

APPENDIX D
HISTORIC RESOURCES

APPENDIX D.1

ARCHAEOLOGY REPORT

**CEMETERY
AND
DOMESTIC SITE
DOCUMENTARY STUDY**

**MANHATTANVILLE
REZONING
IN
WEST HARLEM
NEW YORK, NEW YORK**

CEMETERY AND DOMESTIC SITE
DOCUMENTARY STUDY

MANHATTANVILLE REZONING
IN WEST HARLEM
NEW YORK, NEW YORK

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EXECUTIVE SUMMARY

Columbia University is the applicant for the rezoning of an approximately 35-acre area of Manhattanville (the “Project Area”) in West Harlem in Manhattan. The rezoning would also allow Columbia to realize an Academic Mixed-Use plan (the “Academic Mixed-Use Development”) on approximately 17 acres within the 35-acre rezoning area. Development within the Academic Mixed-Use Area would include academic buildings, laboratory/research facilities, student and faculty housing, administrative offices, recreational facilities, and an open space. The Academic-Mixed Use Development would also include an extensive below-grade component of several basement levels to house support facilities and an energy center.

The approximate boundaries of the Project Area are West 133rd and 135th Streets to the north, Broadway and Old Broadway to the east, West 125th Street and St. Clair Place to the south, and the Hudson River to the west.

The proposed project requires review under City Environmental Quality Review (CEQR), the New York State Environmental Quality Review Act (SEQRA), and the New York State Historic Preservation Act of 1980 (SHPA), which require the analysis of archaeological resources. Under CEQR, the New York City Landmarks Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* outlines specific steps to determine whether the Proposed Actions could affect areas of potential archaeological sensitivity. The first step in this process is an initial review conducted by LPC of the affected area, in this case the Project Area. In reviewing the Project Area, the New York City Landmarks Preservation Commission (LPC) determined on June 16, 2004 that two lots within the Project Area—Block 1986, Lot 30 and Block 1997, Lot 17—may be sensitive for archaeological resources dating to the nineteenth century and recommended that a Phase 1A Documentary Study be prepared to determine the archaeological sensitivity of these sites.

Blocks 1986 and 1997 are located within the Academic Mixed-Use Area. Block 1986 is located north of West 131st Street, east of Broadway. For Block 1986, Lot 30, LPC noted a nineteenth century estate complex, and subsequent church on an 1852 map, and inquired about the potential for archaeological resources associated with the residential complex and an adjoining cemetery.

Block 1997 is located on the north side of West 130th Street, between Broadway and Twelfth Avenue. On Block 1997, Lot 17, LPC noted a nineteenth-century possible dwelling with an alley-way to an open space in the rear yard to the north and requested that additional documentary research be performed to evaluate the potential for a domestic site with the concomitant shaft features such as privies, cisterns, and wells.

Following LPC’s request for research into the potential for a nineteenth-century cemetery and domestic site archaeological resources, HPI undertook background research for these two lots. A search through a combination of conveyance, tax assessment, city directory, atlas, and insurance map records, as well as a centennial history of Manhattan College, indicates that the church on Block 1986, Lot 30, was constructed in 1853, two years after New York City’s prohibition of new cemeteries in Manhattan. The Church of the Annunciation at Manhattanville

was connected with the nascent Manhattan College, and the area to the north of the church served as an open space. In addition to an 1877 insurance map, a period photograph indicates that the open space to the north of the church was part of the college's courtyard and a manicured park area with an allee of trees that ran north and south along the east side of the block. An estate complex stood on the site prior to Manhattan College's purchase of the property. The college adaptively reused two of the estate buildings, then razed them in conjunction with the construction of the brick multi-storied academic building. Sometime after 1926, the brick building was demolished and the exposed bedrock blasted so that the area aligned with street level.

As for the domestic site on Lot 17 of Block 1997, documentary records indicate that the lot was originally part of an eighteenth-century farm or estate. During the first three quarters of the nineteenth century, the lot was undeveloped and owned variously by merchants, druggists, a medical doctor, a stationer, and a carpenter/builder who worked and lived, for the most part, south of Washington Square. In 1878 a 20 by 30-foot brick three-story dwelling was built on the 25 by 100-foot lot. In 1879 there were fire hydrants at the southeast and southwest corners of the West 130th Street side of the block, indicating the provision of city water. By 1884 a fire hydrant stood between Lots 17 and 16. Even if the residents of Lot 17 made use of privies, cisterns, and wells in combination with city water, there would be only a six-year timeframe between the construction of the house and the placement of a fire hydrant directly in front of the dwelling, a very short time for the potential use of any shaft features in the nineteenth century.

Manhattan College and its courtyard and open space on Block 1986 stood on the site until 1926, when its buildings were demolished. The 20 by 30-foot brick dwelling stood on Lot 17 from 1878 until at least 1985. Presently both sites are used as surface parking lots (Photographs 1, 1b, and 2). Lot 30 on Block 1986, which had been at a high elevation (approximately 15 feet above street level) in contrast to the land that became Broadway (Photograph 3: Washington 2002:45), is now level with Broadway for its western part, but rises sharply to the east. Lot 17 on Block 1997 is level with the West 130th Street streetbed, which slopes gently downward to the west toward the Hudson River (Photograph 4: Gabriel 1953:14).

Therefore, there is little potential for either a nineteenth-century cemetery or domestic back yard features on the two lots flagged by LPC. Lot 30 of Block 1986 was an open courtyard connected with Manhattan College, not the location of a burial ground. In addition, the bedrock outcrop was blasted to street level, eliminating the potential for the recovery of any residential resources that predated Manhattan College or human remains. In addition, As for Lot 17 on Block 1997, in all likelihood, public utilities ran along West 130th Street the year the residence was built. If not, Lot 17 of Block 1997 had public utilities available within anywhere from one to six years from the year of the dwelling's construction in 1878, thus greatly reducing the chances for back-yard shaft features' existence and usage. No further archaeological study for Lot 30 of Block 1986 and Lot 17 of Block 1997 is warranted.

This documentary study will be submitted to LPC and SHPO for their review.

I. INTRODUCTION

Columbia University is the applicant for the rezoning of an approximately 35-acre area of Manhattanville (the “Project Area”) in West Harlem in Manhattan. The rezoning would also allow Columbia to realize an Academic Mixed-Use plan (the “Academic Mixed-Use Development”) on approximately 17 acres within the 35-acre rezoning area. Development within the Academic Mixed-Use Area would include academic buildings, laboratory/research facilities, student and faculty housing, administrative offices, recreational facilities, and an open space. The Academic-Mixed Use Development would also include an extensive below-grade component of several basement levels to house support facilities and an energy center.

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The proposed project requires review under City Environmental Quality Review (CEQR), the New York State Environmental Quality Review Act (SEQRA), and the New York State Historic Preservation Act of 1980 (SHPA), which require the analysis of archaeological resources. Under CEQR, the New York City Landmarks Preservation Commission (LPC) *Guidelines for Archaeological Work in New York City* outlines specific steps to determine whether the Proposed Actions could affect areas of potential archaeological sensitivity. The first step in this process is an initial review conducted by LPC of the affected area, in this case the Project Area. In reviewing the Project Area, the New York City Landmarks Preservation Commission (LPC) determined on June 16, 2004 that two lots within the Project Area—Block 1986, Lot 30 and Block 1997, Lot 17—may be sensitive for archaeological resources dating to the nineteenth century and recommended that a Phase 1A Documentary Study be prepared to determine the archaeological sensitivity of these sites. LPC flagged both sites as potentially sensitive for nineteenth century residential resources. Lot 30 of Block 1986 was additionally identified as potentially sensitive for human remains if a cemetery had ever existed on the site.

This report presents the results of the documentary research undertaken to evaluate the potential sensitivity of Lot 30 of Block 1986 and Lot 17 of Block 1997.

II. RESEARCH GOAL AND METHODS

The research goal for this documentary study was to respond to the City of New York Landmarks Preservation Commission's (LPC) environmental review request for an archaeology review only for two lots within the approximately 35-acre Project Area (LPC: June 16, 2004). LPC based the review request on sensitivity models, historical maps, and subsurface information, including boring logs, contained in *Summary of Available Historic and Subsurface Data, University Master Plan, New York, New York*, prepared by Mueser Rutledge Consulting Engineers, March 7, 2003. LPC indicated "that there is the potential for the recovery of remains from [nineteenth-century] occupation on two lots within the study area (B 1997 L17 – residential) (B 1986 L30 – possible burial ground and residential).... There are no further archaeological concerns for the other blocks and lots in the study area." (Ibid.).

To accomplish the goal, several kinds of resources were consulted. The documentary research included the review of conveyance records, tract reports, re-indexed maps, and tax assessments, as well as manuscript and published maps and atlases, and a listing of church records. Published resources included city directories and histories of Manhattanville, Manhattan College, housing, and a study of graveyards in New York City. There was a review of the New York Public Library's (NYPL) photograph collection and the City's 1940s tax assessment photographs at the Municipal Archives. LPC files turned up no historical-archaeology site reports within a one-mile radius. Site photographs were taken in June and July 2004 (Photographs 1-2). Several librarians and archivists provided insight, as did a site visit and a walking tour of the West 125th Street area (led by Eric Washington, a Manhattanville scholar).

Historical maps and atlases, both published and in manuscript form, were studied for land use over time. Evidence of twentieth-century disturbance was also established in order to determine site integrity and the potential presence of intact cultural remains. Establishing prior disturbance was essential toward determining whether additional research would be necessary.

Among the maps consulted were the British Headquarters' Map (1782); Tract Report Map (33) showing the project area in 1806; the manuscript version of the Commissioner's Plan (1807-1811); Tract Report Maps (44 and 71) showing the project area in 1835; Dripps (1852 and 1867); Sackersdorf Blue Book (1815-1868); Viele (1855, 1865); Perris (1877); Holmes (1878); Bromley (1879, 1897, 1916, 1921, 1927, 1934, 1955); Spielmann & Brush (1881); Beers (1884-1885); Robinson (1884, 1890); Re-indexed Map 385 (1917); City Register Maps (1917); USGS (1956, 1979); and the Sanborn Insurance Maps (1975, 1985, 2002).

III. NATURAL HISTORY AND NINETEENTH-CENTURY OVERVIEWS

Generally, the project area is within the Manhattanville Valley, which was formed as a result of a northwest-southeast fault in the bedrock and is known as the “125th Street Fault” (MRCE 2003:7). The depressed fault zone lies, roughly, between West 123rd and 125th Streets, with the elevation of the top of the bedrock rising to the north and south of the fault (Berkey 1933:38). Block 1986, the former site of Manhattan College and the Church of the Annunciation at Manhattanville, stood on a bedrock outcrop on the north side of West 131st Street between Broadway on the west and Old Broadway on the east (Photograph 3: Washington 2002:45). The top of the bedrock was 15 feet above the street level, with the buildings rising above that.

The dwelling on Block 1997's Lot 17, was, beginning in 1878, listed as being three-stories high and brick (Tax Assessment, Manhattan, 12th Ward, 1878:226 through 1890:226). A 1940 photograph shows the same brick residence with two outdoor sets of stairs, one down to a windowed basement level, several feet below street level; the other, up to the first level of the house (Tax Photograph, Manhattan, E-1306). It appears as though the residence that stood on the site from 1878 to 1985, at least, had a foundation on some combination of surficial fills and alluvial and glacial outwash sands, silts, clays, and till (MRCE 2003:8; Berkey 1933:38). Soil borings have not been taken on Lot 17, but in the twentieth century, after the construction of the elevated IRT subway along Broadway in 1904, the top of bedrock at the corner of Broadway and West 130th Street (325 feet east of Lot 17) was 11.4 feet beneath the curb level (Rock Data 1937: Vol. 4, Sheet 1, Boring 61). It is assumed that the house stood on alluvial and glacial outwash materials.

In part, period maps shed light on the streams, ponds, and watercourses that may have been influenced by and had an effect on the geology and soils on Block 1997. Both the shoreline of “Haerlem Cove” on the Hudson River at the foot of West 130th Street (Randel's manuscript version of the Commissioners' Map 1807-1811; British Headquarters' Map 1782; Holmes 1878; Robinson 1884; Bromley 1897, 1916, 1921, 1927, 1934, 1955; Sanborn 1975, 1985, 2002) and the ponds and a stream that ran diagonally southeast/northwest downstream just west of Lot 17 (Viele 1855 and 1865) were located in what became West 130th Street between the Hudson River and Broadway. The bight's estuarine shoreline varied with the mapmakers (and perhaps time), and the high tide line may have been located anywhere from 175 to more than 350 feet west of Lot 17. The western boundary of the Byrd, subsequently the Lawrence and Hicks, Lawrence & Co. parcels, which included Lot 17, probably was the Hudson River shoreline, shown within the western part of Block 1997 (Tract Report 55 [1806]; Tract Report 44 [1835]; Tract Report 71 [1835]; Holmes 1878). The ponds, as shown on maps, varied from being located in the street in front of Lot 17 to being 175 feet west of Lot 17. The “Old Pond” label at the foot of West 130th Street on an 1879 map may indicate a combination of a pond system draining into the Hudson or a filling-in of the cove at the foot of West 130th Street (Bromley). At any rate, the water drained down gently westward to the river in and along Block 1997, west of Broadway.

The valley formed by the 125th Street fault in the bedrock provided a gentle downward-sloping plane to the Hudson River and a sandy bight that allowed sailing vessels, barges, and other

water craft to load and unload produce and products from the seventeenth century onward (Washington 2002:I). During the Revolution the project area appeared to be the only hospitable landing area for a great distance along the west coast of Manhattan as it was a low lying area between what is known today as Morningside Heights to the south and Washington Heights to the north (British Headquarters Map 1782).

In 1790, Peter and Elizabeth Waldron and their three slaves lived on land that included the project sites on Blocks 1986 and 1997 (Ancestry.com: 1790 Federal Census; City Register General Statements for Blocks 1986 and 1997). In 1795 Elizabeth Waldron, Peter's widow, sold their property to two merchants, Joseph Byrd and John Barrow, who lived and worked in federal downtown New York City (City Register: Liber 54, Pages 405-408; Tract Reports 33 and 55; Duncan 1795; Longworth 1800-1807).

In 1806, the village of Manhattanville was established in the Bloomingdale Road/Old Broadway and Manhattan Street/West 125th Street area. The village's street grid was laid somewhat parallel and perpendicular to Harlem Cove on the Hudson River, which was at a 45-degree angle (northeast/southwest) to the grid system being devised by the Commissioners between 1807 and 1811 (Holmes 1878).

During the nineteenth century the suburban village was the location of country estates, residential housing, commercial establishments, manufacturing enterprises, religious, educational, and other institutions, as well as a transportation hub that linked water travel with that of the stagecoaches, streetcars, and the railroad (Washington 2002:9; Photographs 3 and 4). Early landowners who established the village—Jacob Schieffelin, John Lawrence, and Thomas Buckley—gave the streets their names. These streets would, by and large, succumb to the Commissioners' grid plan. Only vestigial streets from the 1806 period, including West 125th Street (formerly Manhattan Street), West 126th Street, (Lawrence Street, east of Broadway outside of the Project Area), and Old Broadway (Bloomingdale Road) still remain today.

As Manhattan moved uptown, with present day Broadway being cut through the area in 1872 and the IRT's elevated subway opening above it in 1904, Manhattanville, as a distinct village, lost some of its autonomy and became engulfed in the urban large-scale and high-rise development of the twentieth century.

IV. RESEARCH RESULTS

Block 1986, Lot 30 (Figures 2 and 3; Photographs 1 and 3) variously appeared as a meadow atop a southern prong of the exposed bedrock of Washington Heights (Viele 1855 and 1865). It was the location of a colonial estate (Gabriel 1953:7; Holmes 1878), then a nineteenth-century estate (Dripps 1852; Holmes 1878; City Register grantor/grantee index; Gabriel 1953:6; Washington 2002:45), after which it became part of the Manhattan College campus and the churchyard of the Church of the Annunciation at Manhattanville, both built in 1853 (Gabriel 1953:7-8; Dripps 1867; Bromley 1879; Robinson 1884; Bromley 1897). The church building was razed some time after 1897 (Bromley), but before the Manhattan College's north/south, L-shaped, multi-storied building facing Broadway was torn down in 1926 (New York Public Library 1981:752, A4).

Describing the block's landscape of a century earlier, at the time just before the construction of the college and church buildings, Brother Casimir Gabriel, in a centennial monograph, wrote that the building site "In miniature, . . . was a topographical wonder with solid hillocks of granite [sic], fertile valleys, a few small groves and one or two plane areas" (Gabriel 1953:7). At the time neither West 131st Street nor Broadway had been cut through (Gabriel 1953:7; Washington 2002:45). One of the flat areas was behind both the college building and the east/west long axis of the church, whose tower and steeple stood at the eastern end of the building facing what would become West 131st Street (Photographs 4 and 5). This area served as a public space, an interior-block courtyard, with an allee of trees behind the tower/steeple end of the church (Photograph 5).

The New York State Rural Cemetery Act of 1847, together with the 1851 moratorium in New York City for new cemeteries, made it highly unlikely that there was a burial ground in the churchyard of the Church of the Annunciation at Manhattanville, constructed in 1853 (Snyder 1881; Inskcep 2000). The 1847 Act encouraged the establishment of the suburban cemeteries in Brooklyn and Queens, where, in all likelihood, those connected with the church would have been buried. The church's death registers began in 1853 (WPA 1940:60), the year the church was built and two years after the regulation against new cemeteries in New York City went into effect. The only possible area for a churchyard burial ground would have been the relatively level area behind and to the north of the church in the public space and Manhattan College campus courtyard. In any case, the nineteenth-century churchyard stood on bedrock at least 15 feet above street level, a poor location for a cemetery. Today, only a small section, mid-block, on the western part of Block 1986 is above street level; the majority of the project site on Lot 30 is at street level (Photograph 1), indicating that the bedrock was blasted to drop the elevation to street level.

An estate complex stood on the site prior to Manhattan College's purchase of the property from Newbold Lawrence (Gabriel 1953, Washington 2002)). The college adaptively reused two of the buildings for an academic year, then razed them in conjunction with the construction of a brick multi-storied academic building. Sometime after 1926 the brick building, which faced Broadway, was razed and the exposed bedrock blasted so that the area aligned with street level.

Block 1997, Lot 17 (Photographs 2 and 3) shifted from being part of a colonial farm/estate to becoming part of the growing real estate investment market as the Village of Manhattanville was established in 1806 (1795:Liber 54, Pages 405-408; 1807: Liber 76, Page 36 in Tract Report 33; 1795: Liber 54, Page 405 in Tract 55; Duncan 1795; Longworth 1800-1807). The early nineteenth-century conveyances for the not-yet-lotted Block 1997 (but, through Tract Report maps, can be identified as parcels that include Lot 17) site a meadow, a brook, and the North [Hudson] River as surveying points (1795, Liber 54, Page 405; 1807: Liber 76, Page 36 in Tract Report 33). Thus, the Tract Report maps mirror the conveyance text and substantiate the map evidence from the later nineteenth-century published maps (Holmes 1878; Bromley 1879; Robinson 1885; Bromley 1897).

Merchants John Barrow and Joseph Byrd, who carried on a business together, lived and worked downtown on Pearl Street (Longworth's). They and their wives, Rebecca and Elizabeth, respectively, after purchasing the property from widow Elizabeth Waldron in 1795, conveyed their parcels back and forth to each other in the first decade of the nineteenth century. These parcels, which included Lot 17, were "passed through various conveyances to John Lawrence in 1833 and 1835, respectively" (City Register: General Statement of Early Title for Block 1997). Lawrence had been purchasing property in the area at least as early as 1804.

Druggist John Lawrence, who, like Barrows and Byrd, worked and lived downtown. Yet Lawrence and other family members maintained country estates in the project area. (Two of the buildings on Newbold Lawrence's estate served, for a short time, as a "school house and dormitories" for the nascent Manhattan College being built in 1853 on Block 1986 [Gabriel 1953:6,7]. Cornelius E. Lawrence had a house one block north of Lot 17, Block 1997 [Dripps 1852]. Another Lawrence estate, which was outside the project area, included substantial buildings and outbuildings on the crest of the bluff, along with an elaborate roadway system, encompassing several blocks north of West 134th Street [Dripps 1852]). The Lawrence kin had both business and residential addresses downtown (Longworth's 1804-1807, 1826-1828, 1832, 1833, 1835, 1838; Doggett's 1849, 1850; Rode's 1853; Trow's 1852, 1853, 1854, 1857, 1858).

There were several conveyances among Lawrences in the 1850s for land that included what would become Lot 17. In 1864, there was a conveyance between John B. Lawrence, M.D. (and his wife Mary Adeline Lawrence) of the City of Brooklyn and Edward Jones (Liber 914, Page 208-210; Liber 1358, Pages 38-41) for five parcels that included Lot 17, which, as of then, was not built upon. The five lots conveyed in 1864 sold for a total of \$3500.00. Edward Jones, stationer, had a business address on John Street and a home at the foot of West 130th Street (Trow's 1864). Period maps indicate structures at the foot of West 130th Street as well as at the western end of Block 1997, but not on Lot 17 (Dripps 1867; Perris 1877).

Lot 17 continued to be an absentee-owned parcel of land. In 1877, George H. Peck, agent (later listed as either storage or clerk), both purchased and sold Lot 17 in fee simple (his business address was not listed, but his home address was Kingsbridge [Trow's]). Subsequent directories put his business address downtown and his home in Brooklyn. The next fee simple owner of Lot 17 was James Pettit, builder, carpenter, and fireman, who lived in the Manhattanville neighborhood. Between 1876 and 1889, he lived either on Lawrence (West 126th) Street or Manhattan (West 125th) Street (Trow's).

Finding that the conveyances were providing little detail concerning any of the structures that might have been conveyed, tax assessment records were reviewed, yielding only a small amount of information before 1878. In 1856, Lot 17 was one of 12 lots listed under Dr. John B. Lawrence's name, and the total assessment was \$2000.00 (Tax Assessments Reel 69, Page 165). Thus, in 1856, the assessed value averaged \$166.00 per lot, and, in 1864, the selling price per lot averaged \$700.00. In 1877, even though conveyances listed James Pettit as the owner in fee simple, John B. Lawrence's name continued on the tax assessment rolls for Lot 17. That year Lot 17 was listed as being 25 by 99 feet, with no structure, with a real estate value of \$800.00. The total corrected value of his Lots 15-21 was \$4000.00 (Tax Assessments Reel 82, Page 226).

As early as 1852 the eastern end of the block, near the railroad and the piers along the Hudson, was being randomly developed (Dripps 1852). Fifteen years later little more in the way of development occurred anywhere on Block 1997 (Dripps 1867). Yet, surrounding blocks housed factories, a paint manufactory, lumber and coal yards, as well as stables, all enterprises that were part of the burgeoning Village of Manhattanville. Ten years later, the eastern half of the block continued to show little or no development, although immediately to the west of Lot 17, there was a "planning [sic] mill" (Perris 1877).

In 1878, one house, three stories high, was listed on Lot 17 and valued at \$2000.00 (Tax Assessments Reel 84, Page 226). Throughout its history the 20 by 30 foot house stood on a 25 by 99 foot lot, with an alleyway on the eastern side of the lot leading to the open rear yard (Bromley 1879, 1897, 1916, 1921, 1927, 1934, 1955; Sanborn 1975, 1985). The tax assessment for Lot 17 remained the same through 1894, and, from 1879 on, the house was listed as being brick. After 1890 the tax assessment surname listing for Lot 17 read "unknown" rather than John B. Lawrence.

At least as early as 1879 there was a fire hydrant at either end of Block 1997 on the West 130th Street side (Figure 3). By 1884 there was a hydrant in place between Lots 17 and 16, right in front of the brick three-story house, single-family house. Public utilities were probably put in West 130th Street along the south side of Block 1997 in anticipation of the development of the eastern end of the block, which began at the end of the 1870s. Thus, in all likelihood, there was little need for the residents of Lot 17 to have a well or cistern or privy or any other shaft feature into which they could deposit any refuse and other cultural material.

In the second decade of the twentieth century, there was a complete build-out of the block (Bromley 1916). The buildings on both sides of West 130th Street between Broadway and Twelfth Avenue, housed a pencil works, a sawmill, a stable for street-cleaning horses, a dye works, a worsted mill, and a railway depot (Bromley 1897). Processing and manufacturing complexes as well as businesses involved with transportation and city services surrounded the residence and the tenants on Lot 17. The house stood on the lot until 1985, after which time it became the uneven-surfaced, street-level parking lot it is presently.

V. SENSITIVITY

Both Lot 30 on Block 1986 and Lot 17 on Block 1997 have low sensitivity: Lot 30 for a potential cemetery and estate dwelling site and Lot 17 for domestic site nineteenth-century archaeological remains. On Lot 30 of Block 1986, there is low sensitivity for human remains to be at the location of the former site of the Church of the Annunciation at Manhattanville and its churchyard to the north, which were constructed in 1853, two years after the New York City Ordinance against new burial grounds went into effect. There is also low sensitivity for any residential resources. The churchyard and contiguous Manhattan College campus courtyard, including the adaptively reused early nineteenth century estate complex's two buildings, stood on exposed bedrock, which has subsequently been blasted away.

On Lot 17 of Block 1997, the combination of the initial development of the house lot as a residence in 1878 with the potential access to public utilities at least as early as 1879 makes it unlikely that the residents of the dwelling had such shaft features as a cistern, well, or privy in their open backyard. Historical archaeology relies on subsurface deposits to help in the understanding of the daily lives of the people living and working on the site. In the absence of these shaft features, there is no need to consider further archaeological investigation.

Consequently, since both sites possess low sensitivity for historic period resources, no further archaeological analysis is warranted.

VI. CONCLUSION AND RECOMMENDATIONS

Historical Perspectives, Inc. concludes that there is very low sensitivity for either nineteenth-century human- or domestic-site remains on the two lots that the City of New York Landmarks Preservation Commission flagged for archaeological review as a part of their review process for the Proposed Project. Therefore, Historical Perspectives, Inc. recommends that no further documentary research or archaeological field testing be done concerning Lot 30 on Block 1986 and Lot 17 on Block 1997 in Manhattanville.

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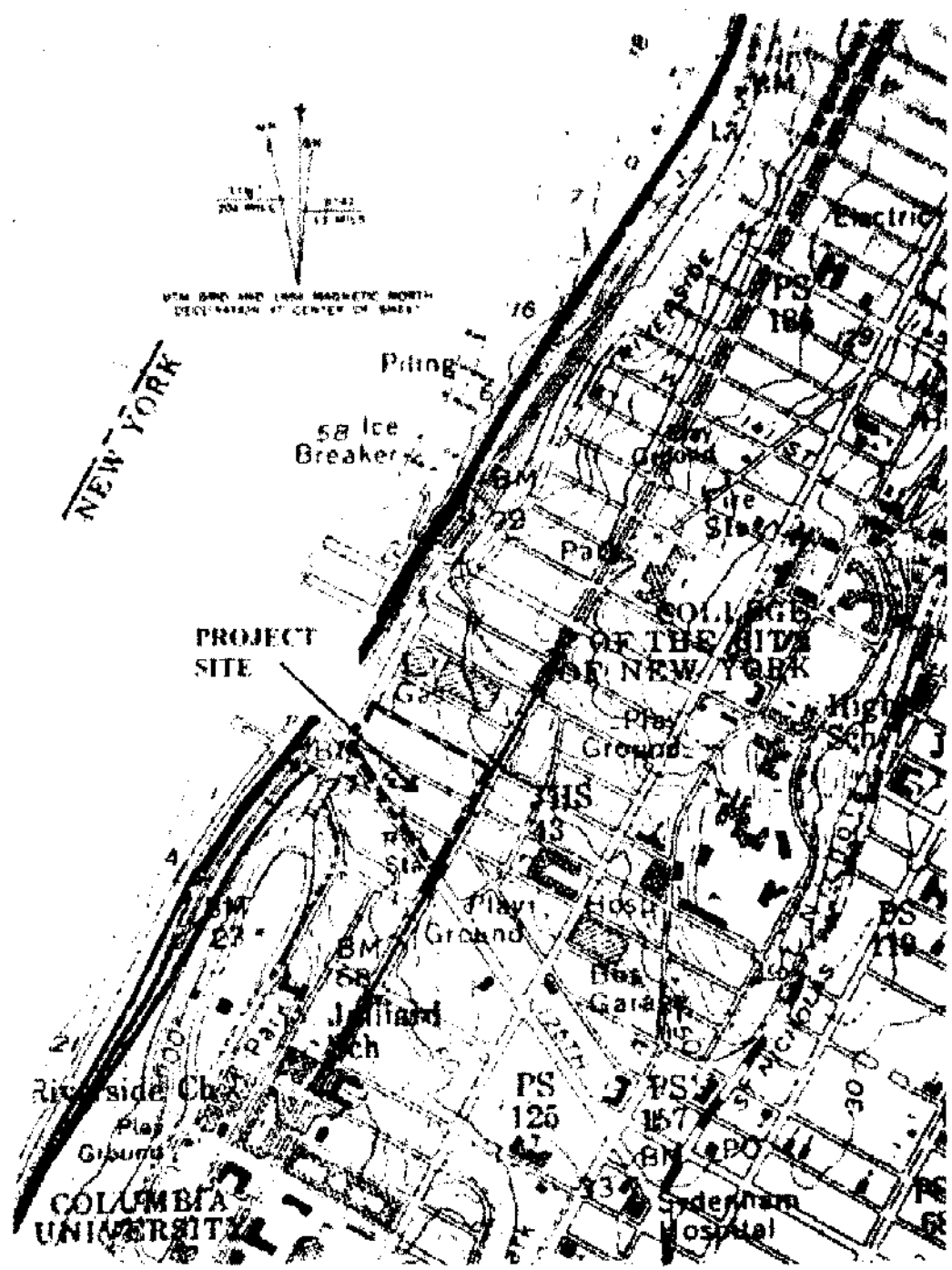


Figure 1: USGS 1979, Central Park Quadrangle

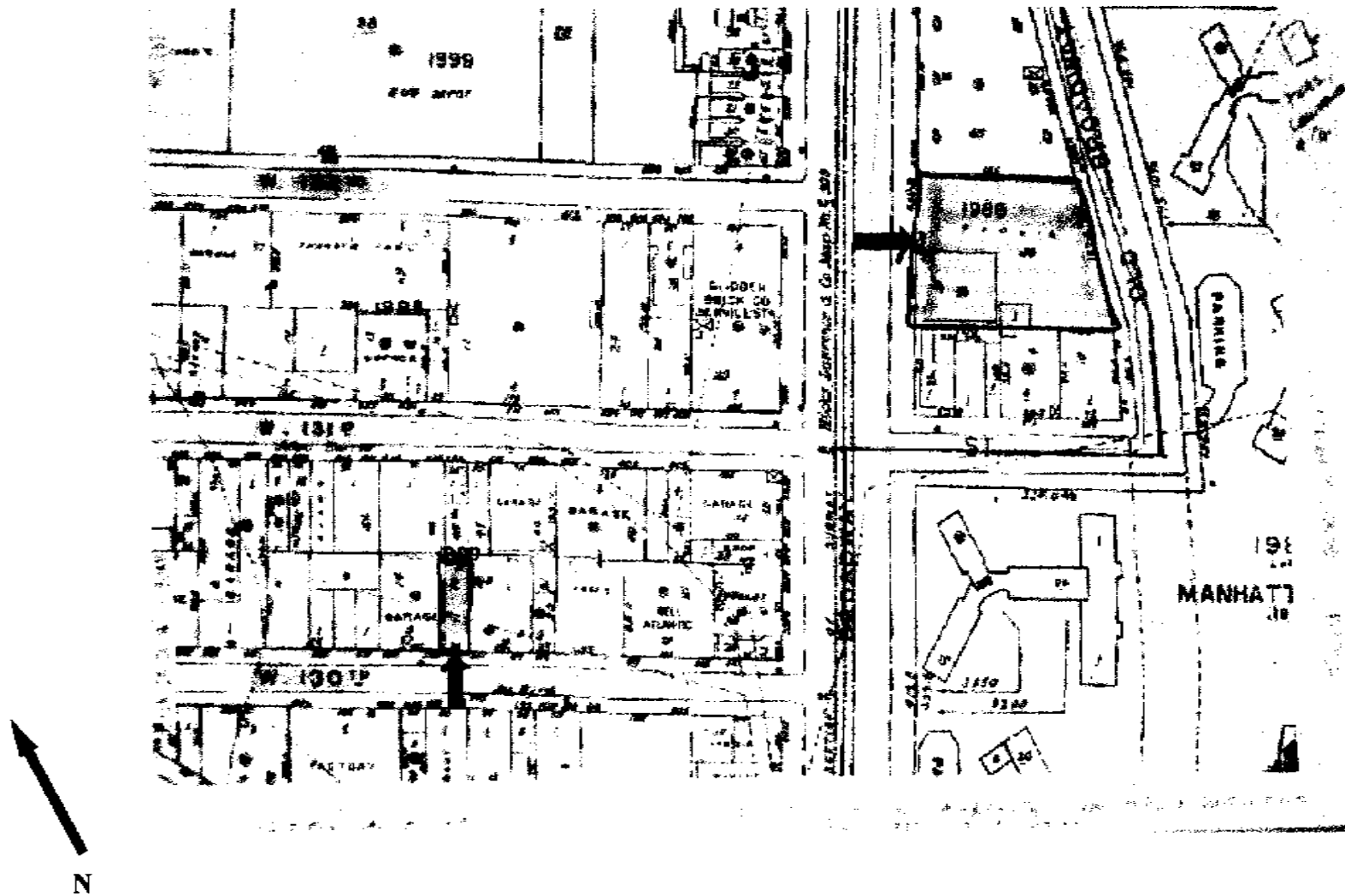


Figure 2: Sanborn 2002

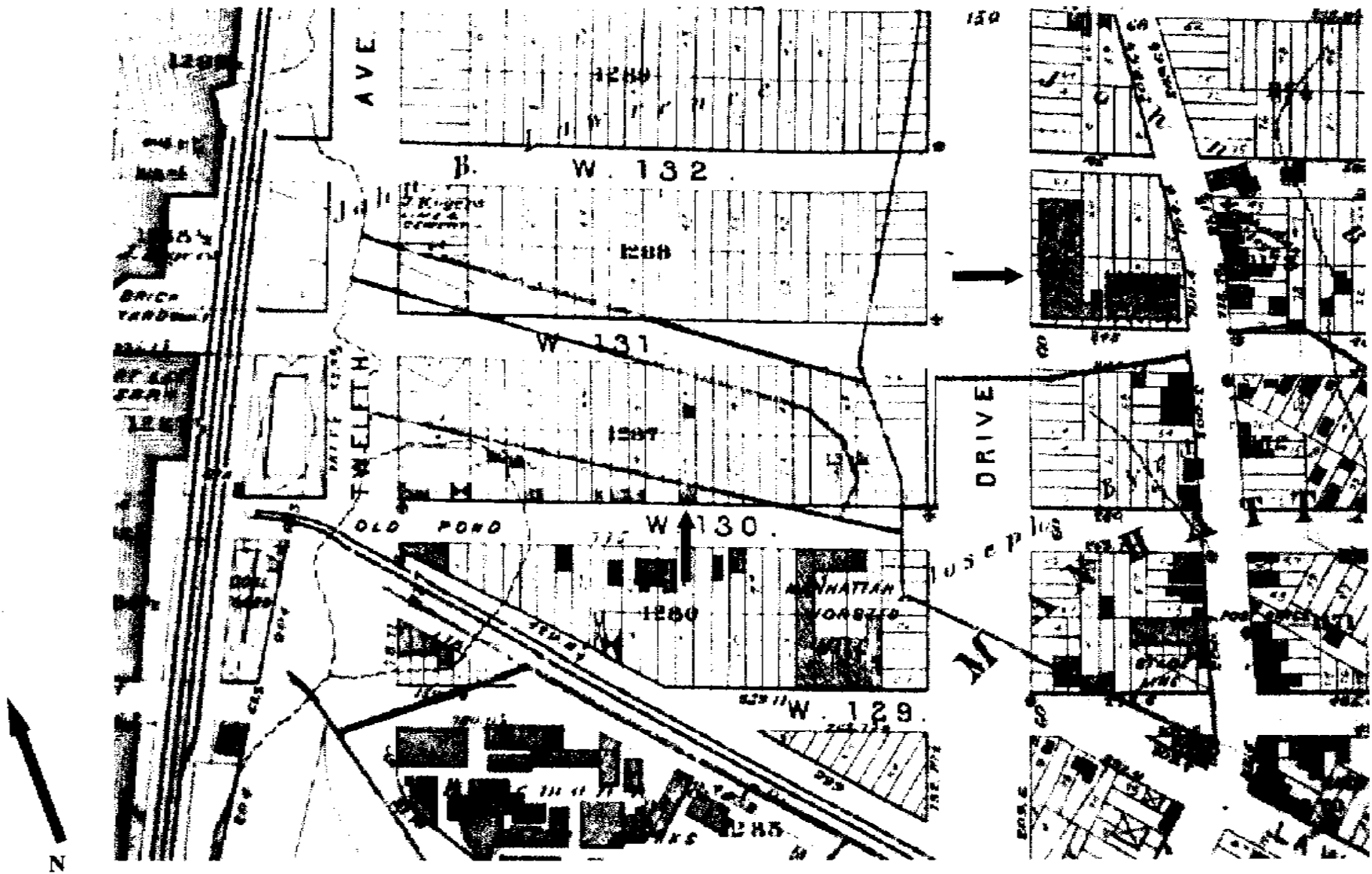


Figure 3: Bromley 1879



Photograph 1a: Block 1986, Lot 30, looking east from Broadway



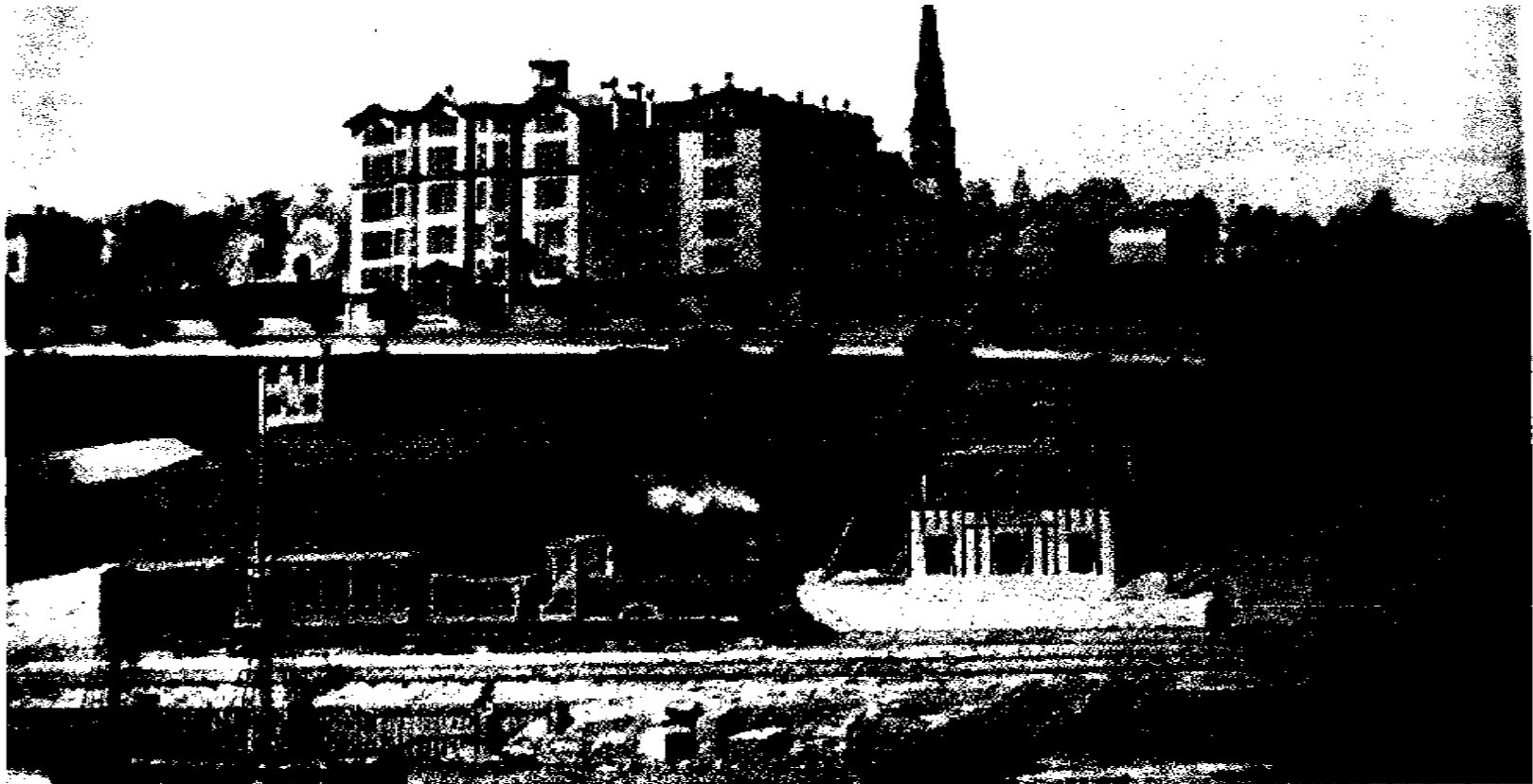
Photograph 1b: Block 1986, Lot 30, looking northwest from Old Broadway



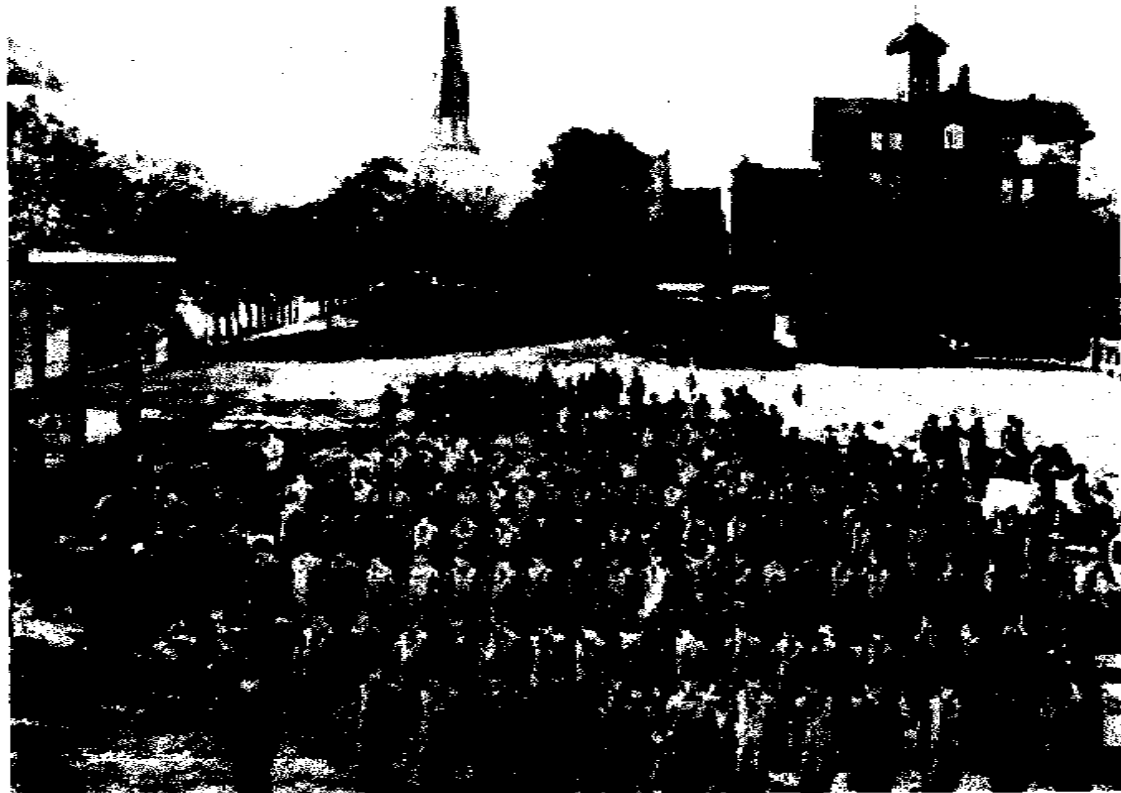
Photograph 2: Block 1997, Lot 17, looking north from West 130th Street



Photograph 3: Block 1986, looking northeast from Broadway and West 131st Street (Washington 2002:45)



Photograph 4: Block 1997 area, looking east from the Hudson River (Gabriel 1953:14)



Photograph 5: Block 1986, looking south within the middle of the block (Gabriel 1953:43)

APPENDIX D.2

**HISTORIC RESOURCES
AGENCY CORRESPONDENCE**



Environmental and Planning Consultants

117 East 29th Street
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Fax Cover Sheet

TO: Gina Santucci FROM: Claudia Cooney
 COMPANY: NYC LPC DATE: October 27, 2004
 FAX NUMBER: 212-669-7817 PHONE NUMBER: 212-340-9745
 PHONE NUMBER: 212-669-7822 TOTAL NO. OF PAGES, INCLUDING COVER: 4
 RE: Manhattanville Rezoning in West Harlem: EDC/LA-CEQR-M

URGENT PLEASE REVIEW PLEASE COMMENT PLEASE REPLY

Thank you for your comments of October 20, 2004 providing LPC's determinations of eligibility for potential resources identified in the Project Area and Study Area. As we discussed, Table 1 should be entitled "Properties within the Project Area." Table 2 should be entitled "Properties in the Study Area."

Thank you for your assistance in this matter. Please let me know if you have any questions at (212) 340-9745.

Regards,



ENVIRONMENTAL REVIEW

EDC /LA-CEQR-M

08/16/04

PROJECT NUMBER

DATE RECEIVED

PROJECT

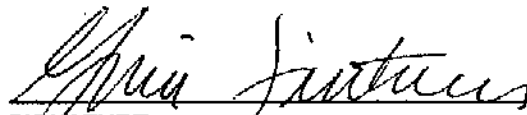
MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation *as noted.*
- May be archaeologically significant; requesting additional materials

COMMENTS

See attached comments.

cc: SHPO


SIGNATURE

10/20/04

DATE

As per the applicant's documents dated 8/13/04, the LPC is in receipt of Table 1, a list of properties within the Academic Mixed-Use project area that appear to meet criteria for listing on the State/National Registers (S/NR), and Table 2, properties that appear eligible for the S/NR in the larger rezoning area. LPC determinations are as follows.

Table 1, Properties within the Academic Mixed-Use project area

Map Ref. #	Name	Address	LPC eligible	S/NR eligible
1	Studebaker Building	615 W. 131 St.	X	X
A	Claremont Theater Building	3338 Broadway	X	X
B	Former Lee Brothers Storage Building	at Riverside Drive Viaduct	X	X

Table 2, Properties in the larger rezoning area

Map Ref. #	Name	Address	LPC eligible	S/NR eligible
1	Former Sheffield Farms Dairy	632 W. 125 St.	X	X
4	Former Engine Co. No. 37	509 W. 126 St.	X	X

7	New York Public Library, George Bruce Branch	518 W. 125 St.	X	X
8	P.S.43, Manhattanville JHS	509 W. 129 St.		X
11	Riverside Drive & Riverside Park Scenic Landmark North	North of 135 St.	X	X
12	Riverside Drive/135 through 136 Sts. Historic District		X	X

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ENVIRONMENTAL REVIEW

EDC /LA-CEQR-M 09/03/04
PROJECT NUMBER DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R


- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

"Table 1, Subdistrict A:Academic Mixed Use Area, Properties that do not appear to meet NR listing and NYCL designation in the Project Area", received 9/3/04. The LPC concurs with these findings of no significance.

"Table 2, Subdistricts B, C, and Other Area Properties that do not appear to meet criteria for NR listing and NYCL designation", received 9/3/04. The LPC concurs with these findings of no significance.

cc: SHPO


SIGNATURE DATE 10/19/04



Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

October 7, 2004

Claudia Cooney
Technical Director
Allee King Rosen & Fleming
117 East 29th Street
New York, New York 10016-8022

RE: Proposed Manhattanville Rezoning and Academic Mixed-Use Development
Historic Resource Evaluations
New York County, NY
04PR04734

Dear Ms. Cooney:

Thank you for requesting the comments of the State Historic Preservation Office concerning your project's potential effect upon historic resources. My site visit of August 18th was most helpful in evaluating the properties. I have reviewed the documentation which you provided in your submissions in accordance with the provisions of Section 14.09 of the New York State Historic Preservation Act of 1980.

We concur with the Area of Potential Effect (Historic Resources Study Area) for this project. It is our understanding that you are seeking our opinion on the National Register eligibility of the potential historic resources within the area of potential effect.

Properties in Academic Mixed-Use Area – Subdistrict A

The following properties in Subdistrict A (Table 1 "List of Potential Historic Resources in Project Area: Academic Mixed-Use Area," August 12th submission) appear to be National Register-eligible. Resource Evaluations for these properties are enclosed.

- Studebaker Building, 615 West 131st Street
- Former Warren Nash Service Center Building, 3280 Broadway
- West Market Diner, 659 West 131st Street
- Hudson Moving & Storage Building, 3229 Broadway
- Riverside Drive Viaduct, above Twelfth Ave. from St. Claire Place to West 135th St.

While the following properties in Subdistrict A (Table 1 "List of Potential Historic Resources in Project Area: Academic Mixed-Use Area," August 12th submission) are of local historic interest they do not appear to meet the National Register criteria.

- Former Glidden Buick Company Service Station, 3261-3275 Broadway
- Former Chevrolet Building, 3300-3318 Broadway
- Despatch Moving & Storage Building, 3243-3247 Broadway
- Factory building at 3251-3255 Broadway
- Former Third Avenue Railway Company Car House, 637-643 West 125th Street
- Remnants of the original Manhattanville street pattern at West 125th Street

In addition, the State Historic Preservation Office concurs with your "List of Properties That Do Not Appear to Meet the Criteria for NR Listing - Subdistrict A: Academic Mixed-Use Area" (Table 1 of September 2nd submission).

Properties in Subdistricts B, C, and Other Area

The three following buildings in Subdistricts B, C, Other Area (Table 2, August 12th submission) appear to meet the National Register criteria. Resource Evaluations for these properties are enclosed.

- Claremont Theater, 3338 Broadway
- Former Lee Bros. Storage Building, 571 Riverside Drive
- Former NY Central Railroad Substation, 2350-2362 12th Avenue/700 West 134th St.

The following historic resources (Table 2, August 12th submission) are of local historical interest do not appear to meet the National Register criteria.

- Meat packing buildings, 2284-2286 Twelfth Avenue.
- Third Avenue Railway Co. turn around tracks, Twelfth Avenue south of 125th Street
- Remnants of the original Manhattanville street pattern, 125th Street west of Twelfth Avenue.

In addition, we concur with your "List of Properties That Do Not Appear to Meet the Criteria for NR Listing - Subdistricts B, C, and Other Area" (Table 2 of September 2nd submission).

Potential Resources in the Study Area

We have reviewed the documentation for the Potential Historic Resources in the Study Area. (These are properties that fall outside Subdistricts A, B, C, and Other Area but within the Study Area Boundary.)

Based on the documentation provided the following properties appear to meet the National Register criteria. Resource Evaluations for these properties are enclosed.

- Whitestone Apartments, 45 Tiemann Place
- Former Sheffield Farms, 632, West 125th Street
- Two apartment buildings at 189 and 191 Claremont Avenue
- Former Engine Co. No. 37, 509 West 126th Street
- Former McDermott-Bunger Dairy, 527-535 West 125th Street
- New York Public Library, George Bruce Branch, 518 West 125th Street
- P.S. 43/Manhattanville JHS, 509 West 129th Street
- Seven residential buildings, 505-517 West 135th Street
- Riverside Drive and Riverside Park Boundary Increase
- Riverside Drive/135-136th Streets Historic District

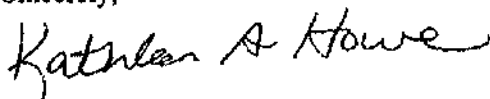
The former stable at 508 West 126th Street and the former NY Central Railroad Freight House at 701 West 135th Street are of historic interest but do not meet the National Register criteria.

Comments on Archaeology

Doug Mackey of our Archaeology Unit concurs with LPC's comments concerning the archaeological potential for Lots Block 1997 Lot 17 and Block 1986 Lot 30.

If you have any questions regarding this review, please call me at (518) 237-8643, ext. 3266. Please refer to the Project Review (PR) number noted above in any correspondence.

Sincerely,



Kathleen A. Howe
Historic Preservation Specialist

enc: Resource Evaluations

cc: Rachel Shatz, ESDC



Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: Studebaker Building

MCD: Manhattan

ADDRESS: 615 West 131st Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015089

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The Studebaker Building at 615 West 131st Street in Manhattanville is a Moderne style industrial building designed by W.S. Ferguson and erected in 1923. The six-story brick building with white terra cotta ornament meets Criterion C as an outstanding example of 20th century Moderne design. The building appears to retain a high degree of integrity of design, materials, and craftsmanship. Many of the original multi-light industrial steel sash remain providing profuse light to the interior spaces.

The Studebaker Building was one of many auto-related businesses that sprang up in Manhattanville prior to World War II. It meets Criterion A at the local level for its association with the industrial history of New York. The building originally served as a large-scale automobile service station by the Studebaker Corporation and was later used as a sales and service headquarters. The historical significance of the building continued after 1937 when it was altered to house a Borden's Farm Products Milk Plant.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: former Warren Nash Service Center Building

MCD: Manhattan

ADDRESS: 3280 Broadway

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015090

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former Warren Nash Service Center Building at 3280 Broadway in Manhattanville was built in 1927 to the designs of Frank S. Parker as an automobile service station for the Warren Nash Motor Corporation. The six-story reinforced concrete building meets Criterion C as an intact example of early 20th century industrial design. It is historically significant under Criterion A for its association with Manhattanville's "Automobile Row." Warren-Nash occupied the building up until the early 1940s.

The building is historically significant at the national level for housing one of the laboratories for the Manhattan Project which developed the atomic bomb. Columbia University's SAM Laboratory, which was contracted by the National Research Defense Committee, conducted research in this building from at least 1943 to 1945. The offices of J. Robert Oppenheimer and Brigadier Leslie Grove are believed to have been located on the upper floor.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-297-8643

Bernadette Casimiro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: West Market Diner

MCD: Manhattan

ADDRESS: 659 West 131st Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015093

- i. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- ii. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The West Market Diner at the corner of West 131st Street and Twelfth Avenue is comprised of two connected diner buildings. The original diner car, now at the east end, was installed on the site in 1921 by the P.J. Tierney Company of New Jersey. The western diner car was placed here by the Mountain View Diner Company in 1948. The 1921 diner car was converted for use as a kitchen after the installation of the 1948 diner. The diner was in operation up until recently. It meets Criterion C as an example of streamlined metal diner design typical of the period.

The exterior of the entire structure was covered with the present non-historic brick cladding sometime after 1973. Probes of the exterior of the 1948 dining car recently taken by Building Conservation Associates suggest that the original painted sheet metal cladding appears to be intact and in good condition. The interior of the 1948 diner car

retains a high degree of integrity of design and materials. The plan conforms to that of a typical dining car plan, featuring booth seating on the front wall, an arched ceiling, a longitudinal center aisle, and long counter with stools for seating. Behind the counter is the food storage and preparation area and built-in shelves. Finishes include ceramic tile wainscoting, enameled ceiling panels, and stainless steel equipment and wall panels behind the counter, all adding to the aesthetic of efficiency typical of diner design.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: former Sheffield Farms stable

MCD: Manhattan

(present Hudson Moving & Storage Building)

ADDRESS: 3229 Broadway

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015094

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The six-story brick and stone clad building at 3229 Broadway was built in 1903 to the designs of Frank Rooke. Research indicates that the building served as a stable for Sheffield Farms, a large milk manufacturer. Sheffield Farms had a milk plant nearby at 632 West 125th Street, also designed by Rooke. The building is historically significant under Criterion C for its association with the local milk manufacturing industry which had an important presence in Manhattanville during the early 20th century. Rooke's distinctive façade features rusticated pilasters, a modillioned cornice, and slate roof.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Pebbles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: Riverside Drive Viaduct

MCD: Manhattan

ADDRESS: Riverside Dr. above Twelfth Ave. between
St. Clair Place and West 135th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015133

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The Riverside Drive Viaduct, designed by engineer F. Stewart Williamson, was completed in 1901. This impressive engineering structure is designed to carry the Riverside Drive roadway over Manhattanville, which is in a valley. The 80 foot high viaduct is supported on 130-foot girders and semicircular arches featuring steel filigree work. The structure was built three years prior to the IRT Viaduct on Broadway (NR-listed). The Riverside Drive Viaduct meets Criterion C as an important engineering structure in New York City. Its elegant design is also important as an expression of the City Beautiful movement. While the viaduct underwent a major rehabilitation, completed in 1987, and the original viewing balconies have been removed it retains sufficient integrity of design, setting, materials, workmanship, feeling, and association.



Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: Claremont Theater Building

MCD: Manhattan

ADDRESS: 3338 Broadway

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015099

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former Claremont Theater Building is located on the east side of Broadway between 134th and 135th Streets in Manhattanville. The two and three-story terra cotta and brick clad building was erected in 1914 to the design of architect Gaetan Ajello. The multi-purpose building housed a 1,500-seat movie theater, a dance hall, a rooftop garden, and stores on Broadway. The Claremont displays many of the character-defining features of the Italian Renaissance style including arched window openings, pilasters, and swags. It is historically significant for its association with the cultural entertainment history of the neighborhood.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: former Lee Brothers Storage Building

MCD: Manhattan

ADDRESS: 571 Riverside Drive

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015100

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former Lee Brothers Storage Building at 571 Riverside Drive was built in 1927 to the designs of Chicago architect George Kingsley. The upper portion of the façade which projects above the Riverside Drive Viaduct is an elegant neoclassical design done in terra cotta while the lower portion, beneath the Viaduct, is a functional concrete façade devoid of ornament. The temple-fronted building is an outstanding example of Neoclassical design that conceals its very utilitarian purpose as a storage warehouse.



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Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: New York Central Substation No. 11

MCD: Manhattan

ADDRESS: 2350-2362 Twelfth Avenue
(a.k.a. 700 West 134th Street)

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015103

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former New York Central Substation No. 11 at 2350-2362 Twelfth Avenue in Manhattanville was built in 1931 for the New York Central Railroad as part of its electrification network to power its trains. This three-story, Art Deco brick building meets Criterion C as an intact example of typical substation design. Identifying characteristics of substation design include the rectangular plan, masonry construction, large window openings (now boarded up) for ample ventilation and natural light. It is not known if original equipment is intact at the interior.



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Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: Whitestone Apartments

MCD: Manhattan

ADDRESS: 45 Tiemann Place

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015132

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

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- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The Whitestone Apartments at 45 Tiemann Place meets Criterion C as a distinctive architectural design by the prolific apartment house architect Emery Roth (1871-1947). The six-story brick building is notable for its fine craftsmanship, ornamentation, and use of materials (brick, terra cotta, copper). The lively façade is articulated by tall brick piers between the window bays, colorful terra cotta ornament in geometric shapes, and a fanciful copper parapet.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: former Sheffield Farms Dairy Company

MCD: Manhattan

ADDRESS: 632 West 125th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015105

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
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- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former Sheffield Farms Dairy Company building was designed by architect Frank Rooke in 1907. In 1934 a three-bay addition, which matches the original design, was built to the west. The building is built of brick with an elegant classical-inspired white terra cotta façade. Sheffield Farms was one of New York City's large milk manufacturers in the early 20th century. This building housed pasteurization and bottling facilities for milk that was distributed on the Upper West Side and Harlem. Of special note at the interior of the building is the original showroom with its Guastavino tile vaulted ceiling. Sheffield Farms Dairy Company meets both Criterion C for its architectural design and Criterion A for its association with the New York's dairy industry.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: apartment buildings

MCD: Manhattan

ADDRESS: 189 and 191 Claremont Avenue

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015109

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The apartment buildings at 189 and 191 Claremont Avenue were designed by Denby & Nute in 1906 for developer James O'Brien. Like much of this area, they were built in response to the completion of the IRT subway line. The apartments have limestone bases with brick facades above. Of special note is the attic story which is ornamented with a geometric pattern of diamonds and squares. The buildings meet Criterion C for their elegant architectural design and possess a high degree of integrity of materials, design and craftsmanship.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/6/04

STAFF: Kathy Howe

PROPERTY: former Engine Co. No. 37

MCD: Manhattan

ADDRESS: 509 West 126th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015106

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

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- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

Former Engine Company No. 37 at 509 West 126th Street was built in 1881 to the designs of Napoleon LeBrun, who served as the NYC Fire Department's chief architect from 1880 to 1895. This three-story, Romanesque Revival style, red brick building meets Criterion C as a typical example of firehouse design of the period. It is also historically significant under Criterion A for its association with the history of firefighting in New York City. Although the ground floor openings have been blocked in and second and third floor windows partially enclosed, the façade retains many of the original design features including fluted pilasters and decorative shields at the base, stringcourses of brownstone, and a modillioned cornice.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: former McDermott-Bunger Dairy

MCD: Manhattan

ADDRESS: 527-535 West 125th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015110

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

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- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former McDermott-Bunger Dairy at 527-535 West 125th Street was built in 1904 to the designs of Joseph H. McGuire. The three-story brick building with rusticated stone base has large door openings to either side of the main block which provided access to delivery wagons. The building is historically significant under Criterion A for its association with Manhattanville's once thriving dairy industry. The area's easy access to rail, road, and river transportation made it attractive for the development of industry. Sheffield Farms, another large dairy in the neighborhood, took over the McDermott-Bunger operation by 1929.



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518-237-8643

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: New York Public Library, George Bruce Branch MCD: Manhattan

ADDRESS: 518 West 125th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015111

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

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- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The George Bruce Branch of the New York Public Library was designed by Carrere & Hastings and opened its doors in 1916. The three-story brick building with white marble base meets Criterion C as an outstanding example of Georgian Revival civic architecture in New York City. This elegant building displays a high degree of integrity of design, materials, and craftsmanship. Typical characteristics of the Georgian Revival style used in the design include the entrance with tall fanlight and oculus windows above, the keystoned lintels, and the dentilled cornice.



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Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: Manhattanville Junior High School/P.S. 43

MCD: Manhattan

ADDRESS: 509 West 129th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015113

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

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- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The Manhattanville Junior High School (P.S. 43) was designed by Walter C. Martin, Superintendent of School Buildings at the NYC Board of Education. The four-story red brick building with limestone trim was built between 1932 and 1937, replacing an earlier school on the site. The school meets Criterion C as an intact example of 1930s-era institutional design with simplified Collegiate Gothic details including a central tower, a pointed arch entrance, and stone pinnacles at the parapets.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: Houses at 505-517 West 135th Street

MCD: Manhattan

ADDRESS: 505-517 West 135th Street

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015115

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The row of seven tenements at 505-517 West 135th Street were built in 1906 to the designs of George Frederick Pelham by builder Louis Cohen. This cohesive row of Beaux-Arts style buildings appears to be eligible under Criterion C as potential historic district for embodying the distinctive characteristics of middle-class tenement design in New York City. The buildings are new-law tenements, erected following the passage of a reform law in 1901. The construction of these buildings reflects the history of development in this section of Manhattan, especially development relating to the construction of the city's first subway lines which opened in 1904. The buildings retain a high degree of integrity of materials, design, and craftsmanship.



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/8/04

STAFF: Kathy Howe

PROPERTY: Riverside Drive and Riverside Park

MCD: Manhattan

Boundary Increase (North End)

ADDRESS: Riverside Dr. from W. 135th St. to W. 158th St.

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015116

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The portion of Riverside Park and Riverside Drive that is listed on the National Register begins at 72nd Street and continues north to St. Clair Place, approximately 129th Street, where it is effectively terminated by the Manhattanville fault. The northern section of the park and drive was not included in the original nomination though it appears to meet the NR criteria in the areas of landscape design and recreation. This section extends from 135th Street up to approximately 158th Street. The original nomination could be amended to include this section of the park provided the appropriate documentation is prepared.



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Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

Bernadette Castro
Commissioner

RESOURCE EVALUATION

DATE: 10/7/04

STAFF: Kathy Howe

PROPERTY: Riverside Drive – West 135th – 136th Streets
Historic District

MCD: Manhattan

ADDRESS: various

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: various

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.
- Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

Based on the documentation provided the Riverside Drive – West 135th – 136th Streets Historic District consists of a cohesive group of buildings on the blocks between Riverside Drive and Broadway. The potential district meets Criterion C for its collection of high quality residential buildings erected between 1906 and 1909 by many of New York's prominent architectural firms including Neville & Bagge, Schwartz & Gross, Emery Roth, and Bernstein & Bernstein. The majority of the buildings are examples of the Beaux Arts style. The neighborhood is historically significant under Criterion A in the area of community development as a result of the completion of the IRT subway line.

ENVIRONMENTAL REVIEW

EDC/LA-CEQR-M

09/17/04

PROJECT NUMBER

DATE RECEIVED

PROJECT

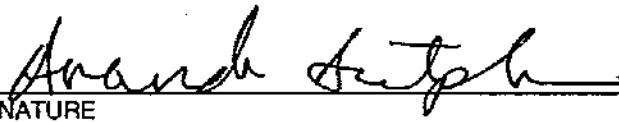
MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- requesting additional materials

COMMENTS

The LPC is in receipt of the "Cemetery and Domestic Site Documentary Study for Manhattanville Rezoning in West Harlem, New York, New York," prepared by Historical Perspectives, Inc and dated September 2004.

The LPC concurs that there are no further archaeological concerns. Please submit 2 bound copies for archival distribution.


SIGNATURE

09/23/04

DATE

ENVIRONMENTAL REVIEW

EDC /LA-CEQR-M 08/16/04
PROJECT NUMBER DATE RECEIVED

PROJECT


MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

The LPC is in receipt of the draft scope of work for EIS dated 8/10/04. The text is acceptable for architectural resources.

cc: SHPO


SIGNATURE DATE 08/24/04

1 of 2

ENVIRONMENTAL REVIEW

EDC/ LA-CEQR-M 08/19/04
PROJECT NUMBER DATE RECEIVED


PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

Archeology review only. The EIS Draft Scope of Work appears to be acceptable. The project was previously reviewed on 6/16/04 and the following comments still apply. LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century occupation on two lots within the study area (B 1997 L 17 - residential) (B 1986 L30 ? possible burial ground and residential). Accordingly, the Commission recommends that an archaeological documentary study be performed for these locations only, to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2001). There are no further archeological concerns for the other blocks and lots in the study area.
m0edc0MANHATTANVILLEinWharlemREZONE08232004AYz


SIGNATURE

08/23/04
DATE



ENVIRONMENTAL REVIEW

EDC/

LA-CEQR-M

06/04/04

PROJECT NUMBER

DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

No architectural significance

No archaeological significance

Designated New York City Landmark or Within Designated Historic District

Listed on National Register of Historic Places

Appears to be eligible for National Register Listing and/or New York City Landmark Designation

May be archaeologically significant; requesting additional materials

COMMENTS

Archeology review only.

LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century occupation on two lots within the study area (B 1997 L 17 - residential) (B 1986 L30 - possible burial ground and residential). Accordingly, the Commission recommends that an archaeological documentary study be performed for these locations only, to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2001). There are no further archeological concerns for the other blocks and lots in the study area.

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lzFSO.doc

Aracelis Acosta

SIGNATURE

06/16/04

DATE

ENVIRONMENTAL REVIEW

EDC /06-DCP032M

05/12/06

PROJECT NUMBER

DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

The LPC is in receipt of the Historic Resources chapter of the DEIS dated 5/1/06. Regarding the renovation of the former Warren Nash Service Station (S/NR eligible) and the Studebaker Building (LPC and S/NR eligible), please copy LPC on all SHPO documents. In order to complete the review, a copy of the full DEIS, including the mitigation chapter and the shadow and contextual analysis, should be provided to LPC for comment.

cc: SHPO

Gina Santucci

SIGNATURE

06/07/06

DATE

ENVIRONMENTAL REVIEW

EDC/06-DCP032M

05/12/06

PROJECT NUMBER

DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

For archaeological resources only:

The LPC is in receipt of the DEIS dated May 1, 2006. In the agency's findings of 9/23/2004, the LPC noted that it did not have any archaeological concerns for the project area as then envisioned which is noted in the DEIS. In the event that any additional blocks and lots are added, the LPC should receive the amended block/lot list for review and comment.

cc: SHPO


SIGNATURE

05/15/06

DATE

7.1.07

ENVIRONMENTAL REVIEW

EDC /06-DCP032M 05/12/06
PROJECT NUMBER DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

The LPC is in receipt of the Historic Resources chapter of the DEIS dated 5/1/06. Regarding the renovation of the former Warren Nash Service Station (S/NR eligible) and the Studebaker Building (LPC and S/NR eligible), please copy LPC on all SHPO documents. In order to complete the review, a copy of the full DEIS, including the mitigation chapter and the shadow and contextual analysis, should be provided to LPC for comment.

cc: SHPO

Guia Santucci 06/07/06
SIGNATURE DATE

ENVIRONMENTAL REVIEW

EDC/06-DCP032M

05/12/06

PROJECT NUMBER

DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

For archaeological resources only:

The LPC is in receipt of the DEIS dated May 1, 2006. ^{HRC Chapter of} In the agency's findings of 9/23/2004, the LPC noted that it did not have any archaeological concerns for the project area as then envisioned which is noted in the DEIS. In the event that any additional blocks and lots are added, the LPC should receive the amended block/lot list for review and comment.

cc: SHPO


SIGNATURE

05/15/06

DATE

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre St., 9N, New York, NY 10007 (212) 669-7700

ENVIRONMENTAL REVIEW

EDC /06-DCP032M 09/07/06
PROJECT NUMBER DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
- Listed on National Register of Historic Places
- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
- May be archaeologically significant; requesting additional materials

COMMENTS

The LPC is in receipt of the PDEIS chapters for: Chapter 21, "Construction" dated 8/31/06; Chapter 23, "Mitigation", dated 8/31/06; and "Alternatives", dated 8/31/06.

Global change: the Former Sheffield Farms Dairy no longer appears eligible for LPC designation.

The revised Shadow study for the St. Mary's P.E. Church (LPC listed) is still outstanding, and possible mitigation needs to be explored in the Mitigation chapter.

Chapter 23, "Mitigation": Paragraph 40 regarding construction protection for the LPC designated Claremont Theater, please note that TPPN 10/85, "Procedures for the Avoidance of Damage to Historic Structures", issued by the NYC DOB, still provides protection to the landmark, regardless of an as-of-right or project-related action. The text should reflect this.

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Guia Santucci 09/07/06
SIGNATURE DATE

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre St., 9N, New York, NY 10007 (212) 689-7700

ENVIRONMENTAL REVIEW

EDC /06-DCP032M 08/23/06
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MANHATTANVILLE/W. HARLEM R

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COMMENTS

The LPC is in receipt of the revised historic resources chapter of the DEIS dated 8/14/06, and the shadows chapter dated 8/15/06. Comments are as follows.

The Mitigation chapter still needs to be provided for review and comment. The St. Mary's Protestant Episcopal Church, Parish House, and Sunday School Complex at 517-523 W. 126 St. (LPC and S/NR) should be added to the shadow study analysis. It is a sun-sensitive historic resource within the project study area. A construction protection plan should be provided for the Claremont Theater (LPC) at 3320 Broadway.

Gina Santucci
SIGNATURE

08/30/06
DATE

DEPT OF CITY PLANNING
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2006 AUG 31 PM 2:32
ENVIRONMENTAL REVIEW DIV.

PROJECT**MANHATTANVILLE/W. HARLEM R**

- No architectural significance
- No archaeological significance
- Designated New York City Landmark or Within Designated Historic District
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- Appears to be eligible for National Register Listing and/or New York City Landmark Designation
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COMMENTS

Chapter 23, "Mitigation", dated 10/3/06.

Page 23-4. Remove lines 26 through 34. Replace with: "DOB's Technical Policy and Procedure Notice (TPPN) #10-88 will provide protection measures for these structures should construction occur on the adjacent soft sites. Therefore, the potential for construction period damage to these resources will be eliminated, and no adverse impacts are anticipated."

Chapter 8, "Historic Resources", dated 9/28/06.

Page 8-10. Table 8-1. The Former Sheffield Farms Dairy does not appear eligible for LPC designation.

Page 8-23. Remove lines 20 through 28. Replace with:
"DOB's Technical Policy and Procedure Notice (TPPN) #10-88 will provide protection measures for these structures should construction occur on the adjacent soft sites. Therefore, the potential for construction period damage to these resources will be eliminated, and no adverse impacts are anticipated."

Page 8-31. Line 19. Please provide the supporting shadow analysis for the statement that the Old Broadway Synagogue and St. Mary's Episcopal Church are not affected by incremental project shadows.



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Gula Santucci
SIGNATURE

10/17/06

DATE

ENVIRONMENTAL REVIEW

EDC /06-DCP032M 11/01/06
PROJECT NUMBER DATE RECEIVED

PROJECT

MANHATTANVILLE/W.HARLEM R

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COMMENTS

The LPC is in receipt of Chapter 7, "Shadows", Chapter 8, "Historic Resources" and Chapter 23, "Mitigation", of the DEIS, all dated 10/26/06. Comments are as follows.

Chapter 7, "Shadows". Provide Figure 7-2.

Chapter 8, "Historic Resources". Table 8-1. The Former Sheffield Farms Dairy does not appear eligible for LPC designation.

Chapter 23, "Mitigation". LPC notes that the text regarding construction protection for Riverside Drive viaduct, former Central Railroad Substation #11, and the Claremont Theater, a designated NYC landmark, has been removed. These properties may be affected by the redevelopment of projected development sites in Subdistrict B and in the Other Area east of Broadway. The text should be restored as written in Chapter 8, "Historic Resources", lines 25 through 38 on page 8-22.


SIGNATURE

11/01/06

DATE

Proposed Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development

**Table 8-1
Architectural Resources in the Project Area and Study Area**

Ref. No.	Name	Address	Block/Lot	S/NR	S/NR-Eligible	NYCL	NYCL-Eligible
Project Area							
1	Manhattan Valley IRT Viaduct	Broadway from West 122nd to West 135th Streets	N/A	X		X	
2	125th Street IRT Subway Station	Broadway and West 125th Street	N/A	X			
3	Studebaker Building	615 West 131st Street	1998/17		X ²		X ³
4	Former Warren Nash Service Station building	3280 Broadway	1988/65		X ²		
5	Former Sheffield Farms Stable	3229 Broadway	1998/34	X ^{2,4}			
6	West Market Diner	659 West 131st Street	1998/1		X ²		
7	Riverside Drive viaduct	Above Twelfth Avenue	N/A		X ²		
8	Former New York Central Railroad Substation No. 11	2350-2362 Twelfth Avenue/700 West 134th Street	2005/9		X ²		
9	Former Lee Brothers Storage Building	571 Riverside Drive	2001/1		X ²		X ³
10	Claremont Theater building	3320 Broadway	1988/1		X ²	X	
Study Area							
11	Former Sheffield Farms Dairy	632 West 125th Street	1995/44		X ¹		X³
12	Whitestone Apartments	45 Tiemann Place	1995/16		X ²		
13	Two six-story apartment buildings	188 and 191 Claremont Avenue	1994/66, 69		X ²		
14	Former McDonnott-Bunger Dairy	627-636 West 125th Street	1982/10		X ²		
15	New York Public Library, George Bruce Branch	518 West 125th Street	1980/22		X ²		X ³
16	St. Mary's P.E. Church, Parish House and Sunday School	517-523 W. 126th Street	1983/11		X	X	
17	Speyer School	614 West 126th Street	1982/36		X		
18	Old Broadway Synagogue	15 Old Broadway	1982/49	X			
19	Former Engine Co. 37	509 West 126th Street	1983/20		X ²		X ³
20	P.S. 43, Manhattanville Junior High School	609 West 128th Street	1933/37		X ²		
21	Seven five-story residential buildings	505-517 West 135th Street	1888/ various		X ²		
22	Riverside Park and Riverside Drive Scenic Landmark	West 72nd to West 129th Streets	1897/1	X		X	
23	Riverside Park and Riverside Drive Scenic Landmark North	North of West 135th Street	210/35		X ²		X ³
24	Riverside Drive/West 135th-136th Streets Historic District	See Table 8-2	See Table 8-2		X ²		X ³
25	Tiemann Estate Historic District	Tiemann Place and West of Broadway	Various		X ²		
<p>Notes:</p> <p>¹ Corresponds to Figure 8-1</p> <p>² S/NR eligibility determinations made by SHPO on October 7, 2004.</p> <p>³ NYCL eligibility determinations made by LPC on October 2, 2004.</p> <p>⁴ This property has subsequently been listed on the S/NR.</p> <p>⁵ Eligibility determination made by SHPO on June 20, 2006.</p> <p>N/A: Not applicable</p> <p>SR: New York State Register of Historic Places.</p> <p>NR: National Register of Historic Places.</p> <p>S/NR Eligible: Site has been found eligible for listing on the New York State and National Registers of Historic Places.</p> <p>NYCL: New York City Landmark.</p> <p>NYCL Eligible: LPC has determined that the site appears eligible for NYCL designation.</p> <p>Pending NYCL: Site has been calendared for a public hearing or heard for designation by LPC.</p>							

 Chapter 8: Historic Resources

The portion of the building below the viaduct is functional rather than ornate, built of concrete with rectangular window openings (see Figure 8-6). The building continues today to serve as a storage warehouse.

Other Areas

- 5 The former Claremont Theater building (S/NR-eligible, NYCL [in part]) is a two- and three-story terra-cotta and brick-clad building designed by Gastan Ajello in the Italian Renaissance style (see No. 10 in Figures 8-1 and 8-9). Occupying the east blockfront on Broadway between West 134th and West 135th Streets, it was erected by the Wayside Realty Co., Inc. in 1914 to house a two-story theater, a dance hall on the second floor of the building, a roof garden, and stores on Broadway. The theater was a very early example of a New York City movie theater; Thomas Edison is reputed to have screened his *On the Stroke of Twelve* at the theater in 1915. Only the original two-story 1914 portion of the building on the southeast corner of West 135th Street and Broadway is an NYCL.

- 15 The northwest corner of the building has a chamfered corner, resulting in three façades at the intersection of Broadway and West 135th Street. White terra-cotta detailing includes a combination of shields, swags, finials, pilasters, and moldings. A movie camera detail is depicted in a shield at the cornice. The upper-story fenestration includes palazzo-inspired groupings of arched window openings with slender columns. Little of its original interior is believed to have survived intact, largely as a result of its many subsequent uses over time, which included an auto showroom and roller rink. The three-story brick-clad portion to the south of the theater is an addition from circa 1939 and is not an NYCL; the portion of the building south of the theater was originally one and two stories. It is currently occupied by a variety of commercial uses, including a furniture store.

STUDY AREA

- 25 There are 15 architectural resources located in the study area (see Table 8-1 and Figure 8-1). Of these resources, four—St. Mary's Protestant Episcopal Church, Speyer School, Old Broadway Synagogue, and Riverside Park and Riverside Drive Scenic Landmark—were previously known architectural resources. Ten resources, including a historic district north of West 135th Street, were determined by OPRHP (October 7, 2004) and/or LPC (October 2, 2004) to meet eligibility criteria for listing on the S/NR and/or designation as NYCLs, respectively, as part of their review of the Proposed Project. OPRHP determined that the Tiemann Estate Historic District is eligible for listing on the S/NR on June 20, 2006, based on information submitted by the West Harlem Community Preservation Organization.

- 35 ~~NYCL (eligible)~~ Prentiss Hall (S/NR-eligible, ~~NYCL (eligible)~~), formerly the Sheffield Farms Dairy, is a five-story building at 632 West 125th Street (see No. 11 in Figures 8-1 and 8-10). It was designed by Frank A. Rooke for the Sheffield Farms-Slawson-Decker Company to house pasteurization and bottling facilities for the production of milk that was delivered throughout the Upper West Side and Harlem. The original building, built in 1907, was about 135 feet wide; a three-bay addition to the west was built in 1934. The building is clad in glazed white terra-cotta; the color may have been chosen to symbolize the dairy's sanitary and hygienic conditions. The façade has classical ornament, including a dentillated string course above the third story, an egg-and-dart string course above the fourth story, and fascias framing the two triple-story openings (the central and westernmost openings) and the arches of the flanking windows. A showroom with a Guastavino tile vaulted ceiling, still extant, allowed the public to see the milk being processed.

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre St., 9N, New York, NY 10007 (212) 669-7700

ENVIRONMENTAL REVIEW

EDC /06-DCP032M

01/30/07

PROJECT NUMBER

DATE RECEIVED

PROJECT MANHATTANVILLE/HARLEM R

- No architectural significance
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COMMENTS

The LPC is in receipt of the Historic Resources chapter of the DEIS dated 1/26/07. On page 8-10, Table 8-1, item 11, "Former Sheffield Farms Dairy" is not LPC eligible.

Erin J. [Signature]
SIGNATURE

01/30/07
DATE

4/20
B Kreves



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189

516-237-8643

January 30, 2007

Rachel Shatz
Empire State Development Corporation
633 Third Avenue
New York, NY 10017

Dear Ms. Shatz:

Re: ESDC
Proposed Manhattanville Rezoning and Academic Mixed-Use Development
New York County
04PR04734

Thank you for requesting the comments of the Office of Parks Recreation and Historic Preservation (OPRHP) for the proposed Manhattanville Rezoning and Academic Mixed-Use Development in Manhattan. We have reviewed the Draft Environmental Impact Statement information submitted in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Based upon our review, we offer the following comments/concerns:

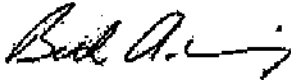
1. The historic properties identified in Chapter 8 are correct.
2. We understand the National Register listed property known as the Former Sheffield Farms Stable located at 3229 Broadway is proposed for demolition. Demolition of a National Register listed property constitutes an Adverse Impact as defined by the State Historic Preservation Act. Pursuant to Section 428.8 of the Regulations, Chapter III, for Historic Preservation, we request a formal exploration of all prudent and feasible alternatives "to avoid or mitigate any adverse impact of the undertaking." The preservation and adaptive reuse of the building is our preferred alternative to demolition.
3. We understand that the National Register eligible West Market Diner at 659 West 131st Street is proposed for relocation. It would be our preference for the diner to be uncovered and restored in its current location. If this cannot be accomplished, we request the opportunity to review possible new locations, the proposed move and the rehabilitation plans for the structure.
4. As noted, our office has previously reviewed the rehabilitation of the National Register eligible Studebaker Building and has determined that the Studebaker project, as presented at that time, would have No Adverse Impact upon this historic building. Given the schematics of the proposed development around the Studebaker building, we would like to review the plans and specifications for proposed Columbia University Building #8 in Subdistrict A. It appears that Building #8 will abut the Studebaker building obscuring the Eastern façade. If this is the case, it is possible that Building #8 could have an Adverse Impact upon the historic Studebaker building.
5. We request site line studies with regard to the visual impact of the proposed development upon the Studebaker Tower and cornice line. At a minimum we would like to see views from the street beneath the Viaduct at 131st Street and 132nd Street toward the building.
6. We are pleased to learn that the former Warren Nash Service Station building at 3280 Broadway is planned for rehabilitation. Our office would like to review the proposed plans and specifications for the rehabilitation when they are available. For your use we have attached the Resource Evaluation for the Warren Nash Service Station building. We note that the building may be of national significance for its use as the headquarters of the Association of Manhattan Project Scientists who worked on the atomic bomb during the Second World War. It seems possible that

interior remnants from this era may still exist within the building and that they should be considered for preservation.

7. Given the proximity of historic structures to the proposed new construction, construction protection plans should be developed for properties within 90 feet of any construction. The plan should be developed in accordance with the requirements stipulated in the New York City Department of Buildings "Technical Policy Procedure Notice #10/88" and the New York City Landmarks Preservation Commission guidelines described in "Protection Programs for Landmarked Buildings".
8. We note that there are no proposed plans for Subdistricts B and C at this time. When such plans become available we request the opportunity to review and comment on such plans. We note that Subdistrict B is directly adjacent to the National Register eligible Riverside Drive Viaduct and includes the National Register eligible former New York Central Railroad substation No. 11. We further note that Subdistrict C includes the National Register eligible former Lee Brothers Storage Building.
9. The proposed Columbia University development building #17 is directly across from National Register eligible Claremont Theater building. If the proposed development across the street at building #17 has the potential to impact this historic theater building, we would like to review the proposed development.

Thank you for your request. If you have any questions, I can be reached at (518) 237-8643, ext. 3282. Please refer to the SHPO Project Review (PR) number in any future correspondences regarding this project.

Sincerely,



Beth A. Cumming *BAC*
Historic Preservation Specialist -- Technical Unit
e-mail: Beth.cumming@oprhp.state.ny.us

enc: Resource Evaluation -- former Warren Nash Service Center Building



New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Watertford, New York 12188-0189

518-237-8643

RESOURCE EVALUATION

DATE: 1/30/07

STAFF: Kathy Howe

PROPERTY: former Warren Nash Service Center Building MCD: Manhattan

ADDRESS: 3280 Broadway

COUNTY: New York Co.

PROJECT REF: 04PR04734

USN: 06101.015090

- I. Property is individually listed on SR/NR:
name of listing:
- Property is a contributing component of a SR/NR district:
name of district:
- II. Property meets eligibility criteria.
- Property contributes to a district which appears to meet eligibility criteria.

Pre SRB: Post SRB: SRB date

Criteria for Inclusion in the National Register:

- A. Associated with events that have made a significant contribution to the broad patterns of our history;
- B. Associated with the lives of persons significant in our past;
- C. Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The former Warren Nash Service Center Building at 3280 Broadway in Manhattanville was built in 1927 to the designs of Frank S. Parker as an automobile service station for the Warren Nash Motor Corporation. The six-story reinforced concrete building meets Criterion C as an intact example of early 20th century industrial design. It is historically significant under Criterion A for its association with Manhattanville's "Automobile Row." Warren-Nash occupied the building up until the early 1940s.

The building is historically significant at the national level for housing one of the laboratories for the Manhattan Project which developed the atomic bomb. Columbia University's SAM Laboratory, which was contracted by the National Research Defense Committee, conducted research in this building from at least 1943 to 1945. The offices of J. Robert Oppenheimer and Brigadier Leslie Grove are believed to have been located on the upper floor.

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre St., 9M, New York, NY 10007 (212) 669-7700

ENVIRONMENTAL REVIEW

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COMMENTS

Amended determination. The LPC is in receipt of the Historic Resources chapter of the DEIS dated 1/26/07. The text is acceptable.

Guia Santucci
SIGNATURE

01/31/07
DATE

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440 Park Avenue South
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

April 13, 2007

Ms. Beth Cumming
Historic Preservation Specialist – Technical Unit
New York State Office of Parks, Recreation and Historic Preservation
Peebles Island, P.O. Box 189
Waterford, NY 12188-0189

Re: **Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development**
New York County
04PR04734

Dear Beth:

Further to your letter to Rachel Shatz of ESDC dated January 30, 2007 and as discussed on February 6, 2007, please find information on a number of the concerns you raised:

1. West Market Diner at 659 West 131st Street

Columbia University is studying potential locations for the diner to be relocated and exploring options for its restoration. As was discussed on February 6th and as described in Chapter 8, "Historic Resources" of the Preliminary Draft Environmental Impact Statement (PDEIS), the diner is composed of three distinct structures. These consist of the original 1921 wood diner at the north end of the site, the 1948 car fronting on West 131st Street, and a cinderblock addition to the east. The older wood car (on the north) has been substantially altered, with little left of its original fabric. It most recently served as the kitchen for the diner and possesses little historic integrity. The cinderblock addition does not contain significant interior architectural elements and its façade, as that of the 1948 Mountain View dining car, has been extensively remodeled through its recladding in brick in the 1970's. Unlike the 1921 car, however, the 1948 dining car appears to retain many original interior features, and it is possible that the 1948 diner's original metal cladding may still be present beneath the brick cladding. Therefore, Columbia proposes to relocate and to restore to the extent practicable the 1948 diner, but not the 1921 car or the cinderblock addition as these other two structures possess little integrity and architectural significance. Columbia would consult with the New York State Office of Parks Recreation and Historic Preservation (OPRHP) regarding potential relocation sites for the 1948 diner and plans for its rehabilitation.

2. Studebaker Building, 615 West 131st Street

The east façade of the Studebaker Building is a stucco party wall façade with some windows cut into it (see attached Figure 1). A 1909 Sanborn map indicates that the site immediately east of the Studebaker Building was formerly occupied by a two-story stable/carriage house, which was built up against the east façade of the Studebaker Building. This site is now occupied by a one-story industrial building. Since the east façade of the Studebaker Building does not contain any significant architectural elements and is essentially a blank wall, construction of the academic research building on Site 8 would not obstruct views to significant elements of the Studebaker Building. As such, development of Site 8 would not result in significant adverse visual or contextual impacts on the Studebaker Building.

3. Sightlines to the Studebaker Building

As described in Chapter 8 of the PDEIS, views of the west façade of the Studebaker Building, including its cornice and tower, would be obstructed from 12th Avenue beneath the viaduct by the proposed new building to be located on 12th Avenue between West 131st and West 132nd Streets. However, views of the Studebaker's north (West 132nd Street) and south (West 131st Street) facades, including the terracotta cornice lines, would remain visible from 12th Avenue at West 131st and 132nd Streets, as shown in Figure 2. These facades would also remain visible in views west from Broadway (see Figure 9-48 of Chapter 9, "Urban Design and Visual Resources" of the PDEIS).

The project has been designed to respect the historic and architectural character of the Studebaker Building. As described in Chapter 8, the proposed zoning text for the Academic Mixed-Use Area would waive the mandatory setbacks at grade for the West 131st/West 132nd Street block to preserve the streetwall established by the Studebaker Building. In addition, the proposed project would create new open spaces in the Academic Mixed-Use Area that would provide new publicly accessible locations to view the Studebaker Building and its tower. As shown in Figure 3, the proposed new midblock open area, which would traverse the blocks between West 133rd and West 125th Streets, would provide views of the west façade of the Studebaker Building and its tower. Views north from the proposed open area between West 129th and West 130th Streets would be especially dramatic, as views would terminate at the westernmost bay of the Studebaker Building's south (West 131st Street) façade, which includes the Studebaker logo at the terracotta-clad parapet, the two-story decorative terracotta entrance surround, and the Studebaker tower visible above the cornice line (see Figure 8-24 of Chapter 8).

Furthermore, the south and west facades of the Studebaker Building, including its cornice with the Studebaker logo and its tower would be visible from the proposed new square to be built between West 130th and West 131st Streets. The building's south façade would be visible from West 131st Street between Broadway and 12th Avenue, the north façade visible from West 132nd Street between Broadway and 12th Avenue, with a portion of the west façade visible from these streets in proximity to the proposed midblock open area. Figure 3 depicts the locations where it is expected that the Studebaker tower would be visible, in addition to the facades. Therefore, while views from under the viaduct on 12th Avenue would not include the west façade of the Studebaker Building and its tower, its primary north and south facades would remain visible on West 132nd and West 131st Streets and new publicly accessible open areas would be created where the public would enjoy views of this important resource and tower. Therefore, it is not expected that the proposed Academic Mixed-Use Development would result in significant adverse visual or contextual impacts on the Studebaker Building.

4. Subdistricts B, C and Other Areas are subject to the New York City Department of City Planning's proposed rezoning for Manhattanville. Columbia's proposed Academic Mixed-Use Development, which is subject to the General Project Plan (GPP) to be issued by ESDC and other state actions, would only occur in Subdistrict A. Therefore, the PDEIS has identified a reasonable worst-case development scenario that could result in the rezoning areas (Subdistricts B, C, and Other Areas) which included the identification of projected development sites, and assessed what the effects of that redevelopment could be. Since Columbia has no proposed development plans in Subdistricts B, C, and Other Areas, and ESDC's GPP will not include any redevelopment plans for these areas, there are no state-sponsored development plans in Subdistricts B, C, and Other Areas at this time that would require review by OPRHP.

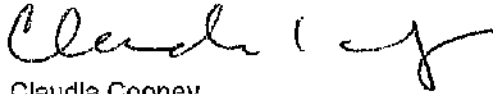
5. Claremont Theater Building, 3320 Broadway

The academic research building proposed on Site 17 would be located across West 134th Street from the Claremont Theater. Since it is located within 90 feet of proposed construction, the Claremont Theater would be included in the Construction Protection Plan to be prepared for historic buildings as described in the PDEIS. Site 17 is presently occupied by a three story building. Development on Block 17 would result in a taller building with a larger footprint. However, it would not block views to the Claremont Theater that are not already obstructed by the existing three-story building on the site. Furthermore, the primary terracotta façade of the Claremont Theater is located at the chamfered corner of Broadway and 135th Street, which faces north/northwest away from Site 17 (which is located to the south). Views of this

decorative portion of the façade would remain unchanged in views south on Broadway, views north on Broadway in proximity to West 135th Street, and on 135th Street. Therefore, development of the proposed academic research building on Site 17 would not result in any significant adverse visual or contextual impacts to the Claremont Theater.

Please let us know if you require any further information or have any questions at (646) 388-9745.

AKRF, INC.

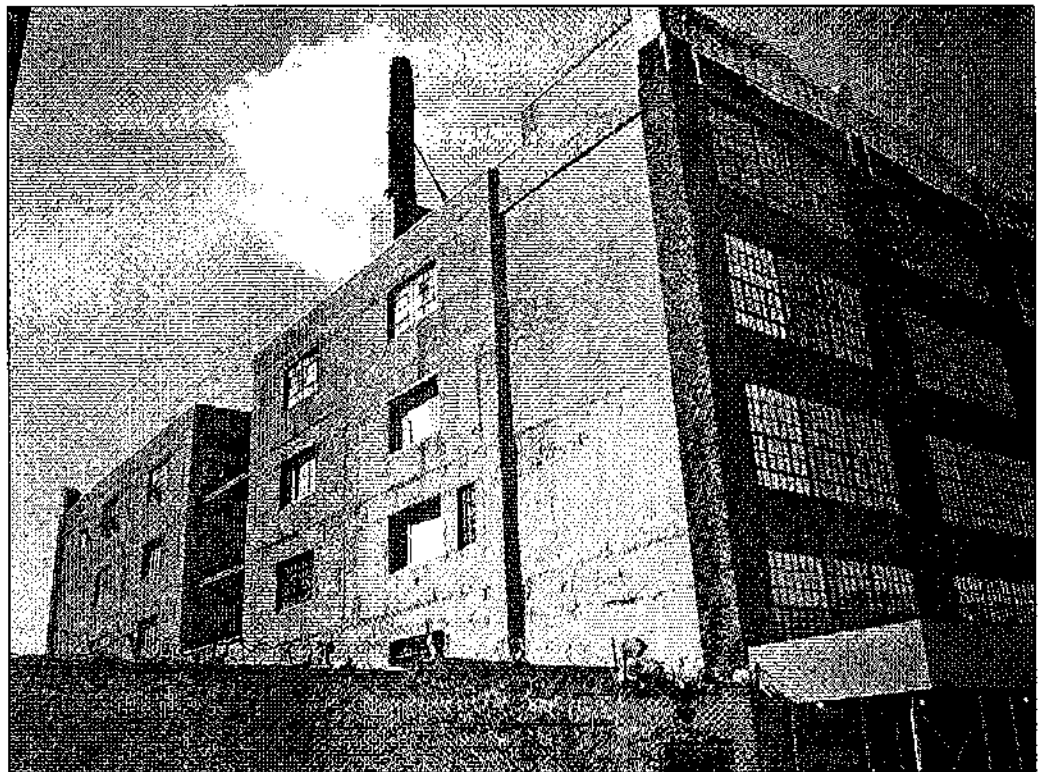


Claudia Cooney
Vice President

cc: Rachel Shatz ESDC
Geoffrey Wiener, Columbia University
Richard G. Leland, Esq., Fried, Frank, Harris, Shriver & Jacobson LLP
Mark Chertok, Esq., Sive, Paget & Riesel, P.C.
David Karnovsky, Esq., New York City Department of City Planning

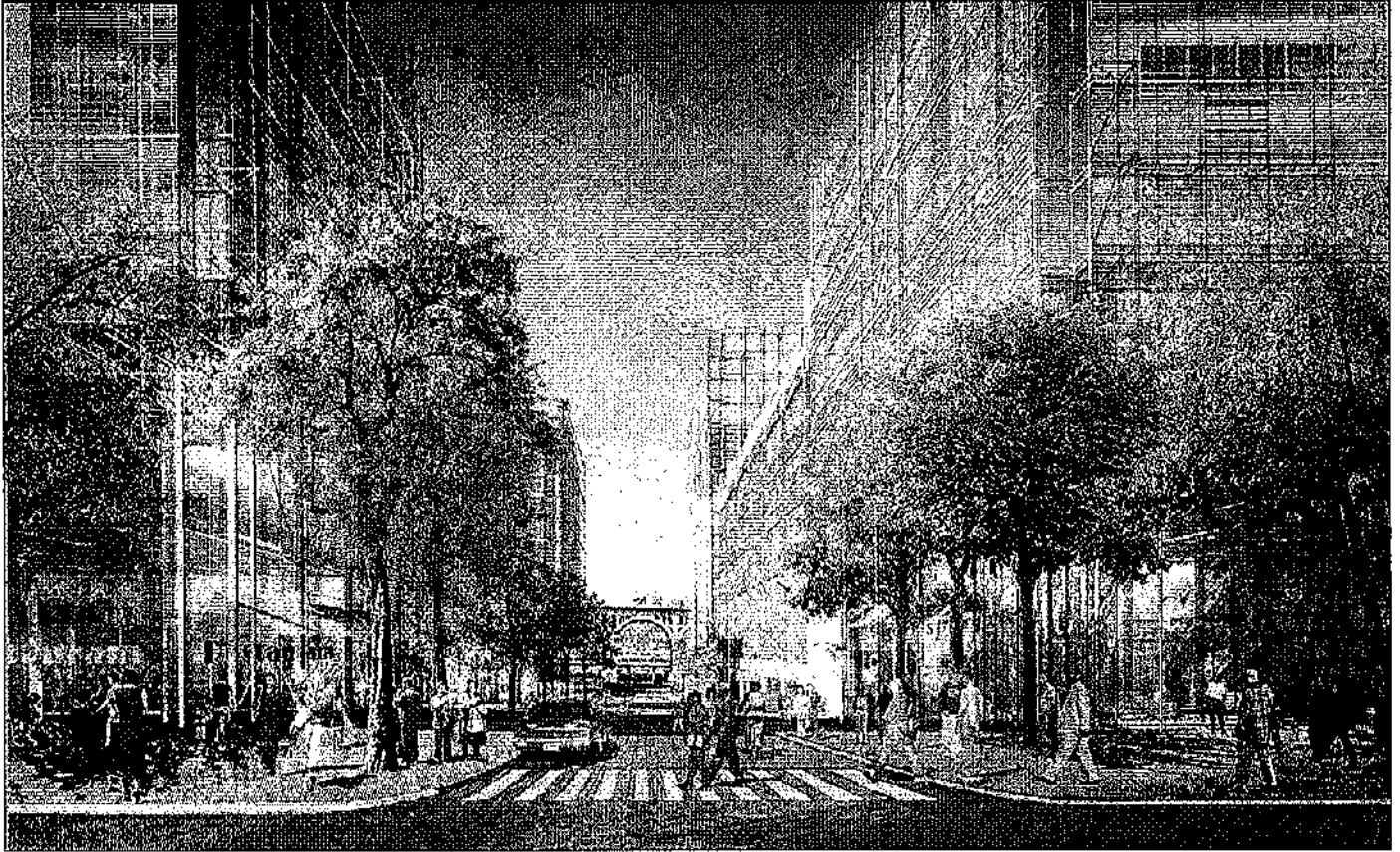


View of east facade of the Studebaker Building from West 131st Street 1



View of east facade of the Studebaker Building from West 132nd Street 2





ILLUSTRATIVE PLAN SHOWN.

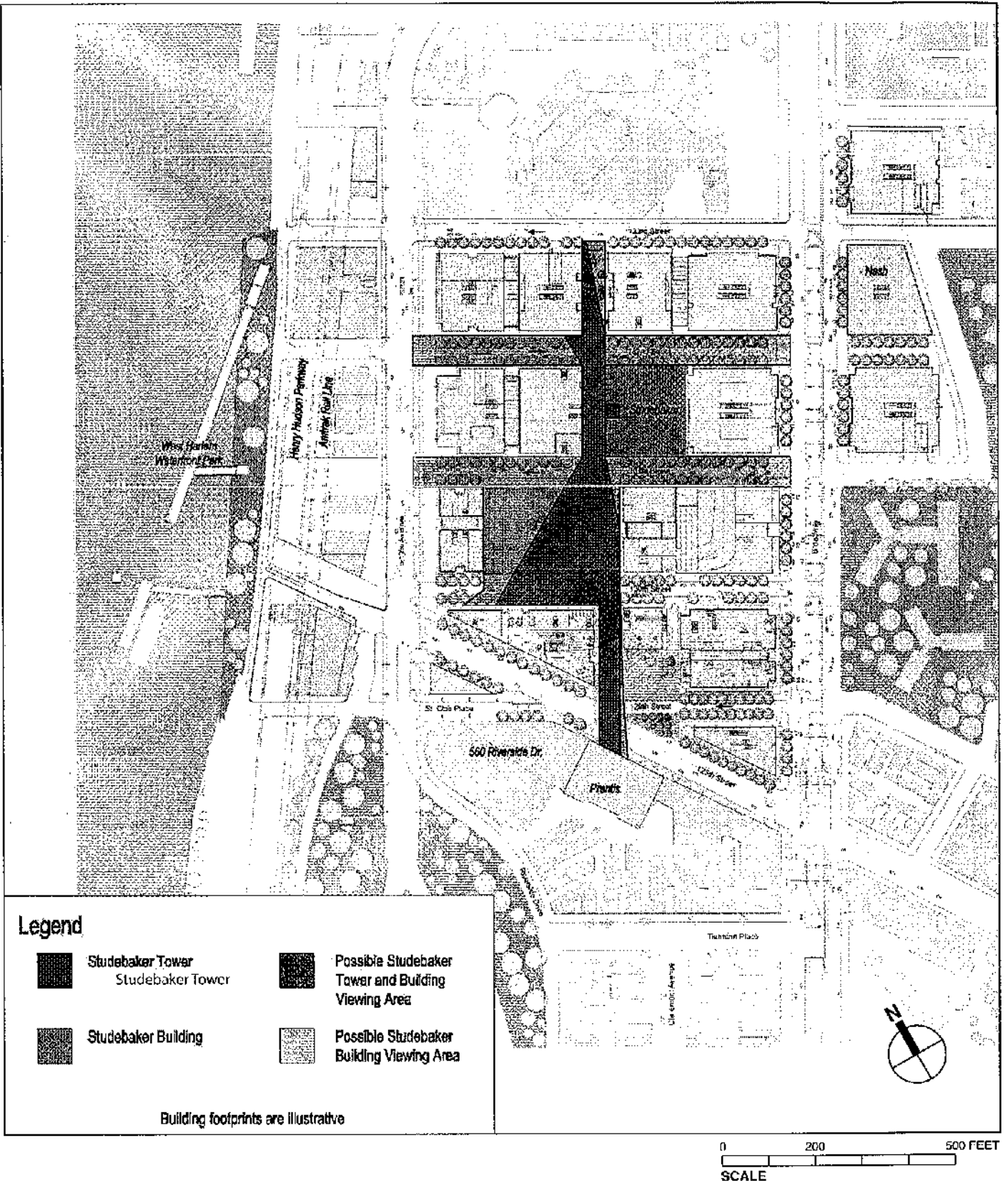


Figure 3
Studebaker Building and Tower - Viewing Locations in the Academic Mixed-Use Area



Figure 8-24
**View from Open Space Between
West 129th and West 130th Streets
Toward Studebaker Tower**



New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

May 11, 2007

Claudia Cooney
Vice President
AKRF
440 Park Avenue South
New York, NY 10116

Re: BSDC
Proposed Manhattanville Rezoning and Academic Mixed-Use Development
New York County
04PR04734

Dear Ms. Cooney:

Thank you for providing the additional information requested for review by the Office of Parks, Recreation and Historic Preservation (OPRHP) for the proposed Manhattanville Rezoning and Academic Mixed-Use Development in Manhattan. We have reviewed the information submitted in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.01.

Based upon our review we offer the following comments:

1. West Mark Diner at 659 West 131st Street We concur that the cinderblock addition and the original 1921 wood diner car possess little historic integrity and as such, we would not advocate for their restoration. We understand that the 1948 Mountain View dining car retains much of its original interior features and that the original exterior metal cladding is still present beneath the brick exterior. As such, we concur that relocating and restoring the 1948 diner would be appropriate. We would like to be consulted on the proposed new location and rehabilitation of this structure. In this case, it is our opinion that moving the structure would not necessarily result an adverse impact to the 1948 diner car since diner cars were designed to be relocated as needed.
2. Studebaker Building, 615 West 131st Street We concur that there would not be significant adverse visual or contextual impacts on the Studebaker building due to the proposed new construction.
3. Claremont Theater Building, 3320 Broadway We concur that the redevelopment of site 17 would not result in significant adverse visual or contextual impacts to the Claremont Theater.

Thank you for your request. If you have any questions, I can be reached at (518) 237-8643, ext. 3282. Please refer to the SHPO Project Review (PI) number in any future correspondences regarding this project.

Sincerely,

Beth A. Cumming
Historic Preservation Specialist - Technical Unit
e-mail: Beth.cumming@oprhp.state.ny.us

cc: Rachel Shatz - BSDC



<Kathy.Howe@oprhp.state.ny.us>

10/02/2007 03:06 PM

To <CCooney@akrf.com>

cc <MHabstritt@aol.com>

bcc

Subject: NY Central Viaduct - request for inventory form

History:

This message has been forwarded.

Claudia,

The SHPO is requesting an inventory form and photos of the NY Central Viaduct (present Amtrak viaduct) in Manhattanville so we can review the structure for National Register eligibility. As we discussed, this structure was not identified in the Manhattanville study.

Sincerely,

Kathleen A. Howe
Historic Preservation Specialist
NYS Office of Parks, Recreation & Historic Preservation
Field Services Bureau
Peebles Island
P.O. Box 189
Waterford, NY 12188-0189
ph. 518-237-8643 ext. 3266
fax 518-233-9049
kathy.howe@oprhp.state.ny.us



New York State Office of Parks, Recreation and Historic Preservation

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October 25, 2007

Eliot Spitzer
Governor

Carol Ash
Commissioner

Claudia Cooney
Vice President
Alice King Rosen & Fleming
440 Park Avenue South
New York, NY 10016

New York, New York

RE: Manhattanville Rezoning and Academic Mixed-Use Development
Historic Resource Evaluation: NY Central & Hudson River RR Viaduct
New York County, NY
04PR04734

Dear Ms. Cooney:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation concerning your project's potential effect upon historic resources. I have reviewed the documentation which you provided in your submission in accordance with the provisions of Section 14.09 of the New York State Historic Preservation Act of 1980.

Based on the documentation provided, it is the opinion of OPRHP that the New York Central and Hudson River Railroad Viaduct, between St. Clair Place and West 137th Street, does not meet the National Register criteria for listing.

If you have any questions regarding this review, please call me at (518) 237-8643, ext. 3266. Please refer to the Project Review (PR) number noted above in any correspondence.

Sincerely,

Kathleen A. Howe
Historic Preservation Specialist

cc: Rachel Shatz, ESDC



<Kathy.Howe@oprhp.state.ny.us>

10/29/2007 11:45 AM

To <MHabstritt@aol.com>

cc <Beth.Cumming@oprhp.state.ny.us>,
<CCooney@akrf.com>

bcc

Subject Manhattanville questions

History: This message has been forwarded.

Mary,

The lead agency for the Manhattanville project under Section 14.09 is ESDC. You should direct your questions concerning the review processes and schedule to Rachel Shatz of ESDC at 212-803-3252.

We received the alternatives analysis for 3229 Broadway on October 16th. Beth Cumming, the technical reviewer for NYC, will be the person reviewing and responding to that report.

AKRF sent us an inventory form on the NY Central & Hudson River RR Viaduct on October 19th. After reviewing the form, I responded on October 25th stating that it is the opinion of the OPRHP that the RR viaduct does not meet the NR criteria.

Thank you for sending me the copies of the submissions you made to the New York City Planning Commission and LPC on historic resources in Manhattanville. Claudia Cooney of AKRF called me last week to discuss your submission on "Historic Resources Needing Further Research or Re-assessment." I have "revisited" the properties on your list that we previously determined not NR eligible and, while the research you provided is useful and provides additional historic context, OPRHP maintains its determination that these properties do not meet the NR criteria.

Sincerely,

Kathleen A. Howe
Historic Preservation Specialist
NYS Office of Parks, Recreation & Historic Preservation
Field Services Bureau
Peebles Island
P.O. Box 189
Waterford, NY 12188-0189
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THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

DCP/06DCP032M

11/8/2007

Project number

Date received

Project: MANHATTANVILLE IN WEST HARLEM REZONING

Comments: The LPC is in receipt of the Construction Protection Plan dated 11/6/07. The text appears acceptable, but LPC will defer to the SHPO.

cc: SHPO



11/8/2007

SIGNATURE

DATE

24070_FSO_GS_11082007.doc



New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

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Eliot Spitzer
Governor

Carol Ash
Commissioner

November 14, 2007

Rachel Shatz
Empire State Development, Corporation
633 Third Avenue
New York, NY 10117-6754

Re: ESDC
Manhattanville Rezoning and Academic Mixed-Use Development
New York County
04PRC 4734

Dear Ms. Shatz:

Thank you for providing the additional information requested for review by the Office of Parks Recreation and Historic Preservation (OPRHP) for the proposed Manhattanville Rezoning and Academic Mixed-Use Development in Manhattan. We have reviewed the information submitted in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

We have reviewed the proposed Construction Protection Plan (CPP) dated November 6, 2007. Based upon our review, we have no further concerns with the proposed protections for the building covered by this plan. If other buildings are determined to require protection, our office will need to review such additions or new CPP's.

Thank you for your request. If you have any questions, I can be reached at (518) 237-8643, ext. 3282. Please refer to the SHPO Project Review (PR) number in any future correspondences regarding this project.

Sincerely,

Beth A. Cumming; BAC
Historic Preservation Specialist - Technical Unit
e-mail: Beth.cumming@oprhp.state.ny.us



New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services • Peebles Island, PO Box 189, Waterford, New York 12188-0189

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Eliot Spitzer
Governor

Carol Ash
Commissioner

November 14, 2007

Rachel Shatz
Empire State Development, Corporation
633 Third Avenue
New York, NY 10017-6754

Re: ESD
Manhattanville Rezoning and Academic Mixed-Use Development
New York County
04PJ:04734

Dear Ms. Shatz:

Thank you for providing the additional information requested for review by the Office of Parks Recreation and Historic Preservation (OPRHP) for the proposed Manhattanville Rezoning and Academic Mixed-Use Development in Manhattan. We have reviewed the information submitted in accordance with the New York State Parks, Recreation and Historic Preservation Law, Section 14.09.

Sheffield Farms Stable is listed on the National Register of Historic Places. As stated in our January 30, 2007 letter, demolition of a National Register listed property constitutes an Adverse Impact as defined by the State Historic Preservation Act. The purpose of the alternatives analysis is to explore all prudent and feasible alternatives to any adverse impact from the undertaking. Based upon our review of the feasibility study that explores the potential of reusing the former Sheffield Farms Stable building at 3229 Broadway, we cannot concur that all prudent and feasible alternatives to demolition have been explored. It is OPRHP's opinion that the option of incorporating the existing building into the proposed new construction warrants further exploration. We concur that the options of retaining half of the building or the facade only are not appropriate given that much of the significance of the building is retained by the interior horse stable remnants.

Sheffield Farms Stable is a rare surviving example of a stable that contributes to telling the story of the role that New York played in the history of public health and milk pasteurization. In the spirit of consultation, during the further exploration we request that consideration be given to using the open space along 129th Street. It seems possible that use of this space, could provide the large-floor plate space needed for a modern science center and retain the Stable better than the proposed L-shaped building alternative. It appears that the open space could be relocated in proximity to the Stable. While this may not be ideal, we hope it will yield a workable solution that retains the rare surviving example of a stable building in Manhattanville.

Thank you for your request. If you have any questions, I can be reached at (518) 237-8643, ext. 3282. Please refer to the SHPO Project Review (PR) number in any future correspondences regarding this project.

Sincerely,

Beth A. Cunningham
Historic Preservation Specialist – Technical Unit
e-mail: Beth.cunningham@oprhp.state.ny.us

APPENDIX D.3

CONSTRUCTION PROTECTION PLAN

CONSTRUCTION PROTECTION PLAN
MANHATTANVILLE IN WEST HARLEM REZONING AND
ACADEMIC MIXED-USE DEVELOPMENT
CEQR NUMBER: 06DCP032M
SHPO REVIEW NUMBER: 04PR04734

As specified in the Draft Environmental Impact Statement (DEIS) for the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development project, a Construction Protection Plan is required to avoid adverse physical impacts on architectural resources that are located close enough (within 90 feet) to the proposed project to be potentially affected by staging, deconstruction, and construction period activities.¹ This Construction Protection Plan was prepared based upon the requirements stipulated in The New York City Department of Buildings (DOB) *Technical Policy and Procedure Notice #10/88*, regarding procedures for the avoidance of damage to historic structures resulting from adjacent construction; the New York City Landmarks Preservation Commission (LPC) guidelines described in *Protection Programs for Landmark Building and Guidelines for Construction Adjacent to a Historic Landmark*; and the National Park Service's *Preservation Tech Notes, Temporary Protection Number 3: Protecting a Historic Structure During Adjacent Construction*. Implementation of this Construction Protection Plan will be undertaken by an engineering firm licensed to practice in the State of New York (the "Inspecting Engineer."), to be selected by Columbia University. The Inspecting Engineer will have documented experience with historic structures.

This Construction Protection Plan focuses on the activities related to site preparation and construction required to build the Academic Mixed-Use Development in Subdistrict A of the proposed Special Manhattanville Mixed-Use Zoning District (the "Project"), to be located on all or portions of blocks bounded by West 125th Street to the south, Twelfth Avenue to the west, West 133rd/134th Streets to the north, and Broadway/Old Broadway to the east in Manhattan (see Figure 1). The proposed project would also include the construction of a multi-level below-grade facility that would provide a variety of supporting services for academic and academic research, utilities, parking and loading areas, and other services that would extend beneath the Academic Mixed-Use Area (including the side streets) from the north side of West 129th Street to the south side of West 133rd Street, from Broadway to Twelfth Avenue (except for the area beneath the Studebaker Building). See Figure 2. Conventional basements would be constructed under new buildings east of Broadway.

As described in the DEIS, the seven architectural resources to be protected are:

1. 1948 Dining Car of the West Market Diner, 659 West 131st Street (S/NR-eligible)
2. Manhattan Valley IRT Viaduct, above Broadway (S/NR-listed, NYC Landmark)
3. 125th Street IRT Subway Station, Broadway and 125th Street (S/NR-listed)

¹ Through its Technical Policy and Procedure Notice (TPPN) #10/88, the New York City Department of Buildings (DOB) outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource. TPPN #10/88 was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures.

Construction Protection Plan

4. Riverside Drive Viaduct, above Twelfth Avenue (S/NR-eligible)
5. Former Warren Nash Service Station, 3280 Broadway (S/NR-eligible)
6. Studebaker Building, 615 West 131st Street (S/NR-eligible, NYC Landmark-eligible)
7. Claremont Theater building, 3320 Broadway (S/NR-eligible, NYC Landmark (partial))

Three of these historic resources are owned by Columbia University: The 1948 Dining Car of the West Market Diner, the former Warren Nash Service Station, and the Studebaker Building. The Claremont Theater is under separate private ownership, and the Manhattan Valley IRT Viaduct, the 125th Street IRT Subway Station, and the Riverside Drive Viaduct are under public ownership. The locations of these resources are shown in Figure 3.

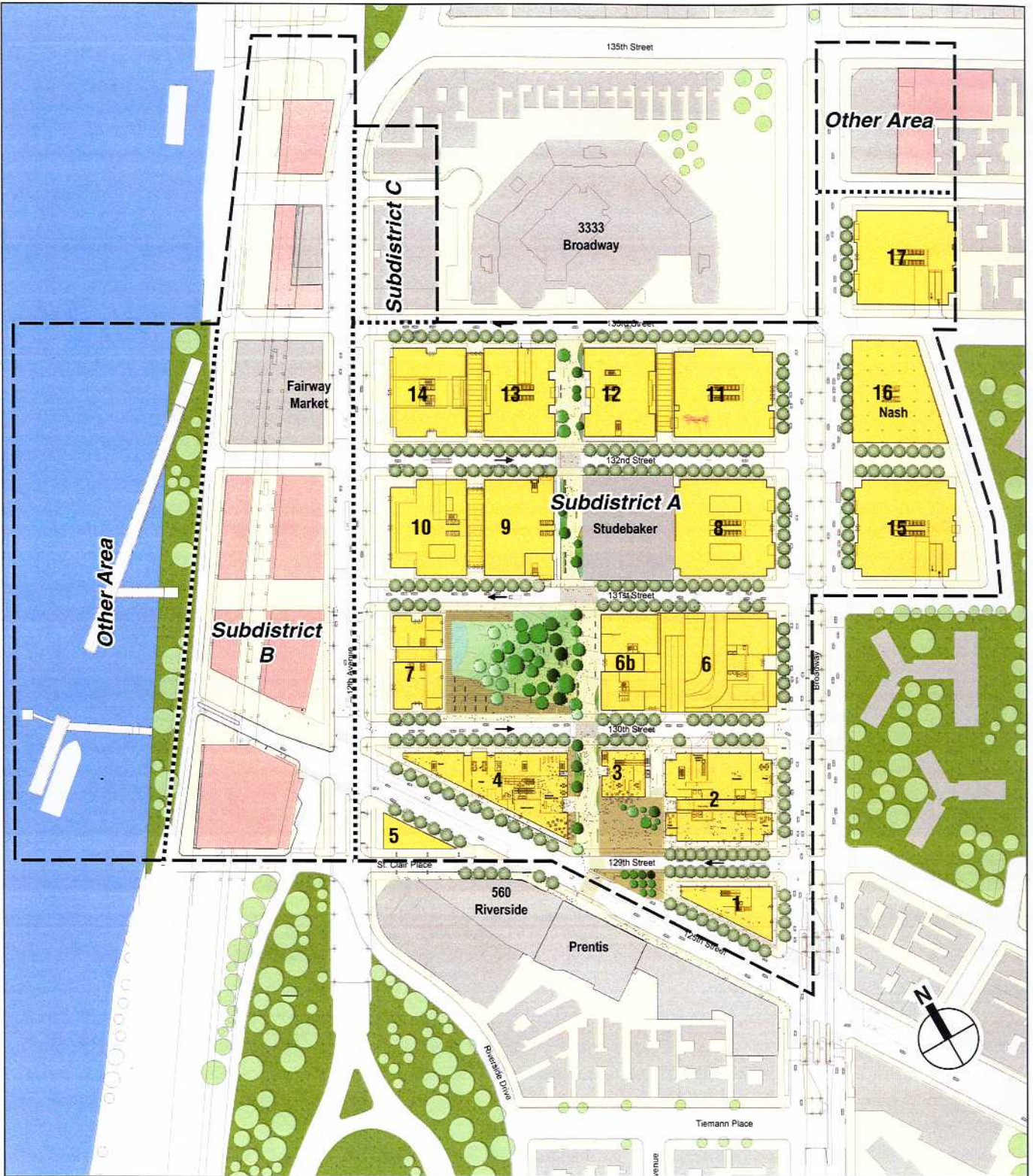
Development of the Academic Mixed-Use Development would occur in stages with a construction sequence moving from south to north, starting at the blocks between West 125th and West 131st Streets and ending at the block between West 132nd and West 133rd Streets. Construction activities include the abatement and demolition of all buildings located in the Academic Mixed-Use Area with the exception of three historic buildings: the Studebaker Building, the former Warren Nash Service Station, and the West Market Diner. The Studebaker Building and former Warren Nash Service Station would be retained and adaptively reused. The 1948 Dining Car of the West Market Diner would be restored and relocated to a new site. Construction also includes the installation of a slurry wall around the perimeter of portions of the below-grade construction area to keep out groundwater (and which may serve as basis for new building foundations), excavation and removal of soils, construction of the new buildings, and interior fit-out of both the above-grade and below-grade spaces.

Construction of the planned below-grade service space would require the following: (a) installation of slurry wall (or similar) systems around selected portions of the construction area perimeter to control the inflow of groundwater and provide temporary excavation support during construction; (b) soil and rock excavation and removal operations; (c) construction of new building foundations and superstructures; and (d) interior fit-out of both the above-grade and below-grade spaces.

Foundation construction likely would include the use of cranes, drill rigs, excavators, back hoes, rock breakers, loaders, pumps (for dewatering), motorized concrete buggies, concrete pumps, jackhammers, pneumatic compressors, a variety of small tools, and dump trucks and concrete trucks.

In addition, excavation operations may include the limited use of controlled rock blasting techniques, where rock cannot be practically removed by conventional excavation methods. All rock blasting activities would conform to the New York City Fire Department (FDNY) regulations and other applicable standards. In general, rock blasting methods involve the use of a controlled series of timed, small explosive charges designed to fracture rock mass, so it can be easily excavated and removed, while limiting the resulting blast intensities and reducing potential impacts.

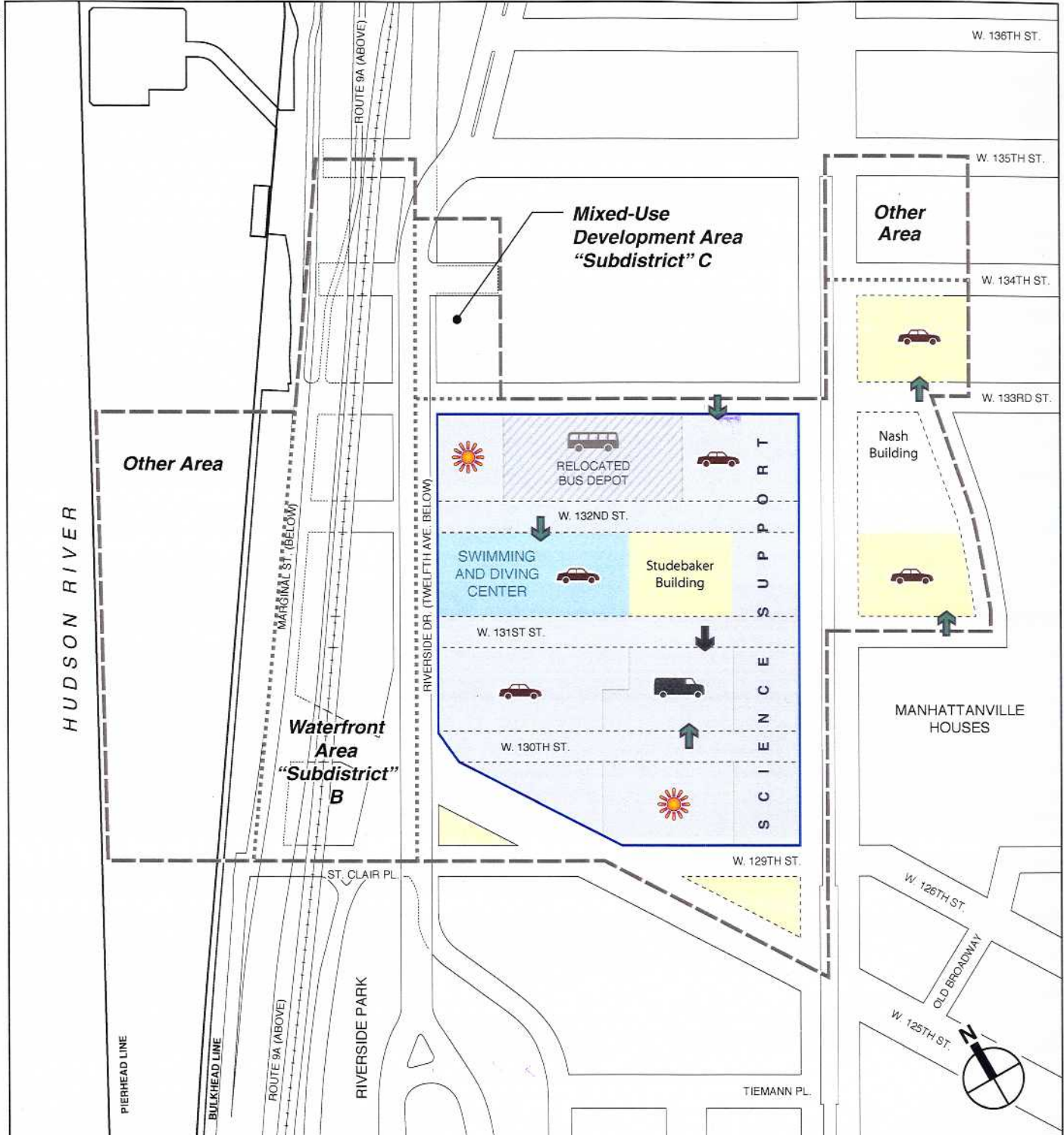
This Construction Protection Plan is designed to address concerns over any potential impacts on the seven properties described above (the "architectural resources") that could result from construction of the proposed project. In summary, the following protective measures will be implemented:



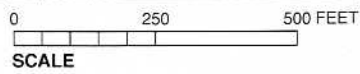
- — — — — Project and Rezoning Area Boundary
- Subdistrict Boundary
- 1** Development Site
- Existing Development
- Columbia University Development
- New Open Space
- Subdistricts B, C, and the Other Areas Projected Development Sites

NOT TO SCALE

Figure 1
Columbia University Development
2030 Illustrative Site Plan

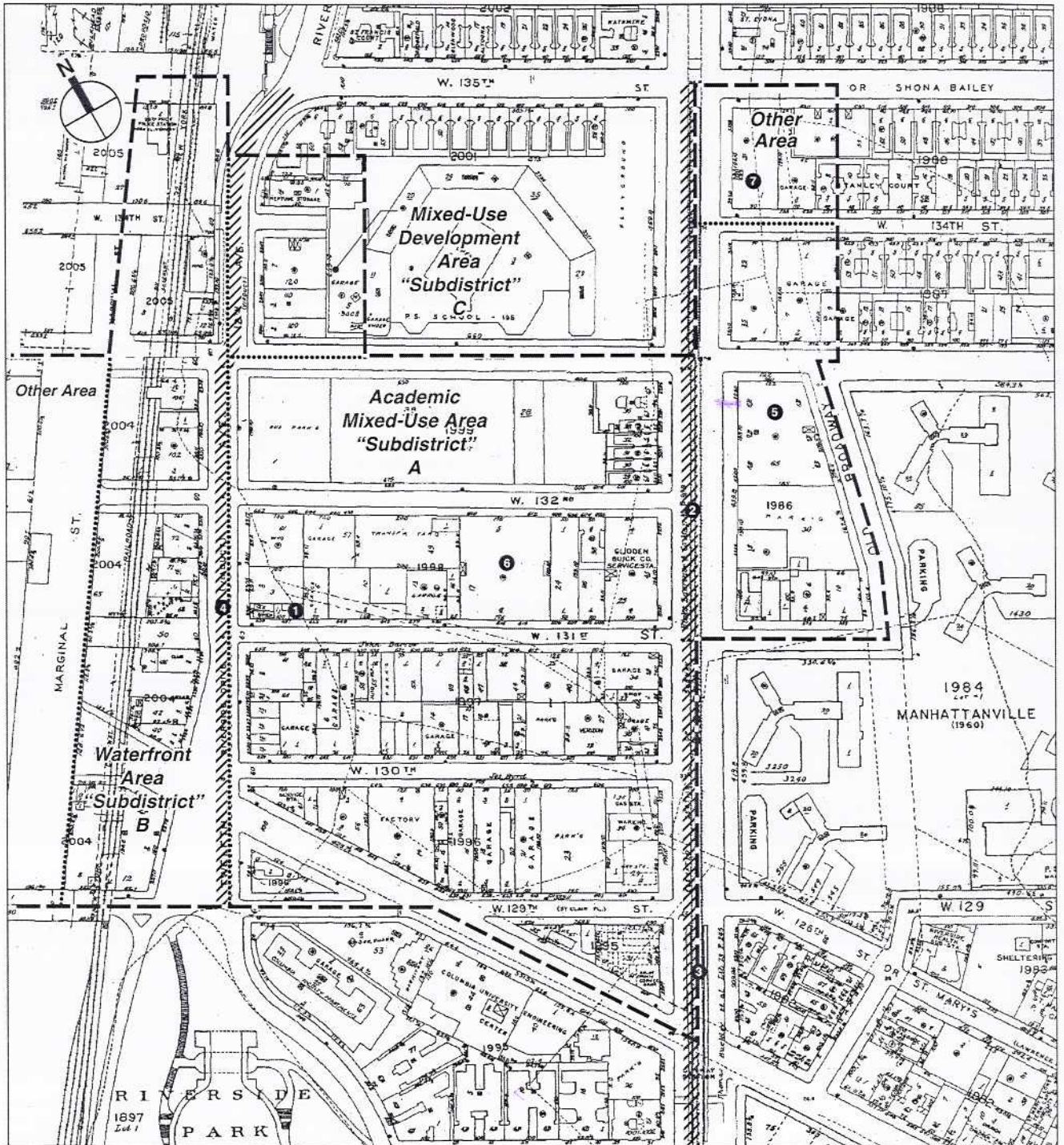





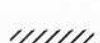
- Proposed Special Manhattanville Mixed-Use District / Project Area
- Subdistrict Boundary
- ▭ Central Service Area
- ▭ Conventional Basement
- ▭ Parking with Swimming and Diving Center Below
- ☀ Central Energy Plant
- 🚗 Below-Grade Parking
- 🚚 Truck Loading
- ➡ Auto Access
- ➡ Truck Access



Note: The former Warren Nash Service Station Building (existing building) does not contain a basement

Figure 2
Proposed Below-Grade Areas:
Illustrative Plan



-  Project Area Boundary
-  Subdistrict Boundary
-  Historic Resource
(Corresponds to List of Resources in the Construction Protection Plan)
-  Historic Viaduct Structure

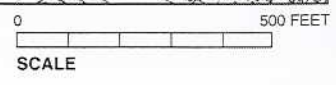


Figure 3
**Locations of Historic Resources
 To Be Protected**

Manhattanville In West Harlem Rezoning and Academic Mixed-Use Development Project

1. Preconstruction inspections and condition surveys of the architectural resources will be undertaken by the Inspecting Engineer, Bovis Lend Lease, to ascertain any pre-existing damage, existing structural distress, and any potential weakness of the foundations or structures of the seven architectural resources. The Claremont Theater will be inspected to the extent permitted by the owner. For buildings, these inspections will include all exterior areas from the ground floor to roof levels, and will include all sidewalks, curbs, pavements, driveways, setbacks, parapets and coping. In addition, interior inspections will be performed (with the owners' prior permission), and will include all accessible public ground floor areas, e.g. lobbies, and subgrade areas and upper floors as appropriate (and subject to accessibility). For the Riverside Drive and Manhattan Valley IRT viaducts and the 125th Street IRT Subway Station, these inspections will be undertaken in coordination with the New York City Department of Transportation (DOT) and Metropolitan Transportation Authority (MTA), and will include all appropriate accessible areas.
2. Written reports will be prepared for each historic resource by the Inspecting Engineer documenting all observed pre-construction building conditions, and identifying any potential weakness or structural distress in the buildings. After completion of the visual survey and inspection of the seven architectural resources, the Inspecting Engineer will make recommendations to Columbia University for any additional monitoring required to adequately monitor, document, and assess ground and building deformations (i.e., movements) over the entire duration of construction, together with any recommended protocols and procedures to adequately protect and preserve the integrity of the structures during the construction activities. These written reports will be supplemented with photo- and video-documentation – in the form of 4” X 6” color photographs keyed to a “key” map or plan and video footage – to adequately document pre-existing building conditions, which are not attributable to the planned construction activities.
3. The majority of the architectural resources (with the exception of the Claremont Theater and the West Market Diner) are located adjacent to proposed project construction.¹ The types and locations of barriers that will be used to protect the architectural resources during construction activities—including sheeting, flagging tape, and construction barriers—will be shown on a plan. Protection shall possess sufficient stiffness and strength and be of adequate dimensions to prevent potential impacts as could be reasonably anticipated from work touching or in proximity to the architectural resources. Protection shall be designed to shield the architectural resources so that no permanent marks or damage shall result from the construction activities. The proposed protection measures will be contained in a plan to be submitted by the Construction Contractor retained by the Inspecting Engineer for review and approval by the Inspecting Engineer. No work that could affect the architectural resources will commence until the protection plan has been submitted to and approved in writing by the Inspecting Engineer, and the Contractor installs the approved protection measures.

¹ The Claremont Theater is located across West 134th Street, an approximately 60-foot-wide street, from Site 17. The West Market Diner would be moved off site prior to development of the block on which it is located, and, therefore, potential impacts are those that could occur from development of the block to the south, across West 131st Street.

Construction Protection Plan

4. Measures to protect significant interior elements in the former Warren Nash Service Station during its rehabilitation for reuse as part of the project will be included in the preservation plan to be prepared for this building by Columbia University's Preservation Consultant, Building Conservation Associates. Measures to protect the West Market Diner to ensure its stability while being moved, stored, and reinstalled in a new location will also be included in the preservation plan to be prepared for that structure by the Preservation Consultant. These preservation plans are separate documents from this Construction Protection Plan, and will be prepared in consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP).¹
5. For buildings, controls on construction vibration will be required as per the DOB and LPC standards and will be specified in the contract drawings to be prepared by the Construction Contractor and approved by the Inspecting Engineer. LPC requirements are for a maximum peak particle velocity of 0.5 inches per second for historic structures and 2.0 inches per second for non-historic structures. For the purposes of this Construction Protection Plan, these guidelines will be adhered to and monitored for the preservation of the four historic buildings. Protection measures and vibration limits for the Riverside Drive and Manhattan Valley IRT viaduct structures and the 125th Street IRT Subway Station will be developed in coordination with DOT and MTA.
6. Columbia University's Construction Contractor (the "Construction Contractor") will thereafter ensure that the appropriate vibration limits and any other criteria deemed appropriate by the Inspecting Engineer are incorporated into the sub-contracts for the construction work, which may include controlled rock blasting methods, use of heavy machinery, and construction vehicle traffic in near proximity to the architectural resources. The Construction Contractor will be responsible for monitoring these controls with periodic inspection by the Inspecting Engineer.
7. Under supervision of the Inspecting Engineer, a Monitoring Consultant will provide continuous vibration monitoring at the seven architectural resources to be protected for the Project. Vibrations will be measured with seismographs installed at pre-established locations, which have been reviewed and accepted by the Inspecting Engineer, within each historic building; at locations and to extents permitted by the owners of the architectural resources. These devices will measure vertical and lateral ground vibrations, and will be located in such a way that they are away from the general public yet accessible throughout construction. Vibration measurements will be recorded at vibration-sensitive locations at different various daytime, evening, and nighttime periods. Vibrations will be monitored and recorded continuously by the recording seismographs and routinely checked by the Monitoring Consultant. The Monitoring Consultant will check the vibration logs daily during controlled rock blasting and weekly during less vibration inducing work. Prior to the start of demolition or excavation operations, these seismographs will be installed and tested to ensure that they are in working order and to enable the taking of baseline readings. The installation and

¹ Columbia University is currently renovating the Studebaker Building for administrative office space. This renovation has proceeded and will continue to proceed in consultation with OPRHP to ensure there are no adverse impacts to the Studebaker Building as a result of alterations to adapt the building for use by Columbia University.

monitoring of the seismographs at the Riverside Drive and Manhattan Valley IRT viaducts and the 125th Street IRT Subway Station will be undertaken in coordination with DOT and MTA. Logs of all seismographic monitoring activities will be maintained and submitted to LPC and/or OPRHP upon request. In addition, the Monitoring Consultant will prepare weekly/monthly seismograph-monitoring reports, which will be submitted to LPC and/or OPRHP upon request.

8. If the specified seismograph monitoring indicates that the project-specific vibration threshold criteria have been exceeded, the Monitoring Consultant will verify the accuracy of the seismograph equipment, and evaluate the possibility of measurement errors. In addition, the Monitoring Consultant will attempt to correlate the recorded event to specific construction activities, which were likely the direct cause of said event. If the measurement is verified, can be directly correlated to specific construction activities, and the recorded measurement exceeds the specified threshold criteria, the Monitoring Consultant will inform the Inspecting Engineer, who will direct the Construction Contractor to stop the work causing this excessive vibration, and the associated architectural resource(s) will be inspected for any possible structural degradation that may have occurred due to the measured excess vibration event. Any such inspections at the Riverside Drive and Manhattan Valley IRT viaducts and the 125th Street IRT Subway Station will be undertaken in coordination with DOT and MTA. Before the work causing excessive vibration is recommenced, the Inspecting Engineer will submit a report to LPC and OPRHP detailing the reason for exceeding the peak particle velocity level and the presence or lack of damage to the architectural resources. If any damage to either resource was sustained, it will be secured, and the work that caused any damage will be altered to reduce the vibration levels to within acceptable limits to avoid further damage. Where damage has occurred, the resumption of all work must be authorized by the Inspecting Engineer. Any repairs that can be reasonably attributed to the Project's vibration activities will be undertaken in consultation with LPC and OPRHP, and in consultation and with the permission of the owners of the architectural resources (including DOT and MTA with respect to the viaduct structures and the 125th Street IRT Subway Station).
9. During excavation, the Inspecting Engineer will monitor any exposed vertical rock faces or fissures, joint orientation, and potential weaknesses to ensure that underground utilities serving the architectural resources are protected from damage.
10. Based on the preconstruction inspection, crack monitors shall be installed as deemed necessary across existing cracks deemed by the Inspecting Engineer to warrant monitoring, to permit changes in crack width to be measured. The crack monitors shall be routinely monitored, as deemed appropriate by the Inspecting Engineer. Should any existing cracks widen at the architectural resources during all construction activities, the crack monitors will be monitored at least on a weekly basis, and more frequently if required, until the Inspecting Engineer deems the cracks to be stable. Should any new cracking occur, crack monitors will be installed over each crack and monitored in the same manner.
11. Staging areas will be identified on a site plan that will show the locations of construction equipment including cranes, bulldozers, and dumpsters and the locations of the seven historic resources to be protected. Staging areas and equipment should be located as far away from the architectural resources as practicable to mitigate the potential for damage.

Construction Protection Plan

12. All other provisions of the New York City Building Code applicable to construction activities, protection of adjacent structures and utilities, and specific sections dealing with excavation and foundation operations will be met. Construction of the Project will be performed in a safe manner with controlled inspections as required by the New York City Department of Buildings. Inspections will include but will not be limited to structural stability and foundation concrete. The Inspecting Engineer is required to be present during these and other operations to monitor the construction progress and conformance with contract documents.

APPENDIX D.4

**FORMER SHEFFIELD FARMS
FEASIBILITY STUDY**

October 15, 2007

**PROPOSED MANHATTANVILLE IN WEST HARLEM REZONING AND
ACADEMIC MIXED-USE DEVELOPMENT
ALTERNATIVES ANALYSIS FOR THE SHEFFIELD FARMS STABLE
BUILDING
3229 BROADWAY, NEW YORK, NY**

I. INTRODUCTION

Columbia University proposes to develop 17 acres in the Manhattanville neighborhood of West Harlem, with approximately 6.8 million gross square feet (gsf) of facilities above and below grade, known as the “Academic Mixed-Use Development.” A Draft Environmental Impact Statement (DEIS) has been prepared to assess the potential impacts of Columbia’s Academic Mixed-Use Development and potential impacts of the rezoning of the larger 35-acre area in which it would be developed (see Figure1).

The area of the proposed Academic Mixed-Use Development is bounded by West 125th Street and St. Clair Place on the south, West 133rd Street on the north, Broadway on the east, and Twelfth Avenue on the west, along with areas east of Broadway between West 131st and West 134th Streets (see Figure 2). The proposed development would allow the University to meet its need for long term growth and modernization, and would consist of up to 17 new buildings. Within this new development, two significant historic buildings would be retained and reused: the Studebaker Building at 615 West 131st Street (eligible for listing on the State/National Register of Historic Places [S/NR-eligible]) and the former Warren Nash Service Station Building at 3280 Broadway (also S/NR-eligible). These buildings have large floor plates, and as such lend themselves for adaptive reuse within the Academic Mixed-Use Development Area. A portion of the West Market Diner (the 1948 dining car), a small historic movable structure located at 659 West 131st Street, would be relocated to a site yet undetermined and restored and reused as a food service facility.

As part of the proposed project, academic research facilities (the University’s scientific research laboratory buildings) are proposed to be built on Broadway. Construction of the first of these academic research facilities, the Jerome L. Greene Science Center for Columbia’s Mind, Brain and Behavior initiative (“Jerome L. Greene Science Center”), is proposed at the location of the former Sheffield Farms Stable at 3229 Broadway, currently operated as a storage facility by Hudson Moving and Storage (see Figures 2-4). This building is listed on the S/NR. The DEIS certified by the New York City Planning Commission (CPC) on June 18, 2007 identified the proposed demolition of the building as a significant adverse impact on historic resources.

Columbia has evaluated the potential for retaining and reusing the former Sheffield Farms Stable in conjunction with the proposed academic research program proposed on the site. This analysis, presented below in greater detail, concludes that it is not feasible to retain all or portions of the former Sheffield Farms Stable as part of the proposed project. The former Sheffield Farms Stable does not meet the requirements for an academic research facility due to its small size and floor plates, lack of infrastructure, outmoded design and construction materials (which make it noncompliant with current building codes), its incompatible floor-to-floor heights, and

Sheffield Farms Stable Building

restrictive column spacing. Furthermore, the alterations required to bring the building up to code would destroy elements of the building that contribute to its historic significance. In addition to these physical and structural constraints, retaining all or a portion of the building would significantly alter the proposed purpose of the Jerome L. Greene Science Center and adversely impact the usability of the proposed below-grade research support space.

II. PROPOSED MANHATTANVILLE DEVELOPMENT PROJECT

PURPOSE AND NEED

Columbia University's two main campuses are both in upper Manhattan: Morningside Heights, at Broadway between West 114th Street and West 120th Street, and the Columbia University Medical Center (CUMC) at Broadway and West 168th Street. As described in greater detail in Chapter 1, "Project Description," of the DEIS, the University is committed to continuing and expanding its teaching, research, and community service in northern Manhattan, but this requires that space be constantly added and upgraded. This need for growth is precipitated by major changes in academic research, the focus on interdisciplinary approaches, and the advent of new teaching and research technologies. These changes require that new buildings be constructed in close proximity with larger floor sizes than has been typical in the past.

In recent years, Columbia has renovated and expanded existing buildings, replaced buildings, filled in the remaining spaces on its Morningside Heights and CUMC campuses where development is feasible, and acquired and built on properties near its campuses when they have become available. However, there is little opportunity for new development at either of these locations. Assuming current trends continue Columbia estimates it will need 5 to 6 million gross square feet (gsf) of new program space over the next 25 years. Thus, Columbia has identified a portion of West Harlem known as Manhattanville, characterized by auto repair businesses, parking facilities, moving and storage facilities, and low-density commercial and industrial buildings, between the Morningside Heights and CUMC campuses, as the only reasonable location to expand for the future with a strategic, rational plan. Within a dedicated area for expansion, Columbia can promote integration among disciplines and schools, create an environment that will foster new areas of education and academic research, and provide amenities for both Columbia's population and local residents.

The Academic Mixed-Use Development would allow the University to meet its need for long term growth and modernization, retain and attract top-tier faculty, researchers, and students, maintain and enhance its position as a world-class research university, and contribute to the position of the City and State of New York as a leading center of higher education and academic research. Development would consist of up to 17 new buildings, all of which (other than retail and other active ground floor uses) would be used for university purposes. The new buildings would range in height from 140 feet to 260 feet to the roofline (without mechanical equipment).

Essential to the function of Columbia's proposed academic research facilities is the creation of a below-grade space that would provide vital academic research support space and would also be used for the central energy plants, parking, off-street loading, and storage. The below-grade service area would extend beneath the Academic Mixed-Use Area (including the side streets) from the north side of West 129th Street to the south side of West 133rd Street, from Broadway to Twelfth Avenue (except for the area beneath the Studebaker Building). It would be a continuous area containing approximately 2 million gsf (see Figure 5). This central service area would accommodate specialized research support activities in a continuous corridor along the

west side of Broadway, linking the academic research buildings above, and would remove the important, but unsightly, support functions, such as energy plants, parking, receiving and loading facilities from above grade. Centralizing these activities underground and interconnecting them under public streets that would remain fully open at grade (aside from temporary closures for construction) would have several important benefits: 1) the street level would be reserved for more pedestrian-friendly uses, such as stores, restaurants, community services, and an interconnected network of open spaces, facilitating the goal of creating visually open and accessible space along the base of the buildings; 2) the below-grade parking and loading facilities would minimize vehicular presence on the streets; and 3) having a major portion of the new development served by a single support facility, with easy connections throughout, would increase the efficiency of campus support functions.

PHASED DEVELOPMENT PROGRAM

The Academic Mixed-Use Development would be developed gradually over 25 years, from south to north, with the first new buildings located between West 125th and West 130th Streets. The development, which would take place in stages, commencing from the south and proceeding north, has been designed to fulfill two of the project's goals with respect to development that: 1) allows for Columbia's expansion to occur in a consolidated area to create an integrated, urban campus environment, which would promote interaction among students, faculty, and researchers of all disciplines; and 2) facilitates the city's goal to enliven and activate 125th Street as the gateway to the West Harlem Waterfront park, which is now under construction. Therefore, the first phase has been designed to contain a critical mass of facilities that together create a first phase self-contained campus in a contained geographic area (see Figure 6). In Phase 1, five new buildings (one academic research, three academic, and one academic/housing for graduate students, faculty, and other employees) would be developed on the north side of West 125th Street and on the east side of Twelfth Avenue between West 130th and West 131st Streets.

The initial phase of development would encompass the entire block on which the Sheffield Farms Stable is located—the block between West 129th and West 130th Streets and Broadway and Twelfth Avenue—where three new buildings would be built: the Jerome L. Greene Science Center (on Site 2 on Broadway), a new home for the Columbia Business School (at the western end on Site 4), and a smaller mid-block academic building on Site 3 for the Columbia Business School and the School of the Arts (see Figure 6). The first phase of development would also include an academic building on Site 1 west of Broadway between West 125th and West 129th Streets to be used for the Columbia Business School and the School of the Arts and a building containing the School of International and Public Affairs and housing for graduate students, faculty, and other employees on Twelfth Avenue between West 130th and West 131st Streets (Site 7). Active ground floor uses and a publicly accessible landscaped plaza on the north side of West 129th Street would create an open and accessible environment that would complement the West 125th Street streetscape improvements currently being developed by the City and the existing Columbia buildings across West 125th Street, including the S/NR-eligible former Sheffield Farms Dairy (now Prentis Hall), which would be renovated and reused.

The interconnected below-grade service area would also be constructed in stages. The initial phase of the below-grade facility would include the entire block between Broadway, Twelfth Avenue and West 129th to West 130th Streets, where a central energy plant and academic research support facilities that would serve much of the rest of the campus, as well as some academic and academic research program space, would be located. The fully completed space

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dedicated to science support would extend beneath the academic research facilities along Broadway for a distance of approximately 150 feet west from the Broadway lot lines. This would allow accessibility directly from the above-grade portions of the buildings to the science support space and create an efficiency of space by allowing the above-grade buildings to share support space, rather than duplicating it in single basement buildings.

Immediately west of the science support space between West 129th and West 130th Street would be the central energy plant. The central energy plant would generate steam and hot water to service the Academic Mixed-Use Area's heating demand and to drive mechanical air-conditioning equipment for the development anticipated to be operational in Phase 1. The central energy plant would need to be located in its present location beneath the open space that would be built west of the Jerome L. Greene Science Center, to allow access from grade in the future. This would be accomplished through at-grade lift panels directly above the energy center (present engineering locates the lift panels in the approximately 60-foot by 30-foot area between the Jerome L. Greene Science Center on Site 2 and the proposed small building to the west on Site 3 (see Figure 6). At grade access is a critical requirement to allow for the changing out and addition of required equipment to the energy center, given that the central energy plant design is modular and is intended to grow with the construction of each project phase. Placement of the lift panels between the buildings has been designed so that it does not affect the open space on West 129th Street. Further, the central energy plant would need to be located in proximity to the Jerome L. Greene Science Center, as the cooling towers and stacks for this facility are, for engineering and aesthetic reasons, planned to be located on the roof of the Jerome L. Greene Science Center. The width of the science support space is dictated by the presence of the Studebaker Building, which would be retained on the block between West 131st and West 132nd Streets (and its conventional basement retained), and the placement of the central energy plant.

Columbia expects the entire Academic Mixed-Use Development to be completed by 2030. The new buildings would include a mix of academic and academic research space, housing for graduate students, faculty and other employees, and recreation facilities and open space.

By 2030, up to 4.8 million gsf of space would be developed above grade, including 2.6 million gsf of academic research space, and 2.0 million gsf would be developed below grade.

III. PROPOSED JEROME L. GREENE SCIENCE CENTER

PROPOSED ACADEMIC RESEARCH IN MANHATTANVILLE

Columbia University's Academic Mixed-Use Development would place up to seven academic research buildings along both sides of Broadway, creating a nexus for academic research (see Figure 2).

The consolidation of academic research sites along Broadway follows the University's plans to bring together basic, applied and medical science research in a cohesive complex of buildings. This concentration of academic research buildings will further foster the interdisciplinary nature of the sciences envisioned for development in Manhattanville over the next two decades by allowing the placement of research programs from varying disciplines in close proximity to one another. This corridor also provides the ability to connect the five academic research sites that are west of Broadway below grade, which will allow the University to provide broad access to highly specialized core facilities and maximize connections to the below-grade space. As noted above, provision for below grade access and connectivity is an integral component of the

academic research program as it will both facilitate shared use for research and allow the efficient maintenance and operation of these costly resources. The first academic research building, the Jerome L. Greene Science Center, will be developed with below-grade research support facilities that will serve the needs of its own scientists as well as some of the needs of the remainder of the science campus.

PURPOSE AND NEED OF THE JEROME L. GREENE SCIENCE CENTER

The Jerome L. Greene Science Center will serve as the intellectual home for Columbia's expanding research initiative in Mind, Brain and Behavior. The Jerome L. Greene Science Center is made possible by a gift from Dawn M. Greene and the Jerome L. Greene Foundation, to honor Mrs. Greene's late husband, Jerome L. Greene, a Columbia alumnus and prominent New York lawyer, real estate investor and philanthropist. The gift is valued at more than \$200 million, and is contingent on the construction of the Jerome L. Greene Science Center during the first phase of campus development.

The Jerome L. Greene Science Center will be led by the renowned neurobiologist Dr. Thomas Jessell, and Nobel laureates Dr. Richard Axel and Dr. Eric Kandel. The Center will include laboratories in which the University's scientists will explore the causal relationship between gene function, brain wiring, and behavior—research which will have implications for the treatment of brain illness—probing the root causes of neurodegenerative diseases, such as Parkinson's and Alzheimer's, and motor neuron diseases, among others—and which will also assist in decoding disorders of mood and motivation, cognition and behavior, such as autism, dementia and schizophrenia. It will also establish an educational outreach facility and clinical programs with a focus on childhood developmental disorders and diseases of the aging brain.

Columbia is committed to expanding the realm of traditional neuroscience to include other disciplines such as psychology, philosophy, anthropology, and sociology on the more macroscopic level, and physics, chemistry, bioengineering, nanotechnology, and computer sciences on the other. To that end, the recent establishment of the Center for Neuroscience Initiatives (CNI) to coordinate the creation of a Department of Neuroscience, and plans for the new Jerome L. Greene Science Center are the first phase of development for this comprehensive and interdisciplinary Mind, Brain and Behavior initiative.

REQUIREMENTS FOR MODERN ACADEMIC RESEARCH FACILITIES

Modern academic research requires facilities that support new research and cross-discipline interaction have specific performance and design requirements.

As shown in Table 1, the typical size of academic research buildings built today by universities and other research institutions is a minimum of approximately 250,000 gsf. As described in the DEIS, this minimum space need is largely based on the fact that modern wet lab research requires 10 to 12 principal research investigators (Principal Investigators) working in proximity on one floor, with each Principal Investigator averaging 2,500 gsf per team.¹ This translates into

¹ Floor area per investigative team is defined in two ways: assignable square feet, which is the floor area that qualifies for federal research grants, and gross square feet, which includes all space on the floor (e.g., labs, support, corridors, offices, mechanical, etc.). Generally, the goal is to have assignable floor area represent at least 60 percent of gross floor area. Thus, the average gross floor area per team of 2,500 gsf is equivalent to assignable floor area per team of at least 1,500 gsf.

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a need for a floor plate of at least 25,000 gsf. This size also accommodates the scale of scientific activity necessary to support specialized and expensive shared equipment and support facilities.

**Table 1-1
Recently Constructed and Proposed Academic Research Buildings**

Facility	Total Building Floor Area	Gross Square Feet per Floor	Principal Investigators per Floor	Year Built
University of Pennsylvania School of Medicine—Biomedical Research Building II/III	384,000	23,480	10	1999
University of Rochester—Kornberg Medical Research Building	290,000	40,187 ¹	20 ¹	1999
Princeton University—Lewis-Sigler Institute for Integrated Genomics and The Carl Icahn Lab	138,000	46,500	12	2000
University of Colorado HSC—Research Complex 1	601,000	35,000	20	2001
University of Minnesota—Molecular & Cellular Biology Building	263,000	32,511	16	2002
Johns Hopkins School of Medicine—Broadway Research Building	363,000	25,500	12	2004
Memorial Sloan Kettering—Cancer Research Building	629,000	22,000	8 ²	2005
Ohio State University—Biomedical Research Tower	400,000	32,000	16	2005
University of Michigan—Biomedical Science Research Building	492,000	45,123 ¹	22 ¹	2006
Cornell University—Life Sciences Technology Building	258,000	33,333	12	2008
University of Colorado HSC—Research Complex 2	400,000	28,000	15	2008
University of Wisconsin—Interdisciplinary Research Building	445,000	38,333 ¹	18 ¹	2008
Harvard University—FAS Northwest Laboratory	465,000	51,993	15	2008
Rockefeller University—Collaborative Research Center	270,000	28,000	12	2009
Mount Sinai School of Medicine—Center for Science and Medicine	410,000	28,000	12	2011
City College of New York—Advances Science Research Center	289,000	37,800 ¹	25 ¹	2011
Notes: 1. Buildings accommodate 10-12 principal investigator teams in two separate wings. 2. Floor plate is smaller than optimal, because this constrained site was the only one available to Memorial Sloan-Kettering.				
Source: Jacobs Consultancy				

Features required to support the modern academic research facility include:

- Flexibility and Adaptability
- Shared Spaces

- Large Floor Plates
- High Floor to Floor Heights
- High Performance Mechanical and Centralized Utility Systems

Each of these requirements is described in further detail below.

1) Flexibility and Adaptability

- i. The base unit of measure in modern academic research buildings is the lab module (see Figure 8). This is the unit of space generally dedicated to a Principal Investigator with a research group. A typical lab module contains 6 to 7 lab benches (accessible sides) and associated adjacent research support space (as shown in Figure 8, most lab benches are arranged in double-sided units with two accessible sides). The lab module forms the basis for efficiently managing research programs over time. The size and number of modules assigned to a particular Principal Investigator varies depending upon the type of research being conducted, the level of grant funding associated with that Principal Investigator and the resulting number of researchers in his or her group. Certain types of research, such as cancer research and systems neuroscience require more space than a typical lab module provides because research groups in these fields tend to be larger and their specialized science support space needs tend to be greater.
- ii. It is important that modern academic research space provide for flexibility and adaptability of the basic lab module components. Over time researchers needs change, expanding and contracting with advances in technology and shifting emphasis in scientific direction. Generic spaces that can readily accommodate changes are critical and are even more important for interdisciplinary research, such as that to be conducted at the Jerome L. Greene Science Center. The National Institutes of Health (NIH) “Research Laboratory Design and Policy Guidelines” provide criteria for those projects to be funded by Federal programs and states “The goal of these guidelines is to produce laboratories that are adaptable. This concept encourages generic spaces with the ability to readily accommodate changes in function (within the same space category) without requiring significant physical or infrastructure changes to the space itself and within budget constraints. Excessively and individually planned, non-generic, or customized spaces are to be avoided.”¹
- iii. The generic academic research spaces are best fit in a rectangular plan. A simple rectangular shape provides flexibility for expansion and contraction of space allocation quickly and without costly and time-consuming alterations to the facility. The advantages of an open, rectangular floor plan that allows for the creation of adaptable/flexible labs are immeasurable in terms of avoiding major disruptions to ongoing research programs necessitated by costly renovations. In addition, the rectangular shape can function with only one corridor, thus minimizing any loss of space due to additional corridors, which could lead to the need to duplicate support facilities, and other obstructions.

¹ National Institutes of Health, “Research Laboratory Design and Policy Guidelines,” p. B-4.

2) Shared Research Support Spaces

Critical to the success of a highly interdisciplinary research program is the provision of shared research support, such as procedure rooms, environmental rooms and high resolution imaging equipment. These types of spaces need to be in close proximity to investigator laboratories, their offices and meeting rooms (see Figure 8). Modern academic research buildings have some of these uses located on each floor to enhance interaction among the scientists with easy access to instruments, equipment, files, and important supplies. The shared interactive functions must serve the needs of all research groups' requirements on the floor, but may also serve the broader needs of the building's entire science community.

3) Large floor plates

Large floor plates are mandated by at least three functional and space criteria:

- i. The need for shared spaces mandates large open floor plates of at least 25,000 gsf to allow for an optimal number of Principal Investigators working in proximity on each floor, to accommodate the required uses per floor (lab benches and support facilities), and to allow for research groups from various disciplines to interact. As described above, an optimal floor layout with 10 Principal Investigator units, averaging 2,500 gsf apiece, results in a 25,000 gsf floor plate. The creation of an environment conducive to interaction, or a research "neighborhood," is facilitated by a floor plate design with a minimum of obstructions, that is as column-free as possible, and allows for physical and visual contact between researchers and associated staff. The rectangular floor plan best meets this requirement as it is conducive to easy access between laboratories and support space.
- ii. Modern research methodologies have required an increase in the proportion of research support space to lab space per floor—to a ratio of approximately 1 to 1, requiring a large floor plate to support both the research and support space on the same floor. This increase in support space reflects the advent of highly sophisticated analytical technologies, the widespread use of space intensive computerized data analysis systems, and the introduction of imaging and gene sequencing equipment, all in direct support of laboratory bench research. These new and emergent technologies must be located largely outside of the lab proper, due to their demanding environmental and space requirements, but remain easily accessible by the researchers on each floor. Therefore, it is important to have a floor plate that is large and conducive to easy access between laboratories and all forms of support space.
- iii. Floor plates of at least 25,000 gsf allow for a basic efficiency (or ratio) between usable lab space (such as lab benches and offices) and total space (including non-usable but necessary areas such as stair towers, ventilation shafts, public corridors, elevators, etc.). Usable space is generally lower when the floor size is smaller, given that stair towers, ventilation shafts, public corridors, and elevators are required irrespective of size—they do not decrease in proportion to total floor area. Since the federal government's overhead reimbursement rates for laboratory science grants is based on assignable square feet (i.e., usable

space), if the proportion of usable floor area drops too low, the institution cannot fully recover its base operating costs.

4) High Floor-to-Floor Heights

To effectively support the work of the scientists it is imperative that modern academic research facilities have high floor heights of typically between 14'-6" to 16 feet to accommodate infrastructure systems that would otherwise take up valuable lab space and impinge on the clear access required to accommodate large lab equipment. This height provides for approximately 10 feet of clear ceiling height, and 4.5 to 6 feet of mechanical distribution and structural zones (see Figure 9). The systems required to support the research space located within the mechanical and structural zones include:

- heating, cooling, and general ventilations systems;
- robust electrical distribution for analytic imaging and computing systems;
- supplemental cooling systems to support sensitive analytical and laser imaging apparatus;
- distribution of piping to support plumbing, compressed air, vacuum, gas and sprinkler systems;
- biological and chemical fume hood duct work; and
- network and computational data wiring.

5) High Performance Mechanical and Centralized Utility Systems

In addition to the systems that would be contained in the area above the finished ceiling, other essential equipment for wet laboratories includes lighting, adequate numbers of chemical fume hoods to meet new demands, sinks, and de-ionized water outlets. Essential air handling equipment, exhaust fans, cooling towers, fume hood exhaust manifolds, elevator machine rooms, and stair bulkheads are also required and would terminate on the roof. To be most efficient and environmentally sensitive, academic research buildings are typically served by a central plant that supplies steam and chilled water (the majority of medical centers and university campuses are typically served by a central utility plant; local examples in New York City include Rockefeller University, New York University Medical Center, and Mount Sinai Medical Center). Research buildings require uninterrupted utility service, because most studies require temperature-controlled environments full-time. As described above, the energy plant for the proposed project would be located on the block between Broadway, Twelfth Avenue and West 129th and West 130th Streets (see Figure 5).

PLACEMENT OF THE ACADEMIC RESEARCH CORRIDOR ON BROADWAY

Locating uses within the Academic Mixed-Use Area has been influenced by the needs to have a campus that is both programmatically and operationally efficient, and in consideration of important visual and community amenities in the surrounding area. Academic research facilities are by nature bulky due to their large floor plate size. As such, they are more suitably located along avenues rather than cross streets. Therefore, the choices for the academic research corridor were Broadway and Twelfth Avenue.

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Since Twelfth Avenue is adjacent to the waterfront park presently being developed along the Hudson River and the historic Riverside Drive viaduct, the proposed zoning would require that development sites along this frontage be set back 30 feet from the property line, creating widened sidewalks. As described in Chapter 1 of the DEIS, widening the sidewalk on Twelfth Avenue sufficiently to open up views of the Riverside Drive viaduct and providing height limits to the proposed buildings on Twelfth Avenue to protect views of and from the Riverside Drive viaduct are two objectives of the proposed project. To fulfill these objectives, the parcels along the Twelfth Avenue frontage would not be as deep as those on Broadway (generally 30 to 40 feet less, and heights would also be lower (generally 20 to 50 feet less) to reduce building bulk along Twelfth Avenue. .

Further, since only the east side of Twelfth Avenue is located within the Academic Mixed-Use Development Area, there are not sufficient sites along Twelfth Avenue to accommodate the proposed academic research corridor of approximately 2.6 million (above grade) gsf. As described above, the academic research buildings require a rectangular plan, and there are only three sites available in the Academic Mixed Use Area on the east side of Twelfth Avenue for academic research facilities (see Figure 2). This is in contrast to the six sites that are available along both sides of Broadway in the Academic Mixed Use Area. Therefore, Broadway was selected as the optimum location for the academic research corridor as it provides sufficient sites to fulfill the program, allows for a grouping of academic research facilities to foster interdisciplinary research, and allows for most of the academic research facilities (those west of Broadway) to be connected by the below-grade support space.

PROPOSED JEROME L. GREENE SCIENCE CENTER PROGRAM

The Jerome L. Greene Science Center is expected to be a 10-story building with eight floors of academic research above two non-laboratory floors that would include active ground floor uses. An additional two mechanical levels will be located on the roof (see Figure 7). The Jerome L. Greene Science Center will include sophisticated research laboratories in which Columbia Principal Investigators will explore the relationship between gene function, brain wiring, and behavior. The space program is based around a critical mass of no less than 75 to 80 Principal Investigators situated in proximity to one another working principally in the neurosciences but supported by investigators from biological sciences, psychology, physics, chemistry, bioengineering, nanotechnology, and computer sciences. This range of Principal Investigators is critical in allowing Columbia to create an interdisciplinary Neurosciences program, which is the foundation of the Mind, Brain and Behavior initiative. (A strictly neurological research building without the interdisciplinary component would not require as many Principal Investigators to be housed in one building).

This larger community of scientists will function in research neighborhoods of between 9 and 10 Principal Investigators on each of 8 primary research floors, proposed on floors 3 through 10 of the building. This number of principal research investigators is at the lower end of the desirable range of 10 to 12 researchers per floor that has been found to result in high levels of collaboration among research groups and high efficiency in the utilization of specialized equipment that is shared among all the laboratories on the floor. In addition, the physical size of each lab will need to be larger due to the Neurosciences' reliance on large-scale behavioral research, complementary electrophysiology suites, and specialized analytical set-ups, which require more researchers and research support space than in a typical wet lab. In the Neurosciences, each Principal Investigator will typically have 10 to 12 researchers in his or her lab (including graduate students, postdoctoral research fellows, and other research staff),

whereas many other types of wet lab research tend to have smaller research groups.¹ These equipment and personnel requirements increase the overall space allocation per Principal Investigator to an average of approximately 3,500 gsf and result in the need for a larger floor plate of between 35,000 and 40,000 gsf.

The lower two floors will contain more publicly accessible uses, including retail and other community services. The proposed zoning text for the Special Manhattanville Mixed-Use Zoning District requires such uses along the Broadway frontage. The 8 research floors will form the backbone of the building. Each typical floor of approximately 37,000 gsf will house lab modules (which typically consist of lab benches, with reagent rack and piped services for gas, water, compressed air, etc., and floor standing equipment and circulation space), equipment rooms, shared lab support spaces, and academic offices and meeting space to support between 9 and 10 Principal Investigators and their associated research groups (see Figure 8). This will result in approximately 297,000 gsf of research space. This is comparable in size to other academic research buildings typically built today by universities and other research institutions, which is a minimum of approximately 250,000 gsf (see Table 1). Examples include facilities recently built or under development by the University of Pennsylvania, University of Michigan, Cornell University, and Harvard, among others. This building size accommodates the scale of scientific activity necessary to support specialized and expensive shared equipment and support facilities.

IV. EXISTING CONDITIONS

The site of the proposed Jerome L. Greene Science Center consists of a gas station, 2 one-story auto-repair buildings, 2 parking lots, and the former Sheffield Farms Stable at 3229 Broadway. The former Sheffield Farms Stable is a six-story brick structure built in 1909 (an expansion of an existing 1903 stable building). It has a footprint of 50' x 100', floor plates of approximately 5,000 gsf, with a total floor area of approximately 30,000 gsf.

EXTERIOR

The east façade of the Sheffield Farms Stable, which fronts on Broadway, is clad with terra-cotta ornament while its north, south and west facades are of plain brick (see Figures 10 and 11). As described in the National Register of Historic Places Registration Form, September 2005 ("National Register form"), Section 7, page 1, its east façade is divided into three central vertical bays which are divided by rusticated pilasters. Above the sixth floor, each pilaster is adorned with a terra-cotta "tassel." The central three bays contain groups of steel windows and are overhung by a slate roof supported on a prominent dentil cornice. The outer bays contain small narrow windows and the bays extend as piers above and on either side of the slate roof. The tops of these piers are ornamented with terra-cotta shields capped with wreaths. The second floor is separated from the upper stories via a terra-cotta cornice, and contains three bays each with three grouped windows. The windows on the second through sixth floors are replacement aluminum and date to the 1990's. The ground floor has been altered completely, and contains two bays with loading docks and a contemporary metal and glass office (see Figure 10).

¹ Wet laboratories are currently the most common type of laboratory space; these typically include one or more of the following features: lab benches typically provided with sinks, outlets for compressed air, gas, vacuum, water, and electrical receptacles; de-ionized water outlets; fume hoods; chemical and solvent storage cabinets; and chemical resistant finishes and flooring.

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The south façade is windowless. The north and west facades contain window openings – the 15 windows on floors two through six of the west façade have all been sealed except for one. The three openings on the ground floor of this façade have also been sealed. The north façade contains 19 small windows (which have been covered from the inside) and a fire escape. (National Register form, Section 7, page 2).

INTERIOR

Since the property is privately owned and access was not available, specific information regarding the interior could not be ascertained, nor is it known if there have been changes to the interior of the building since preparation of the National Register form in 2005. Therefore, the following description of the interior of the former Sheffield Farms Stable relies on the 2005 National Register form.

Based on the building's footprint, the six floors of the former Sheffield Farms Stable each contain approximately 5,000 gsf. It is assumed that the floor-to-floor heights of the building do not exceed 12 feet, except on the first floor, where a height of approximately 16 feet is estimated.

The ground floor is divided into three bays. The north bay contains an elevator and a work area to the rear. The center bay is used for parking of trucks and other company vehicles, and the south contains offices. Each of the upper floors (floors two through six) have an open plan with sets of steel columns two feet across and four feet deep (see Figure 12), for a total of eight freestanding columns per floor (National Register form, Section 7, page 2).

The building contains a number of elements that relate to its original use as a stable. Horse ramps are located within the building in the south bay. These consist of wood ramps leading from the first floor to the basement and to the second floor, and concrete ramps leading from the second floor to the third and fourth floors. The ramps are estimated to occupy approximately 650 gsf on each of these floors. There is a small metal bin at the ceiling at the rear of the office on the first floor with a handle or "hay drop." There is also a rounded post and wood siding at the first floor entrance to the horse ramp, as well as the outlines of former horse stalls on the concrete floors of the second, third and fourth floors, and surface drains (National Register form, Section 7, page 2).

SIGNIFICANCE

The Sheffield Farms Stable Building was built by the Sheffield Farms-Slawson-Decker Company, which was formed in 1902. In 1903, Sheffield Farms acquired two lots on the west side of Broadway between West 129th and West 130th Streets and built a small milk depot (National Register form, Section 8, page 4). This included construction of a two-story stable on the present site of the Sheffield Farms Stable and a one-story milk depot building (where bottles of milk could be purchased) on the lot to the north at the corner of West 130th Street (since demolished). The two-story stable building built by Sheffield Farms in 1903 was altered to create the new six-story stable building in 1909. Apparently four floors were added above the existing two (National Register form, Section 8, page 6). This could explain why the ramps from the first to second and first to basement floors are of wood but the ramps at the third and fourth floors (there are stairs from the fourth to sixth floors) are of concrete (discussed in Section 7, page 2 of the National Register form). The new stable building, which included an Otis elevator in the location of the present elevator in the building, was built to provide delivery of milk at the company's recently opened (1908) milk pasteurizing and bottling plant on West 125th Street

(now Columbia University's Prentis Hall). Both the Sheffield Farms Stable and the milk plant on West 125th Street were designed by Frank A. Rooke, who designed other structures for the Sheffield Farms-Slawson-Decker Company.

The National Register form indicates that the Sheffield Farms Stable is significant under Criterion A (in which "a property is associated with events that have made a significant contribution to the broad patterns of our history") in the category of industry (National Register form, Section 8, Statement of Significance). Its period of significance is 1903-1938, 1903 being the date of construction of the original stable on the site—which was altered to create the existing building six years later—and 1938 being the year that Sheffield Farms ceased Manhattan milk delivery by horse-drawn wagons.

V. ALTERNATIVES ANALYSIS

A. ADAPTING EXISTING BUILDING FOR THE PROPOSED PROGRAM

Columbia has evaluated the characteristics of the Sheffield Farms Stable building in relation to the structural and programmatic requirements of the Jerome L. Greene Science Center. As described above, the Sheffield Farms Stable is an approximately 30,000 gsf, early 20th century, non-fireproof, largely masonry and timber structure with floor plates of approximately 5,000 gsf each. Under the Illustrative Plan analyzed in the DEIS, the Jerome L. Greene Science Center will require a state-of-the-art, technically sophisticated structure with approximately 297,000 gsf of research space and with research floor plates that measure approximately 37,000 gsf. As described in greater detail below, the Sheffield Farms Stable is not suitable for reuse to serve the program of the Jerome L. Greene Science Center due to its small size, lack of infrastructure, outmoded design and construction materials (which make it noncompliant with current building codes), its incompatible floor-to-floor heights, and restrictive column spacing. In addition, the alterations required to bring the building up to code would destroy elements of the building that contribute to its historic significance.

SUITABILITY FOR ABOVE-GRADE PROGRAM

The major program need for the Jerome L. Greene Science Center is large, regular-sized floors that can be developed to accommodate 10 to 12 Principal Investigator research groups per floor, along with enough space that is easily accessible to the laboratory benches (i.e., nearby and on the same floor), for research support equipment and activities, researcher and administrator offices, and conference and meeting areas (see Figure 8). Flexibility in floor layout is also essential because the composition and space needs of research groups will change over time. Not only is the floor plate of the Sheffield Farms Stable building too small, but the space within it is constrained by existing columns placed two across and four feet deep that restrict placement and flexibility of lab benches. The floor to floor heights (except for approximately 16 feet on the ground floor) cannot accommodate the necessary mechanical equipment and exhaust ducts that must be placed between the ceiling and the floor above and which typically take up 4.5 to 6 feet of space (see Figure 9).

Notwithstanding the above constraints that limit its usability as an academic research facility, retrofitting the Sheffield Farms Stable building for such use would also necessitate substantial reconfiguration and retrofitting to meet legal and building code requirements (currently the building is a storage warehouse, with strict limits on permitted occupancy). The building has no internal stairs between the ground and fourth floors (there are only stairs from the fourth to sixth

Sheffield Farms Stable Building

floors), with a freight elevator and horse ramps providing the only vertical circulation below the fourth floor. Emergency egress is only provided by a single exterior fire escape on the north side. Two separate fire stairs, one or two passenger elevators, toilets, sprinkler and fire alarm systems and basic mechanical and utility systems would all have to be installed (including heating, ventilation and air conditioning equipment and ducts and new electrical plumbing and sprinkler service to the building with shafts/risers to each floor). These required new systems would occupy between 25 and 35 percent of each floor. Due to space constraints, the horse ramps, which take up approximately 650 gsf per floor on the south side of the building, would need to be removed. These alterations would compromise the architectural integrity of the building by removing elements that contribute to its significance.

SUITABILITY FOR BELOW-GRADE PROGRAM

As described above, the research-oriented academic campus that Columbia proposes to develop would have a continuous underground service area to accommodate uses that are best located off of street level (such as parking, loading and energy centers) to provide a better environment and to enhance the pedestrian experience at street level, and to accommodate specialized science support functions, such as imaging equipment, water treatment, space for storage of hazardous materials, and laboratory support facilities that would be located beneath, and be accessible to, the academic research buildings on the west side of Broadway (see Figure 5). Having an uninterrupted regularly shaped open service area that connects all of the future campus' buildings below grade is crucial to fulfilling Columbia's academic and academic research program needs and maximizing the efficiency of the campus support functions. A deep basement with a depth of up to 70 feet will be constructed below the majority of the campus (including below the beds of 130th, 131st and 132nd Streets) in stages from south to north. The first stage, which requires construction of a slurry wall up to 120 feet deep to keep out groundwater, is planned to incorporate the area below the Sheffield Farms Stable building and its entire block — from West 125th and West 129th Streets on the south and to either the north side of West 130th Street or West 131st Street to the north. The slurry wall itself will serve as the permanent foundation wall for the buildings on the site. As described above, the fully completed space dedicated to science support would extend beneath the academic research facilities along Broadway for a distance of approximately 150 feet west from the Broadway lot lines. This would allow accessibility directly from the above-grade portions of the buildings to the science support space. Immediately west of the science support space between West 129th and West 130th Street would be the central energy plant.

Currently the Sheffield Farms Stable building has one self-contained cellar level. It would not be practical to extend the basement levels beneath this building to create the planned large below-grade service area, since it would require the underpinning of the foundations of the entire structure. Retaining the Sheffield Farms Stable would reduce the amount of science support space available by more than 5,000 gsf on each of the below grade science support floors, impacting proposed science support activities associated with the Jerome L. Greene Science Center and future academic research buildings. Excluding the area of the Sheffield Farms Stable would create a highly irregular footprint and create a narrow area of only approximately 50 feet wide between the Sheffield Farms Stable and western edge of the science support space that would be constrained in terms of its potential use and function on each below-grade science support floor. As described above, there is little flexibility to extend science support activities further west on the block occupied by the Sheffield Farms Stable because the central heating and cooling plant for most of the campus must be located there (part of it will actually be under the

Jerome L. Greene Science Center). The required slurry wall would also have to be constructed around the Sheffield Farms Stable building, instead of continuing the slurry wall along the Broadway property line in this location. As a result, the slurry wall supports would also become more complicated, likely requiring the drilling of tie-backs under the Sheffield Farms Stable. The cost of slurry walls increases significantly if the below-grade space is irregularly shaped and/or discontinuous—requiring more square footage of slurry wall compared with a simple, large rectangular shape. The incremental costs of the slurry walls as a proportion of overall construction costs increases substantially as the size of the site decreases. Retaining the building may also require that the slurry wall be set back from the building perimeter, so as to leave a buffer between the existing building foundations and the slurry wall to mitigate the possible effects of settlement or instability of the Sheffield Farms Stable foundations. This buffer would result in a further loss of area in the below grade space.

B. INCORPORATING EXISTING BUILDING INTO THE PROPOSED JEROME L. GREENE SCIENCE CENTER

Since the Sheffield Farms Stable cannot feasibly be adapted to meet the needs of the proposed Jerome L. Greene Science Center, Columbia evaluated the potential for retaining the building and joining it with the proposed Jerome L. Greene Science Center. However, joining and incorporating the Sheffield Farms Stable building was determined not to be a viable alternative. The Sheffield Farms Stable would be physically isolated from any adjoining new construction by (1) the structural walls of the historic building (which can be pierced, but not eliminated) and (2) differences in floor-to-floor heights (see Figure 4). The Sheffield Farms Stable building has approximately 12 feet from floor to floor, except for an estimated 16 feet on the ground floor. As described above, modern wet-lab research laboratories typically require 14'-6" to 16 feet from floor-to-floor to accommodate mechanical equipment and exhaust ducts that must be placed between the ceiling and the floor above. This would render the Sheffield Farms Stable building not easily accessible to the rest of the building, would require another circulation system to be developed to connect the different floor heights, and would retain a space that is not suitable for laboratory functions. Actually joining the buildings would also require the removal of substantial historic material to pierce the north, west, and south walls of the structure and to physically join it with the new Jerome L. Greene Science Center.

In addition, based on the placement of the Sheffield Farms Stable building on the block, retaining this building would require that the Jerome L. Greene Science Center be constructed around it (see Figure 3). This would result in an irregularly U-shaped building that would have a section (that rectangular portion of the building fronting on Broadway north of the Sheffield Farms Stable building at the corner of Broadway and West 130th Streets) with somewhat similar dimensions as the existing Sheffield Farms Stable, though with a smaller footprint due to mandatory setbacks at grade as set forth in the proposed zoning text for the Manhattanville Mixed-use Zoning District. This space corresponds with the approximately 50' by 100' lot at the corner of Broadway and West 130th Street. This would result in a portion of the building having small floor plates of less than 5,000 gsf, which would be separated from the rest of the building and as such would result in space that is neither the appropriate size nor easily accessible to all researchers in the building. Therefore, Columbia has explored the possibility of expanding the Sheffield Farms Stable building with an infill building on the largely undeveloped 5,000-square-foot parcel directly north (see Figures 13-16).

This would result in an infill structure adjacent to the Sheffield Farms Stable building, which could have connections to the Sheffield Farms Stable. Due to difference in floor-to floor heights,

Sheffield Farms Stable Building

neither the Sheffield Farms Stable nor the infill structure would connect to the Jerome L. Greene Science Center. Neither building could be utilized for academic research space due to the small floor plates, insufficient floor-to-floor heights and isolation from the remainder of the building. As such, the Sheffield Farms Stable and infill buildings do not meet the requirements for the academic research uses contemplated as part of the Academic Mixed-Use Development, and specifically the requirements of the Jerome L. Greene Science Center, and this alternative would result in the following impacts to the proposed project.

IMPACTS ON SPACE REQUIREMENTS

In this scenario, the Jerome L. Greene Science Center would only contain approximately 226,000 gsf of academic research space. As described above, this amount of research space would be below the minimum 250,000 gsf typically required for modern academic research facilities and currently built today (see Figure 13). As described in greater detail below, the loss of academic research space caused by the retention of the Sheffield Farms Stable building and construction of the infill building would translate into an approximately 25 percent reduction, or removal of one quadrant, of above-ground research lab, research support, and academic office and meeting space from each proposed research floor plate of the Jerome L. Greene Science Center (see Figures 13 and 14). This impact would be felt most noticeably by the ensuing loss of usable square feet on each research floor, in addition to other impacts, which include:

- Creation of an L-shaped academic research building, which does not meet the adaptability and flexibility needs of a modern research facility with a rectangular plan;
- Significantly less efficient net to gross square footage ratios on each floor, specifically related to building cores taking up a larger proportion of each floor;
- Increased costs associated with shared facilities allocated to a smaller research population in the building;
- Loss of windows on floors 2 to 4 facing Broadway for a linear distance of approximately 100 feet (or half of the building facing east), rendering significant portions of these three floors unsuitable for spaces other than windowless support. Windows are important for both lab benches and offices to provide natural light. Columbia University is committed to incorporating energy and environmental design elements into the proposed development and will construct buildings that would minimize energy consumption and maximize energy performance. This includes promoting building designs that improve indoor environmental quality, including incorporating natural light where practicable to create an improved working and learning environment for University faculty, staff, students, and guests.

IMPACTS ON THE PROPOSED JEROME L. GREENE SCIENCE CENTER PROGRAM

The impacts of retaining the entire Sheffield Farms Stable building on the proposed program would first and foremost be a precipitous reduction in number of research modules possible on each floor of at least approximately 25 percent. This in turn would reduce each of the 8 floors capacity to house Principal Investigators to between 6 and 7, a reduction of between three and four Principal Investigator research units per floor. This would yield an upper limit of 60 Principal Investigators and their groups in the building, the minimum associated with just the Neurological component of the building. This would fundamentally change the program of the building from an interdisciplinary Neurosciences building to a much more narrowly focused

Neurological research building, which would result in a building program that doesn't realize the scientific objectives of the Jerome L. Greene Science Center and contains none of the unique attributes afforded by the full building size. The complementary research disciplines of psychology, physics, chemistry, bioengineering, nanotechnology, and computer sciences would not be possible under this scenario, nor would realization of the fully integrated teaching and outreach programs afforded by these complementary science disciplines.

IMPACTS ON PHASE I PROGRAM AND FUTURE SCIENCE PROGRAM

Retaining the Sheffield Farms Stable building would have negative impacts on the programs associated with the below-grade support spaces currently planned for the Neurosciences building by reducing them by approximately 22 percent on each below-grade science support floor. More of the program's shared support space would have to move up from a reduced below-grade space to reside on the research floors, further reducing program area and isolating these vital functions from the future scientific community in Manhattanville.

C. RETAINING 50% OF THE BUILDING IN CONJUNCTION WITH THE PROPOSED JEROME L. GREENE SCIENCE CENTER

Due to the impacts that retaining the existing stable building would have on the proposed design and program of the Jerome L. Greene Science Center, Columbia explored the potential of retaining only a portion of the Sheffield Farms Stable (see Figures 17-20). This alternative assumes retaining the façade of the building and a 50' x 50' section of the building (the rear 2,500 sf footprint of the building would be removed). Using the methodologies described above, an infill building with a smaller footprint than that of the partially retained stable would be built at the corner of Broadway and West 130th Street, which could connect to the Sheffield Farms Stable (see Figures 17 and 18). This alternative would pose similar problems in that neither the Sheffield Farms Stable nor the infill building could be used for academic research space. This alternative would result in less of an actual reduction of academic research space and below-grade research space than retaining the entire building but would also negatively impact the proposed project. Approximately 12 percent of actual above ground research lab, research support, and academic office and meeting space would be lost from each proposed floor plate. This would impact the geometry of the lab zone in the northeast quadrant of the Jerome L. Greene Science Center to the point of it being unsuitable for lab modules. It would eliminate lab benches located on the north and east sides of the building, removing 2 to 3 Principal Investigator research units, similar to the impact of retaining the entire Sheffield Farms Stable (see Figures 8 and 18). This would only leave the academic research support spaces associated with those lab benches. Without the lab benches, the academic research support space would not be needed, therefore leaving an area for which there is no academic research use.

The effect this alternative would have would be a similar impact on the above grade space—the loss of one quadrant—as retaining the entire building. The actual reduction in space would also impact efficiency ratios with respect to usable space to total space (including non-usable space, such as for circulation and ventilation), increase costs associated with providing shared facilities to a small research population, result in a loss of windows facing east on research floors 2 to 4 for approximately half of the building, and result in a 12 percent reduction in below-grade support space on each below-grade science support floor, some of which would then have to be moved to the upper research floors, reducing space for academic research.

Sheffield Farms Stable Building

In addition to the removal of the rear portion of the Sheffield Farms Stable building, other substantial structural modifications to the Sheffield Farms Stable would be required. These include building a new west foundation wall to support the remaining portion of the building, and removing the horse ramps, which partially extend into the section of the building that would be demolished (see Figure 18). These modifications would require the removal of substantial historic material and would impact the historic and architectural integrity of the structure.

Due to the anticipated loss of one quadrant for academic research, the impacts on the proposed program would be similar to those described above for retaining the entire building in that the reduction of Principal Investigators would prevent the development of an interdisciplinary Neurosciences building. The significance of the first academic research building realized in Manhattanville cannot be underestimated. It is imperative for the realization of interdisciplinary sciences as a broad concept to be concretized in the initial building phase. This concept is inherent to recent scientific breakthroughs and will guide the future development of academic research in Manhattanville.

D. MOVING THE JEROME L. GREENE SCIENCE CENTER

Retaining the Sheffield Farms Stable building would negatively impact the program of the Jerome L. Greene Science Center and the below-grade support space and would require substantial alterations that would affect the integrity of the Stable building. Therefore, analyses were undertaken to determine whether it is possible to move the Jerome L. Greene Science Center to another location in the Phase 1 development area. First, as noted above, this analysis is limited to Phase 1 sites for several reasons.

Columbia has received a gift for the construction of the Jerome L. Greene Science Center that is contingent on building the Jerome L. Greene Science Center during the first phase of campus development. Further, project phasing, commencing along the north side of West 125th Street in conjunction with the City's revitalization project for 125th Street, and the University's objective to build a first phase self-contained campus, necessitates that the Jerome L. Greene Science Center be built in the Phase 1 area (see Figure 6).

There are only two sites in the Phase 1 area that would allow for a rectangular shaped building—the present proposed site (Site 2) and the site of the proposed building containing the School of International and Public Affairs and housing for graduate students, faculty, and other employees on Twelfth Avenue between West 130th and West 131st Streets (Site 7). The other sites with avenue frontage in the Phase 1 area south of West 130th Street are too small and are triangular, not meeting the physical requirements of the Jerome L. Greene Science Center. Moving the Jerome L. Greene Science Center to a mid-block location in Phase I would preclude the development of a building that is proposed to house program space for the Business School and the School of the Arts on Site 3 and would also preclude the creation of the small square open space and interfere with the creation of an aligned north-south open space corridor.

Moving the Jerome L. Greene Science Center to Site 7 would substantially impact the proposed project in a number of ways:

1. Relocating the Jerome L. Greene Science Center to Twelfth Avenue would substantially impact the proposed open space to be built on that block. Full development would provide a privately owned, publicly accessible large through-block central open space (the Square) of approximately 40,000 sf, located between West 130th and West 131st Streets. This square has been oriented to the west for a greater proximity to the West Harlem

Waterfront Park currently being developed at the edge of the Hudson River and to allow for the creation of mid-block open areas that also serve as north-south pedestrian passageways. To achieve the required floor plate size, the proposed Jerome L. Greene Science Center would occupy a 220-foot frontage on the side streets. In contrast, the academic and housing building on Site 7 would occupy 106 feet on the side streets, approximately 50 percent less than the Jerome L. Greene Science Center. This would result in a floor plate size of approximately 21,200 gsf, which is less than the 25,000 gsf required for a modern academic research facility and substantially less than the 37,000-square-foot floor plate size needed for the Jerome L. Greene Science Center. To achieve the required floor plate for the Jerome L. Greene Science Center on Twelfth Avenue, approximately 22,800 sf would need to be removed from the proposed 40,000 sf square, or over one-half of this important privately owned, publicly accessible open space. To avoid the dramatic reduction of this open space, the square would need to shift east. This would in turn impact the open space by having the north-south passageways bisect it and would reduce the amount of space for the academic research uses to be located on Broadway on the same block.

2. If on Twelfth Avenue, the Jerome L. Greene Science Center would be separated from the academic research corridor on Broadway and the corresponding below-grade support corridor on the west side of Broadway. This would prevent the Jerome L. Greene Science Center from having efficient access to the below-grade academic research support space along the west side of Broadway needed by its own scientists. It would also require duplicate purchase of large and expensive equipment, because of the significant distance between the Jerome L. Greene Science Center and other academic research buildings.

An alternate proposal could be to extend the boundary of the development (including the development of the below-grade support space) in Phase I to include Site 6 directly to the north (the west side of Broadway between 130th and 131st Streets) and move the Jerome L. Greene Science Center to that location. This would also substantially impact the Project. By leaving undeveloped the highly prominent northwest corner of 129th Street and Broadway until an undetermined later date, it would delay the realization of a key objective of the project, which is to enliven and activate West 125th Street as the gateway to the West Harlem Waterfront park, now under construction. It would also be contrary to the University's desire to create an integrated urban campus throughout the proposed Manhattanville development process, since the first block within the Project Area (from 125th to 130th Streets) would remain only partially developed for some time. In any case, because of the importance of the continuous grade space as described above, Site 2 would still remain an appropriate location for an academic research facility as part of the academic research corridor on the west side of Broadway. The Sheffield Farms Stable building does not meet the requirements for a modern academic research facility, and retaining the building for academic research or incorporating all or a portion of this building into the proposed Jerome L. Greene Science Center would considerably impact the program of the Jerome L. Greene Science Center and negatively impact the goals and objectives of the proposed project.

E. RETAINING FAÇADE ONLY

As a result of the anticipated impacts on the proposed interdisciplinary Neurosciences program of the Greene Science Building, an alternative that removes the Sheffield Farms Stable building with the exception of its façade has been evaluated. This option would eliminate the main structure of the building and all significant interior elements of the building within it, including the horse ramps, flooring, and a hay drop (see Figures 21-24). However, retaining the façade poses a number of other considerable design and structural challenges, as follows:

- Retaining the six-story façade of the Sheffield Farms Stable building against a 10-story academic research lab building would result in juxtaposition of old and new that would neither benefit the historic building nor the new lab building. The size and proportions of the proposed new Jerome L. Greene Science Center would be out scale with the façade of the Sheffield Farms Stable (see Figure 21).
- The existing floor to floor heights of the Sheffield Farms Stable and the requirements for a modern research facility are not the same. The difference in the floor-to-floor heights between the Sheffield Farms Stable building and the proposed research building would negate the stable façade's function as a façade. Its windows relate to its approximately 12 foot floor to floor height, but the working assumption is that the floor to floor height in the proposed research building will be at least 14'-6" to accommodate the equipment and environmental control systems. Consequently, the windows of the existing Broadway façade would not match the floor levels of the proposed building, and in some cases a new floor level may occur in the middle of a window on the stable façade (see Figure 23). This would require that these windows be mostly blocked out, rendering them lifeless and unusable; thus, not only would the facade be stripped of its relationship to the stable building itself (and its associations with the historical context of which it was a part), but it would also be non-functional as a part of the façade of the proposed building. This double loss of meaning is contradictory with the intent of the historic preservation of this building.
- Retaining the façade of the existing building would impact the design and use of the proposed Jerome L. Greene Science Center. While the effect on the rooftop mechanical space and basement spaces would be minimal (a reduction of 0 percent and 2 percent respectively), it would result in a 2 percent loss of program space at the research floors. This reduction would have an effect greater than this number may suggest. As described above, the researchers are organized around Principal Investigators, and each Principal Investigator unit includes six to seven modular lab benches (whose standard size is dictated by the research needs of the scientists) and related lab support spaces. This ostensibly small reduction in program space represents the loss of approximately 9 lab benches on each of the estimated five floors affected by the façade retention (see Figures 8 and 22). The reduction in the number of lab benches effectively means the loss of one entire Principal Investigator unit on each affected research floor, since it will not be able to function at its required size. Retaining the façade would also affect a second Principal Investigator unit on each affected research floor—the approximately five remaining benches at the northeast corner of the Jerome L. Greene Science Center would not meet the required Principal Investigator unit size of six to seven benches. This would result in a Principal Investigator unit which would be constrained in terms of its effectiveness and would likely be marked as a more junior unit headed by a secondary, rather than principal, investigator.

- Retaining the façade of the building would generate logistical problems and incur considerable costs to the project. To construct the slurry wall, either the façade would have to be dismantled and removed off site, or it would have to be braced in such a way that the slurry wall could then be excavated behind it. If the façade were to remain, it would have to be braced from behind, since the height of the building of approximately 75 feet requires a linear distance between the façade and the bracing mechanism of approximately 40 feet, which could not be accommodated in front of the building on the sidewalk (see basement plan of Figure 21). The slurry wall would then have to be constructed around both the façade and the braced area behind it. This would eliminate an additional estimated 2,100 gsf of below grade academic research support space per basement level, resulting in a 6.5 percent reduction of that space per basement level. Further, retaining the façade and shoring it up during project construction has been estimated to cost in excess of \$2 million. Therefore, the cost for dismantling the façade, removing it off-site, and reassembling it as part of a new building was evaluated. Under this scenario, it is assumed that the removal and dismantling of the east façade would proceed concurrently with the demolition of the building behind the façade. All terracotta and masonry elements would be retained, with non-historic elements of the façade, such as windows and storefront, replicated in some manner. The total cost for dismantling, off-site storage, and subsequent reassembly of the east façade has been estimated at \$10 million. Because of the lack of a valuable preservation purpose that would be served by either retaining the façade against the proposed Jerome L. Greene Science Center or removing and reconstructing it in its original location, these additional costs would not be justified.

Notably, the National Register form indicates in section 8 that the significance of this building falls within Criterion A: “Property associated with events that have made a significant contribution to the broad patterns of our history.” As has been noted in the form, the building contains a number of interior features that relate to its use as a stable, which contribute to its significance. It is estimated that the new windows and altered ground floor frontage on Broadway account for approximately 50 percent of the building’s principal façade. Consequently, preserving only the façade of the building, which has been altered through the removal of its original windows and the alteration of its ground floor façade, does not respect the intent of its nomination to the National Register of Historic Places.

VI. CONCLUSION

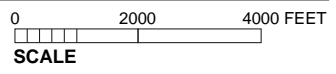
Columbia has evaluated the potential for reusing and adapting the Sheffield Farms Stable as an academic research facility, or incorporating it into the proposed Jerome L. Greene Science Center proposed on the site. However, as outlined above, the structure does not meet the requirements for an academic research facility due to its small size and floor plates, lack of infrastructure, outmoded design and construction materials (which make it noncompliant with current building codes), its incompatible floor-to-floor heights, and restrictive column spacing. Furthermore, the alterations required to bring the building up to code and to create a sufficient floor plate for use would remove elements of the building that contribute to its historic significance, such as the horse ramps. In addition to these physical and structural constraints, retaining all or a portion of the building would significantly alter the proposed building program such that it would not meet the purpose and need of the Jerome L. Greene Science Center, which is the integral foundation for development of Columbia’s comprehensive initiative in Mind, Brain and Behavior and would significantly impact the usability of the proposed below-grade

Sheffield Farms Stable Building

research support space. Retaining only the façade of the building would not serve a valuable preservation purpose and would constrain the proposed project in terms of constructability and additional costs. Therefore, it has been determined that it is not feasible to retain all or portions of the Sheffield Farms Stable as part of the proposed project. Columbia would consult with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) regarding appropriate measures to mitigate this adverse impact on historic resources.



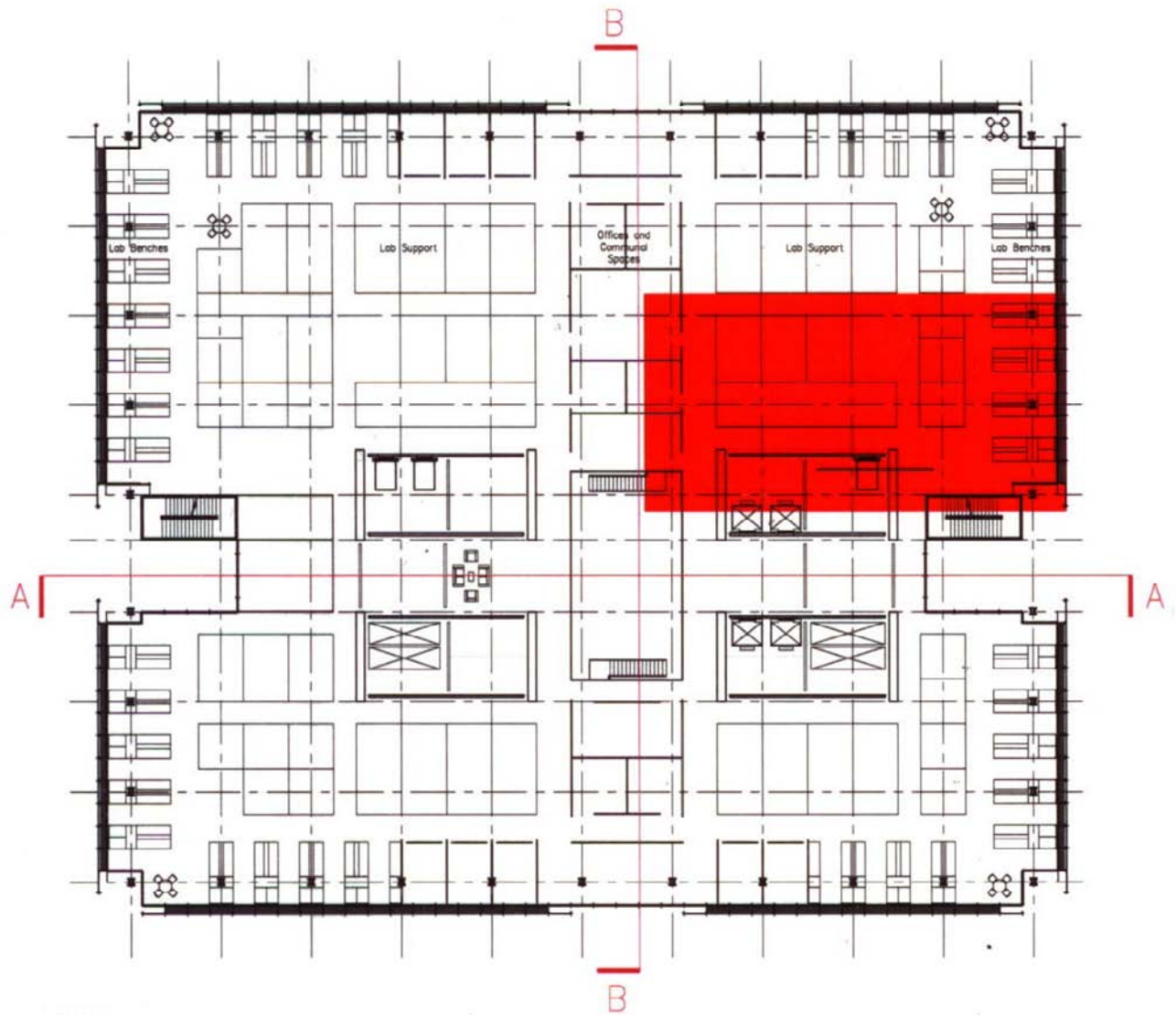
 Project and Rezoning Area Boundary





NOT TO SCALE

- Sheffield Farms Stable
- Proposed Jerome L. Greene Science Center
- R Other Proposed Research Buildings
- 1 Development Site



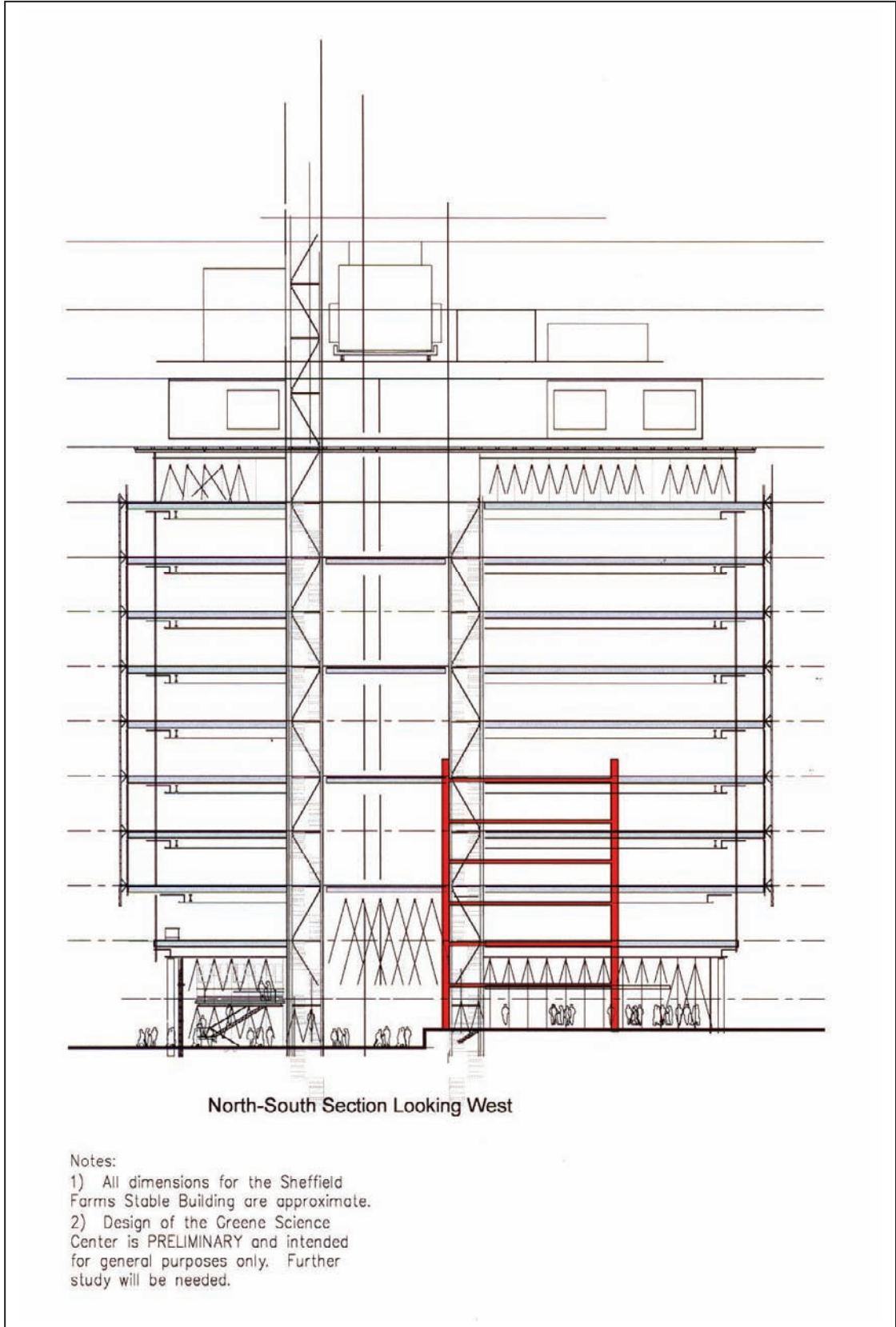
- Notes:
- 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 - 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.



 Sheffield Farms Stable

Figure 3

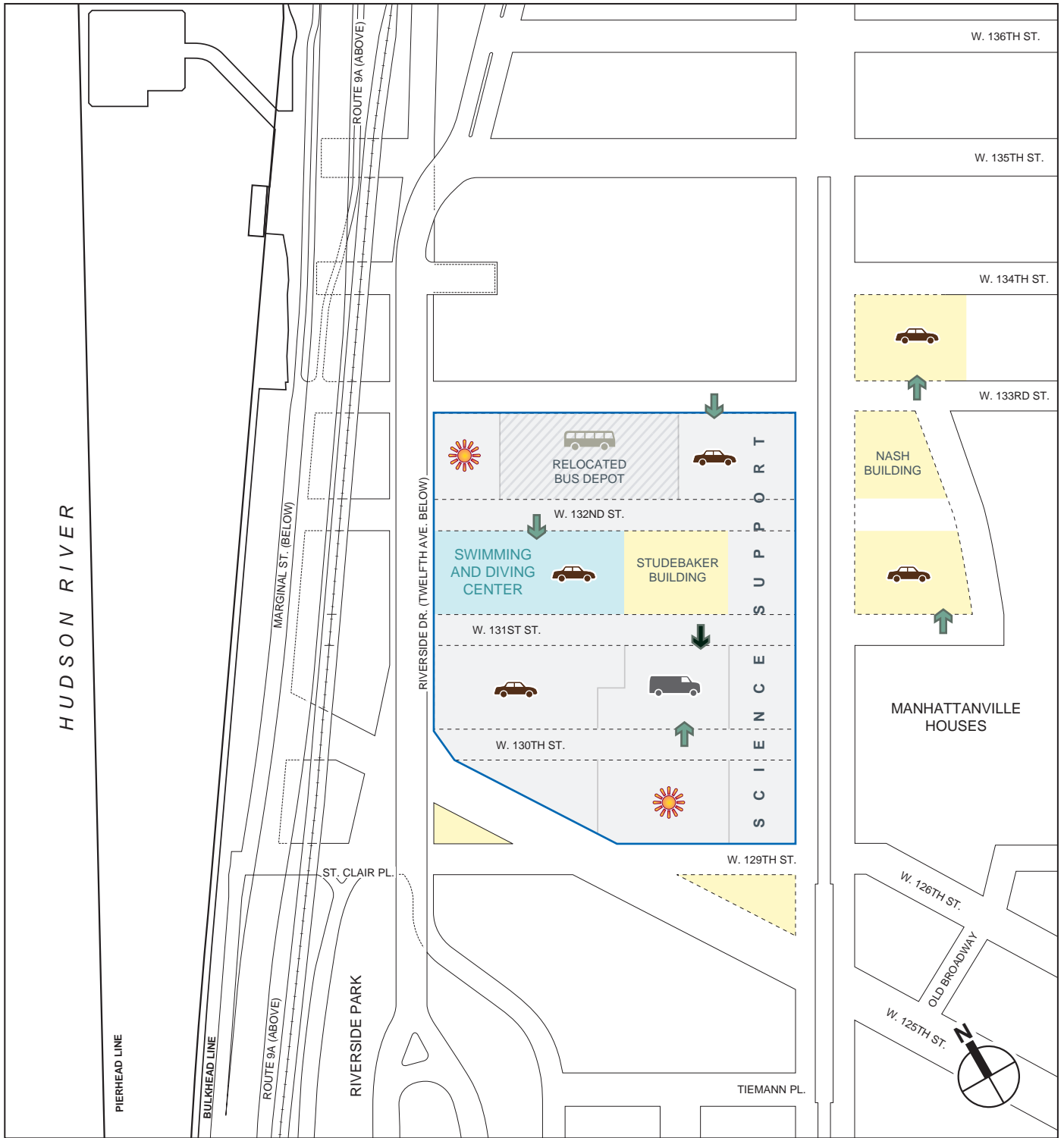
Typical Floor Plan of Greene Science Center Showing Footprint of Sheffield Farms Stable



- Sheffield Farms Stable*
- Proposed Greene Science Center*

Figure 4

**Section of Greene Science Center
Showing Sheffield Farms Stable**



- Central Service Area
- Conventional Basement
- Parking with Swimming and Diving Center Below
- Central Energy Plant
- Below-Grade Parking
- Truck Loading
- Auto Access
- Truck Access

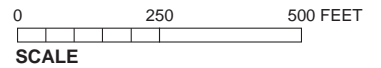


Figure 5
Proposed Below-Grade Areas:
Illustrative Plan

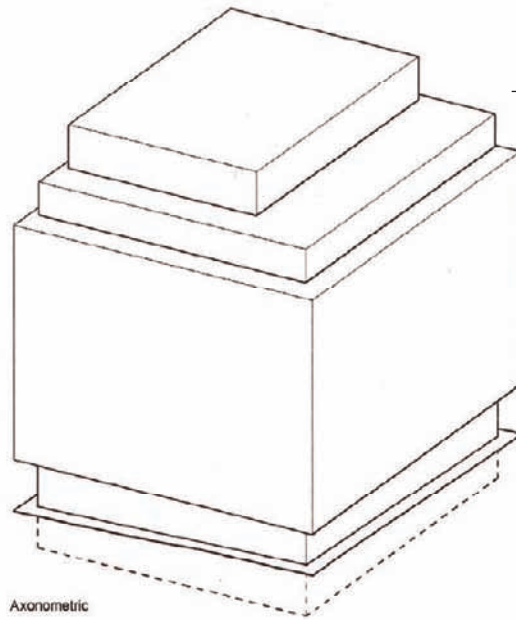
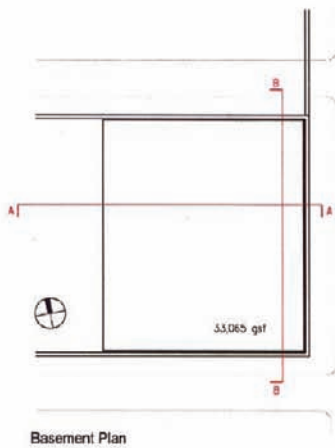
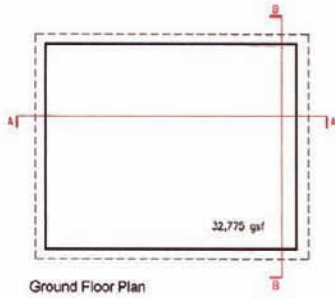
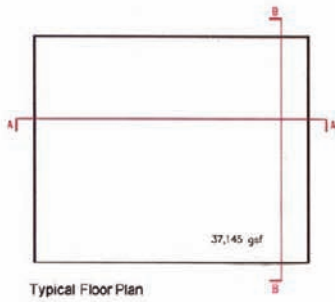
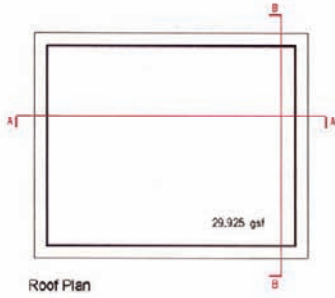


- Sheffield Farms Stable
- Proposed Jerome L. Greene Science Center

NOT TO SCALE

FLOOR AREA CALCULATIONS
(Greene Science Center only):

Academic Research (8):	297,160
Urban Layer (2):	65,550
Total:	362,710 gsf



- LEVELS 11-12
Mechanical
- FLOORS 3-10
Academic Research
- FLOORS 1-2
Active
Ground Floor Uses

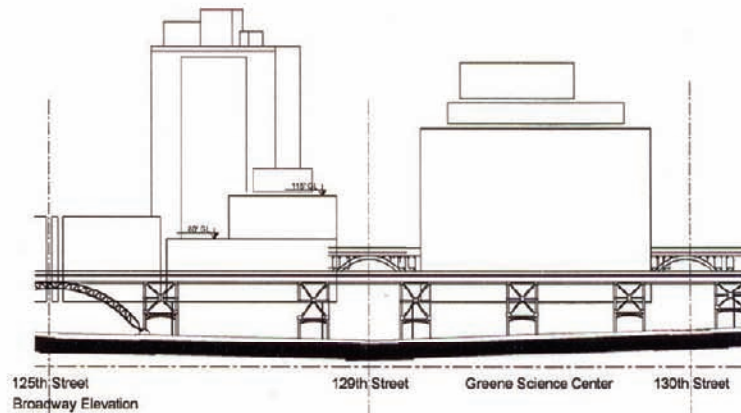
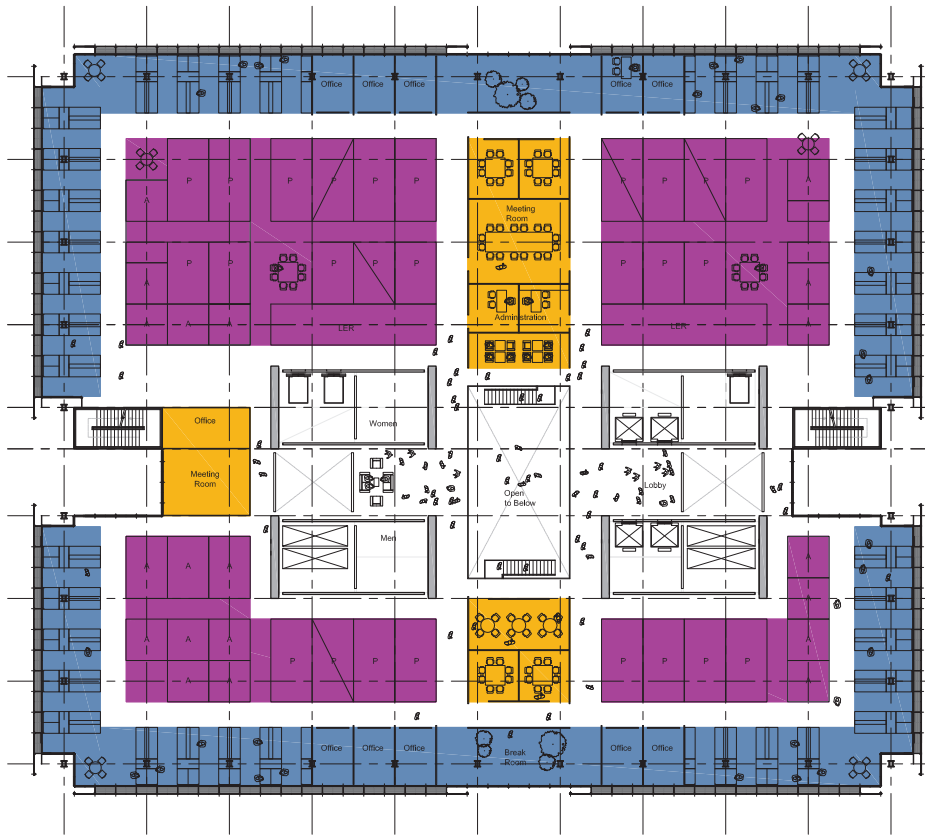


Figure 7

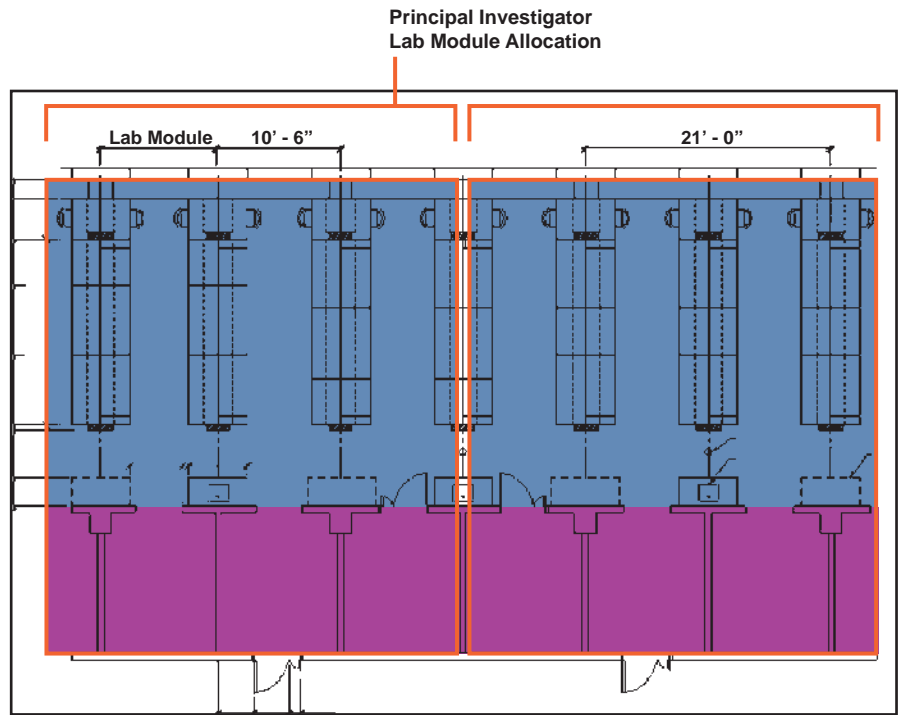
Illustrative Massing Diagrams: Proposed Greene Science Center



- Lab Benches
(or Offices—same module)
- Lab Support
- Communal Spaces,
Offices,
Administration

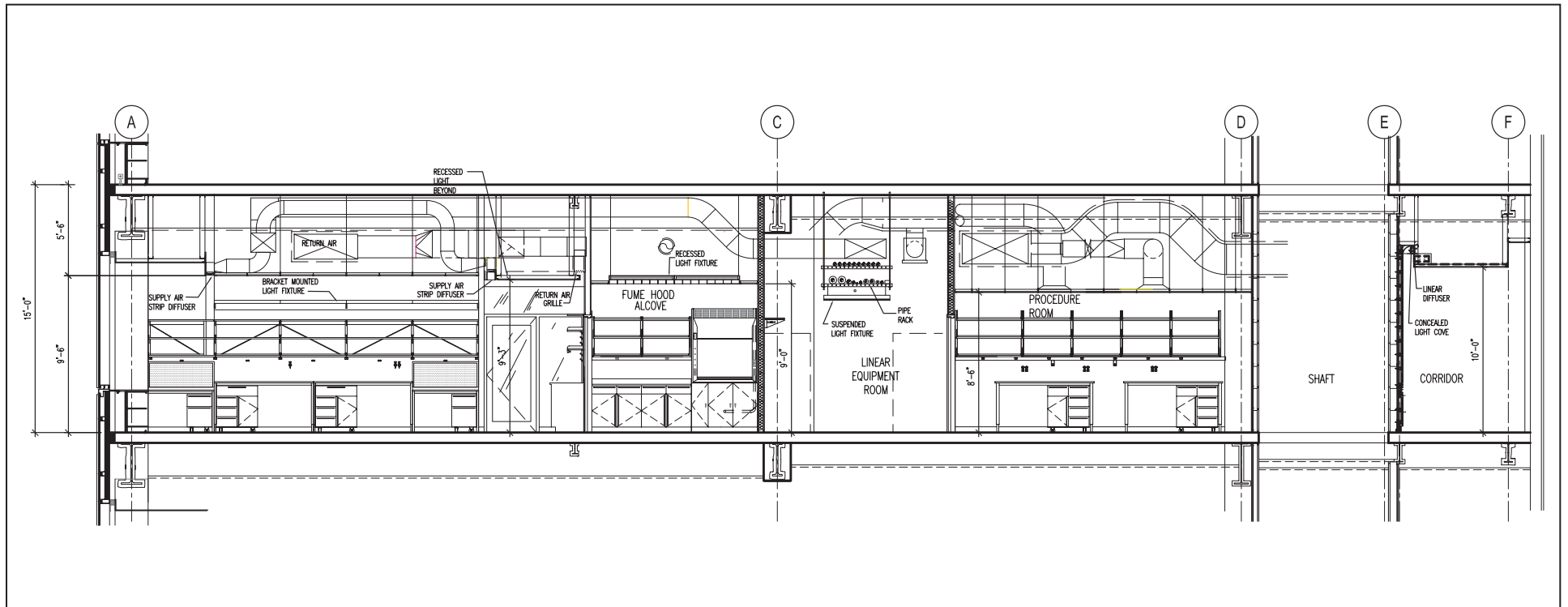


Note:
1) Design of the Greene Science Center is PRELIMINARY and intended for general discussion purposes only. Further study will be required.



Detail
Typical Lab Modules

Figure 8
**Greene Science Center:
Preliminary Program Distribution
on Typical Floor Plan**





Sheffield Farms Stable – east (Broadway) facade



Sheffield Farms Stable – south facade

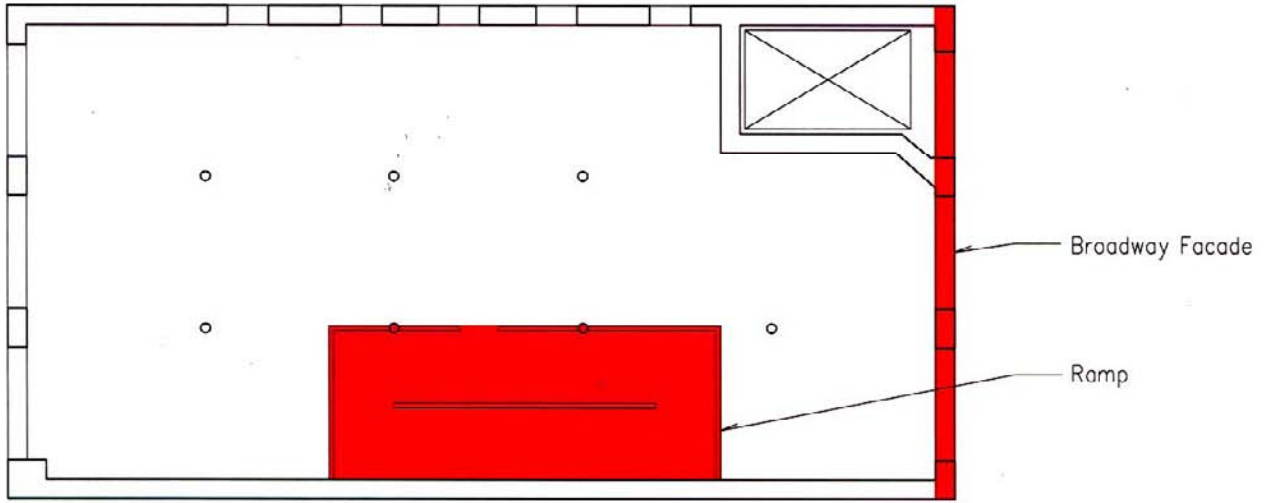


Sheffield Farms Stable – north facade



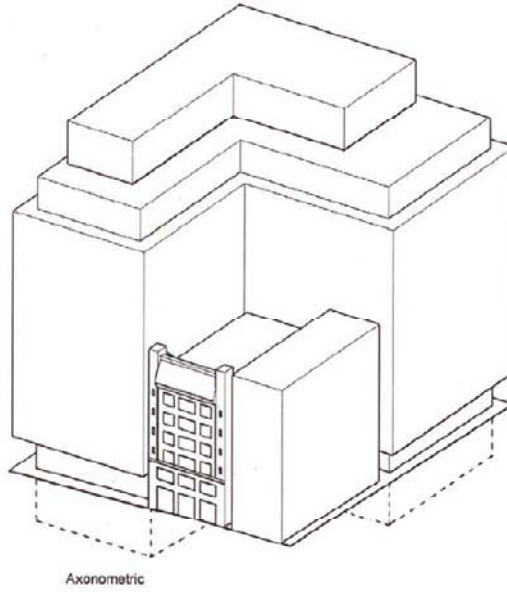
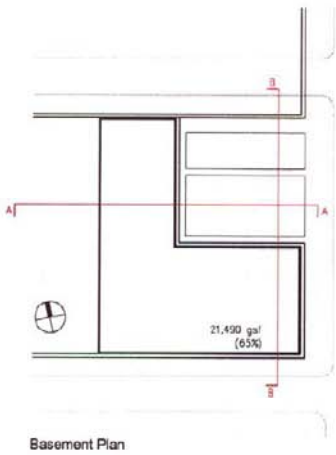
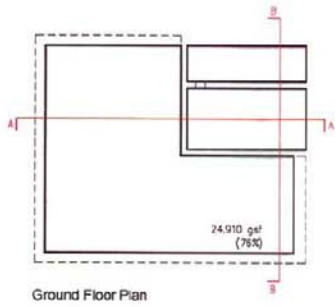
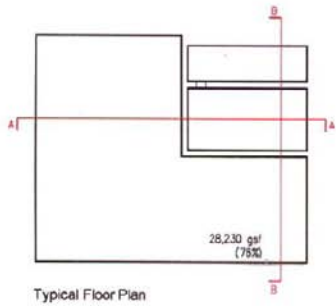
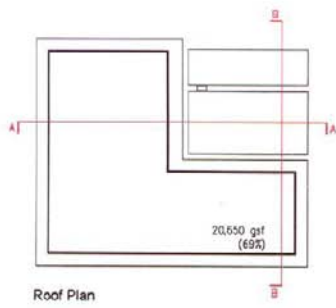
Sheffield Farms Stable – west facade

4.26.07



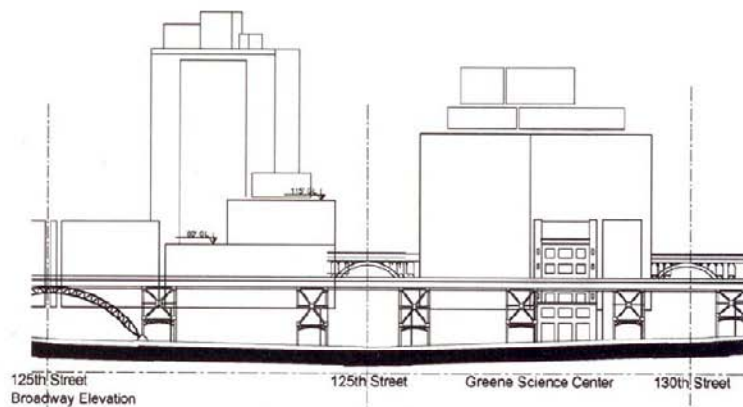
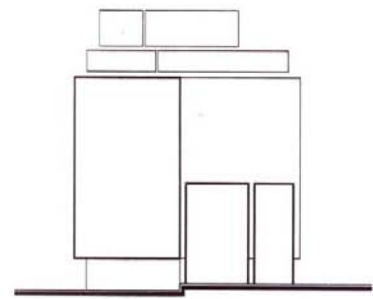
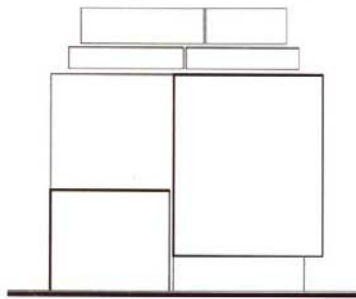
Sheffield Farms Stable Building
Typical Floor Plan
(from the New York City Department of Buildings)

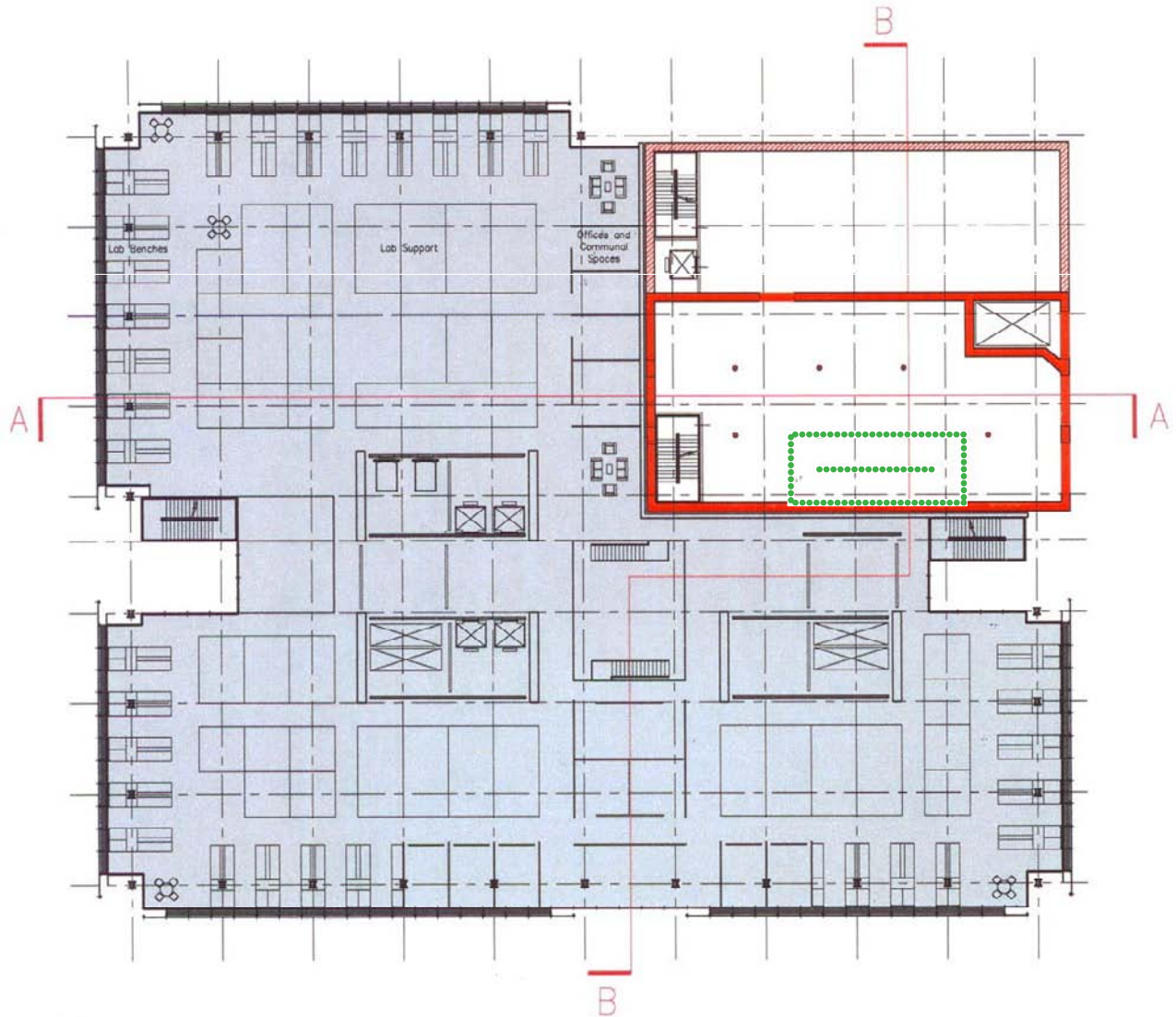




IMPACTS:
 1. Loss of approx. 24% above ground program space, 31% roof mechanical space, and 22% basement space
 2. Slurry wall at basement level

FLOOR AREA CALCULATIONS
(Greene Science Center only):
 Academic Research (8): 225,840
 Urban Layer (2): 49,820
Total: 275,660 gsf (76%)



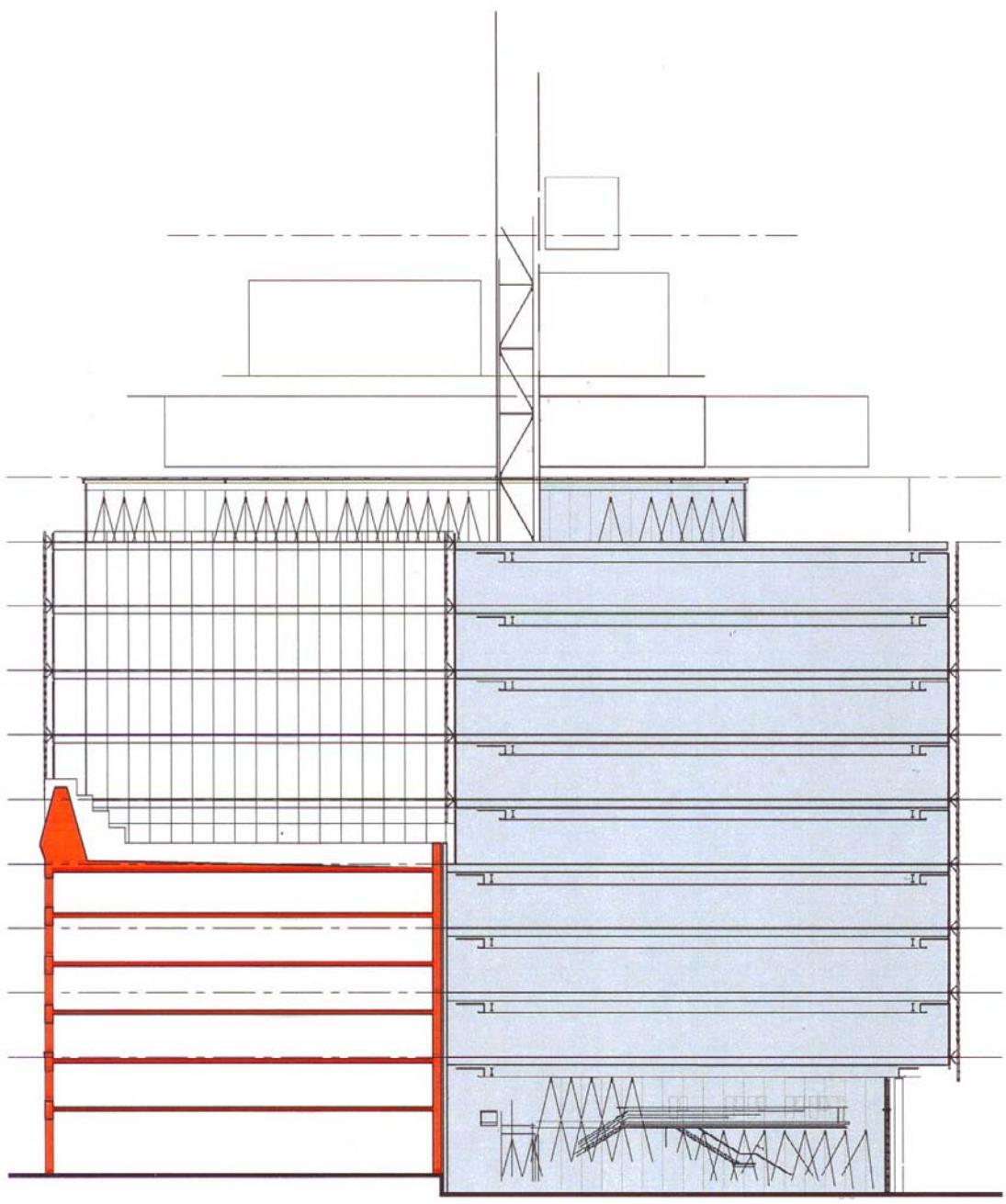


- Notes:
- 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 - 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.



- Sheffield Farms Stable
- Proposed Greene Science Center
- Proposed Infill Building
- Location of Ramp

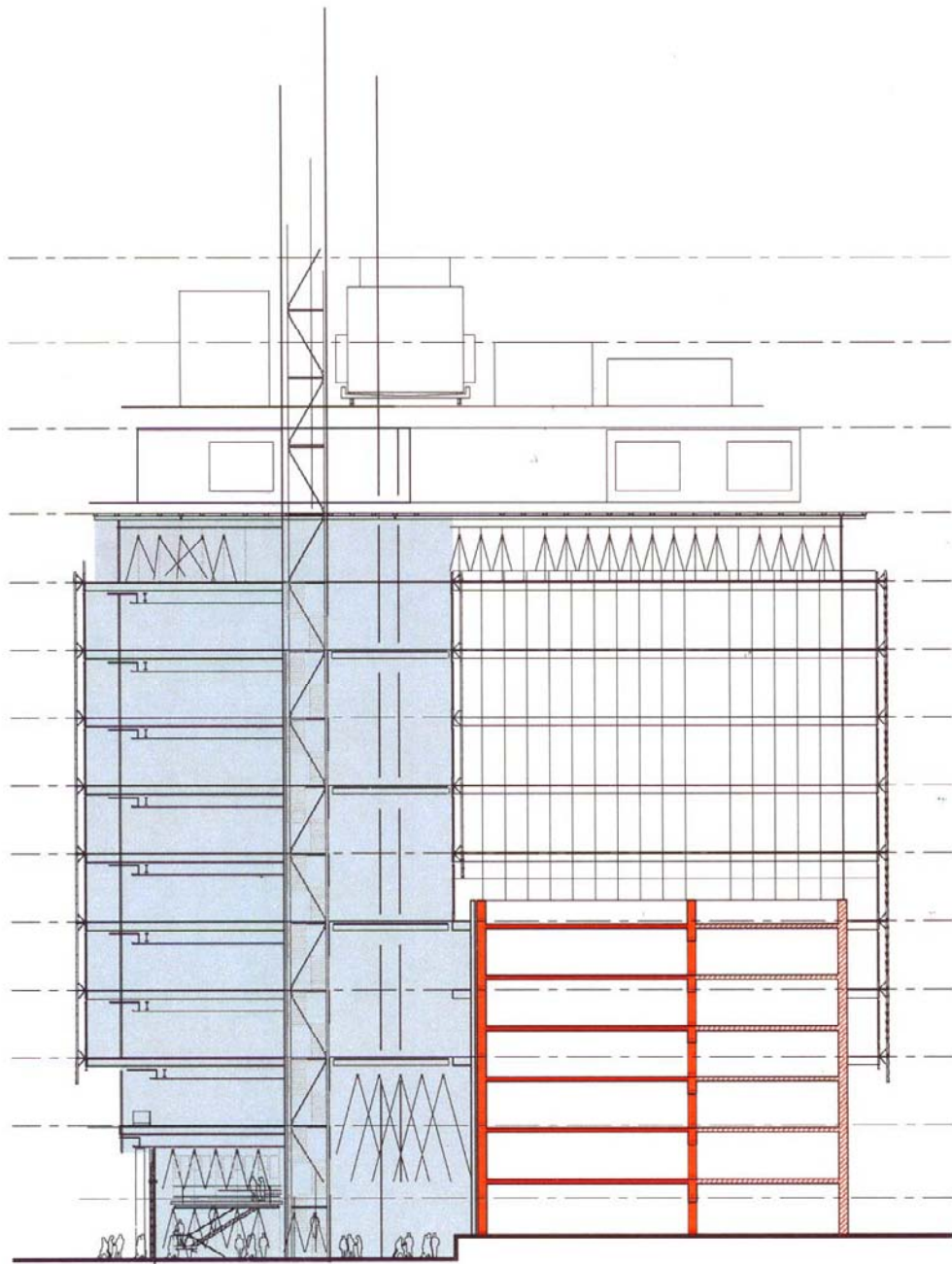
Figure 14
**Typical Floor Plan:
 Retain Entire Sheffield Farms Stable**



Notes:
 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.

- Sheffield Farms Stable
- Proposed Greene Science Center

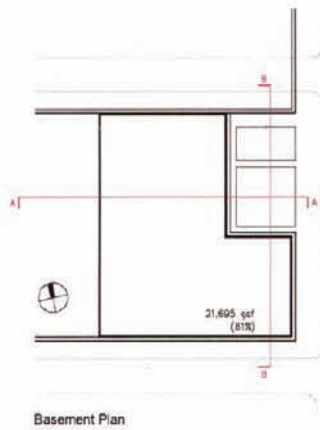
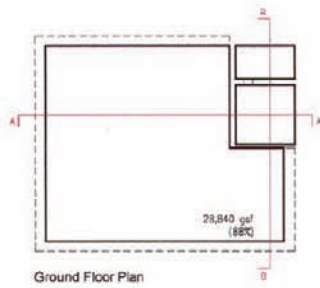
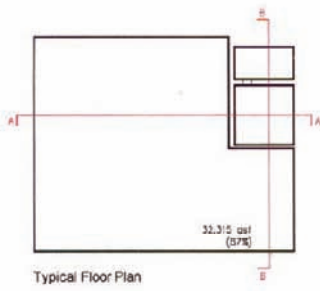
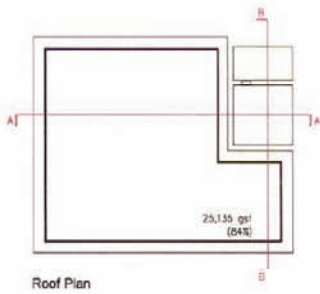
East-West Section Looking South



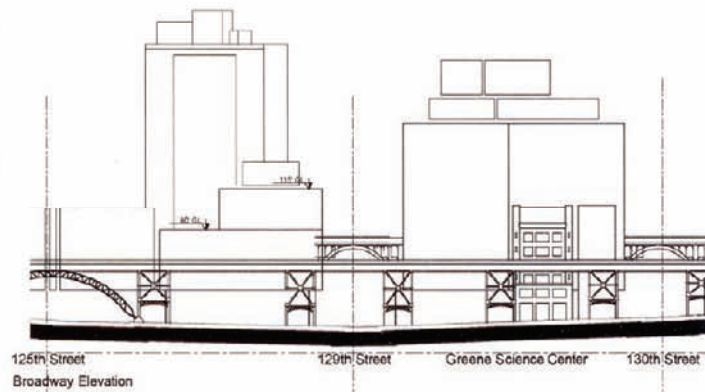
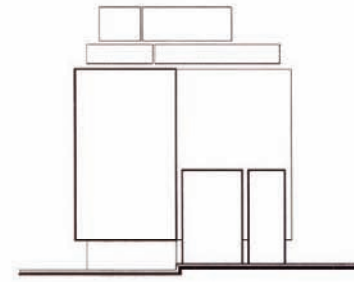
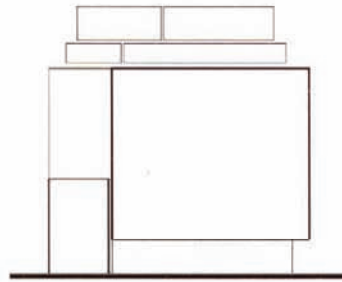
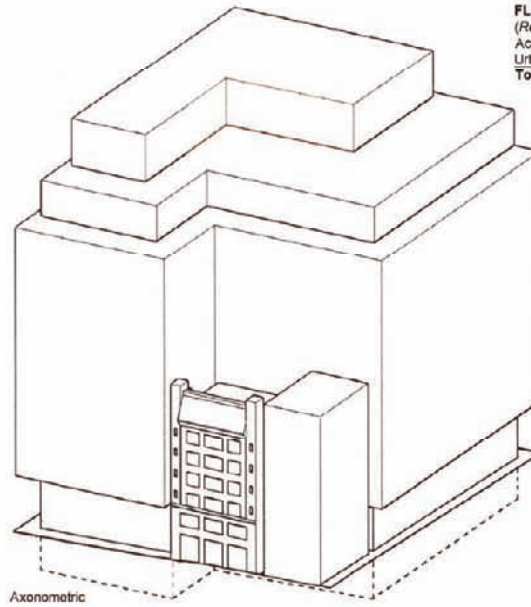
Notes:
 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.

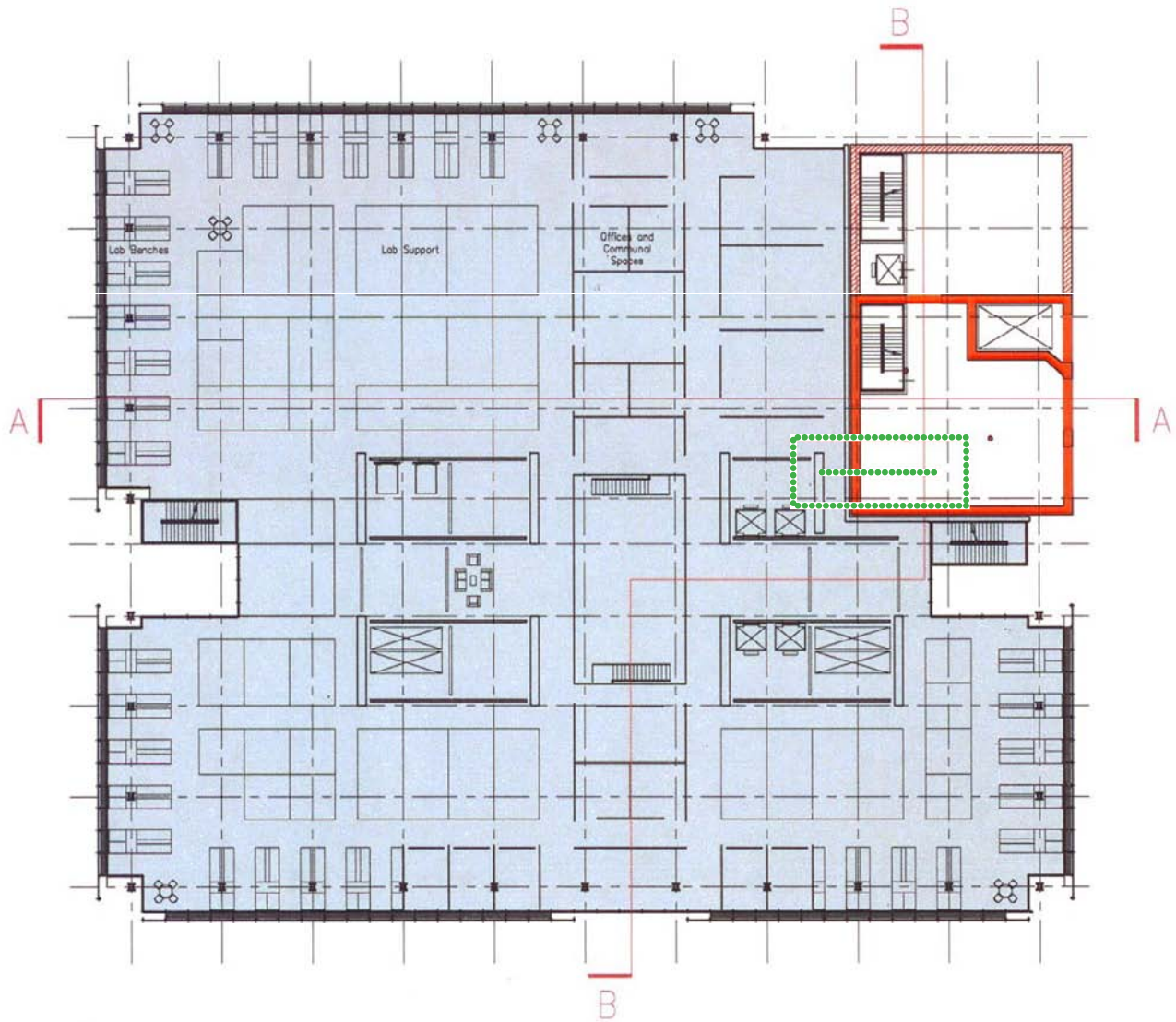
- Sheffield Farms Stable*
- Proposed Greene Science Center*
- Proposed Infill Building*

North-South Section Looking West



FLOOR AREA CALCULATIONS
(Research Building only):
 Academic Research (B): 258,520
 Urban Layer (2): 57,680
Total: 316,200 gsf (87%)



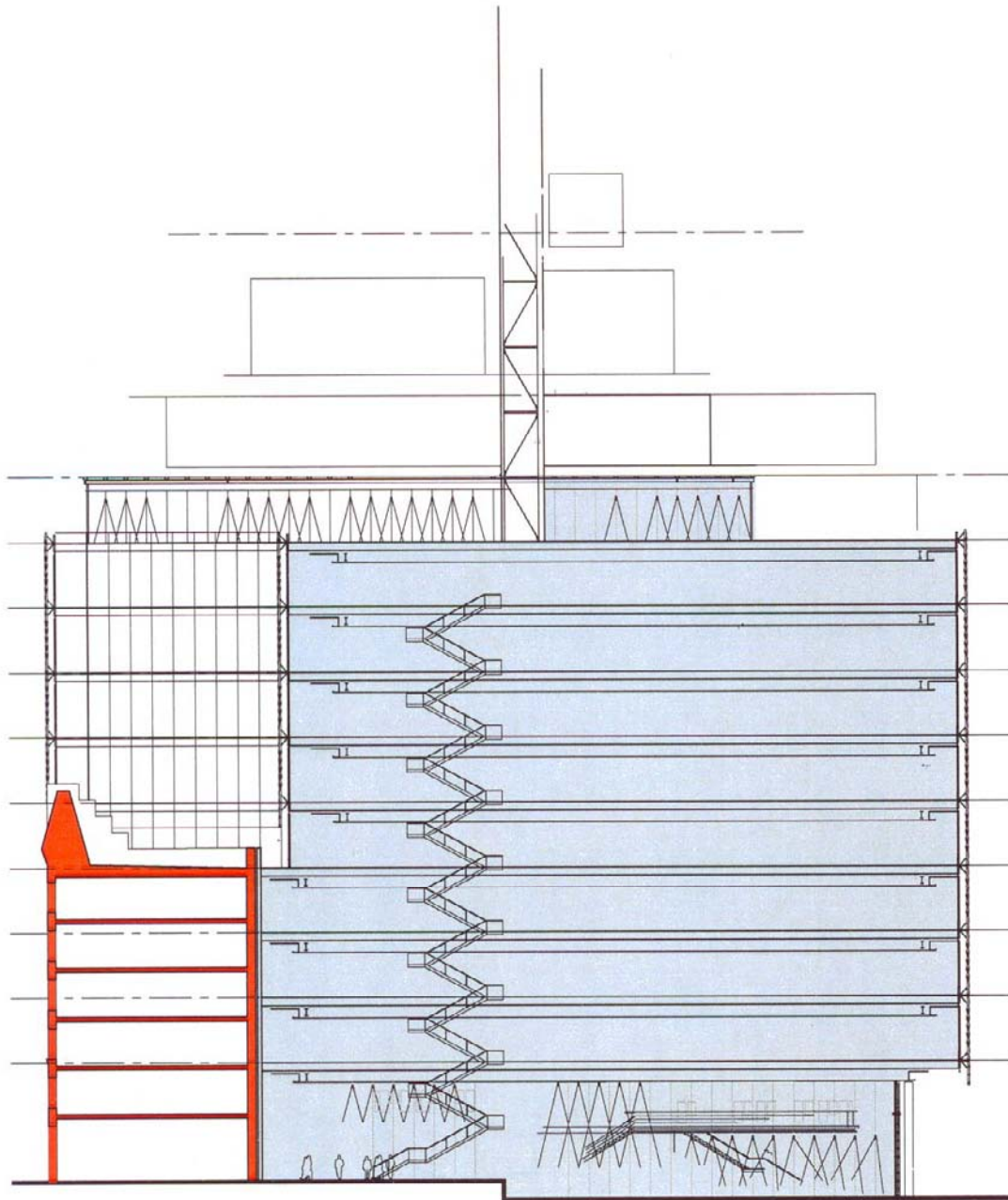


- Notes:
- 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 - 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.



- Sheffield Farms Stable
- Proposed Greene Science Center
- Proposed Infill Building
- Location of Ramp

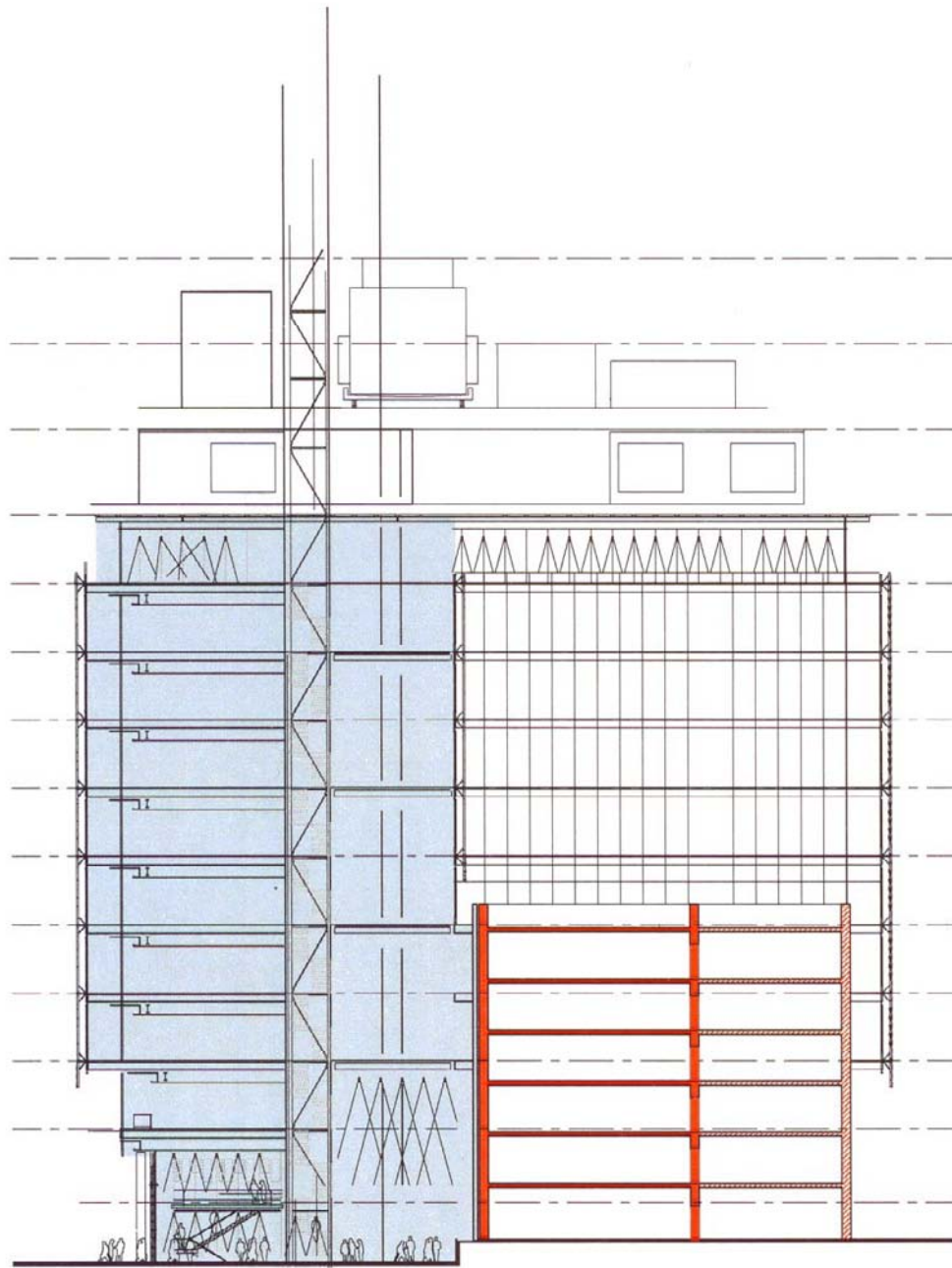
Figure 18
Typical Floor Plan:
Retaining 50 Percent of Sheffield Farms Stable



Notes:
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 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.

█ Sheffield Farms Stable
█ Proposed Greene Science Center

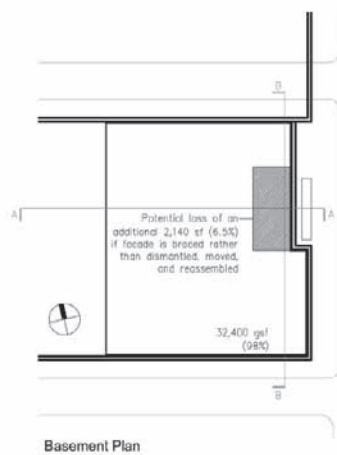
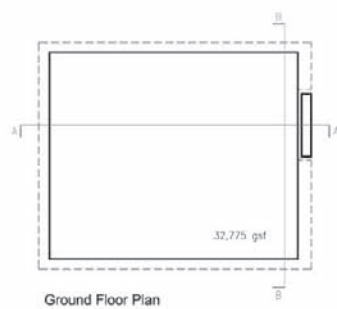
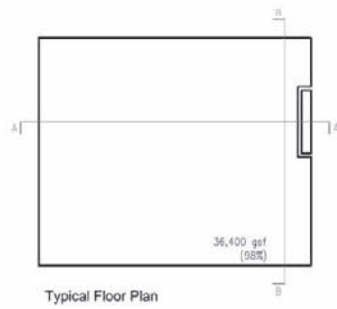
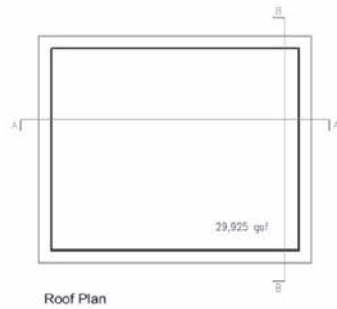
East-West Section Looking South



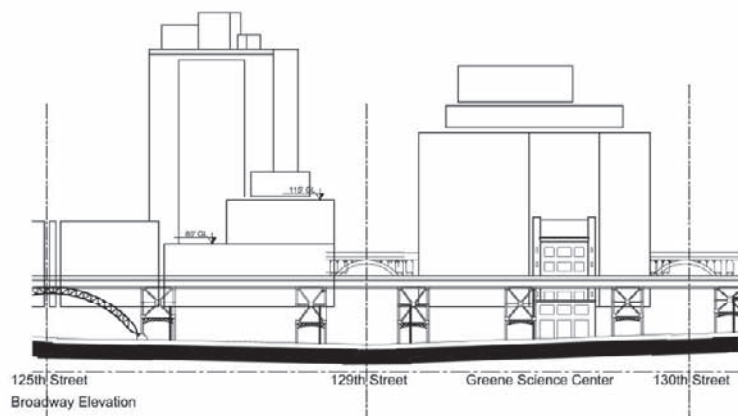
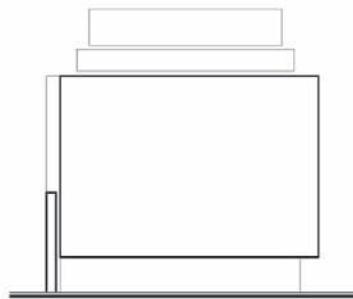
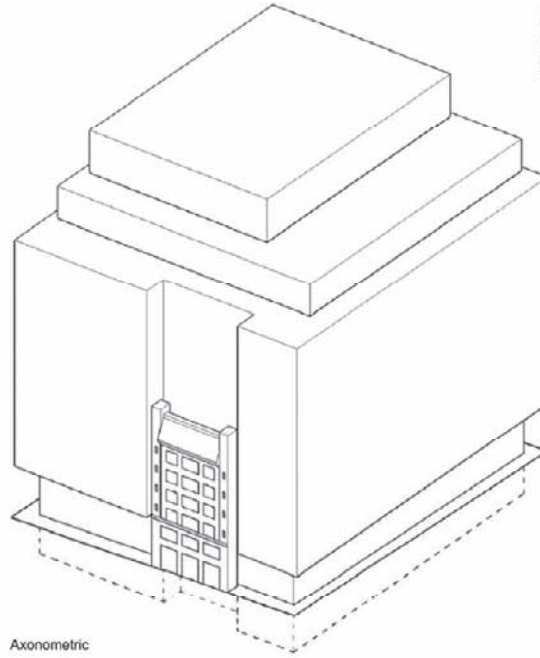
Notes:
 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.

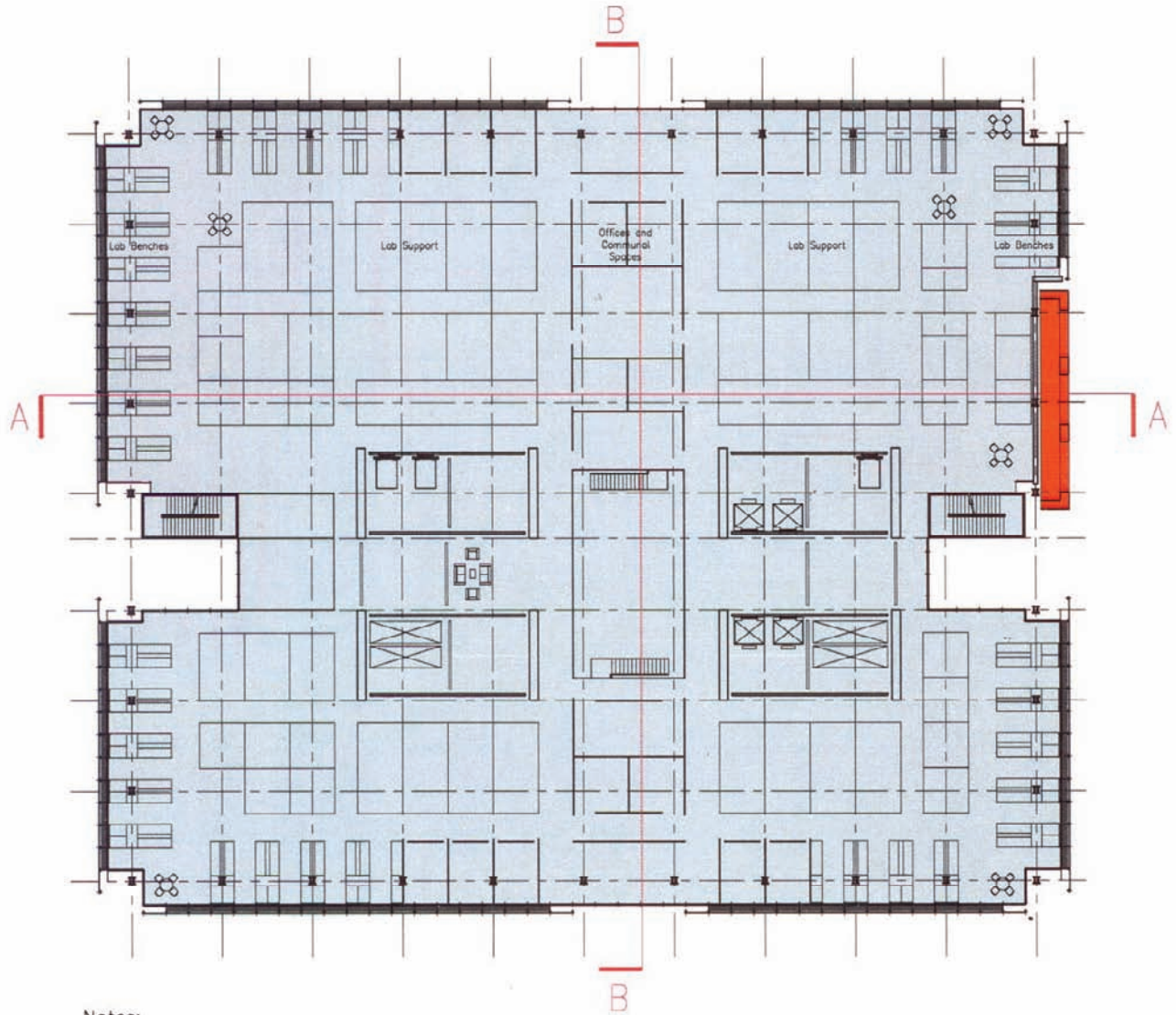
- Sheffield Farms Stable
- Proposed Greene Science Center
- Proposed Infill Building

North-South Section Looking West



FLOOR AREA CALCULATIONS
(Greene Science Center only):
 Academic Research (8): 291,200
 Urban Layer (2): 65,550
Total: 356,750 gsf (98%)





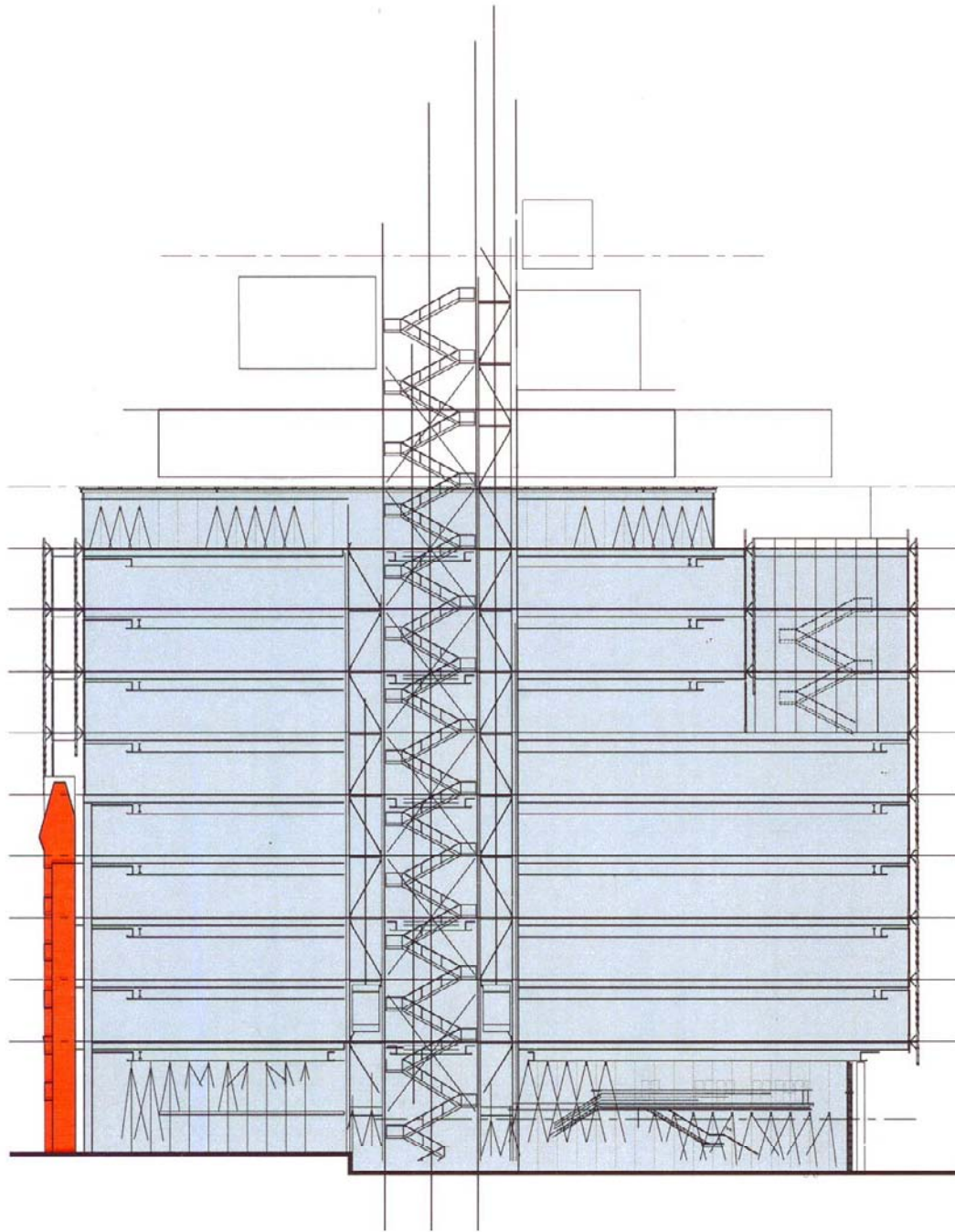
Notes:

- 1) All dimensions for the Sheffield Farms Stable Building are approximate.
- 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.



-  Sheffield Farms Stable
-  Proposed Greene Science Center

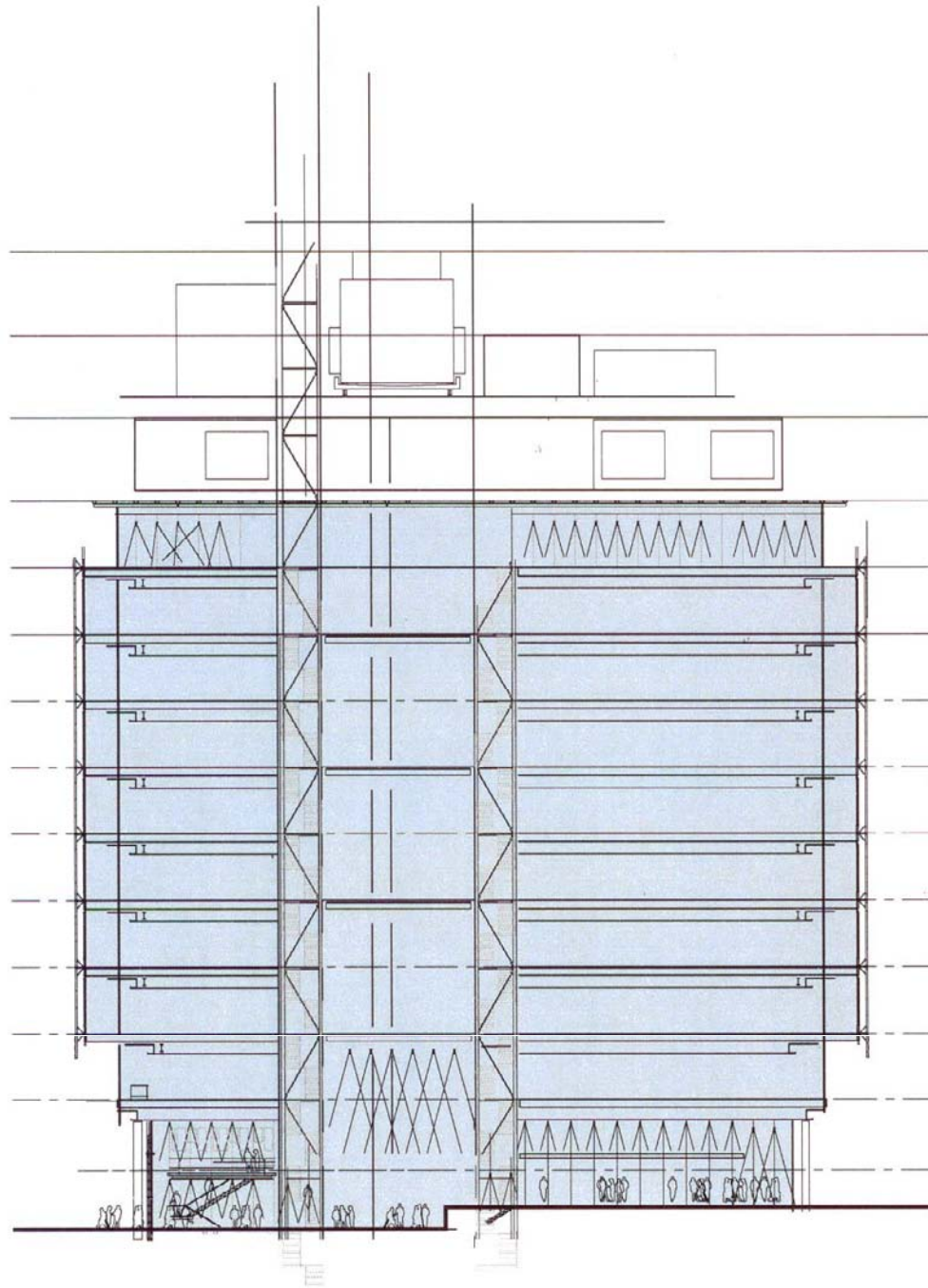
Figure 22
**Typical Floor Plan:
Retaining Facade of Sheffield Farms Stable**



Notes:
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 Sheffield Farms Stable
 Proposed Greene Science Center

East-West Section Looking South



Notes:
 1) All dimensions for the Sheffield Farms Stable Building are approximate.
 2) Design of the Greene Science Center is PRELIMINARY and intended for general purposes only. Further study will be needed.

Proposed Greene Science Center

North-South Section Looking West