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TO: Hilary Semel, Director
New York City Office of Environmental Coordination

FROM: Alyssa Cobb Konon ACK

DATE: April 25, 2017

RE: **Final Scope**
American Museum of Natural History
Richard Gilder Center for Science, Education, and Innovation
CEQR No. 16DPR004M
SEQR Classification: Type I
Project area: The west side of the American Museum of Natural History complex and Theodore Roosevelt Park located on the superblock bounded by West 81st Street, West 77th Street, Central Park West, and Columbus Avenue
Community District #7

In accordance with City Environmental Quality Review, Mayoral Executive Order No. 91 of 1977, and the City Environmental Quality Review Rules of Procedure found at Title 62, Chapter 5 of the Rules of the City of New York (CEQR), and the State Environmental Quality Review Act, Article 8 of the New York State Environmental Conservation Law and its implementing regulations found in Part 617 of 6 NYCRR (SEQRA), the New York City Department of Parks and Recreation (NYC Parks), as lead agency, issued a Draft Scope of Work on March 2, 2016 for the preparation of an Environmental Impact Statement (EIS) for the American Museum of Natural History (AMNH) proposed Gilder Center project. A public scoping meeting was held on April 6, 2016 and comments on the proposed project's Scope of Work were accepted through April 20, 2016. New York City Department of Transportation completed review of the project's Travel Demand Factors Memorandum on April 24, 2017.

The Final Scope of Work for this project's EIS, including a summary of comments received and responses to those comments, was issued on Tuesday, April 25, 2017. A copy of the Final Scope of Work, together with the other documents listed below, is attached hereto or can be obtained on-line at http://nyc.gov/parks/amnh-gilder.

Attachments:
Final Scope of Work and Response to Comments on Draft Scope of Work, dated April 25, 2017
1999 AMNH Transportation Management Plan
2016 AMNH Transportation Management Plan
Travel Demand Factors Memorandum dated April 12, 2017

Distribution List:

AMNH Gilder Center Project CEQR Distribution List for Final Scope of Work

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American Museum of Natural History
Gilder Center for Science, Education, and Innovation
Environmental Impact Statement ~~Draft~~ Final Scope of Work

A. INTRODUCTION

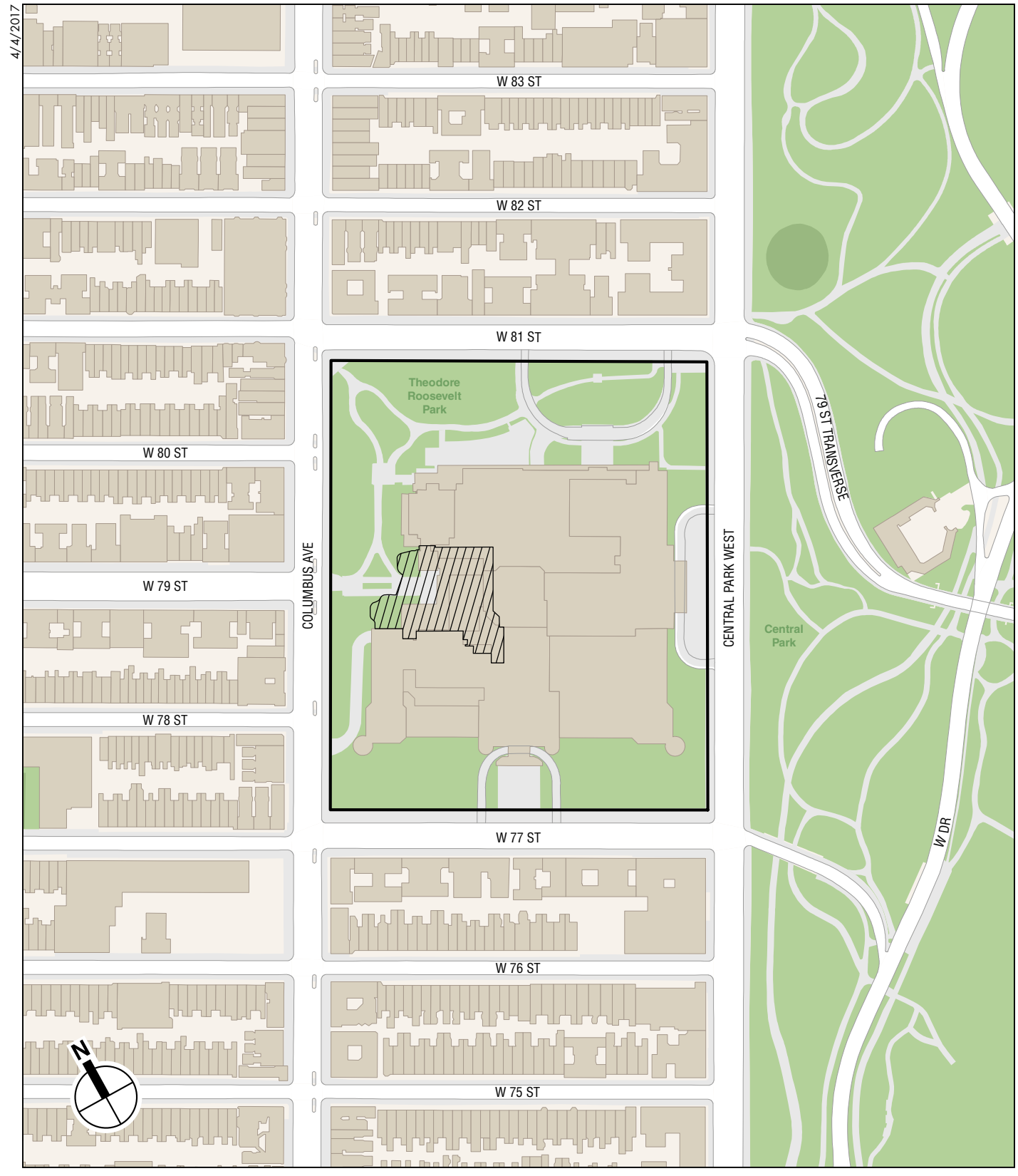
The American Museum of Natural History (AMNH or the Museum) is seeking discretionary actions in connection with a proposed new building, the Richard Gilder Center for Science, Education, and Innovation (the Gilder Center). The Gilder Center would be a five-story, approximately ~~180,000~~203,000-gross-square-foot (gsf) addition located on the Columbus Avenue side of the Museum campus. Because the building would be integrated into the Museum complex, an additional approximately ~~38,000~~42,000 gsf of existing space would be renovated to accommodate the program and make connections into the new building, for a total of approximately ~~218,000~~245,000 gsf of new construction and renovation. Alterations also would be made to adjacent portions of Theodore Roosevelt Park. The Gilder Center, together with these other alterations, is the proposed project.

Approximately 80 percent of the square footage of the project would be located within the area currently occupied by the Museum. Three existing buildings within the Museum complex would be removed to minimize the footprint on land that is now open space in Theodore Roosevelt Park, to about 11,600 square feet (approximately a quarter acre).

The Museum is located on the superblock bounded by West 81st Street, West 77th Street, Central Park West, and Columbus Avenue, in the Upper West Side neighborhood of Manhattan (Block 1130, Lot 1). The Museum is located in Theodore Roosevelt Park, which is City-owned parkland under the jurisdiction of the New York City Department of Parks and Recreation (NYC Parks~~DPR~~). The site for the proposed project is on the west side of the Museum complex facing Columbus Avenue (see **Figure 1**). The site is located in Manhattan Community District 7.

AMNH, a not-for-profit educational corporation, was formed by the New York State Legislature in 1869 to establish a museum and library of natural history in New York City, to encourage the study of natural science, and to provide popular instruction and recreation with the goal of advancing general scientific knowledge. Since that time, the Museum has grown to become one of the most important centers for the study of natural history in the world. The Museum currently employs approximately 200 scientists and offers a master's degree program in teaching science and a Ph.D. program in comparative biology. With annual attendance of approximately five million people, the Museum is one of the top visitor destinations in New York City. The purpose of the proposed project is to expand and modernize the Museum's science and education programs, provide new exhibition space, improve circulation and operations throughout the Museum, and provide new visitor services.

The proposed project will require discretionary approvals from NYC Parks~~DPR~~ and the New York City Public Design Commission (PDC) and a report and approval from the New York City Landmarks Preservation Commission (LPC). LPC issued its Binding Report on November 2,



AMNH Gilder Center for Science, Education, and Innovation

Project Location
Figure 1

2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings. Funding for the project has been appropriated by the City of New York, through the New York City Department of Cultural Affairs (DCLA), and by the State of New York, through the New York State Urban Development Corporation (d/b/a Empire State Development [ESD]). The New York State Office of Parks, Recreation, and Historic Preservation's Office of Historic Preservation (SHPO) will also review the proposed project.

Development of the proposed project may result in potentially significant adverse environmental impacts, requiring that an Environmental Impact Statement (EIS) be prepared. Scoping is the first step in the EIS preparation and provides an early opportunity for the public and other agencies to be involved in the EIS process. It is intended to determine the range of issues and considerations to be evaluated in the EIS. This ~~draft~~ EIS Final scope has been prepared to describe the proposed project, present the proposed framework for the EIS analysis, and discuss the procedures to be followed in the preparation of the Draft EIS (DEIS). The 2014 *City Environmental Quality Review (CEQR) Technical Manual* will serve as a general guide to the methodologies and impact criteria for evaluating the project's potential effects on the various environmental areas of analysis.

The CEQR public review process for the proposed project was initiated at a public scoping meeting for the preparation of an EIS held on April 6, 2016 at the American Museum of Natural History, LeFrak Theater, Columbus Avenue and West 79th Street, New York, New York 10024. Oral and written comments were accepted through the close of the public comment period, which ended at close of business on April 20, 2016.

Subsequent to the public scoping meeting, NYC Parks reviewed and considered comments received during the public scoping process. Appendix A to this Final Scope identifies the comments made during the public review period and provides responses. This Final Scope of Work was prepared after consideration of relevant public comments.

B. PURPOSE AND NEED

The proposed project is designed to address critical external and internal needs in furtherance of the Museum's purposes. The purpose and need for the proposed project is driven by the Museum's commitment to exploring new areas in scientific research, addressing key challenges in science education and enhancing the public understanding of and access to science at a time when science underpins so many of our most pressing societal issues—human health, climate change, and biodiversity conservation, among others.

Despite the importance of scientific knowledge for informed decision-making, our country faces challenges in STEM (Science, Technology, Engineering and Math) fields, both in educating students and in supporting teachers. Over the past two decades the Museum has partnered with the City, State, and federal departments of education, private and foundation supporters, and other science institutions to help develop and model programs that result in more STEM resources for more students and teachers.

The Museum employs approximately 200 working scientists who conduct their work through field expeditions and in laboratories using the Museum's onsite collections and state-of-the-art scientific equipment. It houses collections containing more than 33 million objects and specimens, only a very small percentage of which are on display at any given time, and one of the most comprehensive natural history libraries in the United States. These unique assets must

be made available to educate the next generation of teachers, scientists, and workers to ensure a scientifically literate nation, our nation's workforce preparedness, and opportunities for young people.

The Museum administers important educational programs, such as the Urban Advantage Middle School Science Initiative, which serves over 62,000 students from more than 220 schools, making it the largest formalized science program in the country. In 2009, AMNH became the first non-university affiliated museum in the United States to grant a Ph.D., and in 2011 AMNH also became the first such museum to offer a master's degree program in teaching science. Museum attendance has grown over the past 20 years, from approximately 2.77 million annual visitors in 1994[1] to approximately 5 million visitors in 2015~~2014~~, including about 500,000 visitors in school and camp groups.

As a result of this strong growth and expansion of programs, a portion of the Museum's facilities are overcrowded and inefficient. There is a shortfall of instructional space and the current spaces are out of date, fragmented, and difficult to access. Collections need improvement in their housing and additional capacity. Visitor services are poorly located and insufficient to meet visitor demand.

Prior to making the decision to undertake the proposed project, the Museum undertook a comprehensive, multi-year space planning initiative, which included a detailed and extensive analysis of its existing spaces, highest priority needs, and alternatives for achieving some or all of those needs. The Museum made substantial investments in its facilities to renovate, reorganize, and revitalize existing space. Even with these improvements within the existing footprint of the Museum, the space planning effort identified the need for the construction of an addition to the Museum to effectively address the key deficiencies described above, as well as to meet the scientific, educational, and other programmatic needs of the Museum to continue to meet its mission. Accordingly, the proposed project has been developed to fulfill the following goals and objectives:

- Accommodate growth in science and education programming and exhibits;
- Provide multi-disciplinary and flexible space for science and education;
- Enhance and integrate the Museum's science, exhibition and educational programming;
- Provide greater access to the Museum's scientists and scientific resources;
- Provide greater access to library resources;
- Improve and expand collections storage and visibility;
- Enhance the sustainability features of the Museum;
- Improve the Museum's circulation and connections;
- Provide a new entrance that activates the Columbus Avenue side of the Museum and welcomes visitors and the neighborhood; and
- Upgrade visitor and operational services.

The proposed project would make necessary improvements to the Museum's ability to integrate scientific research, collections, and exhibition with its educational programming, and would also upgrade and revitalize the Museum's facilities to address critical needs. Thirty new connections

[1] Fiscal Year 1994, i.e., from July 1, 1993 to June 30, 1994.

from the Gilder Center to ten existing Museum buildings would be created, improving circulation and flow for visitors, creating pathways without dead ends, and reinforcing the intellectual links among the Museum's programmatic, exhibition, and collections areas. Utility connections and service areas, some original to the 1908 construction of the Museum's service yard—and vital to the operation of the Museum complex—would be replaced and/or improved. New state-of-the-art facilities for research, exhibition, and education would be provided.

Scientific learning is powerful when it is demonstrated and experienced and not just told. The Museum considers the co-location of science, education, and exhibition uses to be essential to achieving its mission. The educational program of the project is enveloped and fueled by the Museum's onsite assets and resources. The proposed project would serve as a platform for the partnership between scientists and educators, offering spaces where students of all levels and ages can engage in the process of scientific research and discovery.

Within the framework of these needs and objectives, the proposed project is designed—and three existing buildings will be removed—to minimize the physical expansion of the Museum on Theodore Roosevelt Park.

C. PROJECT DESCRIPTION

PROJECT SITE

The Museum is located within, and bounded by, Theodore Roosevelt Park, on the approximately 17.5~~8~~7 acre superblock formed by West 81st Street, West 77th Street, Central Park West, and Columbus Avenue.

The Museum complex consists of numerous interconnected buildings, covering an approximately 7.7~~5~~ acre footprint (see **Figure 2** for a plan of the existing campus). Uses within the Museum complex include science laboratories and research space; collections storage; a library; exhibit space; theater spaces such as the LeFrak Theater and the Hayden Planetarium Space Theater; classrooms, education space, lecture halls, and support space for visiting school groups; café and food court uses; the Ross Terrace; gift shops; a parking garage; and maintenance, administrative, and operational space. Vehicular access to the Museum's parking garage is provided via a driveway that extends from West 81st Street. The main pedestrian entrance to the Museum faces Central Park West; additional entrances include the Weston Pavilion (facing Columbus Avenue), the Rose Center for Earth and Space (facing West 81st Street), and a restricted-access entrance on West 77th Street.

Beyond the Museum complex, open space uses in Theodore Roosevelt Park include bench-lined walking paths, fenced lawns and gardens, and a dog run. On the west side of the park, the Nobel Monument is located in a small square at the northwest corner of the Museum complex and *The New York Times* Capsule, designed by architect Santiago Calatrava, is located on a terrace adjacent to the Weston Pavilion. A protected bike lane runs along Columbus Avenue, adjacent to the western boundary of Theodore Roosevelt Park.

The development footprint of the proposed project is approximately ~~36,500~~35,307 square feet below-grade for new construction and 14,222 square feet for renovated space, with a total footprint of approximately ~~44,700~~43,691 square feet at grade. Of that, approximately 11,600 square feet of the at-grade footprint is outside the existing built area of the Museum (see **Figure 3**). The portion of the development area that is inside of the existing Museum footprint contains the Weston Pavilion and adjacent corridors, two other Museum buildings and adjacent corridors,

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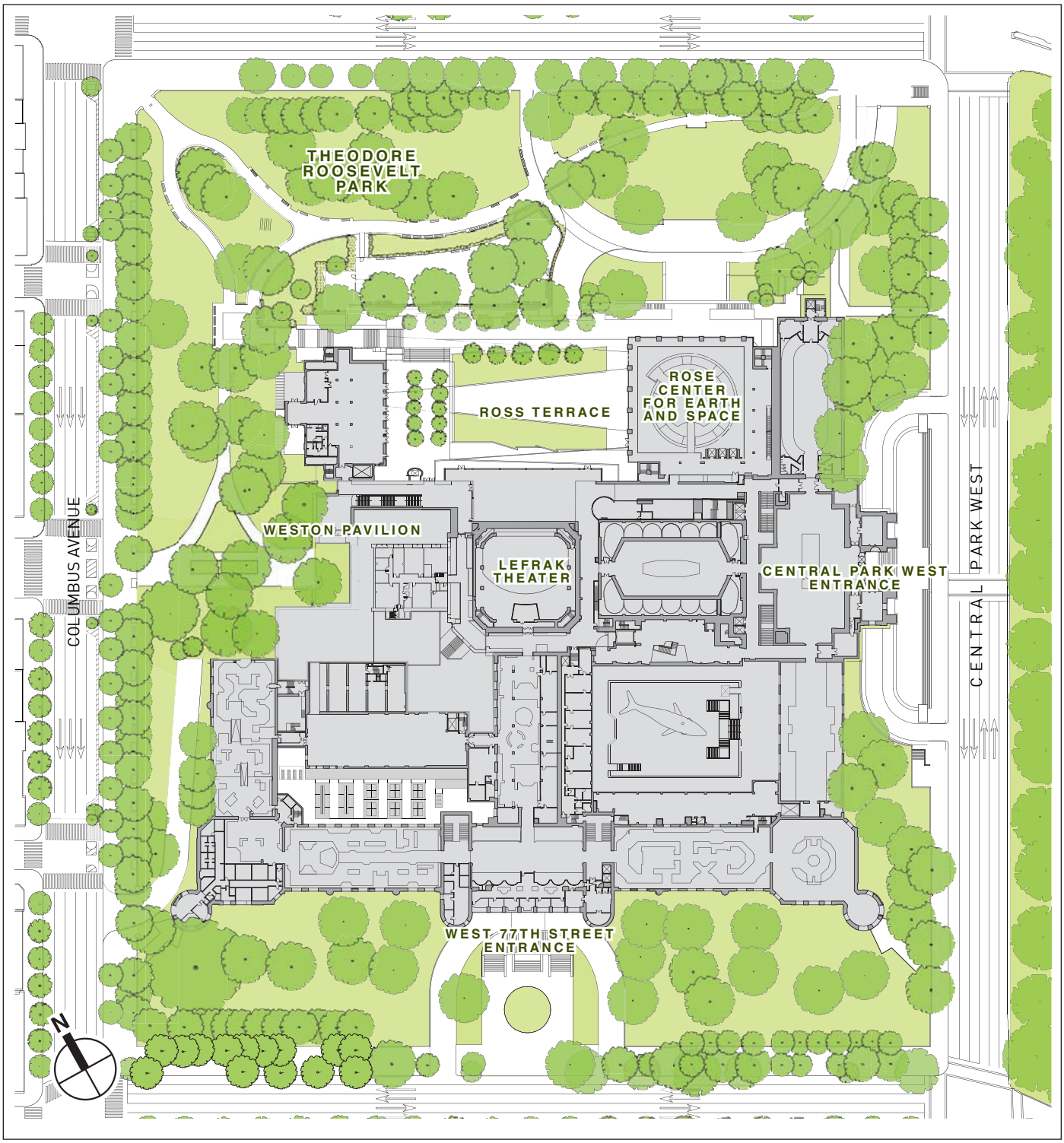
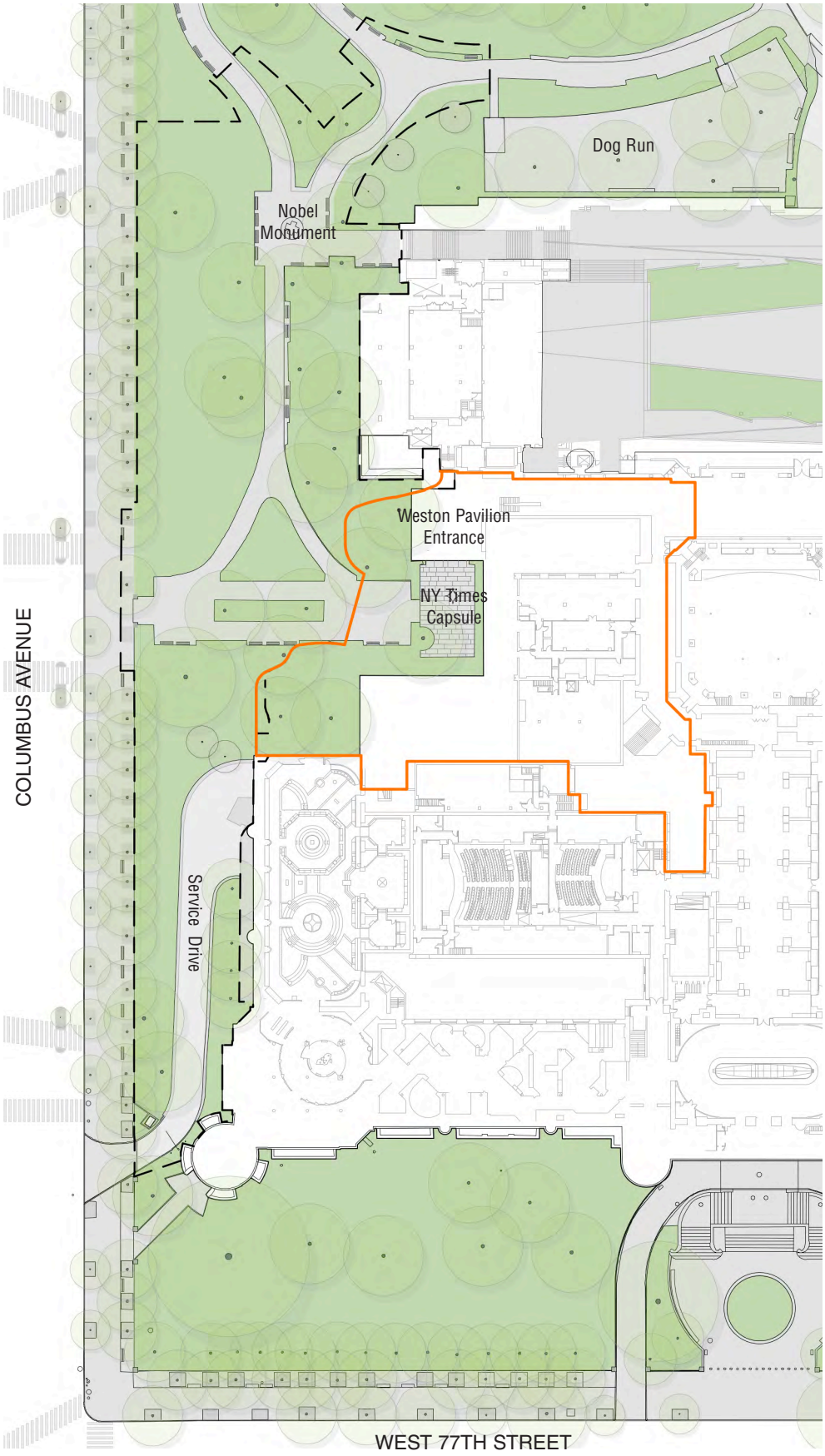


Existing AMNH Campus Plan

AMNH Gilder Center for Science, Education, and Innovation

Figure 2



Building Site *Park Improvement Boundary*

Existing Site Plan

and the Museum's service yard. The portion of the development area that is outside of the existing Museum footprint contains walkways, seating areas, fenced lawns, and landscaped areas.

PROPOSED PROJECT

BUILDING PROGRAM AND USES

The Gilder Center would be a five-story, approximately ~~180,000~~203,000 gsf addition to the Museum. The proposed project would also include approximately ~~38,000~~42,000 gsf of renovations to existing space and alterations to an approximately ~~31,100~~75,000 square-foot adjacent area of Theodore Roosevelt Park (see **Figure 4** for the proposed site plan and **Figure 5** for an elevation view of the proposed project).

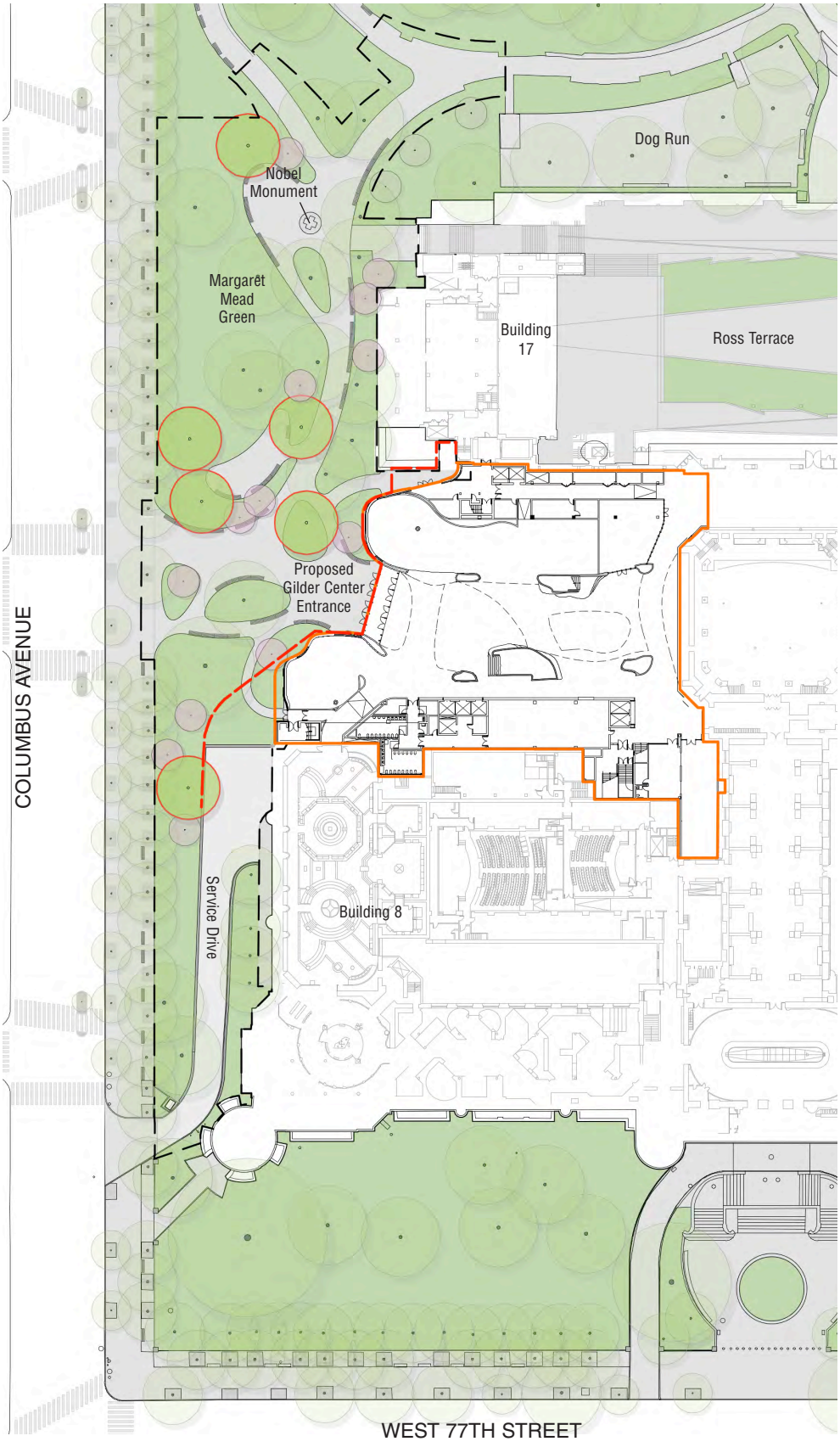
The proposed project would be designed to reveal the behind-the-scenes work of the Museum and integrate it into the visitor experience, to create an authentic and direct encounter with science. Collection storage spaces, the research library, and laboratories ~~for gene mapping, 3D imaging, and big data assimilation~~ would be located adjacent to immersive galleries and interactive education spaces for children and adults in family and school groups, transcending traditional boundaries between scientific research, education and exhibition.

Among the major new features that would be included in the proposed project are:

- A physical articulation of the Museum's full, integrated mission of science, education, and exhibition, that will provide visitors with cross-disciplinary exposure to the natural world;
- New kinds of exhibition and learning spaces infused with the latest digital and technological tools, linked ~~connected~~ to scientific facilities and collections;
- Innovative spaces devoted to the teaching of science—including for middle school, early childhood, family, and adult learners and teachers;
- Spaces for carrying out cutting edge scientific research—particularly in natural sciences—and facilitating public understanding of this vital scientific field;
- Increased storage capacity and greater visibility and access to the Museum's world-class collections;
- Exhibitions and interpretations of ~~facilities in~~ new areas of scientific study;
- Expansion of the natural history library from a world-class repository to a place of adult and public learning;
- Thirty new connections into ten existing Museum buildings on multiple levels, improving circulation and better utilizing existing space;
- Enhanced visitor experience and services;
- Improved building services; and
- A more visible and accessible entrance on the west side of the Museum complex

ARCHITECTURAL AND DESIGN PLAN

The architecture of the Gilder Center is intended to inspire a sense of discovery, through openings and natural light that echo the types of spaces in nature that are fluid, connective, and enticing to navigate. Visitors would see—and be invited to experience—more of the Museum's collections which form an irreplaceable record of life and human culture. The design would

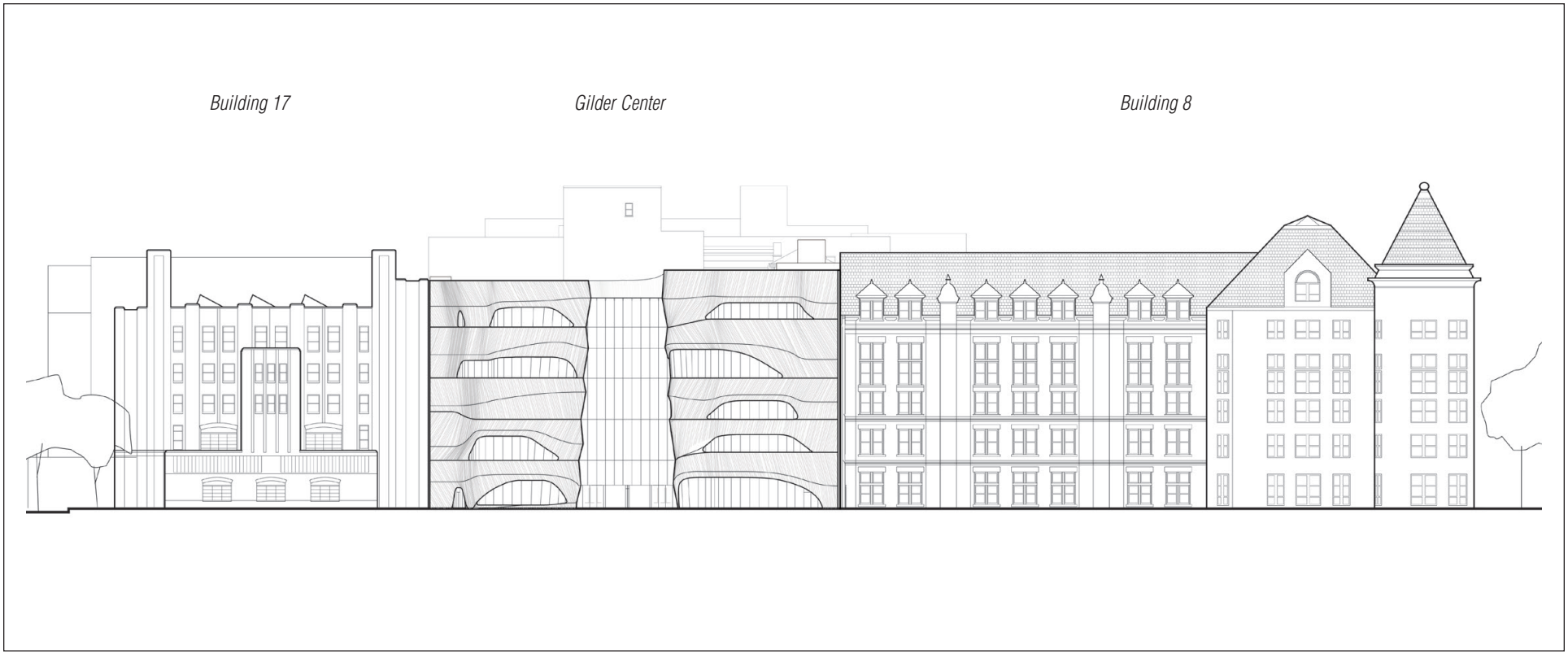


Building Site
Below-Grade Footprint
Park Improvement Boundary
Bench
Proposed Trees
Understory Tree
Canopy Tree

Proposed Site Plan

AMNH Gilder Center for Science, Education, and Innovation

Figure 4



Elevation View of Proposed Project

advance crucial aspects of the Museum's original master plan while reflecting a contemporary architectural approach that is responsive to the Museum's needs and the character of the surrounding public park and neighborhood.

The Gilder Center would include five stories above grade (up to 105 feet tall; taking into account mechanical and elevator bulkheads, a portion of the rooftop would reach 115 feet), and one below-grade, situated between buildings of different heights, diverse architectural styles, and varied relationships to the surrounding park and city. The building mass and proportion would carefully respond to this multilayered context, maintaining the height and scale of the existing Museum buildings. Critical alignments—in both elevation and plan—would neatly weave the new building into its site, maximizing utility while minimizing impact on the historic surroundings (see **Figures 6 and 7**).

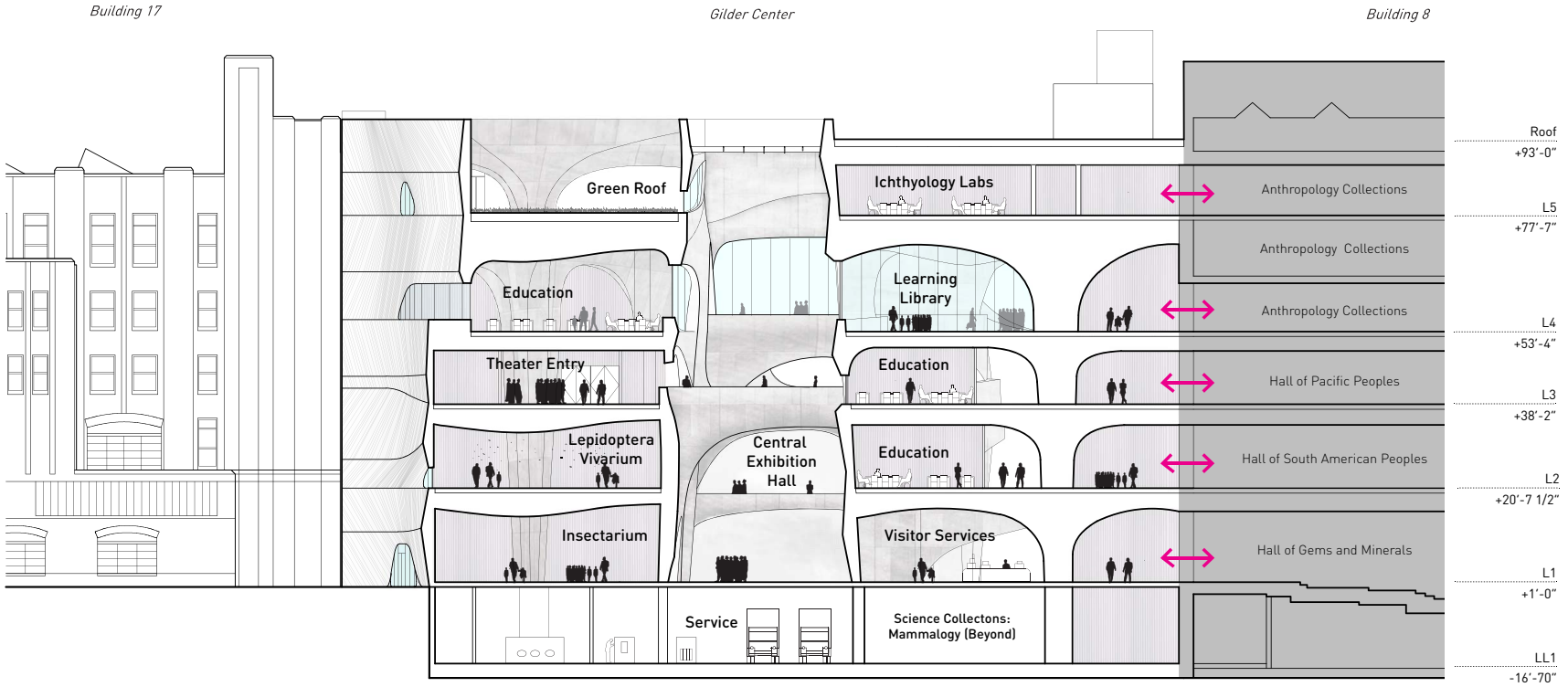
In developing the architectural concept, Architect Jeanne Gang worked from the inside out, seeing an opportunity to reclaim the physical heart of the Museum complex at its center and to complete connections between and among existing Museum halls and the new space. From Columbus Avenue, visitors would access the building through the park at grade and enter a Central Exhibition Hall that would link the west side of the Museum to all other parts of the campus, thereby enhancing accessibility and simplifying circulation. Functionally, the new building completes the east-west axis of circulation and exhibition spaces which was envisioned in the original master plan for the Museum, and only partly completed to date and creates a north-south connection on the west side of the campus for the first time. Overall, the proposed project is expected to improve the connectivity, spatial logic, and function of the Museum's interior spaces.

LANDSCAPE PLAN

As noted above, the proposed project would result in the expansion of the Museum's footprint by approximately 11,600 square feet at grade in Theodore Roosevelt Park. As part of the initial design effort, the Museum reduced the development footprint with the goal of minimizing the number of trees and the amount of public open space that would be impacted. Subsequent refinements have reduced the size of the proposed below-grade service area and modified the design of the service drive with the goal of preserving two trees. AMNH is developing plans to protect and conserve these two trees, a Pin oak and an English elm. It is expected that the proposed project would directly affect ~~approximately ten trees, including nine~~ seven canopy trees in Theodore Roosevelt Park that would be removed and one understory tree that would be relocated. Construction would be performed in compliance with an approved tree protection plan and NYC Parks tree protection protocols, and any trees that are removed and ~~cannot be~~ not transplanted would be replaced, consistent with NYC Parks~~DPR~~ rules and regulations. The Museum anticipates planting ~~eight~~six new canopy trees and ~~nine~~thirteen new understory trees in the vicinity of the development area.

Paths and landscaping in an approximately 75,000 square-foot portion of Theodore Roosevelt Park adjacent to the development area would be modified, removed, or relocated to accommodate the proposed project and to provide more areas for seating and public access (see **Figure 4**). It is anticipated that these changes would include:

- Path adjustments by the Nobel Monument area to improve circulation, provide more seating, and create a gathering space off of the path network and away from Museum entry.

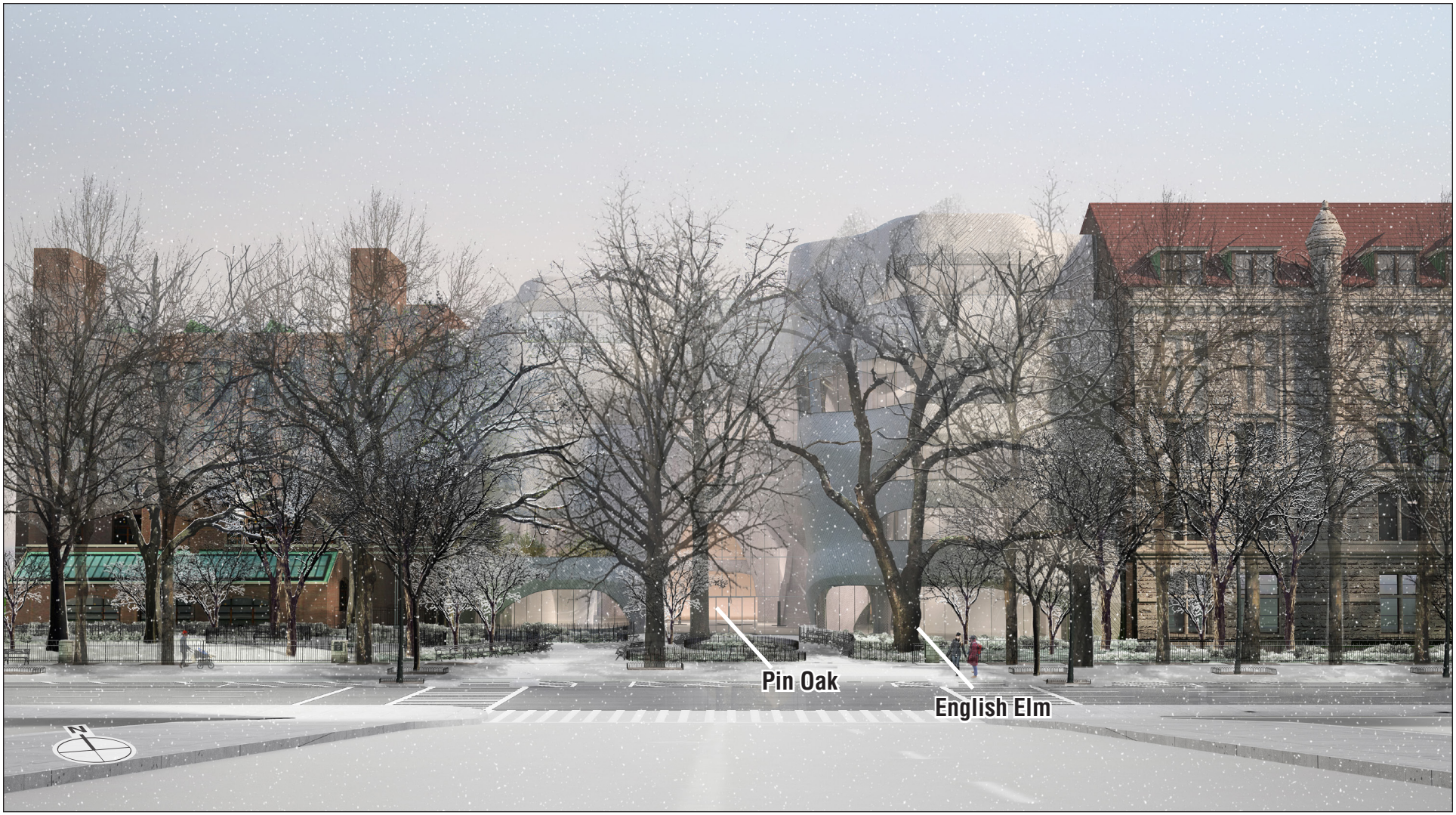


Section View of Proposed Project

Figure 6

Note: *Subsequent to initial design effort, below-grade service area and service drive modified with goal of preserving Pin Oak and English Elm labeled above.*

Illustrative Rendering of Proposed Project (Spring)



Note: *Subsequent to initial design effort, below-grade service area and service drive modified with goal of preserving Pin Oak and English Elm labeled above.*

Illustrative Rendering of Proposed Project (Winter)

- Enlargement of Margaret Mead Green (from approximately 26,725 square feet to approximately 27,137 square feet) by shifting a park path farther to the east, and addition of an adjacent hard scape gathering area with seating that would be away from the path network, Museum entry, and the street.
- Relocation of *The New York Times* Capsule to a location adjacent to the Rose Center entrance.
- A wider entrance from Columbus Avenue and path adjustments between Columbus Avenue and the Gilder Center entrance to accommodate greater pedestrian traffic. The paths and entrance would be designed to be accessible to children, strollers and the mobility-impaired.
- New planted islands would be created, incorporating the pin oak and English elm trees that the Museum plans to protect and conserve, and areas for respite would be provided away from the path network and Museum entry.
- New and revitalized plant beds, extending from the Nobel Monument to the service drive, would incorporate the existing oaks and Siberian elm trees. Species would be selected for native and adaptive characteristics, and would include shade- and moisture-tolerant groundcovers and shrubs, flowering understory trees, and ephemeral bulbs, providing year-round interest.
- Park infrastructure improvements, including upgraded fencing, and drainage and irrigation where needed.

Taking into account the improvements associated with the proposed project, ~~T~~the character of the park along Columbus Avenue is anticipated to be similar to the existing paths and landscaped areas, primarily designed for walking and quiet activities. In addition, the Museum proposes to ~~increase the number of benches in this area from seven to seventeen~~install approximately fifteen new benches. The area in front of the new entrance would (as it currently does), provide an entrance point to the Museum, although with the project it would at times be more populated and active with Museum visitors. The paths and entrance would be designed to be accessible to children, strollers and the mobility-impaired.

As stated above, *The New York Times* Capsule would be relocated as part of the proposed project. For construction access, three recently planted, smaller caliper trees outside the Park (one on the curb and two in the bike lane traffic islands) would be temporarily moved prior to the commencement of construction and replanted (or replaced) after completion of construction. The existing dog run would not be altered or affected ~~by the design~~, and the other paths in the Park ~~to the dog run and to the subway~~ would remain.

SUSTAINABILITY

As noted above, one of the proposed project's goals is to enhance the sustainability features of the Museum. In keeping with this objective, ~~T~~the proposed project is targeting~~anticipated to achieve~~ a LEED ~~Silver~~ Gold rating, with state-of-the-art systems and controls, and a high-performance envelope that minimizes energy use. Sustainable systems and high performance/energy-efficient technologies are under consideration for the proposed project; this includes photovoltaic panels, heat recovery, displacement ventilation, green roofs, and storm water collection, and reuse. ~~Alternative energy sources and efficiency measures are under consideration and may be included in the proposed project, including photovoltaic panels, geothermal wells, storm water retention systems, and grey water recycling.~~

PROPOSED ACTIONS

The Museum and its original buildings were created pursuant to New York State statutes passed between 1869 and 1875; then, an 1876 State statute set aside the entire site of Theodore Roosevelt Park for the Museum and authorized the City's then Department of Public Parks to enter into a contract (the Museum's lease) granting the Museum exclusive use of the buildings erected or to be erected in the park. Thus, the Museum is a permitted use in the Park, and no further legislative action or disposition of property is required. Since Theodore Roosevelt Park is City-owned mapped parkland, the project site does not bear a zoning designation and is not subject to the New York City zoning resolution.

However, the proposed project requires approval from NYC Parks~~DPR~~ pursuant to the Museum's lease, from DCLA for City funding, and from ESD for State funding. The new location of *The New York Times* Capsule requires the approval of PDC.

The Museum is a New York City Landmark (NYCL) and is listed on the State and National Registers of Historic Places (S/NR). Therefore, prior to making its determination, NYC Parks~~DPR~~ must obtain a report and approval from LPC, and ESD is required to undertake a historic preservation review in consultation with SHPO. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings.

D. ANALYSIS FRAMEWORK

The 2014 *CEQR Technical Review Manual* will serve as a guide on the methodologies and impact criteria for evaluating the proposed project's potential environmental effects. In disclosing impacts, the EIS considers the proposed project's potential adverse impacts on the environmental setting. It is anticipated that the proposed project, if approved, would be built and operational by 2020, with its first full-year of operation in 2021. Consequently, the environmental setting for comparison is not the current environment, but the future environment in which the project is operational. Therefore, the technical analyses and consideration of alternatives includes descriptions of existing conditions, conditions in the future without the proposed project (the No Action condition), and conditions in the future with the proposed project (the With Action condition). The incremental difference between the No Action and With Action conditions is therefore the subject of analysis for evaluating the potential environmental effects of the proposed project.

NO ACTION CONDITION

Absent the proposed project, the Museum would continue in its current operations. Routine growth in attendance is expected to occur absent the proposed project. Independent of the proposed project, over time AMNH anticipates undertaking various improvements to Museum facilities. No Action projects within the Museum will be identified in the EIS.

WITH ACTION CONDITION

The Gilder Center would be a five-story, approximately ~~180,000~~203,000 gsf addition. The proposed project would also include the creation of thirty new connections into ten existing Museum buildings and the renovation and reconfiguration of approximately ~~38,000~~42,000 gsf of existing Museum space. The proposed project would result in the expansion of the Museum's

footprint by approximately 11,600 square feet at grade in Theodore Roosevelt Park~~, impacting ten trees (one of which is expected to be replanted within the park)~~.

Based on analysis of the Museum's historic attendance data and the impact of major capital projects on attendance at other museums and visitor attractions~~market penetration~~, it is expected that Museum annual ~~ticketed~~ attendance in the With Action condition would increase by approximately ~~500~~745,000 people, compared to conditions without the proposed project.

The physical changes to the project site and the incremental population increase will be analyzed in the EIS for potential significant adverse impacts on the environment, consistent with the guidance of the *CEQR Technical Manual*.

E. ENVIRONMENTAL REVIEW PROCESS

CEQR OVERVIEW

New York City has formulated an environmental review process (CEQR) pursuant to the State Environmental Quality Review Act (SEQRA) and its implementing regulations (Part 617 of 6 New York Codes, Rules and Regulations). The City's CEQR rules are found in Executive Order 91 of 1977 and subsequent rules and procedures adopted in 1991 (62 Rules of the City of New York, Chapter 5). CEQR's mandate is to strike a balance between social and economic goals and concerns about the environment. Agencies undertaking, funding, or approving actions interject environmental considerations into their discretionary decisions by taking a "hard look" at the environmental consequences of each of those actions so that all potential significant environmental impacts of each action are disclosed, alternatives that avoid or reduce such impacts are considered, and appropriate, practicable measures to reduce or eliminate such impacts are adopted.

The CEQR process begins with selection of a lead agency for the review. The lead agency is generally the governmental agency that is most responsible for the decisions to be made on a proposed action and is also capable of conducting the environmental review. For the proposed project, NYC Parks~~DPR~~ is the CEQR lead agency.

The lead agency, after reviewing the Environmental Assessment Statement (EAS), has determined that the proposed project has the potential for significant adverse environmental impacts and that an EIS must be prepared. A public scoping of the content and technical analyses of the EIS is the first step in its preparation, as described below. Following completion of scoping, the lead agency oversees preparation of a DEIS for public review.

The lead agency is expected to hold a CEQR hearing following the completion of the DEIS. That hearing record is held open for a minimum of 10 days following the open public session, at which time the public review of the DEIS ends. The lead agency then oversees preparation of a Final EIS (FEIS), which incorporates all relevant comments made during public review of the DEIS. The FEIS is the document that forms the basis of CEQR Findings, which the lead agency and each involved agency must make before taking any action within its discretion on the proposed project.

SCOPING

The CEQR scoping process is intended to focus the EIS on potentially significant adverse impacts in order that relevant issues are identified early and studied properly and by eliminating

consideration of those impacts that are irrelevant or non-significant. At the same time, the process allows other agencies and the public to have a voice in framing the scope of the EIS. During the period for scoping, parties interested in reviewing the Draft Scope of Work may do so and give their comments in writing to the lead agency or at the public scoping meeting.

The period for comments on the Draft Scope of Work ~~will~~ remained open for ~~10~~ 14 days following the public scoping meeting on April 6, 2016.~~,~~ Oral and written comments were accepted through the close of the public comment period, which ended at close of business on April 20, 2016~~at which point the scope review process will be closed~~. The lead agency ~~will~~ then ~~oversee~~ oversaw preparation of ~~a~~ this Final Scope of Work, which incorporates all relevant comments made on the scope and revises the extent or methodologies of the studies, as appropriate, in response to comments made during scoping. The DEIS will be prepared in accordance with ~~the~~ this Final Scope of Work.

F. ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

The scope of the EIS will conform to all applicable laws and regulations and will follow the guidance of the *CEQR Technical Manual*.

The EIS will contain:

- A description of the proposed project and its environmental setting;
- A statement of the environmental impacts of the proposed project, including its short- and long-term effects;
- An identification of any adverse environmental effects that cannot be avoided if the proposed project is implemented;
- A discussion of alternatives to the proposed project;
- An identification of any irreversible and irretrievable commitments of resources that would be involved in the proposed project should it be implemented; and
- A description of mitigation measures proposed to minimize significant adverse environmental impacts.

The analyses for the proposed project will be performed for the first expected year of operation, which is 2021. The incremental difference between the No Action and With Action conditions will form the basis for the EIS analyses. Based on the preliminary screening assessments outlined in the *CEQR Technical Manual* and as described in the EAS, the following environmental areas would not require analysis for the proposed project in the EIS: socioeconomic conditions; community facilities; water and sewer infrastructure; solid waste; and energy~~; and greenhouse gas emissions~~.

Below are descriptions of the environmental categories in the *CEQR Technical Manual* that will be analyzed in the EIS, with a description of the tasks to be undertaken.

PROJECT DESCRIPTION

The first chapter of the EIS introduces the reader to the project and sets the context in which to assess impacts. This chapter will contain a project identification (brief description and location of the project site); the background and/or history of the project site and proposed project; a statement of purpose and need for the proposed project; a detailed description of the proposed project, its programming, and project siting and design; and a discussion of the approvals

required, the procedures to be followed, and the role of the EIS in the process. The chapter will also describe the analytic framework for the EIS. This chapter is key to understanding the proposed project, and gives the public and decision-makers a base from which to evaluate the With Action condition against both the No Action condition and alternative options, as appropriate.

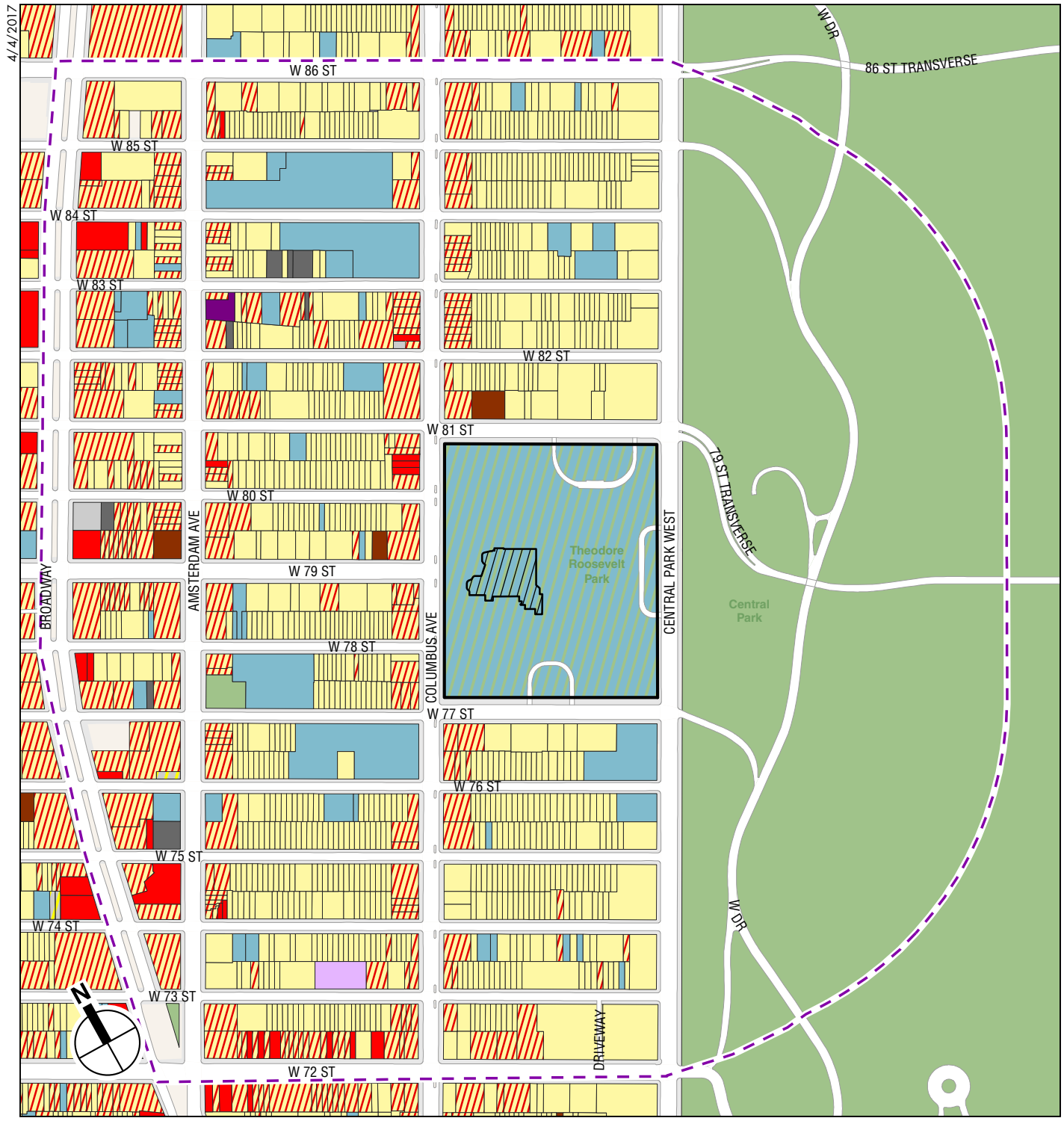
The project description will include a discussion of key project elements, such as the site plan, access and circulation, and other project features. In addition to describing the project design and interior program elements, the project description will include information on the treatment of the 78th Street service driveway and the existing service yard, below grade construction, and improvements and alterations to the Theodore Roosevelt Park. The section on required approvals will describe all public actions required to develop the project. The role, if any, of any other public agency in the approval process will also be described. The role of the EIS as a full-disclosure document to aid in decision-making will be identified and its relationship to any other approval procedures will be described.

LAND USE, ZONING, AND PUBLIC POLICY

A land use analysis characterizes the uses and development trends in the area that may be affected by a proposed project. The analysis also considers a project's compliance with and effect on the area's zoning and other applicable public policies. Even when there is little potential for an action to be inconsistent or affect land use, zoning, or public policy, a description of these issues is appropriate to establish conditions and provide information for use in other technical areas.

The EIS will include a detailed assessment of the proposed project's consistency with land use, zoning, and public policy, which will consist of the following tasks:

- Provide a brief development history of the project site and study area.
- Describe existing conditions in the Museum superblock, including existing uses and visitor levels.
- Describe predominant land use patterns in the study area, including recent development trends. The study area will include the blocks immediately surrounding the Museum block and land uses within the area bounded by West 86th Street to the north, West 72nd Street to the south, the Loop Drive of Central Park to the east, and Broadway to the west ~~approximately ¼ mile~~ (see **Figure 8**).
- Provide a clear zoning map and discuss existing zoning. The discussion will explain that the proposed project, because it is on parkland, is not subject to the New York City zoning resolution.
- Summarize other public policies that may apply to the project site and study area, including any applicable formal neighborhood or community plans.
- Prepare a list of other projects expected to be built in the study area that would be completed before or concurrent with the proposed project (No Action projects). Describe the effects of these No Action projects on land use patterns and development trends. Also, describe any pending zoning actions or other public policy actions that could affect land use patterns and trends in the study area, including plans for public improvements.
- Describe the proposed project and provide an assessment of the impacts of the proposed project on land use and land use trends, zoning, and public policy. Consider the effects



Land Use Study Area

Figure 8

AMNH Gilder Center for Science, Education, and Innovation

related to issues of compatibility with surrounding land use, consistency with public policy initiatives, and the effect of the project on development trends and conditions in the area.

OPEN SPACE

Open space is defined as publicly- or privately-owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment. An analysis of open space is conducted to determine whether a proposed project would have direct effects resulting from the elimination or alteration of open space, and/or indirect effects resulting from overtaxing available open space due to an increased user population generated by the project.

According to the *CEQR Technical Manual*, an assessment of a project's potential direct effects may be appropriate if the project would result in a physical loss of publicly-accessible open space (by encroaching on an open space or displacing an open space); change the use of an open space so that it no longer serves the same user population (e.g., elimination of playground equipment); limit public access to an open space; or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether on a permanent or temporary basis. An assessment of indirect effects may be appropriate if a substantial population would be introduced that could overburden existing open space resources.

The proposed project would involve the construction of an addition to the Museum within a City park. While the proposed project would result in a reduction and change in existing open space, this change would not require State alienation legislation because of existing statutes permitting Museum uses within the park. However, because the proposed project would directly affect existing parkland, an assessment of direct effects and indirect effects will be provided in the EIS. The analyses will consider the number of park users that would be affected as well as the type, quantity, and quality of displaced publicly-accessible open spaces. The assessment will also consider the availability of public open spaces within a ½-mile of the project site and provide a comparison of open space conditions in the No Action and With Action conditions. The chapter will quantify the ratio of acres of open space available per 1,000 residents in the study area and compare this ratio with the City's planning goals and the citywide community district median. In addition, as a conservative measure, Museum attendance and utilization will also be accounted for in the analysis. The analysis will project the open space ratio in the future without the proposed project, taking into account any substantial identified background development projects. The open space ratio in the future with the proposed project, taking the forecasted increase in attendance into account, will also be calculated. The incremental difference attributable to the proposed project will be identified, and the significance of the anticipated change will be assessed. ~~assess the potential impacts of the proposed project, based on quantified ratios and qualitative factors.~~

SHADOWS

The *CEQR Technical Manual* requires a shadows assessment for proposed actions that would result in new structures (or additions to existing structures) greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly-accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features.

The proposed project would result in a new structure greater than 50 feet in height that would be located within Theodore Roosevelt Park, a publicly-accessible open space. Therefore, a

preliminary assessment of shadows is warranted and will be provided in the EIS. The shadow assessment will be coordinated with the tasks for open space and historic resources. The preliminary assessment will include the following tasks:

- Develop a base map illustrating the proposed project in relation to publicly accessible open spaces, historic resources with sunlight-dependent features, and natural features in the area.
- Perform a screening assessment to ascertain those seasons and times of day during which shadows from the proposed project could reach any sunlight-sensitive resources.

Since new shadows reaching sunlight-sensitive resources are expected, the EIS will also include a detailed analysis. This will include the following tasks:

- Develop a three-dimensional computer model of the elements of the base map developed in the preliminary assessment.
- Develop a "worst-case" three-dimensional representation of conditions in the With Action scenario.
- Develop three-dimensional representations of the No Action condition.
- Determine the extent and duration of new shadows that would be cast on sunlight-sensitive resources as a result of the proposed project on four representative days of the year.
- Document the analysis with graphics comparing shadows resulting from the No Action condition with shadows resulting from the proposed project, with incremental shadow highlighted in a contrasting color.
- ~~Include a summary table listing~~Provide the entry and exit times and total duration of incremental shadow on each applicable representative day for each affected resource.
- Assess the significance of any shadow impacts on sunlight-sensitive resources.
- If any significant adverse shadow impacts are identified, identify and assess potential mitigation strategies.

HISTORIC AND CULTURAL RESOURCES

According to the *CEQR Technical Manual*, a historic and cultural resources assessment is required if there is the potential for a proposed project to affect either archaeological or architectural resources. The Museum is a NYCL and is individually listed on the S/NR. The project site is also located within the Upper West Side/Central Park West Historic District (NYCHD and S/NR eligible) and the S/NR listed Central Park West Historic District. Central Park, located directly east of the project site, is a National Historic Landmark (NHL), listed on the S/NR, and a designated New York City Scenic Landmark. The proposed project will require review and approval by LPC pursuant to the City's Landmarks Law. As the proposed project will also be seeking state financing through ESD, the project will also be subject to review by SHPO pursuant to the New York State Historic Preservation Act (SHPA) of 1980, as set forth in Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law.

Therefore, an analysis will be undertaken to examine the effect of the proposed project on historic and cultural resources. The following tasks will be undertaken as part of the archaeological and architectural resources analyses:

- Consult with LPC and SHPO regarding the project site's potential archaeological sensitivity. If it is determined that all or part of the area that would be disturbed in order to construct the

proposed project may be sensitive for archaeological resources, a Phase 1A Archaeological Documentary Study of the affected area will be prepared as directed by LPC and/or SHPO.

- Prepare a map of the 400-foot study area (measured from the boundaries of Theodore Roosevelt Park) and describe known architectural resources within the study area. These comprise NHLs, S/NR and S/NR-eligible properties, and NYCLs and NYCHDs.
- Based on planned development projects, qualitatively discuss any impacts on historic and archaeological resources that are expected in the No Action condition.
- Assess the proposed project's potential impacts on architectural resources, including visual and contextual impacts as well as any direct physical impacts. This analysis will include a summary of LPC's review of the proposed project pursuant to the Landmarks Law and the results of the consultation with SHPO. If significant adverse impacts are identified, practicable mitigation measures, such as a historic building survey report, will be evaluated for recommendation.

URBAN DESIGN AND VISUAL RESOURCES

According to the methodologies of the *CEQR Technical Manual*, if a project requires actions that would result in physical changes to a project site beyond those allowable by existing zoning, and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources should be prepared. Although the project site is not subject to zoning, the proposed project would result in physical changes to the project site that would be visible to pedestrians from public areas including Theodore Roosevelt Park and Columbus Avenue.

Therefore, a preliminary analysis will be undertaken as follows:

- Prepare a concise narrative of the existing conditions of the project site and a study area of approximately ¼ mile. The study area for the preliminary assessment of urban design and visual resources will be consistent with the study area for the analysis of land use, zoning, and public policy. The analysis will draw on information from field visits to the project site and study area.
- Based on planned and proposed development projects and using the information gathered above for existing conditions, assess whether and how urban design conditions are expected to change in No Action condition.
- Assess qualitatively how the proposed project would affect the pedestrian's experience of the built environment, and determine the significance of those changes. The assessment will consider the potential effects of increased lighting along the Gilder Center façade. The preliminary assessment will present photographs, building heights, project drawings and site plans, and view corridor assessments, as appropriate.

NATURAL RESOURCES

According to the *CEQR Technical Manual*, a natural resource is defined as a plant or animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support environmental systems and maintain the City's environmental balance. Such resources include surface and groundwater, wetlands, dunes and beaches, grasslands, woodlands, landscaped areas, gardens, and built structures used by wildlife. An assessment of natural resources is appropriate if a natural resource exists on or near the site of the proposed action, or if an action involves disturbance of that resource.

The project site is within Theodore Roosevelt Park, a landscaped park adjacent to Central Park, under the jurisdiction of NYC Parks~~DPR~~. Construction of the project will result in the displacement of vegetation and trees within the park. In accordance with the *CEQR Technical Manual*, the EIS will provide an assessment of natural resources. Existing natural resources within and in the vicinity of the project site will be characterized, including terrestrial plants and wildlife. The proposed project's potential impacts to natural resources will be assessed, including short-term construction effects, and long-term effects associated with any changes in landscaping and human activity due to the proposed project, as well as any impacts associated with the building expansion. A discussion of any related permits (e.g., NYC Parks~~DPR~~ tree-replacement requirements) that may be required will be provided.

The analysis will include the following tasks:

- On the basis of site reconnaissance and existing information on and in the vicinity of the project site, including terrestrial resources, threatened or endangered species from resource agencies such as the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYSDEC), characterize the existing natural recourses within and adjacent to the project site. This will include an inventory of the number, type, and size of directly affected trees and other vegetation.
- Assess potential effects to natural resources in the No Action condition, accounting for any changes in the study area that may alter natural resources.
- Assess potential impacts to terrestrial resources in the With Action condition by considering tree removal and other vegetation disturbance, visual and noise disturbances to wildlife, risk of daytime bird collision due to the building expansion, and any benefits from landscaping or other improvements that would be implemented as part of the proposed project. Related permits such as the NYC Parks~~DPR~~ tree-replacement requirements will be described.

HAZARDOUS MATERIALS

The EIS will address the potential presence of hazardous materials on the project site. The EIS will summarize a Phase I Environmental Site Assessment (ESA) and a Phase II subsurface investigation report for the project site. It will include any necessary recommendations for additional testing or other activities that would be required prior to or during construction and/or operation of the project, including a discussion of any necessary remedial or construction health and safety measures, as appropriate.

TRANSPORTATION

The proposed project is expected to result in an incremental increase in Museum attendance and a change in access/egress patterns attributable to the Gilder Center entrance along Columbus Avenue. According to guidelines provided in the *CEQR Technical Manual*, if a project's travel demand (Level 1) is expected to show fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are typically not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that a project would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses are warranted to assess the potential for significant adverse impacts.

TRAVEL DEMAND PROJECTIONS AND SCREENING ASSESSMENTS

The Museum already influences conditions in the area due to its generation of substantial levels of traffic by all modes, including private autos and taxis, tour buses, school buses, subways, local buses, bicycles (including those using the Columbus Avenue bike lane), and walking. In conjunction with construction of the Rose Center for Earth and Space and the Museum's parking garage, AMNH prepared an internal operational plan to manage the Museum's transportation (the Transportation Management Plan [TMP]). The TMP addressed a range of issues generated by visitor travel to and from the Museum, including congestion on the blocks around the Museum and the need to manage school buses bringing children to the Museum. The Museum actively encourages the use of public transportation. The TMP was updated in 2015 to reflect current bus and visitation levels as well as changes to local traffic conditions.

Future travel demand estimates for the proposed project have been prepared using visitation projections and recent travel characteristics provided by the Museum. The estimates were compared to the above screening thresholds to identify transportation elements that would be subject to further detailed analyses. The results of these estimates were summarized in a Travel Demand Factors (TDF) memorandum for review and concurrence by the lead agency and involved expert agencies, including the New York City Department of Transportation (DOT) and/or New York City Transit (NYCT). ~~Although subject to change based on comments and questions raised during this review, the~~ The current trip estimates would not exceed the above analysis thresholds for traffic, but would exceed the analysis thresholds for one subway station and several pedestrian elements in at least one peak hour. Nonetheless, due to substantial existing traffic and pedestrian levels in the area and those contributed by the Museum, a detailed traffic impact analysis will be included in the transportation scope ~~has been identified, as follows,~~ described below to assess potential transportation-related impacts associated with the proposed project.

TRAFFIC

Vehicle travel to the Museum includes use of private auto, taxis, tours buses, and school buses. Based on the travel demand estimates described above, the proposed project is not expected to yield ~~minimal~~ incremental vehicular traffic exceeding the *CEQR Technical Manual* analysis threshold of 50 vehicle trips at an intersection during weekday and weekend peak hours. ~~Therefore~~ However, a detailed traffic impact study ~~would~~ will be conducted for ~~only~~ the weekday midday and PM peak periods, as well as the weekend (Saturday) afternoon peak period. If significant adverse traffic impacts are identified, ~~feasible~~ practicable traffic mitigation measures, such as signal timing changes and lane re-striping, will be evaluated for recommendation. The following tasks will be undertaken:

- Define traffic study area: Based on the findings of the TDF memo and consultation with the lead agency and DOT, the following ~~seven~~ nine intersections have been identified for a detailed analysis for the weekday and Saturday peak periods, as shown on **Figure 9**.
    1) Central Park West and West 77th Street;
    2) Central Park West and West 81st Street;
    3) Central Park West and West 82nd Street;
    4) Columbus Avenue and West 77th Street;
    5) Columbus Avenue and West 78th Street;

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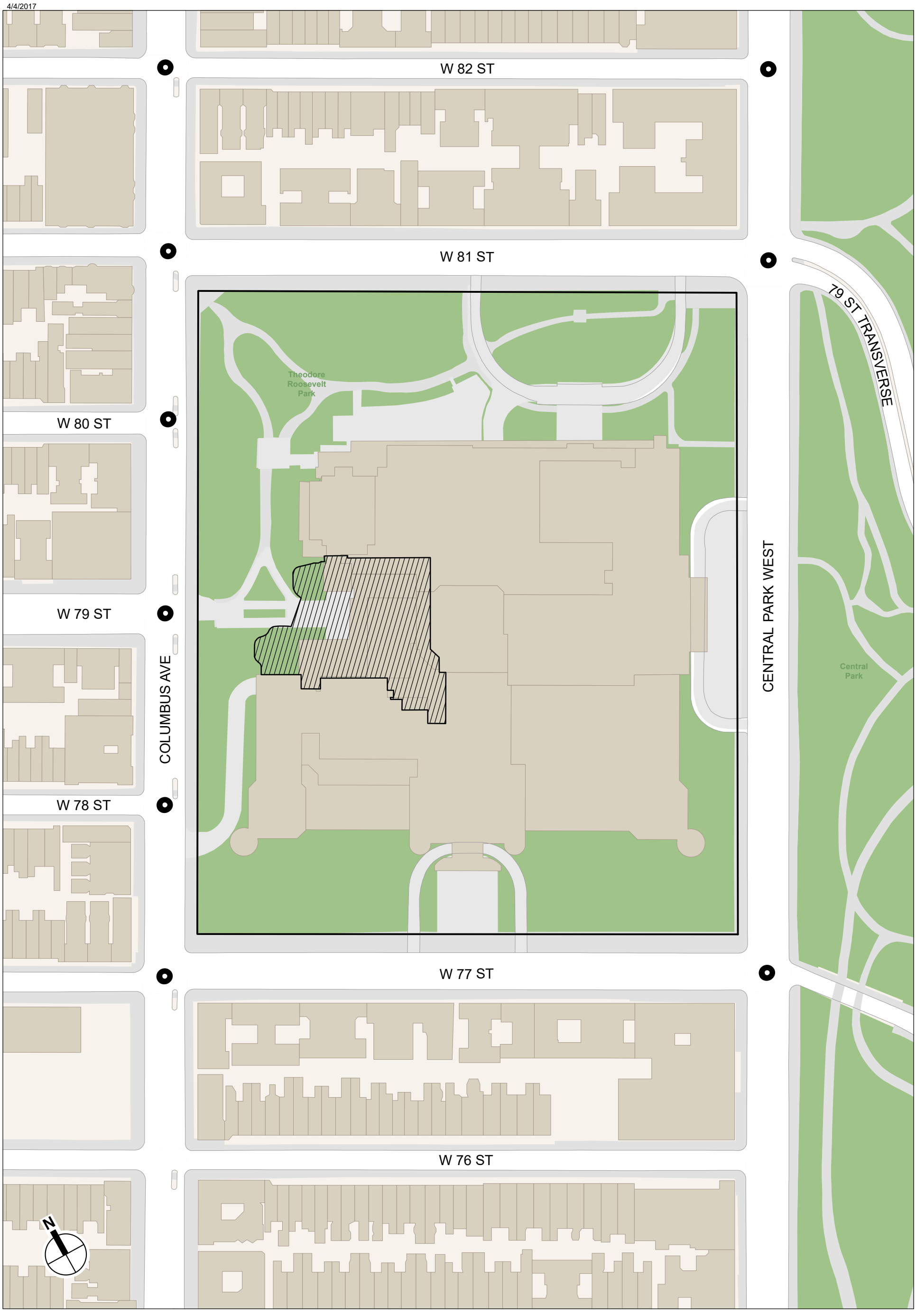

Traffic Study Area
Figure 9

AMNH Gilder Center for Science, Education, and Innovation

6) Columbus Avenue and West 79th Street;
7) Columbus Avenue and West 80th Street; ~~and~~
8) Columbus Avenue and West 81st Street~~.~~; and
9) Columbus Avenue and West 82nd Street.

- Traffic data collection: Traffic volumes and relevant data at the study area intersections will be collected following CEQR guidelines via a combination of manual, video, and machine counts. Turning movement and vehicle classification counts (including, autos taxis, buses and trucks) will be conducted for the weekday and Saturday analysis peak periods. These counts will be supplemented with continuous automatic traffic recorder (ATR) counts at key locations to identify temporal and daily traffic variations. Information pertaining to street widths, traffic flow directions, lane markings, parking regulations, and bus stop locations at study area intersections will be inventoried; this task will account for the condition created by the bike lanes and parking along the east side of Columbus Avenue. Traffic control devices (including signal timings) in the study area will be recorded and verified with official signal timing data from DOT.
- Conduct existing conditions analysis: Balanced peak hour traffic volumes will be prepared for the capacity analysis of study area intersections. This analysis will be conducted using the 2000 *Highway Capacity Manual* (HCM) methodology with the latest approved Highway Capacity Software (HCS)—HCS+, version 5.5. The existing volume-to-capacity (v/c) ratios, delays, and levels of service (LOS) for the peak hours will be determined.
- Develop the future No Action condition: No Action traffic volumes in the 2021 analysis year will be estimated by adding a background growth factor to existing traffic volumes, in accordance with CEQR guidelines, and incorporating incremental changes in traffic resulting from other projects in the area. The analysis will also account for increased attendance at the Museum expected to occur independent of the proposed project. Physical and operational changes that are expected to be implemented independent of the proposed project, such as those related to the implementation of Select Bus Service (SBS) on the M79 bus route ~~if any~~, will also be incorporated into the future traffic analysis network. The No Action v/c ratios, delays, and LOS at the study area intersections will be determined.
- Perform traffic impact assessment for the proposed project: Incremental project-generated vehicle trips (including diverted trips due to the Gilder Center entrance location) will be overlaid onto the future No Action peak hour traffic networks. The potential impact on v/c ratios, delays, and LOS will then be evaluated in accordance with *CEQR Technical Manual* criteria. In addition, changes in truck access and circulation at the Columbus Avenue receiving area will be described. Where impacts are identified, ~~feasible~~ practicable improvement measures, such as signal retiming, phasing modifications, roadway restriping, addition of turn lanes, revision of curbside regulations, turn prohibitions, and street direction changes, etc. will be explored for DOT approval and implementation.

TRANSIT

Public transportation near the project site includes subway service along Central Park West at the 81st Street-Museum of Natural History (B and C lines) and along Broadway at the 79th Street (No. 1 line) subway stations. The Museum is also accessible via area local bus service, including the north-south M7 and M11 routes along Amsterdam Avenue (northbound) and Columbus Avenue (southbound), the north-south M10 route along Central Park West, and the

crosstown M79 and M86 routes that traverse Central Park north of the Museum. ~~In addition, NYCT has recently proposed implementation of Select Bus Service (SBS) on the M79;~~ SBS service has already been initiated on the M86. The M79 will be converted to the M79 SBS in 2017.

Subway Station Analysis

Based on the screening assessments described above, a detailed study is expected to be warranted for the key circulation and control area elements at the 81st Street-Museum of Natural History subway station. This effort will be conducted using similar data collection and analysis procedures described above for the traffic impact analysis. Considering that the Museum does not open until 10 AM, this analysis will be prepared only for the midday and PM peak periods on a weekday and the afternoon peak period on a Saturday. Where impacts are identified, ~~feasible~~ practicable improvement measures, such as access improvements, will be explored for NYCT approval and implementation.

Subway and Bus Line-Haul Analyses

Based on the screening assessments described above, the incremental increases in subway and local bus riders associated with the proposed project are expected to be below the CEQR analysis thresholds of 200 subway riders per subway line or 50 bus riders per route in a single direction of travel during the weekday peak hours. Subway and bus line haul analyses are typically conducted during the peak weekday commuting hours when system-wide transit ridership is at its highest. Therefore, detailed subway and bus line-haul analyses would not be warranted.

PEDESTRIANS

Project-generated pedestrian trips are expected to be concentrated at the project site and along primary routes to area transit facilities. A quantified pedestrian analysis will be conducted for a study area of pedestrian elements determined by the Level 2 screening assessment. With the proposed Museum entrance from Columbus Avenue, it is expected that there will be a redistribution of existing trips to the new entrance, in addition to new project-generated trips. Pedestrian elements identified to incur 200 or more incremental peak hour trips as well as other sensitive locations will be analyzed for the weekday midday and PM peak periods, as well as the Saturday afternoon peak period, in accordance with procedures outlined in the *CEQR Technical Manual*. Based on the screening assessments described above and consultation with the lead agency and DOT, selective pedestrian elements (sidewalks, corner reservoirs, and crosswalks) along Columbus Avenue, as depicted in **Figure 10**, have been identified for analysis. Where impacts are identified, ~~feasible~~ practicable improvement measures, such as sidewalk and crosswalk modifications, will be explored for DOT approval and implementation.

VEHICULAR AND PEDESTRIAN SAFETY

Crash data for the study area intersections and other nearby sensitive locations from the most recent three-year period will be obtained from the New York State Department of Transportation (NYSDOT). The data will be analyzed to determine if any of the studied locations may be classified (under CEQR criteria) as high vehicle crash or high pedestrian/bike accident locations and whether trips and changes resulting from the proposed project would adversely affect vehicular, school bus, and pedestrian safety at these locations. If any high accident locations are

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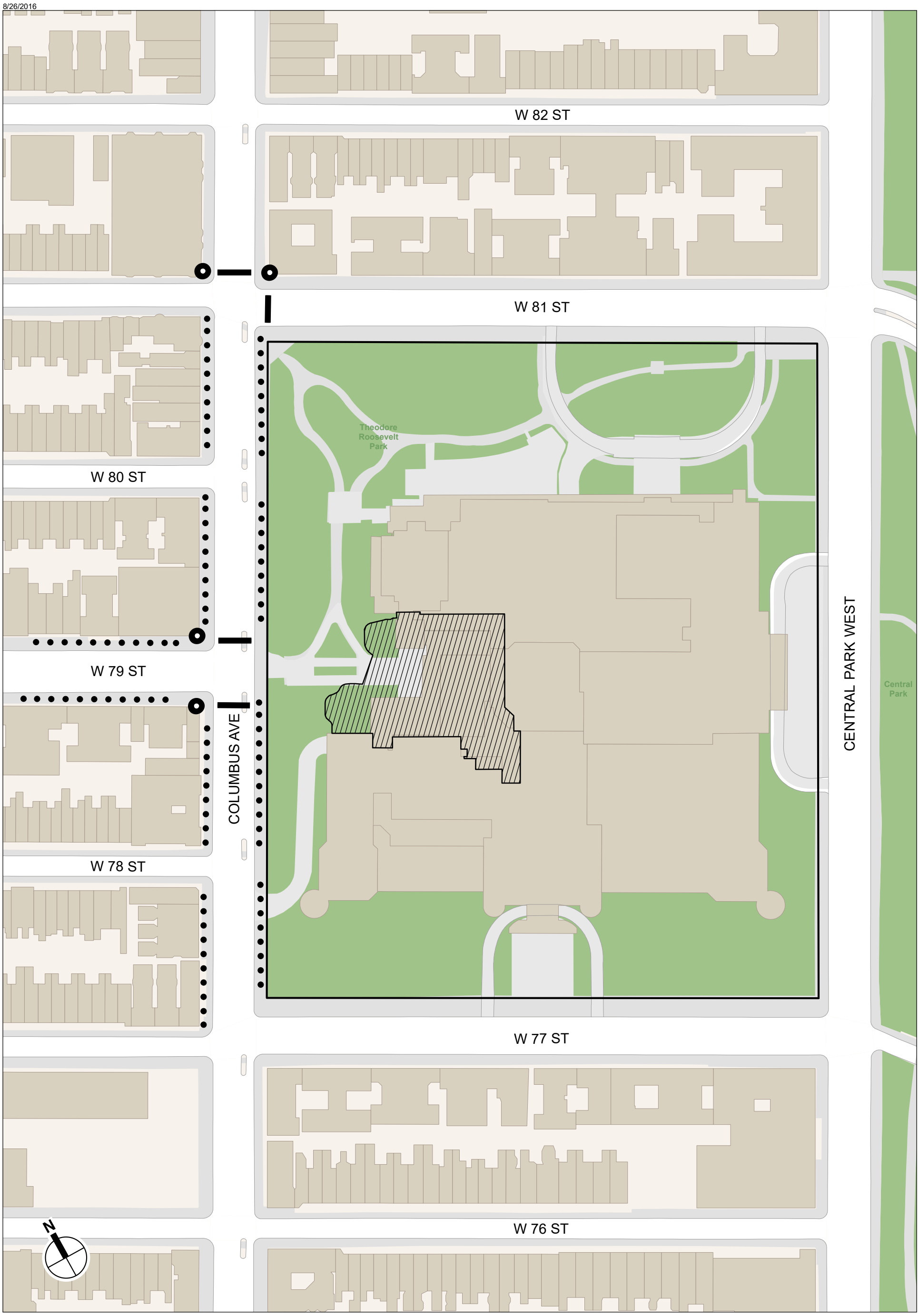

AMNH Gilder Center for Science, Education, and Innovation

Pedestrian Study Area
Figure 10

identified, ~~feasible~~ practicable improvement measures, such as sidewalk and crosswalk modifications, will be explored to address potential safety issues.

PARKING

Currently, parking is available in an on-site garage and other off-street parking resources in the area. An assessment of existing and future parking supply and demand will be conducted to determine if the proposed project has the potential to result in a parking shortfall. This assessment will involve evaluating existing utilization and current user characteristics of the on-site parking facility, and the off-street parking supply and utilization within ¼ mile of the project site. Parking demand projections will be developed using the proposed project's travel demand estimates and overlaid onto the existing/future baseline parking utilization to determine if future parking demand can be accommodated within the on-site and study area parking resources.

AIR QUALITY

Based on the preliminary travel demand forecast, the proposed project is unlikely to exceed the 170-vehicle-trip screening threshold for conducting a quantified analysis of carbon monoxide (CO) emissions from mobile sources, as well as the fine particulate matter ($PM_{2.5}$) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual.* Therefore, a mobile source air quality analysis is not anticipated to be required. In the event that—based on the project's traffic studies—the CO and/or $PM_{2.5}$ screening threshold is exceeded, a detailed analysis of pollutant emissions from mobile sources will be performed to assess the potential impacts on air quality.

The proposed project is expected to use the Museum's existing Con Edison steam service connection for the project's heating, ventilation, and air conditioning (HVAC) system needs. If new fossil-fuel-fired HVAC systems are proposed, a stationary source air quality impact analysis will be performed, using the screening procedure outlined in the *CEQR Technical Manual*. In addition, a screening level analysis will be conducted to determine the potential for significant adverse impacts from large or major emission sources, as defined in the *CEQR Technical Manual*, within a distance of 1,000 feet.

In the event that the stationary source screening analysis identifies a potential significant adverse air quality impact, a detailed analysis will be performed using the EPA-approved AERMOD model to determine maximum concentrations for the pollutant(s) of concern.

GREENHOUSE GAS EMISSIONS

Following the guidelines of the *CEQR Technical Manual*, greenhouse gas (GHG) emissions generated by the proposed project will be quantified, and an assessment of consistency with the City's established GHG reduction goals will be prepared. The analysis will also be consistent with the 2009 guidance from New York State Department of Environmental Conservation, *DEC Policy: Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements*. Emissions will be estimated for the 2021 analysis year and reported as carbon dioxide equivalent (CO_2e) metric tons per year. GHG emissions other than carbon dioxide (CO_2) will be included if they would account for a substantial portion of overall emissions, adjusted to account for the global warming potential.

Relevant measures to reduce energy consumption and GHG emissions that could be incorporated into the proposed project will be discussed, and the potential for those measures to reduce GHG emissions from the proposed project will be assessed to the extent practicable.

The analysis will consist of the following subtasks:

- Direct Emissions—GHG emissions from on-site Gilder Center sources, if any, will be quantified.
- Indirect Stationary Source Emissions—GHG emissions from purchased electricity and/or steam generated off-site and consumed at the Gilder Center and any increases in electricity by the Museums systems serving the Gilder Center during the project's operation will be estimated.
- Indirect Mobile Source Emissions—GHG emissions from vehicle trips to and from the Gilder Center will be quantified using trip distances and vehicle emission factors provided in the *CEQR Technical Manual* or developed specifically for the project in accordance with the *CEQR Technical Manual* guidance.
- Emissions from project construction and emissions associated with the extraction or production of construction materials will be qualitatively discussed. Opportunities for reducing GHG emissions associated with construction will be considered.
- Design features and operational measures to reduce the proposed project's energy use and GHG emissions will be discussed and quantified to the extent that information is available.
- Consistency with the City and State's GHG reduction goals and policies will be assessed according to the approach outlined in the *CEQR Technical Manual*.

NOISE

Under *CEQR Technical Manual* guidelines, a noise analysis determines whether a proposed project would result in increases in noise levels that could have a significant adverse impact on nearby sensitive receptors and also considers the effect of existing noise levels at the project site on proposed uses. The noise analysis for the proposed project would be undertaken in three ~~four~~ sections:

- Identification of potential impacts due to traffic generated by the proposed project,
- Identification of potential impacts due to the proposed project's mechanical equipment, and
- Determination of the necessary window/wall attenuation to achieve acceptable interior noise levels according to CEQR criteria.

NOISE DUE TO TRAFFIC GENERATED BY THE PROPOSED PROJECT

The amount of vehicular traffic generated as a result of the proposed project is not expected to be large enough to necessitate a detailed analysis of noise due to traffic—i.e., it is unlikely that the proposed project would result in a doubling of Noise PCEs, which would result in a 3 dBA increase in noise levels. Therefore, the EIS will present a screening analysis to determine whether a detailed mobile source noise analysis is warranted.

NOISE DUE TO BUILDING MECHANICAL EQUIPMENT

The building mechanical systems (i.e., heating, ventilation, and air conditioning systems) associated with the proposed project would be required to meet all applicable noise regulations

(i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code). Consequently, noise associated with the proposed project's building mechanical systems will be discussed qualitatively based on these applicable code requirements.

BUILDING ATTENUATION ANALYSIS

Structures with noise-sensitive uses constructed as part of the proposed project would be required to provide sufficient window/wall attenuation to ensure acceptable interior $L_{10(1)}$ noise levels to comply with CEQR criteria. The *CEQR Technical Manual*-recommended L_{10} descriptor will be used to characterize noise in this analysis. The following tasks would be performed for the building attenuation analysis in compliance with guidelines contained in the *CEQR Technical Manual*:

- Selection of noise measurement locations. Measurement sites will be selected at the project site. These measurement sites would be placed in areas to be analyzed for building attenuation. This would focus on areas of potentially high ambient noise at the project site.
- Determine existing noise levels. At the identified locations, existing noise readings will be determined by performing one-hour equivalent (20-minute readings as per *CEQR Technical Manual* guidelines) continuous noise levels (L_{eq}) and statistical percentile noise levels. The noise levels will be measured in units of "A" weighted decibels (dBA) as well as one-third octave bands. The monitoring periods will coincide with the expected peak periods of use of the project. These would be the weekday AM, midday, PM time periods.
- Determine the required amount of building attenuation. The level of building attenuation necessary to satisfy CEQR requirements is a function of the exterior noise levels. Measured values will be compared to appropriate standards and guideline levels. As necessary, attenuation measures will be recommended for the proposed project.

PUBLIC HEALTH

Following the guidelines presented in the *CEQR Technical Manual*, this task will examine the proposed project's potential to significantly impact public health concerns related to air quality, noise, hazardous materials, and construction. Drawing on other EIS sections, this task will assess and summarize the potential for significant adverse impacts on public health from project activities.

NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns; residential, worker, and visitor populations; the scale of its development; the design of its buildings; the presence of landmarks; and a variety of other physical features. According to CEQR criteria, a neighborhood character assessment is conducted if the action would result in a significant impact in the areas of land use, zoning, and public policy; urban design; visual resources; historic resources; socioeconomic conditions; traffic; or noise. In addition, if the action falls below the thresholds for significant adverse impacts in these categories but would result in moderate changes in the elements that contribute to neighborhood character, thereby potentially resulting in a significant impact, an analysis of neighborhood character is required. Since most of these elements will already be covered in other EIS sections, this section will essentially represent a summary of the key conclusions of these other analyses.

The neighborhood character analysis will include the following tasks:

- Drawing on other EIS sections, describe the predominant factors that contribute to defining the character of the neighborhood, focusing primarily on the area within ¼ mile of the project site.
- Based on planned development projects, public policy initiatives, and planned public improvements, summarize changes that can be expected in the character of the neighborhood in the No Action condition.
- The analysis of impacts on various EIS sections will serve as the basis for assessing and summarizing the action's impacts on neighborhood character.

CONSTRUCTION

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Prior to the commencement of construction activities, AMNH would establish a construction coordination group that would include AMNH, its construction manager, NYC Parks, the local NYPD precinct, and representatives of Community Board 7, the Columbus Avenue Business Improvement District, and other neighborhood groups. The group would anticipate, monitor, communicate, and resolve issues during construction. AMNH and its construction manager also would provide contact information for neighbors to call or email with questions or concerns at any hour.

The EIS construction analysis will describe the likely construction program and schedule for the proposed project. This section will assess the potential for impacts during the construction period based on preliminary construction information for the proposed project, including schedules, phasing plans, staging plans, and construction practices (e.g., public safety measures and rodent control measures). This section will also describe plans for local street fairs, crafts markets, the green market, as well as businesses along Columbus Avenue during the construction period; the construction logistics plan will consider any issues related to coordination with the Thanksgiving Day Parade. The construction assessment for the proposed project would generally be qualitative, focusing on areas where construction activities may pose specific environmental problems; technical areas to be analyzed include:

- Open Space. This assessment will document the potential effects of construction staging and construction activities on the quality (including potential construction air quality, construction noise, and other safety concerns) and access to public open space in the vicinity of the project site.
- Transportation Systems. This assessment will consider temporary losses in and modifications to vehicular and bike lanes and sidewalks/crosswalks, construction worker parking, and effects on other transportation services, if any, during the construction of the proposed project, and identify the increase in vehicle trips from construction workers and trucks. It will also account for temporary changes in Museum access and park circulation and operations of the receiving area. Where warranted, detailed traffic and pedestrian analyses will be prepared to identify potential temporary impacts during construction. If significant adverse impacts are identified, feasible mitigation measures will be evaluated for implementation, following similar methodologies described under "Transportation."
- Air Quality. The construction air quality impact section will qualitatively review both mobile source emissions from construction equipment and worker and delivery vehicles, and also fugitive dust emissions. It will discuss measures to reduce impacts.

- Noise and Vibration. The construction noise analysis will quantitatively assess potential noise impacts due to construction-related stationary and mobile sources. Existing noise levels will be determined by noise measurements performed at grade-level receptor locations, and by use of a combination of measurements and mathematical models for elevated receptor locations. During the most representative worst-case time period(s), noise levels due to construction activities at each sensitive receptor will be predicted. The construction vibration assessment will determine critical distances at which various pieces of equipment may cause damage or annoyance to nearby buildings based on the type of equipment, the building construction, and applicable vibration level criteria. Should it be necessary for certain construction equipment to be located closer to a building than its critical distance, vibration mitigation options will be proposed.
- Hazardous Materials. In coordination with the hazardous materials summary, this section will determine whether the construction of the project has the potential to expose construction workers to contaminants.
- Natural Resources. In coordination with the work performed related to natural resources, as described above, this section will determine whether the proposed project's construction activities will significantly impact existing natural resources within the project area. If appropriate, relevant mitigation measures will be discussed.
- Other Technical Areas. As appropriate, other areas of environmental assessment for potential construction-related impacts will be assessed.

ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and practicable options that avoid or reduce project-related significant adverse impacts and achieve the stated goals and objectives of the proposed actions, considering the capabilities of the project sponsor.

The specific alternatives to be analyzed will be finalized with the lead agency as project impacts become clarified. However, they must include the No Action Alternative and an alternative that reduces any identified significant adverse impacts. The alternatives will include: an alternative that reuses administrative space and moves administrative functions off-site; an alternative that avoids the demolition of existing Museum buildings by expanding the building footprint; an alternative limited to infill construction; an alternative with a reduced building footprint; an alternative where the building site is moved to the Ross Terrace; and an alternative that considers moving the proposed project to an off-site location. Since the Museum does not own or have rights to an off-site property, the Museum would need to locate and purchase an appropriate new site for two of these alternatives. According to the *CEQR Technical Manual*, sites which a private applicant like the Museum does not own or does not have a right to use are not required to be considered as alternative sites, rendering these alternatives not applicable on that basis alone under SEQRA and CEQR. The alternatives analysis will be qualitative, except where significant adverse impacts of the proposed project have been identified.

MITIGATION

Where significant adverse impacts attributable to the proposed project have been identified in the analyses discussed above, measures will be assessed to mitigate those impacts. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

SUMMARY CHAPTERS

Several summary chapters will be prepared, focusing on various aspects of the EIS, as set forth in the regulations and the *CEQR Technical Manual*. They are as follows:

- Executive Summary. Once the EIS technical sections have been prepared, a concise executive summary will be drafted. The executive summary will use relevant material from the body of the EIS to describe the proposed project, its environmental impacts, measures to mitigate those impacts, and alternatives to the proposed action.
- Unavoidable Adverse Impacts. Those impacts, if any, which could not be avoided and could not be practicably mitigated will be described in this chapter.
- Growth-Inducing Aspects of the Proposed Action. This chapter will focus on whether the proposed project would have the potential to induce new development in the surrounding area.
- Irreversible and Irretrievable Commitments of Resources. This chapter focuses on those resources, such as energy and construction materials, that would be irretrievably committed should the proposed project be built. ✷

APPENDIX A

A. INTRODUCTION

This document summarizes and responds to comments on the Draft Scope of Work, issued on March 2, 2016, for the Draft Environmental Impact Statement (DEIS) for the American Museum of Natural History (AMNH) Gilder Center for Science, Education, and Innovation proposal.

City Environmental Quality Review (CEQR) requires a public scoping meeting as part of the environmental review process. A public scoping meeting was held on April 6, 2016 at the American Museum of Natural History, LeFrak Theater, Columbus Avenue and West 79th Street, New York, New York 10024. Oral and written comments were accepted through the close of the public comment period, which ended at close of business on April 20, 2016.

Section B lists the organizations and individuals that provided relevant comments on the Draft Scope of Work. Section C contains a summary of these relevant comments and a response to each. These summaries convey the substance of the comments made, but do not necessarily quote the comments verbatim. Comments are organized by subject matter and generally parallel the chapter structure of the Draft Scope of Work. Where more than one commenter expressed similar views, those comments have been grouped and addressed together.

B. LIST OF ORGANIZATIONS AND INDIVIDUALS WHO COMMENTED ON THE DRAFT SCOPE OF WORK

AGENCIES

1. Naim Rasheed, Senior Director, Traffic Engineering & Planning, New York City Department of Transportation, email dated April 15, 2016 (Rasheed [DOT]_111)

COMMUNITY BOARDS

2. Manhattan Community Board 7, email dated April 5, 2016 (CB7_001); Andrew Albert, Co-Chair, Transportation Committee, verbal comments received April 6, 2016 (Albert [CB7]_013)

    - The following commenters are included as part of the above references (CB7_001, Albert [CB7]_013):

        – Manhattan Community Board 7—Elizabeth Caputo, Chairman, verbal comments received April 6, 2016 (Caputo [CB7]_011); Mark Diller, Member, verbal comments received April 6, 2016 (Diller [CB7]_012); Michelle Parker, Co-Chair, Business and Consumer Issues Committee, verbal comments received April 6, 2016 (Parker [CB7]_014); Roberta Seemer, Member, verbal comments received April 6, 2016 (Seemer [CB7]_015); Mel Wymore, Chair, Strategy & Budget Committee, verbal comments received April 6, 2016 (Wymore [CB7]_016)

ORGANIZATIONS AND BUSINESSES

3. Alliance to Protect Theodore Roosevelt Park—Alliance to Protect Theodore Roosevelt Park, email dated April 20, 2016 (AllianceToProtectTRP_102); Susan Browser, verbal comments received April 6, 2016 (Browser [Alliance]_040); Seth Kaufman, verbal comments received April 6, 2016 (Kaufman [Alliance]_042)
4. Columbus Avenue Business Improvement District—Barbara Adler, Executive Director, verbal comments received April 6, 2016 (BID_023)
5. Committee for Environmentally Sound Development—Olive Freud, President, email dated April 14, 2016 (Freud [Committee]_081)
6. Community United to Protect Theodore Roosevelt Park—Community United to Protect Theodore Roosevelt Park, emails dated April 6, 2016 (CU_002, CU_080); Janne Appelbaum, verbal comments received April 6, 2016 (Appelbaum [CU]_049); email dated April 19, 2016 (Appelbaum [CU]_091); email dated April 20, 2016 (Appelbaum [CU]_103); Claude Beller, verbal comments received April 6, 2016 (Beller [CU]_031); Paige Cameron, verbal comments received April 6, 2016 (Cameron [CU]_027); Claudia DiSalvo, verbal comments received April 6, 2016 (DiSalvo [CU]_037); email dated April 19, 2016 (DiSalvo [CU]_086); email dated April 20, 2016 (DiSalvo [CU]_104); Dr. Cary Goodman, verbal comments received April 6, 2016 (Goodman [CU]_046); email dated April 9, 2016 (Goodman [CU]_071); Barbara Sachs, verbal comments received April 6, 2016 (Sachs [CU]_028); Sophia Sokolov, verbal comments received April 6, 2016 (Sokolov [CU]_038); Bob Weingarten, verbal comments received April 6, 2016 (Weingarten [CU]_032)
7. Defenders of Teddy Roosevelt Park—Sig Gissler, Board Member, verbal comments received April 6, 2016 (Gissler [DefendersTRP]_021); Adrian Smith, President, email dated April 6, 2016 (DefendersTRP_007); verbal comments received April 6, 2016 (Smith [DefendersTRP]_020)
8. Friends of Damrosch Park—Cleo Dana, President, email dated April 13, 2016 (Dana [Friends]_077)
9. Friends of Roosevelt Park—Peter Wright, President, verbal comments received April 6, 2016 (Wright_017)
10. Landmark West—Sean Khorsandi, verbal comments received April 6, 2016 (Khorsandi [LW]_024); email dated April 13, 2016 (Khorsandi [LW]_076)
11. Municipal Arts Society of New York—Thomas Devaney, verbal comments received April 6, 2016 (Devaney [MAS]_045)
12. New York City Audubon—Kathryn Heintz, Executive Director, email dated April 18, 2016 (Heintz [Audubon]_110)
13. Society for the Architecture for the City—Christabel Gough, Secretary, verbal comments received April 6, 2016 (Gough_064); email dated April 20, 2016 (Gough [Society]_105)
14. Theodore Roosevelt Park Neighborhood Association—Deborah Bottle, verbal comments received April 6, 2016 (Bottle [TRPNA]_053); John Phufas email dated April 21, 2016 (Phufas [TRPNA]_109)
15. West 75th Street Block Association—DeAnna D. Rieber, President, email dated April 18, 2016 (Rieber [W75Block]_082)

GENERAL PUBLIC

16. Richard Barr, verbal comments received April 6, 2016 (Barr_057)
17. George Beane, email dated April 9, 2016 (Beane_072)
18. John Benson, email dated April 9, 2016 (Benson_068)
19. Peter P. Blanchard III, email dated April 7, 2016 (BlanchardIII_005)
20. Helga Busemann, email dated April 6, 2016 (Busemann_004)
21. Albert Caan, verbal comments received April 6, 2016 (Caan_052)
22. Ken Coughlin, verbal comments received April 6, 2016 (Coughlin_026)
23. Aleta Davies, verbal comments received April 6, 2016 (Davies_044)
24. Raúl de Brigard, email dated April 20, 2016 (de Brigard_108)
25. Terry Dickert, email dated April 20, 2016 (Dickert_096)
26. Martha M. Dwyer, verbal comments received April 6, 2016 (Dwyer_033); email dated April 20, 2016 (Dwyer_097)
27. Roxanne Edwards, email dated April 19, 2016 (Edwards_087)
28. SuEllen Estey, verbal comments received April 6, 2016 (Estey_060); fax dated April 20, 2016 (Estey_085)
29. Chris Fernandez, verbal comments received April 6, 2016 (Fernandez_048)
30. Ronald Flesch, verbal comments received April 6, 2016 (Flesch_025)
31. Peter Frishauf & Katharine Rice, email dated April 9, 2016 (Frishauf_Rice_073)
32. Harvey Ganot, email dated April 19, 2016 (Ganot_088)
33. Randy Garutti, CEO, Shake Shack, email dated April 5, 2016 (Garutti_006)
34. Nancy Goldberg, verbal comments received April 6, 2016 (Goldberg_019)
35. Sidney Goldfisher, verbal comments received April 6, 2016 (Goldfisher_058); emails dated April 10, 2016 (Goldfisher_067) and April 11, 2016 (Goldfisher_069)
36. Richard Grausman, verbal comments received April 6, 2016 (GrausmanR_043)
37. Susan Grausman, verbal comments received April 6, 2016 (GrausmanS_036)
38. Spence Halperin, verbal comments received April 6, 2016 (Halperin_065)
39. James Hammond, verbal comments received April 6, 2016 (Hammond_047)
40. Elliot Harris, verbal comments received April 6, 2016 (Harris_061)
41. Brian Hoberman, email dated April 19, 2016 (Hoberman_092)
42. Regina Karp, verbal comments received April 6, 2016 (Karp_059)
43. Ellen Kier & Donna Bascom, email dated April 20, 2016 (Kier_Bascom_099)
44. Musa Klebnikov, verbal comments received April 6, 2016 (Klebnikov_039)
45. Mark A. Koppel, email dated April 9, 2016 (Koppel_074)
46. Paul Lashin, email dated April 7, 2016 (Lashin_009)

47. Samuel Leff, verbal comments received April 6, 2016 (Leff_056)
48. Betty Lerner, verbal comments received April 6, 2016 (Lerner_054)
49. Lori Malloy, email dated April 13, 2016 (Malloy_075)
50. Leslie Mantrone, verbal comments received April 6, 2016 (Mantrone_034)
51. M.C. Marden, email dated April 20, 2016 (Marden_100)
52. Gary Mayer, verbal comments received April 6, 2016 (Mayer_035)
53. Ann McFrederick, verbal comments received April 6, 2016 (McFrederick_066)
54. Maryanne Mendelsohn, email dated April 19, 2016 (Mendelsohn_093)
55. Laura Miner, email dated April 20, 2016 (Miner_094)
56. Donald Morris, email dated April 8, 2016 (Morris_084)
57. Fritz Mueller, email dated April 13, 2016 (MuellerF_078)
58. Marnie Mueller, verbal comments received April 6, 2016 (Mueller_051); email dated April 19, 2016 (Mueller_095)
59. Robert Pierpont, verbal comments received April 6, 2016 (Pierpont_050)
60. Ernest Pysher, Assistant Principal Administration, Midwood High School, email dated April 6, 2016 (Pysher_008)
61. Brian Ragan, email dated April 8, 2016 (Ragan_003)
62. Frederick Ratcliffe, email dated April 20, 2016 (Ratcliffe_106)
63. Sharon Reaves, email dated April 20, 2016 (Reaves_101)
64. Eileen Robbins, verbal comments received April 6, 2016 (Robbins_062)
65. William Roudenbush, verbal comments received April 6, 2016 (Roudenbush_030)
66. Reed Rubey, email dated April 9, 2016 (Rubey_070)
67. Glynn Rudich, email dated April 20, 2016 (Rudich_107)
68. Barbara & Charles Sacks, email dated April 19, 2016 (Sacks_089)
69. Faith Steinberg, verbal comments received April 6, 2016 (Steinberg_022)
70. Jessica Studness, verbal comments received April 6, 2016 (Studness_063)
71. Sharon Taylor, email dated April 18, 2016 (Taylor_083)
72. Caroline Thomas, verbal comments received April 6, 2016 (Thomas_055)
73. Carolee Troy, email dated April 19, 2016 (Troy_090)
74. Jamie Uhrig, email dated March 12, 2016 (Uhrig_010)
75. Rudy Van Daele, verbal comments received April 6, 2016 (Van Daele_029)
76. Barbara Ward, verbal comments received April 6, 2016 (Ward_018)
77. Howard Yourow, verbal comments received April 6, 2016 (Yourow_041)

C. COMMENTS AND RESPONSES

ENVIRONMENTAL REVIEW PROCEDURES

Comment 1: The New York City Department of Parks and Recreation (NYC Parks) must adjourn the scoping review unless and until the American Museum of Natural History (AMNH or the Museum) describes comprehensively what they intend to do. A full description of AMNH's proposed redesign of the park must be provided, with sufficient time to review it, along with details on construction, building use, and the proposed underground loading area, before a rescheduled scoping session is planned. (Browser [Alliance]_040, DiSalvo [CU]_086, Goodman [CU]_046, Kaufman [Alliance]_042, Miner_094)

Given the considerable amount of information that has not been provided in the draft scope, the lead agency should afford the public another opportunity to comment on a significantly revised scope of work before a final scope is approved. (Dwyer_097)

Without a detailed architectural drawing and/or blueprints of the proposed building, as well as a fuller description of what will be contained inside and for what use it is intended, the real design and impact of this plan can only be guessed at. (Browser [Alliance]_040, Davies_044, DiSalvo [CU]_086, Dwyer_097, Yourow_041)

Response: The Scope of Work is intended to outline the pertinent issues and areas of study that will be examined in more detail in a Draft Environmental Impact Statement (DEIS) and to eliminate consideration of those impact areas that are considered to be irrelevant or non-significant. The Draft Scope of Work was prepared in accordance with the requirements of the New York State Environmental Quality Review Act (SEQRA) and CEQR, including their admonition to incorporate the consideration of environmental factors into project planning "at the earliest possible time," and provided an appropriate level of detail for the purposes of identifying the environmental issues and methodologies proposed for CEQR review. As the review process progresses, the project will evolve and aspects of the project are subject to change. Further information referenced in this comment will be provided in the Project Description of the DEIS, upon which the public will have further opportunity to comment.

Comment 2: Please reconsider your decision not to require an expanded analysis for the project in the Environmental Impact Statement (EIS). The scope of the described project falls well within the *City Environmental Quality Review (CEQR) Technical Manual*'s guidelines for requiring this expanded analysis. (Mantrone_034)

Given the current transportation situation in the neighborhood of AMNH, which includes school buses parked on at least six nearby blocks on school days, "further quantified analyses" are most certainly warranted. The parameters

should be disclosed in a revised Draft Scope and the public should have the opportunity to comment on those parameters and related matters. (Dwyer_097)

Response: Consistent with SEQRA, CEQR, and the guidelines of the *CEQR Technical Manual*, NYC Parks, as the lead agency for the proposed project, has determined that the proposed actions could result in significant adverse impacts and directed that a DEIS be prepared. The Final Scope of Work outlines the analysis areas and methodologies to be included in the DEIS. The DEIS will include quantified transportation analyses, as set forth in the Final Scope of Work.

Comment 3: The board members of AMNH have intentionally manipulated and controlled the release of details of this proposal in order to advance to this stage of action without the educated awareness of the community and businesses surrounding the Museum and affected by their proposal. (Estey_085, Rieber [W75Block]_082)

Information about this project, including the demolition and all the building that is going on, should be open to the public so that everybody that lives in this community knows what is going to happen. (Goldberg_019)

I believe the same shenanigans (as the de Blasio administration being bamboozled by a developer to sign off on a project not in the public interest) are at play with AMNH's planned development of a new building that will subsume public parkland and undermine an additional swath of parkland in Theodore Roosevelt Park. (Appelbaum [CU]_091)

I believe the fix is already in. Our sentiments mean nothing. I strenuously object to this ridiculous project and to the upcoming "hearing." (Taylor_083)

Response: AMNH has engaged in extensive community outreach about the Gilder Center project, in person, in public information sessions, online and in the media. Since November 2015, AMNH has maintained a website dedicated to the Gilder Center project, containing information about the project and the public review process, news, press releases, answers to frequently asked questions and a phone number and email address to which members of the public may direct inquiries. Prior to agency decision making, the proposed actions are undergoing public review consistent with the requirements of SEQRA and CEQR. Agencies undertaking, funding, or approving actions are required to incorporate environmental considerations into their discretionary decisions by taking a "hard look" at the environmental consequences of each of those actions so that all potential significant environmental impacts are disclosed, alternatives that avoid or reduce such impacts are considered, and appropriate, practicable measures to reduce or eliminate such impacts are adopted. In addition to disclosing and analyzing the various environmental consequences associated with a project, the CEQR process serves as a vehicle for public engagement, with opportunities for citizens to comment at various milestones. Consistent with SEQRA and CEQR

NYC Parks, as the lead agency for the review of the proposed project, has determined that the proposed actions could result in significant adverse impacts and directed that a DEIS be prepared. A public scoping of the content and technical analyses of the DEIS is merely the first step in its preparation. While SEQRA and CEQR provide for the consideration of environmental factors "at the earliest possible time" in the review and decision-making process, not all project details are anticipated to be fully developed at the scoping stage. Further, SEQRA and CEQR require project sponsors to provide a level of detail that is appropriate for each stage in the process. At this stage, AMNH is required to provide sufficient detail to facilitate the public scoping process, i.e., to help identify the relevant environmental issues presented by the project and the methodologies best suited to properly study those issues. Following completion of scoping, the lead agency oversees preparation of a DEIS for public review. Once NYC Parks has determined that the DEIS is adequate with respect to its scope and content, it will hold a CEQR public hearing on the document. That hearing record is held open for a minimum of 10 days following the public hearing, or 30 days after the filing of the DEIS, at which time the public review of the DEIS ends. The lead agency then is responsible for preparation of a Final EIS (FEIS), which, among other purposes, incorporates and/or responds to all relevant comments made during public review of the DEIS. The FEIS is the document that forms the basis of CEQR Findings, which the lead agency and each involved agency must make before taking any action within its discretion on the proposed project.

Comment 4: I have no knowledge of or access to the *CEQR Technical Manual*. NYC Parks must offer a workshop for the community to educate the average person as to how to address this specific and comprehensive Environmental Assessment Statement (EAS). The document needs to be more user-friendly, as there are many areas that require additional research of supporting documents by the public. (DiSalvo [CU]_086, DiSalvo [CU]_104)

Response: The *CEQR Technical Manual* is available online at: http://www.nyc.gov/html/oec/html/ceqr/technical_manual_2014.shtml. Additional information on CEQR is available at the Mayor's Office of Sustainability website: http://www.nyc.gov/html/oec/html/ceqr/ceqr.shtml. Additional information on SEQRA is available at the New York State Department of Environmental Conservation's website: http://www.dec.ny.gov/permits/357.html. The DEIS will be written and presented in plain language intended for a general public audience.

Comment 5: NYC Parks should not have held the scoping meeting at the Museum, as it gives an impression of partiality. Area schools, such as Brandeis High School, have auditoriums that could have been used instead. (DiSalvo [CU]_104)

Response: The LeFrak Theater was chosen for the public scoping meeting because it is located in the center of the study area subject to SEQRA and CEQR review and is easily accessible by members of the affected community. Its use did not restrict the ability of members of the public to comment on the scope. The scoping meeting was well attended, with over 50 speakers providing oral comments.

Comment 6: The museum's planned expansion has progressed far too far with far too little disclosure, and the Community Board has been asleep at the wheel (or playing dead). So the weight of their influence (when they get around to using it) will likely amount to bupkis. (Appelbaum [CU]_091)

Response: AMNH has engaged in extensive community outreach about the Gilder Center project, in person, in public information sessions, online and in the media. As required, the proposed actions are undergoing a public review under SEQRA and CEQR, which began in the earliest phase of design (the concept phase), as described in the response to Comment 3. CB7 has commented on the Draft Scope of Work, as summarized in this document. NYC Parks will hold a CEQR public hearing following the completion of the DEIS, at which time CB7 and the general public will have the opportunity to comment on the DEIS.

Comment 7: A standalone EIS should be prepared for a Special Project Area, i.e., the Theodore Roosevelt Park Neighborhood Association (TRPNA) residential block on West 81st Street between Central Park West and Columbus Avenue (the "Specially Impacted Block"). This Specially Impacted Block is currently congested well-beyond its capability to safely serve the community. The proposed Gilder Center's undeniable impact on this Block mandates that it be the subject of a standalone EIS (in addition to the main EIS). TRPNA contends that the Gilder Center should not be built at all unless and until real solutions, binding and enforceable, are implemented to reduce the current traffic on this Block. (Phufas [TRPNA]_109)

Response: The DEIS analysis framework will follow the guidance of the *CEQR Technical Review Manual*. The environmental setting for comparison is not merely the current environment, but the forecasted future environment in which the project is completed. Therefore, the technical analyses and consideration of alternatives will include descriptions of existing conditions, conditions in the future without the proposed project (the No Action condition), and conditions in the future with the proposed project (the With Action condition). The incremental difference between the No Action and With Action conditions is therefore the subject of analysis for evaluating the potential environmental effects of the proposed project. Consideration of remedies to pre-existing conditions at an off-site location is outside the scope of a CEQR analysis. Nonetheless, conditions on this adjacent block are part of the environmental setting and will be reflected in the DEIS. For example, as described in the Final Scope of Work, a detailed

traffic analysis will be conducted of nine intersections during the weekday and Saturday peak periods, including Central Park West and 81st Street, and Columbus Avenue and 81st Street.

Comment 8: AMNH's conduct has been manipulative and cynical since the introduction of the proposed project, illustrated by the manner in which public meetings have been orchestrated, with little opportunity for members of the public to ask questions or make comments. A significant portion of the members chosen to speak were individuals known to AMNH as supporters of the proposed project. The cynicism is illustrated by the Draft Scope relating to the proposed Gilder Center. (Dwyer_097)

Powerful voices with financial backing are trying to move this project forward with haste. Please do not allow this to happen. (Rieber [W75Block]_082)

Response: The proposed actions are subject to public review under SEQRA and CEQR, as described in the response to Comment 3. Thirty days advance notice was given for the scoping meeting and all community members who wished to speak or provide comments were afforded the opportunity to do so. Oral and written comments on the Draft Scope were accepted through the close of the 49-day public comment period, which ended at close of business on April 20, 2016. Written comments are given the same weight as oral comments in the SEQRA/CEQR process. NYC Parks will hold a CEQR hearing following the completion of the DEIS, and anyone who wishes to comment on the DEIS will have the opportunity to do so. NYC Parks will then oversee the preparation of a FEIS, which incorporates all relevant comments made during public review of the DEIS and provides written responses to all substantive comments. The FEIS is the document that forms the basis of CEQR Findings, which the lead agency and each involved agency must make before taking any action within its discretion on the proposed project.

PROJECT DESCRIPTION

Comment 9: The draft scope almost entirely neglects the proposed construction of an underground service driveway running from 78th Street to the Gilder Center. The draft simply says "service areas…would be replaced or improved." In fact, AMNH originally proposed a driveway excavation that would remove two mature canopy trees—a majestic English Elm and a Pin Oak—with trunks more than two feet in diameter. After we raised concerns, AMNH is now considering possible revision in the driveway layout that could save one or both of the trees. The scope should assure that the EIS pursues this mitigation. (Browser [Alliance]_040, DefendersTRP_007, Kaufman [Alliance]_042, Pierpont_050, Smith [DefendersTRP]_020, Steinberg_022)

The project will require a sub-surface excavation within the park footprint. In order to understand the total area of disturbance, we must know the extent of the

area and the volume of the excavation in relation to the park and footprint of the existing buildings. (Devaney [MAS]_045, Dwyer_097)

The below-grade structure would preclude any meaningful replacement trees since there would be no room for roots. The expansion does not help satisfy the stated goals of AMNH. (DiSalvo [CU]_086, Pierpont_050)

AMNH has noted in the past that it will construct a new goods-delivery ramp along the Columbus Avenue edge of the building to fit with the new Gilder Center. What would be the environmental impact of this? (AllianceToProtectTRP_102, DiSalvo [CU]_086, Uhrig_010)

AMNH has stated that the existing service drive will be expanded to permit delivery vehicles to turn around. Yet neither the drawings nor the site description even mentions that the service drive extends below grade. The proposed changes in the service are not described anywhere in the Draft Scope. The truck delivery area needs to be addressed—will the trucks simply be going round and round? (Dwyer_033, Dwyer_097)

In the site description, a new and improved delivery service system running below grade is mentioned, but the proposed changes are not noted anywhere in the draft scope. (DiSalvo [CU]_086)

A determination must be made as to how and to what extent the park bed overlaying the proposed garage's loading area extension will be undermined and what remediation will need to be done to insure its safety. (AllianceToProtectTRP_102)

The below-grade expansion does not help to satisfy the Museum's stated goals. These functions should be located under the proposed expansion above ground. The larger below-grade expansion is not necessary since the turn at the entrance to the driveway ramp that leads down to this area off of Columbus Avenue is not proposed to be changed. That curve sets the limits on the trucks and their turning radii. That turn to the left at the top of the ramp would be repeated in reverse by a turn to the right at the base of it, to avoid hitting the roots of the English Elm, saving that tree and the Pin Oak next to it. The Museum should not extend the below-grade expansion beyond the proposed above-ground expansion. (Pierpont_050)

Response: Subsequent to the publication of the Draft Scope of Work, and as reflected in the Final Scope, the area of the proposed below-grade service area was reduced and the design of the service drive was modified with the goal of preserving two trees. AMNH is developing plans to protect and conserve these two trees, an English elm and a Pin oak. The Project Description of the DEIS will provide a description of the design and programming of any changes to the service driveway, as well as all other subsurface work. The impact of such elements will be assessed in the DEIS. The purpose and need for this component of the

proposed project, and any impact it is expected to have on trees, will also be described in the DEIS.

Comment 10: There needs to be more clarity and openness about the proposed parking lot. (Sokolov [CU]_038)

No mention was made in the plans about the underground parking lot. (Steinberg_022)

Response: The proposed project does not include a new parking lot (either underground or at grade).

Comment 11: The Museum's forecasts of increased attendance are very important to the project's environmental impact, but they are fuzzy. They speak of "incremental increase" in attendance and project an increase of 500,000 in "ticketed attendance." How was that estimate reached? What methodology was deployed? When would the 500,000 be reached? How far into the future do the projections look? Is the steady rise in New York City tourism taken into account? (CU_080, DefendersTRP_007, Dwyer_097, Gissler [DefendersTRP]_021)

AMNH has said it expects the new entrance to serve about 18 percent of museum visitors, compared to about nine percent today. With an annual attendance now of about five million, that means the new entrance would serve about 900,000 annually, or nearly 2,500 per day. On what survey or analysis are those projections based? (DefendersTRP_007, Gissler [DefendersTRP]_021)

The EAS provides contradictory information on AMNH attendance. Page four of the EAS states that "approximately five million visitors" attended in 2014, while on the same page, the EAS reports museum attendance at four million visitors. (CU_080, Goodman [CU]_071)

Response: Total attendance and utilization at AMNH was approximately 5.0 million in 2015. That figure primarily consists of approximately 4.1 million ticketed visitors, tracked through AMNH's ticketing system. The balance of the attendance includes visiting scientists, graduate school students, teachers, vendors, people attending public programs and events, visitors to free spaces, and other miscellaneous trips. The Final Scope of Work forecasts that AMNH annual attendance and utilization would increase by approximately 745,000, compared to conditions without the proposed project, based on an analysis of the Museum's historic attendance data and the impact of major capital projects at other museums and visitor attractions. Additional information on the attendance and utilization projection analysis will be provided in the DEIS. The DEIS will also describe the anticipated distribution of visitors to the proposed entrance.

Comment 12: Page eight of the EAS states that this is a "city capital project," while page five states that it is not, "a large publicly-sponsored project." Further, the Positive

Declaration, on page three, lists the New York City Department of Cultural Affairs (DCLA) and New York State's Empire Development Corporation as funding sources. (CU_080, Goodman [CU]_071)

What explains this contradiction in the Assessment application? On page 22, the Museum submits that the proposed project is a "city capital project." On page 19, it answers negatively when asked if it is a "large, publicly-funded project." Is this because a "yes" on page 19 would trigger a greenhouse gas assessment? (CU_080)

Response: As described in the EAS and the Final Scope of Work, the proposed project would be located on City-owned property and may receive funding from the City of New York through DCLA and, therefore, is identified as a city capital project. Since the proposed project is not sponsored by a City agency and does not exceed the 350,000 square-foot threshold identified in the *CEQR Technical Manual* it is not a large, publicly sponsored project. However, in response to comments made during the scoping process, an assessment of greenhouse gas emissions has been added to the Final Scope of Work and will be included in the DEIS.

Comment 13: On page three of the Positive Declaration, AMNH acknowledges that three buildings would be removed; however, on page eight of the EAS, it argues that only one building is involved. (CU_080, Goodman [CU]_071)

The draft scope does not provide adequate description of either the present site or the proposed project. The scope says that the development area includes the Weston Pavilion and two other Museum buildings, but these other buildings are never identified. (Dwyer_097)

Response: The response on page eight of the EAS refers to the number of buildings that would be constructed by the proposed project, not the number of buildings that would be removed. The project would involve the removal of three existing buildings and construction of one new building. The Draft Scope provided a sufficient level of detail for purposes of identifying the environmental issues and methodologies for CEQR review, and for public review of the proposed methodology. It is customary for projects to evolve during the review process, particularly during the earlier stages of review such as scoping. The building site is defined and shown on the proposed site plan—see Scope Figure 4.

Comment 14: The scope refers to the Gilder Center as "five stories," which is deceptive, as the building will be 105 feet tall, the height of a 10-story apartment building in Manhattan. (Dana [Friends]_077, Goldfisher_067, Goldfisher_069)

The Gilder Center is bigger than it sounds. The Draft Scope says it will be five stories tall. In passing, the draft also notes that the building will rise to 105 feet—or about 10 stories in conventional construction, depending on ceiling height. (DefendersTRP_007)

The scope refers to the Gilder Center as being a five-story building, but the conceptual plan clearly shows six stories, the top story being mechanical. This should have been disclosed, and details of the mechanical operations and the effects of these operations should be described. (Dwyer_097)

Mechanical, water storage, and exhaust facilities housed on the roof are additional and not even counted. These will rise as much as 15-20 feet. (Goldfischer_069)

Response: The DEIS analyses will take into account the building's mechanical bulkhead. As described in the Final Scope of Work, the Gilder Center would be a five-story building of approximately 105 feet tall. Taking into account mechanical and elevator bulkheads, a portion of the rooftop would reach 115 feet. Analyses in the DEIS will reflect the number of stories and the actual height dimension of the proposed building.

Comment 15: The amount of park space to be taken by this project is misleading. The park itself would be the new entranceway to AMNH. (Browser [Alliance]_040, Kaufman [Alliance]_042)

Response: The project would replace a Museum entrance that already exists along Columbus Avenue. The areas of Theodore Roosevelt Park that are expected to be affected by the proposed project are identified in the Final Scope of Work and will be further described in the DEIS. The DEIS will also assess the potential for the proposed project to result in a significant adverse open space impact on Theodore Roosevelt Park.

Comment 16: The new building would be approximately 180,000 square feet, and 11,600 of that would be in existing park space; that amounts to less than six-and-a-half percent, and it conflicts with the statement that 20 percent would be left outside the existing footprint. (Barr_057)

Can we see an independent on-site mock-up in the park, with stakes and scrim, to show much park space will be lost, what the proposed building's footprint will be, and where the project work site will overflow into? (CU_080)

Response: The footprint for the proposed project was shown in the Draft Scope of Work and will be shown in the DEIS. As was described in the Draft Scope of Work, approximately 11,600 square feet of the footprint of the proposed project would be located on land that is now open space. The 180,000 square feet represented the total floor area of new construction on all five floors, as well as the lower level. As the review process progresses, the project may evolve and aspects of the project, such as its square footage, are subject to change. The Final Scope provides additional detail regarding the proposed project, including an updated square footage, based on design changes and updates. However, the footprint has not changed. As described in the Urban Design and Visual Resources

responses section, computer modeling and renderings of the proposed project will be utilized to provide visual representations of the proposed project.

Comment 17: The drawings presented by AMNH misrepresented the south side of Theodore Roosevelt Park. Their plan has trees throughout the area on 77th Street and Columbus Avenue. The real landscape is a single row of London Plain (14) along 77th Street and other trees near the Museum with a large area of open space between. The land area is about 40,000 square feet from Columbus Avenue to the 77th Street entrance. (Pysher_008)

Response: A professional tree survey was conducted and the plans presented as part of the Draft Scope of Work accurately show existing trees in this section of Theodore Roosevelt Park.

Comment 18: Has a design for the proposed Gilder Center been finalized? If not, at what stage will this be done? When can the community see it, and will the community have any input into the actual appearance of the structure? (CU_080)

The only designs that have been released of the proposed Gilder Center show the external building. How, though, will the interior space be divided and utilized (foot-by-foot)? (CU_080)

What percentage of the planned space is the atrium/entrance? (CU_080)

Response: Typical of projects of this nature, the design of the proposed project has not been finalized and will be refined throughout the process. The Draft Scope provided a sufficient level of detail for purposes of scoping, including identifying the environmental issues and methodologies for CEQR review, and for public review of the proposed methodology. Additional information regarding the exterior design and the interior space allocation will be provided in the DEIS.

Comment 19: Is it legal to give up parkland for any reason? It seems special approval would be necessary. (Koppel_074)

Theodore Roosevelt Park never belonged to the Museum, and it never will. (Rieber [W75Block]_082)

This expansion will bring partial demolition of the city-owned Theodore Roosevelt Park, which is not AMNH's property. (Estey_085)

Uprooting a grove of trees (nine trees) and pouring concrete on a small city park seems to raise larger issues in terms of the public trust doctrine. (Gough [Society]_105)

Response: As stated in the Final Scope of Work, the Museum and its original buildings were created pursuant to New York State statutes passed between 1869 and 1875; then, an 1876 State statute set aside the entire site of Theodore Roosevelt Park for the Museum and authorized the City's then Department of Public Parks

to enter into a contract (the Museum's lease) granting the Museum exclusive use of the buildings erected or to be erected in the park. Thus, the Museum is a permitted use in the Park, and no further legislative action or disposition of property is required. However, the proposed project requires approval from NYC Parks pursuant to the Museum's lease. As described in the response to Comment 9, subsequent to the publication of the Draft Scope of Work, the number of trees expected to be removed within the Park has been reduced from nine to seven.

Comment 20: The way AMNH expansion is designed, with limousines lined up at night, makes it look like a huge event space. (Beller [CU]_031, Dwyer_033, Dwyer_097)

AMNH makes money on event space; you can't even walk on Columbus Avenue sometimes around West 81st Street because of the town cars lined up waiting to pick people up. (Beller [CU]_031)

One thing I do not see addressed in the scoping document is this building's proposed use for events. That will mean lights. That should be considered in the scoping. (Dwyer_033)

It seems to me that the proposed expansion is really just an excuse to create an aggrandized and dramatic lobby that can be used for membership events, private parties, and fund-raising functions. We've noticed that AMNH has picked up increased revenue from these sorts of private functions, but let's not call for appropriation of a public park for rentable party space or ways to impress materialistic values. (Malloy_075)

Will the new space be rented out for special events? If so, what impact will this have on noise, traffic, and the park in general? (CU_080)

What percentage of the Gilder Center space will be used for public purposes, e.g., as a profitable conference/event center, versus educational purposes, science purposes and innovation purposes? (CU_080)

Response: The Museum hosts conferences, public programs, and events in spaces throughout the Museum campus, which would include spaces within the proposed Gilder Center. With the new space provided by the Gilder Center, AMNH would be able to schedule more public programs and events of a size and character comparable to those taking place currently. The potential for increased attendance at public programs and events due to the proposed project is included in the forecast of annual attendance and utilization described in the response to Comment 11. For noise and transportation, the DEIS will focus on assessing potential impacts associated with the projected increase in visitation and changes in access resulting from the proposed project for critical peak periods. Effects from the increase in public programs and events during off-peak periods will also be described and evaluated for potential impacts where

warranted. The lighting plan for the proposed project will be described and assessed in the DEIS.

Comment 21: What will be the policy for food and souvenir vendors? (CU_080)

Response: Street vendors are governed by a combination of City and State law and are not controlled by the Museum. Additional information on visitor services inside the Gilder Center, including food service and retail, will be included in the Final Scope of Work and in the DEIS.

Comment 22: The draft scope avoids stating that trees will be destroyed or moved. The targeted trees are not identified. (DiSalvo [CU]_086, Dwyer_097)

Response: As stated in the Draft Scope of Work, it was expected that the proposed project would affect nine canopy trees that would be removed and one understory tree that would be relocated. As described in the Final Scope, AMNH is developing plans to protect and conserve two of these trees, an English elm and a Pin oak, reducing the number of trees expected to be removed. Construction would be performed in compliance with an approved tree protection plan and NYC Parks tree protection protocols, and any trees that are removed and not transplanted would be replaced, consistent with NYC Parks rules and regulations. The Museum anticipates planting six new canopy trees and thirteen new understory trees in the vicinity of the building site. The DEIS will include a description of expected tree loss and replacement associated with the project and an assessment of impacts. For construction access, three recently planted, smaller caliper trees outside the Park (one on the curb and two in the bike lane traffic islands) would be temporarily moved prior to commencement of construction and replanted (or replaced after completion of construction).

Comment 23: While AMNH states that the new addition would facilitate flow-through and easier movement through the various buildings, it seems to me that one would need to nonetheless travel up or down through the newly proposed entrance to access areas on the same floor. (Malloy_075)

The circulation of the building does not actually look like it's doing what it's intended to do; you cannot even cross the new Gilder Center from north to south and can only be fed backwards. You don't circulate beyond the edge of the existing buildings. You don't have to go out, you can tuck it in. (Klebnikov_039)

Response: The proposed project includes connections on all the public floors. Additional information regarding the connections between buildings and circulation will be provided in the DEIS.

Comment 24: The proposal is devoid of any plans for recruiting scientists, identifying the fields in which they will work, and the nature and cost of creating, maintaining, and sustaining facilities for their research. There is also no provision or even

consideration of research that poses significant environmental concerns. These range from housing for experimental animals to huge costly imaging facilities. There is also no discussion of the absolute need to provide affordable housing and family-related facilities in the overcrowded and expensive Upper West Side, if AMNH wishes to recruit young investigators and research fellows. (CU_080, Dana [Friends]_077, Goldfisher_069)

This project is a delusion, a fantasy. Anyone who has had any experience with biomedical research establishments would laugh if they saw this piece of paper. Thirty pages of text with a couple paragraphs of program. They throw in acronyms, STEM, diversity, global warming. That's science. There isn't a whiff, a whimper, a smell, a touch of a programmatic program in this entire book. Why don't you go visit the deans at Rockefeller University, Cornell, NYU, Mt. Sinai, with huge research establishments, and ask them: how much does it cost to maintain a research center? This money is peanuts. It's wasted. It's really a mausoleum. It's not going to be a scientific research institute. (Goldfisher_058, Goldfisher_067, Goldfisher_069)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

PURPOSE AND NEED

Comment 25: AMNH should expand/build in another location, perhaps in one of the outer boroughs. (Beller [CU]_031, Cameron [CU]_027, CU_002, CU_080, DefendersTRP_007, Dwyer_097 Goldberg_019, Gough [Society]_105, GrausmanR_043, Khorsandi [LW]_024, Koppel_074, Leff_056, Marden_100, Smith [DefendersTRP]_020, Steinberg_022)

Response: The purpose and need for the location of the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 26: The footprint of the proposed project could be made significantly smaller. (CU_080, DefendersTRP_007, Dwyer_097 Goldberg_019, Khorsandi [LW]_024, Klebnikov_039, Leff_056, Malloy_075, Mantrone_034, MuellerF_078, Smith [DefendersTRP]_020)

The building should not go past the western edge of Building 17; rather, it should tuck back a little and be more restrained. (Klebnikov_039)

AMNH can reuse the existing property, reutilize existing space, and/or change the nature of the existing building, to ideally stay within its existing footprint. (Barr_057, Beller [CU]_031, Browser [Alliance]_040, Cameron [CU]_027, CU_080, Dwyer_097, Goldberg_019, Goodman [CU]_071, GrausmanR_043,

Malloy_075, Mantrone_034, MuellerF_078, Rieber [W75Block]_082, Taylor_083)

Why don't you stop building—the Museum is already huge; it would take too much work it make it bigger. (Harris_061)

If the Museum has a real need for additional space, for specific practical purposes such as storage, libraries, or offices (in contrast to what is vaguely described as the enhancement of programming), would a conventional structure—with normal ceiling heights—occupy a smaller footprint and satisfy practical needs without encroaching on areas presently used as a neighborhood park? (Gough [Society]_105)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum. Further information referenced in this comment regarding space allocation will be provided in the Project Description chapter of the DEIS, upon which the public will have further opportunity to comment.

Comment 27: The purported purposes and needs for the proposed project should be examined and justified in detail, as should the effectiveness of the project in serving such purposes/needs and the possibility of serving those purposes/needs in a manner that would not result in adverse environmental impacts, "potential" or not. Neither New York City nor the planet should be subjected to adverse environmental impacts unless there is absolutely no alternative, particularly for a project that is to receive at least $80 million of taxpayer support. In particular, AMNH should explain how the Gilder Center will "provide greater access to library resources," and to whom; how it will "enhance sustainability features" and "upgrade visitor and operational services." It is particularly important to understand how a project with the "potential for significant adverse environmental impacts" will enhance sustainability and whether sustainability could be as effectively enhanced in another manner. (Dwyer_097)

AMNH gave some general explanations about why they prefer building this expansion instead of reconfiguring existing space. Many people are not convinced so could we be given more detailed facts? (CU_080)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 28: The museum can re-engineer its footprint to better utilize the available space, but it should not be putting a major entrance on the back end of the Museum (Benson_068).

In its application, the Museum does not mention the Power House, the North Galleria, and the one-acre Arthur Ross Terrace. These spaces, according to the Museum's website, can accommodate more than 1,000 people and are available for your next catered event. How many other spaces could be repurposed to meet the Museum's needs, which are not being acknowledged? (Mantrone_034)

Given the space the Museum already has, how can this project be necessary? (CU_080, DiSalvo [CU]_086)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 29: AMNH argues that the proposed configuration is needed to solve internal flow and circulation issues. However, has AMNH examined all reasonable ways to achieve its goals with a less imposing structure? It is hard to say because schematic plans are still being drawn and have yet to be shared publicly. (AllianceToProtectTRP_102, CU_080, DefendersTRP_007, Malloy_075, Smith [DefendersTRP]_020)

Have you ever heard of skywalks, underground passageways? If you put out a bid to architects to design this building, why haven't we seen the other ones? Why haven't we seen what other people have designed? (Beller [CU]_031)

When I look at the Museum's stated goal of having connectivity and circulation between departments and buildings, there are many ways to do that. I believe one needs to look again, and the designers of this plan need to look at the fact that one could not have this kind of imposition on the park and still accomplish their major goal of connectivity and circulation. (Flesch_025)

Why does AMNH have to build a 220,000 square-foot building to get people from one side to the other? (Beller [CU]_031)

Connectivity could be addressed more simply; the thirty new connections should be described and shown in drawings. (Dwyer_097)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work, including circulation and connectivity. The DEIS will provide appropriate supporting graphics to illustrate the proposal, describe the proposed project's purpose and need, and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 30: AMNH itself is a classroom, and thus the proposed addition of classrooms with the project is not needed. (Beller [CU]_031, CU_002, Goldberg_019, Goldfisher_058, Goldfisher_067, Goldfisher_069, Goodman [CU]_071, GrausmanR_043, Karp_059, Koppel_074, Leff_056)

What kind of education can take place in two or three classrooms in a building that size? We should know more about what the education is. Who is getting educated? How many rooms will be devoted? What are the schedules and what is coming out of this? (Beller [CU]_031)

Will the proposed project provide an "opportunity for children" in science education? (Goodman [CU]_071)

Will the Draft Scope include an evaluation of the quality of education versus quantity of students visiting the Museum (this has a direct effect on the number of school buses)? (Ratcliffe_106)

The EIS should explore the exact nature and effect of education programs requiring a facility of the kind proposed. (Gough [Society]_105)

Response: The purpose and need for the proposed educational space is described in the Final Scope of Work. A description of this space and its use will be included in the DEIS, as well as consideration of alternatives.

Comment 31: Is it wise to spend (probably) four hundred million dollars on demolition, and building more museum, when the money could be spent on education in the classroom rather than busing young people to a large busy place? Isn't it wiser to spend money on educational materials, new media, internet, housing for the poor, feeding the poor, on fixing bridges and infrastructure?

It is better to keep students (kids) in their classrooms rather than putting them on buses to the Museum. It would be better to have the information/learning come to the students rather than the other way around. Why bus school children to AMNH to be educated about greenhouse gases while their buses are spewing those very gases and burning fossil fuels? Simply use that money to better equip science classrooms in the city's public schools. (Beller [CU]_031, CU_002, CU_080, Dana [Friends]_077, Goldberg_019, Goldfisher_058, Goldfisher_067, Goldfisher_069, GrausmanR_043, Karp_059, Koppel_074, Leff_056, MuellerF_078, Robbins_062)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 32: What interior space of the proposed Gilder Center has been allocated to classrooms, laboratories, and other educational facilities? And what, specifically, are these facilities?

Please define in detail the education, science, and innovation functions the proposed Gilder Center will be offering. What are the specific curriculum and classes that will be offered there? How many full-time students does the Museum predict will be studying there on a daily basis? What is the age

breakdown of these students? Who are the educators who will be working through the proposed Gilder Center? What are the specific classes each of these staff members will be teaching? (CU_080)

Response: Additional information about the allocation of interior spaces in the Gilder Center is provided in the Final Scope of Work and will be provided in the DEIS, as appropriate.

Comment 33: Separate the function of the entrance from that of science and technology. There's an enormous entrance on 77th Street: use it properly. (Klebnikov_039, MuellerF_078)

Why is a fourth major entrance necessary when there is an existing entrance on 77th Street, which the Museum has chosen to close to the public? (Estey_085, Gough [Society]_105)

The Museum already has three major entrances, which is more than enough. Any planned education center can surely be accessed by using these other entrances. (AllianceToProtectTRP_102)

Response: The project would replace an entrance that already exists along Columbus Avenue. A description of the anticipated entrance and circulation patterns, including the 77th Street entrance, will be included in the DEIS. The purpose and need for the proposed project is described in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 34: The claim that this project will educate our children in STEM is being propagated by an institution with virtually no experience in STEM. AMNH has acknowledged expertise in entomology, paleontology, herpetology, ichthyology, and anthropology, but none in critical fields such as molecular biology, immunology, oncology, and genetics. AMNH's claim that it will "ensure a scientifically literate nation" and "our nation's workforce preparedness" is a messianic delusion. Innovative scientists and students simply will not join an institution that is not staffed by highly regarded researchers who will serve as their mentors and collaborators. Sky-high salaries and beautiful apartments will not attract individuals who want to (and need to) rub shoulders and ideas with Nobel- and National Academy-level scientists. Competence in natural history will not attract such individuals. (Goldfisher_067)

Much emphasis in the Draft Scope promotes the idea that the project will help stimulate interest in STEM. Are there hard numbers about cost-benefits and how many new scientists are needed? There is an urgent need for more people to go into medicine and dentistry. This has been documented. (CU_080)

The assumption that we need this project to interest girls in science is as spurious as it gets and I'm not sure I understand it. (Steinberg_022)

Response: The purpose and need for the proposed project is described in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need, including anticipated educational component, and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 35: What is the yardstick of measurement to gauge the "incremental learning" that comes from this project? (Ganot_088)

Response: Measurement of incremental learning is outside the scope of a CEQR analysis and will not be included in the DEIS.

Comment 36: An independent space utilization audit should be conducted to see whether or not this proposed building is really necessary for the Museum's core mission. (CU_080)

Is there a concrete reason to believe current Museum visitors have been dissatisfied with their experience? The "space planning initiative" cited in the Purpose and Need section should be more full described. Were consultants employed and/or reports produced? (Gough [Society]_105)

Response: AMNH has analyzed its space needs as part of the analysis of environmental, economic, and social factors, which will be further discussed in the purpose and need section of the DEIS, along with an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 37: The "master plan" referenced in the Draft Scope was abandoned decades ago. Resurrecting a small portion of it to justify a project that flies in the face of everything AMNH purportedly stands for is cynical at best. (Dwyer_097)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need.

ANALYSIS FRAMEWORK

Comment 38: The *CEQR Technical Manual* posits a modest study area, with dimensions as small as 400 feet from the project site, which would not extend past the superblock on which we are located. Given that the required study area would not extend past the dimensions of the project site itself, it is manifestly inadequate. There are also some inconsistencies in the way in which the measurement is made. For example, historic and cultural resources posits a 400-foot study area, yet the interrelated categories of urban design and visual resources and neighborhood character post a ¼-mile. Land use and zoning would have a ¼-mile radius, but the analysis of open space would have a ½-mile. Transportation is a collection of mixed bags; some of the transportation

study areas would not get past the confines of the superblock. Our concern is that transportation and traffic impacts need to be fluid and go upstream and downstream.

An appropriate study area for this project should embrace the potential for impacts on the surrounding community as well as on other historic and cultural facilities and resources proximate to the proposed project site. In our opinion, the study area should extend at least to Amsterdam Avenue in all respects. It should extend west along 79th Street to Amsterdam Avenue, south along Central Park West to West 72nd/74th Street, north along Columbus Avenue to West 86th Street, and East to the Loop Drive of Central Park, including the busy intersection of Central Park West at 82nd Street. Anything less would compromise the EIS by failing to embrace the multiple identities and nuances of our largely residential neighborhood with its commercial, recreational, cultural, and historic overlays. (CB7_001)

The study area should be a quarter mile from the boundary of the block enclosing the Museum. (Dwyer_097)

Response: The study areas selected are described in the Final Scope of Work and are consistent with the methodologies of the *CEQR Technical Manual*. According to the *CEQR Technical Manual*, appropriate study areas differ depending on the technical area being analyzed, since the study area should reflect the geographic area most likely to be affected by each specific technical analysis category. The study areas are conservatively measured from the boundaries of the Theodore Roosevelt Park superblock, not the proposed building footprint. In response to comments received on the Draft Scope of Work:

(1) The scope of the DEIS traffic analysis has been expanded to include West 82nd Street and Columbus Avenue and West 82nd Street and Central Park West, as well as an analysis of the weekday midday and PM peak hours. In addition, sidewalks, along the west side of Columbus Avenue will be included in the pedestrian analysis in the DEIS, as described in the Final Scope of Work.

(2) The DEIS study area for the land use analysis will extend north to West 86th Street, south to West 72nd Street, east to the Loop Drive of Central Park, and west to Broadway, as described in the Final Scope of Work.

Comment 39: The Department for the Aging should be consulted for analysis on this project, to help analyze impacts—pedestrian, health (including exposure to pollution, ozone, and small particulates) and safety—on the elderly, who make up more than 25 percent of the residents in the study area. (Goodman [CU]_071, Halperin_065)

Response: The Department for the Aging, like other city agencies, will have the opportunity to comment on the DEIS. Following the guidelines presented in the *CEQR Technical Manual*, the DEIS public health chapter will examine the

proposed project's potential to significantly impact public health concerns related to air quality, noise, hazardous materials, and construction.

Comment 40: AMNH must develop a well-considered master plan that sets out its vision, programmatic goals, and mechanisms for protection and improvement of the park and its accessibility for the entire, approximately 18-acre super block site. (Devaney [MAS]_045, Miner_094)

It is time the Museum take a holistic approach to architecture and landscape design, an approach which acknowledges the extensive disturbance of the ramps, driveways, and circulation defined in this proposal and how they will affect the park. Striving to minimize those impacts while aggressively seeking out opportunities to maximize the limited public access that currently exists. Preparing a master plan would address these concerns, whereas relying on an 1874 plan that the Museum began deviating from by 1904, does not. (Khorsandi [LW]_024, Khorsandi [LW]_076)

Response: The DEIS will analyze the potential environmental impacts of the proposed project consistent with the guidance of the *CEQR Technical Manual*, as described in the Final Scope of Work. A master plan is not required under SEQRA or CEQR. Nonetheless, AMNH has carefully analyzed its space needs in consideration with other factors, such as environmental, health and safety concerns, which will be further discussed in the purpose and needs section of the DEIS, along with an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 41: Should the public expect that this project will precipitate another expansion of program, trigger ticketed attendance increases by 500,000 people and, in turn, result in over-crowded, inefficient facilities requiring even more new buildings that would further erode historic building fabric and the park alike? The EIS should look at the potentiality that the park will be completely built out one day through incremental growth, such as the encroachment represented by this project. Any plan which does not establish limits for future expansion into the park is fundamentally inappropriate. (Khorsandi [LW]_024)

Does AMNH have additional plans to expand into Theodore Roosevelt Park? (DiSalvo [CU]_086)

Response: The proposed actions will be fully described in the DEIS. There are no other plans formulated.

Comment 42: In the review process, when the impact on the neighborhood is determined, future conditions—with and without the project—are supposed to be compared to existing conditions; the problem with this approach is that the existing conditions in the blocks around the Museum are already overcrowded by people and traffic. (MuellerF_078)

Response: It is correct that for each environmental impact area identified in the scoping process as requiring further analysis, the lead agency is required to identify the project's incremental impacts on the environment. SEQRA and CEQR then require the agencies to take a "hard look" at the environmental consequences of their actions so that all potential significant environmental impacts are disclosed, alternatives that avoid or reduce such impacts are considered, and appropriate, practicable measures to reduce or eliminate such impacts are adopted.

Comment 43: What level of certainty is there that the proposed project will turn out as planned?

I believe the Museum wildly underestimated the increase in the number of annual visitors when they were planning the planetarium project. Isn't it at least as likely that they're wildly underestimating the number of new visitors that this new building will attract? Couldn't it easily be two, three, or even four times more than the 500,000 number that is stated? (CU_080)

Response: The Final Scope of Work forecasts that AMNH annual attendance and utilization would increase by approximately 745,000, compared to conditions without the proposed project. Since the issuance of the Draft Scope of Work, attendance and utilization projections have been updated and provide more conservative assumptions for the EIS analyses and disclosure of potential impacts. Additional information on the attendance projection analysis will be described in the DEIS.

Comment 44: The draft scope states that the analyses for the proposed project "will be performed for the first expected year of operation, which is 2021." The analyses should be performed for the second or third year of operation as well. The impacts of the proposed project on traffic, congestion, pollution, and other matters could well increase after one year. (Dwyer_097)

Response: Following the guidance of the *CEQR Technical Manual,* CEQR analyses are made for one particular year, generally known as the "build year" or "analysis year." The analysis year is the year when the proposed project would be substantially operational, since this is when the full effects of the project would occur.

LAND USE, ZONING, AND PUBLIC POLICY

Comment 45: How will the project affect residents, visitors, and buildings surrounding the project area? (CB7_001)

Response: An analysis of the proposed project's potential effects on land use, zoning, and public policy will be included in the DEIS, consistent with *CEQR Technical Manual* guidelines. As described in the Final Scope of Work, the analysis will

consider a study area that extends north to West 86th Street, south to West 72nd Street, east to the Loop Drive of Central Park, and west to Broadway.

Comment 46: A quarter-mile study area for land use does not include the intersection of 79th Street and Broadway; thus, the study area for this analysis should be half a mile. (Dwyer_097)

Response: *CEQR Technical Manual* guidelines suggest that a study area of 400 feet is generally sufficient for most projects but should be expanded for large scale projects. In response to comments received on the Draft Scope of Work, the DEIS study area for the land use analysis will extend north to West 86th Street, south to West 72nd Street, east to the Loop Drive of Central Park, and west to Broadway. Therefore, the DEIS land use analysis will consider the intersection of 79th Street and Broadway.

SOCIOECONOMIC CONDITIONS

Comment 47: The answers to the socioeconomic conditions section of the EAS were left blank by AMNH. (Goodman [CU]_071)

Response: The EAS form includes four threshold questions for socioeconomic conditions, all of which were checked "no." The socioeconomic questions that follow on the form are not applicable when "no" is selected for the threshold questions. Since the proposed project would not directly displace any residents or businesses and—according to *CEQR Technical Manual* methodology—does not have the potential to indirectly displace any residents or businesses, a DEIS analysis of socioeconomic conditions is not warranted.

Comment 48: The addition of a western entrance to the Museum will no doubt have a significant impact on the flow of commercial traffic between the Museum and Columbus Avenue. The DEIS must consider the potential impact on local businesses (e.g., street fairs, markets, and local commerce), both during and after construction. (CB7_001, Goodman [CU]_046, Goodman [CU]_071)

Will AMNH promise in writing to return the farmer's market to exactly the same place it occupies now following construction? (CU_080)

Response: As described in the Draft Scope of Work, the DEIS will include an analysis of the proposed project's potential effects on land use, zoning, and public policy. The DEIS will also include an assessment of the proposed project's effects on land use and socioeconomic conditions during construction, including plans for local street fairs, crafts markets, the green market, as well as businesses along Columbus Avenue during the construction period, which have not yet been formulated. Construction impacts will be analyzed in accordance with the *CEQR Technical Manual*. AMNH is in conversation with the members of the Columbus Avenue Business Improvement District and will continue to maintain communications with businesses in the study area.

Comment 49: A year ago, I achieved my dream of owning an apartment in New York City, a half-block from Theodore Roosevelt Park. Proximity to the park is cited as adding value to nearby property and one reason why it comes at a premium. However, the Museum never saw fit to disclose to purchasers that our substantial investment in our right to enjoyment of it would be adversely affected due to demolition and construction. (Cameron [CU]_027, CU_080)

Response: AMNH has engaged in extensive community outreach about the Gilder Center project, in person, in public information sessions, online and in the media. An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. Prior to the commencement of construction activities, AMNH would establish a construction coordination group that is anticipated to include AMNH, its construction manager, NYC Parks, the local New York Police Department (NYPD) precinct, and representatives of Community Board 7, the Columbus Avenue Business Improvement District, and other neighborhood groups. The group would anticipate, monitor, communicate, and resolve issues during construction. AMNH and its construction manager also would provide contact information for neighbors to call or email with questions or concerns at any hour.

COMMUNITY FACILITIES AND SERVICES

Comment 50: How will the project affect social programs and community facilities surrounding the project area? (CB7_001)

Response: Under *CEQR Technical Manual* methodology, a proposed project could impact community facilities and services either through a direct effect (physically altering a community facility, whether by displacement of the facility or other physical change), or an indirect effect (increased population in an area caused by a project would increase demand for existing services). Community facilities considered in a CEQR analysis include public schools, child care centers, libraries, police/fire protection services, and health care facilities. The proposed project would not displace or otherwise physically affect the operations of an existing community facility. Since the proposed project would not introduce any additional residential population, it would not have the potential to overburden any existing community facilities. Therefore, the proposed project would not result in a significant adverse community facilities impact, and a community facilities assessment will not be included in the DEIS, consistent with *CEQR Technical Manual* guidelines. An analysis of the proposed project's potential effects on land use, zoning, and public policy will be included in the DEIS, as described in the Final Scope of Work.

Comment 51: What will the impact be on emergency services? (CB7_001, CU_080, Dwyer_097, Goodman [CU]_071, GrausmanS_036, Hammond_047, Mantrone_034, Rudich_107, Sacks_089)

With traffic increases, how can emergency medical personnel, firefighters, and police possibly provide for public safety? (CU_080, Dwyer_097, Goodman [CU]_071, GrausmanS_036, Hammond_047, Mantrone_034, Sachs [CU]_028, Sacks_089, Weingarten [CU]_032)

There are many elderly people on the Upper West Side. Is there really so great a need for more unnecessary buildings and fewer human services? (Weingarten [CU]_032)

There is a huge strain being placed on the city's infrastructure with the decreasing width of our two major west side arteries—Amsterdam Avenue is about to lose two traffic lanes to a bike lane and an island—congesting traffic to the extent that it could soon easily bring police cars, fire engines, and ambulances to a standstill, not to mention a homeland security emergency. Do we really need a dubiously-purposed new building the size of the new Whitney Museum?

What additional amount of police and fire resources need to be allocated due to this project, and is this cost being absorbed by the Museum? If not, what is the cost to the taxpayers? (CU_080)

What would happen in the event of a Homeland Security emergency? The current methodology used in the *CEQR Technical Manual* doesn't allow for safety issues to be measured by visitors, only by increases in residents, which is inadequate when considering AMNH, a global tourism icon. (Goodman [CU]_071, GrausmanS_036, Weingarten [CU]_032)

The proposed plan would import an additional 800,000 visitors annually, putting an enormous strain on security and safety. (Goodman [CU]_071)

Response: The Final Scope of Work has been prepared in accordance with the *CEQR Technical Manual*. The *CEQR Technical Manual* threshold for an assessment of potential impacts on health care facilities and police/fire protection services is the creation of a "sizable new neighborhood," as defined by the *CEQR Technical Manual*. As an example of what constitutes a "sizable new neighborhood," the *CEQR Technical Manual* identifies Hunters' Point South, which is an approximately 30-acre development with up to 5,000 units of housing, as well as retail space, community/cultural facilities, school space, parking, and a continuous waterfront park. The proposed project would result in an addition to an existing use within an established neighborhood, and would not be considered a "sizable new neighborhood." Therefore, an analysis of indirect effects on health care facilities and police/fire protection services is not warranted and will not be included in the DEIS. Traffic conditions will be analyzed as part of the DEIS and the incremental impact from the proposed project on traffic operating conditions will be disclosed. It is also noted that, as a major visitor destination, AMNH continuously reviews its security plans and coordinates with the NYPD to ensure that appropriate public safety measures

are in place. AMNH will increase its security force as necessary in relation to the proposed project and the expected increase in attendance and utilization.

OPEN SPACE

Comment 52: How will the proposal affect the health, access, or usability of Theodore Roosevelt Park? (CB7_001, Goodman [CU]_071)

The EIS should include a review of the expected change in the nature of park usage, as it is impacted by the placement of a major entrance to AMNH on Columbus Avenue. One only needs to look at the constant crowds in front of the current main entrance, sitting on the steps, standing about on the streets, patronizing the food vendors, even spilling over into Central Park, to realize that the whole western section of Theodore Roosevelt Park would no longer be a neighborhood park, or even any sort of a park, but primarily a staging area and walkway to and from the Museum entrance. This would be an irretrievable loss for the neighborhood, which would, in effect, lose the entire park. (Benson_068)

It seems that the current proposal is in fact creating a main entrance to AMNH through its currently lower-impact side entrance facing Columbus Avenue. This substantial upgrade will indeed not only take part of the park for AMNH construction, but permanently change the character and use of the park. The park would in essence become an exterior courtyard and entrance way into AMNH, instead of maintaining its current function as a quiet place to commune with nature. I find this change undeniable and disturbing. (Malloy_075)

There should be a limit on the number of visitors allowed to enter on 79th Street (knowing that the proposed project will make this area "more populated" and more active). In addition, there should be restrictions placed on how this part of the park is used, and how many visitors have access at a given time. (CU_080)

What if the new building changes the tranquil atmosphere of this part of the park? Can there be restrictions placed on how it is used, how many visitors can have access at a given time. (CU_080)

Response: An assessment of the proposed project's potential effects on Theodore Roosevelt Park will be included in the open space chapter of the DEIS, as described in the Final Scope of Work. The DEIS will take into account the number of visitors that will utilize the proposed entrance and consider potential environmental impacts in accordance with the *CEQR Technical Manual*. Separate from the CEQR process, a park working group was created by the Museum to seek community input on the proposed future design of the western portion of Theodore Roosevelt Park within the project site.

Comment 53: The proposed plan poses a danger to open space, as the official study area includes part of Central Park, IS 44, and Diana Ross Playground. (Goodman [CU]_071)

Response: The open spaces identified in this comment would not be directly affected by the proposed project. They will be taken into account in the DEIS analysis to assess the availability of open space resources for residents and other park users in the future with and without the proposed project.

Comment 54: While AMNH proposes to replace lost trees and add benches, will the park's role as a neighborhood oasis be fully restored? (DefendersTRP_007, Devaney [MAS]_045, Goodman [CU]_071, Klebnikov_039, Smith [DefendersTRP]_020, Steinberg_022)

Will offsetting interior space, including sufficient benches, be provided for the community to gather, relax, and recreate safely and conveniently? (Gissler [DefendersTRP]_021).

A review of the landscape plan—one that shows changes in locations of foot paths, benches, trees, and vegetation—is needed and should be a major part of the EIS analysis. (CU_080, Devaney [MAS]_045)

According to the draft scope, the number of benches will be increased from seven to 17, more than double; this implies that AMNH expects the number of people in the affected area of Theodore Roosevelt Park will more than double. However, neither the present placement/size of existing benches nor the proposed place/size of new benches is described. (Dwyer_097)

Response: The DEIS will include a detailed open space analysis, as described in the Final Scope of Work. Any changes to Theodore Roosevelt Park, including landscaping, new benches, trees, or other features will be described. Separate from the CEQR process, a park working group was created by the Museum to seek community input on the proposed future design of the portion of the west side of Theodore Roosevelt Park within the project site.

Comment 55: What impacts will the proposed project have on the dog run, or the Nobel Monument? (CU_080, Goodman [CU]_071, Phufas [TRPNA]_109)

Will the entire dog run be off-limits to the public during construction or will just sections of it be closed? And when the Bull Moose Dog Run is being renovated, will AMNH provide a temporary dog run somewhere else in the park? (CU_080).

Response: The proposed project would not result in any changes to the dog run. Temporary disruption to Theodore Roosevelt Park, including the area around the Nobel Monument, during the construction of the proposed project will be described in the DEIS.

Comment 56: The draft largely neglects growth in neighborhood population density, which will place more pressure on Theodore Roosevelt Park. Community District 7 is home to about 212,000 people and supports approximately 50 percent more people per acre than the average for Manhattan and four times more people per

acre than the average for New York City. New apartment buildings keep rising in the area. What does that trend mean to pressure on our pocket park? (DefendersTRP_007, Gissler [DefendersTRP]_021, Roudenbush_030)

The concern regarding the AMNH expansion is not the park imprint; rather, it is the number of people—there are five million visitors to AMNH annually—and the fundamental changing of that side of the park. (Roudenbush_030)

If this building is a major entrance for AMNH, it will be akin to a Times Square attraction in the park. (Klebnikov_039)

Response: The DEIS will include a detailed open space analysis, as described in the Final Scope of Work. The DEIS open space analysis will quantify the ratio of acres of public open space per 1,000 residents in the study area and compare this ratio with the City's planning goals and the citywide community district median. In addition, as a conservative measure, Museum attendance and utilization will be taken into account in the analysis. The analysis will project the open space ratio in the future without the proposed project, taking into account any identified background development projects. The open space ratio in the future with the proposed project, taking into account the forecast increase in attendance and utilization, will also be calculated. The incremental difference attributable to the proposed project will be identified, and the significance of the anticipated change will be assessed.

Comment 57: AMNH and NYC Parks propose that parkland lost to the public due to the proposed project be compensated by the further opening up of the north side of the park. These efforts are mere tinkering, as they only serve to justify the project's taking of parkland and avoiding opening up other fenced-off areas of the park, such as the long-closed southwest quadrant bordering Columbus Avenue and West 77th Street. The north side of the park, which is the only part serving the public, cannot withstand further development. (Phufas [TRPNA]_109)

Response: Changes to Theodore Roosevelt Park associated with the proposed project will be described in the DEIS. If any significant adverse impacts related to open space are identified in the DEIS, practicable mitigation measures will be explored by the lead agency and the Museum.

Comment 58: NYC Parks must consider the adverse impact that reducing any amount of parkland will have on the quality of life of our neighborhood's increasingly aging and elderly population. It is easy to say it is not a burden for residents to walk a block or two to Central Park, but for people with walkers, wheelchairs, and/or portable oxygen canisters, it is a burden to experiencing this green space. (Mantrone_034, Miner_094)

People say we can just go to Central Park instead. Don't they understand people in wheelchairs, people with small children, people taking a quick break from

working at home, older people bad feet/legs… not to mention having to cross at extra, busy intersections to get into Central Park? Theodore Roosevelt Park is a vital resource (CU_080).

Central Park and Riverside Park cannot take the place of this park. Once we lose this green space, we will never get it back. (Appelbaum [CU]_091, Dwyer_097, Miner_094, Studness_063)

Once any parkland is gone, we will never get it back. (Kier_Bascom_099)

Everybody's saying you have the giant park (Central Park) next to the little park (Theodore Roosevelt Park), what are you complaining about? Central Park is wonderful but it, at times, can become overcrowded with tourists. (Caan_052)

Theodore Roosevelt Park is a neighborhood park, primarily enjoyed by local residents. Its character and use are quite different from Central Park, which is heavily used by tourists and residents of the entire city. It is a quiet park on a human scale. (Benson_068)

Response: Comments noted. The DEIS will include a detailed open space analysis, as described in the Final Scope of Work.

Comment 59: A "user survey" of Theodore Roosevelt Park must be conducted to determine who uses the park, their age, their preferred time of day, etc., as these park-goers differ from those using Central Park. (CU_080)

Response: Comments noted. The DEIS will include a detailed open space analysis. As described in the Final Scope of Work, the analysis will consider the number of park users that would be affected as well as the type, quantity, and quality of displaced publicly-accessible open spaces. Observations of park utilization will be included as part of the assessment.

Comment 60: Park paths are not well maintained, especially when it comes to snow and/or ice removal. Will the increased foot traffic brought on by the proposed project lead to more accidents and/or injuries from falls? (CU_080)

The Draft Scope should explain specifically how AMNH will sustain and support Theodore Roosevelt Park, including allocation of sufficient funding and other resources to help develop and maintain a recreated park area. (DefendersTRP_007)

AMNH, to its credit, has created a park working group to address park redevelopment. But will the Museum allocate sufficient funding and other resources required to develop and then maintain a recreated park area? (Smith [DefendersTRP]_020)

Response: Theodore Roosevelt Park is currently maintained by NYC Parks staff with financial and other support from Friends of Theodore Roosevelt Park and the Museum. To the extent that any project commitments, including maintenance

considerations, are made that are relevant to the CEQR review, they will be described in the EIS.

Comment 61: The presence of a park surrounding the Museum is a significant part of the public experience, not merely a latent development site. As the Upper West Side has grown into America's second densest neighborhood, the park has been treated by the community and the City as a multi-functional parcel of public parkland. While the Museum relies on a 140-year old statute that bears little relevance to the present character and density of the neighborhood, it has treated the park as a residual, an element to tolerate rather than an asset to celebrate. (Khorsandi [LW]_024, Khorsandi [LW]_076)

This park belongs to the City of New York. If AMNH is allowed to destroy our park and take green space away, this sets a negative precedent for future generations, not to mention the vulnerability of our city parks everywhere. (Rieber [W75Block]_082)

This plan is an affront to our venerable park and a dangerous precedent for New York City. A private institution hijacking a public park is an unconscionable abuse of power and suggests unscrupulous and questionable distortions of statue, public policy, and case law. The Museum is trading our rights and peace for the benefit of another group they deem more worthy, namely, their patrons and contributors. Many of New York's most valued universities and hospitals are housed in multiple venues. The very purpose of designating public lands as such is to render them immune to appropriation or encroachment by private interests. We must have the security of being able to rely on their permanence beyond the immediate designs of their temporary custodians, no matter their intentions or justifications. (Cameron [CU]_027, CU_080)

Response: The DEIS will include a detailed open space analysis, as described in the Final Scope of Work. It is noted that, with respect to Theodore Roosevelt Park and the Museum specifically, an 1876 State statute set aside the entire site of Theodore Roosevelt Park for the Museum and authorized the City's then Department of Public Parks to enter into a contract (the Museum's lease) granting the Museum exclusive use of the buildings erected or to be erected in the park.

SHADOWS

Comment 62: Will the new building decrease light in the park? (Browser [Alliance]_040, CB7_001, CU_080)

Response: The DEIS will include an assessment of the shadows cast by the proposed project on Theodore Roosevelt Park, and other sunlight-sensitive resources in the study area, consistent with *CEQR Technical Manual* guidelines.

Comment 63: The proposed building would cast extensive shadows into the same part of the park from which 11,000 square feet are being requested. The three-dimensional

space here is being overwhelmingly threatened. The CEQR-required shadows study must focus on the winter months when the angle of the sun is severe, and the fear is that a significant amount of morning sun will be lost in whatever parkland remains near the 79th Street entrance. (Mayer_035)

The greenery that survives will be deprived of essential sunlight due to the new shadows cast by the Gilder Center. (CU_080, Goldfisher_069)

I oppose the project because it will cast shadows on the park. (Dana [Friends]_077)

The 100-foot new building will produce shadows in the park; that alone should be enough to halt the whole project. (Freud [Committee]_081)

Response: The DEIS will include an assessment of the shadows cast by the proposed project on Theodore Roosevelt Park, and other sunlight-sensitive resources in the study area, consistent with *CEQR Technical Manual* guidelines. The analysis will describe the extent and duration of any new shadows casts on four representative analysis days, including December 21, June 21, March 21, and September 21, in order to capture conditions during each season. If the DEIS analysis identifies any potential significant adverse impacts, measures to mitigate those impacts will be explored by the Museum and NYC Parks.

Comment 64: The shadows analysis for the EIS must expand its analysis duration beyond four representative days of the year. (Dwyer_097)

The shadows analysis should be conducted for each season of the year for at least one week. (AllianceToProtectTRP_102)

Response: Following the guidance of the *CEQR Technical Manual*, shadows on the summer solstice (June 21), winter solstice (December 21) and spring and fall equinoxes (March 21 and September 21) will be modeled in the DEIS. The summer and winter solstices represent the opposite extremes, and the spring and fall equinoxes the midpoint, of the yearly variation in the angles and length of shadows. Shadows on any other date will fall somewhere within the maximum extent circumscribed by the solstice and equinox shadows.

HISTORIC AND CULTURAL RESOURCES

Comment 65: What will be the impact of construction on landmark buildings nearby? (CB7_001)

Why is there a need to spend countless millions of dollars to create a massive, cement structure that will create many environmental issues, and, not comply with the landmark designation of the existing Museum? (Estey_085)

Response: As described in the Draft Scope of Work, the DEIS will include an assessment of the proposed project's potential effects on historic resources, including the Museum and other resources within a 400-foot study area (measured from the

boundaries of Theodore Roosevelt Park). The Museum is a NYCL and is S/NR-listed. Therefore, prior to making its determination, NYC Parks must obtain a report and approval from LPC, and ESD is required to undertake a historic preservation review in consultation with SHPO. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings. Those review processes and approvals will be further described in the DEIS.

Comment 66: There is a landmarked building behind the proposed Gilder Center. If the project is constructed, the landmarked building will be completely hidden from view. Is this legal? (CU_080)

Response: As was noted in the Draft Scope of Work, the Museum is a NYCL and is S/NR-listed. Therefore, prior to making its determination, NYC Parks must obtain a report and approval from LPC, and ESD is required to undertake a historic preservation review in consultation with SHPO. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings.

Comment 67: The draft scope states that an "analysis will be undertaken to examine the effect of the proposed project on historic and cultural resources," but it goes on to state, conversely, that impacts on historical resources will be discussed "only" in the context of the No Action condition. (AllianceToProtectTRP_102, Dwyer_097)

Response: The Draft Scope of Work does not state that the analysis of potential impacts on historic resources will only be discussed in the No Action condition. The DEIS analysis framework will follow the guidance of the *CEQR Technical Review Manual*. The analysis of historic and cultural resources in the DEIS will include a full description of existing conditions, as well as anticipated conditions in the future without the proposed project (the No Action condition), and conditions in the future with the proposed project (the With Action condition).

Comment 68: The study area to be mapped should be at least a quarter mile from the boundaries of AMNH, not merely 400 feet. (Dwyer_097)

Response: The DEIS analysis of historic and cultural resources will follow the guidelines of the *CEQR Technical Manual*, as described in the Final Scope of Work. As noted in the *CEQR Technical Manual*, the study area is the area in which any historic resources may be affected by a project, and a study area of 400 feet is typically appropriate. The 400-foot study area will be measured from the boundaries of Theodore Roosevelt Park, not the building site. A quarter-mile radius would extend beyond the physical and visual area of influence for historic character.

Comment 69: A study must be done of all buildings to be demolished or modified during the construction plan, in order to determine their historic or architectural significance (whether or not such structures are currently landmarked). (AllianceToProtectTRP_102)

Response: The Museum complex is an LPC-designated landmark that is listed on the state and national registers of historic places. Therefore, the proposed project requires approval by LPC and will also be reviewed by SHPO. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings. As described in the Draft Scope of Work, the DEIS will include an assessment of the proposed project's potential effects on historic resources. Consistent with *CEQR Technical Manual* guidelines, the assessment of historic resources will include any buildings considered eligible for landmark status, and not just those that have already been designated.

Comment 70: Hopefully, the Landmarks Preservation Commission will have something to say about the tacky design of the new building, which is completely out of character with the rest of the Museum, with a flashy entrance that looks like an amusement-park grotto inside that will only dumb down science rather than promoting it. (Benson_068)

Response: Comment noted. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings. The LPC and SHPO reviews of the proposed project will be further described in the DEIS.

URBAN DESIGN AND VISUAL RESOURCES

Comment 71: We question the structure's mass and impact on the tone and texture of this small park. (Khorsandi [LW]_024, Smith [DefendersTRP]_020)

The appropriateness of the proposed project depends on the visual qualities. (Browser [Alliance]_040, Khorsandi [LW]_024, Troy_090)

The proposed additions looks like nothing else anywhere near AMNH or the Upper West Side. This would be the visually dominant structure anywhere within sight of it. (Mayer_035)

The proposed building itself looks to be a kind of undulating mediocrity, certainly out of context with most of AMNH and the neighborhood. (Dana [Friends]_077, Troy_090, Yourow_041)

I don't think the project fits in with the character, and I think it would create yet more commotion and less elegance. (Klebnikov_039)

We fear that the proposed massive, imposing structure will be out of scale for this little gem of a park. The majestic elm trees that tower over the park provide a sanctuary from the busy streets. (Kier_Bascom_099)

I wish I could say I liked the design of the building. I don't. I don't think it fits elegantly with the existing buildings that surround it. But that isn't enough for me to withhold my support for this project. (Ragan_003)

Response: The urban design and visual resources chapter of the DEIS will analyze the changes in the pedestrian experience associated with the proposed project, as well as any anticipated effects on visual resources and view corridors, as described in the Final Scope of Work. This will include visual representations that illustrate the building's massing, scale and relationship to the surrounding park context.

Comment 72: Missing from the current conceptual design is any coherent vision for the relationship between the new building and Theodore Roosevelt Park. This relationship is as important as the relationship between the new building and the landmark. The apparent subordination of landscape design to architecture, at this critical stage, raises concerns about AMNH's commitment to the preservation of quality park space. (DiSalvo [CU]_086)

Response: The Urban Design and Visual Resources section of the DEIS will include graphic representations and supporting narrative to illustrate the relationship between the Gilder Center and its surrounding landscape context. These issues were also considered in LPC's deliberations regarding the appropriateness of the proposed building design, which will also be detailed in the Historic and Cultural Resources section. LPC issued its Binding Report on November 2, 2016, approving the proposed design of the Gilder Center and modifications to the existing Museum complex and site, subject to LPC's further review and approval of final Department of Buildings (DOB) filing drawings.

Comment 73: The building's proposed use for events will bring lights with it, and this should be considered during the scoping analysis. (Browser [Alliance]_040, Dwyer_033, Dwyer_097, Klebnikov_039)

Response: The DEIS will consider the potential impacts of increased lighting along the Gilder Center façade.

Comment 74: Will the proposed expansion reduce light and air in the area? (CB7_001)

Response: As described in the Final Scope of Work, the potential for the proposed project to affect the experience of a pedestrian in public space will be considered in the urban design and visual resources chapter of the DEIS.

NATURAL RESOURCES

Comment 75: The plan acknowledges a loss of natural resources, particularly trees, birds, and wildlife. (CU_080, Goodman [CU]_071)

There are grave consequences to both humans, migratory birds, and animals that now inhabit the serenity surrounding AMNH. (Rieber [W75Block]_082)

Is it true that 46 species of birds could be disrupted if this project takes place, and of those 46, 30 are listed as protected? (CU_080)

A study must be done to catalogue existing animal populations and their habitats, including birds that nest and frequent Theodore Roosevelt Park, as well as their potential displacement due to construction and loss of park space and trees. (AllianceToProtectTRP_102, Rudich_107)

Response: As described in the Final Scope of Work, the potential for the proposed project to affect natural resources—including wildlife and trees—will be considered in the DEIS.

Comment 76: The loss of nine trees is unfortunate but may have beneficial effects. The park has too many canopy trees, too many high trees, and too much shadow, the result of which is that the grass, flowers, and bushes are challenged and the grass isn't healthy. The idea of more undercanopy trees and less high canopy trees is another reason we are less concerned about the loss of these trees. (Wright_017)

Response: Comment noted.

Comment 77: Though soil will be replaced on top of the structure of the proposed underground driveway, the draft scope does not address the depth of the soil. Will the soil be deep enough to support trees needed to restore a shady canopy central to the park's character? What steps will be taken to assure sufficient soil depth for optimal tree health? (CU_080, DefendersTRP_007, Smith [DefendersTRP]_020)

Will the root systems of the trees be affected? (CU_080, Sokolov [CU]_038)

The underground service delivery system will massively destroy the root system and could possibly "wipe out" the whole tree system, as well as buses and native plants, along Columbus Avenue. (DiSalvo [CU]_086)

An independent arborist must study the existing trees in the Columbus Avenue entrance area, including disclosure of the condition of the large Elm at the entrance, as well as potential impacts on this tree during construction and operation of the project. (Devaney [MAS]_045, Gough [Society]_105, Pierpont_050)

Response: Subsequent to the publication of the Draft Scope of Work, the area of the proposed below-grade service area was reduced and the design of the service drive was modified with the goal of preserving two trees. AMNH is developing plans to protect and conserve these two trees, an English elm and a Pin oak. Additional information regarding the below-grade service area will be provided in the DEIS. As described in the Final Scope of Work, the potential for the proposed project to affect natural resources will be considered in the DEIS. This will include an inventory of the number, type, size, and condition of directly affected trees prepared by a professional arborist.

Comment 78: By taking down trees, the project would be removing shade; those trees also absorb carbon and emit oxygen, which will be lost with their removal. (Dana [Friends]_077, Dickert_096, DiSalvo [CU]_086, Dwyer_097, MuellerF_078, Steinberg_022)

All trees are not alike. The specific tree, the age, the type, the way the tree affects the habitat of the park—all of these details are important, both scientifically and educationally. (Dana [Friends]_077, MuellerF_078, Van Daele_029)

Nine mature trees are to be removed; does this include an American Elm, which is a rare and threatened species? (Gough [Society]_105)

You cannot replace mature 100 year old trees. These are irreplaceable treasures. (Freud [Committee]_081)

If we have more storms, and there are no trees (because they have been removed for this project) to absorb the impact of those storms, there is going to be flooding, including in the parking areas for AMNH. (Steinberg_022)

Is it true that due to the construction, 10 trees, some of which are estimated to be over 100 years old, would be lost? (CU_080)

Response: Comments noted. As described in the Final Scope of Work, the potential for the proposed project to affect natural resources—including trees—will be considered in the DEIS. The species, size, and condition of all affected trees will be catalogued. Subsequent to the publication of the Draft Scope of Work, the area of the proposed below-grade service area was reduced and the design of the service drive was modified with the goal of preserving two trees. AMNH is developing plans to protect and conserve these two trees, an English elm and a Pin oak, which would reduce the number of trees expected to be removed due to construction from nine to seven. Construction would be performed in compliance with an approved tree protection plan and NYC Parks tree protection protocols, and any trees that are removed and not transplanted would be replaced, consistent with NYC Parks rules and regulations. For construction access, three recently planted, smaller caliper trees outside the Park (one on the curb and two in the bike lane traffic islands) would be temporarily moved prior

to the commencement of construction and replanted (or replaced after completion of construction).

Comment 79: NYC Parks' guidelines embrace the absolute care and protection for every tree in the park and the city. NYC Parks is our line of defense and environmental policeman. Please enter this document [the comment letter] as evidence and support to maintain and protect every tree in Theodore Roosevelt Park. According to NYC Parks' guidelines, large trees preserve 65 times the benefits of small trees and the benefits achieved by preserving large trees far exceed the costs of the protection efforts. The guideline state that "tree protection begins with careful planning in the project design phase, and then relies on enforcement of the specifications and standards during construction. Attention to tree protection at all project stages will avoid costly construction delays, fines, and in some instances litigation. These best practices apply to all trees, No work impacting a tree may proceed without the authorization of the commissioner of parks and recreation." Please stand by this standard. The Draft Scope states "the lead agency, after reviewing the environmental assessment statement (EAS) has determined that the proposed project has the potential for significant adverse impacts." I say this confidently, the construction with or without the 11,800 square feet will have the capacity to create horrendous damage to our grove of trees. (DiSalvo [CU]_086)

Response: Comment noted. As described in the Final Scope of Work, construction would be performed in compliance with an approved tree protection plan and NYC Parks tree protection protocols, and any trees that are removed and not transplanted would be replaced, consistent with NYC Parks rules and regulations.

Comment 80: The proposed new building will likely endanger the large number of birds that live year round in the adjacent Central Park or migrate along the Eastern Flyway each spring and fall. It is imperative—given the close proximity of this proposed large scale construction to the important bird area of Central Park and the smaller park in which the Museum is situated—that the building be designed to minimize the potential for fatal bird/glass collisions and minimize the distraction caused to birds from outdoor artificial lighting or light 'leaking' from the building's windows. A glass building designed with avoiding bird collisions in mind would be an important and visible contribution to the movement to address the need for bird-friendly architecture and would stand as an important symbol of the need to address this hazard. There are several tested and cost-effective ways of reducing the reflexivity of glass surfaces. These include the addition of texture and the use of shading devices on the exterior and interior of the building to increase the visibility and reduce the bird's access to the glass. Landscaping design can ensure that bird-attracting greenery is placed where it is not reflected in glass surfaces, or alternatively, placed so closely adjacent to the glass that its reflection is obscured, so that even if birds fly from the greenery into the glass,

their momentum will not be fatal. Outdoor decorative lighting needs to be extinguished on tall buildings during migration. Other artificial outdoor lightings should be downward-facing and shielded, and indoor lighting can be controlled at night by drawing the blinds or moving lights away from the windows. A building that regularly and predictably results in fatal bird collisions will be distressing to visitors to the Museum and cannot be regarded as sustainable building. (Heintz [Audubon]_110)

Audubon and the Sierra Club should be consulted because this project will certainly have an effect on birds. (Dwyer_033, Dwyer_097)

The draft scope underestimates the risk to birds occasioned by the proposed project. (Dwyer_097)

The proposed project includes a huge glass wall, which is extremely dangerous for birds. What is the methodology for determining the number of deaths? Has an independent audit been done of that? The Museum already contributes to the death of hundreds of birds each year as a result of their flying into the all-glass planetarium. Why would AMNH construct a second glass structure? (CU_080, Goodman [CU]_071)

Since there are migratory birds in the park, and since the United States is a signatory to the 1918 migratory bird treaty, a study must be done to ascertain the project's compliance with this federal law. (AllianceToProtectTRP_102, Kaufman [Alliance]_042)

The assessment must include an analysis on the impact to our neighborhood's red-tailed hawk population. (CU_080, Mantrone_034, Rudich_107)

The final scope should address the effect of mechanical equipment on the top floor of the proposed Gilder Center on birds and other wildlife, as the equipment will cause noise (buzzing is known to discourage bees), heat, odors, and radiation. (Dwyer_097)

Response: Comments noted. In accordance with bird-safe building guidelines developed by NYC Audubon and others, the new building would incorporate design features, including fritted glass, to deter daytime bird collisions; additional design information will be included in the DEIS. As described in the Final Scope of Work, the potential for the proposed project to affect migratory and other birds will be considered in the DEIS, following the guidelines of the *CEQR Technical Manual*. Any applicable state or federal regulations pertaining to natural resources will be considered in the DEIS analysis.

Comment 81: With the increased use of the park from Museum visitors, what will be done about garbage that attracts rats, particularly after hours? (CU_080)

Response: As described in the Final Scope of Work, the potential for the proposed project to significantly affect the rodent population will be considered in the DEIS.

Rodent management in the park is the responsibility of NYC Parks, and AMNH supports NYC Parks in these efforts. Integrated Pest Management techniques are utilized by NYC Parks in Theodore Roosevelt Park to control the rat population, thus diminishing the need for the use of pesticides. Methods to control the rat population include use of special garbage bins, garbage removal, and cleaning to remove food sources; ensuring proper drainage throughout the park to remove water sources; and burrow harassment measures (e.g., collapsing burrows and use of irritants) to remove shelter.

HAZARDOUS MATERIALS

Comment 82: The plan acknowledges the likely presence of hazardous materials, including contamination, illegal dumping, fill, or fill of unknown origin. (AllianceToProtectTRP_102, Appelbaum [CU]_103, CU_080, Goodman [CU]_071)

Will the proposed expansion increase exposure to asbestos, construction dust, or other contaminants? (AllianceToProtectTRP_102, Appelbaum [CU]_103, Cameron [CU]_027, CB7_001, CU_080, Davies_044, DefendersTRP_007, Gissler [DefendersTRP]_021)

How will the Museum deal safely with hazardous materials? (Gissler [DefendersTRP]_021)

What is the environmental impact of removing AMNH's hazardous waste? (Mantrone_034)

The plan acknowledge the presence of brownfields, gas tanks, oil storage facilities, and other contaminated areas, which have the potential for compromised air quality, vapor infusion, asbestos, PCBs, and mercury. (AllianceToProtectTRP_102, Appelbaum [CU]_103, CU_080, DiSalvo [CU]_104, Goodman [CU]_071)

Response: The hazardous materials chapter of the DEIS will provide information on any hazardous materials present in the area that would be affected by proposed project, based on the findings of a Phase I Environmental Site Assessment (ESA). A Phase II Subsurface Investigation, Remedial Action Plan (RAP), and Construction Health and Safety Plan (CHASP) will be prepared for the review and approval of the New York City Department of Environmental Protection (DEP). The RAP and CHASP will include any appropriate measures needed to protect public health and safety, subject to approval by DEP.

Comment 83: Will the Museum's proposed cutting-edge "laboratories for gene-mapping and 3D imaging" introduce additional dangers to the neighborhood? (CU_080, Goodman [CU]_071)

The Museum is full of materials that release toxic fumes if burning—what fire hazard does this add? Has this been studied? What fire prevention and fire-fighting resources need to be added? (CU_080)

Response: The hazardous materials chapter of the DEIS will provide information on hazardous materials and their handling.

Comment 84: Any future taxpayer money should be used to get rid of any toxic waste found on the grounds. (Beller [CU]_031)

Response: Comment noted. See response to Comment 82.

Comment 85: How will the proposed project affect the farmer's market both during and after the build? Would particulates in the air leave dangerous materials on food that cannot be washed off? (CU_080)

What guarantees can be made to local residents that their soil will not be contaminated? (CU_080)

Response: See response to Comment 82.

Comment 86: Is it possible that there was a generator on the ground of the Museum, which many have caused the creation of brownfields? (CU_080)

Response: Historical uses on the site will be identified in the Phase 1 ESA and described in the DEIS. See response to Comment 82.

Comment 87: What are the "hazardous materials, contaminants, and fill of unknown origin" referenced in the Museum's plan and acknowledged in the EAS? Where will the gas tanks, oil storage facilities, and other contaminated areas be, those that may compromise the air quality by releasing vapor infusion, asbestos, PCBs, and mercury into the environment? (DiSalvo [CU]_104)

Response: The hazardous materials chapter of the DEIS will provide detailed information on any hazardous materials present in the area that will be disturbed as a result of the proposed project. See response to Comment 82.

WATER AND SEWER INFRASTRUCTURE

Comment 88: Will the expansion add stress to water/sewer systems? (i.e., how much additional run-off will result from the expansion?) (CB7_001)

The impact of new buildings, ones that will house restaurants, combined with the high volume of visitors to the neighborhood will put stress on an already troubled water and sewer system. As a result, the EIS must demand an analysis of water and sewer infrastructure. (DiSalvo [CU]_104)

Response: As noted in the EAS, the proposed project does not meet *CEQR Technical Manual* threshold for an assessment of water and sewer infrastructure, as the proposed project would not result in an exceptionally large demand for water or

be located in an area that experiences low water pressure; would not exceed the threshold of 250,000 square feet of development requiring an analysis in Manhattan; and would not result in development on a site greater than five acres. Therefore, the DEIS will not include an assessment of water and sewer infrastructure. Large-scale infrastructure planning is beyond the scope of the proposed project.

SOLID WASTE AND SANITATION SERVICES

Comment 89: The draft scope and EAS state that a solid waste assessment is not warranted, but these documents were prepared by AMNH and are inadequate. An analysis should be prepared. (Dwyer_097)

Response: According to the *CEQR Technical Manual*, most projects do not have the potential to result in impacts to solid waste and sanitation services, and a solid waste assessment is usually not warranted unless a project would generate a substantial amount of solid waste (50 tons per week or more) or would be inconsistent with the New York City Solid Waste Management Plan (SWMP). As indicated in the EAS, the proposed project is estimated to produce less than one ton per week (using *CEQR Technical Manual* guidelines) and would not meet this threshold. Therefore a solid waste assessment is not warranted and will not be included in the DEIS.

Comment 90: How much additional stress will be placed on solid waste systems, and is there a projected increase in solid waste? (CB7_001, DiSalvo [CU]_104)

Is there a projected increase in garbage trucks/pickups during excavation and construction? (Browser [Alliance]_040)

Response: As described in the EAS, the proposed project does not meet the *CEQR Technical Manual* threshold for an assessment of solid waste and sanitation services, as the proposed project does not have the potential to overburden available waste management capacity, and would not directly affect a component of, or result in an inconsistency with, the SWMP. The EAS estimates that the proposed project would generate approximately 1,266 pounds of waste per week, which would be handled by private carters. The additional waste generated by the proposed project would represent a negligible addition to the 50,000 tons of waste generated every day by public and private sector sources in New York City, and this minimal increase would not overburden existing commercial solid waste handling services.

TRANSPORTATION

Comment 91: The New York City Department of Transportation (DOT) provided the following comments on the Draft Scope of Work:

Provide 2015 AMNH Attendance forecasts.

Adjust estimates for a "high activity day" reflecting 85th percentile instead of 80th percentile, and revise Table I (Comparison of Forecasted 2022 Without and With the Museum Addition) accordingly.

Provide the 2015 intercept survey and results (including summaries), which were conducted for three weekdays and the weekend, 2015 Loading Dock Trip Logs, and provide detailed explanation on how vehicle and taxi occupancy rates, modal splits, temporal and directional distributions, and delivery trip temporal and directional distributions were determined.

Provide an Excel spreadsheet for Table 2 (Travel Demand Assumptions) and Table 3 (Trip Generation Summary).

Clarify the difference between visitor and Museum attendance.

Explain why school buses are not included in Table 3 (Trip Generation Summary: Net Incremental Trips).

Provide the 2015 Transportation Plan.

Provide spreadsheets for existing, no action, and with action conditions for traffic and pedestrian volumes. (Rasheed [DOT]_111)

Response: AMNH and the lead agency have compiled and submitted the requested information to DOT for their continuing review of the travel demand assumptions. Based on DOT's recommendation, the 85th percentile attendance and utilization day will be used to develop the travel demand estimates, consistent with traffic engineering benchmarks. All required supporting documents for the DEIS impact analyses will be submitted to DOT for their review and approval. The 1999 Transportation Management Plan, a 2016 update of the Transportation Management Plan (the most current), and the Travel Demand Factors memorandum are included as appendices to the Final Scope of Work.

TRAFFIC

Comment 92: The scope of study should include assessments during daytime traffic, especially rush hours, as well as Sundays. Additionally, it should investigate potential impacts on congestion at the critical intersections of 82nd Street/Columbus Avenue and 82nd Street/Central Park West, as well as Columbus Avenue and Central Park West as far as 83rd Street (though up to 86th Street may not be out of line). (Albert [CB7]_013, Browser [Alliance]_040, CB7_001, Kaufman [Alliance]_042)

The draft scope does not indicate what "peak hours" as it relates to the transportation analysis; anyone who lives in the neighborhood can attest they those hours range from 9:30 in the morning until at least three o'clock in the afternoon on all weekdays. (Dwyer_097)

The draft scope proposes that public transit will be studied only at the 81st Street-AMNH subway station, and only "for the midday and PM peak periods on a weekday and the afternoon peak period on a Saturday" because the Museum does not open until 10 AM. That assumes that no one comes before or at opening time, which is simply false. Current bus traffic and parking between the hours of 9 AM and 5 PM on weekdays should be analyzed, and the effect of a realistic estimate of additional visitors to the Museum should then be determined. In addition, the new Columbus Avenue entrance will certainly result in significantly increased traffic from the subway station at 79th Street and Broadway, and this, too, should be studied. (Dwyer_097)

The scope of the traffic study should be extended well beyond Saturdays, to look at what's happening on a day-to-day basis during the day, during school times. (Bottle [TRPNA]_053, Dwyer_097, Freud [Committee]_081, Leff_056)

The draft scope states that "[i]f significant adverse traffic impacts are identified [on Saturdays]" traffic will be analyzed at seven intersections on Saturdays. The largest problem is parked buses and subway traffic. Buses do not park at intersections, and only one of the intersections proposed for study has a subway station. (Dwyer_097)

Both a vehicular study and pedestrian traffic study of West 79th Street are needed, from at least Broadway to Columbus Avenue. (Kaufman [Alliance]_042)

There is a strain placed on traffic, especially considering the decreasing width of our two major west side arteries, as Amsterdam Avenue is about to lose two traffic lanes, to a bike lane and an island, respectively, and as traffic will surely be turning onto West 79th Street and unloading at the new entrance. (Kaufman [Alliance]_042, Weingarten [CU]_032)

The quarter-mile-radius is unrealistic. Traffic does not begin and end in the small area from 77th Street to 81st Street, which AMNH chose to examine; traffic will be affected throughout the west side, including crosstown traffic on 72nd, 79th, 86th, and 96th Streets. (Freud [Committee]_081)

The study area for the EIS must not be limited to the so-called superblock (or the blocks immediately surrounding the Museum block) and land uses within a quarter mile, as proposed, since the traffic impact alone will affect the area bordered by West 96th Street to the north, Central Park West to the east and the Central Park transverses leading to the east side, West 72nd Street to the south, and Broadway to the west (where subways will transport visitors to the Gilder Center). (Phufas [TRPNA]_109)

Extend the vehicular traffic study to include Amsterdam Avenue from West 72nd Street through West 86th Street during weekday hours when the museum is open and during the hours when the Gilder Center is projected to be open. (AllianceToProtectTRP_102)

Extend the vehicular traffic study to include West 79th Street from Riverside Drive to Columbus Avenue, and, in particular, from Amsterdam Avenue to Columbus Aves during the weekday hours when the Museum is in operation and during the hours of when the Gilder Center is projected to be open. (AllianceToProtectTRP_102)

Project increased vehicular traffic on both current configuration of Amsterdam Avenue and configuration with the proposed bike lane during the weekday hours when the Museum is in operation. (AllianceToProtectTRP_102)

Project increased vehicular traffic between West 82nd Street and West 78th Street on Columbus Avenue based on double parking, vehicular pick up and drop off, school bus parking, and double parking, etc. (AllianceToProtectTRP_102)

Response: In response to these comments, the scope of the DEIS traffic analysis will be expanded to include West 82nd Street and Columbus Avenue and West 82nd Street and Central Park West, as well as an analysis of the weekday midday and PM peak hours. As described in the Final Scope of Work, future travel demand estimates for the proposed project have been prepared using attendance and utilization projections and recent travel characteristics provided by the Museum. The estimates were compared to *CEQR Technical Manual* screening thresholds to identify transportation elements that would be subject to further detailed analyses. The results of these estimates were summarized in a Travel Demand Factors (TDF) memorandum for review and concurrence by the lead agency and DOT (the TDF Memo is available as an appendix to the Final Scope of Work). The current trip estimates would not exceed the *CEQR Technical Manual* analysis thresholds for any location. Nonetheless, due to substantial existing traffic and pedestrian levels in the area and those contributed by the Museum, an expanded transportation scope has conservatively been identified in the Final Scope of Work. The other intersections identified in these comments have been determined to not warrant further study for this DEIS, due to low numbers of project-generated trips. *CEQR Technical Manual* methodology focuses on peak periods, since these periods represent the worst case condition for analysis. Analyses conducted during off-peak periods would be expected to result in fewer impacts than those conducted for peak periods. The transit analyses focus on Museum weekday and weekend peak hours, representing the period of greatest sensitivity to impacts. Incremental trips during non-Museum hours would not be sufficient to warrant further analyses.

Comment 93: Are there any plans for having DOT assess the traffic signals around the Museum? Re-timing West 81st Street and Columbus Avenue has a lot of merit, as it's a confusing intersection. (CB7_001)

Response: As described in the Final Scope of Work, the intersection of West 81st Street and Columbus Avenue has been identified for a detailed analysis in the DEIS. If

the analysis identifies the potential for a significant adverse impact at this location, then potential practicable mitigation measures (possibly including signal timing changes) will be identified and explored in coordination with DOT.

Comment 94: Each year, school buses bring about 350,000 students to the Museum. They generally park on Columbus Avenue and adjoining streets, creating congestion and diminishing park enjoyment. (Gissler [DefendersTRP]_021)

School bus congestion is a major problem in this neighborhood. While AMNH says that there will be no increase in school buses, the existing bus problem should not be neglected, especially given the concern over heightened activity in the area. Will the Museum guarantee that such busing will not creep higher in years ahead? What about the tour buses? (Browser [Alliance]_040, CU_080, DefendersTRP_007, Dwyer_097, Gissler [DefendersTRP]_021, GrausmanS_036, Hammond_047, Marden_100, Rudich_107)

We request that the environmental assessment conduct a detailed analysis of bus traffic serving AMNH, both in terms of circulation and layovers. What will the bus parking plan be both during the construction period and after completion? (CB7_001)

Will the Draft Scope include consideration of providing a parking area for school buses (currently many occupy the limited off street parking or double park)? (Ratcliffe_106)

With the main entrance on Columbus Avenue, buses will stop and discharge passengers on Columbus Avenue, which is narrower than other heavily-trafficked city avenues. Cars from across Central Park on 81st Street have only one way to go. At the end of 81st Street they must make a left-hand turn on to Columbus Avenue right in front of the entrance. Traffic unable to turn because of bus traffic on Columbus Avenue will back up on 81st Street, causing heavier traffic and congestion problems along with more noise and pollution. (Kier_Bascom_099)

Will groups of children brought in by bus (and unloaded wherever it is they now unload) be walking through Theodore Roosevelt Park to enter at the new Gilder Center entrance? (CU_080)

Response: The proposed project is not expected to introduce new or additional school bus traffic or change the location of school bus loading and unloading. School groups arrive via bus at the on-site parking garage or by subway using the Central Park West station at 81st Street, both of which have direct entry into the Museum from the first level of the Museum garage which is accessed from the driveway on West 81st Street. The transportation chapter of the DEIS will analyze the potential traffic impacts from incremental traffic attributable to the proposed project and identify potential measures, to the extent practicable, to

mitigate any potential significant adverse impacts. The construction chapter of the DEIS will describe staging for construction activities and any lane closures that might be required. Addressing pre-existing conditions, including the current school bus congestion, is outside the scope of the CEQR environmental review process. Separate from the CEQR process, AMNH has convened a transportation working group with members of the community to identify potential improvement measures, prioritize these measures, and coordinate potential implementation with DOT.

Comment 95: AMNH has noted foot traffic of people entering the Museum by the new 79th Street entrance of the Gilder Center; however, they have not mentioned how people will all arrive at that entrance—if they arrive by foot, then that is good for the neighboring environment, but if they arrive by car or school bus, how will traffic flow on Columbus Avenue be affected, and how will that have an impact on the environment? (Browser [Alliance]_040, Kaufman [Alliance]_042, Roudenbush_030, Uhrig_010)

The environmental review should include a thorough analysis of the increased pedestrian traffic occurring within the park itself, not just on the crosswalks and sidewalks of Columbus Avenue and 79th Street. (Benson_068)

Response: The transportation chapter of the DEIS will explain how new visitors are likely to travel to the Museum, including the percentage arriving by car, taxi, subway, city bus, tour bus, and by foot. The analysis will then determine the number of incremental walking trips to and from the Museum attributable to the proposed project, and assess whether these trips have the potential to result in significant adverse impacts on pedestrian conditions. In addition, the open space chapter of the DEIS will consider the potential effects of additional pedestrians traveling through Theodore Roosevelt Park.

Comment 96: We ask for a full study of the impact of the entrance and/or effects of increased pedestrian and vehicular traffic congestions and flow in combination with a bike path, including pick up and drop off on Columbus Avenue (Browser [Alliance]_040)

Response: As part of the DEIS transportation study, effects of trip-making from the proposed project on vehicular and pedestrian conditions on the surrounding roadways, including Columbus Avenue, will be assessed.

Comment 97: The original Transportation Management Plan, the 2015 update, and the Travel Demand Factors (TDF) memorandum mentioned in the draft scope should be part of the final scope, and the public should be given the opportunity to review and comment on them, as they constitute material information. (Dwyer_097)

Response: The 1999 Transportation Management Plan, a 2016 update of the Transportation Management Plan (the most current), and the Travel Demand Factors memorandum are included as appendices to the Final Scope of Work.

TRANSIT

Comment 98: A study must be done on the Central Park West bus passenger loads as compared to those on Amsterdam Avenue and Columbus Avenue. (Kaufman [Alliance]_042)

A study must be conducted of current passenger loads on city bus lines on Central Park West, Columbus Avenue, and Amsterdam Avenue between West 72nd Street and West 86th Street during weekday hours when the Museum is in operation. (AllianceToProtectTRP_102)

We request that the environmental assessment study potential impacts on the M72 bus route. (CB7_001)

Given the huge impact that AMNH already has on transit in the neighborhood, detailed subway and bus line-haul analysis must be made (Dwyer_097).

How will the increase in Museum attendance affect public transportation and services? (CU_080)

Response: As described in the Final Scope of Work, the DEIS will include a detailed study of the key circulation and control area elements at the 81st Street-Museum of Natural History subway station. However, the incremental increases in subway and local bus riders associated with the proposed project are expected to be below the CEQR analysis thresholds of 200 subway riders per subway line or 50 bus riders per route in a single direction of travel during the weekday peak hours. Therefore, detailed subway and bus line-haul analyses are not warranted and are not included in the Final Scope of Work.

Comment 99: A study must be done on the 1, B, and C trains passenger loads. (AllianceToProtectTRP_102, Kaufman [Alliance]_042, Rudich_107)

When people get directions on your cell phone, they are not going to be told to take the C or the B subway lines, they are going to be directed to use the 1 train, causing the streets to be impacted with foot traffic. This means millions of people a year using the neighborhood in a different way. (Roudenbush_030)

Response: See response to preceding comment. Following the guidelines of the *CEQR Technical Manual*, detailed line haul analyses of the 1, B, and C train services are not warranted for the proposed project.

PEDESTRIANS

Comment 100: The draft scope proposes a quantified pedestrian analysis for purported peak periods, and as mentioned with other transportation elements, this is insufficient. (Dwyer_097)

Response: *CEQR Technical Manual* methodology focuses on peak periods, since these periods represent the worst case condition for analysis. Volumes during off-peak periods would be lower and expected to result in fewer impacts than those conducted for peak periods.

Comment 101: The west side of Columbus Avenue should be included when studying the impact of pedestrian increases. (CB7_001)

Response: In response to this comment, selected pedestrian elements, including sidewalks, along the west side of Columbus Avenue will be included in the pedestrian analysis in the DEIS, as described in the Final Scope of Work.

Comment 102: Explain why negative incremental pedestrian diversions were assumed because of the assumed preference to access the direct entrance to the new Gilder Center entrance. Based on the information provided, the integration of the Gilder Center into the existing facility implies access can be accomplished from any location of the existing Museum; please verify and adjust Table 7 (Pedestrian Level 2 Screening Analysis Results) and pedestrian assignments accordingly. In addition, please have the consultant conduct the pedestrian analysis at the West 79th Street south sidewalk located between Amsterdam and Columbus Avenues during the Saturday peak hour. (Rasheed [DOT]_111)

Response: A more prominent entrance at the Gilder Center is expected to draw additional pedestrian activity to the west side of the Museum. Pedestrians accessing the Museum were assumed to continue to use all available entrances in the future, but a greater share was assumed to use the new Gilder Center entrance because of its increased prominence, resulting in a redistribution from other entrances. The West 79th Street south sidewalk between Amsterdam and Columbus Avenues is already included in the pedestrian study area.

VEHICULAR AND PEDESTRIAN SAFETY

Comment 103: We request that the environmental assessment include an assessment of impacts, including safety impacts, on pedestrian routes from 81st to 77th Streets, on both sides of Columbus Avenue. (Browser [Alliance]_040, CB7_001, Goodman [CU]_071, Kaufman [Alliance]_042)

Studies should also include projections for bike and pedestrian conflict points as pedestrian traffic increases due to the project. Perhaps a stop light at 79th Street would be safe for pedestrians and bikers. (CB7_001)

Bike lanes were added on Columbus Avenue only recently and Citi Bike stands were added to the neighborhood very recently. Their impact on vehicular and pedestrian safety should be evaluated. (Dwyer_097)

We request that the environmental assessment do the following: study high-crash locations as identified by NYC crash data and New York State Department of Transportation data; consider traffic calming measures, signage,

red lights, turning signals; and study potential for increased usage of streets and sidewalks. (CB7_001, Goodman [CU]_071)

With the influx of school buses and children, there is an increased risk of both traffic and pedestrian accidents. (Hammond_047, Rudich_107)

Response: In response to these comments, the scope of the pedestrian analysis in the DEIS has been expanded to include the west side of Columbus Avenue. Pedestrian analyses and a study of vehicular and pedestrian safety will be prepared in accordance with *CEQR Technical Manual* procedures and presented in the DEIS, as described in the Final Scope of Work.

Comment 104: I'm very concerned about the elderly and the disabled. What will be the impact of this project on the sidewalk and traffic flow as it pertains to elderly pedestrians? People walk very fast when they want to get to a museum. And I've seen quite a lot of people struggle just to maintain their balance on the block. (Halperin_065)

Response: Following the guidelines of the *CEQR Technical Manual*, a detailed pedestrian analysis will be provided in the DEIS, as described in the Final Scope of Work. Government-reported crash data identified no high accident locations in the study area; therefore, under the *CEQR Technical Manual*, a detailed pedestrian safety analysis is not required. However, the pedestrian walking speed to be used in the pedestrian operational analysis considers the walking speed of seniors and school children.

Comment 105: We request that the environmental assessment include analysis of bike ridership (rides to the Museum, rides in neighborhood), and where bikes will be stored, as well as study possible impacts on the protected bike lane along Columbus Avenue, both during and after construction. (Beane_072, Browser [Alliance]_040, CB7_001, Coughlin_026, Dwyer_097, Frishauf_Rice_073, Goodman [CU]_071, Klebnikov_039, Rubey_070, Rudich_107)

Response: Bicycle counts in the study area will be used as an input in the traffic analysis, where appropriate, to assess potential traffic impacts. More detailed projections of bicycle travel for trip generation purposes were not developed as modal split surveys conducted by AMNH indicated that less than 1 percent of Museum-goers arrive by bike. Related transportation impacts will be studied following the guidelines of the *CEQR Technical Manual*. Temporary disruptions along surrounding roadways and pedestrian/bike facilities during construction will be described and will be subject to future review by DOT for construction permit approvals

PARKING

Comment 106: We request that the environmental assessment pay special attention to the potential loss/availability of off-street parking, where private cars drop off

and/or park. The EIS should assess possible loss of load, unload, and street parking necessary for operation of fairs, markets, and local retail stores. (Browser [Alliance]_040, CB7_001, Rudich_107)

Will increased pressures on street parking increase cruising for limited street parking? (CB7_001)

Response: As described in the Final Scope of Work, an assessment of existing and future parking supply and demand will be included in the DEIS to determine whether the proposed project has the potential to result in a parking shortfall. Any changes in street parking conditions associated with the proposed project will also be discussed in the DEIS, including effects on fairs and markets.

Comment 107: We request that the environmental assessment study alternative parking scenarios, possible options for loading and unloading, and the effective use of other AMNH entrances. Please identify where buses will drop off users of the Gilder Center. (CB7_001)

Response: Circulation at the Gilder Center will be described in the DEIS, which will include an assessment of the project's potential impacts on parking. The Gilder Center entrance on Columbus Avenue is not anticipated to be an entry point for school bus trips. Visitors arriving by school bus would access the Gilder Center through an internal connection from the Museum's parking garage.

Comment 108: A quarter-mile study area for the assessment of parking supply and demand is not a sufficient distance, as the existing shortfall already requires visitors to park much farther away. The Final Scope should disclose the number of available public car parking spaces (taking into account school buses that occupy those spaces), the cost of such spaces, and the number of available legal bus parking spaces. (Dwyer_097)

The parking study area is limited to a quarter-mile and anyone who has ever tried to find on-street parking in this neighborhood knows that is an interesting challenge. (CB7_001)

Response: A ¼-mile parking study area is generally considered appropriate for CEQR purposes. If the study identifies a parking shortfall in the ¼-mile study area due to the proposed project, the area would be expanded, in consultation with the lead agency and DOT, to identify additional parking resources where the project-generated demand can be met.

AIR QUALITY

Comment 109: How much air pollution will be generated during and after construction? (CB7_001)

The significant reduction in the size of Theodore Roosevelt Park, as well as the loss of many large trees, signals that an air quality analysis of the neighborhood is crucial. (Dwyer_097)

Response: The DEIS will include consideration of the proposed project's potential effects on air quality both during construction and upon completion and operation of the Gilder Center.

Comment 110: The draft does not address potential air pollution from food carts. It should be noted that more foot traffic at the 79th Street entrance would attract food-preparation carts that create noxious fumes What can AMNH do, in conjunction with other city agencies, to prevent the pollution? (Browser [Alliance]_040, DefendersTRP_007, Gissler [DefendersTRP]_021)

Response: Vendors on the sidewalks around the Museum are regulated by State and City law and are not within AMNH's control. AMNH has worked and will continue to work with the NYPD to ensure that vendors comply with the law.

Comment 111: An air pollution study due to traffic increases from the proposed project should be conducted for the following intersections: Theodore Roosevelt Park, Columbus Avenue from West 81st Street to West 77th Street, West 79th Street from Riverside Drive to Columbus Avenue, and Amsterdam Avenue from West 72nd Street to West 86th Street, during regular weekday hours when the Museum is in operation. (AllianceToProtectTRP_102)

Response: As stated in the Final Scope of Work, the proposed project is unlikely to exceed the 170-vehicle-trip screening threshold for conducting a quantified analysis of carbon monoxide (CO) emissions from mobile sources, as well as the fine particulate matter ($PM_{2.5}$) emission screening threshold discussed in the *CEQR Technical Manual.* Therefore, a mobile source air quality analysis is not anticipated to be required. In the event that—based on the project's traffic studies—the CO and/or $PM_{2.5}$ screening threshold is exceeded, the DEIS will include a detailed analysis of pollutant emissions from mobile sources to assess the potential impacts on air quality.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Comment 112: The draft scope and EAS state that a greenhouse gas emissions assessment is not warranted, but these documents were prepared by AMNH and are inadequate. An analysis should be prepared. (Dwyer_097)

How do we follow the money, and what are the regulations for New York State since they have contributed $5 million to this project? What are the EPA regulations that focus on greenhouse gas emissions, water and sewer, etc.? (DiSalvo [CU]_104)

As it gets hotter and hotter, there is a concern that the new (white) building is going to reflect sunlight, and with trees being removed and the addition of more concrete, the area will only get hotter. (Davies_044)

Will greenhouse gas emissions increase (particularly with street parking limited, thus causing more idling/cruising)? (CB7_001)

Response: In response to comments received on the Draft Scope of Work, an analysis of greenhouse gas (GHG) emissions and climate change has been added to the Final Scope of Work and will be included in the DEIS. Any applicable state or federal regulations pertaining to GHG emissions will be considered in the DEIS analysis.

Comment 113: What is meant by "enhance the sustainability features of the Museum?" Isn't that another completely different objective, independent of the Gilder Center mission, one which should be carried out in any case? (Dwyer_097, MuellerF_078)

Response: The DEIS will describe the proposed project's purpose and need, including the goal of enhancing the sustainability features of the Museum. The DEIS also will include an assessment of GHG emissions, including an identification of the proposed project's measures to reduce energy consumption and GHG emissions, as described in the Final Scope of Work.

Comment 114: The proposed project should be consistent with the spirit of the Paris Agreement on climate change, and consultation with the U.S. Department of State is recommended. (Goodman [CU]_071)

Response: An analysis of greenhouse gas emissions will be conducted in compliance with the *CEQR Technical Manual*. Any applicable state or federal regulations pertaining to GHG emissions will be considered in the DEIS analysis. However, consultation with the U.S. Department of State is not required under SEQRA or CEQR.

Comment 115: There are no alternative energy sources planned for the current proposal of the Gilder Center. (Goodman [CU]_046, Goodman [CU]_071)

Response: Alternative energy sources, if proposed, will be described in the DEIS.

Comment 116: By cutting down mature trees, destroying public parkland, and constructing a new building, 2.3 million metric tons of carbon dioxide—a greenhouse gas—will be generated annually, in a city that has one of the worst air qualities in the country. (CU_080, Fernandez_048, Goodman [CU]_071)

Response: An analysis of GHG emissions will be included in the DEIS, as described in the Final Scope of Work, including quantifying the proposed project's expected GHG emissions.

Comment 117: Forty-three trillion BTUs are expected, according to the EAS, to be used to heat, cool, and operate this building every year. According to the *CEQR Technical Manual*, it is not enough energy to qualify for a greenhouse gas review, but a formal public request for a GHG review on this project is now made. (CU_080, Goodman [CU]_046, Goodman [CU]_071)

How can AMNH allow itself to construct a huge building, one they admit will use 4.3 trillion BTUs of fossil fuel energy per year, resulting in 2.3 million metric tons of carbon dioxide? (DiSalvo [CU]_104)

From the plans that have been shared with the public, there is an enormous glass atrium lobby entrance. AMNH has admitted that the new building will use 43 trillion BTUs of fossil fuel energy per year, resulting in 2.3 million tons of carbon dioxide. The glass structure is hardly sustainable. (Kier_Bascom_099)

Given the project would use 43 trillion BTUs every year, how does that fit with progress and a world where saving the environment would seem one of the best message a museum could share with the children and community? (CU_080)

Response: The EAS contains an estimate of the proposed project's energy consumption, based on a rate of 250.7 thousand Btu (MBtu)/square foot, which the *CEQR Technical Manual* identifies as the average whole-building energy use for institutional uses in New York City. Due to a typographical error, the CEQR calculation was stated as 4.3 trillion BTUs in one location in the EAS, whereas the correct calculation is 4.3 million BTUs. The DEIS will include an assessment of the proposed project's GHG emissions—based on more refined project-specific information rather than standard CEQR multipliers—as described in the Final Scope of Work.

Comment 118: The draft scope states that the proposed project is anticipated to achieve a LEED silver rating, which is the lowest level of LEED ratings. It must be explained why AMNH is not aiming for a platinum rating for the proposed project. (Dwyer_097)

Response: The DEIS will include an assessment of GHG emissions, including an identification of the proposed project's measures to reduce energy consumption and GHG emissions, as described in the Final Scope of Work, and a description of any potential accreditation that may be targeted.

Comment 119: What energy source, or alternative energy source, will the proposed project use? Will energy consumption increase? AMNH should be responsible for conducting this analysis. (CB7_001, DiSalvo [CU]_104, Dwyer_097, Goodman [CU]_071)

Response: The DEIS will describe the anticipated energy source(s) for the proposed project as well as energy or other resource conservation measures proposed as part of the project. In response to comments received on the Draft Scope of Work, an

assessment of GHG emissions and climate change has been added to the Final Scope of Work and will be included in the DEIS.

NOISE

Comment 120: The DEIS must include specific strategies to mitigate noise, especially during demolition and excavation. (CB7_001, Davies_044, Goodman [CU]_071)

Will construction have an impact on ambient noise? (CB7_001)

What provisions are in place to mitigate noise from contiguous construction sites? (CB7_001, DefendersTRP_007, Gissler [DefendersTRP]_021, Goldberg_019)

Response: The project is subject to the construction noise regulations included in the New York City Noise Control Code. The DEIS will include an assessment of the proposed project's potential noise effects both during construction and during operation of the proposed project, as described in the Final Scope of Work.

Comment 121: Decibel meters should be installed along Columbus Avenue, and regular readings (and action, when necessary) should be taken. (Busemann_004)

Response: As described in the Final Scope of Work, noise at nearby noise receptors (including residences along Columbus Avenue) resulting from construction of the proposed project will be predicted based on construction logistics, equipment, and schedule information for the proposed project. This projection will determine the potential for noise impacts from construction of the proposed project and consider various noise control measures to reduce noise at nearby receptors. Based on the results of this analysis, the lead agency will determine commitments to noise control measures for construction of the proposed project. The project is subject to the construction noise regulations included in the New York City Noise Control Code.

Comment 122: A noise study due to traffic increases from the proposed project should be conducted for the following intersections: Theodore Roosevelt Park, Columbus Avenue from West 81st Street to West 77th Street, West 79th Street from Riverside Drive to Columbus Avenue, and Amsterdam Avenue from West 72nd Street to West 86th Street, during regular weekday hours when the Museum is in operation. (AllianceToProtectTRP_102)

Response: As described in the Final Scope of Work, a screening analysis will be prepared to determine whether the proposed project would have the potential to result in sufficient traffic to potentially cause a significant increase in noise levels, which would warrant a detailed mobile source noise analysis. At any locations (including any of the intersections noted in the comment) where the screening analysis indicates that there would be the potential for a double of Noise

Passenger Car Equivalents (Noise PCEs), a detailed mobile source noise analysis will be conducted.

PUBLIC HEALTH

Comment 123: It is frightening that, during the comfort of my morning walks through the park, I might be exposed to toxins, waste, and vermin infestation. (Cameron [CU]_027, CU_080)

If one cares about his/her health, using the dog run during the day will be impossible, given the fumes and noise. (Davies_044)

Will the construction / digging up of these fields emit cancer-causing toxins? We know diesel exhaust is among them, and exhaust is carcinogenic.

If toxic materials are released into the air, what area will they cover? How can we be sure that our homes, schools, and streets won't be assaulted by toxic dust? The Draft Scope includes a 400-foot study area, but if fumes and gases and dirt, dust, and debris are in the air, wouldn't that suggest that the entire Upper West Side (and beyond) are in jeopardy of feeling the negative effects of these harmful substances? (CU_080).

Response: The hazardous materials chapter of the DEIS will provide information on any hazardous materials present at the project site, based on the findings of a Phase I Environmental Site Assessment (ESA). A Phase II Subsurface Investigation, Remedial Action Plan (RAP), and Construction Health and Safety Plan (CHASP) will be prepared for the review and approval of the New York City Department of Environmental Protection (DEP). The RAP and CHASP will include any appropriate measures needed to protect public health and safety, subject to approval by DEP. Following the guidelines presented in the *CEQR Technical Manual*, the DEIS public health chapter will examine the proposed project's potential to significantly impact public health concerns related to air quality, noise, hazardous materials, and construction.

Comment 124: What are the effects on the neighborhood asthma rates, specifically for children and the elderly? (CU_080, Mantrone_034)

There is significant research linking autism to pollution, which is something to be investigated for this proposed project work. (DiSalvo [CU]_104)

The mechanical equipment that will be located on the top floor of the proposed Gilder Center should be addressed and analyzed. It will most certainly result in increased noise and extremely low-frequency radiation throughout the area. The option of locating any necessary mechanical equipment underground should be considered. (Dwyer_097)

Response: The DEIS public health chapter will examine the proposed project's potential to significantly impact public health concerns in accordance with the guidelines

presented in the *CEQR Technical Manual*. This will include public health concerns related to air quality, noise, hazardous materials, and construction.

Comment 125: The potential health and safety hazards cited by citizen groups opposed to the plan come directly from the Museum's own 27-page Draft Scope. While I do not mean to imply that the particulars of potential harm are the same as what happened in Flint, Michigan, the comparison is irresistible: the Flint whistle-blowers were dismissed with official rhetoric, or literally dismissed from employment. (Appelbaum [CU]_103)

Response: The DEIS public health chapter will examine the proposed project's potential to significantly impact public health concerns in accordance with the guidelines presented in the *CEQR Technical Manual*, including those related to air quality, noise, hazardous materials, and construction.

NEIGHBORHOOD CHARACTER

Comment 126: What will be the impact on the quality of life for residents in surrounding buildings? (Caan_052, CB7_001, CU_080, Dickert_096, Goodman [CU]_071, Halperin_065, Klebnikov_039, Malloy_075, Mueller_095, Steinberg_022)

This expansion will have a negative impact in every segment of our community life, potentially creating dire implications (public health, air and noise pollution, gridlock, etc.). (DiSalvo[CU]_086)

The park is very peaceful, and by bringing in more people, no matter how they shift them—there are going to be buses of students, tourists, people in general—there will be so much milling about, the area will lose its wonderful quality and charm.

With the proposed building being a major entrance, the park will no longer be a community space but one for massive amounts of visitors, estimated at an additional 800,000 entering on Columbus Avenue. (Caan_052, CB7_001, CU_080, Dana [Friends]_077, Dickert_096, Goodman [CU]_071, Halperin_065, Klebnikov_039, Mendelsohn_093, Mueller_095, Steinberg_022)

Tearing down trees will change the look and feel of the neighborhood, and it simply should not happen. (Steinberg_022)

How can New York City retain its essential character if public assets are so easily given over to private development, especially without complete public review, input, and approval? (CU_002)

This proposed expansion will irrevocably alter, for the worse, the beloved nature, real estate, and gracious ambience of the neighborhood that surrounds the western "super block" of Columbus Avenue between 77th and 81st Streets. This project will also have a far wider effect on the entire quadrant of the Upper West Side, from 72nd to 86th Streets and all along the Columbus Avenue corridor. (Estey_085, Mendelsohn_093, Mueller_095)

Theodore Roosevelt Park is a pocket of tranquility and reflection for both residents and visitors alike, with towering canopy trees and beautiful plantings. Children play there. Mothers walk their strollers. Residents commute through the park. More than one lunch or dinner from Shake Shack has been consumed there. All of these benefits cannot be reduced to metrics and measured. They simply enhance the quality of life in this neighborhood. (Kier_Bascom_099)

For many Upper West Siders, our parks are the only avenue for fresh air and green space. Even if an Environmental Impact Statement is issued and reveals minimal impact, I am not convinced that you can put a value on the human impact this foolish, arrogant plan will have on the residents and visitors who have come to see this area as a respite from city existence. (Rieber [W75Block]_082)

Response: The DEIS will include an assessment of the proposed project's potential effects on neighborhood character, as described in the Final Scope of Work. The study area for the assessment will include Theodore Roosevelt Park and the area ¼-mile from the boundaries of Theodore Roosevelt Park.

CONSTRUCTION

Comment 127: CB7 recommends the immediate creation of a task force to anticipate, monitor, communicate, and resolve issues during construction. (CB7_001)

Who would be the all-hours (i.e., 24/7) contact if issues arise during construction? (CU_080)

Response: As described in the Final Scope of Work, prior to the commencement of construction activities, AMNH would establish a construction coordination group that is anticipated to include AMNH, its construction manager, NYC Parks, the local NYPD precinct, and representatives of Community Board 7, the Columbus Avenue Business Improvement District, and other neighborhood groups. The group would anticipate, monitor, communicate, and resolve issues during construction. AMNH and its construction manager also would provide contact information for neighbors to call or email with questions or concerns at any hour.

Comment 128: The DEIS must include specific strategies to mitigate dust, especially during demolition, excavation, and subsurface disturbances, as well as investigate the potential for exposure to hazardous materials, ground contamination, and air pollution. (Browser [Alliance]_040, CB7_001, CU_080, DefendersTRP_007, DiSalvo [CU]_104, Goldberg_019, Goodman [CU]_071, GrausmanS_036)

Response: An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. The construction analysis will include consideration of dust, hazardous materials and contamination, and air quality. It is expected that a DEP-approved Remedial Action Plan and Construction Health and Safety Plan will be implemented that address the issues raised in this comment.

Comment 129: Construction is likely to enlarge the rat-infestation problem in Theodore Roosevelt Park (which impairs park use, especially after sundown, and has been difficult to eradicate) by dispersing rats into the neighborhood. What steps will be taken to counteract this danger? (Browser [Alliance]_040, Cameron [CU]_027, CB7_001, CU_080, DefendersTRP_007, Gissler [DefendersTRP]_021, Goodman [CU]_071, GrausmanS_036, Mantrone_034)

Response: An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. The construction analysis will include consideration of rodent control. AMNH works with NYC Parks to support their efforts to address the rodent issue, in compliance with NYC Parks' recommended eradication procedures and policies.

Comment 130: The proposed plan acknowledges a construction timeline of at least three years. This would include operation of multiple pieces of diesel-powered machinery, cement trucks, rerouting traffic, and a decline in air quality. (CU_080, Goodman [CU]_071, GrausmanS_036)

The proposed AMNH plan acknowledges a construction timeframe of three years. During this time, traffic will be rerouted, and multiple pieces of machinery will be in operation, which use diesel power, a form of energy known to be carcinogenic. Subsurface disturbances from blasting, drilling, and piling will be produced over an indeterminate amount of time, over an undetermined area, at an undetermined noise level. (DiSalvo [CU]_104)

The proposed development will create overcrowding and traffic safety issues, not to mention the environmental concerns that a four-year construction site will cause in the area. (Rieber [W75Block]_082)

I personally lived through the demolition and renovation of the new planetarium on 81st Street. It was a complete nightmare for the block. And that is probably about one-twentieth of the size of this massive project. And the construction phase is slated at three years, but we always know that there are overruns so that it could be four years. (GrausmanS_036)

How long will the project take—what if it is not done in the announced amount of time? (CU_080)

Confirm that this project will take three years to complete. (CU_080)

Response: An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. The construction analysis will include: a description of the timeline of the proposed project and construction methods and procedures; consideration of issues including hazardous materials, noise and vibration, and traffic; and measures to reduce or eliminate any impacts on the community. As noted in the EAS, the anticipated duration of construction is approximately 36 months (3 years), including work in the interior of the

proposed project. As described in the Final Scope of Work, it is currently anticipated that the proposed project, if approved, would be built and operational in 2021.

Comment 131: The DEIS must study possible safety impacts on students going to and from school, including the impact of construction traffic, noise, and dust. (CB7_001, DefendersTRP_007, Gissler [DefendersTRP]_021, Goldberg_019, Rudich_107)

Response: An analysis of construction impacts will be included in the DEIS, including safety measures, as described in the Final Scope of Work.

Comment 132: What provisions will ensure safety and quality of life during construction? (CB7_001, CU_080, Goodman [CU]_071)

A person just died after being hit by falling debris from a NYC construction site. What similar hazards might there be during construction here? (CU_080)

Workers on the construction site must be fitted with masks and ear plugs to protect their long-term health. (Busemann_004, CU_080)

Response: An analysis of construction impacts will be included in the DEIS, including safety measures, as described in the Final Scope of Work.

Comment 133: The DEIS should address the impact on local street fairs, crafts markets, the green market, as well as vital businesses along Columbus Avenue during the construction period. (CB7_001)

How will the loss or relocation of the popular Sunday farmer's market affect the community? (CU_080, Goodman [CU]_071)

None of the businesses along the Columbus Avenue superblock have been notified by the Museum of the 36-month construction timeline for the project. If the disruptions along the route of the Second Avenue subway are any indication, the small businesses on Columbus Avenue will suffer a significant and negative financial impact. (CU_080, DiSalvo [CU]_104, Goodman [CU]_071)

Response: The DEIS will describe plans for local street fairs, crafts markets, the green market, as well as businesses along Columbus Avenue during the construction period. Construction impacts will be analyzed in accordance with the *CEQR Technical Manual*. AMNH is in conversation with the members of the Columbus Avenue Business Improvement District, which has issued a letter in support of the proposed Gilder Center, and will continue to maintain communications with businesses in the study area.

Comment 134: How many schools, hospitals, nursing homes, churches, synagogues, and retailers in the area would see disruptions due to the (minimum of three years of) project construction? (CU_080)

Response: An analysis of construction impacts will be included in the DEIS, including safety measures, as described in the Final Scope of Work.

Comment 135: What will be the maintenance and protection of traffic plan both during construction and when the project is completed? The DEIS should assess the impact of any disruption to the flow of traffic along Columbus Avenue during construction. It should also address alternative plans for museum access/egress during construction. (CB7_001)

Response: An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. The DEIS will include a description of any lane or sidewalk closures that are anticipated. Any changes in Museum access during construction will also be described.

Comment 136: Given that thousands of local residents and visitors use Theodore Roosevelt Park each day, the study should include the extent to which the operation of the park will be limited. Will park hours change? Will the dog park remain in full operation? (CB7_001)

Will the park remain in operation during construction? (CB7_001)

What will the Museum do once construction starts to provide the current amount of space—along with sufficient benches—for the community to gather, relax, and recreate safely and conveniently? (DefendersTRP_007)

During construction, neighbors will need access to the park. Given that West 79th Street entry will be closed by workers, will a temporary entrance be made at West 80th Street? (DefendersTRP_007, Gissler [DefendersTRP]_021)

What kind of detour will be needed to access the dog run and the subway during blasting? (CU_080)

Response: An analysis of construction impacts will be included in the DEIS, including effects on open space, as described in the Final Scope of Work. Any expected closures or disruptions to Theodore Roosevelt Park will be described and assessed.

Comment 137: What will the utilization of other Museum entrances be during the construction period and after completion? (CB7_001).

Response: Any changes in Museum access both during construction and upon completion will be described in the DEIS.

Comment 138: The DEIS should account for the impact vibration from demolition and excavation could have on surrounding landmarks and historic buildings, including those within the campus of AMNH. Construction should follow the methods and practices usually applied to fragile landmarked buildings.

Also, the DEIS should study the potential for uncovering precious artifacts during excavation. (CB7_001)

Response: An analysis of construction impacts will be included in the DEIS, including effects on historic and cultural resources, as described in the Final Scope of Work. Appropriate measures to prevent damage to historic resources will be described (including architectural and archaeological resources). LPC and OPRHP have determined that the project site is not archaeologically significant.

Comment 139: I hope every effort will be made to minimize disruption to the community (in the park and on surrounding streets and sidewalks) during construction, and thereafter as it pertains to transportation planning (e.g. buses) and access planning (flow of people) to the addition. (Goldberg_019, Ragan_003)

Response: An analysis of construction impacts will be included in the DEIS, including land use, as described in the Final Scope of Work. The DEIS will include a description of any lane or sidewalk closures that are anticipated and the associated DOT review, approval, and oversight of any such closures.

Comment 140: Noise disruption needs to be minimized during the construction period. Can mufflers (or equivalent) be used with the machinery, or can the area to be blasted be surrounded with a movable screen or fence to muffle the sound (which would also serve to contain some of the particulates)? (Busemann_004, Goldberg_019)

How will the Museum abate noise associated with excavation? (DefendersTRP_007)

Response: An analysis of construction impacts will be included in the DEIS as described in the Final Scope of Work. The analysis will include consideration of noise and vibration during construction and, as appropriate, measures to reduce construction noise will be described.

Comment 141: What provisions are in place for NYC Parks to monitor the health of the park during construction? (CB7_001)

Dust and particulate matter should be collected on Columbus Avenue and side streets, as well as in the park, and examined for toxic materials, with action taken to use alternate materials. (Beller [CU]_031, Busemann_004)

Response: An analysis of construction impacts will be included in the DEIS, as described in the Final Scope of Work. The construction analysis will include consideration of potential impacts on the Park, hazardous materials, appropriate measures for health and safety, and construction monitoring practices.

Comment 142: What will the hours of construction be? (CB7_001)

When will construction start and end? What will the decibel level of blasting be? Will there be any quiet periods / breaks? (CU_080)

Response: The DEIS construction chapter will include a description of construction practices, including hours of work and the expected duration of disruptive activities. Blasting is not expected to be necessary. The analysis will include consideration of noise and vibration during construction and, as appropriate, measures to reduce construction noise will be described. The project is also subject to the construction noise regulations included in the New York City Noise Control Code.

Comment 143: Where will construction materials be stored? (CB7_001)

Where will the staging areas be, and where will the construction machinery be placed, as well as construction crew facilities? (CU_080)

Response: The DEIS construction chapter will include a description of construction practices, including identification of staging areas, storage areas, and any worker facilities.

Comment 144: The Draft Scope of Work should address the effect of construction on the Columbus Avenue bike lane, and the planned construction must preserve a safe route for cyclists. (Beane_072, Coughlin_026, Frishauf_Rice_073, Rubey_070)

Response: The DEIS construction chapter will include consideration of transportation impacts, including on the Columbus Avenue bike lane, and will describe any closures or re-routing that may be required.

Comment 145: Would a project such as this require nighttime blasting that could go on for months/years? If so, what are the actual hours the besting would take place? (CU_080)

Response: The DEIS construction chapter will include a description of construction practices and anticipated hours of work. The proposed project is not planned to include blasting.

Comment 146: AMNH must present a plan to protect all of our trees during construction. (DiSalvo [CU]_086)

Response: The DEIS construction chapter will include a description of measures to protect trees during construction of the proposed project.

Comment 147: The Macy's Thanksgiving Day Parade has a unique impact on the neighborhood of the Museum and Theodore Roosevelt Park, though it has not been mentioned or assessed for its environmental impact. Statistics on the number of visitors who come to the neighborhood the night before the parade and on the day of the parade could provide important statistics on pedestrian and vehicular traffic flow. The impact on residents of the neighborhood in terms of congestion, noise,

food trucks, and garbage appears to be significant. (Rudich_107)

Response: Congestion, noise and other factors will be analyzed in accordance with the methodologies set forth in the *CEQR Technical Manual*. The construction logistics plan will consider any issues related to coordination with the Thanksgiving Day Parade. To the extent potential impacts could occur they will be described in the DEIS.

ALTERNATIVES

Comment 148: Serious consideration must be given to alternatives to this project. (Gough [Society]_064, Rudich_107)

I'm surprised not to see viable alternatives, a menu of possibilities at different cost and benefit levels. (Mayer_035)

Where's the plan B? Where's the plan C or D? There are many ways to do this. (Davies_044)

Response: The DEIS will include consideration of alternatives, as described in the Final Scope of Work. The specific alternatives to be analyzed will be finalized with the lead agency as project impacts become clarified. However, they must include the No Action Alternative and an alternative that reduces any identified significant adverse impacts.

Comment 149: In addition to the no-build scenario typically included in an EIS context, it would make a world of sense to require that the EIS analyze, disclose, and assess the impacts associated with a potential option to build a much more modest building on the proposed site. (Beller [CU]_031, CB7_001, Flesch_025, Khorsandi [LW]_024, Mantrone_034)

The re-opening to the public of the historic 77th Street entrance should be assessed in terms of both relieving pedestrian congestion at the Central Park West entrance and rebalancing the pedestrian flows on the sidewalks of the Museum block. (Rudich_107)

Response: Consistent with SEQRA and CEQR, the DEIS will include consideration of alternatives to the proposed project, including alternatives that have the potential to reduce or eliminate any significant adverse impacts identified in the DEIS. The selection of alternatives will be determined by taking into account the nature of the proposed project, its purpose and need, potential significant adverse impacts, and the feasibility of potential alternatives consistent with the objectives and capabilities of the Museum.

Comment 150: The footprint of this portion of the proposed building could be made significantly smaller by utilizing one of the following options: 1) placing all or most of the indicated educational facilities in an off-campus structure located close enough to the existing museum to maintain sufficient accessibility to

collections; 2) removing a number of back-office functions to an off-campus structure, thereby freeing up space in existing buildings for some or all of the proposed educational facilities; 3) reducing the size of the classrooms, labs, library, and hallways indicated on the plan; 4) moving all of the administrative functions off-site; and/or 5) reducing the size of the very large entrance lobby for what will remain, according to AMNH estimates, a secondary entrance to the Museum. (AllianceToProtectTRP_102, Barr_057, Beller [CU]_031, Browser [Alliance]_040, Cameron [CU]_027, CU_002, Davies_044, DefendersTRP_007, Goldberg_019, Goldfisher_058, Goldfisher_067, Goldfisher_069, Goodman [CU]_071, GrausmanR_043, Karp_059, Koppel_074, Leff_056, Mantrone_034, Mayer_035, Morris_084, MuellerF_078, Robbins_062, Smith [DefendersTRP]_020, Taylor_083)

The possibility should be explored that there is an alternative design that would not use any of the parkland. (Beller [CU]_031, CU_080, Dwyer_097 Gough [Society]_105, Koppel_074, Malloy_075, Mantrone_034)

Is there a way for all of the talent, resources, creativity, passion, and technology available from AMNH to find a way to integrate 11,800 square feet, one-quarter acre, into the confines of almost 1.2 million extra square feet? (DiSalvo [CU]_037)

Just a block or two north of the Museum along Columbus, an entire commercial building is currently for sale. Someone tell them. (Mantrone_034)

What do we gain from new linkage to Building 17? Building 17 has five floors, four of which are administration and the other is for events. Why not move all of this off-site and recapture Building 17. (Mayer_035)

Can AMNH find a new way to repurpose the 11,800 square feet intended to be taken from the park and make it part of a cloud museum? (DiSalvo [CU]_037)

Response: See responses to Comment 149 and 150. The DEIS will include a discussion of the proposed project's purpose and need and provide an analysis of reasonable and feasible alternatives, considering the objectives and capabilities of the Museum.

Comment 151: There should be consideration of expanding/building in another location, including another borough. (Beller [CU]_031, Cameron [CU]_027, CU_002, CU_080, DefendersTRP_007, Ganot_088, Goldberg_019, GrausmanR_043, Koppel_074, Smith [DefendersTRP]_020, Steinberg_022, Taylor_083)

The Museum should be asked to consider off-site alternatives for future expansions. (Khorsandi [LW]_024)

I know that what the Museum could do in an educational sense could be done in the five boroughs for one-tenth of the cost that they are talking about doing here. (Leff_056)

Response: See responses to Comment 149 and 150. The DEIS will include a discussion of the proposed project's purpose and need and a consideration of reasonable and feasible alternatives, considering the objectives and capabilities of the Museum.

Comment 152: Consideration should be made for a turntable for truck turnaround, or an outdoor loading dock elsewhere, instead of the proposed underground loading area. (AllianceToProtectTRP_102)

The loading area should have a turntable there so trucks do not have to make a big circle; they turn around and go out. (Dwyer_033)

Part of the building project envisions the connection of the two sections of the Museum to improve visitor flow. Such connection could be done underground or by a transparent passageway between the already existing building entrance on West 79th Street, incorporating the existing Time Capsule (preventing the necessity for its relocation) to the adjacent building. (AllianceToProtectTRP_102)

Response: Comments noted. The specific alternatives to be analyzed in the DEIS will be finalized with the lead agency as project impacts become further clarified. Subsequent to the publication of the Draft Scope of Work, the area of the proposed below-grade service area was reduced and the design of the service drive was modified with the goal of preserving two trees. AMNH is developing plans to protect and conserve these two trees, an English elm and a Pin oak.

MITIGATION

Comment 153: Serious consideration on this project must be given to mitigation. (Gough [Society]_064)

Response: Where significant adverse impacts attributable to the proposed project are identified in the DEIS analyses, practicable measures will be assessed to mitigate those impacts.

Comment 154: One mitigation strategy that should be considered would be extending the landscaping, pathways, benches, and all that is now gated-off in the beautiful green lawn at the 77th Street western edge of the park. That land could be used and repurposed to help mitigate some of the potential pedestrian traffic impacts to the entrance area.

If the major entrance becomes a reality, consideration must be given to developing the south side of AMNH into open park area, with walks, benches, and landscaping rather than the fenced off grass lawn it is today. (Benson_068, Bottle [TRPNA]_053, Pysher_008, Ratcliffe_106)

Response: Comments noted. If the DEIS open space analysis identifies a significant adverse open space impact, practicable measures to reduce or eliminate such impacts will be explored by AMNH and NYC Parks.

OTHER COMMENTS AND COMMENTS OUTSIDE THE DRAFT SCOPE OF WORK

Comment 155: DCLA and the New York City Commission on Human Rights should study the discriminatory effect of putting this building in a well-served neighborhood, where less than seven percent of the students are African-American, and not in an underserved community. (Goodman [CU]_071)

Response: Comment noted. DCLA and the New York City Commission on Human Rights, like other city agencies, will have the opportunity to comment on the DEIS.

Comment 156: I oppose the Gilder Center project at AMNH (or any plan that will reduce the amount of parkland available to the public). (AllianceToProtectTRP_102, Appelbaum [CU]_049, Appelbaum [CU]_091, Beller [CU]_031, BlanchardIII_005, Browser [Alliance]_040, Caan_052, Cameron [CU]_027, CU_080, Dickert_096, DiSalvo [CU]_086, Dwyer_097, Edwards_087, Estey_060, Freud [Committee]_081, Ganot_088, Goldberg_019, Goldfisher_067, Harris_061, Khorsandi [LW]_024, Kier_Bascom_099, Leff_056, Lerner_054, Malloy_075, Mantrone_034, McFrederick_066, Morris_084, Mueller_051, Mueller_095, MuellerF_078, Reaves_101, Rieber [W75Block]_082, Robbins_062, Thomas_055, Troy_090, Weingarten [CU]_032)

The Alliance to Protect Theodore Roosevelt Park is unalterably opposed to the taking of any green space, any reconfiguration of the park, or any loss of animal habitats. (Browser [Alliance]_040)

The Museum should reconsider this plan and instead celebrate nature and nature's interface with humanity that is at the core of its mission. To cut down trees and destroy even a portion of the park is a poor and ill-advised way to promote the cause of conservation and environmental awareness. (BlanchardIII_005)

In 50 years of practice, teaching, research and scientific administration, I have not encountered such an ill-conceived project. I urge you to send the Museum back to the drawing board and create a realistic, creative, non-destructive project worthy of this magnificent museum and Mr. Gilder's generosity. (Goldfisher_069)

Are New Yorkers being asked to trade parkland for a gift shop and to pay for that privilege? (Mayer_035)

Theodore Roosevelt Park is an amazing little park. It's too important to have green rather than another cement building. (Lerner_054)

Response: Comments noted.

Comment 157: I'm concerned that public assets, such as the Museum, are being given over to private development and rich people putting their names on buildings. (Goldberg_019)

How do you eat salami? The same way the city is feeding private interest parkland: a slice at a time. (Appelbaum [CU]_049)

Response: Comments noted. As stated above and in the Final Scope of Work, the Museum and its original buildings were created pursuant to New York State statutes passed between 1869 and 1875; then, an 1876 State statute set aside the entire site of Theodore Roosevelt Park for the Museum and authorized the City's then Department of Public Parks to enter into a contract (the Museum's lease) granting the Museum exclusive use of the buildings erected or to be erected in the park. Thus, the Museum is a permitted use in the Park.

Comment 158: My concerns include construction, infrastructure, health, and quality of life. (Troy_090)

Response: Comment noted. These issues will be considered in the DEIS, as described in the Final Scope of Work.

Comment 159: Furthermore, the proposed analysis should not only pay attention to the CEQR requirements to assess the existing infrastructure, but it should also seek to identify ways the existing infrastructure could be supplemented or enhanced by the project. (CB7_001)

Response: Comment noted. Consideration of pre-existing conditions is outside the scope of a CEQR analysis.

Comment 160: How can a museum of natural history justify causing so much damage to actual, living nature? (CU_080)

Response: Comment noted.

Comment 161: Are the decisions made by NYC Parks binding? Can they be appealed or circumvented by AMNH? (CU_080)

Response: The proposed project requires a binding approval from NYC Parks pursuant to the Museum's lease. The other proposed actions or approvals by involved New York State and City agencies are described in the Final Scope of Work.

Comment 162: Local elected officials pledged several million dollars toward this private project long before the public knew anything about it. (Appelbaum [CU]_091)

Why does the Museum deserve taxpayer money? Why is the expansion not funded privately? What is the amount of taxpayer money involved? Is there a cap? How is the cap enforced? Or is taxpayer funding open-ended? Why not get

funding from the out of state schools who will be pouring their kids onto Manhattan streets? (Ganot_088)

Is there a way to stop the use of taxpayer dollars whose use has not been approved by the taxpayers? Is it possible to cap the amount of tax dollars that are taken? Is there any way that taxpayers can demand their money not be used for a private endeavor? Before tax dollars are used for a private project, how can the budget be determined to be fair and accurate? How can the project be kept from going over budget? (CU_080)

How is it that a city council person or a borough president can allocate nearly $50 million in tax money to a private institution without any consultation with or approval from their tax payers? (CU_080, Beller [CU]_031)

Response: Prior to contractual commitment of government funding for the proposed project, the proposed actions are undergoing public review consistent with the requirements of SEQRA and CEQR.

Comment 163: It is not only that the proposed project will increase vehicle trips, but, as it is, there is already too much congestion in the area. Volume of traffic on these streets is often greater than the capacity of these streets. That is, the volume to capacity ratio is greater than 1 and the level of service is in the D, E, and F range. (Freud [Committee]_081)

I frequently take the crosstown bus on 79th Street and during arrival and departure hours of the school buses, the crosstown wait time can become a nightmare—and this is now. The current overcrowding on the Upper West Side has become very difficult to walk on the sidewalk—serious congestion, some of it from vendors, food carts with lines, and delivery bicycles wrapped 5 or 6 at a time on anything they can chained to, the overwhelming Citibike and racks. It has come to the point that at time I am unable to take the subway because of overcrowding—and this is now. (Troy_090)

The streets are already congested with school buses. No Upper West Side traffic plan can possibly mitigate that issue. (Ganot_088)

Response: Comments noted. Addressing remedies to pre-existing issues is outside the scope of a project-specific SEQRA or CEQR analysis.

Comment 164: Can you truthfully say that the dog run renovation was not delayed by the Museum's plans for the construction of this center? If they are not related, can you explain the coincidence? The dog run has been unhealthy and unsafe for many years, largely due to a serious drainage problem. Several years ago, a multi-purpose material was added to the dog run surface to address the problems of puddles and flooding. The material is zeolite, a material containing silica. In most forms zeolites are harmless. However, in powdered form, zeolite is carcinogenic if inhaled. It is recognized by the AMA and by Sloane Kettering to

be a cause of mesothelioma. The zeolite that was added to our dog run, regardless of the form it came in, has long since degraded into dust. This means that the dogs who play in it are kicking up carcinoid particles and they and their two-legged companions are breathing it in. I have raised this issue with Gale Brewer, the Museum's Public Relations office, and the manager for Theodore Roosevelt Park. The park manager walked away from me and I never heard from the councilwoman's office or the Museum. So how can we trust the process? The dog run really should be a showplace, and if the Museum cared about the park, how come they've done nothing for us? I know it's under the aegis of the Parks Department. (Appelbaum [CU]_049)

The dog run has been unhealthy and unsafe for many years, with rotten drainage. Zeolite becomes carcinogenic when it turns to dust; that means that the dogs who play in it are kicking up carcinogenic air all the time. (CU_080)

Response: Though the maintenance and renovation of the dog run is within the jurisdiction of NYC Parks, any renovation of the dog run would be a separate project that is not related to the Gilder Center project.

Comment 165: It is unacceptable to describe impacts as "unavoidable adverse impacts." That itself is proof that the project is ill-conceived and should not go forward. (Freud [Committee]_081)

What recourse does the public have if the project does harm? (CU_080)

Response: SEQRA directs decision makers to balance the economic and social benefits of a proposed project against any unavoidable environmental risks in determining whether to approve the project. The DEIS will identify areas of significant adverse impact and potential practicable mitigation measures, as appropriate.

Comment 166: Another food service problem is posed by Shake Shack, a popular fast-food restaurant at 77th Street and Columbus Avenue, whose thousands of patrons often use the park, sometimes overflowing garbage containers while competing for benches. (DefendersTRP_007, Mueller_095)

Response: Comment noted.

Comment 167: AMNH promised, when work was being done on the new planetarium, that there would be no further expansion. In addition, they promised there would be no school buses on 81st Street at that time; that was ignored two weeks after completion, as there are buses on both sides of the street. (Davies_044, GrausmanS_036, Leff_056)

The old planetarium had a parking lot where the buses parked. They took that parking lot away and now these are the orphan buses cruising our neighborhood looking for parking places. (Leff_056)

Response: As described in the Final Scope of Work, in 1999, in collaboration with Community Board 7, the West 81st Street Block Association, and the NYPD 20th Precinct, AMNH developed a Transportation Management Plan in anticipation of the opening of the Rose Center for Earth and Space. The plan addresses bus operations, including the safe loading and unloading of school children, demand management, use of the parking garage, and layover and dispatching activities. The EIS for the Rose Center, and the Transportation Management Plan, expressly provided for use of the first level of the garage (entered from the driveway on West 81st Street) for school bus loading and unloading to provide a dedicated, safe area for discharging and loading of school children. AMNH encourages school groups to arrive by subway, using the Office of Pupil Transportation's (OPT) Certificate of Free Transportation program, which allows free round-trip travel on subways for school groups on educational field trips. The Transportation Management Plan has evolved—and will continue to evolve—over time in response to Museum visitation patterns and conditions in the surrounding neighborhood, including the loss of bus layover space. Construction of the Rose Center did not rule out the possibility of further expansion.

Comment 168: There is reason to believe that Jeanne Gang, the chosen architect of the proposed Gilder Center, had previous ties to the Gilder family. In earlier public presentations, executives of AMNH mentioned that Gang's design was chosen as part of an architectural competition. Since AMNH remains very important to New York City and its residents, we—the Museum's neighbors and patrons—should be given the right to at least view the various designs from the other participants in the competition, particularly given that such a large portion of the construction budget will come from our tax dollars.

How many proposal for construction included ways to use the existing footprint of the building without building outside of it? (CU_080)

The person who will be investing in this project is conducting ostentatious philanthropy in the manner of the Koch brothers, and a whole slew of present day robber barons. It is a community of conservative libertarians who are starving our government, have their names carved in stone on mostly frivolous projects to show how good they are. How much influence will Mr. Gilder, a financier, have on a science curriculum, I would venture a guess, considering most of his investments are probably in fossil fuels and hydrofracking. The building is hailed as beautiful, but where are the solar panels? The interests of the philanthropists are not in preserving billions for little girls, I promise you. Beauty today must be adjusted to our present day climate change and I sincerely hope that such charity is not accepted. (Steinberg_022)

This project is ridiculous and wasteful, simply a big-money chance for some billionaire to get his name on something. Outrageous! (Taylor_083)

If Richard Gilder had not given $50 million to put up a building in his name, would AMNH ever have thought to build this center? (CU_080)

Response: The purpose and need for the proposed project is presented in the Final Scope of Work. The DEIS will also describe the proposed project's purpose and need and provide an analysis of reasonable alternatives, considering the objectives and capabilities of the Museum.

Comment 169: Is the reason that the proposed building would rely on fossil fuel for its energy because Ellen Futter is a trustee of the Museum and a director of Con Edison? The application states that alternative energy sources will be considered but admits that 2.3 million metric tons of greenhouse gas emissions and expected to be released from the building. (CU_080)

Response: In response to comments received on the Draft Scope of Work, the DEIS will include an assessment of GHG emissions, including an identification of the proposed project's measures to reduce energy consumption and GHG emissions, as described in the Final Scope of Work. Any applicable state or federal regulations pertaining to GHG emissions will be considered in the DEIS analysis.

Comment 170: I think the public money for this project should be spent on the infrastructure in the City, in education and in fixing education in the City. (Goldberg_019)

Response: Comment noted.

Comment 171: The Museum's track record executing a segmented development approach is shortsighted. Case in point is their proposal to obliterate the 15-year old, Ennead-designed Weston Pavilion with this project, in order to restore connectivity, removed by the former's own construction. (Khorsandi [LW]_024, Khorsandi [LW]_076)

Response: Comment noted.

Comment 172: What will be the real cost of the proposed Gilder Center? How much of the cost burden will be placed on taxpayers' shoulders? Where will the necessary (outside) money come from? What happens if construction goes over budget (i.e., in the event of hazardous materials or brownfields being uncovered and needing clean up)? Will the taxpayers be responsible for those costs? (CU_080, DiSalvo [CU]_104)

Has a cost-benefit analysis been done for this proposed project? (CU_080)

Response: The CEQR process is intended to identify and evaluate the environmental consequences associated with the implementation of a particular project. Neither SEQRA nor CEQR require the analysis of speculative issues, such as cost overruns. Cost-benefit analyses are also not required under SEQRA or CEQR.

Comment 173: What will be the admission fee structure as it relates to the proposed project (i.e., will part of the fee be used to pay for the project)? (CU_080)

Will the admission fee for the Gilder Center be part of general admission, or would it be a set price as a special exhibit? (Appelbaum [CU]_103)

Response: The Gilder Center would follow the Museum's admission policies. New York City school and camp visits are free of charge. Some key features at the Museum, like the Space Show and the 3D films in the LeFrak Theater, require an additional charge to visit. It is expected that certain elements in the Gilder Center would require the additional charge, such as the Invisible Worlds Theater and the relocated Butterfly Vivarium.

Comment 174: What process was followed to put the Time Capsule in the park? It takes up space in previously open space and is not user-friendly. (CU_080)

Response: The installation of the *The New York Times* Capsule was subject to review by the New York City Public Design Commission (PDC). As was stated in the Draft Scope of Work, it is expected that *The New York Times* Capsule would be relocated elsewhere in Theodore Roosevelt Park as part of the proposed project, subject to PDC approval.

Comment 175: The protected bike lane on Columbus Avenue has become an important transit link on the Upper West Side, especially after the introduction of Citi Bike into the neighborhood. It is important that the hard-won lane is maintained during and after AMNH expansion. (Beane_072, Frishauf_Rice_073, Goodman [CU]_071, Hoberman_092, Rubey_070)

Response: Comment noted.

Comment 176: We have five highrises going up between 77th Street and 81st Street. There is nothing in there for the community. There is no open space at all. Every time they take down a five-story building, they put up a 30-story building. Everyone has talked about the noise, the pollution, the traffic. We need space, which is just green and quiet, so desperately just to go to a place and calm down. (Lerner_054)

This neighborhood is under assault. This relates, perhaps not to the specifics of the Museum, but how life on the Upper West Side has become intolerable because of all the building that is going on. (Robbins_062)

NYC can be stressful, as we are like cliff dwellers, some living in tiny apartments. The best release is a walk in that darling little park sometimes with a book in hand and to just sit under one those big fabulous trees. Taking a deep breath and sitting in the park can restore one's body, mind, and spirit. (Troy_090)

Response: Comments noted.

Comment 177: I'm reminded of an experience I had days ago at the Museum of Natural History in Washington, D.C. Due to the extraordinary security outside that building before I could get, I was waiting in for backpack checking for probably a good 45 minutes to an hours, which let about 150 of the most exuberant kids line up. And if you think that's going to be tranquil in our little park, think again. Because that was a pittance of what will probably, before too long, be coming here. (McFrederick_066)

Response: Comment noted. Most school groups enter the Museum through the existing parking garage, which connects into the school reception lobby, or from the 81st Street-Museum of Natural History subway station.

Comment 178: Is it possible to get a list of our politicians that support the project and those that don't? (CU_080).

Response: The purpose of the scoping process is to outline the analysis areas and methodologies to be included in the DEIS. The scoping process does not require elected officials to present their opinions on any aspect of a proposed project.

Comment 179: The proposed Gilder Center addresses the expansion needs of AMNH, and the design by [Studio Gang Architects] is an improvement over the existing assemblage of non-historic buildings that make up the west wing. (Devaney [MAS]_045)

Response: Comment noted.

Comment 180: The available free and open public area of Theodore Roosevelt Park is to be reduced in size by a quarter of an acre; the NYC Parks website describes the park as occupying 17.57 acres, but does that figure include the footprint of the Museum? (Gough [Society]_105)

Response: As described in the Final Scope of Work, the superblock containing Theodore Roosevelt Park and the Museum is 17.58 acres. Of that, the Museum complex covers an approximately 7.7-acre footprint.

Comment 181: The Museum's disregard for us is such that anyone who was out this morning between ten and eleven would have been privy to the tip of the iceberg as yellow school buses filled out streets and avenues, completely filled the, prowling for parking spaces after they'd let off school children in the Museum. We're talking scores of buses, which take up valued, free parking spaces from residents and refuse to move when the sanitation trucks come through, leaving our streets filthy. And when we try to call the Museum to do something about it, someone comes to try and help us, but, frankly, it is not that one person's fault. It is the fault of the Museum and Ellen Futter, who has not made any accommodations for this community in regard to traffic, to buses, to whatever. (Mueller_051)

School bus congestion is a major problem in the neighborhood. AMNH officials advised that school buses will be permitted to park on one floor of the existing garage, though they did not say when. These plans are mentioned nowhere in the scope, begging the question: why can't this problem be addressed now? (Dwyer_097)

I was told that the Rose Center parking garage couldn't take buses. I was in there a month ago and there is room for 15 buses on the top floor of that parking lot. Instead of using this space, the buses are being shoved into the neighborhood, causing incredible congestion. (Leff)

Response: As described in the Final Scope of Work, in 1999, in collaboration with Community Board 7, the West 81st Street Block Association, and the NYPD 20th Precinct, AMNH developed a Transportation Management Plan in anticipation of the opening of the Rose Center for Earth and Space. The plan addresses bus operations, including the safe loading and unloading of school children, demand management, use of the parking garage, and layover and dispatching activities. The EIS for the Rose Center, and the Transportation Management Plan, expressly provided for use of the first level of the garage for school bus loading and unloading to provide a dedicated, safe area for discharging and loading of school children. AMNH encourages school groups to arrive by subway, using the Office of Pupil Transportation's (OPT) Certificate of Free Transportation program, which allows free round-trip travel on subways for school groups on educational field trips. The Transportation Management Plan has evolved—and will continue to evolve—over time in response to Museum visitation patterns and conditions in the surrounding neighborhood, including the loss of bus layover space. Construction of the Rose Center did not rule out the possibility of further expansion.

Comment 182: If we're getting 10, 15, 20 million, 100 million dollars together, a scholarship fund should be erected instead of this mausoleum. The Dick Gilder Scholarship Fund for needy children with a serious scientific bent. (Hammond_047).

Response: Comment noted.

Comment 183: I would ask you would accept questions from the children, very direct questions that then your answers will inform them and your answers will assist them in getting a proper education. (Van Daele_029)

I don't think that the Museum cares about the psychological effects that it will have on children that have grown up in this area and, basically, the backyard is this area that's now going to be taken over by the Gilder Center. (Sokolov [CU]_038)

Response: Comments noted.

Comment 184: The Draft Scope states that as part of the initial design effort, the Museum reduced the development footprint. I was told by one of the architects and have communicated that with many people, including the board of the Defenders group that the project was cut back as part of their RFP process with architects a long time ago. There have been no victories thus far. (Dwyer_033)

Response: The decision to pull back the footprint of the Gilder Center was made by AMNH in the Fall of 2015 and reviewed with NYC Parks at that time, following public comments about the park during initial presentations about the project.

Comment 185: We should request scenic landmark designation for Theodore Roosevelt Park. (Dwyer_033)

Response: The DEIS will analyze and discuss historic and cultural resources in accordance with the *CEQR Technical Manual*.

Comment 186: I have not included my comments and concerns regarding impact on: the Columbus Avenue Farmer's Market; pedestrian/bicycle/traffic safety; lighting effect on neighborhood character; and attendant and foreseeable cause and effect on these and other relevant variables, but could provide additional feedback on request. (Malloy_075).

Response: Comment noted.

Comment 187: I support the Gilder Center project at AMNH. (BID_023, de Brigard_108, Garutti_006, Lashin_009, Ragan_003, Rubey_070, Ward_018, Wright_017)

Response: Comment noted.

Comment 188: The Columbus Avenue Business Improvement District applauds and supports Studio Gang's design for the Gilder Center and believes it will be an important addition for our district and a striking and impressive extension of AMNH. (BID_023)

Response: Comment noted.

Comment 189: The proposed addition offers a once-in-a-lifetime opportunity to integrate AMNH with Columbus Avenue and the Upper West Side, so as to make the new Gilder Center more approachable and prominent within this City-owned park. However, there is still work to be done connecting the new building with the community. (BID_023)

Response: Comment noted.

Comment 190: The footprint impact of the project looks minimal. All but one of the removed canopy trees will be replaced nearby, based on what I've read, and the mission of the Museum will allow development in the interest of science education. (Ragan_003)

Response: Comment noted.

Comment 191: Those of us on the Upper West Side are proud of this Museum and consider ourselves lucky to have such a wonderful facility in such easy reach of our children. The objections are, by and large, NIMBY ["not in my backyard"]. (de Brigard_108)

Response: Comment noted.

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American Museum of Natural History
Transportation Management Plan
for the Period After the Opening of the Rose Center

The Rose Center for Earth and Space

The creation of the Frederick Phineas and Sandra Priest Rose Center for Earth and Space (the Rose Center), which will open early in the year 2000, represents one of the most exciting chapters in the Museum's long and distinguished history of science and education. The Rose Center includes a new Hayden Planetarium housed in a sphere, some 90 feet in diameter. The upper portion of the sphere comprises the most technologically advanced space theater in the world which will allow visitors to journey among the stars and planets in our galaxy; the lower portion of the sphere includes a "Big Bang Theater," which will present a multi-sensory re-creation of the first moments of the formation of the universe. Above, below, and around the sphere will be new exhibits, including those in the Lewis B. and Dorothy Cullman Hall of the Universe, where interactive technology and participatory displays will elucidate important principles of astronomy and astrophysics, and the adjoining Gottesman Hall of Planet Earth (opening in mid-1999) which uses natural samples from all over the world to examine Earth processes and to investigate what we know about the origins of life. The Rose Center for Earth and Space will enable the Museum to join science and education and to provide a seamless journey taking visitors from the beginnings of the universe, to the formation and processes of Earth to the extraordinary and irreplaceable diversity of life and cultures on our planet. This magnificent facility will also house new classrooms, a conference center, a landscaped terrace, and visitor amenities such as a three story parking garage, Museum shop, eating facilities, and a new pedestrian entrance facing Columbus Avenue.

Community outreach and public hearings to date

The Museum made numerous presentations to several Community Board 7 (CB7) committees during the public review of the Planetarium in 1995 and 1996 in order to present preliminary plans for the design of the Rose Center, and to discuss transportation and other important community issues. The project was reviewed in public hearings and discussed in hundreds of additional briefings and meetings with local elected officials and community and neighborhood groups. It received approvals from six official bodies, in addition to the AMNH Planetarium Authority itself.

As we began construction on the Rose Center we enhanced our community outreach to help coordinate construction and transportation issues. To this end, we instituted monthly construction coordination meetings that are held on the third Tuesday of every month at 6:00 P.M. These meetings are open to the public and have been a positive forum for exchanging information with the community. Neighbors who would like to receive an update or express concerns between the monthly meetings may call our 24 hour information line at (212) 769-5282. This number is posted on informational stanchions in the Park and is published in our community newsletter that also includes construction and transportation updates and other information.

With respect to the transportation planning, we visited the CB7 Transportation Committee in February 1997 to present an interim transportation plan addressing transportation concerns that had been identified as existing at the Museum prior to the

construction of the Rose Center. In February of this year we presented to the Committee a preliminary description of the types of things expected to be included in the transportation plan for the period after the opening of the Rose Center. In May of this year we returned to the Community Board to present a draft of the plan and to get the community's feedback on this draft. We received many oral and written comments from individual neighbors and community organizations during the comment period (through June 18). We appreciate the entire Board's and the community's thoughtful input during the planning process. The Museum will maintain regular communications regarding transportation related concerns with the Community Board, local block associations, New York City Transit, the New York City Police Department, New York City Department of Parks and Recreation's (DPR) Parks Enforcement Patrol, New York City Department of Transportation, and elected officials.

Transportation Study

In 1995, as part of the intensive public review process prior to approval of the Planetarium & North Side Project, the American Museum of Natural History Planetarium Authority completed a full environmental review of the impacts of the Project in accordance with the State Environmental Quality Review Act (SEQR) with the help of Allee King, Rosen and Fleming, a nationally respected environmental research firm. Months of study and analysis resulted in a comprehensive Final Environmental Impact Statement (EIS), issued in September 1996. Following that analysis, a Findings Statement was issued, evaluating the Project and describing the mitigation measures that would be required as a condition to approval of the Project. The Findings Statement was later amended to include additional requirements suggested by community representatives and approved by the Planetarium Authority.

The EIS reported on detailed impact studies that were conducted with respect to traffic and parking, public transportation, and pedestrian circulation at the Museum and Planetarium. The EIS reported that a number of transportation service issues on the streets bordering the Museum existed at the time the studies were conducted. These issues were and remain unrelated to the Project; rather they result from existing Museum programming and operations. In response to community comments regarding those existing issues, the Museum committed to initiating an on-going transportation planning effort covering all aspects of Museum-related transportation services. Because it relates to existing conditions, this commitment was not required in connection with the approval of the Planetarium & North Side Project (under SEQR, or otherwise). Rather, the Museum voluntarily undertook to address these concerns when they were brought to its attention. The EIS and Findings Statement disclosed that if the Museum was not able to design and implement a successful transportation plan, the traffic friction associated with some Museum operations would persist in the future.

<u>Existing Transportation Concerns</u>

Along with the full range of transportation concerns studied, the EIS reported three specific transportation issues that were then at the core of the transportation service problems around the Museum:

Weekday friction related to school bus unloading, layover, and loading, approximately between the hours of 10:00 A.M. and 2:00 P.M.

Weekend friction related to excess demand for on-site parking by Museum visitors; approximately between the hours of 11:00 A.M. to 2:00 P.M.
Congestion at heavily trafficked intersections.

The Museum's on-going transportation management program covers visitors' trips by all modes, employee trips, planning for special events, and management of parking and service and delivery vehicles. Shortly after the Amended Findings Statement was issued, the Museum hired a full-time transportation coordinator, who works with a staff of six dispatchers and greeters to coordinate activities affecting traffic around the Museum. The outline of this transportation management plan is described in more detail in the EIS and the Amended Findings Statement for the Planetarium & North Side Project.

Transportation Management After Opening of the Rose Center

As disclosed and discussed during the environmental review of the Project, development of the Project will place additional service demands on the transportation network surrounding the Museum. Although the number of school buses traveling to the Museum is not expected to change (because the Museum already draws from the full range of City and suburban schools), visitor trips by other modes of transportation are expected to increase. However, the Project's new garage will increase the supply of on-site parking, thereby reducing the duration of traffic friction associated with excess parking demand on weekends. The garage will also accommodate school-bus unloading and loading, thereby reducing the friction previously associated with that activity.

These and other changes require adaptation of the Museum's on-going transportation management efforts. Therefore, the Museum has prepared the following transportation management plan (the plan) as an organizational and operating framework to guide management of all aspects of Museum-related transportation services for the period after opening of the Planetarium & North Side Project. Similar to the on-going transportation management plan, the plan, described below, covers visitor trips by all modes, employee trips, planning for special events, and management of parking and service and delivery vehicles. Also similar to the on-going transportation management plan, the plan is intended to be flexible – e.g., it will evolve in response to on-the-spot conditions, and change when ideas for improvement present themselves or components of the plan are not successful. The plan also includes the measures proposed in the EIS and Findings Statement to mitigate adverse impacts of the Project on the transportation network surrounding the Museum.

Background

The Museum is open seven days a week and is closed Thanksgiving and Christmas. Annual attendance of paid visitors at the Museum is approximately 2.3 million. With the opening of the Rose Center, attendance is expected to further increase. The number of visitors is usually much heavier on weekends than on weekdays. Daily visitors on a weekend typically range from approximately 9,000 to 11,000; on a weekday (exclusive of school groups), the figure is 3,500 to 4,000. Weekday attendance is heavily influenced by the additional activity of school groups, with student attendance averaging

approximately 2,200 visitors per school day; about 500,000 per year. The Museum offers free admission to all New York City school and camp group visitors.
Visitors to the Museum come by all modes of transportation with different patterns on weekdays versus weekends. Table 1 shows the estimated percentage of people utilizing the various transportation modes. Exclusive of school groups, on weekdays, the most heavily used modes are auto (30 percent), subway (25 percent) and foot (24 percent). Weekends are more skewed toward auto (55 percent), followed by foot (20 percent) and taxi (11 percent).

Table 1

Visitor Transportation Modes (exclusive of school groups)

(Percent)

	Auto	Taxi	Bus	Subway	Foot	Total
Weekday	30%	13%	8%	25%	24%	100%
Weekend	50%	14%	8%	9%	19%	100%

Transportation Alternatives

The Museum encourages the use of public transportation and other transportation alternatives. Our bike racks, located on 77th Street, can accommodate dozens of bicycles. In addition, a substantial percentage of Museum visitors use public transportation. These trips are concentrated during Museum visiting hours and on weekends, and generally do not overlap with peak usage periods at the station or in the transit system. Consequently, crowding and congestion within the station is typically not a significant problem for museum visitors.

The Museum will continue to promote the use of public transportation by its visitors and employees. We have recently partnered with New York City Transit and Arts for Transit to undertake a major renovation and art installation at the 81st Street subway station. We believe that physical enhancements to the station will increase visitor use of public transportation. We plan to continue to publicize information regarding public transportation through brochures, printed advertisements, posters and on our Web site, which provides transit directions and a subway map. We also plan to continue our recently implemented employee Transitcheck program. The Museum will participate in, as appropriate, and initiate partnering programs with the MTA or other public transit service providers which couple discounted fares with Museum admission. We applaud the Board of Education's recent announcement that they will provide students and teachers with MetroCards for visits to museums.

Garage description

As stated above, the EIS for the Project identified a number of transportation service issues that existed at the time the traffic studies were conducted. Planning for the

garage addresses these and other concerns. The garage will be open seven days a week between 6:00 A.M. and 11:00 P.M. for entering cars; cars may exit after 11:00 P.M.. The garage will provide up to 370 spaces in valet operations, which will be used on weekends and holidays during Museum hours.

Since the intention of the Museum is that the garage be primarily of service to Museum visitors, the garage prices will be structured to be slightly higher than other neighborhood garages, but will offer a discount with validated Museum admission. The garage consists of three levels -- one at grade and two below grade. The 81st Street carriage drive is the primary garage access point and its entry and exit driveways will be open during all hours that the garage is in operation (and not full). A second weekend entrance will be provided for cars using the Museum's existing service driveway on Columbus Avenue. Museum transportation staff will monitor the entrances and driveways during school bus operations and on all weekends to facilitate the movement of traffic immediately surrounding the Museum. The garage can accommodate yellow school buses on the first floor. Coach buses will load and unload in the 81st Street carriage drive, Central Park West, and on 77th Street during peak days. Buses entering the garage and all exiting vehicles would use the existing driveways on West 81st Street.
On weekends, there will typically be a period during the midday hours when the garage is full and drivers will be turned away. In the past, this condition created a traffic problem on 81st Street when vehicles queued outside the driveway entrance waiting for spaces to open in the parking lot. With the increased parking supply at the garage, roughly a doubling of the supply at the former lot, the hours during which the garage is full will be reduced. However, when capacity is reached, it will be important that staff be posted at both the 81st Street and Columbus Avenue driveways and information provided regarding alternative parking locations, in order to avoid traffic problems associated with a back-up at the driveway entrances. The plan calls for deploying staff at all appropriate times to monitor and coordinate activities affecting traffic surrounding the site with particular emphasis on preventing queues from forming when the parking lot is full, overseeing service vehicles, and controlling conditions at drop-off points. When the garage is full, this information will be communicated to the transportation staff from the garage via 2-way radio. At that time the staff will be responsible for closing the driveways and providing printed instructions showing the location of alternate parking facilities and directing vehicles to move away so that queues of vehicles are not allowed to form. Upon receiving information from the garage that approximately 10% of the spaces are available, the staff will reopen the driveways to entering cars.

On weekdays, when schools are in session, the top level of the garage is expected to be used for bus operations, 179 self-park spaces will be available on the lower two levels, including 50 spaces for Museum employees. On weekdays, it is expected that the garage will be able to accommodate all visitors who choose to park on-site. The Museum has no immediate plans to offer long-term parking agreements, however, should excess weekday parking become available, the Museum may consider such agreements. These cars would not be permitted to remain in the garage between 11:00 P.M. Friday and 6:00 PM Sunday. Violators would be heavily fined and possibly towed.

Columbus Avenue Driveway

In addition to the 81st Street entrance, the Museum plans to use the service drive located on Columbus Avenue as a secondary garage entrance for cars on weekends as described in the EIS for the Project. This plan was required as a result of the environmental review to mitigate traffic conditions anticipated on 81st Street after completion of the Project.

On weekends, the drive would serve only entering automobiles. Trucks and other service vehicles will be scheduled during other hours or will use the 77th or Central Park West entrances. Buses could not use this driveway because of its slope and sharp turns. Given the width of the roadway, the grade, and the sight lines, the driveway would be able to accommodate traffic in only one direction at a time; it is not suitable for heavy volumes of exiting traffic due to the limited sight distance for vehicles approaching the top of the driveway. All cars would exit the garage on 81st Street.

When in use as a garage entrance, there will be one or two transportation staff members assigned to the driveway at Columbus Avenue, and one staff member assigned to the service drive, to facilitate the movement of vehicles into the driveway and through the service yard. Prior to opening the driveway to cars, cones will be placed along the Columbus Avenue curb lane to channel entering vehicles into the driveway. In addition, the Museum proposes to change the parking regulations immediately north and south of the service driveway to a no standing zone to assist in this movement. These measures are intended to insure that vehicles enter the driveway from southbound Columbus Avenue, rather than coming across westbound 78th Street. It is also expected, with NYCDOT approval, that signage can be placed along 78th Street indicating that it is not an approach route to the Museum garage. We hope to further discourage cars from taking this route by seeking NYCDOT approval to change the green light facing 78th Street at Columbus to a green arrow. These measures, coupled with trailblazing signs from the West Side Highway will direct vehicles along 96th or 79th Streets. From the East Side, proposed signs will be placed at Fifth Avenue and the transverse roads at 81st, 86th and 96th Streets.

In order to accommodate cars safely at the Columbus Avenue driveway, the Museum is proposing a number of minor design changes. The most visible change will be the addition of a guard booth to the north of the service drive at the Park level. The booth will house one security guard, who will manage cars entering the garage on weekends, as well as delivery trucks entering and exiting the driveway on weekdays. In addition, a swinging arm will be installed near the booth. These changes and additional lighting will allow the Museum to control access to the driveway. The Columbus Avenue driveway will be closed when the garage reaches capacity. This will be communicated to the Columbus Avenue transportation staff via 2-way radio from the garage. At such times, the gate will be closed, and staff will be responsible for giving printed instructions showing the location of alternate parking facilities. After providing the parking information, the transportation staff will direct vehicles to leave the approach lane to the driveway. The staff will be responsible to see that traffic does not queue on Columbus Avenue waiting to enter the garage.

During weekdays, when the service driveway will continue to be used by vehicles accessing the loading areas, parking garage entry and exit will continue to be provided only along West 81st Street.

Buses

The Museum accommodates visits from large numbers of school groups from City and suburban schools throughout the school year and from camp groups during the summer. Most of these groups arrive by bus – primarily in yellow school buses and some in chartered coach buses. The buses arrive throughout the school year from September through June (approximately 180 weekdays) and during the summer when day camps are open (approximately 40 weekdays). The number of buses coming to the Museum can vary from fewer than 25 to up to 100 in a day. The Museum receives fewer than 10 buses a day on about half of the days of the year. The Museum encourages schools to schedule their visits on days of medium to low bus activity in order to reduce the number of high activity days. During 1998, there was an average of 41 buses per school day. The volume of buses ranges considerably as shown in Table 2.

TABLE 2
Bus Volume Patterns at the Museum

Number of buses	Days Per Year*	
	Number	Percent
Less than 26	231	64%
26 to 40	47	13
41 to 70	78	21
More than 70	7	2
Total days	363	100%

Note: * Excludes Thanksgiving and Christmas
Source: American Museum of Natural History

Arrivals are highly concentrated. Most of the buses (75 percent) arrive in the 1½-hour period between 9:45 to 11:15 A.M.. Half of the buses arrive in the peak 30-minute period from 10:00 to 10:30 A.M.. They typically stay for approximately 2-3 hours, and depart between 12:00 and 1:00 P.M.. Departures are also concentrated, but less so than arrivals. Most buses (75 percent) depart over a two- hour period between 12:15-2:15 P.M.. The greatest number depart in the peak 30 minutes between 12:30-1:00 P.M.. The coach-type bus brings schoolchildren from longer distances, and these vehicles make up approximately 20 to 25 percent of all buses.

Bus conditions are being addressed in five ways: 1) institution of stronger control of bus operations through a reservation system; 2) redistribution of buses from days of peak school visits; 3) management by a Transportation Coordinator with the authority and support to control bus operations; 4) organization of loading operations in the garage, on the driveway, and on the street; and 5) implementation of a bus layover plan.

The Museum has initiated a reservation system for school and camp groups. All groups now apply in advance for a date and time, and the Museum is able to send these groups a variety of details on the trip, including information on bus operations. This system allows the Museum to schedule arrivals and departures to reduce to the extent possible the heavy peaking, particularly of arrivals and assign the location of unloading and loading for each bus. These operations will continue after the opening of the Rose Center.

Buses will unload and groups will enter the Museum at four locations:

- The upper level of the new North Side garage (yellow buses only)
- 81st Street driveway
- Central Park West southbound (primarily for peak days)
- 77th Street (primarily for peak days)

In considering whether to use the top level for parking or loading and unloading, the Museum determined that providing a protected entrance/exit for schoolchildren would receive priority. Safety of children was the primary consideration. It is expected that on most days all school bus unloading and loading will take place within the garage. It is expected that approximately 50 to 60 school buses per hour will be able to unload in the garage, allowing 10 minutes for a bus to pull up, unload, and depart from an unloading location. The time for loading, 15 minutes, is greater than that for unloading. The transportation coordinator and staff would enforce the operations plan, keeping buses from unloading and loading in inappropriate places or from blocking the driveway, entrance to the parking garage, or moving traffic. The garage operations will be staffed by two bus dispatchers—one inside the garage and one at the driveway—who will control the movements of the buses inside the garage, and by four bus greeters who will supervise the unloading and loading of the buses.

Coach type buses bringing school and camp groups (and some school buses on the heavy activity days) would discharge in the West 81st Street driveway or on Central Park West or 77th Street. Adult groups, when they travel in buses, come exclusively in coach-type buses, and would be handled on Central Park West. On high activity days, when there are more than 70 buses, it is expected that Central Park West would also service excess school buses that cannot be accommodated at the garage. The curb positions for the buses would be clearly marked by cones and/or pennants. With an average of 10 minutes for unloading, up to 30 buses can be unloaded in an hour along Central Park West as at the garage, there would be a transportation staff who will log in the bus, direct the unloading of children, and provide information regarding parking and the pick-up time and position.

As stated above, friction related to school bus unloading, layover, and loading was an existing transportation service issue at the Museum at the time the EIS was prepared. Therefore, the on-going transportation management plan addresses these bus operations. The on-going plan calls for optimizing use of designated off-site locations for bus layover bus parking at a surface parking lot. The current facility is located at West End Avenue and 60th Street. Information about this off-site parking lot is given to group leaders and bus drivers in reservation materials and at the site, upon unloading of passengers. It has been our experience, however, that bus drivers elect the less expensive option of parking (or double parking) at the curb in the neighborhood surrounding but not adjacent to the Museum.

During light travel days when there are fewer than 10 school buses (we estimate approximately 70 to 80 weekdays each year), all buses will be able to park within the garage. For other days, the plan proposes signage, parking regulations, and staffing that will allow for the use of dedicated bus layover and staging areas on Central Park West northbound from 77th Street to 81st Street. This area will hold approximately 25 buses, this, in addition to the spaces in the garage, results in an overall supply of approximately

25 to 30 positions for bus layover. Thus, on lower and moderate demand days, (55% to 65% of week days) all of the buses could potentially be accommodated in the garage or on Central Park West. On days when the number of buses requiring layover position would exceed the supply identified here, the excess buses would be directed to the offsite parking location at 60th Street and West End Avenue or to existing bus layover locations at 11th Avenue between 30th and 34th Streets, and 60th and West End Avenue.

Staging buses along the east side of Central Park West across from the Museum will provide a consolidated location for bus layover, keeping them out of the surrounding streets, and will allow Museum transportation personnel to dispatch buses back to the garage only when their groups are ready to depart. This will control or eliminate the main causes of delay during bus loading operations. In order for this plan to be implemented, parking regulations would have to be changed from alternate side of the street cleaning regulations to "No Standing Anytime Except Authorized Buses 9:00 A.M. to 2:00 P.M., School Days" at the curb locations used for bus parking. The goal of the layover plan is to facilitate the orderly and safe movement of buses, minimize the impact on the surrounding neighborhood, and minimize double-parking and idling by buses on streets surrounding the Museum.

The Museum has also encouraged the MTA and Board of Education to implement a student MetroCard program for visits to cultural institutions. In the past few weeks, these two agencies have committed to such a program.

If the Museum, working with the MTA, Board of Education, and New York City Police Department, is not able to design and implement a successful bus management plan, the adverse conditions associated with bus loading and parking will persist in the future and will continue to contribute to weekday parking and traffic congestion problems in the area surrounding the site.

Cars

The EIS identified a number of traffic improvement measures which would address increased traffic associated with the reopening of the Planetarium. Key among those measures was a restriping and signal retiming of the intersection of 81st Street at Central Park West. While decisions regarding traffic operations on public streets are the responsibility of NYCDOT, the Museum has been and will continue to pursue with NYCDOT the implementation of appropriate traffic mitigation measures.

Comments and responses

The Museum received a number of written and oral comments on the draft plan after it was distributed on May 11, 1999. In general, many of the comments were supportive of the tone, direction, and thoroughness of the draft plan. Specifically, proposals involving signage and public transportation incentives were well received. In general, concerns were expressed about the efficacy and appropriateness of the bus layover plan, monthly parking, and garage operations. We are responding to those concerns and are exploring a pre paid bus-parking policy and have chosen not to offer monthly parking at this time. While some neighborhood groups requested pre-reserved parking for cars, we believe that such a program would be nearly impossible to implement.

Conclusion

The final plan is intended to be flexible – e.g., it will evolve in response to on-the-spot conditions, and change when ideas for improvement present themselves or components of the plan are not successful. The Museum intends to evaluate the plan after the end of the next school year. As it has over the past few years, the Museum plans to continue to seek community input on issues of mutual concern. We understand that the planning process can be difficult, and that visible construction can be inconvenient for our neighbors. We would like to thank our neighbors for their patience and their many efforts to express their concerns and work with the Museum to resolve outstanding issues and create a better community. We hope that you will visit and enjoy our new facilities and that we will continue to work together for years to come.

American Museum of Natural History
Transportation Management Plan
2016

A. INTRODUCTION

The Museum's Transportation Management Plan (TMP) is intended to support the provision of safe and convenient access to the Museum within the context of transportation services and issues in the surrounding neighborhood. The TMP provides a guide for Museum staff to effectively coordinate visitor travel to the Museum by all travel modes, including public transit, walking and bicycling, school and coach buses, and private vehicles. This operating plan was initially established in 1999, in conjunction with the opening of the Rose Center. It has evolved over time and been utilized to effectively manage the Museum's transportation services while minimizing the impact on nearby streets and facilities. This updated TMP reflects the Museum's current practice, and is subject to further change over time in response to the Museum's needs, as well as conditions in the surrounding neighborhood. The primary elements of the TMP are:

- Promoting the use of non-vehicular modes, particularly public transportation;
- Bus operations, including demand management, use of the parking garage, and layover and dispatching activities; and
- Managing the demand for auto parking at the on-site parking garage.

B. BACKGROUND

MUSEUM ATTENDANCE

The Museum is open seven days a week from 10:00 A.M. to 5:45 P.M., and is closed Thanksgiving and Christmas Days. The annual total attendance of AMNH is approximately 5 million. With respect to visitor origin, approximately 43% of visitors are international tourists, 14% are domestic tourists, and 43% lived in New York City and the surrounding region in FY2015. Museum attendance varies substantially by month, with July consistently seeing the highest visitation (12% of annual attendance in FY2016) and September consistently seeing the lowest attendance (6% in FY2016). Visitation is typically higher on weekends and weekday holidays than typical weekdays

Table 1 shows the means of transportation used by Museum visitors exclusive of school groups. On weekdays, approximately 4 of every 5 Museum visitors arrive by either mass transit or walking, with 52 percent arriving by subway and 30 percent arriving on foot. On weekends, trips are slightly more skewed towards auto (13 percent) and taxi (9 percent) than on weekdays, but most trips to the Museum are still made by subway (44 percent) and walk only (26 percent). During the past decade, the Museum has achieved a notable shift from private auto and taxi, with a commensurate increase primarily in public transportation.

Table 1
Museum Visitor Transportation Modes (exclusive of school groups)

Mode	Weekday Percent	Weekend Percent
Auto	3.8%	13.4%
Taxi	6.7%	9.3%
City Bus	2.4%	3.5%
Group/Tour Bus	5.1%	3.7%
Subway	51.8%	43.7%
Walk Only	29.7%	25.9%
Bike	0.5%	0.4%
Source: American Museum of Natural History, June 2015		

STAFFING

The Museum employs a staff of ten in its Transportation Department to carry out and enforce the TMP: it consists of one Associate Director, one full-time Manager, one full-time Lead, and seven part-time Bus Greeters. During peak school group visitation months, the Museum supplements the Transportation Department with Visitor Services Representatives to assist in coordinating weekday school group trips to the Museum. Transportation staff members are responsible for coordinating safe and efficient bus arrivals and departures, directing movements of buses in and around the West 81st Street parking garage and driveway, and overseeing parking garage operations. Staff responsibilities in bus operations and parking management are further described in this TMP.

As needed, the Museum also utilizes supplemental staff to oversee vehicle and pedestrian access points near Museum facilities and ensure the safety of Museum visitors. Museum staff is also responsible for coordinating with the New York City Department of Transportation (NYCDOT), the Metropolitan Transportation Authority (MTA) New York City Transit (NYCT), the New York City Police Department (NYPD), and community groups on site-related transportation issues.

OPENING OF THE ROSE CENTER

In 1999, a TMP was prepared in anticipation of the opening of the Frederick Phineas and Sandra Priest Rose Center for Earth and Space (the Rose Center), the Hayden Planetarium, and the 423-seat Space Theater. In conjunction with the Rose Center, a three-story parking garage was constructed, with the at-grade level providing pickup and drop-off for bus operations and the two below-grade levels offering paid parking during weekdays, and all three levels offering paid parking during weekends.

PRECEDING TRANSPORTATION STUDIES

In 1996, as part of the public review process associated with the approval of the Planetarium & North Side Project, the Museum completed a full Environmental Impact Statement (EIS) on the impacts of the Project in accordance with the State Environmental Quality Review Act (SEQR).

The EIS documented a number of neighborhood transportation service issues on the streets bordering the Museum, as well as issues more specifically related to the Museum's programming and operations. In response to community comments regarding those issues, the Museum committed to initiating an on-going transportation planning effort covering all aspects

of Museum-related transportation services. Three specific issues that were then at the core of transportation service problems around the Museum included:

1) Weekday friction related to school bus unloading, layover, and loading, approximately between the hours of 10:00 AM and 2:00 PM;
2) Weekend friction related to excess demand for on-site parking by Museum visitors, approximately between the hours of 11:00 AM and 2:00 PM; and
3) Congestion at heavily trafficked intersections.

After the EIS findings were issued, the Museum hired a full-time transportation coordinator to work with a staff of dispatchers and bus greeters to coordinate activities affecting traffic around the Museum. The TMP, released in 1999, served as a framework to how the Museum would manage Museum-related transportation operations after the opening of the Planetarium & North Side Project in 2000, with a focus on bus operations and management of the new parking facility to address the issues identified in the FEIS. The implementation of the plan resulted in substantial improvements in the management of transportation issues at the site, and created an effective framework for addressing the Museum's transportation concerns. Over time, measures identified in the plan have been modified and refined in response to various operational issues and changes in neighborhood conditions. This current TMP describes the framework for how the Museum manages site-related transportation operations in the context of present-day neighborhood conditions.

RECENT CITY TRANSPORTATION PROJECTS NEAR THE MUSEUM

COLUMBUS AVENUE PARKING PROTECTED BIKE PATH

In 2011, NYCDOT made roadway improvements along Columbus Avenue, which included a protected bicycle lane along the east curbside (the leftmost lane) from West 96th Street to West 77th Street, and a floating parking lane and concrete pedestrian refuge islands between the bicycle lane and the travel lanes. From West 81st Street to West 77th Street along Columbus Avenue, the installation of the protected bicycle lane and concrete pedestrian islands at crosswalks, has significantly reduced bus layover capacity for the Museum along Columbus Avenue (from as many as 25 spaces to as few as 4 spaces). NYCDOT has provided some additional bus layover capacity for the Museum on the north curbside of West 77th Street between Columbus Avenue and Central Park West to recoup some of the lost bus layover space due to the roadway improvements along Columbus Avenue.

WEST SIDE TRANSPORTATION PLAN

From 2007 to 2012, NYCDOT conducted a traffic and transportation study for the Upper West Side covering an area bounded by West 55th Street, West 86th Street, Central Park West, and the Henry Hudson Parkway. The study was conducted in response to community concerns over traffic congestion and increased development in the neighborhood, and outlined recommendations for improvements in traffic operations, safety, and goods movement at nineteen separate intersections, including West 81st Street and Central Park West, at the northeast corner of the Museum block.

The study identified heavy traffic delays during the AM, midday, PM, and Saturday peak periods on the eastbound and westbound approaches of West 81st Street, and significant delays caused by heavy traffic on the southbound approach of Central Park West during the AM peak period. To address these issues, the plan recommended lane restriping on the southbound and eastbound approaches, designating the rightmost lane on the westbound approach to right turn

only, changing the existing bicycle lane on the northbound approach to a shared traffic lane, and extending the concrete median on the westbound approach.

As of April 2015, only the lane restriping on the eastbound approach of West 81st Street has been implemented. Previously, the approach was striped as one left turn only lane and one shared thru-right lane. It has since been modified to provide one left turn bay, one thru lane, and one shared thru-right lane.

CITY BUS ROUTES

In 2000, NYCT introduced articulated buses on its crosstown M79 route in Manhattan, which stops on West 81st Street near the Central Park West and Columbus Avenue intersections. These new articulated buses are 60 feet long and have 22 more seats than the standard buses. In addition, express buses from the Bronx, serving the BxM2 route, now stop along West 81st Street near the Museum. Given the increased length of the articulated buses and the proximity of the M79/BxM2 eastbound bus stop to the Museum's 81st Street exit driveway, these buses at times extend back to block the exit driveway.

CITI BIKE

In 2013, NYCDOT introduced bike share services, or Citi Bike, in parts of Manhattan and Brooklyn. Riders can rent bikes from docking stations that are typically sited on the curbside, on a sidewalk, or in a pedestrian plaza. As of August 2016, stations were installed on the south side of West 82nd Street just west of Central Park West, the east side of Central Park West south of West 77th Street, and the north side of West 76th Street west of Columbus Avenue.

UPDATES TO THE 1999 TRANSPORTATION PLAN

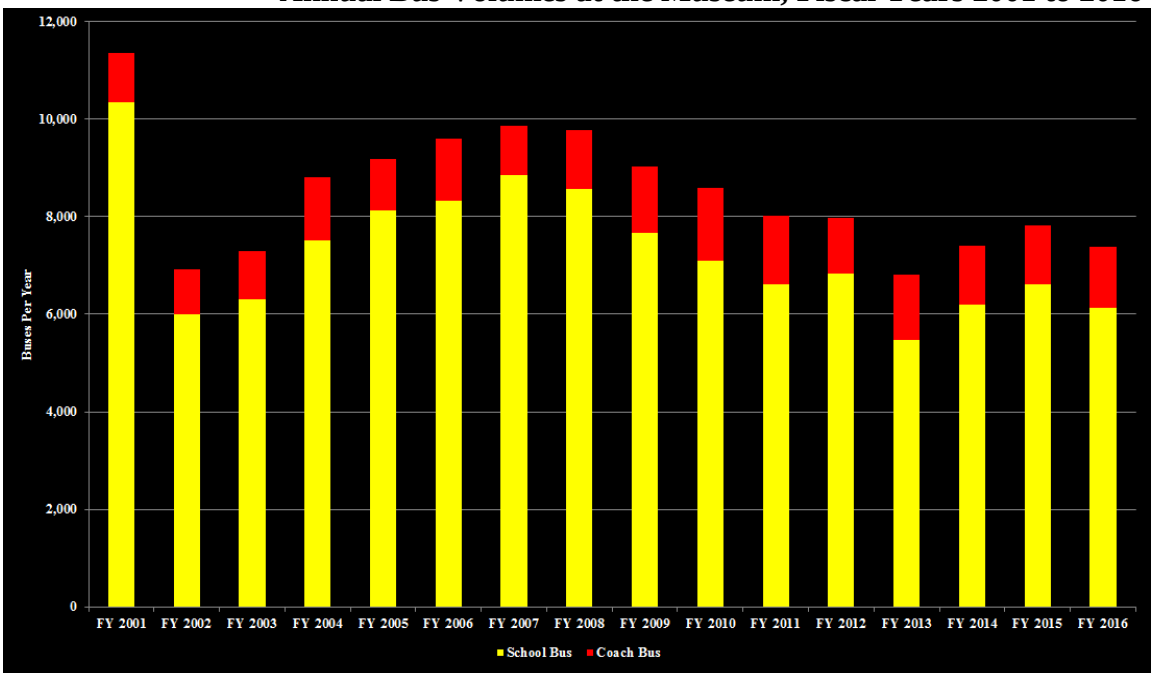
The 1999 plan was intended to be flexible, with the expectation that it would adapt to the Museum's evolving needs as well as be responsive to modifications to the local transportation network and changes in neighborhood conditions. Several key changes to the operating plan were implemented between 1999 and 2016, as summarized below:

- The Museum's service driveway facing Columbus Avenue is closed to passenger vehicles for security purposes, rather than serving as a secondary parking garage entrance for visitors on weekends. The driveway currently accommodates delivery vehicles only.
- All school buses now unload at the top level of the Museum parking garage or in the 81st Street Museum driveway, rather than on surrounding curbsides.
- Coach bus unloading activities are now handled on the 81st Street Museum driveway; coach bus loading is also primarily on the 81st Street Museum driveway, with some buses loading on the west curbside of Central Park West in front of the Museum. In the 1999 plan, coach buses activities were to be handled on the Central Park West and West 77th Street curbsides, in addition to the 81st Street Museum driveway.
- Some school bus layover space has been redistributed from Columbus Avenue to West 77th Street due to street geometry changes on Columbus Avenue, as described above.
- School bus pickups are now permitted on the west curb of Central Park West and the north curb of West 77th Street, if the bus was assigned a layover space upon arrival.
- The Museum now offers up to 45 available spaces for monthly paid parking for nearby residents within its on-site parking garage, and also offers spaces for the nearby Excelsior Hotel and Park79 Hotel.
- The increased parking supply available at the Museum parking garage substantially reduced the hours during which parking is unavailable on weekends.

BUS AND AUTO TRENDS

The overall volume of buses that the Museum receives has steadily declined on an annual basis since Fiscal Year 2007 (FY07), when approximately 9,900 buses arrived at the Museum. In Fiscal Year 2016 (FY16), the Museum received nearly 2,500 fewer buses than in FY07, a 25 percent decrease. The bus volumes the Museum received in FY16 are comparable to that of FY02 and FY03, when there were approximately 7,000 buses arriving at the museum annually. The trends in annual bus volumes since 2001 are shown in **Figure 1.** There was an average of approximately 500,000 school group visitors annually in the past five fiscal years, which is comparable to the number of school group visitors in 1999.

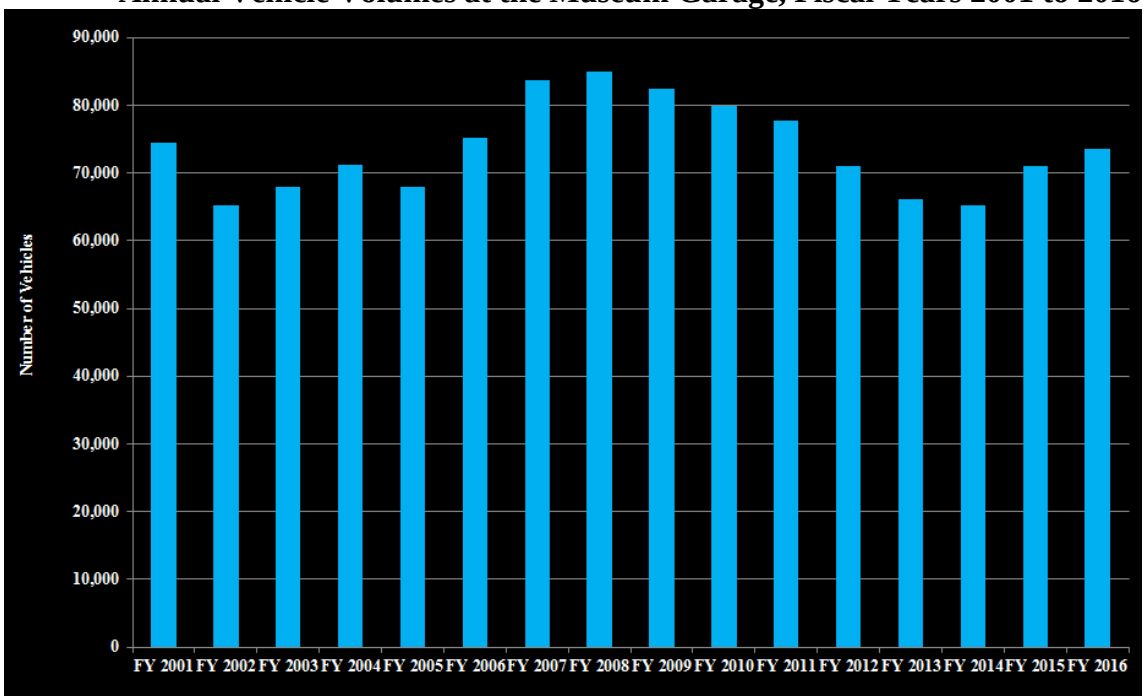
Figure 1
Annual Bus Volumes at the Museum, Fiscal Years 2001 to 2016



***Note: A school bus strike caused lower bus volumes in FY 2013**
Source: American Museum of Natural History

The number of vehicles arriving at the Museum's parking garage has also fluctuated on an annual basis, and these annual trends are shown in **Figure 2**. Vehicle volumes peaked in Fiscal Year 2008 (FY08) at approximately 85,000 vehicles, but have declined over the past six years, as there were nearly 14,000 fewer vehicles using the garage in FY16, a 16 percent decrease since FY08.

Figure 2
Annual Vehicle Volumes at the Museum Garage, Fiscal Years 2001 to 2016



Source: American Museum of Natural History

C. CURRENT MUSEUM TRANSPORTATION OPERATIONS

The sections below describe the Museum's current TMP, and how trips to the Museum by public transit, walking and bicycling, bus, and car are managed.

TRANSIT ACCESS

Public transportation is a critical component of visitor access to the Museum. A direct connection is available from the Museum to the 81st Street-American Museum of Natural History subway station, serving the B and C subway lines. The station can be accessed along the west side Central Park West, on the southwest corner of Central Park West and West 81st Street, on the west sidewalk of Central Park West north of West 81st Street, and on the west sidewalk of Central Park West south of the Museum's main entrance at approximately West 78th Street (where there is a direct connection to the Lower Level of the Museum). According to NYCT data, the station is the 88th busiest in the system and has an average weekday ridership of 13,935 and an average weekend day ridership of 9,296. Since 2009, weekday ridership has increased by 13 percent and weekend ridership has increased by 15 percent at this station, compared to a system-wide increase of 10 percent on weekdays and 15 percent on weekends. The Museum can also be accessed from the nearby 79th Street subway station (No. 1 subway line) two blocks west of the site at West 79th Street and Broadway.

A substantial percentage of Museum visitors, including some school groups, use the subway to arrive at the Museum. As shown in **Table 1**, approximately 52 percent of visitor trips (excluding school groups) to the Museum on weekdays were by subway in 2015, compared to 25 percent in 1999. Trip-making by the school group trips is concentrated during Museum visiting hours on weekdays and dispersed on weekend days, and generally does not overlap with peak usage

periods at the station or in the transit system. Consequently, crowding and congestion within the station are typically not significant problems for Museum visitors. Visitors arriving by subway through the direct access on the Lower Level can check in and purchase their tickets at the lobby adjacent to the entrance. Based on an arrival survey conducted in June 2015, approximately 20 percent of all Museum visitors enter at the Lower Level entrance from the subway station.

Visitors arriving by City bus can use multiple routes that stop in the vicinity of the Museum. The crosstown M79 route stops along West 81st Street in the eastbound direction, and along West 81st Street, Columbus Avenue, and West 79th Street in the westbound direction. The M7 and M11 bus routes stop along Columbus Avenue in the southbound direction and along Amsterdam Avenue in the northbound direction. The M10 bus route stops along Central Park West in both directions. In addition, the BxM2 express bus service from Riverdale, Bronx to West Midtown stops at the south curbside of West 81st Street, west of Central Park West.

The Museum actively promotes the use of public transportation by visitors and employees. Information on how visitors can arrive to the Museum by subway, bus, and commuter rail is publicized on the Museum web site, which provides directions and web links to transit maps and schedules. The Museum encourages school groups to arrive by subway, and publicizes information on its website on public transit services, including the Office of Pupil Transportation's (OPT) Certificate of Free Transportation program that allows free round-trip travel on subways for school groups on educational field trips.

PEDESTRIAN AND BICYCLE ACCESS

The Museum has street-level entrances on all four sides, with the main entrance facing Central Park West and the Planetarium entrance facing West 81st Street. Visitors walking to the site from the east can access the Museum by crossing Central Park West at the West 81st Street and West 77th Street intersections, or at the mid-block signal adjacent to the Museum's main entrance on Central Park West. On West 81st Street, the Museum at times experiences a high volume of bus and vehicle traffic utilizing the Museum driveways during peak visitation periods. To ensure pedestrian safety and minimize vehicle and pedestrian conflicts during these periods, Museum transportation staff is deployed when needed to direct bus and auto traffic and to ensure that drivers yield to crossing pedestrians and refrain from blocking pedestrian flows at locations where the driveways intersect with sidewalks and park paths. As part of their roadway improvement projects along Columbus Avenue, NYCDOT has installed concrete pedestrian islands and painted medians at intersections from West 81st Street to West 77th Street to provide safer pedestrian routes to and from the west. For visitors and employees arriving at the Museum by bike, the Museum has installed indoor bike racks at the top level of the parking garage on West 81st Street. A bike rack is also available in Theodore Roosevelt Park at West 77th Street.

BUS OPERATIONS

BUS VOLUME PATTERNS

The Museum draws visits from a large number of school groups from New York City and the surrounding region throughout the school year and from camp groups during the summer. Most school groups arrive by bus, primarily in yellow school buses and some in chartered coach buses. The buses arrive throughout the school year from September through June (approximately 180 weekdays) and during the summer when day camps are open (approximately 40 weekdays). The number of buses coming to the Museum has varied in recent years from fewer than 10 to as many as approximately 70 in a given weekday. During most days, the bus traffic is light to moderate and does not pose a substantial traffic concern to the bordering street system. In FY16, there were 10 or fewer buses arriving at the Museum on 182 of the 364 days the Museum was

open (50 percent of total days); the peak level exceeding 70 buses did not occur on any weekday, though the Museum received 61 to 70 buses on 10 weekdays (3 percent of total days). Beginning in mid-2016, the Museum instituted a cap of 60 on the number of school bus reservations accepted through the school group reservation system, with the goal of spreading demand over more dates and reducing the level of peak traffic on weekdays. **Table 2** shows the distribution of bus levels for FY16.

Table 2
Bus Volume Patterns at the Museum
Fiscal Year 2016 (July 2015 – June 2016)

# of Buses	# of Days	% of Total Days
0 to 10	182	50.0%
11 to 20	37	10.2%
21 to 30	27	7.4%
31 to 40	39	10.7%
41 to 50	44	12.1%
51 to 60	25	6.9%
61 to 70	10	2.7%
> 70	0	0.0%
Total	364*	100%

Note: *Excludes Thanksgiving and Christmas Days
Source: American Museum of Natural History

Weekday bus volumes in FY16 varied considerably over the course of the year, with the highest activity from March to June (**Figure 3**). In FY16, the Museum received an average of 26 buses per weekday (23 school buses, 3 coach buses) and 3 coach buses per weekend day. The number of buses per weekday peaked in May, when there was an average of 44 school buses and 9 coach buses per weekday. In contrast, there were fewer than 20 buses per weekday in the months of August and September. The Museum continues to encourage school groups traveling to the museum to schedule their visits on days of medium to low bus activity in order to reduce the number of high activity days, and implements a demand management policy of capping the total number of school groups arriving by bus at approximately 60 per weekday.

BUS MANAGEMENT

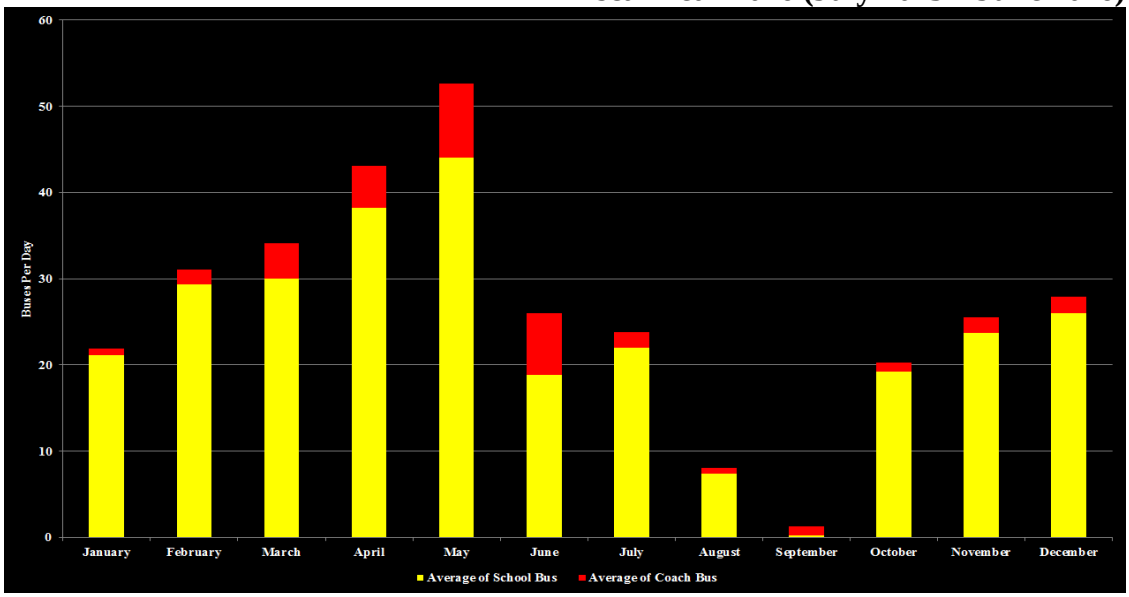
Bus traffic is addressed in five primary ways: 1) institution of stronger control of bus operations prior to arrival through a school group reservation system; 2) redistribution of buses from days of peak school visits; 3) direction of the bus operations plan by a transportation coordinator who has the authority and support to implement the plan and make adjustments when necessary; 4) organization of loading and unloading operations in the garage, the West 81st Street driveway, and designated curbsides on adjacent streets; and 5) implementation of a bus layover plan.

Pre-Arrival

The Museum has initiated a reservation system for school and camp groups. School groups apply in advance for a scheduled date and time for arrival, and the Museum is able to send groups information on the trip, including instructions on public transportation options and bus operations. The Museum also has implemented a reservation process that allows school groups

to schedule their visits online through the Museum's website. This reservation system allows the Museum to schedule arrivals and departures by day and time of day to reduce to the extent possible the heavy peaking of bus trips, and assign the location of unloading, layover, and loading for each bus.

Figure 3
Average Weekday Bus Volumes at the Museum by Month
Fiscal Year 2016 (July 2015 – June 2016)



Source: American Museum of Natural History

Bus Arrivals

School bus arrivals to the Museum are highly concentrated: most buses arrive between 10:00 A.M. and 11:00 A.M. on weekdays. Upon arriving, buses proceed to the West 81st Street driveway and pull up to the top level of the parking garage to unload their passengers. The use of the top level of the parking garage for bus unloading and loading activities is a key element in the plan in that it allows for a safe, protected access point for supervising the bus unloading and bringing schoolchildren into the Museum. Museum transportation staff enforces the operations plan by preventing buses from unloading or loading in inappropriate places, blocking the driveway or entrance to the parking garage, and managing bus turning movements from West 81st Street onto the Museum driveway. Two bus dispatchers—one inside the garage and one at the driveway—control the movements of buses inside the garage; three bus greeters supervise the unloading and loading of the buses, log the school group and bus company information, assign a bus layover area and departure time, and assist with the unloading of the school buses. The process of a bus entering the garage, unloading passengers, and exiting takes approximately 10 minutes.

Bus Layover

Arriving buses are assigned to designated bus layover locations inside the Museum parking garage and 81st Street driveway, or at nearby curbside locations where bus parking is appropriate based on the existing curb regulations. On lower volume days (15 buses or fewer), all buses can remain on site and layover in the garage or on the 81st Street Driveway. (Coach buses do not fit in the garage and unload and layover on the driveway.) On higher volume days,

after unloading buses are dispatched for off-site layover at a nearby curb location. **Figure 4** shows existing curb regulations for blocks surrounding the Museum during the weekday peak bus layover period of 11:00 AM to 12:00 PM; **Table 3** lists all curb regulations on blocks surrounding the museum, with the regulation reference number in the tables corresponding to the number labels on the map in **Figure 4**.

Figure 4
Curb Regulations Near the Museum
Weekday 11 AM – 12 PM

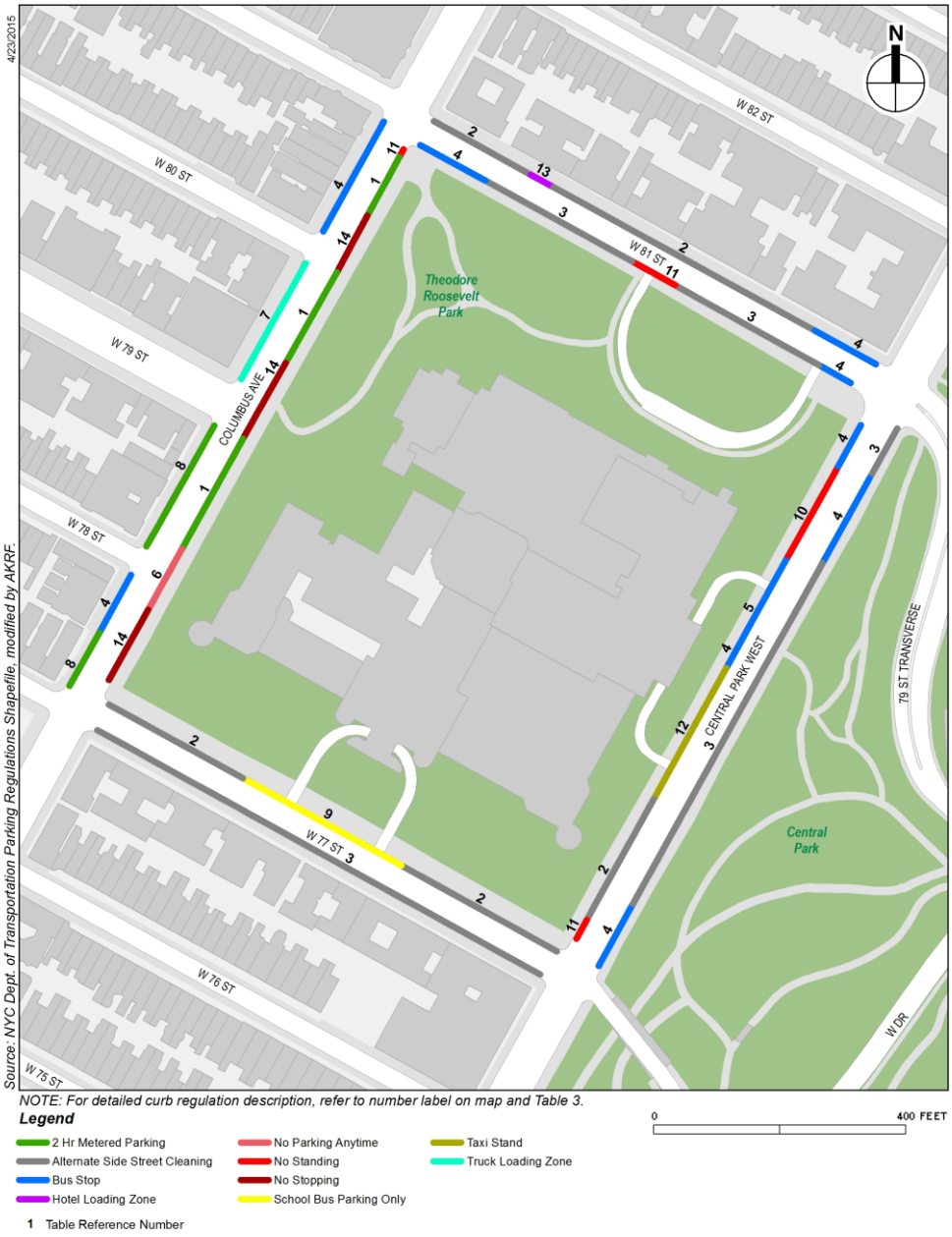


Table 3
Curb Regulations on Blocks Surrounding Museum

Map Reference Number	Curb Regulation
1	2 Hour Metered Parking 7:30 AM – 7:00 PM Except Sunday; Farmer's Market 6:00 AM – 6:00 PM Sunday
2	Alternate Side Parking – Street Cleaning 11:00 AM – 12:30 PM Monday & Thursday
3	Alternate Side Parking – Street Cleaning 11:00 AM – 12:30 PM Tuesday & Friday
4	No Standing - City Bus Stop
5	No Standing - Tour Bus Stop
6	No Parking Anytime
7	No Standing 7:00 AM – 10:00 AM, Truck Loading 10:00 AM – 4:00 PM, 2 Hour Metered Parking 4:00 PM – 7:00 PM Monday to Friday; 2 Hour Metered Parking 9:00 AM – 7:00 PM Saturday
8	No Standing 7:00 AM – 10:00 AM, 2 Hour Metered Parking 10:00 AM – 7:00 PM Monday to Friday; 2 Hour Metered Parking 9:00 AM – 7:00 PM Saturday; Farmer's Market 6:00 AM – 6:00 PM Sunday
9	No Standing 9:00 AM – 3:00 PM Monday to Friday Except School Buses
10	No Standing 9:00 AM – 6:00 PM Monday to Friday
11	No Standing Anytime
12	No Standing Anytime – Taxi Stand
13	No Standing – Hotel Loading Zone
14	No Stopping Anytime

Source: New York City Department of Transportation, April 2015

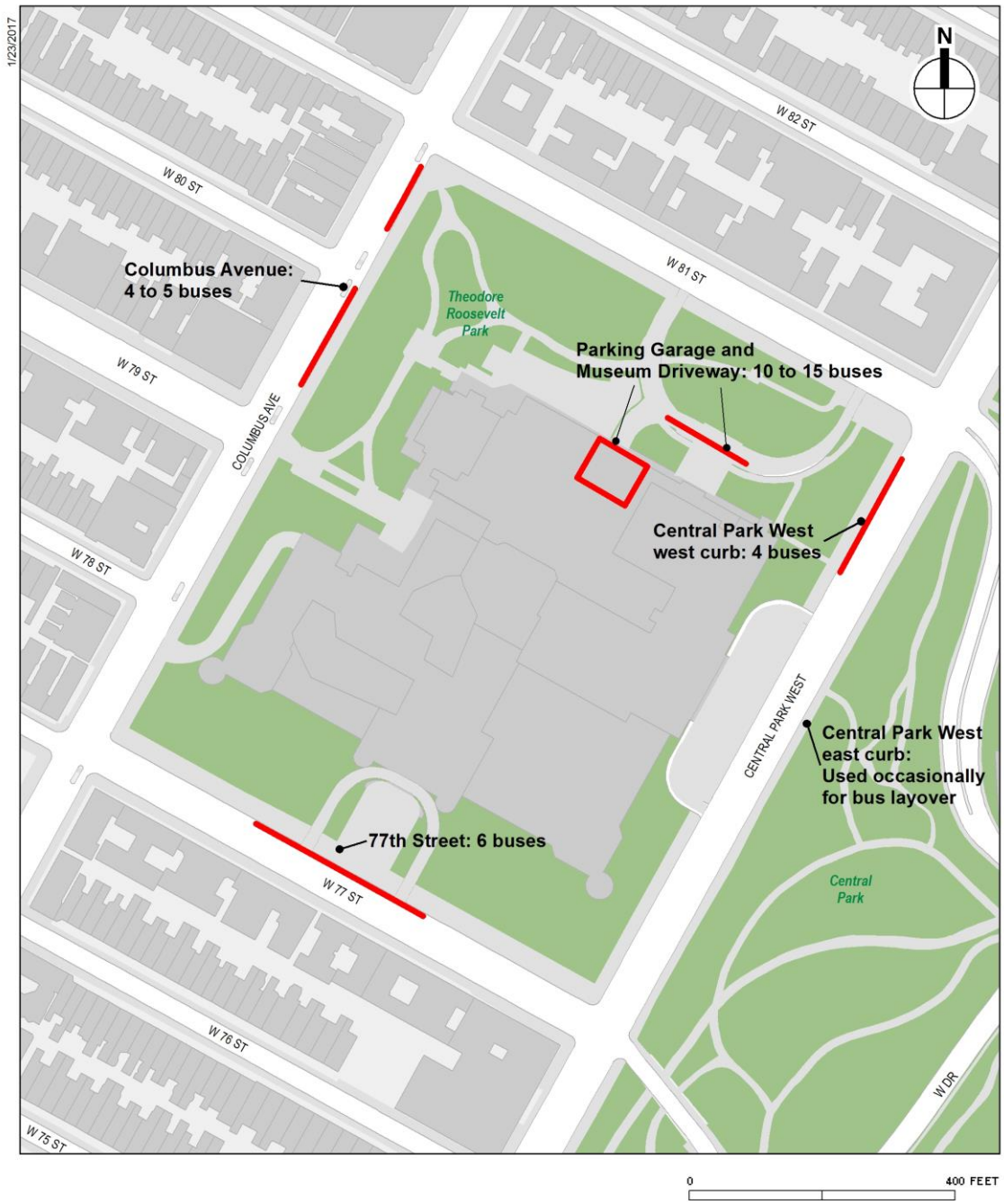
Upon arrival, the bus greeter typically assigns buses to one of four designated layover locations surrounding the Museum. These designated locations and the approximate number of bus layover spaces are listed below:

1) The top level of the Museum's parking garage or on the 81st Street Driveway (approximately 15 buses), used primarily during days when the Museum expects low school bus volumes;
2) The west curbside of Central Park West, using the tour bus stop and taxi stand curb space (approximately 4 buses);
3) The north curbside of 77th Street, using the school bus layover curb space (approximately 6 buses); and
4) The east curbside of Columbus Avenue between West 81st Street and West 79th Street (4 to 5 buses—parking spaces are coned off by transportation staff prior to peak layover period).

On days when the number of buses requiring layover positions exceed the supply identified above, excess buses disperse to other non-designated layover locations. Additional bus layover space may be available on the east curbside of Central Park West following street cleaning on Tuesdays and Fridays, and on West 77th Street between Columbus and Amsterdam Avenues. The goal of the layover plan is to facilitate the orderly and safe movement of buses, provide for a

convenient return trip at a scheduled pick-up time, minimize the impact on the surrounding neighborhood, and minimize double-parking and idling by buses on streets surrounding the Museum. **Figure 5** is a map of the designated bus layover locations on the blocks surrounding the Museum.

Figure 5
Designated Bus Layover Locations



Bus Departures

Most school groups depart from the Museum between 12:00 PM and 1:00 PM. Museum transportation staff assigns departure times for each school group in 15-minute intervals starting at 12:00 PM. On lower volume days, buses that have parked in the garage or on the driveway are already on-site and therefore do not return to 81st Street for pick-up. Those buses that utilize an off-site layover return to the West 81st Street driveway and parking garage prior to their assigned departure time. To facilitate the departure process, the Museum has established a school group check-in area on the 1st floor, in the hallway adjacent to the school group entrance to the top level of the parking garage. School groups gather at the 1st floor check-in area inside the Museum, wait for notification that their buses have arrived, and proceed through the parking garage doorways to a supervised loading of buses on the top level of the garage. For bus pickups inside the garage, the process of a bus entering the garage, picking up passengers, and exiting takes approximately 15 minutes.

When no loading space is available inside the top level of the garage, buses are directed by Museum transportation staff to load passengers from the West 81st Street driveway. School groups are directed to the nearest exit to safely board buses at this location. During days with high bus volumes, transportation department staff is positioned at the entrance of the West 81st Street driveway to coordinate bus movements during the peak departure period and prevent queuing on West 81st Street.

If buses are assigned layover positions on the west curbside of Central Park West and the north curbside of West 77th Street, where students have direct access from the sidewalk, they are permitted to load passengers at the curbside near the Museum entrances on each of those blocks, thereby avoiding the need to circle back to the parking garage and reducing queuing and congestion on West 81st Street. Transportation department staff informs school groups of where their buses are parked and how they can find them when they depart from the Museum, and assists school groups with bus loading.

Coach Bus Operations

While most school groups arrive by yellow school bus, some groups from suburban areas arrive by chartered coach buses. As coach buses do not have the clearance to enter the garage, their loading and unloading activities occur on the West 81st Street driveway, adjacent to the Planetarium entrance. This disperses a portion of the bus activity away from the garage, but still provides a safe, managed location, with immediate access for the children into the Museum. When possible, coach buses are assigned parking along the west curbside of Central Park West, rather than on residential blocks.

Some adult tour groups also arrive at the Museum by coach buses. Typically, these arrivals are more dispersed than school arrivals, primarily occurring in the afternoon hours after the school groups depart and/or on weekends. The Museum also consolidates loading and unloading for these buses at the West 81st Street driveway. Adult tour groups wait outside the Planetarium entrance at the West 81st Street driveway for bus pickup.

BUS MANAGEMENT ENFORCEMENT

To actively enforce the TMP, the Museum sends each school bus operator an information packet after a school group has reserved a date for its trip. The packet includes detailed instructions on the Museum's policies for bus arrival, layover, and departure, and facilitates compliance with the transportation plan, thereby reducing issues related to bus unloading, layover, and loading activities on nearby streets. If bus drivers are found to intentionally circumvent these bus operation policies, such as dropping off or picking up passengers at unauthorized locations, the

Museum's transportation staff will document the violations, send a warning letter to the bus operator, and report drivers who commit repeat violations to the Office of Pupil Transportation and the New York State Department of Motor Vehicles.

PARKING GARAGE OPERATIONS

The Museum parking garage is open for entering vehicles from 8:00 A.M. to 11:00 P.M, seven days a week. The garage consists of three levels: on weekdays, the top level is used primarily for bus operations, while the lower two levels are used for vehicle parking. On weekends and holidays, all three levels are used for vehicle parking. Cars proceeding to the lower two levels share the same entrance as buses and use the garage access point from the West 81st Street driveway.

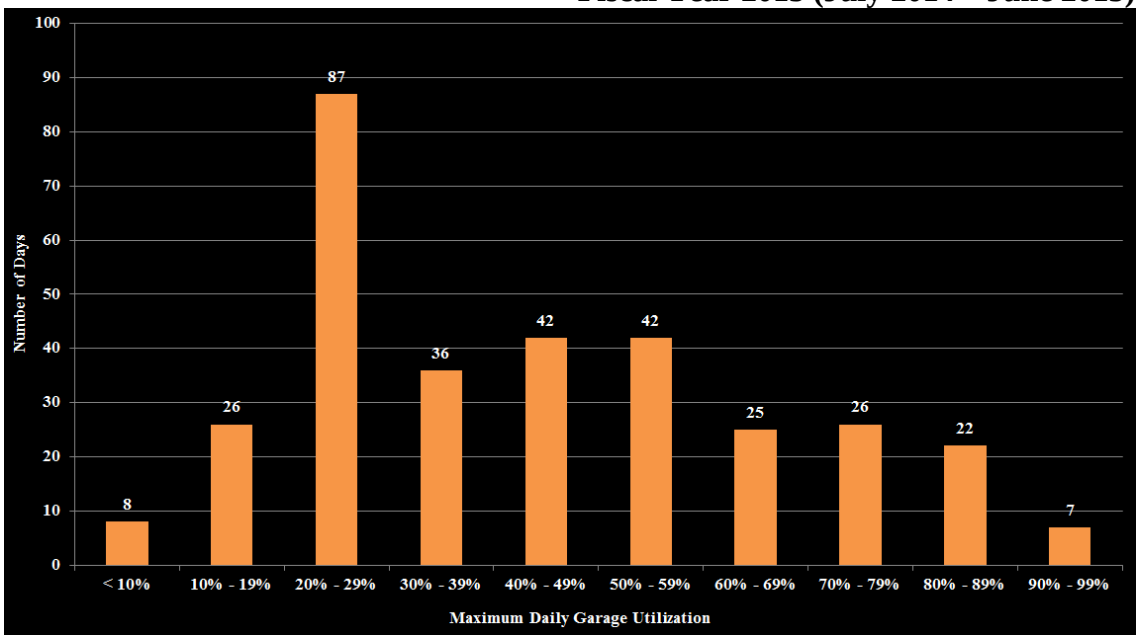
The garage has a capacity to accommodate 388 parked vehicles. It currently has sufficient capacity to accommodate parking demand for Museum visitors and employees on weekdays. The Museum allocates 50 spaces for employees with sticker privileges. In addition, approximately 45 spaces currently are available for monthly parking to neighborhood residents. The garage also provides parking for guests of the nearby Excelsior Hotel and Park79 Hotel. A valet parking system is utilized to manage parking operations during special events at the Museum on weekends and holidays.

Prior to the opening of the parking garage, weekend congestion due to vehicles queuing outside the parking lot when it was filled on weekends was identified as a key transportation issue that affected nearby streets. The increased parking supply at the new parking garage substantially reduced the hours during which parking is unavailable on weekends. In the event that the garage does reach capacity on weekends, the information will be communicated to the transportation staff from the garage by two-way radio. At that time, transportation staff will be deployed to close the driveways and place signs outside and near the garage to inform drivers that the garage is full. Staff will assist and direct drivers to locations of alternate parking facilities, to prevent the formation of queues on West 81st Street. Upon receiving information from the garage that approximately 25 spaces are available, transportation staff will reopen the garage to entering cars.

The TMP prepared in 1999 identified the service driveway connecting Columbus Avenue to the lowest level of the parking garage as a secondary garage entrance for passenger vehicles on weekends. However, a new Museum security plan implemented after 9/11 determined that the driveway could no longer be used by visitor vehicles under the adopted security protocols. Therefore, the Columbus Avenue service driveway is used exclusively for delivery vehicles, and visitor vehicles use only the garage entrance on the West 81st Street driveway.

Parking garage occupancy varies over the course of the year, but in general, existing capacity meets demand. In FY15, maximum garage utilization ranged from 20 percent to 50 percent on most days. The garage utilization reached 90 percent of capacity on 7 of the 321 days for which data were collected (data were not collected on 32 of the 363 days when the Museum was open in FY15). **Figure 6** summarizes the distribution of days under each maximum garage utilization range for FY15.

Figure 6
Distribution of Maximum Daily Garage Utilization
Fiscal Year 2015 (July 2014 – June 2015)



Source: American Museum of Natural History

D. RECENT INITIATIVES

In 2016, the Museum engaged members of the community to update them on the Transportation Management Plan, provide information on recent transportation improvement initiatives, and identify potential solutions to a number of transportation issues. To coordinate this outreach, the Museum participated in the Transportation Working Group co-chaired by the offices of Manhattan Borough President Brewer and City Council Member Rosenthal. One of the community's concerns from previous outreach efforts was to address pedestrian safety in the area of the Museum. As a result, the Transportation Working Group and its consultant initiated a pedestrian safety assessment.

This assessment consisted of a series of outreach meetings, an inventory of sidewalks, crosswalks, and paths surrounding the Museum site, an analysis of five years of historic crash data, and a group walking tour to identify potential strategies to improve pedestrian safety on streets surrounding the Museum. The pedestrian safety assessment recommended improvements such as:

- Pedestrian and bicycle signal improvements at key intersections on Columbus Avenue
- Study traffic, bicycle, and pedestrian operations on West 81st Street and other streets to improve the separation and protection of traffic, bicycle, and pedestrian movements
- Improved safety signage and pedestrian ramps
- Assess street lighting needs to improve night visibility of pedestrians crossing the street
- Install additional bus layover parking on both sides of Central Park West
- Additional enforcement by NYPD of speeding and vehicles yielding to pedestrians and bicycles
- Safety education campaigns by NYCDOT to increase awareness of pedestrian safety issues

In addition to participation in the Transportation Working Group, the Museum has recently undertaken a series of measures to better manage transportation operations. These include:

- Demand Management: The Museum has instituted a daily cap on the number of buses it receives at approximately 60 per day, with the goal of spreading demand over more dates and reducing the level of peak traffic on weekdays. The cap is managed using the school group reservation system.
- On Site Bus Layover: The Museum has begun using the top level of the parking garage and a portion of the 81st Street Driveway for bus layover, during low demand weekdays with 15 or fewer buses. This measure reduces bus circulation on local streets bordering the Museum.
- Staffing: Four part-time traffic management staff were hired by the Museum to supplement the existing staff in coordinating daily transportation operations.
- Online School Group Reservation System: In August 2016, the Museum began providing an online reservation system through its website for school groups to schedule their visits in advance.
- CPW Bus Layover: The Museum is investigating the option of increased bus layover on the west and/or east curbsides of Central Park West between 77th Street and 81st Street.

E. CONCLUSION

The Museum's transportation management plan has resulted in substantial improvements in transportation conditions at the Museum. The current TMP is intended to be flexible. It responds on a daily basis and over time to the Museum's evolving needs as well as modifications to the local transportation network and changes in neighborhood conditions.

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Travel Demand Factors Memorandum

To: Marjorie Bryant (NYCDOT)

From: Carson Qing (AKRF), Chi Chan (AKRF)

Date: April 12, 2017

Re: American Museum of Natural History – CEQR Travel Demand Analysis

cc: Greg Holisko (AKRF), Susan Golden (Venable)

A. INTRODUCTION

The American Museum of Natural History (AMNH or the Museum) is seeking discretionary approval of actions in connection with a proposed new building, the Richard Gilder Center for Science, Education, and Innovation (the Gilder Center). The Gilder Center would be a five-story, approximately 203,000-gross-square-foot (gsf) addition located on the Columbus Avenue side of the Museum campus. Because the building would be integrated into the Museum complex, an additional approximately 42,000 gsf of existing space would be renovated to accommodate the program and make connections into the new building, for a total of approximately 245,000 gsf of new construction and renovation. Alterations also would be made to adjacent portions of Theodore Roosevelt Park. The Gilder Center, together with these other alterations, is the proposed project.

The Museum is located on the superblock bounded by West 81st Street, West 77th Street, Central Park West, and Columbus Avenue, in the Upper West Side neighborhood of Manhattan (Block 1130, Lot 1). The Museum is located in Theodore Roosevelt Park, which is City-owned parkland under the jurisdiction of the New York City Department of Parks and Recreation (NYC Parks). The site for the proposed project is on the west side of the Museum complex facing Columbus Avenue.

This memorandum details the trip generation assumptions and travel demand estimates for the proposed Gilder Center project and summarizes the recommended scope of transportation analyses to be undertaken as part of the proposed project's Environmental Impact Statement (EIS). The proposed addition to the Museum is expected to be fully operational by 2021, which will be the analysis year for the EIS's transportation assessments.

B. TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the proposed project were developed based on information compiled from travel surveys and attendance forecasts prepared by AMNH and relevant metrics presented in other approved EISs.

MUSEUM ATTENDANCE AND UTILIZATION

Table 1a provides a comparison of the forecasted Museum attendance and utilization without and with the proposed project. These attendance and utilization projections represent forecasted attendance and utilization for the 2021 build year at a stabilized level. This projection is used for analysis purposes to reflect stabilized Museum attendance and utilization the more pronounced attendance increase associated with the opening.

Table 1a
Comparison of Forecasted Attendance and Utilization
Without and With the Gilder Center Project

Components	2015 Attendance and Utilization (Actual)	Projected 2021 Attendance and Utilization Without the Proposed Actions (No Action)	Projected 2021 Attendance and Utilization With the Proposed Actions (With Action)	Project Increment
Annual Attendance and Utilization[(1)]	**5.0 million**	**5.3 million**	**6.0 million**	**745,000**
Ticketed Attendance	*4.1 million*	*4.4 million*	*5.0 million*	*630,000*
Non-Ticketed Attendance	*900,000*	*900,000*	*1.0 million*	*115,000*
Weekday Attendance and Utilization[(2)]	**17,843**	**19,109**	**21,816**	**2,707**
Ticketed Attendance	*14,672*	*15,938*	*18,234*	*2,296*
Non-Ticketed Attendance	*3,171*	*3,171*	*3,582*	*411*
Saturday Attendance and Utilization[(2)]	**23,018**	**23,166**	**26,405**	**3,239**
Ticketed Attendance	*18,928*	*19,076*	*21,823*	*2,747*
Non-Ticketed Attendance	*4,090*	*4,090*	*4,582*	*492*

Notes: Annual attendance and utilization numbers in this table are rounded.
[(1)] Based on AMNH attendance forecasts prepared in 2016.
[(2)] Based on estimates for a high-activity day (85th percentile) at the Museum: one weekday and one Saturday.

Total attendance and utilization at AMNH was approximately 5.0 million in 2015. That figure primarily consists of approximately 4.1 million ticketed visitors, tracked through AMNH's ticketing system. The balance of the attendance includes visiting scientists, graduate school students, teachers, vendors, people attending public programs and events, visitors to free spaces, and other miscellaneous trips. Specifically, the ticketed visitation forecasts for the No Action condition account for a year over year annual background growth rate of less than 1 percent from 2015 to 2021, reaching approximately 4.4 million ticketed visitors by 2021. Accounting for non-ticketed attendance, attendance and utilization would be approximately 5.3 million by 2021, without the proposed project.

For conditions with the proposed project, based on an analysis of the Museum's historic attendance data and the impact of major capital projects at other museums and visitor attractions, annual ticketed attendance is estimated to increase by an additional 630,000 visitors. Added to the ticketed attendance projection of 4.4 million absent the proposed project, this increase would result in just over 5.0 million ticketed visitors per year with the project. For purposes of conservatively estimating total building population based on historic trends, non-ticketed attendance is estimated to increase by an amount equivalent to 18 percent of incremental ticketed visitors; this forecast is based on recent attendance data and trends tracked by the Museum. When this non-ticketed attendance increment is added to the 630,000 ticketed attendance, this yields a total project attendance and utilization increment of approximately 745,000 annual visitors. Therefore, the total estimated attendance and utilization with the project is just over 6.0 million per year, as shown in **Table 1a.** The daily ticketed attendance estimates are based on the projected attendance during high-activity days, which have been defined as the 85th percentile of forecasted daily weekday and Saturday Museum ticketed attendance.

In addition, as typically occurs for a major capital expansion or similar enhancements at museums and other visitor attractions, during the first year of operation there would likely be a more pronounced attendance increase, which is estimated to bring the ticketed increment to roughly one million and result in an overall annual attendance of up to 6.4 million following the opening. While the travel demand forecasts used for analysis purposes appropriately focus on the stabilized attendance increment, a qualitative assessment of opening year conditions will be conducted in consideration of the analysis findings. **Table 1b** compares the annual, weekday, and Saturday stabilized ticketed and non-ticketed increments used for analysis purposes against the corresponding initial year increments.

Table 1b
Comparison of Forecasted Incremental Attendance and Utilization

	Stabilized Attendance and Utilization			Temporary Initial Increased Attendance and Utilization		
Components	Ticketed Project Increment	Non-Ticketed Project Increment	Total Attendance and Utilization Project Increment	Ticketed Project Increment	Non-Ticketed Project Increment	Total Attendance and Utilization Project Increment
Annual Attendance[(1)]	630,000	115,000	745,000	1,000,000	115,000	1,115,000
Weekday Attendance[(2)]	2,296	411	2,707	3,631	411	4,042
Saturday Attendance[(2)]	2,747	492	3,239	4,344	492	4,836

Notes: Annual attendance and utilization numbers in this table are rounded.
(1) Based on AMNH attendance forecasts prepared in 2016.
(2) Based on estimates for a high-activity day (85th percentile) at the Museum: one weekday and one Saturday.

SCHOOL GROUP VISITATION

Accommodating school group visitation is a core element in the Museum's mission. Given the widespread participation from schools in New York City and the broader metropolitan area, this successful service is generally regarded as well-established and stabilized. School bus activity to AMNH has not increased during recent years, and it is not expected to increase as the Museum follows procedures to manage the daily school bus traffic, as outlined in its Transportation Management Plan (TMP).

With respect to means of travel, school groups arrive via school or coach bus (approximately 60 percent of total) at the on-site parking garage or by subway (approximately 40 percent of total) using the Central Park West station at 81st Street, both of which have direct entry into the Museum. This pattern of access is not expected to change and the Gilder Center is not intended as an entry or exit point for school groups. Consequently overall school bus traffic would not change as a result of the Gilder Center and does not require further study as part of this EIS.

The Museum already attracts a large number of school group visits from New York City and throughout the region and there are limited opportunities to expand the market for this service. There was an average of approximately 500,000 school group visitors annually in the past five fiscal years, which is comparable to the number of school group visitors in 1999. Since teachers and students already visit the Museum in large numbers, substantial increases in school bus activity are not anticipated in future years, although there may be some year to year fluctuation, and there may be some increase in school group visitors using public transit. Therefore, school bus trips are not expected to notably increase from 2015 to 2021. The Museum actively manages school bus visitation through its TMP. As part of this program, AMNH staff manages and limits the daily demand level of school bus trips, and directs the movement and layover of school buses in order to address the safety of schoolchildren and traffic conditions in the surrounding neighborhood. Going forward, AMNH staff would make adjustments to the TMP as needed in response to changes in demand level and other operating conditions.

TRAVEL CHARACTERISTICS

A visitor intercept survey was conducted by the Museum in June 2015 on three weekdays, one Saturday, and one Sunday. In total, 1,267 responses were recorded during the three weekdays and 1,736 responses during the two weekend days. Museum visitors were asked about their mode choice, subway line used or parking location, number of persons they traveled with, their region of origin, and what entrance they used to enter the Museum. These survey data were applied to estimate the weekday and Saturday peak periods' modal splits and vehicle and taxi occupancy rates. The data show that travel patterns to the Museum have changed in recent decades. With the increase in domestic and international tourism in New York City, a larger share of Museum visitors consists of tourists visiting from out of town. Of the surveyed visitors, approximately 70 percent live in areas beyond 60 miles of New York City, and 41 percent are international visitors. The survey results indicate that public transportation is the leading mode used to access the Museum, consisting of the majority of all trips on weekdays, and approximately half of trips on weekend days. According to survey findings, 4 percent of weekday visitors and 13 percent of weekend visitors arrived at the site by personal vehicle.

The temporal and directional distributions are also based on hourly attendance surveys and analyses conducted in 2015 by the Museum. These studies provided information on the average length of each visit and when visitors arrive on a typical weekday and Saturday in July. These data were also used to determine the peak hours of Museum visitation—between 12 PM and 2 PM (midday period) and between 4 PM and 6 PM (PM period) on weekdays and from 12 PM to 5 PM on a Saturday. The daily delivery trip rate is based on AMNH projections of the expected increase in loading dock usage by delivery vehicles, at the Gilder Center. The delivery trip temporal and directional distributions are based on Museum loading dock trip log data collected in May 2015. The overall travel demand profile for incremental trip-making associated with the Gilder Center is presented in **Table 2**.

Table 2
Travel Demand Assumptions

Use	Museum Attendance and Utilization		
	Weekday		Saturday
Daily Incremental Attendance (1)	**[2,707 persons]**		**[3,239 persons]**
Person Trip Generation Rate	2.0		2.0
	Trips/Guest		
Final Trip Rate	2.0		2.0
Person Trip Temporal Distribution	(1) Midday (12-1 PM) 18%	(1) PM (4-5 PM) 11%	(1) Saturday (1-2 PM) 17%
Directional Distribution	(2)	(2)	(2)
In	43%	31%	54%
Out	57%	69%	46%
Total	100%	100%	100%
Modal Split	(3)	(3)	(3)
Auto	4%	4%	13%
Taxi	7%	7%	9%
Subway	62%	62%	49%
City Bus	2%	2%	5%
Tour Bus	5%	5%	4%
Walk	20%	20%	20%
Total	100%	100%	100%
Vehicle Occupancy			
Auto (3)	4.0	4.0	3.8
Taxi (3)	3.2	3.2	3.3
Tour Bus (4)	45.0	45.0	45.0
Daily Deliveries	(5) 15 Deliveries per day		(5) 5 Deliveries per day
Delivery Trip	(6)	(6)	(6)
Temporal Distribution	Midday 10%	PM 8%	Saturday 8%
Directional Distribution	(6)	(6)	(6)
In	50%	50%	50%
Out	50%	50%	50%
Total	100%	100%	100%

Sources:
(1) AMNH 2021 attendance and utilization projections
(2) AMNH 2015 hourly attendance surveys and analysis
(3) AMNH June 2015 Visitor Surveys, with adjustments per DOT recommendations
(4) Tour buses were assumed to accommodate 45 passengers each
(5) AMNH projections conservatively reflect estimated increase in delivery trips
(6) AMNH May 2015 Loading Dock Trip Logs

C. CEQR TRANSPORTATION ANALYSIS SCREENING

The 2014 *CEQR Technical Manual* identifies procedures for evaluating a proposed project's potential impacts on traffic, transit, pedestrian, and parking conditions. This methodology begins with the preparation of a trip generation analysis to determine the volume of person and vehicle trips associated with the proposed project. The results are then compared with the *CEQR Technical Manual*-specified thresholds (Level 1 screening analysis) to determine whether additional quantified analyses are warranted. If the proposed project would result in 50 or more peak hour vehicle trips, 200 or more peak hour transit trips (200 or more peak hour transit riders at any given subway station or 50 or more peak hour bus trips on a particularly route in one direction), and/or 200 or more peak hour pedestrian trips, a Level 2 screening analysis is undertaken.

For the Level 2 screening analysis, project-generated trips would be assigned to specific intersections, transit routes, and pedestrian elements. If the results of this analysis show that the proposed project would generate 50 or more peak hour vehicle trips through an intersection, 50 or more peak hour bus riders on a bus route in a single direction, 200 or more peak hour transit riders at any given subway station, or 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

TRIP GENERATION SUMMARY

As summarized in **Table 3,** in the future with the proposed project, AMNH with the proposed Gilder Center is estimated to generate a total of 974, 595, and 1,101 new person trips during each of the weekday midday, weekday PM, and Saturday peak hours, respectively. Approximately 54, 34, and 93 new vehicle trips would be generated during the same respective time periods. Since the Museum does not open for visitors until 10:00 AM on weekdays, the assessment was not conducted for the weekday AM peak hour, which typically occurs from 8:00 AM and 9:00 AM and does not overlap with Museum opening hours.

LEVEL 1 SCREENING

The estimated net incremental trips generated in the future with the proposed project are shown in **Table 3**.

Table 3
Trip Generation Summary: Net Incremental Trips

Person Trips								Vehicle Trips					
Weekday Midday Peak Hour													
In/Out	**Auto**	**Taxi**	**Subway**	**City Bus**	**Tour Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi (Balanced)**	**Tour Bus**	**Delivery**	**Total**
In	17	29	260	8	21	84	419	In	4	19	1	2	26
Out	22	39	344	11	28	111	555	Out	6	19	1	2	28
Total	39	68	604	19	49	195	974	Total	10	338	2	4	54
Weekday PM Peak Hour													
In/Out	**Auto**	**Taxi**	**Subway**	**City Bus**	**Tour Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi (Balanced)**	**Tour Bus**	**Delivery**	**Total**
In	7	13	114	4	9	37	184	In	2	12	1	1	16
Out	16	29	255	8	21	82	411	Out	4	12	1	1	18
Total	23	42	369	12	30	119	595	Total	6	24	2	2	34
Saturday Peak Hour													
In/Out	**Auto**	**Taxi**	**Subway**	**City Bus**	**Tour Bus**	**Walk**	**Total**	**In/Out**	**Auto**	**Taxi (Balanced)**	**Tour Bus**	**Delivery**	**Total**
In	77	54	291	30	24	119	595	In	20	26	1	1	48
Out	66	46	248	25	20	101	506	Out	17	26	1	1	45
Total	143	100	539	55	44	220	1,101	Total	37	52	2	2	93

TRAFFIC

As shown in **Table 3**, the estimated net incremental trips generated by the proposed project would be 54, 34, and 93 vehicle trips during the weekday midday, PM, and Saturday peak hours, respectively. A Level 2 screening assessment (presented in the section below) was conducted to determine the recommended level of quantified analyses for the EIS assessment of potential traffic impacts.

TRANSIT

Public transit options to and from the study area include the B/C subway lines on Central Park West, the No. 1 subway line on Broadway two blocks west of the Museum, and the M7, M10, M11, and M79 bus routes. As shown in **Table 3**, the estimated net incremental transit trips generated by the proposed project would be 604, 369, and 539 person trips by subway and 19, 12, and 55 trips by city bus during the weekday midday, PM, and Saturday peak hours, respectively. A Level 2 screening assessment (presented in the section below) was conducted to determine the level of quantified transit analyses to be recommended for the EIS assessment of potential impacts for subway elements at nearby stations.

The incremental bus trips would be below the *CEQR Technical Manual* analysis threshold of 50 peak hour bus trips on a particular route in one direction. Therefore, based on *CEQR Technical Manual* guidelines a detailed analysis of buses is not warranted and the proposed project is not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

As shown in **Table 3**, the estimated net incremental pedestrian trips would be 974, 595, and 1,101 in the weekday midday, PM, and Saturday peak hours, respectively. All person trips generated by the proposed project would traverse pedestrian elements bordering the Museum, with the exception of the direct entry provided to some subway riders using the 81st Street subway station, persons dropped off or picked up by taxi or tour bus at the West 81st Street Museum driveway, and persons parked inside the Museum garage. A Level 2 screening assessment (presented in the section below) was conducted to determine the level of quantified pedestrian analyses recommended for the EIS assessment of potential pedestrian impacts.

LEVEL 2 SCREENING

A Level 2 screening assessment involves the distribution and assignment of projected trips to the transportation network and the determination of whether specific locations are expected to experience incremental trips exceeding *CEQR Technical Manual* thresholds. Typically, if the results of this analysis show that the proposed project would result in 50 or more peak hour vehicle trips through an intersection, 50 or more peak hour bus riders on a bus route in a single direction, 200 or more peak hour subway passengers per station, or 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

In consideration of congested conditions experienced in the area, locations that are expected to incur fewer trips than these thresholds were also nonetheless included in the analyses in order to account for the potential for significant adverse impacts with fewer than 50 peak hour incremental vehicle trips at an intersection and fewer than 200 incremental pedestrian trips at a pedestrian element, particularly if the existing conditions indicate that those intersections and elements are already operating at poor levels of service.

SITE ACCESS AND EGRESS

Currently, there are eight different access points for entering or exiting the Museum complex, as follows (listed in descending order of number of entries).

- Theodore Roosevelt Rotunda (main entrance on Central Park West) – second floor entrance facing the west side of Central Park West between West 81st Street and West 77th Street, with 45 percent of visitor entries;

- Subway Station – lower level entrance leading directly from the 81st Street/Museum of Natural History subway station, with 21 percent of visitor entries;
- West 81st Street (Rose Center) Entrance – first floor entrance facing the Museum driveway on the south side of West 81st Street between Columbus Avenue and Central Park West, with 21 percent of visitor entries;
- Columbus Avenue (Weston Pavilion) Entrance – first floor entrance facing Columbus Avenue and Theodore Roosevelt Park, with 11 percent of visitor entries;
- Parking Garage – first floor entrances from the parking garage (visitors who park in the lower levels of the garage take elevators or stairs up to the first floor; school groups who arrive at the Museum by bus enter through doors leading from the top floor of the garage), with 2 percent of visitor entries;
- Theodore Roosevelt Memorial Hall – first floor entrance located under the stairs leading to the main entrance on Central Park West, with less than 1 percent of visitor entries;
- West 77th Street Entrance – first floor entrance on the south side of the building used primarily for employee access or during public programs and events; and
- Arthur Ross Terrace Entrance – second-level entrance from terrace located above the Museum parking garage.

The proposed Gilder Center would face Columbus Avenue, an approximately 60-foot wide, one-way southbound roadway with three moving lanes, a parking lane on the west blockface, and a floating parking lane with a southbound protected bike lane on the east blockface. The existing Weston Pavilion Entrance at Columbus Avenue would be replaced by the larger, more prominent Gilder Center entrance that is expected to attract a greater share of Museum visitors. Based on Museum survey data collected in 2015, 11 percent of Museum visitors currently enter at the Weston Pavilion; with the Gilder Center project, an estimated 20 percent of Museum visitors would utilize the proposed Gilder Center entrance. With the new entrance facing Columbus Avenue, it is anticipated that some of the Museum access patterns would change, affecting pedestrian circulation and taxi pickup and drop-off locations. However, school bus circulation patterns would not be affected by these changes, as the Museum has established designated pick-up and drop-off locations for school and coach buses; these locations and the use of the 81st Street garage as the school bus hub are not being altered by the project. Based on the projections developed by AMNH, as a greater percentage of general Museum visitors would likely utilize the Columbus Avenue entrance, there would correspondingly be a reduced percentage utilizing the Rose Center and Central Park West entrances.

TRAFFIC

As shown in **Table 3**, incremental vehicle trips resulting from the proposed Museum addition would exceed the *CEQR* Level-1 screening threshold only during the Saturday peak hour. However, in light of the sensitive existing traffic conditions in the surrounding neighborhood, a Level 2 screening assessment was conducted for the weekday midday and PM peak hours as well as the Saturday peak hour. In this assessment, vehicle trips were assigned to area intersections based on the most likely travel routes to and from the Museum.

Auto trips were assigned to the Museum garage and available off-site parking spaces, based on information obtained from the June 2015 visitor intercept survey, which indicated that approximately half of Museum visitors arriving by car would park at the on-site garage on West 81st Street. **Figure 1** depicts the off-street parking facilities, including the Museum garage, within ¼-mile of the Museum and **Table 4** summarizes the existing supply and peak period utilization levels at these parking locations.

Table 4
Existing Off-Street Parking Utilization
¼-mile Study Area

Map #	Name/Operator and Address/Location	License Number	Licensed Capacity	Utilization Rate			Utilized Spaces			Available Spaces		
				MD	PM	SAT	MD	PM	SAT	MD	PM	SAT
1	Carousel Parking Corporation – 20 W. 75th Street	920608	278	70%	85%	70%	195	236	195	83	42	83
2	Laureate Garage LLC – 2148 Broadway	2001881	155	80%	90%	50%	124	140	78	31	15	77
3	Champion Parking LLC – 205 W. 76th Street	1351985	58	80%	90%	90%	46	52	52	12	6	6
4	Barmax Garage Corporation – 203 W. 77th Street	1249271	75	65%	90%	50%	49	68	38	26	7	37
5	Quik Park LLC – 200 W. 79th Street	1217579	95	80%	80%	50%	76	76	48	19	19	47
6	Click Parking Corporation – 225 Central Park West	766695	58	85%	90%	70%	49	52	41	9	6	17
7	Kinney W. 83rd Street Inc. – 147 W. 83rd Street	2022177	182	70%	70%	70%	127	127	127	55	55	55
8	Kinney W. 83rd Street Inc. – 157 W. 83rd Street	2022173	182	70%	70%	70%	127	127	127	55	55	55
9	Rapid Parking LLC – 225 W. 83rd Street	819247	107	80%	90%	50%	86	96	54	21	11	53
10	Rapid Parking LLC – 15 W. 72nd Street	7690524	164	60%	80%	80%	98	131	131	66	33	33
11	Standard Parking – 200 Central Park West	1029322	388	64%	64%	48%	248	248	187	140	140	201
Total			**1,742**	**70%**	**78%**	**62%**	**1,225**	**1,353**	**1,078**	**517**	**389**	**664**

Notes: MD = Midday; Garage 11 is the on-site facility at the Museum. Weekday data for Garage 11 is based on maximum weekday and Saturday utilization
Sources: Survey conducted by AKRF Inc. in September 2015; Data for Garage 11 provided by the American Museum of Natural History and is based on two high attendance days in July in 2015.

Field observations indicated that approximately 30 percent of auto trips access the Museum from the west, 30 percent from the east, 18 percent from the south, and 22 percent from the north.. These patterns were applied to estimate the distribution of auto trips throughout the network.

Taxi trips were assigned to the Central Park West and Columbus Avenue block faces, and the West 81st Street Museum driveway, and were distributed to the nearby streets based on survey data and Museum projections of trip distribution to each of the Museum entrance locations. Delivery trips were assigned to nearby truck routes and to the Museum service driveway on the east side of Columbus Avenue south of West 78th Street. Tour buses to the Museum were assigned to designated tour bus pickup and drop-off locations on Central Park West and the West 81st Street Museum driveway.

Summary

As shown in **Figures 2 through 4** and presented in **Table 5**, the project is estimated to generate up to 20 vehicle trips through an intersection during weekday peak hours and up to 34 vehicle trips during the Saturday peak hour. Although no single intersection is expected to incur incremental trips exceeding the *CEQR* Level 2 screening threshold of 50 incremental vehicle trips, nine intersections surrounding the Museum are conservatively recommended for detailed analysis in the weekday midday, weekday PM, and Saturday peak hours, in consideration of congested existing traffic conditions and in response to comments made by community stakeholders. A map of the recommended traffic analysis locations is presented in **Figure 5**.

TRANSIT

As described above, the project is estimated to generate fewer than 50 peak hour bus riders in a single direction. Therefore, based on *CEQR Technical Manual* guidelines, a detailed analysis of bus line-haul conditions is not warranted and the proposed project is not expected to result in any significant adverse bus line-haul impacts. An assignment of the projected subway trips was undertaken to determine the need for a detailed analysis of subway station elements and line-haul conditions.

Table 5
Traffic Level 2 Screening Analysis Results—
Recommended Analysis Locations

Intersection	Incremental Vehicle Trips (Weekday)		Recommended Analysis Location (Weekday)	Incremental Vehicle Trips (Saturday)	Recommended Analysis Location (Saturday)
	Midday	PM			
Columbus Avenue and West 82nd Street	3	2	✓	6	✓
Columbus Avenue and West 81st Street	6	6	✓	10	✓
Columbus Avenue and West 80th Street	7	6	✓	9	✓
Columbus Avenue and West 79th Street	13	9	✓	17	✓
Columbus Avenue and West 78th Street	12	9	✓	18	✓
Columbus Avenue and West 77th Street	12	9	✓	18	✓
Central Park West and West 83rd Street	11	5		19	
Central Park West and West 82nd Street	11	4	✓	19	✓
Central Park West and West 81st Street	20	9	✓	34	✓
Central Park West and Museum Entrance	11	8		18	
Central Park West and West 77th Street	12	9	✓	20	✓
West 81st Street and Museum Driveway Entrance	3	2		9	
West 81st Street and Museum Driveway Exit	9	3		16	
Amsterdam Avenue and West 79th Street	10	6		15	

Notes: ✓ – denotes intersection recommended for detailed traffic analysis. Incremental vehicle trips for certain movements at some intersections may be negative due to the relocation of some taxi trips to Columbus Avenue with the new Gilder Center entrance.

The Museum is located near two New York City Transit (NYCT) subway stations: (1) 81st Street–American Museum of Natural History (B and C lines); and (2) 79th Street (No. 1 line). As summarized in **Table 3**, the proposed project is expected to generate 604, 369, and 539 peak-hour incremental subway trips during the weekday midday, PM, and Saturday peak hours, respectively. Based on visitor intercept survey data, approximately 84 percent of Museum visitors arriving by subway currently use the 81st Street station and 16 percent use the 79th Street station. It is anticipated that the share of visitors using the 79th Street station would increase with the new Gilder Center entrance on Columbus Avenue, due to the closer proximity from the Gilder Center entrance to that subway station; therefore, after accounting for the distance to each station from the Museum and subway ridership levels at each station, a shift in subway trips from the 81st Street station at Central Park West to the 79th Street station at Broadway was assumed.

This shift is projected to increase the share of AMNH trips using the 79th Street station from 16 percent to 18 percent. The modified distribution would be expected to result in 82 percent of Museum subway trips to the 81st Street station, which connects directly into the Museum complex, and 18 percent to the 79th Street station two blocks west of the Museum. Applying these distribution patterns to the total No Action and total Proposed Project peak hour subway trips would result in up to approximately 430 and 170 incremental peak hour subway trips at the 81st Street and 79th Street stations, respectively. Therefore, a quantified analysis of station elements is warranted only for the 81st Street station, because more than 200 incremental peak hour trips would be generated at that station. **Table 6** provides a summary of the trips assigned to various station elements at the 81st Street station. The specific elements and peak periods to be included for analysis will be determined in consultation with the lead agency and New York City Transit.

Since most hotels and other tourist attractions are situated south of the Museum, it is projected that most subway trips generated by the project would originate from the south. This distribution pattern would result in incremental subway trips during the critical weekday PM transit peak hour that would be below the *CEQR Technical Manual* analysis threshold of 200 or more peak hour subway trips per line. Therefore, a detailed analysis of subway line-haul conditions is not warranted and the proposed project is not expected to result in any significant adverse subway line-haul impacts.

Table 6
81st Street Subway Station – Potential Analysis Elements

Subway Station Element	Peak Hour Incremental Subway Trips					
	Weekday Midday		Weekday PM		Saturday	
Stairway Elements	**Up**	**Down**	**Up**	**Down**	**Up**	**Down**
P1A/P1B/S2A/S2B (Street-level stair at West 81st Street)	31	40	13	30	34	29
S1A/S1B (Street-level stair at Central Park West)	60	79	27	59	67	57
PL5/PL6 (Platform-level stair near West 81st Street)	5	14	2	10	5	10
PL7/PL8 (Platform-level stair near West 81st Street)	5	14	2	10	5	10
PL3/PL4 (Platform-level stair near Museum entrance)	23	71	10	53	26	51
Fare Control Areas	**Entry**	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
Control Area Near West 81st Street (5 turnstiles)	40	31	30	13	29	34
Control Area Near Museum Entrance (3 turnstiles, 3 high entry-exit turnstiles)	205	154	151	67	147	173

PEDESTRIANS

As shown in **Table 3**, the projected peak hour pedestrian trips are expected to exceed 200 pedestrians during all peak hours. Level 2 pedestrian trip assignments, as described below, were developed for the proposed project and are shown in **Figures 6 through 8**.

- Auto Trips – Motorists would either park inside the Museum garage on West 81st Street and enter the building directly from the garage, or would park off-site and walk to the Museum.
- Taxi Trips – Taxi patrons would generally be dropped off and picked up along Central Park West, Columbus Avenue, and West 81st Street.
- City Bus Trips – City bus riders would use bus routes on Central Park West, West 81st Street, Columbus Avenue, and Amsterdam Avenue, and would get on/off buses at stops nearest to the Museum.
- Tour Bus Trips – Tour bus passengers would board/alight at designated tour bus pick-up and drop-off locations, on the West 81st Street Museum driveway and the west side of Central Park West.
- Subway Trips – Subway riders were assigned to the 81st Street–American Museum of Natural History (B/C) and 79th Street (No. 1) subway stations. As described above, approximately 82 percent of riders were assigned to the 81st Street station and 18 percent were assigned to the 79th Street station with the new Gilder Center entrance. Some of the riders assigned to the 81st Street station would enter the building directly from the station.
- Walk-Only Trips – Pedestrian walk-only trips were developed by distributing project-generated trips to bordering pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on survey data, as well as the land use characteristics of the surrounding neighborhood.

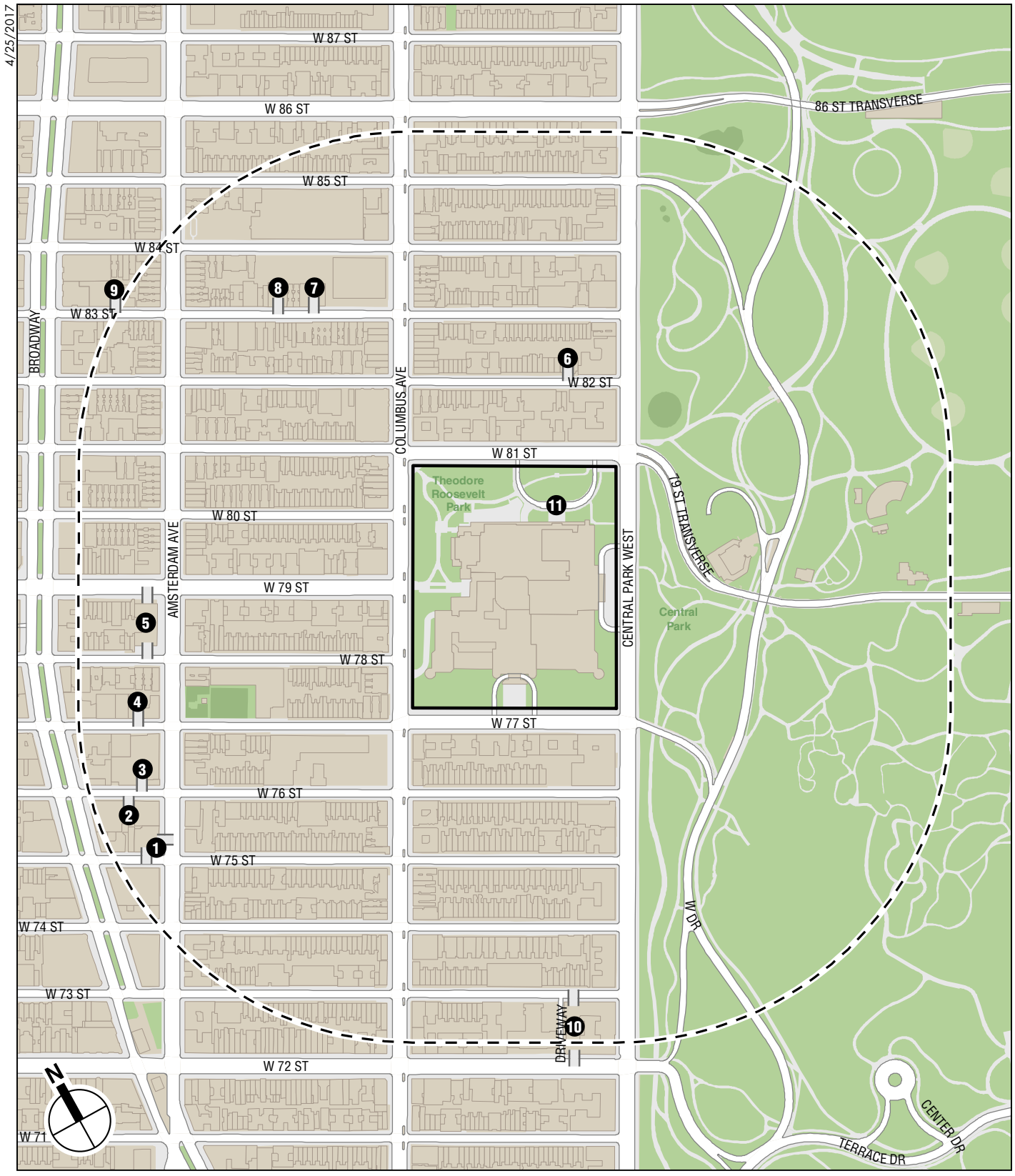
The pedestrian trip assignments also account for a shift in trip-making from the existing Museum entrances on West 81st Street and Central Park West to the new Gilder Center entrance. Even with the project's net gain in trip-making, this shift in pedestrian travel patterns is expected to yield a reduction in Museum-related pedestrian volumes on the south side of West 81st Street and along Central Park West. Based on the detailed pedestrian assignment results, ten sidewalks, four crosswalks, and four corners are recommended for detailed analysis for the weekday peak hours and the Saturday peak hour, as shown in **Table 7** and depicted in **Figure 9.** While some of the pedestrian elements recommended for detailed analysis would not incur incremental trips exceeding the *CEQR* Level 2 threshold of 200 trips in any of the peak hours, these pedestrian elements are conservatively recommended for analysis, in consideration of sensitive conditions bordering the Museum. In addition, some park paths within Theodore Roosevelt Park may be recommended for analysis; this determination will be made based on how the Gilder Center expansion is expected to affect pedestrian circulation along those park paths.

Table 7
Pedestrian Level 2 Screening Analysis Results—Recommended Analysis Locations

Pedestrian Elements	Weekday Incremental Pedestrian Trips		Recommended Analysis Location (Weekday)	Saturday Incremental Pedestrian Trips	Recommended Analysis Location (Saturday)
	Midday	PM			
Amsterdam Avenue and West 79th Street					
Northwest Sidewalk between Amsterdam Avenue and Broadway (on West 79th Street)	112	68		114	
Southwest Sidewalk between Amsterdam Avenue and Broadway (on West 79th Street)	114	70		121	
North Crosswalk	149	90		146	
South Crosswalk	193	118		191	
Northeast Corner	149	90		146	
Southeast Corner	193	118		191	
Southwest Corner	107	66		113	
Northwest Corner	69	42		73	
Columbus Avenue and West 81st Street					
Southeast Sidewalk between West 81st Street and West 80th Street (on Columbus Avenue)	60	38	✓	97	✓
Southwest Sidewalk between West 81st Street and West 80th Street (on Columbus Avenue)	-17	-10	✓	-5	✓
Southeast Sidewalk between Columbus Avenue and Museum Driveway (on West 81st Street)	-201	-122		-176	
Northwest Corner	43	26	✓	58	✓
Northeast Corner	93	56	✓	116	✓
Southeast Corner	-167	-101		-132	
Southwest Corner	-225	-137		-215	
North Crosswalk	33	20	✓	38	✓
East Crosswalk	60	36	✓	78	✓
South Crosswalk	-251	-153		-253	
West Crosswalk	10	6		20	
Columbus Avenue and West 79th Street					
Northwest Sidewalk between Amsterdam Avenue and Columbus Avenue (on West 79th Street)	**222**	135	✓	**212**	✓
Southwest Sidewalk between Amsterdam Avenue and Columbus Avenue (on West 79th Street)	**278**	170	✓	**269**	✓
Northwest Sidewalk between West 80th Street and West 79th Street (on Columbus Avenue)	27	16	✓	53	✓
Southwest Sidewalk between West 79th Street and West 78th Street (on Columbus Avenue)	2	0	✓	0	✓
Northeast Sidewalk between West 80th Street and West 79th Street (on Columbus Avenue)	147	91	✓	**225**	✓
Southeast Sidewalk between West 79th Street and West 78th Street (on Columbus Avenue)	116	72	✓	132	✓
Northwest Corner	**265**	160	✓	**287**	✓
Southwest Corner	**282**	172	✓	**277**	✓
North Crosswalk	**278**	168	✓	**302**	✓
West Crosswalk	1	0		1	
South Crosswalk	**282**	173	✓	**280**	✓
Columbus Avenue and West 77th Street					
Northeast Sidewalk between West 78th Street and West 77th Street (on Columbus Avenue)	86	53	✓	97	✓
Northwest Sidewalk between West 78th Street and West 77th Street (on Columbus Avenue)	2	1	✓	2	✓
Northeast Sidewalk between Columbus Avenue and Central Park West (on West 77th Street)	-131	-81		-139	
East Crosswalk	62	39		72	
North Crosswalk	-64	-40		-54	
West Crosswalk	5	4		6	
South Crosswalk	8	5		9	
Southwest Corner	13	9		15	
Northwest Corner	-58	-35		-44	
Southeast Corner	72	46		83	
Northeast Corner	-14	-8		4	
Central Park West and West 81st Street					
Southwest Sidewalk between Museum Driveway and Central Park West (on West 81st Street)	4	4		10	
Southwest Sidewalk between West 81st Street and Museum Entrance (on Central Park West)	28	18		15	
West Crosswalk	-18	-11		-14	
North Crosswalk	12	7		13	
Southwest Corner	-30	-19		-50	
Northwest Corner	-6	-4		-1	
Central Park West and Museum Entrance					
Mid-block crosswalk on Central Park West between West 81st Street and West 77th Street	35	21		53	
Central Park West and West 77th Street					
Northwest Sidewalk between West 77th Street and Museum Entrance (on Central Park West)	-103	-62		-95	
Southwest Sidewalk between West 77th Street and West 76th Street (on Central Park West)	52	31		68	
West Crosswalk	31	18		43	
North Crosswalk	12	7		13	
Southwest Corner	31	18		43	
Northwest Corner	-85	-53		-72	

Notes:
✓ denotes pedestrian elements recommended for the detailed pedestrian analysis.
Some sidewalk, corner, and crosswalk pedestrian elements bordering the Museum, such as those on Central Park West and the south side of West 81st Street, are projected to have negative incremental pedestrian trips. Most of these elements were not recommended for detailed analysis. These negative incremental pedestrian trips are attributed to the diversion of pedestrian trips from other Museum entrances to the new Gilder Center entrance.

✷



Theodore Roosevelt Park

Study Area (Quarter-mile boundary)

1 *Off-Street Parking Facility*

0 400 FEET

Off-Street Parking Facilities

AMNH Gilder Center for Science, Education, and Innovation

Figure 1

4/12/2017

With Action Incremental Vehicle Trips
Weekday Midday Peak Hour

Figure 2

AMNH Gilder Center for Science, Education, and Innovation

4/12/2017

With Action Incremental Vehicle Trips
Weekday PM Peak Hour

Figure 3

AMNH Gilder Center for Science, Education, and Innovation

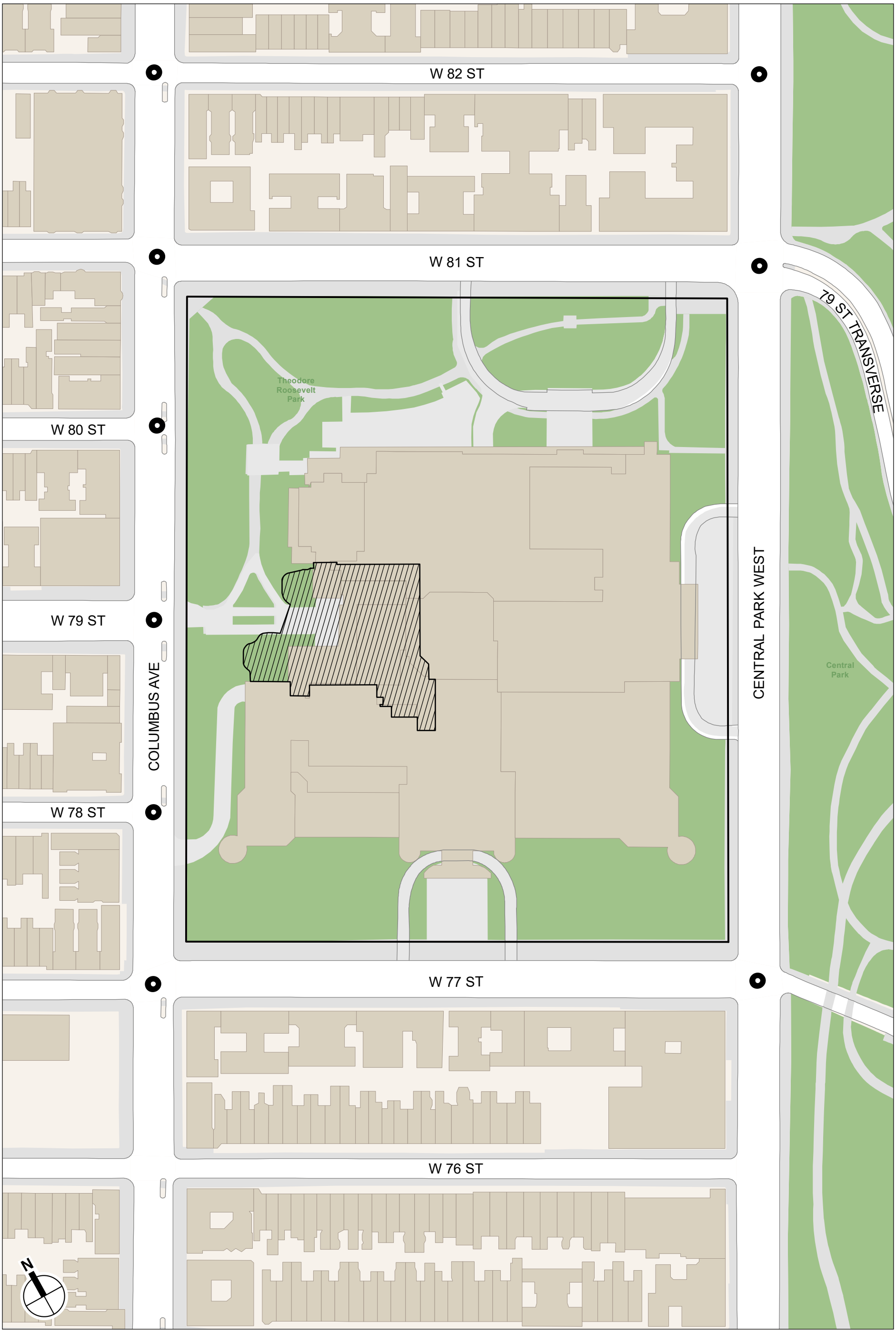
4/12/2017

With Action Incremental Vehicle Trips
Saturday Peak Hour

Figure 4

AMNH Gilder Center for Science, Education, and Innovation

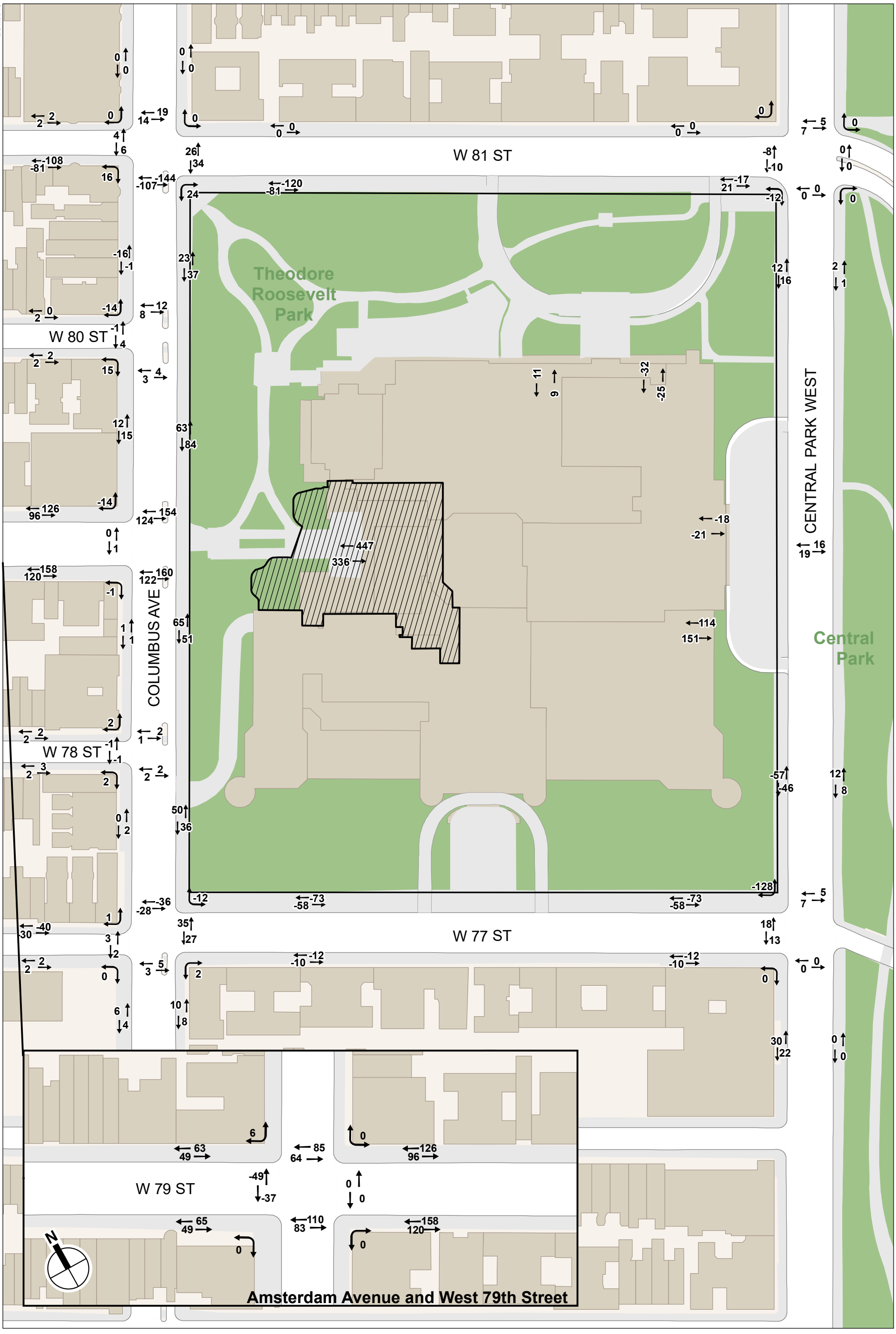
4/12/2017



AMNH Gilder Center for Science, Education, and Innovation

Traffic Study Area
Figure 5

8/31/2016



Theodore Roosevelt Park

Building Site

0 200 FEET

With Action Incremental Pedestrian Trips
Weekday Midday Peak Hour

Figure 6

AMNH Gilder Center for Science, Education, and Innovation

8/31/2016

W 81 ST

W 80 ST

W 78 ST

W 77 ST

W 79 ST

COLUMBUS AVE

CENTRAL PARK WEST

Theodore Roosevelt Park

Central Park

Amsterdam Avenue and West 79th Street

N

Theodore Roosevelt Park

Building Site

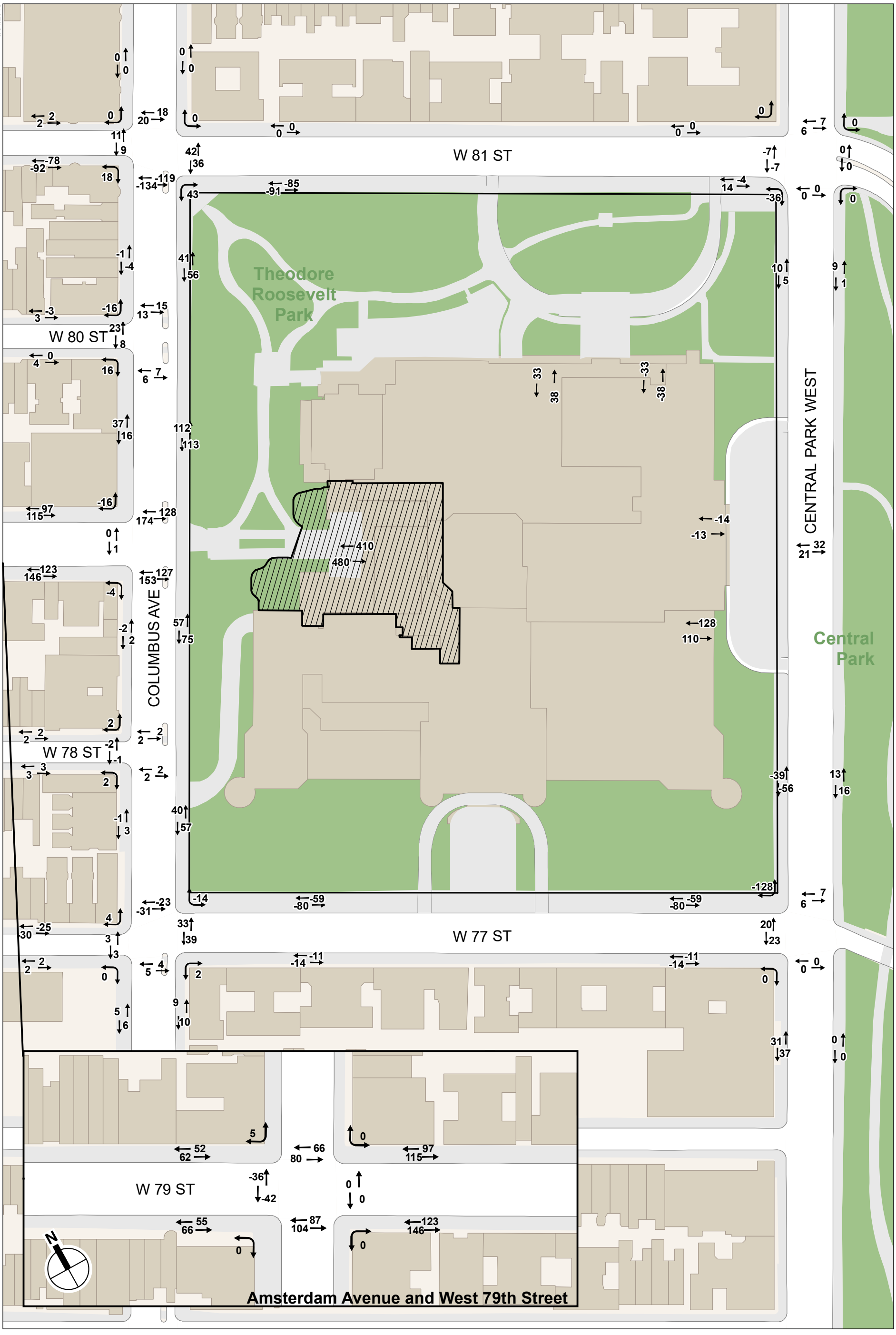
0 200 FEET

With Action Incremental Pedestrian Trips
Weekday PM Peak Hour

Figure 7

AMNH Gilder Center for Science, Education, and Innovation

8/31/2016



Theodore Roosevelt Park

Building Site

0 200 FEET

With Action Incremental Pedestrian Trips
Saturday Peak Hour

Figure 8

8/12/2016

W 82 ST

W 81 ST

W 80 ST

W 79 ST

W 78 ST

W 77 ST

W 76 ST

COLUMBUS AVE

CENTRAL PARK WEST

Theodore Roosevelt Park

Central Park

N

Theodore Roosevelt Park

Building Site

Corner (Weekday and Saturday)

Sidewalk (Weekday and Saturday)

Crosswalk (Weekday and Saturday)

0 200 FEET

AMNH Gilder Center for Science, Education, and Innovation

Pedestrian Study Area

Figure 9