Executive Summary

Resumen Ejecutivo | Sumário Executivo

South Coast Rail

Draft Supplemental Environmental Impact Report

Ferrocarril de la Costa Sur | Anteproyecto Suplementario del Informe de Impacto Ambiental

Ferrovia da Costa Sul | Esboço Suplementar do Relatório de Impacto Ambiental

Prepared for

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Contract No. 99771

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The Commonwealth of Massachusetts is committed to moving forward with the SCR Project and providing commuter rail service for the South Coast region as soon as possible.

Introduction

The South Coast Rail (SCR) Project is an initiative of the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA) to bring public transportation to the South Coast region.

The Commonwealth of Massachusetts is committed to moving forward with the SCR Project and providing commuter rail service for the South Coast region as soon as possible. The SCR Project will increase transit access for an underserved area of the state, increase transit ridership, reduce greenhouse gas emissions, and support economic development and smart growth. For these reasons, MassDOT is proceeding with design and permitting of the Stoughton Straight Electric Alternative (the "Full Build Project") already reviewed under both the National Environmental Policy Act (NEPA) and the Massachusetts Environmental Policy Act (MEPA), while also proposing to adopt a phased approach that will provide service to the South Coast region in advance of the Full Build Project.

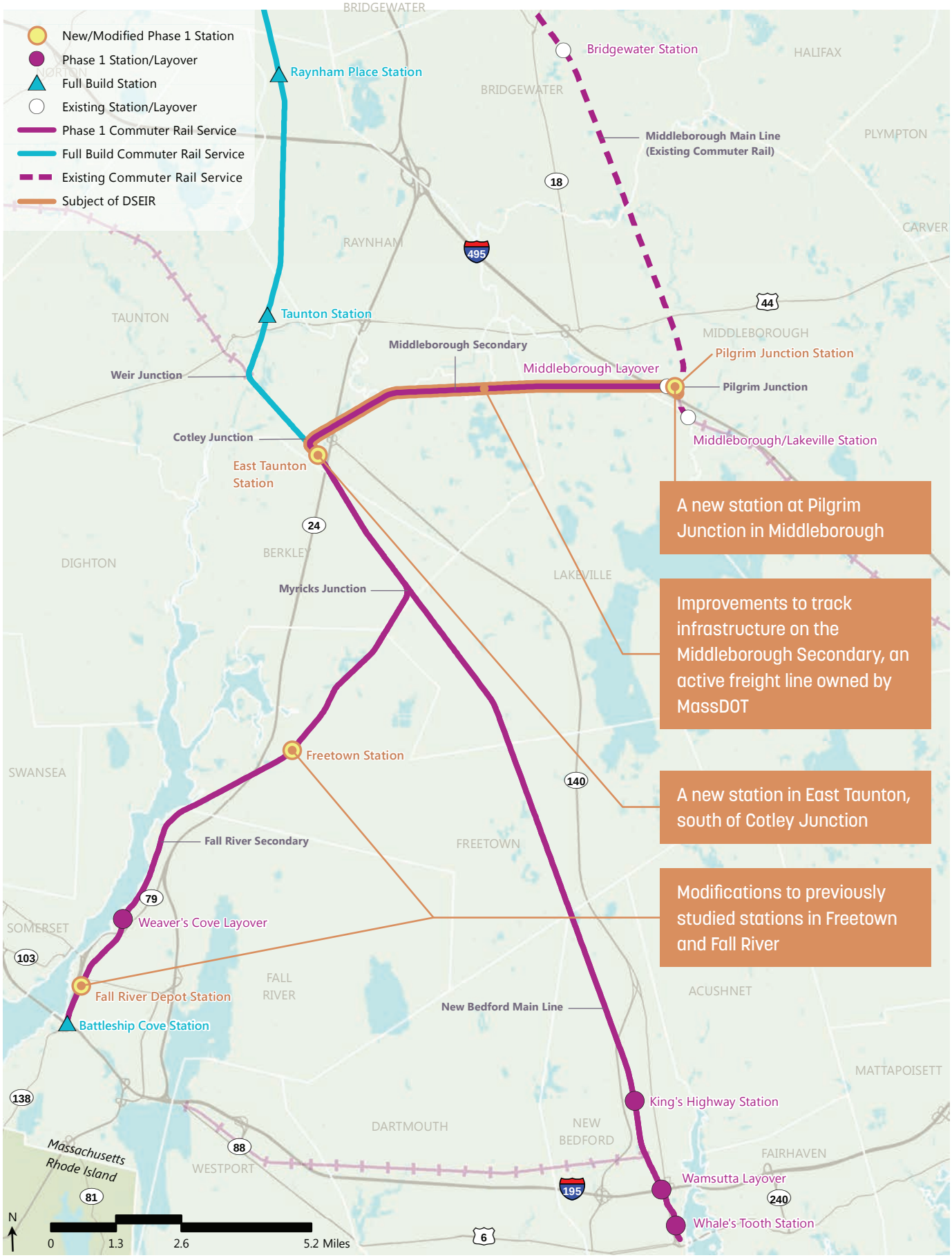
Phase 1 will provide commuter rail service by extending service from the Middleborough/ Lakeville Line to New Bedford, Fall River, and Taunton using existing active freight rail corridors. As proposed for the Full Build Project, and analyzed in the SCR Final Environmental Impact Statement (FEIS)/Final Environmental Impact Report (FEIR)[1], service will be provided on the Southern Triangle, which connects Fall River (using the Fall River Secondary Line) and New Bedford (using the New Bedford Main Line) to Cotley Junction in Taunton (see Figure ES-1). The new primary element to be included in Phase 1 is the use of the existing Middleborough Secondary freight line to connect Taunton to the Middleborough Main Line.

This Draft Supplemental Environmental Impact Report (DSEIR) analyzes only the new elements proposed as part of Phase 1 that were not previously analyzed in the FEIS/FEIR (see Figure ES-1).

In this document, the "Full Build Project" means the Stoughton Straight Alternative that was analyzed, and designated as the preferred alternative, in the FEIS/FEIR. The term "Phase 1 Project" refers to the infrastructure, service and stations associated with both the Southern Triangle and the Middleborough Secondary. "New Phase 1 Elements" are the portions of the Phase 1 Project that are studied only in this DSEIR, which are listed above. Ongoing maintenance of the existing rail infrastructure under MassDOT's State of Good Repair (SGR) program are not considered part of the SCR Phase 1 Project. These are discussed further in chapter 8.

1 The FEIS/FEIR can be accessed at: www.mass.gov/massdot/southcoastrail

Figure ES-1–The Proposed Phase 1 Project



Source Info: MassGIS, VHB, ESRI

Why is MassDOT Proposing to Phase the SCR Project?

Phasing the Project will allow many of the overall Project goals to be met almost a decade sooner than will otherwise be realized by the Full Build Project alone.

The SCR Project is a priority initiative for MassDOT. It has been extensively studied in multiple configurations for over 25 years. MEPA review was most recently completed in 2013, when a final certificate on the FEIS/FEIR was issued. Since that time, MassDOT has advanced the design of the SCR Project and determined that the timeline for implementing service to the South Coast is longer than desired. MassDOT also determined that the cost of the SCR Project is substantially greater than previously anticipated. Phasing the project will allow many of the overall Project goals, including providing critical service to the South Coast communities, to be met almost a decade sooner than will otherwise be realized by the Full Build Project alone. Starting Phase 1 operations will advance the project's Purpose and Need on an accelerated schedule, as described in more detail in Chapter 1.

Phasing the project will provide service by 2022

In accordance with MEPA regulations, MassDOT filed a Notice of Project Change (NPC) on March 15, 2017 describing the phased approach to Project implementation. MEPA issued a certificate on the NPC on May 26, 2017, with a scope for a DSEIR that required analysis of the proposed changes associated with Phase 1 of the SCR Project.

What is the Goal of this DSEIR?

To evaluate the use of the Middleborough Secondary freight corridor to carry extended Middleborough/Lakeville commuter rail service.

The goal of this DSEIR is to evaluate the use of the Middleborough Secondary freight corridor to carry extended Middleborough/Lakeville commuter rail service, which was previously considered in the FEIS/FEIR, but did not fully meet the ridership criteria. However, in the context of Phase 1, use of the Middleborough Secondary Line will meet many of the project goals. As such, this route was evaluated for environmental impacts and mitigation measures. This DSEIR analyzes the proposed route, along with various service options and station locations/configurations for Phase 1. This DSEIR follows the format and considerations of the FEIS/FEIR to ensure consistency in approach. It supplements the 2013 FEIS/FEIR and reviews new elements associated with the Phase 1 Service that were not previously studied. This DSEIR does not review elements of the SCR Project that were previously included in the FEIS/FEIR analysis and remain unchanged.

What Alternatives Did MassDOT Consider for Phase 1 Service?

MassDOT considered multiple service options and selected the Middleborough route for Phase 1 service.

MassDOT selected the Middleborough route for Phase 1 service because it will support earlier commuter rail service to Fall River and New Bedford by taking advantage of existing active freight rail lines owned by MassDOT (the Middleborough Secondary, New Bedford Main Line, and Fall River Secondary) with ample operational capacity to add passenger service. Currently, there are only two routes to reach Fall River and New Bedford without significant new track construction: (1) via the Northeast Corridor with a connection at Attleboro, or (2) via the Middleborough Secondary to the Old Colony Main Line. Operating Phase 1 service through Attleboro would require adding train trips along the heavily congested Northeast Corridor. That corridor includes MBTA trains to Providence and Wickford Junction, RI, as well as frequent Amtrak Acela and Northeast Regional service. The Middleborough Alternative will allow service to be extended from Middleborough with a limited number of new trains. The Middleborough Alternative does not have significant environmental impacts, can be constructed without substantial adverse impacts to the existing transportation system and within a reasonable time frame, and provides both short-term and long term benefits to MBTA operations.

The selected alternative provides the shortest distance and travel times for passengers from the South Coast to Boston

MassDOT views Phase 1 service as an interim service until the full-service route along the Stoughton corridor can be designed, permitted, and constructed. The Phase 1 service provides utility in the short term by meeting many of the project goals to deliver service to New Bedford and Fall River. It accomplishes the goal of earlier service and uses part of the Full Build infrastructure, thereby increasing the value of the Phase 1 investment.

The DSEIR alternatives analysis considered several potential commuter rail service options to deliver Phase 1 service between Boston and Fall River/New Bedford using various points of origin for service and boarding. Multiple service options with variations in train movements through the connecting points of Cotley Junction and Pilgrim Junction (where the Southern Triangle connects to the Middleborough Secondary and where the Middleborough Secondary connects to the Middleborough Main Line) were considered. These service options included siting the stations in Taunton Center and Taunton Depot as described in the FEIS/FEIR, constructing a new

station in East Taunton south of Cotley Junction, modifying the existing station in Lakeville, providing a new station in downtown Middleborough, modifying the Bridgewater station and track between Bridgewater and the Middleborough/Lakeville Station, and constructing a new station in Pilgrim Junction. Each of the options would provide varying levels of operational flexibility, environmental impact, and trip times. The alternatives selection process is detailed in Chapter 2 of the DSEIR. Each option considered would provide a one-seat ride between Boston and Fall River/New Bedford (meaning passengers board the train and remain aboard for the entire duration of the trip without transferring to another train or bus).

The selected alternative, which includes a new station in East Taunton and a new station at Pilgrim Junction in Middleborough, would avoid any time-consuming reverse moves (where the trains must travel out of direction to make station stops), provides the greatest operational flexibility and provides the shortest distance and travel times for passengers from the South Coast to Boston. The option selected also minimizes environmental impacts from new infrastructure, would provide service by 2022, would not preclude future Cape service, in accordance with project goals.

What's Included in the Phase 1 Project?

Phase 1 service will include the stations proposed in the FEIS/FEIR south of Cotley Junction, with the exception of Battleship Cove (in Fall River) which will be included in the Full Build Project. Two stations (Freetown and Fall River Depot) require modification unrelated to the phasing of the SCR Project, while the planned Taunton Depot station will be relocated south of Cotley Junction and renamed the East Taunton Station. The relocated Taunton Station will be in service in both Phase 1 and the Full Build. Phase 1 will also include a new station in Middleborough. Overnight layover facilities, as previously proposed in New Bedford and Fall River, will also be constructed as part of Phase 1.

The Phase 1 Project will improve the existing track infrastructure and install a new Positive Train Control (PTC) signal system to address passenger safety. Because Phase 1 proposes to use the existing Middleborough Main Line into South Station, which is not electrified, Phase 1 service will utilize diesel-powered locomotives.

Elements of Phase 1

Phase 1 includes elements previously evaluated in the FEIS/FEIR and elements evaluated in this DSEIR (new Phase 1 elements are shown in **bold**).

Element 1

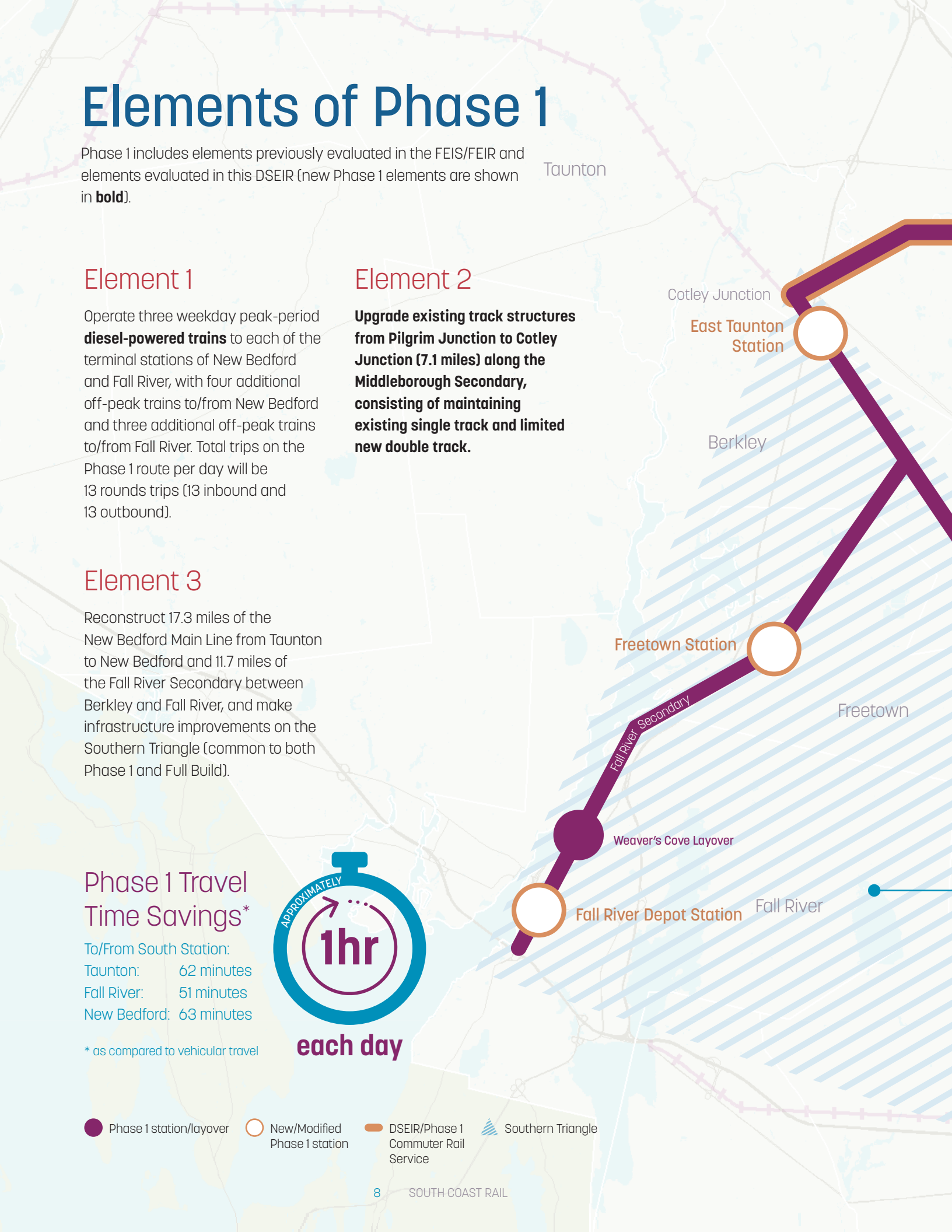
Operate three weekday peak-period **diesel-powered trains** to each of the terminal stations of New Bedford and Fall River, with four additional off-peak trains to/from New Bedford and three additional off-peak trains to/from Fall River. Total trips on the Phase 1 route per day will be 13 rounds trips (13 inbound and 13 outbound).

Element 2

Upgrade existing track structures from Pilgrim Junction to Cotley Junction (7.1 miles) along the Middleborough Secondary, consisting of maintaining existing single track and limited new double track.

Element 3

Reconstruct 17.3 miles of the New Bedford Main Line from Taunton to New Bedford and 11.7 miles of the Fall River Secondary between Berkley and Fall River, and make infrastructure improvements on the Southern Triangle (common to both Phase 1 and Full Build).



Phase 1 Travel Time Savings*

To/From South Station:

Taunton:	62 minutes
Fall River:	51 minutes
New Bedford:	63 minutes

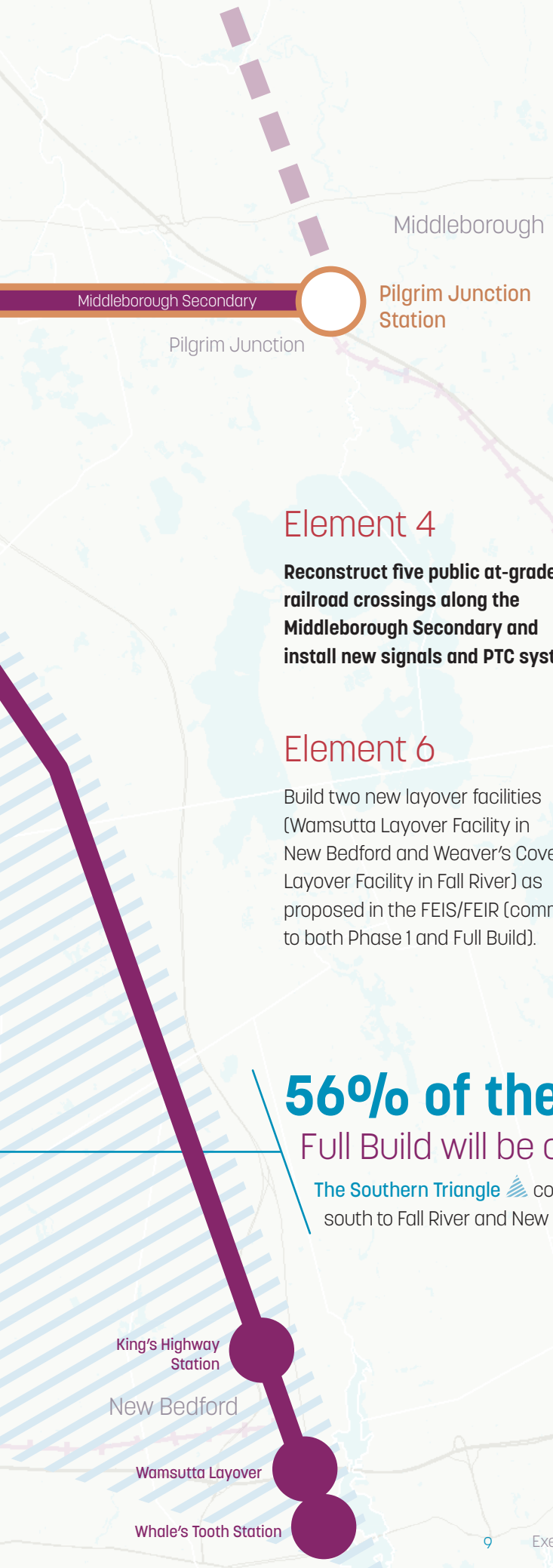
* as compared to vehicular travel

Phase 1 station/layover

New/Modified Phase 1 station

DSEIR/Phase 1 Commuter Rail Service

Southern Triangle



Phase 1 Service will provide riders with **7 million trips over 8 years** before the Full Build is completed.

Element 4

Reconstruct five public at-grade railroad crossings along the Middleborough Secondary and install new signals and PTC system.

Element 5

Build six new stations, including two as proposed in the FEIS/FEIR (King's Highway and Whale's Tooth), two with design modifications from the design shown in the FEIS/FEIR (Freetown and Fall River Depot), **one relocated from the FEIS/FEIR location (East Taunton, common to both Phase 1 and Full Build), and one newly proposed station in Middleborough (Pilgrim Junction).**

Element 6

Build two new layover facilities (Wamsutta Layover Facility in New Bedford and Weaver's Cove Layover Facility in Fall River) as proposed in the FEIS/FEIR (common to both Phase 1 and Full Build).

56% of the track needed for the Full Build will be constructed as part of Phase 1

The Southern Triangle consists of all existing freight lines from Cotley Junction in Taunton, south to Fall River and New Bedford. These lines will be used in both Phase 1 and the Full Build.

Phase 1 service will continue to stop at the existing stations on the Middleborough/Lakeville Line between South Station and Bridgewater. These stations include: South Station, JFK/UMass, Quincy Center, Braintree, Holbrook/Randolph, Montello, Brockton, Campello, and Bridgewater. Phase 1 will not require modifications to these stations.

The Phase 1 service could retain the existing Lakeville Station by providing a shuttle bus between the existing station and the new Pilgrim Junction station, with no modifications required. The existing Lakeville Station could continue to accommodate existing Cape Flyer service. Alternatively, the station could be closed, allowing the land to be made available for other uses.

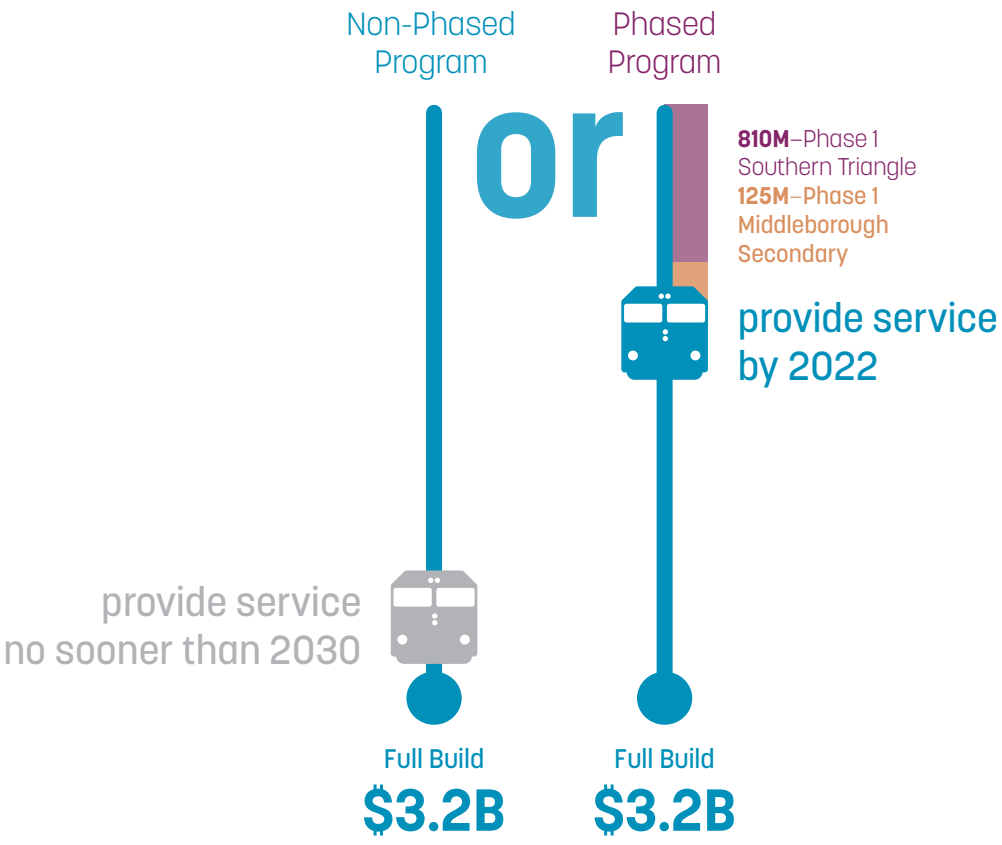
Phase 1 will include stations in Middleborough Taunton, Freetown, Fall River and New Bedford as well as layover facilities as previously reviewed in the MEPA FEIS/FEIR.

How Much Will the SCR Project Cost?

The total program capital cost of Phase 1, with escalation, is anticipated to be approximately $935 million*.

Capital costs include the cost of new infrastructure, such as new track and new stations, the cost of new transportation equipment, and the cost of coaches, but does not include operation or maintenance costs. The project cost includes 16 new coaches; other railroad equipment will be redistributed from the existing MBTA fleet. The total program capital cost of Phase 1, with escalation, is anticipated to be approximately $935 million, as detailed in Chapter 2. Much of the infrastructure that will be built as part of Phase 1 will also support the Full Build Project. Making the Middleborough Secondary improvements as part of Phase 1 does not appreciably increase the overall Full Build capital cost because the escalation savings from performing the Southern Triangle work (which makes up 56% of the track needed for the Full Build Project) by 2022 exceed those capital costs of the upgrades for passenger service included in Phase 1 that are not required for the Full Build Project. The Full Build capital cost is estimated to be $3.2 billion, inclusive of the Phase 1 costs.

Figure ES-2–(approximate) Non-phased and Phased Program Cost



* 2016 dollars, estimate as of dec. 5, 2017

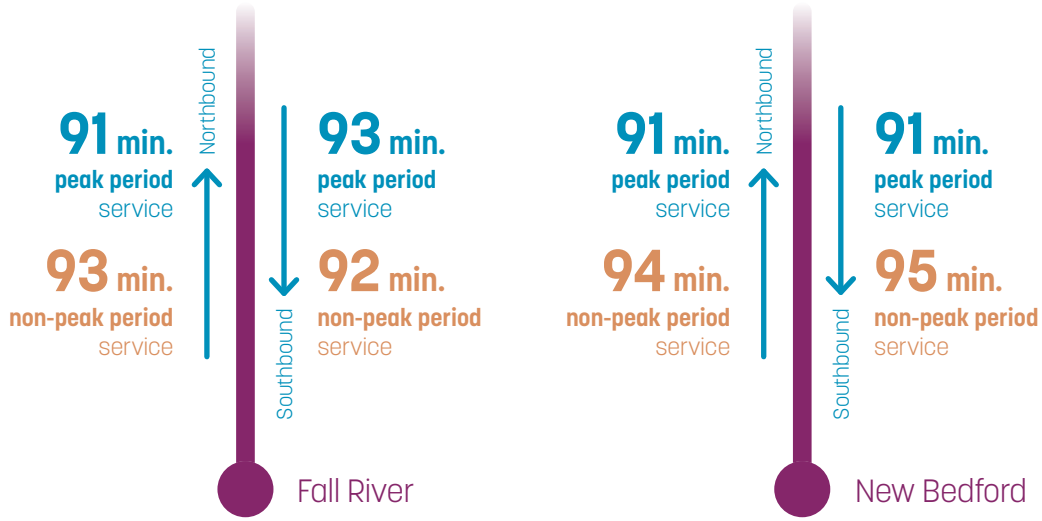
How Often Will the Trains Operate?

The proposed operations feature three peak-period trains to each of the terminal stations of New Bedford and Fall River. During off-peak periods, three or four additional trains will operate.

The proposed operations feature three peak-period trains to each of the terminal stations of New Bedford and Fall River, similar to the Full Build. The peak periods are indicated on the MBTA Middleborough/Lakeville Line schedule, effective May 22, 2017. Each peak period encompasses approximately three hours: inbound in the morning, and outbound in the afternoon/evening. During off-peak periods, three or four additional trains will operate on a 3.0- to 3.5 hour frequency from the terminal stations in Fall River and New Bedford, and with approximately 90-minute frequency from the stations in Taunton and Middleborough. This operational model provides six round trip trains per weekday from Fall River and seven round trip trains per weekday from New Bedford (13 total round trip trains per weekday between East Taunton and Boston). All trains will make all stops between the terminal stations and Holbrook/Randolph, and then will have varying stopping patterns between Holbrook/Randolph and South Station.

Two additional trains on the Old Colony Lines (Middleborough/Lakeville, Kingston/Plymouth, and Greenbush Lines) are needed to support Phase 1 service. Bi-level coaches will provide additional passenger capacity to accommodate increased ridership. Figure ES-3 shows Phase 1 average trip times developed using simulation software. The operations for Phase 1 service will continue to be refined, with the goal of providing travel times between Boston and each of the termini Station of under 90 minutes when phase 1 begins.

Figure ES-3–Average Trip Times, Phase 1



Overall travel times were developed using Berkeley's Rail Traffic Controller® simulation software. Assumptions were made based on track and signal layout.

How Were the Numbers of Expected Riders Estimated?

Ridership was modeled for the Phase 1 service using a travel demand model developed by the Central Transportation Planning Staff (CTPS).

Consistent with the approach taken in the FEIS/FEIR, ridership was modeled for the Phase 1 service using a travel demand model developed by the Boston Region MPO Central Transportation Planning Staff (CTPS). The CTPS model uses a process consistent with that of other major transportation projects in eastern Massachusetts. This travel demand model was refined specifically for the South Coast Study Area, using the current Boston region Metropolitan Planning Organization (MPO) travel model and the statewide model for the South Coast Study Area.

The Phase 1 service is expected to result in a projected increase of about 1,600 trips. Even with limited service and fewer stations than provided in the Full Build condition, Phase 1 is expected to capture a significant portion of the projected ridership for SCR in the South Coast region. The projected increase in trips in Phase 1 represents 41 percent of the projected increase in linked trips in the Full Build Scenario at approximately one-third of the cost.

Outbound train entering Middleborough-Lakeville MBTA station, Lakeville MA.

What Environmental Benefits and Impacts are Anticipated with Phase 1? What Will MassDOT/MBTA Do to Mitigate Impacts?

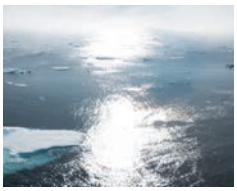
Phase 1 will likely result in some environmental benefits and impacts that were not previously anticipated, and were not described in the FEIS/FEIR. A detailed analysis of these impacts and proposed mitigation associated with the new Phase 1 elements is included in this DSEIR in Chapters 3 through 13. Below are the impacts summarized.

Land Alteration

Additional Land Alteration at one new station in Middleborough, and modifications to land alteration at stations in Taunton, Freetown and Fall River.

Climate Change

Will reduce CO_2 emissions and provide an opportunity to improve resiliency through route redundancy.

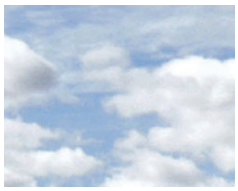


Traffic and Transportation

Traffic improvements proposed at new stations and grade crossings to mitigate any potential impacts.

Air Quality

Will not exceed National Ambient Air Quality Standards and will reduce CO and VOC.



Water Resources

Minor improvements to water quality associated with new track drainage systems and station designs incorporate water quality Best Management Practices.

Coastal Zone and Chapter 91 Waterways

No new Phase 1 elements in Coastal Zone or Tidelands. No additional Chapter 91 licensing is required.

Wetland Resources

No Wetlands Protection Act variances required. Impacts to vegetated wetlands along the Middleborough Secondary total less than 5,000 sf (Total Phase 1 impacts including the Southern Triangle are approximately 16,000 sf and are less than 5,000 sf per municipality).

Environmental Justice

No new adverse impacts to Environmental Justice communities anticipated. Phased service is expected to benefit EJ communities sooner than expected in the FEIS/FEIR.

Source:
VHB (2013 FEIS/FEIR and 2017 analysis)

Wildlife

No impacts to vernal pools or natural ecosystems along the Middleborough Secondary. Phase 1 will not cause habitat fragmentation or affect habitat quality.

Threatened and Endangered Species

Minor habitat impact to eastern box turtle from loss of vegetation within the ROW. There is an opportunity to improve connectivity by adding wildlife passages.

Hazardous Materials

Provides environmental benefits associated with assessment and remediation of contaminated soil and groundwater if found.

Noise

New noise impacts from additional train operations on Middleborough Secondary. The MBTA is committed to providing cost effective noise mitigation for the locations that meet or exceed the Severe Noise Impact Level due to train pass-by noise.

Vibration

New vibration from additional train operations on Middleborough Secondary. No vibration impacts to structures.

Cultural Resources

No direct impacts to above-ground resources or historic districts. Intensive archaeological surveys required in sensitive locations.

Indirect and Cumulative Impacts

The Phase 1 Project will result in positive indirect and cumulative effects to South Coast residents from improved transportation, including economic benefits. Due to use of existing rail lines, adverse indirect impacts anticipated to be minor. Indirect and cumulative impacts associated with Phase 1 expected to be similar to the impacts previously evaluated for the entire SCR Project. Impacts in the South Coast Region expected to be fewer than for the Full Build condition. Smart Growth initiatives will continue to be supported by MassDOT through Phase 1.

Climate Change: Photo by William Bossen on Unsplash
Hazardous Materials: Photo by Neslihan Gunaydin on Unsplash
Noise: Photo by Janko Ferlič on Unsplash
Wildlife: Photo by Vincent van Zalinge on Unsplash

Land Alteration Impacts and Mitigation

Property acquisition associated with Phase 1 requires one additional full property taking and five partial takings. No additional residential displacements beyond those reported in the FEIS/FEIR are required for Phase 1. Chapter 2 details the proposed land acquisitions that were not previously reviewed.

Environmental Justice Impacts and Mitigation

Phase 1 will provide many of the benefits of the SCR Project to the environmental justice communities located in Fall River, New Bedford, and Taunton on an accelerated schedule. The cities of Fall River and New Bedford are expected to experience improved accessibility to jobs. Phase 1 of the SCR Project would have no disproportionate adverse impact on the environmental justice populations based on Massachusetts' criteria for determining such populations. There are no designated environmental justice populations living within the environmental justice study area of the Middleborough Secondary and East Taunton and Pilgrim Junction Stations. Although Middleborough includes one census block with an environmental justice community, this is well to the north of the Middleborough Secondary, along the existing Middleborough Main Line and therefore is not included in the study area for Phase 1. There are no adverse impacts to environmental justice communities related to property acquisition, socioeconomic conditions, noise, vibration, air quality, public safety, or access and travel. Environmental justice communities in Fall River and New Bedford would see improved access to jobs. If MassDOT does not implement phased service to the region, then the Full Build Project, as the SCR FEIS/FEIR describes, would proceed, though delayed from the originally anticipated commencement of operations. Environmental justice communities in the Southern Triangle would not see these benefits until sometime after 2030.

Phase 1 will allow many of the benefits to EJ communities in Fall River, New Bedford and Taunton to be realized sooner than the Full Build

There is no mitigation required for environmental justice communities, as there are no anticipated adverse impacts.

Traffic and Transportation Impacts and Mitigation

Vehicle Miles Traveled

Reduction in Vehicle Miles Traveled (VMT) as a result of Phase 1 Service is an important indicator of the benefits of enhancing the transit system. Reducing travel on roadways through shifting trips from automobiles to trains has several environmental benefits including cleaner air and fewer greenhouse gas emissions. VMT quantifies how many miles of travel will be removed from the regional roadway network by commuters who elect to travel by train or bus rather than drive. Fewer cars on the road also eases congestion along highway corridors. Phase 1 service will achieve a daily reduction of approximately 66,400 VMT from automobiles, and would result in an increase of approximately 714 VMT from transit.

Intersection Traffic Impacts

Improvements will be made at several intersections to improve traffic flow.

The analysis looked at intersections near the new proposed stations. There are no anticipated adverse impacts caused by Phase 1 Service at the proposed Pilgrim Junction Station. However, intersection improvements are being suggested to either mitigate existing deficiencies or enhance bicycle and pedestrian access to Pilgrim Junction Station. Traffic mitigation measures are proposed at South Main Street at the I-495 ramps and at Route 105 and include a dedicated left turn lane into the station, signal timing adjustments, and improved pedestrian accommodations.

The potential for intersection impacts caused by Phase 1 Service in Taunton is due to increased activation of the existing at-grade railroad crossing on Route 140 on traffic operations along the Route 140 corridor. Specific station-related traffic impacts are not anticipated. MassDOT proposes intersection improvements to facilitate grade-crossing safety while maintaining traffic operations to the extent possible during grade crossing activation on Route 140. Improvements at Route 140 include signal timing adjustments, a new traffic signal at the new station driveway intersection with Route 140, and roadway restriping.

At the driveway entrance to Freetown Station, advanced warning signage along South Main Street and at the station driveway will be installed to alert drivers to activity at the station driveway. Measures already proposed in the SCR FEIS/FEIR at Fall River Depot Station were found to be appropriate for the redesigned station for Phase 1.

At-grade Crossing Traffic

There are five public grade crossings on the Middleborough Secondary, which were not considered in the FEIS/FEIR:

1. Route 140, Taunton
2. Middleboro Avenue, Taunton
3. Old Colony Avenue, Taunton
4. North Precinct Street, Lakeville
5. Leonard Street, Lakeville

These are active grade crossings that typically carry fright service daily.

These are active crossings that are typically activated twice a day for freight service. For Phase 1 service, each location will be equipped with a combination of new, state-of-the-art, automatic highway crossing warning (AHCW) systems and minor geometric modifications such as driveway reconfiguration, driveway closures, vegetation clearing, and utility pole relocations. In addition to installation of AHCW systems, minor modifications to driveways adjacent to the grade crossings are proposed along Old Colony Avenue and Middleboro Avenue in Taunton.

Air Quality Impacts and Mitigation

Diesel emissions were used to model Phase 1 Operations and compare train emissions with the reduction in automobile emissions that will result from the shift from motor vehicles to transit. The air quality analysis indicates that Phase 1 operations will comply with the Clean Air Act Amendments and the Executive Office of Energy and Environmental Affairs Policy on Greenhouse Gas Emissions and the National Ambient Air Quality Standards (NAAQS).

Mesoscale Analysis Results

The air quality study included a mesoscale analysis that estimates the area-wide emissions of volatile organic compounds (VOCs), nitrogen oxides (NO_X), carbon dioxide (CO_2), carbon monoxide (CO), and particulate matter (PM). The analysis evaluated the changes in emissions based on changes in the average daily traffic volumes, roadway lengths, and vehicle emission rates. The results of the mesoscale analysis show that Phase 1 Service reduces the emissions of CO, VOC, and $PM_{2.5}$. The increased train operations are expected to result in a minor increase in NO_X and PM_{10} emissions in the region, but emissions will still be well below the *de minimis* criteria, indicating Phase 1 complies with air quality regulations for these pollutants.

Microscale Analysis Results

The microscale analysis assessed air quality impacts at intersections, grade crossings and train stations. The results indicate that pollutant concentrations from Phase 1 will comply with the national air quality standards. The results for all microscale analyses show that Phase 1 will not substantially change the concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ at grade crossings.

Phase 1 will reduce greenhouse gas emissions by 7,121 short tons per year (6,460 metric tons)

Greenhouse Gas Emissions

The analysis shows that Phase 1 will reduce greenhouse gas (GHG) emissions by 7,121 short tons per year (6,460 metric tons). Since the Phase 1 Project will not increase GHG emissions, further mitigation measures are not required by the MEPA GHG Policy. However, MassDOT is proposing other measures to further mitigate GHG emissions and their impacts, including light-emitting diode (LED) lighting and electric vehicle charging stations, at station locations.

Climate Resiliency and Adaptation Impacts and Mitigation

The DSEIR identifies strategies for increasing resiliency and adapting to anticipated climate conditions including increased precipitation and extreme temperatures. MassDOT has identified potential design solutions for stations, track, bridges, and electrical systems. During final design, project designers and engineers will follow a series of steps intended to result in the selection of appropriate design solutions to increase resiliency over the design life of each project component.

Wetlands, Water Quality, and Waterways Impacts and Mitigation

Wetlands

The elements of the Phase 1 Project studied in this DSEIR will impact state and federal wetland resources due to track modifications and culvert replacements. Phase 1 impacts will be dramatically less than Full Build impacts. Total impacts (including permanent and temporary construction impacts) to vegetated wetlands associated with new Phase 1 Project elements will total less than 5,000 sf. The modified track design developed during the Phase 1 design process has resulted in a marked decrease in impacts to wetland resources within the Southern Triangle. Southern Triangle redesign has resulted in a reduction in total impacts from approximately seven acres of vegetated wetland impact as reported in the FEIS/FEIR (12 acres for entire Full Build Project) to approximately 0.37 acres for all of Phase 1. With this reduction, the overall impact to wetlands, including the new Phase 1 elements, is substantially below that previously indicated in the FEIS/FEIR for the Southern Triangle alone. All work and anticipated wetland impacts will comply with the performance standards in the Massachusetts Wetlands Protection Act (WPA) regulations (310 CMR 10.00), and therefore, Phase 1 will not require any WPA variances.

The overall impacts to wetlands, including new Phase 1 elements, are **substantially below previous estimates**

Mitigation for unavoidable wetland impacts will be conducted in accordance with state and federal requirements. MassDOT proposes to satisfy all WPA mitigation requirements on-site in a series of small compensatory wetland areas. Additional U.S. Army Corps of Engineers (USACE) requirements will be met through the USACE's in-lieu-fee program. The wetland mitigation section of Chapter 8 also describes the town-by-town mitigation required under the Massachusetts WPA.

Water Quality

The Phase 1 Project will upgrade the existing Middleborough Secondary's drainage system, providing a benefit to overall water quality over existing conditions. Stormwater management features will be incorporated into the design of the two new stations to meet state stormwater standards. The Phase 1 Project elements are not anticipated to impair any water resources.

Surface Waters

Although the Middleborough Secondary crosses or is adjacent to six named rivers, streams, and ponds and numerous unnamed minor waterbodies, Phase 1 will not result in any short- or long-term impacts to these waters. None of the bridges will be reconstructed. All culverts that need replacement will be designed to improve openness and fish passage in accordance with the Massachusetts Stream Crossing Standards.

Eastern Box Turtle.

Wildlife and Rare Species Impacts and Mitigation

The proposed upgrade of the railbed, track, and signals, and use of the Middleborough Secondary for rail service is not anticipated to result in any new adverse impacts on vegetation or wildlife. All work necessary will occur within the existing freight ROW, and will not increase habitat fragmentation or result in the loss of important wildlife habitat areas. Phase 1 along the Middleborough Secondary will not impact any vernal pools.

Track upgrades present opportunities to improve wildlife habitat connectivity by adding wildlife crossings between the ties and by reconstructing existing culverts to improve wildlife or fish passage and reduce fragmentation. The MBTA will adhere to the approved Vegetation Management Plan, as implemented with its Yearly Operating Plans, which restrict the use of herbicides in areas adjacent to wetlands or sensitive resources.

Phase 1 will have a minor impact to eastern box turtle habitat by clearing vegetation adjacent to the existing tracks to allow for improvements to the railroad infrastructure. Appropriate construction-period measures will be used to protect listed species and important coastal plain pond habitats during construction.

Noise and Vibration Impacts and Mitigation

Noise

The Phase 1 Project will introduce new passenger rail service to the study area which includes existing freight rail operations. Noise impacts have been assessed for Phase 1 at receptors along the Middleborough Secondary corridor. As discussed in Chapter 11, noise impacts can be expected at residential receptors in close proximity to the track due to train passbys and train horns

Where sensitive land uses are impacted, MassDOT will investigate the use of cost effective noise mitigation measures designed to reduce the impact.

Cultural Resources Impacts and Mitigation

MassDOT expects that a Programmatic Agreement will be signed by MassDOT, the State Historic Preservation Officer, and the USACE. This will stipulate how historic and archaeological resources will be assessed and protected during Phase 1 construction and operations.

Historic New Bedford Station. Station was demolished in 1959.

Historic

One citywide multiple resource area, one area/district, and eight individual historic properties have been identified in the Project Area of Potential Effect (APE). As discussed in Chapter 11, there will be no direct effects to these properties. The Middleborough Secondary is an active rail line; however, the minimal changes planned to infrastructure, introduction of new structures (such as signal bungalows), and construction activities such as vegetation clearing and grading along the Middleborough Secondary, could have minor indirect visual effects on nearby historic properties.

Indirect impacts may occur in the vicinity of historic properties during construction from atmospheric dust and exhaust and from noise or vibration generated by vehicles and equipment. Vegetation clearance that increases the visibility of the rail corridor and changes the setting may have a visual effect on adjacent historic properties. There will be no indirect visual effects to National Register and State Register listed or eligible historic properties from work at grade crossings or at Pilgrim Junction Station, East Taunton Station, or the Freetown and Fall River Depot Stations, as there are no such historic properties within the site boundary or APE of the stations. Any visual impacts to the setting of nearby historic properties caused by the construction of new rail signal houses (locations not yet determined) will be properly mitigated. Indirect impacts during operations could result from the introduction of additional rail service with increased noise from train pass-bys and horn blowing at grade crossings that could increase noise levels at residential historic properties.

Archaeological

There are moderate- and high-sensitivity areas for archaeological resources that extend into the proposed limit of work/limit of grading for the new sections of track and associated infrastructure along the Middleborough Secondary, as well as moderate-sensitivity areas in the proposed limits of work at Pilgrim Junction and East Taunton stations. Intensive (locational) archaeological surveys consisting of subsurface testing will be undertaken to identify any archaeological sites in these sensitive areas. While Project impacts are expected to be minor, they will be fully assessed once the intensive surveys in the Middleborough Secondary ROW and at these two proposed stations are complete.

No impacts are expected to archaeological resources in areas assessed as low-sensitivity in the Middleborough Secondary ROW, portions of the Pilgrim Junction Station, East Taunton Station, and the Freetown Station. No further archaeological investigations are needed in these low-sensitivity areas.

Hazardous Materials Impacts and Mitigation

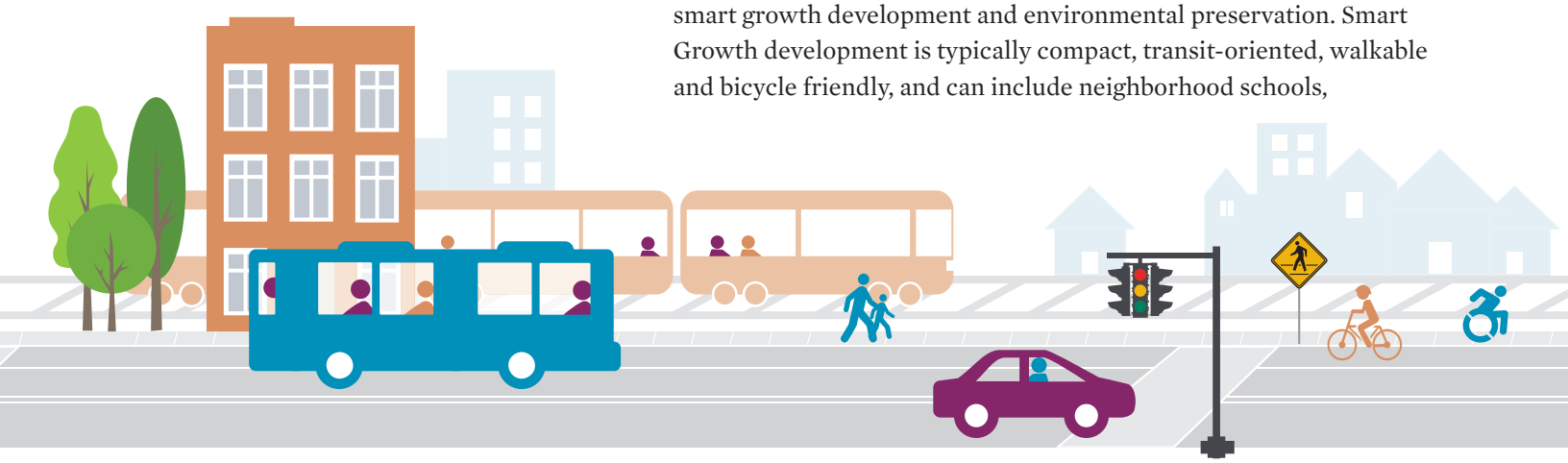
Each of the Phase 1 station sites requires that MassDOT acquire properties with recognized environmental concerns (RECs), including potentially contaminated soil or groundwater, that will require further investigation. Although sites containing RECs could increase construction costs, there will be an environmental benefit associated with remediating contaminated sites, particularly the station sites with known soil and groundwater contamination such as the Fall River Depot station site (which was previously studied in the FEIR/FEIS). The stations that will receive the greatest environmental benefits are the stations with the most RECs, since these properties are the most likely to have contaminated environmental media that will be cleaned up as part of the proposed SCR Project.

The spill or release of Oil or Hazardous Material (OHM) in the process of constructing Phase 1 is an unlikely event, and measures will be required to prevent and control any spills. The construction contractors will implement a Spill Control Program in compliance with the Massachusetts Contingency Plan (310 CMR 40.000).

Indirect and Cumulative Impacts and Mitigation

Indirect Impacts

Transportation infrastructure can spur economic and housing growth which, if not carefully planned for, have the potential to result in uncontrolled growth (sprawl) and other indirect impacts. To manage the region's rapid growth and prepare for and maximize the benefit of new transit service, the South Coast needs to plan for smart growth development and environmental preservation. Smart Growth development is typically compact, transit-oriented, walkable and bicycle friendly, and can include neighborhood schools,



complete streets, and mixed-use development within a range of housing choices. Chapter 13 of the DSEIR provides information on Smart Growth goals and initiatives already undertaken by MassDOT.

The SCR Project is anticipated to provide economic benefits and growth in jobs and households within the South Coast region. Although economic benefits from Phase 1 may be lower than for the Full Build Project due to its lower level of commuter rail service, these benefits will still be substantial and will be achieved almost a decade sooner. While these changes are economically beneficial, induced growth has the potential to affect land use and other resources. As part of the overall SCR Project, MassDOT is committed to supporting Smart Growth measures within the SCR corridor. *The South Coast Rail Economic Development and Land Use Corridor Plan*[2] (Corridor Plan) was the result of widespread collaboration between the Commonwealth, 31 corridor communities, and two Regional Planning Agencies (the Metropolitan Area Planning Council and the Southeastern Regional Planning and Economic Development District).

To guide future development, the Corridor Plan created "a blueprint for clustering jobs and homes around stations, maximizing the economic benefits of rail investment, minimizing sprawl development, and preserving the farms, fields, and forests of the South Coast."[3] To promote such smart growth, the Corridor Plan identified Community Priority Areas of Regional Significance, including Priority Development Areas (PDAs) and Priority Protection Areas (PPAs). According to the Corridor Plan, PDAs are areas "with the greatest capacity or potential to accommodate new development," while PPAs "include land or environmental resources that are not permanently protected but are worthy of increased levels of protection through planning, regulation, conservation, or acquisition."[4] All communities to be served by Phase 1 are addressed in the Corridor Plan.

MassDOT and the EOHED have

awarded nearly $1.7 million in Technical Assistance grants

to South Coast cities and towns.

For seven years, MassDOT and the Executive Office of Housing and Economic Development (EOHED) have awarded Technical Assistance grants to South Coast cities and towns. The grants consist of nearly $300,000 each year, totaling nearly $1.7 million to date. MassDOT and EOHED plan to continue this program through the start of South Coast Rail service. The proposals are developed by the communities with assistance from the regional planning agencies (RPAs) serving the South Coast. The RPAs assist the communities in implementing their projects. The regional planning agencies are Southeastern Regional Planning & Economic Development District

2 Goody Clancy. 2009. South Coast Rail Economic Development and Land Use Corridor Plan. Goody Clancy: Boston, MA. June 2009.

3 Ibid.

4 Ibid.

(SRPEDD), Old Colony Planning Council (OCPC) and Metropolitan Area Planning Council (MAPC). Cities and towns can apply for up to two projects, which must be completed by the end of the fiscal year. Emphasis is placed on proposals to advance the *Corridor Plan*, its PDA/PPA designations and the state's Sustainable Development Principles, and proposals that demonstrate a clear and achievable outcome. Almost every corridor community has taken advantage of the TA program.

Cumulative Impacts

Cumulative impact analysis is inherently resource-specific and frequently regional in scale. This DSEIR considers the impacts from Phase 1 as added to the Full Build Project as well as any reasonably foreseeable projects proposed for the area that were not previously considered in the FEIS/FEIR. Because the Phase 1 service uses active freight lines, the anticipated environmental impacts are minor, and Phase 1 is not expected to substantially change the cumulative impacts of SCR on any environmental resource. They include:

- Overall wetland impacts have been reduced from the FEIS/FEIR impact levels, and Phase 1 will not cumulatively exceed previously anticipated impacts.
- Air, Environmental Justice, Historic, Hazardous Materials, Resiliency, Biodiversity, and GHG are not anticipated to be significantly impacted by Phase 1 service (or will be beneficially impacted) and cumulatively will not exceed previously reported thresholds.
- Noise will result in new areas of impacts, but these are localized and as such do not result in regional cumulative impacts.

MassDOT's Commitments

As the Phase 1 process continues, MassDOT is committed to advancing the design and permitting of the Stoughton Straight Electric Full Build Project and upholding the commitments outlined in the Section 61 Findings included in the FEIS/FEIR that pertain to Phase 1. In addition, MassDOT has provided a number of commitments for Phase 1, including Smart Growth technical assistance to impacted communities, and providing mitigation to offset Phase 1 impacts. Minimizing and managing construction period impacts is also a priority for MassDOT as Phase 1 construction is undertaken. Chapter 14 of the DSEIR includes the full list of mitigation commitments related to the Phase 1 Project. MassDOT respectfully requests that the secretary reviews this DSEIR as a final EIR in accordance with 301 CMR11.08(8)(b)(2).

Next Steps in the Decision-Making Process

1 Update Communities

MassDOT has briefed elected officials, planners and Conservation Commission members to update communities on the Phase 1 plan, and has held multiple public meetings beginning in 2016 to introduce the public to the phased approach. MassDOT is working with local Conservation Commissions in southeastern Massachusetts to file Notices of Intent under the MA Wetlands Protection Act for Phase 1. The Conservation Commission reviews include public hearings. MassDOT has also re-engaged the Interagency Coordinating Group (ICG), which includes state and federal regulators with a role in permitting the SCR Project.

2 Comment Period

MassDOT will host public meetings during the public comment period on the DSEIR. The DSEIR will be distributed to all agencies, officials, and public libraries that received the FEIS/FEIR as well as organizations that commented on the NPC. Agencies, officials, and the public will be invited to submit their comments following publication of the DSEIR.

3 FSEIR and Finalize NEPA Process

Following the comment period, if the Secretary of Energy and Environmental Affairs (EEA) determines that no substantive issues remain to be addressed, the document could be reviewed as a Final Supplemental Environmental Impact Report (FSEIR) in accordance with 301 CMR 11.08(8)(b)(2). MassDOT has respectfully requested that the Secretary make such a determination. MassDOT will also coordinate with the USACE to finalize the NEPA process for Phase 1.

4 Project Development

Following the completion of the MEPA process, and depending on the outcome of MassDOT's decision-making process, Phase 1 will proceed to the subsequent stage of project development, which includes final design, permitting, equipment procurement, real estate transactions, construction, and preparation for system operations.

How to Comment on the DSEIR

You can find the DSEIR in a number of places, including:

- At the public libraries in most South Coast communities (see the SCR Project website for a full list)
- For an electronic copy, request to Jean Fox by email (jean.fox@state.ma.us) or phone (857-368-8853)

Visit the SCR Project website www.mass.gov/southcoastrail

To comment on the document:

- Participate in the public meeting (visit the SCR Project website at www.mass.gov/southcoastrail for details).
- Send a letter, postcard or email to MEPA by March 23, 2018, the last day comments are accepted:

  Secretary Matthew A. Beaton, EOEEA
  Attn.: MEPA Office (Purvi Patel)
  100 Cambridge Street, Suite 900
  Boston, MA 02114
  fax: 617-626-1181
  email: purvi.patel@state.ma.us
  or via hand delivery

MassDOT would also like to receive a copy of your letter, which you can email or mail to Jean Fox (jean.fox@state.ma.us) or MassDOT, Ten Park Plaza, Room 4150, Boston, MA 02116.

Thank you for participating.

South Coast Rail

Draft Supplemental Environmental Impact Report