

## product focus: precast retaining walls perform at the Kennedy Center

The hand-laid stone retaining wall surrounding the John F. Kennedy Center for the Performing Arts in Washington, D.C., needed to be expanded. However, using the same hand-laid technique proved too expensive. A cast-in-place concrete with a formliner finish would take too long to complete, and the area lacked the proper space to complete the project.

Instead, Smith-Midland Corp., Midland, Va., designed and produced an 18,300-sq.-ft. precast concrete retaining wall, which was completed in 2005. It reproduced the look of the existing walls without needing to cut away an adjacent access road.



Smith-Midland custom-manufactured tan and gray precast concrete panels to match the pre-existing stone wall. The panels also matched an Ashlar stone design found on many structures in the D.C. area by using rubber formliners. The different-colored mixes that were placed in the forms incorporated black granite chips, colored pigments, and special coarse and fine aggregate. A heavy sandblasted finish exposed the aggregate.

The project incorporated two designs. Shorter walls were designed with an integral footer, allowing 10-foot sections to be set on a gravel base and backfilled immediately. Sections more than 12 feet tall couldn't be cast as one piece, so the

team designed a cantilever system consisting of a precast footer and a separate vertical wall. The footers contained two voids, where the corresponding legs of the vertical wall were grouted into place. The precast footer was designed to be the same for wall panel sections from 12 to 21 feet tall—the tallest part of the wall where it meets the existing stone wall.

All wall components incorporated a secondary architectural backup, which was finished with an exposed aggregate finish, complementing the Kennedy Center's exterior granite curbing. The facing also included an integral precast concrete cap to match the granite caps found on the site's existing stone walls.



PHOTOS: SMITH-MIDLAND CORP.