Turner Construction

Barnard College

New Building

Construction Plan

DRAFT 6

December 22, 2015
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Project Overview

Barnard College proudly builds on its 125-year history with the teaching and learning center, a new structure that will stand at the heart of its campus and at the core of a Barnard education. When the 128,000-square-foot building (4 story podium and 11 story tower) opens its doors in 2018, it will be a distinctive place that brings students and faculty together – facilitating collaboration, fostering dialogue, and continuing Barnard’s legacy for decades to come.

Located in the heart of Barnard's campus, the new facility will house the College’s library, with a core collection of books, journals, and special collections that support a strong liberal arts education. The spacious facility will allow the College to expand its Special Collections and Archives, and grow the total footprint of the library by more than 30 percent.

The facility will significantly increase the number of student study spaces on campus overall and create distinct, inviting areas for both quiet study and group collaboration. The outdoor terraces will enhance the library environment, extending the College’s signature campus lawn up onto the building to create inviting green spaces where students can gather over a cup of coffee purchased in the building’s café.

The teaching and learning center will house a digital commons with five innovative teaching labs (movement lab, empirical reasoning lab, digital humanities lab, multimedia lab, and a roomy maker space dedicated to creativity) and a range of flexible learning spaces that utilize new media and digital technologies.

In addition, the new building will integrate an expanded conference center that will be physically connected to existing event spaces on campus; bring together offices and collaborative space for Barnard’s departments of economics, history, political science and urban studies; and provide a new home for two of Barnard’s signature programs -- the Barnard Center for Research on Women and the Athena Center for Leadership Studies.
Construction Timeline Summary

2015
• November 18: Magnolia tree move
• December 23: Closure of Lehman Hall
• Dec 23 – Jan 18: Faculty and staff move from Lehman to LeFrak Center

2016
• January 19: Official opening of LeFrak Center; Classes begin
• Dec – Jan 2016: Construction site fenced off; installs above ground walkway
• Jan – May: Demolition of Lehman Hall
• May – Nov: Excavation and foundations work
• Jun – Sept: Rock drilling operation
• Nov – Mar 2017: Steel structure and concrete

2017
• Feb – Aug: Installation of the exterior wall
• September: Building watertight
• May – Apr 2018: Interior finishes

2018
• May: Temporary occupancy
• May – Aug: Furniture and equipment
• Aug: Building is open for business
Construction Logistics Summary

Hours of Operation (see section 2A)
• 8:00 am – 4:00 pm (work may continue until 6:00pm to maintain schedule)

No Construction Dates (see section 2B)
• Construction work will not take place during reading and finals periods

Campus Access (see section 2D)
• An above ground, wheelchair accessible, walkway will run from Barnard Annex to Altschul Hall, across the lawn, providing access from north to south campus and vice-versa.
• This above-ground “Campus Corridor” will replace the underground tunnel between Barnard and Altschul Hall during construction.
• Pedestrians can also access campus from Claremont Avenue via the 119th St. entrance.

Construction Worker Access Points (see section 2C)
• Construction workers will enter and exit the site via Claremont Avenue; all workers will wear clearly labeled ID cards.

Claremont Avenue (see section 2E)
• Claremont Avenue will serve as the logistics hub for the construction site.
• One northbound lane will be closed resulting in the loss of around 20 parking spaces for the duration of the project.

Safety and Security (see section 2G)
• Barnard Public Safety will be responsible for perimeter controls at all booth areas and on foot patrol as normal.

Noise Mitigation (see section 3A)
• All practical measures will be in place to mitigate noise.
• Use of high construction fences draped in sound deadening blankets, noise mufflers on vehicles, limited vehicle idling along Claremont, and softening rock prior to excavation will mitigate, but not eliminate noise.

Dust Mitigation (see section 3B)
• During demolition, Lehman Hall will be covered in a fine mesh netting to contain dust and all demolition operations will be hosed with water. During excavation, truck wash-down areas will hose vehicles before they leave the site.
Section 1: CONSTRUCTION ACTIVITIES

1A: PRE-CONSTRUCTION ACTIVITIES

SWING SPACE CONSTRUCTION

• LeFrak Gymnasium went offline in early June to begin construction.

• Barnard is refurbishing the LeFrak Gymnasium to serve as “swing space” where select staff and programs currently operating in Lehman Hall will be located during construction. (IMATS moved to 2nd floor Sulzberger Annex in August.)

• The new LeFrak Center will consist of a first floor transitional library, archives, two seminar rooms, digital lab, Empirical Reasoning Center and a new second floor for the Economics, History, Political Science, and Urban Studies Departments.

• The LeFrak Center will be open for business on January 19, 2016, the start of the spring semester.

• The College will move staff and equipment from Lehman Hall to the LeFrak Center over winter break, between December 28, 2015 and January 18, 2016.

• For more details on swing space construction see: http://barnard.edu/about/teaching-learning-center/swing-space.

MAGNOLIA MOVE: November 17-19

• Great care was taken over the summer to ensure a smooth move for the Magnolia tree. Our consultants provided air spading and pruning, and additional mulch to protect the tree. Watering was also increased and the tree, post pruning, is showing vibrancy.

• The College will move the Magnolia tree about 30 feet from its current location to a new spot south of the Diana Center and closer to the fence along Broadway.

• Prior to move, we will remove the pine tree and crab apple tree along the fence along Broadway. Removing these trees is necessary to maintain the health of the Magnolia tree, ensuring that it will receive the appropriate amount of light and room for growth in its new location.

• The College plans to recycle the trees being removed in the service of the Magnolia tree, creating new lawn furniture for use when the lawn re-opens.

• The actual move of the Magnolia will take three days.
  
  o On day one, a portion of the Broadway fence will be removed to allow for installation of a crane that will move the tree on day two. A temporary fence will be put in place for security. We will also lay protection for the crane to rest on lawn.
On day two, the Magnolia will move to its new location, via crane on lawn. This could take up to 12 hours. There will be tape/barricades indicating where it is safe to walk during this move.

On day three, the property will be restored along with the metal fence along Broadway. We will keep the protection in place on the lawn for use as a walkway for pedestrians next to an aboveground tunnel that will be used for access across campus during construction (see section 7 below for more information on access through campus).

ELECTRICAL SHUTDOWNS:

- During swing space construction, we have had some electrical shutdowns – planned and unplanned. We are currently planning on an electrical shutdown during Thanksgiving weekend that will affect Barnard Hall, Lehman Hall and Reid. We will be utilizing a generator, and expect to have little impact to operations.
1B: CONSTRUCTION ACTIVITIES DEFINED

   Lehman Hall will be closed and scaffolded; a security fence will seal off the construction site and
   an above ground walkway will be installed for pedestrian access across campus.

2) Abatement and Demolition Operation – January thru May 2016
   Hazardous material remediation – also known as abatement -- will occur along with demolition of
   Lehman Hall; the building will be demolished from the top down, a noisy operation; noise and
   dust mitigation measures will be in place.

3) Excavation and Foundations – May thru November 2016
   Preparing the site for construction entailing excavating and removing rock and creating the new
   foundation for the building. This part of the operation will be noisy and noise and dust mitigation
   efforts will be in place.

4) Rock Excavation – June thru September 2016
   This operation involves drilling and splitting rock. This is the noisiest part of the construction
   project and is expected to occur over the summer. Noise and dust mitigation efforts will be fully
   in place.

5) Steel Erection and Concrete Superstructure – November 2016 thru March 2017
   During this phase we will see the building rise first with a steel structure and then with concrete.

6) Exterior Wall – February thru August 2017
   Installation of the exterior walls of the building including the façade.

7) Building Watertight – September 2017
   The point where the exterior wall is completed and the roof has been installed so that all work is
   now confined to the interior of the building.

8) Interior Finishes – May 2017 thru April 2018
   This phase focuses on fitting out the interior spaces; landscaping will also begin.

9) Temporary Certificate of Occupancy – Anticipated May 2018
   The construction is substantially complete and ready for the installation of furniture and
   equipment.

10) Furniture and Equipment – May thru August 2018
    Installation of furniture and equipment to finalize the interior spaces, including the return of
    Barnard’s book collection from offsite storage.

11) Occupancy – August 2018
The building is open for business!
Section 1C: CONSTRUCTION ACTIVITIES IN DETAIL

Note: Appendix 4 shows schematic diagrams of the phases of construction.


Demolition of Lehman Hall will begin at the end of the fall semester 2015. As the existing Lehman Hall is emptied, a site construction fence will be installed, sealing off the area currently occupied by Lehman Hall and a large section of the lawn. In addition, a new, above ground, enclosed “tunnel” will be constructed to provide access between north and south campus for students, faculty, and staff. The construction fence installation will include sound deadening blankets around the entire perimeter fence to better assist in containing noise within the site. Nearly all deliveries will be scheduled to start at 8 a.m.

Claremont Avenue will be the primary thoroughfare for construction trucks and staff to enter and exit the site. Prior to commencing demolition, a lane closing will be required for the frontage of Lehman Hall on Claremont Avenue extending 20 to 25 feet in both directions to allow for pedestrian access. Flag-people will direct pedestrian traffic as trucks enter and exit the site.

Abatement and Demolition Operation – January thru May 2016 (see Appendix 4; schematic 2 for a depiction of the site during the demolition phase)

Abatement refers to the removal of hazardous material from the building. Demolition refers to the process of dismantling Lehman Hall. This phase of the process will take place from the middle of January until May.

To begin, the demolition contractor will provide sidewalk scaffolding for pedestrian traffic on Claremont – similar to the scaffolding that you find in many NYC construction sites including the structure by Hewitt along Claremont Avenue. The contractor will install scaffolding on all four sides of Lehman; the scaffold will include fine-mesh netting along the perimeter, which will help contain dust. The scaffold will also be a staging point for a water operation. As the demolition proceeds in an area, hoses will be focused on the operation to keep dust to a minimum.

Abatement: Upon emptying the top two floors of Lehman, abatement operations will begin on the 4th floor and will work its way down the building, provided there is an empty floor in-between. Abatement will continue in this manner until completed. Abatement work is typically focused on a particular area of operation to contain any hazardous materials. While abatement can be noisy, it should not interrupt operations in other buildings. The abatement operation will be well contained and conducted in strict compliance with city, state, and federal regulations.

Demolition: Once the abatement operation is completed on the top two floors, demolition activities will commence. The windows will be removed first and covered to contain dust. Roll-off waste containers will be set up along the sidewalk area on Claremont Avenue, but within the construction fence, to collect debris. Debris will be sent down to the containers through covered shoots from various points in Lehman. The area between Barnard Hall and Lehman is another potential location for a roll-off
container, but this will be considered once this area is demolished. We expect to remove trash on a daily basis. As with abatement, the demolition operation will work from the top down and out of the building.

Demolition will be noisy; the demolition contractor will most likely bring several Brokk machines into Lehman to help pull down the walls, pillars, and other parts of the building. Brokk machines are compact tools, originally designed for mining tasks, but are used in construction for drilling, scaling, digging, and breaking. These machines make a loud drilling noise that is continual through the entire demolition process.

During the demolition operation, it is also possible that we may pre-drill the rock in the plaza area, so that a safe, non-toxic chemical demolition agent, like Crackamite or Bustar or Da-mite, can be inserted to soften the rock to make it easier to excavate and remove. The pre-drill is loud and noisy and will seem disruptive. This construction activity is not definite and is part of means and methods for some of the potential excavation contractors.

Note that construction activities will cease during reading and finals week.

**Excavation and Foundations – May thru November 2016** *(see Appendix 4; schematic 3 for a depiction of the site during this phase)*

The next phase of the project is excavation and foundation work. During this phase, we will begin to prepare the site for construction, excavating and removing rock, and creating a new foundation to support the building. This work will begin in late May, after commencement and reunion weekend.

Once demolition is complete, the demolition contractor will demobilize its operation and will remove the pedestrian sidewalk shed along Claremont Avenue. The construction fence protecting the site will remain and “Yodock” barriers will be utilized to create a corridor for a pedestrian walkway. A Yodock barrier is a water-filled plastic barrier usually used to contain traffic. Flag-people will continue to direct traffic during deliveries.

The foundation contractor will create stabilized construction entrances as well as a truck wash down area to contain dirt from leaving the site. The contractor will bring large excavators onto the site and trucks will take excess soil from the site as they work to set the grade for the different building areas. This operation will be very noisy for a continuous period.

Once excavation is completed for a portion of the site, work on the foundation will begin. This area will include the construction of a foundation for the steel crane. This part of the operation is less noisy, but will be louder on days when there are concrete pours and a large influx of trucks making concrete deliveries.

**Rock Excavation – June thru September 2016**

During the regular excavation operation, the contractor will bring in equipment to drill and break rock primarily at the northern end of the site. This operation will be very loud as it involves drilling and splitting rock with numerous trucks removing the broken rock from the site. This operation is targeted
for summer when activity on campus is less intense; Turner will review schemes to possibly accelerate this operation to limit the impact on campus and the surrounding community.

**Steel Erection and Concrete Superstructure – November 2016 thru March 2017** *(see Appendix 4, schematics 4 and 5 for a depiction of the site during these phases of construction)*

During this phase, we will see the building rise, first with the steel structure and then concrete. At the end of this phase the new building will take its shape and will be a presence on campus.

While slab on grade is being installed and poured, a steel crane will be brought to campus for the steel erection phase of the project; the crane will be situated on the campus side of the project (not on Claremont). Bringing the crane to the site will likely occur on a weekend when such work is usually permitted. Turner will install a new sidewalk shed on Claremont for pedestrian traffic with protection from overhead operations (similar to the overhead protection during demolition). Turner will also install roof protection for the Barnard Annex portion of Barnard Hall.

The steel erection operation will involve daily deliveries of steel to the site. Delivery trucks will be queued on Riverside Drive and come to Claremont for just-in-time delivery. This operation is noisy, but will not be as loud as the excavation operation. Staging trucks on Riverside Drive will help mitigate the noise on Claremont. Before the steel structure reaches 75 feet in height, an outside hoist will be installed at the tower portion of the building on the Claremont Avenue side of the site. This hoist will allow for staff and material deliveries to the individual floors. After the steel erection proceeds up three or four floors, the superstructure concrete operation will begin.

Once the steel is erected on each floor, concrete will be poured and the floor will be readied for the trades – carpentry, electrical, plumbing, etc. – which will begin setting embedded items and reinforcement on the deck. This in itself is not a noisy operation; however, it will be concurrent with steel erection on higher floors, which will be noisy. On the days of concrete pours there will be numerous concrete trucks coming to Claremont that will likely be concurrent with steel deliveries. As a result, on these days there will be a higher level of construction truck traffic.

**Exterior Wall – February 2017 thru August 2017** *(see Appendix 4, schematic 5 for a depiction of the site during this phase of construction)*

As the concrete deck operation approaches the floors of the tower, we will begin installing the exterior wall. The exterior wall includes the façade of the building. Construction of “party walls” will start first at the north and south ends of the site. Party walls are structures that adjoin adjacent buildings. In this case, the party walls join the new building to Altschul on the north side and to Barnard Annex on the south side. Installation of the party walls will require a scaffold; however, this scaffold will be within the site and this operation will produce minimal noise.
Once the party walls are constructed the metal and glass panel installation will begin. These will likely be erected using the crane from the completed steel operation. The delivery of these panels will result in another operation with numerous trucks, which will again be queued on Riverside Drive and are likely to occur concurrently with trucks pouring concrete. Because the crane is involved in this operation, it will be loud as well.

As the exterior wall installation proceeds up the building, interior activities like the construction of mechanical and electrical pathways and masonry walls, and the laying down of track for interior walls will begin on the lower levels. While some of this work (e.g. shooting track and hangers into the deck) is loud the sound will mostly be contained within the building walls.

**Building Watertight – September 2017**

“Building watertight” is the point where the exterior wall is complete and the roof has been installed. The completion of the wall allows for the removal of the crane from the project site and the demobilization of the outside hoist since workers can use the interior elevators.

**Interior Finishes - May 2017 thru April 2018** *(see Appendix 4, schematic 6 for a depiction of the site during this phase of construction)*

Building watertight is generally the kick-off for the finish trades such as millwork, ceiling tile, interior walls, and mechanical equipment. While Turner will still need to coordinate material deliveries, many of these activities will be less noisy and the sound will be contained within the building enclosure.

Turner will begin building and lawn landscape operations in late winter/early spring. The lawn landscape operation will require moving the aboveground campus corridor to different locations to allow for landscaping. Changes to the campus corridor will be coordinated well in advance of the operation so that all parties are aware and agree upon the new paths. Some of the landscape operations will require equipment to move soil that will be noisy, but for the balance of the time the noise should be limited.

**Temporary Certificate of Occupancy – Anticipated May 2018**

Temporary Certificate of Occupancy (TCO) means the construction is substantially complete. There will still be a “punch-list” to perform - fixing small things inside the building and commissioning of non-essential life safety systems, but for the most part, the building will be ready for Barnard to start installing furniture and equipment. Some portions of the construction fence may still remain, but most of it will be removed along with the sidewalk shed. One lane on Claremont Avenue will still be closed for delivery of furniture and equipment so Yodock barriers will still be required to direct pedestrian flow. The campus corridor will be eliminated, as the underground path through campus will be fully operational.
Furniture and Equipment – May thru August 2018

The furniture and equipment operation will also require numerous trucks. While deliveries may not occur daily, there will be numerous trucks on days when deliveries do occur. It is also possible a set of trailers will sit outside for longer periods of time to unload. This is typically a less noisy operation.

Occupancy - August 2018

Once the operation is complete, all construction fence and barriers will be removed and the building will be ready for use by the College!
SECTION 2: CONSTRUCTION LOGISTICS IN DETAIL

2A: HOURS OF OPERATION

• Construction activities will occur from 8:00 a.m. until 4:00 p.m. Monday through Friday.
• No deliveries will be permitted on Claremont Avenue before 8:00 a.m. or after 10:00 p.m., consistent with current practice.
• The Barnard community and neighbors will be provided with advance notice on the rare occasion that work will be required on weekends or after hours.
• Construction activities will cease during reading and finals weeks.

2B: NO CONSTRUCTION WORK DATES

• Construction activities will stop during reading and finals periods.
• For the Spring 2016 semester, no construction work will occur from:
  o Tuesday, May 3 – Thursday May 5: Reading Period
  o Friday, May 6 – Thursday May 12: Finals Period
  o Tuesday, May 17 – Barnard Commencement
• No work periods will continue during these periods for each academic year during construction.

2C: CONSTRUCTION WORKER ACCESS POINTS/IDENTIFICATION

• Turner Construction will maintain its field office in the basement of Altschul Hall.
• Construction workers and affiliated trades will enter on Claremont.
• All construction workers and affiliated trades will wear clearly labeled ID cards with photos and will be equipped with relevant PPE (personal protective equipment).
• Visitors to the site will need to request approval to schedule a visit from Campus Services and Turner, and will be required to wear appropriate PPE and sign a visitors’ waiver release.

2D: CAMPUS ACCESS DURING CONSTRUCTION

• Turner will erect a construction fence that will run from Barnard Annex to Altschul Hall, across the lawn, on the campus side. On Claremont, they will erect a construction fence around the same perimeter near the curb.
• The existing tunnel that traverses Lehman Hall connecting Barnard Hall to Altschul Hall will be closed for the duration of construction.

• In place of the underground tunnel, North-south access across campus will be maintained through a pedestrian walkway (a “Campus Corridor”) linking the north side of Barnard Hall to the Diana Center and Altschul Hall.

• The Corridor will be 8’ in width and covered to protect students, faculty, and staff from the elements.

• A path will be created alongside the corridor on the lawn to create additional space to traverse north and south, but will be uncovered and open to the elements.

• The above-ground corridor will be wheelchair accessible from Barnard Hall to The Diana Center and Altschul Hall.

• The walkway will be lit at all times to ensure safety.

• Access will still be available from the 119th Street gates on both Broadway and Claremont to the north side buildings and east/west.

2E: CLAREMONT AVENUE

• Claremont Avenue will serve as the logistics hub for the construction project.

• Construction workers will enter and exit from Claremont Avenue.

• The demolition contractor will provide a sidewalk scaffold for pedestrian traffic along Claremont Avenue for safety purposes during the demolition phase.

• Orange Yodoks or plastic jersey barriers will create a lane for delivery trucks and other logistics operations. One northbound lane of Claremont Avenue will be closed, resulting in the loss of approximately 20 parking spaces for the duration of the project.

• Trucks will not be permitted to idle along Claremont Avenue; trucks will stage along Riverside Drive prior to dropping off at Claremont.

• Flag-people will direct pedestrian traffic as trucks enter and exit the site.

• Note: Once demolition is complete, the Yodok barriers will remain to create a pedestrian walkway with Flag-people directing traffic.

• Garbage holding will be relocated to an enclosed storage container on Claremont.

2F: PARKING IMPLICATIONS
• The northbound parking lane (east side) of Claremont Avenue will be closed during construction, resulting in the loss of approximately 20 parking spaces for the duration of the project. Traffic will still be able to go north and south.

• The closure of one parking lane on Claremont Avenue will have implications for the availability of parking in and around the neighborhood.

• We anticipate that parking along Claremont Avenue, 116th and 120th Streets, and Broadway will be limited.

**2G: SAFETY AND SECURITY MEASURES**

• Barnard Public Safety will be responsible for perimeter controls at all booth areas and on foot patrol, as standard.

• Emergency call boxes are available and will be in convenient locations.

• The construction fence will be in place both to restrict access from campus to the site and vice versa.

• Overhead protection on the sidewalk at Claremont Avenue will be in place to protect pedestrians.

• Flag-people will direct traffic to ensure that unauthorized people are not on site.

**2H: NYC CONSTRUCTION REGULATIONS**

• All construction activities will be conducted in accordance with NYC building regulations.

• See Appendix 2 for key noise and dust regulations.
SECTION 3: NOISE AND DUST MITIGATION PLANS

3A: NOISE MITIGATION

• While noise is a major concern for all construction projects, Barnard and Turner Construction will take every practical measure to mitigate noise.

• Turner will erect a 12’ fence around the construction perimeter, 4’ higher than New York City construction standards require to help contain the noise.

• Turner will drape the construction fence with sound-deadening blankets to further muffle noise.

• Trucks will be equipped with variable volume backup beepers to regulate truck noise during construction hours.

• Trucks, construction vehicles, and other equipment will be equipped with sound mufflers.

• Trucks will not be permitted to idle along Claremont Avenue. Delivery trucks will be staged on Riverside Drive and come to campus for just-in-time deliveries.

• The demolition contractor will pre-treat the bedrock with a non-toxic demolition agent such as Crackamite, Bustar or Da-mite to soften the rock to make it easier to break and remove during excavation.

3B: DUST MITIGATION

• Dust is a typical byproduct of construction, especially in the early phases – demolition, excavation, and foundations.

• The scaffolding around Lehman Hall will be netted with a fine-mesh netting to capture dust during the demolition phase.

• The most effective dust mitigation technique is a process called “wetting.” Turner will hose demolished areas with water to keep dust to a minimum. The wetting process was used to great success during demolition of LeFrak Gymnasium during the summer of 2015.

• Turner will establish fixed truck wash-down stations to wash trucks before they exit the site.

3C: ADDITIONAL POTENTIAL REMEDIATION EFFORTS

• Barnard is hiring a third party contractor to evaluate additional noise remediation effects and to monitor vibration and dust while construction is ongoing.

• The College is evaluating whether to block windows in Barnard Annex to keep out dust and select noise.
• The College is evaluating whether to treat or replace windows in Barnard Hall to help mitigate noise.

• The College is evaluating whether to treat or replace selected windows in Altschul Hall to mitigate noise and vibration impacts.

• For select activities, Barnard is evaluating moving these activities to offsite locations.

• The College is evaluating class schedules to determine if some classes can occur after standard construction times.
SECTION 4: COMMUNICATIONS

4A: ROUTINE COMMUNICATIONS

• Barnard Communications has prepared a comprehensive communications plan for both internal and external audiences. The Communications Director for Special Projects is responsible for the management and implementation of the communications plan.

• Internal audiences, including students, faculty and staff, will receive information and updates about the project via a number of different communications channels, including email, a new “Campus Construction” section on the MyBarnard portal (intranet), expanded social media highlighted by @MillieBuilds Twitter, signage, meetings and briefings, and celebratory events.

• External audiences include Claremont residents, Columbia University, other neighborhood groups and elected officials, Barnard alumnae, prospective students and their parents, and the media. Communications tools for these audiences will vary by audience but will include an expanded website with FAQs, timelines, and impact notices; monthly email project updates, becoming more frequent when construction commences; community meetings; signage/message boards; collateral materials; and videos. Barnard will maintain an email and phone number to send construction questions and concerns.

For more information, visit: http://barnard.edu/about/teaching-learning-center.

4B: EMERGENCY COMMUNICATIONS

• Barnard personnel will be available to handle concerns that come up during construction.

• If you have a general question or comments, please email newbuilding@barnard.edu.

• If you have an urgent issue that needs to be addressed immediately, please email constructionteam@barnard.edu if you have any issues or concerns that need immediate attention.

• During off-hours, please call Barnard Public Safety at 212/854-3362.
Section 5: EDUCATIONAL OPPORTUNITIES

The building of the teaching and learning center provides a number of opportunities for our faculty, as well as the project architects and construction management company, to teach discrete lessons to the Barnard community and audiences about a variety of topics, including architecture, construction, biological sciences, urban studies, history, visual arts, and more. Barnard’s Campus and Community committee will develop ideas over the course of the construction and planning period, and invite faculty and others to participate.
Appendix 1: HAZARDOUS MATERIALS ABATEMENT

The removal of hazardous materials including asbestos is a common occurrence in most every pre-1970s building that is renovated or demolished in New York City. The process of removing these materials is heavily regulated and monitored by the New York City Department of Environmental Protection’s Bureau of Environmental Compliance.

This is the case with Barnard College’s Lehman Hall, which was built in the late 1950s. The College’s contractors will be removing asbestos and other hazardous materials from the building as a part of its abatement and demolition operation. It is anticipated that the removal of these materials will take approximately six weeks, beginning in January. The College’s construction team, led by Turner Construction, will manage the process, complying with all city, state and federal requirements for the removal if these materials.

Among the regulation’s requirements include an ongoing, daily, comprehensive air and bulk sampling, monitoring and analysis program; notice of abatement signage posted on the exterior of the building; and isolation barriers on openings throughout the building. The method for sealing these openings is specifically outlined in the city’s removal regulations, and include, but are not limited to windows, corridors, doorways, barriers, skylights, ducts, grills, diffusers and any other penetrations of the work areas.

In addition, the regulations outline specific cleanup procedures that must occur during abatement including that all waste shall be bagged, wrapped, or containerized immediately upon removal; and the installation and maintenance of a worker decontamination enclosure system, which shall be HEPA vacuumed and wet cleaned at the end of each work shift at a minimum.

The complete rules and regulations for the New York City Department of Environmental Protection’s Asbestos Control Program can be found at:

### Appendix 2: NOISE AND DUST MITIGATION PLAN THROUGH THE EXCAVATION AND FOUNDATION PHASE

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Noise Mitigation</th>
<th>Dust Mitigation</th>
<th>NYC Code</th>
</tr>
</thead>
</table>
| **Site Capture:** Empty Lehman Hall, install site fence, campus corridor, and Claremont Avenue sidewalk shed | December 2015 – January 2016 | - Perimeter construction fence will be 12’ – 4’ taller than NYC code requires.  
- Perimeter fence will include sound-deadening blankets; these blankets are not required by NYC code.  
- Entry gates will be sound-treated and will remain closed when not in use; sound-treatment on gates is not required by NYC code. | - The 12’ construction fence and the sound-deadening blankets help contain dust.  
- Scaffolding surround the construction site will include fine-mesh netting to further capture dust. The NYC code requires ½” mesh; however, the mesh used at the Barnard site will be smaller than ½”.  
- Sound-treated entry gates will remain closed when not in use; this helps contain dust. | - NYC code calls for an 8’ construction fence; Barnard is installing a 12’ fence, 4’ taller than required.  
- Sound-deadening blankets are not required by NYC code.  
- Sound-treatment on gates is not required by NYC code. |

| **Abatement and Demolition:** Interior abatement, scaffolding Lehman Hall, demolition of Lehman hall from top floors down, pre-drill rock for chemical treatment, removal of Lehman scaffold and Claremont Avenue shed. | January 2016 – May 2016 | - Perimeter construction fence will be 12’ – 4’ taller than NYC code requires.  
- Perimeter fence will include sound-deadening blankets; these blankets are not required by NYC code.  
- Entry gates will be sound-treated and will remain closed when not in use; sound-treatment on gates is not required by NYC code.  
- Trucks, construction vehicles and other equipment with | - The 12’ construction fence and the sound-deadening blankets help contain dust.  
- Scaffolding surround the construction site will include fine-mesh netting to further capture dust. The NYC code requires ½” mesh; however, the mesh used at the Barnard site will have much tighter spacing to capture dust.  
- Entry gates will remain closed when not in use; this | - NYC code calls for an 8’ construction fence; Barnard is installing a 12’ fence, 4’ taller than required.  
- NYC code does not require sound-deadening blankets.  
- NYC code requires perimeter netting with a ½” mesh, but the mesh used at the Barnard site will have much tighter spacing to capture dust.  
- NYC code does |
<table>
<thead>
<tr>
<th>Large motors will be equipped with sound mufflers to help mitigate noise.</th>
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<tbody>
<tr>
<td>- Trucks will be equipped with variable volume back-up beepers, alarms that are ambient sensitive and self-adjusting to minimize noise from the site. These are not required by NYC code.</td>
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<tr>
<td>- Trucks will not idle on Claremont Avenue and will be queued on Riverside Drive for just-in-time deliveries.</td>
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<tr>
<td>- Rock softening operation, with the use of a safe, non-toxic chemical, will make it easier to drill and excavate and lessen the sound during that phase. This is not required by NYC code.</td>
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<th>Helps contain dust.</th>
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<tr>
<td>- Demolition operation will use hoses to dampen and contain dust. Lehman scaffold will allow for the hose operation at the exterior face of the building as well.</td>
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<tr>
<td>- Exterior windows will be removed first and openings will be covered with plastic or plywood to contain dust.</td>
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<th>Not require entry gates to be sound-treated.</th>
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<tr>
<td>- Demolition operations will meet all NYC code and agency regulations.</td>
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<tr>
<td>- The use of variable volume back-up beepers is not required by NYC code.</td>
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<tr>
<td>- All equipment will meet sound level standards specified in NYC building codes.</td>
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<tr>
<td>- Chemical softening of rock is not required by NYC code.</td>
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