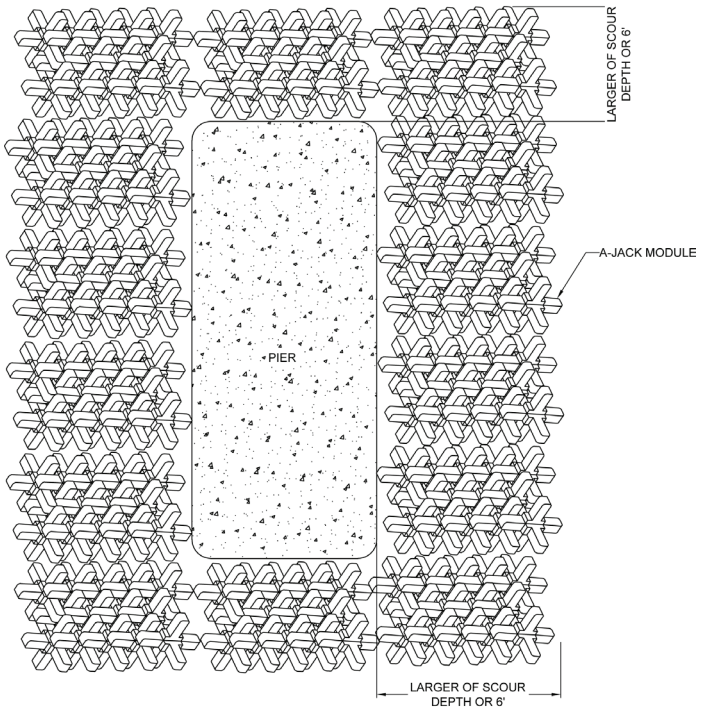
Bridge Scour

A-Jacks® are high stability concrete armor units designed to interlock into a flexible, highly permeable matrix and replace conventional scour controls like rock riprap or cast-in-place concrete. They can be installed either randomly or in a uniform pattern. The ability of the A-Jacks system to dissipate energy and resist the erosive forces of flowing water makes an ideal solution for protection of channel boundaries from scour and erosion.

A-Jacks protect soil and infrastructure while also protecting the ecological systems. The open area formed within the A-Jacks matrix provides approximately 40% void space for fish and other marine life habitats when applied as a reef, revetment or soil support system.

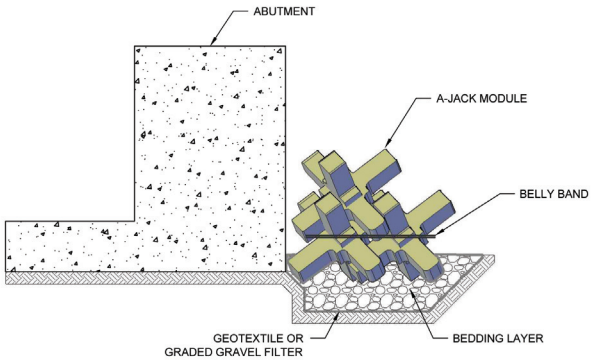
Extensive laboratory research has been performed on both model and full scale units to evaluate the hydraulic and structural properties of the A-Jacks units. Field tests have confirmed that the A-Jacks system provides a flexible, nonerodible barrier between the channel subgrade and the potentially damaging flow of water.

TECHNICAL DETAILS



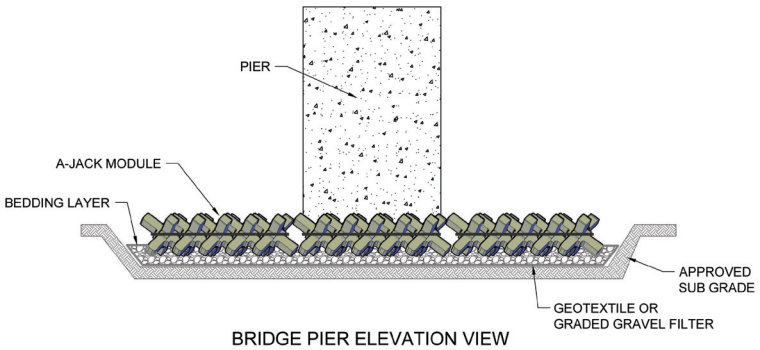
NOTE: PER FHWA HEC 23 DESIGN GUIDELINE 19.

BRIDGE PIER / PLAN VIEW



ABUTMENT / FOOTING DETAIL

N.T.S.



BRIDGE PIER ELEVATION VIEW

N.T.S.

TECHNICAL REFERENCES

- Federal Highway Administration Hydraulic Engineering Circular 23: Bridge Scour and Instability Countermeasures: Experience, Selection and Design Guidance - Third Edition, Volume I & 2
- Transportation Research Board - National Cooperatibe Highway Research Program Report 593: Countermeasures to Protect Bridge Piers from Scour

Bridge Scour

PROJECT SPOTLIGHTS

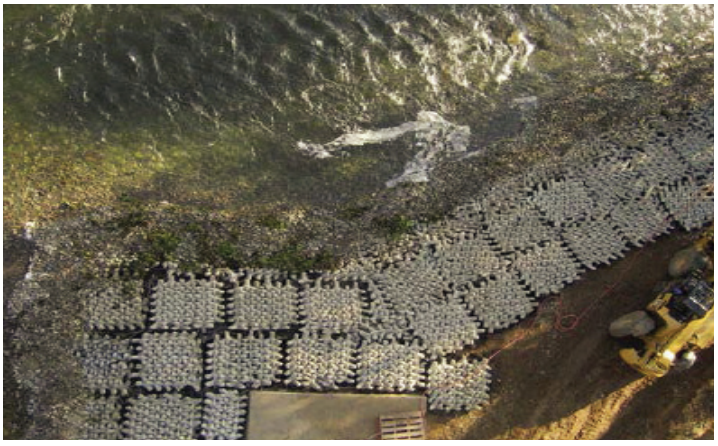
Herbert C. Bonner Bridge - NC12 - NCDOT
Outer Banks, North Carolina

Route 35 Cheesquake Creek Bridge - NJDOT
Morgan, New Jersey

US95 Spalding Bridge - ITD
Lewiston, Idaho

Chastain Meadows Parkway
Marietta, Georgia

Interstate 10 - TXDOT
Presidio, Texas



Tuolumne River Bridge - Caltrans
Hickman, California