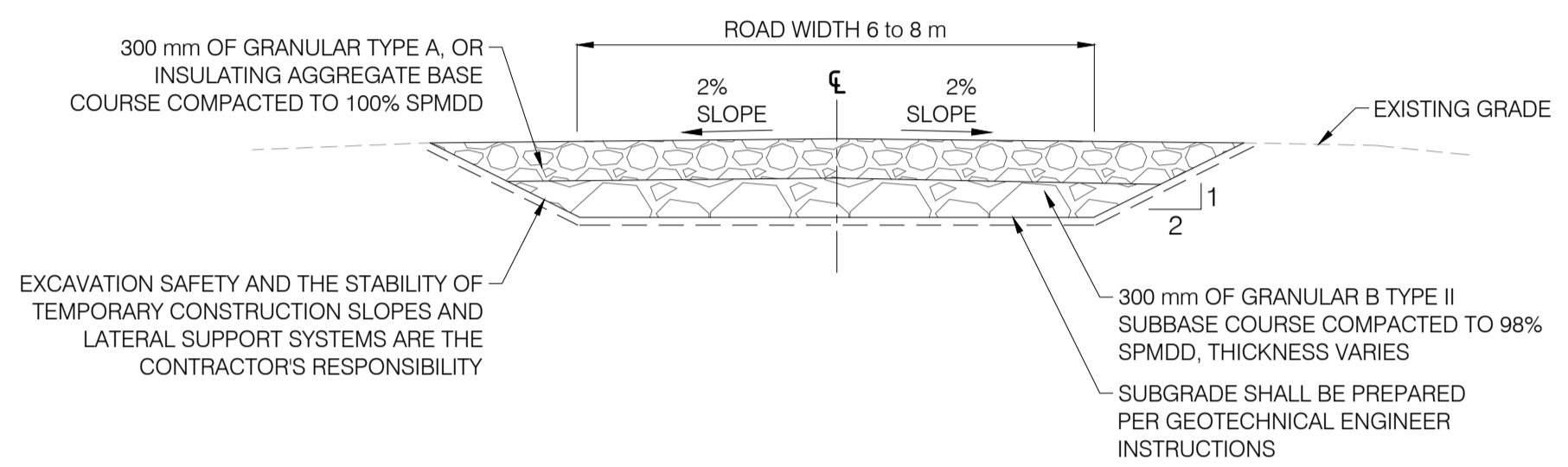
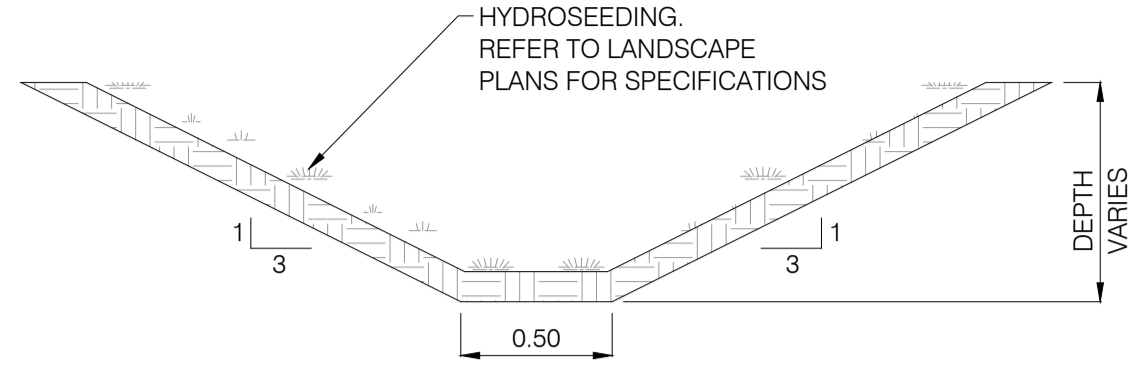


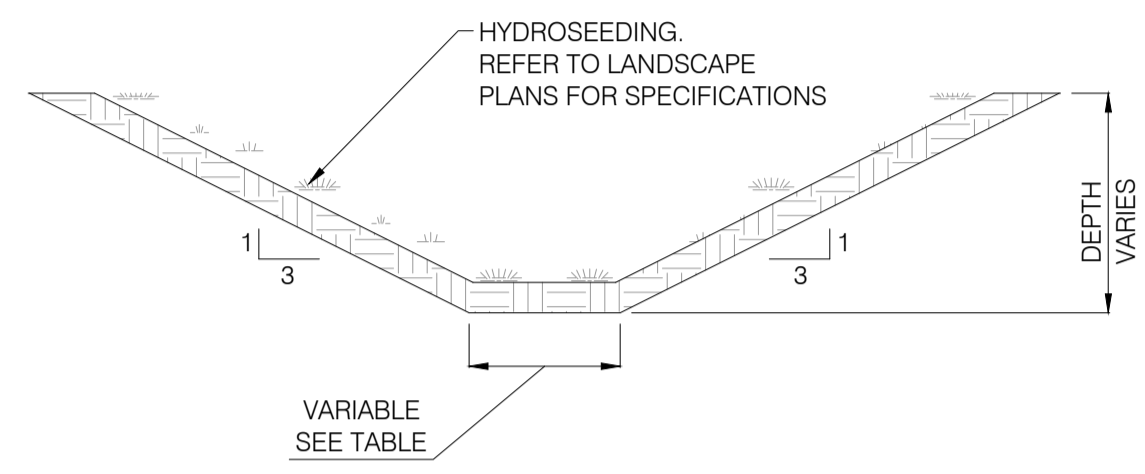
**TYPICAL ROAD SECTION IN FILL - FOR MAIN ACCESS TO THE SITE**  
SCALE: N.T.S.



**TYPICAL ROAD SECTION IN CUT - FOR MAIN ACCESS ROAD TO THE SITE**  
SCALE: N.T.S.



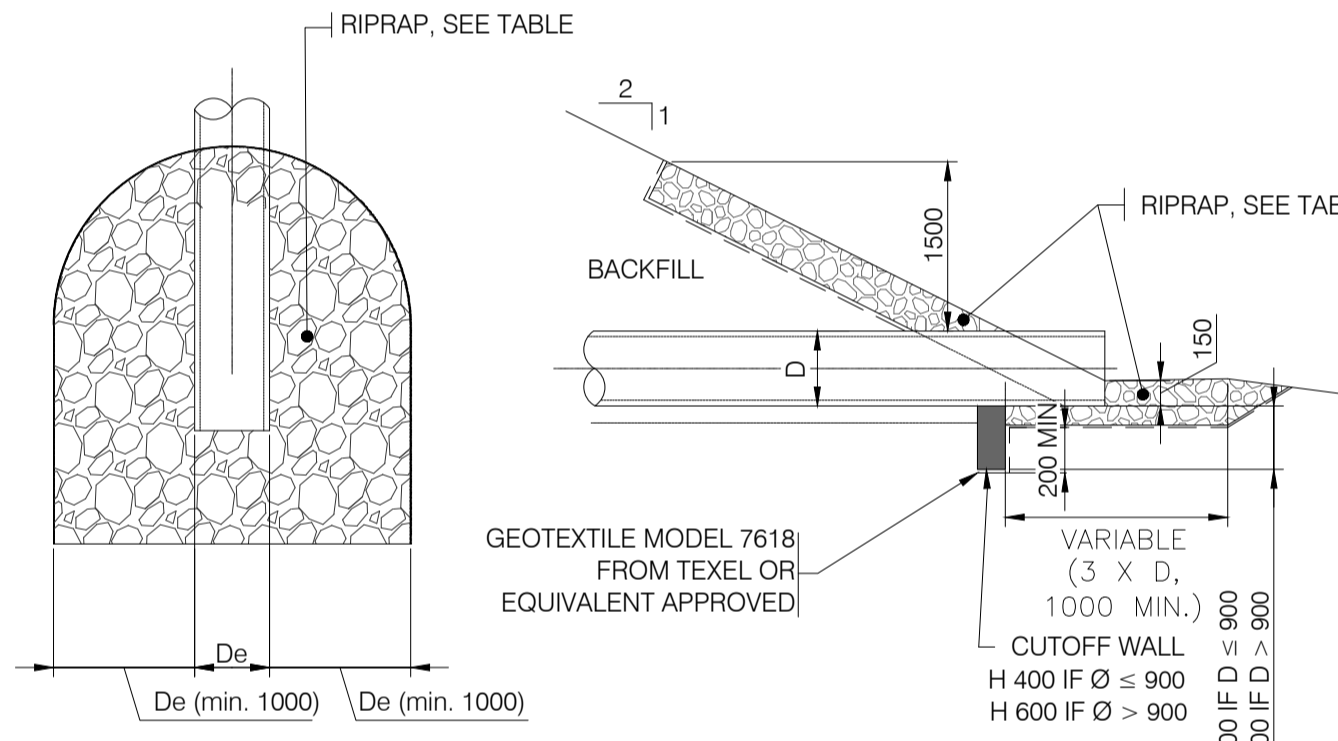
**TYPICAL SECTION - POND OUTLET DITCH**  
SCALE: N.T.S.



**TYPICAL SECTION - REALIGNED WATERCOURSE**  
SCALE: N.T.S.

| STATIONS      | WIDTH |
|---------------|-------|
| 0+000 @ 0+539 | 2 m   |
| 0+539 @ 0+600 | 3 m   |

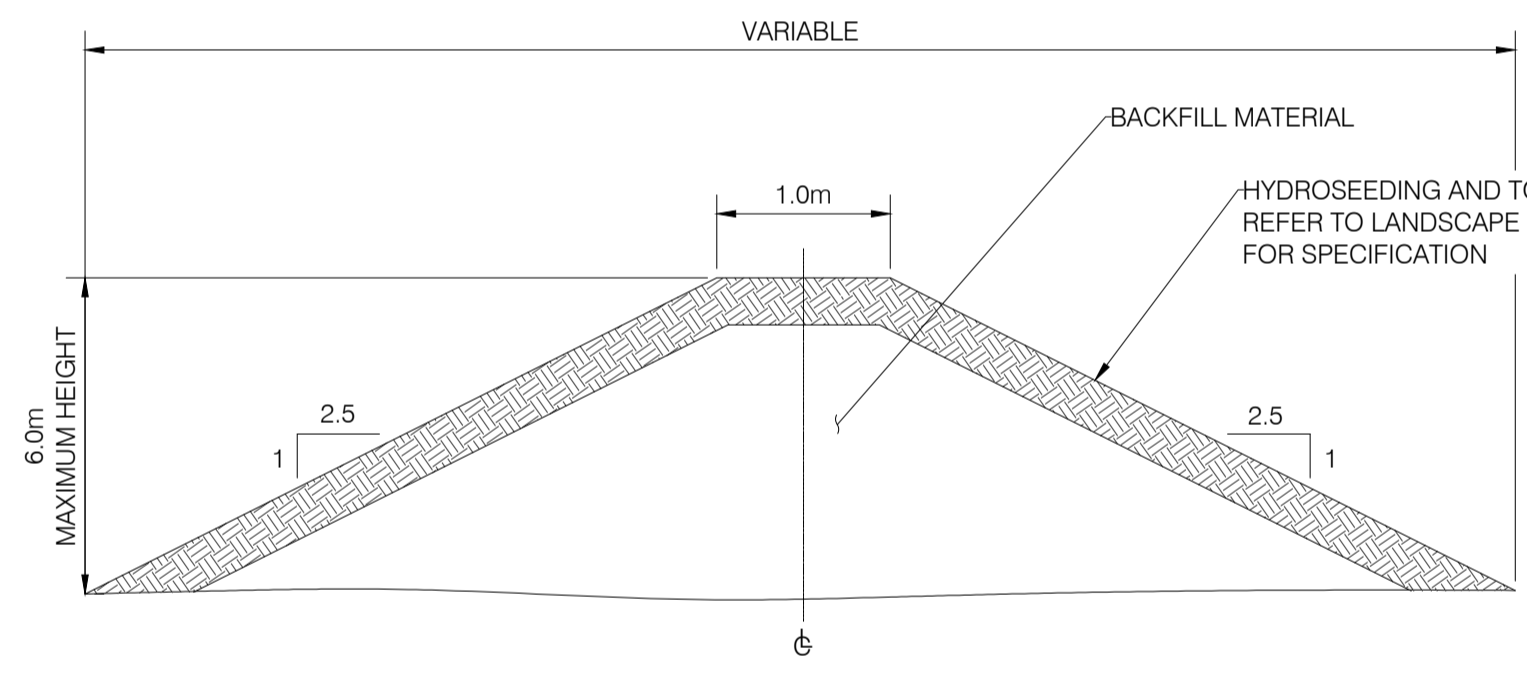
- NOTES:**
- PROJECT COORDINATES ARE SET IN NAD83 (CSRS) MTM ZONE 9 PROJECTION.
  - COORDINATES ARE IN METERS AND ELEVATIONS ARE GEODETIC AND IN METERS.
  - THE DEVELOPER SHALL EMPLOY A PROFESSIONAL GEOTECHNICAL ENGINEER WITH EXPERIENCE IN IN-SITU COMPACTION AND DENSITY TESTING DURING THE PREPARATION OF THE SUB-GRADE AND CONSTRUCTION OF THE ROAD STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUB-GRADE.
  - PREPARATION AND CONSTRUCTION OF THE PROPOSED ACCESS ROAD INCLUDING MATERIAL TYPE, THICKNESSES AND COMPACTION EFFORTS SHALL BE COMPLETED IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS PROVIDED BY HATCH IN THE REPORT "SOUTH MARCH ROAD BATTERY ENERGY STORAGE SYSTEM (BESS) PRELIMINARY GEOTECHNICAL INVESTIGATION", PROJECT #H375142-0000-2A0-230-0001, REV. A, DATED FEBRUARY 28, 2025.
  - PROPOSED MANHOLES WITHIN THE ROAD ALLOWANCE MUST BE ADJUSTED TO SUIT THE PROPOSED FINISHED GRADE.
  - ALL LOOSE, ORGANIC, DELETERIOUS MATERIALS, OR SOFT SPOTS MUST BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES WITHIN THE ROADWAY. THESE AREAS SHALL BE REPLACED WITH ADEQUATE ENGINEERED FILL IN ACCORDANCE WITH THE GEOTECHNICAL CONSULTANT'S REPORT OR AS DIRECTED BY THE CITY.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXPOSE AND CONFIRM THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES, AND ADVISE THE ENGINEER OF ANY POTENTIAL CONFLICTS. EXISTING UTILITIES SHOWN ARE BASED ON SURVEY PROVIDED BY TULLOCH GEOMATICS INC., "241451-FITZROY\_BESS-MTM9-REV0.DWG" BY TULLOCH GEOMATICS INC, DATED MARCH 11, 2025.
  - ROAD DIMENSIONS AND TURNING RADIUS HAVE BEEN DESIGNED TO ACCOMMODATE A TRIDEM DRIVE TRACTOR SEMITRAILER TRUCK AND THE LR 1300.1 SX CRAWLER CRANE. IN ADDITION, ROAD GEOMETRY HAS BEEN DESIGNED TO ACCOMMODATE A LOWBOY SEMI-TRAILER DURING THE CONSTRUCTION PHASE. REVIEW OF ACCESS FOR DELIVERY AND INSTALLATION OF EQUIPMENT/STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR.
  - ALL REQUIRED PERMITS MUST BE IN PLACE BEFORE START OF CONSTRUCTION.
  - SITE FROST DEPTH IS 1.8 m PER GEOTECHNICAL INVESTIGATION REPORT.
  - BASED ON THE GEOTECHNICAL INFORMATION PROVIDED BY HATCH, AVERAGE TOPSOIL THICKNESS RANGED ON SITE BETWEEN 100 AND 600 mm.
  - THE MATERIAL FROM TEXEL (TM240 AND 7612) MEETS THE REQUIRED FUNCTION NEEDED. TM240 IS A GEOMEMBRANE THAT IS IMPERMEABLE AND THE TM7612 IS A GEOTEXTILE USED TO SEPARATE THE GRANULAR MATERIAL LAYERS. THIS PREVENTS THE SAND TO MIGRATE INTO THE COARSE MATERIAL BELOW. APPROVED EQUIVALENT MEANS ANY OTHER SUPPLIER WITH A GEOMEMBRANE OR GEOTEXTILE THAT MEETS THE SAME CRITERIA COULD BE USED ONCE APPROVED BY THE CLIENT OR THE ENGINEER IN CHARGE.



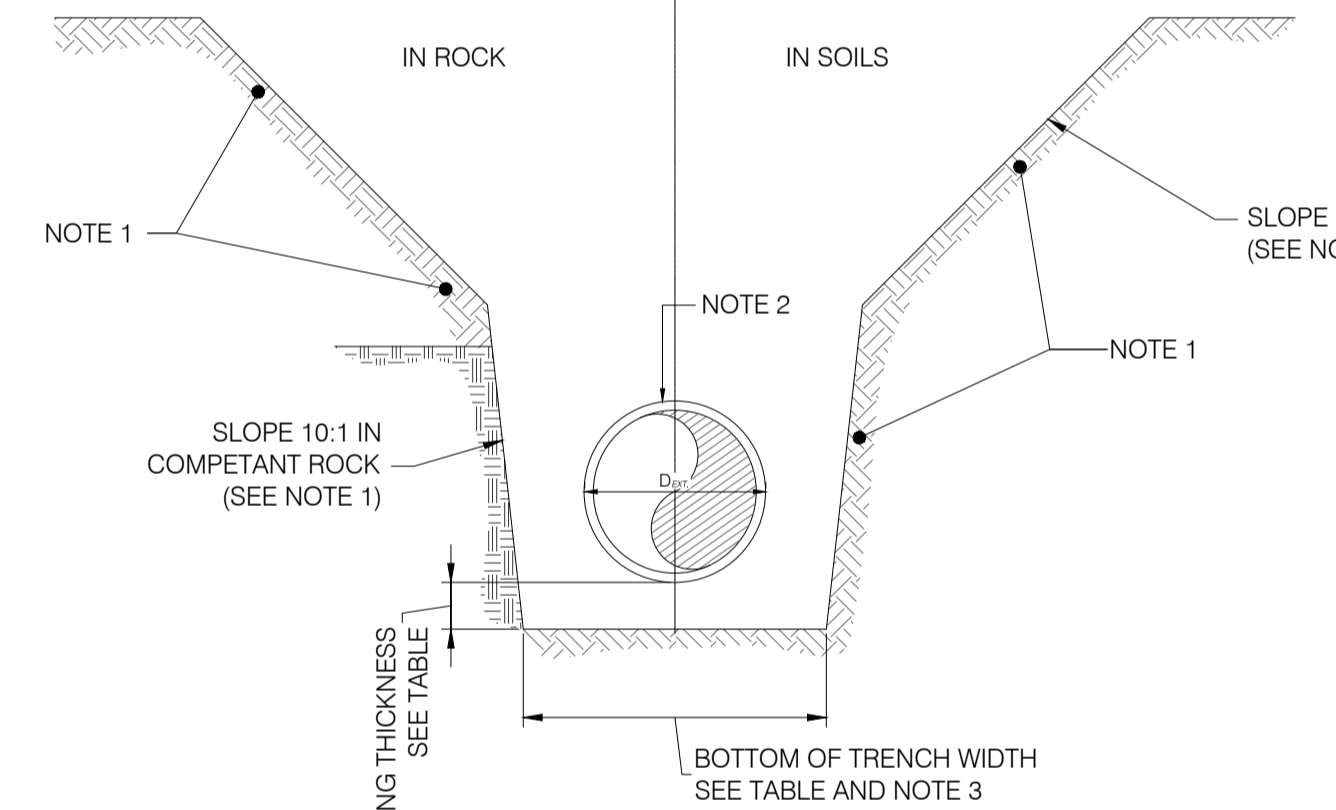
**DETAIL 1: INLET/OUTLET EROSION PROTECTION FOR CULVERTS**  
SCALE: N.T.S.

| 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:**
- D = DIAMETER OF PIPE.
  - DIMENSIONS ARE IN MILLIMETERS



**TYPICAL SECTION - BERM**  
SCALE: N.T.S.

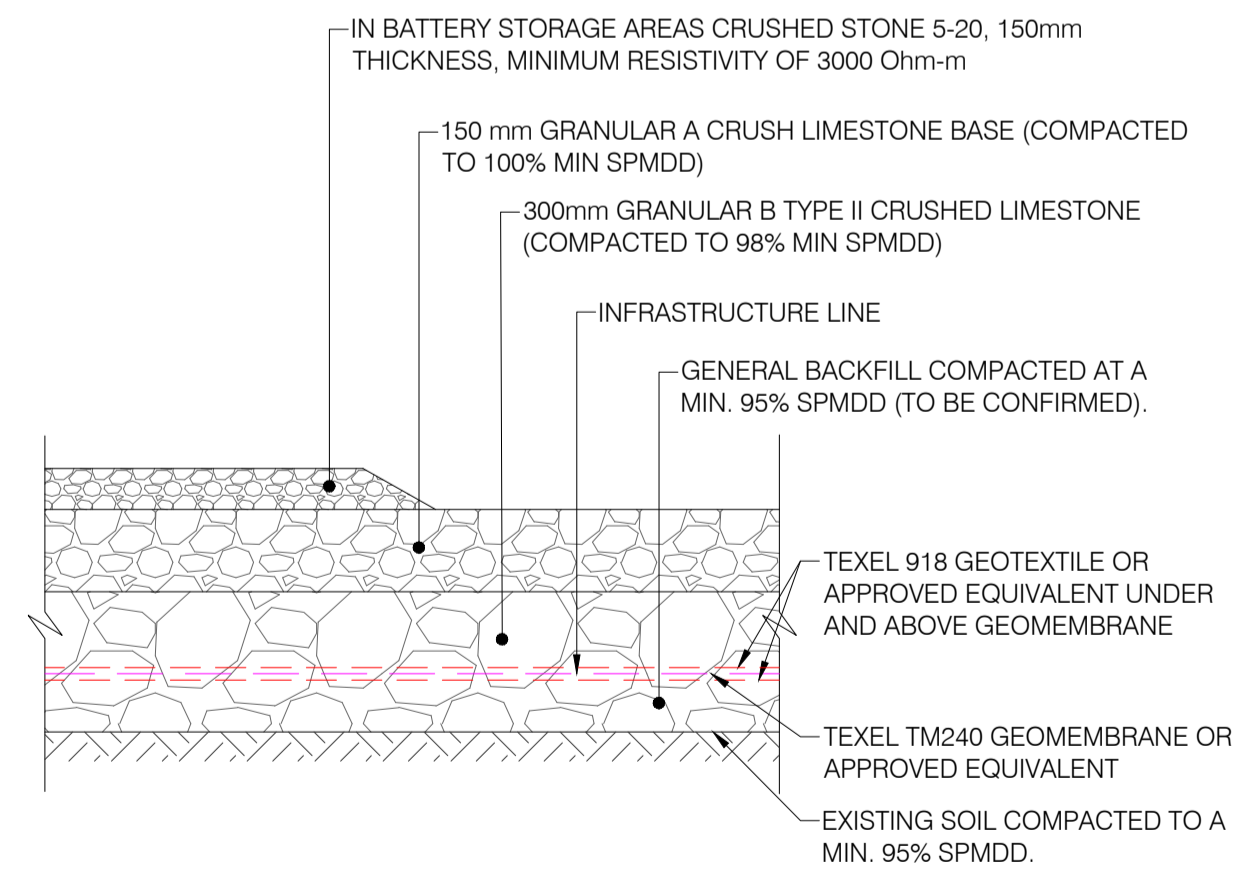


- NOTES:**
- EXCAVATION SLOPES ARE NOT RESTRICTED TO SLOPES SHOWN ON DRAWING. THE EXCAVATION MUST MEET THE REQUIREMENTS OF THE "OCCUPATIONAL HEALTH AND SAFETY ACT", NAMELY THE REQUIREMENTS FOR MATERIAL STORAGE, CIRCULATION OF VEHICLES NEAR THE EXCAVATION AND STABILITY OF THE SLOPES.
  - THE PIPE MUST BE CENTERED AT THE BOTTOM OF THE TRENCH. D<sub>EXT</sub> IS THE OUTSIDE DIAMETER OF THE PIPE, MEASURED IN MILLIMETERS.
  - BOTTOM OF TRENCH WIDTH CORRESPONDS TO THE DISTANCE BETWEEN SHORING WALLS, IF EXCAVATION IS SUPPORTED.

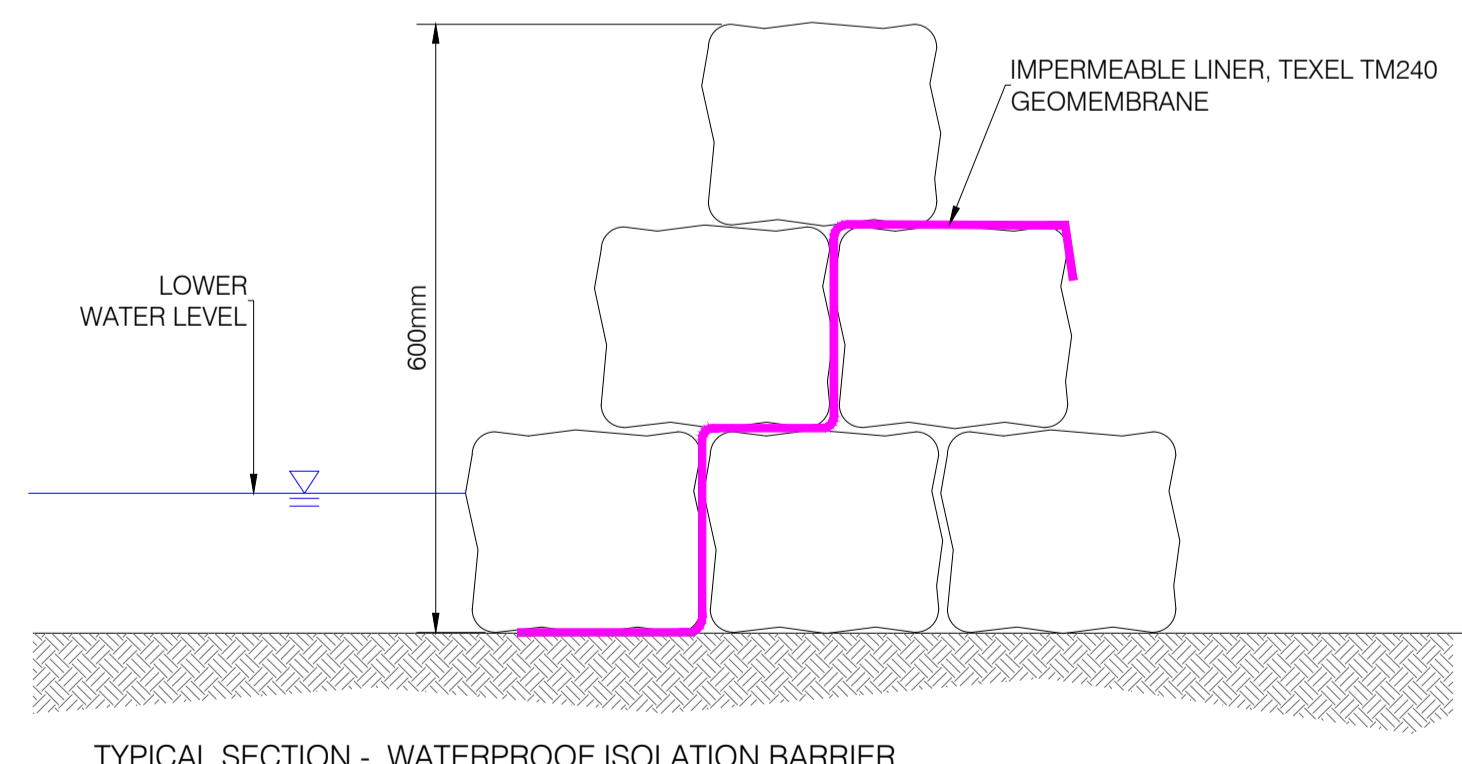
| NOMINAL DIAMETER OF THE PIPE (mm) | MIN. BEDDING THICKNESS (mm) | BOTTOM OF TRENCH WIDTH (mm)   |
|-----------------------------------|-----------------------------|---|
| 300 AND LESS                      | 150                         | D <sub>EXT</sub> + 900  |
| 350 TO 600                        | 150                         | D <sub>EXT</sub> + 900  |
| 750 TO 1200                       | 200                         | D <sub>EXT</sub> + 1200   |
| 1350 TO 1500                      | 250                         | D <sub>EXT</sub> + 1200   |
| 1800 AND MORE                     | 300                         | A) D <sub>EXT</sub> + 1200 TRENCH IS SHORED<br>B) D <sub>EXT</sub> + 900 TRENCH IS NOT SHORED |

**TRENCH SECTION**  
N.T.S.

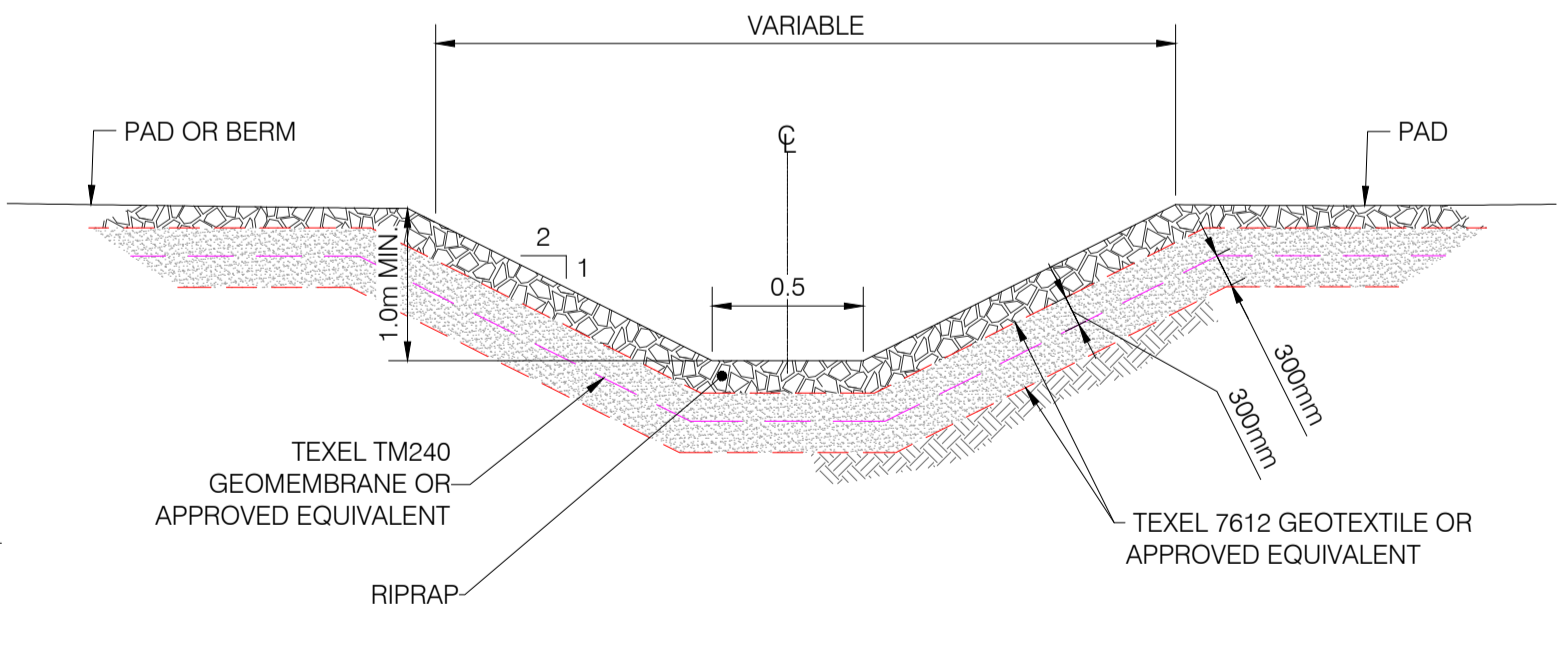
**FOR PERMITTING**



**BATTERY AREA AND PAD STRUCTURE**  
SCALE: N.T.S.



**TYPICAL SECTION - WATERPROOF ISOLATION BARRIER**



**TYPICAL SECTION - PAD DITCH**  
SCALE: N.T.S.

| DRAWING No.        | DESCRIPTION | REV       | DESCRIPTION    | PREPARED BY | CHECKED BY  | DATE       |
|--------------------|-------------|-----------|----------------|-------------|-------------|------------|
|                    |             | AE        | FOR PERMITTING | B. THOMAS   | V. BRUNELLE | 2026-04-21 |
|                    |             | AD        | FOR PERMITTING | B. THOMAS   | V. BRUNELLE | 2026-01-23 |
|                    |             | AC        | FOR PERMITTING | B. THOMAS   | V. BRUNELLE | 2025-11-05 |
|                    |             | AB        | FOR PERMITTING | E. AMELI    | M. SHAHRAKI | 2025-06-19 |
|                    |             | AA        | FOR COMMENTS   | E. AMELI    | M. SHAHRAKI | 2025-03-03 |
| REFERENCE DRAWINGS |             | REVISIONS |                |             |             |            |

SEAL:

APPLICATION FILE NUMBER : D07-12-25-0096  
PLAN NUMBER : 19401

PROJECT: SOUTH MARCH BESS  
2555 AND 2625 MARCHURST ROAD, OTTAWA

TITLE: CIVIL ROAD AND DRAINAGE DETAILS

CLIENT:

DESIGNED BY: B. THOMAS  
PREPARED BY: V. BRUNELLE  
SCALE: NTS  
DRAWING No.: 7154023-100000-41-D50-0002

DRAFTED BY: G. NORMAND  
CHECKED BY: V. BRUNELLE  
DATE: 2025-03-03

SHEET: 01  
SIZE: A1  
REV: AE