INTERIM REMEDIAL MEASURES – WORK PLAN

8264 Ridge Road West
Town of Clarkson
Monroe County, New York

Prepared for:

Town of Clarkson
P.O. Box 858
Clarkson, New York 14430

Prepared by:

LU ENGINEERS
Civil and Environmental
2230 Penfield Road
Penfield, NY 14526

January 2009

Environmental Restoration Program
Former Service Station Site (#E828143)
8264 Ridge Road West
Town of Clarkson
Monroe County, New York

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Project No. 40503

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1.0 Introduction

This work plan is presented to provide a plan of work for the completion of Interim Remedial Measures (IRMs) during the Remedial Investigation (RI) of the Former Service Station Site #E828143. This IRM Work Plan has been developed in accordance with New York State Department of Environmental Conservation (NYSDEC) IRM-Procedures (Technical and Administrative Guidance Memorandum (TAGM) 4048) and Department of Environmental Restoration (DER)-10 "Technical Guidance for Site Investigation and Remediation."

As defined within DER-10, an IRM is an action taken to mitigate environmental or human exposures before the completion of the remedial investigation and remedial alternative selection. IRMs may include the removal of wastes and contaminated materials, including environmental media. The use of a non-emergency IRM is encouraged when a source of contamination or exposure pathway can be effectively addressed prior to completion of the investigation and remedy selection process.

The proposed IRM activities for the Site include:

- Asbestos abatement and hazardous/non-hazardous waste removal;
- Demolition of on-Site buildings;
- Removal of the concrete slab/foundation;
- Removal of underground floor drains;
- Removal of at least one hydraulic lift and associated hydraulic oil reservoir;
- Removal and disposal of one underground storage tank (UST) and associated piping;
- Removal and disposal of one aboveground storage tank (AST) and associated piping;
- Removal of one 55-gallon drum of unknown contents and other miscellaneous hazardous materials containers; and
- Excavation and disposal of petroleum impacted soils.

The objective of the proposed IRMs will be to eliminate and contain potential exposures to environmental contaminants and contain further movement of contaminants associated with the presence of USTs, drain routes, and petroleum impacted soil beneath the current Site building.

2.0 Scope of Work

The IRM demolition and removal activities will be performed by an appropriately qualified and licensed subcontractor ("subcontractor") to be selected by Lu Engineers and approved by the Town of Clarkson ("Town") and NYSDEC. Asbestos abatement activities, if necessary, will also be conducted by a qualified subcontracted firm to be selected by Lu Engineers and approved by the Town and NYSDEC. Subcontractor selection will be made through a competitive bidding process in accordance with Section 10.3 of the NYSDEC Municipal Assistance for Environmental Restoration Projects (ERP) Procedures Handbook.

All IRM activities will be observed by Lu Engineers. The subcontractor will be responsible for identification and clearance of all Site utilities prior to commencement of work.

Prior to the building demolition, the Town of Clarkson will be responsible for removing any items located within the buildings (i.e., vehicles, files, etc.).

2.1 Site Control

The proposed IRM work will require Site controls to ensure the safety of Site workers and the public. Site controls will include fencing of the area where the work will be performed, including equipment staging areas and any temporary stockpiling locations. Access to the Site will be limited to project workers only. The public will not be permitted to enter within the fenced areas.

All IRM activities are to be contained within the Site boundaries.

2.2 Asbestos Abatement and Hazardous Materials Removal

Asbestos abatement activities will be conducted by a qualified subcontracted firm to be selected by Lu Engineers and the Town of Clarkson, and approved by the NYSDEC. Subcontractor selection will be made through a competitive bidding process in accordance with Section 10.3 of the NYSDEC Municipal Assistance for Environmental Restoration Projects Procedures Handbook.

The Town of Clarkson will retain a qualified Air/Project Monitoring Consultant to perform the New York State Department of Labor (NYSDOL) Code Rule 56-required air monitoring and project monitoring during asbestos removal activities.

Hazardous materials identified during the building survey (i.e., chemical containers, PCB-containing light ballasts, etc.) will be sampled for waste characterization in order to determine proper disposal methods. For unlabeled chemical containers, Level C personal protective equipment will be worn during sampling in conjunction with appropriate air monitoring instruments.

All hazardous materials will be disposed of or recycled off-Site as part of the IRM, prior to building demolition.

2.3 Building Demolition

Vent pipes were observed on the north side of the body shop/garage and the office/storage building that may be indicative of additional USTs. The size and orientation of the possible USTs is unknown. There is also the potential that unidentified tanks may be partially located beneath the building foundation. It may be necessary to demolish the structure to assess and remove any USTs that may exist and to investigate the tank pit and surrounding soils. It is anticipated that demolition work will be performed by the subcontractor using necessary equipment.

Lu Engineers will coordinate with the subcontracted abatement/demolition firm selected through the competitive bidding process. While demolition is underway, a Lu Engineers' representative will be on Site to oversee the demolition process with respect to potential discovery of information relating to subsurface environmental conditions, especially floor drains.

At the present time it is estimated that approximately two (2) soil samples will be collected from under the existing building slab of the body shop/garage during its removal (Figure 3).

The on-Site representative from Lu Engineers will have the discretion to take additional samples, as necessary, to completely assess any potential environmental concerns that may be found during the demolition.

Dye or smoke testing may be used to confirm that the Site floor drains are connected to the public sewer system. If warranted by field observations, sub-slab soil samples may be collected in areas of suspected contamination (i.e., floor drains, broken concrete).

2.4 Concrete Slab Removal

The body shop/garage building's concrete slab and foundations will be excavated and reused on Site as backfill. The slab will be excavated by the subcontractor using an excavator capable of breaking up the concrete into manageable units. Lu Engineers will observe and screen soils beneath the slab with a MiniRAE 2000, or equivalent, photoionization detector (PID) to assess possible petroleum impacts to sub-slab soils, especially around floor drains and other significant features. Concrete pieces will be reused as backfill in the bottom of the tank excavation.

Sub-slab piping and drainage structures can potentially act as migration pathways for contaminants to follow. If any such piping or drainage structures are encountered, they will be investigated and removed during the concrete slab removal.

2.5 Tank and Drum Removal

The one known UST located on the southwestern portion of the Site (Figures 2 and 3) will be excavated, cleaned, and disposed of in accordance with NYSDEC protocols in DER-10 Section 5.5, Petroleum Bulk Storage (PBS) regulations in 6 New York Code of Rules and Regulations (NYCRR) Part 613.9, and all other applicable regulations.

The one known AST located west of the body shop/garage will be emptied and removed from the Site in accordance with NYSDEC protocols in DER-10 Section 5.5.

The 55-gallon drum with unknown contents, located west of the body shop/garage will also be emptied and removed from the Site, along with any additional hazardous materials containers.

The tank and drum removal will be performed by the subcontractor with oversight by Lu Engineers. Lu Engineers will provide a description in the field notes and photographic documentation of the tank and piping condition for the report.

2.5.1 Soil Removal

It is anticipated that petroleum impacted soils exist in the vicinity of the UST, and that removal of contaminated soil from the building demolitions, tank excavation, and/or piping trenches will be necessary during the IRM.

During excavation, clean soil will be stockpiled and reused as backfill material. Soils exhibiting evidence of contamination (i.e., elevated PID readings, odors, staining) will be staged on polyethylene sheeting and securely covered to prevent run-off, prior to off-Site disposal. Soils exhibiting a PID reading of 25 ppm or higher will be staged for offsite disposal. An on-Site soil staging area will be determined by Lu Engineers' Field Team Leader with approval by the NYSDEC and the Town of Clarkson, as appropriate.

Waste characterization samples will be collected from the excavated soils to determine disposal options. These samples will be analyzed for the following parameters:

- Ignitability
- Toxic Characteristic Leaching Procedure (TCLP) Metals
- Volatile Organic Compounds (VOCs)- STARS list (EPA Method 8021B)
- Semi-volatile Organic Compounds (SVOCs)- base/neutrals (EPA Method 8270D)
- Paint Filter Test

If widespread soil contamination is encountered, only grossly contaminated soils will be removed as part of the IRM to the extent possible under the existing project scope and budget. Widespread soil contamination will be characterized in the remaining assessment activities and addressed during the cleanup phase with respect to Unrestricted Commercial Reuse criteria as set fourth in 6NYCRR Part 375. Groundwater is not expected to be encountered during tank removal.

The limits of the tank excavation will be located using a handheld global positioning system (GPS) unit and added to the Site Plan.

2.5.2 Closure Samples

Upon removal of the UST and associated piping, the excavation floor and sidewalls will be examined for any physical evidence of contamination and screened with a PID along transects no more than 5 feet apart. Sampling will be biased to suspected areas of greatest contamination. To the extent possible under the current budget, soils will be removed for disposal if PID readings exceed 25 ppm.

After contaminated soil is removed to the extent possible, closure samples will be collected in accordance with NYSDEC protocols in DER-10 Section 5.5, as summarized below.

If groundwater is not encountered and there is no evidence of a discharge, a representative sidewall sample will be collected from each of the four (4) excavation side walls. Excavation floor samples will also be collected in accordance with NYSDEC protocols in DER-10 Section 5.5(b)(4)(iii)(1). It is anticipated that one (1) centerline soil sample will be collected from the excavation floor along the tank footprint every 5 linear feet. This sampling protocol is based on an assumed overall tank length of approximately 25 feet, for a total of 5 samples. Samples will be collected from the suspected areas of greatest contamination, based on screening results. Samples will be analyzed for:

- VOCs (EPA Method 8021)
- SVOCs (EPA Method 8270 base/neutrals)

If groundwater is encountered in the excavation, a water sample will be collected and analyzed for VOCs (EPA Method 8260) and confirmatory soil samples will then be collected in accordance with NYSDEC protocols in DER-10 Section 5.5(b)(4)(iii)(2)(A).

If upon tank removal there is evidence of a discharge, grossly contaminated soils (>25 ppm) will be removed as part of the IRM to the extent possible under the current budget. Confirmatory soil sampling will then be performed in accordance with NYSDEC protocols in DER-10 Section 5.5(b)(4)(iv). This includes the collection of a minimum of 5 soil samples, consisting of four (4) sidewall samples and one (1) floor sample per 15 feet of excavation trench.

All associated underground piping will be evaluated to identify any evidence of a release. Soil samples will be collected from 0-6 inches below the removed piping, in accordance with DER-10 Section 3.9(a)5.

One sample for each 15 feet of piping length and one sample for each additional 20 feet will be collected and analyzed for the parameters listed above. Analytical results will be evaluated with respect to 6NYCRR Part 375 Unrestricted Commercial Reuse standards with respect to the completeness of the interim remedial effort.

2.6 Decontamination Procedures

As part of the subcontractor's mobilization activities, a decontamination area for trucks, equipment, and personnel will be constructed on the Site to prevent tracking of petroleum-contaminated residuals from the Site.

To further eliminate the tracking of petroleum-contaminated soils, the drivers will follow designated truck routes to contain traffic within a limited area. If materials accumulate outside the excavation and staging areas, they will be addressed to the satisfaction of the Field Team Leader.

All decontamination will be performed in accordance with NYSDEC-approved procedures. Sampling methods and equipment have been chosen to minimize decontamination requirements and prevent the possibility of cross-contamination. All drilling equipment will be decontaminated prior to drilling, after drilling each boring/monitoring well, and after the completion of all drilling. Special attention will be given to the drilling assembly, augers, split-spoons, and polyethylene casing. Split-spoons will be decontaminated prior to and following each use.

Split-spoons and other non-disposable sampling equipment, including bailers and stainless steel spoons will be decontaminated using the following procedure:

- Initially cleaning equipment of all foreign matter;
- Scrubbing equipment with brushes in Alconox solution;
- Rinsing equipment with distilled water;
- Triple-rinsing equipment with distilled water; and
- Allowing equipment to air dry.

A temporary decontamination pool will be established in a secure area on site using 6-ml polyethylene sheeting. Fluids generated during decontamination will be collected in the plastic-lined pool. Prior to completion of the work activities, the contractor will remove the decontamination facilities and associated materials, decontamination fluids, equipment, etc. Decontamination wastes exhibiting signs of contamination shall be collected and containerized in 55 gallon drums for proper disposal.

2.7 Disposal of IRM-Derived Wastes

The following IRM-derived wastes are anticipated for this project:

- Building demolition debris;
- Asbestos-containing building materials (if present);
- Steel UST and piping;
- Steel AST;
- Metal 55 gallon drum;
- Steel or PVC drainage lines;

- Petroleum impacted soils; and
- Decontamination wastes (if applicable).

Demolition debris will be disposed of at an off-Site landfill as C&D waste. The building's concrete slab pieces will be reused on-Site as backfill. The UST, AST, and 55 gallon drum will be transported for off-Site cleaning and disposal as scrap metal. Piping will be cleaned and recycled off-Site as scrap metal.

Asbestos-containing materials will be removed by a contracted abatement firm prior to building demolition. Asbestos-containing wastes will be disposed of at a landfill permitted to accept either friable or non-friable waste, as appropriate. Asbestos waste shall be manifested and a copy of the manifest, signed by the landfill, will be returned to Lu Engineers and included in the report.

Decontamination water exhibiting evidence of contamination (i.e., elevated PID readings, sheen, odor) will be containerized and staged on-Site. Final disposal of decontamination water will be dependent on the results of water analyses and waste characterization samples. Decontamination water exhibiting no signs of contamination will be discharged to the ground surface, allowing for infiltration.

Excavated petroleum impacted soils will be transported to an off-Site disposal facility permitted to accept such wastes. Prior to transport, waste characterization samples will be collected for laboratory analysis, as required by the disposal facility.

IRM-generated wastes will be staged on-Site for appropriate waste characterization and disposal unless it is loaded out as it is generated. All waste containers will be labeled and secured. Waste manifests or bill of ladings will be used for all off-Site shipments and included in the report.

2.8 Site Restoration

Once petroleum impacted soils have been excavated and closure sampling has been completed, the excavation will be backfilled with clean soil previously removed during the tank excavation, remnant pieces of the former building slab, and sand/gravel from an approved source.

Areas impacted by the IRM will be returned to existing conditions except for the building foundation, which will be a sand/gravel surface consistent with the rest of the Site.

3.0 QA/QC Protocols

Lu Engineers is responsible for the project management, coordination and scheduling, subcontracting, and quality assurance/quality control (QA/QC) of IRM activities. General QA/QC procedures, including sample preparation and holding times, are described in the Quality Assurance Project Plan (Appendix A of the RI Work Plan).

Analytical work will be performed by an appropriately qualified New York State Department of Health (NYSDOH) Environmental Laboratory Approval Plan (ELAP) Contract Laboratory Protocol (CLP) certified subcontracted laboratory. Analytical methods reflect the requirements of the NYSDEC Analytical Services Protocol (ASP), Revised June 2000.

All analytical data for the tank closure samples will be reported by the laboratory with NYSDEC ASP Category B deliverables.

4.0 Reporting and Schedule

Upon receipt and review of all necessary data, a Tank Closure and Interim Remedial Action report will be prepared including:

- A discussion of the IRM work completed;
- A Site Plan with location of the removed tanks and piping;
- Extent of soil removal;
- Manifests for all off-Site disposal of waste materials;
- Photographs;
- Post excavation soil sampling results; and
- Laboratory analytical reports and chain-of-custody.

Closure samples will be compared to the NYSDEC Cleanup Standards in 6 NYCRR Part 375.

A final submittal package will be provided by the licensed asbestos removal contractor, which will include the documentation outlined in NYSDOL Industrial Code Rule 56, Section 3.4 Notice and Record Keeping Requirements. Information includes certifications of workers who performed the abatement, license of contractor, name of waste transporters, copy of supervisor's log, and waste manifests.

An Air/Project Monitoring Report, in accordance with Code Rule 56, will be issued at the conclusion of abatement activities. The report will include air monitoring results and inspection reports.

A project schedule, including all anticipated fieldwork and report submission, is included as Appendix E of the RI Work Plan.

Periodic progress reports will be submitted to NYSDEC and include a description of work completed during the reporting period, problems encountered, sampling results, and any changes to the scope of work.

5.0 Health and Safety

A Site specific Health and Safety Plan (HASP) has been prepared for this project and is included as Appendix B of the RI Work Plan. The HASP will be reviewed by all employees before starting site work. Monitoring of the work area and screening of soil and groundwater will be conducted throughout duration of IRM activities using the following (or equivalent) instrumentation:

- aerosol particulate meter
- Explosimeter
- PID equipped with a 10.2 eV lamp

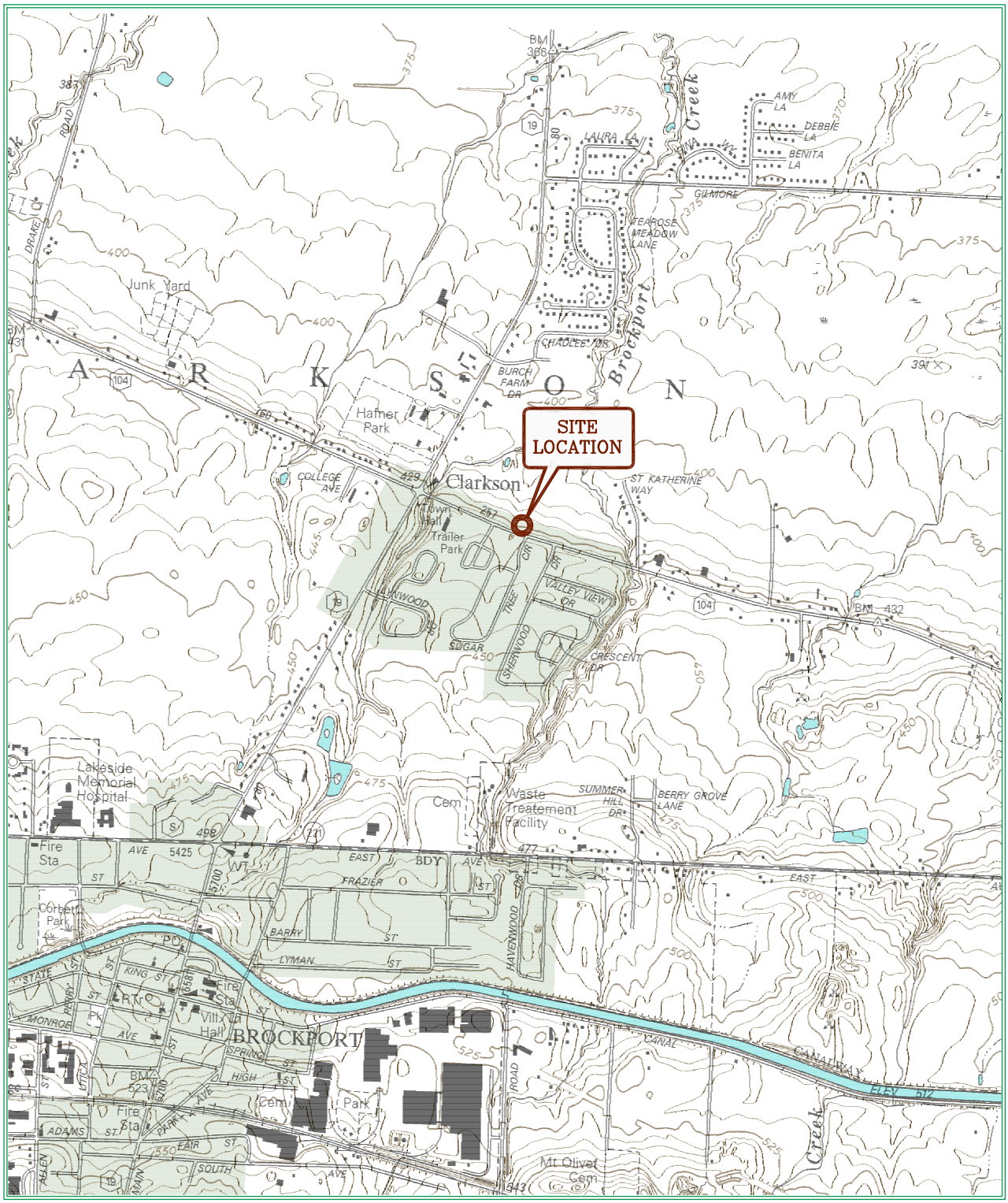
Air monitoring at the Site will be continuous during ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Air monitoring will be periodic during all non-intrusive activities. Daily recorded perimeter real-time air monitoring readings for VOCs, as required by the Community Air Monitoring Plan (CAMP) during investigative and remedial activities, will be submitted to the NYSDEC and the New York State Department of Health (NYSDOH) via email (as practicable) each day that the monitoring is implemented.

A written CAMP is provided as Appendix C of the RI Work Plan.

Lu Engineers' employees and the subcontractor on-Site will have completed the OSHA 40-hour HAZWOPER training with current refresher courses. A copy of the HASP will be available on-Site at all times during the IRM and field investigations.

6.0 Citizen Participation

A Citizen Participation (CP) Plan has been developed for this project and is provided under separate cover. This work plan will be made available for review in the document repository. A Fact Sheet will be prepared and distributed to the parties listed on the Public Contact List, which explains the proposed IRM activities and estimated project schedule.



SCALE: 1" = 2000'

Lu Engineers
ENVIRONMENTAL • TRANSPORTATION • CIVIL

FIGURE 1. SITE LOCATION MAP

TOWN OF CLARKSON (FORMER SERVICE STATION)
8264 RIDGE ROAD WEST
BROCKPORT, NEW YORK 14420

DATE:	JULY 2010
SCALE:	1:24,000
DRAWN BY:	DLS

MAP SOURCE: NYS DOT RASTER QUADRANGLE
BROCKPORT / MONROE COUNTY
DOT EDITION DATE: 1997 / USGS CONTOUR DATA: 1971

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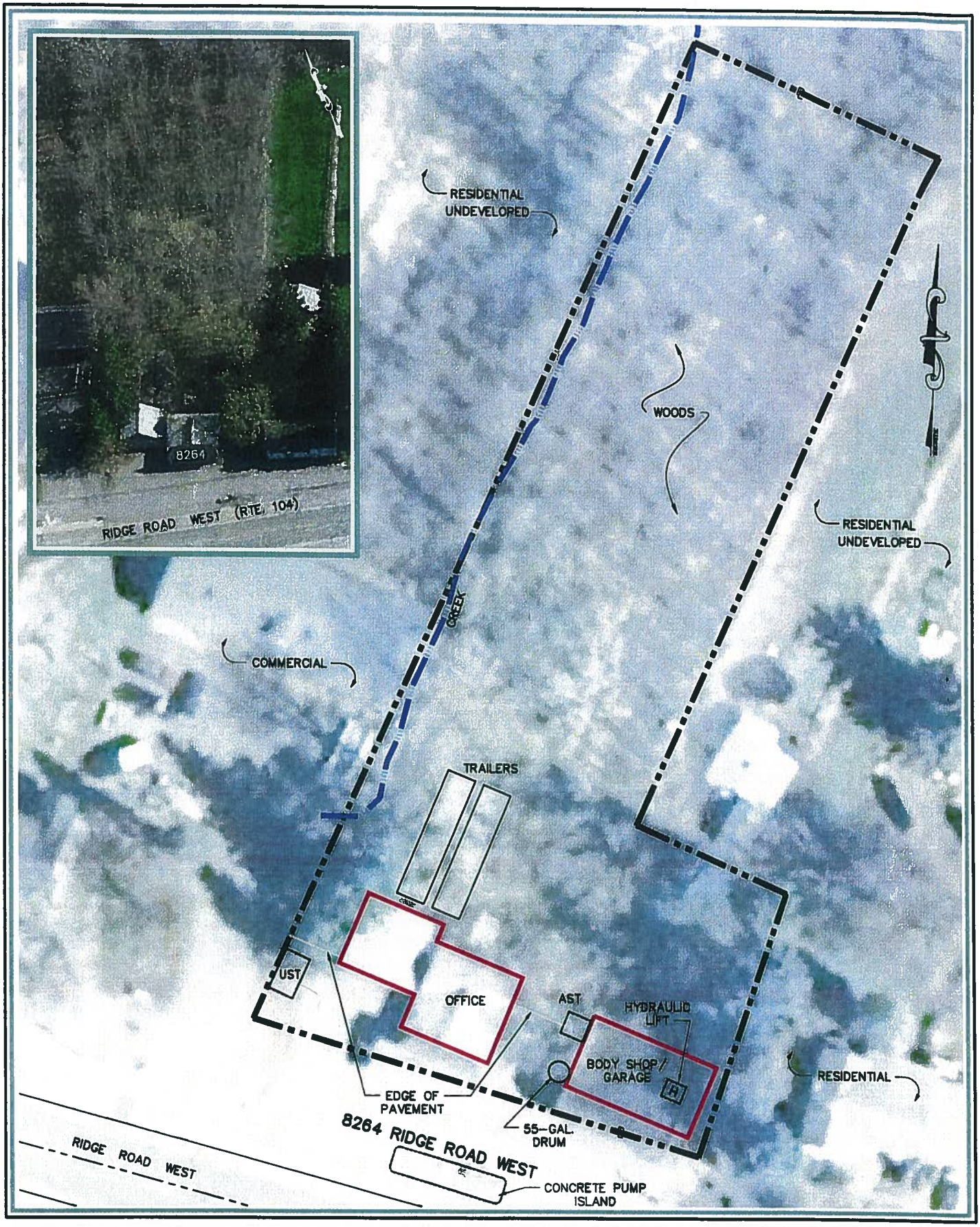

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FIG. 2
SITE PLAN
8264 RIDGE ROAD WEST
TOWN OF CLARKSON NEW YORK

DATE:	SEPTEMBER 2008
SCALE:	±1" = 40'
DESIGNED/DRAWN/CHECKED	JB/DS/GA
P.N.	40503

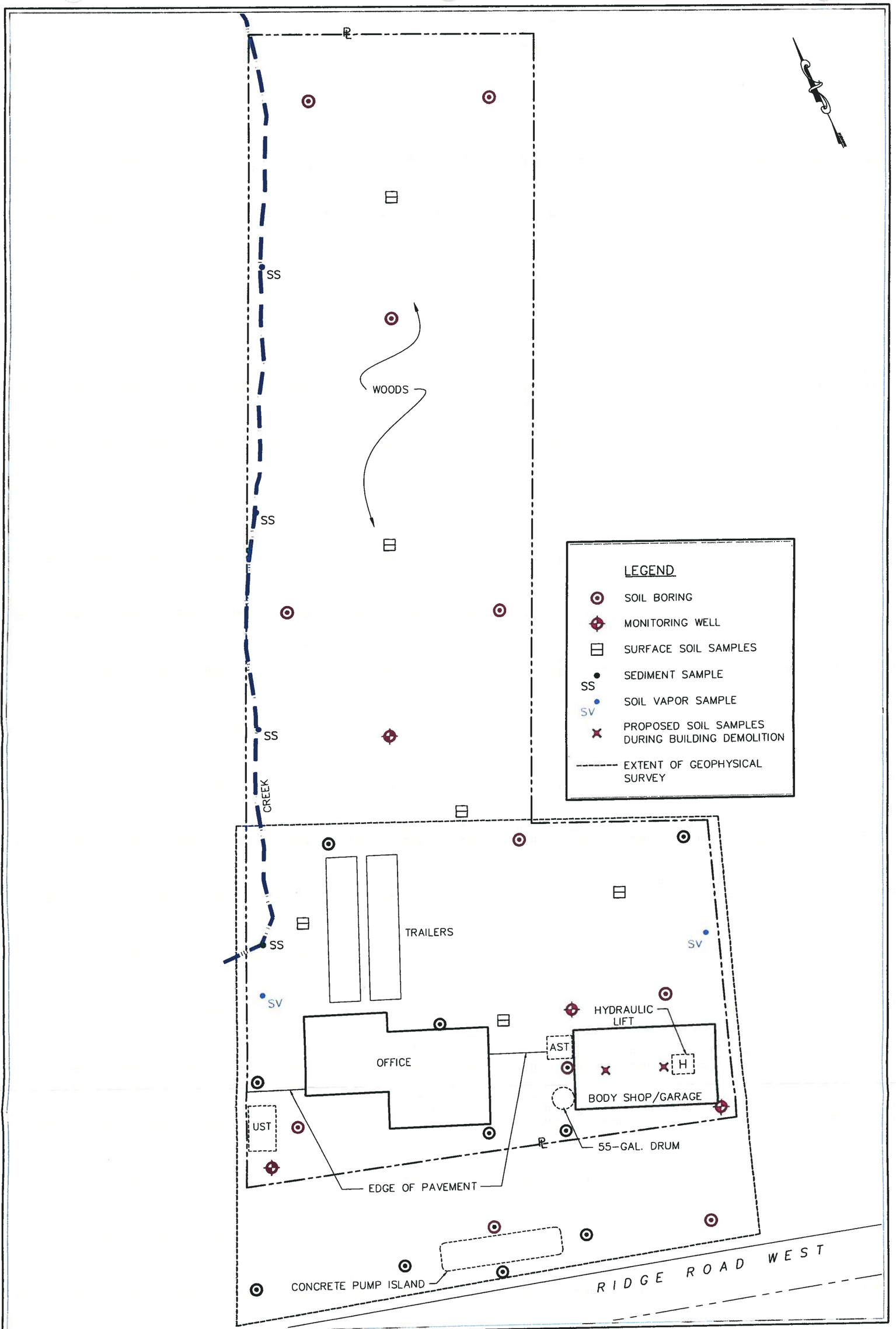

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FIG. 3
SAMPLE LOCATION PLAN
8264 RIDGE ROAD WEST
TOWN OF CLARKSON NEW YORK

DATE: OCTOBER 2008
SCALE: ±1" = 25'
DESIGNED/DRAWN/CHECKED JB/DS/GA
P.N. 40503

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