The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Richard K. Sullivan Jr.
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1181
http://www.mass.gov/envir

April 19, 2013

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: South Station Expansion Project
PROJECT MUNICIPALITY	: Boston
PROJECT WATERSHED	: Boston Harbor
EEA NUMBER	: 15028
PROJECT PROPONENT	: Massachusetts Department of Transportation
DATE NOTICED IN MONITOR	: March 20, 2013

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and Section 11.03 of the MEPA Regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of a mandatory Draft Environmental Impact Report (DEIR).

As described in the ENF, the project consists of an expansion of Boston's South Station by the Massachusetts Department of Transportation (MassDOT). The project is being undertaken to allow for expansion of intercity and high-speed rail (HSR) service into South Station and to improve existing rail operations and service delivery at South Station provided by the National Railroad Passenger Corporation (Amtrak) and the Massachusetts Bay Transportation Authority (MBTA). According to MassDOT, the importance of an expanded South Station has been extensively documented in State and regional transportation plans including MassDOT's *Massachusetts State Rail Plan* (2010) and *Massachusetts Freight Plan* (2010); the Boston Region Metropolitan Planning Organization's (MPO) *Paths to a Sustainable Region*, the long-range transportation plan for the metropolitan Boston region (2011); and the MBTA's *Program for Mass Transportation* (2009).

South Station is a critical node in both the Amtrak and MBTA rail systems (it is the sixth busiest station in the national Amtrak system and is Boston's busiest multimodal transit hub). It is the terminus of Amtrak's Northeast Corridor (NEC) service and Lake Shore Limited service from Chicago via Albany; approximately 1.36 million Amtrak passengers used South Station facilities in 2011. It also serves as the terminus for the western and southern lines of the MBTA's commuter rail system and provides connections to the MBTA's Red Line, Silver Line and local bus routes. In 2012, there were approximately 80,600 weekday inbound and outbound MBTA south side commuter rail boardings (including South Station and Back Bay station). South Station's bus terminal is also a hub for intercity, regional and local bus service with over 16,000 daily bus terminal passengers and nearly 28,000 additional weekday subway and bus transit passengers.

According to the ENF, the project is part of an overall plan to improve intercity and future HSR service in the NEC, as stated in Amtrak's *NEC Master Plan,* its *Vision for High Speed Rail in the Northeast Corridor*, and its 2012 update. Projections in the ENF indicate that HSR ridership on the Acela Express will be nine times higher by 2040 (increasing from 3.2 million riders to 29.7 million riders) and that ridership on MBTA commuter rail lines will grow by at least 28 percent by 2030. Amtrak's 2030 plans call for increased service between Boston and New York City and additional trains to operate over an "inland route" connecting Boston, Worcester, Springfield and New Haven. South Station presently operates with a total of thirteen tracks, all of which are fully utilized by Amtrak and the MBTA resulting in increasing congestion and declining service reliability.[1] Furthermore, presently there is insufficient vehicle layover space to meet existing and future South Station operational requirements. Amtrak and the MBTA currently store trains in the South Station terminal while waiting for slots at the existing south side layover yards. The project includes five primary elements:

- Expansion of the South Station terminal facilities by adding up to seven tracks and platforms, construction of an approximately 215,000 square foot (sf) passenger concourse, and reconstruction of the Cove, Broadway, and Tower 1 Interlockings at the terminal approach;
- Acquisition and demolition of the U.S. Postal Service (USPS) General Mail Facility located on Dorchester Avenue to provide a 16-acre site upon which to expand South Station and restore Dorchester Avenue for public and station access;
- Creation of an extension of the Harborwalk along a reopened Dorchester Avenue that will include pedestrian, bicycle, local transit, and vehicular improvements;
- Creation of possible future joint/private development adjacent to and/or over an expanded South Station;
- Construction of additional rail layover space to address existing and future Amtrak and MBTA service expansions and other planned improvements. Layover facilities are used to store, service, inspect, and maintain trains when they are not in service.

The approximately 49-acre South Station project site is bounded by Summer Street to the north, Dorchester Avenue and the Fort Point Channel to the east, Atlantic Avenue to the west,

[1] South Station currently has less than half the original track capacity that was available when the station was first opened in 1899.

and the MBTA's Cabot Yard to the south. The South Station project site also extends along a portion of the NEC Main Line to the west past the Cove Interlocking and along the MBTA's Fairmount/Old Colony Railroad Line to the south just past the Broadway Interlocking. South Station is located at the junction of several Boston neighborhoods including Chinatown, the Leather District, the Fort Point Channel, and the Seaport-Innovation District/South Boston Waterfront.

The project also includes the construction of layover facilities at one or more sites within the greater Boston area. After completion of a layover facility alternative analysis that evaluated 28 potential locations, three sites for new and/or expanded layover facilities were further considered as part of ENF. These potential layover locations include:

- The Boston Transportation Department (BTD)-owned Tow Lot located along Frontage Road approximately one track-mile from South Station;
- Beacon Yard Park, a freight yard and intermodal terminal most recently used by CSX Transportation, Inc. (CSX) located along Cambridge Street in the Allston section of Boston, approximately four track-miles on the MBTA Framingham/Worcester Line from South Station; and
- Readville Yard 2, an existing MBTA layover yard and maintenance facility located off Wolcott Court in the Hyde Park section of Boston, approximately nine track-miles from South Station.

MEPA Procedural History

The ENF was noticed in the March 20, 2013 Environmental Monitor, commencing the 20-day comment period. On April 1, 2013, a public MEPA Scoping Session was held at One South Station in compliance with 301 CMR 11.06(2). Portions of the project site have previously been subject to MEPA review as far back as 1973. As indicated in the ENF, projects previously filed on the South Station site include:

- EEA No. 243 – South Station Urban Renewal Project;
- EEA No. 2868 – South Station Project;
- EEA No. 3173 – Temporary South Station Bus Terminal;
- EEA No. 3205 – South Station Project;
- EEA No. 4049 – Tunnel Ventilation Program Phase 1;
- EEA No. 4327 – South Station Wye Connector;
- EEA No. 3205/9131 – South Station Air Rights Project; and
- EEA No. 10270 – North/South Rail Link Project.

Of these prior filings, only three projects required the preparation of an EIR. The South Station Air Rights Project (EEA Nos. 3205 and 9131) consists of a 1.765 million square foot mixed-use development located on the northern end of the site above existing portions of South Station headhouse and tracks. The project also includes a 70,000-sf horizontally expanded bus terminal, pedestrian connections from the train station concourse and platforms to the expanded bus terminal, and a 775-space three-level parking garage located above the bus terminal. The EIR complied with M.G.L. Chapter 30 and the Proponent recently filed a Notice of Project

Change (NPC) for an extension of time. The North/South Rail Link Project consists of a three-mile tunnel linking North and South Stations and associated rail infrastructure. The DEIR for this project was determined to adequately and properly comply with the MEPA Regulations in July 2003. A Final EIR has not been filed for this project. I have received numerous comments requesting that the scope of the South Station Expansion Project improvements include underground rail tracks and platforms for the North/South Rail Link Project. I cannot mandate the specific components of a project being forwarded by any proponent, public or private, as part of the MEPA review process.

Jurisdiction and Permitting

This project is subject to MEPA review and requires the preparation of a mandatory EIR because it requires State Agency Actions and exceeds several MEPA review thresholds including:

- Provided a Chapter 91 (c. 91) License is required, expansion of an existing non-water-dependent structure, provided the use or structure occupies one or more acres of (historic) tidelands;
- New discharge or expansion in discharge to a sewer system of 100,000 or more GPD (301 CMR 11.03(5)(b)(4(a));
- Generation of 3,000 or more unadjusted new additional daily trips on roadways providing access to a single location (301 CMR 11.03(6)(a)(6)); and
- Construction of 1,000 or more new parking spaces at a single location (301 CMR 11.03(6)(a)(7)).

The project requires several permits from the Massachusetts Department of Environmental Protection (MassDEP) including, but not limited to: a c.91 Waterways License and a Sewer Connection Permit (BRP WP 74). The project also requires an Amendment to the Fort Point Channel Downtown Waterfront Municipal Harbor Plan and a Public Benefit Determination issued by the Executive Office of Energy and Environmental Affairs (EEA), a Vehicular Access Permit from MassDOT, air-rights easements or approvals from the MBTA and State Register Review (950 CMR 71.00) and Section 106 Review (36 CFR 800) by the Massachusetts Historical Commission (MHC). An Order of Conditions will be required from the Boston Conservation Commission, or in the case of an appeal, a Superseding Order of Conditions from MassDEP. The project may also require an 8(m) permit from the Massachusetts Water Resources Authority (MWRA) for potential work at Beacon Park Yard. The project requires several federal permits/approvals including, but not limited to: approval under the National Environmental Policy Act (NEPA), Part 77 Airspace Review from the Federal Aviation Administration (FAA), Modification of High Occupancy Vehicle Designation review by the Federal Highway Administration (FHWA), Section 4(f) Review by the United States Department of Transportation (USDOT) and a National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the United States Environmental Protection Agency (USEPA). The project is subject to the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol.

The project will receive Financial Assistance in the form of a funding from the Commonwealth and the Federal Railroad Administration (FRA). Therefore, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF submitted by MassDOT included a completed form, a project description, required plans and maps, the ENF distribution list, and the Layover Report. The ENF focused primarily on outlining the potential alternatives to be explored further as part of the DEIR process, consistency with local, regional and State policy and transportation plans, and potential impacts to wetland resource areas including filled tidelands. MassDOT acknowledged the need for significant amounts of additional environmental study in a variety of areas including transportation, air quality, noise and vibration, tidelands and wetlands impacts, historic resources, solid and hazardous waste, and GHG emissions.

Alternatives Analysis – South Station Terminal

As indicated in the ENF, MassDOT has yet to identify a preferred project alternative for either the South Station site or layover facilities; however, the ENF included schematic drawings and a general description of several alternatives for each scenario. For the South Station terminal four alternatives were identified:

- **No Build Alternative** – This alternative is the future baseline against which all the other project alternatives will be compared. This alternative assumes that the South Station complex, including the headhouse, track operations and the USPS General Mail Facility will all remain in their current condition. Dorchester Avenue would remain predominantly in private use by the USPS. This alternative also assumes the construction of the South Station Air Rights Project (EEA Nos. 3205/9131).
- **Alternative 1 - Transportation Improvements Only** – This alternative includes the previously approved South Station Air Rights Project and an expansion of South Station onto the adjacent USPS property. The USPS General Mail Facility would be demolished to make way for a 215,000-sf expansion of the existing 69,000-sf transit concourse and 126,000 sf of office space, for a total terminal size of 410,000 sf. Up to seven new tracks and platforms will be constructed along with the extension of some existing platforms to create a total of 20 tracks. Additionally, the Cove, Broadway and Tower 1 Interlockings at the terminal approach will be reconstructed. Dorchester Avenue would be restored for public and station access, reconnecting it to Summer Street as a public way with landscaping and improved pedestrian and cycling connections (sidewalks, crosswalks, and bike lanes). This restoration would also include construction of a long-awaited extension of the Harborwalk along a reopened Dorchester Avenue. The project would be constructed in accordance with c.91 standards for non-water-dependent infrastructure facilities and City of Boston zoning requirements. This alternative also includes the construction of additional layover facilities at one or more sites.

- **Alternative 2 - Joint/Private Development Minimum Build** – This alternative includes all the components from Alternative 1, plus provisions for future joint/private development of up to 850,000-sf of mixed-use space consisting of office, retail, residential and hotel uses, with building heights up to approximately 12 stories and up to 470 parking spaces. This alternative would be constructed in accordance with existing State and local regulations including existing c.91 regulations, the Fort Point Downtown Municipal Harbor Planning Area (the Municipal Harbor Plan (MHP)) requirements and the Massachusetts Coastal Zone Management (CZM) Program. This alternative also includes the construction of additional layover facilities at one or more sites.
- **Alternative 3 – Joint/Private Development Maximum Build** – This alternative includes all of the components from Alternative 1, plus provisions for future joint/private development of approximately 2.5 million sf of mixed-use development consisting of office, retail, residential and hotel uses, with building heights up to 26 stories and approximately 1,370 parking spaces. This alternative would be limited by the Federal Aviation Administration's (FAA's) maximum building height limits, pursuant to the Terminal Instrument Procedures (TERPS) regulations applicable to Boston Logan International Airport. These restrictions would limit building heights to approximately 290 feet and require an amendment to the Municipal Harbor Plan, modifying applicable c.91 regulations. This alternative also includes the construction of additional layover facilities at one or more sites.

Alternatives Analysis – Layover Facilities

The ENF also included a discussion of potential layover facility site alternatives. The ENF described layover facility needs and summarized the formal *Layover Facility Alternatives Report* (the Layover Report) prepared by MassDOT in March 2013. A complete copy of the Layover Report was included in an appendix to the ENF. As noted previously, current layover facility capacity deficiencies has led to sub-optimal operations and will likely not meet the needs of proposed future ridership on Amtrak and the MBTA. The Layover Report described existing conditions, including an inventory of the four existing Amtrak and MBTA layover areas and types of activities conducted at each. These existing facilities include:

- Amtrak's Southampton Street Yard – owned and operated by Amtrak, this 16-track facility is located north of Southampton Street, between the MBTA's Old Colony Main Line and the Dorchester Branch. This facility is the primary train storage and layover facility for Amtrak in Boston and the MBTA has an agreement with Amtrak to store train consists[2] here during daylight hours.
- Amtrak's Front Yard – owned by Amtrak, this five-track facility is located east of the Widett Circle Access Road and north of the Dorchester Branch between the Southampton Street Yard and the wet/dry loop tracks for the Amtrak train wash building. This yard is currently used for layover of MBTA commuter train consists on three of the tracks, while the remaining two tracks are used for Amtrak storage of on-track, non-revenue equipment and maintenance-of-way materials.

[2] A consist is a railroad term used to describe the physical makeup of a combination of locomotives and coaches coupled together and operating as one unit.

- MBTA's South Side Service and Inspection Facility – owned and operated by the MBTA, this facility consists of 57,000-sf of space in four buildings, including a two-track maintenance facility and two outdoor tracks used for locomotive fueling and servicing. The facility is located adjacent to Widett Circle, between South Station and Southampton Street Yard.
- MBTA's Readville Yard 2 – owned and operated by the MBTA, this 12-track facility includes a maintenance building and is the largest layover yard used by the MBTA for their south side service. The facility is located in the Hyde Park section of Boston adjacent to the MBTA Dorchester Branch.

The ENF summarized existing layover requirements for Amtrak during the midday and overnight. Amtrak's layover requirements include eight consists during the midday period and 13 consists overnight. According to the ENF, all of Amtrak's current layover needs are accommodated at Southampton Street Yard. The MBTA currently requires 38 consists to support its daily South Station commuter rail operations during a typical weekday. Of these 38 consists, 28 are in layover status during a typical midday period. The existing consists capacity at Southampton Street Yard (8), Front Yard (3), South Side (4) and Readville Yard 2 (10), leaves the MBTA with a midday shortfall of three consists. This results in restrictive scheduling of revenue and non-revenue trains in and out of South Station as well as the storage of trains by Amtrak and MBTA at the South Station Terminal while waiting for slots at the existing south side layover facilities.

The Layover Report summarized a series of assumptions that informed layover demand forecasts for Amtrak and the MBTA in the years 2025 and 2040. These assumptions include the usage of existing layover facilities, increased ridership demand, planned service increases in both frequency and routes, modifications to fleet vehicle mix (such as increased train length, bi-level coaches, and improved HSR service). The Layover Report concluded that in the year 2025 Amtrak will continue to be able to meet its overnight layover demands within its existing layover facilities. Specific details of Amtrak's 2040 layover needs and service and inspection requirements (including track length and support facilities) are not yet known, but it is assumed that Amtrak will need layover space beyond what is currently available. The Layover Report concluded that in the year 2025 the MBTA, with an increased fleet of 58 consists using South Station, the layover demand will increase to 43 consists. In 2025, it was assumed that layover capacity will increase to 37 consists, due to the use of a four-track layover yard on an MBTA easement at Beacon Yard, leaving the MBTA with a projected deficit of six layover slots. Layover capacity will be reduced to 30 consist spaces by 2040 due to an assumed increase in train consist length (requiring a minimum clear-track length of 760 feet apiece), precluding storage at the Front Yard facility and reducing capacity at Southhampton Street Yard. Combined with a projected increase in the number of consists to support MBTA service (66) and increased midday layover demand (49), the MBTA will have a predicted shortfall of 19 layover slots in 2040. As noted in the ENF, with anticipated increased service demands for both Amtrak and the MBTA, the lack of layover capacity will become a major constraint and limit the planned growth in rail service at South Station.

The Layover Report included a description of how potential layover sites were identified and a description of each alternative site. A total of 28 alternative sites were initially identified

based upon site criteria established by MassDOT deemed necessary to adequately support railroad operations at South Station. These criteria include: direct or nearly direct access to an existing rail line, adjacent uses compatible with the characteristics of a layover facility, avoiding adjacency with residences, if possible, site size and configuration suitable for the storage of eight car plus one locomotive consists, and proximity to South Station, favoring locations closer to South Station over those farther away. MassDOT then completed a two-tier screening assessment that included further analysis and conceptual design. The first tier screening process was used to identify "fatal flaws" based upon three key criteria including site suitability, railroad operations, and site access. At the conclusion of the first tier of screening, 18 of the 28 potential sites were eliminated from further review. The second tier screening process included the preparation of a conceptual plan for each location and a more detailed comparison of candidate sites based on factors such as: consistency with zoning, distance from South Station, site topography, environmental impacts, layover yard and main line operations, and capital improvement requirements. The Layover Report described how each remaining potential layover facility site met or conflicted with the evaluation criteria and recommended various alternatives for dismissal or continued consideration.

As noted previously, MassDOT proposed three potential layover facilities for further consideration and examination as part of the DEIR. The Beacon Park Yard conceptual layover design would provide tracks parallel to the MBTA Framingham/Worcester Line to store up to 30 consists. Expansion at this site would require a renegotiation of MassDOT's option agreement with Harvard University on a 132-foot wide area immediately north of the existing MBTA easement area at Beacon Park Yard to establish rights not conveyed as part of the current option. The BTD Tow Lot conceptual layover design would provide tracks capable of storing up to 10 consists, but would require acquisition of three full parcels and a portion of an additional parcel from the City of Boston and an easement from Amtrak. The BTD Tow Lot site would require a rail connection to be made to the MBTA's Dorchester Branch, but given its close distance to South Station impacts to the Main Line would be reduced compared to other potential layover sites. Finally, a conceptual layover facility expansion at Readville Yard 2 would create a total storage capacity for up to 18 consists with rail access via the existing yard lead connection to the MBTA Dorchester Branch at Dana Interlocking. Travel distance to South Station is the longest (8.8 miles) of the three potential layover sites proposed for further evaluation.

Notably, the Layover Report concluded that no single remaining layover facility alternative has the physical space to fulfill the entire projected 2040 layover need. The Layover Report also determined that layover of too many trainsets approaching South Station from one location could cause conflicting railroad operations and create a bottleneck. As outlined in the scope below, MassDOT will be required to evaluate a combination of the three recommended sites to assess how they can be integrated with the existing four layover sites serving South Station.

Potential environmental impacts associated with the South Station terminal project were presented as a "worst-case" scenario (e.g., Alternative 3, the Joint/Private Development Maximum Build alternative) in the ENF. A maximum build out development would increase building square footage on-site from 1,660,000 sf to 2,975,000 sf, an increase of 1,315,000 sf. Impervious areas would remain the same at 46.5 acres of the 49-acre project site. The project

would add a total of 750 housing units and increase the maximum building height by 185 feet to a 290-foot maximum. Average vehicle trips per day are predicted to increase from 5,400 trips to 9,900 trips; a creation of 4,500 new vehicle trips per day. The project would also add 1,128 new parking spaces for a site total of 1,593 parking spaces. Wastewater generation and water use would each increase by 567,000 gallons per day (gpd) for a project total of 598,000 gpd each. The South Station site includes the South Station Headhouse and Waiting Room, both of which are listed in the State and National Registers of Historic Places.

The ENF also included a description of potential environmental impacts associated with the conceptual plans prepared for the three proposed layover facilities. This included an estimate of land alteration (either additional or removal of buildings, internal roadways, parking/paved areas, or other altered areas), wetland resource area impacts (i.e., the types of resources that may be impacted either permanently or temporarily with no areas/volumes provided), and regulatory status in accordance with the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000).

A portion of the South Station terminal site is located within the Fort Point Downtown Waterfront Municipal Harbor Planning Area, for which Phase 1 and Phase 2 MHPs have been approved (March 8, 2004). These MHPs establish the planning area boundaries and outline planning principles for the Fort Point Downtown Waterfront Municipal Harbor Planning Area. The South Station terminal site contains filled former tidelands that are subject to c.91 under the authority of numerous historic licenses (310 CMR 9.00). Approximately 47 acres of the 49-acre project site include jurisdictional filled or flowed tidelands. The proposed project includes four acres dedicated to water-dependent uses, while the remaining 43 acres will be occupied by non-water-dependent uses. The ENF included a summary of these existing licenses, their date of issuance (between 1897 and 1997), and the scope of work authorized. The BTD Tow Lot and Beacon Park Yard layover sites each contain filled tidelands, but according to the ENF, the tidelands are geographically isolated from existing flowed tideland and meet the statutory definition of landlocked tidelands.

The ENF identified project components that are listed either on the State or National Registers of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth. The South Station site includes the South Station Head House (BOS.1517) which is listed in the State and National Registers of Historic Places (the Registers). The South Station site is located adjacent to the Leather District Historic District (BOS.AP) and the Fort Point Channel Historic District (BOS.CX), also listed in the Registers. The USPS General Mail Facility/South Postal Annex is included in the Inventory of Historic and Archaeological Assets of the Commonwealth (the Inventory). The BTD Tow Lot, Beacon Park Yard and Readville Yard 2 potential layover sites do not contain historic buildings or structures listed in the Registers or Inventory. The ENF included a list of historic resources listed on the Registers or Inventory within the vicinity of South Station or the three proposed layover facility locations.

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope.

Project Description and Permitting

The DEIR should include a detailed description of the proposed project and describe any changes to the project since the filing of the ENF. The DEIR should include updated site plans for existing and post-development conditions for each potential project alternative at a legible scale. For the South Station terminal site, these conceptual plans should clearly identify vehicle access points, pedestrian corridors and access points, wetland resource areas and c.91 jurisdictional limits, the type and location of vehicle and bicycle parking (including shared bicycle infrastructure), and stormwater, wastewater and water supply infrastructure. The DEIR should describe how the proposed development scenarios and expanded station operations will be integrated into the existing South Station building and platforms, including connections to other modes of transit (e.g., private and MBTA buses, Red Line and Silver Line) and Main Line commuter rail operations. For the potential layover facilities, these conceptual plans should clearly identify proposed track placement, the types of support buildings or structures proposed, adjacent land uses, existing on-site infrastructure (i.e., existing rail-yard operations, etc.) stormwater management infrastructure, and vehicle access points. The DEIR should identify the types of signal, track (new sidings or double tracking to increase capacity) or interlocking upgrades proposed as part of the project and include their location on the project's site plans.

The DEIR should include a discussion of future permitting requirements associated with the project, identifying permitting requirements specific to each identified development scenario and layover facility location. Additionally, while this project is not subject to the EEA Environmental Justice (EJ) Policy, MassDOT has committed to evaluate the project for potential impacts to EJ communities based on federal and State guidelines. The effects of the project alternatives on EJ populations will be evaluated relative to their overall effects to determine whether impacts in the No Build and Build conditions will be disproportionate or adverse on EJ communities or populations.

Alternatives Analysis

The ENF noted that MassDOT has not currently identified a preferred alternative for the project. The DEIR should include an expanded alternative analysis that builds off the preliminary data presented in the ENF and provide additional description and data outlining the potential environmental impacts associated with each development scenario and layover facility.

Specifically, the DEIR should provide an alternatives analysis that provides conceptual site layout plans, a summary of potential environmental impacts associated with each of these alternatives, preferably in tabular format, and a supporting narrative for each of the following alternatives for the South Station Site:

- A No Build Alternative;
- Alternative 1 – Transportation Improvements Only;
- Alternative 2 – Joint/Private Development Minimum Build; and
- Alternative 3 – Joint/Private Development Maximum Build.

The DEIR should also include an alternative analysis that evaluates the following potential layover facility locations (providing refined conceptual plans, a summary of potential environmental impacts and a supporting narrative identifying the types of activities to be conducted on-site):

- BTD Tow Lot;
- Beacon Park Yard;
- Readville Yard 2; and
- Widett Circle

This layover facility alternatives analysis should consider how each potential facility will operate and meet expected operational needs either individually or in conjunction with other proposed facilities once integrated into the larger rail system (Amtrak, MBTA, freight) that connects to South Station. The DEIR should specifically address how the location and operations at any of the potential layover facility sites will impact Main Line services for Amtrak, the MBTA and freight services due to necessary train dead-heading and midday storage requirements. The DEIR should include a phasing plan that addresses sequencing and timing of the potential layover facility sites based on operational need.

As part of the DEIR, I encourage MassDOT to consider additional ways to reduce impacts to environmental resources through design modification or the addition of features to further mitigate potential impacts. Additional recommendations provided in this Certificate may result in a modified design that enhances the project's ability to avoid, minimize, or mitigate Damage to the Environment. The DEIR should discuss steps MassDOT has taken to further reduce the impacts of the project since the filing of the ENF, or, if certain measures are infeasible, the DEIR should discuss why these measures will not be adopted.

Land Impacts

The DEIR should include a description of how the South Station terminal site and the potential layover facility sites will alter existing land uses or require the relocation of existing uses. The ENF acknowledged that all development alternatives at South Station will require the demolition of the USPS General Mail Facility. The relocation of this facility, if pursued by the USPS, may be subject to separate MEPA review contingent upon the characteristics and location of a new facility. Since the South Station site is a predominantly altered area, direct land impacts are anticipated to be limited. However, the DEIR, as discussed later in this scope, should describe the project's potential impacts to jurisdictional tidelands and their associated public benefit requirements, as well as expected public realm improvements along Dorchester Avenue. The DEIR should discuss any potential easements or impacts to Article 97 land that may encumber the proposed project areas within the vicinity of South Station.

More notably, land impacts associated with the proposed layover facilities appear to have the potential to result in more substantial impacts. The DEIR should identify the location of known easements, either existing or required for project completion, and how the terms of these easements may impact project operations and the ability to construct suitable layover facilities. The DEIR should also discuss how each layover alternative will impact existing uses within the site, as applicable. In particular, the DEIR should focus on the potential current and future impacts to the Boston Department of Public Works (DPW) facility in the BTD Tow Lot layover facility alternative, impacts to existing commercial facilities in the Widett Circle layover facility alternative, and vested rights to CSX and Harvard University at the Beacon Park Yard site. MassDOT should work with the Boston DPW and City officials to assess the impacts of using the BTD Tow Lot for layover purposes on Boston DPW operations and supporting uses and present these findings in the DEIR. The DEIR should respond to Harvard University's comments regarding the layover facility analysis presented in the ENF and existing rights afforded to the MBTA, MassDOT, CSX or Harvard University. Additionally, the DEIR should evaluate the use of each layover site with consideration for how they may preclude reasonably anticipated future projects by MassDOT (highway or commuter rail service), anticipated future Amtrak service, projects identified in State and local planning documents, or development rights vested to Harvard University

Wetlands, Waterways and Tidelands

The South Station terminal is located near wetland resource areas regulated under the Massachusetts Wetlands Protection Act (WPA). The DEIR should confirm the presence of either Land Subject to Coastal Storm Flowage (LSCSF) or 100-foot buffer zone to Coastal Bank, characterize these wetland resource areas and estimate potential temporary or permanent impacts associated with construction of each project alternative. A similar assessment should be performed for each potential layover facility location, identifying regulated wetland resource areas and potential impacts. The DEIR should describe how each project element will be designed and constructed in a manner consistent with relevant performance standards established in the WPA Regulations (310 CMR 10.00). The project will require a Federal Consistency Certification because the project will receive funding from the FRA. The DEIR should include an assessment of how the project will be designed and implemented in a manner consistent with CZM policies.

The DEIR should include graphics that overlay key c.91 jurisdictional criteria (e.g., Historic Mean High and Mean Low Water Marks, Ordinary High Water Marks, filled tidelands, landlocked tidelands, etc.) on top of the South Station Terminal and potential layover facility conceptual plans. The DEIR should include information demonstrating how each project alternative will be designed to meet the c.91 licensing criteria for a non-water-dependent (transportation improvements, joint/private development) and water-dependent (Harborwalk extension) uses. The DEIR should include conceptual design plans, graphics and a supporting narrative that details the location of uses within the building on tidelands, facilities dedicated for public use, and proposed building heights for each development and layover alternative. For each of these scenarios the DEIR should also describe how the project will: maintain a capacity for water-dependent uses, meet shoreline utilization requirements, activate Commonwealth

Tidelands for public use, and comply with standards for non-water-dependent infrastructure facilities. The DEIR should identify areas on or adjacent to the project site that have existing c.91 Licenses and identify site attributes approved in conjunction with those historic licenses. I strongly encourage MassDOT to meet with the MassDEP Waterways program prior to preparing the DEIR to ensure that sufficient information is provided in the DEIR to assist MassDEP in providing meaningful comments on the project's ability to meet c.91 licensing standards.

According to the CZM comment letter, the 2004 Secretary's Decision on Phase 2 of the MHP (the Phase 2 Decision) anticipated an amendment of the MHP to provide for track expansion and additional development at the USPS site. The Phase 2 Decision included specific guidance requiring a comprehensive master planning effort for the area south of Summer Street prior to submitting an MHP Amendment. The master planning effort and MHP Amendment should draw from the Boston Redevelopment Authority's (BRA) Watersheet Activation Plan for the Fort Point Channel area for a list of potential public benefits for development projects along the Fort Point Channel. As noted by CZM, following this comprehensive planning process, an MHP Amendment that implements the planning vision for the area can be submitted to the Secretary for review according to the procedures outlined in 301 CMR 23.06. MassDOT should work with the City of Boston and CZM to determine how to meet the requirements set forth in the Phase 2 Decision and successfully amend the MHP. I strongly encourage MassDOT to work collaboratively with the City of Boston to expedite the commencement of the Phase 2 Decision master planning process. The DEIR should report on the status of the master planning process required in the Phase 2 Decision, providing details on the plan components, public outreach efforts or other plan aspects, as available. The DEIR should include a summary of historic master planning efforts and describe the geographic location and terms of the Phase 1 and Phase 2 MHPs for contextual purposes.

The DEIR should include the results of the potential impacts to the public realm from wind and shadow associated with the proposed development alternatives at the South Station terminal site. As committed to by MassDOT in the ENF, the DEIR should include the results of a quantitative wind analysis, including wind tunnel testing to assess potential ground-level impacts to the pedestrian environment. This analysis should focus on potential wind impacts to new and existing open spaces, including the pedestrian environment around the South Station terminal, the proposed Harborwalk extension along the Fort Point Channel, and other areas of the public realm. The DEIR should also include a shadow impact analysis, performed to meet the standards required as part of the c.91 License review process, for each development alternative (including the Transportation Only Improvements).

The project is a critical piece of infrastructure not only for the City of Boston and the surrounding region, but is key to the operation of the NEC. As a coastal city, the project has an increased susceptibility to potential damage associated with the affects of climate change, most notably sea-level rise and flooding impacts due to increase storm frequency and intensity. The DEIR should discuss how the proposed project (South Station terminal and potential layover facilities) will be designed, constructed and operated to reduce or avoid the risk of damage associated with these types of events. MassDOT should assess the potential impact of sea level rise and flooding (within the reasonable life span of the project) on public spaces, water and wastewater infrastructure, stormwater management, track elevations and passenger platforms,

track switching equipment, and other critical project elements. The CZM comment letter includes recommended sea-level rise scenarios that MassDOT should use when conducting this assessment and to assist in the selection of appropriate mitigation or adaptation strategies to make the project more flood-resistant or flood-resilient. At a minimum, CZM has recommended that MassDOT evaluate impacts of two feet of sea level rise. This assessment may also draw from data included in the Federal Emergency Management Agency's (FEMA's) update to the Suffolk County flood insurance study or available updated data regarding rainfall events. The DEIR should consider climate change adaptation strategies presented in the Massachusetts *Climate Change Adaptation Report* (2011), The Boston Harbor Association's *Preparing for the Rising Tide,* or other publications issued by U.S. EPA or the National Oceanographic and Atmospheric Administration (NOAA).

The DEIR should include a discussion of how the project complies with the Public Benefit Determination (301 CMR 13.00) criteria established for non-water-dependent projects located completely or partially within tidelands or landlocked tidelands. Specifically, the DEIR should include a discussion of: the purpose and effect of the project, impact of the project on abutters and the surrounding community, enhancement to the property, benefits to the public trust rights in tidelands, benefits provided through previously obtained municipal permits, community activities on the South Station site, environmental protection and preservation, and public health, safety, and general welfare. At the conclusion of the MEPA process (i.e., in conjunction with a Final EIR, or a Supplemental FEIR if required, I will issue a Public Benefit Determination in compliance with the provisions of *An Act Relative to Licensing Requirements for Certain Tidelands* (2007 Mass. Acts ch. 168, sec.8).

Stormwater

The DEIR should discuss how development of the South Station terminal (including the reopening of Dorchester Avenue) as well as each layover facility site will be designed in compliance with MassDEP Stormwater Management Regulations and its associated Stormwater Policy, as applicable. The DEIR should include a conceptual discussion of proposed BMPs that may be selected in the final design phase. MassDOT should demonstrate in the DEIR that the South Station terminal and potential layover facility conceptual designs include sufficient measures capable of conveying and treating estimated stormwater flows generated by the project, including a discussion of existing stormwater infrastructure, outfall locations, and connections to infrastructure susceptible to combined sewer overflows (CSOs). The stormwater analysis should evaluate and compare storm-event peak flow rates and volumes to existing conditions based upon conceptual designs for South Station and layover facilities. If groundwater recharge is required or proposed, the DEIR should demonstrate that sufficient area exists on-site to accommodate necessary recharge areas. The DEIR should include a discussion of low impact design (LID) stormwater management techniques to be incorporated at the South Station or layover facility sites.

The DEIR should identify and describe the location of existing storm drain systems that will receive stormwater flows generated by the project (both South Station terminal and layover sites). The DEIR should describe existing connections of stormwater flows to sanitary or combined sewers that will be removed in conjunction with the project and how flows from these

removed connections will be redirected to the storm drain system and associated discharge points (Fort Point Channel or otherwise). The DEIR should discuss BMPs to be implemented within the proposed parking areas to manage and treat stormwater discharges.

Water Supply and Wastewater

The DEIR should provide an estimate of wastewater generation and water usage, tabulated by use (residential, commercial, irrigation, air conditioning make-up) and location. The DEIR should clearly state assumptions used to generate these estimates. The DEIR should clarify if the proposed layover facilities will utilize water for rail car or equipment washing or for repair and maintenance activities. The DEIR should confirm the availability of sufficient water and sewer conveyance capacity for each of the project alternatives and identify if new water or sewer mains will be necessary to construct the project's various components. I encourage MassDOT's plans for exterior spaces around the expanded South Station and Dorchester Avenue to include provisions for a variety of drought-tolerant, native species to limit or eliminate project demand for irrigation.

The DEIR should include a description and supporting graphic characterizing the existing wastewater system associated with the South Station terminal and the potential layover sites from the the point of origin to the point of treatment and/or discharge. The DEIR should clarify what infrastructure is solely for sanitary purposes and what infrastructure conveys combined flows (sanitary and stormwater). As noted by the MWRA, particularly in the area near South Station, the configuration and performance of the network of sanitary, combined sewers, and combined sewer outfalls, including the frequency and volume of CSO discharges at each outfall are the subjects of Federal District Court mandates, NPDES permits issued to the Boston Water and Sewer Commission (BWSC) and MWRA, and regulatory performance standards. The DEIR should demonstrate that any proposed changes to the physical configuration, location, and/or hydraulic performance of these sewers and outfalls will not affect compliance with Federal Court mandates and regulatory requirements, as well as water quality conditions in Fort Point Channel. The DEIR must also demonstrate that the project will not compromise MWRA's or BWSC's ability to attain required long-term levels of CSO control. MassDOT should coordinate with the MWRA and the BSWC to ensure that conceptual and final design plans are consistent with applicable requirements and maximize potential benefits to the wastewater system at large. The BWSC comment letter indicates that a plan to improve a CSO outfall pipe (BOS 065) which runs under the USPS building. MassDOT should consider these improvements in its design plans and coordinate with BWSC as necessary to facilitate its construction.

MassDOT will be required to offset any increases in project-related wastewater flow with stormwater inflow reduction, infiltration (groundwater) or sewer separation in hydraulically related sewer systems. The DEIR should discuss how the project will comply with MassDEP's Policy on Managing Infiltration and Inflow in MWRA Community Sewer Systems (BRP 09-01) and with BWSC policy and regulations.

Traffic and Transportation

The DEIR should include a Traffic Impact and Access Study (TIAS) prepared in accordance with EEA/MassDOT Guidelines for EIR/EIS Traffic Impact Assessments. As noted in the ENF, this TIAS will examine existing and future 2040 No Build and Build alternative transportation conditions. The TIAS should also to include an interim 2025 traffic assessment to align traffic and transportation estimates with those generated by Amtrak and MBTA as part of their planning studies forecasting layover requirements and ridership using South Station. The TIAS should use data and methodologies provided through collaborative efforts with the Boston Transportation Department (BTD) and Central Transportation Planning Staff (CTPS) to identify study area intersections, mode-split data, and data forecasting. The TIAS should discuss existing and proposed traffic volumes and conditions, anticipated trip generation rates across all modes (vehicles, pedestrians, transit, etc.), crash rate data, level-of-service (LOS) operations at signalized and unsignalized intersections, estimated parking demand, and proposed access points and loading operations for the South Station site.

The DEIR should describe anticipated modifications to the existing roadway network, including physical modifications to the State Highway Layout and South Station Bus Terminal ramps, to implement each alternative at South Station or the potential layover facilities. The DEIR should include conceptual drawings depicting these required modifications to demonstrate their feasibility and overall integration into the roadway network and any traffic-related mitigation measures proposed by MassDOT. The DEIR should also identify any proposed modifications to bus terminal access by either private carriers or MBTA buses for each development alternative. The DEIR should describe any proposed "kiss-and-ride", shuttle bus, or taxi stand accommodations around the perimeter of South Station and how these areas will be accessed and designed to avoid conflict with bus operations, pedestrians and bicyclists. Finally, the DEIR should confirm that sufficient location exists for expanded Hubway facilities at the South Station terminal site under each development scenario.

The DEIR should evaluate and describe how reopening Dorchester Avenue to public access will potentially impact various modes of transit, including private vehicle, truck and bus traffic, pedestrians, and bicycles. The DEIR should describe how a reopened Dorchester Avenue may be used to reroute MBTA buses to provide more direct bus connections to downtown. The DEIR should include a refined conceptual plan that depicts the extent and types of proposed improvements to Dorchester Avenue, proposed connections to the Harborwalk, and broader pedestrian and bicycle connections through and around South Station to the adjacent neighborhoods (i.e., Fort Point Channel, Seaport District, South Boston, Chinatown, Leather District, etc.). These connections are critical to enhancing South Station's operations as a multi-modal transit facility as well as integrating public improvement areas into the broader urban fabric of downtown Boston and connections to the waterfront. The conceptual design for Dorchester Avenue (or any other street improvements) should comply with the City of Boston's Complete Street Initiative, which requires the incorporation of "green infrastructure" into street designs.

As noted in several comment letters, expansion of rail services at South Station will lead to increased ridership on other modes of transit service that use South Station. The DEIR should

include an analysis of how the predicted increases in rail ridership and changes to operations will impact existing and future capacity on MBTA subway and bus routes. The DEIR should also evaluate how ridership increases will affect station (entrances and exits, escalators, interior waiting areas, etc.) and platform capacities for MBTA operations both within South Station and at key stations within the downtown core of the MBTA subway system (i.e., Park Street, Downtown Crossing, State Street and Government Center). MassDOT should consider the comments received from WalkBoston with design recommendations to accommodate increased pedestrian volumes within and around South Station when advancing design plans. The DEIR should discuss the current planning (State and federal) and funding status for the North/South Rail Link project. The DEIR should describe how the proposed South Station Expansion Project will be designed to not preclude future construction of the North/South Rail Link project.

The DEIR should confirm that additional traffic associated with potential layover facilities will be negligible in volume. While traffic volumes may be limited, the DEIR should describe how vehicle access will be made to each potential layover site and if new driveways will be required to facilitate access.

I anticipate that MassDOT will be required to enter into a Transportation and Access Plan Agreement (TAPA) with the City of Boston which will outline the proposed traffic and transportation mitigation measures associated with the project contingent upon which development scenario is advanced. Furthermore, the project will likely require a Highway Access Permit from MassDOT – Highway Division and therefore associated Section 61 Findings will identify additional requirements related to traffic-related project mitigation requirements. The DEIR should include proposed traffic mitigation measures to offset unavoidable impacts associated with the project including, but not limited to, intersection improvements, pedestrian and bicycle facilities upgrades, and implementation of a Transportation Demand Management (TDM) program. As recommended by MassDEP, the DEIR should describe all reasonable opportunities for trip reduction and management tailored to the specific needs of employees and patrons with particular emphasis on transit connections and pedestrian and bicycle infrastructure amenities. MassDOT should review the recommended TDM measures presented in the MassDEP comment letter and explain which measures are proposed for adoption in conjunction with the project, or if recommendations are infeasible, explain their reason for dismissal from consideration.

The DEIR should provide additional analysis justifying the number of proposed parking spaces for each development alternative at South Station. MassDOT must demonstrate in the DEIR that the number of parking spaces have been reduced to the maximum extent practicable based upon estimated demand. The DEIR should describe how an effective parking management plan, shared parking, or fee-structures may be used to achieve this reduction in structured parking.

Air Quality

The DEIR should include the results of a noise and vibration impact analysis performed in accordance with the Federal Transit Administration (FTA) Guidance Manual for both the South Station site and the proposed layover facility locations. MassDOT will conduct a noise

and vibration monitoring program to establish ambient background noise levels within the South Station project area and proposed layover facility locations to develop the project criteria noise limits using FTA guidelines. The DEIR should present the results of the noise and vibration modeling for each design year build alternative and propose abatement measures to mitigate anticipated noise or vibration impacts that may exceed the FTA or other applicable criteria. The project must comply with applicable anti-idling regulations. Additionally, the MBTA should implement noise and operational best management practices (BMPs) equal to or more stringent than those currently utilized at other layover facilities along the commuter rail. The MBTA should ensure that a forum for citizen complaint is implemented as a BMP in the operational plan for any proposed layover facility and at South Station. I expect that the MBTA will provide documentation of these BMPs, and contractual obligations associated with the operator of the railroad in the DEIR. Specific consideration should be given to the hours of operation at each layover facility, potential idling times of locomotives and proximity to sensitive receptors. The DEIR should include a feasibility assessment of potential mitigation measures, a phasing plan for their implementation, and identification of responsible parties for their construction and maintenance. The DEIR should include a discussion of locomotive technologies, including the potential upgrades of either Amtrak or MBTA equipment (including MBTA's bus fleet that operate via South Station) within the project's design year that may provide additional air quality benefits to the region or layover and station facilities on a localized level. This discussion should also include the electrification of rail lines and the use of plug-in facilities at layover yards and the potential air quality benefits thereof.

The DEIR should include an air quality analysis consisting of a regional emissions inventory for criteria pollutants (volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), and particulate matter ($PM_{10}/PM_{2.5}$). These emissions inventories should include daily and annual emissions from the diesel locomotives and motor vehicles on roadways in the air quality study area for the existing and 2040 No Build, Build, and Build with Mitigation alternatives. Similar to the traffic studies, the air quality study should include an interim year analysis of 2025 to correspond with ridership data. MassDOT should work with MassDEP prior to the preparation of the DEIR to establish the appropriate extent of the study area and modeling methodology. I encourage MassDOT to expand the pollutants analyzed to include air toxics, diesel PM and ultrafine particulates.

The DEIR should also include a localized microscale assessment of CO hotspot, or intersection analysis, using the U.S EPA's CAL3QHC model for South Station Terminal and the four potential layover sites. MassDOT indicates that the South Station project is of "local air quality concern" and will therefore conduct a PM quantitative hotspot analysis as part of the DEIR using the U.S. EPA's December 2010 guidelines to assess emissions from diesel trains and motor vehicles within the study area. The DEIR should discuss measures to limit vehicle idling time in compliance with the Massachusetts Idling regulation (310 CMR 7.11). The DEIR should discuss possible mitigation measures to offset potential air quality impacts pending the results of the air quality analysis.

Greenhouse Gas Emissions

The DEIR should include a GHG analysis prepared in compliance with the MEPA Greenhouse Gas Policy and Protocol ("the Policy"). The Policy requires projects to quantify carbon dioxide (CO_2) emissions and identify measures to avoid, minimize or mitigate such emissions. The analysis quantifies the direct and indirect CO_2 emissions associated with the project's energy use (stationary sources) and transportation-related emissions (mobile sources). Since MassDOT has not selected a preferred joint/private-build or layover facility alternative, the DEIR should assess GHG emissions associated with each alternative to allow for a comparison of potential GHG impacts. The GHG analysis should evaluate CO_2 emissions for two scenarios as required by the Policy including 1) a Base Case and 2) a Build with Improvements Condition. In the case of the joint/private-build alternatives, the Build with Improvements alternative should include energy efficiency design measures in order to meet the Stretch Energy Code (Stretch Code), while the Base Case should be consistent with the applicable State Building Code in effect at the time the ENF was filed.[3] MassDOT should meet with staff from the MEPA office, the Department of Energy Resources (DOER) and MassDEP prior to performing the GHG analysis to confirm modeling assumptions and methodology.

The City of Boston has adopted the Stretch Code subsequent to its designation as a Green Community under the provisions of the *Green Communities Act of 2008*. Therefore, the project will be required to meet the applicable version of the Stretch Code in effect at the time of construction. The Stretch Code increases the energy efficiency code requirements for new construction (both residential and commercial) and for major residential renovations or additions in municipalities that adopt it. Projects may meet the Stretch Code requirement of 20-percent better energy efficiency than the State's base energy code by either meeting the standard of 20-percent better than ASHRAE 90.1-2007, or by using a prescriptive energy code. The DEIR should demonstrate that the project can be designed to meet the Stretch Code requirements. As applicable, project elements will also be required to be Leadership in Energy and Environmental Design (LEED) certifiable in accordance with Article 37 of the Boston Zoning Code.

Direct stationary source CO_2 emissions include those emissions from the facility itself, such as boilers, heaters, and internal combustion engines. Indirect stationary source CO_2 emissions are derived from the consumption of electricity, heat or other cooling from off-site sources, such as electrical utility or district heating and cooling systems. Mobile CO_2 emissions include those emissions associated with vehicle use by employees, vendors, customers and others, and in the case of this project, diesel trains. The Policy requires proponents to use energy modeling software to quantify projected energy usage from stationary sources and energy consumption and mobile source modeling software to predict transportation-related emissions. The DEIR should clearly state the types of modeling software used and emissions factors applied to GHG calculations.

The GHG analysis should clearly demonstrate consistency with the objectives of MEPA review, one of which is to document the means by which MassDOT plans to avoid, minimize, or mitigate Damage to the Environment to the maximum extent feasible. The DEIR should state

[3] I note that the Massachusetts State Building Code is slated for revision in mid-2013. I strongly encourage MassDOT to use the updated code when preparing the GHG analysis.

modeling assumptions and explicitly note which GHG reduction measures have been modeled and those that cannot be modeled due to the constraints of the modeling software. The DEIR should include the modeling printout for each alternative and emission tables that compare Base Case emissions in tons with the Build with Improvements Condition showing the anticipated reduction in tons and percentage by emissions source (direct, indirect and transportation). The DEIR should include a clear and complete listing of modeling inputs (e.g., R-values, U-values, efficiencies, lighting power density, etc.) for items such as equipment, walls, ceilings, windows, lighting, HVAC units, etc. for both the Base Case and Build with Improvements Condition. The DEIR should describe additional GHG reduction measures expected to provide further benefits, but are not currently quantifiable (e.g., building orientation, building commissioning, use of an energy management system, Energy Star equipment, and water conservation and wastewater reduction measures, etc.). The DEIR should also identify TDM measures proposed for each of the alternatives and the corresponding emission reductions expected. Other tables and graphs may also be included to convey the GHG emissions and potential reductions associated with various mitigation measures as necessary.

The DEIR should use of the United States Energy Information Administration (EIA) Commercial Buildings Energy Consumption Survey (CBECS) Energy Use Index (EUI) values as a benchmark for the EUI resulting from modeling both the Base Case and Build with Improvements scenarios. While not required per the GHG Policy, but required as part of Stretch Code compliance, I encourage MassDOT to calculate the EUI and then compare the modeled building's EUI to those averages presented in the CBECS. This exercise is a helpful tool to understand the comparative improvements achieved for the proposed project and identifying potential modeling errors.

The DEIR should include a draft Tenant Manual designed to influence future tenants in the mixed-use space to fit-out and operate their spaces with sustainable and energy efficient designs and operating practices to reduce overall energy demand and GHG emissions. It remains unclear if the future occupation of the mixed use space will be owner-occupied, leased, or sold to future tenants for fit-out. However, it is assumed that future developer or tenants will require City of Boston building permits for their construction or fit-out, and will be required to comply with the Stretch Code adopted by the City. MassDOT should identify potential strategies that could be adopted as part of the joint/private development agreement to ensure that the GHG reduction goals modeled as part of the DEIR are met. These strategies may also form the basis for all third party lease agreements associated with the project. These strategies may include, but should not be limited to: identification of the core and shell features that are provided that allow tenant choices in energy-related fit-out (i.e., chilled water distribution capabilities, individual electric metering, the energy management systems (EMS) and other building features); requiring or encouraging tenants to adopt appropriate sustainable design, energy efficiency, water use, water pollution control, and TDM commitments to the extent feasible as part of their respective lease agreements.

The GHG analysis should also include a renewable energy evaluation considering the use of wind power, solar or photovoltaic (PV) panels, geothermal power, or the purchase of green power. The DEIR should include a separate analysis to determine if PV systems (either ground-mounted or building-mounted) to off-set electric demand or for hot water heating purposes are

feasible in association with this project. This feasibility analysis should use online DOER and Massachusetts Clean Energy Center (CEC) resources to calculate potential project cost, payback periods and returns on investment. MassDOT should consider both first-party and third-party ownership/lease scenarios. The DEIR should state assumptions with regard to available area for PV equipment, efficiencies, etc. If feasible, I encourage MassDOT to commit to the use of PV systems at their facilities. At a minimum, buildings should be "solar ready" to facilitate future installation of PV systems. If PV is not financially feasible, I request that the Proponent commit to revisit the PV financial analysis on a regular timetable and to implement PV when the financial outcomes meet specified objectives.

Because the project will generate in excess of 500,000 gpd of wastewater, the GHG analysis must assess the GHG emissions associated with the conveyance and treatment of project-related wastewater. MassDOT should review the GHG Policy and data available on the MEPA webpage for guidance on how to complete this calculation.

Finally, I encourage the Proponent to also consider the qualitative GHG reduction benefits that could be gained through commitments to preferred parking for hybrid vehicles and electric vehicle charging stations. More information on the opportunities associated with electric vehicle infrastructure can be found at the following websites: http://www.afdc.energy.gov/afdc/fuels/electricity.html and http://www.oregon.gov/ODOT/HWY/OIPP/docs/EVDeployGuidelines3-1.pdf . EEA staff can also provide additional information on the implementation of electric vehicle charging infrastructure initiatives in Massachusetts.

The DEIR should include an assessment of GHG emissions generated by mobile sources using data gathered as part of the mesoscale analysis. The DEIR should clearly state modeling assumptions, particularly regarding diesel train operations, potential idling times at South Station or layover facilities. For vehicular traffic, the DEIR should use traffic volume, delay and speed data along with emissions factors (as described in the Policy) for a No-Build existing condition, a future (2025 and 2040) Build condition and a future (2025 and 2040) Build with Mitigation condition. The DEIR should describe mitigation measures implemented as part of the future Build with Mitigation condition modeling. These measures may include, but should not be limited to, improvements to roadway operations, physical roadway infrastructure upgrades, implementation of a TDM program, railroad operations improvements and use of CO_2 reduction technologies.

Historic Resources

The DEIR should include the results of any consultations conducted with the MHC in accordance with State Register Review (950 CMR 71.00) and Section 106 of the National Historic Preservation Act of 1966 (36 CFR Part 800). While the ENF included a summary of historic resources potentially affected by the project the DEIR should expand this summary to identify potential historic or archaeological resources listed on the Registers or Inventory located on the site of, and within the vicinity of, the Widett Circle layover facility alternative. The DEIR should also identify the Area of Potential Effect (APE) for the project for both historic and archaeological resources and identify and evaluate historic and archaeological resources therein.

Reconnaissance surveys for historic or archaeological resources within each designated APE should be prepared in a manner consistent with that described in the ENF and in consultation with MHC.

As noted in the MHC comment letter, the DEIR should take into account the potential visual, atmospheric, and physical effects (shadow and wind) that the proposed development alternatives may have on surrounding historic properties. The DEIR must also consider the effect of the proposed demolition of the USPS General Mail Facility and the potential physical effects of construction-related vibration and methodology on the South Station Head House. Studies should also be performed to evaluate the potential effects of the proposed layover facilities alternatives on nearby historic properties.

Impacts associated with the project may be unavoidable. MassDOT should work with MHC and interested parties, such as the Boston Landmarks Commission, to develop appropriate mitigation measures to minimize or mitigate impacts to historic resources. The DEIR should include possible mitigation measures to be considered as part of the State Register and Section 106 Review processes. This may include the preparation of a Memorandum of Agreement (MOA) between affected parties.

Hazardous Materials

According to the ENF, MassDOT has initiated a Phase I Environmental Site Assessment (ESA) to identify any recognized environmental conditions associated with the South Station terminal, the USPS General Mail Facility and the alternative layover sites. The project will likely require reviews relative to the MCP given the historic uses within the project area. The DEIR should summarize the results of the Phase I ESA; and include all the alternative layover sites identified in this scope as part of the assessment. Based upon the results of the Phase I ESA, the DEIR should identify any MCP-regulated environmental conditions and list recommendations for further evaluation or testing to be conducted as part of a future Phase II ESA (if warranted). The DEIR should discuss how MCP-regulated conditions may impact construction techniques (i.e., dewatering, foundation types, etc.) or potential site infrastructure (e.g., groundwater and stormwater management). The DEIR should identify any State permits related to solid and hazardous waste mitigation at both the South Station and alternative layover facility locations.

Construction Period

The project must comply with MassDEP's Solid Waste and Air Pollution Control regulations, pursuant to M.G.L. c.40, §54. MassDOT should consult the MassDEP comment letter with regard to regulatory requirements and potential mitigation measures to be implemented during the construction period. Specifically, the MassDEP comment letter has provided significant information with regard to solid waste management during the construction period, recycling of construction and demolition (C&D) waste, asbestos removal requirements, and handling of asphalt, brick and concrete (ABC) associated with demolition activities. The ENF indicated that MassDOT will incorporate recycling initiatives within demolition plans for the USPS General Mail Facility. The DEIR should include a discussion of MassDOT's

recycling goals for solid waste generated as part of the project's construction and how demolition actitivies will comply with the goals of the Massachusetts Solid Waste Master Plan. This information may be included as part of a larger draft Construction Waste Management Plan for the project.

The DEIR should also describe potential project site construction period impacts (including but not limited to traffic management, materials management, parking, air quality and noise impacts, and other items as they related to the construction period) and analyze and outline feasible measures that can be implemented to eliminate or minimize these impacts. The DEIR should include a draft Construction Management Plan (CMP) to demonstrate how construction period impacts will be mitigated. Specifically, the DEIR should identify truck traffic routes associated with construction traffic, staging areas, and how safe pedestrian, bicycle and vehicle access to South Station will be maintained throughout the construction period for each proposed project phase. Depending upon the results of the TIAS, the project may require work at a number of off-site intersections and roadways to mitigate project-related traffic impacts. The DEIR should present a conceptual plan with a list of BMPs that could be selected by project contractors to reduce construction related environmental impacts for these roadway improvement projects. These BMPs should focus on erosion and sedimentation controls, staging areas, traffic management, and air/noise pollution. The DEIR should also discuss potential construction-period dewatering activities and related permitting requirements.

I encourage MassDOT to continue to develop staging and construction period access plans in collaboration with the City of Boston, Amtrak, the MBTA and other landowners as required. The DEIR should also describe how Amtrak, MBTA commuter rail and light rail, bus, and freight service will be modified and accommodated during project construction (on a per phase basis) for both the South Station Site and construction of selected layover facilities, as applicable.

The CMP should include appropriate erosion and sedimentation control BMPs. These erosion and sedimentation controls should be implemented and maintained in accordance with the Stormwater Pollution Prevention Plan prepared in accordance with the NPDES Construction General Permit requirements. MassDOT is advised that, if sources oil and/or hazardous material (OHM) are identified during the implementation of the project, notification pursuant to the MCP (310 CMR 40.0000) must be made to MassDEP, if necessary.

In accordance with MassDOT's GreenDOT Policy Directive, contractors are required to install emission control devices on all off-road vehicles in an effort to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). I also encourage MassDOT to implement the use of recycled materials in pavement in accordance with MassDOT's Sustainable Design and Construction Best Practices.

Mitigation

The ENF did not include draft Section 61 Findings for each anticipated State Agency Action. The DEIR should include a separate chapter summarizing proposed mitigation

measures. This chapter should also include draft Section 61 Findings for each permit to be issued by State Agencies. The DEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and a schedule for implementation. The DEIR should clearly indicate which mitigation measures will be constructed or implemented based upon project phasing, either tying mitigation commitments to overall project square footage/phase or environmental impact thresholds, to ensure that measures are in place to mitigate the anticipated impact associated with each development phase.

In order to ensure that all GHG emissions reduction measures adopted by MassDOT in the Build with Improvements Condition are actually constructed or performed by the MassDOT or third-party developers, I require proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. Specifically, I will require, as a condition of a Certificate approving an FEIR (or Supplemental FEIR if necessary), that following completion of construction for each project phase, MassDOT (or a third-party developer) provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, transportation planner, general contractor) indicating that the all of the mitigation measures proposed in the FEIR have been incorporated into the project. Alternatively, MassDOT or a third-party developer may certify that equivalent emissions reduction measures that collectively are designed to reduce GHG emissions by the same percentage as the measures outlined in the FEIR, based on the same modeling assumptions, have been adopted. The certification should be supported by plans that clearly illustrate where GHG mitigation measures have been incorporated. For those measures that are operational in nature (i.e. TDM, recycling) MassDOT or the third-party developer should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the DEIR.

Responses to Comments/Circulation

The DEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the DEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the DEIR beyond what has been expressly identified in this certificate.

The Proponent should circulate the DEIR to those parties who commented on the ENF, to any State Agencies from which the Proponent will seek permits or approvals, and to any parties specified in section 11.16 of the MEPA regulations. A copy of the DEIR should be provided to DOER. A copy of the DEIR should be made available for review at the nearest neighborhood branches of the Boston Public Library.

April 19, 2013
Date

Richard K. Sullivan Jr.

Comments received:

03/22/2013	Nathaniel Curtis
04/01/2013	Stephen H. Kaiser
04/01/2013	James RePass
04/01/2013	Robert J. La Tremouille
04/01/2013	John A. Businger (with attachments)
04/04/2013	Jay Demasi
04/04/2013	A Better City
04/04/2013	Ellen Altman
04/04/2013	Boston Redevelopment Authority, Boston Transportation Department, and Boston Energy and Environment Department (joint letter)
04/05/2013	Massachusetts Office of Coastal Zone Management
04/05/2013	Frank DeMasi
04/08/2013	Joel Weber II
04/08/2013	Brad Bellows
04/08/2013	Boston Department of Public Works
04/08/2013	Representative Elaine C. O'Brien, Connecticut 61st Assembly District
04/09/2013	City of Cambridge
04/09/2013	Seaport Transportation Management Association
04/09/2013	Massachusetts Division of Marine Fisheries
04/09/2013	Sierra Club
04/09/2013	Association for Public Transportation
04/09/2013	Massachusetts Department of Environmental Protection – NERO
04/09/2013	Massachusetts Bus Association
04/09/2013	Massachusetts Historical Commission
04/09/2013	Wig Zamore
04/09/2013	Massachusetts Water Resources Authority
04/09/2013	WalkBoston
04/09/2013	Boston Water and Sewer Commission
04/09/2013	The Boston Harbor Association
04/09/2013	Harvard University
04/09/2013	495/MetroWest Partnership
04/09/2013	Stephen H. Kaiser (2nd letter)
04/11/2013	Representative Frank I. Smizik, Massachusetts 15th Norfolk District

RKS/HSJ/hsj