

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**Covenant House
Block 1050, Lots 1 and 61
538-554 10th Avenue
New York, New York 10018**

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TRC Project No: 242065.0000.0000

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EXECUTIVE SUMMARY

Subject to the qualifications and limitations stated in Section 1 of this report, TRC Engineers, Inc. (TRC) was retained by Covenant House International (also known as “Client” or “User”) to perform a Phase I Environmental Site Assessment (ESA) of the property located at 538-554 Tenth Avenue, New York, NY 10018 (herein referred to as the “Site”). The legal description of the Site is Block 1050, Lots 1 and 61. This property was assigned an E-Designation “E-137” as part of the 2005 No. 7 Subway Extension—Hudson Yards rezoning study. The E-designation is for Hazardous Materials and Window/Wall Noise Attenuation. According to the study, the Site or nearby properties were historically occupied by a coal yard and a piano factory and, as a result, there is potential for non-petroleum contamination on the Site. This Phase I ESA was performed in accordance with the scope and limitations of the American Society of Testing and Materials Practice E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13). Limiting conditions and/or deviations from the ASTM E 1527-13 standard are described in Sections 1.3 and 7.7 of this report.

The approximately 29,000 square foot (sf) lot area contains 3 buildings (buildings A, B and C) and a parking lot. Building A is an 8-story 90,000 sf building that fronts on Tenth Avenue. Originally built in 1961 as a hotel, the building was converted by Covenant House in 1984 to serve as its main residential and administrative facility. Building B is a 4-story, 12,000 sf building that fronts 40th Street. Originally built as a branch of the New York Public Library in the early 1900s, the building has been significantly altered by Covenant House to serve as the organization’s gymnasium, chapel, and legal services center. Building C is a 5-story, 29,000 sf building that fronts 41st Street. The building currently serves as Covenant House’s cafeteria, health center, classrooms, and administrative offices.

As a result of the Phase I ESA, including but not limited to our visual observation of the Site; review of historical information, environmental databases, and information provided by the User; interviews with current Site representative(s); and TRC’s professional judgment, the following *recognized environmental conditions* (RECs) and/or *controlled recognized environmental conditions* (CRECs) associated with the Site, as defined by the ASTM E 1527-13 standard were identified:

On-Site RECs:

- The review of the regulatory agency database report identified the Site in the Historic Automobile Stations database. Additionally, the review of the historic Sanborn Maps confirm the historic presence of two filling stations and an automobile repair shop. One of the filling stations on the northwest corner of the Site operated from approximately 1950 until at least 1987. Historic Site use for automobile repair and filling stations are considered RECs.
- The review of the regulatory agency database report identified two NYSDEC reported spills associated with the Site. In 2004, petroleum impacted soils were reportedly identified during soil borings drilled on the Site in association with the No. 7 subway

extension. Additionally, petroleum impacted soil and perched water/groundwater were encountered during excavations associated with rate renovations performed in 2007. Petroleum impacted soil and groundwater are considered RECs.

- There is an active 10,000-gallon fuel oil underground storage tank (UST) on-Site. The presence of a 10,000-gallon fuel oil UST is considered a REC.
- Structures were formerly on-Site and demolished prior to the construction of the current Site building. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site property. The likely presence of historic fill and buried structures is considered a REC.

Off-Site RECs:

- Review of the regulatory agency database revealed that petroleum releases to soil were observed during a pre-closure investigation performed in the vicinity of the No. 6 fuel oil UST located on the east adjoining site. A spill was reported to the NYSDEC and groundwater monitoring wells were installed in the vicinity of the UST to monitor for the presence of petroleum impacts. Reportedly, the wells were monitored for several years and the spill was closed by the NYSDEC. However, petroleum impacts to soil remain in the vicinity of the UST and this is considered a REC.
- Review of the regulatory agency database report revealed that the east adjoining site is listed in the RCRA database as a CESQG for generation of hazardous waste. The current and historic generation of hazardous waste at this site is considered a REC.
- Review of a previous Phase I Environmental Site Assessment performed at the east adjoining property revealed that the site was previously utilized as an automobile repair trade school. Historic site uses of the east adjoining property for automobile repair is considered a REC.
- The review of historic Sanborn fire insurance maps revealed that coal yards were present on a property to the east of the Site from at least 1890 to approximately 1899 and the northeast adjoining property from at least 1950 to approximately 1968; a laundry facility, "Steam Laundry", was present on a property to the east of the Site along 41st Street from at least 1930 to approximately 1950; an upholsterer was present on a property to the east of the Site along 40th Street from approximately 1911 to approximately 1930; and "Iron Works" was present on a property to the east of the Site along 40th Street from at least 1930 to approximately 1950. These historic uses of adjoining properties are considered RECs.
- Review of the regulatory database report identified the west adjoining property as a historic automobile station and a CESQG. There is a NYSDEC reported spill associated with the property as well. Petroleum impacted soils were encountered in 1995. Reportedly, wells were installed and monitored for several years. Historic fill and impacted soils were excavated for off-site disposal during the redevelopment of the site.

A vapor barrier and waterproofing system was installed beneath the footprint of the current building. The spill case was closed in 2014, however, the historic use of the western adjoining property as an automobile station, the historic generation of hazardous waste and the presence of petroleum impacted soils and groundwater are considered a RECs.

- Review of the regulatory agency database report identified that two Con Edison service boxes located on the west adjoining sidewalks and associated with the Site address are listed in the RCRA database as CESQGs for generation of hazardous waste. The historic generation of hazardous waste is considered a REC.

In addition to the ASTM E 1527-13 requirements and in accordance with TRC's signed proposal dated July 30, 2015, TRC performed limited visual inspections for asbestos-containing materials (ACM), lead-based paint (LBP), and other building materials with regulated components. Suspect ACM, LBP, and building materials with regulated components (i.e., fluorescent light bulbs and ballasts, mercury switches, exit signs, electronic waste, first extinguishers, etc.) were identified during the Site reconnaissance. The presence of ACM, LBP and building materials with regulated components at the Site is considered an environmental concern.

This Executive Summary is part of this complete report; any findings, opinions or conclusions in this Executive Summary are made in context with the complete report. TRC recommends that the User read the entire report for all supporting information related to findings, opinions and conclusions.

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1.0 INTRODUCTION

TRC Engineers, Inc. (TRC) has prepared this Phase I Environmental Site Assessment (ESA) for Covenant House International (hereinafter “Client” or “User”).

This report was prepared for and may be relied upon by Client for the purposes set forth herein; it may not be relied on by any party other than the Client and reliance may not be assigned without the express approval of TRC. Authorization for third party reliance on this report will be considered by TRC if requested by the Client. TRC reserves the right to deny reliance on this report by third parties.

1.1 Purpose and Scope of Services

The following Phase I ESA was performed for the property located at 538-554 Tenth Avenue in New York, New York (hereinafter the “Site”). The legal description of the Site is Block 1050, Lots 1 and 61. A Site location map is included as **Figure 1**. This Phase I ESA has been prepared by TRC in accordance with the American Society for Testing and Materials E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13) and is intended for the sole use of Client as per the Proposal for Phase I Environmental Site Assessment dated July 30, 2015.

The purpose of this assessment is to identify *Recognized Environmental Conditions* (RECs) at the Site, as defined by the ASTM E 1527-13 standard. The completion of this Phase I ESA report may be used to satisfy one of the requirements for the User to qualify for the *innocent landowner, contiguous property owner, or bona fide prospective purchaser* limitations pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), thereby constituting *all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice* as defined by 42 U.S.C. §9601(35)(B) of CERCLA.

TRC understands that this assessment is not funded with a federal grant awarded under the United States Environmental Protection Agency (U.S. EPA) Brownfields Assessment and Characterization program.

The Scope of Services for this Phase I ESA included the following tasks:

- Site and vicinity reconnaissance;
- Site and vicinity description and physical setting;
- Historical source review and description of historical Site conditions;
- Interviews with owners, operators, and/or occupants of the Site, and/or local officials;
- Review of environmental databases and regulatory agency records;
- Review of previous environmental reports/documentation, as applicable;
- Review of environmental liens, if provided or authorized to obtain by the User; and
- Preparation of a report summarizing findings, opinions and conclusions.

Pursuant to the ASTM E 1527-13 standard, recommendations to conduct Phase II sampling or other assessment activities are not required to be included in this report. TRC can provide such recommendations upon request.

1.2 Additional Services

Items outside the scope of the ASTM E 1527-13 standard include, but are not limited to, the following:

- Asbestos-containing building materials (ACM)
- Radon
- Lead-based paint (LBP)
- Lead in drinking water
- Wetlands
- Regulatory compliance
- Cultural and historic resources
- Industrial hygiene
- Health and safety
- Ecological resources
- Endangered species
- Indoor air quality unrelated to *releases of hazardous substances or petroleum products* into the environment
- Biological agents
- Mold
- Polychlorinated biphenyls (PCBs)

The additional services performed during the course of this Phase I ESA, other than those required by the ASTM E 1527-13 standard, included limited visual survey for suspect ACM, suspect LBP, and suspect PCB-containing materials as discussed in greater detail in Section 9.0.

1.3 Deviations to ASTM E 1527-13 Standard

The following significant deviations or deletions to the ASTM standard were made during this Phase I ESA:

1. Property area history was not conducted in five-year intervals. However, sufficient information about the history of the Site and surrounding area could be obtained from the available historical Sanborn maps, aerial photographs, city directories, and local records, and this data gap is not likely to alter the conclusions of this report.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The approximately 29,000 square foot (sf) property is located at 538-554 Tenth Avenue in New York, New York, in a mixed commercial/residential area. The Site is described by the tax assessor as Block 1050, Lots 1 and 61, is zoned as C6-3, commercial, and is currently owned by the City of New York. A Site location map is included as **Figure 1**.

2.2 Site Improvements

Current on-Site improvements are listed in the following table. A Site layout plan is included as **Figure 2**.

Table 2.1 - Site Improvements

Site Feature	Description
Buildings (stories)	One 8-story building encompassing a total floor area of approximately 90,000 sf; one 4-story building encompassing a total floor area of approximately 12,000 sf; and one 5-story building encompassing a total floor area of approximately 29,000 sf
Construction date(s)	1961 (building A), 1912 (building B) and 1968 (building C)
Exterior areas	A parking lot is located in the northwestern portion of the lot and a courtyard is located on the southern portion of the lot between buildings A and C.
On-site roads/rail lines	N/A
Other large equipment	N/A
Potable water supply	Municipal
Sewage disposal system(s)	Municipal
Heating/Cooling system fuel source(s)	Heating oil/Electricity/Natural Gas
Back-up fuel source(s)	Diesel fuel fired generator
Electricity supplier(s)	Con Edison/Emergency Generator
Storm water system	NYCDEP combined sewer

2.3 Current and Historical Site Use

2.3.1 Current Site Use(s)

The approximately 29,000 sf property is located in an area that is part of a rezoning project under the Metropolitan Transportation Authority (MTA) to facilitate the No. 7 Subway Extension-Hudson Yards Rezoning and Development Program and consists of 3 buildings (buildings A, B and C) and a parking lot. Building A is an 8-story, 90,000 sf building that fronts on Tenth Avenue and serves as the main residential and administrative facility. Building B is a 4-story, 12,000 sf building that fronts 40th Street and serves as the organization's gymnasium, chapel, and

legal services center. Building C is a 5-story, 29,000 sf building that fronts 41st Street and serves as the cafeteria, health clinic, classrooms, and administrative offices.

2.3.2 Previous Owner and Operator Information

Based on information provided by the User (Section 3), the historical record review (Section 4), and/or interviews conducted during this Phase I ESA (Section 6), historical Site ownership and operator information is provided in the tables below.

Table 2.2 - Previous Owner and Operator Information

Lot 1

Site Owner	From	To
The City of New York	2006	Present
Covenant House	1984	2006
New York State Urban etc.	1984	1984
Maidman, Irving	1966	1984
Reifer, David L-Referee	Unknown	1966

Site Operator	Description	From	To
City of New York	Rezoning Project	2006	Present
Covenant House	Residential/Commercial Facility	1984	2006

Lot 61

Site Owner	From	To
The City of New York	2006	Present
Covenant House	1989	2006
Rockrose Company	1986	1989
Norman, Norman C. LWT	1984	1986
Ivanetic, Mirjan EXC	Unknown	1984

Site Operator	Description	From	To
City of New York	Rezoning Project	2006	Present
Covenant House	Residential/Commercial Facility	1989	2006
Rockrose Company	Residential Development Company	1986	1989

Review of the New York City Department of Finance Office of the City Register database revealed that the Site is located in an area that is part of a rezoning project under the Metropolitan Transportation Authority (MTA) to facilitate the No. 7 Subway Extension-Hudson Yards Rezoning and Development Program. The No. 7 Subway is believed to run beneath 41st St. The lateral extent is not known and may partially run beneath the northern extent of the Site.

2.4 Physical Setting

According to the United States Geological Survey (USGS) topographic map, Central Park, New York quadrangle dated 1995 (**Figure 1**), the Site is located approximately 0.5 miles east from the Hudson River, the Site topographic elevation is approximately 26 feet above mean sea level (MSL), and local topography slopes downward toward the west. The topographic downward slope observed at the Site during the Site reconnaissance is generally flat slightly sloped toward the west. Based on local topography and historical environmental reports provided to TRC, as applicable, the assumed direction of shallow ground water flow is to the west, towards the Hudson River. However, a subsurface investigation would be required to determine actual ground water flow direction.

The database radius report supplied by Environmental Data Resources, Inc. (EDR) of Milford, Connecticut was reviewed to obtain information regarding the dominant soil composition in the Site vicinity. This information is summarized below:

Hydric Status:	Soil does not meet the requirements for a hydric soil.
Soil Surface Texture:	Silt loam, loamy sand, sandy loam, fine sandy loam
Soil Component Name:	URBAN LAND
Deeper Soil Types:	Unweathered bedrock, very gravelly-loamy sand, stratified, sandy loam

Please refer to the Geotcheck Physical Setting Source Summary of the EDR report presented in **Appendix A** for further information regarding the soil composition in the Site vicinity. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel ID 3604970088F, the Site is not located in a FEMA flood zone.

3.0 USER PROVIDED INFORMATION

According to the ASTM E 1527-13 standard, certain tasks that may help identify the presence of RECs associated with the Site are generally conducted by the Phase I ESA User. These tasks include: providing, or authorizing the *environmental professional* to obtain, recorded land title records for environmental liens or activity and land use limitations (AULs); providing specialized knowledge related to RECs at the Site (e.g., information about previous ownership or environmental litigation); providing commonly known or *reasonably ascertainable* information within the local community about the *property* that is material to RECs in connection with the *property*; and informing the *environmental professional* if, as believed by the User, the purchase price of the *property* is lower than the fair market value due to contamination. A list of requested information was included in TRC's Proposal for Phase I Environmental Site Assessment dated July 30, 2015 (see Section 1.1). The User did not provide any additional helpful documents as defined in the ASTM E 1527-13 standard. A copy of the User questionnaire is included in Appendix B.

3.1 Title and Judicial Records for Environmental Liens or Activity and Use Limitations

TRC reviewed the EDR report (discussed in Section 4.2), local municipal records (Section 4.4), and the State Land Records (Section 4.4). No evidence of environmental liens or AULs associated with the Site was identified.

3.2 Specialized Knowledge

The User was not aware of specialized knowledge related to RECs at the Site.

3.3 Property Value Reduction Issues

The User was not aware of property valuation reduction issues regarding the Site.

3.4 Commonly Known or Reasonably Ascertainable Information

TRC was supplied with commonly known and/or reasonably ascertainable information regarding the Site by the Site occupants. This information was used during this Phase I ESA and has been incorporated in this report as applicable.

3.5 Reason for Conducting Phase I

It is TRC's understanding that the User requires a Phase I for due diligence purposes associated future redevelopment of the Site.

4.0 RECORDS REVIEW

4.1 Historical Use Information

Information regarding Site and vicinity historical uses was obtained from various publicly available and practically reviewable sources including:

- Aerial photographs (scale: 1" = 500') dated 1940, 1943, 1951, 1954, 1961, 1966, 1974, 1976, 1980, 1984, 1991, 1994, 2006, 2008, 2009, 2010, and 2011;
- Sanborn fire insurance maps dated 1890, 1899, 1911, 1919, 1930, 1950, 1968, 1979, 1980, 1982, 1984, 1985, 1987, 1988, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 2001, 2002, 2003, 2004, and 2005;
- Topographic maps dated 1897, 1947, 1956, 1966, 1979, and 1995;
- City directories dated 1923, 1927, 1931, 1934, 1938, 1942, 1947, 1950, 1956, 1958, 1963, 1968, 1973, 1978, 1983, 1988, 1993, 1996, 1998, 2000, 2006, 2008, and 2013;
- Local municipal records;
- An environmental database report; and
- Interviews with Site representative(s) and regulatory agency official(s), as necessary. Historical research documentation is included in **Appendix C**.

4.1.1 Site History

Operational History

Table 4.1 - Site History

Year	Site History
1890 – 1911	The Site is developed with multiple (approximately 16) 4-story buildings and a 5-story building located in the southern portion of the Site labeled "Piano Factory".
1911 – 1930	The 4-story buildings are now labeled as residential buildings with basements and first-floor commercial space. Two buildings along Tenth Avenue are labeled "Drugs" and "Bakery".
1930 – 1950	Two of the 4-story buildings in the southern corner of the Site are labeled "N.Y. Public Library". The 5-story building located in the southern portion of the Site is no longer labeled "Piano Factory". Two of the 4-story buildings at the corner of Tenth Avenue and 41 st Street have been demolished and replaced by a triangular building labeled as a store.
1950 – 1968	Five buildings in the northeastern portion of the Site and two buildings in the southwestern corner of the Site have been demolished. The northeastern corner of the Site is now labeled "Auto Parking". The 5-story building located in the southern portion of the Site is labeled "Auto Repair". The southwestern and northern corners of the Site are labeled "Fill'g Sta."

Table 4.1 - Site History

Year	Site History
1968 – 1979	The remaining 4-story buildings along Tenth Avenue have been demolished. There is no longer a filling station located on the southwestern corner of the Site. The Site is improved with the current Site buildings A and B on the eastern portion of the Site along Tenth Avenue (c. 1961) and in the southern corner of the Site (c. 1912). The Site is labeled “Narcotic Rehabilitation Center”.
1979 – 1990	Current Site building C has been built in the northeastern portion of the Site (c. 1968). The Site is labeled “N.Y. State Narcotic Rehabilitation Center”.
1990 – 2001	The Site is depicted as the current configuration. The filling station located in the northern corner of the Site is no longer shown.
2001 – Present	The Site is labeled “N.Y. State Narcotic Rehabilitation Center”. The northern corner of the Site is labeled “Park’g”.

It does not appear that topographic contours in the Site area have significantly changed during the time period reviewed.

Hazardous Substances

The historic use of hazardous substances on-Site (i.e., gasoline) associated with the former filling stations and an auto repair shop are considered a REC. No hazardous substances were observed during the Site reconnaissance.

4.1.2 Adjoining Property History

Table 4.2 - Adjoining Property History

Direction	Adjoining Property History
North	West 41 st Street has been present north of the Site since at least 1890. The properties beyond West 41 st Street, adjoining north of the Site, were generally developed with mid-rise buildings with undesignated uses until approximately 1930. A tile warehouse was located on the northeast adjoining property in 1930. In 1950 a coal yard is shown on the north adjoining property. In 1968, the warehouse facilities were razed and West 41 st Street was widened to create a “Bus Driveway” to a 4-story building with a basement located on the north adjoining property labeled “Westside Airlines Bus Terminal”. In 1984 the bus garage was replaced by a recording studio until 2005 when the entire northwestern adjoining block was razed. In 2001 the adjoining property to the north was razed and replaced with a parking garage in 2002.

Table 4.2 - Adjoining Property History

Direction	Adjoining Property History
East	<p>The adjoining property to the east was developed with multiple (approximately 16) 4-story buildings and one 5-story building from 1890 until 1911. In 1911, approximately 19 4- and 5-story buildings with basements are depicted as residential buildings and one of them is labeled "Job Painter". The small northern adjoining structure is labeled "Plaster & Moulder" from 1911 to approximately 1950. Between 1930 and 1950, an adjoining property to the southeast along 40th Street was labeled "Iron Works". In 1950, the buildings on the eastern portion of the property are no longer depicted and the area is labeled "Lumber Yard" and "Auto Parking". A structure along 40th Street is labeled "Metal Wks" from 1950 to approximately 1968. In 1968 the property is improved with a 6-story L-shaped building labeled "Off. & W. Ho." and is occupied by "Diana Stores Corp.". The property was occupied by "N.Y.C. Community College" from 1979 to approximately 1995. Since 1995, the eastern adjoining property has been occupied by "Hunter College Voorhees Campus".</p>
South	<p>West 40th Street has been present south of the Site since at least 1890. The properties beyond west 40th Street, adjoining south of the Site, were developed with 3-, 4- and 5-story buildings from at least 1890 until approximately 1950 when the south adjoining property was replaced with a tunnel exit/entrance ramp to the 3rd floor of the nearby bus terminal.</p>
West	<p>Tenth Avenue has been present to the west of the Site since at least 1890. West adjoining properties were generally developed with 5-story buildings with the exception of a mid-rise building to the southwest labeled "Kilns" and "Matt House" from 1890 to approximately 1911. In 1911, the 5-story buildings are identified as residential buildings having basements and first-floor commercial space. In 1930, one of the 5-story buildings is labeled "Chine Laundry". The adjoining property to the southwest is labeled "Schlossman's Furniture Warehouse" until the entire block was razed and replaced with an access tunnel connecting to the Lincoln Tunnel in 1950. One of the 5-story buildings is labeled "Tin Shop" and three of the 5-story buildings have been demolished and replaced with a "Filling Station" with four underground storage tanks. In 1968, the remaining 5-story buildings were demolished and the property is depicted as undeveloped land until 1990 when it was replaced with an auto repair shop and parking lot. In 1995, the four underground storage tanks are no longer shown on the northeastern adjoining property.</p>

4.1.3 Surrounding Property History

Table 4.3 - Surrounding Property History

Direction	Surrounding Property History
North	<p>Central Park is present to the north of the Site. From at least 1890 to approximately 1950 this area consisted of mid-rise commercial and residential buildings. In approximately 1968, the area was cleared of buildings, temporarily used for parking and consisted of a filling station until approximately 1979. The area has been improved with high rise residential buildings from approximately 1979 to present.</p>

Table 4.3 - Surrounding Property History

Direction	Surrounding Property History
East	<p>From at least 1890 to approximately 1950 this area consisted of low to mid-rise commercial and manufacturing buildings. In 1940, Dyer Avenue was constructed which vertically bisected the block east of the Site between the Site and 9th Avenue. In approximately 1950 this area was redeveloped with the current entrance and exit ramps to various levels of the nearby "Bus Terminal".</p> <p>Review of topographic maps revealed that the subway along Broadway, St. Patrick's Cathedral, Bryant Park, and the Public Library have been located east of the Site since at least 1947; "Longacre Sq" was shown east of the Site in 1947 and was replaced by "Times Square" by 1956; and, Penn RR Station was shown southeast of the Site, PS 17 was located northeast of the Site, and the Metropolitan Opera House, Rockefeller Center, and Grand Central Terminal have been located east of the Site since approximately 1956. No other significant changes were noted from the historical reference documents.</p>
West	<p>The Hudson River is west of the Site. Subway tracks have been west of the Site since at least 1947. No other significant features from historical reference documents were identified on surrounding properties to the west.</p>
South	<p>Public School 127 was present south of the Site from approximately 1956 to 1966. Pennsylvania Railroad station has been present south of the Site since at least 1956 and the department of education has been located south of the Site since approximately 1966. No other significant features from historical reference documents were identified on surrounding properties to the south.</p>

4.2 Database Report and Environmental Record Review

A database search report that identifies properties listed on state and federal databases within the ASTM-required radii of the Site was obtained from EDR and is included in **Appendix A**.

The environmental database report identified 1,708 properties/listings including the Site and adjoining properties. These properties included those that could be mapped and those that could not (i.e., orphan properties). The Site and the adjoining properties were listed in the database search report.

4.2.1 Subject Site

Site information included in the database search report is summarized in the following table:

Site Facility Name(s) and/or Listed Address(es)	"Lot 1, Tax Block 1050" 538 10 th Ave. Manhattan, NY 10018
EDR Map No(s).	A1
Database(s)	NY E Designation – E-137 EDR US Hist Auto Stations

Description/ID No(s).	N/A
Database Review Summary	The Site is listed in the City of New York Searchable Property Environmental E-database with an "E"-designation for noise attenuation and hazardous materials. This property was assigned an E-Designation "E-137" as part of the 2005 No. 7 Subway Extension—Hudson Yards rezoning study. The E-designation is for Hazardous Materials and Window/Wall Noise Attenuation. According the study, the Site or nearby properties were historically occupied by a coal yard and a piano factory and, as a result, there is potential for non-petroleum contamination on the site.

Site Facility Name(s) and/or Listed Address(es)	"Lot 1, Tax Block 1050" 538 10 th Ave. Manhattan, NY 10018
EDR Map No(s).	A2
Database(s)	EDR US Hist Auto Stations
Description/ID No(s).	N/A
Database Review Summary	The Site is listed EDR US Hist Auto Stations as an auto repair facility, "Acc Car Care Ctr" in 2003. There are no documented spills related to the historic use of the Site as an automobile repair facility.

Site Facility Name(s) and/or Listed Address(es)	"Lot 61, Tax Block 1050" 554 10 Avenue Manhattan, NY
EDR Map No(s).	A6
Database(s)	NY E Designation
Description/ID No(s).	N/A
Database Review Summary	The Site is listed in the City of New York Searchable Property Environmental E-database with an "E"-designation for noise attenuation and hazardous materials. This property was assigned an E-Designation "E-137" as part of the 2005 No. 7 Subway Extension—Hudson Yards rezoning study. The E-designation is for Hazardous Materials and Window/Wall Noise Attenuation. According the study, the Site or nearby properties were historically occupied by a coal yard and a piano factory and, as a result, there is potential for non-petroleum contamination on the site.

Site Facility Name(s) and/or Listed Address(es)	"Covenant House" 460 West 41 st Street New York, NY
EDR Map No(s).	B31
Database(s)	NY Spills

Description/ID No(s).	Spill No.: 0613314
Database Review Summary	The Site is listed in the NYSDEC petroleum spill database. During building demolition in 2007, oily water was identified in the basement excavation of the Site building. NYSDEC required the oily water be pumped out. Approximately 3,000 gallons of oily water was pumped from the excavation. No additional oil/water infiltration occurred after removal. Closure was obtained approximately two years after the spill was reported.

Site Facility Name(s) and/or Listed Address(es)	"Covenant House" 460 West 41 st Street New York, NY 10036
EDR Map No(s).	B36
Database(s)	NY UST
Description/ID No(s).	PBS Facility ID: 2-610819
Database Review Summary	The Site is listed in the NYSDEC petroleum bulk storage tank database for one (1) 10,000-gallon No. 2 fuel oil UST which was installed in 1996.

Site Facility Name(s) and/or Listed Address(es)	"7 Line Subway Extension-NYCT" 460 West 41 st St. Covenant House New York, NY
EDR Map No(s).	B37
Database(s)	NY Spills
Description/ID No(s).	Spill No.: 04044424
Database Review Summary	Petroleum impacted soils were identified during drilling for the subway extension project in July 2004. Contaminated soils were removed and replaced with clean fill. The spill was closed in October 2005.

4.2.2 Adjoining and Surrounding Property Record Review

TRC evaluated the following factors to determine whether additional environmental records should be reviewed with respect to the potential for contaminant migration from the adjoining and surrounding properties:

- (1) Whether the property is up-gradient or down-gradient of the Site vis-à-vis **ground water migration** based on the local topography, and the assumed ground water depth and westerly shallow ground water flow direction;
- (2) Whether the property is up-gradient or down-gradient of the Site vis-à-vis **vapor migration** based on readily available information pursuant to the ASTM E 1527-13 standard including soil and geological characteristics; contaminant characteristics;

contaminated plume migration data; and significant conduits that might provide preferential pathways for vapor migration such as major utility corridors, sanitary sewers, storm sewers, and significant natural conduits such as Karst terrain (vapor migration may also be influenced by the age and design of infrastructure features associated with these conduits);

- (3) Property case status (i.e., whether the New York State Department of Environmental Conservation (NYSDEC) has issued a No Further Action letter;
- (4) Type of database and whether the presence of contamination is known; and
- (5) The distance between the listed property and the Site.

Based on this evaluation, TRC limited the review of additional environmental records to the properties listed below, since the potential for contamination to be migrating to the Site from the other properties identified by the database search is considered low.

4.2.2.1 *Adjoining Properties*

Adjoining property information included in the database search report is summarized in the following table(s):

Site Facility Name(s) and/or Listed Address(es)	"Con Edison Service Box: 43254" 548 10 th Ave. New York, NY 10036
EDR Map No(s).	A3
Database(s)	RCRA-CESQG FINDS NY Manifest
Description/ID No(s).	EPA ID: NYP004268306
Database Review Summary	The service box was identified as a conditionally exempt small quantity generator of hazardous waste in 2012 with no violations. The NY Manifest database revealed that 500 pounds of unknown waste was removed from the Con Edison Service Box.

Site Facility Name(s) and/or Listed Address(es)	"Con Edison Service Box: 43254" 548 10 th Ave. New York, NY 10036
EDR Map No(s).	A4

Database(s)	RCRA-CESQG FINDS NY Manifest
Description/ID No(s).	EPA ID: NYP004268314
Database Review Summary	The service box was identified as a conditionally exempt small quantity generator of hazardous waste in 2012 with no violations. The NY Manifest database revealed that 500 pounds of unknown waste was removed from the Con Edison Service Box.

Site Facility Name(s) and/or Listed Address(es)	"Con Edison Manhole:43247" W 40 th Street and 10 th Ave NW Corner New York, NY 10018
EDR Map No(s).	A7
Database(s)	RCRA-CESQG NY Manifest
Description/ID No(s).	EPA ID: NYP004265500
Database Review Summary	The manhole was identified as a conditionally exempt small quantity generator of hazardous waste in 2007. The NY Manifest database revealed that 5,000 pounds of unknown waste was removed from the Con Edison Manhole.

Site Facility Name(s) and/or Listed Address(es)	"Fast Towing & Auto Repair" 547 10 th Ave New York, NY 10018
EDR Map No(s).	A8
Database(s)	RCRA NonGen NY Manifest
Description/ID No(s).	EPA ID: NYR000009746
Database Review Summary	The site is listed in the RCRA NonGen database as a small quantity generator with no violations in 1995 and as a verified non-generator in 1999 and 2006. The NY Manifest database revealed that the site was listed for disposal of 165 gallons of non-listed ignitable wastes (D001) in 1995.

Site Facility Name(s) and/or Listed Address(es)	"Fast Towing & Auto Repair" 547 10 th Ave New York, NY 10018
EDR Map No(s).	A10
Database(s)	RCRA-CESQG FINDS NY Manifest
Description/ID No(s).	EPA ID: NYP004268256

Database Review Summary	The site is listed in the RCRA-CESQG database as a conditionally exempt small quantity generator with no violations in 2012. The NY Manifest database revealed that the site was listed for disposal of 500 gallons of unknown hazardous wastes in 2012.
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Site Facility Name(s) and/or Listed Address(es)	547-551 10 th Ave. New York, NY 10018
EDR Map No(s).	A11, A12
Database(s)	EDR US Hist Auto Stations
Description/ID No(s).	N/A
Database Review Summary	The site is listed in the EDR US Historic Auto Stations database as an auto repair facility, "NYC Auto Repair" in 1999 and 2000; "Auto Repair & Towing" in 2001 and 2002; "Call Transmission Repair HR" in 2003, 2004 and 2010; and "Meineki Towing Transmission" in 2011 and 2012.

Site Facility Name(s) and/or Listed Address(es)	"Con Edison" 10 th Ave and 41 st St. New York, NY 10036
EDR Map No(s).	A14, A15
Database(s)	NY Manifest RCRA NonGen
Description/ID No(s).	EPA ID: NYP004526471
Database Review Summary	The site is listed in the RCRA NonGen database as a conditionally exempt small quantity generator with no violations in 2014 and as a verified non-generator in 2014. The NY Manifest database revealed that 500 pounds of unknown waste was removed from the site in 2014.

Site Facility Name(s) and/or Listed Address(es)	"#7 Subway Extension-NYCT" 10 th Ave and West 41 st St. New York, NY 10036
EDR Map No(s).	A16
Database(s)	NY Spills
Description/ID No(s).	Spill No.: 0307082
Database Review Summary	A petroleum spill occurred on a sidewalk at the site of the subway extension project in 2003. Corrective action was taken and the spill case was closed in April 2013.

Site Facility Name(s) and/or Listed Address(es)	"Manhole 60112" West 41 st St. / 10 th Ave. New York, NY 10036
EDR Map No(s).	A17
Database(s)	NY Spills
Description/ID No(s).	Spill No.: 0313103
Database Review Summary	A 125-gallon spill of an unknown liquid occurred in February 2004. Corrective action was taken and the spill case was closed in June 2004.

Site Facility Name(s) and/or Listed Address(es)	"Lot 158, Tax Block 1050" 454 West 40 th Street Manhattan, NY 10018
EDR Map No(s).	A18
Database(s)	NY E Designation – E-137
Description/ID No(s).	N/A
Database Review Summary	The site is listed in the City of New York Searchable Property Environmental E-database with an "E"-designation for noise attenuation and hazardous materials. This property was assigned an E-Designation "E-137" as part of the 2005 No. 7 Subway Extension—Hudson Yards rezoning study. The E-designation is for Hazardous Materials and Window/Wall Noise Attenuation. According the study, the site or nearby properties were historically occupied by a coal yard and a piano factory and, as a result, there is potential for non-petroleum contamination on the site.

Site Facility Name(s) and/or Listed Address(es)	"Con Edison" 454 W 41 st Street New York, NY 10036
EDR Map No(s).	A19
Database(s)	NY Manifest
Description/ID No(s).	EPA ID: NYP004735957
Database Review Summary	The NY Manifest database revealed that the site was listed for disposal of 500 gallons of unknown hazardous wastes in 2015.

Site Facility Name(s) and/or Listed Address(es)	547 10 th Ave. Manhattan, NY
EDR Map No(s).	A22

Database(s)	NY Spills
Description/ID No(s).	Spill No.: 9503865
Database Review Summary	This site is listed in the NYSDEC petroleum spills database. 83 tons of contaminated soil and 434 gallons of contaminated water were removed from the site in 1995. A Phase II report was conducted by MTA during the No. 7 Subway Line Extension. Monitoring wells were installed and vacuum truck extraction was performed prior to the excavation and redevelopment of the site. Historic fill and impacted soils were excavated for off-site disposal. A vapor barrier and waterproofing system was installed beneath the footprint of the building. The spill case was closed in December 2014.

Site Facility Name(s) and/or Listed Address(es)	"Lot 6, Tax Block 1050" 455 West 40 th Street Manhattan, NY 10018
EDR Map No(s).	A24
Database(s)	NY E Designation – E-137
Description/ID No(s).	N/A
Database Review Summary	This site is listed in the City of New York Searchable Property Environmental E-database with an "E"-designation for noise attenuation and hazardous materials. This property was assigned an E-Designation "E-137" as part of the 2005 No. 7 Subway Extension—Hudson Yards rezoning study. The E-designation is for Hazardous Materials and Window/Wall Noise Attenuation. According the study, the site or nearby properties were historically occupied by a coal yard and a piano factory and, as a result, there is potential for non-petroleum contamination on the site.

Site Facility Name(s) and/or Listed Address(es)	"Hunter College – MFA" 450 W 41 st Street New York, NY 10018
EDR Map No(s).	B33
Database(s)	RCRA NonGen/NLR NY Manifest
Description/ID No(s).	EPA ID: NYR000143585
Database Review Summary	This site was identified as a non-generator of hazardous waste in 2007. Previously, the site had been identified as a conditionally exempt small quantity generator. The NY Manifest database revealed that the Site was listed for disposal of unreported waste in 2006, 2007, 2008, and 2009.

Site Facility Name(s) and/or Listed Address(es)	"450 W. 41 st Street" 450 West 41 st Street Manhattan, NY
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EDR Map No(s).	B34
Database(s)	LTANKS
Description/ID No(s).	NYSDEC Spill No. 9504490
Database Review Summary	An unknown amount of No. 6 oil was discovered below the tank after cleaning and testing on July 14, 1995 prior to closure. Monitoring wells were installed in the vicinity of the tank and monitored for several years prior to spill closure in July 2005.

Site Facility Name(s) and/or Listed Address(es)	"Hunter College, MFA" 450 West 41 st Street New York, NY 10021
EDR Map No(s).	B38
Database(s)	NY AST
Description/ID No(s).	Facility ID: 2-609728
Database Review Summary	This site is listed in the NYSDEC petroleum bulk storage tank database for one (1) 20,000-gallon capacity aboveground storage tank (AST) installed in 1995 which originally contained No. 6 fuel oil but presently contains No. 2 fuel oil and one (1) 100-gallon capacity AST which contains No. 2 fuel oil. No spills related to either AST were identified in the regulatory database review.

Based on the above-listings, TRC conducted a file review for abovementioned properties of available files maintained by NYSDEC and USEPA. TRC has not yet received any documentation related to spill closure for these sites, however, if the file review alters the findings within this report, TRC will submit an addendum.

4.2.2.2 Surrounding Properties

Surrounding property information included in the database search report is summarized below:

Site Facility Name(s) and/or Listed Address(es)	"In Street" 440 West 41 st Street Manhattan, NY
EDR Map No(s).	B30
Database(s)	NY Spills
Description/ID No(s).	NYSDEC Spill No. 9504490
Database Review Summary	Approximately 30 gallons of petroleum spilled onto a sidewalk during the removal of drums from the site. The spill was cleaned up and no drains were impacted. The spill case was closed in June 2010.

4.3 Other Environmental Record Sources

Per the ASTM standard, local or additional state records were reviewed to enhance and supplement the ASTM-required federal and state records reviewed and discussed earlier in this report. These additional records include additional information obtained from New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH). Local sources that were contacted include New York City Department of Environmental Protection (NYCDEP) and New York City Department of Health and Mental Hygiene (NYCDOHMH). Information from these sources is discussed throughout the report, as applicable.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

Mr. Kevin McGuinness, TRC Principal Environmental Scientist conducted a Site reconnaissance of accessible areas on and around the Site on August 14, 2015 for the purpose of identifying potential RECs, and was accompanied by Covenant House Director of Facilities, Mr. Nunzi Cuzzupoli who provided access to the property and answered questions during the reconnaissance. Photographs taken during the reconnaissance are provided in Appendix D. A Site layout plan is included as Figure 2.

5.2 Interior and Exterior Site Observations

Unless otherwise noted, the items listed in the table below appeared in good condition with no visual evidence of staining, deterioration or a discharge of hazardous materials; and there are no records of a release in these areas. Items where further description is warranted are discussed in the section(s) following the table.

Table 5.1 - Interior and Exterior Site Observations

Item	Present (Current/Historic/No)	Description
Hazardous material storage or handling areas	No	
Aboveground storage tanks (ASTs) and associated piping	Yes	There is an approximately 100 gallon AST associated with the emergency generator located in the parking area near Tenth Ave. The freight elevator in Building A is reportedly powered by a hydraulic lift. The condition of any hydraulic fluids or reservoir could not be observed as it was not accessible.
Underground storage tanks (USTs) and associated piping	Current	One 10,000 gallon No. 2 fuel oil storage tank located below the parking lot in the northern portion of the Site.
Drums and containers (≥5 gallons)	Current	5-gallon buckets containing paint, household cleaners and boiler maintenance materials were observed.
Odors	No	
Pools of liquid, including surface water bodies and sumps (handling hazardous substances or substances likely to be hazardous only)	No	
Polychlorinated Biphenyls (PCBs) / Transformers	Current	Transformer located in a vault beneath sidewalk on 10 th Avenue to the south of the Site.
Stains or corrosion	No	
Drains and sumps	No	Floor or roof drains are connected to the municipal sewer system.
Pits, ponds and lagoons	No	
Stressed vegetation	No	

Table 5.1 - Interior and Exterior Site Observations

Item	Present (Current/Historic/No)	Description
Historic fill or any other fill material	Current	The Site has had numerous past uses and is not all occupied by buildings with basements. As a result, it is likely that historic fill is present beneath portions of the Site
Wastewater (including storm water or any discharge into a drain, ditch, underground injection system, or stream on or adjacent to the Site)	No	
Wells (including dry wells, irrigation wells, injection wells, abandoned wells, or other wells)	Current/Historic	There were several monitoring wells either active or abandoned, observed in the sidewalks surrounding the Site
Septic systems or cesspools	No	
Asbestos-Containing Materials (ACM)	Current	Non-ASTM Scope Item (see Section 9)
Lead Based Paint (LBP)	Current	Non-ASTM Scope Item (see Section 9)
Polychlorinated biphenyls (PCBs)	Current	Non-ASTM Scope Item (see Section 9)
Mercury	Current	Non-ASTM Scope Item (see Section 9)
Chlorofluorocarbons and halons	Current	Non-ASTM Scope Item (see Section 9)

5.2.1 Hazardous Substances

No hazardous substances were present on-Site.

5.2.2 Underground Storage Tanks

According to Site personnel and observations made during Site reconnaissance, there is one in-service 10,000-UST at the Site, which contains No. 2 oil. According to the NYSDEC Petroleum Bulk Storage (PBS) database, the UST is a painted steel tank located below the parking lot in the northern portion of the Site. A record request for spill/tank installation documentation was submitted to NYSDEC. TRC has not yet received any additional information from NYSDEC.

5.2.3 Aboveground Storage Tanks

There are no aboveground storage tanks (ASTs) located on-Site.

5.3 Adjoining and Surrounding Properties Reconnaissance

5.3.1 Adjoining Properties

During the Site reconnaissance, TRC viewed the adjoining properties from the Site and publicly accessible areas (e.g., public roadways, etc.).

Table 5.2 - Adjoining Properties Reconnaissance

Direction from Site	Current Land Use Description
North	The Site is bordered to the north by West 41 st Avenue followed by a high-rise residential/commercial building.
East	The Site is bordered to the east by a mid-rise commercial building followed by a high-rise residential building, the overpass ramp to the Port Authority (PA) bus terminal and Dyer Avenue.
South	The Site is bordered to the south by PA bus terminal overpass and West 40 th Street followed by a fenced in construction area. Several monitoring wells as well as a transformer vault were observed on the south adjoining sidewalk.
West	The Site is bordered to the west by 10 th Avenue followed by a midrise building that is currently undergoing construction. A large pad-mounted transformer was observed on the northwest corner of the block. Monitoring wells were observed on the eastern sidewalk along 10 th Avenue between 40 th and 41 st street.

5.3.2 Surrounding Properties

The surrounding properties are generally mixed commercial and residential. Historically the area was zoned industrial and commercial and consisted primarily of low and mid-rise buildings; however, the area is undergoing rezoning as part of the redevelopment of the Hudson Yards, which extends from approximately 30th Street to 42nd Street and from 8th Avenue to the Hudson River, and encompass the Site. Rezoning will bring high-rise commercial and residential real estate to the area.

6.0 INTERVIEWS

The following persons were interviewed to obtain historically and/or environmentally-pertinent information regarding RECs associated with the Site.

- Mr. Nick Nilio, Director of Operations, 2 years – *Key Site Manager* (as defined by the ASTM standard and identified by the property User)
- Mr. Nunzi Cuzzupoli, Director of Facilities, 8 years

The information provided by each is discussed and referenced in the text or provided below. Other references and sources of information are included in **Appendix E**.

7.0 FINDINGS, OPINIONS AND CONCLUSIONS

Potential findings can include RECs, historical RECs (HRECs), controlled RECs (CRECs) and *de minimis* conditions, pursuant to the ASTM E 1527-13 standard.

RECs are defined as the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (1) due to any *release* to the environment; (2) under conditions indicative of a *release* to the *environment*; or (3) under conditions that pose a *material threat* of a future *release* to the *environment*.

CRECs are defined as a REC resulting from a past *release* of *hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

HRECs are defined as a past *release* of any *hazardous substances* or *petroleum products* that has occurred in connection with the *property* and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the *property* to any required controls (for example, *property* use restrictions, *activity and use limitations*, *institutional controls*, or *engineering controls*).

De minimis conditions are defined as a condition 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. Conditions determined to be *de minimis conditions* are not RECs nor CRECs.

TRC has performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-13 at the property located at 455 West 40th Street, New York, New York (Site), see **Appendices F and G**. Deviations from this standard are described in Sections 1.3 and 7.6 of this report.

7.1 RECs and CRECs

This assessment has revealed no evidence of RECs (including CRECs) in connection with the Site except for the following:

On-Site RECs:

- The review of the regulatory agency database report identified the Site in the Historic Automobile Stations database. Additionally, the review of the historic Sanborn Maps confirm the historic presence of two filling stations and an automobile repair shop. One of the filling stations on the northwest corner of the Site operated from approximately

1950 until at least 1987. Historic Site use for automobile repair and filling stations are considered RECs.

- The review of the regulatory agency database report identified two NYSDEC reported spills associated with the Site. In 2004, petroleum impacted soils were reportedly identified during soil borings drilled on the Site in association with the No. 7 subway extension. Additionally, petroleum impacted soil and perched water/groundwater were encountered during excavations associated with rate renovations performed in 2007. Petroleum impacted soil and groundwater are considered RECs.
- There is an active 10,000-gallon fuel oil underground storage tank (UST) on-Site. The presence of a 10,000-gallon fuel oil UST is considered a REC.
- Structures were formerly on-Site and demolished prior to the construction of the current Site building. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site property. The likely presence of historic fill and buried structures is considered a REC.

Off-Site RECs:

- Review of the regulatory agency database revealed that petroleum releases to soil were observed during a pre-closure investigation performed in the vicinity of the No. 6 fuel oil UST located on the east adjoining site. A spill was reported to the NYSDEC and groundwater monitoring wells were installed in the vicinity of the UST to monitor for the presence of petroleum impacts. Reportedly, the wells were monitored for several years and the spill was closed by the NYSDEC. However, petroleum impacts to soil remain in the vicinity of the UST and this is considered a REC.
- Review of the regulatory agency database report revealed that the east adjoining site is listed in the RCRA database as a CESQG for generation of hazardous waste. The current and historic generation of hazardous waste at this site is considered a REC.
- Review of a previous Phase I Environmental Site Assessment performed at the east adjoining property revealed that the site was previously utilized as an automobile repair trade school. Historic site uses of the east adjoining property for automobile repair is considered a REC.
- The review of historic Sanborn fire insurance maps revealed that coal yards were present on a property to the east of the Site from at least 1890 to approximately 1899 and the northeast adjoining property from at least 1950 to approximately 1968; a laundry facility, "Steam Laundry", was present on a property to the east of the Site along 41st Street from at least 1930 to approximately 1950; an upholsterer was present on a property to the east of the Site along 40th Street from approximately 1911 to approximately 1930; and "Iron Works" was present on a property to the east of the Site along 40th Street from at least 1930 to approximately 1950. These historic uses of adjoining properties are considered RECs.

- Review of the regulatory database report identified the west adjoining property as a historic automobile station and a CESQG. There is a NYSDEC reported spill associated with the property as well. Petroleum impacted soils were encountered in 1995. Reportedly, wells were installed and monitored for several years. Historic fill and impacted soils were excavated for off-site disposal during the redevelopment of the site. A vapor barrier and waterproofing system was installed beneath the footprint of the current building. The spill case was closed in 2014, however, the historic use of the western adjoining property as an automobile station, the historic generation of hazardous waste and the presence of petroleum impacted soils and groundwater are considered a RECs.
- Review of the regulatory agency database report identified that two Con Edison service boxes located on the west adjoining sidewalks and associated with the Site address are listed in the RCRA database as CESQGs for generation of hazardous waste. The historic generation of hazardous waste is considered a REC.

Recommendations

TRC understands that the proposed redevelopment plans for the Site may include demolition of the existing structure and possible subsurface excavation. Consequently, TRC recommends the following actions to support the proposed demolition and redevelopment of the Site:

- A Phase II Environmental Site Investigation (ESI) should be conducted to determine if there are any subsurface impacts due to historic usage of the Site and surrounding properties. The Phase II ESI should include additional research regarding the reported on-Site spill. As the Site has an E-Designation, the NYCOER E-Designation Program process will be followed. The E-Designation Program requires submittal and review and approval of Phase II ESI Work Plans, Remedial Action Plans and Closure Reports in order to receive a Notice of Satisfaction from the NYCDOB.
- Prior to demolition an Asbestos and Regulated Materials Survey should be performed. This survey should include identifying, quantifying, sampling and analyzing materials suspected of containing asbestos. Inventories of other regulated and hazardous materials, such as Universal and Hazardous wastes should be performed. Potentially PCB-containing building materials (e.g., caulk/glazing) should be identified, quantified, sampled, and analyzed. Based on the results of these surveys the following should be performed:
 - A comprehensive asbestos survey of the Site building should be conducted to confirm the presence and quantities of ACM on the Site. Previous asbestos surveys and renovation plans from the 2007 renovation should be reviewed to define the scope of the survey. All asbestos should be abated, handled and disposed of in accordance with local, state, and federal asbestos regulations.

- The potential for LBP exists with respect to the on-Site structure. Prior to general construction activities, building materials with potential LBP should be sampled and tested to determine if the paint would be classified as LBP, as defined by applicable laws and regulations. If LBP is present, the appropriate controls and measures must be instituted during demolition activities to protect Site workers and ensure that any removed LBP materials are appropriately managed and disposed of.
- Building materials with regulated components (i.e., fluorescent light bulbs and ballasts, mercury switches, electronic waste, fire extinguishers, etc.) must be gathered, packaged, and disposed or recycled in accordance with applicable laws and regulations prior to any demolition activities.

7.2 HRECs

This assessment has revealed no evidence of HRECs in connection with the Site.

7.3 *De Minimis* Conditions

This assessment has revealed no evidence of *de minimis* conditions in connection with the Site.

7.4 Data Gaps

TRC has made an appropriate inquiry into the commonly known and reasonably ascertainable resources concerning the historical ownership and use of the Site back to the first development per 40 CFR Part 312.24 (*Reviews of Historical Sources of Information*). Data gaps identified during this assessment include the following:

1. Property area history was not conducted in 5-year intervals. However, sufficient information about the history of the Site and surrounding area could be obtained from the available historical Sanborn Maps, aerial photographs, city directories, and local records, and this data gap is not likely to alter the conclusions of this report.

7.5 Other Noteworthy Issues

Other noteworthy issues identified during this Phase I ESA that, while not strictly a REC, HREC, CREC, or *de minimis* condition, in TRC's opinion warrant further discussion include the following and are discussed in detail in Section 9.0:

- Suspect ACM, LBP, and building materials with regulated components were identified during the Site reconnaissance. The presence of ACM, LBP and building materials with regulated components at the Site is considered an environmental condition.

7.6 Limiting Conditions and Deviations

7.6.1 Accuracy and Completeness

The ASTM E 1527-13 standard recognizes inherent limitations for Phase I ESAs that apply to this report, including:

- **Uncertainty Not Eliminated** – No Phase I ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Data gaps identified during this Phase I ESA are listed in Section 7.5.
- **Not Exhaustive** – A Phase I ESA is not an exhaustive investigation.
- **Past Uses of the Property** – A review of standard historical sources at intervals less than five years is not required.

The Client is advised that the Phase I ESA conducted at the Site is a limited inquiry into a property's environmental status, cannot wholly eliminate uncertainty, and is not an exhaustive assessment to discover every potential source of environmental liability at the Site. Therefore, TRC does not make a statement i) of warranty or guarantee, express or implied for any specific use; ii) that the Site is free of RECs or environmental impairment; iii) that the Site is "clean"; or iv) that impairments, if any, are limited to those that were discovered while TRC was performing the Phase I ESA. This limiting statement is not meant to compromise the findings of this report; rather, it is meant as a statement of limitations within the ASTM standard and intended scope of this assessment. Specific limiting conditions identified during the Site reconnaissance are described in Section 5.1. Subsurface conditions may differ from the conditions implied by surface observations, and can be evaluated more thoroughly through intrusive techniques that are beyond the scope of this assessment. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes.

This report presents TRC's site reconnaissance observations, findings, and conclusions as they existed at the time of the Site reconnaissance. TRC makes no representation or warranty that the past or current operations at the property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes. TRC makes no guarantees as to the accuracy or completeness of information obtained from others during the course of this Phase I ESA report. It is possible that information exists beyond the scope of this assessment, or that information was not provided to TRC. Additional information subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based upon reasonably ascertainable information and observed Site conditions at the time of the assessment.

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 assessed. Regardless of the

findings stated in this report, TRC is not responsible for consequences or conditions arising from facts that were not fully disclosed to TRC during the assessment.

An independent data research company provided the government agency database referenced in this report. Information regarding surrounding area properties was requested for approximate minimum search distances and was assumed to be correct and complete unless obviously contradicted by TRC's observations or other credible referenced sources reviewed during the assessment.

TRC is not a professional title insurance or land surveyor firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

7.6.2 Warranties and Representations

This report does not warrant against: (1) operations or conditions which were not evident from visual observations or historical information provided; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; (3) locations other than the client-provided addresses and/or legal parcel description; or (4) information regarding off-site location(s) (with possible impact to the Site) not published in publicly available records.

7.6.3 Continued Validity/User Reliance

This report is presumed to be valid, in accordance with, and subject to, the limitations specified in the ASTM E 1527-13 standard, for a period of 180 days from completion, or until the Client obtains specific information that may materially alter a finding, opinion, or conclusion in this report, or until the Client is notified by TRC that it has obtained specific information that may materially alter a finding, opinion, or conclusion in this report. Additionally, pursuant to the ASTM E 1527-13 standard, this report is presumed valid if completed less than 180 days prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction.

7.6.4 Significant Assumptions

During this Phase I ESA, TRC relied on database information; interviews with Site representatives, regulatory officials, and other individuals having knowledge of Site operations; and information provided by the User as requested in our authorized Scope of Work. TRC has assumed that the information provided is true and accurate. Reliance on electronic database search reports is subject to the limitations set forth in those reports. TRC did not independently verify the information provided. TRC found no reason to question the validity of the information received unless explicitly noted elsewhere in this report. If other information is discovered and/or if previous reports exist that were not provided to TRC, our conclusions may not be valid.

8.0 REFERENCES

Table 8.1 - References Information

Description/Title of Document(s) Received or Agency Contacted	Date Information Request Filled/Date of Agency Contact	Information Updated	Reference Source
United States Environmental Protection Agency	8/12/2015 and 8/23/2015	N/A	TRC has not yet received a response from USEPA.
New York State Department of Environmental Conservation	8/12/2015 and 8/23/2015	N/A	TRC has not yet received a response from NYSDEC.
New York State Department of Health	8/12/2015	N/A	TRC has not yet received a response from NYSDOH.
New York City Department of Environmental Protection	8/12/2015	N/A	TRC has not yet received a response from NYCDEP.
New York City Department of Health and Mental Hygiene	8/12/2015	N/A	TRC has not yet received a response from NYCDOHMH.
Fire Department of New York	8/25/2015	N/A	TRC has not yet received a response from the FDNY.

Note that if any additional responses from the regulatory agencies are received, TRC will review the responses and, if conclusions contained within this report are affected, TRC will submit an addendum.

- ASTM International (ASTM) 2013, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-13.
- ASTM E 2600-10 "Standard Practice for Vapor Encroachment Screening on Property Involved in Real Estate Transactions".
- Environmental Data Resources, Inc. Regulatory Agency Database Search Report, July 18, 2014.
- Environmental Data Resources, Inc. Aerial Photographs: 1940, 1943, 1951, 1954, 1961, 1966, 1974, 1980, 1984, 1991, 1994, 2006, 2008, 2009, 2010, and 2011.
- Environmental Data Resources, Inc. Sanborn Fire Insurance Maps: 1890, 1899, 1911, 1919, 1930, 1950, 1968, 1979, 1980, 1982, 1984, 1985, 1987, 1988, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 2001, 2002, 2003, 2004, and 2005.
- Environmental Data Resources, Inc. Historical Topographic Maps: 1897, 1947, 1956, 1966, 1979, and 1995.
- Environmental Data Resources, Inc. City Directories: 1923, 1927, 1931, 1934, 1938, 1942, 1947, 1950, 1956, 1958, 1963, 1968, 1973, 1978, 1983, 1988, 1993, 1996, 1998, 2000, 2006, 2008, and 2013.

- Environmental Data Resources, Inc. Tax Map Report, August 11, 2015.
- Environmental Data Resources, Inc. Building Permit Report, August 11, 2015.
- Environmental Data Resources, Inc. Environmental LienSearch™ Report, August 12, 2015.
- Property Shark™ Report, “538-550 10th Avenue, New York, NY 10018”, August 12, 2015.
- Federal Emergency Management Agency, Flood Insurance Rate Map, Nassau County, Panel 3604970088F, August 24, 2014.
- August 2014, Phase I Environmental Site Assessment for the Former Hunter College MFA Facility, 455 W 40th Street, New York, New York 10018, TRC Engineers Inc., August 12, 2015.

9.0 ADDITIONAL SERVICES

At the request of the Client and described in the proposed Scope of Work (see Section 1.1), TRC performed limited visual inspections for asbestos-containing materials (ACM), lead-based paint (LBP), and other regulated materials. Below is a summary of the findings.

9.1 Asbestos-Containing Materials (ACM)

TRC conducted a limited visual survey for the presence of suspect ACM within the Site. The intent of the survey was to identify exposed suspect ACM through preliminary non-destructive observations. No sampling of suspect ACM was performed during this investigation. Based upon the age of the three buildings 1961 (building A), 1912 (building B) and 1968 (building C), it is likely that numerous building components are or were ACM. According to Mr. Nilio, the buildings underwent a full renovation in 2007, during which an ACM abatement was performed. The observable suspect-ACM was in good condition. No reports or further documentation of the abatement activities were provided. As such, it is not known what was/was not addressed. As such, all potentially suspect ACM are considered ACM unless documentation establishing otherwise can be provided. The suspect ACM consist of:

- Piping wrap/elbows
- Piping joint compound
- Vinyl floor tiles
- Window caulk and other caulk (may also contain PCBs)
- Window glazing (may also contain PCBs)
- Rolled roofing
- Roof flashing
- Fire Doors
- Roofing mastic
- Electrical systems (wiring and panels)

A thorough review of previous survey data and renovation plans and a comprehensive pre-demolition survey of these suspected ACM, including sampling and analysis should be performed prior to any demolition activities.

9.2 Lead-Based Paint (LBP)

During the site inspection, a limited visual assessment of all accessible painted surfaces was performed. No sampling or intrusive work was performed, as this is outside the scope of this Phase I ESA. No exterior painted surfaces were identified during the limited visual assessment. The interior painted surfaces were found to be in good condition; with no peeling and chipping. Based on the age of the Site buildings, it is likely that materials original to building contain LBP. The buildings were renovated in 2007; therefore, significant removals of LBP coated building materials likely occurred. Remaining LBP coated building materials may have been painted over. A thorough assessment for LBP, should be performed in anticipation of demolition activities.

9.3 Other Regulated Materials

TRC performed a limited visual inspection of the Site to identify other materials or material components that would be considered regulated and therefore would require specialized handling, disposal, and recycling. The following table presents the regulated materials identified during the inspection and the associated environmental concern.

Table 9.1 - Other Regulated Materials

Material	Environmental Concerns	Quantity/Condition
Petroleum bulk storage tanks	One existing, in-use UST and one existing in-use AST	(1) 10,000-Gal Fuel Oil UST/Good (2) 100-Gal Diesel AST associated with the emergency generator
Fluorescent light-bulbs	Mercury	Throughout
Lamp-ballasts	PCBs	Throughout
Electronic waste	Heavy metals	Equipment located in the basement of building A
Roof mounted air conditioning units	CFCs	Roof of building A
Water fountains	CFC	Throughout
Fire extinguishers	CFCs	Located throughout