

A high-speed Amtrak train, specifically a blue and red locomotive with the number 3665, is shown in motion on a track. The train is moving from left to right, with a blurred background of green trees and a blue sky. The Amtrak logo and name are visible on the side of the locomotive. The text "Amtrak Experience with Operations Analysis" is overlaid in white, bold, sans-serif font across the middle of the image.

Amtrak Experience with Operations Analysis

**Surface Transportation Board
Passenger Rail Advisory Committee
17 September 2026**

Inland Route Operations Analysis

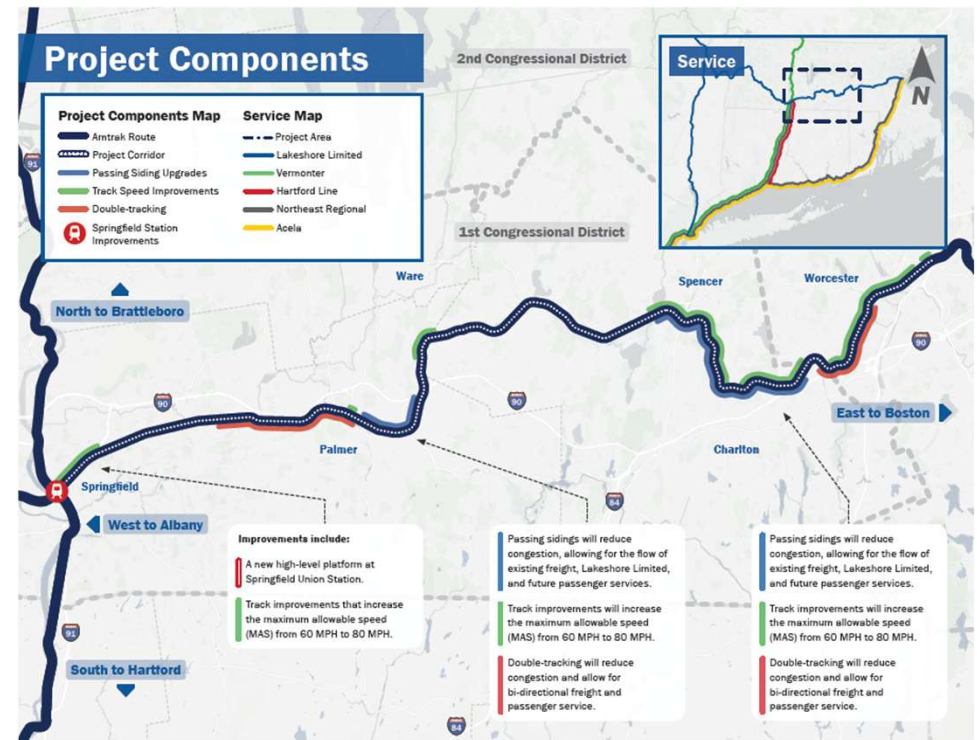
Background

- Until the mid-2000s, Amtrak operated limited service via the Inland Route, from Boston to New Haven via Worcester and Springfield
- With the significant upgrades to the New Haven-Hartford-Springfield line completed over the past ~10 years, there has been renewed interest in establishing service over the full Inland Route from Boston to New Haven
- CSX acquired the Boston and Albany line as part of the purchase of Pan Am Railways in 2022
- Current use of the segment from Worcester to Springfield
 - 15 daily CSX trains (at time of analysis), plus two NS intermodal trains via trackage rights that started this year
 - Daily Amtrak *Lake Shore Limited* Long Distance service



Grand Funding Opportunity

In 2023, the Massachusetts Department of Transportation (MassDOT) was awarded a CRISI grant to design and construct the improvements needed to operate two round trips between Springfield and Boston, requiring upgrades to the 54-mile CSX-owned segment between Springfield and Worcester

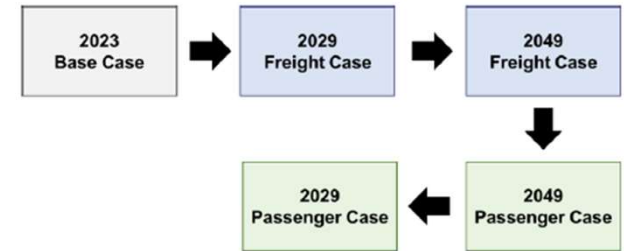


Key Elements of the Process

- While the grant was being evaluated, MassDOT, CSX, and Amtrak initiated a collaborative process to analyze the detailed infrastructure needs
- Started with an initial infrastructure concept developed by Amtrak and MassDOT based on a simplified operational analysis
- Rail Traffic Controller analysis completed by consultant contracted by CSX (reimbursed by MassDOT), but with regular oversight from broader technical advisory committee
- Involvement of a range of technical experts/representatives from both railroads, including transportation operations, maintenance of way, service/operations planning, and commercial
- Multiple rounds of detailed reviews by technical advisory committee

Key Steps in the Process

- Describe existing conditions (physical and operational)
- Agree on the future analysis scenarios
- Agree on analytical assumptions and key parameters (including service standards)
- Agree on service schedules/volumes
- Develop and calibrate the base case
- Develop and analyze future scenarios/cases
- Identify needed infrastructure improvements (freight and passenger)



Key Lessons Learned

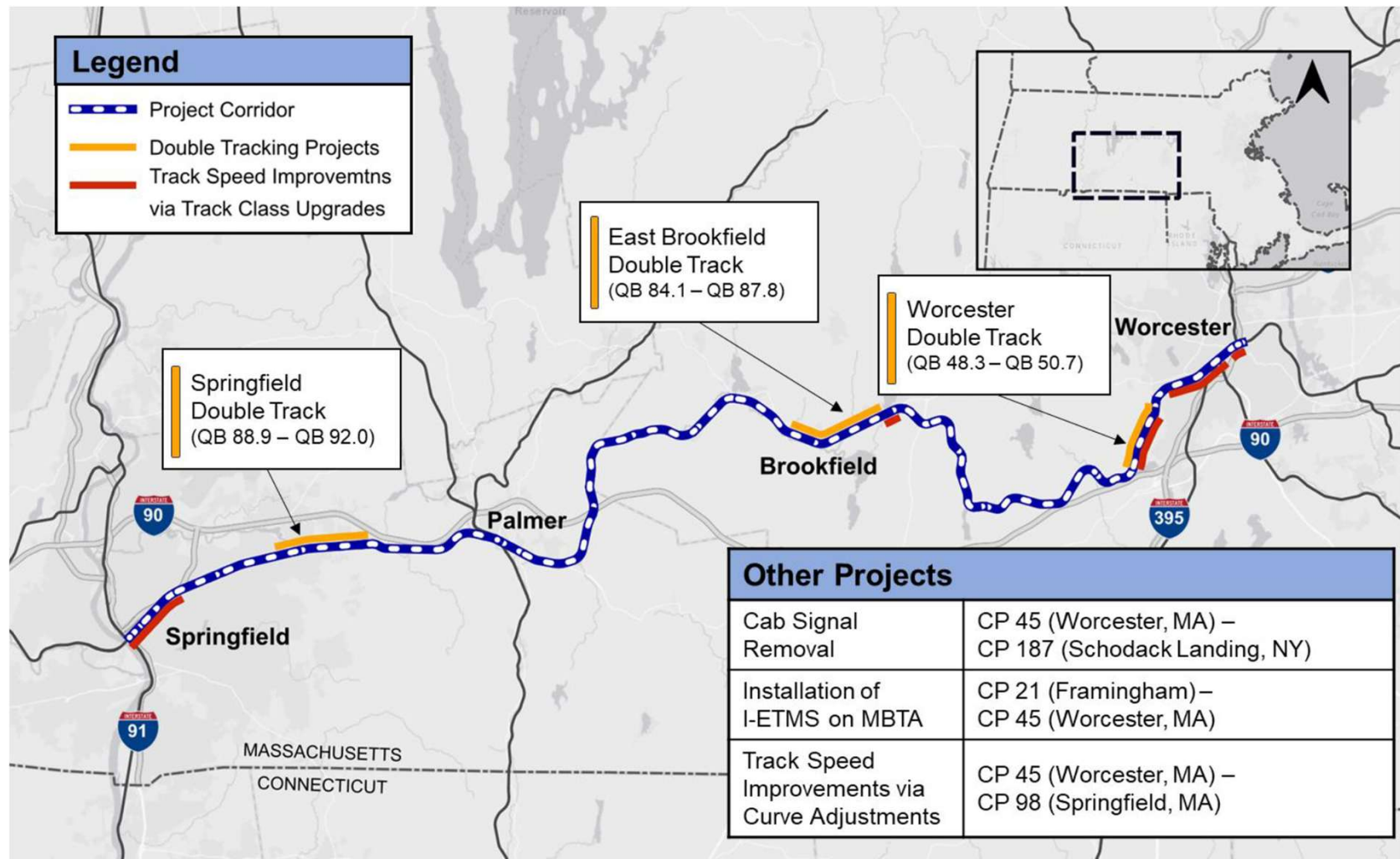
Prior to Starting

- Agree on process and expectations
- Understand project goals and objectives
- Review assumptions in detail
- Reach agreement on growth factors
- Start with an initial infrastructure scenario as a “strawdog”

During Process

- Review model development in detail, including ongoing in person/over the shoulder reviews
- Consider full railroad operations, including MOW, yard operations, signal system/PTC, etc.
- Protect commercially sensitive data
- Freight benefits exist even when passenger trains are not operating
- Go slow to go fast

Improvements Identified



Hiawatha West Operations Analysis

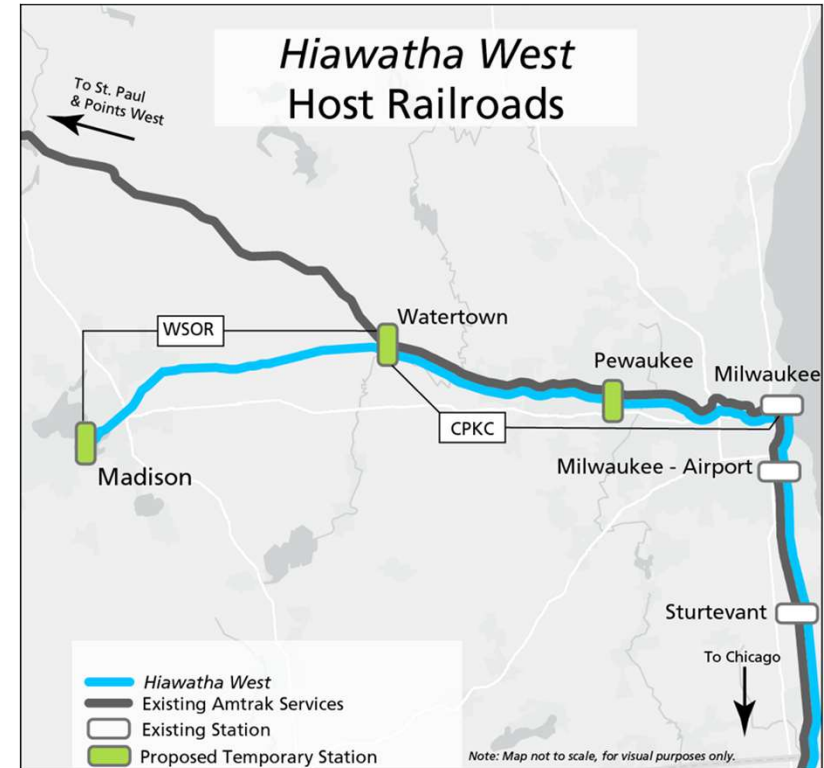
Background

- Amtrak Hiawatha Service: 7 round-trip Chicago-Milwaukee
- Until 2024, WI priority had been increasing to 10 RT
- WI/Amtrak priority shifted to extending some Hiawatha trains west to Madison, WI (45 miles on CPKC; 35 miles WSOR)
- CPKC corridor is also shared by Amtrak Empire Builder and Borealis services
- Amtrak led and completed Service Development Plan extending 2 RT to Madison, dubbed **Hiawatha West**



Modeling Approach & Outcome

- Amtrak reached out to CPKC for RTC modeling to determine required infrastructure improvements
- CPKC completes RTC using its planning consultant; CPKC reimbursed from project sponsors (State/city)
- Technical Advisory Committee (Amtrak RTC/planning teams, state, and consultant) provided oversight, comments, and input to CPKC's modeling consultant
- Bi-weekly TAC working meetings
- Amtrak and CPKC had previous agreements for additional service on this corridor; a term sheet agreement was developed to align with Hiawatha West while preserving terms of original agreement
- Similar process approach to Inland Route. Agreement on assumptions and methodology was key
- Railroad improvements identified and agreed upon - Siding and double track extensions with crossovers



Key Lessons Learned During Operational Analysis

- Before starting the modeling:
 - Agree on outcome of the modeling: Identifying improvements to move into PE/NEPA
 - Agree on assumptions, base case, and build scenarios
 - Ensure all parties have ability and expertise to review each step of the process
- Amtrak and host railroads are aligned in wanting to protect sensitive data
- Infrastructure for additional passenger trains can also improve the host's ability to dispatch existing passenger (Empire Builder and Borealis) and future freight
- Deadline for RTC completion helped parties move quickly (CPKC shared the desire to proceed efficiently & wrap the analysis up soon)
- Joint pre-RTC desktop operations analysis, including current operating challenges, provided a foundation and shared understanding going into RTC
 - Strawdog infrastructure ideas
 - Narrow down schedules for testing in RTC to one (flexibility to adjust to avoid conflicts)



Questions / Discussion

