

SHORT-TERM RECOMMENDATIONS: WESTMINSTER AVENUE & LOWELL STREET

**Transportation Advisory Committee Report
to the
Arlington Board of Selectmen**

June 4, 2007

Working Group Members: Elisabeth Carr-Jones (TAC), Jeff Maxtutis (TAC), John Bean (DPW), Joe Cahill (TAC), Lt. Paul Conroy (APD), David Levy (TMM), Ralph Elwell (TMM), Sue Doctrow (TMM), Owen Callaghan, Thea Colman, Anne Ehlert, Carlene Hempel, Edie Jirak, Ken and Brenda Kokubo, Alisa Pascale, David Rines, Sharon Stafford, Diane Stansbury, Betsy Surratt and Caroline Walters.

PROCESS

On April 26, a Public Meeting organized by Town Meeting Members of the Mt. Gilboa neighborhood was held to discuss traffic problems on Westminster Avenue. At the meeting, neighborhood residents presented their concerns following two recent crashes to members of the Board of Selectmen, the Town Manager, the Chief of Police, the Public Works Director and members of the TAC.

The TAC has an ongoing study of Downing Square, and has been collecting information from the neighborhood on the Square's connecting roadways. Last fall, the TAC conducted a survey of residents regarding a one-way proposal for Westminster Avenue. Consequently, TAC members familiar with Westminster Avenue through the Downing Square project met prior to the Public Meeting to brainstorm on possible solutions. These ideas were presented at the Public Meeting.

Following the Public Meeting, a working group composed of five members of the TAC and sixteen neighborhood residents was formed. The neighborhood members are residents of Westminster Avenue, Lowell Street, Westmoreland Avenue, Montague Street and Park Avenue Extension. The working group's initial meeting defined goals for the project. These were to:

- Decrease overall speed
- Discourage excessive speeding
- Increase protection at Westminster curve
- Increase pedestrian safety.

The working group then examined how well the TAC's brainstorming ideas would address the goals. Several tasks were defined and carried out, and at the second working group meeting, short- and long-term recommendations for the neighborhood were decided upon. The working group reported their goals and recommendations at the May TAC meeting. The seven short-term recommendations listed below were unanimously voted by the TAC.

SHORT-TERM RECOMMENDATIONS (voted by the TAC on May 22, 2007)

1. Install Stop signs on Westminster to create a 4-way stop at Westmoreland.
2. Install multiple chevrons on temporary reflective metal posts or barrels at Westminster curve.
3. Replace curve sign with speed advisory sign eastbound on Westminster before curve (25 MPH).
4. Paint edge lines from the speed advisory sign through the Westminster curve (@11' each side).
5. Install fluorescent yellow-green standard crosswalk signs on Lowell at three existing crosswalks.
6. Increase enforcement on Westminster and Lowell immediately after changes.
7. Monitor traffic volume and speed before and after changes to evaluate effectiveness.

ONGOING WORK

It was determined early in the project that the TAC's recommendations should be separated into short and long term, in order that the short term items could be implemented while the long term items were being studied and funded.

The TAC is currently studying several long-term solutions for the traffic and pedestrian problems in this neighborhood. These solutions involve looking at the entire length of Westminster Avenue (including the intersection with Lowell Street in Lexington), Lowell Street between Downing Square and the Lexington line and certain areas on Westmoreland Avenue and Montague Street.

The working group preferred solutions that would reduce the traffic speed in the neighborhood without restricting the traffic flow on the roadways.

Long-term Solutions Recommended by the Working Group:

1. Install granite curb on south side of Westminster from Westmoreland to Downing Square, with high profile at curve.
2. Repair sidewalk in vicinity of Westminster curve.
3. Install bollards or wood guard posts with reflectors between curb and sidewalk on south side of Westminster at curve.
4. Install chicane(s) or curb extension(s) on Westminster and Lowell.
5. Install speed table(s) on Westminster.
6. Reconfigure Westminster / Lowell intersection in Lexington (with cooperation of Lexington).

Other Long-term Solutions from the initial TAC brainstorming session:

1. Westminster one-way proposal (see appendix).
2. Place Do Not Enter sign on Westminster eastbound.
3. Close Westminster at Lowell Street in Lexington.
4. Close Westminster between Westmoreland and the curve creating two dead ends.
5. Diagonal street closure at Westminster and Westmoreland intersection (see appendix).

The TAC will continue to work with the neighborhood to craft a set of long term recommendations for the Board of Selectmen's review in the coming months. During this period, we expect to be monitoring and evaluating the effectiveness of the installed short term recommendations.

APPENDIX: WESTMINSTER AVENUE & LOWELL STREET

- A. Recommended signs
- B. Sign inventory for Downing Square roadways
- C. Photos of roadway edge and sidewalk at Westminster curve
- D. Sketches of Westminster / Lowell intersection in Lexington (2 pages)
- E. Turning counts for Westminster intersections (2 pages)
- F. Traffic data for Westminster and Lowell
- G. Westminster one-way proposal (2 pages)
- H. Diagonal street closure, Westminster & Westmoreland



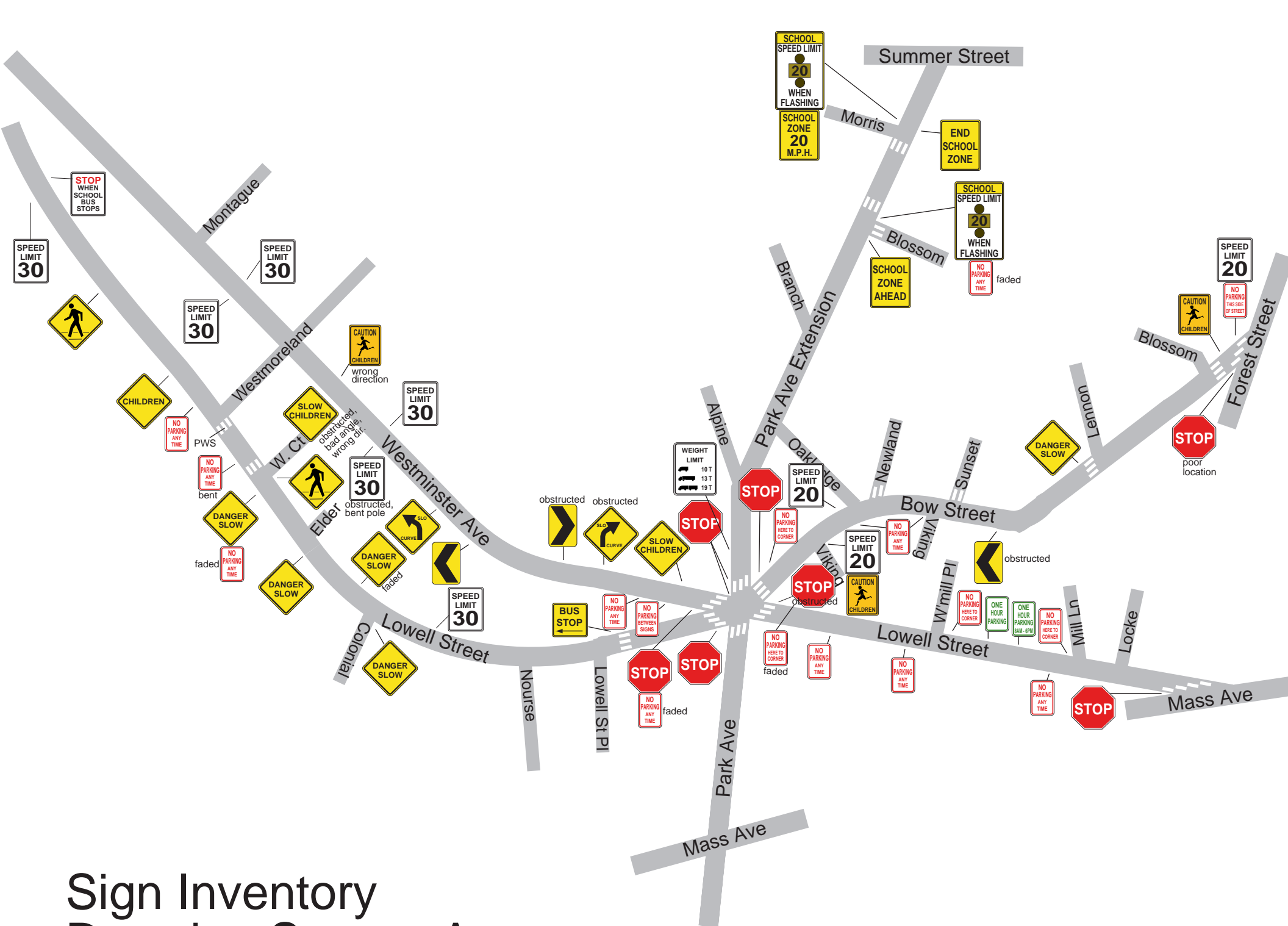
Chevron - Yellow
(MUTCD W1-8L)



Curve Speed Advisory - Yellow
(MUTCD W13-5)



Standard Crosswalk - Fluorescent Yellow-Green
(MUTCD W11-2 and W16-7pL)



Sign Inventory Downing Square Area



Condition of Roadway Edge and Sidewalk at Westminster Curve

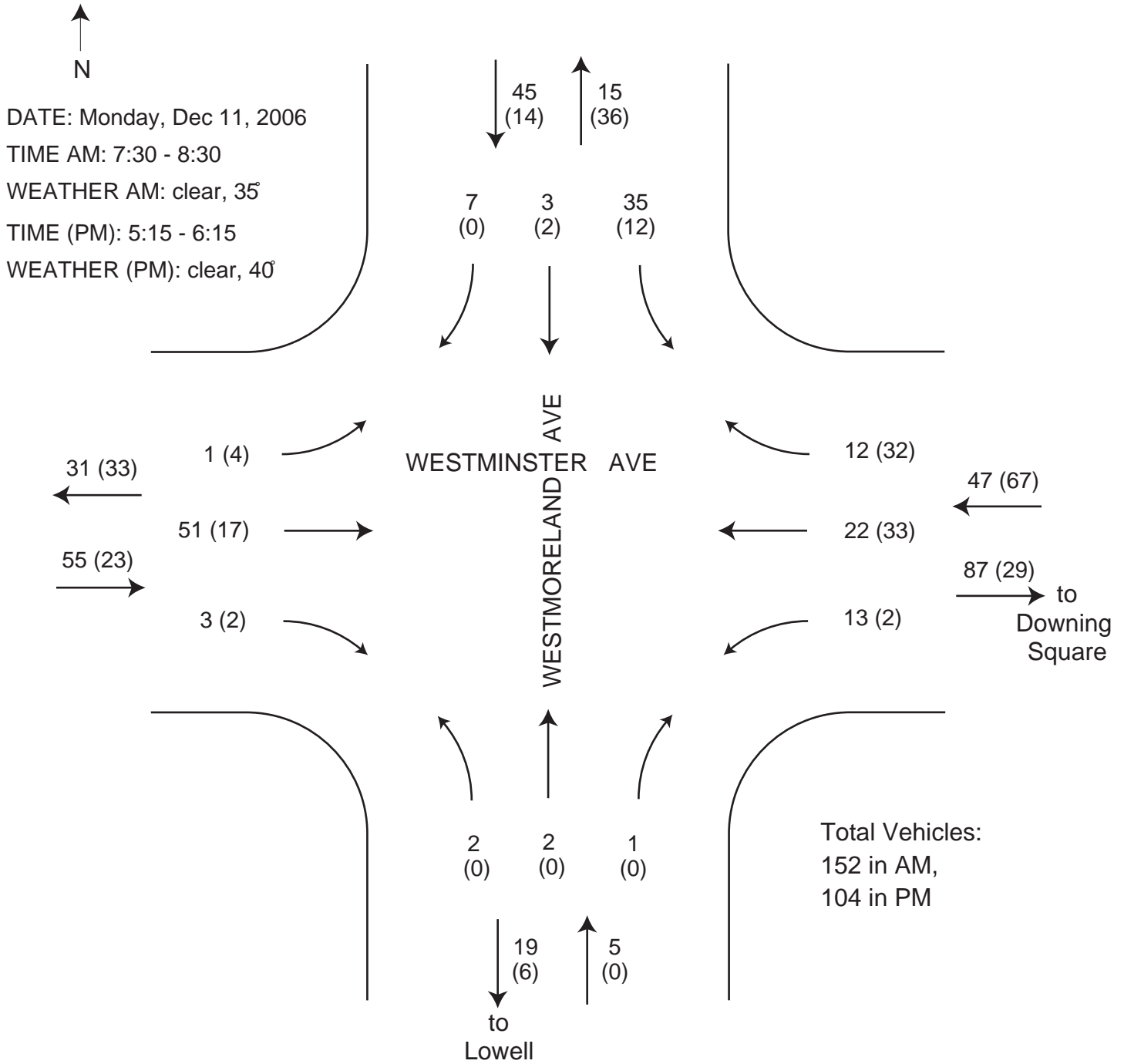


Sketch of "T" Intersection at Lowell Street and Westminster Avenue



Sketch of "Island" Intersection at Lowell Street and Westminster Avenue

TURNING COUNTS WESTMINSTER & WESTMORELAND

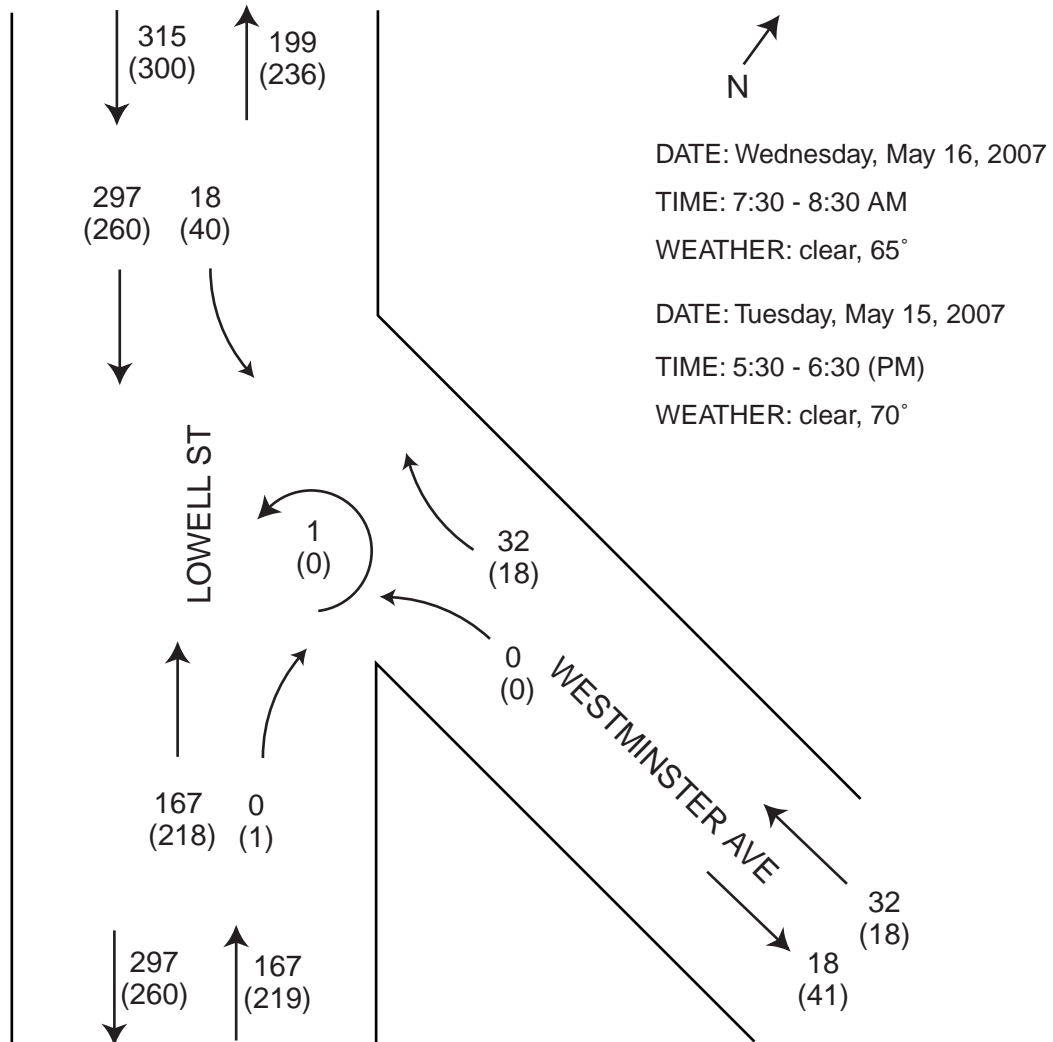


OBSERVATIONS:

- Generally orderly traffic flow
- Tight turning radii
- No right turns from Westmoreland to Lowell
- AM Covenant drop off route--Westminster to Westmoreland to Lowell
- Pedestrians: 18 in AM, 8 in PM
- Cyclists: 1 in AM, 0 in PM

TURNING COUNTS

LOWELL ST & WESTMINSTER AVE



OBSERVATIONS:

- Pedestrians: 5 in AM, 6 in PM (all but one on Lowell)
- Cyclists: 3 in AM, 5 in PM (all but one on Lowell)
- School buses: 4 in AM (1 turned left onto Westminster)
- Heavy trucks: 8-10 in AM, 5-6 in PM (all on Lowell)
- Left turn from Lowell awkward (where to cross traffic)
- Some traffic turning onto Westminster speeds up to beat oncoming traffic
- EB lane on Lowell not wide enough to get around turning traffic
- Intersection confuses some drivers on Lowell
- Right turn awkward from Westminster (where to stop)

Traffic Data (2001)

<u>Roadway</u>	<u>ADT (average daily traffic)</u>	<u>Speed (85th percentile)</u>
Westminster Avenue	1,229	31
<u>Lowell Street (west of Square)</u>	<u>5,193</u>	<u>39</u>

All data from Arlington Police Department traffic counts.

Crash Data

<u>Roadway</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Total</u>
Westminster Avenue	1	1	0	2
<u>Lowell Street</u>	<u>7</u>	<u>5</u>	<u>9</u>	<u>21</u>

All data from Arlington Police Department

Sidewalk Inventory of Principal and Minor Arterial Roadways

<u>Roadway</u>	<u>ADT (maximum)</u>	<u>Continuous sidewalk (N or E side)</u>	<u>Continuous sidewalk (S or W side)</u>
Massachusetts Avenue	32,000	Y	Y
Mystic Street	24,000	Y	Y
Pleasant Street	22,500	Y	Y
Medford Street	20,500	Y	Y
Summer Street	18,000	N	N
Mill Street	13,000	Y	Y
Park Avenue	12,000	N	Y
Broadway	11,500	Y	Y
Lake Street	11,500	Y	Y
Park Ave Extension	6,000	Y	Y
Warren Street	6,000	Y	Y
Concord Turnpike	5,000	Y	n/a
Grove Street	5,000	N*	Y
Lowell Street	5,000	N	Y

* At Bikeway bridge only

Dear Downing Square Neighbor,

As you may be aware, Arlington's Transportation Advisory Committee (TAC) has been considering improvements to Downing Square. This mailing is to inform you and to get your feedback on one specific proposal: the TAC is considering restricting Westminster Avenue traffic from entering the Square by making a short section of Westminster one-way between Downing Square and the nearest driveway. The remainder of Westminster Avenue would remain two-way. Having only westbound traffic on Westminster Avenue at the Square would provide the following benefits:

- The number of traffic conflicts in the intersection would be reduced.
- Pedestrian/motorist conflicts during the morning school rush hour would be reduced.
- A significant motorist visibility problem (the corner of Westminster Avenue and Park Avenue Extension) would be eliminated.
- Cut-through traffic might be reduced.

In this proposal, a neck-down and a "Do Not Enter" sign would be installed on Westminster Avenue at the Square (see attached drawing). An additional "No Outlet" sign would be placed on Westminster Avenue at Westmoreland Avenue, and a temporary "New Traffic Pattern: No Direct Access To Park Avenue" sign is proposed for the intersection with Lowell Street in Lexington. Two-way access for local traffic would be retained west of the neck-down. For reference, traffic data collected for the Downing Square roadways appears below.

Street	Average Daily Traffic
Park Avenue	11,704
Park Avenue Extension	6,100
Lowell Street (west of Square)	5,193
Lowell Street (east of Square)	3,293
Bow Street	3,551
Westminster Avenue	1,229

All data from Arlington Police Department traffic counts.

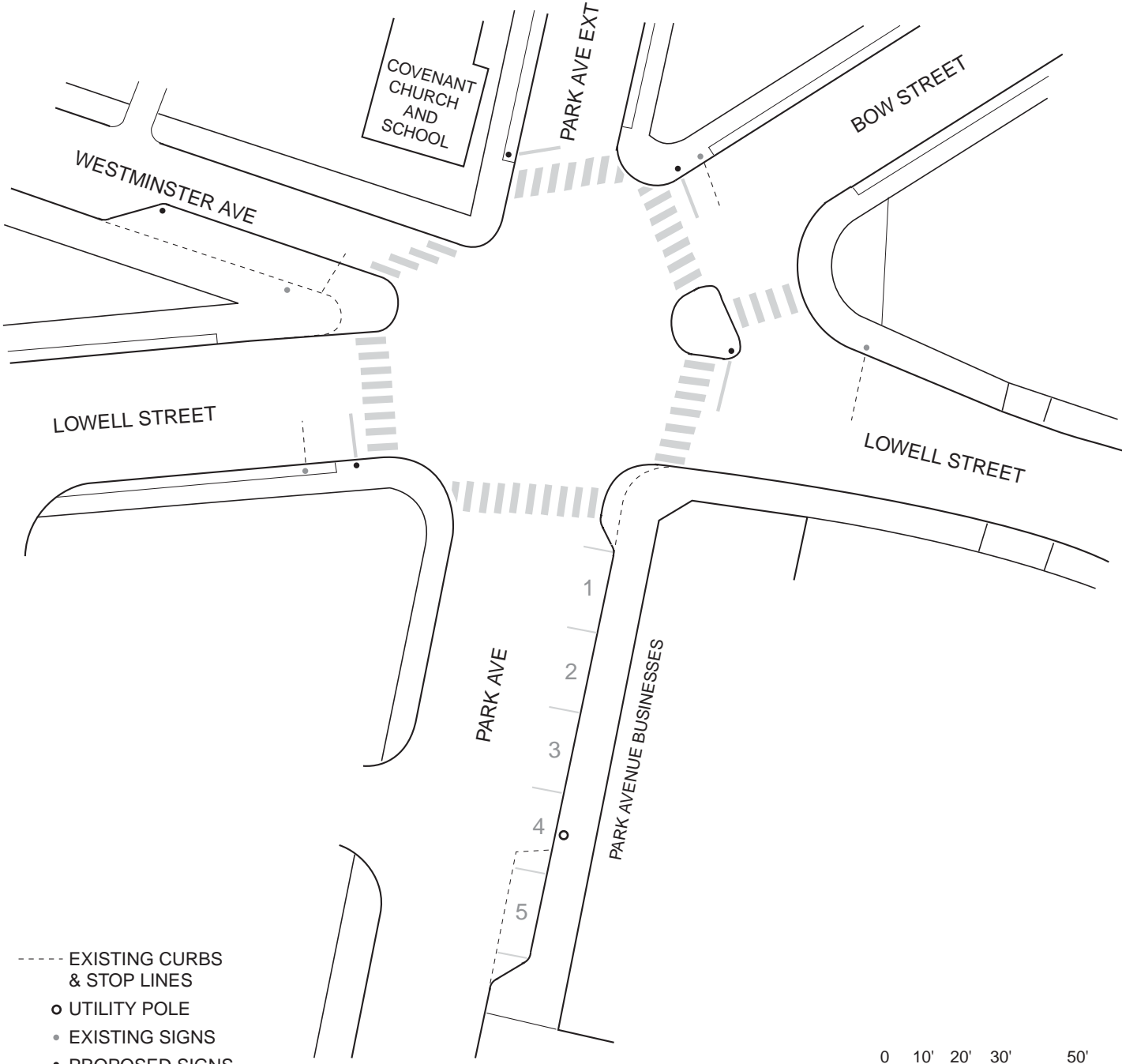
The TAC is seeking comments from those who would be affected on Westminster Avenue, Lowell Street and Westmoreland Avenue. Since this proposal would result in increased traffic on Lowell Street west of the Square and Westmoreland Avenue, some mitigations (such as traffic calming, additional sidewalks, thermoplastic crosswalks and/or improved signs) are also under consideration.

A Response Form is enclosed. We urge you to take a few minutes to fill it out and return it in the enclosed postage-paid envelope. The TAC will hold another public meeting on the Downing Square project before making final recommendations to the Board of Selectmen. Construction on the project is currently planned for next summer.

Thank You,
Edward Starr, Chairman
Transportation Advisory Committee

DOWNING SQUARE

08/29/06



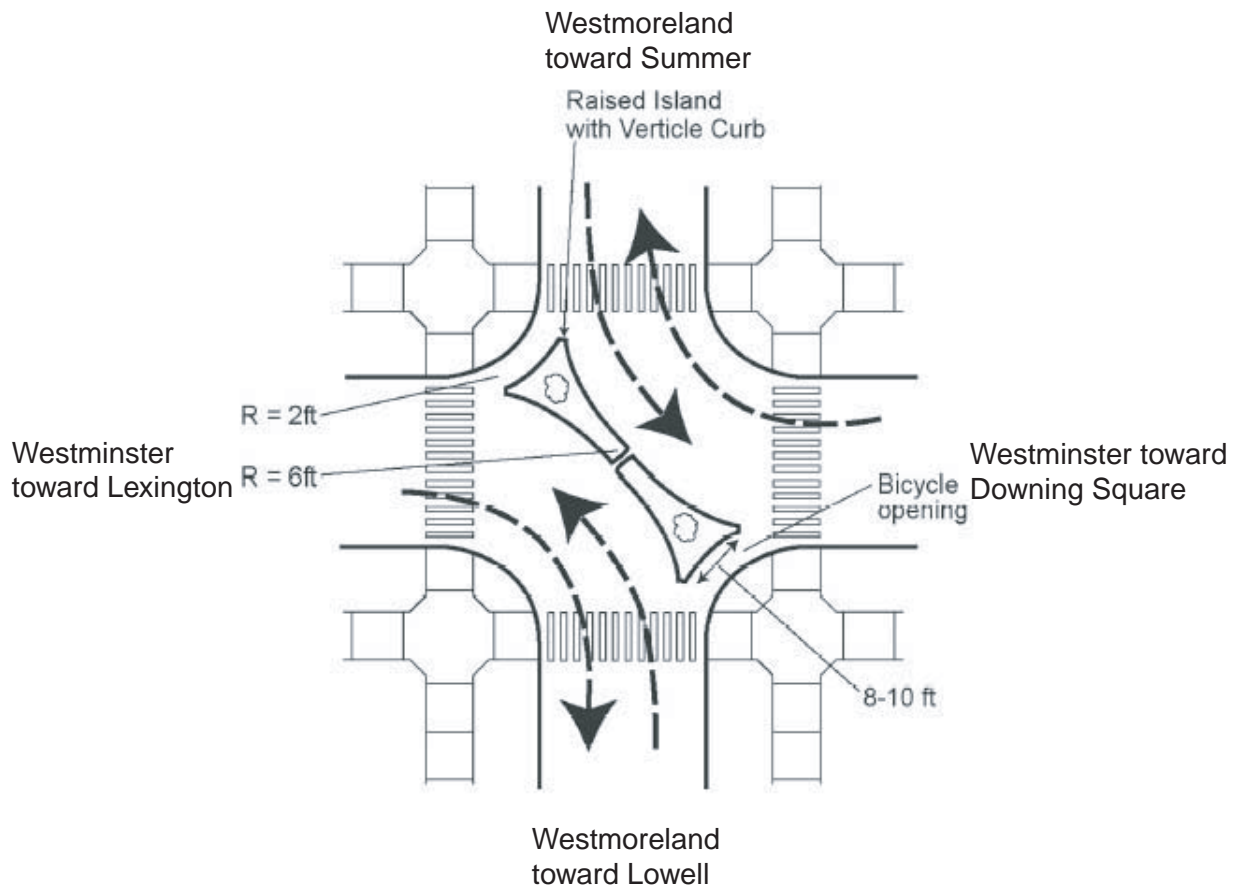


Exhibit 16-18
 Diagonal Street Closure
 Source: Traffic Calming State of the Practice, ITE, 1999

16.8.1 Restriction of Vehicle Movements through Street Design
 Several design measures are available to restrict specific movements at an intersection. For example, a segment of median extending across an intersection limits turning movements, from all approaches, to a right turn only. Further, a median eliminates the possibility of through trips on the cross street. This type of cross-street access restriction by medians could be appropriate where sight distance is inadequate for safe turning movements at the intersection, or where through traffic on the cross street is being discouraged. Other techniques such as the use of channelizing islands for particular movements can be used to restrict traffic movements at intersections.

On local streets, the diagonal street closure, shown in Exhibit 16-18, prevents through movement on both of the intersecting streets, but allows either a right or left turn from all approaches. Diagonal through-movement closure may be appropriate to discourage cut-through trips in neighborhood districts with a dense, well-connected network of streets. Diagonal street closures should also maintain connectivity for bicycle travel.