



North American Society for Trenchless Technology
2007 No-Dig Conference & Exhibition



San Diego, California
April 15-20, 2007

Paper A-1-02

LARGE BORE NON CIRCULAR PIPE AND BOX CULVERT REHAB USING CIPP

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ABSTRACT: This paper addresses the site specific challenges that lie inherent in rehabilitating large diameter non circular pipe and concrete box culverts using the cured in place pipe methods described in ASTM F 1216, as well as ASTM F 1743. This paper details the pipe preparation requirements including, corner grouting to allow for fully deteriorated design modeling as a large bore non circular case. It focuses on two (2) case histories detailing the design thru installation of both a triple barrel 8'-0" x 7'-0" , as well as, a 5'-0" x 6'6" installation. At the time of its installation, the triple barrel was the largest cured in place installation of this kind in the world. This installation utilized over one million pounds of isophtallic polyester resin. Due to the tubes being too large to transport; three (3) tube lengths , each measuring twelve hundred foot, were installed in a period of less than one month using the "over the hole" method of field wet out and inversion.