

## CHAPTER 6: RECOMMENDATIONS

### Introduction

The purpose of the Grounding McGrath study is to identify alternatives that improve the McGrath corridor and provide a multi-modal transportation corridor that provides effective access for all users, while balancing regional mobility with neighborhood livability. The study included a thorough alternatives analysis framed by a comprehensive civic engagement process with the MassDOT-appointed Working Group and the public in general. The recommendations summarized in this chapter have been selected primarily because they best address the issues identified in the corridor when assessed through the lens of specific goals, objectives and evaluation criteria that were developed through input from both the Working Group and the general public.

Formally, this report marks the end of the planning process, and the beginning of the project initiation, environmental permitting, and project development stages. This report identifies which components of the planning study's recommendations need further analysis or public input, and which alternatives can reasonably be promoted or advanced for more detailed evaluation, permitting or design as part of the project development process. Public involvement will continue as these recommended improvements are brought through the stages of permitting, design, and construction.

### Planning Context

The Grounding McGrath study has been conducted in the context of transportation policy and planning principles that are significantly different from those that were in place when the McCarthy Viaduct and other components of the McGrath corridor were built. The planning environment for infrastructure in Massachusetts and around the country has changed, in terms of evolving policy positions and in local and regional priorities. The recommendations for the Grounding McGrath study are not determined strictly by how much traffic can be moved, and are informed by:

- MassDOT's GreenDOT policy, which includes the MassDOT goal of tripling the travel mode share by bicycle, transit, and walking.<sup>1</sup>

- Federal regulations under the Moving Ahead for Progress in the 21st Century (MAP-21) that increase the emphasis on non-auto users.
- MassDOT's Complete Streets policy which requires balancing the use of the public right-of-way for all transportation modes.
- The Massachusetts Healthy Transportation Compact and MassDOT's Healthy Transportation Policy Directive, which requires that all MassDOT projects not only accommodate, but actively promote healthy transportation modes.
- The Accelerated Bridge Program's emphasis on long-term maintenance costs, and consideration of removing, rather than rebuilding, structures that are not completely necessary. MassDOT is reviewing elimination of such structures as the Casey Overpass in the Jamaica Plain neighborhood of Boston; underpass structures along the Rutherford Avenue corridor in the Sullivan Square neighborhood of Boston; and the Route 79 viaduct in Fall River.

All of these policies reflect the fact that roadways are part of the infrastructure that must serve all users, while being an integral part of their surrounding neighborhoods. Providing access for all modes and travelers, considering vulnerable roadway users, enhancing transportation choices, fostering community connectivity and economic development, and ensuring the public health of adjoining residents are important considerations that are recognized through the policies and initiatives described above.

As described in Chapter 1, Grounding McGrath was conducted within the evolving local and regional environment around the McGrath corridor. The City of Somerville has undertaken significant planning efforts to enhance economic development and improve access for the Inner Belt, Brickbottom and Union Square areas. The City of Cambridge is advancing plans for the redevelopment of NorthPoint, which includes a set of associated transportation improvements. The Green Line extension (GLX) will provide new transit service to the corridor, as well as potential roadway changes. The neighborhoods surrounding the corridor are growing as well, with population growing faster in the McGrath corridor than in the surrounding towns.

<sup>1</sup> <http://transportation.blog.state.ma.us/blog/2012/10/massdot-goal-triple-travel-by-bicycle-transit-walking.html>

## **Recommended Long-Term Corridor Alternative**

It is within the context described above that MassDOT recommends moving forward with the Boulevard Alternative (see Figure 6-1 and Figure 6-2), which would provide six general travel lanes (three in each direction) to accommodate northbound and southbound traffic. This alternative would provide the following benefits:

- Provide a Complete Streets design for the McGrath corridor by incorporating access for all modes and for users of a diverse range of ages and abilities.
- Improve traffic operations at seven of fifteen intersections compared to the No Build due to refined signal timing and reduced volumes.
- Reduce roadway width and congestion through management of circulation and turning movements.
- Improve multi-modal access to Union Square and Brickbottom via the McGrath corridor, Somerville Avenue, and Poplar Street.
- Provide at-grade intersections that are more intuitive for wayfinding.
- Create enhanced pedestrian access across the corridor.
- Allow the reclamation of the right-of-way for other uses.
- Provide for urban design and community character improvements.
- Provide an opportunity for compliance with the Americans with Disabilities Act of 1990 and the Massachusetts Architectural Access Board by being rigorously designed to current accessibility and mobility standards and regulations.

MassDOT and the project team presented this recommended alternative at a public meeting on May 15, 2013. Those in attendance were generally supportive of MassDOT's efforts to remove the existing barrier created by an elevated highway and incorporate transit and non-motorized modes of travel. However, many Working Group members and other attendees also voiced comments, concerns, and preferences regarding the preferred alternative. MassDOT recognizes these concerns, and takes this feedback from the Working Group and the community very seriously. The following are the principal issues raised about the preferred alternative, and responses to those issues:

## **Roadway Cross-Section**

- **Public Comments.** A preference for further reduction of vehicular capacity, and an exploration of a Boulevard option with four travel lanes (two in each direction). Many participants expressed this preference, and it is the comment that would have the greatest effect on the overall design and function of the preferred alternative, and is discussed further below.
- **MassDOT Response.** It is understandable that the Grounding McGrath study participants favor an alternative that emphasizes minimizing local impacts. MassDOT, however, must also consider the impacts of the corridor design on roadway users in all modes. While MassDOT feels that the Six-Lane Boulevard Alternative was developed, refined, and analyzed as a design approach that appropriately balances regional mobility with multi-modal accessibility and neighborhood livability, MassDOT is willing to give consideration to a four-lane design for the McGrath corridor, as discussed further below. A four-lane design may result in reduced motor vehicle demand and volumes in the corridor; however, this would be due to increased congestion and delay, which would also be experienced by residents of neighborhoods abutting the corridor.

## **Functional Classification of the McGrath Corridor**

- **Public Comments.** A preference for creating a more "livable community" by designing a local roadway, rather than an arterial.
- **MassDOT Response.** MassDOT strongly supports a McGrath corridor design that helps to create a livable community in the area, and multi-modal transportation corridors both along the McGrath corridor and Washington Street. Relative to the question of a local roadway versus an arterial roadway, these are technical "functional classes" of roadway. An arterial is a higher-volume roadway that is used largely for longer trips, while a local roadway is the "lowest" class of roadway, and is used principally for access to and from adjacent land uses. The McGrath corridor is currently a principal arterial, the "highest" class of roadway aside from interstate highways. It currently serves important regional connections for Medford, Somerville, Cambridge,



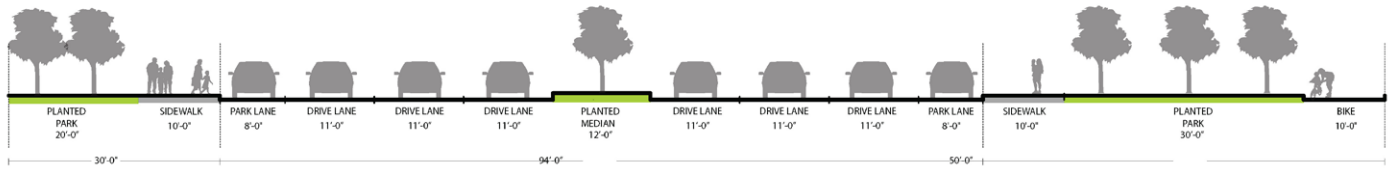
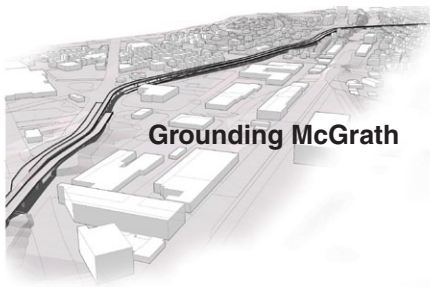
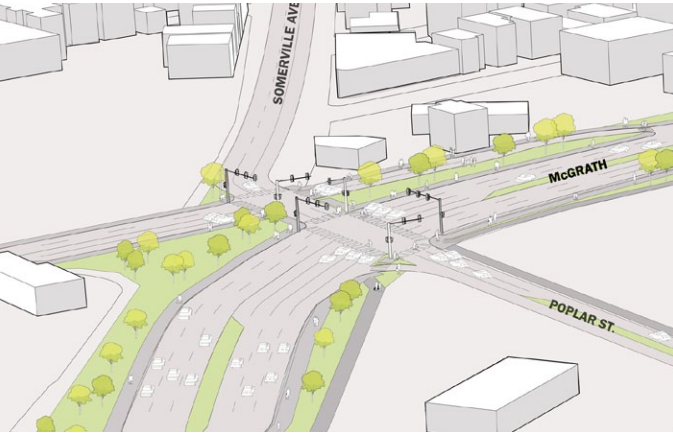


Figure 6-1 : Boulevard Recommended Alternative



Somerville Avenue Intersection



Washington Street Intersection

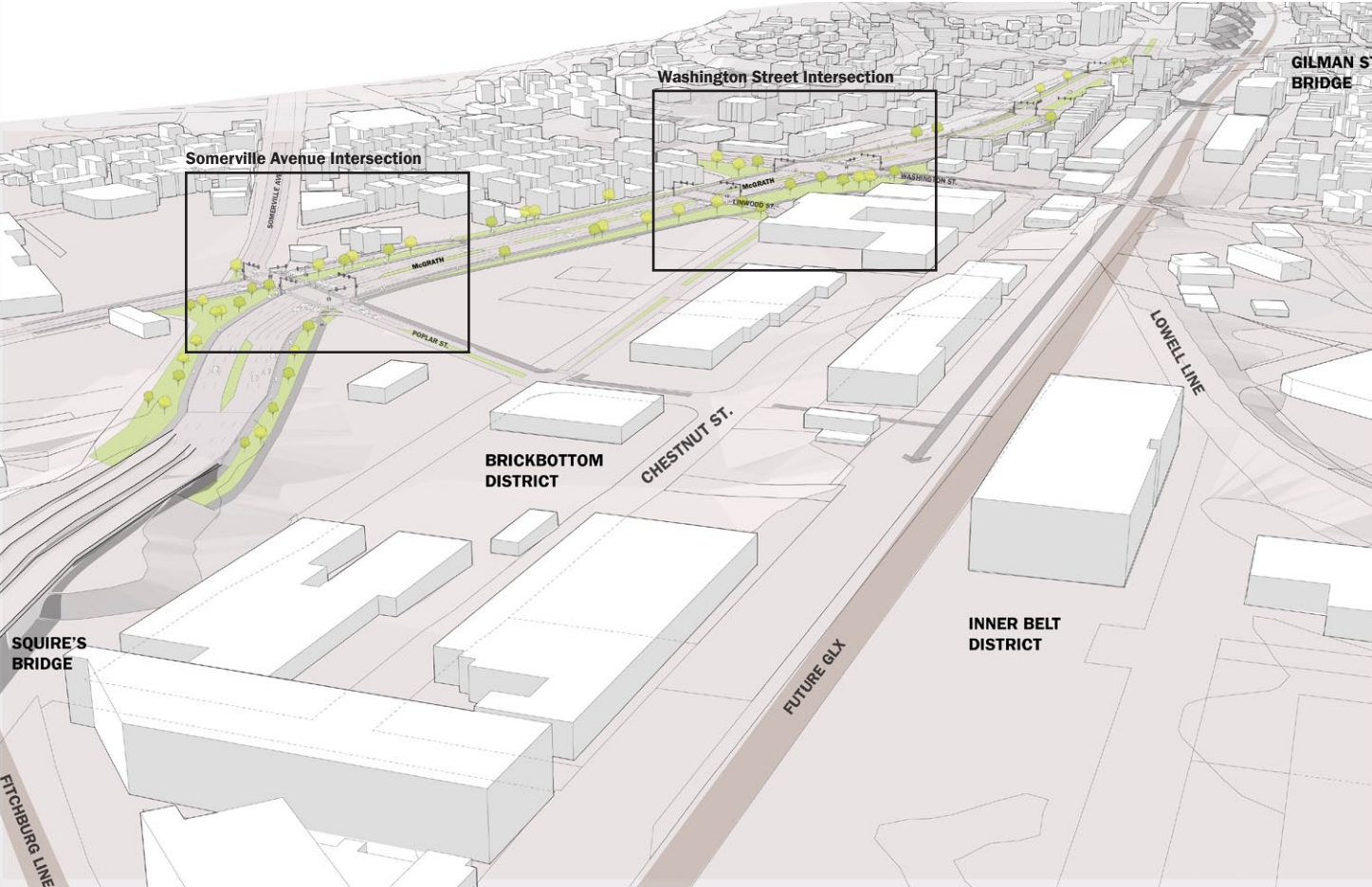
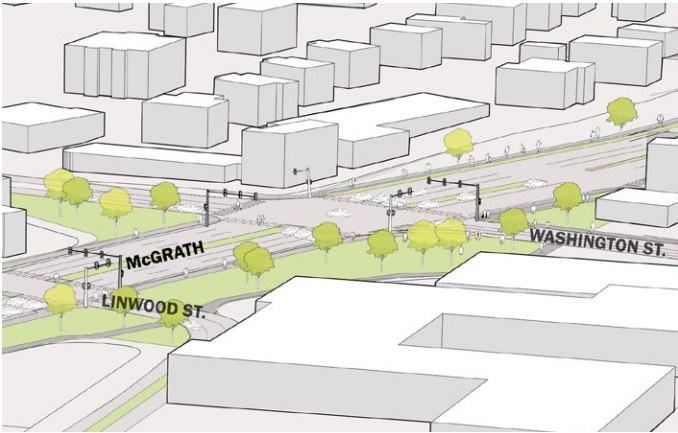
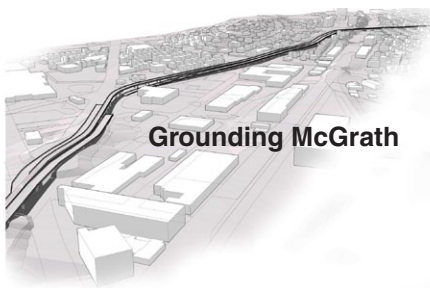


Figure 6-2: Boulevard Alternative Renderings



and Boston, and MassDOT believes it should continue to do so, even in a lower-volume, lower-speed, and more neighborhood-friendly at-grade configuration.

### Multi-Modal Facility Design

- Public Comments. A desire for more clearly-defined pedestrian and bicycle facilities.
- MassDOT Response. Each Build alternative includes comprehensive and thorough consideration and accommodation of pedestrian and bicycle facilities. Such facilities are provided in the designs of all the Build alternatives. The designs of the Boulevard Alternative are appropriate for the purposes of a planning study, but they are still conceptual. The level of definition of accommodation for all modes is still fairly general, and will become more clearly defined as the corridor design advances through an open and public process.

### Circulation and Turn Restrictions

- Public Comments. Concerns about the impact of circulation management and turn restrictions on local access.
- MassDOT Response. Turn lanes require widening a roadway. They also reduce operational efficiency by requiring the addition of more phases to a traffic signal cycle, which increases congestion. The preliminary concept for the Boulevard Alternative proposes the elimination of northbound and southbound left turns at Washington Street; these turning movements have relatively low volumes, and the connections that they provide can also be satisfied at adjacent intersections (via northbound left turns at Somerville Avenue and southbound left turns at Poplar Street). Including left turns from McGrath at Washington Street would also reduce the operational efficiency of the intersection and the corridor in a way that would make a four-lane boulevard cross-section even harder to achieve. Even though these turn restrictions would make local access more circuitous for neighborhood residents, it is more likely to help achieve the goals of a narrower, more livable corridor.

Based on the study analysis and the feedback received at the May 15, 2013 public meeting, MassDOT recommends advancing the Six-Lane Boulevard Alternative into the environmental review process.

MassDOT also recommends consideration of a Four-

reduces roadway scale. This sub-option would require additional analysis through the environmental process, comparable to what was completed for the six-lane option for the Grounding McGrath study. The environmental review and project development process will be conducted in the context of the opportunities and challenges discussed below.

### Recommended Long-Term Corridor Alternative – Opportunities and Challenges

Advancing both the Boulevard Alternative developed in this planning study and a four-lane sub-option with reduced roadway dimensions to the project development stage requires that the following opportunities and challenges be considered.

All at-grade alternatives result in some diversion of trips from the McGrath corridor. Due to the change in vehicle capacity along the McGrath corridor and the resulting reduction in congested travel speed, the CTPS regional travel demand model indicates that some vehicles may seek alternate routes in order to travel on roads with more available capacity. While the regional travel demand model adequately takes into account some of the expected future changes – such as the vehicle fleet-mix, technology changes, and new transit services – there may be unexpected factors that could serve to reduce the expected volumes using the McGrath corridor and the surrounding roadways.

For example, the Inner Belt and Brickbottom districts (IBBB) in Somerville, east of the McGrath corridor and south of Washington Street, have the greatest potential for future development that would increase population and employment in the corridor. Once this area has a greater mix of uses, internal capture of trips could increase at a rate greater than what is reflected in the regional travel demand model. An aggressive Transportation Demand Management (TDM) program to reduce vehicular trips associated with new development in the IBBB and NorthPoint districts could result in fewer automobile trips than what the regional travel demand model is able to project with current assumptions in place. In addition, non-motorized transportation improvements that are implemented in the future, but not yet included in the Boston MPO regional plans, could

result in further mode shifts from automobile trips to other means of travel.

Moreover, there are examples of other urban viaduct removal and expressway downgrading projects around the country that have demonstrated that a certain amount of traffic reduction can be achieved through peak period spreading, mode shift to transit use, rideshare options, and an increase in pedestrian and bicycle trips. For example, San Francisco's elevated Central Freeway carried 100,000 cars per day, while the Octavia Boulevard that replaced it carries 45,000 with less than 3% shifting to transit. In Portland, the Tom McCall Waterfront Park replaced the Harbor Drive Freeway, leading to 9.6% fewer vehicle trips on roads and bridges near the former ground-level highway.<sup>2</sup> More generally, a study of road capacity reductions at over 100 locations internationally found that motorized traffic decreased by about 25%, even incorporating a control for traffic on parallel routes.<sup>3</sup>

<sup>2</sup> Seattle Urban Mobility Plan, Case Studies in Urban Freeway Removal, 2008, <http://www.seattle.gov/transportation/docs/ump/06%20SEATTLE%20Case%20studies%20in%20urban%20freeway%20removal.pdf>

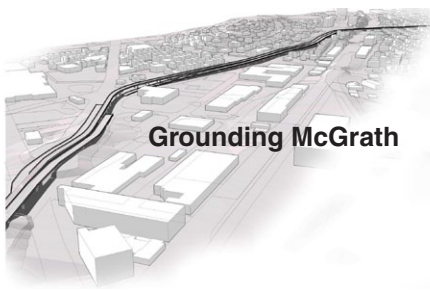
<sup>3</sup> P. Goodwin, C. Haas-Klua, and S. Cairns, Evidence on the effects of road capacity reduction on traffic levels, *Journal of Transportation Engineering + Control* Vol. 39, No. 6, 1998, pp. 348-354, as cited in R. Cervero, *Freeway Deconstruction and Urban Regeneration in the United States*, paper prepared for

Other challenges to be addressed in the design and project development for the Boulevard Alternative include:

- Traffic diversion could cause impacts on local streets and neighborhoods.
- Prohibition of left-turns from the McGrath corridor to Washington Street would constrain connections. However, these turns are relatively low in volume, and allowing them would result in a wider intersection for pedestrian crossings and would worsen operational efficiency and congestion.
- High east and west traffic volumes on Washington Street, including left-turns onto the McGrath corridor, will need to be accommodated.
- Roadway delay and congestion as northbound queues on the McGrath corridor may exceed block lengths due to the proximity of the Washington Street and Linwood Street intersections.
- Minimal queue storage between signals and high demand for left-turns at the McGrath/Somerville Avenue/Medford Street/Poplar Street intersection area may cause delay and congestion.
- The fixed width of the Squire's Bridge may constrain the extension of bicycle and pedestrian accommodations along the McGrath corridor to the south.

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the International Symposium for the 1st Anniversary of the Cheonggyecheon Restoration, 2006 (<http://www.uctc.net/papers/763.pdf>)



## Recommended Long-Term Corridor Alternative – Implementation Plan

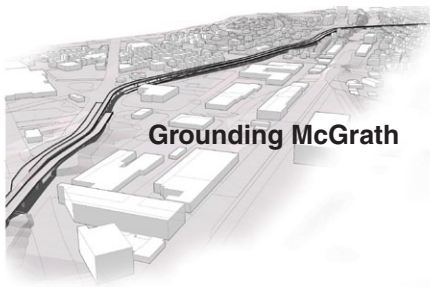
The following is a summary of the short-term, medium-term, and long-term steps to be taken in order to pursue implementation of the Boulevard Alternative for the McGrath corridor.

Actions		Primary Responsibility	Supporting Responsibility
<b>Immediate Actions</b>			
I1	Initiate the project development process by submitting Project Needs and Initiation Forms	City of Somerville	MassDOT
I2	Determine level of State and Federal environmental review and permitting necessary to proceed into project development	MassDOT	
I3	Work with the Boston Metropolitan Planning Organization (MPO) to include the project in the next update of the Regional Transportation Plan (RTP)	City of Somerville	
I4	Collect traffic, bicycle and pedestrian data and conduct analyses to assess circulation changes and opportunities resulting from the interim improvements proposed by MassDOT District 4 as part of the ongoing structural repair work	MassDOT	
<b>Medium-Term Actions</b>			
M1	Conduct and complete environmental permitting and preliminary engineering process that should include, but not be limited to, the following: <ul style="list-style-type: none"> <li>Examination of the implications of traffic diversions that could occur on side streets, adjacent neighborhoods, and the regional roadway network including Rutherford Avenue</li> <li>Clarify and integrate plans for the Brickbottom, Inner Belt, and Union Square areas of Somerville and NorthPoint in Cambridge</li> <li>Continue coordination with the Green Line Extension (GLX) project to clarify improvements and ensure proper connectivity</li> <li>Ensure that accommodations for local bus route stops are considered and incorporated as part of the design options</li> </ul>	MassDOT	City of Somerville, Stakeholders, General Public   MBTA  MBTA



Actions		Primary Responsibility	Supporting Responsibility
	<ul style="list-style-type: none"> <li>Develop potential design refinements at Washington Street based on potential for trip diversion with new IBBB connections (e.g. additional eastbound/westbound lanes; exclusive, channelized right-turn lanes)</li> <li>Coordinate with Federal Highway Administration (FHWA) on implications of changing the McGrath corridor as part of the National Highway System (NHS)</li> <li>Incorporate elements of the Health Impact Assessment recommendations</li> <li>Ensure proper connections to Somerville Community Path to the north and south</li> <li>Develop and integrate a corridor-management plan for curb cuts</li> <li>Examine potential utility upgrades (e.g. underground, relocation, fiber optic, etc.)</li> <li>Select a preferred Boulevard Alternative design option</li> </ul>	MassDOT	Stakeholders
M2	Implement an aggressive Travel Demand Management (TDM) program aimed at reducing single-occupant vehicular trips along the McGrath corridor as well as overall trips generated, particularly in areas targeted for future development.	City of Somerville	MassRIDES
<b>Long-Term</b>			
L1	Complete engineering, design, and permitting	MassDOT	Stakeholders
L2	Coordinate with the Boston Metropolitan Planning Organization (MPO) to secure construction funding through the regional Transportation Improvement Program (TIP)	City of Somerville	Boston MPO





## McGrath Corridor Interim Improvements

There are a number of short-term and medium-term recommendations related to physical improvements and policy implementation that should be pursued either independent of the long-term Boulevard Alternative, or else are important interim measures that should be put in

place in advance of the Boulevard Alternative and Four-Lane sub-option. There are also a number of short-term and medium-term actions that should be taken in pursuit of the Boulevard Alternative through the environmental permitting, project development, and funding processes.

	Actions	Primary Responsibility	Supporting Responsibility
C1	Improved pedestrian crossings with new crosswalks, signage and signal timing at the following intersections with McGrath Highway <ul style="list-style-type: none"> <li>Medford Street/Highland Avenue</li> <li>Washington Street</li> <li>Medford Street/Somerville Avenue (west of the McGrath corridor)</li> <li>Medford Street/Somerville Avenue/Poplar Street (east of the McGrath corridor)</li> </ul>	MassDOT	City of Somerville, Stakeholders
U1	Complete McCarthy Viaduct Interim Repairs	MassDOT	City of Somerville, Stakeholders
U2	Continue to Advance Design of Somerville Avenue 'Punch-Through' to McGrath Highway Northbound, and McGrath Southbound Off-Ramp to Somerville Avenue Closure	MassDOT	City of Somerville, Stakeholders
I1	Improve the roadway cross-section, north of the Lowell Line bridge, by adding on-street parking and/or bicycle facilities (Complete Streets approach) <ul style="list-style-type: none"> <li>Examine removal of the Otis Street pedestrian bridge</li> </ul>		
I2	Explore the feasibility of changes in lane configurations at the intersection of Highland Avenue/Medford Street at the McGrath corridor	MassDOT	City of Somerville, Stakeholders
I3	Promote safe routes of travel for pedestrians and bicycles within the McGrath corridor, such as providing a "best routes" map	City of Somerville	Stakeholders

## MassDOT Project Development and Design Process

Transportation decision-making is complex and can be influenced by legislative mandates, environmental regulations, financial limitations, agency programmatic commitments, and partnering opportunities. Decision-makers and reviewing agencies, when consulted early and often throughout the project development process, can ensure that all participants understand the potential impact these factors may have on project implementation. Project development is the process that takes a transportation improvement from conception through construction.

The MassDOT Highway Division has developed a comprehensive project development process which is contained in Chapter 2 of the MassDOT Highway Division's Project Development and Design Guide. The eight-step process covers a range of activities extending from identification of a project need, through completion of a set of finished contract plans, to construction of the project. The sequence of decisions made through the project development process progressively narrows the project focus, while developing greater design details, and ultimately leads to a project that addresses the identified needs in the most cost-effective and publicly acceptable way. The Grounding McGrath study has been structured to meet the first two steps of the project development process: 1) Needs Identification, and 2) Planning. The more-detailed descriptions provided below are focused on the process for a roadway project, but the same basic process will need to be followed for non-roadway projects as well.

### 1. Needs Identification

For each of the locations at which an improvement is to be implemented, MassDOT leads an effort to define the problem, establishes project goals and objectives, and defines the scope of the planning needed for implementation. To that end, it has to complete a Project Need Form (PNF), which states in general terms the deficiencies or needs related to the transportation facility or location. The PNF documents the problems and explains why corrective action is needed. For this study, the information defining the need for the project will be drawn primarily, perhaps exclusively, from the present report. Also, at this point in the process, MassDOT meets with potential participants, such as the Metropolitan

Planning Organization (MPO) and community members, to allow for an informal review of the project.

The PNF is reviewed by the MassDOT Highway Division district office whose jurisdiction includes the location of the proposed project. MassDOT also sends the PNF to the MPO, for informational purposes. The outcome of this step determines whether the project requires further planning, whether it is already well supported by prior planning studies, and, therefore, whether it is ready to move forward into the design phase, or whether it should be dismissed from further consideration.

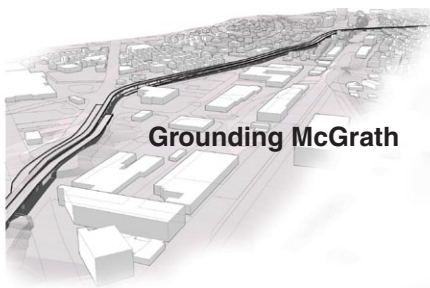
### 2. Planning

This phase will likely not be required for the implementation of the improvements proposed in this planning study, as this planning report should constitute the outcome of this step. However, in general, the purpose of this implementation step is for the project proponent to identify issues, impacts, and approvals that may need to be obtained, so that the subsequent design and permitting processes are understood.

The level of planning needed will vary widely, based on the complexity of the project. Typical tasks include: define the existing context, confirm the project need, establish goals and objectives, initiate public outreach, define the project, collect data, develop and analyze alternatives, make recommendations, and provide report documentation. Likely outcomes include consensus on the project definition to enable it to move forward into environmental documentation (if needed) and design, or a recommendation to delay the project or dismiss it from further consideration.

### 3. Project Initiation

At this point in the process, the proponent, MassDOT Highway Division, fills out a Project Initiation Form (PIF) for each improvement, which is reviewed by its Project Review Committee (PRC) and the MPO. The PRC is composed of the Chief Engineer, each District Highway Director, and representatives of the Project Management, Environmental, Planning, Right-of-Way, Traffic, and Bridge departments, and the MassDOT Federal Aid Program Office (FAPO). The PIF documents the project type and description, summarizes the project planning process, identifies likely funding and project management responsibility, and defines a plan for interagency and



public participation. First the PRC reviews and evaluates the proposed project based on the MassDOT's statewide priorities and criteria. If the result is positive, MassDOT Highway Division moves the project forward to the design phase, and to programming review by the MPO. The PRC may provide a Project Management Plan to define roles and responsibilities for subsequent steps. The MPO review includes project evaluation based on the MPO's regional priorities and criteria. The MPO may assign project evaluation criteria score, a Transportation Improvement Program (TIP) year, a tentative project category, and a tentative funding category.

#### **4. Environmental Permitting, Design, and Right-of-Way Process**

This step has four distinct but closely integrated elements: Public Outreach, Environmental Documentation and Permitting (if required), Design, and Right-of-Way Acquisition (if required). The outcome of this step is a fully designed and permitted project ready for construction. The sections below provide more detailed information on the four elements of this step of the project development process.

##### *Public Outreach*

Continued public outreach in the design and environmental process is essential to maintain varying levels of public support for the project and to seek meaningful input on the design elements. The public outreach is often in the form of required public hearings (conducted at the 25-percent and 100-percent design milestones), but can also include less formal dialogues with those interested in and affected by a proposed project.

##### *Environmental Documentation and Permitting*

The project proponent, in coordination with the Environmental Services section of the MassDOT Highway Division, will be responsible for identifying and complying with all applicable federal, state, and local environmental laws and requirements. This includes determining the appropriate project category for both the Massachusetts Environmental Policy Act (MEPA) and the National Environmental Policy Act (NEPA). Environmental documentation and permitting is often completed in conjunction with the Preliminary Design phase described below.

##### *Design*

There are three major phases of design. The first is Preliminary Design, which is also referred to as the 25-percent submission. The major components of this phase include a full survey of the project area, preparation of base plans, development of basic geometric layout, development of preliminary cost estimates, and submission of a functional design report. Preliminary Design, although not required to, is often completed in conjunction with the Environmental Documentation and Permitting. The next phase is Final Design, which is also referred to as the 75-percent and 100-percent submission. The major components of this phase include preparation of a subsurface exploratory plan (if required), coordination of utility relocations, development of traffic management plans through construction zones, development of final cost estimates, and refinement and finalization of the construction plans. Once Final Design is complete, a full set of Plans, Specifications, and Estimates (PS&E) is developed for the project.

##### *Right-of-Way Acquisition*

A separate set of Right-of-Way plans are required for any project that requires land acquisition or easements. The plans must identify the existing and proposed layout lines, easements, property lines, names of property owners, and the dimensions and areas of estimated takings and easements.

#### **5. Programming (Identification of Funding)**

Programming, which typically begins during the design phase, can actually occur at any time during the process, from planning to design. In this step, which is distinct from project initiation, the proponent requests that the MPO place the project in the region's Transportation Improvement Program (TIP). The proponent requesting the project's listing on the TIP can be the community or it can be one of the MPO member agencies (the Regional Planning Agency, MassDOT, and the Regional Transit Authority). The MPO then considers the project in terms of state and regional needs, funding availability, project readiness, evaluation criteria, and compliance with the Regional Transportation Plan and decides whether to place it in the Draft TIP for public review and then in the Final TIP. A project does not have to be fully designed in order for the MPO to program it in the TIP, but generally a project has reached 75-percent design to be programmed in the year-one element of the TIP.



## 6. Procurement

Following project design and programming of a highway project, the MassDOT Highway Division publishes a request for proposals, which is also often referred to as being ‘advertised’ for construction. MassDOT then reviews the bids, and awards the contract to the qualified bidder with the lowest bid.

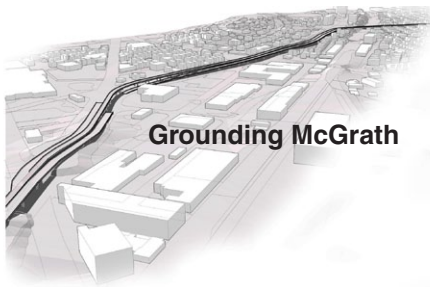
## 7. Construction

After a construction contract is awarded, MassDOT Highway Division and the contractor develop a public participation plan and a traffic management plan for the construction process.

## 8. Project Assessment

The purpose of this step is to receive constituents’ comments on the project development process and the project’s design elements. MassDOT Highway Division can apply what is learned in this process to future projects.

Description	Schedule Influence	Typical Duration
<b>Step I: Problem/Need/Opportunity Identification</b> The proponent completes a Project Need Form (PNF). This form is then reviewed by the MassDOT District office, which provides guidance to the proponent on the subsequent steps of the process.	The PNF has been developed so that it can be prepared quickly by the proponent, including any supporting data that is readily available. The District office shall return comments to the proponent within one month of PNF submission.	1 to 3 months
<b>Step II: Planning</b> Project planning can range from agreement that the problem should be addressed through a clear solution to a more-detailed analysis of alternatives and their impacts.	For some projects, no planning beyond preparation of the Project Need Form is required. While other projects require a planning study centered on specific project issues associated with the proposed solution or a narrow family of alternatives. More complex projects will likely require a detailed alternatives analysis.	Project Planning Report: 3 to 24+ months
<b>Step III: Project Initiation</b> The proponent prepares and submits a Project Initiation Form (PIF) and a Transportation Evaluation Criteria (TEC) form in this step. The PIF and TEC are informally reviewed by the Metropolitan Planning Organization (MPO) and MassDOT District office, and formally reviewed by the Project Review Committee (PRC).	The PIF includes refinement of the preliminary information contained in the PNF. Additional information summarizing the results of the planning process, such as the Project Planning Report, is included with the PIF and TEC. The schedule is determined by PRC staff review (dependent on project complexity) and meeting schedule.	1 to 4 months



**Grounding McGrath**

<b>Step IV: Design, Environmental, and Right of Way</b> The proponent completes the project design. Concurrently, the proponent completes necessary environmental permitting analyses and files applications for permits. Any right of way needed for the project is identified and the acquisition process begins.	The schedule for this step is dependent upon the size of the project and the complexity of the design, permitting, and right-of-way issues. Design review by the MassDOT District and appropriate sections is completed in this step.	3 to 48+ months
<b>Step V: Programming</b> The MPO considers the project in terms of its regional priorities and determines whether or not to include the project in its Draft Transportation Improvement Program (TIP) which is then made available for public comment. The TIP includes a project description and funding source.	The schedule for this step is subject to each MPO's programming cycle and meeting schedule. It is also possible that the MPO will not include a project in its Draft TIP based on its review and approval procedures.	3 to 12+ months
<b>Step VI: Procurement</b> The project is advertised for construction and a contract awarded.	Administration of competing projects can influence the advertising schedule.	1 to 12 months
<b>Step VII: Construction</b> The construction process is initiated including public notification and any anticipated public involvement. Construction continues to project completion.	The duration for this step is entirely dependent upon project complexity and phasing.	3 to 60+ months
<b>Step VIII: Project Assessment</b> The construction period is complete and project elements and processes are evaluated on a voluntary basis.	The duration for this step is dependent upon the proponent's approach to this step and any follow-up required.	1 month

