

# GREEN ROOFS FOR STORMWATER MANAGEMENT *Chicago*

## Chicago Specific Stormwater Calculations and Details

Columbia Green Technologies provides AutoCAD details and stormwater calculations that are specifically designed with the city of Chicago stormwater regulations in mind. Through our technical support we strive to make designing and implementing a green roof in the Chicago area as easy as possible. Chicago 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 Chicago

### Stormwater Volume Control

The City of Chicago requires that all regulated developments employ volume control measures to limit the total amount of stormwater discharged. To fulfill the volume control requirements a development must either capture ½" of runoff from all impervious surfaces, or for developments not discharging directly to waters or a municipal storm sewer, achieve a 15% reduction in impervious surfaces from existing conditions.

In order to meet volume control levels developments should use Best Management Practices, BMPs, like permeable pavements, green roofs, drainage swales and bio-infiltration systems.

Run-off coefficients called C-Values are used to calculate runoff volumes, which represent how permeable a surface is on a scale of 0 to 1.



Green roofs are recognized as a BMP and are considered a reduction of impervious area. Columbia Green Technologies offers green roof systems with medium depths of 4-8" that earn a C-Value of .3 and systems with medium depths over 9" with a C-Value of .2.

### Green Permit Program

The Chicago Department of Building offers the Green Permit Program to manage and incentivize sustainable development. Projects qualify through a combination of LEED certification and the implementation of "menu items" like exceptional energy performance, green roofs, renewable energy, extra affordability, and natural ventilation.

**Benefits** There are two tiers to the permit, requiring different project features and offering different incentives. Tier I offers expedited permit review, Tier II does the same while also partially waiving the permit fee. In order to qualify for Tier II benefits commercial projects must include a green roof covering 25% of the available area, and offices over 80' tall must have a green roof covering 75%, in addition to the other requirements of achieving LEED Silver and including two other menu items.

For more information about The Green Permit Program go to [http://www.cityofchicago.org/city/en/depts/bldgs/provdrs/green\\_permit.html](http://www.cityofchicago.org/city/en/depts/bldgs/provdrs/green_permit.html)

Our green roof systems are adaptable to many different rooftop conditions and can help fulfill the Green Permit requirements for any type of development. Additionally a green roof can satisfy stormwater requirements, increase the life of the roof, and lower heating and cooling costs.

## Local Green Roof Incentive Programs

The city of Chicago offers a Floor Area Ratio Bonus (FAR) for developments including a green roof that covers 50%, or 2000 sq. ft., of the roof area. The program is listed under the city code as "17-4-1015 Green Roofs". The bonus is calculated as,

$$\text{Bonus FAR} = (\text{area of roof landscaping in excess of 50\% of net roof area} \div \text{lot area}) \times 0.30 \times \text{Base FAR.}$$

For more information go to <http://dev.chicagocode.org/17-4-1000/>

## 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.



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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.