

**KEY PLAN**

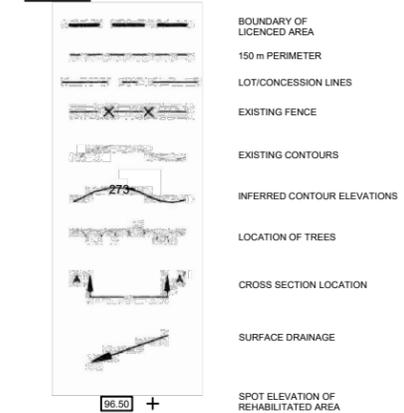
**REHABILITATION NOTES**

1. THE CURRENT EXTRACTION AREA WILL BE EXCAVATED AS SHOWN IN CROSS SECTION A-A TO THE ALLOWABLE DEPTH BELOW GROUNDWATER DETAILED IN THE EXTRACTION PLAN.
2. THIS SITE IS TO BE EVENTUALLY REHABILITATED TO AGRICULTURE, IN A MANNER DETERMINED SUITABLE BY THE MUNICIPALITY OF MIDDLESEX CENTRE. A 1M BUFFER WILL BE PROVIDED BETWEEN ABOVE GROUND WATER AND AGRICULTURAL.
3. HECTARAGE OF TOTAL AREA TO BE REHABILITATED = 23.61 HECTARES, 15.05 ABOVE WATER, 8.56 BELOW WATER POND.
4. BELOW WATER REHABILITATED SIDE SLOPES TO BE 1:1, ABOVE WATER SIDE SLOPES TO BE 2:1.
5. EXISTING FENCES TO REMAIN AFTER FINAL REHABILITATION & EXISTING TREES TO REMAIN IN SETBACK AREAS, EXCEPT SOUTH BOUNDARY.

**REHABILITATION TO AGRICULTURE - GENERAL NOTES**

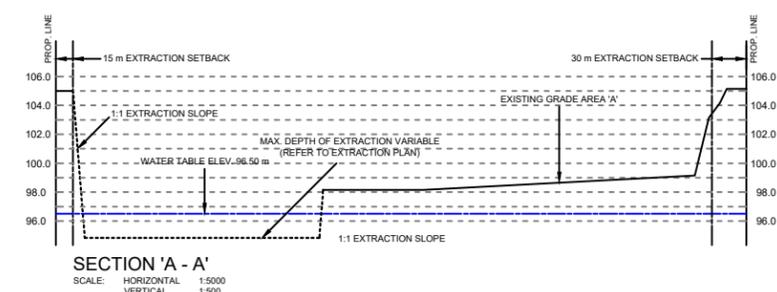
1. TOPSOIL, SUBSOIL AND OVERBURDEN MUST BE STRIPPED AND STOCKPILED SEPARATELY.
2. FINAL GRADE OF FARMLAND TO BE A MIN. OF ONE METRE ABOVE WATER TABLE (ASSUMED ELEV. 97.50 m)
3. ALL FINAL SLOPES SHALL BE AT LEAST 3:1. SIDE SLOPES TO BE CREATED THROUGH BACKFILL OF PARENT MATERIALS.
4. IF IMPORTED MATERIALS ARE USED AT THE SITE, VERIFICATION OF THE SUITABILITY OF THE FILL WILL BE REQUIRED FROM AN ENVIRONMENTAL STANDPOINT. A QUALITY ASSURANCE PROGRAM SHOULD BE IMPLEMENTED TO ENSURE THAT THE FILL MATERIAL WILL COMPLY WITH THE CURRENT MECP, MUNICIPALITY OF MIDDLESEX CENTRE, MINISTRY OF TRANSPORTATION AND MNR STANDARDS FOR PLACEMENT AND TRANSPORTATION.
5. EARTH MOVING OPERATIONS SUCH AS STRIPPING AND REHABILITATION SHOULD TAKE PLACE ONLY WHEN THE SOIL IS DRY. THIS WILL AID IN REDUCING COMPACTION AND THE POSSIBILITY OF SLUMPING SIDE SLOPES.
6. BEFORE REPLACEMENT OF ANY MATERIAL OVER THE PIT FLOOR, COMPACTION IN THE PIT FLOOR MUST BE RELIEVED BY A HEAVY SUBSOILER OR RIPPER. THIS MUST BE DONE UNDER DRY CONDITIONS TO AID IN "SHATTERING" COMPACTED MATERIAL. SUBSOILING IS MOST EFFECTIVE WHEN DONE IN A CRISS-CROSS PATTERN OVER THE ENTIRE PIT FLOOR TO ALLEVIATE COMPACTION.
7. TOPSOIL, SUBSOIL AND OVERBURDEN SHALL BE EVENLY SPREAD OVER THE ENTIRE PIT FLOOR IN SUCH A MANNER AS TO APPROXIMATE THE ORIGINAL SOIL PROFILE DEPTH. A MINIMUM TOPSOIL THICKNESS OF 150 mm SHOULD SURFACE THE REHABILITATED AREA. REPLACED TOPSOIL AND SUBSOIL TO BE PICKED FOR STONES LARGER THAN 75 mm.
8. IF NECESSARY, TOPSOIL AND SUBSOIL MAY BE BROUGHT IN TO IMPROVE THE AGRICULTURE CAPABILITY OF THE SOIL.
9. SOIL SAMPLES SHOULD BE TAKEN FOLLOWING REPLACEMENT OF THE TOPSOIL TO DETERMINE ORGANIC MATTER REQUIREMENTS AND OPTIMAL FERTILIZER RATES.
10. THE REHABILITATION AREA SHALL BE SEEDED WITH THE FOLLOWING MIXTURE:
  - 55% CREEPING RED FESCUE
  - 27% KENTUCKY BLUE GRASS
  - 15% PERENNIAL RYE GRASS
  - 3% WHITE CLOVER
 AT A RATE OF 150 kg/HECTARE. IF VEGETATION FAILS TO ESTABLISH ITSELF, IT MUST BE REPLANTED / RESEED.
11. REHABILITATION TO CLASS 1-3 AGRICULTURAL LAND.

**LEGEND**



**EXCESS SOILS-GENERAL NOTES**

1. EXCESS SOILS AS DEFINED IN ONTARIO REGULATION 406/19 UNDER THE ENVIRONMENTAL PROTECTION ACT, MAY BE IMPORTED TO THIS SITE FOR THE FOLLOWING REHABILITATION PURPOSES:
  - i) CREATION OF 2:1 SLOPES
  - ii) TOP DRESSING TO ESTABLISH VEGETATION
2. EXCESS SOILS IMPORTED FOR THE REHABILITATION PURPOSES DESCRIBED ABOVE SHALL MEET THE SOIL QUALITY STANDARDS SET OUT IN TABLE 1, "FULL DEPTH BACKGROUND SITE CONDITION STANDARDS", OF THE RULES FOR SOIL MANAGEMENT AND EXCESS SOIL QUALITY STANDARDS PUBLISHED BY THE MINISTRY OF ENVIRONMENT CONSERVATION AND PARKS.
3. THE MAXIMUM TOTAL AMOUNT OF EXCESS SOIL THAT MAY BE IMPORTED TO THE SITE FOR REHABILITATION PURPOSES IS 150,000m<sup>3</sup>
4. THE LICENSEE SHALL ENSURE THAT THE ACCEPTANCE AND REUSE OF EXCESS SOIL IMPORTED FOR REHABILITATION PURPOSES IS COMPLIANT WITH PART 1 RULES FOR SOILS MANAGEMENT OF THE "RULES FOR SOIL MANAGEMENT AND EXCESS SOIL QUALITY STANDARDS" PUBLISHED BY THE MINISTRY OF ENVIRONMENT, CONSERVATION, AND PARKS.



**-NOTES-**

1. Benchmark is the northeast abutment of the weigh scales (Assumed Elevation 100.00 m).
2. Groundwater elevation inferred from test holes advanced during Geotechnical Investigation (~ 96.5 m).
3. Inferred ground contour elevations displayed in drawing assume a groundwater elevation of 271.35 m.

<p><b>Olalondo Pit Underwater Extraction</b> 21515 Olalondo Road Middlesex Centre, Ontario</p>		CLIENT	The Municipality of Middlesex Centre	
		TITLE	Rehabilitation Plan	
DRAWN BY:	REVIEWED BY:	DATE		
E.B.	B.C.	July 2021		
		EXP Services Inc. 15701 Robin's Hill Road London, ON, N5V 0A5		
		SCALE	PROJECT NO.	DWG.
AS SHOWN		LON-00015778-GE	A3	