

LEGEND

- Proposed berm
- Contours (0.5m)
- 1282.5m Contour

Value

High : 1304.71

Low : 1280.68

Document Path: Z:\Shared\Projects\28000\28602_Cochrane_Lakes_Improve_Plan\02_CADD\25_GIS\251_Figures\28602_Cochrane_Lake Improvement Plan_Topography.mxd

TITLE
SITE TOPOGRAPHY

PROJECT
COCHRANE LAKE IMPROVEMENT PLAN
CLIENT
ROCKY VIEW COUNTY

DATA SOURCES
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

PROJECTION
CANAR3 3TM114

0 0.035 0.07 0.14
1:5,000 KM








FIGURE 1.1

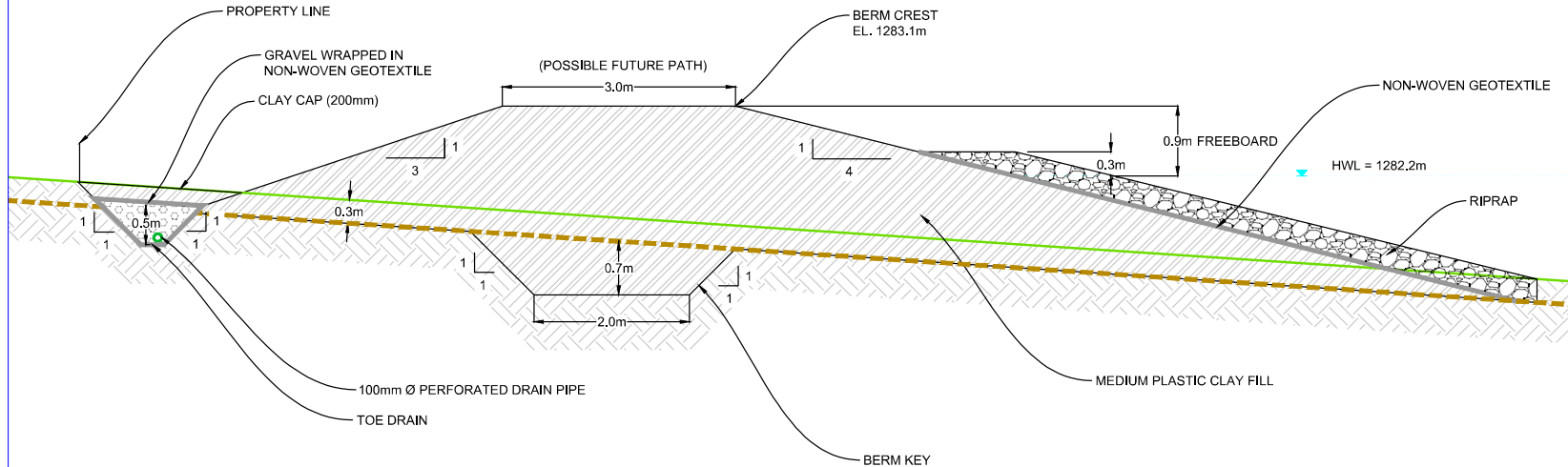
DATE 12/17/2024

PROJECT NO. 28602

AUTHOR dwickham











- LEGEND:**
-  EXISTING GRADE
 -  ASSUMED BASE OF ORGANICS/TOPSOIL
 -  NON-WOVEN GEOTEXTILE
 -  RIPRAP
 -  TOE DRAIN
 -  CLAY FILL/CAP
 -  NATIVE GROUND



NOTES:

LINEAR QUANTITIES

ITEM	QUANTITY
CLAY FILL	20.1 m ³ /LINEAR m
CLASS II RIPRAP	2.4 m ³ /LINEAR m
TOE DRAIN SAND	0.5 m ³ /LINEAR m
NON-WOVEN GEOTEXTILE	11.2 m ² /LINEAR m
STRIPPING	5.6 m ² /LINEAR m
SUBGRADE CUT	1.9 m ³ /LINEAR m
100mm PERFORATED PIPE	1.0 m/LINEAR m

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SCALE:

NTS

A	DATE	DETAILS
1	OCTOBER 9, 2024	DRAFT FOR DISCUSSION



CLIENT:

**ISL ENGINEERING
AND LAND SERVICES
LTD.**

SCHEMATIC BERM DESIGN

COCHRANE LAKE IMPROVEMENT PLAN
COCHRANE LAKE, ROCKY VIEW COUNTY, AB

DRAWN: KF	CHKD: MS	DATE: OCTOBER 2024
PROJECT NO. 2405436CA	REV. NO. 0	FIGURE NO. 7

NOTES:

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| <p>1.0 DESIGN HIGH WATER LEVEL (1282.2m) PROVIDED BY THE CLIENT.</p> <p>2.0 FREEBOARD 0.9m BASED ON MAX WIND SPEED 87 km/hr AND LAKE SIZE OF 0.8 km.</p> <p>3.0 STRIP ORGANIC SOIL BELOW BERM BASE, ASSUMED 0.3m THICK.</p> <p>4.0 ASSUMED CURRENT GRADE AT 15H:1V WITH LEADING EDGE OF BERM AT 1281.0m.</p> <p>5.0 UPLAND SIDE OF BERM (DRY SIDE) ASSUMED AT 3H:1V TO FACILITATE MAINTENANCE ACTIVITIES.</p> <p>6.0 BERM FILL</p> <p>6.1 BERM FILL MATERIAL TO CONSIST OF MEDIUM PLASTIC CLAY.</p> <p>6.2 THE NATIVE CLAY TILL IS EXPECTED TO BE SUITABLE FOR BERM FILL BUT WILL REQUIRE MOISTURE CONDITIONING AND REMOVED OF ANY COBBLES OR BOULDERS.</p> <p>6.3 THE BERM FILL SHOULD BE PLACED IN THIN LIFTS OF NO MORE THAN 150mm AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DRY DENSITY WITH MOISTURE CONTENT 0 TO + 2% OF OPTIMUM MOISTURE CONTENT.</p> <p>6.4 BERM KEY SHOULD EXTEND 0.7m BELOW THE BASE OF THE ORGANIC LAYER, THE SLOPES SHOULD BE NO STEEPER THAN 1H:1V. THE FRONT OF THE BERM KEY SHOULD ALIGN WITH THE BERM CREST.</p> | <p>7.0 TOE DRAIN</p> <p>7.1 TOE DRAIN TO CONSIST OF FREE DRAINING WELL GRADED SAND MATERIAL 0.5m THICK, WRAPPED IN A NON-WOVEN GEOTEXTILE.</p> <p>7.2 100mm PERFORATED DRAIN PIPE SHOULD BE PLACED AT THE BASE OF THE TOE DRAIN. THE DRAIN SHOULD HAVE A CROSS FALL OF AT LEAST 0.25% TOWARDS PUMP LOCATIONS. THE PUMP LOCATION SHOULD BE SPACED NO MORE THAN 50m ALONG THE BERM.</p> <p>7.3 THE TOE DRAIN SHOULD BE CAPPED WITH CLAY FILL AT LEAST 0.2m THICK.</p> <p>7.4 THE GROUND SURFACE AT THE TOE DRAIN SHOULD BE GRADED TO SHED SURFACE WATER AWAY FROM THE BERM OR TO LOCAL COLLECTION POINTS.</p> <p>8.0 RIPRAP PRODUCTION</p> <p>8.1 THE FACE OF THE BERM SHOULD BE PROTECTED WITH 0.5m THICK LAYER OF CLASS II RIPRAP PLACED ON NON-WOVEN GEOTEXTILE.</p> <p>8.2 THE RIPRAP SHOULD EXTEND AT LEAST 0.3m ABOVE THE HIGH WATER LEVEL.</p> <p>9.0 TOPSOIL AND VEGETATION</p> <p>9.1 ALL CONSTRUCTED SURFACE FACES, EXCEPT RIP RAP AREAS, SHOULD BE FINISHED WITH 150mm TOPSOIL AND SEEDED WITH PRAIRIE GRASS MIXTURE.</p> |
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