

UNIVERSITY OF PENNSYLVANIA NEURAL AND BEHAVIORAL SCIENCES BUILDING

415 University Ave, Philadelphia, PA 19104

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Lighting Design Memo Update 1

9.9.13

## PURPOSE

This lighting design memo outlines the spaces to be studied in detail and redesigned later; upon approval, I will create a cohesive lighting design concept which will lead to a complete lighting solution for the spaces described:

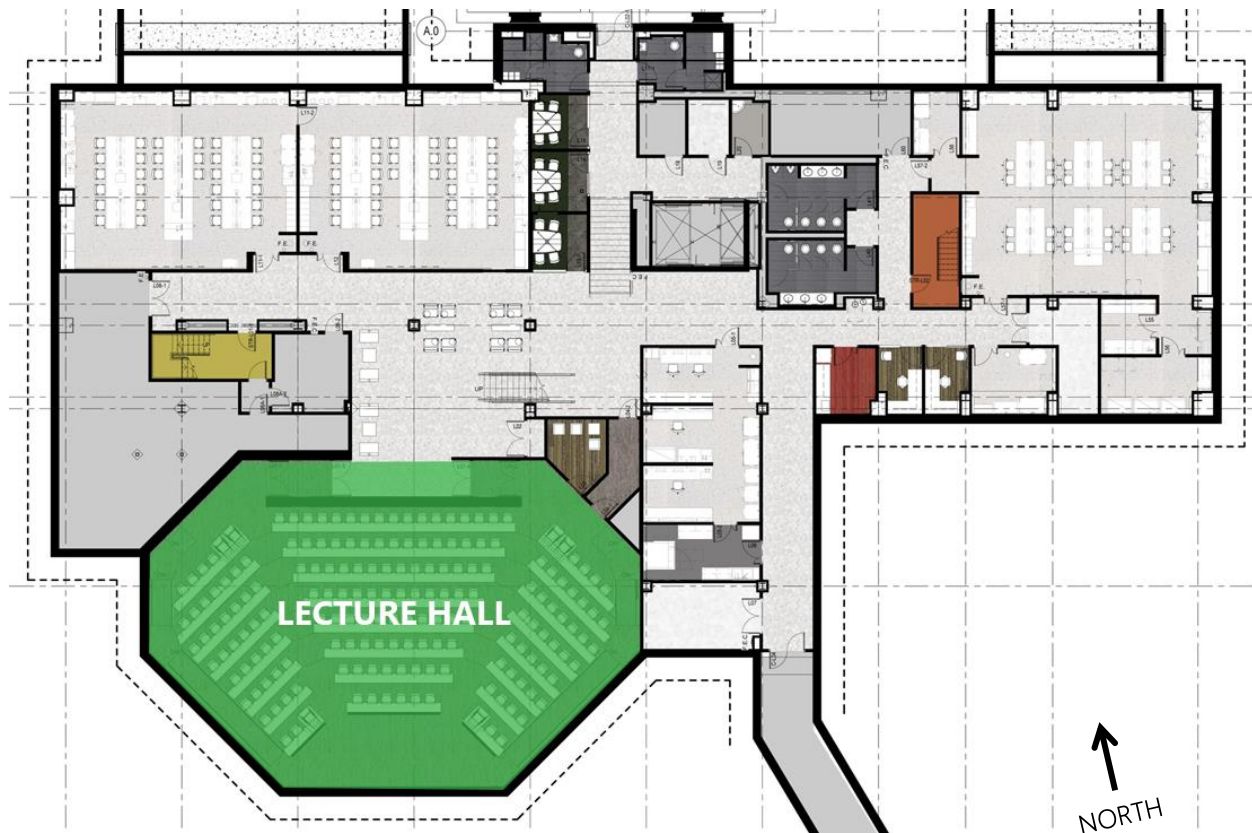
- **Special purpose space** – lecture hall
- **Circulation space** – ground floor southern lobby/lounge
- **Large work space** – ground floor classroom
- **Outdoor space** – southern façade and site

Three lighting design concepts will be presented for the underground tiered lecture hall to be documented in future thesis deliverables; the ceiling geometry and spatial definition allow for several interesting lighting designs. Likewise, by using light effectively in conjunction with the southern scrim façade and site the goal will be to instill a festive psychological impression on the occupants.



Courtesy of SmithGroupJJR | Southwest Corner

## SPECIAL PURPOSE SPACE – LECTURE HALL



The lecture hall is a tiered underground space that houses 174 mobile seats as well as AV equipment and lecture space. The ceiling and walls are custom-made acoustic panels that angulate throughout the space.

### DIMENSIONS

Area – 3200 ft<sup>2</sup>.

Approx. width – 90'

Approx. length – 55'

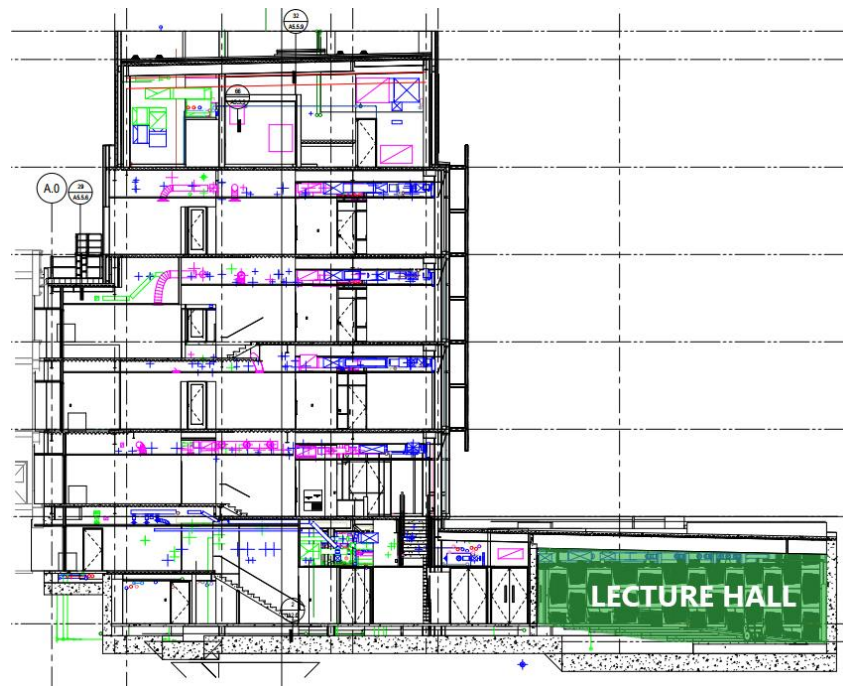
Approx. ceiling height – 13'

### TASKS/ACTIVITIES

Reading, writing, computer use,  
AV presentations (projectors),  
performance



## NORTH-SOUTH SECTION



## MATERIAL PALETTE

**Ceiling** – special acoustic ceiling panel with iron ore accent paint

**Walls** – acoustic wall panels, yellow wood veneer

**Floor** – resilient sheet flooring



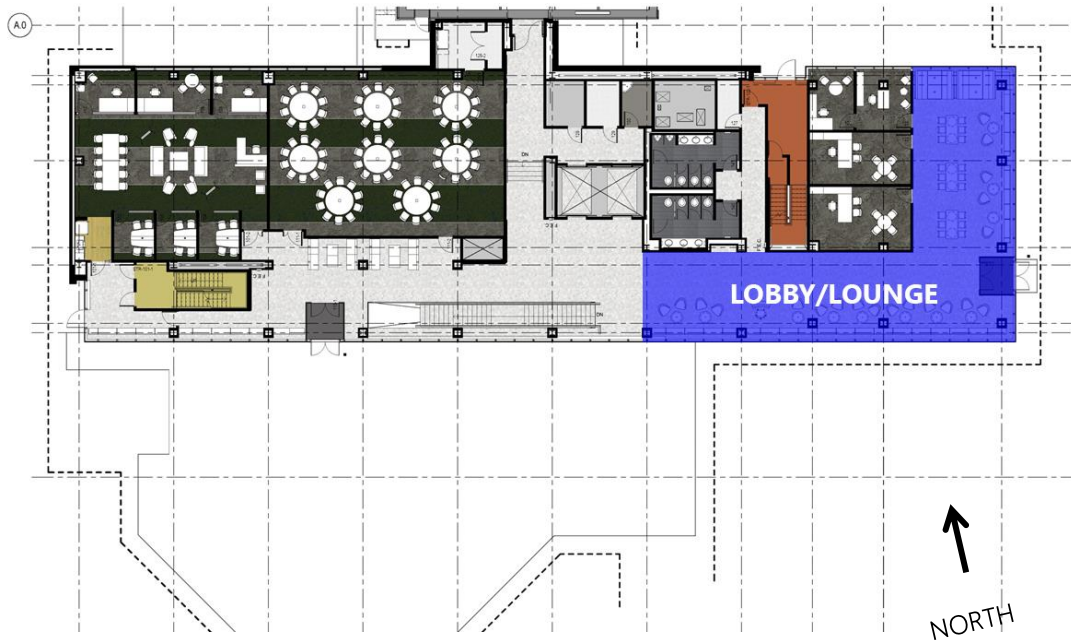
## FURNITURE

The lecture hall houses comfortable mobile seating including space for six handicap accessible spots. The space has AV projectors, rolling screens, whiteboards, and lecturer stands.





## CIRCULATION SPACE – GROUND FLOOR LOBBY/LOUNGE



The main lobby and lounge is a welcoming space that is abundantly lit by daylight. The ceiling is kinetic in form and promises to provide opportunities for a unique lighting solution.

### DIMENSIONS

**Area** – 1180 ft<sup>2</sup>.

**Approx. width** – 80' (L-shaped)

**Approx. length** – 60' (L-shaped)

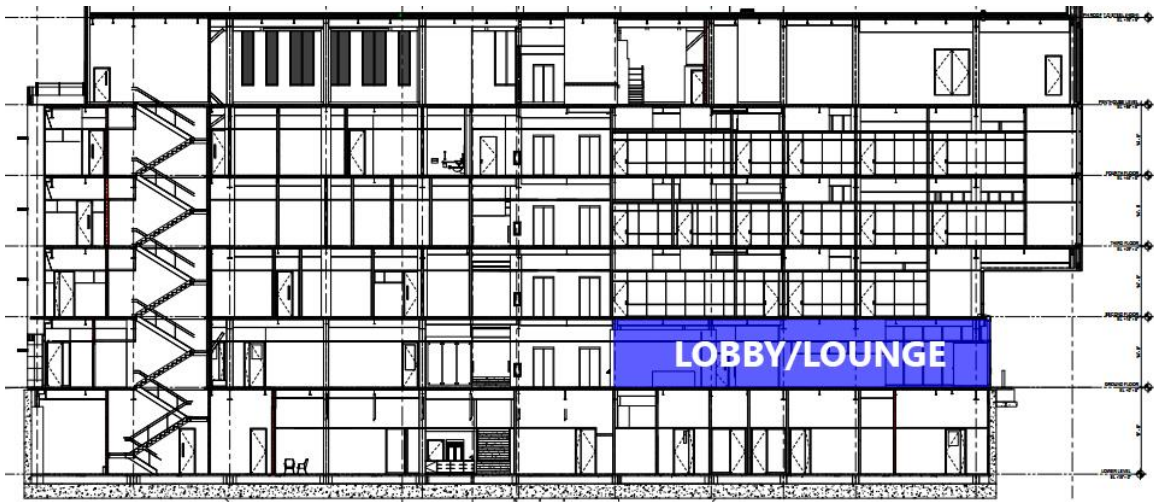
**Approx. ceiling height** – 9'6"

### TASKS/ACTIVITIES

Public transition space, some reading and writing



## EAST-WEST SECTION



## MATERIAL PALETTE

**Ceiling** – acoustic wood ceiling with various hole sizes and some areas with typical acoustic ceiling tile

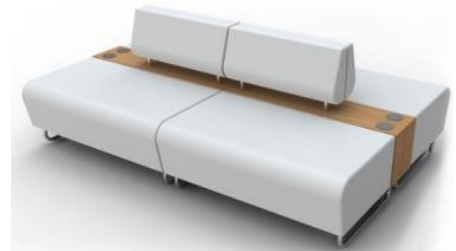
**Walls** – writable glass walls, insulated glazing units, white painted sections

**Floor** – terrazzo tile

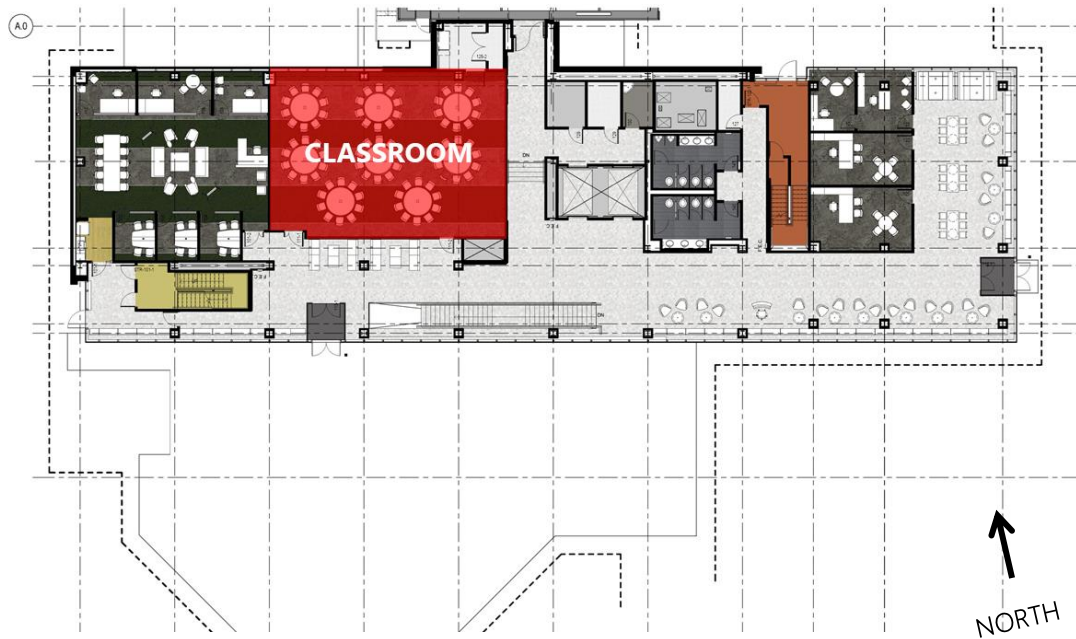


## FURNITURE

The public spaces are furnished as to promote community and public interaction. The seating is mobile and modern. The open space and furniture encourages collaboration and discussion between the users of the NSB Building.



## LARGE WORKSPACE SPACE – GROUND FLOOR CLASSROOM



On the ground floor, there is a large classroom arranged to inspire collaboration and teamwork. Modern classroom furniture and equipment is placed in the space. Located to the north, this space has good diffuse daylight ideal for classroom work.

### DIMENSIONS

**Area** – 1700 ft<sup>2</sup>.

**Approx. width** – 50'

**Approx. length** – 34'

**Approx. ceiling height** – 9'6"

### TASKS/ACTIVITIES

Reading, writing, computer use,  
AV presentations (projectors)

## EAST-WEST SECTION



## MATERIAL PALETTE

**Ceiling** – acoustic ceiling tile

**Walls** – white eggshell paint

**Floor** – dark green/gray carpet tile



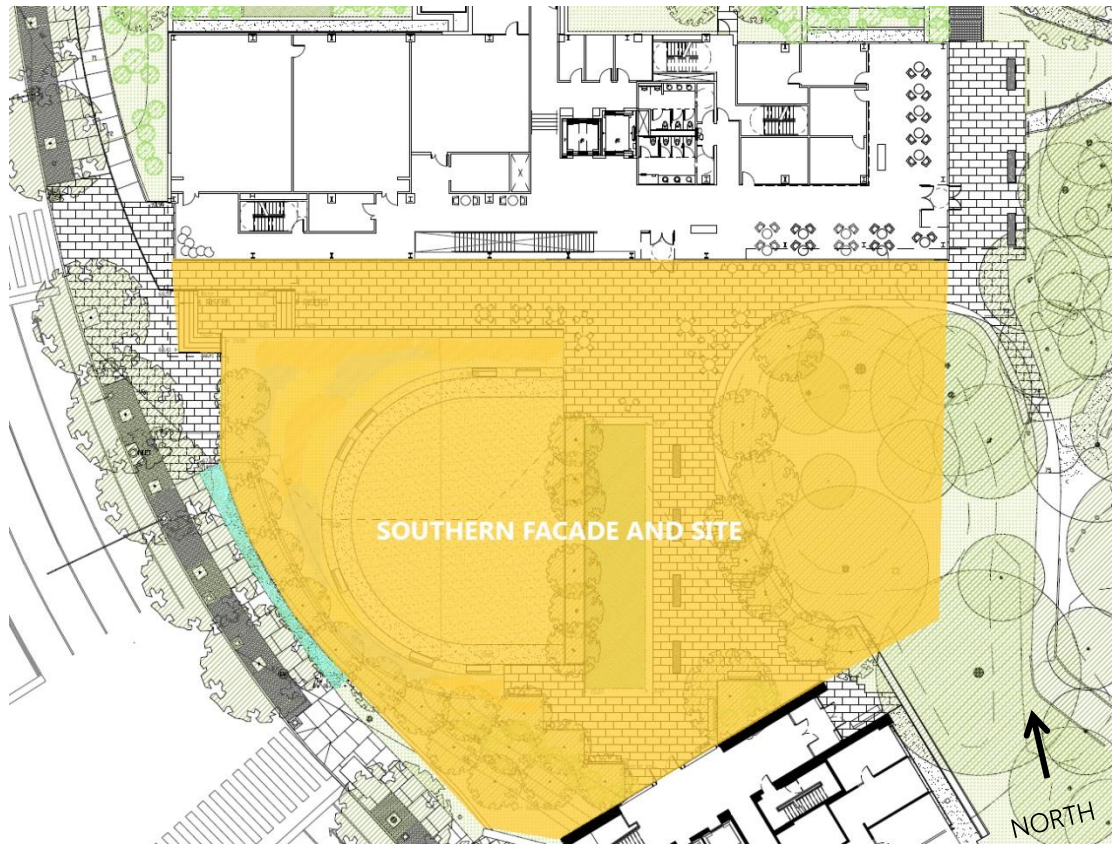
## FURNITURE

The classroom has several large collaborative seating areas with mobile chairs. The round collaboration desks are designed for computer and laptop use and are chosen to accommodate for projector presentations.





## OUTDOOR SPACE – SOUTHERN FAÇADE AND SITE



The scrim on the southern wall allows for a distinctive and interesting lighting design solution that further identifies the NBS building and reinforces the overall lighting scheme. The outdoor lighting will focus on the scrim façade and corresponding site.

### DIMENSIONS

Site area – 20000 ft<sup>2</sup>

Approx. scrim width – 140'

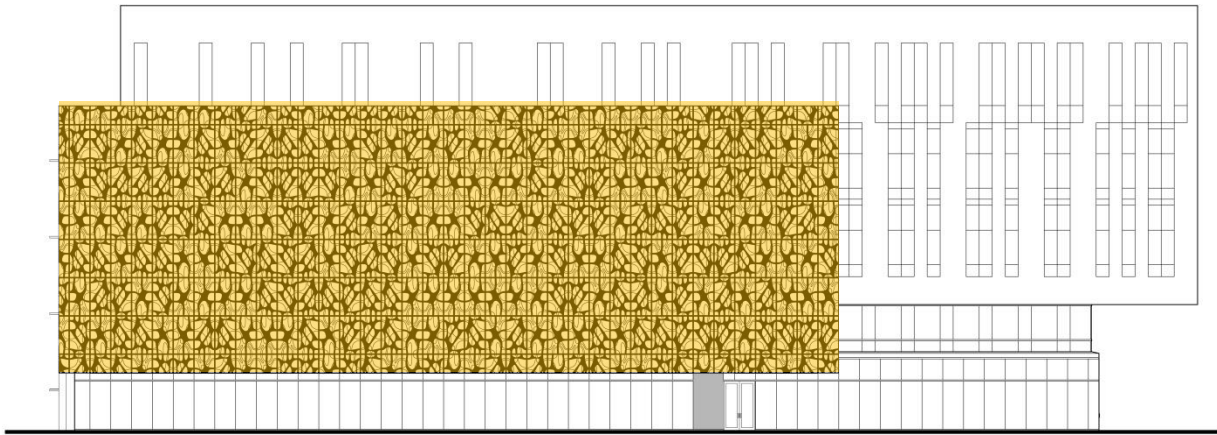
Approx. scrim height – 48'

### TASKS/ACTIVITIES

Public entrance, façade,  
outdoor movement



## SOUTHERN ELEVATION



## SCRIM FAÇADE

Solid and perforated aluminum panels backed by curtain wall insulated glazing units and metal panels.

## MATERIALS/PLANTING

The outdoor space consists of various types of planting including sycamore maple, crabapple, American beech, and horsechestnut trees. The walkways are constructed using bluestone pavers, granite curbing, concrete paving, and a wooden bridge.