

RE: Galvanized Strand Buy American Waiver Request
Financial Projects Numbers: 409334-1-52-01 and 409334-1-52-02 (F.A.P. 4221-091-C)
SR30 (US98) Pensacola Bay Bridge Replacement of Bridge No. 480035

This email is to request a waiver of the Buy American requirements of CFR 635.410 for the Signature Bridge stay cable components on the above-subject project.

Overview: The stay cable components of the Signature Pedestrian Bridge on the above-subject project will be as follows:

- Utilize individually sheathed galvanized strands consisting of HDPE or HDPP sheath filled with flexible filler corrosion inhibitor meeting the requirements of FDOT Specification 938 sometimes referred to as a mono-strand system. The galvanized stands will be required to meet the PTI "Recommendations for Stay Cable design, Testing, and Installation" Appendix B, including fatigue and other tests.
- The stay cable system consists of a group of mono-strands housed in HDPE stay cable pipe. The HDPE pipe will also require meeting the requirements of PTI "Recommendations for Stay Cable Design, Testing and Installation", Section 3.5.

This system meets the two barriers of corrosion protection required by PTI, but includes galvanized strands which provides an additional corrosion layer of protection for the bridge crossing the Pensacola Bay which is classified as extremely aggressive environment. Enhanced corrosion protection of the stay cables will notably improve the service life of the bridge.

This specific cable stay protection system has been utilized on multiple bridges in both Europe and Asia, and most recently a Buy American Waiver Request was approved for Financial Project Number: 251688-1-52-01 (F.A.P. 3951-501-I) SR-83/I-395 from West of I-95 to MacArthur Causeway Bridge. **We know of no domestic producer of galvanized strands in the U.S. that can meet the fatigue testing of PTI.**

Project Information:

Financial Project Numbers: 409334-1-52-01 and 409334-1-52-02 (F.A.P. 4221-091-C)

Project Description: SR-30 (US98) Pensacola Bay Bridge Replacement of Bridge No. 480035

Total cost of project: \$398.5 million

Cost of waiver item: Approximately \$80,000

Country of origin of the product (if known at the time): Europe and Asia

Reasons for the waiver request: The standard in the U.S. consists of following the PTI "Recommendations for Stay Cable Design, Testing and Installation" which calls for two barriers of protection. This typically consists of the system being proposed in this waiver except with ungalvanized black strand. The concern of the standard U.S. produced stay system is that chaffing due to wind vibrations and loading may occur at certain zones along the cable over time thus compromising the sheathing resulting in loss of one layer of protection. In this case the bare ungalvanized strands are at risk of corrosion. Also this bridge is located in an extremely aggressive environment. That is the reason that galvanized strands are being proposed as a prudent additional layer of protection against corrosion.

A description of the efforts made by the State to locate a domestically manufactured product:

We contacted the following stay cable producers and they have confirmed that they do not produce galvanized strands in the U.S. and meeting the fatigue testing of PTI (Appendix B).

- Bekaert USA
- Sumiden Wire
- Insteel Industries, Inc.

An analysis of re-design of the project using alternate or approved equal domestic product:

Several alternative stay-cable protection systems have been investigated. Filling the PE cable pipe with wax or grout has technical issues associated with thermal expansion differences between the HDPE stay cable pipe and the strands as well as long-term maintenance concerns associated with the wax leaking-out over time. Stainless Steel strands were considered but ruled out due to reduction in strength, potential fatigue issue and overall cost.