

# CITY OF SALMON ARM LAKESHORE ROAD SLOPE STABILIZATION EARTHFILL BUTTRESS STATION 0+340 TO 0+490 ISSUED FOR CONSTRUCTION

CITY PROJECT No. ENG-2024-47  
OEL PROJECT No. 7-41

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PREPARED FOR:

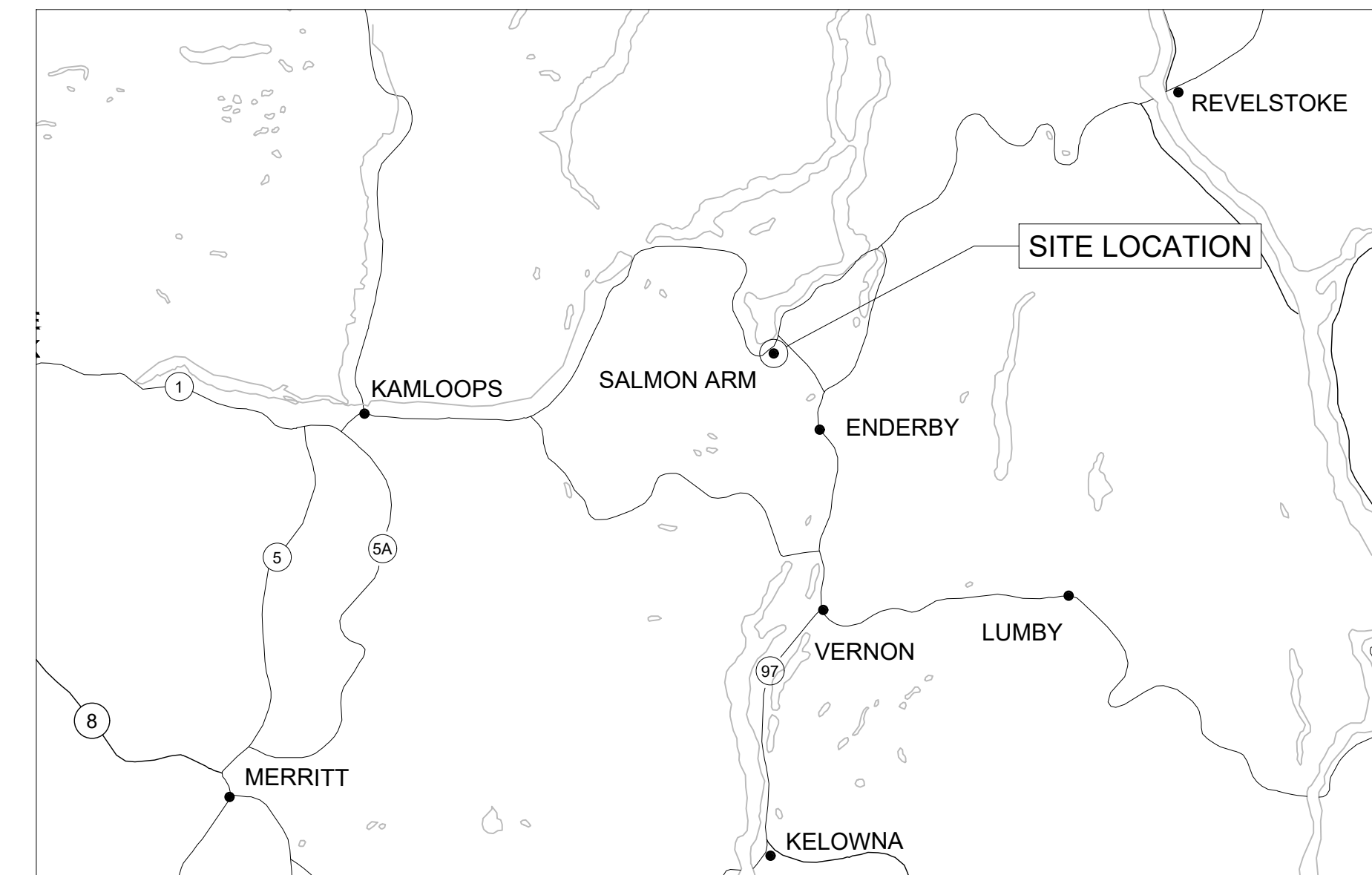
**CITY OF**  
**SALMON ARM**

DESIGNED BY:

**ONSITE**  
Engineering Ltd.

INTERIOR OPERATIONS  
#201-231 TRANS CANADA HWY  
SALMON ARM, BC, V1E 4R1  
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EGBC PERMIT TO PRACTICE No.: 1002678



**KEY PLAN**  
NTS



**LOCATION PLAN**  
NTS

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DATE: 16/01/2023 11:17 PM BY: Evan Moeke

**GENERAL NOTES:**

- THE CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF CONSTRUCTION WITH THE ENGINEERING CONSULTANT(S) & CITY OF SALMON ARM AND THE CITY'S QEP.
- THE CONTRACTOR SHALL NOTIFY CPKC PRIOR TO COMMENCEMENT OF WORKS.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH:
  - CITY OF SALMON ARM SUBDIVISION AND DEVELOPMENT SERVICING BYLAW NO. 4293;
  - THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT AND STANDARD DETAIL DRAWINGS (MMCD) PLATINUM;
  - ISSUED FOR CONSTRUCTION CONTRACT DRAWINGS AS PER THE FORM OF AGREEMENT SIGNED & SEALED BY PROFESSIONAL ENGINEER;
  - APPLICABLE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS REFERENCED THEREIN;
  - MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS, MINISTRY OF ENVIRONMENT, CPKC RAIL, AND/OR FEDERAL DEPARTMENT OF FISHERIES AND OCEANS REQUIREMENTS;
  - MINISTRY OF TRANSPORTATION "B.C. TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS", LATEST EDITION;
  - WORKSAFEBC, LATEST EDITION.

THE CONTRACTOR SHALL MAINTAIN ON SITE COPIES OF THE ABOVE DOCUMENTS AND SHALL ENSURE THAT ALL TRADES ARE THOROUGHLY FAMILIAR WITH THE APPLICABLE SECTIONS OF THE DOCUMENTS.
- NO ENCROACHMENT ONTO THE EXISTING CANADIAN PACIFIC KANSAS CITY (CPKC) RIGHT-OF-WAY SHALL OCCUR DURING ANY CONSTRUCTION STAGE.
- THE CONTRACTOR SHALL REGISTER A BC ONE CALL AND DISHAUW CALL BEFORE START OF CONSTRUCTION 1-800-474-6886.
  - USE THE BC ONE CALL INFORMATION PROVIDED TO MARK THE LOCATION OF BURIED LINES
  - HAND DIG TO EXPOSE ALL PRIVATE UTILITY LINES
- EXISTING PRIVATE UTILITIES ARE ASSUMED TO HAVE THE FOLLOWING COVER:
  - BC HYDRO 0.90m
  - COMMUNICATIONS 0.90m
  - FORTIS BC 0.60m
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR ADMINISTRATOR OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS BETWEEN EXPOSED UTILITIES AND DRAWINGS PRIOR TO CONSTRUCTION.
  - THE EXACT LOCATION AND EXTENT OF ANY UTILITIES SHOULD BE DETERMINED BY CONSULTING THE LOCAL AUTHORITIES AND UTILITY COMPANIES CONCERNED;
  - THE CONTRACTOR SHALL:
    - BE RESPONSIBLE FOR RESTORATION OF ANY DAMAGE TO EXISTING UTILITIES; AND
    - ANY COSTS ASSOCIATED WITH UTILITY CONFLICTS WHICH WERE NOT PRELOCATED ARE TO BE THE CONTRACTORS RESPONSIBILITY.
- FIGURED DIMENSION(S) SHALL GOVERN OVER SCALED DIMENSION(S).
- THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORKS HAVE BEEN OBTAINED FROM ALL AUTHORITIES AND AGENCIES PRIOR TO COMMENCING THE WORK.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE THE WORKS DONE BY
  - THE CITY OF SALMON ARM
  - QUALIFIED ENVIRONMENTAL PROFESSIONAL

THE CONTRACTOR SHALL CONTACT THE APPROPRIATE PERSONNEL AT LEAST 72 HOURS PRIOR TO THE WORK. SCHEDULING AND OTHER CONSTRUCTION CONSTRAINTS IMPOSED BY THESE WORKS SHALL BE TAKEN INTO ACCOUNT.
- RESIDENTS DIRECTLY AFFECTED BY CONSTRUCTION OF THESE WORKS AND SERVICES SHALL BE GIVEN 48 HOURS WRITTEN NOTICE OF THE PROPOSED START OF CONSTRUCTION. ALL WORKS TO BE COMPLETED WITHIN THE CITY RIGHT OF WAY OR AS DICTATED BY THE DRAWINGS. THE CITY SHALL OBTAIN WRITTEN PERMISSIONS FOR ANY ACCESS TO PRIVATE PROPERTY. FOLLOWING CONSTRUCTION ACTIVITY ON THE AFFECTED PROPERTY A WRITTEN RELEASE MAY BE REQUIRED FROM THE PROPERTY OWNER AT THE DISCRETION OF THE CITY.
- THE CONTRACTOR SHALL REPAIR TO EXISTING CONDITION OR BETTER ANY STREETS, SERVICES, LANDSCAPING, PRIVATE LANDSCAPING OR PRIVATE IMPROVEMENTS THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION. REPAIRS TO EXISTING CITY SERVICES SUCH AS WATER, SANITARY SEWER, STORM SEWER AND STREET OR TRAFFIC LIGHTING SHALL BE MADE BY THE CITY AT COST TO THE CONTRACTOR. REPAIRS TO EXISTING SURFACE WORKS MAY BE DONE BY THE CONTRACTOR AT THE DISCRETION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL AS PART OF THE WORK PERFORM, OR CAUSE TO BE PERFORMED, ALL TESTS, INSPECTIONS AND APPROVALS OF THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS. PRIOR TO ISSUANCE OF THE CERTIFICATE OF SUBSTANTIAL PERFORMANCE, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR COPIES OF ALL TEST RESULTS. COPIES OF REPORTS AND TEST RESULTS SHALL BE SUBMITTED TO THE CITY'S PROJECT MANAGER AS WORK PROGRESSES OR AS REQUESTED. COST OF ALL TESTING SHALL BE INCIDENTAL TO THE CONTRACT.
- A DETAILED PHASED CONSTRUCTION PLAN SHALL BE SUBMITTED BY THE CONTRACTOR. THE PLAN SHALL INCLUDE DETAILED TRAFFIC AND PEDESTRIAN SAFETY CONTROL PLANS (TCP) AND BE SUBMITTED TO AND APPROVED BY THE CITY AND ENGINEERING CONSULTANT PRIOR CONSTRUCTION. AFFECTED RESIDENTS SHALL BE PRESENTED THE PHASED CONSTRUCTION PLAN FOR INFORMATION. THE CONTRACTOR SHALL INVESTIGATE THE EXTENTS OF PRIVATE PROPERTY DAMAGE REQUIRED, IF ANY, PRIOR TO CONSTRUCTION.
- THE PRIME CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY AT THE PLACE OF WORK AND TO THE EXTENT REQUIRED BY WORKSAFE BC AND CODES, INCLUDING THE WORKERS COMPENSATION ACT AND APPLICABLE REGULATIONS, AND BY GOOD CONSTRUCTION PRACTICE. THE CONTRACTOR SHALL BE THE PRIME CONTRACTOR UNLESS OTHERWISE CHANGED BY THE CONTRACT ADMINISTRATOR.

**DRAWINGS**

- THIS SET OF DRAWINGS SHOWS THE COMPLETED PROJECT. THE DRAWINGS DO NOT SHOW COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORMWORK, FALSE WORK, SHORING, ETC. REQUIRED TO COMPLETE THE WORK.
- THE INFORMATION ON THESE DRAWINGS SHALL NOT BE USED FOR ANY OTHER PROJECT OR WORKS. THE INFORMATION ON THESE DRAWINGS APPLIES SOLELY TO THIS PROJECT.
- THE CURRENT REVISION OF THE SEALED PDF OR PHYSICAL COPY OF THESE DRAWINGS GOVERN. ANY INFERENCES FROM DIGITAL FILES THAT ARE NOT EXPLICITLY SHOWN ON THE PDF DRAWINGS SHALL BE DISCUSSED WITH THE ENGINEERING CONSULTANT AND/OR USED AT THE CONTRACTOR'S RISK.

**EARTHWORKS & GRADING**

- WORKS IN SET-BACK AREAS, AND DISCHARGE TO CREEKS, STREAMS, AND WATERCOURSES MAY BE SUBJECT TO FEDERAL AND PROVINCIAL AUTHORITY APPROVAL. REFER TO THE PROJECT SPECIFIC QUALIFIED ENVIRONMENTAL PROFESSIONAL REPORT FOR CONSTRUCTION REQUIREMENTS IN SENSITIVE AREAS.
- GEOTECHNICAL ENGINEERING CONSULTANT TO REVIEW AND APPROVE FILL MATERIAL PRIOR TO USE.
- REMOVE VEGETATION, STRIP ORGANIC MATERIAL, AND UNSUITABLE MATERIAL, AS REQUIRED, PRIOR TO PLACING ANY FILL. NO TREES OR VEGETATION SHALL BE REMOVED BEFORE AUGUST 11 AND AFTER A BIRD NEST SURVEY HAS BEEN COMPLETED BY THE CITY'S QEP. IF BIRD NESTS ARE FOUND TO STILL BE ACTIVE, THE CONTRACTOR SHALL FOLLOW THE DIRECTIONS OF THE QEP TO PROTECT THE NEST SITES FOR AS LONG AS IS NECESSARY.
- REMOVAL OF ALL DEAD, DYING OR DISEASED TREES ALONG THE EMBANKMENT WITHIN 10M OF LAKESHORE ROAD FROM 10 AVE NE TO 17 AVE NE. THE CITY'S ARBORIST WILL IDENTIFY WHICH TREES ARE TO BE REMOVED PRIOR TO COMMENCEMENT. TREES ARE TO BE COMPLETELY REMOVED FROM SITE AND CUT OFF AT BASE. STUMPS ARE NOT TO BE REMOVED.
- COMPACT ALL EARTH FILLS AND GRANULAR MATERIAL LAYERS AS PER THE RELEVANT MMCD SPECIFICATIONS.
- ALL PROPOSED GRADING SHALL MEET EXISTING GROUND ELEVATIONS AT ADJOINING PROPERTY LINES UNLESS OTHERWISE NOTED.
- REFER TO GEOTECHNICAL REPORT BY ONSITE ENGINEERING LTD. FOR FURTHER DETAILS ON THE EARTHWORKS & GRADING REQUIREMENTS.
- ALL GRADING SHALL BE CARRIED OUT IN A MANNER TO DIRECT WATER AWAY FROM THE CONSTRUCTION AREA AND NOT ONTO PRIVATE PROPERTY. THE CONTRACTOR SHALL BE PREPARED TO PUMP WATER OUT OF EXCAVATIONS AS REQUIRED.
- A PROFESSIONAL ENGINEER OR THEIR DESIGNATE IS REQUIRED TO INSPECT THE FOLLOWING ACTIVITIES:
  - FOUNDATION SUBGRADE FOLLOWING CLEARING, GRUBBING, STRIPPING, AND BENCHING.
  - PLACEMENT AND COMPACTION OF BUTTRESS FILL INTERMITTENTLY THROUGH CONSTRUCTION TO REVIEW METHODOLOGY.
  - INSTALLATION OF GEOGRID
  - OTHER SITE INSPECTIONS AT THE DISCRETION OF THE PROFESSIONAL
- STRUCTURAL BACKFILL SUPPLEMENTARY SPECIFICATIONS:
  - MATERIAL IS TO BE PLACED AND COMPACTED IN MAXIMUM 300 mm THICK LIFTS (MEASURED LOOSE). IN AREAS WHERE GEOGRID IS REQUIRED AT 0.5m SPACING, THE BUTTRESS MATERIAL SHALL BE PLACED IN TWO EQUAL LIFTS OF 250 mm.
  - WATER MAY NEED TO BE ADDED TO THE MATERIAL TO ACHIEVE ADEQUATE COMPACTION (DEPENDS ON MOISTURE CONTENT OF THE MATERIAL). IF WATER IS REQUIRED, IT SHOULD BE ADDED PRIOR TO COMPACTION. DURING THE SPREADING OF THE LIFT, ALL FILL LAYERS SHALL BE OUTSLOPED TO ENSURE NO WATER IS DIRECTED INTO THE SLOPE.
  - MATERIAL IS TO BE COMPACTED TO MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
  - IT IS EXPECTED THAT THE ABOVE COMPACTION SPECIFICATIONS CAN BE ACHIEVED WITH MULTIPLE PASSES OF A 1000 LB VIBRATING PLATE COMPACTOR OR VIBRATORY STEEL DRUM ROLLER. TESTING REQUIREMENTS FOR THIS COMPACTION SHOULD BE DETERMINED BY OEL'S REPRESENTATIVE DURING THE RECOMMENDED SITE INSPECTIONS.
  - MATERIAL SPECIFICATIONS:

**SAMPLING AND TESTING SUMMARY:**

- THESE NOTES SHALL BE USED AS A REFERENCE FOR GENERAL SAMPLING AND TESTING REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DISCUSSING TESTING REQUIREMENTS FROM THE ENGINEER OF RECORD AND THE CITY OF SALMON ARM TO ENSURE ALL SAMPLING AND TESTING MEETS THE CITY'S STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING TESTING FOR GRANULAR MATERIALS TO DEMONSTRATE CONFORMITY TO THE CONTRACT DOCUMENTS. TESTS BY A REPUTABLE TESTING AGENCY SHOULD, AS A MINIMUM, BE CARRIED OUT, AND FORWARDED TO THE ENGINEER OF RECORD, AS FOLLOWS:
  - GRANULAR BACKFILL MATERIAL - ONE PROCTOR DENSITY TEST PER 50m, EACH LIFT OR OTHERWISE DIRECTED BY THE ENGINEER OF RECORD
  - SUB-GRADE - ONE PROCTOR DENSITY TEST PER 500m<sup>2</sup>.

**SURVEY CONTROL & AS-BUILT SURVEY REQUIREMENTS:**

- TOPOGRAPHIC DATA DERIVED FROM 2019 CSRD LIDAR.
- ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM NATURAL RESOURCE CANADA'S PPP GNS PROCESSING SERVICES
  - VERTICAL DATUM: CGVD28 (HTV2.0), NAD83 CSRS
  - HORIZONTAL DATUM: NAD83 (UNIVERSAL TRANSVERSE MERCATOR ZONE 11) - VELOCITY GRID NAD83V70VG
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE CONTROL POINTS REMAIN UNDISTURBED DURING CONSTRUCTION.
  - ENGINEER OF RECORD MAY PERMIT CONTRACTOR TO REMOVE OR DESTROY CONTROL WHICH IS IN DIRECT CONFLICT WITH CONSTRUCTION
  - THE CONTRACTOR SHALL REPLACE AT THEIR OWN COST ANY PROJECT CONTROL WHICH HAS NOT BEEN ACCEPTED FOR REMOVAL IF DISTURBED, OR IN ANY WAY ALTERED.
- THE CONTRACTOR SHALL SURVEY THE PROJECT SITE AT THE FOLLOWING CONSTRUCTION STAGES AND SEND THE DATA TO THE ENGINEER OF RECORD:
  - EXISTING GROUND PRIOR TO STRIPPING
  - SUBGRADE FOLLOWING STRIPPING
  - BENCHING INTO NATIVE MATERIAL PRIOR TO FILL
  - FINAL AS-BUILT GROUND PRIOR TO SUBSTANTIAL PERFORMANCE

CONTROL POINT TABLE			
RAW DESCRIPTION	ELEVATION	NORTHING	EASTING
BM1	364.051	5619839.9590	339634.9890
OIP	372.893	5619978.0300	339744.7750
FH 196 TOP NUT	364.862	5619765.7500	339610.9080
OEL BM 1214	410.128	5620505.6710	340228.3092
OIP	374.887	5620156.5620	339850.6630
FH 187 616 TOP NUT	370.211	5620286.1990	339880.3190
FH 616 186 TOP NUT	374.550	5620049.5660	339793.1520
OIP	375.248	5620222.7870	339872.1460
OEL BM 1217	398.154	5620508.1040	340128.7165
OEL BM 1213	404.446	5620507.2060	340179.4359
OIP	0.000	5619770.5720	339608.9930
OIP	0.000	5619829.7540	339650.7680
OIP	0.000	5619897.4710	339693.1060
OIP	372.896	5619978.0630	339744.7970
OIP	374.158	5620222.2140	339863.3530
OIP	379.476	5620504.7340	339882.0640

LEGEND	EXISTING	PROPOSED
MANHOLE		
CATCH BASIN		
WATER VALVE		
FIRE HYDRANT		
WATER CURB STOP		
UTILITY POLE		
DAVIT STREET LIGHT		
GUY WIRE ANCHOR		
ROAD CENTRELINE		
EDGE OF PAVEMENT		
CURB & GUTTER		
SHOULDER		
SIGN		
FENCE		
PROPERTY BOUNDARY		
OIP		
BOREHOLE		
PIEZOMETER		
TOP OF BANK/CUT SLOPE		
BOTTOM OF BANK/FILL SLOPE		
GEOGRID (SECTION)		
EXISTING GROUND (SECTION)		
STRIPPED GROUND (SECTION)		



**150mm MINUS ANGULAR GRAVEL**

MMCD SPECIFICATION 31.05.17.23

SIEVE SIZE (mm)	PERCENT PASSING (%)
150	100
50	70 - 100
25	50 - 100
4.75	22 - 100
2.36	10-85
0.075	2 - 8

\*RIPRAP: CLEAN ANGULAR ROCK  
**CLASS 250kg RIPRAP**  
 ROCK GRADATION PERCENT SMALLER THAN GIVEN  
 ROCK MASS kg(mm)  
 15% 25(200)  
 50% 250(565)  
 85% 750(815)  
 NOMINAL THICKNESS OF RIPRAP 1000mm

**75mm MINUS CRUSHED SUB-BASE COURSE**

MMCD SPECIFICATION 31.05.17.2.9

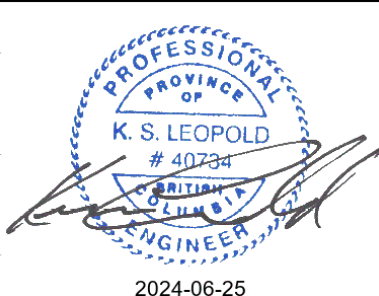
SIEVE SIZE (mm)	PERCENT PASSING (%)
75	100
38	60 - 100
19	35 - 80
9.5	26 - 60
4.75	20 - 40
2.36	15 - 30
1.18	10 - 20
0.6	5 - 15
0.3	3 - 10
0.075	0 - 5

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REV NO	REVISIONS	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	APR 15 2024	EM	KL
1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



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 PERMIT NUMBER: 1002678  
 ENGINEERS AND GEOSCIENTISTS BC



SCALE:

DESIGNED: EM/PM  
 DRAWN: EM  
 CHECKED: RW  
 SURVEYED: OEL  
 DATE: DEC 2023

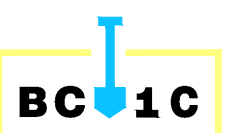
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CITY OF SALMON ARM  
 LAKESHORE ROAD SLOPE STABILIZATION  
 EARTHFILL BUTTRESS DESIGN PACKAGE  
 GENERAL NOTES AND LEGEND

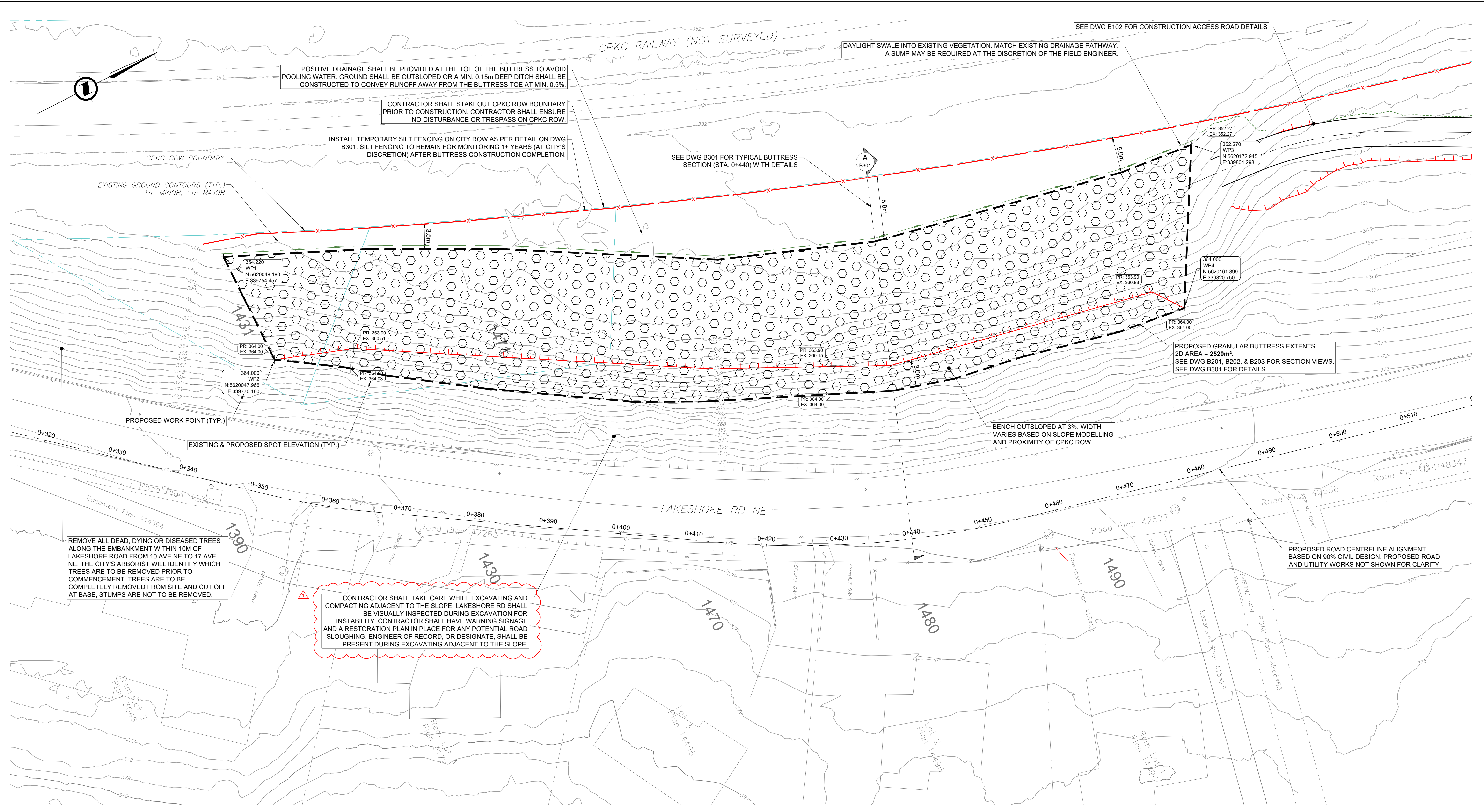
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CLIENT PROJECT NO.	ENG-2024-47
OEL PROJECT NO.	7-41
DRAWING NO.	B001
SHEET:	2 OF 9

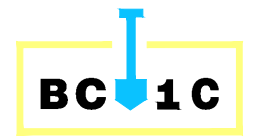
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PLAN  
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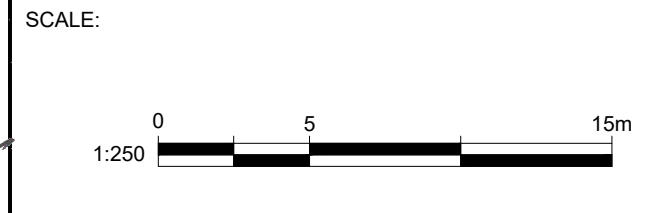
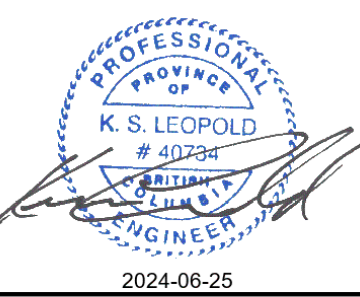


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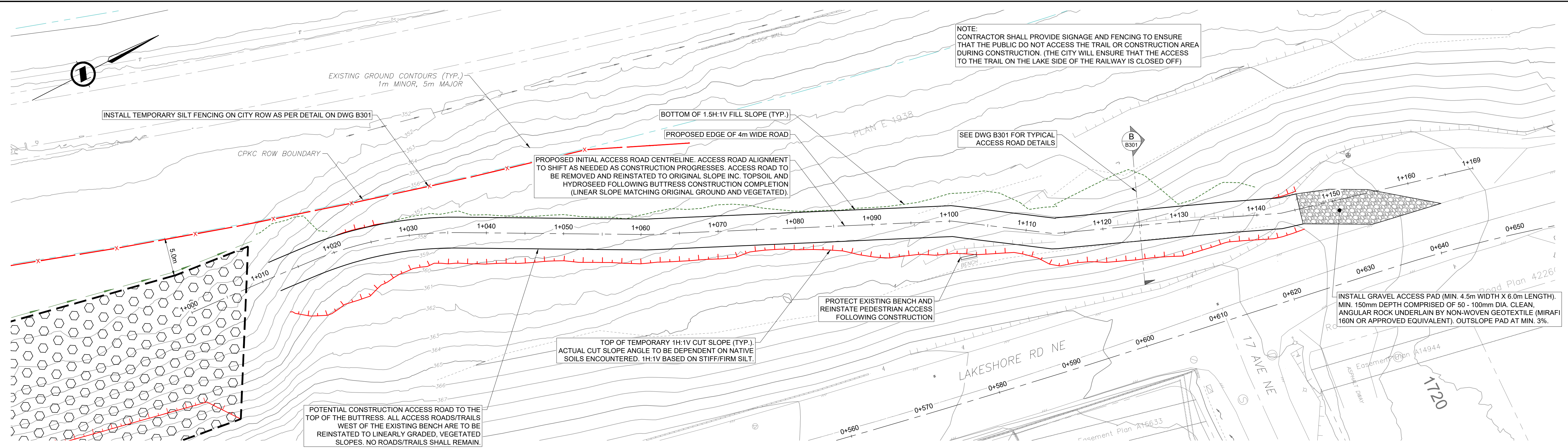


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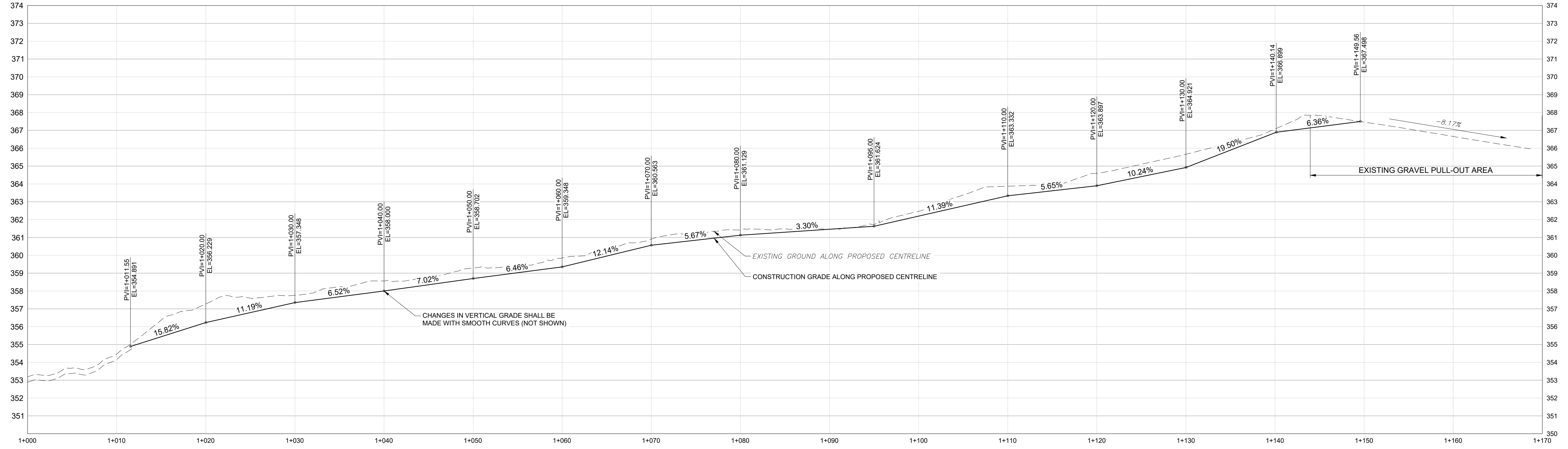
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CITY OF SALMON ARM  
**LAKESHORE ROAD SLOPE STABILIZATION  
 BUTTRESS  
 SITE PLAN**

CLIENT PROJECT NO.	ENG-2024-47
OEL PROJECT NO.	7-41
DRAWING NO.	B101
SHEET:	3 OF 9
REV	1



PLAN  
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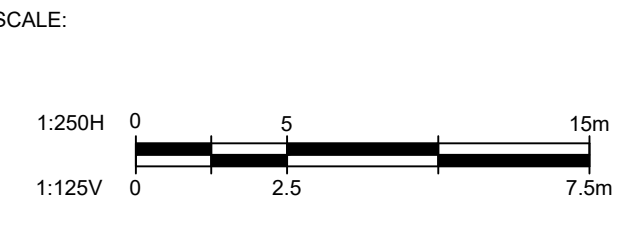
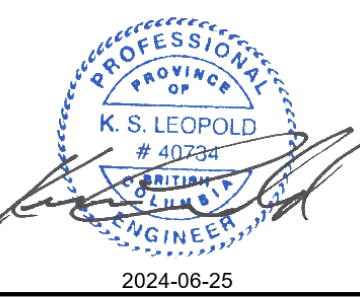
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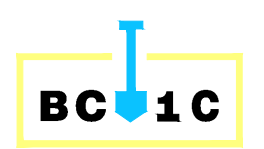


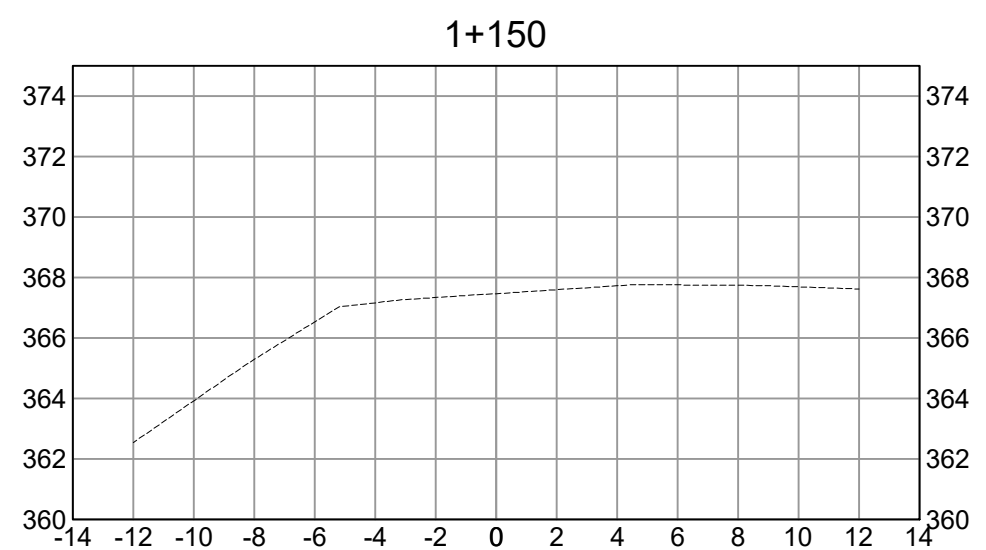
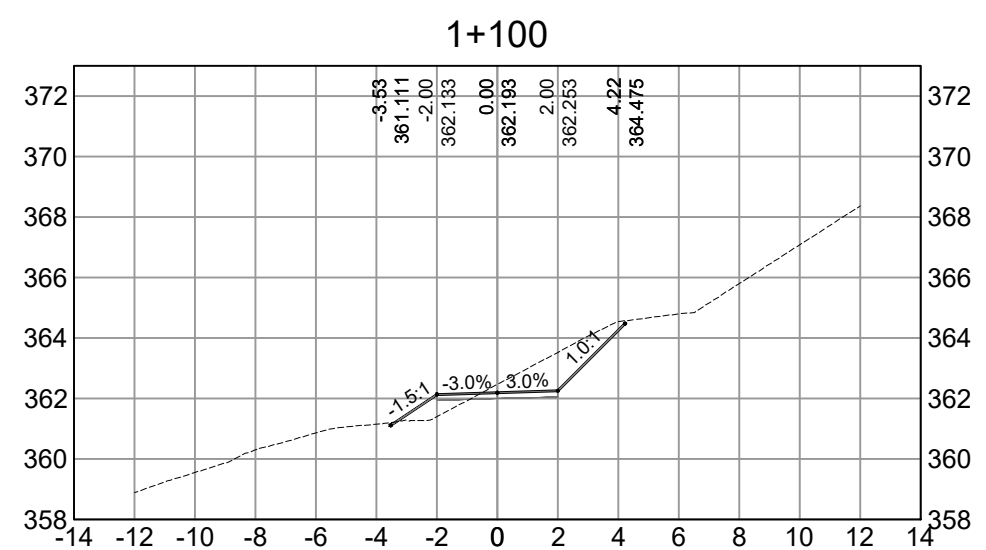
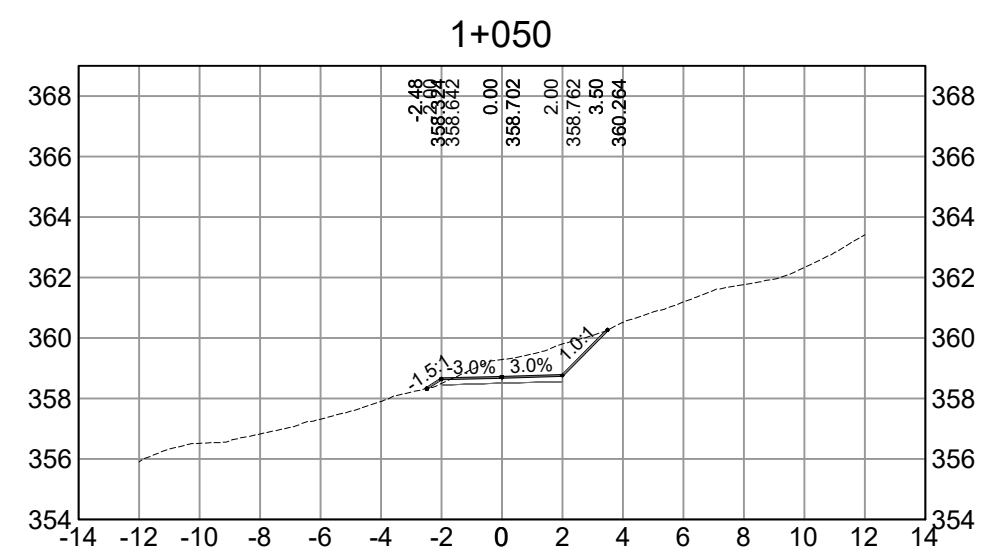
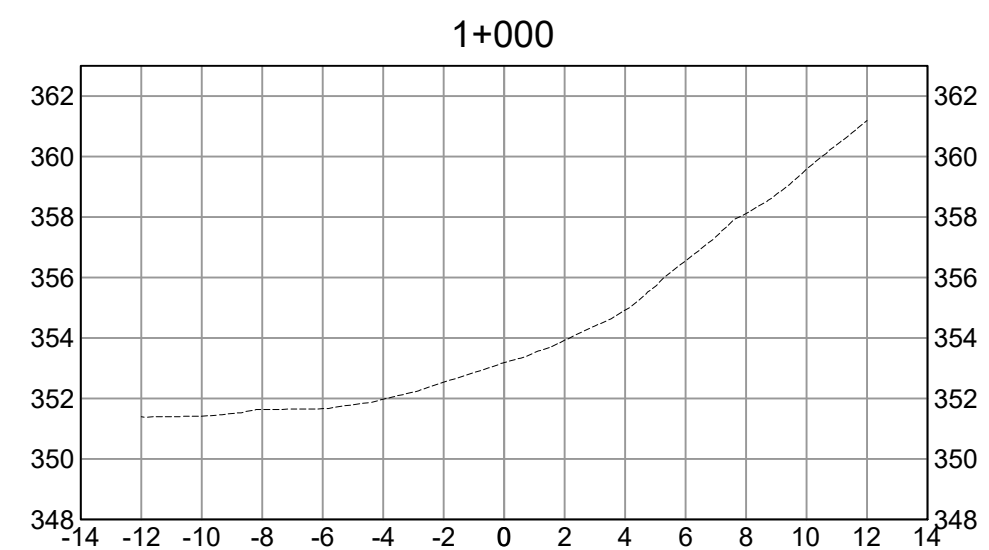
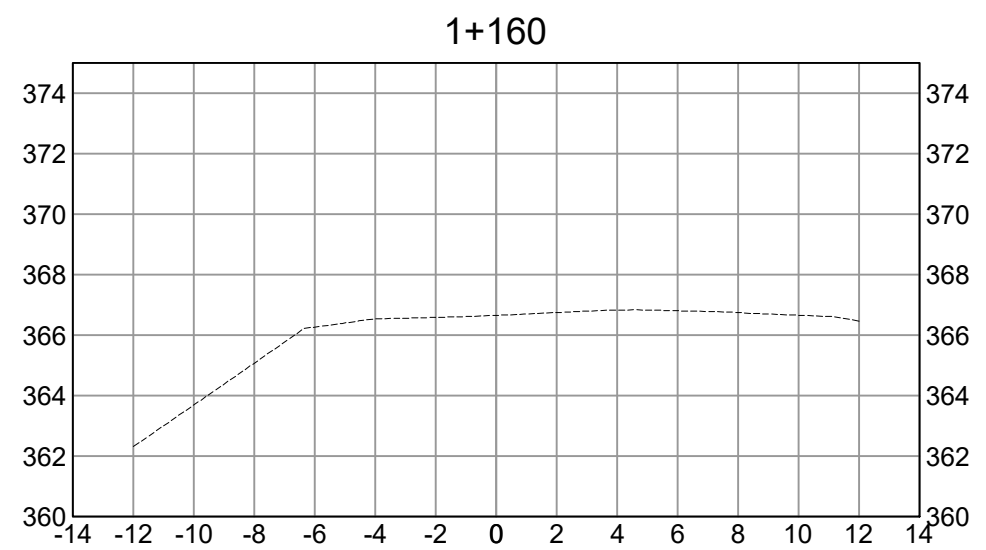
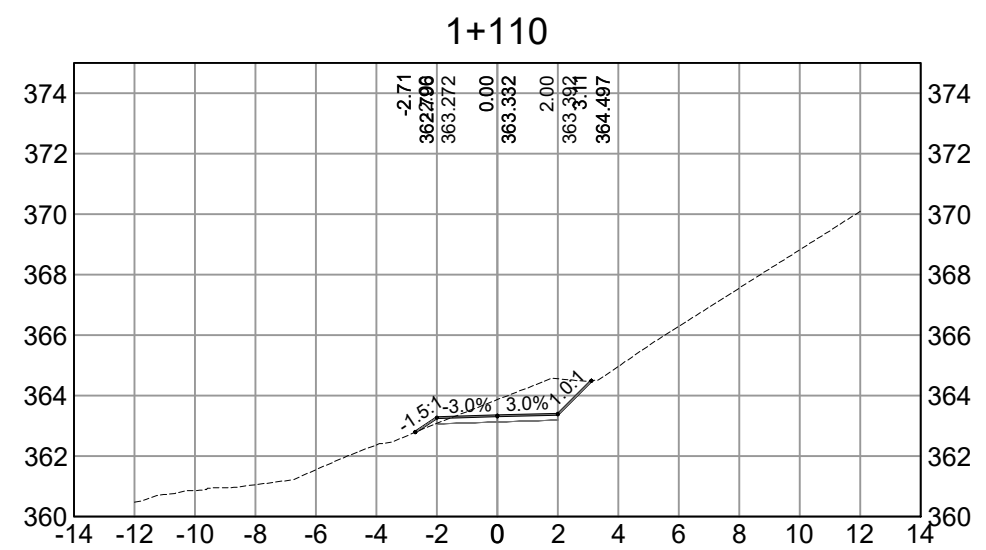
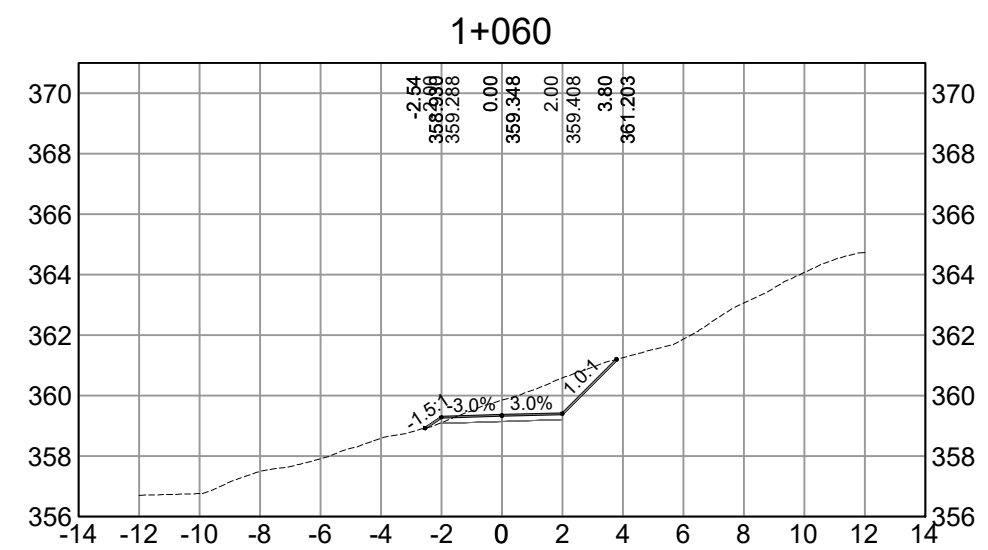
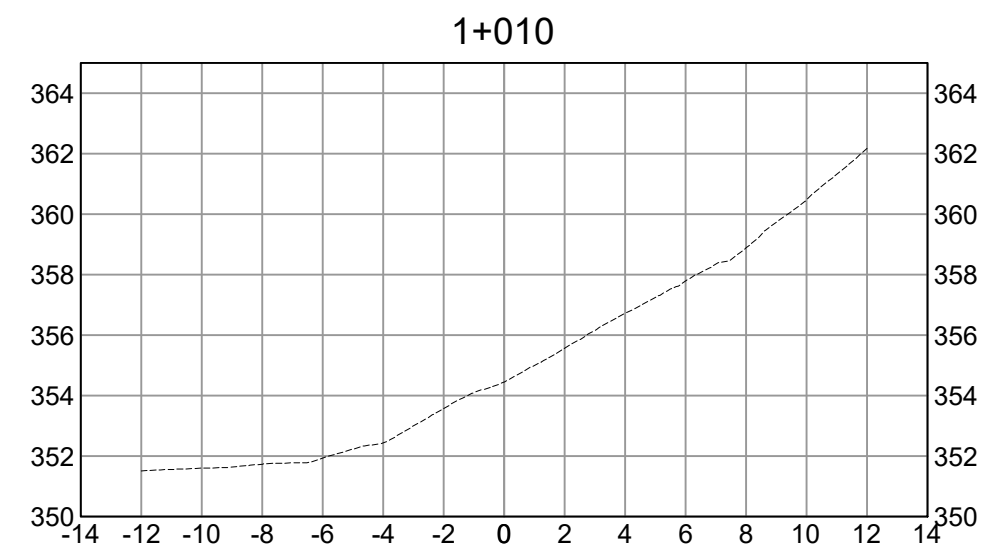
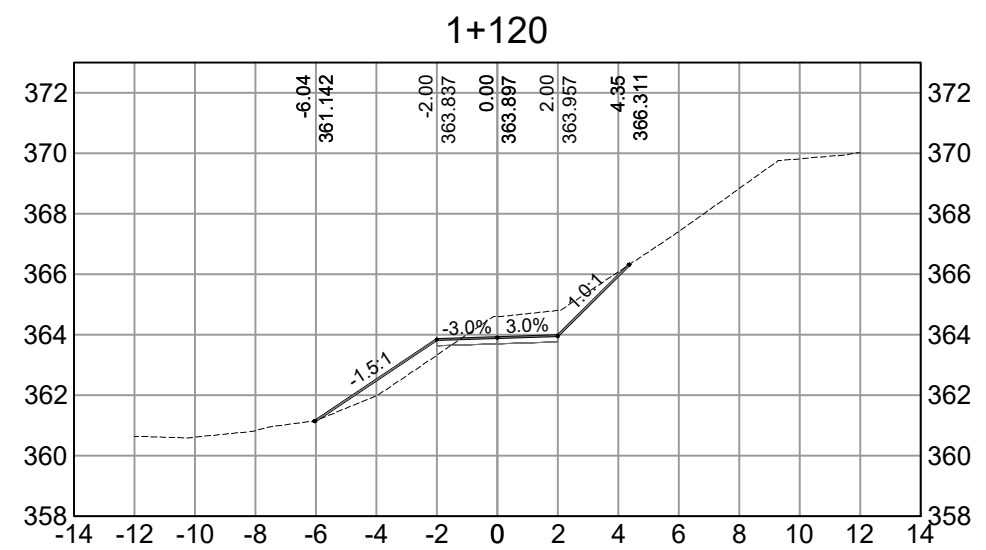
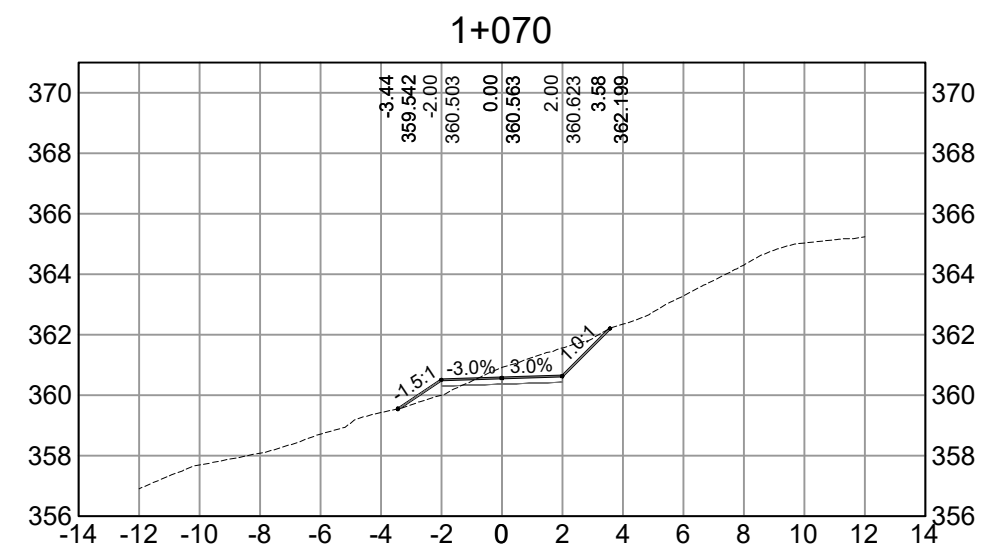
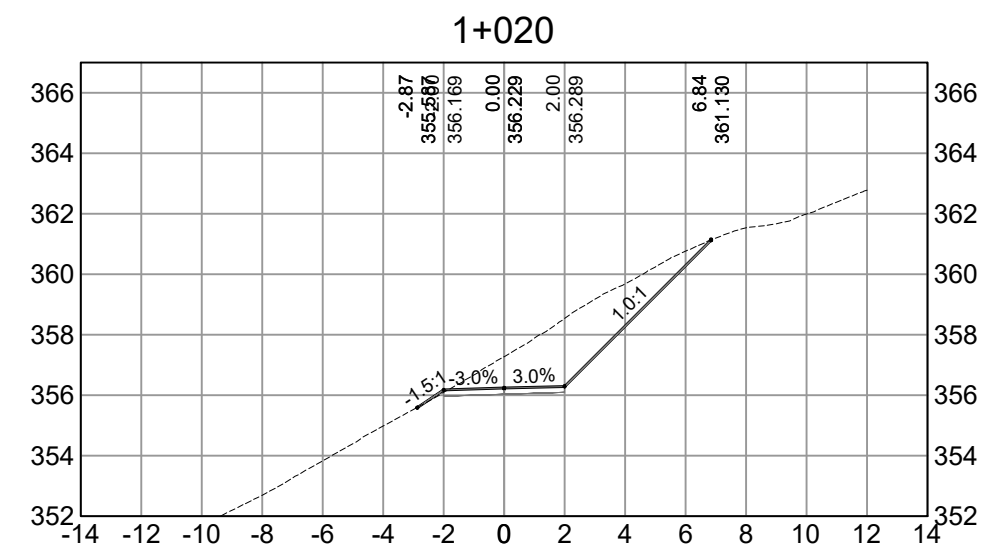
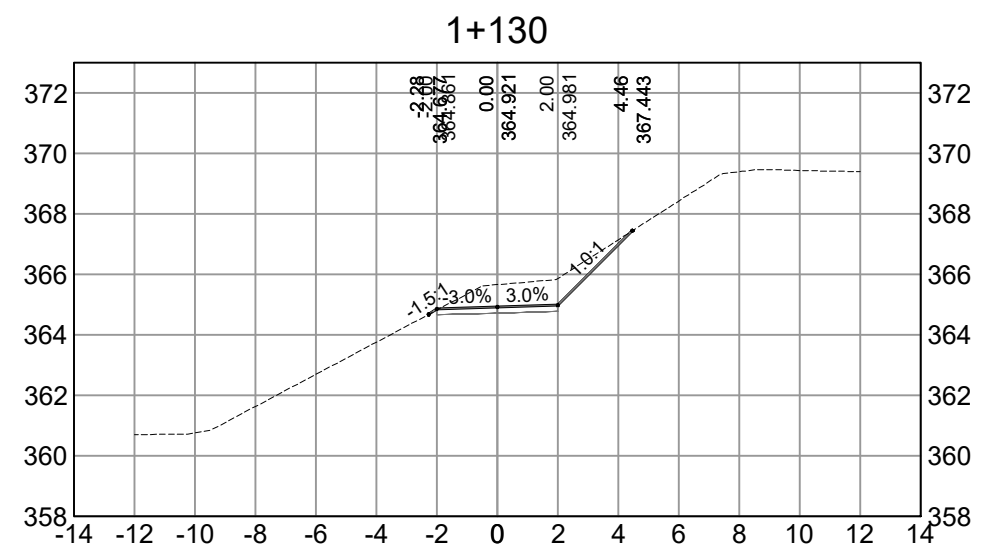
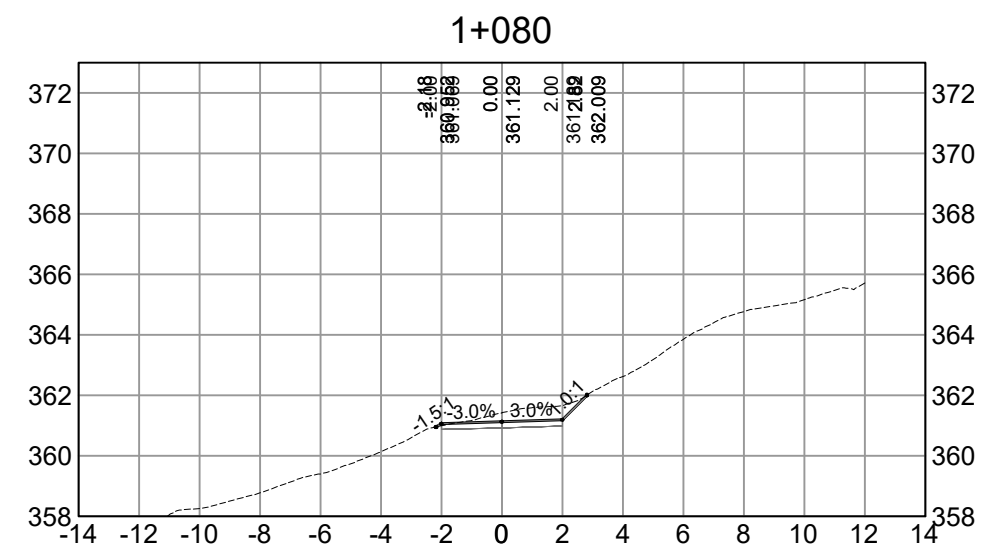
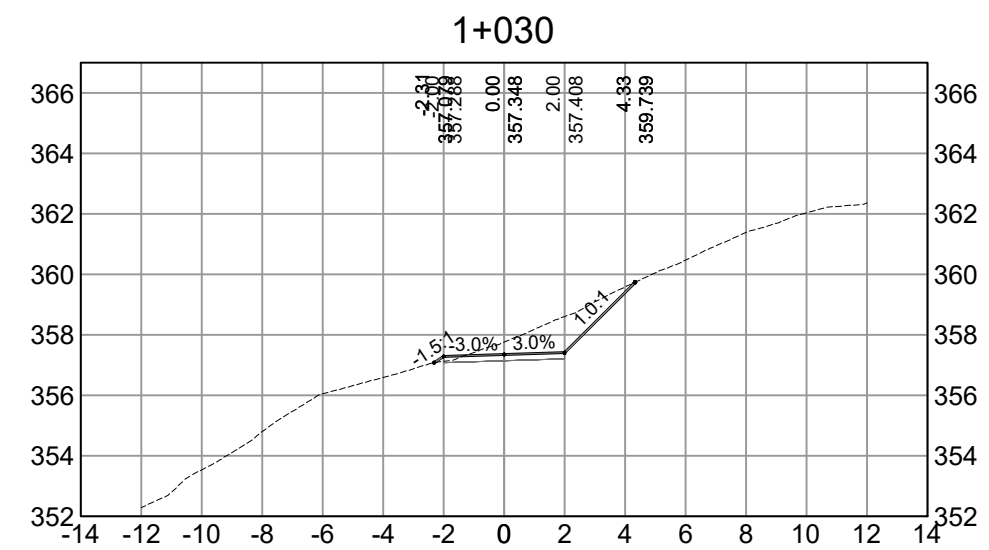
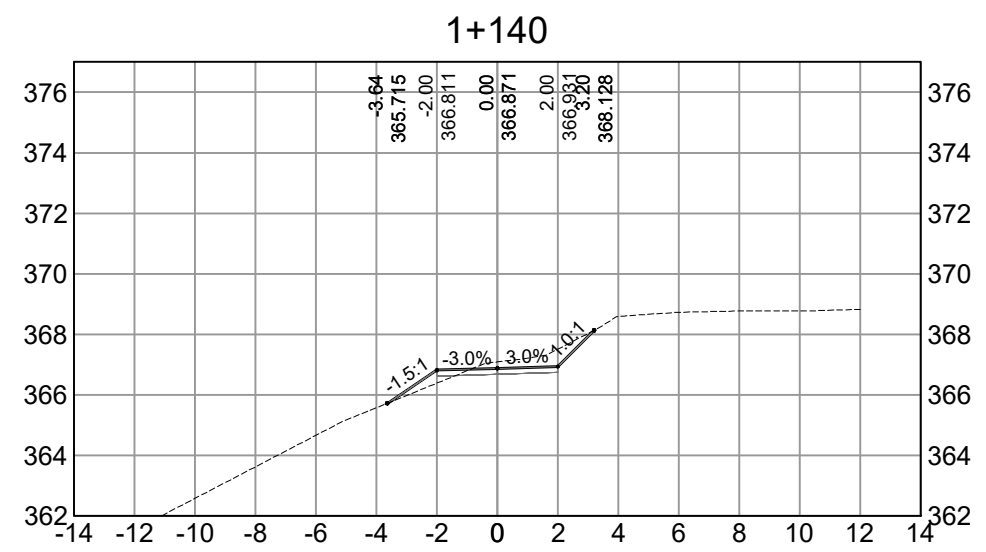
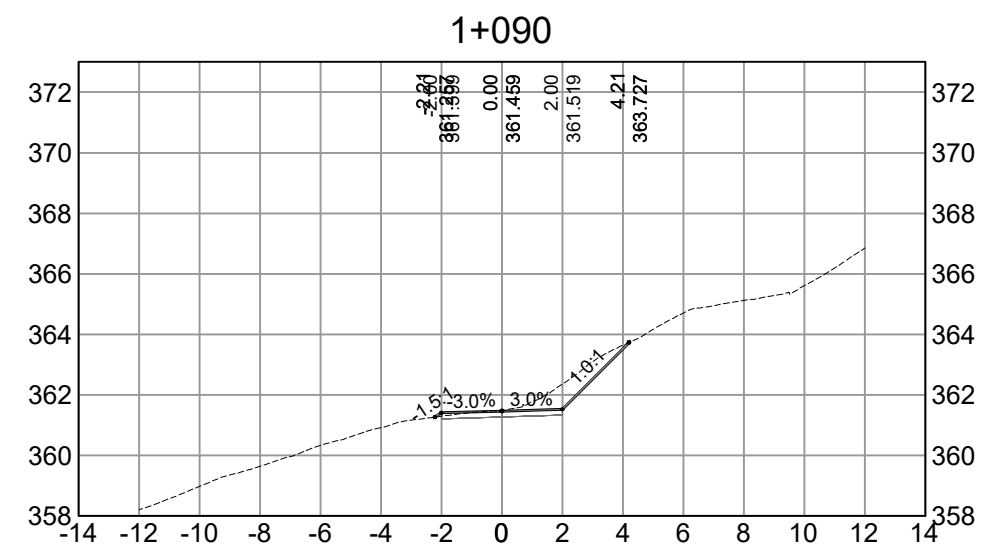
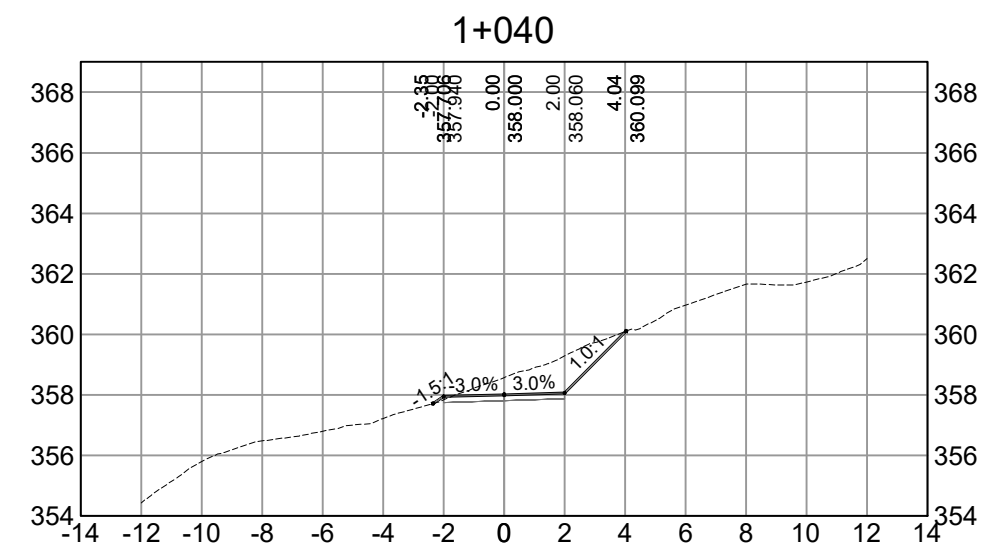
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CHECKED: RW  
SURVEYED: OEL  
DATE: DEC 2023



CITY OF SALMON ARM  
LAKESHORE ROAD SLOPE STABILIZATION  
BUTTRESS  
ACCESS ROAD - PLAN & PROFILE

TICKET No.	CLIENT PROJECT NO.
ENG-2024-47	ENG-2024-47
OEL PROJECT NO.	DRAWING NO.
7-41	B102
SHEET: 4 OF 9	REV 1

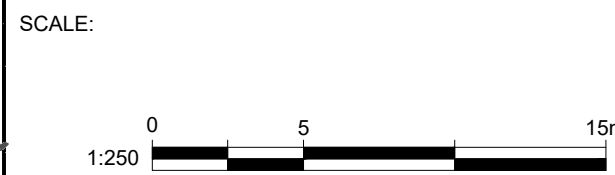




REV NO	REVISIONS	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	APR 15 2024	EM	KL
1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



PERMIT TO PRACTICE  
 ONSITE ENGINEERING LTD.  
 PERMIT NUMBER: 1002678  
 ENGINEERS AND GEOSCIENTISTS BC

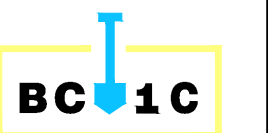


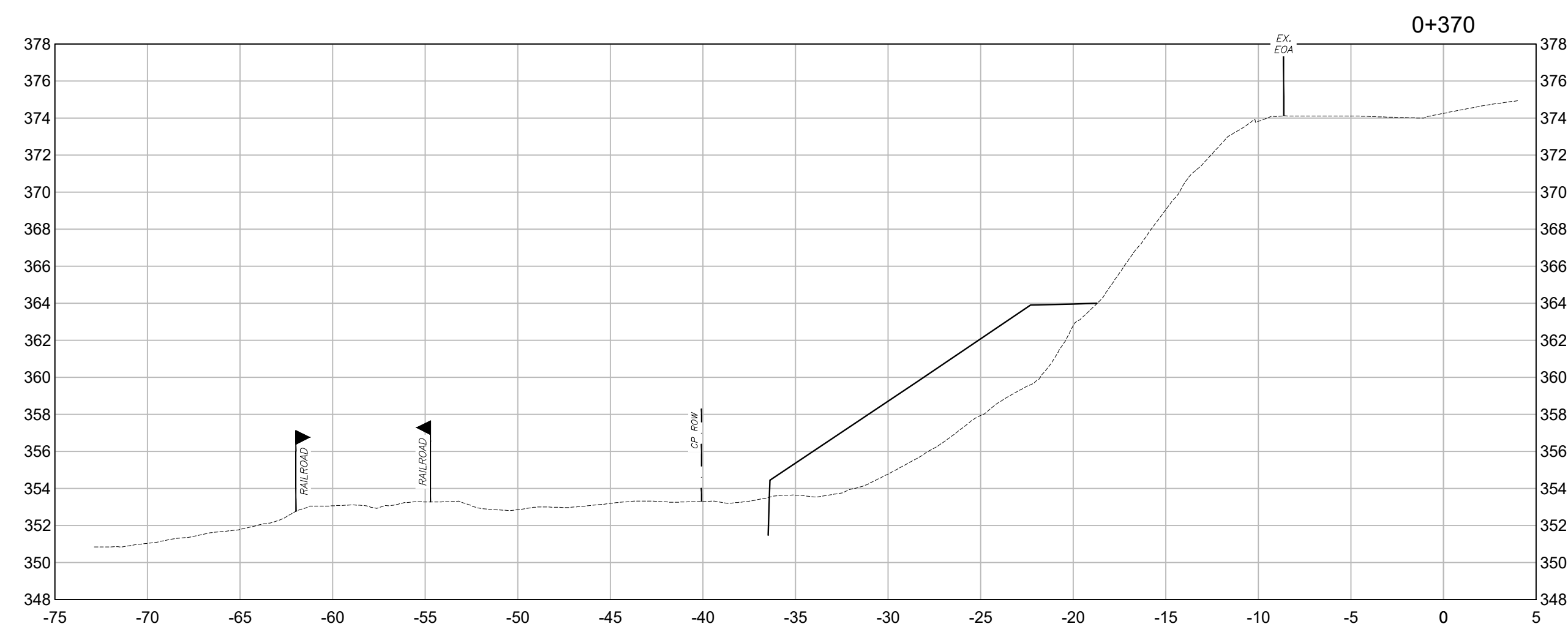
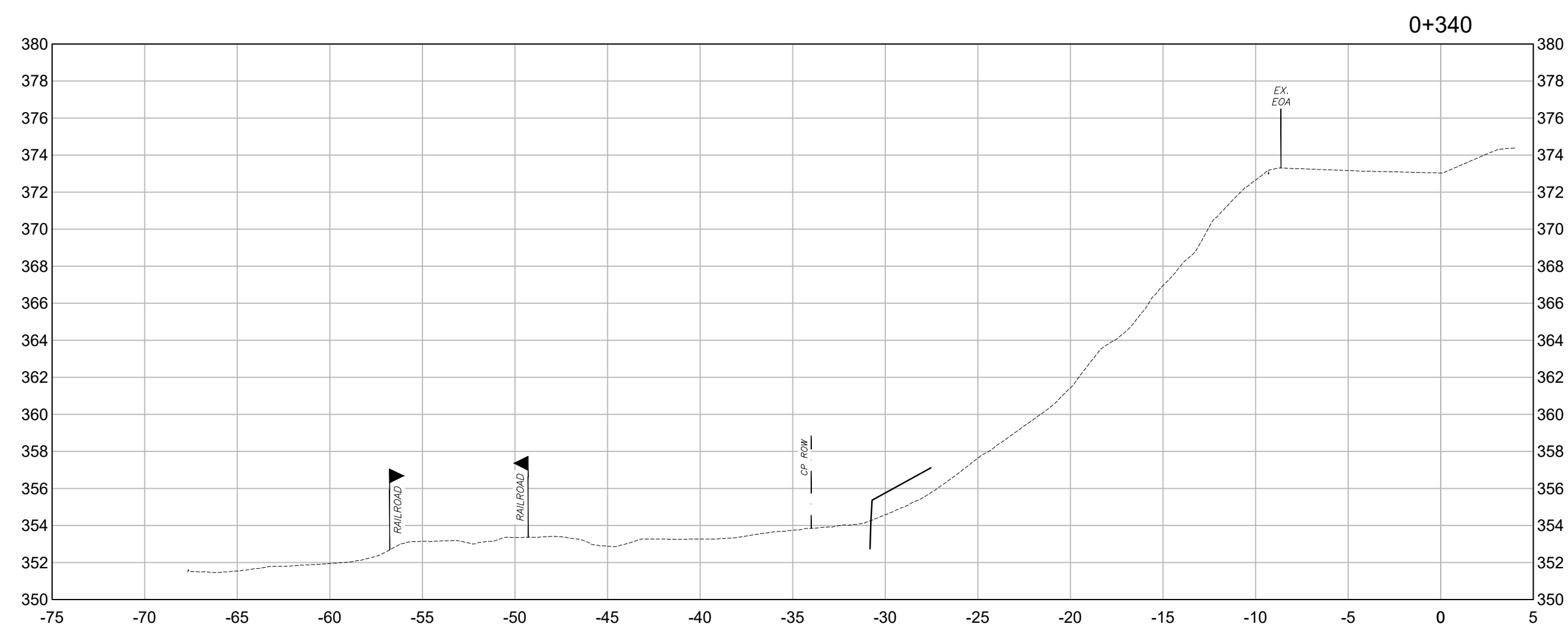
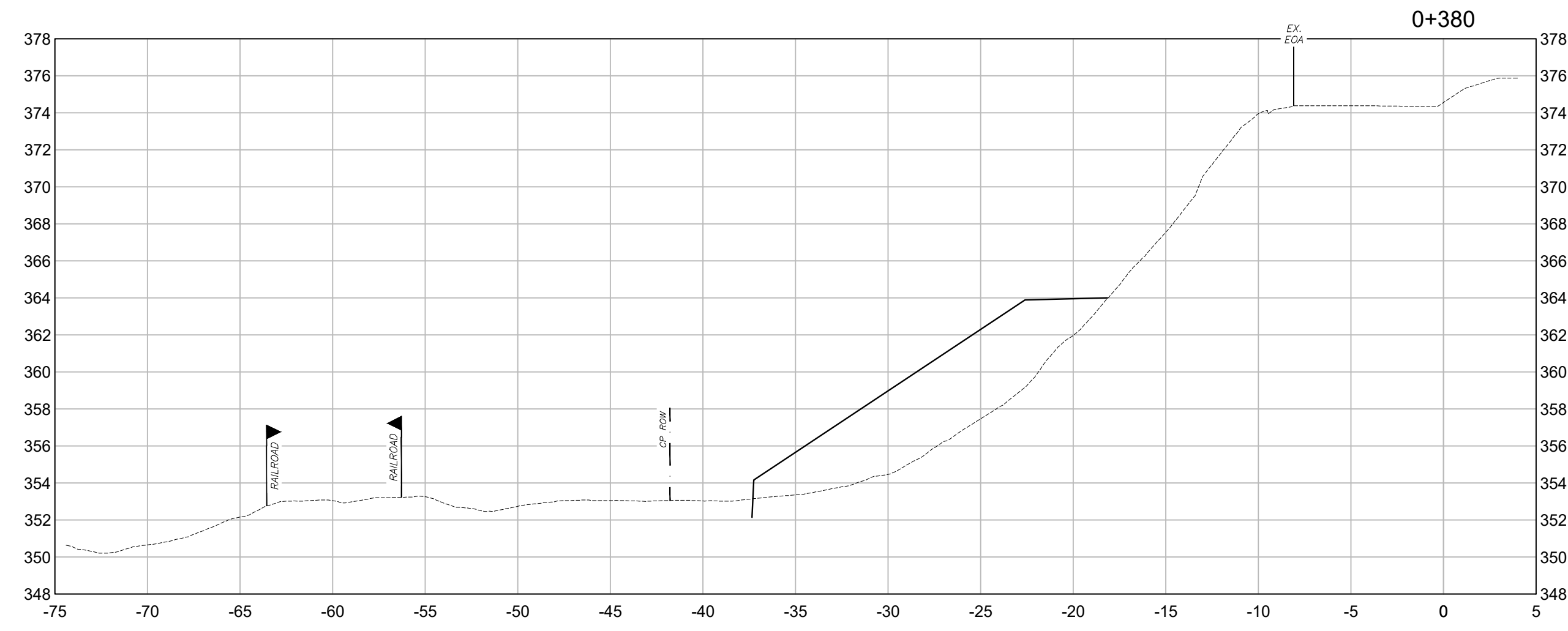
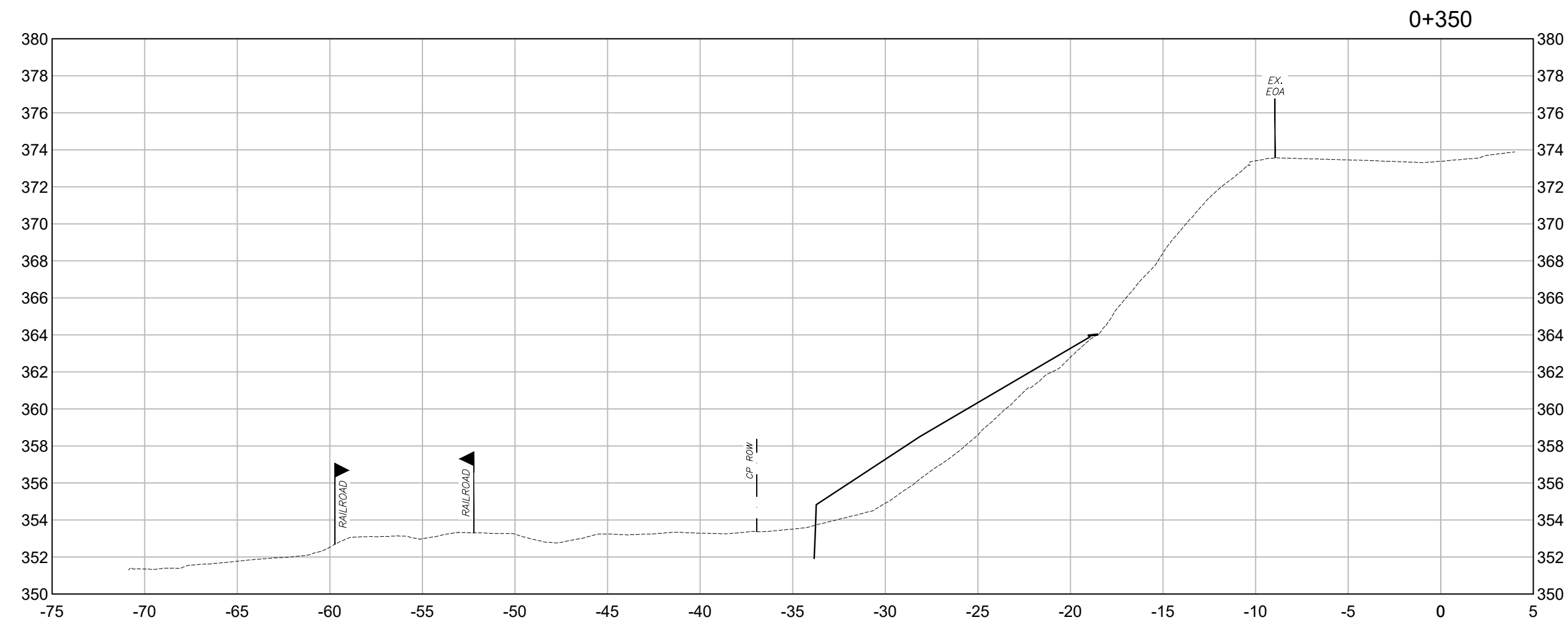
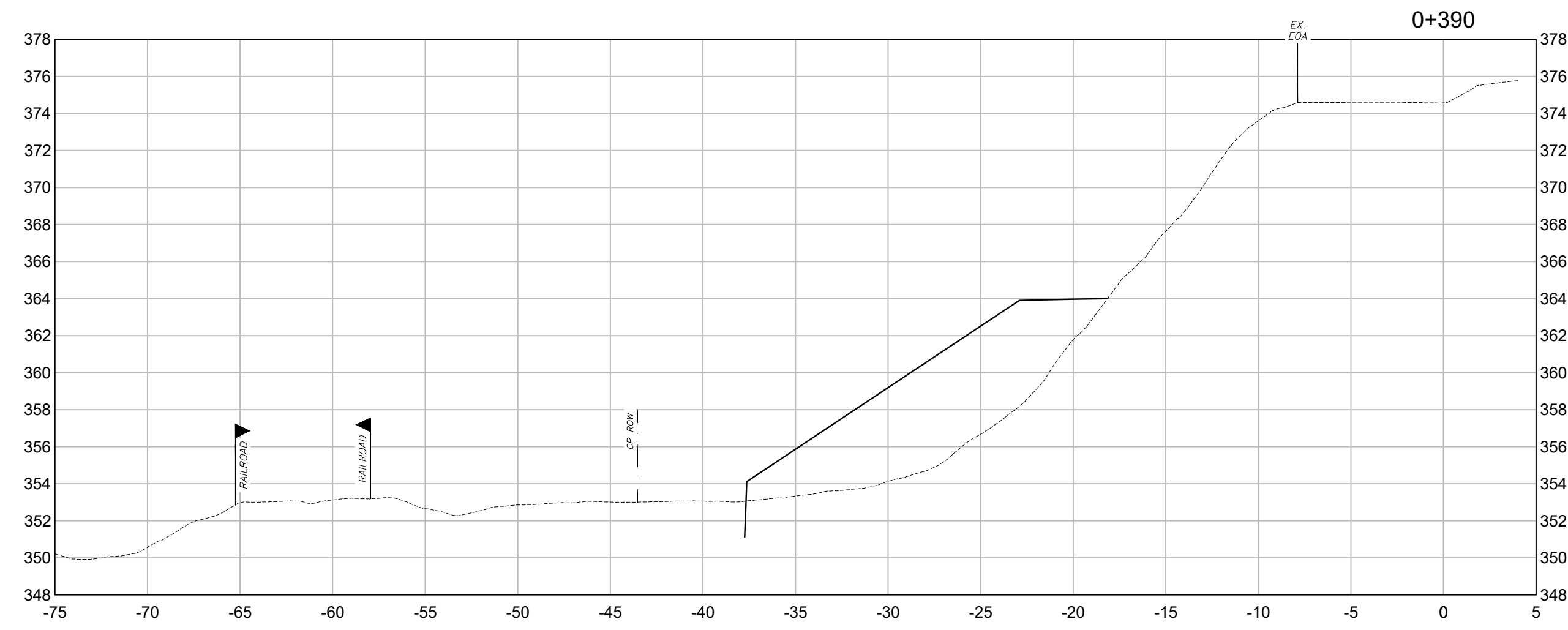
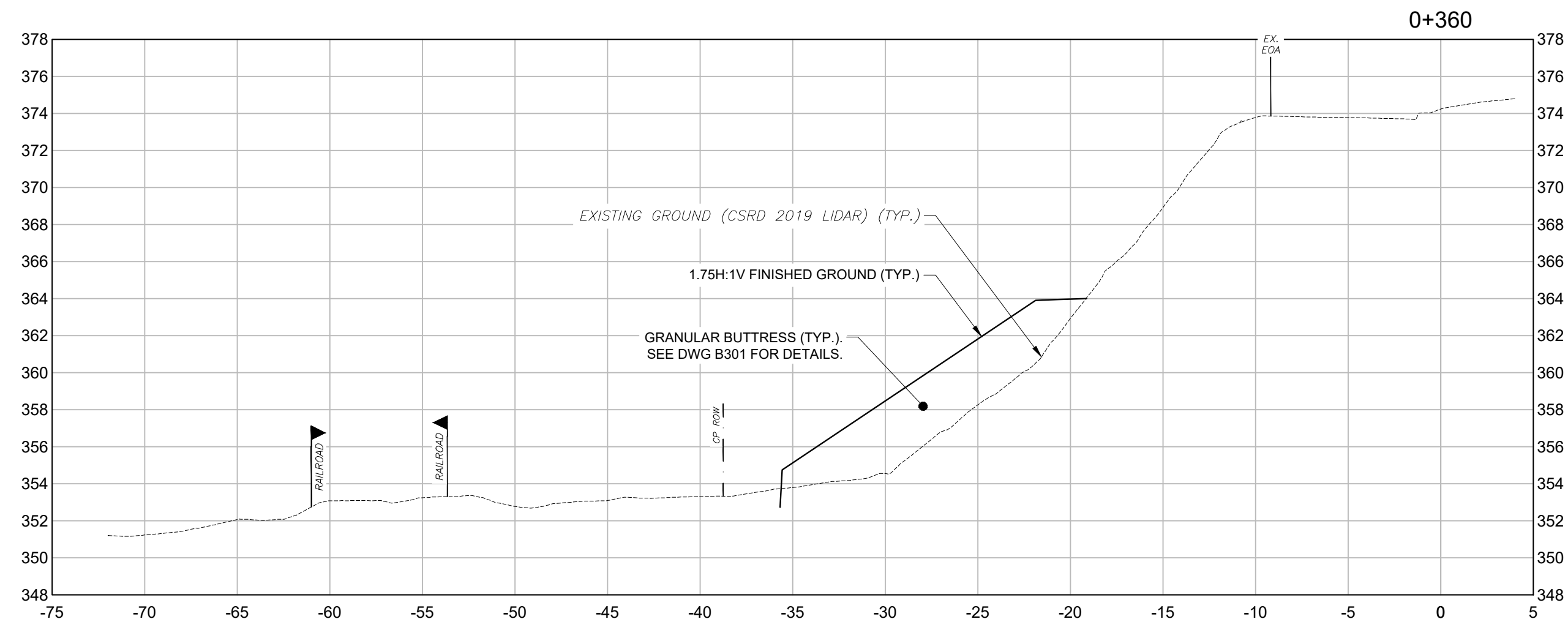
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 CHECKED: RW  
 SURVEYED: OEL  
 DATE: DEC 2023

**ONSITE**  
 Engineering Ltd.  
 INTERIOR OPERATIONS  
 #201-231 TRANS CANADA HWY  
 SALMON ARM, BC, V1E 4R1  
 PH: 250-833-5643  
 FAX: 250-235-6943  
 EGBC PERMIT TO PRACTICE No.: 1002678

CITY OF SALMON ARM  
 LAKESHORE ROAD SLOPE STABILIZATION  
 BUTTRESS  
 ACCESS ROAD - SECTIONS

TICKET No.	CLIENT PROJECT NO.
ENG-2024-47	7-41
OEL PROJECT NO.	DRAWING NO.
B201	B201
SHEET: 5 OF 9	REV 1



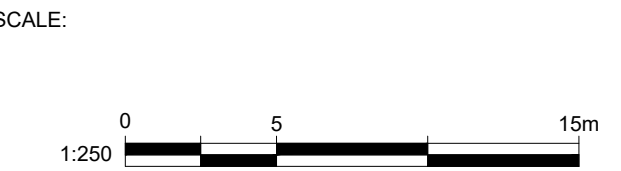
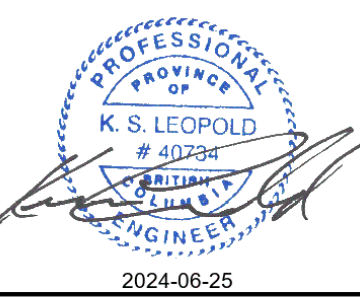


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 DATE: 25/06/2024 9:39 AM BY: Evan Moerite

REV NO	REVISIONS	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	APR 15 2024	EM	KL
1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



PERMIT TO PRACTICE  
 ONSITE ENGINEERING LTD.  
 PERMIT NUMBER: 1002678  
 ENGINEERS AND GEOSCIENTISTS BC



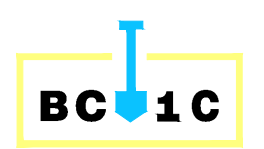
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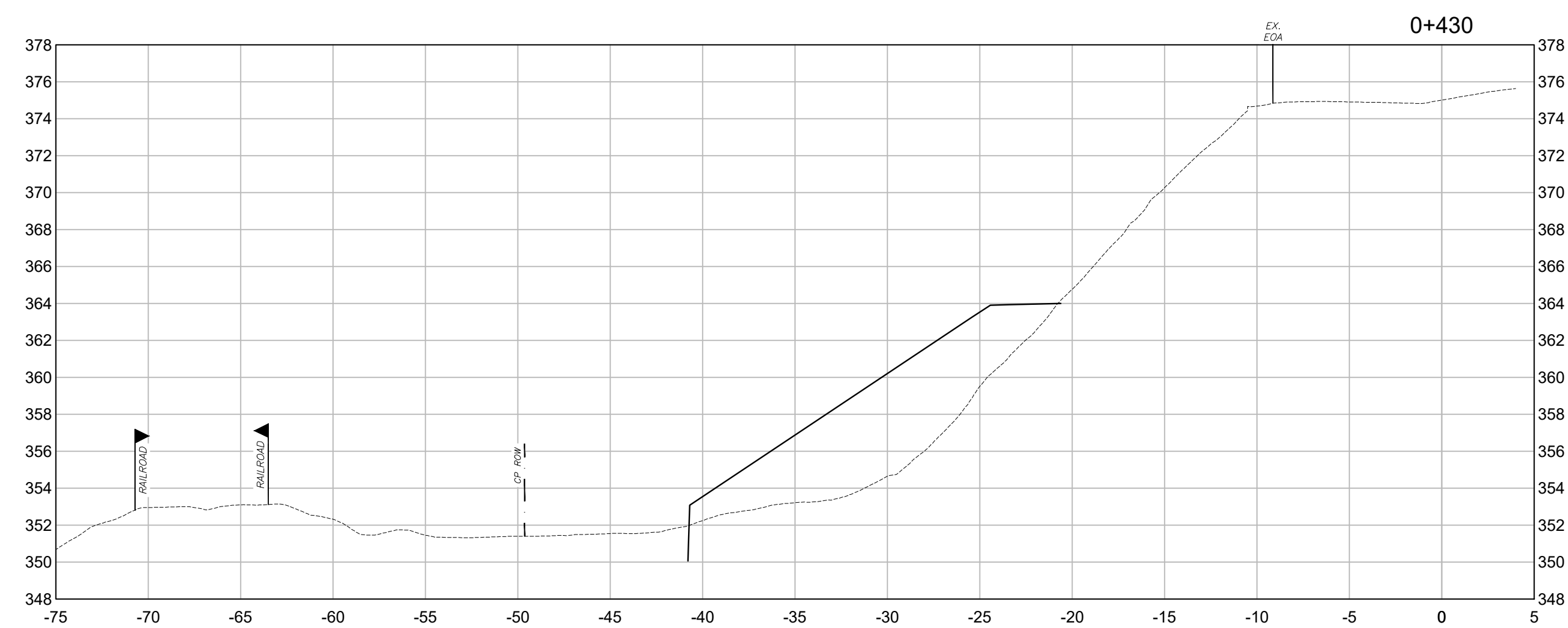
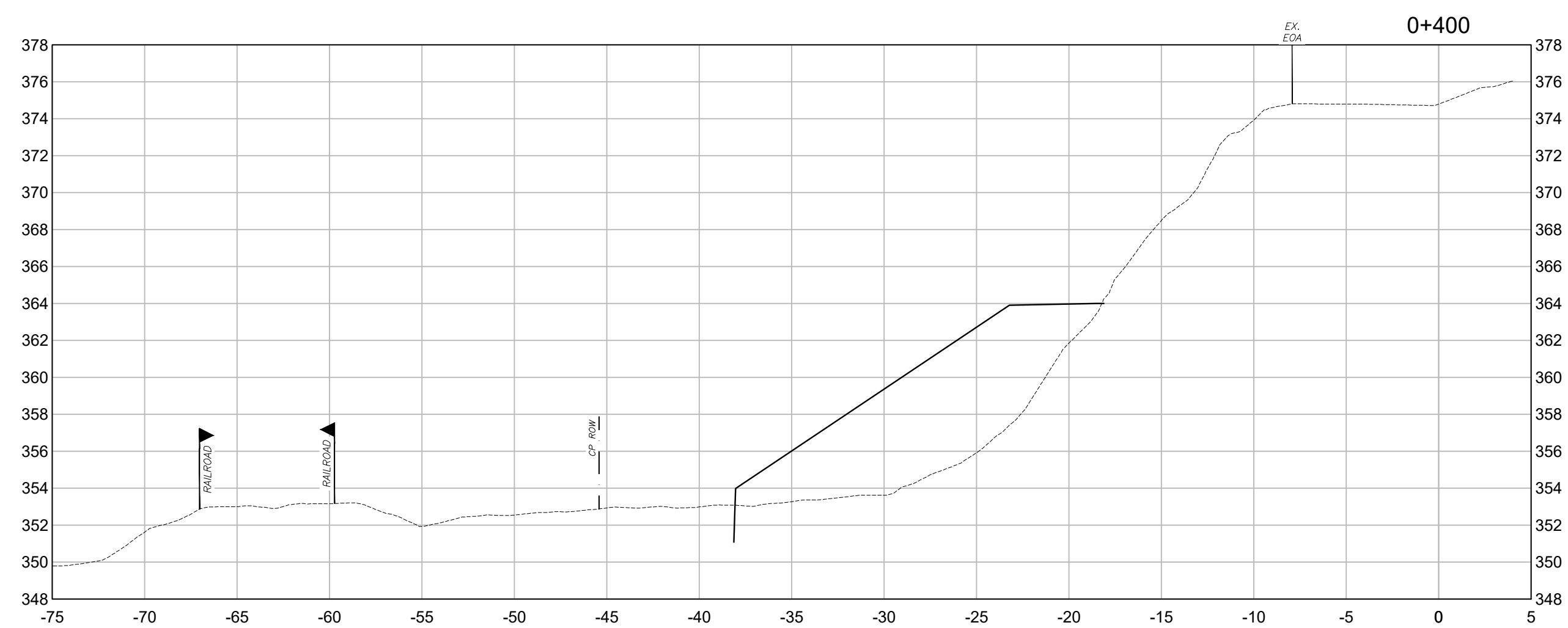
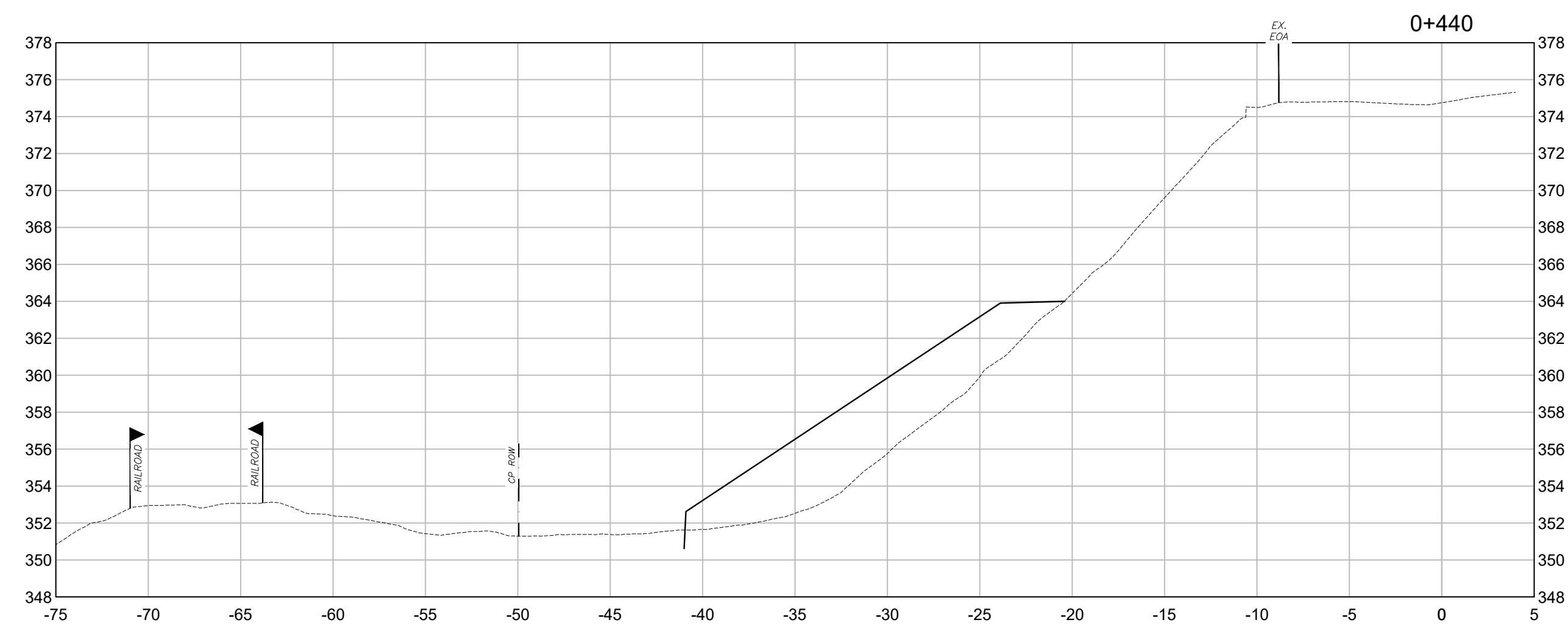
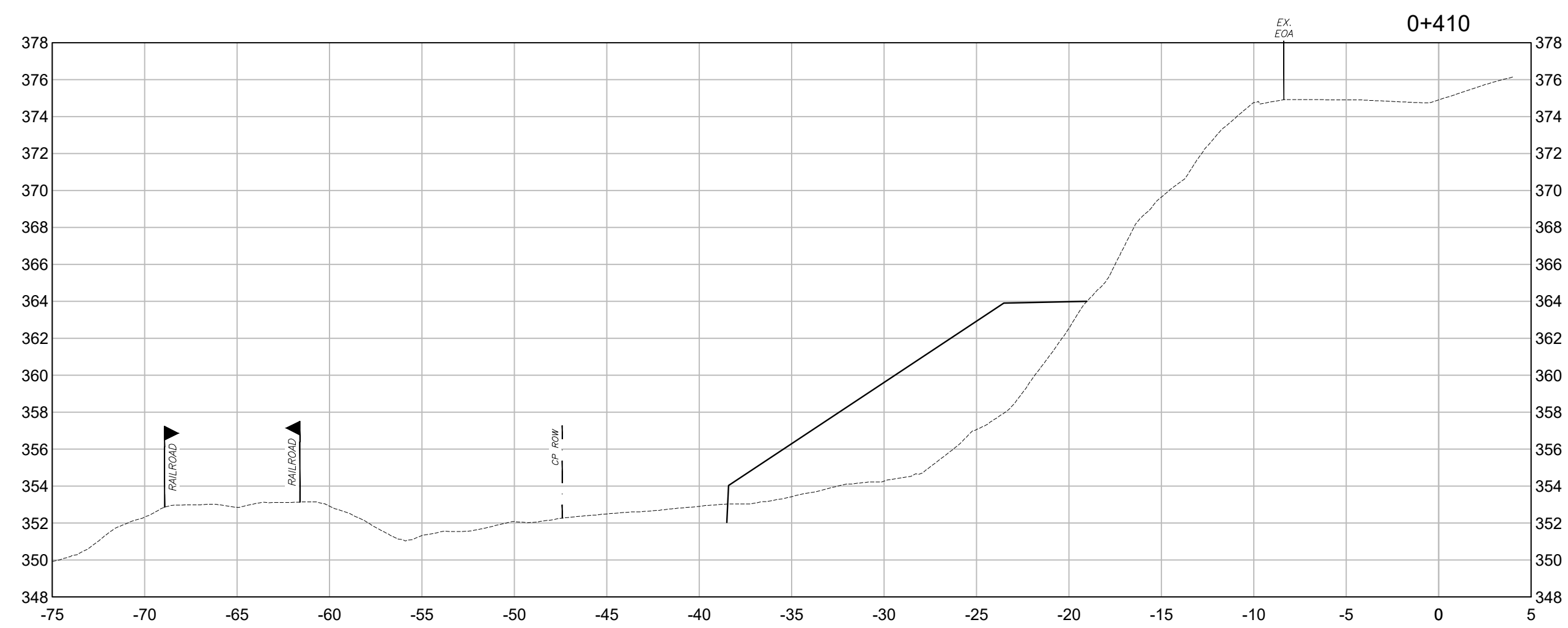
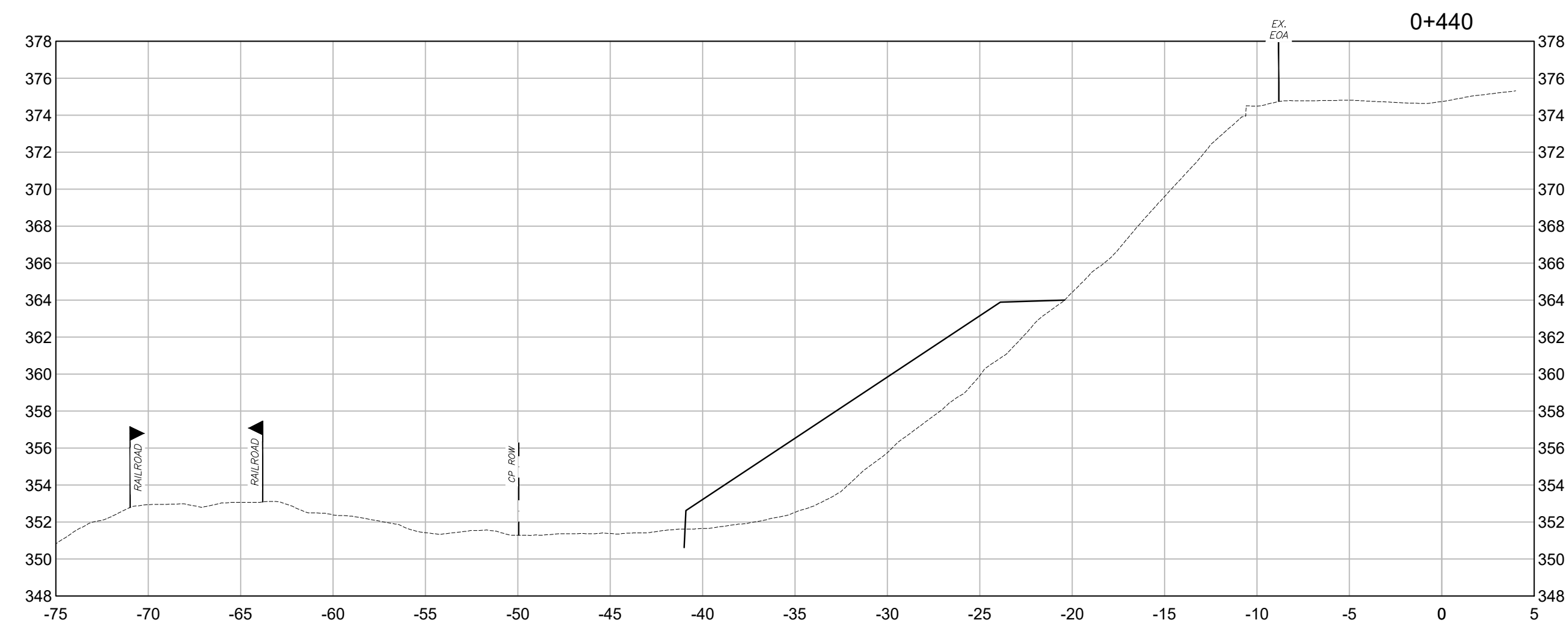
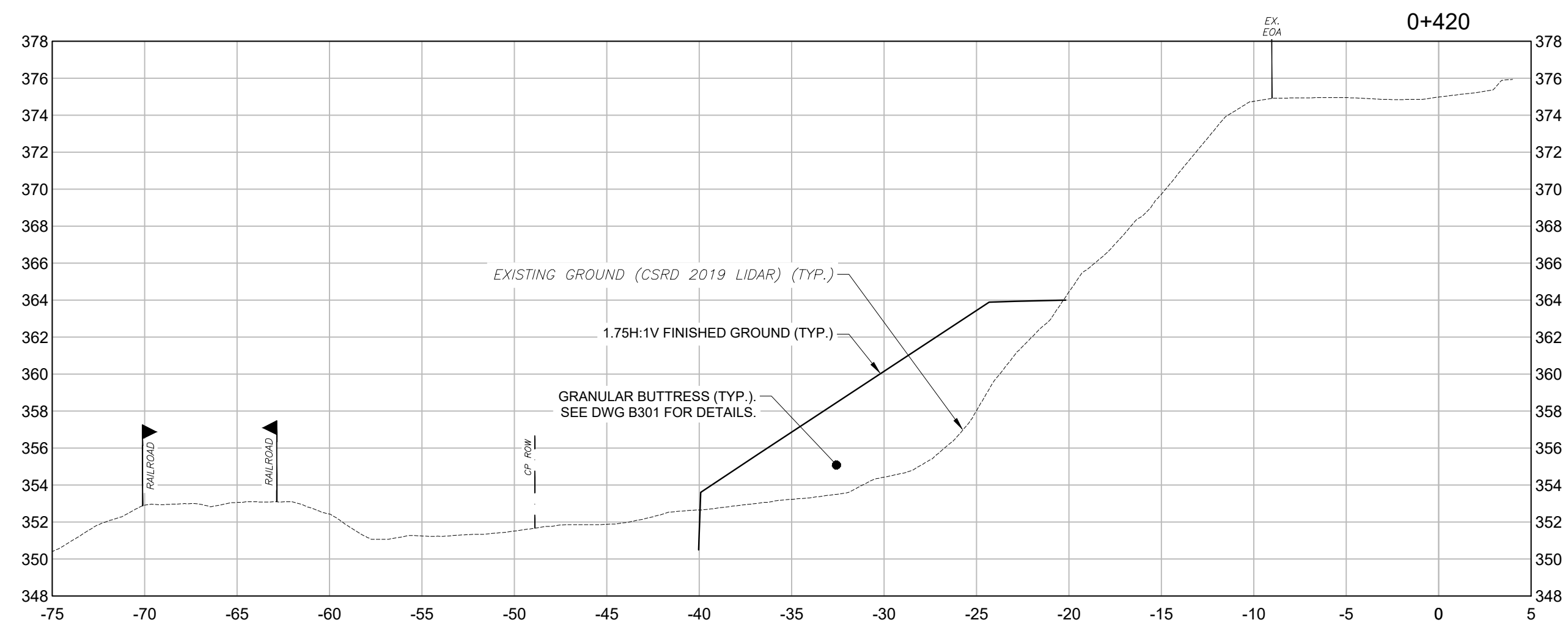
**ONSITE**  
 Engineering Ltd.  
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 #201-231 TRANS CANADA HWY  
 SALMON ARM, BC, V1E 4R1  
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EGBC PERMIT TO PRACTICE No.: 1002678

CITY OF SALMON ARM  
 LAKESHORE ROAD SLOPE STABILIZATION  
 BUTTRESS  
 SITE SECTIONS (1 OF 3)

TICKET No.

CLIENT PROJECT NO.	ENG-2024-47
OEL PROJECT NO.	7-41
DRAWING NO.	B202
SHEET:	6 OF 9
REV	1



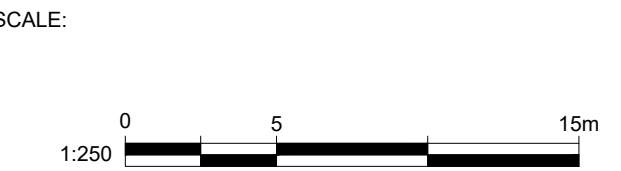
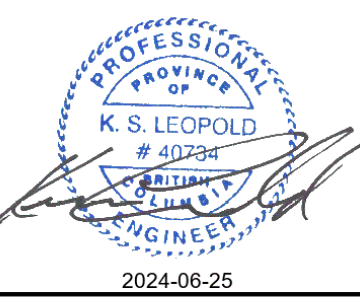


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REV NO	REVISIONS	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	APR 15 2024	EM	KL
1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



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 ONSITE ENGINEERING LTD.  
 PERMIT NUMBER: 1002678  
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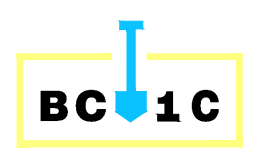


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DRAWN:	EM
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SURVEYED:	OEL
DATE:	DEC 2023

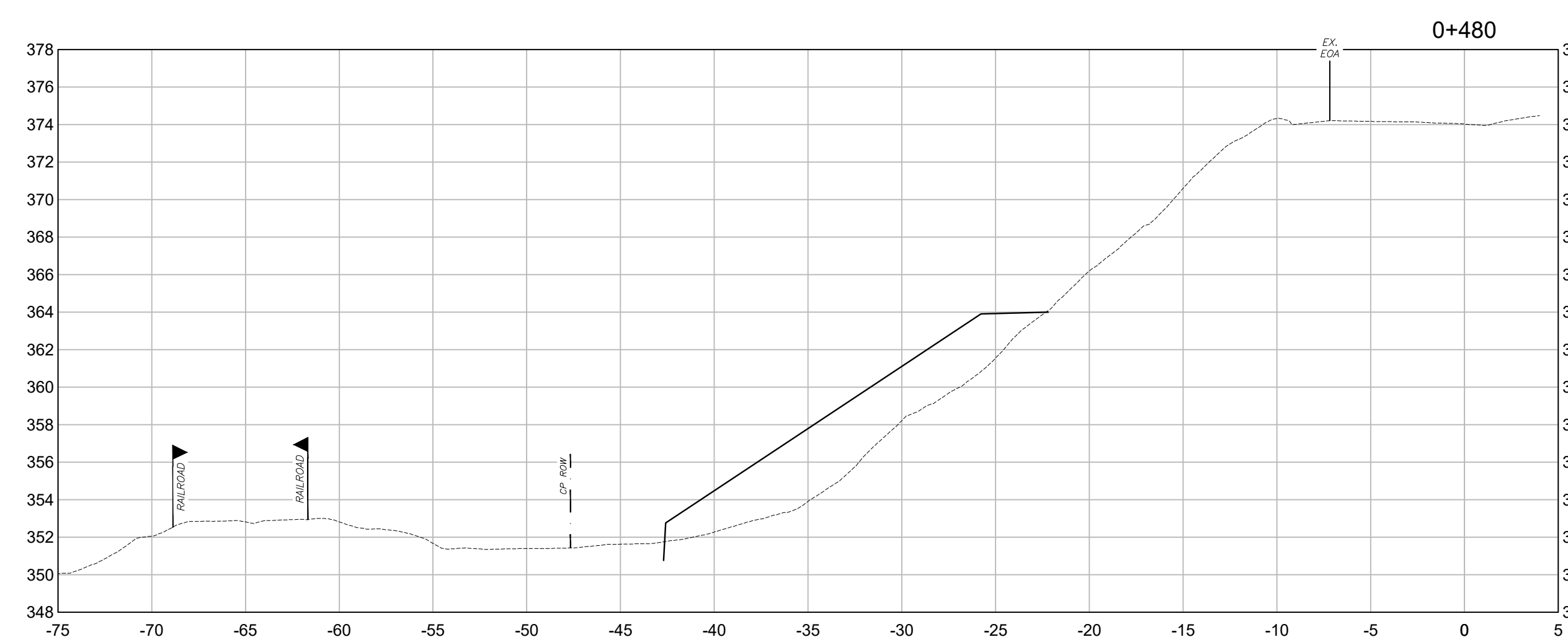
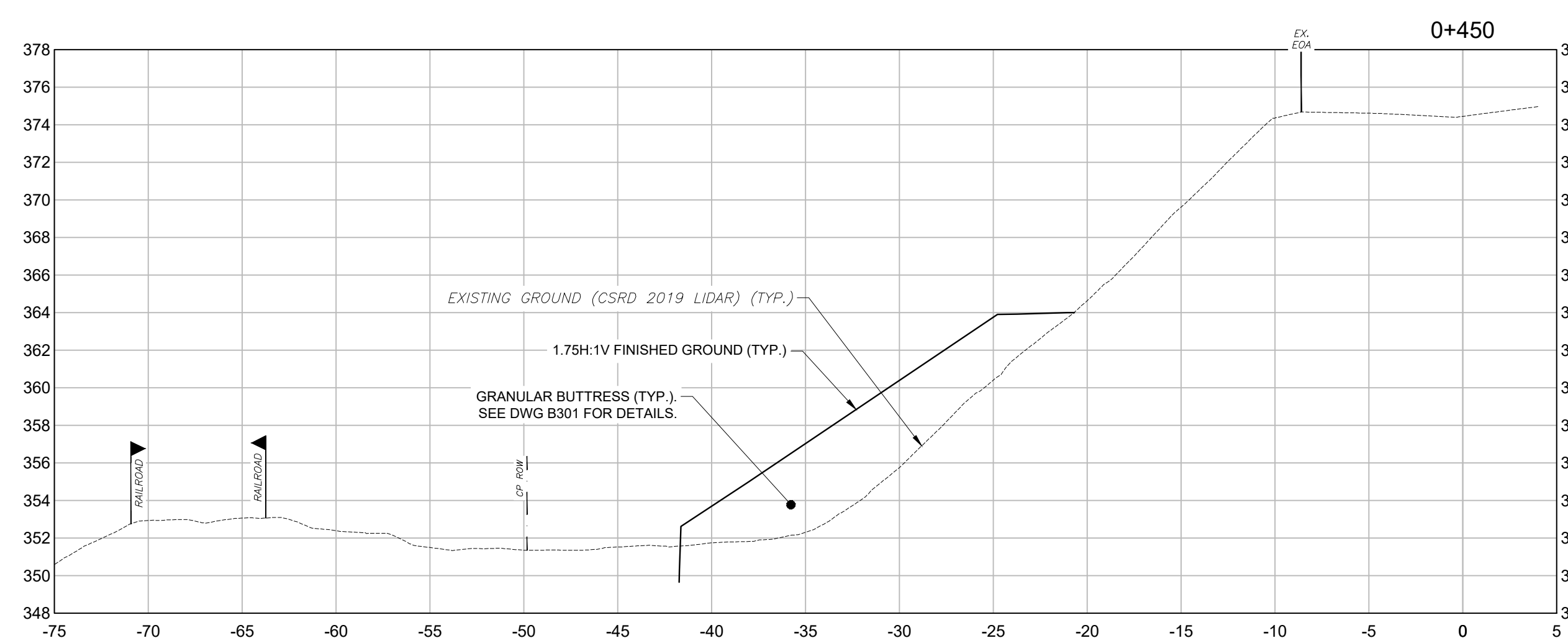
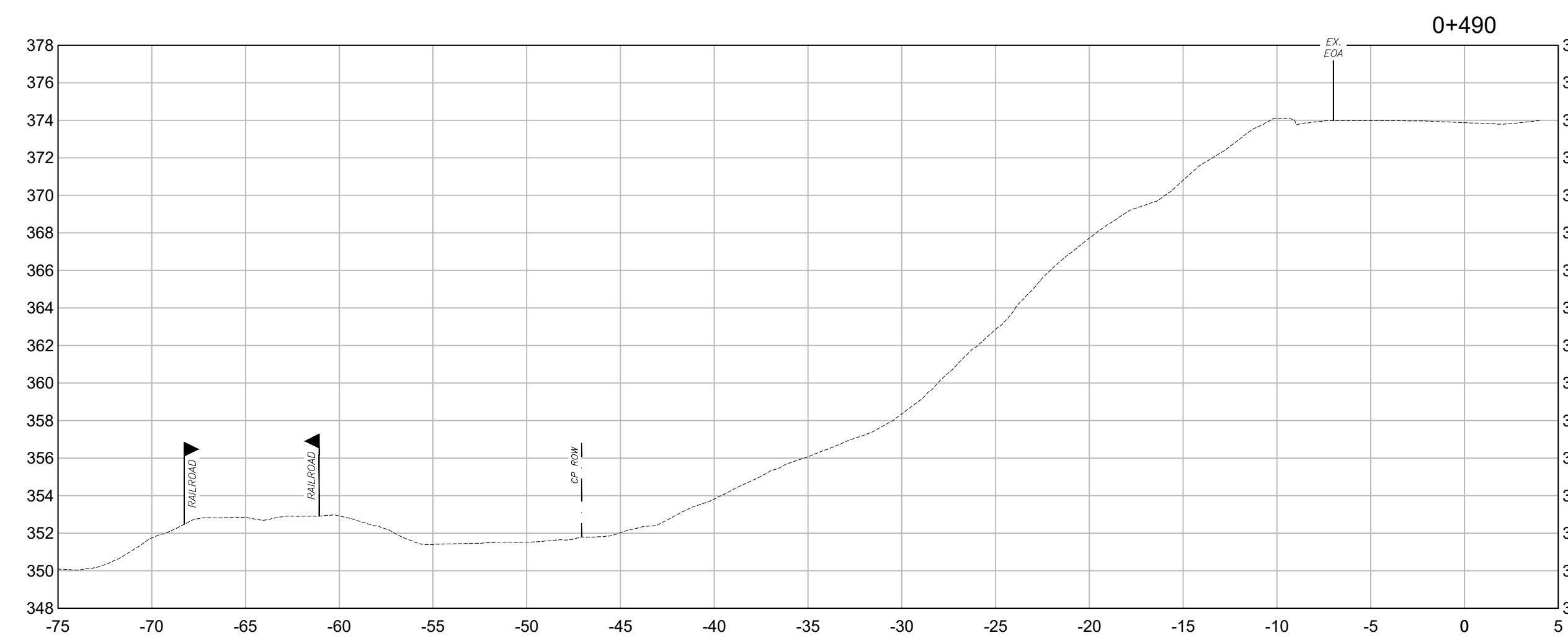
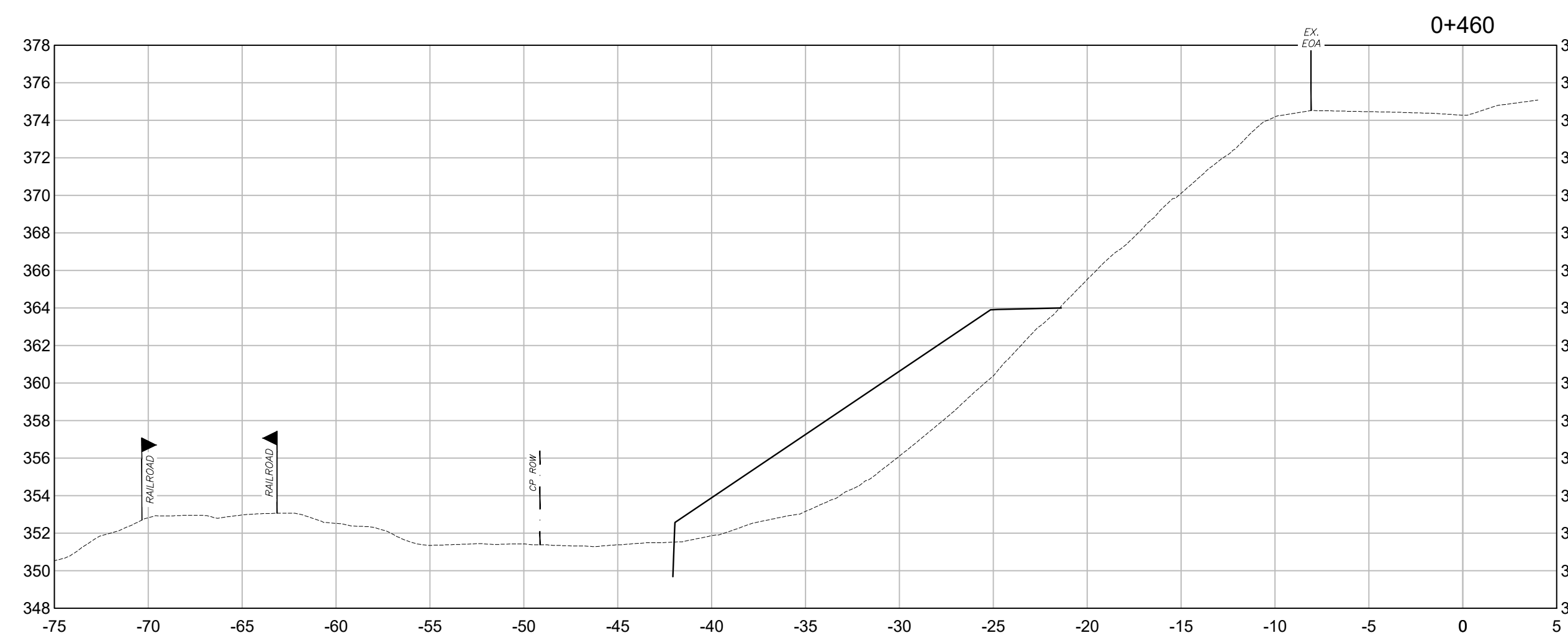
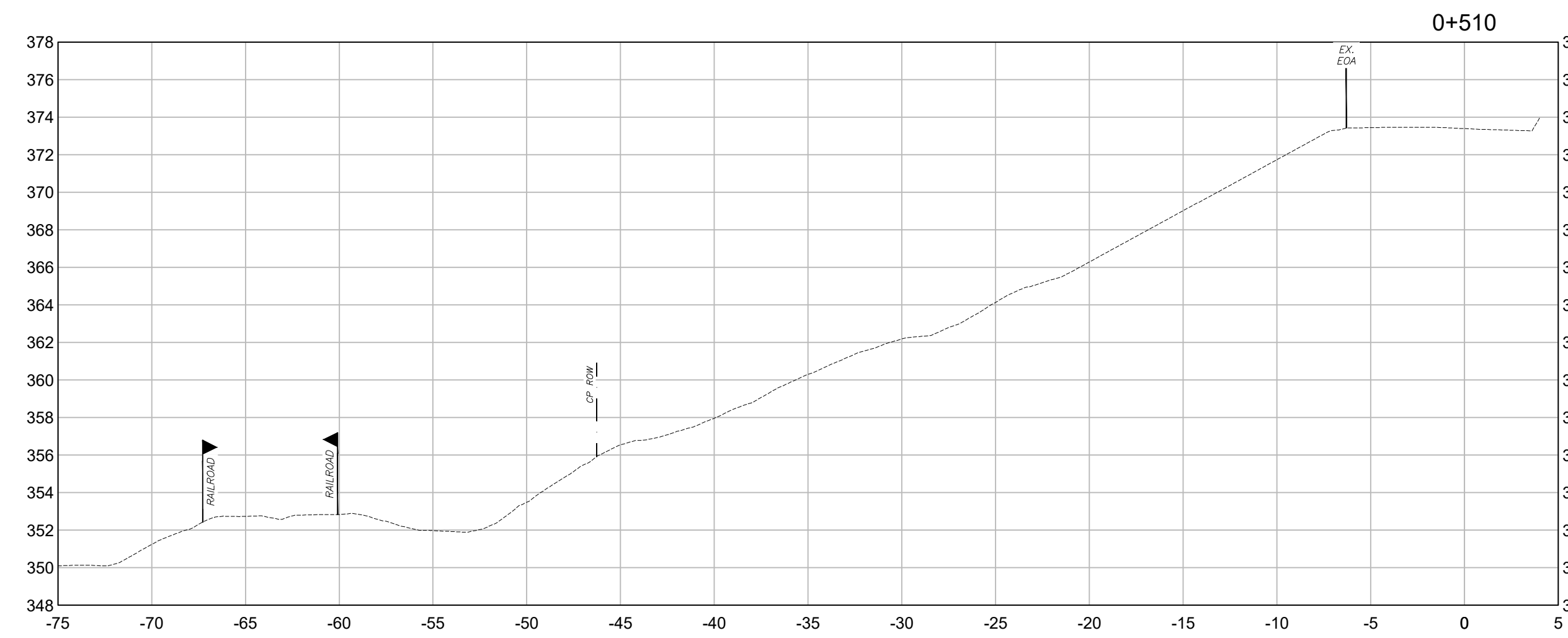
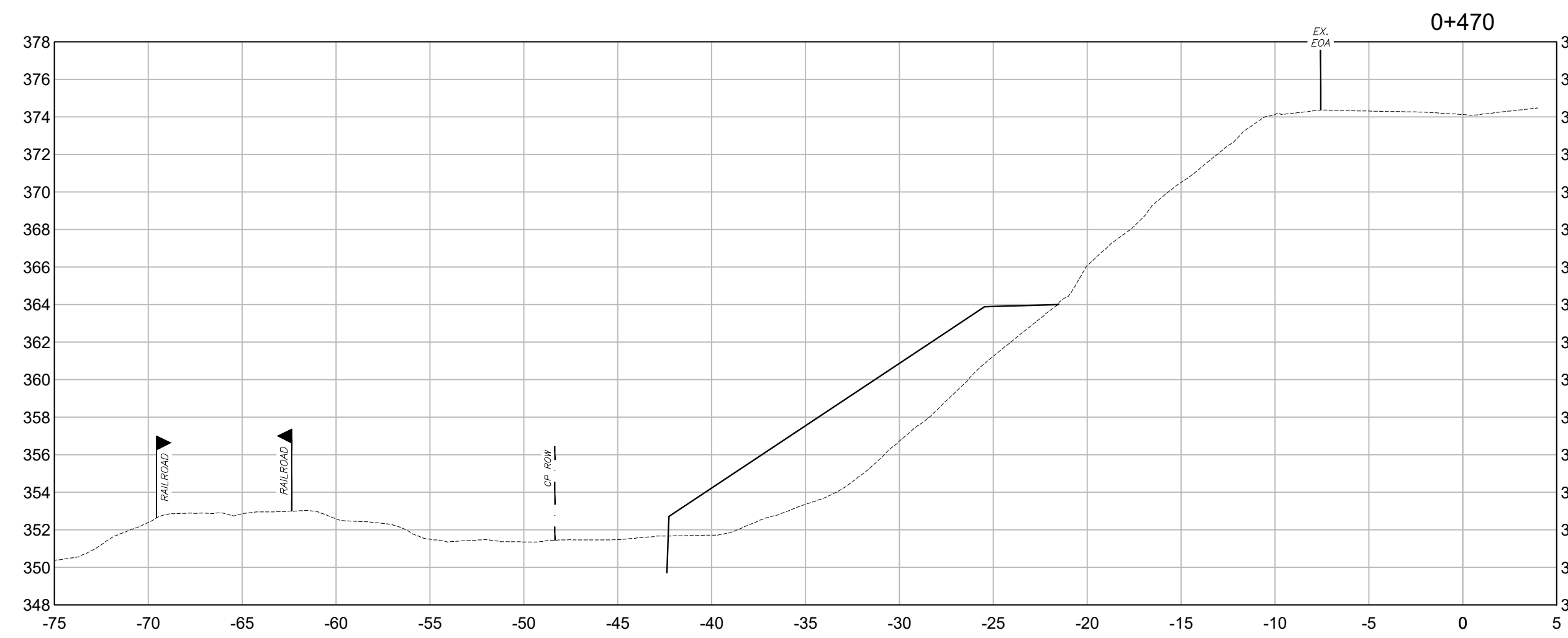
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CITY OF SALMON ARM  
 LAKESHORE ROAD SLOPE STABILIZATION  
 BUTTRESS  
 SITE SECTIONS (2 OF 3)

TICKET No.	
CLIENT PROJECT NO.	ENG-2024-47
OEL PROJECT NO.	7-41
DRAWING NO.	B203
SHEET:	7 OF 9
REV	1



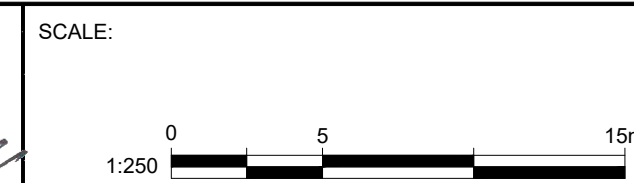
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REV NO	REVISIONS	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	APR 15 2024	EM	KL
1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



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 ONSITE ENGINEERING LTD.  
 PERMIT NUMBER: 1002678  
 ENGINEERS AND GEOSCIENTISTS BC

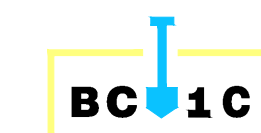


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 DRAWN: EM  
 CHECKED: RW  
 SURVEYED: OEL  
 DATE: DEC 2023

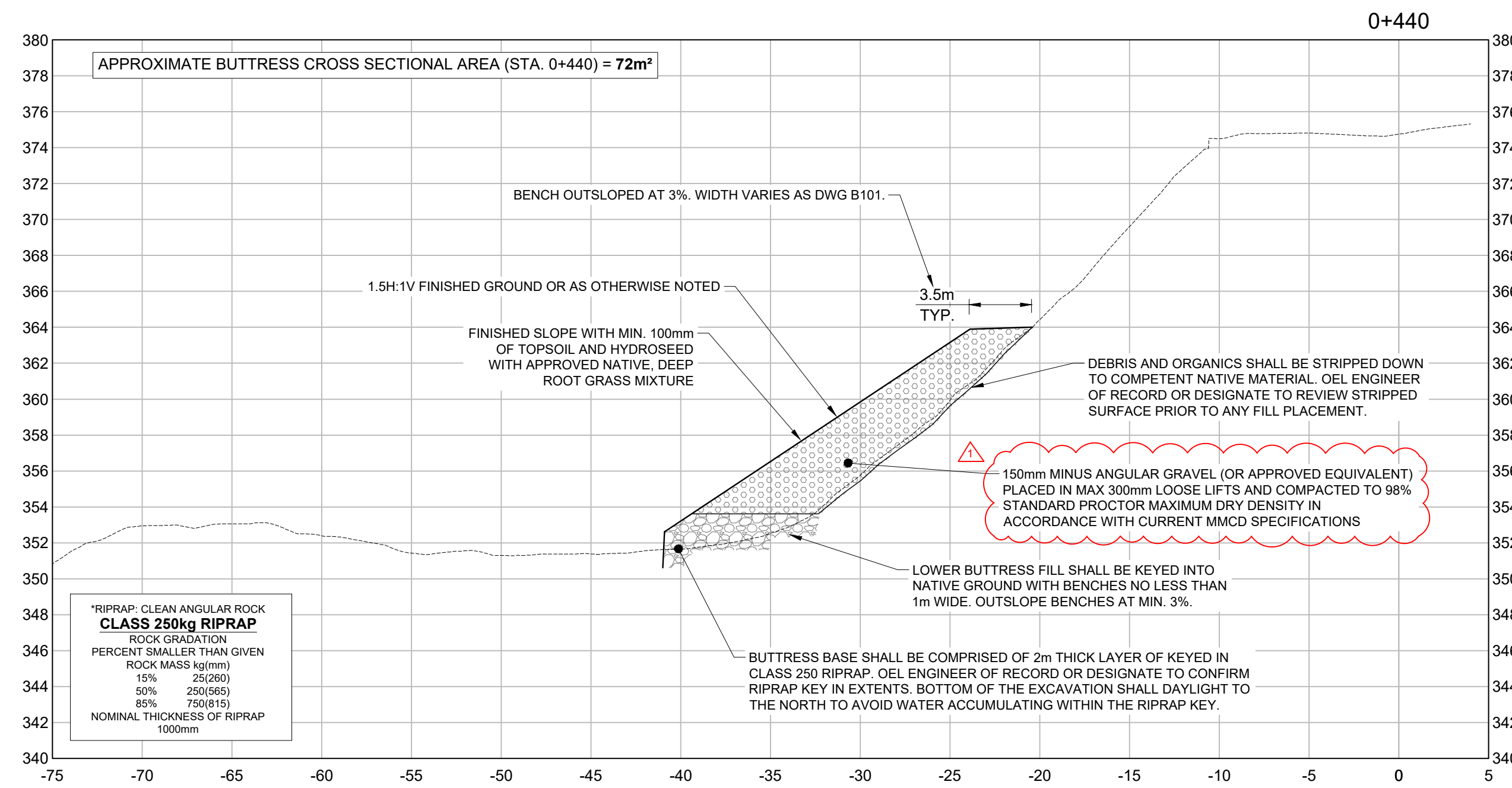
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 EGBC PERMIT TO PRACTICE No.: 1002678

CITY OF SALMON ARM  
 LAKESHORE ROAD SLOPE STABILIZATION  
 BUTTRESS  
 SITE SECTIONS (3 OF 3)

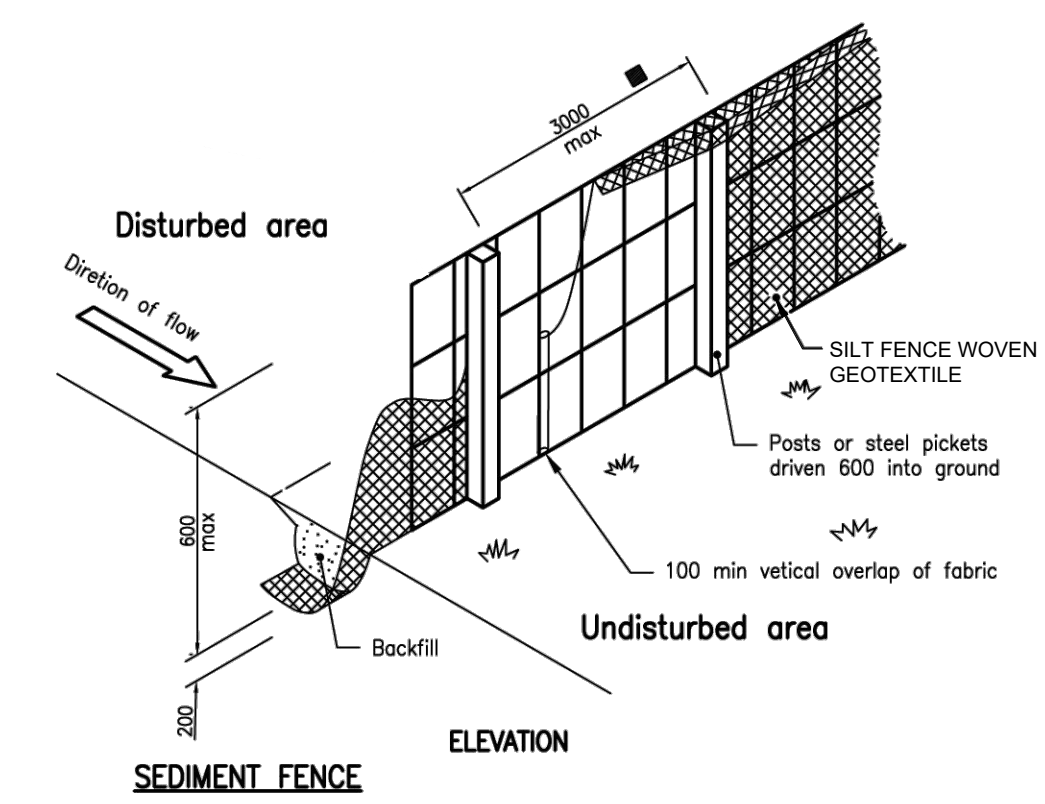
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 OEL PROJECT NO. 7-41  
 DRAWING NO. B204  
 SHEET: 8 OF 9 REV 1





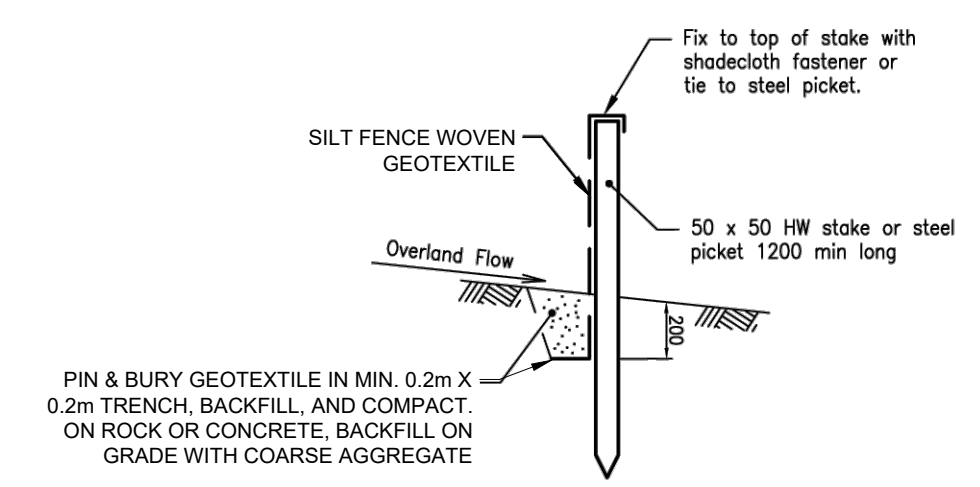


**A** TYPICAL BUTTRESS SECTION DETAIL (STA. 0+440)  
SCALE 1:250

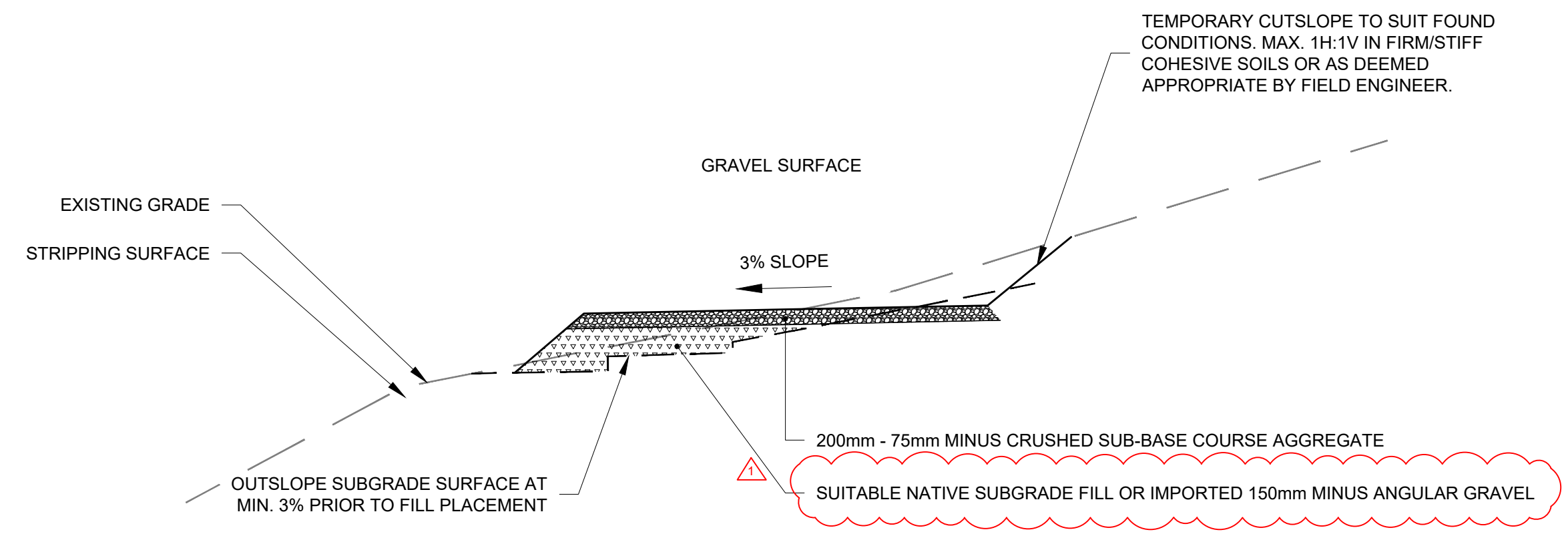


EROSION & SEDIMENT CONTROL DETAILS  
SCALE NTS

NOTES:  
1) CONSTRUCTION OF FENCE SHALL BE ENTIRELY FROM THE CITY SIDE, ABSOLUTELY NO ACCESS ONTO CPKC LAND.



NOTES:  
1. SUBGRADE FILLS TO BE COMPRISED OF APPROVED NATIVE OR IMPORTED GRANULAR SOILS PLACED IN LIFTS AND NOMINALLY COMPACTED FOR CONSTRUCTION TRAFFIC.



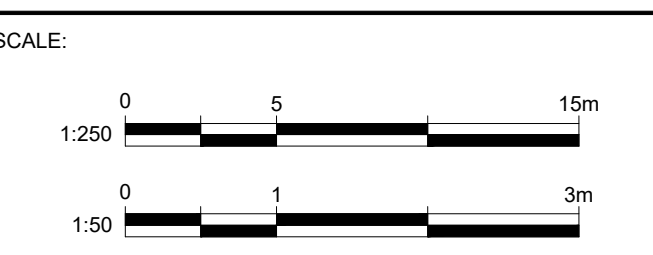
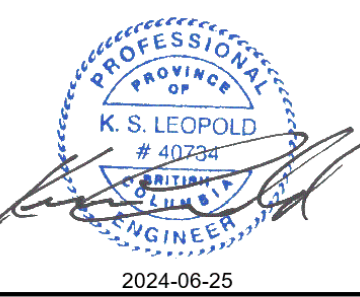
**B** TYPICAL ACCESS ROAD DETAIL  
SCALE 1:50

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REV NO	REVISIONS	DATE	DRAWN	APPRD
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1	ISSUED FOR CONSTRUCTION	JUN 25 2024	EM	KL



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PERMIT NUMBER: 1002678  
ENGINEERS AND GEOSCIENTISTS BC



DESIGNED: EM/PM  
DRAWN: EM  
CHECKED: RW  
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DATE: DEC 2023

**ONSITE**  
Engineering Ltd.  
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EGBC PERMIT TO PRACTICE No.: 1002678

CITY OF SALMON ARM  
LAKESHORE ROAD SLOPE STABILIZATION  
BUTTRESS  
TYPICAL DETAILS

TICKET No.

CLIENT PROJECT NO.	ENG-2024-47
OEL PROJECT NO.	7-41
DRAWING NO.	B301
SHEET:	9 OF 9

REV 1

