



Project Overview

FRP STRENGTHENING OF CONCRETE COLUMNS IN AIRPORT

Name: Ted Stevens International Airport

Type: Federal Building

Location: Anchorage, Alaska

Estimated Completion Date: July 2008

PROBLEM

The Ted Stevens International Airport is currently undergoing significant seismic retrofit measures. As part of the scope of the project, new shear walls are being built that tie down to existing concrete columns. As a result, these columns required strength and ductility improvements in order to withstand the seismic forces transmitted by the shear walls.



SOLUTION

QuakeWrap® FRP Strengthening System was selected to retrofit 35 columns. Unique FRP retrofit designs were generated using carbon fabric for columns tying down to existing and new shear walls. The number of wraps varied from two to three, depending on the transverse confinement demands imposed on the columns.



Technical Highlights

- 35 concrete columns of various dimensions were targeted for FRP retrofit
- Concrete columns required increase in strength and ductility
- 6,500 ft² of FRP carbon fabric to be installed when retrofit project is completed.

Credits

Engineering: QuakeWrap, Inc., Tucson, AZ.

FRP Installation Contractor: FRP Construction, LLC, Tucson, AZ

General Contractor: PCL, Anchorage, AK



“The FRP Retrofit Experts”