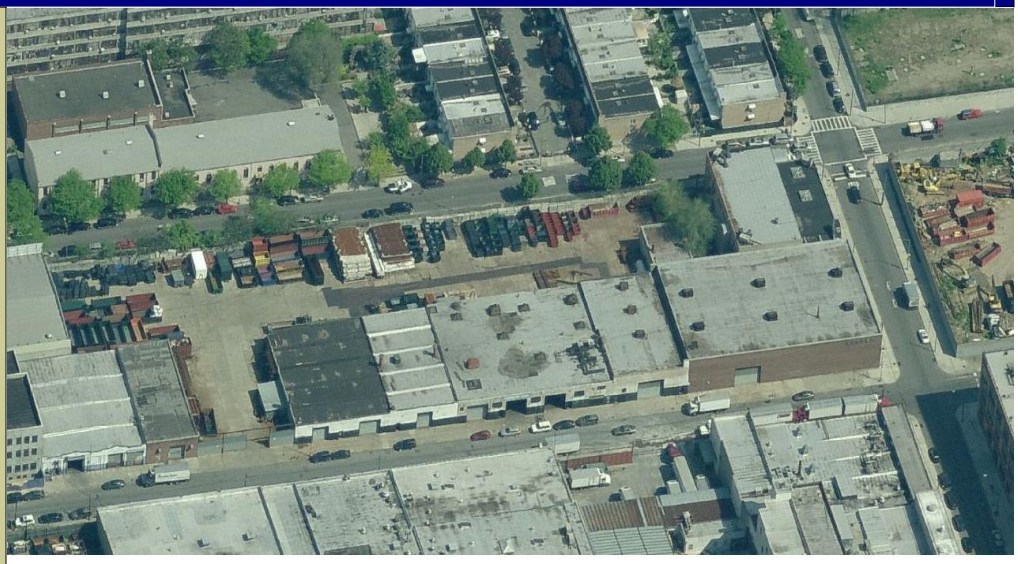
COOPER TANK AND WELDING CORPORATION



215 MOORE STREET

BROOKLYN, NEW YORK

PHASE I ENVIRONMENTAL

SITE ASSESSMENT

SEPTEMBER 2010

Prepared By
GANNETT FLEMING
100 Crossways Park Drive West
Woodbury, NY 11797
Office: 516-364-4140
Fax: 516-921-1565

Office Contacts
Vincent Frisina, P.E.
Megan Borruso

GF Project No.
53319

Gannett Fleming

COOPER TANK AND WELDING CORP.
PHASE I SITE ASSESSMENT
215 MOORE STREET,
BROOKLYN, NEW YORK
TABLE OF CONTENTS

Page

FIGURES

APPENDICES

EXECUTIVE SUMMARY

Cooper Tank and Welding Corp. (Cooper Tank) retained Gannett Fleming Engineers, P.C. (GF) to perform a modified Phase I Environmental Site Assessment (ESA) of 215 Moore Street, Brooklyn, New York (subject property). This site assessment was performed to evaluate environmental conditions on the subject property associated with historical property use and current operations.

Activities consisted of an environmental database search and historical document review. Freedom of Information Law (FOIL) requests were made to federal, state, and local regulatory agencies. FOIL request letters are included in Appendix A.

The subject property is located in a commercial and industrial area of Brooklyn, New York and is currently an approximately 2.35-acre property which includes a 44,000-square foot building and associated driveway and parking lot owned and operated by Cooper Tank and Welding Corp.

The following *environmental conditions* (ECs) were identified during this modified Phase I ESA:

- The subject property has an open spill case associated with a former leaking underground storage tank which reportedly impacted soil and groundwater at the property.
- A spill was discovered to the southeast of the subject property at the intersection of Moore and White Streets that the New York State Department of Environmental Conservation (NYSDEC) believes may be associated with the open spill case at the subject property. In correspondence dated July 15, 2010, NYSDEC ordered a Phase I Report, a delineation of soil and groundwater contamination in the area of the former UST, and a delineation of possible soil and groundwater contamination in the southeast corner of the subject property.

GF recommends the installation of soil borings and groundwater monitoring wells at the subject property to determine the site specific groundwater flow gradient and the laboratory analysis of groundwater samples to determine groundwater quality upgradient and downgradient of the subject property. A findings report should be submitted to the NYSDEC in satisfaction of the July 15, 2010 correspondence.

1.0 INTRODUCTION

1.1 Purpose

On August 12, 2010, Cooper Tank and Welding Corp. (Cooper Tank) retained Gannett Fleming Engineers, P.C. (GF) to perform a modified Phase I Environmental Site Assessment (ESA) of 215 Moore Street, Brooklyn, New York (subject property). This Phase I ESA was conducted to identify environmental conditions (ECs) indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property, and included a review of environmental files for the subject property and surrounding area and a computer database search of environmental regulatory agency files.

A site location map is provided as Figure 1.

1.2 Detailed Scope of Services

This Phase I ESA was performed by environmental professionals; GF performed this assessment in a professional manner using standard practices of the environmental consulting industry. The qualifications for the GF personnel are in Appendix B.

The scope of work completed for this Phase I ESA included a review of publicly available agency records, database information, fire insurance maps, and historical information.

1.3 Limitations and Exceptions to the Assessment

This Phase I ESA report is based partially on information obtained from others and GF cannot represent or warrant the accuracy or completeness of this information in describing site operations or environmental conditions. Some of the information presented in this report may be subject to interpretation and differing conclusions are possible. The information contained in

this report was developed from information available at the time of report preparation. GF does not assume liability for financial or other losses, or subsequent damage caused by or related to any use of this document.

The following items are considered non-scope considerations and were not included in the scope of work for this Phase I ESA:

- Wetlands delineation;
- Regulatory compliance auditing;
- Cultural and historic resource evaluation;
- Industrial hygiene;
- Health and safety;
- Ecological resource evaluation;
- Endangered species surveys;
- Indoor air quality surveys; and
- High voltage power lines.

1.4 User Reliance

This assessment report is based partially on information, documents and data obtained from others and Gannett Fleming makes no representation or warranty concerning the accuracy or completeness of this information in describing historical or current site operations or environmental conditions. Some of the information presented in this report may be subject to varying interpretations and conclusions. The information contained in this report was developed from information available at the time of report preparation. Gannett Fleming shall not be liable for financial or other losses or subsequent damage caused by or related to any use of this document.

This report was prepared for the sole use of Cooper Tank and Welding Corp. Any other distribution or use or reliance by any third-party is at that party's own risk without recourse to Gannett Fleming.

2.0 ASSESSMENT FINDINGS

2.1 Property Location

The subject property is located at 215 Moore Street, Brooklyn, Kings County, New York. The subject property is located approximately at latitude 40º 42' 16" North and longitude 73º 56' 09" West. A site location map is presented as Figure 1.

2.2 Property Setting and Adjacent Properties

The subject property is located in a residential/commercial/industrial area. More specific information relative to the surrounding properties is as follows:

North: The subject property is bordered to the north by Seigel Avenue, across which are industrial, commercial, and a few residential properties.

East: The subject property is bordered to the east by White Street, across which is an auto storage yard.

South: The subject property is bordered to the south by Moore Street, across which are industrial and commercial properties.

West: The subject property is bordered to the west by industrial and commercial properties.

2.3 Physical Site Setting

A property's physical setting critically influences its potential to be impacted by possible on-site and off-site contaminant sources, and also influences the probable extent and magnitude of the

resulting contamination. The geologic setting, hydrogeologic setting, climatic setting and land-use setting are of particular importance in influencing potential site contaminant migration.

The subject property lies approximately 18 feet above mean sea level. Depth to groundwater at the subject property is approximately 10 to 15 feet below grade. The nearest water body is Newtown Creek, which is located 0.39 miles from the subject property to the northeast. The East River is located approximately 1.5 miles from the subject property to the west.

2.4 Background Information

2.4.1 Historical Site Use – Sanborn Maps

Sanborn® Fire Insurance Map coverage was available from Toxics Targeting, LLC (TTI) for the years 1888, 1907, 1933, 1951, 1965, 1979, and 1990.

Descriptions are as follows:

1888 – The subject property contains numerous lots of the block bounded by Siegel Street to the north, Moore Street to the south, White Street to the east, and Bushwick Court to the west. The subject property contains five (5) developed lots which contain dwellings with associated stables and/or small storage sheds.

Surrounding properties include a furrier, a rope manufacturer, a varnish works, commercial storage buildings, dwellings, and numerous vacant lots.

1907 – The subject property now contains a mason's material shed, multiple dwellings, wagon houses and sheds, a tailor shop, a mineral water works building, Frederick Elflein & Sons – store fixture manufacturer, and a lumber yard with associated sheds. No other significant changes were observed on the subject property.

Surrounding properties include the Michael Mayer Sash & Blind Factory, wagon houses, apartment buildings with and without first-floor storefronts, a church, and a school. No other significant changes were observed on surrounding properties.

1933 – The mason's material shed has been replaced with a 70-car capacity garage with associated gasoline tank; the lumber yard has been sectioned off to include a box factory, a wood and tin shop, and three (3) apartments. One residence was replaced with a lumber shed and another has been removed from the property. No other significant changes were observed on the subject property.

Surrounding properties include auto painting, fur dyeing, junk yards and sheds (one junkyard includes a gasoline tank), a siphon factory, a small ice cream factory, a 50-car capacity garage with associated gasoline tank, a manufacturing loft, a bottling works, multiple stores, a church with associated playground, a school, a 40-car capacity garage with associated gasoline tank, a dairy products factory, a sausage casing manufacturer, multiple apartment buildings, and a filling station with three (3) gasoline tanks. No other significant changes were observed on surrounding properties.

1951 – Multiple wagon houses and sheds have been replaced with a beverage warehouse, a white metal smelting business, a steel tank manufacturer, and the Kalemein Door Manufacturer. Two (2) private garages have replaced stores and apartment buildings, a paint manufacturer has replaced a lumber storage area, an iron works has replaced a wood and tin shop, and a blacksmith, a tin smith, and a sheet metal works have replaced a lumber shed and vacant area. No other significant changes were observed on the subject property.

The former fur dyeing operation has been replaced with a trucking garage, the ice cream factory has been replaced with a 40-capacity car garage with associated gasoline tank, and a large parking lot replaced a sausage casing manufacturer and storage areas. No other significant changes were observed on surrounding properties.

1965 – Two (2) apartment buildings are no longer present at the subject property, a steel tank manufacturer has replaced sheds and apartment buildings, and a used clothing depot has replaced a tin smith, blacksmith, and sheet metal works. No other significant changes were observed on the subject property.

The trucking garage has been replaced with an auto repair shop and private garage, the junk yard has been replaced with a parking lot, the siphon factory has been replaced with an iron works, two apartment buildings are no longer present, a former parking lot is now an electronics manufacturer, stores have been replaced with a metal products manufacturer, furniture finisher, and storage area. No other significant changes were observed on surrounding properties.

1979 – Three (3) apartment buildings with first-floor storefronts and a beverage warehouse have been demolished and are now listed as vacant and open, the white metal smelting has been replaced by an unlabeled manufacturer, a steel tank manufacturing area has been relabeled as metal storage, Kalemein Door Manufacturing has been replaced by a warehouse, the paint manufacturer has been relabeled as general manufacturing, and the used clothing depot is now a metal products manufacturer. No other significant changes were observed on the subject property.

A parking lot has been converted to auto wrecking, an iron works was replaced by a general manufacturer and storage, an institutional building replaced a vacant lot the electronics manufacturer is labeled as general manufacturing, and the filling station was converted to a parking lot. No other significant changes were observed on surrounding properties.

1990 – The garage has been converted to a warehouse building. Parts of the subject property are not visible due to the quality of the map; however, the area of the property bordering Seigel Street appears to be a storage yard, as no buildings are visible. No other significant changes were observed on the subject property.

Surrounding properties appear to be unchanged; however, the map is of poor quality.

Sanborn Maps are included in Appendix C.

2.5 Regulatory Compliance Review

2.5.1 Federal and State Database Search

GF reviewed TTI's database search report for the subject property. TTI's report summarizes their computer database search of regulatory agency files for the subject property. The TTI report is presented in Appendix D and includes the following files:

Federal Files

- National Priority List for Federal Superfund Cleanup
- Delisted National Priority List Sites
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List
- Federal CERCLIS No Further Remedial Action Planned (CERCLIS NFRAP) List
- Resource Conservation and Recovery Act (RCRA) Corrective Action Activity (CORRACTS) List
- Federal Emergency Response Notification System Spills (ERNS) List
- Federal Toxic Release Inventory Facilities
- Federal Permit Compliance System Toxic Wastewater Discharges
- Federal Air Discharges
- Federal Civil and Administrative Enforcement Docket
- Federal Hazardous Waste Treatment, Storage or Disposal Facilities
- Federal Hazardous Waste Generators and Transporters (RCRA HWGT)

State Files

- New York State Inactive Hazardous Waste Disposal Site (SHWS) Registry
- New York Inactive Hazardous Waste Disposal Site Registry Qualifying
- New York State Brownfields Cleanup Sites

- New York Solid Waste Facilities Registry
- New York Hazardous Waste Treatment, Storage, or Disposal Facilities
- New York State Major Oil Storage Facilities
- New York State Toxic Spills: Active
- New York State Toxic Spills: Closed
- New York and Local Petroleum Bulk Storage Facilities (PBS)
- New York Hazardous Waste Generators and Transporters
- New York Chemical Bulk Storage Facilities (CBS)
- New York Hazardous Substance Disposal Site Draft Study

The subject property was listed in the following databases in the TTI database search report:

- Cooper Tank T.S. at 215 Moore Street was on the Solid Waste Facilities list. The facility was listed as a large transfer station (50,000 cubic yards/year) which accepts residential waste. The permit for this facility expired on December 12, 1985.
- Cooper Tank & Welding Corp. at 215 Moore Street is on the Active Tank Test Failures list.

On February 23, 2004, a 1,000-gallon Underground Storage Tank (UST) containing diesel failed a tank tightness test. NYSDEC assigned spill number 0312904 to the subject property. Upon removal of the tank, petroleum impacted soils were discovered. Approximately 220 tons of impacted soil were removed and staged pending laboratory analysis. On January 20, 2006, a UST closure report which detailed the process of removal was reviewed by the NYSDEC case manager. The report stated that one (1) 1,080-gallon UST was removed, along with seven (7) inches of residual product and 220 tons of contaminated soil. Sixty (60) pounds (lbs) of Oxygen Release Compound (ORC) was applied to the remaining soils in the excavation. The report also stated that there may be residual contamination that may have affected groundwater at the property. Four (4) six-inch (6-in) diameter sump wells were installed, and seven (7) post-excavation samples were collected from the sidewalls of the excavation. The report recommended the collection of one (1) groundwater sample for laboratory analysis.

The results of the April 2006 groundwater sampling report were reviewed by the NYSDEC case manager and revealed impacts to groundwater in exceedance of groundwater quality standards. The case manager required additional sampling of all wells at the subject property. The results of the secondary groundwater sampling event revealed minor exceedances of groundwater standards in three (3) of the four (4) on-site wells. Compounds which exceeded standards included Volatile Organic Compounds (VOCs), including benzene, toluene, ethylbenzene, xylenes, and naphthalene. No Light Non-Aqueous Phase Liquids (LNAPLs) were detected in any of the samples. The case manager required an additional two (2) rounds of groundwater sampling and a sensitive receptor survey. The results of the April 2007 groundwater monitoring report revealed minor exceedances of VOCs, no LNAPLs were detected.

In November 2007, the case manager was informed of spill number 9911504, in which contaminated soils were discovered during a utility excavation, at the intersection of Moore and White Streets. The NYSDEC was suspected that this contamination may have been caused by the subject property based on groundwater flow direction, which had yet to be determined. The case manager asked RND to return to the site to create a more accurate map of the subject property and the location of the former tank relative to the intersection.

The results of the January 2008 monitoring report were reviewed by the case manager, and revealed that VOC levels in all on-site wells were below 100 parts per billion (ppb), similar to previous sampling results.

Included in the TTI report detail for the subject property was a section describing the water main installation carried out by the New York City Department of Design and Construction (NYCDDC). The case manager reviewed all previous documents from DDC regarding the soil investigation as part of new water main installation in 2000/2001. The subsurface investigation report stated that four (4) soil borings were installed to fifteen (15) feet below ground surface (bgs), and five (5) soil samples were collected. Monitoring wells were installed at all four (4) borings. Sample results revealed contamination of soil by Semi-Volatile Organic Compounds (SVOCs) and contamination of groundwater by Volatile Organic Compounds (VOCs).

The TTI database search revealed the presence of regulated sites within the specified ASTM search radii as follows:

- Four (4) Inactive Hazardous Waste Disposal Site Registry Qualifying sites are located within the ASTM minimum search distance of 1-mile from the subject property.
- One (1) Inactive Hazardous Waste Disposal Site Registry Qualifying site is located within the ASTM minimum search distance of 1-mile from the subject property.
- One (1) Resource Conservation and Recovery Act (RCRA) Corrective Action Activity List site is located within the ASTM minimum search distance of 1-mile from the subject property.
- Eight (8) Brownfield Voluntary Cleanup Program sites are located within the ASTM minimum search distance of $^1/_2$-mile from the subject property.
- Two (2) Solid Waste Facilities are located within the ASTM minimum search distance of $^1/_2$-mile of the subject property.
  - The subject property is listed as a Solid Waste Facility site, as discussed above.
- Four (4) Active Tank Test Failure sites are located within the ASTM minimum search distance of $^1/_2$-mile of the subject property.
  - The subject property is listed as an Active Tank Test Failure site, as discussed above.
- Nine (9) Active Hazardous Spills (Unknown Causes & Other Causes) sites are located within the ASTM minimum search distance of $^1/_2$-mile of the subject property.
- Five (5) Closed Status Tank Failure sites are located within the ASTM minimum search distance of $^1/_2$-mile from the subject property.
- Thirty (30) Closed Status Tank Test Failure sites are located within the ASTM minimum search distance of $^1/_2$-mile from the subject property.
- One Hundred Forty Eight (148) Closed Status Spill (Unknown Causes & Other Causes) sites are located within the ASTM minimum search distance of $^1/_2$-mile from the subject property.
- Ten (10) Closed Status Spill (Miscellaneous Spill Causes) sites are located within the ASTM minimum search distance of $^1/_2$-mile of the subject property.

- Eleven (11) Petroleum Bulk Storage Sites are located within the ASTM minimum search distance of $^1/_8$-mile.
- Eleven (11) Hazardous Waste Generators, Transporters sites are located within the ASTM minimum search distance of $^1/_8$-mile of the subject property.
- Two (2) Hazardous Substance Waste Disposal Sites are located within the ASTM minimum search distance of $^1/_2$-mile from the subject property.
- Two (2) Air Discharge Sites are located within the ASTM minimum search distance of $^1/_8$-mile from the subject property.

2.5.2 Historical Documents

GF reviewed the following historical documents which were provided by Cooper Tank. Copies of these documents can be found in Appendix E.

UST Closure Report

A UST Closure Report prepared by RND Services Inc. (RND) and dated February 2004 was furnished by Cooper Tank. This report states that one (1) 1,080-gallon UST formerly containing diesel fuel failed a tank tightness test and was subsequently removed from the subject property. Groundwater was reported to be encountered at eleven (11) ft-bgs. There was approximately seven (7) inches of residual product in the tank, which was removed and drummed by RND. Once the UST was removed, separate phase petroleum impacts to soil were observed in the excavation. Approximately 219 tons of contaminated soil was removed from the property; however, contaminated soils remained at the site due to the close proximity of site buildings and their foundations. Sixty (60) gallons of ORC was applied and slurried in the 23.5 x 18.7 x 11 foot excavation. The excavation was backfilled with clean fill and four 6-inch diameter sump wells were installed on a gravel base and slotted from five to twelve (5-12) ft-bgs. Seven (7) endpoint samples were collected from the sidewalls of the excavation, as groundwater was encountered in the base of the excavation. Soil samples collected from the southwest and northeast sidewalls were found to contain compounds above NYSDEC guidance values. It was concluded that one (1) groundwater sample be collected to establish groundwater conditions and determine if additional investigation was necessary at the site.

Single Groundwater Sample Collection Report

NYSDEC responded to the UST Closure Report with a letter dated January 24, 2006 stating that the collection of one (1) groundwater sample was required. This sample was collected on April 18, 2006 from MW-4, on the west side of the former tank excavation. Results of the groundwater sampling reported five (5) volatile organic compounds (VOCs) above NYSDEC Technical and Administrative Guidance Memorandum (TAGM) Groundwater Criteria. These compounds were 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Naphthalene, and total Xylenes. RND recommended another round of sampling to determine if levels reported at this well were representative of site groundwater.

First Quarter Groundwater Sampling Report

NYSDEC responded to the Single Groundwater Sample Collection Report with a letter dated June 05, 2006 stating that a second round of groundwater sampling was required. The initial round of groundwater samples were collected on November 28, 2006 from all four (4) on-site wells. Results of the initial groundwater sampling event indicated five (5) compounds above NYSDEC TAGM Groundwater Criteria in three (3) of the four (4) on-site wells. These compounds were 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Naphthalene, and total Xylenes.

Second Quarter Groundwater Sampling Report

NYSDEC responded to the First Quarter Groundwater Sampling Report with a letter dated January 10, 2007 stating that all four (4) wells were required to be gauged for the presence of LNAPL and sampled on a quarterly basis for at least two (2) additional quarters. If, after the additional sampling events, contaminant trends remain level or decrease and no LNAPL was detected, a sensitive receptor survey and a spill closure petition could be submitted. The second round of groundwater sampling occurred on April 04, 2007 from all four (4) on-site wells. Results of the second quarter groundwater sampling event indicated compounds above NYSDEC TAGM Groundwater Criteria in all four (4) on-site wells. 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Naphthalene, and total Xylenes were reported in MW-1 and

MW-4. 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, and total Xylenes were reported in MW-2 and MW-3.

Third Quarter Groundwater Sampling Report

The third round of groundwater sampling occurred on July 19, 2007 from three (3) of the four (4) on-site wells. Results of the third quarter groundwater sampling event indicated compounds above NYSDEC TAGM Groundwater Criteria in all four (4) on-site wells. MW-1 and MW-4 indicated six (6) compounds above NYSDEC TAGM Groundwater Criteria, including 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Naphthalene, o-Xylenes, and p- & m-Xylenes. MW-3 indicated five (5) compounds were reported above NYSDEC TAGM Groundwater Criteria, including 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Ethylbenzene, Naphthalene, and o-Xylenes.

Sensitive Receptor Survey

A letter dated March 22, 2010 from RND to NYSDEC stated that a Sensitive Receptor Survey was prepared and dated July 3, 2008 but failed to be submitted to the NYSDEC case manager. The Sensitive Receptor Survey was attached to this letter and requested spill closure at the subject property. The Sensitive Receptor Survey gives background information on the investigations and sampling events which have taken place at the subject property since 2004.

Letter from NYSDEC Case Manager

A letter dated July 15, 2010 from the NYSDEC case manager stated that on January 3, 2000, NYSDEC was notified by the New York City Department of Design and Construction (NYC DDC) that petroleum contaminated soil was discovered during a water main installation at the intersection of Moore and White Streets, and heavy contamination was discovered near 236 Moore Street. A soil and groundwater investigation was conducted at 236 Moore Street, and based on the associated groundwater flow data, NYSDEC suggested that the contamination found may be originating from Cooper Tank. NYSDEC requires the subject property to perform a Phase I Report, a delineation of soil and groundwater contamination via the installation of

monitoring wells in the area of the former UST, and a delineation of possible soil and groundwater contamination in the southeast corner of the subject property.

3.0 FINDINGS

Environmental conditions (ECs) are conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property. Historical environmental conditions include conditions that would have been considered environmental conditions in the past, but may or may not be currently considered an environmental condition. These terms are not meant to include *de minimus* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of enforceable action if brought to the attention of appropriate government agencies.

The following *environmental conditions* (ECs) were identified during this modified Phase I ESA:

- The subject property has an open spill case associated with a former leaking underground storage tank which reportedly impacted soil and groundwater at the property.
- A spill was discovered to the southeast of the subject property at the intersection of Moore and White Streets that the New York State Department of Environmental Conservation (NYSDEC) believes may be associated with the open spill case at the subject property. In correspondence dated July 15, 2010, NYSDEC ordered a Phase I Report, a delineation of soil and groundwater contamination in the area of the former UST, and a delineation of possible soil and groundwater contamination in the southeast corner of the subject property.

The following *de minumus* condition was identified during this modified Phase I ESA:

- Due to the location of the subject property in close proximity to both the English Kills – a tributary of Newtown Creek – and the East River, and due to the complexity of the urban landscape in this area, groundwater flow could not be accurately determined; therefore, properties which lay upgradient of the subject property could not be identified.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following *environmental conditions* (ECs) were identified during this modified Phase I ESA:

- The subject property has an open spill case associated with a former leaking underground storage tank which reportedly impacted soil and groundwater at the property.
- A spill was discovered to the southeast of the subject property at the intersection of Moore and White Streets that the New York State Department of Environmental Conservation (NYSDEC) believes may be associated with the open spill case at the subject property. In correspondence dated July 15, 2010, NYSDEC ordered a Phase I Report, a delineation of soil and groundwater contamination in the area of the former UST, and a delineation of possible soil and groundwater contamination in the southeast corner of the subject property.

The following *de minumus* condition was identified during this modified Phase I ESA:

- Due to the location of the subject property in close proximity to both the English Kills – a tributary of Newtown Creek – and the East River, and due to the complexity of the urban landscape in this area, groundwater flow could not be accurately determined; therefore, properties which lay upgradient of the subject property could not be identified.

GF recommends the installation of soil borings and groundwater monitoring wells at the subject property to determine the site specific groundwater flow gradient and the laboratory analysis of groundwater samples to determine groundwater quality upgradient and downgradient of the subject property. A findings report should be submitted to the NYSDEC in satisfaction of the July 15, 2010 correspondence.

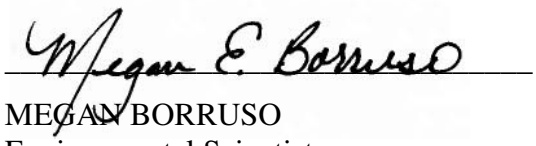
5.0 REFERENCES

- Toxics Targeting Incorporated, *Phase I Environmental Database Report: 215 Moore Street, Brooklyn, NY 11206.* August 24, 2010.

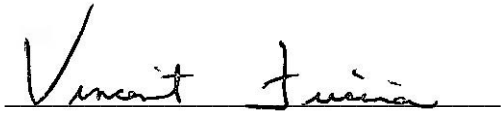
- Toxics Targeting Incorporated, *Sanborn Maps*. 1888, 1907, 1933, 1951, 1965, 1979, 1990.

6.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONAL(S)

This Phase I Environmental Site Assessment has been prepared by the following environmental professionals and is true and accurate to the best of their knowledge:

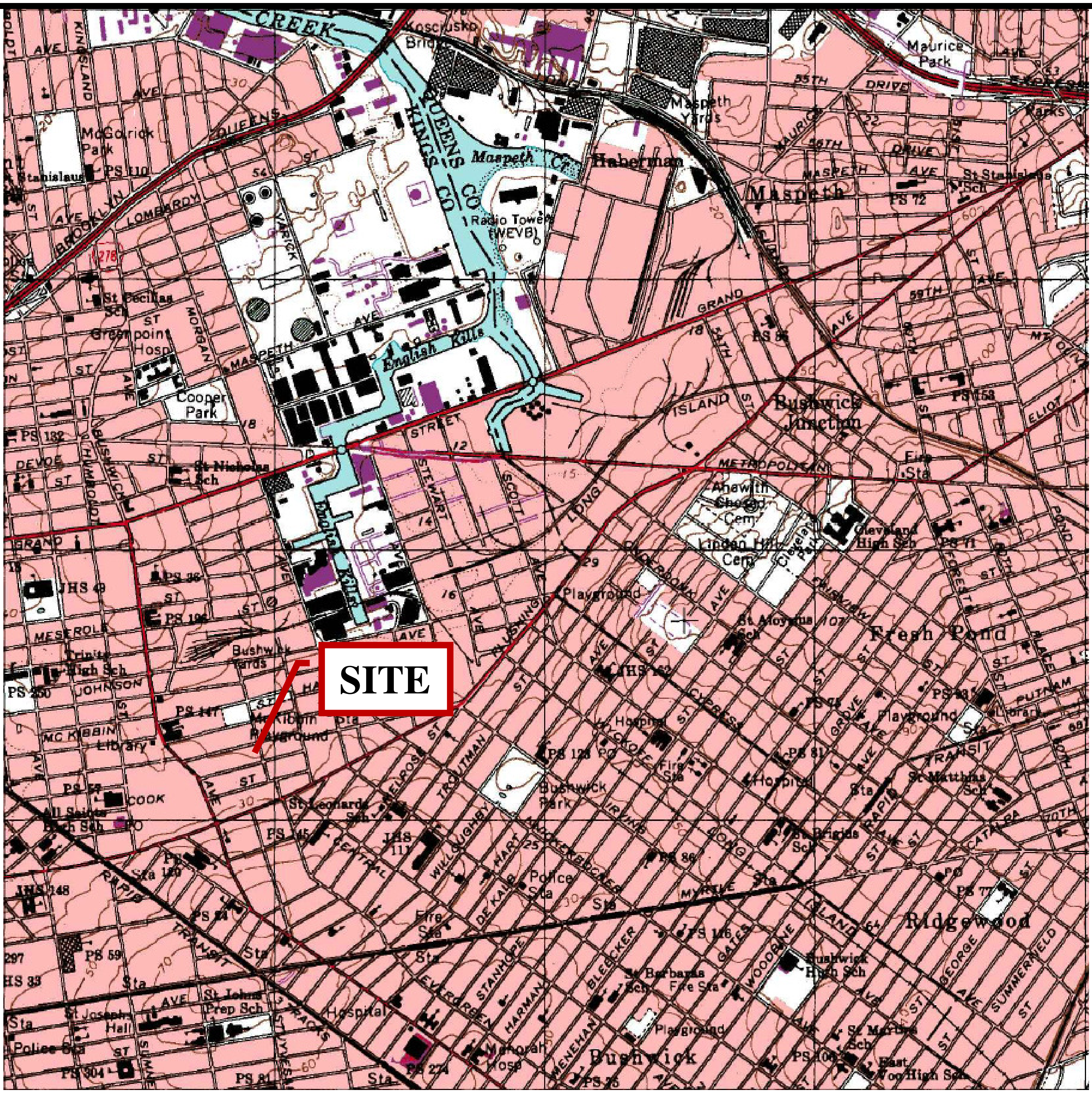


MEGAN BORRUSO
Environmental Scientist



VINCENT FRISINA, P.E.
Director of Environmental Services

FIGURES



Gannett Fleming

FIGURE 1 – SITE LOCATION MAP
215 MOORE STREET
BROOKLYN, NY 11206
USGS Topographic Map Brooklyn, New York Quadrangle, 1995

APPENDIX A
FOIL REQUEST LETTERS

Gannett Fleming

GANNETT FLEMING ENGINEERS, P.C.
100 Crossways Park Drive West, Suite 300
Woodbury, NY 11797-2012

Office: (516) 364-4140
Fax: (516) 364-1565
Internet:www.gannettfleming.com

September 10, 2010

City of New York
Department of Health and Mental Hygiene
125 Worth Street, CN 31
New York NY 10013

Re: Freedom of Information Request

Dear Sir or Madam:

Gannett Fleming requests copies of environmental files, records, and memoranda concerning the following property:

215 Moore Street
Brooklyn, NY 11206

This information should include: 1) past and present underground storage tank registration(s); 2) reported spills or releases of hazardous substances; 3) generation, storage, treatment, or disposal of hazardous substances; 4) past and present groundwater, surface water, and soil investigations; and 5) environmental permits/violations.

We will gladly pay copying costs.

Please let us know if you can accommodate this request in an expedient manner. We would like to schedule an appointment to copy the files/records if this is not possible.

Please call if you have any questions.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

Megan E. Borruso

MEGAN E. BORRUSO
Environmental Scientist

Gannett Fleming

GANNETT FLEMING ENGINEERS, P.C.
100 Crossways Park Drive West, Suite 300
Woodbury, NY 11797-2012

Office: (516) 364-4140
Fax: (516) 364-1565
Internet:www.gannettfleming.com

September 10, 2010

New York City Department of Buildings
3rd Floor
280 Broadway
New York, NY 10007

Re: Freedom of Information Request

Dear Sir or Madam:

Gannett Fleming requests copies of environmental files, records, and memoranda concerning the following property:

215 Moore Street
Brooklyn, NY 11206

This information should include: 1) past and present underground storage tank registration(s); 2) reported spills or releases of hazardous substances; 3) generation, storage, treatment, or disposal of hazardous substances; 4) past and present groundwater, surface water, and soil investigations; and 5) environmental permits/violations.

We will gladly pay copying costs.

Please let us know if you can accommodate this request in an expedient manner. We would like to schedule an appointment to copy the files/records if this is not possible.

Please call if you have any questions.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

Megan E. Borruso

MEGAN E. BORRUSO
Environmental Scientist

Gannett Fleming

GANNETT FLEMING ENGINEERS, P.C.
100 Crossways Park Drive West, Suite 300
Woodbury, NY 11797-2012

Office: (516) 364-4140
Fax: (516) 364-1565
Internet:www.gannettfleming.com

September 10, 2010

New York State Department of Environmental Conservation
Region 2
1 Hunter's Point Plaza
47-40 21st Street
Long Island City, NY 11101
Re: Freedom of Information Request

Dear Sir or Madam:

Gannett Fleming requests copies of environmental files, records, and memoranda concerning the following property:

215 Moore Street
Brooklyn, NY 11206

This information should include: 1) past and present underground storage tank registration(s); 2) reported spills or releases of hazardous substances; 3) generation, storage, treatment, or disposal of hazardous substances; 4) past and present groundwater, surface water, and soil investigations; and 5) environmental permits/violations.

We will gladly pay copying costs.

Please let us know if you can accommodate this request in an expedient manner. We would like to schedule an appointment to copy the files/records if this is not possible.

Please call if you have any questions.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

Megan E. Borruso

MEGAN E. BORRUSO
Environmental Scientist

Gannett Fleming

GANNETT FLEMING ENGINEERS, P.C.
100 Crossways Park Drive West, Suite 300
Woodbury, NY 11797-2012

Office: (516) 364-4140
Fax: (516) 364-1565
Internet:www.gannettfleming.com

September 10, 2010

Records Access Office
New York State Department of Health
Corning Tower Room 2348
Albany, New York 12237-0044
Re: Freedom of Information Request

Dear Sir or Madam:

Gannett Fleming requests copies of environmental files, records, and memoranda concerning the following property:

215 Moore Street
Brooklyn, NY 11206

This information should include: 1) past and present underground storage tank registration(s); 2) reported spills or releases of hazardous substances; 3) generation, storage, treatment, or disposal of hazardous substances; 4) past and present groundwater, surface water, and soil investigations; and 5) environmental permits/violations.

We will gladly pay copying costs.

Please let us know if you can accommodate this request in an expedient manner. We would like to schedule an appointment to copy the files/records if this is not possible.

Please call if you have any questions.

Very truly yours,

GANNETT FLEMING ENGINEERS, P.C.

Megan E. Borruso

MEGAN E. BORRUSO
Environmental Scientist

APPENDIX B
PERSONNEL QUALIFICATIONS

Vincent J. Frisina, P.E. Resume

YEARS EXPERIENCE WITH FIRM: 4

YEARS EXPERIENCE WITH OTHER FIRMS: 27

EDUCATION:

B.C.E., Civil Engineering, Manhattan College, 1977
M.E., Environmental Engineering, Manhattan College, 1978
40-Hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Training, 1992
8-Hour OSHA HAZWOPER Refresher Training, Field Safety Corporation, 2010
OSHA Hazardous Waste Operations and Emergency Response Supervisor Training, 1998
OSHA Confined Space Entry Training, 1992-2007
MTA/East Side Access Project Contractor Safety Training, Long Island Rail Road, 1999-2005
American Red Cross Standard First Aid Training
American Red Cross Adult CPR Training

PROFESSIONAL REGISTRATION(S):

P.E..: New York - No. 059115 (1982)
New Jersey - No. 24GE03741000 (1993)
Connecticut - No. PEN.0019688 (1996)
Massachusetts - No. 39559 (1996)
Pennsylvania - No. PE051815E (1996)
Maryland - No. 22230 (1996)
Delaware - No. 10919 (1996)
Wisconsin - No. 31963 (1997)
Illinois - No. 62051394 (1997)
Florida - No. 51618 (1997)
Missouri - No. 028724 (1997)
Virginia - No. 031392 (1997)
Mississippi - No. 13321 (1997)
West Virginia - No. 013765 (1998)
Texas - No. 85173 (1999)
Underground Storage Tank Closure and Subsurface Evaluation License: New Jersey - No. 0016131 (1982)
MTA Long Island Rail Road Roadway Worker Protection (1995)
MTA Metro-North Railroad Roadway Worker Procedures - No. 01976 (2010)
Norfolk Southern Roadway Worker Procedures/Contractor Safety (2010)

CURRENT RESPONSIBILITIES:

Director of Environmental Services responsible for the supervision and technical performance of environmental investigations and assessments, remediation projects, and aboveground and underground storage tank removal and replacement. Has managed and provided designs for subsurface remediation efforts, hazardous materials remediation, landfill construction and closure on projects for the Long Island Rail Road. With a thorough knowledge on U.S. Environmental Protection Agency (U.S. EPA), state, and local environmental regulations and permitting requirements, is experienced in the preparation of hazardous materials assessments, construction contaminant management plans, and environmental impact statements, as well as site planning, permitting, and stormwater management documents.

SUMMARY OF EXPERIENCE:

Remedial Investigation/Remedial Alternatives Analysis, Elmira, NY, *Norfolk Southern Railway Company.* Senior Project Manager responsible for providing technical management and quality control for the development of the remedial investigation work plan, remedial investigation report, and remedial alternatives analysis for a former rail yard. Reviewed historical investigative data and reports to formulate a supplemental remedial investigation in conformance with the site's voluntary clean-up agreement. Investigative efforts included surface and subsurface soil sampling, groundwater sampling, and soil gas investigation.

Gowanus Canal Assessment, Brooklyn, NY, *New York City Office of Environmental Remediation.* Environmental Task Manager responsible for reviewing reports to initially identify sites that may potentially be of concern. Contaminates of concern include petroleum products, metals, coal tars, polychlorinated biphenyls (PCBs), and dioxins. Submitted a Freedom of Information Law request to the New York City Department of Environmental Conservation requesting file information pertaining to a specific site in the study area. Prioritized the list of sites remaining for potential sites to have had or continue to have an impact on the canal. Developed a simplified Phase II site investigation work plan for the highest-priority sites. Developed site-specific descriptions of the Phase II work at each site and developed a report presenting the findings.

Brownfield Cleanup Program and Vacant Properties Database, New York, NY, *New York City Office of Environmental Remediation.* Assistant Project Manager assisting with the development of a database for a Brownfield Cleanup Program (BCP) to promote the redevelopment of potentially contaminated and under-used sites. The City's BCP is the first municipal program of its kind in the country, and it is intended to facilitate the fast and efficient cleanup and reuse of contaminated sites. One of the 10 brownfield initiatives is the creation of a database of historical site uses across the city that can be used to identify potential brownfield sites. This vacant property database assists in the rapid redevelopment of these sites and allow the City to measure long-term progress toward the plan's goals.

Harmon Yard, Croton-on-Hudson, NY, *MTA Metro-North Railroad.* Environmental Task Manager responsible for preparing a work plan for a limited site investigation. The investigation characterized concrete and subsurface soil in support of demolition and construction activities related to Phase IV of the 2001 master plan for the replacement of equipment maintenance facilities. Phase IV includes the demolition of the Harmon Mechanical Department storeroom (Building #5), partial demolition the main shop building (MSB), construction of the new support shop building (SSB), and construction of the new recycling center. The work plan includes historical background and physical site conditions, detailed work scope with proposed sampling locations, sampling methodology and quality assurance/quality control procedures, and health and safety protocol. The future SSB will be built in the location of the existing recycling facility. The existing recycling facility once stored polychlorinated biphenyl (PCB)-containing transformers and currently operates a bulb crushing unit. The MSB has a documented history of PCB spills and potential contamination. Soil borings will be advanced in identified areas of concern where concrete core samples have been removed.

Old Bethpage Landfill, Bethpage, NY, *Town of Oyster Bay.* Project Manager responsible for planning and overseeing groundwater sampling activities, monitoring concentrations of contaminants in impacted groundwater, and tracking the progress of the contaminant plume. Reviewed field data and managed the preparation of quarterly and annual reports.

On-Call Environmental Services, Oyster Bay, NY, *Town of Oyster Bay.* Project Director responsible for leading a Phase I environmental site assessment and a Phase II environmental site investigation and updating remedial investigation reports at various locations. Responsible for asbestos sampling and

identification and preparation of a findings report. Also prepared cost estimates based on the findings report results.

Indoor Air Assessment, New York, NY, *Metropolitan Opera.* Project Director responsible for coordinating indoor air sampling in an opera house building. Led the preparation of an indoor air findings report, and tracked and maintained project budgets, including labor and expenses.

Remedial Investigation/Return Activated Sludge Report, Maintenance-of-Way Repair Shop at Holban Yard, Hollis, NY, *MTA Long Island Rail Road.* Project Manager responsible for preparing and executing a remedial investigation work plan and developing a remedial action selection report for impacts directly related to the spill based on the remedial investigation findings. Additionally, the report included biddable plans and specifications to decommission by abandoning-in-place or removing the existing underground oil/water separator, and close or petition to reclassify the three underground injection control structures.

Soil and Groundwater Investigation Services, New York, NY, *Time Warner.* Project Manager responsible for coordinating and conducting onsite activities, including groundwater sampling, plume delineation, and a tidal fluctuation study. Also coordinated and prepared reports to be submitted to clients and regulatory agencies, and served as the liaison with the client, the contractors, and state and local officials.

Environmental Site Investigation, Glen Head, NY, *Confidential Client.* Project Director responsible for coordinating a Phase I environmental site assessment and a limited Phase II environmental site investigation of a property in support of the property sale. Reviewed documentation and reports, and tracked and maintained project budgets, including labor and expenses.

Annual Site Certification, Southport, NY, *Equilibrium Equities.* Project Director responsible for the coordination and preparation of an annual New York State Department of Environmental Conservation certification. Performed a site visit to verify that the required engineering controls were in place, and reviewed the site management plan. Coordinated with the client and New York State, and tracked and maintained project budgets, including labor and expenses.

Groundwater Remediation, Freeport, NY, *Nassau Uniform Services.* Project Director responsible for correspondence with the New York State Department of Environmental Conservation regarding the record of decision and order of consent related to chlorinated solvents, metals, and fuel oil impacts to soil, groundwater, soil vapor, and surface water. Responsible for the coordination of remedial system operations, maintenance, and upgrades. Coordinates fieldwork, including groundwater sampling, soil gas sampling, and air sparging/soil vapor extraction system monitoring. Led the development of site assessment work plans, interim remedial measure work plans, and remedial action/remedial design work plans. Responsible for tracking and maintaining project budgets, including labor and expenses.

Site Assessments and Investigations at Various Locations, New York, NY, *New York City Housing Authority.* Project Director responsible for developing work plans, coordinating field staff and contractors to perform work, and generating site assessment reports, investigation summaries, and remedial plans for more than 50 fuel oil-impacted sites. Responsibilities included budget and technical tracking of the $2 million contract and the coordination of soil and groundwater sampling, and performing site characterizations. Served as the liaison with the client, contractors, and state and local officials. Work involves assisting the Authority to comply with an order of consent issued by the New York State Department of Environmental Conservation (NYSDEC) and developing site-specific work plans for conducting comprehensive site assessments and investigations at documented spill sites. Project Manager

responsible for coordinating, planning, and conducting underground storage tank closures following procedures recommended by NYSDEC.

Geotechnical Investigation, New York, NY, *New York City Housing Authority.* Project Director responsible for developing work plans, coordinating field staff and contractors to perform work, and generating site assessment reports. Also responsible for budget and technical tracking.

Soil and Groundwater Investigation Services, Hempstead, NY, *Planned Parenthood of Nassau County.* Project Manager responsible for coordinating and performing a Phase I environmental site assessment to precharacterize site conditions and prepare an all appropriate inquiries-compliant Phase I environmental site assessment report. Coordinated the Phase II investigation addressing potential petroleum impacts to soil, groundwater, and drywells present at the site. Led the preparation of the Phase II investigation findings summary report.

Subsurface Investigation at Armonk Square, Armonk, NY, *Antares Armonk Square, LLC.* Senior Project Manager responsible for providing technical direction and quality control for the subsurface investigation of the Class II inactive hazardous waste site based on perchloroethylene-impacted groundwater. Evaluated the existing groundwater pump-and-treat system and assessed feasible alternatives, including enhanced bio-attenuation. Assessed subsurface soil conditions in support of planned site development. Designed a sub-slab depressurization system to mitigate soil gas vapor intrusion into the proposed buildings. Assisted with client's consent order negotiations with New York State Department of Environmental Conservation case manager.

Remedial Investigation/Remedial Alternative Analysis, Brooklyn, NY, *Frito Lay, Inc.* Senior Project Manager responsible for providing technical oversight and administrative management of the remedial investigation and alternatives analysis tasks. The remedial investigation was conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) DER-10 Guidelines. Provided technical support and quality control for the preparation of the remedial investigation work plan, remedial investigation report, and supplemental remedial investigation work plan, and the implementation of the supplemental remedial investigation and remedial alternatives analysis. Led the effort preparing the brownfield applications and successfully worked with the NYSDEC case manager to gain acceptance into the Brownfield Clean-Up Program.

Spill Prevention, Control, and Countermeasure Plan, Hempstead, NY, *Hofstra University.* Project Manager responsible for preparing amendments to the University's Petroleum Spill Prevention, Control, and Countermeasure Plan to incorporate facility modifications and additions, including waste oil and oil/water separator systems and hydraulic elevators. Assessed existing waste oil and associated oil/water separator systems for compliance with Nassau County Article XI requirements.

Groundwater Investigation of Petroleum Contamination, Richmond Hill and Morris Park Facilities, New York, NY, *MTA Long Island Rail Road (LIRR).* Project Manager responsible for the delineation of on-site and off-site petroleum-impacted groundwater and the preparation of an investigative report recommending remedial alternatives. The investigative approach uses historical investigative data and existing monitoring well sampling data and incorporates new monitoring well sampling data to quantify and delineate petroleum-impacted groundwater. Groundwater quality data is also being used to evaluate areas of historical petroleum releases. Manages several subcontractors whose activities are critical to the success of the project. Conducts meetings with the LIRR and New York State Department of Environmental Conservation at appropriate stages of the project to discuss the investigative work plan approach, schedule, and findings. Field activities require coordination with LIRR yard personnel to pre-arrange train movement and track outages for a safe operation that also minimizes interference with yard operations.

Massapequa Creek Streamflow Augmentation and Pond Restoration, Nassau County, NY, *Nassau County Department of Public Works.* Project Manager responsible for managing the analyses, studies, modeling, permitting, and design efforts for a groundwater extraction well system and pump station. Stream-flow augmentation is part of Nassau County's plan to mitigate sewering impacts on the Massapequa Preserve. Groundwater will be extracted and conveyed to two upstream locations, augmenting the stream flow during low flow conditions. Prepared a work plan for the installation of borings and attainment of groundwater samples to determine soil lithology and groundwater quality. Coordinated the use of a groundwater fate and transport modeling effort to illustrate the impacts that the augmentation well system will have on existing contaminant plumes, nearby water supply wells, and surface water drawdown. Prepared a work plan and managed the aquifer testing efforts to analyze aquifer yield and determine augmentation well design parameters. Managed the preparation of design documents for the augmentation well and pump station system and preparation of Long Island well and wetland impact/mitigation permit applications.

Phase 2 Subsurface Investigation, Brooklyn, NY, *Berry Street, LLC/Essex Capital Partners, Ltd.* Project Manager responsible for preparing a property pre-acquisition assessment work plan for the Phase 2 subsurface investigation of an industrial site on Berry Street. Managed the implementation of the investigation that focused on chlorinated volatile organic compounds and heavy metals within the subsurface soil and groundwater associated with historical site use as a metals fabrication operation. Adjusted field procedures and analytical protocol after field evidence suggested the possible presence of an underground fuel oil tank. Also prepared the investigative findings/recommendations report and cost estimates for soil handling and disposal procedures and tank-removal efforts.

Food Products Assessment, Osceola, AR, *Creative Foods, LLC.* Project Manager responsible for conducting an environmental site assessment and environmental compliance audit for a food products facility as part of the pre-acquisition due diligence for the facility. The assessment included a review of historical information, site inspection, and report preparation using the historical research methods standardized by ASTM E-1527-00. The environmental compliance audit involved a review of air emissions and associated permit requirements, review of a U.S. EPA compliance inspection report involving the storage of anhydrous ammonia as a refrigerant, the review of their industrial wastewater pretreatment discharge permit criteria, an assessment of raw and waste drum storage practices, and the assessment of the facility's petroleum storage system. Recommendations included upgrades to the petroleum storage facility, upgrades to the drum storage practices and the need for a stormwater management plan and discharge permit.

Hazardous Materials Policy, Copiague, NY, *Watson Pharmaceuticals, Inc.* Project Manager responsible for reviewing corporate hazardous materials and hazardous waste handling and transport procedures. Developed site-specific policies for the handling and transportation procedures in conformance with Watson's corporate policies and federal, state, and county requirements.

Environmental Site Assessment, Queens, NY, *Tully Environmental.* Project Manager responsible for managing the environmental assessment of an active asphalt plant. The assessment included a review of historical information, site inspection, and report preparation using the historical research methods standardized by ASTM E-1527-00 and used by both the financial-lending and environmental-consulting industries. Managed a detailed property inspection to identify any apparent or potentially adverse conditions on or adjacent to the property and to confirm information that the team obtained during the site's historical review. The environmental assessment included a review of the facility's air emissions permit and historical monitoring data, underground petroleum storage tank testing reports and regulatory compliance, and recommendations for the preparation of a stormwater management plan and State Pollutant Discharge Elimination System permit.

EXPERIENCE PRIOR TO GANNETT FLEMING:

STV Incorporated, New York, NY

Phase I Environmental Assessments for Street Improvements, Brooklyn, NY, *New York City Department of Design and Construction.* Environmental Task Manager responsible for overseeing environmental research for roadway improvements to Nostrand, Wyckoff, Columbia, and Kent Avenues. Managed the assessments in accordance with ASTM 1527-00. These results were used to evaluate the potential existence of contaminated soil and groundwater, which may impact design and construction.

Harper Street Yard Master Plan and Facility Design, Flushing, NY, *New York City Department of Design and Construction.* Environmental Program Manager responsible for preparing a master plan and design documents for the replacement of a former asphalt plant and current New York City Department of Transportation maintenance facility. Identified and prepared all environmental permit applications to support planning, design, and construction of the asphalt plant and maintenance facility. The preparation and implementation of a subsurface sampling and analysis plan quantified and delineated subsurface soil, groundwater, and sediment contamination. This data, along with data from previous subsurface investigations, was used to prepare the master plan's contamination issues, as well as design documents for the proper handling and disposal of contaminated material. A component of the master plan and design effort is the management of underground and aboveground petroleum storage tank systems. Closure assessment plans and operational planning and design documents were prepared to support the master planning and design effort.

Harper Street Vehicle Maintenance Facility and Asphalt Plant, Queens County, NY, *New York City Department of Design and Construction.* Environmental Task Manager responsible for managing the investigation of subsurface contaminants, including petroleum and other hazardous materials used at the existing facility, as well as the permitting and stormwater management tasks that would impact the master plan, design, and construction of the New York City Department of Transportation vehicle maintenance facility and asphalt plant. Permitting issues encompassed wetlands, since the facility is located near Flushing Bay; bulkheading to prevent erosion and stabilize the portion of the facility on dry land; and air emissions from the heated asphalt tanks. Provided the management of underground storage tanks and supervised the preparation of environmental assessment documents, including the assessment of natural resources, all in accordance with the City Environmental Quality Review. Responsibilities also included the implementation of a sediment sampling program for waste characterization and Army Corps of Engineers permitting for bulkheading and dredging to allow barged aggregate deliveries. The facility consists of a shop for vehicles and equipment involved in heavy roadway construction, and a new asphalt plant.

Phase I Environmental Site Assessment, Acquisition of Property, Copiague, NY, *MTA Long Island Rail Road.* Environmental Program Manager responsible for managing the assessment of a 0.7-acre former auto repair shop site that the Metropolitan Transportation Authority planned to acquire to provide additional parking at the local railroad station. The assessment included a review of historical information, site inspection, and report preparation using the historical research methods standardized by ASTM E-1527 and used by both the financial-lending and environmental-consulting industries. Managed a detailed property inspection to identify any apparent or potentially adverse conditions on or adjacent to the property and to confirm information that the team obtained during the site's historical review. Visual site assessments uncovered a suspect cesspool/sanitary system and stained asphalt. The team found upgradient sources of contamination that impacted the project. As a result of these findings, prepared recommendations and cost estimates for conducting a Phase II subsurface investigation.

High School 800/High School for Architecture and Urban Planning, Queens County, NY, *New York City School Construction Authority.* Environmental Program Manager responsible for managing the preparation of a subsurface sampling and analysis plan and health and safety plan to quantify and delineate subsurface soil and groundwater contamination. Reviewed historical data and Phase I assessment reports in preparation for the subsurface investigation. The findings supported the preparation of specifications and a construction contaminant management plan, which detailed contaminated soil and dewatering handling and disposal criteria. Soil gas survey and groundwater plume data were the basis for design documents, which detailed the installation of a solvent vapor-collection system and foundation membrane to prevent vapor intrusion into the structure of the school.

Harper Street Asphalt Plant, NY, *New York City Department of Design and Construction.* Environmental Operations Manager responsible for providing technical guidance and supervision for the master plan and design phases of an asphalt plant, maintenance facility, and site redevelopment. Environmental tasks included aboveground and underground storage tanks management, subsurface soil and groundwater investigation, and remedial action planning, remedial design, sanitary sewage treatment plant design criteria and vendor selection, stormwater management, and sewage effluent discharge permitting. Responsibilities also included the implementation of a sediment sampling program for waste characterization and Army Corps of Engineers permitting for bulk heading and dredging to allow barged aggregate deliveries.

Meadows Maintenance Complex Expansion, Kearny, NJ, *New Jersey Transit.* Environmental Task Manager/Environmental Program Manager responsible for conducting and managing a subsurface geotechnical and environmental soil investigation to quantify and delineate soil contamination for the $87 million expansion of the existing facility. Managed the preparation of a construction contaminant management plan detailing contaminated soil handling and disposal procedures. Duties also included overseeing the closure assessment and replacement design of underground petroleum storage tanks and the development of specifications for the proper disposal of contaminated groundwater during construction. Oversaw these tasks to minimize the cost and scheduling impacts on construction.

Medgar Evers College Campus Master Plan, Environmental Impact Statement, Brooklyn, NY, *Dormitory Authority of the State of New York.* Hazardous Materials Task Manager responsible for managing the completion of a hazardous materials assessment as part of the environmental impact statement (EIS) for the renovation and expansion of a college campus, particularly the existing Bedford Avenue Building and Carroll Street Building. Prepared the hazardous materials chapter of the EIS following the completion and acceptance of the Phase I assessment. The scope of the assessment included the renovation of more than 250,000 square feet within the two buildings, including the demolition of 12,000 feet within the Bedford Avenue Building. Also conducted a hazardous materials analysis for the master plan for the construction of a new 57,000-square-foot addition to the Carroll Street Building and a 700,000-square-foot addition to the Bedford Avenue Main Campus.

Westchester County Airport Parallel Taxiway "L" Reconstruction and Extension, Westchester County, NY, *Westchester County Department of Public Works.* Environmental Task Manager responsible for investigating subsurface environmental conditions, including the potential for buried drums, tanks, and leaching fields using geophysical survey instrumentation and soil/groundwater sampling. Also performed a lead paint and asbestos assessment of the existing hangar to be demolished. The results of the subsurface investigation and hangar assessment were used to develop construction contaminant management plans and specifications. Additional duties included the preparation of a stormwater pollution prevention plan, due to the airport's proximity to the New York City watershed, in accordance with New York City Department of Environmental Protection guidelines. The plan included the diversion of any stormwater associated with airport operations away from the drinking supply watershed to the non-drinking water supply watershed, and an analysis of the impacts resulting from the

diversion, as well as predicted pollutant loading impacts resulting from the proposed construction activities. During another portion of the project, prepared a tank closure assessment plan and oversaw the removal of two 1,000-gallon fuel tanks and one 1,000-gallon septic tank. Prepared the sampling and developed an assessment report following federal and state underground storage tank closure protocols. The $4.5 million project involved preliminary and final design and construction-phase services for the reconstruction and extension of 2,100 feet of taxiway, in accordance with Westchester County DPW and Federal Aviation Administration guidelines.

100th Street Bus Depot Design-Build, New York, NY, *MTA New York City Transit.* Environmental Task Manager responsible for managing environmental investigation services for the design and construction of a $95 million, four-story bus maintenance and storage facility in Manhattan. Supervised the collection and analysis of soil samples and the digging of test pits to determine existing subsurface environmental conditions prior to construction. Also coordinated a geophysical survey to guide the advancement of soil borings to the depth of excavation, and managed the preparation of a construction contaminant management plan that delineated and quantified the extent of contaminated soil and hazardous waste that could impact the depots design and construction, and detailed the procedures for contaminated soil and groundwater handling and disposal. The 80,000-square-foot, 98-foot-tall building houses standard buses and 133 articulated, 60-foot-long buses.

Environmental Assessment and Environmental Impact Statement, Coney Island Hospital Modernization, Coney Island, NY, *Dormitory Authority of the State of New York.* Hazardous Materials Task Manager responsible for managing the completion of a hazardous materials assessment and environmental impact statement (EIS) for the modernization of the existing Coney Island Hospital campus. One of the issues addressed was the need to protect the air quality in the environmentally sensitive area. Prepared the hazardous materials chapter of the EIS, which relied upon the completion and acceptance of the Environmental Assessment Form, the initial step in the State Environmental Quality Review Act process. Contributed to the project as part of the overall effort to replace and upgrade the facility's structures and create a more modern and efficient hospital complex.

1-35 Commuter Rail Assessment, Preliminary Environmental Assessment, Kansas City, MO, *Johnson County Transit.* Environmental Program Manager responsible for overseeing environmental analyses for the assessment of a proposed $4.5 million, five-station commuter rail line extending 23 miles from downtown Kansas City, continuing southwest to Lenexa and Olathe in Johnson County. The preliminary evaluation of possible environmental impacts associated with each alternative included ecological water resources, wetlands, hydrology, floodplains, vegetation, and wildlife; visual enhancement; cultural resources; and hazardous materials impacts. Monitored these tasks for compliance with Federal Transportation Authority and Federal Highway Administration guidelines.

Glen Cove Road Extension, NEPA/SEQRA Environmental Assessment, Glen Cove, NY, *Glen Cove Community Development Agency/City of Glen Cove.* Environmental Task Manager responsible for managing an environmental review for a $2 million roadway connector project, in response to the New York State Department of Transportation's determination that the proposed road extension is a NEPA Class III/ State Environmental Quality Review Act (SEQRA) Non-Type II project. Managed an environmental assessment, including a NEPA scoping process and the evaluation of the social, economic, and environmental impacts of the proposed design alternatives. Supervised a field investigation to determine the general characteristics of all bodies of surface water, establish surface water and groundwater classifications, delineate wetlands, determine wetland permitting requirements, evaluate the effects of construction activities on surface water bodies, and determine wetland mitigation measures. Duties included overseeing the assessment of the impacts of design alternatives on the air quality of the project area, a microscale analysis for carbon monoxide concentrations, and the determination of the construction impact on the air quality of the study area. Managed the preparation of a hazardous

waste/contaminated materials screening reports, supervised an environmental site investigation, and oversaw the drafting of a remediation plan and preparation of a preliminary asbestos assessment.

SUNY New Paltz Wetland Mitigation Planning and Permitting, NY, *Dormitory Authority of the State of New York.* Program Manager responsible for assessing the freshwater wetland impacts associated with a planned dormitory expansion and supporting facilities. Evaluated the wetland delineation report, provided a wetland habitat analysis, developed a wetland mitigation plan, and prepared a U.S. Army Corps of Engineers permit application to mitigate the dormitory's impact on the existing wetland area.

Farmingdale Diesel Spill Investigation and Remediation, Farmingdale, NY, *MTA Long Island Rail Road.* Environmental Program Manager responsible for conducting the spill investigation and remediation alternatives analysis. Submitted the findings of the spill investigation in a remedial investigation report that indicated that the petroleum-impacted soil was limited to the area around the spill and had not migrated under the adjacent facility's foundation. Additionally, conducted a feasibility study and remedial analysis of the site, which determined that soil excavation with off-site disposal was the most expeditious method for remediating the petroleum-impacted soil. The $200 million investigation involved construction management, site supervision, endpoint soil sampling, and preparation of a spill closure report for New York State Department of Environmental Conservation.

Cooper Square Urban Renewal Area, Manhattan, NY, *New York City Housing Preservation and Development.* Environmental Task Manager responsible for managing the preparation of an environmental assessment statement for an urban renewal program, which involved the evaluation of community and business impact issues, such as traffic, transit, and pedestrian activity; air quality; noise; and hazardous materials on the development of 623 new dwelling units and up to 221,000 square feet of community facilities and commercial retail space in the Cooper Square area. Verified that all surveys, inventories, and analyses were conducted in accordance with City Environmental Quality Review Technical Manual standards. The $64.5 million program aimed to redevelop properties for commercial and community/public use, and to preserve buildings for sale to current residential tenants.

East Side Access Phase II and Remedial Site Investigations, Manhattan and Queens Counties, NY, *MTA Long Island Rail Road.* Program Manager responsible for managing all aspects of Phase II and remedial site investigations for rail yards and track alignments, as part of a $4.3 billion project to provide Long Island Rail Road service to Manhattan's East Side. Provided technical direction on the handling and disposal of contaminated and excavated soils and managed technical staff in the preparation of sampling plans, investigative finding reports, subsurface contaminant fate and transport modeling indicating the distance that contamination traveled and the location to which it spread, and construction contaminant management plans.

Victoria Theater Environmental Investigation, Manhattan, NY, *Apollo Theater Foundation Inc.* Environmental Program Manager responsible for managing Phase I of an environmental site assessment to determine whether the 90,000-square-foot theater needed renovations or demolition and rebuilding. The Phase I assessment followed ASTM 152700 historical research protocol and also included assessments of lead-based paint and asbestos-containing materials. Based on recommendations within the Phase I report, advised and recommended an intrusive investigation, which included geophysical surveys and soil borings in the vicinity of an underground storage tank. Also managed a findings report that included mitigation cost estimates.

Highbridge Yard Development Design-Build, Bronx, NY, *MTA Metro-North Railroad.* Environmental Task Manager responsible for managing a full subsurface investigation prior to the $90 million design and construction of the 20-acre yard. The oversight was instrumental in keeping the contractor's costs within the estimated range.

SUNY New Paltz Athletic Facility, Environmental Impact Statement with Phase I Environmental Site Assessment, NY, *Dormitory Authority of the State of New York.* Environmental Task Manager responsible for managing the preparation of an environmental impact statement to meet the requirements of the State Environmental Quality Review Act. Oversaw the assessment of the environmental impacts of the construction of a new natatorium, hockey rink, arena, parking lot, the relocation of existing tennis courts, and the extension of an existing road on natural surroundings. The task entailed field reconnaissance and the review of New York State Department of Environmental Conservation rare and endangered species information and the type of vegetation and wildlife, wetlands, and water bodies. Furthermore, the statement included a review of hazardous materials impacts on the proposed athletic facility based on the findings of a Phase I assessment analysis. Also managed an infrastructure analysis to focus on the adequacy of existing utility systems (stormwater, water, sewage, gas, and electric to handle the additional demand as a result of proposed athletic facilities. Oversaw air-quality modeling to determine the short-term or construction-related impacts on air quality. The task included a screening analysis to indicate the need for a microscale and mesoscale analysis.

Springfield-Branson Transportation Corridor Study, MO, *Missouri Department of Transportation.* Environmental Task Manager responsible for managing and conducting an analysis of natural and cultural features, including wetlands, floodplains, threatened and endangered species, and parkland, and conducted a Phase I environmental assessment of the proposed transportation corridor in accordance with Federal Transportation Authority and Federal Highway Administration guidelines. Also supervised the preparation of a NEPA environmental assessment document identifying potential environmental impacts to the proposed corridor between Springfield and Branson.

Northeast Corridor Acela High-Speed Rail Maintenance Facilities Design-Build, Various Locations, *National Railroad Passenger Corporation (Amtrak).* Environmental Technical Advisor responsible for providing technical guidance on the handling and disposal of contaminated and excavated soils for the $112 million design-build of three new vehicle maintenance facilities at the Sunnyside Yard in Queens, NY; the Southampton Yard in Boston, MA; and Ivy City Yard in Washington, D.C. Provided technical guidance at Southampton Yard, which contained soils contaminated with petroleum and polycyclic aromatic hydrocarbons and heavy metals, and required the excavation of soils containing 20,000 cubic yards (30,000 tons) of industrial fill and ash that had been previously used to fill in an area of open water. Since the concentrations of contaminants were within Massachusetts' criteria, remediation of the 60,350-square-foot yard was unnecessary. At Sunnyside Yard, technical guidance encompassed the excavation and disposal of soil contaminated by diesel fuel and polychlorinated biphenyls (PCBs). The analysis of the soil determined that the proposed location of the 900-foot-by-60-foot facility did not contain the light non-aqueous phase liquid body of diesel fuel, although it was present near the site. With refined knowledge of the groundwater elevation at the site, oversaw a design modification to build the shop at a higher elevation from the ground, thereby reducing the required depth of foundation excavation and avoiding groundwater dewatering. Due in large part to these efforts, excavation and construction continued on schedule at the site. Also responsible for gathering information on the soil conditions at Ivy City Yard and providing guidance on excavation procedures.

Phase I Environmental Assessment for the Acquisition of Property, Speonk, NY, *MTA Long Island Rail Road.* Program Manager responsible for managing a Phase I environmental assessment of a single-family residence and assorted outbuildings, located at the southwest comer of the intersection of Phillips Avenue and the railroad. Managed a detailed inspection of the 1.6-acre site to identify any apparent or potentially adverse conditions on or adjacent to the property and to confirm information that was obtained during the site's historical review. As part of the $8 million project, made certain that the staff prepared reports and adhered to ASTM E-1527 research methods and procedures that also are standard for the financial-lending and environmental-consulting industries. Based on the research, recommended a

geophysical survey to confirm the presence or absence of underground storage tanks used for heating oil, and sanitary septic/leaching systems. The Metropolitan Transportation Authority planned to acquire this property to provide additional parking at the Speonk train station.

Phase I Environmental Assessment for the Acquisition of Three Properties, Merrick, NY, *MTA Long Island Rail Road.* Program Manager responsible for managing Phase I environmental assessments for three properties located on Benson Lane. The Metropolitan Transportation Authority hoped to acquire these properties to provide additional parking at the nearby train station. Managed a detailed site inspection and the review of historical records from federal, state, and local regulatory agencies concerning past and present environmental conditions on and adjacent to the properties. Throughout the assessment, oversaw the work of environmental engineers for compliance with the standard research methods and procedures of ASTM E-1527 and the financial-lending and environmental-consulting industries.

Phase II Site Investigation at Conway Rail Yard, Conway, PA, *Norfolk Southern Corporation.* Environmental Task Manager responsible for managing the assessment of potential hazardous materials prior to and during the proposed construction of a $70 million locomotive service building at an active freight rail yard maintenance facility. The assessment included five areas of concern: the turntable/roundhouse area and proposed location of the main shop; the location of a proposed turntable, parking lot, and track/track realignment area; a proposed maintenance line building location; a proposed replacement wheel-truing building; and the currently active south end of the rail yard. Supervised the advancement of 84 soil borings and 168 soil and groundwater samples to determine the aerial and vertical extent of any petroleum-impacted soil and assess groundwater quality for construction dewatering activities. Also coordinated Phase II findings with the construction manager for the overall construction contaminant management program. Supervised a groundwater investigation to define the site hydraulic conditions and groundwater flow rates that could assist construction dewatering planning. Throughout the project, verified that all work complied with Pennsylvania Department of Environmental Protection regulations.

Environmental Compliance Projects, Ridley Township, PA, *Boeing Helicopters.* Project Engineer responsible for preparing engineering design and specifications for a series of environmental compliance projects at a major manufacturing complex located in suburban Philadelphia. Projects consisted of the design of several spill-containment areas to contain potential oil and fuel spills at existing tank truck unloading areas, as well as the design of several underground petroleum storage and spill-containment tanks to bring about compliance with applicable federal storage tank regulations.

Richmond Hill Locomotive Shop and Yard, Queens County, NY, *MTA Long Island Rail Road.* Environmental Task Manager responsible for managing the fast-track examination of subsurface soil and groundwater contamination due to the presence of three active petroleum spills at the site, and 48 spills within its half-mile radius, all documented by the New York City Department of Environmental Conservation. Coordinated the preparation of environmental specification documents recommending the environmental procedures for the proposed $26 million, 19,600-square-foot addition to the existing Sheridan Shop. The addition accommodates the inspection and maintenance of new DE-30 diesel-electric and DM-30 dual-mode locomotives. Conducted site visits, providing hands-on direction of sampling efforts. Using Geoprobe drilling methods, as well as accelerated laboratory turnarounds to expedite soil sampling, the team met the tight deadline for the investigation.

UST Management Services at Eight Rail Yards, Various Locations, NY, *MTA Long Island Rail Road.* Project Manager responsible for managing the closure assessment of over 40 underground storage tanks (UST) at eight Long Island Rail Road yards, in conformance with federal UST regulations (40 CFR Part 280) and New York State Department of Environmental Conservation Spill Prevention Operation

Technology Series #14 (SPOT #14) guidelines. Also supervised the preparation of replacement design drawings and specifications for the tanks and their related appurtenances, in conformance with LIRR standards and CSI format requirements. Responsibilities included overseeing construction for the yards involved in the project: the Babylon, Morris Park, Port Jefferson, Hicksville Divide, Oyster Bay, and Speonk passenger rail yards on Long Island, NY, and the Long Island City freight and passenger yards in Queens County, NY. Due in part to his able management skills, replacement tanks were installed on time without interrupting operations at the yards.

JFK International Airport AirTrain Operations, Maintenance, and Storage Facility, Phase I/II Site Investigations, Queens County, NY, *The Port Authority of New York and New Jersey.* Environmental Task Manager responsible for managing environmental investigations to determine the extent of potential hazardous waste present at the site of a vehicle operations, maintenance, and storage facility. Verified compliance with New York State Department of Environmental Conservation regulations and Port Authority Technical Provisions during the investigations, which included a Phase I environmental site assessment that involved research on the history of the site's usage and materials released from it, in compliance with ASTM International protocol. Based on these results, oversaw the baseline Phase II environmental site investigation (ESI) of soil and groundwater contamination, in which the team recommended an Additional Phase II Environmental Site Investigation of samples. Duties included supervising soil borings that were advanced using a Geoprobe® unit, and leading the collection and analysis of soil and groundwater samples from the five sites. Submitted the appropriate Baseline Phase II ESI reports, which were subsequently approved, and coordinated Phase II ESI findings with the overall construction contaminant management program to address potential exposure due to excavation and/or dewatering during construction.

Remedial Investigation/Feasibility Study at Jamaica Station, Jamaica, NY, *MTA Long Island Rail Road.* Project Manager responsible for conducting a remedial investigation and feasibility study for a rail site. The investigation determined the soil and groundwater quality and extent of contamination from petroleum stored in underground tanks that fueled the station's boilers. Results indicated that petroleum-impacted the soil around the tanks, but not the groundwater. Managed pilot studies for the engineering evaluation and remedial design of an in situ bioremediation system. Supervised the development of a remedial action plan that involved injecting nutrients into the soil to increase the rate of natural petroleum degradation and soil remediation by microbes. Other aspects of the plan included risk-based corrective action analysis and a corresponding cost analysis.

Reconstruction of Housatonic Avenue and Demolition of Railroad Viaduct, Phase II Construction and Alignment Investigation, Bridgeport, CT, *City of Bridgeport.* Environmental Task Manager responsible for developing a subsurface investigation work plan and managing the alignment investigation of 6,600 linear feet of abandoned railroad property and 4,100 linear feet of corridor along Housatonic Avenue. Supervised a subsurface soil and groundwater investigation to characterize and delineate contamination within the planned demolition and construction areas. Also led an assessment of lead paint to confirm the existence of lead-based paint on the abandoned viaduct structures. Duties included overseeing the development of a findings report that quantified and delineated lead- and petroleum-impacted soil and petroleum-impacted groundwater. Also supervised the development of construction specifications that dictated the proper handling and disposal of the construction-related waste, excavated soil, viaducts, and dewatering effluent.

JFK International Airport, Phase I Environmental Site Assessment of Various Buildings and Hangars, Jamaica, NY, *Port Authority of New York and New Jersey.* Environmental Task Manager responsible for managing historical research on and visual site surveys of three hangars and a commissary at the John F. Kennedy International Airport. The environmental site assessments (ESAs) identified potential areas of concern within the site in accordance with guidelines provided by the Authority and

ASTM International Standards on Environmental Site Assessment for Commercial/Industrial Real Estate. In addition, the ESAs determined whether the building occupant and/or the Authority complied with applicable federal, state, and local environmental laws and regulations. The report recommendations enabled the Authority to remedy any deficiencies expeditiously, maintain its policy of safe and regulatory compliant hazardous waste management, and prepare new facility leases for its tenants, since the assessments of the facilities were conducted at the termination of the facility lease.

Remedial Investigation/Feasibility Study, Long Island City Passenger Yard, Queens County, NY, *MTA Long Island Rail Road.* Project Manager responsible for managing the technical supervision and engineering for the investigation of petroleum contamination at a 100-year-old, 8-acre rail yard that contained vehicle fueling, minor maintenance, and vehicle storage provisions. The investigation included the development of the work plan, sampling plan, and health and safety plan. Groundwater samples collected from monitoring wells indicated the presence of diesel fuel floating on the groundwater, but the absence of off-site migration. Samples obtained using Geoprobe and conventional drilling demonstrated that soil in the western third of the yard contained petroleum. Supervised pilot tests to evaluate the feasibility of using the skim pump to recover light non-aqueous phase liquids (LNAPL) from the soil. Using five monitoring wells with skim pumps as recovery wells, the system recovered more than 9,000 gallons of LNAPL.

Remedial Investigation/Feasibility Study, Long Island City Freight Yard, Long Island City, NY, *MTA Long Island Rail Road.* Project Manager responsible for managing a remedial investigation and feasibility study of an active rail freight yard to determine the groundwater gradient and quality and assess the site's impact on the surrounding environment. Data indicated that off-site groundwater contained the volatile organic compounds lead and antimony in excess of groundwater standards, but this data may have been influenced by an active gasoline station directly downgradient of the site. Because of these findings, led the development of a remedial action plan that recommended monitoring on-site groundwater quality. Supervised environmental engineers recommending a risk-based corrective action approach to support site closure, in compliance with guidelines of ASTM ES38-94 and the New York State Department of Environmental Conservation Draft Interim Procedures for Inactivation of Petroleum-Impacted Sites.

Subsurface Soil Investigation, Camp Smith Active Firearms Training Facility, Peekskill, NY, *Federal Bureau of Investigation.* Environmental Task Manager responsible for managing a subsurface soil investigation to determine subsurface soil conditions for an expansion to an active firearms training facility at Camp Smith. Oversaw a geophysical survey to clear soil boring locations and confirm the presence of underground storage tanks. Supervised the use of a Geoprobe system to obtain soil samples, which were analyzed for lead and petroleum constituents, due to the nature of on-site activities. Led the preparation of an investigative work plan, including a health and safety plan and Quality Assurance Project Plan for the project and its submittal to the client; coordinated the preparation and submittal of an investigative report, including results of the geophysical survey and analytical tests; and developed recommendations for handling excavated soils.

Plum Island Animal Disease Center, Spill Prevention Control and Countermeasures Plan, Greenport, NY, *U.S. Department of Agriculture.* Environmental Engineer responsible for reviewing as-built plans and inspecting and evaluating a fuel storage facility, which included storage tanks, distribution systems, spill containment and control provisions, transfer and pumping operations, pipelines, and discharge. Adhering to the U.S. EPA's Oil Pollution Prevention Regulation (40CFR112), prepared a spill prevention control and countermeasures plan for the center's fuel oil storage operations to prevent any discharge of oil into navigable waters or adjoining shorelines.

Farmingdale Diesel Spill Remediation Litigation Support, Suffolk County, NY, *MTA Long Island Rail Road (LIRR).* Environmental Program Manager responsible for providing litigation support

confirming the property owner's claim that a petroleum spill from a locomotive had migrated beneath the foundation of the adjacent facility and into the groundwater of the site. Duties included designing a soil and groundwater pre-remediation investigation to verify the previous spill investigation results and providing further information regarding groundwater quality and flow. Also coordinated with LIRR legal counsel in performing the investigation, which consisted of a geophysical investigation, installation of soil borings, and collection of soil and groundwater samples from the spill area and from inside the adjacent facility. Avoided disrupting the property owner's business by conducting field activities on weekends and employing innovative means, including a remote-controlled, track-mounted Geoprobe® rig to collect samples. In the presentation prepared for New York State Department of Environmental Conservation, recommended spill closure.

Contamination Investigation and Remedial Design at Seven Rail Yards, Various Locations, NY, *MTA Long Island Rail Road.* Environmental Manager responsible for supervising soil borings and groundwater investigations in the area around fuel handling and storage facilities to define areas of contamination and remedial alternatives to maximize oil-return quantity and minimize disruptions to site operations. Provided environmental planning, field investigations, health and safety, and remedial design for seven rail yard sites in New York City and Long Island. The project was part of a general engineering design contract for Long Island Rail Road shops and yards.

East Side Access Major Investment Study, New York, NY, *MTA Long Island Rail Road.* Environmental Engineer/Hazmats responsible for supervising a hazardous materials investigation to support the establishment of Long Island Rail Road access from Queens County to Manhattan. Following an evaluation of historical documentation and federal and state databases of contaminated sites in the vicinity, prepared the technical appendix hazardous materials contamination along and around the proposed $4.3 billion alignment.

Remedial Investigation and Pilot Remediation Studies, Morris Park Yard, Queens County, NY, *MTA Long Island Rail Road.* Project Manager responsible for managing a large and complex investigation of soil and groundwater contamination beneath a 23-acre major vehicle fueling, maintenance, and repair facility within the Long Island sole-source aquifer area for drinking water. Coordinated the project with regulatory agencies such as the New York State Department of Environmental Conservation. Supervised an initial geophysical and Geoprobe survey that identified six areas of shallow diesel petroleum contamination. By means of deeper soil borings and monitoring wells, established the vertical extent of contamination, the absence of petroleum contamination in groundwater, and the presence of a Freon-contaminated groundwater plume. The soil borings also provided information needed to characterize light non-aqueous phase liquids and dense non-aqueous phase liquids contamination and create a fate transport model indicating the distance that the contamination had spread and the location to which it spread. Supervised pilot testing of remedial technologies such as soil vapor extraction, bioventing, and bioremediation to determine their feasibility. Based on this data, coordinated the services of suppliers of the remediation technologies and led the preparation of a cost analysis for the remedial action plan. Involved in the project for 40 months, submitted the final report to the regulatory agency, which approved the plan, and proceeded to manage the remedial design.

Fenley & Nicol Environmental, Deer Park, NY

Subsurface Remediation Projects. Technical Director/Engineering Manager responsible for overseeing the technical direction of the installation, operation, maintenance, cost estimating, permit attainment, and project management of various subsurface remediation projects. Work for the projects included soil vapor extraction, air sparging, bioremediation, and air stripping. Also directed Phase I and II site assessments, and supervised and directed engineering/geology personnel. Provided technical direction for the cost estimating, permit attainment, decommissioning, and project management of both underground

and aboveground petroleum and hazardous material storage tank systems. Witnessed installations and provided as-built drawings to the various regulatory agencies. Clients included the New York State Department of Environmental Conservation, New York State Department of Mental Health, New York City Department of Transportation, Suffolk County Community College, Greenburgh Central School District, Suffolk County Department of Public Works, Grumman Aerospace Corporation, Getty Petroleum, Sun Oil Company, Mobil Oil, Shell Oil, Garrett Aviation Services, United Parcel Services, Cummins Metropower, and Fire Island Ferries.

Suffolk County Department of Health, Farmingville, NY

Senior Public Health Engineer for the County's Bureau of Hazardous Materials with responsibilities centering on groundwater and surface water protection, as regulated by the U.S. EPA, New York State Department of Environmental Conservation, and Suffolk County's Sanitary Code. Served as the supervising engineer for the construction unit, which established and evaluated design and specification criteria for subsurface remediation and hazardous/toxic materials storage facilities. Primary duties were the review of engineering and architectural designs for compliance with the County's design and specification requirements, as well as the review of engineering and hydrogeologic proposed subsurface investigation and remediation systems. Also reviewed sanitary landfill closure plans, including capping, leachate collection, and groundwater monitoring. Authored several specification documents, including underground storage tank designs, drum storage area designs, aboveground tank containment areas, leak and overfill alarm operational requirements, and underground tank and piping installation and testing procedures. Managed several computer databases, which provided storage inventory and compliance information. Also performed numerous construction sites and completed site inspections. Coordinated with several field inspectors regarding installation and completion of the storage facilities. Reviewed equipment and tank manufacturer's products for compliance with the regulations and specifications.

Eder Associates, Consulting Engineers, Locust Valley, NY

Project Engineer responsible for designing and writing specifications for several industrial and municipal wastewater treatment facilities, hazardous materials storage facilities, sludge and solid waste landfills, and sludge dewatering facilities. Treatment plant designs included aerated lagoon systems, activated sludge systems, physical/chemical systems, spray irrigation systems, and anaerobic systems. Design experience also included process design, hydraulic design, structural design, and construction drawing preparation, as well as the design of hazardous materials storage facilities for industrial firms on Long Island, NY. Designed landfill facilities for treatment plant sludge and solid waste, which involved leachate collection systems, membrane and clay liner systems, capping systems, groundwater monitoring, and landfill cell operational parameters. Clients included Georgia Pacific, Milk Industry Foundation, Flambeau Paper, Fort Orange Paper, Pope and Talbot Paper, City of Peshtigo (WI), Fairchild Republic, Fairchild Industries, and Dairylea.

PROFESSIONAL AFFILIATIONS AND PUBLICATIONS:

American Society of Civil Engineers
National Registry of Environmental Professionals

Megan E. Borruso — Resume

YEARS EXPERIENCE WITH FIRM: 2

YEARS EXPERIENCE WITH OTHER FIRMS: 2

EDUCATION:

B.A., Geography, Minor in Environmental Studies, State University of New York at Geneseo, 2006
Masters courses in Geography, Hunter College of the City University of New York, 2007-present
40-Hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) Training, Compliance Solutions, 2007
8-Hour OSHA HAZWOPER Refresher Training, Field Safety Corporation, 2010

PROFESSIONAL REGISTRATION(S):

MTA Metro-North Railroad Roadway Worker Procedures - No. 01978 (2010)
CPR - Adult: American Red Cross (2010)
Standard First Aid: American Red Cross (2010)
Norfolk Southern Roadway Worker Protection/Contractor Safety Certification (2010)

CURRENT RESPONSIBILITIES:

Environmental Scientist responsible for coordinating and conducting fieldwork, including soil, groundwater, air, and soil vapor sampling; performing site characterization; and providing contractor oversight. Responsible for the preparation of all appropriate inquires-compliant Phase I environmental site assessment reports and Phase II environmental site investigations, as well as the compilation and tabulation of soil and groundwater analytical data. Also responsible for geographic information system (GIS) projects related to environmental work.

SUMMARY OF EXPERIENCE:

Vacant Properties Database, New York, NY, *New York City Mayor's Office of Environmental Remediation.* GIS Analyst responsible for coordinating project staff and performing a vacant properties assessment to identify property use, features, environmental concerns, and/or existence on regulatory databases. Prepared screening criteria for assessment and a methodology document presenting work flow.

Regional GIS Database, New York, NY, *New York Office of Emergency Management.* Business Analyst responsible for contacting GIS professionals within New York and conducting meetings to establish a working relationship and gather GIS data to prepare a seamless GIS database for use in emergency planning. GIS Analyst responsible for analyzing incoming GIS data relating to emergency planning by recording and documenting information on GIS data quality and making recommendations for data gap correction.

Community Air Monitoring Program, Soil Vapor Sampling, Groundwater Sampling, Freeport, NY, *Nassau Uniform Services.* Environmental Scientist responsible for monitoring and recording air quality, and collecting soil vapor samples and groundwater samples from a former dry cleaning operation.

Sylvia Packard School, North Massapequa, NY, *Town of Oyster Bay.* Environmental Scientist responsible for conducting a hazardous materials assessment to identify potential hazards prior to a building demolition.

Salem Fields Cemetery, Queens, NY, *Kaye Scholar, LLP.* Environmental Scientist responsible for conducting quarterly sampling to monitor groundwater impacted by waste-disposal operations, performing quarterly soil gas sampling to monitor explosive gas conditions at the site, and compiling associated field data.

Phase I Environmental Site Assessment, Wyandanch, NY, *Town of Oyster Bay.* Environmental Scientist responsible coordinating and performing a Phase I environmental site assessment to precharacterize site conditions and prepare an all appropriate inquires (AAI)-compliant Phase I environmental site assessment report.

Gowanus Canal Assessment, Brooklyn, NY, *New York City Mayor's Office of Environmental Remediation.* Environmental Scientist responsible for coordinating and performing an upland properties assessment to identify sites that may warrant further investigation to evaluate if they may have caused or are continuing to contribute to the environmental impacts in the Gowanus Canal. Prepared a simplified Phase II site investigation work plan and a report presenting the findings of the assessment.

EXPERIENCE PRIOR TO GANNETT FLEMING:

Biene, Ltd., New York, NY

Existing and Potential School Sites, New York, NY, *New York City School Construction Authority.* Project Scientist responsible for managing multiple existing and potential school sites, involving Phase I environmental site assessments, coordination of remedial investigations, preparation of Phase I ESA reports and remedial action work plans, and correspondence with the New York State Department of Environmental Conservation. Performed inspections of aboveground storage tanks and appurtenances to develop decommissioning and remedial measures, and marked up technical specification sections and drawings for the removal of petroleum storage tanks at existing schools.

Subsurface Investigations, New York, NY, *New York City School Construction Authority.* Environmental Scientist responsible for providing services for numerous subsurface investigations, including soil gas and vapor sampling, soil and groundwater investigative work, and preparation of work plans and Phase II reports.

Galli Engineering, PC, Melville, NY

Brownfield Site, Bronxville, NY. Environmental Scientist responsible for developing remedial investigation work plans, a remedial investigation report, and a final engineering report for a brownfield site in accordance with New York State Department of Environmental Conservation requirements. Prepared Phase I environmental site assessment and Phase II environmental site investigation reports. Performed field investigations, including the collection of soil and groundwater samples for laboratory analyses.

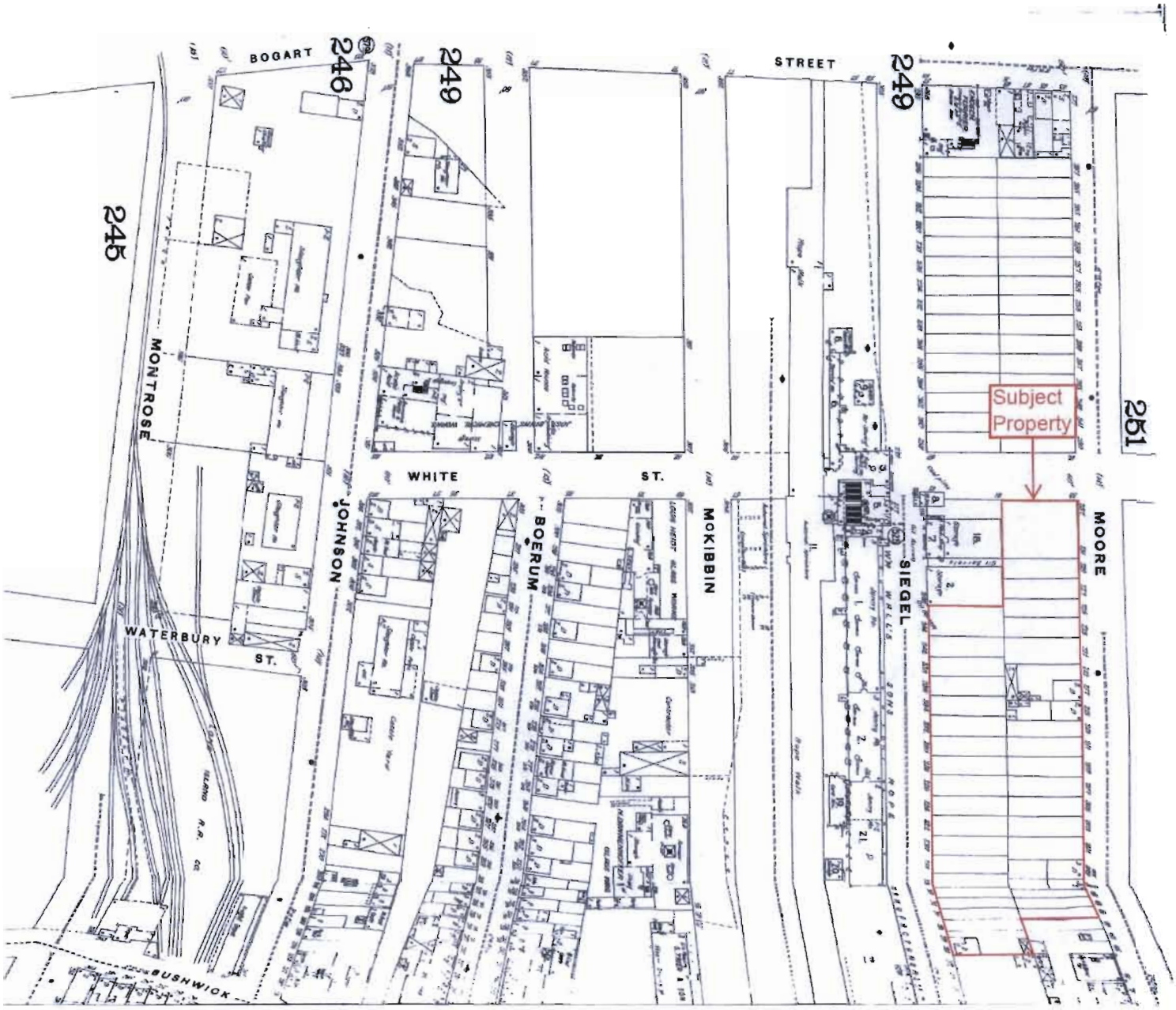
Environmental Impact Statement, Bayonne, NJ. Environmental Scientist responsible for preparing the hazardous materials chapter of an environmental impact statement.

Contaminated Soil Remediation, Brooklyn, NY. Environmental Scientist responsible for overseeing the remediation of contaminated soils at a site. Served as the on-site Health and Safety Officer during construction and performed real-time air monitoring.

PROFESSIONAL AFFILIATIONS:

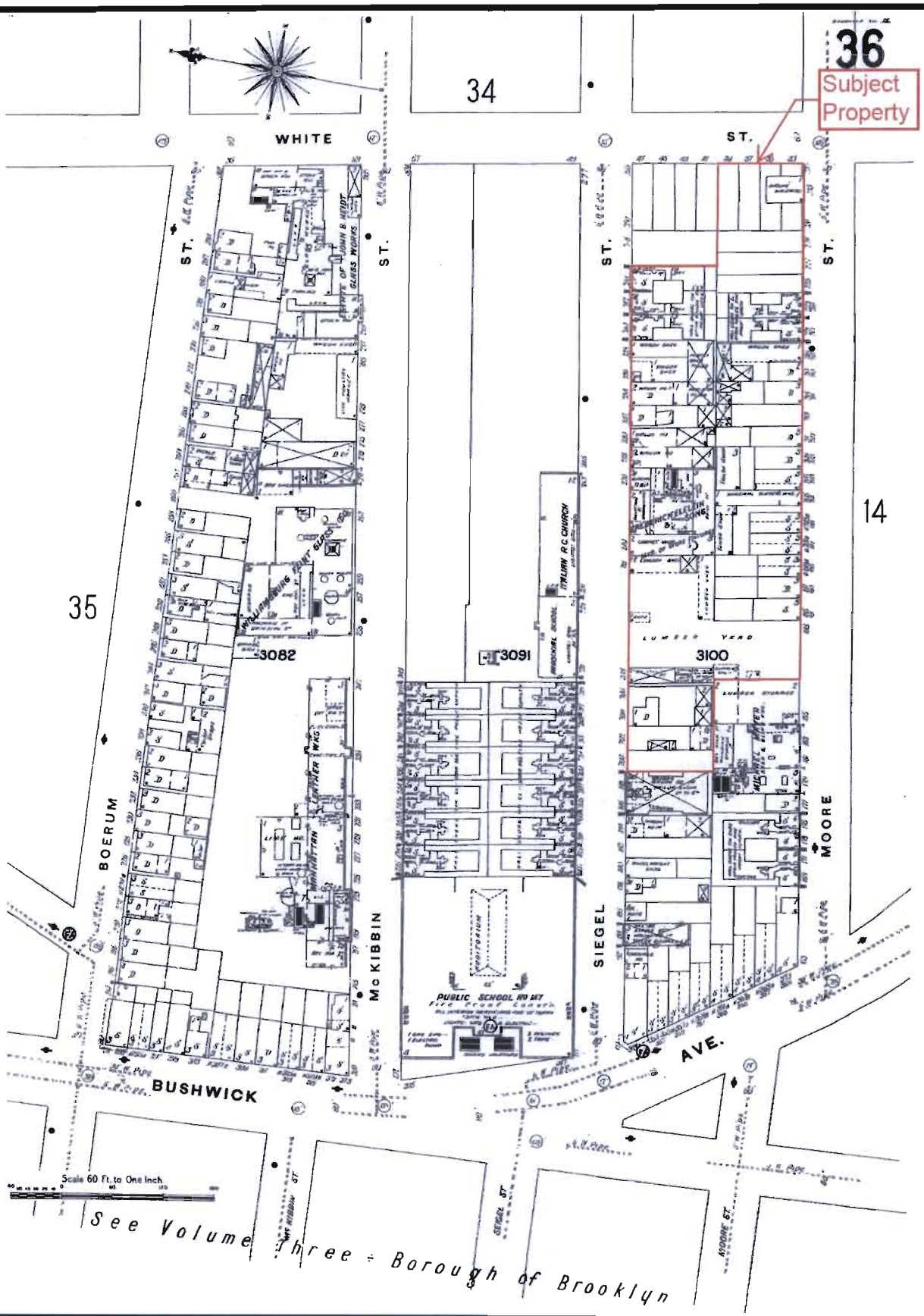
Association of American Geographers

APPENDIX C
SANBORN MAPS



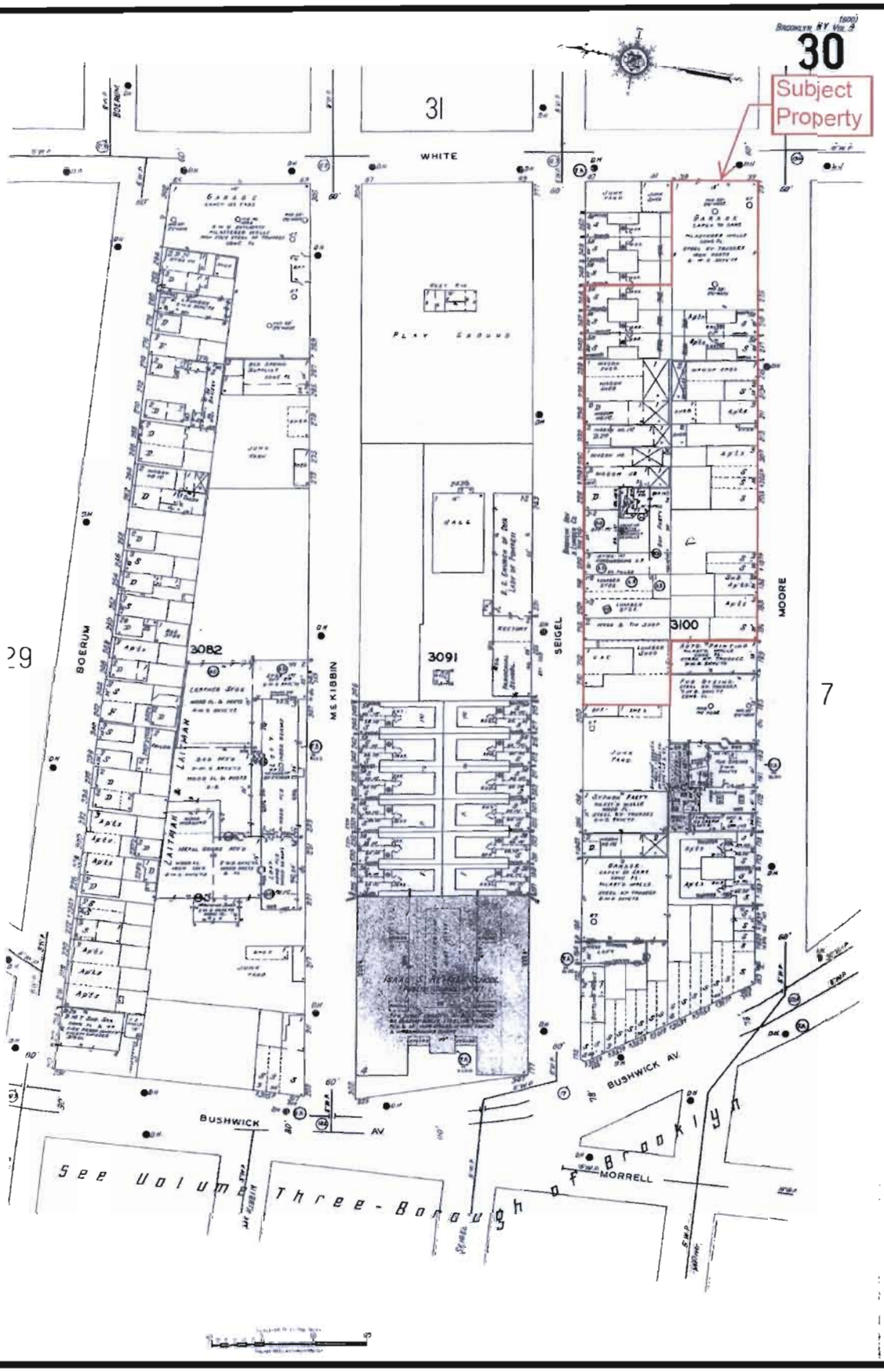
Gannett Fleming

1888 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK



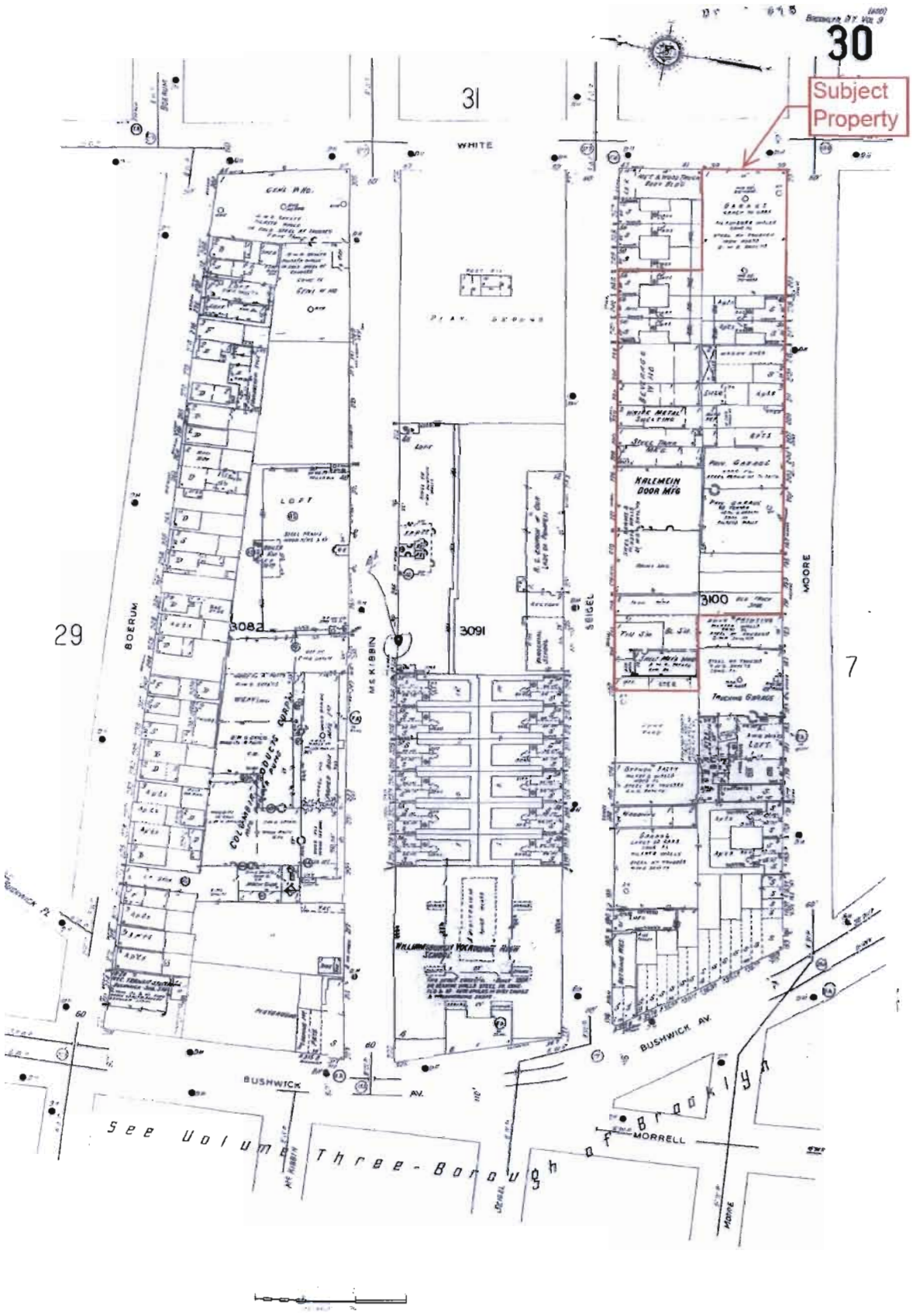
Gannett Fleming

1907 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK



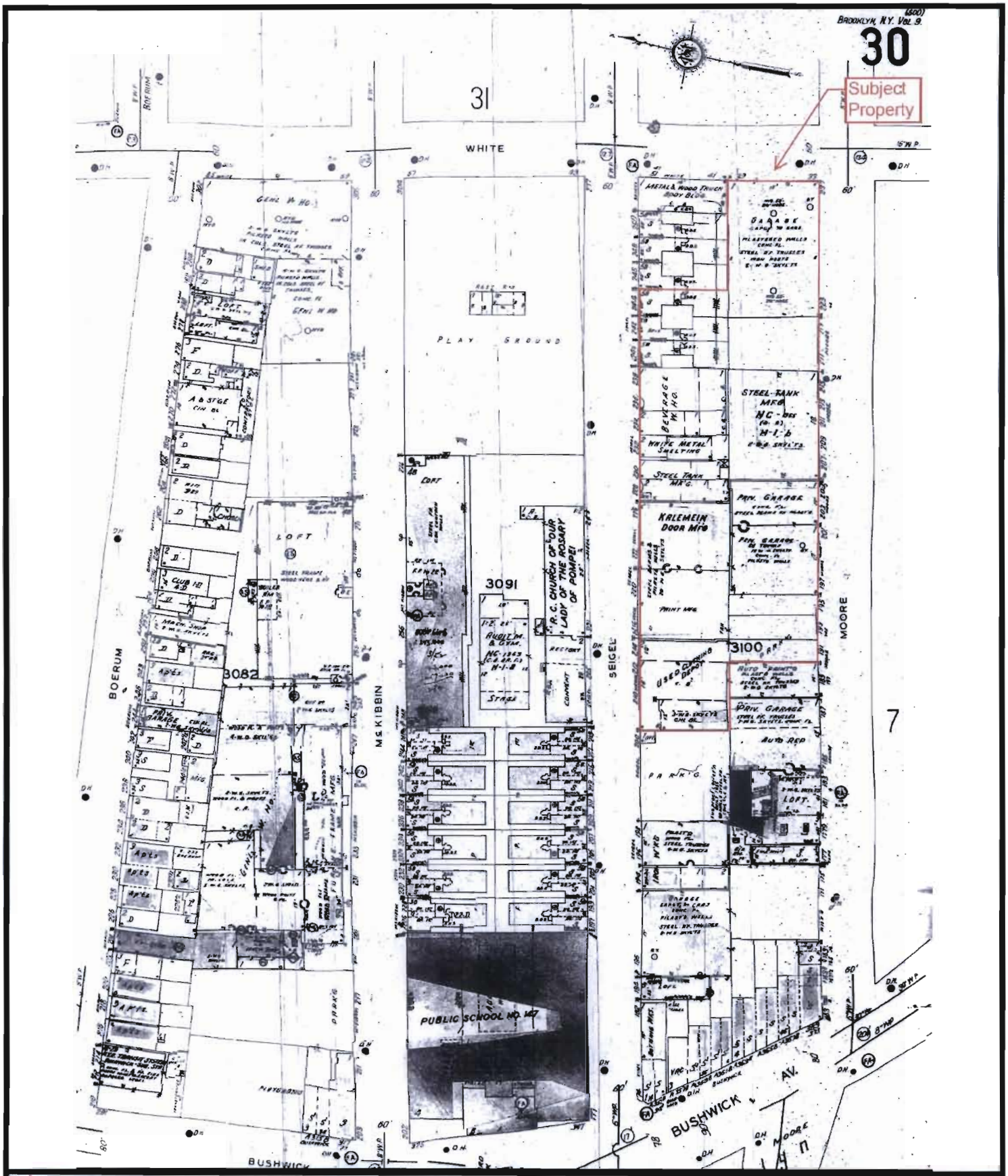
Gannett Fleming

1933 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK



Gannett Fleming

1951 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK

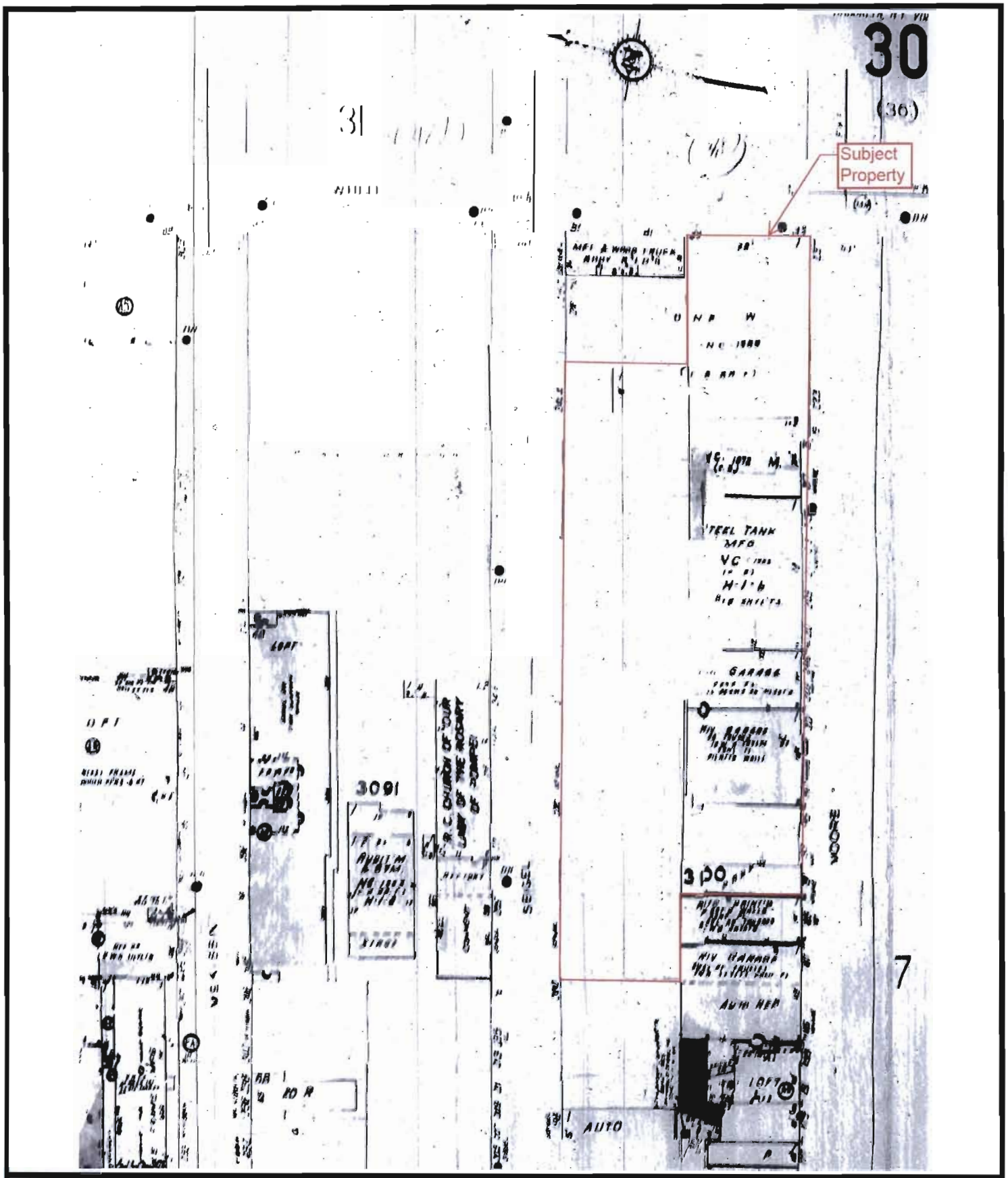


Gannett Fleming

1965 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK

Gannett Fleming

1979 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK



Gannett Fleming

1990 Sanborn® Map
215 MOORE STREET
BROOKLYN, NEW YORK

APPENDIX D

ENVIRONMENTAL DATABASE SEARCH

(stored separately)

APPENDIX E

HISTORICAL DOCUMENTS

(includes previous tank removal report and
GW monitoring reports which are stored separately)