



State Building No. 2 is a 22-story steel frame building completed in 1980.

The facade of the building consists of partially fluted precast concrete panels and strip windows. During a recent sealant replacement project, cracking of the precast facade panels was noted. Therefore, BTC's assistance was requested to evaluate the cause(s) and significance of the observed cracking.

BTC evaluated the causes of the precast panel cracking and localized deterioration of the panels. The evaluation included visual review of the panels from swingstage scaffolding, core sampling and petrographic examination of the cores to evaluate cause of cracking. BTC also evaluated the connection of the precast panels to the building frame to assess if restraint against thermal movements or building frame movements could have contributed to the observed cracks. Our findings indicated that the cracks were primarily due to drying shrinkage of concrete. The localized deterioration of the precast panels was attributed to corrosion of embedded reinforcing steel with shallow concrete cover. BTC developed recommendations for repair of the observed deficiencies and sealant work on the building facade.

Upon approval of the project budget, it is anticipated that BTC will develop design documents for the repairs, and provide construction phase services.

Project Name:
State Building No. 2

Project Location:
333 Market Place
Harrisburg, Pennsylvania

Client:
Harristown Development Corporation
P.O. Box 1224
Harrisburg, Pennsylvania 17108

Approximate Construction Cost:
Unknown

Year Completed:
2005

Nature of Services:
Evaluation of Existing Precast Concrete Facade Panels, and their Joints.
Preparation of Repair Recommendations, and Development of Cost Estimates for Repairs

