UPMC Shadyside Pharmacy Renovation

Proposed Project Scope for Review:
UPMC is planning to renovate their Central Pharmacy to meet current USP Guidelines (interior renovation). To meet the stated guidelines, the project requires a new air handling unit (AHU) and chiller.

UPMC studied various locations on the roof of the hospital for the new AHU, however the size and weight of the unit cannot be supported by the existing infrastructure and current code.

UPMC is proposing to place the new AHU on a raised platform structure over the existing loading dock and connect to the main hospital via a duct bridge. The location was carefully studied and designed to minimize impact to adjacent structures and properties, as well as proximity to the interior Central Pharamcy.

Project Address:
UPMC Shadyside
5230 Centre Ave
Pittsburgh, PA 15232
51-R-150

Zoning District:
EMI
Baum-Centre Corridor Overlay District

Project Team:

UPMC:
Project Manager: Joe Coleman

Construction Manager:
Mascaro Construction
Project Manager: Erin Dunbar

Architect:
RM Creative Inc
Project Manager: Rebecca Griffith, AIA

MEP Engineers:
Barton Associates

Civil Engineers:
Langan Engineering

Structural Engineers:
Atlantic Engineering Services

Acoustic Engineers:
NV5 (formerly known as The Sextant Group)
project location map
UPMC Shadyside campus location map

- Preservation Hall
- Centre Ave
- Posner Tower
- Train Tracks
- East Busway

ahu location
chiller and screen wall location
project exterior scope

- new air handling unit (AHU) with internal acoustic mitigation
- steel support structure painted to match ahu with locked access stair to meet OSHA standards
- pilasters at base of steel structure with concrete bases and bollards for protection.
- exterior duct bridge to connect the AHU to Posner Tower over internal driveway clad in decorative panel
- new chiller unit to support the AHU adjacent to preservation hall on new concrete pad in existing paved area
- acoustic screen wall around new chiller unit
- all existing exterior drives/vehicular access and loading dock access will remain unchanged.
enlarged plan
Site scope includes the structural support for the air handling unit and new slab for chiller platform and screen wall.

- New bollards at steel posts encased in concrete.
- New concrete pad for chiller.
- All drives and vehicular access are maintained (unchanged).
- Access to existing docks is maintained (clearance height at dock height exceeds 15’).
grading / runoff plan

- Grading is anticipated to be unchanged, as the platform is above grade.
- New concrete pad at the chiller is in the same location as an existing asphalt pad.
acoustic design strategy
The acoustic design goals for the project are to meet the Pittsburgh Noise Code and to reduce the noise impact on the nearby residences.

design notes:

- This noise analysis built upon a previous study that was conducted in June 2019 for the replacement of 9 Cooling Tower cells. In the previous study, the threshold at which noise complaints were generated was found to be when the old cooling towers were operating at 80-100% capacity. The sound levels at this threshold were measured at the nearby residences and are reported in the table below, along with the limits of the Pittsburgh Noise Code and the existing environmental sound level due to sources other than the hospital.

- A detailed model of the proposed equipment and planned noise control measures was created to predict the sound levels at the closest residences under the maximum operating conditions for all new equipment. New equipment specifically includes the replacement of the Cooling Towers and the addition of the AHU and Chiller.

- The resulting sound levels at the closest residences due to all new equipment running at maximum operating capacity are expected to be significantly lower than the measured sound levels of the old cooling towers.

- The values shown below were calculated under the maximum operating conditions for each piece of equipment. Sound levels are expected to be even lower under normal operating conditions.

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Overall Average Sound Pressure Level at Closest Residences, dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Hospital Noise Sources</td>
</tr>
<tr>
<td>Daytime (7AM-10PM)</td>
<td>50</td>
</tr>
<tr>
<td>Nighttime (10PM-7AM)</td>
<td>47</td>
</tr>
</tbody>
</table>
existing site photos

location map

view from cooling towers

Preservation Hall
existing site photos

Existing Preservation Hall Loading Dock

location map

from existing loading dock looking toward neighborhood
existing site photos

Existing Preservation Hall
Loading Dock

additional photos from existing loading dock
looking toward neighborhood
existing site photos

additional photos from existing loading dock looking toward neighborhood
existing site photos

additional photos from existing loading dock looking toward neighborhood
Design Concept:
The AHU enclosure and steel will be powdercoat painted to blend with dark brown Posner Tower brick – the color was specifically selected to minimize the visual impact and fade into the colors of the site.

The design team chose not to enclose the AHU in decorative panels after careful study due to the additional steel and spacing for air intake. The panels would have to be louvered style to allow for the correct air flow and would therefore not match the decorative panels at the bridge. The presented approach was to minimize the AHU visually. Acoustic mitigation is included within the AHU itself and is not reliant on additional acoustic screening.

Design Concept:
The duct bridge will be encased in a decorative metal panel due to the close proximity of the cafeteria windows to improve the aesthetic of exposed ductwork to the cafeteria occupants.
ahu plans and elevations
ahu plans and elevations
enlarged ahu elevation
enlarged ahu elevation
duct bridge elevations
chiller plans and elevations

panel style and color
chiller plans and elevations
proposed renderings

rendering view from the busway

AHU location
proposed ahu renderings

enlarged rendering view from the busway

AHU location
color aligns with poser tower brick color
proposed renderings

rendering view from the busway

AHU location
proposed renderings

rendering view from the busway

AHU location
sustainability / stormwater management plan
no anticipated change to existing site conditions due to unit being raised above grade

accessibility / universal design summary
unit will only be accessible by staff. platform will have a locked gate at the bottom of the access stair
Meeting OSHA requirements.
community process summary

UPMC / RM Creative reached out to Kate Rakus to begin this review process in July 2020. Kate Rakus connected the team with Chris Corbett, who suggested we reach out to the Shadyside Action Coalition and the Baum Centre Initiative for Community Review.

UPMC sent the initial design documentation to Kate Rakus in July for initial planning review:
- David De Leon sent via email on 8/21/2020 that they had reviewed the initial documentation with the Urban Design targets and “staff had no comments regarding the design intent of the proposed air-handling unit, and appreciated the detailing employed on the duct bridge.”
- David De Leon stated in his email that they “had no outstanding comments, so nothing else needed regarding Design Review.”

UPMC contacted the Shadyside Action Coalition – Lead Contact: Kevin Kunak.
- The presentation was sent on October 21<sup>st</sup>,
- UPMC and RM Creative presented at their meeting November 12<sup>th</sup>
- UPMC received an approval email from Kevin Kunak on November 24<sup>th</sup>, indicating there were no follow up questions from the group or community at large.

UPMC contacted the Baum Centre Initiative – Lead Contact: Lenore Williams.
- The presentation was sent on October 19<sup>th</sup>,
- UPMC and RM Creative presented at their meeting on November 16<sup>th</sup>,
- The meeting ended with vote of attending members to support the project.
- BCI will be represented on the call with Planning Commission and has indicated they will support the project.