

Project Brief

Infant Welfare Society Beam Strengthening



Chicago, IL
September 2004



The building was being converted into an office building and some beams had to be strengthened to allow efficient use of the space. The engineer wanted to provide an additional shear capacity for 18 kips of service load and an additional 150 K-FT of moment capacity on the top of the beams.

The strengthening scheme involved using carbon composites with a special steel connection at the negative moment areas. It involved coring holes through the column and bolting a steel angle iron to connect the composite to the column. Six (6) layers of fiber wrap were applied in a staggered configuration.

The use of the composites was the only solution that had a minimal impact on the useful space of the building. The steel connections were the most intrusive part of the solution.

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