

IIS-074
**Examination of Horizontal Shear Tie Requirements for Composite
Precast/Prestressed Construction**

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Industry Participants

Schuylkill Products Inc., Spancrete

Abstract

Precast prestressed concrete is a popular means of fabricating both buildings and bridges in Pennsylvania. In addition, the Pennsylvania precast industry supplies a large amount of product both locally and to a number of states in the region. The research project will examine the viability of eliminating horizontal shear ties between precast elements and field cast concrete toppings. The outcome of the research has the potential of benefiting local industry by reducing fabrication costs for precast beams and floor panels, improving construction safety through the elimination of trip hazards, and providing initial and long-term economic benefits. The research is a seed project that will provide support for a graduate student researcher over the academic year. The project will consist of an extensive literature study of existing research and an analytical study of horizontal shear requirements for building and bridge systems. The project will culminate in the development of an experimental research program coordinated between bridge and building precast producers including Schuylkill Products Inc. and High Concrete Structures.