

Arterial Aqueduct Providence, RI USA



Challenges



Corrosion Damage

- Corrosion of PT lead to complete failure of PCCP
- Only certain sections of pipe were effected

Constructibility

- Only access is through 3'-0" diameter manholes every 2000-ft of pipe
- Confined space
- Pipe runs 15 to 20' under roads and residential areas

Installation

FRP Liner

- 5 layers of MBrace® CF 130 in the hoop direction
- 3 layers of MBrace® CF 130 in the longitudinal direction
- Sections of pipe dehumidified prior to applying the system
- Coated with ThoRoc® 48 PW epoxy liner for potable water applications
- All materials & equip brought in through manholes



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Acknowledgements

- Owner: City of Providence, Providence, RI
- Engineer: Camp Dresser & McKee, Cambridge, MA
- MBrace Applicator: Structural Preservation Systems, Baltimore, MD



2000

Award of Excellence Winner
Water Systems Category