



Preparing surface with high-pressure water blasting.



Completed SeaShield™ 500 System.



SeaShield™ 500 Epoxy Grout being pumped into the Fiber-Form jacket.

### Project Data

<b>Location</b>	Seattle, WA
<b>Completion</b>	2005
<b>Project Type</b>	Concrete Pile Rehabilitation
<b>Products Used</b>	SeaShield™ Series 500 System
<b>Contractor or Applied By</b>	Triton Marine

### Project Details

The Harbor West Condominiums were built in 1965 along the aggressive coast of Puget Sound in Seattle, WA. The structure is supported by 140 each 14" octagonal concrete pilings and had been performing well until they were damaged from an earthquake in 2002. The SeaShield Series 500 System was selected as the sole-source system for complete encapsulation of all the piles.

The project included the complete encapsulation of all 140 piles. Firstly, 100 of the piles were protected with the Series 500 System, that included a 15 3/4" dia. SeaShield Fiber-Form jacket that yielded a minimum 1/2" annulus at the 8 corners of the existing octagonal piles. The jackets were constructed of 3/16" thick woven and roving fiberglass and gel coated. The annulus was then pumped and filled with the SeaShield 550 Epoxy Grout. The epoxy grout kits consisted of 1 gallon of 2-part epoxy and a 44 lb. bag of grout yielding 0.4 cu. ft.

Next, 40 of the 140 piles were encapsulated with 3/8" thick 16" dia. steel split sleeves, welded and then filled with the 550 Epoxy grout. Finally, these 40 piles were encapsulated with 17 3/4" dia. Fiber-Form jackets that included 1/2" stand-offs and were again filled with the 550 Epoxy Grout.

All together the project included approximately 1,800 LF of 15 3/4" dia. jackets, 800 LF of 17 3/4" dia. jackets, and 2,400 kits of the 550 Epoxy Grout.

Installation took place during the late summer and early fall when tides are difficult, temperatures are near freezing at times, and coastal waters are at their most aggressive. With all the elements working against the Contractor, they were still able to complete the project on schedule and on budget. The contractor gave rave reviews on the ease of installation of both the Fiber-Form Jackets and the 550 Epoxy Grout. The Series 500 System provides excellent bond strength/adhesion to steel and concrete, long-term corrosion protection, UV resistance and outstanding abrasion resistance. The system will provide many years of additional service life to the Condominium structure.

Date Published: 03/01/2005

Denso North America - Canada (Ontario)  
 90 Ironside Crescent, Unit 12 / Toronto, M1X 1M3  
 Tel: 416-291-3435 Fax: 416-291-0898  
 sales@densona-ca.com

[www.densona.com](http://www.densona.com)  
 A Member of Winn & Coales International

Denso North America - USA  
 9710 Telge Road / Houston, TX 77095  
 Tel: 281-821-3355 Fax: 281-821-0304  
 info@densona.com