



# WELCOME



Smithsonian  
Institution



**National  
Capital  
Planning  
Commission**

## NATIONAL AIR AND SPACE MUSEUM MALL BUILDING REVITALIZATION CONSULTING PARTIES MEETING #2

22 FEBRUARY 2016

# MEETING AGENDA

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- Welcome/Introductions
- Purpose of Meeting
- Project Background
- Section 106 Overview
- Project Elements
- Next Steps and Timeline
- Discussion of Effects on Historic Resources



# PURPOSE OF TODAY'S MEETING

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- Inform the public of project updates
- Record public input related to alternatives considered
- Discuss effects on historic resources





# PROJECT LOCATION

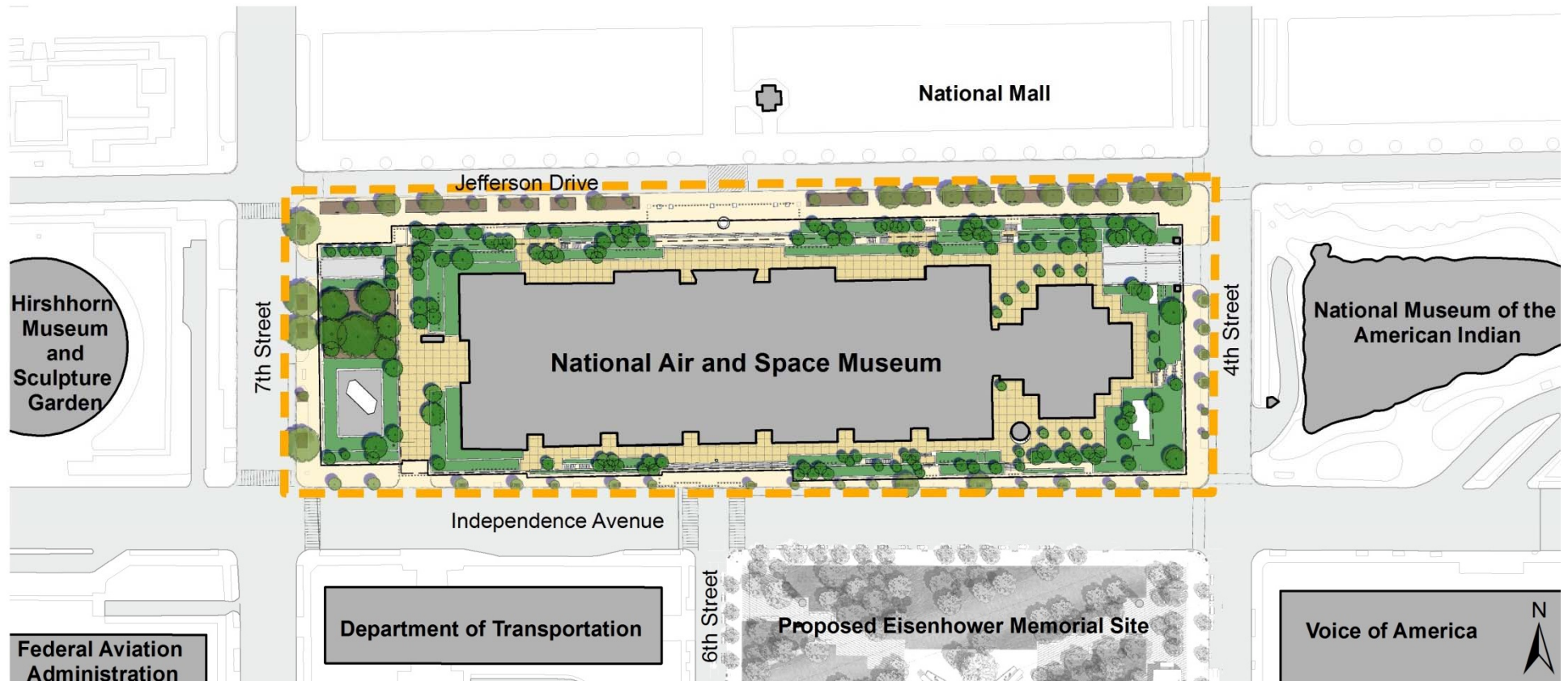
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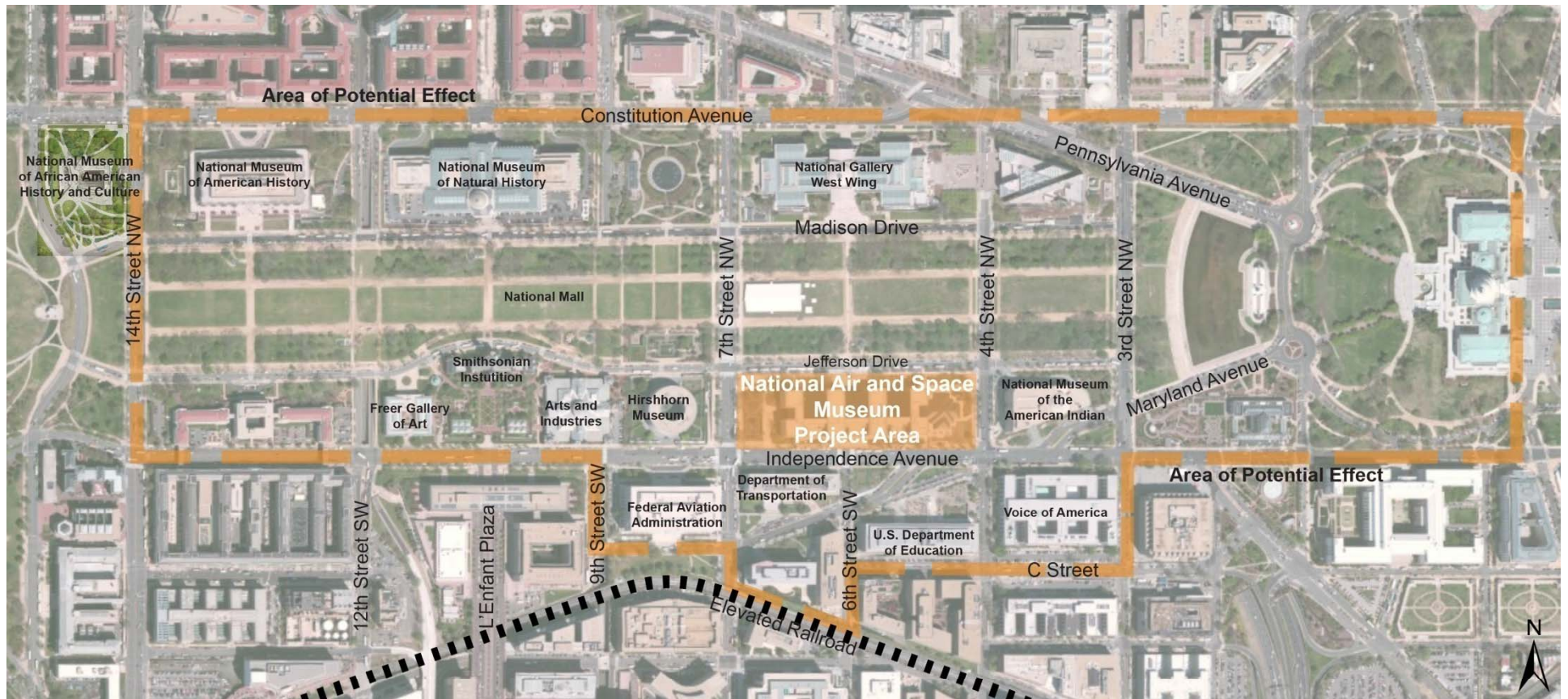
**National Air and  
Space Museum**



# EXISTING SITE CONTEXT



# PROPOSED AREA OF POTENTIAL EFFECT



# NASM MALL BUILDING BACKGROUND

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- **1958** – planned location authorized by President Eisenhower
- **1971** – Congress appropriated \$41 million for building's construction
- **1972-1973** – design by Hellmuth, Obata & Kassabaum (HOK)
- **1976** – opened to the public on July 1 as part of Nation's Bicentennial
- **1995-1997** – last previous major work on stone façade
- **1997-2001** – skylight & window wall replacement



# NASM MALL BUILDING BACKGROUND

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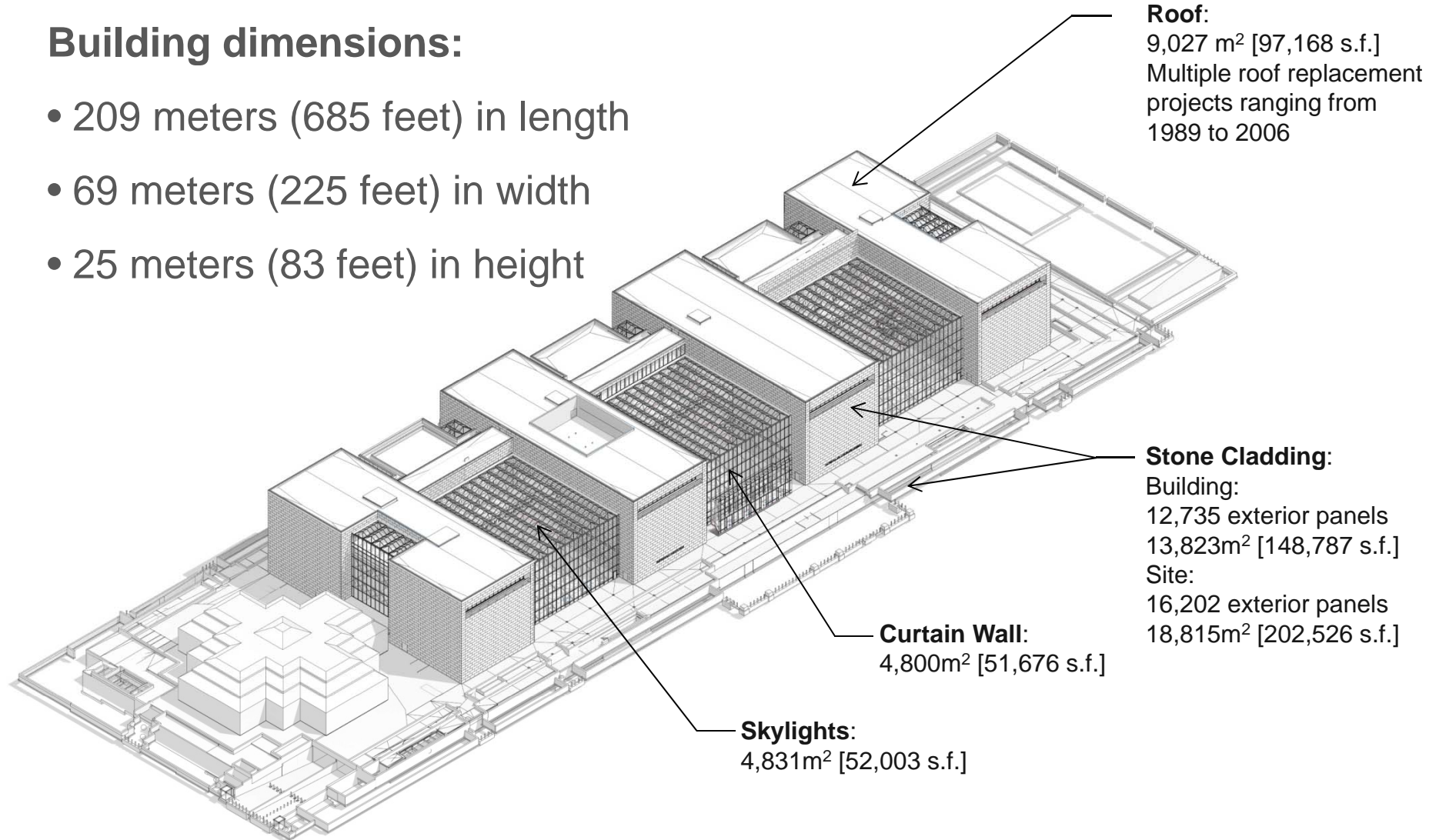
- **Contributes** to the National Mall National Register Historic District
- **Entry on Axis** with National Gallery of Art West Building and has same exterior cladding
- **Stone façade** is exclusive weather barrier
- **Mechanical systems** date to the building's construction

# NASM MALL BUILDING BACKGROUND

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## Building dimensions:

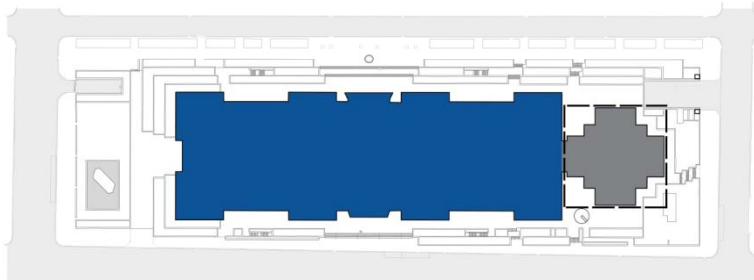
- 209 meters (685 feet) in length
- 69 meters (225 feet) in width
- 25 meters (83 feet) in height



# MASTER PLAN

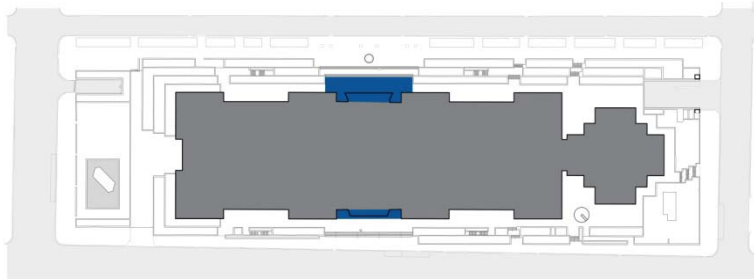
## RECOMMENDED PROJECTS

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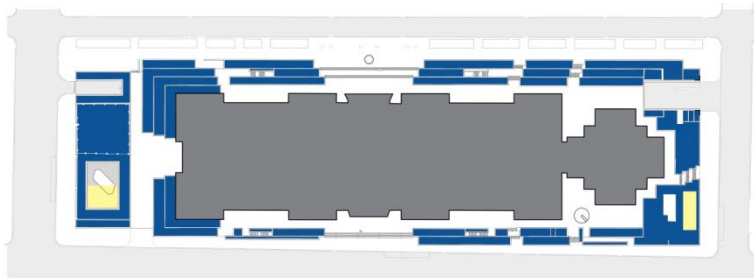
Revitalization of the National Mall Building

- Complete replacement of building systems and cladding



Entry Revitalization

- Entry Revitalization – Vestibules and Canopies



Terrace Revitalization

- Terrace Revitalization – including landscape, storm water management, accessibility improvements



# PROJECT SCOPE AND GOALS

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- Replace building systems to provide a safe and appropriate environment for visitors, staff, and artifacts.
- Reduce carbon emissions and energy consumption.
- Improve access, queuing and security screening conditions by revitalizing the terraces, entrances and improve overall visitor experience.

# PROJECT COMPONENTS

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- **Cladding and Glazing Replacement**
- **Terrace and Perimeter Security Improvement**
- **Expanded Vestibules and Canopies**
- **Solar Panels Addition**

# CLADDING EXISTING CONDITIONS

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# CLADDING MATERIAL ALTERNATIVES

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**Tennessee  
Marble:  
Match  
Original**



**Different  
Stone  
With  
Similar  
Character-  
istics**



**Titanium:  
Considered  
and  
Dismissed**



**Ceramic:  
Considered  
and  
Dismissed**



# GLAZING ORIGINAL INSTALLATION

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**Original 1976 Construction**





# GLAZING EXISTING CONDITIONS

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**2001 Replacement**





# GLAZING REPLACEMENT REQUIREMENTS

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- Protection of Exhibits
- Integrity of Original Design Concept
  - View of Exhibits from Exterior
  - View of National Gallery from Interior
- Mitigate Solar Heat Gain
- Prevent Condensation with Reintroduction of Humidification

# TERRACE EXISTING CONDITIONS

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Northwest



Northeast



Southwest



Southeast

# TERRACE EXISTING CONDITIONS

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Monumental Stair (Northeast) – HOK 1976



Free-Standing Wall (West stair) – HOK 1988



Ramp (Northwest) – 1991



Seat Wall (North Entrance Plaza) – HOK 1976

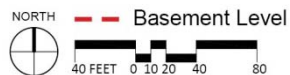
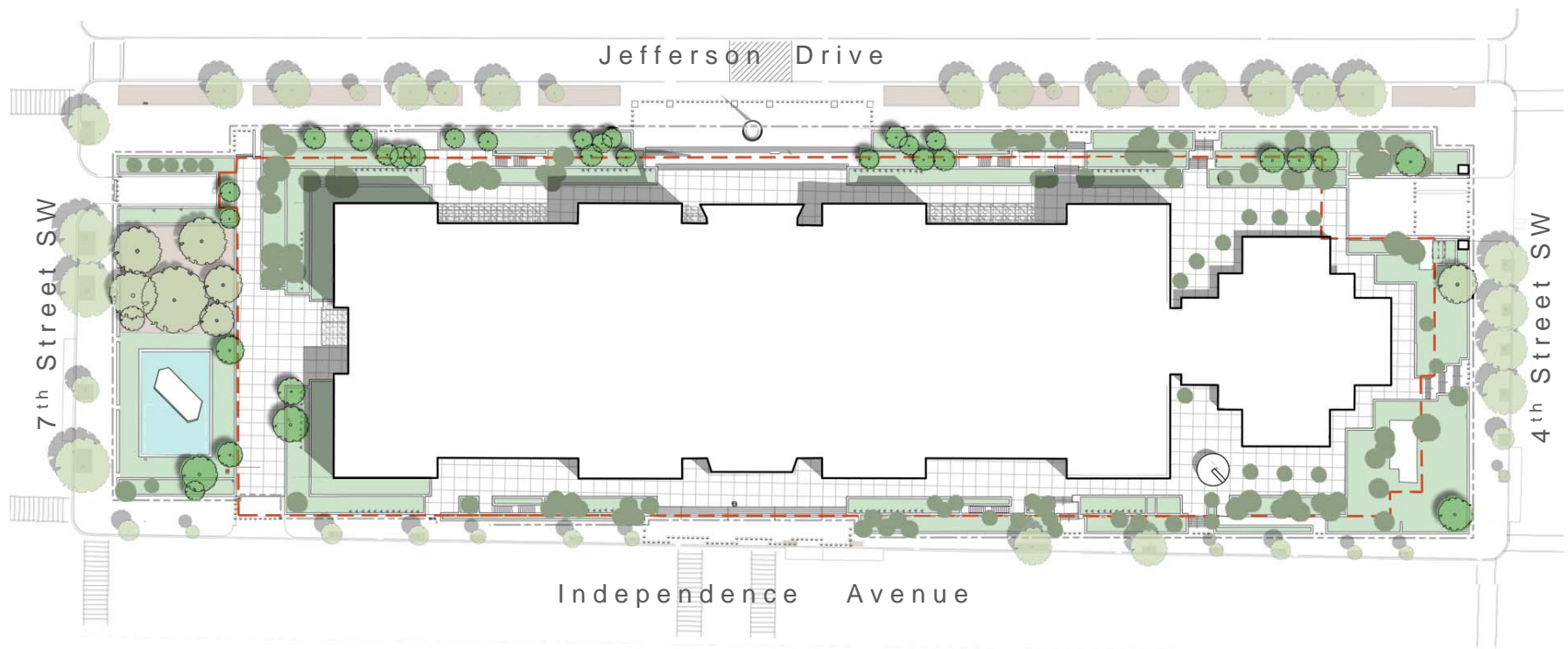


Low Perimeter Wall (SOUTH) – HOK 1976

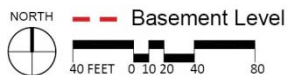
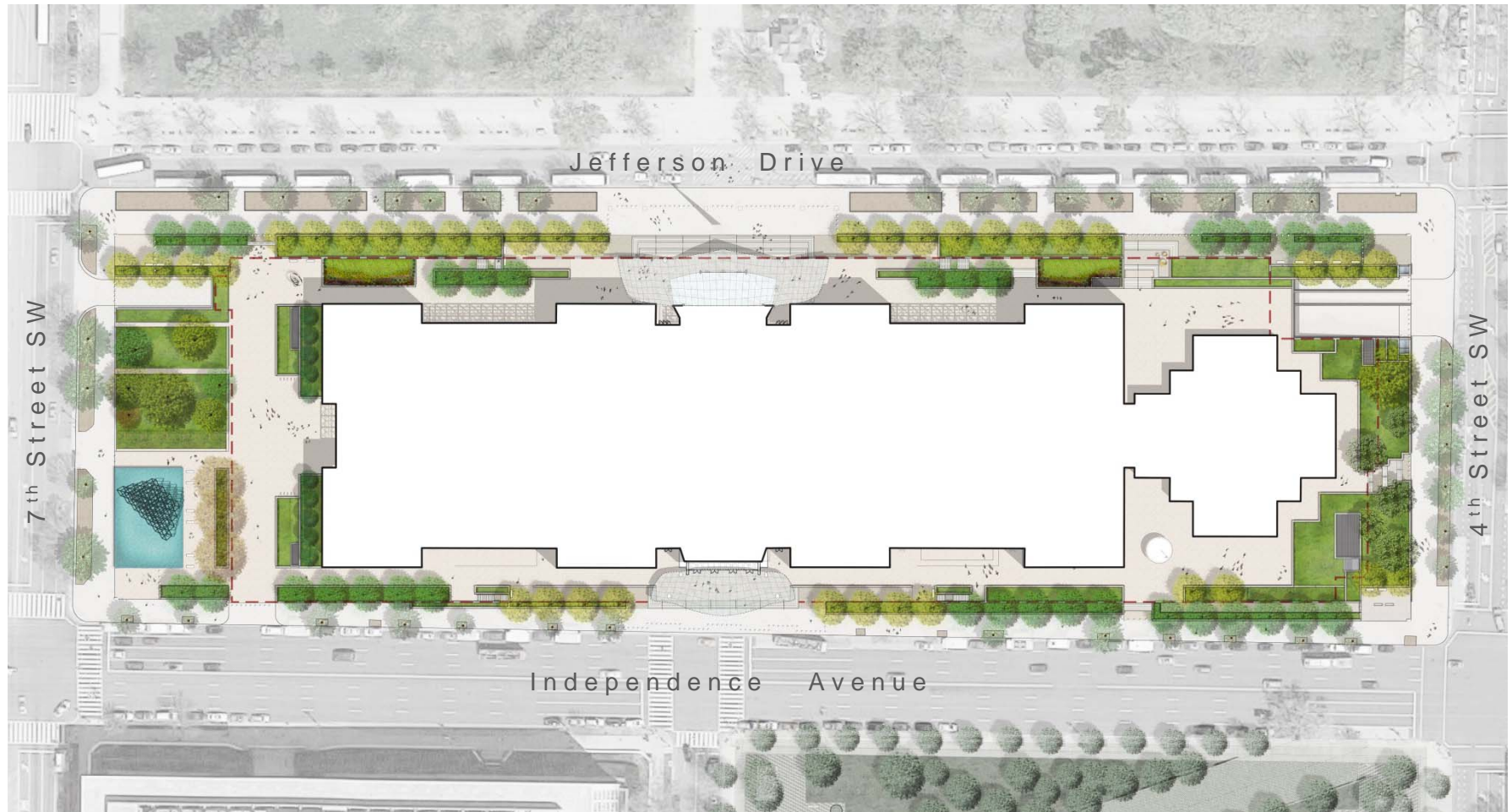


# TERRACE EXISTING CONDITION

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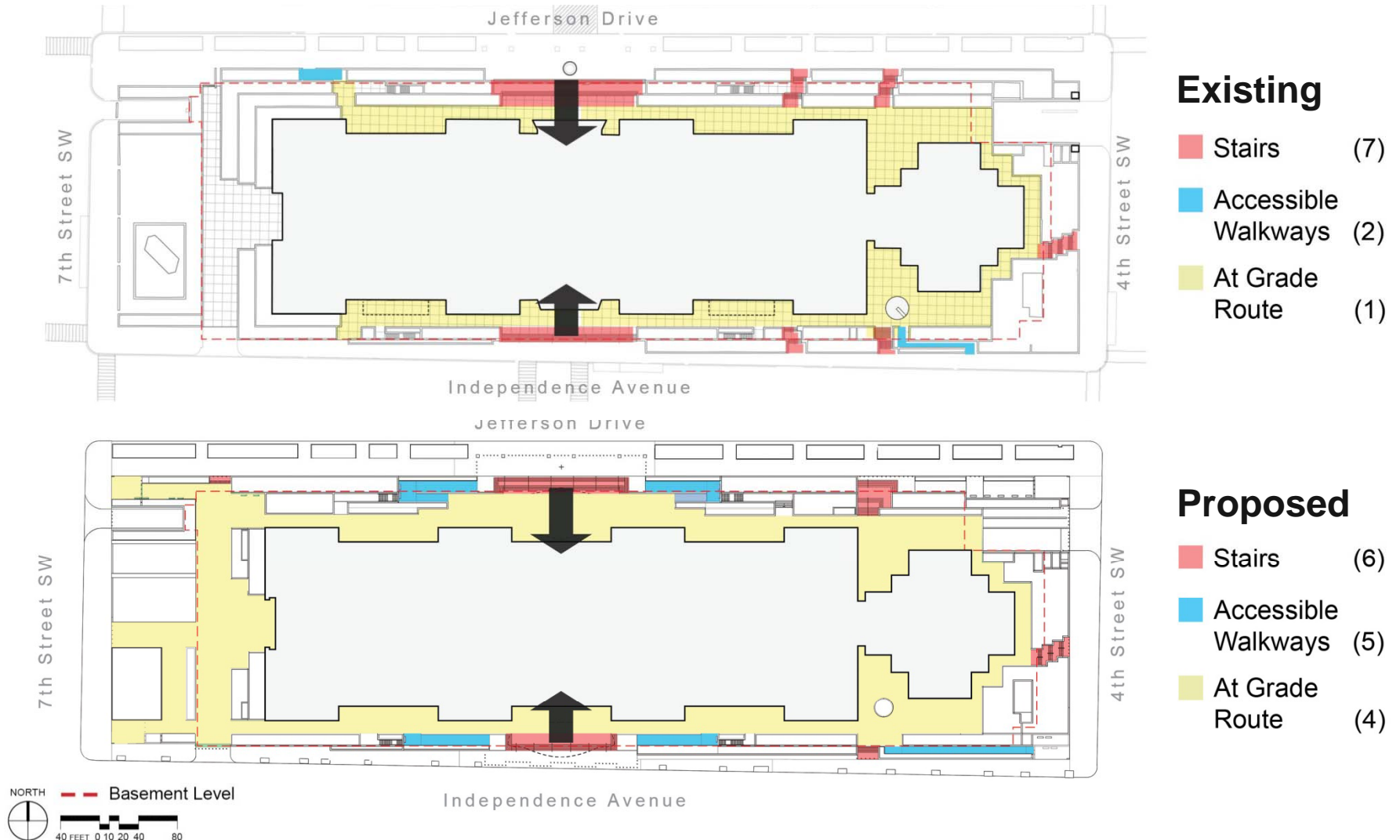


# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED SITE PLAN





# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED ACCESSIBILITY UPGRADE

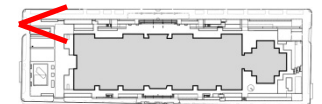


# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED NORTHWEST CORNER



**Existing**

**Proposed**





# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED NORTH ENTRANCE



**Existing**

**Proposed**





# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED NORTHEAST CORNER



**Existing**

**Proposed**





# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED SOUTHEAST CORNER

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**Existing**

**Proposed**





# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED SOUTH ENTRANCE



**Existing**

**Proposed**



# TERRACE IMPROVEMENT ALTERNATIVE: PROPOSED SOUTHWEST CORNER



Existing

Proposed





# TERRACE IMPROVEMENT ALTERNATIVE: MAINTAIN PERIMETER SECURITY



# VESTIBULES EXISTING CONDITIONS

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# VESTIBULES EXISTING CONDITIONS

## FACILITIES MASTER PLAN REQUIREMENTS

### Security

- Mall Side: 4 Lanes
- Independence Ave Side: 3 Lanes

### Inside Queuing

- Maximum Wait Time: 5 Minutes Inside
  - Mall Side: 2,000sf Vestibule + 480sf Screening Equipment
  - Independence Side: 1,500sf Vestibule + 360sf Screening Equipment

### Protected Outdoor Queuing



# VESTIBULE ALTERNATIVES

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**FLIGHT**



**GLASS BOX**

# VESTIBULE ALTERNATIVE: FLIGHT NORTH ENTRANCE

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# VESTIBULE ALTERNATIVE: FLIGHT NORTH ENTRANCE

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# VESTIBULE ALTERNATIVE: FLIGHT SOUTH ENTRANCE

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# VESTIBULE ALTERNATIVE: FLIGHT SOUTH ENTRANCE

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# VESTIBULE ALTERNATIVE: GLASS BOX NORTH ENTRANCE

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# VESTIBULE ALTERNATIVE: GLASS BOX NORTH ENTRANCE

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# VESTIBULE ALTERNATIVE: GLASS BOX SOUTH ENTRANCE (WITH BIPV SOLAR PANELS)

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# VESTIBULE ALTERNATIVE: GLASS BOX SOUTH ENTRANCE (WITH BIPV SOLAR PANELS)

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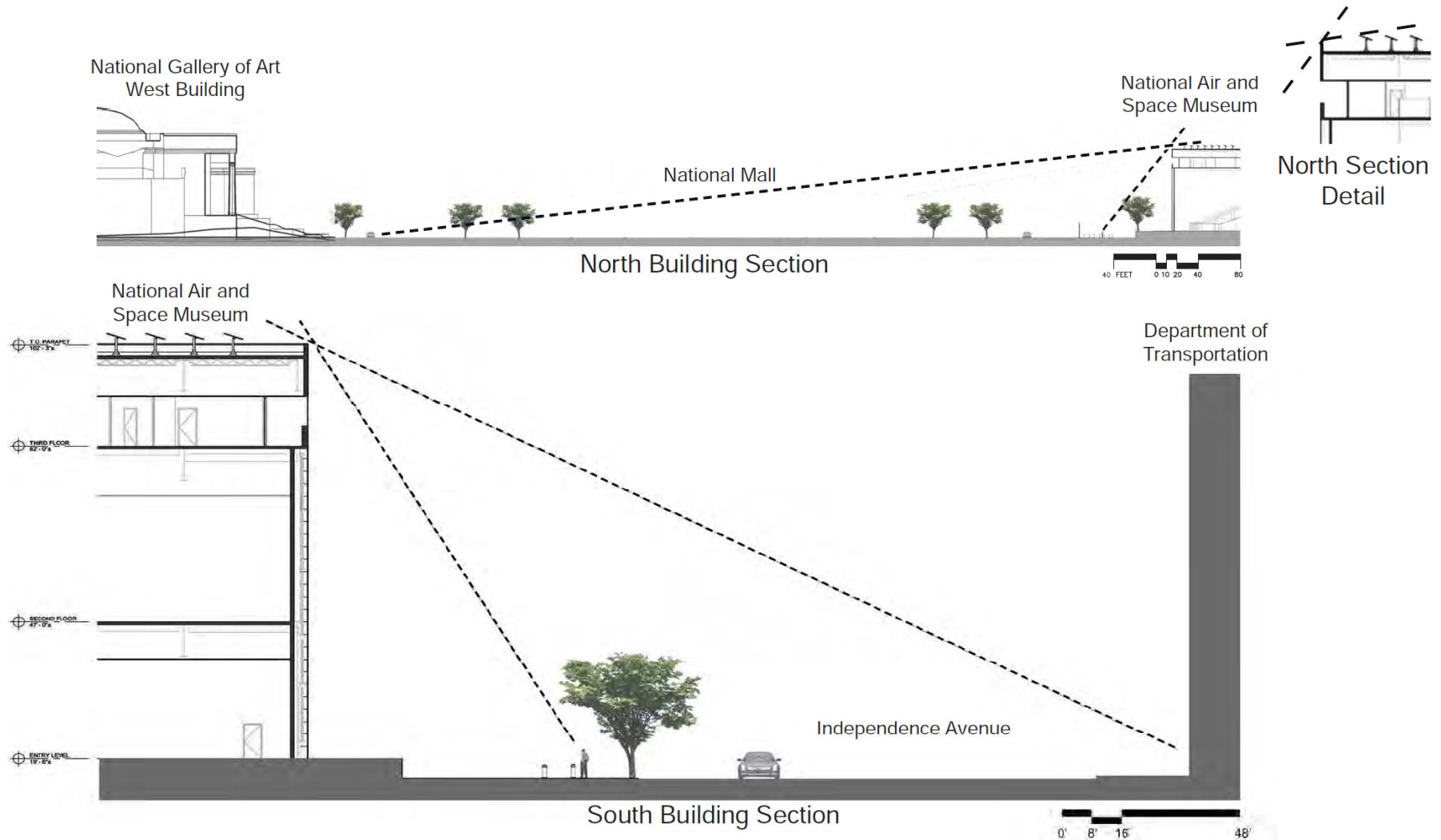
# SOLAR PANEL ALTERNATIVE: ROOF-MOUNTED PHOTOVOLTAICS

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- 70,000 sf roof area
- 1,300 PV panels
- 21.5% efficient
- 345-watt each
- Could generate approximately 630,000 KWh/yr
- Equivalent of roughly 7% to 10% of electrical load of revitalized building

# SOLAR PANEL ALTERNATIVE: ROOF-MOUNTED PHOTOVOLTAICS





# SOLAR PANEL ALTERNATIVE: SOUTH WALL BIPV'S

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**South Wall  
BIPV Applied  
to All Sides:  
Considered  
and  
Dismissed**



# SOLAR PANEL ALTERNATIVE: SOLAR CANOPY

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**Thin Film  
PV's Applied  
to Canopy of  
South  
Vestibule**





# PROJECT SCOPE AND ALTERNATIVES

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# SCHEDULE / NEXT STEPS

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| Milestone   | Date                            |
|---|---------------------------------|
| Public Scoping Meeting                                      | November 12, 2014               |
| End of Public Scoping Period                                | November 28, 2014               |
| Consulting Parties Meeting                                  | February 22, 2016               |
| Preparation of Environmental Assessment Public Review Draft | February 2016 through May 2016  |
| Predicted EA Public Review Period                           | June 2016                       |
| Section 106 Consultation                                    | February 2016 through July 2016 |
| Predicted Preparation of Decision Document                  | July 2016                       |

# OPPORTUNITIES FOR PUBLIC COMMENT

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- **Today:**  
Provide your comments for inclusion in the meeting minutes
- **Submit comments electronically by March 22, 2016 to:**  
[www.ncpc.gov](http://www.ncpc.gov) or  
[vivian.lee@ncpc.gov](mailto:vivian.lee@ncpc.gov)
- **Submit written comments by March 22, 2016 to:**  
Attn: Vivian Lee  
NCPC  
401 9<sup>th</sup> Street NW, Suite 500  
Washington, D.C. 20004

# DISCUSSION OF EFFECTS

