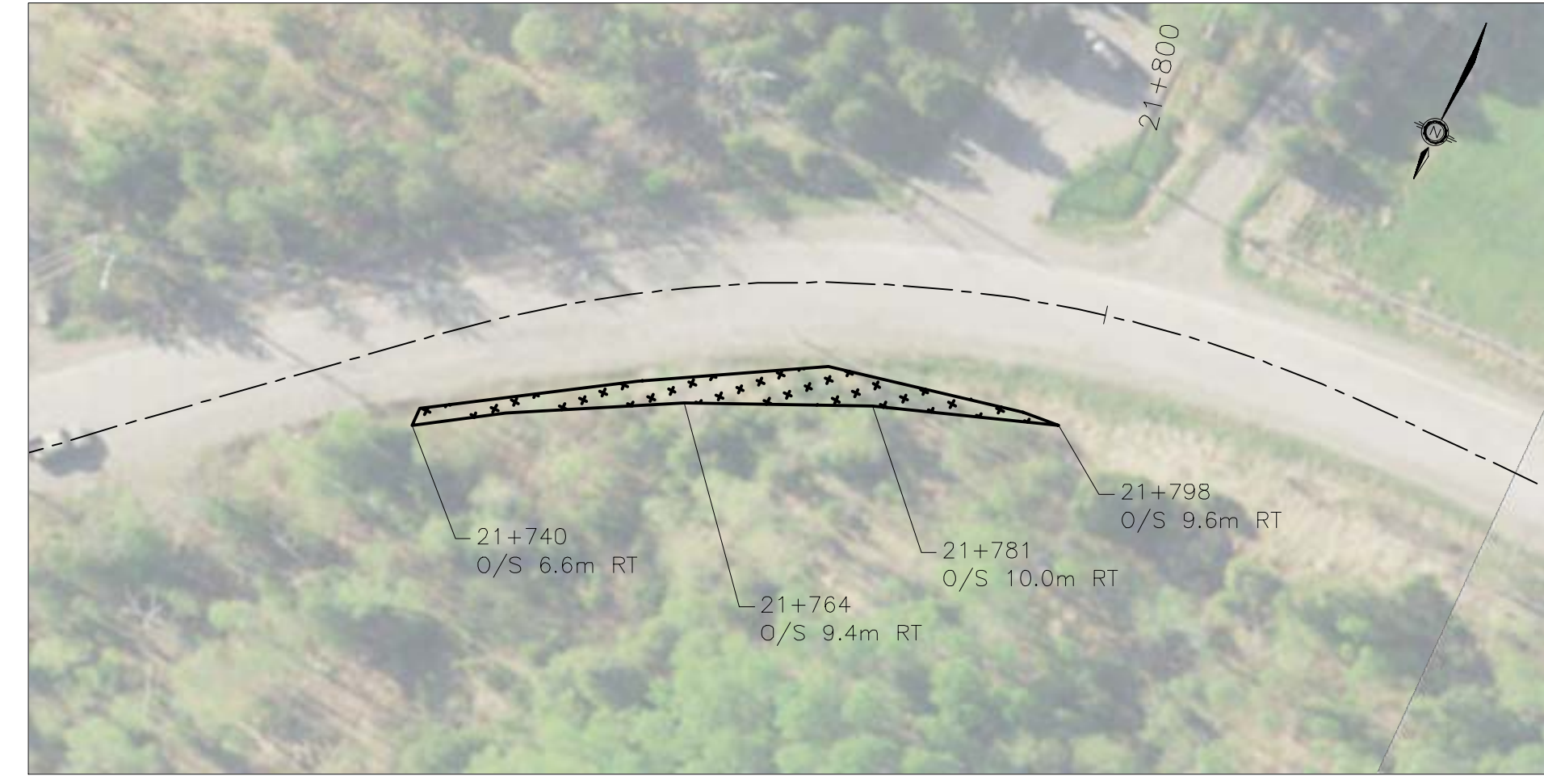
PROPERTY DISCLAIMER: The underlying parcel fabric representing approximate measurements only and should be verified by an OAC.
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① STA. 20+411 - 20+469 LT
TILTON LAKE ROAD



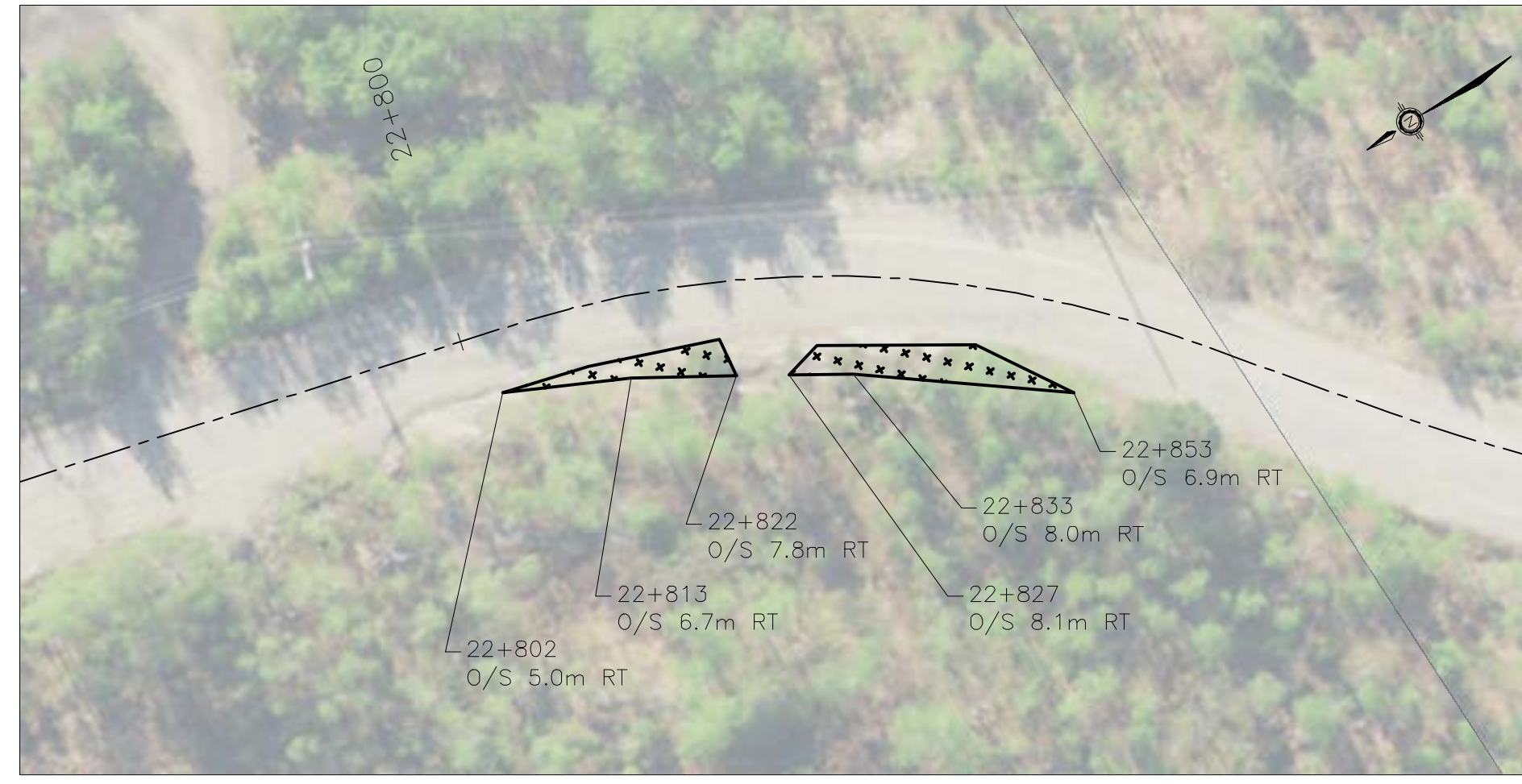
② STA. 20+986 - 21+045 LT
TILTON LAKE ROAD



③ STA. 21+740 - 21+798 RT
TILTON LAKE ROAD



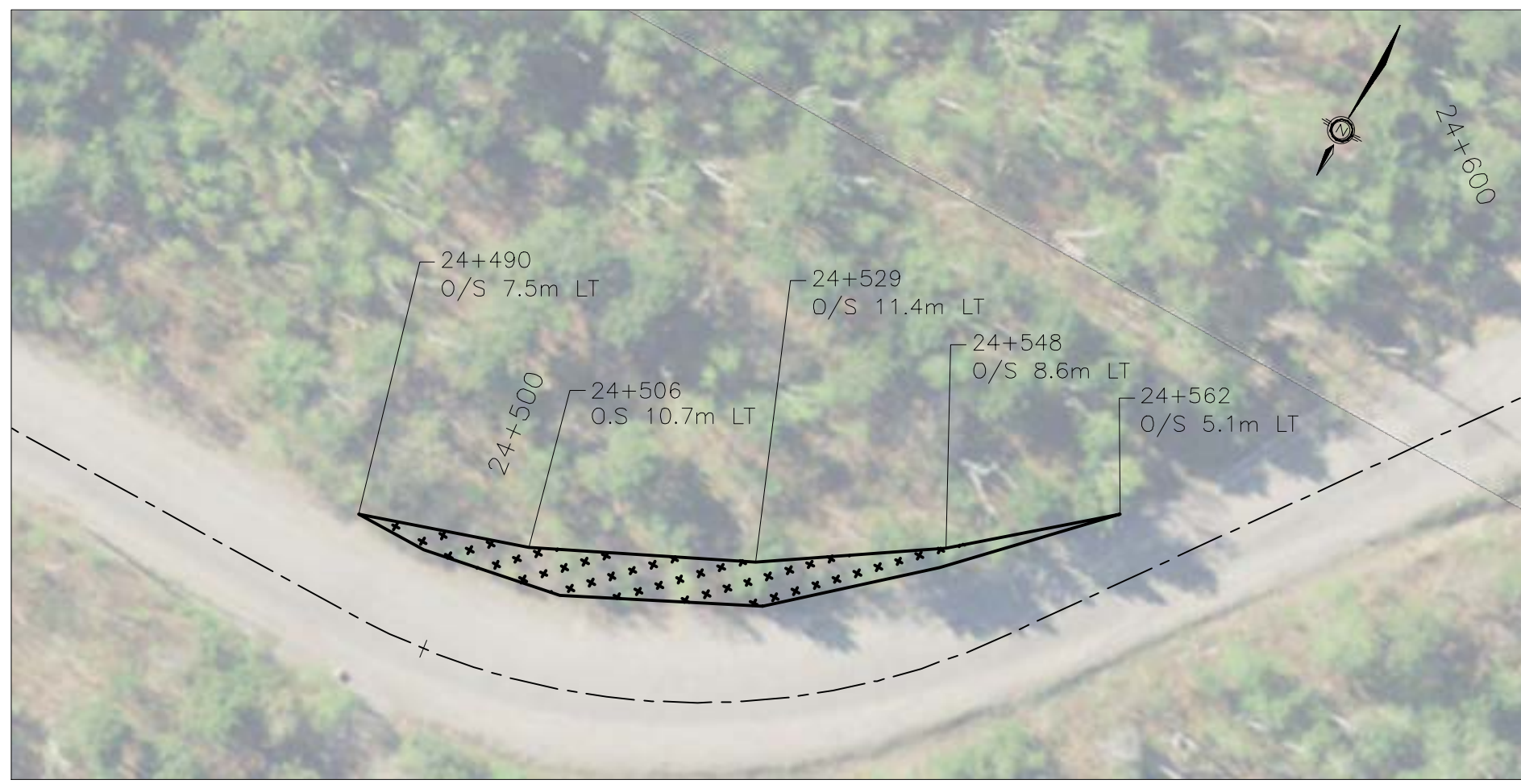
④ STA. 22+053 - 22+115 LT
TILTON LAKE ROAD



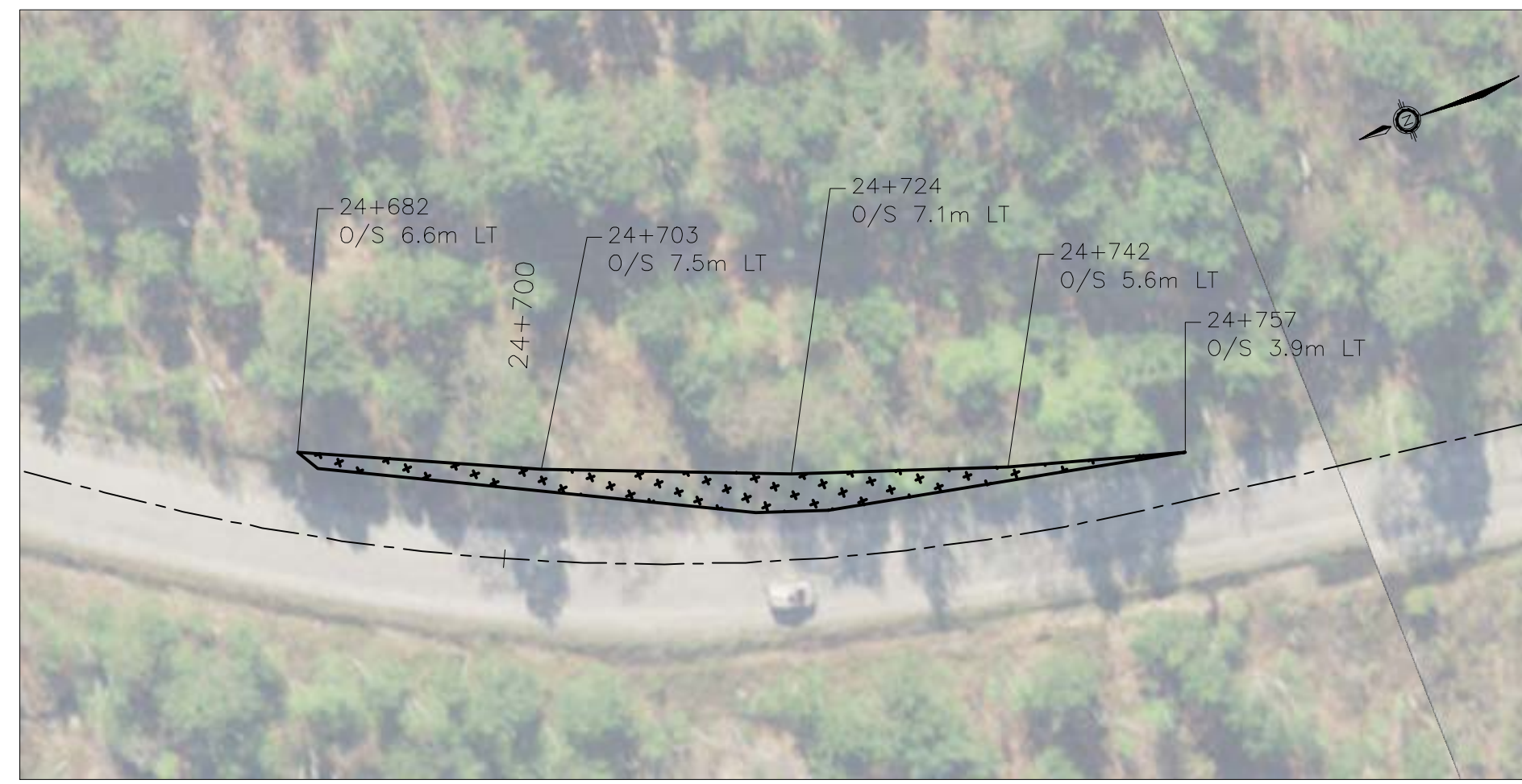
⑤ STA. 22+802 - 22+853 RT
TILTON LAKE ROAD



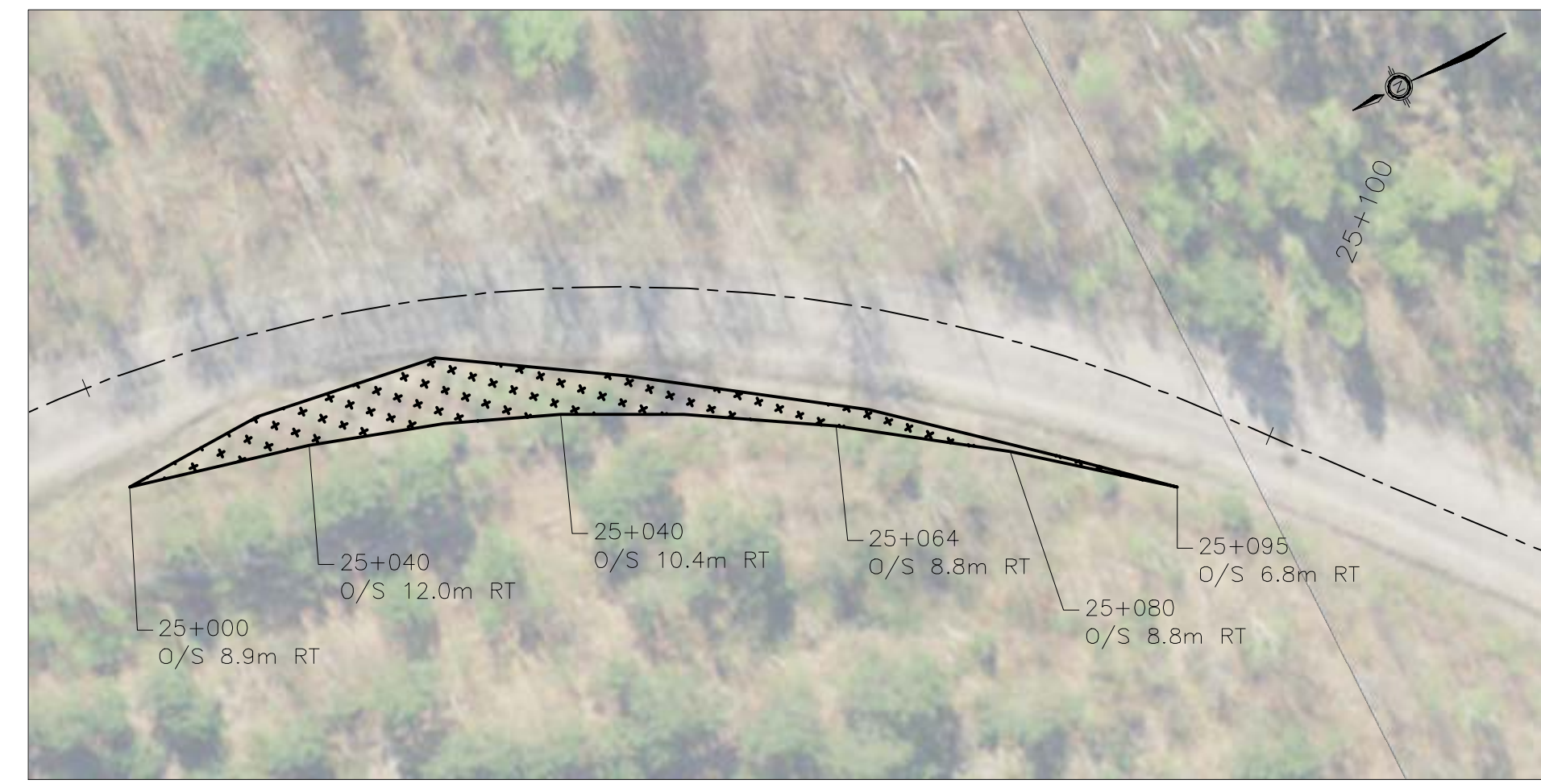
⑥ STA. 23+947 - 23+964 LT
TILTON LAKE ROAD



⑦ STA. 24+490 - 24+562 LT
TILTON LAKE ROAD



⑧ STA. 24+682 - 24+757 LT
TILTON LAKE ROAD



⑨ STA. 25+000 - 25+095 RT
TILTON LAKE ROAD

REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

DETAILS
VEGETATION TRIMMING ON CURVES

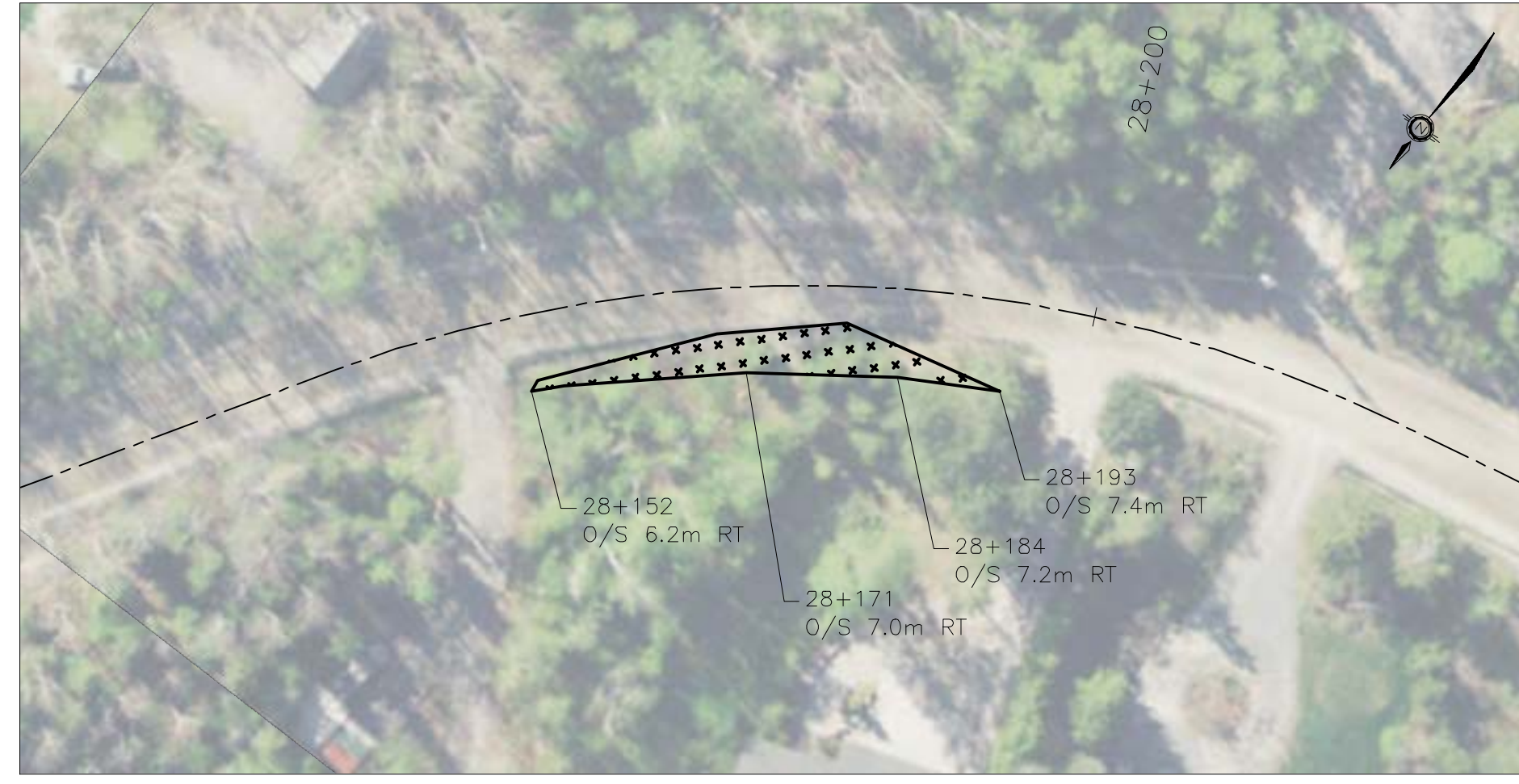
SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	400

NOTES: 1. All dimensions are in metres unless otherwise noted.

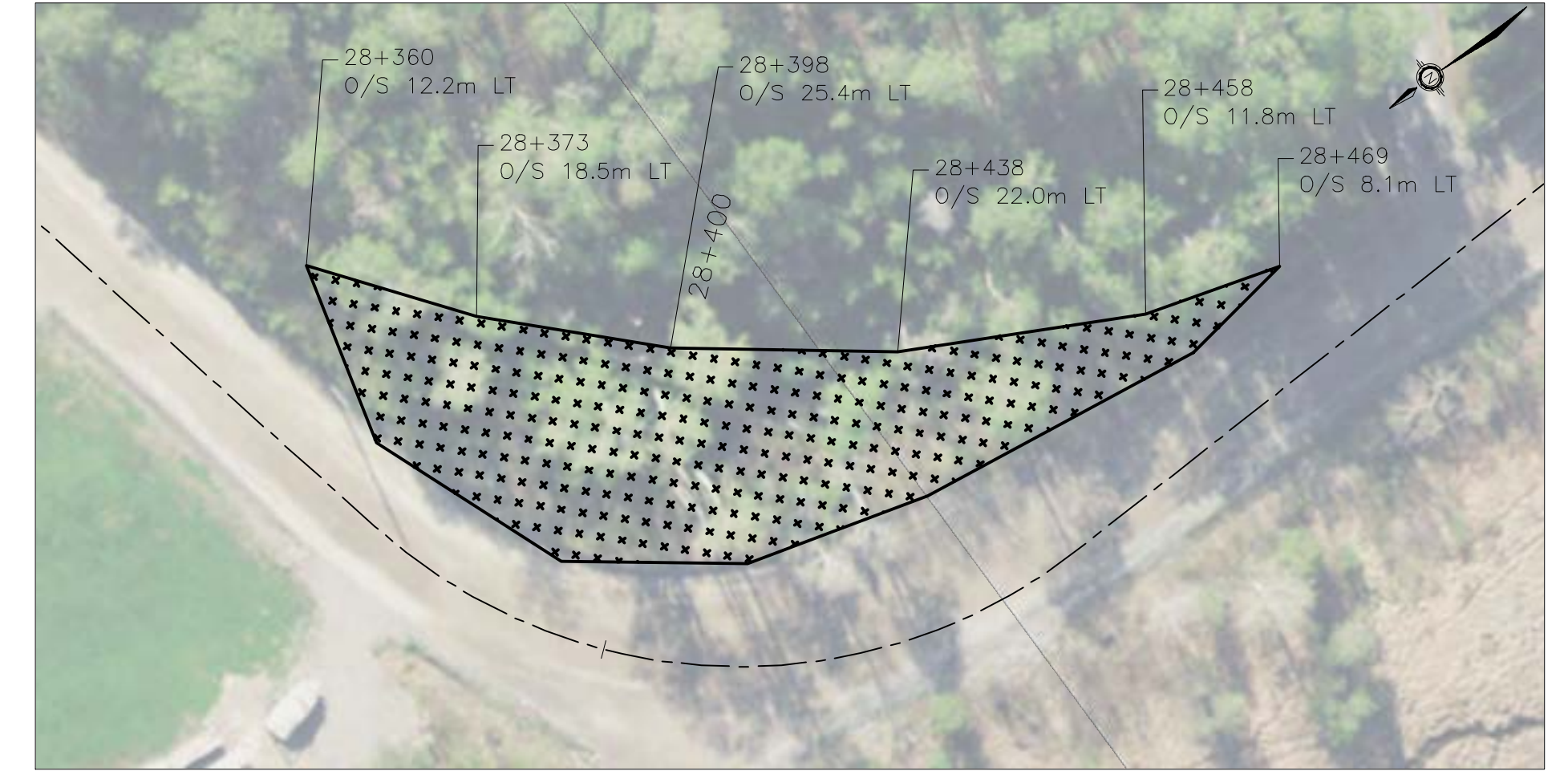
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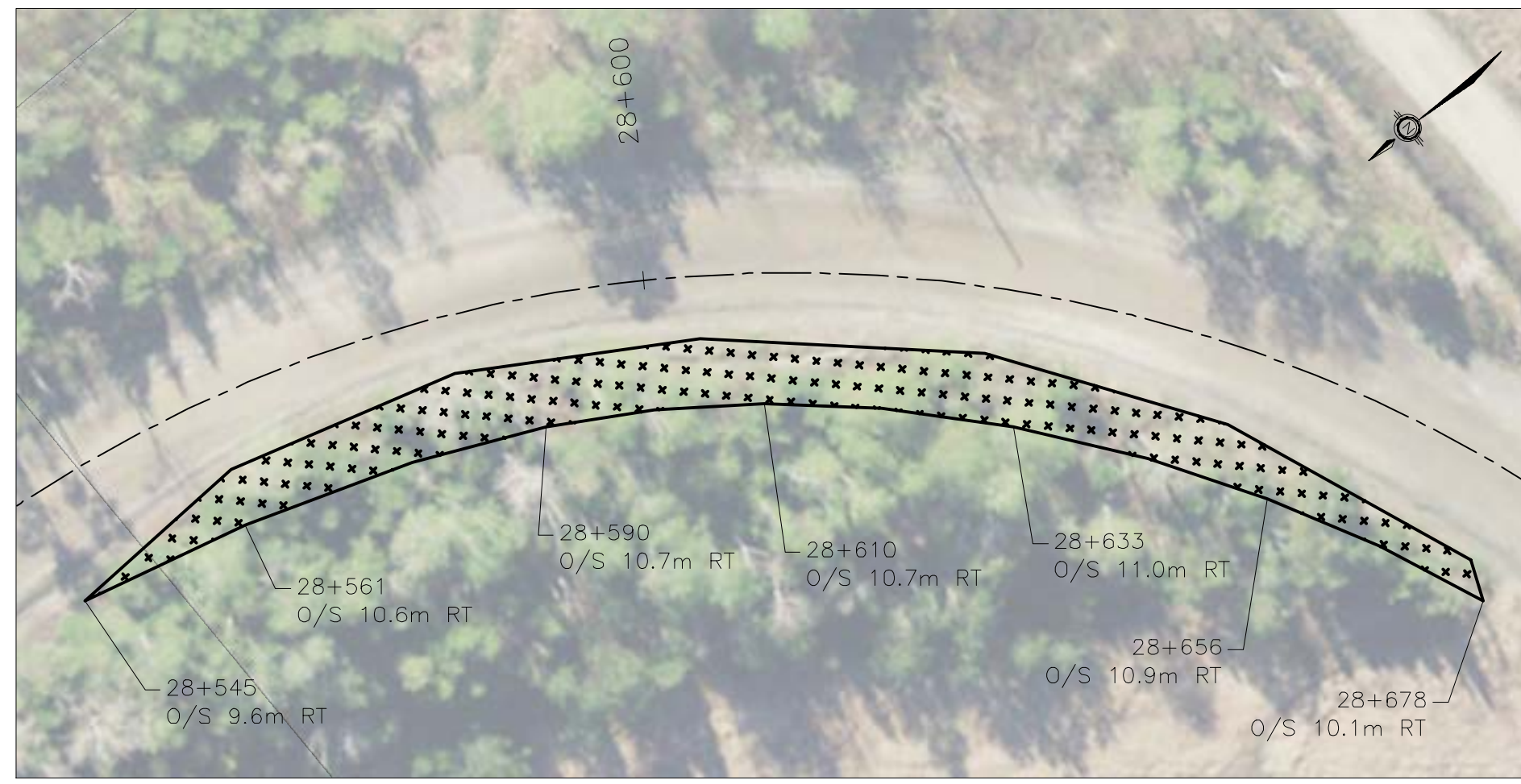
10 STA. 27+796 - 27+864 RT
TILTON LAKE ROAD



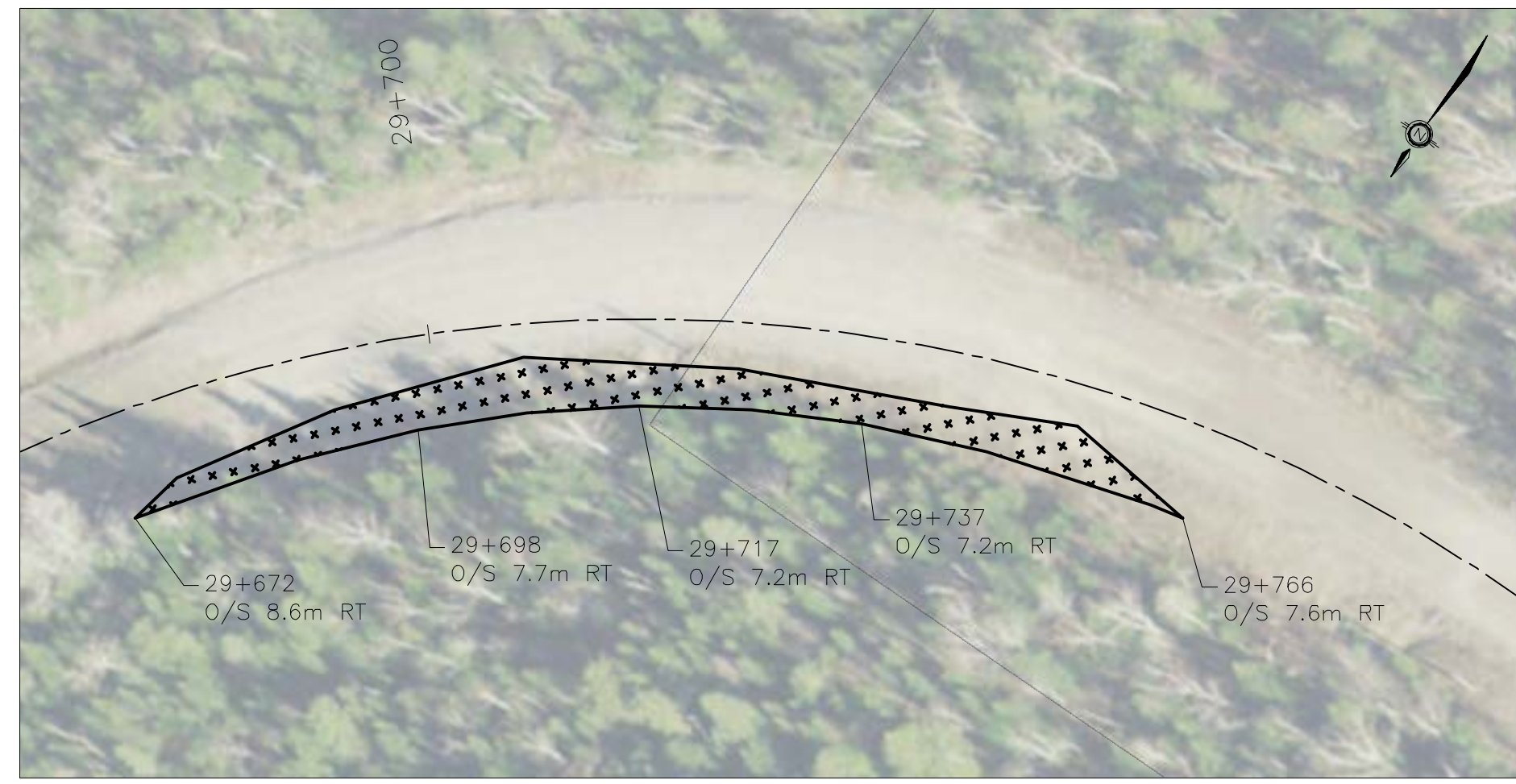
11 STA. 28+151 - 28+193 RT
TILTON LAKE ROAD



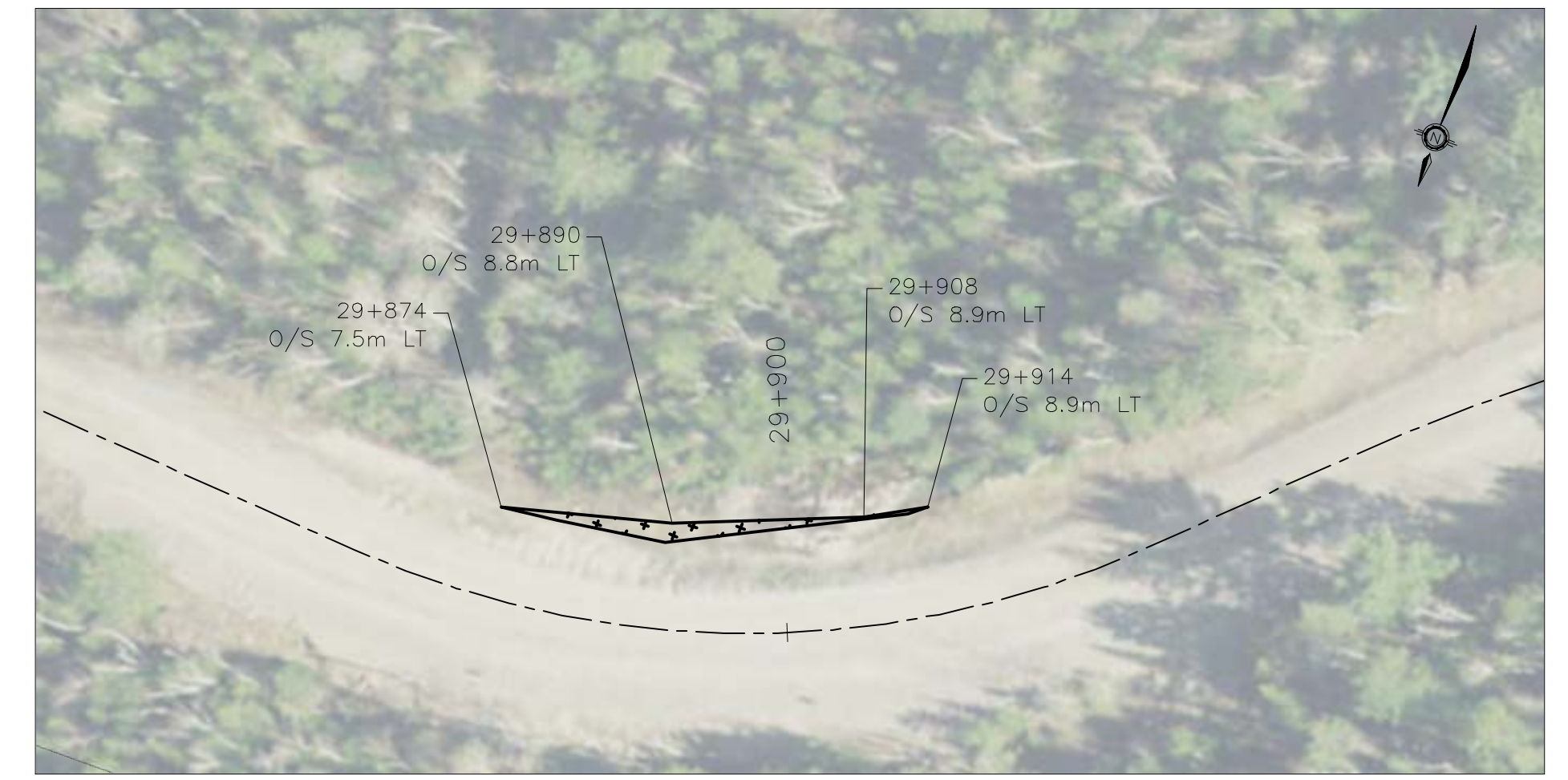
12 STA. 28+359 - 28+468 LT
TILTON LAKE ROAD



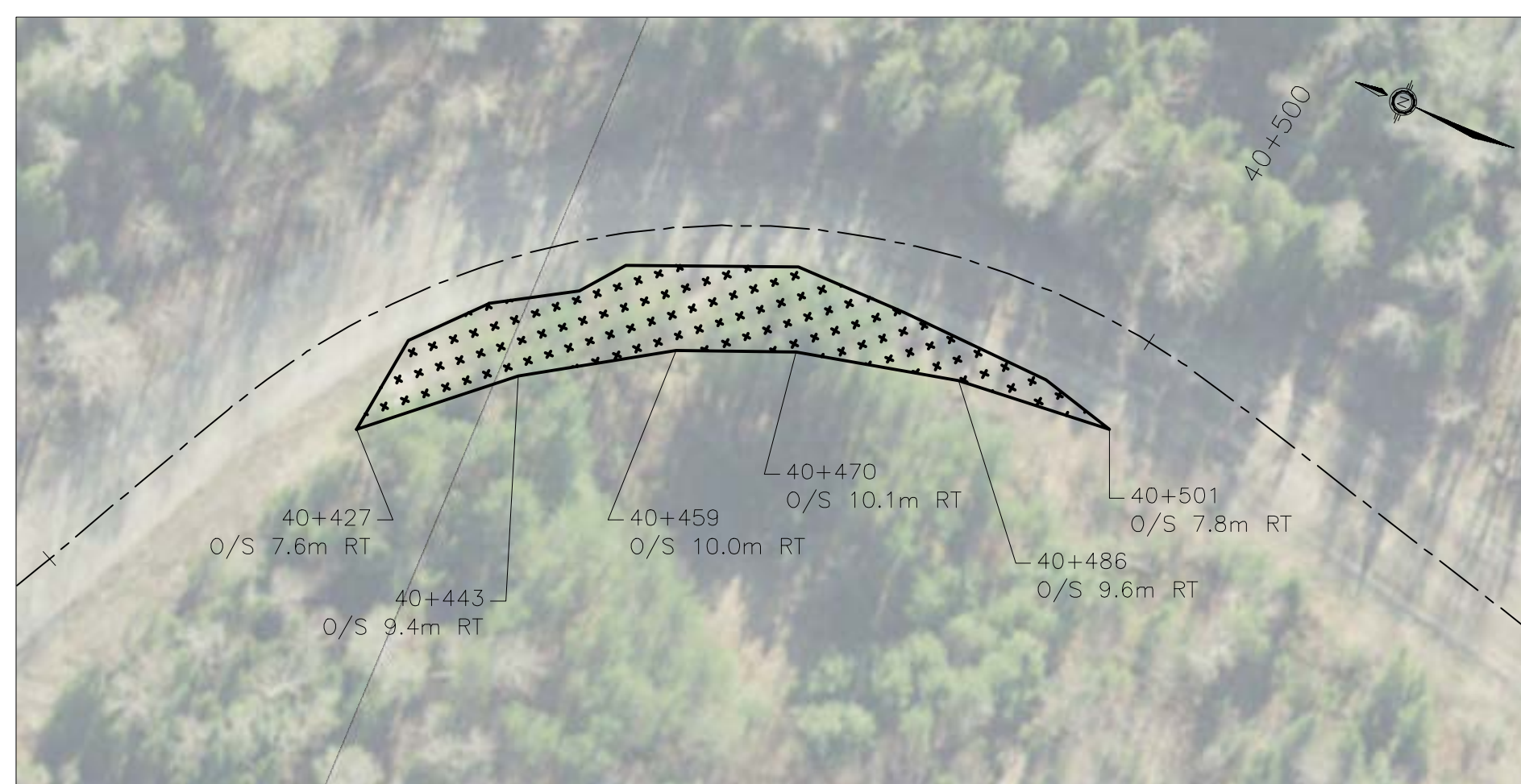
13 STA. 28+544 - 28+677 RT
TILTON LAKE ROAD



14 STA. 29+671 - 29+765 RT
TILTON LAKE ROAD



15 STA. 29+873 - 29+913 LT
TILTON LAKE ROAD



16 STA. 40+427 - 40+501 RT
WAVY TRAIL

REVISIONS

DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

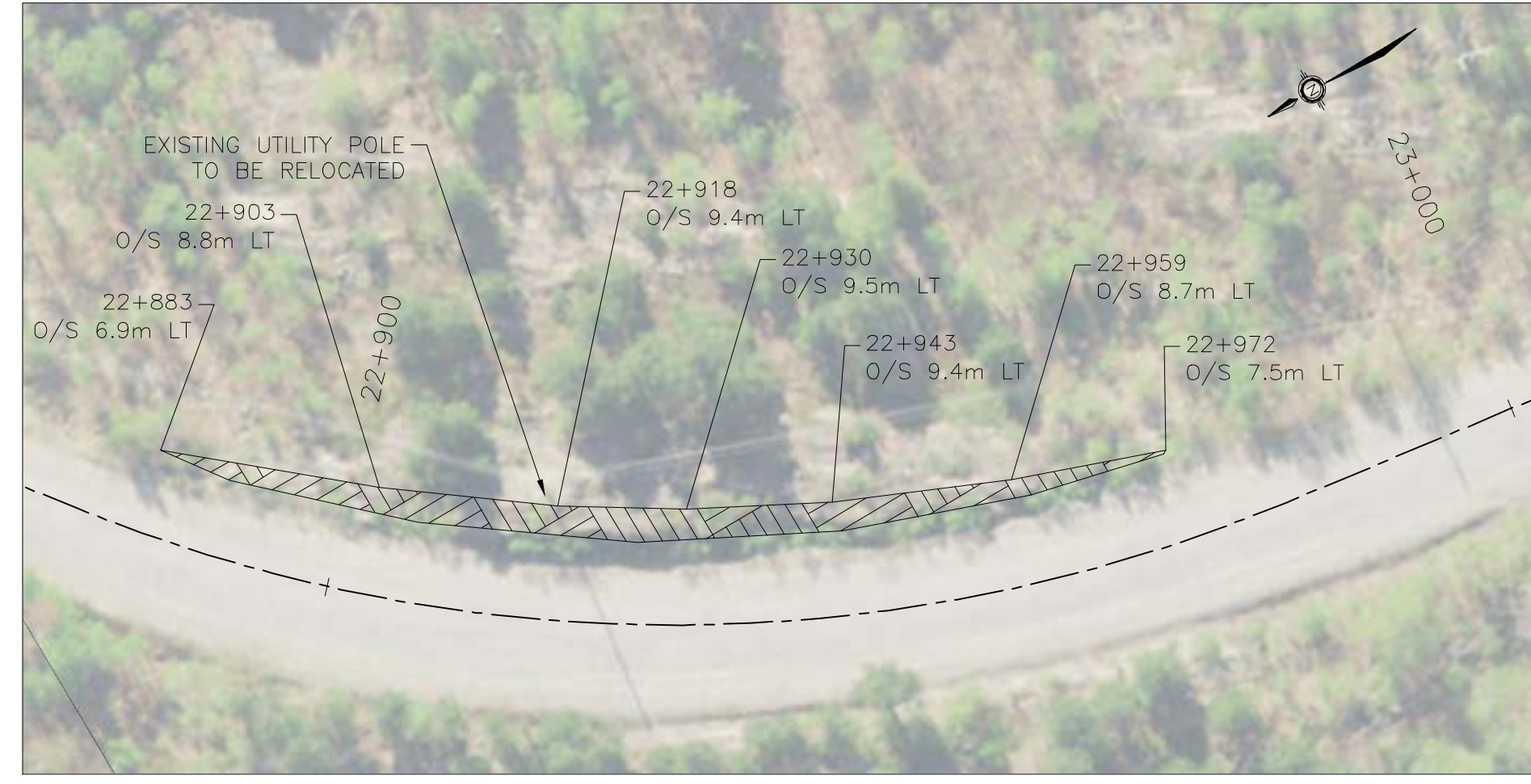
DETAILS
VEGETATION TRIMMING ON CURVES

SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	401

NOTES: 1. All dimensions are in metres unless otherwise noted.

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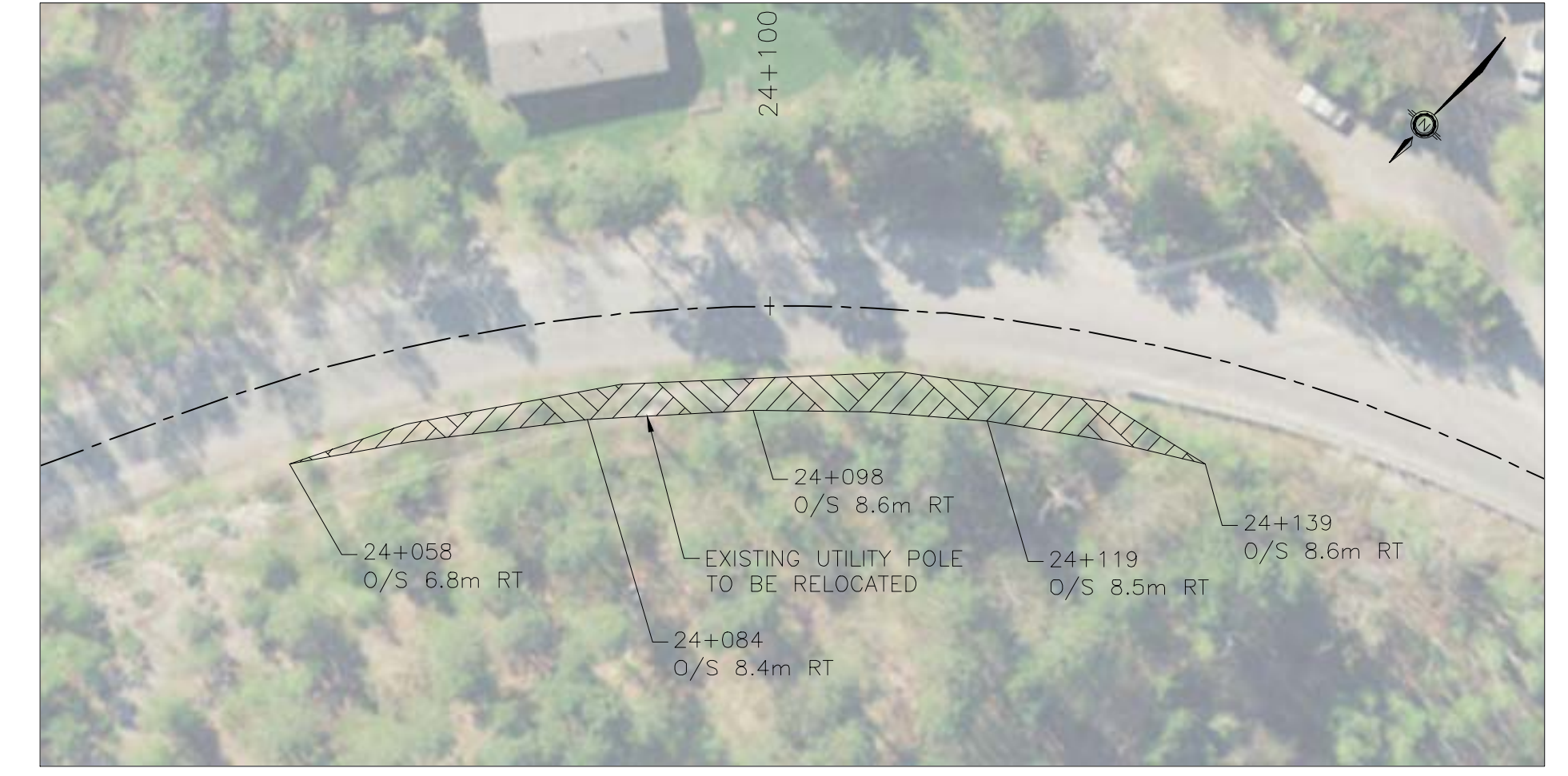
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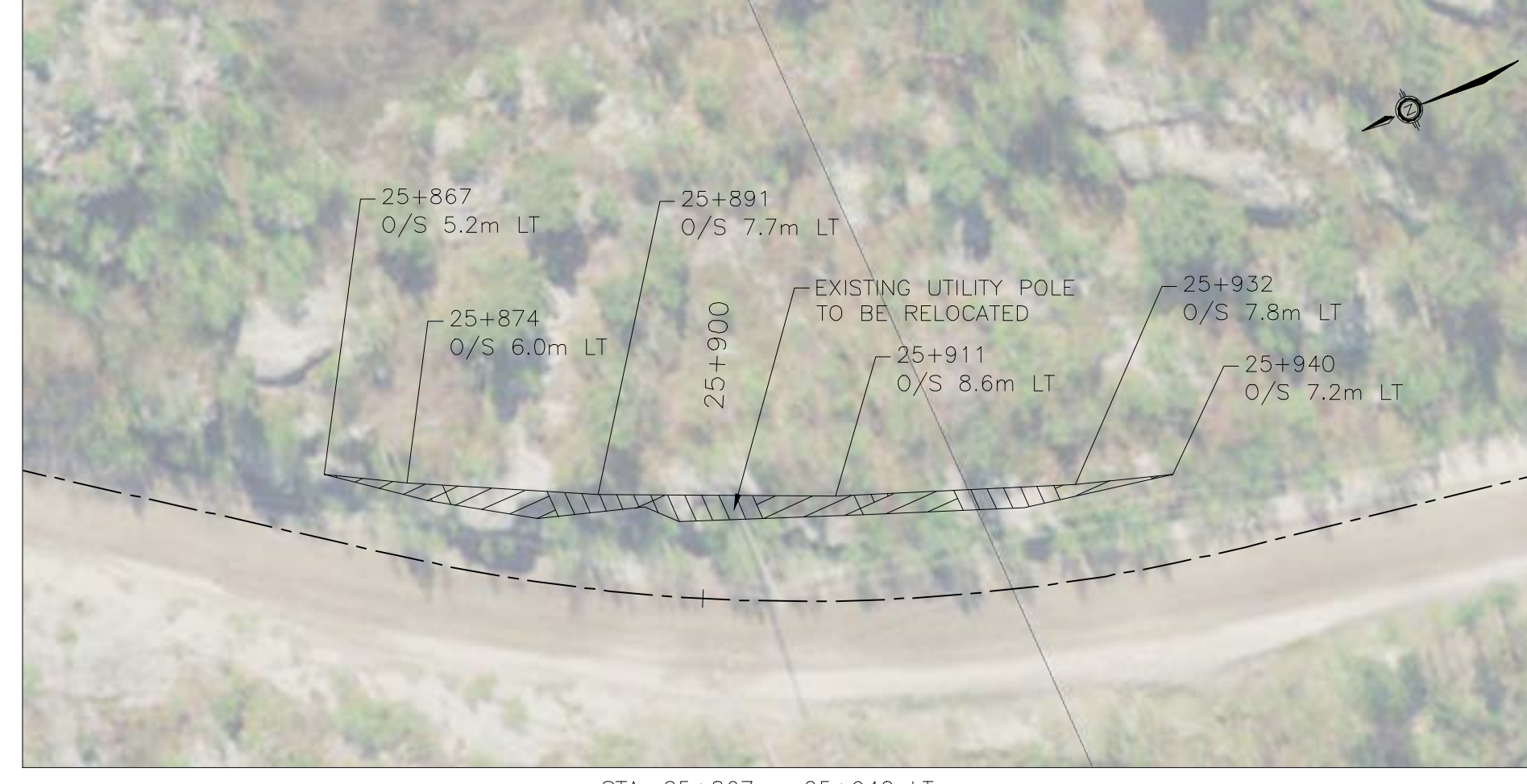
1 STA. 22+883 - 22+972 LT
TILTON LAKE ROAD



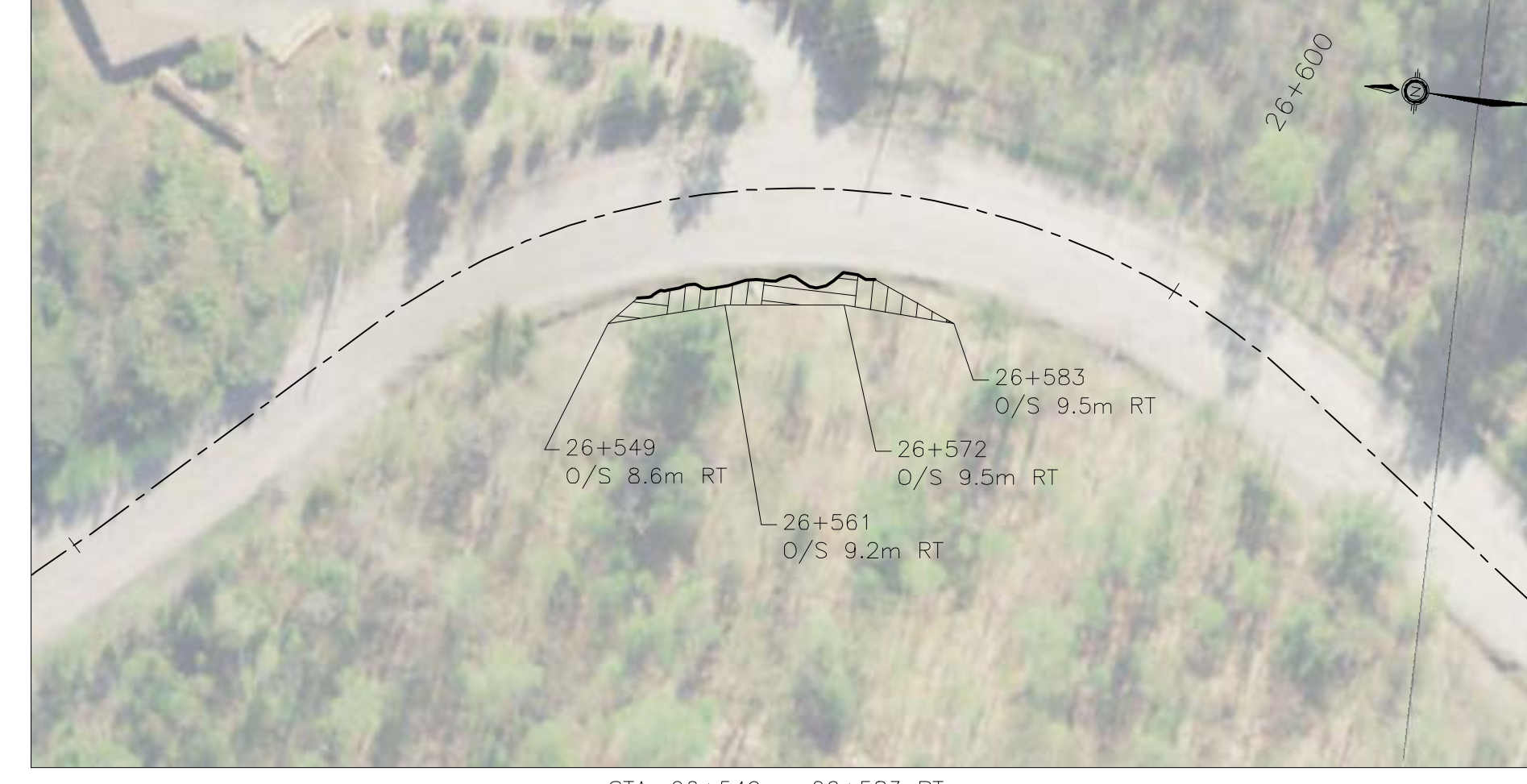
2 STA. 23+396 - 23+444 RT
TILTON LAKE ROAD



3 STA. 24+058 - 24+139 RT
TILTON LAKE ROAD



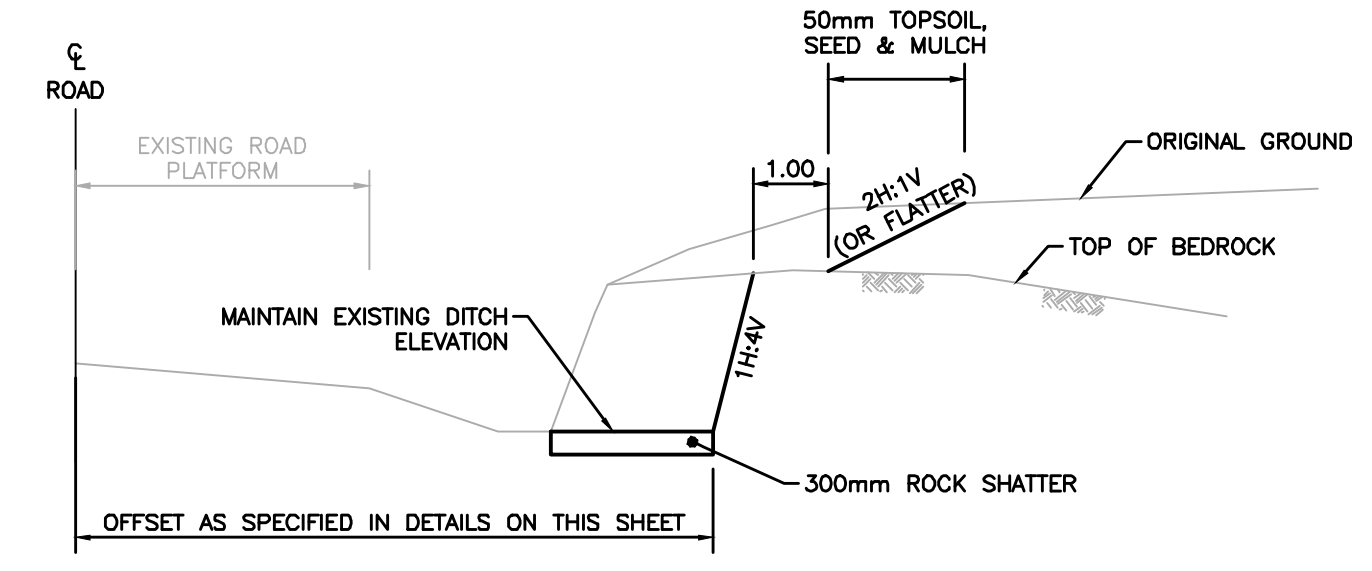
4 STA. 25+867 - 25+940 LT
TILTON LAKE ROAD



5 STA. 26+549 - 26+583 RT
TILTON LAKE ROAD



6 STA. 27+895 - 27+927 LT
TILTON LAKE ROAD



TRIMMING OF EXISTING ROCK CUTS
(N.T.S)

REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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DATE:
DRAWN:
DESIGNED:
CHECKED:
ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

DETAILS
ROCK TRIMMING ON CURVES

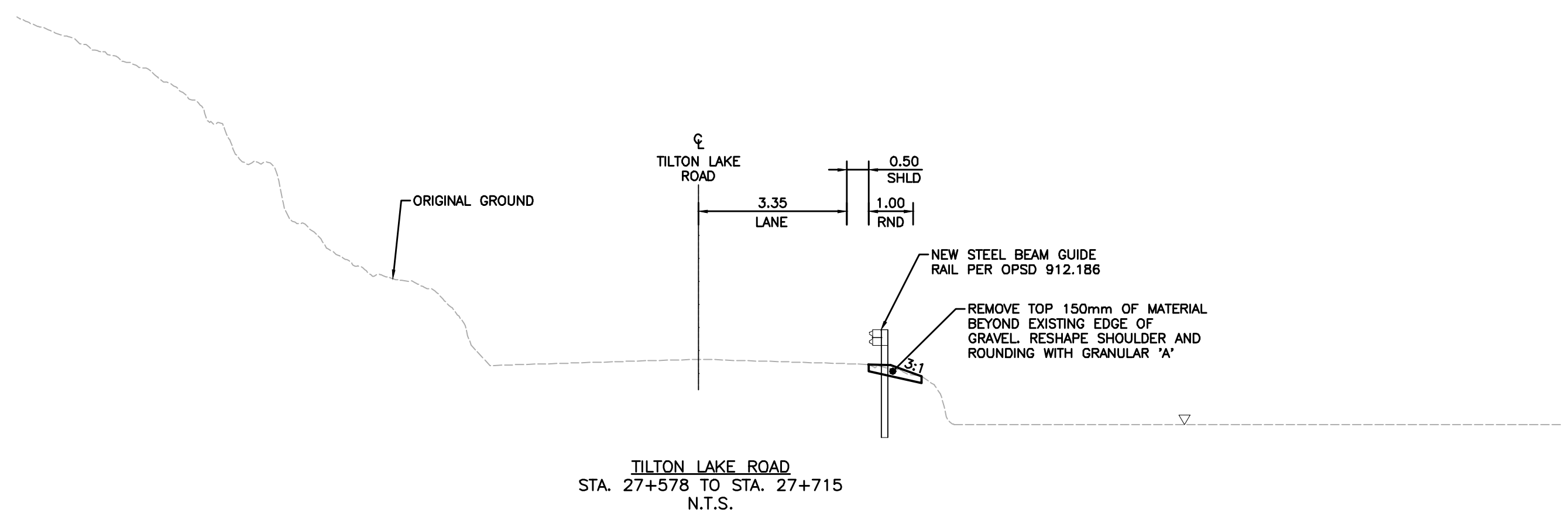
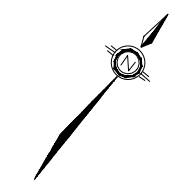
SCALE:	HOR: 1:500 VERT: 1:100
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	402

DWG NAME: O:\20100-20199\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\Tilton Lake Road.dwg
DATE: 2022-02-11

NOTES: 1. All dimensions are in metres unless otherwise noted.

PROPERTY DISCLAIMER: The underlying parcel fabric, measurements and boundaries shown on this drawing are based on the current parcel fabric and measurements only and should be verified by an O.L.S.

DISCLAIMER OF WARRANTY: The data is provided "as is", without warranty of any kind either expressed or implied, for use in the design of any project. The user assumes all responsibility for the data and any errors or omissions. The user shall indemnify and hold the provider harmless from and against all claims, damages, losses, costs, expenses, and liabilities, including reasonable attorneys' fees, arising from the use of the data, whether or not such claims, damages, losses, costs, expenses, and liabilities are caused in whole or in part by the negligence of the provider.



REVISIONS		
DATE	DETAILS	BY
	90% DESIGN COMPLETE SUBMISSION	

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DATE:
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ENGINEER:
APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
ROADWAY IMPROVEMENTS

DETAILS
TILTON LAKE ROAD SHOULDER RESHAPING
AND GUIDE RAIL EXTENSION

SCALE: HOR: 1:500 VERT: 1:100
CONTRACT NO.:
CAD/FILE NUMBER: 20183
SHEET NO.: 403

DWG NAME: O:\20183-2019\20183 - Long Lake Gold Mine Access Road\02 Drawings\Current Drawings\Highway\20183 CS DT.dwg
 DATE: 2022-02-11
 NOTES: 1. All dimensions are in metres unless otherwise noted.
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Station	Side	Sign Number From Ontario Traffic Manual	Sign Size		Sign Description	Sign Area (m ²)	Post Type	Post Action	Sign Action	Comments
			H (mm)	W (mm)						
Long Lake Road										
10+115	LT	Wc-3	900	x	900	0.81	Metal	RP	ES	
		Wc-18	600	x	600	0.36			RS	
11+086	LT	Rb-1A	600	x	900	0.54	Metal	RP	RS	
11+208	RT	Wa-2L	600	x	600	0.36	Metal	EP	RS	
11+288	LT	Wa-3L	600	x	600	0.36	Metal	EP	RS	
11+356	RT	G304	300	x	900	0.27	Metal	EP	RS	
		G217	300	x	900	0.27			RS	
Tilton Lake Road										
20+213	LT	Custom	750	x	750	0.56	Metal	EP	RS	
21+225	RT	Wa-33L	300	x	900	0.27	Metal	RP	ES	
21+700	LT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
22+060	RT	G304	300	x	900	0.27	Metal	NP	NS	
		G304	300	x	900	0.27			NS	
22+089	RT	G216	200	x	750	0.15	Metal	RP	ES	
		G216	200	x	750	0.15			ES	
24+175	LT	Wa-33L	300	x	900	0.27	Metal	RP	ES	
24+236	RT	Wa-33L	300	x	900	0.27	Metal	RP	ES	
24+250	RT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
24+244	LT	Wa-33R	300	x	900	0.27	Metal	EP	NS	
25+300	LT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
25+370	RT	G304	300	x	900	0.27	Metal	NP	NS	
		G304	300	x	900	0.27			NS	
25+685	RT	Wa-28	750	x	750	0.56	Metal	NP	NS	
		Wa-28t	300	x	600	0.18			NS	
26+065	LT	Wa-28	750	x	750	0.56	Metal	NP	NS	
		Wa-28t	300	x	600	0.18			NS	
26+250	RT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
27+100	LT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
27+466	LT	Wa-6L	600	x	600	0.36	Metal	EP	NS	Bilingual Sign
		Wa-6t	450	x	600	0.27			ES	
		Wa-7t	450	x	450	0.20			NS	
27+580	LT	Wa-33R	300	x	900	0.27	Metal	RP	RS	
27+654	RT	Wa-4R	600	x	600	0.36	Metal	RLP	RS	Existing signs at 27+654
		Wa-4R	450	x	450	0.20			RLS	
28+050	RT	Rb-1A	600	x	900	0.54	Metal	NP	NS	
28+079	LT	Wa-4R	600	x	600	0.36	Metal	NP	NS	
		Wa-4R	450	x	450	0.20			NS	
28+475	LT	Wa-2R	600	x	600	0.36	Metal	RP	ES	
		Wa-7t	450	x	450	0.20			ES	
28+677	RT	Wa-33R	300	x	900	0.27	Metal	RP	RS	
Wavy Trail										
41+119	RT	Wa-13AL	600	x	600	0.36	Metal	NP	NS	
		Wa-18t	300	x	600	0.18			NS	
41+259	RT	G216	200	x	750	0.15	Metal	NP	RLS	Existing sign at 41+148 Lt
		G216	200	x	500	0.10			RLS	Existing sign at 41+153 Lt
41+275	RT	Wa-31	600	x	600	0.36	Metal	NP	RLS	Existing sign at 41+148 Lt. Bilingual sign.
41+399	LT	Wa-13AR	600	x	600	0.36	Metal	NP	NS	
		Wa-18t	300	x	600	0.18			NS	
Lakes End Road										
50+010	LT	Ra-1	600	x	600	0.36	Metal	NP	NS	

POST ACTIONS

EP = EXISTING POST
 NP = NEW POST
 RP = REPLACE POST
 XP = REMOVE POST
 RLP = RELOCATE POST

SIGN ACTIONS

ES = EXISTING SIGN
 NS = NEW SIGN
 RS = REPLACE SIGN
 XS = REMOVE SIGN
 RLS = RELOCATE SIGN

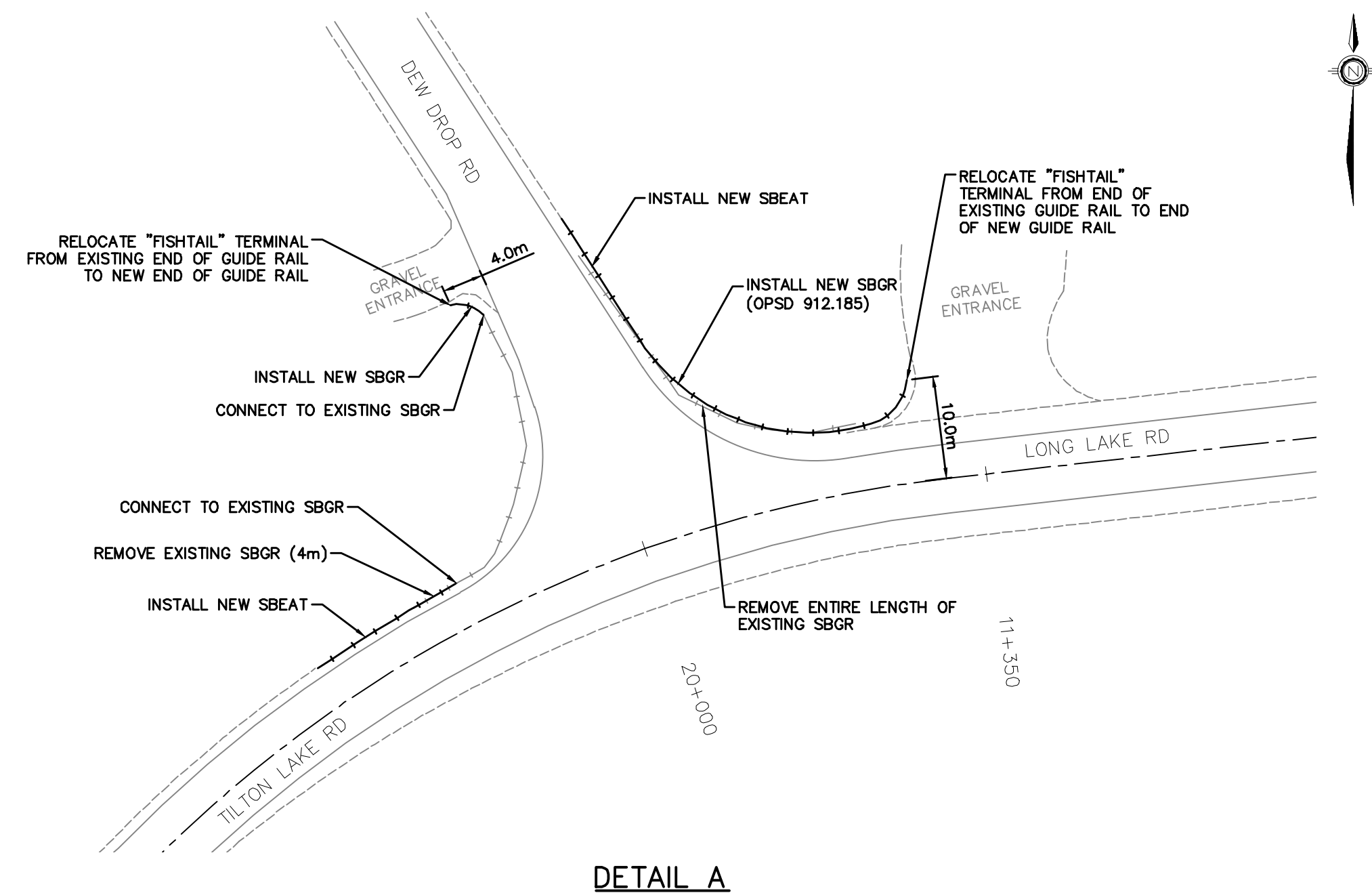
NOTES

- SIGNS TO BE LOCATED AT AN OFFSET TO THE ROADWAY IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUALS.
- POST-MOUNTED DELINEATORS SHALL BE INSTALLED ON THE OUTSIDES OF THE FOLLOWING CURVES. DELINEATORS SHALL BE BI-DIRECTIONAL OR BACK-TO-BACK WHITE DELINEATORS, INSTALLED AS PER OPSD 984.101 TYPE A AND AT SPACING AS PER OTM BOOK 11, TABLE 4 FOR THE SPECIFIED RADIUS.
 - STA. 27+800 - 27+886, RADIUS 85m
 - STA. 27+893 - 27+964, RADIUS 70m

GUIDE RAIL SCHEDULE			
ID	STATION LOCATION	ROAD	DESCRIPTION OF WORKS
GR1	11+356-11+381 RT	LONG LAKE ROAD	11+361-11+381 RT - REMOVE EXISTING SBGR (35m). 11+356-11+378 RT - INSTALL NEW SBGR (31m) AS PER DETAIL A. 11+378-11+381 RT - INSTALL NEW SBEAT AND Wa-33L OBJECT MARKER
GR2	20+006-20+034 RT	TILTON LAKE ROAD	STA. 20+006 RT - INSTALL NEW SBGR (4m) AROUND ENTRANCE RADIUS PER DETAIL A. STA. 20+019-20+023 RT - REMOVE EXISTING SBGR STA. 20+019-20+034 RT - INSTALL NEW SBEAT AND Wa-33L OBJECT MARKER.
GR3	24+132-24+234 RT	TILTON LAKE ROAD	STA. 24+162 RT - REPLACE DAMAGED SECTION OF RAIL (OPSD 912.101). REPLACE BROKEN OFFSET BLOCKS (3)
GR4	27+441-27+715 RT	TILTON LAKE ROAD	STA. 27+441-27+578 RT - ADJUST MOUNTING HEIGHT PER OPSS.PROV 721. STA. 27+475 RT - REPLACE DAMAGED OFFSET BLOCK AND SECTION OF RAIL (OPSD 912.101). STA. 27+578-27+587 RT - REMOVE EXISTING ECCENTRIC LOADER. STA. 27+587-27+700 RT - INSTALL NEW SBGR (OPSD 912.185). STA. 27+700-27+715 RT - INSTALL NEW SBEAT AND Wa-33L OBJECT MARKER.
GR5	27+541-27+578 LT	TILTON LAKE ROAD	STA. 27+541-27+563 LT - ADJUST MOUNTING HEIGHT PER OPSS.PROV 721. STA. 27+563-27+578 LT - REMOVE AND REPLACE SBEAT.
GR6	28+678-28+764 RT	TILTON LAKE ROAD	STA. 28+678-28+764 RT - ADJUST MOUNTING HEIGHT PER OPSS.PROV 721.
GR7	28+695-28+768 LT	TILTON LAKE ROAD	STA. 28+695-28+710 - REMOVE AND REPLACE SBEAT AND INSTALL Wa-33L OBJECT MARKER.
GR8	40+992-41+062 LT	WAVY TRAIL	STA. 40+992-41+062 LT - REMOVE EXISTING 3CGR AND ANCHOR BLOCKS (2). STA. 40+995-41+010 LT - INSTALL NEW SBEAT AND Wa-33L OBJECT MARKER. STA. 41+010-41+046 LT - INSTALL NEW SBGR (OPSD 912.185). STA. 41+046-41+061 LT - INSTALL NEW SBEAT AND Wa-33R OBJECT MARKER.
GR9	41+024-41+195 RT	WAVY TRAIL	STA. 41+033-41+131 RT - REMOVE EXISTING 3CGR AND ANCHOR BLOCKS (2). STA. 41+024-41+039 RT - INSTALL NEW SBEAT AND Wa-33R OBJECT MARKER. STA. 41+039-41+180 RT - INSTALL NEW SBGR (OPSD 912.185). STA. 41+180-41+195 RT - INSTALL NEW SBEAT AND Wa-33L OBJECT MARKER.
GR10	50+111-50+195 LT	LAKES END ROAD	STA. 50+111-50+126 - INSTALL NEW SBT AND Wa-33L OBJECT MARKER. STA. 50+126-50+180 - INSTALL NEW SBGR (OPSD 912.185). STA. 50+180-50+195 - INSTALL NEW SBT AND Wa-33R OBJECT MARKER.

NOTES

- ACRONYMS:
 - SBGR = STEEL BEAM GUIDE RAIL
 - SBEAT = STEEL BEAM ATTENUATING TERMINAL
 - 3CGR = THREE CABLE GUIDE RAIL
 - SBT = STEEL BEAM TERMINAL
- UNLESS OTHERWISE NOTED, NEW SBGR TO BE INSTALLED AT EDGE OF EXISTING SHOULDER.



REVISIONS		
DATE	DETAILS	BY
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CAUTION

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 APPROVED:



LONG LAKE GOLD MINE ACCESS ROUTE
 ROADWAY IMPROVEMENTS

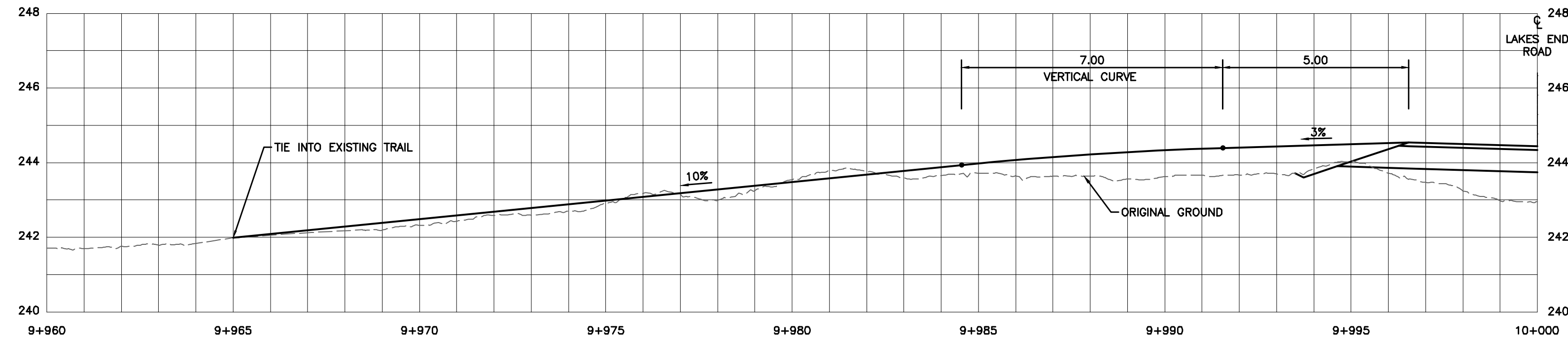
SIGNAGE AND GUIDE RAIL DETAILS

SCALE: NOT TO SCALE

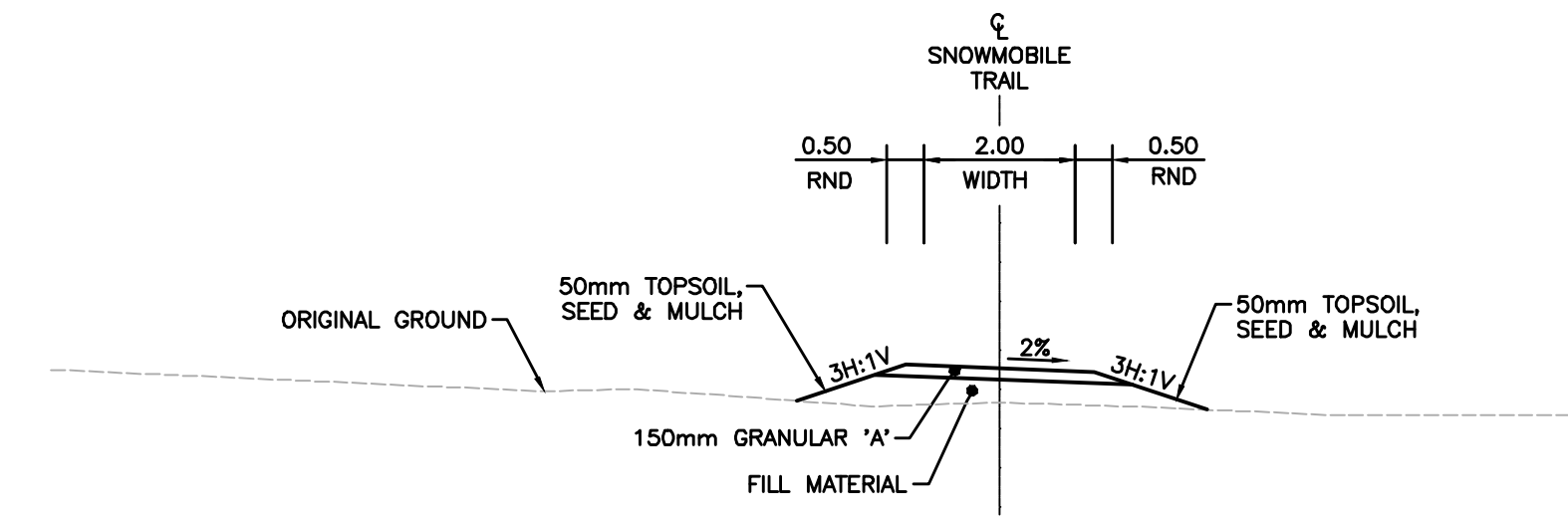
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CAD/FILE NUMBER: 20183

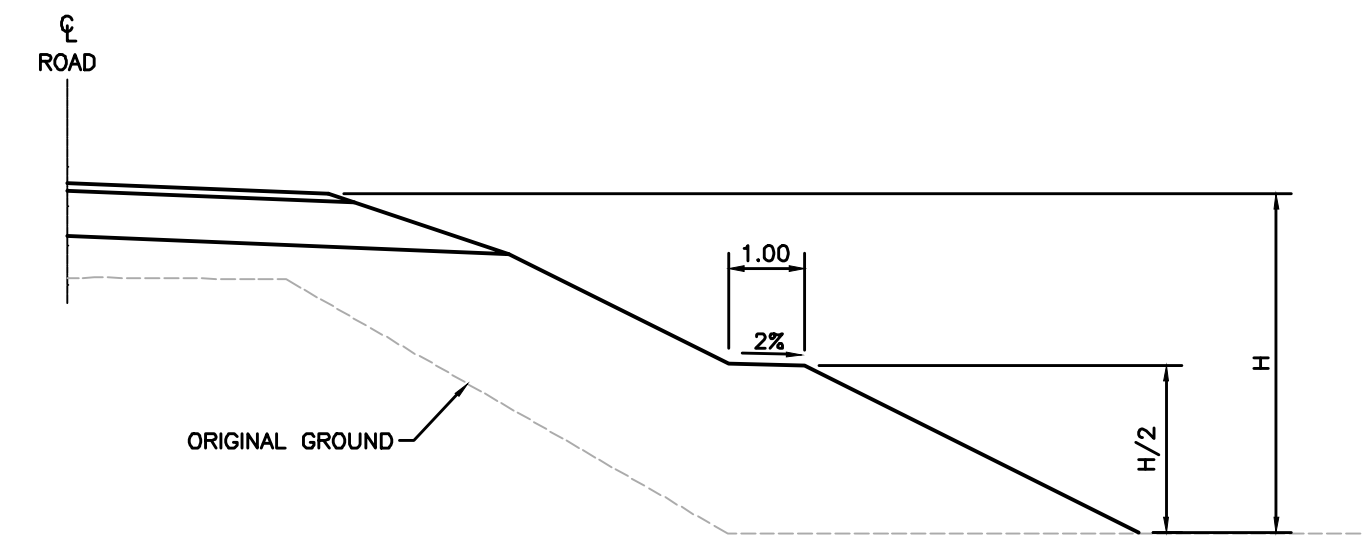
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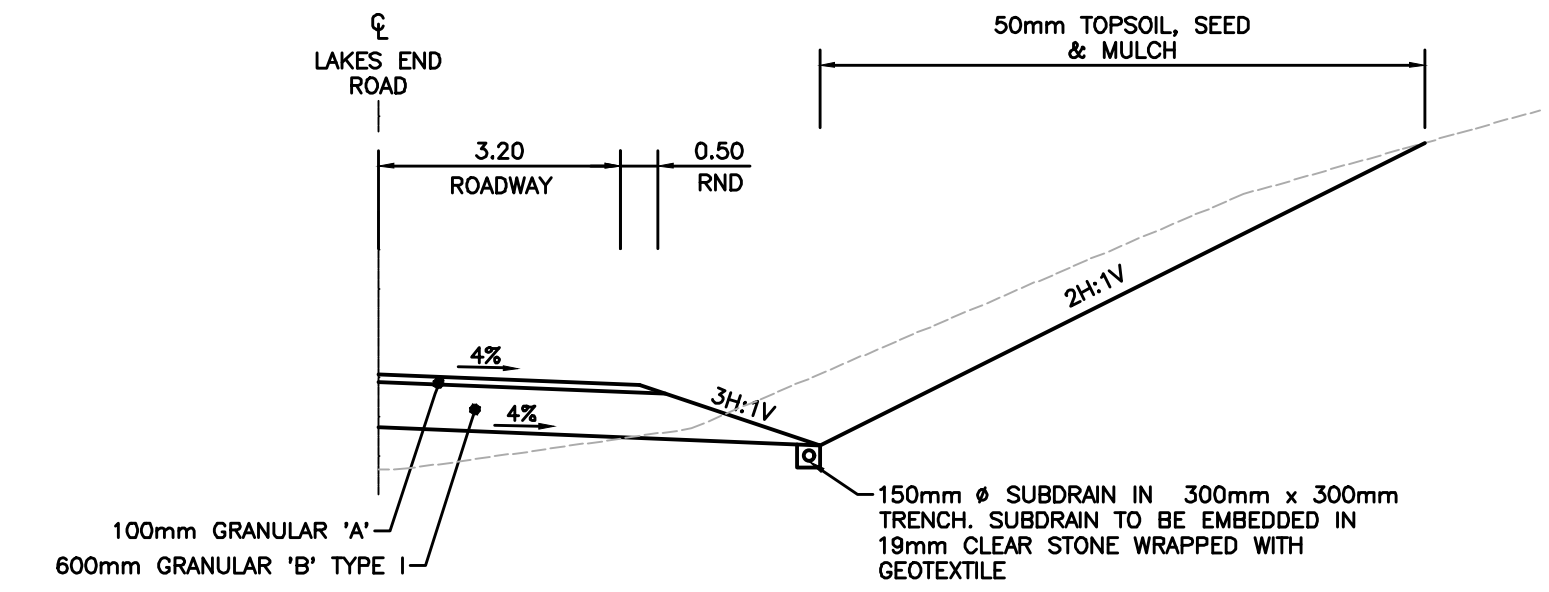
LAKES END ROAD SNOWMOBILE TRAIL REALIGNMENT PROFILE



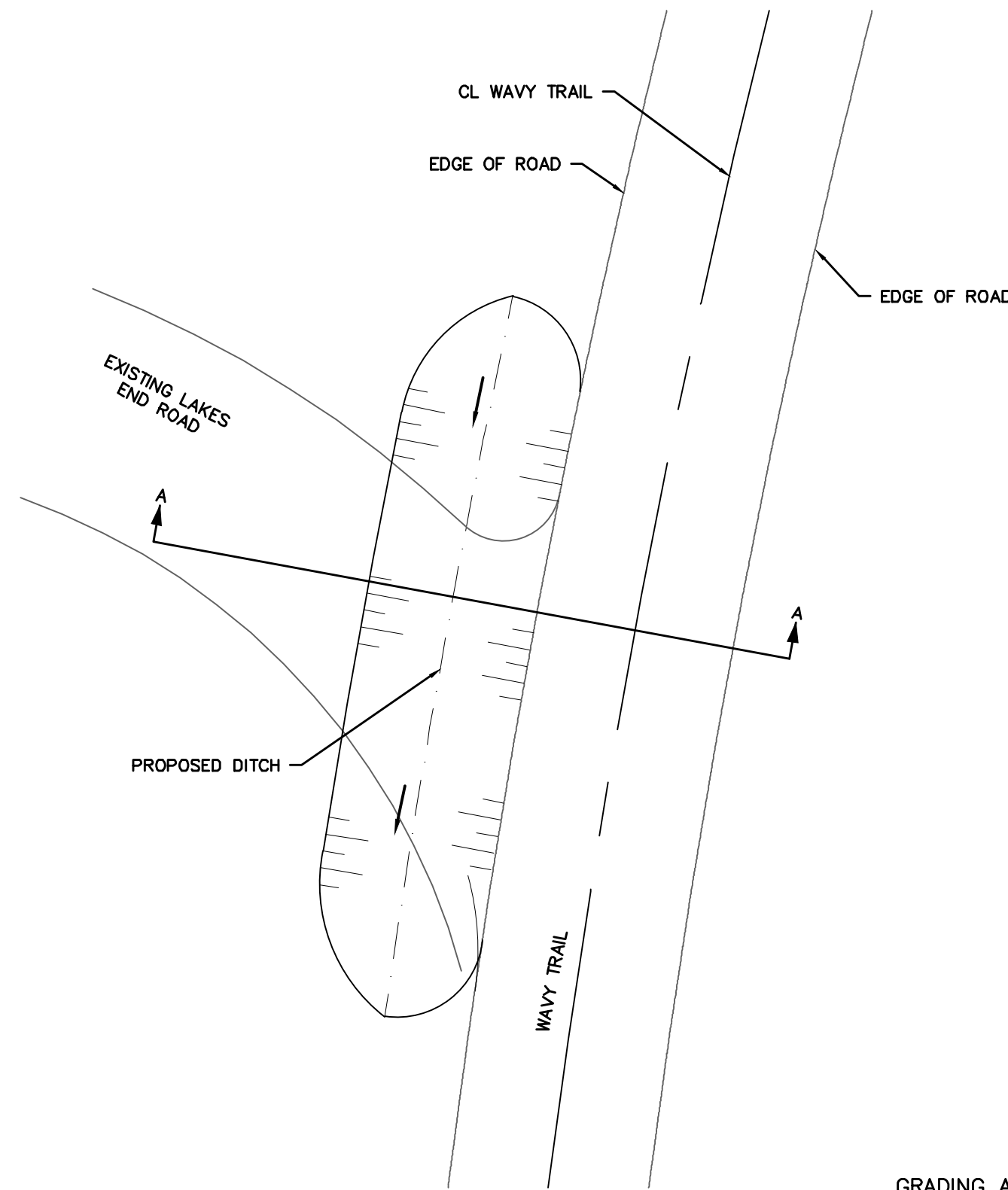
LAKES END ROAD SNOWMOBILE TRAIL REALIGNMENT TYPICAL CROSS-SECTION



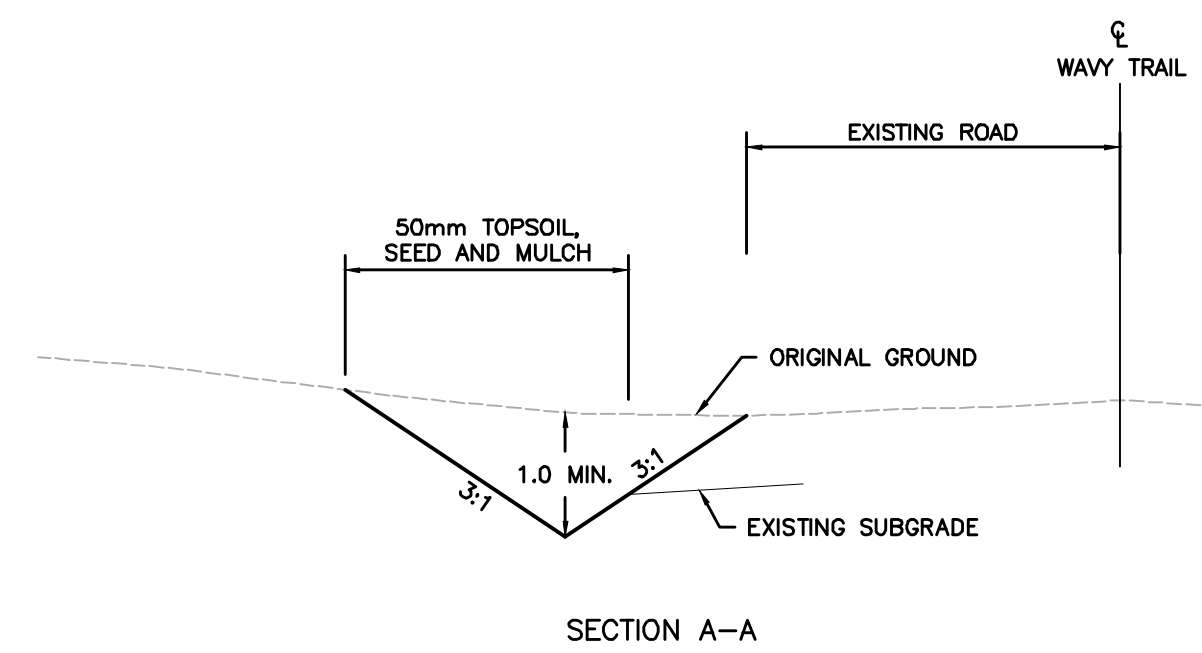
MID-SLOPE BENCH DETAIL (WHERE H > 5.5m)



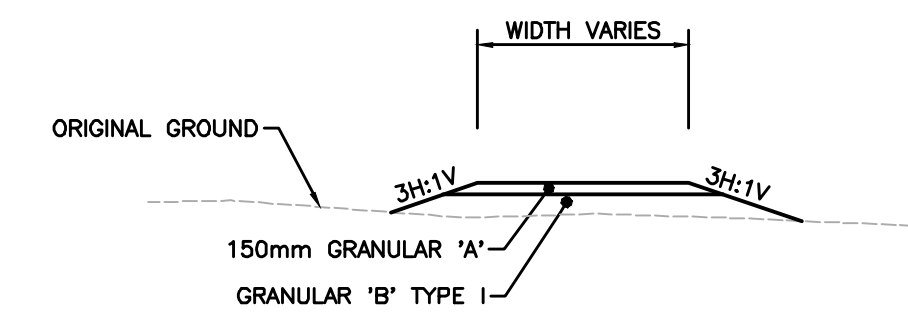
LAKES END ROAD SUBDRAIN DETAIL STA. 50+170 - 50+200 RT



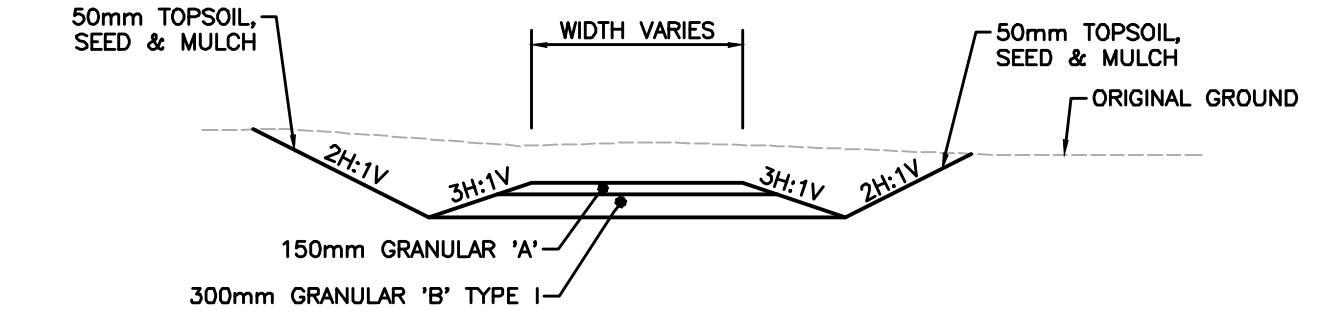
GRADING AT EXISTING LAKES END ROAD INTERSECTION



SECTION A-A



FILL SECTION



CUT SECTION

ENTRANCE TYPICAL SECTIONS

REVISIONS

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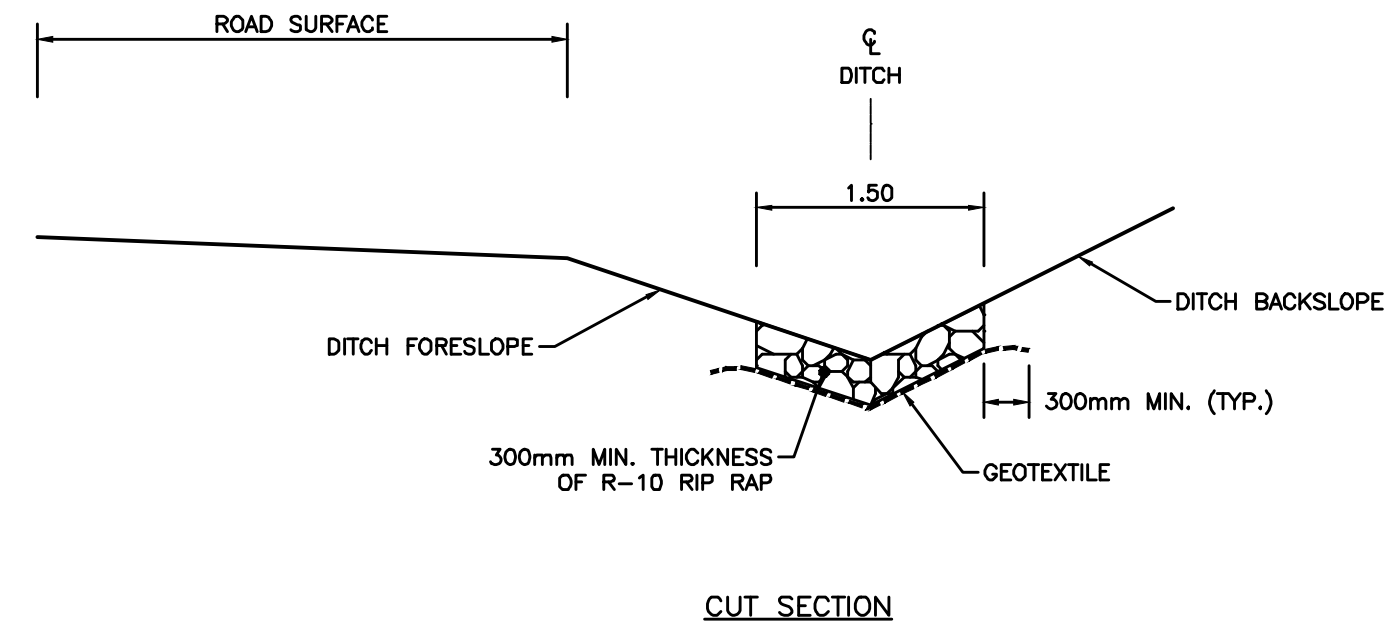
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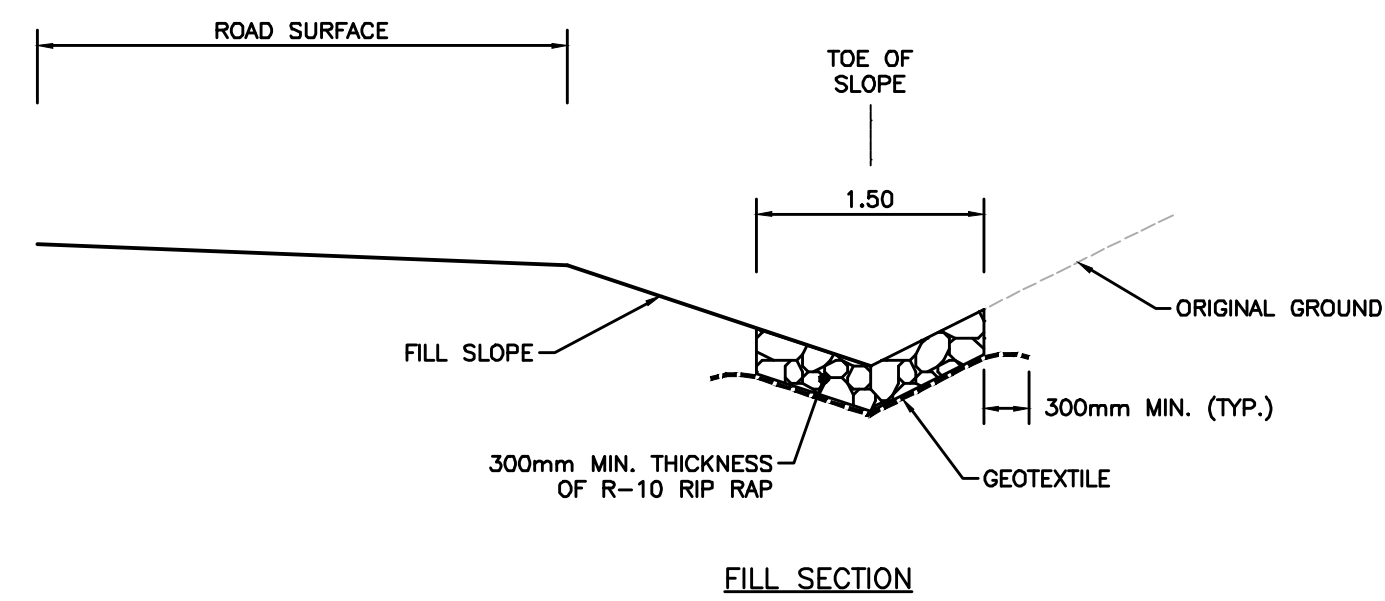
LONG LAKE GOLD MINE ACCESS ROUTE ROADWAY IMPROVEMENTS

MISCELLANEOUS DETAILS

SCALE:	NOT TO SCALE
CONTRACT NO.:	
CAD/FILE NUMBER:	20183
SHEET NO.:	405



CUT SECTION



FILL SECTION

RIP RAP IN DITCH
 (SEE TABLES FOR LOCATIONS)

LAKES END ROAD
 RIP RAP IN DITCH LOCATIONS

STATION LOCATION	OFFSET (LT/RT)
50+150 - 50+240	RT
50+320 - 50+400	RT
50+340 - 50+460	LT
50+590 - 50+650	RT
50+600 - 50+670	LT
50+680 - 50+690	RT
50+700 - 50+720	RT
50+750 - 50+790	LT
50+780 - 50+790	RT
50+860 - 50+910	RT
50+890 - 50+900	LT
50+950 - 50+980	LT
50+960 - 50+980	RT
51+160 - 51+190	RT
51+200 - 51+245	RT
51+320 - 51+350	LT
51+300 - 51+360	RT
51+480 - 51+520	RT
51+480 - 51+540	LT
51+570 - 51+600	RT
51+575 - 51+600	LT
51+660 - 51+700	LT
52+010 - 52+050	LT
52+090 - 52+110	RT
52+130 - 52+150	LT
52+170 - 52+190	LT
52+370 - 32+410	LT
52+370 - 52+420	RT
52+640 - 52+700	LT
52+730 - 52+740	LT
52+760 - 52+795	RT
52+770 - 52+795	LT
52+830 - 52+860	LT
52+960 - 53+050	RT
53+020 - 53+100	LT
53+130 - 53+160	LT
53+140 - 53+150	RT
53+200 - 53+228	RT

SITE ACCESS ROAD
 RIP RAP IN DITCH LOCATIONS

STATION LOCATION	OFFSET (LT/RT)
60+230 - 60+280	LT
60+390 - 60+440	RT
60+390 - 60+400	LT
60+550 - 60+560	RT
60+730 - 60+830	RT
60+870 - 60+900	RT
60+880 - 60+900	LT
61+410 - 61+440	LT
61+580 - 61+630	RT
61+600 - 61+610	LT
61+900 - 61+920	RT
62+020 - 62+050	RT
62+020 - 62+050	LT
62+310 - 62+420	LT
62+295 - 62+320	RT
62+370 - 62+390	RT
63+050 - 63+130	LT
63+080 - 63+100	RT
63+140 - 63+180	LT
63+230 - 63+300	LT
63+390 - 63+410	LT
63+470 - 63+480	LT
63+530 - 63+580	LT
63+620 - 63+725	RT

REVISIONS

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LONG LAKE GOLD MINE ACCESS ROUTE
 ROADWAY IMPROVEMENTS

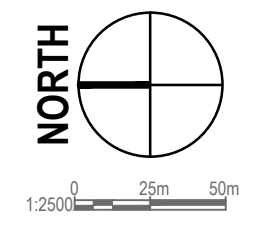
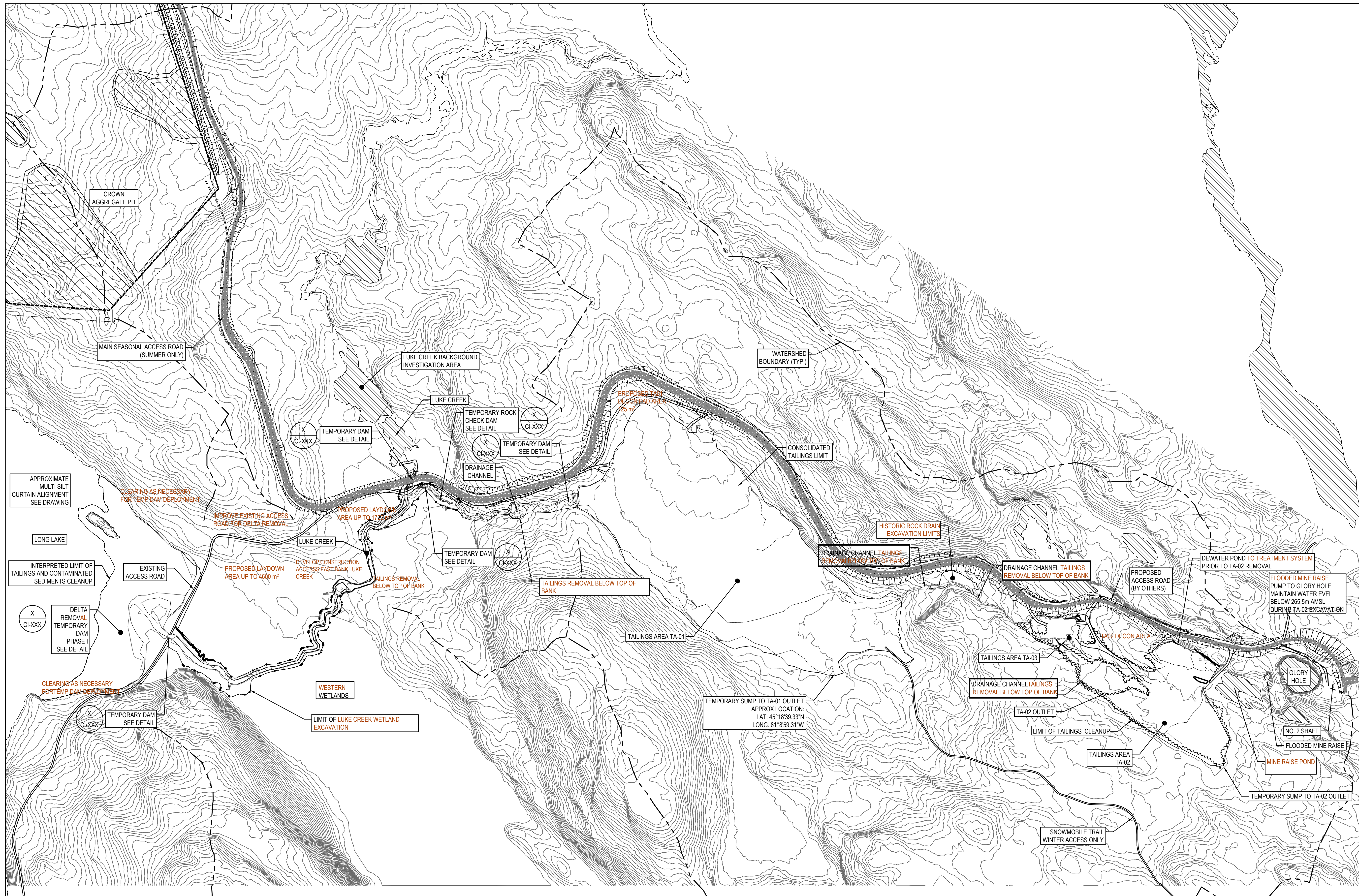
MISCELLANEOUS DETAILS

SCALE: NOT TO SCALE

CONTRACT NO.:

CAD/FILE NUMBER: 20183

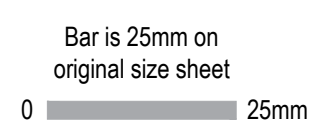
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 2. CONTOURS DERIVED FROM 2014 AIRBORNE LIDAR SURVEY NAD83(CSR5) UTM ZONE 17.
 3. TAILINGS AND FUGITIVE TAILINGS ARE TO BE EXCAVATED/ RELOCATED TO THE CONSOLIDATED AREA AT TA-01.
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 5. TAILINGS AND CONTAMINATED SEDIMENT LIMITS WERE INTERPRETED BASE ON THE GEOTECHNICAL DATA COLLECTED DURING THE 2015/16 INVESTIGATION. SEE DOCUMENTS 624398-0000-4GER-0001 AND 624398-0000-4GER-0002 FOR DETAILS.
 6. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH DETAILED DESIGN REPORT DOC NO. 624398-0000-4GER-0003.

- LEGEND:**
- BH-15-05 BOREHOLE (2015/16 SNC LAVALIN)
 - V-BH08 SAMPLING LOCATION (2015 SNC LAVALIN)
 - CH-LL-MW03 MONITORING WELL (2014 CH2MHILL)
 - CH-LL-SE06 SEDIMENT SAMPLE LOCATION
 - CH-LL-TS04 TAILINGS SAMPLE LOCATION (2014 CH2MHILL)
 - CH-LL-MP03 MINI-PIEZOMETER (2014 CH2MHILL)
 - LC-HAB07 PROPOSED SAMPLING LOCATIONS (2021 GHD)
 - WATERSHED BOUNDARY
 - EXISTING GROUND CONTOURS
 - WATER COURSES
 - WATER BODIES
 - EXISTING TAILINGS/ FUGITIVE TAILINGS AND CONTAMINATED SEDIMENT
 - SUSPECTED HISTORIC ROCKFILL

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No.	Issue	Checked	Approved	Date
Author	C. JOHNSON	Drafting Check	Project Manager	
Designer		Design Check	Project Director	#####



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Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

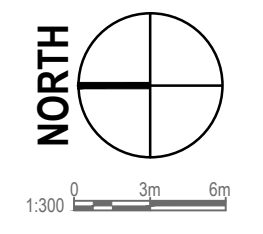
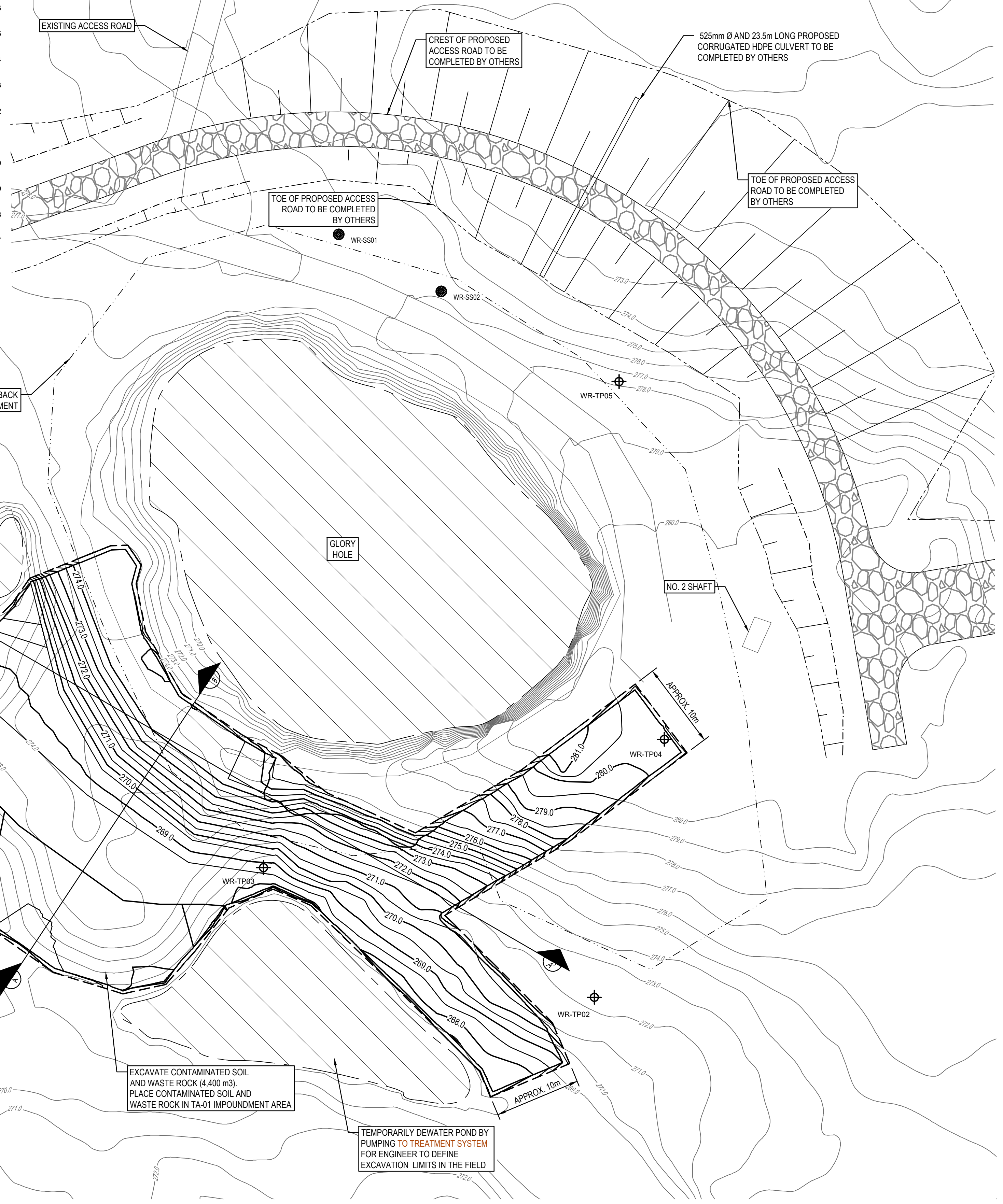
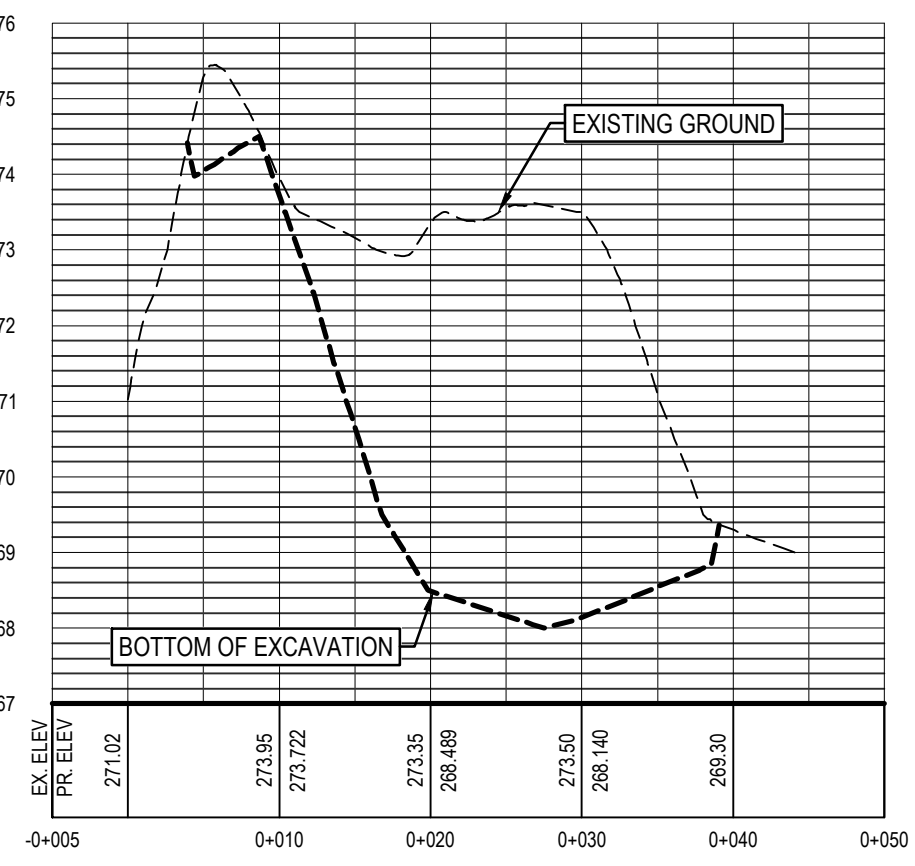
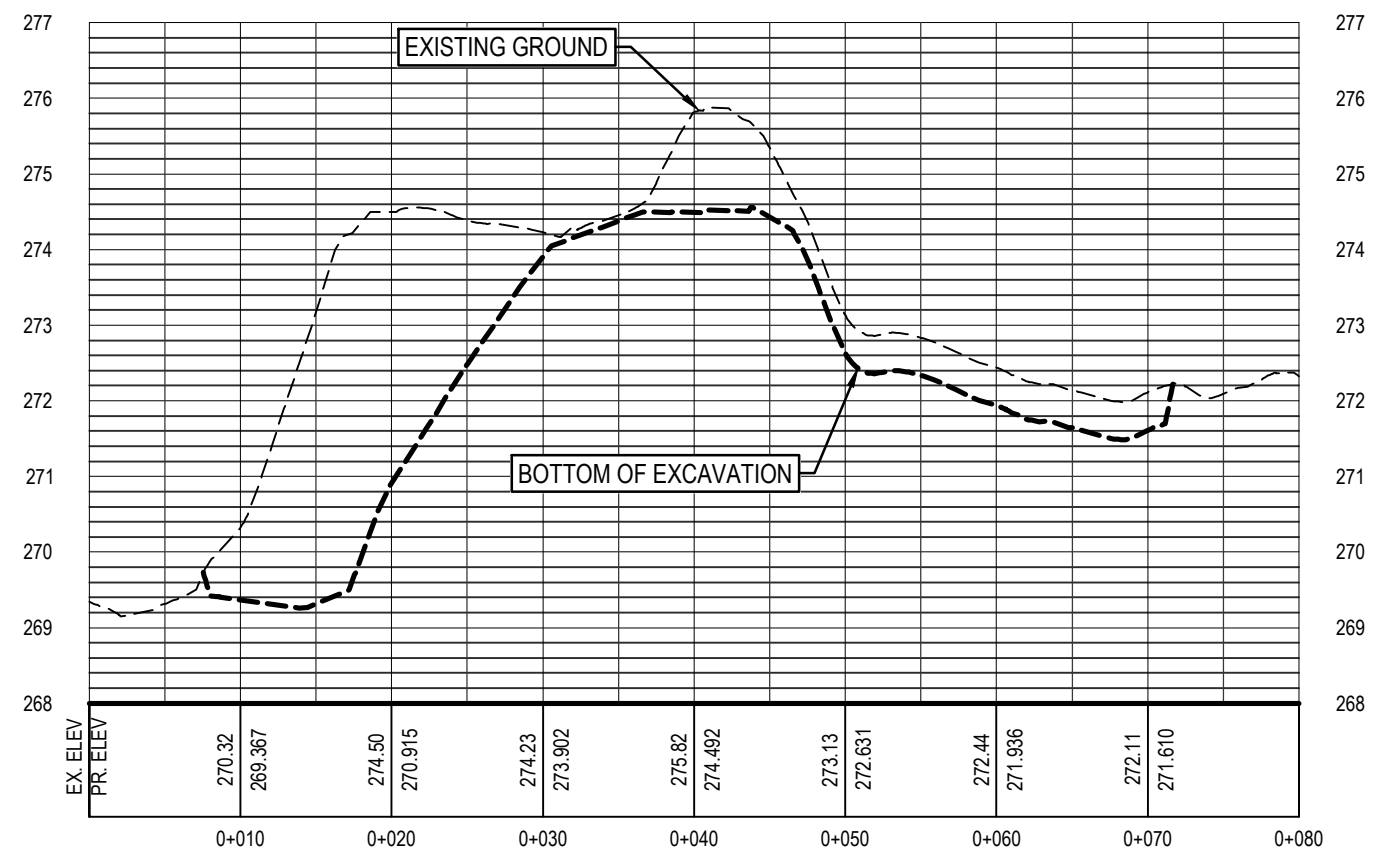
Title **WATER MANAGEMENT PLAN**

Project No. **12565543** Date **Oct 12/23** Scale **1:2500**

PRELIMINARY

Sheet No. **CI-104**

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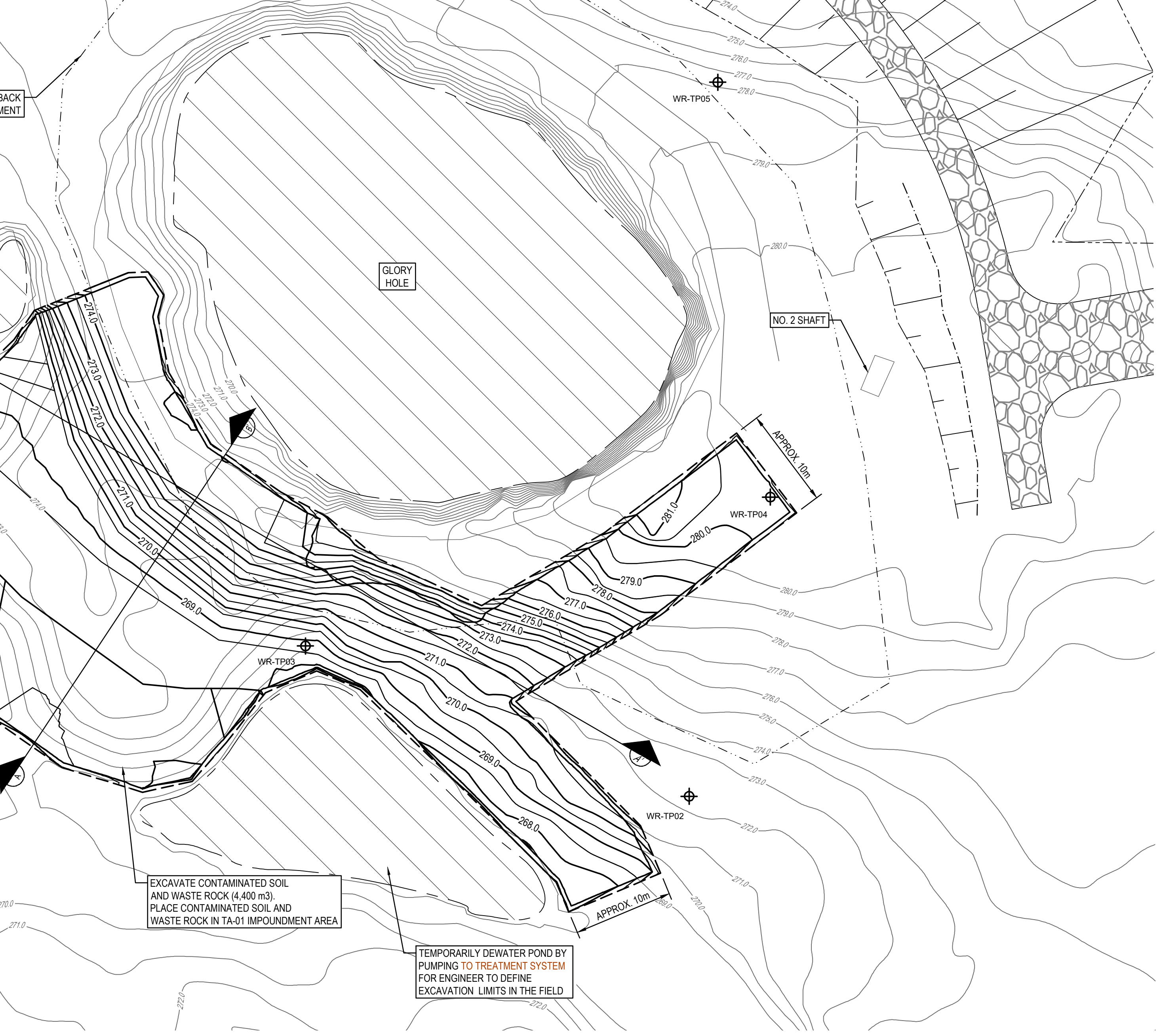
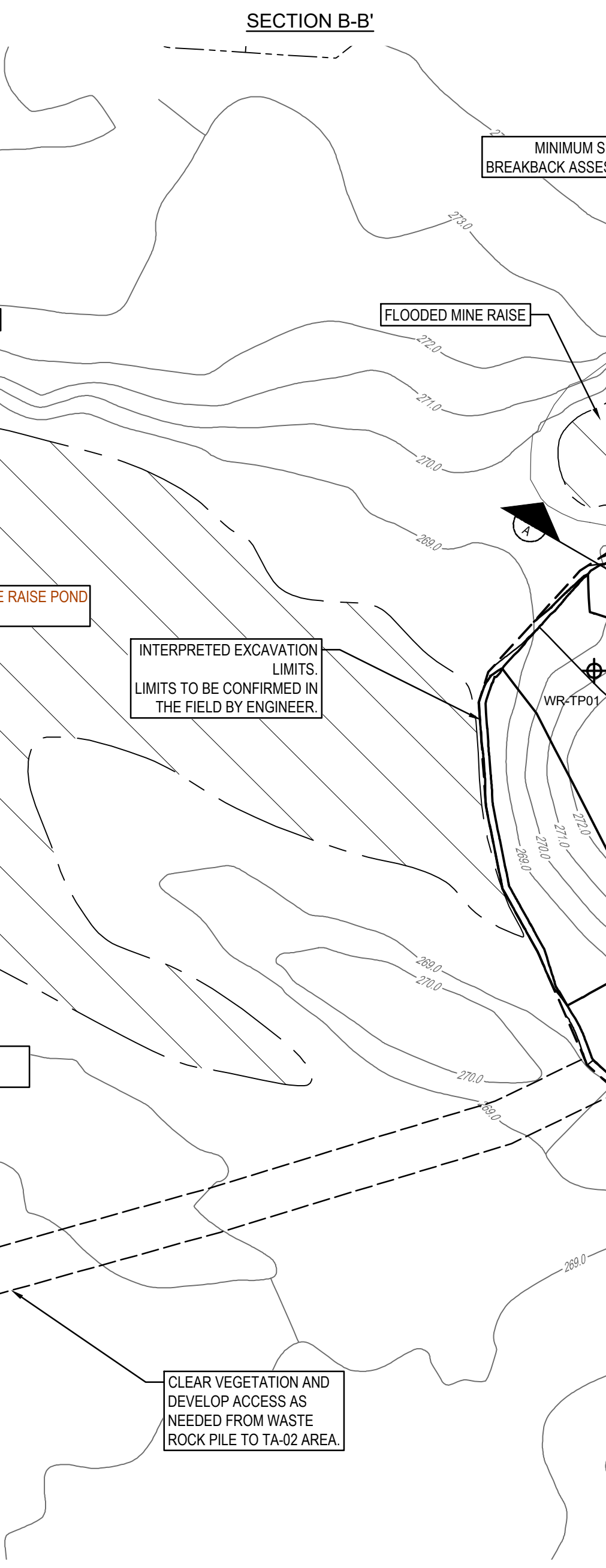


NOTE:

- GHD HAS NOT EVALUATED STABILITY WITHIN THE DEFINED MINIMUM SETBACK AREA. CONTRACTOR TO VERIFY WITH OWNER'S SAFETY PRECAUTIONS FOR EXCAVATING WITHIN MINIMUM SETBACK LIMITS.
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- LEGEND:**
- EXCAVATED CONTAMINATED SOIL LINE LIMITS
 - TOE OF PROPOSED ACCESS ROAD
 - DEVELOP ACCESS TO WASTE ROCK PILE FOR REMOVAL
 - WR-TP01 SURFACE SOIL SAMPLING LOCATIONS (2021 GHD)
 - V-BH08 TEST PIT (2021 GHD)
 - MINIMUM SETBACK BREAKBACK ASSESSMENT
 - WATERSHED BOUNDARY
 - EXISTING GROUND CONTOURS
 - EXCAVATION CONTOURS
 - EXISTING ACCESS ROAD
 - WATER COURSES
 - WATER BODIES
 - PROPOSED ACCESS ROAD PATH

REFERENCES FOR TOPOGRAPHY:
 - SURVEY DATA FROM 2014
 - AIRBORNE LIDAR SURVEY



PRELIMINARY

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No.	Issue	Checked	Approved
Author	C. JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

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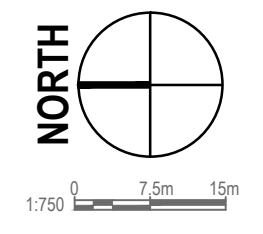


Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
 Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN WASTE ROCK AREA**

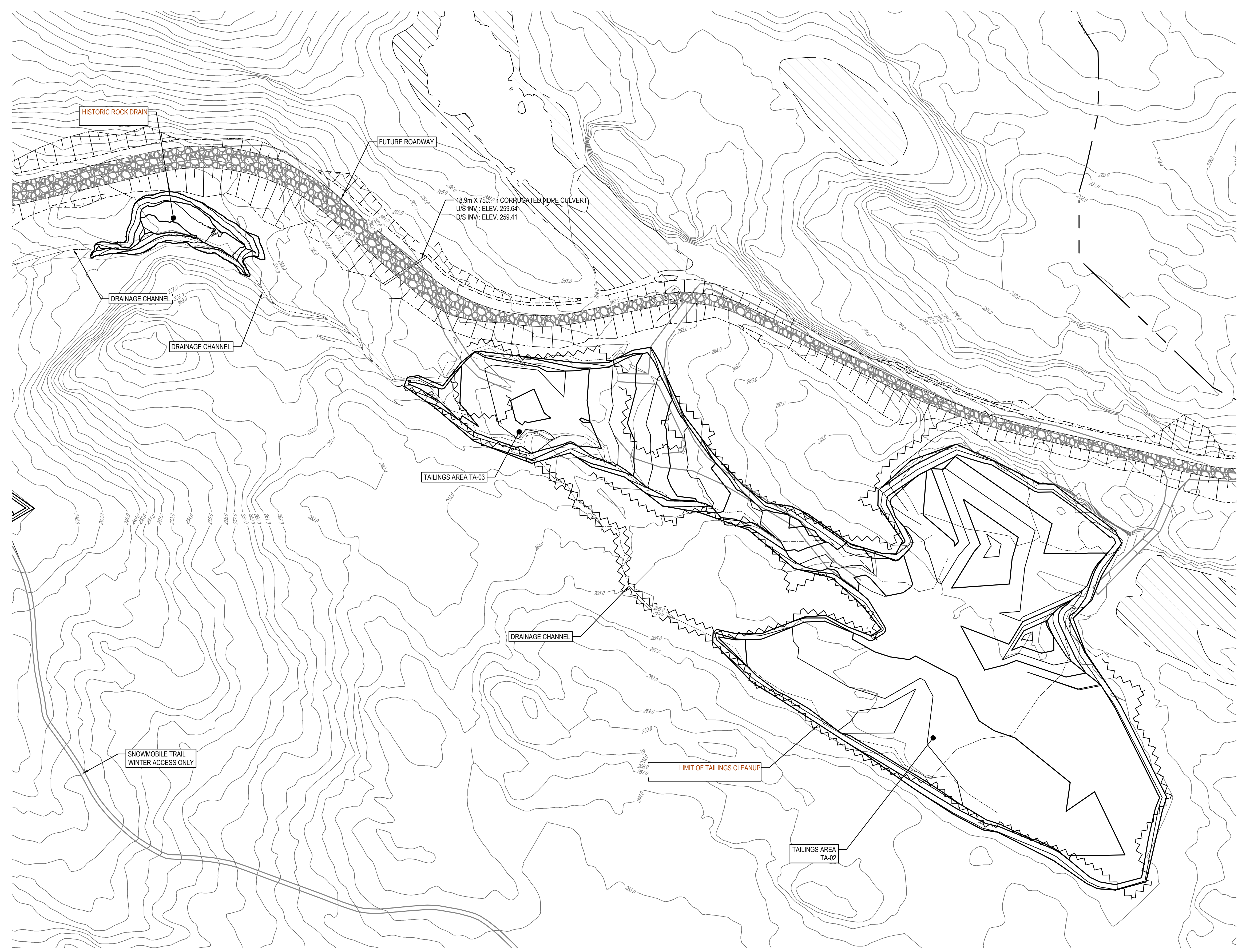
Project No. **12565543** Date **Oct 12/23** Scale **1:300**

Size **ANSI D**
 Sheet No. **CI-105**



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- LEGEND:**
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 - CH-LL-SE06 SEDIMENT SAMPLE LOCATION
 - CH-LL-TS04 TAILINGS SAMPLE LOCATION (2014 CH2MHILL)
 - CH-LL-MP03 MINI-PIEZOMETER (2014 CH2MHILL)
 - WR-TP01 PROPOSED SURFACE SOIL SAMPLING LOCATIONS (2021 GHD)
 - T3E-TP01 PROPOSED TEST PIT LOCATIONS (2021 GHD)
 - T2-MW01-2021 PROPOSED WELL LOCATIONS (2021 GHD)
 - WATERSHED BOUNDARY
 - EXISTING GROUND CONTOURS
 - WATER COURSES
 - WATER BODIES
 - EXISTING TAILINGS/ FUGITIVE TAILINGS AND CONTAMINATED SEDIMENT
 - SUSPECTED HISTORIC ROCKFILL



PRELIMINARY

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No.	Issue	Checked	Approved
Author	C. JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

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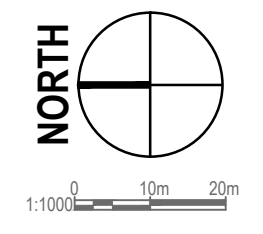
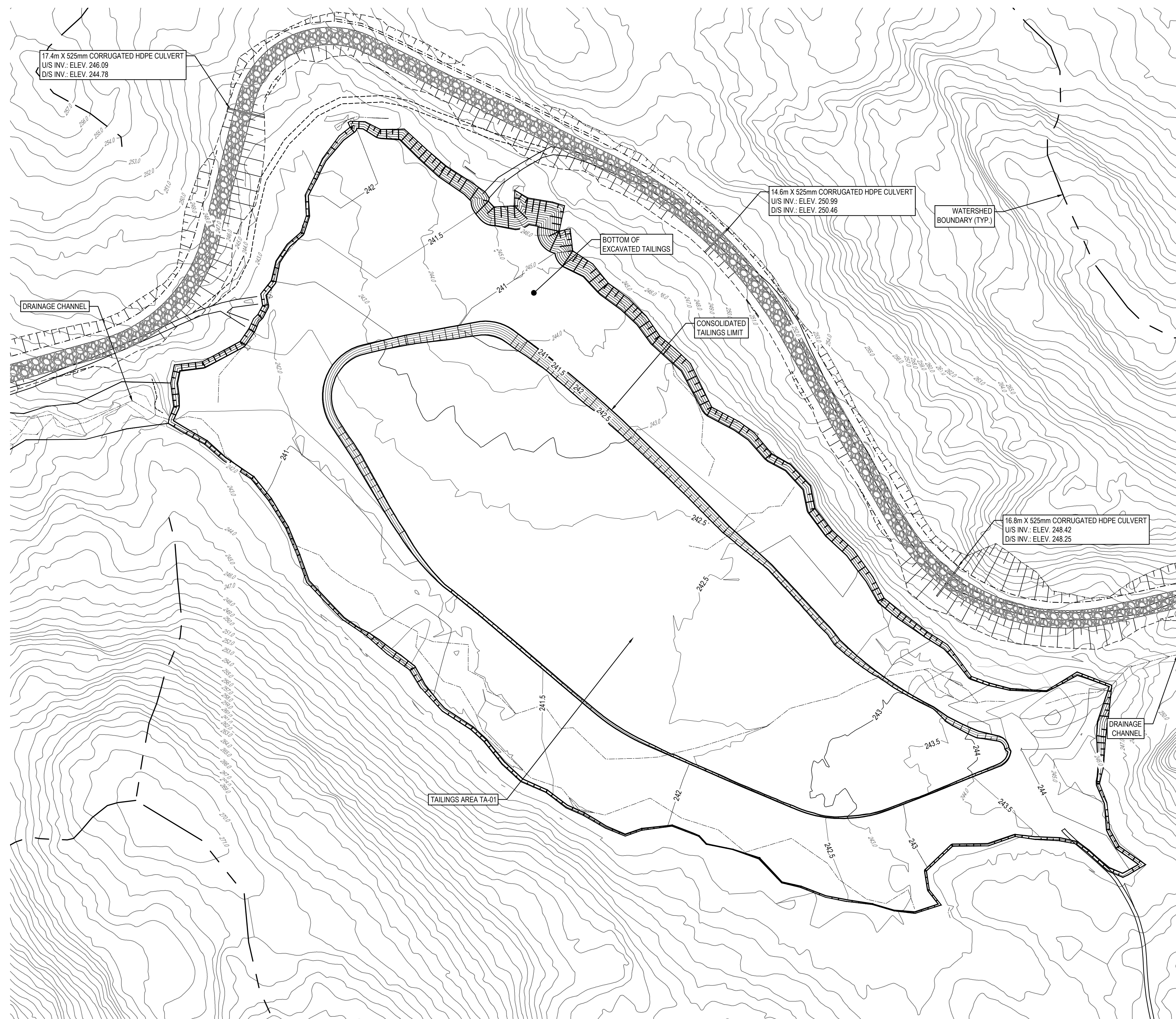
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Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**
Project No. **12565543** Date **Oct 12/23** Scale **1:750**

Title **REMEDIATION PLAN AREAS TA-02, TA-03 AND HISTORIC ROCK DRAIN AREA**
Sheet No. **CI-106**

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 - CH-LL-MW03 MONITORING WELL (2014 CH2MHILL)
 - CH-LL-SE06 SEDIMENT SAMPLE LOCATION
 - CH-LL-TS04 TAILINGS SAMPLE LOCATION (2014 CH2MHILL)
 - CH-LL-MP03 MINI-PIEZOMETER (2014 CH2MHILL)
 - T2W-TP01 PROPOSED TEST PIT LOCATIONS (2021 GHD)
 - WATERSHED BOUNDARY
 - EXISTING GROUND CONTOURS
 - WATER COURSES
 - WATER BODIES
 - EXISTING TAILINGS/ FUGITIVE TAILINGS AND CONTAMINATED SEDIMENT
 - SUSPECTED HISTORIC ROCKFILL

PRELIMINARY

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Author	C.JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

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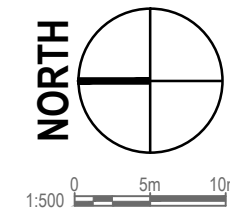
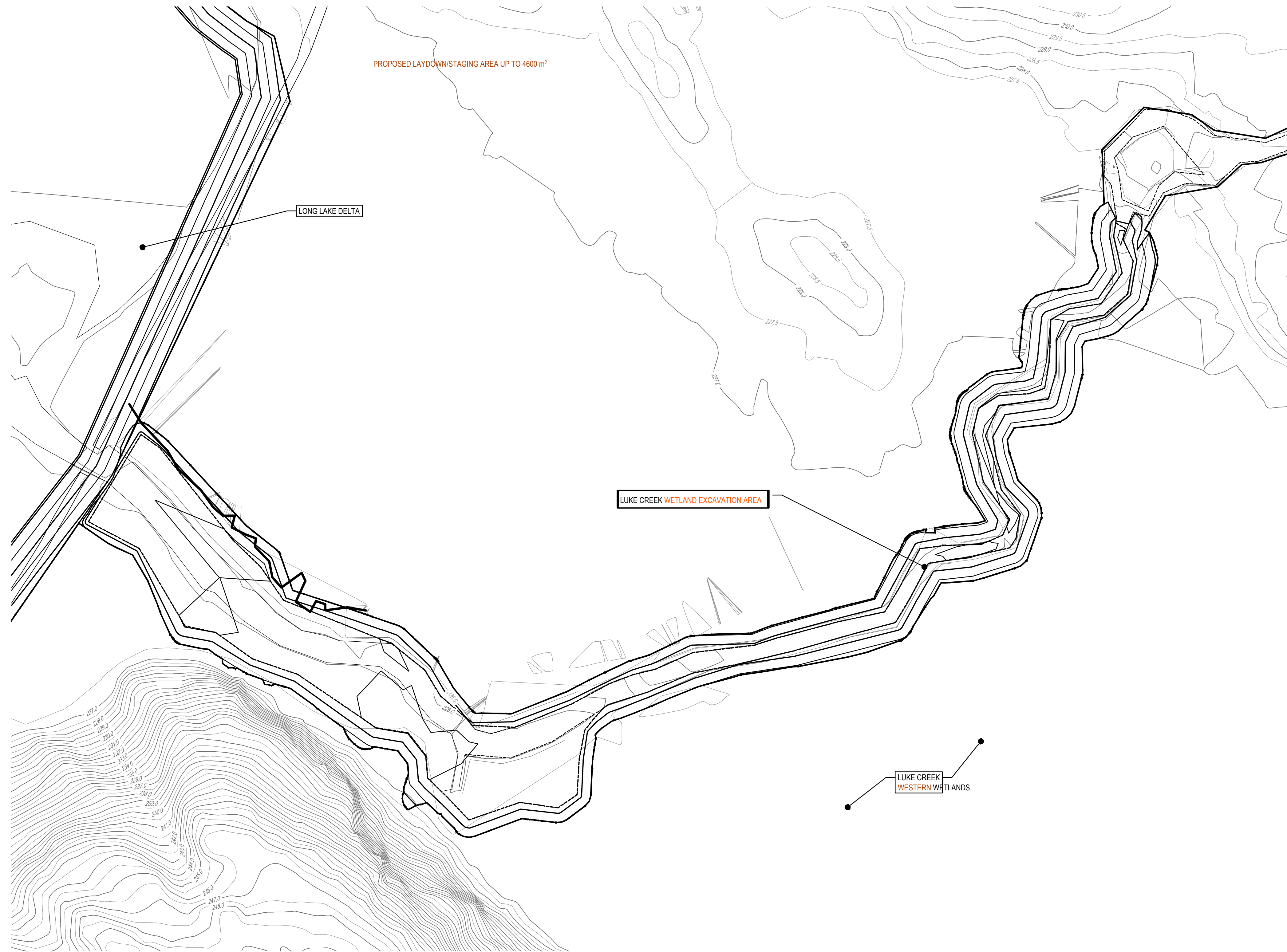
Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN TAILINGS AREA TA-01 BOTTOM OF EXCAVATION**

Project No. **12565543** Date **Oct 11/23** Scale **1:1000**

Sheet No. **CI-107**

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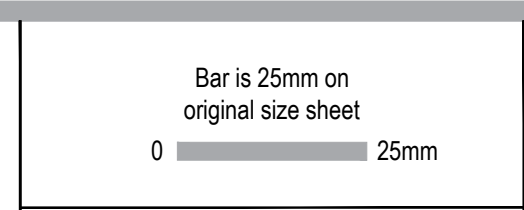


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PRELIMINARY

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No.	Issue	Checked	Approved	Date
Author	C.JOHNSON	Drafting Check	Project Manager	
Designer		Design Check	Project Director	#####

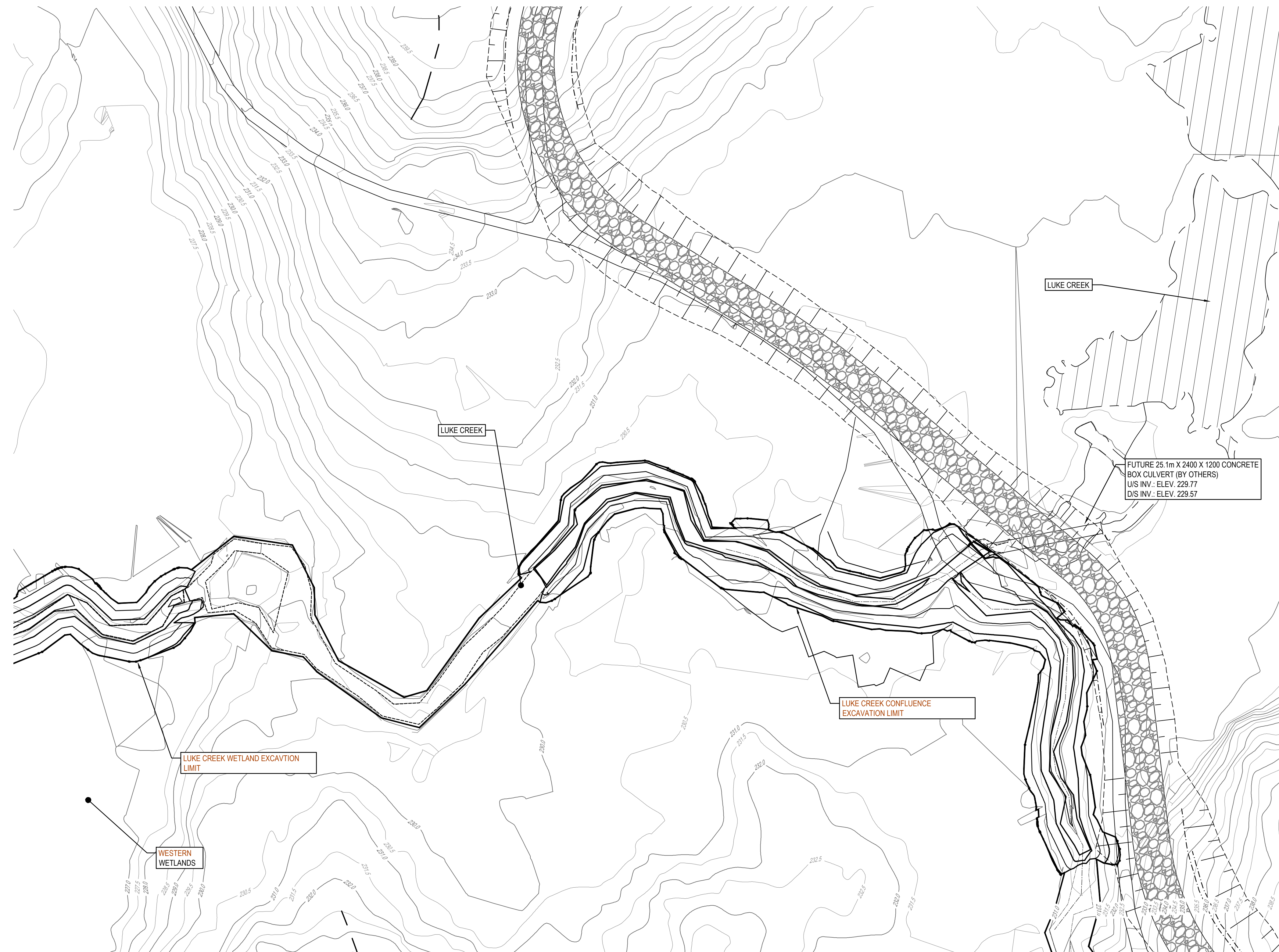
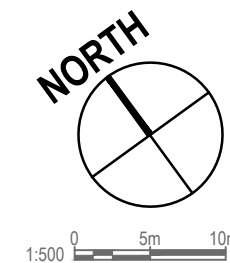


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Client	MINISTRY OF NORTHERN DEVELOPMENT AND MINES
Project	THE CLEAN-UP OF THE LONG LAKE GOLD MINE
Project No.	12565543
Date	Oct 11/23
Scale	1:500

Title	REMEDIATION PLAN LUKE CREEK AND DRAINAGE CHANNEL 1 OF 3
Sheet No.	CI-108



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PRELIMINARY

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Author	C.JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

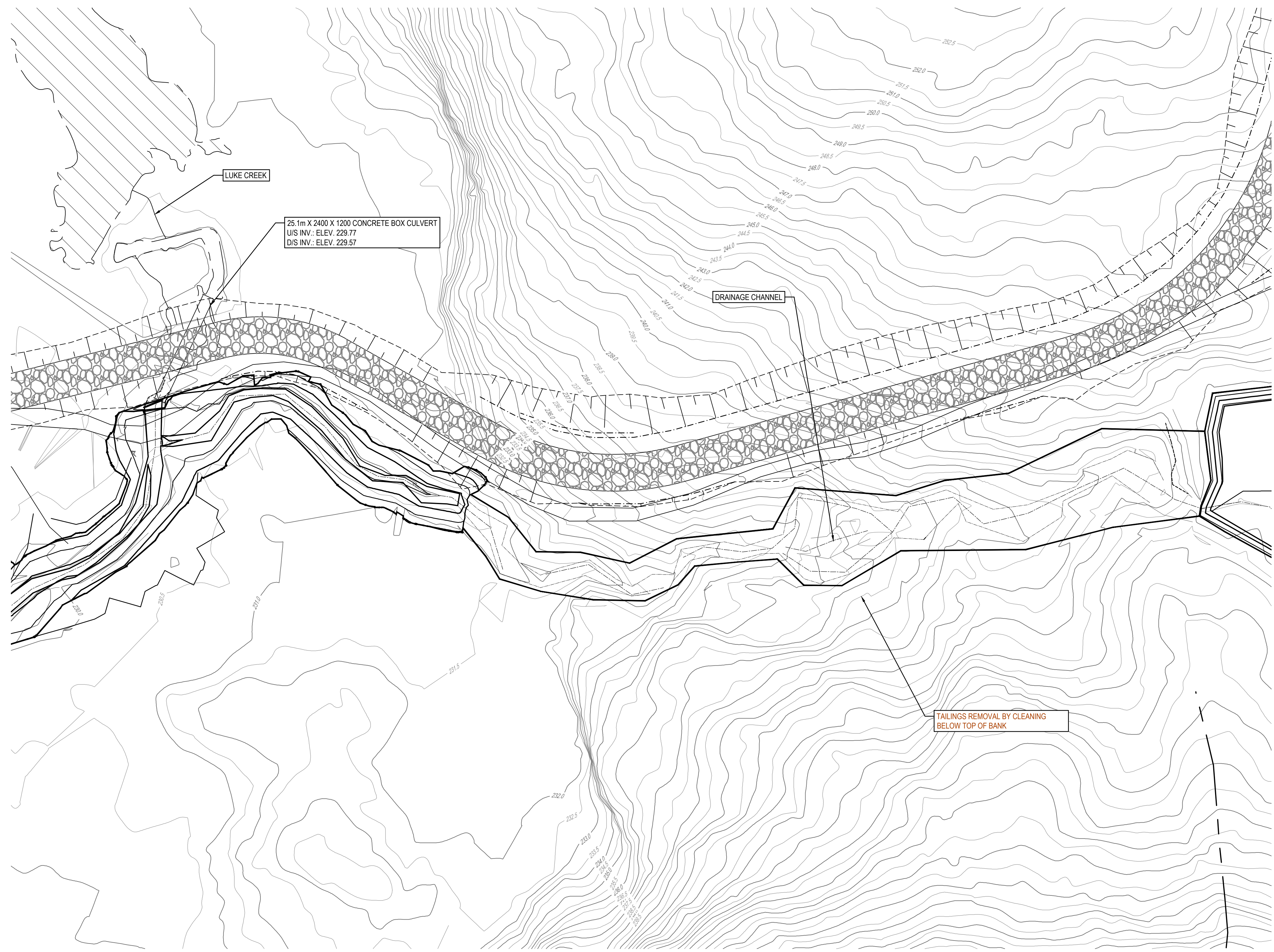
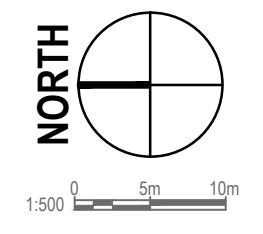
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Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**
Project No. **12565543** Date **Oct 11/23** Scale **1:500**

Title **REMEDIATION PLAN LUKE CREEK AND DRAINAGE CHANNEL 2 OF 3**
Sheet No. **CI-109**



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PRELIMINARY

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No.	Issue	Checked	Approved
Author	C.JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

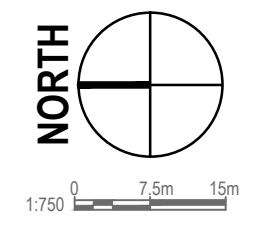
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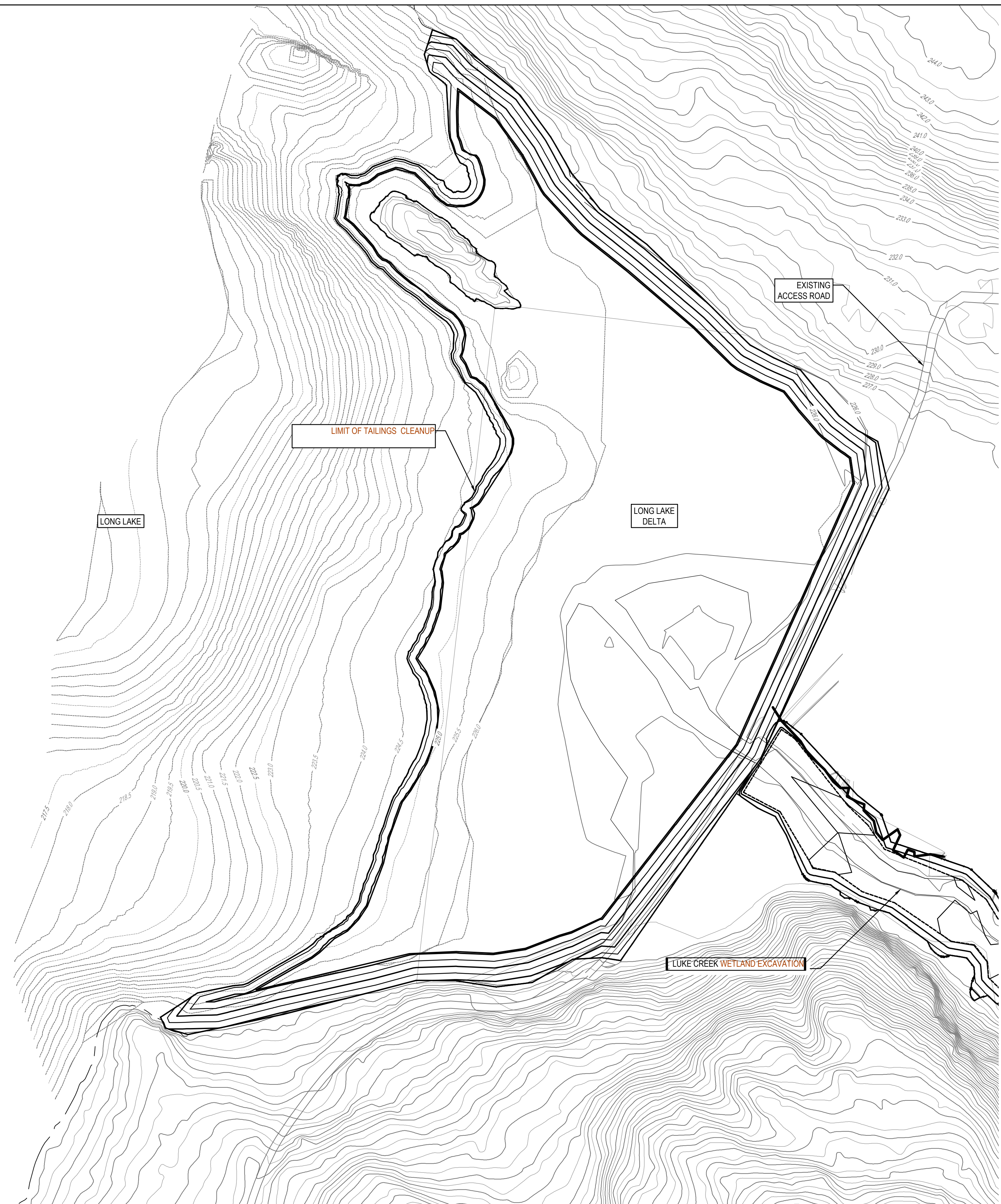
Client	MINISTRY OF NORTHERN DEVELOPMENT AND MINES
Project	THE CLEAN-UP OF THE LONG LAKE GOLD MINE
Project No.	12565543
Date	Oct 11/23
Scale	1:500

Title	REMEDIATION PLAN LUKE CREEK AND DRAINAGE CHANNEL
Sheet No.	3 OF 3
Size	ANSI D
Sheet No.	CI-110



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No.	Issue	Checked	Approved	Date
Author	C.JOHNSON	Drafting Check	Project Manager	
Designer		Design Check	Project Director	#####

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Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Project No. **12565543**

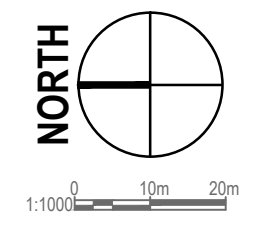
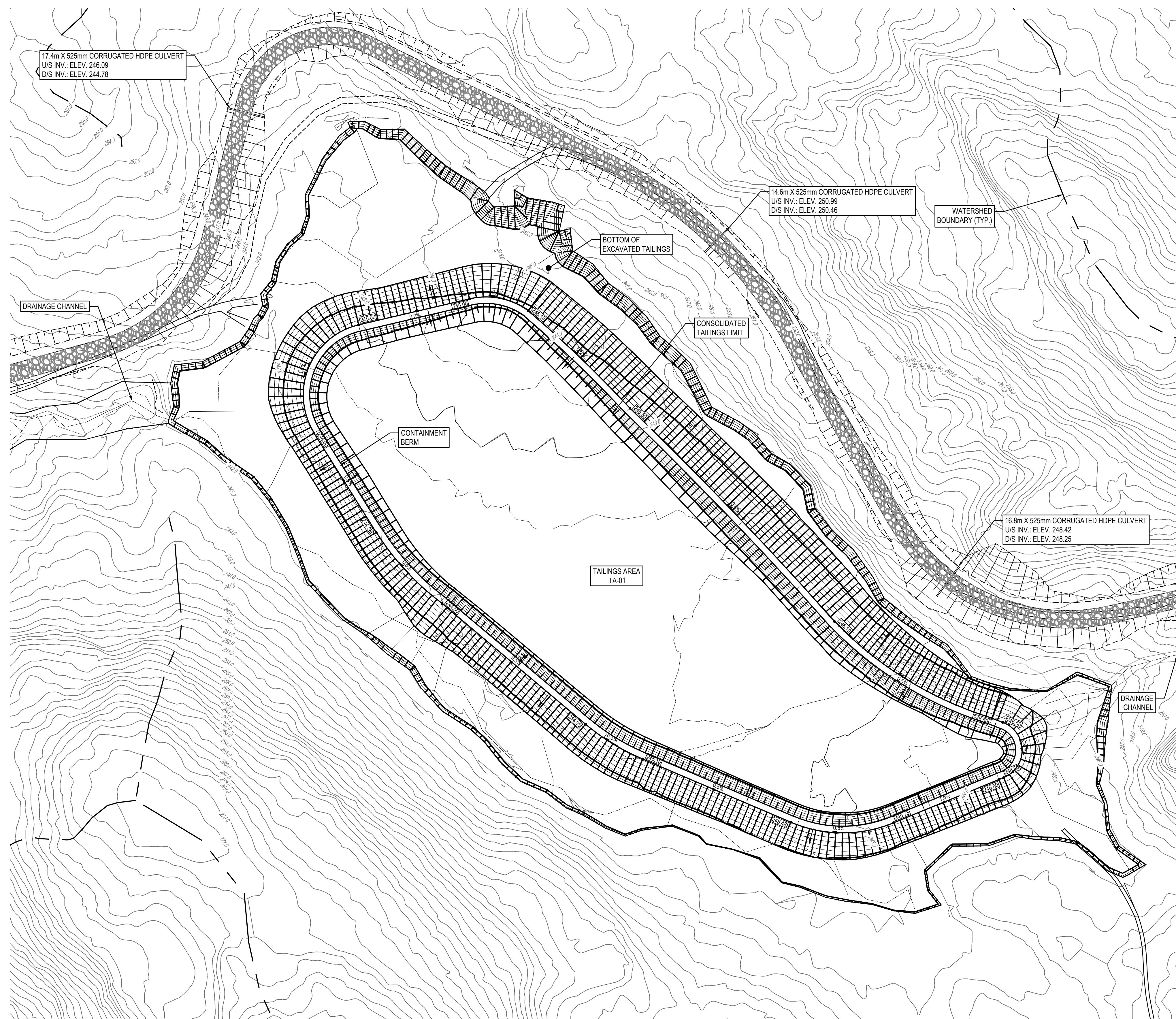
Date **Oct 11/23**

Scale **1:1000**

Title **REMEDIATION PLAN LONG LAKE TAILINGS DELTA BOTTOM OF EXCAVATION**

Sheet No. **CI-111**

Size **ANSI D**



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PRELIMINARY

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No.	Issue	Checked	Approved
Author	C.JOHNSON	Drafting Check	Project Manager
Designer		Design Check	Project Director

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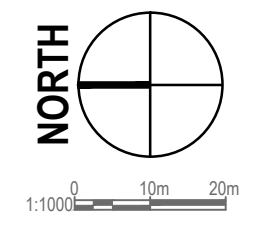
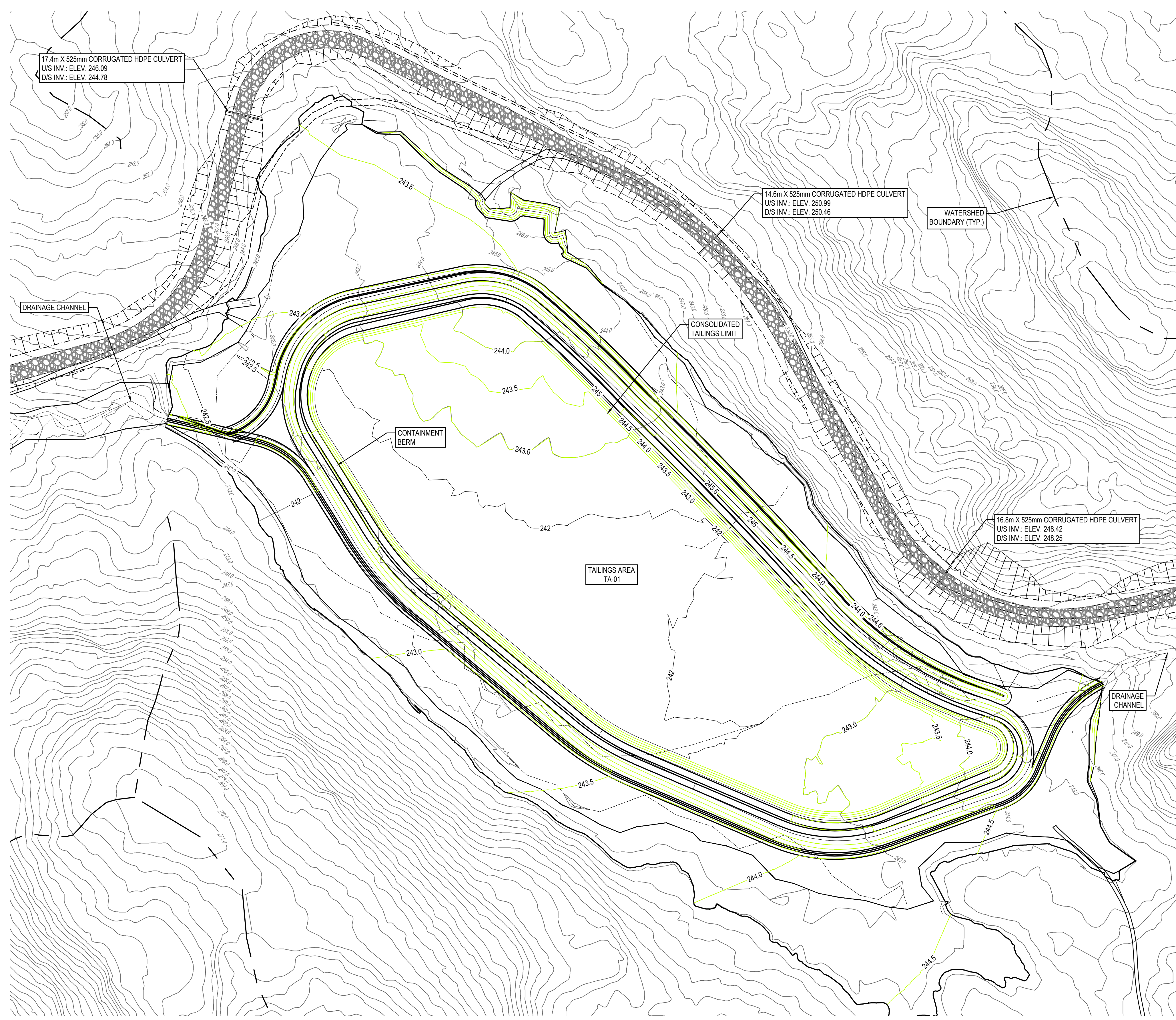


Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN TAILINGS AREA TA-01 CONTAINMENT BERM**

Project No. **12565543** Date **Oct 11/23** Scale **1:1000**

Sheet No. **CI-112**



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PRELIMINARY

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Designer		Design Check	Project Director

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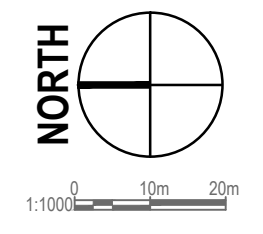
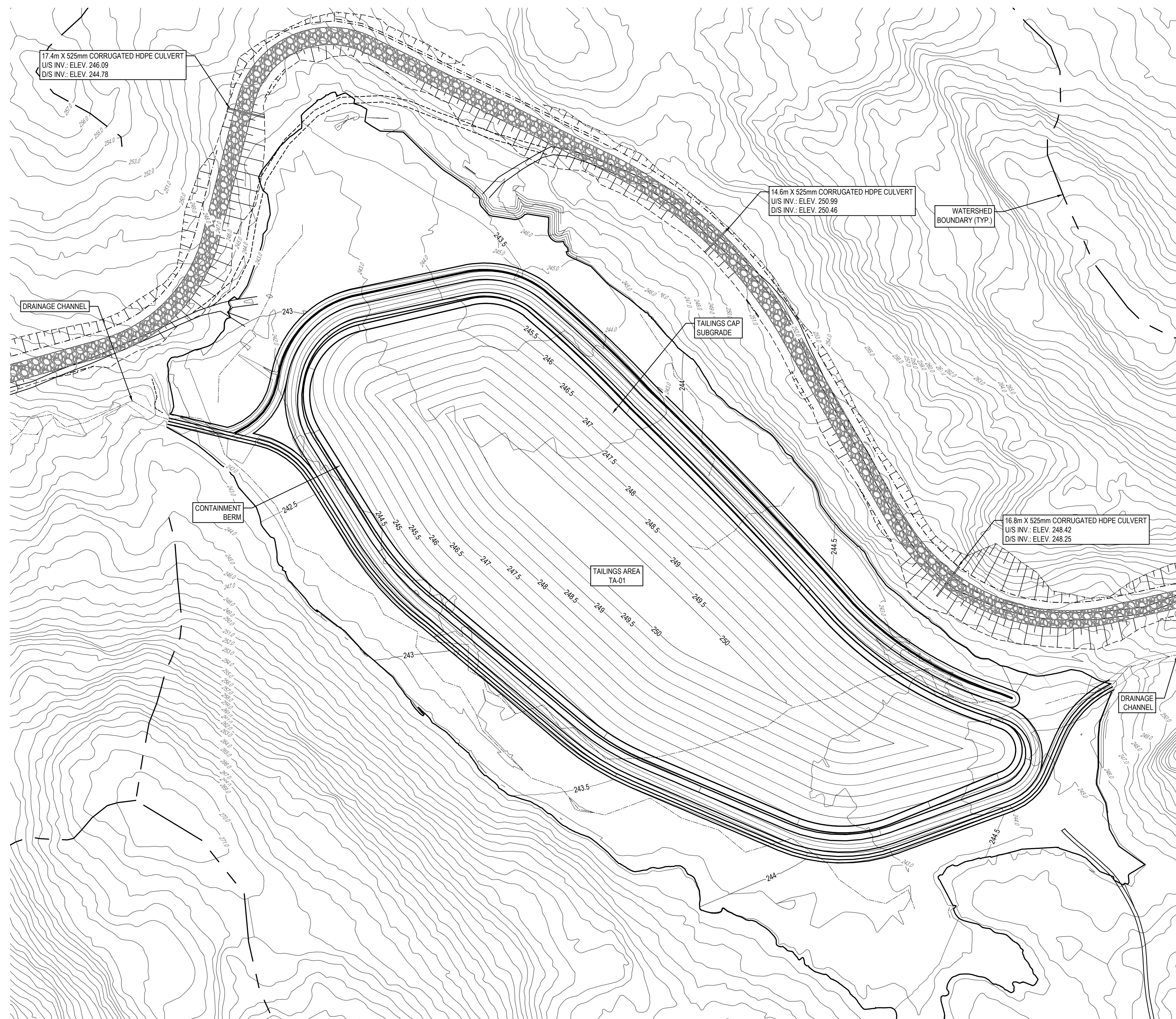


Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN TAILINGS AREA TA-01 SUBGRADE PLAN**

Project No. **12565543** Date **Oct 11/23** Scale **1:1000**

Sheet No. **CL-113**



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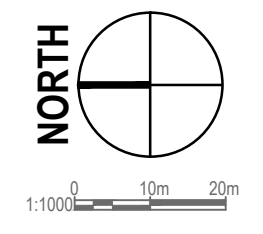
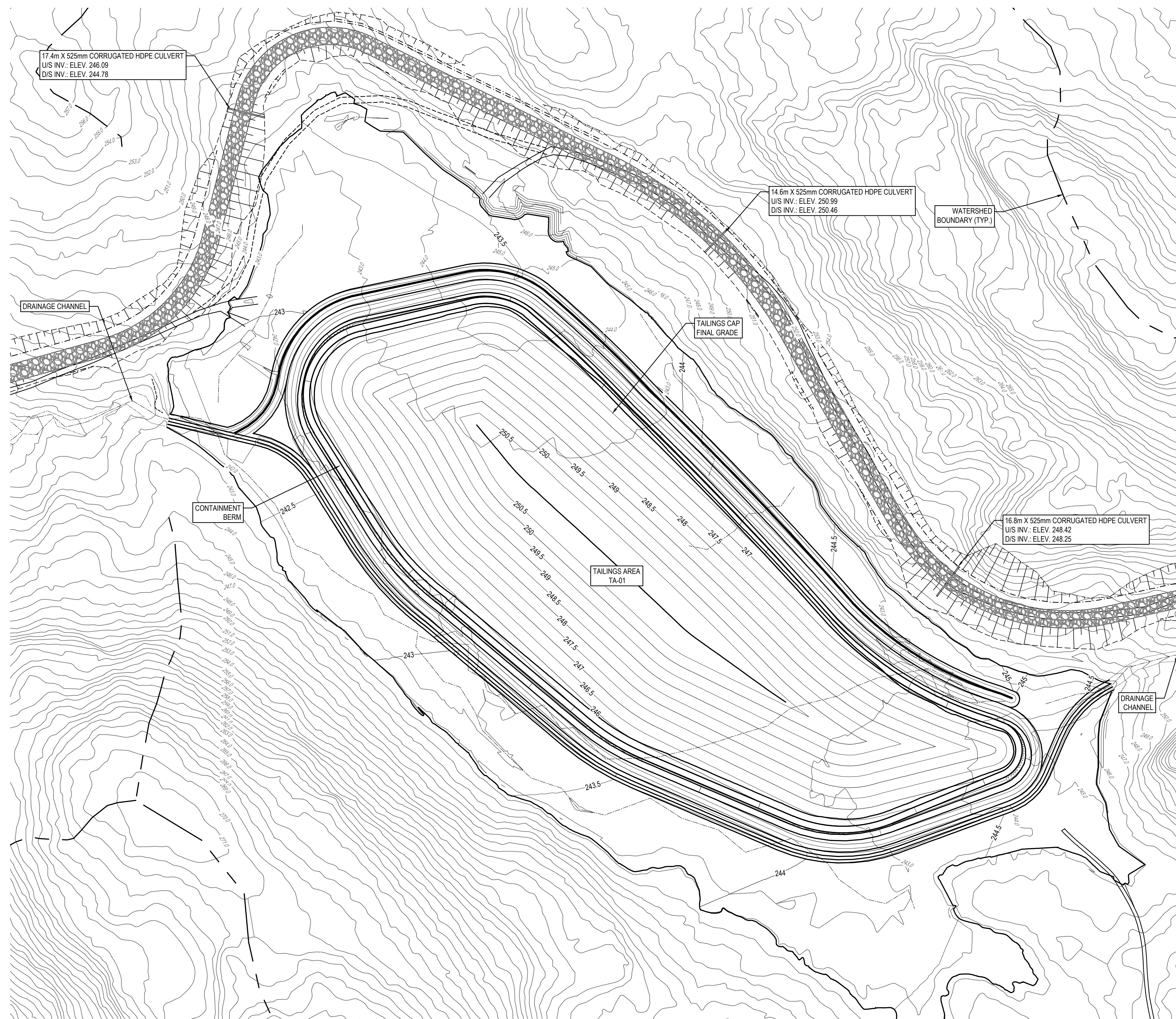
Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN TAILINGS AREA TA-01 CAP SUBGRADE PLAN**

Project No. **12565543** Date **Oct 11/23** Scale **1:1000**

Sheet No. **CI-114**

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PRELIMINARY

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Designer		Design Check	Project Director

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Client **MINISTRY OF NORTHERN DEVELOPMENT AND MINES**
Project **THE CLEAN-UP OF THE LONG LAKE GOLD MINE**

Title **REMEDIATION PLAN TAILINGS AREA TA-01 CAP FINAL GRADE PLAN**

Project No. **12565543** Date **Oct 11/23** Scale **1:1000**

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