The design-build project in Greenville, South Carolina was named Project of the Year for the Corrugated Plastic Pipe Association Division of the Plastics Pipe Institute.

More than 41,000 feet of large diameter corrugated high-density polyethylene (HDPE) pipe has already been used for the new storm water drainage system during the rebuilding of the third busiest interchange in South Carolina. The watertight pipe was selected for this design-build project in Greenville because it met AASHTO M294 requirements, has a long projected life, and could be delivered on a just-in-time basis to the jobsite. Pipe manufacturer, Advanced Drainage Systems received the award.

The South Carolina Department of Transportation (SCDOT) Interstate 85-385 Gateway Project under construction involves creating a new interchange within the general footprint of the current interchange by staging construction of the new lanes, ramps, and bridges while maintaining the flow traffic. Ten new bridges including two flyovers, rehabilitation of two existing bridge structures, and modifications to the substructure of one existing bridge, are also part of this new interchange system. It is South Carolina's largest transportation infrastructure project in more than 10 years. The new storm water drainage system will be installed throughout the $231 million project scheduled to be completed in 2020. AASHTO M294 pipe, such as the ADS N-12 HDPE pipe, has been approved in South Carolina.

"Originally, the project called for reinforced concrete pipe - RCP - to be used in most of the storm drainage, while HDPE was only considered for a small portion of the project," explained Daniel Currence, P.E. director of engineering for the Corrugated Plastic Pipe Division of PPI. "A decision was made, however, to move to HDPE for the vast majority of the job, after the contractor realized that it could be delivered on time and with high quality. This change allowed the contractor to get the pipe they needed on a just-in-time basis to the exact spot where it was needed. The pipe has watertight bells and spigots which are extremely easy to connect. The favorable weight of the pipe makes it very efficient to be installed, about twice as fast as RCP, which lowered the total installed cost. These benefits added up to reducing the cost of the storm water system."
The HDPE pipe ranging in diameters from 12 to 48 inches usually comes in 20-foot lengths from the plant in Charlotte, North Carolina or other ADS plants in the region but some custom 13-feet lengths were made to meet the contractor's needs. Currence elaborated on the properties of the pipe, “The HDPE material will not corrode, rust or degrade due to biological attack so the pipe resists bio-clogging and will be able to maintain high and consistent flow capacities over the service life of a system. And HDPE pipe has a very favorable strength-to-weight ratio.”

Some PPI members involved in the manufacture of pipe used in storm water drainage systems now also use post-consumer recycled plastics. Studies have shown that corrugated high-density polyethylene (HDPE) pipe manufactured with recycled materials performs the same as pipe made from all virgin HDPE resin.

The Projects of the Year program is held annually by PPI to recognize the use of plastic pipe in exceptional applications for all of PPI’s five divisions. Submissions are reviewed, evaluated and voted upon by PPI members. PPI is the major North American trade association representing all segments of the plastic pipe industry.

About the author
Ana Mendez
Ana Mendez is the editorial intern for Hanley Wood’s Concrete Construction Group. She has a Bachelor’s in English from Northeastern Illinois University. Contact Ana by email.
AWARD WINNERS
ACPA 2018 EXCELLENCE IN CONCRETE PAVEMENT AWARD WINNERS

ROADWAYS
WINNERS OF THE TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS AWARDS

WATER/SEWER
USDA INVESTS $1.2 BILLION TO IMPROVE RURAL WATER INFRASTRUCTURE IN 46 STATES

AWARD WINNERS
WINNERS OF THE U.S. MAYORS CHALLENGE Announced

BRIDGES & CULVERTS
ENGINEERING FIRM WINS GOLD MEDAL FOR BOULEVARD EXTENSION PROJECT

AWARD WINNERS
PROJECTS RECOGNIZED FOR OUTSTANDING ACHIEVEMENTS IN CONSTRUCTION MANAGEMENT