DECISION DOCUMENT

Diamond Auto Service
Brownfield Cleanup Program
Bay Shore, Suffolk County
Site No. C152196
January 2013

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Diamond Auto Service
Brownfield Cleanup Program
Bay Shore, Suffolk County
Site No. C152196
January 2013

Statement of Purpose and Basis

This document presents the remedy for the Diamond Auto Service site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Diamond Auto Service site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. The property is currently concrete-paved and is occupied by an 8,000 square foot single-story building that was constructed in 1971. This cover will stay in place, however, if modified; a site cover will be installed to allow for commercial use of the site. The site cover will consist

either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where exposed surface soil exceeds the commercial use soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d). The soil cover will be placed over a demarcation layer. The excavation will be backfilled with soil meeting the backfill material requirements for commercial use as set forth in 6 NYCRR Part 375-6.7(d) with the upper six inches of the soil of sufficient quality to maintain a vegetative layer.

3. Install a sub-slab depressurization system (SSDS) in the current structure on the site to prevent exposure to site related contaminants which result from soil vapor intrusion. The mitigation system will eliminate any exposures by preventing contaminated soil vapor from entering the on-site building(s). It will extract sub-slab vapors, and actively vent to the outside air. Communication testing will be performed to verify that the radius of influence of the system provides adequate venting for all on-site structures. A passive SSDS was installed at the site by the applicant in April 2009 in an effort to mitigate any soil vapors. The system was installed "at risk" and without the Department's review and approval. The SSDS will be upgraded to an active system. Once the system has been upgraded to an active SSDS, a system communication test will be performed. Based on this testing, adjustments to the system may be proposed. Post-mitigation indoor air sampling will be conducted 30 days after system start-up and during the current or the subsequent heating season. Indoor air samples will be collected from the waiting and office areas, as well as in the operation areas. If post-mitigation sampling results do not indicate a significant decrease in the concentrations of VOCs in indoor air due to vapor intrusion, the reason will be identified and corrections will be made.

4. Institutional Control. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- prohibits agriculture or vegetable gardens on the controlled property; and
- requires compliance with the Department approved Site Management Plan.

5. Site Management Plan. A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 7 above.

Engineering Controls: The soil cover discussed in Paragraph 2 and the sub-slab depressurization system discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in

areas of remaining contamination;

- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any additional buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of soil vapor/indoor air to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings occupied or developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in item above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

January 4, 2013

Date

James B. Harrington, Director
Remedial Bureau A

DECISION DOCUMENT

Diamond Auto Service
Bay Shore, Suffolk County
Site No. C152196
January 2013

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

The Bay Shore-Brightwaters Public Library
Attn: Reference Desk
1 South Country Road
Brightwaters, NY 11718
Phone: 631-665-4350

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen

participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is the Diamond Auto Service located at 71-73 Cleveland Avenue in Bayshore, Suffolk County.

Site Features: The site is 0.46 acres in size. The parcel is concrete-paved and is occupied by an 8,000 square foot single-story building that was constructed in 1971.

Current Zoning/Use (s): The site is currently zoned for commercial use and is an active automobile repair facility. Surrounding land use includes commercial and industrial.

Historic use(s) and source(s) of contamination: Chlorinated solvents were detected in the on-site sanitary system. The system has been remediated. Impact to groundwater and soil vapor has resulted. The contamination is attributed to a prior building tenant, Precision Metals Corporation, which operated a sheet metal shop and used tetrachlorethene (PCE) for degreasing.

Site Geology/Hydrogeology: Site soils consist of well sorted fine to medium sands. The average depth to groundwater at the site is 6 feet below grade and generally flows in a southerly direction.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Volunteer(s) does/do not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and

there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

An investigation to determine the extent of off-site impacts has not been conducted.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- air
- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

VINYL CHLORIDE TETRACHLOROETHYLENE (PCE)

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: The main contaminant of concern at the site is Volatile Organic Compounds (VOCs), specifically tetrachlorethylene (PCE), which entered into the subsurface via a storm drain located in the rear parking lot of the facility. The storm drain has been remediated.

As a result of VOCs entering into the subsurface, site soils, groundwater and soil vapor have been impacted. In 1998, impacted soils in and around the storm drain were successfully remediated in accordance with Suffolk County Department of Health Services' (SCDHS) regulations (SOP No.9-95). During the RI, which was conducted in 2007 and 2008, several VOCs were detected in groundwater at frequencies and levels that will not require further delineation and/or remediation. The detected VOCs in groundwater included 1.1 ppb of PCE, which is below the standard of 5 ppb. Vinyl chloride was detected at 4.4 ppb, which is above the standard of 2 ppb. Cis-1,2-dichloroethene was detected at 4.7 ppb, which is below the standard of 5 ppb.

VOCs were detected in air samples collected outside, inside and below the slab of the facility. Diamond Auto Service performed an inventory of its auto repair facility and replaced all products containing PCE. It appears that the sub-slab air detections reflect the PCE trapped between the slab and the shallow water table (four to six feet below grade). The sub-slab concentrations of PCE detected in three sampling events combined with the indoor concentrations exceeds the recommended New York State Department of Health (NYSDOH) soil vapor guidance values and therefore warrants remediation.

Regarding off-site issues, the Department, in concurrence with the NYSDOH determined that the site poses a significant threat due to the potential for an off-site plume of contaminated groundwater existing and resulting in vapor intrusion issues in adjacent buildings. An investigation to determine the extent of off-site impacts has not been conducted. However, an off-site exposure assessment was conducted as part of the RI. Based on the results of groundwater sampling on-site, no current issues exist with respect to groundwater onsite. The constituents historically detected in on-site wells may have migrated off-site in the southerly direction.

The potential does exist for soil vapor intrusion to impact indoor air quality in off-site buildings. This will be evaluated during the anticipated off-site investigation.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

The site is mostly covered by buildings and pavement, so the public is not expected to come into contact with contaminated groundwater unless they dig below the surface. People are not drinking contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in the contaminated groundwater or soils may move into the soil vapor (air spaces within the soil, which in turn may move into overlying buildings and affect indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A venting system was installed in the on-site building to reduce levels of contaminants in indoor air. The potential exists for off-site migration of contaminants into indoor air.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the soil vapor intrusion mitigation remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

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- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any additional buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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- a schedule of monitoring and frequency of submittals to the Department;
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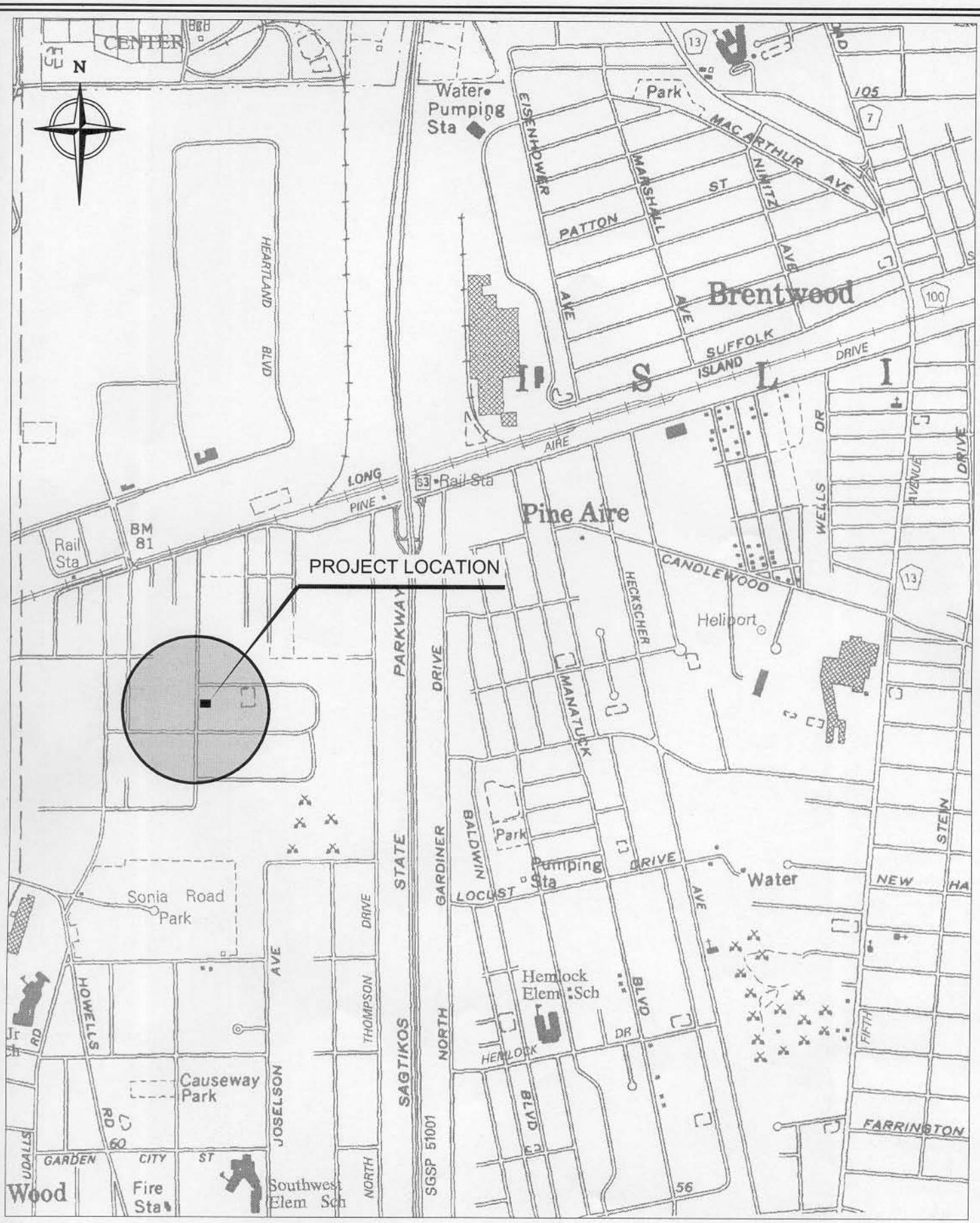
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

FIGURES



SCALE: 1" = 1400'

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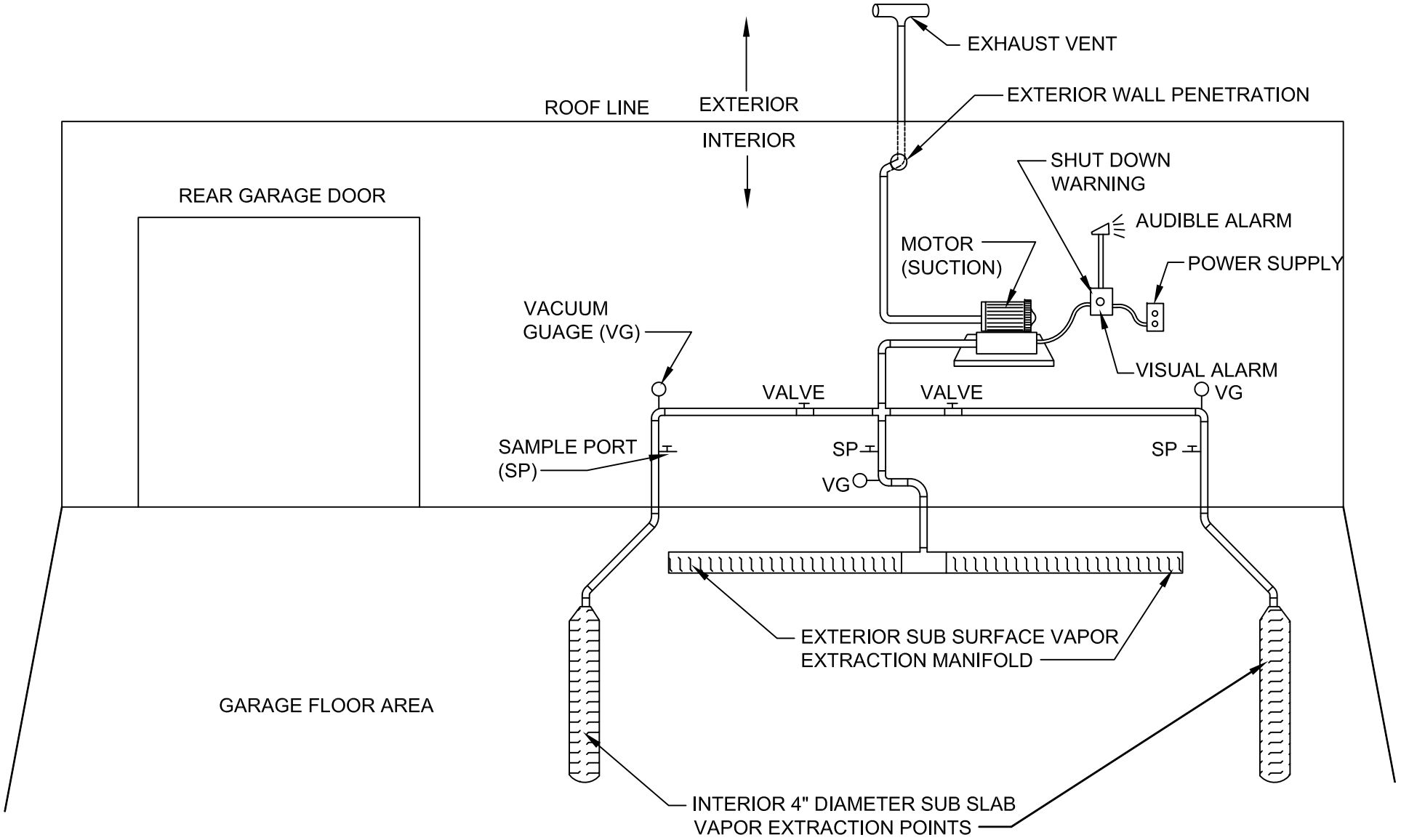
TITLE:

LOCATION MAP
DIAMOND AUTO SERVICE, INC.
71-73 CLEVELAND AVENUE
BAY SHORE, NEW YORK

DWN:	SCALE:	DATE:	PROJECT NO.:
APK	NOTED	12/29/05	Diamo 05-01
CHKD:	APPD:	REV.:	NOTES:
JMD	JRH	-	–
FIGURE NO.:	1		



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TITLE:

DIAMOND AUTO SERVICE INC.

71-73 CLEVELAND AVENUE
BAYSHORE, NEW YORK

SUB-SLAB DEPRESSURIZATION SYSTEM

DWN:	SCALE:	DATE:	PROJECT NO.:
AJZ	AS SHOWN	09-24-12	Diamo 11-01
CHKD:	APPD:	REV.:	NOTES:
JMD	JMD	-	-

FIGURE NO.: 7

p:/projects/2011/DIAMO/CADD/FIGURE 7 SSDS 09-245-12dwg