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### **Height Modeling Study**

Responding to the Congressional Request

Methodology

3 Approaches

# Responding to the Congressional Request

Any changes to the Height of Buildings Act that affect the historic L'Enfant City should be carefully studied to ensure that the iconic, horizontal skyline and the visual preeminence of the U.S. Capitol and related national monuments are retained.

The Committee encourages the exploration of strategic changes to the law in those areas outside the L'Enfant City that support local economic development goals while taking into account the impact on federal interests, compatibility to the surrounding neighborhoods, national security concerns, input from local residents, and other related factors \$\frac{1}{2}\$

Representative Darrell Issa Chairman, Committee on Oversight and Government Reform

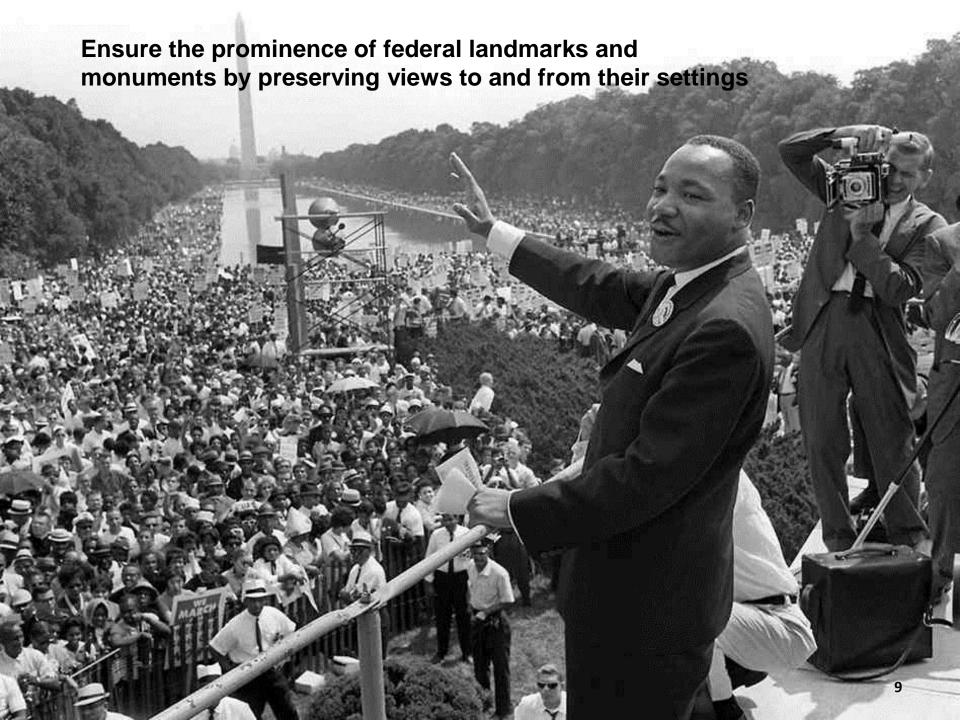
# The Height Master Plan is Guided by Three Core Principles

- 1 Ensure the prominence of federal landmarks and monuments by preserving views to and from their settings
- 2 Maintain the horizontality of the monumental city skyline
- 3 Minimize negative impacts to nationally significant historic resources, including the L'Enfant Plan

# Ensure the prominence of federal landmarks and monuments by preserving views to and from their settings





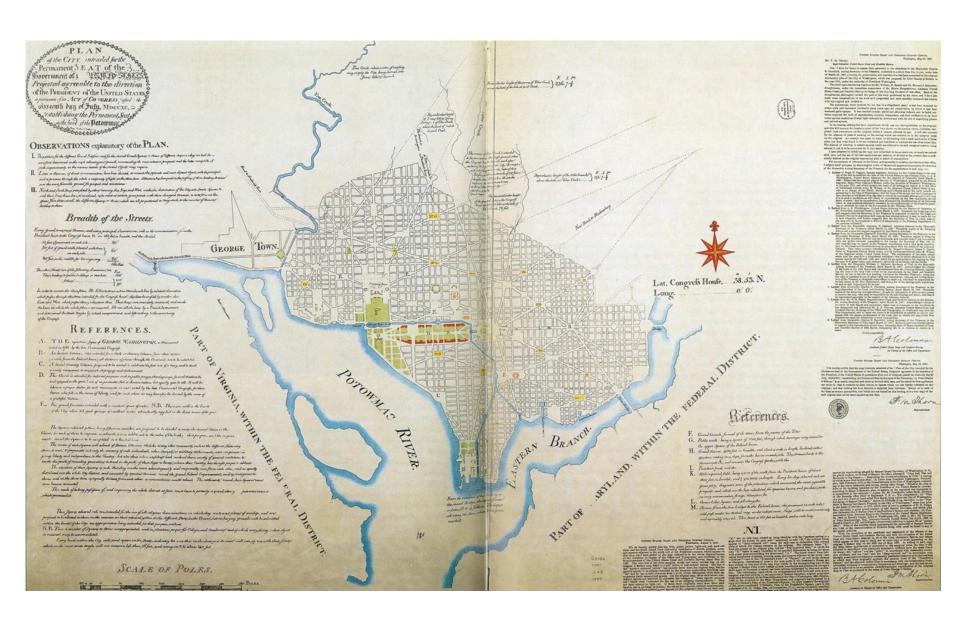






### The L'Enfant Plan

The avenues were to be wide, grand, lined with trees, and situated in a manner that would visually connect ideal topographical sites throughout the city, where important structures, monuments, and fountains were to be erected.



The L'Enfant Plan Facsimile, US Coast and Geodetic Survey

### 1791 Building Code

Rules and Regulations established by the President of the United States, and the Commissioners of the City of Washington, for the erection of buildings

- All buildings on the streets shall be parallel
- The wall of no house to be higher than forty feet to the roof, in any part of the city, nor shall any be lower than thirty-five feet on any of the avenues
- Squares are designed for common use, the property is reserved to the public



### The Height of Buildings Act of 1910

**Applies Citywide** 

### Residential Streets (80'-160' R.O.W.)

- Width of the street = building height
- Maximum height = 90'

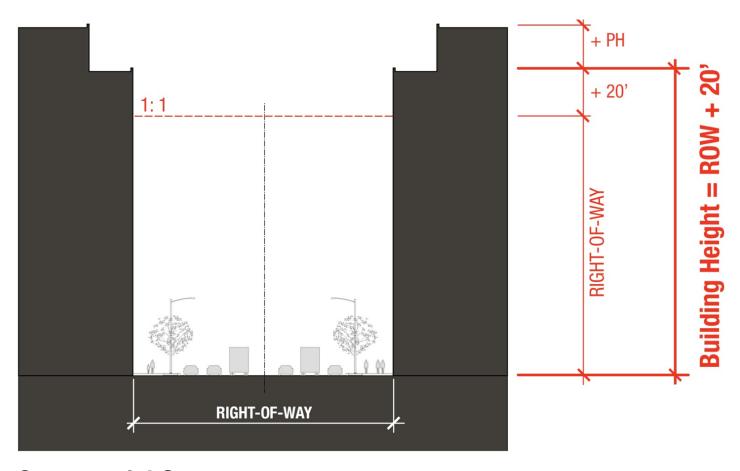
### Commercial Streets (90'-160' R.O.W.)

- Width of the street + 20' = building height
- Maximum height = 130'

### Pennsylvania Avenue (160' R.O.W.)

Maximum height = 160'

### The Height of Buildings Act of 1910

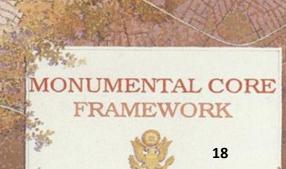


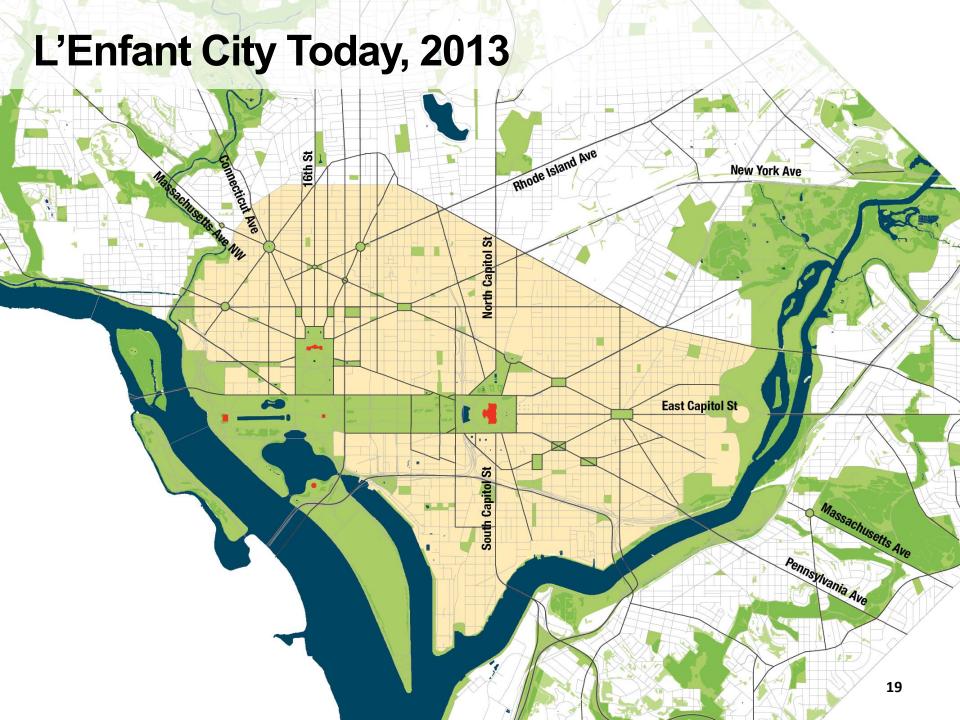
**Commercial Streets** 

## The Monumental Core Framework Plan, 2009

Connecting new destinations with the National Mall

- Transform the federal precincts surrounding the National Mall into vibrant destinations
- Improve connections between the city, the National Mall and the waterfront
- Achieve the highest level of livability and sustainability in central Washington







# Methodology

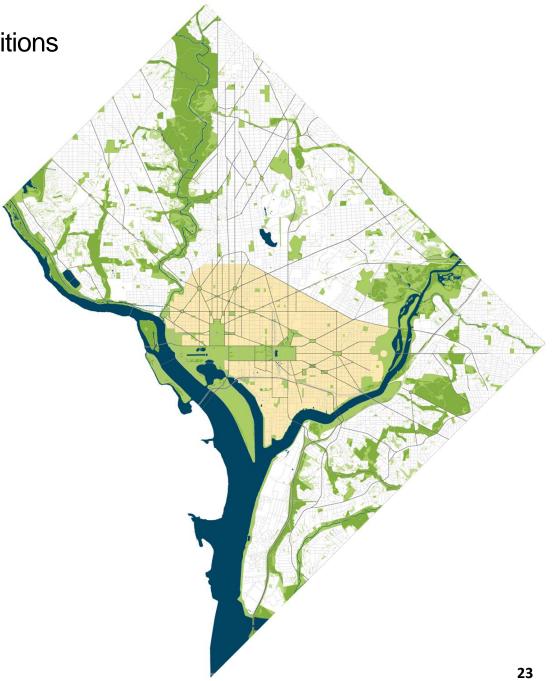
- 1. Understand the Existing Conditions
- 2. Define Areas to be Studied for Increased Building Height
- 3. Update the Citywide GIS 3D Database
- 4. Develop a Photographic Database, Both Eye-Level & Aerial
- 5. Model Various Height Increments
- 6. Consider the Visual Impacts of Increased Building Height on the City's Built Form with Respect to the Core Principles



# **Updating the City's 3D GIS Database** 22

Understand the Existing Conditions

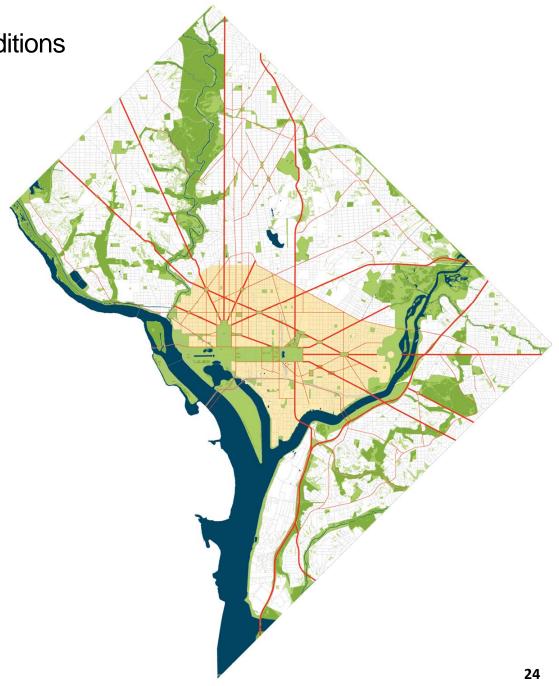
# Parks and Open Spaces



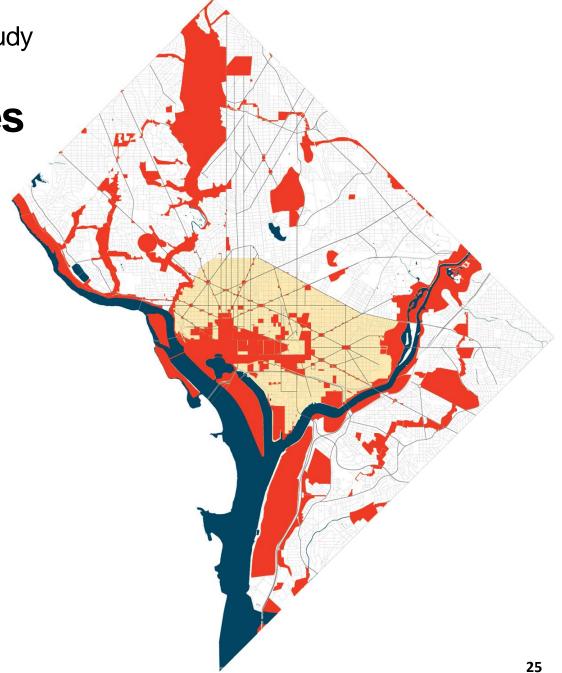
Understand the Existing Conditions

### **Streets**

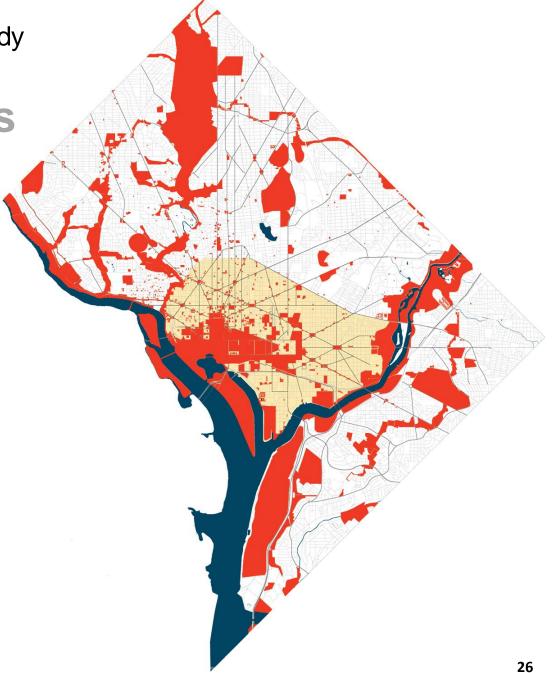
A city connected by parks, avenues, streets and views



**Federal Properties** 

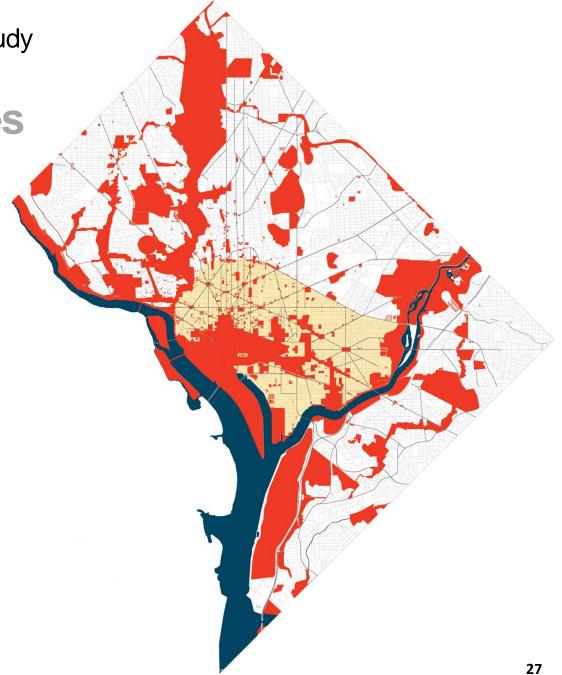


**Federal Properties Historic Sites** 



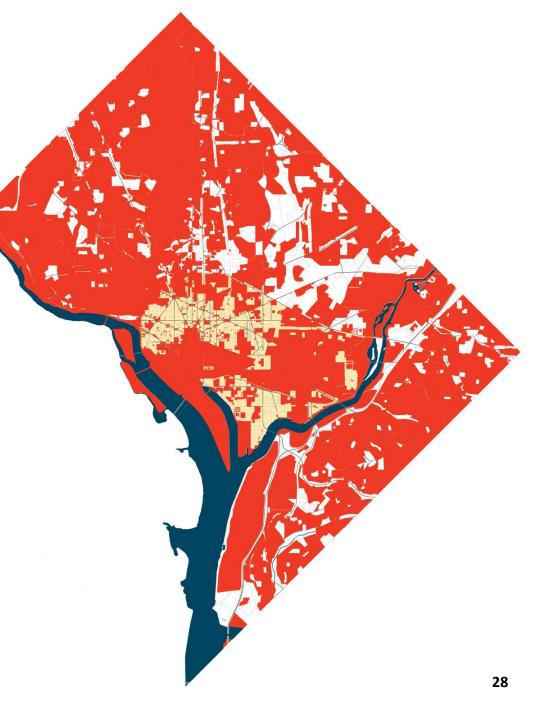
Federal Properties Historic Sites

**Low Density Historic Districts** 



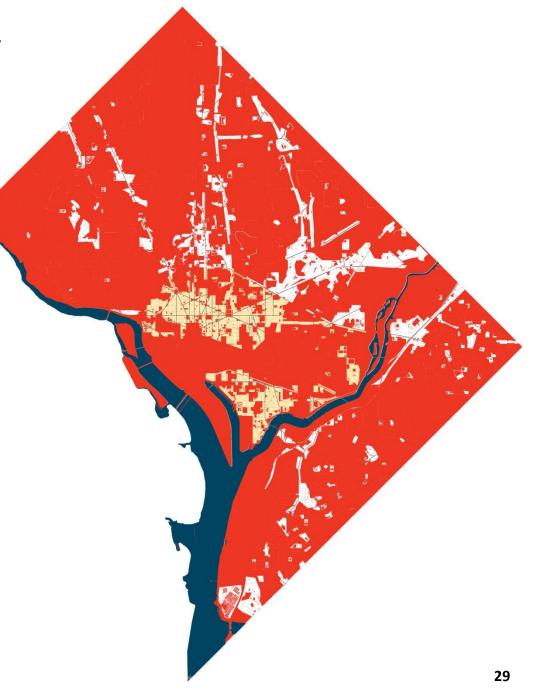
Federal Properties
Historic Sites
Low Density
Historic Districts

**Low Density Areas** 



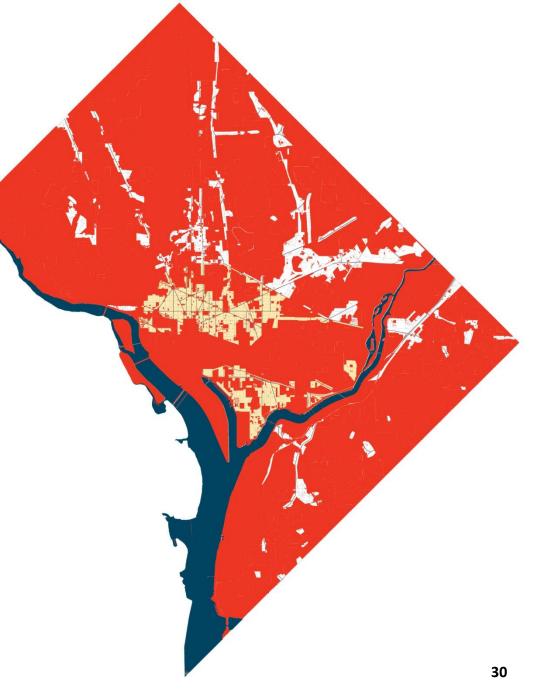
Federal Properties
Historic Sites
Low Density
Historic Districts
Low Density Areas

Institutional

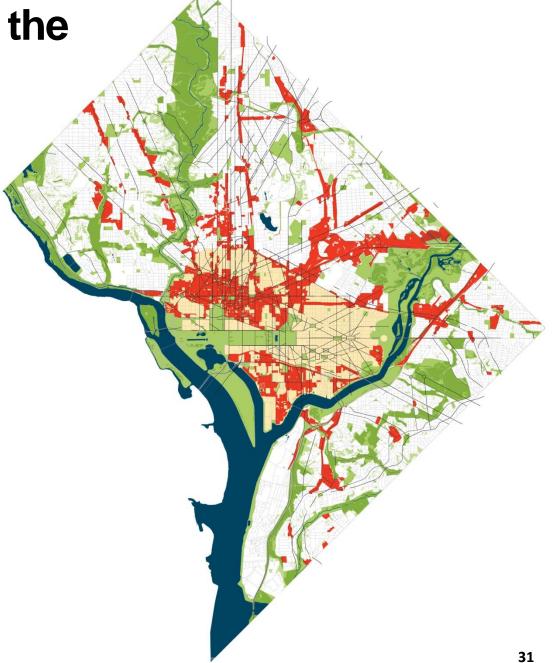


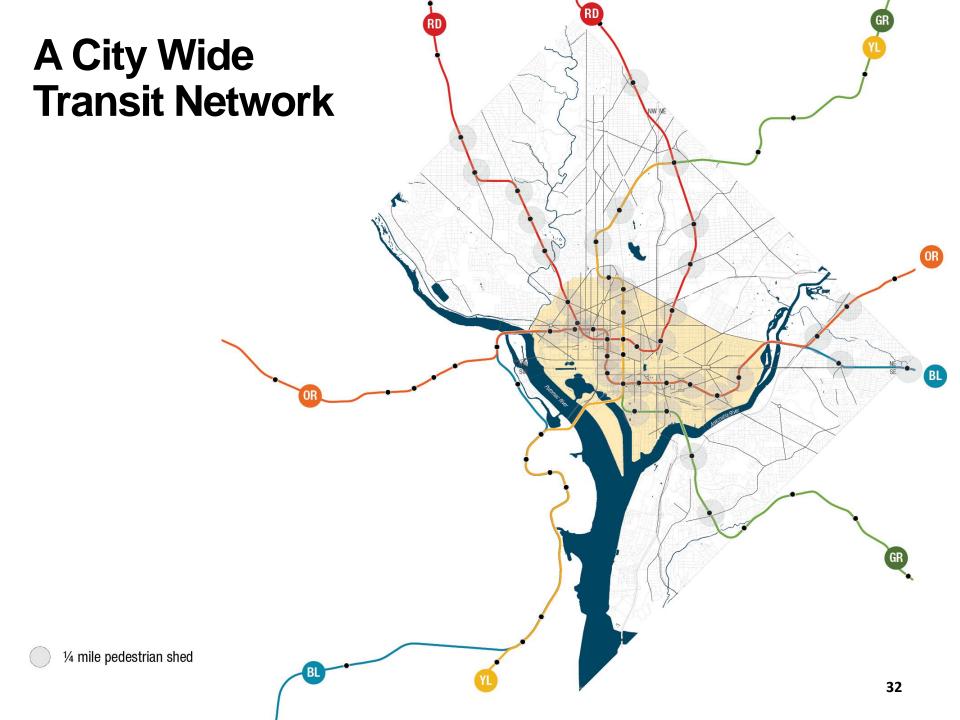
Federal Properties
Historic Sites
Low Density
Historic Districts
Low Density Areas
Institutional

**Public Facilities** 

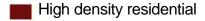


Areas included in the **Modeling Study** 





**Comprehensive Plan Future Land Use Map** 



Moderate density residential

Medium density residential

Low density residential

Low density commercial

Moderate density commercial

Medium density commercial

High density commercial

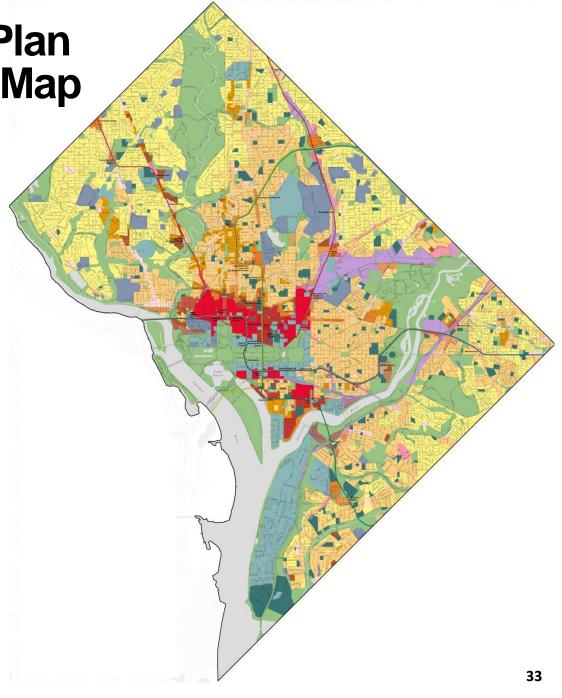
Production, distribution and repair

Federal

Local public Facilities

Institutional

Parks, recreation and open space



High and Medium Density Areas

Land use information is based on the District of Columbia Comprehensive Plan Future Land Use Designations

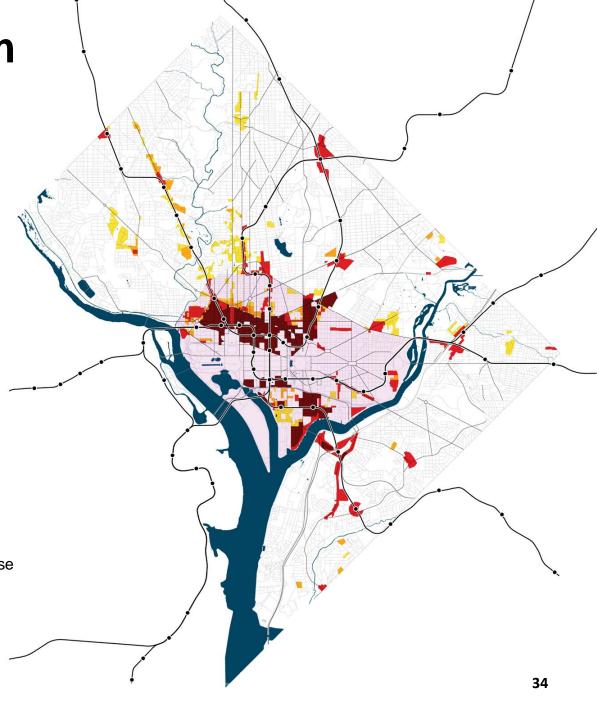


Medium Density Commercial and Mixed Use

High Density Residential

Medium Density Residential

L'Enfant City Boundary



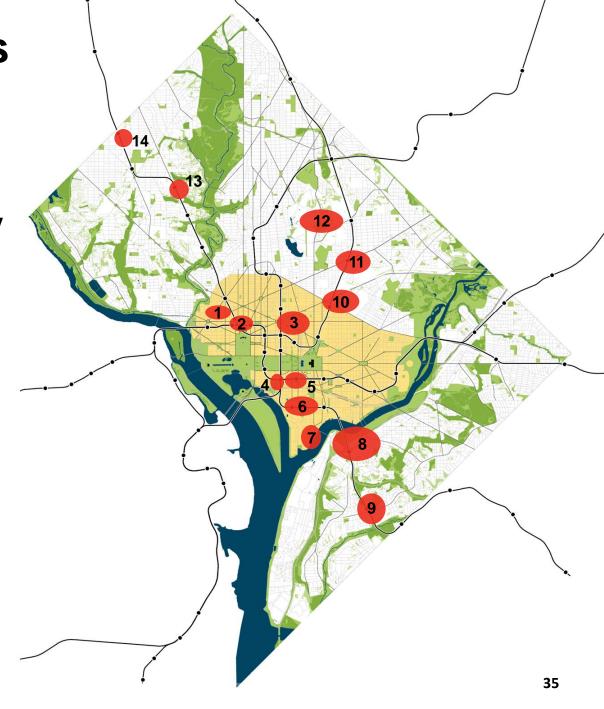
**Illustrative Areas** 

- High and medium density
- Transit based
- Development potential

### **Illustrative Areas**

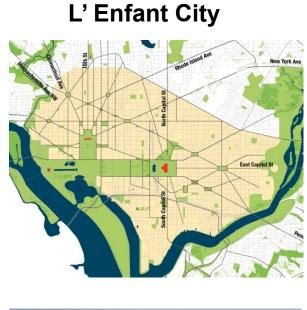


- M Street and 22<sup>nd</sup> Street, NW
- 2. Farragut
- 3. K Street and 5<sup>th</sup> Street, NW
- 4. L'Enfant Plaza
- 5. Federal Center, SW
- 6. Waterfront Station
- 7. Buzzard Point
- 8. Poplar Point (2 Sites)
- 9. Congress Heights
- 10. Florida Avenue Market
- 11. Rhode Island Avenue, NE
- 12. Old Soldier's Home
- 13. Intelstat
- 14. Friendship Heights



# **Consider the Visual Impacts at Various Scales**















# Approaches

- 1. No Height Increase
- 2. Reinforce Relationship between Building Height and Street Width
- 3. Raise Height Cap in Selected Areas
- 4. Change Height Cap City-Wide



#### **Four Approaches**



Approach 1: No Change to the Height Act



Approach 3: Selective Areas



Approach 2: Street to Height Relationship



Approach 4: City Wide Increase

# Approach 1: No Height Increase

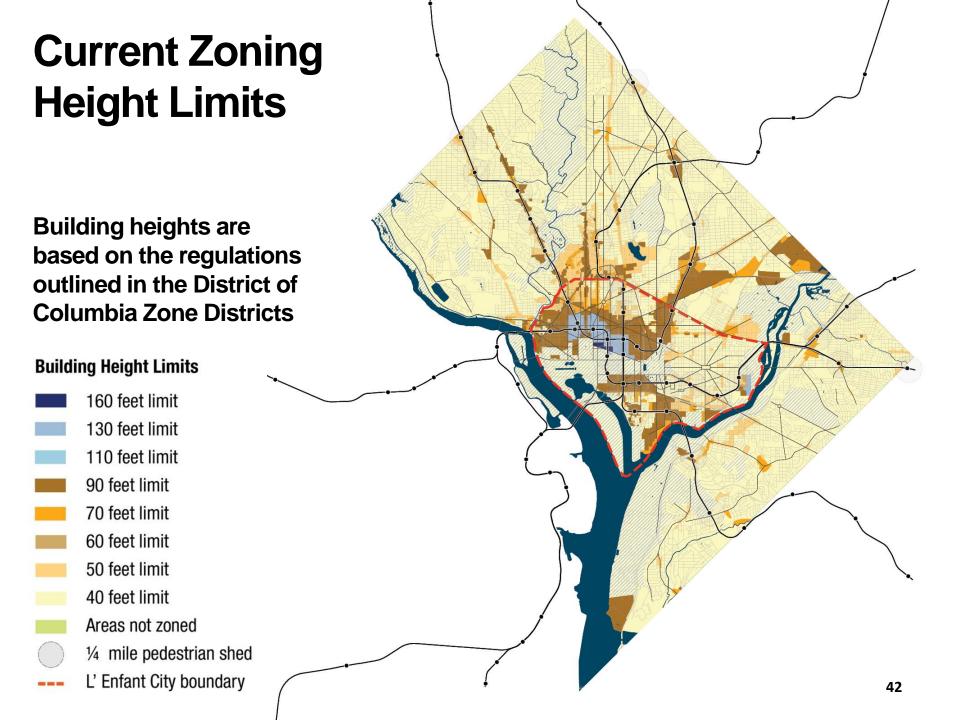
1A: Status Quo – Maintain the Existing Building Height

**1B: Allow Penthouse Occupancy** 

# Approach 1: No Height Increase

1A: Status Quo – Maintain the Existing Building Height

**1B: Allow Penthouse Occupancy** 



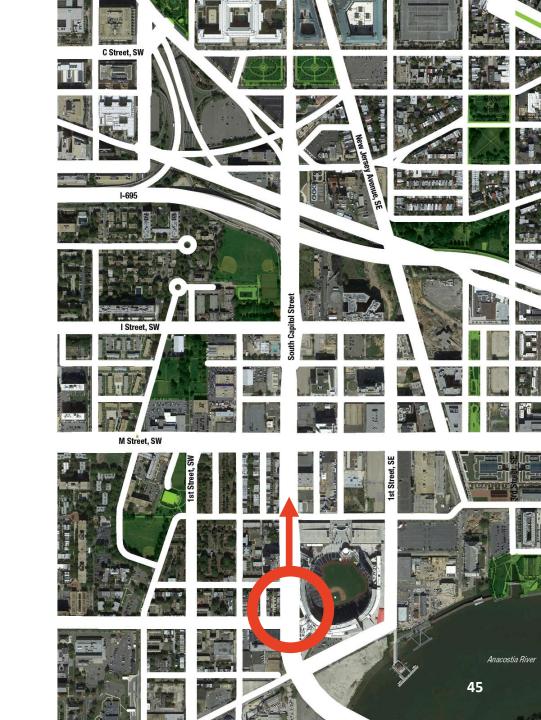
# Area of the City Currently Zoned for 90' Height Limit





Approach 1A: Status Quo

South Capitol Street, looking north: Street Network











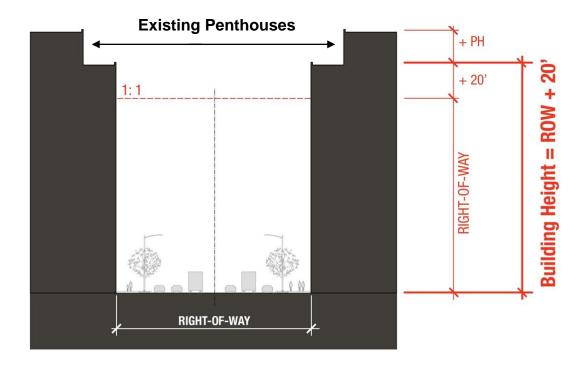
# Approach 1: No Height Increase

1A: Status Quo – Maintain the Existing Building Height

**1B: Allow Penthouse Occupancy** 

## **Today Penthouses include Unoccupied Space**

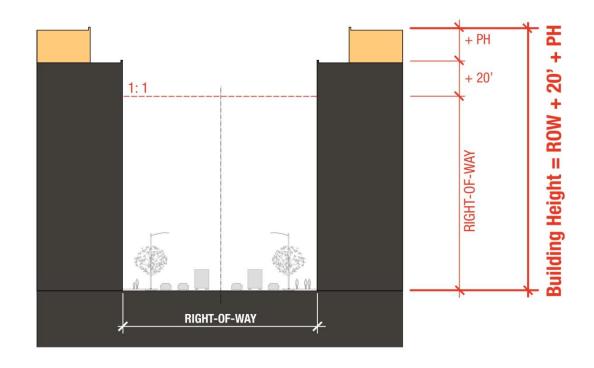
#### **Existing Conditions**



#### Approach 1B: Allow Penthouse Occupancy

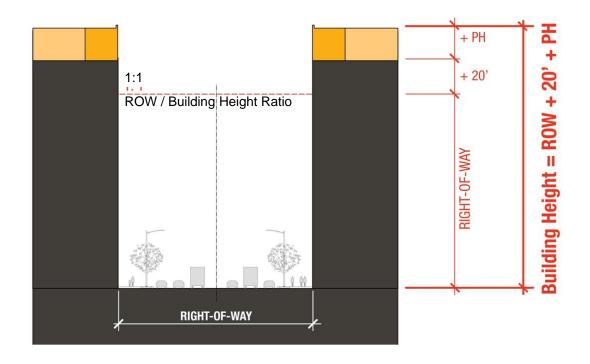
## Allow Penthouse to Include Occupied Space

#### Occupied Penthouse



Existing Penthouse to be Occupied

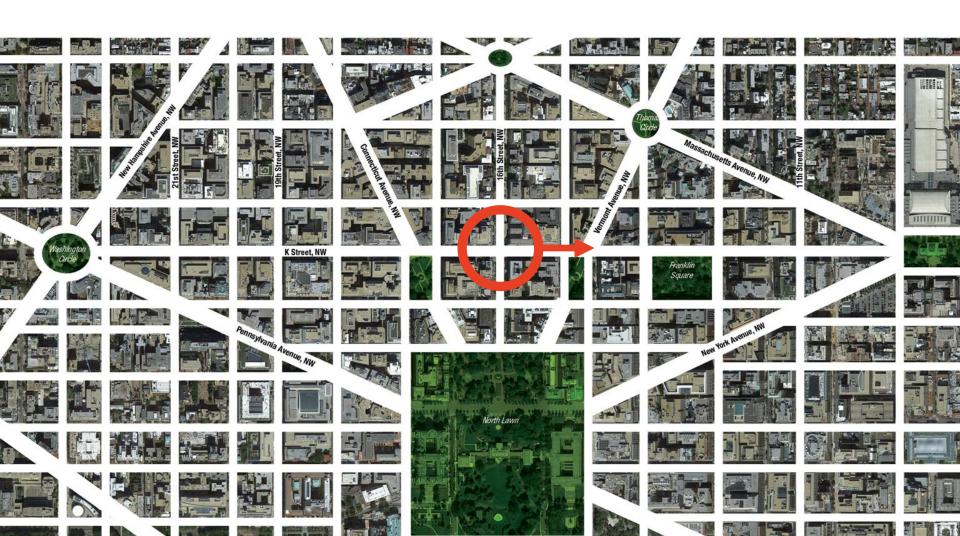
#### **Eliminate Penthouse Setbacks**



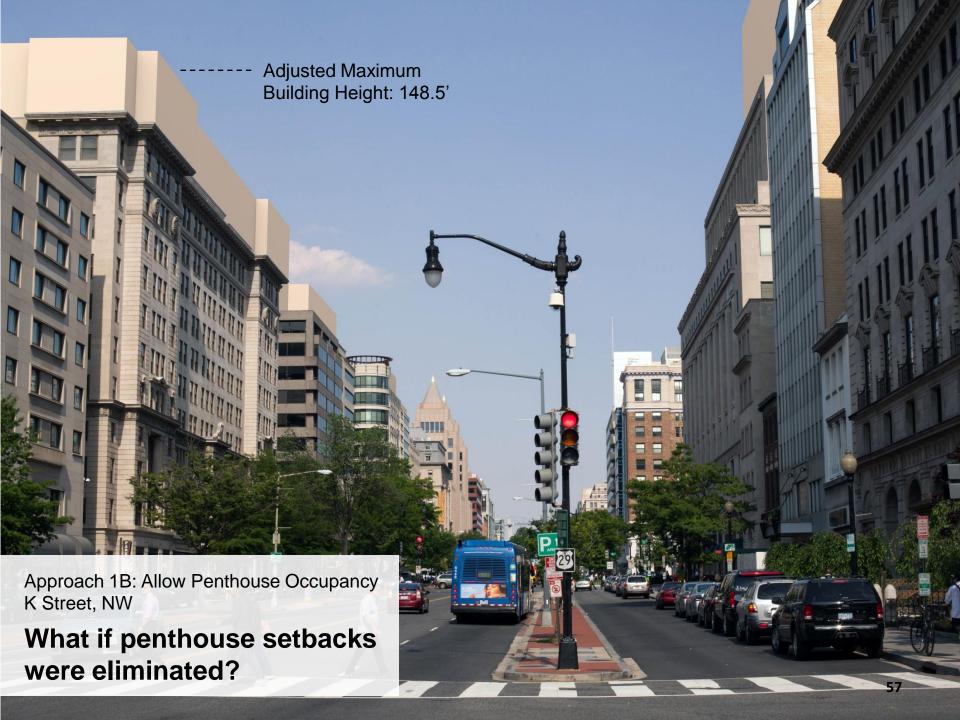


Approach 1B: Allow Penthouse Occupancy

#### K Street / 16<sup>th</sup> Street, NW looking east: Street Network



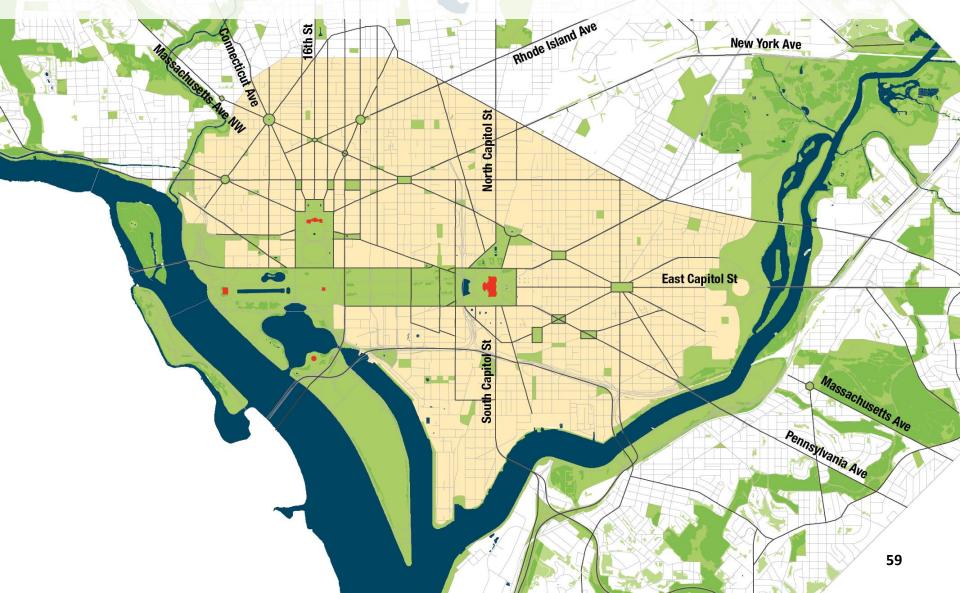




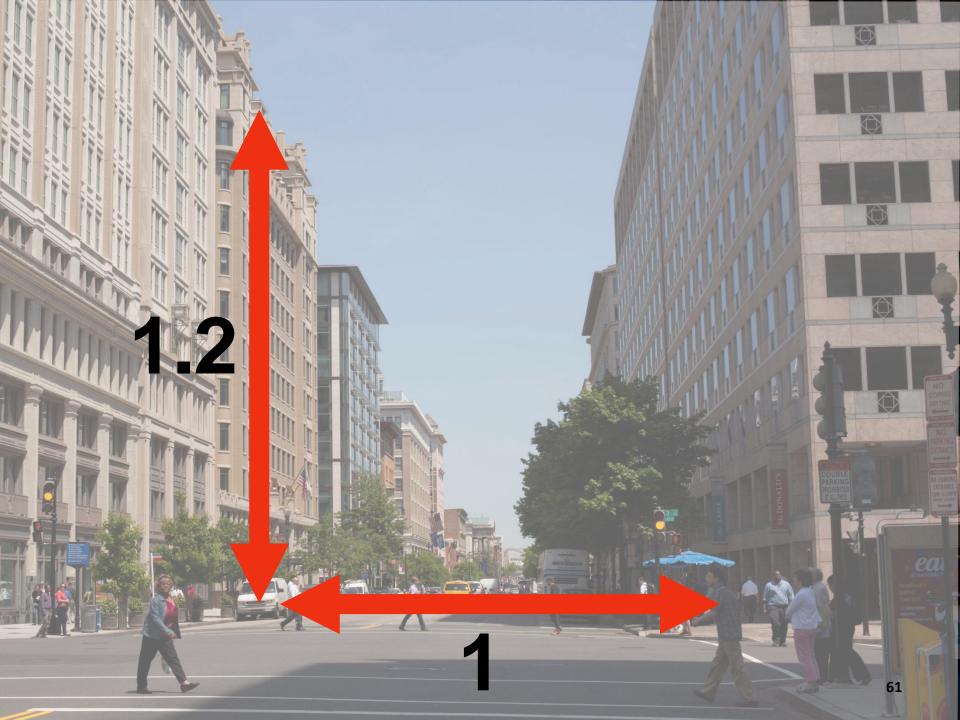
# Approach 2: Working with the principles of the L'Enfant Plan

Reinforce Relationship Between Building Height and Street Width

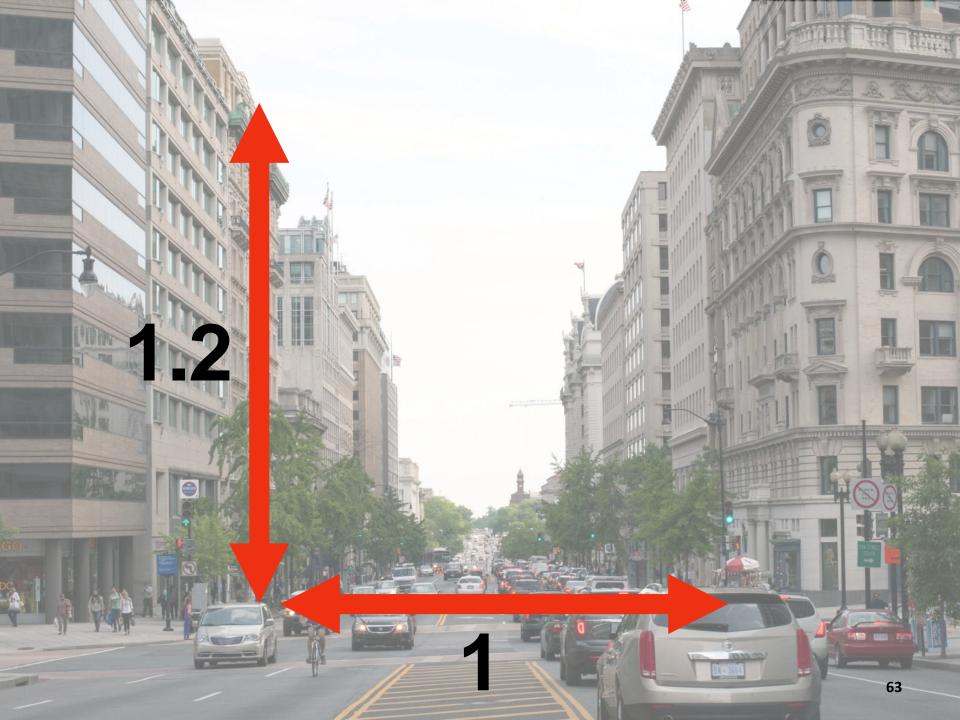
# Reinforce the relationship between the street network and the building height







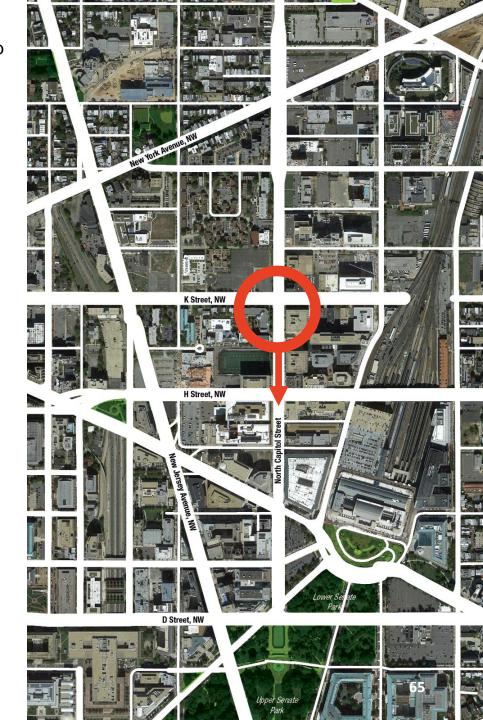




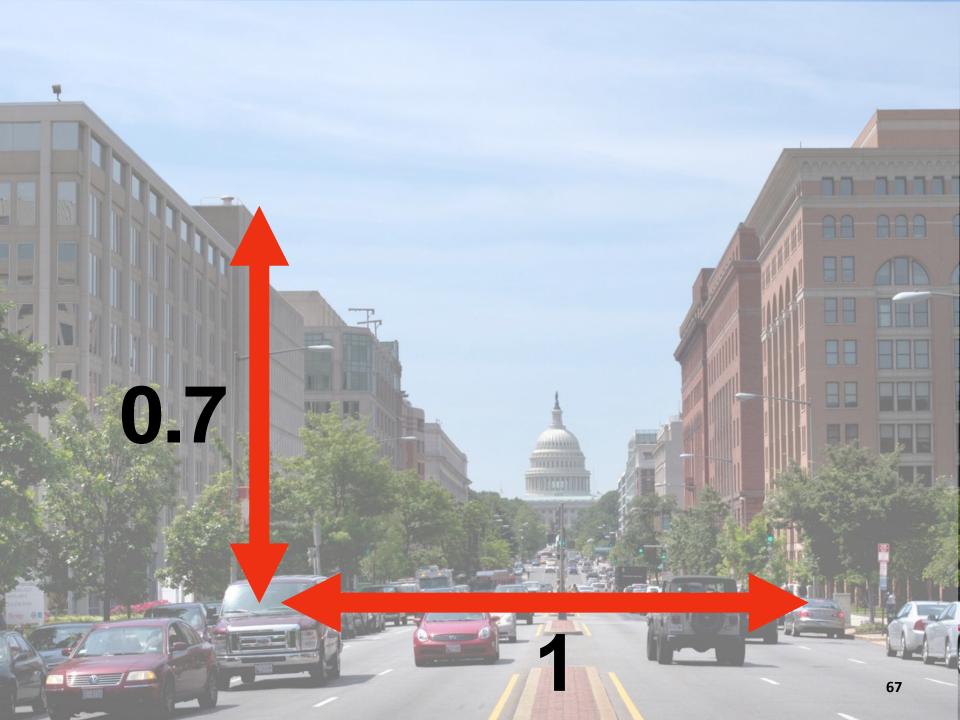


Approach 2: Building Height / Street Width Relationship

## **North Capitol Street, looking south Street Network**







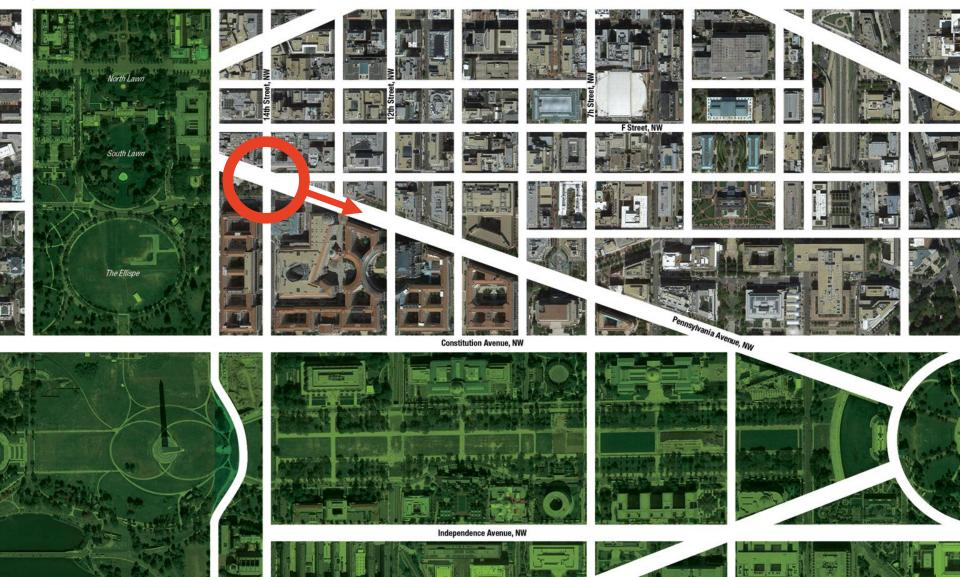








#### Pennsylvania Avenue: looking east Street Network











### Approach 3: Raise the Height Cap in Selected Areas

3A: L'Enfant City

3B: Outside L'Enfant City – but within Topographic Bowl

3C: Illustrative Clusters

## Approach 3: Raise the Height Cap in Selected Areas

3A: L'Enfant City

3B: Outside L'Enfant City – but within Topographic Bowl

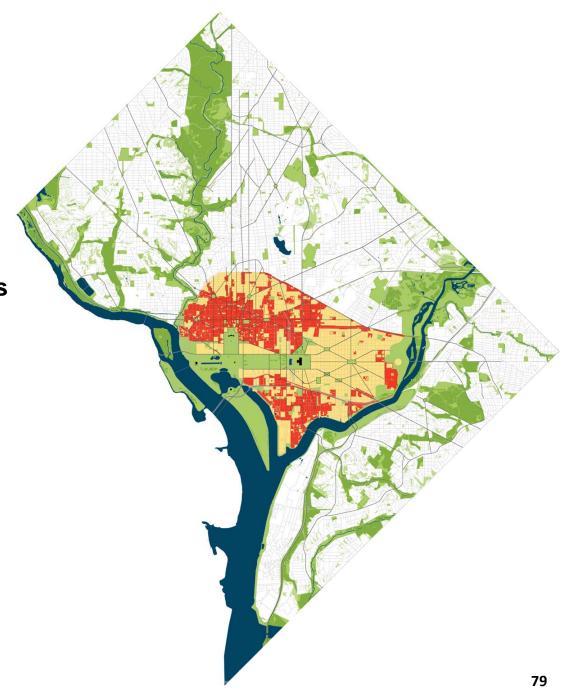
3C: Illustrative Clusters

Approach 3A: L'Enfant City

#### Raise Height Cap in Selected Areas:

#### L'Enfant City

- High and medium density
- Eliminates exclusion areas



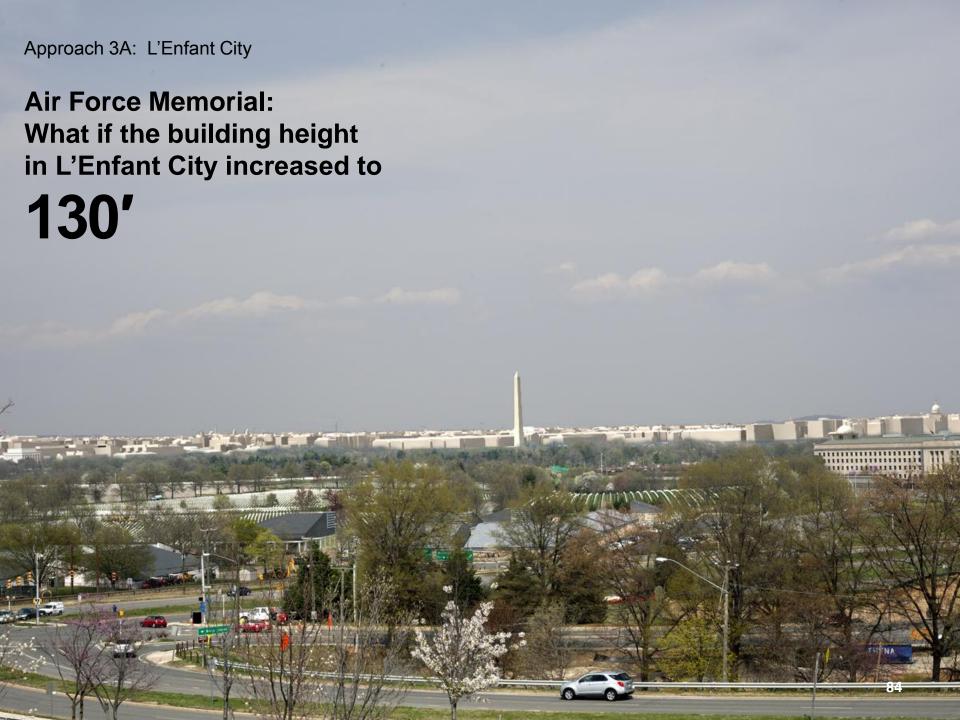
Areas considered for height increase

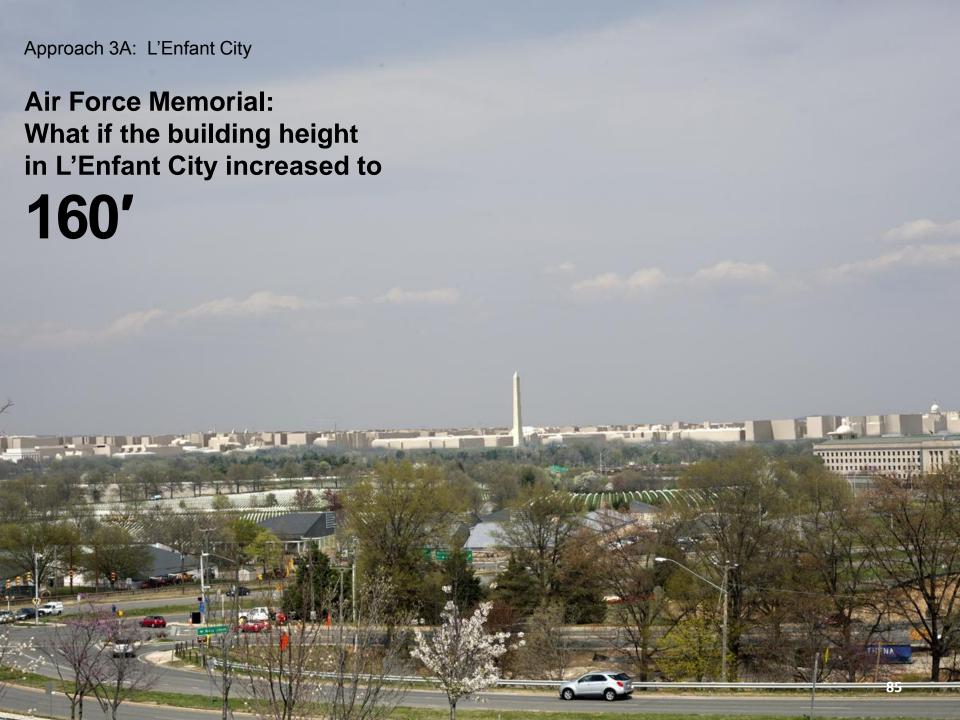
### L'Enfant City Rhode Island Ave 16th St **New York Ave** North Capitol St **East Capitol St** South Capitol St Massachusetts Ave Pennsylvania Ava 80

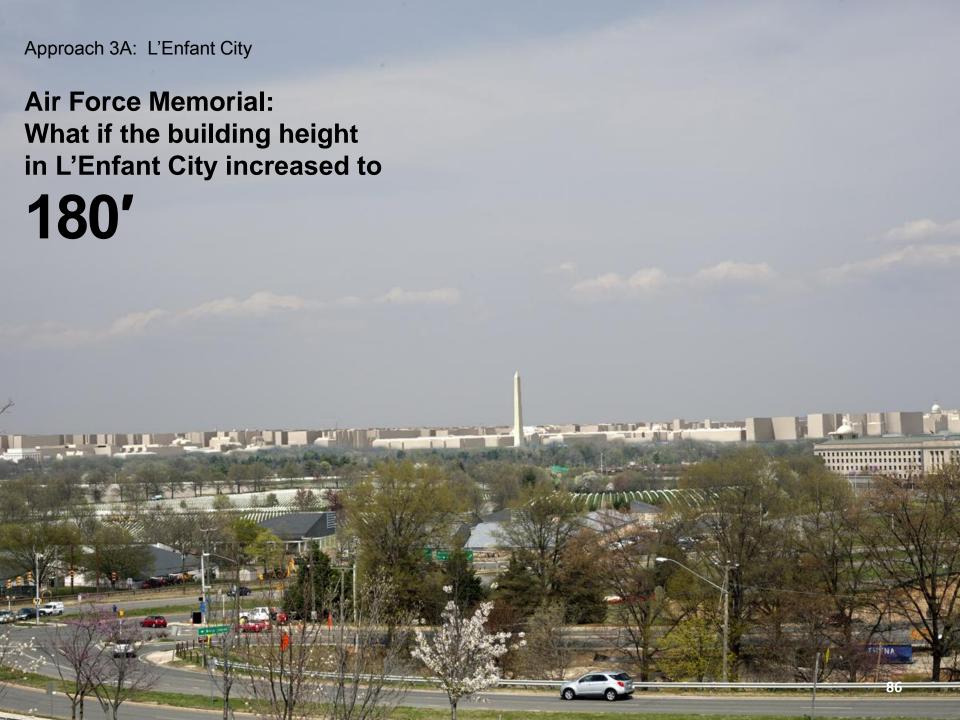
## L'Enfant City Rhode Island Ave **New York Ave** East Capitol St Massachusetts Ave Pennsylvania Ava Areas considered for height increase 81

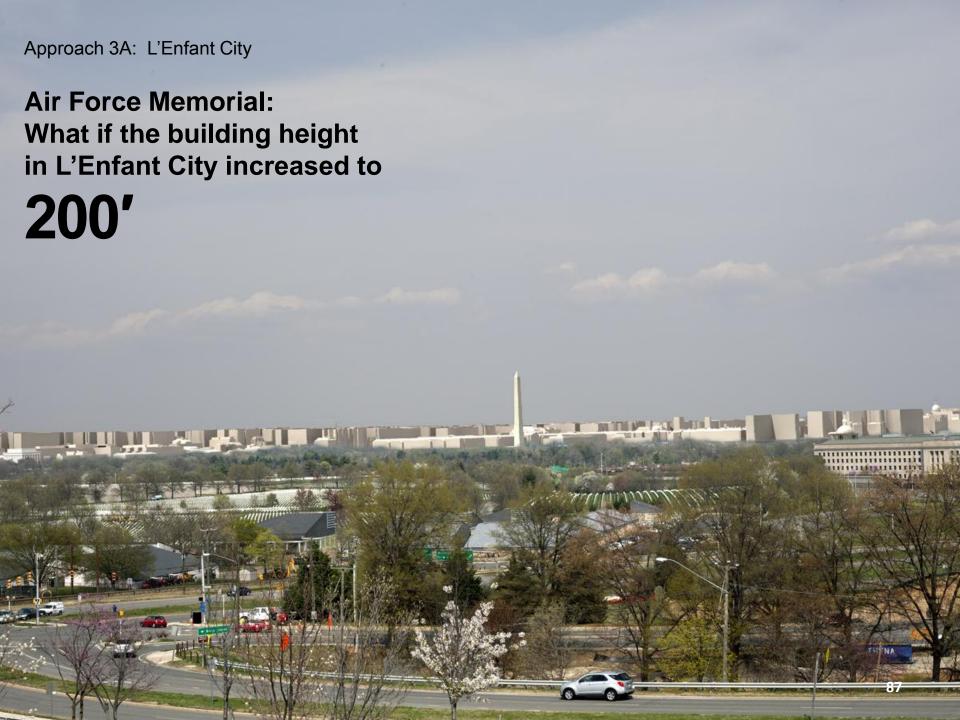




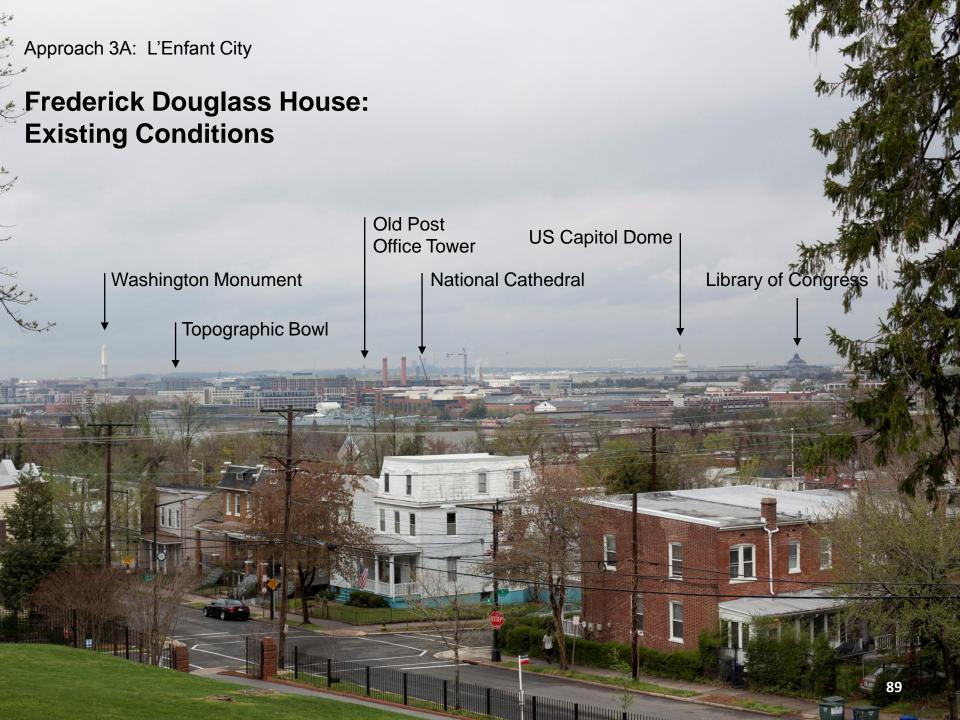


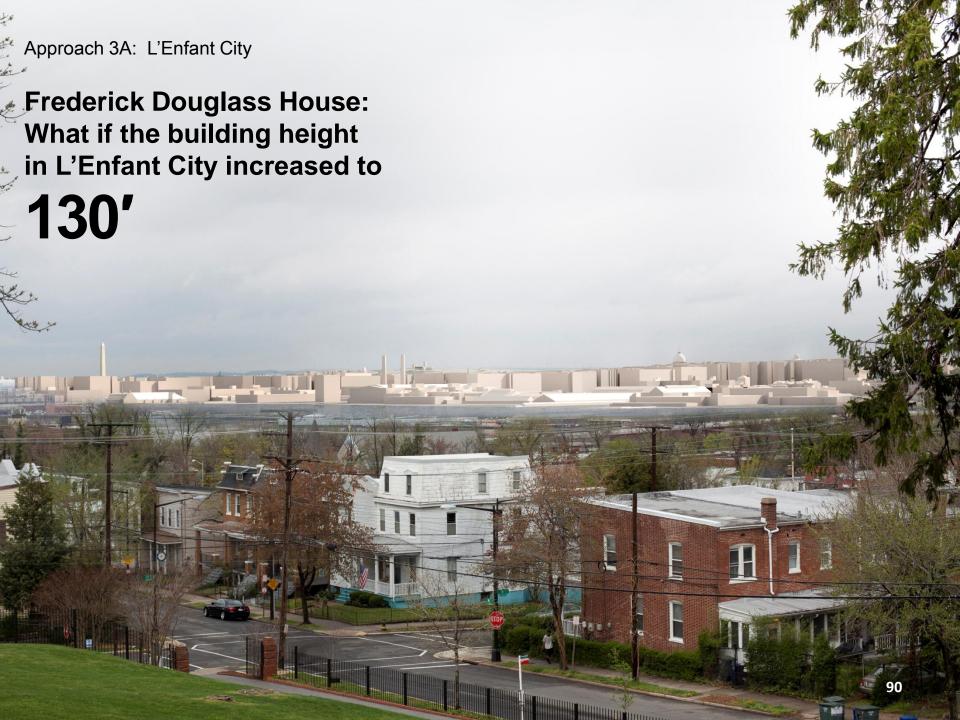


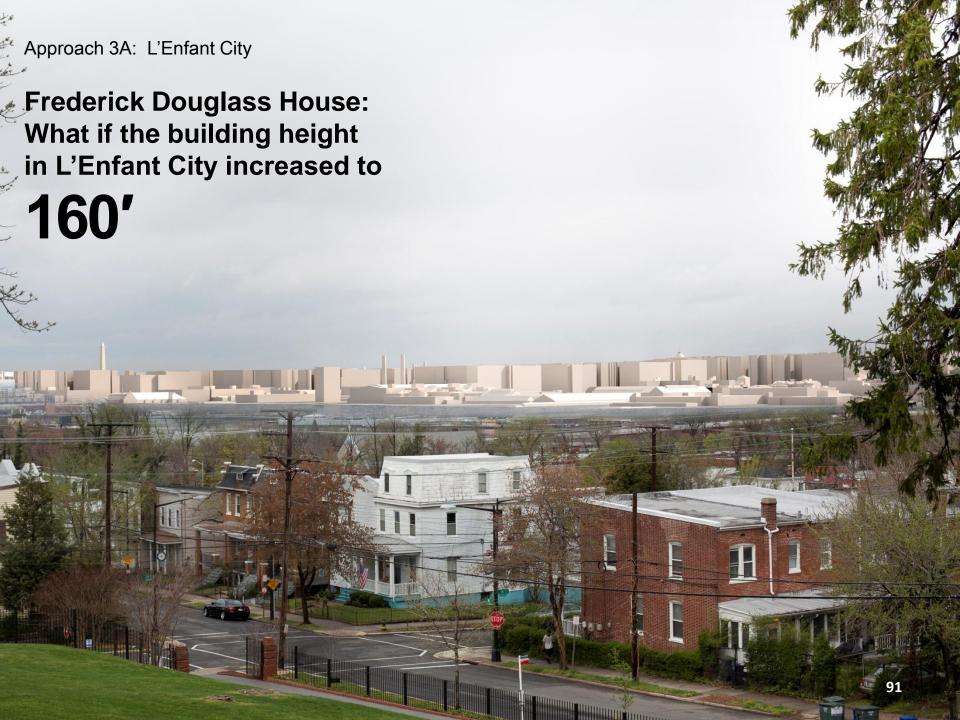


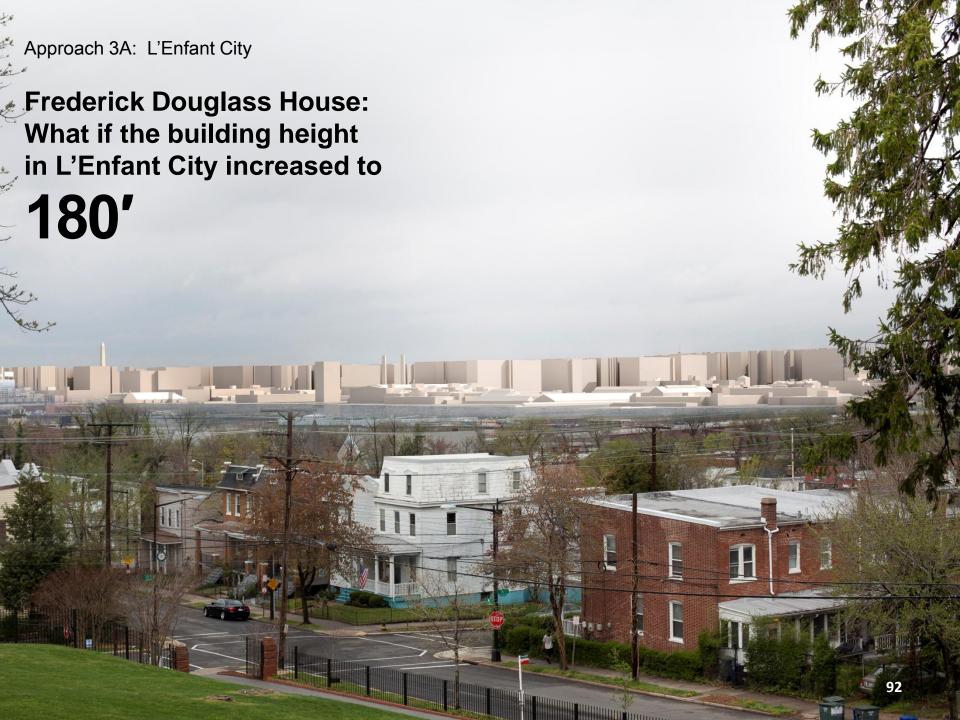


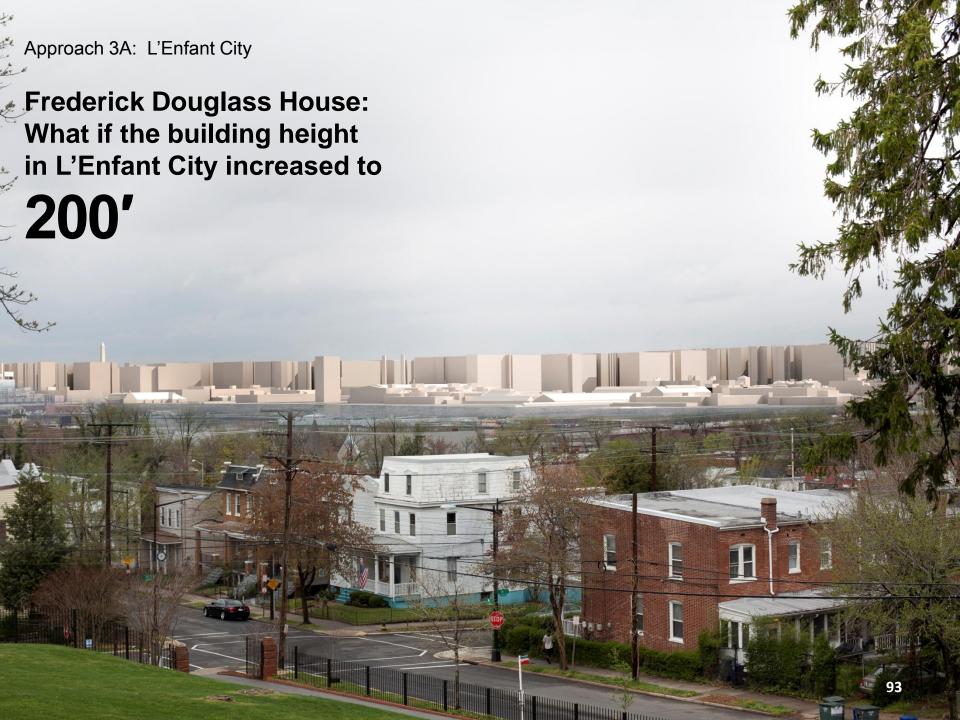












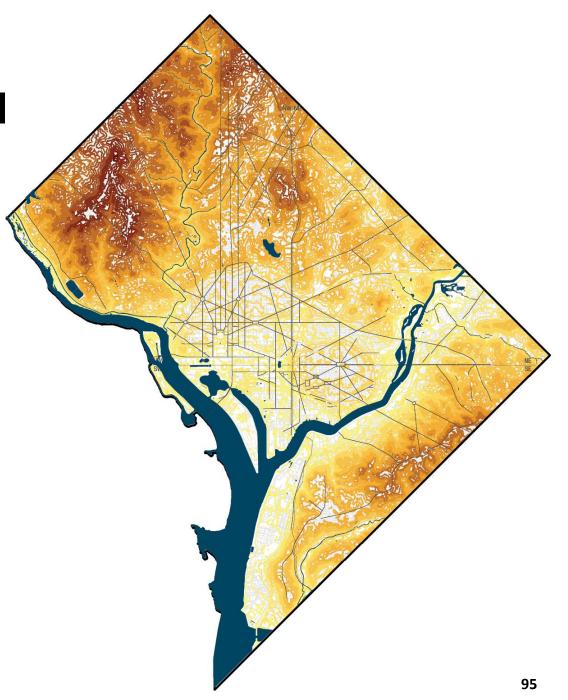
## Approach 3: Raise the Height Cap in Selected Areas

3A: L'Enfant City

3B: Outside L'Enfant City – but within Topographic Bowl

3C: Illustrative Clusters

A Clear Topographic Bowl

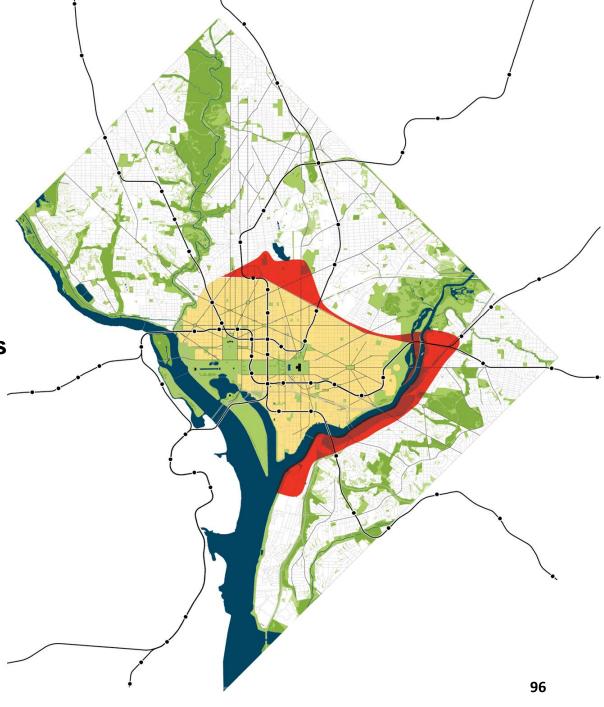


#### Raise Height Cap in Selected Areas:

Outside L'Enfant City but within Topographic Bowl

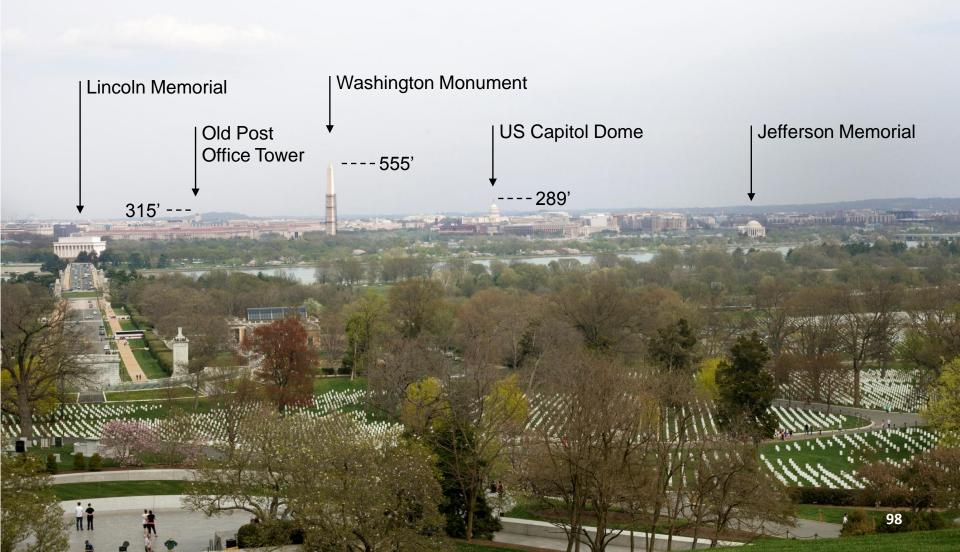
High and medium density

Eliminates exclusion areas





#### **Arlington Cemetery: Existing Conditions**



# Arlington Cemetery: What if the building height outside L'Enfant City but within the topographic bowl increased to



Arlington Cemetery:
What if the building height outside L'Enfant City
but within the topographic bowl increased to



# Arlington Cemetery: What if the building height outside L'Enfant City but within the topographic bowl increased to



# Arlington Cemetery: What if the building height outside L'Enfant City but within the topographic bowl increased to











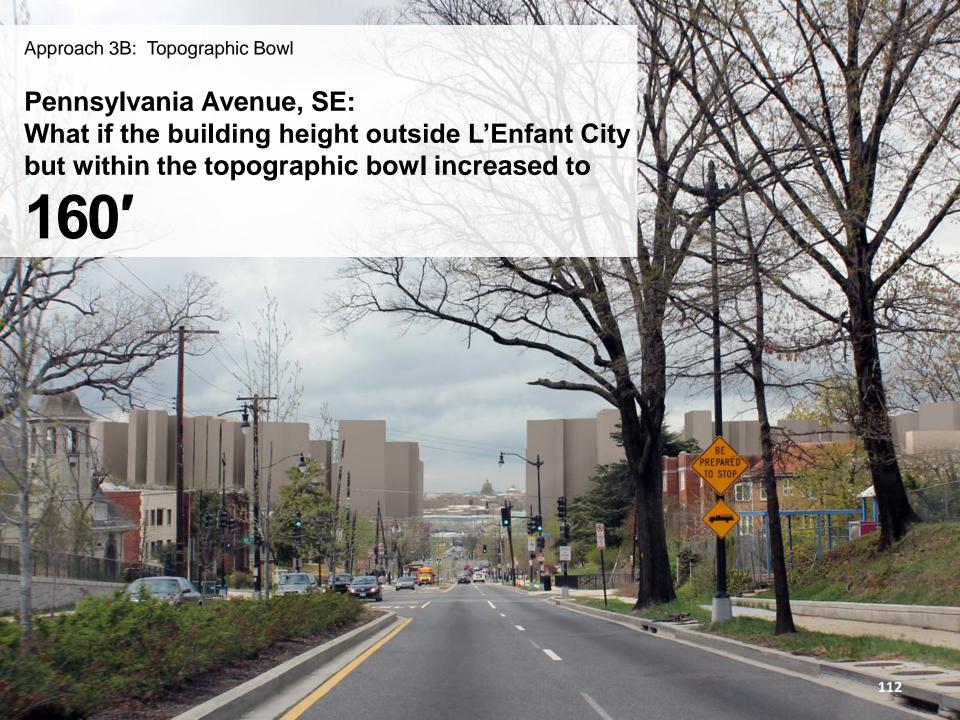


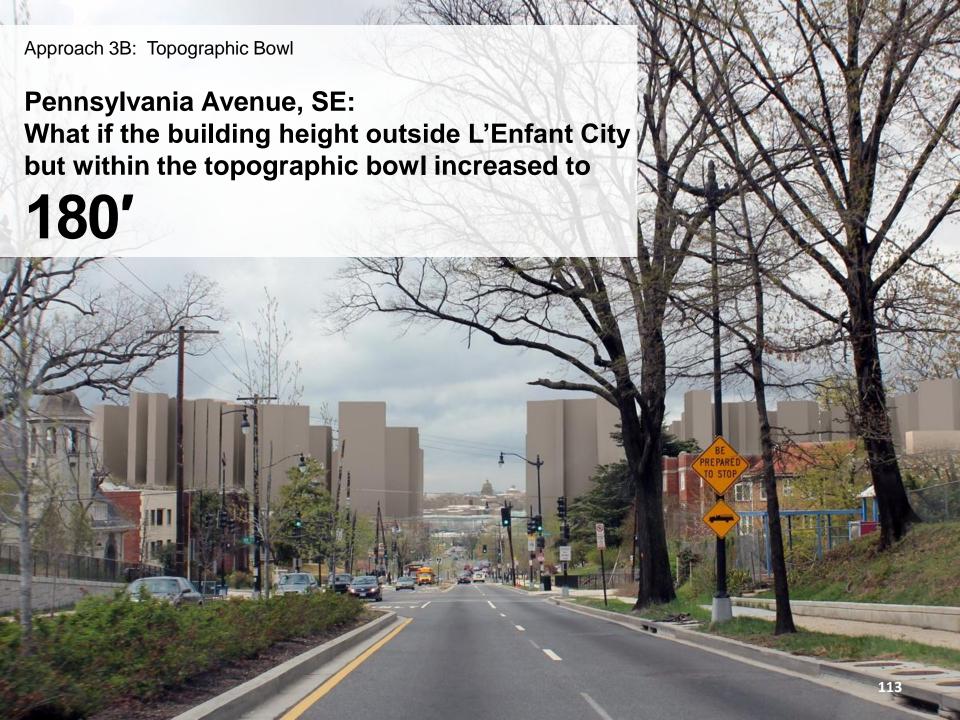


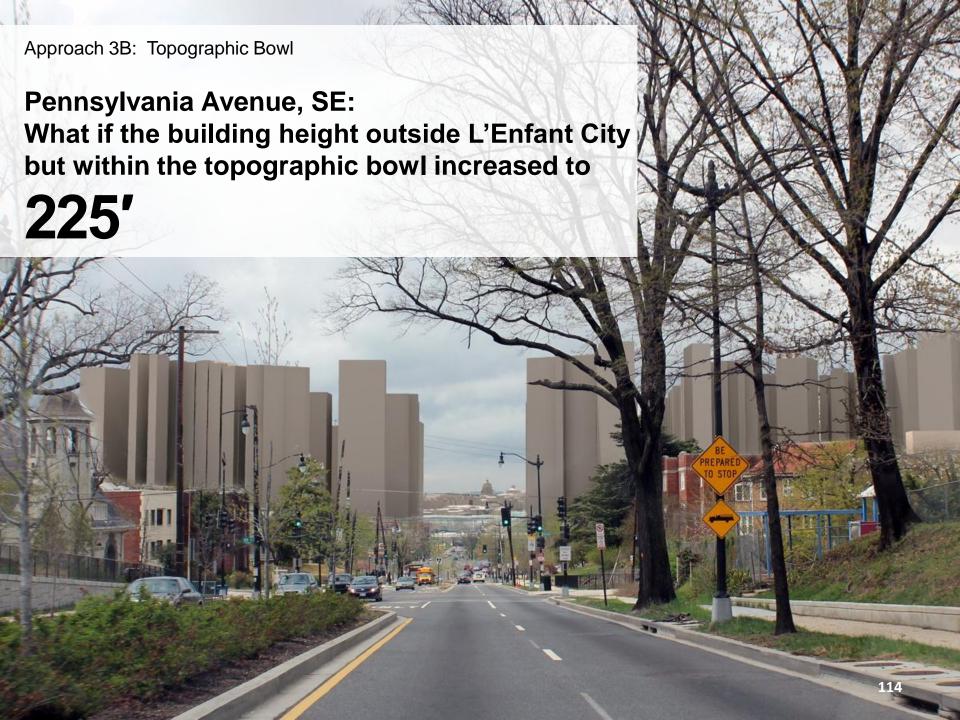












## Approach 3: Raise the Height Cap in Selected Areas

3A: L'Enfant City

3B: Outside L'Enfant City – but within Topographic Bowl

**3C: Illustrative Clusters** 

High and Medium Density Areas

Land use information is based on the District of Columbia Comprehensive Plan Future Land Use Designations

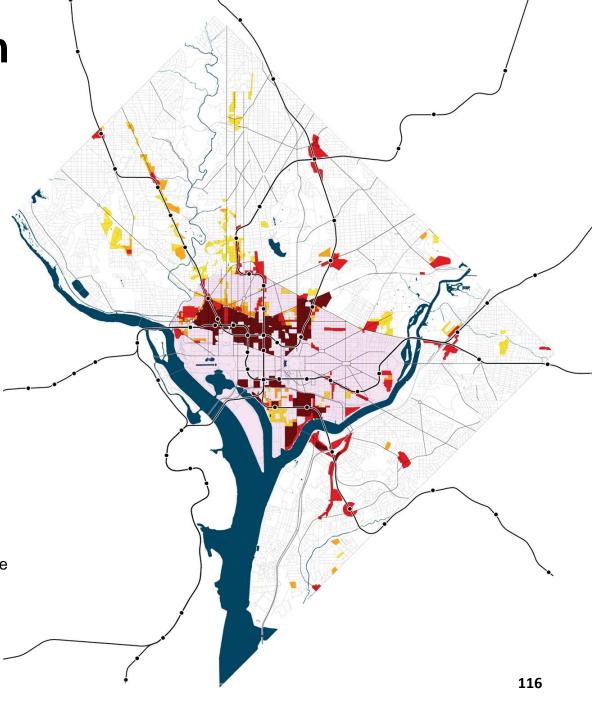


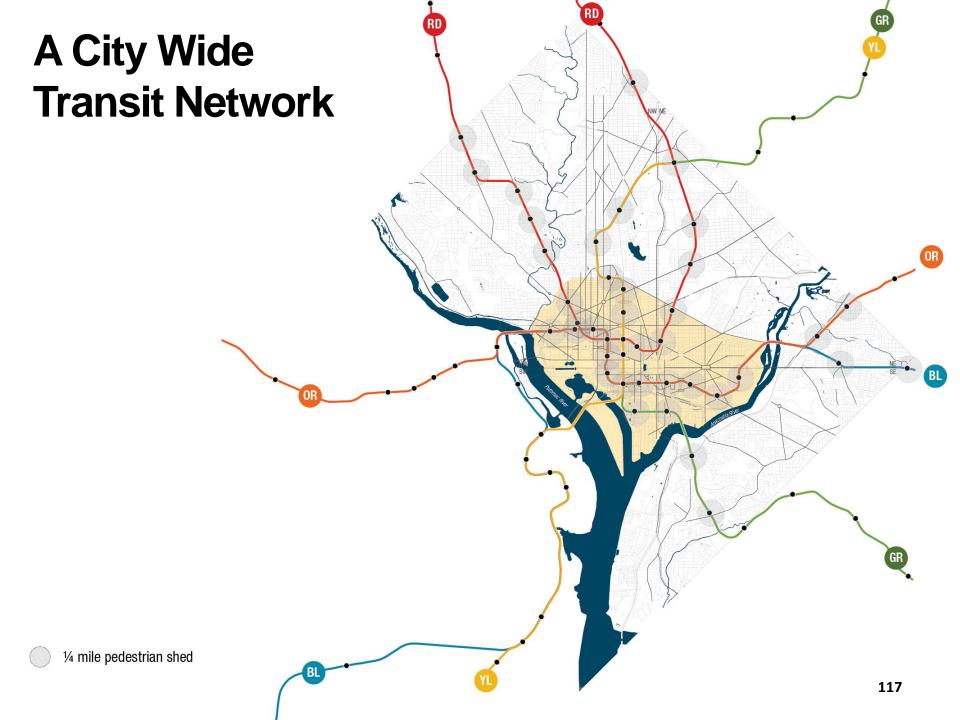
Medium Density Commercial and Mixed Use

High Density Residential

Medium Density Residential

L'Enfant City Boundary





# Adjacent Cores

# Building heights for adjacent cores are based on the following regulatory documents:

Rosslyn, VA Height Plan and Sculpting Guidelines

Crystal City, VA Crystal City Sector Plan

Friendship Village, MD

Montgomery County Land Use, Zoning and Urban Design Plan

Bethesda, MD

Bethesda CBD Land Use and Zoning Plan

Silver Spring, MD

Silver Spring Central Business District Sector Plan

#### **Building Height Limits**

160 feet limit

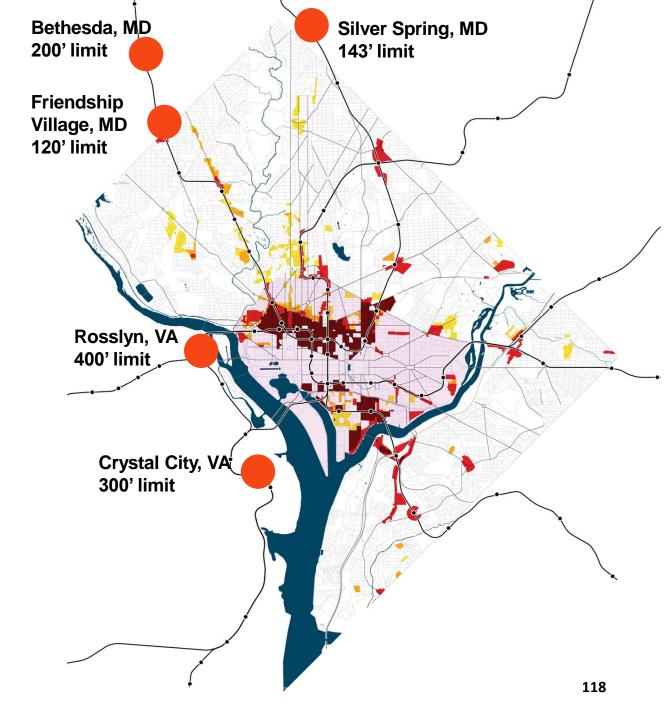
130 feet limit

110 feet limit

90 feet limit

1/4 mile pedestrian shed

L' Enfant City boundary

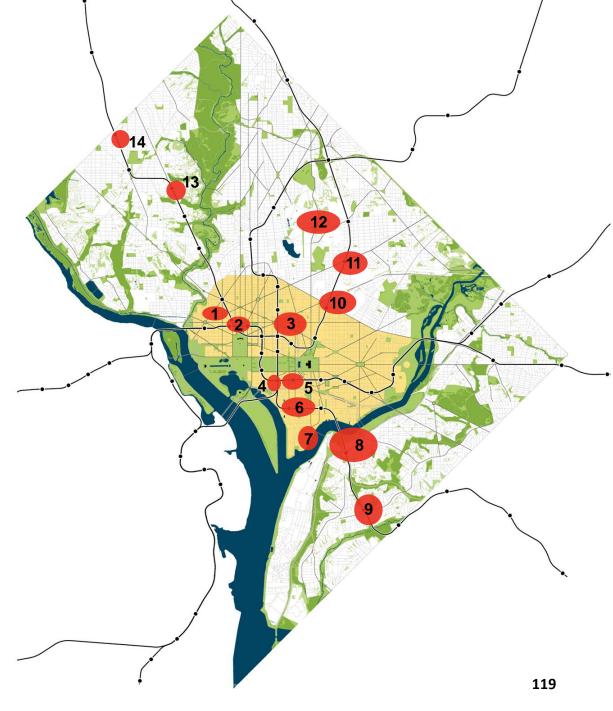


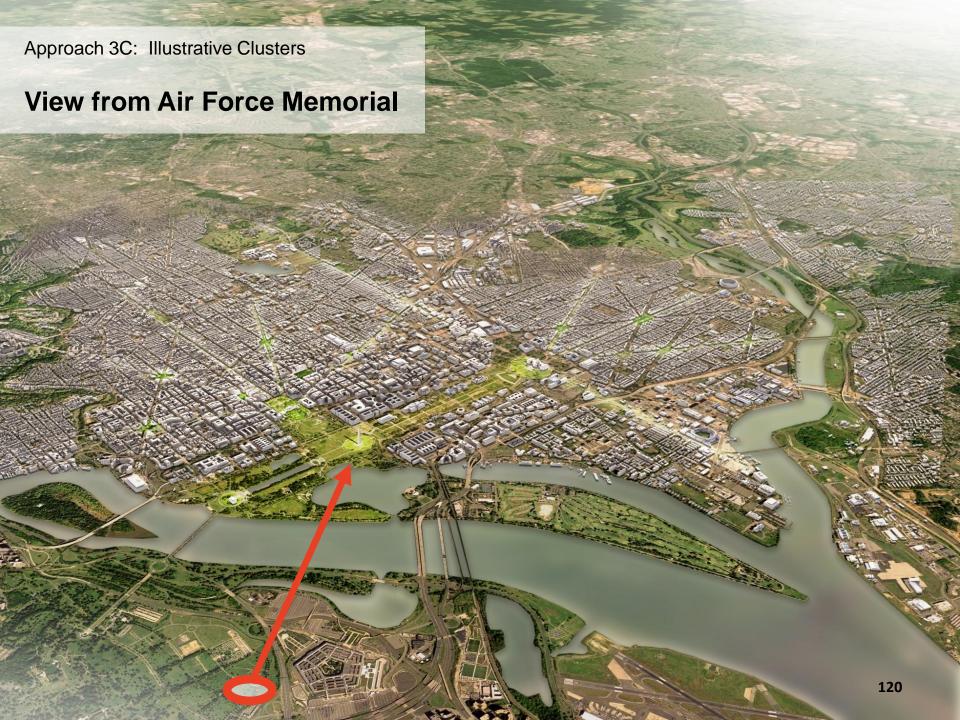
### Raise Height Cap in Selected Areas

- High and medium density
- Transit based
- Development potential



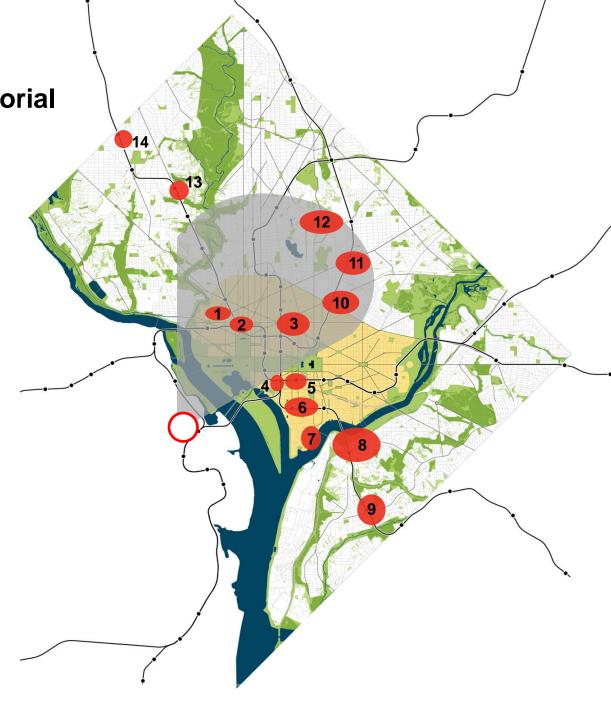
- M Street and 22<sup>nd</sup> Street, NW
- 2. Farragut
- 3. K Street and 5<sup>th</sup> Street, NW
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**View from Air Force Memorial** 

- M Street and 22<sup>nd</sup> Street, NW
- 2. Farragut
- 3. K Street and 5th Street, NW
- 4. L'Enfant Plaza
- 5. Federal Center, SW
- 6. Waterfront Station
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### **Air Force Memorial: Existing Conditions**

Photograph taken 500' above grade



Air Force Memorial: What if the building height in the clusters increased to



Air Force Memorial: What if the building height in the clusters increased to



Air Force Memorial What if the building height in the clusters increased to



Air Force Memorial What if the building height in the clusters increased to

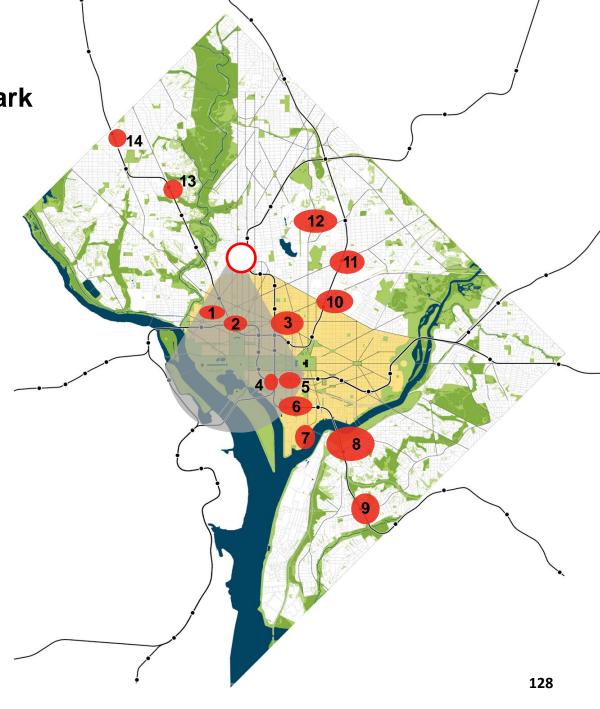
200' / 225'





**View from Meridian Hill Park** 

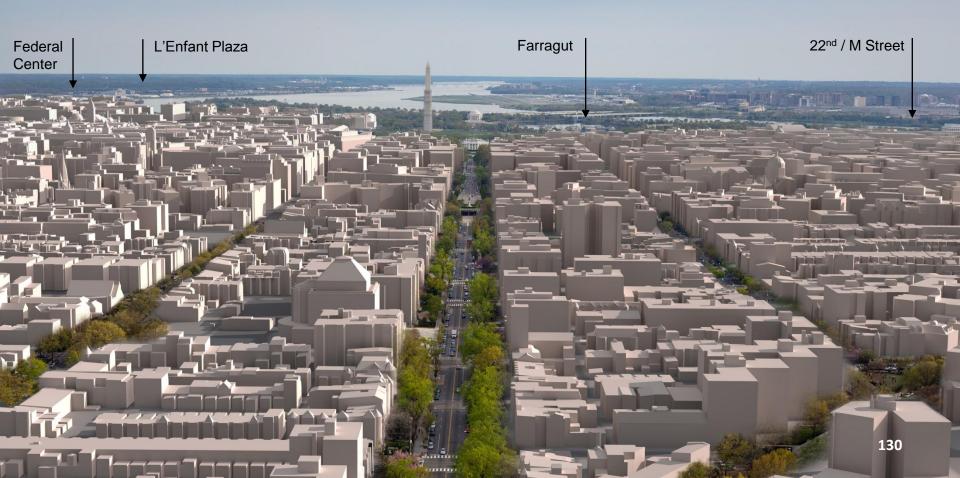
- 1. M Street and 22<sup>nd</sup> Street, NW
- 2. Farragut
- 3. K Street and 5th Street, NW
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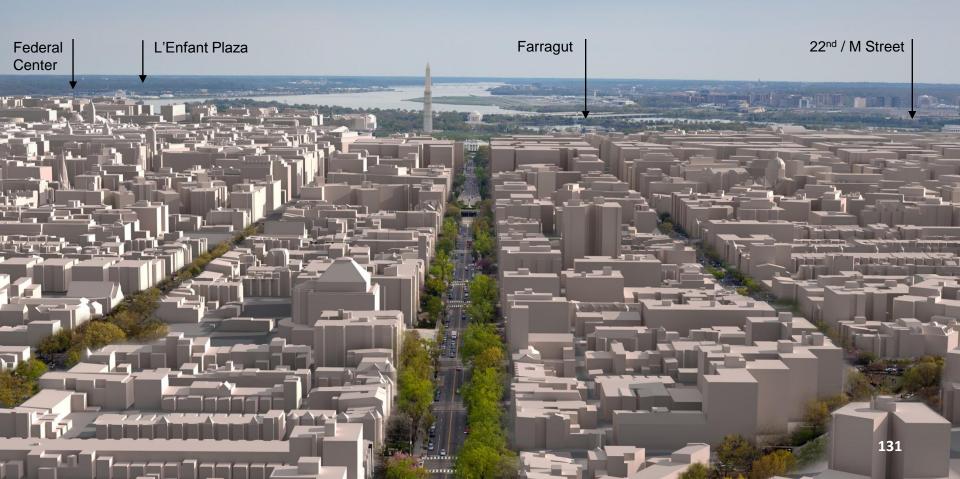




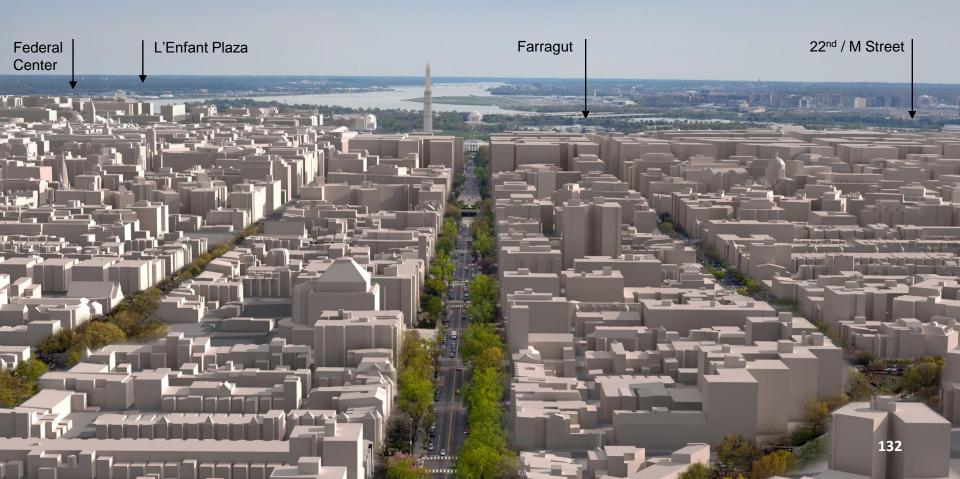
Meridian Hill Park: What if the building height in the clusters increased to



Meridian Hill Park: What if the building height in the clusters increased to



Meridian Hill Park: What if the building height in the clusters increased to



#### Meridian Hill Park: What if the building height in the clusters increased to

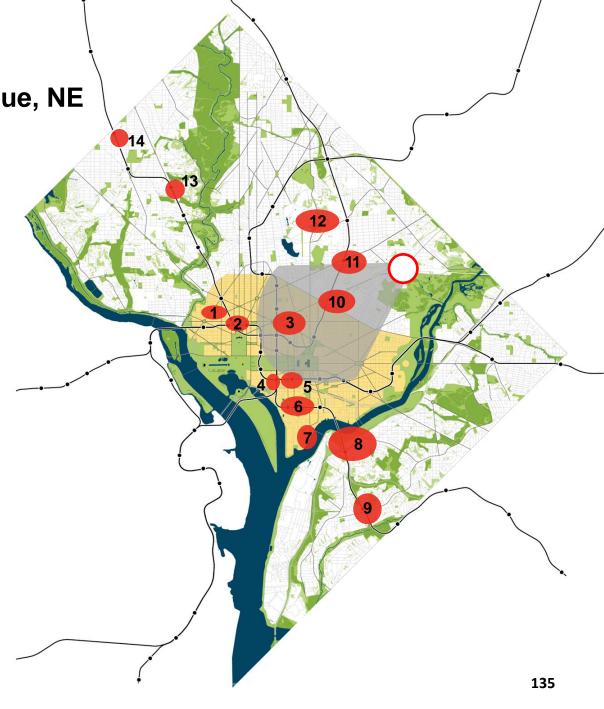




**View from New York Avenue, NE** 

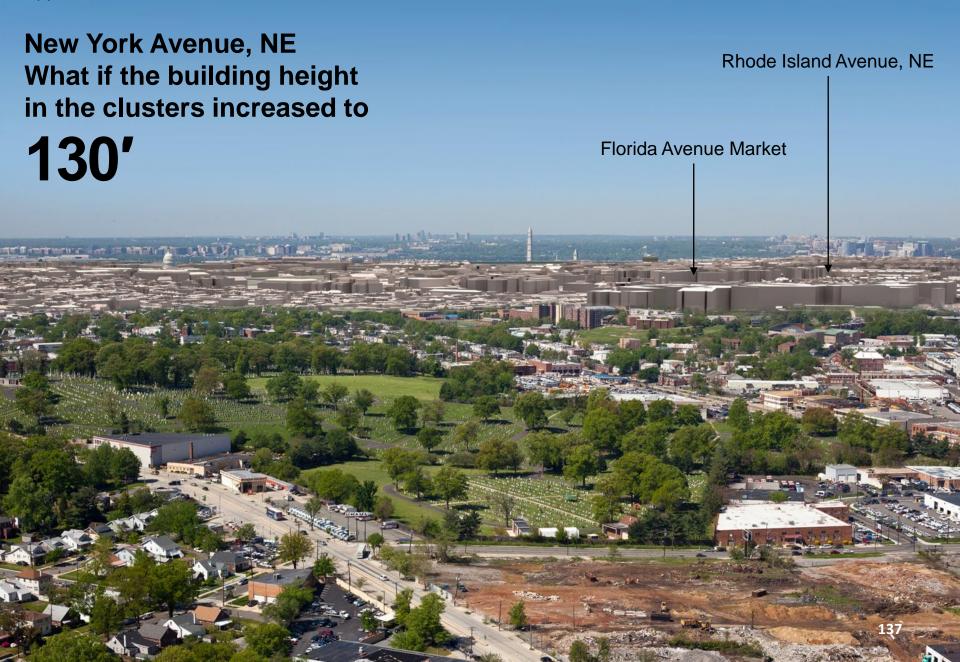


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- 2. Farragut
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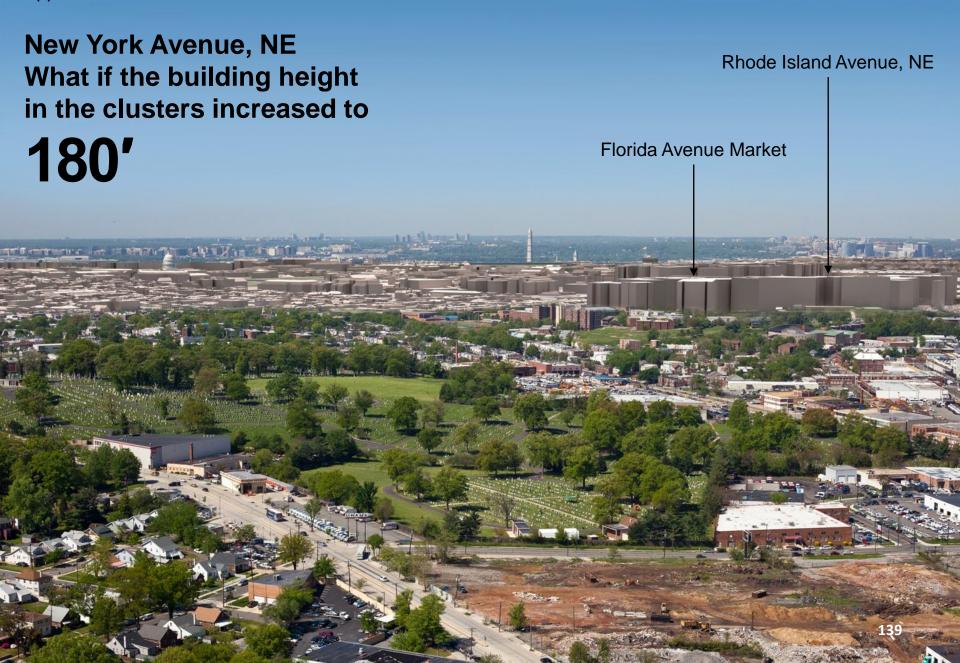


### **New York Avenue, NE Existing Conditions**







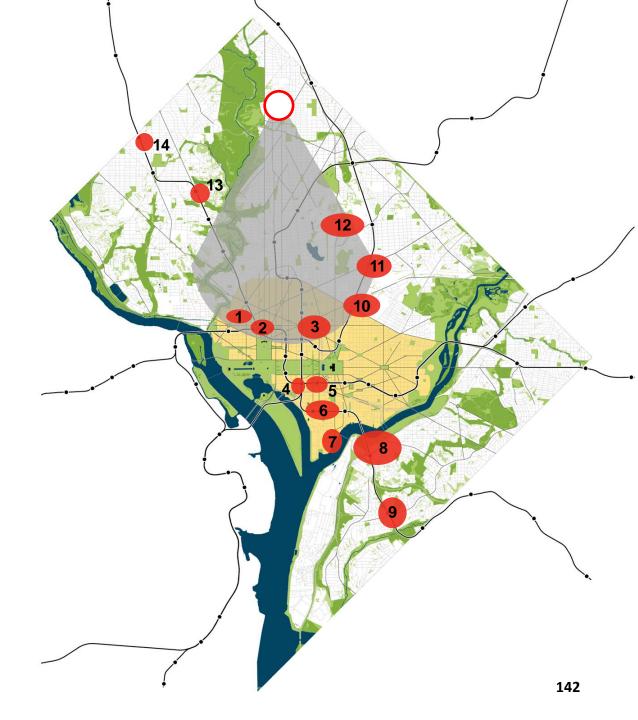






#### **View from Walter Reed**

- 1. M Street and 22<sup>nd</sup> Street, NW
- 2. Farragut
- 3. K Street and 5th Street, NW
- 4. L'Enfant Plaza
- 5. Federal Center, SW
- 6. Waterfront Station
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### Walter Reed **Existing Conditions**



Walter Reed What if the building height in the clusters increased to



Approach 3C: Illustrative Clusters

Walter Reed What if the building height in the clusters increased to

160'



Approach 3C: Illustrative Clusters

Walter Reed
What if the building height
in the clusters increased to

180'



Approach 3C: Illustrative Clusters

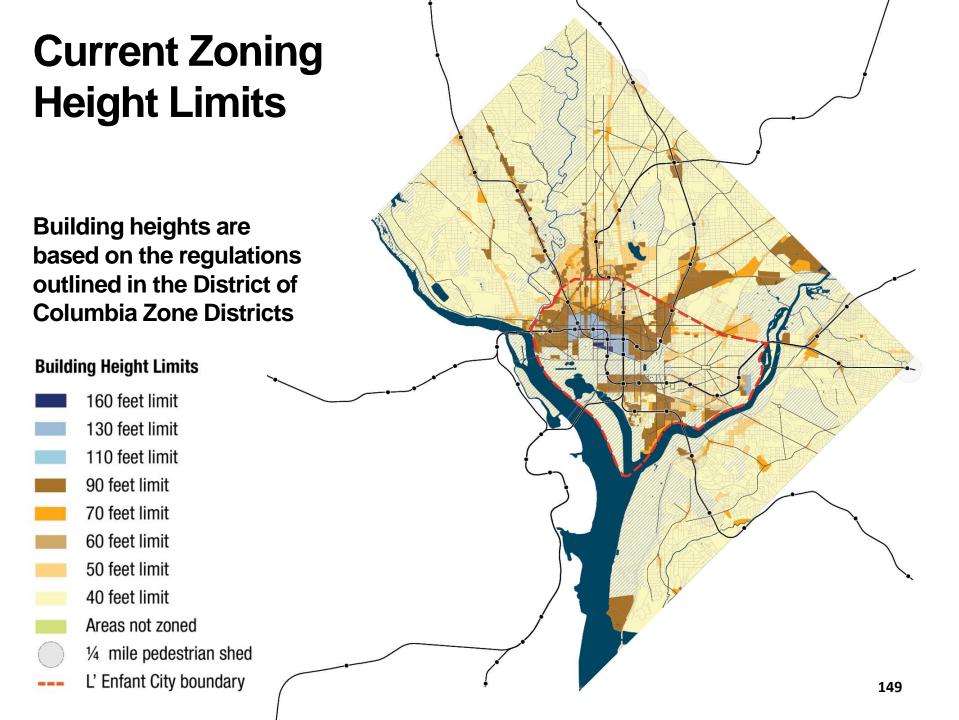
Walter Reed What if the building height in the clusters increased to

200' / 225'



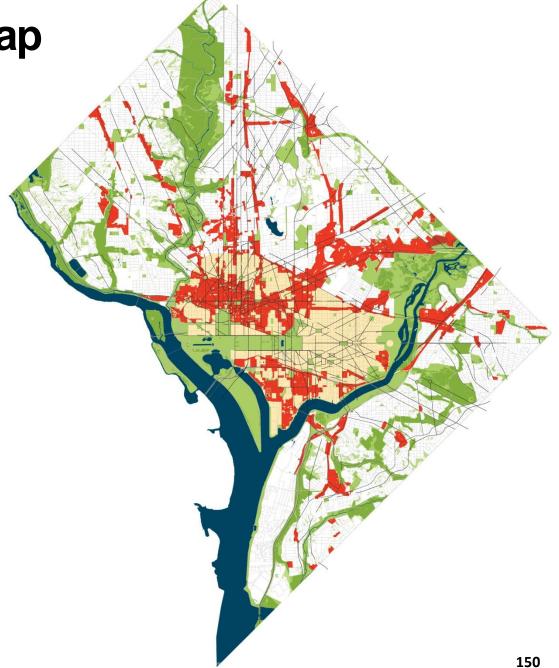
## Approach 4: Change Height Cap City Wide

Raise Height Cap Uniformly



**Change Height Cap** 

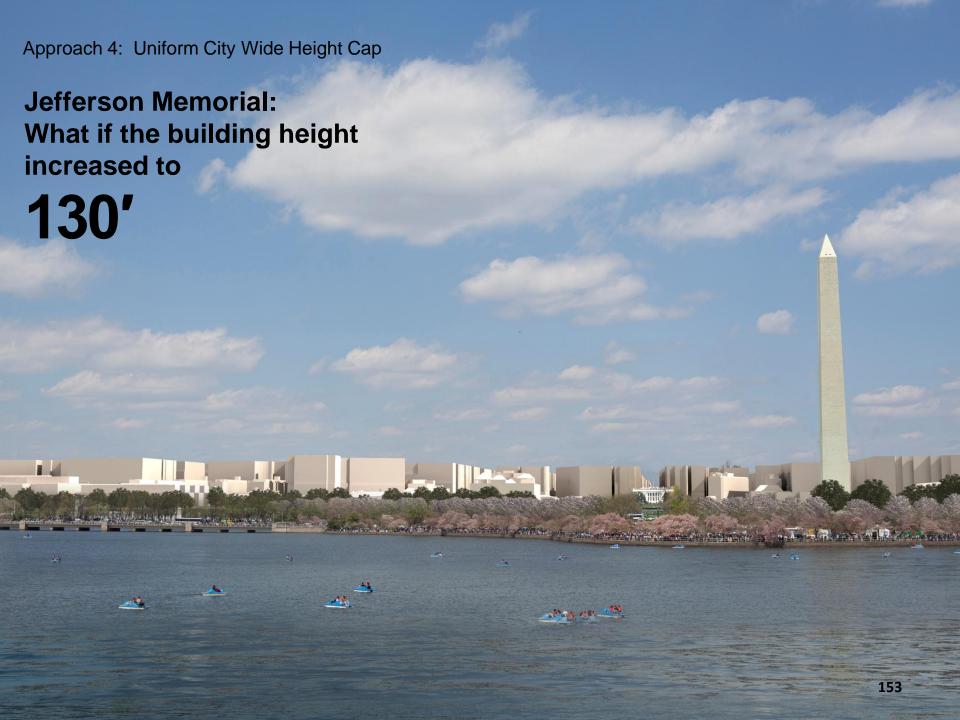
**City Wide** 

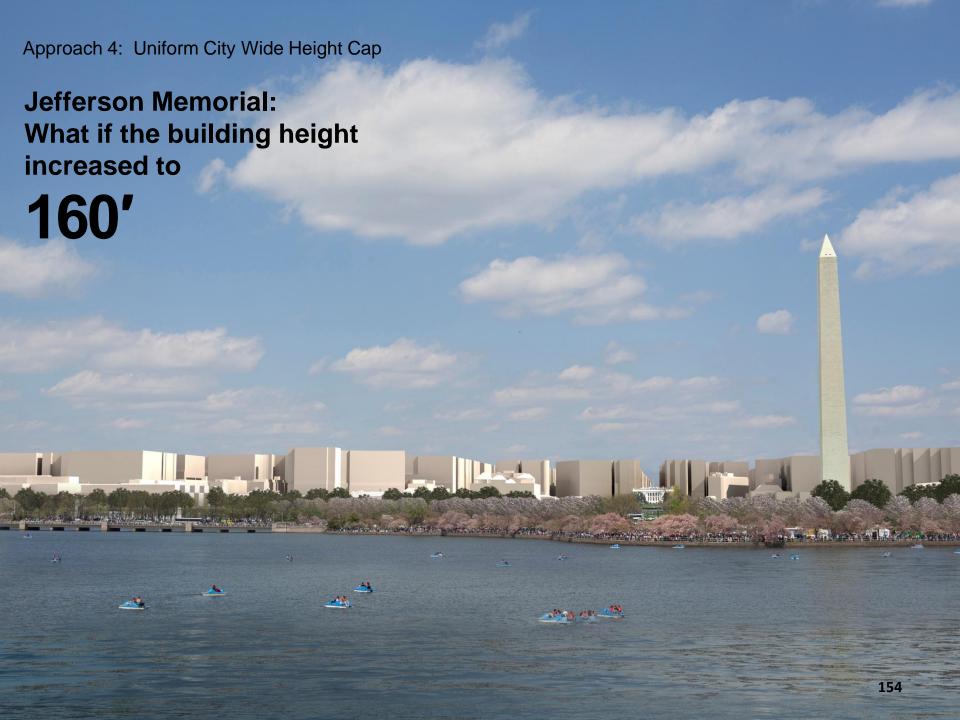


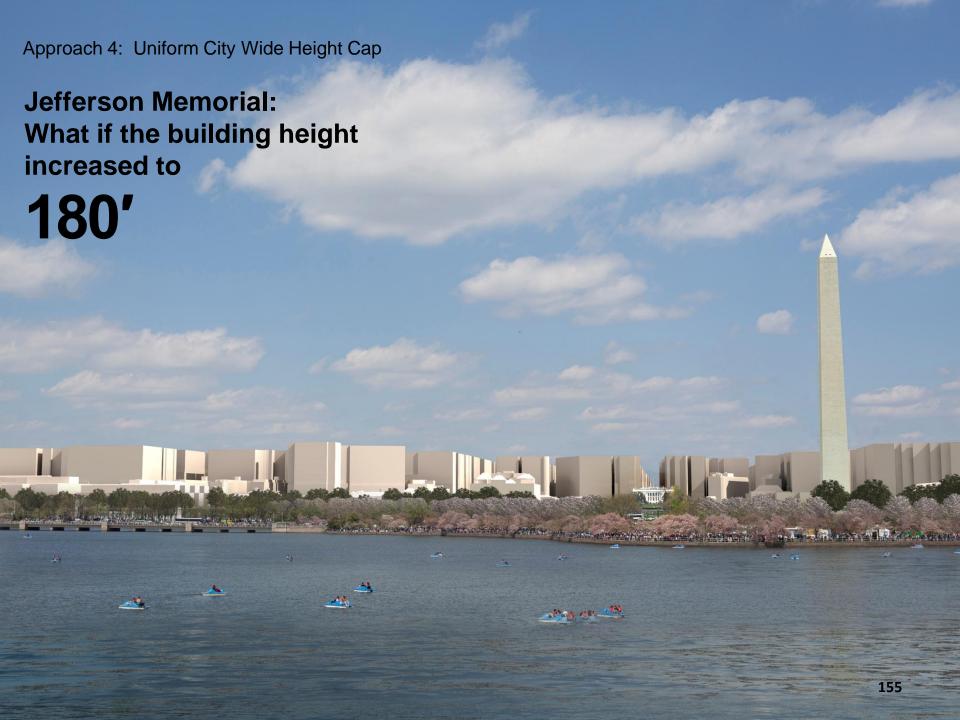
Areas included in the Height Study

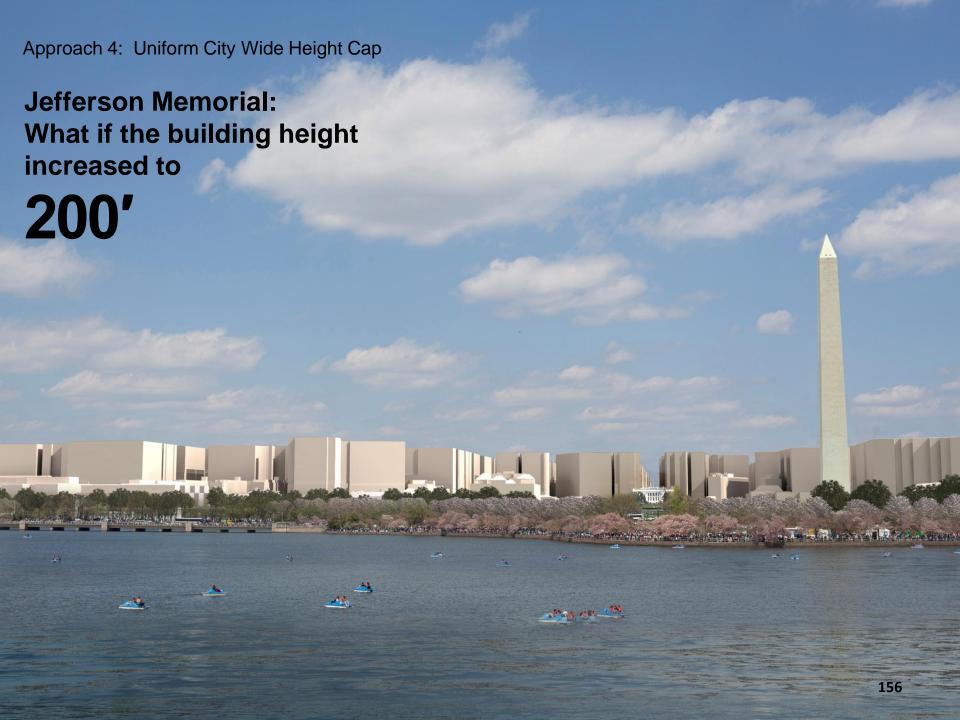












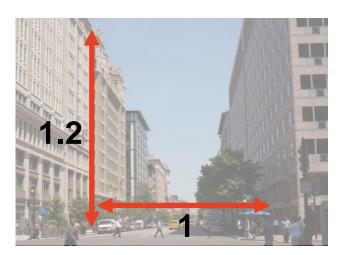
## What we learned



Approach 1: No Change to the Height Act



Approach 3: Selective Areas



Approach 2: Street to Height Relationship



Approach 4: City Wide Increase

## **Goals of Managing Height**

- Reinforce and strengthen the L'Enfant Planning principles
- Preserve significant views
- Maintain the light and airy quality of the city
- Support the existing commercial core
- Locate opportunities around transit
- Consider selective opportunities for taller buildings on the periphery

