1430 Broadway
10th Floor
New York, NY 10018

212.221.7822 PHONE
212.221.7840 FAX

www.TRCsolutions.com

June 22, 2012

Mr. Michael Posillico
Harbor Isle Development, LLC
1750 New Highway
Farmingdale, New York 11735

Re: Posillico Development Company at Harbor Isle, LLC
Former Cibro Petroleum Terminal Site, Island Park, New York
Brownfield Cleanup Agreement Index # W1-1075-05-09
Brownfield Cleanup Site #C130153
Groundwater Flow Direction and Tidal Influence Study

Dear Mr. Posillico:

This report, prepared by TRC Engineers, Inc. (TRC) on behalf of Posillico Development at Harbor Isle, LLC (Posillico), provides a summary of the recent groundwater flow direction and tidal influence study (the "Study") performed at the Former Cibro Petroleum Terminal Site, Island Park, New York (the "Site") as requested in the May 7, 2012 New York State Department of Environmental Conservation (DEC) letter to Posillico Development Company at Harbor Island. Specifically, the objective of this letter is to report whether the groundwater under the Harbor Isle site flows towards the adjacent residential area during monthly high and low tide cycles.

Groundwater Flow Direction and Tidal Influence Methodology

Groundwater flow direction was determined by measuring groundwater elevations at 14 monitoring wells as shown on Figures 1 and 2. In addition, surface water elevation was measured at a stilling well installed outside the bulkhead immediately to the south of the Site for purposes of determining the tidal fluctuation of the adjacent surface water. LevelTROLLs™ (data loggers with level sensors) were installed and groundwater and surface water levels were measured hourly from 4:10 pm, June 4, 2012 through 8:10 am, June 5, 2012 in the 15 locations. The timeframe of measurements included the full moon tide (i.e., the highest estimated tide of the month). The measurements were evaluated to describe the effect of tidal change on groundwater flow direction. In addition the interaction of groundwater between shallow and deep wells was examined by comparing waterlevel measurements in two, two-well clusters screened in the sediments above and below an intervening peat layer. Tidal variability in groundwater elevations measured in the monitoring wells is shown in the attached chart. The high and low-tide measurements recorded over time and the associated groundwater contours for the 11 shallow wells are shown on the attached figures.

Groundwater Flow Direction and Tidal Influence Results

Groundwater Elevation

The results of the Study indicate that groundwater elevations, reported with respect to mean sea level, ranged from 2.97 feet at well location MW-16S to 6.07 feet at well location MW-12 at high tide and from 2.30 at feet at well location MW-13 to 5.21 feet at well location MW-12 at low tide. The highest groundwater elevation at both the low and high tide events occurred at MW-12 in the northeastern corner of the Site. This may be the result of a storm sewer discharging into the canal just north of MW-12 and other discharge piping running just east of MW-12 that may have added water to the ground at this location.

Groundwater Flow Direction

Site-wide watertable elevation measurements from shallow wells were used to determine groundwater flow direction during both high and low tides. As shown on Figures 1 and 2, groundwater generally flows southerly, away from the residences located to the north of the Site and ultimately flows toward the channels located to the east and south of the Site.

Tidal Influence

Continuous measurements in onsite monitoring wells indicate that groundwater levels fluctuate in response to tidal fluctuations in the surrounding channels. The surface-water level measured at the bulkhead fluctuated 5.8 feet. Tidally-influenced fluctuations in shallow-well water levels ranged from a minimum of 0.14 feet at MW-GW1 and a maximum of 3.08 feet at MW-2. The well with the greatest measured overall tidal fluctuation of 4.91 feet was MW-15D. (The measured surface water tidal fluctuation between high and low tide was 5.83 feet.) Generally, variability in groundwater elevation attributable to tidal fluctuations decreased with increasing distance from the surrounding channels. Tidal fluctuation had no significant impact on groundwater flow direction.

The vertical gradients between the two monitoring well clusters (MW-15S/D and MW-16S/D) were calculated during high and low tides. These were -0.23 feet and +4.62 feet, respectively for MW-15S/D and -0.22 feet and 1.50 feet, respectively for MW-16S/D. The downward vertical gradient at low tide and the upward vertical gradient at high tide suggests that the peat layer at the Site impedes vertical groundwater movement between the shallow and deeper sediments.

Conclusions

Based on the groundwater flow direction and tidal influence study, TRC concludes the following:

- Groundwater generally flows to the south away from the residences located north of the Site.
- Tidal fluctuation had no significant impact on groundwater flow direction at the Site.
- The vertical gradients at the two monitoring well clusters indicate that the peat layer retards vertical groundwater movement between the shallow and deeper zones.

Please do not hesitate to contact me at (212) 221-7822, ext. 109 if you have any questions or comments.

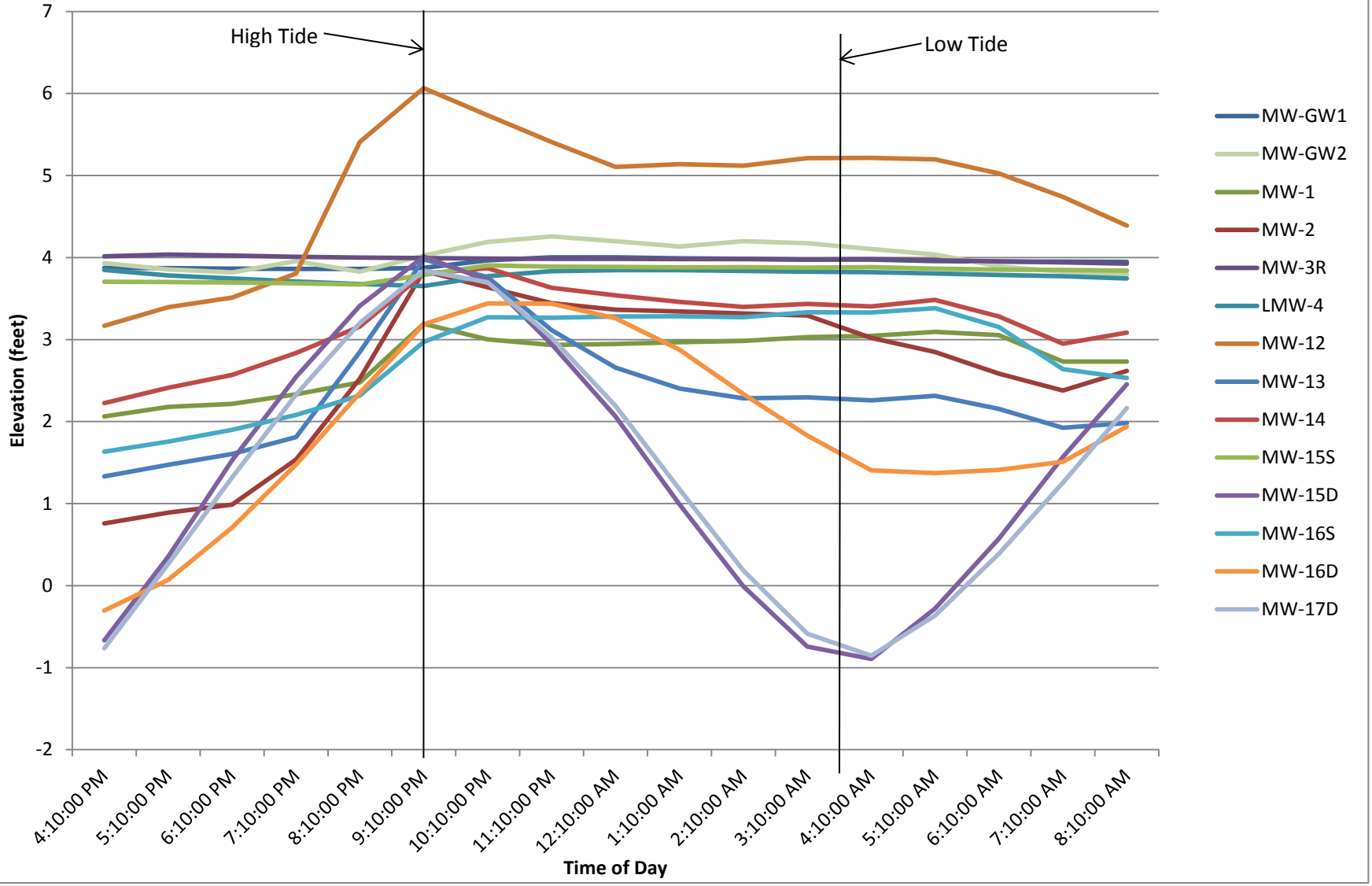
Sincerely,
TRC Engineers, Inc

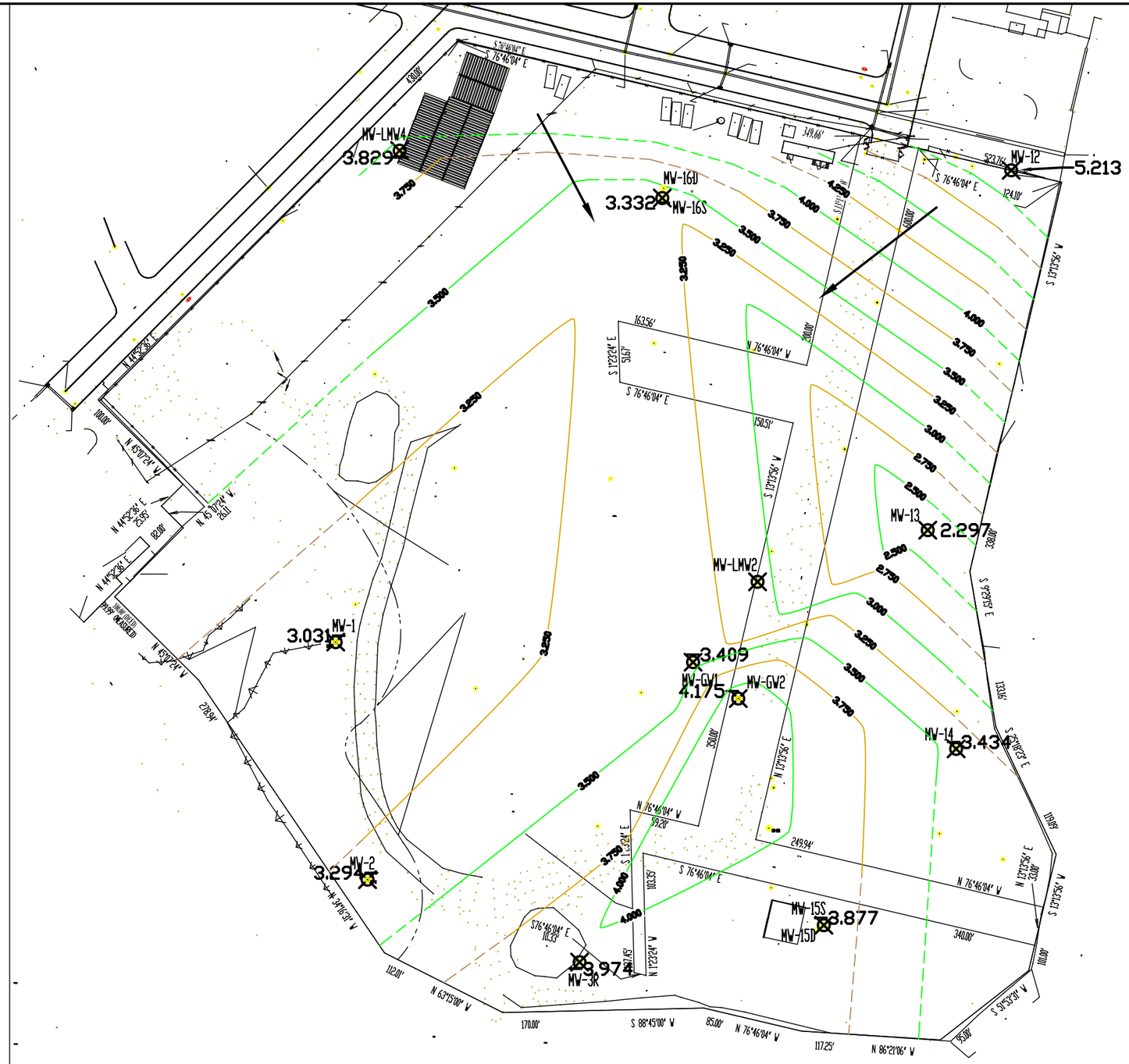
Steven D. Meersma, P.E
Director, NYC Environmental Compliance

Enclosures: Chart 1: 6/4-6/5/12 Tidal Fluctuations
Figure 1: June 5, 2012 Low Tide Groundwater Elevations
Figure 2: June 4, 2012 High Tide Groundwater Elevations

cc: E. Koch, Posillico
J. Miranda, TRC
163189 Project File

Chart 1
Former Cibro Petroleum Facility - Island Park, NY
6/4-6/5/12 Tidal Fluctuations





LEGEND:

- GROUNDWATER CONTOUR LINE
- INFERRED GROUNDWATER CONTOUR LINE
- 5.213 GROUNDWATER ELEVATION
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES:

1. TIDAL STUDY COMPLETED 06/04/12 TO 06/05/12.
2. GROUNDWATER ELEVATIONS RELATIVE TO SEA LEVEL.
3. DATA FROM DEEP WELLS (MW-15D, MW-16D, AND MW-17D) NOT UTILIZED TO DEVELOP GROUNDWATER CONTOURS.
4. MONITORING WELL MW-LMW2 WAS NOT GAUGED DUE TO THE PRESENCE OF 0.03' OF FREE PRODUCT.

0 100 200 FT.

APPROXIMATE SCALE: 1"=100'

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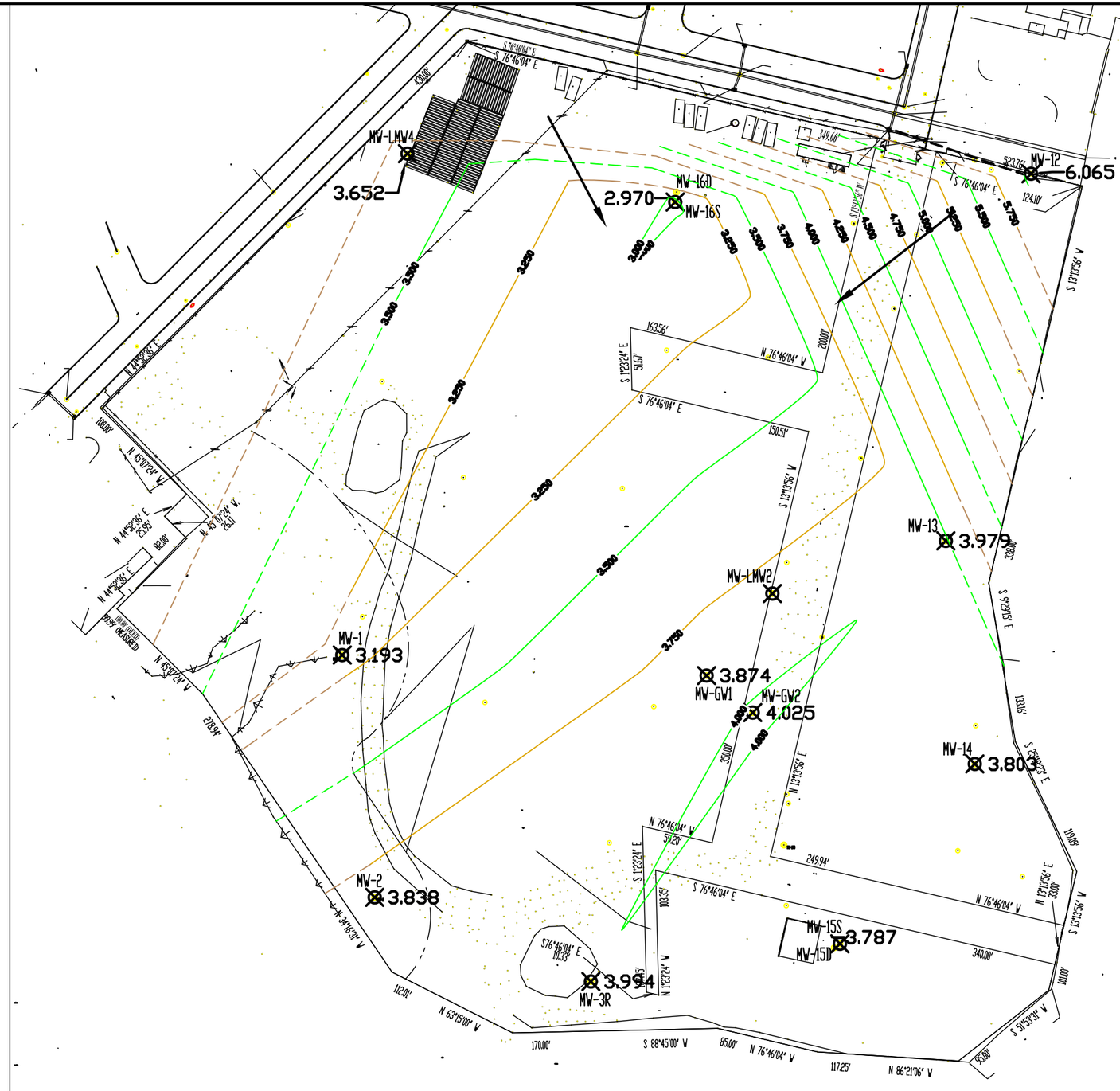
CHECKED BY:	SM
DATE:	JUNE 2012
SCALE:	193962.0000.0000
PROJECT NUMBER:	189559.0000.0000

PROJECT NAME:
FORMER CIBRO PETROLEUM FACILITY
ISLAND PARK, NY

DRAWING TITLE:
JUNE 5, 2012 LOW TIDE GROUNDWATER ELEVATIONS

FIGURE 1



LEGEND:

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- INFERRED GROUNDWATER CONTOUR LINE
- 6.065 GROUNDWATER ELEVATION
- INFERRED GROUNDWATER FLOW DIRECTION

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ISLAND PARK, NY

DRAWING TITLE:
JUNE 4, 2012 HIGH TIDE GROUNDWATER ELEVATIONS

FIGURE 2

Path\Name: I:\Projects\193962 - Harbor Isle (Pendillo)\Figures TRC Working\TIDAL STUDY.dwg - Date\Time: Wed, 13 Jun 2012 - 8:40am - User Name: mkyers - Layout Tab: HIGH