

Delaware Valley Regional Planning Commission (DVRPC)

Urban Waterfront Action Group (UWAG) Meeting

Tuesday, September 18, 2012

Tacony-Palmyra Bridge Fender Replacement Project

Participants:

Fae Bailey, U.S. Coast Guard, cgsectordelbaywaterways@usgc.mil
Jim Boyer, U.S. Army Corps of Engineers, james.n.boyer@usace.army.mil
Randy Brown, Pennsylvania Department of Environmental Protection, rabrown@pa.gov
Rick Gonzalez, Kinder Morgan Fairless Hills, richard_gonzalez@kindermorgan.com
Sasha J. Hardiag, Pennoni Associates, shardiag@pennoni.com
Cassandra Khazem, Pennoni Associates, skhazem@gmail.com
Tom Kubicz, Pennoni Associates
Chris Linn, Delaware Valley Regional Planning Commission, clinn@dvrpc.org
Shawn Megill Legendre, Delaware Valley Regional Planning Commission, slegendre@dvrpc.org
Captain Jim Roche, Delaware River Pilots, president@delpilots.com
Matt Walderon, Pennsylvania Department of Environmental Protection, mwalderon@pa.gov
Steve Walsh, Delaware River Basin Commission, steve.walsh@drbc.state.nj.us

Meeting Summary:

Pennoni Associates, Inc. (Pennoni) serves as Engineer of Record and Program Manager for the Burlington County Bridge Commission (BCBC), which owns, operates, and maintains the Tacony-Palmyra Bridge (TPB). In this capacity Pennoni has been tasked with designing and overseeing construction of new fender systems for Pier E and F of the TPB. Piers E and F are located to the west and east, respectively, of the bascule section of the bridge. As such, they also fall to the east and west of the main shipping channel.

The fender replacement project was prompted by the detachment of the upstream fender on Pier E in 2003. A temporary steel replacement fender was installed in 2003. Neither the steel replacement fender nor the existing timber fenders on Pier E and F meet current American Association of State Highway and Transportation Officials (AASHTO) design standards. These design standards are meant to guide development of fender systems that will protect the bridges from damage in the event of a marine vessel collision. It is the intent of the BCBC and Pennoni that the new fender systems meet these standards and are designed to protect the bridge from a collision.

Tom Kubicz presented the preliminary fender designs, outlined the expected construction process and timeline, and highlighted some current questions. Among these questions is the exact location of the PA-NJ boundary in the river. Construction documents, previous permit activity, as well as historical documentation do not provide a clear indication of where the New Jersey-Pennsylvania state line falls in

reference to the project site. Concurrence will need to be achieved between the two states on whether or not two sets of state permits will need to be obtained.

A project information sheet and copies of the presentation were provided to meeting participants.

Jim Boyer of the U.S. Army Corps of Engineers opened the question and answer period with an inquiry about AASHTO standards and their role in state Department of Transportation regulations over bridges and bridge design. Mr. Boyer asked specifically if BCBC was required to follow AASHTO design standards by enforceable regulations. Sasha Hardiag and Cassandra Khazem of Pennoni responded that it was always the intent to replace the (temporary) steel fender with a permanent structure; that with knowledge of the deficiencies in the current fender structures, BCBC and Pennoni have an obligation to resolve these deficiencies; and that irrespective of regulatory requirements that could be enforced by a state DOT, the AASHTO standards are the standard to which any credible engineering firm would design.

Captain Jim Roche raised a series of questions about the proposed fender design, including what load and types of impact the system would be designed to absorb. He posed a scenario in which a 60,000-70,000 ton ship traveling at up to 7 knots strikes an upstream fender after taking action to avoid hitting the bascule section of the bridge in the event it failed to open. He asked whether the upstream and downstream fenders should be placed further up or downstream from the bridge structure. Ms. Khazem asked first if Captain Roche could share additional documentation of typical ship traffic on this portion of the river and responded that the fenders would be designed to withstand a collision by a typical ship.

Captain Roche also raised concern about the narrowing of the ship channel (which in Pennoni's current designs is decreased in width from 246 feet to 230 feet). Captain Roche suggested that with 150 foot wide ships and strong side currents he has concerns about constriction of the ship channel. The Pennoni team responded saying that at least some constriction was needed in order to separate the mid-section fenders from the bridge structure, and that they had tried to limit the amount of constriction in their design. They added that they would assess whether additional ship channel width could be preserved.

Steve Walsh of the Delaware River Basin Commission (DRBC) and Mr. Boyer both inquired about dredging and fill activity, which Mr. Kubicz indicated would be part of the project. Both indicated that permits would need to be pursued from their agencies for these activities. Mr. Walsh indicated that approval of this permit by DRBC would take six to nine months. He also indicated that if DRBC issues a permit prior to other required agencies that it would be made conditional on those other permits being obtained.

Mr. Boyer indicated that a permit would be required by the U.S. Army Corps of Engineers (ACOE) for any dredging or fill activity. The ACOE would not issue a permit until the U.S. Coast Guard issues their authorization for modifications to the bridge. The ACOE would also need Federal Consistency Notifications from Pennsylvania and/or New Jersey CZM programs (either as part of a state permit or standing alone) before issuing a permit. The ACOE would work with the National Marine Fisheries Service to incorporate threatened or endangered species restrictions into their permit. Some species of interest include Atlantic Sturgeon and Short-nosed Sturgeon. Mr. Boyer told BCBC that they should start working with ACOE on the permit so it is ready to go when the approvals from the other agencies come in.

Fae Bailey of the U.S. Coast Guard indicated that District 5 would need to grant approval for the project and that the Philadelphia station would carry out and enforce the approval locally. Maintenance of

safety and commerce are the two criteria that the U.S. Coast Guard will focus upon in assessing both the final design and construction processes.

Randy Brown of the Pennsylvania Department of Environmental Protection (PADEP) indicated that if any part of the project is determined to be in Pennsylvania, then a permit would need to be issued by the Pennsylvania Department of Environmental Protection. A prerequisite to this permit would be resolving issues raised by the Pennsylvania Fish and Boat Commission and the Pennsylvania Game Commission. The PADEP would also assess consistency with the state's Coastal Zone Management Plan.

Mr. Boyer did clarify that because the project did not involve the wholesale movement of a federal shipping channel, just modifications to that channel, Congressional approval would not be required for issuance of the Army Corps permit.