

**PROPOSED FINAL SITE INVESTIGATION  
WORK PLAN  
FORMER BIG N PLAZA**

**1510-1520 MAXON ROAD  
SCHENECTADY, NEW YORK**

**NETC DOCUMENT #1 OF 2006**

**PREPARED FOR:**

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AND

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**DATED:**

**FEBRUARY 10, 2006 - REVISED MAY 12, 2006**

**PREPARED BY:**

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BROKERAGE SERVICES**



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## **ATTACHMENTS**

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**ATTACHMENT A    Subsurface Investigation Report Big N Plaza 1510-1520 Maxon Rd. Schenectady, NY NETC Project #04.12144**

## **APPENDICES**

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**APPENDIX A        Proposed Work Areas**

**APPENDIX B        Health and Safety Plan**

**APPENDIX C        Proposed Laboratory Testing Plan**

## **1.0 INTRODUCTION**

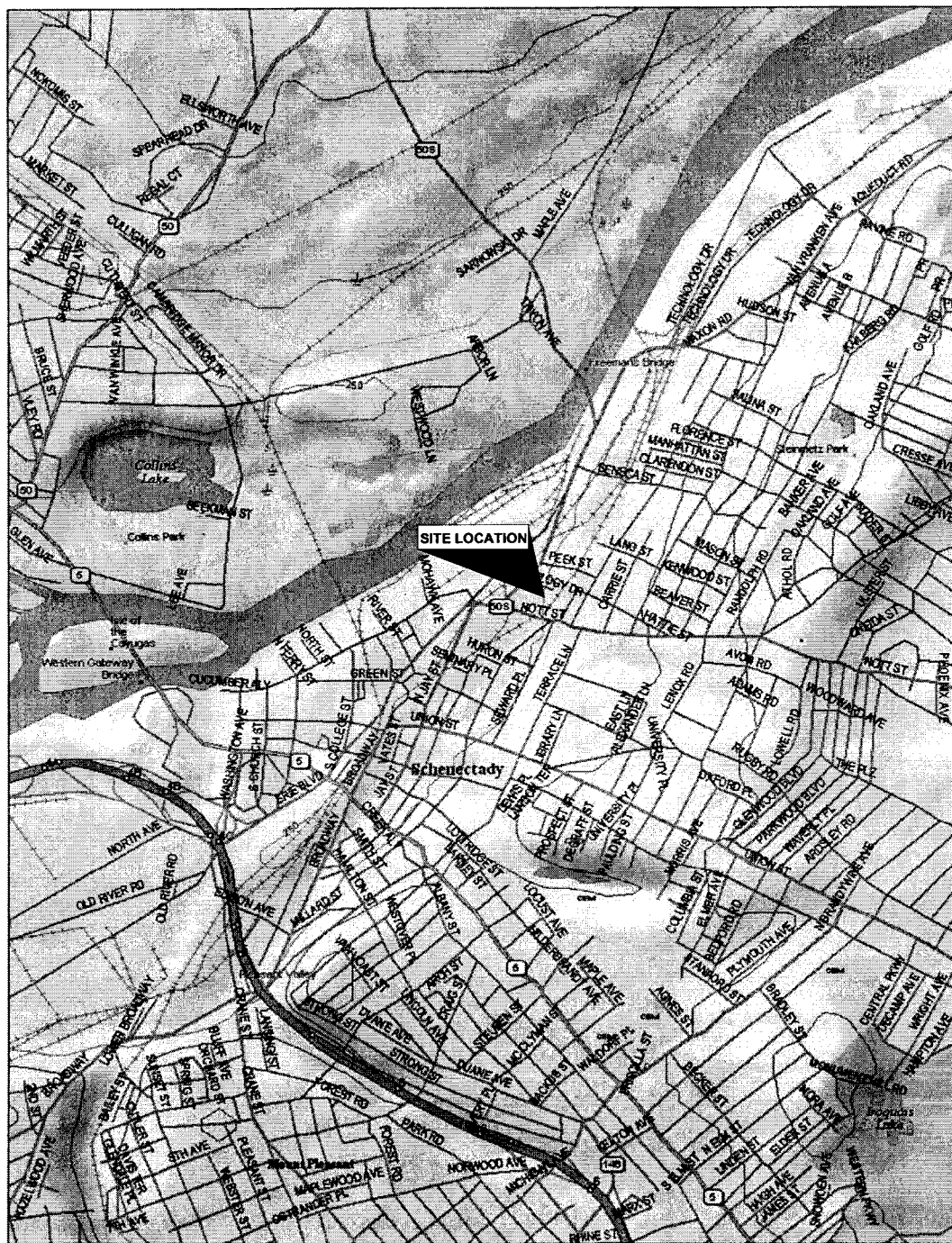
Northeastern Environmental Technologies Corporation (NETC) has prepared this Final Site Investigation (SI) work plan to complete the evaluation of subsurface environmental contaminant conditions at the former Big N Plaza site. This technical work plan represents the level of investigatory work considered appropriate in light of site investigation work recently completed by NETC as well as historical input from the NYS Department of Environmental Conservation (DEC) regarding other contiguous properties formerly owned and used by the American Locomotive Co. (ALCO). The scope of the individual services described herein are intended to address the technical requirements outlined as necessary pursuant to the DEC's Draft Brownfields Cleanup Program (BCP) Guide dated May 2004. This Final SI work plan has been prepared to complete a base line of site conditions from which subsequent remedial measures can be implemented, if deemed necessary for the contemplated commercial development of the property. This Final SI is intended to qualify the soil and groundwater impacts detected in prior site investigations and determine whether the impacts pose a significant threat to public health and the environment. This work plan has been developed with the understanding that the anticipated use of the property would include a 65,000 square foot YMCA facility; as well as three additional 30,000 square foot commercial structures to be used by community based educational, medical and commercial entities.

### **1.1 SITE DESCRIPTION**

The site, approximately  $\pm$  8.32 acres in size, is composed of two contiguous parcels of land (i.e., Tax Map No.s 39.49-3-1 and 39.50-1-9.1) located in the City of Schenectady, New York (see Figure 1). The owner of record for the site is BN Partners Associates, LLC. Until January 2006 the site was improved by a  $\pm$  86,000 square foot slab on grade structure retail plaza and a  $\pm$  150,000 sq. ft. lighted asphalt parking lot. The effective construction dates listed for the structure located at 1510 and 1520 Maxon Rd. are 1972 and 1960, respectively. During January and February 2006 active demolition of the retail plaza has occurred in anticipation of site remediation and development work. The site is bordered by Nott Street (south), Maxon Road (west), Peek Street (north) and the City of Schenectady bike path (east).

Recent site investigation work has determined the sites unconsolidated deposits as, in descending order, a heterogeneous mixture of cultural fill (consisting of demolition debris, railroad timbers, slag, concrete, brick, coarse sand and gravel) overlying glacial till. The unconsolidated glacial deposits were found to be highly variable across the site. In some cases, the upper surface of the glacial till is highly weathered and exhibits a greater soil moisture content. Unconsolidated deposits located along the City of Schenectady Bike Path consists of a loamy sand fill.

Surface water drainage crosses the site mainly as sheet drainage and is directed towards Maxon Road. Two catch basins were identified at the site and are located in the southeast and southwest corners of the site. The outlet of each catch basins is presumed to be the City of Schenectady storm sewer system.



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**FIGURE 1 - Location Map**  
**Big N Plaza**  
**1510 - 1520 Maxon Rd.**  
**Schenectady, New York**

Project # 04.12144

March 14, 2005



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**TANK CLOSURES \* EXCAVATION SERVICES \* SOIL & GROUNDWATER**  
**REMEDIAION \* EXPERT TESTIMONY \* OSHA FIELD CERTIFIED**

College Creek is reported to exist underground approximately 180 feet northwest of the site. The outfall or College Creek is the Mohawk River located approximately 1,500 feet northwest of the site. The apparent flow direction in the shallow groundwater table is to the west towards College Creek and the Mohawk River. A more complete characterization of the site conditions is included in Attachment A (i.e., SUBSURFACE INVESTIGATION Big N Plaza 1510-1520 Maxon Rd. Schenectady, NY NETC Project #04.12144; dated March 28, 2005).

## **1.2 VICINITY CHARACTERISTICS**

The site is located in the City of Schenectady "Heavy Industrial" zoning district. A mixture of active and vacant commercial properties, residential dwellings and the Union College Campus exist in the immediate study area. The Nott Street Industrial Park and a D&H Railroad right of way exist west of the site and parallels Maxon Road. Amerada Hess operates a retail gasoline station adjacent to the southwest corner of the site. Two inactive auto repair garages exist adjacent to the southwest and northeast portions of the site. The Mohawk River is located approximately 0.50 miles west of the site.

## **1.3 OPERATIONAL HISTORY**

Aerial photographs, historical maps, and previously completed environmental reports were used to assimilate information regarding prior manufacturing and commercial practices that occurred at the site. The available historical records identify that prior to  $\pm$  1914 the majority of the site was used for residential purposes. During the period from  $\pm$  1914 - 1960 the majority of the site was used by the American Locomotive Company (ALCO). The Peckham Wolf & Co. (a planing mill and lumber yard) is also known to have operated from the eastern portions of the site during the  $\pm$  1910 - 1930 period. Map records dated 1923 - 1930 illustrate the City of Schenectady Bike path as occupied by the rail lines of the NY Central & Hudson River Railroad. Specific references to water lines, "Locomotive Assembly Shop", "Pipe Shop", "Pump House" and underground storage tank infrastructure are noted in the map records.

By June 1958 the above noted facilities located at the site were razed. The site remained vacant until  $\pm$  1960 when the existing Big N Plaza was constructed. The available historical records suggest the Big N Plaza was originally constructed as a retail shopping facility. The City of Schenectady assessor records identify various retail, commercial, educational and recreational establishments have operated at the Big N Plaza. Noteworthy commercial activities that are known to have occurred at the Big N Plaza included an "auto & tire service center", M&P Laboratories, and the E-Z Wash & Dry Cleaners. The available historical records suggest the auto & tire service center and the M&P Laboratories each operated from facilities located in the northeast portion of the structure. Historical photographs of the Big N Plaza suggest the E-Z Wash & Dry Cleaners operated from the southern portion of the facility, however a specific location for the E-Z Wash & Dry Cleaners was not established.

M&P Laboratories is identified as a RCRA Small Quantity Generator (ID No. NYD98675761). No regulatory information has been obtained for the "auto & tire service center" or the E-Z Wash & Dry Cleaners. References to a "Tank" adjacent to the "auto & tire service center" and pad mounted electrical transformers located southeast of the structure have been substantiated using a 1990 Sanborn maps of the Big N Plaza.

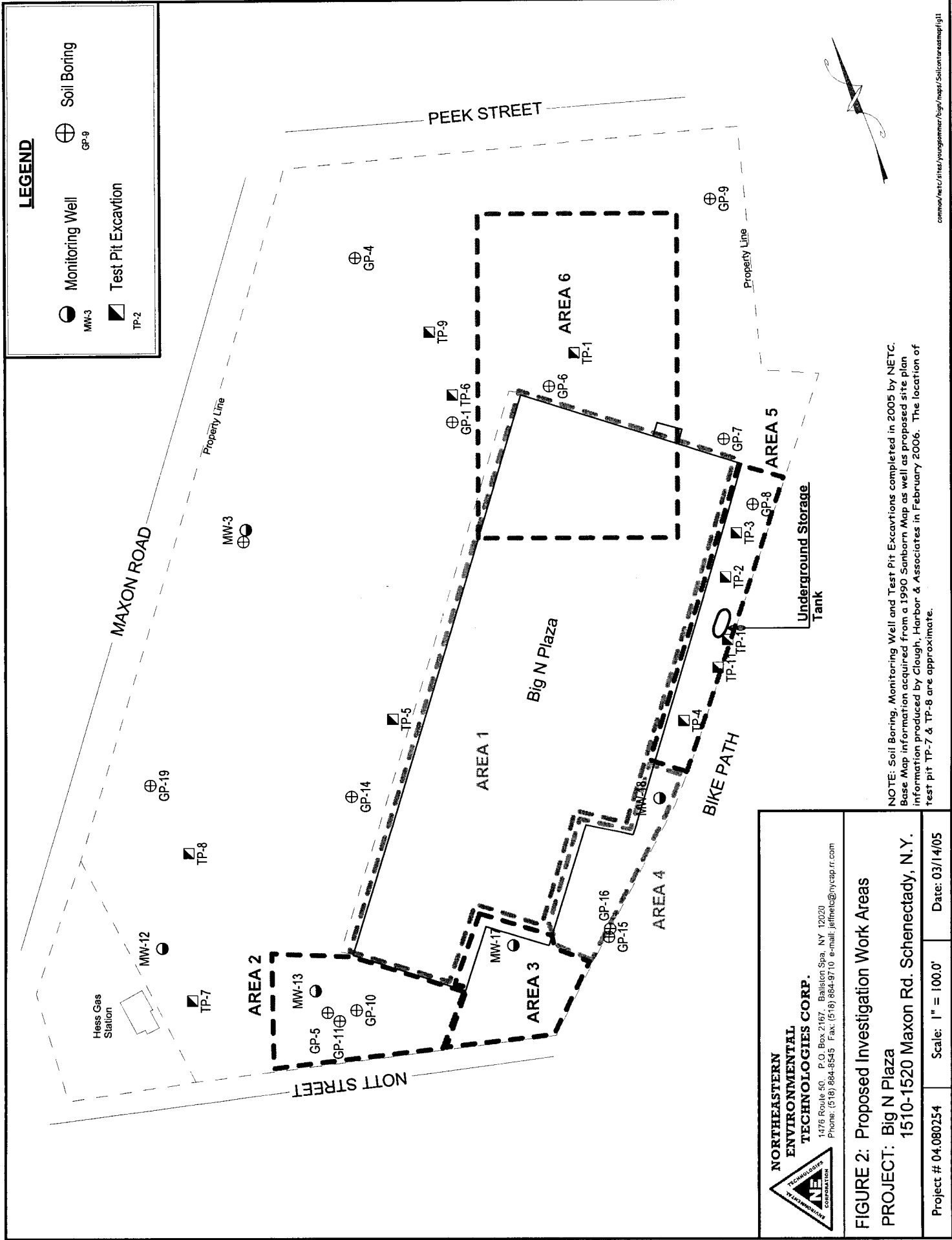
#### **1.4 EXISTING ENVIRONMENTAL CONDITIONS**

Site investigation work at the Big N Plaza has confirmed the presence of buried cultural fill, concrete foundations, UST infrastructure as well as certain areas of the property that have detectable concentrations of petroleum, heavy metal and PCB impacted soil and groundwater (see Appendix A). The documented chemical compounds of concern are generally confined to the southern and eastern portions of the site. The documented soil and groundwater conditions at the Big N Plaza site are in most cases consistent with those known to exist at other properties historically used by ALCO. The areas found to contain chemical contamination appear localized and do not suggest property wide impacts that would otherwise restrict the future commercial use of the site.

To achieve the SI objectives outlined as necessary by the BCP the Final SI approach proposes to segment the site into (6) investigation areas (See Figure 2). Soil and groundwater samples will be collected from each area and analyzed for a specific set of contaminants of concern. In addition, a network of monitoring wells will be completed in areas outside the above noted investigation areas to establish background (i.e., up gradient and down gradient) water quality information for the site. Soil and groundwater characterization work below the existing Big N Plaza structure will occur following the demolition of the structure. Similarly, floor drains located in and outside the structure will be evaluated (if possible) following the demolition activities. The following is a detailed description of each work area.

##### **AREA 1**

Area 1 consists of the foot print of the former Big N Plaza. Recent project monitoring services performed by NETC during the demolition of the structure have confirmed the presence of a buried concrete surface  $\pm$  2.5 – 3.0 feet below the floor of the Big N Plaza. The buried concrete surface is expected to represent the floor of ALCO Building 28 which previously occupied the majority of the southern and eastern portions of the subject property. The field monitoring services have substantiated the fill layer to consist of a relatively uniform layer of coarse sand and gravel. Localized areas of elevated VOCs both above and below the buried ALCO concrete slab have been detected during the monitoring services.



NOTE: Soil Boring, Monitoring Well and Test Pit Excavations completed in 2005 by NETC. Base Map information acquired from a 1990 Sanborn Map as well as proposed site plan information produced by Clough, Harbor & Associates in February 2006. The location of test pit TP-7 & TP-8 are approximate.

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**FIGURE 2: Proposed Investigation Work Areas**

**PROJECT: Big N Plaza**  
 1510-1520 Maxon Rd. Schenectady, N.Y.

Project # 04.080254	Scale: 1" = 100.0'	Date: 03/14/05
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To address this site condition the evaluation of Area 1 will initially include a more complete assessment of the upper  $\pm 2.5 - 3.0$  foot fill layer. The initial evaluation will consist of a series of shallow test pit excavations performed through fill layer on a 50.0 x 50.0 foot grid basis.

A series of grab and composite soil samples collected at each test pit will be taken to represent the fill layer. Particular attention will be given to areas of the fill layer previously found to contain elevated VOC soil gas conditions during the demolition of the structure. Short listed soil samples will be subjected to chemical analysis to evaluate if the sand and gravel fill layer can be reused as beneficial fill on site. In addition penetrations will also be made through the buried concrete layer to assess the soil and groundwater conditions below the former ALCO Building 28 slab. The soil and groundwater quality characterization services advocated for Area 1 include VOCs, SVOCs, heavy metals and PCBs. This work is proposed in large part to characterize the soil horizon for potential disposal or reuse.

## **AREA 2**

Area 2 located southwest of the former Big N Plaza, represents a  $\pm 100$  ft x 160 ft. work zone. Petroleum impacted soil and groundwater exists in this portion of the site. Dissolved phased groundwater impacts appear limited to only heavy metal constituents. The proposed SI work will include a delineation of the above noted soil and groundwater impacts which are attributed to ALCO; including the degree that light non aqueous phase liquid (LNAPL) contaminants are present in this portion of the site. The Area 2 testing services will also consider future redevelopment work anticipated for this portion of the site (i.e., proposed Union University Building).

## **AREA 3**

Area 3 is located south of the former Big N Plaza and represents an area  $\pm 100$  ft. x 100 ft. Petroleum impacted soil and groundwater exists in this portion of the site. Dissolved phased groundwater impacts include volatile organic compounds (VOC), semi volatile organic compounds (SVOC) and heavy metals. The detection of petroleum constituents is attributed to the historical use of UST infrastructure in this portion of the site. The detection of vinyl chloride is attributed to dry cleaning operations associated with a former Big N Plaza tenant. The proposed SI work will include a delineation of the above noted soil and groundwater impacts. Additional remote sensing survey work will also be performed to assess the potential for UST infrastructure. This work is expected to include areas below the present foot print of the former Big N structure.



#### **AREA 4**

Area 4 is located southeast of the former Big N structure and represents an area  $\pm 70$  ft. x 180 ft. Visual and olfactory evidence of impacted soil and groundwater exists in this portion of the site. The impacts include VOCs, SVOCs, heavy metals and PCBs. The proposed SI work will include a delineation of the above noted soil and groundwater constituents; including the degree that light non aqueous phase liquid (LNAPL) contaminants are present in this portion of the site. The Area 4 testing services will also consider future redevelopment work anticipated for this portion of the site as well as areas below the former Big N structure.

#### **AREA 5**

Area 5 consists of a narrow  $\pm 50$  ft. x 275 ft. zone northeast of the Big N Plaza. One ALCO gasoline UST exists in this portion of the site. Visual and olfactory soil and groundwater impacts suggest the detection of petroleum constituents to be in part associated with the use of the UST infrastructure. The presence of shallow groundwater combined with buried concrete footings has thus far prevented a qualitative assessment of the soil and groundwater condition. The soil and groundwater quality characterization services to be implemented in Area 5 include VOCs, SVOCs, heavy metals and PCBs. Additional remote sensing survey work will also be performed within the foot print of the former Big N Structure to consider the potential for other UST infrastructure. The proposed Final SI work will also include an assessment of the degree that LNAPL contaminants, if any are present in this portion of the site, including areas below the former Big N structure.

#### **AREA 6**

For the purpose of this SI, the foot print of a proposed YMCA facility and medical office building will be considered Area 6. The soil and groundwater quality characterization services advocated for Area 6 include VOCs, SVOCs, heavy metals and PCBs. The work proposed is based on the anticipated future uses of the facility and the lack of data from these areas of the site.

## **2.0 METHODOLOGIES**

A detailed accounting of the actual field and laboratory methods proposed to complete the BCP SI work plan are included for consideration.

## **2.1 COMMUNITY AIR MONITORING PLAN**

A Community Air Monitoring Plan (CAMP) will be instituted prior to any invasive activities at the site. The CAMP will include ambient air monitoring and visual inspection for dust particulate at the perimeter of the site and at properties located adjacent to the site. Ambient volatile organic compound (VOC) air quality conditions will be documented three times a day (i.e., prior to work commencement, during work, and after work) using a properly calibrated hand held photoionization detector (PID - PhotoVac Model 2020 or equivalent). Visual and olfactory conditions at the perimeter of the site will also be recorded during the CAMP testing services. The visual and olfactory inspection work will document evidence, if any of dust particulate accumulation on adjacent properties and olfactory nuisances conditions. Each day prior to the invasive ground activities, a base line survey will be performed at each of the surrounding properties to establish site specific background reading / conditions. Readings obtained during the invasive ground activities will be compared to the base line reading. In the event elevated VOCs and / or physical observations are attributed to work at the site, BCP activities will cease until an appropriate remedy is implemented.

## **2.2 REMOTE SENSING SURVEY**

Additional remote sensing surveys will be performed in Areas 3 and 5. The need to perform work of this nature in Area 1 will be re evaluated following the demolition services underway at the site. The remote sensing surveys will involve the use of a Noggin 250 plus Smart Cart ground penetrating radar (GPR) profiling system and a high resolution, time domain electromagnetic metal detector (i.e., Geonics EM-61MK2). The remote sensing survey work will be performed on a  $\pm 4.0$ -ft. on center rectangular grid basis to supplement previous GRP information assimilated at the site. Under favorable conditions the ground penetrating radar is able to locate a buried metal UST at depths of  $\pm 6.0 - 8.0$  ft. The EM-61MK2 will be used to assist with the detection of ferrous and non ferrous metal structures below the buried concrete slab of ALCO Building 28. Profile records will be interpreted in the field and retained for later interpretation as to the presence of subsurface anomalies. The location of suspect anomalies will be located in the field using conventional marker paint for subsequent excavation evaluation(s), as deemed necessary.

## **2.3 SOIL GAS SURVEY**

Five soil vapor (SV) samples will be collected at the site. The proposed SV sampling services are based on favorable field gas chromatography data reported in NETC's subsurface investigation report dated March 28, 2005; specifically that the majority of the site is unaffected by SV VOC contaminants and that only low VOC concentrations were identified in SV samples collected at the southeast corner of the former Big N Plaza. Based on this information one SV sample will be collected from each of the proposed new building locations as well as the southeast corner of the

former Big N Plaza (see Figure 3). Soil vapor probes will be installed using direct push technologies. The soil vapor probes will be installed according to the NYS Department of Health (DOH) guidance document entitled Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Public Comment Draft February 2005); hereinafter termed the guidance document.

A SV sample will be collected from each vapor implant. One to three volumes of the vapor prove will be removed and transferred into a Tedlar® bag prior to sampling. Soil vapor purge rates of < 0.2 liters per minute will be maintained. The spoil vapor will be screened (in areas other than the implant site) using a hand held photoionization meter (i.e., PhotoVac Model 2020) for the presence of VOCs. Soil vapor samples will be obtained over an 8 hour sampling period using 6L Summa® canister sampling methods.

All Summa® canisters will be certified as clean by EMSL Laboratories. A sampling log will be maintained for the sampling event which will document sample ID, date and time of the sample collection, sample height, the names of NETC staff, pertinent weather conditions, sampling methods and devises used, volume of air sampled, applicable pre and post sample vacuum and ambient air temperature data and chain of custody information. All samples will be shipped next day air to EMSL Laboratories for chemical analysis. All samples will be analyzed via Method TO-15. All data sets will be reported in micrograms per cubic meter (ug/m<sup>3</sup>) with minimum sample reporting limits of 1 ug/m<sup>3</sup>.

## **2.4 TEST PIT EXCAVATIONS**

Test pit excavations will be advanced in each of the proposed work zones. Particular attention will be given to areas of the site found to contain GPR anomalies indicative of UST and / or other buried structures that could be attributed to ALCO as well as areas of the site previously identified as containing soil and groundwater impacts. An experienced NETC geologist will oversee the excavation services and be responsible for detailed logging of each penetration. As part of the test pit excavation program, NETC will perform periodic examinations of the ambient air space surrounding the work zone, to evaluate the presence of volatile organic compounds (VOC). An PhotoVac Model 2020 photoinization detector (PID) will be used to facilitate the testing requirements. The information acquired will be used to determine the level of health and safety equipment necessary to accomplish the proposed work. At this time level "D" conditions are assumed for all drilling services.

Soil samples will be collected at 2.0 ft. intervals from each side wall of the test pit excavations. A series of composite soil samples will be manufactured to represent each two foot horizon and later analyzed for the chemical compounds of concern. Grab soil samples will be collected from areas of the test pit excavations that exhibit visual and / or olfactory evidence of soil impacts. A copy of the proposed Health and Safety Plan proposed for this work is included as Appendix B.

# LEGEND

Proposed Soil Vapor  
Sampling Location



Hess Gas  
Station

MAXON ROAD

MEDICAL OFFICE  
30,000 S.F.

UNION  
UNIVERSITY  
30,000 S.F.

NOTT STREET

CORPORATE OFFICE  
60,000 S.F.

Big N Plaza

YMCA  
59,350 S.F.

PEEK STREET

BIKE PATH

Property Line



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**FIGURE 3 : Proposed Soil Vapor Sampling Locations**

**PROJECT: Big N Plaza**  
**1510-1520 Maxon Rd. Schenectady, N.Y.**

Project # 04.080254

Scale: 1" = 100.0'

Date: 05/11/06

NOTE: Map based on a 1990 Sanborn Map.  
The locations of the proposed buildings are  
approximated.

Unless otherwise directed, visual and / or olfactory impacted soil that is generated during this work will be encapsulated on site using the 6 mil poly liners until off site arrangements for waste disposal are made. Uncontaminated soil and C&D generated during the soil removal services will be used as fill. Groundwater encountered during the test pit excavation services will be removed if necessary to facilitate the site inspection and sampling services. Groundwater removed from the excavation will be containerized on site and later treated on site or transported off site disposal. The test pit excavations proposed for the (6) work areas are illustrated in **A1A**.

## **2 SOIL BORING & WELL INSTALLATION PROGRAM**

Soil borings will be installed in each of the (6) work areas. Each soil boring will be completed in a manner to provide a geological log of the subsurface conditions and provide necessary data on groundwater level and soil quality. Each soil boring will be installed following standard drilling methods using a combination of direct push techniques (DPT) and rotary drilling methods. Each soil boring will be advanced to a depth sufficient to establish the vertical extent of soil contamination, the glacial till or bedrock surface. The estimated maximum depth for the soil borings is 20 feet.

Sixteen soil borings will be converted to permanent monitoring wells. All monitoring wells will be composed of two basic components; the well screen and the riser or blank. The well screen is the intake portion of the monitoring well. The basic purpose of the riser is to provide storage and a connection to the surface from the well screen. Monitoring wells will be installed individually. The size and materials used in monitoring well construction will be determined on a site-specific basis, in accordance with standard methods / guidelines typical for site investigations of this nature. Existing data suggests that the proposed monitoring wells will be constructed of 2 -inch flush joint, schedule 40 PVC pipe with 10 feet of slotted well screen. Each monitoring well will be constructed to straddle the upper most groundwater table. A tailpiece will be included below the screen to postpone silting of the well. The annular space around and approximately two feet above the well screen will be filled with a clean filter pack material graded for the slot size of the well. A bentonite seal will be installed above the sand pack with the remainder of the bore-hole will be filled with a cement grout surface seal. A steel protective manhole cover or protective casing will be installed over each monitoring well to prevent unauthorized access and provide protection for the wells.

An experienced NETC geologist will supervise all aspects of the drilling and monitoring well installation program and be responsible for detailed logging of all samples. The soil boring / monitoring wells proposed for this SI are included in **A1A**. As part of the subsurface drilling program, NETC will perform periodic examinations of the ambient air space surrounding the work zone, and the open bore hole to evaluate the presence of VOCs. An PhotoVac Model 2020 PID will be used to facilitate the testing requirements. The information acquired will be used to determine the level of health and safety equipment necessary to accomplish the proposed work. At this time level "D" conditions are assumed for all drilling services

### 2.5.1 SOIL SAMPLING

Continuous soil samples will be collected following standard ASTM sampling method. Two 24 - 48-inch long (2-inch O.D.) samplers, consisting of a drive head, barrel and drive shoe, will be used to collect the subsurface soil samples. All samples will be logged on site as they are extracted, labeled and retained for additional VOC analysis. All sampling equipment will be pre-cleaned prior to use. Samples obtained in this manner will be examined and described using the New York State Department of Transportation soil description procedure (Geotechnical Engineering Bureau Soil Control Procedure STP-2, December 1994). In compliance with ASTM methods, the sample jars will be labeled with the following information: job designation, boring number, sample number, depth of sample, depth penetration record and length of recovery. Composite soil samples will be manufactured to represent each two foot horizon unless visual and / or olfactory evidence of soil impact is apparent, at which time a grab soil sample will be collected and retained for chemical analysis.

As part of the subsurface investigative program, NETC will perform examinations for VOC's on all soil samples obtained during the test pit excavation services and soil boring program. A properly calibrated PID will be used for the field testing program. Results of the PID tests will be used to determine the vertical extent of VOC soil contamination, as well as short listing a select number of soil samples for additional laboratory analysis. At this time the chemical testing services presently under consideration for the (6) work areas include a combination of EPA Method 8260, 8270, 8082 and TAL Metals\*.

The anticipated number of laboratory tests per investigation area are listed in Appendix C. The type of soil sample method, composite verses grab, will be determined by field observations, PID results, and input from the NYSDEC at the time of soil sample collection. The significance of the cultural fill found to exist at the site will be evaluated by analyzing (1) composite soil sample to be manufactured from soil samples collected at the 0-2 foot horizon at work zones 2, 3, 4, 5 and 6. In addition a series of grab and composite soil samples will be manufactured from the fill layer located in Area 1. The composite fill sample will be analyzed for EPA Methods 8260(+10), 8270B/N(+20), 8082, and TAL Metals\*.

### 2.5.2 DECONTAMINATION PROCEDURES

Prior to drilling the first boring, the equipment to be used in drilling and sampling will be cleaned to remove possible contaminants encountered during drilling at previous jobs. All equipment, which is to come in contact with the soil or groundwater, will undergo the initial cleaning procedure. While working at the site, the drilling equipment will be decontaminated between soil borings to prevent cross-contamination. The cleaning process will involve the use of a steam cleaner or high-pressure wash. Uncontaminated water obtained from the City of Schenectady municipal water system will be used for all decontamination procedures. All decontamination activities will be performed within an designated decon pad established at the site. Decontamination

waters resultant from the proposed work will be containerized in 55 gallon drums upon identification of VOC's in excess of 5 ppm in any of the soil boring locations. Decontamination waters resultant from the proposed work will be containerized in 17 H salvage drums. NETC personal will be responsible for recording and verifying all decontamination procedures during the excavation and drilling aspects of the site characterization.

## **2.6 GROUNDWATER SAMPLING SERVICES**

Prior to any groundwater sample collection services, static water levels will be measured to the nearest one-hundredth of a foot in each monitoring well. The presence of non-aqueous phase liquids (NAPL) will be evaluated in the network of monitoring well using an interface probe. Concomitant with the development process temperature, pH, specific conductance, and turbidity will be measured until these parameters show no change, indicating that fresh, representative groundwater is entering the well.

Groundwater sampling will occur at the (16) monitoring wells installed during this SI. Sampling services will occur when a sufficient volume of water has recovered (i.e., fresh aquifer water has entered the well) in the designated wells. Sampling will be performed using low flow sampling methods. All sample containers and preservatives will be provided by a NYS approved laboratory. Field quality measurements of pH, specific conductance, temperature and turbidity will be recorded prior to groundwater sampling. All samples will be maintained at a temperature of 4°C by commercially available (pre-frozen) "ice-packs" and appropriate holding and transportation times were followed. To assure quality assurance / quality control (1) VOC trip blank, (1) sample blank for each laboratory method and (1) blind duplicate sample for each laboratory method will be during each sampling event.

All samples will be collected in such a manner as to minimize agitation and other disturbing conditions, which may cause physio-chemical changes and bring about losses due to volatilization, adsorption, redox changes or degradation. At this time the chemical testing services presently under consideration include EPA Method 8260, 8270, 8082 and TAL Metals. With the exception of one TAL Metal sample, all groundwater samples will reflect unfiltered total matrix groundwater chemistry. Groundwater obtained from one up gradient monitoring well will be subjected to both filtered and unfiltered TAL metals chemistry for comparison purposes. Formal chain of custody documentation will be maintained throughout the shipment of the NETC samples to the laboratory. Only NYS ELAP certified laboratories will be used for all chemical analysis.

Observation will be made and recorded regarding weather and surrounding air/water/soil conditions, non-aqueous components of well water (e.g. "sinkers", surface sheens) and any other pertinent field conditions. The anticipated number of laboratory tests per investigation area are listed in Appendix C.

\*NOTE: Category B laboratory deliverables will be provided if deemed necessary.

## **2.7 UST EVALUATION**

A total of eight soil samples and one groundwater sample will be collected as part of the UST assessment in Area 5. The soil and groundwater samples will be collected in accordance with the DER-10 Technical Guidance for Site Investigation and Remediation Section 3.9-3. Other UST infrastructure and/or ALCO piping infrastructure identified will be evaluated on an as needed basis. Soil samples will be collected from around the piping infrastructure in accordance with the DER-10 Technical Guidance for Site Investigation and Remediation Section 3.9-5.

## **2.8 FLOOR DRAIN ASSESSMENT**

Although the property is abandoned, a floor drain and storm sewer assessment will be conducted if possible following the demolition services to establish the receptors for the past use of floor drains located in the Big N Plaza as well as the storm sewer located on the south side of the property. The assessment may include the use of tracer tests (i.e., dye or smoke) to confirm that the City of Schenectady Sewer System was the ultimate receptor for the site.

## **2.9 FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS**

In light of the urban setting and the specific site conditions encountered during recent assessment work at the site (i.e., dilapidated building, paved lots and former ALCO infrastructure below the pavement), a fish and wildlife resource impact analysis is not considered germane to this SI.

## **2.10 BASE MAP PREPARATION**

In order to locate all investigative activities with respect to site features, a base map will be prepared. The map will depict on site features adjacent to the subject work zone. The preparation of this map will allow for the evaluation of groundwater flow and potential chemical migration pathways. The location of all pertinent utility information, test pit, soil boring, monitoring wells and adjacent property information will be placed on this map for reference and evaluation of results. The base map will be prepared by a certified New York State Surveyor.

## **2.11 REPORT ASSIMILATION**

Data collected using the methodologies described in this transmittal will be utilized to interpret and describe the subsurface condition of the site. Presentation of data will be clear and concise, providing an understanding of site conditions, and identify any significant risk to human health and the environment posed by the existing conditions.

A report will be prepared and submitted to the DEC for formal consideration. The report will document all investigatory activities, discuss the rationale and methods of the



investigation selected and recommend appropriate options for additional site characterization and / or corrective action work, if necessary.

The final report will include all data, data analysis, methodology, laboratory results, chain-of-custody documentation as well as any pertinent field notes. All information will be presented in a clear and concise manner and substantiate the conclusions and recommendations reached.