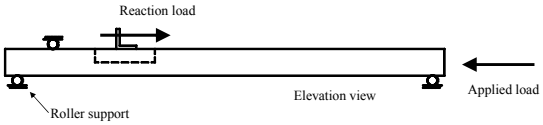
Corbel Capacity of Channel Embeds

Richard A. DeVries
Jon Bliese

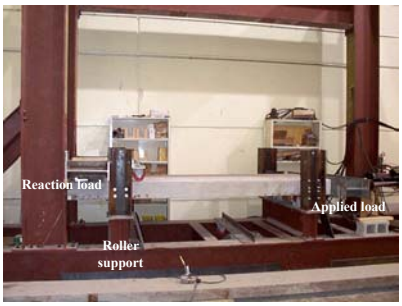
Test Program

Conduct 8 tests to determine the capacity in concrete planks of channel embeds subjected to corbel loading.

Variables included the length and location of channel embed.



Schematic of test setup



Test Setup

Typical failure at plank end

Typical failure away from plank end

Prestressing strand in anchorage zone

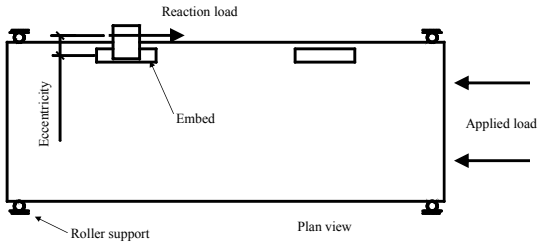
Anchorage Capacity of Channel Embeds

Richard A. DeVries

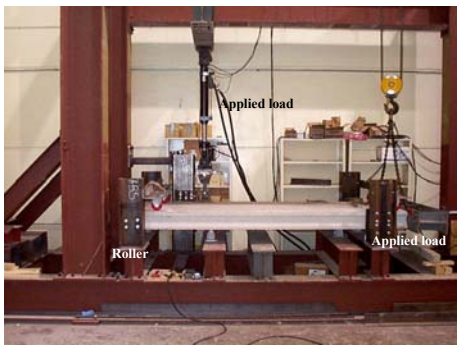
Test Program

Conduct 48 tests to determine the anchorage capacity in concrete planks of channel embeds subjected to shear and/or tension loads.

Variables included the eccentricity of applied loads and the effect of a prestressing strand in the anchorage zone.

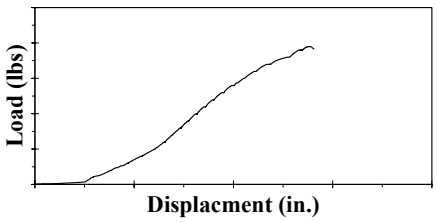


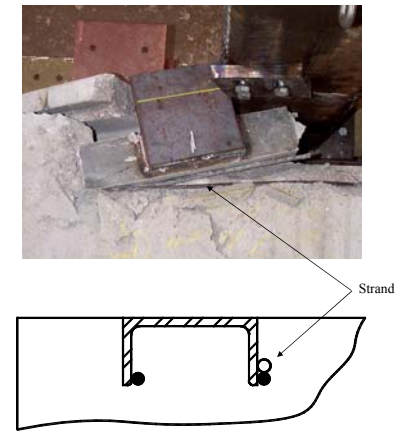
Schematic of test setup



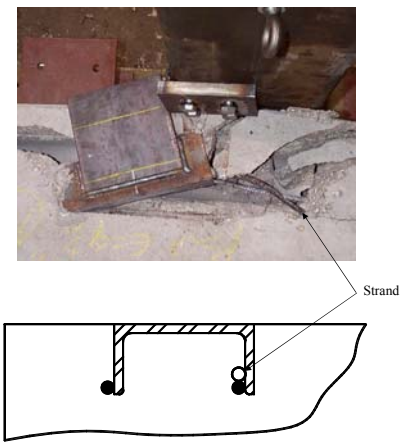
Test setup

Typical Load vs. Displacement





Prestressing strand outside of anchorage zone



Prestressing strand inside anchorage zone

Observations and Results:

•The location of the prestressing strand had a large effect on the anchorage capacity and behavior.

•Capacity interaction between shear and tension load was determined.