APPENDIX L: CONTAMINATED MATERIALS AND WASTE MANAGEMENT

L.1 INTRODUCTION

Environmental Planning & Management, Inc. (EPM), as subconsultant to The Louis Berger Group, Inc., and on behalf of Metropolitan Transportation Authority New York City Transit (MTA NYCT), has conducted a draft Hazardous Material Screening Investigation (HMSI) of the area proposed for development of the Fulton Street Transit Center (FSTC) project (the project area). The project area is situated in Lower Manhattan, New York County, New York, and is bound to the west by Church Street and the World Trade Center (WTC) site, to the north by Fulton Street, to the east by William Street, and to the south by Liberty Street. The project area also includes Pier 6, which was considered a potential barging location (see Appendix C), which extends into the East River in the vicinity of Broad and South Streets. The properties proposed for deconstruction / renovation under the Full Build Alternative (189 Broadway and 192 through 210 Broadway) were individually evaluated and the findings of those assessments are provided under separate cover in Draft Phase I Environmental Site Assessment (ESAs) Reports, dated September 2003. This HMSI was conducted to determine the presence or likely presence of hazardous materials within the limits of the project area.

The results of the HMSI were used to determine where additional investigations may be warranted to characterize the actual conditions of a specific area. Such additional investigations, commonly referred to as Phase II Environmental Site Investigations (ESIs), typically include the collection and laboratory analysis of soil and/or groundwater samples. The results of ESIs can be used to avoid contaminated areas if possible, identify appropriate soil and groundwater handling and disposal options, and identify appropriate public and worker health and safety precautions to be employed during construction. Sites were evaluated for ESIs based on two (2) primary criteria, 1) the known or suspected presence of hazardous materials, and 2) the probable impacts to the design alternatives by the potentially contaminated sites (PCSs). A property or area could be deemed potentially contaminated, but not identified as a site of potential environmental concern to the project if the property or area is not expected to be impacted during the construction phase.

The hazardous material screening was conducted in March, April and September of 2003 through visual on-site inspections, a review of current and past land use records, a review of available Federal, State, and local agency environmental records, including underground storage tank records and hazardous waste incident reports, and other available environmental database records. The assessment focused on those properties with underground or aboveground storage tanks, hazardous waste generators, properties that have had hazardous material spills, and properties that have been investigated by the US Environmental Protection Agency (EPA), New York State Department of Environmental Conservation (NYSDEC) and/or New York City Department of Environmental Protection (NYCDEP). The findings of this hazardous material investigation are preliminary; actual sample collection and analysis was not performed. Additionally, full access to all sites was not available.

L.1.1 POTENTIALLY CONTAMINATED SITES (PCS)

The following PCSs were identified as having the potential to impact the Proposed Action. EPM assigned temporary reference numbers (TRNs) to each site for the purposes of this report. The locations of each site relative to the limits of the project area are provided on Figure L-1.
Figure L-1

Areas of Potential Contamination

New York City Transit
Fulton Street Transit Center

Legend:
- Vac PIPE
- Fix Pipe
- Montage Well

Sites of Potential Concern:
1. Hazardous Material Spill Site/Haz. Waste Generator/Petroleum Storage Site
2. Former Industrial Printing Operation
4. NYCT - Substation/Haz. Mater. Waste Generator (Lead)
5. Con Ed. Substation/Haz. Waste Generator (PCBs)
6. Con Ed. Substation/Haz. Waste Generator (PCBs)
7. Hazardous Material Spill Site/groundwater Impact
8. Hazardous Material Spill Site/groundwater Impact
9. Con Ed. Methane/Haz. Waste Generator (PCBs)
10. Petroleum Storage Site 175 Broadway
11. Petroleum Storage Site 170 Broadway
12. Former Hudson and Manhattan Railroad Terminal
### Table L-1
Summary of Sites with Potential Environmental Concerns
Proposed Fulton Street Transit Center
Lower Manhattan, New York

<table>
<thead>
<tr>
<th>Site Identification</th>
<th>Location</th>
<th>Potential Environmental Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property at 195 Broadway (TRN 1)</td>
<td>Adjacent to west of Broadway between Fulton and Dey Streets</td>
<td>Active NYSDEC Hazardous Material Spill Site; Registered Petroleum Bulk Storage Site and Hazardous Waste Generator Site.</td>
</tr>
<tr>
<td>Property at 204-210 Broadway (TRN 2)</td>
<td>Southeast corner of Broadway and Fulton Street</td>
<td>Identified as former industrial operation (Evening Post Printing) on 1824 and 1923 Sanborn Maps; potential petroleum impacted water observed in pit beneath sub-basement.</td>
</tr>
<tr>
<td>Con Edison Substation, near 2 Dey Street (TRN 3)</td>
<td>Beneath Dey Street, immediately west of Broadway</td>
<td>Registered Hazardous Waste Generator Site for the generation of Polychlorinated Biphenyl (PCB) containing oil and soil.</td>
</tr>
<tr>
<td>NYCTA Substation (TRN 4)</td>
<td>Beneath intersection of Broadway and Fulton Street</td>
<td>Registered Hazardous Waste Generator Site for the generation of lead containing waste in the year 2000.</td>
</tr>
<tr>
<td>Con Edison Substation Vault 6027, near 12 John Street (TRN 5)</td>
<td>Beneath John Street and west of Broadway</td>
<td>Registered Hazardous Waste Generator Site for the generation of petroleum oil or other liquids containing PCBs in 1999.</td>
</tr>
<tr>
<td>Con Edison Vault 359, near 212 Broadway (TRN 6)</td>
<td>Beneath intersection of Broadway and Fulton Street</td>
<td>Registered Hazardous Waste Generator Site for the generation of petroleum oil or other liquids containing PCBs in 1999.</td>
</tr>
<tr>
<td>5 WTC (TRN 7)</td>
<td>West of Church Street at Fulton Street</td>
<td>Active NYSDEC Hazardous Material Spill Site, including a reported spill of 5,000 gallons of hydraulic oil with groundwater impact on October 26, 2001.</td>
</tr>
<tr>
<td>WTC Site (TRN 8)</td>
<td>West of Church Street between Dey and Liberty Streets</td>
<td>Active NYSDEC Hazardous Material Spill Site, including a reported spill of 10,000 gallons of diesel fuel on September 11, 2001.</td>
</tr>
<tr>
<td>Con Edison Manhole # 3538 (TRN 9)</td>
<td>Beneath intersection of Fulton and Dutch Streets</td>
<td>Registered Hazardous Waste Generator Site for the generation of PCB containing oil, soil, and sludge in 2000.</td>
</tr>
<tr>
<td>Property at 176 Broadway (TRN 10)</td>
<td>Northeast of the Broadway / Maiden Lane intersection</td>
<td>NYSDEC Registered Petroleum Bulk Storage Site for an in-service 7,500-gallon fuel oil underground storage tank</td>
</tr>
<tr>
<td>Property at 170 Broadway (TRN 11)</td>
<td>Southeast corner of the Broadway / Maiden Lane intersection</td>
<td>NYSDEC Registered Petroleum Bulk Storage Site for an in-service 7,500-gallon fuel oil underground storage tank</td>
</tr>
<tr>
<td>Former Hudson &amp; Manhattan Railroad Terminal (TRN 12)</td>
<td>Beneath Church Street between Fulton and Dey Streets</td>
<td>Identified as a former Railroad Terminal on the 1894 and 1923 Sanborn maps.</td>
</tr>
<tr>
<td>Petroleum Storage Tank Fillports and Vent Pipes</td>
<td>Various locations (see Figure L-1)</td>
<td>Potential impact to surroundings soils and/or groundwater from leaks or spills.</td>
</tr>
</tbody>
</table>

TRN = Temporary Reference Number.

The areas most likely to be impacted during the construction phase would be along Dey, Church, and Fulton Streets where access shafts and/or cut-and-cover excavations are proposed, and from excavation beneath the structures proposed for deconstruction along Broadway. Excavation is also proposed near the...
intersection of Fulton and William Streets for installation of new stairs to the 23 Line, and near the intersection of Broadway and Cortlandt Street for installation of new stairs to the 45 Line. Phase II ESIs are recommended to determine actual conditions. The ESIs should include the advancement of soil borings to the proposed depths of excavation and the collection of soil and/or groundwater samples for laboratory analysis. Insulated steam pipes beneath the City’s streets may contain asbestos. Prior to excavation and utility relocation, subsurface utility plates should be reviewed to determine if buried utilities are present within the project area with the potential of Asbestos Containing Material (ACM).

L.2 189 BROADWAY

EPM performed a Phase I ESA of the property located at 189 Broadway, in Manhattan Borough, New York County, New York (subject property). The site reconnaissance was conducted by EPM representative, Darren Frank on June 24, 2003. This Phase I ESA was conducted in connection with the proposed FSTC.

The subject property occupies an approximate 4,800 square foot parcel on the southwest corner of the intersection of Broadway and Dey Street, approximately 300 feet east of Church Street. The property is modified by a two (2) story, steel reinforced concrete building with a basement. The building is leased by eight (8) different tenants with six (6) retail stores at street-level, Ho Yip Chinese Restaurant below street-level, and The World of Golf retail store on the second level. An entrance to the Fulton Street subway station is located on the northern side of the property on the Dey Street sidewalk.

The basement level is occupied by a Chinese restaurant accessed via stairs on Dey Street. The basement also contains the New York City municipal connections to water, gas, steam, electric, and sewerage systems. EPM noted two (2) gas powered hot water tanks, which reportedly supply the building with hot water. The walls, floors, and ceiling of the basement are brick and cement with the exception of the restaurant which has ceramic floors, sheetrock walls, and suspended ceiling tile with fluorescent lighting fixtures. No transformers were observed on the subject property. The first floor at street-level contains retail stores which include: New York Stocking Exchange (lingerie store), Island Cookie (bakery), Panorama’s (printed photo sales), the Photo Booth (no developing on site), a tobacco and cell phone booth, and Stylz Clothing Store. All of the stores contained either carpeted, ceramic or wood covered floors, sheetrock walls, and suspended ceiling tiles with fluorescent and/or incandescent lighting. The World of Golf retail store occupies the entire second floor and has construction materials consisting of carpeted floors, sheetrock covered ceilings with halogen light fixtures, and walls covered with slot board and merchandise. The roof has seven (7) air conditioning units and is covered with a silver painted roofing membrane with mastics/tar in areas of seams. The roof was observed to be clean and in good condition. Cleaning and resurfacing of the subject building’s roof was reportedly completed subsequent to the events of September 11, although documentation regarding such work was not provided for review. No visible signs of WTC fallout (i.e., dust/debris) were observed on the roof of the subject property building during the site inspection.

As part of this assessment, a limited asbestos inspection for exposed, friable ACM was conducted. The inspection process focuses on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. The inspection was limited to the accessible areas of the subject site. EPM did not observe potential friable ACM on pipes or fire proofing. Suspect vinyl floor tile (VT) or linoleum may be present in uninspected locations or beneath carpeting. Non-friable materials such as VT or linoleum in good to fair condition are not hazardous if left undisturbed. It was reported to EPM that an asbestos abatement was performed at the subject property within the last eight (8) to nine (9) years. Documents indicating the asbestos abatement and scope of work have not been made available to EPM for review.

New York City banned the use of lead-based paint (LBP) in residential structures in 1960. As the site structure was constructed prior to 1950 and is utilized as a commercial structure, it is possible that
underlying areas and/or existing original construction may contain LBP. During the site inspection EPM observed the painted surfaces within the building to be in good condition.

Past use of the subject property, adjoining properties, and nearby properties was ascertained through the review of available Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps for the area of the subject property were available for the years 1894, 1923, 1950, 1977, 1985, 1994, and 2001. The 1894 Sanborn Map identifies the subject property as two (2) separate buildings, one (1) of which was labeled as maintaining three (3) steam boilers. The subject property was then shown on the 1923 map as a single five (5) story structure with an elevator and no steam boilers. The present day two (2) story structure was identified on the 1950 map along with the Fulton Street subway station entrance. No potential environmental concerns were noted regarding the subject property or immediately nearby properties based on the Sanborn Maps reviewed.

A search of standard regulatory agency records was conducted for the subject property and nearby properties. The subject property did not appear on any of the databases reviewed. The Consolidated Edison (Con Edison) vault site, located approximately 45 feet north of the subject property at Dey Street, is identified as a Hazardous Waste Generator site for the generation of wastes including Polychlorinated Biphenyl (PCB) oils, PCB-containing equipment, and PCB-impacted soils; and violations are reported for the site. The potential exists for soils in the vicinity of the Con Edison vault site to have been adversely impacted. Based on the proximity of the Con Edison vault to the subject property, the Con Edison site is considered a potential environmental concern with the potential to impact the subsurface conditions of the subject property.

L.2.1 PHASE I ESA

EPM has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E-1527-00 of the property located at 189 Broadway, in the Borough of Manhattan, New York County, New York. This assessment has revealed the following evidence of recognized environmental conditions in connection with the property:

- An asbestos abatement was reportedly conducted at the subject property approximately nine (9) years prior to this ESA; however, documentation pertaining to the asbestos removal was not made available for review;
- Since the subject property is located one (1) block east of the WTC site, it is possible that potentially contaminated fallout from the WTC collapse could have impacted the subject property. Removal of WTC debris and resurfacing of the roof reportedly was completed subsequent to the WTC collapse. The roof appeared clean and newly resurfaced during the June 2003 site inspection; however, documents pertaining to the roof renovation were not available for review; and,
- Potential impact to subsurface soils and/or groundwater beneath the subject property from the Con Edison Vaults at Dey Street.

This assessment has revealed no other evidence of recognized environmental conditions or associated issues in connection with the subject property.

L.2.2 RECOMMENDATIONS

Based on the findings of this ESA, EPM recommends the following:

- Documentation regarding asbestos abatement work reportedly conducted at the subject property should be provided for review to confirm the proper removal and disposal of such material;
- Documentation regarding removal of WTC debris and resurfacing of the roof of the subject property should be provided for review;
Comprehensive asbestos and LBP surveys are recommended prior to building renovation or deconstruction. These surveys should include sample collection and laboratory analysis of suspect materials. If asbestos containing materials are confirmed to be present in the building, these materials should be properly removed from the building in accordance with all applicable rules and regulations prior to building renovation or deconstruction.

Soil and/or groundwater sampling on the subject property is recommended prior to any building renovation or construction, to document subsurface conditions relative to possible impacts from the Con Edison Vault site located immediately north of the subject property at Dey Street.

L.3 192 BROADWAY AND 11 JOHN STREET

EPM has performed a Phase I ESA of the Corbin Building, located at 192 Broadway and 11 John Street, in the Borough of Manhattan, New York County, New York (subject property). The site reconnaissance was conducted by EPM representatives, Darren Frank and Matthew Herschfeld on June 18, 2003. This Phase I ESA was conducted in connection with the proposed FSTC development project.

The subject property is situated on the east side of Broadway, at the northeast corner of the intersection of Broadway and John Street. The subject property occupies an approximate 5,500 square foot parcel. The subject property, owned by Collegiate Church Corporation, is modified by an eight (8)-story with sub-basement and basement building. The majority of current tenants on the second through eighth floors include professional businesses (i.e., doctors, lawyers, dentists, financial advisors, etc.) and two (2) residential units. The first floor tenants include retail stores (i.e., men’s clothing, women’s clothing, cell phones, jewelers, etc.)

The sub-basement contains a water pump room, two (2) out-of-service steam tanks, and an estimated 10,000-gallon above ground vaulted out-of-service fuel oil storage tank. The basement contains a storage room and observable evidence of recent construction below the outside sidewalk. The sub-basement, basement and other common areas throughout the building are lit by fluorescent lighting. The lighting ballasts may contain Polychlorinated Biphenyls (PCBs), but were not accessible for inspection. The roof contains an elevator room, with pulleys and relays, used to operate the subject building’s two (2) elevators, a 5,000 gallon wood water tank, and an apartment. Cleaning and resurfacing of the subject building’s roof was reportedly completed subsequent to the events of September 11, although documentation regarding such work was not provided for review. No visible signs of WTC fallout (i.e., dust/debris) were observed on the roof of the subject property building during the site inspection.

Water and sewer is reportedly provided to the subject property by the City of New York. There are no reports of any on-site wells or wastewater disposal systems. Electricity and steam heat distributed by radiators exists throughout the subject building and is supplied by Consolidated Edison. There were no transformers observed on the subject property. No hazardous wastes are reportedly generated or stored at the subject property, with the exception of small quantities of paint and general cleaning products observed being stored in the basement.

As part of this assessment, a limited asbestos inspection for exposed, friable ACMs was conducted. The inspection process focuses on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. The inspection was limited to the accessible areas of the subject property. EPM did not observe friable suspect asbestos on pipes or sprayed fireproofing. However, a small amount of suspect friable asbestos debris was observed on the floor of the sub-basement’s south side in the form of pieces of varying sizes no larger than four (4) inches x four (4) inches (see photograph No. 3 in Appendix A). In addition, the building contains areas of 12 inch x 12 inch VT and nine (9) inch x nine (9) inch VT which have the potential to contain asbestos. Reportedly, an asbestos abatement occurred at the subject property within the last three (3) years. However, records pertaining to the asbestos abatement work were not provided to EPM for review. Additional suspect VT or linoleum may be present in uninspected locations or beneath
carpeting. Non-friable materials such as VT or linoleum in good to fair condition are not hazardous if left undisturbed.

New York City banned the use of LBP in residential structures in 1960. As the site structure was constructed prior to 1960, it is possible that underlying areas and/or existing original construction may contain lead-based paint.

Past use of the subject property, adjoining properties, and nearby properties was ascertained through the review of available Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps for the area of the subject property were available for the years 1894, 1923, 1950, 1977, 1985, 1994, and 2001. The 1894 Sanborn Map, and all subsequent Sanborn Maps identify the present day subject building. No potential environmental concerns were noted regarding the subject property or immediately nearby properties based on the Sanborn Maps reviewed.

A search of standard regulatory agency records was conducted to identify potential environmental concerns associated with the subject property and properties located within a 1/8-mile radius of the subject property. The subject property does not appear on any of the databases reviewed, and no sites were identified in the immediate vicinity with the potential to adversely impact the subject property.

**L.3.1 PHASE I ESA**

EPM has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E-1527-00 of the property located at 192 Broadway and 11 John Street, in the Borough of Manhattan, New York County, New York. This assessment has revealed the following evidence of recognized environmental conditions in connection with the property:

- An asbestos abatement was reportedly conducted at the subject property within the last three (3) years; however, documents pertaining to the asbestos removal work were not made available for review;
- The subject property is located one (1) block east of the WTC site, and therefore has a potential to have received potentially contaminated fallout from the WTC collapse. Removal of WTC debris and resurfacing of the roof reportedly was completed subsequent to the WTC collapse. The roof appeared clean and newly resurfaced during the June 2003 site inspection; however, documents pertaining to the roof renovation were not available for review; and,
- An estimated 10,000-gallon out of service heating oil tank is located in the basement of the subject property.

This assessment has revealed no other evidence of recognized environmental conditions or associated issues in connection with the subject property.

**L.3.2 RECOMMENDATIONS**

Based on the findings of this ESA, EPM recommends the following:

- Documentation regarding asbestos abatement work reportedly conducted at the subject property should be provided for review to confirm the proper removal and disposal of such material.
- Documentation regarding removal of WTC debris and resurfacing of the roof of the subject property should be provided for review;
- The out of service heating oil tank in the basement of the subject property should be removed or abandoned in place in accordance with all applicable regulations and guidelines;
- Comprehensive asbestos and LBP paint surveys are recommended prior to building renovation or deconstruction. The surveys should include sample collection and laboratory analysis of suspect materials. If asbestos containing materials are confirmed to be present in the building, these
materials should be properly removed from the building in accordance with all applicable rules and regulations prior to building renovation or deconstruction.

**L.4 198 BROADWAY**

EPM has performed a Phase I ESA of the property located at 198 Broadway, in the Borough of Manhattan, New York County, New York (subject property). The subject property is located along the east side of Broadway, between Fulton and John Streets. The site reconnaissance was conducted by EPM representatives, Darren Frank and Matthew Herschfeld on June 18, 2003. This Phase I ESA was conducted in connection with the proposed FSTC.

The subject property was reportedly constructed in 1902 and occupies an approximate 3,700 square foot parcel on the east side of Broadway. The subject property is reportedly owned by Collegiate Church Corp., and is modified by a steel frame and concrete 12-story with sub-basement and basement building. The majority of current tenants on the second through twelfth floor of the subject building include professional businesses (i.e., doctors, lawyers, dentists, financial advisors, etc). The first floor of the subject building includes a deli/restaurant.

The sub-basement contains an elevator room with relays and a pulley system. The basement contains an oil fired boiler which supplies heat to the subject property, and an associated 4,000-gallon #4 fuel oil vaulted storage tank encased in cinder block. No permits or compliance related records were posted at the subject property or made available for review regarding the boiler and fuel oil storage tank; therefore, compliance with applicable NYCDEP and/or NYSDEC requirements could not be confirmed. A metal 30-gallon drum labeled “oil solvent and soot eliminator” was observed located in the basement of the subject property in the vicinity of the boiler. The sub-basement, basement and other common areas throughout the building are lit by fluorescent lighting. The ballasts of the fluorescent lighting may contain PCBs, but were not accessible for inspection.

Water and sewer is reportedly provided by the City of New York. There are no reports of any on-site wells or wastewater disposal systems. Electricity is supplied by Con Edison. There were no transformers observed on the subject property.

Two (2) 5,000-gallon wood water tanks are located on the roof of the subject property building. Cleaning and resurfacing of the subject building’s roof was reportedly completed subsequent to the events of September 11, although documentation regarding such work was not provided for review. No visible signs of WTC fallout (i.e., dust/debris) were observed on the roof of the subject property building during the site inspection.

As part of this assessment, a limited asbestos inspection for exposed, friable ACM was conducted. The inspection process focuses on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. The inspection was limited to the accessible areas of the subject property. EPM did not observe friable asbestos on pipes, or highly suspect materials such as interior surfacing compounds or fireproofing. The subject property building contains areas of 12 inch x 12 inch VT and nine (9) inch x nine (9) inch VT which have the potential to contain asbestos. An asbestos abatement reportedly occurred approximately three (3) years prior to the date of this report; however, records pertaining to the asbestos abatement work were not provided to EPM for review. Additional suspect VT or linoleum may be present in uninspected locations or beneath carpeting. Non-friable materials such as VT or linoleum in good to fair condition are not hazardous if left undisturbed.

New York City banned the use of LBP in residential structures in 1960. As the site structure was constructed prior to 1960, it is possible that underlying areas and/or existing original construction may contain LBP.
Past use of the subject property, adjoining properties, and nearby properties was ascertained through the review of available Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps for the area of the subject property were available for the years 1894, 1923, 1950, 1977, 1985, 1994, and 2001. The present day subject building appears for the first time on the 1923 Sanborn. No potential environmental concerns were noted regarding the subject property or immediately nearby properties based on the Sanborn Maps reviewed.

A search of standard regulatory agency records was conducted to identify potential environmental concerns associated with the subject property and properties located within a 1/8-mile radius of the subject property. The subject property appears on the NYSDEC Petroleum Bulk Storage (PBS) Site database for having an underground vaulted with access 4,000-gallon fuel oil tank. No sites were identified in the immediate vicinity with the potential to adversely impact the subject property.

L.4.1 PHASE I ESA

EPM has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E-1527-00 of the property located at 198 Broadway, in the Borough of Manhattan, New York County, New York. This assessment has revealed the following evidence of recognized environmental conditions in connection with the property:

- An asbestos abatement was reportedly conducted at the subject property within the last three (3) years; however, documents pertaining to the asbestos removal work were not made available for review;
- The subject property is located one (1) block east of the WTC site, and therefore has a potential to have received potentially contaminated fallout from the WTC collapse. Removal of WTC debris and resurfacing of the roof reportedly was completed subsequent to the WTC collapse. The roof appeared clean and newly resurfaced during the June 2003 site inspection; however, documents pertaining to the roof renovation were not available for review;
- A 4,000-gallon in-service underground vaulted with access heating oil tank is located in the basement of the subject property. Evidence and/or documents pertaining to the tank’s compliance with applicable requirements regarding leak detection, overflow protection, and current registration status were not available;
- A 30-gallon metal drum of material labeled “oil solvent and soot eliminator” was observed in the basement of the subject property; and,
- Access and inspection of two (2) locked storage rooms in the basement of the subject property was not authorized.

This assessment has revealed no other evidence of recognized environmental conditions or associated issues in connection with the subject property.

L.4.2 RECOMMENDATIONS

Based on the findings of this ESA, EPM recommends the following:

- Documentation regarding asbestos abatement work reportedly conducted at the subject property should be provided for review to confirm the proper removal and disposal of such material.
- Documentation regarding removal of WTC debris and resurfacing of the roof of the subject property should be provided for review;
- Documentation regarding current permit status of the heating oil tank in the basement of the subject property should be provided. The tank should be properly removed from the site or abandoned in-place in accordance with all applicable regulations and guidelines prior to building deconstruction or renovation.
Comprehensive asbestos and LBP surveys are recommended prior to building renovation or deconstruction. The surveys should include sample collection and laboratory analysis of suspect materials. If asbestos containing materials are confirmed to be present in the building, these materials should be property removed from the building in accordance with all applicable rules and regulations prior to building renovation or deconstruction.

The 30-gallon drum of material labeled as oil solvent and soot eliminator should be removed from the subject property prior to deconstruction or renovation.

L.5 200 - 202 BROADWAY

EPM has performed a Phase I ESA of the property located at 200-202 Broadway, in the Borough of Manhattan, New York County, New York (subject property). The site reconnaissance was conducted by EPM representative, Darren Frank on June 26, 2003. This Phase I ESA was conducted in connection with the proposed FSTC.

The subject property occupies an approximate 7,680 square foot parcel on the east side of Broadway. The property is modified by a one (1) story building with basement constructed of steel, concrete and wood. The building is equally divided by a concrete block partition and leased by two (2) tenants. Henry Modell & Co. Inc., (Modell’s) leases the southern half referred to as 200 Broadway, and Portabella 125 Inc., (Portabella) leases the space known as 202 Broadway.

The space occupied by Modell’s is utilized as a sporting goods retail store. Portabella utilizes its space for sales, storage and alterations to men’s clothing, suits and shoes. Both tenants have usable basement space below the respective leased space. The basement of Modell’s is used for merchandise display, and contains a utility/storage area containing municipal connections, a hydraulic cardboard compactor, and miscellaneous storage of display racks and merchandise. Construction materials and pipes were visible within the utility/storage room and included brick walls, and cement ceiling and floor. All visible pipes were observed to be bare. The public areas of the basement and main floor comprises sheetrock and slotboard walls, 12 inch x 12 inch VT over cement, and suspended two (2) foot x four (4) foot ceiling tile with fluorescent lighting fixtures. The main floor’s entrance and cashier check out area were observed to be covered with a rubber like membrane material. Approximately 1,600 square feet of the total occupied space has VT. A public restricted stairwell was observed to have painted plaster walls, an electric circuit breaker box and some inventory storage.

The basement construction of 202 Broadway included concrete floors, painted cement ceiling with fluorescent lighting fixtures and painted brick/concrete block walls. Pipes were visible and fiberglass insulation was observed around pipes that have insulation. Additionally, EPM observed the municipal gas and electric meters, an air exchange unit, and the basement’s primary use as shoe inventory storage. The first floor construction consists of stone floor tile, slotboard walls, and suspended ceiling tile with various lighting fixtures. A gas fired heat blower suspended from the ceiling was also noted. A stairwell with painted plaster walls leads to a mezzanine level which contains a room for clothing storage, and an area used for tailoring and pressing. The second level had a carpeted floor, sheetrock walls and suspended ceiling tile with fluorescent lighting fixtures.

A roof inspection was conducted on July 22, 2003 by The Louis Berger Group Inc. representatives, Richard Wetherbee and Rebecca Tummon accompanied by a building representative. The roof was observed to be covered with rolled asphalt, heating and air conditioning units, a cooling unit and a Heating Ventilation Air Conditioning (HVAC) unit. The roof was noted to be in good condition with minor amounts of refuse and reportedly any fallout debris associated with the events of September 11 had been previously cleared from the roof.

Water and sewer is reportedly provided by the City of New York. There were no pad or pole-mounted electrical transformers or capacitors visually identified on or near the subject property. Fluorescent
lighting was observed in areas of the building; the ballasts may contain (PCBs), but were not accessible for inspection.

As part of this assessment, a limited asbestos inspection for exposed, friable ACM was conducted. The inspection process focuses on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. The inspection was limited to the accessible areas of the subject site. EPM did not observe potential friable asbestos on pipes or fire proofing. However, the Modell’s store has approximately 1,600 square feet of 12 inch x 12inch VT and both stores contain surfacing plaster in the stairwells which have the potential to contain asbestos. Additional suspect VT or linoleum may be present in uninspected locations or beneath carpeting. Based on the aged of the building, the roof materials and construction materials are further suspect ACM. Non-friable materials such as VT, linoleum, or tar/mastics in good to fair condition are not hazardous if left undisturbed.

New York City banned the use of LBP in residential structures in 1960. As the site structure was constructed prior to 1950 and is utilized as commercial structure, it is possible that underlying areas and/or existing original construction may contain lead-based paint. During the site inspection EPM observed the painted surfaces within the building to be in good condition and since the building is used for commercial purposes the presence of lead based paint is not an issue. However, renovations or deconstruction activities, will invoke the OSHA Lead In Construction Standard 1926.62, as well as applicable Federal and State regulations regarding the handling, storage and disposal of lead.

Past use of the subject property, adjoining properties, and nearby properties was ascertained through the review of available Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps for the area of the subject property were available for the years 1894, 1923, 1950, 1977, 1985, 1994, and 2001. The 1894 Sanborn Map identifies the subject property as two (2) separate buildings 200 and 202 Broadway with an elevator and a steam boiler at each address. On the 1923 map the subject property is identified as a single six (6) story structure with a basement and serviced with two (2) elevators. According to the Sanborn Maps, the present day structure was constructed prior to 1950. Upon review of the Sanborn Maps it was determined that no properties abutting and/or adjacent pose an apparent environmental threat to the subject property based on their occupants and historic usage of the surrounding properties.

A search of standard regulatory agency records was conducted. The subject property does not appear on any of the database reviewed, and no sites were identified in the immediate vicinity with the potential to impact the subject property.

**L.5.1 PHASE I ESA**

EPM has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E-1527-00 of the property located at 200-202 Broadway, in the Borough of Manhattan, New York County, New York. This assessment has revealed the following evidence of recognized environmental conditions in connection with the property:

- The subject property is located one (1) block east of the WTC, and therefore has a potential to have received potentially contaminated fallout from the WTC collapse. The roof appeared clean and newly resurfaced during the June 2003 site inspection; however, documents pertaining to the roof renovation were not available for review; and,
- Areas of the building contain materials which are suspected to contain asbestos or LBP.

This assessment has revealed no other evidence of recognized environmental conditions or associated issues in connection with the subject property.
L.5.2 RECOMMENDATIONS

Based on the findings of this ESA, EPM recommends the following:

- Documentation regarding removal of WTC debris and resurfacing of the roof of the subject property should be provided for review;
- Comprehensive asbestos and LBP surveys are recommended prior to building renovation or deconstruction. This survey should include sample collection and laboratory analysis of suspect materials. If asbestos containing materials are confirmed to be present in the building, these materials should be property removed from the building in accordance with all applicable rules and regulations prior to building renovation or deconstruction.

L.6 204-210 BROADWAY

EPM has performed a Phase I ESA of the property located at 204-210 Broadway (a.k.a. 150 Fulton Street), in the Borough of Manhattan, New York County, New York (subject property). The site reconnaissance was conducted by EPM representatives, Darren Frank and Matthew Herschfeld on June 18, 2003. This Phase I ESA was conducted in connection with the proposed FSTC development project.

The subject property was reportedly constructed in 1942 and occupies an approximate 10,140 square foot parcel on the east side of Broadway. The subject property is reportedly owned by Collegiate Church Corp., and is modified by a steel frame and concrete two (2)-story with basement building. The current tenants on the second floor of the subject building include doctors, dentists, a hair salon, a tailor and a non-profit organization. The first floor tenants of the subject building include various retail establishments (i.e. restaurants, florists, women’s clothing, etc.)

The basement contains a large storage area, three (3) smaller storage rooms, and an electric utility room. The basement contains two (2) floor drains that reportedly connect to a sump pump for discharge to the municipal sewer. A third drainage structure was observed in a walkway area of the basement which consisted of an opening in the floor covered by a circular metal plate. Upon removing the metal plate, standing water was observed beneath the basement floor which exhibited a petroleum-like sheen and sulfur odor. It was reported to EPM that this structure receives water that infiltrates the walls of the basement. Water and sewer are reportedly provided to the subject property by the City of New York. There are no reports of any on-site wells or wastewater disposal systems. Electricity and steam are supplied by Con Edison. There were no transformers observed on the subject property. No hazardous wastes are reportedly generated or maintained at the subject property.

The basement and other common areas throughout the building are lit by fluorescent lighting. The ballasts of the fluorescent lighting may contain PCBs, but were not accessible for inspection. The subject property is located one (1) block east of the WTC site. Cleaning and resurfacing of the subject property building roof was reportedly completed subsequent to the events on September 11, although documentation regarding such work was not provided for review. No visible signs of WTC fallout (i.e., dust/debris) were observed on the roof of the subject property building during the site inspection.

As part of this assessment, a limited asbestos inspection for exposed, friable ACM was conducted. The inspection process focuses on identifying 1) surfacing materials, 2) exposed thermal system insulation, and 3) friable miscellaneous materials, all of which are likely to contain asbestos in their composition. The inspection was limited to the accessible areas of the subject property. EPM did not observe friable asbestos on pipes, or highly suspect materials such as interior surfacing compounds or fire proofing. The building contains areas of 12 inch x 12 inch VT with a potential to contain asbestos. Suspect asbestos insulation was observed on three (3) pipe elbows in the basement. Additional suspect VT or linoleum may be present in uninspected locations or beneath carpeting. Non-friable materials such as VT or linoleum in good to fair condition are not hazardous if left undisturbed. An asbestos abatement
reportedly occurred at the subject property approximately three (3) years prior to the issuance date of this report. Documentation pertaining to the asbestos abatement work was not provided for review.

New York City banned the use of LBP in residential structures in 1960. As the site structure was constructed prior to 1960, it is possible that underlying areas and/or existing original construction may contain LBP.

Past use of the subject property, adjoining properties, and nearby properties was ascertained through the review of available Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps for the area of the subject property were available for the years 1894, 1923, 1950, 1977, 1985, 1994, and 2001. The inks and other printing supplies that may have been used while the subject property was identified as “Evening Post” may have impacted the subsurface and/or the groundwater of the subject property. The present day subject building appears for the first time on the 1950 Sanborn.

A search of standard regulatory agency records was conducted for the subject property and surrounding properties. The subject property does not appear on any of the database reviewed. However, the Con Edison Vault 359 site, reported as located at or near 212 Broadway, approximately 80 feet north of the subject property, is identified as a Hazardous Waste Generator Site for generating petroleum oil or other liquid containing more than 50 parts per million (ppm) and less than 500 ppm of PCBs in 1999. The Con Edison Vault 359 site is considered a recognized environmental condition with the potential to impact the subsurface conditions of the subject property due to the reported hazardous waste activity, its proximity to the subject property, and its expected hydraulically upgradient location relative to the subject property.

**L.6.1 PHASE I ESA**

EPM has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E-1527-00 of the property located at 204-210 Broadway (a.k.a. 150 Fulton Street), in the Borough of Manhattan, New York County, New York. This assessment has revealed the following evidence of recognized environmental conditions in connection with the subject property:

- An asbestos abatement was reportedly conducted at the subject property within the last three (3) years; however, documents pertaining to the asbestos removal work were not made available for review;
- Since the subject property is located one (1) block east of the WTC site, it is possible that potentially contaminated fallout from the WTC collapse could have impacted the subject property. Removal of WTC debris and resurfacing of the roof reportedly was completed subsequent to the WTC collapse. The roof appeared clean and newly resurfaced during the June 2003 site inspection; however, documents pertaining to the roof renovation were not available for review;
- A drain pit was observed in the basement of the subject property which contained standing water with a petroleum-like sheen and sulfur odor; and,
- The Con Edison Vault 359 site has a potential to impact the subsurface conditions of the subject property due to its status as a Hazardous Waste Generator and location relative to the subject property.

This assessment has revealed no other evidence of recognized environmental conditions or associated issues in connection with the subject property.

**L.6.2 RECOMMENDATIONS**

Based on the findings of this ESA, EPM recommends the following:
- Documentation regarding asbestos abatement work reportedly conducted at the subject property should be provided for review to confirm the proper removal and disposal of such material.
- Documentation regarding removal of WTC debris and resurfacing of the roof of the subject property should be provided for review;
- Sampling and laboratory analysis of the standing water and bottom sediment (if present) in the drain pit located in the basement of the subject property would be required prior to building deconstruction to determine appropriate handling and disposal criteria.
- Soil and/or groundwater sampling would be required on the subject property to document subsurface conditions relative to possible impacts from the Con Edison Vault 359 site reportedly located immediately north of the subject property at or near 212 Broadway.
- Comprehensive asbestos and LBP surveys are recommended prior to building renovation or deconstruction. The surveys should include sample collection and laboratory analysis of suspect materials. If asbestos containing materials are confirmed to be present in the building, these materials should be property removed from the building in accordance with all applicable rules and regulations prior to building renovation or deconstruction.