Integral Engineering, P.C.
61 Broadway
Suite 1601
New York, NY 10006

telephone: 212.962.4303
facsimile: 212.962.4302
www.integral-corp.com

July 1, 2015 Project No. E075

Ruth E. Curley, P.E.
Environmental Engineer II
New York State Department of Environmental Conservation

Subject: **Data Evaluation Report**
Former Bridge Cleaners, 39-26 30th St, Long Island City, NY
BCP Site No. C241127

Dear Ms. Curley:

Integral Engineering, P.C. (Integral) is pleased to present this Data Evaluation Report Letter (Letter) on behalf of Zhong Chuang Properties LLC (Zhong Chuang or Volunteer) that describes the results of the Supplemental Remedial Investigation for the property located at 39-26 30th Street, Long Island City, NY (Site). The Volunteer installed two soil borings on-Site in December 2014 and identified constituents above applicable standards in each boring. The Volunteer was unsuccessful in accessing any off-Site properties. The Site is currently enrolled in the New York State Brownfield Cleanup Program (BCP) and listed as Site No. C241127.

SITE BACKGROUND

A number of previous investigations and assessments have been performed at the Site between 2011 and 2014. These investigations primarily consisted of limited subsurface assessments conducted by various consultants on behalf of the Site owner or the New York State Department of Environmental Conservation (NYSDEC). Integral has been provided with the following investigation reports:

- Limited Sub-Surface Site Investigation, Long Island Laboratories, Inc., dated September 2011
- Site Characterization Report, Ecology and Environmental Engineering, P.C., May 2012

- Remedial Investigation Report, TechSolutions Engineering, P.C., June 2014

According to the June 2014 Remedial Investigation Report (RIR) prepared by TechSolutions Engineering, P.C. (TechSolutions)[1], the Site was used as a dry cleaner from 1997 until about 2011. Other historical uses included warehousing and distribution.

The RIR summarized soil, groundwater, and soil vapor results from investigations performed at the Site between September 2011 and February 2014. In general, elevated tetrachloroethylene (PCE) and trichloroethylene (TCE) concentrations were found in groundwater and soil vapor samples collected within and nearby the Site. PCE and TCE were identified in soil samples at the Site, but did not exceed NYSDEC Unrestricted Soil Cleanup Objectives (SCOs).

On November 21, 2014, NYSDEC approved the Supplemental Remedial Investigation Proposal submitted by the Volunteer on November 19, 2014. This Data Evaluation Report discusses the results of the approved investigation.

SUPPLEMENTAL REMEDIAL INVESTIGATION RESULTS

Integral was unsuccessful in obtaining access to neighboring properties to conduct the off-Site portion of the Supplemental Remedial Investigation, but was able to complete the on-Site portion of the Supplemental Remedial Investigation.

Off-Site Access Attempts

On behalf of the Volunteer, Integral made multiple, unsuccessful attempts to obtain access to the off-Site properties to implement the Supplemental Remedial Investigation. On November 26, 2014, Integral sent access requests to the property owners via FedEx with signature required (records enclosed). Each request was received by the owner/operator except for the request sent to the Brazilian Missionary Church to the north of the Site; no one answered the door at the Church after three delivery attempts.

[1] This RIR was rejected by the NYSDEC in a letter dated September 10, 2014, though it has been utilized in this Work Plan for reference.

Integral followed up with each property owner/operator to discuss obtaining access for the Investigation. Below is a summary of this outreach:

Lot	Address	Owner/Operator	Dates Contacted	Result
29	39-22 30th St.	Brazilian Missionary Church, Inc.	12/5/14, 12/11/14	No response.
12	39-21/23 29th St.	JM-AM Realty Corp.	12/11/14, 12/15/14, 12/19/14	Declined access.
10	39-25 29th St.	Frank Falco	12/11/14, 12/11/14	Declined access.
7	39-31 29th St.	Alma Publishing Corp.	12/8/14	Declined access.
34	39-40 30th St.	Ganesh Management, LLC	12/11/14, 12/12/14	Declined access; already performing soil vapor sampling; will provide Integral with results.

None of the off-Site properties were willing to grant access for the Investigation.

On-Site Investigation

A soil investigation conducted by Integral in December 2014 that identified concentrations of PCE above the Unrestricted SCO, but below the Industrial SCO, in four soil samples collected from beneath the northern corner of the on-Site building. A total of five soil samples, inclusive of one duplicate, were collected at depths ranging from beneath the floor slab to a maximum of 18.5 feet below ground surface (ft bgs). PCE was the only analyte detected in any of the samples. In four of the five samples, PCE was identified above the Unrestricted SCO and the Protection of Groundwater SCO (to the extent the Protection of Groundwater SCO is applicable to this Site), both 1.3 mg/kg, but below the Industrial SCO of 300 mg/kg (see table below). The maximum observed concentration was 9.6 mg/kg.

Sample Location	Depth (ft bgs)	Result (ppm)	Unrestricted SCO (ppm)	Industrial SCO (ppm)	Protection of Groundwater SCO (ppm)
SB-06	11.5 - 12	6.9	1.3	300	1.3
SB-07	0 - 4	4.8	1.3	300	1.3
SB-07	0 - 4 (duplicate)	9.6	1.3	300	1.3
SB-07	15 - 17.5	1.8	1.3	300	1.3

The complete laboratory data package and the boring logs are enclosed. The electronic data deliverable will be uploaded to the NYSDEC EQuIS system when the complete Remedial Investigation Report is issued.

UPDATED CONCEPTUAL SITE MODEL

The conceptual site model (CSM) is that there are residual chlorinated hydrocarbons in the unsaturated subsurface near the northern corner of the building, which are potentially causing secondary impacts to groundwater. This residual material may have discharged from a boiler drain in the northern corner of the building into the subsurface. However, while there is a small concrete patch in this area, there is no evidence that such a drain existed in the building. The CSM also must consider the possibility that a release occurred off-Site and is contributing to the observed conditions. The magnitude of the release, whether on-Site or off-Site (or both), is unknown, though the chlorinated hydrocarbon concentrations identified in the unsaturated on-Site soil lead to the conclusion that any on-Site release was minor.

Below is additional supporting information to the CSM:

- The groundwater at the Site, based on previous reports, generally flows from north to south. PCE concentrations in groundwater ranged from 176 to 340 μg/L, and were within the same order of magnitude across the Site, although slightly higher to the south.

- Soil vapor concentrations of PCE ranged from 21,400 to 668,000 μg/m^3 across the Site. The larger concentrations were found in the northern portion of the building, indicating potential residual source material nearby (in unsaturated soil).
- A boiler room was historically present in the northern corner of the building. In the past, it was not uncommon for buildings to construct a drain (dry well) for boiler condensate blow-down. No evidence of a drain or dry well has been observed or provided, although there appears to be a small concrete patch in this area.
- PCE was identified in soil samples collected from the northern corner of the Site building with a maximum concentration of 9.6 mg/kg, which is below the Industrial SCO of 300 mg/kg, but above the Unrestricted Use and Protection of Groundwater SCOs of 1.3 mg/kg, to the extent the Protection of Groundwater SCO is applicable to this Site.

REMEDIAL ACTION

The concentrations of PCE and TCE in soil and groundwater at the Site are being addressed through remedial actions at the Site. A soil vapor extraction / air sparge pilot test is currently being implemented in accordance with the approved *Interim Remedial Measure Pilot Test Work Plan* dated May 29, 2015.

Please let us know if you have any questions during your review of this Report. We look forward to continuing to work with NYSDEC on this project.

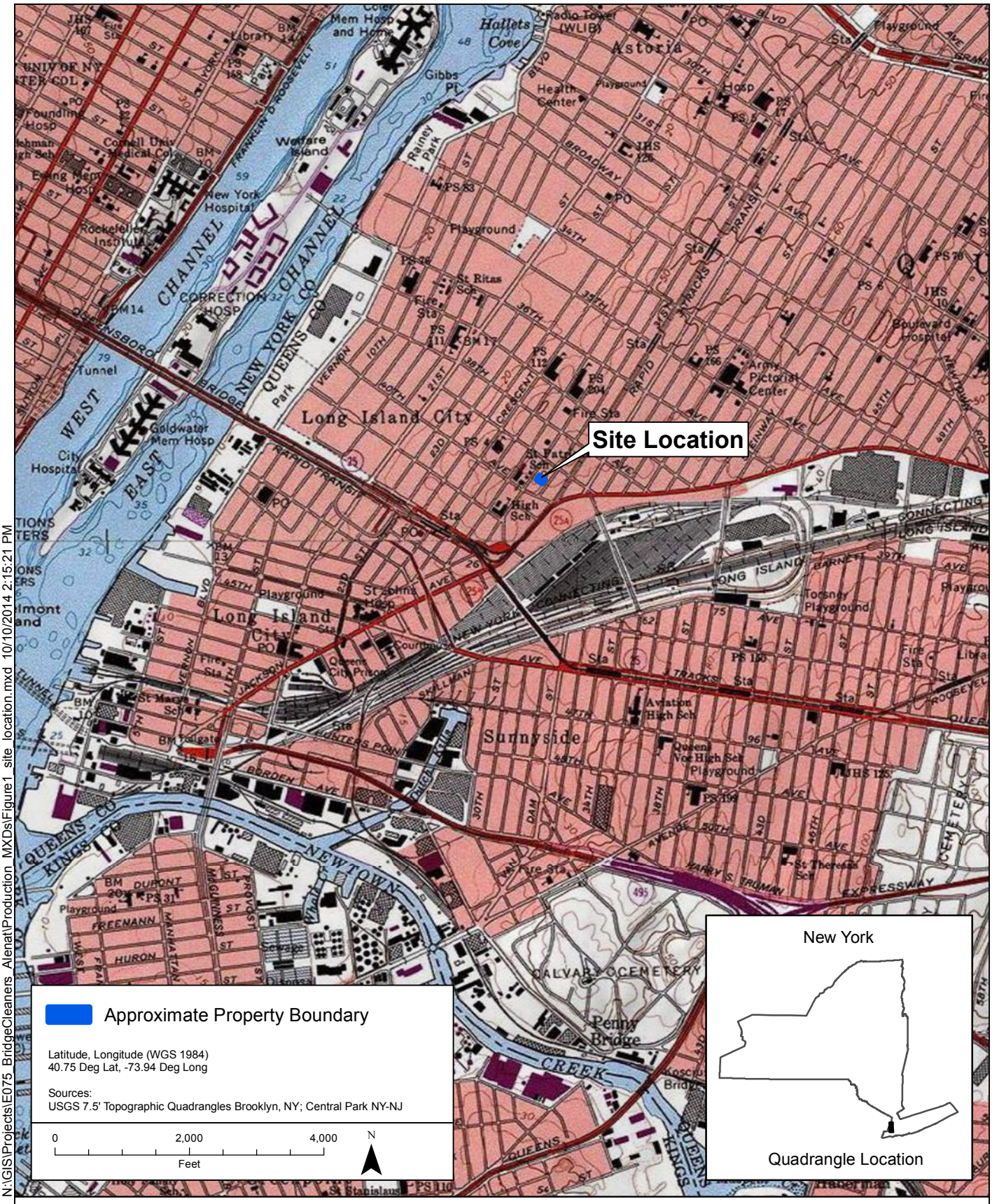
Sincerely,

James P. L'Esperance
Engineer

Keith P. Brodock, P.E.
Managing Engineer

Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Sampling Locations
Appendix A – Boring Logs
Appendix B – Off-Site Access Attempts
Appendix C – Lab Data Report

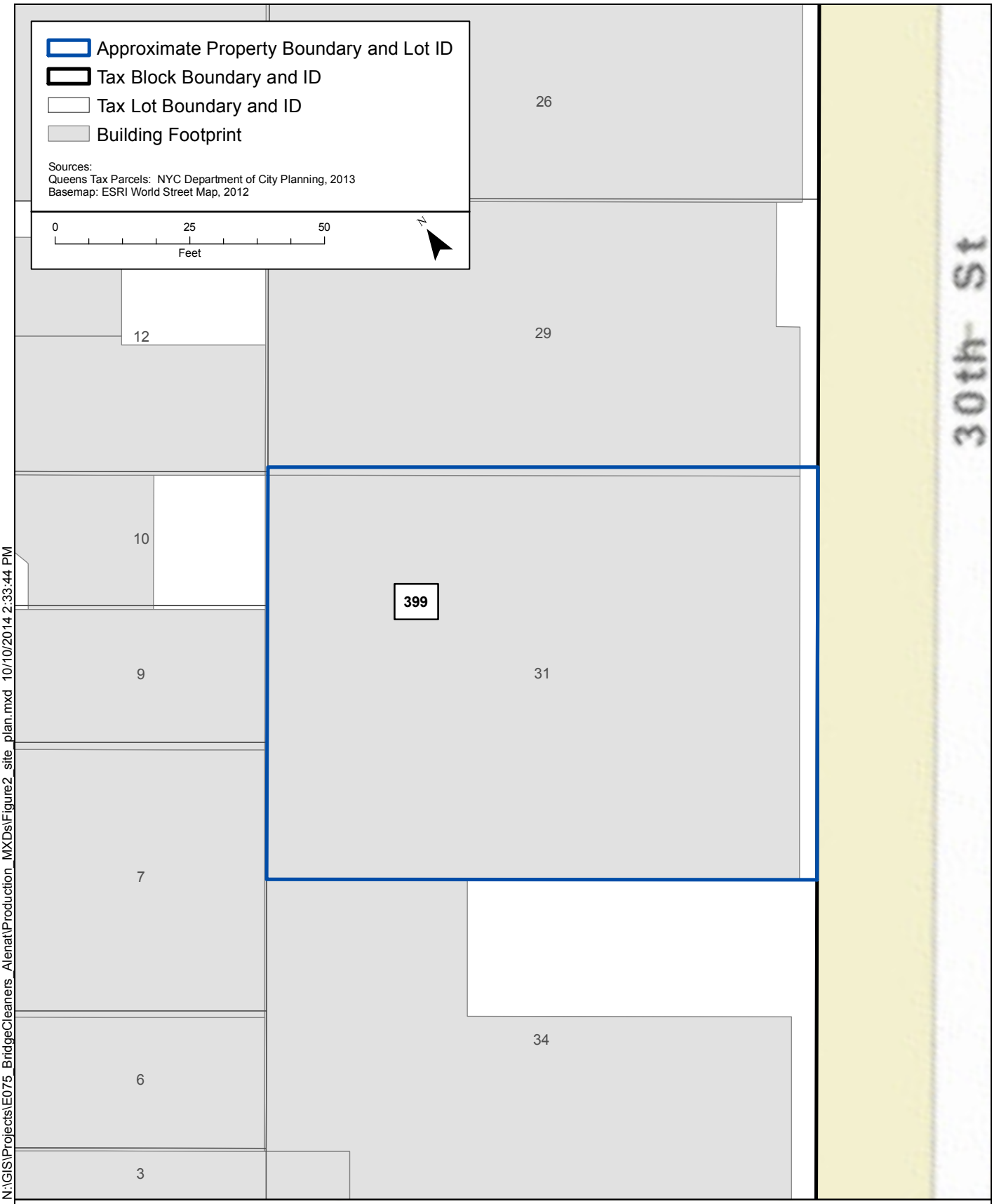
FIGURES



N:\GIS\Projects\E075_BridgeCleaners_Alenat\Production_MXDs\Figure1_site_location.mxd 10/10/2014 2:15:21 PM

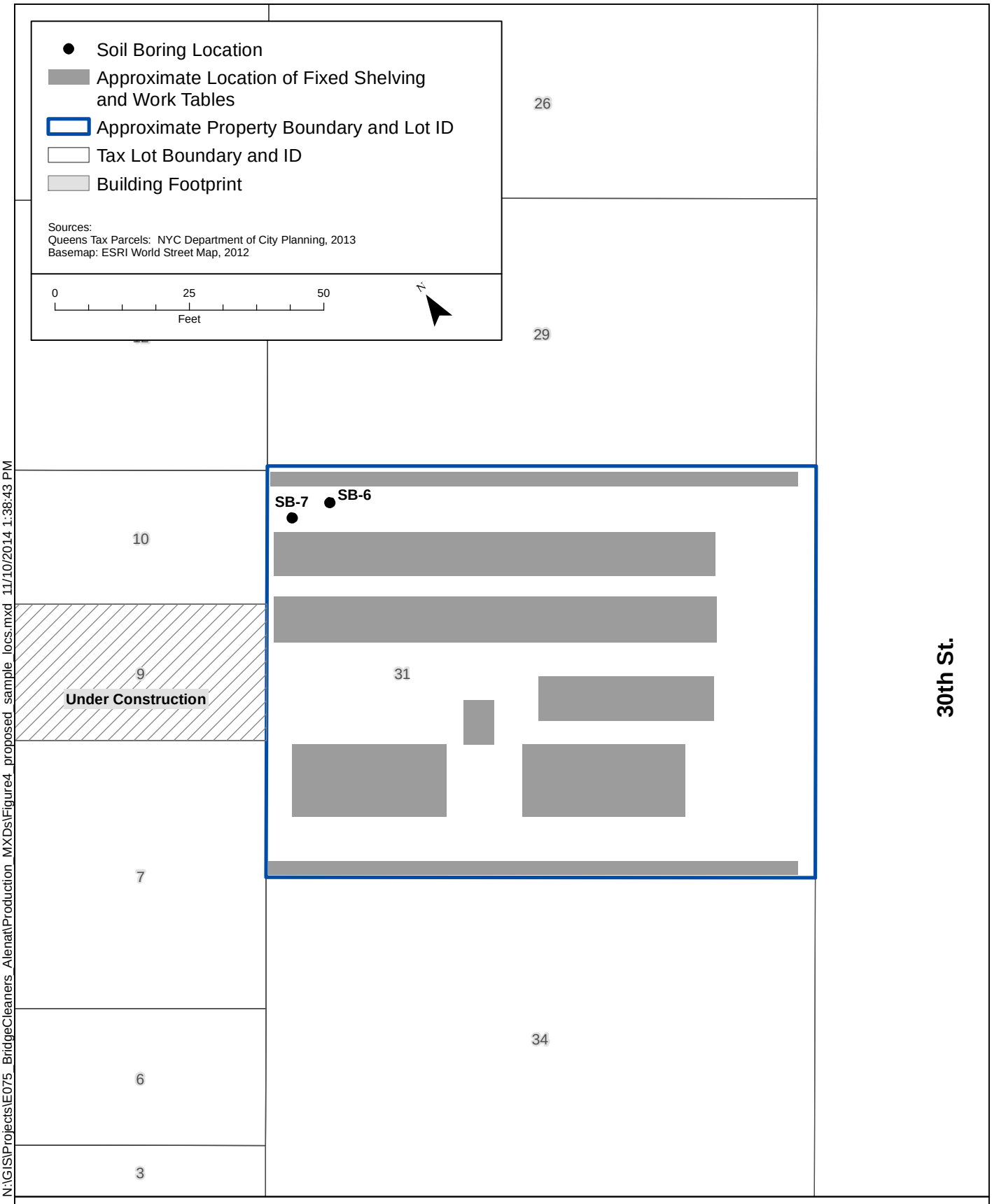
integral engineering p.c.
61 Broadway, Suite 1601
New York, New York 10006
www.integral-corp.com

Figure 1.
Site Location Map
39-26 30th St.
Long Island City, NY



integral engineering p.c.
61 Broadway, Suite 1601
New York, New York 10006
www.integral-corp.com

Figure 2.
Site Plan
39-26 30th St
Long Island City, NY



N:\GIS\Projects\E075_BridgeCleaners_Alenat\Production_MXDs\Figure4_proposed_sample_locs.mxd 11/10/2014 1:38:43 PM

integral engineering p.c.
61 Broadway, Suite 1601
New York, New York 10006
www.integral-corp.com

Figure 3.
Sample Locations
39-26 30th St
Long Island City, NY