

**Maryland Transportation Authority  
Bay Bridge Reconstruction Advisory Group**

Meeting Summary

Regular Meeting  
Wednesday, October 6, 2010  
MDTA Bay Bridge Police Building

**PRESENT:** Jack Broderick, Chairman  
Barbara Span Obert

Tracy Schulz

**MDTA staff:**

Gail Moran	Doug Hutcheson
Dan Williams	Simela Triandos
Gordon Garretson	Kerry Brandt

**State Highway Administration staff:**  
Robert Rager

**Call to Order**

Chairman Jack Broderick called the meeting of the Bay Bridge Reconstruction Advisory Group (BBRAG) to order at 6:20 pm. He welcomed all attendees. Mr. Broderick said that the crab feast, held in September, went well. On behalf of the members of the BBRAG, he praised outgoing Maryland Transportation Authority Executive Secretary Ron Freeland and thanked him for his efforts to improve the Bay Bridge. Mr. Broderick also thanked Ken Cimino, former Facility Administrator, for his significant efforts, professionalism and access to individual BBRAG members. Mr. Broderick looks forward to the continuing positive relationship with Bay Bridge officials. It was noted that Gordon Garretson has been named Acting Facility Administrator.

Mr. Broderick also commended all staff for the excellent work and the recent completion of the Bay Bridge Preservation Project.

**Bridge Updates:**

Mr. Garretson reported that by the end of the following week, American Bridge will be finished all of the re-decking work on the westbound span.

Work now resumes on the eastbound span. This work will necessitate some lane closures. Work includes barrier painting and bridge and cable inspections. There also will be toll plaza work, westbound signage replacements and installation of security fencing on the anchor piers. Some of the work (some inspections, and security fencing) will not impede traffic flow because the work will be performed under the bridge deck.

Responding to a question from Ms. Span Obert, Mr. Garretson said that delays during the week of September 28 were weather-related.

Mr. Broderick said that some of the 1-877-BAYSPAN (229-7726) hotline messages are not timely. In those cases, Mr. Garretson asked BBRAG members to call him (410-537-6659) to report such problems and ask for updated information.

MDTA Acting Chief Engineer Doug Hutcheson said that a painting contract was awarded recently. A Notice To Proceed will be issued and work should begin in the spring 2011. A second painting contract will be awarded in the future. Two more cables still must be inspected; that work should be completed by the end of November 2010. It is likely that the cables will need to be rewrapped after the inspection is completed.

### **Bridge Inspections:**

Mr. Hutcheson and Deputy Director of Engineering Dan Williams presented detailed information about bridge inspections. They said that the Maryland Transportation Authority has 120 center line bridge miles and 250 bridges (10% of the total number of bridges under State control) within its jurisdiction. The purpose of inspecting the bridges is to keep them safe for the traveling public.

There were no federal mandates on bridge construction or inspection prior to 1967. Then, as a result of action taken after the Silver Bridge (which spans the Ohio River) collapsed, the federal government began to impose standards. However, at that time, there was no formalized national bridge inspection or maintenance required.

In the early 1970s, the National Bridge Inspection Program began. In 1983, the Lannis River Bridge collapsed because of pin and hanger failure. This sparked a new focus on preventing fracture failure. In 1970, following an upstate New York bridge collapse, which was caused by flooding, scour inspection and repair were mandated by the federal government. Finally, in 2007, following the I-35 bridge collapse in Minneapolis, which was caused by bridge overloading, more requirements were put in place.

The resulting National Bridge Inspection Standards cover all bridges over 20 feet in length for all publically-owned bridges. A rating scale of 0 through 9 (with 9 being excellent) was established. Bridges that are determined to be structurally deficient are rated at four or less. There are tens of thousands of structurally obsolete bridges nationally. Standards measured include: location of the bridge, what the bridge is carrying, traffic loads, percentages of trucks, grating capacity, geometry of the bridge and construction components. Two examples of conditions on structurally obsolete bridges that make them obsolete are narrower lane widths and guardrails that do not meet today's standards. Such a standard does not indicate that the bridge is unsafe -- it merely is a determination that the bridge does not meet current standards.

Another factor affecting the MDTA is the Trust Agreement, mandated by its bond holders. The Trust Agreement requires that the MDTA maintain its bridges to a high standard. It also requires annual bridge inspections. The current annual inspection is slated to begin around the end of October. Five engineering firms will be working on this inspection. The inspection will cost approximately \$4 million.

The Bay Bridge is structurally sound, but functionally obsolete.

MDTA employs 80 engineers. Its structures group manages bridge inspections. MDTA contracts with nationally-recognized bridge-inspection firms to provide the inspections. The contracts are

either joint ventures or tri-ventures. To comply with the federal standards and the Trust Agreement and to guide its bridge inspections, the MDTA has developed a detailed inspection manual. A sight inspection of all bridge parts is done annually. A hands-on inspection is done every two years. When necessary, more frequent inspections are undertaken to track matters of concern.

The federal government requires that underwater inspection be done every five years. An underwater inspection costs about \$6 million. MDTA performs underwater inspections every four years, thus surpassing federal mandates. Cable inspections are done every 30 years and currently cost about \$2.3 million. The eastbound span cables have been inspected twice, while the westbound span cables have been inspected once. Cable inspections are currently underway.

Inspections are scheduled to minimize the impact on bridge traffic. All inspectors must meet rigorous standards and be registered and have at least four years of experience. All inspectors must be highly trained, complete the two-week federal training program and also attend the training program run by the MDTA. Teams of inspectors rotate so that no bridge is re-inspected by the team that last inspected the bridge. This MDTA requirement assures that different people are inspecting the bridges and giving the structures a new look. During inspections, biweekly meetings are held to review inspection findings. MDTA engineers have found this to be a valuable tool. Inspectors are looking for many deficiencies, including cracks, rusting or oxidation, and scour and channel flows. The senses of sight, sound and touch are used by inspectors. There is a lot of non-destructive testing done, using sensor technologies. Ratings, or recommendations, used by bridge inspectors include: emergency, priority one and routine maintenance. Of course, emergency and priority one needs are met as soon as possible.

Mr. Hutcheson and Mr. Williams detailed many inspection techniques, including magnetic particle, chain dragging, ultrasound and dye penetrant. They also outlined bridge-access options, many of the inspection analysis/reporting steps and repair processes. They indicated that detailed schedules for inspections are developed, modified and circulated to affected staff on a weekly basis. These schedules are critical to bridge administrators as well because they dictate what lanes must be closed to traffic at specific times. Finally, in answering a question from Mr. Broderick, they said that they work with federal and State security officials on bridge security and bridge vulnerabilities.

As the infrastructure ages, these inspections and resulting repairs are critical. There are spots on MDTA bridges in Baltimore that are patched nightly for safety. Federal officials oversee these inspections, examining inspection records and bridges every two years.

Members thanked Mr. Hutcheson and Mr. Williams for their excellent presentation and recommended that more policy makers see it.

**Other Business:** Mr. Broderick and Mr. Tracy Schulz asked about delays on the bridge caused by disabled vehicles. Mr. Garretson said that it usually takes about 10 minutes to clear the vehicle and have traffic resume its normal patterns.

Robert Rager, State Highway Administration (SHA) community liaison, said that Jeff Wentz and Kim Trann will be attending most future BBRAG meetings to discuss State Highway Administration (SHA) activities in the vicinity of the Bay Bridge. As was discussed and agreed-upon at the July meeting, BBRAG members are expanding its scope to review activities on roads near the Bay Bridge communities. Jeff Wentz is with SHA District 2 (Upper Eastern Shore) and Kim Trann is with District 5 (Anne Arundel County and Southern Maryland)

Maryland Public Television (MPT) is producing a program on the Bay Bridge. Kerry Brandt said that MPT staff has been in touch with the MDTA on this project. MDTA is assisting MPT. More details will be shared when they are available.

Minutes of all BBRAG meetings now are available on the MDTA webpage for the public. All BBRAG members indicated that this move is good for public information.

Members expressed interest in expanding the membership. Ms. Moran indicated that staff is working to identify new members. One new member will be sent a confirmation letter shortly.

### **Minutes**

Ms. Moran circulated copies of edited minutes for BBRAG member approval. She indicated that some technical, but not substantive, changes were made in this most recent copy. The minutes were read. Barbara Spann Obert moved approval of the minutes, as amended. Her motion was seconded by Mr. Schulz. The minutes were approved, as amended.

### **Next meeting**

The next meeting will be held on Wednesday, January 5, 2011. At the request of BBRAG members, officials from the State Highway Administration (SHA) will participate in that and future meetings to discuss activities at sites in the vicinity of the Bay Bridge communities.

The meeting was adjourned at 8:18 p.m.

*Submitted by,  
Gail Moran*