

Appendix D: Integrating Stormwater Management With Buildings

Sussex County has many different building types, ranging from historically rich town center buildings in places like Georgetown, Lewes, and Milton, to newer commercial centers and residential communities. Regardless of the building type, there are essentially two ways of dealing with the stormwater generated from roofs: manage the stormwater on the building, or manage it off the building. On-building techniques include using green roofs, rainwater harvesting, and flow-through planter systems. Off-building strategies employ downspout disconnection, infiltration planters, swales, and gardens. Each strategy or combination of strategies depends on the building type, its surrounding context, and the amount of landscape space surrounding the building. In some sites, the lack of landscape area next to buildings may mean that the only feasible stormwater strategies might be green roofs or narrow flow-through planters.



EPA

Figure D-1. Shop on Second Street in Lewes.

Most of these strategies were discussed in Sections 5.2.7 through 5.2.13 of the main report. This appendix illustrates some further variations of these techniques that Sussex County could consider to manage building runoff.



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Figure D-2. Downspout disconnection into an infiltration garden at the University of Delaware's Lewes Campus.

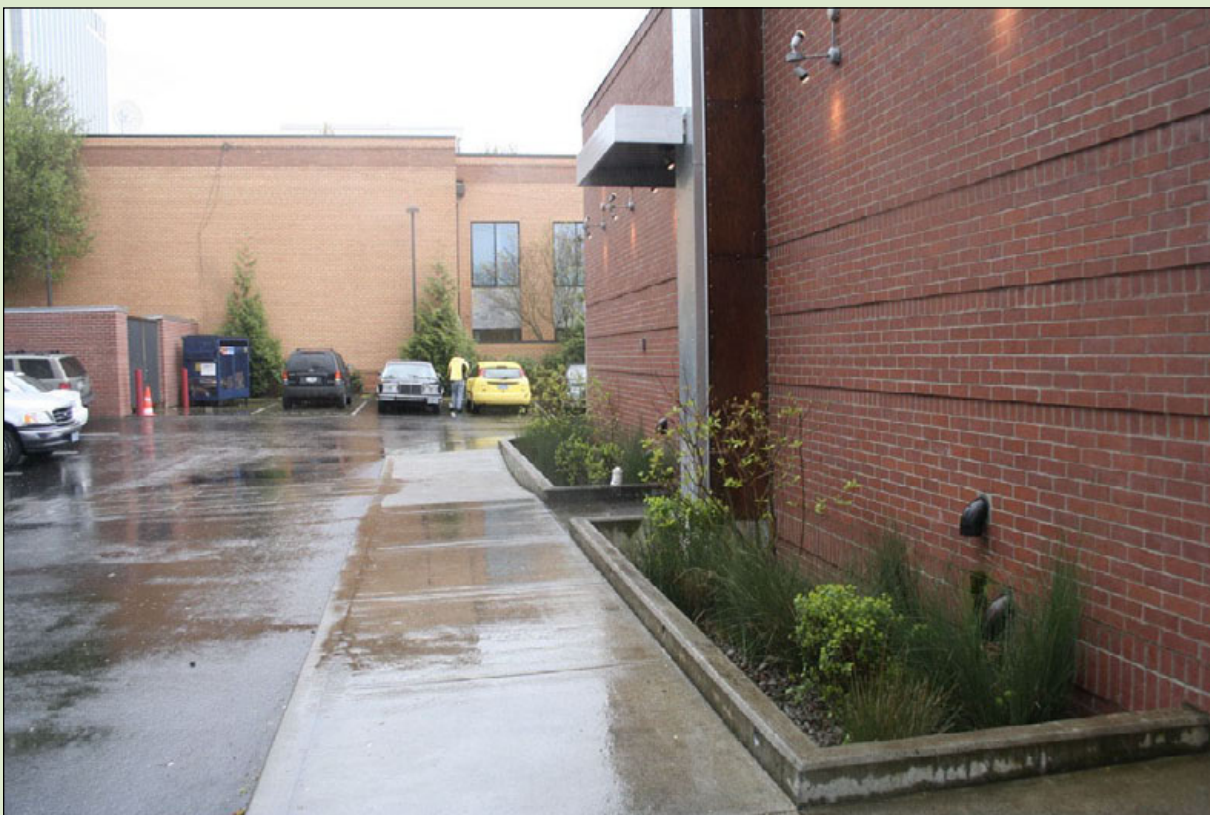
Stormwater Planters

The foundation planting shown in Figure D-3 could be transformed into a flow-through planter to capture and clean water from the building. The example shown in Figure D-4 illustrates a narrow flow-through planter well-integrated into its perimeter landscaping. Large stores can also use a series of stormwater planters to manage stormwater if a green roof is not feasible.



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Figure D-3. Landscaping at Rehoboth Beach Library.



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Figure D-4. A building flow-through planter accepts runoff from a fast-food restaurant in Portland, Oregon.

Different Types of Building Stormwater Planters

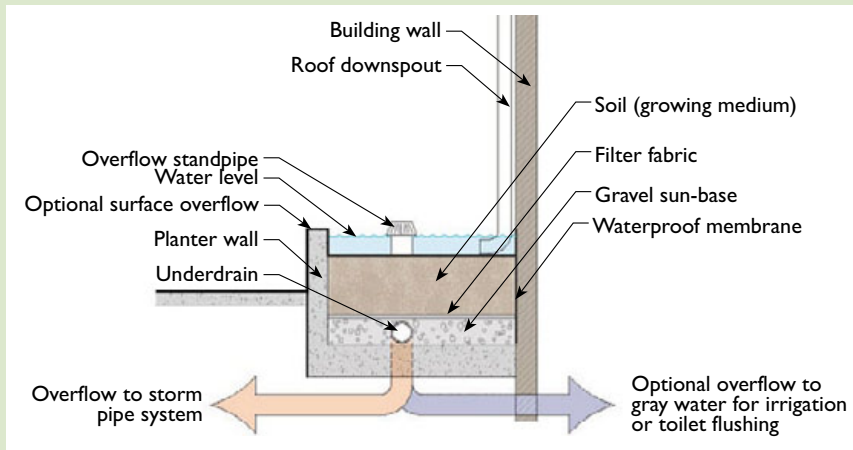


Figure D-5. Typical flow-through planter located next to a building.



Figure D-6. An infiltration planter located away from the building foundation. Notice the surface conveyance of runoff to the planter by using a concrete runnel.



Figure D-7. A flow-through planter adjacent to an apartment complex in Portland, Oregon. This stormwater planter is completely lined to protect the building foundation from migrating water.

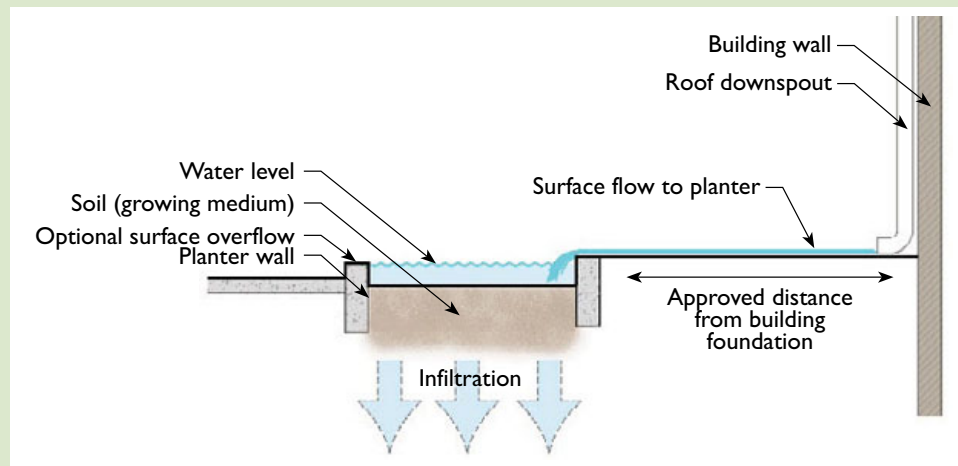


Figure D-8. Typical infiltration planter offset from building foundation.

Rain Art – Scuppers, Gutters, and Stormwater Sculptures

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Figure D-9. Water is conveyed on the surface into a stormwater planter via a concrete runnel.

One of the best opportunities for managing runoff from building rooftops is illustrating, through art, the beauty of stormwater management. There are many different ways to capture the beauty of falling water. These pictures illustrate a few successful examples. The opportunities to display artful forms of stormwater conveyance are limited only by the imagination.

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Figure D-11. An artful display of a building downspout in Seattle, Washington.



Figure D-10. The beautiful stair-stepping of runoff from a building rooftop. This effect also helps slow water down.

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