

Assessment of Recent PennDOT Bridge Replacement Projects

*Prepared for
the Delaware Riverkeeper Network*

Bruce Wallace, Tinicum Resident

February 23, 2016

Recent bridge replacements on Headquarters Road in Tincicum illustrate some of the damaging effects of PennDOT's practices. Bridges at Cafferty Road and at Tettemer Road were grouped together to facilitate permitting. It has never been made clear how these projects even came to be under consideration since they were not locally requested, were not on the TIP, and the Cafferty bridge had been the subject of a \$600,000 rehabilitation just a few years earlier. To get approval, PennDot submitted misleading drawings and permit applications for these bridges which vastly understated their effects. As a result, local government and residents had no idea what was coming and no real chance to comment. General permits were allowed where they should not have been, environmental damage occurred that would never have passed proper review, and the final result was in both cases, bridges that are universally loathed by local residents, boondoggles which cause ongoing stream and road problems and create safety problems where none existed before.

Cafferty Road Bridge

Theses drawings show how the project was presented in documents submitted to the Township and the public to get approval.



These drawings represented changes that would be cosmetic, replacing guiderail with stone parapets and having no effect on the stream, the Little Tincicum Creek. As a result, local government did not object and public concern was muted. However, the project that emerged from final design was very different. This was no longer just a bridge, this had become primarily a stream channelization project. The final result looked like this, incorporating 200' of new concrete stream bank:



Cafferty Road Bridge as built

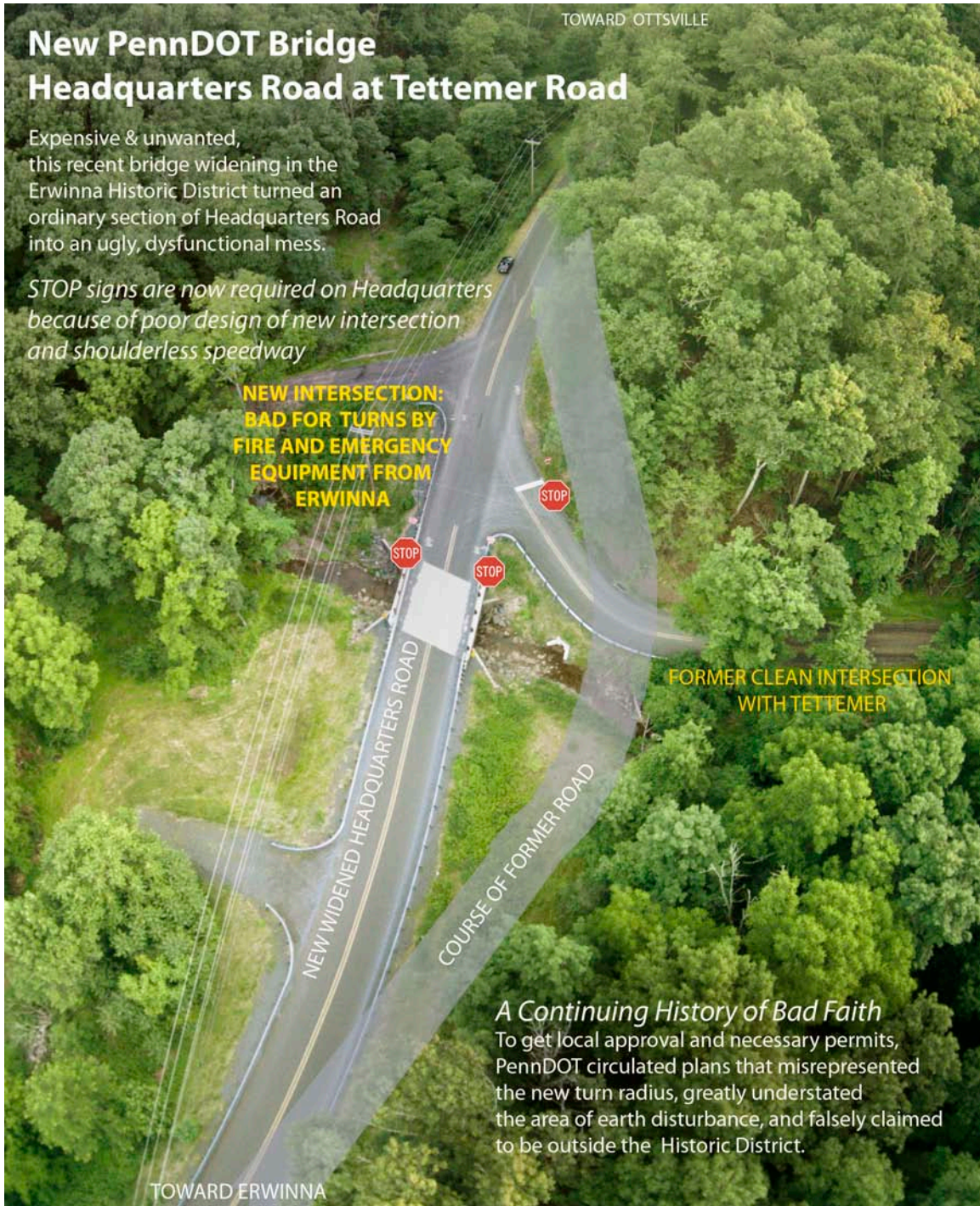
Considering this is an Exceptional Value waterway, this should never have been allowed without full environmental review, however because it was submitted as a small project, it proceeded under a general permit and none of this work was properly reviewed or permitted.

When, just before construction, the full extent of the proposed work became known, environmental appeals were filed by the Delaware Riverkeeper but the courts declined to intervene so late in the process. And so the money was spent and the work was done. The result has been a blight on the community, scorned by Township residents for its pointlessness, for its jarring appearance and unnecessary width, for the 200' long concrete roadside wall not even faced with a fake stone texture, for the sudden intrusion of this concrete speedway into what is otherwise a scenic road that winds alongside one of the most beautiful streams in the county, and for its effect on that stream itself. Loss of flood storage and velocity increases from this project have effected the stream below the bridge for miles undercutting the road and forcing further crude streambank protections, essentially rocks dumped into the stream, to protect the road while eroding away and destroying the tree-lined opposite bank.

Tettemer Road Bridge

The bridge further down the same stream at Tettemer Road was just as inexplicable, unnecessary, and damaging. The application for this bridge not only understated the size of the area affected to get approval, but it also concealed the fact that the existing bridge was inside and part of a delineated national register eligible historic district. Again, without the permit review that should have occurred, PennDOT relocated and straightened a stream and filled wetlands, eliminating vital flood storage for the Little Tinicum.

The result was a new bridge and roadway that is even more despised locally than the Cafferty bridge, a wide concrete eyesore that is completely out of place in the historic district. Worse, it has created such safety problems due to its poor design that despite the new roadway being streamlined and twice the width of the old road that it connect to, as soon as traffic enters this area it has to stop. All way stop signs are now required where unnecessary before because the poor design tightened the turn from the direction of the firehouse onto the local Tettemer Road so much that visibility was lost and fire trucks and long vehicles can no longer make the turn. See Figure 1. Tettemer Bridge Diagram



Nobody would be allowed to damage an EV stream the way these bridges have under PA law without full permit review, public comment, and mitigation. But PennDOT has done it here without ever being called to task. No-one has ever taken responsibility for the multiple failures at these locations, for the appalling result and waste of tax dollars. In fact, no-one has even explained how these projects came to be built at all.

These bridges typify the recent history of PennDOT in Tinicum Township. National Register listed or eligible bridges are routinely and unnecessarily removed when they could have been economically maintained indefinitely. Instead, at great expense, they are replaced with new structures that don't fit the community, cartoon versions with a fraction of the durability and expected life of the original. In 2002, the early twentieth century Oscar Martin double concrete arch bridge carrying Dark Hollow Road over the Tohickon creek was replaced in 2002 with a modern bridge that began crumbling immediately, an expensive embarrassment. The Township had pleaded for PennDOT to retain and restore the magnificent original bridge, had in fact legally bound itself to take ownership of the restored bridge if PennDOT did not want it. Instead PennDOT abruptly closed it and demolished it as unsafe. In this case, we don't know whether or not that was true. But PennDOT's subsequent projects in Tinicum show the routine use of safety as a red herring, a false reason that is used to bulldoze over regulations and opposition.

It took persistent objections over decades to get PennDOT to back away from their plans to replace the rare 1887 Carnegie national register truss bridge, which carries Geigel Hill Road over the Tinicum Creek in a national register historic district, with a box culvert 3 times as wide as the road. In 2008, after litigation, PennDOT finally agreed to save the truss after condemning the bridge to immediate removal as unsafe, unable to even carry its own weight. When the bridge was finally removed, it was found that the 8-ton weight restricted bridge deck had been overlaid with 40 tons of asphalt and even so, showed no deflection even under additional load. The demolition crew that removed the bridge told passers by that the structure was completely sound and stable and would have gone another hundred years. Removal and replacement of the historic bridge was completely unnecessary, millions would have been saved by simply repairing and redecking the historic bridge.

In the case of the Headquarters Road Bridge, PennDOT is claiming that its demolition is required for safety reasons, specifically, they argue that the turn onto Sheep Hole Road from the historic bridge is too tight for fire trucks, although the largest fire trucks have in fact been able to negotiate it, and if such a problem did exist it would be easily repairable. Obviously, though, here again safety is just being used as a smokescreen; if this condition actually troubled PennDOT they would have corrected the worse situation they themselves had just created at Tettermer, a situation they continue to refuse to fix.

Until full accountability is introduced at PennDOT, these bad practices will continue to waste countless millions damaging our road systems, environment and communities, depriving future generations of our rich heritage of natural and historic resources.