

**METRIC**  
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN. STATIONS IN KILOMETRES + METRES.

CONT No.  
WP No.

**WATERMAIN CROSSINGS**  
HIGHWAY 403 ERIN MILLS PARKWAY INTERCHANGE  
MONITORING PROGRAM - OPEN CUT  
EXCAVATIONS



SHEET



**Golder Associates Ltd.**  
MISSISSAUGA, ONTARIO, CANADA



**KEY PLAN**  
SCALE  
1 0 1 2 km

**LEGEND**

- Borehole - Current Investigation
- ⊕ Borehole - Previous Investigation (Geo-Canada)
- ✕ In-ground Monitoring Point

**BOREHOLE CO-ORDINATES**

No.	ELEVATION	NORTHING	EASTING
37	161.7	4823836.1	288780.1
38	162.1	4823872.8	288745.3
136	162.0	4823815.8	288800.8
136A	163.4	4823797.5	288812.9
EM-1	164.9	4823943.2	288796.9
EM-2	164.9	4823938.9	288762.7
EM-3	163.7	4823975.1	288742.2
EM-4	163.9	4823792.7	288816.8
EM-5	164.0	4823844.5	288759.9
EM-6	164.6	4823871.1	288735.6
EM-7	162.9	4823905.8	288712.3

**NOTES**

This drawing is for subsurface information only. The proposed structure details/works are shown for illustration purposes only and may not be consistent with the final design configuration as shown elsewhere in the Contracts Documents.

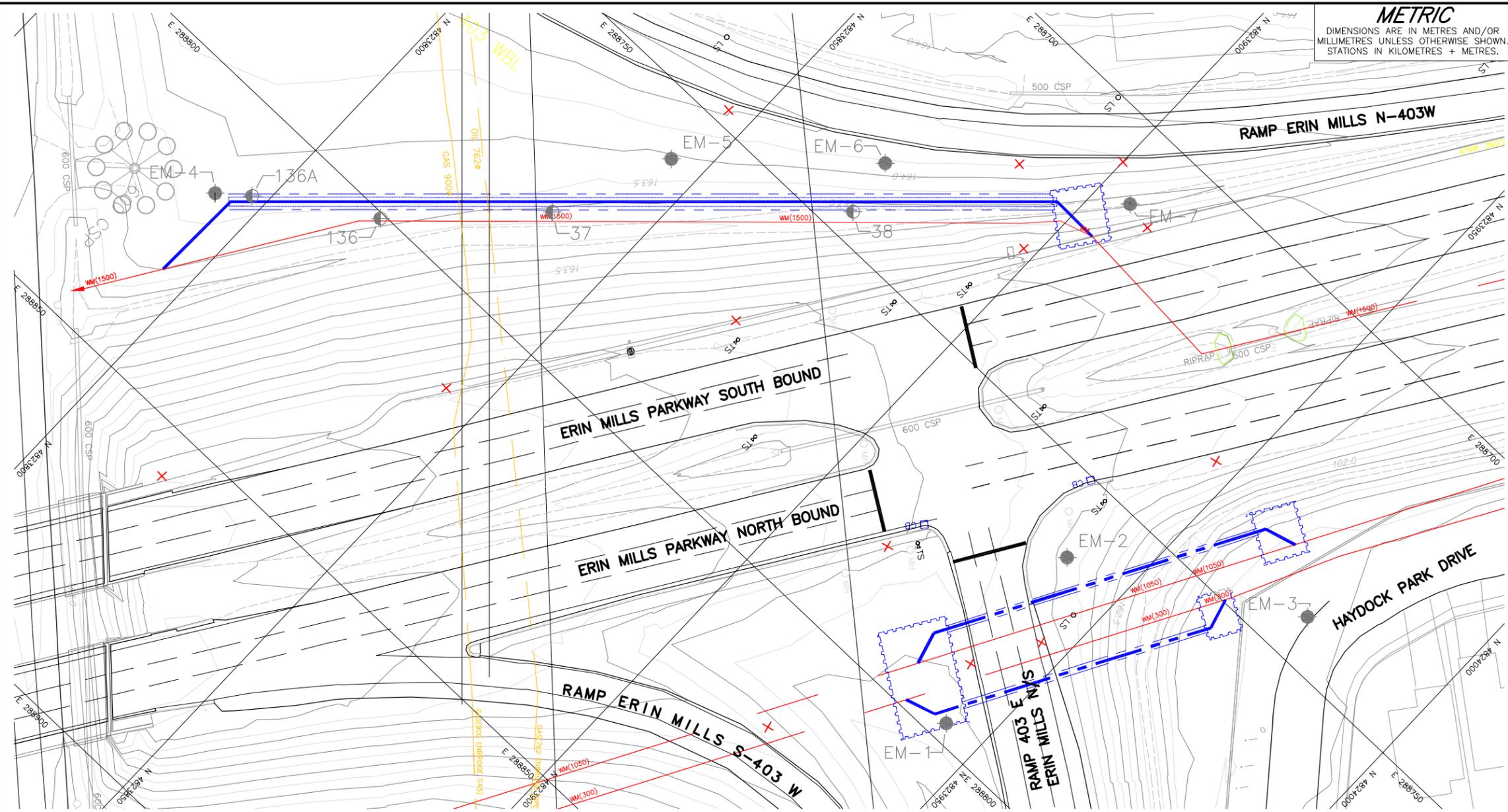
The boundaries between soil strata have been established only at borehole locations. Between boreholes the boundaries are assumed from geological evidence.

The complete Foundation Investigation and Design Report for this project and other related documents may be examined at the Materials Engineering and Research Office, Downsview. Information contained in this report and related documents is specifically excluded in accordance with Section GC 2.01 of OPS General Conditions.

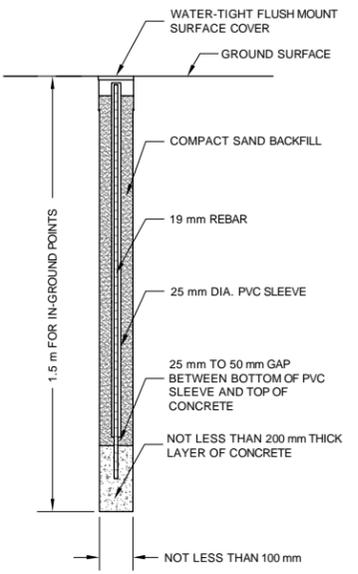
**REFERENCE**

Base plans provided in digital format by Cole Engineering Group Ltd., drawing file nos. 069770-C\_Base.dwg and 60150558-UTL.dwg, received October 20, 2011. Section obtained from drawing file no. E11-276-C1-01+to+04.dwg, received February 08, 2012.

NO.	DATE	BY	REVISION
Geocres No.			
HWY. 403		PROJECT NO. 11-1111-0102	
SUBM'D. RA		CHKD. RA	DATE: 5/7/2012
DRAWN: CD		CHKD.	APPD. JMAC
		DIST.	
		SITE:	
		DWG. G1	



**PLAN**  
SCALE  
8 0 8 16 m



**IN-GROUND MONITORING POINT  
INSTALLATION DETAIL**

N.T.S.

**NOTES:**

- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GOLDBER ASSOCIATES LTD. REPORT NO. 11-1111-0102 (EMP), DATED MAY 2012.
- ALL MONITORING LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND MUST BE CONFIRMED BY THE CONTRACTOR IN CONSULTATION WITH THE GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION AND CONSTRUCTION AND MAY HAVE TO BE ADJUSTED IN THE FIELD TO SUIT LOCAL CONDITIONS/CONSTRAINTS.
- THE CONTRACTOR SHALL RETAIN A SURVEYOR REGISTERED IN ONTARIO FOR ESTABLISHING AND SURVEYING THE MONITORING POINTS FOR THE DURATION OF CONSTRUCTION.
- ALL MONITORING POINTS SHALL BE INSTALLED AT LEAST 7 DAYS PRIOR TO ANY EXCAVATION TAKING PLACE.
- THE CONTRACTOR SHALL ESTABLISH A TEMPORARY BENCHMARK OUTSIDE THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT THE PROPOSED BENCHMARK LOCATION TO THE ENGINEER FOR APPROVAL. ELEVATIONS SHALL BE DETERMINED TO A TOLERANCE OF NOT MORE THAN 2 mm.
- ALL POINTS SHALL BE SURVEYED AT LEAST ONCE PER DAY.
- DURING MONITORING, IF DISPLACEMENTS REACH THE "REVIEW LEVEL" OF 10 mm, THE CONTRACTOR SHALL PROVIDE A FORMAL PLAN TO ENSURE FURTHER DISPLACEMENTS DO NOT OCCUR. IF DISPLACEMENTS REACH THE "ALERT LEVEL" OF 15 mm, THE CONTRACTOR SHALL SUSPEND EXCAVATION AND THE OWNER WILL HAVE THE AUTHORITY TO ORDER THE CONTRACTOR TO SUSPEND ALL WORK UNTIL AN APPROVED MITIGATIVE SOLUTION IS DEVELOPED.
- WITHIN 4 HOURS OF COMPLETION OF ANY MEASUREMENT A COPY OF THE PRELIMINARY RESULTS SHALL BE MADE AVAILABLE TO THE ENGINEER AND THE FINAL RESULTS SHALL BE PROVIDED WITHIN 24 HOURS OF COMPLETION OF THE SURVEY.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR TRAFFIC SAFETY PRECAUTIONS AS REQUIRED.
- REMOVE ALL MONITORING POINTS ON COMPLETION OF SURVEY, SUBJECT TO APPROVAL FROM THE ENGINEER.