



INTERNAL PIPE

HydraTite®

JOINT SEAL

Market:
Stormwater

Challenge:

Leaks were discovered in three culverts that redirected stormwater below a runway at an airport in Mississippi. A 50 by 150-foot portion of the runway began to sink in due to erosion. The leaks were found in two culverts that were 6 by 6-foot and a third culvert that was 4 by 6-foot. Joints had minor separation which was allowing water, soil, and plant life to enter the pipe. The airport patched the runway and intended to continue operations during any attempted repairs.



Engineered Solution:

HydraTech provided custom-made HydraTite seals with anchors and corner forms for all the joints in the three culverts. HydraTech also manufactured custom-made drill hole guides to speed up the anchor drilling.

Scope:

Over several months, three box culverts were rehabilitated. In these culverts, there were 189 joints sealed. One aspect that complicated the project was the frequent need to exit the culverts. If a plane was taking off, the water level started to increase, or if any unknown substance floated into the pipe, everyone had to vacate the job site.

The surface of the culvert near each of the joints was prepared for the seal installation by removing debris and chipping away mineral build-up. Then custom-made guides were used to drill the anchor holes, anchors were inserted into the holes, and the seal was then positioned between the anchors. Anchor plates were loosely put in position and the steel bands were expanded. Next, the anchor plates were tightened down and sealant was injected behind the corners of the seal. Finally, the anchors were trimmed down to ensure a minimal profile.

HydraTech Engineered Products, LLC
HydraTech Field Services, LLC

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Solution:

HydraTech provided customized seals to eliminate leaks in failing joints. These 189 joints will be fortified against leaks for much longer than if they had been repaired with a short-term repair such as grout.



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