



I-84 HARTFORD PROJECT

Public Meeting Presentation

East Hartford, CT

December 2, 2015



Presentation Overview

1. Project background
2. Alternatives overview
3. Alternatives screening process
4. Sample traffic analyses
5. Initial Alternatives Assessment
6. Lowered Highway Possibilities
7. Next steps



Project Overview



I-84 Project Background

- Rail line built in 1830s
- East-west expressway
- I-84 built in 1960s
 - Designed to avoid impacting rail
 - Prior to NEPA
- Soon realized effect on Hartford not all positive
- Now, have opportunity to rethink the previous design



“The impact of the I-84 freeway upon the physical environments into which it was introduced has been both dramatic and overwhelming.” - 1970 CTDOT & FHWA



Where is the Project?





I-84 Mainline Crosses Rail Twice



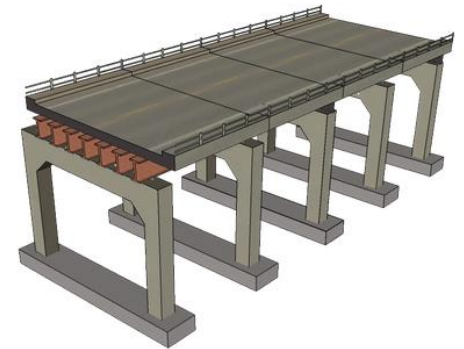


I-84 HARTFORD PROJECT



Why is it Needed?

- Bridge structural deficiencies
- Operational and safety deficiencies
- Mobility deficiencies



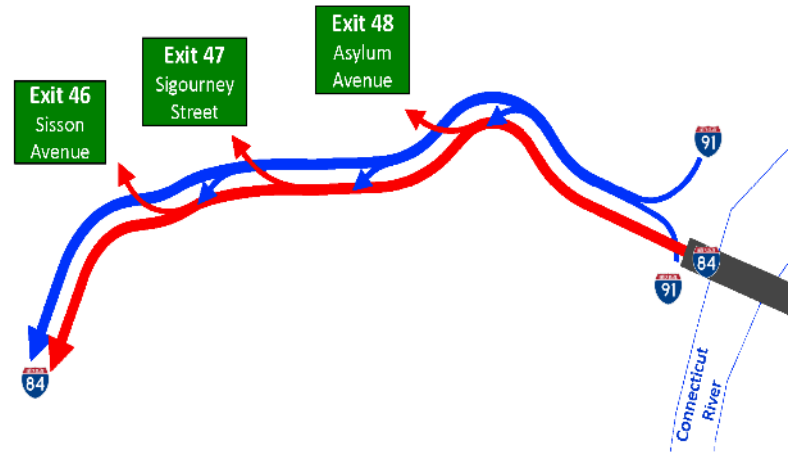
Bridge Structures (Viaduct)

- Reaching end of lifespan
- Cost of repairs = \$60M since 2004
- An additional \$60M over next 5 years
- Bridges are safe; deterioration will continue



Operations and Safety

- Eight full / partial interchanges
- Weaves
- Lane drops
- Sharp curves
- High crash rates





Mobility: Moving People and Goods

- Designed for 55,000 vehicles per day
- Carries 175,000 vehicles per day
- Freight volumes are above national average



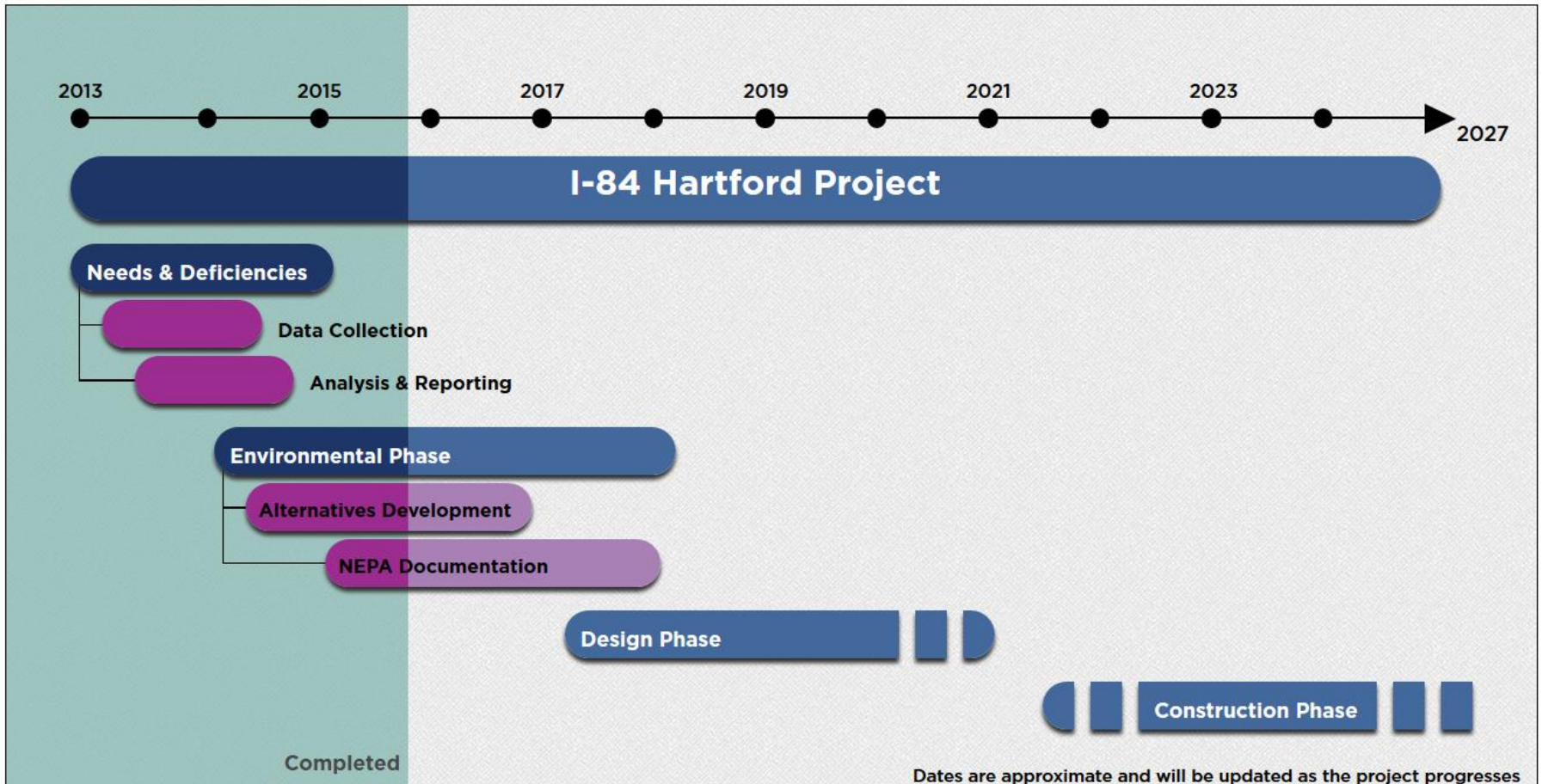
Mobility: Moving People and Goods

- Improved pedestrian and bicyclist connections
- Transit, parking are also considerations





Project Schedule



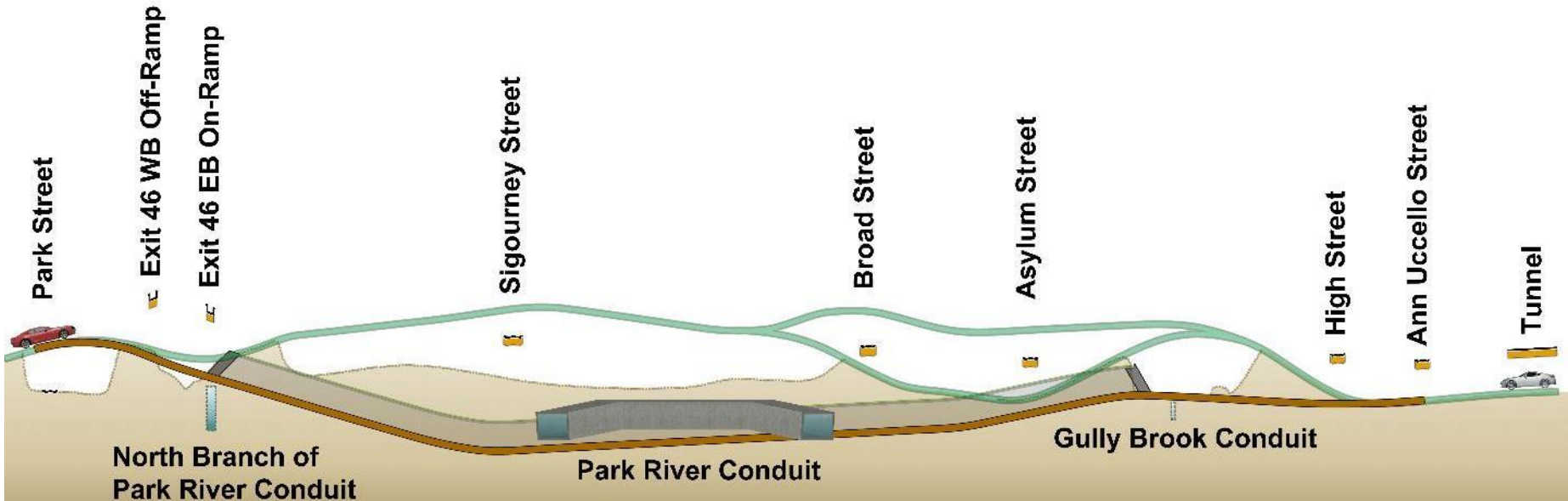
Dates are approximate and will be updated as the project progresses



84 Alternatives Overview

Mainline Alternatives





- Alternative 1: No-Build Green
- Alternative 2 (elevated) Blue
- Alternative 3 (lowered) Yellow
- Alternative 4 (tunnel) Brown

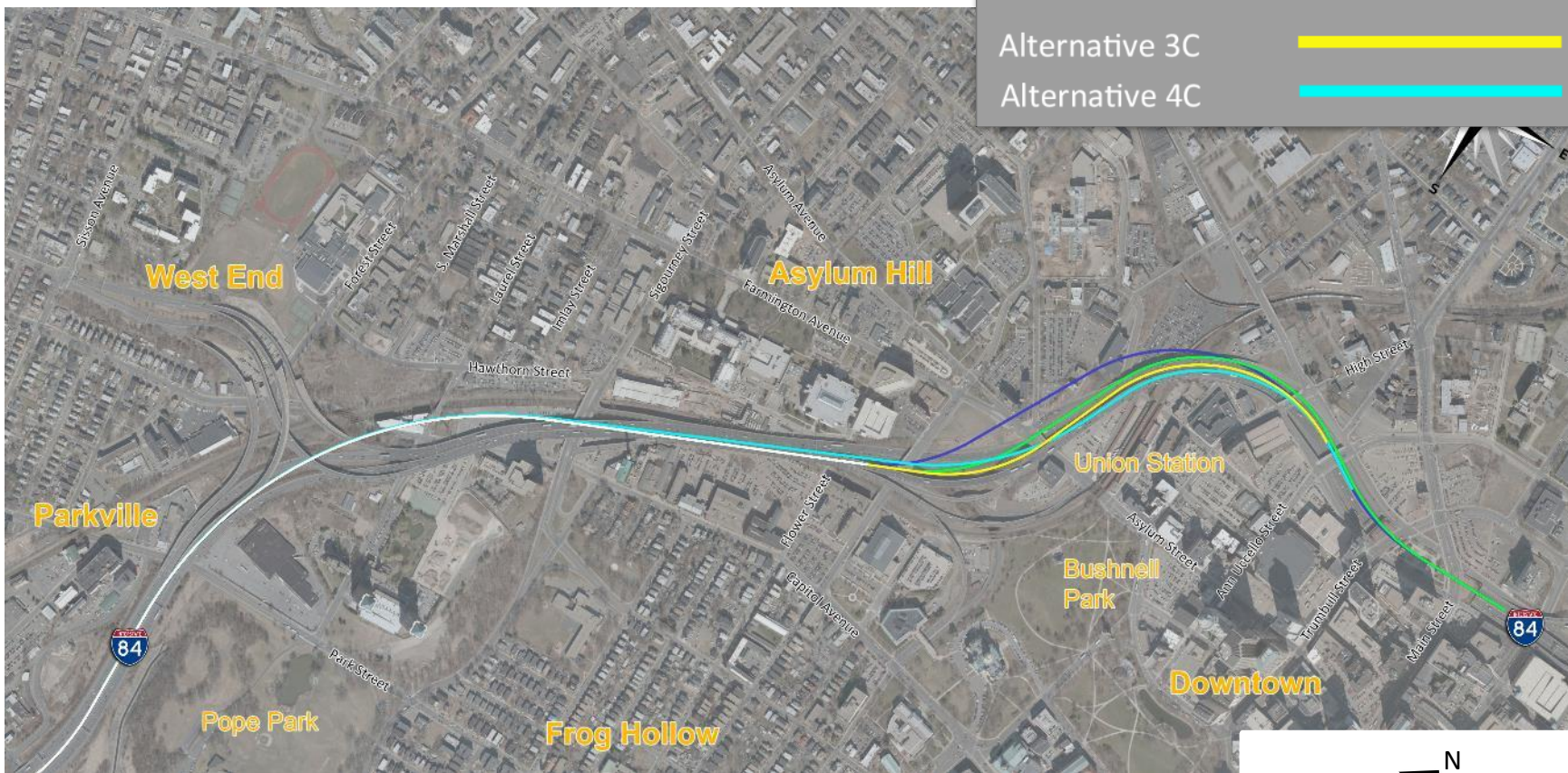




Mainline Alternatives

Legend

- Alternatives 2A/3A 
- Alternative 3B 
- Alternative 3C 
- Alternative 4C 



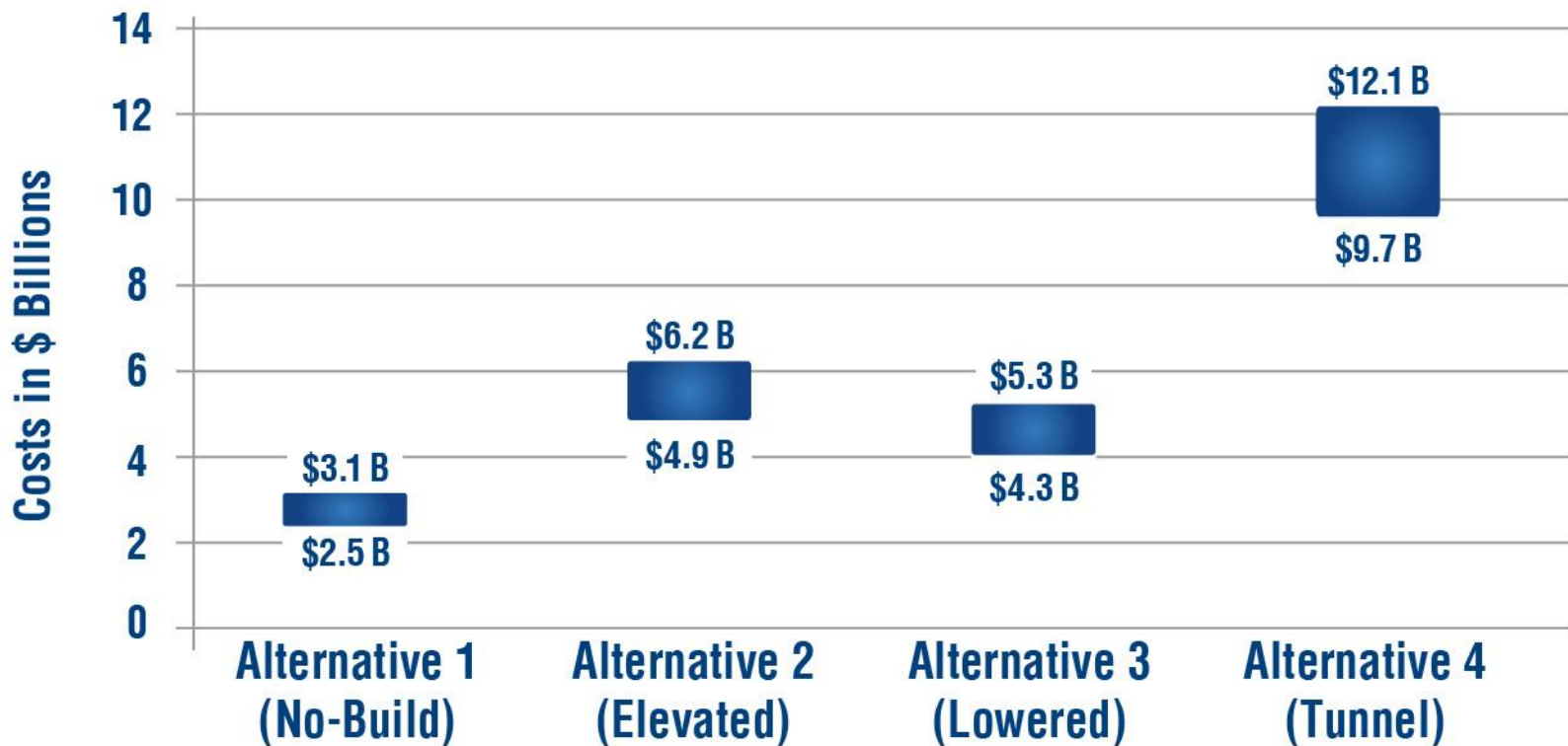
Various Ramp Options





Cost Estimates

Estimates represented in future dollars to the mid-point of construction



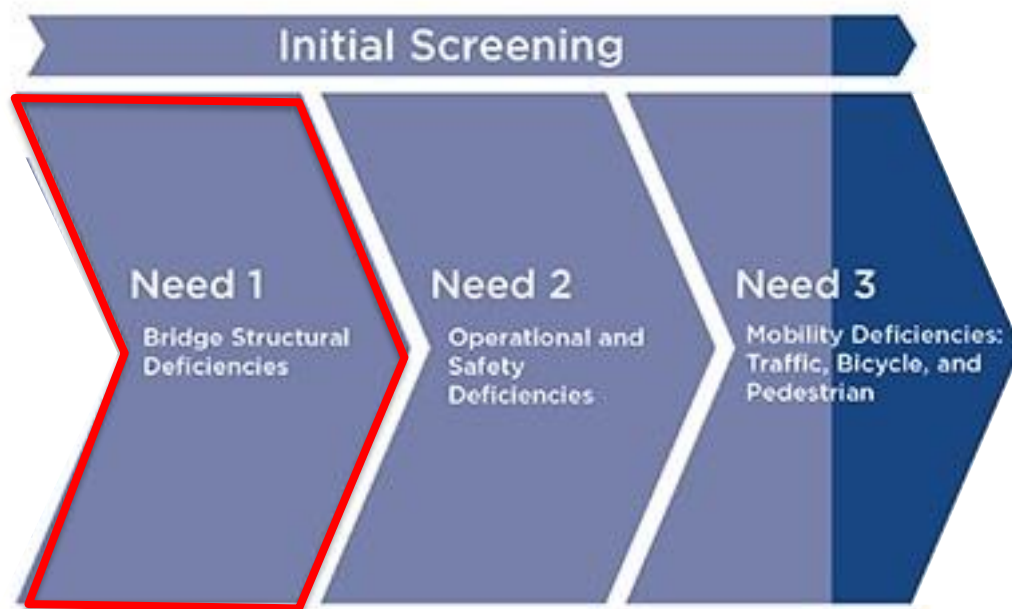
Alternatives



84 Alternatives Screening Process

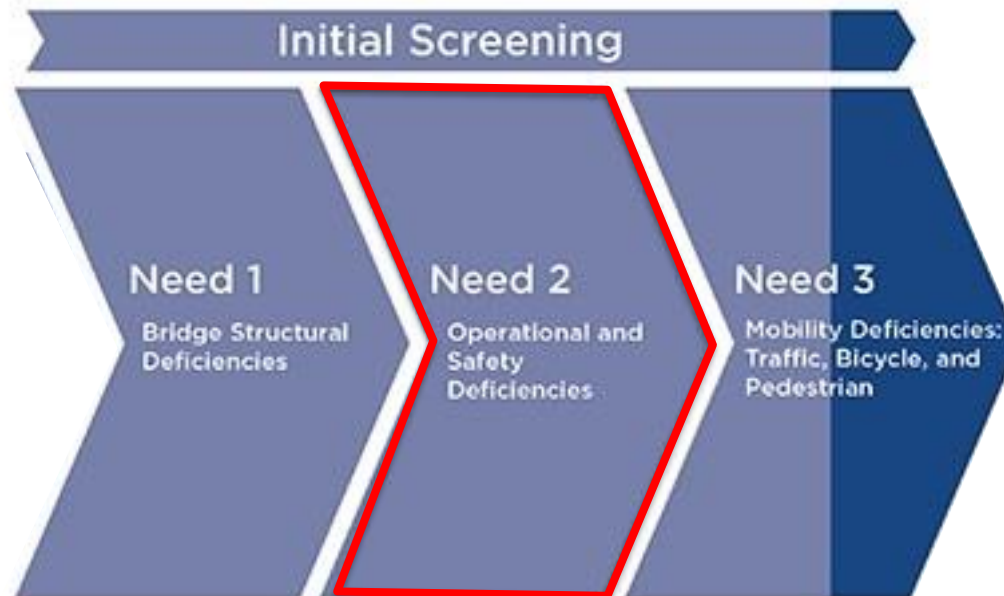
Initial Screening

1. Does the option address *bridge structure deficiencies*?



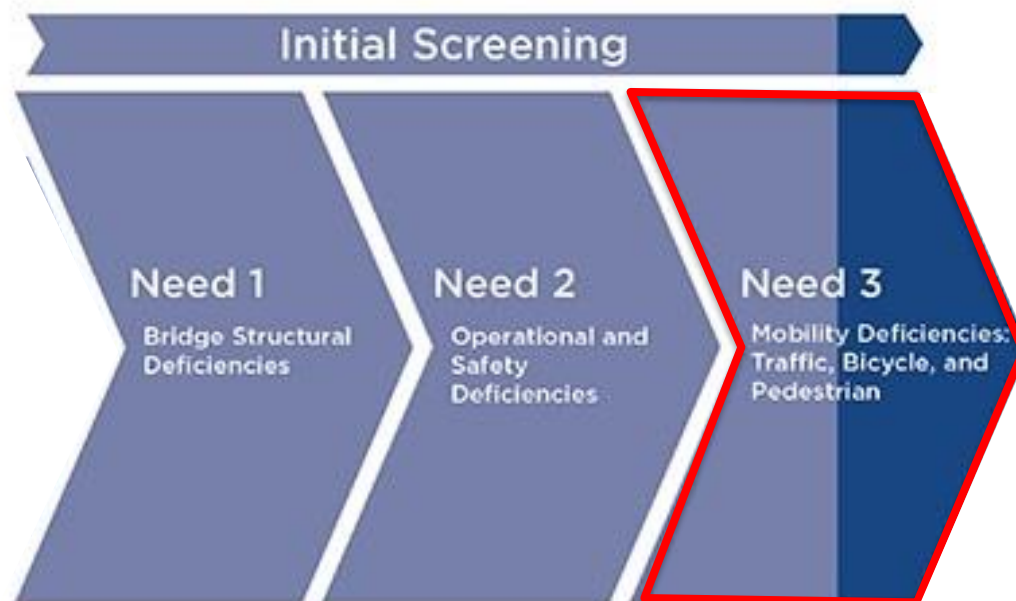
Initial Screening

- Does the option address ***operational and safety deficiencies?***



Initial Screening

3. Does the option address ***mobility deficiencies***, including ***traffic performance and bicycle and pedestrian accommodations***?





Mobility: Traffic Performance

- Perform I-84 mainline analysis
- Analyze local road intersections



Mobility: Bicycle / Pedestrian

- Collected information/usage patterns
- Continue to meet with stakeholders/users
- Incorporated data into the traffic model
- Balancing lanes with walkability / bikeability





84

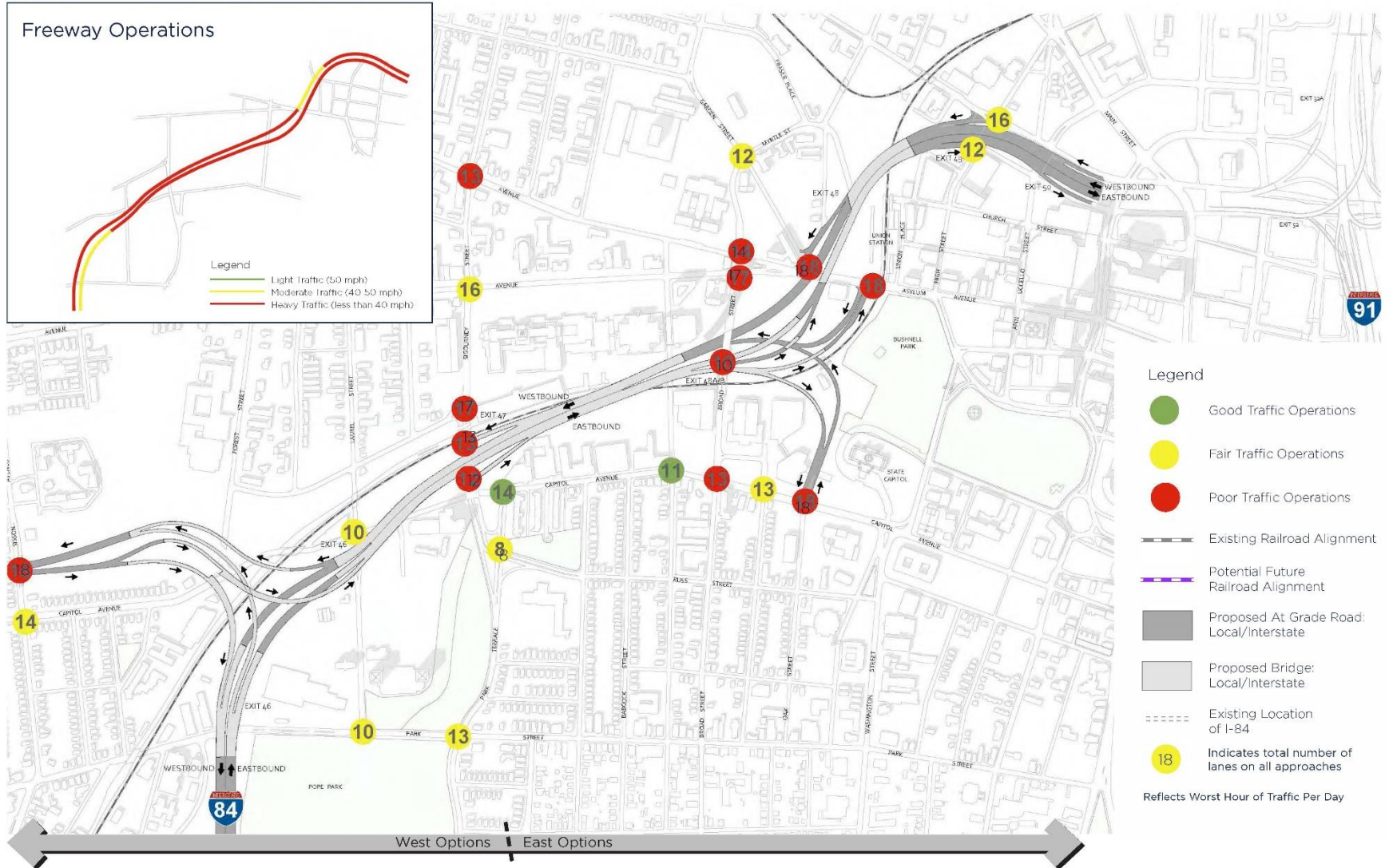
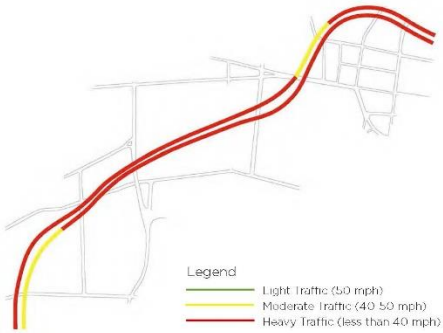
Sample Traffic Analyses



EXISTING CONDITIONS

Intersection Operation

Freeway Operations



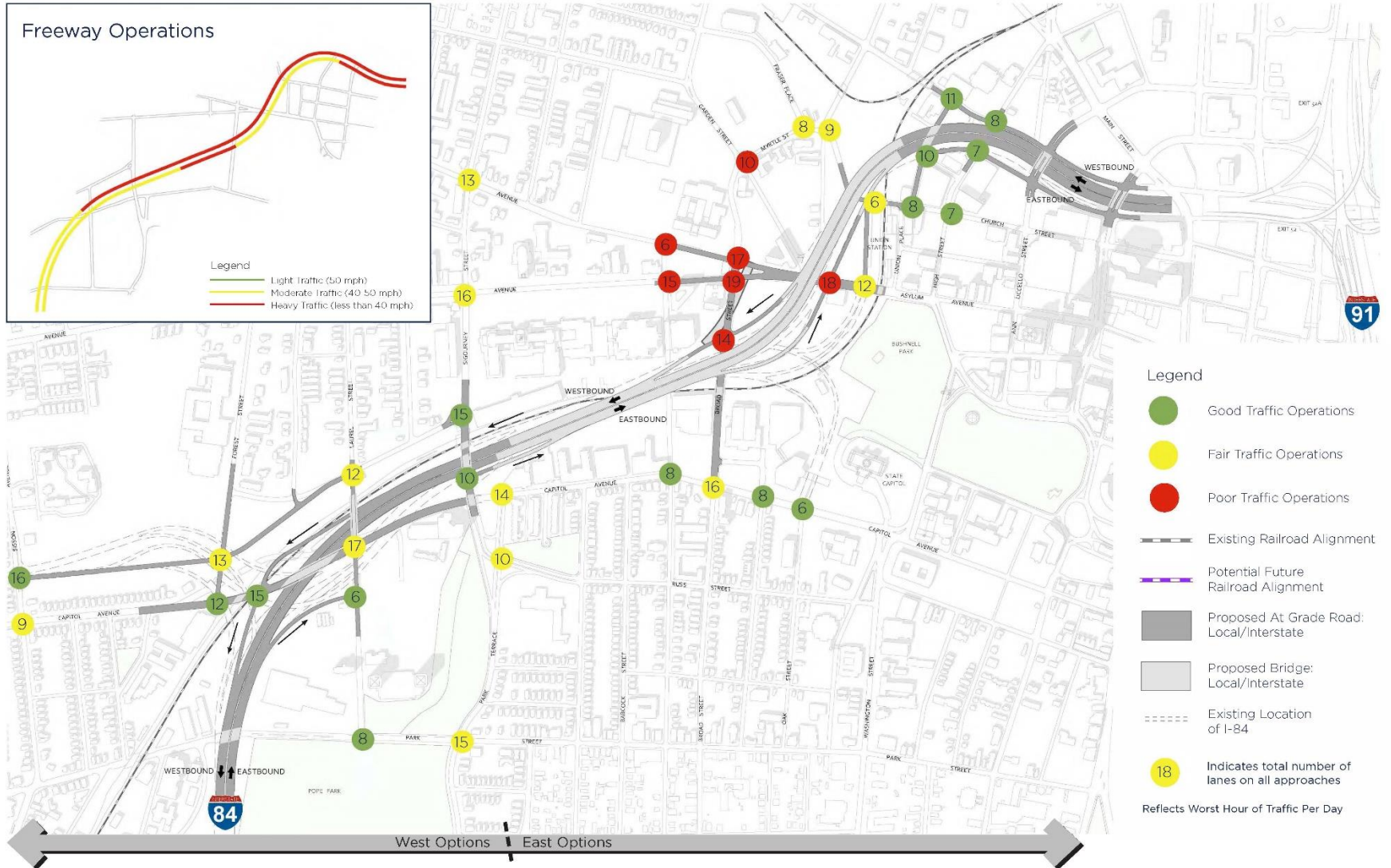
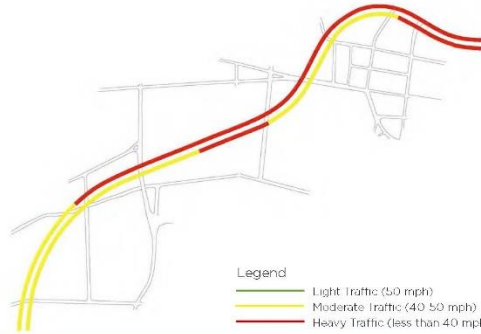


ALTERNATIVE 2A: W3-2/E3

Elevated

Intersection Operation

Freeway Operations



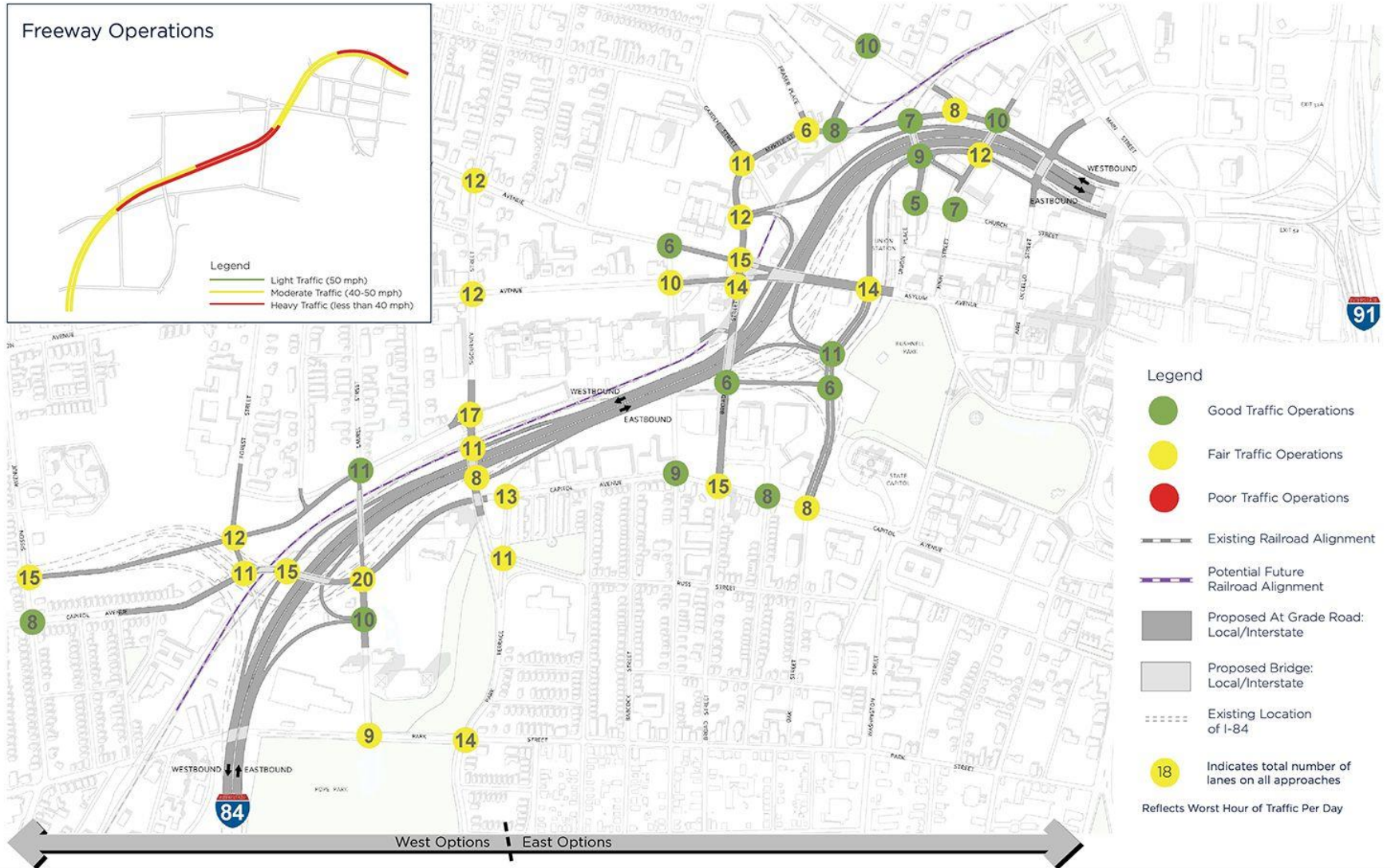
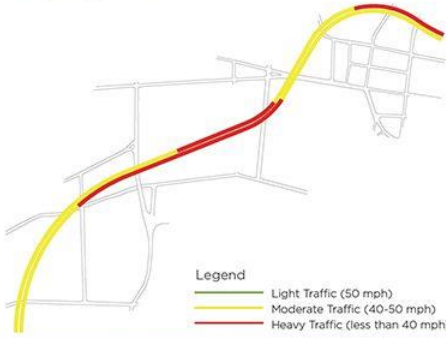
West Options | East Options



ALTERNATIVE 3B: W3-3/E2 (S) Lowered

Intersection Operation

Freeway Operations

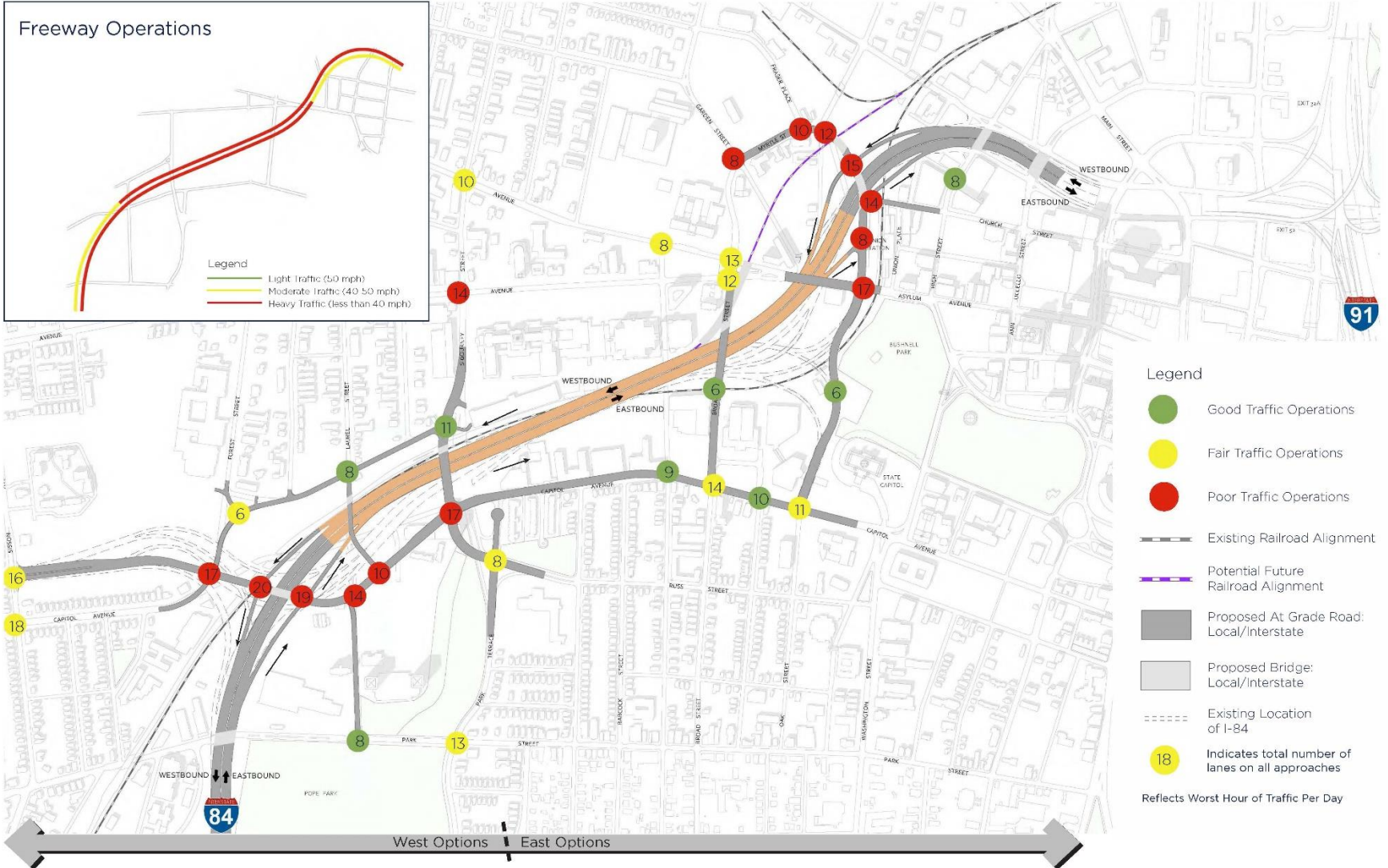


West Options | East Options



ALTERNATIVE 4C Tunnel

Intersection Operation





Traffic: What we've learned...



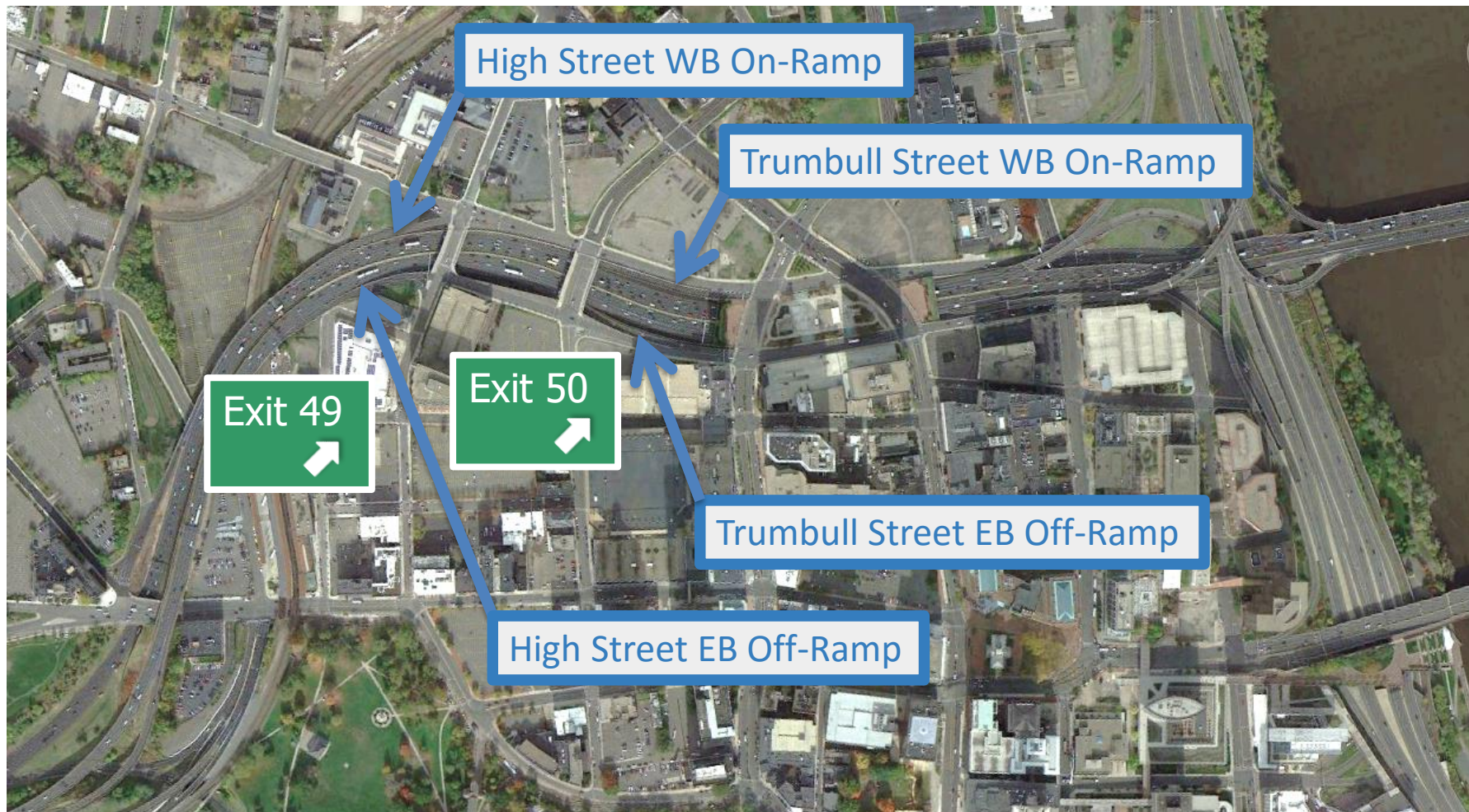
Analysis of existing I-84

- Corridor has too many ramps
- Left-hand on-ramp and left-hand off-ramp
- Multi-lane weaves
- Poor intersections affect mainline





Proposed Ramp Closures



High Street WB On-Ramp

Trumbull Street WB On-Ramp

Exit 49

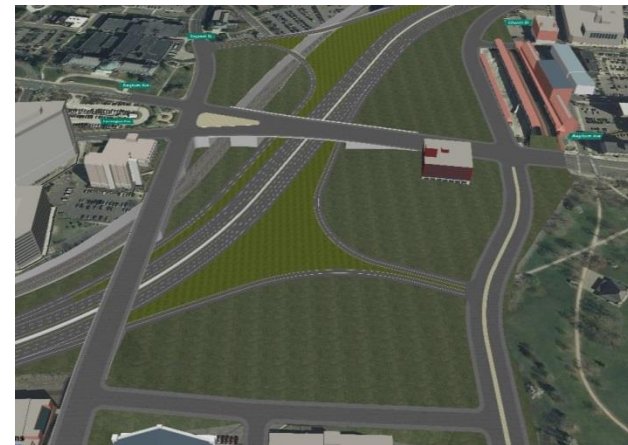
Exit 50

Trumbull Street EB Off-Ramp

High Street EB Off-Ramp

Intersection analysis tells us:

- Sigourney St. ramps are needed
- Create new roads to add redundancy
- Remove ramps from Broad St. and Asylum St.
- Improved bike/ped corridors can be achieved
- Improved mainline = Improved intersections





Initial Alternatives Assessment

How do the alternatives and interchange options address...

- **Structure** deficiencies?
- **Safety** and **operational** deficiencies?
- **Mobility** deficiencies?

Ability to Meet Purpose and Need	
Meets P&N	
Moderately Meets P&N	
Does Not meet P&N	
Critical Flaw	
More Analysis Needed	

How do the alternatives and interchange options address...

- **Other Considerations, such as**
 - Impacted Buildings
 - Construction Costs

Other Considerations	
Good	
Fair	
Poor	
Critical Flaw	
More Analysis Needed	

Initial analysis shows...

Criteria	EASTERN OPTIONS													WESTERN OPTIONS																
	N-B ALT 1	ELEVATED HWY ALT 2A			LOWERED HIGHWAY						ELEVATED / LOWERED HIGHWAY ALT 2/3							TUNNELED HIGHWAY ALT 4												
		E1	E2(S)	E3	E1-1	E1-2	E2(S)	E3	E4	E5(S)	E1(S)	E2(S)	E3(S)	E4(S)	E1(S)	E2(S)	W1	W2	W3-1	W3-2	W3-3	W4	W5	W6-1	W6-2	W7	4A	4B	4C-1	4C-2
Purpose & Need																														
Bridge Structure Deficiencies																														
Mainline Traffic Performance																														
Safety Considerations																														
Local Road Traffic Performance																														
Bike/Ped Accommodations																														
Goals & Objectives																														
Rail Accommodations																														
Multi-Modal Connectivity																														
Cost Effectiveness																														
Neighborhood Connections																														
Viewsheds																														
Opportunities for Land Development																														
Other Considerations																														
Changes to Travel Patterns																														
Permit Feasibility																														
Impacted Buildings																														
Construction Costs																														

- Options unique to the elevated highway perform poorly
 - Poor traffic operations

Initial analysis shows...

Criteria	EASTERN OPTIONS														WESTERN OPTIONS											TUNNELED HIGHWAY				
	N-B	ELEVATED HWY			LOWERED HIGHWAY							ELEVATED / LOWERED HIGHWAY							ALT 4											
		ALT 1	ALT 2A		ALT 3A			ALT 3B				ALT 3C		ALT 2/3							4A	4B	4C-1	4C-2						
Alt	E1	E2(S)	E3	E1-1	E1-2	E2(S)	E3	E4	E5(S)	E1(S)	E2(S)	E3(S)	E4(S)	E1(S)	E2(S)	W1	W2	W3-1	W3-2	W3-3	W4	W5	W6-1	W6-2	W7	4A	4B	4C-1	4C-2	
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Impacted Buildings																														
Construction Costs																														

- Options unique to the elevated highway perform poorly
 - Poor traffic operations

- Tunneled highway options perform poorly
 - Poor traffic operations or significant property impacts
 - High Cost

Initial analysis shows...

Criteria	EASTERN OPTIONS														WESTERN OPTIONS															
	N-B	ELEVATED HWY			LOWERED HIGHWAY							ELEVATED / LOWERED HIGHWAY							TUNNELED HIGHWAY											
		ALT 1	ALT 2A		ALT 3A			ALT 3B				ALT 3C		ALT 2/3			ALT 4													
	E1	E2(S)	E3	E1-1	E1-2	E2(S)	E3	E4	E5(S)	E1(S)	E2(S)	E3(S)	E4(S)	E1(S)	E2(S)	W1	W2	W3-1	W3-2	W3-3	W4	W5	W6-1	W6-2	W7	4A	4B	4C-1	4C-2	
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Impacted Buildings																														
Construction Costs																														

- Some lowered highway options perform well
 - Relocated railroad creates interchange opportunities
 - New roadways create redundancy in network

- Additional Building Impacts



We need your help!

Please review the preliminary analysis and give us your feedback

What are your thoughts?





Lowered Highway Possibilities - West



Existing Conditions



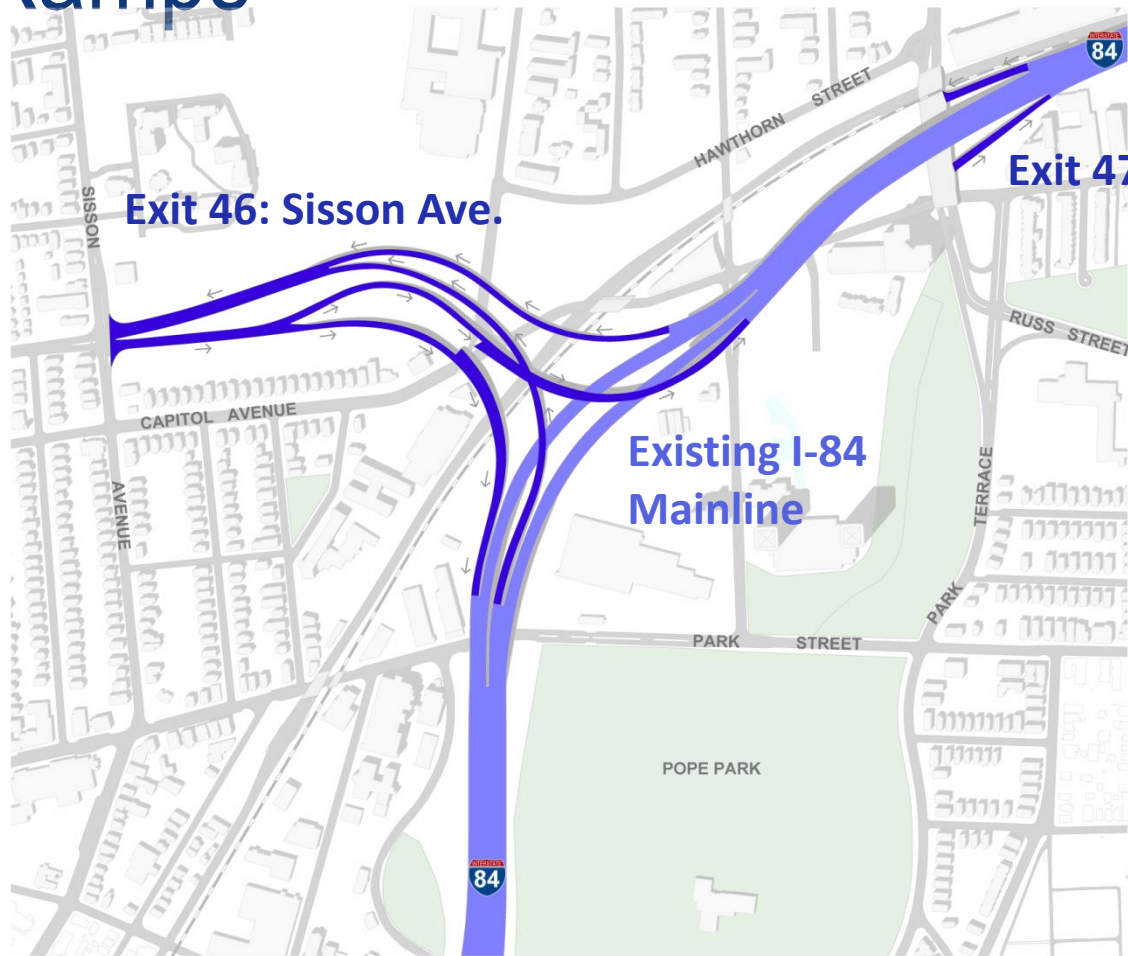


Existing Mainline





Existing Ramps



Exit 46: Sisson Ave.

Exit 47: Sigourney St.

Existing I-84
Mainline



Option W3-3

Proposed Mainline



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Ramp Closures



Sisson Avenue Ramps Closed

Sigourney Street Ramps Reconfigured

Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Capitol Ave. Realignment



**Realigned
Capitol Avenue**

Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Proposed Ramps



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3



Proposed New Local Roads



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Summary of Improvements



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3



New and Reconstructed Roads



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3



Potentially Impacted Buildings



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3

Current Bike Routes



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3



Proposed Complete Streets

Existing or Proposed
Bike Lane

Complete
Streets Improvements



Preliminary

Subject to change based upon ongoing analysis and design



Option W3-3



Potentially Available Land



Preliminary

Subject to change based upon ongoing analysis and design. Actual location and limits may vary.



Option W3-3

Greenway & Streetscapes



CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY

Subject to change based upon ongoing analysis and design. Streetscapes restricted to actual limits of necessary roadway infrastructure improvements.



Sisson Ramps

Existing aerial view looking north





Sisson Ramps

Potential aerial view looking north





Realigned Capitol Avenue

Existing street view looking east





Realigned Capitol Avenue

Potential street view looking east





Lowered Highway Possibilities - East



Existing Conditions - East



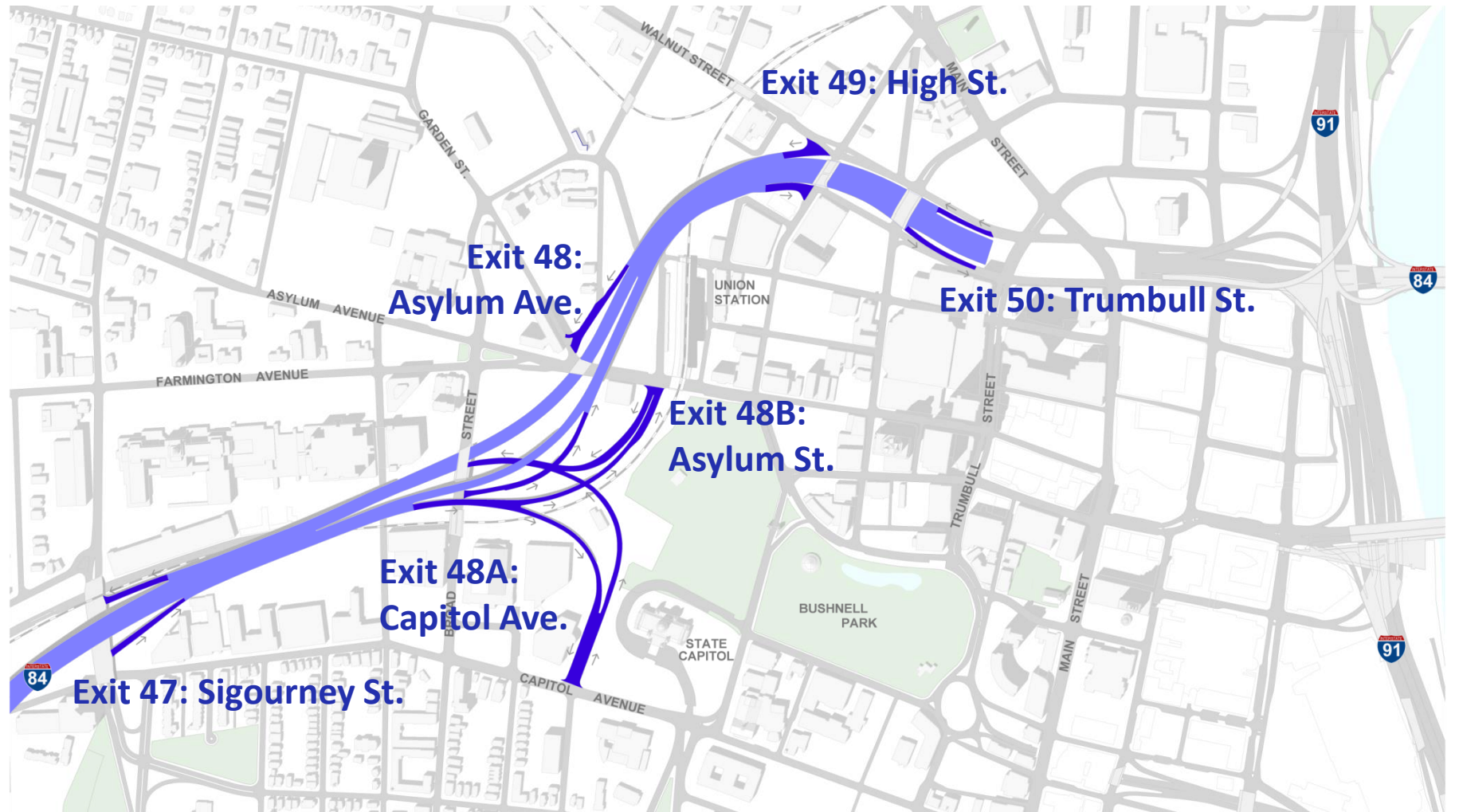


Existing Mainline



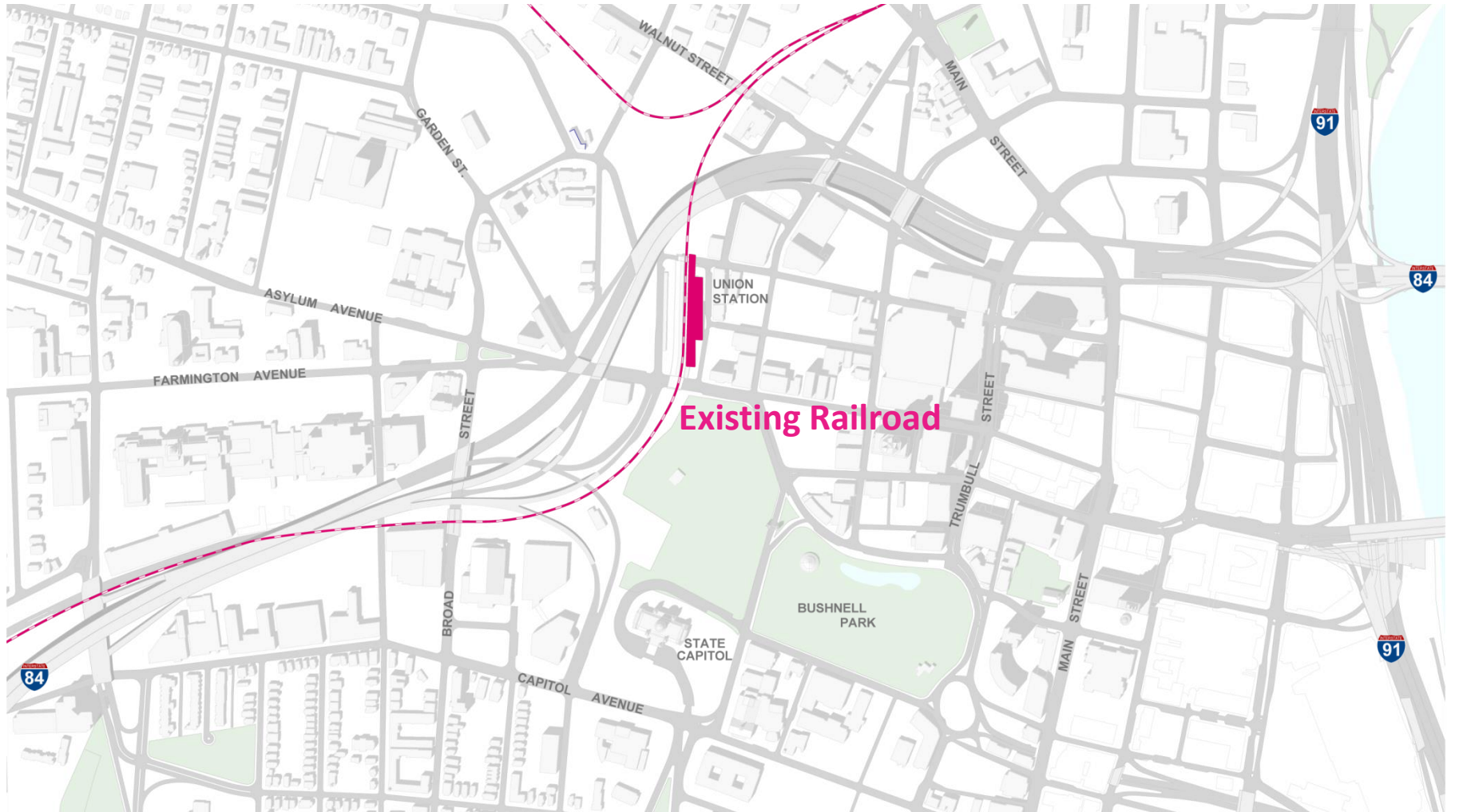


Existing Ramps





Existing Railroad

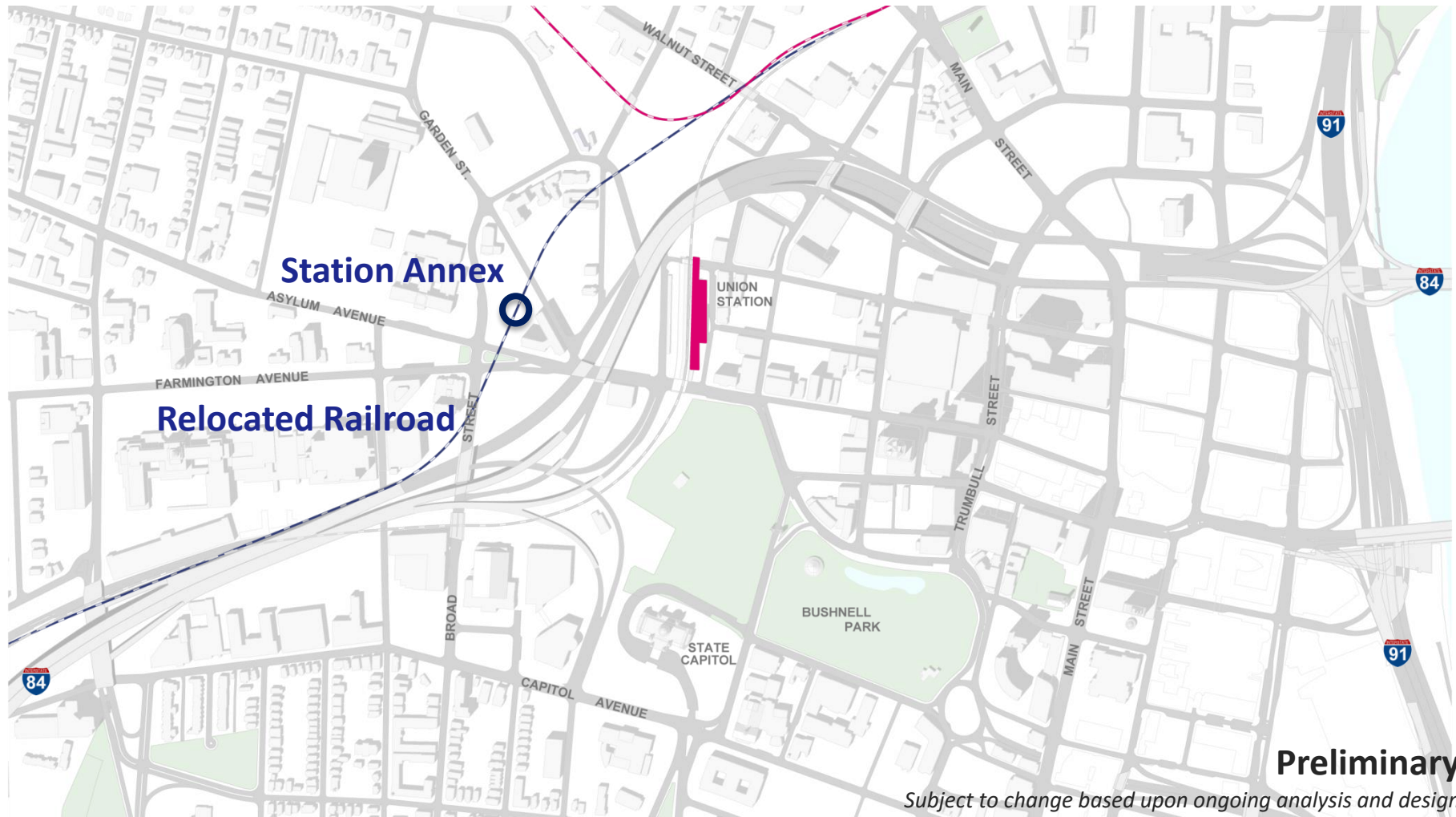




Option 3B E2(S)



Relocated Railroad & New Annex



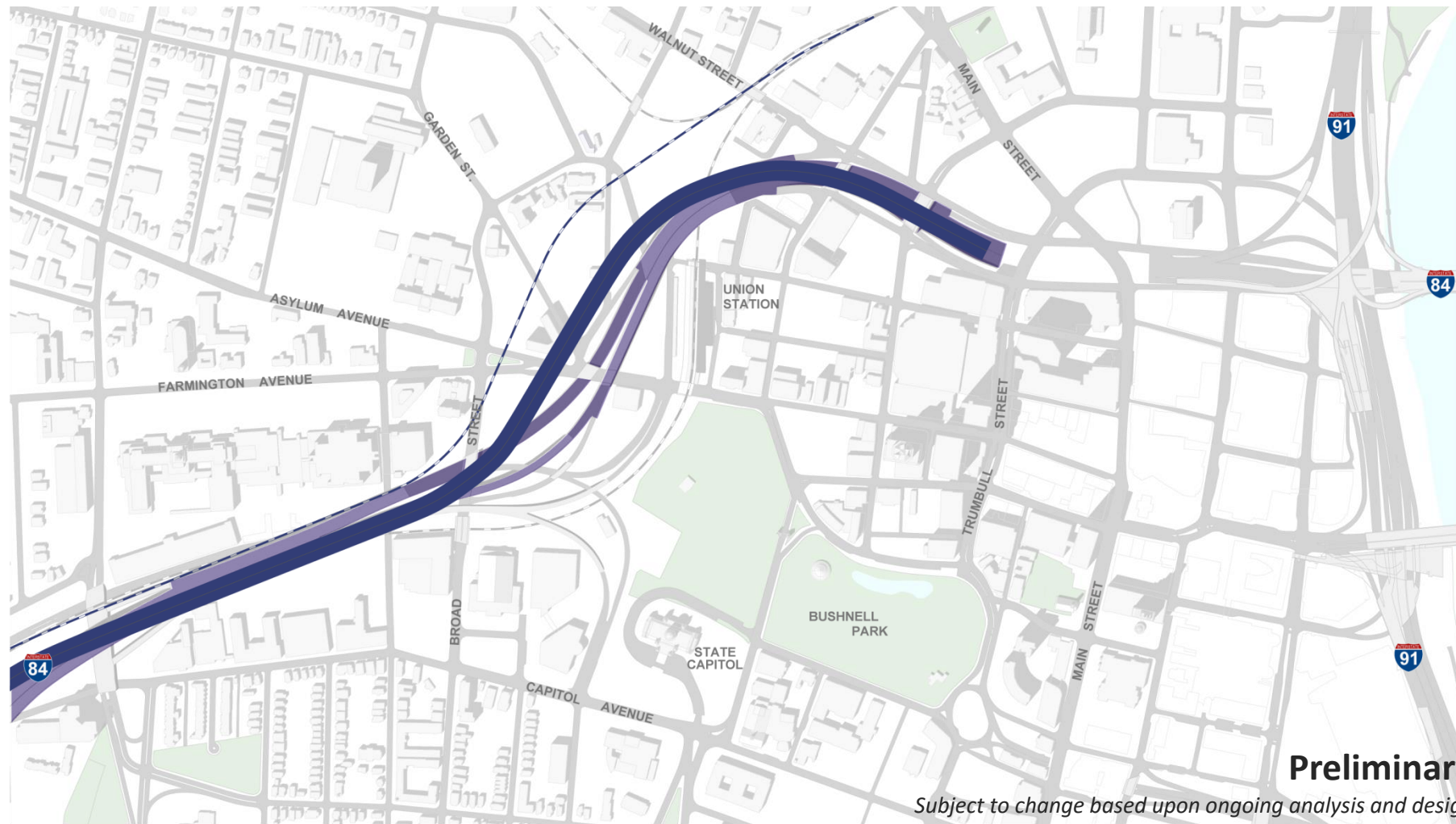
Preliminary

Subject to change based upon ongoing analysis and design



Option 3B E2(S)

Proposed Mainline



Preliminary

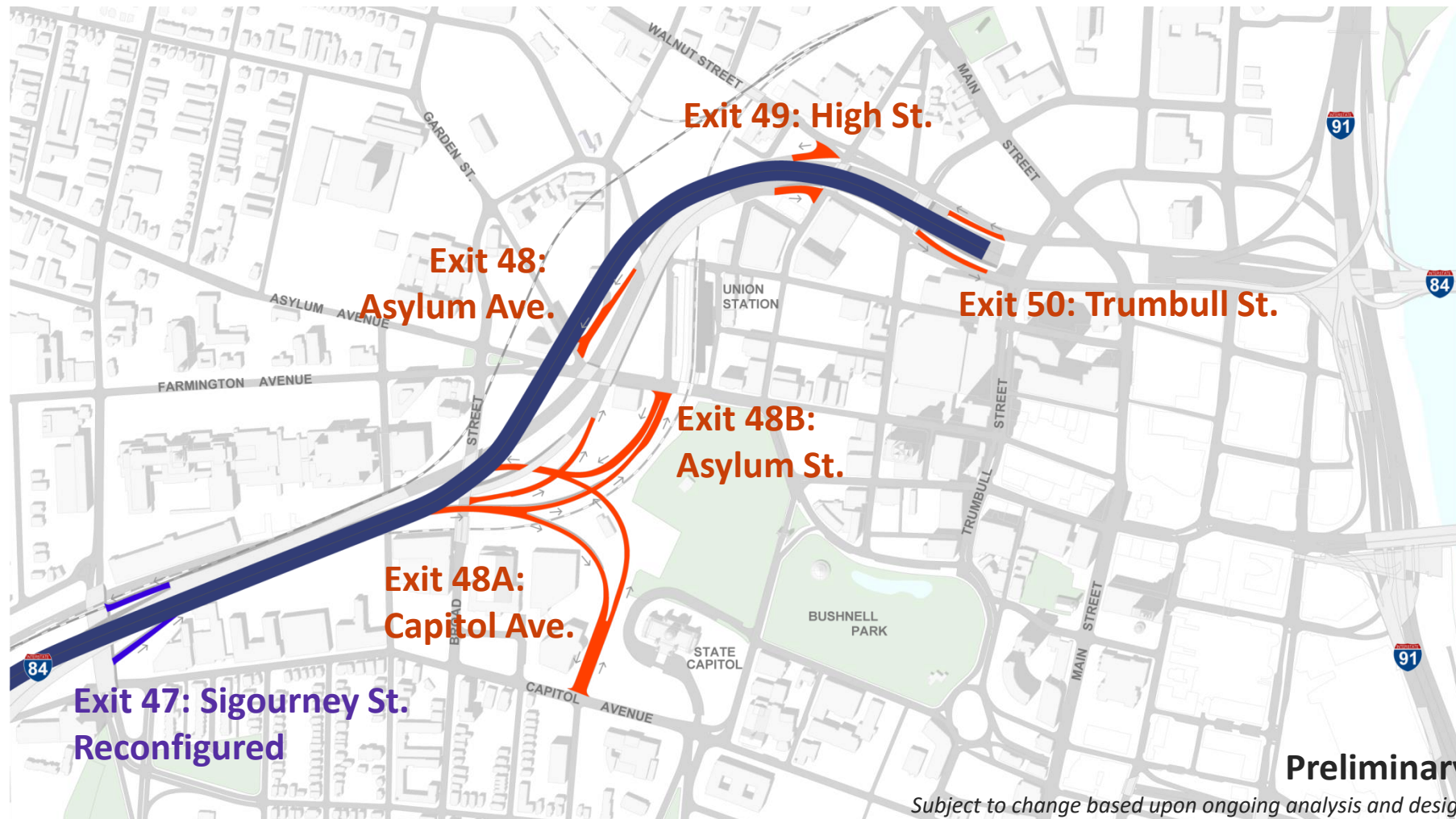
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Option 3B E2(S)



Proposed Ramp Closures



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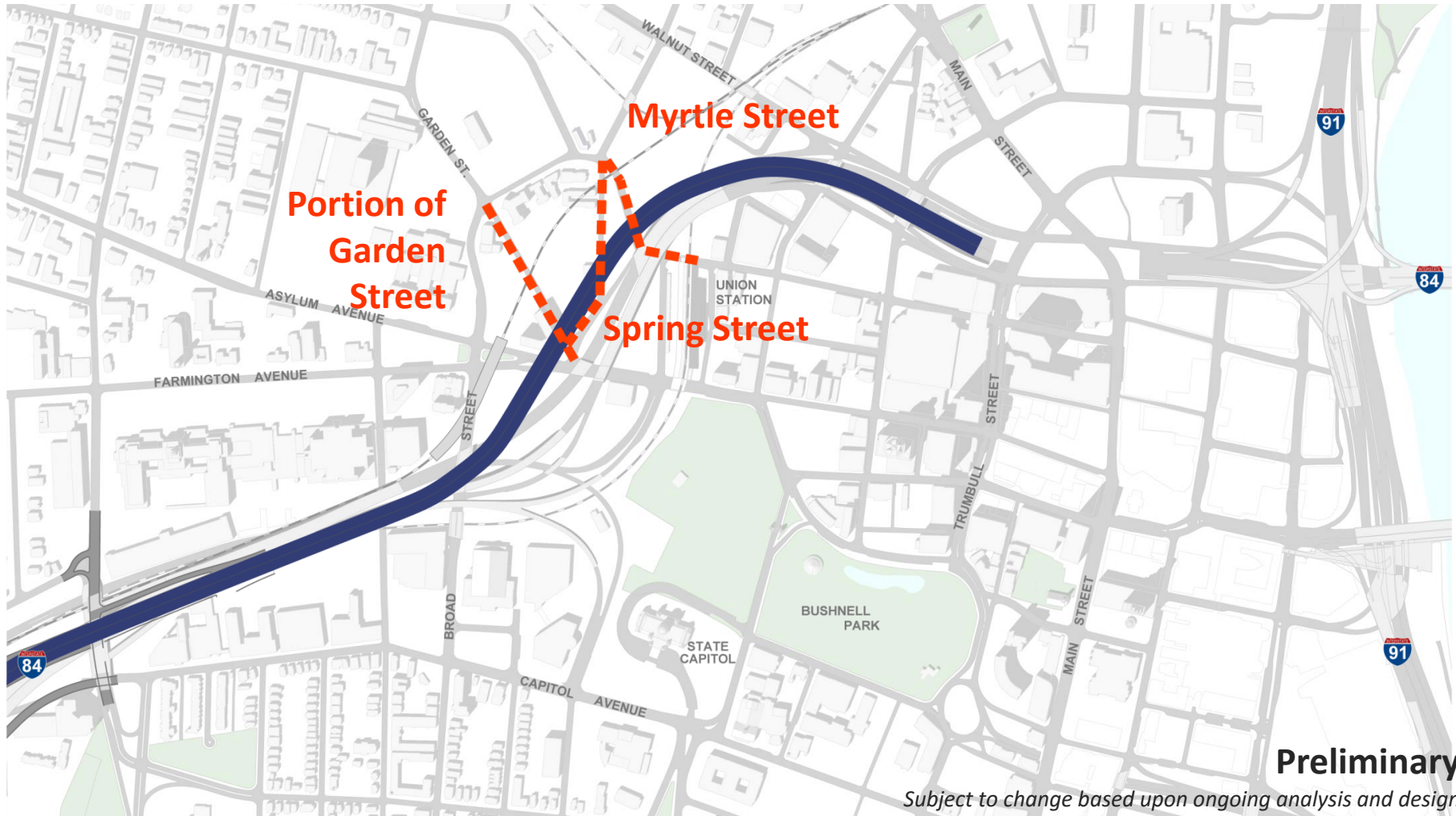
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Proposed Roads Closed



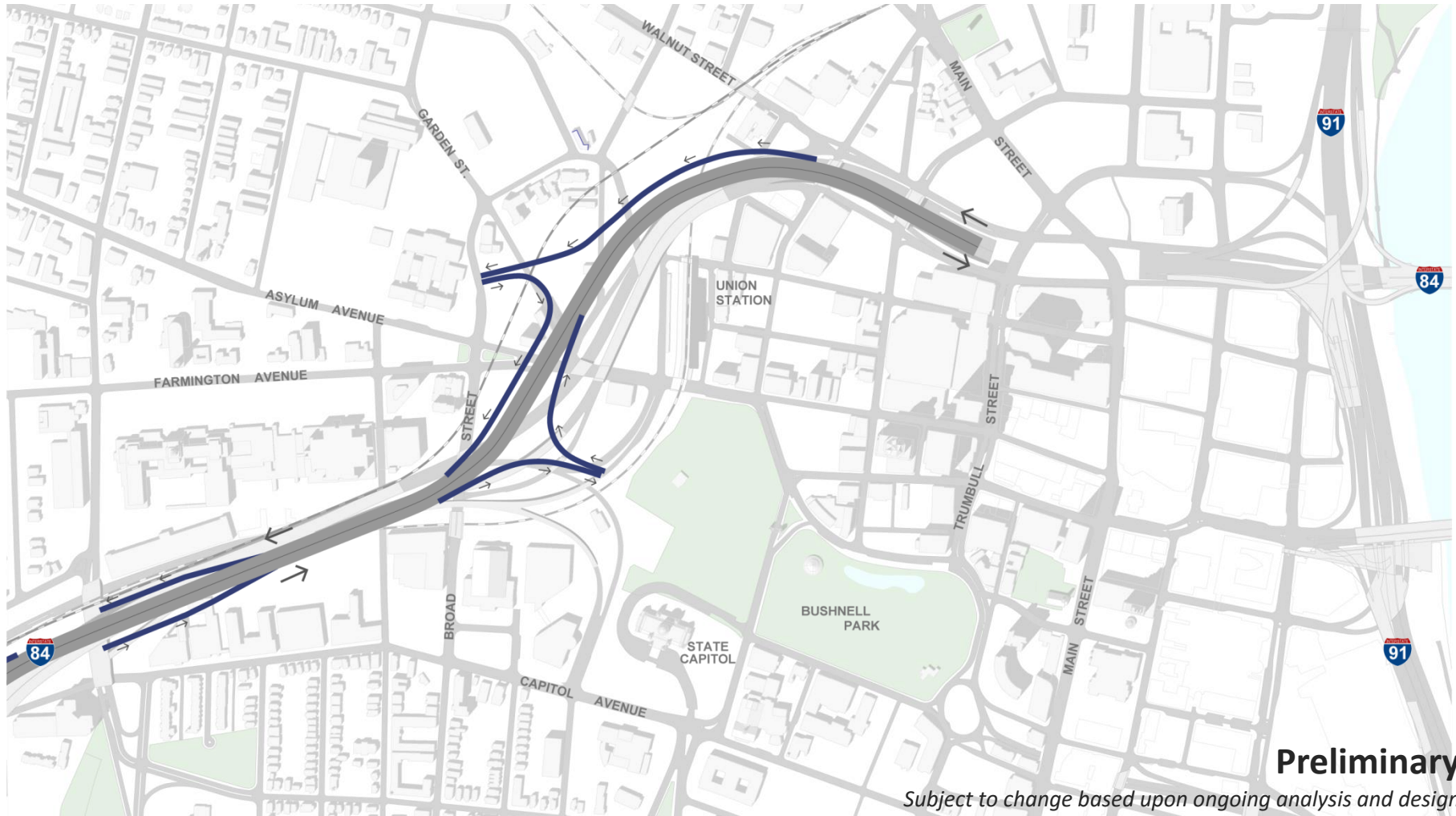
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Subject to change based upon ongoing analysis and design



Option 3B E2(S)

Proposed Ramps



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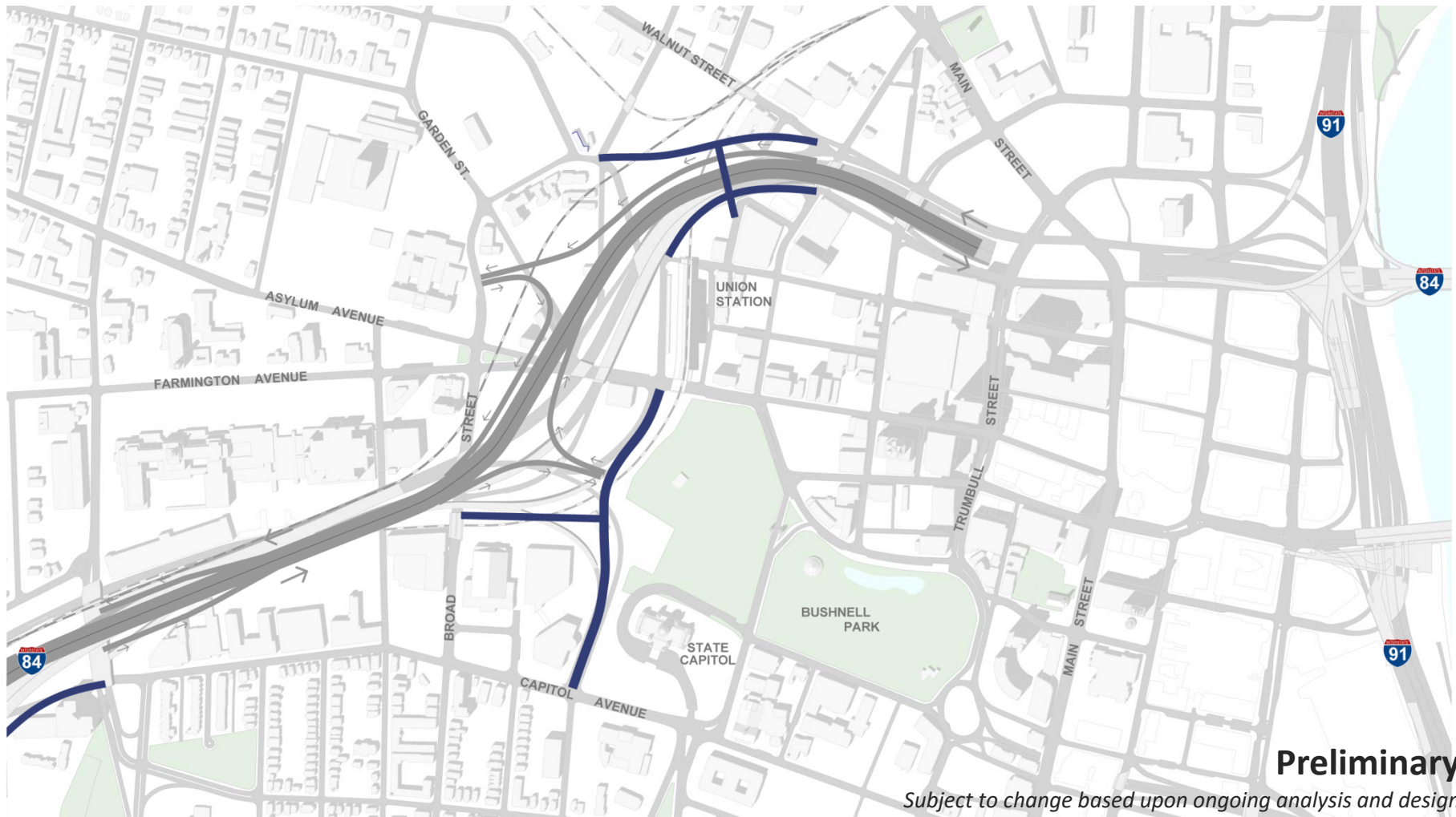
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Proposed New Local Roads



Preliminary

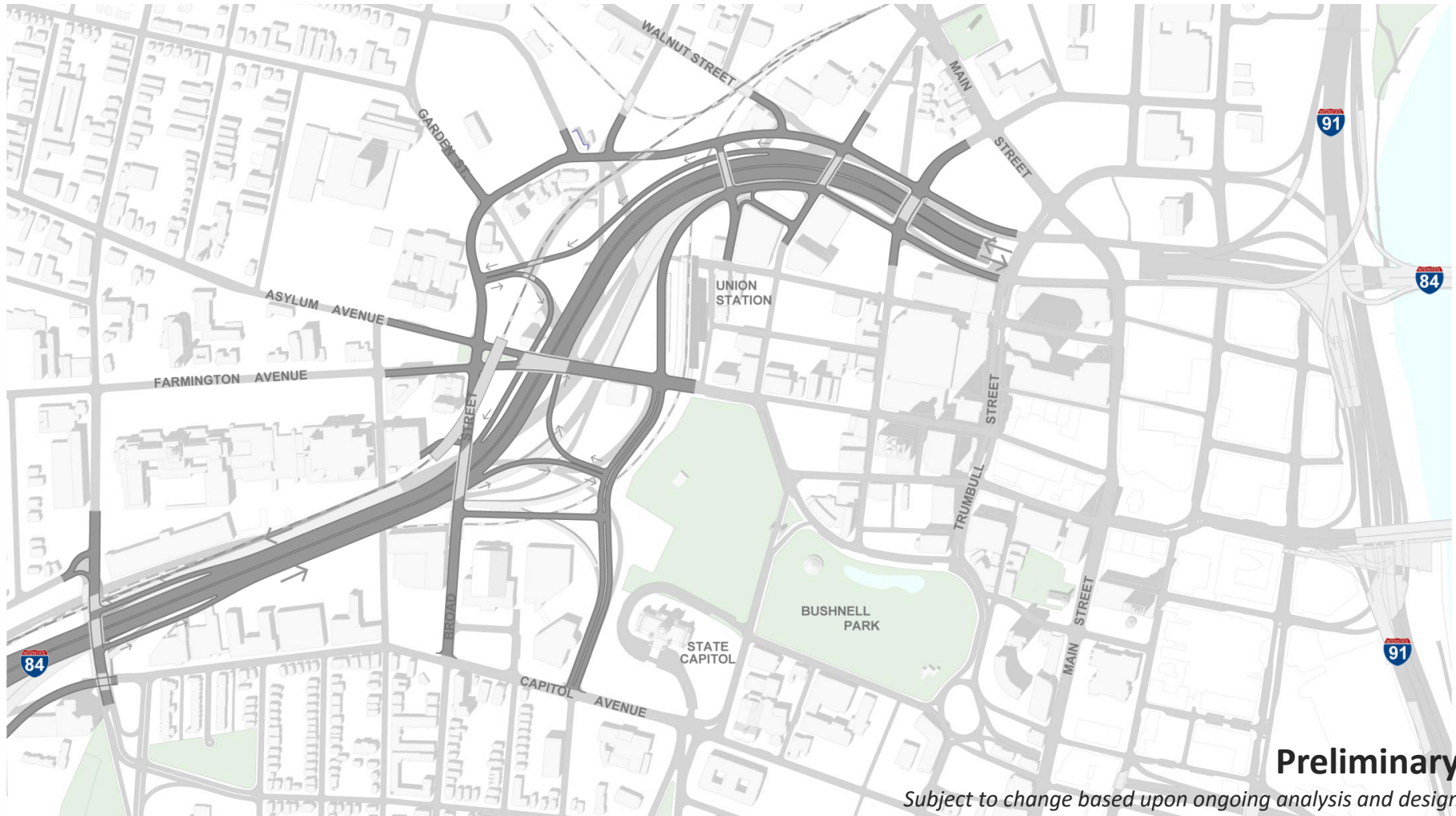
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Summary of Improvements



Preliminary

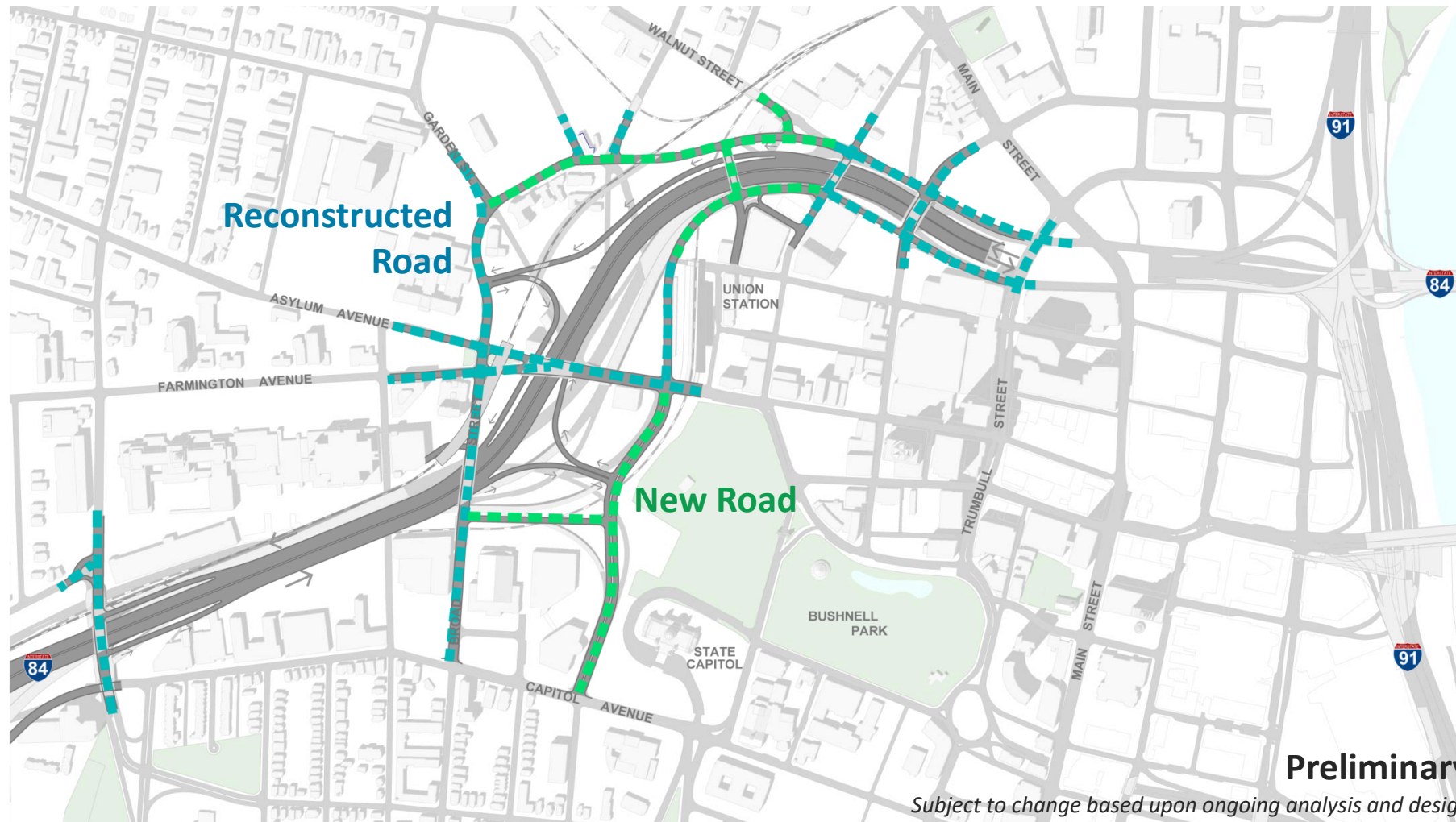
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



New and Reconstructed Roads



Preliminary

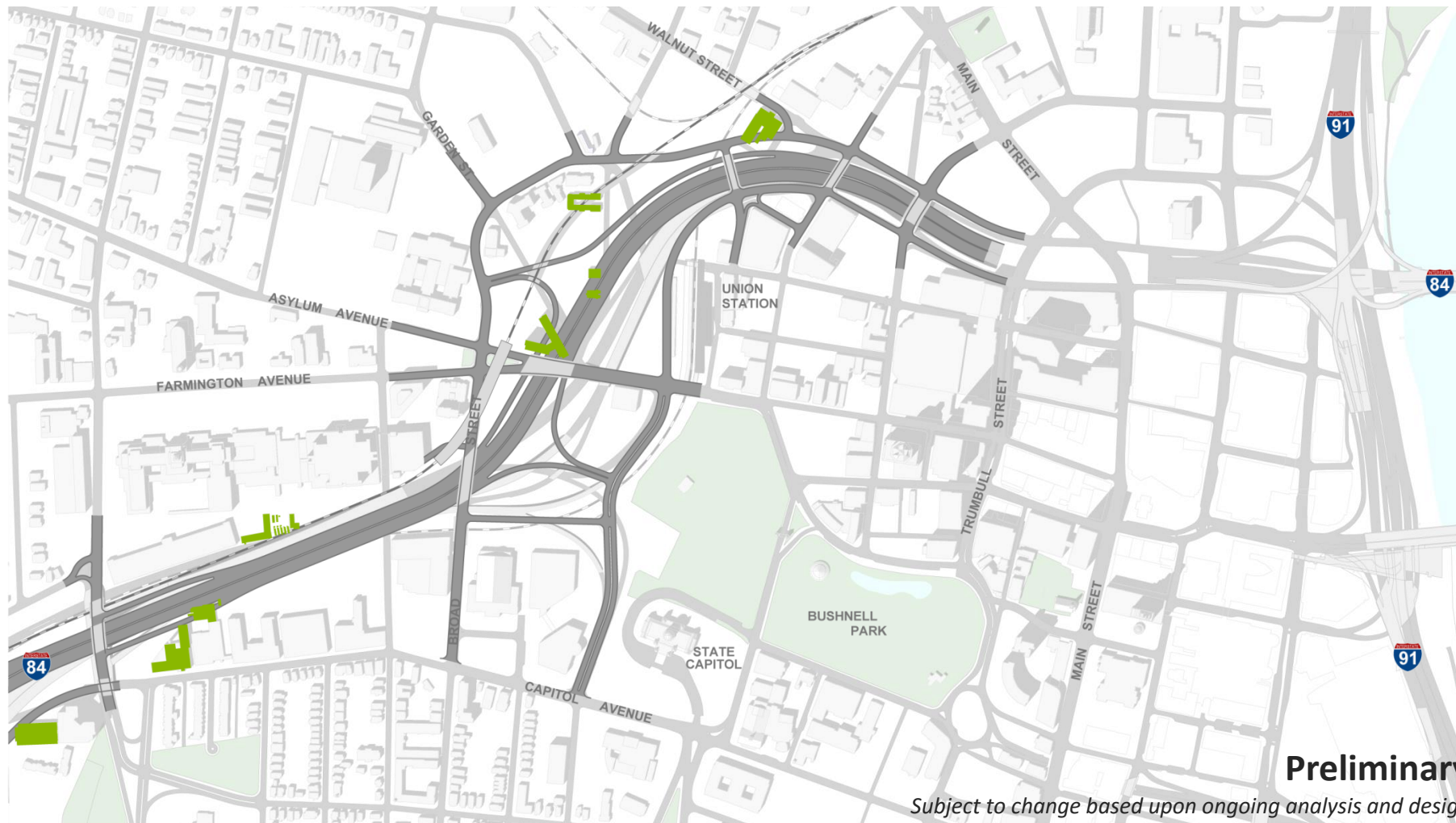
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Potentially Impacted Buildings

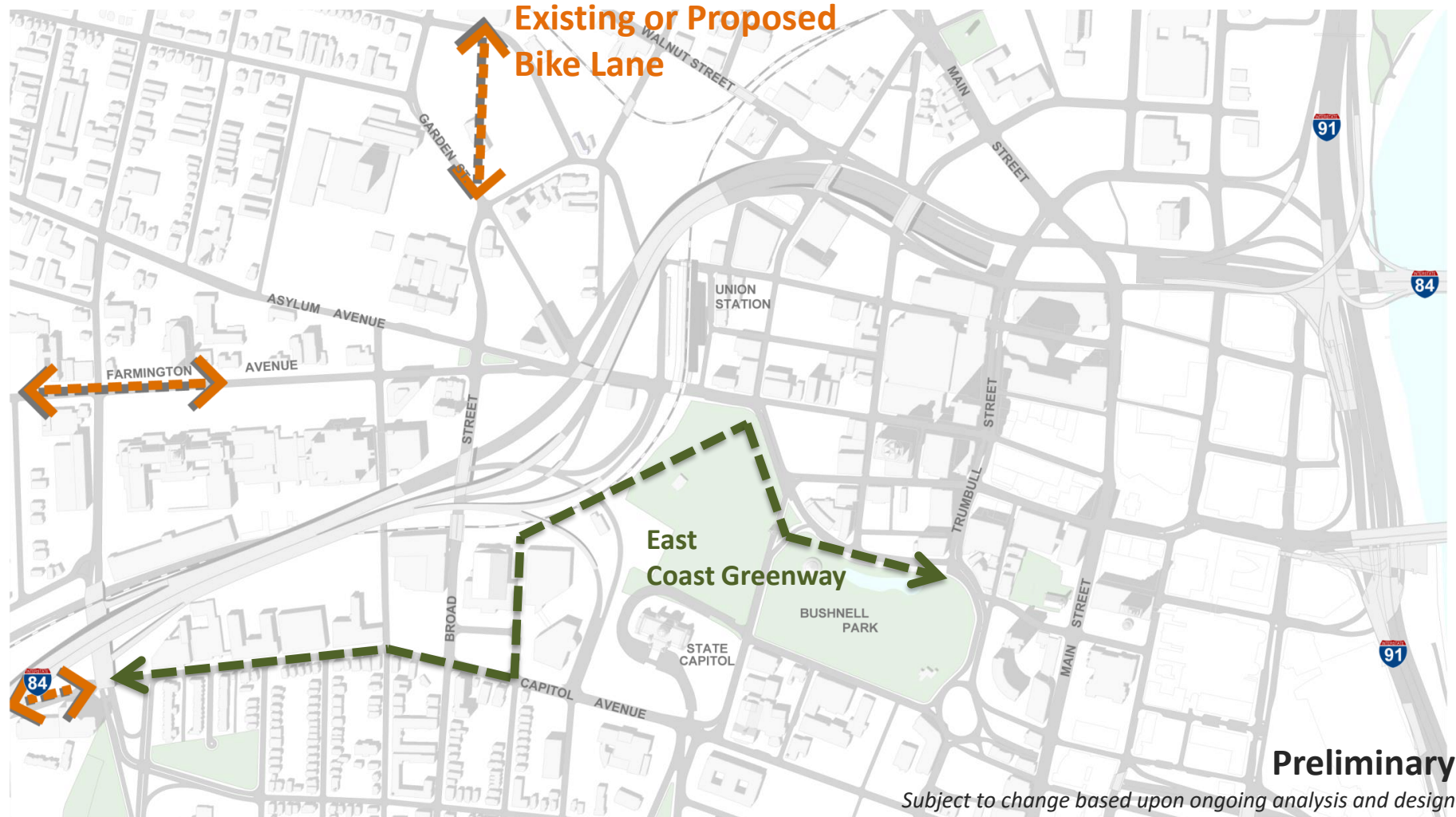


Preliminary

Subject to change based upon ongoing analysis and design



Current Bike Corridors



Preliminary

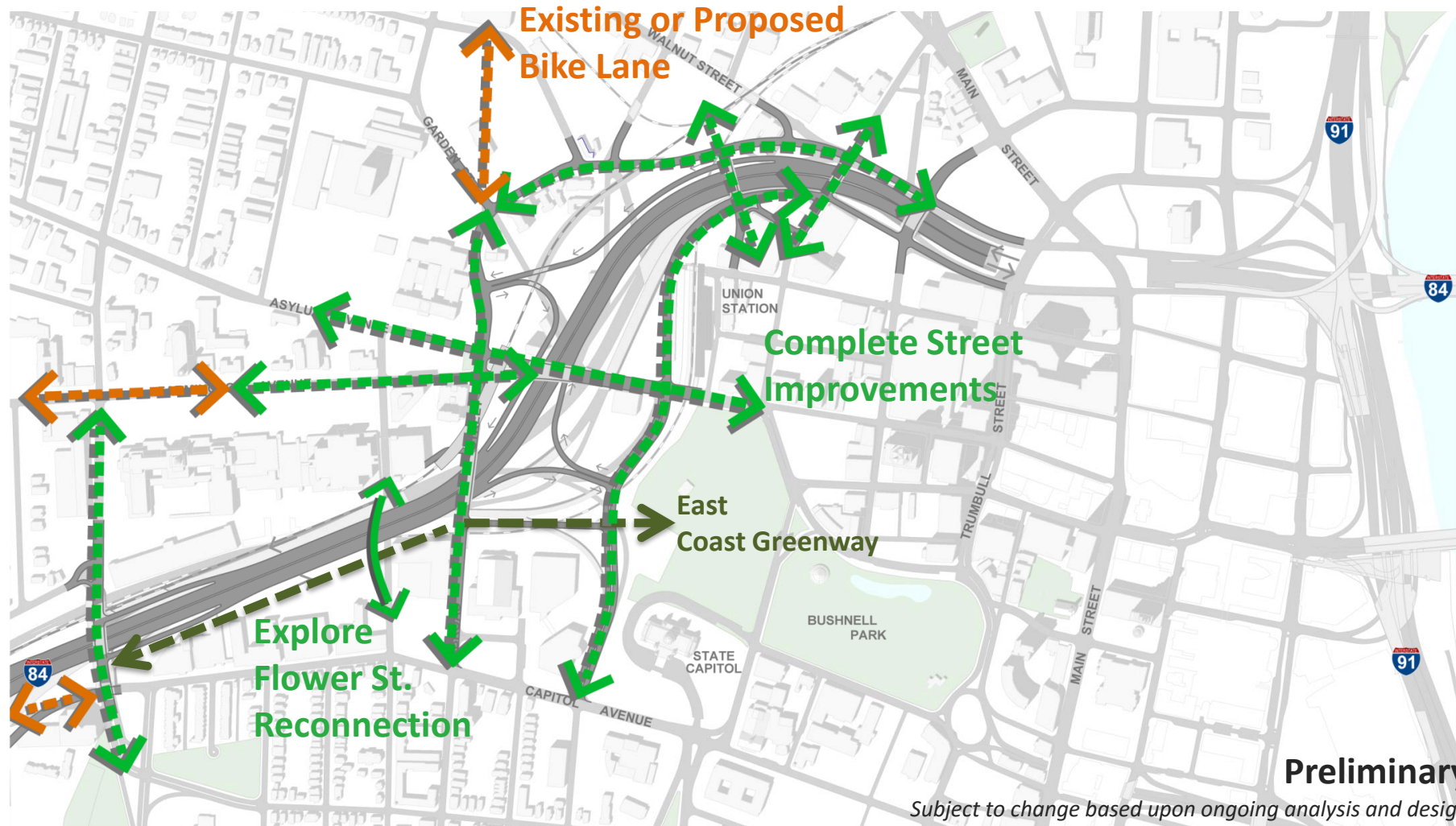
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Potential Complete Streets



Preliminary

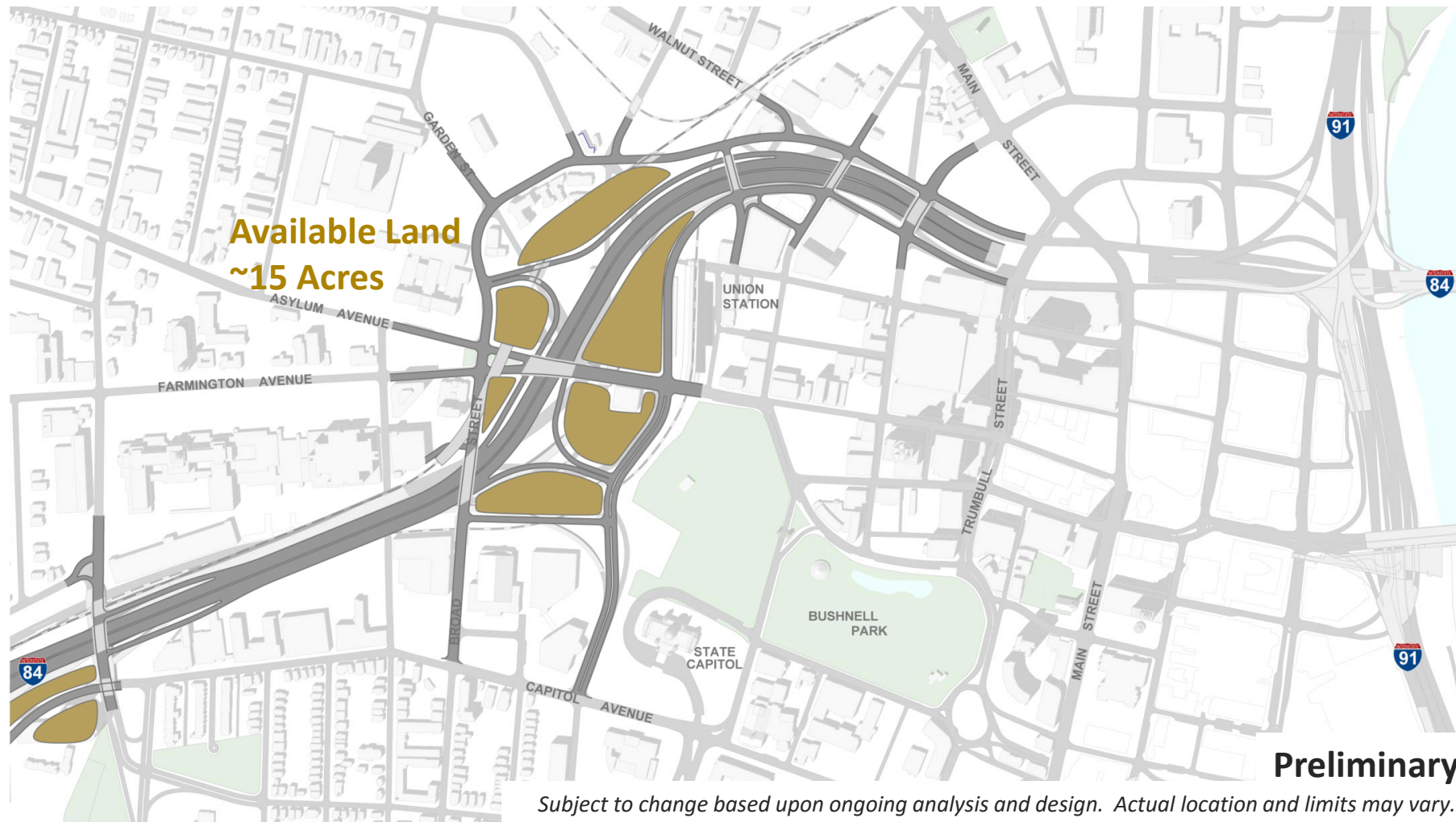
Subject to change based upon ongoing analysis and design



Option 3B E2(S)



Potential Available Land



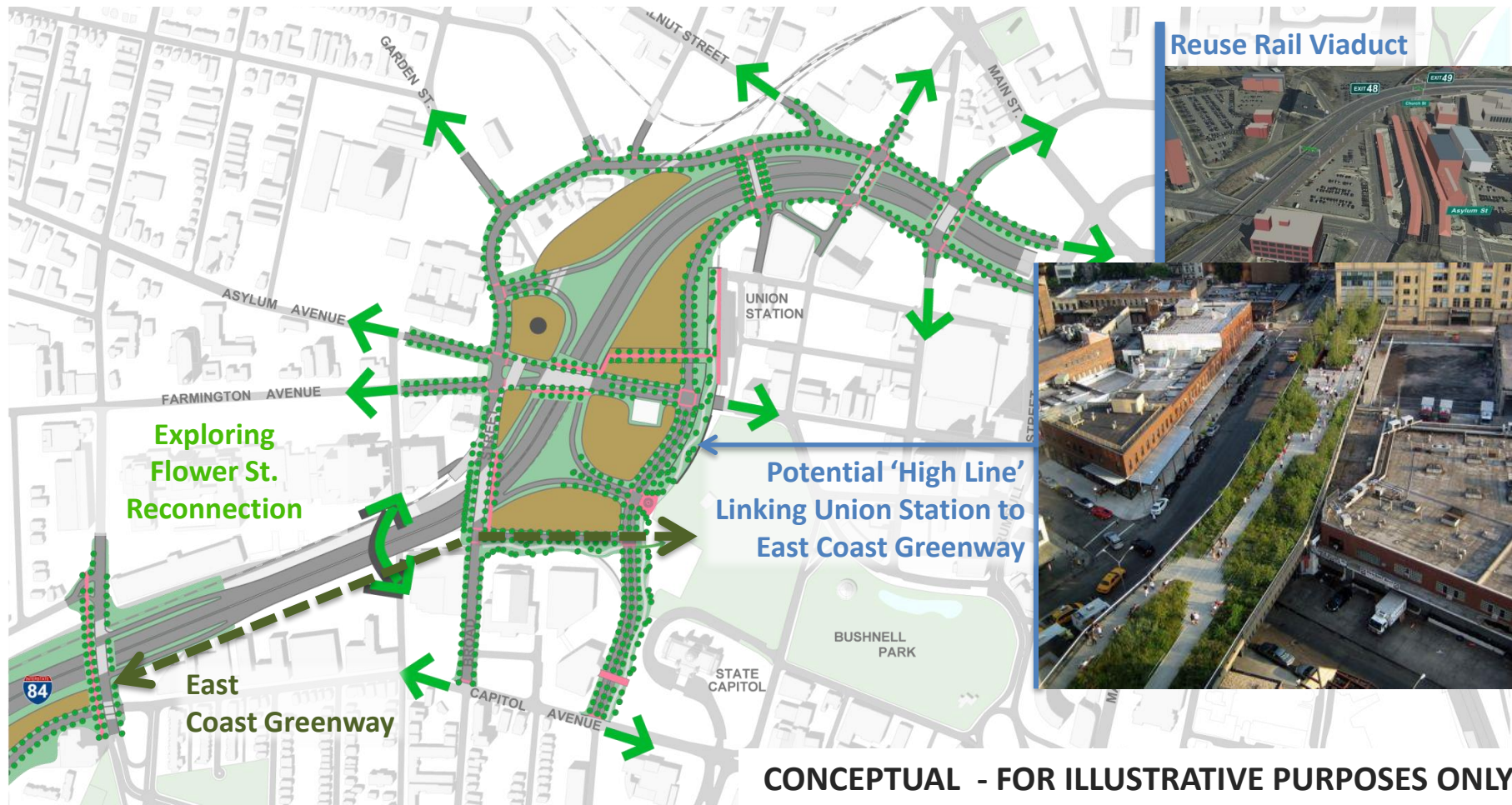
Preliminary

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Option 3B E2(S)

Greenway & Streetscapes



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Asylum Avenue

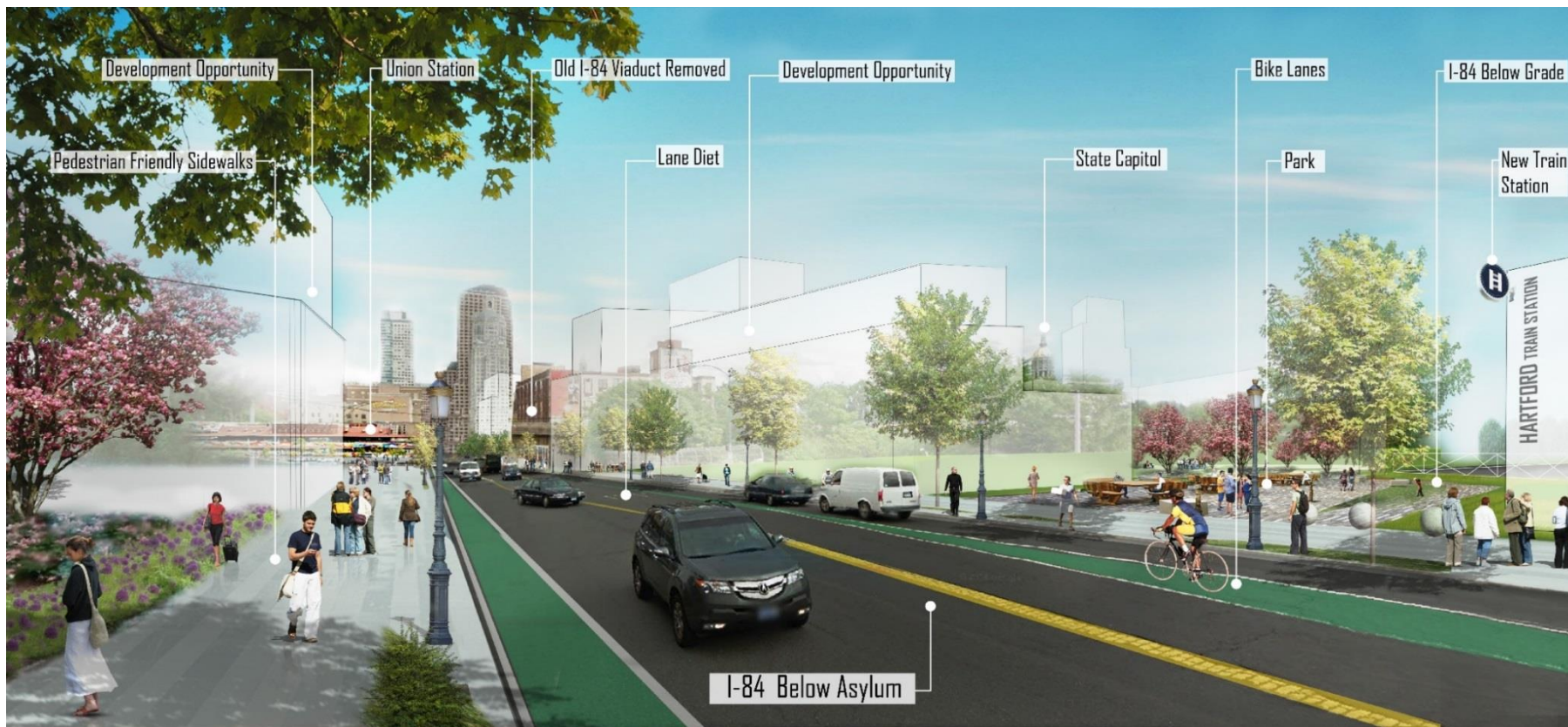
Existing view looking east towards Downtown





Asylum Avenue

Potential view looking east towards Downtown





Intermodal Opportunities

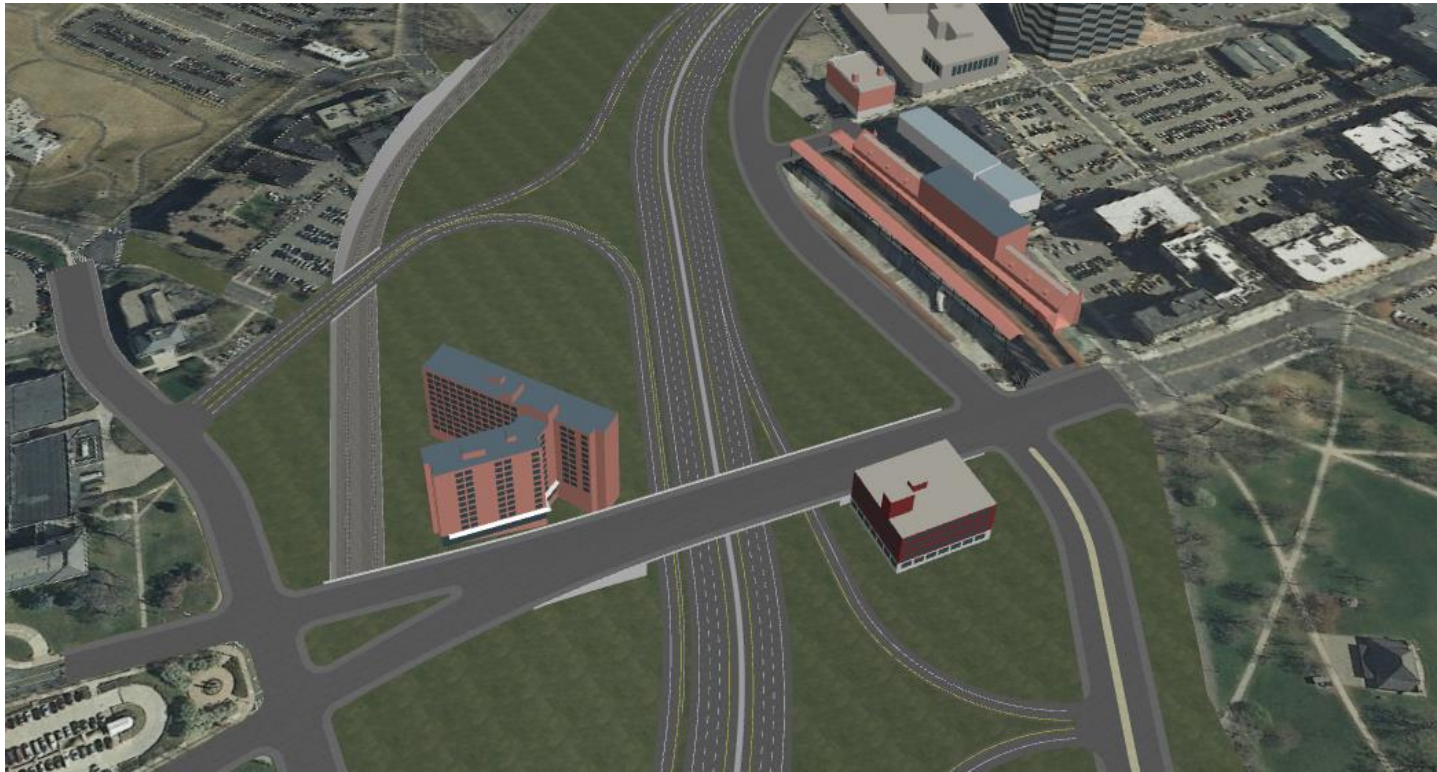


CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY

Subject to changed based upon ongoing analysis and design



Intermodal Opportunities



CONCEPTUAL - FOR ILLUSTRATIVE PURPOSES ONLY

Subject to changed based upon ongoing analysis and design



Next Steps



Public input is crucial!

With your help, we'd like to narrow down the number of options for further consideration.





Open Planning Studios

- Series of day-long, open house events
- Scheduled regularly in various locations
- More info at i84hartford.com





Interactive Alternatives Webpage

- View and assess the alternatives
- Provide feedback, ask questions
- www.i84hartford.com

**Interactive Alternatives Analysis:
Evaluating the Alternatives**

OPEN PLANNING STUDIO
View materials from our August 12th event.

INTERACTIVE ALTERNATIVES ANALYSIS

HARTFORD TIMELINE
Read a brief history of transportation in Hartford.

RELATED PROJECTS
View map and descriptions of other projects related to I-84.

3D INTERACTIVE MODEL
Explore the project area.



Thank You!

We appreciate your time and commitment to helping us reach the best possible solution for the State of Connecticut, the Capitol Region, and the City of Hartford.

Sincerely,

Your I-84 Hartford Project Team