

# TRANS REPORT

TRANSPORTATION NEWS FROM THE BOSTON METROPOLITAN PLANNING ORGANIZATION

## Big Dig Milestone: I-90 Connector to Ted Williams Tunnel Opens

On January 17 Governor Mitt Romney, Massachusetts Turnpike Authority Chairman Matthew J. Amorello, and a host of other dignitaries marked the completion of the I-90 Connector to the Ted Williams Tunnel and Logan Airport with a ribbon-cutting ceremony. The long-awaited Connector is a major component of the immense Central Artery/Tunnel Project. It extends from the Massachusetts Turnpike's former terminus at I-93 near South Station, traveling under the Fort Point Channel, through to the Ted Williams Tunnel, and on to Logan Airport. This direct, 3.5-mile route to the airport can save drivers as much as 45 minutes over the former route, which involved I-93 northbound and the Sumner/Callahan Tunnel.

"Today we deliver a significant transportation improvement to the city and the region," Amorello said. "There are two major pieces of the Central Artery Project—the third harbor tunnel to the airport and the construction of I-93 under the city. By opening the I-90 Connector from the MassPike Extension to the Ted Williams Tunnel, we have completed the third harbor crossing portion of the project."

The dedication ceremony was held inside the Connector tunnel. In addition to Romney and Amorello, speakers included

Federal Highway Administrator Mary Peters, U.S. Representatives Edward Markey and Stephen Lynch, Massachusetts Senate President Robert Travaglini, Mayor Thomas Menino, Robert Beal of the Artery Business Committee, and

1,700 freeze pipes inserted into the ground. The soil was also injected with grouting compound to further firm it up for jacking; this took five months.

The tunnel jacking operation went on for two years without disturbing any of the

256 daily Amtrak and MBTA commuter rail trips on the tracks above. Each tunnel was pushed about three feet forward per day. This work went on 20 hours a day, six days a week. The jacking operation pushed about 75,000 tons of concrete tunnel through ground dug out by "road header" digging machines excavating a space from three to five feet ahead of the tunnel box. The road headers dug, then the jacks

pushed. The largest jacked tunnel box weighed 32,000 tons.

■ I-90 Connector *cont.* on p. 3



Governor Mitt Romney addresses the crowd at the I-90 Connector ceremony

Joseph Nigro, head of Boston Building Trades. As they stood in the chilly tunnel, all of the speakers referred to the dedication of the construction workers who built the Connector. "We salute those who envisioned and conceived this project, those who designed it, and, most importantly, those who did the work every day," Amorello said.

Up to the Fort Point Channel, the Connector is composed of four concrete tunnel boxes that were built in a construction pit nearby and then jacked into position under the South Station rail tracks. This is the first installation of jacked tunnels in the United States. The soil under the tracks was frozen using

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## TRANSPORTATION PLANNING AND PROGRAMMING COMMITTEE ACTION ITEMS

At its January 23 meeting the Boston MPO's Transportation Planning and Programming Committee released for public review an amendment to the transit element of its fiscal year 2003–2008 Transportation Improvement Program (TIP). Among other things, the amendment calls for using Grant Anticipation Notes (GANs) to purchase new emission-control buses and to accelerate the reconstruction of the Maverick Blue Line station. The Committee also considered a TIP amendment for an emergency request for the replacement of the High Street Bridge in Canton. Due to the safety concerns motivating the request, the Committee waived its requirement for a 35-day public review period and scheduled a January 30 MPO meeting for acting on the amendment. The MPO meeting will not be needed, however, because MassHighway, in consultation with FHWA, advertised the project under a statewide infrastructure funding category.

A technical memorandum prepared by the Central Transportation Planning Staff which examines transit opportunities in the North Suburban Planning Council (NSPC) subregion was approved by the Committee for public distribution. The NSPC subregion comprises the towns of Burlington, Lynnfield, North Reading, Reading, Stoneham, Wakefield, Wilmington, Winchester, and Woburn. For more information or to request a copy of the report, contact CTPS project manager Clinton Bench at (617) 973-8853 or [cbench@ctps.org](mailto:cbench@ctps.org).

## REGIONAL TRANSPORTATION ADVISORY COUNCIL

January was "Transit Month" at the Council. Two timely transit issues, the Program for Mass Transportation (PMT) and the Fairmount Line project, were the major topics of conversation at the Council's January 8 meeting. Dennis DiZoglio, MBTA Assistant General Manager, gave Council members an in-depth look at the PMT, the MBTA's long-range-vision document. Members reviewed the PMT's vision and goals, the descriptions of prescreened expansion and enhancement projects, performance measures, and the preliminary results of the detailed evaluations of projects. Bill Deignan has been representing the Advisory Council on the PMT Working Committee.

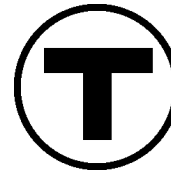
Members also heard a briefing on the Fairmount Line presented by Joe Cosgrove, MBTA Director of Planning. He gave an overview of the project's purpose, elements, and benefits and prepared members for the Council's January 15 field trip to the Fairmount Line. The trip provided members with first-hand observations of the opportunities this project will offer for opening up the line to additional access by underserved communities through station infrastructure improvements and construction of new stations.

## ACCESS ADVISORY COMMITTEE TO THE MBTA

At the January meeting of AACT, as at the Advisory Council meeting, members were encouraged to comment on draft PMT materials following a presentation on the PMT by Dennis DiZoglio. Kathy Cox, Manager of Fixed-Route Services at the MBTA, presented the monthly Office for Transportation Access report on fixed-route services and facilities, and Michael Festa of the MBTA's Design and Construction Department reported on the scope of improvements for Shawmut Station on the Red Line. It was announced that Lt. Herman Wheeler has been appointed the MBTA Police Department's liaison to AACT. Lt. Wheeler, who serves on the Community Service Unit, will give a report at each meeting.

The Committee will hold an election on May 28 to select new officers for two-year terms. Any current AACT member may run. Nomination papers may be requested by calling (617) 973-7507.

## MBTA Board Authorizes New Contract for Commuter Rail Services



On December 13 the Massachusetts Bay Transportation Authority (MBTA) announced that its board of directors had authorized General Manager Michael H. Mulhern to execute a \$1 billion, 5-year contract for commuter rail services with the Massachusetts Bay Commuter Railroad Company (MBCR).

MBCR is a Boston-based consortium of three experienced rail service providers: Alternate Concepts, Inc., Connex North America, and Bombardier. The three companies have extensive experience in operating and maintaining passenger rail systems in North America and abroad.

"I am grateful for the MBTA Board of Directors' support that is reflected by this historic vote," said Mulhern. "This contract provides us with the opportunity to contain costs while improving the delivery of public transportation throughout the state." Mulhern added, "This truly demonstrates how a healthy and effective competitive bidding process can serve the commonwealth's best interests."

"The MBCR wishes to thank the MBTA for its careful consideration and vote of confidence," said Jack Leary, MBCR Managing Director. "We look forward to beginning what we hope will be a long and successful partnership with the MBTA as we work together on the details of the contract."

The contract is expected to take effect July 1. For more information on the MBTA's commuter rail system, visit [www.mbta.com](http://www.mbta.com).

■ I-90 Connector *cont. from p. 1*

Crossing the Fort Point Channel involved the most extensive use of concrete immersed-tube tunnels in the United States. Prebuilt tubes could not be floated from off-site into the Fort Point Channel because of several low bridges, and there were no steel mills for

constructing them in South Boston. Tubes were constructed on-site in a casting basin next to the Gillette plant. The casting basin was in effect a dry dock 1,000 feet long, 300 feet wide, and 60 feet

deep—large enough to hold three football fields, an aircraft carrier, or three *Titanics* side by side. More than 450,000 cubic yards of dirt was excavated to form the basin, which was kept dry by a cofferdam. The use of this technique was another construction first in the United States.

Six tunnel sections were built on the gravel-covered floor of the casting basin. The longest of the tubes is 414 feet long, the widest 174 feet across. All are about 27 feet high. The heaviest weighs more than 50,000 tons—more than the *Titanic*, and about the weight of a battleship. Each was sealed watertight at either end. They were then floated into position and sunk onto 110 concrete shafts poured into bedrock beneath the Channel. The bottom of the tubes and tops of the shafts match up in a fit like giant Lego blocks.

The I-90 Connector is equipped with air quality monitors, surveillance cameras, and loops laid into the roadway to detect speeds. In addition, two types of electronic, variable-message “smart signs” are in use: lane-use markers (arrows and X’s) indicate which lanes are in use, and variable-message boards offer road condition information. All of these intelligent highway systems are wired directly to the

Operations Control Center (OCC) in South Boston for monitoring 24 hours a day, seven days a week.

The lighting system in the tunnels is designed to transition from bright sun to tunnel lighting without a blind spot at the portal; concrete pavements used at



tunnel entrances and exits are designed to reflect light. Air is pushed through the tunnels by giant fans in above-ground ventilation buildings. These are connected to an extensive underground duct system. Fresh air is fed through tailpipe-height openings in the tunnel walls, and air is removed through adjustable vents in the tunnel’s ceiling panels. The airflow for both exhaust and intake is controlled electronically at the OCC, based on readings from air quality monitors in the tunnel and on observation via cameras surveying tunnel traffic. A permanent drainage system collects runoff water as it enters catch basins at tunnel entrances and exits. The water goes to low-point pump stations that will send it to outfalls around the city.

The dedication ceremony was concluded with a ribbon-cutting and all those in attendance boarding buses for a ride to Logan Airport through the Connector. With the Connector’s opening, all restrictions relative to use of the Ted Williams Tunnel were lifted. All vehicles, with the exception of trucks that are carrying hazardous cargoes or are over height, are permitted to use the tunnel at all times. This will result in about 25,000 fewer vehicles per day driving on the elevated artery through the city. For more on the I-90 Connector and information on upcoming project milestones, visit [www.bigdig.com](http://www.bigdig.com).

## I-90 Connector Passes Rush Hour Test; New Exit Opens from I-93

On January 21 the I-90 Connector got its first real test during rush hour conditions and passed with flying colors. Commuters heading to Logan Airport and South Boston had dramatically improved trips via the Connector. In addition, traffic flow along the Central Artery improved with the Connector’s opening.

“We are seeing results where, for example, the Logan Express out of Framingham took 45 minutes to an hour on a good day [via I-93] to get from Framingham to Logan Airport,” Massachusetts Turnpike Chairman Matthew Amorello said. “It took 22 minutes today in rush hour. That’s not bad.” The only problem officials noticed was confusion over the new traffic pattern for motorists used to bearing right for Kneeland Street and downtown. “We’d like people heading to Logan to stay to the right and people heading for 93 North or South or South Station or Kneeland Street to stay to the left,” Amorello said.

In heavy rush hour traffic, the trip from the tunnel under the Prudential Center to the airport used to take as long as 45 minutes. In a test drive during the January 21 rush hour, the trip took six minutes, 38 seconds.

In addition, the new Exit 20 ramp from I-93 northbound to the I-90 Connector and Ted Williams Tunnel opened on January 25. The old I-93 northbound Exit 24 (Logan Airport, Callahan Tunnel, Government Center) closed permanently on January 29. Drivers leaving Logan Airport who are destined for I-93 southbound must still use the Sumner/Callahan Tunnel. The reason for this is that the ramp system that will take traffic from I-90 westbound to I-93 southbound will not be completed until the new underground portion of I-93 southbound is finished early in 2004.

For more information on the Central Artery/Tunnel Project, visit [www.bigdig.com](http://www.bigdig.com).

## New Tool for Winter Maintenance Launched by FHWA

The Federal Highway Administration (FHWA) has announced a new, sophisticated weather information tool, the Maintenance Decision Support System (MDSS). It will assist winter road maintenance managers in predicting the impact of adverse weather conditions and planning the appropriate treatment.

The system, which combines general standards of practice with the latest weather models and forecasting techniques, uses advanced winter prediction capabilities to recommend courses of action. The system displays various maintenance alternatives and their resulting benefits, which will allow highway departments to deploy snowplows and improve road conditions more effectively while also reducing response costs. In addition, the system will lead to more efficient use of chemicals, thereby reducing negative impacts on the environment.

"Having access to proper weather and road condition information before and during adverse winter weather conditions will help transportation system managers take appropriate measures to keep roads open," FHWA Administrator Mary E. Peters said. "MDSS will help make roads safer."



Under the U.S. Department of Transportation's Intelligent Transportation Systems program, the FHWA built upon the maintenance approaches already used in the winter maintenance community to develop MDSS.

The system was designed to respond to the needs of state departments of transportation. Private industry has been engaged in the development process from the beginning and will build new products and services around the core capabilities of MDSS.

Adverse weather conditions dramatically affect the nation's surface transportation system. Each year, 6,600 people die, 470,000 are injured, and 544 million hours of time are lost on America's highways during episodes of bad weather.

FHWA's Office of Operations developed MDSS through its Road Weather Management Program. The Office of Operations is committed to improving highway performance by advancing the management and operations of the transportation system in real time and in response to varying conditions. MDSS and other useful materials are available on the FHWA's Road Weather Management Web site at [www.ops.fhwa.dot.gov/weather/index.htm](http://www.ops.fhwa.dot.gov/weather/index.htm).

## Silver Line Frequency Is Improved as Ridership Increases

In response to growing ridership on its Silver Line, which opened last July, the MBTA has increased



service frequency. Formerly, buses departed every seven to eight minutes; the frequency is now five to six minutes. This is the second time since the service began that its frequency has been increased. Close monitoring of the Silver Line has shown that ridership, which is in the vicinity of 10,000 passengers a day, is about 50 percent higher than it was on MBTA bus route 49, the service it replaced.

The Central Transportation Planning Staff, under contract to the MBTA, continues to collect Silver Line data, including boardings and alightings by stop, farebox readings, trip travel times, departure/arrival times, and intermediate stop arrival times. It also gathers data at specific locations along the route indicating the number of passengers on board each trip at peak load points and the times at which trips pass by these points.

The MBTA uses this information to make service enhancements that ensure that the Silver Line, which is Boston's

■ Silver Line *cont.* on p. 5

## Logan Express Ridership Breaks Record

Massport officials announced in January that 1.18 million travelers used its Logan Express bus service in 2002. This figure represents an increase of more than 60,000 passengers, or 5.4 percent, over the previous year. This record-breaking increase in use of the service, which offers nonstop trips between secure, 24-hour suburban parking facilities and Logan Airport, continues a trend reported in *TRANSREPORT* last year of air passengers favoring

Logan Express. At that time, Massport announced that, despite a 12.7 percent decline in air travel for 2001 due to the terrorist attacks of September 11, Logan

Express's 2001 total of 1.12 million passengers was only 1 percent lower than its

2000 total. Since that time, air travel has rebounded and high-occupancy travel modes in general continue to be a popular choice for travelers to Logan.

The first Logan Express operation was established in Braintree in 1986 as part of a mitigation agreement by Massport to increase high-occupancy-vehicle ridership. The service helps to reduce traffic congestion and improves convenience for passengers. Framingham service also began in 1986, and a Woburn facility opened in 1993. Peabody service began in the fall of 2001. The accompanying table shows Logan Express ridership statistics by facility for 2001 and 2002.

**Logan Express Ridership**

Location	2001	2002	% Change
Braintree	501,489	513,475	+2.4%
Framingham	393,261	385,187	-2.1%
Peabody	11,248	49,255	NA*
Woburn	<u>215,530</u>	<u>234,422</u>	<u>+8.7%</u>
<b>Total</b>	<b>1,121,528</b>	<b>1,182,339</b>	<b>+5.4%</b>

\*Not applicable; service began in the fall of 2001.

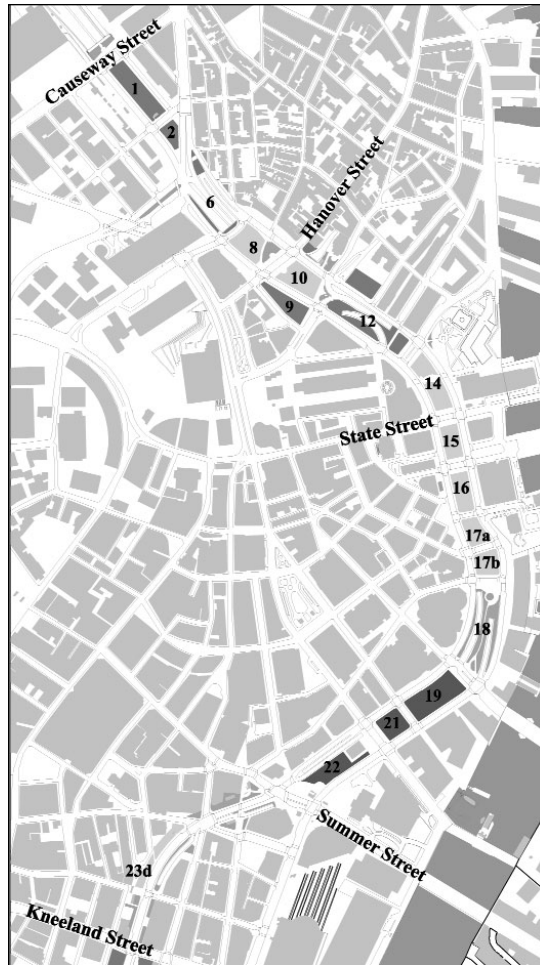
## Turnpike Authority Selects Design Teams for Central Corridor Parks

Over the past three months, the Massachusetts Turnpike Authority has selected three teams to design new parks in the Central Corridor, the portion of the Central Artery/Tunnel Project between Kneeland and Causeway Streets where the elevated Central Artery currently exists. The Central Corridor has 23 surface parcels, of which 15 have been fully designed. A five-member committee of state and city officials employed a competitive process to select design teams for the eight remaining parcels. The teams that were chosen bring to their projects a wealth of park-building experience both in Boston and around the world.

On November 19 Wallace Floyd Design Group of Boston and Gustafson Partners of Seattle were selected to design the two North End parks at Parcels 8 and 10 (see map). Parcel 8 is about 1.5 acres in size; Parcel 10 is almost 1.4 acres. The two parks will frame Hanover Street and will reconnect the North End to downtown. Wallace Floyd, a well-known firm specializing in planning and designing the urban environment, has designed several parks in the North End. Gustafson Partners has designed many parks in Europe, as well as signature public spaces in Chicago and Seattle. In Boston, the Museum of Fine Arts has hired Gustafson to do the landscape design and master plan for the museum's renovation.

On December 27 EDAW of Alexandria, Va., and Copley Wolff Design Group of

Boston were chosen to design open space and parks in the Wharf District (between the Boston Harbor Hotel and Long Wharf) at Parcels 14, 15, 16, 17a, and



17b, all of which total 4 acres. The selected team was one of 12 to submit proposals, and one of five finalists. EDAW is the largest designer of parks in the world, and among its projects is the Centennial Olympic Park in Atlanta. Working with the team will be William

McDonough Architects, Judith Nitsch Engineering, Selbert Perkins, WET Design, Fay Spofford and Thorndyke, Lim Consultants Inc., GPI Models, Schweppe Lighting, and Sherry Kafka Wagner.

On January 15 Carol R. Johnson Associates of Boston was selected to design a park for the residents of Chinatown at the approximately one-acre Parcel 23d. Among this firm's projects are Hi Hwa Park in Chung-Li City, Taiwan, the Riverfront Plaza in Hartford, Conn., and the Old Harbor Park in Boston. Working with Carol R. Johnson will be Turenscape (arguably China's foremost landscape architecture firm), Communication Arts Inc., Judith Nitsch Engineering, Lim Consultants Inc., Shekar and Associates, Chia-Ming Sze Architects Inc., Stull and Lee, Ripman Lighting and the International (a Chinese cultural institute).

"Our goal now is to produce world-class public parks and spaces along the Central Corridor," said Turnpike Authority Chairman Matthew J. Amorello. "The building blocks leading to where we are today have been carefully and gradually laid, and we will continue to proceed carefully and thoughtfully."

The total cost for the design and construction of the remaining eight parcels is approximately \$26.2 million. Construction is expected to be complete in mid-2005. For more information on the Central Corridor, visit [www.bigdig.com](http://www.bigdig.com).

### ■ Silver Line *cont.* from p. 4

first bus rapid transit service, continues to operate in the way it was designed. The Silver Line is more reliable than the old Route 49 and about 8 minutes faster on average for a one-way trip in the morning rush hour. One reason for the time savings is the creation of a bus-only lane that runs the opposite way on a one-way portion of Washington Street. This "contraflow" lane allows the Silver Line to avoid the congested Surface Artery and to travel further downtown than the

old Route 49.

Other service improvements include priority traffic signalization for buses at key intersections along the route and electronic message boards at stations that display a countdown to the time when the next bus arrives. These features are made possible by satellite tracking technology that also provides dispatchers with the location of all vehicles on the route, allowing effective intervention to restore service quickly after a disruption. In addition,

the MBTA received the go-ahead from the South End Landmark Historical District Commission to add a station at Washington Manor, a residential facility for seniors and people with disabilities, which lost a bus stop when Route 49 was discontinued.

# MEETING CALENDAR

The public is welcome to attend the following transportation-related meetings. A photo ID is usually required for access to meeting sites.

## AT THE STATE TRANSPORTATION BUILDING, 10 PARK PLAZA, BOSTON

- Thursday, February 6  
**Boston MPO Transportation Planning and Programming Committee Work Session** 10:00 A.M.  
 MPO Conference Room, Suite 2150
- Wednesday, February 12  
**Regional Transportation Advisory Council** 3:00 P.M.  
 Conference Room 1
- Wednesday, February 19  
**Boston MPO Environmental Justice Committee** 2:00 P.M.  
 MPO Conference Room, Suite 2150
- Thursday, February 20  
**Boston MPO Transportation Planning and Programming Committee** 10:00 A.M.  
 MPO Conference Room, Suite 2150
- Wednesday, February 26  
**Access Advisory Committee to the MBTA (AACT)** 1:00 P.M.  
 Conference Room 2
- Wednesday, March 5  
**MBTA Public Hearing: Comments on Draft Program for Mass Transportation** 6:00 P.M.  
 Conference Room 2/3
- Thursday, March 6  
**MBTA Public Hearing: Comments on Draft Program for Mass Transportation** 1:00 P.M.  
 Conference Room 1
- Call (617) 222-5179 for date  
**MBTA Board of Directors** 1:00 P.M.  
 Conference Room 2/3

## AT OTHER BOSTON-AREA LOCATIONS

- Monday, February 3  
**Arborway Rail Restoration Advisory Committee** 7:00 P.M.  
 Agassiz Community School  
 20 Child Street, Jamaica Plain
- Thursday, February 6  
**MBTA North Shore Transit Improvement Project** 7:00 P.M.  
 Revere City Hall  
 281 Broadway, Revere
- Wednesday, February 19  
**Central Artery/Tunnel Project Community Meeting** 6:30 P.M.  
 Harborside Community School  
 312 Border Street, East Boston
- Tuesday, February 25  
**MassHighway Design Public Hearing: Proposed Reconstruction of Union Street, Rockland** 6:30 P.M.  
 Rockland Town Hall  
 Moynihan Memorial Room  
 242 Union Street, Rockland
- Wednesday, February 26  
**Metropolitan Area Planning Council Winter Meeting** 11:30 A.M.  
 Sheraton Ferncroft Hotel  
 50 Ferncroft Road, Danvers  
 Contact Tom Hauenstein at (617) 451-2770 ext. 2072.
- Thursday, February 27  
**MassHighway Design Public Hearing: Proposed Reconstruction of Route 123 (Main Street), Norwell** 6:30 P.M.  
 Norwell Town Hall  
 Osbourne Room  
 345 Main Street, Norwell

Meeting dates and times are subject to change: please call (617) 973-7119 for confirmation. Additional transportation meetings open to the public are listed on the Boston MPO Web site, at [www.bostonmpo.org](http://www.bostonmpo.org).

## MBTA Short Notes

- On January 13 Green Line stations at Heath Street, Longwood, and the Museum of Fine Arts reopened after renovations to make them ADA accessible were completed. Work is continuing at the Brigham Circle and North-eastern stations.
- On January 27 renovations to Back Bay Station began. The work will include replacement of all station entrance doors and reconstruction of the public restroom facilities. Those facilities will be closed at all times, and temporary restrooms will be available at the Clarendon Street entrance in the rear of the station. Construction is projected to take six months.

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