

Case Study

BG-FILCOTEN[®] Trench Drains

LONGWOOD GARDENS EXPANSION PROJECT MANAGES SHEET FLOW WITH LOW PROFILE NDS DRAINS AND STAINLESS-STEEL GRATES THAT BLEND INTO BEAUTIFUL SURROUNDINGS

Longwood Gardens in Kennett Square, PA, is renowned for its collection of some of the most beautiful plants and landscape designs the world over. It consists of over 1,110 acres of horticultural gardens and woods that transform each season, drawing hundreds of thousands to its beautiful oasis. In February of 2023, the organization made the decision to incorporate a 17-acre expansion on the property inclusive of new indoor gardens, outdoor gardens, lily courts, as well as walkways, stairways, and buildings that would enhance the property and public experience moving into the future.

NDS was contacted by the specifying engineer to develop a drainage solution that would capture the sheet flow from the new walkway and staircases in an effort to stave off any water pooling. It was a priority for the solution to blend into Longwood's highly aesthetic surroundings comprised of vibrant and eclectic gardens, meadows, conservatories, and fountains, which are designed by some of the world's most forward-thinking landscape artists, horticulturists, and architects.

NDS TRENCH DRAINS NOT ONLY AESTHETIC BUT GREEN

The NDS Design Worx[®] team recommended BG-FILCOTEN trench drains and stainless-steel slot top grates as the best choice. As one of the most inconspicuous solutions, it would not detract from the beauty of the garden but add to its charm. The stainless-steel grates were carefully selected by the landscape architect for a number of reasons. Not only were the durability and corrosion-resistant properties of the stainless steel appealing, but the designer liked how it matched the finish of the other stainless-steel design elements like railings and lighting.

As a fiber-reinforced concrete trench drain system that can handle high-load capacities, BG-FILCOTEN is also a sustainable solution manufactured without VOCs or heavy-metal residues that can leach into the ground, is 100% recyclable, and qualifies for LEED credits.



ONSITE SUPPORT MAKES INSTALLATION EFFORTLESS

More than 600 lf of channel drains and slot top grates were installed along the new cement walkway. The grates easily snap into place for a stable and secure connection. In addition, channel drains were placed along the bottom of each section of the staircase.

NDS field staff provided detailed installation instructions as well as onsite support and training. The Design Worx team was also called in to make slight revisions to the original plans to accommodate changes to field elevations during construction. The project wrapped on time and the new area was open to the public beginning in October 2024.

PROJECT SUMMARY

PROJECT TYPE

Capture & Convey

PROPERTY

Public Parks (Municipal)

STAKEHOLDERS

Berg Construction
Pennoni Engineering

NDS PRODUCTS USED

4 in. BG-FILCOTEN[®] trench drains and stainless-steel slot top grates

"It was very easy for our crew to follow the installation instructions and really had no issues installing the product. It's a great product." — Stetson R., Berg Construction

NDS Design Worx Services Utilized:

1. Layout drawings
2. Storage calculations
3. Installation details