

# Section 9

## Implementing Green Streets

# Implementing Green Streets and Parking Lots



LANCASTER, NEW YORK: Green infrastructure outreach workshop.

A Green Streets approach requires a change in the way a community has historically viewed and evaluated its streets, from mostly single-purpose (moving people in vehicles) to a holistic approach that includes multimodal transportation, placemaking, and sustainability. Communities that want Green Streets need to build local support and capacity to ensure that project ideas can become reality.

## 9.1 BUILDING AWARENESS AND SUPPORT

To create a new vision for a street, community members need to build awareness, support, and buy-in. Demonstrating and communicating the values of Green Streets to public officials, municipal staff, and the community at large creates early buy-in and support. It also informs future opportunities to implement Green Streets or develop supportive policy. Examine what specific communities have used in the past and employ the most successful avenues for community engagement. Strategies may include:

- **Outreach and Communication:** Outreach is important for public awareness and building support. Presentations in the community, articles in the local paper or social media, and displays at town meeting are all strategies that can be employed to introduce and promote Green Streets.
- **Pilot Projects:** Low-cost, quick-build demonstration projects can help a community experience Green Street elements, build awareness, garner support, and test practices. They can also add value to programming by demonstrating effectiveness and reliability.
- **Educational signage** that signals to passers-by the unique and multifunctional aspects of existing green features and can help community members embrace change that increases green elements in street design.
- **Public Installations:** Beyond a pilot project, the installation of green streets facilities in public spaces offers municipalities several benefits, including first-hand experience with design, construction and maintenance of green streets before requiring it of others. Public installations not only help the public develop familiarity with Green Streets, but empowers municipalities to answer questions from private landowners who may have questions to make their practice own successful.

# Implementing Green Streets and Parking Lots

Talking about and demonstrating the values of Green Streets to public officials, municipal staff and the community at large creates buy-in early and when an opportunity arises; whether it is built infrastructure or a policy adjustment, the seed has been planted.

## 9.2 DEVELOPING LOCAL LEADERSHIP AND PARTNERSHIPS

Growing local capacity is at the heart of any community revitalization program. Sharing successful examples of Green Streets and making resources accessible to community members can help grow local interest and support in planning, constructing, and maintaining Green Streets.

Support for potential volunteers is also key to redevelopment initiatives. They are the people who will see the project to fruition and provide maintenance once a project is installed. Vermont communities are rich with individuals and groups who value the natural environment, such as SOUL Tree Stewards, members of a tree board, garden club, conservation commissions, or UVM Extension Master Gardeners.

Building partnerships between public and private entities is essential. Such partnerships can inform changes in regulations that help support Green Street principles or even fund green infrastructure in new development.

Key partnerships in a municipality may also include those between public works department staff, road foremen, local arborists, tree boards, tree wardens, bicycle and pedestrian committees, and community business associations. Fostering relationships between these entities and other volunteer-led organizations, such as watershed groups, can create a project vision with multiple benefits and long-term viability.

### Identifying Project Leaders

Developing a successful Green Streets plan or program requires coordination between local, regional, and state organizations. Identify local leaders currently managing infrastructure or environmental projects and enlist help from town

staff, local boards, non-profits or regional watershed groups, regional planning commissions, or state-wide non-profits.

### State Partners

The State offers resources and technical assistance to support local development and implementation of Green Streets. State agencies that have resources and technical expertise in Green Streets includes the Department of Environmental Conservation, the Department of Forests, Parks and Recreation, the Vermont Agency of Transportation (VTTrans), and the Agency of Commerce and Community Development.

The key resource for identifying state projects and best practices in green stormwater infrastructure is the state's Green Infrastructure (GI) Coordinator, a position jointly funded by the Department of Environmental Conservation and the University of Vermont's Lake Champlain Sea Grant Program. The GI Coordinator convenes a statewide group, the Green Infrastructure Roundtable, composed of individuals from municipalities, watershed organizations, state agencies, and the university community. GI Roundtable furthers green infrastructure goals throughout Vermont by sharing information on best practices, future funding opportunities, and education opportunities for green infrastructure.

### Regional Planning Commissions

Regional Planning Commissions (RPCs) help local communities in their municipal planning efforts, including transportation planning and project development. RPCs help ensure that Green Streets policies and projects are identified and developed in local municipal and transportation plans. They also work closely with VTTrans through the Transportation Planning Initiative and can help communities develop and implement future transportation-related infrastructure projects that include elements of Green Streets. RPCs also play a vital role in connecting local municipalities to state entities and funding sources.

### State-Wide Non-Profits

The Vermont League of Cities and Towns, Watersheds United Vermont (WUV), and the Vermont Housing and Conservation Board (VHCB) are state-wide non-profits



# Implementing Green Streets and Parking Lots



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that can provide insight, technical expertise, and leadership on implementation of Green Streets. The Vermont Natural Resource Council (VNCR), a leader in protecting our natural resources and building sustainable communities, is another great resource for providing education and developing local capacity.

## Watershed Groups and Conservation Districts

Given the impact of conventional stormwater management systems on local water resources, watershed groups and Conservation Districts are particularly interested in the stormwater management capacity of Green Streets. These groups often advocate for Green Streets principles, apply for funding, and oversee the implementation process of stormwater-related projects in local communities.

## 9.3 DEVELOPING A LOCAL STRATEGY

Although communities may be receptive to creating Green Streets, there may be reluctance to initiate a Green Streets project without local leadership and community support. Establishing goals and identifying hurdles for implementing Green Streets, then identify what strategies and activities will help move communities towards project implementation. The table below explains what each potential strategy entails.

Providing a variety of opportunities for the public to get to know Green Streets in a community can increase willingness to change. Every town has at least one green feature to begin a conversation about Green Streets.

## 9.4 INFLUENCING LOCAL AND STATE POLICY AND REGULATION

Green Streets and parking lots can be achieved when policies align with community support. There are opportunities to influence regulations or local plans every few years during updates of municipal plans or local bylaws. The development of local policies and actions help lay the groundwork for future Green Streets installations and programs.

- Municipal Plan** – Include specific language that recognizes the importance of Green Streets, their benefits to the community in new developments and redevelopment. The Plan should include policies and action items that could result in changes to land use regulations (zoning & subdivision),

# Implementing Green Streets and Parking Lots

## POLICY, PROGRAM, AND PROJECT EXAMPLES

	DEFINITION	EXAMPLE
<b>POLICY</b>	A plan or course of action set by a government, business, or municipal board or committee intended to influence and determine decisions, actions, and other matters.	Develop a local Green Streets resolution and policy to promote and incorporate Green Streets principles in public and private development.
<b>PROGRAM</b>	A group of related projects managed in a coordinated way to obtain benefits not available from managing the projects individually. A program may also include elements of on-going, operational work.	Public “Build-Your-Own” Rain garden training program.
<b>PROJECT</b>	Temporary undertaking with a defined start and end point and specific objectives to create a unique installation or service that, when attained, signifies completion.	New bioretention retrofit project at a city parking lot.

changes to municipal infrastructure investments and public works policies, and new approaches to conservation. In addition, any barriers to the implementation of Green Streets techniques that exist in current land use regulations should be identified. Potential changes to these regulations and funding strategies to implement Green Streets should be evaluated and discussed.

- **Zoning and Unified Development Regulations** – Many local bylaws need updating to prevent new development from harming the natural features that help absorb stormwater. Municipalities can adopt Green Stormwater Infrastructure requirements in new construction. While the State of Vermont regulates stormwater runoff for development projects that disturb over one acre of earth or create one acre of impervious surfaces, the stormwater from many developments of less than one acre can cumulatively cause flooding and negatively impact water quality. Zoning regulations should require specific site design review and explicitly allow for bioretention areas, rain gardens, and filter strips. Parking requirements should be focused on reducing impervious surfaces through methods such as parking maximums (vs. the typical minimum required parking) or shared parking.

Municipalities can fill the gap by regulating the stormwater impacts of smaller development projects through zoning and subdivision regulations.

- **Subdivision regulations** are a tool that communities can use to address the early stages of development planning as it relates to Green Streets. During the development of subdivisions, communities could require applicants to maximize design and functionality of stormwater management practices using Green Streets techniques relating to the design of internal roads, lot layout, parking, open space, public spaces and land to be conserved.
- **Public Works Specifications** - Green Streets practices impact a number of different municipal programs including street design and maintenance, underground utilities such as sewer, water and power, public space planning, management, and budgeting. As a result, there needs to be a unified approach to developing a Green Streets project. All municipal departments should be kept aware of potential projects, and municipal policy should require collaboration and synchronization, particularly when cost savings from Green Streets improvements can be realized when completed in coordination other projects. For example, Green Streets project may be included during a sewer or water line replacement that already impacts a street.
- **Local Tree ordinances** - Municipalities should consider integrating Green Streets into standalone ordinances or other municipal policies such as tree ordinances, which define the procedures for tree plantings and protection. These practices could be coordinated with a Green Streets approach, such as requiring a tree box filter when a new tree is installed by the municipality under certain circumstances.
- **Local Energy Planning** - Similarly, municipal energy planning and policy can encourage Green Streets practices as a way to reduce the need for cooling during the summer. For communities developing Enhanced Energy Plans, support for Green Streets should be included as one component of how the municipality will demonstrate “leadership by example” with respect to reducing energy use throughout the community.

## 9.5 PROGRAMMING

Identify opportunities in municipal planning and policy to initiate Green Streets

# Implementing Green Streets and Parking Lots

project in a coordinated and systematic approach. While individual Green Streets gestures improve water quality and make our streetscapes and parking lots more enjoyable places, connecting elements in a coordinated program enhances the benefits and maximizes impact. Determining programming goals, whether that is the capture of stormwater runoff or the amount of urban tree canopy, will help narrow the program, maximize impact, and prioritize projects. Programming helps communities align projects that meet multiple goals in a focused, cost-effective, and impactful manner.

## 9.6 PROJECT

The development and identification of a project typically goes through a four step process:

1. **Planning and Feasibility, or Project Scoping and Identification**
2. **Design, Engineering and Permitting**
3. **Construction**
4. **Maintenance and Monitoring**

The first stage, planning and scoping, requires identification of the size and location of the project area. The scoping of the project will help the municipality explore what is feasible, given the financial, environmental, community, and infrastructure opportunities and constraints. Additional projects can be added over time, as momentum builds, to meet the overall programming and goals of the community. Within the project area, identify priority zones for investment to enable a project to be flexible to match funding opportunities.

Once a project has been identified, technical experts can then propose concepts and involve the public in the selection of alternatives. Selected concepts are then developed into construction documents and can go out to bid. Projects that receive public funding are required to go through a competitive bidding process.

After a bid has been accepted, construction begins. However, like all infrastructure projects, the end of construction is not the end of a project – it is the beginning

of long-term maintenance and monitoring. Green Streets must have a detailed maintenance schedule in place to ensure it long-term success and viability.

## 9.7 FUNDING

Like any new project, securing the funding for Green Streets and parking lots can be intimidating. But it's necessary to make a Green Street design become a reality. Many projects require intentional and thoughtful combinations of local matching funds and grant programs. Below are some ways to plan for the funding of a Green Street project.

### Capital Improvement Planning

One of the best tools available to meet your community vision and objectives is *capital planning*, a process that outlines the use of limited funds to achieve needed improvements in public facilities and infrastructure such as Green Streets. Not all improvements can be funded immediately, and some may be more critical than others to meeting your planning goals. The capital budget and program helps municipalities select, schedule, and finance their public facility improvements. The plan sets forth the capital projects to be funded each year for a period of five or more years and identifies the anticipated source of funding for each project. The long-term capital program informs the annual capital budget, and projects listed on the capital program are likely to be implemented because funding is allocated to make it a reality. While capital planning may seem purely an accounting exercise for municipalities to manage public facilities, it is a powerful implementation tool when used to fund priority projects that move the community closer to the vision in the plan.

### Local Funding Sources

Vermont towns, villages, and cities can encourage good design through incentives at the local level. These incentives cover a wide array of potential services and funds and can be scaled to suit the budget and size of the community. Among the most frequently used local tools are:

**Downtown Improvement Districts (DID)** – DIDs are special assessments made on downtowns where the additional tax revenues are dedicated to improvements within that district. Green infrastructure improvements could be supported through a DID.



# Implementing Green Streets and Parking Lots

**Local Option Tax** – Local option tax is a way for municipalities in Vermont to raise additional revenue to support (green stormwater) infrastructure improvements.

**Bonding** - Bond issues by the town may provide important opportunities to leverage other funds, such as required match amounts for federal or state grant programs. Regional bonds may be needed for larger scale projects.

**Private Donors and Fundraising** - Funds can be provided by private donors or through special fund-raising efforts that can supplement or substitute for local funds. A Conservation Commission can be an excellent representative to encourage donations related to the implementation of Green Infrastructure.

## Funding Opportunities

Funding opportunities are always changing and evolving, and staying abreast of current grants is challenging. To assist in locating viable funding options, below is a list of grant resource hubs that could be applied for to implement a Green Streets initiative or project.

- The [Agency of Commerce and Community Development](#) offers a comprehensive directory of grants and assistance in matching projects with funding.
- The Department of Environmental Conservation's [Clean Water Initiative](#) Program offers a list of current and prior water quality grants and the ability to sign up for grant notifications.
- The [Agency of Transportation's Municipal Assistance Bureau](#) provides both technical and financial assistance in the planning and implementation of projects.
- The [Vermont Urban & Community Forestry Program](#) offers grants to support projects that grow tree canopy.
- The [Lake Champlain Basin Program](#) offers a variety of grants and links to other funding opportunities.
- The [Environmental Protection Agency](#) hosts a site that list the federal grant programs that support green infrastructure.

Philanthropic foundations are strong in Vermont and worth investigating. Some of the top giving foundations for projects aligning with Green Streets principles include the [Vermont Community Foundation](#), the [Lintilhac Foundation](#), and the [New England Grassroots Environmental Fund](#).

These resources are available on Vermont Urban & Community Forestry's website, [vtcommunityforestry.org](http://vtcommunityforestry.org).

The Vermont League of Cities and Towns developed a model [Low Impact Development Bylaw Template](#) to help reduce the impacts of conventional development practices on water quality. While the model is aimed at stormwater management, it is a stepping stone in providing the content that may be envisioned in advancing Green Streets at the local level.





**SOUTH BURLINGTON, VERMONT:** Students help install one of many rain gardens throughout their school grounds and parking lot.