STRENGTHENING OF RC BRIDGE WITH MECHANICALLY FASTENED-FRP STRIPS

Investigators: A. Rizzo and U. Deza (Graduate Research Assistants)
Dr. A. Nanni (Faculty Advisors)
Sponsored by: Meramec Regional Planning Commission
DELTA Authority

June 4th-6th 2003

Objectives
Upgrade the existing flexural capacity of a structure with FRP strips mechanically fastened.
It’s so possible to rehabilitate bridges saving money and the never enough time.

Background
The majority of bridges were built in the 2nd part of the past century.
The aging, the increasing service loads as well as the complying to the building codes requirements have generated the need to strengthen many of these bridges.
Off-system (Counties or Cities) up to 31 bridges.

Fastening System

Proposal
1. Identify representative bridges to reinforce with this new methodology.
2. Determine the existing flexural strength of the structures.
3. Develop and improve a design procedure for this type of repair.
4. Develop a schedule, materials, personnel and methods plan for the in-field strengthening of the bridge.
5. Final test to check the real effectiveness of the strengthening.