I-90 ALLSTON INTERCHANGE

A MULTIMODAL TRANSPORTATION PROJECT

TASK FORCE MEETING #11

JULY 15, 2015 – FIORENTINO COMMUNITY CENTER, ALLSTON

Meeting Agenda

- Task Force, Project Team, and Introductions
- Introduction of New Project Team Members
- Traffic Analysis Update
- West Station and Beacon Park Yards Update
- Overview of Future Process
- Discussion

Meeting Agenda

- Task Force, Project Team, and Introductions

Allston Interchange Taskforce Membership

Name	Representing	Name	Representing	Name	Representing
Joseph Beggan	Harvard University	James Gillooly	BTD	Galen Mook	Allston Resident
Harris Band	Harvard University	Anabela Gomes	Allston-Brighton Improvement Assoc.	Tom Nally	A Better City
Andrew Bettenelli	Office of Senator Brownsberger	Vineet Gupta	BTD	Paul Nelson	MASCO
Jorge Briones	MBTA	Bruce Houghton	Houghton Chemical	Alana Olsen	Allston Village Main Streets
Sen. William Brownsberger	2nd Suffolk & Middlesex	Barbara Jacobson	MassBike	Mande Pallavi	Charles River Watershed Assoc.
Steve Bushnell	Office of Senator DiDomenico	Marc Kadish	Allston Board of Trade	John Pourbaix	Construction Industries of MA.
Councilor Mark Ciommo	District 9 Boston	Patrice Kish	Department of Conservation & Recreation	Susanne Rassmussen	City of Cambridge
Matthew Danish	Allston Resident	John Laadt	Office of Neighborhood Services	Tad Read	Boston Redevelopment Authority
Bill Deignan	City of Cambridge	Wendy Landman	Walk Boston	Jessica Robertson	Allston Resident
Richard Dimino	A Better City	Elizabeth Leary	Boston University	Steve Silveira	Boston University
Anthony D'Isidoro	Allston Civic Association	David Loutzenheiser	MAPC	Margaret Van Deusen	Charles River Watershed Assoc.
Brian Doherty	Boston Building Trades	Will Luzier	Allston Resident	Joseph Walsh	Office of Councilor Ciommo
Jackie Douglas	LivableStreets	Wayne MacKenzie	Allston Resident	Kevin Wright	Federal Highway Administration
Paola Ferrer	Allston Resident	Mary Maguire	AAA Southern New England	Jillian Zywien	Mass Motor Transportation Assoc.
Kim Foltz	Boston Bikes Program	Harry Mattison	Allston Resident		

Project Team Introductions

- Additional Resources
  - Urban Design
  - Pedestrian Bridge Architecture

Statement of Purpose

- Convened by MassDOT to provide stakeholder input on the broad range of issues affecting interchange design
- Input will affect MassDOT's decisions regarding the development of implementable alternatives, selection of a preferred alternative, and the details of design
- Advisory body to MassDOT to assist in determining a single Preferred Alternative to be selected by the Secretary of Transportation for inclusion in the EA/EIR

Shared Priorities

- ✓ *Improve safety for all modes: walking, cycling, driving, transit*
- ✓ Realign I-90
- ✓ Context sensitive design or:
  - ✓ Lessen impact of interchange
  - ✓ Avoid inducing cut-through traffic with new configuration
  - ✓ Reconnect sections of Allston to each other and the River
- ✓ Protect the neighborhood during construction
- ✓ A more vibrant Cambridge Street that serves all modes
- ✓ Accessibility to transit at future West Station

Rotating Meeting Focus

- Each Session to be Chaired by MassDOT Leaders-
  - Highway and Interchange Issues – Mike O'Dowd
  - Rail and Transit Issues – Astrid Glynn and City of Boston Co-Chair
  - Community Place-making Issues- David Mohler and City of Boston Co-Chair

Highway and Interchange Issues – Mike O'Dowd

- Viaduct Configuration
- Interchange Configuration
- Soldiers Field Road Relocation
- Roadway Accommodation and Traffic Management/Protect Neighborhood from Cut-Through Traffic
- Pedestrian and Bicycle Facilities
- Integration with Community Place-Making Concepts
- Stormwater Management
- Environmental Analysis
- Construction Staging
- Integration with Rail and Transit Design
- ADDITIONAL ISSUES?

Rail and Transit Issues – Astrid Glynn

- Track Configuration
- Yard Facilities and Operations
- Station Configuration and Operations
- Pedestrian and Bicycle Access
- Integration with Interchange Design
- Integration with Community Place-Making Concepts
- Bus Operations
- ADDITIONAL ISSUES?

Community Place-Making Issues - David Mohler

- Potential Future Development Scenarios
- Parcelization
- Pedestrian and Bicycle Facilities
- Landscape, Streetscape, Greenspace, and Riverfront (SFR)
- Economic Impact
- Integration with Interchange Design
- Integration with Rail and Transit Design
- ADDITIONAL ISSUES? (BRA Study)

Crosby | Schlessinger | Smallridge

- Planning, Urban Design, Landscape Architects
- Partners for 30+ Years – 12 at CSS
- Many Projects at the Intersection of Land Use, Transportation, and Landscape/Streetscape
  - Big Dig
  - Green Line Extension
  - Neponset River Greenway
  - Plazas, Parks and Streetscapes in Boston
  - 25+ Intermodal Center/TOD Projects
  - Boston Master Plans

C|S|S

Urban Design

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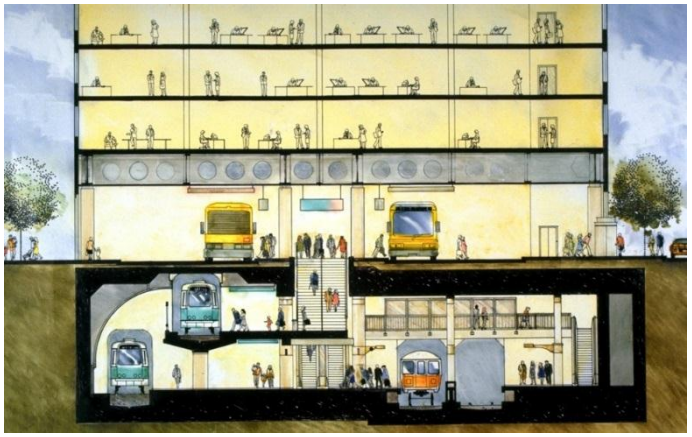

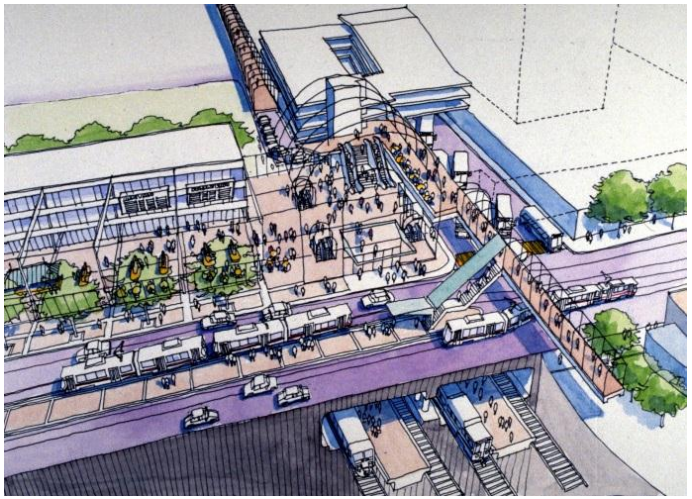

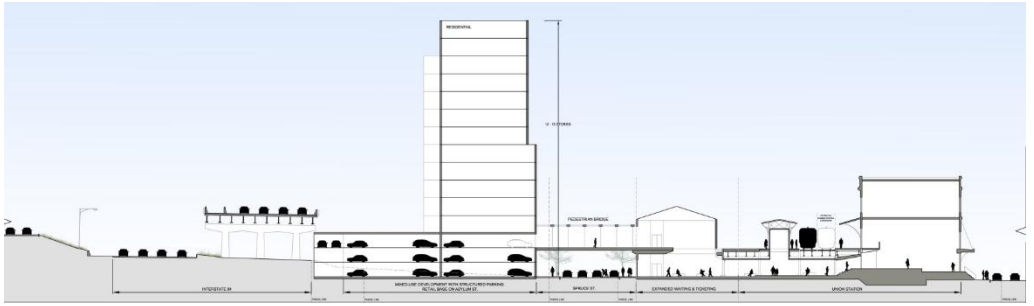

Landscape Architecture

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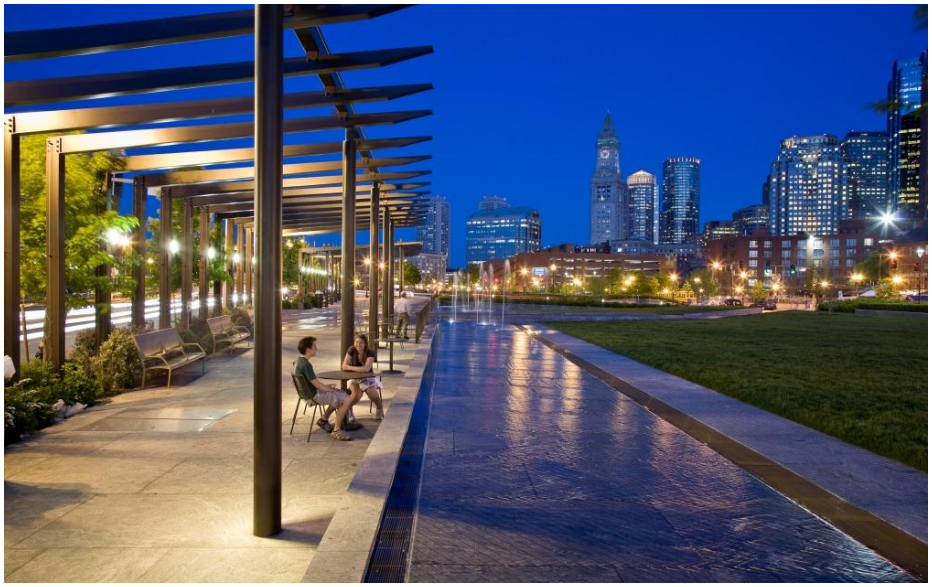

Project Role

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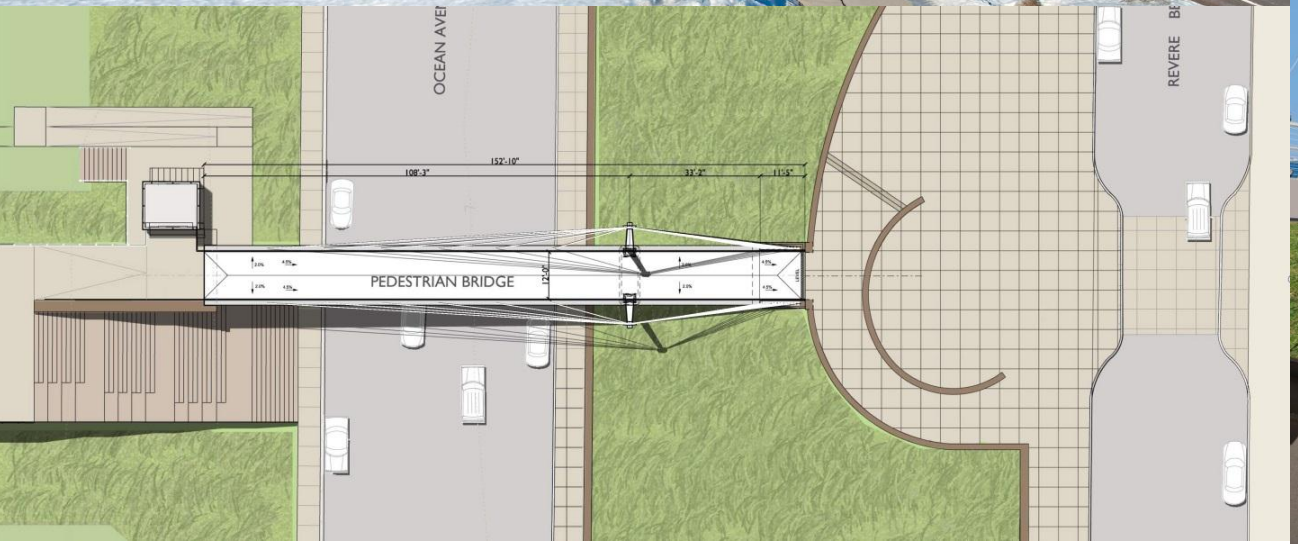
- Future Development Potential and Flexibility
- Open Space Opportunities (As part of this project and future)
- Neighborhood Connections to West Station and Commonwealth Avenue
- Street Character
- Place-making Opportunities (as part of this project and future)
- Coordination with BRA Study

Christina & John Markey Memorial Pedestrian Bridge - Revere, MA

Urban Idea Lab



Lechmere Station, MA

Urban Idea Lab

Urban Idea Lab

- Pedestrian/Bicycle Bridge Architecture
- Working on the Pedestrian Bridges
- Supporting the Urban Design Effort
- Supporting the Work on Place Making
- Contributing to the Infrastructure Architecture

Christina & John Markey Memorial Pedestrian Bridge - Revere, MA

Urban Idea Lab

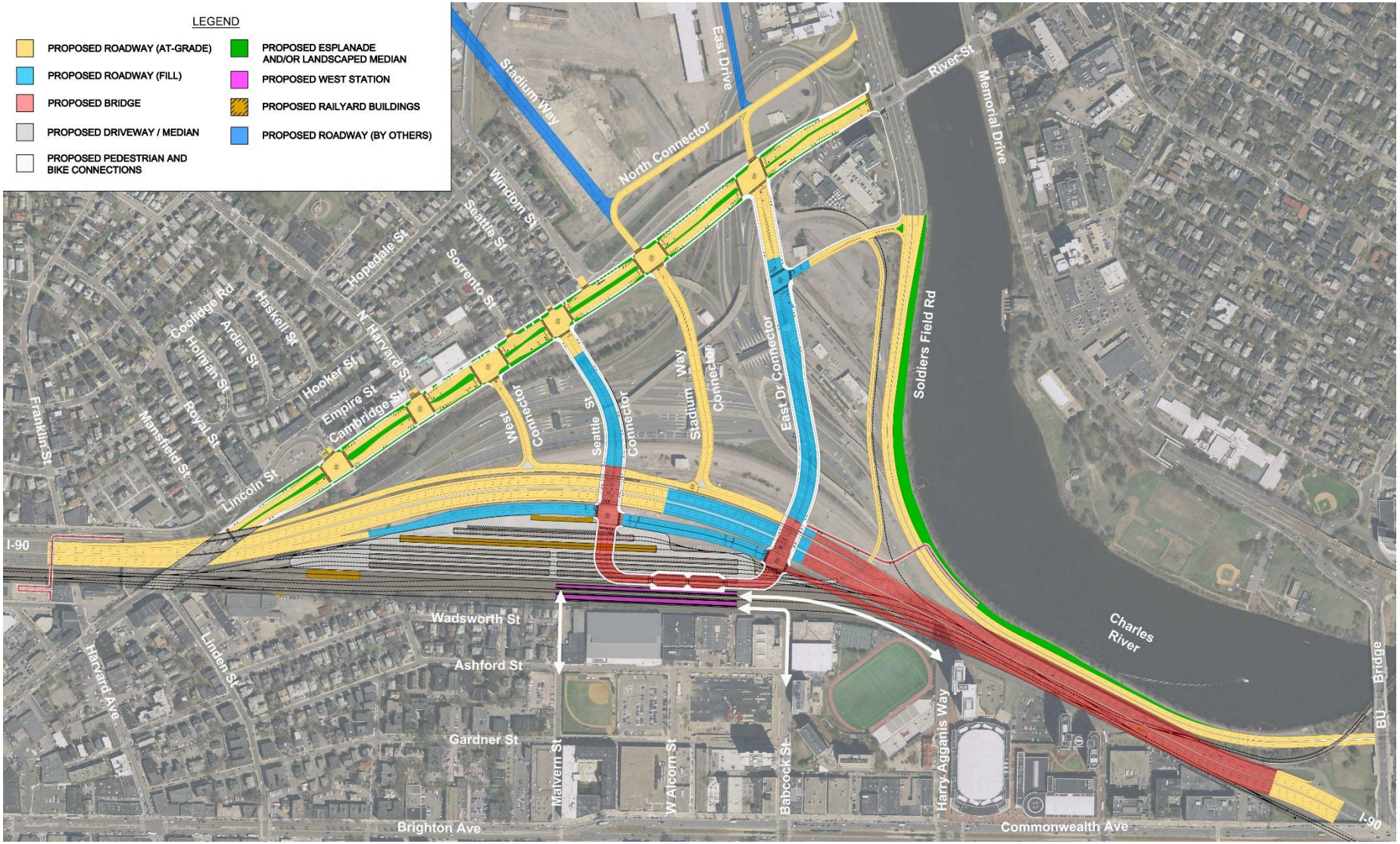
Meeting Agenda

- Task Force, Project Team, and Introductions
- Traffic Analysis Update

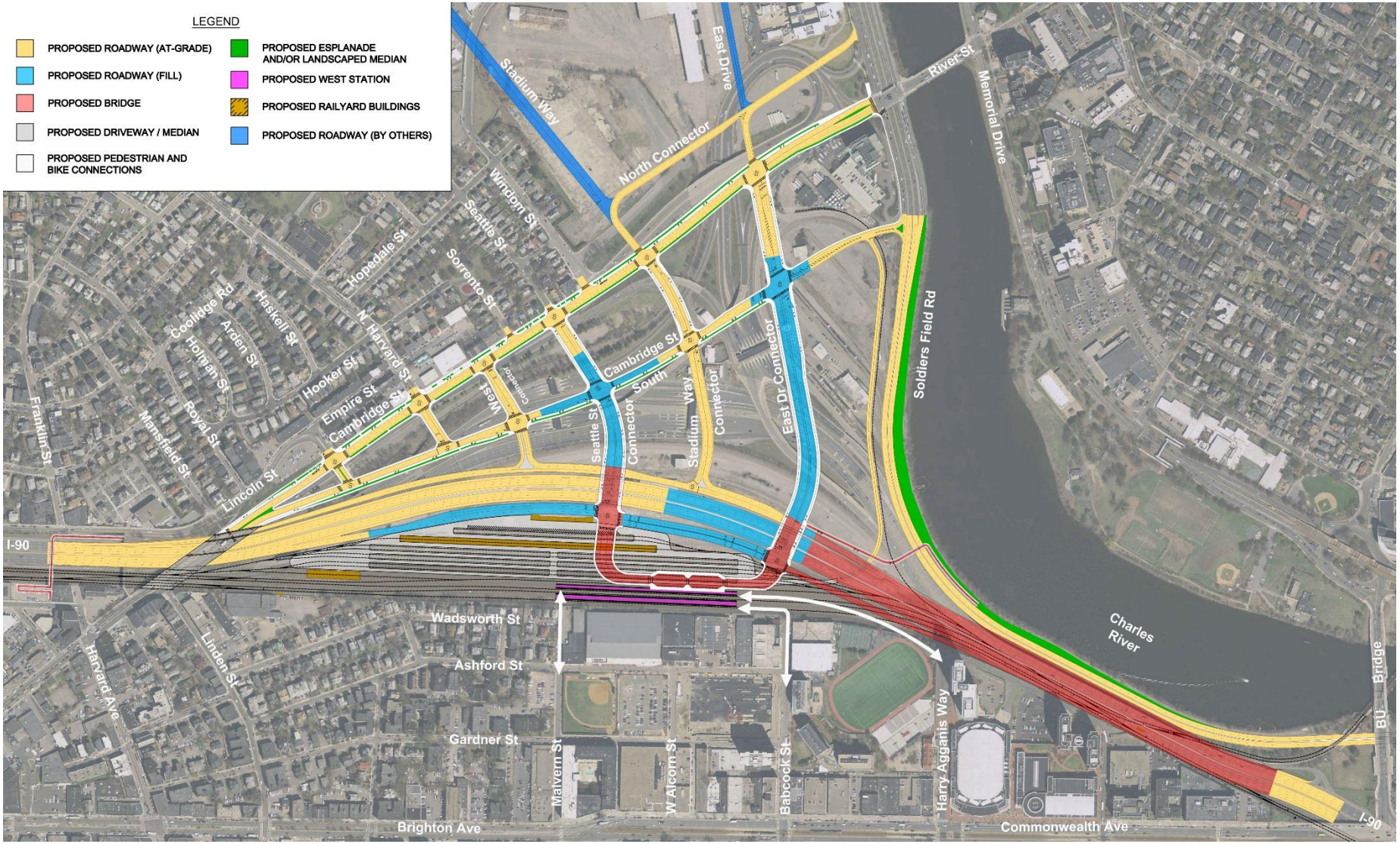
Traffic Analysis Update

- CTPS Modeling Assumptions
- Historic Traffic Trends
- 2035 Traffic & Transit Forecasts
- Next Steps

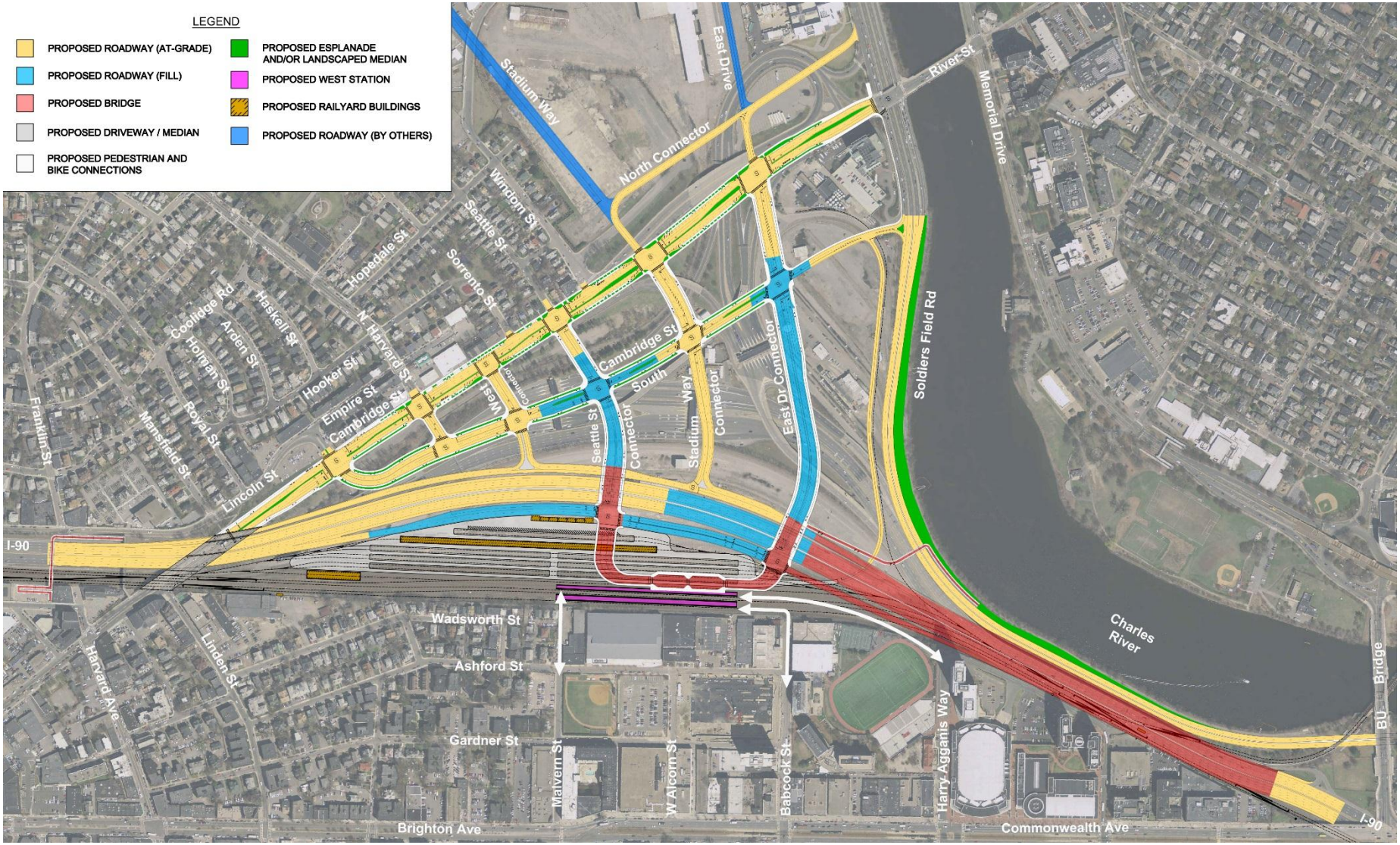
Urban Interchange Option 3J-1



Urban Interchange Option 3J-2



Urban Interchange Option 3J-3



Factors Influencing Roadway Lane Requirements

- Traffic Volumes
- Elimination of Grade Separation at Ramps/Cambridge St.
- Control of Right Turns (Pedestrian & Bicyclist Safety)
- Exclusive Pedestrian Phases
- Explore Bicycle Signals / Phases
- Vehicular Queuing
- Roadway Classifications

APPLIES TO BOTH MOTORIZED AND NON-MOTORIZED USAGE

CTPS 2035 Modeling Assumptions – Land Use

- 2035 Population and Employment Forecasts from MAPC
  - From City and Towns within MAPC region (e.g., BRA)
- Estimates for IMP area from Harvard U.
  - 2013 to 2025: Harvard IMP
  - 2025 to 2035: Same as 10-year IMP (i.e., 20-year forecast = IMP x 2)
- Beacon Park Yard: population/employment estimates
  - based on the developable land area of BPY as a proportion of the IMP area (= 70%)
  - Similar density as proposed in the IMP

CTPS 2035 Modeling Assumptions - New Development

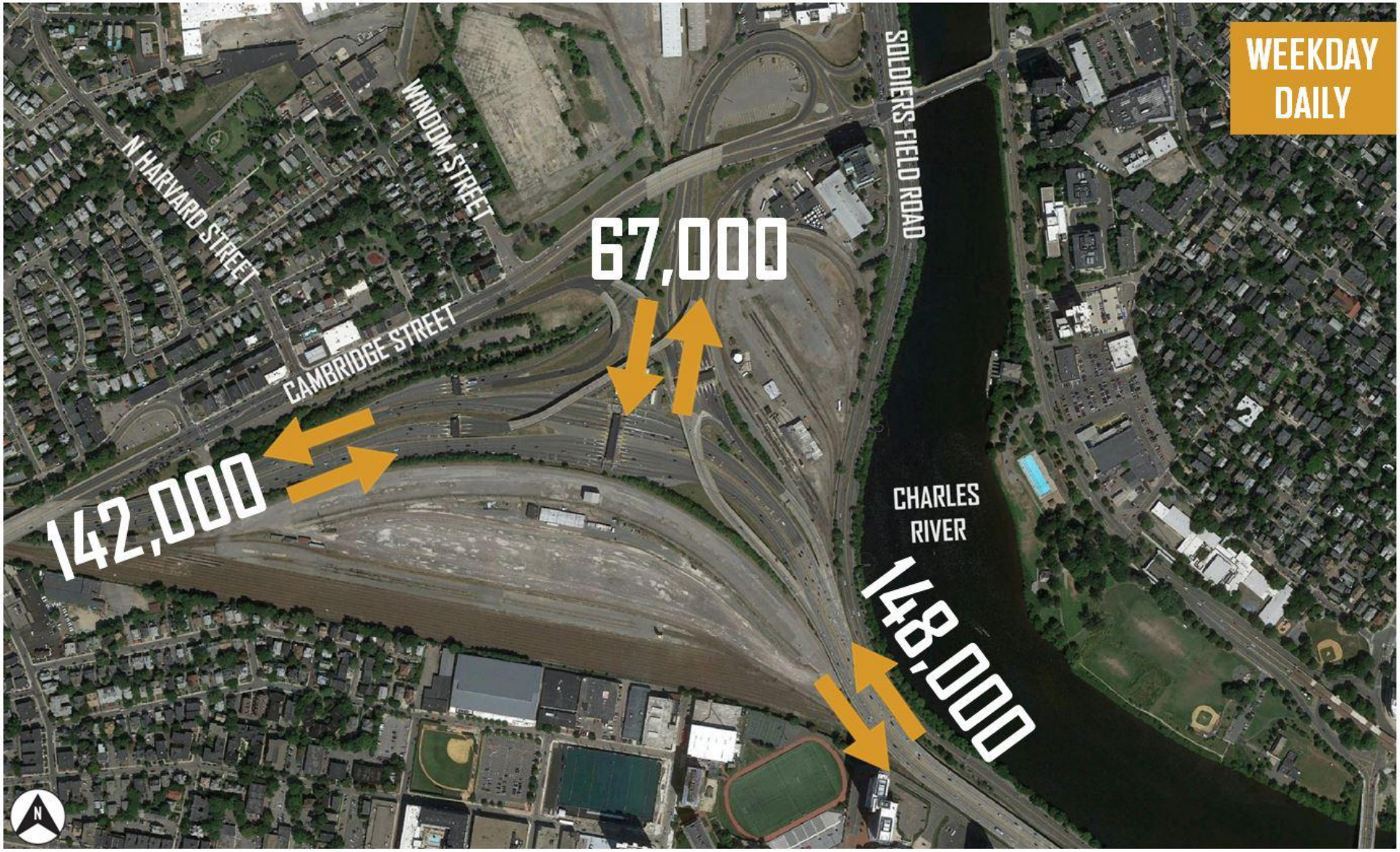
CTPS 2035 Modeling Assumptions - Transit

- West Station
  - Commuter Rail
  - Urban Rail Service (Worcester Line/South Station)
  - Bus Service (MBTA, Shuttle, Intercity)
- Boston Landing Station
- Green Line Extension Project
- Fairmont Line Improvements

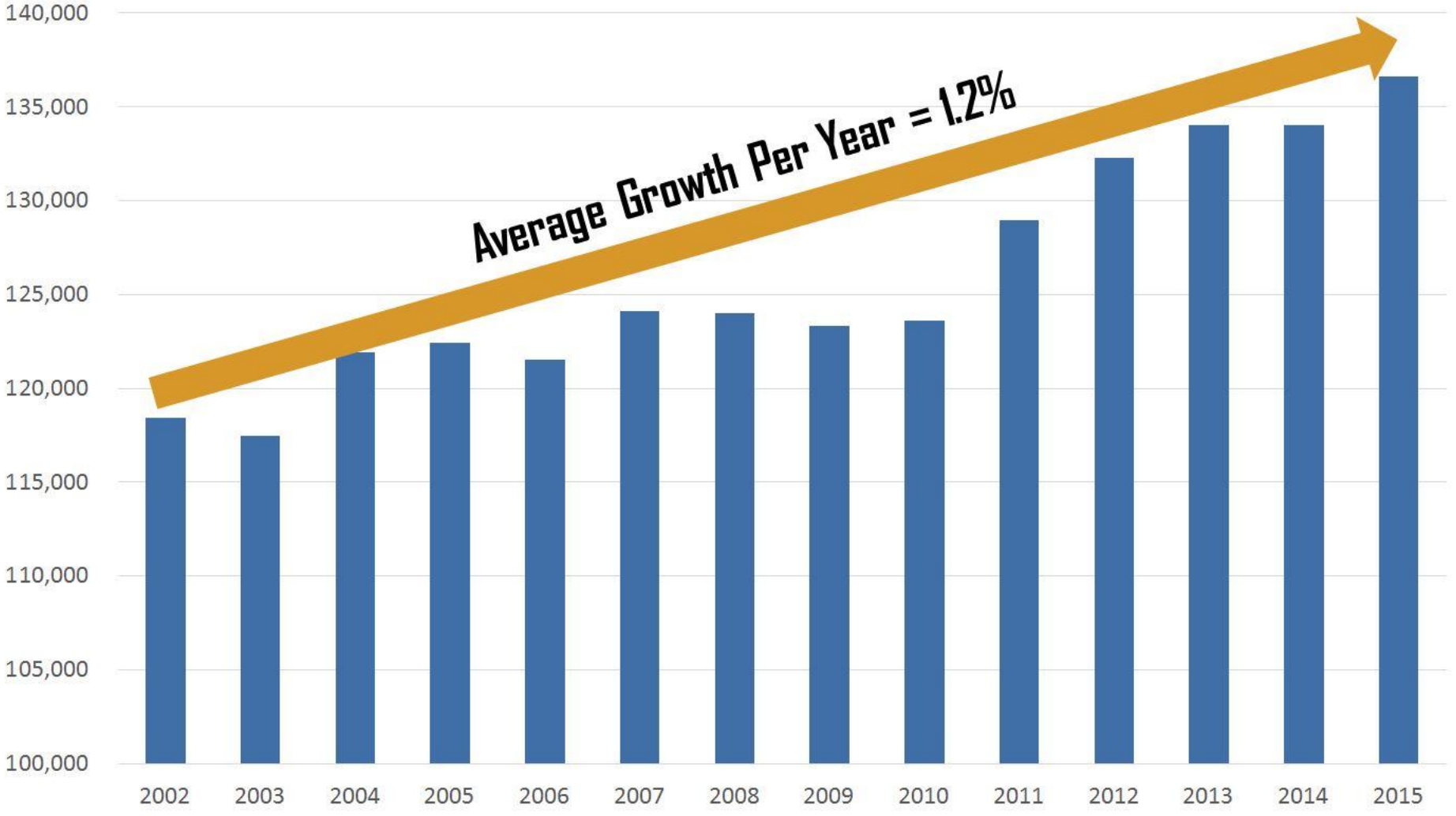
CTPS 2035 Modeling Assumptions - Traffic

- All Electronic Tolling on I-90 (AET)
- Allston Interchange Improvements

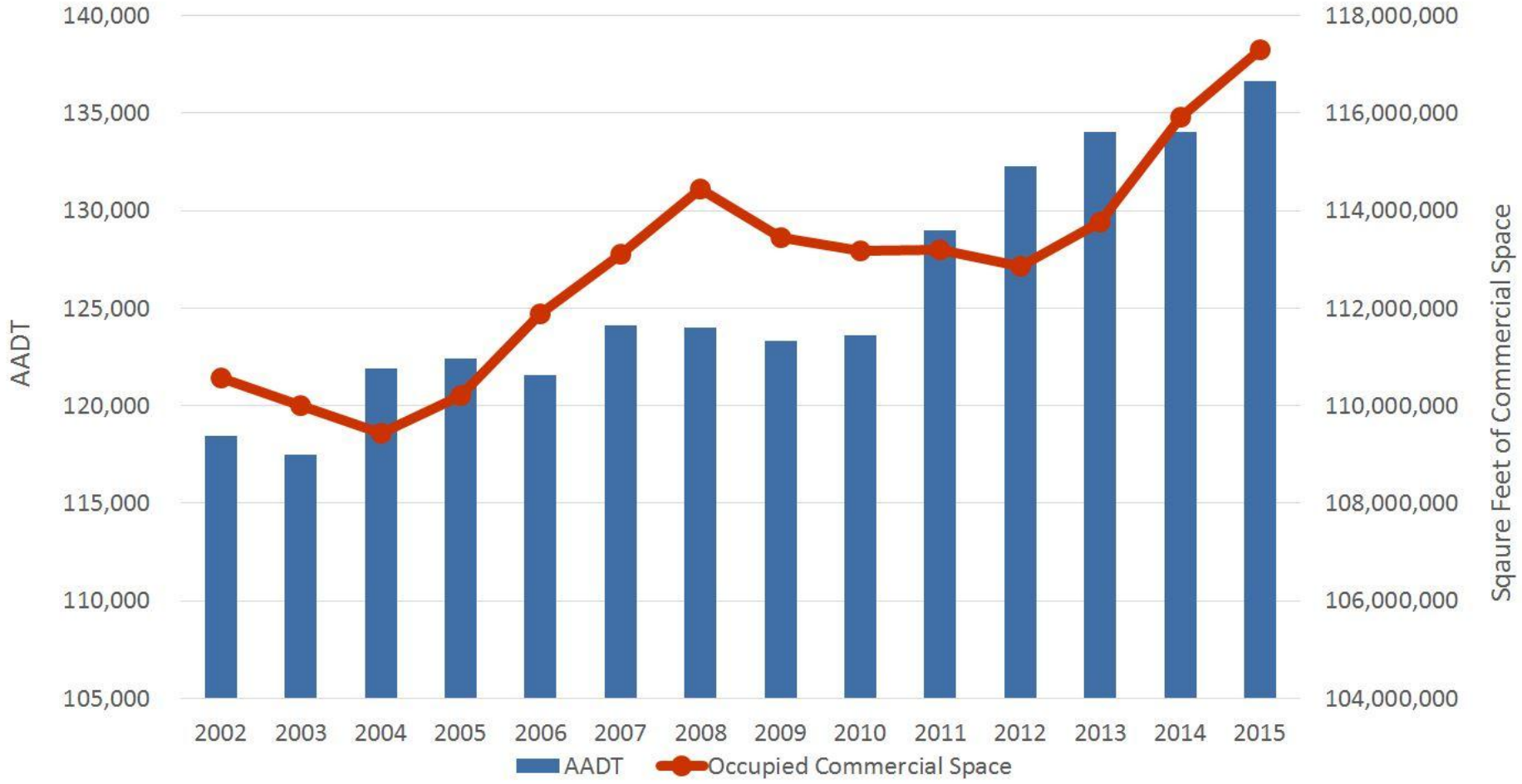
Existing Highway Volumes



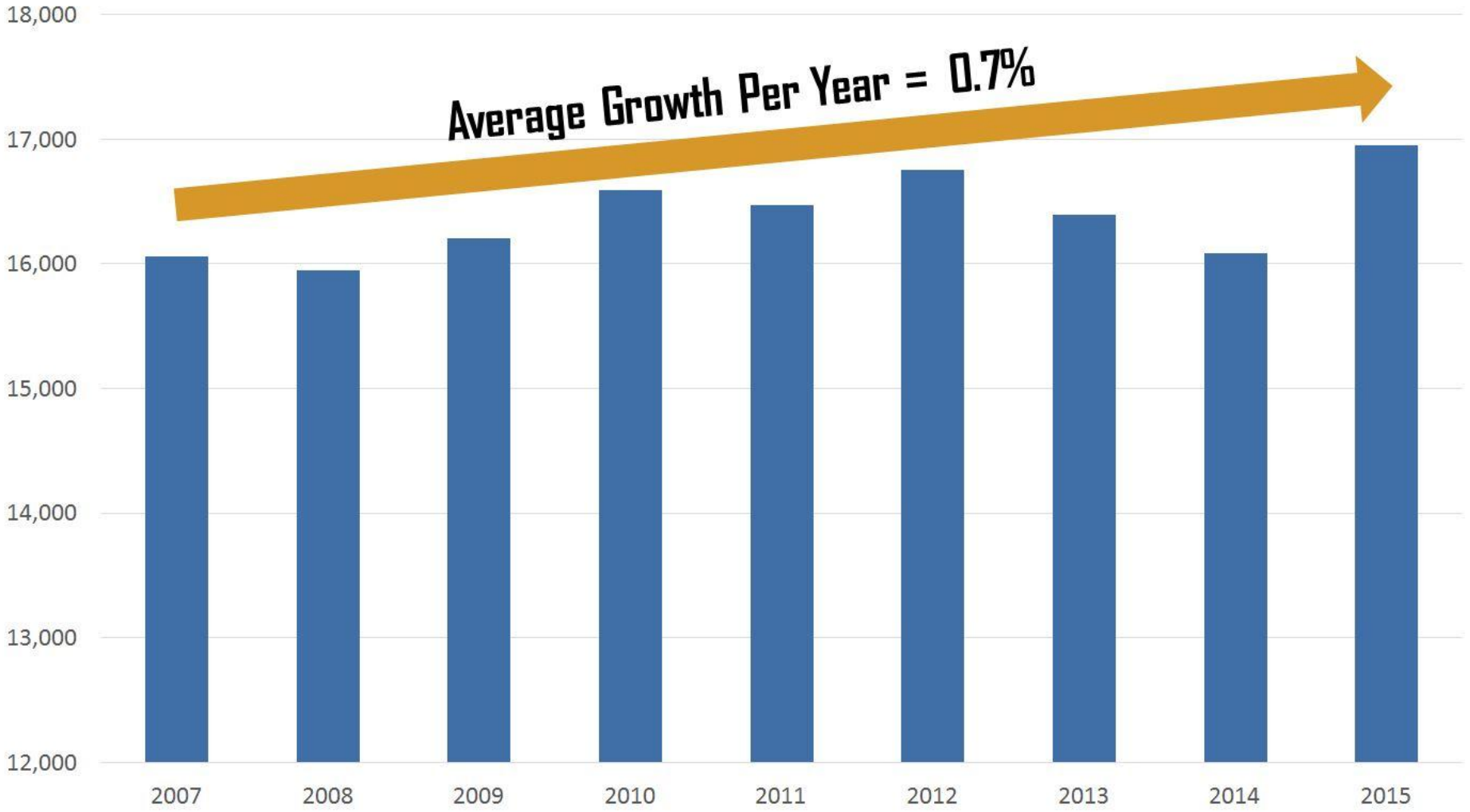
Historic Traffic Trends on I-90 Mainline (between Exits 17 and 18)



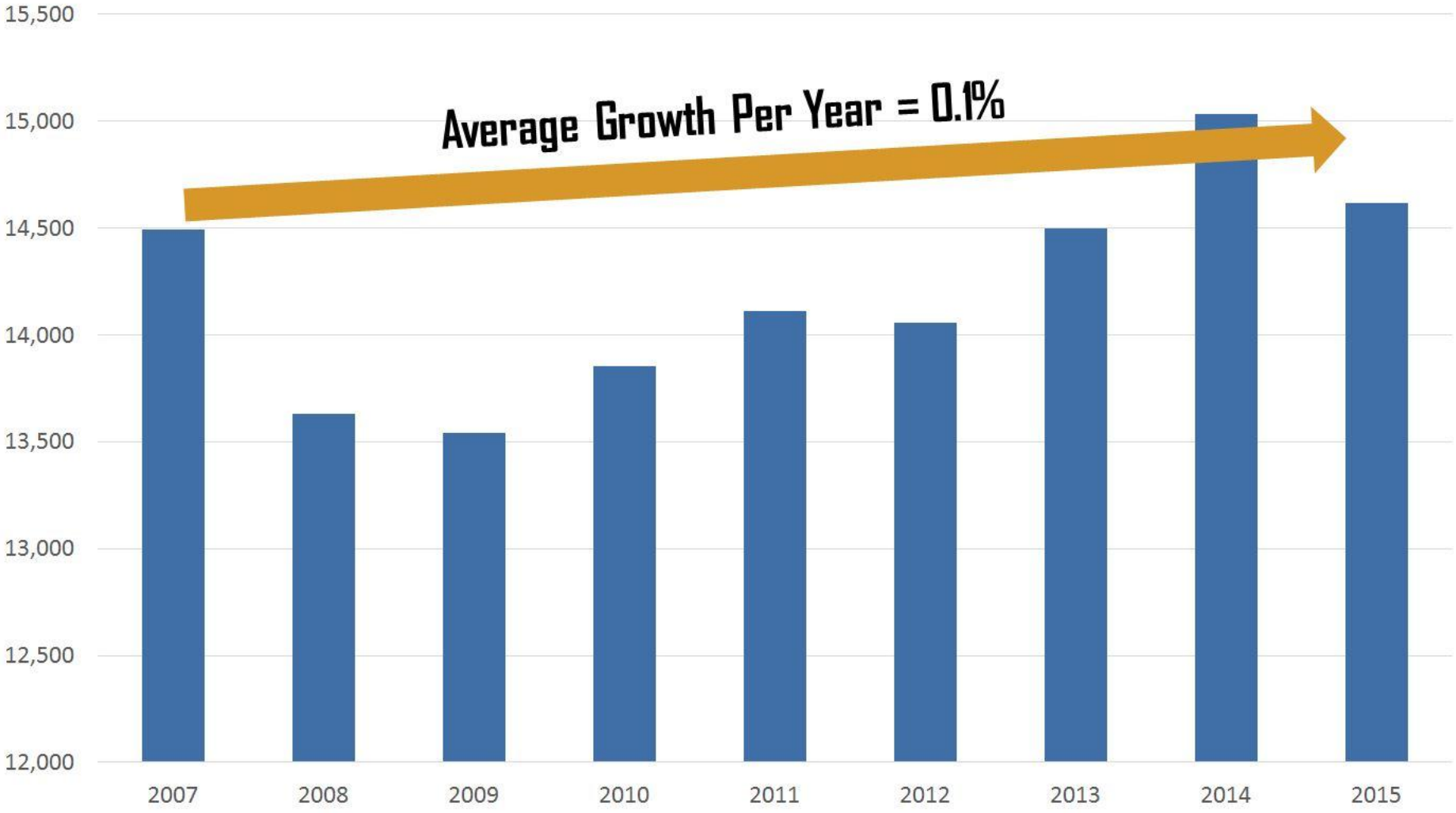
2002 to 2015 I-90 Traffic Trends vs. Occupied Commercial Space in Boston



Historic Traffic Trends at Allston Interchange – Eastbound Off-Ramp



Historic Traffic Trends at Allston Interchange – Westbound Off-Ramp



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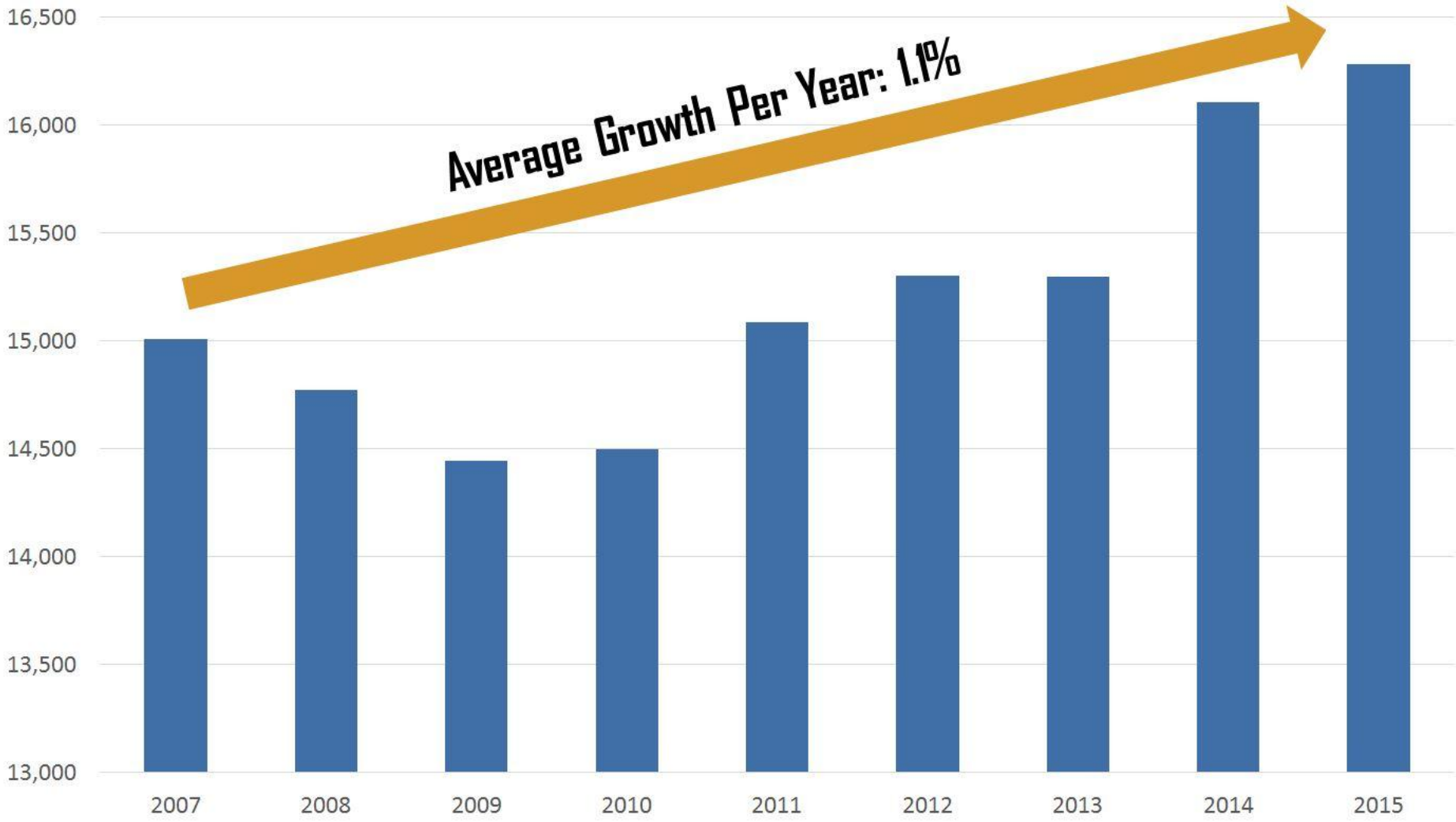
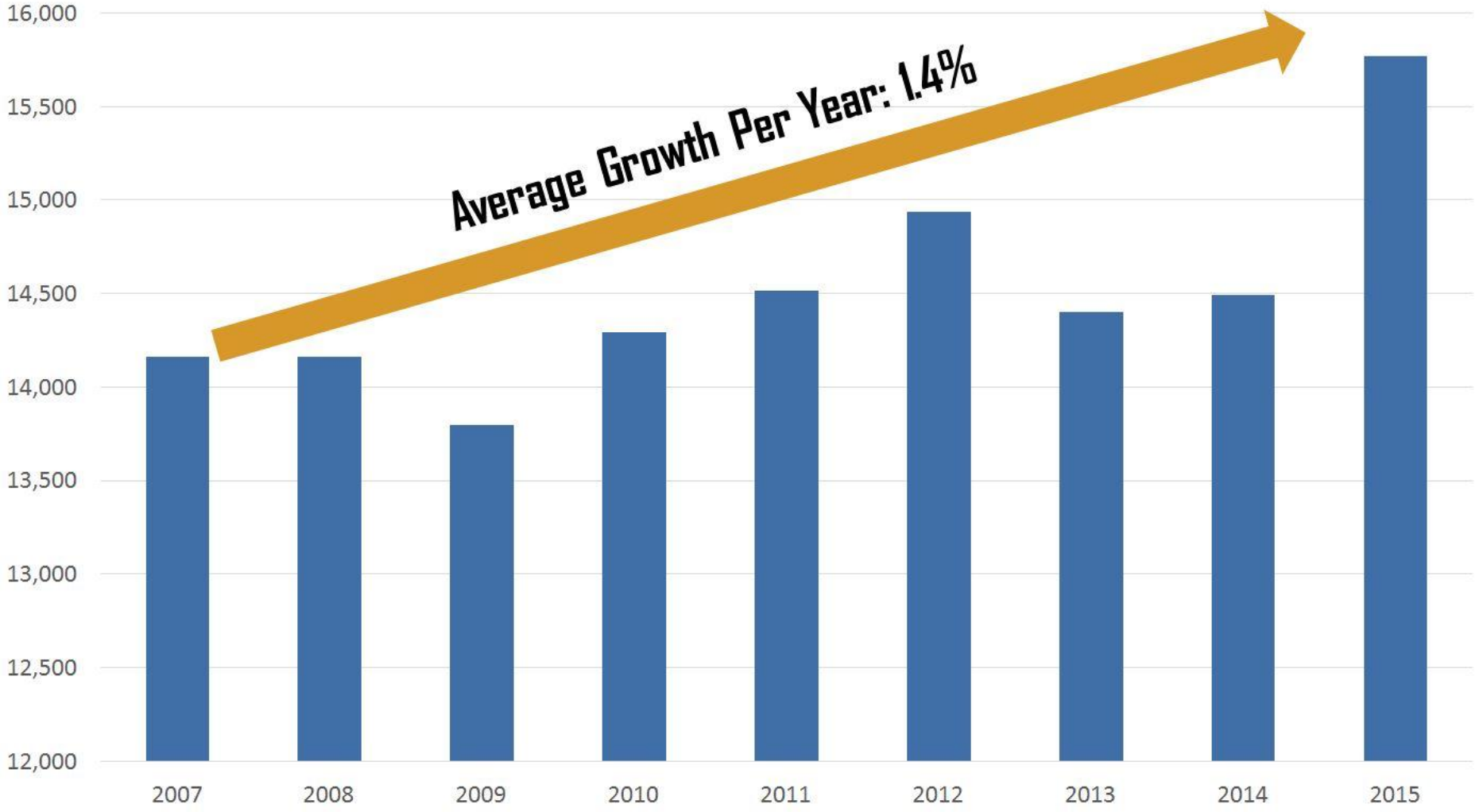


Historic Traffic Trends at Allston Interchange – Westbound On-Ramp



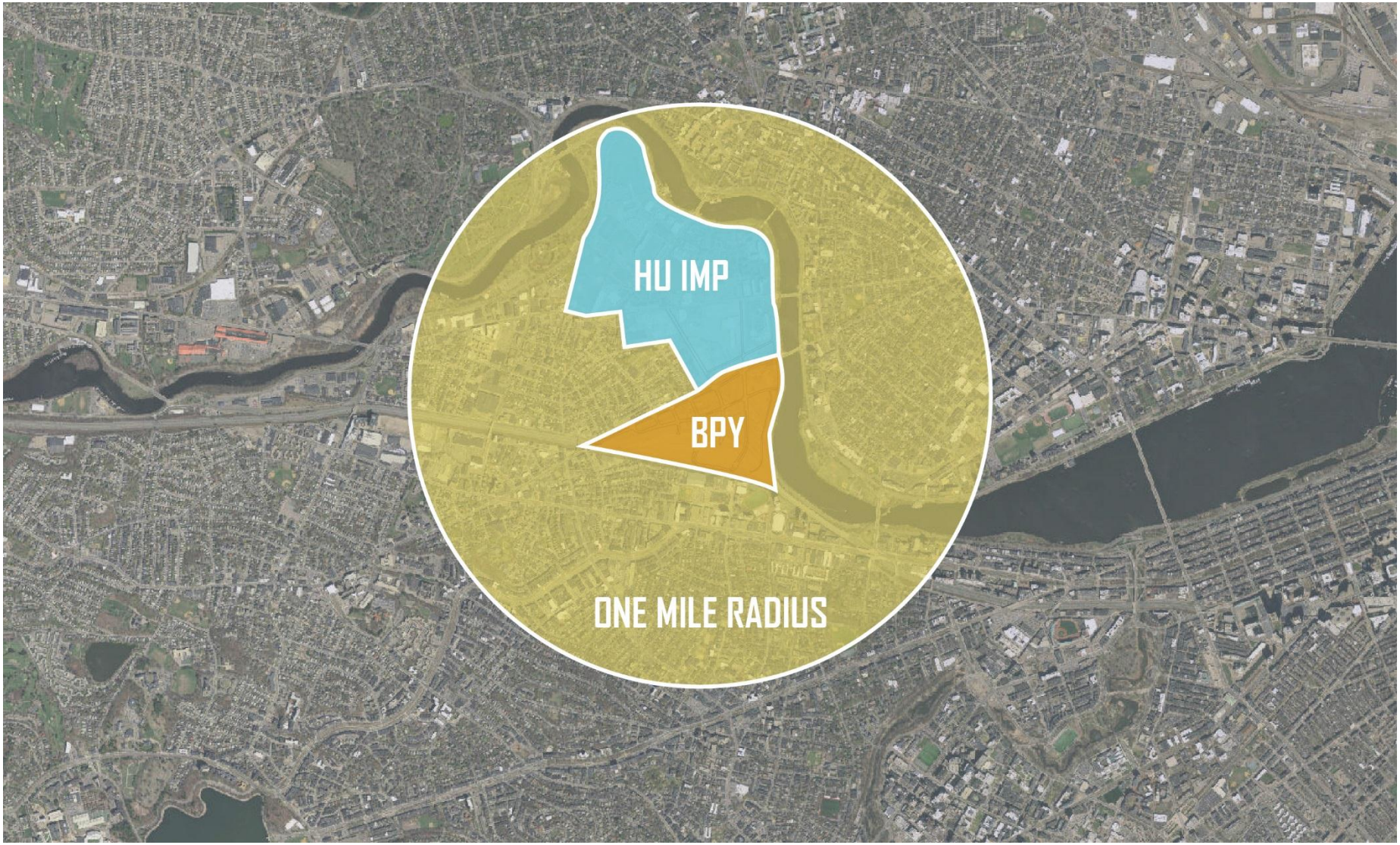
Allston Interchange – Regional Context

Allston Interchange – Regional Context

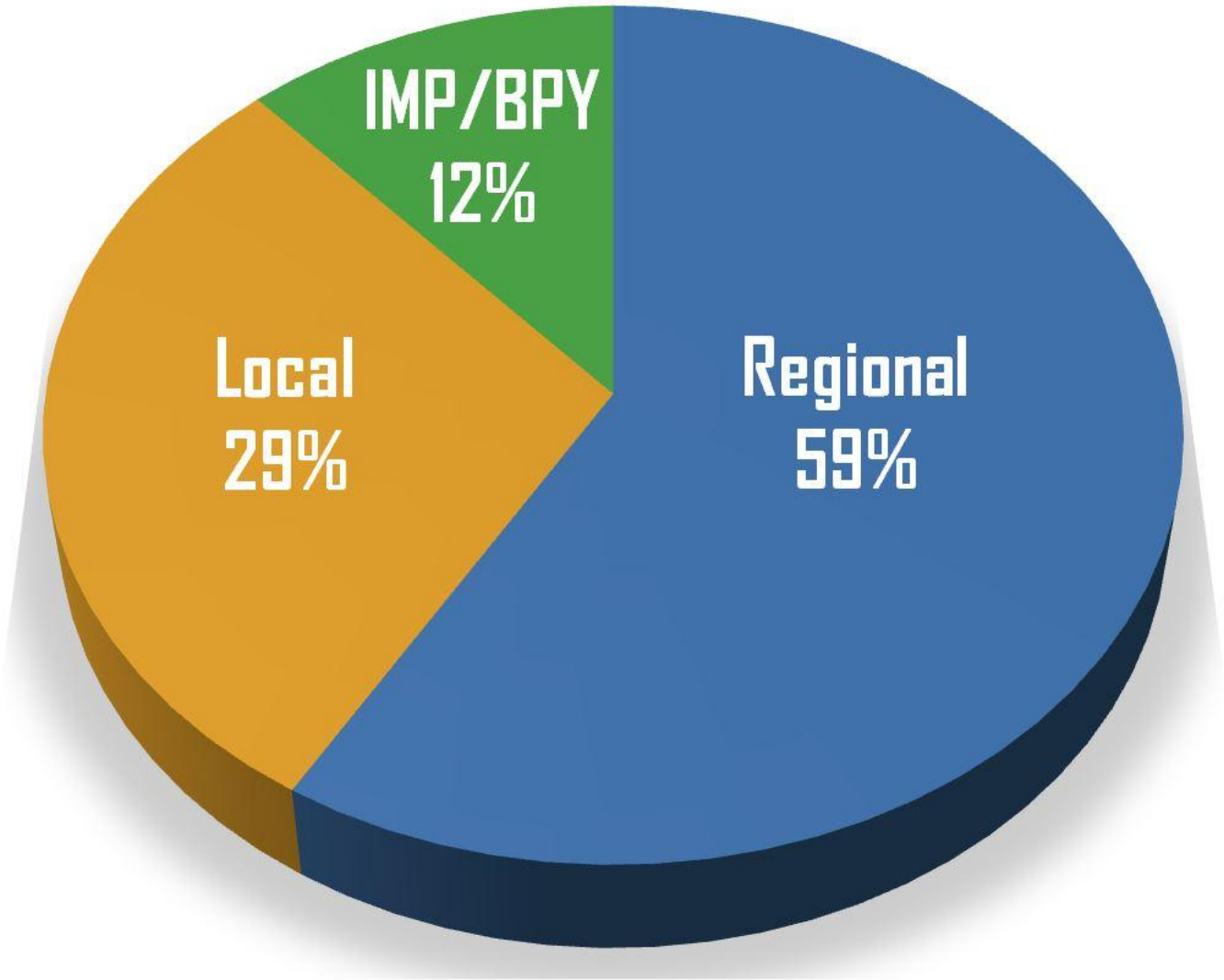
Allston Interchange – Communities

Allston Interchange – Employment Centers

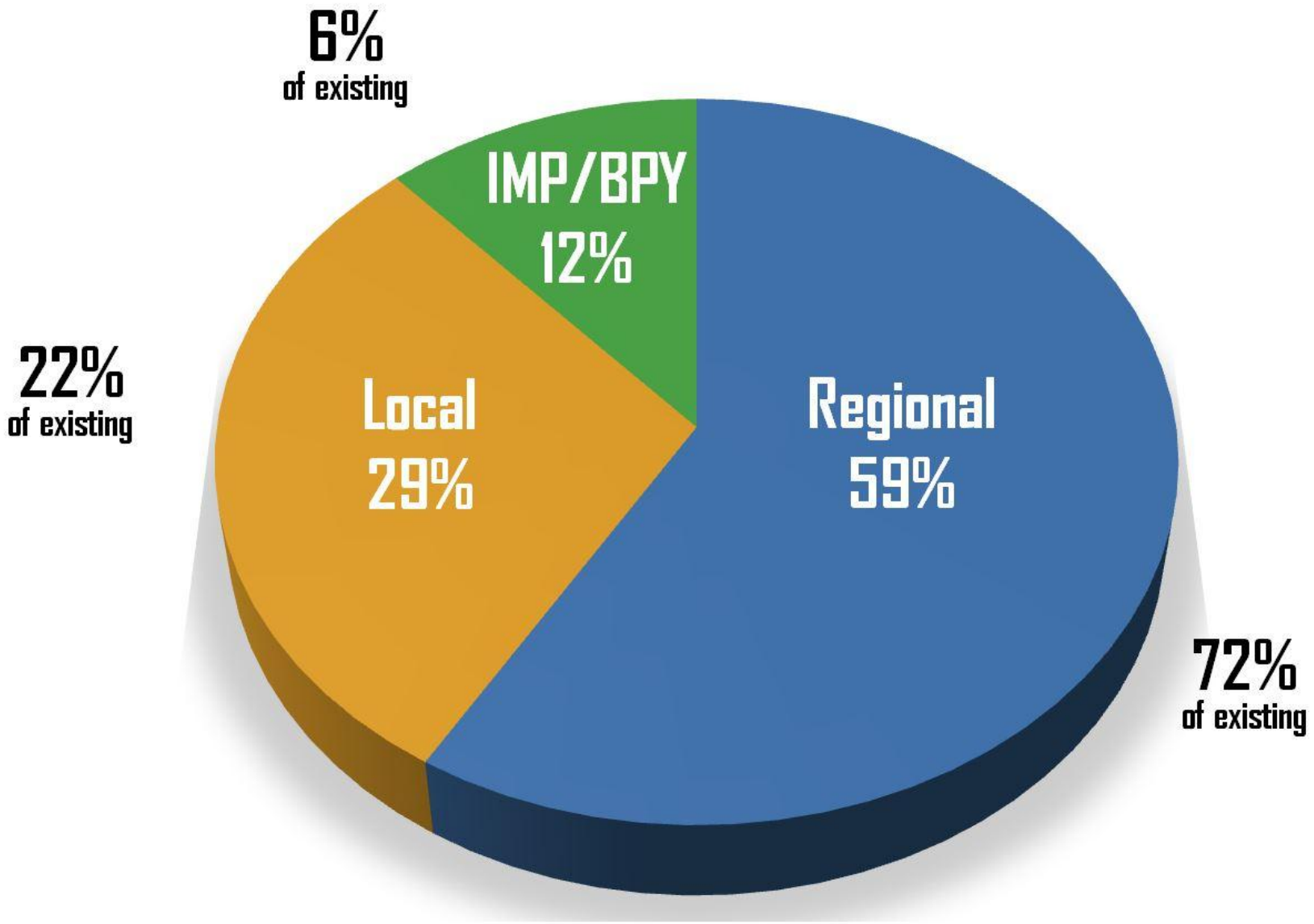
Allston Ramp Composition: Local vs Regional



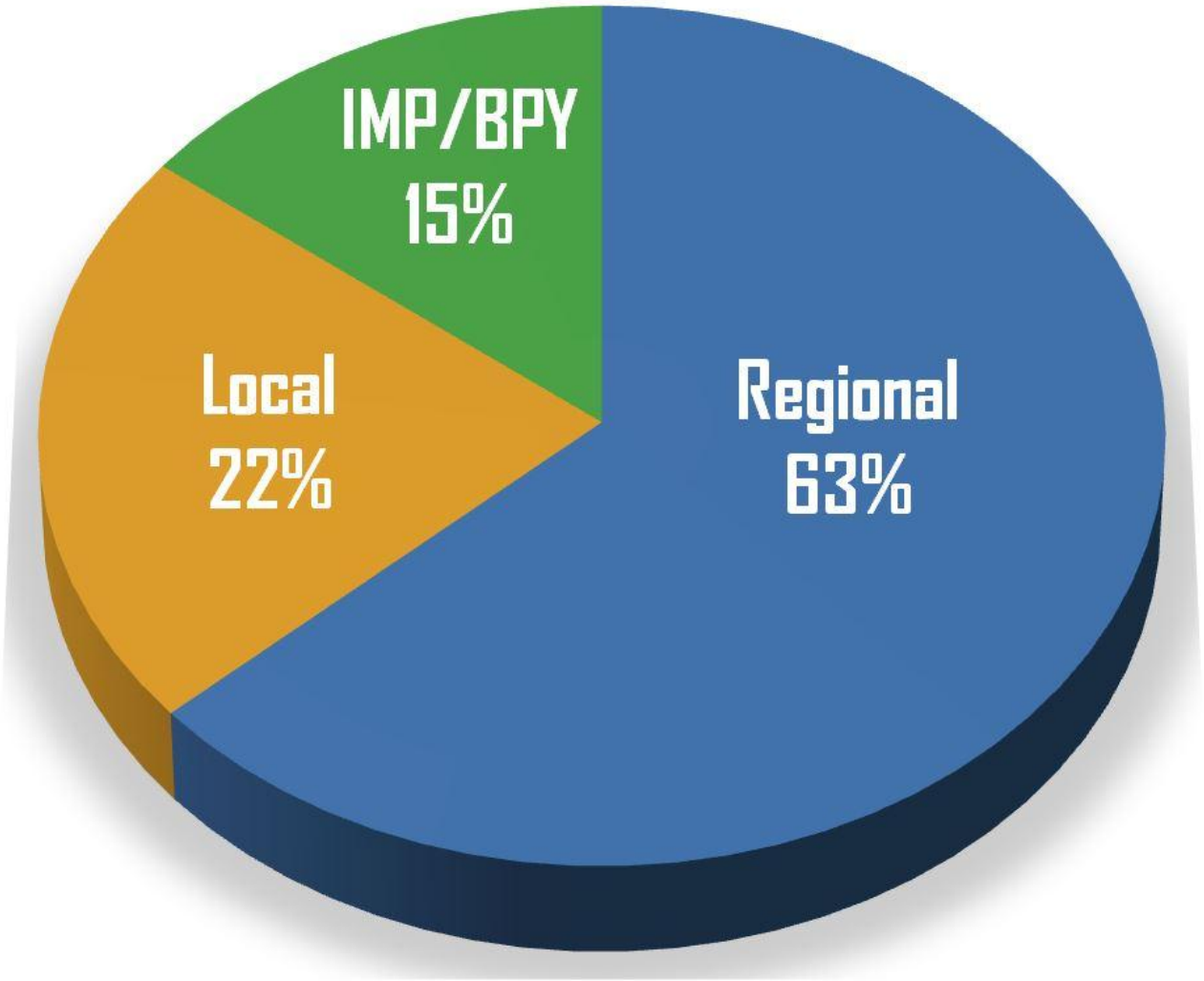
2035 Build AM Peak Ramp Volume Composition



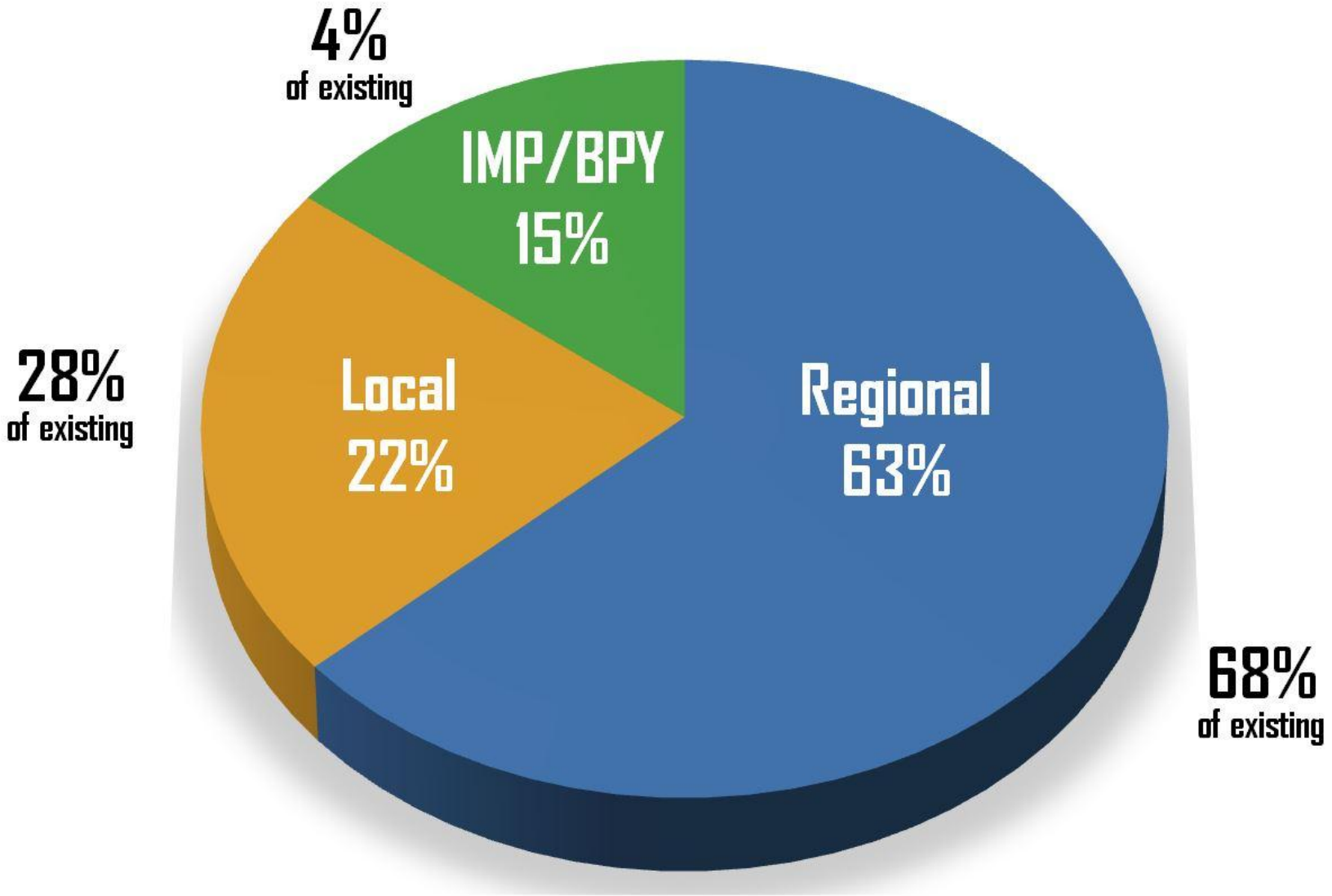
2035 Build AM Peak Ramp Volume Composition



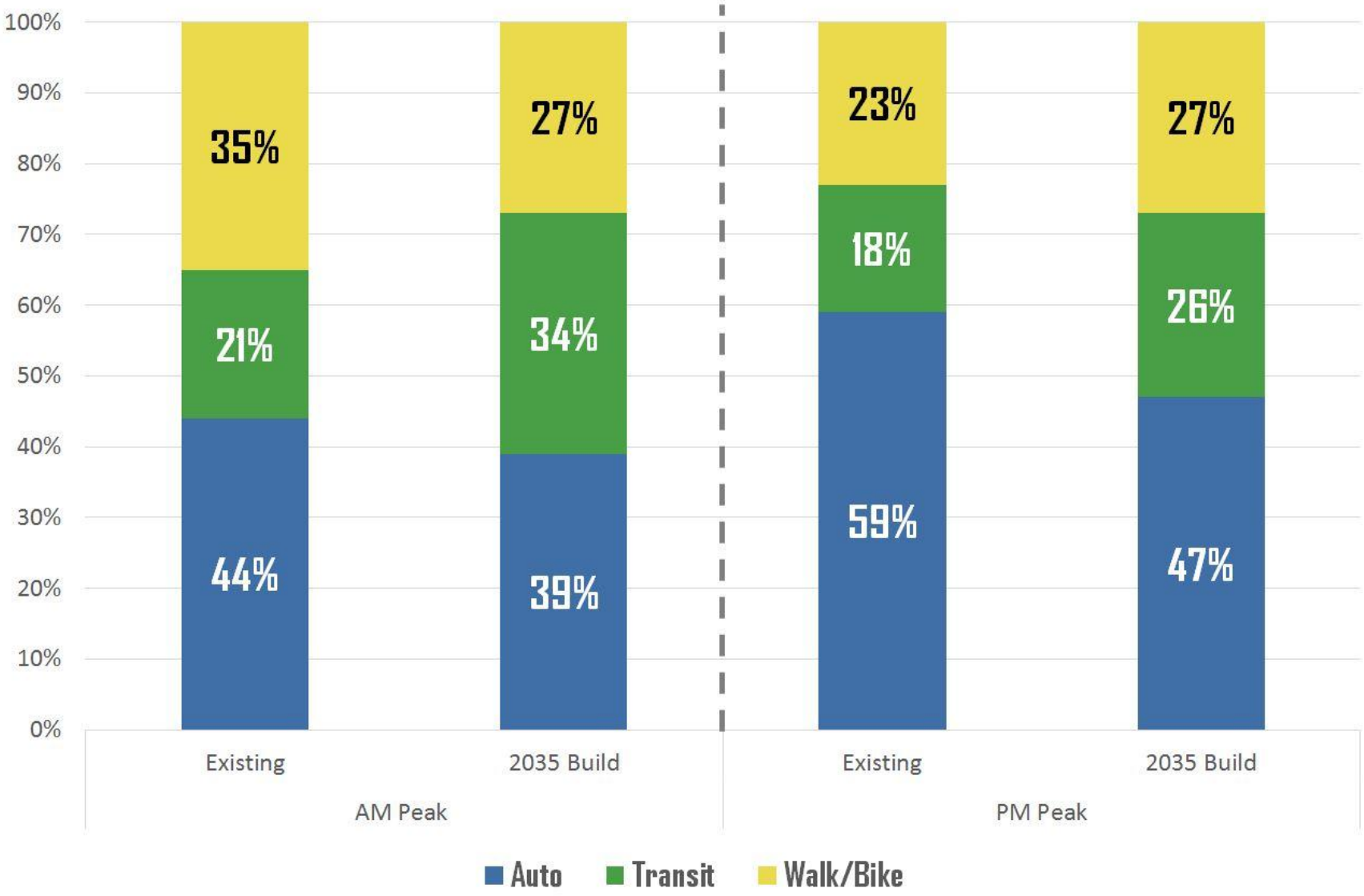
2035 Build PM Peak Ramp Volume Composition



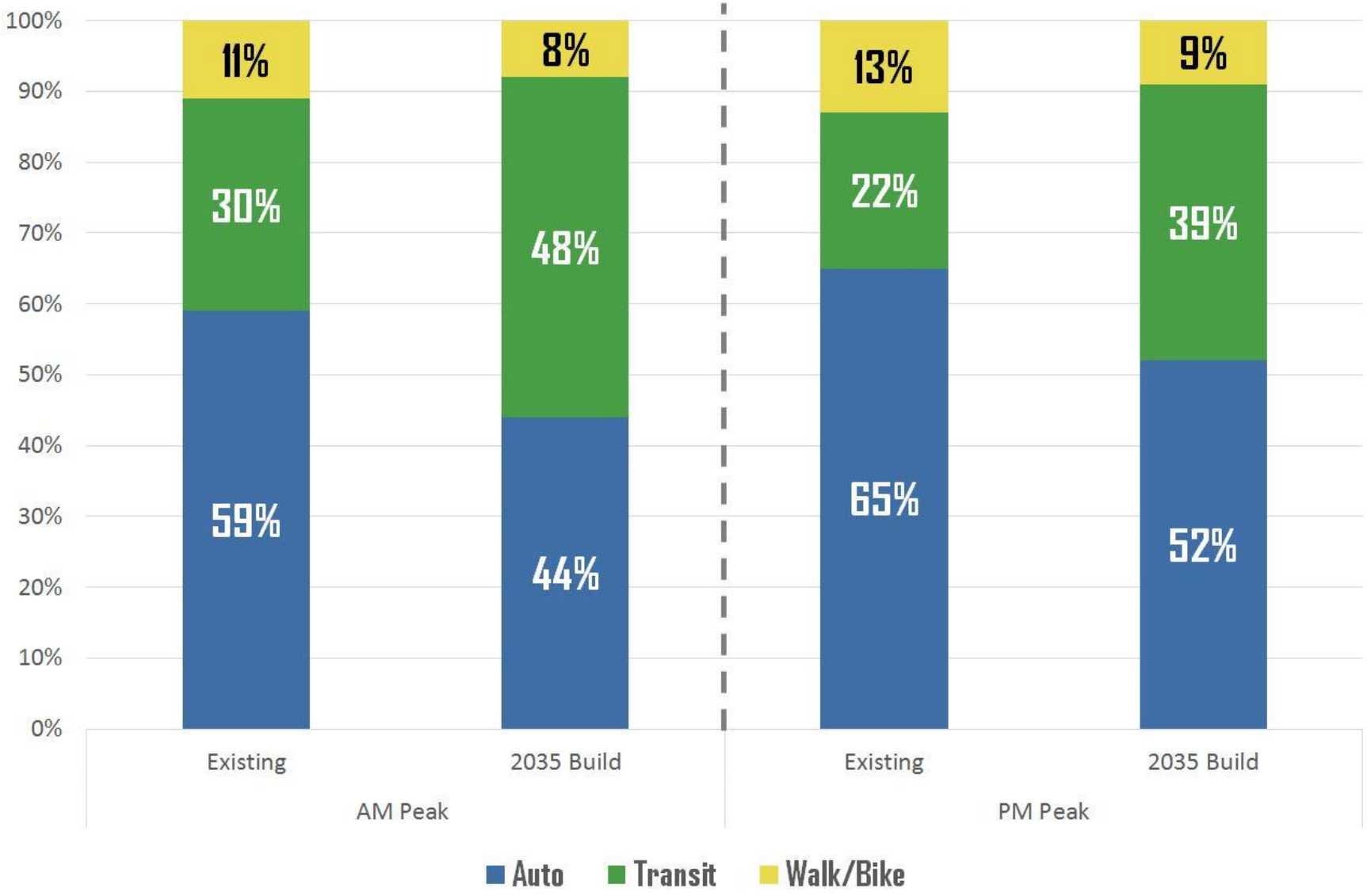
2035 Build PM Peak Ramp Volume Composition



IMP/BPY: Mode Split Summary (All Trips)



IMP/BPY: Mode Split Summary (Home-Work)



2035 Build – Mode Share Results: Harvard IMP Area and BPY Only

Daily (all trips)

- Transit Use increases from 17% to 24% +7%
- Auto Use decreases from 57% 46% -11%

AM Peak (all trips)

- Transit Use increases from 21% to 34% +13%
- Auto Use decreases from 44% to 39% -5%

PM Peak (all trips)

- Transit Use increases from 18% to 26% +8%
- Auto Use decreases from 59% to 47% -12%

2035 Build – Mode Share Results: Harvard IMP Area and BPY Only

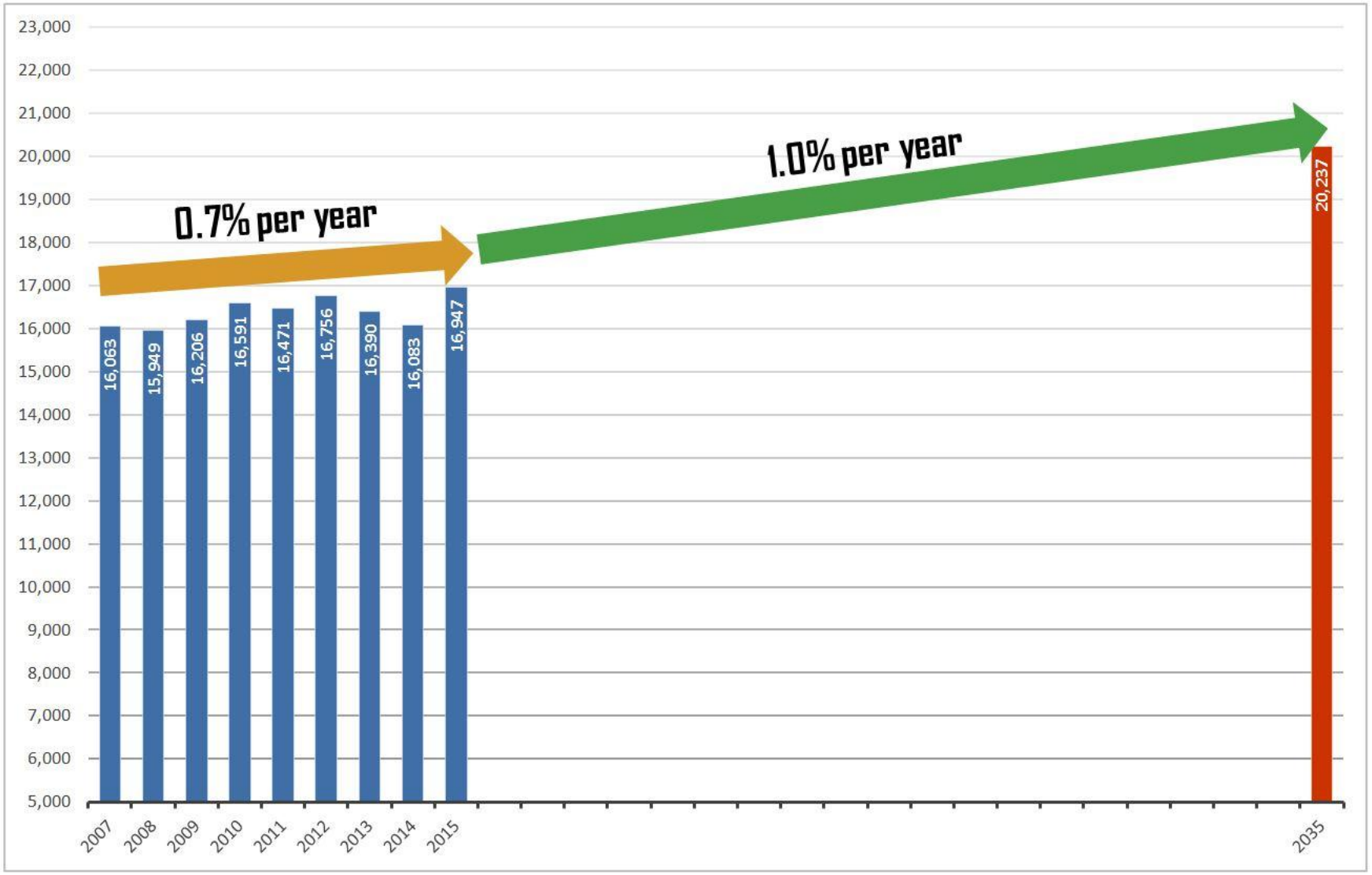
AM Peak (home to work trips)

- Transit Use increases from 30% to 48% +18%
- Auto Use decreases from 59% to 44% -15%

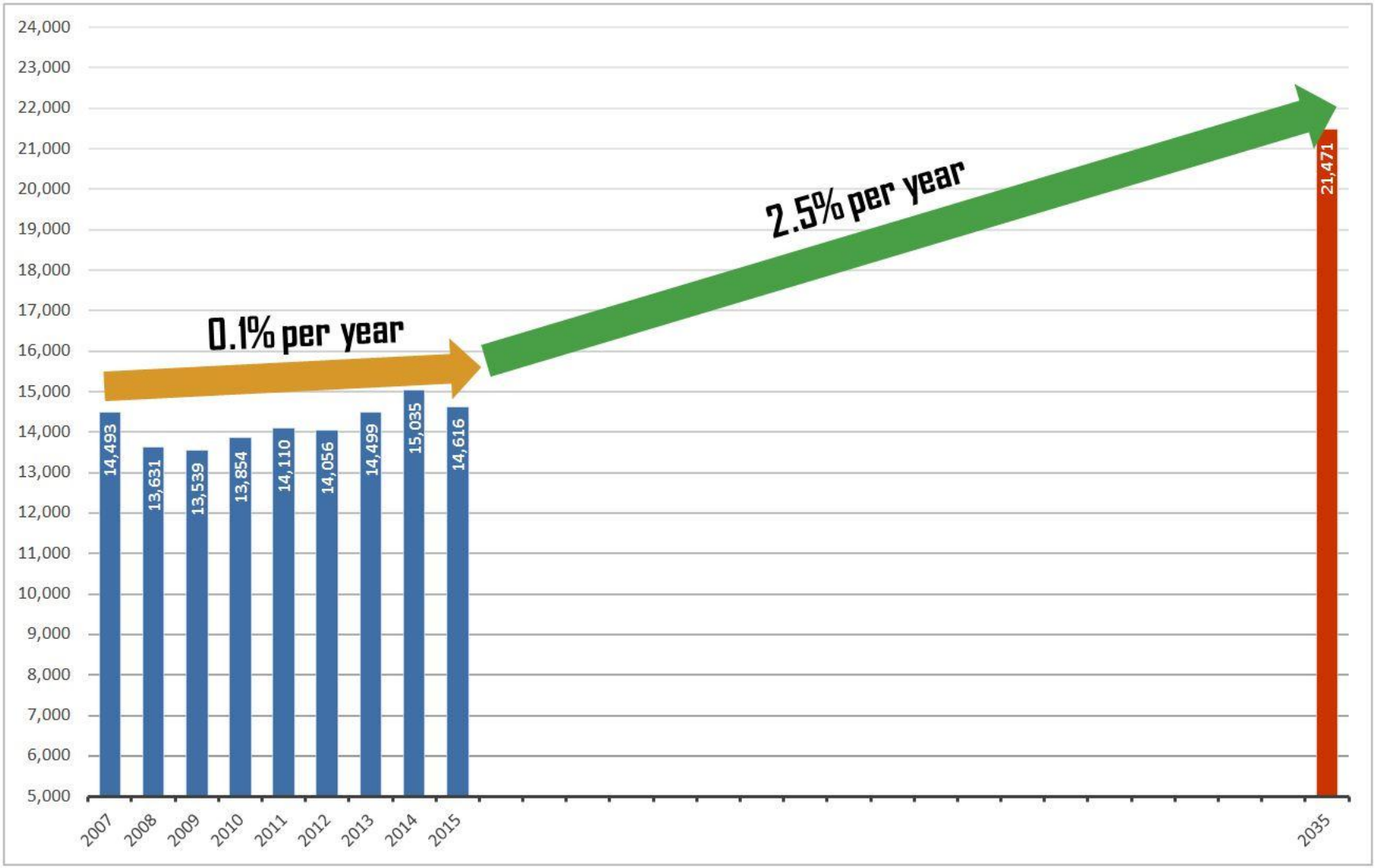
PM Peak (work to home trips)

- Transit Use increases from 22% to 39% +17%
- Auto Use decreases from 65% to 52% -13%

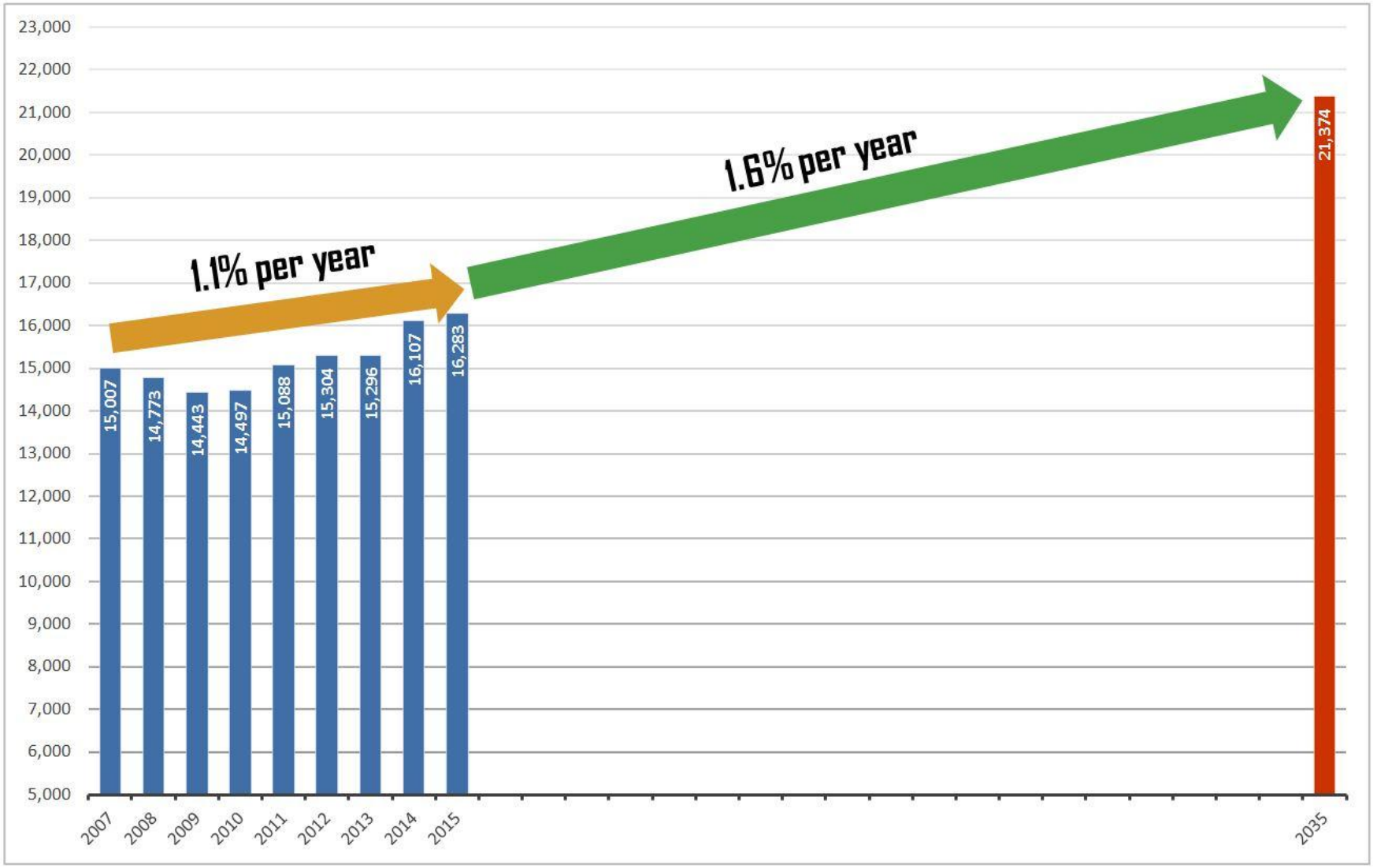
I-90 EB Off-Ramp Volume Growth (2007 - 2035)



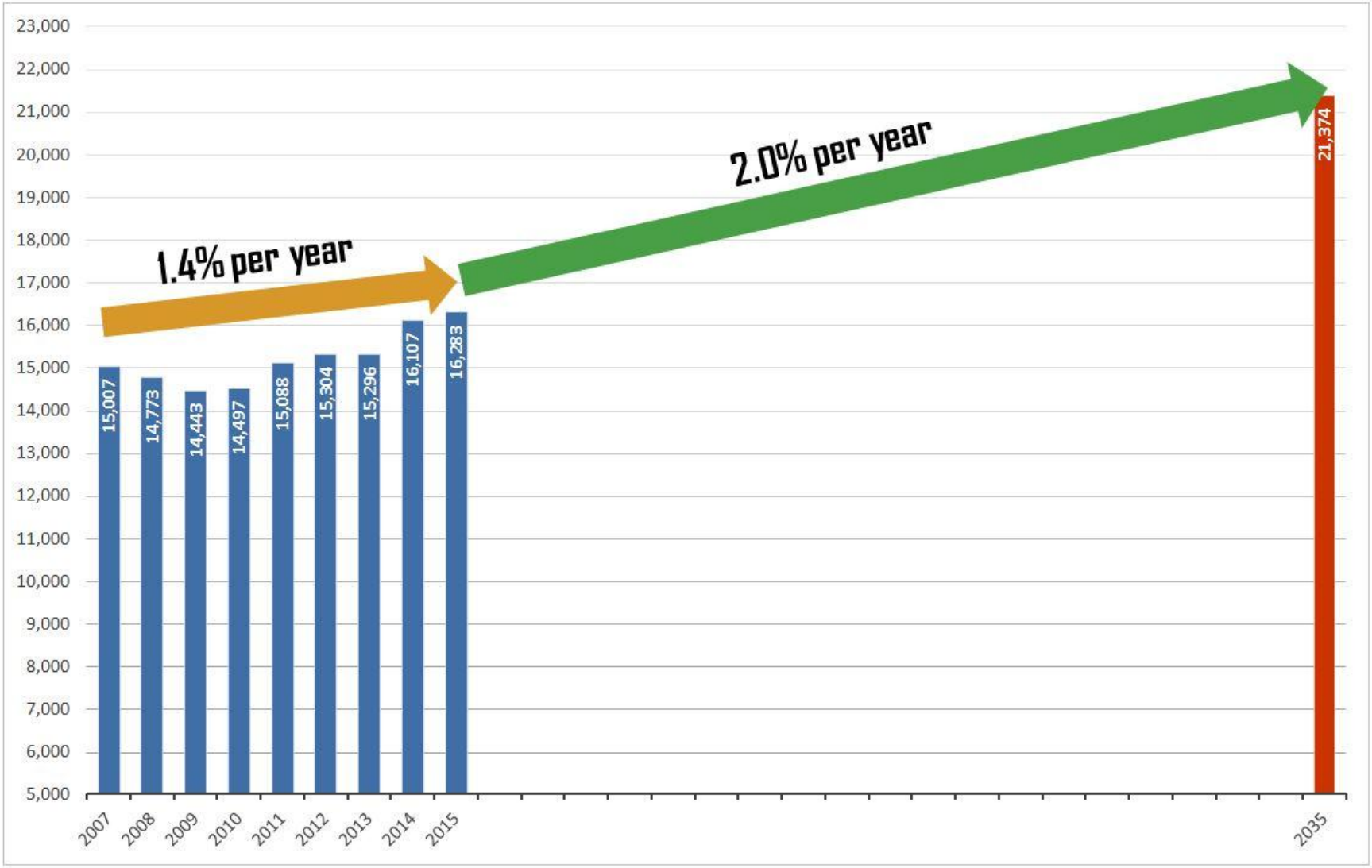
I-90 WB Off-Ramp Volume Growth (2007 - 2035)



I-90 EB On-Ramp Volume Growth (2007 - 2035)



I-90 WB On-Ramp Volume Growth (2007 - 2035)



Traffic Analysis – Next Steps

- Complete peak hour capacity analyses of Alternatives 3J-1, 3J-2, 3J-3
- Analysis of switching East Drive and Stadium Way connections to I-90 ramp system
- Analysis of vehicular connection to Commonwealth Avenue
- Analysis of Opening Year conditions (2020)

Traffic Analysis Intersections

Traffic Analysis Intersections

Meeting Agenda

- Task Force, Project Team, and Introductions
- Traffic Analysis Update
- West Station and Beacon Park Yards Update

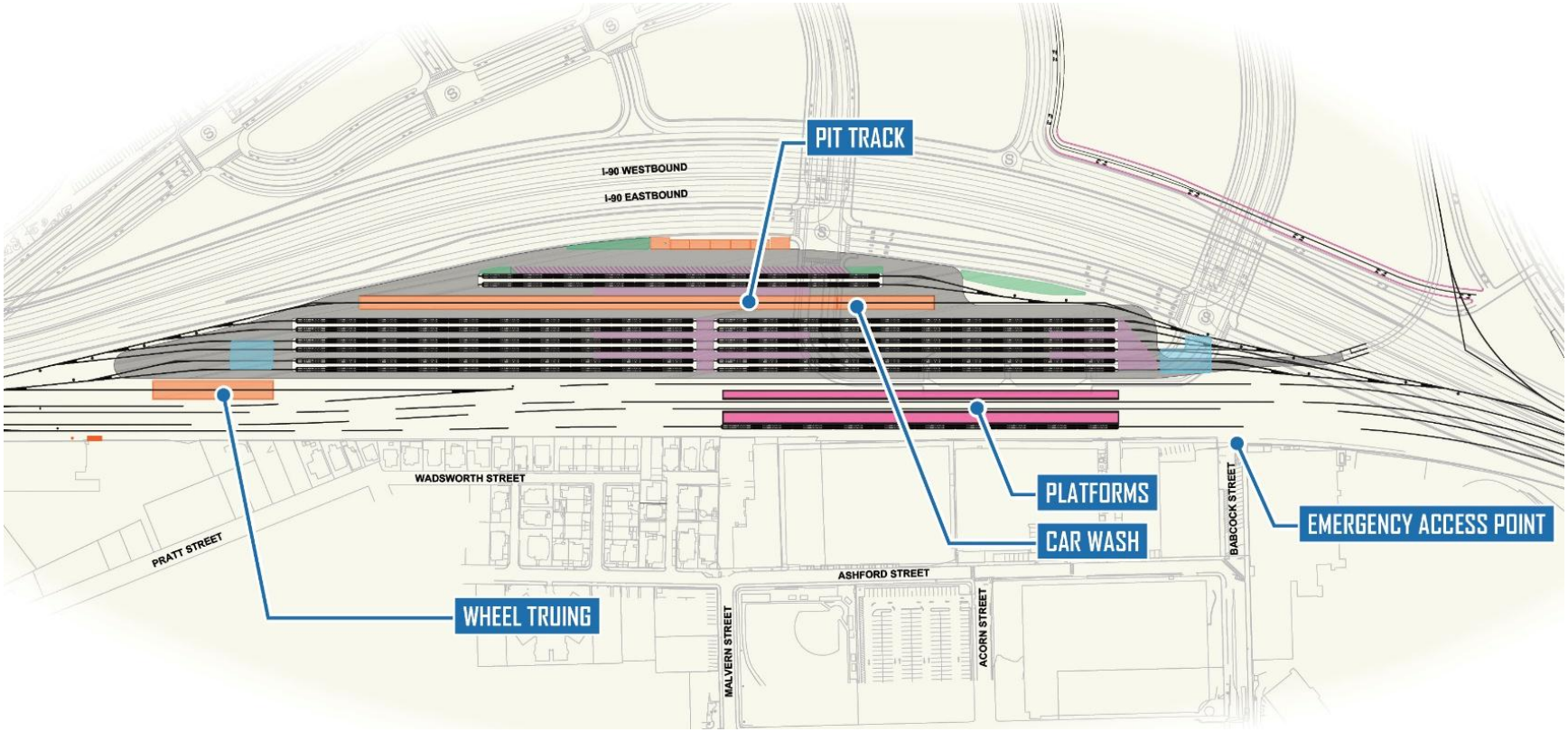
I-90 Project Rail & Transit Overview

- Beacon Park Yards
  - Layover Tracks (Need published in SSX DEIR)
  - Running Repairs (Need based on system limitations & fleet expansion)
  - Crew Quarters
- West Station
  - Evolved from Public Process/Neighborhood input
  - Accommodates urban, multimodal use
  - Considers expanded commuter rail service, future urban rail service
- Other
  - Branch to Houghton Chemical
  - Grand Junction, today and tomorrow

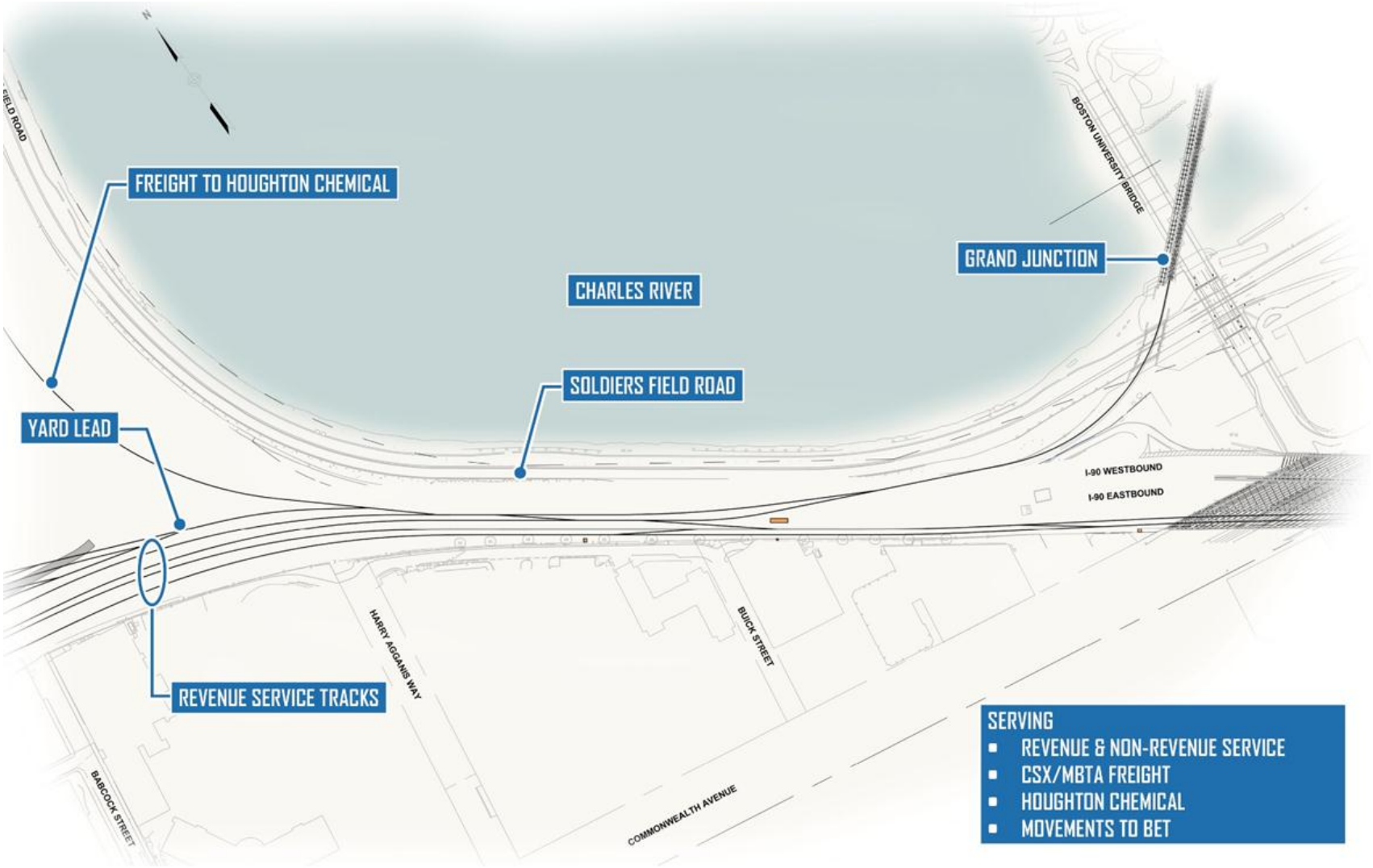
Beacon Park Yards Overview

- Layover Tracks for 14-18, 9-Car Consists
- Sheltered Pit Track
- Wheel Truing
- Car Wash/Deicing Facility
- Crew Quarters
- Power Substations, Transformers, Generators

Beacon Park Yard Elements



Tracks Below Viaduct



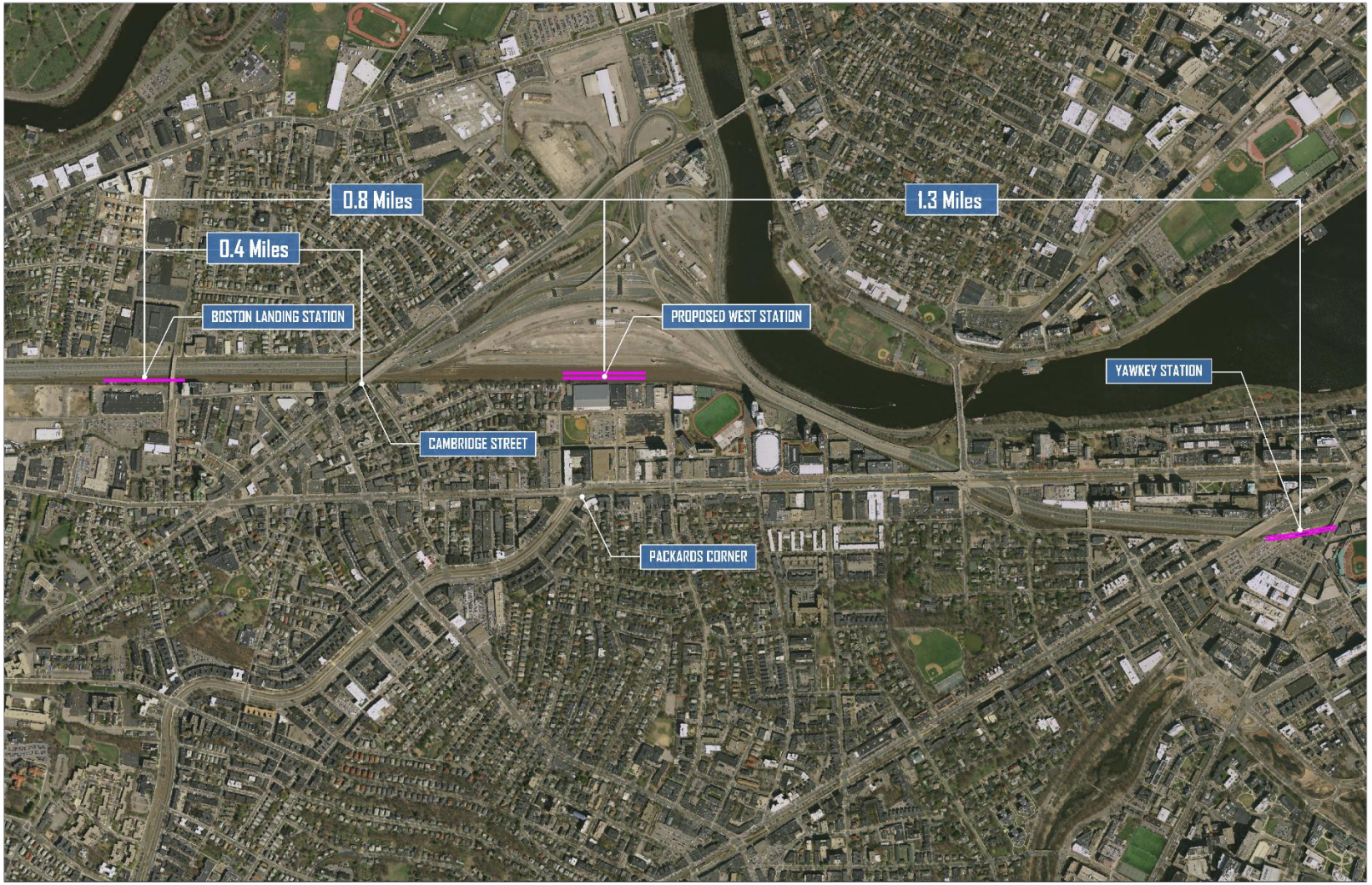
Suggested Beacon Park Yards AA Evaluation Criteria

- Provision of Layover Spaces (Minimum of 14 consists)
- Supports Running Rail Maintenance Functions
- Accommodates Freight Movements
- Yard Operational Flexibility - Layover
- Yard Operational Flexibility - Maintenance
- Yard Operational Flexibility – Access Roadway
- Preserve Air Rights (Technically Feasible/Economically Viable)
- Order-of-Magnitude Capital Cost
- Constructability

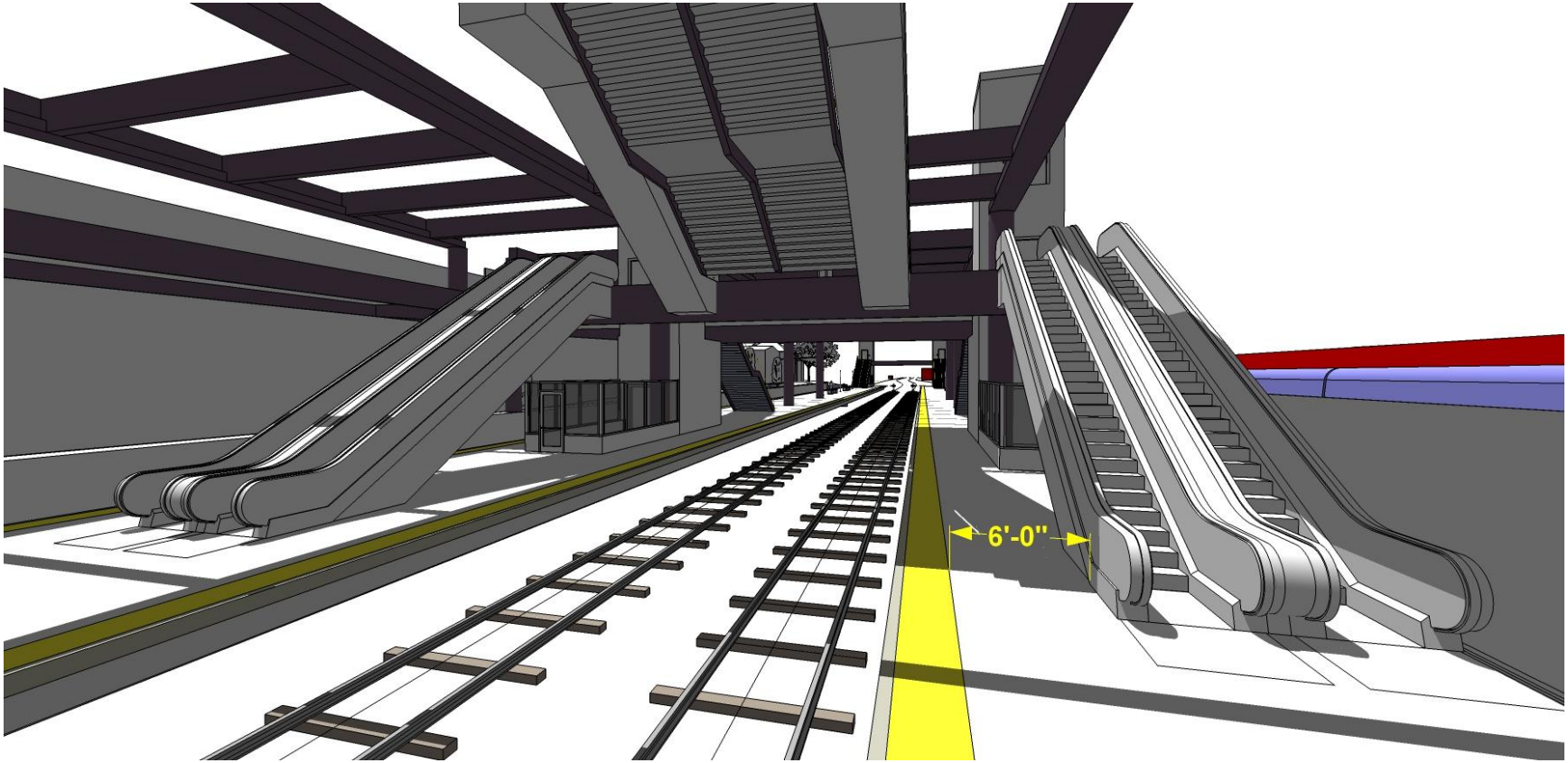
West Station Elements

- Two Platforms/3-4 Revenue Service Tracks
  - 830 ft x 26.5 ft
- At least two pts of ped/bike access from south and north
  - At least one bike *No Dismount*
- Vehicular access for buses, shuttles, K&R
- Live berthing for 5 MBTA buses
- Layover berthing for 5 MBTA buses
- Vertical circulation to satisfy NFPA 130 evacuation
- No Parking facilities provided

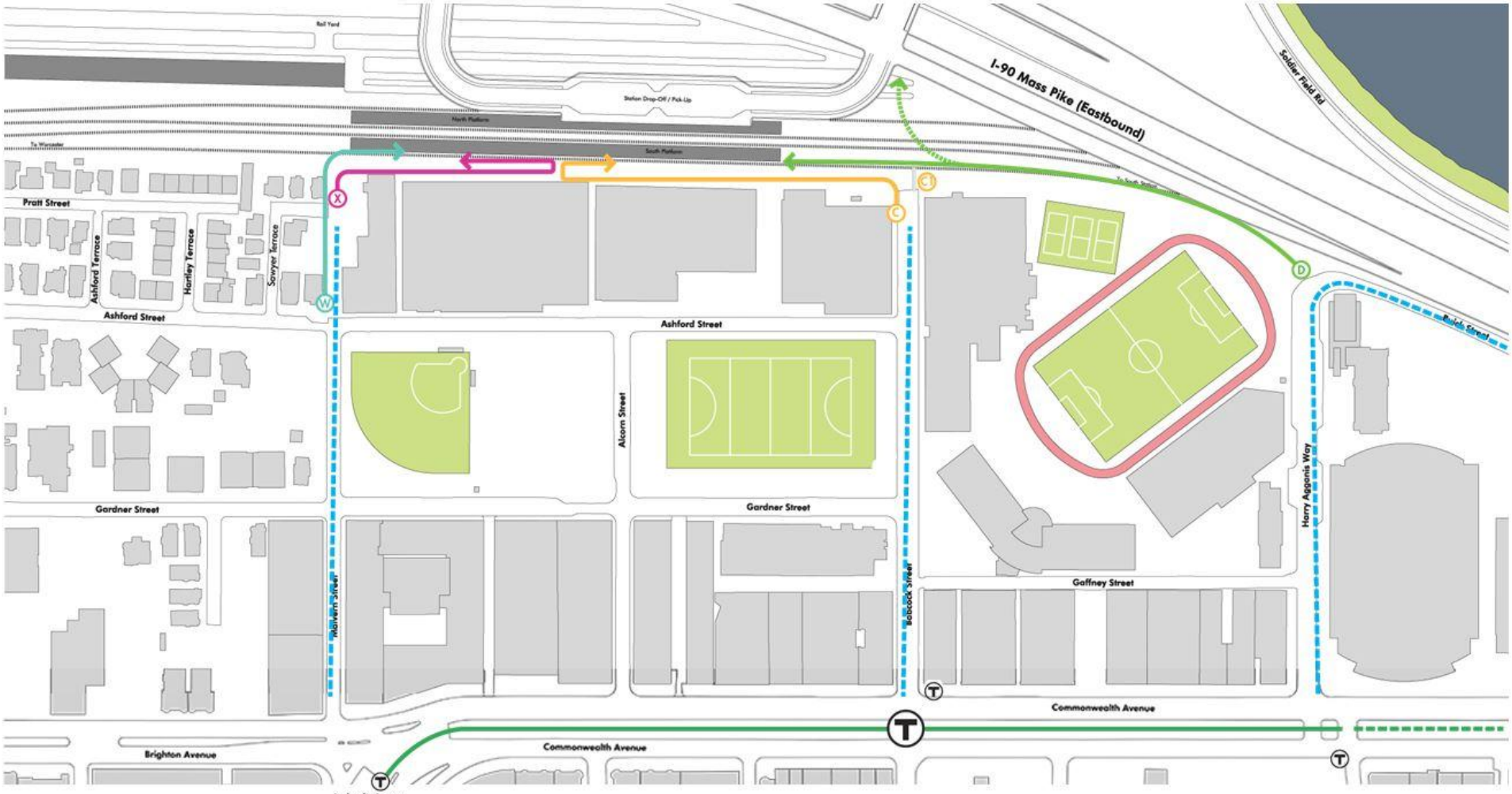
Proximity to Adjacent Stations



Platform View



Southerly Pedestrian/Bicycle Access Routes



C — END OF BABCOCK SWITCHBACK

Start Elevation	19'
Elevation Gain	36'
Distance Req'd	800'
Max Slope	4.5%

D — AGGANIS WAY FLYOVER

Start Elevation	34'
Elevation Gain	21'
Total Distance	1000'
Avg. Slope	2.1%

W — DRIVEWAY AT MALVERN STREET

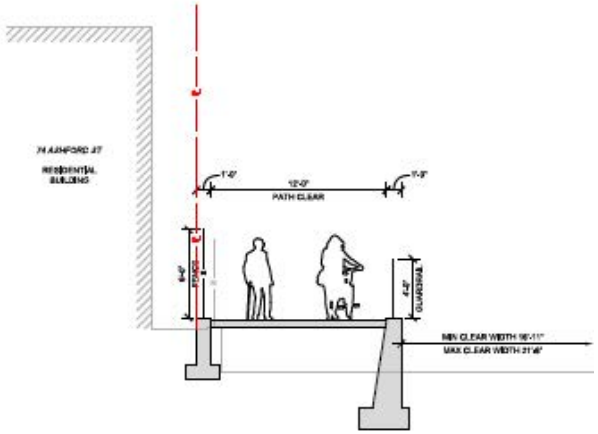
Start Elevation	35'
Elevation Gain	20'
Distance Req'd	450'
Max Slope	4.5%

X — END OF MALVERN SWITCHBACK

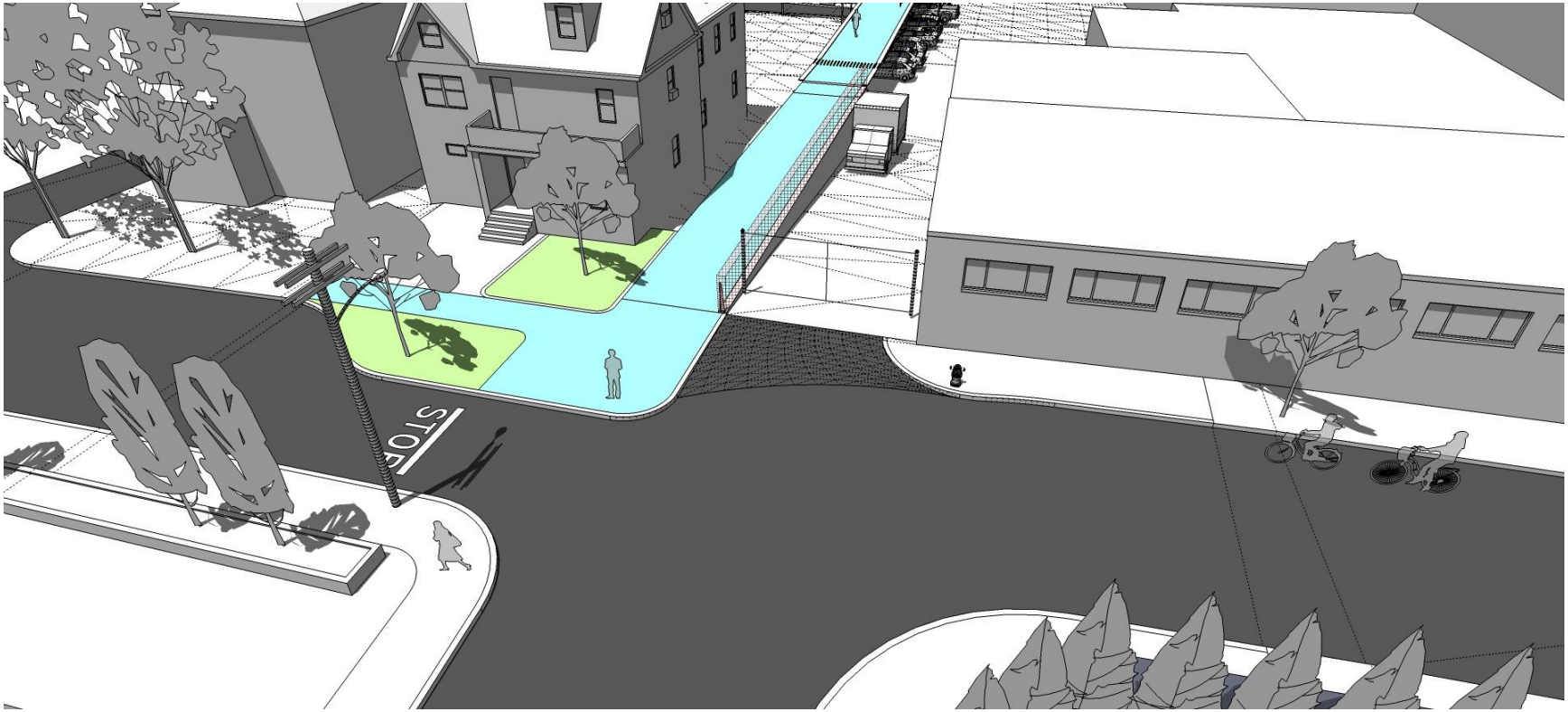
Start Elevation	26'
Elevation Gain	29'
Distance Req'd	650'
Max Slope	4.5%

C1 — END OF STAIR/ELEVATOR

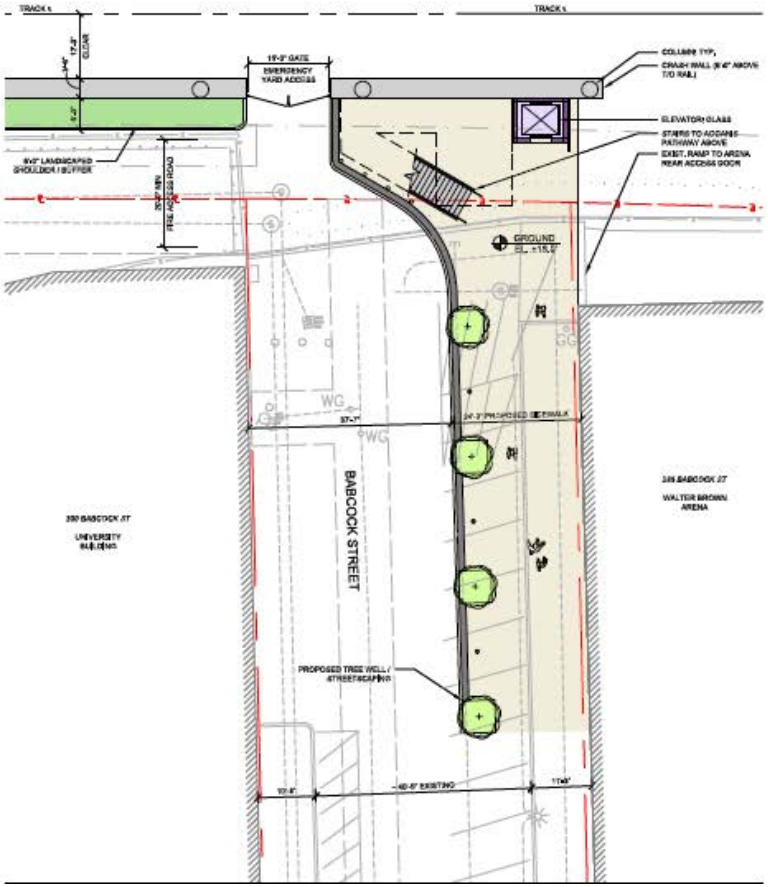
Option W - Malvern St Access

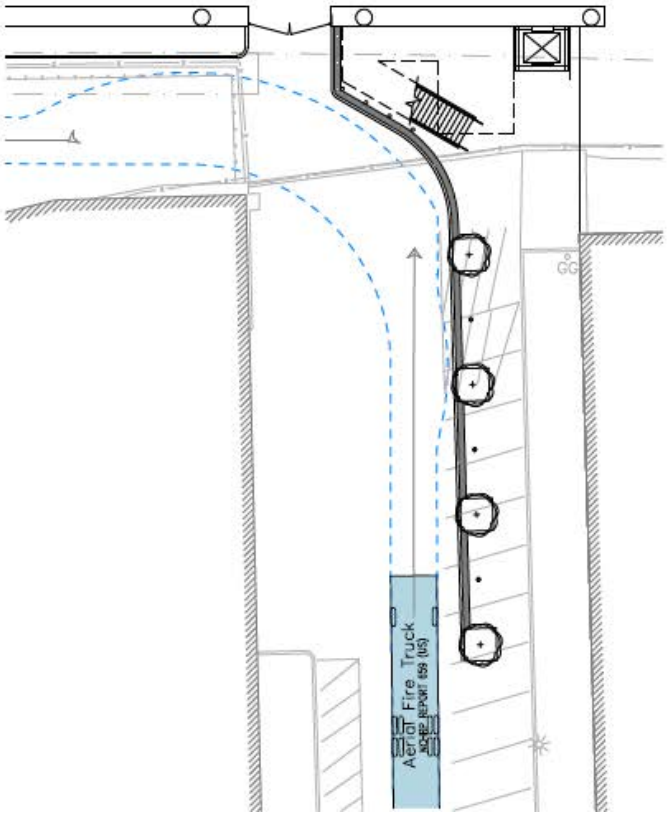


Malvern St Pedestrian/Bike Entrance

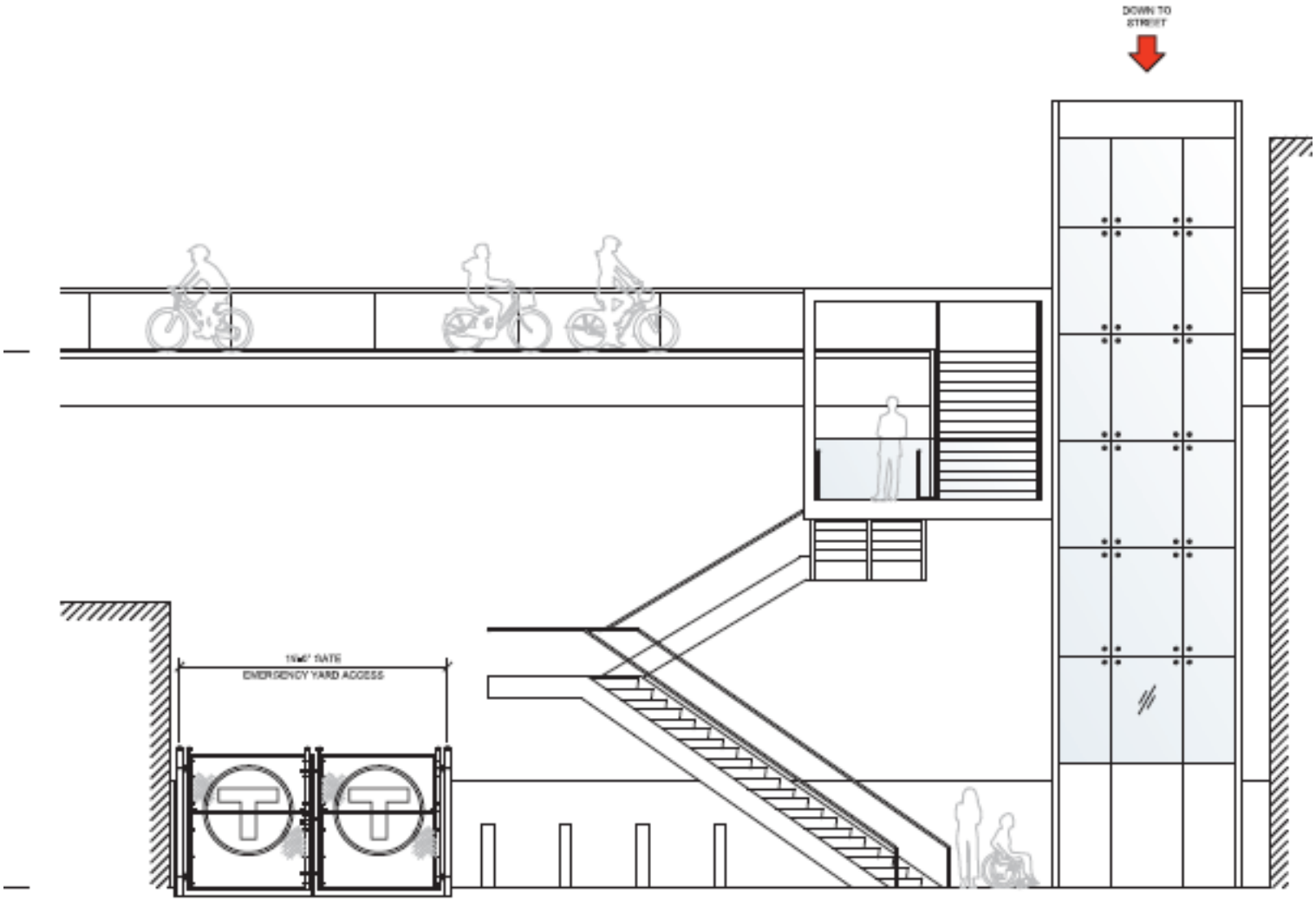


Option C1 - Babcock Street Access

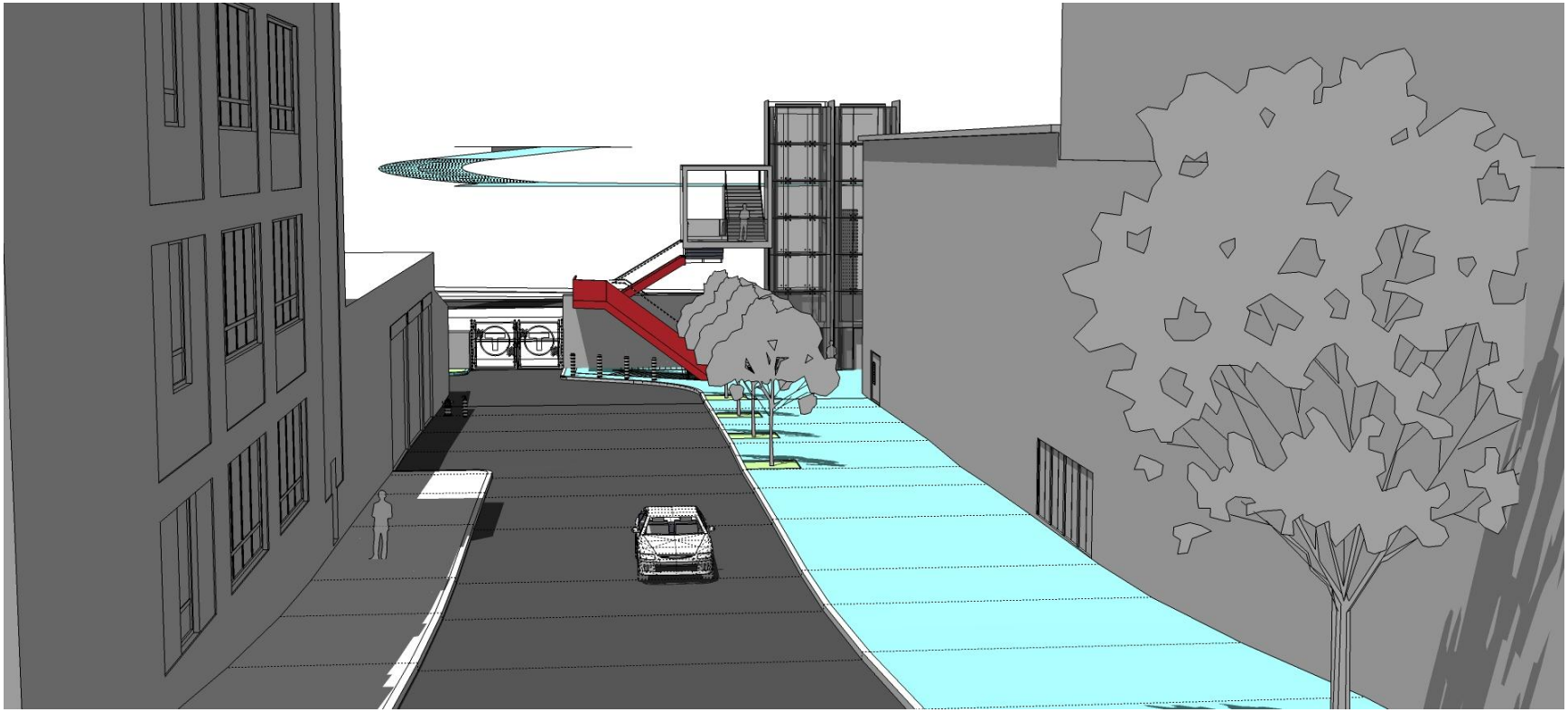




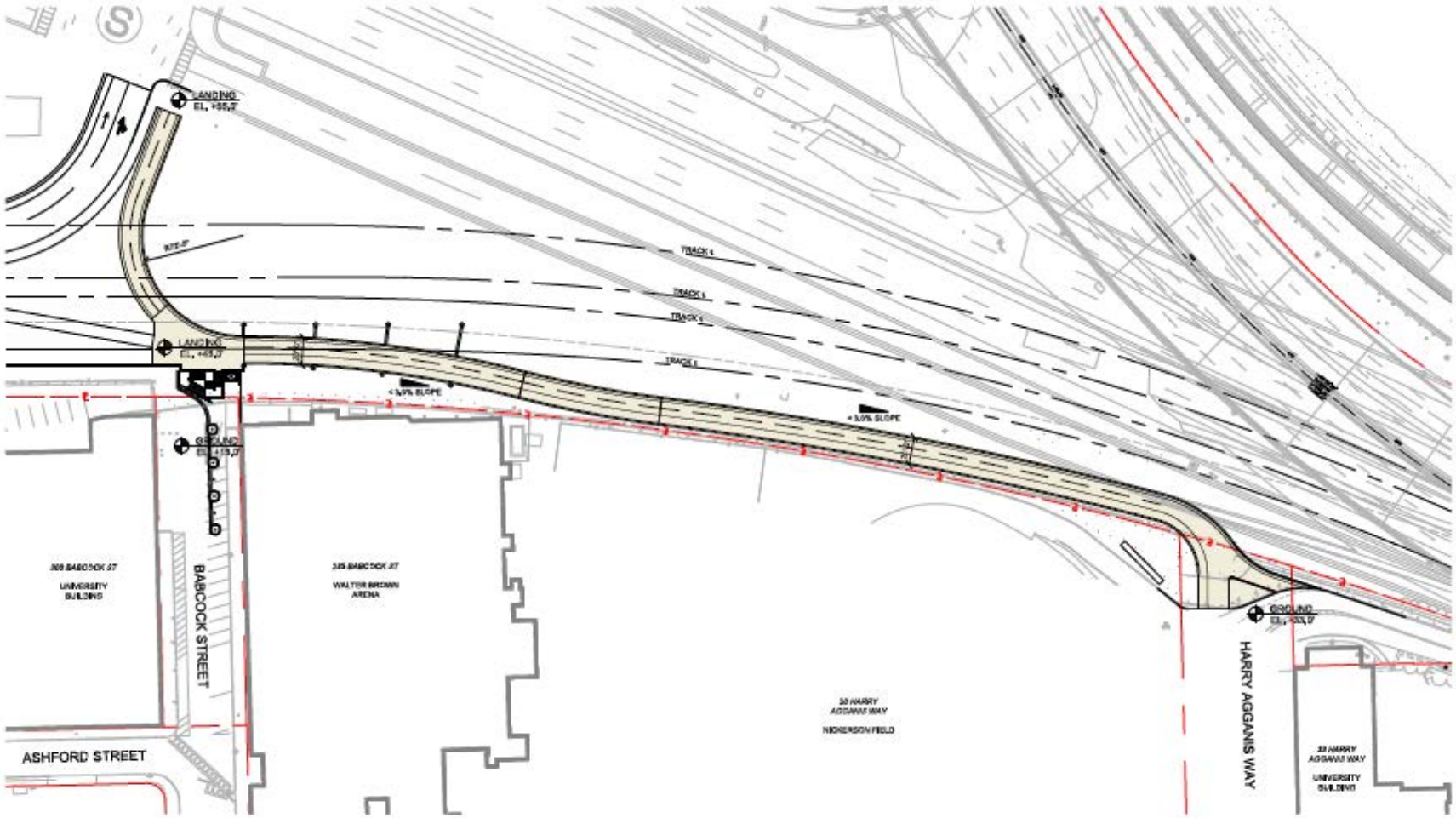
Stair & Elevator at Babcock St.



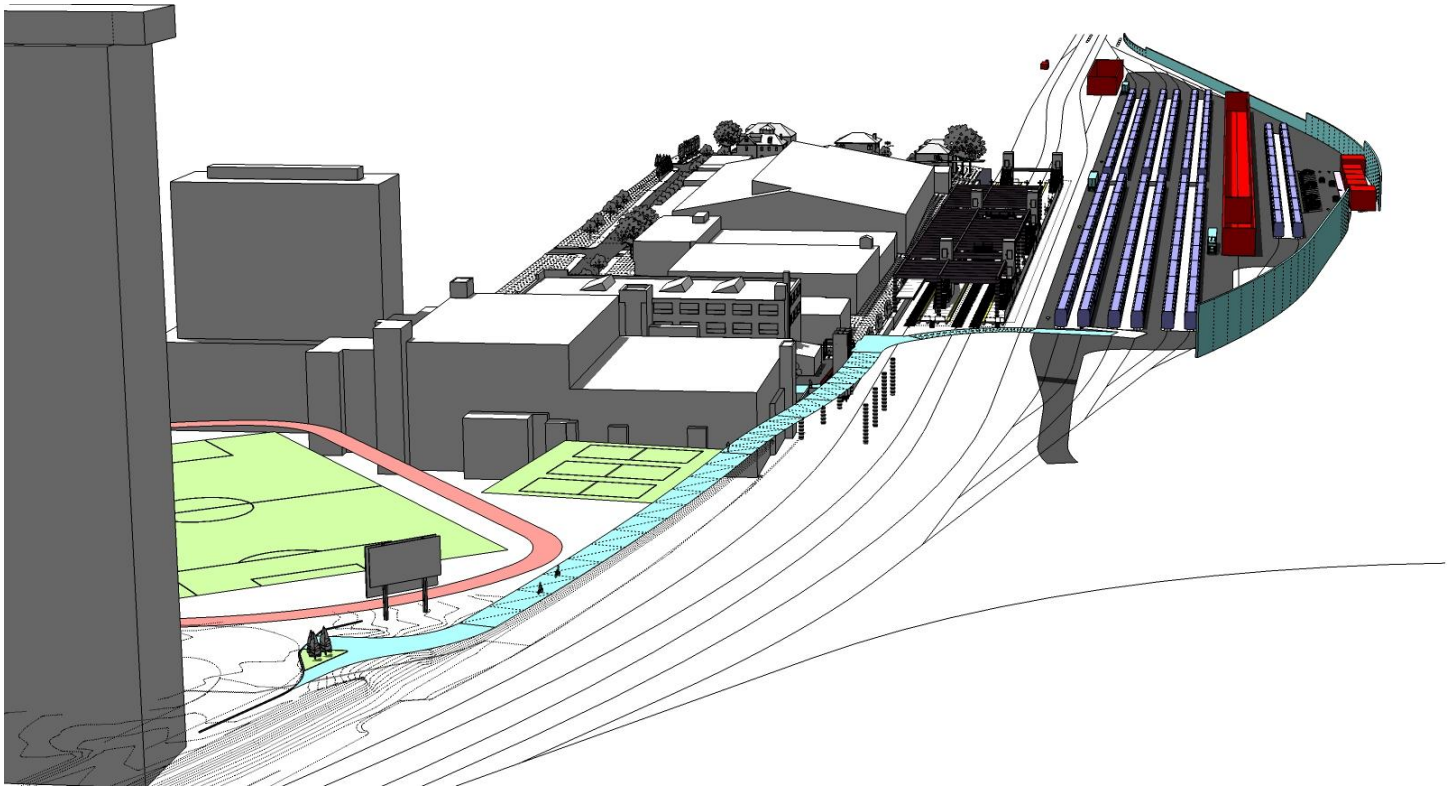
Babcock St Access – Commonwealth Avenue View



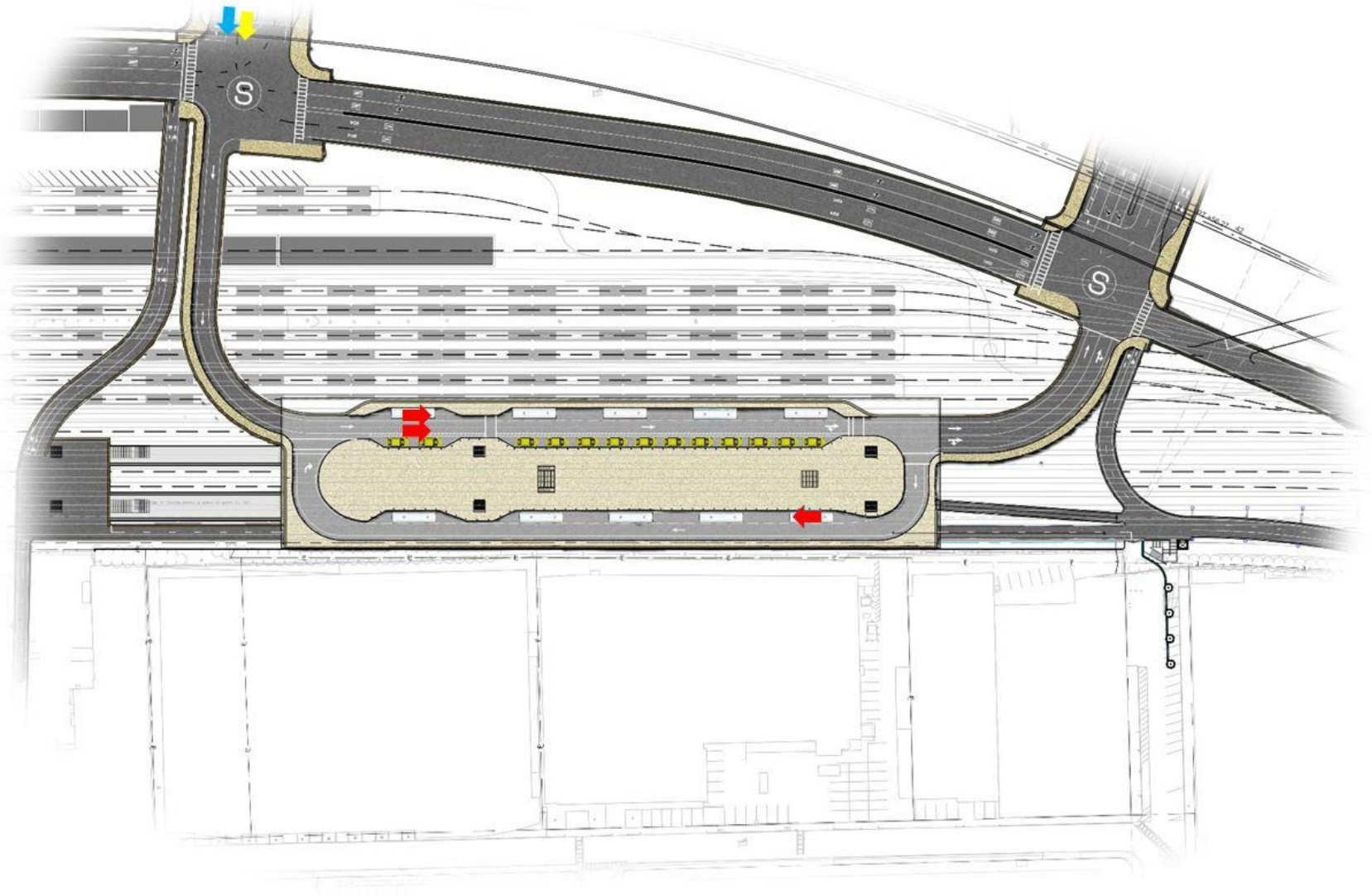
Option D - Agganis Way Access



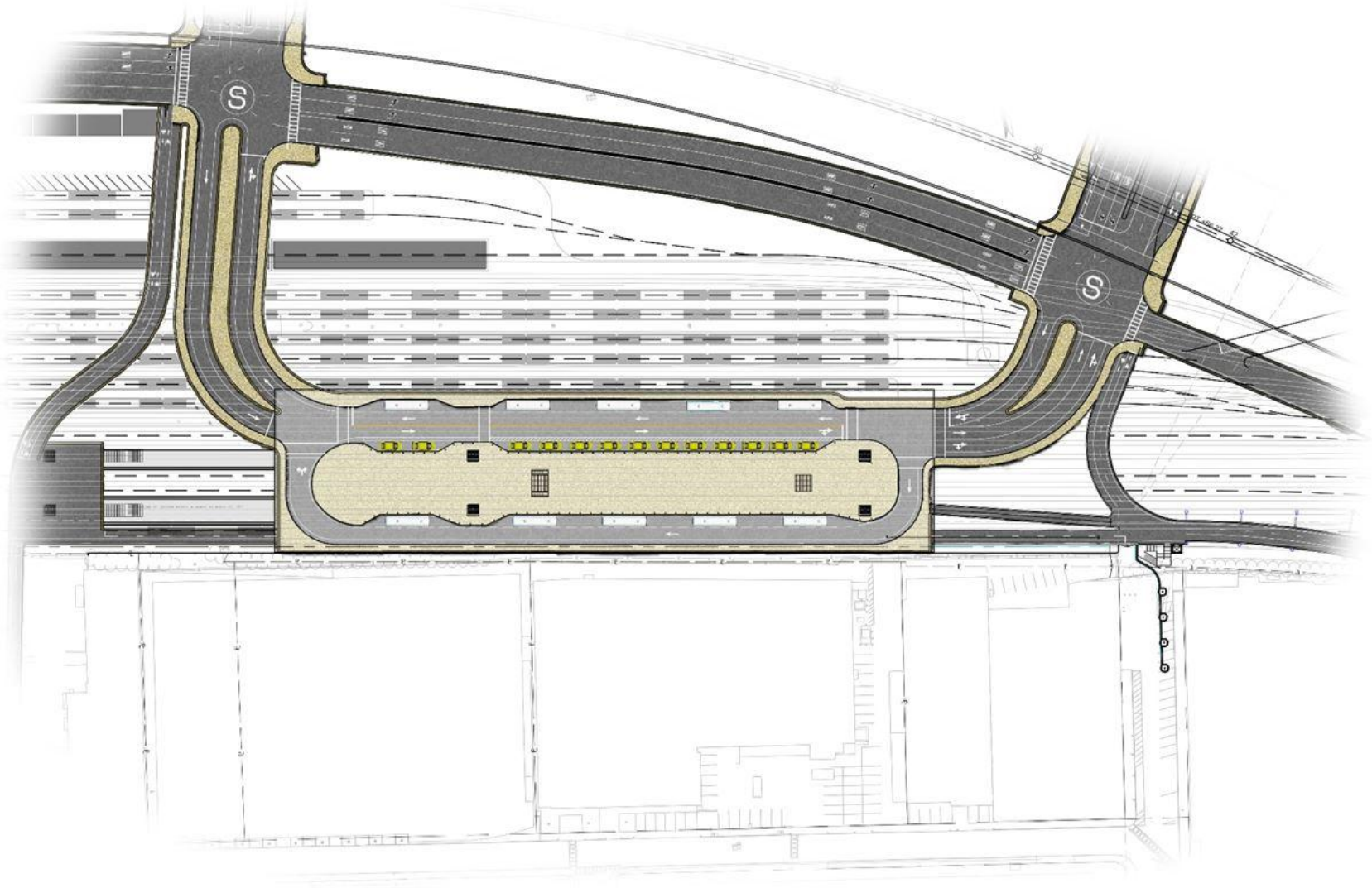
Harry Agganis Way - City Perspective



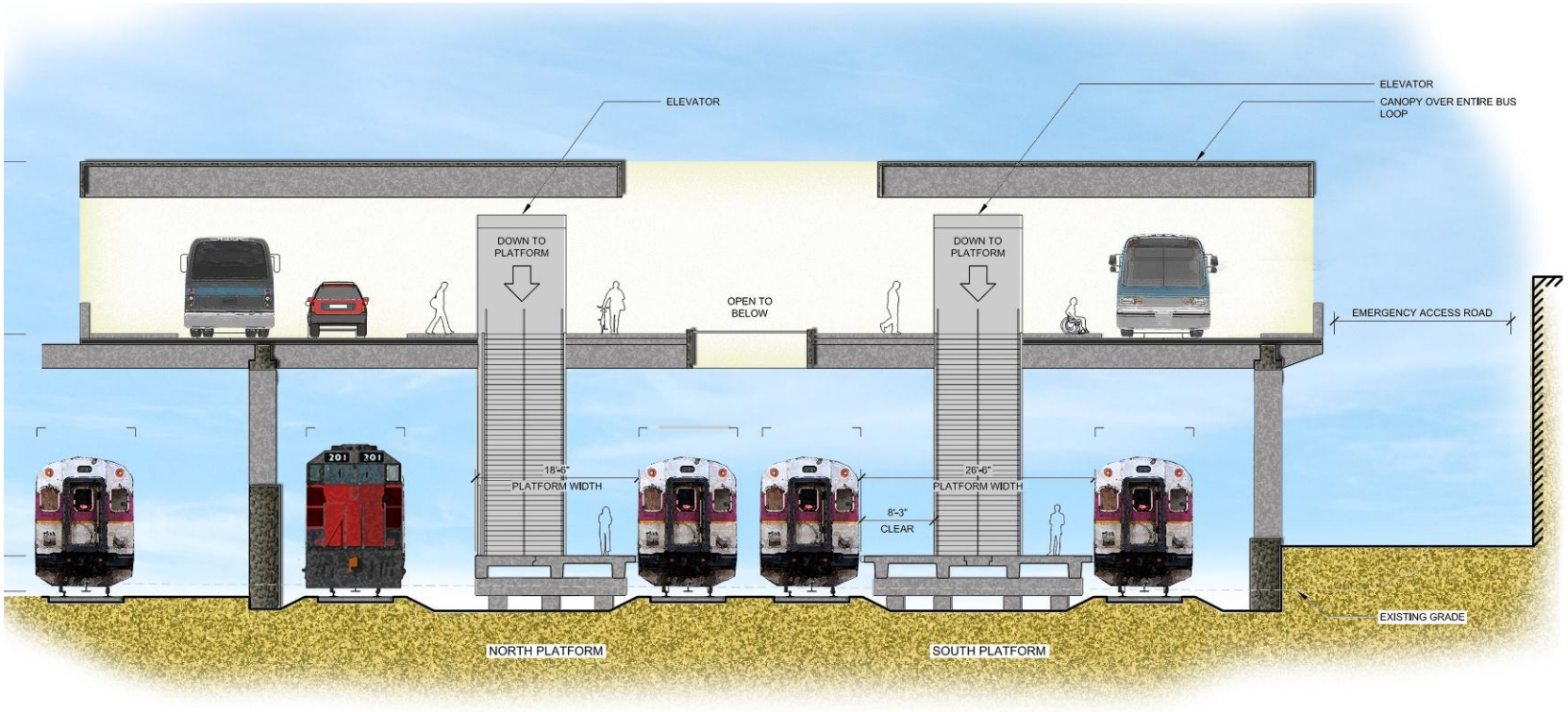
One-Way Station Loop



Two-Way Station Loop

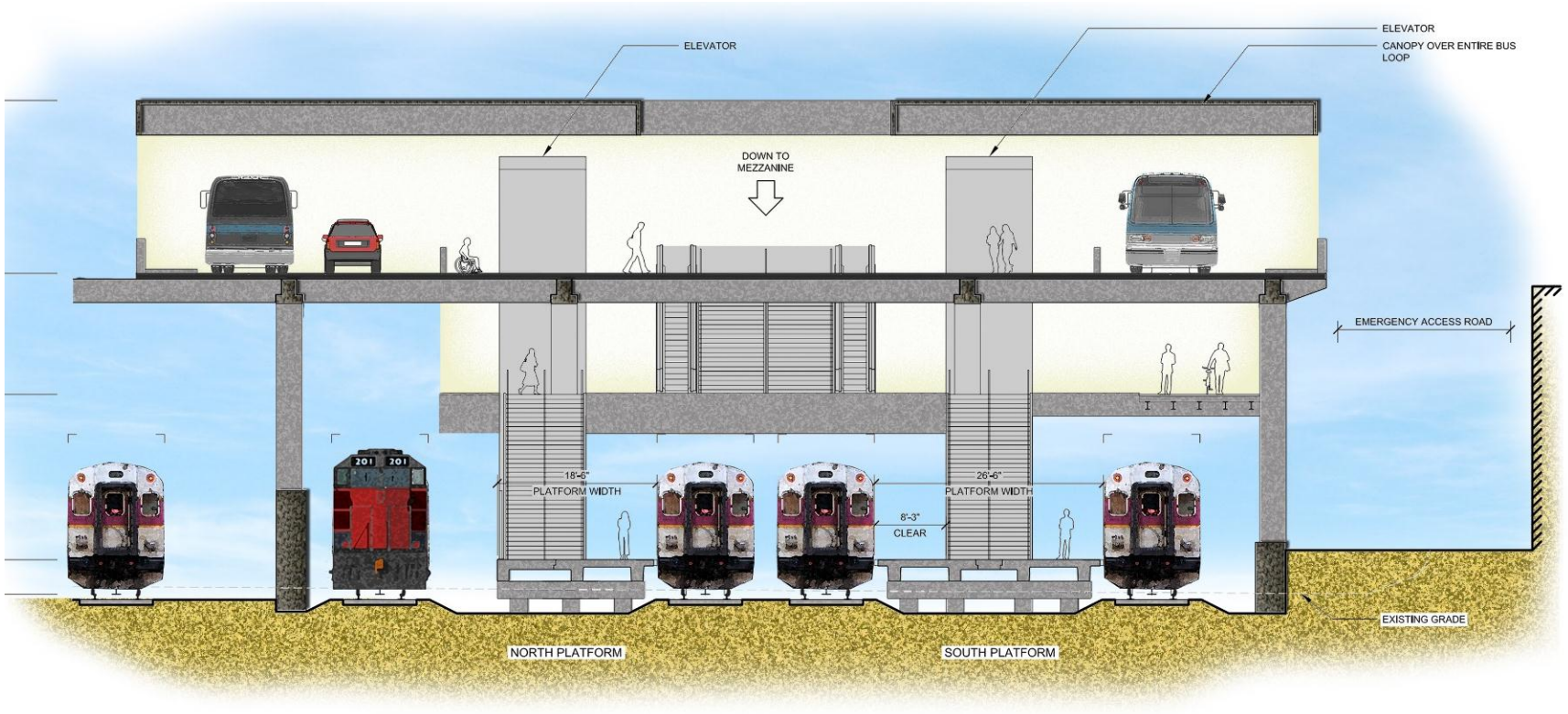


Two Level Station Section



TWO LEVEL STATION / PLATFORM OPTION

Three Level Station Section

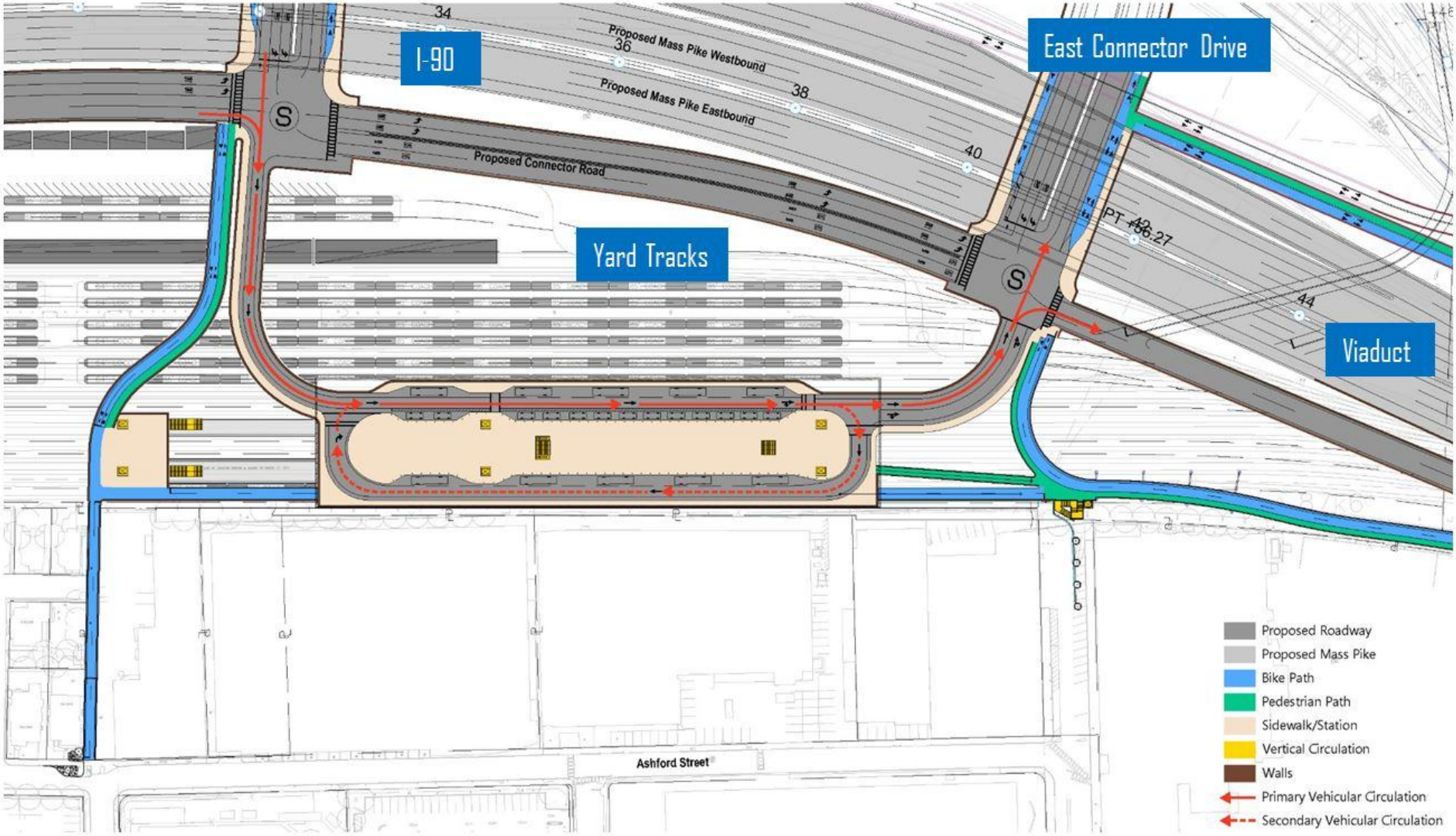


THREE LEVEL STATION / PLATFORM OPTION

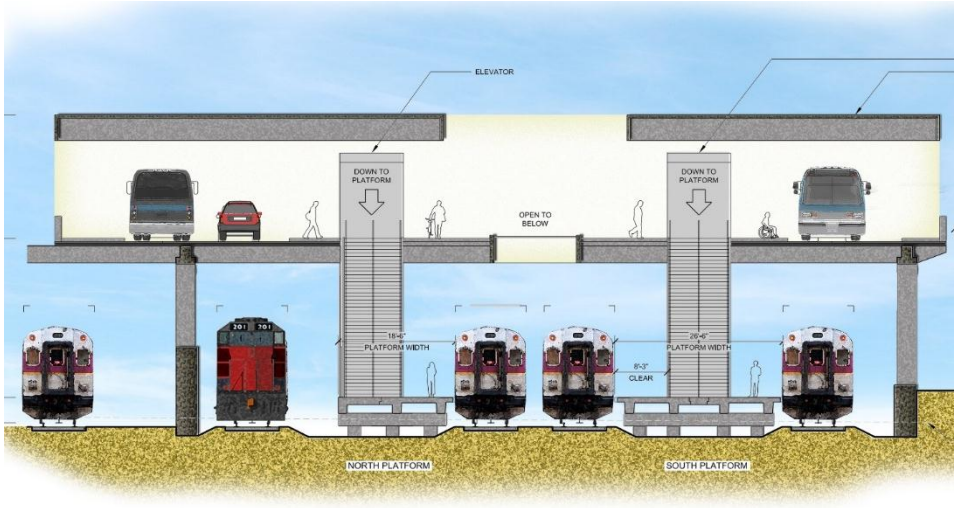
West Station Height Factors

- Driven by interrelated viaduct, highway, bridge and track elements
  1. Viaduct must provide clearance for yard tracks
     a. Yard lowered by about 2 ft
  2. I-90 profile must climb to reach viaduct elevation
  3. East Drive Connector bridge must climb over I-90
  4. Access loop road elevation tied to bridge elevation
     a. Keeping curbside terminal area nearly level
     b. Little distance between bridge and curbside
     c. Avoid draining access loop back to terminal

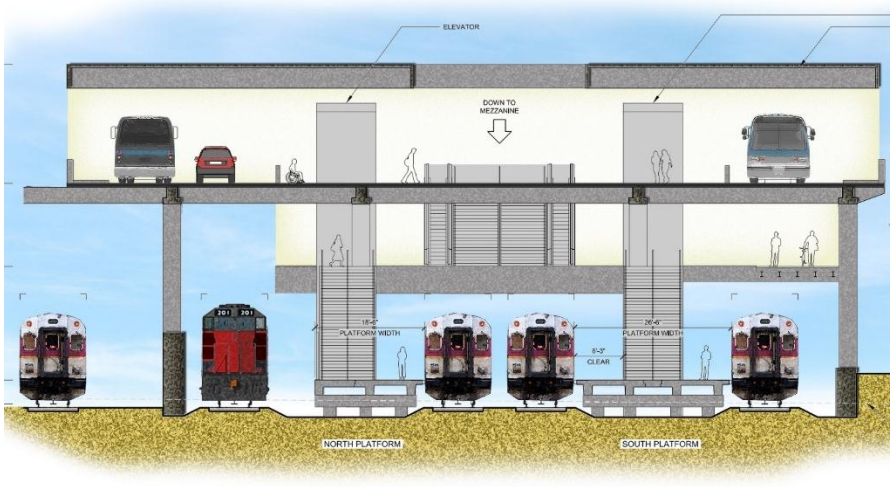
Element Layers



Two vs Three Level Station



TWO LEVEL STATION / PLATFORM OPTION



THREE LEVEL STATION / PLATFORM OPTION

Station Height Comparison

Two Level Station	Three Level Station
Pro	**Pro**
Lower structure height	Lower station entry for peds and bikes
Less cost to build & maintain	Allows full station bypass north & south
Improved visibility to surroundings	Offers vendor space, bike parking at mezz
Receives more natural light at platform	Avoids mode conflicts
Con	**Con**
Vehicular, pedestrian and bicycle traffic converge on top level	Taller structure height
Steeper climb from grade to deck top	Increased const & maint costs
Few vendor, kiosks, bike cage options	Mezzanine not visible from outside
Impaired ability to bypass the station	Limits natural lighting at platform level

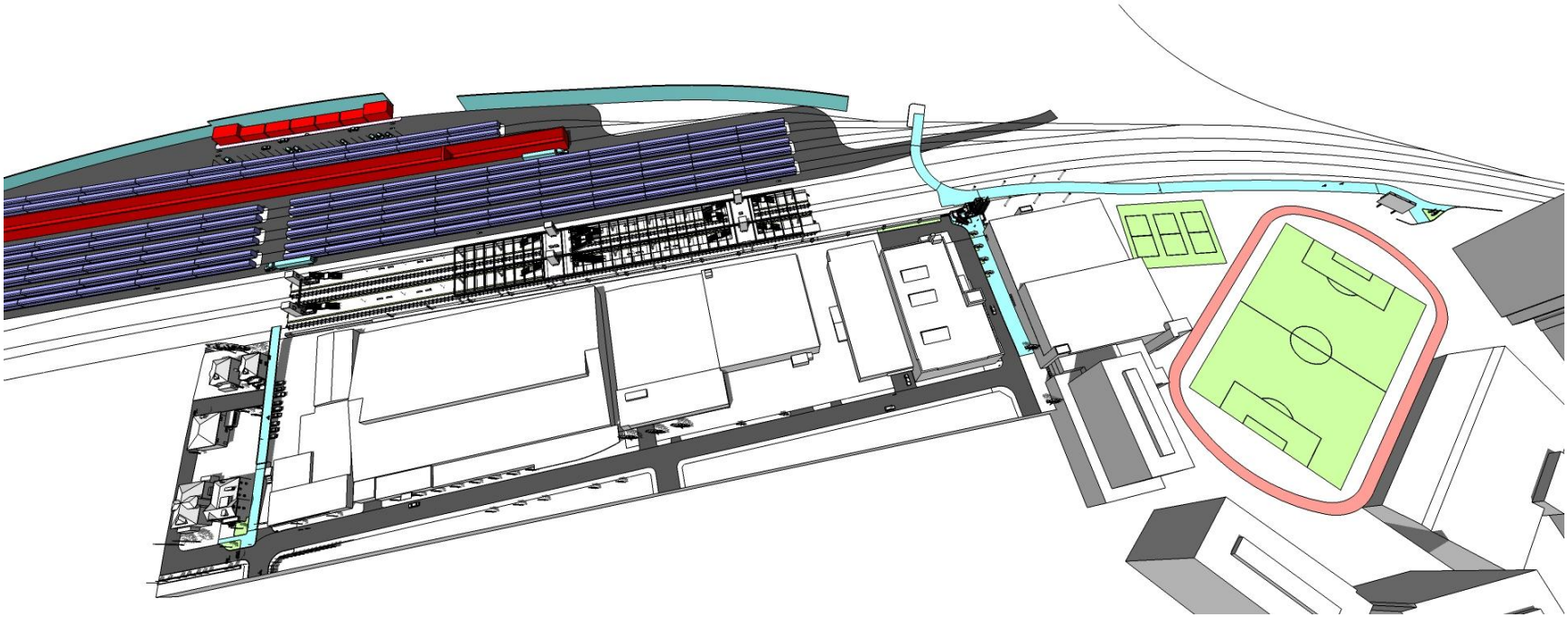
Suggested West Station Technical Evaluation Criteria

- Provides for 2 platforms, 4 tracks for future service expansion
- Nearness to adjacent stations
- Supports local bus operations/vehicular access
- Avoids motorized & non-motorized conflicts
- Preserves air rights (Technically Feasible/Economically Viable)
- Position accommodates 2-way yard access (east and west)
- Minimizes direct environmental impacts
- Order-of-Magnitude cost
- Constructability

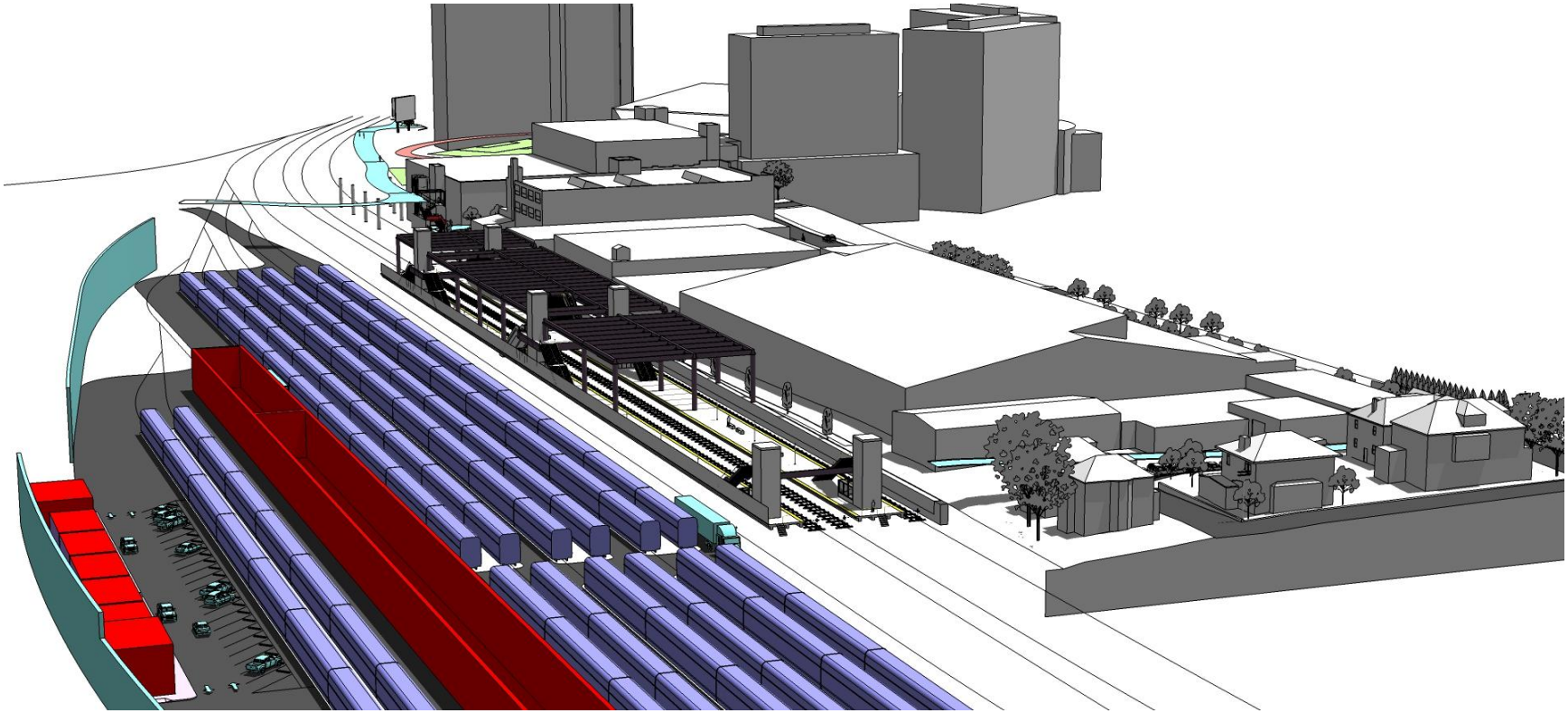
Important West Station Neighborhood Criteria

- Accessible by people of all abilities
- Connectedness to neighborhoods/customers
- Limits ROW & privacy impacts
- Facilitates 24-hr ped/bike access around station
- Minimizes air, noise & light pollution
- Incorporates urban design elements within & around

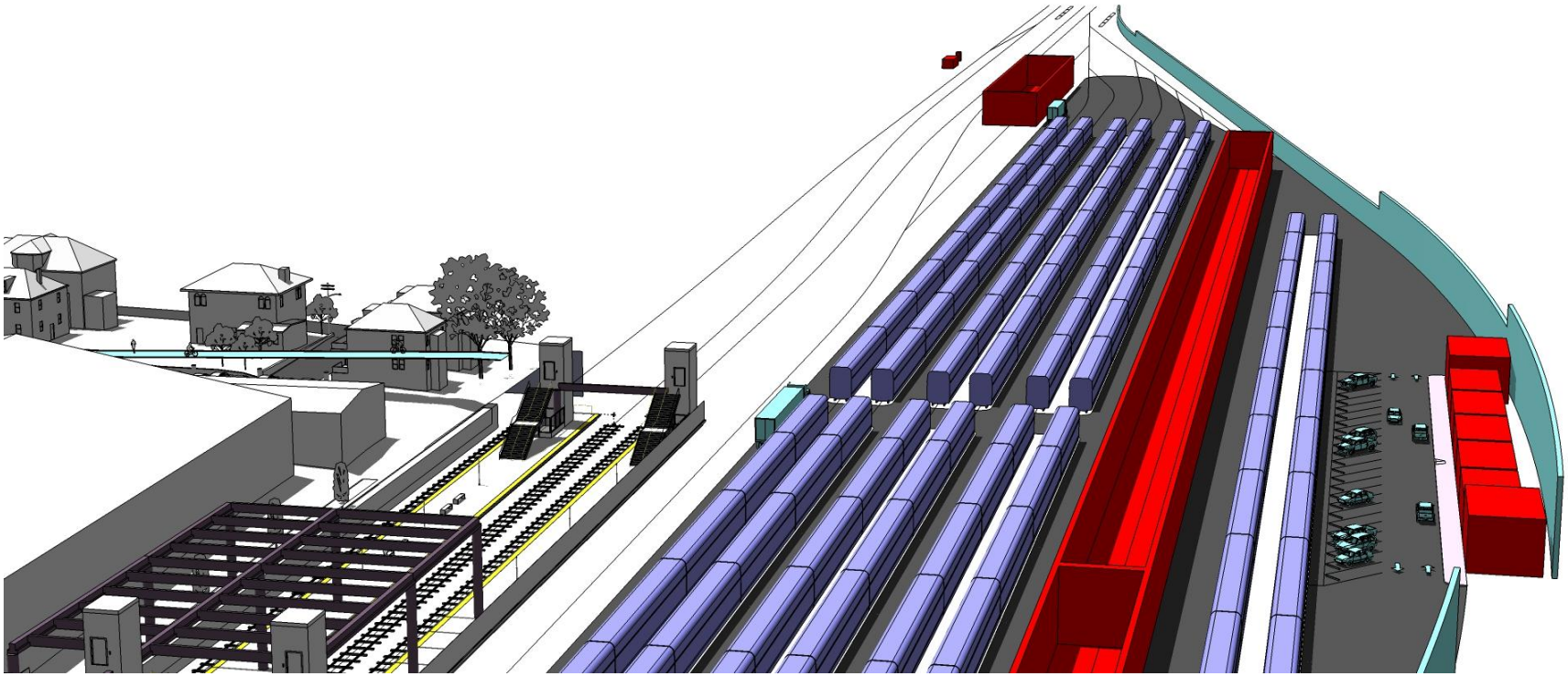
West Station/BPY Northerly Perspective View



West Station/BPY Easterly Perspective View



Looking West towards Sawyer Terrace



Meeting Agenda

- Task Force, Project Team, and Introductions
- Traffic Analysis Update
- West Station and Beacon Park Yards Update
- **Overview of Future Process**

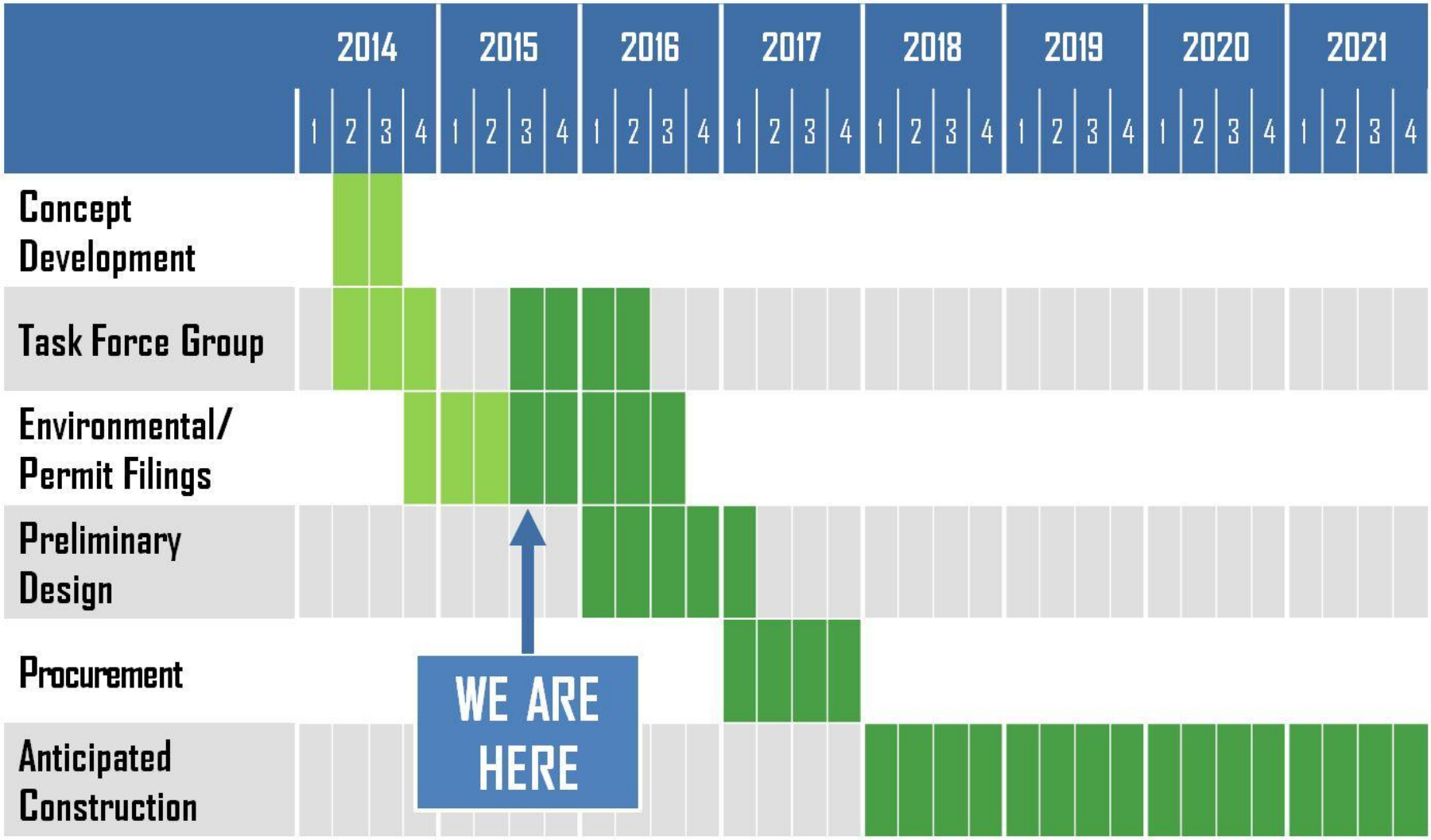
Overview of Future Process

- Next meeting will focus on Community Place-making
- Next meeting date is
  August 19, 2015 Fiorentino Community Center, Allston
- Process for information requests
- Website update

Meeting Agenda

- Task Force, Project Team, and Introductions
- Traffic Analysis Update
- West Station and Beacon Park Yards Update
- Overview of Future Process
- Discussion

Preliminary Project Timeline



Discussion

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