

RJN Repairs Bridge at I-355 Over Hitchcock Avenue

The ISTHA selected RJN Group, Inc. to be Construction Section Engineer (CSE) for the repair of a single long span (120-foot) precast prestressed concrete I-beam bridge at the North-South Tollway (I-355) over Hitchcock Avenue. The outside beam of the bridge had been struck and cracked by an errant crane vehicle.

RJN personnel were responsible for:

- Review of contractor's demolition and erection procedures
- Monitoring construction activities for adherence to design specifications
- Inspection and testing of materials for incorporation into work
- Providing final documentation
- Enforcing traffic control standards

Construction activities for this project consisted of the complete repair of the damaged structure, including:

- Detouring traffic
- Installing sacrificial sheet piling to stabilize the shoulders
- Installing temporary shoring towers to stabilize the damaged beam
- PPC I-beam removal and replacement
- Reinforced concrete deck removal and replacement
- Reinforced concrete diaphragm removal and replacement
- Reinforced concrete parapet removal and replacement
- Using mechanical splicers to connect existing reinforcement with proposed reinforcement



Since Hitchcock Avenue is a lightly traveled local road the contractor was allowed to close it down for a two-week period. This closure allowed the contractor to do the demolition work and beam installation faster than if provisions had been made for doing this work over live traffic. This also reduced the project cost because safety features such as a temporary support beam and protective shielding were not needed.