

Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.  
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Notes

- ALL DIMENSIONS SHOWN IN MILLIMETER UNLESS OTHERWISE NOTED.
- AREA UNDER THE BASE SHALL BE EXCAVATED TO BELOW THE FROST LINE (1100mm) OR TO A DEPTH NECESSARY TO REACH FIRM, UNDISTURBED MATERIAL, WHICHEVER IS DEEPER.
- EXCAVATE 300mm BEYOND THE PERIMETER OF THE BASE AND BACKFILL THE ENTIRE EXCAVATED AREA WITH CLEAN, NON-EXPANSIVE SOIL, COMPACTED TO 95% SPD IN 300mm LAYERS.
- SEAL CABLE PASSAGE THROUGH CONDUIT END WITH FIRE RETARDANT EXPANSION FOAM.
- RESERVED.
- ALL PART NUMBERS SUBJECT TO APPROVED EQUIVALENT.
- FIBER SPLICE BOX TO BE SIZED TO CONTAIN 10m OF EACH FIBER CABLE FOR ACCESS TO SPLICE. SPLICE BOX TO BE SIZED FOR CABLE MINIMUM BENDING RADIUS x2.
- FIBER OPTIC JUNCTION BOX TO BE PLACED IN ROAD ALLOWANCE AND OUTSIDE OF TRAVELED ROAD SURFACE. MAINTAIN MINIMUM OF 1.2m CLEARANCE FROM EDGE OF TRAVELED ROAD SURFACE TO EDGE OF JUNCTION BOX.

Legend

Revision	By	Appd.	YY.MM.DD	
H	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.09.07
G	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.08.28
F	ISSUED FOR MUNICIPAL CONSENT	JM	JR	17.08.16
E	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.07.18
D	ISSUED FOR MUNICIPAL CONSENT	JL	AR	17.07.17

Revision

File Name	Dwn.	Chkd.	Dsgn.	YY.MM.DD
dwg_60104_AWF_E404.dwg	BM	JR	BM/JM	16.10.12

Permit-Seal



FOR MUNICIPAL CONSENT

Client/Project



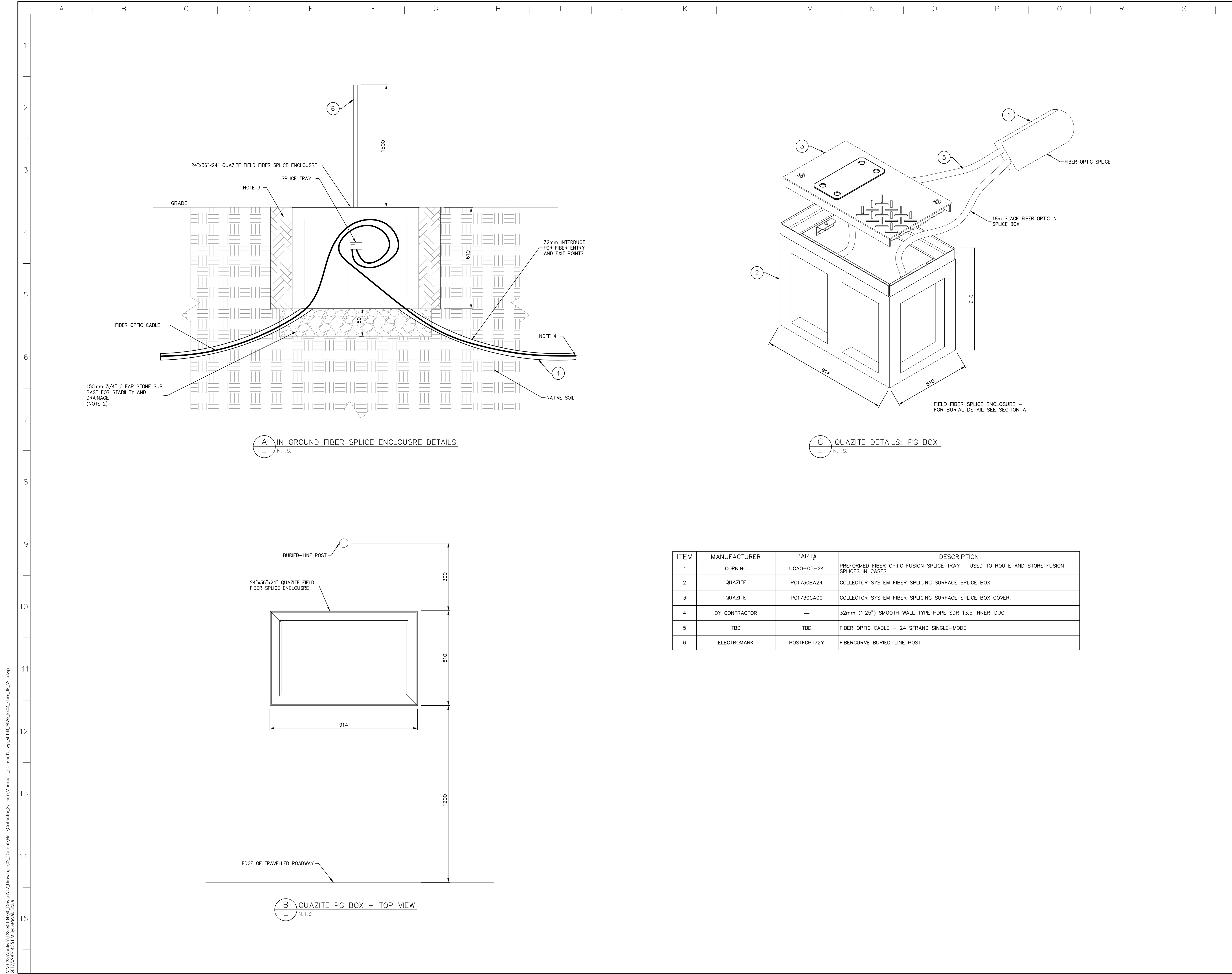
AMHERST ISLAND WIND PROJECT  
75MW WIND FARM  
Amherst Island, Loyalist Township, Ontario

Title

34.5kV COLLECTOR SYSTEM  
FIBER OPTIC JUNCTION BOX  
INSTALLATION DETAILS

Project No.	Scale	
133560104	N.T.S.	
Drawing No.	Sheet	Revision

E404A 1 of 1 H



ITEM	MANUFACTURER	PART#	DESCRIPTION
1	CORNING	UCA0-05-24	PERFORMED FIBER OPTIC FUSION SPLICE TRAY - USED TO ROUTE AND STORE FUSION SPLICES IN CASES
2	QUAZITE	PG1730BA24	COLLECTOR SYSTEM FIBER SPLICING SURFACE SPLICE BOX.
3	QUAZITE	PG1730CA00	COLLECTOR SYSTEM FIBER SPLICING SURFACE SPLICE BOX COVER.
4	BY CONTRACTOR	-	32mm (1.25") SMOOTH WALL TYPE HDPE SDR 13.5 INNER-DUCT
5	TBD	TBD	FIBER OPTIC CABLE - 24 STRAND SINGLE-MODE
6	ELECTROMARK	POSTFCPT72Y	FIBERCURVE BURIED-LINE POST

V:\013356\active\133560104\_40\_Design\42\_Drawing\42\_Corner\Elec\_Collector\_System\Municipal\_Corner.dwg\_40104\_AWF\_E404\_Fiber\_IB.dwg  
2017/09/17 4:55 PM by: Macell, Blake



Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.  
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Notes

- ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL UNDERGROUND PARALLEL CABLES SHALL BE SEPARATED FROM ALL OTHER EXISTING UTILITIES RUNNING IN PARALLEL BY A MINIMUM OF 1.0m CENTERLINE TO CENTERLINE, UNLESS OTHERWISE INDICATED BY SPECIFIC UTILITY CLEARANCE REQUIREMENTS.
- SUPPLY, PLACE AND COMPACT NATIVE BACKFILL. NATIVE BACKFILL TO BE FREE OF DEBRIS, SHARP OBJECTS, ORGANIC OR FROZEN MATERIAL AND SCREENED WHERE LARGE PARTICLE SIZE MAY CAUSE DAMAGE TO CABLE. NATIVE BACKFILL TO BE INSTALLED IN LIFTS OF 300mm AND COMPACTED TO 95% SPD.
- THE PADDING BACKFILL MATERIAL SHALL BE SCREENED NATIVE MATERIAL WITH MAXIMUM PARTICLE SIZE NO LARGER THAN 4.75mm IN DIAMETER. PADDING BACKFILL TO BE INSTALLED IN LIFTS OF 300mm AND COMPACTED TO 95% SPD.
- THERMAL BACKFILL TO BE IMPORTED SCREENED CRUSHED LIMESTONE WHERE CABLE AMPACITY CONTROL IS REQUIRED WITH NO PARTICLES LARGER THAN 4.75mm. THERMAL RESISTIVITY SHALL NOT EXCEED 1.0°C.m/W IN ITS DRY STATE.
- INSTALLATION METHODS TO BE IN ACCORDANCE WITH OESC AND MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN TREFOL CONFIGURATION.
- FINAL LOCATION AND SIZE OF BARE Cu GROUND CONDUCTOR TO BE CONFIRMED WITH FINAL GROUNDING STUDY.
- TOPSOIL TO BE SEGREGATED DURING TRENCH EXCAVATION AND RETURNED TO GRADE LEVEL FOLLOWING TRENCH BACKFILL TO ENSURE VEGETATION RE-GROWTH AT CABLE INSTALLATIONS.
- TERRAFIX COMBGRID 40/40 SHALL BE PLACED BELOW GRANULAR A MATERIAL DURING TRENCH BACKFILL. OVERLAP ADJACENT TERRAFIX COMBGRID 40/40 MINIMUM 300mm.

Legend

- 35kV POWER CABLE
- FIBER OPTIC CABLE
- Cu GROUND CONDUCTOR
- EXISTING NATIVE SOIL
- COMPACTED NATIVE FILL
- PADDING BACK FILL
- THERMAL BACK FILL
- TERRAFIX COMBGRID 40/40

H	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.09.07
G	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.08.28
F	ISSUED FOR MUNICIPAL CONSENT	JM	JR	17.08.16
E	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.07.18
D	ISSUED FOR MUNICIPAL CONSENT	JL	AR	17.07.17

Revision	By	Appd.	YY.MM.DD
----------	----	-------	----------

File Name:	dwg_60104_AWF_E406.dwg	BM	JR	JM	15.12.07
		Dwn.	Chkd.	Dgn.	YY.MM.DD

Permit-Seal



FOR MUNICIPAL CONSENT

Client/Project

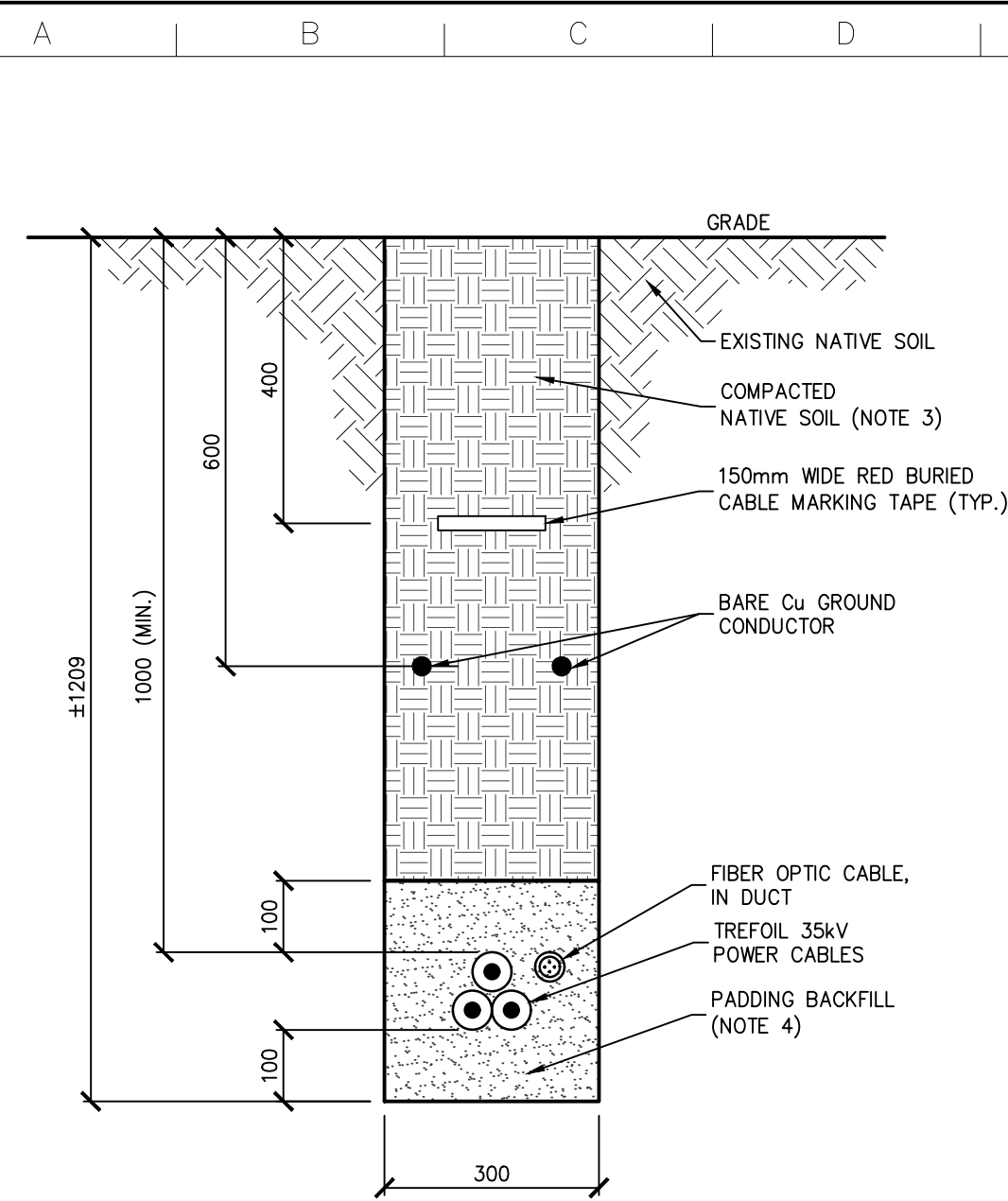


AMHERST ISLAND WIND PROJECT  
75MW WIND FARM  
Amherst Island, Loyalist Township, Ontario

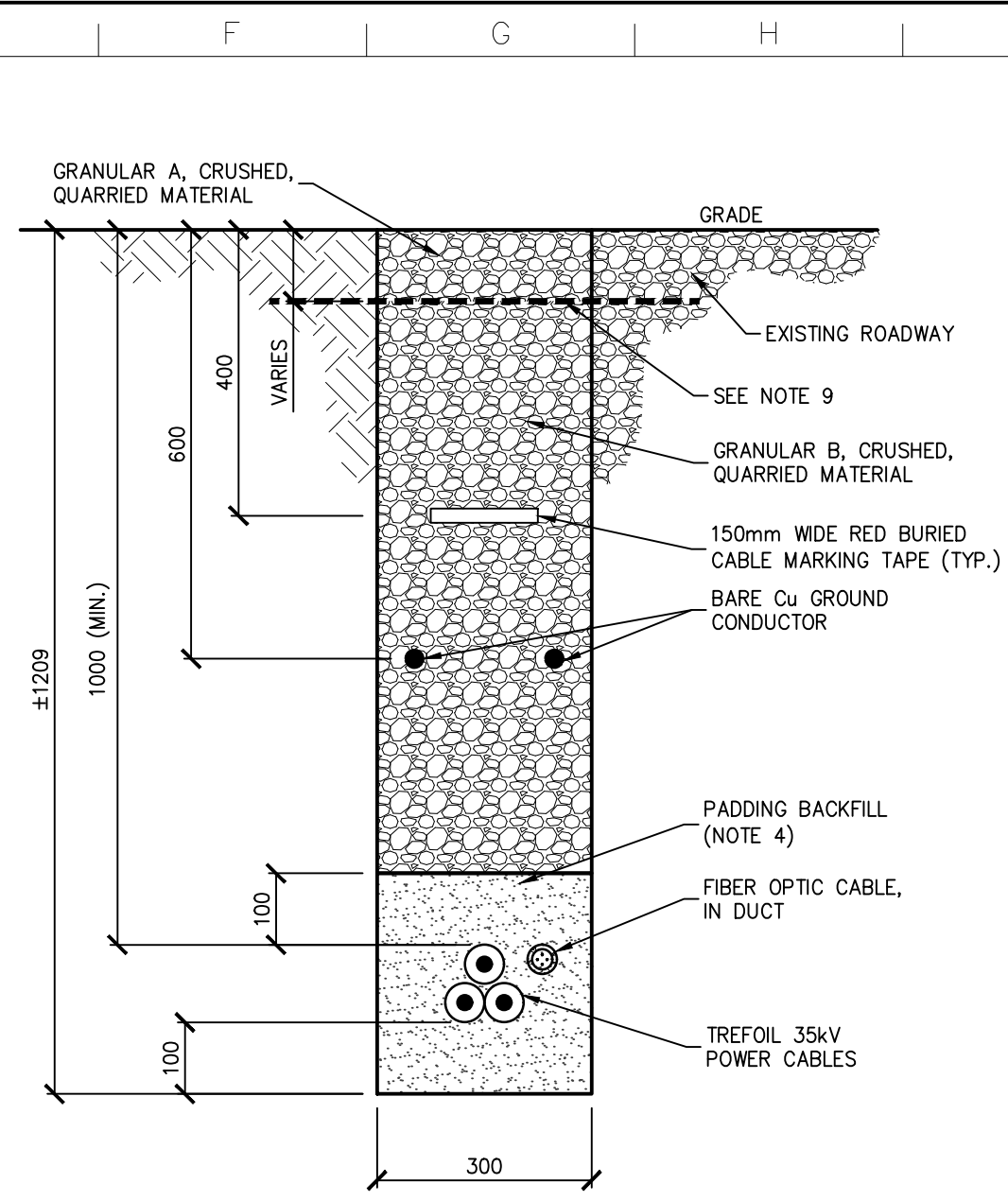
Title

34.5kV COLLECTOR SYSTEM  
CABLE TRENCH DETAILS

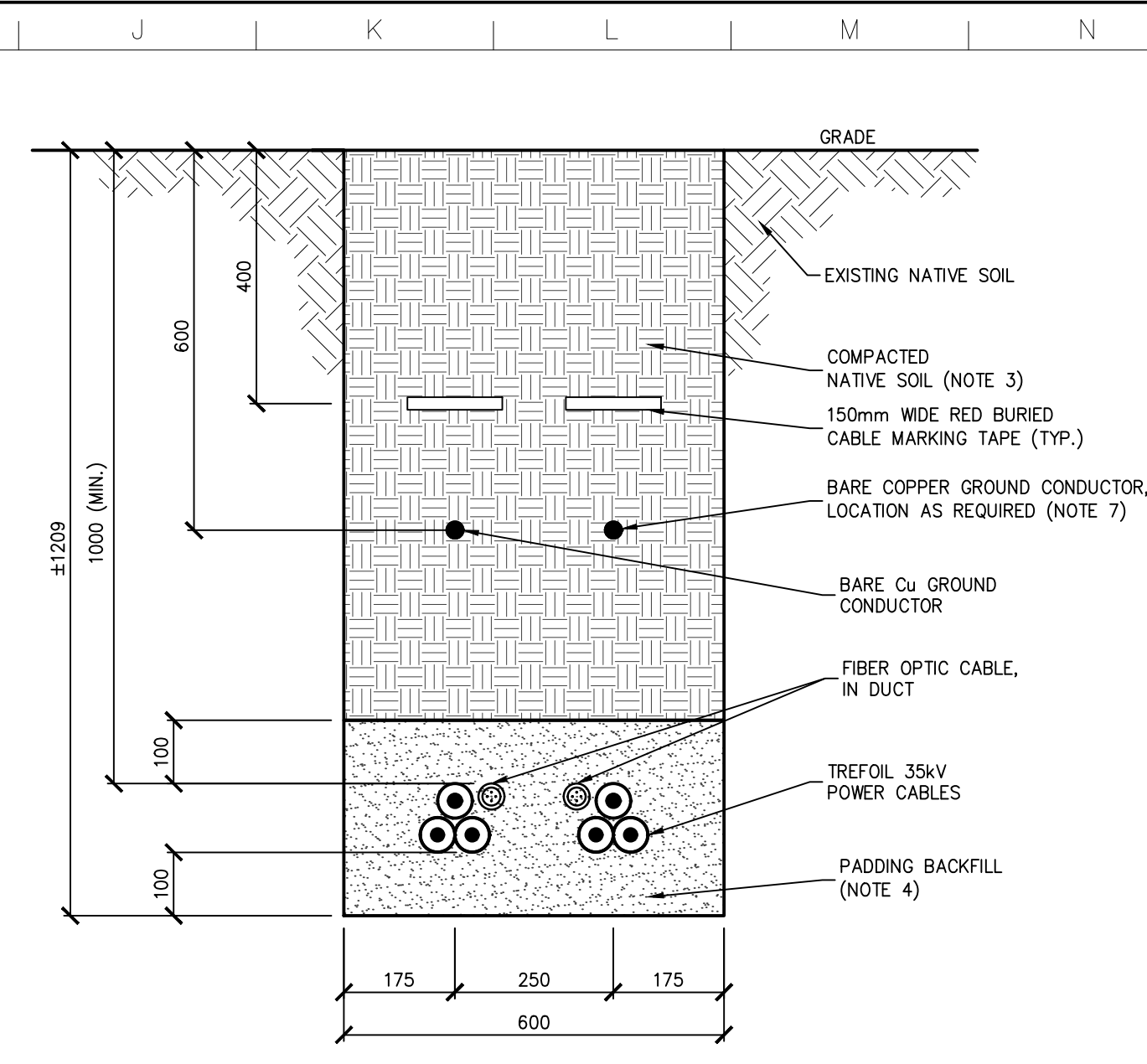
Project No.	Scale	
133560104	1:10	
Drawing No.	Sheet	Revision



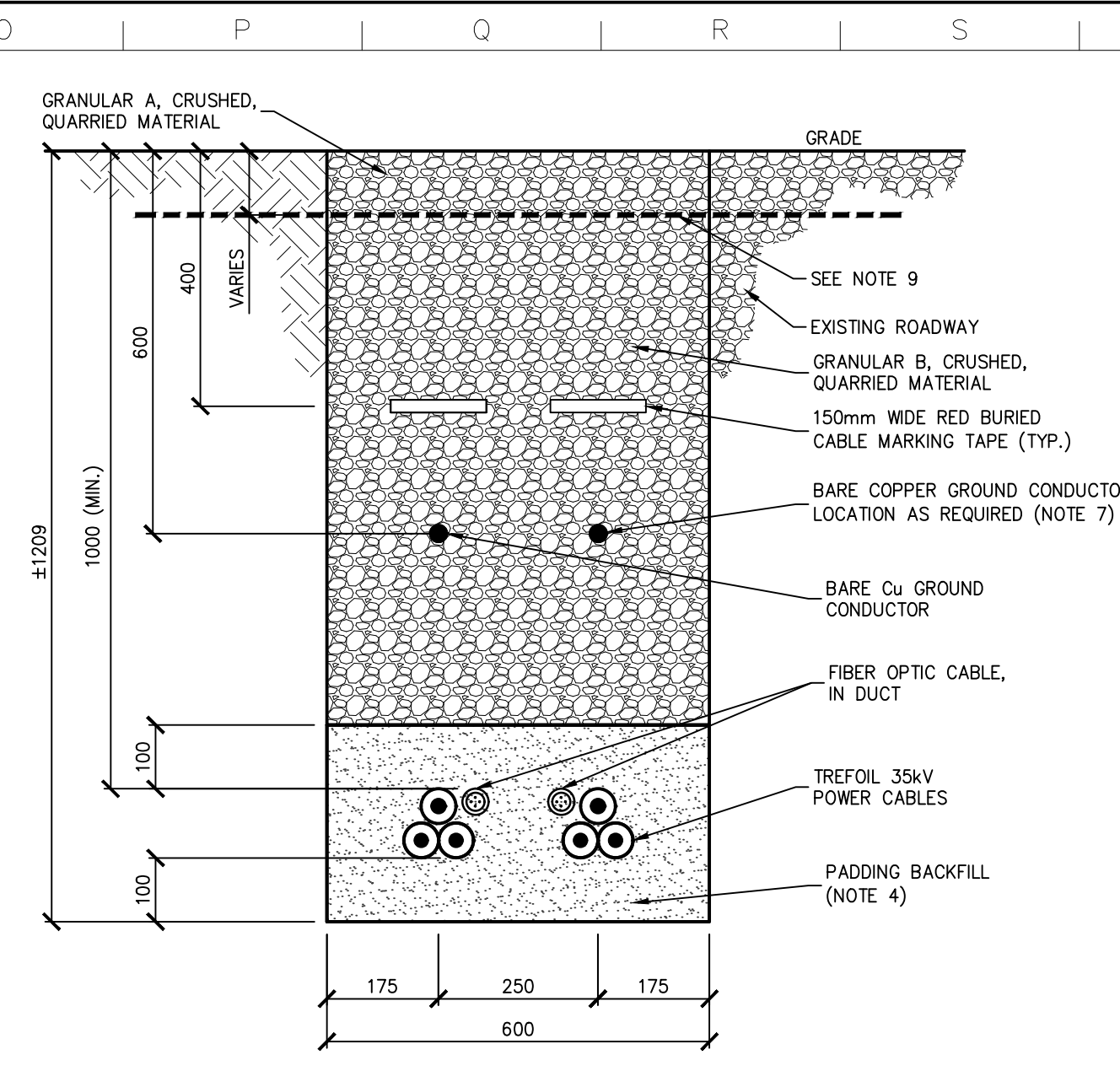
**A** ONE CIRCUIT IN GRASS OR SHOULDER TRENCH THROUGH SOIL  
Scale 1:10



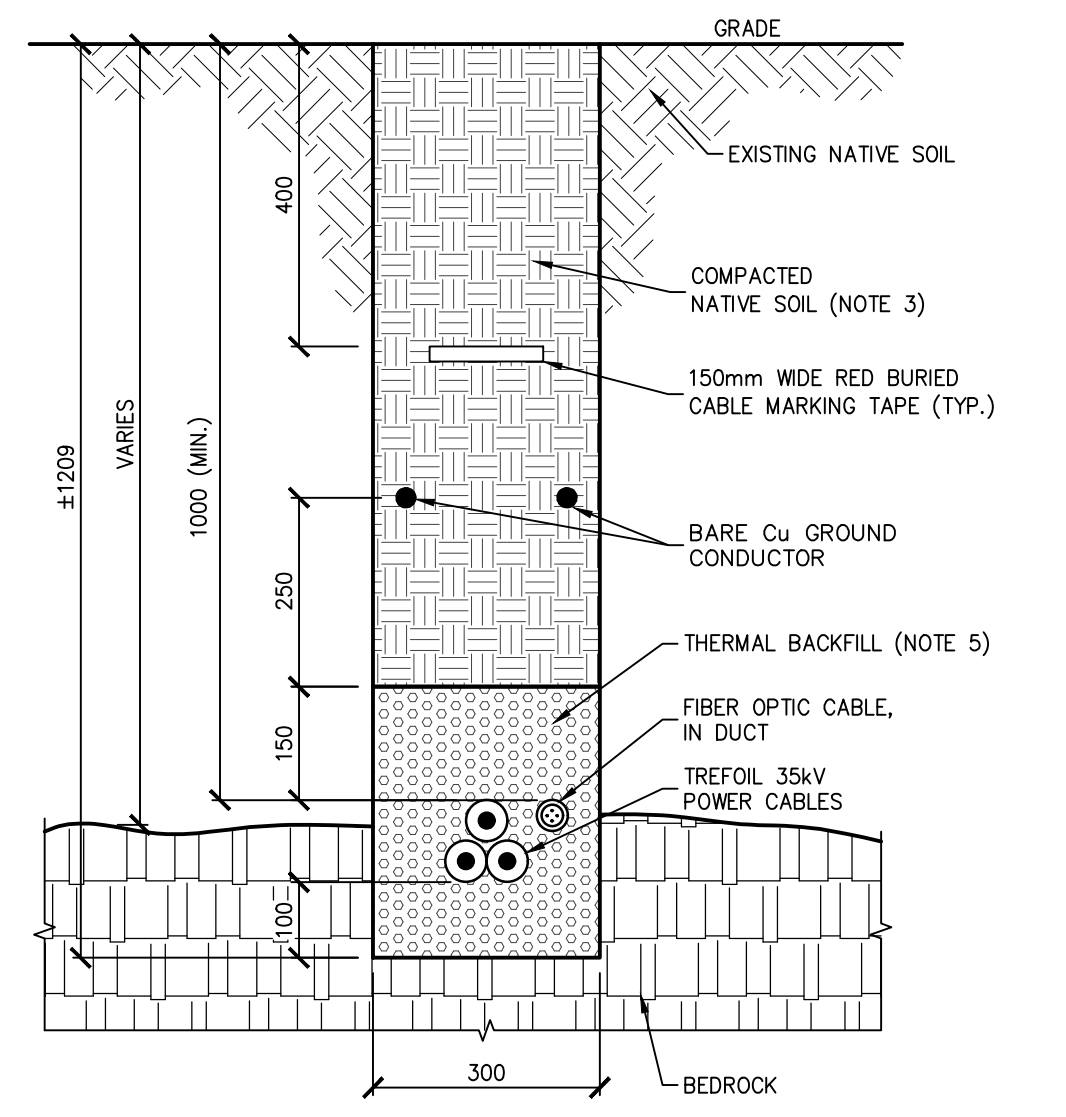
**B** ONE CIRCUIT UNDER ROADWAY TRENCH THROUGH SOIL  
Scale 1:10



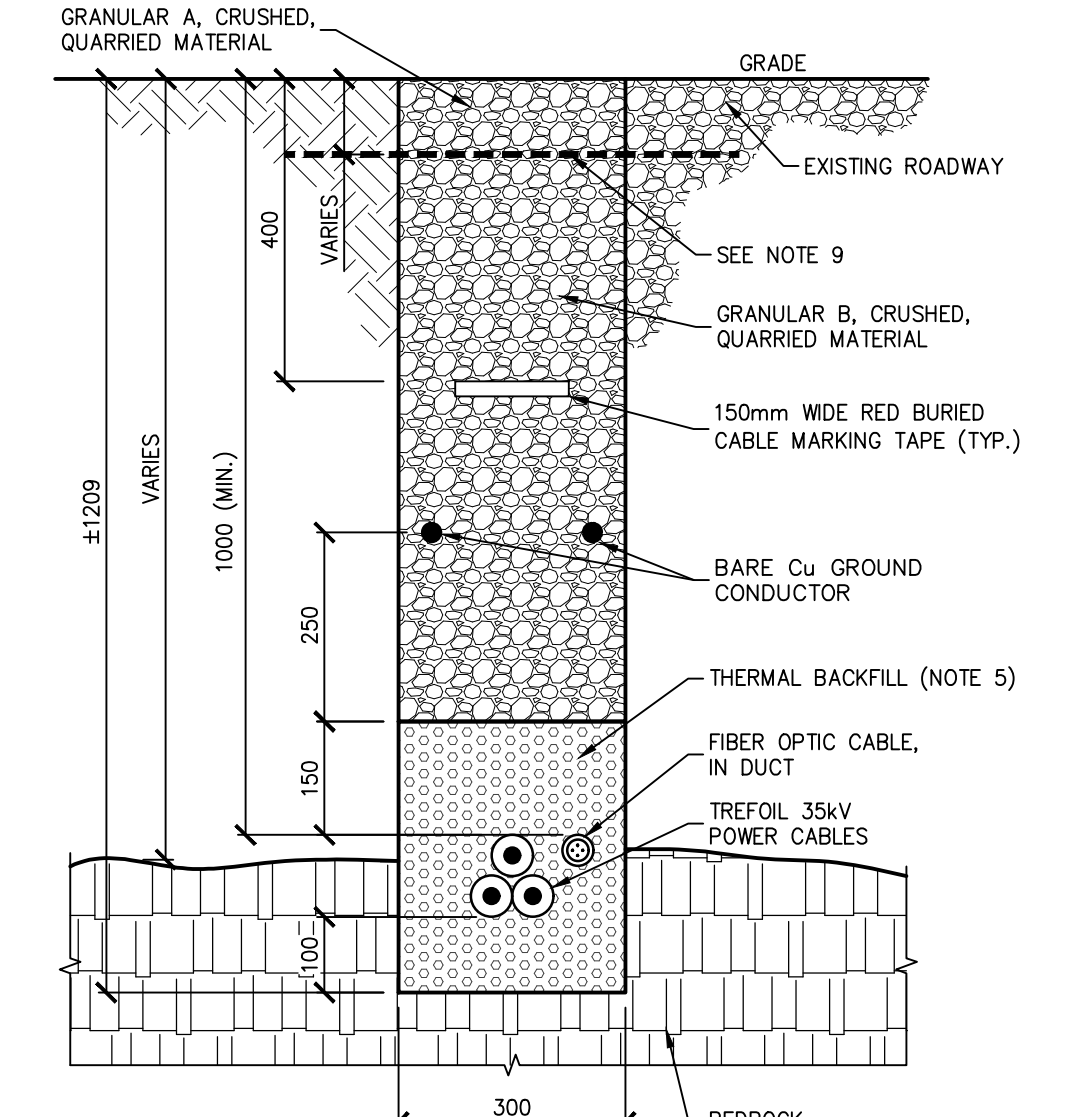
**C** TWO CIRCUIT IN GRASS OR SHOULDER TRENCH THROUGH SOIL  
Scale 1:10



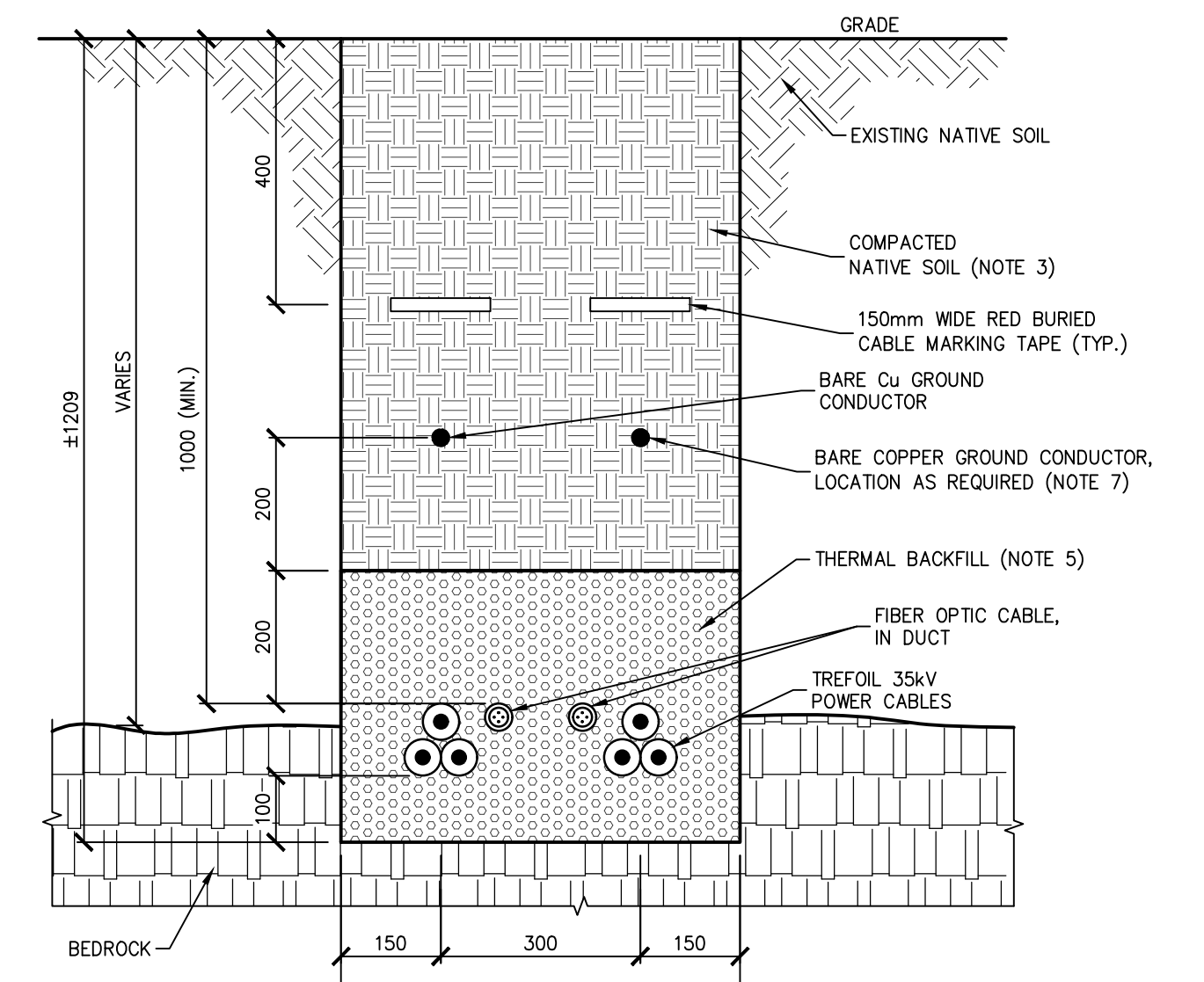
**D** TWO CIRCUIT UNDER ROADWAY TRENCH THROUGH SOIL  
Scale 1:10



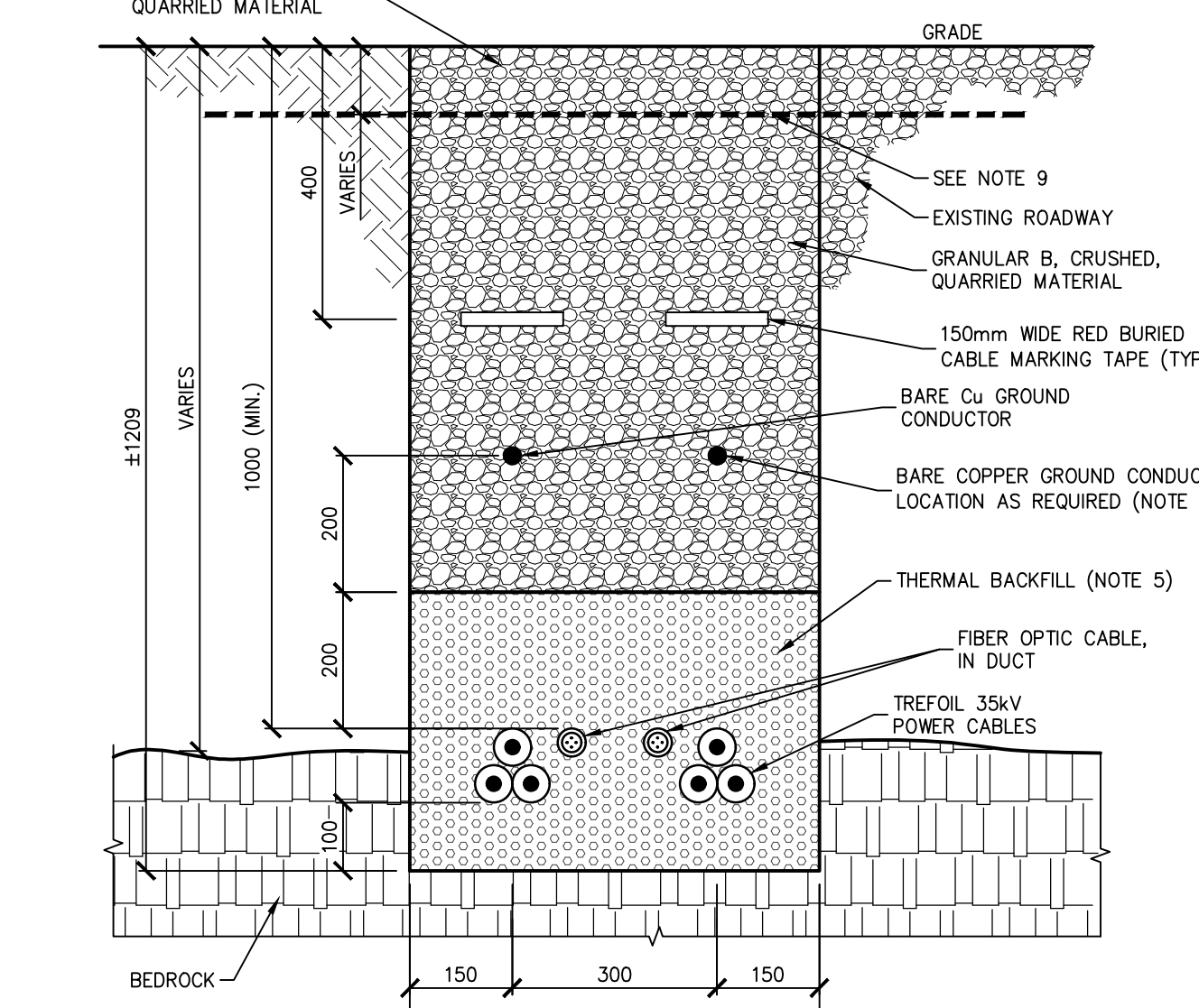
**A1** ONE CIRCUIT IN GRASS OR SHOULDER TRENCH THROUGH BEDROCK  
Scale 1:10



**B1** ONE CIRCUIT UNDER ROADWAY TRENCH THROUGH BEDROCK  
Scale 1:10



**C1** TWO CIRCUIT IN GRASS OR SHOULDER TRENCH THROUGH BEDROCK  
Scale 1:10



**D1** TWO CIRCUIT UNDER ROADWAY TRENCH THROUGH BEDROCK  
Scale 1:10

V:\01355\active\133560104\_0\_Design\42\_Drawing\42\_Drawing\42\_Collector\_System\Municipal\_Consent\dwg\_60104\_AWF\_E406\_trench\_sections\_MC.dwg 2017/09/19 13:43:35 by: Nicole Blake



Copyright Reserved

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.  
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Notes

- ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- ALL UNDERGROUND PARALLEL CABLES SHALL BE SEPARATED FROM ALL OTHER EXISTING UTILITIES RUNNING IN PARALLEL BY A MINIMUM OF 1.0m CENTERLINE TO CENTERLINE, UNLESS OTHERWISE INDICATED BY SPECIFIC UTILITY CLEARANCE REQUIREMENTS.
- SUPPLY, PLACE AND COMPACT NATIVE BACKFILL. NATIVE BACKFILL TO BE FREE OF DEBRIS, SHARP OBJECTS, ORGANIC OR FROZEN MATERIAL AND SCREENED WHERE LARGE PARTICLE SIZE MAY CAUSE DAMAGE TO CABLE. NATIVE BACKFILL TO BE INSTALLED IN LIFTS OF 300mm AND COMPACTED TO 95% SPD.
- THE PADDING BACKFILL MATERIAL SHALL BE SCREENED NATIVE MATERIAL WITH MAXIMUM PARTICLE SIZE NO LARGER THAN 4.75mm IN DIAMETER. PADDING BACKFILL TO BE INSTALLED IN LIFTS OF 300mm AND COMPACTED TO 95% SPD.
- THERMAL BACKFILL TO BE IMPORTED SCREENED CRUSHED LIMESTONE WHERE CABLE AMPACITY CONTROL IS REQUIRED WITH NO PARTICLES LARGER THAN 4.75mm. THERMAL RESISTIVITY SHALL NOT EXCEED 1.0°C.m/W IN ITS DRY STATE.
- INSTALLATION METHODS TO BE IN ACCORDANCE WITH OESC AND MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN TREFOL CONFIGURATION.
- FINAL LOCATION AND SIZE OF BARE Cu GROUND CONDUCTOR TO BE CONFIRMED WITH FINAL GROUNDING STUDY.
- TOPSOIL TO BE SEGREGATED DURING TRENCH EXCAVATION AND RETURNED TO GRADE LEVEL FOLLOWING TRENCH BACKFILL TO ENSURE VEGETATION RE-GROWTH AT CABLE INSTALLATIONS.
- TERRAFIX COMBIGRID 40/40 SHALL BE PLACED BELOW GRANULAR A MATERIAL DURING TRENCH BACKFILL. OVERLAP ADJACENT TERRAFIX COMBIGRID 40/40 MINIMUM 300mm.

Legend

- 35kV POWER CABLE
- FIBER OPTIC CABLE
- Cu GROUND CONDUCTOR
- EXISTING NATIVE SOIL
- COMPACTED NATIVE FILL
- PADDING BACK FILL
- THERMAL BACK FILL
- TERRAFIX COMBIGRID 40/40

Revision	By	Appd.	YY.MM.DD	
H	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.09.07
G	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.08.28
F	ISSUED FOR MUNICIPAL CONSENT	JM	JR	17.08.16
E	ISSUED FOR MUNICIPAL CONSENT	BM	AR	17.07.18
D	ISSUED FOR MUNICIPAL CONSENT	JL	AR	17.07.17

File Name	Dwn.	Chkd.	Dgn.	YY.MM.DD
File Name: dwg_60104_AWF_E406.dwg	BM	JR	JM	15.12.07

Permit-Seal



FOR MUNICIPAL CONSENT

Client/Project



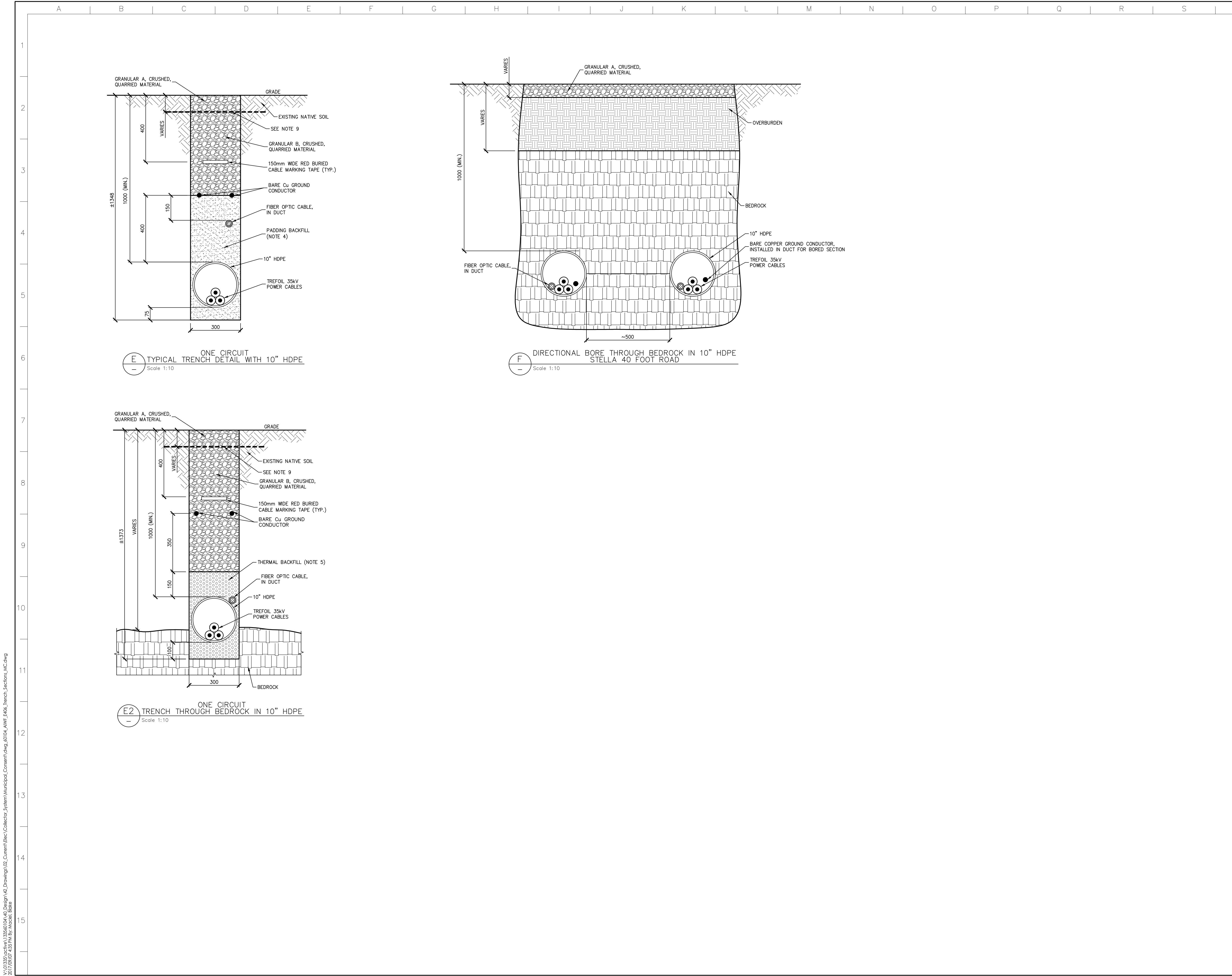
AMHERST ISLAND WIND PROJECT  
75MW WIND FARM  
Amherst Island, Loyalist Township, Ontario

Title

34.5kV COLLECTOR SYSTEM  
CABLE TRENCH DETAILS

Project No.	Scale	
133560104	1:10	
Drawing No.	Sheet	Revision

E406A 2 of 2 H



V:\0133560104\040\_Design\42\_Drawing\42\_Drawing\02\_Curent\Bac\_Collector\_System\Municipal\_Consent.dwg\_60104\_AWF\_E406\_Trench\_Sections\_MC.dwg 2017/09/17 4:35 PM By: Nicole Blake