

# Case study

## The Moderne, Saratoga Springs, NY

Rooftop Detention- Vegetated and Hardscape (roof area: 11,000 sf @ 2% slope)

**A traditional stormwater tank system was replaced with rooftop detention, providing maximum efficiency of space and over \$700k in ROI to the Owner.**

### 1 Problem:

Traditional stormwater options would require either (1) substantial structural work or (2) the loss of parking , thereby the loss of one residential unit.



### 2 Solution:

The traditional green roof specified for the project was upgraded to a Purple-Roof system by adding:

- Needled Mineral Wool (2")
- Honeycomb Reservoir (3")
- Detention Layer (0.2")

### 3 Profiles:



### 4 Results:

Upgrading to Purple turned the under-utilized green roof into a complete stormwater solution. It eliminated the need for a traditional tank and the related excavation, hauling, concrete and utilities .

[www.purple-roof.com](http://www.purple-roof.com)

The Moderne is a 5-story condominium located in Saratoga Springs, New York. Constructed in 2021, it contains a mix of 24 high-end residential units with exterior and underground parking. It also includes an 11,000 sf green roof and amenity terrace. The greenroof designed was a traditional profile, consisting pre-grown sedum mat on 5" deep engineered growing media, over a filter fabric and drainage panel.



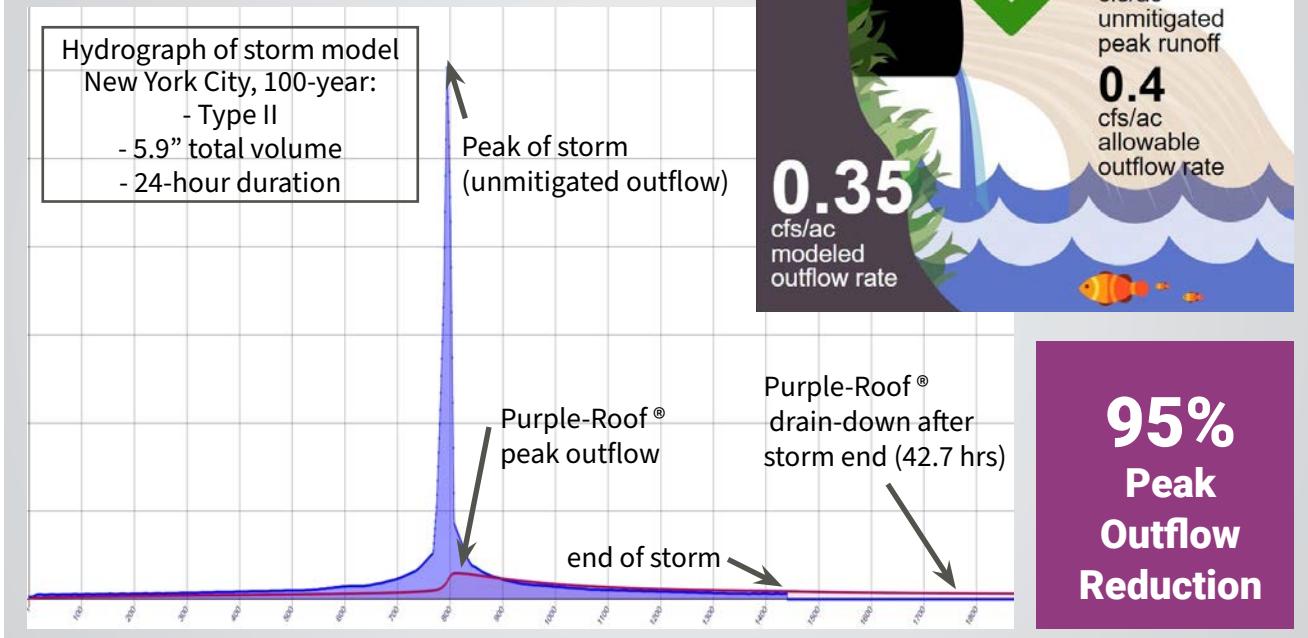
### Project Information

Owner	Bonacio Construction
Architect	Design Logic Architects, New York
Installer	Apex green Roofs, Boston MA
Cost Info	The upgrade from the traditional green roof specified to the Purple-Roof profiles installed was \$195,000 (approx. \$18.00 psf).
ROI Info	<p>The upgrade:</p> <ul style="list-style-type: none"> <li>• eliminated a custom detention tank and pump system</li> <li>• reduced the structural and mechanical scope</li> <li>• allowed for 1 additional condo unit</li> <li>• allowed for maximum exterior parking</li> <li>• generated over \$700,000 in ROI.</li> </ul>

# Technical

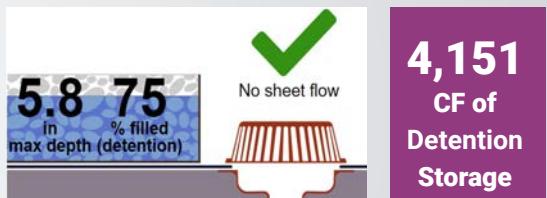
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### Peak Outflow Reduction



### Purple-Roof® Detention Storage

The Purple-Roof® profiles were engineered and installed to provided 4,151 CF of stormwater detention capacity over the 11,000 sf roof area.



### Structural Load Info

**25**  
lbs/sf  
ballast

**47**  
lbs/sf  
dead load

**66**  
lbs/sf  
max. load



\*The added weight of the Purple-Roof system was within the original snow-load parameters, therefore no structural upgrade was required.

### Vegetated Profile Components

