

SOMERVILLE'S STREETS

AN OVERVIEW OF POLICIES AND PLANS



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An aerial photograph of a city grid, likely Somerville, Massachusetts, showing a dense network of streets and buildings. A man in a brown blazer and white shirt is standing on the right side of the frame, pointing with a yellow highlighter at a specific street intersection in the city below. The background is a high-angle, top-down view of the urban landscape, showing a mix of residential and commercial areas, green spaces, and major thoroughfares.

MAYOR'S MESSAGE//

If streets are the backbone of cities –the infrastructure that permits us all to move about and transfer products – then I think it is fair to say we have good bones. Unlike many of the dying fringe suburbs, with their cul-de-sacs and monster freeways, Somerville has streets that everyone can enjoy.

In so many ways, we are a city planner's dream: quaint, tree-lined streets with bike paths and an ideal mixture of commercial and residential uses. This document describes some of our efforts to maintain this situation, to ensure that our bones are in good shape.

Making the City's streets and sidewalks safe and accessible to everyone is our top priority. We are constantly reminded of the variety of ways that people move throughout Somerville, including by wheelchair, skateboard, bicycle, car, truck, and jogging shoes, just to name a few.

In SomerVision, the City's 20-year comprehensive plan, one of the goals is to make 50% of new trips by transit, bike, or walking. We keep that in mind when making decisions about how to allocate capital resources. As you will see in the following pages, we plan our streets today with an eye on tomorrow.



➔ Davis Square



DATA SUMMARY

3200

Curb Ramps

93

*Miles of
roadway.*

462

*Streets in
Somerville.*

67

*Somerville's
Pavement
Condition
Index (PCI).*

35

*Miles of
roadway that
have been
reconstructed
since 2004*

6.5

*Million
square feet
of sidewalks*

84

*Somerville's
Walk Score.
One of the
highest in
the nation.*

Ivaloo St

INTRODUCTION//

For decades, the vast majority of municipal street reconstruction, planning, and design programs have focused solely on pavement quality and moving able-bodied adults in automobiles efficiently. This created a system that provides reasonably good mobility and convenience for millions of Americans. Yet the needs and safety of travelers outside that group, including younger or older people, those with disabilities, and those who travel by public transit, bicycle, or on foot, have been routinely overlooked and at times, even disregarded.

The streets of our city, the public rights of way in front of our homes and businesses, are an essential part of the livability of our community and directly impact our quality of life. Our streets are for everyone, whether young or old, motorist or cyclist, walker or wheelchair user, bus rider or shopkeeper. And for many, our streets are an extension of home: a place to play, exercise, and enjoy company—as well as a connection to and from work, school, shopping, or worship.

OUR VISION

The City of Somerville's **Neighborhood Street Reconstruction Program (NSRP)** is committed to creating safe and dynamic urban streetscapes that adequately provide for all users: pedestrians, bicyclists, wheelchair users, transit users, and motorists to the extent appropriate to the function, context, and use of the street.

This means, going forward, the City will plan for streets that will:

- Improve accessibility and safety for all users
- Maintain and improve existing infrastructure
- Balance transportation mode choices by providing critical system connections for pedestrian, bicycle, and the transit network
- Foster a sense of community through design and provide a built environment that complements the innovation and creativity that is uniquely Somerville

The NSRP will change the way street reconstruction and transportation projects are prioritized. While we will continue to rely on the traditional measures of pavement (preservation) quality and infrastructure conditions, we will also focus, more than ever before, on accessibility, safety and traffic calming, quality-of-life priorities and economic sustainability.

80,000

*Population of
Somerville*

NSRP

**Neighborhood
Street
Reconstruction
Program**

35 Miles of Newly Constructed Roadway since 2004





HOW STREETS ARE MAINTAINED: EVALUATION CRITERIA

**2. Promote Safety
& Affect Traffic Calming**

**4. Economic &
Environmental Sustainability**



1. Improve Accessibility

3. Invest in Maintenance

EVALUATIVE CRITERIA//

The NSRP's metrics are based on various data points collected by City departments that are aggregated into weighted categories and then scored. They are:

1. Improve Accessibility

The City recognizes that disabled individuals are often put in danger when they are forced to travel in streets and roadways, and that they are sometimes prevented from reaching their destination. The City will comply with all federal and State disability laws and is committed to ensuring that individuals with disabilities can travel throughout in a safe and convenient manner by building all the required curb ramps or sloped areas to make sidewalk travel safe and easy for individuals who use wheelchairs, scooters, and other mobility aids.

Accessibility Data Sources:

- Critical Pedestrian Connections (T&I, Somerville by Design)
- Existing Pedestrian Markings/Connections (T&P)
- Sidewalk and Ramp Inventory (DPW Engineering)
- Critical Bicycle Connections (T&I, Somerville by Design)
- Existing Bicycle Markings/Connections (T&P)
- Existing Transit Routes (MBTA)

2. Promote Safety and Affect Traffic Calming

The City desires to improve safety for people walking, bicycling, or driving to their destinations. Somerville's NSRP approach breaks down the traditional separation between highways, transit, biking, and walking, and instead focuses on the desired outcomes of a balanced transportation network that supports safe use of the roadway for everyone. The City's Complete Streets ordinance and guide will help in prescribing interventions at sites prioritized for safety and traffic calming.

Safety/Traffic Calming Data Sources:

- Pedestrian Collision Data (safe-START)
- Bicyclist Collision Data (safe-START)
- Automobile Collision Data (safe-START, MassDOT)
- Speed data (SPD, T&P)



“Making the City’s streets and sidewalks safe and accessible to everyone is our top priority.”

–Mayor Curtatone

EVALUATIVE CRITERIA//

3. Invest in Maintenance

Investing in repair and preservation does more than make headway on an inevitable problem, it actively reduces the scale of future costs. According to the American Association of State Highway and Transportation Officials, every \$1 spent to keep a road in good condition avoids \$6-\$14 needed later to rebuild the same road once it has deteriorated significantly. Prioritizing repair and preservation makes good fiscal sense and brings with it a host of additional benefits.

Condition Data Sources:

- Pavement Condition Index (DPW Engineering)
- Ramp Condition Data (DPW Engineering)

The PCI, or Pavement Condition Index, is an objective measure of which roads are in need of maintenance, which are in good condition, and which roads need reconstruction. The PCI provides a solid basis for engineering decisions, and is at the heart of this plan.

4. Economic and Environmental Sustainability

The quality of our urban connectivity is vital to both a vibrant business community and a green, aesthetically pleasing public realm – and a superior quality of life. A ‘complete streets’ approach to roadway design will guide us toward these goals.

Complete streets are comfortable and engaging, provide convenient and safe travel for all transportation modes, allow additional opportunity to implement sustainable and green elements, and enable convenient and vibrant business districts.. A complete street will invest in more than just asphalt and sidewalks. The City’s Complete Streets guide will outline elements such as traffic calming measures, new street typologies, lighting and signal improvements, and greening / tree canopy improvements to increase the safety and convenience for all modes. The multimodal vitality encouraged by complete streets will nurture businesses, increase social interaction among residents and visitors, and add character to the built environment. All projects identified as necessary by headings 1-3 above will proceed by using complete streets design guidance, with further improvements to the environment informed by the following data:

Economic and Environmental Sustainability Data Sources:

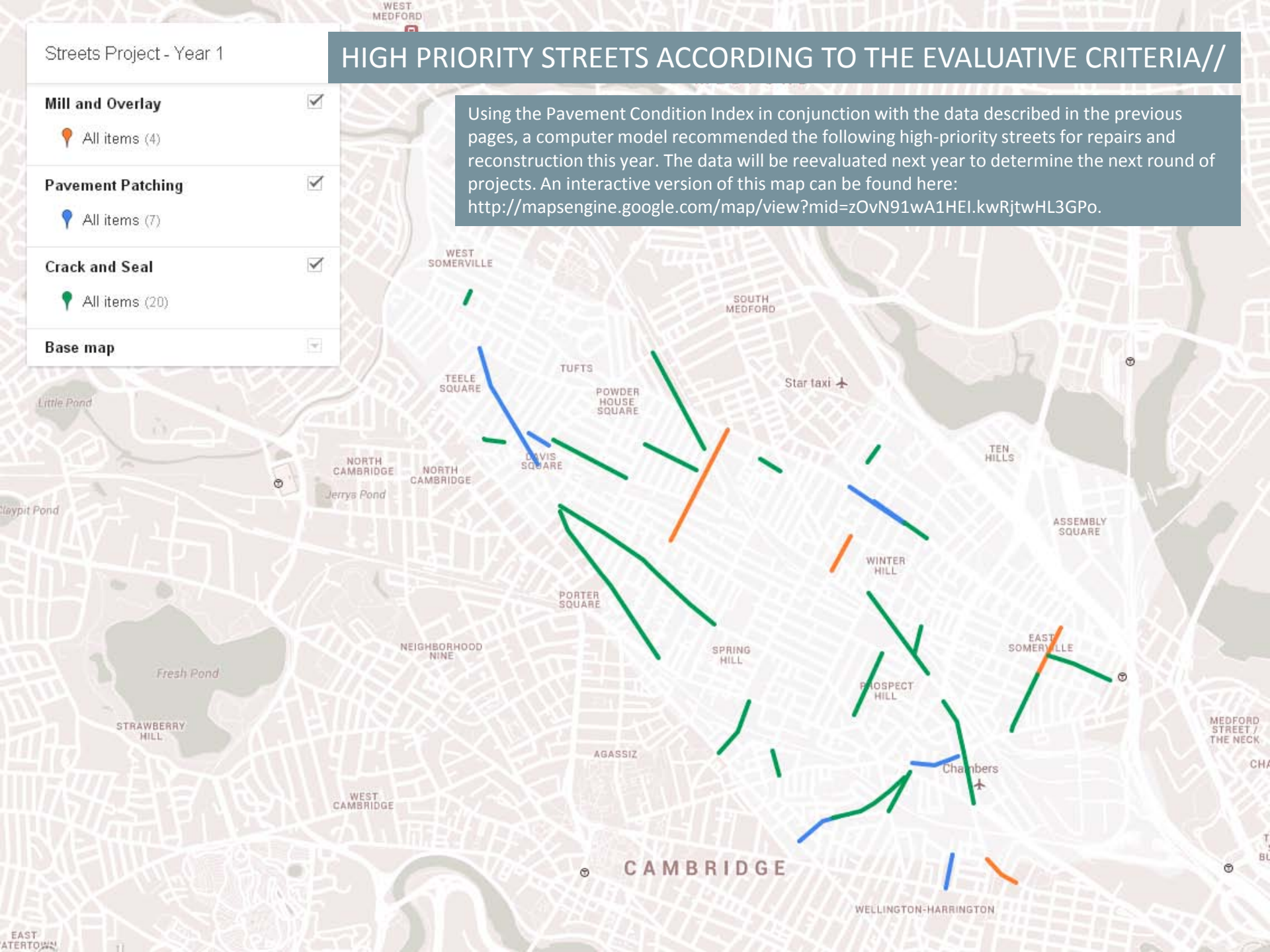
- Tree Canopy Data (T&I)
- Lighting quality
- Increased open/green space / civic space opportunities
- Targeted Areas for Infrastructure Improvements (DPW)
- Targeted Areas for Transition (Somervision)
- Future Transportation Context (Somervision)



HIGH PRIORITY STREETS ACCORDING TO THE EVALUATIVE CRITERIA//

Using the Pavement Condition Index in conjunction with the data described in the previous pages, a computer model recommended the following high-priority streets for repairs and reconstruction this year. The data will be reevaluated next year to determine the next round of projects. An interactive version of this map can be found here: <http://mapsengine.google.com/map/view?mid=zOvN91wA1HEI.kwRjtwHL3GPo>.

- Streets Project - Year 1
- Mill and Overlay**
 - All items (4)
- Pavement Patching**
 - All items (7)
- Crack and Seal**
 - All items (20)
- Base map**



FUNDING AND CAPITAL INVESTMENT PROGRAM//

Each year, resources will be dedicated to the NSRP program from a variety of funding sources, including, but not limited to:

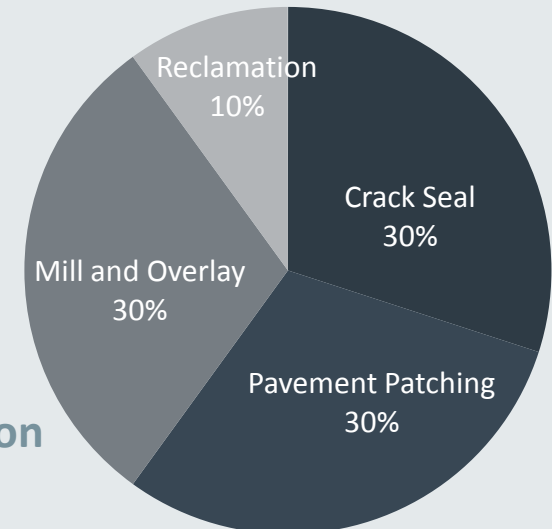
- The City's Annual Operating Budget. Each year funds are budgeted within the Public Works Highway Department for minor maintenance and repairs to roadways and sidewalks (i.e., filling potholes, sidewalk panel replacement).
- The City's Capital Investment Plan. Within the Capital Investment Plan the City budgets money for large improvements to roadways and sidewalks. These projects must exceed \$50,000 and typically have a useful life of at least five years. Capital funding sources include borrowing, stabilization funds, and "free cash."
- State Chp. 90 Distribution. Each year the Governor and State Legislature appropriate funds that are distributed to Massachusetts cities and towns. The distribution is formula-based and uses centerline miles, population, and daytime working population as factors in determining its calculation.
- Water and Sewer Enterprise Fund. The Water and Sewer Enterprise Funds finance any road improvements that accompany improvements to underground water and sewer lines.

In addition to ranking streets by their accessibility, safety, preservation, and quality of life factors—the City will separate the existing pavement information for Somerville roadways into two funding categories: Maintenance Projects and Reconstruction Projects.

Routine Maintenance—roadways requiring only maintenance work (patching or crack seal). This is work that does not require "breaking open" the infrastructure and is critically important to maintaining the assets in their current "good" condition. The cost savings that a meaningful and robust maintenance program creates in future years are real and substantive (see the appendix for more information).

Mill/Overlay Projects—roadways or infrastructure improvement requiring investment beyond basic maintenance (either based on pavement management or a known major utility need). Those roadways will be aggregated into the four priority categories (access, safety, preservation, and quality of life) so that the resulting project fully addresses all aspects of the asset, both transportation and infrastructure. Residents and businesses can anticipate new and innovative streetscape designs that capture the tools and essence of complete streets. These projects will include not only new surfaces and sidewalks and, in some cases, infrastructure, but the latest tools in traffic calming and safety measures.

Sample Funding Allocation



A photograph showing a person in a wheelchair being pushed by another person on a city street. The wheelchair is dark blue and has a black bag attached to the back. The person pushing the wheelchair is wearing a dark blue shirt and dark pants. The person in the wheelchair is wearing a dark blue shirt and dark pants. The background is a blurred city street with other people walking. The text "MAKING STREETS SAFE AND ACCESSIBLE" is overlaid on the image in white, bold, sans-serif font, slanted upwards from left to right.

**MAKING STREETS SAFE
AND ACCESSIBLE**

OUTCOMES //

Somerville's goal is to be the most walkable, bikable, scooter, and/or wheelchair-friendly, transit-accessible city in America by improving accessibility and safety for all modes of travel. We are committed to an underlying collection of shared values, as expressed by SomerVision: the City's Comprehensive Plan for 2010-2030:

- To celebrate our diversity and inclusiveness, foster community, invest in our economic base, and promote dynamic, urban streetscapes
- To build a sustainable future through strong environmental leadership and a commitment to continued innovation.

Integral to these values are how we provide for movement in Somerville.

The NRCP's comprehensive approach to street reconstruction assessment will allow the City to invest in our streets in ways that are in line with our values as a City and yet unprecedented in our City's history. With each project completed, we will be providing measurable accessibility, preservation, safety, and economic development improvements. Under this approach, even small projects can provide an opportunity to make meaningful improvements for our community.

The ideal result of the City of Somerville's Neighborhood Street Reconstruction Program (NSRP) is that all transportation improvements are viewed as opportunities to create safer, more accessible streets for all users.

At the completion of this project, the City of Somerville envisions:

- The identification and elimination of most, if not all, physical and communication barriers in the right-of-way.
- The installation and continued maintenance of accessible pedestrian signals.
- The realization of the fundamental goal of the Americans with Disabilities Act to provide access to civic life for people with a broad range of disabilities.



PLANNING FOR THE FUTURE



FORTHCOMING PLANS//

The City is buzzing with several important planning efforts. SomerVision set the groundwork for these plans, which are taking place throughout Somerville, but they go beyond the comprehensive plan to provide more detail about the future of our streets and sidewalks.

Complete Streets

Complete Streets are streets designed to increase safety and efficiency for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete Streets increase safety by slowing, calming, and simplifying traffic patterns. They increase neighborhood vitality by making it easy to cross the street, walk to shops, bicycle to work, and access transit.

The City is currently working on Complete Streets Guidelines to assist in the design of these streetscapes and compliment the Complete Streets Policy currently under consideration with the Board of Alderman. Adopting these documents mean that the City is putting into writing, and it committed to, consistently working toward the safest and most convenient accommodation of all modes in every street project moving forward. This means that with every roadwork project moving forward, our streets will iteratively improve for all modes.

Safe-START 2.0.

In 2006, Mayor Curtatone convened a task force that was asked to evaluate every aspect of the City's traffic and pedestrian systems. The report they produced presented the preliminary findings of the task force, now referred to as the "Safe, Sustainable Transportation Assessment and Recommendation Team" or in short Safe-START. This report reviewed 27 priority locations throughout the City to determine strategies for improving pedestrian safety. Safe-START has also proposed policy changes and design standards that should be implemented to improve pedestrian and bicycle safety through out the City. In Spring 2013, the Mayor reconvened an interdepartmental staff to evaluate the progress of the original Safe-START initiative and determine a new set of intervention sites for examination. A data-based approach examined bicycle and pedestrian safety statistics, incident severity, and 311 concerns to determine a set of sites to be prioritized for improvements ranging from new crosswalks to tabled intersections and improved signals.

Other Major Plans

- Beacon Street Reconstruction
- Davis Square Streetscape Improvements
- Union Square Utility and Roadway Improvements Study and Design
- Central Broadway/Winter Hill Roadway and Streetscape Improvements Plan, Study and Design



APPENDIX

Cycling in the streets. Credit: flickr.com/midorionna



“Studies show that for every \$1 spent on preventive maintenance and pavement preservation, the municipality saved \$6-\$8 on costly reconstructions and rehabilitations later.”

- UNH Technical Note



Cost curve for infrastructure repairs.

This is why it is so important to do preventive maintenance.

