

***New York State
Brownfield Opportunity Areas Program
Step 3 Application Site Assessment Supplement***

Instructions:

Please fill out this form for each strategic brownfield site for which site assessment funding is being requested. The form(s) must be included with the Step 3 application package. A site can be defined for the purposes of a site assessment around one or more area(s) of concern and may include one or more tax parcels. The budget requested should be for the site and not broken down by tax parcel. It is recommended that the applicant receive conceptual approval of the proposed sites prior to applying for BOA site assessment funding. Please refer to Appendix E of the BOA Guidance for Applicants when filling out this form.

09/2010

Part I: BOA Information

1. Applicant Name:	2. DOS BOA No.
3. BOA Name:	4. Site Rank (in order of importance to the BOA Plan):

Part II: Site Eligibility Information

The questions apply to all tax parcels and all owners of the tax parcels that are part of the site. Please note, a yes answer to questions 1-5, or a no answer for questions 6-9, will result in the site being determined ineligible. If the site is ineligible, do not complete or submit supplement.

****Due to different eligibility criteria, acceptance of a site for a site assessment under the BOA Program does not relate to site eligibility under the New York State Brownfield Cleanup Program****

- | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1. Is the site, or was any portion of the site, listed on the National Priorities List ? | Yes | No |
| 2. Is the site, or was any portion of the site, listed on the NYS Registry of Inactive Hazardous Waste Disposal Sites as a Class 1 or 2 Site? See the Division of Environmental Remediation (DER) website for a database of sites. | Yes | No |
| 3. Is the site subject to a permit under ECL Article 27, Title 9, other than an Interim Status facility? See DER website for a list of RCRA permitted sites. Note: for purposes of this application, interim status facilities are not deemed to be subject to a RCRA permit. | Yes | No |
| 4. Is the site subject to a cleanup order under Article 12 of the Navigation Law or ECL Article 17 Title 10? | Yes | No |
| 5. Is the site subject to enforcement action under a State or Federal remedial program? | Yes | No |
| 6. Is the site currently owned by a municipality as defined at 6 NYCRR 375-4.2 and 4.3(b)(1), or a volunteer as defined at 6 NYCRR 375-3.2? (see definitions on the following page) | Yes | No |
| 7. Strategic Site – During Step 2 of the BOA process, did DOS determine the site to be a strategic site? | Yes | No |
| 8. Brownfield Site – During Step 2 of the BOA process, did DOS determine that redevelopment or reuse may be complicated by the presence or potential presence of a contaminant at the site? | Yes | No |
| 9. Site Assessment Needed - Is additional environmental information necessary to determine technically and economically viable land uses for the BOA? Justification to support a yes answer must be provided as an attachment. | Yes | No |

Part II: Site Eligibility Information (Continued)

10. Site Ownership and Access - Is the applicant the site owner? Yes No
-If yes, the applicant must submit a deed with the application and certify that it is either a municipality as defined at 6 NYCRR 375-4.2 or a volunteer as defined at 6 NYCRR 375-3.2 by checking one of the boxes below.
-If no, the site owner of each tax parcel that is part of the site must submit a deed and a BOA Non-Applicant Site Owner and Access Certification form with the application. The form is available with the BOA Site Assessment Supplement package on the Department of State's website.

****CERTIFICATION FOR APPLICANT-OWNED SITES ONLY** THE APPLICANT MUST BE ONE OF THE FOLLOWING:**

<p>VOLUNTEER An owner who is not responsible for the disposal of hazardous waste or discharge of petroleum, including an owner whose liability arises solely as a result of ownership, operation of or involvement with the site subsequent to the disposal of hazardous waste or discharge of petroleum.</p> <p>-By checking the volunteer box, the site owner is also certifying that he/she has exercised appropriate care with respect to the hazardous waste found at the facility by taking reasonable steps to: i) stop any continuing discharge; ii) prevent any threatened future release; and iii) prevent or limit human, environmental, or natural resource exposure to any previously released hazardous waste.</p>	<p>MUNICIPALITY A local public authority or public benefit corporation, a county, city, town, village, school district, supervisory district, district corporation, improvement district within a county, city, town, or village, or indian nation or tribe recognized by the state or the United States with a reservation wholly or partly within the boundaries of New York State, or any combination thereof who did not generate, transport, dispose of, arrange for, or cause the generation, transportation, or disposal of hazardous substance located at the site.</p> <p>- A municipality is not considered a generator, transporter, or arranger:(i) for having rendered care, assistance, or advice in the course of an incident creating a danger to public health or welfare or to the environment as a result of any release of a contaminant or the threat of same; or (ii) for having leased a site to another party that generated, transported or disposed of, or that arranged for or caused the generation, transportation or disposal of, any contaminant on such site unless such municipality knew that such other party generated, transported or disposed of, or arranged for or caused the generation, transportation or disposal of, such contaminant and failed to take any action to remediate, or cause the remediation of such contaminant.</p>
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Part III. Current Site Owner/Operator Information

Owner's name and affiliation (List all parties holding an interest in the property):

Address

City/town

Zip Code

Phone

Fax

E-mail

Date of site ownership:

Operator's name and affiliation:

Address

City/town

Zip Code

Phone

Fax

E-mail

Date of start of current operations:

Part IV. Site Information

1. Site Name:

2. Location/Address:

3. City/Town :

4. Zip Code:

5. Municipality where site is located:

6. Counties:

7. Site Size (acres):

8. Latitude for approximate center of property (degrees/minutes/seconds):

9. Longitude for approximate center of property (degrees/minutes/seconds):

10. Horizontal Collection Method (method used to acquire location): Survey GPS Map

11. Horizontal Reference Datum (NAD27 or NAD82):

Part IV. Site Information (Continued)

12. Complete tax map information for all tax parcels included within the site boundaries.

Tax Parcel Address	Parcel No.	Section No.	Block No.	Lot No.	Acreage

13. Three maps must be provided as attachments:

1. The "Underutilized Sites Location Map" from the Nomination Report (Step 2), with strategic brownfield sites clearly identified.
2. A county tax map with identifier numbers, along with any figures needed to show the location and boundaries of the site. If the boundaries of the site do not correspond to the tax map boundaries, provide a description of the property as an attachment.
3. A USGS 7.5 minute quad map on which the site appears.

14. List of existing easements that have a direct bearing on the site assessment.

<u>Easement Holder</u>	<u>Description</u>

15. List of existing permits that have a direct bearing on the site assessment.

<u>Type</u>	<u>Issuing Agency</u>	<u>Description</u>

16. Previous Owners and Operators - A list of previous site owners and operators with names, dates of ownership/operation, last known addresses and telephone numbers must be provided as an attachment. Describe site owner's relationship, if any, to each previous owner and operator listed. If no relationship, put "none".

Part V. Site Environmental History

1. ENVIRONMENTAL REPORTS

If environmental reports (i.e. Phase I environmental site assessment (ESA); Phase II ESA; descriptive profile from the Nomination Report; remedial investigation) currently exist for the site or a portion of the site, they must be provided with this supplement.

2. KNOWN CONTAMINANTS: INDICATE KNOWN CONTAMINANTS AND THE MEDIA WHICH ARE KNOWN TO HAVE BEEN AFFECTED. LABORATORY REPORTS SHOULD BE REFERENCED AND COPIES INCLUDED.

Contaminant Category	Soil	Groundwater	Surface Water	Sediment	Soil Gas
Petroleum					
Chlorinated Solvents					
Other VOCs					
SVOCs					
Metals					
Pesticides					
PCBs					
Other*					

*Please describe:

Part V. Site Environmental History (Continued)

3. SUSPECTED CONTAMINANTS: INDICATE SUSPECTED CONTAMINANTS AND THE MEDIA WHICH MAY HAVE BEEN AFFECTED. PROVIDE BASIS FOR ANSWER AS AN ATTACHMENT.

Contaminant Category	Soil	Groundwater	Surface Water	Sediment	Soil Gas
Petroleum					
Chlorinated Solvents					
Other VOCs					
SVOCs					
Metals					
Pesticides					
PCBs					
Other*					

*Please describe:

4. INDICATE KNOWN OR SUSPECTED SOURCES OF CONTAMINANTS, EITHER ONSITE OR OFFSITE (CHECK ALL THAT APPLY). PROVIDE BASIS FOR ANSWER AS AN ATTACHMENT.

Above Ground Pipeline or Tank	Lagoons or Ponds	Electroplating	Surface Spill or Discharge
Routine Industrial Operations	Industrial Accident	Septic tank/lateral field	Foundry Sand
Dumping or Burial of Wastes	Seepage Pit or Dry Well	Drums or Storage Containers	Underground Pipeline or Tank
Coal Gas Manufacture	Unknown		

Other: _____

5. INDICATE PAST USE OF SITE RELEVANT TO CONTAMINATION. CHECK ALL THAT APPLY.

Coal Gas Manufacturing	Manufacturing	Agricultural Co-op	Dry Cleaner	Salvage Yard
Pipeline	Service Station	Landfill	Tannery	Electroplating
Unknown				

Other: _____

6. CURRENT AND INTENDED LAND USE: CHECK ALL THAT APPLY. SEE 6 NYCRR 375-1.8(G), AVAILABLE ON DEC'S [WEBSITE](#), FOR A DESCRIPTION OF INTENDED USE CATEGORIES.

Current Use:	Residential	Commercial	Industrial	Recreational	Vacant
Intended Use:	Unrestricted	Residential	Commercial	Industrial	

Part VI. Scope of Work, Budget Request

Please provide the information listed below as an attachment to this form:

1. A proposed scope of work including a schedule (in months) and a breakdown by major tasks for the site assessment. See Appendix E (Step 3 Site Assessments) of the BOA Guidance for Applicants and the ASTM Standard for Phase II Environmental Site Assessments (E1903-97 (2002)). The contractor hired for the BOA SA must meet the definition of a Qualified Environmental Professional as provided at 6 NYCRR Part 375-1.2(ak).

If an ASTM E1527 Phase I Environmental Site Assessment was not already performed on the property, the scope of a Phase I must be added to the proposed scope of work. See the Site Assessment Budget Request Worksheet for additional information.

2. The estimated contractual budget should be broken down by expenditure categories within major tasks and be reasonable for the scope of work provided. Use BOA Program Site Assessment Budget Request Worksheet attached to this form. Any grantee administrative costs associated with the site assessment should be included in the Step 3 Implementation Strategy budget submittal. The total of all the site assessment contractual budgets must be included in Part H, column 2 of the Step 3 application.

FIGURES

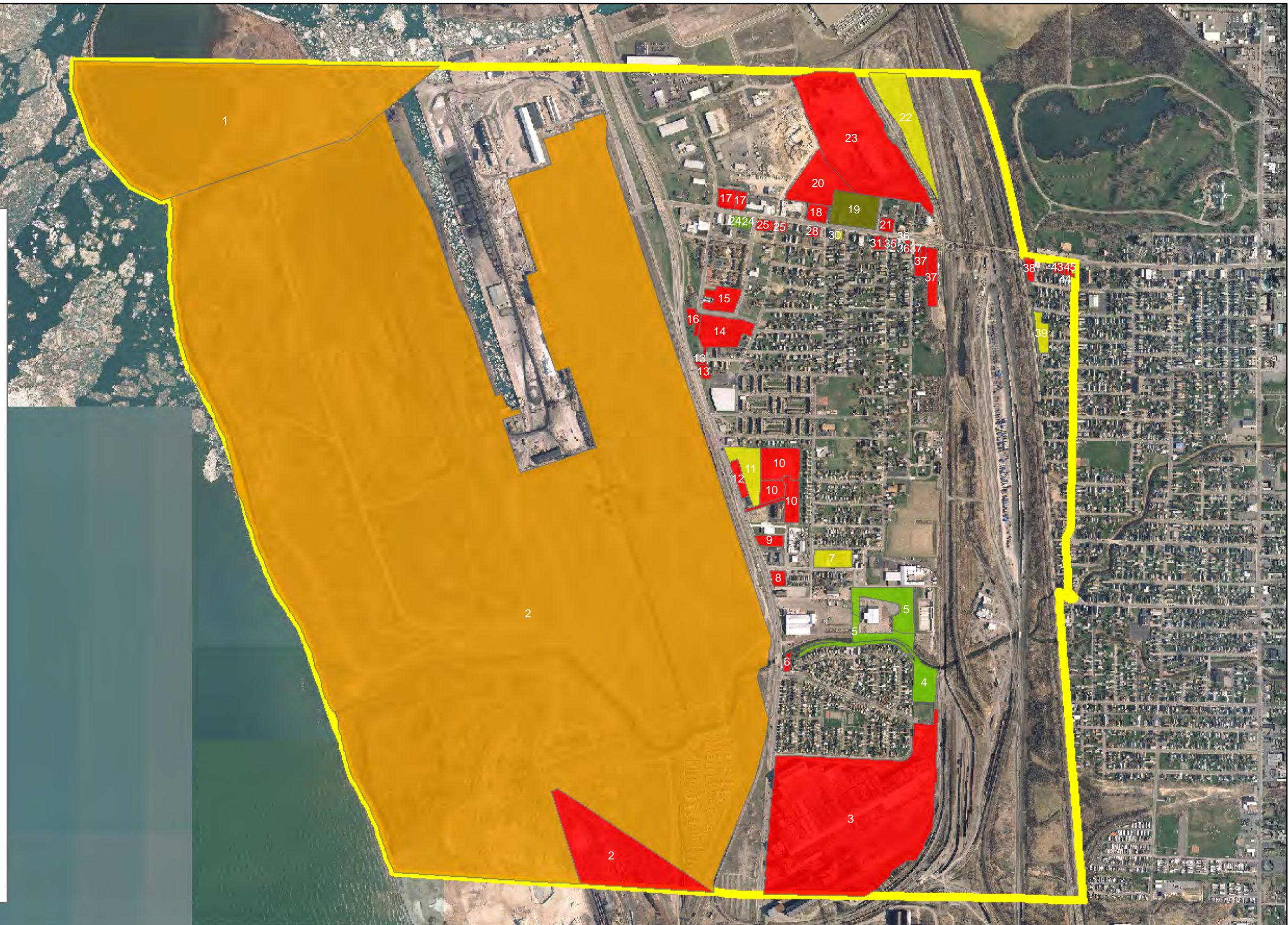
Legend

Level of Investigation

- No Known Environmental Information
- Cleanup Completed
- Cleanup Planned/Ongoing
- Phase I Completed
- Phase II Completed
- Lackawanna BOA

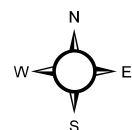
Vacant, Underutilized, and Brownfield Sites

1 - Army Corps Disposal Site
2 - Bethlehem Steel
3 - Steel Mill
4 - Former Lackawanna Foundry Site
5 - Former Amadori Construction Site
6 - Corner Route 5 and Madison
7 - Friendship House Main Building
8 - 2540 Hamburg Turnpike (Route 5 and Dona)
9 - 2520 Hamburg Turnpike
10 - Albright Court Properties
11 - 2380 Hamburg Turnpike
12 - Former Auto Repair
13 - Kane St Properties
14 - Mill Street Properties
15 - End of Gates Avenue
16 - Mill Street Properties
17 - Former Machine Shop
18 - 206 Ridge Road
19 - Friendship House Site
20 - Steelawanna 2
21 - Former Church
22 - Former Lakefront Recycling
23 - 300 Commerce Drive
24 - Six Vacant Lots
25 - Wasson to Steelawanna
26 - 171 Ridge
27 - 175 Ridge
28 - Former Fire Hall
29 - 215 Ridge
30 - Former Spanish House
31 - Dom Polski
32 - 291 Ridge Road
33 - 297 Ridge Road
34 - 303 Ridge Road
35 - 305 Ridge Road
36 - 321 Ridge Road
37 - Storage Yard
38 - Former Dry Cleaners
39 - West End Edna Place
40 - 499 Ridge Road
41 - 501 Ridge Road
42 - 503 Ridge Road
43 - 507 Ridge Road
44 - 511 Ridge Road
45 - 523 Ridge Road



620 MAIN STREET
 BUFFALO NY 14202
 P. 716.849-8739
 F. 716.655.0937
 WWW.TVGA.COM

PROJECT NO. 2010.0358.00



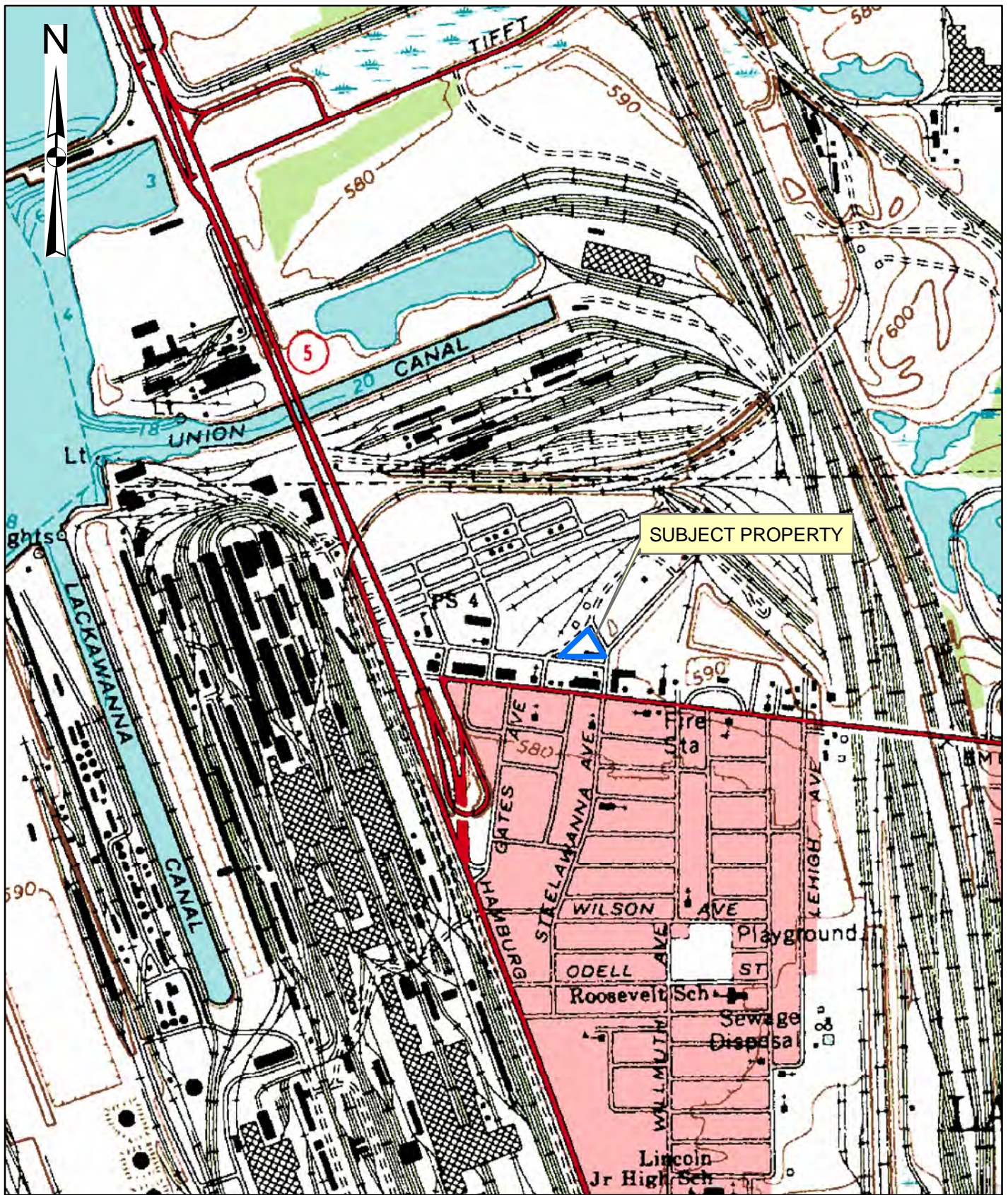
0 430 860 1,720 Feet

VACANT, BROWNFIELD AND UNDERUTILIZED SITES
 CITY OF LACKAWANNA BROWNFIELD OPPORTUNITY AREA

DATE: JUNE 2011

FIGURE NO. 11

This map is prepared for the
 New York State Department
 of State and the New York
 State Department of
 Environmental Conservation
 with funds provided as a result
 of the General Municipal Law,
 Article 18-C, Section 970-f.



STELAWANNA # 2

Lackawanna First Ward Brownfield Opportunity Area
 Step 3 Application
 Lackawanna, New York 14218



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PROJECT NO. 2010.0358.00

1 inch = 1,000 feet

MARCH 2012

FIGURE NO. 2

ATTACHMENT 1

PREVIOUS OWNERS AND OPERATORS

Site Ownership

The Steelawanna #2 Site is owned by the City of Lackawanna. The City of Lackawanna purchased the property in 2007. The previous owner was Quikrete Companies. No additional previous ownership information is known. It is anticipated that during the Phase I ESA, more information regarding past ownership will be revealed. The deed for the property is attached.



141.08-1-13,111

N. STEEZWANNA

ERIE COUNTY CLERKS OFFICE
County Clerk's Recording Page

Book: 11130 Page: 7480

Return To:

BOX 165

Page Count: 2

Doc Type: DEED-\$165 EQUIL

Rec Date: 06/19/2007

Rec Time: 01:47:00 PM

Control #: 2007130977

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MTG SEQ:

UCC:

SCAR:

INDEX:

Party 1:
CITY OF LACKAWANNAParty 2:
QUIKRETE COMPANIES**Recording Fees:**

RECORDING	\$23.00
COE COUNTY	1.00
TRANSFER	\$484.00
NFTA TT	\$605.00
COE STATE GENERAL	\$14.25
COE STATE RM	\$4.75
RP5217 NON RES	\$156.00
RP5217 COUNTY FEE	\$9.00
	\$0.00
TP584	0

Consideration Amount: \$120,800.00

BASIC	\$0.00
SONYMA	\$0.00
ADDL	\$0.00
NFTA MT	\$0.00
TRANSFER	\$484.00
NFTA TT	\$605.00

Total: \$1,297.00STATE OF NEW YORK
ERIE COUNTY CLERK'S OFFICEWARNING - THIS SHEET CONSTITUTES THE CLERK'S ENDORSEMENT,
REQUIRED BY SECTIONS 319&316-a (5) OF THE REAL PROPERTY LAW
OF THE STATE OF NEW YORK. DO NOT DETACH. THIS IS NOT A BILL.Kathleen C. Hochul
County Clerk

ATTACHMENT 2

SITE ASSESSMENT JUSTIFICATION

Site Assessment Justification

The Steelawanna #2 Site property is located on an industrial area which has been industrial for many years. During the Step Two Nomination Study of the Brownfield Opportunity Area (BOA) process, this site was determined to be strategic due to its size, ownership and location between Ridge Road and the Steelawanna Business Park. Little information is known about the history and environmental condition of the property. The property is a key site as it is along the alignment for the proposed new road which will be studied during Step Three of the BOA. This new road is expected to open the property for new development and help to revitalize the First Ward of Lackawanna.

Suspected contamination is based on contamination encountered on similar properties in the vicinity of the site which have previously been assessed under the City's EPA assessment grant. These sites include the property directly adjacent to the east of the Steelawanna #2 site, The Friendship House Site. Polycyclic aromatic hydrocarbons (PAHs) were detected in several of the soil/fill samples on the Friendship House site, in levels which exceeded restricted commercial soil cleanup objectives. Additionally, the Steelawanna #2 Site is in close vicinity to the Six Vacant Lots site. An Interim Remedial Measure was completed at the Six Vacant Lots site to remove areas of elevated chromium in the soil/fill on the site. Additionally, PAHs and metals were detected on the Six Vacant Lots site in concentrations which were above Technical and Administrative Guidance Memorandums (TAGM). A Phase I/Phase II will be completed under this assessment to reveal more about the history of the property and the environmental condition of the Steelawanna #2 Site.

ATTACHMENT 3

SCOPE OF WORK

Scope of Work

Phase I Environmental Site Assessment (ESA)

Background on ESA Standard Practices

Congress established the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), which laid the foundation for the Superfund Program. The Superfund Program is intended to aggressively identify and clean up the worst hazardous waste sites. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment, and established the liability of persons responsible for releases of hazardous waste at these sites, as well as the owners of these sites. CERCLA also held purchasers of contaminated properties liable for the cleanup of contamination that they did not cause. Simply being included in the chain of title for a contaminated property made the purchaser a "Potentially Responsible Party" and liable for cleanup costs. An unintended consequence of CERCLA was that the act created barriers for the ownership and redevelopment of many properties due to potential liability concerns.

CERCLA was amended as a result of the 2002 Small Business Liability Relief and Brownfields Revitalization Act, which was intended to provide liability protection for prospective purchasers of properties, which may ultimately be found to be contaminated. To qualify for this protection, prospective purchasers were required to conduct an adequate investigation. Since 2002, the use of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessment Process (ASTM E1527-00) has been the standard for Environmental Due Diligence activities associated with commercial real estate transactions.

On November 1, 2005, the United States Environmental Protection Agency (USEPA) issued the final ruling defining the standard for conducting "All Appropriate Inquiry" (AAI) for Phase I ESAs. The AAI Rule took effect on November 1, 2006.

The new AAI requirements are intended to provide minimum standards of eligibility for the following defenses or exemptions to CERCLA liability:

- *Bona Fide Prospective Purchaser* – Parties who now conduct AAI prior to purchasing a contaminated property can qualify for this CERCLA exemption, provided they meet a number of other statutory requirements;
- *Contiguous Property Owners* – Owners of property contaminated by releases at a contiguous parcel, but whose parcel is not a source of contamination; and
- *Innocent Purchasers/Landowners* – Parties who perform AAI prior to purchase of a property and buy without knowing, or having reason to know, of contamination on the property.

The new ASTM Standard for Phase I Environmental Site Assessments (ASTM 1527-05) incorporates the requirements of the AAI Rule.

Scope of Work

The consultant will perform Phase I ESAs at the subject property in accordance with ASTM 1527-05. The consultant's team members must meet the requirements of Environmental Professionals, as defined by ASTM 1527-05. The Phase I ESA will consist of the following four subtasks:

- Task 1 – Records Review
- Task 2 – Site Reconnaissance

- Task 3 – Interviews
- Task 4 – Reporting

A description of these subtasks is provided below.

➤ ***Task 1 – Records Review***

The consultant will obtain and review records that will provide information concerning historical ownership and use of the properties and will help identify recognized environmental conditions (RECs) in connection with the properties. These records must be reasonably ascertainable and practically reviewable.

The consultant will review local, state, and federal record sources relating to the presence or occurrence of facilities or releases involving solid and hazardous waste, and petroleum products on the properties and/or properties occurring within the approximate minimum search distances established in ASTM E-1527. State and Federal record sources to be reviewed include:

- Federal NPL list (1.0 mile radius)
- Federal CERCLIS list (0.5 mile radius)
- Federal RCRA TSD facilities list (1.0 mile radius)
- Federal RCRA generators list (0.25 mile radius)
- Federal ERNS list (0.05 mile radius)
- State list of Hazardous Waste sites (1.0 mile radius)
- State list of Solid Waste Disposal sites (0.5 mile radius)
- State list of Leaking UST sites (0.5 mile radius)
- State list of Petroleum and Chemical Bulk Storage Tank Sites (0.25 mile radius)
- State list of Spills (0.5 mile radius)

Available records maintained by local agencies, including the school district, municipal building, assessors and fire departments and County environment, planning and/or health departments, will also be reviewed for the subject property and nearby properties, as necessary.

The consultant will review records that help describe the physical setting of the properties including:

- USGS topographic maps
- Maps of surficial and bedrock geology
- Maps of soil units
- State and Federal wetland maps
- Flood insurance rate maps
- Existing site plans

The consultant will review historic records that help describe past uses of the properties and adjacent lands (back until 1940, and from 1940 back until the property was not yet developed). These may include:

- Aerial photographs
- Fire insurance maps
- Property tax files
- Land title records
- City directories
- Building department records

- Zoning/land use records

Additionally, the consultant will review the results of previous environmental and/or regulatory investigations, studies, or inspections completed on the properties, to the extent that such results are available.

➤ **Task 2 – Site Reconnaissance**

The consultant will perform a site reconnaissance to visually identify current, or evidence of past, recognized environmental conditions in connection with the subject properties at the time of the site visit. During the site reconnaissance, the consultant will search for and attempt to identify:

- Current and past use of the properties and adjoining parcels
- The physical setting of the properties including a general description of structures and improvements
- Evidence of hazardous waste or petroleum product generation, storage, treatment, or disposal
- Storage tanks
- Strong or noxious odors
- Pools of liquid
- Drums
- PCBs, drains, sumps, pits, ponds or lagoons
- Stained soils/surfaces and/or stressed vegetation
- Solid waste
- Waste water and storm water discharges
- On-site septic systems
- On-site groundwater monitoring wells
- Evidence of controlled substances

➤ **Task 3 – Interviews**

The consultant will conduct interviews with current and past owners, employees, or other knowledgeable persons (to the extent that these persons are available) to determine the physical characteristics of the properties and past operations and practices conducted at the properties. Furthermore, the consultant will attempt to interview local government officials to obtain information regarding recognized environmental conditions in connection with the properties.

The interviews will include questions regarding the following:

- Identification and length of occupancy of the interviewee;
- Changes or additions to prior assessment information;
- Environmental documentation reports with regard to the properties;
- Environmental permits or UST registration for the properties;
- Current and/or past activities and practices; and
- Site activities involving the use, storage, treatment, disposal or generation of hazardous substances or petroleum products.

➤ **Task 4 – Reporting**

The consultant will prepare a report containing their findings regarding recognized environmental conditions in connection with the subject property. The report will include a concise summary of the scope of work and will present information obtained as a result of

the record search, interviews and site reconnaissance. The report will also include appropriate documentation that supports their opinions and conclusions. Credentials of those environmental professionals who performed the assessments will be attached as necessary. Additionally, the report will be accompanied by recommendations for further investigation and/or corrective action, if warranted.

Phase II Environmental Site Assessment (ESA)

The objectives of the Phase II ESA are to characterize the surface and subsurface of the site and confirm or deny the presence of potential contamination at the site. There are a wide variety of environmental concerns and contaminants that may be encountered. Therefore, the consultant must develop a scope of services for the Phase II ESA in accordance with the end-use, client objectives and suspected or previously identified site conditions.

The following scope is based on the current understanding of the site and the general scope of services for a typical Phase II ESA. Based on the lack of information and the fact that a Phase I ESA has not been performed on the site, this scope of work may change based on the findings of the Phase I ESA.

➤ Task No 1: Investigation Program Development

The consultant will implement a Phase II ESA program that is consistent with ASTM Designation E 1903-02.

A Work Plan will be prepared to provide a detailed description of the approach to be employed in completing the Phase II ESA. The Work Plan will identify the data quality objectives for the site investigation, as well as the equipment and methods to be employed to achieve these requirements. Provisions for ensuring the health and safety of field personnel and the public as well as the quality assurance/quality control (QA/QC) of the data generated will also be detailed in the Work Plan, which will be suitable for submittal to regulatory agencies, if appropriate.

Based upon the type and extent of suspected environmental contamination, the scientists, engineers and geologists must implement a site investigative program designed to characterize the type and quantity of potential contaminants, determine the potential pathways of contaminant migration, and evaluate the effects of contaminants on the environment.

➤ Task No. 2: Methods of Investigation

Implementation of a Phase II ESA program will involve the focused examination of particular areas of potential concern and the sampling and analysis of soil, groundwater, surface water, and/or air. Depending on the areas of concern and site conditions, varying methods of investigation may be utilized.

Data Quality Objectives (DQOs) for data collected during the ESA are developed in accordance with client objectives and applicable regulatory requirements. Some typical DQOs are summarized below:

- To characterize the site and determine the nature and extent of contamination occurring on or in soil, fill and groundwater;
- To qualitatively evaluate potential risks to human health and the environment associated with current site conditions and potential future use scenarios;

- To identify potential remedial alternatives and associated costs;
- To maintain the highest possible scientific/professional standards for each procedure; and
- To assure the ultimate defensibility of the data generated.

Specific investigative methods will include the following techniques:

Test Pits

A series of test pits will be excavated across the site to characterize subsurface conditions and collect samples for analysis. Test pits allow for the characterization of a large number of areas while facilitating the detailed inspection of each particular area. Test pits should be excavated throughout all accessible areas of the site, with an emphasis on areas of concern identified during the Phase I ESA. For purposes of this scope, we have assumed that one day of test pit activities will be adequate to characterize subsurface conditions, and that a minimum of twelve test pits will be completed during that day.

Test pits will be excavated using a rubber-tired backhoe. Excavation will occur in one to two-foot increments until either clean, native soils; saturated conditions; or the top of bedrock is encountered or to the maximum reach of the backhoe (estimated to be 10 feet). Excavated material will be staged directly adjacent to the test pit. Following characterization and sample collection, the excavated soil/fill shall be returned to the test pit from which it originated.

All investigation activities will be supervised and documented by an experienced scientist or engineer and will be performed under Level D health and safety specifications. Subsurface soil excavated from the test pits will be screened for total organic vapors (TOVs) using a photoionization detector (PID). Soil intervals exhibiting the highest TOV measurement or exhibiting signs of staining may be selected for chemical analysis by a New York State Department of Health-certified laboratory. Logs characterizing overburden stratigraphy will be recorded and the test pit locations will be surveyed using a hand-held Global Positioning System (GPS) device and/or measured from the existing building and other permanent site features.

Up to seven soil samples will be submitted for laboratory analyses using United States Environmental Protection Agency (USEPA) methods that include Target Compound List (TCL) Volatile Organic Compounds (VOCs) and Semi-volatile Organic Compounds (SVOCs) plus Tentatively Identified Compounds (TICs), Polychlorinated Biphenyls (PCBs), Pesticides and Target Analyte List (TAL) metals.

In addition to the subsurface soil samples, QA/QC analysis will be conducted on matrix spike/matrix spike duplicate samples, equipment rinse blank and a trip blank. The analytical laboratory will report the data in a deliverables package to facilitate validation of the data. Third-party validator will be retained to review the analytical results and prepare a Data Usability Summary Report (DUSR), which will be incorporated into the Phase II ESA Report (discussed below).

Soil Probes

A series of soil probes will be advanced across the site to evaluate subsurface conditions. The bulk of the soil probes will be advanced in primary focus areas identified

during the Phase I ESA and during the test pit investigation activities. Additional soil probes will be completed in other areas of the site not characterized by test pits.

Soil probes will be advanced using direct-push drilling equipment to facilitate the collection, screening and chemical analysis of soil samples. The number of soil probes advanced will be as many soil probes as can be installed during the course of two days. Generally, 10 to 15 soil probes can be installed on a site with reasonably good access during an eight-hour workday.

All investigation activities will be supervised and documented by an experienced scientist or engineer and will be performed under Level D health and safety specifications. The soil probes will be advanced to a maximum depth of 16 feet below grade; to clean, native material; or to equipment refusal depth, whichever is encountered first. Continuous subsurface soil samples will be collected throughout the depth of each soil probe, and logs characterizing overburden stratigraphy will be recorded. The soil probe locations will be surveyed using a hand-held Global Positioning System (GPS) device and/or measured from the existing building and other permanent site features.

Subsurface soil samples collected from the soil probes will be screened for total organic vapors (TOVs) using a photoionization detector (PID). Soil intervals exhibiting the highest TOV measurement or exhibiting signs of staining may be selected for chemical analysis by a New York State Department of Health-certified laboratory. All down-hole probing equipment will be decontaminated prior to use at each probe location. Upon completion of probing activities, all probe holes will be backfilled with cuttings.

Up to twelve soil samples will be submitted for laboratory analyses using United States Environmental Protection Agency (USEPA) methods that include Target Compound List (TCL) Volatile Organic Compounds (VOCs) and Semi-volatile Organic Compounds (SVOCs) plus Tentatively Identified Compounds (TICs), Polychlorinated Biphenyls (PCBs), Pesticides and Target Analyte List (TAL) metals.

In addition to the subsurface soil samples, QA/QC analysis will be conducted on matrix spike/matrix spike duplicate samples, equipment rinsate blank and a trip blank. The analytical laboratory will report the data in a deliverables package to facilitate validation of the data. Third-party validator will be retained to review the analytical results and prepare a Data Usability Summary Report (DUSR), which will be incorporated into the Phase II ESA Report (discussed below).

Test Borings and Monitoring Well Installation

Test borings will be advanced across the project site to characterize the subsurface soil/fill and facilitate the installation of groundwater monitoring wells and the collection of groundwater samples.

Test borings will be advanced through surficial deposits using a rubber-tired rotary drilling rig equipped with a 4 ¼-inch I.D. hollow stem auger with continuous split spoon sampling. Up to six monitoring wells will be installed, constructed of 2-inch Schedule 40 Polyvinyl Chloride (PVC) screens and risers. It is assumed that monitoring wells will be installed at a maximum depth of 25 feet below ground surface (bgs) and screened in the upper most water-bearing zone within the overburden.

Retrieved soil samples from each test boring will be screened for TOVs using a PID. The TOV values and soil descriptions will be recorded on Test Boring Logs.

Groundwater Sampling

The six groundwater monitoring wells installed will be developed and sampled in accordance with general practice accepted procedures. Prior to the initiation of groundwater sampling, groundwater levels will be measured to determine the groundwater flow direction and gradient using an electronic water interface indicator. Groundwater development will consist of the evacuation of a minimum of five well volumes from each of the wells or purged until dry conditions are observed. Dedicated polyethylene bailers will be used for the development and sampling of the monitoring wells. After the completion of development, the monitoring wells shall be allowed to recharge. The samples must be collected within 24 hours of completion of well development. Well number, well depth, depth to water, well volume, purge completion time and water quality parameters should be recorded on well development and sampling logs.

The groundwater samples collected from each well will be submitted for analysis of TCL VOCs and SVOCs, PCBs, Pesticides and TAL metals. Additionally, QAQC samples will be collected and analyzed on matrix spike/matrix spike duplicate samples, a blind field duplicate sample and a trip blank.

Surface Soil Sampling

A sampling and analysis program will be implemented to characterize the chemistry of surface soil, fill materials and/or debris across the site. Grab samples will be collected from identified areas of concern as well as from points selected to represent conditions across the site. Up to six surface soil samples will be collected from zero to two inches below the vegetative layer. These samples will be analyzed for TCL SVOCs, PCBs, Pesticides and TAL metals.

➤ **Task No. 3: Sample Screening, Collection and Analysis**

During sample collection, sample media will be field screened for indicative parameters, such as total organic vapors (TOVs), using a photoionization detector (PID). This provides a real-time indication of contaminant levels in the field to assist in selection of samples for laboratory analysis, and helps to ensure appropriate health and safety measures are being employed.

Proper sample collection is imperative to obtaining representative samples for analysis. Personnel must utilize accepted sample collection methods to ensure samples are representative and are not cross-contaminated by other samples or sample collection devices. These methodologies should be outlined in a site-specific ESA Work Plan. Proper sample labeling, handling, packing and shipping, along with a chain-of-custody (COC), is integral to help ensure collected samples are accurate, secure and intact when they arrive at the laboratory for analysis.

All chemical analyses must be performed by a NYS Department of Health Environmental Laboratory Approval Program (ELAP) certified environmental laboratory, for analytical testing.

➤ **Task No. 4: Data Validation**

A third-party data validation firm will independently assess the quality of the analytical results generated by the laboratory. During validation, the laboratory data package will be reviewed for quality control parameters (including, but not limited to, custody documentation, holding times, surrogate and matrix spike recoveries, LCS recoveries, duplicate correlation, calibration standard/blank performance, instrument performance,

blank contamination, matrix interferences, method compliance, etc.). In addition, critical elements of the raw data (i.e. sample chromatograms, etc) will be reviewed. Although full validation to verify every QC summary page value and QC reported result from the raw data will not be performed at this time, the validation qualifiers that would be apparent by full validation review will generally be recommended within the DUSR. The DUSRs will then be generated, incorporating all sampling activities at the site, as a narrative discussion organized by sample type and analytical fraction. Sample result qualifiers indicated by the review will be applied to sample results forms.

➤ **Task No. 5: Data Evaluation and Reporting**

Following the collection of field data and analytical testing, the results must be evaluated and interpreted to characterize site conditions. The chemical concentrations of analyzed media will be compared to Standard Criteria and Guidance Values (SCGs). Relevant SCGs may include the following:

- Soil and Fill: NYSDEC Soil Cleanup Objectives in 6 NYCRR Part 375
- Groundwater: NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1

Upon completion of the data evaluation a report will be prepared. The report will:

- Discuss the investigative measures employed.
- Describe the surface and subsurface conditions observed.
- Compare the analytical data with applicable regulatory levels.
- Assess the implications of the site conditions encountered with respect to potential pathways, affected receptors, potential development concepts, and necessary remediation, if any.

The report will also contain raw and summarized analytical data; field logs; groundwater sampling logs; and other pertinent data tables and maps. The report will be suitable for submittal to regulatory agencies, and will serve as the basis for developing a remedial action plan for the property, if necessary.

Schedule:

Task	Time
Phase I ESA: Records Review, Site Reconnaissance, Interviews and Reporting	½ Month
Development of a Work Plan:	½ Month
Phase II ESA: Assessment Activities	1 Month
Evaluation of Data and Interpretation of Results	1 Month
Report Preparation	1 Month
Total:	4.5 Months

ATTACHMENT 4

**BOA PROGRAM SITE ASSESSMENT BUDGET REQUEST
WORKSHEET**

***New York State
Brownfield Opportunity Areas Program***

SITE ASSESSMENT BUDGET REQUEST WORKSHEET

Instructions for Completing Schedules

1. A separate worksheet must be completed by the applicant for each site assessment (SA) budget requested. The worksheet consists of all relevant schedules.
2. Worksheets must be submitted with the Step 3 Application Site Assessment Supplement. The total contractual budget for all SAs from the worksheets must be entered in Part H, column 2 of the Step 3 application.
3. If an ASTM E1527 Phase I ESA was not already performed on the property, the scope of a Phase I must be added to the proposed scope of work of the Phase II. It may be necessary to complete the Phase I prior to finalizing the scope of work of the Phase II; therefore, the Phase II final workplan may not be approved prior to the completion of the Phase I. The final report for the Phase I and II ESAs should be combined into one document.
4. It is assumed that the applicant does not have a Department of State approved contractor for the SA at the time of application; therefore, the budget must be based on a reasonable estimate for the SA scope of work.
5. Acceptable rates and ranges for Direct Salary and Overhead and Fixed Fee, if applicable, are available upon request from DOS.

**SCHEDULE 1(a)
SITE ASSESSMENT CONTRACTUAL BUDGET**

BOA Name: _____

Site Name: _____

Budget Categories Within Contractual Budget	Amounts	
1. Direct Salary, See Schedule 1(b)		\$
2. Direct Non-Salary, See Schedule 1(c)		\$
3. Subcontracts		
a. Total Price of Cost-Plus-Fixed-Fee Subcontracts, See Subcontract Schedules 1(a)(b)(c)	\$	
b. Total Price of Other Subcontracts, See Schedule 1(d)	\$	
c. Total Price of all Subcontracts (a. + b.)	\$	
d. Total Contractor's Subcontract Management Fee	\$	
e. Total Price and Fee of Subcontracts (c. + d.)		\$
4. Overhead Rate _____% of Direct Salary		\$
5. Fixed Fee Rate _____% of Direct Salary and Overhead		\$
6. Total Contractual Budget For Above Site		\$

Prepared By: _____

Date Prepared: _____

Rev.09/15/2010

SCHEDULE 1(b) DIRECT SALARY/LABOR HOURS BUDGET

BOA Name:
Site Name:

Rev. 09/15/2010

<i>NSPE Level*</i>	<i>IX*</i>		<i>VIII*</i>		<i>VII*</i>		<i>VI*</i>		<i>V*</i>		<i>IV*</i>		<i>III*</i>		<i>II*</i>		<i>I*</i>		<i>Total</i>		
Av. Hourly Salary Rate * Calendar Year _____																					
Description	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	Hrs.	Cost	
Task 1: Development of Workplan																					
Task 2: Site Assessment Activities (Note: includes records review, site reconnaissance, and interviews if the SA includes a Phase I ESA)																					
Task 3: Evaluation of Data																					
Task 4: Interpretation of Results																					
Task 5: Report Preparation																					
<i>Total Hours/Cost</i>																					

Footnotes:

- * Refers to National Society of Professional Engineers (NSPE) levels and job descriptions. See Schedule 1(a) for additional instructions.
- ** Tasks are in accordance with ASTM Phase II. Refer to ASTM Phase II guidance for details.
- *** Applicant should enter estimated number of hours for each NSPE level to complete each task and then calculate cost for each NSPE level, task, and the totals. The total Direct Salary/Labor Hours Budget must match the Direct Salary on Schedule 1(a).

Prepared By:
Date Prepared:

SCHEDULE 1(c)
DIRECT NON-SALARY BUDGET

BOA Name: _____

Site Name: _____

Budget Category	Description	Rates Specify Units	No. of Units	Amount
1. Supplies				
a. Office				
b. Field				
Total Supplies				\$
2. Travel				
a. Meals		Per day		
b. Lodging		Per day		
c. Transportation		Per mile		
d. Misc. (Specify)				
Total Travel				\$
3. Equipment				
Rental				
1.				
2.				
Total Equipment				\$
4. Other (Specify)				
a.				
b.				
Total Other				\$
5. Total Direct Non-Salary Budget				\$

Footnotes

- The Total Direct Non-Salary Budget must match the Non-Salary Budget on Schedule 1(a) and must be directly related to the site assessment scope of work.
- Office and Field Supplies must be broken down by type and will be reimbursed, if reasonable, based on receipts submitted.
- Equipment will be reimbursed at reasonable rental rates.

Prepared By: _____

Date Prepared: _____

Rev. 09/15/2010

SCHEDULE 1(d)
UNIT PRICE/LUMP SUM SUBCONTRACTS

BOA Name:
 Site Name:
 Type of Contract:
 Scope of Work:

Subcontract Items	Rates Specify Units	No. of Units	Amount
1.			
2.			
3.			
Total Price of Subcontract			\$
Contractor's Subcontract Management Fee			\$
Total Price and Fee of Subcontract			\$

Footnotes

- A Schedule 1(d) should be completed for each unit price and lump sum subcontract anticipated under the prime contract. If a subcontract is a time and materials, not to exceed, or cost plus fixed fee, schedules 1(a), (b) and (c) must be completed for those types of contracts.
- The total of all Schedule 1(d)s must match the totals entered on Schedule 1(a) under 3.

Prepared By: _____
 Date Prepared: _____