



I-90 ALLSTON INTERCHANGE

A MULTIMODAL TRANSPORTATION PROJECT

MASSDOT/FMCB JOINT MEETING
JUNE 22, 2020

Today's Agenda



- **Overview: Where Does the Project Stand?**
- **What "Throat" Alternatives Will Be Evaluated?**
- **How Will The Choice Be Made Among The Build Alternatives?**
- **How Do Alternatives Preliminarily Compare?**
- **What Happens Next?**

Purpose and Need of Allston Multimodal Project



How Current Infrastructure Carries Travel to Boston from the West (measured as Average Daily Travel or ADT)



Interstate 90:
~150,000 ADT



- Serves as main interstate route into Boston from the west
- Key freight link from Conley terminal to rail intermodal facility
- Considerations for future congestion management
- 4 lanes required in each direction

Soldiers Field Road:
~75,000 ADT



- Currently serves as major commuting route from west and northwest origin points
- If traffic can be reduced sufficiently in future, roadway could be redesigned as a true parkway

**Worcester/Framingham
Commuter Rail:**
~18,000 ADT



- Potential for more ridership in medium term (better station access, triple track project under study by MBTA)
- Potential for new service model with higher ridership under consideration in Commuter Rail vision but MBTA is 18 months away from having a new rail operating model

Why is the “throat” so difficult?

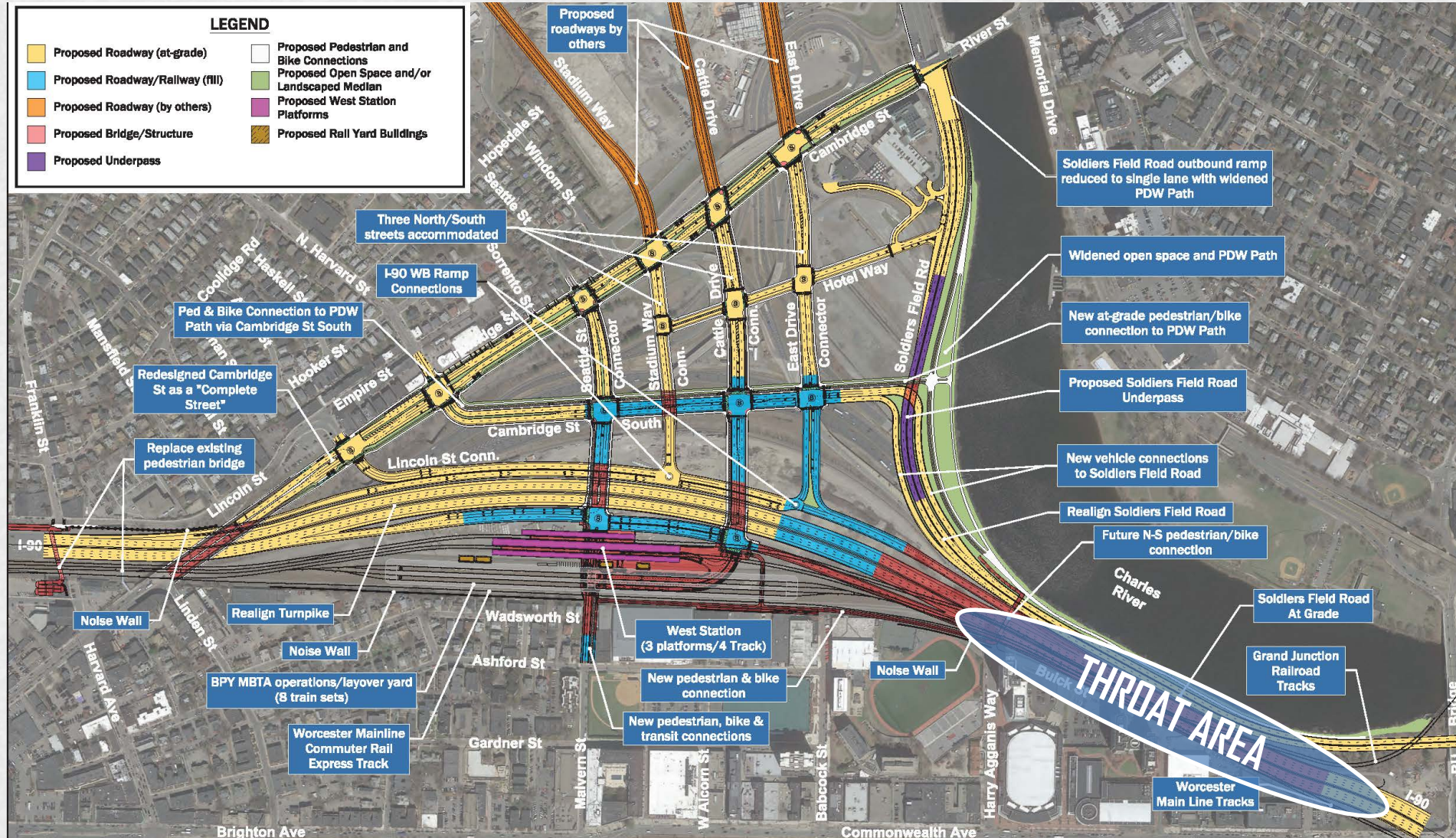
- In the narrowest section of the “throat” there are **204 feet** of available space between Boston University’s property line (as modified to assume some use of current BU land) and the Charles River (top of the bank)
- In that space, the project needs to accommodate five key pieces of transportation infrastructure
 - Interstate 90 (4 travel lanes in each direction)
 - Soldiers Field Road (2 travel lanes in each direction)
 - MBTA Worcester Main Line commuter rail (2 tracks)
 - Grand Junction railroad
 - Paul Dudley White bicycle and pedestrian path (modified to separate pedestrians and cyclists)
- There are only so many ways to rearrange those five
 - All five at grade (entirely on the same path), which requires some of the infrastructure to be permanently constructed in the Charles River
 - Elevate some infrastructure on a viaduct
 - Railroad on viaduct option considered in Draft Environmental Impact Report (EIR) but found not to be viable
 - Idea of bicycle and pedestrian path on viaduct raised but no serious interest and is not under consideration
 - Soldiers Field Road on viaduct concept was introduced by Independent Review and included in NEPA Scoping Report
 - I-90 on viaduct was evaluated in Draft EIR, but NEPA Scoping Report raised concerns about ability to meet project’s Purpose and Need with respect to bicycle and pedestrian infrastructure

Major Concerns Raised Public Comments in the Scoping Report



- Construction duration of 8-10 years disrupting travel from the west
- Charles River Impacts of “Hybrid” alternative due to Temporary Soldiers Field Road/Paul Dudley White Path “trestle” located in the Charles River
- MBTA operational disruptions including
 - Long-term closure of the Grand Junction bridge requiring design and construction of a new south-side commuter rail maintenance facility (\$300 million+)
 - Single Track Worcester Commuter Rail required during construction
- Climate change and resiliency concerns with SFR Hybrid due to I-90 under SFR viaduct located below grade in order to limit height of the viaduct
- Continuing concerns about adequacy parkland and bicycle/pedestrian infrastructure

Outside the "Throat" the Project is Well Defined: Re-alignment Alternative "3L"

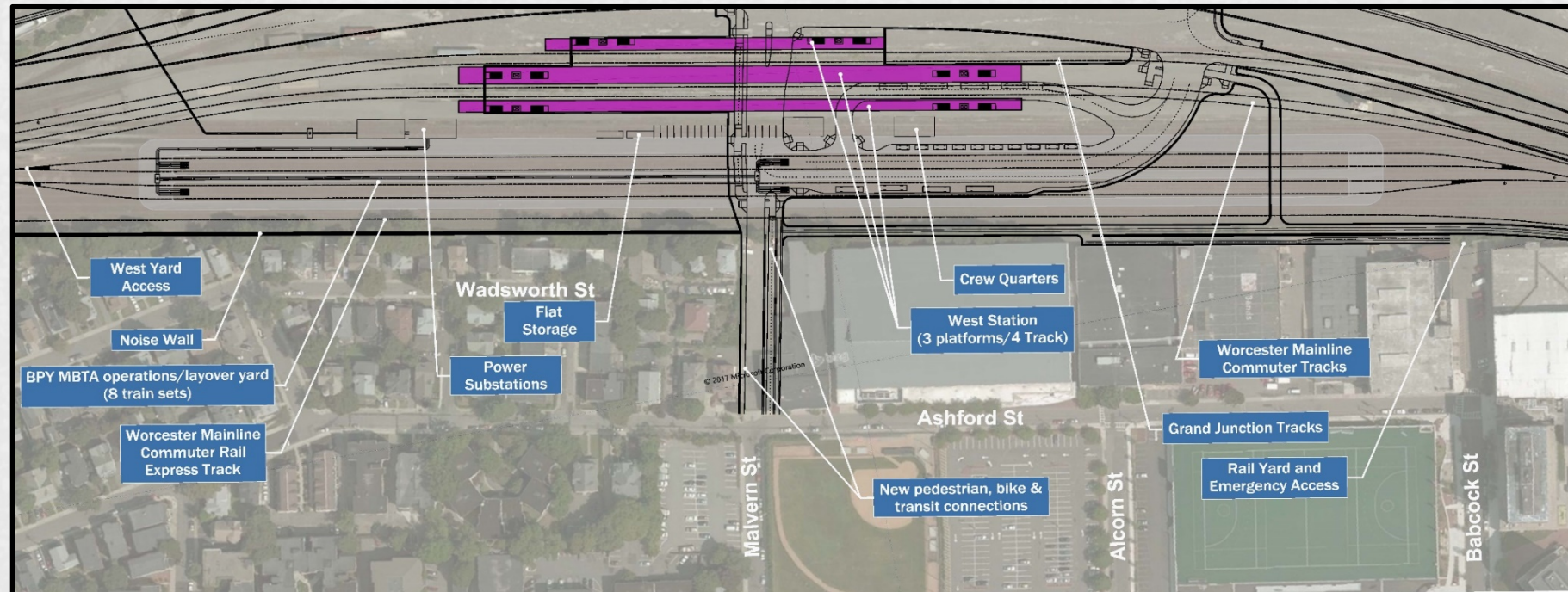


What MassDOT Has Been Doing in 2020

- Refining design of main project on Beacon Park Yards and of West Station
 - West Station now accommodates 4 tracks and 3 platforms
- Re-evaluating No Build Alternative
 - Major preservation was considered as a Build alternative in earlier filings but does not meet Purpose and Need of the Project
 - Reconstruction of the existing viaduct with a major preservation effort will now be treated as a No Build alternative, to be implemented if the full multimodal project does not proceed
- Evaluating options to address major concerns about construction length and complexity and Charles River impacts by
 - Evaluating alternative construction options to reduce impacts of “Hybrid” alternatives on the Charles River during construction
 - Re-evaluating pros and cons of all other Build alternatives, including at-grade and keeping I90 on a Viaduct

West Station Re-Design Has Also Advanced

- Modified for 4 track & 3 platform operation
- Includes express track to the south to accommodate more express trains and operational flexibility in the future
- Allows for future two-track urban rail service to Cambridge



Recent Developments Pertinent to Consideration of Throat Alternatives



LETTER FROM SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS THEOHARIDES

"any alternative that contains impacts on the Charles River, even temporary, is not only difficult to permit, but should be discounted in favor of alternatives with no temporary or permanent impact. . . . my agencies would **consider any intrusion into the river excessive, especially if there are alternatives without any intrusion.** The Charles River and surrounding basin is a historic environmental asset to Boston and the surrounding communities, and any impacts should be weighted heavily in the review of the Allston Viaduct replacement project."

SENATE BOND BILL LANGUAGE ON ALLSTON

6720-2127 For the purpose of capital costs associated with preconstruction, planning, and early action capital work for the so-called Allston Multimodal Project . . . provided further, prior to early action capital work or construction the department shall file with the clerks of the senate and house of representatives a cost benefit examination of design options for the throat area of the project, including a **"no build" option that rehabilitates the existing viaduct structure, upgrades its structural load capacity and minimizes the disruption and duration of construction;** provided further, that the cost examination for each option shall include but not be limited to, a financial plan which includes all sources of funding for the project option, including any third party contributions from stakeholders who benefit from the project option, a tentative construction schedule and implementation timeline, and a detailed mitigation plan . . . provided, further, that the **cost benefit analysis for throat design options** shall be done in consultation with impacted stakeholders, including but not limited to Allston Multimodal task force members, the Greater Boston Chamber of Commerce, the Corridor 9/495 Regional Chamber of Commerce, the Worcester Regional Chamber of Commerce; the Central Massachusetts Regional Planning Commission; the Worcester Regional Chamber of Commerce; the MetroWest Regional Transit Authority; the Worcester Regional Transit Authority; the Worcester Regional Research Bureau; and the 495/MetroWest Partnership.

Designing an Alternative That Does Not Impact the Charles River

- Many commenters asked MassDOT whether there was a way to rebuild the throat without either construction or permanent impacts on the Charles River and MassDOT has developed such an alternative
- This alternative puts I90 on viaduct, but on a viaduct smaller and farther from the Charles River than the existing viaduct that carries I90 through the throat
- Unlike a Highway Viaduct alternative considered earlier in the process, this alternative has also been redesigned to enable an additional ped/bike connection at Agganis Way if that is desired
- Redesigned highway viaduct is smaller than the current Viaduct and previously proposed Highway Viaduct alternative and located closer to Boston University and farther from the Charles River
 - 2,800 feet long compared to the existing viaduct including ramps which is approx. 3,200 ft
 - Narrower than previous viaduct version by 8 feet, which allows for further realignment of Soldiers Field Road to provide additional open space within the throat area
 - Modified highway viaduct is approximately 10,000 square feet smaller
- Redesigned Highway Viaduct has many advantages compared to other Build alternatives
 - Less complicated construction staging as a result of travel modes being replaced in their current horizontal and vertical locations, shortening time that construction disrupts travel from west
 - Does not require either temporary or permanent impacts to the Charles River
 - Minimizes impacts to MBTA operations, eliminating need for long-term closure of the Grand Junction bridge
 - Greater resiliency to increased rainfall events because no below grade elevations are introduced

How Will MassDOT proceed with consideration of throat alternatives?



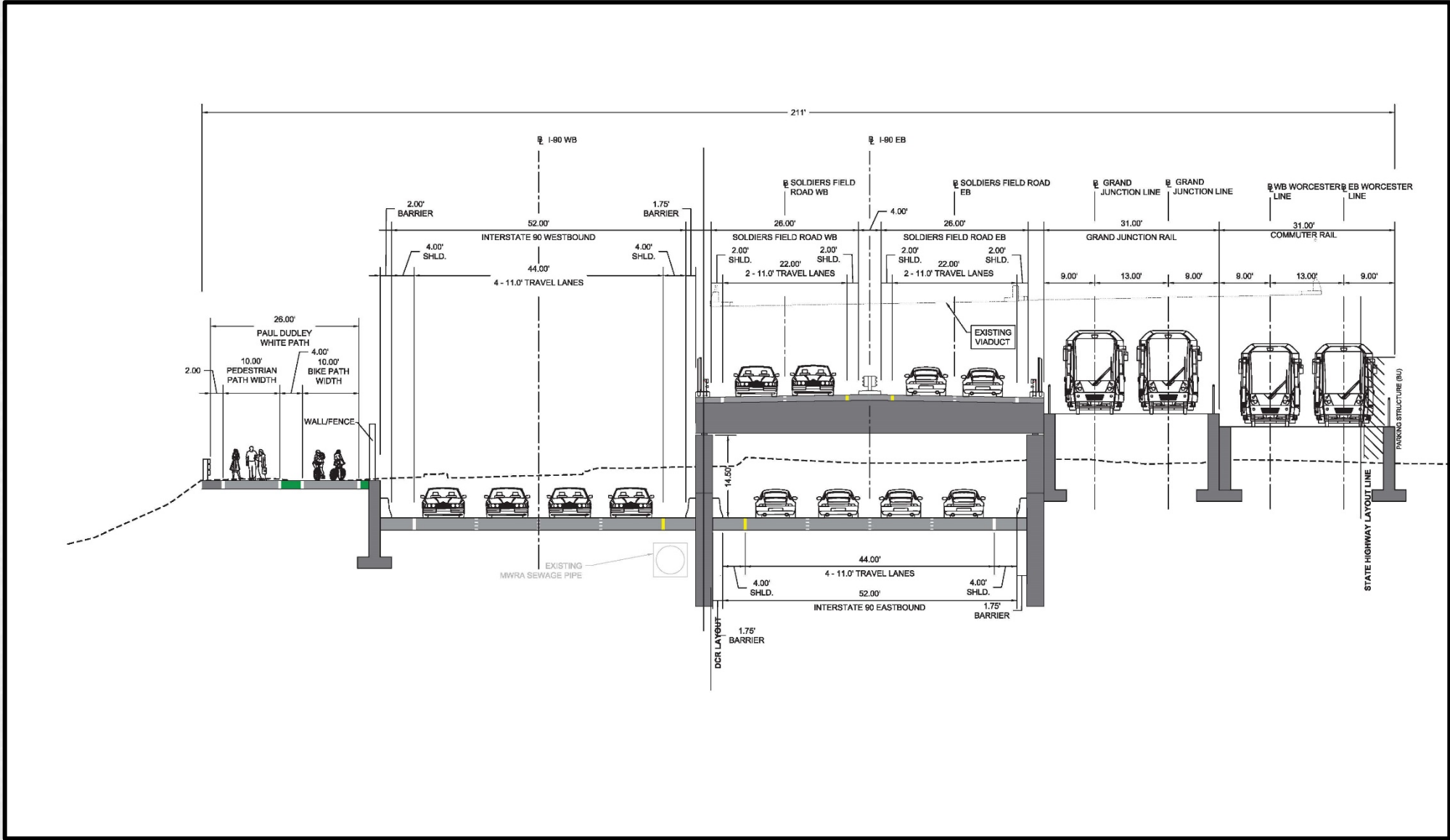
- Need to define both No Build and Build alternatives for the throat in both the NEPA and MEPA processes
- No Build: For both NEPA and MEPA, will clarify that No Build = Major Preservation/Rehabilitation of the Viaduct Structure
- Build Alternatives: While MassDOT believes that it can narrow alternatives in NEPA scope, will carry forward three Build Alternatives
 - Soldiers Field Road Hybrid (with additional engineering on construction options)
 - At Grade (despite permanent impacts on the Charles River)
 - Redesigned Highway Viaduct (no construction or permanent impacts on the Charles River)
- The NEPA concurrence process will be used, this fall, to determine what the preferred alternative will be for both NEPA and MEPA
 - If there is no concurrence/consensus, MassDOT will determine whether to proceed with No Build/Major Rehabilitation rather than Allston Multimodal Project

Today's Agenda

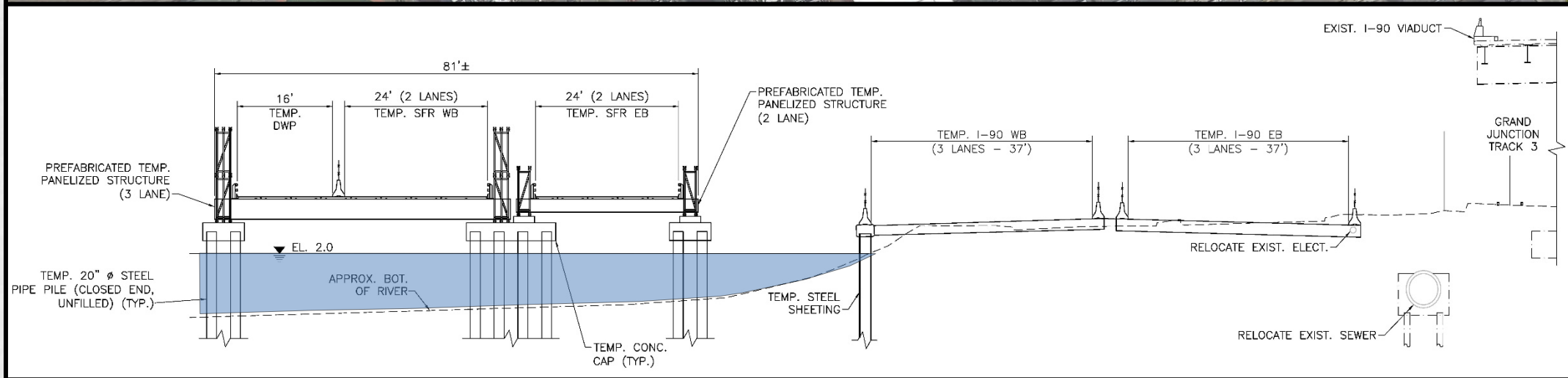
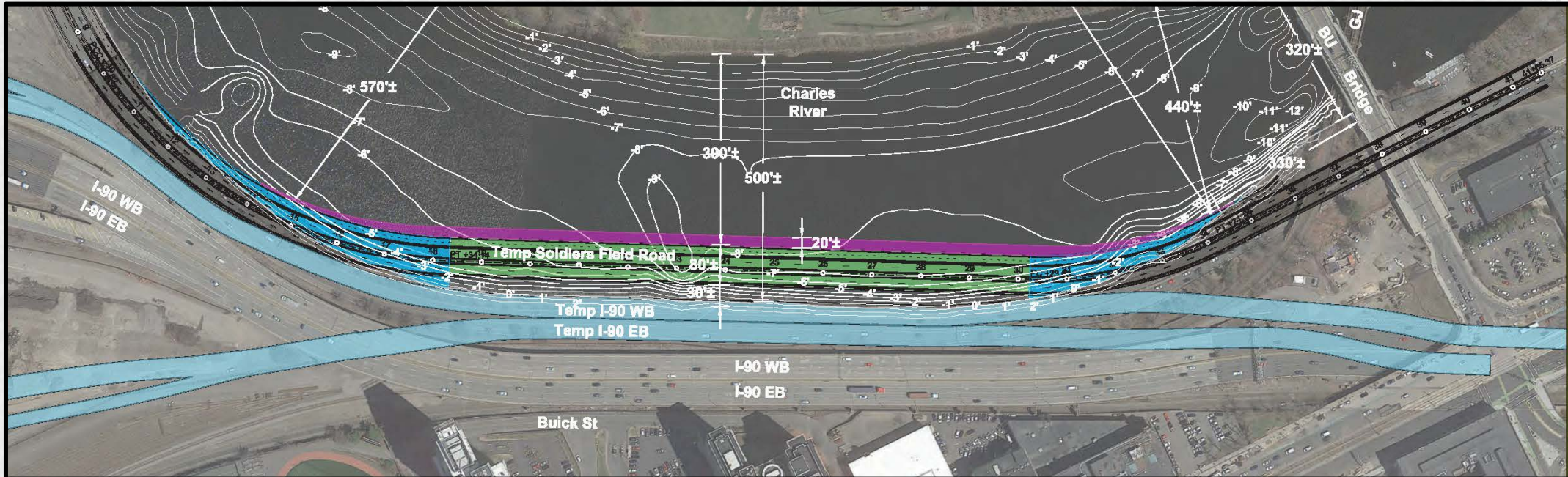


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Soldiers Field Road Hybrid "Throat" Area Variation - Section View



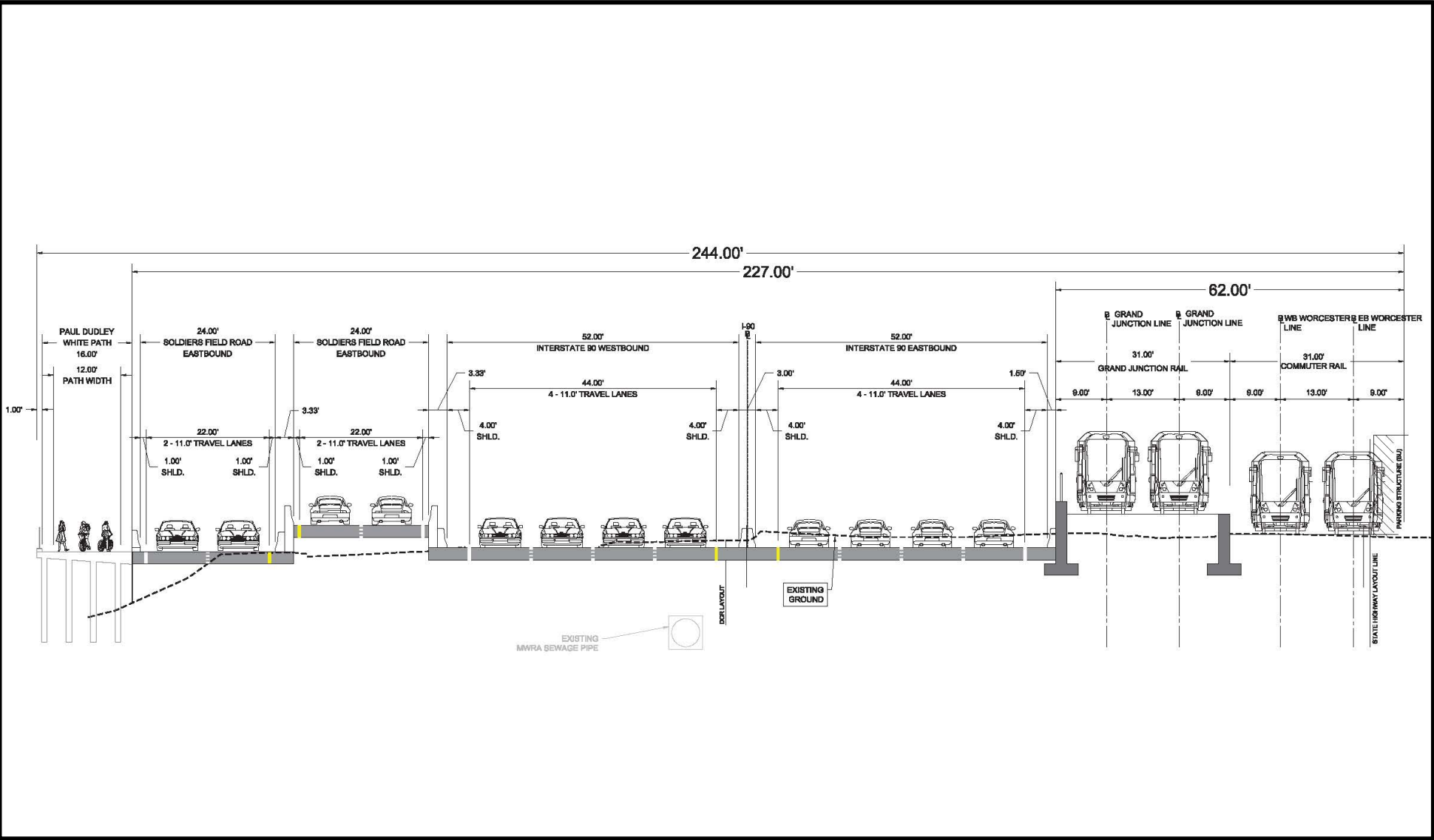
Soldiers Field Road Hybrid Alternative – Reducing Temporary Structure



Modifications to the At-Grade Alternative

- As a result of public input on Scoping Report, MassDOT has been re-examining options for the throat, including re-introducing an improved version of the At-Grade option carried earlier in MEPA but suggested for dismissal in the Scoping Report
- While MassDOT remains concerned that the permanent impacts to the Charles River are “excessive” and that the At Grade throat alternative should accordingly be discounted, a modified At-Grade alternative will be analyzed in the DEIS in response to public comments and in order to provide a comprehensive comparison
- Key modifications to the At Grade alternative include
 - Enabling an additional ped/bike connection at Agganis Way
 - Increasing I-90 shoulder widths from 2-ft to 4-ft wide to ensure safe and effective highway operations, accommodations for stormwater collection infrastructure to prevent ponding and flooding of road surface and snow clearing to maintain highway during storms
 - Increasing SFR travel lane widths from 10-ft to 11-ft to match existing lane widths

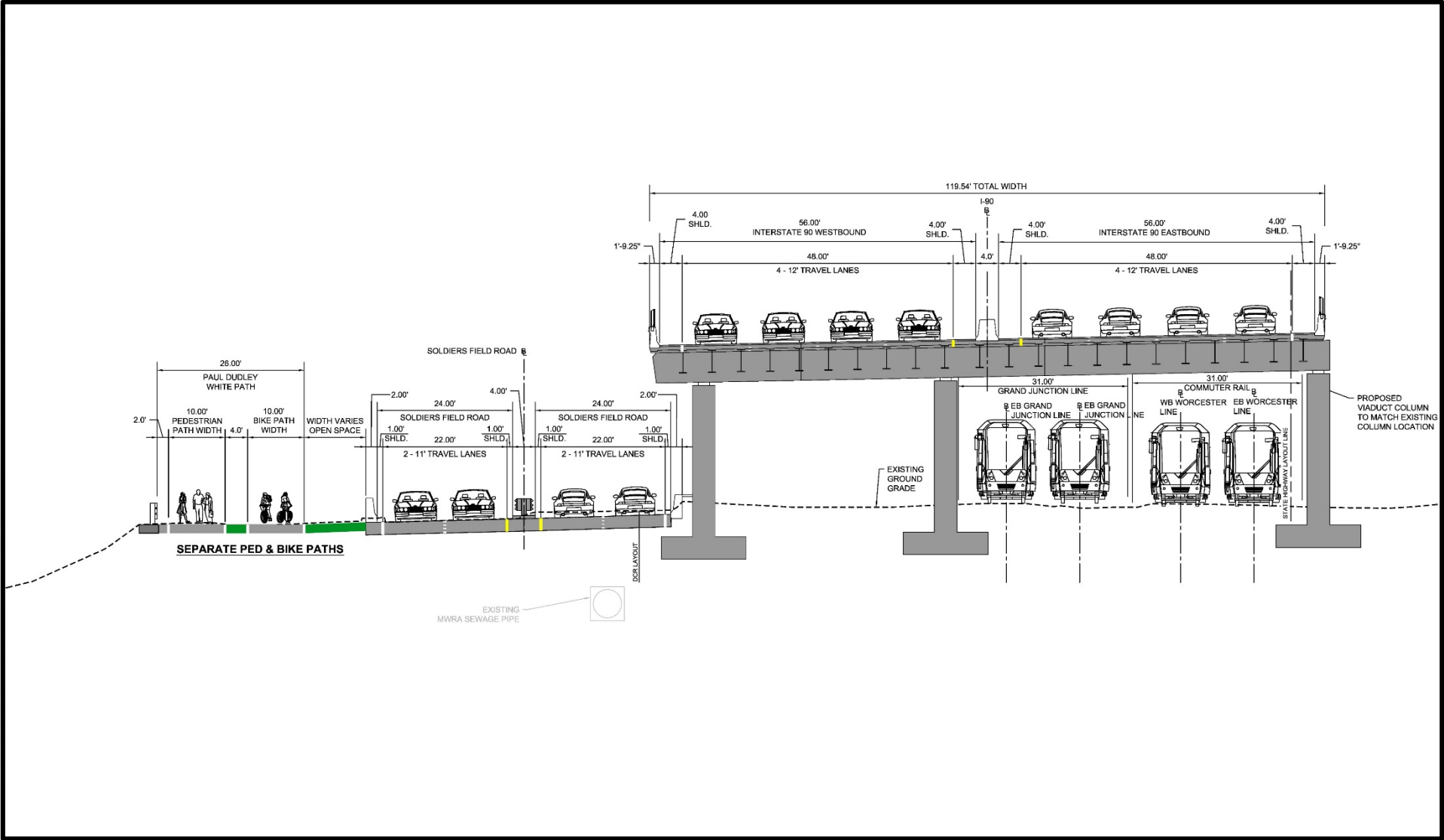
Modified At-Grade "Throat" Area Variation - Section View



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Redesigned Highway Viaduct "Throat" Area Variation – Section View



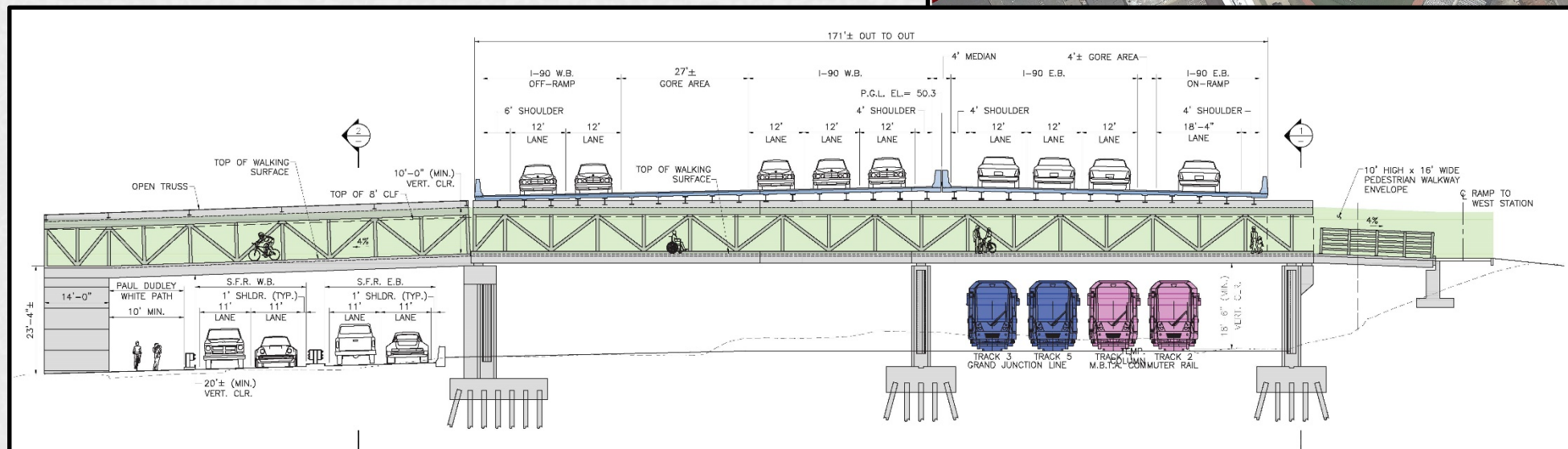
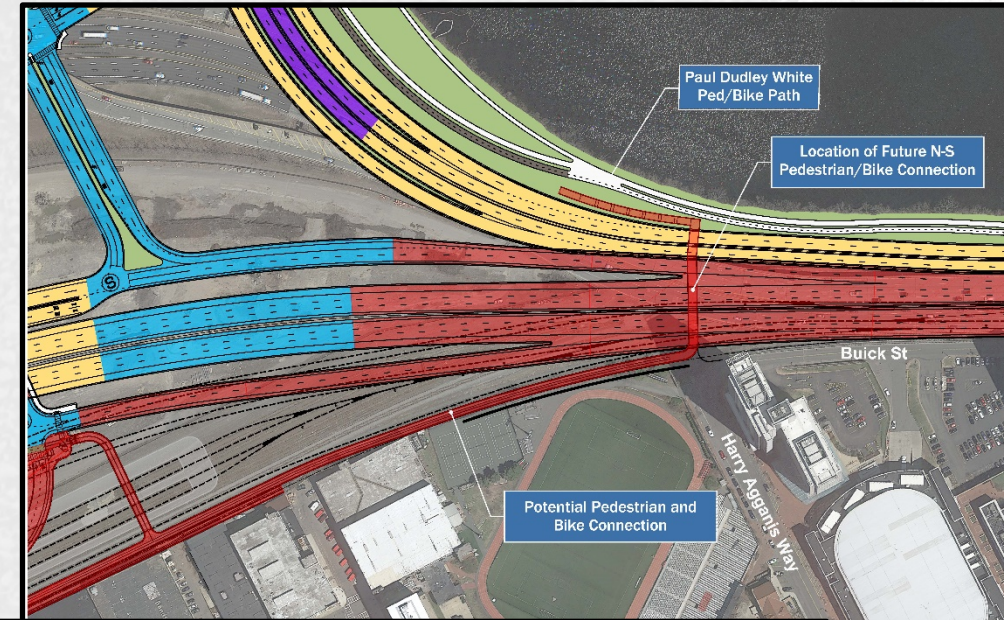
Other considerations for Redesigned Highway Viaduct alternative

- Visual impacts would be addressed with aesthetic treatments to both superstructure and substructure
- Noise impacts would be addressed with the addition of noise barriers
- Less complicated construction staging as a result of travel modes being replaced in their current horizontal and vertical locations
- Minimizes impacts to MBTA operations, both by eliminating long-term closure of the Grand Junction bridge and largely maintaining Worcester main line 2 track operations
- Greater resiliency to increased rainfall events with elimination of below grade roadway
- Does not preclude reconstruction of Grand Junction bridge over SFR as a separate project as part of a future Grand Junction rail project

Potential for additional bicycle/pedestrian connection at Agganis Way



- New highway viaduct design allows for direct North-South Connection at Agganis Way (under viaduct & over rail)
- Includes a potential ped/bike connection from West Station to Agganis Way



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How the Build Alternatives Will Be Compared: Project Purpose and Need



- Key evaluation criteria is: does the alternative fully meet the Purpose & Need of the Project?
- Purpose and Need are to:
 - Address Roadway Deficiencies: Replace structurally deficient viaduct and reconfigure the I-90 Interchange
 - Address Safety Issues: Reconfigure the I-90 Interchange, including the viaduct
 - Provide Rail and Transit Improvements
 - Reconfigure transit and commuter rail facilities
 - Construction of new intermodal West Station
 - Construct layover infrastructure supporting mid-day commuter rail operations
 - Improve Mobility and Transportation Access
 - Provide or allow for connections from Allston, Brighton, Brookline, and BU neighborhoods to the Charles River Reservation
 - Land use planning opportunities facilitated by a multimodal network of streets, paths, rail and transit facilities with Project Area
 - Multimodal transportation access within the Project Area not precluded

How the Build Alternatives Will Be Compared: Selection Criteria

- **Construction Logistics:** Is the alternative feasible to construct with existing technologies?
- **Environmental Impacts:** Does the alternative cause excessive permanent environmental impacts to natural resources when compared to other alternatives?
 - This includes (but is not limited to) impacts on the Charles River
 - Other factors being evaluated include 4(f), resiliency, historic, noise, air etc.
- **Traffic Operations:** Does the alternative adversely impact travel times within the Project Area due to congested conditions on existing or proposed roadways or at existing or proposed intersections?
 - Does the alternative result in worse Level of Service at existing or proposed intersections, or long vehicular queues that impact operations at adjacent intersections?

How the Build Alternatives Will Be Compared: Selection Criteria (cont'd)



- **Rail Operations:**
 - Does the alternative support local and regional multi-modal (pedestrian, bicycle, bus, passenger vehicle, and transit) access to a future West Station?
 - Does the alternative support the rail operation needs of MBTA including providing operational flexibility between Worcester Main Line, layover, and Grand Junction Railroad?
 - Does the alternative interfere with the rail operations needs of MBTA during construction?
 - Two track operation of the Worcester Main Line
 - Commuter rail access to maintenance facility during outages of the Grand Junction bridge
- **Cost and Schedule:**
 - Does the alternative require an unreasonably high cost compared to other alternatives?
 - Does the alternative require an unreasonably complicated or lengthy project schedule?

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Comparison of Build Alternatives on Key Decision Criteria

	Highway Viaduct	SFR Hybrid	At Grade
Duration of construction	6.5 – 8 years	8 – 10 years	6.5 – 8 years
Need to construct in Charles River			
• During construction	No	Yes	Yes
• Permanently	No	No	Yes
Duration of closure for Grand Junction bridge	Short-term (few weeks) outages	8 year closure	6 year closure
Resiliency	Does not introduce below grade elevations	Introduces below grade elevation on Soldiers Field Road	Introduces grade-cut sections on I-90

Preliminary Comparison of “Throat” Area Alternatives



Comparison Descriptions	Throat Area Variations		
	SFR Hybrid	Modified At-Grade	Modified Highway Viaduct
<u>FINAL BUILD CONDITION</u>			
Less Environmental Impact to Charles River			
Greater Resiliency			
Meets Stormwater Standards			
Less Stormwater Infrastructure (Does not require new pump station)			
Greater Open Space Created			
Less Article 97/4(f) Impact			
Less Major Utility Impact			
Does not require replacement of GJR over SFR			
Provides for Future Throat Area Pedestrian Connections to the Charles River Reservation			
Less Visual Impact (Elevated Structure)			
Less Noise			
Less Historic Section 106 Impact			
Provides separated bike and ped. facilities without riverbank impacts			
Less oil and hazardous material requiring specialized handling			
<u>CONSTRUCTION</u>			
Shorter Construction Duration			
Less Challenging Construction Sequencing			
No Major Charles River Impacts Required for Throat Area Construction			
No Navigation Impacts During Construction			
Does Not Require Long-Term Closure of GJR over SFR			
Less Construction Cost			
Less Worcester Mainline Impact During Construction			
Less Construction-Related Risk (Major Utility Relocations, I-90 Boat Sections and GJR Bridges Over I-90)			
Less Construction-Related Noise			
Greater Ability to Collect and Treat Stormwater During Construction			

Key	
More Favorable	
Neutral	
Less Favorable	

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Anticipated Review Process for Remainder of 2020



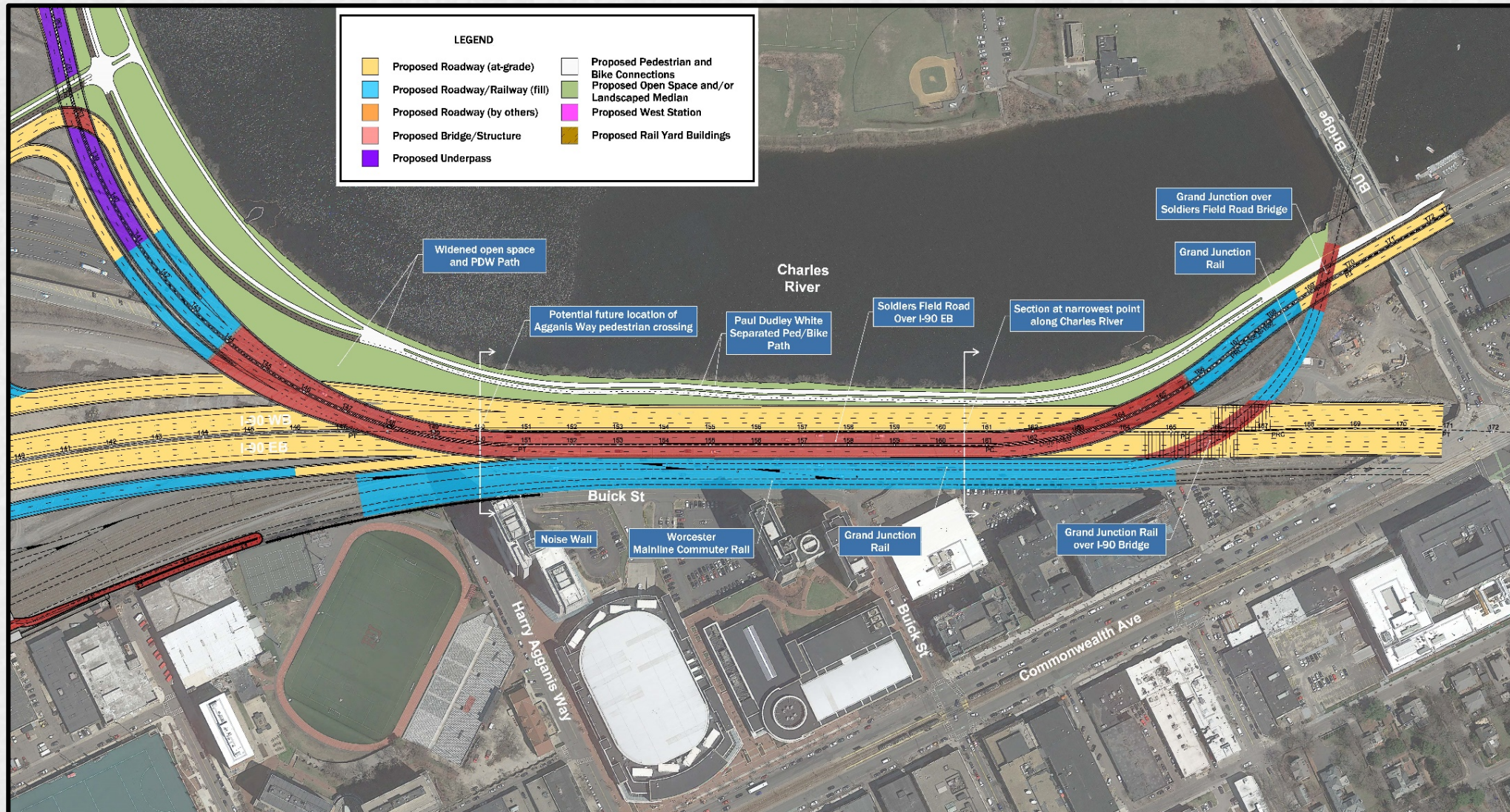
Process	June	July	August	September	October
National Environmental Policy Act (NEPA)		Scoping Summary Report (includes response to public comments on Scoping Report)		Federal/State Agencies Concurrence Meeting (45 days after filing of Scoping Summary Report)	If concurrence reached, work proceeds on Draft Environmental Impact Statement
Massachusetts Environmental Policy Act (MEPA)					Filing of Notice of Project Change to re-scope Final Environmental Impact Report (includes response to public comments on DEIR)
MassDOT Board of Directors	Board Update	Board Update on NEPA filings		Board Update on throat alternatives under consideration at Concurrence Meeting	Board Update on whether there is concurrence on a throat alternative and, if so, on MEPA Notice of Project Change
Task Force	Meeting to review progress	Meeting to review NEPA filings		Meeting to review throat alternatives under consideration at Concurrence Meeting	Meeting to review on whether there is concurrence on a throat alternative and, if so, on MEPA Notice of Project Change

Anticipated Environmental Review Timeline

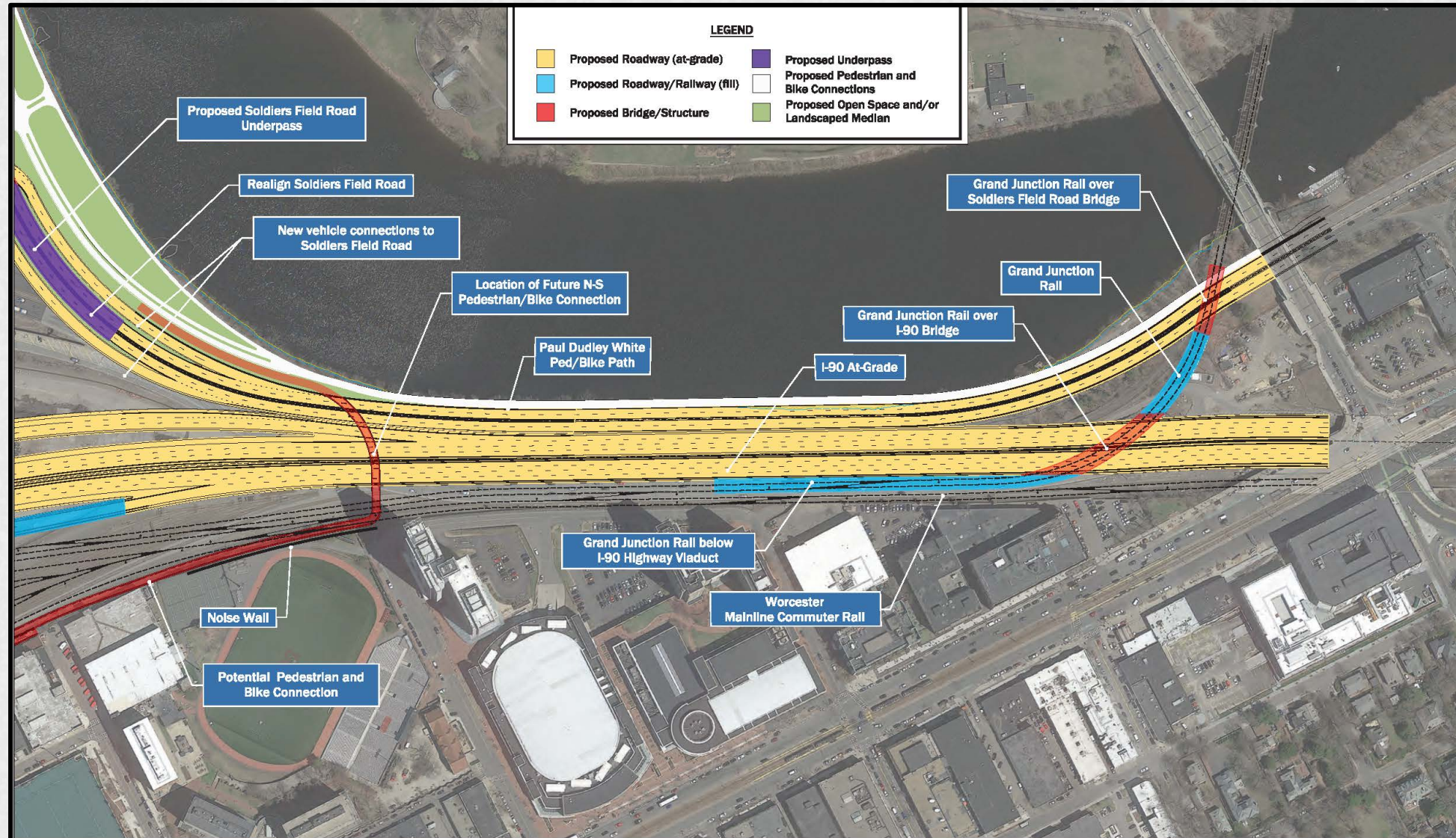
- NEPA Scoping Summary Report : **July 2020**
 - Summarizes the Scoping Process undertaken for the Project
 - Declares No Build and Build alternatives carried forward to the DEIS
 - Responds to Public Comments on the Scoping Report
- NEPA Concurrence Meeting: **Fall 2020**
- MEPA Notice of Project Change (NPC) : **Fall 2020**
 - MassDOT identifies the Preferred Transportation Alternative
 - Responding to Public Comments on the DEIR
 - EEA Secretary issues certificate rescoping the FEIR
- NEPA Draft Environmental Impact Statement (DEIS) : **Spring 2021**
- MEPA Final Environmental Impact Report (FEIR) : **Summer 2021**
- NEPA Final Environmental Impact Statement (FEIS)/
Record of Decision (ROD) : **Winter 2021/2022**

Appendix Slides

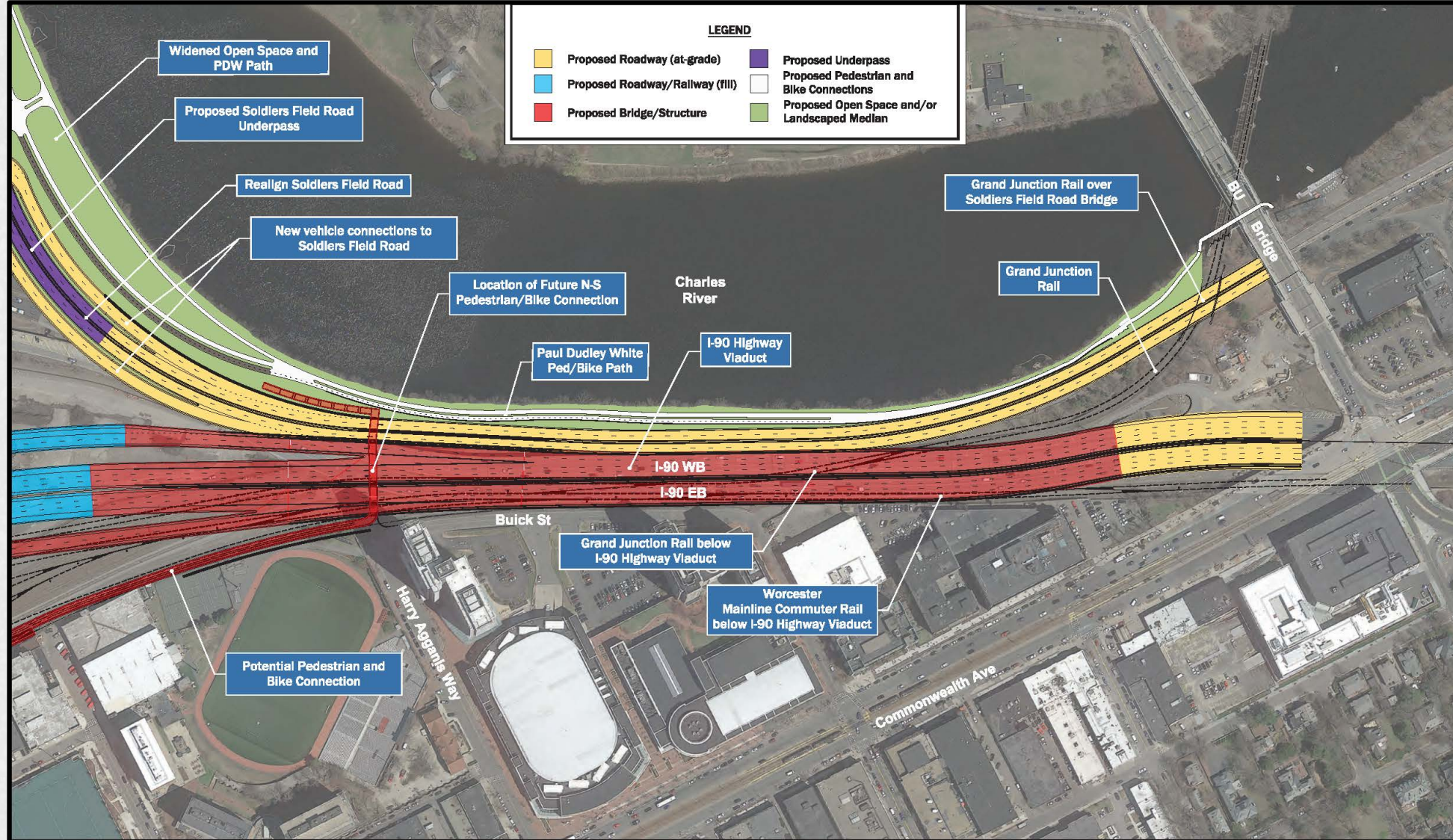
Soldiers Field Road Hybrid "Throat" Area Alternative – Plan View



Modified At-Grade "Throat" Area Variation – Plan View

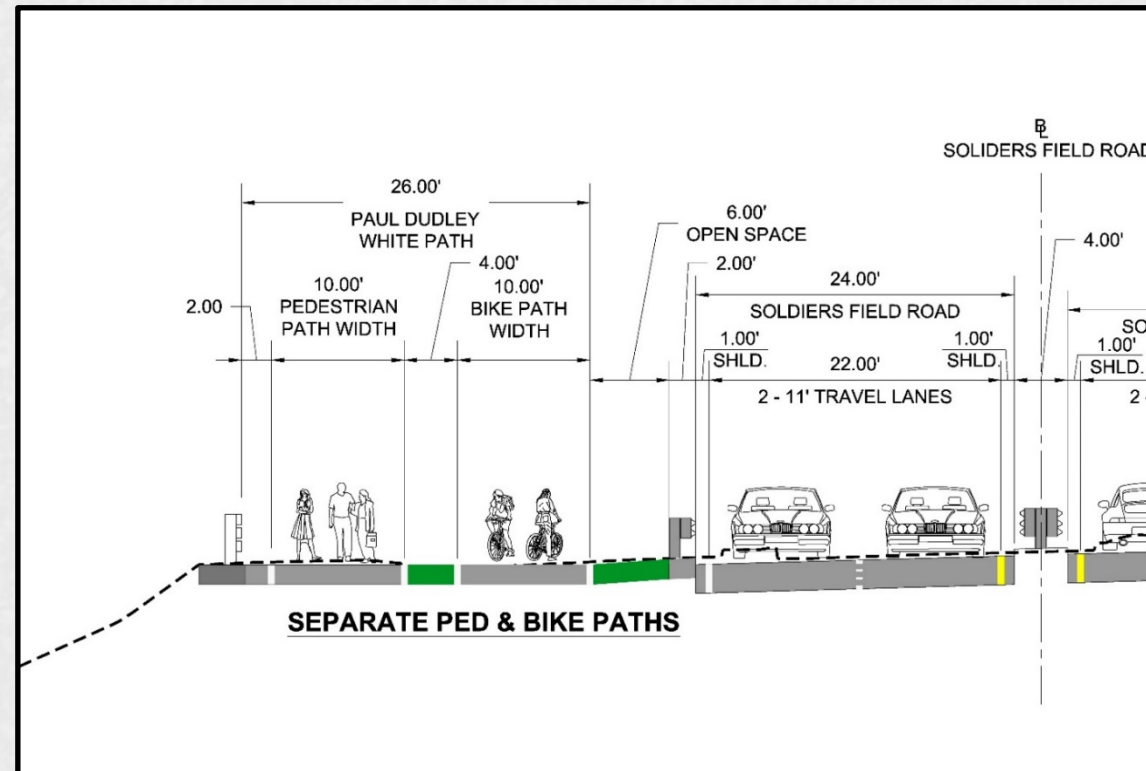


Modified Highway Viaduct "Throat" Area Variation – Plan View



Potential for Additional Open Space along Charles River

- Potential shift in Soldiers Field Road to the south if switch from a four column to a three column viaduct layout
- Provides opportunity for increased length of separated paths and increased open space
- Presents opportunity for full bank restoration/enhancement



Alternatives Considered to Date (continued)

- Fall 2018 Independent Review Team (IRT) Report conclusions
 - Better “hybrid” was to elevate Soldiers Field Road rather than commuter rail
 - At-Grade determined to be not permissible
 - Highway Viaduct modified to increase open space
- In January 2019 Secretary issued a written decision designating the “hybrid” with Soldiers Field Road on viaduct as the preferred alternative for the throat
 - Acknowledged greater cost and potential construction challenges
 - Initial overwhelming public support
 - A full assessment of environmental impacts and constructability not performed
- Fall 2019 filed NEPA Notice of Intent (NOI) and Scoping Report
 - Interchange 3L Re-Alignment Alternative with 3 Throat area variations (No Build, Major Rehabilitation and Replacement, Soldiers Field Road Hybrid)
- Highway Viaduct and At-Grade Variations recommended for dismissal because they did not meet Purpose & Need (due to not providing north-south ped/bike connection)

Alternatives Considered To Date



- **MEPA Environmental Notification Form filed Fall 2014:**
 - Documented examination of 16 suburban and urban type interchange alternatives with West Station and rail layover alternatives
 - Preferred alternative was Urban Interchange Alternative 3J with Highway Viaduct in the throat
- In response to lack of public acceptance, Secretary commits that Draft Environmental Impact Report (DEIR) will not specify a preferred alternative for the throat but will instead analyze two other throat options in addition to the Highway Viaduct
- **Fall 2017 Draft Environmental Impact Report (DEIR):**
 - ENF Alternative 3J refined and presented as Preferred Urban Interchange Alternative 3K with West Station and Layover Yard
 - Three throat alternatives included
 - Highway Viaduct (Interstate 90 on viaduct)
 - A Better City (All Facilities At-Grade)
 - Amateur Planner (Rail on Viaduct)
 - **MEPA Certificate issued February 2018**
- In Fall 2018, in response to lack of consensus for selection of a preferred alternative for the throat, Secretary commits to “pause” MEPA process (which has yet to be re-started) and undertake an Independent Review of throat alternatives, originally scheduled to be completed within 90 days