

CASE STUDY

N-12[®] & HP Storm Provide Stormwater Conveyance for I-75 Rehabilitation

Findlay, OH

OWNER

Ohio Department of Transportation, Columbus, OH

ENGINEER

HDR Engineering, Inc., Cincinnati, OH

CONTRACTOR

Miller Bros. Const., Inc., Archbold, OH

INSTALLATION DATE

Fall 2024

PRODUCTS

1,520' (463 m) of 12" (300 mm) HP Storm
1,440' (439 m) of 15" (375 mm) HP Storm

260' (79 m) of 18" (450 mm) HP Storm
500' (152 m) of 24" (600 mm) HP Storm
20' (6 m) of 30" (750 mm) HP Storm
1,840' (561 m) of 36" (900 mm) HP Storm
600' (183 m) of 42" (1050 mm) HP Storm
320' (98 m) of 48" (1200 mm) HP Storm
240' (73 m) of 60" (1500mm) HP Storm
960' (293 m) of 12" (300 mm) N-12
960' (293 m) of 15" (375 mm) N-12
720' (219 m) of 18" (450 mm) N-12
1,820' (555 m) of 24" (600 mm) N-12
480' (146 m) of 30" (750 mm) N-12
1,780' (543 m) of 36" (900 mm) N-12
840' (256 m) of 42" (1050 mm) N-12
640' (195 m) of 48" (1200 mm) N-12
1,040' (317 m) of 60" (1500mm) N-12

CHALLENGE

Findlay continues to see manufacturing facility and distribution center growth on the city's north side. Access to these points is via the interchange of I-75 and County Road 99. The current bridge is handling 56% more traffic than it was designed to handle.

For safe and efficient movement of traffic, a diverging diamond interchange was designed utilizing the current bridge and by building a new bridge to the south of the current bridge.



adspipe.com



SOLUTION

Stormwater from the project site and along County Road 99 was conveyed to nearby creeks by using nearly 16,000' (4,877 m) of N-12 and HP Storm pipe. The stormwater conveyance ran approximately 1.5 miles along County Road 99.

The project had open specifications for the type of pipe used and required post-installation inspection with less than 7.5% deflection. Miller Bros. Const., Inc., has a long history of using N-12 and HP Storm pipe. For the I-75 rehabilitation, Miller Bros. Const., Inc. utilized HP storm on the deep burials and under roadways and a railroad. N-12 and HP Storm were buried along the County Road 99 corridor, which receives a high volume of semi-truck traffic.

Miller Bros. Const., Inc. prefers N-12 and HP Storm due to the ease of installation and smaller pipe diameters can be nested inside of larger pipe, which allows for a smaller storage footprint.

PRODUCT SOLUTIONS

HP Storm polypropylene pipe provides superior pipe stiffness, longer bells and spigots and a premium joint performance for a longer service life. The smooth interior wall offers additional strength and high flow capacity. HP Storm pipe meets or exceeds the standards specified in ASTM F2881 and AASHTO M330 and the extended bell and spigot meets ASTM D3212. Polypropylene is an inert material and is resistant to the effects of chemicals, abrasion, hot soils and effluent. The lightweight product is easy to deliver and is readily available in convenient locations across North America to service local projects.

N-12 Dual Wall Pipe, made using high-density polyethylene (HDPE), has a corrugated exterior and smooth interior wall that provide exceptional strength and hydraulics. The inert HDPE material is resistant to the effects of chemicals, abrasions and hot soils. N-12 is available in 4"-60" (100-1,500 mm) diameters and in 20' (6 m) lengths. The inline bell design allows for pipe ends to be pushed together for easy installation. N-12 ASTM pipe meets the requirements of ASTM F2648, while the fittings conform to ASTM F2306.



adspipe.com

