

## Arizona Repair Masons/Arizona Ram Jack Case Study

<b>QUOTE #</b>	R17440H	<b>ORDER #</b>	<b>BILL #</b>	<b>SLS#</b>
<b>DATE</b>	2/17 05	<b>DATE</b>	<b>DATE</b>	
Prepared by:	<b>Bob Brown</b>			
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CITY	Phx	TERMS:	<b>NET 15</b>	
	ZIP 85253			

Original Problems: The horizontal concrete beam did not have enough tensile strength to sustain the new loads in a rehab project.

Client's goal: To strengthen the beam with out debilitating removals

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Pic #1 Before

pic #2 Before

Additional constraints: The beam in question was located near the bottom of an existing structure with very little access.

In addition there was a multitude of existing electrical and other infrastructure mounted to the bottom side of this beam.

Alternate solutions: #1 Remove and replace: This method would have been cost prohibitive due to the shoring and removal process in a area with little access.

#2 Metal cladding presented problems of the removal of the existing infrastructure mounted to the beam.

#3 Adding additional concrete and rebar to the beam presented similar problems with access and infrastructure.

Ultimate Solution: Carbon Fiber Laminate aheared to the bottom face of the beam  
Supporting Reasons This solution presented ease because of the ability to apply in limited access.  
No removal or shoring was required.  
The existing infrastructure mounted to the bottom side of the beam was loosened  
and the material was placed between it and the beam with the infrastructure later remounted.

Completion time 2 days  
Ecountered problems None

Solutions to  
Encountered problems

Results The existing project was able to move ahead unimpeded.  
The beam is fully supported and functioning

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Pic #1 After

Pic #2 After



