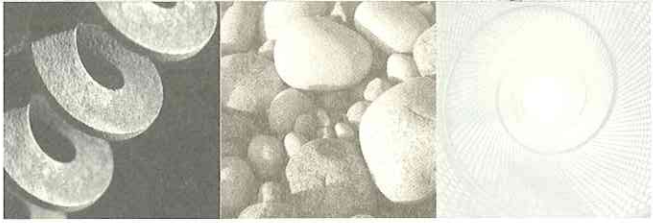

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

Final— Site Characterization Work Plan

Pinelawn/Farmingdale Hortonsphere Site

East Farmingdale, New York
AOC Index No. A1-0595-08-07
Site #: 152214

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December 2007
072710-7-1601

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Abbreviations and Acronyms

ACGIH	American Conference of Government Industrial Hygienists
ACO	Administrative Order on Consent
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CAMP	Community Air-Monitoring Plan
CHSS	Corporate Health and Safety Specialist
DER	Division of Environmental Remediation
DNAPL	Dense Non-Aqueous Phase Liquid
EDR	Environmental Data Resources
ELAP	New York State Environmental Laboratory Approval Program
EPA	United States Environmental Protection Agency
FOIA	Freedom of Information Act
FSP	Field Sampling Plan
FWRIA	Fish and Wildlife Resources Impacts Analysis
GEI	GEI
HASP	Health and Safety Plan
IDW	Investigation derived waste
KeySpan	KeySpan Corporation
LILCO	Long Island Lighting Company
LIPA	Long Island Power Authority
MGP	Manufactured Gas Plant
MS/MSD	Matrix Spike/ Matrix Spike Duplicate
NAPL	Non-aqueous Phase Liquids
NYSASP	New York State Analytical Services Protocols
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSASP	New York State Analytical Service Protocols
OSHA	Occupational Health & Safety Administration
PCB	Polychlorinated biphenyl
PID	Photoionization Detector
PM-10	Respiable Particulates
ppm	Parts Per Million
PPE	Personal protective equipment
PRP	Potential responsible party
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
QHHEA	Qualitative Human Health Risk Assessment
RCRA	Resource Conservation and Recovery Act
RSCOs	Recommended Soil Cleanup Objectives
Sanborn	Sanborn Fire Insurance
SC	Site Characterization
SSO	Site Safety Officer

SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
USDOT	United States Department of Transportaion
VOC	Volatile Organic Compound

1. Introduction

On behalf of KeySpan Corporation (KeySpan), GEI Consultants, Inc. (GEI) has prepared this Draft Site Characterization (SC) Work Plan for the Pinelawn/ Farmingdale Hortonsphere site located to the northeast of the intersection of Broad Hollow Road (Route 110) and Conklin Street (Route 24) in East Farmingdale, Suffolk County, New York. Figure 1 shows the location of the Pinelawn/ Farmingdale Hortonsphere site.

KeySpan is conducting the site characterization because a predecessor company, the Long Island Lighting Company (LILCO), operated the Hortonsphere to store manufactured and natural gas for use in the surrounding community. The Hortonsphere was dismantled in 1964. The former storage of the manufactured gas at this facility may have generated waste products including certain volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, and polychlorinated bi-phenyls (PCBs); if present, could impact the environment.

KeySpan and the New York State Department of Environmental Conservation (NYSDEC) have entered into an administrative order on consent (ACO) and administrative settlement #A2-0552-0606 to evaluate environmental conditions at a number of sites in New York City and Long Island. The Pinelawn/ Farmingdale Hortonsphere site was identified in Table 3 of the ACO; however, the site is currently not covered under the order. The Pinelawn/ Farmingdale Hortonsphere site will be included under a multiple site administrative order on consent (ACO) presently under negotiation between KeySpan and the New York State Department of Environmental Conservation (NYSDEC).

The site characterization scope of work described in this work plan is intended to collect sufficient data to evaluate the presence or absence of chemical compounds within soils, soil vapor and groundwater that may be associated with the Pinelawn/Farmingdale Hortonsphere which operated from approximately 1927 until 1964. The SC will collect the data necessary to evaluate the presence or absence of contaminants associated with the former activities and to assess whether potential pathways exist through which people, flora, or fauna could be exposed to the contaminants. The work plan has been prepared in general accordance with the NYSDEC Draft DER-10 Technical Guidance for Site Characterization and Remedial Investigation dated December 25, 2002.

The purpose of this work plan is to describe the methods and procedures to be implemented in performing a site characterization of the Pinelawn/ Farmingdale Hortonsphere property. This work plan includes a brief site description and brief site history and a proposed scope of work for the site characterization of the Pinelawn/Farmingdale Hortonsphere property. The SC scope of work includes the following tasks:

- Records Review and Preliminary Site Visit
- Sensitive Receptor Summary
- Preparation of a Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP) and Site-Specific Health and Safety Plan (HASP)
- Field Investigation Preparation and Mobilization Activities
- Field Investigation Sampling and Analysis
- Quality Assurance / Quality Control (QA/QC) and Data Validation
- SC Report Preparation

Detailed descriptions of each proposed work activity are provided in Section 4 of this Work Plan.

The appendices contain the historical documents (Appendix A), a Community Air Monitoring Plan (CAMP) (Appendix B), a Field Sampling Plan (FSP) (Appendix C), a Health and Safety Plan (HASP) (Appendix D) and a Quality Assurance Project Plan (QAPP) (Appendix E).

2. Site Background

2.1 Site Location and Description

The Pinelawn/Farmingdale Hortonsphere site is located to the intersection of Broad Hollow Road (Route 110) and Conklin Street (Route 24) in East Farmingdale, New York. The former Hortonsphere facility encompassed a 0.5 acre portion of an approximately 2.3 acre parcel. A significant portion of the 2.3 acre property is occupied by the Long Island Power Authority (LIPA) tree trimming operations. The site location is depicted on Figure 1. The current site conditions are shown on Figure 2.

2.2 Site History

The site history of the Pinelawn/Farmingdale Hortonsphere site and surrounding area was developed through the review of available aerial photographs and topographic maps. Sanborn Fire Insurance (Sanborn) maps were not available for the property. A brief history of the Pinelawn/Farmingdale Hortonsphere site is provided below. The Sanborn Maps, aerial photographs and topographic maps are included in Appendix A.

2.2.1 Pinelawn/ Farmingdale Hortonsphere History

The Pinelawn/ Farmingdale Hortonsphere site was constructed in 1927 according to KeySpan property information. The Pinelawn/Farmingdale Hortonsphere site was undeveloped as shown in the 1903 topographic map of the area. The property contained Hortonsphere and a pump house that were constructed in 1927. The Hortonsphere is shown in the 1947 and 1954 topographic maps and on the 1957 aerial photograph of the area. An electrical substation also occupied the parcel as early as 1927. The location of the Hortonsphere is shown on Figure 2.

2.2.2 Current Site Conditions

GEI visited the Pinelawn/ Farmingdale Hortonsphere site on May 21, 2007. The current site conditions and the surrounding area are shown on Figure 2. The Pinelawn/ Farmingdale Hortonsphere site property is currently used as a storage yard for tree trimming equipment and tree clearing mulch and an inactive electrical substation and control house. The Pinelawn facility is bordered to the north by Long Island Railroad property and then Bi-County Equipment Sales and Service; to the east by abandoned manufacturing buildings; to the south by a vacant lot and then Conklin Street; and to the west by Broad Hollow Road and then a car wash. The Pinelawn/ Farmingdale Hortonsphere site is secured with a chain-link fence. The site is currently owned by LIPA.

3. Summary of Records Search

GEI completed a search of environmental records for the Pinelawn/ Farmingdale Hortonsphere property as part of the preparation of the SC Work Plan. The purpose of this review was to determine:

- Environmental data and information currently available
- History and description of site including nature of operations
- Types, quantities, physical state, locations, methods and dates of hazardous waste disposal
- Identity of other potential responsible parties (PRPs) for releases of hazardous waste

3.1 Records Search

The record search report for the Pinelawn/ Farmingdale Hortonsphere site included the review or evaluation of the following:

- For potential releases on site, GEI reviewed the NYSDEC's on-line Spills Incidents Database Search and the Environmental Remediation Database Search http://www.dec.ny.gov/chemical/8437.html

- For environmental data, potential hazardous waste storage, and PRPs, GEI relied upon information from Environmental Data Resources (EDR), a commercially available environmental database search dated April 9, 2007 and available topographic maps from 1947 to 1954.

The site history, current site conditions and site security are discussed above within Section 2.2.

3.2 Environmental Records Information Summary

A search of the NYSDEC spill incidents and environmental site remediation databases was conducted by GEI on June 28, 2007. No environmental records were encountered for the site when GEI accessed the databases.

A number of spills and state hazardous waste site records were encountered for nearby properties within a block of the site. A summary of the environmental records information is provided on Table 1 and the locations are provided on Figure 3.

No additional environmental records were encountered for the Pinelawn/ Farmingdale Hortonsphere site in the EDR report.

A number of adjacent and nearby properties with current/ historic activities of potential environmental concern were identified within the EDR report and on historic topographic maps. A summary of adjacent and nearby environmental records is provided on Table 1 and the locations are provided on Figure 3.

GEI will issue a Freedom of Information Act (FOIA) request letter to the NYSDEC to obtain information for the subject property and abutting properties prior to the completion of the site characterization report.

3.3 Possible Subsurface Structures

The Pinelawn/ Farmingdale Hortonsphere was an aboveground, steel, spherical gas storage tank. The former Hortonsphere location is currently used for tree trimming mulch and tree trimming equipment storage by LIPA. The dimensions of the support foundations for the Hortonsphere have not been determined because the area is covered within mulch. The former location of the Hortonsphere is shown on Figure 2.

No other records of possible subsurface structures were identified through the NYSDEC database search or the EDR Radius report.

4. Local Environment

The site geology has been compiled from existing published information. The site hydrogeology was determined based upon a review of topographic map information. No subsurface investigation has yet been completed; therefore, the following information has not yet been field-verified by GEI personnel.

4.1 Surficial Geology

According to the 1989 *Surficial Geologic Map of New York, Lower Hudson Street*, the subject property is underlain by outwash sand and gravel. These deposits are coarse to fine gravel with sand, pro-glacial fluvial deposition, well rounded and stratified, with a generally finer texture away from ice border and variable thickness.

4.2 Hydrogeology

There are no streams that are located in the vicinity of the Pinelawn Farmingdale Hortonsphere site. According to Busciolano, et al, groundwater is anticipated to flow to the south to southeast beneath the site and vicinity.

5. Scope of Work

The scope of work addresses field investigation tasks that will provide a better understanding of potential soil and groundwater impacts related to the operation of the Pinelawn/Farmingdale Hortonsphere. The type, number and depth of samples were developed based on a preliminary review of historic sources of information such as historic site boundary plans, topographic maps, and aerial photograph information. Accordingly, the proposed sampling program includes sampling of subsurface soils, surface soils and groundwater.

One soil vapor sample has also been included in this scope of work. If during the course of conducting the site characterization GEI encounters VOCs or naphthalene, then the potential for vapor intrusion would be assessed. The location, depth, magnitude and possible extent of the impacts relative to nearby buildings would be used to assess if soil vapor is of concern. If soil vapor is determined to be of potential concern, then GEI, in consultation with KeySpan and the NYSDEC, would take a step-wise approach to assessing the potential for soil vapor intrusion.

If during the course of conducting the site characterization GEI encounters impacts to the soils and groundwater the need for a Fish and Wildlife Resources Impact Analyses (FWRIA) would also be evaluated.

The scope of work includes the following tasks:

- Preliminary Site Visit
- Field Investigation Preparation and Mobilization Activities
- Site Utility Survey
- Field Investigation Sampling and Analysis
- Survey and Sample Point Location
- QA/QC and Data Validation
- SC Report Preparation

Descriptions of each proposed work activity are provided separately below.

5.1 Preliminary Site Visit

GEI has participated in a preliminary site visit to evaluate on-site conditions, evaluate the SC logistics at the Pinelawn/Farmingdale Hortonsphere site. Soil borings will be used to assess the subsurface possible presence of impacts within the area of the former Hortonsphere. The approximate locations of the proposed sampling locations were identified during the preliminary site visit.

5.1.1 Utility Clearance

Proposed sample locations were identified during the preliminary site visit. Each boring will be marked with stakes and/or white paint. The drilling subcontractor will provide the boring locations to the utility clearance organization (New York City and Long Island One Call) to identify potential utility conflicts at the site and with the street right of ways adjacent to the site. Prior to installation, each proposed soil boring and temporary groundwater well location and soil vapor point location will be cleared by a private utility mark-out company or by KeySpan Survey as necessary based upon GEI/KeySpan consultation. Available drawings will be obtained from KeySpan/LIPA to evaluate subsurface facilities prior to commencing the field program.

All sample locations will be cleared by manual means to a depth of 5 feet, or 1 foot below the estimated depth of any nearby known utility.

5.2 Field Investigation Preparation and Mobilization Activities

Upon receipt of authorization from KeySpan, and receipt of any required private property access agreements, GEI will mobilize to the site to implement the sampling program. The initial field mobilization will include the following items to be completed prior to the commencement of the field SC activities:

- Establish a temporary decontamination area
- Establish a temporary waste storage area and make arrangements with KeySpan for the removal of investigation derived wastes (IDW)
- Identify underground utilities

5.2.1 Site Access

KeySpan and its contractors will need site access granted by LIPA. KeySpan will negotiate access with LIPA.

5.2.2 Decontamination and Investigation Derived Wastes

Drilling equipment will be decontaminated in the vicinity of the sampling rig between each sample in accordance with the FSP in Appendix C. All decontamination equipment will be removed from the site each night. Wastewaters produced during decontamination will be collected and contained within 55-gallon United States Department of Transportation (USDOT) drums. KeySpan will arrange for the disposal of the investigation derived wastes after they have been characterized at the completion of the field program.

Sampling equipment used for sample collection (e.g., stainless steel split spoons, sample spoons, and hand trowels) will be decontaminated prior to use and reuse or disposable sampling equipment will be used.

Soil cuttings will be minimized through the use of direct-push drilling equipment. Groundwater purged from the groundwater points will be minimized through the use of low-flow purge and sampling techniques. Soil cuttings and purged groundwater will be contained in 55-gallon USDOT drum and will be disposed of by KeySpan.

5.3 Field Investigation Sampling and Analysis

This section discusses the proposed soil boring and temporary groundwater point sampling and analysis activities. Table 2 presents the general rationale and proposed sampling and analysis for the borings and temporary groundwater points. The proposed sample locations are shown on Figure 2. In addition, air monitoring and groundwater sampling procedures to be implemented are discussed. Sampling procedures and methods are detailed within the FSP in Appendix C.

The proposed analyses, analytical methods, and QA/QC samples are discussed under each of the following subsections for soil borings and temporary monitoring point sampling procedures and are also provided within the QAPP in Appendix E. Subsection 4.6 discusses laboratory data deliverables and data validation procedures.

If non-aqueous phase liquid (NAPL) or free product is encountered during the site characterization activities, the source of the NAPL will be evaluated and the associated monitoring well will be equipped with a 2-foot-deep sump. If NAPL is found, a sample may be submitted for forensics analysis. KeySpan, in consultation with the NYSDEC, will determine if a remedial investigation is required at the property.

5.3.1 Soil Borings

GEI will install the soil borings shown on Figure 2. Table 2 provides sample description, rationale, and analysis. A minimum of 5 borings, PFH-GP-01 through PFH -GP-05, will be drilled with direct push Geoprobe® drilling methods as described below.

Each soil boring location will be manually cleared using a hand auger or other manual methods to a depth of 5 feet, or 1 foot below the estimated depth of any nearby known utility.

Soil samples will be collected continuously from each boring using 4-foot or 5-foot long MacroCore® samplers equipped with a discrete sampler device. Drilling equipment (rods and macro-core sampler) will be decontaminated in the vicinity of the sampling rig between each sample location. Soil cuttings and decontamination fluids will be collected in 55-gallon USDOT drum and will be disposed of by KeySpan.

Two soil samples will be selected for chemical analysis from each boring. The first sample will be collected from the depth interval indicating the greatest degree of contamination from 0 to approximately 5 feet below grade using a hand auger during utility clearance activities to

evaluate subsurface soil conditions for determination of potential exposure pathways at the site. A sample will be collected at the depth interval indicating the greatest degree of contamination to evaluate the magnitude of the observed impacts at each boring. The greatest degree of contamination will be identified by field screening of the borings with a photo-ionization detector (PID), and by visual and olfactory observations. If impacts are observed 10 feet below the water table, the boring will be advanced approximately 5 feet beyond observed visual impacts for the purpose of vertical delineation to a maximum depth of 40 feet. If dense non-aqueous phase liquid (DNAPL) is encountered, a well will be installed with a two foot deep sump for DNAPL collection. If no impacts are observed at a particular on-site boring location, the boring will terminate at approximately 10 feet below the observed groundwater table and a soil sample will be obtained for analysis at the apparent groundwater table. If impacts associated with the Hortonsphere are observed below 40 feet, GEI will discuss this with KeySpan during the field work to assess whether any deeper delineation would be appropriate during this mobilization.

Each sample will be analyzed for VOCs by Environmental Protection Agency (EPA) Method 8260, SVOCs by EPA Method 8270C, target analyte list (TAL) metals, Polychlorinated byphenols (PCB), and pesticides by EPA Method 8082, Herbicides by EPA Method 8151A, sulfide by EPA Method 9034 and sulfate by EPA Method 300.0. Subsurface soils will be shipped to TestAmerica of Shelton, Connecticut, an approved New York State Environmental Laboratory Approval Program (ELAP) registered laboratory.

Following the collection of subsurface soil samples, each subsurface soil boring will be abandoned by tremmie grouting the boring from the bottom of the boring to the top if a permanent well is not installed at the location.

Each sampling implement will be decontaminated in accordance with decontamination procedures described in the FSP. QA/QC procedures are detailed within the QAPP located in Appendix E. QA/QC samples will include blind duplicate soil samples, matrix spike/ matrix spike duplicate (MS/MSD) samples, and equipment rinsate blank samples. The quality control samples will be completed on a frequency of 1/20. One trip blank will be included per shipment of samples to the laboratory.

5.3.2 Soil Vapor Sampling

Five temporary soil vapor sample points (PFH-SV-01 through PFH-SV-05) will be advanced approximately 5 feet below grade as shown in Figure 2. The sampling tube will be sealed with a two inch layer of bentonite paste. To ensure that the sampling tube is sealed from the ambient air above ground, GEI will utilize helium as a tracer gas as described in the State of New York Department of Health (NYSDOH) Soil Vapor Intrusion Guidance document.
The sample will be collected in a 2.7 Liter SUMMA® canister with a flow controlled rate of less than 0.2 liters/ minute. Samples will be shipped to Alpha Woods Hole Laboratory, an approved

New York State ELAP registered laboratory for analyses. The sample will be analyzed for VOCs and naphthalene by the modified EPA Method TO-15 (including naphthalene) and helium by ASTM 1945.

Soil vapor point will be installed and samples will be collected in general accordance with the *New York State Department of Health's "Guidance for Evaluating Soil Vapor Intrusion in the State of New York"* and *"Draft Standard Operating Procedure- Soil Vapor Intrusion for MGP Sites in New York.*

5.3.3 Surface Soil Sampling

Surface soil samples will be collected at locations shown on Figure 2. Table 2 provides sample description, rationale, and analysis. A minimum of 6 surface soil samples, PFH -SS-01 through PFH -SS-06, will be collected with a stainless steel trowel or disposable sampling implements from 0 to 2 inches of mineral soils. In grass covered areas, the sod will be removed prior to sampling and replaced upon completion of sampling activities. Within paved areas, surface soils will be collected within the first 2 inches of soil beneath the asphalt/ concrete and road base materials. Sampling equipment (stainless steel trowel or spoon) will be decontaminated in the vicinity of the sample location.

Each of the six surface soil samples will be analyzed for VOCs, SVOCs, TAL metals, PCBs, pesticides, herbicides, sulfide and sulfate. Surface soil samples will be shipped to TestAmerica in Shelton, Connecticut for analysis.

Each sampling implement will be decontaminated in accordance with decontamination procedures described in the FSP. QA/QC procedures are detailed within the QAPP located in Appendix E. QA/QC samples will include blind duplicate soil samples, MS/MSD samples, and equipment rinsate blank samples. The quality control samples will be completed on a frequency of 1/20. One equipment blank will be included per shipment of samples to the laboratory.

5.3.4 Groundwater Monitoring Points

Five temporary Geoprobe ® installed groundwater monitoring points PFH -GW-01 through PFH -GW-05 will be installed. Each monitoring point will be installed in general accordance with procedures described below and within the FSP (Appendix C).

Each temporary monitoring well will be installed into apparent groundwater table. Each well will consist of a 2" or smaller polyvinyl chloride (PVC) 0.010 ″ slotted screen and PVC riser to the ground surface. The monitoring well will target the apparent groundwater table interface and a groundwater sample will be collected.

Following installation, each temporary well will be survey for location and elevation. A synoptic round of water level measurements will be collected from the monitoring points PFH-GW-01 through PFH -GW-05.

5.3.5 Air Monitoring

A CAMP will be implemented at the site during each phase of the intrusive field activities. The objective of the CAMP is to ensure through monitoring that unacceptable levels of VOCs or dust potentially generated as part of the investigation do not migrate beyond the work zone. Air will be monitored up upwind and downwind of each intrusive work area (i.e., boring locations). VOCs and respirable particulates (PM-10) will be monitored up-wind and downwind on a continuous basis. Wind direction will be determined using a wind sock(s) and/or flagging poles installed on site. In addition, VOCs, particulates, and cyanide will be monitored in the work zone using hand held equipment.

VOC vapors will be monitored using a PID. Particulate dust will be monitored using a DataRAM particulate meter. In addition, work zone air monitoring will be completed in accordance with the HASP. The monitoring equipment for health and safety monitoring are described in the QAPP in Appendix E. The equipment will be calibrated at least daily or in accordance with manufacturers' recommendations. The proposed modified CAMP is presented in Appendix B, and additional monitoring details are included in the HASP in Appendix D.

5.3.6 Waste Disposal Sampling

KeySpan will arrange for the disposal of the investigation derived wastes at the completion of the field program.

KeySpan/GEI will obtain a waste profile sample of soil and fluid investigation derived wastes to characterize the wastes to determine the appropriate disposal options available. A sample will be collected from each of the investigation-derived wastes that require analysis for disposal. Samples will be collected into laboratory-preserved bottles, chilled with ice and submitted to the laboratory under chain of custody as described in the FSP and QAPP. Each disposal sample media will be sampled for parameters to meet the requirements of the approved disposal facilities. A list of potential disposal parameters is provided in the QAPP.

5.3.7 Groundwater Sampling

Groundwater samples will be collected from the three temporary monitoring points PFH -GW-01 through PFH -GW-05 (Figure 2).

Groundwater samples will be collected and analyzed for VOCs, SVOCs, TAL metals, PCBs, pesticides and herbicides. Groundwater samples will be shipped to TestAmerica in Shelton, Connecticut for analysis.

QA/QC procedures are detailed within the QAPP located in Appendix E. QA/QC samples will include one blind duplicate groundwater sample, a MS/MSD sample, and an equipment rinsate blank sample. An approved ELAP laboratory will perform the analyses. One trip blank will be included per shipment of samples to the laboratory.

5.4 Qualitative Human Health Risk Assessment

In accordance with direction provided by NYSDEC, a qualitative human health risk assessment (QHHEA) will be prepared. This assessment will generally follow the guidelines provided in the *New York State Department of Health Qualitative Human Health Exposure Assessment* (Appendix 3B to NYSDEC's December 2002 *Draft DER-10 Technical Guidance for Site Investigation and Remediation*). In general, the assessment will identify the exposure setting, identify exposure pathways, and will evaluate the fate and transport of the contaminants. The assessment will include text discussions, tables, and graphics depicting the potential exposure pathways. The characterization will include all environmental data gathered pertaining to the SC. The qualitative assessment will identify potential risks for specific potential receptors based on complete pathways of exposure to contaminant levels exceeding default "screening criteria," such as the NYSDEC-recommended soil cleanup objectives (RSCOs) and drinking water standards. The assessment will be used to render an opinion as to whether potential complete exposure pathway(s) and/or risk exist for potential receptors.

5.5 Survey and Sample Point Location

Following completion of the planned soil borings, temporary groundwater points, soil vapor points and surface soil collection, each of these points will be surveyed by a New York State Licensed Land Surveyor. The elevation of each temporary monitoring well will be determined to ±0.01 foot and will be tied into the site benchmark. All locations and elevations will be referenced to the New York State Plane Coordinate System.

5.6 Quality Assurance/Quality Control and Data Validation

TestAmerica and Alpha Woods Hole are both approved ELAP laboratories and will provide New York State Category B data deliverables. The data will be validated in accordance with New York State Analytical Service Protocols (NYSASP) protocols.
The data validator will prepare a data usability report summarizing the adequacy of the analytical data obtained from the laboratory and discussing any pertinent data excursions or limitations on the use of the data. The data usability report will be used in preparing the SC report, and will be submitted as part of the SC report. The QAPP is located in Appendix E.

Through the use of standardized sample collection and decontamination procedures, the quality of the samples during field collection can be assured. The data validation process will ensure that the data collected and reported by the laboratory are of sufficient quality that management decisions regarding the degree and extent of potential impacts can be reliably made. The data validation will evaluate whether the required quantitation limit has been achieved for each sample analyzed, and will evaluate the precision, accuracy, and completeness of the data. The data validator will use the duplicate samples, the MS/MSD samples, the trip blanks, and the equipment rinsate blank samples, as well as laboratory calibration blanks, spikes, and other standards to assess the quality of the data obtained. Any deviations from the required level of sample quality will be called out in the data usability reports prepared by the data validator and these deviations will be taken into consideration when using the data to explain site conditions.

6. SC Report Preparation

GEI will prepare a SC report for submittal to NYSDEC and NYSDOH for the Pinelawn/Farmingdale Hortonsphere site. The report will present the findings of the SC. The report will identify specific contaminant concentrations throughout each media (e.g., soil, groundwater, soil vapor, etc.), which is necessary to assess whether any media require remediation or further evaluation. The reports will also incorporate the findings of the QHHEA.

Key components of the SC report will include:

- An executive summary
- Description of SC activities
- Discussion of site geology
- Summary of analytical compounds in soil, soil vapor, and groundwater
- Identification of NAPL, if any
- Identification of historic structures and any associated waste source areas
- Comparison of site soil, soil vapor and groundwater analytical data to NYSDEC standards and NYSDOH guidelines
- Identification of areas that exceed the soil, soil vapor and groundwater standards
- Conceptual site model
- Boring logs and monitoring well construction details
- Site photographs
- Conclusions and recommendations

7. Schedule

It is anticipated that, pending vendor availability and property access, the Pinelawn/Farmingdale Hortonsphere field program can commence upon authorization by KeySpan and receipt of all access agreements necessary to implement the work scope. KeySpan anticipates that the sampling program can be completed in approximately three to four days of fieldwork, depending on weather, approval of this work plan and property access. A detailed schedule will be established prior to commencing SC activities. KeySpan will notify NYSDEC five working days prior to the anticipated start date of the site characterization program.

8. References

Busciolano, R., J. Monti, Jr., and A. Chu, 1998. *Water-Table and Potentiometric-Surface Altitudes of the Upper Glacial, Magothy, and Lloyd Aquifers on Long Island, New York, in March-April, 1997, with a Summary of Hydrogeologic Conditions*. United States Geological Survey. Water-Resources Investigations Report 98-4019.

Busciolano, R., 2002. *Water-Table and Potentiometric-Surface Altitudes of the Upper Glacial, Magothy, and Lloyd Aquifers on Long Island, New York, in March-April 2000, with a Summary of Hydrogeologic Conditions*. United States Geological Survey. Water-Resources Investigations Report 01-4165.

New York State Department of Environmental Conservation, *Draft DER-10 Technical Guidance for Site Characterization and Remedial Investigation*. December 25, 2002.

New York State Department of Health, *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*

KeySpan Corporation and GEI Consultants, Inc. *Draft Standard Operating Procedure- Soil Vapor Intrusion for MGP Sites in New York.* February 2007.

Tables

Table 1
Summary of Environmental Records Information
Pinelawn/ Farmingdale Hortonsphere Site
East Farmingdale, New York

Parcel I.D. No.	Company Name [Location]	Facility Operations (years)	Environmental Records Information
On Site			
1	Long Island Lighting Company (LILCO)/ Long Island Power Authority (LIPA) [Route 110/ Broad Hollow Road] Road/ Conklin Street (Route 24)]	Pinelawn Farmingdale Electrical Substation (1927 until circa mid 1970's)	None
Abutting Properties			
--	None	None	None
Properties within One Block			
	American Aeroplane Engine Corporation [Unknown]	Possible Manufacturing (1947)	The 1947 Historical Topographic maps shows the buildings associated with the American Aeroplane Engine Corporation.
	Fulton Motor Corporation	Possible Manufacturing (1927)	A 1927 property survey map shows a building associated with the Fulton Motor Corporation.
	Grumman Aircraft Engineering Corporation	Aircraft Manufacturing (1927)	Grumman aircraft "The Farmingdale Years 1932 -1937 obtained from (http://www.grummanpark.org/farmingdale.htm)
2	Arrow Metals Incorporated (aka Arrow Metals Salvage Corp.) [1031 Conklin Street]	Unknown (Recent)	Small quantity generator [NYSD980766927] of hazardous wastes (D-002 non-listed corrosive wastes)
	Independent Silk Dyers	Textile Manufacturing (1947)	The 1947 Historical Topographic maps shows the buildings associated with the American Aeroplane Engine Corporation.
	Independent Silk Dying Company, Inc./Textile Dyeing Company, Inc.[937-941 Conklin Street] .	Textile Screening and Dyeing (1914 and 1958)	NYSDEC Environmental Site Remediation Database indicates that the site was used for silk and textile screening operations.
3	Kenmark Textile Printing Corporation [937-941 Conklin Street]	Screening and Textile Printing (1972-Recent)	The site is a de-listed national priorities listed (NPL), Comprehensive Environmental Response, Compensation Liability Information System (CERCLIS) and a NYSDEC state superfund site for the release of metal an phenol impacted waste waters to sludge dying beds. Remedial action has been completed under NYSDEC supervision and the EPA has issued a no further action records of decision. The site is listed as a small quantity generator of hazardous waste and has records of fuel oil storage in underground storage tanks (USTs) and hazardous waste in aboveground storage tanks (ASTs), all of which are removed.
4	Republic Airfield	Airport (1954 until present)	Republic Airfield/ Airport is shown on historical topographic maps from 1954 until 1994.
5	Hazardous Waste Disposal Inc. [11A Picone Boulevard]	Former Hazardous Waste Transfer Storage Transfer and Recycling Operation (1979 to 1982)	Site is a NYSDEC state superfund site. Hazardous Waste Disposal Incorporated utilized the facility for the storage of hazardous wastes in drums, ASTs and a sludge pit. Hazardous Waste Disposal Inc. was listed as a small quantity generator of hazardous waste with resource conservation recovery act (RCRA) violations and corrective actions. A record of decision has been issued for the site and remediation has been initiated.
6	Fairchild Republic Company/ Fairchild Holding Corporation/ Fairchild Industries Inc. [Conklin Street]	Airplane Manufacturing (1930 to 1986)	Site is a NYSDEC state superfund site. The site was used for airplane manufacturing for the air force. The site has a long history of spills and leaks in tanks, pipelines and various manufacturing processes. Groundwater is contaminated with chlorinated solvents at the site and to the south-southeast of the site. The site is listed as a small quantity generator of hazardous waste with violations and RCRA corrective action.
7	Decon Ford Truck Sales Inc. [1600 Route 110/ Broad Hollow Road]	Truck Sales (Recent)	SQG of hazardous waste and has records for the removal of five gasoline USTs at the parcel.
8	Brown Strober Home Center [1644 Route 110/ Broad Hollow Road]	Commercial (Recent)	Leaking storage tank incident (LTANK) report where a 2,000 gallon UST failed a tank test. Tank was removed.
8	Macys Furniture Store [1640 Route 110/ Broad Hollow Road]	Commercial (Recent)	LTANK report where a fuel oil UST failed a tank test. Tank was removed.
9	Broad Properties Inc. [1637 Route 110/ Broad Hollow Road]	Commercial (Recent)	Records for five diesel ASTs that have been removed.

Table 1
Summary of Environmental Records Information
Pinelawn/ Farmingdale Hortonsphere Site
East Farmingdale, New York

On Site			
Parcel I.D. No.	**Company Name [Location]**	**Facility Operations (years)**	**Environmental Records Information**
10	Chase Bank [1745 Route 110/ Broad Hollow Road]	Commercial (Recent)	LTANK report that documents the removal of a #2 fuel oil tank where contaminated soils were encountered.
	Ameranda Hess Corporation [1590 Route 110/ Broad Hollow Road]	Gasoline Service Station (Recent)	LTANK report that documents elevated PIDs in soils at the site. Small quantity generator of hazardous wastes and has records of waste manifests.
11	Flyin Hand Car Wash [1590 Route 110/ Broad Hollow Road]	Car Wash (Recent)	Five registered gasoline USTs listed for the site. All have been removed.
12	Best Buy Auto Parts [1500 Route 110/Broad Hollow Road]	Commercial (Recent)	Small quantity generator of hazardous wastes [F002-Halogenated solvents]
13	US Truck Body [East Carmans Road]	Commercial (Recent)	LTANK spill report that documents NYSDEC tank test failure and removal of a leaking tank and discovery of cesspool and floor drains. Report also identifies gasoline and diesel tank failures.
	Best Foods Baking Corporation [8 Picone Boulevard]	Commercial (Recent)	Small quantity generator of hazardous wastes.
14	Family Moving and Storage [8 Picone Boulevard]	Commercial (Recent)	Three registered gasoline and diesel USTs that were removed and one AST.
15	Ronnies Truck Service Inc./S. B. Thomas	Commercial (Recent)	Small quantity generator of hazardous waste with waste manifests for [F002-Halogenated solvents]
16	Biosystems Inc. [210 Sherwood Avenue]	Solids Waste Facility (Recent)	Solid waste facility for regulated medical wastes.
17	Midway Ind. Electronics [920 Conklin Street]	Commercial (Recent)	LTANK report for failed tank test. Tank removed.
18	White Rose Foods [150 Price Parkway]	Commercial (Recent)	TANK report that documents a leaking UST.
19	LILCO [Unknown]	Pole Transformer (Current)	NYSDEC Spill # 9007877:Spilled 50 gallons of transformer oil (Closed on 03/12/2001)
20	Brandt Airflex (aka Airflex Industrial Corp. [937-941 Conklin Street]	Manufacturing (1972 until present)	NYSDEC hazardous waste site. Solvents encountered in groundwater associated with a dry well that received discharges form drums and paint spraying operations.
21	Ryder Truck Rental Inc. [11 Picone Boulevard]	Truck Rental [Recent]	A small quantity generator of hazardous waste.

Notes:

AST - Above ground bulk petroleum storage tank.
LTANK - Leaking storage tank.
UST - Underground storage tank.
RCRA-Resource Conservation Recovery Act
LQG-Large Quantity Generator
NYSDEC-New York State Department of Environmental Protection

Prepared by: LEW

Table 2
Sample Descriptions, Rationale and Analysis
Pinelawn/Farmingdale Hortonsphere Site
East Farmingdale, New York

Sample I.D.	Sample Location	Sample Rationale	Number of Samples			VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TAL Metals (EPA 6000/7000)	Herbicides (EPA 8151A)	PCBs/ Pesticides (EPA 8082)	Sulfide (EPA 9034)	Sulfate (EPA 300.0)	VOCs (EPA TO-15) Helium by ASTM 1945
			Soil	Soil Vapor	Groundwater								
Subsurface Soil Borings and Temporary Groundwater Monitoring Point													
PFH-GP-01/ PFH-GW-01	North-central portion of the current tree trimming operations yard.	Soil boring and temporary groundwater sample to provide soil and groundwater information upgradient of the footprint of a former Hortonsphere.	2		1	X	X	X	X	X	X [Soils]	X [Soils]	
PFH-GP-02/ PFH-GW-02	North-central portion of the tree trimming operations yard.	Soil boring and temporary groundwater sample to provide soil and groundwater information downgradient of the within the footprint of a former Hortonsphere.	2		1	X	X	X	X	X	X [Soils]	X [Soils]	
PFH-GP-03/ PFH-GW-03	North-central portion of the tree trimming operations yard.	Soil boring and temporary groundwater sample to provide soil and groundwater information to the west of the former Hortonsphere.	2		1	X	X	X	X	X	X [Soils]	X [Soils]	
PFH-GP-04/ PFH-GW-04	North-central portion of the tree trimming operations yard.	Soil boring and temporary groundwater sample to provide soil and groundwater information to the south/southest of the footprint of the former Hortonsphere.	2		1	X	X	X	X	X	X [Soils]	X [Soils]	
PFH-GP-05/ PFH-GW-05	North-central portion of the tree trimming operations yard.	Soil boring and temporary groundwater sample to provide soil and groundwater information east of the footprint of a former Hortonsphere.	2		1	X	X	X	X	X	X [Soils]	X [Soils]	
Surface Soil Sample Locations													
PFH-SS-01	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions within the footprint of the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	
PFH-SS-02	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions within the footprint of the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	
PFH-SS-03	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions within the footprint of the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	

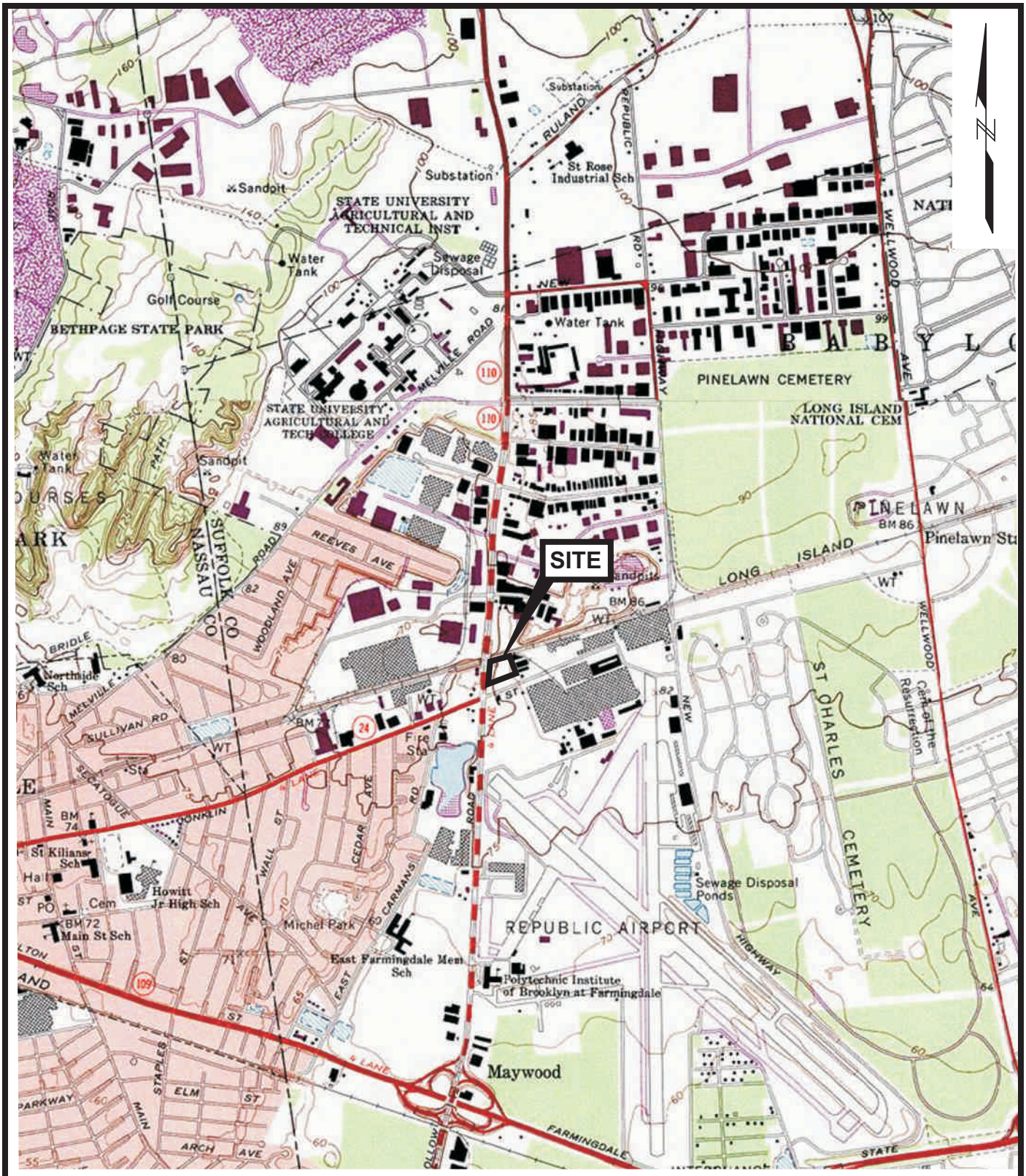
Table 2
Sample Descriptions, Rationale and Analysis
Pinelawn/Farmingdale Hortonsphere Site
East Farmingdale, New York

Sample I.D.	Sample Location	Sample Rationale	Number of Samples			VOCs (EPA 8260B)	SVOCs (EPA 8270C)	TAL Metals (EPA 6000/7000)	Herbicides (EPA 8151A)	PCBs/ Pesticides (EPA 8082)	Sulfide (EPA 9034)	Sulfate (EPA 300.0)	VOCs (EPA TO-15) Helium by ASTM 1945
			Soil	Soil Vapor	Groundwater								
PFH-SS-04	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions adjacent to the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	
PFH-SS-05	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions to the wwest of the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	
PFH-SS-06	North-central portion of the tree trimming operations yard.	Soil sample to evaluate surface soil conditions adjacent to the former Hortonsphere.	1			X	X	X	X	X	X [Soils]	X [Soils]	
Soil Vapor Sample Location													
PFH-SV-01	North-central portion of the tree trimming operations yard.	Soil vapor sample to screen the soil vapor conditions within the footprint of the former Hortonsphere.		1									X
PFH-SV-02	North-central portion of the tree trimming operations yard.	Soil vapor sample to screen the soil vapor conditions to the south of the former Hortonsphere.		1									X
PFH-SV-03	North-central portion of the tree trimming operations yard.	Soil vapor sample to screen the soil vapor conditions to the east of the former Hortonsphere.		1									X
PFH-SV-04	North-central portion of the tree trimming operations yard.	Soil vapor sample to screen the soil vapor conditions on the northern boundary of the former Hortonsphere property.		1									X
PFH-SV-05	North-central portion of the tree trimming operations yard.	Soil vapor sample to screen the soil vapor conditions to the west of the former Hortonsphere .		1									X

Notes:
Chemical analysis test methods specified are from U.S. EPA SW-846 test methods
EPA TO-15 analysis will include VOCs and naphthalene [TO-15 KeySpan Parameter List]
EPA stands for the Environmental Protection Agency
VOC stands for volatile organic compounds
SVOC stands for semi-volatile organic compounds
TAL stands for target analyte list
PCBs stands for Polychlorinated Biphenyls

Prepared by: LEW

Figures



SOURCE: Map created with TOPO! ® ©2001 National Geographic (www.nationalgeographic.com/topo)

SITE CHARACTERIZATION WORK PLAN PINELAWN/FARMINGDALE FORMER HORTONSPHERE SITE EAST FARMINGDALE, NEW YORK	GEI Consultants	**SITE LOCATION MAP**
KEYSPAN CORPORATION	Project 072710-7-1601	December 2007 Figure 1

KEYSPAN\SITE CHARACTERIZATIONS\PINELAWN LOCATION MAP.CDR

LEGEND:

- PROPERTY BOUNDARY (APPROXIMATE)
- HISTORIC PROPERTY BOUNDARY
- HISTORIC STRUCTURE LOCATION
- PFH-GP-01 — PROPOSED GEOPROBE® BORING LOCATION/ TEMPORARY GROUNDWATER SAMPLING LOCATION
- PFH-SV-01 — PROPOSED SOIL VAPOR SAMPLE LOCATION
- PFH-SS-01 — PROPOSED SURFACE SOIL SAMPLE LOCATION

SOURCES:

1. Aerial photograph obtained from Google. © 2007. Imagery: © 2007 New York GIS. Map Data: © 2007 NAVTEQ.
2. Farmingdale Sub Parcel 49 [Suffolk County File 1196280] surveyed September 1927. Scale 1 inch: 50 feet.
3. Farmingdale Substation, Situated Near Farmingdale, Town of Babylon, County of Suffolk, New York. Scale 1 inch: 100 feet.

0 100 200

APPROXIMATE SCALE, FEET

SITE CHARACTERIZATION WORK PLAN
PINELAWN/FARMINGDALE FORMER HORTONSPHERE SITE
EAST FARMINGDALE, NEW YORK

KEYSPAN CORPORATION

GEI Consultants

PROPOSED SAMPLE LOCATIONS

Project 072710-7-1601 | December 2007 | Figure 2

I:\GEI\KEYSPAN\Site Characterizations\ Pinelawn-Sample Location.dwg \Dec 07, 2007

LEGEND

APPROXIMATE FORMER SITE BOUNDARY

APPROXIMATE CURRENT PROPERTY BOUNDARY

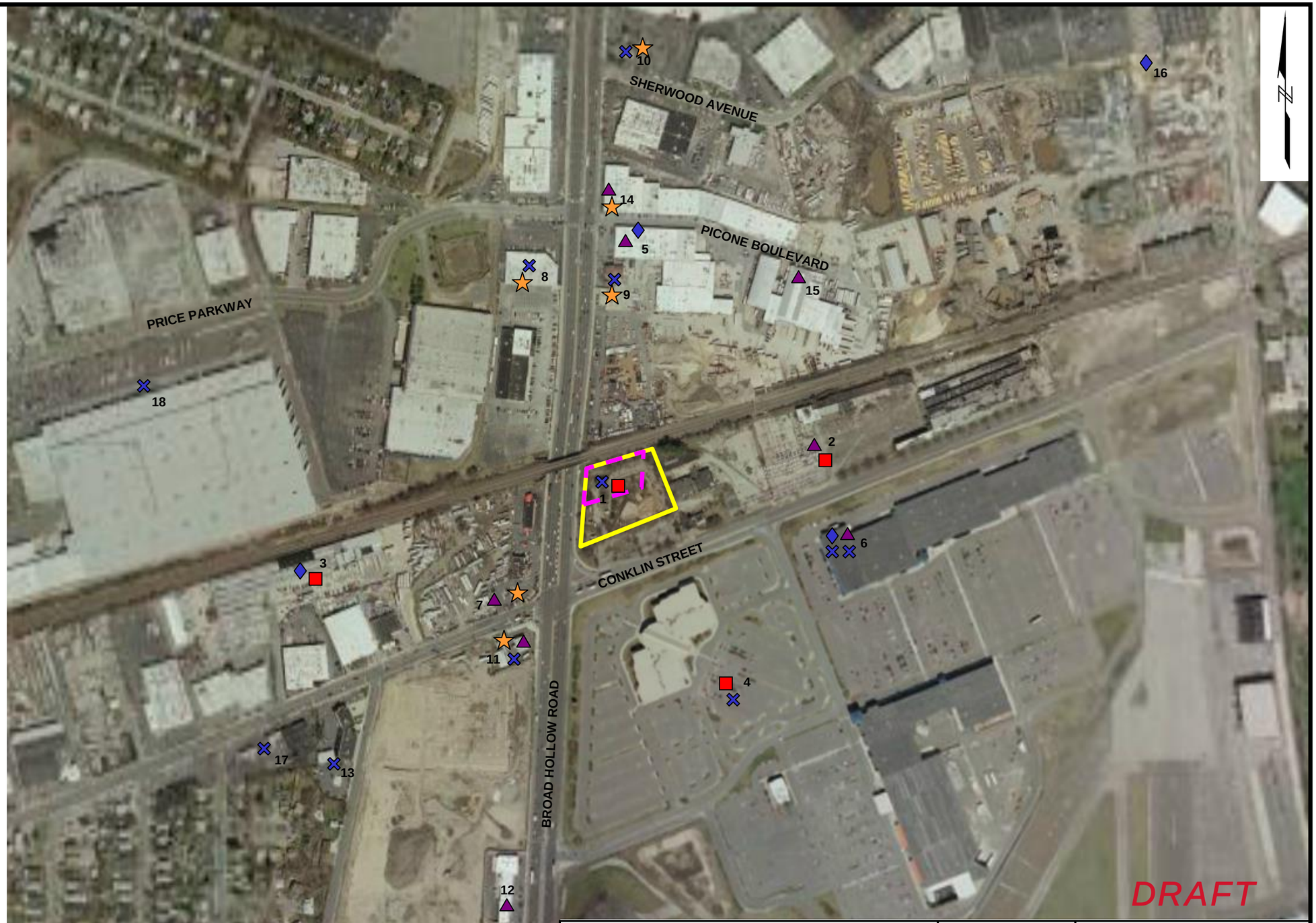
RECENT REGULATORY RECORDS

- RCRA (TSDF, CORRACTS), CERCLIS, VCP, LANDFILL, DISPOSAL SITE
- RCRA (LQG, SQG)
- MAJOR OIL OR CHEMICAL STORAGE
- MINOR OIL STORAGE
- SPILLS, TRIS

HISTORIC LAND USE

- COAL YARD/LUMBER YARD
- ASPHALT PLANT/COAL TAR PRODUCT CO.
- MANUFACTURING AND COMMERCIAL
- OIL/PETROCHEMICAL
- CHEMICAL/PAINT/FERTILIZER/PLASTIC
- MULTIPLE

NOTE:
SEE TABLE 1 FOR INFORMATION ABOUT THESE SITES.



SOURCE:
Copyright 2007 Google.
Imagery – Copyright 2007 New York GIS,
Map Data – Copyright 2007 NAVTEQ.

NOTE: NOT TO SCALE

SITE CHARACTERIZATION WORK PLAN
PINELAWN/FARMINGDALE FORMER HORTONSPHERE SITE
EAST FARMINGDALE, NEW YORK

KEYSPAN CORPORATION

GEI Consultants

NEARBY LAND USE

Project 072710-7-1601 | December 2007 | Figure 3

Appendix A

Historical Documents (electronic only)

The EDR Aerial Photo Decade Package

Pinelwn/ Farmingdale Hortonsphere
Broad Hollow Road/ Conklin Street
Farmingdale, NY 11735

Inquiry Number: 1898596.5

April 10, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

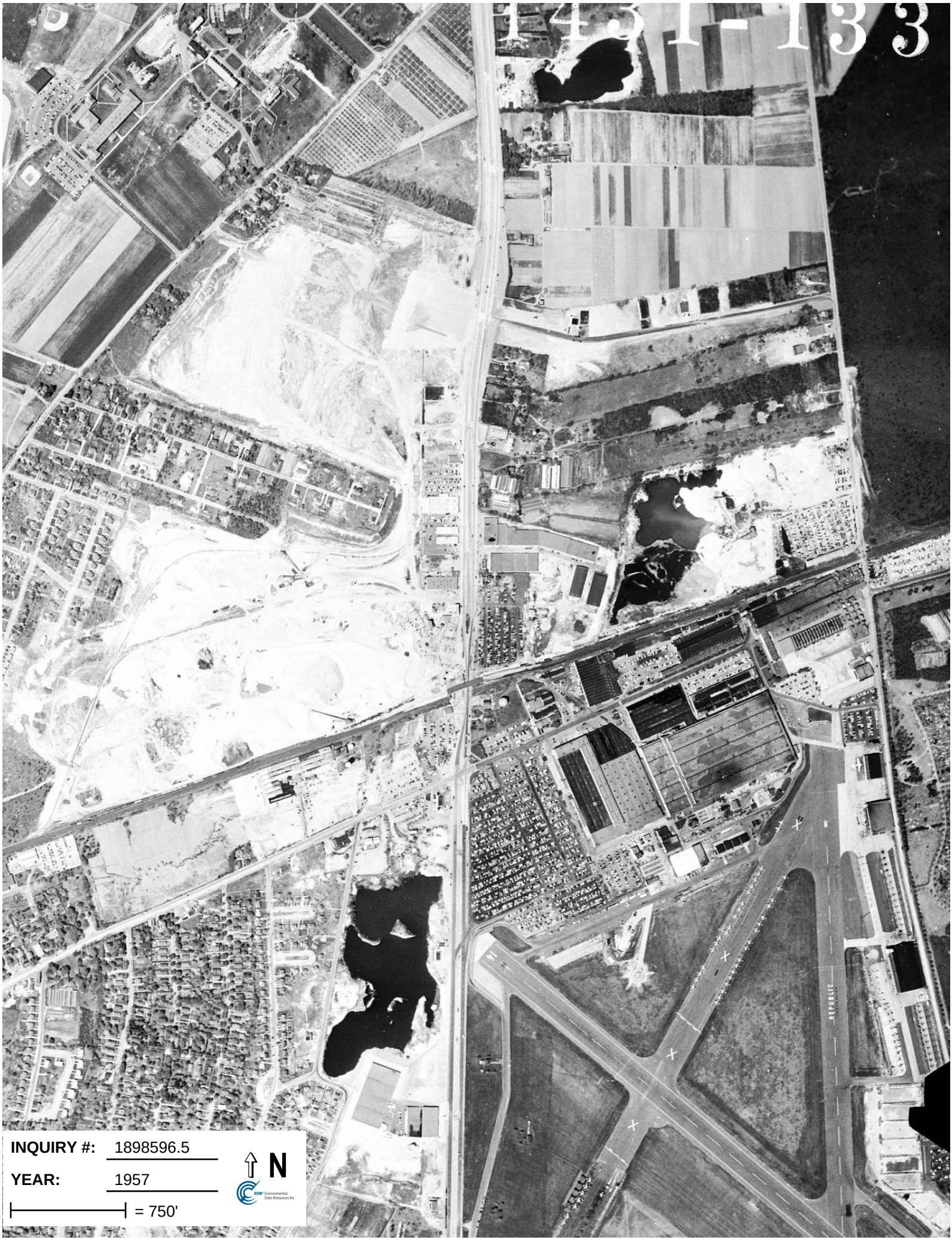
Aerial Photography April 10, 2007

Target Property:

Broad Hollow Road/ Conklin Street

Farmingdale, NY 11735

Year	***Scale***	***Details***	***Source***
1957	Aerial Photograph. Scale: 1"=750'	Panel #: 2440073-F4/Flight Date: April 15, 1957	EDR
1966	Aerial Photograph. Scale: 1"=750'	Panel #: 2440073-F4/Flight Date: March 08, 1966	EDR
1976	Aerial Photograph. Scale: 1"=750'	Panel #: 2440073-F4/Flight Date: March 24, 1976	EDR
1980	Aerial Photograph. Scale: 1"=833'	Panel #: 2440073-F4/Flight Date: September 08, 1980	EDR
1994	Aerial Photograph. Scale: 1"=833'	Panel #: 2440073-F4/Flight Date: April 08, 1994	EDR


1431-133
INQUIRY #: 1898596.5
YEAR: 1957
= 750'
N


REPUBLIC
INQUIRY #: 1898596.5
YEAR: 1966
= 750'
N
EDR Environmental Data Resources Inc

INQUIRY #: 1898596.5

YEAR: 1976

= 750'

N

EDR Environmental Data Resources Inc


INQUIRY #: 1898596.5
YEAR: 1980
= 833'
N


INQUIRY #: 1898596.5
YEAR: 1994
= 833'
N

EDR Historical Topographic Map Report

Pinelwn/ Farmingdale Hortonsphere
Broad Hollow Road/ Conklin Street
Farmingdale, NY 11735

Inquiry Number: 1898596.4

April 10, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Rd
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

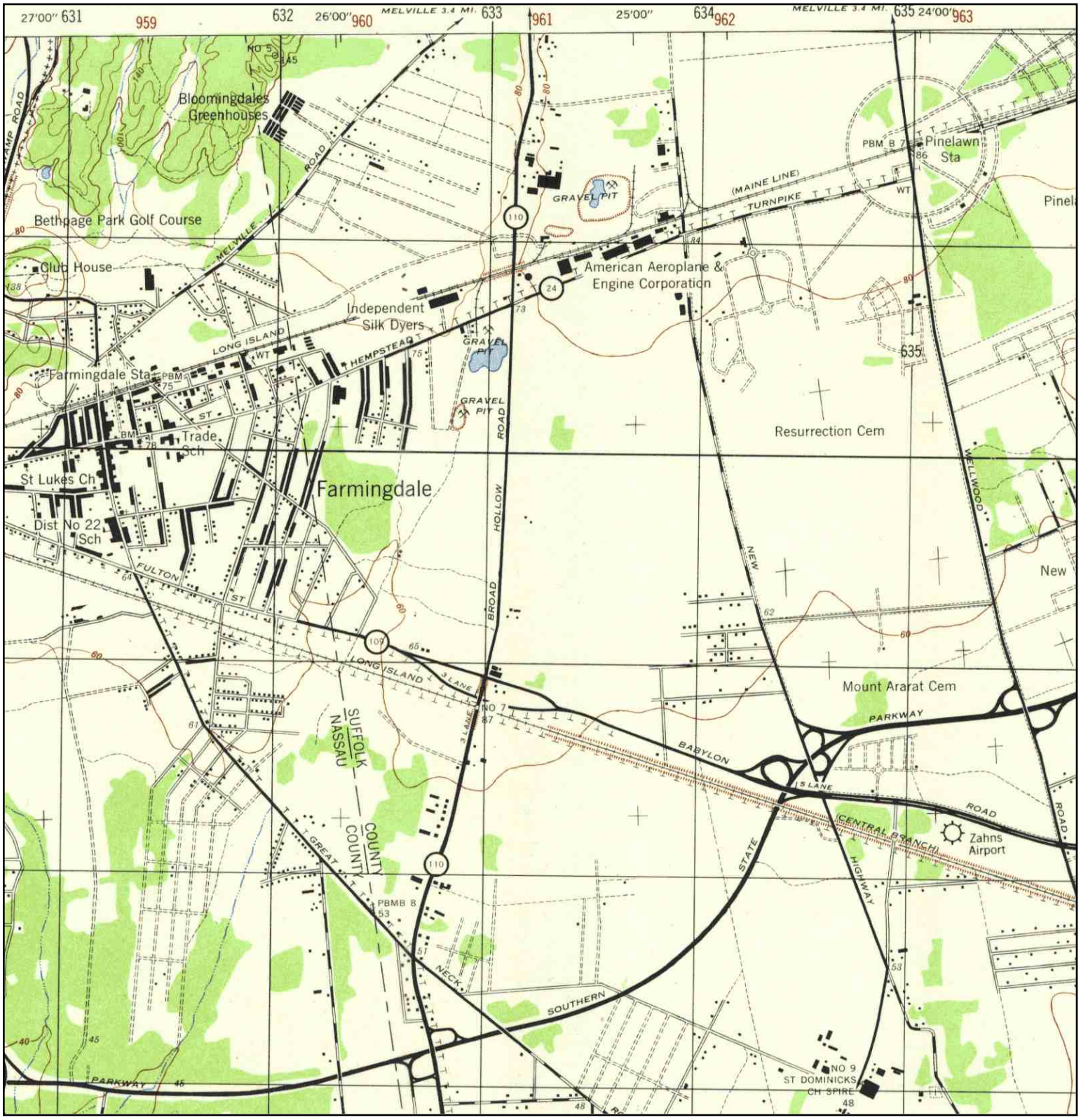
Historical Topographic Map

N	TARGET QUAD NAME: BABYLON MAP YEAR: 1903 SERIES: 15 SCALE: 1:62500	SITE NAME: Pinelwn/ Farmingdale Hortonsphere ADDRESS: Broad Hollow Road/ Conklin Street Farmingdale, NY 11735 LAT/LONG: 40.7397 / 73.4227	CLIENT: GEI Consultants Inc. CONTACT: Lynn Willey INQUIRY#: 1898596.4 RESEARCH DATE: 04/10/2007

Historical Topographic Map

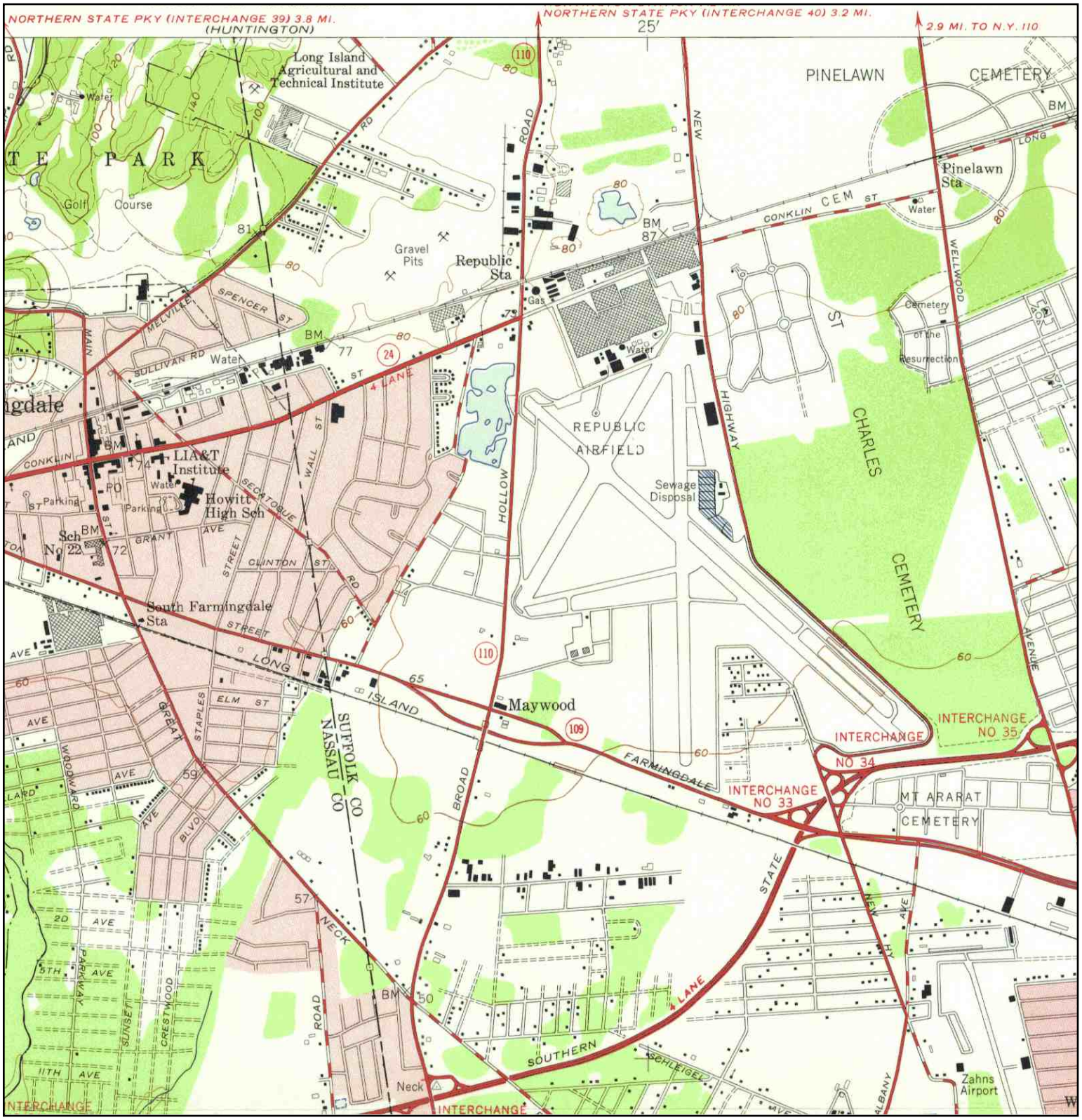
N	TARGET QUAD NAME:	ISLIP	SITE NAME:	Pinelwn/ Farmingdale Hortonsphere	CLIENT: GEI Consultants Inc.
	MAP YEAR:	1904	ADDRESS:	Broad Hollow Road/ Conklin Street	CONTACT: Lynn Willey
					INQUIRY#: 1898596.4
	SERIES:	30		Farmingdale, NY 11735	RESEARCH DATE: 04/10/2007
	SCALE:	1:125000	LAT/LONG:	40.7397 / 73.4227	

Historical Topographic Map



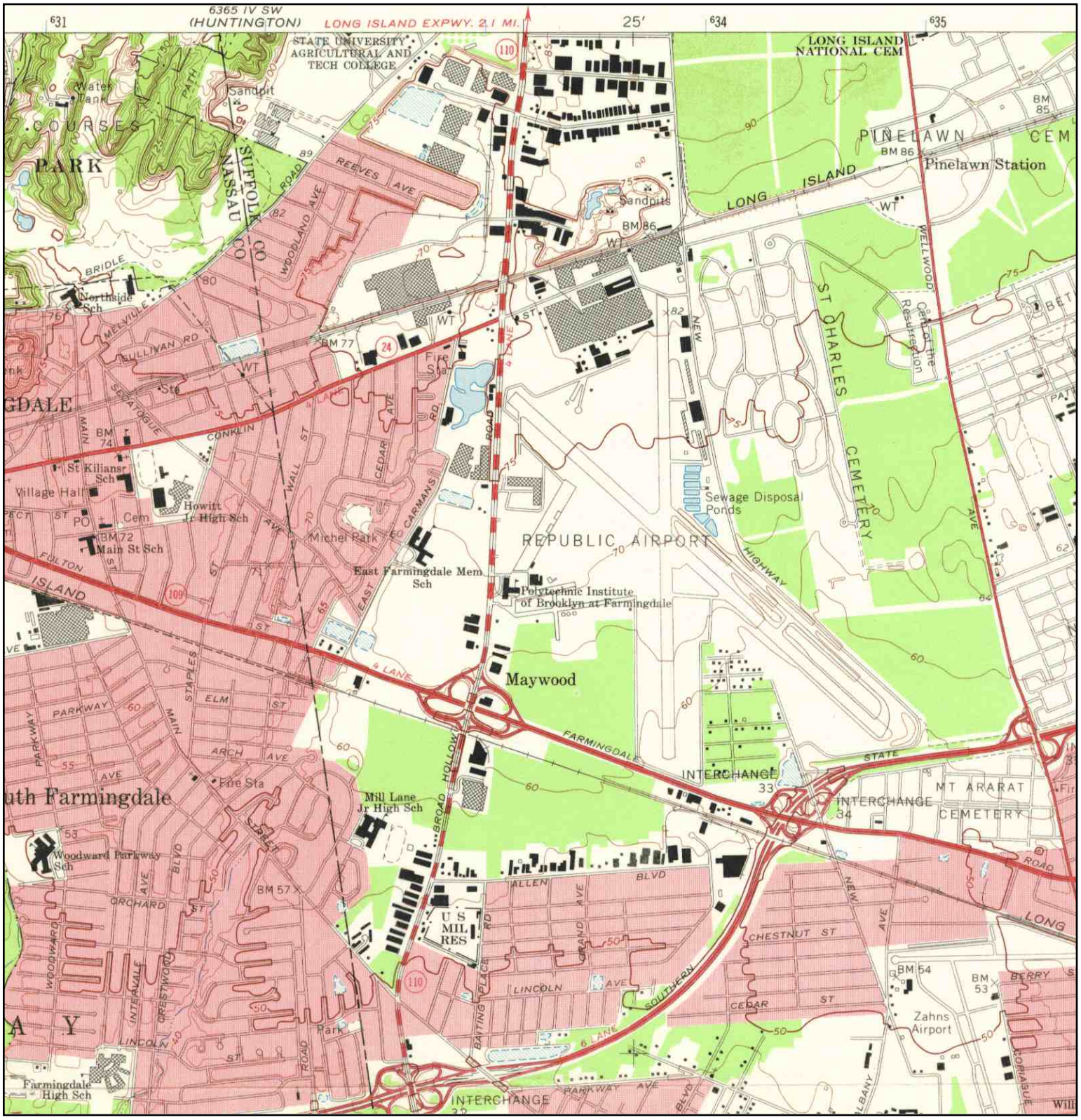
N	TARGET QUAD NAME: AMITYVILLE MAP YEAR: 1947 SERIES: 7.5 SCALE: 1:25000	SITE NAME: Pinelwn/ Farmingdale Hortonsphere ADDRESS: Broad Hollow Road/ Conklin Street Farmingdale, NY 11735 LAT/LONG: 40.7397 / 73.4227	CLIENT: GEI Consultants Inc. CONTACT: Lynn Willey INQUIRY#: 1898596.4 RESEARCH DATE: 04/10/2007	

Historical Topographic Map



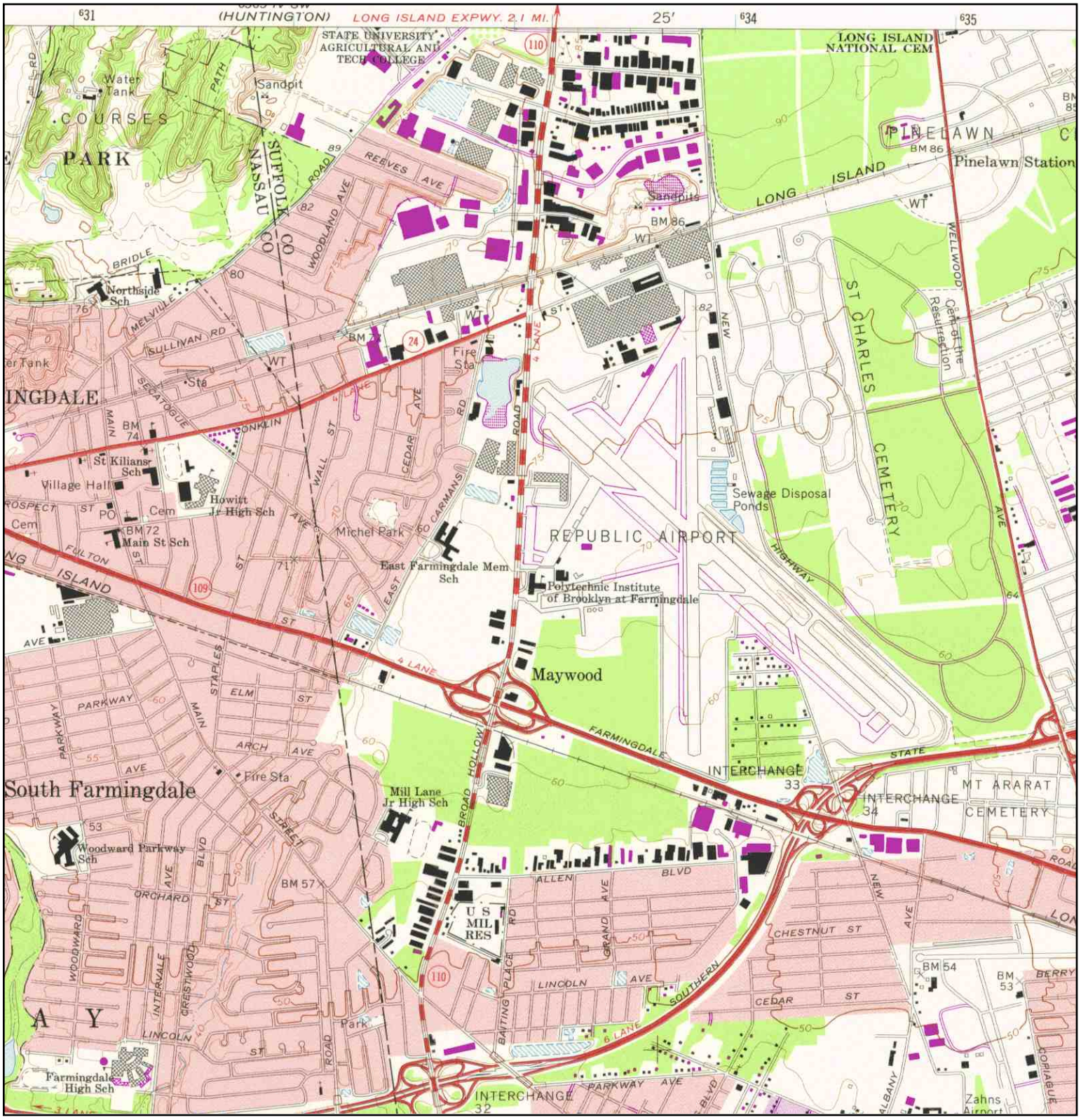
N	TARGET QUAD NAME: AMITYVILLE MAP YEAR: 1954 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Pinelwn/ Farmingdale Hortonsphere ADDRESS: Broad Hollow Road/ Conklin Street Farmingdale, NY 11735 LAT/LONG: 40.7397 / 73.4227	CLIENT: GEI Consultants Inc. CONTACT: Lynn Willey INQUIRY#: 1898596.4 RESEARCH DATE: 04/10/2007

Historical Topographic Map



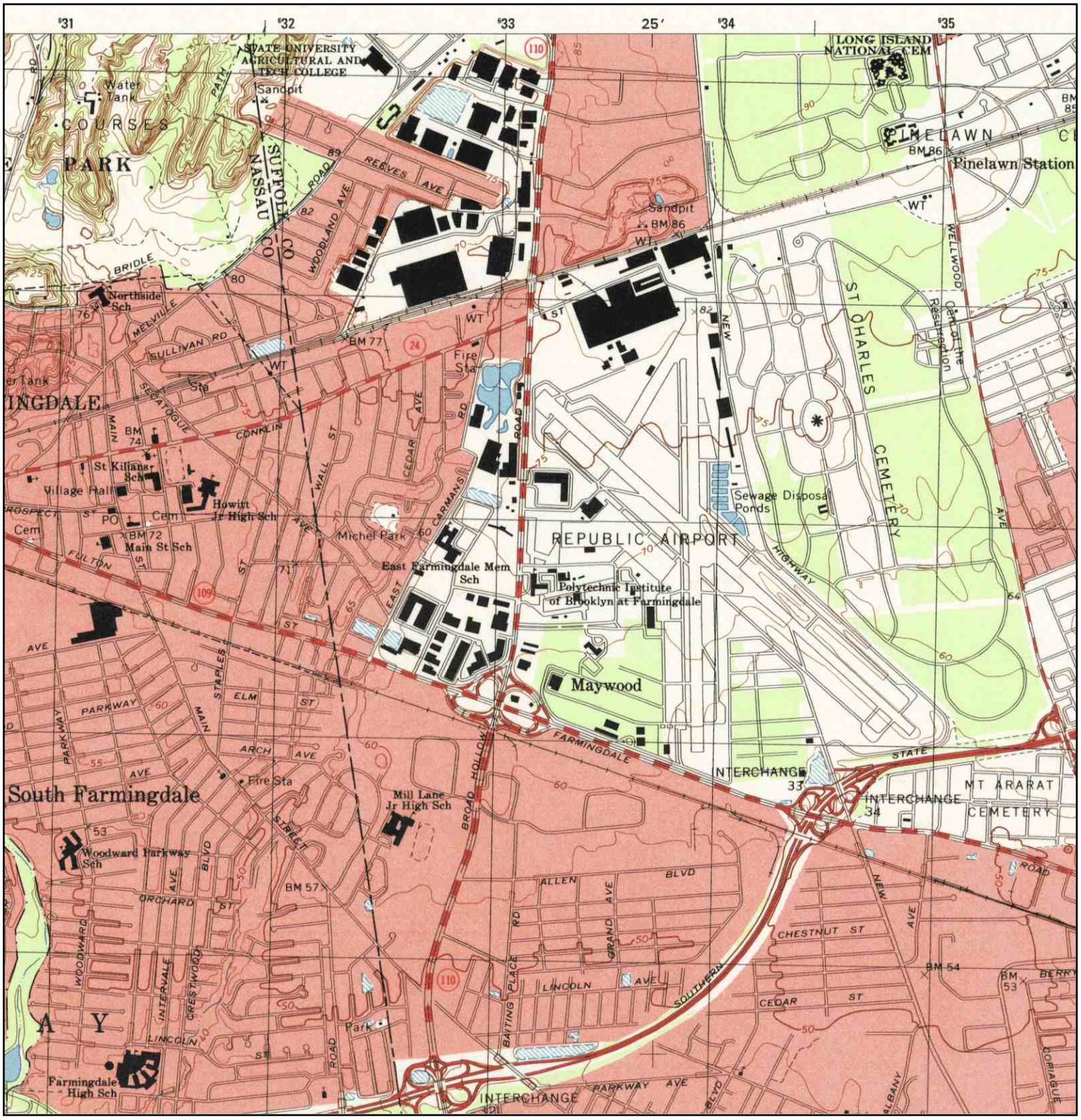
N	TARGET QUAD NAME: AMITYVILLE MAP YEAR: 1969 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Pinelwn/ Farmingdale Hortonsphere ADDRESS: Broad Hollow Road/ Conklin Street Farmingdale, NY 11735 LAT/LONG: 40.7397 / 73.4227	CLIENT: GEI Consultants Inc. CONTACT: Lynn Willey INQUIRY#: 1898596.4 RESEARCH DATE: 04/10/2007	

Historical Topographic Map



N	TARGET QUAD		SITE NAME:	Pinelwn/ Farmingdale Hortonsphere	CLIENT: GEI Consultants Inc.
	NAME:	AMITYVILLE			CONTACT: Lynn Willey
	MAP YEAR:	1979	ADDRESS:	Broad Hollow Road/ Conklin Street	INQUIRY#: 1898596.4
	PHOTOREVISED FROM:	1969			RESEARCH DATE: 04/10/2007
	SERIES:	7.5		Farmingdale, NY 11735	
	SCALE:	1:24000	LAT/LONG:	40.7397 / 73.4227	

Historical Topographic Map



N	TARGET QUAD NAME:	AMITYVILLE	SITE NAME:	Pinelwn/ Farmingdale Hortonsphere	CLIENT: GEI Consultants Inc.
	MAP YEAR:	1994	ADDRESS:	Broad Hollow Road/ Conklin Street	CONTACT: Lynn Willey
	SERIES:	7.5		Farmingdale, NY 11735	INQUIRY#: 1898596.4
	SCALE:	1:24000	LAT/LONG:	40.7397 / 73.4227	RESEARCH DATE: 04/10/2007

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Lynn Willey
GEI Consultants Inc.
455 Winding Brook Drive
Glastonbury, CT 06033

Order Date: 4/9/2007 **Completion Date:** 4/10/2007
Inquiry #: 1898596.3s
P.O. #: NA
Site Name: Pinelwn/ Farmingdale Hortonsphere
Address: Broad Hollow Road/ Conklin Street
City/State: Farmingdale, NY 11735
Cross Streets:

Customer Project: NA
1081503PVC 203-537-0751

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

Appendix B

Modified Community Air Monitoring Plan

Community Air Monitoring Plan
Pinelawn/Farmingdale Hortonsphere Site

In accordance with NYSDEC and NYSDOH requirements for a CAMP, a perimeter air-monitoring plan will be implemented at the site during each phase of the field activities. The objective of the perimeter air-monitoring plan is to provide a measure of protection for the downwind community (i.e., off-site receptors, including residences and businesses and on-site workers not involved with the site field activities) from potential airborne contaminant releases as a direct result of field activities. The perimeter air-monitoring plan is a stand-alone document and will be available on site. The VOC Monitoring, Response Levels, and Actions are presented as follows.

Air Monitoring Response Levels and Actions

VOCs

Response Level	Actions
>5 ppm above background for 15-minute average	▪ Temporarily halt work activities ▪ Continue monitoring ▪ If VOC levels decrease (per instantaneous readings) below 5 ppm over background, work activities can resume
Persistent levels >5 ppm over background <25 ppm	▪ Halt work activities ▪ Identify source of vapors ▪ Corrective action to abate emissions ▪ Continue monitoring ▪ Resume work activities if VOC levels 200 feet downwind of the property boundary or half the distance to the nearest potential receptor is <5 ppm for a 15-minute average ▪ If VOC levels are >25 ppm at the perimeter of the work area, activities must be shutdown

Particulates

Response Level	Actions
>100 mcg/m3 above background for 15-minute average or visual dust observed leaving the site	▪ Apply dust suppression ▪ Continue monitoring ▪ Continue work if downwind PM-10 particulate levels are <150 mcg/m3 above upwind levels and no visual dust leaving site
>150 mcg/m3 above background for 15-minute average	▪ Stop work ▪ Re-evaluate activities ▪ Continue monitoring ▪ Continue work if downwind PM-10 particulate levels are <150 mcg/m3 above upwind levels and no visual dust leaving site

Sources:

New York State Department of Health Community Air Monitoring Plan, June 20, 2000.

New York State Department of Environmental Conservation Division Technical and Administrative Guidance Memorandum - Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites, October 27, 1989.

During excavating and materials handling operations, the air in work areas will also be sampled periodically for the presence of contaminants.

A portable PID will be utilized to periodically monitor the levels of organic vapors in the ambient air and a Mini RAM™ PM-10 (or equivalent) particle detector will be used to count inhalable particles (0.1-10 micrometer range) of dust during the fieldwork. PID and Mini RAM readings will be taken hourly during excavation or more frequently if air quality measurements approach action levels as defined herein. Measurements will be monitored from the breathing zone (4 to 5 feet above ground level) at worker locations to determine working conditions (and whether there is a need to change levels of worker protection).

In addition to VOCs and particulates, cyanide will be monitored in the work zone and at the perimeter of the work area. The cyanide monitoring methods will be determined prior to mobilization, but at a minimum, will include Draeger® tube sampling.

In order to make a conservative assessment of when different levels of respiratory protection are needed during the fieldwork, it will be assumed that the organic vapors detected by the air monitoring instruments consist of the most toxic volatile compounds expected to be found on the site. Preliminary evaluation of the risks expected at the site indicates that the most toxic volatiles that are probably present are VOCs (particularly Benzene, Toluene, Ethylbenzene, Xylene [BTEX]). Based on data published by the Occupational Safety and Health Administration (OSHA) and the American Conference of Government Industrial Hygienists (ACGIH), and GEI's experience with manufactured gas plant (MGP) wastes, the following personal protective equipment (PPE) will be employed when the given concentrations of organic vapor are detected in the breathing zone.

Compound of Concern	Level D	Level C	Level B
Chemical Name	M<X	X<M<Y	M>Y
BTEX and other photoionizable VOCs	M <5 ppm	5 ppm <M <50 ppm	M >50 ppm
Where: M = concentration of organic vapor measured in the field X,Y = concentrations at which different levels of respiratory protection are necessary.			

The PPE requirements may be modified based on compound-specific monitoring results information, with the written approval of the Corporate Health and Safety Specialist (CHSS).

Respiratory protection from dusts will be required when inhalable particulate concentrations from potentially contaminated sources exceed 150 $\mu g/m^3$.

Odors or dusts derived from site contaminants may cause nausea in some site workers, even though the contaminants are at levels well below the safety limits as defined above. Workers may use dust masks or respirators to mitigate nuisance odors with the approval of the site safety officer (SSO).

Whenever practical, work areas should be positioned upwind of organic vapor and dust sources to reduce the potential for worker exposure.

Appendix C

Field Sampling Plan (electronic only)

Appendix D

Health and Safety Plan (electronic only)

Appendix E

Quality Assurance Project Plan (electronic only)