

Patterns of Green Infrastructure: tools for urban design

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Abstract

For the past four years, we have worked on designing networks of green infrastructure and soft transit in both an inner city context and in a suburbanizing edge watershed. Through this work we discovered that the design language of urban open space available in the design literature is weak, fragmented, conceptually conflicted, and poorly suited to designing interconnected networks. We propose to extract from our work and that of others a pattern language of green infrastructure. By patterns, we mean design patterns. These are generalized solutions to recurring design situations, stated so that important criteria can be met while the specific manifestation of the solution can occur in thousands of unique ways. The purpose of this pattern language is to articulate key design concepts and solutions that allow designers or planners to develop integrated proposals for stewardship land and soft transit networks across a rural to urban transect. By analyzing contemporary design proposals, we will identify the most significant alternatives for patterns at a range of scales and then outline these by a graphic method that we have already developed and employed in other knowledge domains. This way of systemic mapping reveals the interrelationships and nested structure of patterns in the built environment (see example in addendum). Of these identified patterns, we will develop in detail 10-12 patterns, at the larger scale of the networks. Each developed pattern will be composed of 1) a design action statement, 2) statement of the problem with relevant issues, including identifying the important elements and their relationships, 3) a generalized diagrammatic solution, 4) a design tool that helps the designer to make important design decisions or size important components of the pattern, 5) an example of how the pattern has been used in an elegant way by a designer, and 6) resources for further information. Patterns published in this way are intended as reference material to inform the creative process.