HydraTech
ENGINEERED PRODUCTS

INTERNAL SEAL FOR

HydraLock

SMALL-DIAMETER PIPE

Market
DOT

Challenge
An Ohio 611 post-installation conduit inspection of a newly laid 12-inch ADS High-Density Polyethylene (HDPE) storm sewer revealed a separated pipe joint approximately 8 feet downstream of manhole HD48. Located just 2 to 4 feet beneath the pavement of an active roadway, the separated plastic joint posed an immediate risk for soil infiltration and bedding loss, which rapidly leads to roadway depressions and sinkholes over shallow-buried flexible pipes. Minor debris had also settled along the invert leading up to the defect. Because the road above was active, the contractor needed a non-invasive way to lock and seal the separated HDPE joint without shutting down traffic or excavating the street.









Engineered Solution
The contractor utilized a 12-inch HydraLock internal pipe joint seal engineered to bridge and seal separated joints in non-man-entry HDPE piping. Unlike chemical grouts that can wash out or full-length liners that add unnecessary cost for a single joint defect, HydraLock uses a 316L stainless steel ratchet-locking band to mechanically compress a durable EPDM rubber sleeve and hydrophilic O-rings directly across the separated joint gap, providing a permanent, watertight structural seal rated up to 23 psi head pressure.

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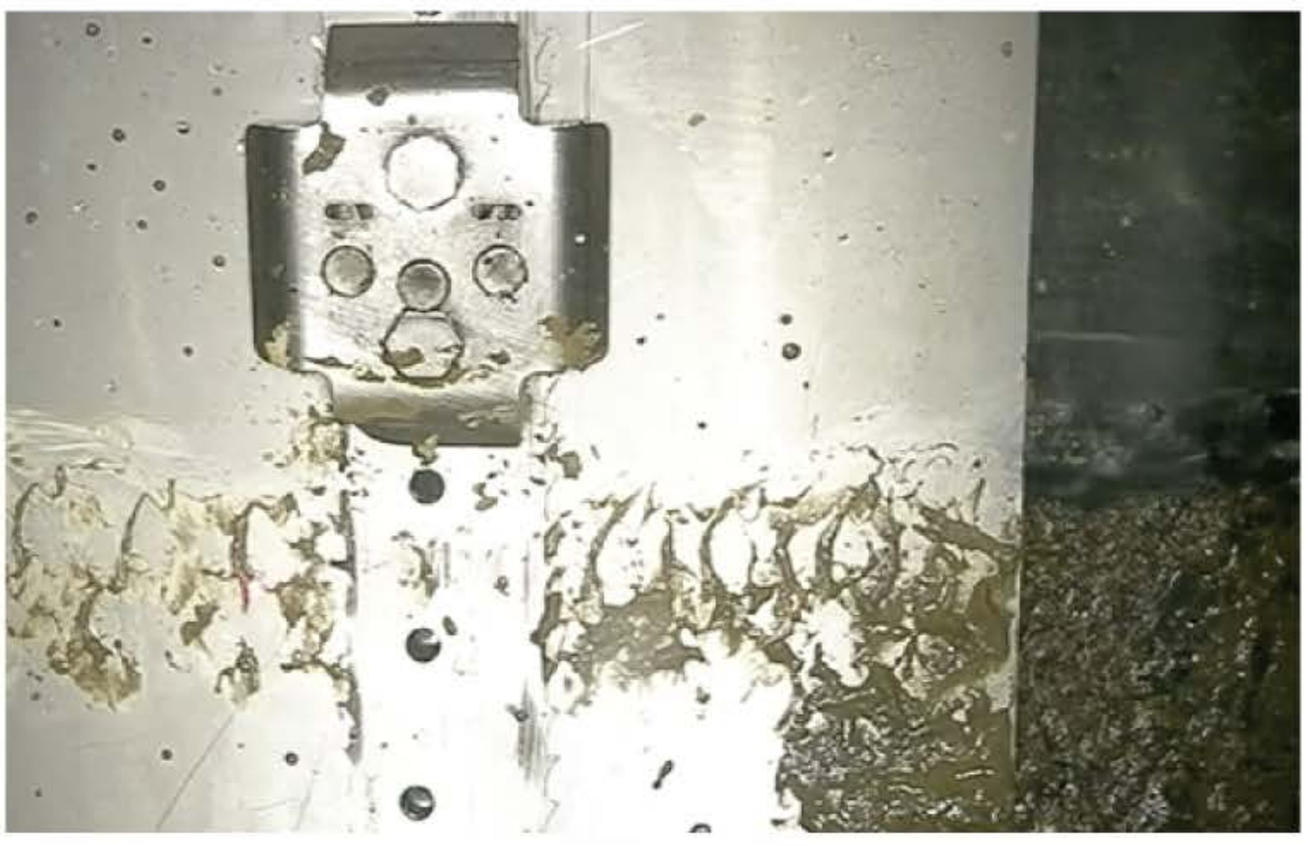
Scope

Accessing the 12-inch storm sewer directly through manhole HD48, a crew of one to two technicians mounted the 12-inch HydraLock seal onto a remote packer assembly and advanced it 8 feet downstream under CCTV camera observation. As the packer assembly traveled down the pipe, it naturally pushed aside the minor invert debris along its path, eliminating the need for time-consuming pre-cleaning or hydro-jetting. Once centered over the separated ADS HDPE joint, the packer was inflated to expand the 316L stainless steel sleeve and lock the ratchet teeth at full compression. The crew completed this installation within a single workday with zero traffic disruption.

Solution

The 12-inch HydraLock seal bridged the separated HDPE joint and restored watertight integrity without a single shovel hitting the pavement. Completed in a fraction of a day with no lane closures and no pre-jetting required, the repair brought the new stormwater line into full Ohio 611 inspection compliance while protecting the overlying roadway from future settlement.









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