



TECHNICAL MEMORANDUM 1 HISTORICAL DATA REVIEW

To: **Town of Stow Lower Village Committee and Planning Board**

From: Fay, Spofford & Thorndike

Subject: Stow Lower Village Historical Traffic Data Review Findings

Date: October 5, 2005 (Rev. October 26, 2005)

In accordance with our Agreement, FST has reviewed historical documents in connection with the Stow Lower Village Traffic Planning Study and Design Services. Following is a summary of the information reviewed in chronological order (most recent to least recent):

□ **Final Environmental Impact Report (FEIR) EOE # 13070, Bose Corporation (July 29, 2005)**

SMMA prepared a final Environmental Impact Report to document the impacts of a 719,480 square foot building replacing a 304,480 square foot office building with 920 parking spaces. The new parking supply at full buildout will include 2,164 parking spaces of which 160 will be in a garage below one of the site buildings. The FEIR indicates scheduled occupancy of the site to be phased between 2004 and 2012. The existing 304K site is occupied, 110K sf of garage labs/offices are scheduled to come on line during 2006, 90K sf of garage labs/offices are scheduled to come on line during 2008, 68K sf of office/R&D during 2010, and 135K sf of office/R&D by 2012. Traffic increases through lower village (12% of the total site generated traffic) will be added incrementally through Lower Village according to the cited schedule, which is subject to adjustment over time.

□ **Priority Development Fund (PDF) - Planning Assistance for Housing Production Application (June 2004)**

Bedford & Stow applied to the Massachusetts DHCD for the development of village zoning bylaw changes. This joint application requests approximately \$50,000 from the PDF with a \$12,800 match from the Minuteman Advisory Group on Interlocal Coordination (MAGIC) to conduct



18 inter-related tasks. Both communities desire to develop appropriate zoning bylaw modifications that will encourage compatible mixed use development and affordable, higher density housing, shared parking, and better pedestrian scale environments, among many other requirements. Approximately 30 units are proposed in Stow Lower Village and Gleasondale Mill. Conceptually, Stow's bylaws would call for a maximum 0.40 floor area ratio (FAR) for lots outside the Water Resource Protection District (WRPD) and up to 0.40 within the WRPD if approved by Mass DEP and the Stow Board of Health. The application indicates Stow is highly interested in preserving its historic character and development patterns through the Chapter 418 process

□ **Traffic Impact Study USPO/Gymnastics Driveway, Stow, Massachusetts (Gordon R. Archibald, March/April 2004)**

This study addresses revisions to an existing USPO/Gymnastics driveway located on the north side of Great Road (Route 117) west of Samuel Prescott Drive. It includes count data and analyses of Great Road with the USPO/Gymnastics driveway and with Samuel Prescott Drive conducted for year 2004 conditions on a Saturday and Tuesday during March 2004. It reviewed a one-way entrance via Great Road and exit via Samuel Prescott Drive vs. maintaining the existing 2-way driveway and recommended maintaining the existing driveway and not converting to a one-way flow operation via Samuel Prescott Drive.

□ **Response to Comments - Proposed Bose Corporation, Stow, Massachusetts, (Greenman-Pederson, Inc., October 2003)**

This report contains responses to comments made by the Town's review consultant (VAI) on the Bose Corporation project regarding the traffic impacts associated with the redevelopment of a site which formerly housed a ±304,480 square foot (sf) Compaq Computer Corporation building on an 82.4 acre site. With reoccupation and construction of new buildings, a ±719,480 sf office and manufacturing space will be created generating approximately 6,270 vehicle trips on a typical weekday and 900-920 vehicle trips during the morning and evening peak hours -- 12% onto Great Road (Route 117) east of the site (through Stow Lower Village).

The study area addressed in the initial study was increased to include Great Road's intersections with Red Acre Road and Pompositicut Street; analyses of queuing and traffic operations were provided. Crash and trip



distribution questions were addressed. A follow-up GPI analysis indicated the intersection of Great Road with Hudson Road (Route 85) will meet several signal warrants with the Build traffic volumes added, the developer indicated that no improvements are recommended at this time because the intersection has a safety history better than the statewide average for unsignalized intersections. Alternative unsignalized modifications to this intersection were not addressed in the response to comments.

□ **Traffic Impact and Access Study, Proposed Bose Corporation, Stow, Massachusetts, (Greenman-Pederson, Inc., July 2003)**

This traffic impact and access study addresses the Bose Corporation site modifications (see above description) for a study area on Great Road between Gleasondale Road in Stow and Sugar Road in Bolton. Projections are made for the year 2008 under No-Build and Build assumptions. Existing conditions analysis was completed for 2003 for counts performed during March and June 2003. Sight distance analyses were conducted for the site driveway intersection with Great Road. The study indicated new traffic signals will be warranted at the intersection of the site driveway with Great Road, Great Road at the I-495 northbound ramp, and at the Great Road/Hudson Road(Route 85).

Proposed mitigation for the site within the Town of Stow included:

- Signalization of the site driveway with Route 117.
- Replace the existing traffic controller at the Route 117/Gleasondale Road (Route 62) and add a new phase to the signal plan for a lead left turn to Library Hill Road southbound. Restripe the northbound Route 62 approach for a shared through lane and an exclusive right turn lane.

Mitigation proposed within Bolton included:

- Install a traffic signal at the unsignalized Route 117 intersection with the I-495 northbound ramp and coordinate the new signal with the existing traffic signal on the southbound

Additionally, the developer proposed to implement transportation demand management measures such as ridesharing, guaranteed ride home, preferential parking, and alternative work hours. While no information was provided concerning the projected effectiveness of the TDM measures, the study included a summary comparing the mitigated Build conditions



with the unmitigated Build and No-Build conditions at the intersections where mitigation is proposed. The study indicated that the development's impacts can be mitigated at the locations where mitigation is proposed.

- **Trip Generation Letter, Proposed Meetinghouse Senior Living Expansion, Stow, Massachusetts, (Greenman-Pederson, Inc., July 2003).**

This letter indicates the trip generation impact from the expansion of the Meetinghouse Lane senior housing by 15 units will be 1 to 2 vehicle trips during peak hours and a total of 52 vehicle trips per day (26 in and out).

- **Stow Lower Village Themes for Improvement (The Cecil Group, Inc., July 2002)**

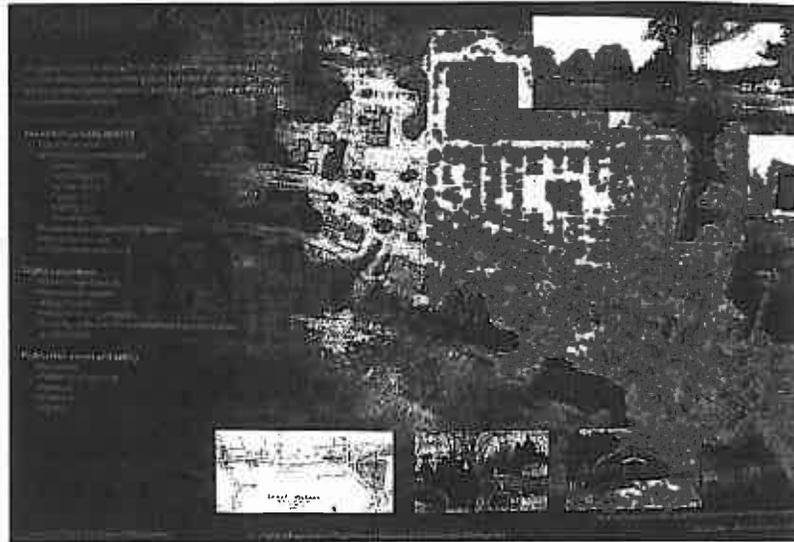
This 42-slide presentation prepared by the Cecil Group, Inc. for a Department of Housing and Community Development workshop held three years ago presents meeting goals, a brief history, slides addressing existing conditions, design concepts, implementation issues, and conclusions. Slides address existing issues and opportunities with a series of alternative strategies and a framework for improvements. Five streetscape improvement areas were outlined, including:

- Reconfiguration of the Gardner Road at Great Road with an expansion of the Lower Village Common and consolidation of curb cuts,
- Enhanced pedestrian connections and crossings of Great Road,
- New intersection treatments
- Addition of street trees
- New building in-fill opportunities

Issues included the infrastructure, and overhead utilities in Lower Village Area (potential to relocate underground?), traffic volumes, congestion, and bypass speeds, shopping center parking layout, new commercial development, the potential to expand the US Post Office. Design concepts included potential street furniture, lighting, signage, sidewalk planters, and bike lanes.



The future vision identified at the conclusion of the project was as illustrated to the right.



- **MAGIC Subregional Study Phase I - Current Conditions and Proposed Additional Studies (CTPS Final Report, February 2002)**

This MAGIC Phase I CTPS study identifies trends in employment, population, and development within the MAGIC subregion that includes 11 communities plus the Town of Stow. It indicates that Stow employment declined 8% between 1990-1999, its population grew by 11%. Between 1990 and 2020, Stow's 5,328 population was projected to grow by 32% to 7,022, while employment was expected to grow by 4% (86 jobs net). It identified Compaq Computer (the Bose site) as the largest employer. (note: supersedes August 2001 DRAFT).

The study identified Route 117 in Stow as being congested between Gleasondale Road and Crescent Street, but did not specifically identify the Stow Lower Village issues being addressed in this study.

- **Meeting House at Stow Senior Living Facility 189 Great Road (HTSD, October 1999)**

This study addresses the projected impact of the 61-unit Phase I development at Meetinghouse Road and Great Road. It was projected that the facility will generate 212 vehicle trips (106 in and out) on a daily basis and 5-7 vehicle trips during the AM or PM peak hours.

- **Route 117 Corridor Study Final Report (Sasaki Associates, Inc. May 1989)**



This report identifies existing traffic conditions, potential short-term mitigation of existing conditions, projected traffic conditions during 1993 and 1998 on Route 117 within the Town of Bolton directly adjacent to the Town of Stow. Traffic operations analyses were performed for each of three time periods (i.e., 1989, 1993, and 1998). The traffic distribution pattern for traffic originating or destined to Bolton was identified and graphically displayed.

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Stow Lower Village Town Meeting
Stow, Massachusetts
October 5, 2005
9:00 AM

Attendees:

Stow Planning Committee:
Stow Lower Village Committee:
Karen Kelleher, Town of Stow Planning Coordinator
Fay, Spofford & Thorndike: Gary Hebert, Keelia Wright

Summary:

FST presented Existing Conditions report to attendees, providing a brief summary of the findings. Possible options for future evaluations were discussed. In accordance with the scope of work, FST will pursue the following three options, selected by the committee members:

Option 1: Creation of a modern roundabout at the intersection of Great Road, Pompositicut and Red Acre Road. Modern roundabout will include a truck apron.

Option 2: Creation of a one-way pair on the section of Great Road in front of Stow Plaza. Configuration will look at placing the two one-way roads on either side of the bank that currently sits between the plaza and Great Road. Address the future use of Gardner Road between Red Acre Road, Stow Plaza, and Great Road.

Option 3: Signalization of one of the two intersections in front of Stow Plaza. This option will also look at the creation of shorter pedestrian storage medians at those sections of Great Road where a two-way left turn lane is present.

We will provide the Committee with the pros and cons of each option. The final recommended strategy could conceivably include portions of all options to be evaluated.

