GREEN ROOFS FOR STORMWATER MANAGEMENT

Ohio

Ohio Specific Stormwater Calculations and Details

Columbia Green Technologies provides AutoCAD details and stormwater calculations that are specifically designed with Ohio stormwater regulations in mind. Through our technical support we strive to make designing and implementing a green roof in Ohio as easy as possible. Ohio specific details can be downloaded from http://columbia-green.com/resources/regional-stormwater-information/ along with Stormwater Regulation Sheets for other areas of the country.

Policies and Regulations in Ohio

Best Management Practices (BMPs)

In Ohio, management of stormwater runoff with post-construction Best Management Practices (BMPs) is required on sites larger than one acre. Ohio divides BMPs into two categories:

Non-Structural BMPs consist of preservation, planning or procedures that direct development away from water resources, like conservation easements and riparian setbacks.

Structural BMPs are practices that must be built to provide treatment storage, filtration or infiltration, such as detention ponds, green roofs, sand filters, and infiltration trenches.

Post-construction BMPs should be designed to treat the Water Quality Volume (WQv) by detaining it for 24 to 48 hours.

For more information about Stormwater policies in Ohio go to http://www.epa.ohio.gov/dsw/storm/.index.aspx

Green roofs are recognized as a BMP and are considered a reduction of impervious area. Columbia Green Technologies offers a variety of green roof solutions that fulfill these requirements and are adaptable to many different rooftop conditions.

Water Quality Volume (WQv)

The Water Quality Volume (WQv) is the amount of stormwater runoff from any given storm that should be captured and treated in order to remove a majority of stormwater pollutants on an average annual basis.

WQv = C x P x A/12

WQv = Water Quality Volume, in acre-feet
C = runoff coefficient appropriate for the site
P = precipitation, or rainfall depth, defined as 0.75 inches
A = area draining to the BMP, in acres

As defined by Ohio, the WQv results in the capture and treatment of the entire volume for 85% of average annual storm events.

In order to allow for full treatment of stormwater and to prevent erosion, Ohio requires all BMPs to retain the water they collect for a period of time, ranging from 24 to 48 hours, depending on the type of BMP.

Columbia Green Technologies offers green roof solutions that retain up to 70% of the annual rainfall, allowing for over 80% of the WQv standard to be fulfilled with one system in some situations.

Local Green Roof Incentive Programs

The Alternative Stormwater Infrastructure Loan Program offers below-market rate loans for the design and construction of green infrastructure as part of economic development projects. Funds are available to government entities who in turn can partner with developers to use the funds.

For more information go to www.development.ohio.gov/cs/cs_altstormwater.htm

About Columbia Green Technologies

At Columbia Green Technologies we offer a variety of comprehensive green roof solutions; from extensive to intensive green roofs, available with both tray based and layered systems. Designers appreciate the flexibility our systems offer and the technical support that accompanies any project we undertake. Building owners love the single-source 'Roof to Green Roof' warranty options provided through our roofing partners.

COLUMBIA GREEN TECHNOLOGIES™

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Note: This summary has been prepared and compiled by Columbia Green Technologies for informational purposes only. The information contained herein is accurate to the best of our knowledge as of Spring/Summer 2014. Please consult the regulatory agency and/or a licensed engineer before using this information for the purposes of facility design or permitting.