
5 PUBLIC AND ROADWAY TRANSPORTATION

Information on existing conditions in the Route 28 corridor was gathered from various sources and via field reconnaissance as a basis for understanding the present performance, operations, level of service, and other conditions. The information gathered included roadway functional classification, roadway administration, public transit service, roadway operations, and roadway speeds. The following are brief descriptions of the information collected. Detailed traffic volume and crash data are presented in Appendix B.

5.1 PUBLIC TRANSPORTATION

As Figure 5.1 shows, the MBTA provides public transit services in the vicinity of Route 28 through buses, the Orange Line, and the Green Line. Access to the Orange Line is at Wellington and Sullivan Square stations, and Lechmere Station provides access to the Green Line. The area's main bus lines feed into Sullivan Square and Lechmere. The MBTA's Lowell and Fitchburg commuter rail lines run through the area with no stops in Somerville. The nearest stop for Somerville is at Porter Square on the Cambridge/Somerville border.

MBTA buses are the main feeder service into the Orange and Green lines for Route 28 corridor and East Somerville residents. Often during the peak periods, bus schedule adherence is poor due to delays on congested segments of Route 28 and local roadways.

5.2 ROADWAY TRANSPORTATION

Roadway Administration

Figure 5.2 provides information on the ownership or jurisdictional control (which includes responsibility for maintenance) of Route 28 and other roadways in the surrounding area. As the figure shows, the area's main roadways, i.e., I-93, Route 28, Route 38 (Mystic Avenue), and Route 1, are under the control of state agencies. The rest of the roadways are under city or town jurisdiction. Route 28 in the study area is owned by the Department of Conservation and Recreation (DCR).

Roadway Functional Classification

Roadway functional classification is the grouping of roadways and streets into classes according to their intended use. It aids in designing a system of roadways and streets that will provide for both mobility and land access. Massachusetts groups roadways into seven categories:



Source: Massachusetts Road Inventory File, MassHighway Planning.

CTPS

FIGURE 5.1
Roadway Administration

*Toward a Route 28 Corridor
Transportation Plan:
An Emerging Vision*



Source: MassHighway Planning using a process mandated by ISTEPA legislation in 1993.

CTPS

FIGURE 5.2
Roadway Functional Classification

*Toward a Route 28 Corridor
 Transportation Plan:
 An Emerging Vision*

- Interstate
- Other freeway
- Rural minor arterial
- Other urban principal arterial
- Urban minor arterial or rural major collector
- Urban collector or rural minor collector
- Local

As Figure 5.3 shows, Route 28 is classified as an “other freeway,” and the main roadways in the study area and vicinity available to commuter travel are I-93, Route 28, Route 16, and Route 1.

Roadway Level of Service

Existing and future roadway operational data were compiled from recent studies and reports. The quality of traffic flow on a roadway facility or at an intersection at a specific time may be quantified and graded in terms of level of service (LOS). There are six levels of service, A through F. LOS A is free-flow conditions (no congestion), and F is failing conditions (heavy congestion).

Figure 5.4 presents the levels of service for intersections in the study area during the AM and PM peak hours (and in some cases the Saturday peak hour). Generally poor intersection operations occur in the I-93/Mystic Avenue/Route 28 interchange area that are not properly reflected by just LOS. Extensive queuing occurs on the roadways, especially to the local side streets which intersect with Route 28. These poor conditions extend south through the Medford Street intersection. Continuing southward, conditions generally improve until one reaches the Route 28/Land Boulevard/Charlestown Avenue intersection, where operations are LOS F for both peak hours.

Roadway Speeds

The Boston Region MPO funds the monitoring of roadway speeds throughout the region as part of the Mobility Management Program. This monitoring captures typical roadway traffic conditions during the weekday AM peak and PM peak commuter periods.

Figures 5.5 and 5.6 are roadway speed index maps for the AM and PM peak periods, respectively. The speed index of a roadway segment is the ratio of the average observed speed to the posted speed limit. Figures 5.5 and 5.6 do not give the specific speed index of each roadway segment, but rather a range of values within which each segment’s speed index falls. The following three ranges are used:

- **Severe delays** – Travel speed is less than 70 percent of the posted speed limit.
- **Some delays** – Travel speed is 70 percent to 90 percent of the posted speed limit.
- **Free flow** – Travel speed is greater than 90 percent of the posted speed limit.

The speed indexes on Route 28 indicate that there are severe delays from the I-93/Mystic Avenue/Route 28 interchange area to the Medford Street intersection and also near the Route

28/Land Boulevard/Charlestown Avenue intersection. These data are in agreement with the LOS data presented above.



FIGURE 5.3
MBTA Services for Route 28
Area

Sullivan Square Station Bus Routes

- 86 - Sullivan Square to Cleveland Circle
- 89 - Clarendon Hill to Sullivan Square
- 90 - Davis Square to Wellington
- 91 - Sullivan Square to Central Square
- 92 - Assembly Square to Downtown
- 93 - Sullivan Square to Downtown
- 95 - West Medford to Sullivan Square
- 101 - Malden Station to Sullivan Square
- 104 - Malden Station to Sullivan Square
- 105 - Malden Station to Sullivan Square
- 109 - Linden Square to Sullivan Square
- CT2 - Sullivan Square to Ruggles

Lechmere Station Bus Routes

- 69 - Harvard to Lechmere
- 89 - Arlington Center to Lechmere
- 90 - Arlington Center/Clarendon Hill to Lechmere
- 91 - Clarendon Hill to Lechmere

LEGEND

*Bicycle rack: Accessible for Silver Line only.
 *Stairs: Blue Line wheelchair access outboard side only. Inbound rider transfer to outbound train at Government Center. Exit stairs outboard.
 Colors are randomly assigned.
 Dashed lines are route variations.
 - - - - - Express route.
 - - - - - Non-MBTA route/shuttle.
 Details in beige box.

For specific times and schedules call
 617-222-3200, (TTY) 617-222-5146
 This map was prepared for the MBTA by the Central Transportation Planning Staff © 2006. All Rights Reserved. No portion of this map can be reproduced without the permission of the MBTA.

Source: MBTA System Map, 2006.

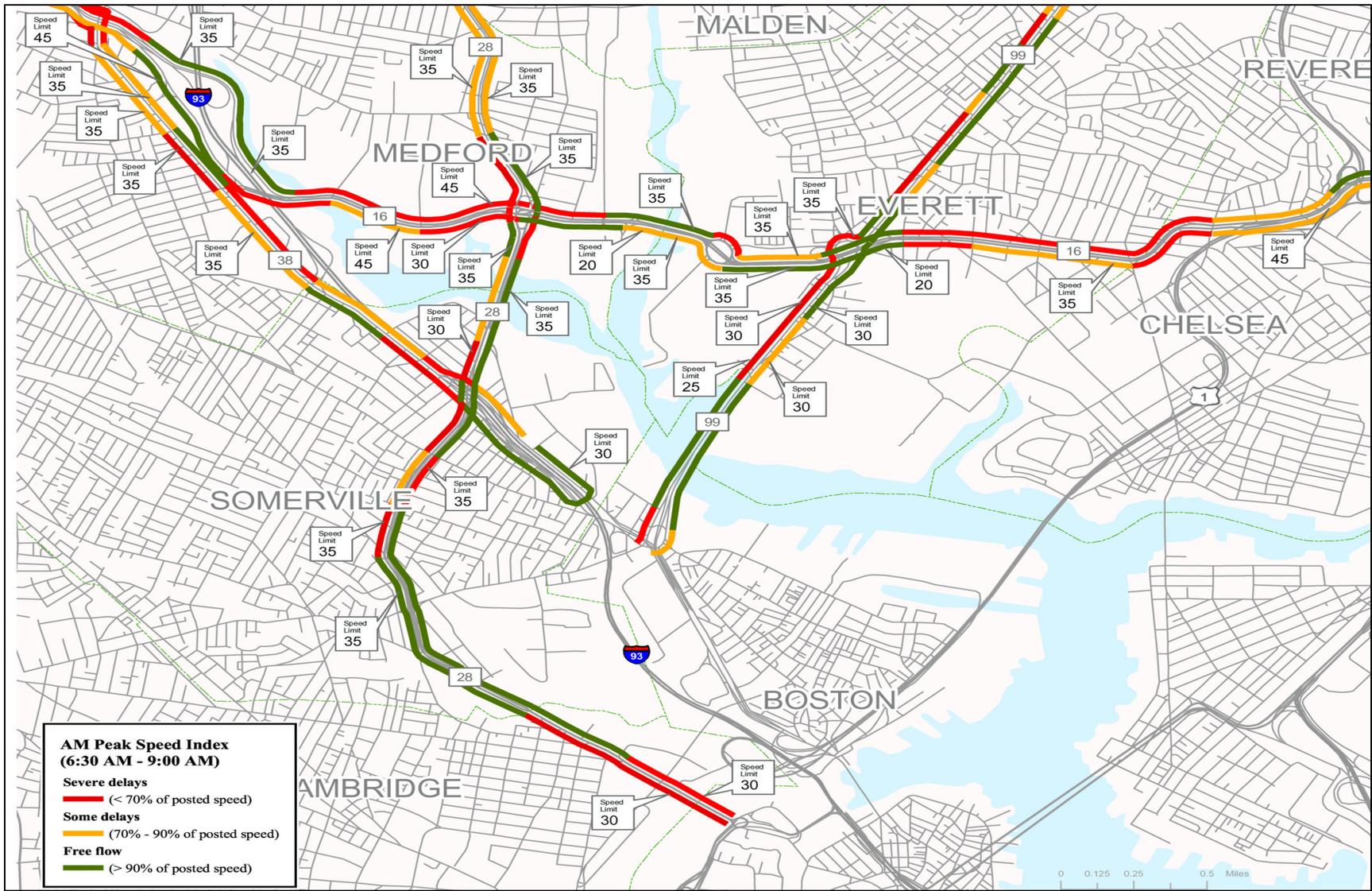
Toward a Route 28 Corridor
Transportation Plan: An Emerging Vision
CTPS



Source: "Existing Conditions" sections from various traffic impact studies. See Appendix A.

FIGURE 5.4
Roadway Operations

*Toward a Route 28 Corridor
Transportation Plan:
An Emerging Vision*

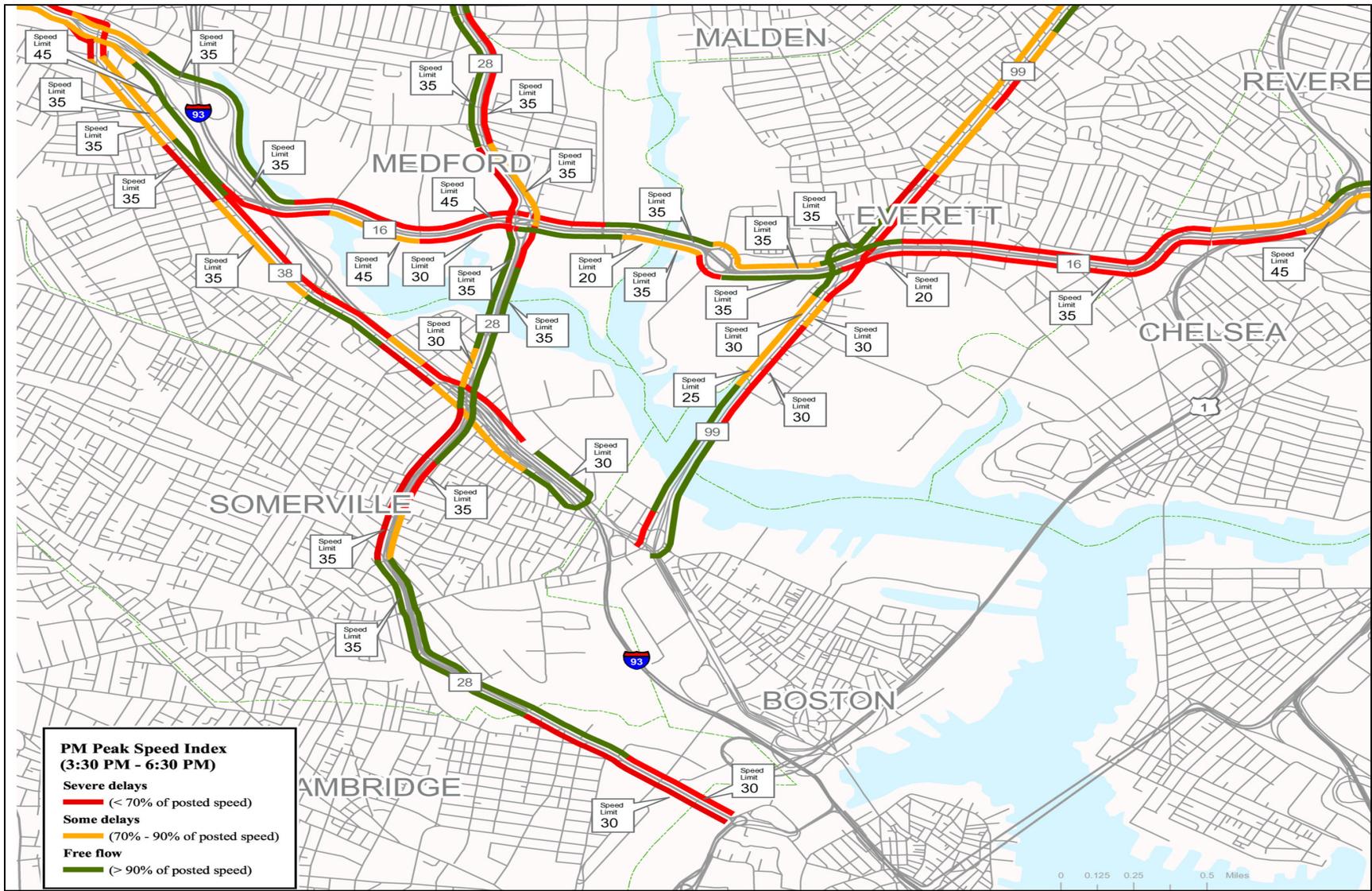


Source: Boston Region MPO Congestion Management System database, spring 2003.

CTPS

FIGURE 5.5
Roadway Speed Index:
AM Peak Period

*Toward a Route 28 Corridor
 Transportation Plan:
 An Emerging Vision*



Source: Boston Region MPO Congestion Management System database, spring 2003.

CTPS

FIGURE 5.6
Roadway Speed Index:
PM Peak Period

*Toward a Route 28 Corridor
 Transportation Plan:
 An Emerging Vision*

