

# Designing for Stormwater Runoff in a Successful Outdoor Event Space



## About

 6,000 sq ft  Danville, VA

The owners of [Ballad Brewing](#) renovated a historic warehouse in Virginia with the vision of creating a community-centered event space and brewery.

Ballad's founders have revitalized numerous buildings in the Danville River District, and they knew this 1891 tobacco warehouse offered lots of opportunities.

The remodeled, modern facility now brews 10,000 barrels of beer each year and boasts a family-friendly taproom for locals and visitors alike.

**“These spaces needed to withstand the high traffic of frequent visitors and the severe rain and weather of the region.”**



# Problems With Stormwater Management in a Busy Space

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Ballad Brewing offers their guests outdoor private event and community spaces to reserve for parties and other special events. These spaces needed to withstand the high traffic of frequent visitors and the severe rain and weather of the region.

Stormwater runoff was an issue for the city<sup>1</sup> and, ultimately, the owners. They needed a way to manage the excessive amounts of water that filled the patio area. To compound the situation, the existing roof structure didn't include eavestroughs, so they needed a solution that could help with water runoff and keep the area dry and visitor-friendly.

Because the brewery hosts frequent events and parties, they needed a space for guests to gather without having to worry about any wear or maintenance on the products used in the space.

## Products used:



BLU

# Permeable Solutions for Happier Guests

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By selecting a permeable paving solution for this project, the designers were able to create a 6,000 square foot patio that would not require inconvenient grade changes to direct surface water to a variety of drains. The entire pavement would, effectively, become a surface drain.

They opted for the Blu collection because of its larger scale modular sizing and smooth texture. The thermodynamically-stabilized iron-oxide pigments used in the manufacturing process ensures that the Chestnut Brown and Chocolate Brown colors that perfectly compliment the historic building remain looking rich and vibrant.

Techo-Bloc's precast concrete pavers and slabs exceed the industry's most stringent standards because of their strength and density. As such, they are resistant to freeze-thaw cycles and the application of de-icing agents (including rock salt), making this aesthetic improvement a long-term investment.

Another benefit of this system is the consistent ¼" wide joint-spacing that can be filled with ASTM 89 or ASTM 9 stone. For these spaces, the latter, when properly-consolidated, offers both excellent stability and infiltration rates of 570 inches per hour<sup>2</sup>.

The project also incorporated Techo-Bloc's Borealis product line in Smoked Pine, a part of the Techo-Bloc wood look-alike collection. [Borealis Wall](#) was used in the patio's fire pit, letting the owners have the appeal of wood, with the strength and durability of concrete.

[Borealis Step](#) was used to create a step down to the patio, providing both the perfect change in elevation and tie-in to historic space's original building materials.

By incorporating Techo-Bloc, Ballad Brewing was able to give guests the kind of event space and community feel they were after, resulting in better guest experiences, and providing happy brewery owners a product that was 10% more cost-effective than other pavers.

<sup>1</sup> Mandated by federal law under the Clean Water Act (CWA), the City of Danville's Stormwater Management Program is a comprehensive program designed to protect properties and aquatic resources from damage caused by increased volume, frequency and peak rate of stormwater runoff. It is the City of Danville's goal to protect these resources from [non-point source pollution](#) and [illicit discharges](#). [Click here](#) for a flyer on the City of Danville's Municipal Separate Storm Sewer (MS4) Program Plan.

<sup>2</sup> <https://www.techo-bloc.com/support/resources/technical-resources/permeable-pavement-solutions/>

**If you need pavers that can handle stormwater management, you need Techo-Bloc Blu pavers. [Visit our site](#) for more information on these permeable pavers.**

