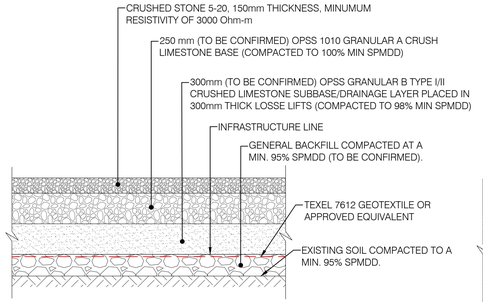
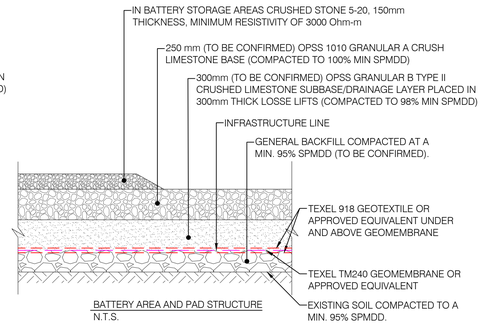
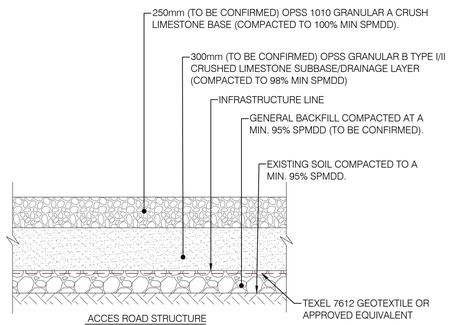


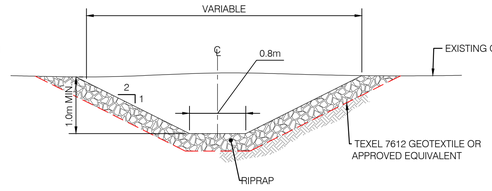
ELECTRICAL PAD STRUCTURE
N.T.S.



BATTERY AREA AND PAD STRUCTURE
N.T.S.



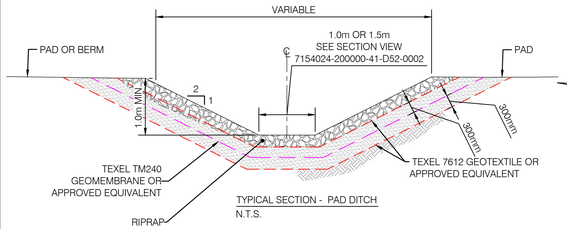
ACCES ROAD STRUCTURE
N.T.S.



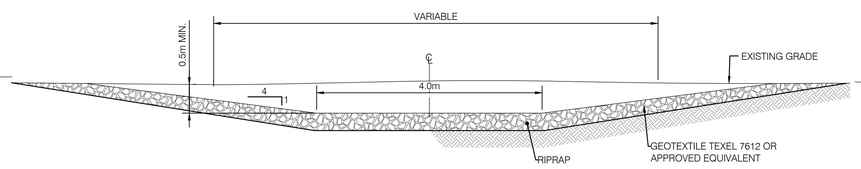
TYPICAL SECTION - ACCES ROAD DITCH
N.T.S.

NOTES:

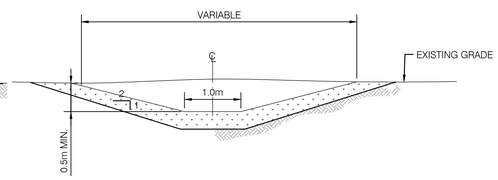
1. ALL MATERIAL THICKNESS SHALL BE VALIDATED FOLLOWING THE GEOTECHNICAL REPORT RECOMMENDATION(S). BASED ON THE DESIGN VEHICULE
2. DIMENSIONS ON THIS DRAWING ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.



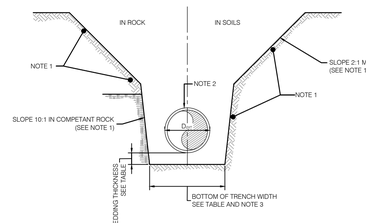
TYPICAL SECTION - PAD DITCH
N.T.S.



TYPICAL SECTION - BASIN OUTLET
N.T.S.



TYPICAL SECTION - VEGETATED SWALE
N.T.S.



NOTES:

1. EXCAVATION SLOPES ARE NOT RESTRICTED TO SLOPES SHOWN ON DRAWING. THE EXCAVATION MUST MEET THE REQUIREMENTS OF THE "OCCUPATIONAL HEALTH AND SAFETY ACT", NAMELY THE REQUIREMENTS FOR MATERIAL STORAGE, CIRCULATION OF VEHICLES NEAR THE EXCAVATION AND STABILITY OF THE SLOPES.
2. THE PIPE MUST BE CENTERED AT THE BOTTOM OF THE TRENCH. Dext. IS THE OUTSIDE DIAMETER OF THE PIPE. MESURED IN MILLIMETERS.
3. BOTTOM OF TRENCH WIDTH CORRESPONDS TO THE DISTANCE BETWEEN SHORING WALLS, IF EXCAVATION IS SUPPORTED.

NOMINAL DIAMETER OF THE PIPE mm	MIN. BEDDING THICKNESS (mm)	BOTTOM OF TRENCH WIDTH mm
300 AND LESS	150	D_{EXT} + 900
350 to 600	150	D_{EXT} + 900
750 to 1200	200	D_{EXT} + 1200
1350 to 1500	250	D_{EXT} + 1200
1800 AND MORE	300	A) D_{EXT} + 1200 TRENCH IS SHORED B) D_{EXT} + 900 TRENCH IS NOT SHORED

TRENCH SECTION
N.T.S.

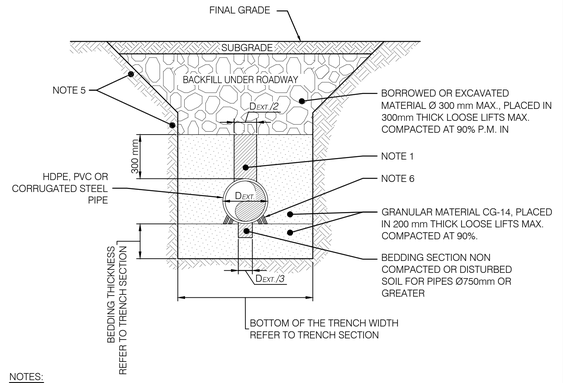
POND BACKFILL MATERIAL
N.T.S

INLET/OUTLET EROSION PROTECTION FOR CULVERTS
N.T.S.

RIPRAP		
TYPE	RIPRAP THICKNESS	DIAMETER (mm)
1	300	0-200
2	300	100-200
3	500	200-300
4	700	300-400
5	800	300-500

NOTES:

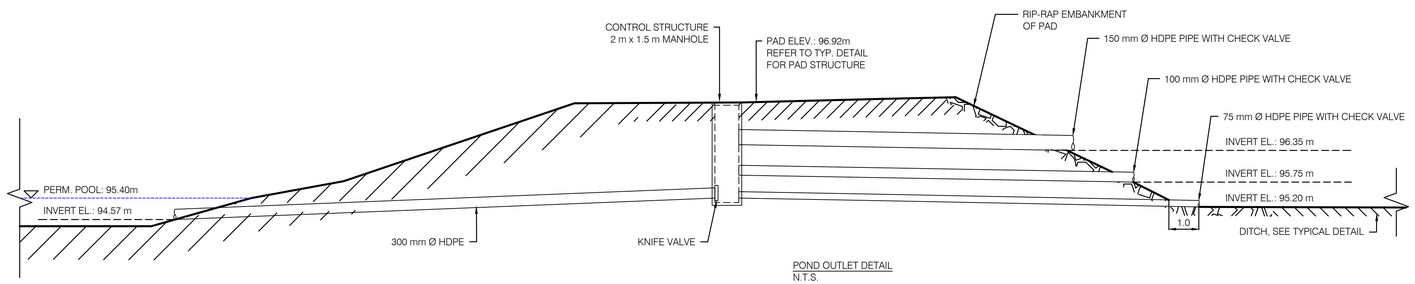
1. D = DIAMETER OF PIPE.
2. DIMENSIONS ARE IN MILLIMETERS



NOTES:

1. COMPACTION EQUIPEMENT SHALL NOT CIRCULATE IN THIS AREA.
2. USE GRANULAR MATERIAL CG-14, ACCORDING TO THE REQUIREMENTS NQ 2560-114 STANDARD.
3. $D_{EXT.}$ IS THE OUTSIDE DIAMETER OF THE PIPE, MESURED IN MILLIMETERS.
4. VIBRATING PLATE, VIBRATING ROLLER OR RAMMER WITH TOTAL APPLIED FORCE NOT TO EXCEED 50kN ARE THE ONLY COMPACTING EQUIPEMENT ALLOWED TO COMPACT THE FIRST METER ABOVE THE PIPE.
5. EXCAVATION SLOPES ARE NOT RESTRICTED TO SLOPES SHOWN ON DRAWING. THE EXCAVATION MUST MEET THE REQUIREMENTS OF THE "OCCUPATIONAL HEALTH AND SAFETY ACT", NAMELY THE REQUIREMENTS FOR MATERIAL STORAGE, CIRCULATION OF VEHICLES NEAR THE EXCAVATION AND STABILITY OF THE SLOPES.
6. IT IS IMPORTANT TO PLACE AND COMPACT BACKFILL MATERIAL IN THIS AREA IN ORDER TO GIVE PROPER SUPPORT TO THE PIPE.

BEDDING AND BACKFILL FOR HDPE, PVC OR CORRUGATED STEEL TRENCH WITHIN A PROPOSED PAD
N.T.S.



POND OUTLET DETAIL
N.T.S.

FOR PERMITTING
NOT TO BE USED FOR CONSTRUCTION

REV	DESCRIPTION	PREPARED BY	CHECKED BY	DATE
AB	FOR PERMITTING	B. THOMAS	V. BRUNELLE P. Eng. P.E.O No. 100617887	2025-05-09
AA	FOR COMMENTS	B. THOMAS	V. BRUNELLE P. Eng. P.E.O No. 100617887	2025-05-02

REVISIONS

DRAWING No.	DESCRIPTION
241437	TOPOGRAPHIC PLAN OF SURVEY
SURFACE LIDAR	LIDAR DTM OTTAWA-GATINEAU 2019-20 PACKAGE M
7154024300000-47-D20-0001-02	TRAIL BESS - 150 MW - 230 kV - 34.5 kV SUBSTATION

REFERENCE DRAWINGS

SEAL:
LICENSED PROFESSIONAL ENGINEER
V. BRUNELLE
100617887
PROVINCE OF ONTARIO
2025-05-09

CLIENT: Evolugen by Brookfield Renewable

PROJECT: TRAIL ROAD BESS

TITLE: CIVIL BESS SITE TYPICAL DETAILS

DESIGNED BY: B. THOMAS	DRAFTED BY: A. MENESES
PREPARED BY: B. THOMAS	CHECKED BY: V. BRUNELLE P. Eng. P.E.O No. 100617887
SCALE: N.T.S	DATE: 2025-04-24

DRAWING No.: 7154024-200000-41-D01-0002 | SHEET: 01 | SIZE: A1 | REV.: AB

BY:MENESES, ANDRES
PRINTED:2025-05-09 08:39:46

0 1 2 3 4 5 6 7 8 9 10 cm

G:\7154024\40_ING_ENG\41_CIVIL\AM\IN PROGRESS\7154024-200000-41-D01-0002_DETAILS.DWG