HK ENGINEERING & GEOLOGY, D.P.C.
A Member of the Hillmann Family of Companies

Phase II Work Plan

For

Fulton and Chelsea-Elliott

Manhattan, NY 10001

Prepared for:

Elliott Fulton LLC

c/o Essence Development

30 Hudson Yards

New York, NY 10001

Prepared by:

HK Engineering & Geology, D.P.C.

1600 Route 22 East

Union, NJ 07083

908.688.7800

September 2023

Table of Contents

Introduction

This Phase II Investigation Work Plan has been developed for Fulton and Elliott-Chelsea ("FEC") which is a joint venture between Essence Development and The Related Companies, New York City Housing Authority's designated development partners for the leasehold disposition, financing, capital rehabilitation, property management, and social services delivery of 4 public housing developments (Fulton Houses, Elliott Houses, Chelsea Houses, and Chelsea Addition), spanning 18 buildings and totaling 2,056 units across two sites in the West Chelsea neighborhood in New York City. This specific workplan has been developed for the first stage of redevelopment consisting of two buildings, Fulton 11 and Chelsea-Addition.

Site Location, Current Use, and Proposed Development Plan

The project site consists of two buildings that will be constructed during the first stage of redevelopment:

Fulton 11, a 7-story, 47,656-gross-square-foot (gsf) apartment building (36 dwelling units) with approximately 10-foot deep basement, located at 401-419 W. 19th Street (Block 717, Lot 19), adjacent to the northwest corner of the W. 19th Street and 9th Avenue intersection. Adjacent areas that would be redeveloped in tandem with the building site are currently occupied by a playground, a 9-space surface parking lot, and other small ancillary uses.

Chelsea Addition, a 14-story, 65,136-gsf apartment building (96 dwelling units), 436 W. 27th Drive and the adjoining 2-story John Lovejoy Elliott Center (an approximately 42,225-gsf neighborhood center operated by Hudson Guild), with approximately 10-foot deep basements, located at 441 W. 26th Street (Block 724, Lot 10), on W. 27th Drive east of 10th Avenue. The Elliott Center is set back from W. 26th Street and entered via a footpath from W. 26th Street though its northern wall faces W. 27th Drive. Adjacent areas that would be redeveloped in tandem with the building site are currently occupied by a playground, walking paths, landscaping, and other small ancillary uses.

The development project demolition of these buildings and new construction that includes the following components:

In place of Fulton 11 and adjacent areas, a new 11-story (approximately 108.5-foot tall to roof) mixed use apartment building would be developed. It would include approximately 186 dwelling units, 6,591 gsf of retail space, and 15,000 gsf of community facility space, with a total building area of approximately 196,191 gsf. It would have an approximately 10-foot deep basement. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Fulton 11..

In place of Chelsea Addition, the adjoining Elliott Center and adjacent areas, a new 38-story (approximately 396.5-foot tall) mixed use apartment building would be developed. It would include approximately 449 dwelling units and 28,229 gsf of community facility space, with a total building area of approximately 469,578 gsf. It would have an approximately 10-foot deep basement. Refer to the site plan which shows the location of the proposed building footprint relative to the footprint of Chelsea Addition/Elliott Center.

Phase I ESA Summary

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated April 21, 2022 for the Fulton locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form. The Phase I ESA is included in Attachment A.

Multiple historic uses of potential environmental concern occurred at the Property prior to the 1963-1965 construction of the present Property buildings, per review of Sanborn Fire Insurance Maps, as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks is considered a REC.

Hillmann Consulting, LLC completed a Phase I Environmental Site Assessment (ESA) dated May 6, 2022 for the Chelsea-Elliot locations. The recognized environmental conditions (RECs) from the ESA are listed in bullet form. The Phase I ESA is included in Attachment B.

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's, as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);
- Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950);
- Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).

The aforementioned historic uses, including a transformer sub-station, machine shop, manufacturing, and garage with a UST, and a printer/lithographer immediately east of the Property, are considered a REC.

Phase II Investigation Work Scope

Geophysical Survey

A geophysical survey will be performed in drilling locations to clear boring locations and in the area of the identified fill-port located on the sidewalk. The geophysical survey will use ground penetrating radar (GPR) and line tracing equipment.

Soil, Groundwater and Soil Vapor Intrusion Summary

An investigation of soil, groundwater and soil vapor is being performed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The geophysical survey and proposed vapor intrusion sampling event will address both RECs as well as to provide general characterization of the site for development purposes. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10 as well as NYSDEC Sampling Analysis. The following shows the number of samples to be collected at the project site.

Fulton 11

- Five (5) test borings will be installed
- Four (4) soil vapor probes will be installed in areas of the proposed new building footprint
- Two (2) temporary monitoring wells will be installed if groundwater is encountered

Chelsea Addition

- Six (6) test borings will be installed;
- Four (4) soil vapor probes will be installed in areas of the proposed new building footprint
- Two (2) temporary monitoring wells will be installed if groundwater is encountered

The depth of groundwater is expected at approximately 10-17 feet bgs and general groundwater flow direction is expected towards the west. Proposed construction may encounter the water table. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.) or by a precision GPS that is capable of coordinating a fixed point with within +/- 1 foot.

Soil Sampling

A geologist/scientist/QEP will screen the soil samples during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting

environmental samples. All field work will be recorded in a field log. Direct Push drilling equipment will be used and if necessary, more advanced drilling technology will be used to complete the site investigation.

Fulton 11

- Area of proposed new building footprint – Three (3) test borings down to 10 feet bgs (2 samples per boring);
- Inside existing building – One (1) test boring collected beneath the concrete floor in lowest elevated area (1 sample)
- One (1) test boring in the existing open landscaped areas down to 2 feet bgs (1 sample);

Chelsea Addition

- Area of proposed new building footprint – Two (2) test borings down to 10 feet bgs (2 samples per boring);
- Inside existing building – Two (2) test borings collected beneath the concrete floor in lowest elevated area (1 sample per boring)
- Two (2) test boring in the existing open landscaped areas down to 2 feet bgs (2 samples);

A total of eight (8) soil samples will be collected from each property totaling sixteen (16) soil samples to be collected. Areas where two soil samples are proposed will be collected from the 0-2 feet bgs interval and a deeper subsurface soil sample will be collected two feet below the bottom of the proposed excavation depth (10-12 feet bgs). One soil sample is to be collected in the proposed landscaping areas from the 0-2 ft bgs interval. One soil sample will be collected from beneath the concrete slab in the existing buildings. Height of the existing basements in both properties is 10 feet. The locations of the proposed soil samples are shown on Figures 1 and 2.

Discrete (grab) samples will be taken from the aforementioned sampling intervals. The subsurface soil samples may also serve as in-situ post-excavation soil samples for the remedial plan. A third soil sample may be collected from each or several test boring(s) if 1) elevated PID readings and/or visual and olfactory observations are noted during borehole advancement and/or 2) field observations identify an upper fill layer underlain by native material the additional soil sample from the upper zone of the native layer will help delineate the vertical migration of impacts (if any), as well as determine a more detailed remedy and potentially provide a cost savings for disposal options.

Monitoring Well Installation and Groundwater Sampling

Up to four (4) 1-inch-diameter temporary groundwater monitoring wells (2 per property) will be installed in areas of the proposed new building areas. If needed, properly sized screen and silica sand pack will be used for noted site conditions. A representative groundwater sample will be collected from each well with a dedicated equipment to eliminate cross contamination. Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010,

and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a depth to groundwater reading (1/100 foot), and if necessary, an interface meter to determine the thickness of LNAPL or DNAPL. The locations of the proposed groundwater well locations are shown on Figures 1 and 2.

Soil Vapor Sampling

Soil vapor samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Conditions in the field may require adjustment of sampling locations.

Eight (8) soil vapor air samples (4 samples per property) will be collected in areas of the proposed new construction's foot print. These soil vapor samples will be installed using a drill rig. The soil vapor samples probes will be installed to the intended final excavation depth at each location (10ft bgs). Sampling will occur for a duration of 2 hours per sample.

Samples will be collected in appropriately sized air canisters that have been certified clean by the laboratory and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the vapor intrusion evaluation, a tracer gas will be used in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals. The locations of the proposed soil vapor, indoor air and ambient air samples are shown on Figures 2A and 2B.

Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Full analysis:

- Volatile Organic Compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
- Target Analyte List metals by EPA Method 6010 and 7471;
- Soil vapor samples will be analyzed for VOCs by using USEPA Method TO-15.

All groundwater samples will be analyzed for both filtered (dissolved) and unfiltered (total) metals.

The analytical methods above should include all compounds included in NYSDEC Part 375-6.8 and CP-51 for soil, NYSDEC Part 703 Groundwater Quality Standards (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater, and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices for soil vapor.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and "finger print analysis" and required regulatory reporting (i.e. NYSDEC spills hotline) will be performed.

Investigation Derived Waste

All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash in a facility trash dumpster as non-hazardous trash.

Reporting

A Phase II Investigation Report (template version) will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative findings. Soil analytical results will be compared to the NYSDEC Part 375-6.8(a) Unrestricted Used Soil Cleanup Objectives, appropriate Part 375-6.8(b) Restricted Soil Cleanup Objectives and supplemental cleanup objectives in NYSDEC CP-51 Soil Cleanup Guidance. Groundwater analytical results will be compared to NYSDEC Part 703 Groundwater Quality Standards (GQS) (class GA) or Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS). Soil vapor analytical results will be compared to NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices, updated May 2017.

The report will include an updated sampling plan, spider diagrams, analytical data tables for all reported constituent compounds (including non-detectable concentrations) and remedial recommendations, as warranted. In the Phase II Investigation Report, all applicable documentation will be prepared from a single grade reference point as well as in terms of elevation.

The report will also include all sampling logs and photos taken during the investigation.

Investigation HASP

An OSHA compliant Health and Safety Plan that meets all OSHA HAZWOPER requirements will be implemented during the site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards

and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a log book or specific form. Potential on-site chemicals of concern include VOCs, SVOCs, Pesticides/PCBs, and Metals (specifically arsenic, lead, and mercury at a minimum). Information fact sheets and/or summary tables for each contaminant group are included in the HASP. A copy of this HASP will be on-site during each sampling event. The HASP is included in Attachment B.

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

PROPOSED BUILDING #1

FULTON 11

SB4/ SV4

SB3/ SV3

SB2/ TWP1/ SV1

SB1/ TWP1/ SV1

9TH AVENUE

WEST 19TH STREET

N

0 12.5 25 50 Feet

Legend

- Proposed Soil Sample
- Proposed Groundwater Sample
- Proposed Soil Vapor Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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9/21/2023

Figure 1 - Proposed Sample Location Map

Fulton Elliot-Chelsea Houses: Fulton 11
401-419 West 19th Street
New York (Manhattan), NY

SIZE		DWG NO.	REV
11x17		Figure 1	0

SCALE:	PROJECT No.:	SHEET
1 in = 25 ft	HK-2661	1 OF 1

ADDITIONAL NOTES:
1. EXISTING BASEMENT IS 10 FEET BELOW GRADE.
2. PROPOSED BASEMENT WILL BE 10 FEET BELOW GRADE.

N

WEST 27TH DRIVE (NOT A MAPPED STREET)

SB4/ SV4

SB3/ SV3

ELLIOTT CENTER

CHELSEA ADDITION

ELLIOTT 1

ELLIOTT 4

SB2/ TW2/ SV2

SB6

PROPOSED BUILDING #1

SB5

SB1/ TWP1/ SV1

CHILDREN'S CENTER

WEST 26TH STREET

0 20 40 80 Feet

Legend

- Proposed Soil Sample
- Proposed Groundwater Sample
- Proposed Soil Vapor Sample
- Property Boundary
- Existing Building
- Proposed Building to be Built in 1st Stage
- Proposed Landscaping
- NYC Tax Parcel

Notes:
All locations are approximate.
City parcel coverage provided by NY State GIS Clearinghouse and New York City Department of Finance, last updated 11/13/2022; aerial imagery basemap obtained from Google Earth Pro, dated 6/19/2022.
Figure created by JLD Mapping Services LLC.

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9/21/2023

Figure 2 - Proposed Sample Location Map

Fulton Elliot-Chelsea Houses: Elliot Addition
432 West 27th Drive
New York (Manhattan), NY

SIZE		DWG NO.	REV
11x17		Figure 2	0
SCALE: 1 in = 40 ft	PROJECT No.: HK-2661	SHEET	1 OF 1

Attachment A

Phase I Environmental Site Assessments

HILLMANN
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PHASE I ENVIRONMENTAL SITE ASSESSMENT

Chelsea-Elliott
264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street
New York, New York 10001

Prepared For:

Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

Report Issuance Date: May 6, 2022
Site Reconnaissance Date: April 19, 2022

Hillmann Project Number Z34898

HILLMANN
CONSULTING

May 6, 2022

Mr. Jamar Adams
Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

RE: Phase I Environmental Site Assessment
Chelsea-Elliott
264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street
New York, New York 10001
Hillmann Project No: Z34898

Dear Mr. Adams:

Hillmann Consulting LLC has completed a Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in conformance with our contract agreement and the scope and limitations of ASTM Practice E 1527-21, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 908-688-7800.

Sincerely,

Hillmann Consulting, LLC

Chris Hirschmann
Environmental Services Director

Etan Hindin
Senior Project Manager

TABLE OF CONTENTS

List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

ACM	– Asbestos Containing Material
AOC	– Area of Concern
AST	– Aboveground Storage Tank
ASTM	– American Society for Testing Materials
BER	– Business Environmental Risk
CEA	– Classification Exception Area
CERCLA	– Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	– Comprehensive Environmental Response Compensation and Liability Information System
CESQG	– Conditionally Exempt Small Quantity Generator
COC	– Chemicals of Concern
CORRACTS	– Corrective Action Sites
CREC	– Controlled Recognized Environmental Condition
DEC	– Department of Environmental Conservation
DEP	– Department of Environmental Protection
DHS	– Department of Health Services
DNPL	– Delisted National Priority List
DOB	– Department of Buildings
DOH	– Department of Health
DOT	– Department of Transportation
DTSC	– Department of Toxic Substances Control
ENG	– Engineering
EPA	– Environmental Protection Agency
ERNS	– Emergency Response Notification System
FD	– Fire Department
FOI/FOIA/FOIL	– Freedom of Information / Freedom of Information Act / Freedom of Information Letter
HVAC	– Heating Ventilation & Air Conditioning
HREC	– Historic Recognized Environmental Condition
IAQ	– Indoor Air Quality
ISRA	– Industrial Site Recovery Act
LBP	– Lead-Based Paint
LCP	– Lead-Containing Paint
LQG	– Large Quantity Generator
LTANK	– Leaking Storage Tank
LUST	– Leaking Underground Storage Tank
SDS/MSDS	– Safety Data Sheet / Material Safety Data Sheet
NA	– Not Applicable
NFA	– No Further Action
NFRAP	– No Further Remedial Actions Planned
NPDES	– National Pollutant Discharge Elimination System
NPL	– National Priority List
OER	– Office of Environmental Remediation
OPRA	– Open Public Records Act
PAH	– Polycyclic Aromatic Hydrocarbon
PCE	– Perchloroethylene
RAO	– Response Action Outcome
RCRA	– Resource Conservation and Recovery Act
RCRIS	– Resource Conservation and Recovery Information System
REC	– Recognized Environmental Condition
RWQCB	– Regional Water Quality Control Board
SCAQMD	– South Coast Air Quality Management District
SDG	– Significant Data Gap
SEMS	– Superfund Enterprise Management System
SRP	– Site Remediation Program
SQG	– Small Quantity Generator
SVOC	– Semi-Volatile Organic Compound
TCE	– Trichloroethylene
TSDF	– Treatment Storage and/or Disposal Facility
UST	– Underground Storage Tank
VEC	– Vapor Encroachment Condition
VOC	– Volatile Organic Compound

1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of 264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street, New York, New York (the Subject Property). The assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-21 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

1.1 Summary of Project Details

Primary Street Address:	264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street				
City:	New York	**County:**	New York	**State:**	New York
Tax ID/Parcel Number:	278 10th Avenue: Block 724, Lot 1; 441W26th: Block 724, Lot 10; 427W26th: Block 724, Lot 15; 264 10th Avenue: Block 723, Lot 1; 407W25th: Block 723, Lot 15				
Property Owner:	New York City Housing Authority (NYCHA)				
Zoning Designation:	R8 (Residential)				
Approx. Property Area:	6.53-acres (combined)				
Buildings:	Seven residential apartment buildings and a daycare building: **Chelsea**: 407 West 25th Street parcel (Block 723, Lot 15) is comprised of two (2) 21-story plus basement apartment buildings. The eastern building is equipped with a two-bay maintenance garage on the east side and a waste management areas east of the building. **Chelsea Addition**: 441 West 26th Street parcel (Block 724, Lot 10) – one (1) 14-story plus basement apartment building (ground level day center). **Elliott**: three (3) parcels (Block 724, Lots 1 and 15 and Block 723, Lot 1), four (4) 11-story and 12-story plus basement apartment buildings and one freestanding daycare at the northeast corner of West 26th Street and 10th Avenue. NOTE: See Appendix A for building numbering/locations				
Approx. Building Size:	1,002-units (combined)				
Approx. Year Built:	1940-1968				

Commercial Occupants:	Primarily residential with a day-center, and management office plus a freestanding daycare
Current Use:	Multifamily residential and daycare
Inspected By:	Mr. Etan Hindin and Mr. Dominick Aponte
Site Contact/Company:	Mr. Patrick Chan / Property Manager (NYCHA)
Site Escort/Company:	Sidiya Harris / Site Caretaker (NYCHA)
Inspection Date:	April 19, 2022
Weather Conditions:	Overcast 42 degrees Fahrenheit

1.2 Findings Summary Table

Assessment Subject	No REC	REC	CREC	HREC	SDG	Rpt. Ref.
Property Regulatory Records Review:			X	X		4.3
Property Historical Records Review:		X				4.2
Bulk Petroleum Storage:	X					6.3
On-Site Operations:	X					6.3
On-Site Haz-Mat Storage/Use/Spills:	X					6.3
Transformers/Hydraulic Systems:	X					6.3
Waste Discharges:	X					6.3
Interviews:	X					5.0
Adjoining & Nearby Properties:	X					4.3 6.2
Prior Env. Reports/User Provided Info:	X					3.0

1.3 Findings, Opinions and Conclusions

Recognized Environmental Conditions & Significant Data Gaps

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-21 of the Subject Property as described in Section 2.2 of this report. Any additions to, exceptions to, or deletions from this practice are also described in Section 2 of this report. This assessment has revealed the following *recognized environmental conditions* (RECs), *controlled recognized environmental conditions* (CRECs) and/or *significant data gaps* (SDGs) in connection with the Subject Property:

RECOGNIZED ENVIRONMENTAL CONDITIONS

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's, as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);
- Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950);
- Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).

The aforementioned historic uses, including a transformer sub-station, machine shop, manufacturing, and garage with a UST, and a printer/lithographer immediately east of the Property, are considered a REC.

Hillmann recommends obtaining records of a subsurface investigation (if already performed) or performing a subsurface investigation to determine the presence/absence of impact to underlying environmental media from

aforementioned uses and the presence/absence of an abandoned underground storage tanks (USTs) in the area of the former garage (417-423 West 25th Street).

Hillmann notes that prior reports reviewed by Hillmann (See Section 3.1) detail investigations limited to the leaking USTs and not site-wide subsurface investigations.

CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CRECs)

Elliott-Houses-NYCHA, 426 West 27th Street is listed on the LTANKS database for Spill Number: 9602200 due to a tank test failure on May 15, 1996. The spill listed as consolidated with Spill Number: 8908401 is listed as having obtained regulatory closure on February 2, 2006. The remarks detail a discharge of #6-fuel oil, extensive remediation and monitoring and the installation of an oil recovery system detailed in Section 3.1 above. The database listing remarks state:

"20K TANK - EVERYTIME FILLED ACTIVE FLOW TAKES PLACE INTO BASEMENT THRU WALLS - ABSORBED WITH SPEEDY DRY AND TEMPORARILY TAKING TANK OUT OF SERVICE"

The database listing detail regarding the backdrop to the regulatory closure is as follows:

The PRS [Petroleum Recovery System] was operated between 1998 and 2014. Free product has not been observed in the accessible monitoring wells since 2007. Since halting the PRS in 2014, free product has not been observed in the accessible monitoring wells and little free product (less than 0.25in) has been observed in the recovery wells. No petroleum related VOCs or SVOCs (listed in Table 3 of CP-51) were detected in groundwater samples collected in April 2015 from the accessible monitoring wells. As per Randy in a discussion of January 20, 2017 if less than 0.25 inches of No. 6 oil has been in on-site wells for 2+ years and contamination has been delineated all around the impacted area and there is nothing off-site and no dissolved phase in wells, spills can be closed. The Closure Letter should contain the contaminated soil clause. Spill closure email will be prepared with contaminated soil clause and sent to NYCHA.

Given the closure with a "*soil clause"* the above is considered a CREC. Hillmann recommends obtaining the closure records from NYCHA to understand the nature of any closure conditions e.g., monitoring or administrative requirements or institutional/engineering controls.

If the onsite groundwater monitoring wells, petroleum recovery system and associated 275-gallon waste oil UST observed during the site reconnaissance are no longer in use these wells and equipment should be decommissioned in accordance with applicable regulations.

SIGNIFICANT DATA GAPS (SDGs)

No SDGs were identified.

Historical Recognized Environmental Conditions (HRECs)

This assessment has revealed the following *historical recognized environmental conditions* (HRECs) in connection with the Subject Property:

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

Chelsea Houses-NYCHA, 431 West 25th Street is listed on the LTANKS, NY SPILLS and UST databases. The LTANKS listings is for Spill Number: 9806339 due to a tank test failure on August 21, 1998. The spill is listed as having obtained regulatory closure on August 27, 2013. The listing details the removal of a 30,000-gallon #2 fuel oil UST with six post excavation samples leading to the removal of 900-tons of soil. Exceedances included Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene.

The listing details the backdrop to regulatory closure as follows:

"*30,000 gallon UST removed in 8/2000. -890 tons of contaminated soils removed in 2000 -investigation done in 2006 along fill lines and by fill port (DEC request) -some PAHs detected in grab groundwater sample in 2006 -5 permanent wells installed in 2010 -All gw under TOGS with the exception of MW-5 (3 minor VOC compound exceedences) -Slight sheen subsequently detected in MW-5. Absorbent sock placed in well. -Minor impacts on sock in 2012. -No oil detect on absorbent sock in 2013. -Confirmed no product sheen in well during site visit of 7/31/13. NFA. Email sent to NYCHA on 8/27/13 requesting wells be decommissioned*."

Hillmann recommends obtaining the closure letter. If it is determined that any conditions are linked to the No Further Action (other than decommissioning the wells), the case would be re-classified as a CREC, however available database listing detail does not list and conditions.

Additionally, Hillmann observed multiple monitoring wells in the vicinity of the former 30,000-gallon UST. Hillmann recommends decommissioning the wells if no ongoing monitoring requirements apply.

De Minimis and Other Environmental Conditions

The following *de minimis* and other environmental conditions were identified:

OTHER ENVIRONMENTAL CONDITIONS / DE MINIMIS CONDITIONS
The Property is equipped with two (2) 25,000-gallon #2 fuel oil USTs. Hillmann recommends continued maintenance and permitting and obtaining most recent maintenance record logs from NYCHA.
Multiple NY SPILLS listings were identified associated with Property addresses. Given their regulatory closure and the nature/quantity of the spills (contained with not impact to soil/groundwater), they are not considered a REC.
Multiple Property and adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property.
Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property.
500 West 25th Street, listed on the VCP database for OER Site Number: 17CVCP047M associated with redevelopment and investigations/remediation associated with historic use obtained a notice of completion dated November 9, 2020. Given the status and findings of the investigations, the southwestern adjacent VCP site is not considered a REC in connection with the Property. Records were reviewed via the NYC EPIC Online Document Repository.

Environmental Professional Statement

I/We declare that, to the best of my professional knowledge and belief, I/we meet the definition of *Environmental professional* as defined in § 312.10 of 40 C.F.R. 312. I/we have the specific qualifications based on education, training and experience to assess a *property* of the nature, history and setting of the *subject property*. I/We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Etan Hindin
Environmental Professional

Chris Hirschmann
Environmental Professional

1.4 Business Environmental Risks / Non-ASTM Scope

Hillmann has performed a limited review of the following potential Business Environmental Risks (BER), also known as "Non-ASTM Scope concerns", in accordance with the contracted scope of work scope for this assessment. BER is defined by ASTM E1527-21 as *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."* The following is a summary of findings for the limited review of potential BERs, where applicable, as per the contracted scope of work and limitations outlined in Section 2. For a more detailed discussion of the findings and contracted scope of work, please see the referenced report section.

BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE			
Subject	**Findings**	**Not Appl.**	**Rpt. Ref.**
Asbestos	Given the 1940-1968 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis. Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-on insulation and roofing materials.		7.1
Lead Paint	Given the 1940-1968 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis. Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 mg/cm^2 (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.		7.2
Radon	The Property is located in the USEPA radon designation Zone 3 or 'low risk' area for radon.		7.3
Mold / Microbial Damage	The basement of Building Elliot-1 was observed to have standing water on the concrete surface. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.		7.4
NWI Wetlands	No NWI Wetlands were depicted within the Property.		7.5
Lead in Drinking Water	Potable water service at the Subject Property is provided by the City of New York. The water purveyor water supply is within acceptable standards. Property building specific lead-in-drinking water sampling was not performed.		7.6

2.0 INTRODUCTION

2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-21. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The goal of the processes established by ASTM E1527-21 is to identify *recognized environmental conditions* in connection with the Subject Property.

The term *recognized environmental condition* (REC) is defined by ASTM E1527-21 as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

The term *controlled recognized environmental condition* is a type of recognized environmental condition and defined by ASTM E1527-21 as a *"recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."*

The term *historical recognized environmental condition* is defined as a *"previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."* The ASTM E1527-21 standard has clarified that a *historical recognized environmental condition* (HREC) is not a *recognized environmental condition* (REC).

The term *de minimis condition* is defined by the ASTM, *"…a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."* A condition determined to be a *de minimis condition* is not REC nor a CREC.

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Subject Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Subject Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports and interviews, etc., to determine prior uses of the Subject Property from the present, back to the Subject Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Subject Property, adjoining properties and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

Business Environmental Risks/Non-ASTM Scope Considerations

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-21 standard:

- Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Subject Property. If the Subject Property contains buildings built in 1990 or later, the contracted scope of work excludes a cursory non-intrusive visual screening or any other level of evaluation for suspect ACM; however, the exclusion for buildings built ≥1990 should not be interpreted to suggest that any such buildings are free of ACM or would not warrant evaluation of building materials for ACM prior to disturbance. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if a greater certainty is desired regarding ACM and potential asbestos hazards at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

- Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Subject Property. If the Property contains buildings built in 1980 or later, the contracted scope of work excludes any cursory non-intrusive visual screening or other level of evaluation for suspect

LPB; however, the scope of work exclusion for building built ≥1980 should not be interpreted to suggest that any such buildings are free of LPB or other lead hazards. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

- USEPA Designated Radon Potential: Review of general non-site specific data published by the USEPA regarding the Radon Zone classification for the area of the Subject Property.

- Mold/Microbial Damage: A cursory non-intrusive visual screening within the accessed areas of buildings on the Subject Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Subject Property.

- NWI Wetlands: The Property has been reviewed for jurisdictional wetlands using the National Wetlands Inventory Wetland Mapper (http://wetlandsfws.er.usgs.gov/NWI/download.html) to determine whether mapped federal wetlands have been indicated on the Subject Property. Any further evaluation or legal delineation of regulated wetlands areas is excluded from the scope of work. It is also emphasized that a field delineation of regulated wetlands by a qualified professional would be warranted to more fully determine the presence or absence of regulated wetlands at the Subject Property.

- Lead in Drinking Water: Review of the potential for elevated levels of lead in the drinking water by determining the source of the drinking water supply and a review of available testing or compliance data reports.

2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

Primary Street Address:	264 & 278 10th Avenue, 427 & 441 West 26th Street, 407 West 25th Street				
City:	New York	**County:**	New York	**State:**	New York
Tax ID/Parcel Number:	278 10th Avenue: Block 724, Lot 1; 441W26th: Block 724, Lot 10; 427W26th: Block 724, Lot 15; 264 10th Avenue: Block 723, Lot 1; 407W25th: Block 723, Lot 15				
Approx. Land Area:	6.53-acres (combined)				
Apprx. Latitude/Longitude:	North 40.7496440 degrees/West 74.0014680 degrees				
Additional Details (if appl.):	Secondary address range: 407-461 West 25th Street;				

	408-466 and 421-465 West 26th Street; 416-460 West 27th Street.
Property Owner:	New York City Housing Authority (NYCHA)
Zoning Designation:	R8 (Residential)

2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

Data Gap:	Significant (Yes/No)?	Discussion
Historical records data failure	No	Records gaps exceeding five years were encountered; however, no significant site use changes are suspected during these intervals.
Response to agency records requests not received as of date of report.	No	Any additional information indicative of a REC will be forwarded upon receipt.

2.4 ESA Report Component Dates/Viability

The ASTM E1527-21 standard states that an environmental site assessment (ESA) is presumed to be viable when it is conducted within 180 days prior to the date of acquisition of the Subject Property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). Specifically, all of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction. The following table summarizes the component completion dates:

ESA Component	Completion Date
Interviews	April 19, 2022
Env Lien Search	(excluded from scope)
Government Records Review	March 28, 2022
Visual Inspections	April 19, 2022
Env. Professional Declaration	May 6, 2022

2.5 User Reliance

This report is for the exclusive use of Elliott Fulton LLC c/o Essence Development and additional relying entities, if any, named on the front cover. No additional individuals or entities shall be permitted to rely upon any data, interpretation, reports or other information or documentation contained in this report, without first obtaining the consent of Elliott Fulton LLC c/o Essence Development; and without obtaining written consent from Hillmann in the form of a reliance agreement/letter.

Hillmann may, in its sole discretion, withhold its consent to additional reliance and/or Hillmann may condition consent for reliance upon payment of a fee or other conditions.

2.6 Significant Assumptions

The following significant assumptions are made:

- The site operations at the time of the site visit are assumed to reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, it is assumed that no areas of the Subject Property with potential environmental concerns or RECs were concealed or otherwise not reported, intentionally or unknowingly, by the Subject Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, an assumption has been made that the gradient of groundwater flow follows the surface topography of the Subject Property and immediate surrounding area.

2.7 General Limitations and Exceptions

Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to the availability of pertinent regulatory agency records. Such limitations, if encountered, would be further specified in Section 4.1.

Significant limitations related to the condition or accessibility of the Subject Property at the time of the site reconnaissance, if encountered, are reported in Section 6.1.

Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-21 are reported.

Special Terms and Conditions

This Phase I Environmental Site Assessment has been prepared using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes and petroleum products at the Subject Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development,

redevelopment, or other construction purposes. No representation or warranty is made that the past or current operations at the Subject Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions and recommendations presented in this report are based on visual observations of the Subject Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Information obtained during the assessment, whether written, graphic or verbal, provided by the Subject Property contact(s) or as shown on any documents reviewed or received from the Subject Property contact, owner or agent, or government agency source; is assumed to be accurate except as specifically stated otherwise in this report. Independent verification of the accuracy or completeness of all information reviewed or received during the course of this assessment is not made and excluded from the scope of work for this assessment. No warranty or guarantee is made of the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. Reasonable efforts are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

No guarantee, explicit or implied, is made that the records pertaining to historical ownership or occupancy which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-21 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User's analysis of landowner liability protections or business environmental risks; and

that the User should consider whether recommendations for additional inquiries or other services are desired.

Recommended response actions offered in Section 1.3, if any, are provided as an option to the Client, and may have taken into account the Client's relation to the Subject Property and/or their intended purpose of this assessment. If included, it is not intended by Hillmann to represent the only course(s) of action, or inaction, to take. Furthermore, it is emphasized that additional response actions may become advisable depending on the outcome of the initial action(s) taken. Hillmann advises that Client and any additional authorized relying parties as specified on the report Cover and Section 2.5, or via letter of reliance extension, undertake consultation with legal counsel familiar with environmental and real estate law would be beneficial to the decision making process for the type and timing of a response action to identified RECs or Business Environmental Risks, if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User(s) of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

The User(s) assumes responsibility for business decisions that it makes utilizing information in the report provided by Hillmann. Hillmann shall not be responsible for any conclusions, interpretations and/or decisions of the User(s).

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Subject Property; specifically, the entity or entities named on the front cover to which the report has been addressed.

3.1 Environmental Lien and Activity and Use Limitation (AUL) Search

The User did not provide Hillmann with the results of an environmental lien and AUL search for the Subject Property.

3.2 Prior Environmental Reports/Documentation

The following prior environmental reports/documentation was provided:

Excel Spreadsheet – R9.5 Sites

An excel spreadsheet was provided listing PBS (Petroleum Bulk Storage) 475483 for Chelsea as having an active tank (Tank #1) ad Elliot PBS 601955 with an active tank (Tank #2). Both are listed as having closed spills, no tank testing and Elliott is listed as having had a visual inspection.

Below is the excel table provided:

Consolidation Name	Development Name	PBS	Active	Tank #s	Tank Testing	Visual inspections	Open Spills	Closed Spills
Chelsea	CHELSEA	475483	Y	1	N	N	N	Y
Chelsea	CHELSEA ADDITION		N		N	N	N	N
Chelsea	ELLIOTT	601955	Y	2	N	Y	N	Y
Fulton	FULTON		N		N	N	N	N

Site Specific Field Investigation Work Plan Elliott Houses, 426 West 27th Street, New York, New York NYSDEC Spill Number 89-08401 PBS Number 601955; prepared by Gannett Fleming Engineers and Architects, P.C. (GF) dated July 2007 (DRAFT)

The draft report prepared by GF for NYCHA details a subsurface investigation in the vicinity of two (2) 20,000-gallon single-walled underground storage tanks (USTs) [PBS No. 601955] removed and replaced with one (1) 25,000-gallon double-walled UST in 1997. "*The purpose of this assessment is to evaluate the effectiveness of the existing on-site oil recovery system and to assess the horizontal extent of the product plume".*

The draft report notes that the groundwater table is approximately 10 to 17 feet below ground surface (bgs) and groundwater flow is towards the west. The USTs that were removed (per the GF report according to NYCHA) were installed in 1947 and contained No. 4 and No. 6 fuel oil. A 275-gallon AST is noted to be located onsite associated with an oil recovery system installed in 1998. The GF report notes that a Phase II was conducted by TRC in November 1989 due to fuel oil observed to leak into the boiler room through the northern wall of the boiler room. The tank was repaired, and seepage into the boiler room ceased, however TRC noted there could still be product within the subsurface soil. Soil and groundwater sampling confirmed free product in the subsurface

(~4-ft thick). In 1998 after the two aforementioned tanks were removed an oil recovery system including two recovery wells, an oil/water separator, and a 275-gallon holding tank was installed. "*According to the NYCHA, free product was observed in monitoring well MW-2 in March 2007".*

The Draft GF report, in Section 3.0 lays out a proposed scope of work which would include monitoring well measurements and sampling, fingerprint analysis, and recovery system evaluation.

Hillmann has included a figure from the GF report showing the locations of the former USTs relative to the present UST as well as the locations of monitoring wells. See Appendix A Figure 3.

Phase II Field Investigation Elliott Houses, 426 West 27th Street, New York, NY 10001, NYSDEC Spill #89-08401; prepared by American Environmental Assessment & Solutions, Inc. (AEASinc) dated March 15, 2011

The Phase II was performed "*to evaluate the effectiveness of the existing on-site recovery system and to assess the horizontal extent of the product plume. The assessment was performed in the vicinity of two former 20,000-gallon single walled underground storage tanks (USTs) which were removed and replaced with one 25,000 gallon double walled UST in 1997".*

The Phase II included soil and groundwater sampling with the following results:

Soil Contamination

VOCs were identified in soil sample SB-4 at 13 to 15 feet. The compound Isoproplybenzene and n-Propylbenzene were detected at levels exceeding their respective RSCO. SB-4 was installed west of RW-1.

SVOCs were identified in soil sample SB-6 and SB-7 exceeding their respective RSCO. The compound Chrysene was detected in SB-6 at 400 µg/kg exceeding its respective RSCO of 400 µg /kg.

Five SVOCs were detected in SB-7 exceeding their respective RSCO. The compounds Benzo(a)Anthracene; Benzo(a)Pyrene; Benzo(b)Fluoranthene; Benzo(k)Fluoranthene; and Chrysene were identified at levels exceeding their respective Recommended Soil Cleanup Objective (RSCO). SB-7 was installed between RW-2 and MW-2

Groundwater Contamination

VOCs were detected in groundwater sample GW-3 at levels exceeding the NYSDEC Groundwater Quality Standards. Five VOCs were detected in groundwater sample GW-3 above their respective groundwater standard. The compounds 1,2,4-Trimethylbenzene; Benzene; Isopropylbenzene; Isopropylbenzene; n-Butylbenzene; and n-Propylbenzene were detected in GW-3 exceeding their respective NYSDEC Ambient Groundwater Quality Standards.

Other VOCs were detected at very low levels below their respective groundwater standard in GW-3 and GW-4.

> No VOCs were detected [in] groundwater sample GW-1 or GW-2.
> No SVOCs were identified in any of the groundwater samples obtained from GW-01 through GW-04.

The AEASinc report concludes and recommends:

> *It is evident that the remediation system has been effective in removing the free floating product from the groundwater as was revealed from the monitoring data and previous environmental report indicating that product thickness has greatly reduced from 4.5 feet in 1992 to 3 inches currently and should be kept in use until no free floating product is present in the groundwater. However although the remediation system usage should be continued, the dissolved constituents in the groundwater should also be addressed.*
>
> *The remediation system should be kept in use to further reduce product thickness until no free floating product is detected in any of the wells or in the groundwater.*
>
> *Since the observed fuel oil impacts have shown to represent an isolated area, no further subsurface investigation is warranted. AEASinc recommends conducting Vacuum Enhanced Fluid Recovery (EFR) and product thickness measurements on a monthly basis for a period of 12 months. The purpose is to remove contamination from the subsurface of the AOC in the liquid, vapor and dissolved phases. After such period the effectiveness of the product recovery strategy should be evaluated by NYCHA and possibly increase recovery efforts of the impacted groundwater twice a month until petitioned for spill closure.*

3.3 User Responsibilities

Section 6 of the ASTM E1527-21 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, the ASTM E1527-21 standard recommends a questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 be provided to the original report User. A User Questionnaire has been provided to the report User; however, a completed questionnaire was not returned to Hillmann.

Question:	Yes/No:	Detail:
Environmental liens that are filed or recorded against the property: Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?	NR	
Activity and use limitations that are in place on the property or that have been filed or recorded against the property: Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?	NR	
Specialized knowledge or experience of the person seeking to qualify for the LLP:	NR	

Question:	Yes/No:	Detail:
Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?		
Relationship of the purchase price to the fair market value of the property if it were not contaminated: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	NR	
Commonly Known or Reasonably Ascertainable Information: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,		
-Do you know the past uses of the property?	NR	
-Do you know of specific chemicals that are present or were once present at the property?	NR	
-Do you know of spills or other chemical releases that have taken place at the property?	NR	
-Do you know of any environmental cleanups that have taken place at the property?	NR	
The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation: Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?	NR	
Litigation/Administrative Proceedings/Government Notices As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	NR	

NR-no response

3.4 User's Reason for Performing Phase I ESA

The User did not indicate the purpose of the assessment. In accordance with ASTM E1527-21, it is assumed that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

4.0 RECORDS REVIEW

4.1 Environmental Information

Physical Setting

Source	Discussion
USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum)	The Property lies at an elevation of approximately 16 feet above mean sea level. An interpretation of topographic contour lines as well as a review of the EDR Geocheck-General Topographic Gradient suggested terrain sloping downward towards the west. The closest down gradient water body is the Hudson River, located approximately 1,750-ft to the west-northwest.
USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum)	The soil type at the Subject Property is classified as "Urban Land". The Urban Land designation indicates that a majority of the original soils on the site have been disturbed by development or covered with impervious surfaces, such as buildings or pavement.
Geologic Data: (EDR Geocheck-Physical Setting Source Addendum)	The Geologic Age Identification Category for the Property is Stratified Sequence, and the Rock Stratigraphic Unit is the Paleozoic Eta, Ordovicias System and Lower Orodovician and Cambrian carbonate rocks Series.
Prior Env. Reports: (Section 3.2)	Prior reports discussed in Section 3.2 detail investigations performed at the site which indicated groundwater to be 10-17-ft bgs and flowing westward.
Additional Sources/ Data:	None
Groundwater Flow Discussion:	Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be towards the west.

Federal, State and Tribal Environmental Record Sources

Standard government records were obtained and reviewed primarily via a third-party regulatory database report, titled EDR Radius Map™ Report, prepared by Environmental Data Resources of Shelton, CT. The report provided government records from the standard environmental resources and within minimum search distances specified by Section 8.2.2-Table 2 of the ASTM E1527-21; and were reviewed for the purpose of identifying potential RECs in connection with the Subject Property. Additional detail of the source and significance of the regulatory databases can be found in the regulatory database report in Appendix E. Hillmann has also included discussion of records pertaining to the Subject Property from other government record sources not specifically listed under Table 2, as applicable.

Reported distances for adjoining property listings, if applicable, are approximate and indicative of the presence of a public roadway or right-of-way between the adjoining site and Property.

The reported gradients have been estimated based on a number of factors including but not necessarily limited to field observation, review of topographic maps, database listing details and/or site specific geo-technical data.

Limited analysis of the details of on-site, adjoining and vicinity database sites was conducted to identify potential sources of sub-surface vapor encroachment. This review was based on elements of the ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also on elements of "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby

Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Subject Property in the up-gradient direction, 365 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Subject Property in the up-gradient direction, 165 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the Subject Property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Subject Property when reviewing applicable sites within those distances.

Regulatory database sites with active petroleum or non-petroleum releases that are considered to constitute a vapor encroachment condition (VEC) to the Subject Property, if any, are identified and discussed in this section.

The EDR Radius Map report is attached in Appendix E.

Property Listings

The following listings of the Subject Property were identified:

- An NY SPILLS database listing, Spill number 0511572, for "Elliott Houses-NYCHA" associated with 426 West 27th Drive obtained regulatory closure on January 9, 2006. The spill occurred on January 6, 2006 when NYC DEP received a call pertaining to the release of 30-gallons of #2 fuel oil. The remarks state that the spill was due to a mechanical failure, and the spill contained in the basement and cleaned. Given no indication that remediation was needed and regulatory closure, the listing is not considered a REC or HREC.

- Elliott- Houses (Chelsea Houses), 426 West 27th Street is listed on the AST database for a permitted Petroleum Bulk Storage aboveground storage tank with ID: 2-601955. The AST capacity is listed as 275-gallon, for waste oil, and installed in 1995.

- Elliott-Houses-NYCHA, 426 West 27th Street is listed on the LTANKS database for Spill Number: 9602200 due to a tank test failure on May 15, 1996. The spill listed as consolidated with Spill Number: 8908401 is listed as having obtained regulatory closure on February 2, 2006. The remarks detail a discharge of #6-fuel oil, extensive remediation and monitoring and the installation of an oil recovery system detailed in Section 3.1 above. The database listing remarks state:

  "20K TANK - EVERYTIME FILLED ACTIVE FLOW TAKES PLACE INTO BASEMENT THRU WALLS - ABSORBED WITH SPEEDY DRY AND TEMPORARILY TAKING TANK OUT OF SERVICE"

  The database listing detail regarding the backdrop to the regulatory closure is as follows:

  The PRS [Petroleum Recovery System] was operated between 1998 and 2014. Free product has not been observed in the accessible monitoring wells since 2007. Since halting the PRS in 2014, free product has not been observed in the accessible monitoring wells and little free product (less than

0.25in) has been observed in the recovery wells. No petroleum related VOCs or SVOCs (listed in Table 3 of CP-51) were detected in groundwater samples collected in April 2015 from the accessible monitoring wells. As per Randy in a discussion of January 20, 2017 if less than 0.25 inches of No. 6 oil has been in on-site wells for 2+ years and contamination has been delineated all around the impacted area and there is nothing off-site and no dissolved phase in wells, spills can be closed. The Closure Letter should contain the contaminated soil clause. Spill closure email will be prepared with contaminated soil clause and sent to NYCHA.

Given the closure with a "*soil clause"* the above is considered a CREC. Hillmann recommends obtaining the closure records from NYCHA to understand the nature of any closure conditions e.g., monitoring or administrative requirements or institutional/engineering controls.

- Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC.

- Chelsea-Elliott Municipal Housing Project, 427 West 26th Street is listed on the NY SPILLS database for Spills 1104033 – closed July 13, 2011 and 1711615 – closed March 23, 2018. 425 West 25th Street is listed for Spill 9802923 – closed July 21, 1998. The spills were contained and closed with no impact to soil/groundwater. Given the nature of the cases, they are not considered a REC or HREC.

- The Property is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC.

- Chelsea Houses-NYCHA, 431 West 25th Street is listed on the LTANKS, NY SPILLS and UST databases. The LTANKS listings is for Spill Number: 9806339 due to a tank test failure on August 21, 1998. The is listed as having obtained regulatory closure on August 27, 2013. The listing details the removal of a 30,000-gallon #2 fuel oil UST with six post excavation samples leading to the removal of 900-tons of soil. Exceedances included Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Chrysene, Dibenzo(a,h)anthracene.

  The listing details the backdrop to regulatory closure as follows:

  "*30,000 gallon UST removed in 8/2000. -890 tons of contaminated soils removed in 2000 - investigation done in 2006 along fill lines and by fill port (DEC request) -some PAHs detected in grab groundwater sample in 2006 -5 permanent wells installed in 2010 -All gw under TOGS with the exception of MW-5 (3 minor VOC compound exceedences) -Slight sheen subsequently detected in MW-5. Absorbent sock placed in well. -Minor impacts on sock in 2012. -No oil detect on absorbent sock in 2013. -Confirmed no product sheen in well during site visit of 7/31/13. NFA. Email sent to NYCHA on 8/27/13 requesting wells be decommissioned*."

  Hillmann recommends obtaining the closure letter to determine what, if any, conditions are linked to the No Further Action. Additionally, Hillmann observed multiple monitoring wells

in the vicinity of the former 30,000-gallon UST. Hillmann recommends decommissioning the wells if no ongoing monitoring requirements apply.

Chelsea-Houses, 431 West 25th Street is listed as being equipped with one (1) 25,000-gallon #2 fuel oil UST installed on September 1, 2000. The UST is listed as having secondary containment and leak detection. A 30,000-gallon UST is listed as having been installed in 1964 and removed in 2000.

Given the above and historic uses a VEC cannot be ruled out for the Property.

Adjoining Property Listings

The following adjoining property listings were identified.

- Multiple adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property.

- Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property.

- 500 West 25th Street, listed on the VCP database for OER Site Number: 17CVCP047M associated with redevelopment and investigations/remediation associated with historic use obtained a notice of completion dated November 9, 2020. Given the status and findings of the investigations, the southwestern adjacent VCP site is not considered a REC in connection with the Property. Records were reviewed via the NYC EPIC Online Document Repository.

Surrounding Area Findings

The following is a discussion of non-adjoining sites identified as located within the ASTM specified search distance surrounding the Subject Property. In order to keep this discussion informative and concise, discussion(s) is/are provided of the listed site(s) for each database category that appears most likely to impact the Subject Property based on distance, area topography and/or regulatory status. Listings of sites within the applicable search distances not specifically discussed below were reviewed and concluded not to be RECs in connection with the Subject Property or VECs based on various factors including distance, area topography, known or inferred groundwater flow direction and/or regulatory status.

Federal NPL				**# of sites:**	1	**Search Distance:**	1-mile
Notable Listing:	Hudson River PCBs						
Distance in feet:	1,600	**Direction:**	WNW	**Gradient:**	Down		
Data Discussion:	Given the location and nature of the NPL case – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property.						

REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.
VEC Discussion:	Based on the available data, a VEC is not suspected.

Federal Delisted NPL				**# of sites:**	0	**Search Distance:**	1-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

Federal SEMS				**# of sites:**	2	**Search Distance:**	½-mile
Notable Listing:	Hudson River PCBs						
Distance in feet:	1,600	**Direction:**	WNW	**Gradient:**	Down		
Data Discussion:	Given the location and nature of the SEMS case (also listed on the NPL database) – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property. The second SEMS listing is 1,925-ft from the Property to the east. Given the distance the SEMS case (USPS JAF Building) is not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

Federal SEMS-ARCHIVE				**# of sites:**	3	**Search Distance:**	½-mile
Notable Listing:	Manhattan General Mail Facility						
Distance in feet:	567	**Direction:**	NE	**Gradient:**	Up/Cross		
Data Discussion:	Given the regulatory status and/or distance, the SEMS-ARCHIVE sites are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

Federal CORRACTS				**# of sites:**	0	**Search Distance:**	1-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

Federal RCRA-TSD				**# of sites:**	0	**Search Distance:**	½-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

State/Tribal SUPERFUND & HAZARDOUS WASTE				**# of sites:**	4	**Search Distance:**	1-mile
Notable Listing:	Bayview Correctional Facility / 550 West 20th Street						
Distance in feet:	1,492	**Direction:**	SW	**Gradient:**	Down		
Data Discussion:	Given the distance, gradient and/or regulatory status the SHWS listing are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						

VEC Discussion:	Based on the available data, a VEC is not suspected.

State/Tribal LANDFILL/SOLID WASTE DISPOSAL				**# of sites:**	3	**Search Distance:**	½-mile
Notable Listing:	Westside Operations Center (WOC) / 281 11th Avenue						
Distance in feet:	1,069	**Direction:**	NW	**Gradient:**	Down		
Data Discussion:	Given the distance and downgradient location, the WOC transfer station is not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal LEAKING STORAGE TANKS				**# of sites:**	144	**Search Distance:**	½-mile
Notable Listing:	28th Under Highline Associates LLC / 505 West 27th						
Distance in feet:	182	**Direction:**	W	**Gradient:**	Down		
Data Discussion:	Given the distance, gradient and/or regulatory status, the LTANKS listings are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal VOLUNTARY CLEANUP SITES				**# of sites:**	41	**Search Distance:**	½-mile
Notable Listing:	311 10th Avenue						
Distance in feet:	218	**Direction:**	NW	**Gradient:**	Down		
Data Discussion:	Given the nature of the listings and/or distance/gradient the VCP sites are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal BROWNFIELD SITES				**# of sites:**	15	**Search Distance:**	½-mile
Notable Listing:	Former Getty Service Station / 239 10th Avenue						
Distance in feet:	238	**Direction:**	W	**Gradient:**	Down		
Data Discussion:	Given the distance, gradient and/or regulatory statut, the Brownfields listings are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

UNMAPPED/ORPHAN LIST SITES	
	Hillmann has also reviewed a list of unmapped sites (a.k.a. "Orphan List" sites) indicated by the database report. Unmapped sites that were identified as falling within an applicable specific search distance or warranting discussion have either been discussed in the preceding tables or are detailed below:
Notable Listings:	None

Additional Environmental Record Sources

Requests have been submitted to local, municipal and state agencies for pertinent records pertaining to the Subject Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Where applicable, internet research of government environmental regulatory databases was also conducted, as well as a general cursory internet search of the Subject Property address, for information indicative of a REC. The following table summarizes the findings of the research:

Source	Type of Request	Outcome
NYCFD-Public Records Unit / Tank Section	FOI request	No response was received prior to report issuance.
NYS DEC	FOI request	No response was received prior to report issuance.
NYCDEP	FOI request	No response was received prior to report issuance.
NY DOB	Online search	Records included in Appendix F including certificates to operate dual natural gas/heating oil number 2 boilers.
USEPA	Online search	No records indicative of a REC identified.
Internet	Online Search	No records indicative of a REC identified.

Pertinent records referenced in the above table have been included in Appendix F.

4.2 Historical Research

Historical records have been compiled and analyzed for historical property information and developing a history of previous uses of the Subject Property, adjoining properties and surrounding area. These records were reviewed for the purpose of identifying the likelihood of past uses having led to RECs in connection with the Subject Property.

The historical record sources listed below have been sought with the objective to document past uses of the Subject Property from the present back to the Subject Property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural use, placement of fill dirt and other uses that do not involve structures. Hillmann has sought to review historical records in minimum intervals of five years.

Fire Insurance Maps

A Certified Sanborn Map Report was obtained from EDR for a review of published historic fire insurance maps for the Subject Property and surrounding area. The following is a summary of site uses and notable details depicted by the available maps:

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
1890, 1899, 1911, 1930	**Property:**	The southwest portion of the Property (Block 723, Lot 1) is depicted as the Columbia Ale Brewery. The southeastern portion of the Property is depicted as a coal yard, stable and elevator factory among multiple multi-story mixed use buildings. The Property north of West 26th Street is improved with multiple multi-story mixed use buildings and a Copper Works company in the present Chelsea Addition portion of the Property. Multiple Property addresses were used for manufacturing listed to the right and depicted spatially relative to the present Property configuration in Appendix A, Figure 4.	N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930); Machine Shop (429 West 26th Street 1911); Manufacturing use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930); Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950).
	Adjoining:	Multiple mixed-use buildings and a manufacturing establishments building to the northeast,	Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005). Motor freight station / auto repair shop equipped with multiple gasoline tanks noted to the adjacent west across 10th Avenue at 293 10th Avenue (1930-2001). Given the location downgradient and across a multi-lane road not considered a REC in connection with the Property.
1950, 1976, 1979, 1980, 1982, 1985, 1987, 1988, 1991-1996, 2001-2005	**Property:**	The present Elliott Buildings 2 and 3 south of West 26th Street are depicted and listed as John Lovejoy, 11-story plus basement apartment buildings. The present Elliott Buildings 1 and 4 between West 26th and 27th Streets are depicted and listed as "Elliott Houses – New York City Housing Authority", 12-story plus basement apartment buildings. The area of the present Chelsea Addition building between Elliott Buildings 1 and 4 has been cleared except for the Hudson Guild Neighborhood House (5-story plus basement building constructed in 1908-09). In the subsequent 1976 Sanborn Fire Insurance Map it is depicted as a 96 unit 14-story plus basement Chelsea Houses Addition with an auditorium/community house corresponding to its present configuration.	
	Adjoining:	Public school to the immediate east of the Property.	

A copy of the Certified Sanborn Map Report is attached in Appendix D.

City Directories

An EDR City Directory Abstract report was reviewed for data of former occupants of the Subject Property's street address. The following is a generalized summary of the findings of city directory research for past occupants of the Subject Property.

Property	
Use(s) / Occupant(s):	**Years**
Residential and mixed-use listings	1920-2017
Hand Laundry (Glassman Standard Hand Laundry) at 436 West 26th Street	1923

The EDR City Directory Abstract report was also reviewed for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

Adjoining Properties	
Use and/or Occupant(s)	**Years**
Mix of residential and commercial occupants.	1920-2017

A copy of the EDR City Directory report is attached in Appendix D.

Historical Topographic Maps

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

Historical Aerial Photographs

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

EDR High-Risk Historical Records

The EDR Radius Map™ report, which is discussed in greater detail in Section 4.1 and attached in Appendix E, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Subject Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

EDR Database	On-site Listings:	Adjoining/Off-Site Listings
Historic Cleaners: (on-site/adjoining only)	None	Tonis Dry Cleaners, 2001-2006 at 243 9th Avenue to the adjacent southeast across West 25th Street;

Historic Auto: (on-site/adjoining only)	None	Carlo and Peter Truck Repair 289 10th Avenue, 1975-2002 and Marial Service Station, 279 10th Avenue, 1971-2014 to the adjacent west across 10th Avenue.
MGP: (1-mile distance)	None	Six listings within 1-mile. Each greater than 1,600-ft from the Property and downgradient.

Petroleum/Natural Gas Well Review

The historical record sources were reviewed for records of historic petroleum and/or natural gas wells at the Subject Property. No record of any historical petroleum/natural gas wells at or adjoining the Property was identified.

Additional Historical Data

Where applicable, the following additional pertinent historical data was obtained:

Interviews/Anecdotal:	No additional pertinent historical data was obtained.
Local Gov't Records:	No additional pertinent historical data was obtained.
Prior Env. Reports: (Section 3.2)	Not applicable; no prior reports were provided.
Site Observations:	Indications of historic uses of the Property or adjoining properties were not observed during the site reconnaissance.
Other Sources:	No additional pertinent historical data was obtained.

Summary of Identified Historic Uses

The following table presents a summary of the types and approximate date ranges of identified prior uses of the Subject Property:

Property	
Date Range	**Use**
Late 1800's to 1940's	Mixed-use and manufacturing including a machine shop, brewery
1940's-Present	Apartment buildings

The following table presents a summary of the types of identified prior uses of the adjoining properties:

Adjoining Properties	
Date Range	**Use**
Unk to Present	Residential, commercial and printing/lithography

Historical Records Data Failure

The ASTM E1527-21 standard defines data failure as failure to achieve the historical research objective even after reviewing the standard historical sources that are reasonably ascertainable and

likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions were sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval. In encountered, data failure and its significance as a data gap is discussed below:

Objective	Met?	Detail	Significant?
First developed use/date determined?	Yes	The first developed use of the Property was for dwellings in the late 1800's.	No
Record sources at 5-year intervals back to 1940 or first developed use?	Yes	Historical record gaps exceeding five years were encountered. However, significant site-use changes or undiscovered site uses appear unlikely to have occurred during the record gaps.	No
All obvious prior uses identified?	Yes	See Summary of Identified Past Uses of this section.	No

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

Historic Uses REC Discussion

The review of historical records indicated evidence of the following potential RECs in connection with the Property:

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1940's-1960's as follows:

- N.Y. Edison Co. Sub Station/transformer station (452 West 27th Street – 1911-1930);
- Machine Shop (429 West 26th Street 1911);
- Manufacturing (not specified) use (418-420 West 27th Street, 447-455 West 26th Street, 425-427 West 25th Street; 1911-1930);
- Garage with a 10,000-gallon buried tank (417-423 West 25th Street – 1930-1950);
- Printer-Lithographer operation with multiple tanks noted to the immediate east of the Property at the southwest corner of 9th Avenue and West 26th Street – 263 9th Avenue (1930-2005).

The aforementioned historic uses including a transformer sub-station, machine shop, manufacturing, and garage with a UST, and a printer/lithographer immediately east of the Property are considered a REC.

5.0 INTERVIEWS

5.1 Interviews with Owners, Operators and Occupants

Current Owner / Key Site Operator

Property Owner	Contact Name	Affiliation	Interview Type
New York City Housing Authority (NYCHA) representative	Sidiya Harris	Property Caretaker with NYCHA	In person
Interview Date:	April 19, 2022		
Interview Outcome/Findings:			
An interview for information pertinent to the assessment was conducted in person at the time of the site visit. The following pertinent information was indicated: Sidiya was unaware of any known environmental concerns at the Property.			

Prior Owners/Operators/Occupants

Name	Company/Title	Yrs @ Site	Interview Type
Interview Date:			
Interview Outcome/Findings:			
No prior owners, operators or occupants were interviewed.			

Neighboring Property Owner/Occupants

Name	Company/Title	Yrs at site	Interview Type
Interview Date:			
Interview Outcome/Findings:			
The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted.			

5.2 Interviews with State and/or Local Government Officials

State and/or local governmental officials have been interviewed to obtain information of potential RECs in connection with the Subject Property. Many government agencies and their officials require submittal of written request for records in order to respond. The details in Section 4.1 list the various state and local government agencies contacted as part of this assessment, and the outcome of each inquiry. In addition, the details of regulatory database research in Section 4.1 may

have included detail of interviews with officials pertinent to government records review and identification of RECs.

Additional interview of government officials not previously detailed in Sections 4.1 are discussed below, if applicable.

Name	**Agency Name/Title**	**Interview Type**
Interview Outcome/Findings:		
No additional local/state government officials were interviewed.		

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

A site reconnaissance was conducted to collect information and make observations to help identify RECs in connection with the Subject Property. This included visual and/or physical observations of the Subject Property and its structures, adjoining properties as viewed from the Subject Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares and accessed Subject Property structures. Subject property building exteriors were observed at ground level, unless otherwise indicated. Where applicable, building interiors were accessed and observed to the extent they were made safely accessible with the cooperation of the site escort.

Site Inspection Personnel:	Mr. Etan Hindin and Mr. Dominick Aponte
Property Escort/Company:	Sidiya Harris / Property Caretaker
Inspection Date:	April 19, 2022
Weather Conditions:	Overcast 45 degrees Fahrenheit

Significant Inaccessible Areas

Due to the pandemic occupied units were inaccessible. The inability to access these units is not considered a Significant Data Gap.

Significant Limiting Site Conditions

No significant limiting site conditions were noted at the time of the site reconnaissance.

6.2 General Site Setting

Site and Vicinity Characteristics

Abutting Roadways:	West 25th Street to the south; West 27th Street – Drive to the north; 10th Avenue to the west; West 26th Street divides the Property parcels.
Current Property Use:	Multifamily residential and daycare
Evidence of Past Property Uses:	None observed.
Evidence of Past Adjoining Property Uses:	None observed.
Surrounding Area Uses:	Commercial, residential

Current Adjoining Property Uses

Dir	Street Address	Description
N	294 10th Avenue	Park
W	259-293 10th Avenue	Residential and commercial
E	281 9th Ave 401 West 25th Street 263 9th Avenue	Public School Residential and commercial Residential and commercial
S	406-462 West 25th Street	Residential and commercial

No visual observations indicative of a potential environmental concern were noted on the adjoining properties.

Topographic Characteristics

Terrain:	Flat to gently sloping
Direction of Downward Slope:	Towards the northwest
On-site Water Bodies:	None observed
Other Significant Features:	None observed

General Description of Structures and Improvements

Buildings:	Eight
Approx. Building Size:	1,002-units (combined)
Approx. Year Built:	1963-1965
Number of Stories:	**Chelsea**: 407 West 25th Street parcel (Block 723, Lot 15) is comprised of two (2) 21-story plus basement apartment buildings. The eastern building is equipped with a two-bay maintenance garage on the east side and a waste management areas east of the building. **Chelsea Addition**: 441 West 26th Street parcel (Block 724, Lot 10) – one (1) 14-story plus basement apartment building (ground level day center). **Elliott**: three (3) parcels (Block 724, Lots 1 and 15 and Block 723, Lot 1), four (4) 11-story and 12-story plus basement apartment buildings and one freestanding daycare at the northeast corner of West 26th Street and 10th Avenue. NOTE: See Appendix A for building numbering/locations
Basement/Subgrade Levels:	See above
Exterior Ground Cover:	Asphalt, cement and landscaped areas,

Ancillary Structures:	Bulk trash/compactor covered-masonry enclosure with two overhead doors. Northeast of Chelsea Building 2
Sources of Heating & Cooling:	Dual natural gas/heating oil boilers for onsite generated steam heat and tenant-owned optional electric window units for cooling.
Potable Water/Sewage Disposal:	Municipal utility connections

6.3 Site Features and Conditions

Storage/Usage of Hazardous Substances and Petroleum Products

The following approximate number of containers, and general description of their contents, capacity, container types and storage conditions, were observed to be stored and/or used at the Subject Property:

Occupant	Substance	Qty/Container Type	Storage Conditions
NYCHA	Maintenance and cleaning materials (including paint)	1-30-gallon	All stored indoors on intact concrete. No storage concerns noted.

Bulk Petroleum/Hazardous Material Storage Tanks

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

AST/UST	Product	Capacity	Construction	Year Installed	Status	Location/Notes
UST	Heating oil Number 2	25,000-gal	Double walled	1998	Active (natural gas generally used)	In area of former UST with monitoring wells noted. West of Chelsea Building 1 just north of West 25th Street.
UST	Heating oil Number 2	25,000-gal	Double walled	1998	Active (natural gas generally used)	West of Elliott Building 4 south of West 27th Street – Drive
AST	Waste oil	275	Steel	1990's	Status unknown	Elliott Building 4 Boiler Room – Remediation Oil Recovery System waste oil tank (see discussion Section 3.1)
AST	Holding tank	275	Steel	1990's	Status unknown	Elliott Building 4 Boiler Room - Remediation Oil Recovery System holding tank (see discussion Section 3.1)

Strong, Pungent or Noxious Odors and their Sources

No strong, pungent or noxious odors were noted at the Subject Property.

Standing Surface Water/Pools & Sumps

No standing water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were noted.

Drums, Totes and Intermediate Bulk Containers

No hazardous substance or petroleum product drums were noted.

Unidentified Substance Containers

No unidentified substance containers suspected of containing hazardous substance or petroleum product were noted.

PCBs in Oil Filled Electrical/Hydraulic Equipment

The Property is equipped with a trach compactor northeast of Chelsea Building 2 just south of West 26th Street. The compactor area is masonry enclosed with a roof and two overhead garage bay doors. No concerns were noted.

It is noted that identification of PCB containing fluorescent light ballasts, caulk, paint, or other materials located inside and are part of the building or structure is outside of the scope of the ASTM E1527-21 standard and this assessment.

Stains or Corrosion on Floors, Walls or Ceilings

No stains or corrosion of floors, walls or ceilings, excluding any staining from water, were noted.

Drains and Sumps

Floor drains and a basement sump designed for the purpose of managing sanitary sewage were noted. No conditions indicative of a REC were observed.

Pits/Ponds/Lagoons

No pits, ponds or lagoons were identified in connection with waste treatment or disposal.

Stained Soil, Pavement/Stressed Vegetation

No stained soil, pavement or stressed vegetation was observed.

On-Site Solid Waste Disposal/Fill Material

No evidence of on-site disposal of trash, construction debris, demolition debris or other solid waste was observed.

Based on the history of previous site development, historical fill material may be present in the subsurface at areas of previous site grading or building structures.

Waste Water

Sanitary sewage generated at the Subject Property is discharged via a connection to the local public sewer system.

Storm water runoff at the Subject Property is discharged via roof drains into the municipal sewer system.

Septic Systems/Cesspools

No septic systems/cesspools identified.

Wells

The following wells were identified at the Subject Property:

Multiple monitoring wells were observed in the vicinity of the two (2) Property heating oil USTs, west of Chelsea Building 1 just north of West 25th Street, and west of Elliott Building 4 south of West 27th Street – Drive. The wells are associated with documented releases from USTs removed from the Property discussed in Section 3 and 4 above.

Railroad Spurs

No railroad spurs were identified on the Subject Property.

7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-21 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Subject Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials in the readily accessible and observed areas of the building, and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Given the 1940-1968 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.

Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials.

7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

Given the 1940-1968 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.

Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 mg/cm^2 (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.

7.3 Radon

Data compiled by the USEPA, as summarized by the regulatory database report, indicated that the Subject Property is located in an area classified as Zone 3 or 'low risk' area for radon. Radon testing was not included in the scope of this assessment.

7.4 Mold/Microbial Damage

The contracted scope of work included a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth.

The following evidence of significant moisture intrusion or mold/microbial growth was noted:

The basement of Building Elliott - 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.

7.5 NWI Mapped Wetlands

The National Wetlands Inventory online Wetland Mapper (https://www.fws.gov/wetlands/data/mapper.html) was reviewed for indications of jurisdictional wetlands at or immediately adjoining the Subject Property. The scope of work for this assessment excluded a visual determination of regulated wetlands at the Subject Property. It is emphasized that, regardless of the data reviewed via the NWI Wetlands Mapper, a field delineation of regulated wetlands by a qualified professional would be warranted to determine the presence or absence of regulated wetlands at the Subject Property.

The review did not indicate regulated wetland areas on the Property.

7.6 Lead in Drinking Water

The scope of work for this assessment included a review of the potential for elevated levels of lead in drinking water by determining the source of the drinking water supply and a review of available compliance or testing data.

Potable water service at the Property is provided by a utility connection with the City of New York. A recently published water quality report from the utility indicated compliance with USEPA water quality standards for lead in drinking water. A copy of the report has been attached in Appendix F. Note – no site-specific lead-in-water sampling was performed within the context of the Phase I.

8.0 REFERENCES

ASTM E1527-21-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2021

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report, and historical record reports discussed in Section 4, Environmental Data Resources

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

Site Specific Field Investigation Work Plan Elliott Houses, 426 West 27th Street, New York, New York NYSDEC Spill Number 89-08401 PBS Number 601955; prepared by Gannett Fleming Engineers and Architects, P.C. (GF) dated July 2007 (DRAFT)

Phase II Field Investigation Elliott Houses, 426 West 27th Street, New York, NY 10001, NYSDEC Spill #89-08401; prepared by American Environmental Assessment & Solutions, Inc. (AEASinc) dated March 15, 2011

9.0 APPENDICES

Appendix A	Site Diagram / Vicinity Map
Appendix B	Site Photographs
Appendix C	Questionnaires / User Provided Information
Appendix D	Historical Records Documentation
Appendix E	Regulatory Records Documentation
Appendix F	Other Documents / Lab Results
Appendix G	Project Personnel Qualifications

HILLMANN
CONSULTING

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Fulton
401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street
New York, New York 10011

Prepared For:

Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

Report Issuance Date: April 21, 2022
Site Reconnaissance Date: April 19, 2022

Hillmann Project Number Z34898

HILLMANN
CONSULTING

April 21, 2022

Mr. Jamar Adams
Elliott Fulton LLC c/o Essence Development
30 Hudson Yards
New York, NY 10001

RE: Phase I Environmental Site Assessment
Fulton
401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street
New York, New York 10011
Hillmann Project No: Z34898

Dear Mr. Adams:

Hillmann Consulting LLC has completed a Phase I Environmental Site Assessment of the above referenced property. This assessment was performed in conformance with our contract agreement and the scope and limitations of ASTM Practice E 1527-21, which is the latest version of the E1527 standard published by the ASTM.

We appreciate the opportunity to provide environmental due diligence services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 908-688-7800.

Sincerely,

Hillmann Consulting, LLC

Chris Hirschmann
Environmental Services Director

Etan Hindin
Senior Project Manager

TABLE OF CONTENTS

List of Abbreviations/Acronyms

Hillmann may use the following abbreviations and acronyms for common terminology described in our report. Not all abbreviations or acronyms may be applicable to this report:

ACM	– Asbestos Containing Material
AOC	– Area of Concern
AST	– Aboveground Storage Tank
ASTM	– American Society for Testing Materials
BER	– Business Environmental Risk
CEA	– Classification Exception Area
CERCLA	– Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	– Comprehensive Environmental Response Compensation and Liability Information System
CESQG	– Conditionally Exempt Small Quantity Generator
COC	– Chemicals of Concern
CORRACTS	– Corrective Action Sites
CREC	– Controlled Recognized Environmental Condition
DEC	– Department of Environmental Conservation
DEP	– Department of Environmental Protection
DHS	– Department of Health Services
DNPL	– Delisted National Priority List
DOB	– Department of Buildings
DOH	– Department of Health
DOT	– Department of Transportation
DTSC	– Department of Toxic Substances Control
ENG	– Engineering
EPA	– Environmental Protection Agency
ERNS	– Emergency Response Notification System
FD	– Fire Department
FOI/FOIA/FOIL	– Freedom of Information / Freedom of Information Act / Freedom of Information Letter
HVAC	– Heating Ventilation & Air Conditioning
HREC	– Historic Recognized Environmental Condition
IAQ	– Indoor Air Quality
ISRA	– Industrial Site Recovery Act
LBP	– Lead-Based Paint
LCP	– Lead-Containing Paint
LQG	– Large Quantity Generator
LTANK	– Leaking Storage Tank
LUST	– Leaking Underground Storage Tank
SDS/MSDS	– Safety Data Sheet / Material Safety Data Sheet
NA	– Not Applicable
NFA	– No Further Action
NFRAP	– No Further Remedial Actions Planned
NPDES	– National Pollutant Discharge Elimination System
NPL	– National Priority List
OER	– Office of Environmental Remediation
OPRA	– Open Public Records Act
PAH	– Polycyclic Aromatic Hydrocarbon
PCE	– Perchloroethylene
RAO	– Response Action Outcome
RCRA	– Resource Conservation and Recovery Act
RCRIS	– Resource Conservation and Recovery Information System
REC	– Recognized Environmental Condition
RWQCB	– Regional Water Quality Control Board
SCAQMD	– South Coast Air Quality Management District
SDG	– Significant Data Gap
SEMS	– Superfund Enterprise Management System
SRP	– Site Remediation Program
SQG	– Small Quantity Generator
SVOC	– Semi-Volatile Organic Compound
TCE	– Trichloroethylene
TSDF	– Treatment Storage and/or Disposal Facility
UST	– Underground Storage Tank
VEC	– Vapor Encroachment Condition
VOC	– Volatile Organic Compound

1.0 FINDINGS, OPINIONS, AND CONCLUSIONS

Hillmann Consulting, LLC (Hillmann) performed a Phase I Environmental Site Assessment (ESA) of 401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street, New York, New York (the Subject Property). The assessment has been conducted in accordance with our contracted scope of work and the ASTM Standard Practice E 1527-21 for Phase I Environmental Site Assessments and All Appropriate Inquiries (AAI) Final Rule 40 CFR Part 312. This section contains a summary of findings, opinions and conclusions made by this assessment. However, this section, alone, does not constitute the complete assessment. The report must be read in its entirety.

1.1 Summary of Project Details

Primary Street Address:		401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street			
City:	New York	**County:**	New York	**State:**	New York
Tax ID/Parcel Number:		401W19th: Block 717, Lot 19; 401W18th: Block 716, Lot 17; 427W17th: Block 715, Lot 10; 430W17th: Block 714, Lot 31			
Property Owner:		New York City Housing Authority (NYCHA)			
Zoning Designation:		R8-C2-5 (Residential with Commercial Overlay)			
Approx. Property Area:		6.21-acres (combined)			
Buildings:		Eleven residential apartment buildings: B2, B6, B9 are high-rise 25-story plus basement; B1, B3, B4, B5, B7, B8, B10, B11 each 6-story with no basement except B1 and B3 which have a basement; and B12 - freestanding garage (1-story / 2-bay) NOTE: See Appendix A for building numbering/locations			
Approx. Building Size:		974-units (combined)			
Approx. Year Built:		1963-1965			
Commercial Occupants:		Primarily residential with senior center, development/management office and computer lab			
Current Use:		Multifamily residential			
Inspected By:		Mr. Etan Hindin and Mr. Dominick Aponte			
Site Contact/Company:		Mr. Patrick Chan / Property Manager (NYCHA)			
Site Escort/Company:		Rico / Site Caretaker (NYCHA)			
Inspection Date:		April 19, 2022			
Weather Conditions:		Overcast 42 degrees Fahrenheit			

1.2 Findings Summary Table

Assessment Subject	No REC	REC	CREC	HREC	SDG	Rpt. Ref.
Property Regulatory Records Review:				X		4.3
Property Historical Records Review:		X				4.2
Bulk Petroleum Storage:	X					6.3
On-Site Operations:	X					6.3
On-Site Haz-Mat Storage/Use/Spills:	X					6.3
Transformers/Hydraulic Systems:	X					6.3
Waste Discharges:	X					6.3
Interviews:	X					5.0
Adjoining & Nearby Properties:	X					4.3 6.2
Prior Env. Reports/User Provided Info:	X					3.0

1.3 Findings, Opinions and Conclusions

Recognized Environmental Conditions & Significant Data Gaps

Hillmann has performed a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-21 of the Subject Property as described in Section 2.2 of this report. Any additions to, exceptions to, or deletions from this practice are also described in Section 2 of this report. This assessment has revealed the following *recognized environmental conditions* (RECs), *controlled recognized environmental conditions* (CRECs) and/or *significant data gaps* (SDGs) in connection with the Subject Property:

RECOGNIZED ENVIRONMENTAL CONDITIONS

Multiple historic uses of potential environmental concern occurred at the Property prior to the 1963-1965 construction of the present Property buildings, per review of Sanborn Fire Insurance Maps, as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue (see Appendix A figure), and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks is considered a REC. Two (2) groundwater monitoring wells were observed within the Property north of B12 (two-bay Property garage) and northwest of B4 on the south side of West 18th and West 17th Streets respectively. The trigger for the installation of these wells and their use for sampling/monitoring if any was unknown by the site escort/contact. Hillmann recommends obtaining records of a subsurface investigation (if already performed) or performing a subsurface investigation to determine the presence/absence of impact to underlying environmental media from aforementioned uses and the presence/absence of abandoned underground storage tanks (USTs) in areas not excavated in the 1960's for the construction of the present Property buildings. If the onsite groundwater monitoring wells observed during the site reconnaissance are no longer in use, said wells should be decommissioned in accordance with applicable regulations.
CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CRECs)
No CRECs were identified.
SIGNIFICANT DATA GAPS (SDGs)
No SDGs were identified.

Historical Recognized Environmental Conditions (HRECs)

This assessment has revealed the following *historical recognized environmental conditions* (HRECs) in connection with the Subject Property:

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS	
	An NY SPILLS database listing for the "Excavation Site - Front of 413 West 16th Street" details the discovery of a fuel odor during an unrelated excavation (infrastructure work on a sewer line and transformer vault) leading to the removal of approximately 40 cubic yards of soil on May 27, 2005. Given the impact identified and subsequent remediation (soil removal) and regulatory closure, listed as closed on December 27, 2005, the NY SPILLS listing is considered an HREC. Hillmann notes that given the nature of the discovery of the impact (unrelated excavation likely along the sidewalk in front of 413 West 16th Street) and title of the listing "Front of…" the investigation/soil removal was likely not comprehensive enough to determine the presence/absence of impact from historical uses to the rest of the 430 West 17th Street Parcel (Block 714, Lot 31), a parcel noted above with historic uses including multiple gasoline tanks and an auto filling/service station.

De Minimis and Other Environmental Conditions

The following *de minimis* and other environmental conditions were identified:

OTHER ENVIRONMENTAL CONDITIONS / DE MINIMIS CONDITIONS
401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017. The listing does not indicate any release was identified during the UST removal and is not considered a REC.
400 West 17th Street (Building 7) is listed on the NY SPILLS database due to an incident involving wastewater in June 2020. The case obtained regulatory closure and due to the nature of the spill and regulatory status is not considered a REC.
Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC.

427-431 West 17th Street / NYCHA-Fulton Houses is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC.
West 17th Street and 10th Avenue is listed on the Brownfields database. The site is located to the adjacent west of Property building 4. In 2004 during a Phase I and II, contaminants of concern were identified associated with past uses of petroleum and historic fill. Soils and groundwater were identified to be contaminated with VOCs, petroleum related and chlorinated solvents and SVOCs. The listings details the subsequent remediation as follows: "*A Track 4 cleanup was achieved for the site. Engineering and Institutional Controls have been instituted to manage the residual contamination. These controls have been memorialized in the Environmental Easement that has been recorded in the New York County Clerk's office. The Certificate of Completion was issued on October 6, 2008.* *Public water is provided to the area, thereby preventing exposures to groundwater. The remedial action work plan for the site calls for the removal of contaminated soil from the site prior to construction of a residential building on-site. Soil gas is contaminated by chlorinated solvents that are likely due to an off-site source. The site owner will include measures in the building construction to prevent soil vapor migration into the building.*" Given the above, a vapor encroachment condition to the Property cannot be ruled out.

Environmental Professional Statement

I/We declare that, to the best of my professional knowledge and belief, I/we meet the definition of *Environmental professional* as defined in § 312.10 of 40 C.F.R. 312. I/we have the specific qualifications based on education, training and experience to assess a *property* of the nature, history and setting of the *subject property*. I/We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

_____

Etan Hindin
Environmental Professional

_____

Chris Hirschmann
Environmental Professional

1.4 Business Environmental Risks / Non-ASTM Scope

Hillmann has performed a limited review of the following potential Business Environmental Risks (BER), also known as "Non-ASTM Scope concerns", in accordance with the contracted scope of work scope for this assessment. BER is defined by ASTM E1527-21 as *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."* The following is a summary of findings for the limited review of potential BERs, where applicable, as per the contracted scope of work and limitations outlined in Section 2. For a more detailed discussion of the findings and contracted scope of work, please see the referenced report section.

BUSINESS ENVIRONMENTAL RISKS / NON-ASTM SCOPE			
Subject	**Findings**	**Not Appl.**	**Rpt. Ref.**
Asbestos	Given the 1963-1965 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis. Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials		7.1
Lead Paint	Given the 1963-1965 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis. Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 mg/cm^2 (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.		7.2
Radon	The Property is located in the USEPA radon designation Zone 3 or 'low risk' area for radon.		7.3
Mold / Microbial Damage	The basement of Building 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.		7.4
NWI Wetlands	No NWI Wetlands were depicted within the Property.		7.5
Lead in Drinking Water	Potable water service at the Subject Property is provided by the City of New York. The water purveyor water supply is within acceptable standards. Property building specific lead-in-drinking water sampling was not performed.		7.6

2.0 INTRODUCTION

2.1 Purpose and Scope

This assessment was conducted utilizing generally accepted Phase I ESA industry standards in accordance with the ASTM Standard Practice E 1527-21. The ASTM describes these methodologies as representing good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. § 9601) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B). The goal of the processes established by ASTM E1527-21 is to identify *recognized environmental conditions* in connection with the Subject Property.

The term *recognized environmental condition* (REC) is defined by ASTM E1527-21 as *"(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."*

The term *controlled recognized environmental condition* is a type of recognized environmental condition and defined by ASTM E1527-21 as a *"recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."*

The term *historical recognized environmental condition* is defined as a *"previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."* The ASTM E1527-21 standard has clarified that a *historical recognized environmental condition* (HREC) is not a *recognized environmental condition* (REC).

The term *de minimis condition* is defined by the ASTM, *"…a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."* A condition determined to be a *de minimis condition* is not REC nor a CREC.

The chief components of this assessment are generally described as follows:

- A non-invasive visual reconnaissance of the Subject Property and adjoining properties in accordance with ASTM guidelines for evidence of RECs.

- Interviews of past and present owners and occupants and state and local government officials, seeking information related to the potential presence of RECs at the Subject Property.

- A review of standard physical record sources for available topographic, geologic and groundwater data.

- A review of standard historic record sources, such as fire insurance maps, city directories, aerial photographs, prior reports and interviews, etc., to determine prior uses of the Subject Property from the present, back to the Subject Property's first developed use, or back to 1940, whichever is earlier.

- A review of standard environmental record sources including federal and state environmental databases, and additional environmental record sources, to identify potential regulatory concerns with the Subject Property, adjoining properties and properties located within the surrounding area.

An evaluation of environmental or other regulatory compliance matters is excluded from the scope of this assessment.

These methodologies are described as representing good commercial and customary practice for conducting an Environmental Site Assessment of a property for the purpose of identifying recognized environmental conditions.

Business Environmental Risks/Non-ASTM Scope Considerations

In accordance with our contract agreement, Hillmann may have addressed the following potential environmental subject matters that are outside of the requirements of the ASTM E1527-21 standard:

- Asbestos-Containing Materials (ACM): A cursory non-intrusive visual screening for the presence of suspect ACM within the accessed areas of buildings built prior to 1990 on the Subject Property. If the Subject Property contains buildings built in 1990 or later, the contracted scope of work excludes a cursory non-intrusive visual screening or any other level of evaluation for suspect ACM; however, the exclusion for buildings built ≥1990 should not be interpreted to suggest that any such buildings are free of ACM or would not warrant evaluation of building materials for ACM prior to disturbance. It is emphasized that this cursory non-intrusive visual screening does not constitute an asbestos survey/inspection of the premises. An asbestos survey/inspection should be sought by the report User(s) if a greater certainty is desired regarding ACM and potential asbestos hazards at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to asbestos is excluded from the scope of work.

- Lead-Based Paint (LBP): A cursory non-intrusive visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980 on the Subject Property. If the Property contains buildings built in 1980 or later, the contracted scope of work excludes any cursory non-intrusive visual screening or other level of evaluation for suspect

LPB; however, the scope of work exclusion for building built ≥1980 should not be interpreted to suggest that any such buildings are free of LPB or other lead hazards. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for LBP or potential lead hazards. A comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding LBP at the Subject Property. Furthermore, a review of regulatory compliance matters pertaining to lead-based paint is excluded from the scope of work.

- USEPA Designated Radon Potential: Review of general non-site specific data published by the USEPA regarding the Radon Zone classification for the area of the Subject Property.

- Mold/Microbial Damage: A cursory non-intrusive visual screening within the accessed areas of buildings on the Subject Property for evidence of systemic microbial problems, including visible mold growth, water damaged building materials or musty odors. It is emphasized that this cursory non-intrusive visual screening does not constitute a comprehensive survey for moisture/mold/microbial damage. A more comprehensive inspection should be sought by the report User(s) if more certainty is desired regarding the potential for moisture/mold/microbial damages at the Subject Property.

- NWI Wetlands: The Property has been reviewed for jurisdictional wetlands using the National Wetlands Inventory Wetland Mapper (http://wetlandsfws.er.usgs.gov/NWI/download.html) to determine whether mapped federal wetlands have been indicated on the Subject Property. Any further evaluation or legal delineation of regulated wetlands areas is excluded from the scope of work. It is also emphasized that a field delineation of regulated wetlands by a qualified professional would be warranted to more fully determine the presence or absence of regulated wetlands at the Subject Property.

- Lead in Drinking Water: Review of the potential for elevated levels of lead in the drinking water by determining the source of the drinking water supply and a review of available testing or compliance data reports.

2.2 Property Location/Legal Description

Property location and legal description details are described as follows:

Primary Street Address:	401 West 19th Street, 401 West 18th Street, 427 and 430 West 17th Street				
City:	New York	**County:**	New York	**State:**	New York
Tax ID/Parcel Number:	401W19th: Block 717, Lot 19; 401W18th: Block 716, Lot 17; 427W17th: Block 715, Lot 10; 430W17th: Block 714, Lot 31				
Approx. Land Area:	6.21-acres (combined)				
Apprx. Latitude/Longitude:	North 40.7436330 degrees/West 74.0043040 degrees				
Additional Details (if appl.):	Secondary address range: 89-157 9th Avenue; 401-433 West 19th;				

	400-426 West 19th; 401-423 West 18th; 400-434 West 18th; 401-445 West 17th; 400-438 West 17th; 401-429 West 16th;
Property Owner:	New York City Housing Authority (NYCHA)
Zoning Designation:	R8-C2-5 (Residential with Commercial Overlay)

2.3 Data Gaps

A *data gap* is defined by the ASTM as a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap and the ability to determine the presence or absence of recognized environmental conditions. The following table summarizes data gaps encountered during the assessment as well as a discussion of their significance.

Data Gap:	Significant (Yes/No)?	Discussion
Historical records data failure	No	Records gaps exceeding five years were encountered; however, no significant site use changes are suspected during these intervals.
Response to agency records requests not received as of date of report.	No	Any additional information indicative of a REC will be forwarded upon receipt.

2.4 ESA Report Component Dates/Viability

The ASTM E1527-21 standard states that an environmental site assessment (ESA) is presumed to be viable when it is conducted within 180 days prior to the date of acquisition of the Subject Property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). Specifically, all of the following components must be conducted or updated within 180 days prior to the date of acquisition or prior to the date of the transaction. The following table summarizes the component completion dates:

ESA Component	Completion Date
Interviews	April 19, 2022
Env Lien Search	(excluded from scope)
Government Records Review	March 31
Visual Inspections	April 19, 2022
Env. Professional Declaration	April 21, 2022

2.5 User Reliance

This report is for the exclusive use of Elliott Fulton LLC c/o Essence Development and additional relying entities, if any, named on the front cover. No additional individuals or entities shall be

permitted to rely upon any data, interpretation, reports or other information or documentation contained in this report, without first obtaining the consent of Elliott Fulton LLC c/o Essence Development; and without obtaining written consent from Hillmann in the form of a reliance agreement/letter.

Hillmann may, in its sole discretion, withhold its consent to additional reliance and/or Hillmann may condition consent for reliance upon payment of a fee or other conditions.

2.6 Significant Assumptions

The following significant assumptions are made:

- The site operations at the time of the site visit are assumed to reflect typical site conditions relative to potential environmental conditions and that no concealment of environmental conditions or releases by site owners or occupants has occurred. Likewise, it is assumed that no areas of the Subject Property with potential environmental concerns or RECs were concealed or otherwise not reported, intentionally or unknowingly, by the Subject Property owners/occupants and/or site escort at the time of the site visit.

- For the purpose of estimating the approximate direction of groundwater flow in the absence of site specific groundwater data, unless indicated otherwise, an assumption has been made that the gradient of groundwater flow follows the surface topography of the Subject Property and immediate surrounding area.

2.7 General Limitations and Exceptions

Limitations

The report turnaround time specified by the contract agreement for this assessment may present a limitation to the availability of pertinent regulatory agency records. Such limitations, if encountered, would be further specified in Section 4.1.

Significant limitations related to the condition or accessibility of the Subject Property at the time of the site reconnaissance, if encountered, are reported in Section 6.1.

Other Exceptions or Deletions

No other exceptions or deletions from the ASTM Standard E 1527-21 are reported.

Special Terms and Conditions

This Phase I Environmental Site Assessment has been prepared using reasonable efforts in each phase of its work to identify recognized environmental conditions associated with hazardous substances, wastes and petroleum products at the Subject Property. Findings within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, site development, redevelopment, or other construction purposes. No representation or warranty is made that the past or current operations at the Subject Property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes.

Findings, conclusions and recommendations presented in this report are based on visual observations of the Subject Property, interviews conducted, the records reviewed, information provided by the Client, and/or a review of readily available and supplied drawings and documents. Information obtained during the assessment, whether written, graphic or verbal, provided by the Subject Property contact(s) or as shown on any documents reviewed or received from the Subject Property contact, owner or agent, or government agency source; is assumed to be accurate except as specifically stated otherwise in this report. Independent verification of the accuracy or completeness of all information reviewed or received during the course of this assessment is not made and excluded from the scope of work for this assessment. No warranty or guarantee is made of the accuracy or completeness of information that was obtained from ostensibly knowledgeable individuals, regulatory agency representatives or other secondary sources.

Regardless of the findings stated in this report, Hillmann is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the assessment was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. Hillmann can neither warrant nor guarantee the accuracy or completeness of the information obtained from the regulatory database report provider during the course of this assessment.

Subsurface conditions may differ from the conditions implied by the surface observations and can only be reliably evaluated through intrusive techniques.

Reasonable efforts have been made during this assessment to identify aboveground and underground storage tanks and ancillary equipment. Reasonable efforts are limited to information gained from visual observation of largely unobstructed areas, recorded database information held in public record and available information gathered from interviews. Such methods may not identify surficial and subsurface features that may have been hidden from view due to parked automobiles and other vehicles, snow cover, vegetative growth, pavement, construction or debris pile storage or incorrect information from sources.

No guarantee, explicit or implied, is made that the records pertaining to historical ownership or occupancy which were reviewed represent a comprehensive or precise delineation of past Property ownership or tenancy for legal purposes.

The ASTM E1527-21 standard states that recommendations are not required to be included in a Phase I ESA report; however, further that recommendations are an additional service that may be useful in the User's analysis of landowner liability protections or business environmental risks; and that the User should consider whether recommendations for additional inquiries or other services are desired.

Recommended response actions offered in Section 1.3, if any, are provided as an option to the Client, and may have taken into account the Client's relation to the Subject Property and/or their intended purpose of this assessment. If included, it is not intended by Hillmann to represent the only course(s) of action, or inaction, to take. Furthermore, it is emphasized that additional response actions may become advisable depending on the outcome of the initial action(s) taken. Hillmann advises that Client and any additional authorized relying parties as specified on the report Cover and Section 2.5, or via letter of reliance extension, undertake consultation with legal counsel familiar with environmental and real estate law would be beneficial to the decision making process for the type and timing of a response action to identified RECs or Business Environmental Risks, if any.

Due to the limited nature of our review of potential Business Environmental Risks, the User(s) of the report should consider whether to take additional action(s) to further define, properly manage and/or mitigate potential BERs.

The User(s) assumes responsibility for business decisions that it makes utilizing information in the report provided by Hillmann. Hillmann shall not be responsible for any conclusions, interpretations and/or decisions of the User(s).

In the event of any conflict between the terms and conditions of this report and the terms and conditions of the consulting services agreement for this project, the consulting services agreement shall control.

3.0 USER PROVIDED INFORMATION

The term "User" is defined by ASTM as the party seeking to use Practice E1527 to complete an environmental site assessment of the Subject Property; specifically, the entity or entities named on the front cover to which the report has been addressed.

3.1 Environmental Lien and Activity and Use Limitation (AUL) Search

The User did not provide Hillmann with the results of an environmental lien and AUL search for the Subject Property.

3.2 Prior Environmental Reports/Documentation

No prior environmental reports/documentation were provided.

3.3 User Responsibilities

Section 6 of the ASTM E1527-21 standard describes certain tasks required to be performed by the report User in order to qualify for landowner liability protections to CERCLA liability. To assist the report User to meet these requirements, the ASTM E1527-21 standard recommends a questionnaire of inquiries (User Questionnaire) specified in 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31 be provided to the original report User. A User Questionnaire has been provided to the report User; however, a completed questionnaire was not returned to Hillmann.

Question:	Yes/No:	Detail:
Environmental liens that are filed or recorded against the property: Did a search of recorded land title records identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?	NR	
Activity and use limitations that are in place on the property or that have been filed or recorded against the property: Did a search of recorded land title records (or judicial records where appropriate, identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law?	NR	
Specialized knowledge or experience of the person seeking to qualify for the LLP: Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	NR	
Relationship of the purchase price to the fair market value of the property if it were not contaminated: Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower	NR	

Question:	Yes/No:	Detail:
purchase price is because contamination is known or believed to be present at the property?		
Commonly Known or Reasonably Ascertainable Information: Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,		
-Do you know the past uses of the property?	NR	
-Do you know of specific chemicals that are present or were once present at the property?	NR	
-Do you know of spills or other chemical releases that have taken place at the property?	NR	
-Do you know of any environmental cleanups that have taken place at the property?	NR	
The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation: Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?	NR	
Litigation/Administrative Proceedings/Government Notices As the User of this ESA, do you have knowledge of (1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property; (2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property; and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	NR	

NR-no response

3.4 User's Reason for Performing Phase I ESA

The User did not indicate the purpose of the assessment. In accordance with ASTM E1527-21, it is assumed that the Phase I ESA was being performed in order to qualify for landowner liability protection to CERCLA liability.

4.0 RECORDS REVIEW

4.1 Environmental Information

Physical Setting

Source	Discussion
USGS 7.5 minute Topographic Map Data: (EDR Geocheck-Physical Setting Source Addendum)	The Property lies at an elevation of approximately 14 feet above mean sea level. An interpretation of topographic contour lines as well as a review of the EDR Geocheck-General Topographic Gradient suggested terrain sloping downward towards the west-northwest. The closest down gradient water body is the Hudson River, located approximately 850-ft to the west-northwest.
USDA SCS Soil Data: (EDR Geocheck-Physical Setting Source Addendum)	The soil type at the Subject Property is classified as "Urban Land". The Urban Land designation indicates that a majority of the original soils on the site have been disturbed by development or covered with impervious surfaces, such as buildings or pavement.
Geologic Data: (EDR Geocheck-Physical Setting Source Addendum)	The Geologic Age Identification Category for the Property is Stratified Sequence, and the Rock Stratigraphic Unit is the Paleozoic Eta, Ordovicias System and Lower Orodovician and Cambrian carbonate rocks Series.
Prior Env. Reports: (Section 3.2)	None provided.
Additional Sources/ Data:	An eastern adjacent Property listed on the Brownfields database, 10th Avenue between West 16th and 17th Streets is listed as having groundwater at 10-14 feet below ground surface (bgs).
Groundwater Flow Discussion:	Based on a review of the above information as well as observation of the site, the direction of shallow groundwater flow at the site is inferred to be towards the west-northwest.

Federal, State and Tribal Environmental Record Sources

Standard government records were obtained and reviewed primarily via a third-party regulatory database report, titled EDR Radius Map™ Report, prepared by Environmental Data Resources of Shelton, CT. The report provided government records from the standard environmental resources and within minimum search distances specified by Section 8.2.2-Table 2 of the ASTM E1527-21; and were reviewed for the purpose of identifying potential RECs in connection with the Subject Property. Additional detail of the source and significance of the regulatory databases can be found in the regulatory database report in Appendix E. Hillmann has also included discussion of records pertaining to the Subject Property from other government record sources not specifically listed under Table 2, as applicable.

Reported distances for adjoining property listings, if applicable, are approximate and indicative of the presence of a public roadway or right-of-way between the adjoining site and Property.

The reported gradients have been estimated based on a number of factors including but not necessarily limited to field observation, review of topographic maps, database listing details and/or site specific geo-technical data.

Limited analysis of the details of on-site, adjoining and vicinity database sites was conducted to identify potential sources of sub-surface vapor encroachment. This review was based on elements of the ASTM "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" (ASTM E 2600-15); and also on elements of "Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby

Contaminated Sources" (Buonicore, 2011-S-103-AWMA). Vicinity database sites pertaining to non-petroleum product releases within 1,760 feet of the Subject Property in the up-gradient direction, 365 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction; and vicinity database sites pertaining to petroleum product releases within 528 feet of the Subject Property in the up-gradient direction, 165 feet of the Subject Property in the cross gradient direction and 100 feet of the Subject Property in the down gradient direction were reviewed to identify active contamination sites with the potential to affect subsurface vapor conditions at the Subject Property. The potential for vapor encroachment was considered in assessing whether or not a REC exists in connection with the Subject Property when reviewing applicable sites within those distances.

Regulatory database sites with active petroleum or non-petroleum releases that are considered to constitute a vapor encroachment condition (VEC) to the Subject Property, if any, are identified and discussed in this section.

The EDR Radius Map report is attached in Appendix E.

Property Listings

The following listings of the Subject Property were identified:

- An NY SPILLS database listing for the "Excavation Site - Front of 413 West 16th Street" details the discovery of a fuel odor during an unrelated excavation (sewer line to transformer vault) leading to the removal of approximately 40 cubic yards of soil on May 27, 2005. Given the impact identified and subsequent remediation (soil removal) and regulatory closure – listed as closed on December 27, 2005, the NY SPILLS listing is considered an HREC.

  Hillmann notes that given the nature of the discovery of the impact (unrelated excavation likely along the sidewalk in front of 413 West 16th Street) and title of the listing "Front of…" the investigation/soil removal was likely not comprehensive enough to determine the presence/absence of impact to the rest of the 430 West 17th Street Parcel (Block 714, Lot 31), a parcel noted above with historic uses including multiple gasoline tanks and an auto filling/service station.

- 401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017. The listing does not indicate any release was identified during the UST removal and is not considered a REC.

- 400 West 17th Street (Building 7) is listed on the NY SPILLS database due to an incident involving wastewater in June 2020. The case obtained regulatory closure and due to the nature of the spill and regulatory status is not considered a REC.

- Multiple Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) associated with Property addresses were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC.

- 427-431 West 17th Street / NYCHA-Fulton Houses is listed on the RCRA-NonGen, FINDS and ECHO databases likely associated with the removal of regulated waste. The listings are regulatory in nature, not indicative of a release and not considered a REC.

Adjoining Property Listings

The following adjoining property listings were identified.

- Multiple adjacent Con-Edison listings (MANIFEST, RCRA-NonGen, FINDS, ECHO) were identified. The listings are associated with infrastructure work generating regulated waste. The listings are not indicative of a release and not considered a REC in connection with the Property.

- Multiple adjacent sites are listed on the NY SPILLS and LTANKS databases. Each of the adjacent listings obtained regulatory closure and are not considered a REC in connection with the Property.

- West 17th Street and 10th Avenue is listed on the Brownfields database. The site is located to the adjacent west of Property building 4. In 2004 during a Phase I and II, contaminants of concern were identified associated with past uses of petroleum and historic fill. Soils and groundwater were identified to be contaminated with VOCs petroleum related and chlorinated solvents and SVOCs. The listings details the subsequent remediation as follows:

  "*A Track 4 cleanup was achieved for the site. Engineering and Institutional Controls have been instituted to manage the residual contamination. These controls have been memorialized in the Environmental Easement that has been recorded in the New York County Clerk's office. The Certificate of Completion was issued on October 6, 2008.*

  Public water is provided to the area, thereby preventing exposures to groundwater. The remedial action work plan for the site calls for the removal of contaminated soil from the site prior to construction of a residential building on-site. Soil gas is contaminated by chlorinated solvents that are likely due to an off-site source. The site owner will include measures in the building construction to prevent soil vapor migration into the building."

  Given the above, a vapor encroachment condition to the Property cannot be ruled out.

Surrounding Area Findings

The following is a discussion of non-adjoining sites identified as located within the ASTM specified search distance surrounding the Subject Property. In order to keep this discussion informative and concise, discussion(s) is/are provided of the listed site(s) for each database category that appears most likely to impact the Subject Property based on distance, area topography and/or regulatory status. Listings of sites within the applicable search distances not specifically discussed below were reviewed and concluded not to be RECs in connection with the Subject Property or VECs based on various factors including distance, area topography, known or inferred groundwater flow direction and/or regulatory status.

Federal NPL				**# of sites:**	1	**Search Distance:**	1-mile
Notable Listing:	Hudson River PCBs						
Distance in feet:	850	**Direction:**	WNW	**Gradient:**	Down		
Data Discussion:	Given the location and nature of the NPL case – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

Federal Delisted NPL				**# of sites:**	0	**Search Distance:**	1-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

Federal SEMS				**# of sites:**	1	**Search Distance:**	½-mile
Notable Listing:	Hudson River PCBs						
Distance in feet:	850	**Direction:**	WNW	**Gradient:**	Down		
Data Discussion:	Given the location and nature of the SEMS case (also listed on the NPL database) – PCBs in the Hudson River sediment, the listing is not considered a REC to the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

Federal SEMS-ARCHIVE				**# of sites:**	2	**Search Distance:**	½-mile
Notable Listing:	Federal Building / 252 7th Avenue						
Distance in feet:	2,216	**Direction:**	E	**Gradient:**	Up/Cross		
Data Discussion:	Given the distance the SEMS-ARCHIVE sites are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

Federal CORRACTS				**# of sites:**	0	**Search Distance:**	1-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

Federal RCRA-TSD				**# of sites:**	0	**Search Distance:**	½-mile
Notable Listing:	None						
Distance in feet:		**Direction:**		**Gradient:**			
Data Discussion:							
REC Discussion:							
VEC Discussion:							

State/Tribal SUPERFUND & HAZARDOUS WASTE	**# of sites:**	7	**Search Distance:**	1-mile

Notable Listing:	Bayview Correctional Facility / 550 West 20th Street				
Distance in feet:	987	**Direction:**	NW	**Gradient:**	Down
Data Discussion:	Given the distance, gradient and/or regulatory status the SHWS listing are not considered a REC in connection with the Property.				
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.				
VEC Discussion:	Based on the available data, a VEC is not suspected.				

State/Tribal LANDFILL/SOLID WASTE DISPOSAL				**# of sites:**	1	**Search Distance:**	½-mile
Notable Listing:	NYCDOS Ganesvoort MTS (near 14th Street)						
Distance in feet:	1,718	**Direction:**	SSW	**Gradient:**	Down		
Data Discussion:	Given the distance and downgradient location, the NYCDOS transfer station is not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal LEAKING STORAGE TANKS				**# of sites:**	132	**Search Distance:**	½-mile
Notable Listing:	Auto Care West / 464 West 18th Street						
Distance in feet:	145	**Direction:**	W	**Gradient:**	Down		
Data Discussion:	Given the distance, gradient and/or regulatory status, the LTANKS listings are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal VOLUNTARY CLEANUP SITES				**# of sites:**	20	**Search Distance:**	½-mile
Notable Listing:	118 10th Avenue / Hudson Yards-Chelsea-Flatiron Union Square						
Distance in feet:	209	**Direction:**	NW	**Gradient:**	Down		
Data Discussion:	Given the nature of the listings and/or distance/gradient the VCP sites are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

State/Tribal BROWNFIELD SITES				**# of sites:**	11	**Search Distance:**	½-mile
Notable Listing:	515 West 18th Street						
Distance in feet:	575	**Direction:**	W	**Gradient:**	Down		
Data Discussion:	Given the distance and gradient, the Brownfields listings are not considered a REC in connection with the Property.						
REC Discussion:	Based on the details provided above, a REC is not suspected in connection with the Property.						
VEC Discussion:	Based on the available data, a VEC is not suspected.						

UNMAPPED/ORPHAN LIST SITES	
	Hillmann has also reviewed a list of unmapped sites (a.k.a. "Orphan List" sites) indicated by the database report. Unmapped sites that were identified as falling within an applicable specific search distance or warranting discussion have either been discussed in the preceding tables or are detailed below:

Notable Listings:	None

Additional Environmental Record Sources

Requests have been submitted to local, municipal and state agencies for pertinent records pertaining to the Subject Property, particularly with regard to potential environmental concerns such as petroleum storage tanks, storage and usage of hazardous substances and petroleum products, and/or known or suspected environmental contamination. Where applicable, internet research of government environmental regulatory databases was also conducted, as well as a general cursory internet search of the Subject Property address, for information indicative of a REC. The following table summarizes the findings of the research:

Source	Type of Request	Outcome
NYCFD-Public Records Unit / Tank Section	FOI request	No response was received prior to report issuance.
NYS DEC	FOI request	A response was received stating that no records were found.
NYCDEP	FOI request	No response was received prior to report issuance.
NY DOB	Online search	Records corroborating historic filling station within the Property identified.
USEPA	Online search	No records indicative of a REC identified.
Internet	Online Search	No records indicative of a REC identified.

Pertinent records referenced in the above table have been included in Appendix F.

4.2 Historical Research

Historical records have been compiled and analyzed for historical property information and developing a history of previous uses of the Subject Property, adjoining properties and surrounding area. These records were reviewed for the purpose of identifying the likelihood of past uses having led to RECs in connection with the Subject Property.

The historical record sources listed below have been sought with the objective to document past uses of the Subject Property from the present back to the Subject Property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural use, placement of fill dirt and other uses that do not involve structures. Hillmann has sought to review historical records in minimum intervals of five years.

Fire Insurance Maps

A Certified Sanborn Map Report was obtained from EDR for a review of published historic fire insurance maps for the Subject Property and surrounding area. The following is a summary of site uses and notable details depicted by the available maps:

430 West 17th Street (Block 714, Lot 31)

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
1895, 1904, 1919, 1921, 1928	**Property:**	Multiple multi-story dwellings and commercial occupants including of potential environmental concern.	Vinegar Factory (1895); Chinese Laundry (101 9th Avenue – 1904); 165-car garage with auto repair operation in basement and 1,500-gallon gasoline UST in basement (415-425 West 16th Street – 1921-1950); Iron works (1921).
	Adjoining:	National Biscuit Company factory/warehouse noted to the south.	
1950	**Property:**	Dwellings have been cleared and replaced with a filling station and a taxi garage.	Taxi garage and filling station each with multiple gasoline tanks along West 16th Street, 9th Avenue and West 17th Street (1950).
	Adjoining:	Warehouse to the south, residential and commercial in other directions.	Auto repair and freight terminal to the west.
1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005	**Property:**	Four Property buildings corresponding to the present configuration are depicted.	
	Adjoining:	Manhattan Industrial Center to the south, residential and commercial in other directions.	

427 West 17th Street (Block 715, Lot 10)

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
1895, 1904, 1919, 1921, 1928	**Property:**	Multiple multi-story dwellings and commercial occupants including of potential environmental concern.	Chinese Laundry (119 9th Avenue in 1904)
	Adjoining:	Consolidated Gas Company Gas Holders to the west; residential and commercial in other directions. In	Gas holding silos depicted to the west (1895-1904);
1950	**Property:**	An auto service and filling station with three gasoline tanks with multiple gasoline tanks is noted at 109 9th Avenue. Auto painting and repair are noted along West 17th. A cheese dealer, lumber yard and waste paper are depicted in addition to multiple mixed-use store/dwelling buildings.	Auto painting, repair and filling with multiple gasoline tanks.
	Adjoining:	Garage with gasoline tanks noted to the adjacent west.	Gasoline tanks depicted to the adjacent west.
1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005	**Property:**	Three Property buildings corresponding to the present configuration are depicted. The apartment complex is listed as "Fulton Houses Apartments" with 944 units and parking.	
	Adjoining:	Beginning in 2002 the western adjacent building is listed as a Verizon site.	

401 West 18th Street (Block 716, Lot 17)

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
1895, 1904, 1919, 1921, 1928	**Property:**	Multiple multi-story dwellings and commercial occupants including a pharmacy and bakery.	
	Adjoining:	Residential/commercial buildings.	
1950	**Property:**	Motor freight terminal noted at 410-412 West 19th Street.	Motor freight terminal

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
	Adjoining:	Auto body shop noted to the adjacent west.	
1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005	**Property:**	Three Property buildings corresponding to the present configuration are depicted.	
	Adjoining:	No significant changes noted.	

401 West 19th Street (Block 717, Lot 19)

Year(s)	Prop/Adj	Depicted Use(s)	Notable Details
1895, 1904, 1919, 1921, 1928	**Property:**	Multiple multi-story dwellings and a convent.	
	Adjoining:	Residential/commercial buildings.	
1950	**Property:**	The dwellings are not listed as mixed-use (store/dwelling) buildings.	
	Adjoining:	Primarily mixed-use buildings.	
1969, 1975, 1979, 1980, 1983, 1985, 1987, 1988, 1991-1996, 2001-2005	**Property:**	One Property building corresponding to the present configuration is depicted.	
	Adjoining:	No significant changes noted.	

A copy of the Certified Sanborn Map Report is attached in Appendix D.

City Directories

An EDR City Directory Abstract report was reviewed for data of former occupants of the Subject Property's street address. The following is a generalized summary of the findings of city directory research for past occupants of the Subject Property.

Property	
Use(s) / Occupant(s):	**Years**
Residential and mixed-use listings	1920-2017
403 West 18th Street – Cleveland Automotive Prod Co, Unit Auto Parts Co	1950
424 West 18th Street – Drayer scrap metal, Dry Lee Plastic Co Inc.	1956-1958

The EDR City Directory Abstract report was also reviewed for listings of historic occupants of the adjoining properties. The following is a general summary of listings of historic adjoining property occupants:

Adjoining Properties	
Use and/or Occupant(s)	**Years**
Mix of residential and commercial occupants.	1920-2017

A copy of the EDR City Directory report is attached in Appendix D.

Historical Topographic Maps

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

Historical Aerial Photographs

Due to the availability of alternate historic sources, as well as the likelihood that this source would not provide any significant data, historical aerial photographs were not researched for this assessment.

EDR High-Risk Historical Records

The EDR Radius Map™ report, which is discussed in greater detail in Section 4.1 and attached in Appendix E, provided a search of proprietary databases of potential historical high-risk uses at or in the vicinity of the Subject Property. These databases include EDR Historic Cleaners – a database of property addresses with records of historical occupancy by suspected cleaners businesses; EDR Historic Auto – a database of property addresses with records of historical occupancy by potential automotive gas/filling stations and repair facilities; and EDR MGP- a database of sites historically occupied by manufactured gas plants and related facilities.

EDR Database	On-site Listings:	Adjoining/Off-Site Listings
Historic Cleaners: (on-site/adjoining only)	None	322 Franklin Street, Indigo Cleaners and Dyers, listed for the years 1957 to 1972
Historic Auto: (on-site/adjoining only)	None	None
MGP: (1-mile distance)	None	ConEdison-West 58th St. Station MGP 11th Ave Between W. 58th – W. 59th Sts, was incorrectly plotted by EDR, and is actually located over a mile to the west-northwest.

Petroleum/Natural Gas Well Review

The historical record sources were reviewed for records of historic petroleum and/or natural gas wells at the Subject Property. No record of any historical petroleum/natural gas wells at or adjoining the Property was identified.

Additional Historical Data

Where applicable, the following additional pertinent historical data was obtained:

Interviews/Anecdotal:	No additional pertinent historical data was obtained.
Local Gov't Records:	The following additional pertinent historical data was obtained: NYC DOB records corroborate Sanborn depictions of gasoline tanks/fillings stations historically within the Property.

Prior Env. Reports: (Section 3.2)	Not applicable; no prior reports were provided.
Site Observations:	Indications of historic uses of the Property or adjoining properties were not observed during the site reconnaissance.
Other Sources:	No additional pertinent historical data was obtained.

Summary of Identified Historic Uses

The following table presents a summary of the types and approximate date ranges of identified prior uses of the Subject Property:

Property	
Date Range	**Use**
Late 1800's to 1963	Residential and auto repair / fillings station among other commercial uses.
1963-Present	Fulton apartment buildings

The following table presents a summary of the types of identified prior uses of the adjoining properties:

Adjoining Properties	
Date Range	**Use**
Unk to Present	Residential, commercial and auto repair, industrial warehouses (south), Chelsea Market (south)

Historical Records Data Failure

The ASTM E1527-21 standard defines data failure as failure to achieve the historical research objective even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. The objective is to identify all obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. Furthermore, records of historic use/conditions were sought in intervals no less than approximately five years, unless the property conditions appear unchanged over a longer interval. In encountered, data failure and its significance as a data gap is discussed below:

Objective	Met?	Detail	Significant?
First developed use/date determined?	Yes	The first developed use of the Property was for dwellings in the late 1800's.	No
Record sources at 5-year intervals back to 1940 or first developed use?	Yes	Historical record gaps exceeding five years were encountered. However, significant site-use changes or undiscovered site uses appear unlikely to have occurred during the record gaps.	No
All obvious prior uses identified?	Yes	See Summary of Identified Past Uses of this section.	No

Please refer to Section 2.3 for additional discussion of data gaps and their significance to the findings of the assessment.

Historic Uses REC Discussion

The review of historical records indicated evidence of the following potential RECs in connection with the Property:

Multiple historic uses of potential environmental concern, based on a review of Sanborn Fire Insurance Maps, occurred at the Property prior to the construction of the present Property buildings in the 1960's as follows:

- Vinegar Factory at 424-426 West 17th Street (off the east side of the present Property Building 4) in 1895;
- "Chinese Laundry" at 101 and 119 9th Avenue (near present Property Buildings 2 and 7) in 1904;
- 165-car garage with auto-repair operations in the basement and a 1,500-gallon gasoline buried tank (in the vicinity of the present asphalt surface parking south of Building 2) and a 15-car private garage with a buried gasoline tank (capacity indecipherable) at 409 West 17th Avenue (off the west side of the present Property Building 7), and iron works 434-436 West 17th Avenue and 414 19th Avenue in 1921;
- Filling station (gas station), taxi garage and auto repair with multiple gasoline tanks depicted along ninth avenue between West 16th and West 17th Avenue and along West 16th and West 17th Avenue (see Appendix A figure), and an additional auto filling/service station with multiple gasoline tanks depicted at the northwest corner of 9th Avenue and West 17th Street (near the southern edge of the present Building 7) and auto painting (431-433 West 17th) and repair (443-445 West 17th), a motor freight terminal (410-412 West 19th) in 1950.

The aforementioned historic uses including a factory, laundry, iron works, motor freight station, auto filling/service stations with multiple gasoline tanks is considered a REC.

5.0 INTERVIEWS

5.1 Interviews with Owners, Operators and Occupants

Current Owner / Key Site Operator

Property Owner	**Contact Name**	**Affiliation**	**Interview Type**
New York City Housing Authority (NYCHA) representative	Patrick Chan	Property Manager with NYCHA	In person
Interview Date:	April 19, 2022		
Interview Outcome/Findings:			
An interview for information pertinent to the assessment was conducted in person at the time of the site visit. The following pertinent information was indicated: The Property was reportedly always supplied with high pressure steam and no heating oil is or was present to Mr. Chan's knowledge.			

Prior Owners/Operators/Occupants

Name	**Company/Title**	**Yrs @ Site**	**Interview Type**
Interview Date:			
Interview Outcome/Findings:			
No prior owners, operators or occupants were interviewed.			

Neighboring Property Owner/Occupants

Name	**Company/Title**	**Yrs at site**	**Interview Type**
Interview Date:			
Interview Outcome/Findings:			
The Property was not an abandoned property with evidence of unauthorized uses or uncontrolled access; therefore, interviews with adjoining or nearby property owners or occupants were not conducted.			

5.2 Interviews with State and/or Local Government Officials

State and/or local governmental officials have been interviewed to obtain information of potential RECs in connection with the Subject Property. Many government agencies and their officials require submittal of written request for records in order to respond. The details in Section 4.1 list the various state and local government agencies contacted as part of this assessment, and the outcome of each inquiry. In addition, the details of regulatory database research in Section 4.1 may

have included detail of interviews with officials pertinent to government records review and identification of RECs.

Additional interview of government officials not previously detailed in Sections 4.1 are discussed below, if applicable.

Name	**Agency Name/Title**	**Interview Type**
Interview Outcome/Findings:		
No additional local/state government officials were interviewed.		

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

A site reconnaissance was conducted to collect information and make observations to help identify RECs in connection with the Subject Property. This included visual and/or physical observations of the Subject Property and its structures, adjoining properties as viewed from the Subject Property boundaries and the surrounding area based on visual observations from adjoining public thoroughfares and accessed Subject Property structures. Subject property building exteriors were observed at ground level, unless otherwise indicated. Where applicable, building interiors were accessed and observed to the extent they were made safely accessible with the cooperation of the site escort.

Site Inspection Personnel:	Mr. Etan Hindin and Mr. Dominick Aponte
Property Escort/Company:	Rico / Property Caretaker
Inspection Date:	April 19, 2022
Weather Conditions:	Overcast 45 degrees Fahrenheit

Significant Inaccessible Areas

Due to the pandemic occupied units were inaccessible. The inability to access these units is not considered a Significant Data Gap.

Significant Limiting Site Conditions

No significant limiting site conditions were noted at the time of the site reconnaissance.

6.2 General Site Setting

Site and Vicinity Characteristics

Abutting Roadways:	9th Avenue to the east; West 16th Street to the south; West 17th, 18th and 19th divide the Property parcels.
Current Property Use:	Multifamily residential
Evidence of Past Property Uses:	None observed.
Evidence of Past Adjoining Property Uses:	None observed.
Surrounding Area Uses:	Commercial, residential

Current Adjoining Property Uses

Dir	Street Address	Description
N	Multiple West 20th addresses	Primarily residential
W	Multiple West 16th-20th addresses	Residential and commercial
E	Multiple 9th Avenue addresses	Commercial and residential
S	75 9th Avenue	Commercial

No visual observations indicative of a potential environmental concern were noted on the adjoining properties.

Topographic Characteristics

Terrain:	Flat to gently sloping
Direction of Downward Slope:	Towards the northwest
On-site Water Bodies:	None observed
Other Significant Features:	None observed

General Description of Structures and Improvements

Buildings:	Twelve
Approx. Building Size:	974-units (combined)
Approx. Year Built:	1963-1965
Number of Stories:	B12 – 1; B2, B6, B9 – 25-story plus basement; B1, B3 6-story plus basement; B4, B5, B7, B8, B10, B11 – 6-story
Basement/Subgrade Levels:	See above
Exterior Ground Cover:	Asphalt, cement and landscaped areas,
Ancillary Structures:	B12 as noted above
Sources of Heating & Cooling:	High pressure steam supplied by Con Edison for heat and tenant-owned optional electric window units for cooling.
Potable Water/Sewage Disposal:	Municipal utility connections

6.3 Site Features and Conditions

Storage/Usage of Hazardous Substances and Petroleum Products

The following approximate number of containers, and general description of their contents, capacity, container types and storage conditions, were observed to be stored and/or used at the Subject Property:

Occupant	Substance	Qty/Container Type	Storage Conditions
NYCHA	Maintenance and cleaning materials (including paint)	1-30-gallon	All stored indoors on intact concrete. No storage concerns noted. Paint storage within western side of B4.

Bulk Petroleum/Hazardous Material Storage Tanks

The following storage tanks for bulk petroleum or hazardous material storage were identified or reported to be present; or are suspected to be present based on visual observations:

AST/UST	Product	Capacity	Construction	Year Installed	Status	Location/Notes
None observed						

One UST noted to have been removed from the Property, specifically, 401-411 West 18th Street (Building 8) is listed on the UST database for a 1,500-gallon UST removed on June 5, 2017.

While no visual evidence of a UST was noted, considering the history of development, the potential presence of abandoned USTs and/or associated buried piping at the Subject Property cannot be ruled out.

Strong, Pungent or Noxious Odors and their Sources

No strong, pungent or noxious odors were noted at the Subject Property.

Standing Surface Water/Pools & Sumps

No standing water, pools or sumps containing liquids likely to be hazardous substances or petroleum products were noted.

Drums, Totes and Intermediate Bulk Containers

No hazardous substance or petroleum product drums were noted.

Unidentified Substance Containers

No unidentified substance containers suspected of containing hazardous substance or petroleum product were noted.

PCBs in Oil Filled Electrical/Hydraulic Equipment

No oil-filled electrical or hydraulic equipment was identified at the Subject Property.

It is noted that identification of PCB containing fluorescent light ballasts, caulk, paint, or other materials located inside and are part of the building or structure is outside of the scope of the ASTM

E1527-21 standard and this assessment.

Stains or Corrosion on Floors, Walls or Ceilings

No stains or corrosion of floors, walls or ceilings, excluding any staining from water, were noted.

Drains and Sumps

Floor drains and a basement sump designed for the purpose of managing sanitary sewage were noted. No conditions indicative of a REC were observed.

Pits/Ponds/Lagoons

No pits, ponds or lagoons were identified in connection with waste treatment or disposal.

Stained Soil, Pavement/Stressed Vegetation

No stained soil, pavement or stressed vegetation was observed.

On-Site Solid Waste Disposal/Fill Material

No evidence of on-site disposal of trash, construction debris, demolition debris or other solid waste was observed.

Based on the history of previous site development, historical fill material may be present in the subsurface at areas of previous site grading or building structures.

Waste Water

Sanitary sewage generated at the Subject Property is discharged via a connection to the local public sewer system.

Storm water runoff at the Subject Property is discharged via roof drains into the municipal sewer system.

Septic Systems/Cesspools

No septic systems/cesspools identified.

Wells

The following wells were identified at the Subject Property:

Two (2) groundwater monitoring wells were observed within the Property north of B12 (two-bay Property garage) and northwest of B4 on the south side of West 18th and West 17th Streets respectively. The trigger for the installation of these wells and their use for sampling/monitoring, if any, was unknown by the site escort/contact.

Railroad Spurs

No railroad spurs were identified on the Subject Property.

7.0 BUSINESS ENVIRONMENTAL RISKS

In accordance with the contract agreement for this assessment, Hillmann has performed cursory reviews of several potential Business Environmental Risks (also known as "Non-Scope Considerations"). The ASTM E1527-21 standard defines the term business environmental risk (BER) as, *"a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice."*

7.1 Asbestos-Containing Material (ACM)

The contracted scope of work included a cursory visual screening of the accessed portions of buildings at the Subject Property built prior to 1990 for suspect asbestos containing materials (ACM). The information provided in this section, where applicable, is limited to identification of potential suspect materials in the readily accessible and observed areas of the building, and their general condition. This is not intended to be a comprehensive survey for the presence of ACM, and no testing has been conducted.

Given the 1963-1965 years of construction, asbestos containing materials are suspected unless ruled out by laboratory analysis.

Suspected ACM noted within the accessed building areas included floor tile, wall-board, spray-of insulation and roofing materials.

7.2 Lead-Based Paint

The contracted scope of work included a cursory visual screening of the condition of painted surfaces in the accessed areas of residential buildings/units built prior to 1980. This is not intended to constitute a comprehensive survey for LBP or potential lead hazards, and no testing has been conducted.

Given the 1963-1965 years of construction, lead-paint is suspected unless ruled out by field survey or laboratory analysis.

Lead sampling was reportedly being performed due to the December 21, 2021 modification to the legal lead-based paint standard to 0.5 mg/cm^2 (Local Law 66 and rules adopted by the Department of Housing Preservation and Development [HPD]) The results of the survey have been requested by Hillmann.

7.3 Radon

Data compiled by the USEPA, as summarized by the regulatory database report, indicated that the Subject Property is located in an area classified as Zone 3 or 'low risk' area for radon. Radon testing was not included in the scope of this assessment.

7.4 Mold/Microbial Damage

The contracted scope of work included a cursory visual screening of the accessed areas of the building for evidence of significant damage to building materials and finishes as result of moisture intrusion and/or mold/microbial growth.

The following evidence of significant moisture intrusion or mold/microbial growth was noted:

The basement of Building 1 was observed to have standing water on the concrete surface with some discoloration. Intermittent pipe and roof leaks were reportedly common given the age of the building. Mold abatement, primarily removing water damaged wall-board is reportedly performed by NYCHA staff as needed.

7.5 NWI Mapped Wetlands

The National Wetlands Inventory online Wetland Mapper (https://www.fws.gov/wetlands/data/mapper.html) was reviewed for indications of jurisdictional wetlands at or immediately adjoining the Subject Property. The scope of work for this assessment excluded a visual determination of regulated wetlands at the Subject Property. It is emphasized that, regardless of the data reviewed via the NWI Wetlands Mapper, a field delineation of regulated wetlands by a qualified professional would be warranted to determine the presence or absence of regulated wetlands at the Subject Property.

The review did not indicate regulated wetland areas on the Property.

7.6 Lead in Drinking Water

The scope of work for this assessment included a review of the potential for elevated levels of lead in drinking water by determining the source of the drinking water supply and a review of available compliance or testing data.

Potable water service at the Property is provided by a utility connection with the City of New York. A recently published water quality report from the utility indicated compliance with USEPA water quality standards for lead in drinking water. A copy of the report has been attached in Appendix F. Note – no site-specific lead-in-water sampling was performed within the context of the Phase I.

8.0 REFERENCES

ASTM E1527-21-Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process; ASTM International, 2021

ASTM E12600-15-Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transaction, ASTM International, 2015

EDR Radius Map Report, and historical record reports discussed in Section 4, Environmental Data Resources

Methodology for Identifying the Area of Concern Around a Property Potentially Impacted by Vapor Migration from Nearby Contaminated Sources; A. Buonicore, 2011

9.0 APPENDICES

Appendix A	Site Diagram / Vicinity Map
Appendix B	Site Photographs
Appendix C	Questionnaires / User Provided Information
Appendix D	Historical Records Documentation
Appendix E	Regulatory Records Documentation
Appendix F	Other Documents / Lab Results
Appendix G	Project Personnel Qualifications

Attachment B

Health and Safety Plan

HK ENGINEERING & GEOLOGY, D. P.C.
1600 Route 22 East
Union, New Jersey 07083
(908) 688-7800 • (908) 688-2636 – Fax

Site Specific
HEALTH AND SAFETY PLAN

Address: Fulton and Chelsea-Elliott
NY, NY 10001

Project Number: HK2661

Plan Revisions

Number	Date	Initials
1		

Chris Hirschmann — 09-19-2023
Plan Preparer — Date

Chris Hirschmann — 09-19-2023
Site Supervisor — Date

Ryan Powell — 09-19-2023
Site Health & Safety Officer — Date

Table of Contents

FORMS

Introduction

This Health and Safety Plan (HASP) has been prepared by HK Engineering & Geology, D.P.C. Engineering, LLC (HK) to summarize the health and safety hazards at the subject site and the requirements and procedures to protect its employees from them. Site is located at multiple addresses in Manhattan, NY. This plan meets or exceeds the requirements of Occupational Safety and Health Administration (OSHA), 29 CFR 1910.120, for a site-specific health and safety plan.

This plan was designed to reduce the potential for occupational illness or injury resulting from working at this site. The purpose of the HASP is to inform HK Engineering & Geology, D.P.C.'s employees and subcontractors of the health and safety risks present at this site, and the proper methods of protecting themselves from those risks. Each worker must be fully aware of the risks associated with the work to be accomplished, and be dedicated to completing that work safely.

Existing and potential hazards at this site have been identified. As new information becomes available, this HASP will be revised. Standard practices and procedures of industrial hygiene, occupational health, safety, and environmental protection are prescribed in this plan, which was prepared and reviewed by experienced professionals.

HK Engineering & Geology, D.P.C. employees who work on this site must read the HASP and sign the form included in this plan, to indicate that they understand the plan's contents, and agree to comply with its provisions. Anyone who cannot, or will not comply with this HASP will be excluded from on-site activities. Violations of this HASP or any applicable federal, state, or local health and safety regulations should be reported immediately to the Site Health and Safety Supervisor (SHSO), or to HK Engineering & Geology, D.P.C.'s Director, Health & Safety (DHS).

This HASP will be readily available on site so workers can reference it when necessary.

Site Information

Location: Multiple Addresses
NY, NY 10001

Historical/Current Site Information: The site is currently a multi-story parking garage.

Location/Class: [ ] Industrial [X] Commercial [X] Urban/Residential
[ ] Suburban [ ] Rural

Site Regulatory Status: [ ] CERCKA/SARA [ ] US EPA [ ] NYCDEC
[ ] NPL [ ] RCRA [X] NYCOER
[ ] NYSDEC [ ] Not Regulated [ ] Due Diligence

Operations or Tasks to be Performed, and Approximate Duration of Each:

1- Soil, Groundwater, and Soil vapor Sampling – 2 Days

Surrounding Population/Structures:

Commercial and residential

Site and Surrounding Topography:

Generally Flat Terrain

Known or Suspected Pathways of Contaminant Dispersion:

Soil, Groundwater, Soil Vapor

Emergency Shower, Eyewash and First Aid Equipment Located at:

Eyewash and emergency shower will not be available.

First aid provided by emergency services (911).

Personnel On-Site trained in First Aid:

1. Ryan K. Powell
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Emergency Medical Care

Hospital #1

Hospital Name: Mount Sinai Beth Israel Telephone # 212-252-6000

Address: 55 East 34th Street, NY, NY Telephone # 911

Contact: N/A

Type of Service ( ) Physical Trauma Only

(X) Physical Trauma and Chemical Exposure

(X) Available 24 Hours

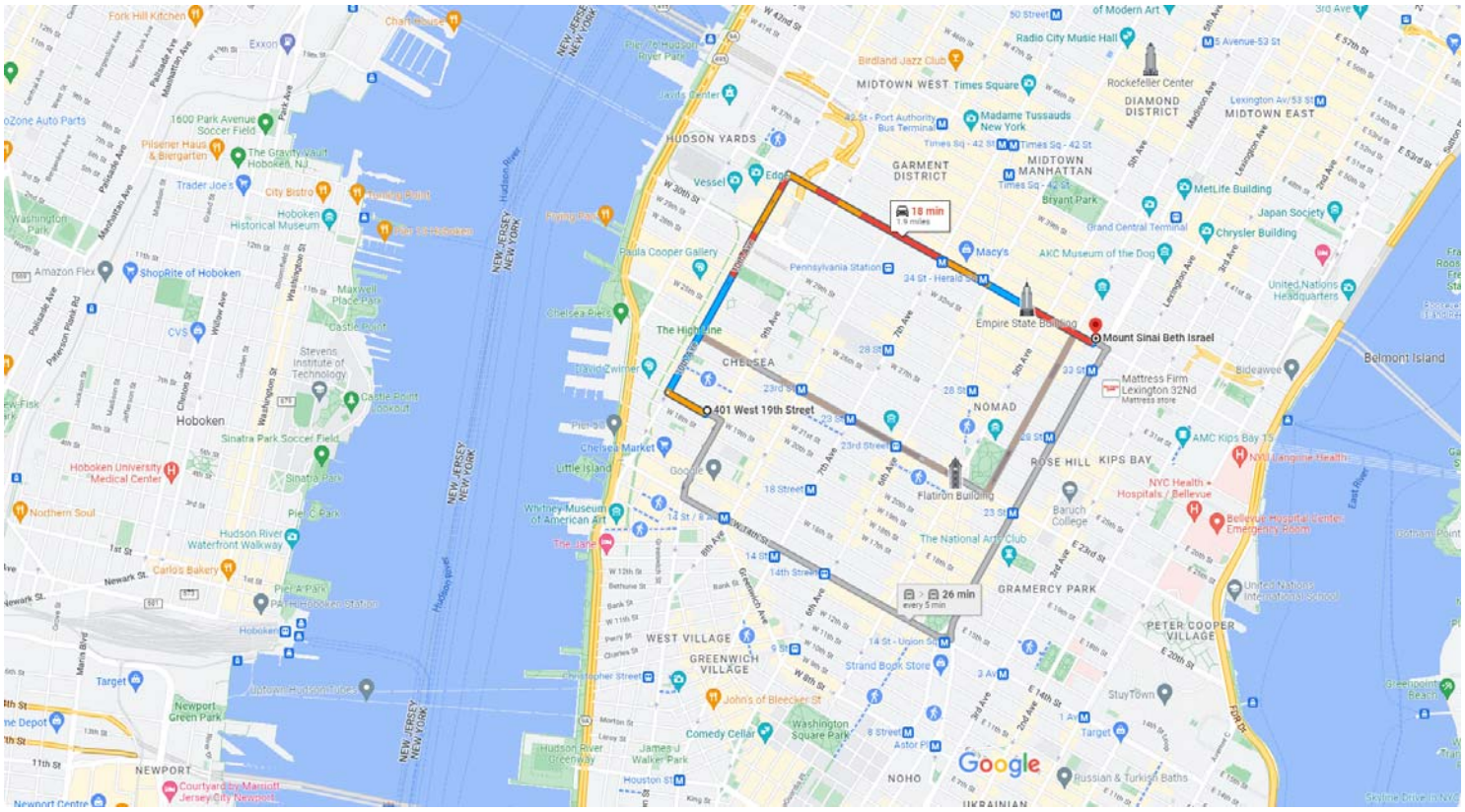
Hospital Route:

See attached map

Hospital route information has been provided to satisfy OSHA requirements (29 CFR 1910.120). **However, where 911-emergency service and/or transport is available, HK Engineering & Geology, D.P.C. personnel are strictly prohibited from transporting accident victims in either company or personal vehicles.

Transporting the injured in non-emergency vehicles increases the potential for motor vehicle accidents during transit to the hospital and further injury to the victim. Also, the victims' condition can worsen during transit. As a result, transportation in non-emergency vehicles can delay or even prevent treatment by trained emergency personnel during a critical time. Employees must remain at the site of the accident, administer appropriate first aid, and await the arrival of **trained emergency and/or rescue personnel.**

Google Maps 401 West 19th Street, New York, NY to Mount Sinai Beth Israel Drive 1.9 miles, 18 min



Map data ©2022 Google 1000 ft

401 W 19th St
New York, NY 10011

1. Head northwest on W 19th St toward 10th Ave
   0.1 mi
2. Turn right onto 10th Ave
   0.7 mi
3. Turn right onto W 34th St.
   Pass by Citi (on the left in 0.5 mi)
   Destination will be on the left
   1.0 mi

Mount Sinai Beth Israel
55 East 34th Street First Floor, New York, NY 10016

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Emergency Medical Care

Hospital #2

Hospital Name: NYC Health + Hospitals / Bellevue Telephone # 212-562-4141

Address: 462 1st Ave., New York, NY 10016 Telephone # 911

Contact: N/A

Type of Service ( ) Physical Trauma Only

(X) Physical Trauma and Chemical Exposure

(X) Available 24 Hours

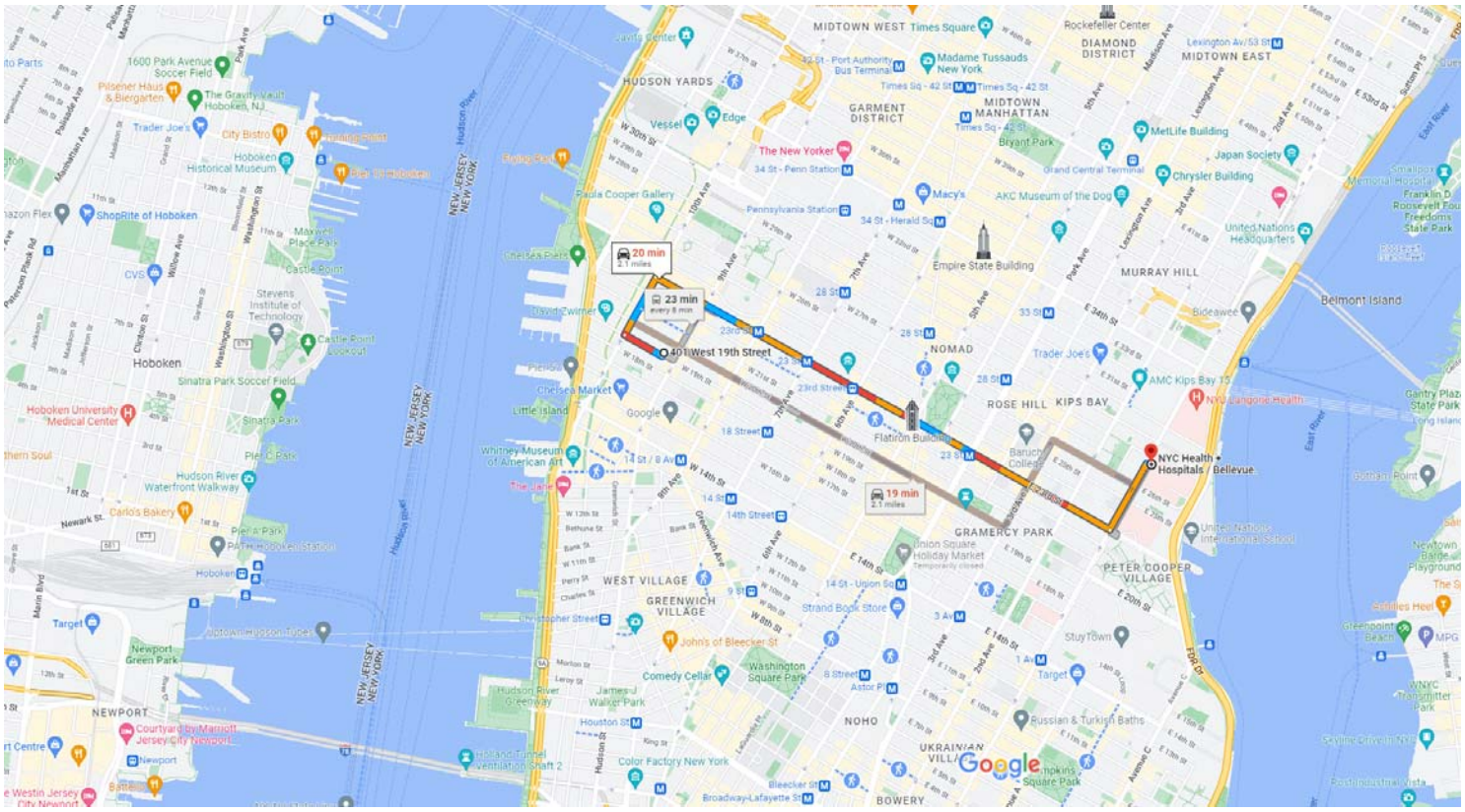
Hospital Route:

See attached map

Hospital route information has been provided to satisfy OSHA requirements (29 CFR 1910.120). **However, where 911-emergency service and/or transport is available, HK Engineering & Geology, D.P.C. personnel are strictly prohibited from transporting accident victims in either company or personal vehicles.

Transporting the injured in non-emergency vehicles increases the potential for motor vehicle accidents during transit to the hospital and further injury to the victim. Also, the victims' condition can worsen during transit. As a result, transportation in non-emergency vehicles can delay or even prevent treatment by trained emergency personnel during a critical time. Employees must remain at the site of the accident, administer appropriate first aid, and await the arrival of **trained emergency and/or rescue personnel.**

Google Maps 401 West 19th Street, New York, NY to NYC Health + Hospitals / Bellevue. Drive 2.1 miles, 20 min



401 W 19th St
New York, NY 10011

1. Head northwest on W 19th St toward 10th Ave
   0.1 mi
2. Turn right onto 10th Ave
   0.2 mi
3. Turn right onto W 23rd St
   Pass by Citizens Bank (on the left in 1.2 mi)
   1.5 mi
4. Turn left onto 1st Ave.
   0.2 mi

NYC Health + Hospitals / Bellevue.
462 1st Ave., New York, NY 10016

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Emergency Contacts

Agency	**Name**	**Phone**
Fire Department	FDNY	911
Police Department	NYPD	911
Site Contact	Ryan K. Powell	(908) 323-4051
First Aid/EMS	NA	911
Federal Agency Representative	NA	NA
State Agency Representative	NA	NA
Local Agency Representative	NA	NA
NYSDEC- Region 2	New York	1-718-482-4900
Pesticide Poisoning	NA	NA
Poison Control	U.S.A.	(800) 222-1222
CHEM TREC	Washington, DC	(800) 424-9300
Utility	**Company Name**	**Phone**
Water Supply	NYC.	800-987-5325
Sewer	NYC.	908-647-0070
Power	CON-ED	(800) 322-3223
Gas	National Grid	(800) 322-3223
NY One Call	NY	811

HK Engineering & Geology D.P.C.
Emergency Contact List
Cell Phone Numbers

Chris Hirschmann	(908) 377-8909
Ryan K. Powell	(908) 323-4051

Key Project Personnel

The following describes the project position assignments, associated responsibilities, and reporting relationships.

Position	Job Description	Interactions
Director	Responsible for technical and administrative performance of the project. Supports Site Supervisor and is available to him at all times. Will visit the site periodically, or as necessary. Reports progress of project on a regular basis. Assigns key personnel, and identifies, requests, secures, and monitors use of resources for project. Approves program expenditures and invoices.	Reports directly to President. Works closely with Site Supervisor.
Site Supervisor	Acts as point of contact for client and client's representative(s). Supervises all on-site personnel and subcontractors. Coordinates daily site-specific work efforts, and ensures all activities are in strict compliance with site-specific health and safety plan. Has authority to suspend all work that possesses any health and safety risk. Briefs subordinate technical personnel on task requirements. Identifies and resolves technical problems. Provides periodic review of project progress.	Reports directly to Project Manager.
Site Health & Safety Officer (SHSO)	Assures compliance with HASP. Instructs site personnel in health and safety procedures through daily pre-work meetings. Performs any monitoring activities as required. Has authority to discontinue site operations if safety violations exist.	Reports directly to Project Manager. Works closely with Director, Health & Safety, and Site Supervisor.
Director, Health & Safety (DHS)	Develops, implements, and enforces the on-site safety program. Oversees all health and safety aspects of project, conducts periodic audits to ensure compliance. Available at all times to discuss project progress and health and safety related issues.	Reports directly to President. Works closely with Project Manager, Site Supervisor, and SHSO.

HK Engineering & Geology, D.P.C. is the entity responsible for managing health and safety at this site. Key project personnel are as follows:

Director:	Chris Hirschmann Name	908-688-7800 / 908-377-8909 Telephone / Cellular Number
Site Supervisor:	Chris Hirschmann Name	908-688-7800 / 908-377-8909 Telephone / Cellular Number
SHSO:	Chris Hirschmann Name	908-688-7800 / 908-377-8909 Telephone / Cellular Number

Medical Surveillance and Training Dates for Authorized Personnel

Employee	Medical Exam	OSHA 8-Hr.	Site Supervisor Training	Respirator Fit Test
Ryan Powell	04/2022	07/2020		10/2018
Chris Hirschmann	04/2022	07/2020	06/2010	07/2019
Dominick Aponte	06/2021	09/2021		06/2021

Task Identification

Tasks covered under this plan:

Task #	Description
1	Soil, Groundwater, and Soil Vapor sampling

Off-site tasks planned? No

Describe:

Chemical Hazards

Task No.(s)	Chemical Name (or class)	PEL	TLV	Other Pertinent Limits (specify)	Primary Hazard			SDS Attached
					Ingestion	Dermal	Inhalation	Y/N
1	**Semi volatiles:**							
	Benzo(a)anthracene	**	**		X	X	X	N
	Benzo(b)fluoranthene	**	**					N
	Benzo(k)fluoranthene	**	**		X	X	X	
	Dibenz(a,h)anthracene	**	**		X	X	X	N
	Indeno(1,2,3-cd)pyrene	**	**		X	X	X	N
	Crysene	2,400 mg/m^3	1,188 mg/m^3		X	X	X	N
	Pesticides:							N
	4'4 DDE	**	**					N
	4'4 DDT	1 mg/m^3	1 mg/m^3	90 ppm				N
	4'4 DDD	5 mg/m^3	**					N
	Delta-BHC	260 mg/m^3	200 ppm					N
	Dieldrin							
1	**Volatiles:**							
	TCE	2.5 ppm	5 ppm	(action level	X	X	X	N
	PCE	125 ppm	125 ppm	based on composition volatility)	X	X	X	N
1	**Metals:**							
	Lead	0.05 mg/m^3	0.05 mg/m^3		X	X	X	N
	Arsenic	0.01 mg/m^3	**		X	X	X	N
	Selenium	1 mg/m^3	0.5 mg/m^3		X	X	X	N
	Mercury	0.03 mg/m^3	0.1 mg/m^3		X	X	X	N
	Nickel	1 mg/m^3	1.5 mg/m^3			X	X	N
	Sodium	**	**		X	X	X	N
	Zinc	**	**		X	X	X	N

PEL – OSHA Permissible Exposure Limit: the maximum allowable 8-hour time weighted average (TWA) exposure concentration.
TLV – ACGIH Threshold Limit Value: the recommended 8-hour TWA exposure concentration.
STEL – ACGIH or OSHA Short-term Exposure Limit: the maximum allowable 15-minute TWA exposure concentration.
Ceiling – OSHA and Cal-OSHA Ceiling Limit: the maximum exposure concentration above, which an employee shall not be exposed during any period without respiratory protection.
IDLH – Immediately Dangerous to Life and Health: the concentration at which one could be exposed for 30 minutes without experiencing escape-impairing or irreversible health effects.
** – Exposure limits not available

Physical and Biological Hazards

Hazard	Yes	No	Task No.(s)	Hazard	Yes	No	Task No.(s)
Electrical (overhead lines)	X		1	Uneven Terrain	X		1
Electrical (underground lines)	X		1	Unstable Surfaces	X		1
Gas Lines	X		1	Elevated Surfaces	X		1
Water Lines	X		1	Lightning	X		1
Drilling Equipment	X		1	Rain	X		1
Excavation Equipment		X		Snow	X		1
Power Tools	X		1	Liquefied/Pressurized Gases		X	
Heat Exposure	X		1	Lifting Equipment	X		1
Cold Exposure	X		1	Vermin	X		1
Oxygen Deficiency		X		Insects	X		1
Confined Spaces		X		Disease-causing organisms	X		1
Noise	X		1	Others, e.g., marine sampling (specify)		X	
Ionizing Radiation		X					
Non-Ionizing Radiation		X					
Fire		X					
Explosive Atmospheres		X					
Shoring		X					
Scaffolding		X					
Holes/Ditches	X		1				
Steep Grades	X		1				
Slippery Surfaces	X		1				

Risk Analysis

Task #	Substance	Concentration (if known)	Risk*
1	VOCs	Low	0-1
1	SVOCs	Low	0-1
1	PCBs	Low	0-1
1	Metals	Low	0-1
1	Pesticides	Low	0-1

*Risk 0 – No Risk
1 – Slight Risk
2 – Moderate Risk
3 – Dangerous Conditions/Caution
4 – High Risk
5 – Extremely Dangerous

General Safety Rules

1. If an employee must work alone, he/she must call his/her supervisor twice a day. If the supervisor is unavailable, that supervisor's supervisor must be contacted.
2. Workers must wear all personal protective equipment required for the tasks to be performed.
3. Horseplay, scuffling, or practical jokes are forbidden on the job.
4. Compressed air must not be used to blow dirt from clothing, or played with or blown at another person. In addition, compressed air tools should be checked periodically for hose leaks, faulty valves and tank pressurization issues as a precursor for potential injury.
5. Drinking of alcoholic beverages or the use drugs on the job is prohibited. Their use will cause immediate dismissal.
6. All areas must be continually cleaned to maintain good housekeeping. Trash is to be piled neatly and removed promptly. All tools and work areas are to be kept in clean and safe condition. Hard floor surfaces should be kept as dry as possible and free to debris in walking zones to prevent potential slips, trips and falls. If an area of flooring will be slippery for an extended period of time, efforts should be taken provide caution signs or high visibility cones/barricades to warn and prevent entrance into the zone.
7. Competent workers must do welding and cutting. Anyone who is required to work in "hot" zones must wear or be provided with proper eye protection and warning that welding will be taking place.
8. A. Ladders are to be of proper design and tied off while in use. Do not go up or down a ladder without the free use of both hands. Use a rope to lift or lower materials or tools. Always face a ladder when climbing or descending. Ladders with structural defects should be discontinued from use and placed aside with a label to warn others not to use until serviced or replaced. Defects include, but are not limited to, bent or broken ladder rung/step, bent or cracked frame rails defected foot holds etc.

   B. Extreme caution must be used with operating with ladders to avoid overhead hazards such as unstable roofing materials or over-head utility lines. Before setting up your ladder, always asses for over-head power lines and avoid operating within those areas. If you have any doubts, don't do it.
9. Every work site must have a qualified first aid person and a complete first aid kit. All first aid materials are to remain clean, unused and non-expired. The first aid materials should remain with a competent first aid responder or in an inconspicuous area for all to use if needed. Eye wash stations or portable bottles should be readily on hand to field personnel in the event of an eye irritant or splashing occurrence. Eye protection should be used to further prevent eye injuries.
10. **ALL** accidents must be investigated and reported. Use the Accident Investigation Form in the back section of this plan.
11. Injuries sustained while on duty must be reported to supervisor immediately, or as soon as possible after injury is sustained.
12. Explosives must be handled and transported by licensed people only. Any doubts of explosive materials should be handled with extreme caution and the project manager notified for further instruction.
13. All tools and electrical equipment must be in proper working order. If a tool is broken/near broken or a piece of electrical equipment has frayed/exposed wiring, sparks generated or missing screws or parts, make sure to disengage use of tool. Faulty tools should be labeled with a "Do NOT use" label and placed in a safe location until it can be serviced or replaced.
14. Clothing appropriate to the duties performed shall be work by all workers. Large pockets, loose jewelry, cuffed trousers and loose or torn clothing are dangerous and should not be worn around machinery, or when climbing ladders, or working on structures.

Employee Training Program

All personnel performing work in areas on this site covered by this HASP must have completed the appropriate training requirements specified in 29 CFR 1910.120(e). Each individual must have completed an 8-hour refresher-training course and/or initial 40-hour training course within the last year prior to performing any intrusive work on this site covered by this HASP. Also, on-site managers must have completed the specified 8-hour supervisor's training course. Records that demonstrate that all persons subject to the training requirements have actually met them will be maintained on site. The Project Manager is responsible for verifying compliance of the project team with these rules.

Prior to commencement of on-site activities, a site safety meeting will be held to review the specific information and requirements of this HASP. HASP sign-off sheets will be collected at this meeting.

Site Specific Training will include:

- Explanation of the overall site HASP.
- Health and safety personnel and organization.
- Brief site history.
- Special attention to signs and symptoms of overexposure to known and suspected site contaminants.
- Health effects of site contaminants.
- Air monitoring description.
- Physical hazards associated with the project.
- Selection, use and limitations of available safety.
- Personal hygiene and decontamination.
- Respirator facepiece fit testing.
- PPE use and maintenance.
- Site rules and regulations.
- Work zone establishment and markings.
- Site communication.
- Emergency preparedness procedures.
- Equipment decontamination.
- Medical monitoring procedures.
- Contingency plan.

Prior to work, each HK Engineering & Geology, D.P.C. employee will attend the contractor's health and safety orientation, if applicable. In addition, HK Engineering & Geology, D.P.C.'s employees will review health and safety items specific to the tasks to be performed that were not covered in the contractor's orientation.

Site Health and Safety Meetings

In addition, the SHSO will meet daily with all HK Engineering & Geology, D.P.C. employees prior to beginning work on site. The agenda of the meeting will include a review of important elements of this plan, any special safety items, and a discussion of the emergency response procedures. Also, everyone will agree on a schedule for periodic meetings, (for example, before beginning work each day), to review the effectiveness of this plan and make changes as necessary. If significant changes at the site occur, special meetings will be scheduled. (If HK Engineering & Geology, D.P.C. is a subcontractor, all HK Engineering & Geology, D.P.C. employees on site will participate in the contractor's daily safety meetings.)

Training Records

The SHSO will complete a report of the daily safety meetings, using the form in the back section of this plan, and all attending the meeting will sign the Daily Safety Meeting Log.

The training status of contractor and subcontractor employees has been verified, and their training criteria meet the requirements specified in 29 CFR 1910.120(e). A copy of all training certificates will be kept at the job site for each person working at the site.

Personal Protective Equipment (PPE) Requirements

Task No.(s)	Level of Protection (A – D)*	Level of Upgrade	PPE Suit	PPE Gloves	PPE Feet	PPE Head	PPE Eye	PPE Ear	PPE Respirator	Additional PPE for Upgrade
1	D	When necessary	Std	N	Steel	When needed	Glasses	Plugs	NA	None

SUIT

Std = Standard Work Clothes
Tyvek = Uncoated Tyvek Disposal Coverall
PE Tyvek = Polyethylene-coated Tyvek
Saranex = Saranex-laminated Tyvek
PVC Suite = PVC Raingear

GLOVES

Work = Work Gloves (canvas, leather)
Neo = Neoprene Gloves
PVC = PVC Gloves
N = Nitrile Gloves
V = Vinyl Gloves
L = Latex Gloves

FEET

Steel = Steel-toe shoes or boots
Steel+ = Steel-toe PVC boots
Booties = PVC booties

HEAD

HH = Hardhat

EYE

Glasses = Safety glasses
Goggles = Goggles
Shield = Face shield

EAR

Plugs = Earplugs
Muff = Ear muffs

RESPIRATOR

APR = Air purifying respirator
Full APR = Full face APR
Half APR = Half face APR
SAR = Airline supplied air respirator
SCBA = Self contained breathing apparatus
Escape = Escape SCBA
OV = Organic Vapor Cartridge
AG = Acid Gas Cartridge
OV/AG = Organic Vapor/Acid Gas Cartridge
AM = Ammonia Cartridge
Dust/Mist = Dust/Mist pre-filter and cover for cartridge
HEPA = High efficiency particulate air filter cartridge

- For unspecified volatile organics (based on 1-minute breathing zone measurement using PID or OVA):
-

Up to 1 ppm above background	Level D
1 – 5 ppm above background	Level C
5 – 500 ppm above background	Level B
500 ppm above background	Level A

Suggested Levels of Protection

Level "D" Protection

1. Coveralls
2. Gloves
3. Boots/shoes – steel toe
4. Boots (outer) chemical resistant (disposable)
5. Safety glasses or chemical splash goggles
6. Hard hat (safety shield)
7. High visibility vest

Level "C" Protection

1. Full-face, air-purifying, canister-equipped respirator (NIOSH/MSHA approved)
2. Chemical resistant clothing (coveralls; hooded, two-piece, chemical splash suit; chemical resistant hood & apron; disposable, chemical-resistant coveralls)
3. Coveralls
4. Gloves (outer) chemical-resistant
5. Gloves (inner) chemical-resistant
6. Boots (outer) chemical-resistant
7. Boots (inner) chemical-resistant
8. Hard hat (face shield)
9. Escape mask
10. Two-way radio

Level "B" Protection

1. Pressure/Demand SCBA (MSHA-NIOSH approved)
2. Chemical resistant clothing (overalls and long-sleeved jacket; coveralls; hooded, one- or two-piece chemical splash suite; disposable, chemical-resistant coveralls)
3. Coveralls
4. Gloves (outer) chemical-resistant
5. Gloves (inner) chemical-resistant
6. Boots (outer) chemical-resistant
7. Boots (inner) chemical-resistant
8. Hard hat (face shield)
9. Two-way radio

Level "A" Protection

1. Pressure/Demand SCBA (MSHA-NIOSH approved)
2. Fully encapsulating, chemical-resistant suit
3. Coveralls
4. Gloves (outer) chemical-resistant
5. Gloves (inner) chemical-resistant
6. Boots, chemical-resistant, steel toe (depending on suit construction, work over or under suit boot)
7. Hard hat (under suit)
8. Two-way radio

Medical Surveillance

Requirements

All HK Engineering & Geology, D.P.C. employees covered by this HASP, who engage in on site activities governed by 29 CFR 1910.120 for 30 or more days per year, must meet the medical surveillance requirements specified in 1910.120(f). Therefore, such personnel must have completed occupational medical baseline or surveillance examination, performed by a licensed physician, within the last 24 months. The medical examination includes the following components:

- Personal Medical Questionnaire
- Occupational Exposure History
- Physical Examination
- Vision Testing
- Spirometry
- Audiometry
- Blood Chemistry Panel (e.g., SMAC-20)
- Complete Blood Count with Differential
- Urinalysis
- Chest X-Ray (every two years at a minimum)
- Electrocardiogram (at physician's discretion)

Examinations are required upon hiring, termination, and exposure to substances at or above the PEL.

Results of the examinations are communicated directly from the physician to the employee. Medical records for HK Engineering & Geology, D.P.C.'s employees are kept by the physician:

Washington Occupational Health
1120 19th Street, Suite 410
Washington, DC 20036
800-777-9642 – office
800-865-6525 – fax

Monitoring Requirements

Monitoring is to be conducted by the SHSO, or his/her designee. The results will be interpreted by the SHSO and the DHS. Copies of monitoring results and calibration logs will be filed with the HASP.

Monitoring is designed to assess exposure to employees during site activities, and to determine if PPE is required and adequate to assure protection. Because investigation and remediation activities at hazardous waste sites are of an inconsistent nature, it is not possible to assign a monitoring protocol that excludes, or is not directly dependent upon, professional judgment in determining when monitoring is required to assess exposure. Thus, the following generic protocol must be followed at a minimum, and should be modified to be more conservative (e.g., require more monitoring) if deemed necessary by the SHSO or DHS. Under no conditions will the required frequency be decreased.

At a minimum, air monitoring will be conducted before and during each task or activities for which air monitoring has been designated. If airborne concentrations of contaminants reach action levels based on observations with the direct reading instruments, then the appropriate PPE upgrade or work stoppage order will be enforced by the SHSO. In case a work stoppage order is given, the area must be cleared of all personnel immediately.

The use of action levels and the basis for the selection of monitoring equipment is explained as follows:

Action levels determine:

(1) the PPE to be used by site workers
(2) their ability to remain and work in the exclusion zone

The selection of the specified monitoring equipment is based on

(1) the nature of the contaminants
(2) the likely concentrations of the contaminants
(3) the probable duration of exposure
(4) the relative sensitivity of the monitoring equipment to the specific contaminants

The following summarizes the calibration requirements for the air monitoring instruments used at the site:

Instrument	Calibration Frequency
PID: Mini RAE-QRAE	Beginning of each work shift

Air Monitoring and Contaminant Action Levels

Task No.(s)	Location	Contaminant	Monitoring Equipment	Monitoring Frequency	Action Level Concentration	
					Mandatory Respirator Use	Mandatory Work Stoppage
1	Work Areas	All analyzed compounds	PID: Multi-Rae	Periodically during all tasks/activities.	--	10 ppm

PID = Photoionization Detector (HNU, TIP, OVM)
FID = Flame Ionization Detector (OVA)
LEL-O_2 = Explosivity and Oxygen Meter

Name(s) of individual(s) responsible for performing the monitoring, and certifying the results:

All HK Engineering & Geology, D.P.C. personnel

Type, make and model of instruments used: Multi-Rae PID Gas Monitor

Method and frequency of calibration: 100 ppm isobutylene-calibration gas. Calibrated prior to each day's use according to manufacturer's instruction.

Procedures for Handling Anticipated Wastes

Waste Generation

Anticipated: Yes: ___ No:____X____

Types: NA __X__ Liquid _____ Solid _____ Sludge_____ Gas _

Quantity: Expected volume of each type:

This project ___will ____X__will not generate non-hazardous, contaminated wastes. These wastes will be:

_____ stored _____ treated
___transported ____manifested in the following manner:

Packaging requirements for waste material:

_____
_____
_____
_____
_____

Decontamination Procedures

All personnel that may be exposed to contaminated soil will wear modified level D Personal Protective Equipment to include disposable gloves. Gloves will be changed after handling potentially impacted material or equipment and placed in a plastic garbage bag for proper disposal. All personnel will wash their hands before eating or drinking and no smoking will be allowed on site.

All equipment brought onto the site will be cleaned of any contaminants prior to accessing the site to prevent offsite cross-contamination or the need to decontaminate prior to the start of field activities. After each borehole is completed, all drilling equipment used for the soil boring (augers, etc.) will be decontaminated with soap (Alconox® or equivalent) and water followed by a water rinse, using a brush as necessary, to remove soil and contaminants. At the conclusion of daily project activities, all equipment will again be decontaminated with soap and water and a water rinse. All equipment will be handled with clean gloves after cleaning to minimize cross-contamination.

Spill Prevention and Response

Potentially hazardous spill situations can be mitigated by using containment devices and materials in work areas. If site conditions are suitable, earthen berms will be constructed around specific areas. If site conditions are not suitable for this, or the potential spill is smaller, barriers will be constructed with sorbent materials such as “speedi-dry”, sorbent booms and/or straw bales. Dikes and berms will also be used to divert stormwater run-on and run-off away from critical zones.

Because a spill cleanup must be conducted under crisis conditions, it is important that the methods used for dealing with a spill be thought out beforehand. However, the steps followed cannot be inflexible, because no two spills are identical. Factors that will be assessed in the event of any and all spills include:

1. The volume of the hazardous substance released and the rate of release.
2. The nature of the spill material.
3. What danger exists to personnel in the immediate area.
4. Nature of damage and possibilities of repair.
5. If the transfer of material to an alternate containment is advisable.
6. Feasibility of the construction of a containment dike.
7. Nature of spill area.
8. Whether the spilled substance has reached a watercourse or sewer.
9. Danger of explosion or fire.
10. Equipment and supplies necessary to confine the material and carry out the cleanup.

In most cases, the success of a cleanup operation is dependent upon the time it takes to contain the spill. Therefore, HK Engineering & Geology, D.P.C.’s first attempt at spill containment will be at the point of discharge. This can often be accomplished by closing valves, reinforcing or repairing damaged containers, moving or changing the position of fallen or ruptured containers, or emptying the container by pumping to a temporary storage or holding vessel. Pumps, suction hoses and containers will be available to recover spilled materials when directed to do so by the Site Supervisor.

Handling and transport of drummed waste always must be conducted in a controlled and safe manner, which will minimize damage to structurally sound drums, repacks and overpacks. If leakage or spillage of waste occurs, the drum must immediately be placed within an overpack unit. Overpack units must be provided at each staging area, at areas of existing drums, and along all site roadways.

In the event of a spill, the drum handling team must immediately contact the SHSO, who will have all personnel evacuated from the immediate spill area. Only personnel trained in spill response procedures shall isolate and contain the spill. Where possible, spilled waste material must be collected and placed in repack containers for ultimate disposal. Following containment and collection of spilled waste, the area must be surveyed by the SHSO, who will decide if it is safe to permit re-entry of work teams.

Task/Work Area	Potential Spill or Discharge	Equipment, Materials, and Procedures for Spill Cleanup
1	Oil & Hydraulic Fluids from drilling equipment	Use of Sorbent Pads for cleanup

Emergency Procedures

Potential emergencies that may arise are most likely to be associated with physical hazards from heavy equipment operation and/or lifting and loading of debris. Emergency response will, in most cases, be performed in Level D protection.

Modifications to these emergency procedures may be necessary after the actual site set-up, based on prevailing conditions. Periodic reviews of these procedures will be performed by the SHSO to ensure that they are appropriate for all anticipated emergencies.

Responsibilities

The Site Supervisor has the authority and responsibility to commit company resources to appropriately respond to an emergency, and to exclude all personnel not directly responding to the emergency.

Prior to beginning work at the site, HK Engineering & Geology, D.P.C. will designate an employee, usually the SHSO, to be responsible for initiating any emergency response actions. In the event an injury or illness requires more than first aid treatment, the SHSO (or alternate) will accompany the injured person to the hospital, and will remain with the person until release or admittance is decided.

Evacuation Plan

The basic elements of an emergency evacuation plan include employee training, escape routes, escape procedures, critical operations or equipment, rescue and medical duty assignments, designation of responsible parties, emergency reporting procedures and methods to account for all employees after evacuation.

When appropriate, wind indicators visible to all on-site personnel will be provided by the SHSO to indicate possible routes of upwind escape. Work-area entrance and exit routes will be planned, and emergency escape routes will be delineated by the SHSO. The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated, should result in the evacuation of the team and a re-evaluation of the hazard and the level of protection required. This re-evaluation will be conducted by appropriate on-site health and safety personnel.

In the highly unlikely event that barrels, canisters, or chemical gases or vapors are uncovered during site work, the following procedures shall be followed:

1) In the event that barrels, canisters, or any other vessels are encountered during excavation, all work shall immediately cease and all workers to be removed from the area. The SHSO shall be immediately notified, and he/she shall identify vessel contents, handling procedures and storage and disposal techniques prior to starting work.

2) In the event that high concentrations of gases or vapors are detected, the following actions will be taken:

    - Remove all workers from the area
    - Monitor gas or vapor concentrations to determine the type of respiratory protection that will be required before workers reenter the area.

3) In the highly unlikely event of a major leak of toxic gas, such as might occur if a compressed gas cylinder were ruptured during excavation or drilling, all on-site personnel will be evacuated to a safe distance. The risk will be assessed prior to restarting work.

Training

Employees will be instructed in the specific aspects of emergency evaluation applicable to the site as part of the site safety meeting prior to the commencement of all on-site activities. On-site refresher or update training is required anytime escape routes or procedures are modified or personnel assignments are changed. During

the site safety meeting, all employees will be trained in, and reminded of, the location of this plan, the procedures outlined in this plan, and the communication systems and evacuation routes used during an emergency.

On a continuous basis, individual employees should be constantly alert for indicators of potentially hazardous situations, and for signs and symptoms in themselves and others that warn of hazardous conditions and exposures. Rapid recognition of dangerous situations can avert an emergency. In the event of any emergency that necessitates an evaluation of the site, on-site personnel will be notified by the use of car horns sounded in regularly spaced, repeated blasts, as detailed in the next section of this procedure. The Site Supervisor in conjunction with the SHSO will control the site until the appropriate local or state agency representatives arrive, if required.

Alarm Systems Emergency Signals

The simplest and most effective emergency communication system, in any situation, is direct voice communications. Voice communications will be supplemented anytime voices cannot be clearly perceived above ambient noise levels (e.g., noise from heavy equipment, drilling rigs or backhoes, and anytime a clear line-of-sight cannot be easily maintained among all site personnel because of distance, terrain, or other obstructions. When voice communications must be supplemented, the following emergency signals, using car horns, will be used.

- One Horn Blast: General Warning

  One blast is used to signal relatively minor, but important events on site. An example would be a minor chemical spill where there is no immediate damage to life or health, yet personnel working on site should be aware of the situation so unnecessary problems are avoided. If one horn blast is sounded, personnel must stop all activity and equipment on site and await further instruction from the SHSO.

- Two Horn Blasts: Medical Emergency

  Two blasts are used to signal a medical emergency where immediate first aid or emergency medical care is required. If two horn blasts are sounded, all first aid and CPR trained personnel should respond, as appropriate. All other activity and equipment should stop, and personnel should await further instructions from the SHSO.

- Three Horn Blasts Followed by One Continuous Blast: Immediate Danger to Life or Health

  Three blasts followed by another extended or continuous horn blast signals a situation that could present an immediate danger to the life or health (IDLH) to all employees on site. Examples of possible IDLH situations could include fires, explosions, hazardous chemical spills or releases, hurricanes, tornadoes, blizzards or floods. If three horn blasts followed by a continuous blast are sounded, all activity and equipment must stop, and all personnel must evacuate the site to an appropriately designated site located outside the site gate, or further off site if necessary. (Note: unless otherwise specified, all decontamination procedures must be implemented.) All personnel must be accounted for by the SHSO or Site Supervisor, and other response actions determined by the SHSO or Site Supervisor must be followed.

Employees on site will use the “buddy” system (pairs). Buddies should pre-arrange hand signals or other means of emergency communication in case radios cannot be used, or if the radios no longer operate. The following had signals are suggested:

1. Hand gripping throat: out of air, can’t breathe.
2. Grip partner’s wrist or place both hands around waste: leave area immediately, no debate.
3. Hand on top of head: need assistance.
4. Thumbs up: OK, I’m alright, I understand.
5. Thumbs down: No, negative.

Visual contact will be maintained between employee pairs. Team members will remain in close proximity to each other in order to provide assistance in case of emergencies, and will inform each other of any of the following effects of exposure to site contamination:

- Headaches
- Dizziness
- Blurred vision
- Cramps
- Irritation of eyes, skin or respiratory tract

If any member of the work crew experiences any adverse symptoms while on site, the entire work crew will immediately stop work and follow the instructions provided by the SHSO.

Medical Treatment/First Aid

Eyewash stations will be available at the work activity locations, the outside of the personal decontamination facility and at the equipment decontamination area. Community emergency services (EMS, fire, and police) will be notified immediately if their resources are needed on site. If necessary, the injured or sick party shall be taken to the nearest hospital.

Fire Extinguishers

Equipment – All heavy equipment will be supplied with ABC fire extinguishers are also located in all vehicles.

Emergency Reporting

Any incident (other than minor first aid treatment) resulting in injury, illness or property damage will be reported to HK Engineering & Geology, D.P.C.. An incident investigation will be initiated as soon as emergency conditions are under control. The purpose of this investigation is not to attribute blame but to determine the pertinent facts so that repeat or similar occurrences can be avoided.

The investigations will begin while details are fresh in the mind of all involved. The person administering first aid may be able to start the fact gathering process if the injured are able to speak. Pertinent facts must be determined. Questions beginning with who, what, when, where, and how are usually most effective to discover ways to improve job performance in terms of efficiency, quality of work, as well as safety and health concerns.

On-Site Evacuation Plan – An emergency evacuation alarm (air horn, etc.) will be on site at all times. This alarm should be of sufficient power to be heard by personnel operating heavy equipment. A series of repeated blasts is the signal for all HK Engineering & Geology, D.P.C. personnel and subcontractors to evacuate the site and assemble at:

To be determined at the beginning of each field event:

The criteria for activating the alarm will be the first sign of any serious problem that requires assistance or evacuation.

Should either a fire or explosion occur, all personnel will proceed immediately to the evacuation assembly point and await further instructions. At that time a personnel check will be conducted to determine if anyone is missing, and the local fire and police departments will be called for assistance. Once on site, the acting officer of the fire department and the Site Supervisor will determine if further evacuations are necessary. No HK Engineering & Geology, D.P.C. personnel will re-enter the site without clearance from the SHSO.

Subcontractor Safety

It has been and shall continue to be the policy of HK Engineering & Geology, D.P.C. that employees of all subcontractors are required to adhere to all applicable company, local, state, and federal safety rules and regulations.

When an infraction of a local, state, federal, or company safety regulation is observed, the SHSO will request verbally that the subcontractor's supervisory personnel correct the infraction immediately. If correction is not made, then the project director will request in writing that proper corrective action be taken. Subcontractors who continue to ignore proper safety procedures present a danger for all workers around them. A Stop-work call should be initiated until compliance with safety protocols are achieved; subcontractors will have payments withheld until compliance is achieved.

Subcontractors are required to hold safety meetings for their employees when they are working on HK Engineering & Geology, D.P.C. projects, and submit documentation of such meetings to the Project Manager. Subcontractor employees are not required to attend HK Engineering & Geology, D.P.C.'s safety meetings.

Job Safety & Health Protection

The Occupational Safety and Health Act of 1970 provides job safety and health protection for workers by promoting safe and healthful working conditions throughout the Nation. Provisions of the Act include the following:

Employers

All employers must furnish to employees' employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious harm to employees. Employers must comply with occupational safety and health standards issued under the Act.

Employees

Employees must comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to their own actions and conduct on the job.

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has the primary responsibility for administering the Act. OSHA issues occupational salary and health standards, and its Compliance Safety and Health Officers conduct job site inspections to help ensure compliance with the Act.

Inspection

The Act requires that a representative of the employer and a representative authorized by the employees be given an opportunity to accompany the OSHA inspector for the purpose of aiding the inspection.

Complaint

Employees or their representatives have the right to file a complaint with the nearest OSHA office requesting an inspection. If they believe unsafe or unhealthful conditions exist in their workplace. OSHA will withhold, on request, names of employees complaining.

The Act provides that employees may not be discharged or discriminated against in any way for filing safety and health complaints or for otherwise exercising their rights under the Act.

Employees who believe they have been discriminated against may file a complaint with their nearest OSHA office within 30 days of the alleged discriminatory action.

Citation

If upon inspection OSHA believes an employer has violated the Act, a citation alleging such violations will be issued to the employer. Each citation will specify a time period with which the alleged violation must be corrected.

The OSHA citation must be prominently displayed at or near the place of alleged violation for three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

Proposed Penalty

The Act provides for mandatory penalties against employers of up to $1,000 for each serious violation and for optional penalties of up to $1,000 for each non-serious violation. Penalties of up to $1,000 per day may be proposed for failure to correct violations within the proposed time period. Also, any employer who willfully or repeatedly violates the Act may be assessed penalties of up to $10,000 for each such violation.

There are also provisions for central penalties. Any willful violation resulting in death of an employee, upon conviction, is punishable by a fine of up to $250,000 (or $500,000 if the employer is a corporation), or by imprisonment for up to six months or both. A second conviction of an employer doubles the possible term of imprisonment.

Voluntary Activity

While providing penalties for violation, the Act also encourages efforts by labor and management before an OSHA inspection, to reduce workplace hazards voluntarily and to develop and improve safety and health programs in all workplaces and industries. OSHA's Voluntary Protection Programs recognize outstanding efforts of this nature.

OSHA has published Safety and Health Program Management Guidelines to assist employers in establishing or perfecting programs to prevent or control employee exposure to workplace hazards. There are many public and private organizations that can provide information and assistance in this effort if requested. Also, your local OSHA office can provide considerable help and advice on saving safety and health problems or can refer you to other sources for help such as training.

Consultation

Free assistance in identifying and correcting hazards and in improving safety and health management is available to employers, without citation or penalty, through OSHA-supported programs in each State. These programs are usually administered by the State of Labor or Health Department or a State University.

Under provisions of Title 29, Code of Federal Regulations, part 1903.2(s)(1) employers must post this notice (or facsimile) in a conspicuous place where notices to employees are customarily posted.

Equipment Calibration Log

Operator Name:_____ Instrument Notice:_____

Signature:_____ Serial Number:_____

Date	Time	Concentration	Comments

Sampling Log

Operator Name:_____ Instrument Notice:_____

Signature:_____ Serial Number:_____

Was the equipment calibrated? _____ Yes _____ No

Date	Time	Concentration	Comments

Daily Sign In/Sign Out Form

(to be completed on site)

Site Name: Multiple Addresses, NY, NY

Location: Multiple Addresses, NY, NY

Employee Name	Company Name	Purpose	Time In	Time Out

Signature of SHSO (or designee) Date

Daily Safety Meeting Log

(to be completed on site)

Site Name Multiple Addresses, NY, NY

Location Multiple Addresses, NY, NY

Weather _____

Topics _____

_____

_____

_____

_____

_____

_____

Employee Names: Signatures

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Signature of SHSO (or designee) Date

ACCIDENT INVESTIGATION REPORT

Place Accident Occurred:		Name of Person Involved:	
Site Location		Age / Sex	Job Title
		Yrs in This Job	Yrs with Company
Date & Time of Incident AM __/__/_____:__ PM		Date & Time of Investigation AM __/__/___:__ PM	
Date Incident Reported __/__/	Reported to Whom	Investigated By:	
Regulatory Agencies or Insurance Carriers Contacted:		Witness(es):	
Description from injured or witnesses (use reverse side of form for more space): Signature Date			

Select one or more in each column. Don't hesitate to write in your own words (continue on reverse side, if necessary).

When completing the following task:
- ☐Operating (what machine)_____
- ☐Using (what tool)_____
- ☐Handling (what material)_____
- ☐Maintenance or repair (of what)_____
- ☐Office or sales task_____
- ☐Other -- Provide details_____

The following occurred:
- ☐Amputation (total or partial)_____
- ☐Burn (thermal)_____
- ☐Burn (chemical)_____
- ☐Electric shock_____
- ☐Concussion/unconscious_____
- ☐Crushing injury (contusion, crush, bruise) -- intact skin_____
- ☐Cut, laceration, puncture, abrasion_____
- ☐Fracture or dislocation_____
- ☐Sprain/strain_____
- ☐Cumulative trauma_____
- ☐Occupational illness or disease_____
- ☐Internal injuries_____
- ☐None -- Near accident_____
- ☐Other -- Provide details_____
- ☐Respiratory_____

To the (explain details):
- ☐Head, face, neck_____
- ☐Eye_____
- ☐Trunk, abdomen_____
- ☐Back (upper, lower)_____
- ☐Arm, shoulder_____
- ☐Fingers_____
- ☐Leg, hip, knee_____
- ☐Ankle, foot_____
- ☐Toes_____
- ☐Internal Injuries_____
- ☐Body System:_____
- ☐Circulatory_____
- ☐Digestive_____
- ☐Musculoskeletal_____
- ☐Nervous_____
- ☐Other_____
- ☐Other (specify)_____

Person was, or got:
- ☐Struck against (not including falls)_____
- ☐Struck by_____
- ☐Fell from (from a higher level)_____
- ☐Slipped, tripped, fell on (in the same level)_____
- ☐Foreign body in eye_____
- ☐Contacted electrical energy from_____
- ☐Exposure to (substance)_____
  - from inhalation_____
  - ingestion_____
  - skin absorption_____
- ☐Vehicle accident_____
- ☐Caught in, under or between_____
- ☐Repetitive_____
- ☐Other_____

While (taking what position) Where (or What):
- ☐Carrying_____
- ☐Climbing_____
- ☐Bending_____
- ☐Driving_____
- ☐Jumping_____
- ☐Kneeling_____
- ☐Lifting - below waist, give weight)_____
- ☐Lifting - above waist, give weight)_____
- ☐Pulling_____
- ☐Pushing_____
- ☐Reaching or stretching_____
- ☐Riding_____
- ☐Running_____
- ☐Sitting_____
- ☐Standing_____
- ☐Throwing_____
- ☐Twisting or turning_____
- ☐Walking_____
- ☐Other_____

Medical Treatment (check as many as apply)
- ☐The injured employee was able to return to work the same day.
- ☐The injured employee was sent home
- ☐The injured employee was sent to a doctor/ clinic; list the doctor/clinic name, address, and phone:_____

_____

_____

_____

- ☐The employee was hospitalized.

List name and address of hospital:

_____

_____

_____

Attending physician:_____

_____

What conditions contributed
- ☐Awkward job procedure
- ☐Inadequate guard/safety device
- ☐Inadequate warning/labeling system
- ☐Fire/explosion hazard
- ☐Not secured against moving
- ☐Poor housekeeping
- ☐Protruding object
- ☐Close clearance/congestion
- ☐Hazardous arrangement/storage
- ☐Defective tools/equipment
- ☐Inadequate ventilation
- ☐Atmospheric condition: gases, dusts, fumes, vapors
- ☐Repetitive motion
- ☐Illumination/noise hazard
- ☐Other

What unsafe procedures contributed
- ☐Operating without training/authority
- ☐Failure to follow proper procedure
- ☐Failure to secure
- ☐Operating at unsafe speed
- ☐Failure to warn/signal
- ☐Congestion
- ☐Used defective equipment
- ☐Used equipment improperly/unsafely
- ☐Improper loading or placement
- ☐Horseplay/distraction
- ☐Improper protective equipment
- ☐Improper lifting or carrying
- ☐Taking unsafe or awkward position
- ☐Servicing moving equipment
- ☐Other

The underlying causes of the incident are:
- ☐Unaware of job hazards
- ☐Inattention to hazard
- ☐Unaware of how to avoid incident
- ☐Not enough time to act
- ☐Person motivated to use unsafe procedure
- ☐Emotional/mental/physical stress
- ☐Equipment failed to perform as expected
- ☐Intoxicant/drugs
- ☐Failure to report/correct unsafe condition
- ☐Illness/medical condition
- ☐Work procedure not ergonomically correct
- ☐Substandard design
- ☐Other

Classification (check as many as apply)
- ☐Fatality
- ☐Medical treatment other than First Aid
- ☐Occupation illness or disease
- ☐First Aid
- ☐Environmental Release
- ☐Property Damage
- ☐Near-accident

What steps have already been taken to prevent similar incidents?_____

What else can be done (engineering controls, training, enforcement, process changes) to eliminate the hazard?_____

SHSO's Signature Date

Health and Safety Review: Is proposed action appropriate? Yes ☐ No ☐ Comments_____

DHS's Signature Date

VEHICLE ACCIDENT REPORT

EMPLOYEE NAME:_____ DRV LIC NO.:_____

COMPANY ADDRESS:_____ INSURANCE COMPANY_____

POLICY NO.:_____

DESCRIPTION OF ACCIDENT

DATE:_____ TIME:_____ SPEED LIMIT_____:

LOCATION:_____

DIRECTION OF TRAVEL:_____

HOW DID IT HAPPEN?_____

USE SPACE BELOW TO INDICATE VEHICLE PATHS - INDICATE NORTH BY ARROW

POLICE REPORT

NAME OF OFFICER: _____ BADGE #: _____

DEPARTMENT: _____ LOCATION: _____

SUMMONS ISSUED? Y [ ] N [ ] TO WHOM? _____

YOUR VEHICLE

YEAR/MAKE: _____ REGIST #: _____

DRIVEN BY: _____ AGE: ___ TEL #: _____

ADDRESS: _____ CITY: _____ STATE: _____

NATURE OF DAMAGE: _____

OTHER DRIVER
(continue below for additional drivers and witnesses)

NAME: _____ DRV LIC NO.: _____

ADDRESS: _____ VEHICLE REGISTRATION: _____

_____ INSURANCE COMPANY _____

POLICY NO.: _____

HASP Sign-Off Form

INSTRUCTIONS: Site personnel are required to read, understand, and agree to the provision of the plan. Personnel are required to sign this form indicating agreement. The original of this form is maintained by the Project Manager, and becomes part of the permanent site project files upon completion of site work.

Site Name: Multiple Addresses, NY, NY

Location: Multiple Addresses, NY, NY

Project Name and Number: HK2611

I have read, understand, and agree to comply with the provisions of this HASP for work activities on this site.

Name	Signature	Company/Agency	Date