RESEARCH REPORT DOCUMENTATION PAGE

1. Report No. ND 2013-03	2. Report Date March 2016	3. Contract No. N/A		4. Project No. SOIA-5-094(084)023
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			Construction ☐ Evaluation ☒	9. Project No.
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OTHER* *see supplementary notes				
14. Supplementary Notes				
15. Abstract Purpose and Need				
North Dakota's state highway system has small and large centerline pipes constructed with deep fills above the pipe. When these pipes become deteriorated they need to be replaced or repaired to maintain hydraulic and structural capacity. The cost of excavating the material above the pipe and the time required to replace the pipe are a driving force for an alternative option. An option to repair the pipe without any excavation or any disruption to the traveling public is needed.				
Objective				
The objective of this research project is to evaluate the performance of SprayWall® polyurethane lining for use as a minimally intrusive option for repair of deteriorating pipe. The SprayWall® lining will re-establish the structural integrity and prevent infiltration by sealing the perforations.				
<u>Scope</u>				
This project will rehabilitate a 90" structural plate pipe on project SOIA-5-094(084)023. The contractor must ensure that the manufacturer's representatives are on site during the preparation of the pipe and installation of the SprayWall® System. The contractor will prepare the pipe and apply the SprayWall® polyurethane lining according to the manufacturer's recommendations. The contractor will apply SprayWall®® on the north 134 linear feet of the 674 linear feet pipe.				
<u>Summary</u>				
The Spraywall liner has very little defects at this time. Most of the cracks occur on the edge of the liner on the end section of the pipe. The crack along the side of the pipe end section is the most severe crack. After that crack was repaired another crack developed parallel next to the original crack. The Spraywall liner is performing well at this point. The small cracks that were found don't appear to be a major concern. Materials and Research will continue to monitor the performance of the Spraywall pipe liner.				
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