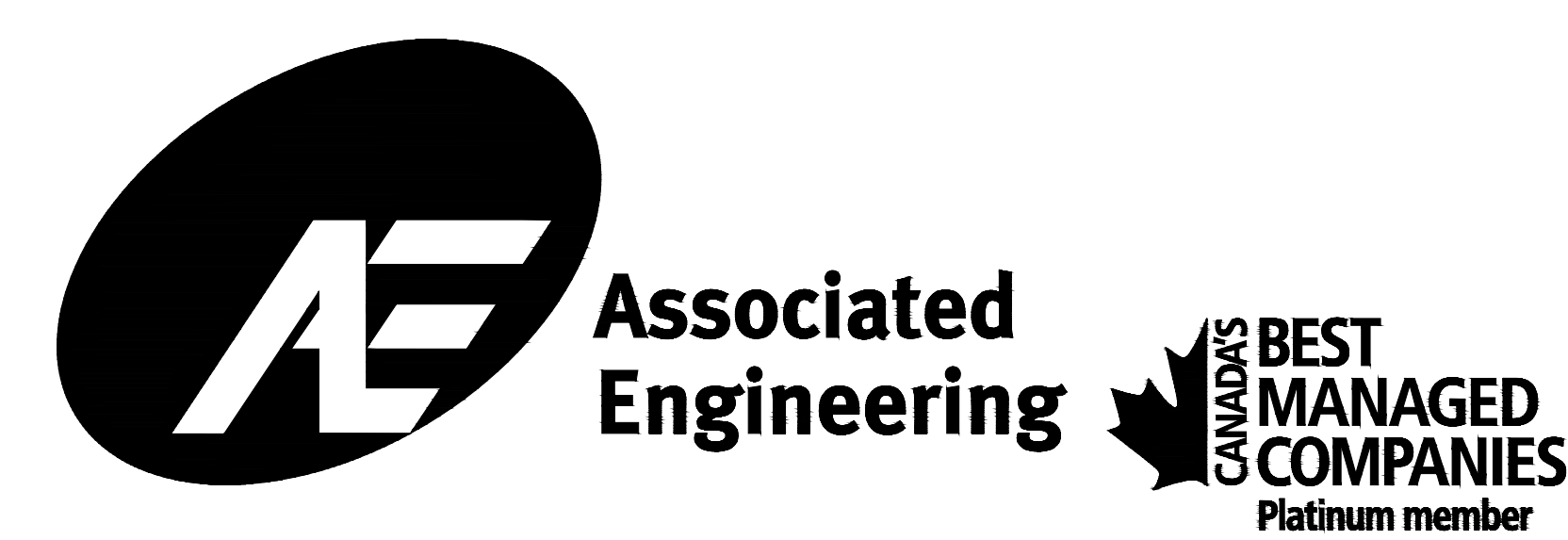


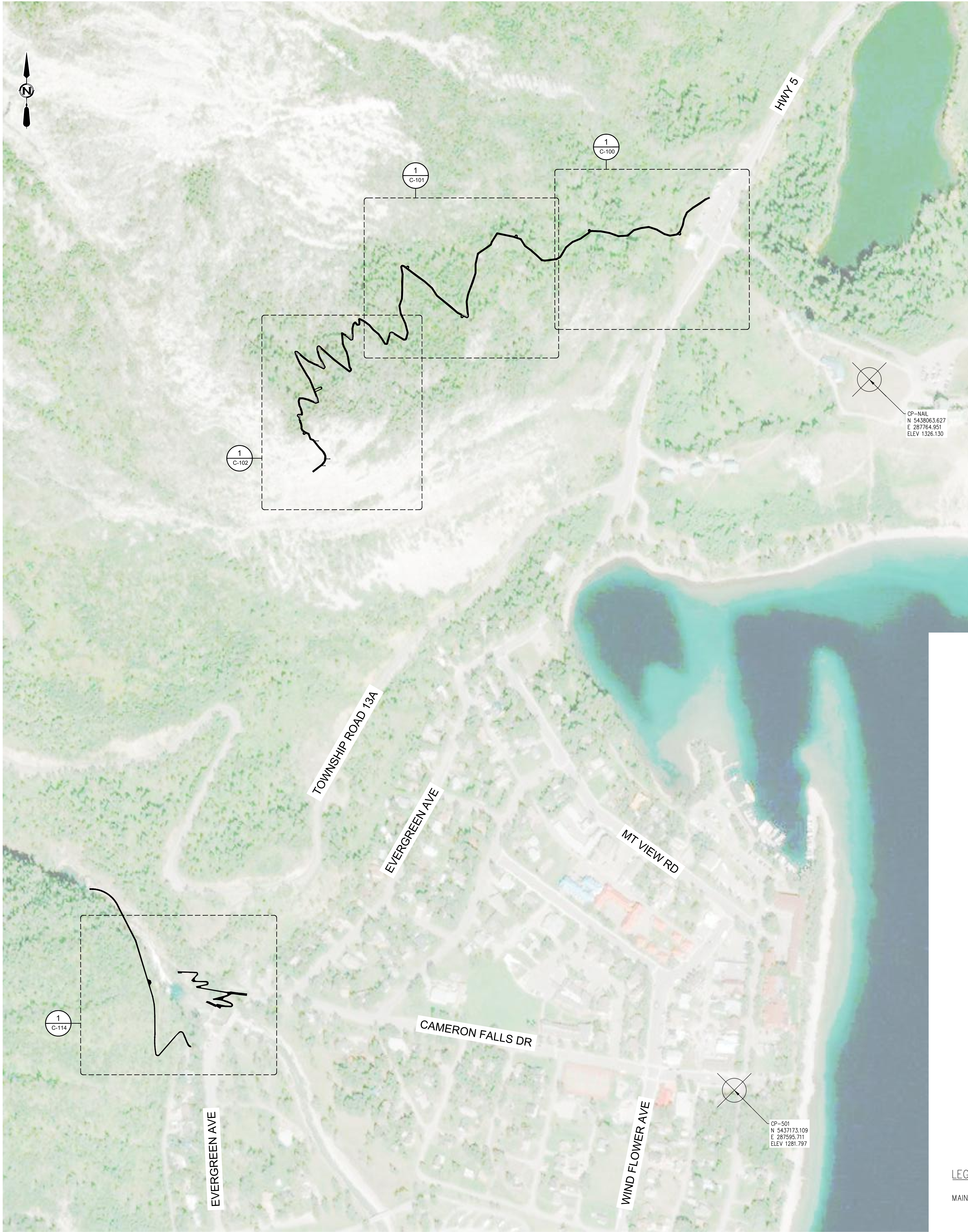
WLNP TRAILS IMPROVEMENT
WATERTON LAKE NATIONAL PARK

Project No. R.099828.001

DRAWING LIST				
SHEET	DRAWING NAME	REVISION	DRAWING TITLE	DRAWING DESCRIPTION
1	G-001	0	COVER	DRAWING LIST
2	G-002	0	PLAN	OVERALL
3	C-001	0	PLAN- BEARS HUMP	LAYOUT 1 OF 3
4	C-002	0	PLAN - BEARS HUMP	LAYOUT 2 OF 3
5	C-003	0	PLAN - BEARS HUMP	LAYOUT 3 OF 3
6	C-100	0	PLAN - BEARS HUMP	SECTION 1 OF 3
7	C-101	0	PLAN - BEARS HUMP	SECTION 2 OF 3
8	C-102	0	PLAN - BEARS HUMP	SECTION 3 OF 3
9	C-103	0	PLAN PROFILE	BEARS HUMP 1 OF 11
10	C-104	0	PLAN PROFILE	BEARS HUMP 2 OF 11
11	C-105	0	PLAN PROFILE	BEARS HUMP 3 OF 11
12	C-106	0	PLAN PROFILE	BEARS HUMP 4 OF 11
13	C-107	0	PLAN PROFILE	BEARS HUMP 5 OF 11
14	C-108	0	PLAN PROFILE	BEARS HUMP 6 OF 11
15	C-109	0	PLAN PROFILE	BEARS HUMP 7 OF 11
16	C-110	0	PLAN PROFILE	BEARS HUMP 8 OF 11
17	C-111	0	PLAN PROFILE	BEARS HUMP 9 OF 11
18	C-112	0	PLAN PROFILE	BEARS HUMP 10 OF 11
19	C-113	0	PLAN PROFILE	BEARS HUMP 11 OF 11
20	C-114	0	PLAN - CAMERON FALLS	OVERALL
21	C-115	0	PLAN - CAMERON FALLS	LOWER VIEWING AREA
22	C-116	0	PLAN - CAMERON FALLS	TRAIL IMPROVEMENTS
23	C-117	0	DETAILS - TYPICAL	SWITCHBACK 1 OF 2
24	C-118	0	DETAILS - TYPICAL	SWITCHBACK 2 OF 2
25	C-501	0	DETAILS	1 OF 5
26	C-502	0	DETAILS	2 OF 5
27	C-503	0	DETAILS	3 OF 5
28	C-504	0	DETAILS	4 OF 5
29	C-505	0	DETAILS	5 OF 5

ISSUED FOR TENDER
2018-NOV-30





1 PLAN 1:2000

GENERAL NOTES

1. ALL DIMENSIONS GIVEN ON STRUCTURAL DRAWINGS ARE IN METRIC SYSTEM UNLESS OTHERWISE NOTED. DO NOT SCALE DRAWINGS.
2. THE SCOPE OF WORK INDICATED ON THE DRAWINGS IS TO SERVE AS A GUIDE ONLY. ALL WORK INDICATED ON THE DRAWINGS SHALL BE COMPLETED REGARDLESS OF INCLUSION IN THE GENERAL SCOPE OF WORK.
3. NOTIFY DEPARTMENTAL REPRESENTATIVE IF ANY DISCREPANCIES ARE FOUND BETWEEN THESE NOTES AND THE SPECIFICATIONS.
4. ALL STATIONS AND ELEVATIONS ARE IN METRES.
5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND AND ABOVE GROUND UTILITIES IN THE FIELD PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY.
7. STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
8. ALL CONTRACTOR SUBMITTALS SHALL BE DONE IN S.I. UNITS (METRIC) AND REFERENCE THE NOMINAL IMPERIAL MEASUREMENTS (E.I. 2X4).
9. REVIEW ALL DRAWINGS AND CHECK DIMENSIONS PRIOR TO IMPLEMENTING THE WORK. REPORT ANY DISCREPANCIES TO THE CONSULTANT FOR CLARIFICATION BEFORE PROCEEDING.
10. ALL SECTIONS, DETAILS, AND STATEMENTS NOTED AS 'TYPICAL' APPLY TO LIKE/SIMILAR CONDITIONS IN THE STRUCTURE.
11. THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
12. THE CONTRACTOR SHALL REFER TO AND ADHERE BY THE PARKS CANADA (PCA) GUIDELINES FOR THE SE, HANDLING, AND DISPOSAL OF TREATED WOOD.
13. THE CONTRACTOR SHALL REFER TO AND ADHERE BY THE PARKS CANADA (PCA) BEST MANAGEMENT PRACTICES FOR TRAIL MAINTENANCE AND MODIFICATION.
14. NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY REQUIRED SITE REVIEWS.
15. ALL REFERENCES TO CODES AND STANDARDS ARE TO THE LATEST ISSUE.
16. SEE DRAWINGS FOR DESIGN LOADS. DO NOT EXCEED DURING CONSTRUCTION.

DESIGN NOTES

CODES

1. CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) CSA S6-14.
2. NATIONAL BUILDING CODE OF CANADA (NBC).

LOADING

1. DEAD LOADS AS PER CSA S6-14.
2. PEDESTRIAN LIVE LOAD AS PER CSA S6-14.
3. HANDRAIL LOADING AS PER PART 4 STRUCTURAL DESIGN NBC
4. WIND, SNOW, AND RAIN LOAD AS PER NBC CLIMATIC DATA FOR CARDSTON:
 $S/s = 1.5 \text{ kPa}$ ($a/\text{snow} = 1.0$ IN COMBINATION WITH $a/LL = 1.5$)
 $S/r = 0.1 \text{ kPa}$
5. $Q(1/50) = 0.72 \text{ kPa}$

CODE COMPLIANT GEOMETRY

1. PART 3 NBC
2. SECTION 12 CSA S6-14.

GEOTECHNICAL

1. ALL GEOTECHNICAL INVESTIGATION FOR THE PROJECT SITE APPLICABLE TO THE SPECIFIED SCOPE OF WORK IS TO BE SUBMITTED FOR DESIGN INCORPORATION.

DEMOLITION

1. CONTRACTOR SHALL PROVIDE A DEMOLITION PLAN PRIOR TO START OF DEMOLITION.
2. ALL MATERIAL SALVAGED SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.

MATERIAL NOTES

1. ALL PROPOSED UPGRADES SHALL BE CONSTRUCTED WITH NEW MATERIAL ONLY. EXISTING WOODEN COMPONENTS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN STRICT ACCORDANCE WITH APPLICABLE STANDARDS.
2. MATERIAL USED FOR CONSTRUCTION SHALL BE FREE OF ANY DEFECTS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL CONFORM TO CSA C40.21M (GRADE 350W).
2. ALL STRUCTURAL STEEL AND BOLTS TO BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
3. ANY GALVANIZING DAMAGED DURING CONSTRUCTION (INCLUDING DAMAGE DUE TO FIELD WELDING) SHALL BE REPAIRED BY METALIZING AS PER ASTM A780 METHOD 3.
4. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF CSA W59.
5. ALL WELDS TO BE 4mm FILLET WELDS UNLESS NOTED OTHERWISE.
6. HIGH STRENGTH BOLTS, NUTS, AND WASHERS ASTM STANDARD A325, STANDARD SPECIFICATION FOR STRUCTURAL BOLTS, STEEL.

TIMBER

1. TIMBER CONSTRUCTION SHALL CONFORM TO CSA O86.
2. WOOD COMPONENTS SHALL CONFORM TO CSA O141.
3. WOOD PRESSURE TREATMENT SHALL CONFORM TO CSA O80.
4. HANDRAIL MEMBERS SHALL BE DOUGLAS FIR-LARCH NO.1 GRADE.
5. DIMENSIONS SHOWN ARE NOMINAL FINISHED DIMENSIONS.
6. ALL TIMBER AND LUMBER MUST BE STRAIGHT, SOUND, AND FREE OF SPLITS, WARPS, CHECKS, LARGE KNOTS, OR OTHER DEFECTS.
7. POSTS, JOISTS, BLOCKING AND DECKING SHALL BE SPF NO.1 GRADE.
8. ALL CONNECTIONS UNLESS NOTED OTHERWISE ARE TO BE 12.7mm ϕ CARRIAGE BOLTS C/W TAMPER PROOF NUTS AND WASHERS.

GROUT

1. GROUT WILL BE SIKA 212, FLOWABLE GROUT OR APPROVED EQUIVALENT. MINIMUM 28 DAY COMPRESSIVE STRENGTH TO BE 40 MPa.

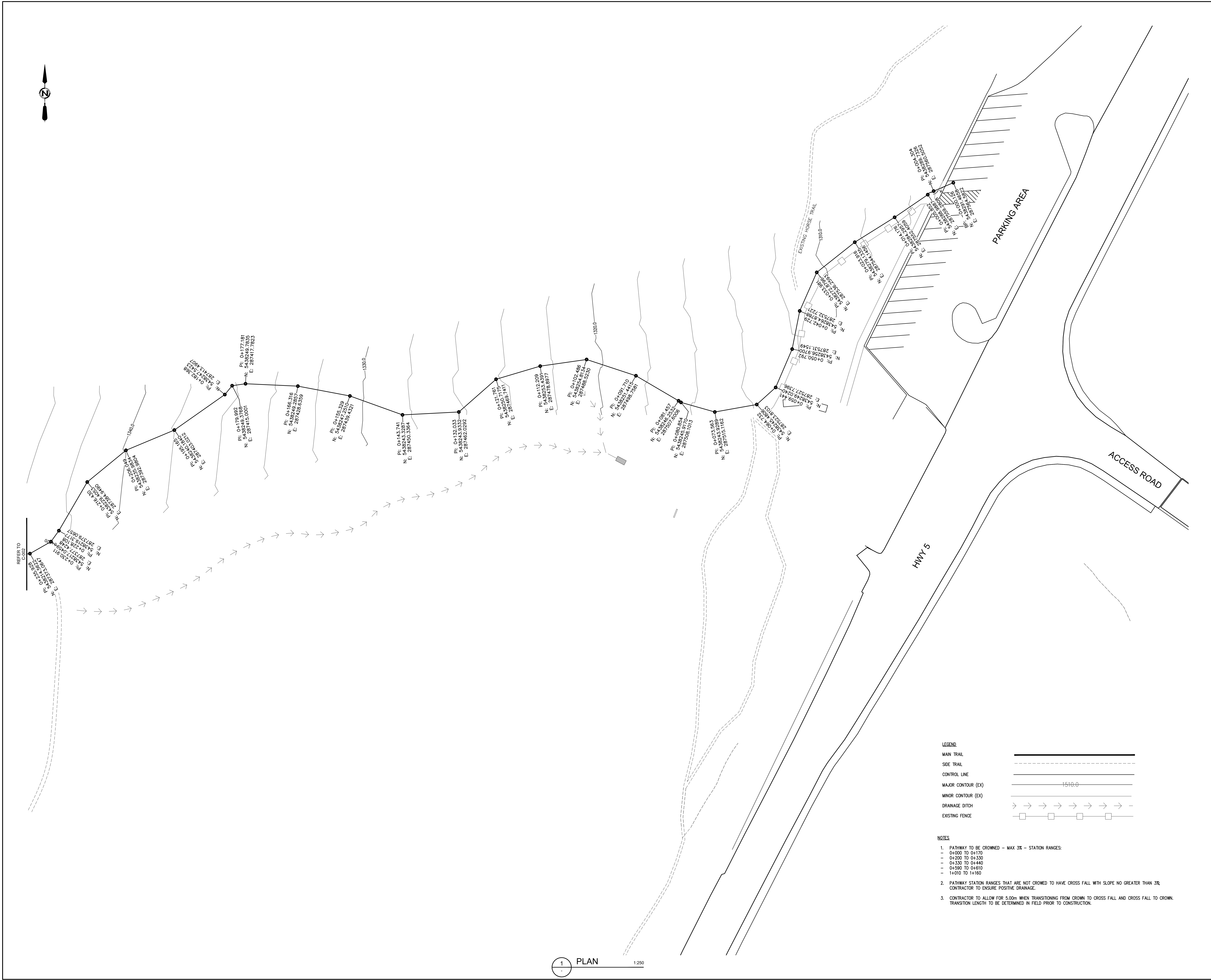
REMOVALS

1. ALL REMOVALS ARE TO BE CARRIED OUT WITH PRECAUTIONS FOR THE SAFETY OF THE WORKERS AND THE PARK USERS.
2. DEMOLITION WORK SHALL BE CARRIED OUT WITHOUT CAUSING OVERSTRESS OR EXCESSIVE DEFLECTION TO ANY PART OF THE EXISTING WORK WHICH IS TO REMAIN. THE CONTRACTOR IS RESPONSIBLE TO MAKE GOOD ANY DAMAGE CAUSED DURING DEMOLITION.
3. CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION SITE DAILY.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL DISPOSAL/TIPPING FEES.
5. THE CONTRACTOR SHALL DISPOSE OF CONSTRUCTION DEBRIS AT LEGALLY DESIGNATED SITES IN ACCORDANCE WITH APPLICABLE LAWS.

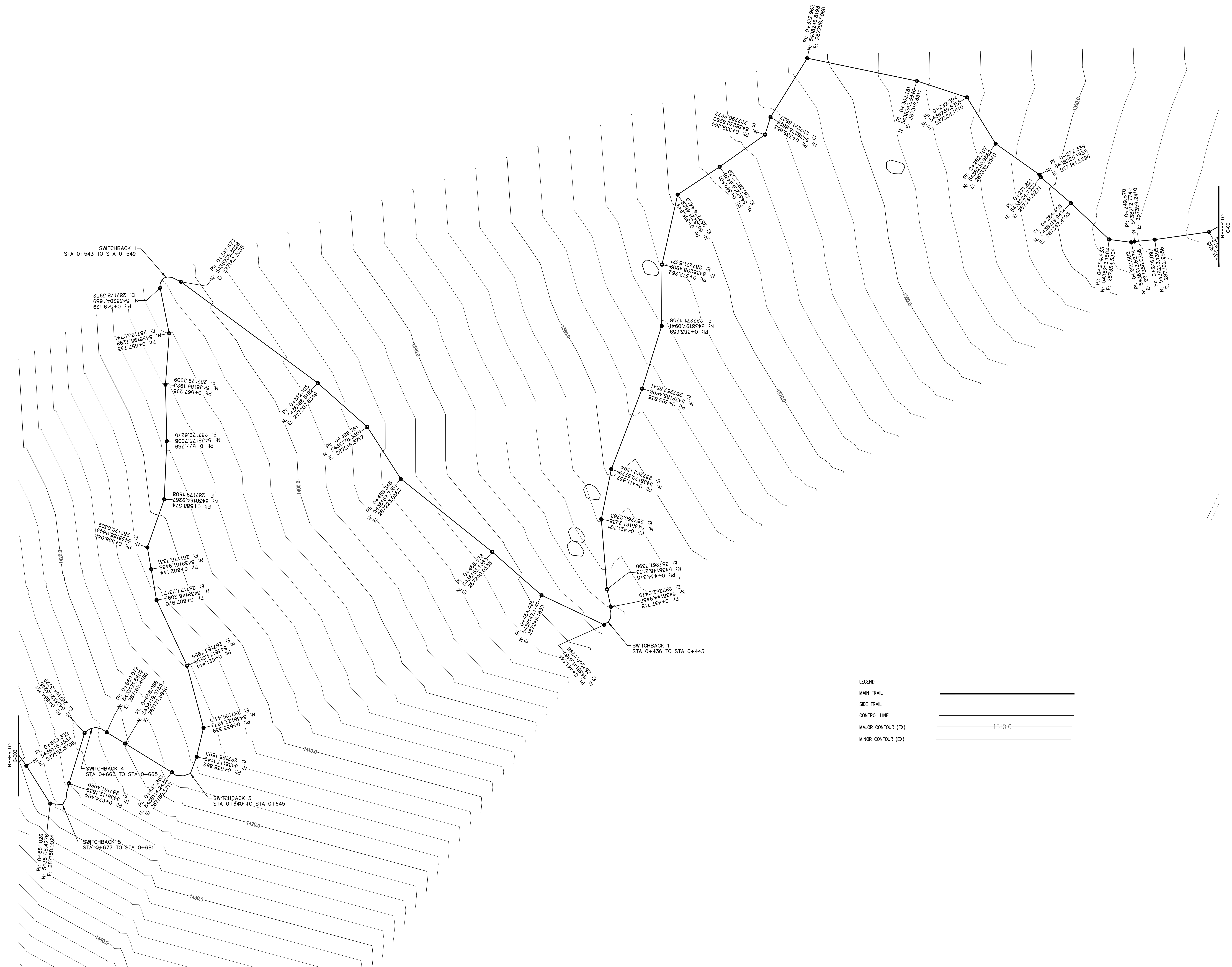
LEGEND

MAIN TRAIL

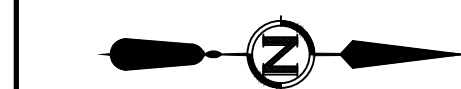
0	2018NOV30	ISSUED FOR TENDER	SY	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé
Revision / Revision				
A detail number numéro de détail				
B source drawing no. de dessin no.				
C detail on drawing no. détail sur dessin no.				
Consultant's Name Nom de l'expert-conseil			Eng. Stamp Sceau de l'ingénieur	
 Associated Engineering				
APEGA Permit to Practice P 3979				
 Public Works and Government Services Canada			Travaux publics et Services gouvernementaux Canada	
Client Services Team Southern Alberta Operations Branch			Le Client Entretien l'Équipe Alberta Méridional Branche d'Opérations	
				
Client/client  Parks Canada Agency			L'Agence Parcs Canada	
Western and Northern Region			Ouest et Nord du Canada	
Project title/Titre du projet WLNPs TRAILS IMPROVEMENT				
Drawing title/Titre du dessin PLAN OVERALL				
Surveyed by/Arpenté par S. YOUNG		Drawn by/Dessiné par S. YOUNG		Date/Date 2018OCT17
Designed by/Concept par A. McDONALD		Reviewed by/Revisé par AS SHOWN		Scale/Echelle AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSCC				
Client Acceptance/Acceptation du client			Approved by/Approuvé par	
Park Responsible Officer/Agent Responsable			PWOSC Project Manager/Administrateur de Projets TPSCC	
Project No./No. du projet R.099828.001		Asset No./No. du-bien		Sheet No./No. de la feuille 2
Drawing Reference No./No. de référence du dessin G-002				29



0		2018NOV30		ISSUED FOR TENDER		SY		AM	
No.	Date/Date	Description/Description				Drawn by Dessiné par	Approved Approuvé		
Revision / Revision									
A		C		A		B		C	
Consultant's Name Nom de l'expert-conseil									
Associated Engineering BEST MANAGED COMPANIES									
APEGA Permit to Practice P 3979									
Public Works and Government Services Canada					Travaux publics et Services gouvernementaux Canada				
Client Services Team Southern Alberta Operations Branch					Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations				
Canada									
Client/client Parks Canada Agency L'Agence Parcs Canada Western and Northern Region Ouest et Nord du Canada									
Project title/Titre du projet WLNP TRAILS IMPROVEMENT									
Drawing title/Titre du dessin PLAN - BEARS HUMP LAYOUT 1 OF 3									
Surveyed by/Arpenté par A. McDONALD		Drawn by/Dessiné par S. YOUNG		Date/Date 2017DEC117		Designed by/Concept par A. McDONALD		Reviewed by/Revisé par AS SHOWN	
PWOSC Project Manager/Administrateur de Projets TPSGC									
Client Acceptance/Acceptation du client					Approved by/Approuvé par				
Park Responsible Officer/Agent Responsable					PWOSC Project Manager/Administrateur de Projets TPSGC				
Project No./No. du projet R.099828.001		Asset No./No. du-bien		Sheet No./No. de la feuille 3		Drawing Reference No./No. de référence du dessin C-001		29	



0		2018NOV30		ISSUED FOR TENDER	
				SY	
				AM	
No.	Date/Date	Description/Description	Drawn by/Dessiné par	Approved/Approuvé	
Revision / Revision					
A detail number numéro de détail					
B source drawing no. de dessin no.					
C detail on drawing no. détail sur dessin no.					
Consultant's Name Nom de l'expert-conseil			Eng. Stamp Sceau de l'ingénieur		
					
APEGA Permit to Practice P 3979					
 Public Works and Government Services Canada			Travaux publics et Services gouvernementaux Canada		
Client Services Team Southern Alberta Operations Branch			Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations		
					
Client/client  Parks Canada Agency			L'Agence Parcs Canada		
Western and Northern Region			Ouest et Nord du Canada		
Project title/Titre du projet WLNP TRAILS IMPROVEMENT					
Drawing title/Titre du dessin PLAN - BEARS HUMP LAYOUT 2 OF 3					
Surveyed by/Arpenté par S. YOUNG		Drawn by/Dessiné par S. YOUNG		Date/Date 2018OCT17	
Designed by/Concept par A. McDONALD		Reviewed by/Revisé par AS SHOWN		Scale/Echelle AS SHOWN	
PWGSC Project Manager/Administrateur de Projets TPSGC					
Client Acceptance/Acceptation du client			Approved by/Approuvé par		
Park Responsible Officer/Agent Responsable			PWGSC Project Manager/Administrateur de Projets TPSGC		
Project No./No. du projet R.099828.001		Asset No./No. du-bien		Sheet No./No. de la feuille 4	
Drawing Reference No./No. de référence du dessin C-002					



LEGEND	
MAIN TRAIL	—————
SIDE TRAIL	- - - - -
CONTROL LINE	—————
MAJOR CONTOUR (EX)	————— 1510.0 —————
MINOR CONTOUR (EX)	—————

0	2018NOV30	ISSUED FOR TENDER	SY AM
No.	Date/Date	Description/Description	Drawn by Dessiné par Approved Approuvé

Revision / Revision

A detail number
numéro de détail

B source drawing no.
de dessin no.

C detail on drawing no.
détail sur dessin no.

Consultant's Name
Nom de l'expert-conseil

**Associated Engineering**
APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

Client Services Team
Southern Alberta
Operations Branch

Le Client Entretien l'Équipe
Alberta Méridionale
Branche d'opérations

Client/client

Parks Canada
Agency

L'Agence Parcs
Canada

Western and
Northern Region

Ouest et Nord
du Canada

Project title/Titre du projet		
WLNP TRAILS IMPROVEMENT		
Drawing title/Titre du dessin		
PLAN – BEARS HUMP LAYOUT 3 OF 3		
Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	20180CT17
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD		AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSGC		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSGC
Project No./No. du projet	Asset No./No. du bien	Sheet No./ No. de la feuille
R.099828.001		5
Drawing Reference No./No. de référence du dessin		
C-003		29

TRAIL SECTION 3
STA 0+100 TO 0+240

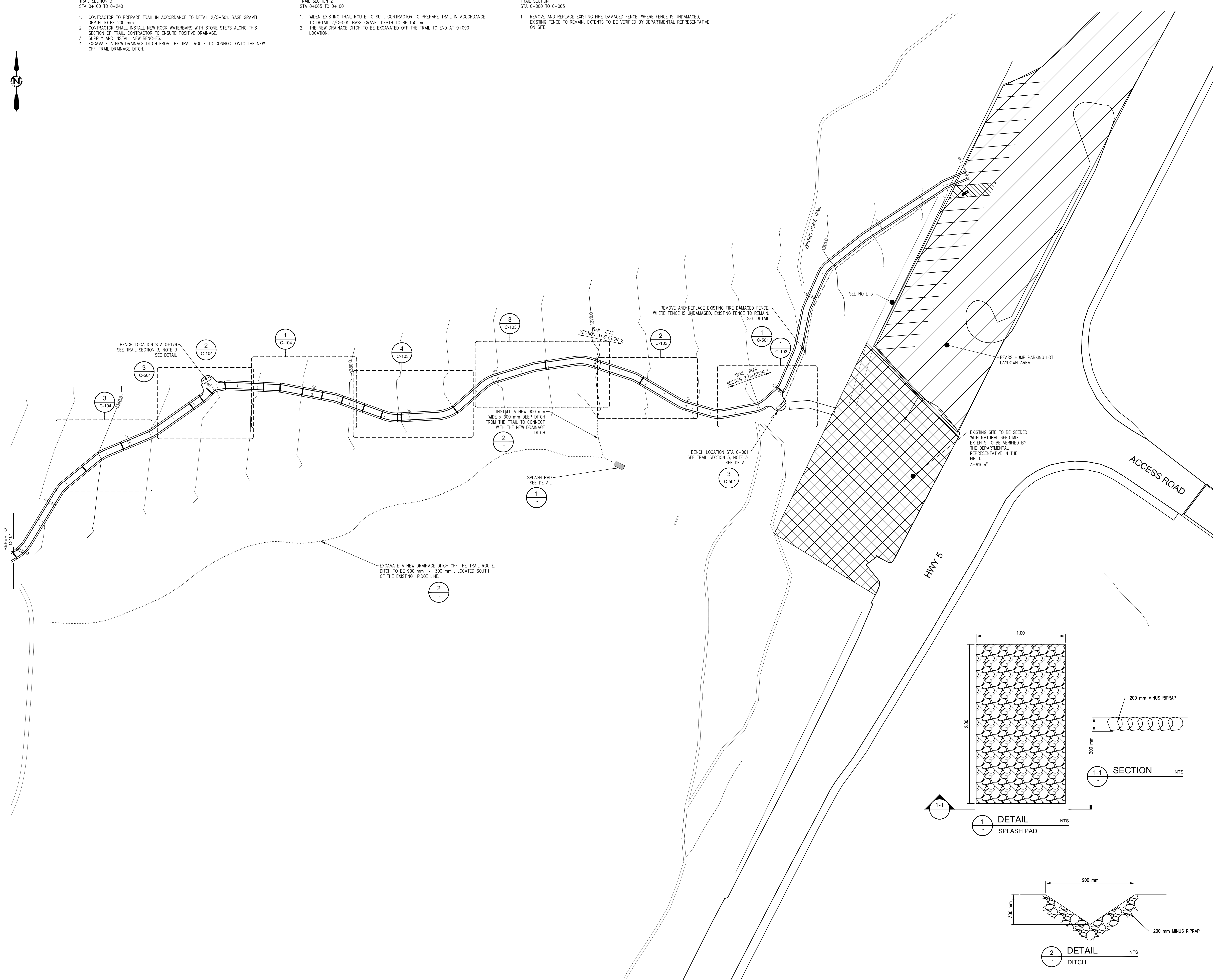
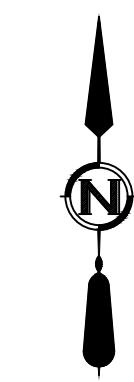
1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501. BASE GRAVEL DEPTH TO BE 200 mm.
2. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH STONE STEPS ALONG THIS SECTION OF TRAIL. CONTRACTOR TO ENSURE POSITIVE DRAINAGE.
3. SUPPLY AND INSTALL NEW BENCHES.
4. EXCAVATE A NEW DRAINAGE DITCH FROM THE TRAIL ROUTE TO CONNECT ONTO THE NEW OFF-TRAIL DRAINAGE DITCH.

TRAIL SECTION 2
STA 0+065 TO 0+100

1. WIDEN EXISTING TRAIL ROUTE TO SUIT. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501. BASE GRAVEL DEPTH TO BE 150 mm.
2. THE NEW DRAINAGE DITCH TO BE EXCAVATED OFF THE TRAIL TO END AT 0+090 LOCATION.

TRAIL SECTION 1
STA 0+000 TO 0+065

1. REMOVE AND REPLACE EXISTING FIRE DAMAGED FENCE. WHERE FENCE IS UNDAMAGED, EXISTING FENCE TO REMAIN. EXTENTS TO BE VERIFIED BY DEPARTMENTAL REPRESENTATIVE ON SITE.



1 PLAN 1:250

NOTES

1. TREES IDENTIFIED AS HAZARDOUS TO BE REVIEWED WITH THE DEPARTMENTAL REPRESENTATIVE. NO TREES TO BE REMOVED WITHOUT APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE AND PARKS CANADA.
2. CONTOURS SHOWN ARE EXISTING GROUND.
3. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
4. REPLACE THE EXISTING WOOD WATERBARS WITH NEW NEW ROCK WATERBARS.
5. CONTRACTOR TO REMOVE AND DISPOSE DAMAGED FENCE SECTIONS. REPLACE WITH NEW TIMBER FENCE. LENGTH TO BE DETERMINED IN THE FIELD BY THE DEPARTMENTAL REPRESENTATIVE. SEE DETAIL 1/C-501.

LEGEND

- NATURAL SEED MIX
- LAYDOWN AREA
- DRAINAGE DITCH

0	2018NOV30	ISSUED FOR TENDER	SY AM
No.	Date/Date	Description/Description	Drawn by Dessiné par
			Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering	Associated Engineering
APEGA Permit to Practice P 3979	

Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations

Client/client	Parks Canada Agence	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN - BEARS HUMP SECTION 1 OF 3

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
A. McDONALD	S. YOUNG	20180611
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
		AS SHOWN

PWSC Project Manager/Administrateur de Projets TPSGC		
Client Acceptance/Acceptation du client	Approved by/Approuvé par	

Park Responsible Officer/Agent Responsable	PWSC Project Manager/Administrateur de Projets TPSGC	
Project No./No. du projet	Asset No./No. du bien	Sheet No./ No. de la feuille
R.099828.001		6

Drawing Reference No./No. de référence du dessin	
C-100	29

TRAIL SECTION 9
STA 0+690 TO 0+838

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.

TRAIL SECTION 8
STA 0+640 TO 0+690

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.

TRAIL SECTION 7
STA 0+540 TO 0+640

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.

TRAIL SECTION 6
STA 0+460 TO 0+540

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.
3. EXCAVATE NEW DRAINAGE DITCH

TRAIL SECTION 5
STA 0+300 TO 0+460

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.
3. EXISTING EDGE RIDGE/BERM ON THE EDGE OF THE TRAIL TO BE REMOVED.
4. BENCH TO BE PROVIDED.

TRAIL SECTION 4
STA 0+240 TO 0+300

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.
3. BENCH TO BE PROVIDED.

TRAIL SECTION 3
STA 0+100 TO 0+240

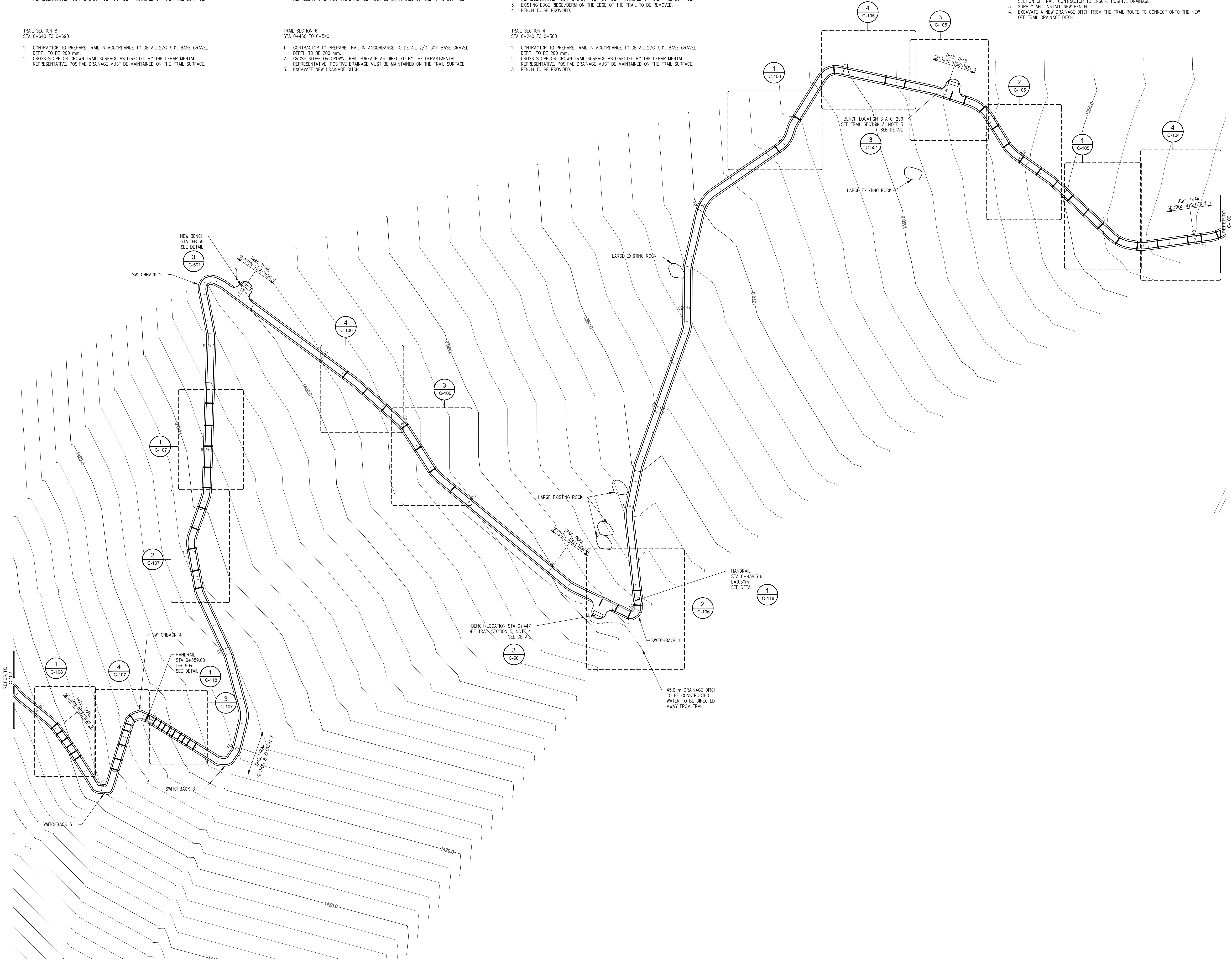
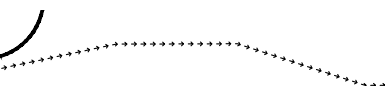
1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 4/C-501, BASE GRAVEL DEPTH TO BE 200 mm.
2. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH STONE STEPS ALONG THIS SECTION OF TRAIL. CONTRACTOR TO ENSURE POSITIVE DRAINAGE.
3. SUPPLY AND INSTALL NEW BENCH.
4. EXCAVATE A NEW DRAINAGE DITCH FROM THE TRAIL ROUTE TO CONNECT ONTO THE NEW OFF TRAIL DRAINAGE DITCH.

NOTES

1. TREES IDENTIFIED AS HAZARDOUS TO BE REVIEWED WITH THE DEPARTMENTAL REPRESENTATIVE. NO TREES TO BE REMOVED WITHOUT APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE AND PARKS CANADA.
2. CONTOURS SHOWN ARE EXISTING GROUND.
3. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
4. REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.



LEGEND

DRAINAGE DITCH



0	2018NOV30	ISSUED FOR TENDER	SY	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
 Associated Engineering	
APEGA Permit to Practice P 3979	

 Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations
	

Client/client	Parks Canada Agency	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN – BEARS HUMP SECTION 2 OF 3

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	201806117
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	AS SHOWN

PWSC Project Manager/Administrateur de Projets TPSGC

Client Acceptance/Acceptation du client	Approved by/Approuvé par
Park Responsible Officer/Agent Responsable	PWSC Project Manager/Administrateur de Projets TPSGC

Project No./No. du projet	Asset No./No. du-bien	Sheet No./ No. de la feuille
R.099828.001		7
Drawing Reference No./No. de référence du dessin		29
C-101		

TRAIL SECTION 11
STA 1+110 TO 1+160

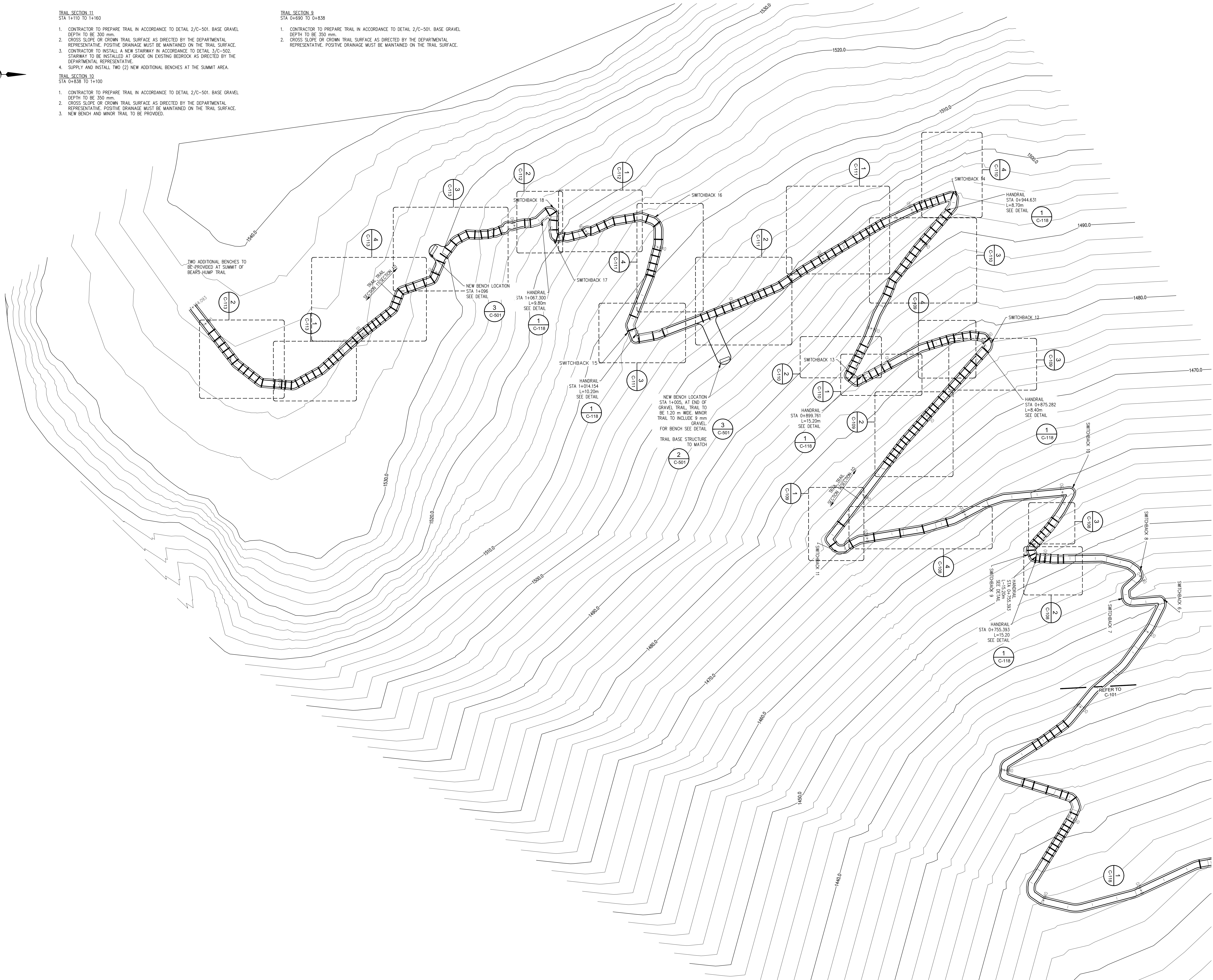
1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501. BASE GRAVEL DEPTH TO BE 300 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.
3. CONTRACTOR TO INSTALL A NEW STAIRWAY IN ACCORDANCE TO DETAIL 3/C-502. STAIRWAY TO BE INSTALLED AT GRADE ON EXISTING BEDROCK AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE.
4. SUPPLY AND INSTALL TWO (2) NEW ADDITIONAL BENCHES AT THE SUMMIT AREA.

TRAIL SECTION 10
STA 0+838 TO 1+100

1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501. BASE GRAVEL DEPTH TO BE 350 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.
3. NEW BENCH AND MINOR TRAIL TO BE PROVIDED.

TRAIL SECTION 9
STA 0+690 TO 0+838

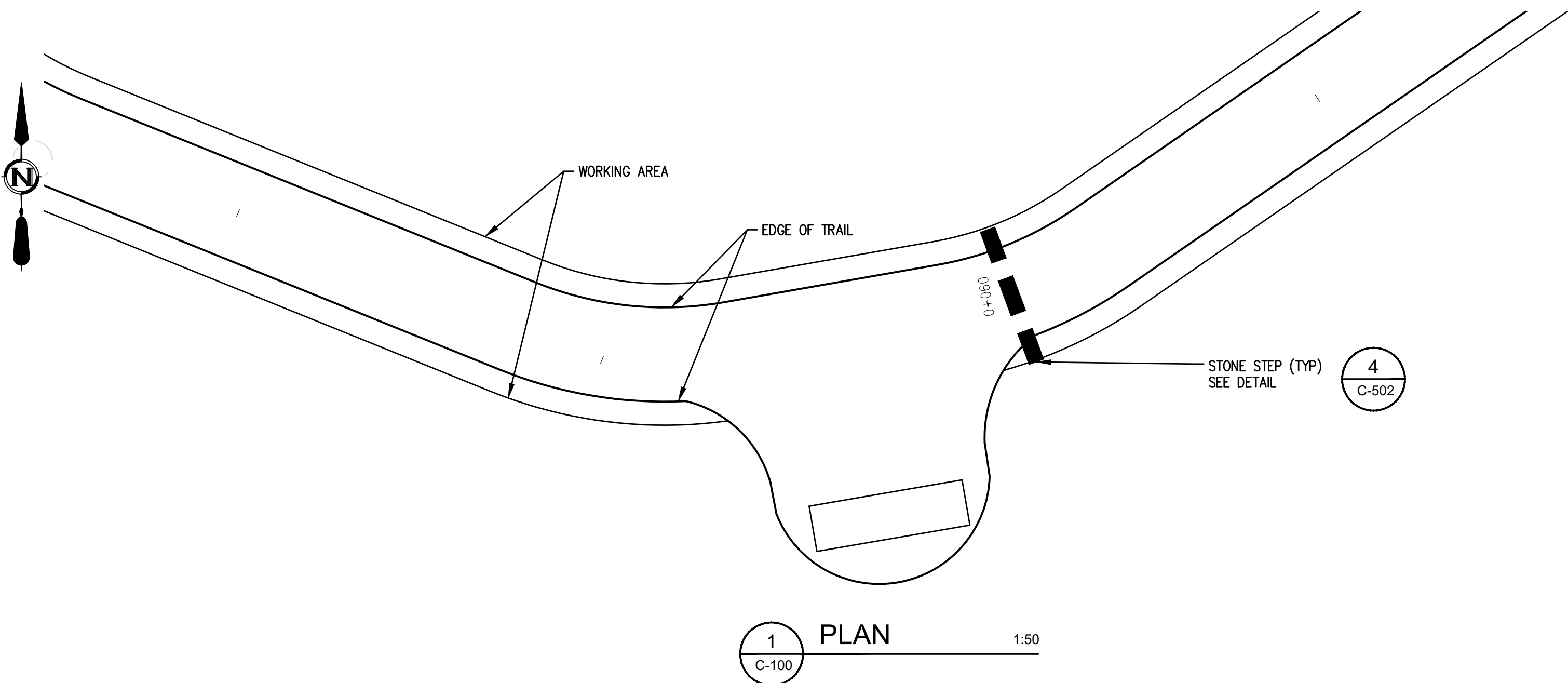
1. CONTRACTOR TO PREPARE TRAIL IN ACCORDANCE TO DETAIL 2/C-501. BASE GRAVEL DEPTH TO BE 350 mm.
2. CROSS SLOPE OR CROWN TRAIL SURFACE AS DIRECTED BY THE DEPARTMENTAL REPRESENTATIVE. POSITIVE DRAINAGE MUST BE MAINTAINED ON THE TRAIL SURFACE.



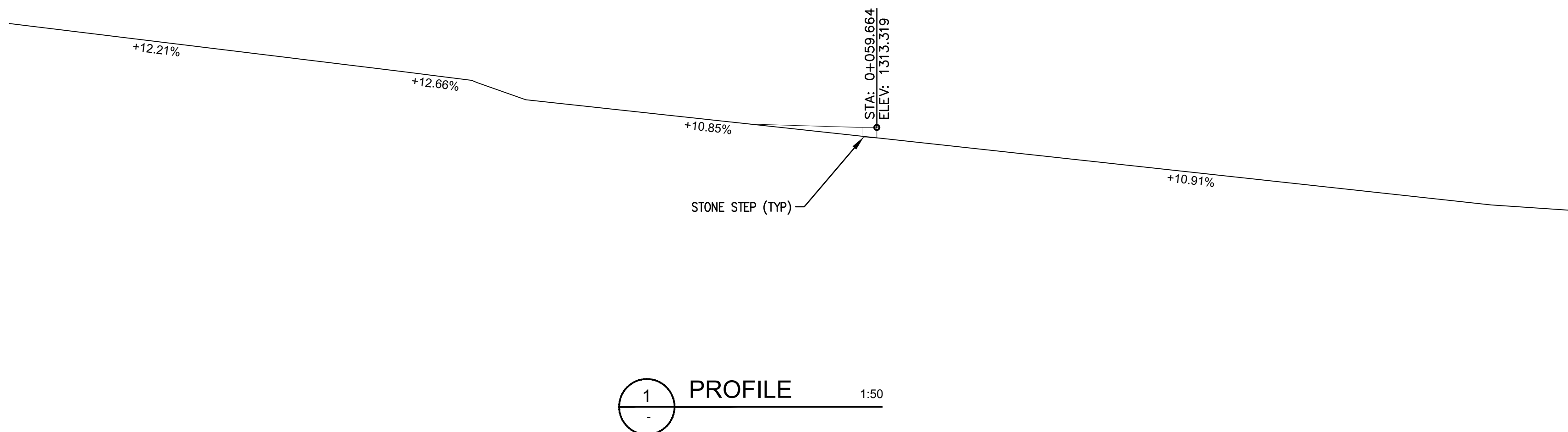
NOTES

1. TREES IDENTIFIED AS HAZARDOUS TO BE REVIEWED WITH THE DEPARTMENTAL REPRESENTATIVE. NO TREES TO BE REMOVED WITHOUT APPROVAL OF THE DEPARTMENTAL REPRESENTATIVE AND PARKS CANADA.
2. CONTOURS SHOWN ARE EXISTING GROUND.
3. ALL DIMENSIONS ARE IN METRES (m) UNLESS OTHERWISE NOTED.
4. REPLACE THE EXISTING ROCK WATERBARS WITH NEW ROCK WATERBARS.
5. INSTALL WOOD TIMBER STEPS FROM STA 1+053 TO STA 1+150.

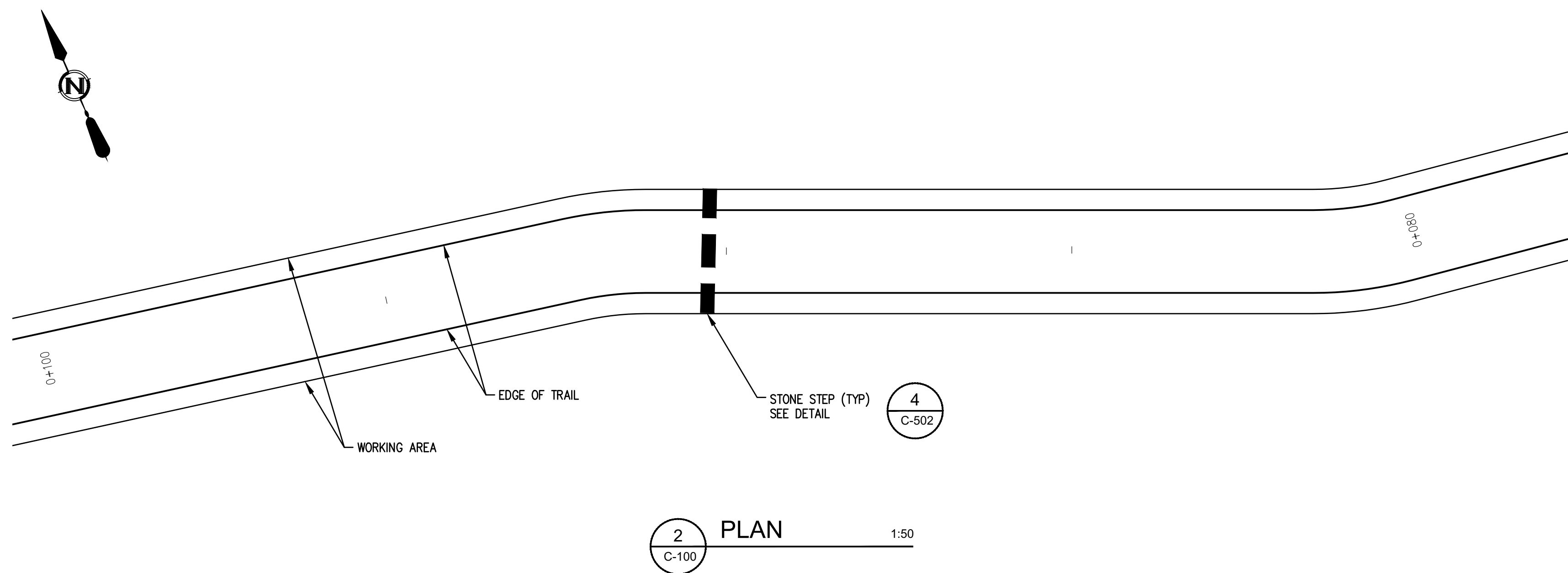
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No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé
Revision / Revision				
A detail number numéro de détail			<div><div>A</div><div>B</div><div>C</div></div>	
B source drawing no. de dessin no.				
C detail on drawing no. détail sur dessin no.				
Consultant's Name Nom de l'expert-conseil			Eng. Stamp Sceau de l'ingénieur	
<div><div></div><div>Associated Engineering</div><div></div></div>			APEGA Permit to Practice P 3979	
<div><div></div><div>Public Works and Government Services Canada</div></div>			Travaux publics et Services gouvernementaux Canada	
Client Services Team Southern Alberta Operations Branch			Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations	
Canada				
Client/client <div><div></div><div>Parks Canada Agency</div></div>			L'Agence Parcs Canada	
Western and Northern Region			Ouest et Nord du Canada	
Project title/Titre du projet				
WLNP TRAILS IMPROVEMENT				
Drawing title/Titre du dessin				
PLAN - BEARS HUMP SECTION 3 OF 3				
Surveyed by/Arpenté par			Drawn by/Dessiné par	Date/Date
			S. YOUNG	20180C117
Designed by/Concept par			Reviewed by/Revisé par	Scale/Echelle
A. McDONALD				AS SHOWN
PWSC Project Manager/Administrateur de Projets TPSGC				
Client Acceptance/Acceptation du client			Approved by/Approuvé par	
Park Responsible Officer/Agent Responsable			PWSC Project Manager/Administrateur de Projets TPSGC	
Project No./No. du projet		Asset No./No. du bien		Sheet No./ No. de la feuille
R.099828.001				8
Drawing Reference No./No. de référence du dessin				29
C-102				



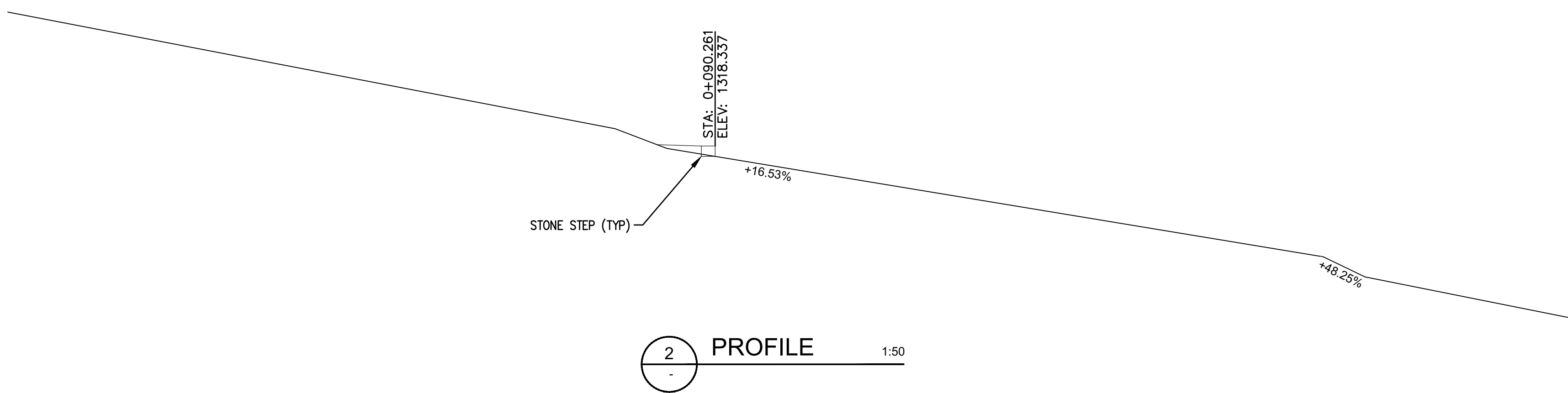
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C-100 1:50



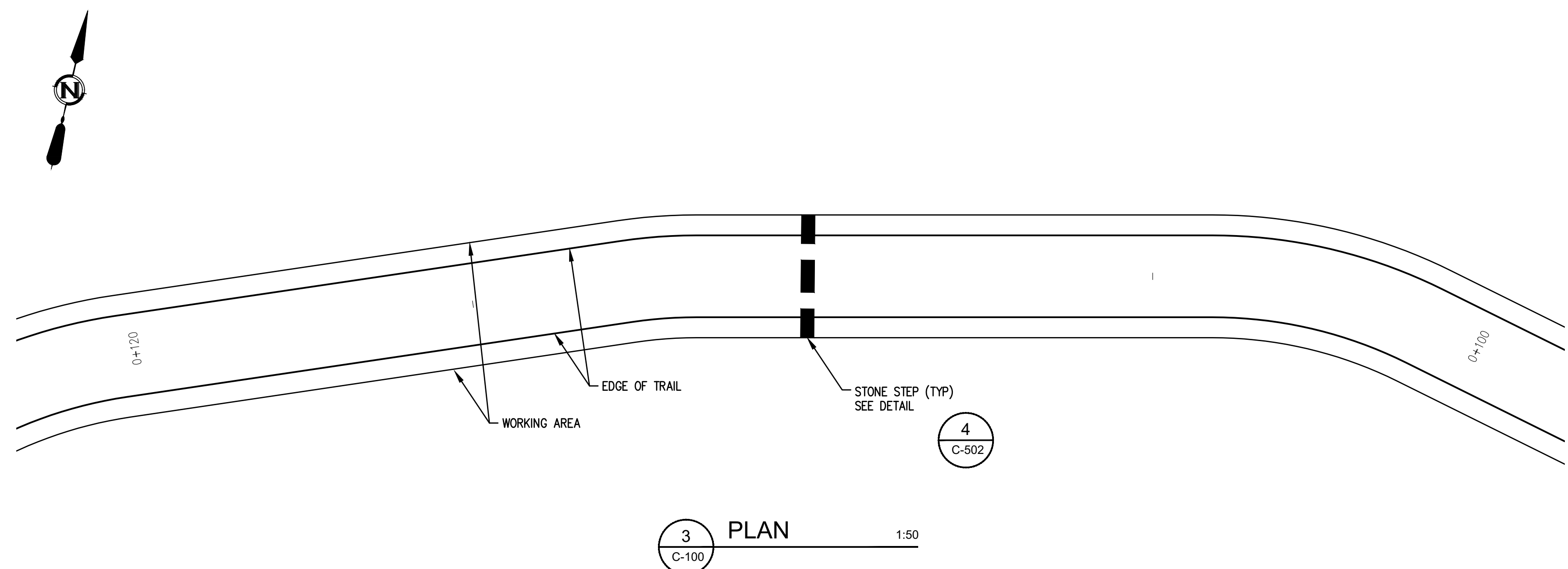
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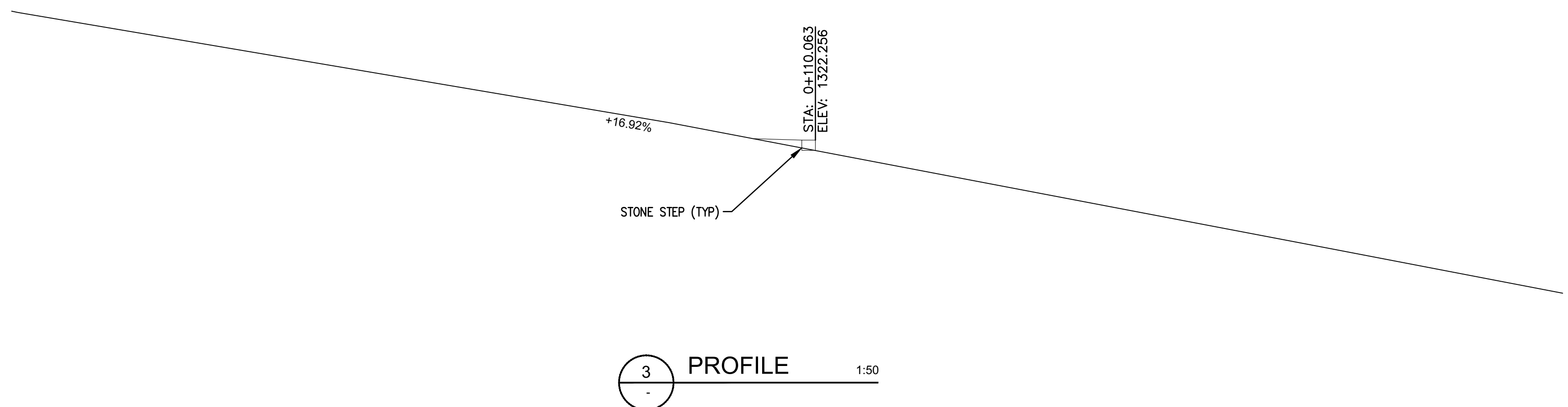
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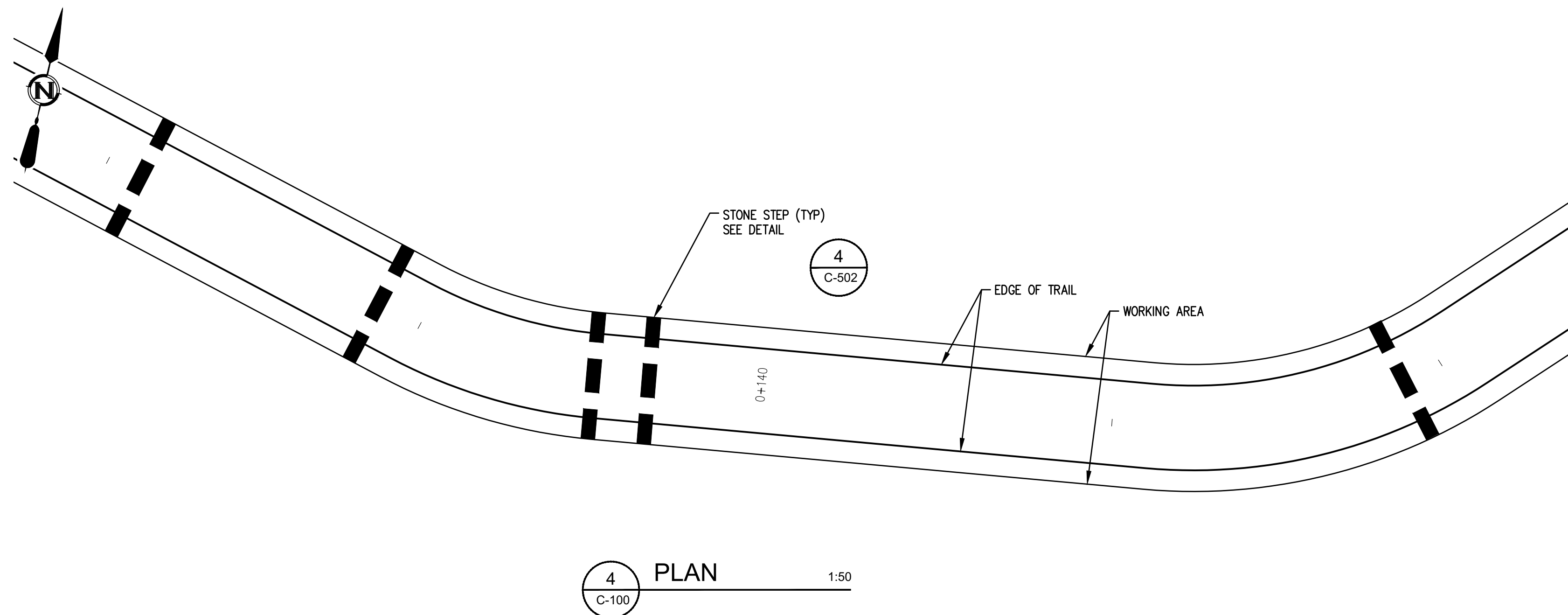
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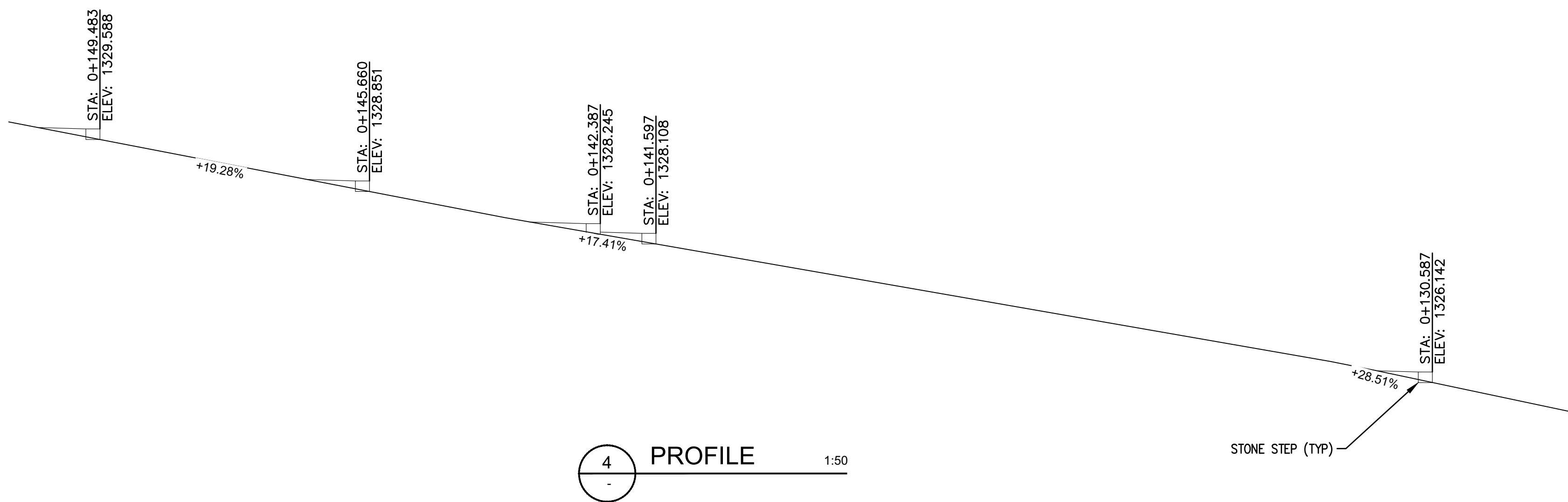
3 PLAN
C-100 1:50



3 PROFILE
- 1:50



4 PLAN
C-100 1:50



4 PROFILE
- 1:50

- NOTES:
- CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 - REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
 - ENSURE NEW STONE STEPS ARE SOUND AND WELL CONSTRUCTED.
 - ALL ROCKS TO BE USED SHALL BE SUPPLIED, HAULED, DELIVERED TO JOB SITE AND COMPLETELY INSTALLED BY THE CONTRACTOR.
 - CONTRACTOR SHALL ROUGH GRADE AND PREPARE THE TRAIL ROUTE TO BE READY TO HAVE A 200 mm TO 300 mm - 400 mm LAYER OF COMPACTED BASE GRAVEL TO BE SUPPLIED AND INSTALLED. CROSS SLOPE OR CROWN TRAIL SURFACE AS REQUIRED TO CREATE A POSITIVE DRAINAGE ON THE TRAIL SURFACE.
 - CONTRACTOR SHALL SUPPLY AND INSTALL A FINISH GRAVEL SURFACING ONTO ALL COMPACTED BASE GRAVEL AREAS. INSTALL 50 mm THICKNESS OF 9 mm GRAVEL MATERIALS.
 - BETWEEN THE SWITCHBACKS 10, 11, 12 AND 13 INSTALL NEW 1.0 METRE WIDE GRAVEL STEPS.
 - CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS ALONG THESE SECTIONS OF TRAIL. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 0+838 TO 0+971 AND STA 0+880 TO STA 0+903 AND STA 0+915 TO STA 0+947 AND STA 0+955 TO STA 1+020.
 - CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS FROM SWITCHBACK NUMBER 13 THROUGH TO STA 1+100 LOCATE NEW WATERBARS AND STEPS BETWEEN STA 1+029 THROUGH TO STA 1+100.
 - EX TRAIL WIDTH = 1.20m±. NEW TRAIL WIDTH = 1.20m (MIN) - WITH VARIES AS PER SITE CONDITIONS.
 - WORKING AREA = 1.80m (MIN). WHERE WIDTH VARIES, WIDTH TO BE AUTHORIZED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.
 - GRADES SHOWN ARE EXISTING.

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No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
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C	detail on drawing no. détail sur dessin no.

Consultant's Name
Nom de l'expert-conseil

Associated Engineering
Ingénierie Associée

APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team Southern Alberta Operations Branch
Le Client Entretien L'Équipe Alberta Méridionale Branche d'Opérations

Canada

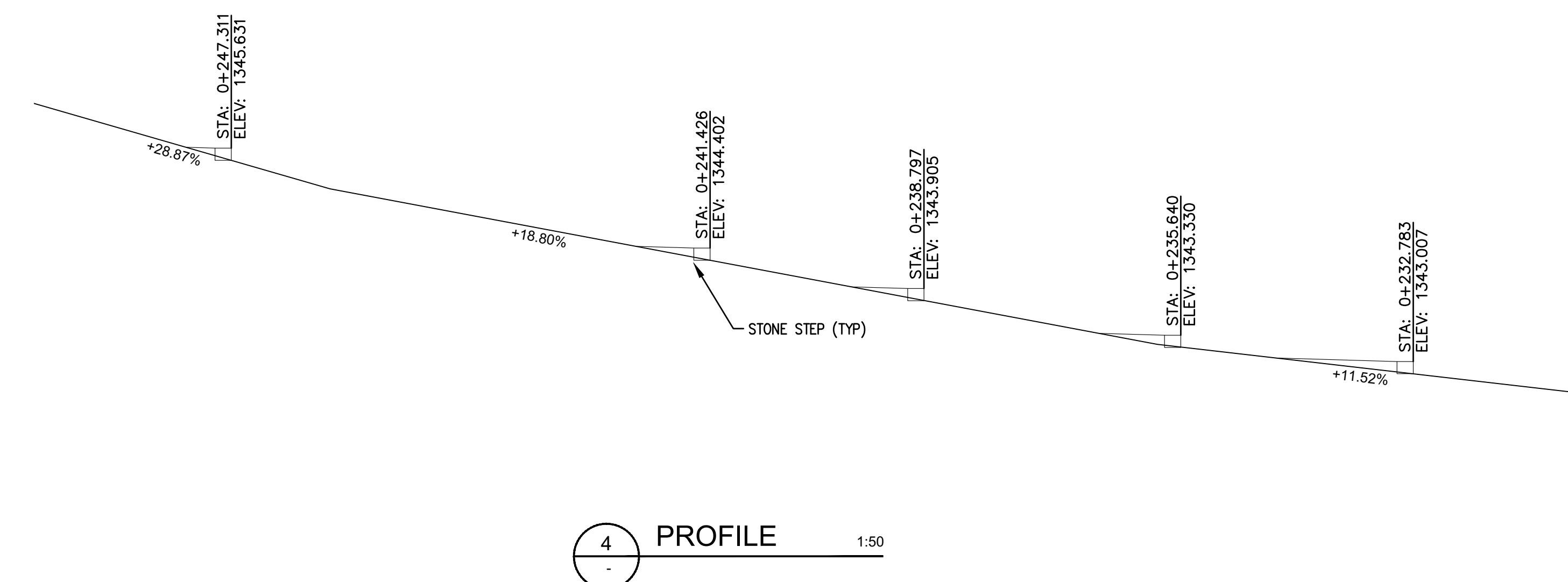
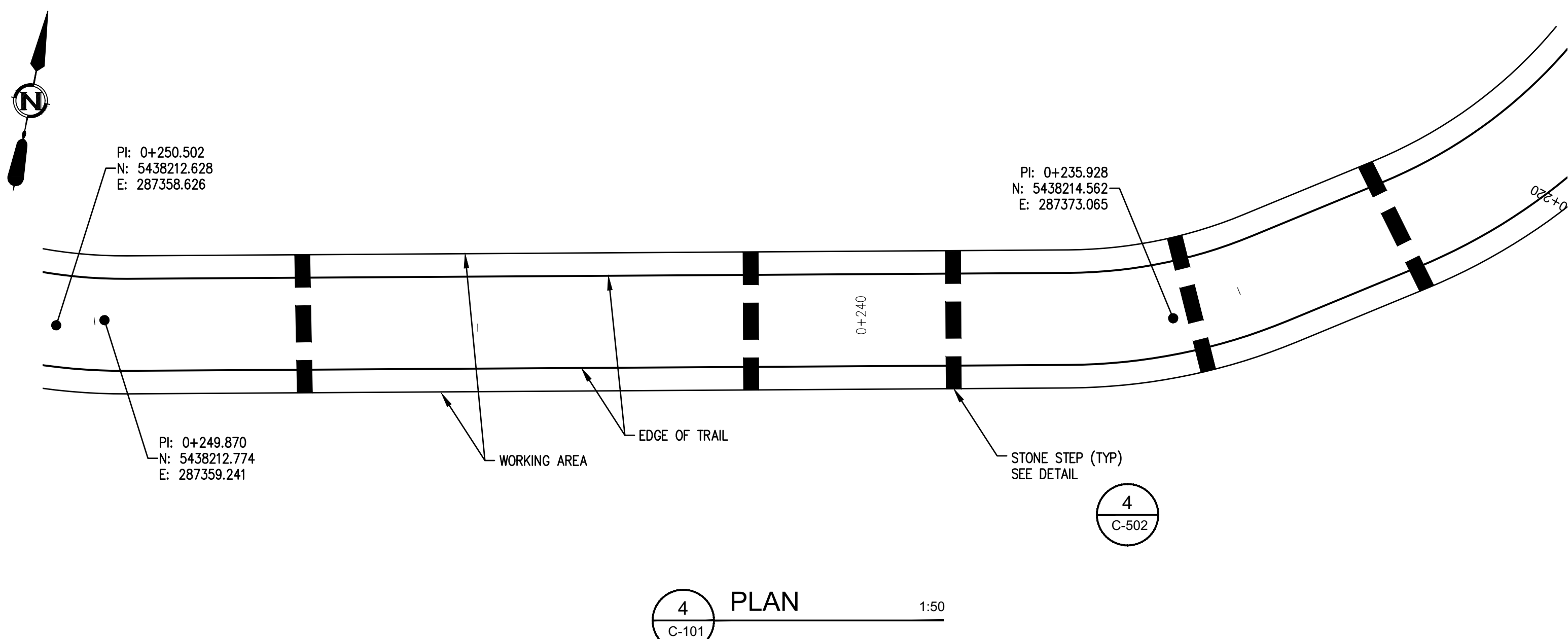
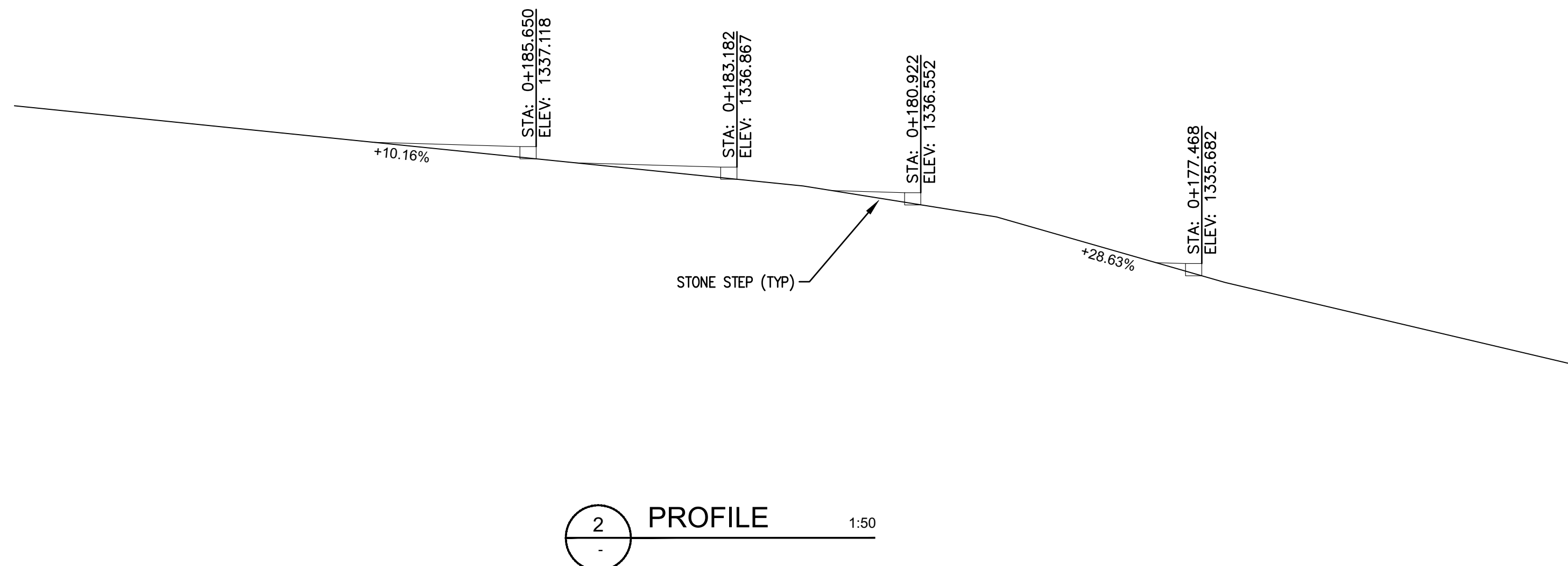
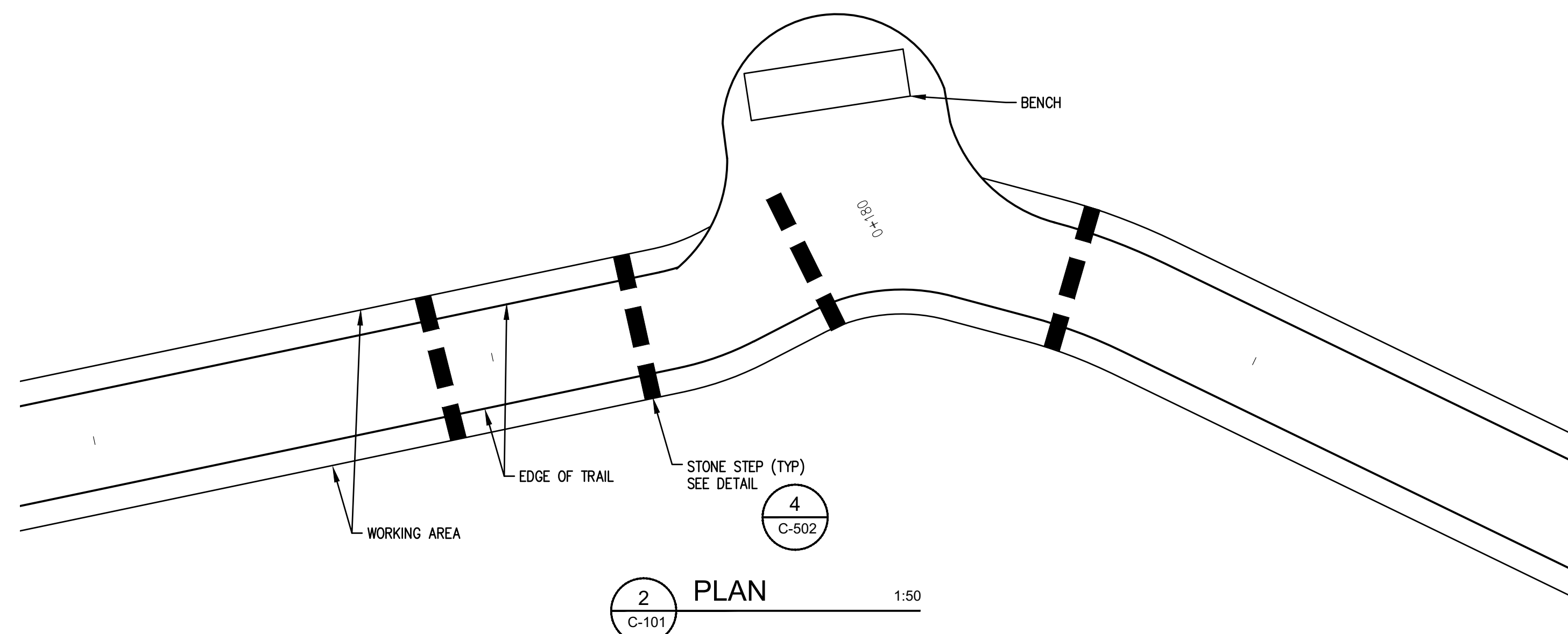
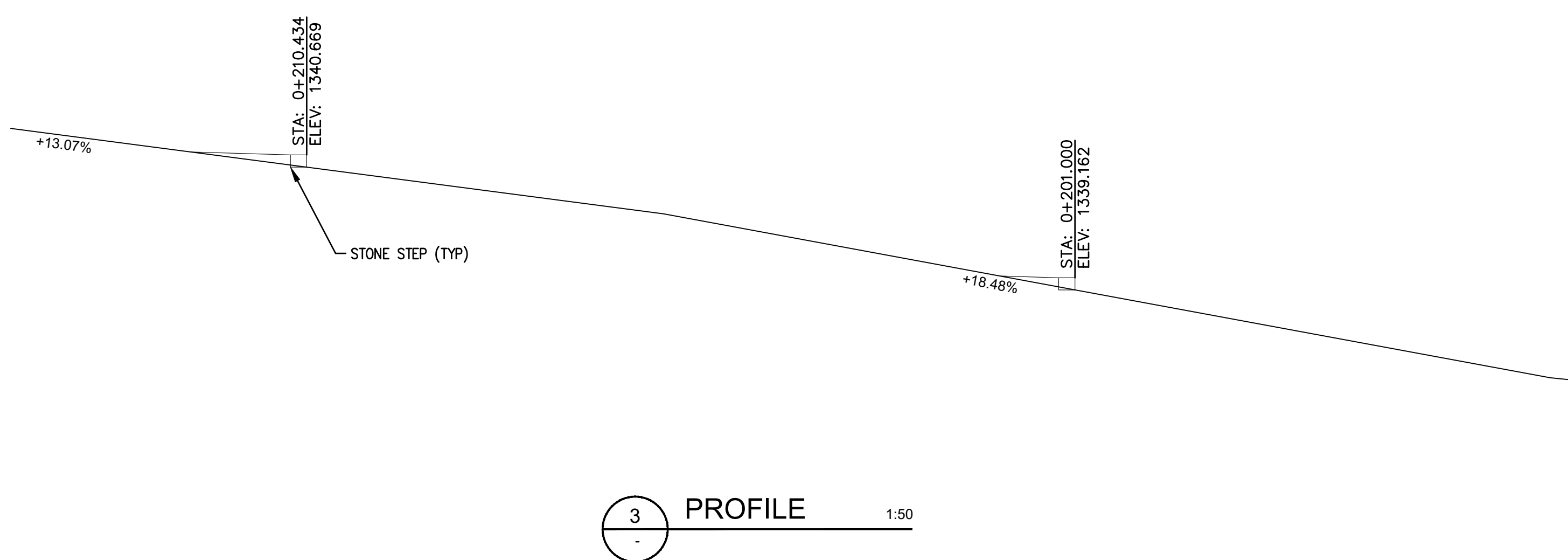
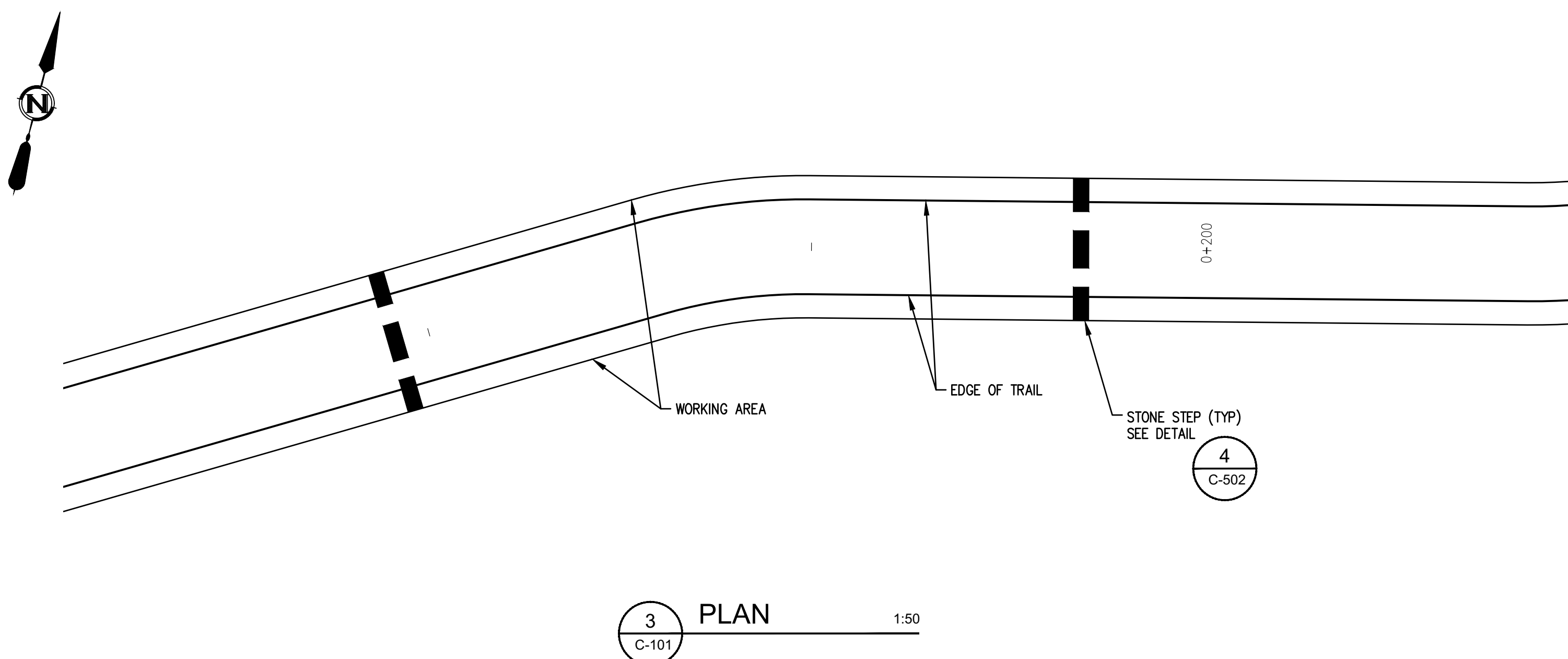
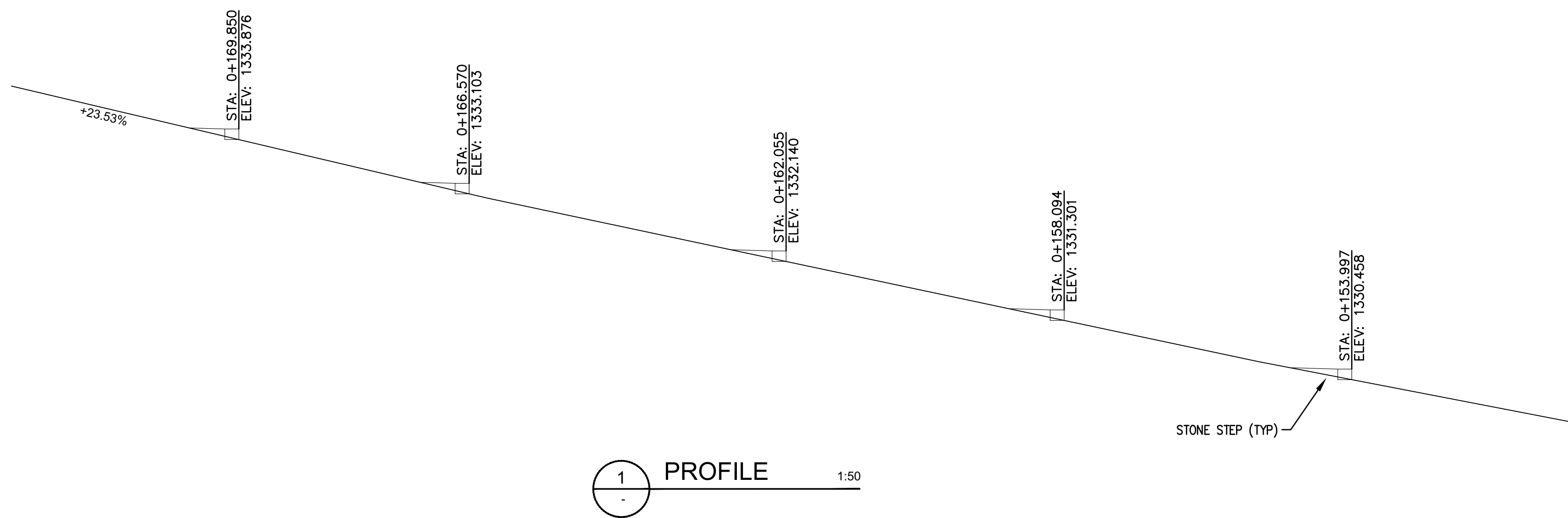
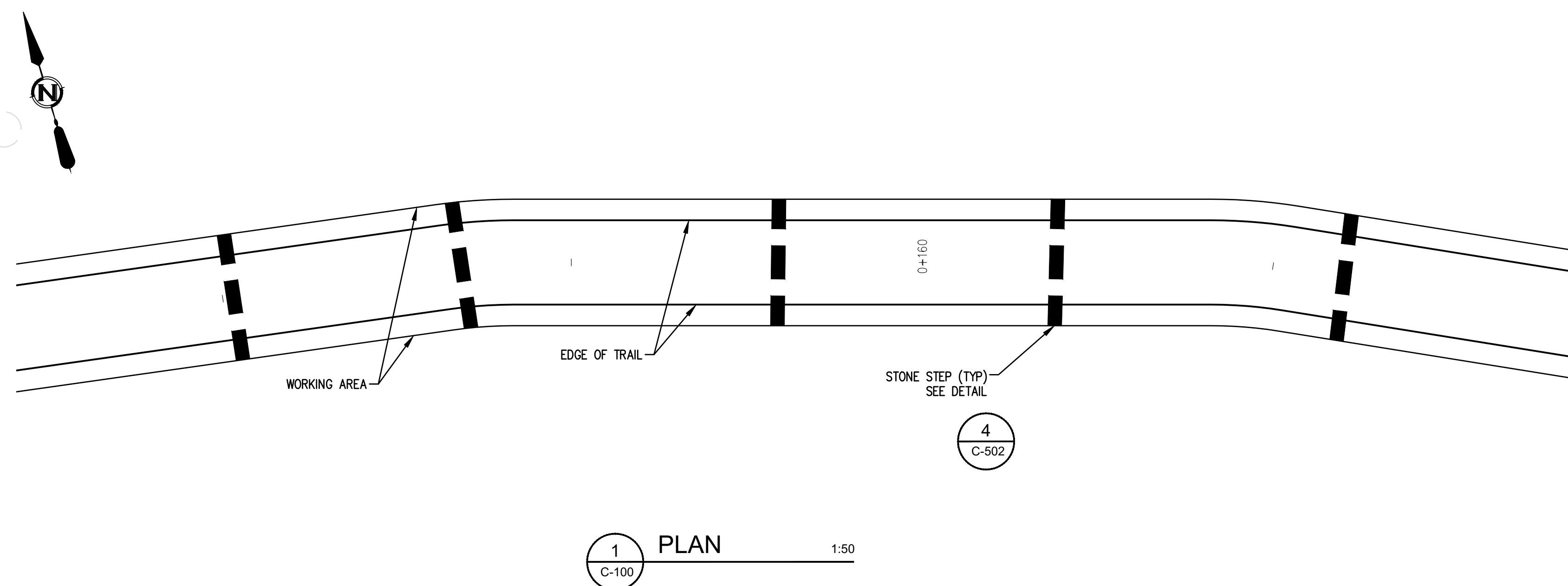
Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 1 OF 11

Surveyed by/Arpenté par S. YOUNG	Drawn by/Dessiné par S. YOUNG	Date/Date 201806117
Designed by/Concept par A. McDONALD	Reviewed by/Revisé par AS SHOWN	Scale/Echelle AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSCG		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSCG
Project No./No. du projet R.099828.001	Asset No./No. du-bien	Sheet No./No. de la feuille 9
Drawing Reference No./No. de référence du dessin C-103		29



- NOTES:
1. CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 2. REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
 3. ENSURE NEW STONE STEPS ARE SOUND AND WELL CONSTRUCTED.
 4. ALL ROCKS TO BE USED SHALL BE SUPPLIED, HAULED, DELIVERED TO JOB SITE AND COMPLETELY INSTALLED BY THE CONTRACTOR.
 5. CONTRACTOR SHALL ROUGH GRADE AND PREPARE THE TRAIL ROUTE TO BE READY TO HAVE A 200 mm TO 300 mm - 400 mm LAYER OF COMPACTED BASE GRAVEL TO BE SUPPLIED AND INSTALLED. CROSS SLOPE OR CROWN TRAIL SURFACE AS REQUIRED TO CREATE A POSITIVE DRAINAGE ON THE TRAIL SURFACE.
 6. CONTRACTOR SHALL SUPPLY AND INSTALL A FINISH GRAVEL SURFACING ONTO ALL COMPACTED BASE GRAVEL AREAS. INSTALL 50 mm THICKNESS OF 9 mm GRAVEL MATERIALS.
 7. BETWEEN THE SWITCHBACKS 10, 11, 12 AND 13 INSTALL NEW 1.0 METRE WIDE GRAVEL STEPS.
 - 7.1. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS ALONG THESE SECTIONS OF TRAIL. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 0+838 TO 0+971 AND STA 0+880 TO STA 0+903 AND STA 0+915 TO STA 0+947 AND STA 0+955 TO STA 1+020.
 - 7.2. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS FROM SWITCHBACK NUMBER 13 THROUGH TO STA 1+100. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 1+028 THROUGH TO STA 1+100.
 8. EX TRAIL WIDTH = 1.20m. NEW TRAIL WIDTH = 1.20m (MIN) - WIDTH VARIES AS PER SITE CONDITIONS.
 9. WORKING AREA = 1.80m (MIN). WHERE WIDTH VARIES, WIDTH TO BE AUTHORIZED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.
 10. GRADES SHOWN ARE EXISTING.

0	2018NOV30	ISSUED FOR TENDER	SY	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	numéro de détail
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Consultant's Name
Nom de l'expert-conseil

Associated Engineering

APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team
Southern Alberta Operations Branch
Le Client Entretien / l'Équipe Alberta Méridionale
Branche d'Opérations

Canada

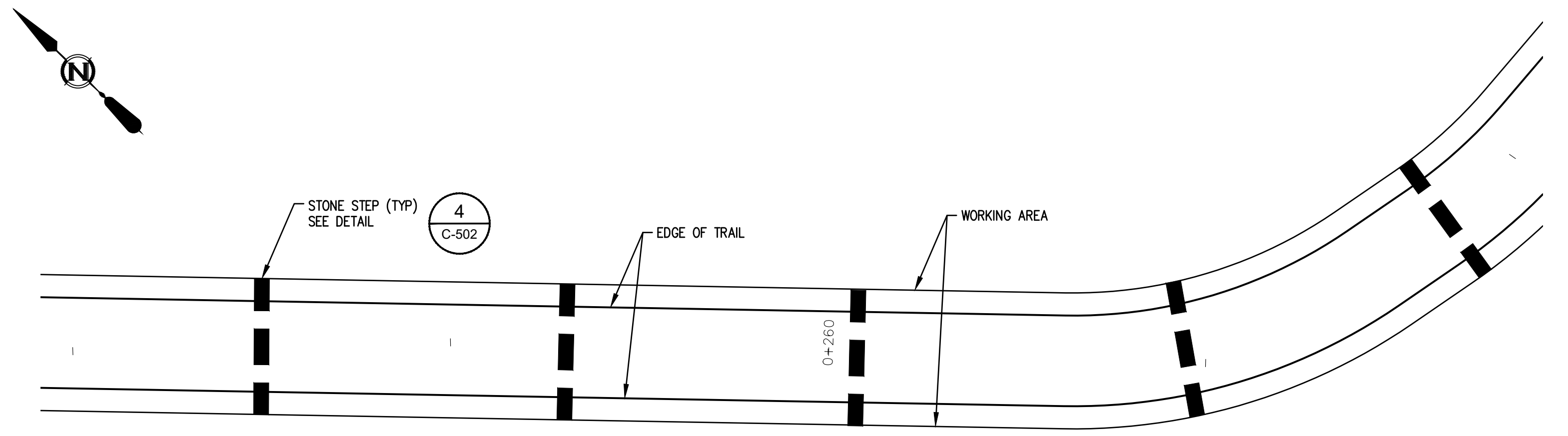
Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

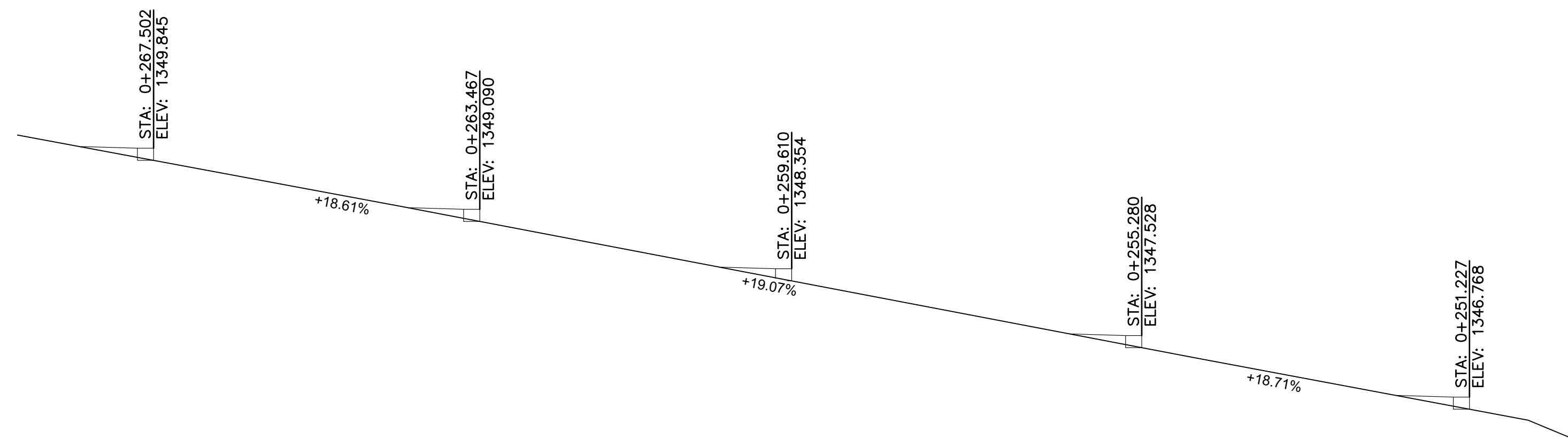
Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 2 OF 11

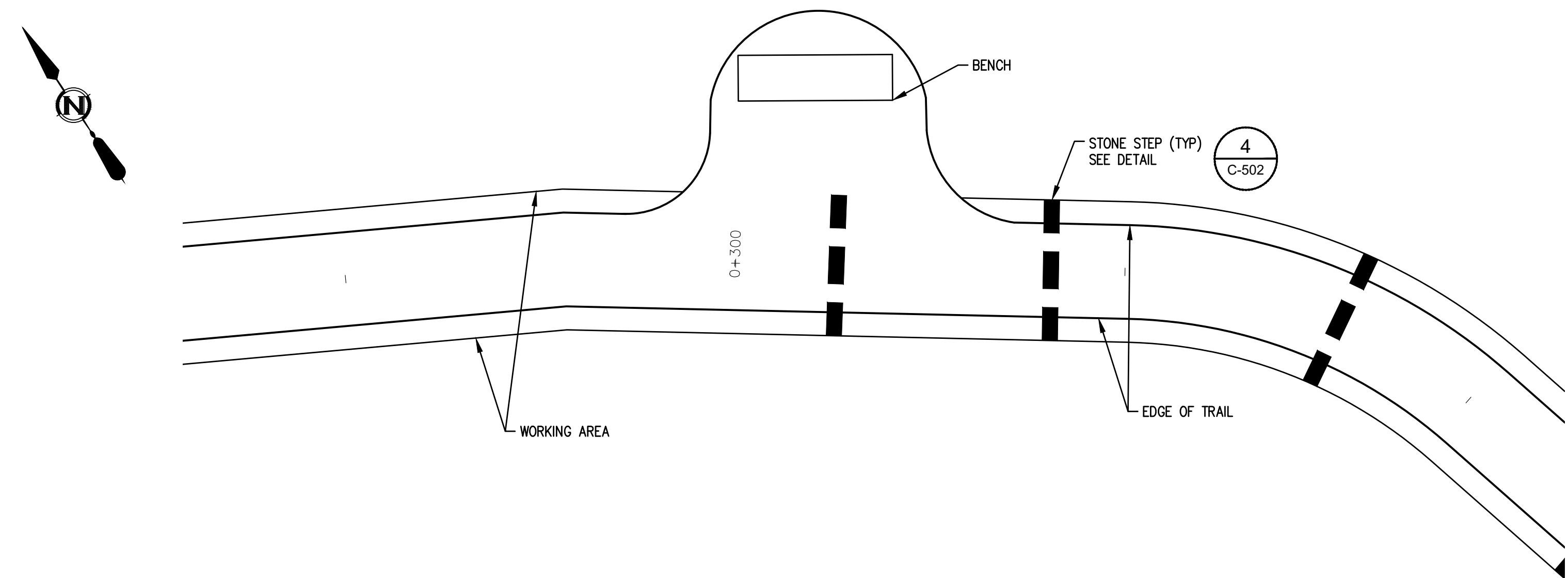
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S. YOUNG	S. YOUNG	201806117
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	AS SHOWN
PWSC Project Manager/Administrateur de Projets TPSGC		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWSC Project Manager/Administrateur de Projets TPSGC
Project No./No. du projet	Asset No./No. du-bien	Sheet No./No. de la feuille
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Drawing Reference No./No. de référence du dessin		29
C-104		



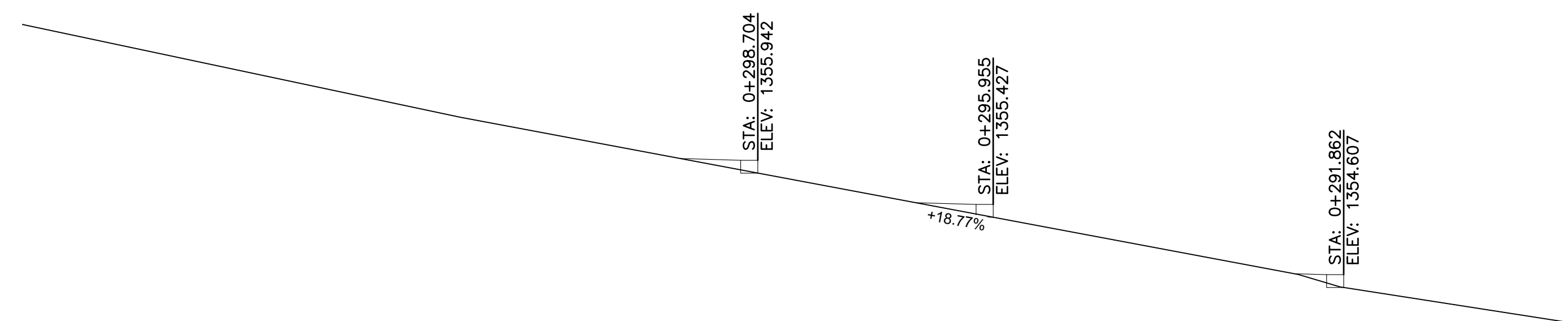
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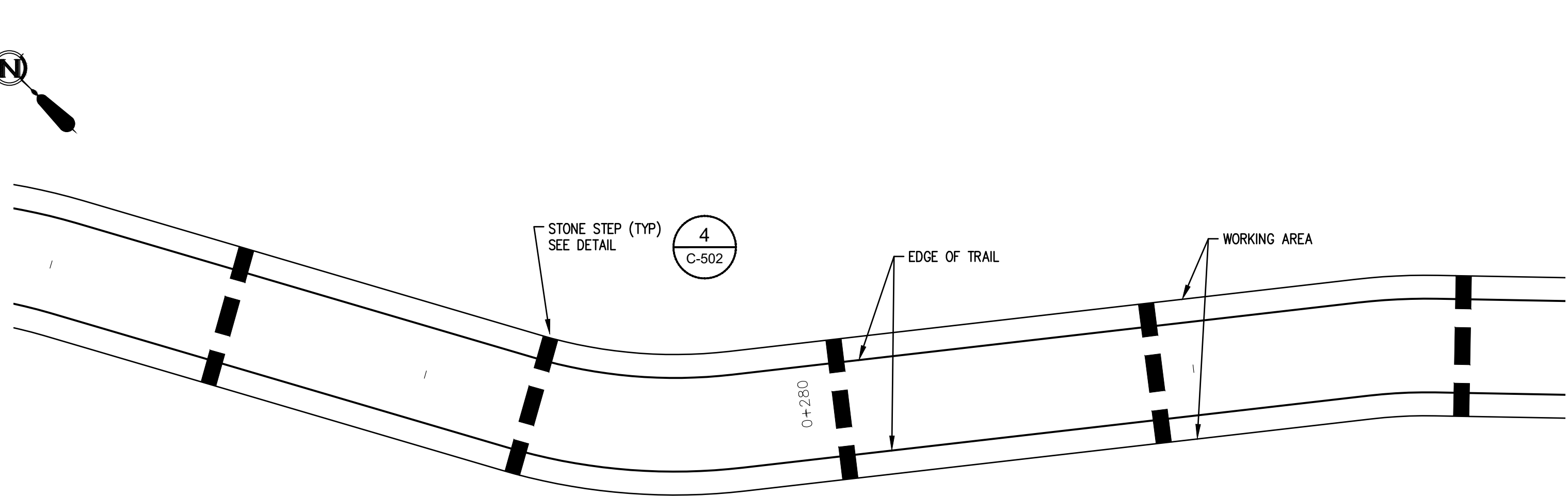
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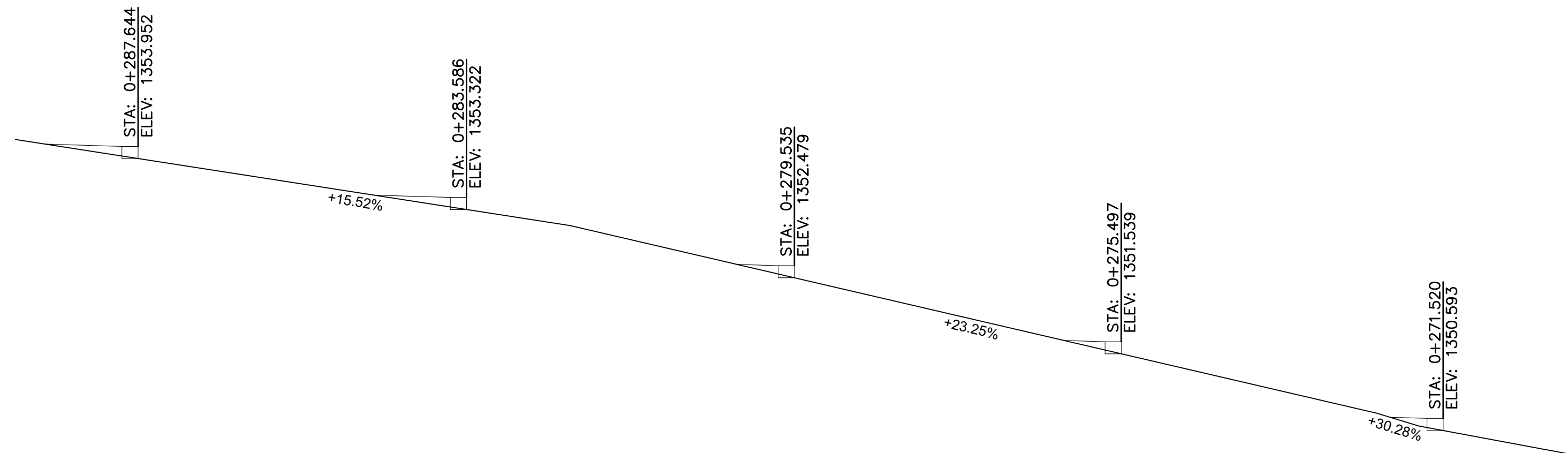
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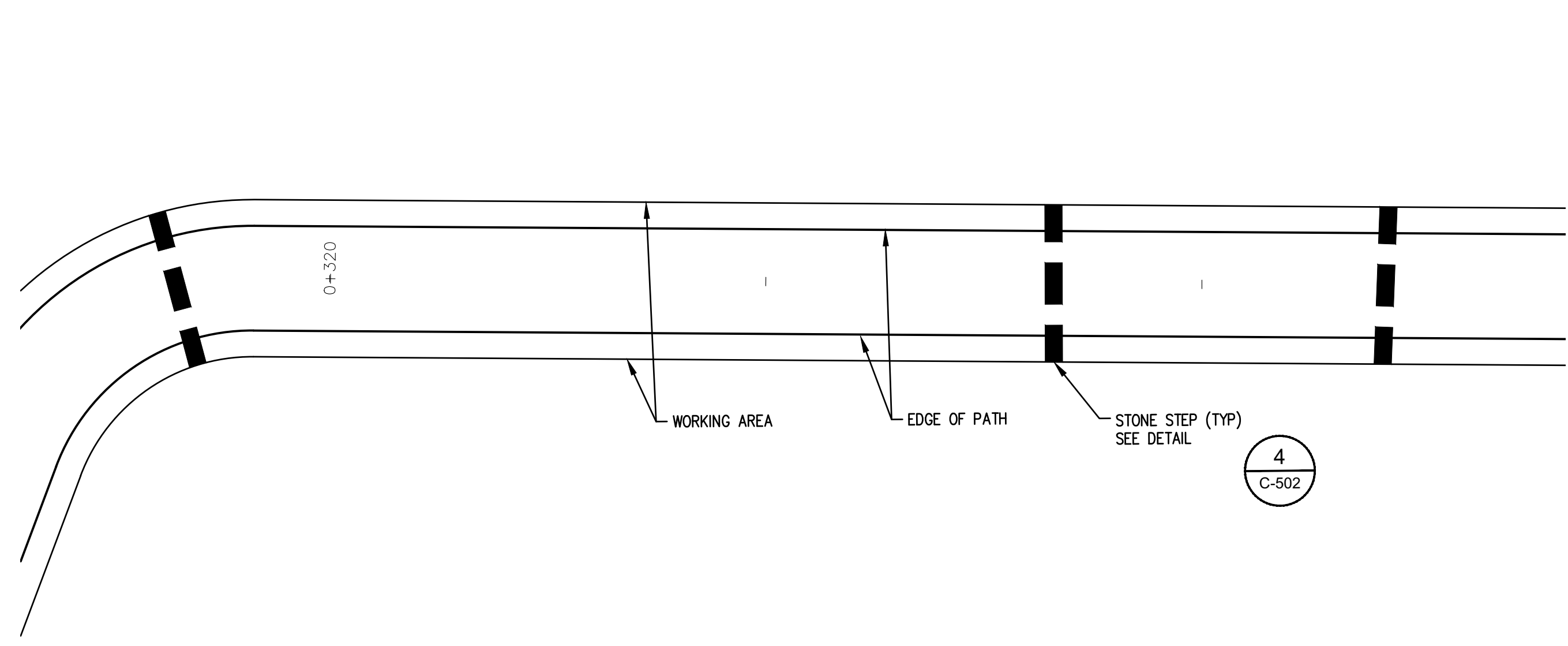
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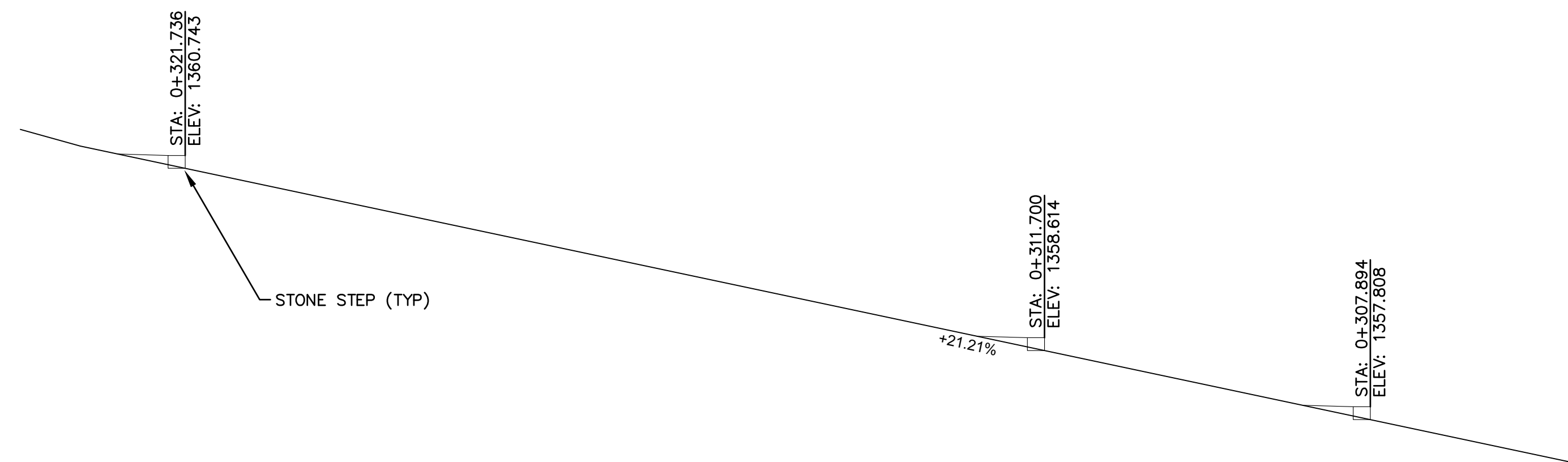
2 PLAN 1:50



2 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

- NOTES:
- CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 - REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
 - ENSURE NEW STONE STEPS ARE SOUND AND WELL CONSTRUCTED.
 - ALL ROCKS TO BE USED SHALL BE SUPPLIED, HAULED, DELIVERED TO JOB SITE AND COMPLETELY INSTALLED BY THE CONTRACTOR.
 - CONTRACTOR SHALL ROUGH GRADE AND PREPARE THE TRAIL ROUTE TO BE READY TO HAVE A 200 mm to 300 mm - 400 mm LAYER OF COMPACTED BASE GRAVEL TO BE SUPPLIED AND INSTALLED. CROSS SLOPE OR CROWN TRAIL SURFACE AS REQUIRED TO CREATE A POSITIVE DRAINAGE ON THE TRAIL SURFACE.
 - CONTRACTOR SHALL SUPPLY AND INSTALL A FINISH GRAVEL SURFACING ONTO ALL COMPACTED BASE GRAVEL AREAS. INSTALL 50 mm THICKNESS OF 9 mm GRAVEL MATERIALS.
 - BETWEEN THE SWITCHBACKS 10, 11, 12 AND 13 INSTALL NEW 1.0 METRE WIDE GRAVEL STEPS.
 - CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS ALONG THESE SECTIONS OF TRAIL. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 0+838 TO 0+971 AND STA 0+880 TO STA 0+903 AND STA 0+915 TO STA 0+947 AND STA 0+955 TO STA 1+020.
 - CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS FROM SWITCHBACK NUMBER 13 THROUGH TO STA 1+100. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 1+028 THROUGH TO STA 1+100.
 - EX TRAIL WIDTH = 1.20m. NEW TRAIL WIDTH = 1.20m (MIN) - WIDTH VARIES AS PER SITE CONDITIONS.
 - WORKING AREA = 1.80m (MIN). WHERE WIDTH VARIES, WIDTH TO BE AUTHORIZED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.
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Revision / Revision	
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Consultant's Name
Nom de l'expert-conseil

Associated Engineering

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Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team
Southern Alberta Operations Branch
Le Client Entretien l'Équipe Alberta Méridionale
Branche d'Opérations

Canada

Client/client
Parks Canada Agency
L'Agence Parcs Canada

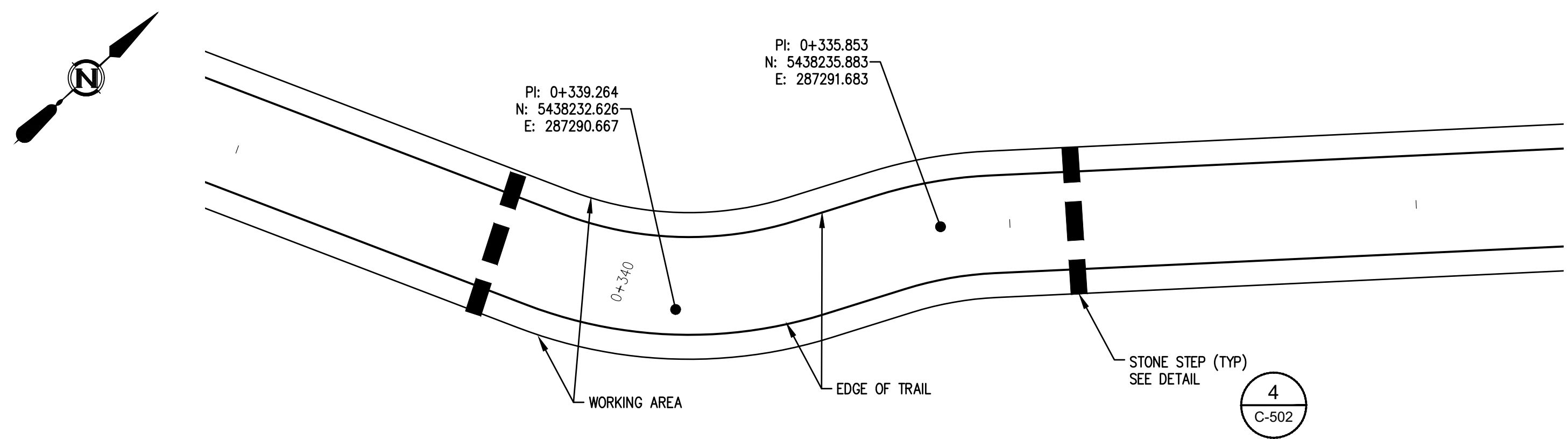
Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

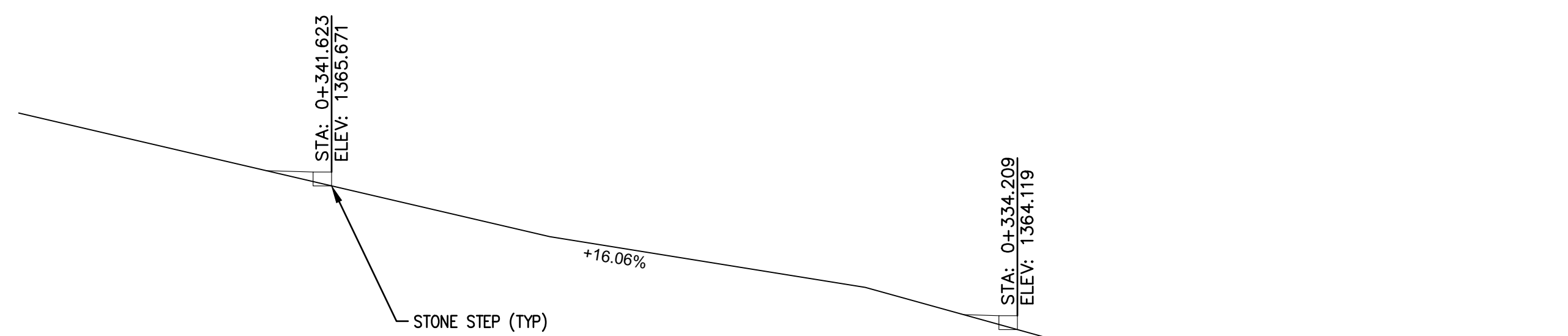
Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 3 OF 11

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
A. McDONALD	S. YOUNG	20180C117
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
		AS SHOWN

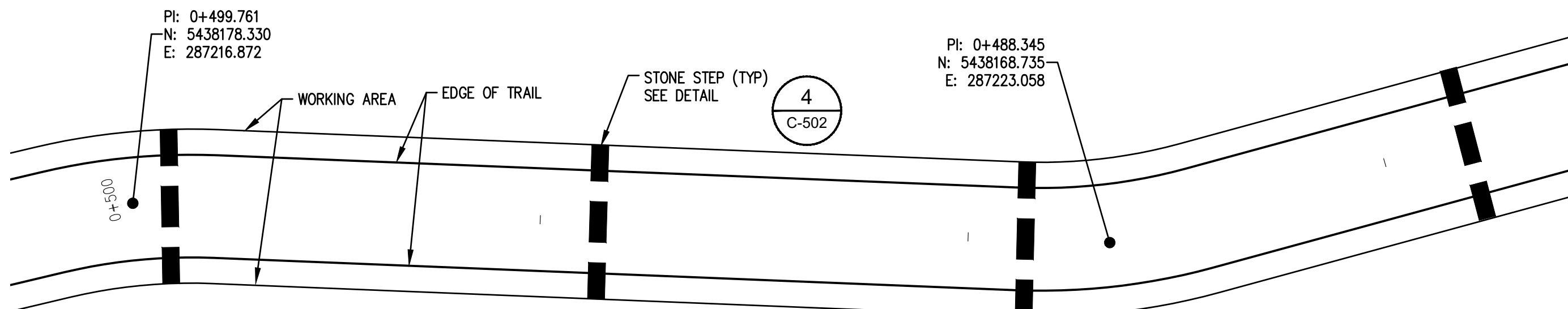
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Client Acceptance/Acceptation du client	Approved by/Approuvé par
Park Responsible Officer/Agent Responsable	PWOSC Project Manager/Administrateur de Projets TPSCG
Project No./No. du projet	Asset No./No. du-bien
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Drawing Reference No./No. de référence du dessin	Sheet No./No. de la feuille
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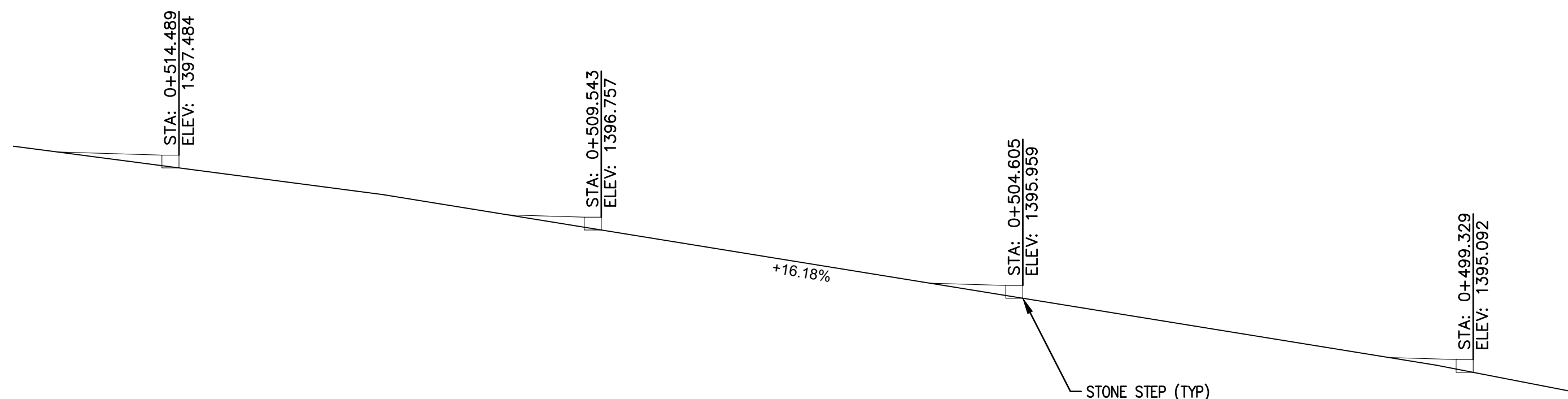
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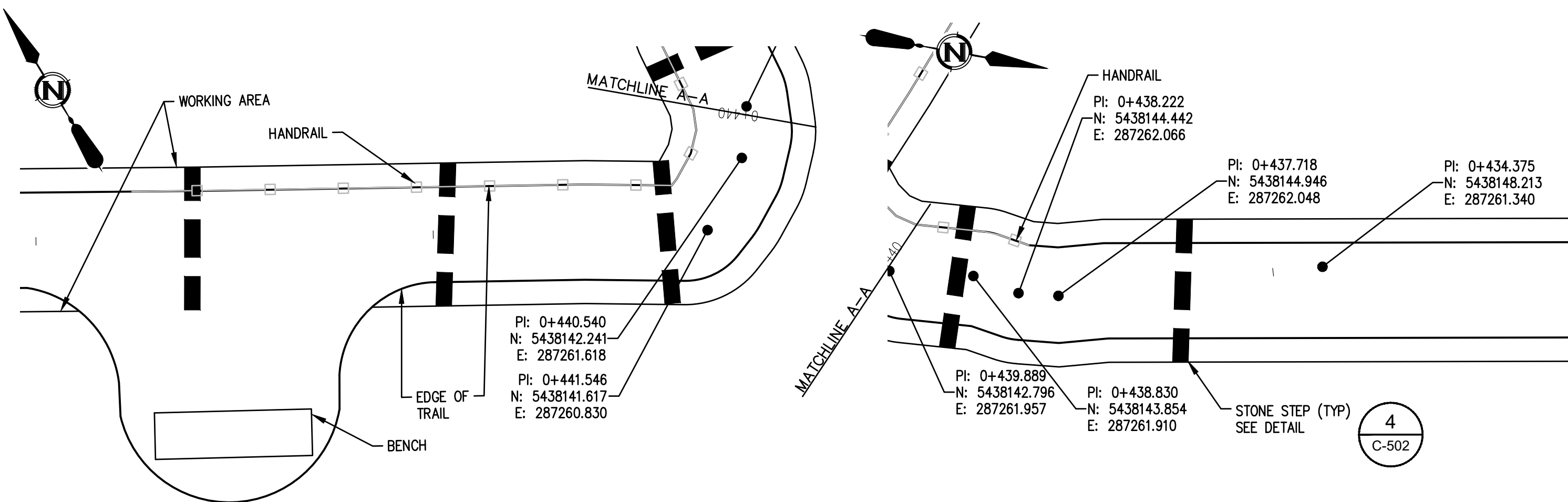
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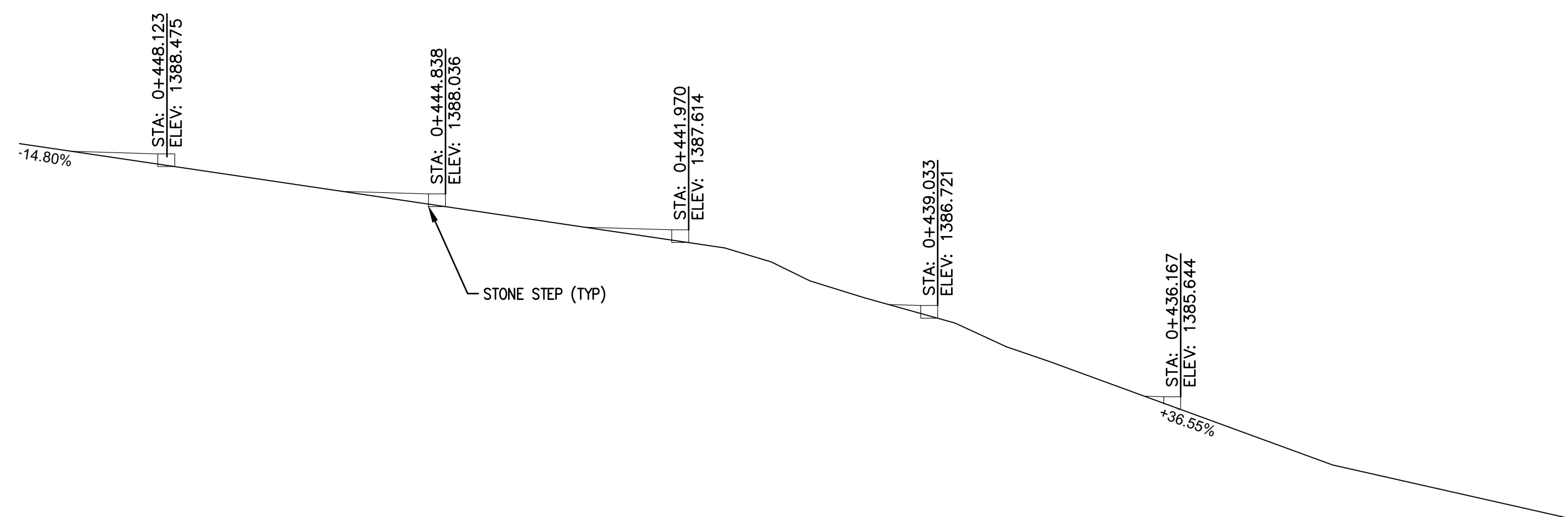
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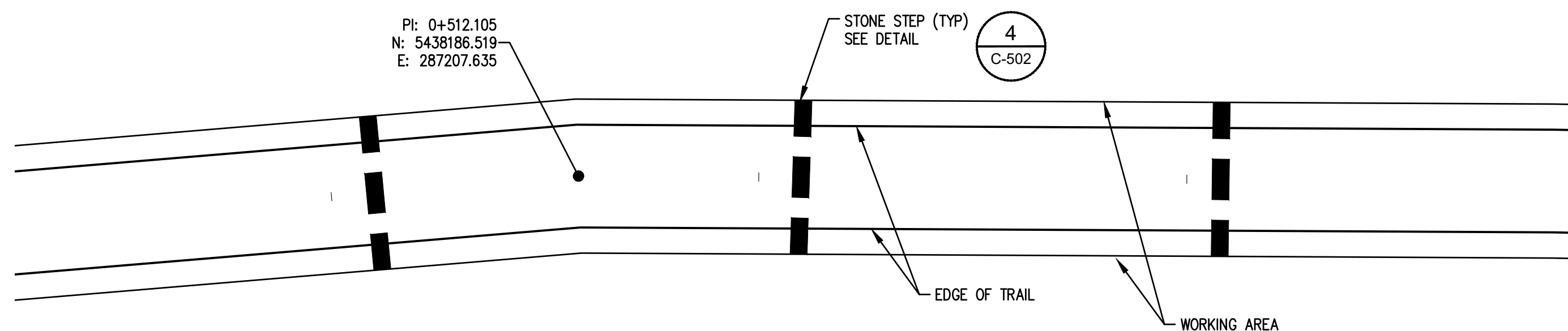
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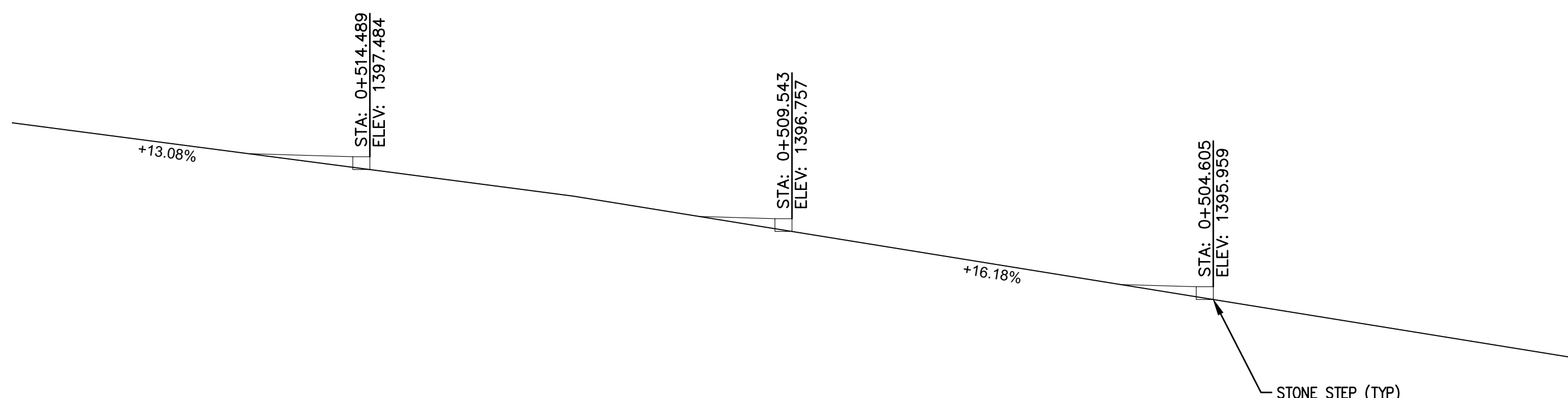
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2 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

- NOTES:
- CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 - REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
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 - BETWEEN THE SWITCHBACKS 10, 11, 12 AND 13 INSTALL NEW 1.0 METRE WIDE GRAVEL STEPS.
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 - EX TRAIL WIDTH = 1.20m. NEW TRAIL WIDTH = 1.20m (MIN) - WIDTH VARIES AS PER SITE CONDITIONS.
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 - GRADES SHOWN ARE EXISTING.

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C	detail on drawing no. détail sur dessin no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering	BEST MANAGED COMPANIES
APEGA Permit to Practice P 3979	

Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
Client Services Team Southern Alberta Regional Operations Branch	Le Client Entretient l'Équipe Alberta Méridionale Branche d'opérations
Canada	

Client/client	Parks Canada Agency	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 4 OF 11

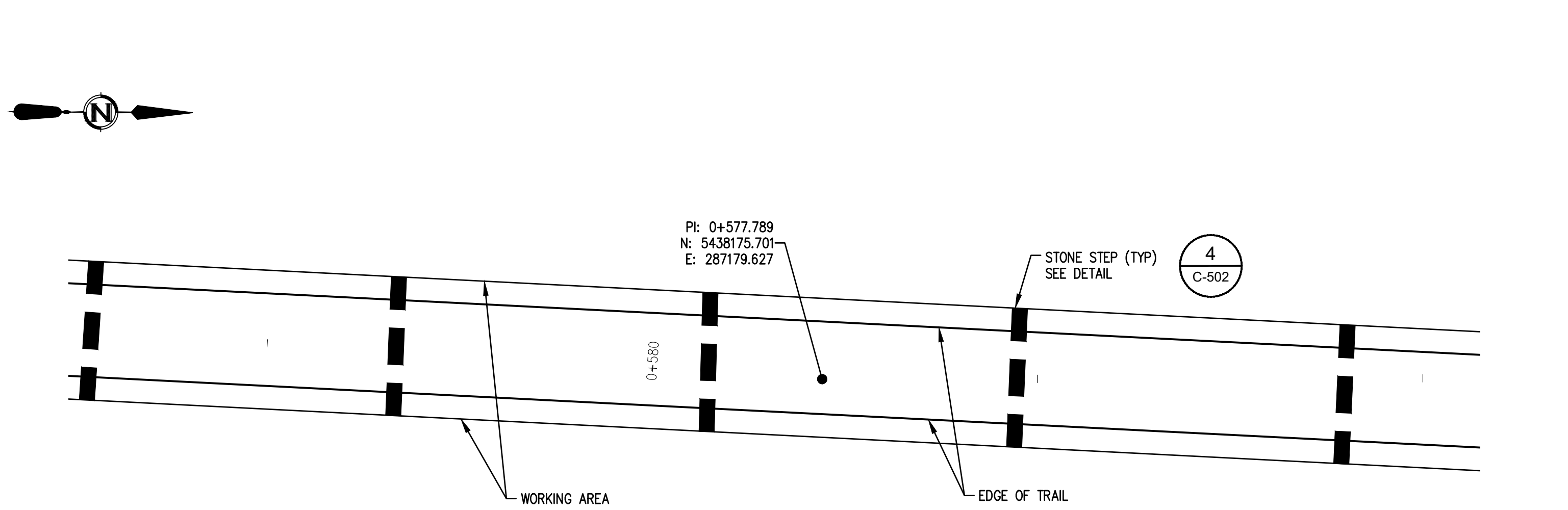
Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	20180CT17
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	AS SHOWN

PMOSC Project Manager/Administrateur de Projets TPSGC

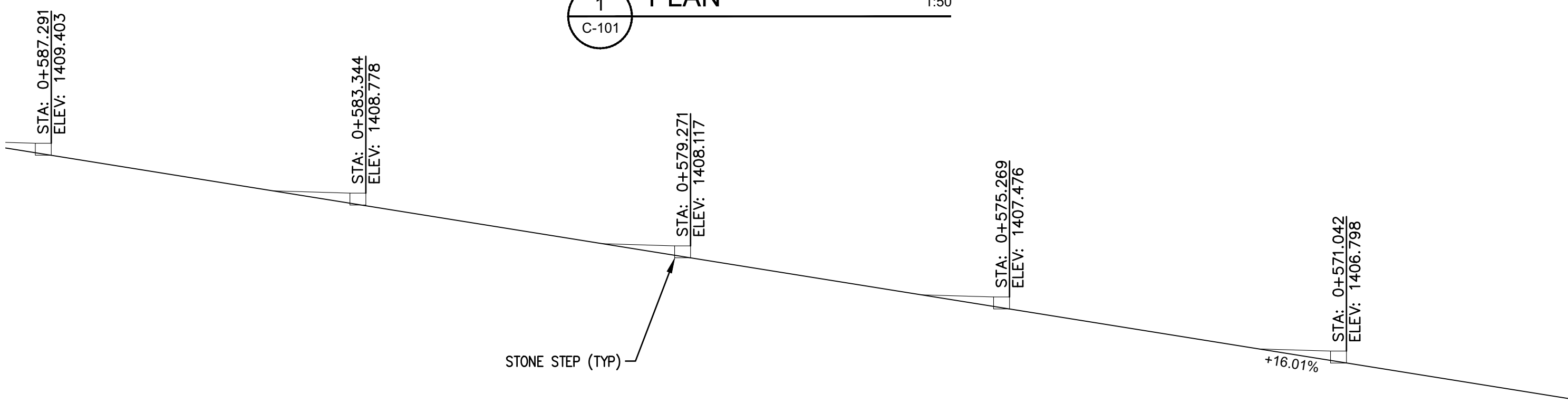
Client Acceptance/Acceptation du client	Approved by/Approuvé par
Park Responsible Officer/Agent Responsable	PMOSC Project Manager/Administrateur de Projets TPSGC

Project No./No. du projet	Asset No./No. du bien	Sheet No./No. de la feuille
R.099828.001		12

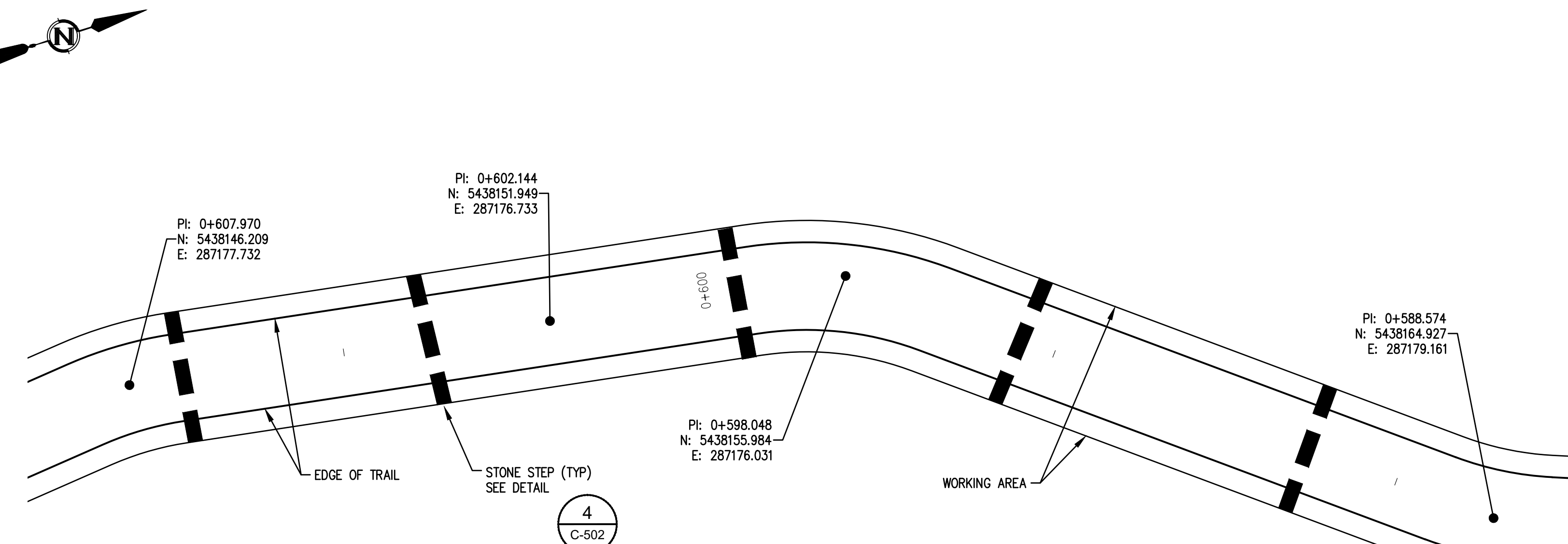
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C-106



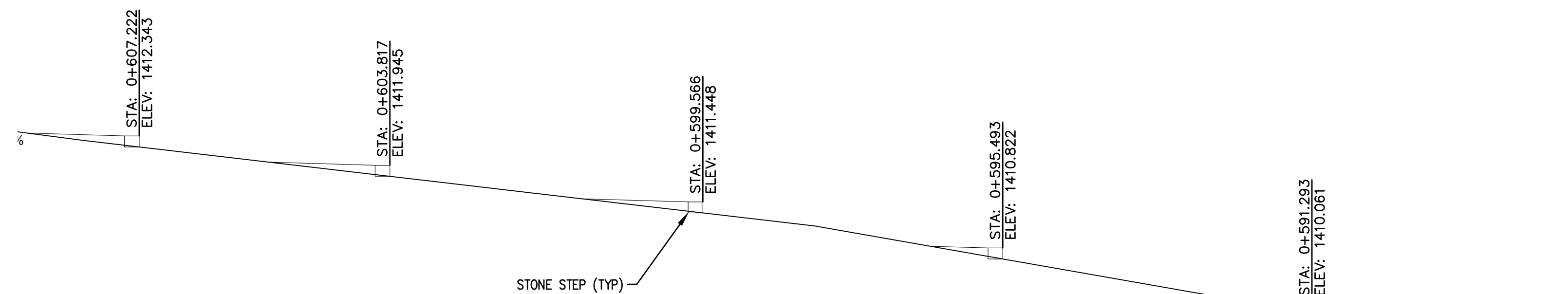
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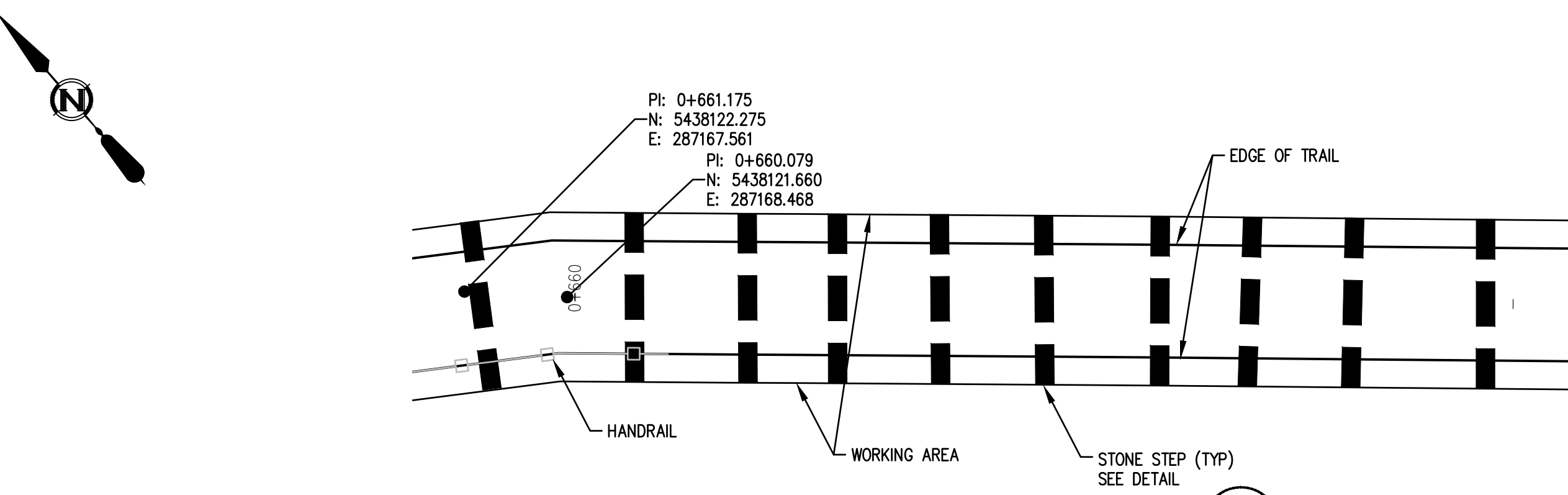
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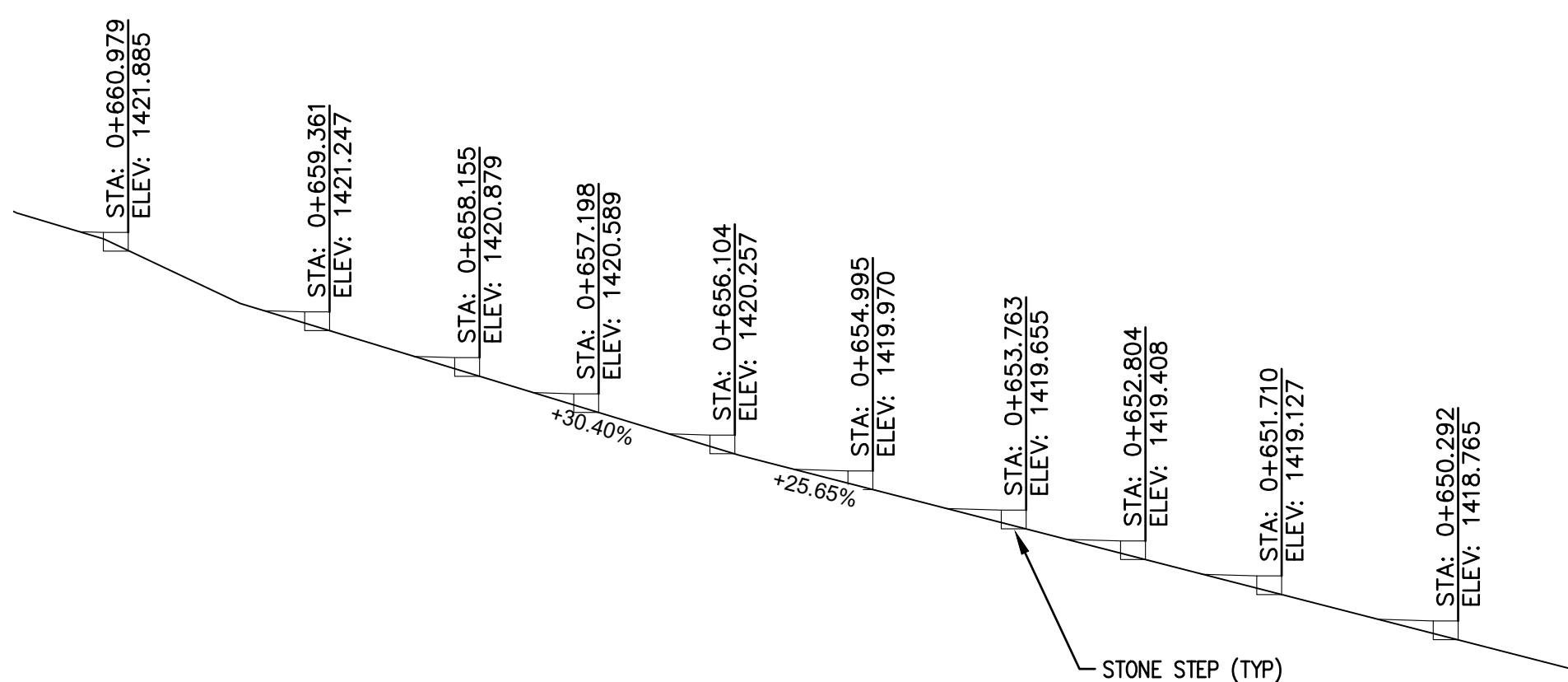
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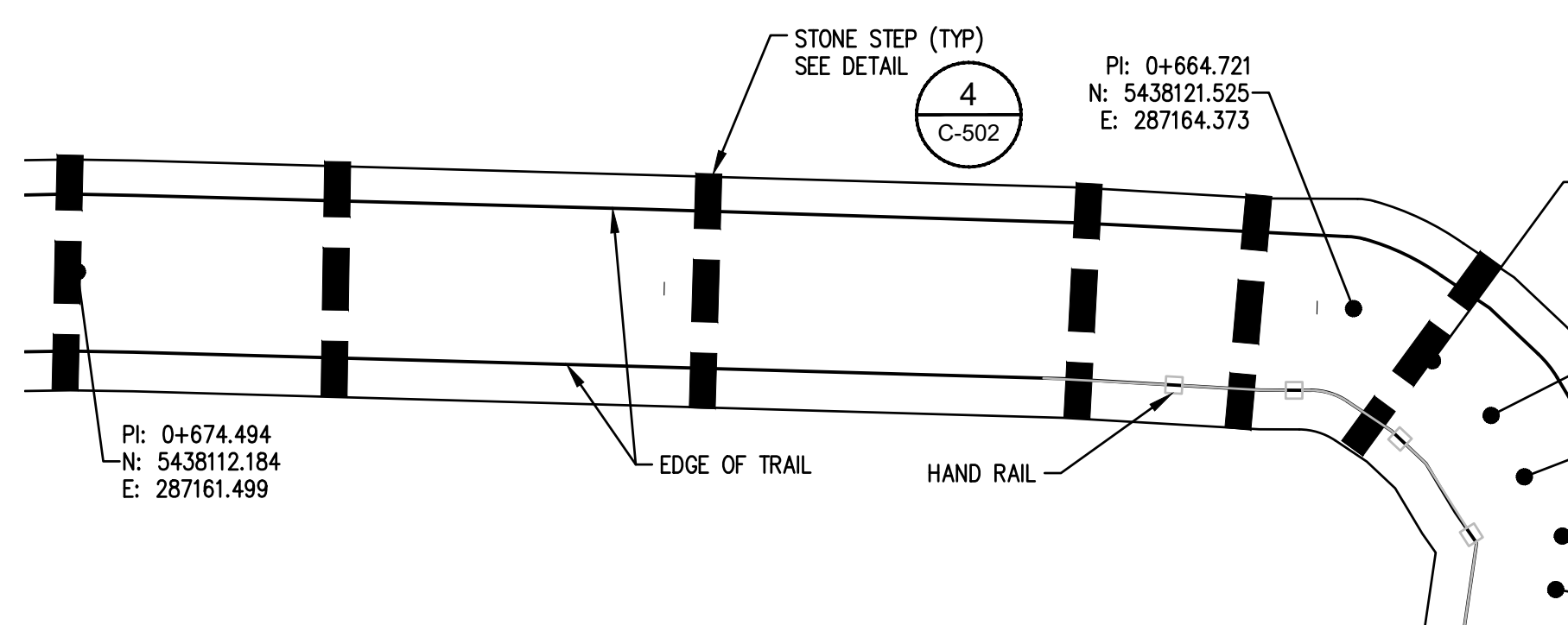
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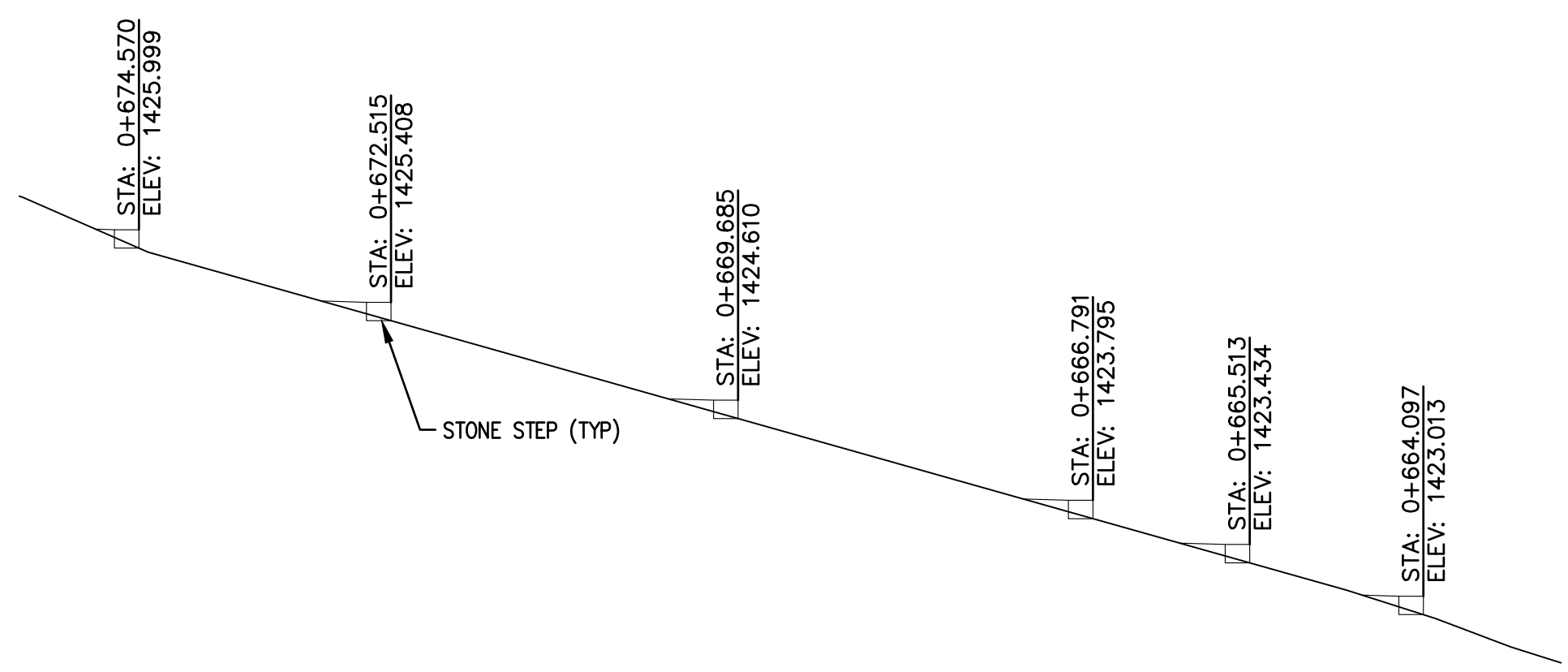
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3 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

- NOTES:
- CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 - REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
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0	2018NOV30	ISSUED FOR TENDER	SY	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name
Nom de l'expert-conseil

Associated Engineering

APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team Southern Alberta Operations Branch
Le Client Entretient l'Équipe Alberta Méridionale Branche d'opérations

Canada

Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 5 OF 11

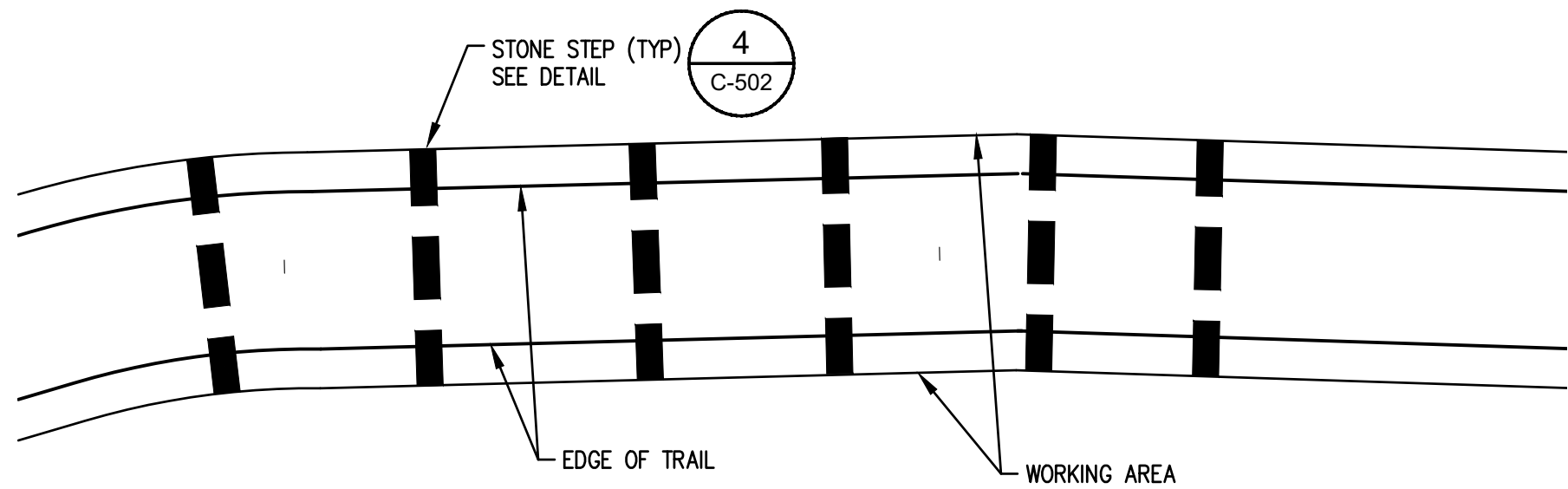
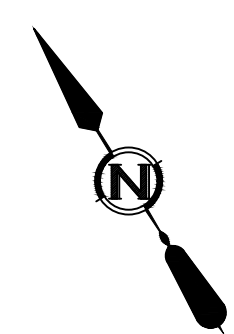
Surveyed by/Arpenté par S. YOUNG	Drawn by/Dessiné par S. YOUNG	Date/Date 20180C117
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PWGSC Project Manager/Administrateur de Projets TPSGC

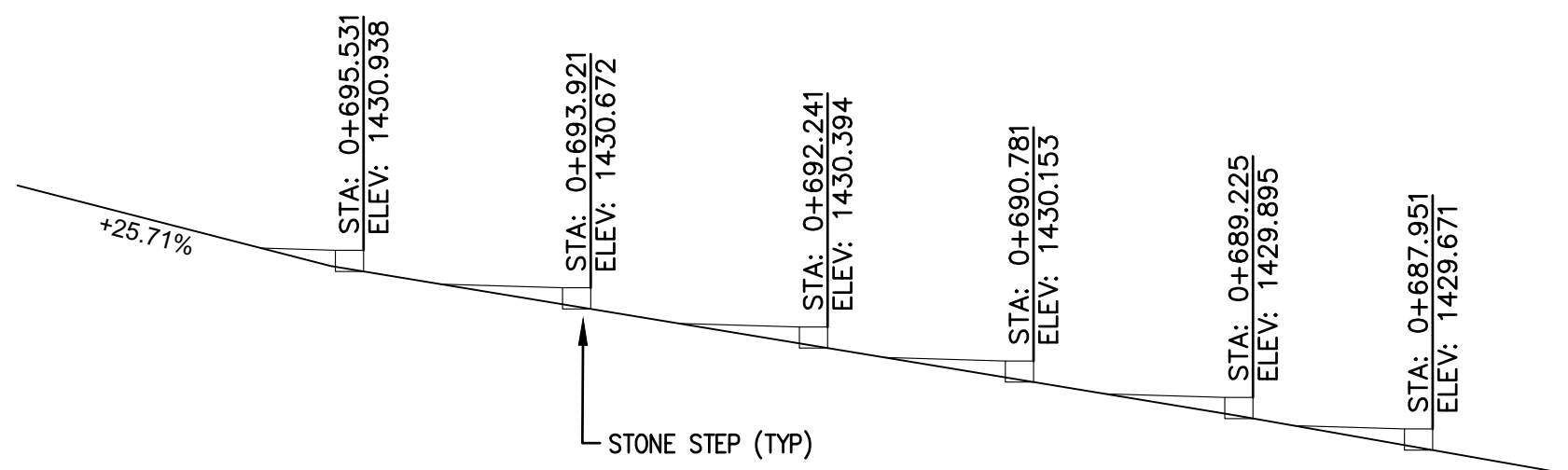
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Park Responsible Officer/Agent Responsable	PWGSC Project Manager/Administrateur de Projets TPSGC

Project No./No. du projet R.099828.001	Asset No./No. du-bien	Sheet No./No. de la feuille 13
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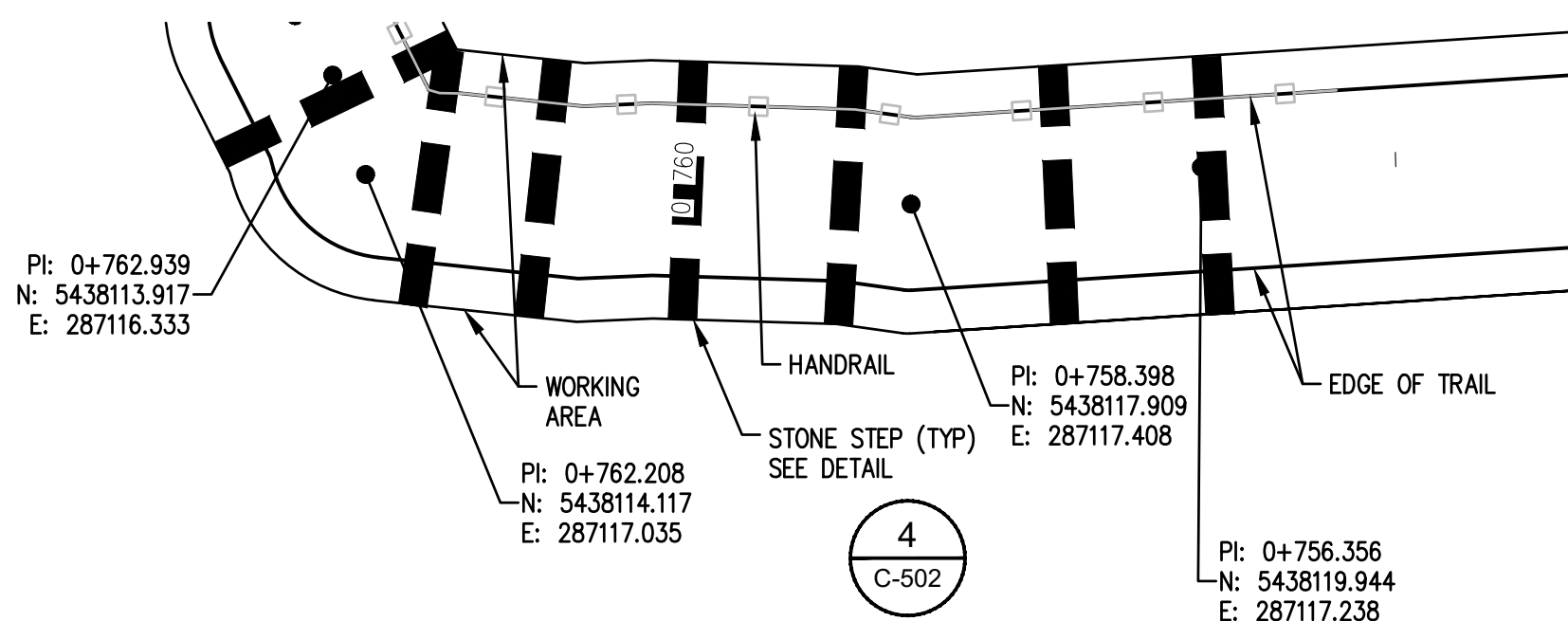
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C-107



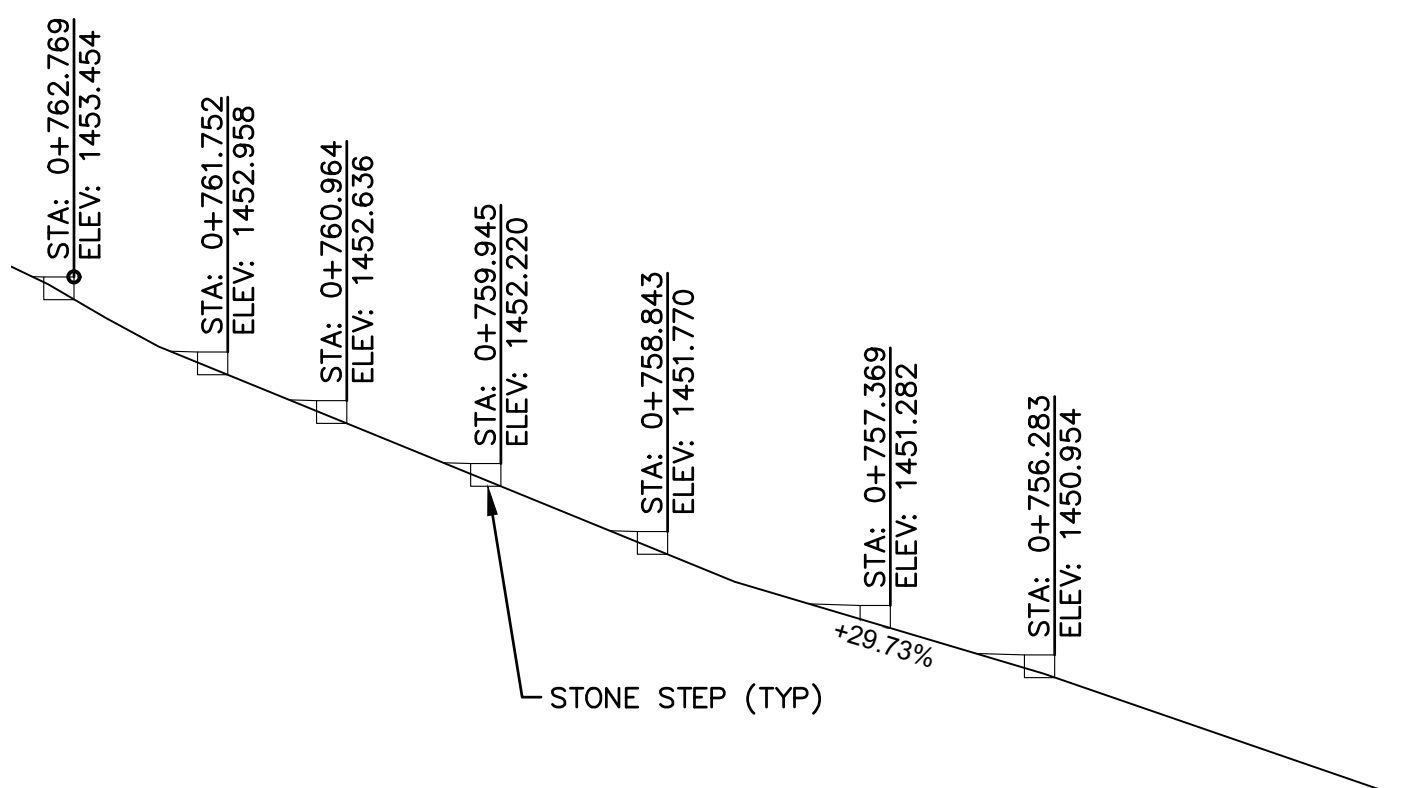
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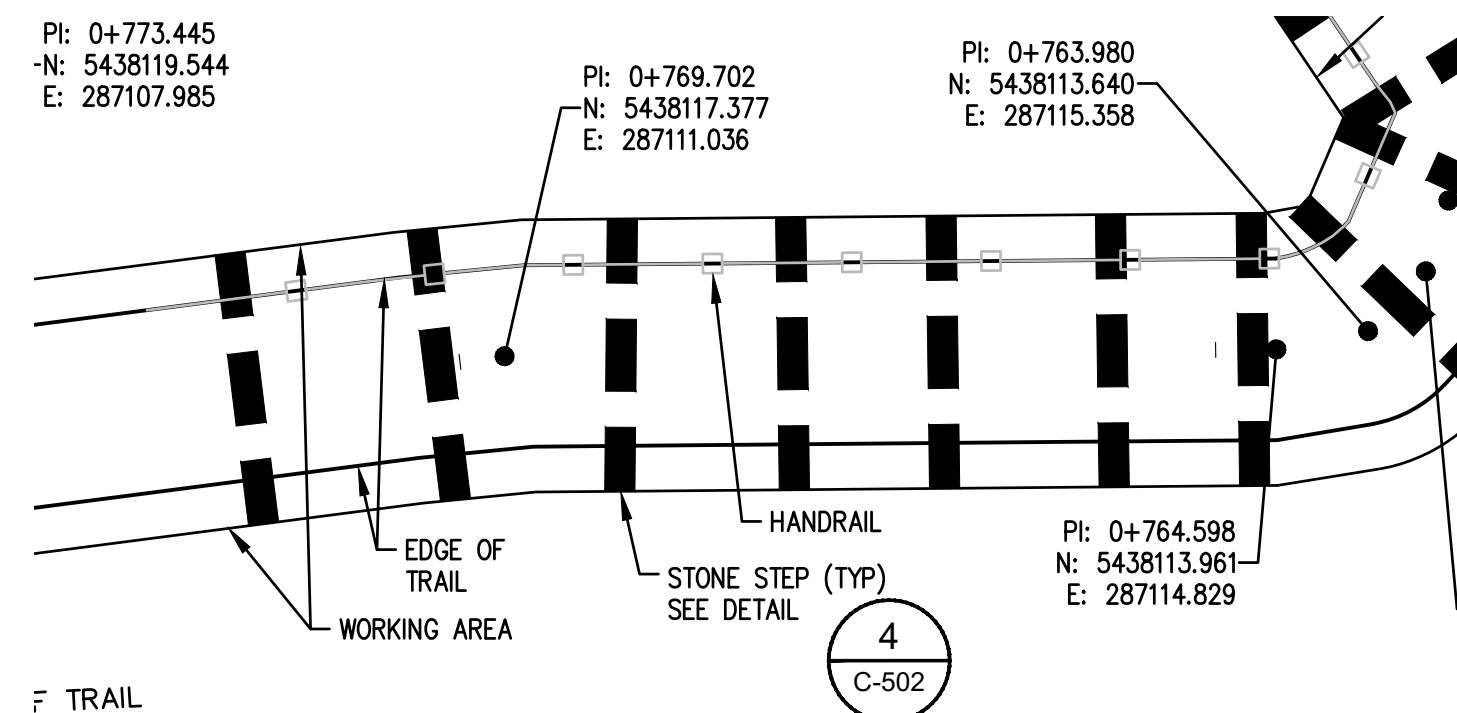
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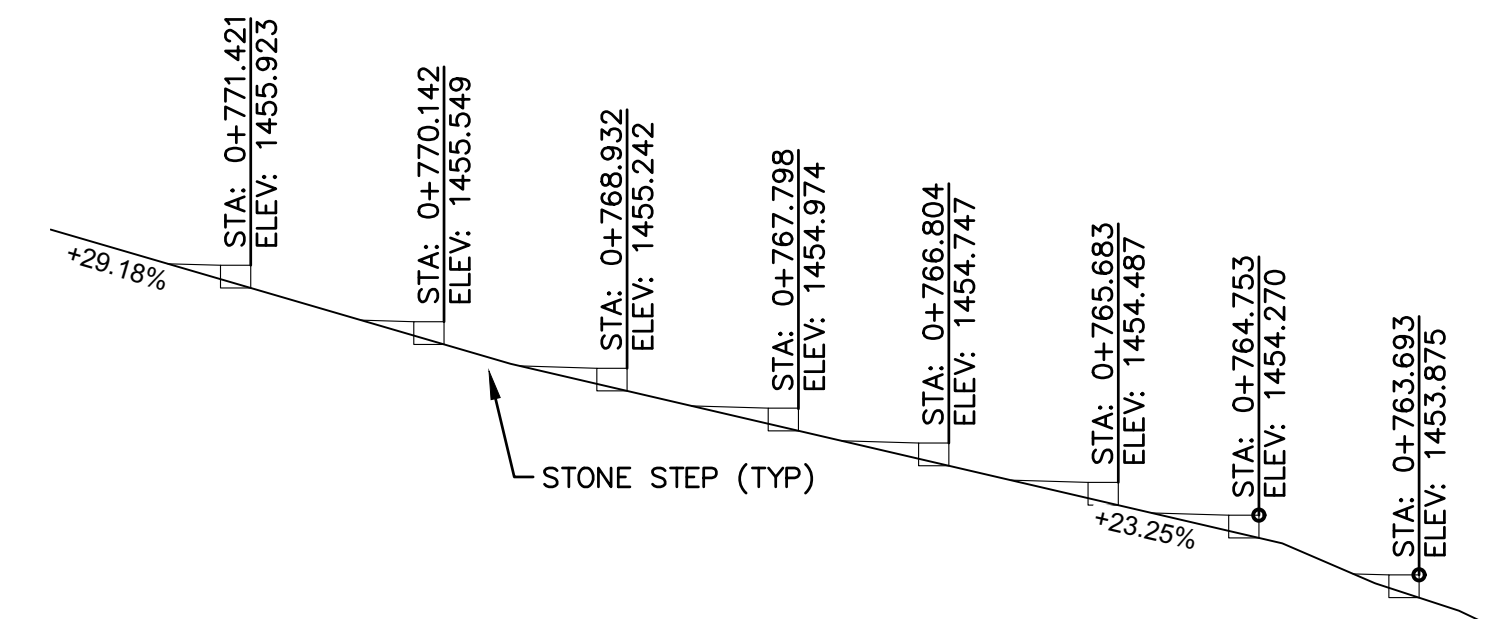
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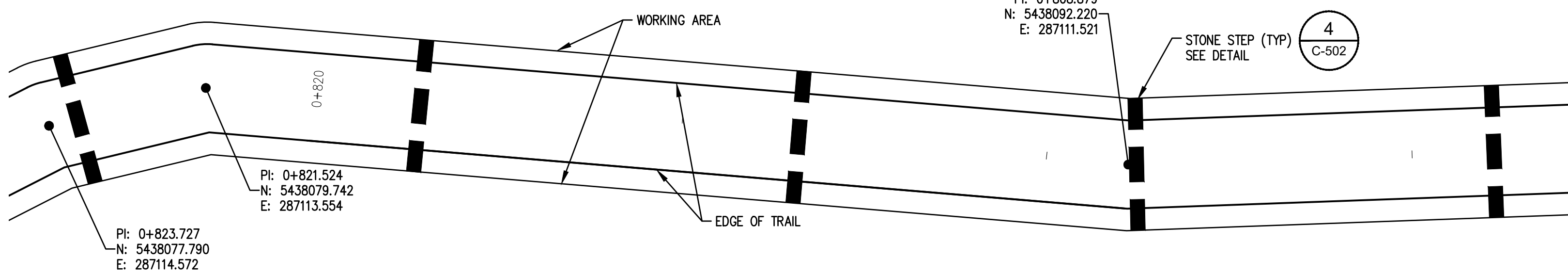
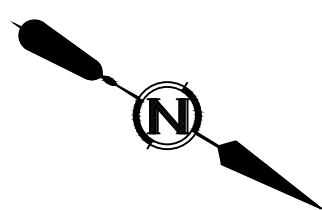
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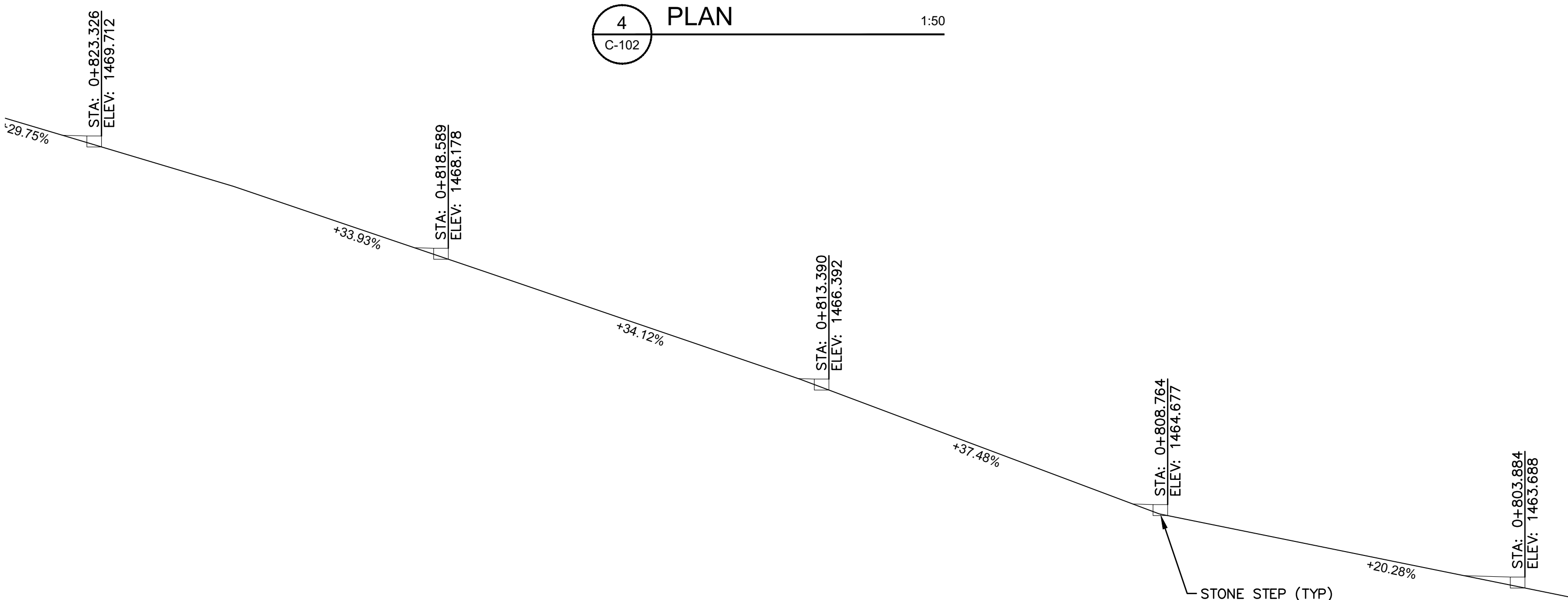
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3 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

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No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name
Nom de l'expert-conseil

Associated Engineering
Ingénierie Associée

APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team
Southern Alberta Operations Branch
Le Client Entretien l'Équipe Alberta Méridionale Branche d'opérations

Canada

Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 6 OF 11

Surveyed by/Arpenté par
S. YOUNG

Designed by/Concept par
A. McDONALD

Drawn by/Dessiné par
S. YOUNG

Reviewed by/Revisé par
AS SHOWN

Date/Date
201806117

Scale/Echelle
AS SHOWN

PWGSC Project Manager/Administrateur de Projets TPSCG

Client Acceptance/Acceptation du client
Approved by/Approuvé par

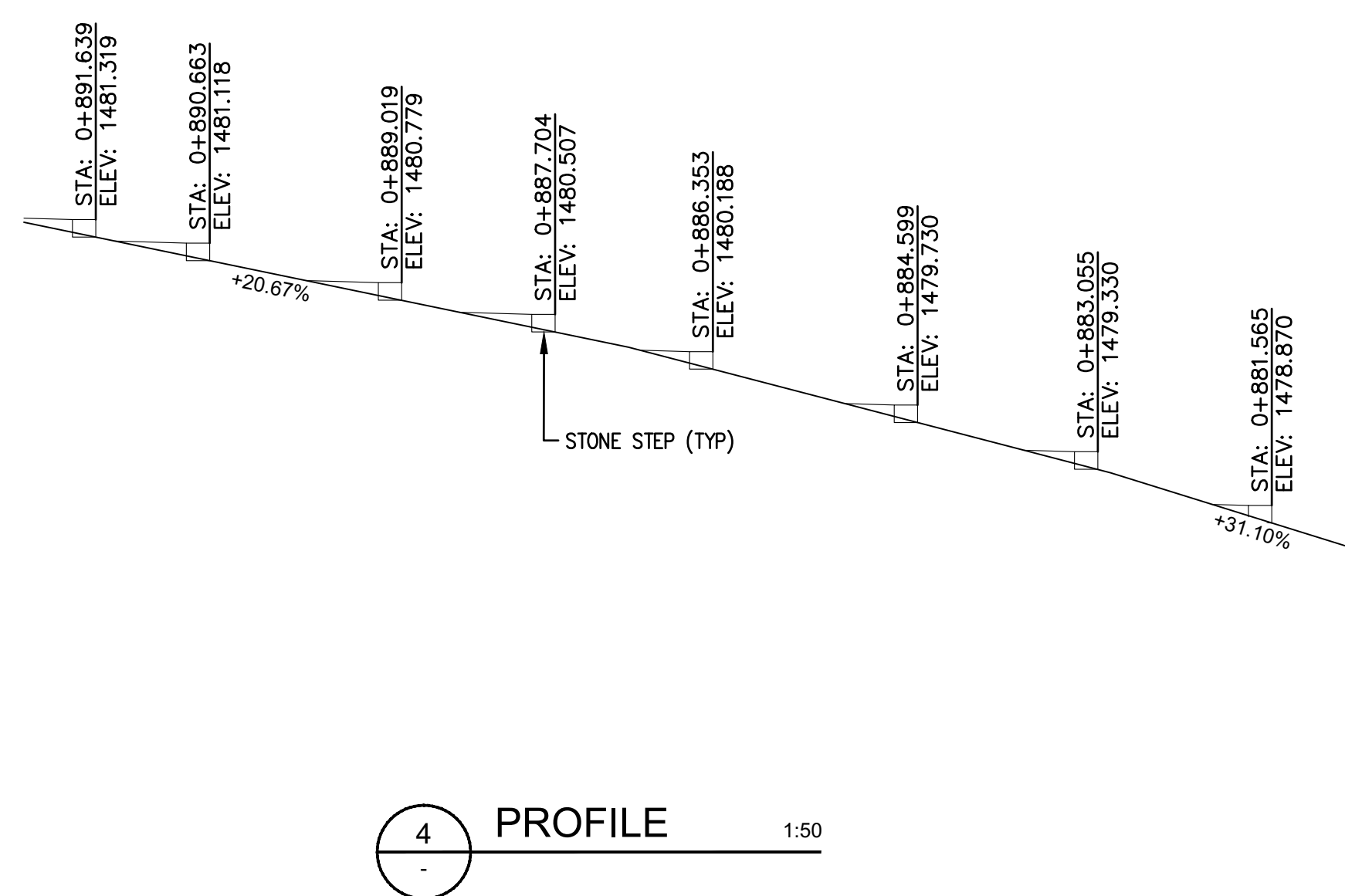
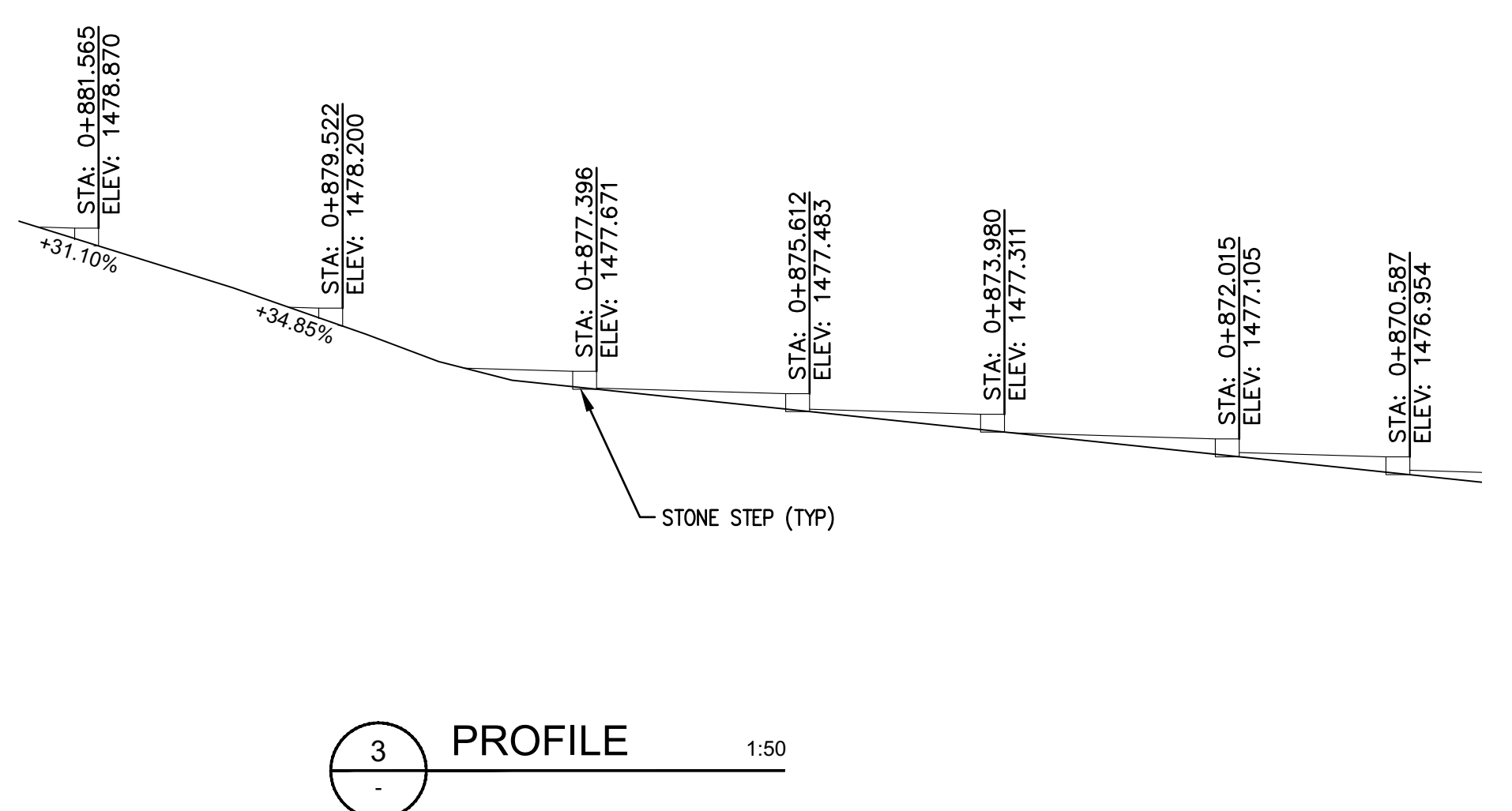
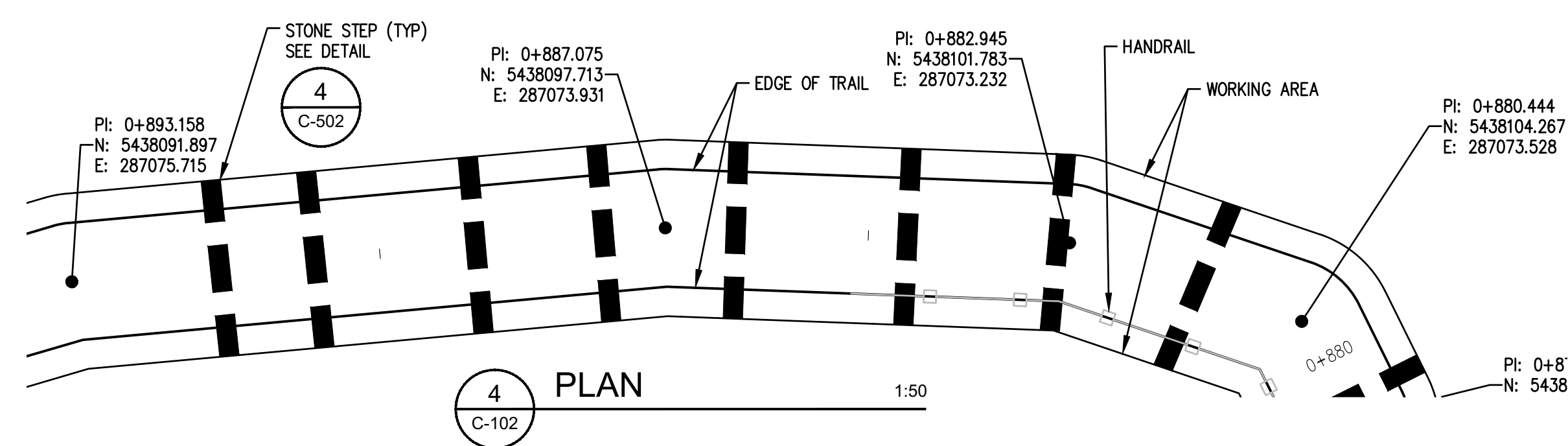
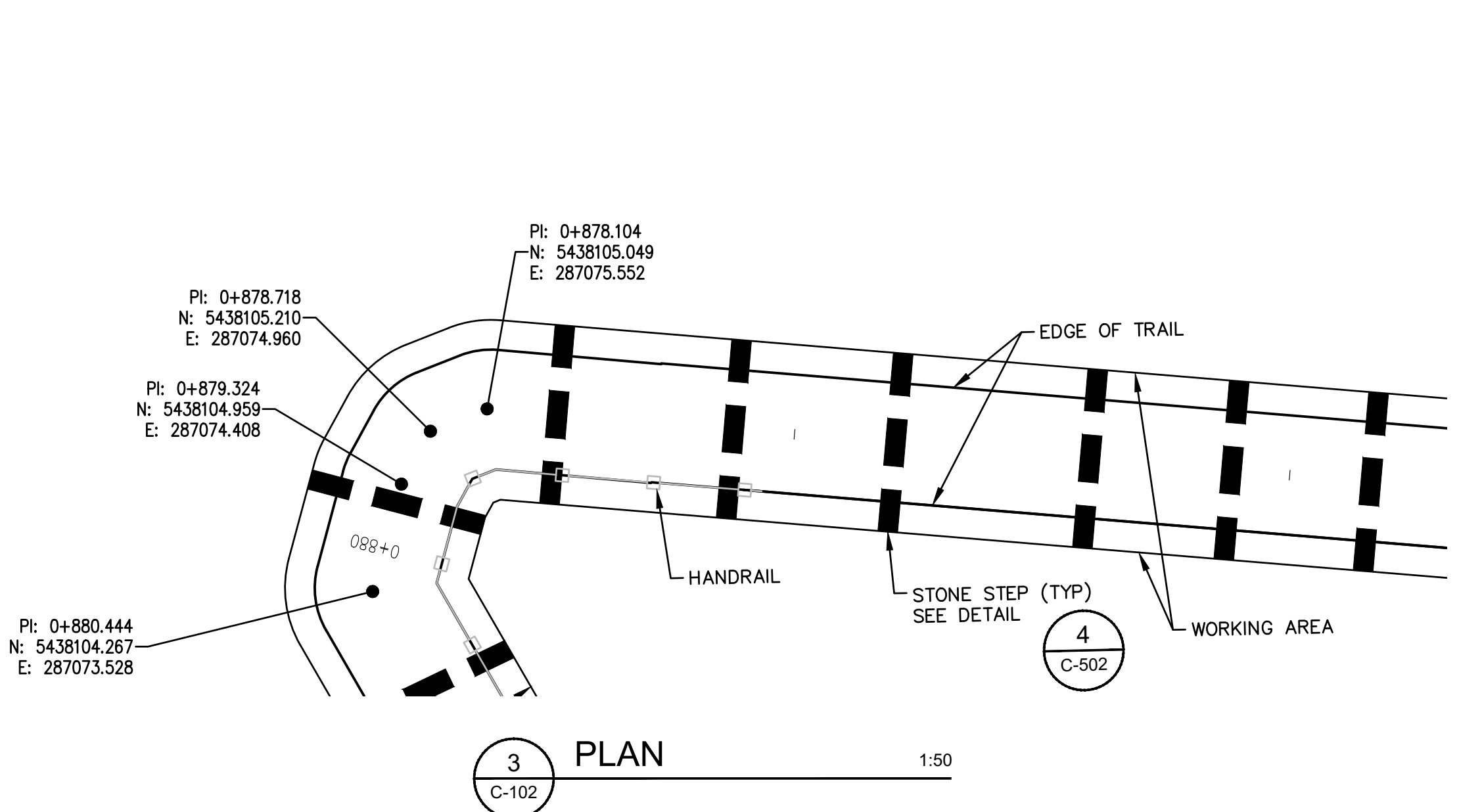
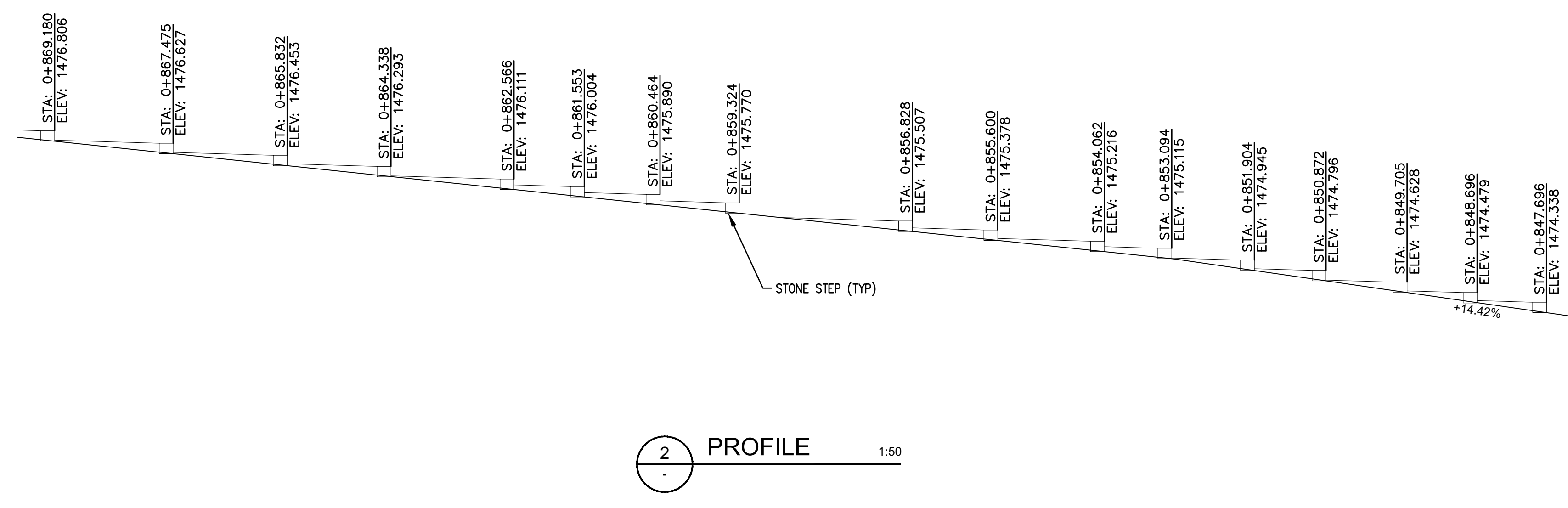
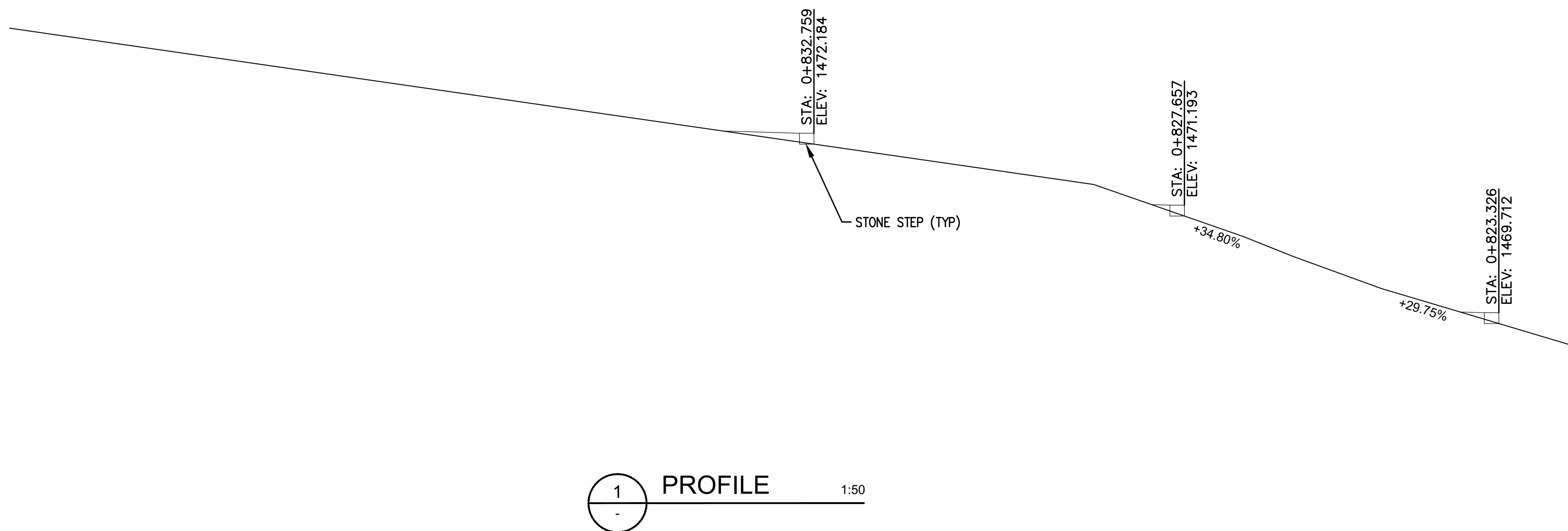
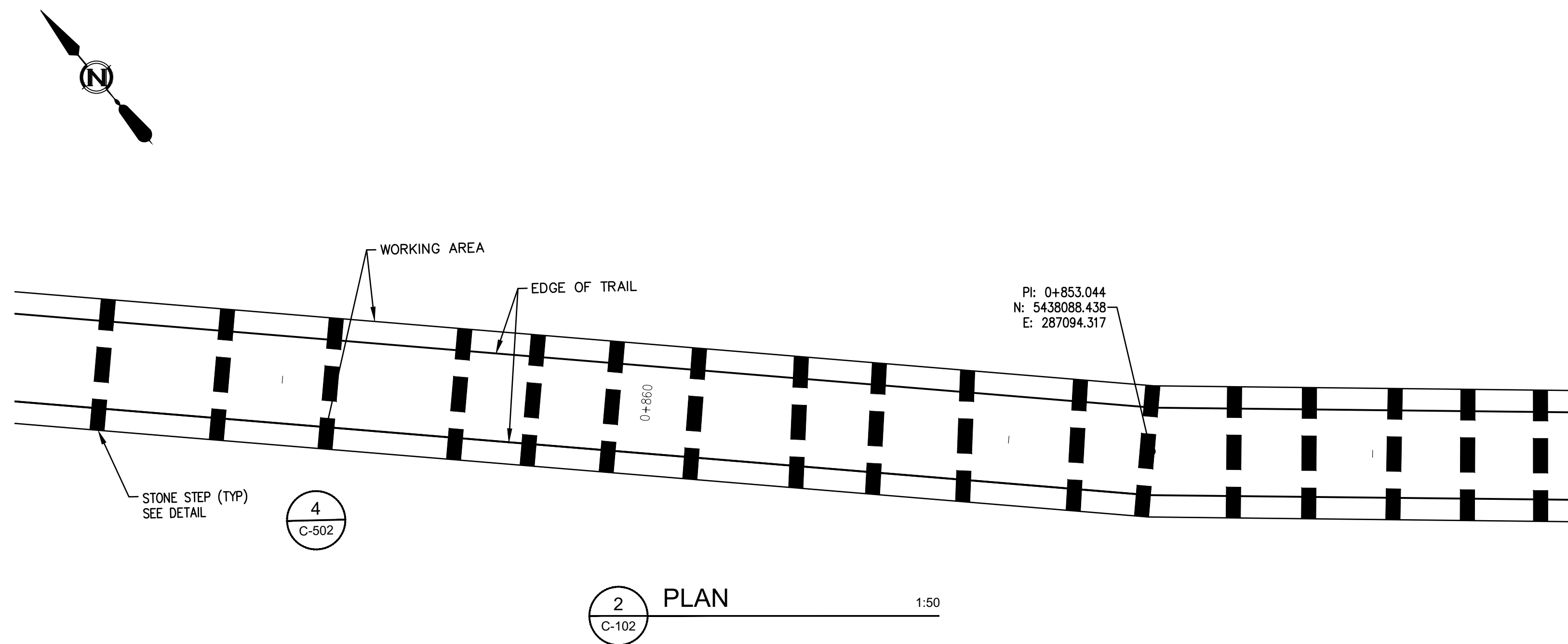
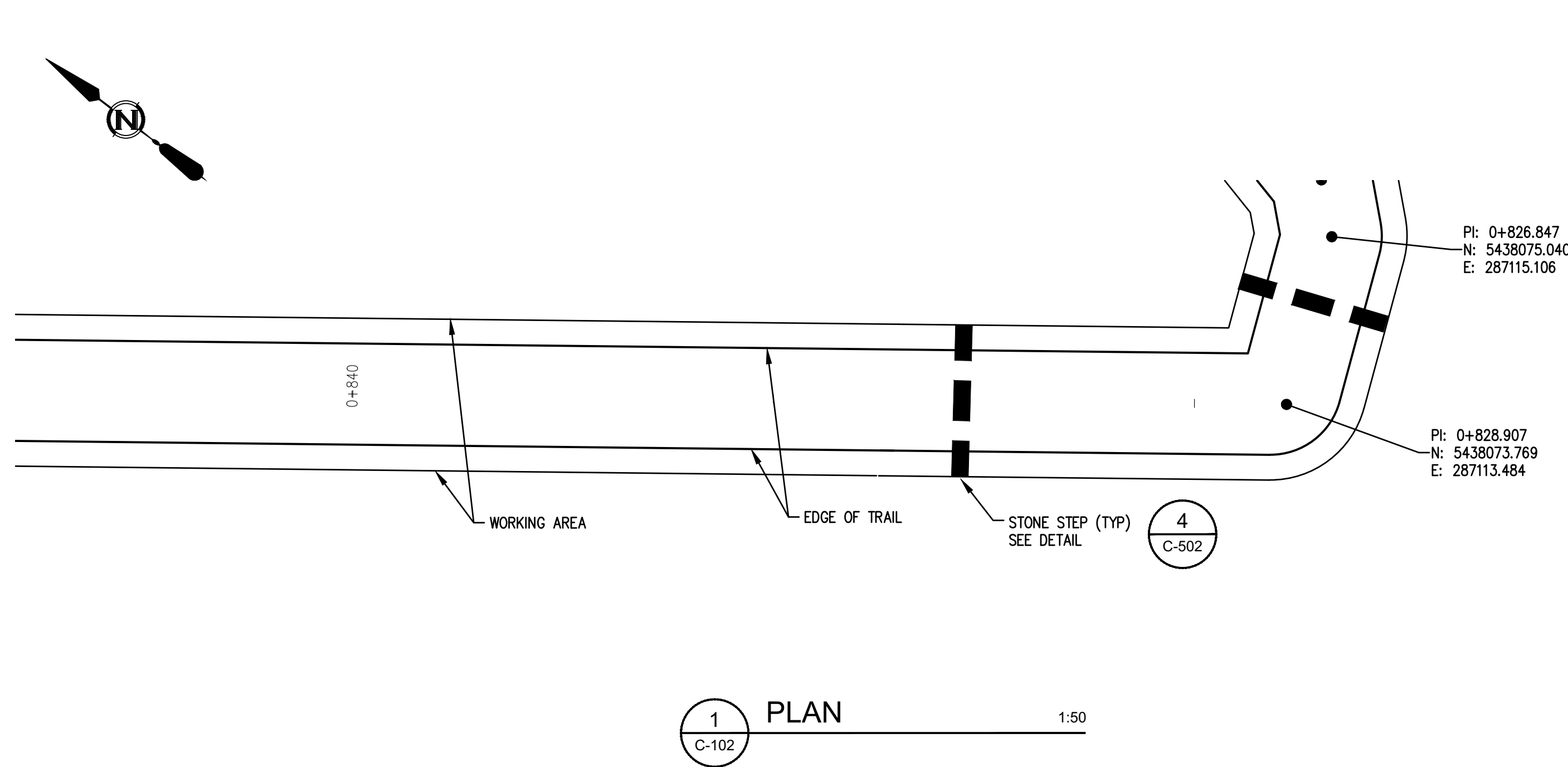
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R.099828.001

Asset No./No. du bien

Sheet No./No. de la feuille
14

Drawing Reference No./No. de référence du dessin
C-108

29



- NOTES:
- CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
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0	2018NOV30	ISSUED FOR TENDER	SY	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number
B	source drawing no.
C	detail on drawing no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering	BEST MANAGED COMPANIES
APEGA Permit to Practice P 3979	

	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridionale Branche d'opérations
Canada		
Client/client	Parks Canada Agency	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

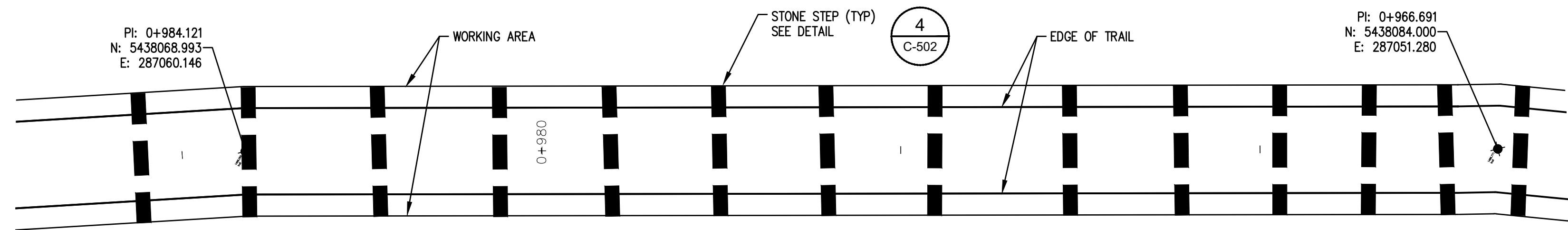
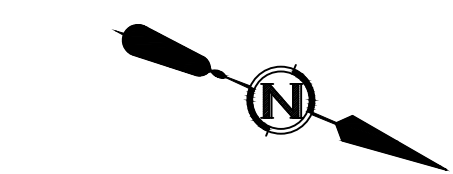
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WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 7 OF 11

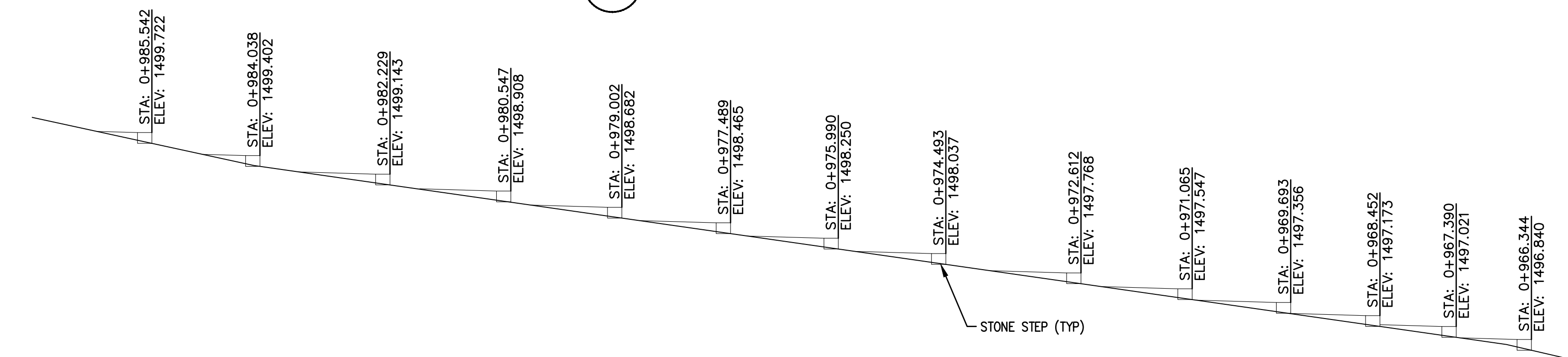
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S. YOUNG	S. YOUNG	20180117
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSCC		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSCC
Project No./No. du projet	Asset No./No. du-bien	Sheet No./No. de la feuille
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C-109		29



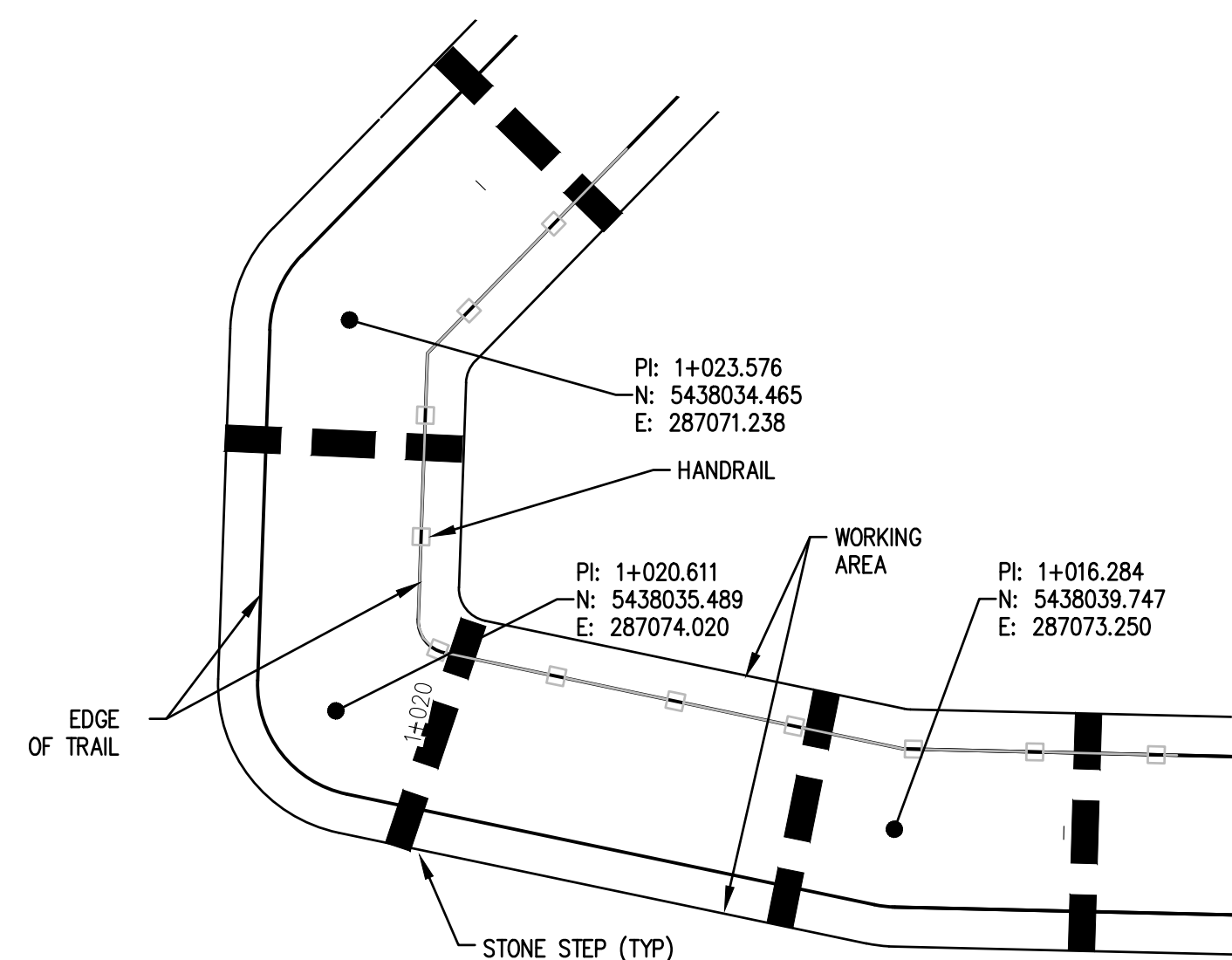
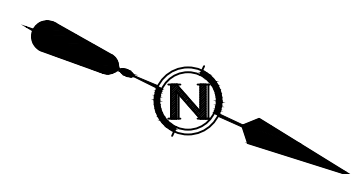
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| Drawing Reference No./No. de référence du dessin | 16 |
| C 1 1 0 | 20 |



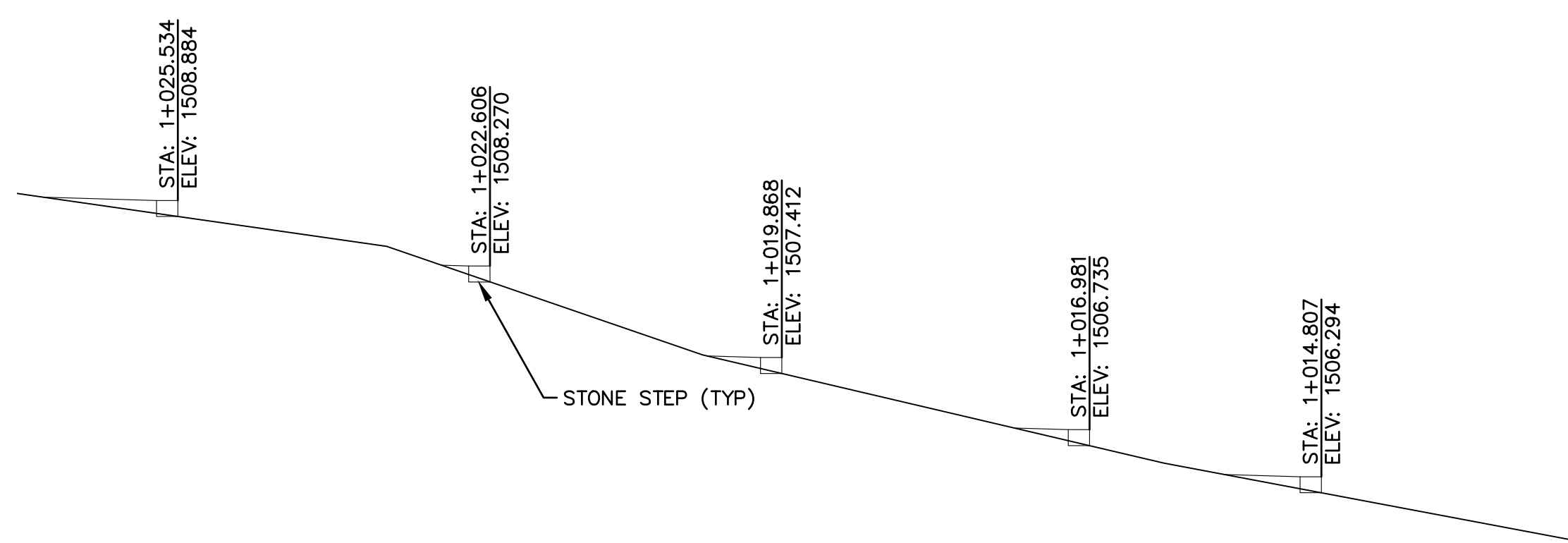
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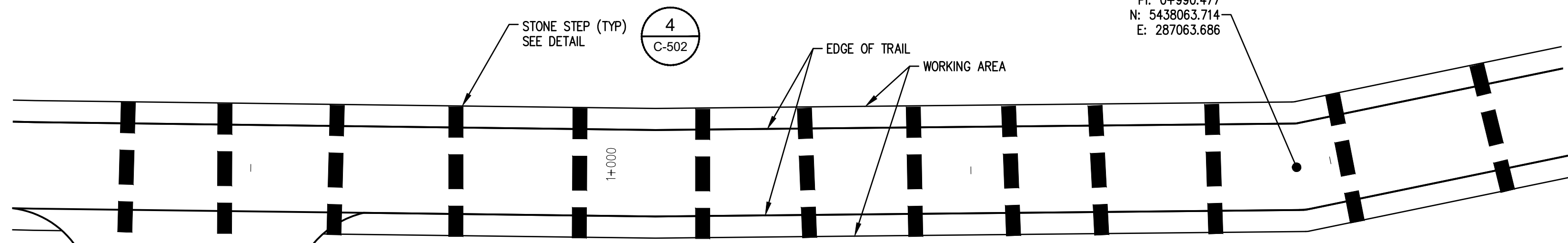
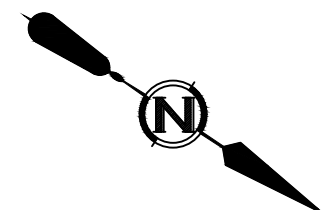
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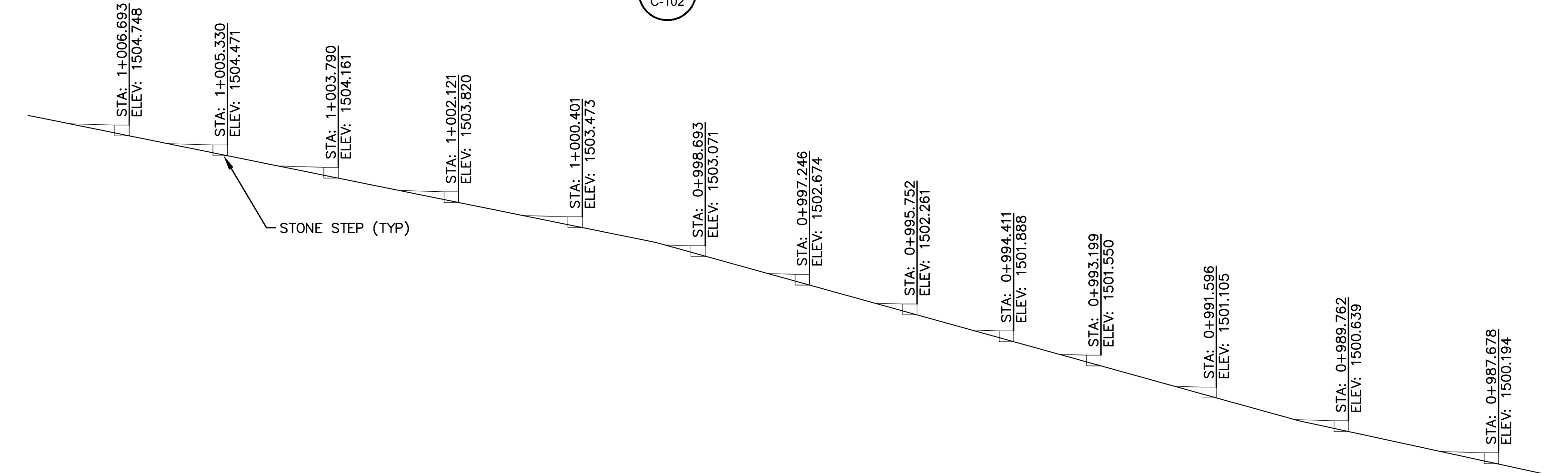
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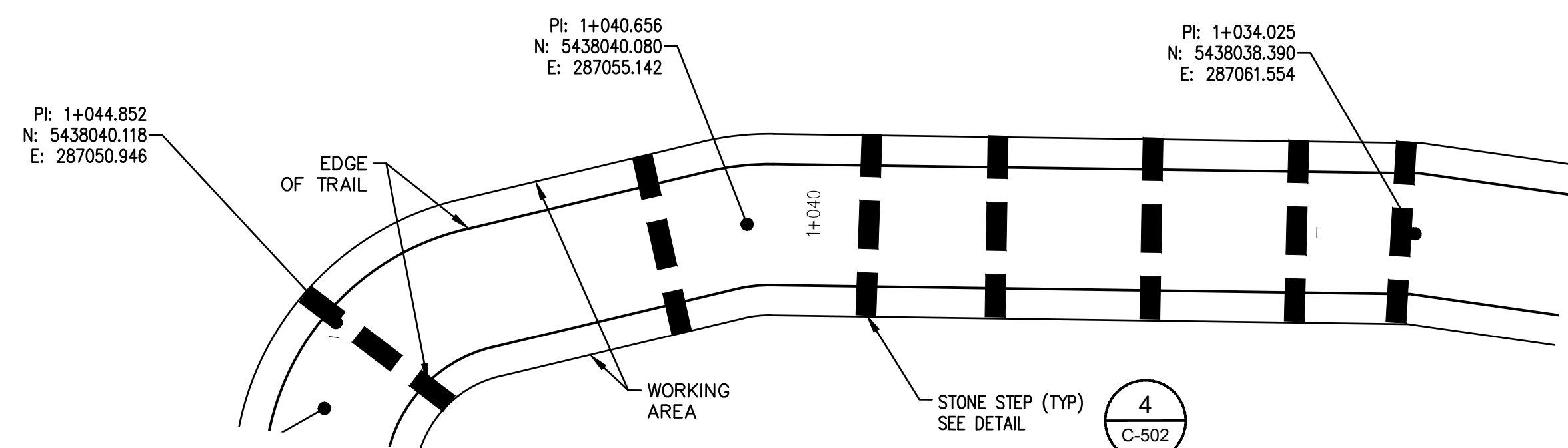
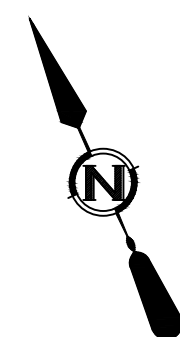
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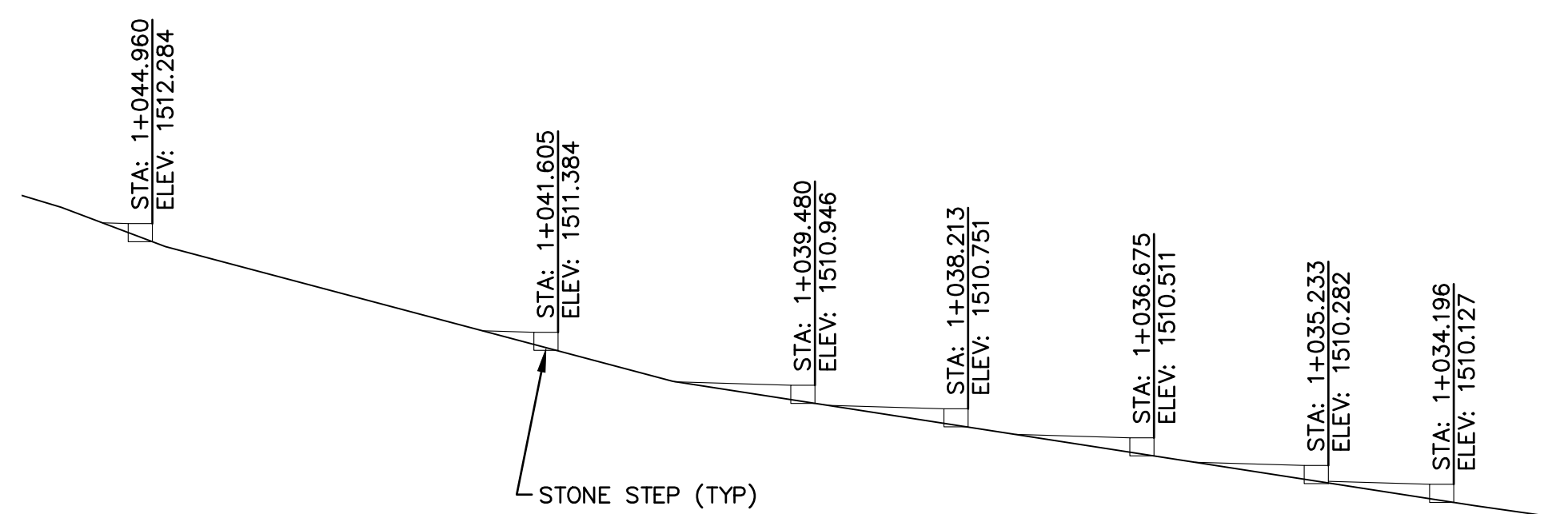
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2 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

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Revision / Revision	
A	detail number / numéro de détail
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Consultant's Name
Nom de l'expert-conseil

Associated Engineering

APEGA Permit to Practice P 3979

Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
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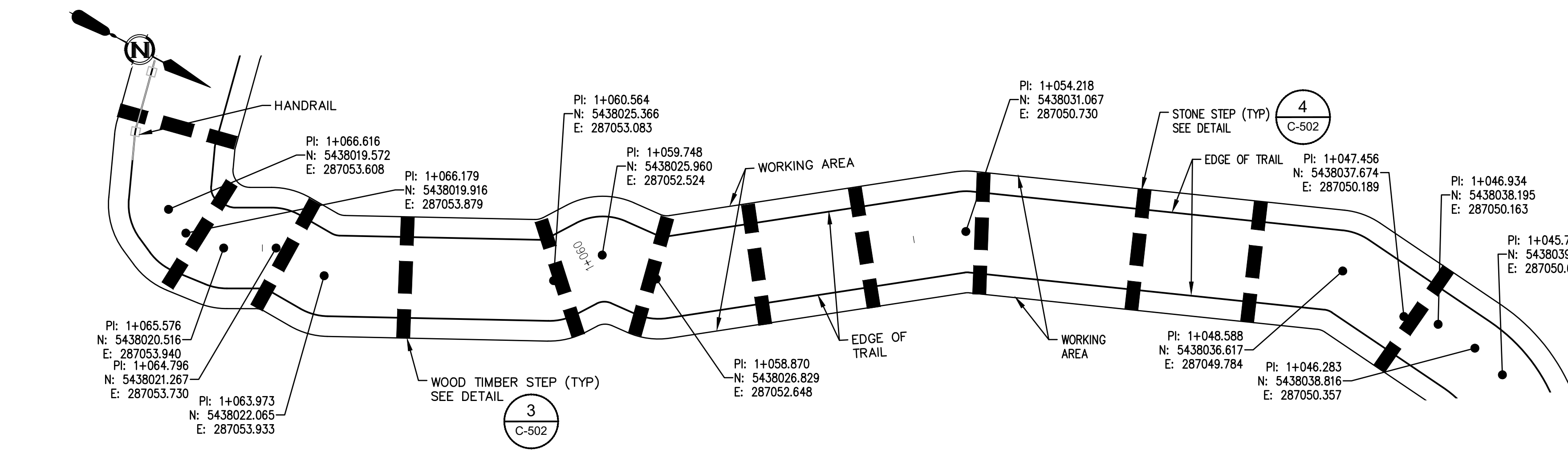
Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

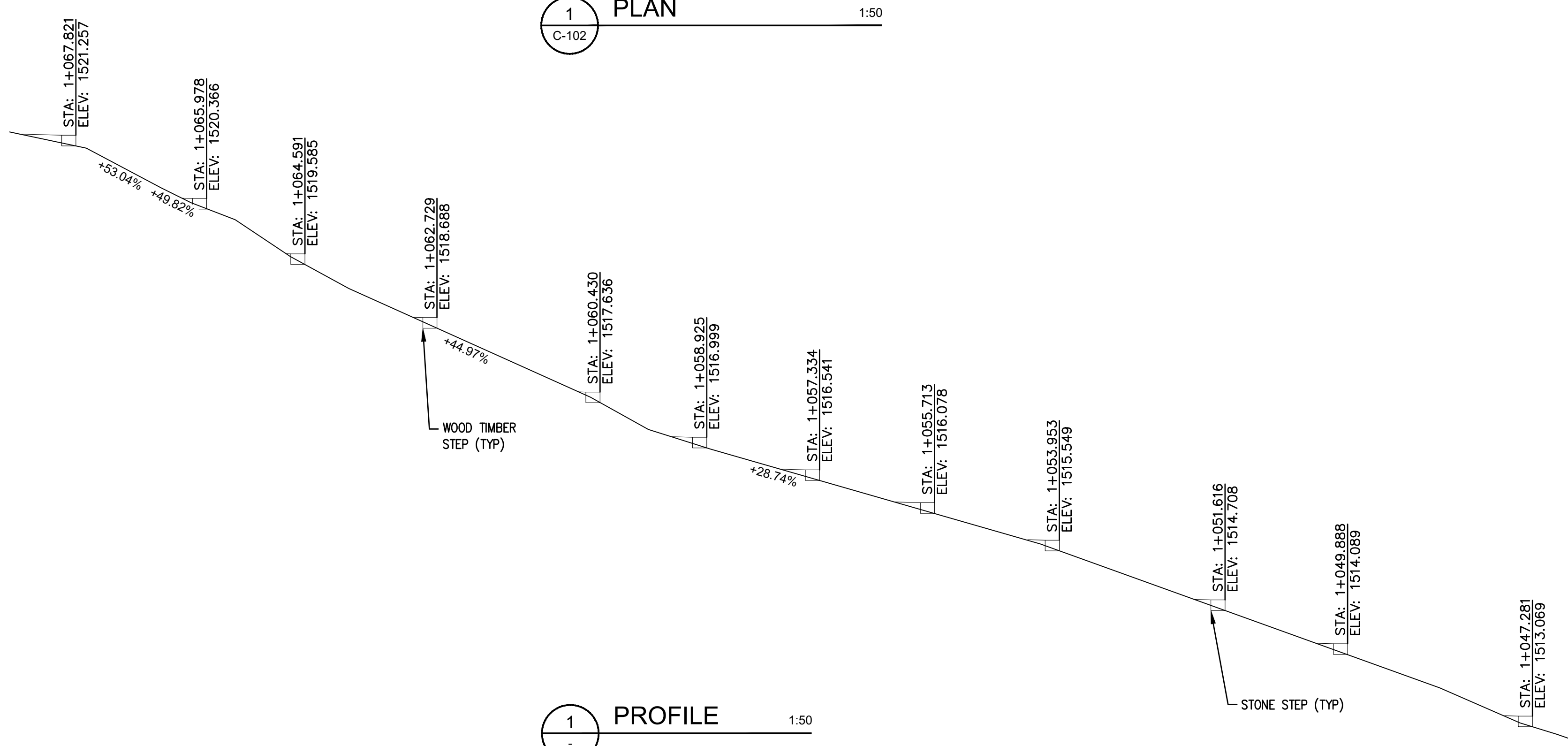
Drawing title/Titre du dessin
PLAN PROFILE BEARS HUMP 9 OF 11

Surveyed by/Arpenté par S. YOUNG	Drawn by/Dessiné par S. YOUNG	Date/Date 201806117
Designed by/Concept par A. McDONALD	Reviewed by/Revisé par AS SHOWN	Scale/Echelle AS SHOWN

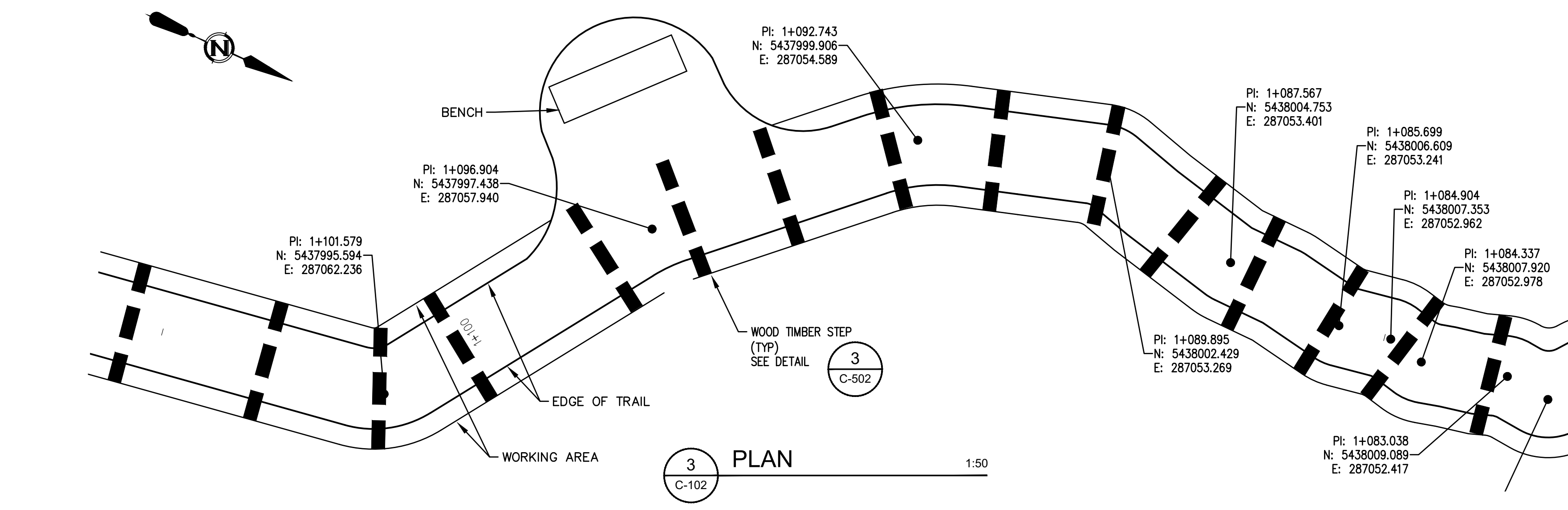
Client Acceptance/Acceptation du client		Approved by/Approuvé par	
Park Responsible Officer/Agent Responsable		PWSC Project Manager/Administrateur de Projets TPS	
Project No./No. du projet R.099828.001		Asset No./No. du-bien	
Drawing Reference No./No. de référence du dessin C-111		Sheet No./ No. de la feuille 17 29	



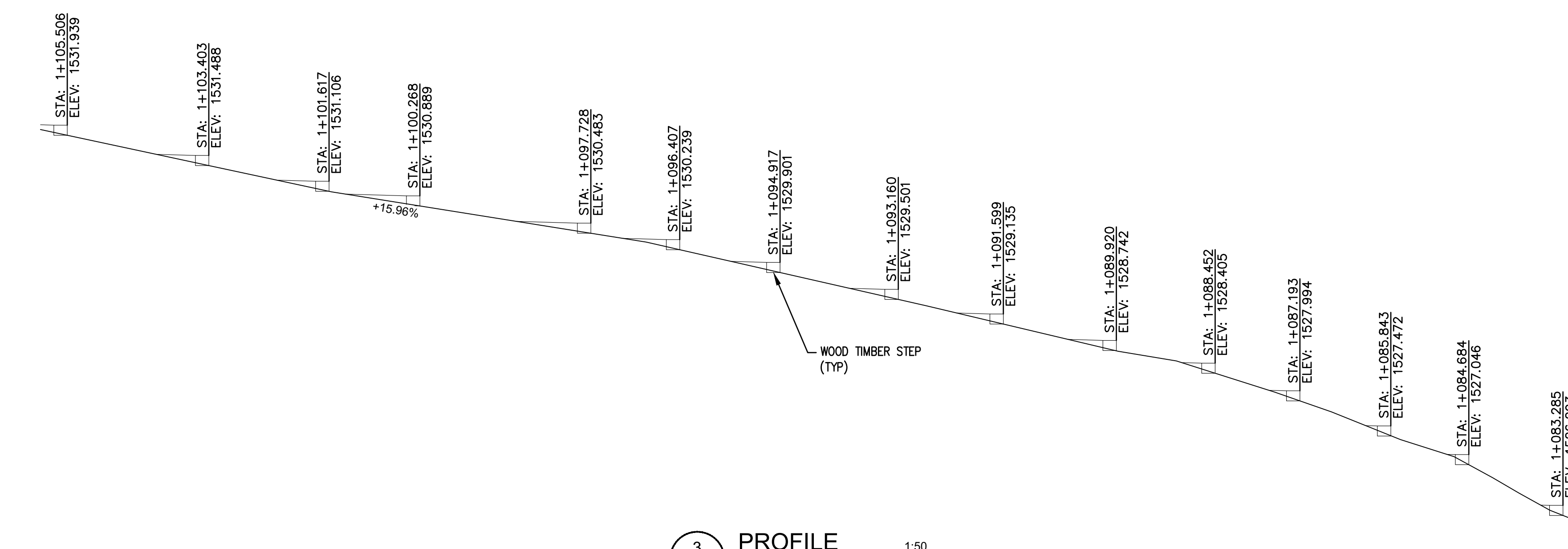
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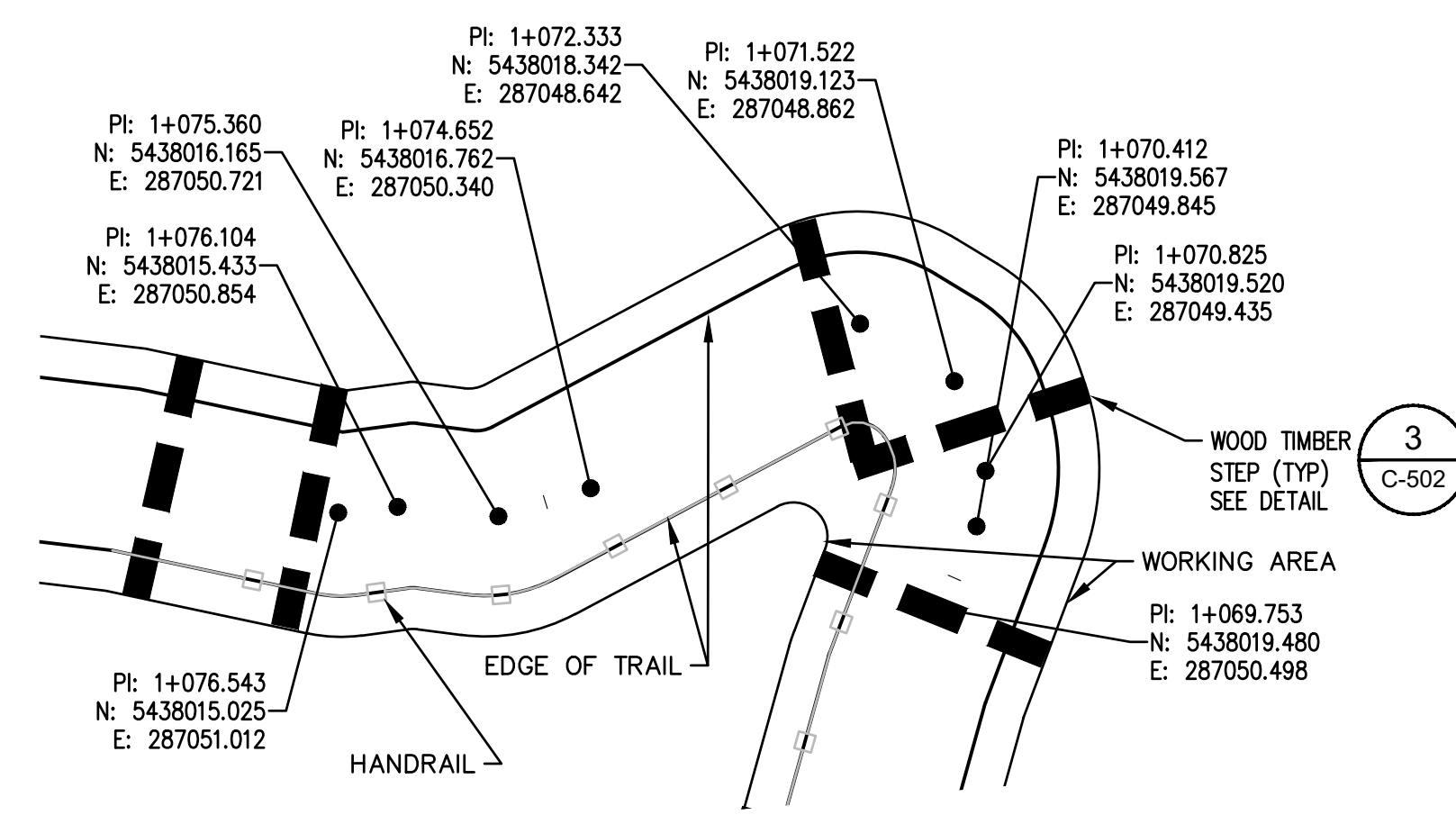
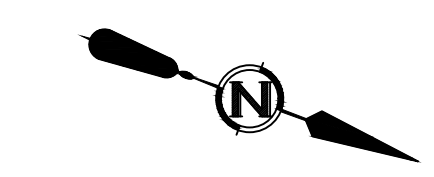
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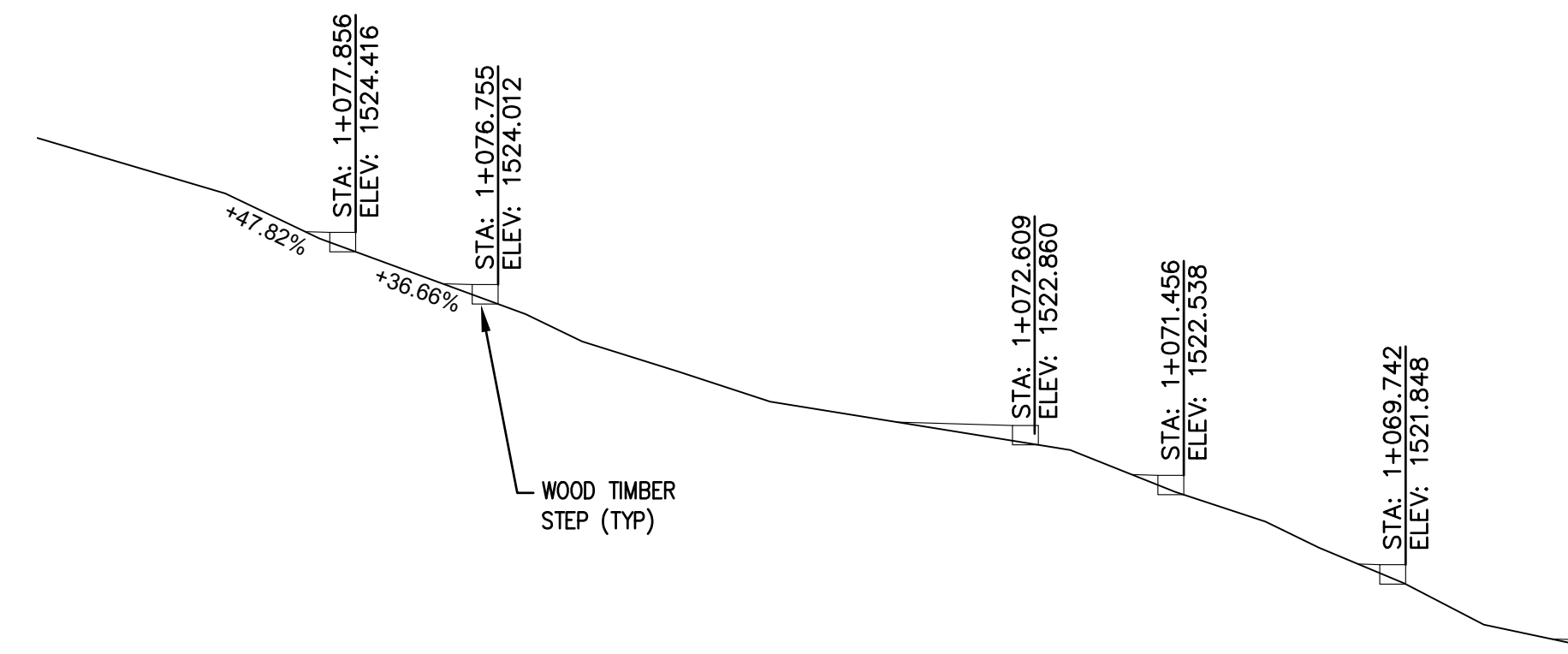
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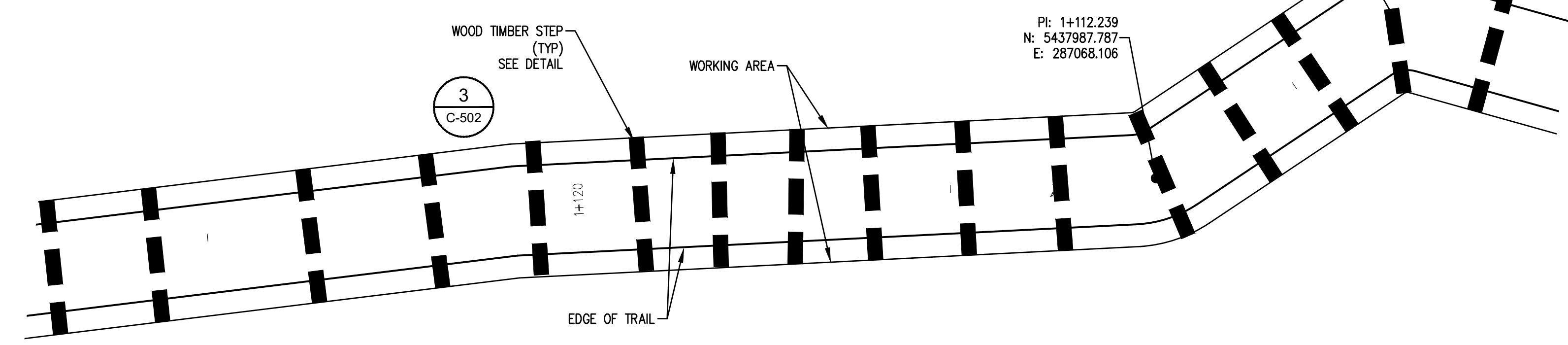
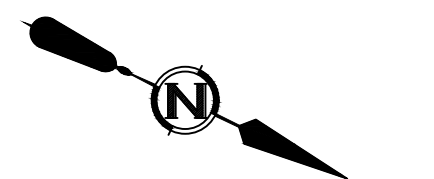
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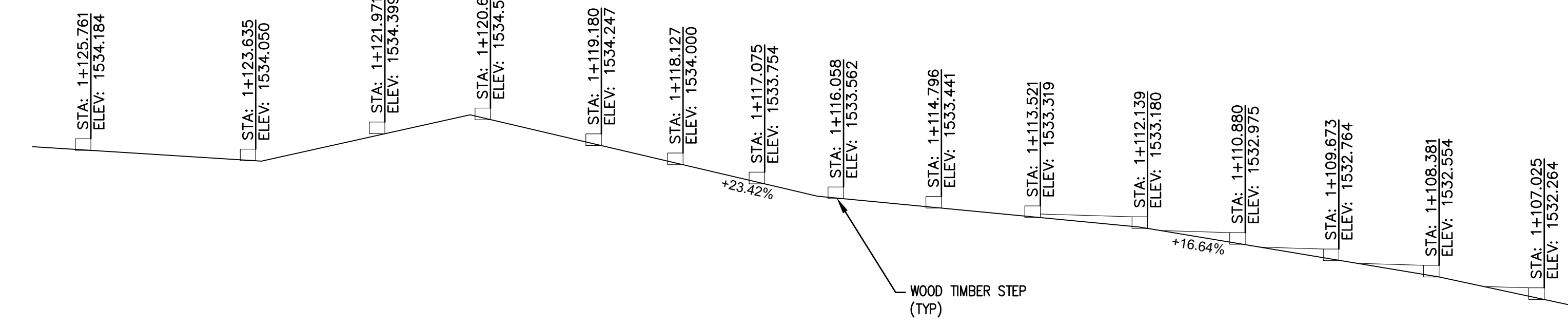
2 PLAN 1:50



2 PROFILE 1:50



4 PLAN 1:50



4 PROFILE 1:50

- NOTES:
1. CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
 2. REPLACE THE EXISTING WOOD WATERBARS WITH NEW ROCK WATERBARS.
 3. ENSURE NEW STONE STEPS ARE SOUND AND WELL CONSTRUCTED.
 4. ALL ROCKS TO BE USED SHALL BE SUPPLIED, HAULED, DELIVERED TO JOB SITE AND COMPLETELY INSTALLED BY THE CONTRACTOR.
 5. CONTRACTOR SHALL ROUGH GRADE AND PREPARE THE TRAIL ROUTE TO BE READY TO HAVE A 200 mm TO 300 mm - 400 mm LAYER OF COMPACTED BASE GRAVEL TO BE SUPPLIED AND INSTALLED. CROSS SLOPE OR CROWN TRAIL SURFACE AS REQUIRED TO CREATE A POSITIVE DRAINAGE ON THE TRAIL SURFACE.
 6. CONTRACTOR SHALL SUPPLY AND INSTALL A FINISH GRAVEL SURFACING ONTO ALL COMPACTED BASE GRAVEL AREAS. INSTALL 50 mm THICKNESS OF 9 mm GRAVEL MATERIALS.
 7. BETWEEN THE SWITCHBACKS 10,11,12 AND 13 INSTALL NEW 1.0 METRE WIDE GRAVEL STEPS.
 - 7.1. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS ALONG THESE SECTIONS OF TRAIL. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 0+838 TO 0+971 AND STA 0+880 TO STA 0+903 AND STA 0+915 TO STA 0+947 AND STA 0+955 TO STA 1+020.
 - 7.2. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METER WIDE GRAVEL STEPS FROM SWITCHBACK NUMBER 13 THROUGH TO STA 1+100. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 1+028 THROUGH TO STA 1+100.
 8. EX TRAIL WIDTH = 1.20m. NEW TRAIL WIDTH = 1.20m (MIN) - WIDTH VARIES AS PER SITE CONDITIONS.
 9. WORKING AREA = 1.80m (MIN). WHERE WIDTH VARIES, WIDTH TO BE AUTHORIZED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.
 10. GRADES SHOWN ARE EXISTING.

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Revision / Revision	
A	detail number
B	source drawing no.
C	detail on drawing no.

Consultant's Name
Nom de l'expert-consultant

Associated Engineering

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Eng. Stamp
Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team Southern Alberta Operations Branch
Le Client Entretien l'Équipe Alberta Méridionale Branche d'opérations

Canada

Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

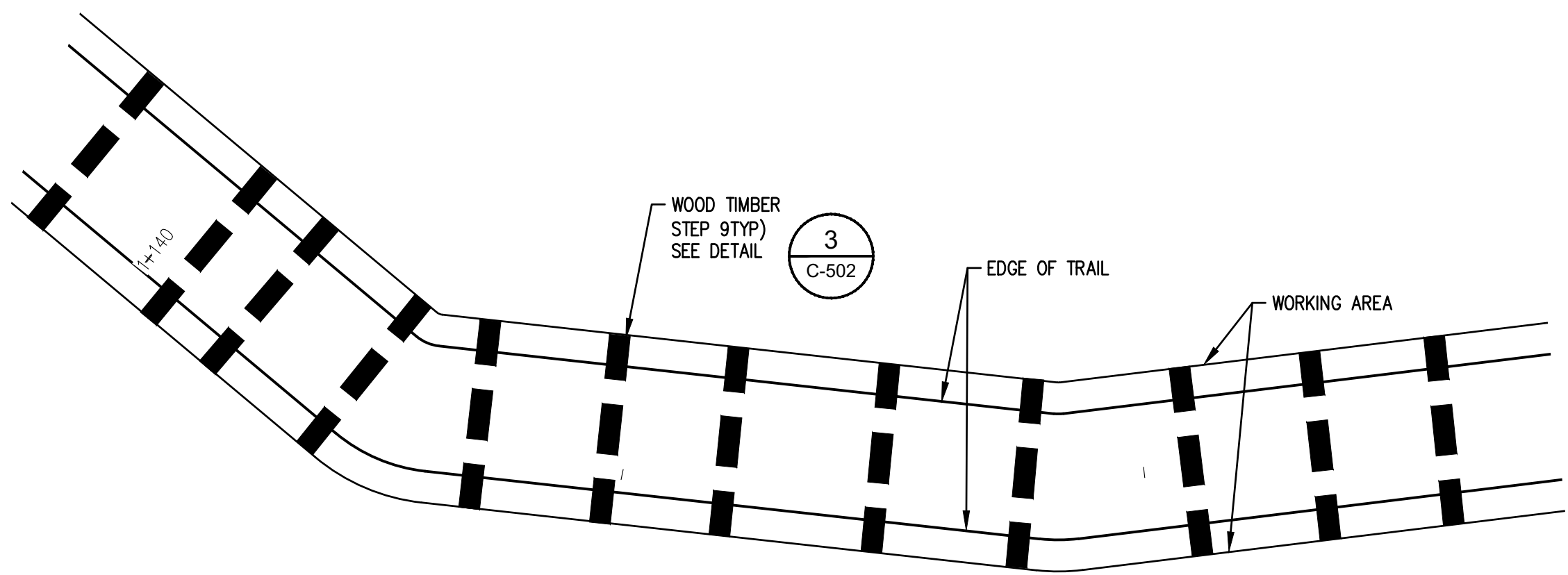
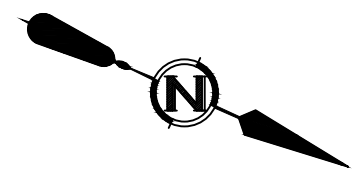
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WLNP TRAILS IMPROVEMENT

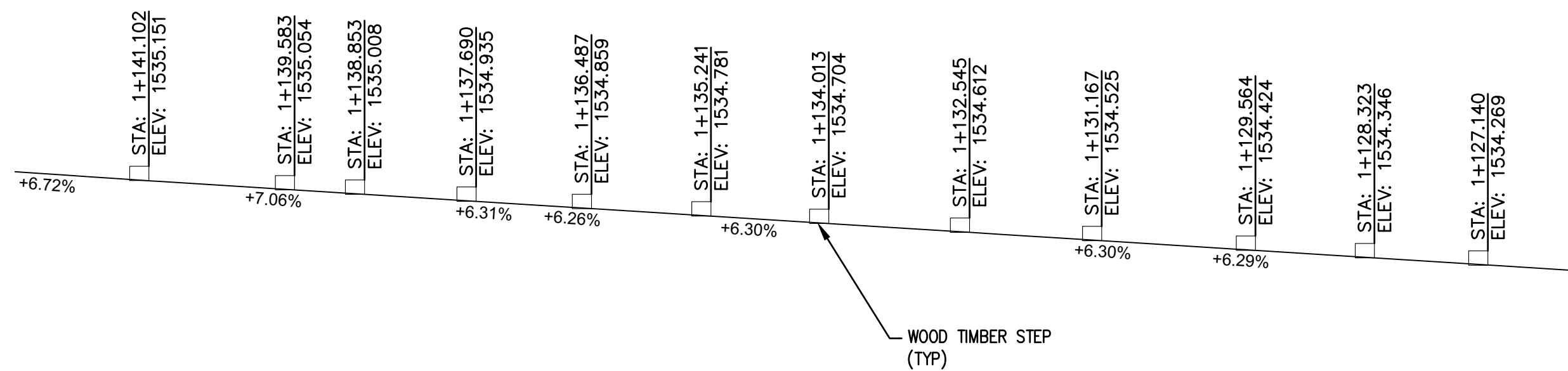
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PLAN PROFILE BEARS HUMP 10 OF 11

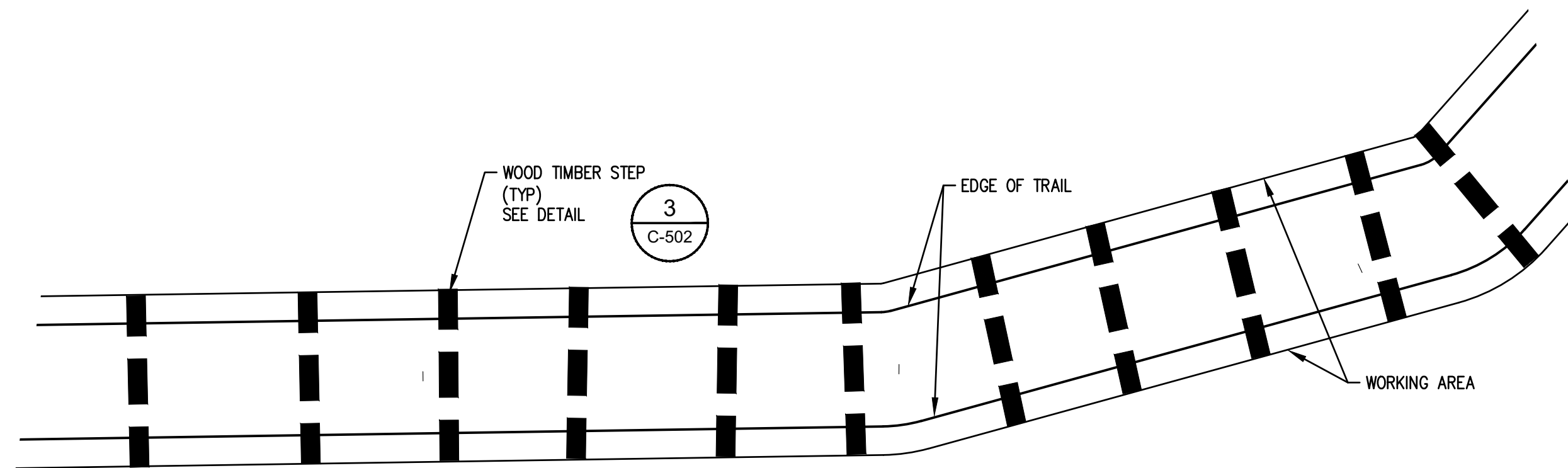
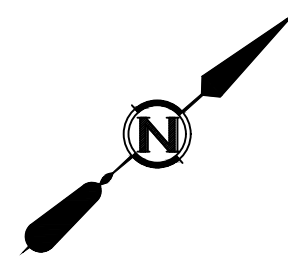
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A. McDONALD	S. YOUNG	2018OCT17
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
	AS SHOWN	
PWOSC Project Manager/Administrateur de Projets TPSCG		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
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R.099828.001		18
Drawing Reference No./No. de référence du dessin		29
C-112		



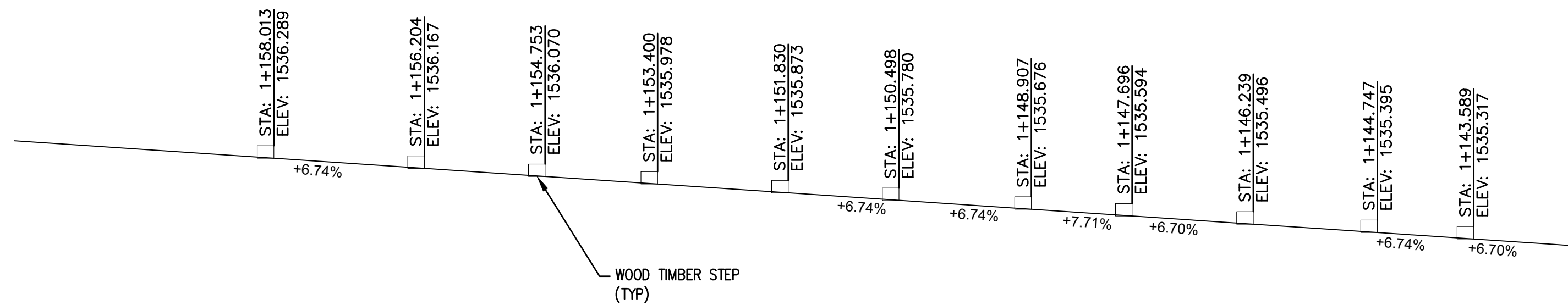
1 PLAN
C-102 1:50



1 PROFILE
1:50



2 PLAN
C-102 1:50





2 PROFILE
1:50


NOTES:

1. CONTRACTOR TO REMOVE ALL TIMBER STEPS AND CLEAN UP AREA.
2. REPLACE THE EXISTING WOOD WATERBARS WITH NEW STONE WATERBARS.
3. ENSURE NEW STONE STEPS ARE SOUND AND WELL CONSTRUCTED.
4. ALL ROCKS TO BE USED SHALL BE SUPPLIED, HAILED, DELIVERED TO JOB SITE AND COMPLETELY INSTALLED BY THE CONTRACTOR.
5. CONTRACTOR SHALL ROUGH GRADE AND PREPARE THE TRAIL ROUTE TO BE READY TO HAVE A 200 mm TO 300 mm = 400 mm LAYER OF COMPACTED BASE GRAVEL TO BE SUPPLIED AND INSTALLED. CROSS SLOPE OR CROWN TRAIL SURFACE AS REQUIRED TO CREATE A POSITIVE DRAINAGE ON THE TRAIL SURFACE.
6. CONTRACTOR SHALL SUPPLY AND INSTALL A FINISH GRAVEL SURFACING ONTO ALL COMPACTED BASE GRAVEL AREAS. INSTALL 50 mm THICKNESS OF 9 mm GRAVEL MATERIALS.
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- 7.1. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS ALONG THESE SECTIONS OF TRAIL. LOCATE NEW WATERBARS AND STEPS BETWEEN STA 0+838 TO 0+971 AND STA 0+880 TO STA 0+903 AND STA 0+915 TO STA 0+947 AND STA 0+955 TO STA 1+020.
- 7.2. CONTRACTOR SHALL INSTALL NEW ROCK WATERBARS WITH 1.0 METRE WIDE GRAVEL STEPS FROM SWITCHBACK NUMBER 13 THROUGH TO STA 1+100 LOCATE NEW WATERBARS AND STEPS BETWEEN STA 1+028 THROUGH TO STA 1+100.
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9. WORKING AREA = 1.80m (MIN). WHERE WIDTH VARIES, WIDTH TO BE AUTHORIZED BY DEPARTMENTAL REPRESENTATIVE PRIOR TO CONSTRUCTION.


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Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
 Associated Engineering APEGA Permit to Practice P 3979	

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Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations

Canada

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Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
**WLNP TRAILS
IMPROVEMENT**

Drawing title/Titre du dessin
**PLAN PROFILE
BEARS HUMP 11 OF 11**

Surveyed by/Arpenté par S. YOUNG	Drawn by/Dessiné par S. YOUNG	Date/Date 201806117
Designed by/Concept par A. McDONALD	Reviewed by/Revisé par AS SHOWN	Scale/Echelle AS SHOWN

PWGSC Project Manager/Administrateur de Projets TPSGC

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Park Responsible Officer/Agent Responsable PWGSC Project Manager/Administrateur de Projets TPSGC

Project No./No. du projet R.099828.001	Asset No./No. du-bien	Sheet No./ No. de la feuille 19
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Drawing Reference No./No. de référence du dessin
C-113




1 PLAN 1:250


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C detail on drawing no. détail sur dessin no.	C

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Nom de l'expert-conseil

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Sceau de l'ingénieur

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Travaux publics et
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Canada

Client Services Team
Southern Alberta
Operations Branch

Le Client Entretien l'Équipe
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Branche d'Opérations

Client/client

Parks Canada
Agence
Canada

L'Agence Parcs
Canada

Western and
Northern Region

Ouest et Nord
du Canada

Project title/Titre du projet

WLNP TRAILS
IMPROVEMENT

Drawing title/Titre du dessin

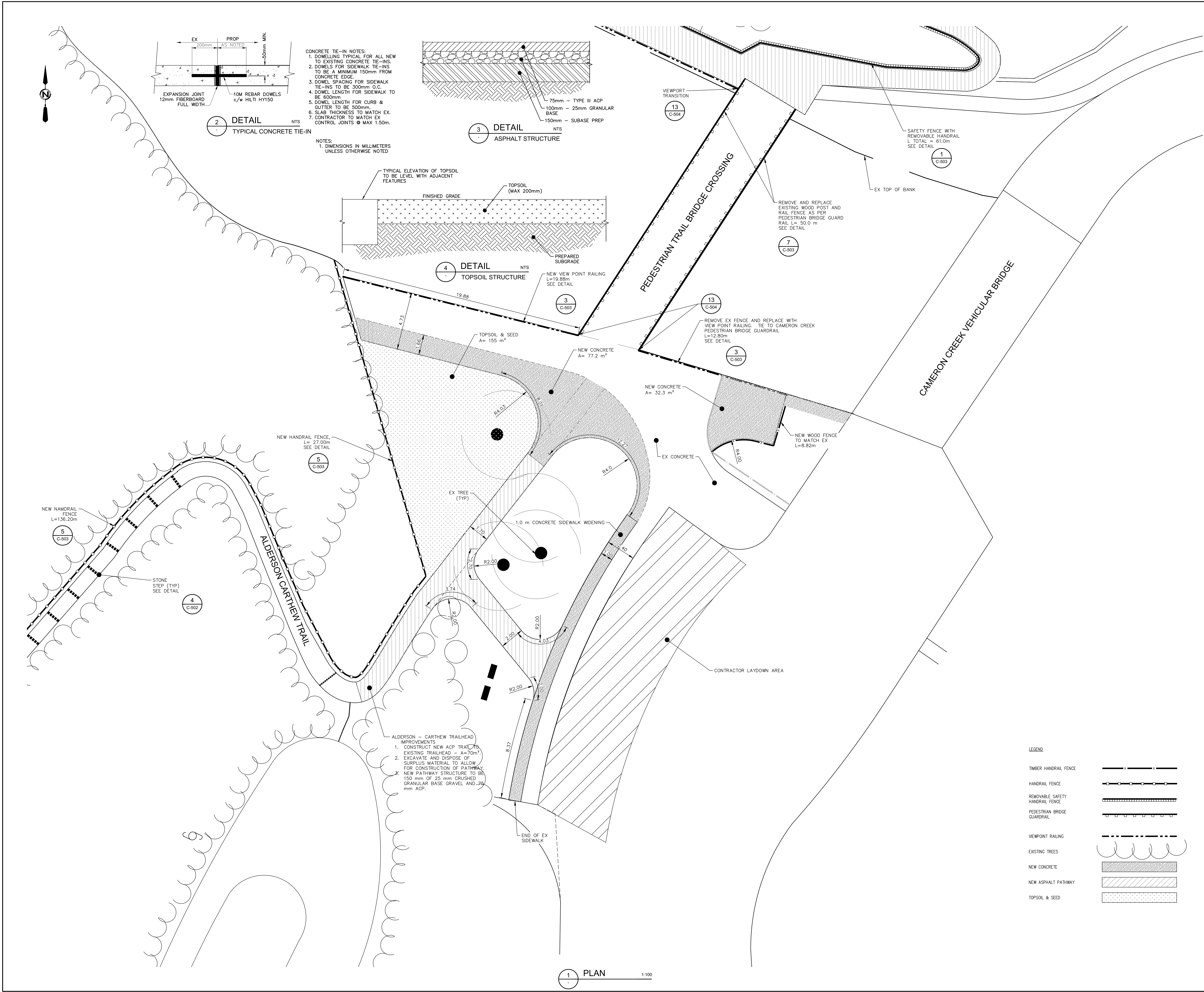
PLAN – CAMERON FALLS
OVERALL

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD		AS SHOWN

PWGSC Project Manager/Administrateur de Projets TPSGC

Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWGSC Project Manager/Administrateur de Projets TPSGC

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R.099828.001		20
Drawing Reference No./No. de référence du dessin		29
C-114		




- LOWER CAMERON FALLS SITE IMPROVEMENTS
1. REMOVE AND REPLACE EXISTING FENCE AS PER CAMERON FALLS METAL SAFETY RAIL FENCE. SEE DETAIL 5/C-505
 2. EXTEND EXISTING VIEW PROMENADE WITH ASPHALT AS SHOWN
 3. INSTALL NEW SAFETY RAIL FENCE FROM THE EAST END OF THE EXISTING FENCE TO THE CAMERON CREEK VEHICLE BRIDGE RAILING LOCATION
 4. REMOVE EXISTING LOW WOODEN POST AND RAIL FENCE FROM EXISTING EAST END OF THE VIEWING PROMENADE TO THE CAMERON CREEK VEHICLE BRIDGE RAILING LOCATION. CONSTRUCT NEW LOW WOOD FENCE TO MATCH EXISTING. REMOVE AND DISPOSE OF PORTION AS INDICATED
 5. WIDEN EXISTING CONCRETE SIDEWALK. EXCAVATE TO 50 mm BELOW EXISTING CONCRETE SIDEWALK STRUCTURE. PLACE 50 mm OF 25 mm CRUSHED GRANULAR BASE GRAVEL. EMBED 10M x 750 mm REBAR DOWELS 150 mm INTO EXISTING SIDEWALK 1.0 m ON CENTRE. CROSSFALL OF CONCRETE WIDENING TO MATCH EXISTING. CONCRETE WIDENING SURFACE TO MATCH EXISTING
 6. PROPOSED ASPHALT AREA STRUCTURES TO BE 150 mm OF 25 mm CRUSHED GRAVEL AND 75 mm ASPHALT. SURFACE AREAS TO EXTEND SLOPE OF EXISTING ADJACENT CONCRETE.
 7. ALL DISTURBED AREAS TO BE ADDRESSED WITH IMPORTED TOPSOIL AND SEED GRASS TO MATCH EXISTING
 8. NEW CONCRETE - CONSTRUCTION JOINT SPACING TO BE MAX 3.00m O/C GRID. EXACT SPACING TO BE DETERMINED IN THE FIELD BY THE DEPARTMENTAL REPRESENTATIVE.

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Nom de l'expert-conseil

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Sceau de l'ingénieur

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

Client Services Team
Southern Alberta Operations Branch

Le Client Entretient l'Équipe
Alberta Méridionale
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Canada

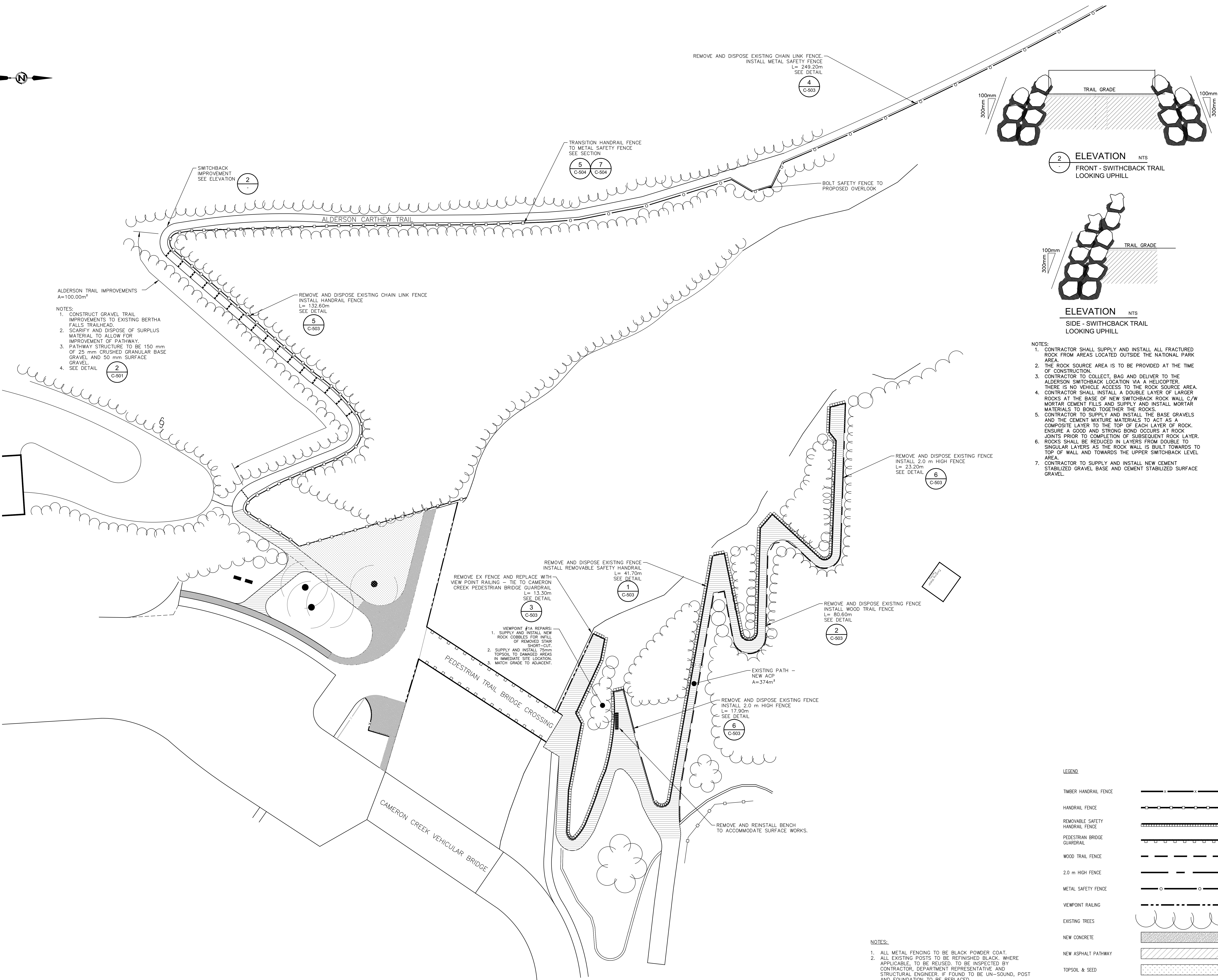
Client/client
Parks Canada Agency
L'Agence Parcs Canada

Western and Northern Region
Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

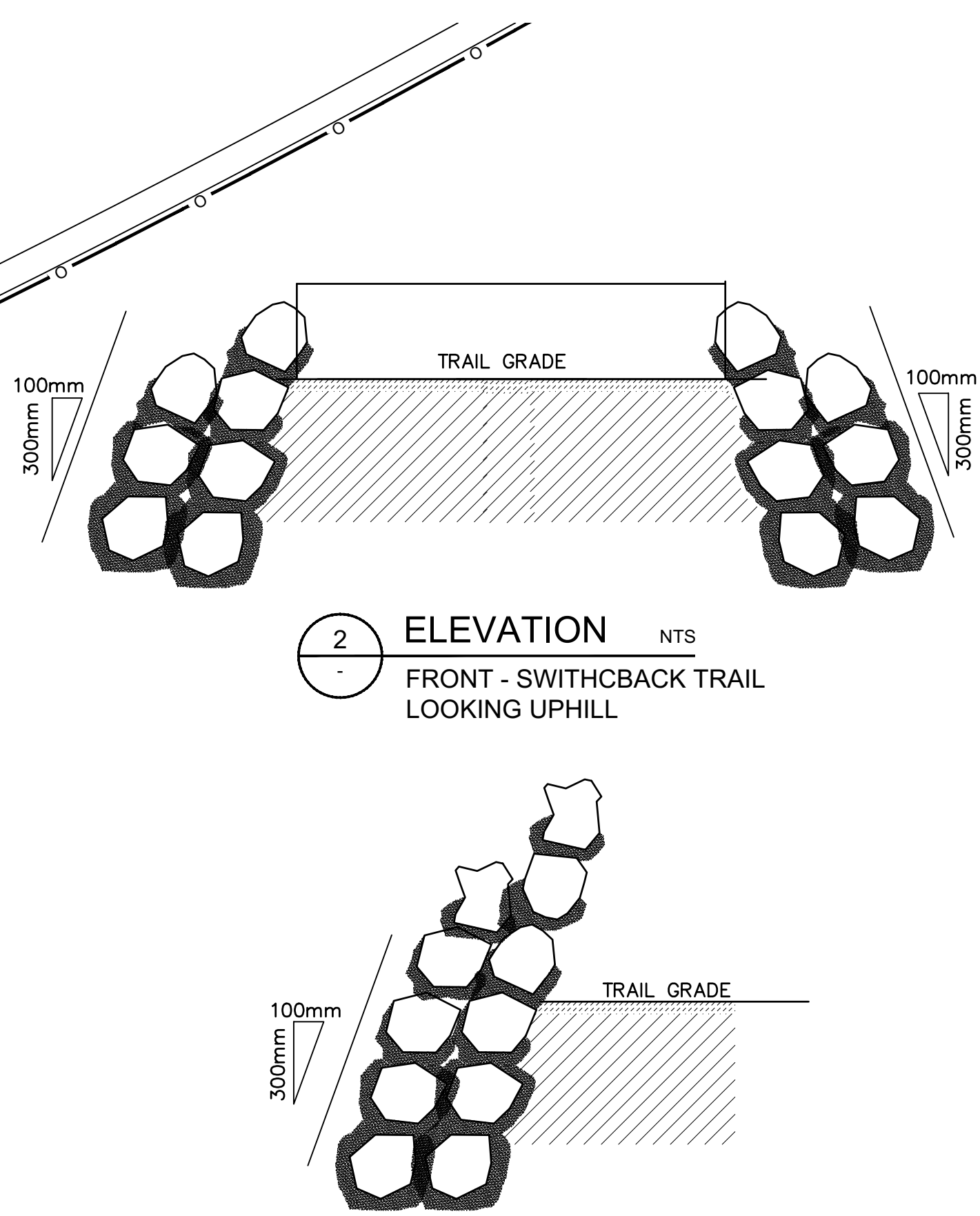
Drawing title/Titre du dessin
PLAN - CAMERON FALLS LOWER VIEWING AREA

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD		AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSGC		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSGC
Project No./No. du projet	Asset No./No. du bien	Sheet No./No. de la feuille
R.099828.001		21
Drawing Reference No./No. de référence du dessin		
C-115		29



1 PLAN 1:100

- NOTES:
1. ALL METAL FENCING TO BE BLACK POWDER COAT.
 2. ALL EXISTING POSTS TO BE REFINISHED BLACK, WHERE APPLICABLE, TO BE REUSED. TO BE INSPECTED BY CONTRACTOR, DEPARTMENT REPRESENTATIVE AND STRUCTURAL ENGINEER. IF FOUND TO BE UN-SOUND, POST AND FOUNDATION TO BE REPLACED.



- NOTES:
1. CONTRACTOR SHALL SUPPLY AND INSTALL ALL FRACTURED ROCK FROM AREAS LOCATED OUTSIDE THE NATIONAL PARK AREA.
 2. THE ROCK SOURCE AREA IS TO BE PROVIDED AT THE TIME OF CONSTRUCTION.
 3. CONTRACTOR TO COLLECT, BAG AND DELIVER TO THE ALDERSON SWITCHBACK LOCATION VIA A HELICOPTER. THERE IS NO VEHICLE ACCESS TO THE ROCK SOURCE AREA.
 4. CONTRACTOR SHALL INSTALL A DOUBLE LAYER OF LARGER ROCKS AT THE BASE OF NEW SWITCHBACK ROCK WALL C/W MORTAR CEMENT FILLS AND SUPPLY AND INSTALL MORTAR MATERIALS TO BOND TOGETHER THE ROCKS.
 5. CONTRACTOR TO SUPPLY AND INSTALL THE BASE GRAVELS AND THE CEMENT MIXTURE MATERIALS TO ACT AS A COMPOSITE LAYER TO THE TOP OF EACH LAYER OF ROCK. ENSURE A GOOD AND STRONG BOND OCCURS AT ROCK JOINTS PRIOR TO COMPLETION OF SUBSEQUENT ROCK LAYER.
 6. ROCKS SHALL BE REDUCED IN LAYERS FROM DOUBLE TO SINGULAR LAYERS AS THE ROCK WALL IS BUILT TOWARDS TO TOP OF WALL AND TOWARDS THE UPPER SWITCHBACK LEVEL AREA.
 7. CONTRACTOR TO SUPPLY AND INSTALL NEW CEMENT STABILIZED GRAVEL BASE AND CEMENT STABILIZED SURFACE GRAVEL.

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A	detail number numéro de détail	A
B	source drawing no. de dessin no.	B/C
C	detail on drawing no. détail sur dessin no.	

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering	MANAGED COMPANIES
APEGA Permit to Practice P 3979	

Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
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Canada

Client/client	Parks Canada Agency	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin

PLAN – CAMERON FALLS TRAIL IMPROVEMENTS

Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
	S. YOUNG	
Designed by/Concept par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	

PWOSC Project Manager/Administrateur de Projets TPSCC

Client Acceptance/Acceptation du client

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Park Responsible Officer/Agent Responsable

PWOSC Project Manager/Administrateur de Projets TPSCC

Project No./No. du projet

Asset No./No. du bien

Sheet No./No. de la feuille

R.099828.001

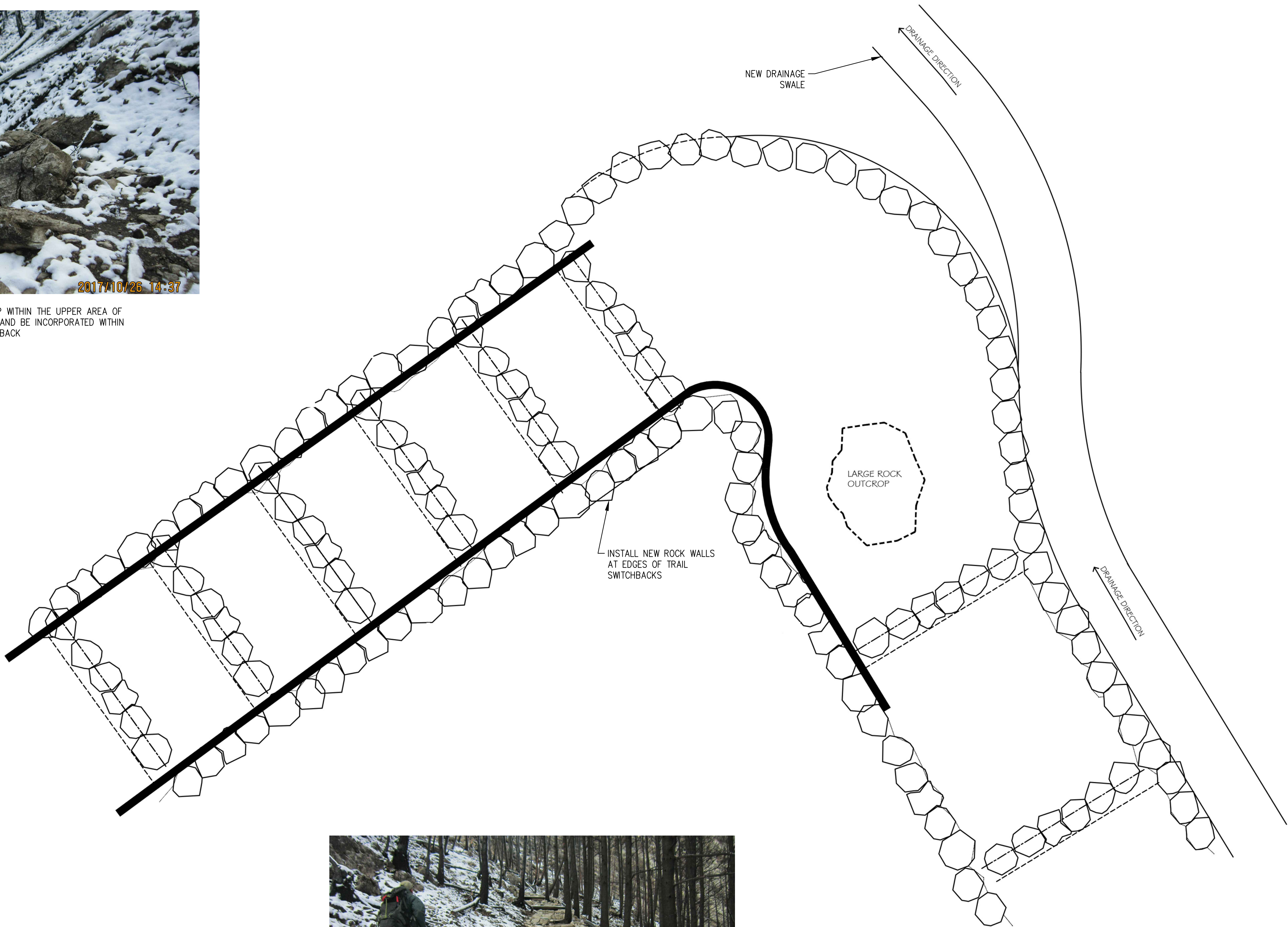
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C-116

29



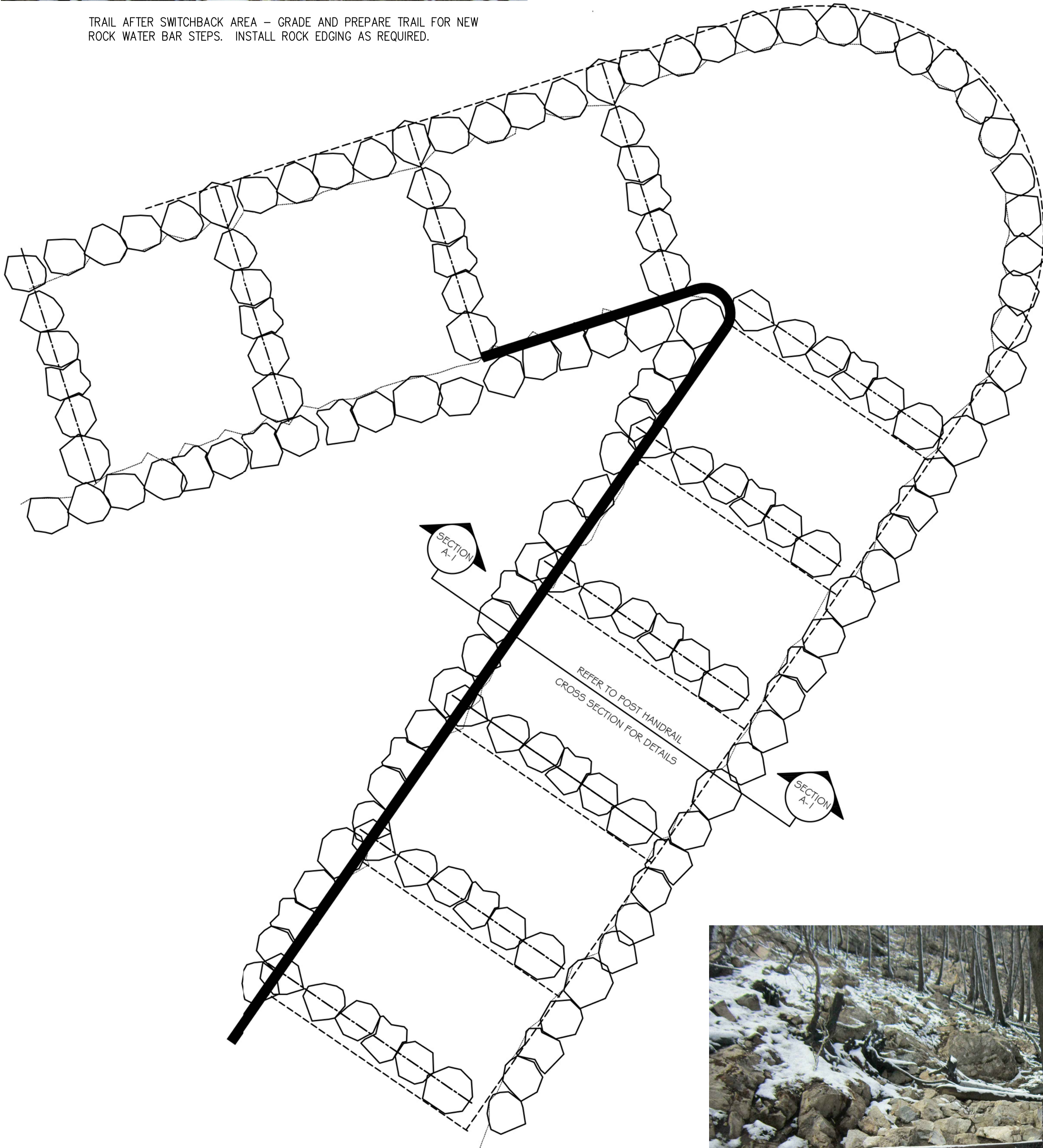
SWITCHBACK WITH A LARGE ROCK OUTCROP WITHIN THE UPPER AREA OF SWITCHBACK. ROCK SHALL REMAIN AS IS AND BE INCORPORATED WITHIN THE NEW LEVEL SURFACE AREA OF SWITCHBACK



TRAIL LOOKING UPHILL AT THE SITE OF THE EXISTING LARGE ROCK IN TRAIL. INSTALL A NEW DRAINAGE SWALE BESIDE THE ROCK OUTCROP AND IMPROVE TRAIL



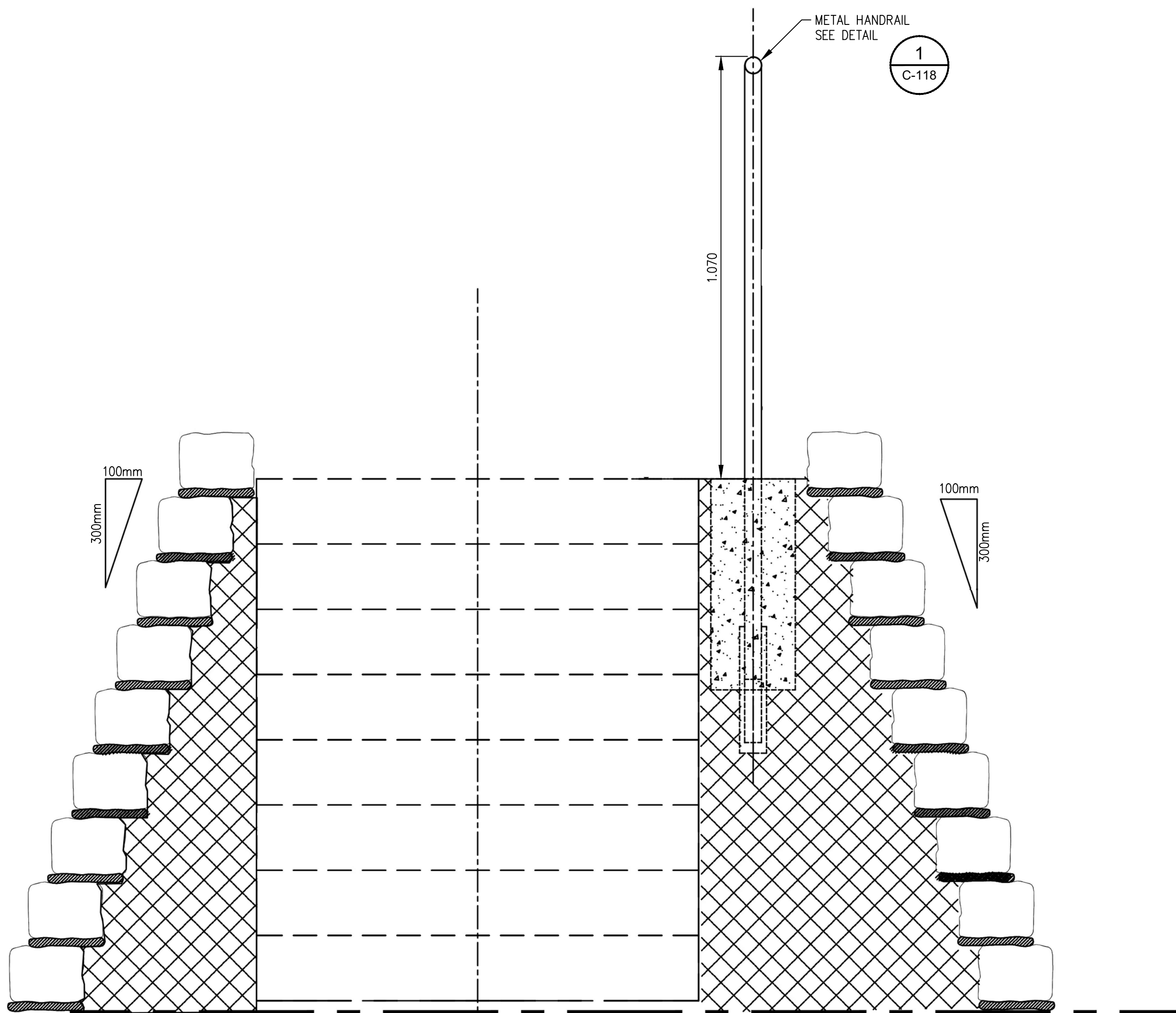
TRAIL AFTER SWITCHBACK AREA - GRADE AND PREPARE TRAIL FOR NEW ROCK WATER BAR STEPS. INSTALL ROCK EDGING AS REQUIRED.



PHOTOGRAPH OF TRAIL ROUTE - "FRACTURED CORNER"

1. REMOVE AND DISPOSE ALL BURNT TREES, ROOT BALL AREAS, AND LOOSE ROCKS FROM TRAIL AND PREPARE SUB BASE.
2. SUPPLY AND INSTALL ALL SUB AND SURFACE GRAVEL MATERIALS. GRAVEL MATERIALS SHALL HAVE AN INFILL OF 5% PORTLAND CEMENT MATERIAL.
3. INSTALL BASE GRAVEL FILLS AND INSTALL THE NEW METAL POST AND HANDRAIL.
4. INSTALL NEW ROCK EDGING WALLS WITH LOCAL ROCK AND SUPPLY AND INSTALL THICK MORTAR MATERIALS TO FIRMLY FASTEN ROCKS TO BEDROCK AREAS AND TO FASTEN THE ROCKS WITHIN THE ROCK WALL STRUCTURE.
- 4.1. BACKFILL LAYERS OF ROCK WALL WITH BASE MATERIALS UPON COMPLETION OF EACH LAYER OF ROCK WALL TO ACHIEVE STABILITY.
- 4.2. SUPPLY AND INSTALL NEW ROCK COBBLES AS REQUIRED TO FULLY BUILD A NEW EDGE RETENTION WALL FOR ALL GRAVELS AND THE CUT STONE STEPS.
5. INSTALL REQUIRED STONE STEPS IN ORDER TO CREATE A UNIFORM STEPPED AREA WITHIN THE EXISTING ROCK OUTCROP/SWITCHBACK AREA.
- 5.1. SUPPLY AND INSTALL NEW CUT STONE STEPS WITHIN THE SWITCHBACK AREAS. INSTALL THE CUT FACE OF STONE ONTO THE LOWER EDGE OF NEW ROCK STEP. INSTALL CUT STONE STEPS ONTO COMPACTED BASE GRAVEL MATERIALS. ENSURE ALL CUT STONE STEPS ARE LEVEL AND PLUMB. UPON COMPLETION, STONE STEPS AND WALL SHALL BE A COMPLETED STAIRWAY UNIT.

- NOTES:
1. CONTRACTOR TO SUPPLY AND INSTALL ALL IMPORTED CUT ROCK SLABS TO THE SWITCHBACK STEP AREAS.
 2. CONTRACTOR TO SUPPLY AND INSTALL ALL ROCK COBBLE STONES TO BE USED FOR THE COMPLETE INSTALLATION OF ALL NEW STONES AND RELATED INSTALLATION WORK TO FULLY COMPLETE THE NEW STONE WALLS AT THE ENDS OF THE NEW CUT STONE STEP SWITCHBACK AREAS.
 3. THE CONTRACTOR SHALL IDENTIFY THE ROCK SOURCE AT THE TIME OF CONSTRUCTION START UP. DEPARTMENTAL REPRESENTATIVE SHALL INSPECT AND APPROVE THE ROCK MATERIALS. THE CONTRACTOR SHALL DELIVER TO THE TRAILHEAD PARKING LOT AREA AND THEN WILL USE A HELICOPTER TO FLY IN THE CONTAINED BAGS OF ROCK MATERIALS TO BE USED FOR THE CONSTRUCTION OF THE TRAIL WORKS. CONTRACTOR SHALL USE BAGS WHEN DELIVERING TO THE EXACT LOCATION ALONG THE TRAIL ROUTE. PROPER FLAG PERSONS ARE REQUIRED FOR TRAFFIC AND FOR PERSONAL SAFETY OF WORKERS AND VISITORS.
 4. CONTRACTOR SHALL INSTALL A STRONG AND FIRM BASE STONE LAYER AT THE BASE OF NEW SWITCHBACK ROCK WALLS C/W MORTAR CEMENT FILL AND SUPPLY AND INSTALL MORTAR MATERIALS TO BOND TOGETHER THE ROCKS. CONTRACTOR TO SUPPLY AND INSTALL THE BASE GRAVELS AND THE CEMENT MIXTURE MATERIALS TO ACT AS A COMPOSITE LAYER TO THE TOP OF EACH LAYER OF ROCK. ENSURE A GOOD AND STRONG BOND OCCURS AT ROCK JOINTS PRIOR TO COMPLETION OF SUBSEQUENT ROCK LAYERS.
 5. ROCKS SHALL BE REDUCED TO A SMALLER SIZE OF ROCK AS THE ROCK WALL IS BUILT TOWARDS THE TOP OF WALL AND TOWARDS THE UPPER SWITCHBACK LEVEL AREA. ROCK SIZE TO RANGE FROM 150mm TO 200mm IN AVERAGE ROCK WIDTH AND HEIGHT AND TO HAVE A LENGTH OF 250mm TO 400mm AVERAGE LENGTH OF ROCK COBBLE STONES.
 6. ALL LANDSCAPE DETAILS REQUIRE ON SITE REVIEW WITH DEPARTMENTAL REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK.




DETAIL NTS
ROCKWALL AND HANDRAIL


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Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering BEST MANAGED COMPANIES APEGA Permit to Practice P 3979	

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Project title/Titre du projet
**WLNP TRAILS
IMPROVEMENT**

Drawing title/Titre du dessin
**DETAILS – TYPICAL
SWITCHBACK 1 OF 2**

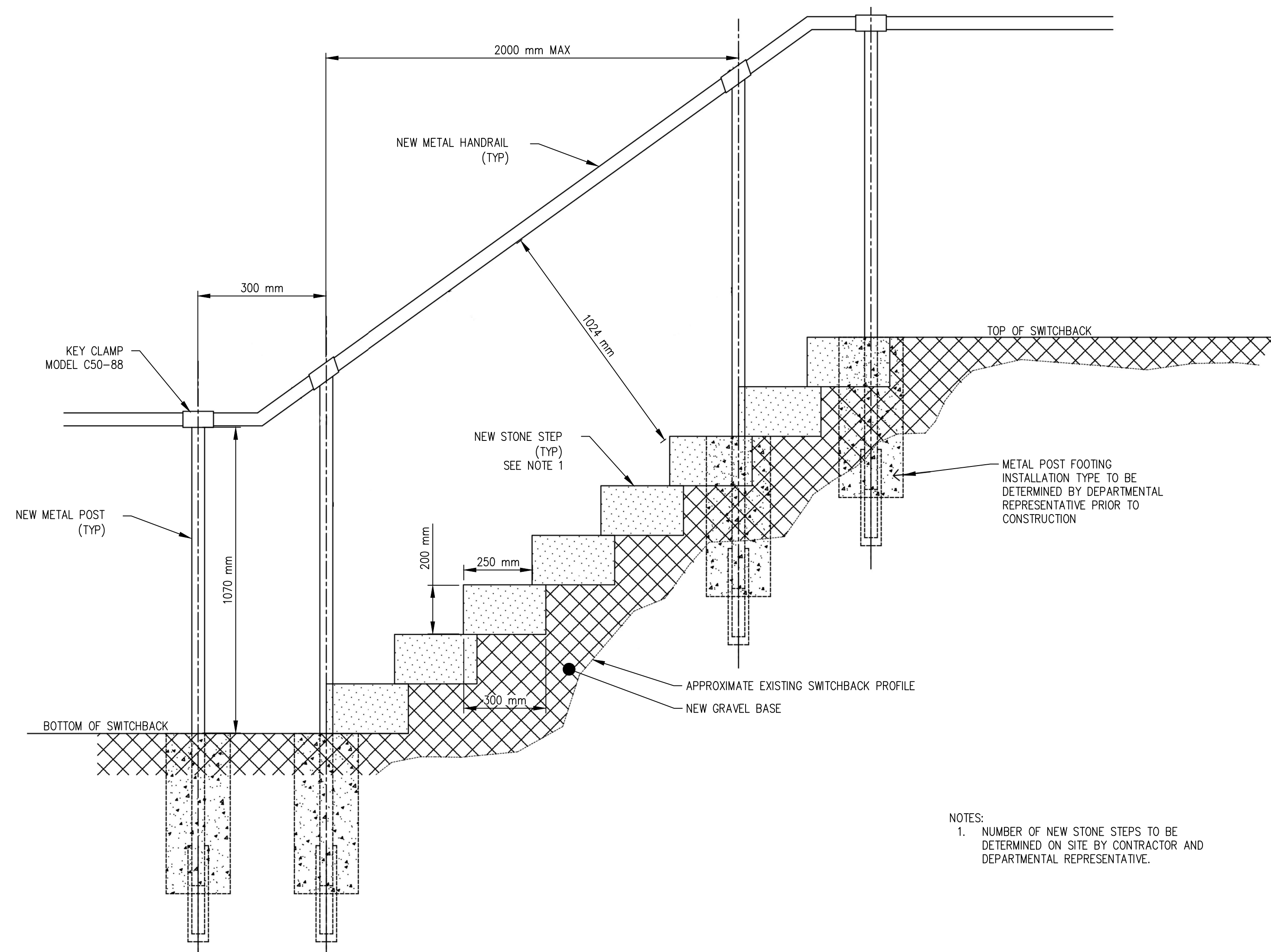
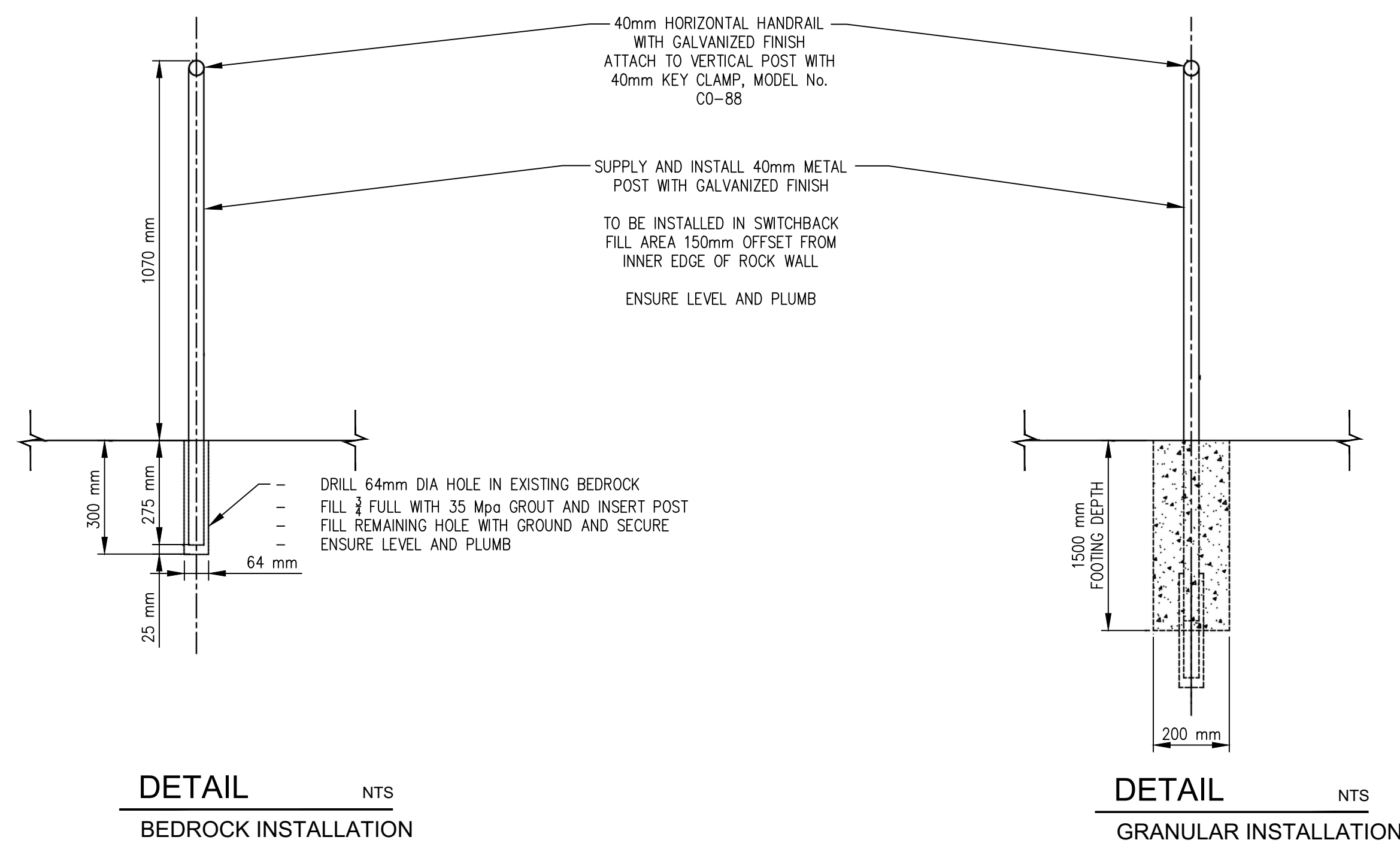
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		28-SEP-18
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A. McDONALD		AS SHOWN

PWOSC Project Manager/Administrateur de Projets TPSGC

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Park Responsible Officer/Agent Responsable		PWOSC Project Manager/Administrateur de Projets TPSGC	
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C-117



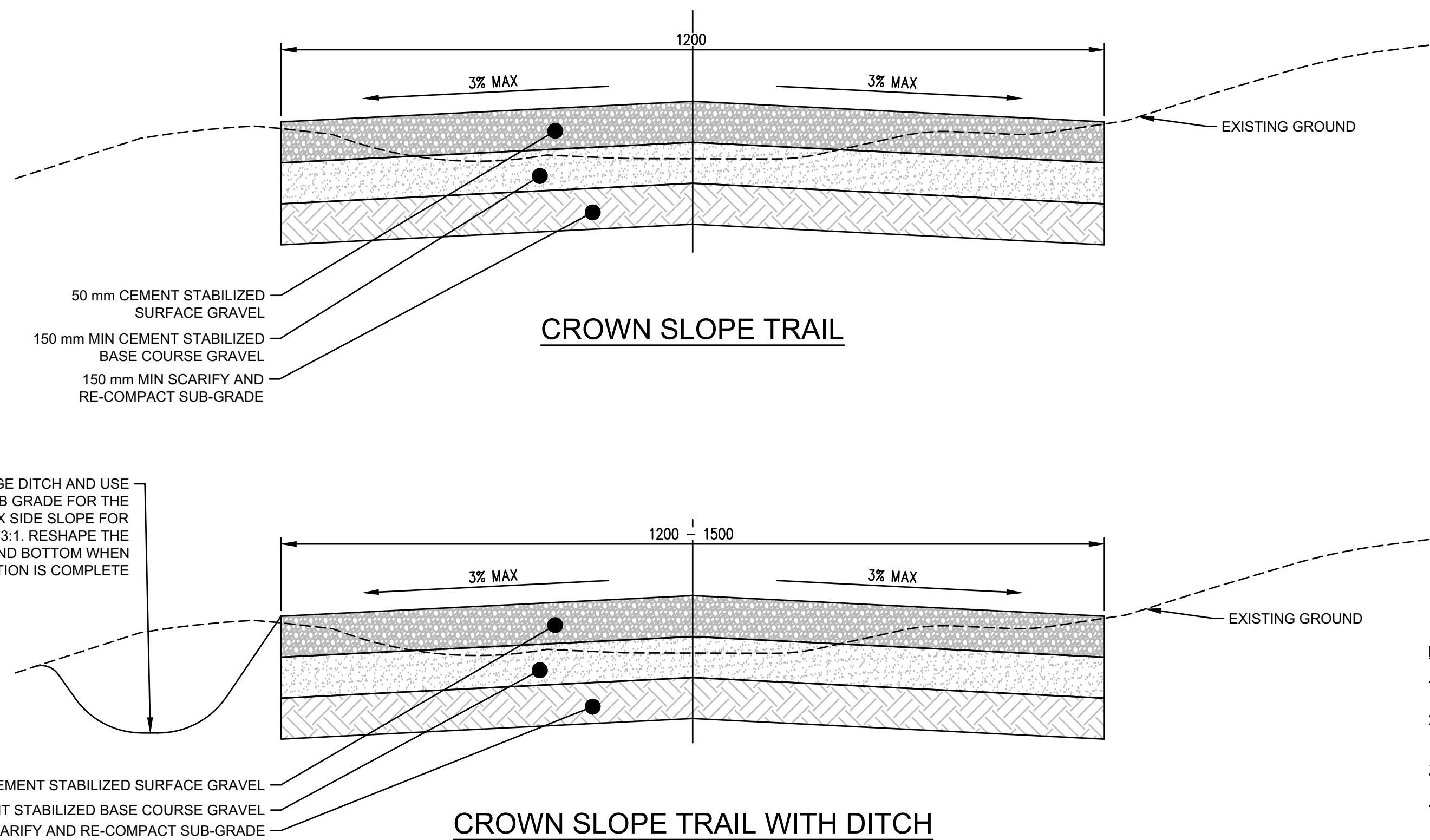
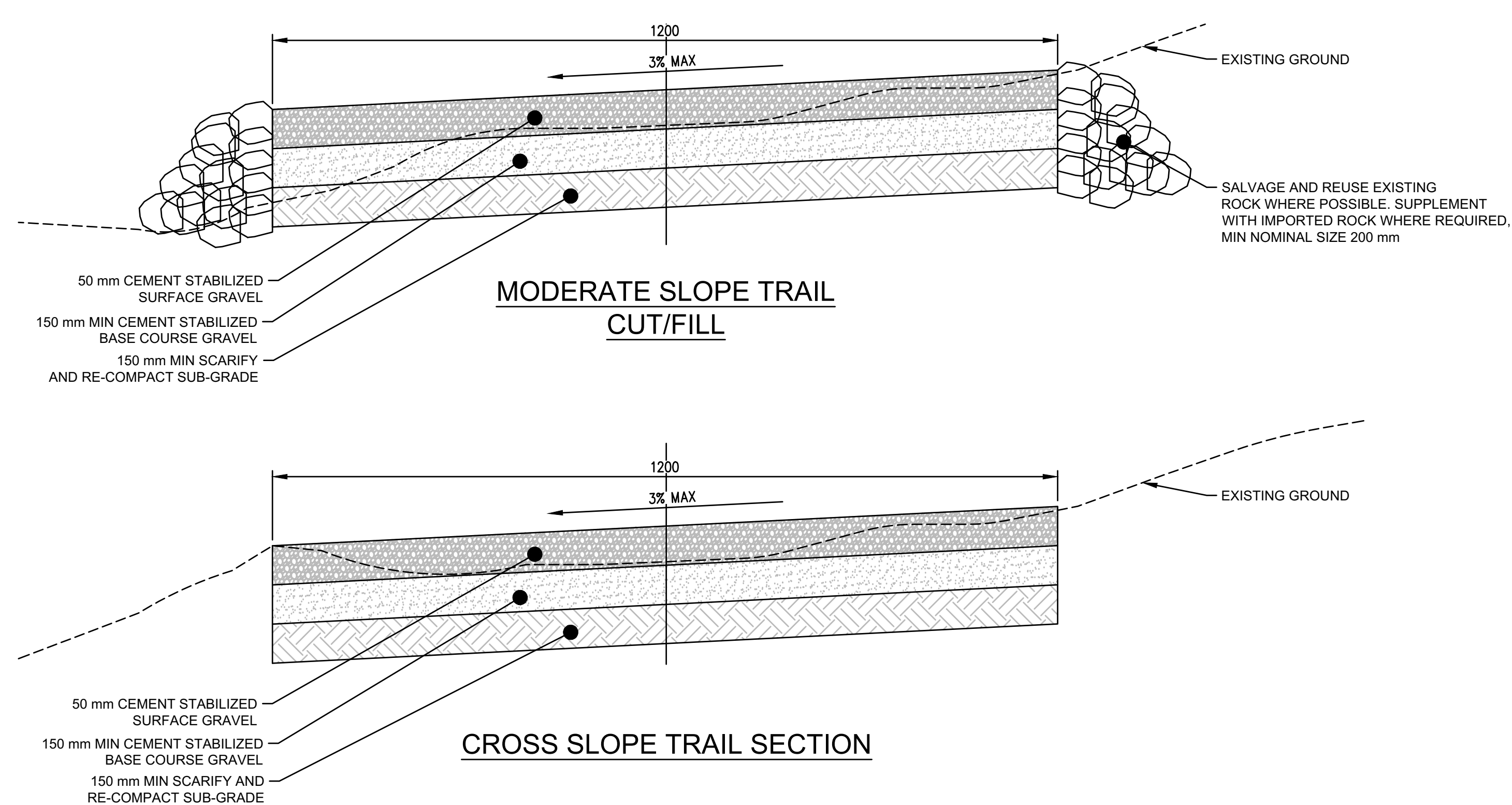
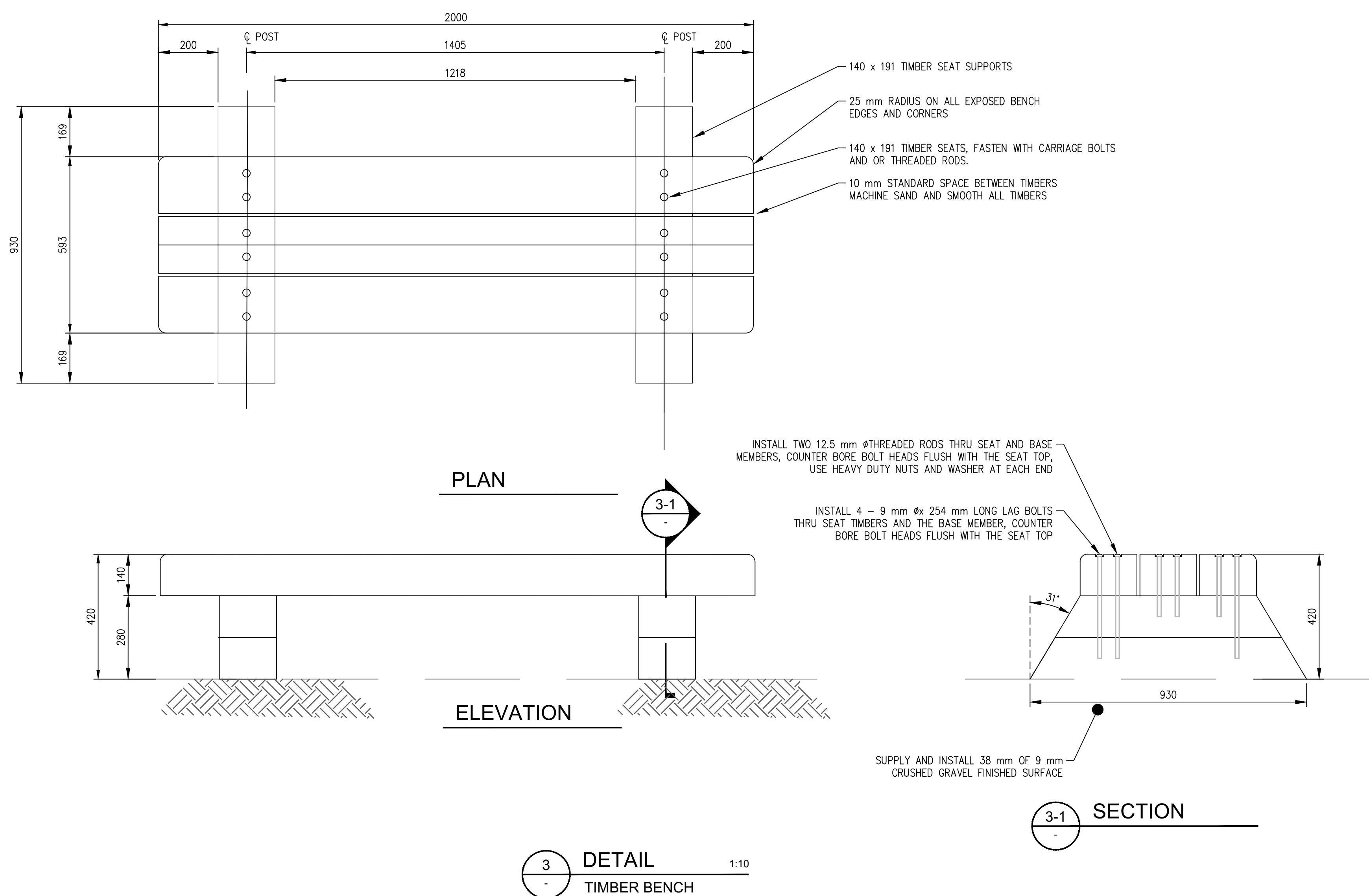
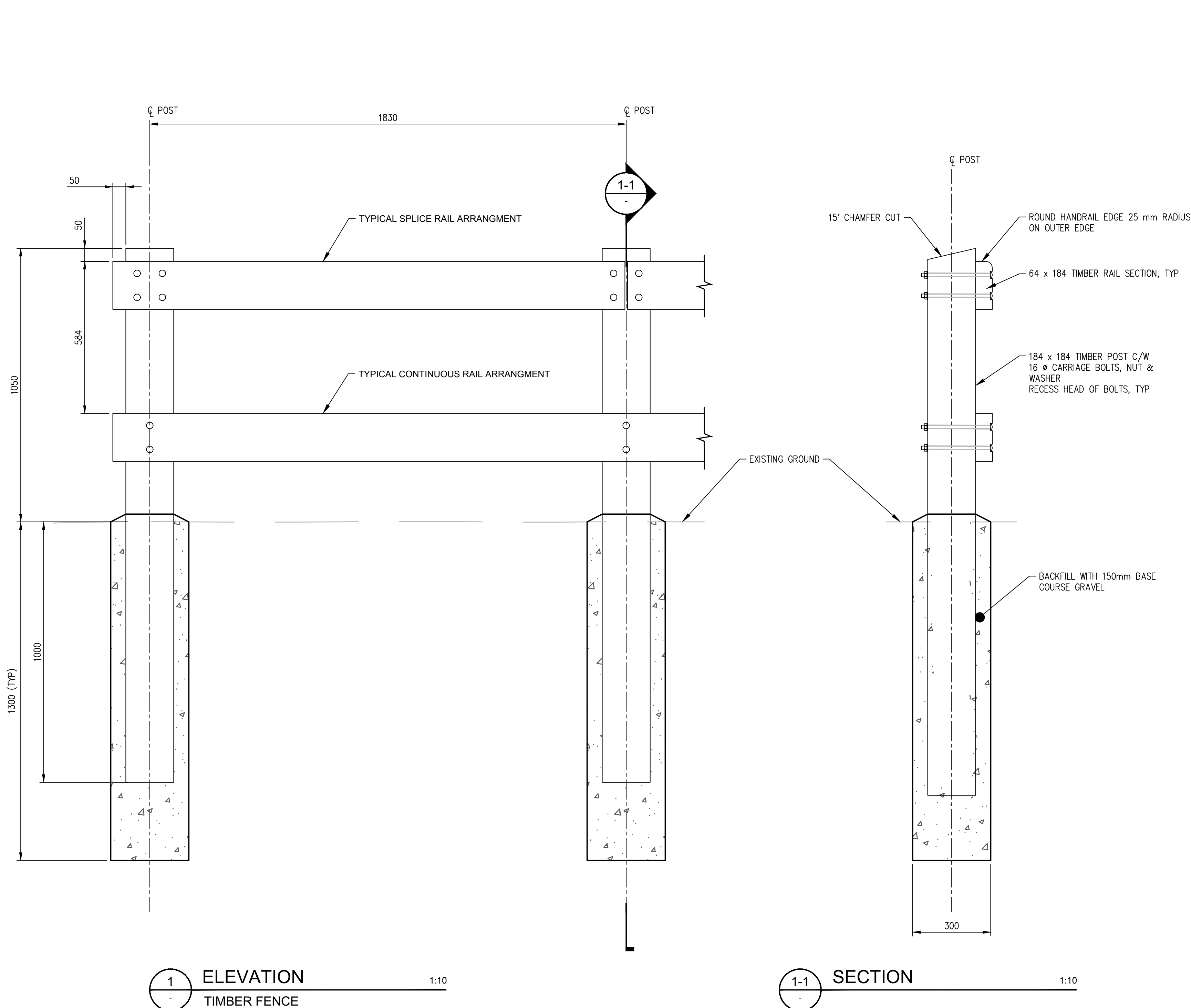
NOTES:
1. NUMBER OF NEW STONE STEPS TO BE DETERMINED ON SITE BY CONTRACTOR AND DEPARTMENTAL REPRESENTATIVE.

1 DETAIL NTS
METAL POST AND HANDRAIL



VIEW NTS
EXISTING ROCK SWITCHBACK
WITH IMPOSED CONSTRUCTION DETAIL

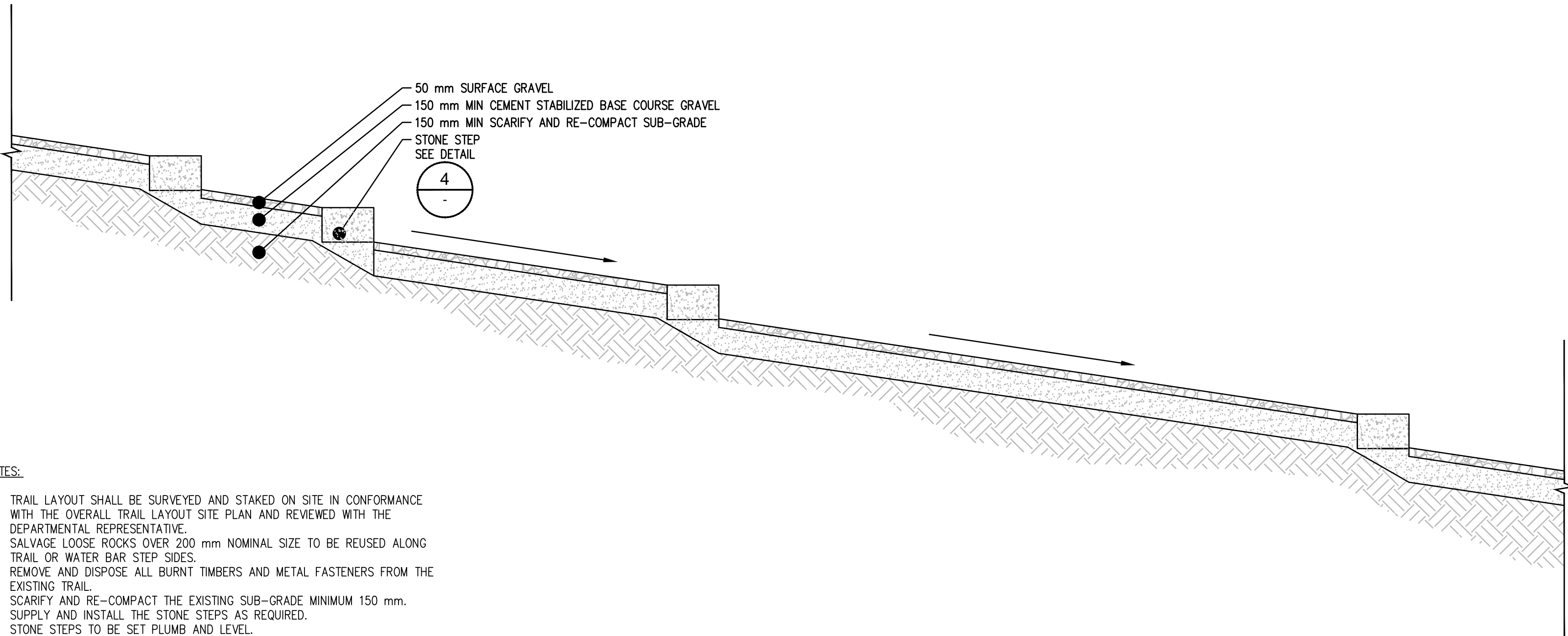
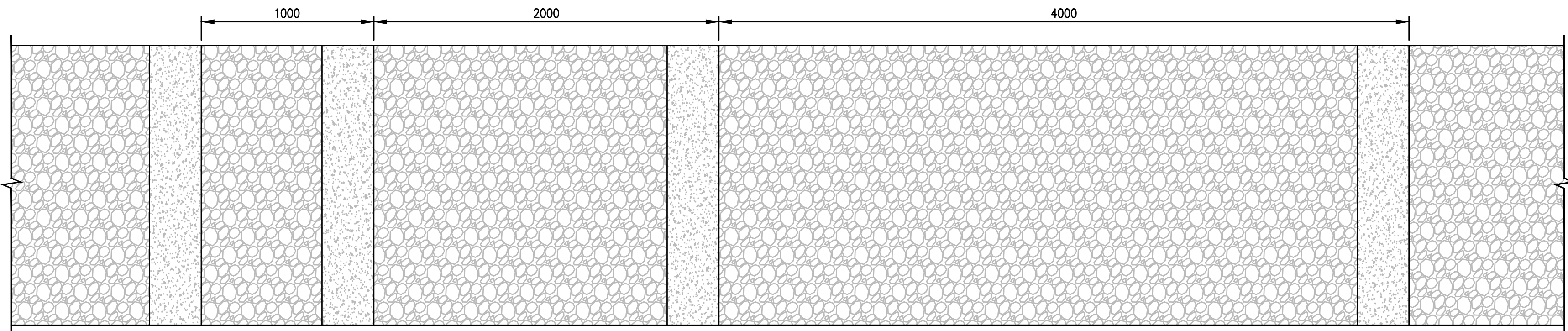
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No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé
Revision / Revision				
A detail number numéro de détail				
B source drawing no. de dessin no.				
C detail on drawing no. détail sur dessin no.				
Consultant's Name Nom de l'expert-conseil			Eng. Stamp Sceau de l'ingénieur	
 Associated Engineering APEGA Permit to Practice P 3979				
 Public Works and Government Services Canada			Travaux publics et Services gouvernementaux Canada	
Client Services Team Southern Alberta Operations Branch			Le Client Entretien l'Équipe Alberta Méridional Branche d'Opérations	
				
Client/client  Parks Canada Agency			L'Agence Parcs Canada	
Western and Northern Region			Ouest et Nord du Canada	
Project title/Titre du projet WLNP TRAILS IMPROVEMENT				
Drawing title/Titre du dessin DETAILS – TYPICAL SWITCHBACK 2 OF 2				
Surveyed by/Arpenté par		Drawn by/Dessiné par		Date/Date 28-SEP-18
Designed by/Conçut par A. McDONALD		Reviewed by/Revisé par		Scale/Echelle AS SHOWN
PWGSC Project Manager/Administrateur de Projets TPSGC				
Client Acceptance/Acceptation du client			Approved by/Approuvé par	
Park Responsible Officer/Agent Responsable			PWGSC Project Manager/Administrateur de Projets TPSGC	
Project No./No. du projet R.099828.001		Asset No./No. du-bien		Sheet No./ No. de la feuille 24
Drawing Reference No./No. de référence du dessin C-118				29



- NOTES:
1. INSPECT THE EXISTING TRAIL SURFACE AND SIDE SLOPE AREAS. REMOVE AND DISPOSE OF EXISTING WOOD TIMBERS AND UNUSABLE EXISTING MATERIALS. MAXIMUM LONGITUDINAL GRADE OF THE TRAIL IS 6% TO BE CONFIRMED BY DEPARTMENTAL REPRESENTATIVE IN THE FIELD. MAXIMUM CROSS FALL OF THE TRAIL IS 3%.
 2. SCARIFY AND RE-COMPACT THE EXISTING SUB-GRADE TO A MINIMUM 150 mm.
 3. SUPPLY AND INSTALL CONCRETE WATER BAR STEPS AND STAIRS. CONTRACTOR TO LAYOUT THE LOCATION OF THE WATERBAR STEPS AND STAIRS. DEPARTMENTAL REPRESENTATIVE TO CONFIRM LAYOUT PRIOR TO PLACEMENT.
 4. SUPPLY AND INSTALL CEMENT STABILIZED BASE COURSE, MIN 150 mm ON COMPACTED SUB-GRADE. CONTRACTOR TO PROVIDE BASE COURSE.
 5. SUPPLY AND INSTALL 50 mm OF 9 mm CRUSHED GRAVEL SURFACE.
 6. TRAIL BASE DEPTH WILL VARY - 150mm TO 350mm. REFER TO TRAIL SECTION NOTES FOR BASE DEPTH.
 7. REFER TO PROJECT SPECIFICATIONS FOR FURTHER DETAILS.
 8. TRAIL SECTIONS - TYPICAL MATERIAL AND DEPTH SHOWN. VARIATIONS ARE NOTED WHERE APPLICABLE ON PLANS C-100, C-101, C-102.

2 DETAIL
TRAIL SECTIONS

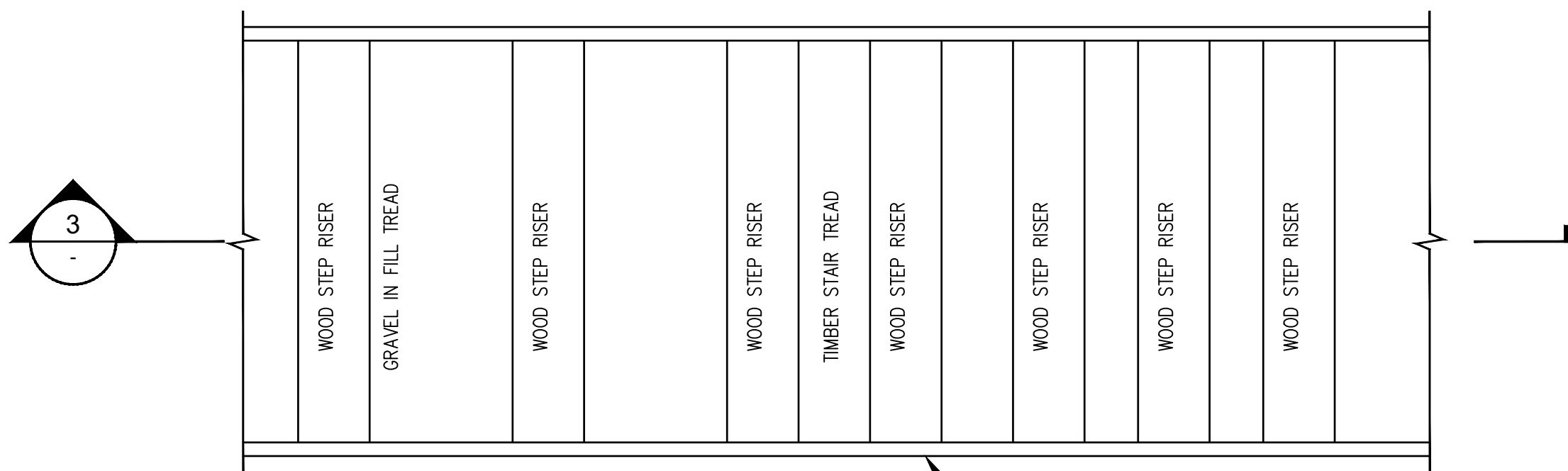
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C detail on drawing no. détail sur dessin no.				
Consultant's Name Nom de l'expert-conseil			Eng. Stamp Sceau de l'ingénieur	
<div><div></div><div>Associated Engineering</div><div></div></div>			APEGA Permit to Practice P 3979	
<div><div></div><div>Public Works and Government Services Canada</div></div>			Travaux publics et Services gouvernementaux Canada	
Client Services Team Southern Alberta Operations Branch			Le Client Entretien l'Équipe Alberta Méridional Branche d'Opérations	
Canada				
Client/client <div></div> Parks Canada Agency			L'Agence Parcs Canada	
Western and Northern Region			Ouest et Nord du Canada	
Project title/Titre du projet				
WLNP TRAILS IMPROVEMENT				
Drawing title/Titre du dessin				
DETAILS 1 OF 5				
Surveyed by/Arpenté par		Drawn by/Dessiné par		Date/Date
		Z. ZWIERMAN		26-SEP-18
Designed by/Conçeut par		Reviewed by/Revisé par		Scale/Echelle
A. McDONALD				AS SHOWN
PWOSC Project Manager/Administrateur de Projets TPSCC				
Client Acceptance/Acceptation du client			Approved by/Approuvé par	
Park Responsible Officer/Agent Responsable			PWOSC Project Manager/Administrateur de Projets TPSCC	
Project No./No. du projet		Asset No./No. du-bien		Sheet No./ No. de la feuille
R.099828.001				25
Drawing Reference No./No. de référence du dessin				29
C-501				



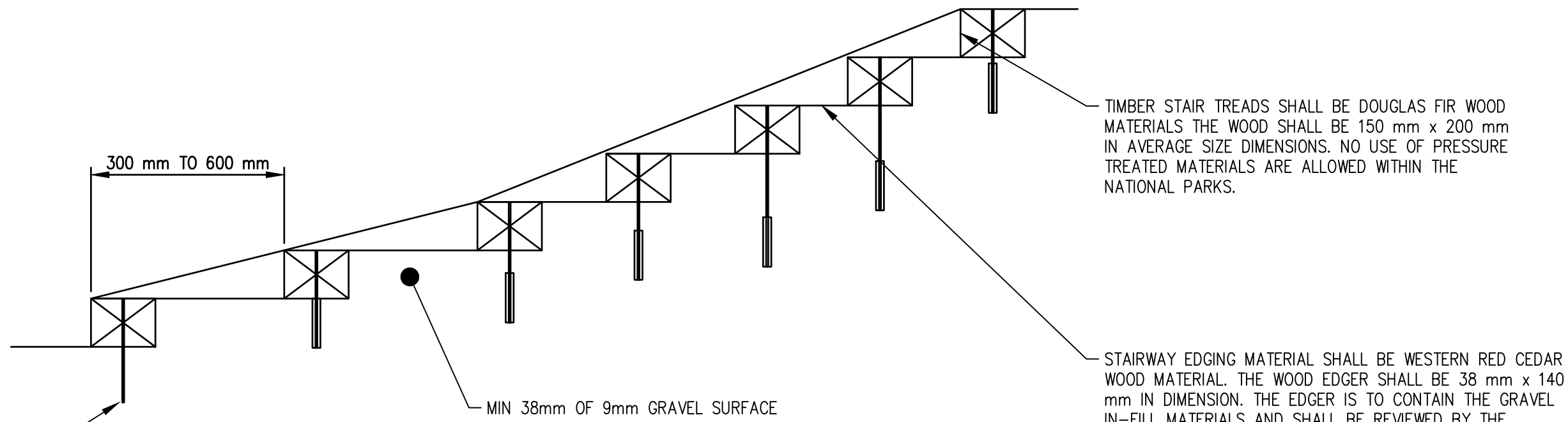
NOTES:

1. TRAIL LAYOUT SHALL BE SURVEYED AND STAKED ON SITE IN CONFORMANCE WITH THE OVERALL TRAIL LAYOUT SITE PLAN AND REVIEWED WITH THE DEPARTMENTAL REPRESENTATIVE.
2. SALVAGE LOOSE ROCKS OVER 200 mm NOMINAL SIZE TO BE REUSED ALONG TRAIL OR WATER BAR STEP SIDES.
3. REMOVE AND DISPOSE ALL BURNT TIMBERS AND METAL FASTENERS FROM THE EXISTING TRAIL.
4. SCARIFY AND RE-COMPACT THE EXISTING SUB-GRADE MINIMUM 150 mm.
5. SUPPLY AND INSTALL THE STONE STEPS AS REQUIRED.
6. STONE STEPS TO BE SET PLUMB AND LEVEL.
7. SLOPE SHALL BE MAX 3% ON STEPS UP TO 3.0 m IN LENGTH.
8. SLOPE SHALL BE MAX 6% ON STEPS LONGER THEN 6.0 m IN LENGTH.
9. ACCEPTABLE EXISTING SUB-GRADE MATERIAL MAY BE USED AS BACKFILL MATERIAL BETWEEN STONE STEPS LEAVING 200 mm FOR SURFACE AND BASE COURSE GRAVEL.
10. PLACE SALVAGED ROCKS, 200 mm NOMINAL SIZE, ALONG THE SIDES OF THE STEPS WHERE FINISHED STEP IS ABOVE EXISTING GRADE.
11. PLACE 150 mm MIN. CEMENT STABILIZED BASE COURSE FOLLOWED BY 50 mm SURFACE COURSE GRAVEL.

1 DETAIL
STONE STAIR CONSTRUCTION NTS



1 PLAN
WOOD TIMBER WATER BAR STEP AND STAIRS NTS



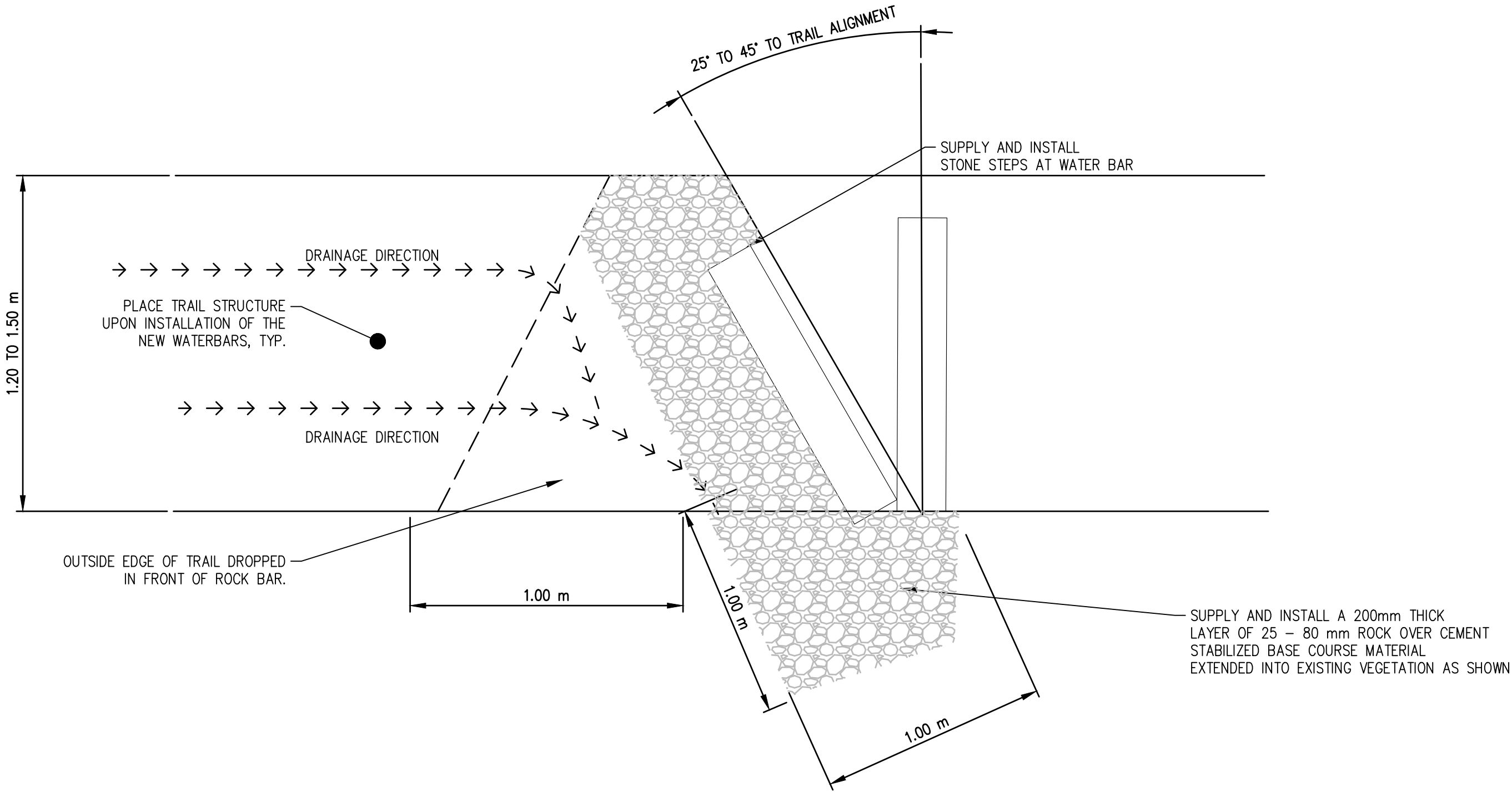
FOR ROCK CONDITIONS
DRILL A 12 mm Ø x 150 mm LONG HOLE INTO ROCK AND DRIVE THE PIN THROUGH THE TIMBER, GRAVEL FILLS AND INTO HOLE.
FOR SOIL CONDITIONS
12 mm Ø x 400 mm LONG REBAR PIN. INSTALL 3 PINS PER EACH TIMBER UNIT.

CONTRACTOR SHALL COMPLETE ALL NECESSARY ROCK WORK AND WOOD STAIRWAY STEP INSTALLATION. CONTRACTOR SHALL SUPPLY AND USE A TWO PART INDUSTRIAL EPOXY AS REQUIRED TO FULLY FASTEN THE RODS TO THE EXISTING BEDROCK AREAS. ENSURE A CLEAN AND FRACTURE FREE HOLE RESULTS
EPOXY PRODUCT SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR REVIEW AND APPROVAL.

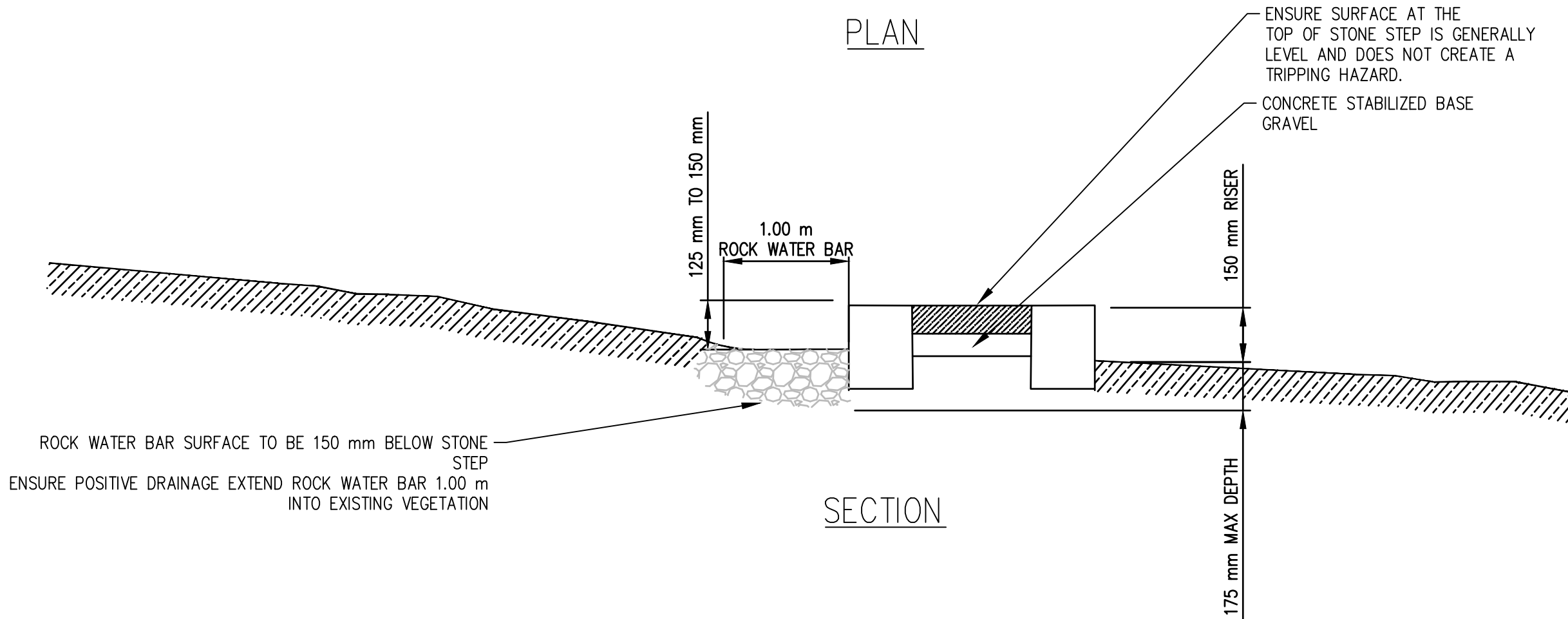
3 SECTION
WOOD TIMBER WATER BAR STEP AND STAIRS NTS

NOTES:

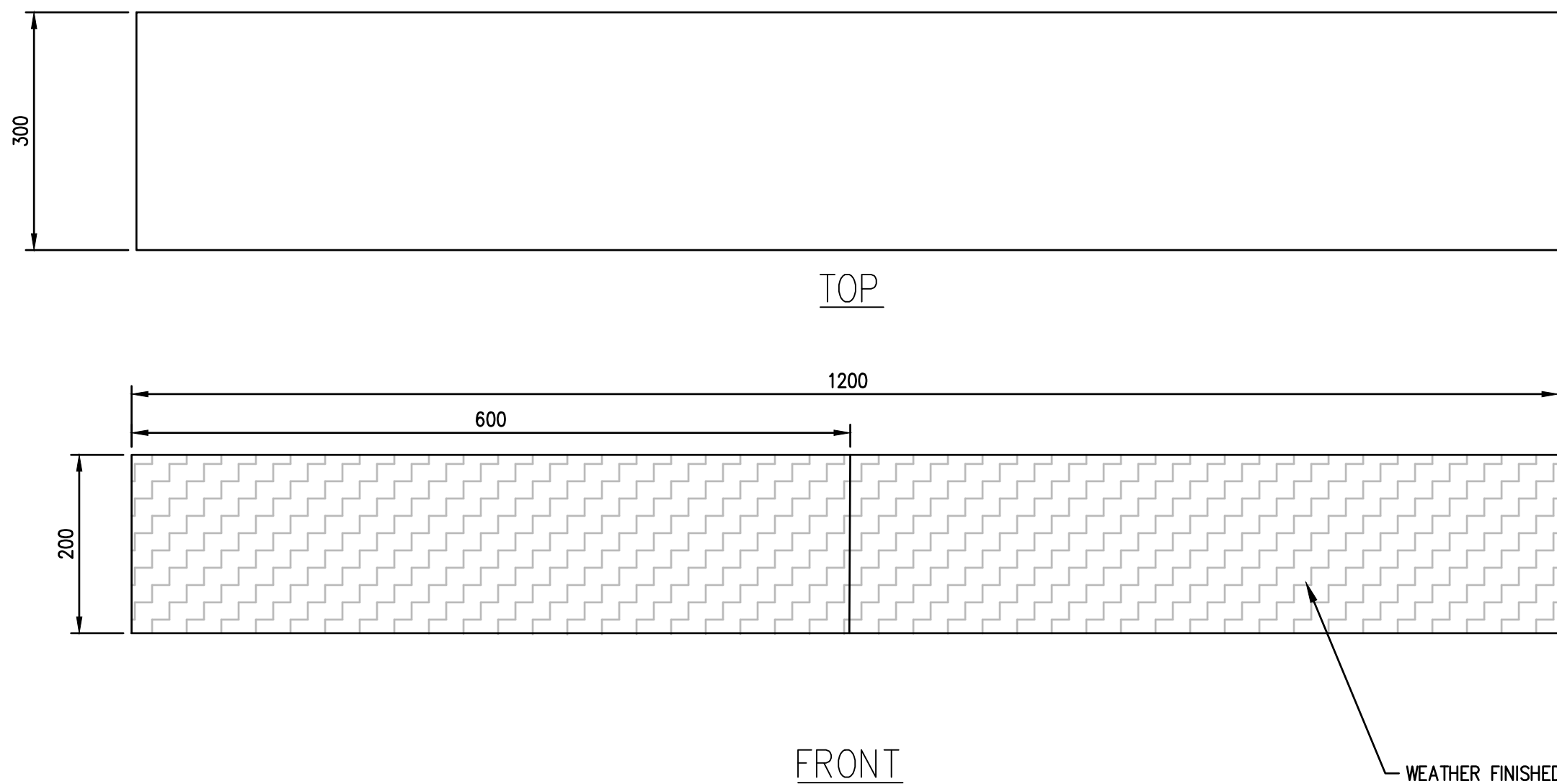
1. MULTIPLE LAYERS OF TIMBER EDGERS MAY BE REQUIRED FOR ELEVATION DIFFERENCES AS PER SITE CONDITIONS. INSTALL GROUND TIMBER TO BASE GRADE AND/OR TO MATCH TO ROCK CONDITIONS AT BASE GRADE. SCULPT THE TIMBER TO MATCH TO ALL ROCK OUTCROPS.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE



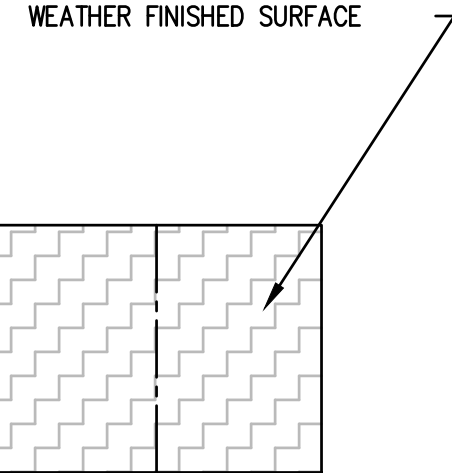
NOTE:
ROCK WATERBAR TO BE INSTALLED AT EACH NEW STONE STEP LOCATION.



2 DETAIL
ROCK WATER BAR NTS



4 DETAIL
STONE STEP NTS



SIDE

0	2018OCT28	ISSUED FOR TENDER	ZZ	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering APEGA Permit to Practice P 3979	BEST MANAGED COMPANIES Meilleures entreprises gérées

Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
Client Services Team Southern Alberta Operations Branch	Le Client Entretient l'Équipe Alberta Méridionale Branche d'Opérations

Canada

Client/client	Parks Canada Agency	L'Agence Parcs Canada
	Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet
WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin
**DETAILS
2 OF 5**

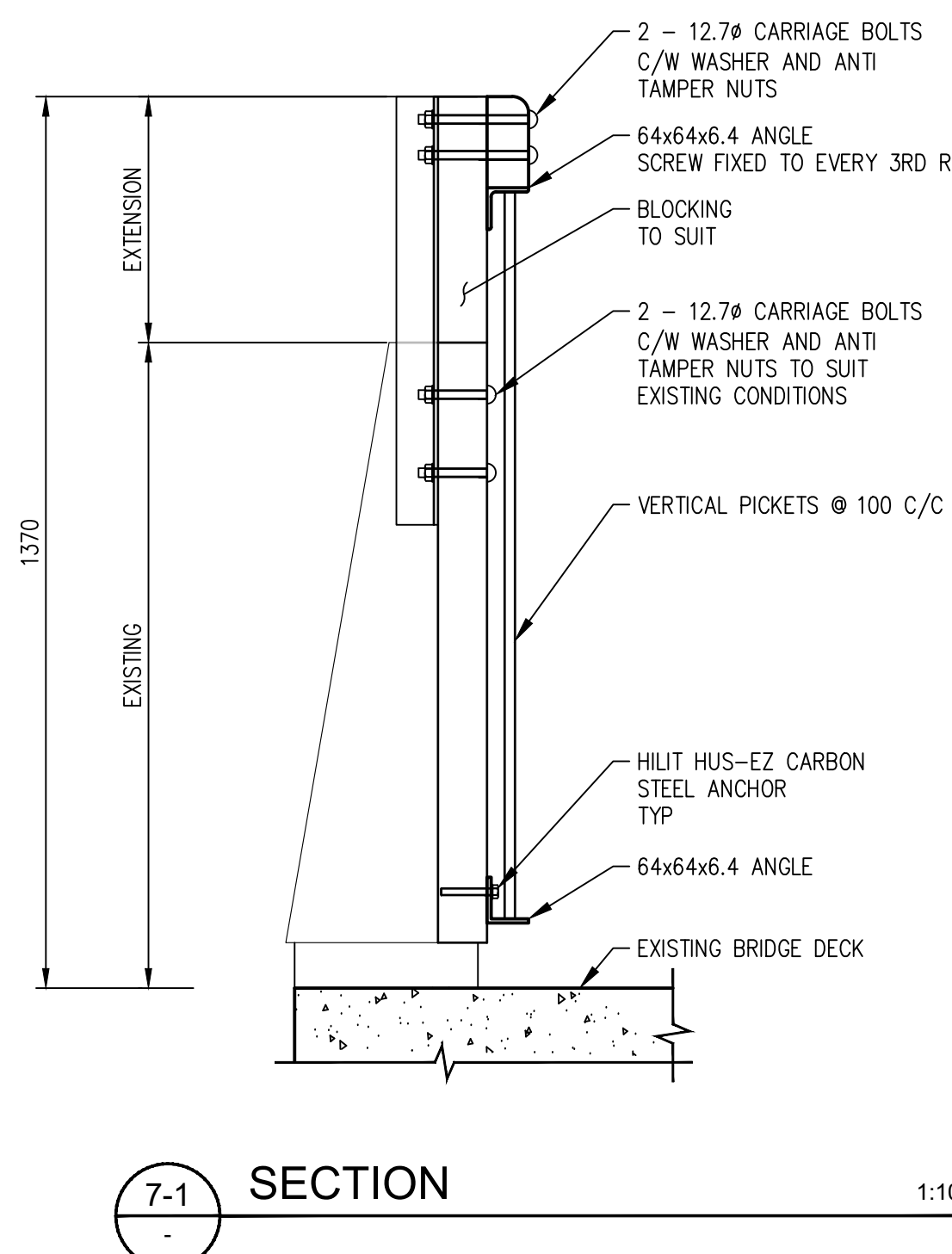
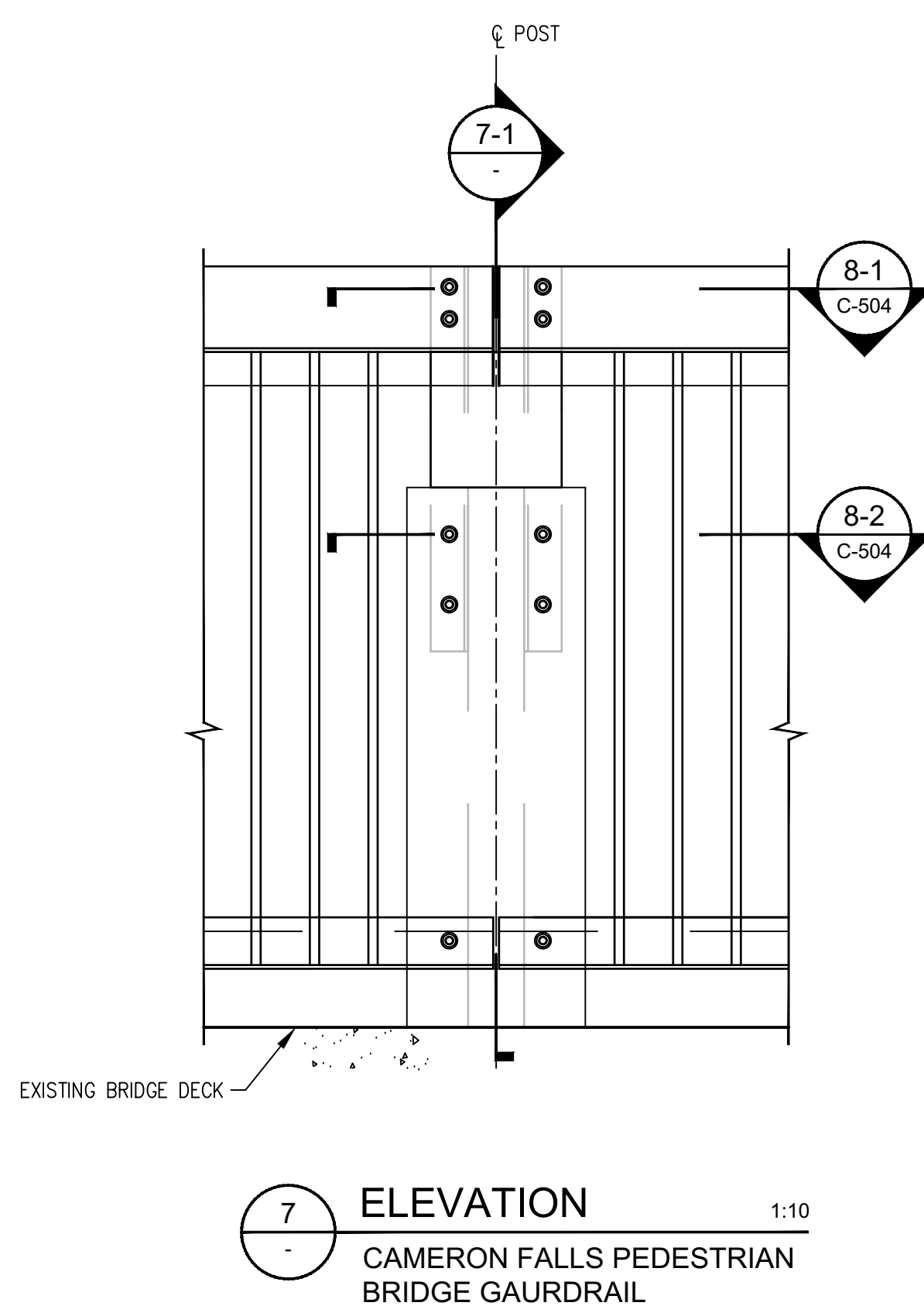
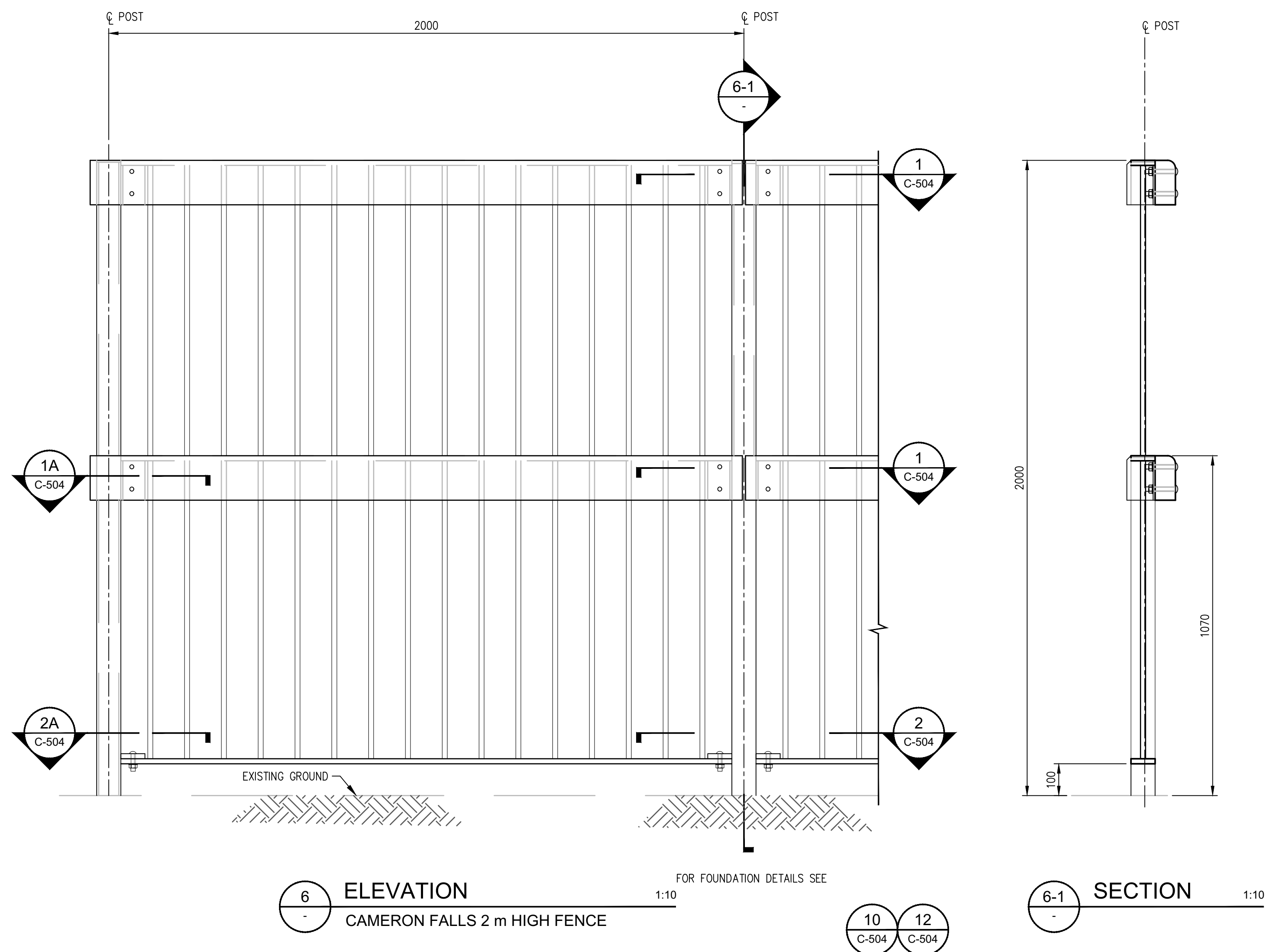
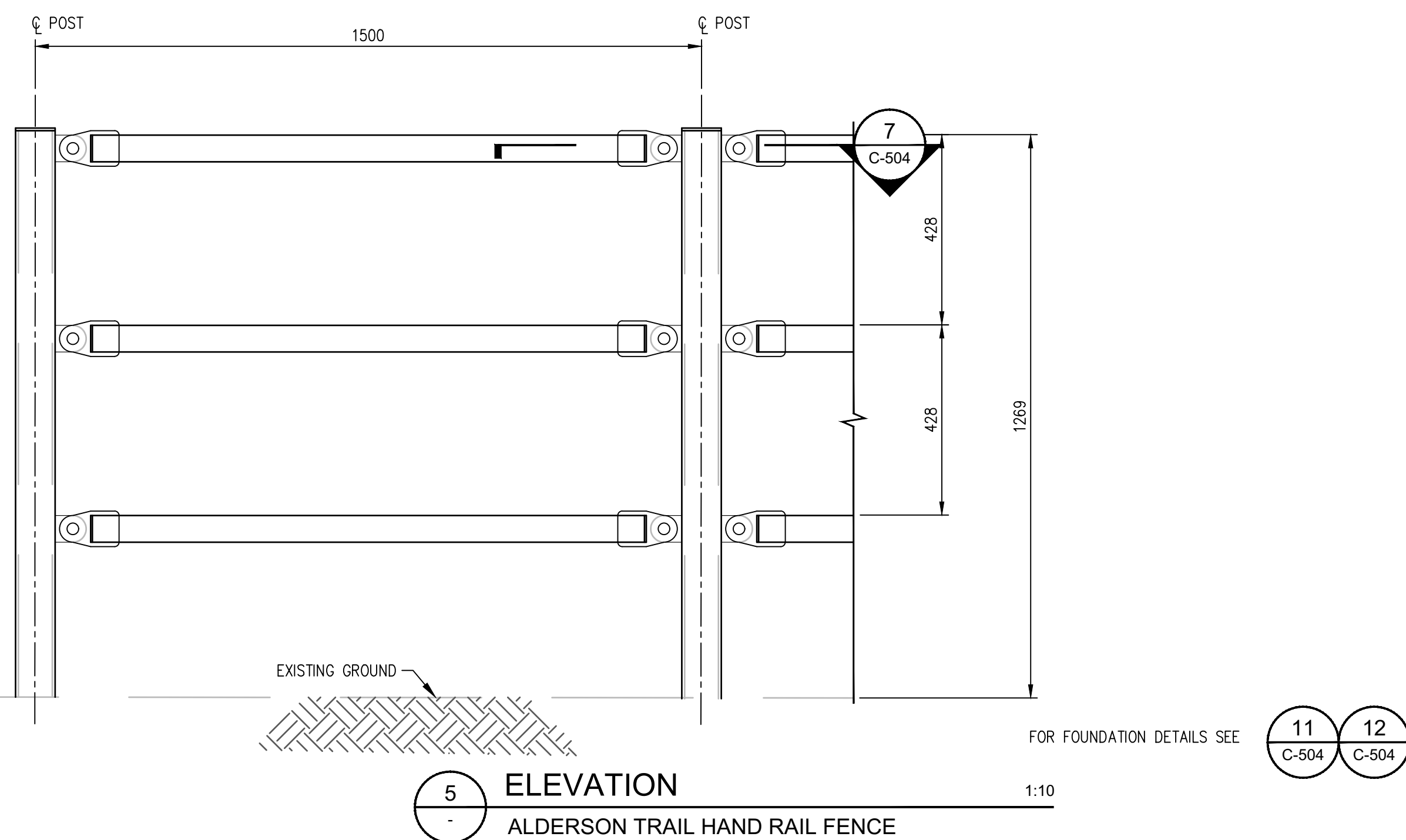
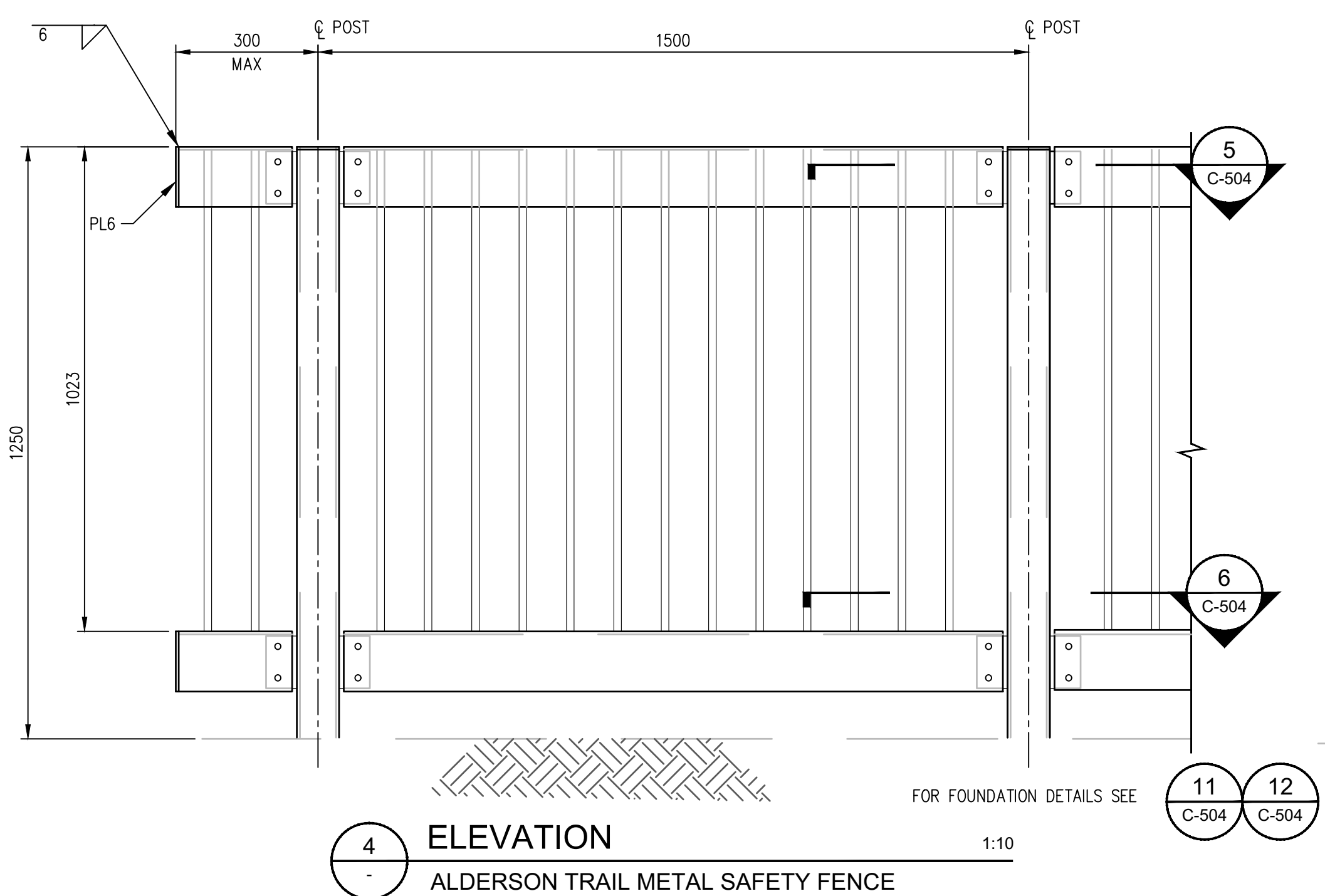
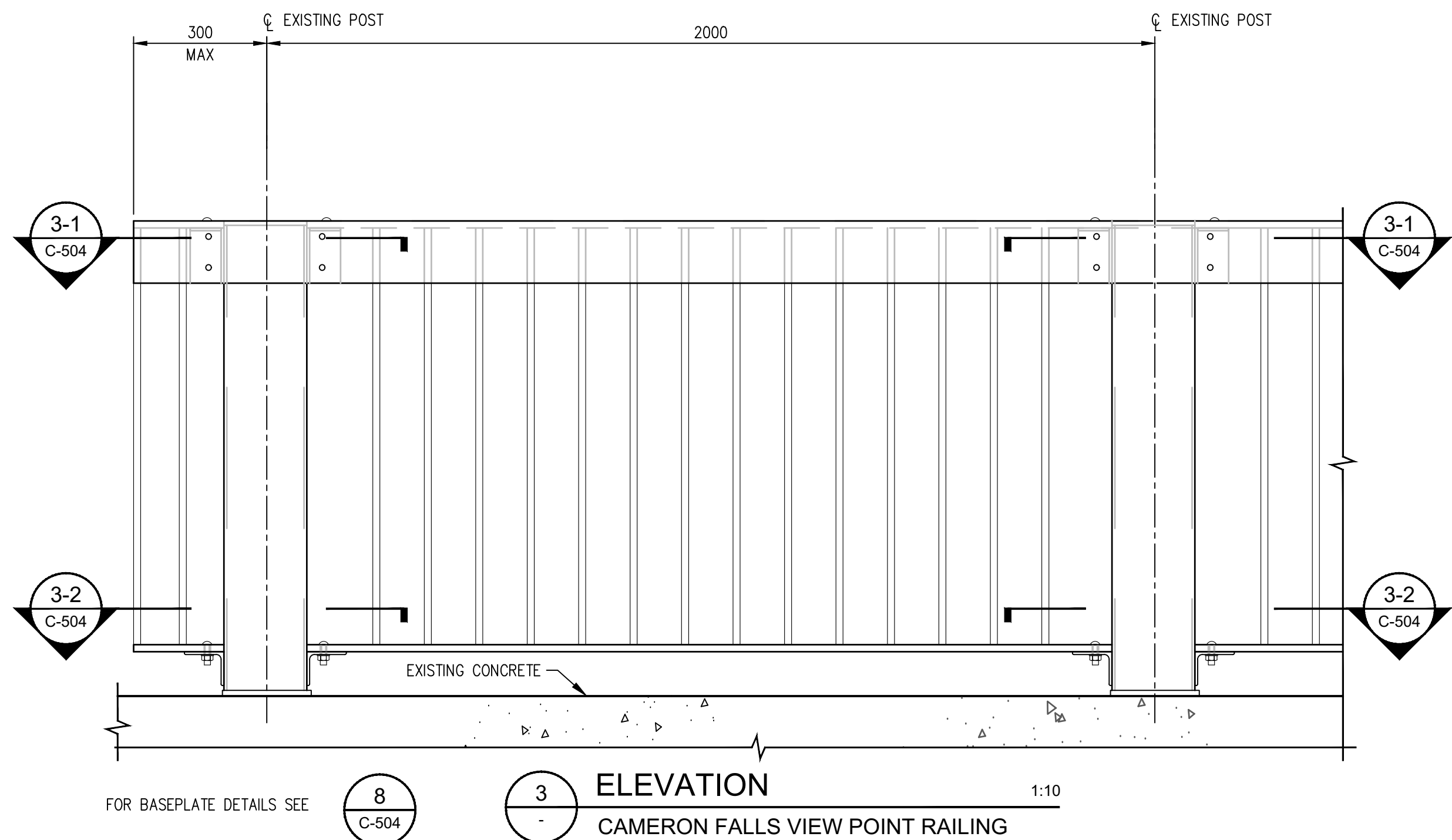
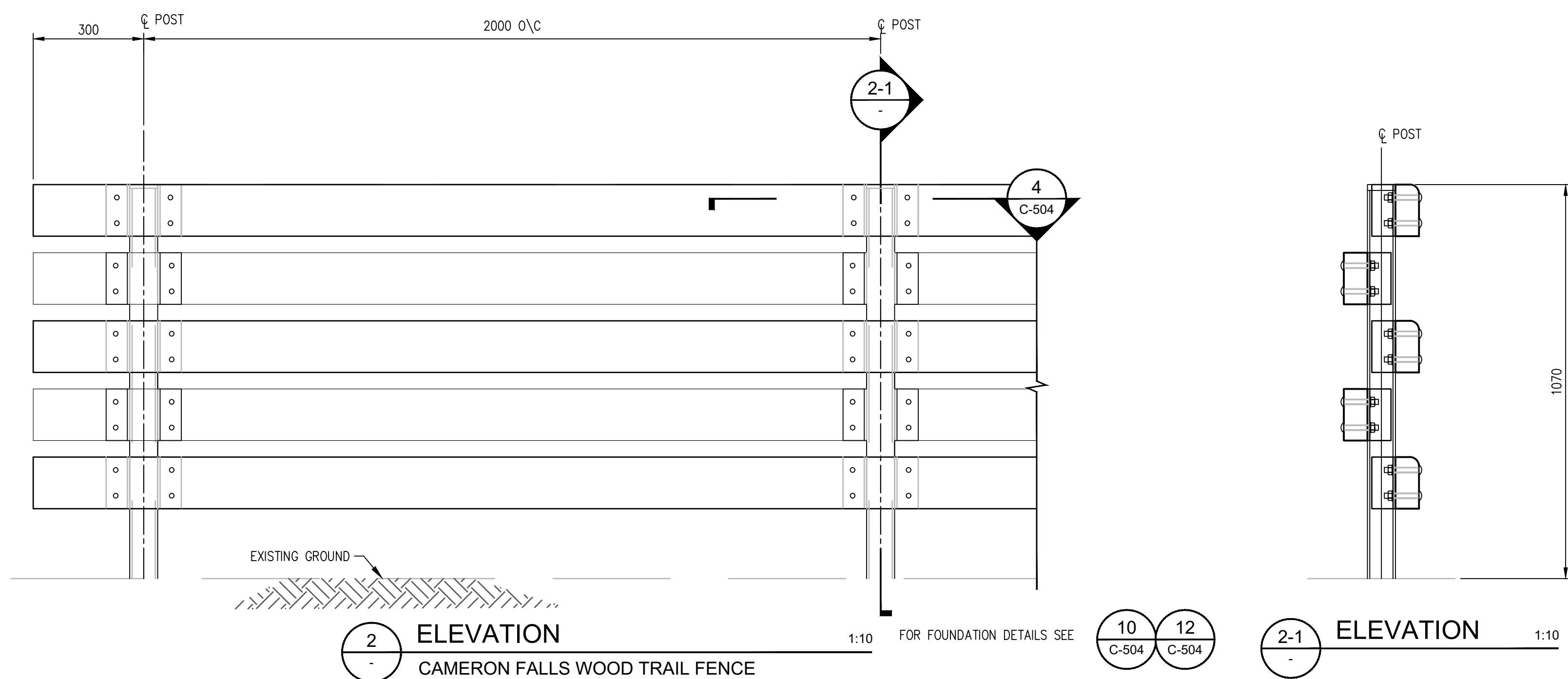
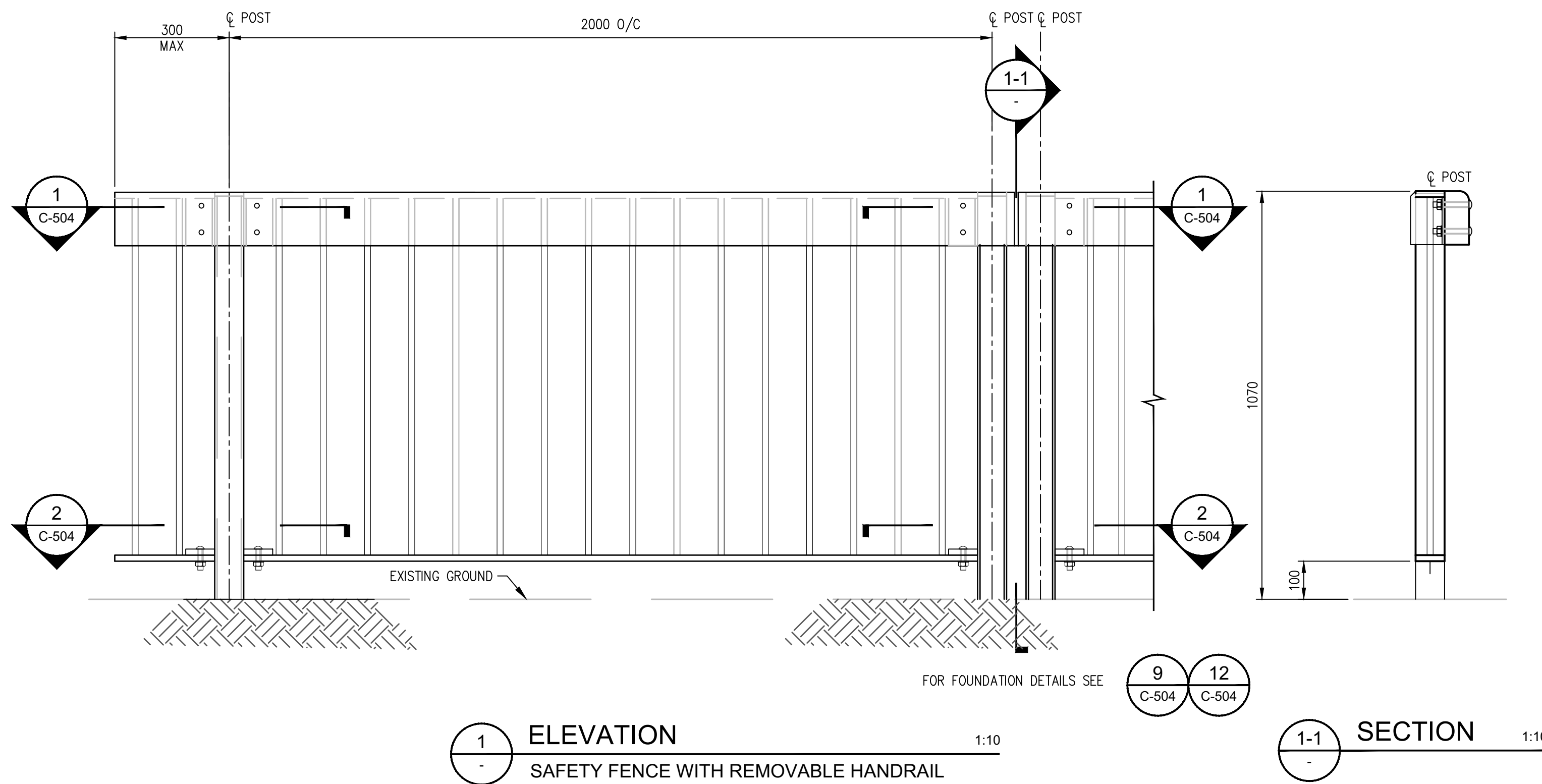
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	Z. ZIMMERMAN	28-SEP-18
Designed by/Conçut par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	AS SHOWN	

PMSC Project Manager/Administrateur de Projets TPSCG

Client Acceptance/Acceptation du client	Approved by/Approuvé par

Park Responsible Officer/Agent Responsable		PMSC Project Manager/Administrateur de Projets TPSCG	
Project No./No. du projet	Asset No./No. du-bien		Sheet No./ No. de la feuille
R.099828.001			26

Drawing Reference No./No. de référence du dessin
C-502



NOTES:
1. SEE PLANS FOR LOCATION OF RAIL
2. FOUNDATIONS NOT SHOWN - SEE SHEET C-504
3. CONTRACTOR TO SUBMIT SHOP DRAWINGS

0	2018NOV30	ISSUED FOR TENDER	ZZ	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision	
A	detail number numéro de détail
B	source drawing no. de dessin no.
C	detail on drawing no. détail sur dessin no.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering APEGA Permit to Practice P 3979	BEST MANAGED COMMUNITIES Meilleures communautés gérées

Public Works and Government Services Canada Travaux publics et Services gouvernementaux Canada	Client Services Team Southern Alberta Operations Branch Le Client Entretient l'Équipe Alberta Méridionale Branche d'Opérations
Canada	

Client/client	Parks Canada Agency L'Agence Parcs Canada
	Western and Northern Region Ouest et Nord du Canada

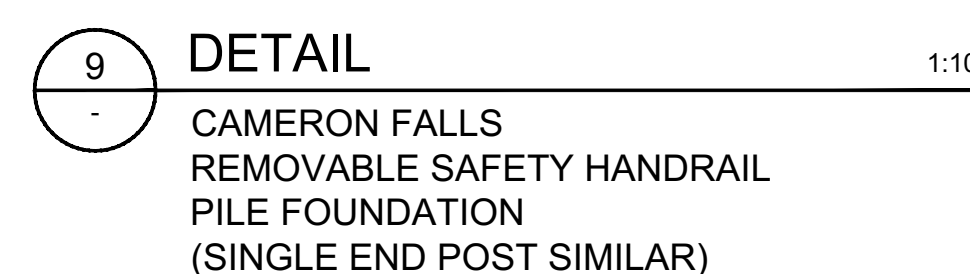
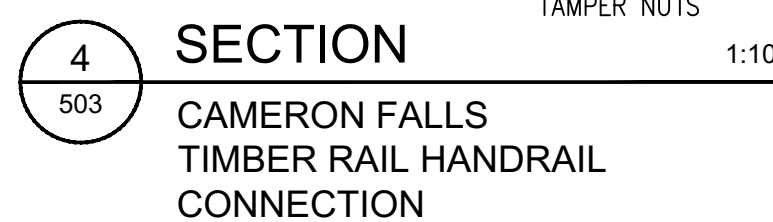
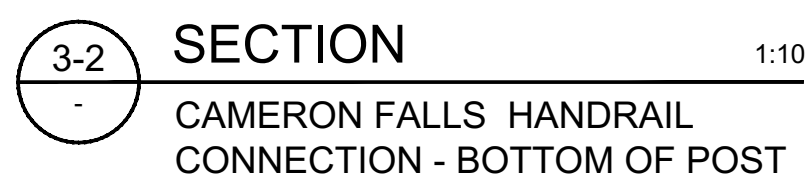
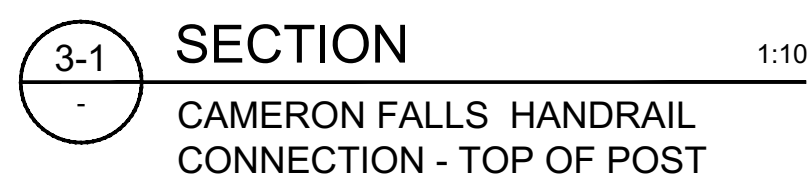
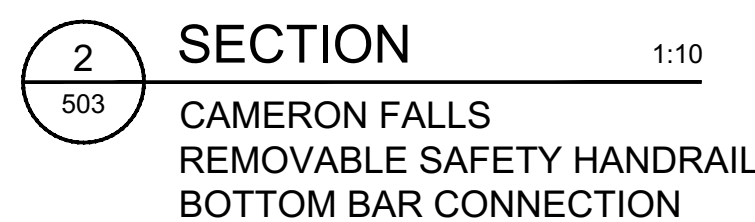
Project title/Titre du projet	WLNP TRAILS IMPROVEMENT
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Drawing title/Titre du dessin	DETAILS 3 OF 5
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Surveyed by/Arpenté par	Drawn by/Dessiné par	Date/Date
Designed by/Conçut par	Reviewed by/Revisé par	Scale/Echelle
A. McDONALD	Z. ZIMMERMAN	AS SHOWN



PWSC Project Manager/Administrateur de Projets TPSCG	
Client Acceptance/Acceptation du client	Approved by/Approuvé par


Project No./No. du projet	Asset No./No. du-bien	Sheet No./No. de la feuille
R.099828.001		27
Drawing Reference No./No. de référence du dessin	C-503	



NOTE
1. FOUNDATION SELECTION FOR PILE OR BEDROCK IS SUBJECT TO SITE INSPECTION BY FIELD ENGINEER



Revision / Revision	
	<p>A detail number numéro de detail</p> <p>B source drawing no. de dessin no.</p> <p>C detail on drawing no. detail sur dessin no.</p>
	

	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridional Branche d'Opérations

Canada

Project Title/Titre du projet

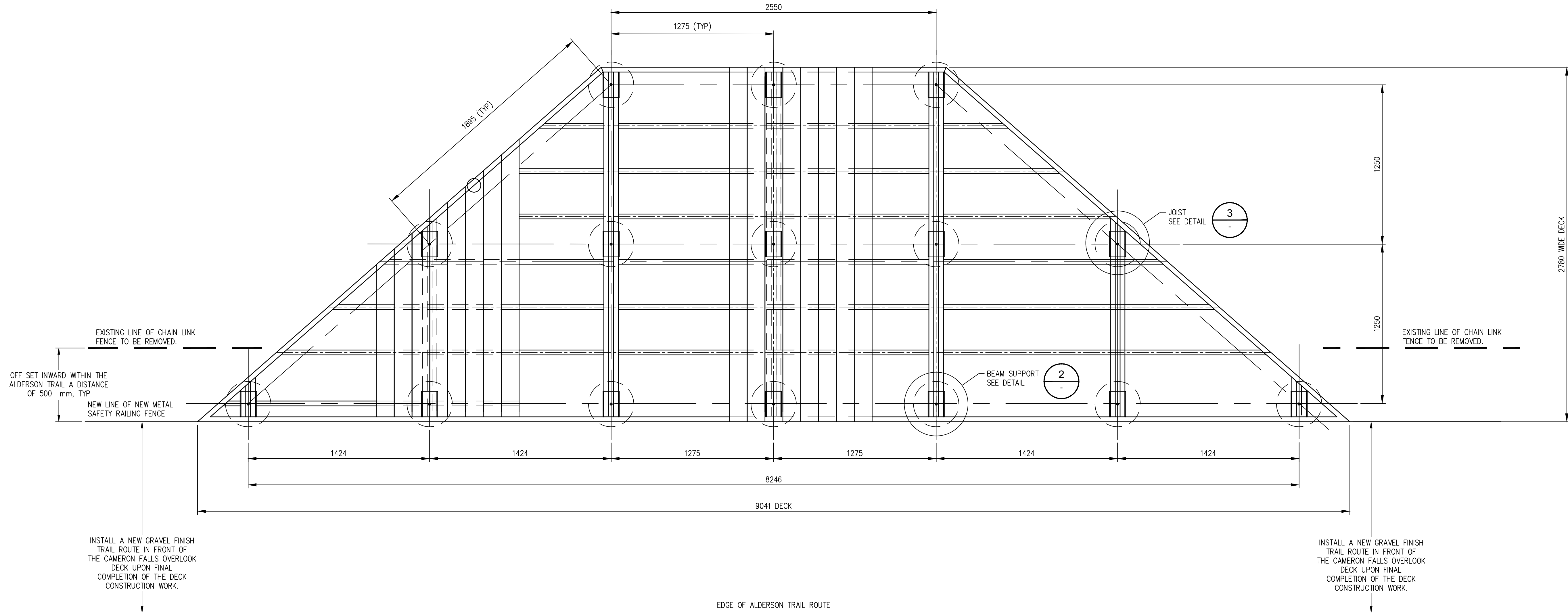
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IMPROVEMENT

Drawing title/Titre du dessin

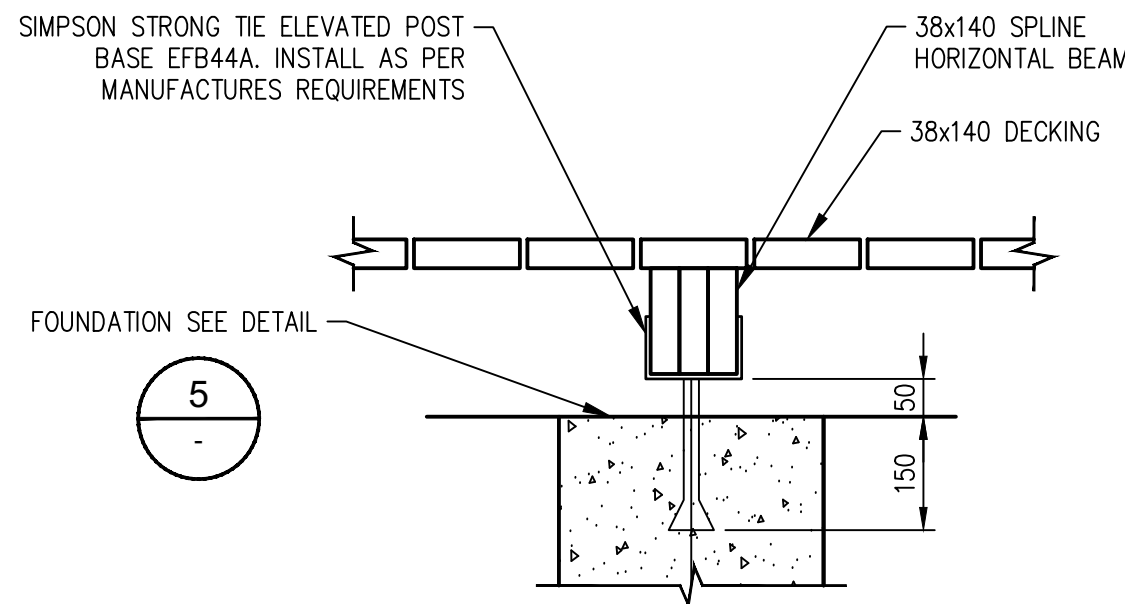
DETAILS
4 OF 5

Client Acceptance/Acceptation du client	Approved by/Approuvé par
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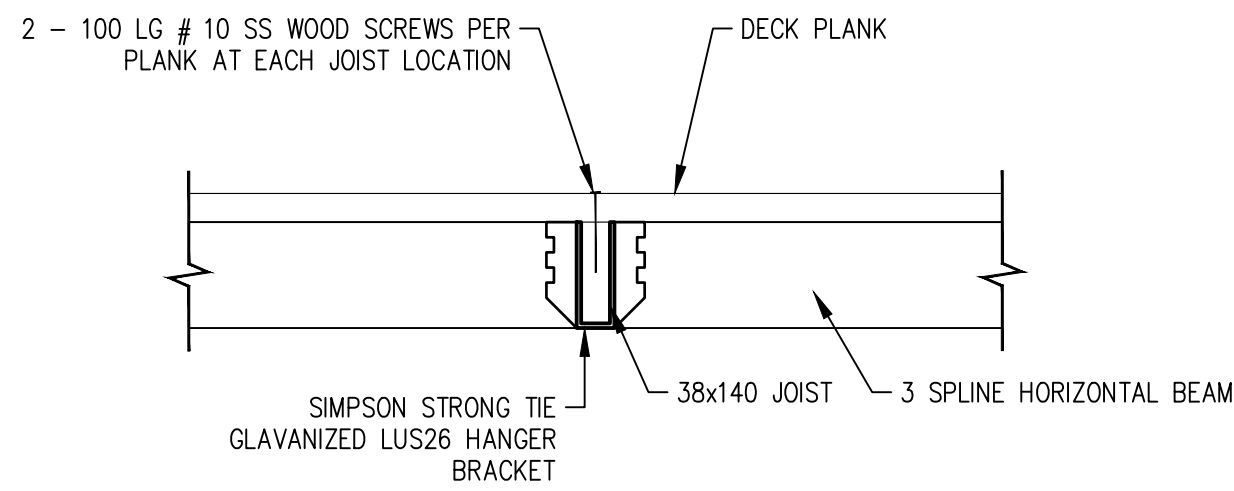
Park Responsable /Office/Agent Responsable		PW25C Project Manager/Administrateur de Projets TP	
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Drawing Reference No./No. de référence du dessin		29	
C-504			



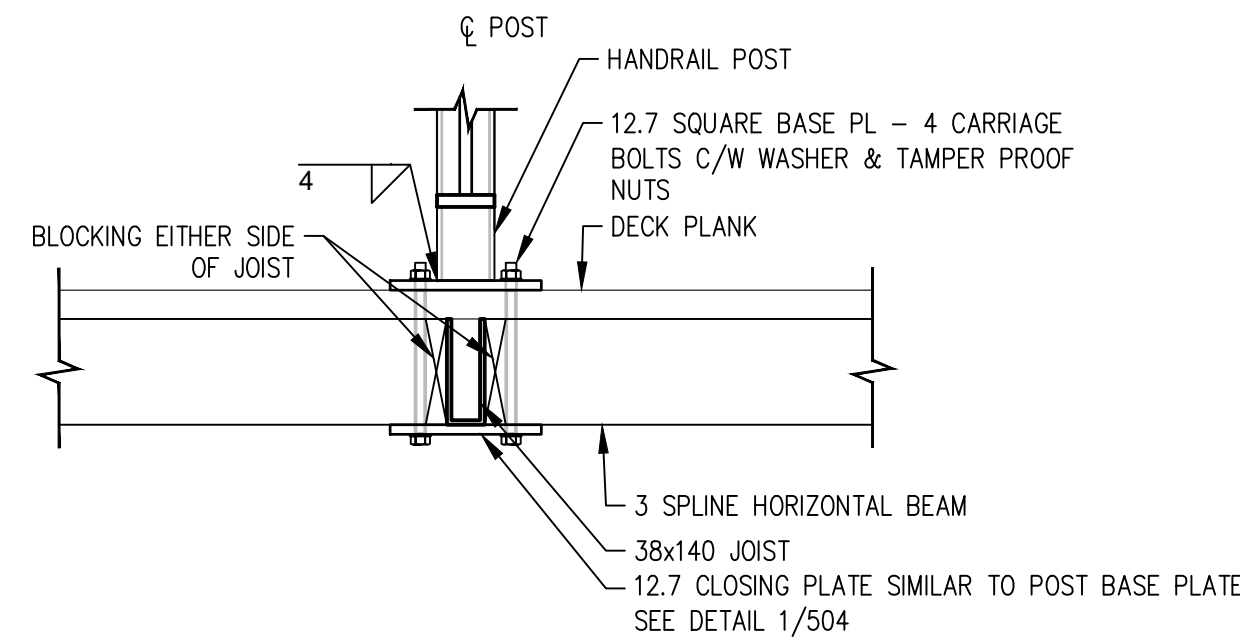
1 DETAIL
ALDERSON TRAIL
OUTLOOK
1:10



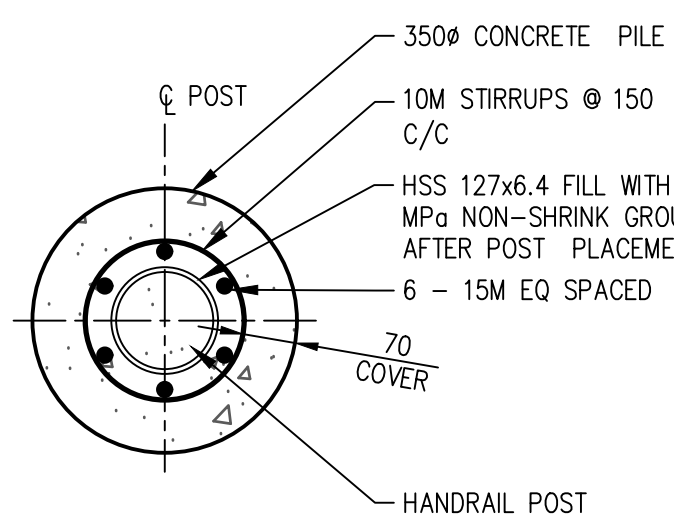
2 DETAIL
ALDERSON TRAIL OUTLOOK
BEAM SUPPORT
1:10



3 DETAIL
ALDERSON TRAIL OUTLOOK
JOIST
1:10



4 DETAIL
ALDERSON TRAIL OUTLOOK
FENCE POST TO JOIST CONNECTION
1:10



5 DETAIL
ALDERSON TRAIL OUTLOOK
FOUNDATION
1:10

0	2018NOV30	ISSUED FOR TENDER	ZZ	AM
No.	Date/Date	Description/Description	Drawn by Dessiné par	Approved Approuvé

Revision / Revision				
A	detail number numéro de détail		A	
B	source drawing no. de dessin no.		B	C
C	detail on drawing no. détail sur dessin no.			

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
Associated Engineering APEGA Permit to Practice P 3979	

Public Works and Government Services Canada Travaux publics et Services gouvernementaux Canada	
Client Services Team Southern Alberta Operations Branch	Le Client Entretien l'Équipe Alberta Méridionale Branche d'Opérations

Canada	
Client/client Parks Canada Agency	L'Agence Parcs Canada
Western and Northern Region	Ouest et Nord du Canada

Project title/Titre du projet WLNP TRAILS IMPROVEMENT

Drawing title/Titre du dessin DETAILS 5 OF 5
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Surveyed by/Arpenté par Z. ZIMMERMAN	Drawn by/Dessiné par Z. ZIMMERMAN	Date/Date 26-SEP-18
Designed by/Concept par A. McDONALD	Reviewed by/Revisé par AS SHOWN	Scale/Echelle AS SHOWN
PWSC Project Manager/Administrateur de Projets TPSGC		
Client Acceptance/Acceptation du client		Approved by/Approuvé par
Park Responsible Officer/Agent Responsable	PWSC Project Manager/Administrateur de Projets TPSGC	
Project No./No. du projet R.099828.001	Asset No./No. du bien	Sheet No./No. de la feuille 29
Drawing Reference No./No. de référence du dessin C-505		