

# I-90 ALLSTON INTERCHANGE PLACEMAKING STUDY

*Boston Redevelopment Authority*

The Cecil Group  
Stantec  
Nelson/Nygaard

**Task Force Presentation** – December 17, 2015

## **Agenda for tonight**

- BRA Introduction
- Consultant Team Introduction
- Placemaking Analysis and Discussion
- Review of Next Steps

## Goals for tonight

- Define placemaking and its role in this process
- Share the methodology we are undertaking
- Describe the anticipated outcome of the work
- Explain the analysis of the area
- Review the key issues that are emerging
- Make sure we are asking the right questions before developing alternative scenarios for the district
- Request additional Task Force input beyond monthly meetings

## Study Scope and Schedule

### Phase 1

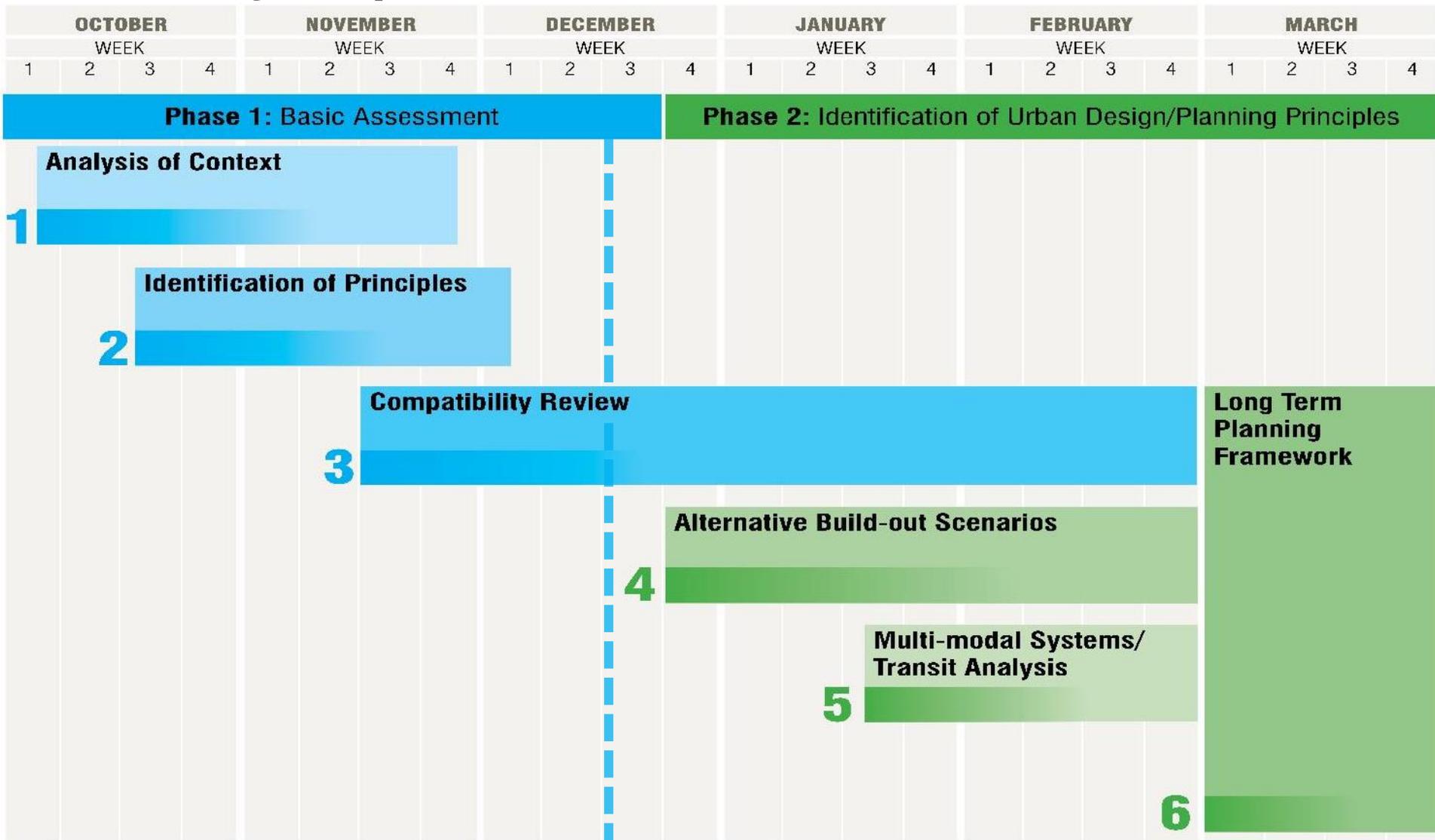
- **Task 1:** Analysis of existing planning and development context
- **Task 2:** Identification of urban design and planning principles
- **Task 3:** Compatibility of current MassDOT design with placemaking principles and economic opportunities

### Phase 2

- **Task 4:** Creation and testing of alternative build-out scenarios
- **Task 5:** Analysis of multi-modal systems and connections to transit
- **Task 6:** Creation of long term planning framework diagrams

*“Provide a critical evaluation of the proposed MassDOT I-90 roadway and transit infrastructure to ensure that it does not preclude a range of successful urban design, economic development and neighborhood planning outcomes in the future.”*

# Study Scope and Schedule



## **Outcomes of the study**

- Detailed urban design and planning analysis
- Identification of multiple strategies for the future
- Recommendations for the short term (MEPA filing)
- Recommendations for the long term (2030 and beyond)
- “Tool kit” of framework diagrams

## Example of Long Term Planning Framework Diagrams

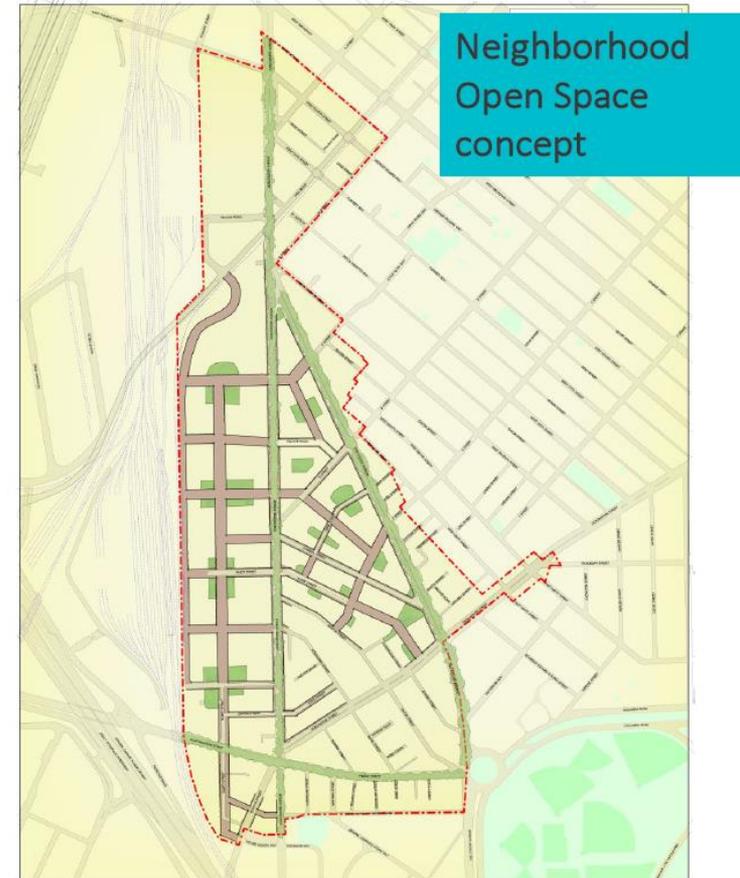
PLAN: South Boston Dorchester Avenue

Preserve. Enhance. Grow.

RECAP



### OPEN SPACE CONCEPTS



## Example of Long Term Planning Framework Diagrams

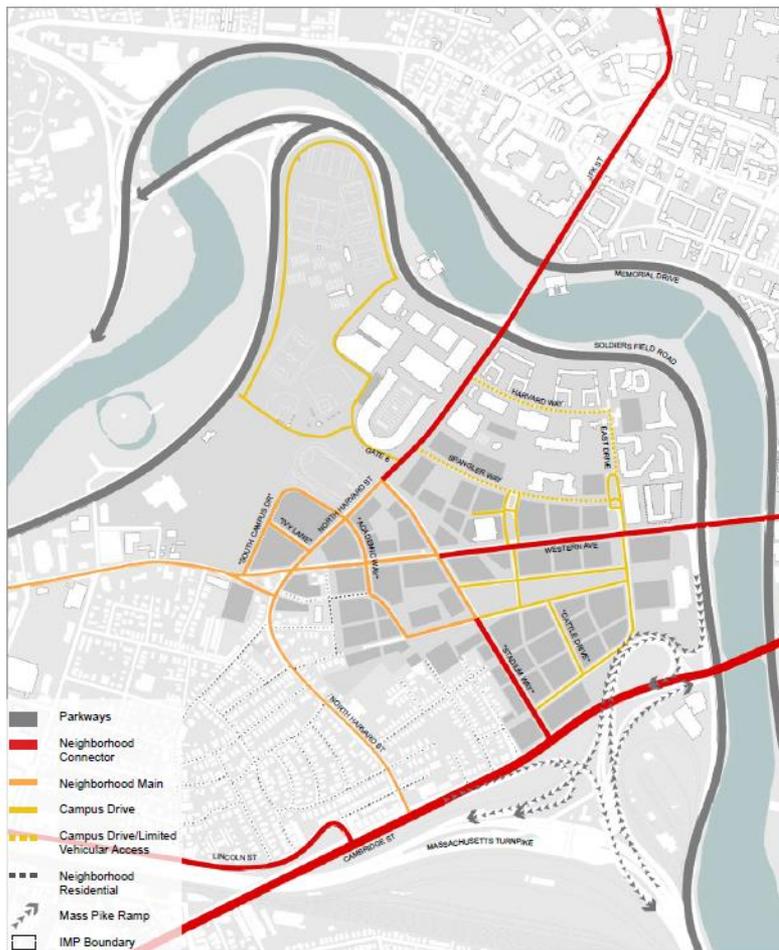


Figure 27: Long-Term Street Typologies  
 Note: Street names are illustrative only; it is anticipated they may be renamed in the future.

Harvard University's Campus in Allston | IMP

3.0 Long-Term Vision 59

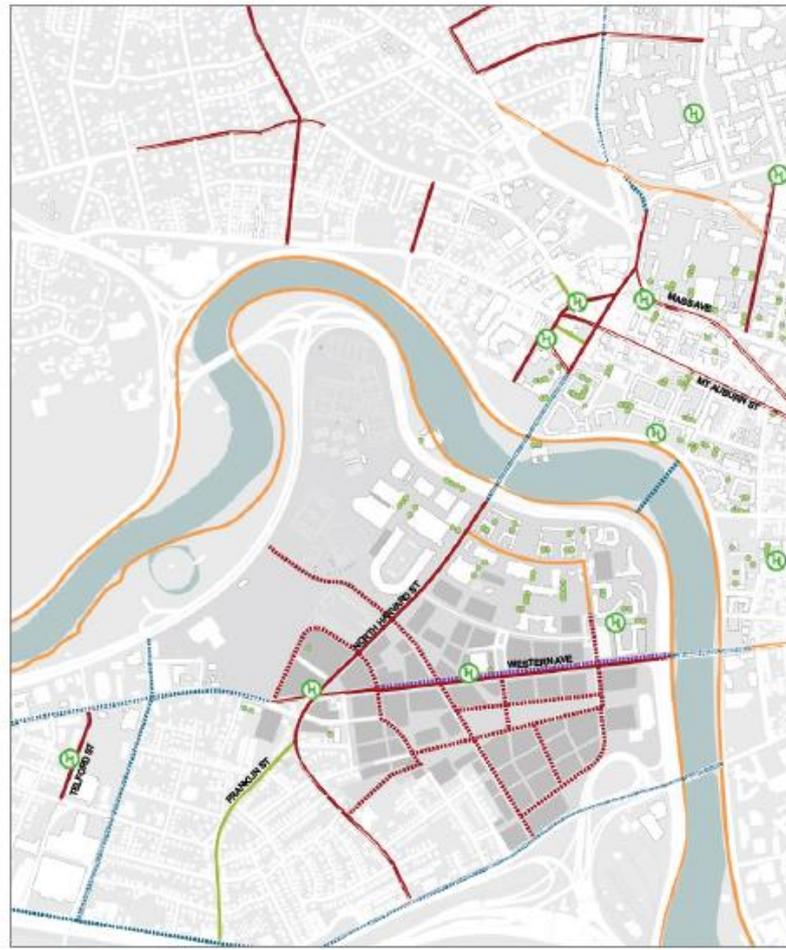


Figure 29: Long-Term Bicycle Network

Harvard University's Campus in Allston | IMP

3.0 Long-Term Vision 61

July 2013

# I-90 Allston Interchange Placemaking Study

## Consultant Team Introduction

### The Cecil Group

- Urban Design
- Planning
- Landscape Architecture
- Visualization



### Stantec

- Real Estate
- Transportation Planning
- Transit Facility Planning
- Highway Design



### Nelson/Nygaard

- Transportation Planning
- Multi-modal Strategies
- Complete Streets



# I-90 Allston Interchange Placemaking Study

## Compelling Visions Exist



**Varanasi Team**



**Krieger/Mountjoy Team**

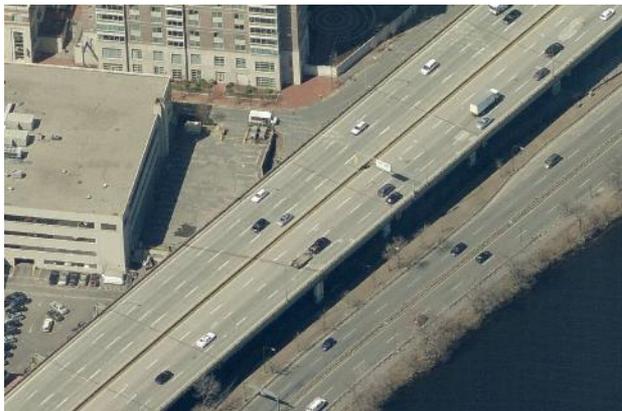
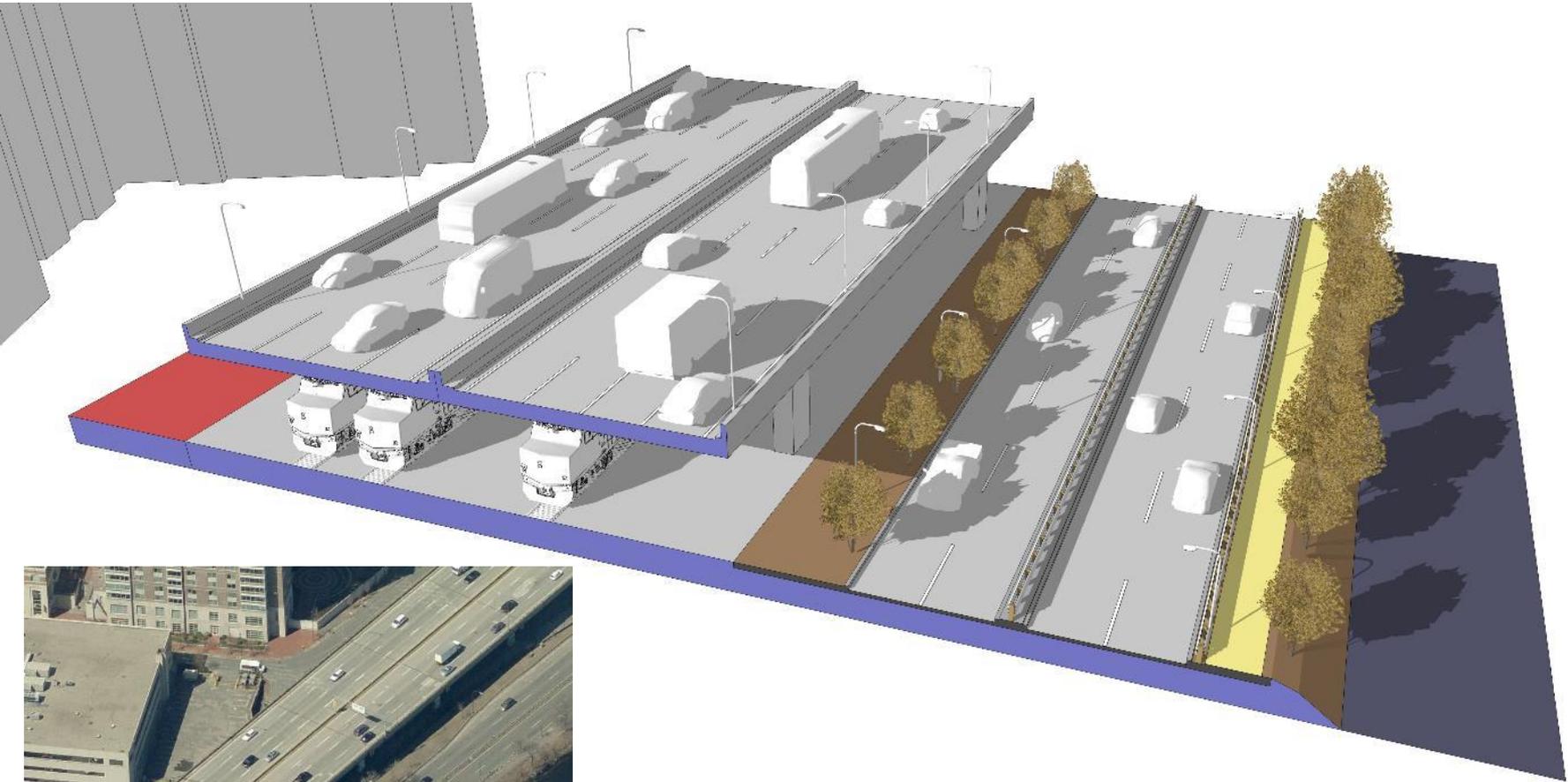


# I-90 Allston Interchange Placemaking Study

## Compelling Infrastructure Alternatives

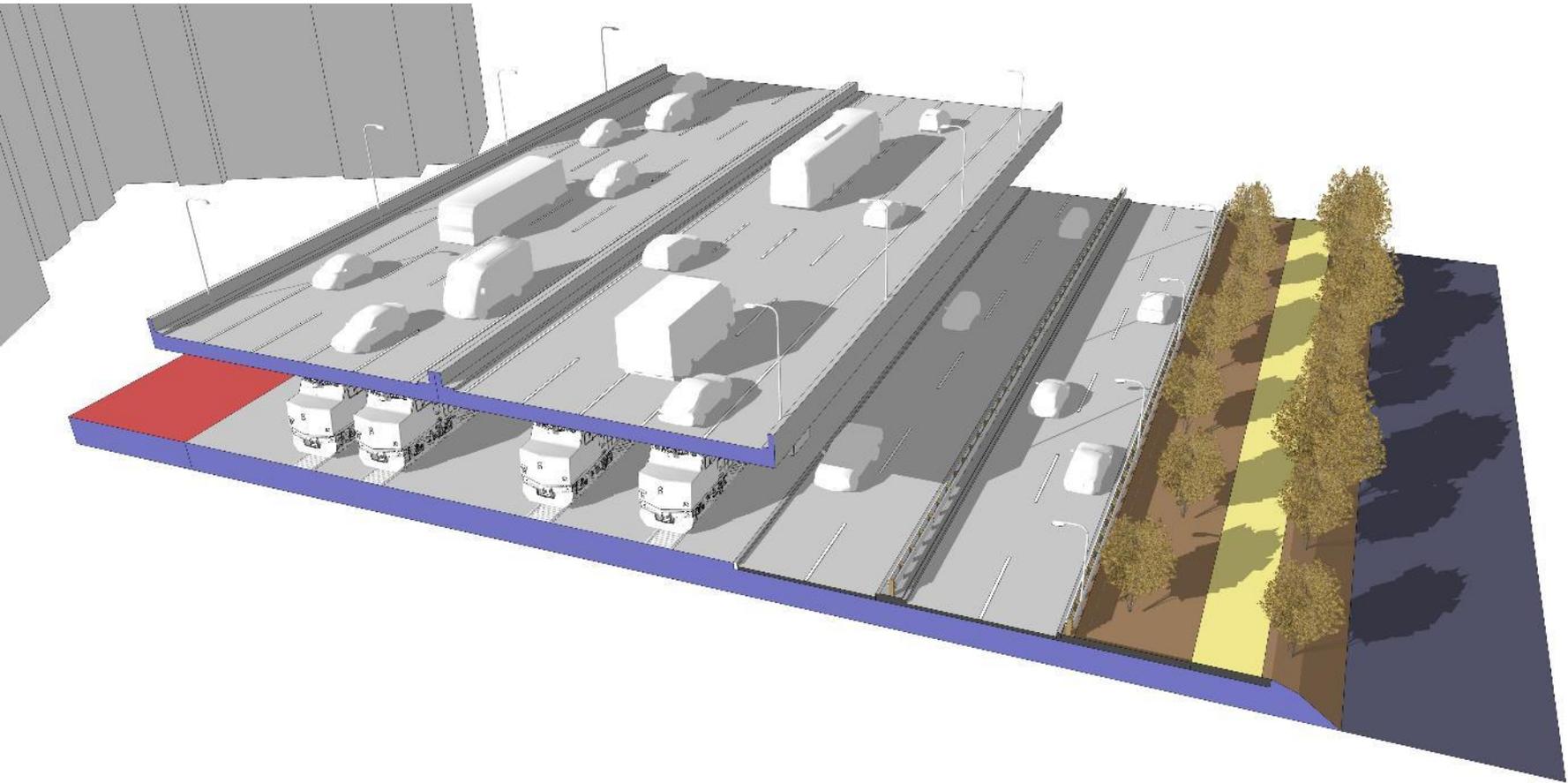


# Typical “Throat” Condition – Existing Configuration

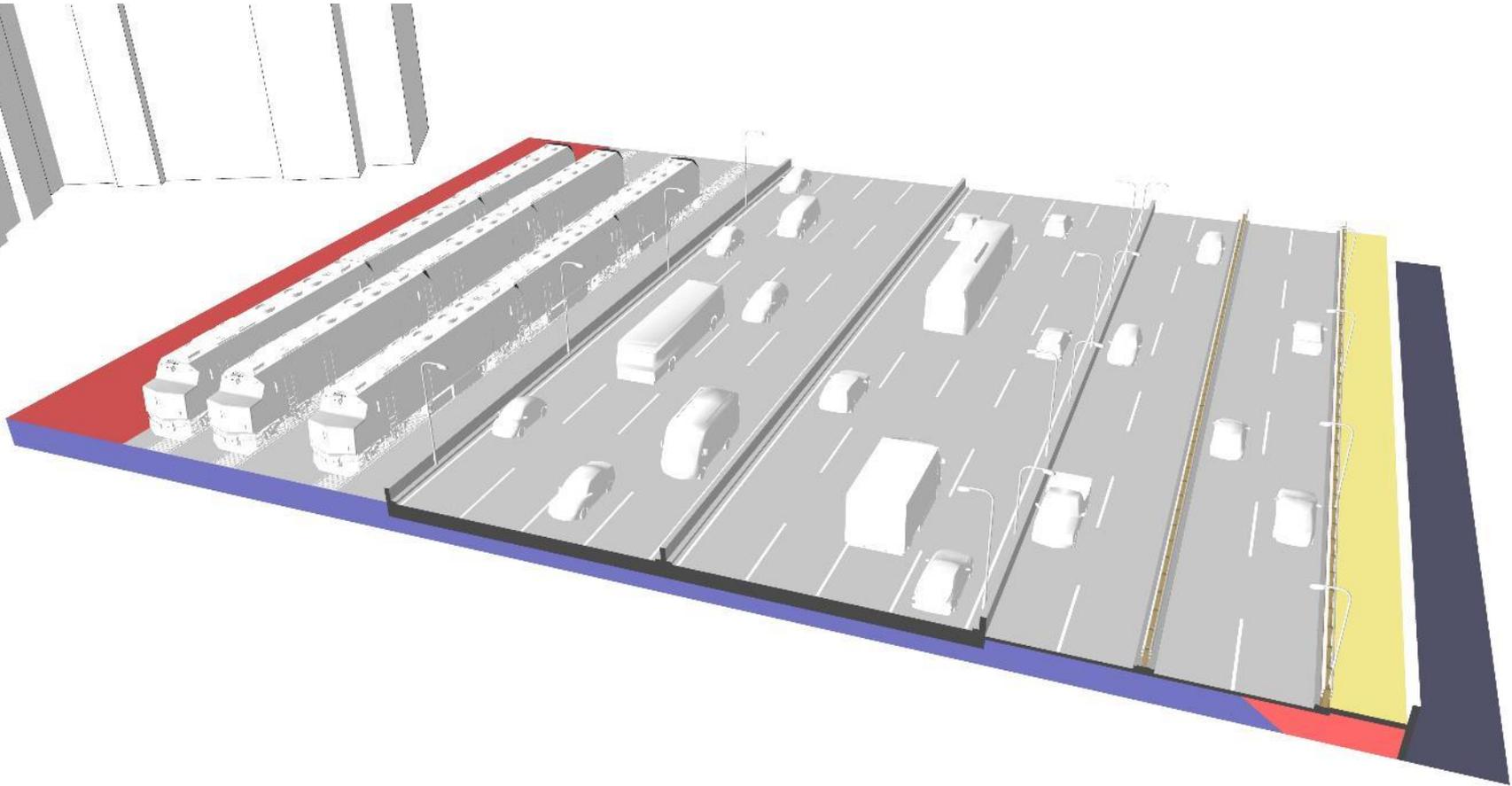


# I-90 Allston Interchange Placemaking Study

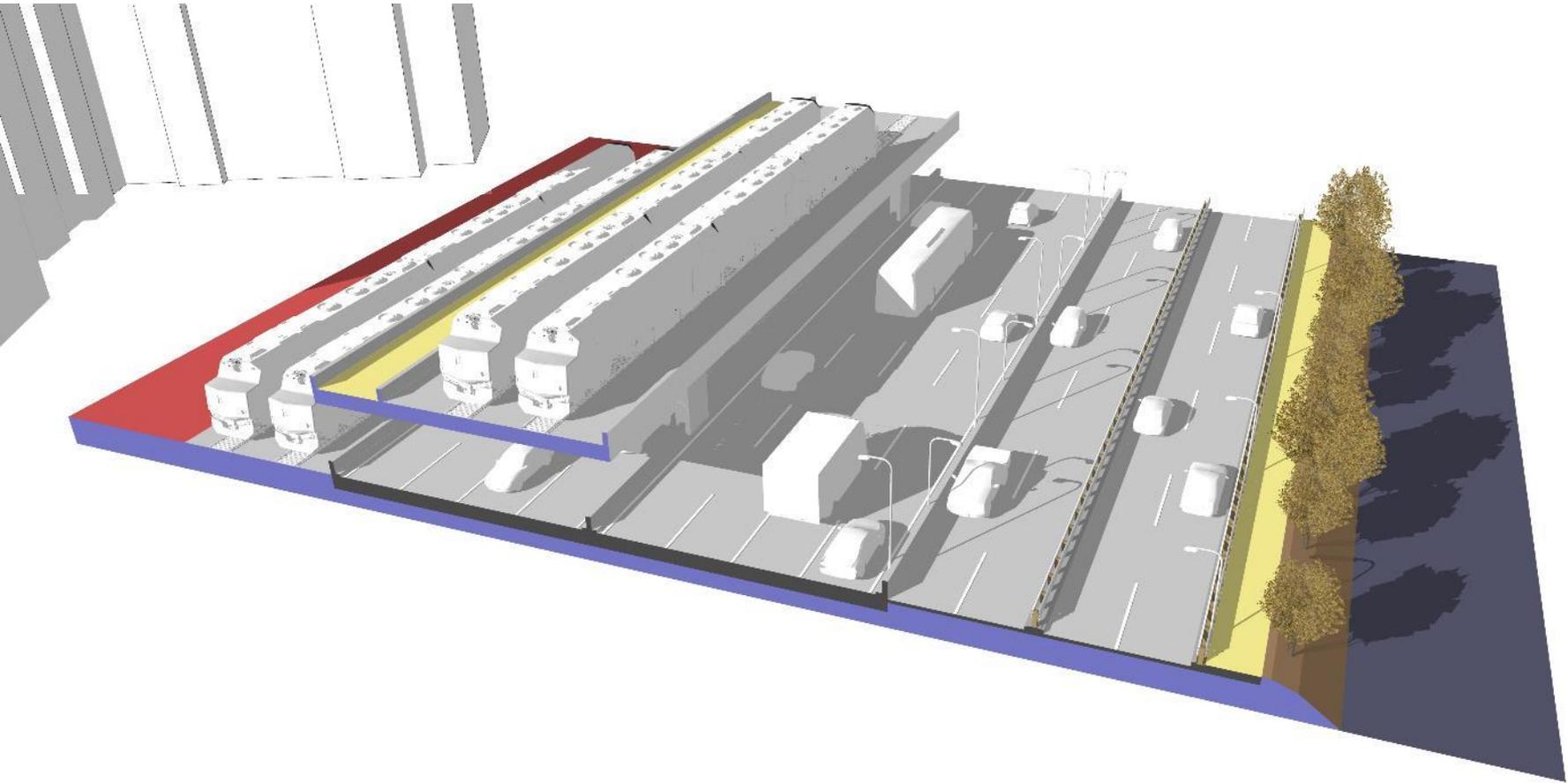
## Typical “Throat” Condition – 3K-4



# Typical “Throat” Condition – ABC Alternative



# Typical “Throat” Condition – Amateur Planner



# I-90 Allston Interchange Placemaking Study

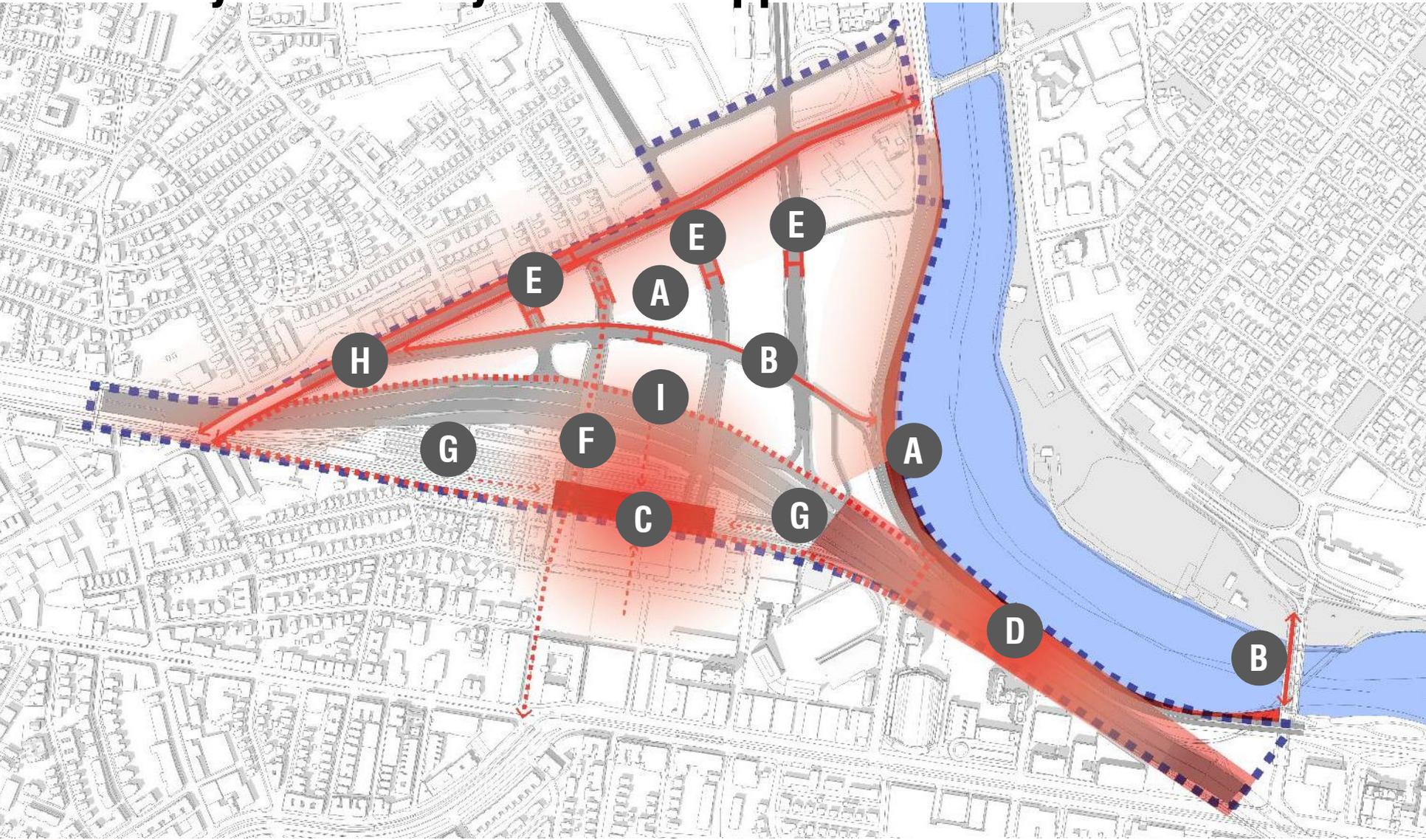
## Focus on District as a Future Place



## Key Community Issues

- A** Integrated open space network with expanded riverfront park
- B** Shared use path connection to Charles River, Cambridge, Memorial Drive via Grand Junction Bridge
- C** Quality of West Station as a landmark and transit-oriented district center with safe and inviting access from all directions
- D** At-grade alternatives for highway/rail alignments – constraints at “throat”
- E** Walkability and pedestrian environment relative to roadway width
- F** Unite Allston’s north and south neighborhoods by connecting Cambridge Street and Commonwealth Avenue
- G** Decking over the highway and railyards to reduce noise and air pollution and create a place for buildings, parks and connections
- H** Transformation of Cambridge Street into a vibrant neighborhood street with protected bike lanes
- I** Interim conditions and phasing of infrastructure and development

# Key Community Issues Mapped



# I-90 Allston Interchange Placemaking Study

## Framework of a Future District



**Public Realm/Open Space**



**Mobility/Connectivity**



**Development Potential/Flexibility**



**Distinctive Place/Context Sensitive**



**Energy Efficiency/Sustainability**

# I-90 Allston Interchange Placemaking Study

## Easier to Focus on Existing Places



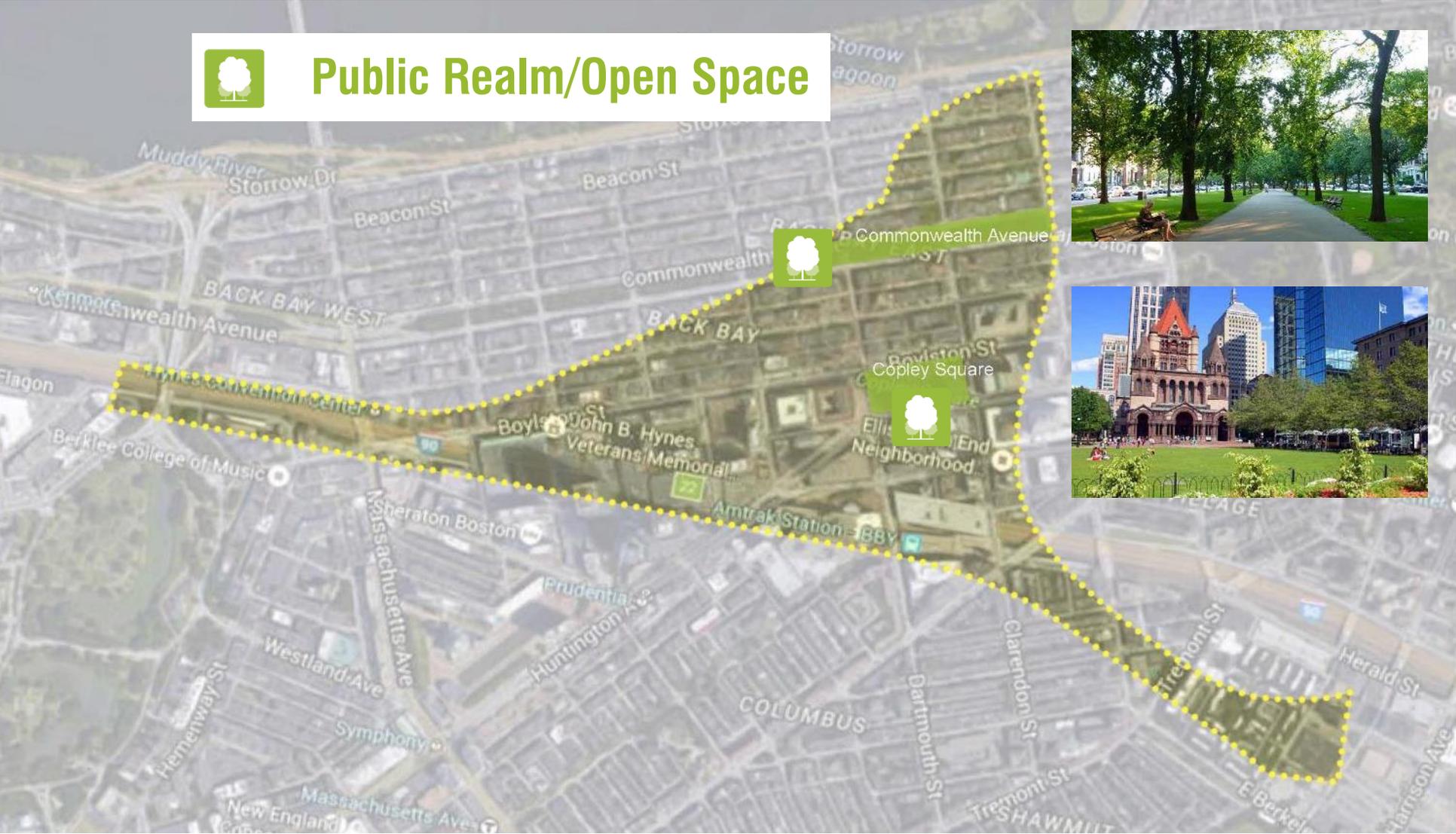
# Placemaking Study Comparisons – Back Bay



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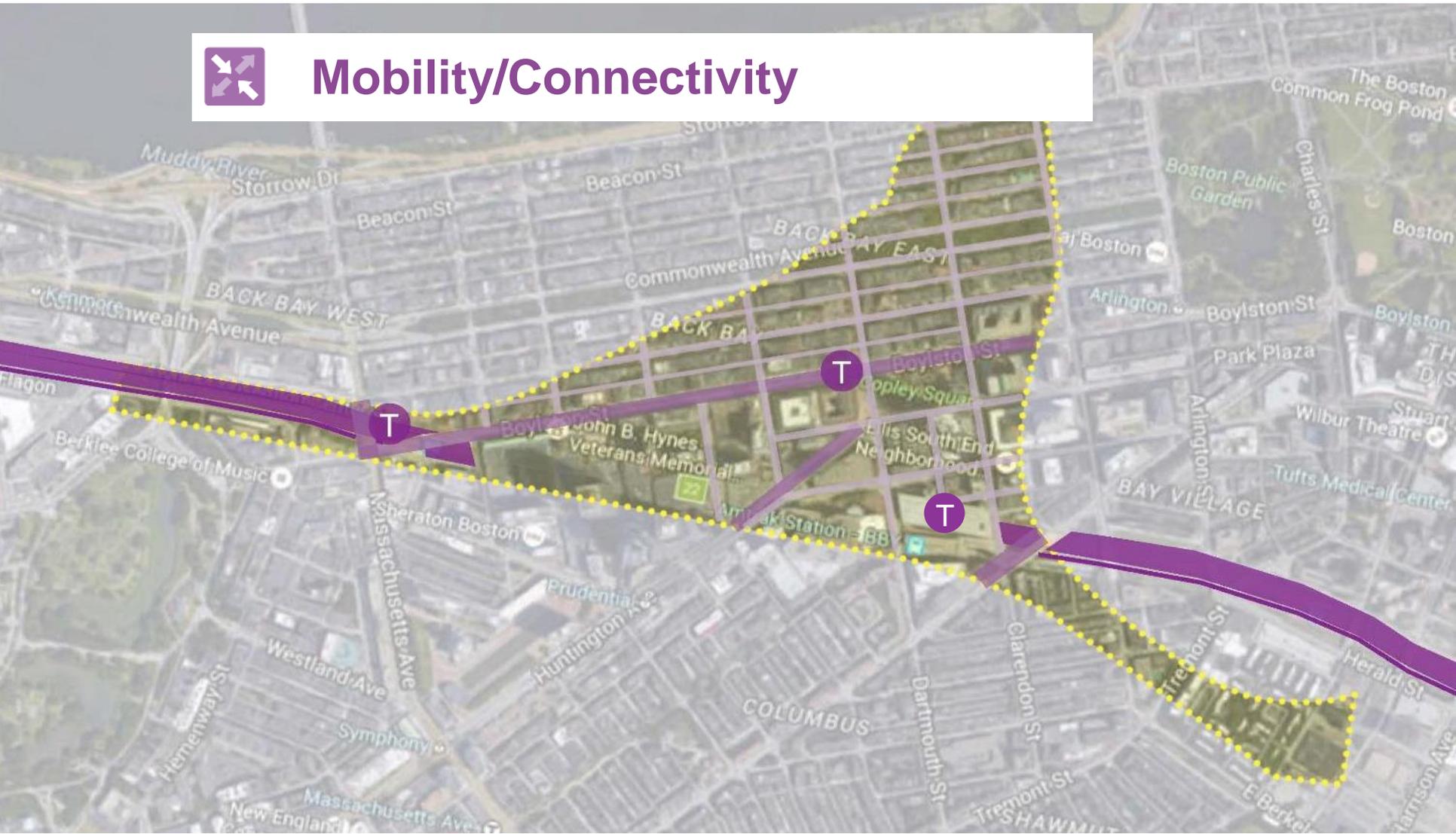
## Public Realm/Open Space



# Placemaking Study Comparisons – Back Bay



## Mobility/Connectivity



# Placemaking Study Comparisons – Back Bay



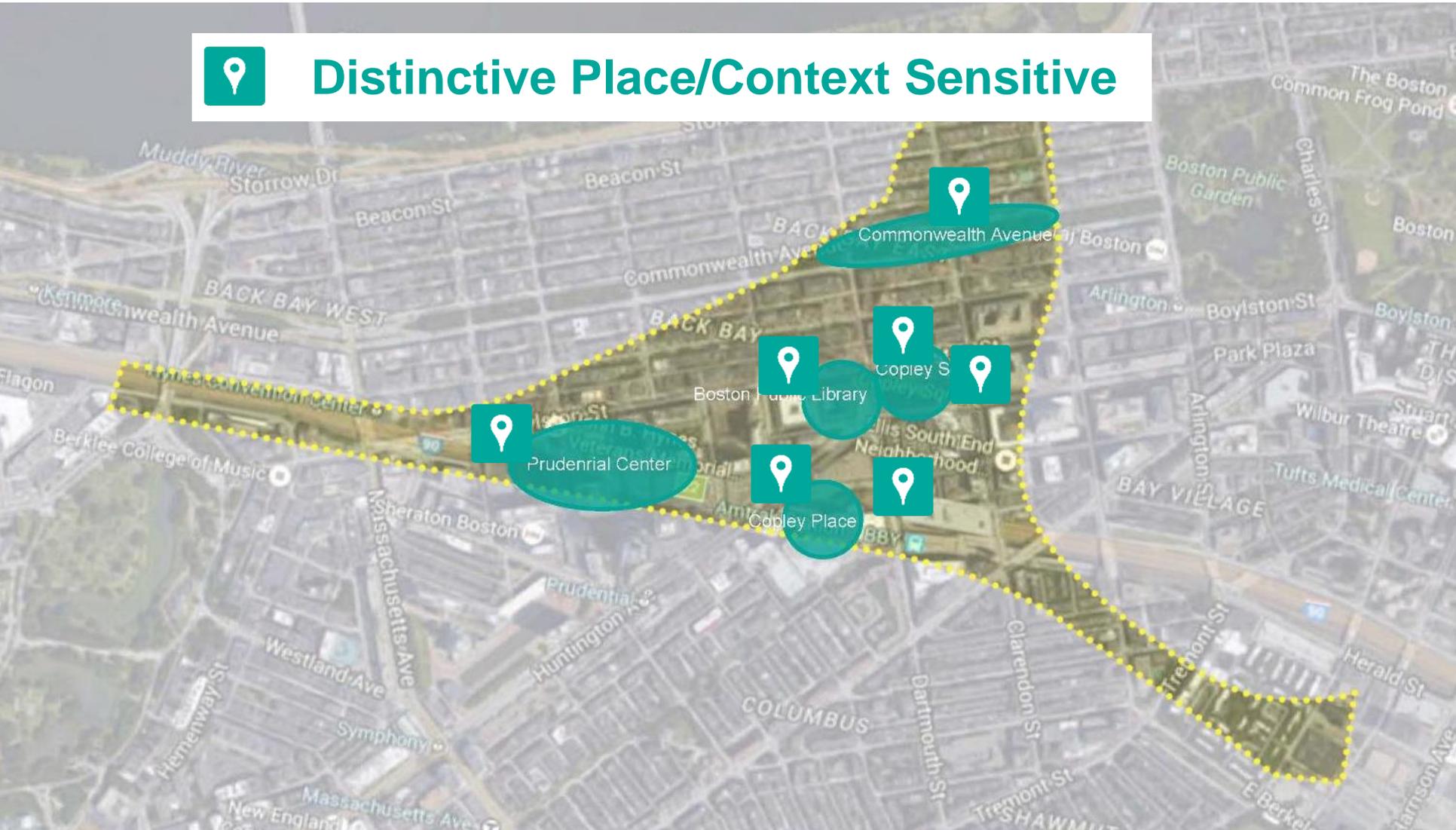
## Development Potential/Flexibility



# Placemaking Study Comparisons – Back Bay



## Distinctive Place/Context Sensitive



# Placemaking Study Comparisons – Back Bay





# Framework for Analysis and Evaluation



**Public Realm/Open Space**



**Mobility/Connectivity**



**Development Potential/Flexibility**



**Distinctive Place/Context Sensitive**



**Energy Efficiency/Sustainability**

# Placemaking Study Analysis

## Framework for Analysis and Evaluation

### CATEGORY



### Public Realm/Open Space

Open space types and typical dimensions; frequency and distribution of open space; average distance to open space; characteristics of public realm conditions; width of public realm



### Mobility/Connectivity

Street types and characteristics; pedestrian circulation network; bicycle circulation network; transit network and access; vehicular circulation network



### Development Potential/Flexibility

Building typologies and dimensions; block size/geometry; air rights block size/geometry; block access/flexibility; location desirability



### Distinctive Place/Context Sensitive

Placemaking character/features; land use and building typologies; block size and geometry; street typologies and transit nodes; elevation of roadways



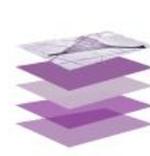
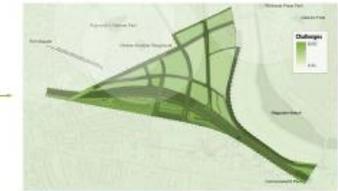
### Energy Efficiency/Sustainability

Utilities and district-wide infrastructure; solar orientation, wind, shadow; resiliency/flood considerations

### PROCESS



### HEAT MAP



## Placemaking Principles



### Public Realm/Open Space

- Enhance access to useable open space
- Reinforce connections to existing resources – Charles River
- Provide active and generous street edges



### Mobility/Connectivity

- Reinforce walkable and pedestrian friendly scale
- Enhance multi-modal connections and convenience
- Strengthen connections between adjacent neighborhoods and districts



### Development Potential/Flexibility

- Maintain flexible accommodation of a wide variety of building types
- Integrate old and new with context-sensitive, compatible approach with transitions
- Strengthen ability to deck over the highway and rail yards



### Distinctive Place/Context Sensitive

- Destination with range of uses and densities
- Maximize opportunities to extend Boston's urban fabric
- Define a network of recognizable places and centers of activity



### Energy Efficiency/Sustainability

- Enhance the ability for energy efficient and sustainable district design
- Anticipate climate change, sea-level rise and infrastructure needs



# Principles

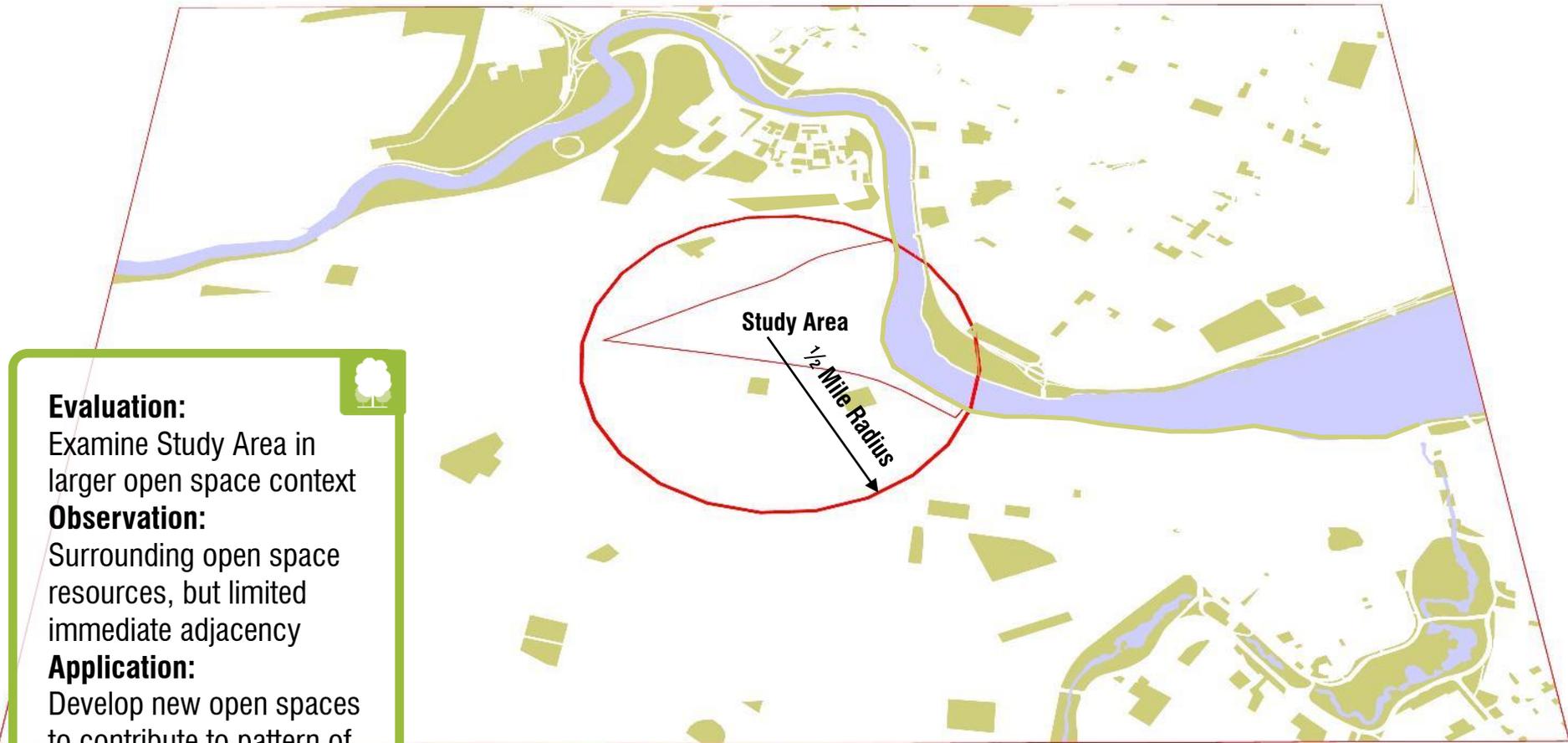
- Enhance access to useable open space
- Reinforce connections to existing resources – Charles River
- Provide active and generous street edges

# Focus of Analysis

- Open space types and typical dimensions
- Frequency and distribution of open space
- Average distance to open space
- Characteristics of public realm conditions
- Width of public realm



# Existing Open Space Context



**Evaluation:**

Examine Study Area in larger open space context

**Observation:**

Surrounding open space resources, but limited immediate adjacency

**Application:**

Develop new open spaces to contribute to pattern of surrounding context



## Existing Open Space Context

(Open Space & Recreation Plan 2015-2021)

### Open Space Types

- Malls, Squares & Plazas
- Parkways, Reservations & Beaches
- Parks, Playgrounds & Athletic Fields
- Cemeteries & Burying Grounds
- Community Gardens
- Urban Wilds & Natural Areas

### Non-Public Open Space

- Neighborhood



### Evaluation:

Allston open space types

### Observation:

Non-public open spaces adjacent to Study Area

### Application:

Develop new open spaces to contribute to pattern of surrounding context



Martin J. Walsh, Mayor

### Map 4: Open Space by Type Allston-Brighton

Boston Open Space Plan 2015-2021

December 2014

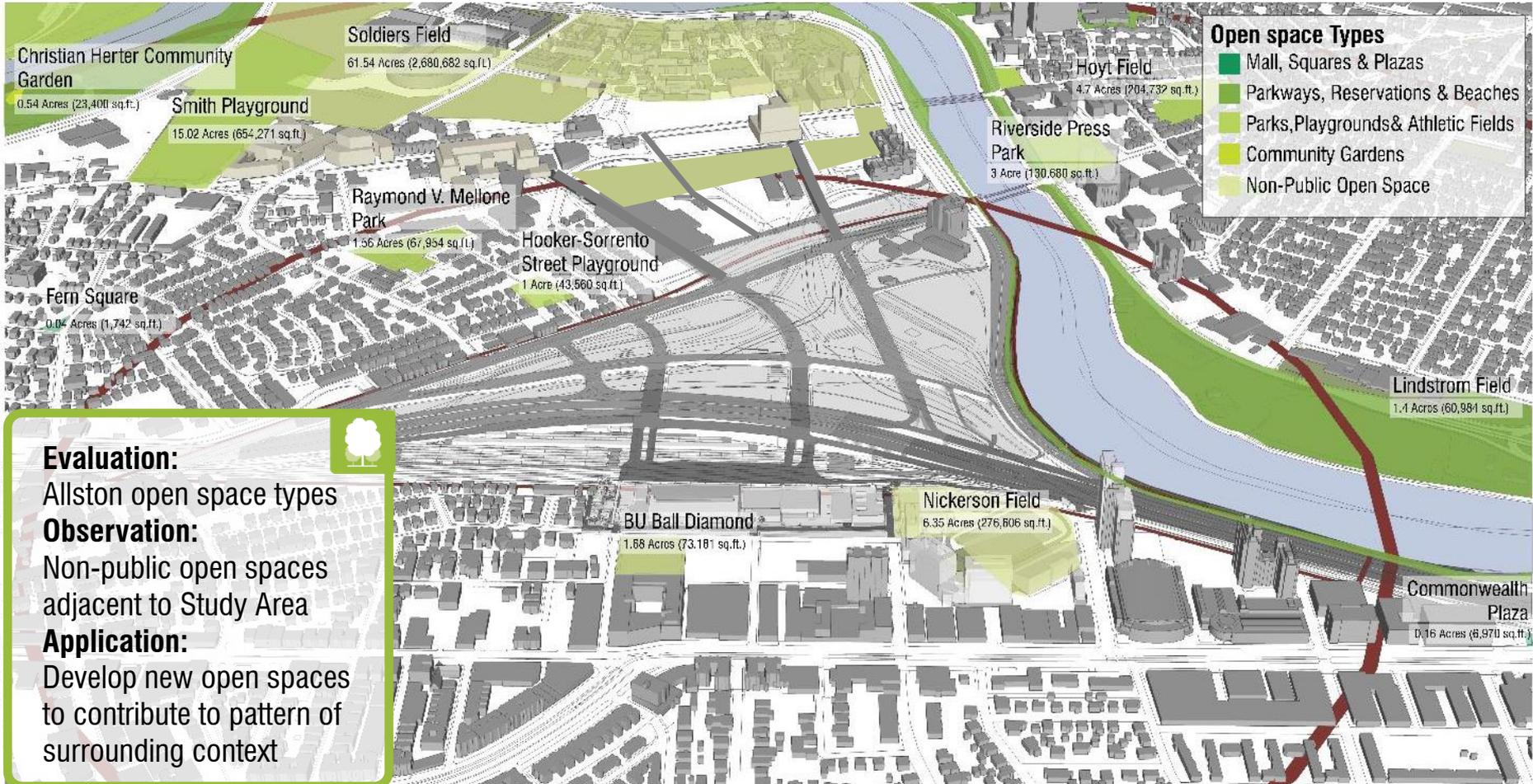


Prepared by the City of Boston  
Parks & Recreation Department





## Existing Open Space Context





## Open Space Types



### Evaluation:

Typical open space types

### Observation:

Service areas relative to park type and size

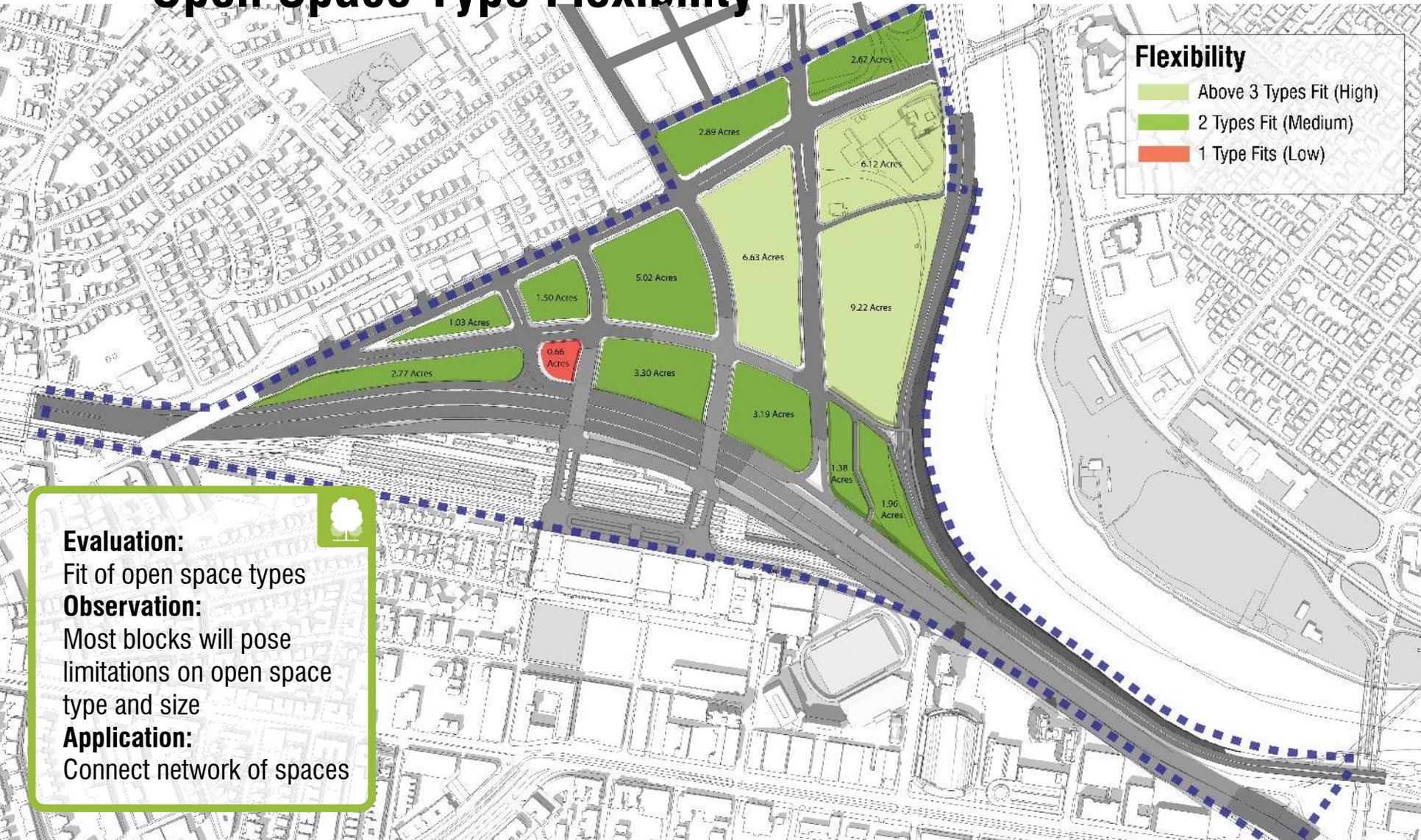
### Application:

Open space type and service area contribute to calculation of access





## Open Space Type Flexibility



**Evaluation:**  
Fit of open space types

**Observation:**  
Most blocks will pose limitations on open space type and size

**Application:**  
Connect network of spaces



# Public Realm/Open Space

## Access to Open Space

(Open Space & Recreation Plan 2015-2021)

- Access: Park Service Areas
- Beyond any park service area
- Served by 1 park
- Served by 2 parks
- Served by 3 or more parks
- Neighborhood Boundary
- Publicly Accessible Open Space
- Other Open Space

**Evaluation:**  
Areas served by parks in Allston

**Observation:**  
Study Area is largely not served by parks

**Application:**  
Optimize park locations to expand park service areas



Martin J. Walsh, Mayor

### Map 10: Park Service Areas Allston-Brighton

Boston Open Space Plan 2015-2021  
December 2014

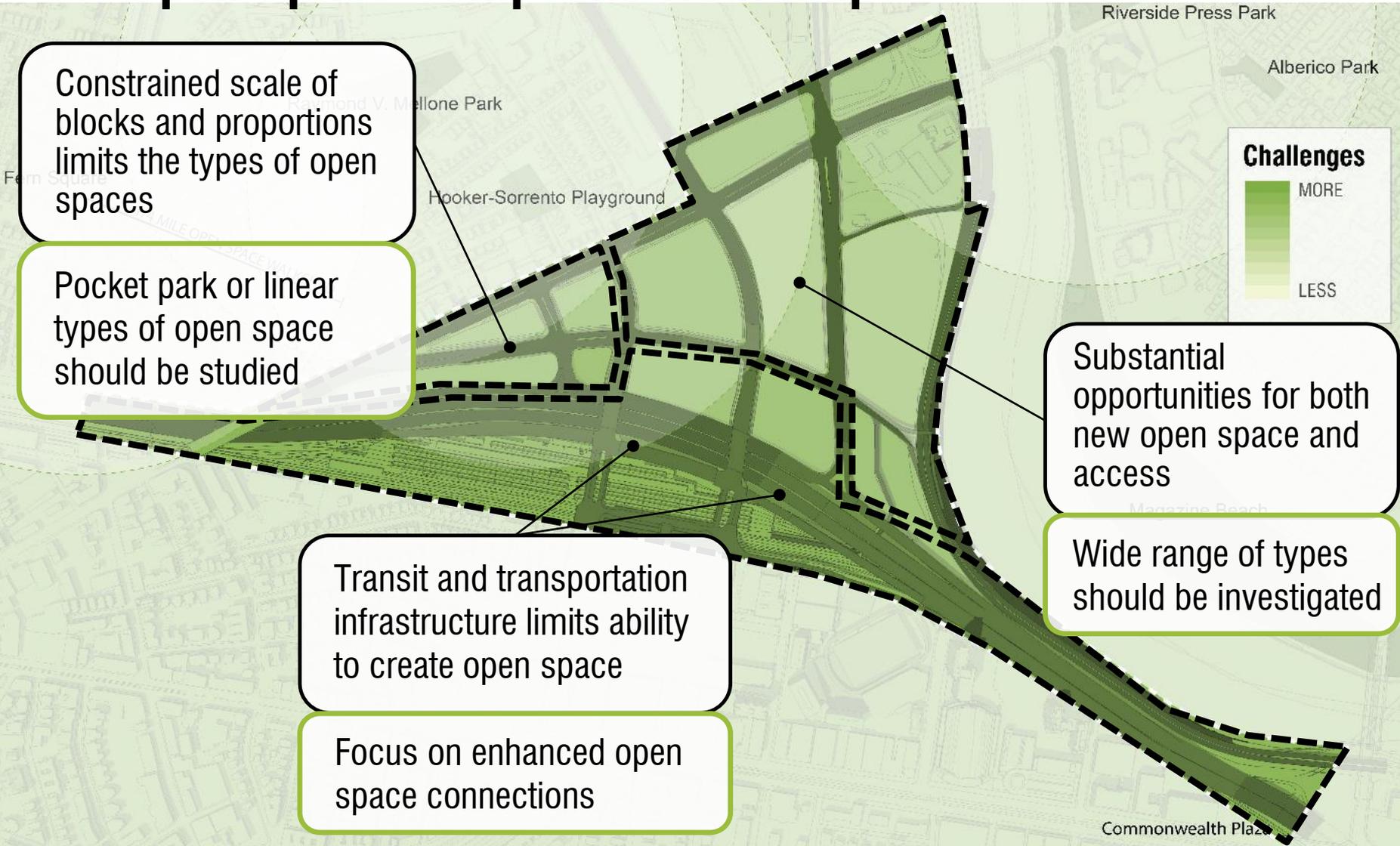


Prepared by the City of Boston  
Parks & Recreation Department





## Open Space Composite Heat Map





# Principles

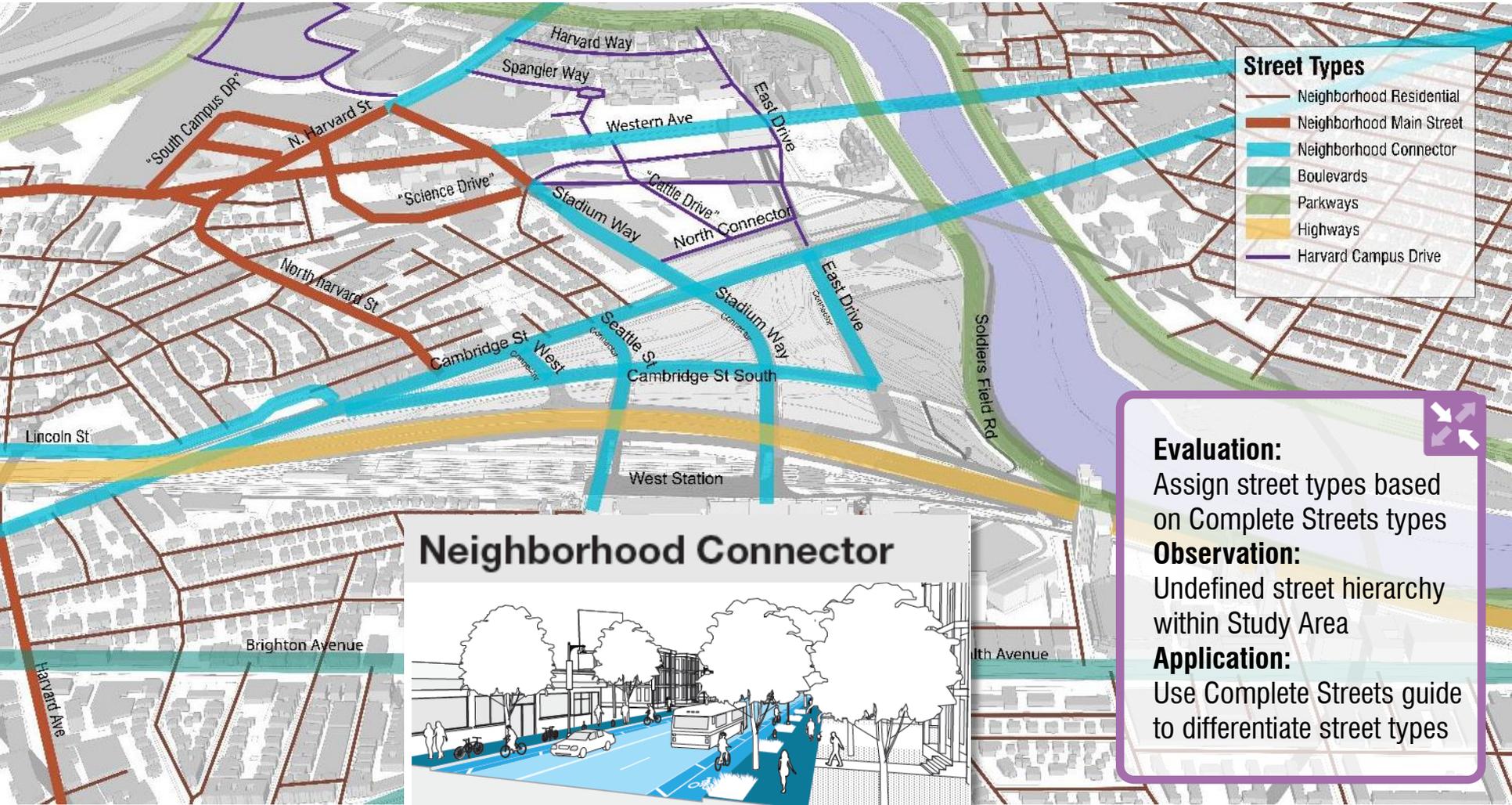
- Reinforce walkable and pedestrian friendly scale
- Enhance multi-modal connections and convenience
- Strengthen connections between adjacent neighborhoods and districts

# Focus of Analysis

- Street types and characteristics
- Pedestrian circulation network
- Bicycle circulation network
- Transit network and access
- Vehicular circulation network



## Street Typologies



**Street Types**

- Neighborhood Residential
- Neighborhood Main Street
- Neighborhood Connector
- Boulevards
- Parkways
- Highways
- Harvard Campus Drive

**Neighborhood Connector**

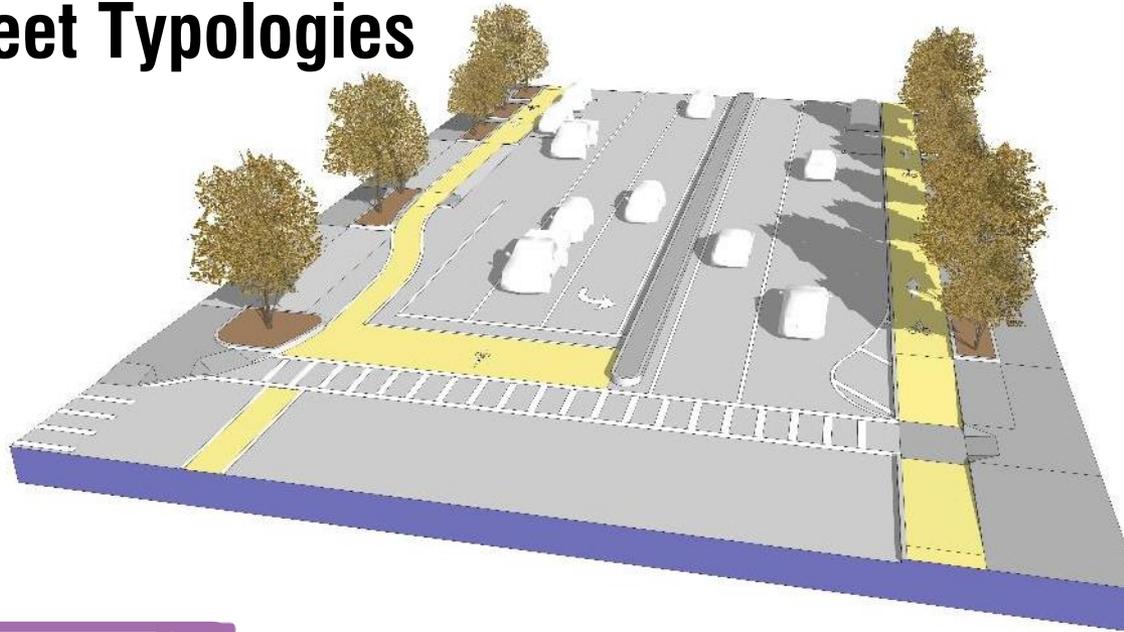
**Evaluation:**  
Assign street types based on Complete Streets types

**Observation:**  
Undefined street hierarchy within Study Area

**Application:**  
Use Complete Streets guide to differentiate street types



## Street Typologies



**Proposed  
Cambridge Street**

### Evaluation:

Illustrate and clarify placemaking characteristics of proposed streets

### Observation:

Undefined street hierarchy with similar street widths throughout district

### Application:

Use Complete Streets guide to differentiate street types



### Neighborhood Connector

Downtown Commercial  
Downtown Mixed-use  
Neighborhood Main Street  
**Neighborhood Connector**  
Neighborhood Residential

Industrial  
Shared Streets  
Parkways  
Boulevards



Street Type identifying Cambridge Street (Allston/Brighton) as example street



# Composite Heat Map

Edge and center of block structure provide choice/connections for all modes

Study improvements to pedestrian environment and street width

Infrastructure edge is barrier to north-south connections (in plan and section)

Investigate alignments vehicular and/or transit connections/options

Height above grade detracts from ped/bike experience

Investigate ways to enhance quality of crossing

### Challenges

Street hierarchy is undifferentiated and large in scale

Variation and/or reduced scale should be investigated

SFR is visual and mental barrier to river access

Study opportunities for crossings and iconic features



# Principles

- Maintain flexible accommodation of a wide variety of building types
- Integrate old and new with context-sensitive, compatible approach with transitions
- Strengthen ability to deck over the highway and rail yards

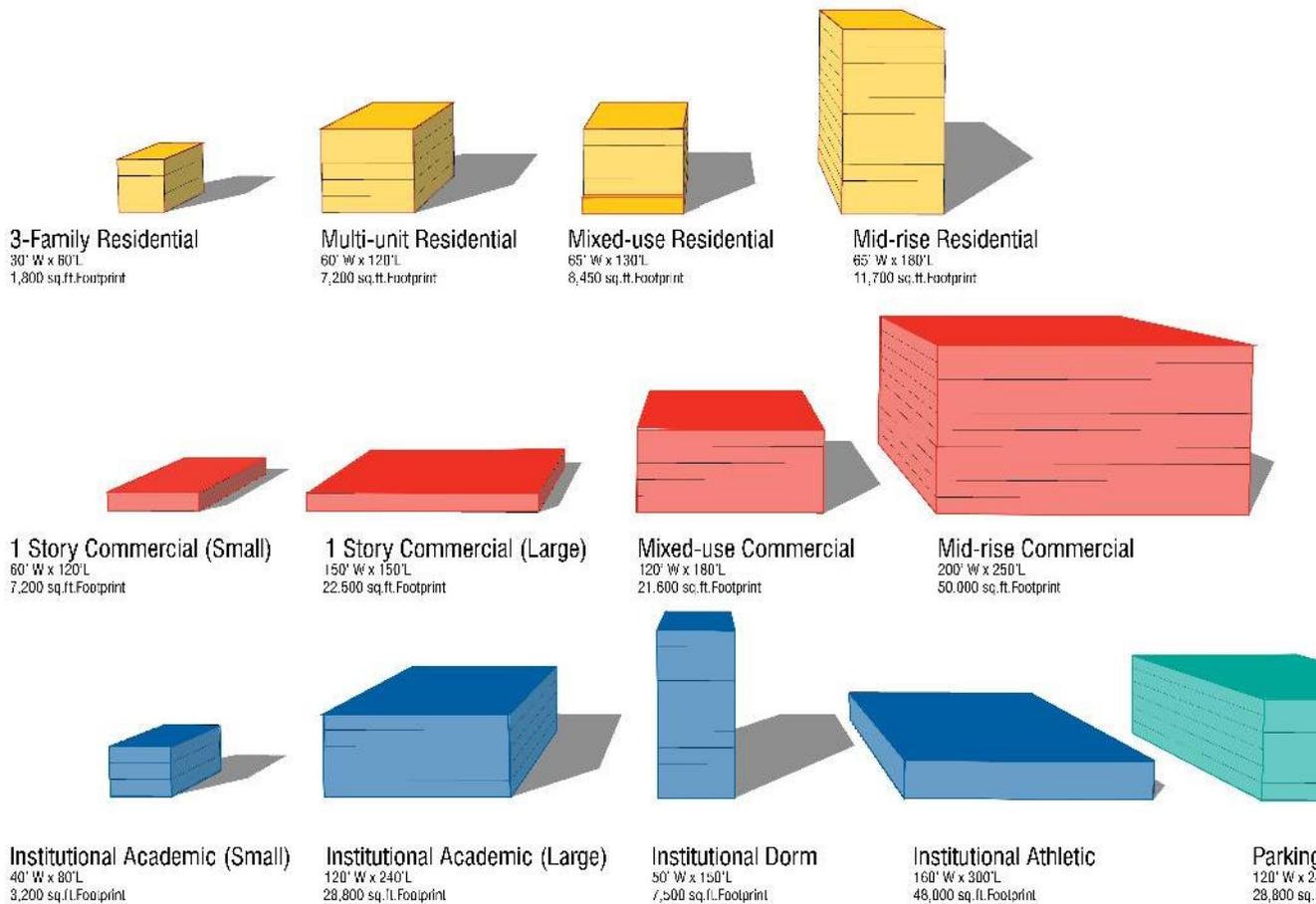
# Focus of Analysis

- Building typologies and dimensions
- Block size/geometry
- Air rights block size/geometry
- Block access/flexibility
- Location desirability



## Development Potential/Flexibility

# Building Typology Accommodation and Flexibility



**Building Typologies**

- Residential
- Commercial
- Institutional
- Transportation

**Evaluation:**  
Test potential fit and flexibility of building prototypes on blocks

**Observation:**  
Areas with limitations exist

**Application:**  
Identify methods to minimize limitations



## Building Typology Accommodation and Flexibility

### Evaluation:

Test potential fit and flexibility of building prototypes on blocks

### Observation:

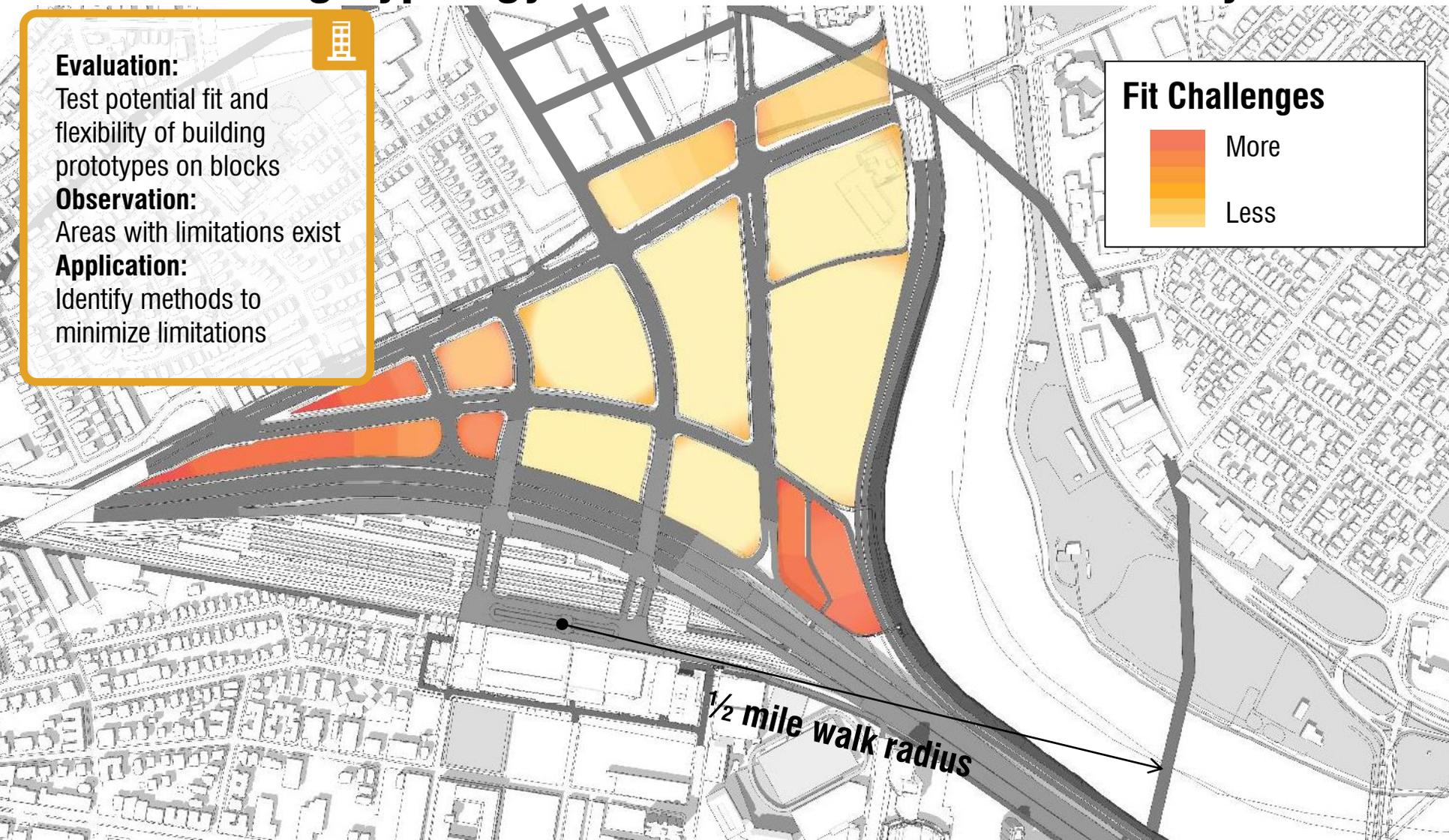
Areas with limitations exist

### Application:

Identify methods to minimize limitations



### Fit Challenges



# Composite Heat Map

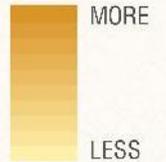
Center of district is adaptable to many scales and types of development

Investigate how flexibility may benefit open space network and placemaking

Development potential is highly dependent on approach to air rights

Studies should include combining sliver parcels and air rights parcels

## Challenges



“Throat” condition limits development flexibility at corner

Study alternatives and air rights combinations in more detail



# Principles and Focus

- Destination with range of uses and densities
- Maximize opportunities to extend Boston's urban fabric
- Define a network of recognizable places and centers of activity

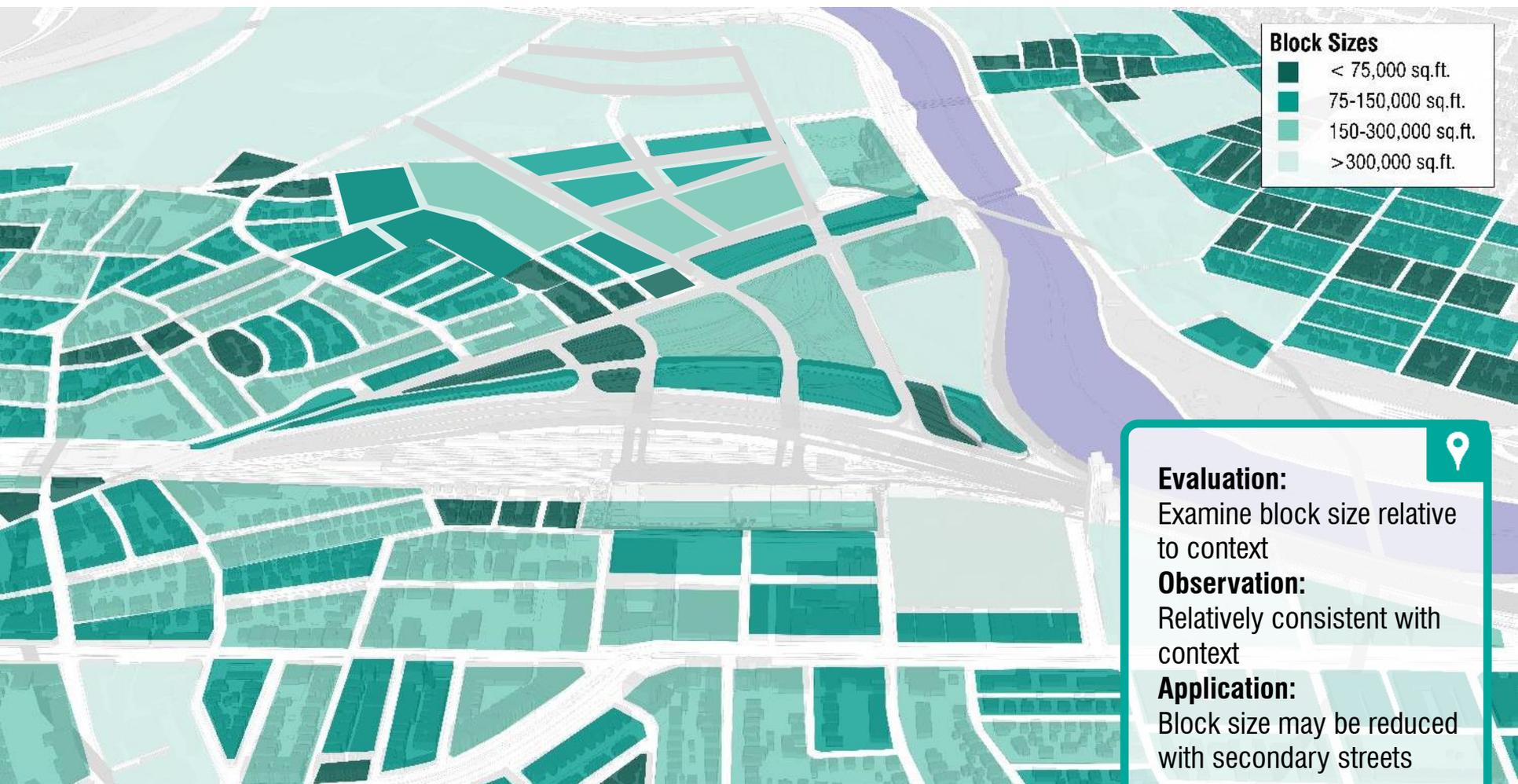
## Focus of Analysis

- Placemaking character/features
- Land use and building typologies
- Block size and geometry
- Street typologies and transit nodes
- Elevation of roadways



## Distinctive Place/Context Sensitive

# Distinct Placemaking Components in Context



### Evaluation:

Examine block size relative to context

### Observation:

Relatively consistent with context

### Application:

Block size may be reduced with secondary streets



## Distinctive Place/Context Sensitive

# Composite Heat Map

The center of district and neighborhood edge have few constraints to creating distinctive places

Number, type and distribution of landmarks or places to be studied

Placemaking will be constrained by the special conditions imposed by the transportation infrastructure

Identify elements of successful models of development

West Station provides a key opportunity to define a significant place in the district

Highlight techniques to take advantage of this

Flexibility for integration with Enterprise Research Campus

Explore elements of transition

Street hierarchy is undifferentiated and large in scale

Variation and/or reduced scale should be investigated

The district corner is highly constrained by the infrastructure and shape of available land

Study alternatives relative to improvement of this riverfront parcel



# Principles

- Enhance the ability for energy efficient and sustainable district design
- Anticipate climate change, sea-level rise and infrastructure needs

# Focus of Analysis

- Utilities and district-wide infrastructure
- Solar orientation, shadow
- Resiliency/flood considerations



# Solar Orientation and Shadow Analysis

12/21 Composite of:

- 9:00am
- 12:00pm
- 3:00pm



**Evaluation:**

Explore solar orientation and shadow considerations

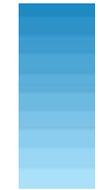
**Observation:**

Several blocks are not optimally oriented

**Application:**

Re-evaluate based on built-out alternatives

## Solar Challenges



More

Less





# Composite Heat Map

Limited challenges, but may have solar impacts on adjacencies

Assessment of district energy options should be undertaken

Underlying infrastructure places limitations on utility/sustainability options

Explore open space network as functional contributor to infrastructure

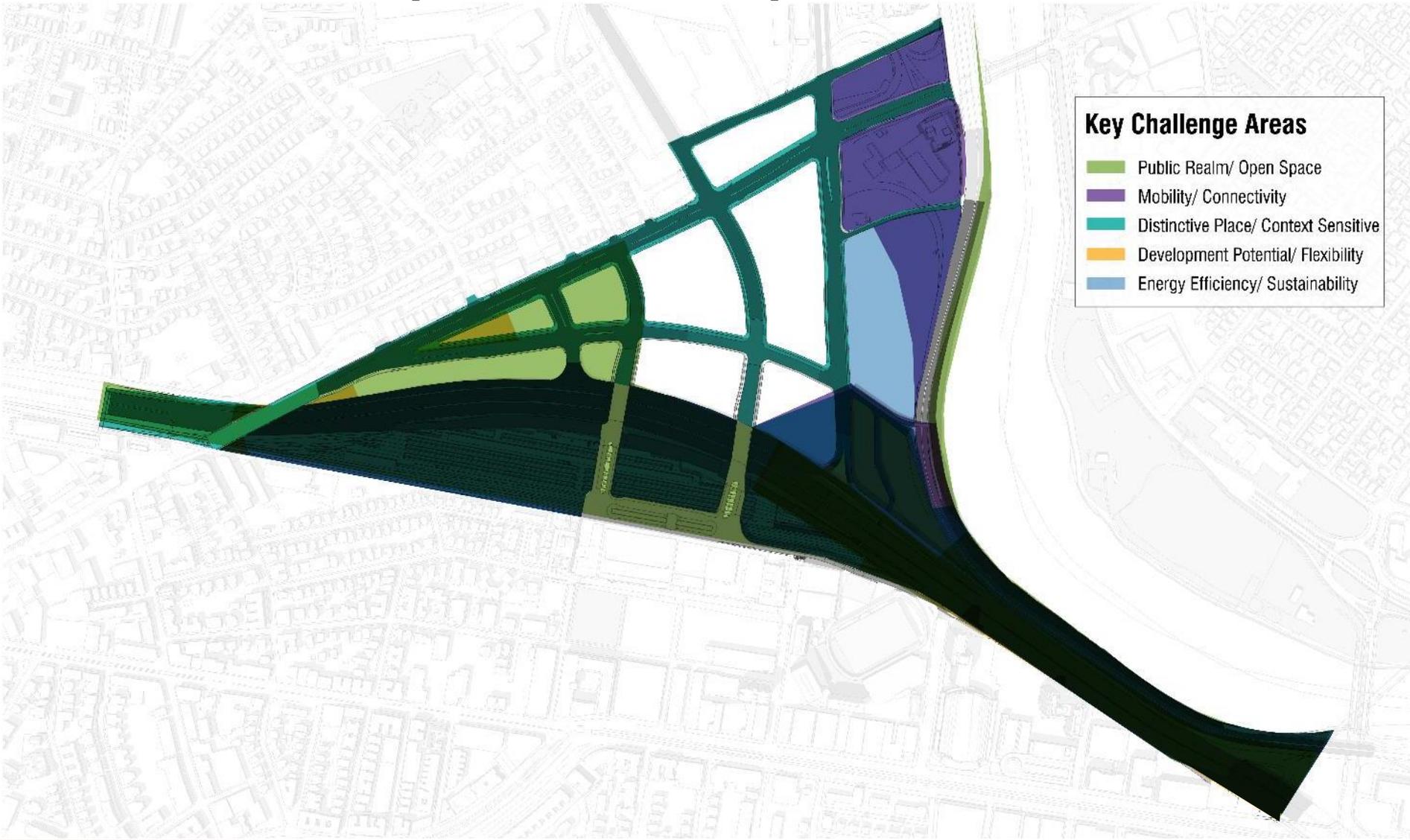


Most challenges occur near river – shade/solar and sea-level rise

Explore impacts relative to development and open space



# Overall Composite “Heat Map”





# Overall Composite “Heat Map”

Constrained area and geometries create challenges that may be addressed a number of ways

**Key Challenge Areas**

- Public Realm/ Open Space
- Mobility/ Connectivity
- Distinctive Place/ Context Sensitive
- Development Potential/ Flexibility
- Energy Efficiency/ Sustainability

Transportation, infrastructure considerations, and SFR create challenges that may be addressed a number of ways

Significant challenges exist to integrate infrastructure areas into a “place” – challenges will likely remain at southern edge, West Station connection provides opportunity for integration

Center of district provides wide range of flexible placemaking opportunities



# Key Community Issues Overlay

Walkability and pedestrian environment relative to roadway width

Vibrant neighborhood street

**Key Challenge Areas**

- Public Realm/ Open Space
- Mobility/ Connectivity
- Development Potential/ Flexibility

Integrated open space network with expanded riverfront park

Decking over the highway and railyards

Shared use path connection

Unite neighborhoods

At-grade alternatives

Quality of West Station as a landmark and TOD center with inviting access

Interim conditions

## **Next Steps**

- Creation and testing of alternative build-out scenarios
- Analysis of multi-modal systems and connections to transit
- Presentation at January or February Task Force Meeting
- Creation of long term planning framework diagrams

## Goals for tonight

- Define placemaking and its role in this process
- Share the methodology we are undertaking
- Describe the anticipated outcome of the work
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