



November 10, 2011

Vanasse Hangen Brustlin, Inc.

Town Offices
Town Administrator's Office
Room 309
37 Shattuck Street,
Littleton, MA 01460

Re: RFP – PEER REVIEW OF THE COMPREHENSIVE PERMIT APPLICATION

Dear Sir/Madam:

For many decades now, VHB has been working alongside communities to serve as an extension of their professional staff in providing independent evaluations of development projects. Communities use VHB's services because we work in a collaborative manner with professional and support staff, both volunteer and elected, and boards to provide a broad understanding of transportation planning and engineering issues. Because of the wide range of services that VHB possesses in house, we are able to offer an in-depth understanding of the technical, social, regional, and local concerns, and are experienced in public outreach and presentation.

Our project management team has collaborated with a number of communities in and around the region on a number of projects similar in nature to the Comprehensive Permit application currently pending with the Town of Littleton. I will serve as the Project Manager for this effort and will be supported by a number of talented and knowledgeable engineers. The following letter, along with its attachments, provides a full response to the Town's RFP.

PROJECT DESCRIPTION

Vanasse Hangen Brustlin, Inc. (VHB) will provide transportation planning and engineering services to the Town to perform an independent traffic evaluation of a recently submitted Traffic Impact and Access Study in support of a Comprehensive Permit application for the 15 Great Road LLC development project. VHB will provide professional services to the Town to determine/confirm the transportation issues associated with the project as they relate to the adequacy of submission materials, identify general traffic impacts both on- and off-site, confirm traffic and pedestrian safety needs are met along with parking adequacy, and that it provides appropriate site circulation in and around the project development site.

PROJECT MANAGEMENT & EXPERIENCE

Robert L. Nagi, PE, will serve as the Project Manager to the Town and will be responsible for overall project implementation and interaction with the client and Board. Mr. Nagi has more than 20 years of professional experience in transportation engineering and planning and is a registered professional engineer in Massachusetts. In his career, Mr. Nagi has served as an on-

call traffic consultant to the Towns of Easton, North Andover, Boxford, Boylston, Acton, Stoneham, and Medway, as well as the City of Medford and South Portland (Maine) as an independent peer reviewer for similar site development projects. In the past several years, Mr. Nagi has overseen the review of several Comprehensive Permit applications for the City of Medford, the Towns of Milford, Concord, and Acton. Additionally, Mr. Nagi has worked with developers in advancing Comprehensive Permit submissions to communities throughout the Commonwealth, most recently in Hopkinton and Stoneham.

Supporting Mr. Nagi will be a talented and knowledgeable team of professionals who also have experience with these types of projects. **Matthew Kealey, PE, PTOE**, will serve as the Senior Project Engineer. Mr. Kealey will be primarily responsible for overseeing the technical aspects of the review and assuring the thoroughness of the technical portions of the various reports to the Town. **Michael Santos, PE**, and **Nicolette Hastings, PE**, will also serve as engineers on this effort.

Resumes of all the VHB team are included in this package. We have also provided references from each of the communities where Mr. Nagi worked on Comprehensive Permit application projects.

PROPOSED SCOPE OF SERVICES

VHB will conduct a professional and independent traffic evaluation of the proposed development. As part of this study, VHB will conduct a review of the project's traffic study and a review of the project's site plans as they relate to traffic circulation and/or access and egress issues. VHB will also review existing traffic information along the local roadway system to identify the project's expected traffic and parking impacts along these roadways. If needed, VHB would develop several suggestions for the Town to consider which might address the impacts of the project on the local roadway system. In the conduct of this effort, VHB may develop additional questions and comments for the applicant to respond to before providing a final evaluation to the Town.

VHB will attend meetings with the applicant, town staff, and other individuals and/or groups as requested by the Town and spelled out in the specific scope of services below. The detailed Scope of Services to be performed on behalf of the Town is explained in more detail below.

1.0 SUBMISSION ANALYSIS

- 1.1 Review of Applicant's Submission: The Town shall provide VHB with a complete copy of the applicant's submission materials, including traffic



studies, site plans, and any other information submitted by the applicant to support the Comprehensive Permit submission. Additionally, the Town shall also provide VHB information associated with the current site plan and zoning information for the current site, which may assist in the evaluation of the current proposal. Upon receipt of this information, VHB will conduct a detailed review of the reports and documents included in the submission. If additional basic information is required and/or if requirements of the Town's traffic study guidelines are not provided, VHB will immediately request, in writing to the Town, that the applicant provide this information.

- 1.2 Site Visit: VHB will visit the project site and study area intersections to gather visual and operating existing condition information to cross-reference with information provided by the applicant in the traffic study.
- 1.3 Review of Traffic Study: Upon determination that the traffic impact and access study is complete and adequate site plan application is available to evaluate the transportation-related components of the comprehensive permit application, VHB will conduct a detailed and thorough evaluation of the project's baseline information as well as its anticipated impacts. Specifically, VHB will perform the following services as part of this project:

- 1.3.1 Conduct Detailed Review of the Traffic Submission – VHB will review the traffic submissions for consistency with standard industry practice and town requirements. This will include a review of the traffic count information provided in the report, a review of the traffic safety information provided (crash statistics and sight distance measurements), traffic forecasting (historical traffic growth, new traffic generation associated with the proposed project, and its distribution onto the area roadways), and standard intersection capacity assessments.

- 1.3.2 Identify Traffic Mitigation Measures – Using the information provided in the traffic report as a baseline, VHB will assess any proposed on-site or off-site transportation improvements suggested by the applicant. If needed, VHB will expand upon these suggestions to include other ideas for the Town to consider.



- 1.4 Site Plan Review: VHB will review the site plan submission for technical accuracy and consistency with both industry standards as well as reasonability. Specific focus will concentrate on:
- Public safety issues including, emergency vehicle access and internal circulation
 - Pedestrian and bicycle amenities
 - Consistency with standard planning procedures
 - Off-site roadway improvements proposed as part of the application (as they relate to highway design standards, traffic operations, and/or safety)

In the process of this review, VHB may be required to review other, non-project related sources of information to provide a historical or new technical perspective on the information presented in the application. This information may include:

- Previous area traffic studies submitted to the Town and/or any other traffic reports deemed relevant by the Town or VHB
- Roadway and site plans for the area around the site
- Traffic data provided by a third party (including MassDOT, the Town of Littleton, and/or the Central Transportation Planning Staff)

- 1.5 Town Meetings: In the performance of this Scope of Services, it is expected that VHB staff will need to contact and/or meet with various members of the Town staff to collect and discuss relevant information. This list of contacts may include representatives from the following Town departments:

- Engineering / Department of Public Work
- Police and Fire
- Zoning
- Community Development/Planning

Any correspondence with these individuals or boards will be documented and forwarded to the Town's designated contact person as part of the preparation of the final report to the Town. For the purposes of this scope of services, VHB will attend three (3) meetings with the Town's staff, applicant team, and other stakeholders as requested by the designated Town's contact person, and up to three (3) public hearings with the Town Zoning Board.



1.6 Draft Technical Memorandum: After reviewing the application and meeting with the necessary Town staff and applicants representatives, VHB will prepare a draft technical memorandum detailing the findings of this effort. This will include summaries of the technical findings (including traffic counts, existing and anticipated intersection operations, safety evaluations, and any recommended improvements and/or findings), as well as additional issues for the Town's consideration. VHB will clearly identify areas of deficiencies, their magnitude, and what potential actions can or should be undertaken by the Town or applicant on these identified issues.

1.7 Final Technical Memorandum: Upon submission of the draft Technical Memorandum to the Town, VHB will be available to meet with the Town's staff or other interested parties (as authorized by the Town) to discuss the findings in greater detail. If needed, information contained in the draft Technical Memorandum may be adjusted or clarified for improved ease of understanding. Written questions of the Draft Technical Memorandum provided to VHB through the Zoning Board will be responded to in writing.

Following the response to any questions, VHB will update the draft Technical Memorandum to incorporate any clarifications, corrections, and/or updates into the report and issue a final Technical Memorandum to the Town.

2.0 EXPENSES

VHB shall be reimbursed for expenditures made specifically for the project such as printing and reprographics; travel and subsistence; telephone charges; shipping, postage, and courier service charges; and purchase of maps and similar documents. These direct expenses will be billed at cost plus 10%.

SERVICES NOT INCLUDED

The services noted in this Scope of Services is inclusive only of those tasks specifically specified within this document. The following tasks are not anticipated at this time and, therefore, are not included in this scope.

- Any design services
- Permitting
- Legal services



Should work be required in these areas, or any areas not specifically described within this proposed Scope of Services, VHB will prepare an appropriate amendment, at the Client's request, that contains the Scope of Services, fee, and schedule required to complete the additional work items.

TOWN-FURNISHED INFORMATION

It is understood that VHB will perform these services under the sole direction of the Town (through its designated contact person). In the performance of these services, VHB will coordinate its efforts with those individuals or entities, as requested by the Town. To the maximum allowable extent, the Town shall provide VHB with project-related technical data in its possession or control, including, but not limited to:

- A complete copy of the development proposal and application including traffic information, site plans, and any other technical supporting information
- Town engineering or other technical reports considered to be relative to this project submission
- Other related legal documentation considered to be relevant to this project submission

VHB will rely upon the timeliness, accuracy, and completeness of Town-furnished information in connection with the performance of services under this Proposal.

SCHEDULE

VHB will begin performance of the above services on the date this contract is formally awarded. Once VHB has been notified in writing that the contract has formally been awarded, VHB will require five (5) days to review the application for adequacy and completeness. At the conclusion of that five day period, VHB will issue a memorandum to the Town stating either that:

- (a) The basic information in the applicants submittal is adequate and complete and that VHB will continue their full review of the applicants information
- (b) The basic information is not adequate or complete, and will note what specific additional information is necessary to begin the detailed review of the application. In this case, VHB will continue the application review on those pieces of information and plans that are complete, but will withhold commentary on those areas where incomplete information is not provided.



Following receipt of all required information, VHB will require an additional ten (10) working days (excluding weekends and holidays) to formally identify the project's impacts and document the findings in a technical report. VHB will issue fifteen (15) copies of the initial technical report to the town with supporting documentation. Following a review period by the Town, VHB expects a brief one-to-five (1-5) day period to review comments, edit, and issue fifteen (15) copies of the Final Memorandum and appendices to the Town (including one reproducible original copy).

In total, assuming all information is provided up front, VHB expects that the review and draft memorandum to the Town can be issued within fifteen (15) days from the date written authorization to proceed is provided.

Furthermore, the VHB team will be available to attend project meetings as requested by the Town and will be available to attend public hearings as requested by the Town. Please note that VHB requires at least five (5) days advance notice be provided prior to the public hearings to assure attendance of appropriate VHB staff.

This schedule is subject to timely delivery of information and review of technical submissions by the Town staff and the applicant. In cases where outstanding information is not provided, VHB will withhold commentary on those subjects until such time that the information is provided to VHB and adequate review time is afforded VHB to review outstanding information. If the Town requests that work under this project be stopped and/or modified, the schedule is subject to renegotiation when written authorization to proceed is received.

COMPENSATION

VHB will perform the Scope of Services contained in this Agreement on a time and expense basis at the standard hourly billing rates in effect at the time the work is performed. The billing rates for the four professionals assigned to this project are as follows:

Robert Nagi ~ \$185/hour
Matthew Kealey ~ \$145/hour
Michael Santos ~ \$125/hour
Nicolette Hastings ~ \$125/hour

Based on prior experience with these efforts, VHB anticipates that to total upset limit for labor for the defined scope of services noted above is \$7,690 with an additional \$500 in expenses for a total of \$8,190. This assumes that the majority of the meetings will be attended by Mr. Nagi.



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Should fewer meetings than noted be required, the cost for these services would be somewhat reduced as this is a time and expenses proposal—not a lump sum fee.

Finally, as requested, we are providing 15 copies of this proposal to you for your consideration. Additionally, an electronic version of this proposal will be forwarded to Ms. Gibbons (jgibbons@littletonma.org) prior to noontime on Thursday, November 10, 2011.

We look forward to having the opportunity to work with the town on this project. In the meantime, if there is anything additional that you might need from us, please do not hesitate to contact me directly.

Regards,

VANASSE HANGEN BRUSTLIN, INC.



Robert L. Nagi, PE
Principal
Transportation Planning & Operations

VANASSE HANGEN BRUSTLIN, INC.



Donald Cooke, PE, PTOE
Managing Director, Transportation Systems

Attachments



Project References

Note that in all cases noted below, Mr. Nagi served as the specific Project Manager for each project except for the last two (in which case Mr. Nagi was responsible charge for the transportation review of the application).

TOWN OF ACTON :: THE WOODLANDS AT LAUREL HILL

Planning Director –Roland Bartl
Town Hall Annex
472 Main Street
Acton, MA 01720
978-929-6631

CITY OF MEDFORD :: WELLINGTON PLACE 40B DEVELOPMENT

Director of Community Development - Lauren DiLorenzo
85 George Hassett Drive
Room 308
Medford, MA 02155
781-393-2480

TOWN OF BARNSTABLE :: VILLAGE GREEN APARTMENTS

Director of Planning, Zoning, & Historic Preservation –Thomas Broadrick, AICP
Town of Barnstable
200 Main Street
Hyannis, MA 02601

TOWN OF NORTH ANDOVER :: THE MEADOWS CHAPTER 40B DEVELOPMENT

Director of Community Development – Curt Bellavance, AICP
1600 Osgood Street
North Andover, MA
978-688-9533

TOWN OF ASHLAND – ASHLAND WOODS 40B REVIEW

Town Manager –John Petrin
Town of Ashland
101 Main Street, 1st Floor
Ashland, MA 01721
508-881-0100





Robert L. Nagi, PE

Principal

East Acton Village Transportation Study, Acton MA

Project Manager for transportation planning study of the East Acton Village area within Acton, Massachusetts. The study evaluated the existing transportation deficiencies within the Village area, worked with the Town staff to determine likely land use growth scenarios, and identified a series of potential transportation mitigation measures intended to address the existing and future traffic conditions in the area. The project required close coordination with and presentations to several interested parties within the community and a steering committee made up of town staff, residents, and business owners.

Central Square Improvements, Chelmsford, MA

Project Manager for a downtown circulation and revitalization study for the Central Square section of Chelmsford, Massachusetts. Project responsibilities included the evaluation and critique of several traffic circulation proposals submitted by various public and private parties, development of new circulation suggestions, and the evaluation of these improvements. The evaluation focused on traffic flow, pedestrian and bicycle issues, and the impact to businesses and parking within the town's central business area. The final recommendations were adopted by the Town and are scheduled to begin construction in the near future as part of a separate project in which Mr. Nagi continued to provide technical support.

Springfield Smith & Wesson Industrial Park (formerly Memorial Industrial Park II), Springfield, MA

Working for the Springfield Redevelopment Authority, Mr. Nagi managed and prepared the preparation of MEPA-related services and a detailed traffic impact and access study for the redevelopment of an 85.3-acre brownfields site in Springfield, Massachusetts to provide 520,000 square feet of office/flex-tech space. The project included the successful request for a Phase I Waiver from MEPA to permit environmental remediation to move forward.

Sun Microsystems, Burlington, MA

Mr. Nagi was responsible for traffic engineering services for a 1.3 million square foot corporate headquarters of Sun Microsystems. The project included extremely close coordination with the Towns of Bedford and Burlington and significant off-site roadway improvements needed to support regional business growth with the Massachusetts Highway Department.

Hanscom Air Show Traffic Management Plan, Bedford, MA

Responsible for preparing a detailed transportation management plan for the semi-annual Boston Air Show at the Hanscom Air Force Base. The study evaluated the existing traffic management plan, developed short- and long-term suggestions aimed at reducing the impact of 250,000 daily visitors on a local roadway system and limiting the impact to surrounding neighborhoods.

Northwest Park, Burlington

Mr. Nagi is a Principal with Vanasse Hangen Brustlin, Inc. where he is responsible for the traffic engineering and permitting for a wide range of land development and transportation projects for private, municipal, and institutional sector clients. His primary areas of expertise include transportation operations, state and local permitting, preparation and review of traffic impact studies, corridor and downtown planning studies, and the development and implementation of traffic monitoring programs.

22 years of professional experience

Mr. Nagi was the Project Manager for the redevelopment of the 3 million+ square foot mixed use Northwest Park development in Burlington, Massachusetts. Mr. Nagi coordinated the local and state MEPA-related services, oversaw the detailed transportation planning and engineering needed to support the project development, and oversaw the successful permitting of the site within 12 months. Mr. Nagi also worked very closely with the City, MassDOT, MOBD, and state legislators to achieve a public-private financing plan for the infrastructure needed to support the project.

On-Call Transportation Consultant – Various Municipalities

Serves as the lead on-call transportation consultant to the City of South Portland, Maine, and the towns of North Andover, Boxford, Boylston, Medway, Leominster, Methuen, and Dedham, Massachusetts for transportation-related issues. The services primarily focus on reviews of private development plan submissions, safety evaluations, and various zoning compliance issues (with a specific focus on Chapter 40B proposals) and other transportation concerns as they arise within the municipalities.

I-95 South Corridor Transportation Plan: Canton to Attleboro, Massachusetts

Mr. Nagi served as the Project Manager responsible for all aspects of the preparation of the study, public outreach, technical analysis, and report production associated with this Massachusetts DOT planning effort. The study evaluated the current and future deficiencies along a 22 mile section of Interstate-95 between Canton and the Rhode Island state border and along the Route 1 corridor from the City of Boston to Rhode Island. The study focused on developing a series of recommendations that will improve overall mobility along these corridors for residents, businesses, and visitors. The recommendations were geared towards enhancing economic opportunities along the transportation corridors, improving safety, and addressing multimodal deficiencies between neighborhoods and communities.

Target Distribution Center, Westfield, MA

Mr. Nagi was responsible for the preparation and permitting of a \$100 million, 1.6 million square foot distribution center for the Target retail store chain. Identified at the time as one of the 25 largest economic development projects in the United States, Mr. Nagi prepared the transportation impact statement for the development, worked with City, MassHighway, Mass Office of Business Development (MOBD), and State legislators to identify funding needs and assisted in the development of the legislation outlining the necessary to support the advancement of the development.

Education

BS, Civil Engineering, Northeastern University, 1992

Professional Registrations / Certifications

Professional Engineer MA 1998

Professional Engineer ME 2002

National Charrette Institute Charrette System™ Certificate 2007

Affiliations / Memberships

Institute of Transportation Engineers, Associate Member



**Matthew J. Kealey,
PE, PTOE**

Project Manager

The Commons at Prospect Hill, Related Retail Corporation, Waltham, MA

The Commons at Prospect Hill is a mixed-use development consisting of 1.24 million sf of retail space and 450,000 sf of office space to be located on the former Polaroid site in Waltham, Massachusetts. Mr. Kealey was the project manager for the traffic impact access study for this project, which involved complex trip generation, trip distribution, capacity analyses, and numerous conceptual improvement plans developed in close coordination with MassHighway and the City of Waltham.

Hamilton Canal JAMplan Improvements, Lowell, MA

Member of the VHB team that recently began work on the Hamilton Canal JAM plan improvements for the City of Lowell. Mr. Kealey is responsible for traffic engineering and analyses used in the development of design plans for 17 intersections that will be improved as part of this project.

Meadow Walk at Lynnfield, National Development, Lynnfield, MA

Meadow Walk at Lynnfield is a mixed-uses development consisting of 395,000 sf of retail space, 80,000 sf of office space, and 228 residential units to be located on the former Colonial Golf Club site in Lynnfield, Massachusetts. Mr. Kealey was the project manager for the traffic impact and access study, including an extensive mitigation program that involved signalization of multiple interchange ramps from Route 128.

1021 Kingston's Place, Thorndike Development, Kingston, MA

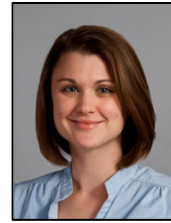
1021 Kingston's Place is a Transit Oriented Development consisting of 50,000 sf of retail space, 250,000 sf of office space, and 730 residential units to be located adjacent to the Kingston Commuter Rail stop in Kingston, Massachusetts. Mr. Kealey prepared the traffic impact and access study for this project, which included detailed assessment of existing operations of the commuter rail station and trip generation credits associated with mixed uses being built in close proximity to a transit station. This project also involved justification of constructing a new on-ramp to Route 3 southbound and analysis of multiple alternatives.

The Park at Great Woods, Norton, MA

The Park at Great Woods development involved the construction of a Tournament Players Club (TPC) Championship Golf Course and 1 million square feet of office space along Route 140 in Norton, Massachusetts. The project involved evaluation of the traffic impacts on local roads as well as the I-495 Ramps at Route 140 and Route 123. Extensive mitigation requirements of this project included widening of Route 140, traffic signal installation at the proposed site driveway, Route 140 at the I-495 Ramps, and Route 123 at the I-495 Ramps. In addition, Mr. Kealey prepared the Event Traffic Management Plan (TMP) for the annual Deutsche Bank Championship played at the TPC course. Attendance at this popular event reaches 25,000 spectators per day during the tournament, and the event requires an updated plan each year. Preparation of the TMP includes planned use of satellite parking areas, coordination of shuttle buses, pedestrian accommodations, and an extensive network of static signs and variable message signs.

Mr. Kealey is a Project Manager with VHB's Land Development group. His engineering responsibilities include preparing traffic impact and access studies and access/circulation/parking analysis for institutional, retail, office and residential and developments.

14 years of professional experience



**Nicolette Hastings,
PE**

Engineer

M. Hastings is a Transportation Engineer with diverse experience for public and private clients. Her work, which has encompassed urban and suburban environments, as well as institutions and campuses, has included transportation impacts, pedestrian and vehicle safety, parking, multimodal transit, and permitting.

9 years of professional experience

Farm Street Corridor Study, Wakefield, MA

Assisted in the preparation of a conceptual transportation improvement plan identifying opportunities to improve safety and operations along Farm Street and the surrounding roadways which serve Wakefield, the surrounding communities, and three schools. Responsibilities included conducting an extensive data collection effort; analyzing existing vehicular operations; assisting in the formulation of an improvement plan to provide safe vehicular access, appropriately accommodate pedestrian and bicycle activity, and address parking issues within the study area; and meeting preparation and attendance.

Southborough Transportation Master Plan, Southborough, MA

Quantified existing traffic, parking, pedestrian, transit, and bicycle facilities throughout the Town of Southborough. Evaluated Southborough's transportation system from a regional standpoint, including identifying potential impacts related to future development in the region. The final report presented a series of improvement strategies to mitigate existing and potential future deficiencies, established a framework for enhancing non-vehicular transportation opportunities, and proposed improvement measures to several intersections. The final report provided the Town with the transportation component of the Town Master Plan Update.

Massport – Congress Street Crosswalk, South Boston, MA

Performed a review of conditions at the pedestrian crossing of Congress Street located at Seaport Lane where crossing is difficult under current conditions due to a number of factors including truck traffic, vehicle speeds, highly variable pedestrian volumes and crossing patterns, and low visibility of the existing crosswalk and associated warning signs. Provided recommendations to improve pedestrian crossing safety including improved crosswalk striping, advanced pavement markings, warning signage adjustments, and a temporary neckdown.

Fish Pier Transportation Study, South Boston, MA

Worked with the Massachusetts Port Authority (Massport) to identify traffic, parking, and pedestrian improvements to the historic Fish Pier in South Boston. The outcome of the study consisted of several near-term and long-term recommendations to help address issues related to traffic congestion, pedestrian circulation, and enforcement of the parking restrictions on the pier.

Westwood Station Neighborhood Traffic Calming, Westwood, MA

Assisted in pre-permitting services to the Town of Westwood to aid in their review of the proposed Westwood Station development. Efforts included assistance in identifying current traffic concerns in the Blue Hill Drive/Whitewood Road, Canton Street and Everett Street/Forbes Road neighborhood; identifying neighborhood concerns regarding future traffic related to the Westwood Station development; review of the potential roadway modifications and traffic calming improvements aimed at reducing/eliminating traffic through the neighborhood; and providing recommendations to address the neighborhood concerns/issues.

**Marlborough West/Northborough East Traffic Planning Study – Marlborough/
Northborough, MA**

Assisted in conducting an area-wide transportation infrastructure planning study of the Marlborough west/Northborough east commercial development area and surrounding roadways. The purpose of the study was to identify the existing transportation infrastructure deficiencies, project future changes in traffic patterns/demands associated with more than 5.2 million square feet of total development, and define short- and long-term transportation improvements needed in the region. Responsibilities included establishing study methodology, performing analysis, and documenting results. Development of the short- and long-term improvement measures was challenging because the area is anticipated to experience rapid growth from 2005 to 2025.

Worcester Regional Mobility Study, Worcester MA

Provided transportation planning services for the Central Massachusetts Regional Planning Commission. The 18-month study is a comprehensive assessment of the multimodal movement of people and goods throughout the urban core of Central Massachusetts, comprised of 132 square miles and 12 municipalities. The study will establish short, medium, and long-term 2030 transportation recommendations. The study process includes outreach to a 20-member Technical Committee and a 50-member Advisory Group. An extensive Public Outreach Plan has been implemented including public informational meetings, scenario planning workshops, and small group focus sessions – all occurring at key decision points to engage the public and stakeholders and provide a forum to solicit opinions.

Accelerated Bridge Program – Charles River Basin, Massachusetts

Recently provided transportation planning and travel demand modeling services to the Massachusetts Department of Transportation to determine potential impacts due to construction activities associated with the Accelerated Bridge Program (ABP) within the Charles River Basin. This effort included creating a focused Charles River Basin travel demand model based on and compatible with the larger Central Transportation Planning Staff (CTPS) regional model; reviewing and evaluating multiple construction scenarios, sequencing alternatives, and proposed traffic management plans; developing an existing conditions Synchro model for 42 study area locations; utilizing the study area Synchro model to evaluate traffic operations during various construction scenarios; evaluating pedestrian, bicycle, and transit impacts associated with construction activities; developing origin-destination (O-D) pairs for the study area bridges; and assessing the effectiveness of signed detour routes and the impacts to traffic volumes on other bridges and within the adjacent neighborhood during construction at the Craigie Bridge.

Education

BS, Civil and Environmental Engineering, Northeastern University,
2006

**Professional
Registrations/
Certifications**

Professional Engineer MA 2011

**Affiliations/
Memberships**

Institute of Transportation Engineers



Michael Santos

Project Engineer

Highland Commons, Hudson/Berlin, MA

VHB prepared several traffic capacity analyses, including differing land uses, roadway geometries, signalization, and peak periods for MEPA document filing; prepared a Traffic Impact and Access Study, which included developing traffic volume networks for several build analyses at 39 study area intersections and working in a compressed time frame; coordinated conceptual roadway improvements for more than 1,900 linear feet of state highway including traffic signals at five intersections, ten conceptual roundabout designs, and a series of construction cost estimates. Mr. Santos served as Project Engineering providing TIAs for this project.

Riverside MBTA, Newton, MA

VHB developed Master Planning and Schematic Design of the “air rights” development of the Massachusetts Bay Transportation Authority (MBTA) Riverside Station located on Grove Street in Newton, Massachusetts. The Project is envisioned to consist of over 800,000 square feet of office, retail, and residential space with structured parking/associated access, MBTA operational modifications, infrastructure improvements and site amenities. While serving as task leader, Mr. Santos oversaw the production of the site access and infrastructure master plans, the MBTA Basis of Design document, and the extensive Environmental Notification Form which initiated the State Massachusetts Environmental Policy Act review. Mr. Santos is the Project Engineer providing TIAs (MEPA).

Fenway Park Traffic Management Plan, Boston, MA

VHB was responsible for design of a new drainage system and city permitting for the reconstruction of Fenway Park’s playing field. We have also provided civil engineering services for streetscape improvements on roads abutting the park: Yawkey Way, Van Ness Street and Landsdowne Street, and the installation of a statue honoring Hall-of-Famer Ted Williams. Mr. Santos was the Project Engineer providing TMP memos and plans.

Stop & Shop, Easthampton, MA

Mr. Santos was Project Engineer providing simulation modeling services for a proposed Stop & Shop Supermarket and 51,860 square feet of additional retail space in the Allston/Brighton section of Boston, MA. Traffic operations in a 21-intersection study area were analyzed for existing and future conditions, with and without the project. Several intersection improvements, roadway configurations and signal designs were evaluated. Prepared the Draft and Final Project Impact Reports, and Transportation Access Plan for submission to the City of Boston, and coordinated permitting with the City’s Public Improvement Commission.

Relevant Project Work

Mr. Santos has been a key member of the traffic engineering team for the following projects with traffic impact assessment, traffic safety analysis, simulation modeling, and traffic operations components:

Mr. Santos is a Transportation Engineer with experience in transportation planning and modeling, traffic operations analyses, traffic simulation modeling, and transit studies. As project engineer, he prepares local traffic impact and access studies and/or Environmental Impact Reports (EIR) for a variety of public- and private-sector clients. His software skills include: VISSIM, Synchro, HCS, aaSidra, AutoCAD, ArcGIS, and other transportation-related programs.

9 years of professional experience

Metropolitan Washington Airports Authority, Dulles Toll Road, VA

Project Engineer providing simulation modeling

Forestdale Village, Sandwich, MA

Project Engineer providing TIAs

Hingham Shipyard Target, Hingham, MA

Project Engineer providing simulation modeling

Sheraton Redevelopment, Braintree, MA

Project Engineer providing TIAs

Proposed Fueling Facility, Danvers, MA

Project Engineer providing traffic study

Christy's Harwich, MA

Project Engineer providing traffic study

Ambulatory Surgical Center, Framingham, MA

Project Engineer providing traffic study

132 Bearses Way, Hyannis, MA

Project Engineer providing functional design report

Town Fair Tire, Woburn, MA

Project Engineer providing TIAs

Education

BS, Civil Engineering, University of Massachusetts, 2001

**Professional
Registrations/
Certifications**

Professional Engineer MA 2008

**Affiliations/
Memberships**

Institute of Transportation Engineers, 2008