



# Ala Moana Shopping Center Parking Garage Beam Repair



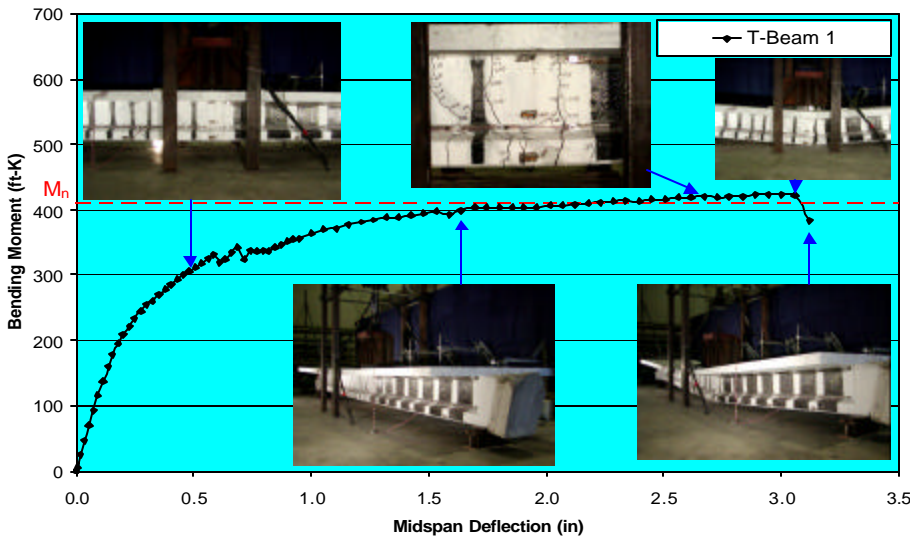
## Beam Repair - 1997

- First application of CFRP strengthening in Hawaii
- Demolition of garage provided opportunity to evaluate field applied CFRP
- 3 Beams recovered for testing at UH Manoa



Beam Recovery for Testing

## Moment Capacity

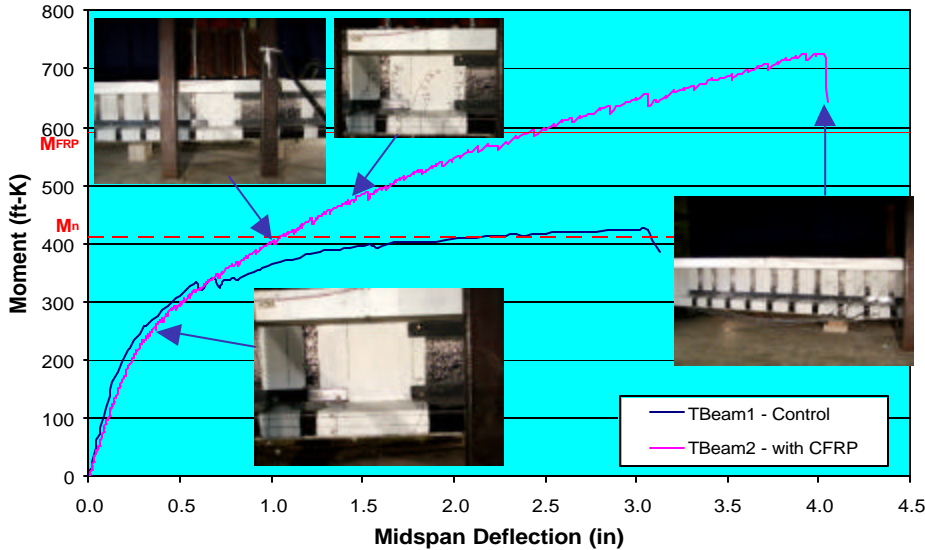


## Control Specimen Flexural Test



T-Beam 1 Failure

## Moment Capacity



## CFRP Strengthened Specimen Test



T-Beam 2 Failure