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## **Building value with green infrastructure: How property owners benefit financially - by Steven Schleider**

November 06, 2018 - Owners Developers & Managers



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Whether green roofs, biophilic design, green trends, low-cost tips for going green, greening offices, conference rooms and lobbies, laying permeable pavements and planting trees, greening the office building and environment and green infrastructure creates value.

What kind of value and how much depends on what you're including and how you're calculating, and we'll get back to that. But, for now, let's explore how property owners benefit financially and from the health and environmental perspective by investing in green infrastructure.

If you're a commercial property owner, when you invest in green infrastructure, you are investing in increasing your rents, length of tenancies, property value and NOI through energy savings, government tax credits, private financial incentives, reduced maintenance costs, water reduction and even on-site safety.

Enlightened companies – and there are many – can be swayed by the beauty, cleaner air and relaxation opportunities of locating their offices within a building with a green roof, living indoor green walls and private gardens. But they can be swayed even further by the body of knowledge that indisputably proves workers take less sick days, stay at their jobs longer and are more productive when working in green buildings, especially with offices designed along sustainability best practices.

As baby boomers continue to retire, the office environments and buildings of their era are being retired with them. To attract new talent, companies are embracing workplace strategies that appeal to younger generations' work styles – freedom to roam, informal settings, alternative work areas, natural light and other green elements.

Take, for example, Amazon's recent expansion of its Seattle headquarters – three glass spheres that house 40,000 plants from 400 species, creating an indoor rain forest. Instead of conventional offices (and, heaven forbid, cubicles), there are attractive wooden walkways open to the sphere with unexpected stopping and meeting points where employees can chance upon tables, chairs and lounges. The company, known for its challenging work ethic, hopes that the headquarters' unusual design and extensive greenery will spark new collaborations, ideas and products.

One additional benefit of investing in green infrastructure is the corporate brownie points received for good citizenship and enhancing the health, safety and livability of neighborhoods. Green infrastructure helps to diminish storm water runoff, provides shade, attracts birds and other wildlife and reduces the Urban Heat Island Effect created by New York City's vast density.

What savings and increases in property value can one expect when investing in green infrastructure? Let's take a snapshot of what's involved in installing a green roof. You're going to need a professional engineer and registered architect to do a structural analysis to determine if your roof can sustain vegetation or needs reinforcement; an architect/landscape designer and/or green roof specialist to design and install the system; and a big budget.

A decision will also need to be made on the type of planting and systems to be used – from

relatively simple sedum and grasses to a veritable forest – that fit your budget, climate, facility and goals.

That being said, what is the ROI? For one thing, the estimated life of a green roof is twice that of a conventional roof, avoiding that cost (especially if you wisely install a green roof at the end of the current roof's life expectancy). You'll have energy savings because of the green roof's insulating qualities and reductions in heating and cooling. There will be tax credits which vary. Your rents and length of tenancy will probably increase. You may have a reduction in storm water fees. Taking a long-term view of two or more decades, savings for a medium-size office building can be \$1+ million.

But, how you calculate makes a difference. Will your cost analysis figure only the initial costs of installing green infrastructure, or will you include the costs of design, installation, operation, maintenance and replacement?

Regardless, the comparison of green vs. gray infrastructure is both art and science because there are intangible benefits such as the difficulty in valuing enhanced safety, or habitat improvements for beneficial wildlife, or greater office worker productivity. Put another way, there is a difference between cost analysis vs. cost-benefit analysis.

As a commercial real estate appraiser and the only one in New York City with a LEED-AP BD+C credential, I can tell you that in determining building value, green infrastructure has become a growing part of assessment. I also believe that it is only a matter of time before lenders will require green analysis in their underwriting considerations.

Trees, shrubs, gardens, fountains, permeable pavements, bioswales, planters, green walls. All contribute tremendous benefits to property owners, tenants and communities.

To explore the topic further, [epa.gov](http://epa.gov) has in-depth information on green infrastructure as well as help with finding resources in your community and collaborating with partners.

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