

A. INTRODUCTION AND METHODOLOGY

This study has been prepared to present a detailed and comprehensive picture of current conditions in a portion of the Manhattanville neighborhood that is the subject of a redevelopment plan proposed by Columbia University. This current conditions evaluation is based on a combination of physical, land use, and other socioeconomic and real estate indicators.

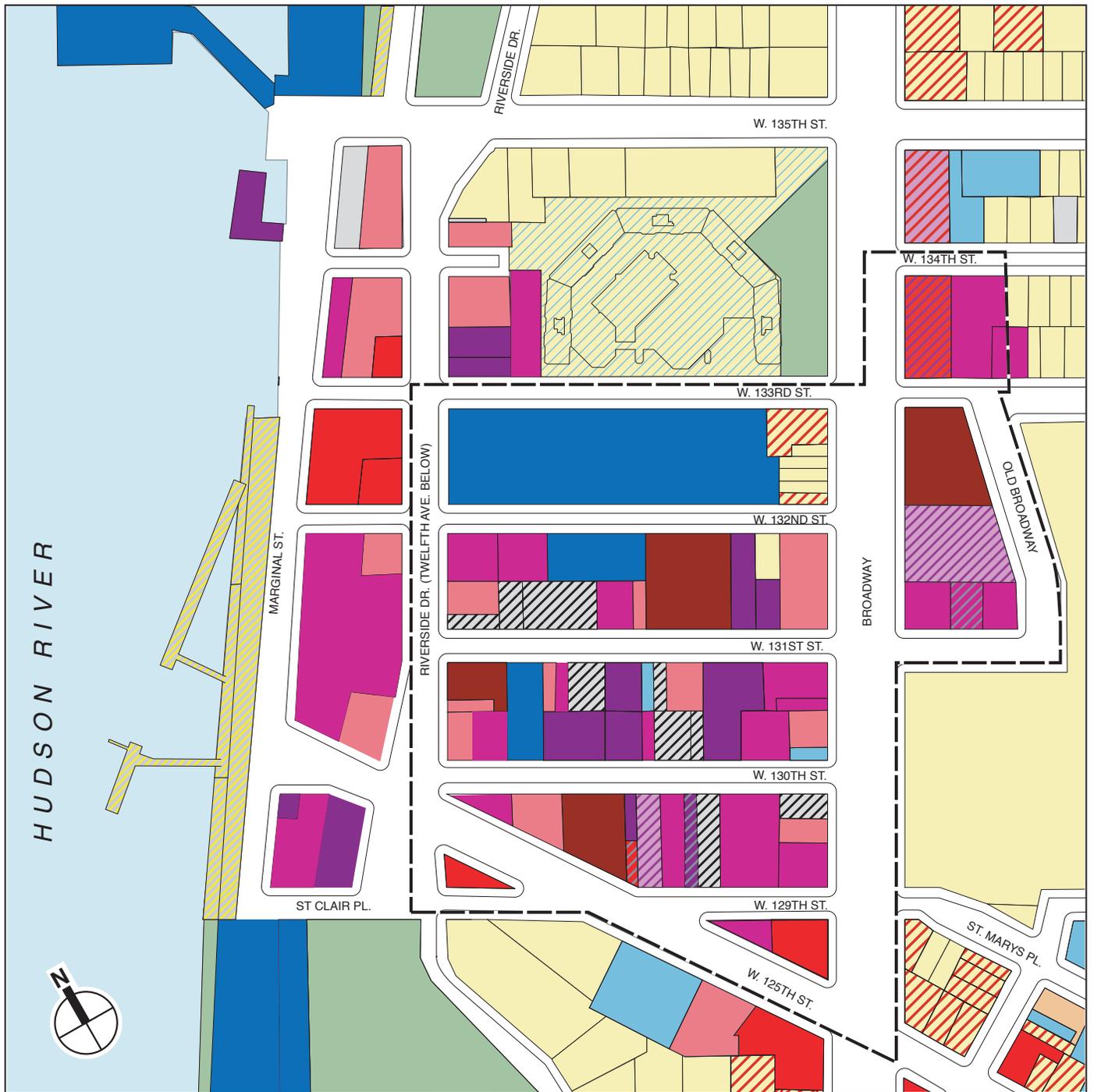
The approximately 17-acre study area is within the neighborhood typically referred to as Manhattanville or West Harlem, and is roughly bounded by Twelfth Avenue to the west, Broadway to the east, West 133rd Street to the north, and West 125th Street to the south (see Figure 1). The study area includes the following seven city blocks and 67 tax lots:

- Block 1986: Lots 1, 6, 10, 30, and 65;
- Block 1987: Lots 1, 7, and a portion of Lot 9;
- Block 1995: Lots 31 and 35;
- Block 1996: Lots 1, 14, 15, 16, 18, 20, 21, 23, 29, 34, 36, 50, 56, and 61;
- Block 1997: Lots 1, 6, 9, 14, 17, 18, 21, 27, 29, 30, 33, 34, 40, 44, 47, 48, 49, 52, 55, 56, 61, and 64;
- Block 1998: Lots 1, 3, 6, 10, 13, 16, 17, 24, 26, 29, 38, 49, 57, and 61; and
- Block 1999: Lots 1, 29, 30, 31, 32, 33, and 36.

The size of the lots varies greatly, ranging from 1,869 to 134,844 square feet. As shown in Figure 3, there are a variety of land uses on the seven blocks, but a significant portion of the lots are light industrial. Auto-related uses, including gas stations and parking lots, account for approximately 28 percent of the study area. Transportation and utility uses, which include the Metropolitan Transportation Authority (MTA) Manhattanville Bus Depot on Block 1999, the Con Edison cooling station on Block 1998, and the New York City Transit's (NYCT) maintenance facility on Block 1997, occupy 23 percent of the study area. Office space represents 12 percent of the study area. Warehouse and storage facilities, the fourth most common use, account for 10 percent of the study area. Finally, nine percent of the study area comprises industrial uses, such as Ashland Chemical and Skyline Windows, which are concentrated on Blocks 1996, 1997, and 1998.

The study area is also notable for its transportation infrastructure, as four rights-of-way pass through or near the area: (1) the Manhattan Valley IRT viaduct, which carries the No. 1 subway line approximately 54 feet above grade from West 122nd Street to West 135th Streets, where it runs below grade again, (2) the Riverside Drive viaduct, which supports a portion of Riverside Drive on a superstructure 80 feet above Twelfth Avenue as it passes through the Manhattan Valley, (3) an elevated portion of Route 9A, a north-south highway located a block west of the study area, and (4) an elevated portion of the Amtrak Empire Corridor rail line, which runs directly east of Route 9A.

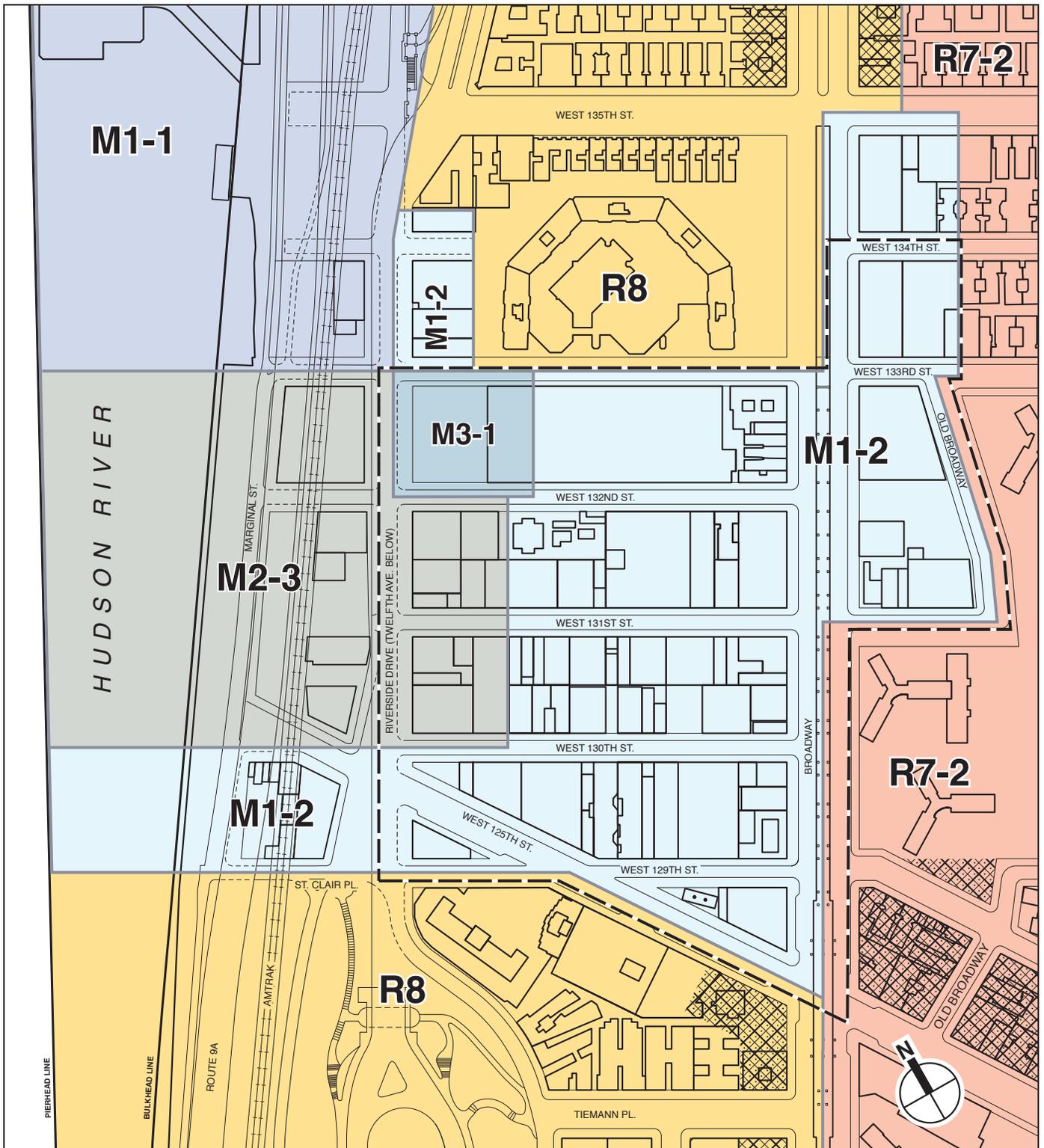
As shown in Figure 4, the study area comprises three types of manufacturing districts: M1-2, M2-3, and M3-1. The allowable floor area ratio (FAR) in these three districts is 2.0. A large majority of the study area is zoned M1-2, which allows “light” manufacturing uses, meaning businesses must adhere to performance standards that limit industrial nuisances like noise, air pollution, and traffic. Indus-



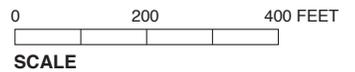
- | | |
|--|------------------------------------|
| --- Study Area Boundary | Transportation/Utilities |
| Residential | Warehouse/Storage |
| Residential (with Ground Floor Retail) | Warehouse/Storage, Parking |
| Residential (with Institutional) | Warehouse/Storage, Retail |
| Retail | Auto-Related, Gas Station, Parking |
| Retail, Vacancy | Auto-Related, Vacancy |
| Office | Open Space |
| Retail and Parking | Vacant Parcel |
| Hotel | Vacant Building |
| Institutional | Under Construction |
| Industrial | |
| Industrial, Vacancy | |

0 200 400 FEET
SCALE

Figure 3
Land Use



--- Study Area Boundary



Existing Zoning

R8	<i>General Residence District</i>	M2-3	<i>Manufacturing District</i>
R7-2	<i>General Residence District</i>	M3-1	<i>Manufacturing District</i>
M1-1	<i>Light Manufacturing District</i>	C1-4	<i>Commercial Overlay</i>
M1-2	<i>Light Manufacturing District</i>	C2-4	<i>Commercial Overlay</i>

Figure 4
Existing Zoning

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tries permitted in M1-2 areas include woodworking shops, auto storage and repair shops, chemical compounding or packaging facilities, manufacturers of rubber products, research laboratories, and wholesale service and storage facilities, among others. The northwestern portion of the study area is located in an M2-3 zoning district, which allows medium-performance medium manufacturing uses and is mainly in the city's older industrial areas along the waterfront. Uses allowed in M2-3 districts include those listed above as well as food stores, including supermarkets, grocery stores, meat markets, or delicatessen stores,¹ and amusement arcades. The western corner of Block 1999 is in an M3-1 zoning district, which allows low-performance heavy manufacturing uses that generate noise, traffic, or pollution. Typical uses include power plants, solid waste transfer facilities and recycling plants, and fuel supply depots. Consistent with its manufacturing zoning, the study area's buildings are largely low rise, as there are only eight lots with buildings of more than four stories.

The analysis of the study area's conditions begins with a historic overview presented in section B, "Historic Context," which traces economic and development patterns in Manhattanville and the study area from the 19th century to the present. Particular attention is focused on recent and current public planning initiatives and private sector redevelopment efforts.

Section C, "Current Conditions," provides an overview of physical conditions in the study area, evaluating structural and other physical conditions based on detailed inspections and assessments of 66 individual tax lots prepared by Thornton Tomasetti, Inc., a structural engineering firm retained by AKRF, Inc. to assist with the study of neighborhood conditions.² The analysis of current conditions also considers such factors as vacancy status, site utilization, property ownership, and crime data. In addition, the analysis evaluates the condition of transportation facilities and topographic features that affect the study area's physical conditions. The evaluation of all of these factors provides a comprehensive picture of the study area's current physical condition, and how these conditions affect the health and safety of its employees and residents, and the integration of the study area as a neighborhood within Manhattanville and the greater community of New York City. The report on current conditions is presented according to the following characteristics:

- Overall lot and infrastructure conditions;
- Sidewalk conditions;
- Geographic and topographic context;
- Property ownership;
- Site utilization; and
- Crime.

Section D, "Physical Characteristics of Properties in the Study Area," provides a detailed profile of each of the 67 properties in the study area, organized by tax block and lot. Each profile begins with a description of the lot's location, zoning classification, current use, and ownership as of April 30, 2007, the date of the last site visit by Thornton Tomasetti, Inc. and AKRF, Inc. This information is followed by a discussion of physical and structural conditions, health and safety concerns, building

¹ Food stores are permitted in M1 districts with a special permit from the New York City Planning Commission.

² Thornton Tomasetti, Inc. did not assess the condition of the MTA Manhattanville Bus Depot.

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code violations, underutilization, and environmental concerns. These factors were selected as part of the criteria for evaluating neighborhood conditions because they are generally accepted indicators of disinvestment in a neighborhood. The widespread presence of one or more of these factors can also demonstrate the need for revitalization and redevelopment of an area.

Supporting tables for Sections C and D are included in Appendix A. These tables include:

Table A-1, *Building Code Violations for Properties in the Study Area: Violations Open as of July 2006*;

Table A-2, *Site Utilization Analysis*;

Table A-3, *2000-2005 Crime Rates, 26th and 30th Precincts*; and

Table A-4, *2000-2005 Crime Rates, Sector 26E*.

Appendix B contains the 66 individual evaluations by Thornton Tomasetti, Inc. of lots in the study area, ordered by Block and Lot. Exterior conditions were assessed and photographed by Thornton Tomasetti, Inc. in September and October 2006 and January through April 30, 2007. Interior conditions were assessed during this period as well, in cases where property owners allowed access to their properties. Thornton Tomasetti's Site Condition Assessment Reports were finalized on July 10, 2007.¹

Finally, Appendix C includes a letter from Columbia University dated October 23, 2007 that describes the condition of 39 Columbia University-owned lots upon acquisition and the stabilization efforts made thereafter. This letter does not include a description of properties that are under contract with Columbia University. The following seven lots, which had been under contract by Columbia University during the analysis period of this report, were purchased by Columbia University after April 30, 2007:

- Block 1986 Lot 30 was purchased on June 28, 2007;
- Block 1997 Lot 64 was purchased on August 7, 2007;
- Block 1998 Lot 13 was purchased on June 28, 2007;
- Block 1998 Lot 16 was purchased on June 28, 2007;
- Block 1998 Lot 17 was purchased on June 28, 2007;
- Block 1998 Lot 57 was purchased on July 31, 2007; and
- Block 1998 Lot 61 was purchased on July 31, 2007.

This letter dated October 23, 2007 reflects that Columbia University now owns 39 lots in the study area as opposed to 32 lots which were owned by Columbia University at the time of the AKRF and Thornton Tomasetti analyses. In addition, nine properties are under contract with Columbia University.

METHODOLOGY

As mentioned above, each profile describes the lot's location, zoning classification, current use, and ownership, as well as discusses physical and structural concerns, health and safety concerns, building

¹ The report for Block 1996 Lot 1 was revised on September 18, 2007 to correct ownership information.

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code violations, underutilization, and environmental concerns. The methodology for each of the evaluation criteria is presented below.

Physical and Structural Concerns

Exterior conditions were assessed and photographed by AKRF, Inc. and Thornton Tomasetti, Inc. in September and October of 2006 and through January through April 2007. Interior conditions were assessed during this time as well, in cases where property owners allowed access to their properties. Interior and exterior conditions for 46 tax lots were assessed and photographed, and additional exterior evaluations were conducted for 21 lots. Conditions evaluated include: the structural integrity of exterior walls, roof systems, beams, columns, joists, and floor slabs; building materials, such as the roof membrane, ceiling, and flooring; stairways and elevators; windows and doors, including framing; and general sidewalk and curb cut conditions. Based on any structural distress, exterior and interior building conditions, site conditions, and health and safety items (see below), Thornton Tomasetti, Inc. provided an overall rating of the condition of each lot.

Health and Safety Concerns

During interior and exterior evaluations, AKRF, Inc. and Thornton Tomasetti, Inc. noted health and safety concerns at each lot, such as mold or efflorescence inside the buildings, inaccessible or blocked fire exits, inoperable elevators, unsound stairs, vermin infestation, standing water, excessive debris, obvious environmental hazards, and poor sidewalk condition. In addition, health and safety concerns noted in New York State Department of Agriculture and Markets sanitary inspection reports are included when applicable. Photographs, which were taken to document the various conditions, are included at the end of each lot profile.

Building Code Violations

The number and type of building code violations issued by the New York City Department of Buildings (DOB) and the New York City Environmental Control Board (ECB) were inventoried for each property on the project site (see Appendix A, Table A-1). Building code violations open as of July 2006 are listed for each lot. Complaints filed with DOB by the general public are also listed when relevant.

Underutilization

A property utilization rate was calculated for each lot by comparing the actual square feet of built space of the property to the maximum allowable square feet under applicable zoning. Figure 4 shows current zoning within the study area, and Appendix A, Table A-2 presents property utilization data for all study area properties. Utilization rates were calculated using building and lot square footage data from the New York City Department of Finance Real Property Assessment Data (RPAD). Site visits were used to confirm RPAD data, and, if a discrepancy was found, building square footage was derived from aerial images and on-site estimates. For this analysis, lots that occupy less than 60 percent of the maximum allowable square feet (or FAR) were considered to be underutilized.

Environmental Issues

A Preliminary Environmental Site Assessment (PESA) was prepared for each lot in the study area as part of the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development Draft Environmental Impact Statement by Columbia University. The PESA determines whether current or

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historical, known or potential, or hazardous conditions may have affected site soil and/or groundwater. This preliminary assessment incorporated street-level site inspections, a review of historic maps, regulatory records, and existing environmental studies. Where access to the property was available from property owners, Phase I Environmental Site Assessments (ESAs) were performed for 38 locations in the study area. Phase II ESAs consisting of soil and groundwater sampling were performed in July 2005 at 22 accessible locations in the study area, focusing on areas with a higher potential for contamination as identified in the PESA. The soil analytical results were compared with the Recommended Soil Cleanup Objectives (RSCOs) in New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) 4046. The groundwater analytical results were compared with the NYSDEC Class GA Ambient Water Quality Standards. The lot profiles summarize the key findings from the PESA, Phase I ESA, or Phase II investigation, listing any documented spills, known or potential aboveground storage tanks (ASTs) or underground storage tanks (USTs), current or historical land uses of environmental concern, and describing any known or potential soil or groundwater contamination beneath the site. Common environmental conditions due to a lot's age (e.g., asbestos, lead paint, and fluorescent lighting that may contain PCB and/or mercury) are not discussed in the lot profiles.