Oldcastle Infrastructure™
A CRH COMPANY

# SEATTLE, WA PERKFILTER™ INSTALLATION
# Waterfront Alaskan Way

**| Owner**
The City of Seattle

**| Contractor**
Gary Merlino Construction

**| Consulting Engineer**
WSP | Seattle

**| Solutions**

**49 PerkFilter Catch Basins**

**3 PerkFilter Vaults**

The all-new Seattle Waterfront is set to change the entire landscape of the city, finally connecting the downtown and historic piers into one single, cohesive system. In addition to completely reimagining the flow of the city, the development will provide new protective infrastructure, including a seismically stable seawall (another Oldcastle project) as well as a green stormwater management system to maintain runoff along the entire development.

The systems had to meet regulatory requirements for basic treatment with GULD approval by the Department of Ecology as well as the City of Seattle (both Seattle Public Utilities and Seattle Department of Transportation). Systems were all sized using City of Seattle Stormwater Design Manual for multiple drainage areas and corresponding treatment flow rates.

## CHALLENGE

**The challenges with this project were primarily found in the coordination of multiple stakeholders and navigating the complex infrastructure below street level, working with both to tie in new construction for multiple utilities.** The existing Alaskan Way Viaduct had required full demolition as we looked to build the new Alaskan Way within the very same footprint. Numerous moving parts resulted in a vastly complex schedule for installation, demanding precision in execution on every phase of the project.

**Specific challenges the Oldcastle team turned into advantages during included:**

- Meeting the HS-25 traffic load rating for all structures included.
- Redesigning pedestrian and vehicular traffic to include PerkFilter systems for stormwater treatment.
- Ensuring the approved inlet vane grating was on all catch basins.
- Providing stamped structural design calculations and drawings for every unit on the project.

## SOLUTION

**When matched against competitor solutions, Oldcastle Infrastructure's PerkFilter stood out among the competition.** Both catch basins and vault units were used in the design of the project, as the City of Seattle sought the longevity of a solution that can only be found in precast concrete. In addition, the PerkFilter product had been used in jobs for the City of Seattle previously; this familiarity and trust with the product helped reassure the project's success. All systems used were sized according to the City of Seattle Stormwater Design Manual to include multiple drainage areas and corresponding treatment flow rates.

BENEFITS

## Longevity

- **Thanks to precast concrete, PerkFilter offers more reliability than steel when used in a marine climate.** The long term durability and service life of concrete is unmatched, and provides a better solution for sustainability of the infrastructure.

## Security

- **Compared to other products, PerkFilter stands up to vehicle traffic better due to its stronger top lid design.** PerkFilter lids fasten securely so that they remain resistant and largely clatter-free when subject to standard vehicular traffic.

## Timely

- **Product delivery was done in phases, ensuring that units were available whenever needed.** This delivery phasing allowed Oldcastle Infrastructure to supply units early and in greater supply, allowing for on-site storage until it was time for installation.

> “The concrete PerkFilter treatment system, was the right application for a high density, corrosive environment. It was the perfect fit for this high profile project.

**Mel Fisher** | Project Engineer
Gary Merlino Construction

# Stronger Stormwater Management **NOW AND INTO THE FUTURE.**