



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

Office of the Administrator

400 Seventh St., S.W.  
Washington, D.C. 20590

April 4, 2005

Refer to: HIF-1

Chairman Matthew J. Amorello  
Massachusetts Turnpike Authority  
Transportation Building  
10 Park Plaza, Room 4160  
Boston, MA 02116

Dear Mr. Amorello:

The Federal Highway Administration (FHWA) has completed its interim leak assessment report on the Central Artery/Tunnel (CA/T) project. The report is part of FHWA's independent and ongoing oversight of the CA/T to ensure public safety and the appropriate use of taxpayer funds.

The report examines the causes and scope of the leaks, the effectiveness of leak control procedures now in use, options for long-term leak solutions, and recommendations for moving forward. The report's findings are based upon on-site inspections, review of relevant documentation and materials, and interviews with contractors and officials from the Massachusetts Turnpike Authority (MTA) and FHWA's Massachusetts Division Office.

In summary, FHWA found that the CA/T is structurally sound and remains safe for traffic. However, FHWA recommends that (1) inspection of tunnel wall panels be completed as soon as possible, (2) sealing low-level leaks continue, and (3) a standardized tunnel inspection program that includes inspection for water intrusion be developed, submitted to FHWA for approval and aggressively maintained.

The report classifies two types of tunnel leaks: leaks in the slurry wall panels and leaks along the interface between the tunnel roof and wall.

#### *Slurry Wall Panel Leaks*

- Defective construction of a slurry wall panel caused the September 15, 2004, breach that resulted in partial closure of the tunnel. The panel has been adequately repaired on a temporary basis while permanent repair options are being reviewed and finalized.
- The MTA has initiated a complete inspection of all the CA/T's slurry walls. Sixty-seven percent of the wall panels have been inspected as of March 29, 2005. Thus far, inspectors have identified two panels, including the one that caused the September 15, 2004 breach, that require major repair.



- FHWA recommends quick inspection of the remaining wall panels. Furthermore, FHWA will consider the following factors when reviewing the CA/T project's proposal for permanent repair; it is structurally sound, is durable and watertight, and is relatively maintenance free, minimizes disruption to nearby structures and property, and minimizes disruption to the traveling public.

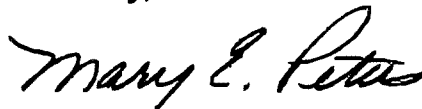
#### *Roof/Wall Interface Leaks*

- The process for identifying and sealing low-level leaks at the interface of the tunnel roof and wall is effective and should be continued. The leaks are classified as low-level as they represent dampness or infrequent dripping and can be remedied by injection of appropriate sealants by trained workers. We expect the sealing operation to be completed by the end of September.
- Freezing water from low-level leaks damaged some fireproofing material surrounding electrical conduits along the tunnel wall and roof interface. Approximately 1,200 sq. feet out of 1.8 million sq. feet of fireproofing material needs to be replaced. Sealing the low-level leaks will resolve this problem with the fireproofing material.

FHWA will issue another report once all slurry wall inspections, sealing of low-level leaks, and repair of slurry wall defects are completed later this year.

If you have any questions, please let me know.

Sincerely,



Mary E. Peters  
Administrator

cc: Acting Secretary John Ziemba  
Massachusetts Executive Office  
of Transportation