

# **South Station Expansion: Successful NEPA Management Drives a Project Forward**

**Essek Petrie**

*VHB, Deputy Project Manager*

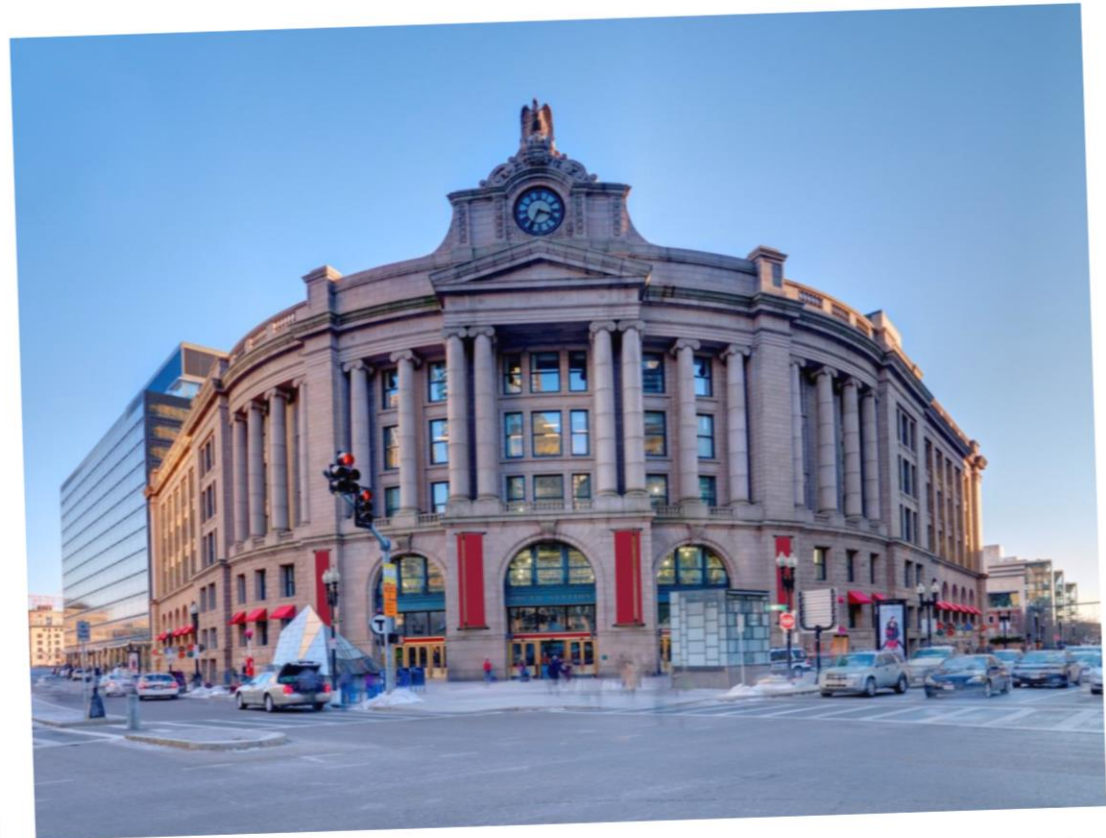
*Boston, MA*



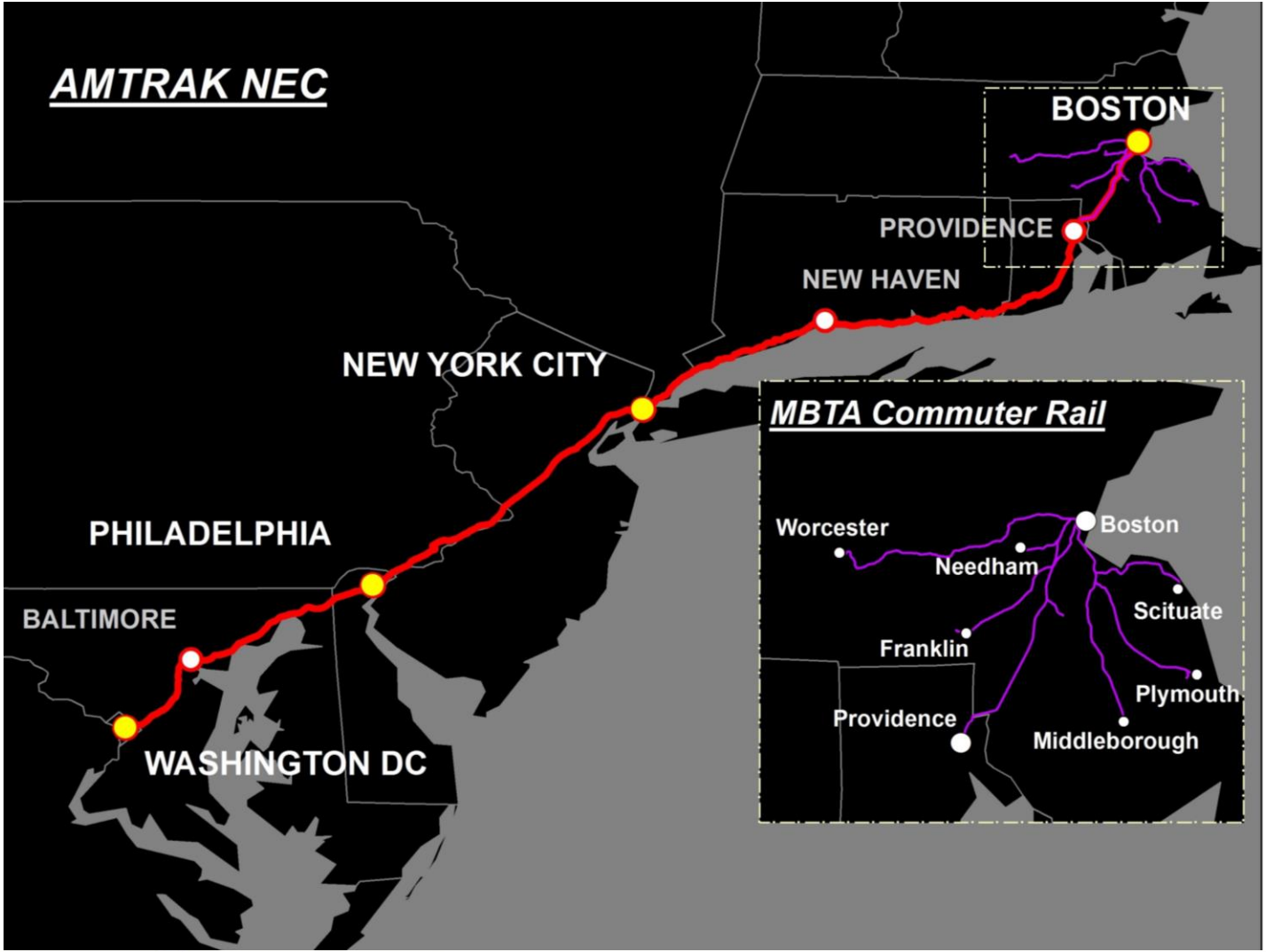
2018 Rail Conference

# Key Presentation Take Aways

- Overcoming challenges
- Managing diverse stakeholders
- Lessons learned and best practices



# Location in Northeast Corridor



**Dominating Air/Rail Market**

**77%**

*New York / Washington DC*

**54%**

*New York / Boston*





# Location in Boston Multimodality

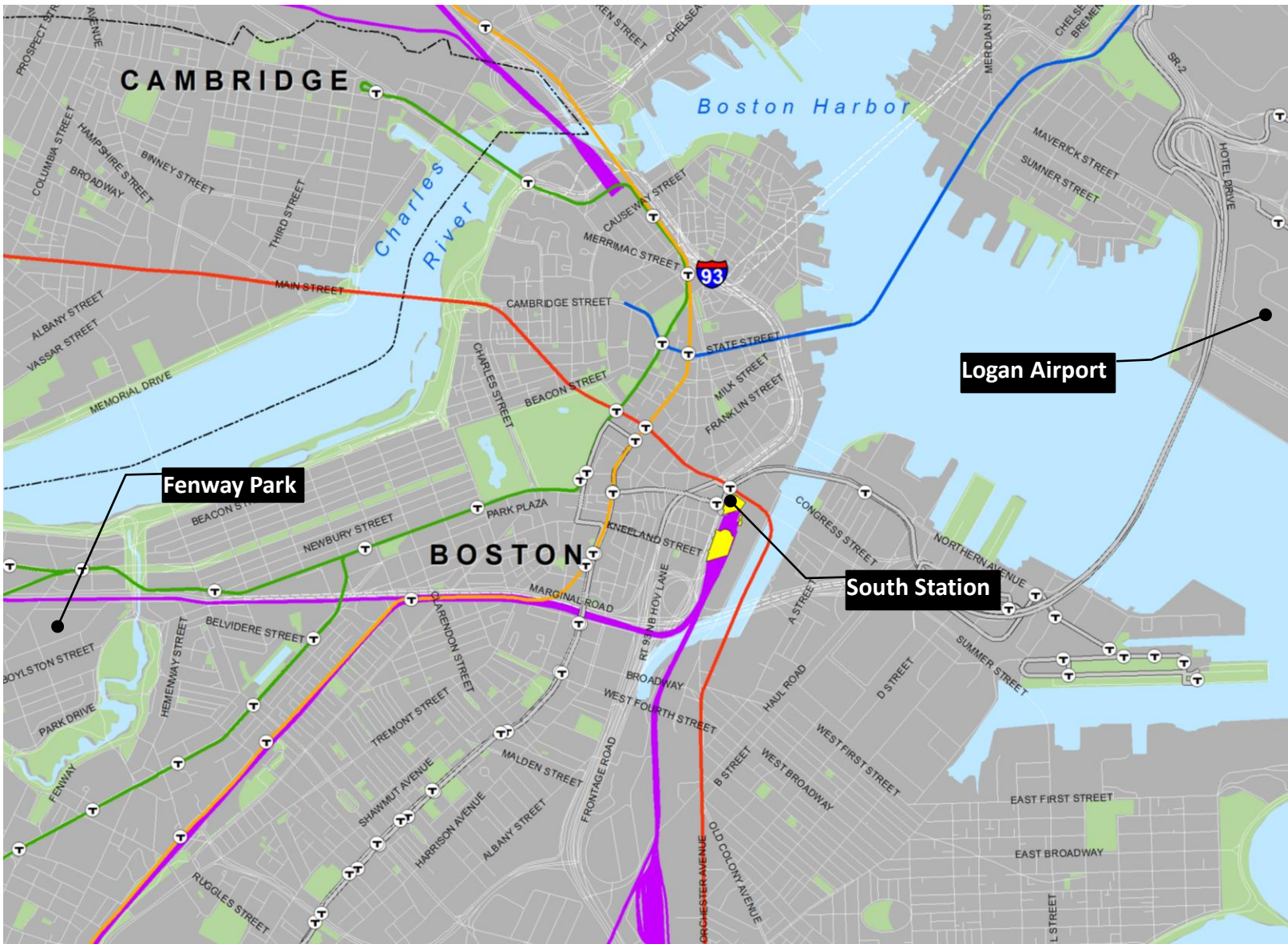


5<sup>th</sup>

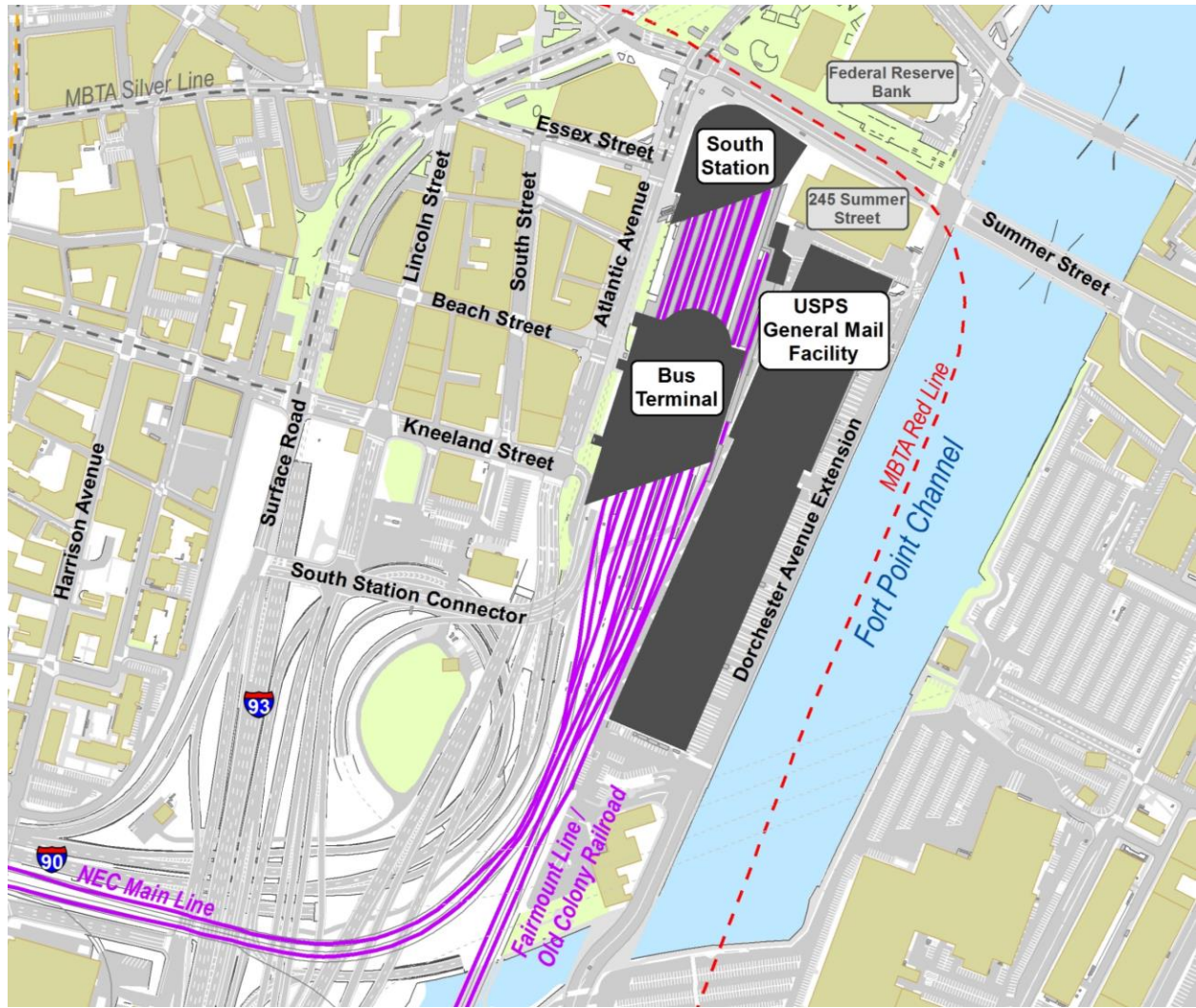
*Largest Commuter Rail System in US*

**Over 60%**

*Of MBTA Commuter Rail Passengers  
ride on South Side service*



# Case Study: South Station Expansion Project





# South Station - History



28 tracks (1899)



# South Station – Today



- Second only to Logan Airport in New England, with 112,000 daily passengers
- Passenger spaces and platforms undersized and outdated
- Growth projections show an additional 50,000 passengers over 20 years
- Current rail infrastructure limits service reliability and expansion opportunities



# Close Collaboration

MassDOT/MBTA (awarded \$32.5 million in federal funds from FRA)

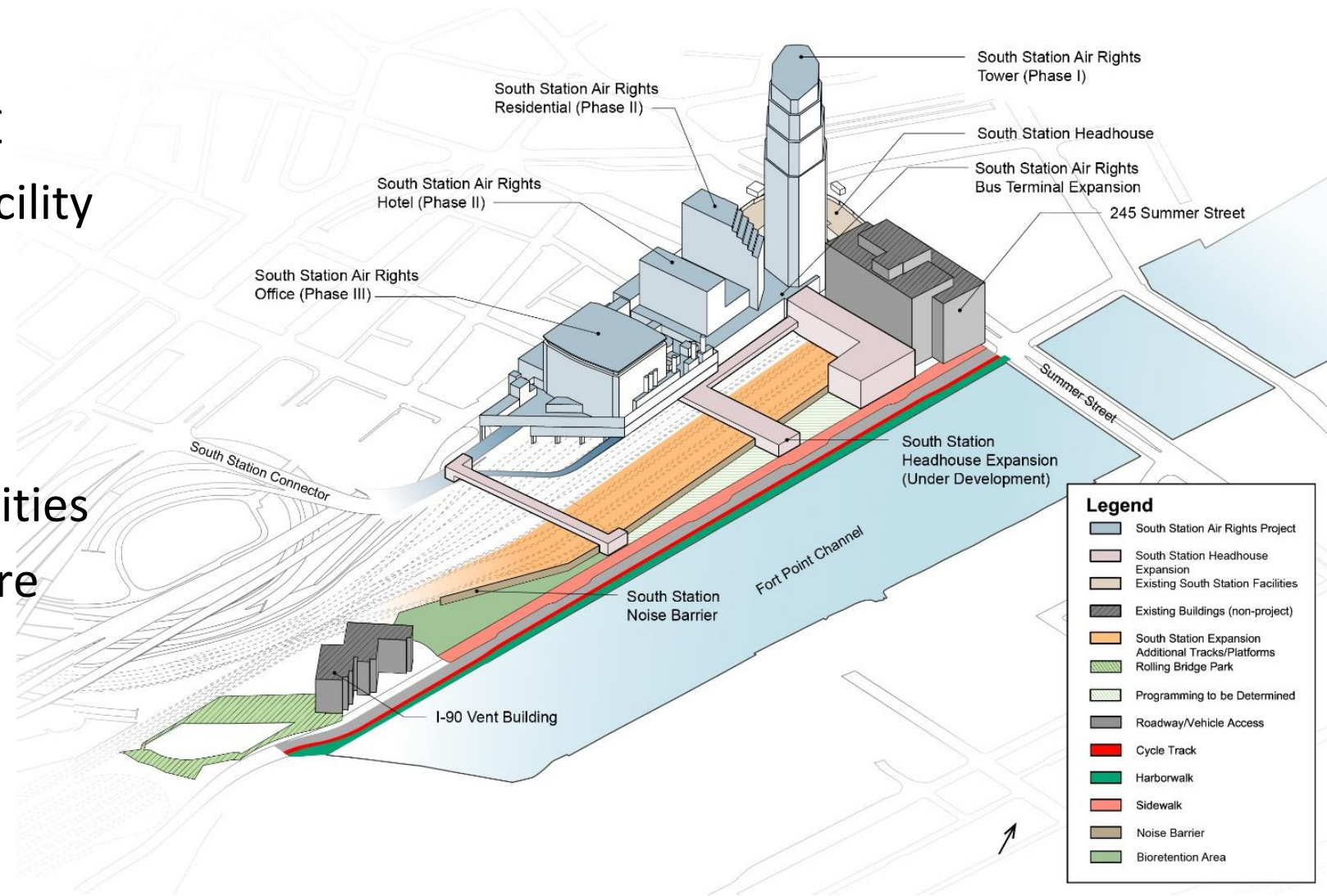
- FRA
- FTA
- U.S. Postal Service
- City of Boston
- Amtrak
- Massport
- Boston Region MPO
- Others...





# Project Components

- Planning, MEPA, NEPA, and PE
- Acquire and demolish USPS facility
- Reopen Dorchester Avenue
- Extend Harborwalk
- Expand South Station facilities
- Construct midday layover facilities
- Provide opportunities for future joint/private development



# Why Was This Project Successful at Navigating NEPA?

## The Right TEAM

- Strong State DOT PM
- Engaged and Collaborative Federal Partners
- Experienced Consultant Partners

**Address the issues.**



# Challenge #1: Defining an Effective Purpose and Need

- Set a clear purpose to be achieved
- Understand the need and the user groups impacted
- Demonstrate the problem being addressed
- Is it clear and concise?
- Is it well-documented and supported?
- Is the Purpose and Need setting an appropriate range for alternative development?





# Project Purpose

- Enable growth in passenger rail transportation along the NEC and within the Commonwealth of Massachusetts;
- Improve service reliability through updates to rail infrastructure and related layover capacity;
- Improve the passenger capacity and experience of using South Station;
- Promote city-building in a key area of Boston; and
- Allow for Dorchester Avenue to be reopened for public use and enjoyment for the first time in decades.



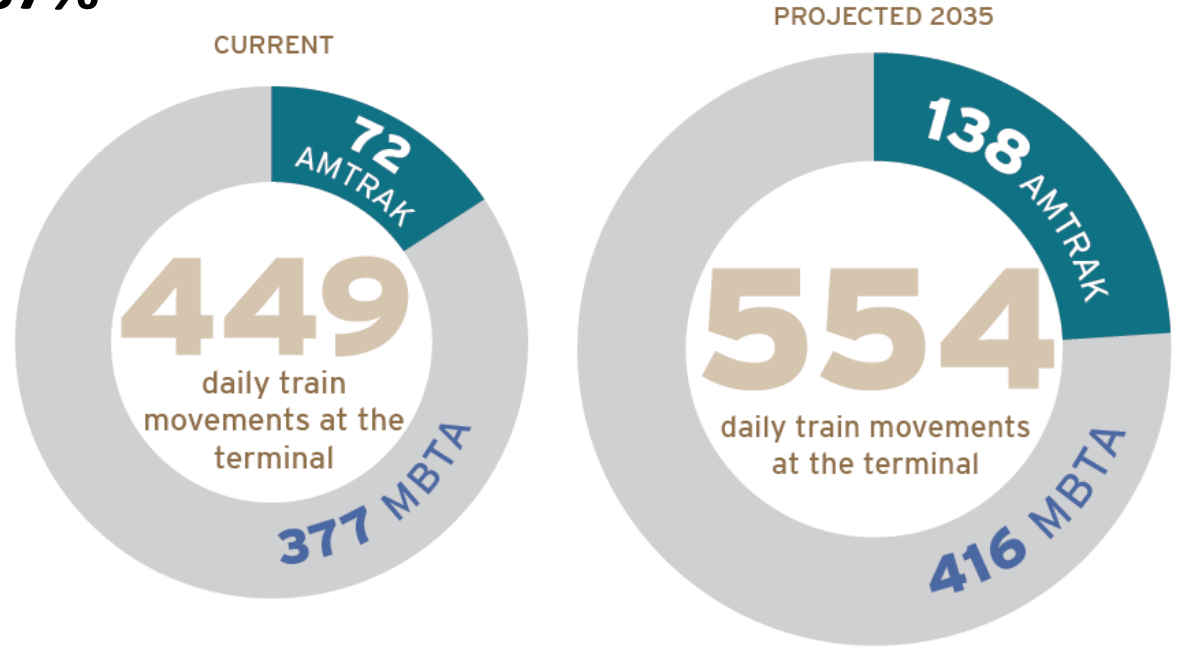
# Transportation Deficiencies (Needs)

## Terminal Capacity Constraints

5 year period prior to DEIR

- Amtrak Acela OTP: **81-90%**
- Amtrak Northeast Regional OTP: **75-87%**
- MBTA Commuter Rail OTP: **82-94%**

OTP Goal  
**95%**



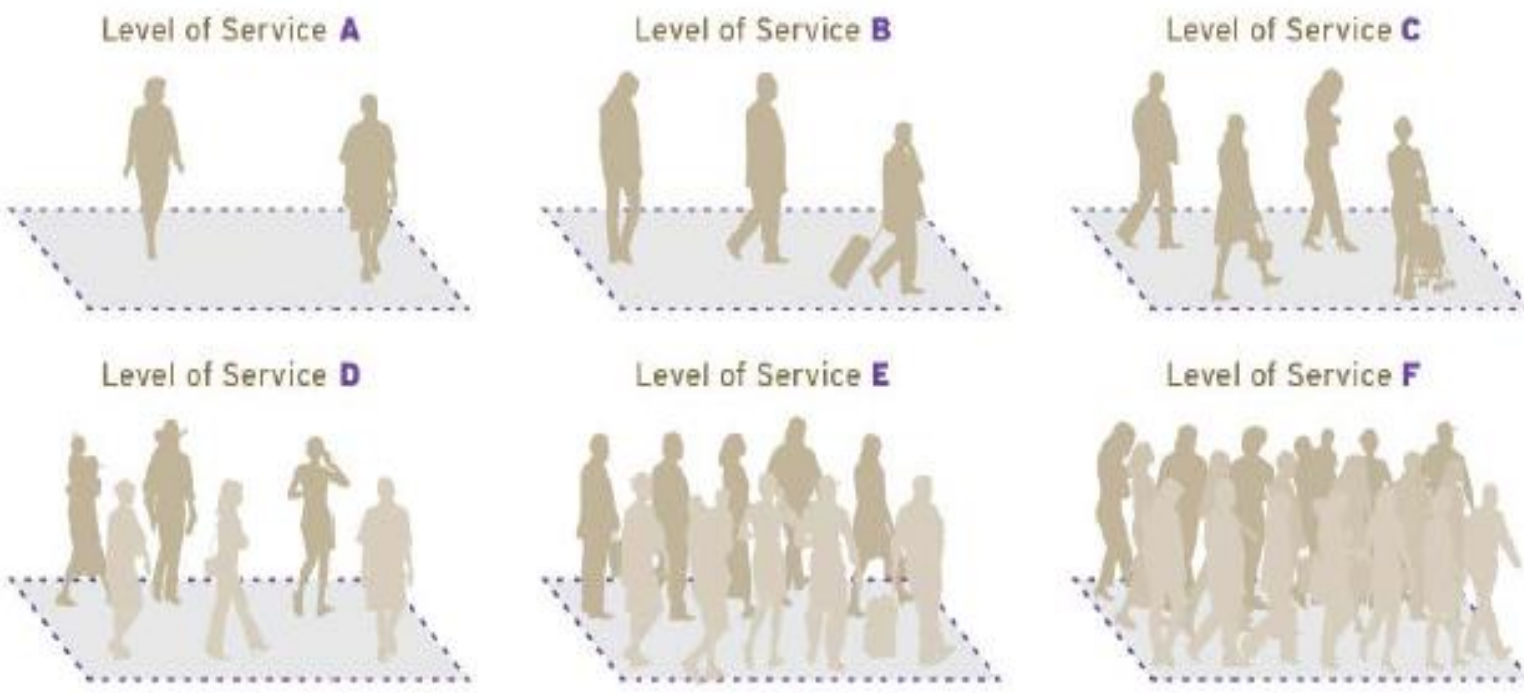
# Transportation Deficiencies (Needs)

## Inadequate Station Facilities

Pedestrian areas should meet LOS C (peak period)

**Current space: +/-15,000 sf**

**Current Daily Passengers:**  
46,000 Commuter Rail/Amtrak  
+ 82,000 rapid transit  
LOS E and LOS F





# Transportation Deficiencies (Needs)

## Insufficient Layover Space

- MBTA does not have sufficient storage space for existing service
- Additional layover storage is necessary to accommodate additional service

MBTA's existing layover facilities will have the capacity to store only

**28** *of the* **49**

trainset spaces needed



# Solution

- Engage your stakeholders early and often
- Clearly state need and identify purpose and goals
- Allow for multiple iterations when required
- Conduct a solid and complete planning foundation
- Develop performance measures with quantifiable results to address the needs



## Challenge #2: Alternatives Development Process

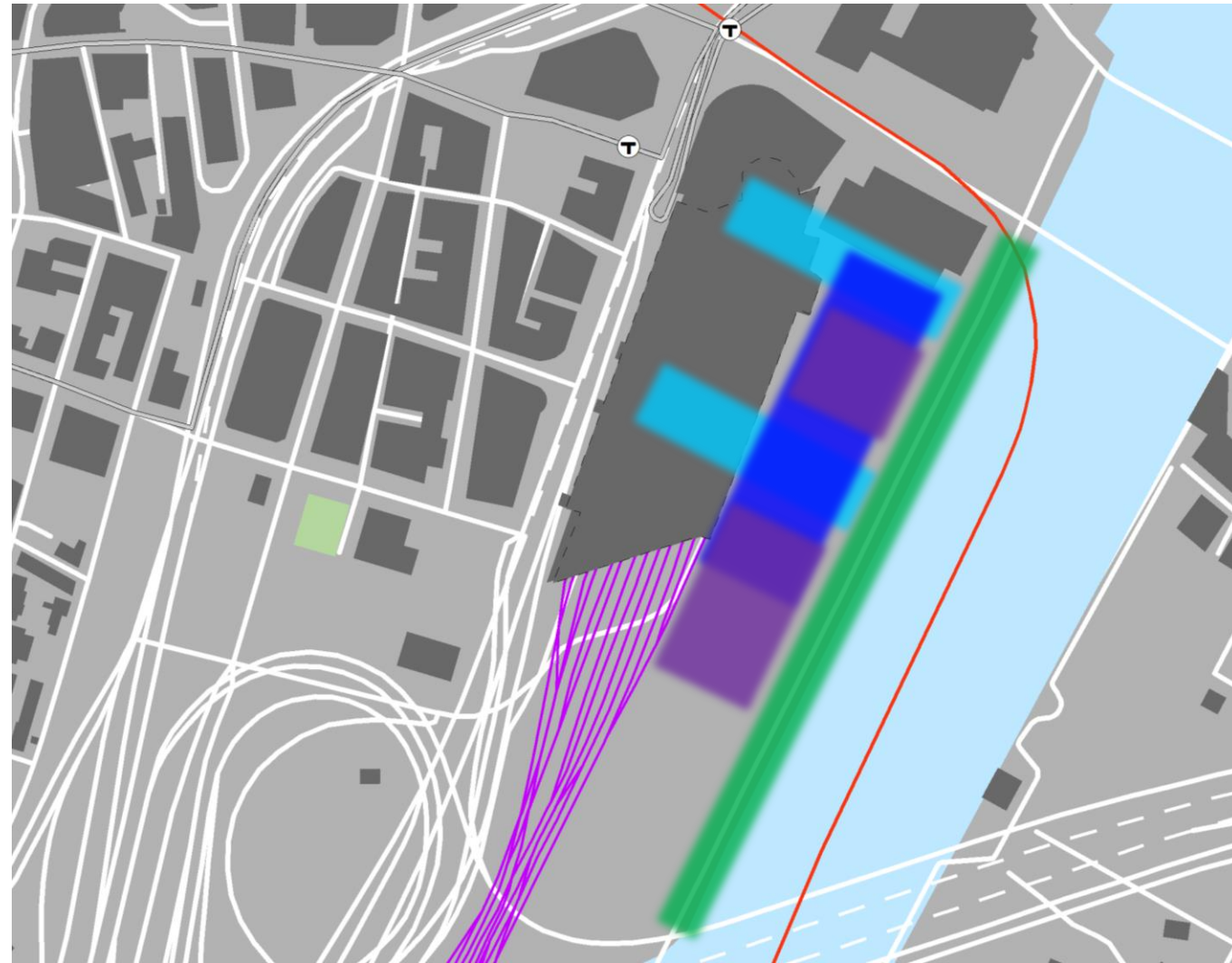
- Collaborate and coordinate with stakeholders
- Identify alternatives to address the need
- Evaluate reasonable range of prudent and feasible alternatives
- Establish a solid planning foundation
- Manage multi-faceted project



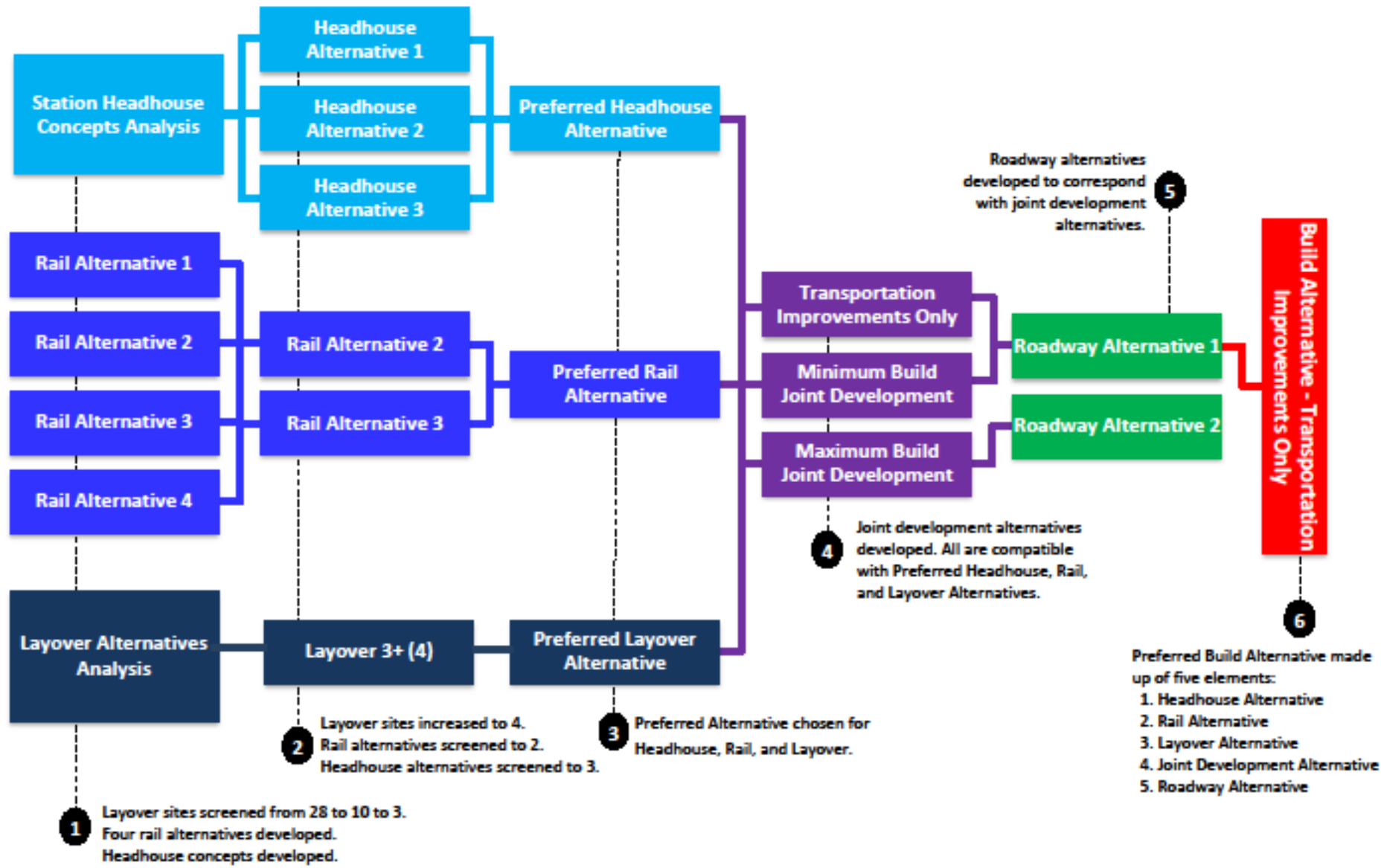


# Major Project Elements – Alternatives Analysis

1. Headhouse
2. Terminal Rail
3. Layover
4. Joint Development
5. Dorchester Ave

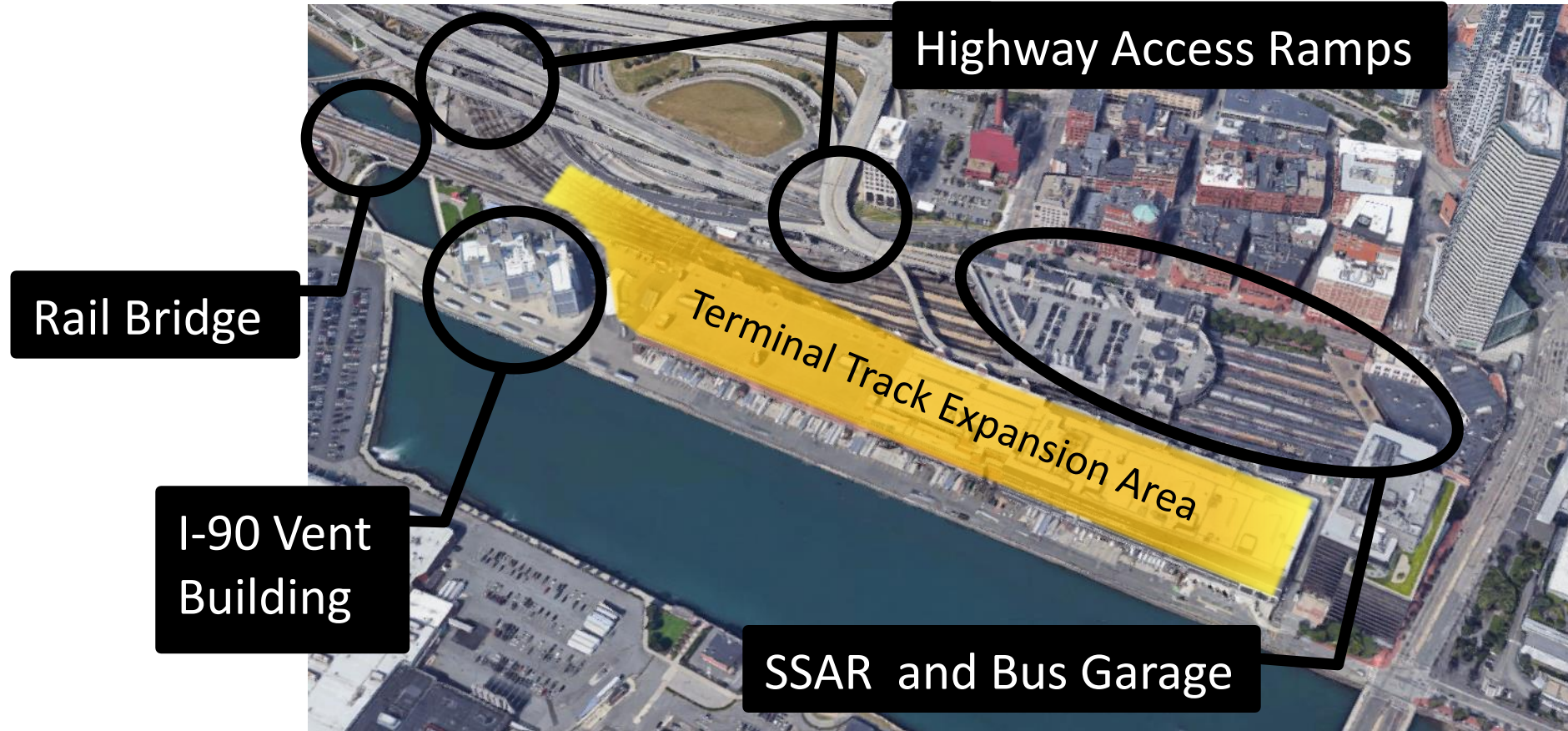


# Solution



# Terminal Track Alternatives Analysis

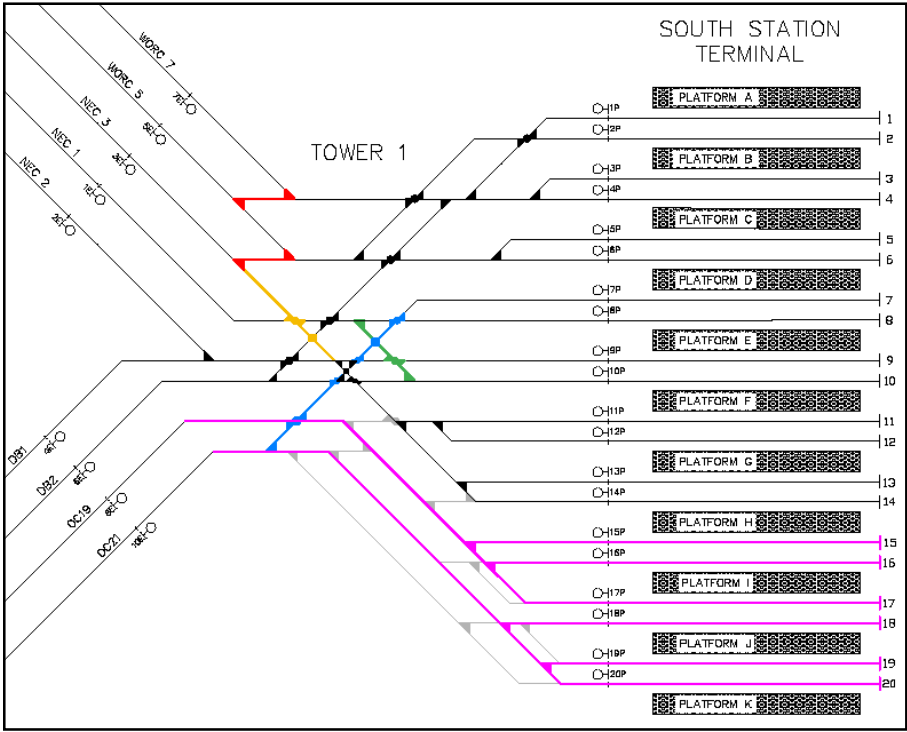
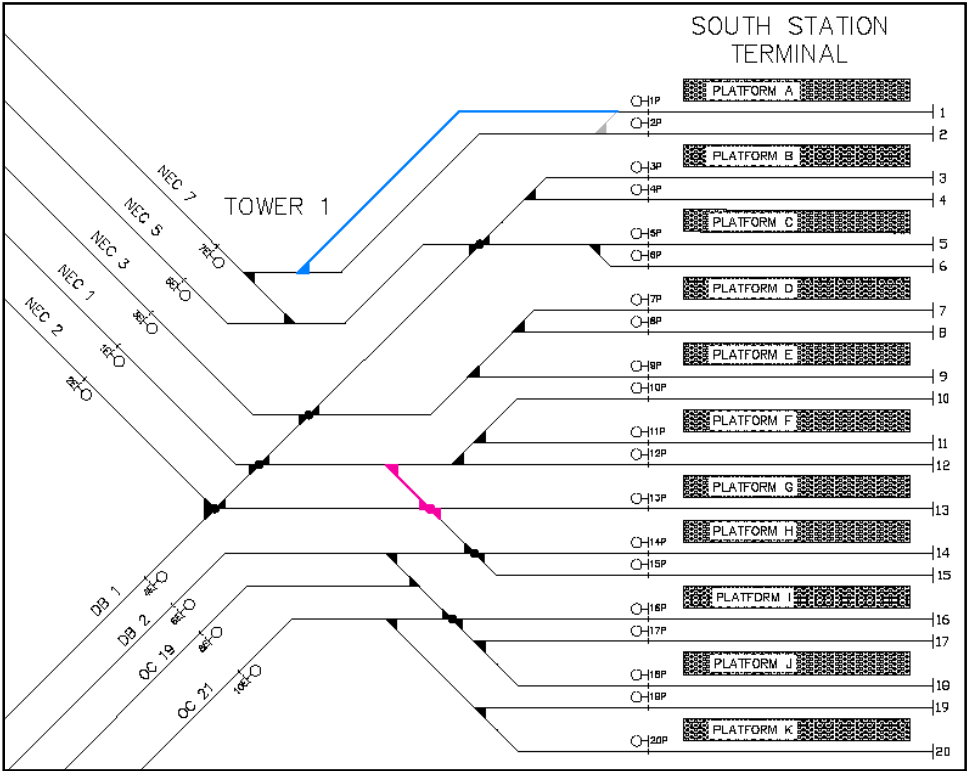
## Physical / Geographic Constraints





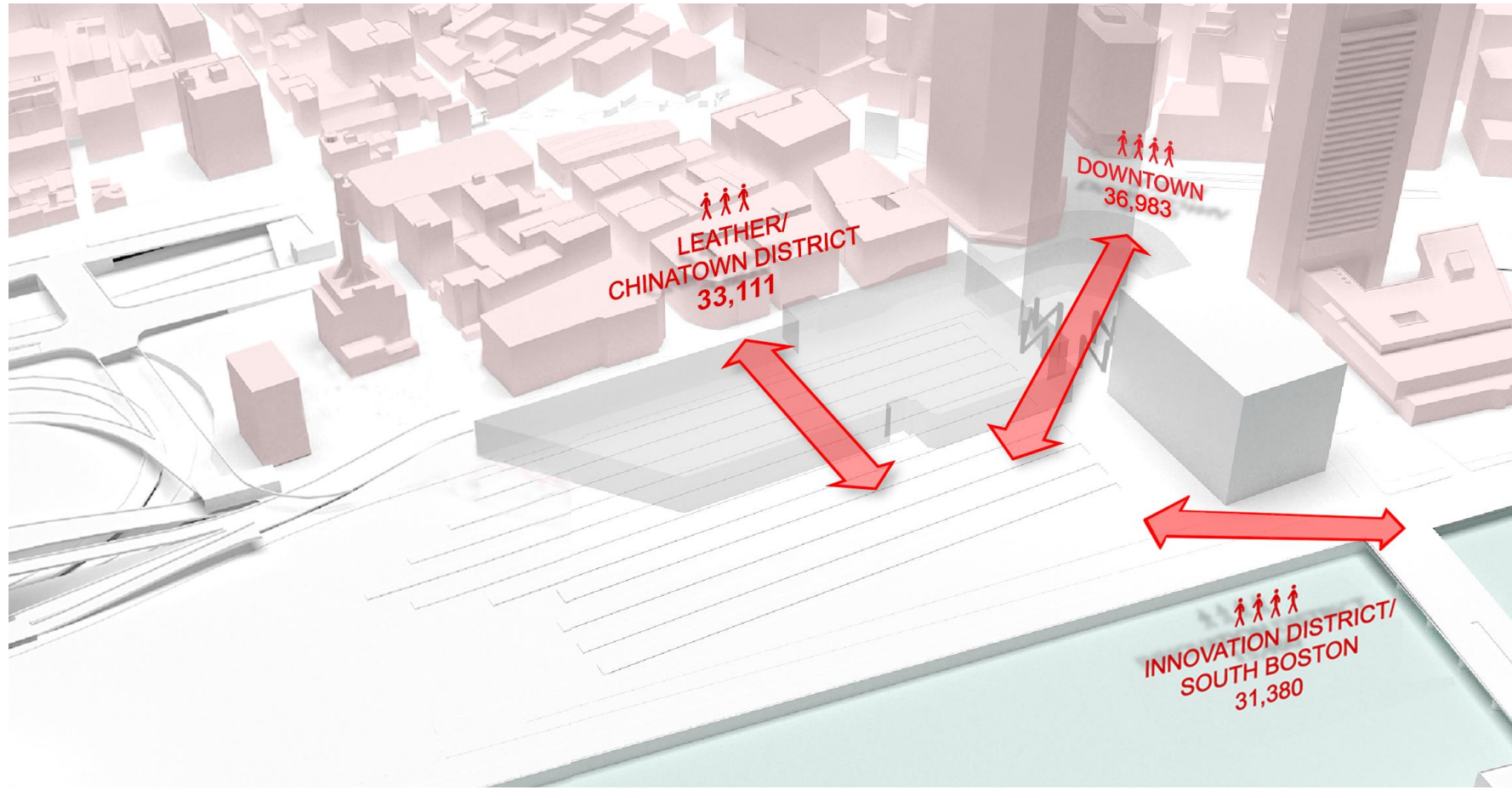
# Terminal Track Alternatives Analysis

- Operational Flexibility
- Platform Accessibility



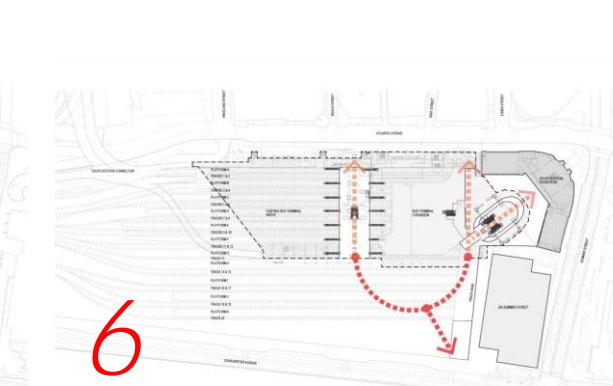
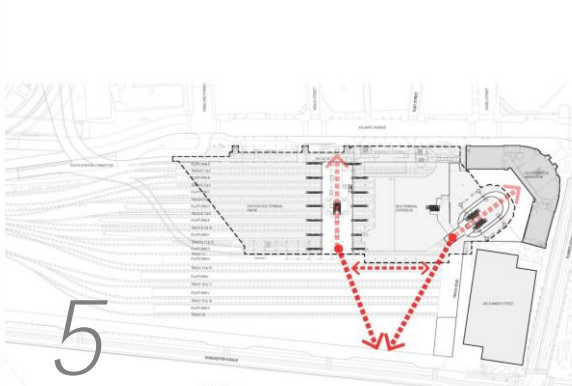
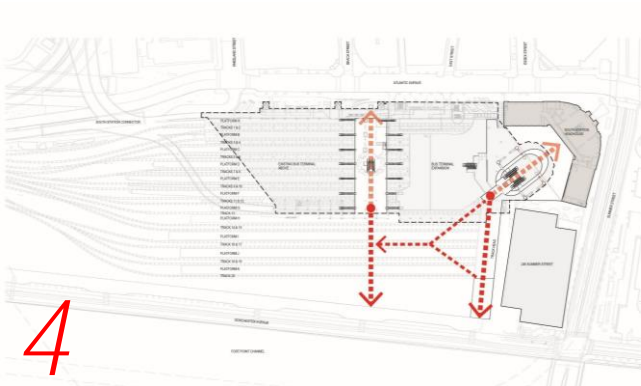
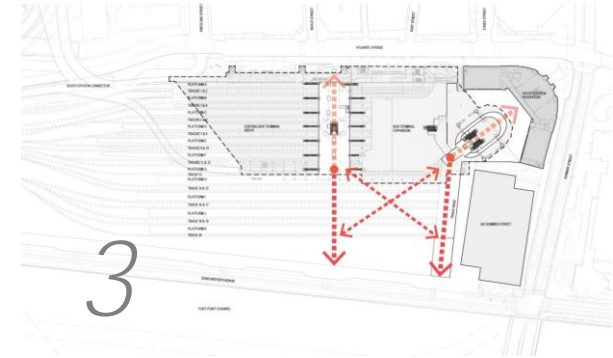
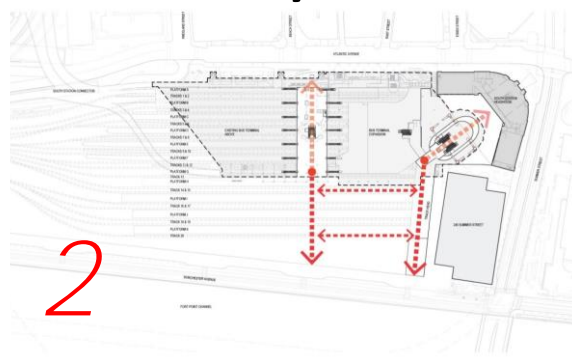
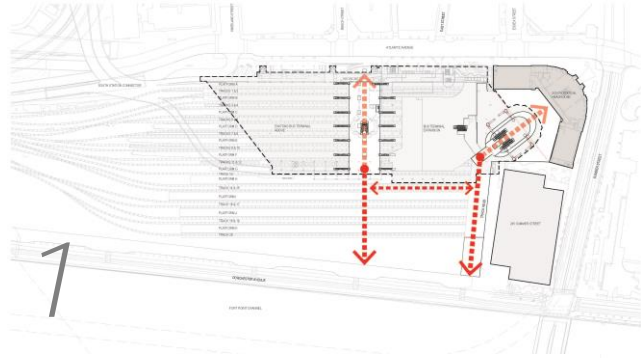
# Station Headhouse Alternatives Analysis

## Identifying Existing and Future Demand



# Station Headhouse Alternatives Analysis

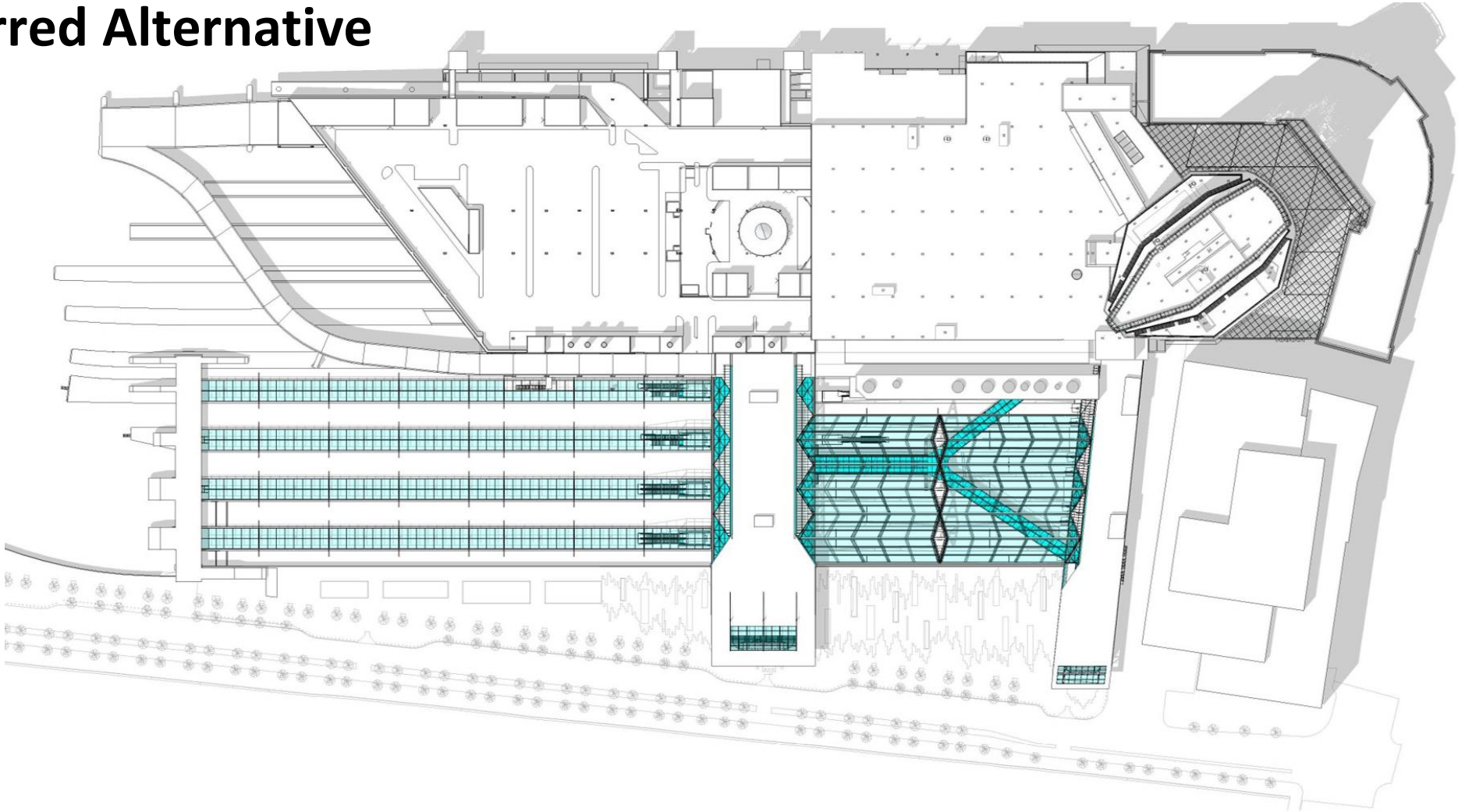
- Passenger Circulation
- Multimodal Connectivity





# Solution

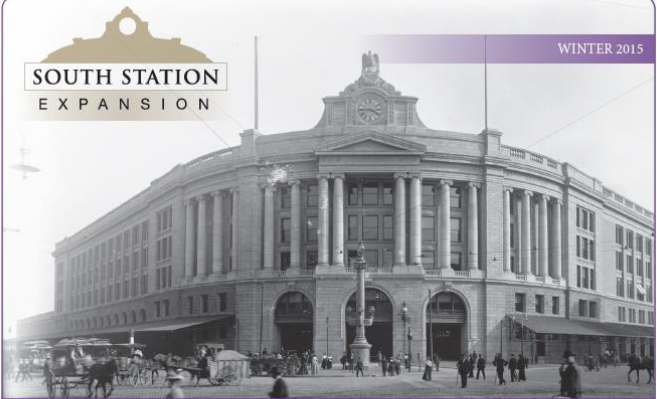
## SSX Preferred Alternative





# Challenge #3: Successfully Managing Stakeholders with Multiple Needs/ Interests

- Diverse Multimodal Users of the Station
  - Regional / Intercity
  - Commuter
  - Rapid Transit
  - Neighborhood
- Numerous Agencies with Varying Jurisdiction
  - Federal
  - State
  - Local



**SOUTH STATION**  
EXPANSION

WINTER 2015

*South Station (circa 1900)*

### The Original South Station

The South Station that you know today has come a long way from its original construction. In 1896, travelers would find their trains at one of three terminals on the south side of Boston. There would have been a walk of some distance from one station to another since as many as nine lines were served at different stations. To address this issue, the Massachusetts General Court granted a charter to the Boston Terminal Company in 1896 to construct and maintain a "union" station – unifying the different railroads under a single roof – for all trains entering Boston from the south.

The company bought a 35-acre parcel for \$9 million that was previously used for the terminal station of the New England Railroad. Construction began on the consolidated station in 1897. The new station combined the operations previously housed at four different terminal stations, owned by the New England Railroad Terminal, the Boston and Albany Railroad Company, the Boston and Providence Railroad Corporation, and the Old Colony Railroad Company. The station was designed by the architectural firm of Shepley, Ruten & Coolidge. Two years and \$11 million later, Boston South Station opened its doors to customers on January 1, 1899. Excited customers lined up to board one of the 65 trains departing that day.

### About the Project

The purpose of the South Station Expansion project is to expand Boston South Station terminal capacity and related layover capacity to meet current and future high-speed, intercity, and commuter rail service needs. The expansion of South Station would enable much-needed growth in passenger rail along the Northeast Corridor (NEC) and within the Commonwealth of Massachusetts. The project would also facilitate improvements in corridor and regional mobility, passenger experience and comfort, economic development, and quality of life.

Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the National Railroad Passenger Corporation (Amtrak) have for decades identified the expansion of rail capacity at Boston South Station as a crucial transportation need, one that has been articulated in multiple local, regional, state, and NEC-wide planning documents. In cooperation with the Federal Railroad Administration (FRA), Amtrak, and the MBTA, MassDOT is now pursuing the expansion of South Station.

**massDOT**  
Massachusetts Department of Transportation

South Station Expansion | WINTER 2015 1

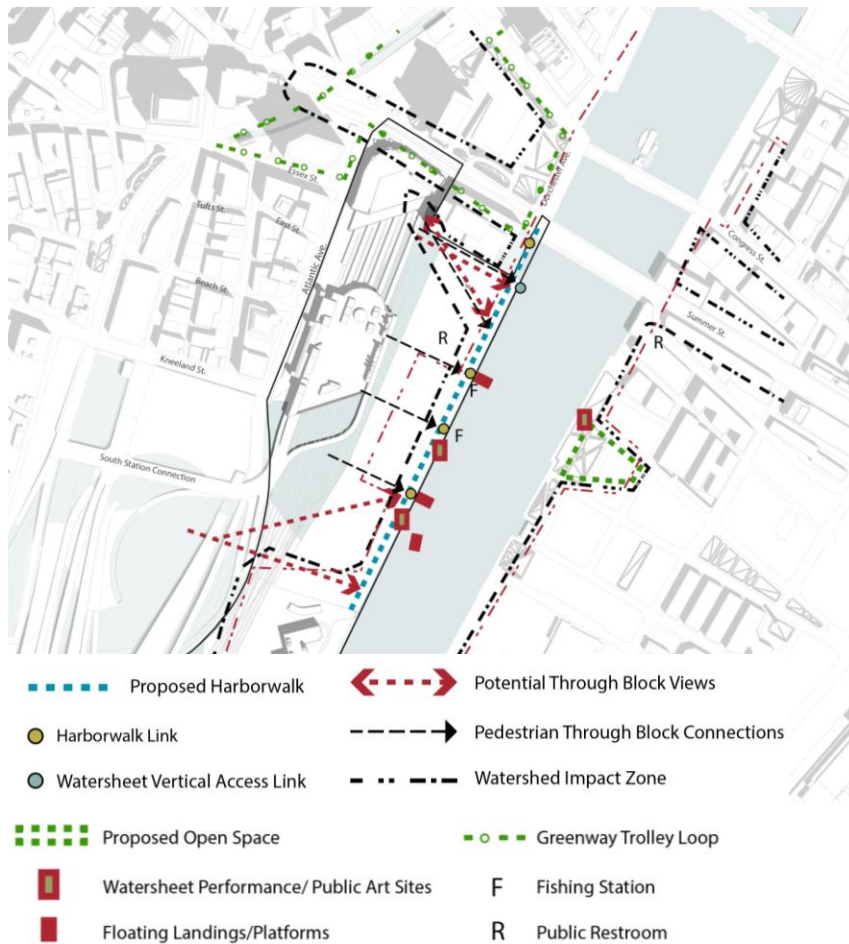
# Agency Coordination – Steering Committee

- Agency Members
  - FRA
  - Amtrak
  - MBTA
- Recurring Meetings
  - Future Operating Plans
  - Station Programming
  - Basis of Design (Engineering Standards)

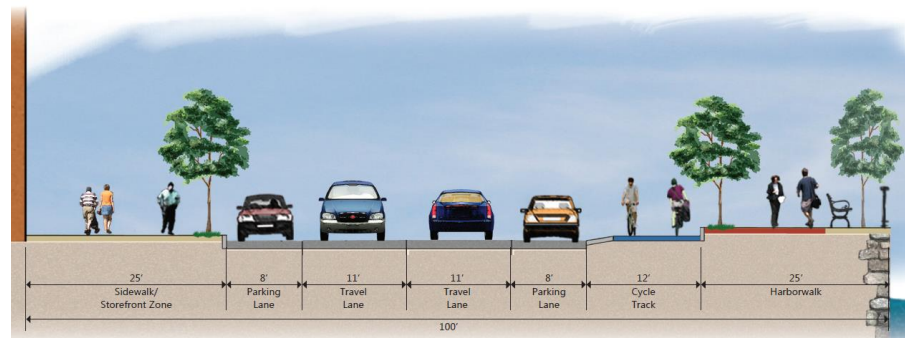
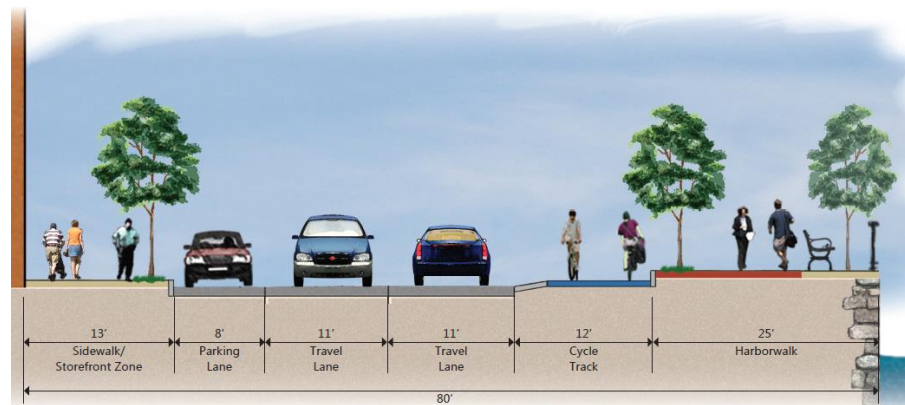


# Agency Coordination – City of Boston

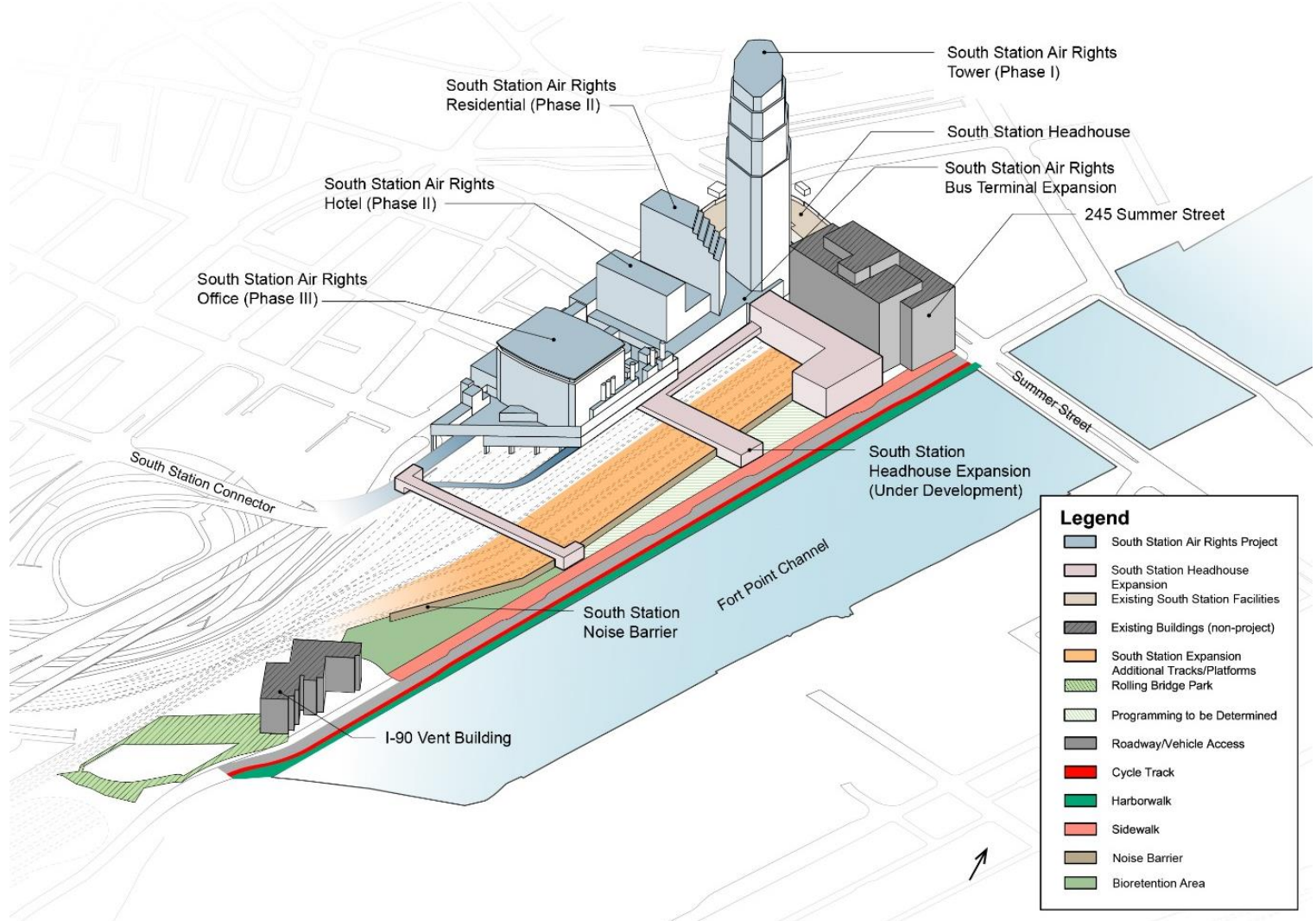
- Municipal Harbor Plan



- Dorchester Avenue



# Stakeholder Coordination – Other Projects





# Public Involvement

- Project mailing list
- Social Media: MassDOT Blog, Twitter, and Facebook
- Meetings and Events:
  - Open Houses
  - Information Sessions at South Station
  - Information Sessions at Dewey Square Market
  - Institution and Business Briefings (35+)
  - Neighborhood and Advocacy Group Briefings (15+)
  - Agency and Elected Official Briefings (25+)
- Online Surveys in Multiple Languages
  - Over 800 Respondents in Fall 2013 amenities survey
  - Over 700 Respondents in bike/ped survey



# Solution

- Coordination with multimodal users
- Significant Agency Collaboration
- Engaged the public throughout the entire planning and NEPA processes
- Tailored the process to the project
- Involved the public as stakeholders
- Fostered consensus building

*Imágenes de computadora que muestran un sendero restaurado de la avenida Dorchester.*

**El vecindario**  
Al este de South Station, el canal Fort Point Channel separa la mayor parte de Boston del puerto marítimo y de Innovation District y South Boston. Con la demolición y la reubicación de las instalaciones postales, MassDOT analiza volver a abrir la avenida Dorchester como una vía pública. La calle restaurada podría conectarse con Harborwalk y ofrecer una nueva ruta a Andrew Square y Dorchester.  
Hacia el este de South Station, se encuentran los históricos Leather District y el barrio chino, vecindarios vibrantes que están actualmente separados del canal. Gracias al proyecto de ampliación de la estación se podrían lograr una mejor orientación, conexiones con el puerto marítimo y con el canal Fort Point Channel, y oportunidades económicas.

*Vista aérea de South Station enmarcada por el edificio del Banco de la Reserva Federal (Federal Reserve Bank).*

**Contáctenos**  
MassDOT agradece su interés en South Station, su participación y sus ideas. MassDOT desea recibir sus sugerencias sobre cómo hacer que este proyecto sea exitoso. Asimismo, estamos a disposición para presentar a su grupo, vecindario o empresa la ampliación de South Station. Puede comunicarse con la gerente de proyectos Katherine Fichter para obtener más información [Katherine.Fichter@state.ma.us, MassDOT, 10 Park Plaza, Room 4150, Boston, MA 02116, o llame al (teléfono) 857-368-0655].

**SOUTH STATION EXPANSION**  
www.massdot.state.ma.us/southstationexpansion  
Foto cortesía de Andy Ryan

**與我們聯絡**  
MassDOT (麻省交通部) 歡迎你對南站擴建計劃的興趣及意見參與。本部門非常樂意聽取大家的實質意見，使計劃更成功完成。同時我們會把南站擴建工程計劃向你們的社區及團體介紹。有關更多資料，大眾可聯絡擴建計劃主任 Katherine Fichter。以電郵：Katherine.Fichter@state.ma.us，書信：MassDOT, 10 Park Plaza, Room 4150, Boston, MA 02116，或致電 (TTY) 857-368-0655 聯絡我們。

**Vecindario**  
南站在東邊為聖路通道(Fort Point Channel)，此地帶現時分隔了大部分從波士頓海港 (Seaport) 的創新區(Innovation District) 和波士頓的南區、拆置及運郵政總局現址。麻省交通部將重新考慮開放多切斯道 (Dorchester Ave) 為公共用地，街道連接將有助海港行道 (Harborwalk) 接駁及提供安德魯斯廣場 (Andrew Square) 和多切斯市 (Dorchester) 一個新的路線/通路。  
南站的西邊為具有歷史的皮革區和華埠，皆為充滿活力的社區，現時被區內一通道分隔。連接海港及車站通道將有尋找方向助道路指引，而南站擴建工程將提高創造更多經濟機會及效益。

**與我們聯絡**  
麻州交通局 (MassDOT) 正努力在未來改善和擴建現有的波士頓南站 (South Station)。南站為一個歷史悠久的交通中，紐英倫地區主要的鐵路客運樞紐。此為Amtrak火車從紐約和華盛頓DC鐵路北面的總站的服務，更包括從芝加哥Amtrak火車的鐵路服務。南站還同時提供地鐵 (MBTA) 從紅線轉經銀線巴士到洛根國際機場 (Logan International Airport)；南站相鄰的巴士站亦為本地、區域和市内巴士服務的樞紐。

**SOUTH STATION EXPANSION**  
www.massdot.state.ma.us/southstationexpansion  
圖中來源： Andy Ryan

# Lessons Learned

- Communication - Stakeholders
  - Comprehensive Coordination with Stakeholders
  - Inform Them / Educate the Project
  - Frequent and Recurring
- Collaboration - Agencies
  - Understand Jurisdictional Responsibilities Early
  - Engage Them in Alternatives Analysis Process
  - Collaborate on Design Standards
- Consensus - All
  - *“A consensus means that everyone agrees to say collectively what no one believes individually.” – Abba Eban*





Thank you



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