

Implementation of Flexible Filler for Post-Tensioning Corrosion Protection in Florida

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On January 28, 2015, the Florida Department of Transportation (FDOT) issued Structures Design Bulletin 15-01, "Update to Revisions to Policy for Post-Tensioning Tendons," mandating the use of flexible filler, in lieu of cementitious grout, for corrosion protection of certain post-tensioning (PT) tendons for projects under design beginning in 2015. Currently, the only FDOT-approved flexible fillers are microcrystalline petroleum-based waxes that are heated until liquid then injected to fill the PT tendon duct, providing long-term corrosion protection of the PT tendons. When flexible fillers are used, the PT tendons are designed to be unbonded and fully replaceable. Table 1 shows the required corrosion protection materials for post-tensioned tendon types in Florida.

Flexible fillers are to be installed under the direct supervision of a filler injection foreman and performed by grouting technicians in the presence of a filler injection quality control inspector. Each of these personnel is required to have




Flexible filler encapsulation of post-tensioning wedge plate (grout cap removed). Photo: Florida Department of Transportation.

Tendon Type	Filler Material
Top slab cantilever longitudinal tendons in segmental box girders	Grout
Top slab transverse tendons in segmental box girders	Grout
Top slab transverse tendons in segmental box girders	Grout
Straight strand or parallel wire tendons in U-beams and girders	Flexible Filler or Grout
Bar tendons (predominately vertical or horizontal)	Flexible Filler or Grout
All other tendon types	Flexible Filler

an American Segmental Bridge Institute (ASBI) Flexible Filler Certification. Verifiable experience performing injection of similar flexible filler on at least two projects is currently acceptable in lieu of ASBI certification. However, this allowance will be deleted from the FDOT specifications after the first ASBI Flexible Filler Certification Training Course has been given.

ASBI, FDOT, and the Post-Tensioning Institute (PTI) are sponsoring the first ASBI Flexible Filler Certification Training Course on May 9-10, 2017.

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involved with upcoming PT projects in Florida. As a prerequisite to attend the course, participants must hold current certificates as an ASBI Grouting Technician and a PTI Bonded PT Field Specialist. The course will consist of 8 hours of classroom instruction, 3 hours of laboratory demonstrations, and an exam. The course will cover all phases of flexible filler field installation. 

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EDITOR'S NOTE

For information regarding the requirements for the use of flexible fillers on Florida Department of Transportation projects, see the FDOT Structures Manual: <http://www.fdot.gov/structures/StructuresManual/CurrentRelease/StructuresManual.shtm>.

For information regarding the ASBI Flexible Filler Certification Training, see <http://www.asbi-assoc.org/index.cfm/events/upcoming-events>.