

# Systems and Methods for Splicing Pile Segments

**R**esearchers at the University of South Florida have developed a novel method to splice precast concrete piles using post-tension and intermediate side anchorages.

Pre-stressed concrete piles have been widely used since the 1950's. When the required pile length is long, piles may be spliced from shorter lengths to provide the necessary overall length. The inherently weaker ends of the piles are not well suited to form these connections, therefore splices have historically been the weakest part of the spliced assembly. It is therefore an important task to provide an efficient cost effective, and structurally robust pile splicing system for pre-stressed concrete piles.

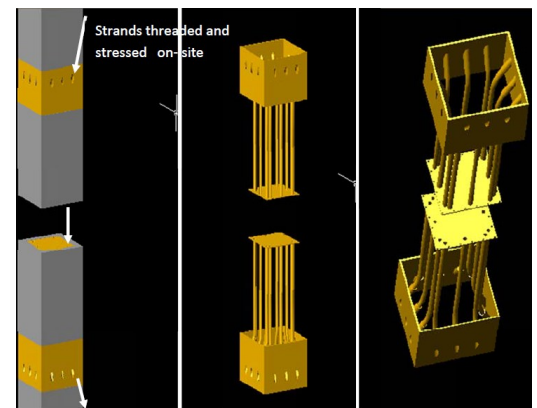
USF inventors have successfully developed a novel method to splice pre-stressed concrete piles using splice post tensioning via intermediate anchorages. The splice is formed by passing steel strands into the weaker ends of the piles through preformed ducts and up into the stronger pre-compressed regions. The steel strands are anchored at the sides of the pile using post tensioning fixtures.

This technology is applicable to the civil, structural engineering industries and the department of transportation.

### ADVANTAGES:

- Strands anchored to stronger pre-compressed regions
- Cost effective splicing system
- Structurally robust
- Efficient

### *New Method for Splicing Pre-Stressed Concrete Piles*



*Splice Cast into Pile (left), Same View Shown Without Concrete (center), Down-Looking View of Curved Ducts and End Plates (right)*