WHITESTONE ASSOCIATES, INC.
ENVIRONMENTAL & GEOTECHNICAL ENGINEERS & CONSULTANTS

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SUPPLEMENTAL REMEDIAL INVESTIGATION WORKPLAN (REV. 1)

RIVER PLAZA SHOPPING CENTER
130 WILDEY STREET
SECTION 01, TAX SHEET 2, LOTS P-25 AND P-25B
TARRYTOWN, WESTCHESTER COUNTY, NEW YORK
NYSDEC SITE ID NO.: 360084

Submitted to:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Remediation, Region 3
21 South Putt Corners Road
New Paltz, New York 12561-1620

and

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Environmental Exposure Investigation
Flanigan Square
547 River Street
Troy, New York 12180

Prepared for:

ACADIA TARRYTOWN, LLC
1311 Mamaroneck Avenue, Suite 260
White Plains, New York 10605

Prepared by:

WHITESTONE ASSOCIATES, INC.
35 Technology Drive
Warren, New Jersey 07059

Keith T. D'Ambrosio, P.E.
Principal, Environmental Services
Professional Engineer License No. 076095

Christopher Seib
Director, Environmental Division

Whitestone Project No.: EJ0810744.002
January 21, 2010

WHITESTONE ASSOCIATES, INC.
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January 21, 2010

via email and Federal Express

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Environmental Protection, Region 3
21 South Putt Corners Road
New Paltz, New York 12561-1620

Attention: Ms. Janet Brown, Case Manager

and

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Environmental Exposure Investigation
Flanigan Square
547 River Street
Troy, New York 12180

Attention: Mr. Nate Walz, Project Manager

Regarding: **SUPPLEMENTAL REMEDIAL INVESTIGATION WORKPLAN (REV. 1)**
RIVER PLAZA SHOPPING CENTER
130 WILDEY STREET
SECTION 01, TAX SHEET 2, LOTS P-25 AND P-25B
TARRYTOWN, WESTCHESTER COUNTY, NEW YORK
NYSDEC SITE ID NO.: 360084
WHITESTONE PROJECT NO.: EJ0810744.002

Dear Ms. Brown and Mr. Walz:

Whitestone Associates, Inc. (Whitestone) is pleased to submit for your review the attached *Supplemental Remedial Investigation Workplan (Rev. 1)* (SRIW) for the above-referenced site that was prepared on behalf of Acadia Tarrytown, LLC. This SRIW has been prepared to address the New York State Department of Environmental Conservation's (NYSDEC's) and New York State Department of Health's (NYSDOH's) comments pertaining to Whitestone's June 24, 2009 *Remedial Investigation Report and Supplemental Remedial Investigation/Corrective Action Workplan* (RIR & SRI/CAW) and September 30, 2009 *Supplemental Remedial Investigation Workplan*. The NYSDEC's and NYSDOH's comments were provided to Whitestone by NYSDEC in a December 11, 2009 letter correspondence. The SRIW is also based on the items discussed with NYSDEC and NYSDOH during the January 13, 2010 conference call.

Please contact us at (908) 668-7777 with any questions or comments regarding the enclosed report.

Sincerely,

WHITESTONE ASSOCIATES, INC.

Keith T. D'Ambrosio, P.E.
Principal, Environmental Services
Professional Engineer License No. 076095

Christopher Seib
Director, Environmental Division

DK/pjp C:\Documents and Settings\azambell\Local Settings\Temporary Internet Files\OLK1\10744SuppRIW(Rev1)-Tarrytown.wpd
Enclosures
Copy: Joel Braun, Acadia Tarrytown, LLC
Elias Slaiby, Acadia Tarrytown, LLC

SUPPLEMENTAL REMEDIAL INVESTIGATION WORKPLAN (REV. 1)
River Plaza Shopping Center
130 Wildey Street
Tarrytown, Westchester County, New York

TABLE OF CONTENTS

SUPPLEMENTAL REMEDIAL INVESTIGATION WORKPLAN (REV. 1)
River Plaza Shopping Center
130 Wildey Street
Tarrytown, Westchester County, New York

TABLE OF CONTENTS

FIGURES

APPENDICES

SECTION 1.0
Executive Summary

Whitestone Associates, Inc. (Whitestone) was retained by Acadia Tarrytown, LLC (Acadia) to prepare this *Supplemental Remedial Investigation Workplan (Rev. 1)* (SRIW) to outline follow-up soil, groundwater, and soil vapor intrusion (SVI) investigations to be conducted at the River Plaza Shopping Center site located at 130 Wildey Street in Tarrytown, Westchester County, New York. This revised SRIW has been prepared to address the New York State Department of Environmental Conservation's (NYSDEC's) and New York State Department of Health's (NYSDOH's) comments pertaining to Whitestone's June 24, 2009 *Remedial Investigation Report and Supplemental Remedial Investigation/Corrective Action Workplan* (RIR and SRI/CAW) and September 30, 2009 *Supplemental Remedial Investigation Workplan*. The NYSDEC's and NYSDOH's comments were provided to Whitestone by NYSDEC in a December 11, 2009 letter correspondence.

This revised SRIW has been prepared to address soil, groundwater, and SVI conditions at the subject site. As discussed with NYSDEC and NYSDOH during the January 13, 2010 conference call, Whitestone's responses to the December 11, 2009 comments are outlined below and addressed throughout this revised SRIW.

- **Comments 1 through 7:** These comments will be addressed and/or satisfied through the submission of a comprehensive RIR following the implementation of the activities proposed in this SRIW. The investigation of on-site utility corridors, floor drains, and other subsurface structures as discussed in Comment 4 will be conducted as outlined in Section 3.0 of this report.

- **Comment 8:** NYSDEC's May 12, 2008 *Supplemental Investigation Workplan Addendum* (SIWA) is referenced in this SRIW and will be referenced in the comprehensive RIR report.

- **Comment 9:** This comment will be addressed and/or satisfied through the submission of the comprehensive RIR following the implementation of the activities proposed in this SRIW.

- **Comment 10:** A shallow and deep soil boring will be installed and sampled in the location denoted by NYSDEC and in accordance with J.R. Holzmacher, P.E., LLC's (JRH's) September 2007 *Supplemental Investigation Workplan* (SIW) and NYSDEC's May 12, 2008 SIWA. Proposed soil and groundwater investigations pertaining to this comment are presented in Section 3.0 of this report. During future groundwater investigations, groundwater level measurements will be collected on a quarterly basis to identify the potential for seasonal change in groundwater flow direction. A workplan outlining the sampling and gauging of the monitor wells is also included in Section 3.0 of this report.

- **Comment 11(a-d):** These comments pertaining to additional SVI investigation activities are addressed in Section 4.0 of this report. Comments pertaining to the reporting of trichloroethene (TCE) and/or tetrachloroethene (PCE) concentrations and SVI results/conclusions will be addressed in the comprehensive RIR.

- **Comment 12:** A comprehensive RIR will be submitted following the implementation of the activities proposed within this SRIW.

- **Comments 13 through 15:** These comments pertaining to additional SVI investigations are addressed in Section 4.0 of this report.

- **Comments 16 and 17:** As required by the December 18, 2008 *Modification to Order on Consent* which defines the site to include the Walgreens parcel, characterization including additional soil and groundwater sampling and analyses will be conducted on this parcel. Proposed soil and groundwater investigation activities in this area are outlined in Section 3.0 of this report.

- **Comment 18:** The "possible underground tank from previous survey" will be investigated as outlined in Section 3.0 of this report and as discussed during the January 13, 2010 conference call.

- **Comment 19:** An updated Project Schedule is included in Section 4.0 of this report.

- **Comment 20:** Figure 2 of this SRIW includes the entire site as defined in the December 18, 2008 *Modification to Order on Consent*. This figure will also be included in the comprehensive RIR.

- **Comments 21 through 25:** These comments pertaining to additional SVI investigation activities are addressed in Section 4.0 of this report.

- **Comment 26:** As discussed on the January 13, 2010 conference call, proposed soil vapor sample location SS-7 will not be shifted due to access constraints associated with the adjoining McDonald's parcel. Specifically, shifting this proposed location is not feasible due to the location and operation of the McDonald's drive-thru lane.

- **Comment 27:** Additional details pertaining to the communication testing to be performed as part of the SVI investigation activities are included in Section 4.0 of this report.

SECTION 2.0
Introduction

2.1 SITE LOCATION/DESCRIPTION

2.1.1 Location

The subject property is located at 130 Wildey Street in Tarrytown, Westchester County, New York. The property is further identified as Section 01, Tax Sheet 2, Lots P-25 and P-25B, and comprises approximately 3.3 acres. The site location and site layout are shown on Figures 1 and 2, respectively.

2.1.2 Existing Structures/Improvements and Current Site Use

The subject property currently consists of an approximately 24,000 square feet (footprint), single-story, retail building occupied by Walgreens, Dunkin' Donuts, and Chase Bank in the southeastern portion of the site and an approximately 9,000 square feet (footprint), retail-strip building occupied (from west to east) by Van Tassel Cleaners, Tappan Zee Dental Group, a laundromat, a video store, and a dollar store in the northern portion of the site. The remaining portions of the site consist of asphalt-paved parking and driveway areas. The off-site parcel located immediately west of the retail-strip building currently is occupied by a McDonald's restaurant.

2.1.3 Past Uses of the Property

According to historical sources reviewed by Whitestone, the current site buildings reportedly were constructed in 1976. The current Walgreens building formerly was occupied by a supermarket. The retail strip building reportedly has been occupied by a dry cleaning facility since construction. Prior to 1976, the subject property was occupied by a variety of commercial retail uses dating back to the late-1800's. Additional site history will be provided in the site conceptual model to be included in the pending comprehensive RIR.

2.1.4 Uses of Adjoining Properties

The area immediately surrounding the subject property consists of a mix of residential and commercial uses. The site is bound by residential properties beyond Wildey Street to the north; residential properties beyond Central Avenue to the east; a residential apartment building to the south; and a McDonald's restaurant, Cortland Street, commercial properties, and railroad tracks to the west.

2.2 PHYSICAL SETTING

2.2.1 Topography/Geology

Surface topography at the subject property is relatively flat with an approximate average elevation of 25 feet above mean sea level (msl). The subsurface conditions encountered in the soil borings and monitor wells previously installed at the site by Whitestone in January 2009 and February 2009 consisted of the following generalized strata in order of increasing depth.

Surface Material: Six inches of asphalt/subbase or topsoil were encountered at the surface in the borings and monitor wells drilled at the site.

Fill Materials: Fill materials generally consisting of gray medium to fine sand with variable amounts of silt, gravel, and debris were encountered in the borings drilled during these investigations. The debris encountered in the borings consisted of brick, asphalt, concrete, and wood fragments. The borings penetrated through the fill material at depths ranging from approximately 0.5 feet below ground surface (fbgs) to 6.0 fbgs.

Native Materials: Underlying the fill materials, three strata of soils were encountered in the borings. The first stratum consisted of layers of dark grayish-brown sand and silt between 6.0 fbgs and 14.0 fbgs. The second stratum consisted of a layer of dark brownish-black fibrous peat between 14.0 fbgs and 16.0 fbgs and the third stratum consisted of intermingled layers of clay, silt, and sand to termination depths of 30.0 fbgs.

Groundwater: Static groundwater conditions recorded during previous investigation and monitoring activities were encountered at depths that ranged from approximately 6.0 fbgs to 8.05 fbgs.

2.2.2 Surface Water/Wetlands

No evidence of surface water or wetland areas were observed on site. The subject property is not described on the United States Fish and Wildlife Service *National Wetlands Inventory Interactive Mapper* as a mapped wetlands area. The nearest surface water body or wetlands area is located approximately 0.25 mile to the west of the subject property.

2.2.3 Groundwater

Groundwater was encountered beneath the subject property during the most recent investigation activities at depths of approximately 6.0 fbgs to 8.05 fbgs. Groundwater was determined to flow in a southwesterly direction during Whitestone's previous remedial investigation activities.

2.3 OBJECTIVE

In response to NYSDEC's and NYSDOH's comments pertaining to Whitestone's June 24, 2009 RIR & SRI/CAW and September 30, 2009 SRIW and as discussed on the January 13, 2010 conference call with NYSDEC and NYSDOH, supplemental soil and groundwater investigations will be conducted at the site as presented in Section 3.0 of this report. Supplemental SVI investigations also will be conducted at the site as presented in Section 4.0 of this report. The results of the proposed investigations and prior investigations at the site will be utilized to develop a site conceptual model.

The proposed remedial investigation activities will be conducted as required by the May 12, 2005 *Order on Consent* and subsequent December 18, 2008 modification. The comments addressed in this SRIW were provided in a December 11, 2009 NYSDEC letter correspondence. The remedial investigation activities will be conducted in accordance with NYSDEC *DER-10 Technical Guidance for Site Investigations and Remediation* and NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006).

SECTION 3.0
Supplemental Remedial Investigation Workplan (Soil/Groundwater)

This section of the SRIW has been prepared to address NYSDEC's and NYSDOH's comments pertaining to soil and groundwater conditions at the site.

3.1 SUPPLEMENTAL SOIL AND GROUNDWATER INVESTIGATION

3.1.1 Suspected UST Investigation (Comment 18)

Based on NYSDEC's Comment 18 and a site survey not previously provided to Whitestone, a suspected underground storage tank (UST) location had been identified in the parking lot area to the southeast of the retail-strip building. A ground penetrating radar (GPR) survey will be conducted at the subject property in an effort to locate the suspected UST location. A magnetic locator will be utilized to supplement the effort of the GPR unit.

Whitestone will use Geoprobe sampling equipment to advance up to five shallow soil borings to maximum depths of 15 fbgs in the vicinity of the suspected UST location in an attempt to evaluate potential impacts to subsurface soil and groundwater conditions. If the GPR survey identifies an anomaly indicative of an UST, one boring will be advanced within two feet of each side of the UST (four borings). If the GPR survey identifies an anomaly indicative of an UST excavation, one boring will be advanced on each side of the excavation and one boring will be advanced through the center of the excavation (five borings). If the GPR survey does not identify an anomaly indicative of an UST or UST excavation, one boring will be advanced in the vicinity of the suspected UST location based on the site survey for site characterization purposes.

One groundwater sample will be collected within or downgradient of the suspected UST location through the installation of a PVC temporary wellpoint. Soil samples will be screened with a photoionization detector (PID) for evidence of volatile organic contamination. One soil sample will be collected from each boring based on field screening and visual observation. Soil and groundwater samples collected in the vicinity of the suspected UST location will be submitted for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) analyses by USEPA Methods 8260/8270. Proposed soil boring locations are identified on Figure 2. The soil analytical results from this sampling event will be compared with the appropriate 6 New York Codes, Rules and Regulations (NYCRR) Part 375 Soil Cleanup Objectives and groundwater results will be compared to NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Water Quality Standards.

3.1.2 Utility Investigation (Comment 4)

The GPR survey along with utility locating equipment will also be utilized to identify utility corridors, floor drains, and other subsurface structures in an effort to develop the site conceptual model and identify potential preferential pathways.

3.1.3 Supplemental Site Characterization

Comment 10

Whitestone's previous investigations have identified a southwesterly groundwater flow direction at the site. To confirm or deny contaminant migration to the southwest of the retail-strip building, one additional shallow and deep soil boring will be installed to the southwest of the building as shown on Figure 2. Whitestone will use Geoprobe sampling equipment to advance the soil borings in a manner consistent with JRH's September 2007 SIW. Accordingly, the shallow boring will be completed as a monitor well (MW-8). If field screening or visual evidence indicates the presence of contamination in the deep boring, the deep boring will also be completed as a monitor well (MW-8D). Soil and groundwater will be sampled from the borings/well in a manner consistent with JRH's 2007 SIW and NYSDEC's May 12, 2008 SIWA. Soil and groundwater samples will be collected and analyzed for TCL+30/TAL compounds. In addition, since shallow site soils previously have not been characterized, a soil sample will be collected from the top two feet of the shallow boring and analyzed for TCL+30/TAL compounds. The soil analytical results from this sampling event will be compared with the appropriate 6 NYCRR Part 375 Soil Cleanup Objectives and groundwater results will be compared to NYSDEC TOGS 1.1.1 Water Quality Standards.

Comments 16 and 17

Two additional shallow and deep soil borings will be installed in the vicinity of the Walgreens in an effort to characterize Parcel P-25B as discussed on the January 13, 2010 conference call. Soil and groundwater samples will be collected from these borings pursuant to JRH's September 2007 SIW and NYSDEC's May 12, 2008 SIWA and analyzed for TCL+30/TAL compounds. Monitor wells will not be installed in either of these locations unless contamination is noted during boring installation. Proposed soil boring locations are identified on Figure 2. The soil analytical results from this sampling event will be compared with the appropriate 6 NYCRR Part 375 Soil Cleanup Objectives and groundwater results will be compared to NYSDEC TOGS 1.1.1 Water Quality Standards.

3.1.4 Monitor Well Sampling and Gauging (Comment 10)

Upon installation, monitor well MW-8 will be surveyed to establish its location and elevation. Following the surveying effort, one round of groundwater sampling will be conducted from monitor well MW-8 for TCL+30/TAL analyses. The remainder of the monitor wells (MW-1 through MW-7) will be gauged at that

time to establish groundwater flow direction. The wells will continue to be gauged to evaluate groundwater flow direction on a quarterly bases for one additional quarter. These two gauging events along with Whitestone's prior gauging events will satisfy the requirements of JRH's 2007 SIW. The sampling and gauging will be conducted as outlined in JRH's September 2007 SIW and NYSDEC's May 12, 2008 SIWA.

3.2 DISPOSAL OF INVESTIGATION DERIVED WASTES

Soil cuttings and purged water generated from well installation sampling activities will be containerized and subsequently transported from the site for regulated off-site management.

SECTION 4.0
Supplemental Remedial Investigation Workplan (Air Quality)

This section of the SRIW has been prepared to address NYSDEC's and NYSDOH's comments pertaining to the SVI investigation at the site.

4.1 PRODUCT INVENTORY INSPECTION (COMMENT 11c)

Prior to the sub-slab and indoor air quality (IAQ) sampling activities, a product inventory inspection will be conducted to identify any potential sources of PCE, TCE, and/or other contaminants within Van Tassel Cleaners as well as the adjoining tenants located in the retail-strip building. During the product inventory inspection, a NYSDOH *Indoor Air Quality Questionnaire and Building Inventory* form will be completed for each of the tenants of the retail-strip building. A copy of this form is included as Appendix 1 of this report. Potential sources of PCE, TCE, and/or other contaminants will be identified, documented, and removed (if feasible) prior to sub-slab and IAQ sampling activities.

4.2 SUB-SLAB AND INDOOR AIR QUALITY SAMPLING (COMMENTS 11, 13 TO 15, AND 21 TO 25)

To address NYSDEC's and NYSDOH's comments, one sub-slab soil gas sample will be collected within Van Tassel Cleaners as well as in each of the four units located within the adjoining retail structure (Tappen Zee Dental Group, the laundromat, the video store, and the dollar store) in order to investigate the potential for SVI. Concurrently, one IAQ sample will be collected from within each of the five units which occupy the retail structure.

Soil gas vapor samples will also be collected to assess the potential for SVI into the adjacent McDonald's restaurant and the Walgreens building. Specifically, one soil gas vapor sample will be collected immediately northwest and one soil gas vapor sample will be collected immediately southwest of the drycleaners unit to assess the potential for SVI into the McDonald's restaurant. One additional soil gas vapor sample will be collected in the parking lot area to the southeast of the drycleaners unit to assess the potential for SVI into the Walgreens building. One ambient air quality sample will also be collected from outside the retail-strip building to establish background conditions.

The sub-slab, soil gas, IAQ, and ambient air samples will be collected over an 8-hour duration utilizing Summa canisters and submitted to a NYSDOH-certified laboratory for VOC analyses by EPA Method TO-15. Whitestone will ensure that the NYSDOH-certified laboratory properly meets the detection limits for each of the VOCs analyzed. The samples will be collected utilizing the methodologies outlined in

NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The negative inches of mercury contained within the Summa canisters will be recorded prior to and following sample collection. The proposed sample locations are identified on Figure 2. The analytical results from this sampling event will be compared with the criteria outlined in NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006). The proposed sampling activities will be conducted during the heating season (prior to March 31, 2010) which runs from November 15th through March 31st .

4.3 COMMUNICATION TESTING (COMMENT 27)

Following Whitestone's review of the results of the sub-slab and IAQ sampling activities and prior to the design of the sub-slab depressurization systems (SSDS), communication testing will be performed to confirm that vapors will be drawn from underneath the entire floor slab of each of the building units. The proposed communication testing will consist of drilling three holes through each unit's flooring and concrete slab. These borings will be terminated in the sub-base material immediately beneath the floor slab. One boring location will be installed in the anticipated location of the future SSDS unit and the two other borings will be installed in the two locations within the unit that are furthest from the anticipated SSDS location to ensure that a vacuum can be created across the entire floor slab of the unit. Hand-held, digital micro-manometers with the ability to measure inches of water column (wc) of pressure to the ten thousandth of an inch of a wc with an accuracy of one percent will be placed in the two holes away from the proposed SSDS unit location to evaluate/measure pressure differentials when a vacuum/suction is applied in the third test hole (proposed SSDS location). The digital micro-manometers will be utilized to confirm that a preferred pressure differential of 0.0025 inches wc to 0.0035 inches wc can be achieved across the floor slabs. A portable device capable of establishing comparable vacuum pressure to a SSDS will be utilized to complete the communication testing. A meter will be utilized to measure the cubic feet per minute (CFM) of air necessary to be removed to create the required vacuum pressure across the floor slabs. The holes will be sealed following the tests.

4.4 REPORTING

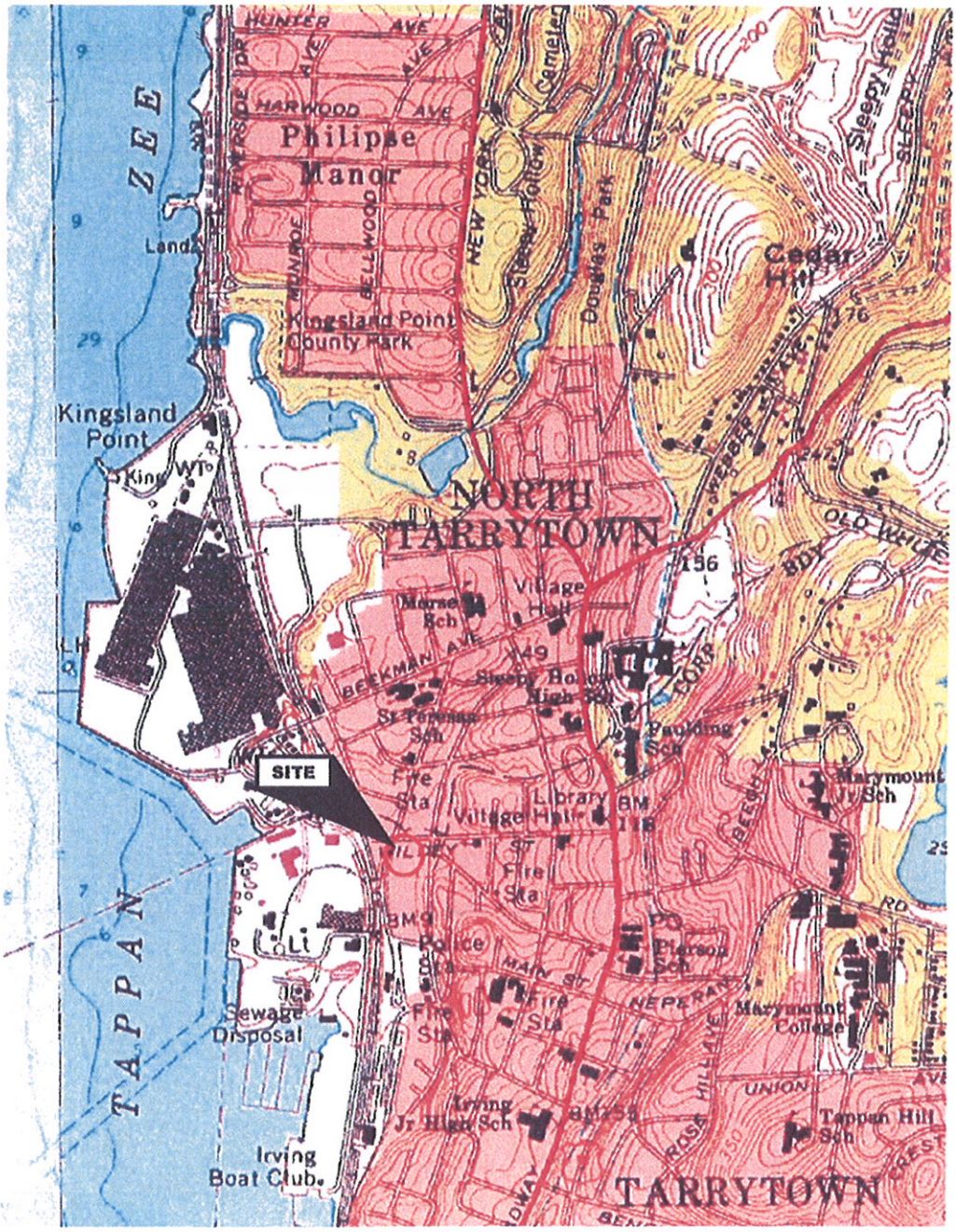
Upon completion of the proposed activities outlined in Sections 3.0 and 4.0 of this report, a comprehensive *Remedial Investigation Report and Supplemental Remedial Investigation/Corrective Action Workplan* will be submitted to NYSDEC and NYSDOH for review. The workplans will include recommendations for supplemental remedial investigations and/or corrective actions that may be necessary to address site conditions. Furthermore, the comprehensive RIR will address NYSDEC's and NYSDOH's comments as outlined in the December 11, 2009 letter and will develop a site conceptual model in accordance with NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation*. If the installation of SSDS units are necessary, an *Interim Remedial Measure Workplan* will be submitted to NYSDEC and NYSDOH and will include installation details and locations.

4.5 SCHEDULE (COMMENT 19)

The following proposed tasks will be completed under the supervision of a Professional Engineer pursuant to the site's *Health and Safety Plan* and *Quality Assurance Project Plan*:

Task	Estimated Schedule*
Product Inventory Inspection	One Week
GPR Survey, Utility Investigation, Supplemental Soil, Groundwater, and SVI Sampling, and Well Installation	Two Weeks
Monitor Well Survey and Sampling	Three Weeks
Communication Testing and IDW Disposal	Five Weeks
Groundwater Gauging	Three Weeks 15 Weeks
Submission of comprehensive *Remedial Investigation Report and Supplemental Remedial Investigation/Corrective Action Workplan*	17 Weeks
* Startup and schedule are from NYSDEC's and NYSDOH's approval of this SRIW.	

FIGURE 1
Site Location Map



TITLE: **Site Location Map**							
CLIENT: ACADIA TARRYTOWN, LLC							
PROJECT: SRIW River Plaza Shopping Center 130 Wildey Street Tarrytown, Westchester County, New York	PROJECT #: EJ0810744.002	BY: USGS	PROJ. MGR.: CS	DATE: 1979	SCALE: 1"=2,000'	FIGURE: 1	

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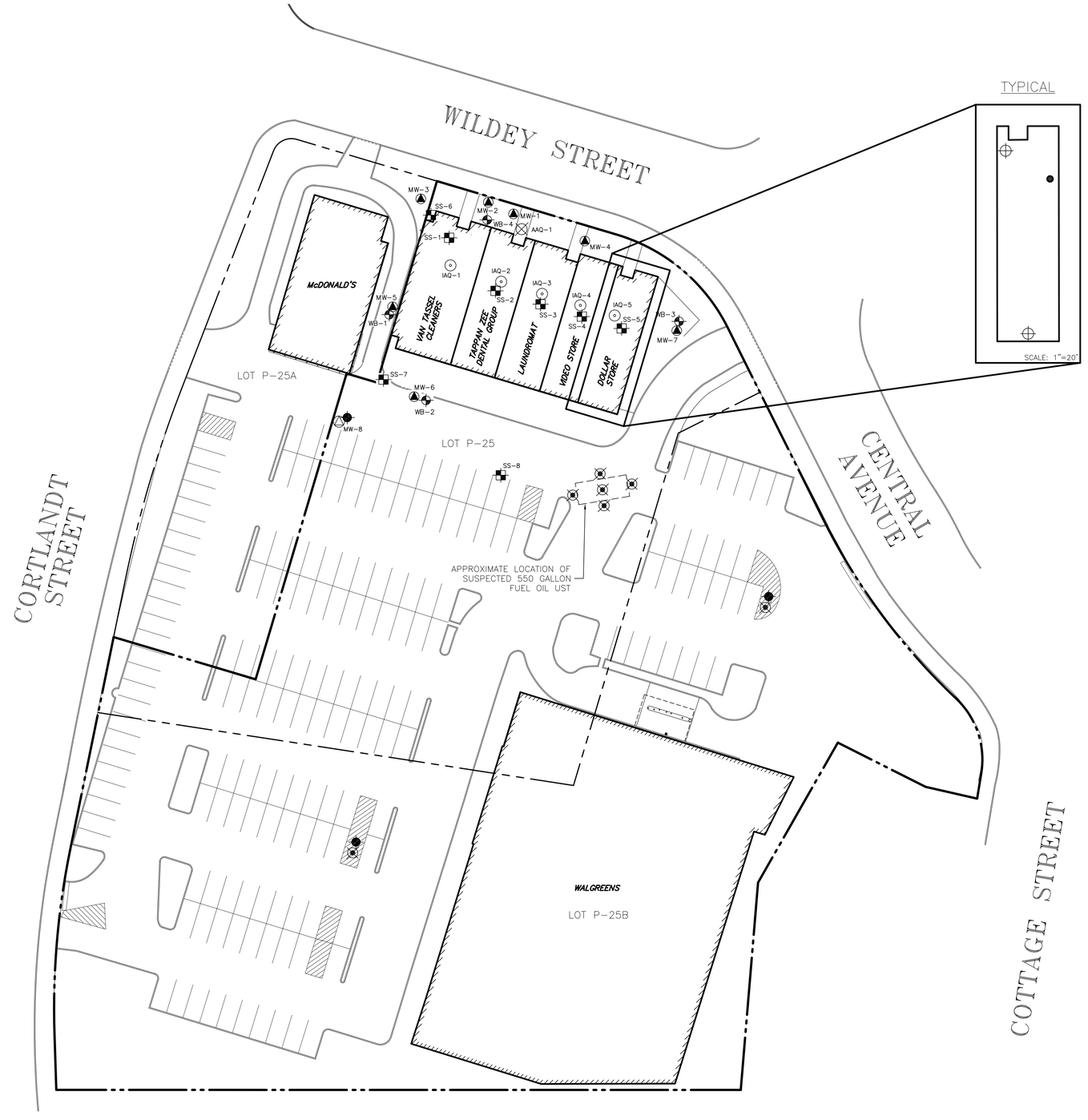
FIGURE 2
Site and Sample Location Plan



LEGEND

- MW-1 — MONITOR WELL LOCATION
- WB-1 — BORING LOCATION (APPROX.) PERFORMED BY WHITESTONE IN JANUARY 2009 OR FEBRUARY 2009
- PROPOSED SHALLOW BORING/MONITOR WELL LOCATION (APPROX.)
- PROPOSED DEEP BORING LOCATION (APPROX.)
- PROPOSED SHALLOW BORING LOCATION (APPROX.)
- SS-1 — PROPOSED SUB-SLAB SOIL VAPOR/SOIL GAS SAMPLE LOCATION (APPROX.)
- IAQ-1 — PROPOSED INDOOR AIR SAMPLE LOCATION (APPROX.)
- AAQ-1 — PROPOSED AMBIENT AIR SAMPLE LOCATION (APPROX.)
- PRESSURE GAUGE LOCATION (APPROX.)
- FUTURE SSDS LOCATION/VACUUM POINT (APPROX.)
- SUBJECT PROPERTY BOUNDARY (APPROX.)
- TAX MAP LOT LINE

NOTE

SUB-SLAB SOIL VAPOR AND IAQ SAMPLE LOCATIONS MAY VARY BASED ON SITE CONDITIONS.

REFERENCE

THIS PLAN IS BASED UPON A SEPTEMBER 23, 2008 ALTA/ACSM LAND TITLE SURVEY PREPARED BY CONTROL POINT ASSOCIATES, INC. AND A MARCH 10, 2009 MONITORING WELL LOCATION MAP PREPARED BY DPK CONSULTING, LLC.

GRAPHIC SCALE

0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

TITLE: **SITE AND SAMPLE LOCATION PLAN**

CLIENT: ACADIA TARRYTOWN, LLC

PROJECT: RIVER PLAZA SHOPPING CENTER
130 WILDEY STREET
TARRYTOWN, WESTCHESTER COUNTY, NEW YORK

WHITESTONE ASSOCIATES, INC.
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PROJECT #:	BY:	PROJ. MGR.:	DATE:	SCALE:	FIGURE:
EJ0810744.002	RP	CS	1/15/10	1" = 30'	2

APPENDIX 1
NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name _____ Date/Time Prepared _____

Preparer's Affiliation _____ Phone No._____

Purpose of Investigation_____

1. OCCUPANT:

Interviewed: Y / N

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / N

Last Name: _____First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors_____ Building age_____

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: _____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors Main Floor Other_____

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

_____

_____

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	_____
1st Floor	_____
2nd Floor	_____
3rd Floor	_____
4th Floor	_____

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA
Please specify_____

d. Has the building ever had a fire? Y / N When?_____

e. Is a kerosene or unvented gas space heater present? Y / N Where?_____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _____

g. Is there smoking in the building? Y / N How frequently? _____

h. Have cleaning products been used recently? Y / N When & Type? _____

i. Have cosmetic products been used recently? Y / N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?_____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?_____

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?_____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	Public Water	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	Public Sewer	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

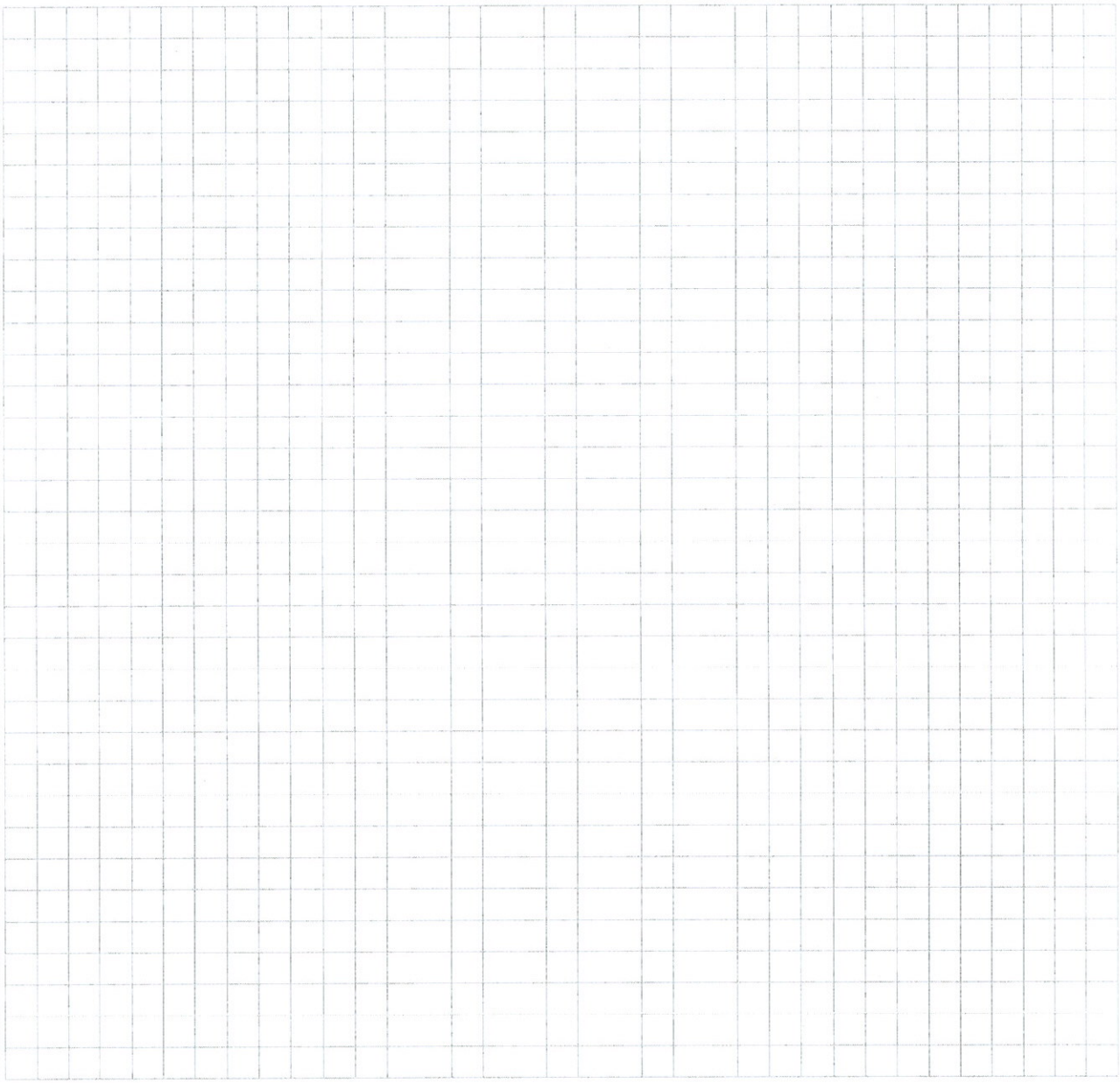
Basement:

First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

APPENDIX 2
NYSDEC December 11, 2009 Letter

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 3
21 South Putt Corners Road, New Paltz, New York 12561-1620
Phone: (845) 256-3000 • **Fax:** (845) 255-3414
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

Transmitted Via: Email

December 11, 2009

Mr. Keith T. D'Ambrosio, PE
Mr. Christopher Seib
Whitestone Associates, Inc.
35 Technology Drive
Warren, NJ 07059

RE: RI Report, Supplemental RI/Corrective Action Work Plan; Supplemental RI Work Plan
Site #: 360084

Dear Messrs. D'Ambrosio and Seib:

The New York State Departments of Environmental Conservation and Health ("NYSDEC/NYSDOH" or "the agencies") have reviewed the June 24, 2009 *Remedial Investigation Report* (RIR) *& Supplemental RI(SRI)/Corrective Action Work Plan* (CAWP) and the September 30, 2009 *Supplemental Remedial Investigation Work Plan* (SRIWP). The RIR/SRI, CAWP and SRIWP are disapproved. The comments/reasons for disapproving the RIR & SRI/CAWP and SRIWP are listed below and include the initial NYSDOH comments on the June 2009 document that were provided to Whitestone on July 27, 2009.

June 2009 *RIR & SRI/CAWP*:

1. The RIR should be revised and resubmitted to contain all of the data gathered for the Site Characterization/Remedial Investigation into one comprehensive RIR, which defines the full nature and extent of contamination and creates a site conceptual model, consistent with DER-10 – Technical Guidance for Site Investigation and Remediation (see below link) and the May 12, 2005 Order on Consent and subsequent December 18, 2008 modification. The revised RIR should include discussion of all relevant/valid data, data summary tables and figures, appending the previous relevant investigations to the comprehensive RIR, as well as address the comments herein.
http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf)

2. A data validation summary discussion should be included in the body of the revised RIR.

3. A summary discussion of the Community Air Monitoring Program data should be provided in the report text and the data included on a CD as a document appendix.

4. Attached is a February 21, 2006 letter that contained the agencies'comments on the January 2005 *Site Charactertization Report/Remedial Action Plan*. Many of the comments in that letter were to be addressed in the comprehensive investigation report that was ultimately prepared for this site (see comment 1). To the extent these comments were not addressed in the subsequent submittals, please ensure these items are

covered in the revised RIR or SRIWP, as appropriate (e.g., utility corridors/connections, floor drains, etc., that could act as preferential pathways were not located on the site plans or investigated).

5. Section 2.2.1 should speak to the presence/absence of perched groundwater. Previous investigations by others indicated that perched groundwater appeared to be present at the northwest corner of the property.

6. Section 2.3 references exceedances of respective soil cleanup objectives (SCOs). Please note that in preparing the revised RIR and site conceptual model that site data should be compared to the appropriate 6 NYCRR Part 375 SCOs.

7. Section 2.3 references the March 2004 removal of the 550 gallon fuel oil underground storage tank (UST). Please indicate whether a tank tightness test performed, and if so, please include the results in this discussion.

8. Section 2.4 should also mention the May 12, 2008 work plan addendum.

9. Section 3.1.1: Please clarify that NYSDEC was not informed of the start of the off-site investigation field work on January 13, 2009 until after the work was completed, and thus did not have an opportunity to perform oversight, or advise of the requirement for full characterization (TCL+30/TAL) per the May 12, 2008 addendum to the *Supplemental Investigation Work Plan* (SIWP) that had not been provided to Whitestone by the previous owner.

10. Section 3.2: Page 13 of the SIWP indicated that three rounds of groundwater levels, once every three months, would be collected to determine the direction of groundwater flow. While three rounds were collected, they were too close together (i.e., February 24, 2009, April 2 and 24, 2009) such that potential seasonal changes in groundwater flow direction could not be identified. However, the agencies acknowledge the slight flexure noted between the February and April gauging events. Site monitoring wells should be gauged at the previously-approved frequency to confirm the apparent southwesterly groundwater flow direction remains consistent.

    Since the well locations were chosen based on the presumed westerly groundwater flow direction, and there is no monitoring well directly down-gradient based on the identified southwesterly groundwater flow direction, an additional shallow and deep soil boring should be installed and the soil sampled consistent with the September 2007 SIWP and the May 12, 2008 addendum. The shallow boring shall be completed as a monitoring well also consistent with the September 2007 SIWP. If evidence suggests that there is contamination in the deep boring, that boring shall also be completed as a monitoring well; otherwise a groundwater grab sample should be collected and analyzed for the full suite of parameters. See attached figure for approximate boring/well locations. In addition, since there are no characterization data for shallow site soils, a soil sample should be collected from the top 2 feet of the new shallow boring and analyzed for the full suite of parameters.

11. Section 3.5 is deficient for the following reasons:

a. Only the dry cleaner section of this approximately 9,000-square foot (sf) retail building was investigated. According to the document, the other businesses in this retail building include the Tappan Zee Dental Group, a laundromat, a video store, and a Dollar Store. Based on review of the data collected from the dry cleaner shop and the likelihood of a continuous slab under the remainder of the building, a Supplemental Soil Vapor Intrusion (SVI) WP for the remainder of the building should be developed and submitted to the

agencies, or corrective actions (i.e., an expanded sub-slab depressurization system [SSDS]) should be considered for reducing the potential for exposure to the employees and patrons of those other businesses.

b. Because tetrachloroethene (PCE) is currently used by this dry cleaner, it is permissible to compare the detected indoor air PCE level to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) as the potential exists for the PCE detected in the indoor air to be a result of the dry cleaning operation (i.e., dry cleaned clothes), although it is reported that the dry cleaner has used a closed loop system since 1980. The 8th sentence in this section should be revised to reflect only one sample was collection the indoor air. The current sentence is plural which suggests more than one indoor air PCE result which is incorrect.

c. The 10th sentence states that the "...TCE (trichloroethene) concentration was above the NYSDOH air guideline value in the indoor air sample." The next sentence states that "...the source of the TCE likely is attributable to a source within the dry cleaners." Since TCE was not detected in any of the three sub-slab soil vapor samples, the agencies agree that the source of the TCE detected in the indoor air sample (15.9 ug/m^3) is something other than from soil vapor intrusion. However, because this detected concentration exceeds the NYSDOH air guideline of 5.0 micrograms per cubic meter (ug/m^3) for TCE, the source of the TCE should be identified through a review of the product inventory, or by conducting a product inventory if one was not completed previously, or by resampling of the indoor air.

d. The agencies disagree with the final sentence of Section 3.5, which is nearly identical to the conclusion in the October 13, 2008 letter report found in Appendix F. The conclusion states that "...the PCE level detected in the indoor air sample does not appear to indicate that the PCE contamination beneath the building is contributing to the PCE level detected within the dry cleaners." That statement is indefensible and should be removed from this June 2009 document. That statement is in sharp contrast to the proposal in the document to install an active SSDS beneath the dry cleaners.

12. Section 4.1: As noted in comment 1, the revised RIR should be a comprehensive report that includes all relevant site characterization data.

13. Section 4.2: A SSDS (i.e., placing a PVC pipe into the sub-base beneath the dry cleaner slab and actively venting to the atmosphere) is proposed only for the dry cleaner portion of the 9,000-sf building. No explanation has been provided as to why the entire building is not being depressurized, especially since there is likely a shared foundation slab with communication via the sub-base material. The potential for vapor migration and intrusion into the other businesses within this retail structure needs to be considered, evaluated, investigated and/or mitigated.

14. Section 4.2: The potential for vapor migration and intrusion into the adjacent McDonald's restaurant and the 24,000 sf retail building in the same shopping center plaza should be evaluated/investigated during the proposed supplemental RI and discussed in the revised RI report to support a recommendation for mitigation or no corrective action, as appropriate.

15. Section 4.2 makes no mention of a pressure field extension test to show that the system is drawing vapors under the entire slab. Any SSDS design work plan should include details of the confirmation testing (physical and chemical) that would be performed along with operation, monitoring and maintenance requirements.

September 2009 *Supplemental RIWP*:

16. Since the site definition/metes and bounds description (see the December 18, 2008 Modification to the

Order on Consent) includes the Walgreens parcel this area will also require characterization. Therefore, the SRIWP should be expanded to include investigation of the entire site as defined.

17. The SRIWP should be expanded to include the additional groundwater and soil sampling requested above, in addition to the SVI sampling outlined below.

18. Based on a review of a survey plan received for the subject property, please also expand the SRIWP to investigate the "possible underground tank from previous survey" noted on the south side of the strip mall building (see attached figure).

19. Please provide an updated project schedule. The supplemental investigation work should be completed first and the results included in the comprehensive RIR. Should the data indicate that, for instance, a SSDS is necessary, an Interim Remedial Measure (IRM) work plan should be prepared and submitted to the agencies for review and approval.

20. Section 2.1.1: Please include a site plan that shows the entire site, including the tax parcels. This section states that Figure 2 shows the entire site, but it is not reflective of the entire 3.3-acre parcel.

21. Section 3.1: A copy of the NYSDOH's product inventory and building questionnaire form that should be filled out for each location/tenant space sampled is attached.

22. Section 3.2: The proposed concurrent sub-slab and indoor air samples should be collected over an 8-hour period.

23. Section 3.2: The detection limits for TCE, vinyl chloride and carbon tetrachloride must be 0.25 micrograms per cubic meter (ug/m^3) for indoor and outdoor air samples. Detection limits for all compounds need to be 1 ug/m^3 for sub-slab and soil gas samples as this was a problem in the first round of sampling. During the soil vapor intrusion testing done in March 2008, TCE was detected in the indoor air at 15.9 ug/m^3 and the report states that TCE was not detected in sub-slab vapor. However, all of the sub-slab samples had elevated detection limits ranging from 18.4 to 46.8 ug/m^3.

24. Section 3.2: The air samples collected should have the negative inches of mercury in the SUMMA canisters recorded prior to sample collection and at the end of the 8-hour period.

25. Section 3.2: Please note that the heating season runs from November 15th through March 31st. Page 7 lists November 1st as the start of the heating season.

26. Section 3.2: Proposed soil vapor sample SS-7 should be shifted to a location just north of MW-5 to better assess vapor migration from the dry cleaners. Please note that the sample location should be off-set by at least 5 feet from MW-5 to avoid short-circuiting from the existing monitoring well.

27. Section 3.3: This section is incomplete and will not be accepted as is. A separate document should be submitted that details testing procedures and system design specifications.

In accordance with Subparagraphs and II.E.2 of the fully-executed Consent Order for the River Plaza Shopping Center Site, dated May 25, 2005, as modified on December 18, 2008 (the "Order"), Robert Martin Company, LLC and Acadia Tarrytown, LLC (f/k/a Noddle Tarrytown Development Co., LLC) (collectively referred to as the "Respondent") must notify the NYSDEC in writing of the Respondent's election regarding the

Department's disapproval of the RIR/SRI, CAWP and SRIWP "within 30 days after the date of this letter." As further provided in Subparagraph II.E.2 of the Order, if the "Respondent elects to modify the submittal, Respondent shall, within sixty (60) days after such election, make a revised submittal to the Department that addresses all of the Department's stated reasons for disapproving the first submittal." Should the Respondent elect to revise the above submittals, the revised SRIWP should be submitted (within 60 days of the election), approved and implemented first. The comprehensive RIR would then be revised, and subsequently resubmitted, to include the data generated from the implementation of the SRIWP and the information noted above. Please feel free to call me at (845) 256-3826 with any questions.

Nothing contained herein constitutes a waiver by the Department of any rights under applicable state and federal law or the relevant Order, nor does it constitute a release of any party from obligations under those same laws or the relevant Order.

Sincerely,

Janet E. Brown

Janet E. Brown, PE
Project Manager

ec (via emai): R. Masters, Esq., Acadia Tarrytown, LLC
S. Spring, The Robert Martin Company, LLC
G. Berger, The Robert Martin Company, LLC
D. Kapson, Whitestone Associates
A. Tamuno, Esq., NYSDEC OGC
E. Moore, PE, NYSDEC
M. VanValkenburg, NYSDOH
N.Walz, NYSDOH

FILE

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 3
21 South Putt Corners Road, New Paltz, New York 12561-1696
Phone: (845) 256-3826 • **FAX:** (845) 255-3414
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

February 21, 2006

Mr. Lloyd Roos
Robert Martin Company, LLC
100 Clearbrook Road
Elmsford, NY 12523

Mr. James M. DeMartinis
Senior Hydrogeologist
J.R. Holzmacher, PE, LLC
300 Wheeler Road, Suite 303
Hauppauge, NY 11788-4300

RE: River Plaza Shopping Center - Site Characterization Report/Remedial Action Plan
Site ID No. - 360084

Dear Mr. Roos and Mr. DeMartinis:

The NYSDEC and the NYSDOH have reviewed the January 2005 Site Characterization Report (SCR)/Remedial Action Plan (RAP) and the subsequent March 2005 Geoprobe™ Investigation Report, as well as the various historical focused subsurface investigation reports and provide the following comments:

- In general, the site characterization information needs to be supplemented to fully characterize the nature and extent of contamination and facilitate the development of a comprehensive conceptual site model, as well as qualitatively evaluate whether a public health exposure exists or potentially exists (on-site and off-site), per the requirements of DER-10. As such, a supplemental investigation work plan should be prepared to address the items noted herein.

- The conceptual site model should be developed using the information gathered to date, qualified as appropriate, and supplemented with additional information, including a scaled site plan and geologic cross-sections that present sampling locations, areal and vertical extent of soil and groundwater contamination, property lines, groundwater elevations, subsurface geology, locations/elevations of utility corridors, floor drains and other subsurface features that may affect contaminant migration or remedial design.

- More specifically, in developing the site conceptual model, several items noted in the previous work should be addressed/clarified and additional activities performed, as follows:
  - Groundwater flow direction needs to be clarified, both in the reported perched layer and below.
  - If possible, define the extent of the perched water table, or determine where it may discharge, in considering potential contaminant flow paths and exposure scenarios.
  - Define the extent of the silt/clay "confining" layer (i.e., historic borings on the west side of the site did not extend deep enough to confirm the presence of the silt/clay layer in the presumed down-gradient direction, while on the south side, the silt/clay layer does not appear to be present).
  - Based on the location of the dry cleaning machine and the presumed westward groundwater flow direction, a soil boring/groundwater monitoring well should be placed directly west of the dry cleaning machine (i.e., in the McDonald's driveway), and soil and groundwater samples should be collected and analyzed for site constituents (VOCs and SVOCs).
  - Another round of groundwater sampling should be performed since some of the previous investigations noted concerns/uncertainty about sampling procedures and data quality/reliability. Please include sampling procedures, a health and safety plan and quality assurance project plan for additional investigation activities consistent with DER-10. The requested additional sampling and analysis should be performed using a NYS Environmental Laboratory Accreditation Program (ELAP) certified lab and a Data Usability Summary Report (DUSR) should be prepared per DER-10 requirements.
  - A soil gas/vapor intrusion survey should be performed in accordance with the NYSDOH Soil Vapor Intrusion Guidance Manual. Utility corridors, floor drains, etc. should be located on site plans as mentioned above and investigated as they could also act as a migration pathway for subsurface vapors or groundwater, depending on their location/depth.
  - Additional indoor soil sample collection should be attempted (e.g., west of the dry cleaning machine in the presumed down-gradient direction). An attempt should be made to determine the cause and extent of the shallow refusal (refusal at 2 feet bgs) encountered below the building slab noted in a previous investigation. As we discussed, based on the site history and 1982 site boring logs you provided in December 2005, it's likely that refusal occurred due to the presence of an old foundation or floor slab (rather than bedrock), the presence of which could complicate evaluation of potential historical source areas and soil vapor behavior.
  - Historic boring logs for the 1982 construction of River Plaza indicate that bedrock is was not encountered at depths up to 35 feet bgs. Depending on the results of the additional investigation activities discussed herein, it may be necessary to determine

whether bedrock has been affected by site constituents, since chlorinated solvents tend to sink due to their specific gravity. While a concern was noted about drilling through the potential confining layer and creating a contaminant migration pathway to the bedrock, alternate drilling/well installation methods can be employed to address this concern.

- While the NYSDEC/NYSDOH (the Agencies) are conceptually in agreement with the proposed use of Regenesis' Hydrogen Release Compound (HRC) to treat residual contamination, a detailed remedial action work plan will need to be prepared and signed by a NYS licensed professional engineer, and approved by the Agencies, prior to implementation. Collection of natural attenuation parameters and other information outlined in the HRC project evaluation form available on the Regenesis website may be considered/performed during this supplemental site investigation phase in order to expedite the remedial design.

- The Agencies will accept the previously submitted historical documents as fulfilling the records search requirement noted in the consent order.

Please feel free to call me at (845) 256-3826 with any questions.

Sincerely,

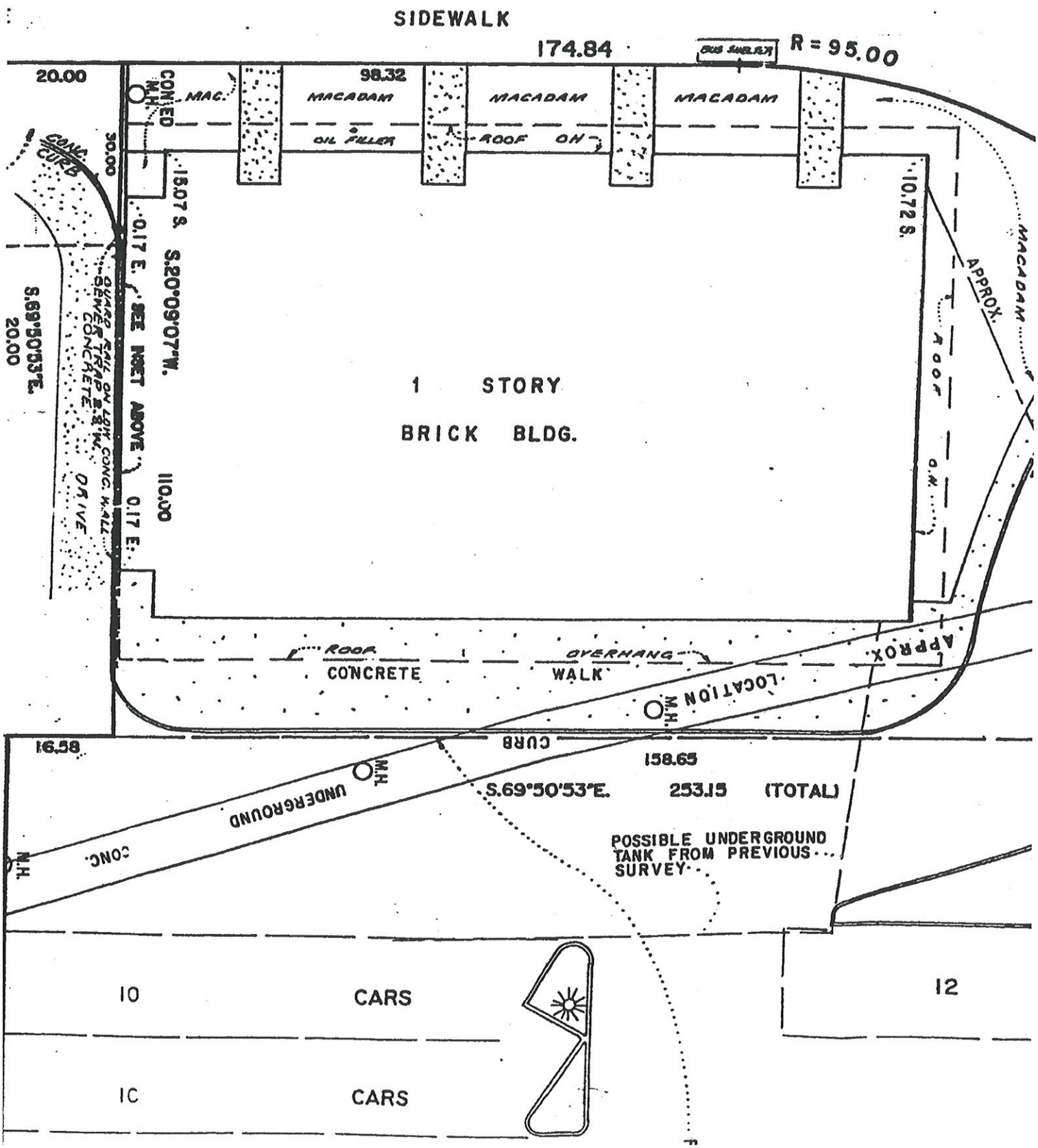
Janet E. Brown

Janet E. Brown, PE
Project Manager

Encl.

cc: R. Pergadia, PE, NYSDEC DER, RHWE (electronic copy via email)
A. Tamuno, Esq. NYSDEC DEE, (electronic copy via email)
B. Callaghan, NYSDOH (electronic copy via email)

DEY STREET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0.17 E.
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SEWER TRAP
CONCRETE
DRIVE
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APPROX.
ROOF O.H.
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BRICK BLDG.
ROOF
OVERHANG
CONCRETE
WALK
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CONC.
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10 CARS
12