

PROJECT: 15 GREAT ROAD

**TRAFFIC STUDY
DOCUMENT CONTROL LIST**

DOCUMENT 1. RFP submitted by Town Counsel as the best draft including the right to award the contract in the best interest of the town and not necessarily by lowest bid. The legal provisions are probably fine, the Committee should work on the Scope of Work.

Relative to the scope of work the comments received are as follows:

Richard Crowley: *. If an auto is allowed to travel at the posted speeds the report should have reflected numbers based on the posted speeds or at least a minimum show all calculations based on both the allowed speed and their estimated speeds.*

It will be interesting to see what happens to sight distances when the calc's are done at the posted 50 mph.

Another item of note is that there was no data or information for sun blindness (this section experiences sun blindness at certain times of year - I have experienced it there), darkness, rainy weather, and snow or icing conditions.

It will be interesting to see what our consultant says when we ask him or her to respond to the data under these types of conditions. Will he find that the sight distances fail ?. Savos can help by providing the number of dark, rainy and snowy days we experience per year in Littleton. He has this data from his solar studies

In addition: Richard Crowley submitted document no. 2.

DOCUMENT 2. A sample of a Bancroft Elementary School RFP

DOCUMENT 3. Traffic report questions submitted by Richard Crowley.

DOCUMENT 4. Letter from Ted Doucette questioning the methodology used in the applicant's Traffic Study.

DOCUMENT 5. An email which summarizes the selection of traffic review consultants from whom to solicit bids:

1. They are Fay Spofford (Doug Prentiss)
2. Gree International
3. Nitsch Engineering
4. Professional Services Corp.
5. Vanasse Hangen Brustin, Inc.

(Excluded by Applicant: Beals and Thomas, Bob Michaud, R. D. Vanasse and Assoc)

DOCUMENT 6. An email from Dan Hill, Abutters' Counsel with his comments to the RFP and his comments to the selection of peer review consultants.

DOCUMENT 7. Reply from Green International Affiliates, Inc.

DOCUMENT 8. Reply from Nitsch Engineering

DOCUMENT 9. Reply from Fay Spofford

DOCUMENT 10. Reply from PSC

DOCUMENT 11. RESERVED for Reply from Vanasse Hangen

DOCUMENT 12. Proposed Contract for Services prepared by Town counsel

DOCUMENT 13. Certificate of Compliance with Tax Laws - to be used with Contract

DOCUMENT 14. Certificate of Non Collusion to be used with Contract

DOCUMENT 15. TRAFFIC STUDY SUBMITTED BY APPLICANT (already posted on town website)

DOCUMENT 16.



**REQUEST FOR PROPOSALS
FOR**

PEER REVIEW

OF

TRAFFIC IMPACT & ACCESS STUDY

15 GREAT ROAD LLC

**A COMPREHENSIVE PERMIT DEVELOPMENT PROPOSED IN
LITTLETON, MA**

The Town of Littleton, Massachusetts ("Town") is soliciting proposals from experienced, qualified professional firms to perform an independent review of any reports or documents submitted in connection with an application for a comprehensive permit.

The Town reserves the right to accept or reject any or all proposals, to waive any informalities, and to award the contract as may be deemed to be in the best interest of the Town.

1.0 PROJECT DESCRIPTION:

The Zoning Board of Appeals of the Town of Littleton is in the process of reviewing an application submitted by Fifteen Great Road, LLC (the "Applicant") for a comprehensive permit under MGL Chapter 40B. The project consists of a proposed development of 200 apartments, with associated parking spaces (garage and surface) on 23± acres of land located at 15 Great Road in Littleton.

2.0 AUTHORITY OF THE BOARD OF APPEALS, PURPOSE OF THE PEER REVIEW:

The Zoning Board of Appeals is permitted to undertake an independent peer review of any reports or documents submitted with an application for a comprehensive permit. The Applicant is obligated to pay for any such peer review in accordance with the Board's Comprehensive Permit Rules. The peer review is intended to provide an independent analysis of the traffic impact and access study submitted to the Zoning Board of Appeals by the Applicant.

3.0 SCOPE OF WORK:

The selected firm and their personnel will serve as agents to the Town of Littleton. The peer review will examine all documents and data submitted and obtained in connection with the comprehensive permit application and will opine on issues related to background growth; site-generated traffic; trip distribution; traffic operation analysis; accident data, methodologies employed by the Applicant; and the validity of the findings and conclusions advanced by the

The engineer will be expected to review the materials for conformance with good engineering practices, the local regulations relevant to the application, and any relevant state, federal or local law or regulation.

The peer report is also expected to address the following:

- 3.1 The overall adequacy of the applicant's traffic study to evaluate the impacts of the project in terms of overall safety, project generated traffic, trip distribution, traffic volumes and turning movements on adjacent roadways, forward sight distance, intersection delays, congestion, safety hazards, and pedestrian and vehicular circulation;
- 3.2 The appropriateness and safety of the location and alignment of the proposed access.
- 3.3 The appropriateness and safety of provisions for pedestrian access and movement on the site, and off the site;
- 3.4 The appropriateness and safety of the on-site circulation plan and parking arrangements;
- 3.5 An evaluation of any accident data contained in the documents reviewed;
- Fire fighting safety & emergency evac*

4.0 PROPOSAL SUBMISSION INSTRUCTIONS

Proposals shall be submitted to _____ until the proposal deadline of _____, _____, 2011. Late proposals shall be rejected. Immediately

following the proposal deadline, all proposals will be publicly logged at _____.

Deliver proposals to the following address:

Postmarks will not be considered. It is the sole responsibility of the proponent to be sure that the proposal arrives on time. The time received will be stamped on each proposal. Proposals should be clearly marked "RFP – PEER REVIEW OF COMPREHENSIVE PERMIT APPLICATION". The firm's name and address should also be on the envelope.

5.0 PROPOSAL REQUIREMENTS:

The proponent shall submit _____ copies of the proposal, which shall include, at a minimum, the following information:

- 5.1 The name of the person performing the work;
- 5.2 The educational and professional credentials of the person performing the work;
- 5.3 The work experience of the person performing the work;
- 5.4 Experience with previous peer reviews of a similar nature (include type and number of reviews);
- 5.5 A description of the work to be performed;
- 5.6 Time schedule to perform the review;
- 5.7 The hourly rate charged by each person performing the work with a stipulated maximum cost, including all expenses, unless additional scope is approved;
- 5.8 Signed Certificates of Tax Compliance and Non-Collusion (attached to this RFP);
- 5.9 All other expenses to be incurred.

6.0 CONSULTANT SELECTION, FEES AND PAYMENTS:

6.1 All proposals will be reviewed by the Board of Appeals. The selection of the finalists will be based, at minimum, on the following criteria/qualifications:

- a. Identity and qualifications of the consultants who will work with the Town and Applicant on the project – the consultant(s) must possess an educational degree in

or related to traffic engineering and at least three (3) years of practice in the field of traffic engineering.

- b. Prior similar experience – the consultant(s) must have worked on at least _____ peer reviews on similar projects. The consultant must provide a detailed description of at least _____ recent similar projects on which the consultant has performed similar services, identifying references as well as the personnel who worked on those projects and stating whether those individuals will be assigned to this project.
- c. Possess all necessary current licenses and registrations.
- d. Provide evidence of insurance for general liability, automobile, workers' compensation and professional services liability, as required.
- e. Submission of required statements and forms.

6.2 All proposals meeting the minimum criteria/qualifications will then be evaluated based upon the specific comparative evaluation criteria. The following point schedule will be used:

<i>Highly advantageous</i>	5 points	Response excels on the specific criterion
<i>Advantageous</i>	3 points	Response meets evaluation standard for the criterion
<i>Least Advantageous</i>	1 point	Response does not fully meet the criterion or leaves a question or issue not fully addressed
<i>Does Not Meet</i>	0 points *	Does not address the criterion

*** Proposal is automatically eliminated from further consideration if "0 points" is received in any category.**

Two or three members of the Board of Appeals will review the proposals and select the three top ranked individuals or firms to present to the entire Board of Appeals and the Applicant for review. The Board of Appeals will then award the contract to the top ranked firm or individual.

6.3 Prior to paying the review fee the applicant may appeal the selection of the consultant to the Board of Selectmen in accordance with the provisions of the Board of Appeals' Comprehensive Permit Rules;

6.4 The review fee will be deposited in a special account established by the Town Treasurer pursuant to MGL Chapter 44, Section 53G. Funds may be expended in accordance with the provisions of the Board of Appeals' Comprehensive Permit Rules;

6.5 Once the contract has been awarded the consultant will be allowed a period of twenty (20) working days (excluding weekends and holidays) to review the applicant's traffic impact and

access study and submit a draft peer review report;

6.6 The consultant retained under this contract will be involved in the final review process, and may be required to attend one or two staff-level meetings with town staff and/or the Applicant's design team.

6.7 The consultant may be required to attend up to three sessions of the public hearing.

7.0 DOCUMENTS TO BE PROVIDED BY THE CONSULTANT:

Prior to site visit and/or commencement of work, consultant will (1) execute the attached Contract for Services, including a Certificate of Tax Compliance and Certificate of Non-Collusion; and (2) provide appropriate Certificates of Insurance to Board of Appeals, as required by the Contract.

The consultant will provide twelve (12) copies of the preliminary peer report to the Board of Appeals. After receiving comments and responses to the preliminary peer report, the consultant shall provide twelve (12) copies of the supplemental peer report will be submitted to the Board of Appeals.

8.0 ATTACHMENTS:

Contract for Services
Certificate of Tax Compliance
Certificate of Non-Collusion

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Bancroft Elementary School
Andover, MA
December 11, 2009

Traffic Impact Analysis

Bryant Associates, Inc. will examine the site and traffic operations in the vicinity of the site and will prepare an analysis of the impacts to highway safety and capacity of the proposed school expansion. The on-site traffic circulation will also be reviewed for conformance with the Town's ordinances and with accepted traffic engineering principles. The various elements of work included in the traffic analysis are listed below.

- Plans for the proposed elementary school project, as well as for the existing roadways and intersections in the area, will be acquired and reviewed.
- Traffic turning movement counts will be undertaken on a weekday from 6:00 A.M. to 10:00 A.M. and from 2:00 P.M. to 6:00 P.M. at the intersections of Bancroft Road and the existing access driveway, Bancroft Road and South Main St (Rt. 28), South Main St and West Knoll Road, Bancroft Road and Holt Road, and Holt Road and Stinson Road.
- Traffic speed data on Bancroft Road and Holt Road in the vicinity of the project site will be obtained. The speed data obtained in the field will be analyzed to determine the 85th percentile speed of existing traffic. The adequacy of the sight distance at the intersection of the school access roadway with Bancroft Road will be determined. The adequacy of the sight distance at the potential alternative construction/permanent access driveways on Holt Road and West Knoll Road will also be determined.
- Traffic accident data for a three-year period in the vicinity of the project site will be acquired from the Andover Police Department. Accident data will be reviewed to determine the existence of any unsafe conditions that might be worsened by additional traffic from the development.
- Information, including roadway widths and geometry, existing traffic control devices, utility locations, existing sight distances, traffic operations, and other pertinent data, will be obtained from a field review of the site and surrounding roadways and intersections.
- The adequacy of the sight distance at the intersection of the proposed school access driveway on Bancroft Road will be determined. The adequacy of the sight distance at the potential construction/secondary permanent access driveways on Holt Road and West Knoll Road will also be determined.
- Accident data will be reviewed to determine the existence of any unsafe conditions that might be worsened by additional traffic from the school project.
- A review and analysis of proposed site circulation and parking will be undertaken. Revisions, if necessary, will be suggested to SMMA.
- The number and distribution of additional vehicle trips to be anticipated from the Bancroft Elementary School, including 175 to 225 potential additional students transferring from other Town of Andover elementary schools, will be analyzed. Existing and projected levels of service (LOS) for the intersections of the school access driveways with Bancroft Road and Holt Road, Bancroft Road and South Main St, Bancroft Road and Holt Road, and Holt Road and Stinson Road will be calculated with a construction/permanent access driveway on Holt Road.
- The projected LOS for the same intersections, as well as the intersection of South Main Street and West Knoll Road, will also be calculated using existing right-of-way from West Knoll Road for either a



Ms. Lorraine B. Finnegan
December 11, 2009
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temporary construction access road or a permanent secondary access driveway. The existing LOS of the South Main Street and West Knoll Road intersection will also be calculated

- Two meetings with the Town of Andover will be attended and expert testimony will be presented.
- An 8½" x 11" bound report will be prepared describing the data collection, analysis, and conclusions and recommendations resulting from the analysis of the proposed elementary school.



Traffic report questions :

- 1-
 - (a) Comment on the proposer's use of 43 mile-per-hour westerly average traffic speed and 48 mile an hour easterly average traffic speed given those readings were taken in 50 mile an hour posted zone.
 - (b) What would be expected for a road like this in terms of actual traffic speed versus posted speed? Would traffic be expected to be higher than the posted speed or lower than the posted speed is Omni suggests?
 - (c) Do records exist at either the state or other levels that reflect the average speeds cars go in this vicinity?
 - (d) How can the board obtain those records?
 - (e) If actual traffic speed going West were 50 miles an hour as the posted speed allows what would the stopping distance going West and East be revised to and with those stopping distances meet the state minimums?
 - (F) Since Omni calculated traffic speed is less than the posted traffic speed, should be traffic report have reflected the actual and also the allowed traffic speeds along with the actual and allowed stopping distances?
- 2-
 - (a) Review and comment on site distance from East in terms of a car going west and the stopping distance at 336 feet at 43 mi./h with cars coming toward you and in front of you and possible child or bike or car coming out of 15 Great Rd. onto route 2A.
 - (b) Would you consider the stopping distance of 336 feet at 43 miles an hour going West a safe stopping distance given the blind hill immediately before the 336 foot mark and given various weather, light and dark, and snowy conditions?
 - (b.1) When a car going west at 43 mph reaches the 336' mark from the entry to 15 great Rd. all they can see at 2' above the road at the 336' mark is a horizontal sliver of something. This car would be much closer to the object at 15 Great Rd and less than the 336' mark before they can visualize exactly what they are seeing. If it is a 2'high child will they have enough time to stop given the 43 MPH speed and stopping distance now that is much less than the 336' mark?
 - (b2) Is the above scenario what the stopping formulas are designed for?
 - (b3) How would this change if the car were going the speed limit of 50?
 - (c) How accurate is the method that Omni used to measure site distance?
 - (d) Given the marginal site distance on the East would it be reasonable to have that site distance re-measured, and if so what would you recommend for measuring equipment? (Ladar/ Radar?).

- 3-
 - (a) Comment on how the test data is affected by the proposer's choice of using a Tuesday and Wednesday midweek for their traffic study when high-traffic days are typically Monday in Friday's?
 - (b) Please advise number of additional cars proposer should add for those high-traffic days
 - (c) Please advise number of cars needed to be added to total turns in and out of 15 Great Rd.
- 4-
 - (a) This site faces directly East West and is affected by morning sun and evening sun. How does East sun blindness in the morning and West sun blindness affect site distances with emphasis on the marginal site distance for West bound autos?
 - (b) Please advise what you would revise the safe stopping distance down to under those conditions.
- 5-
 - (a) How does darkness, rainy, and snowy conditions affect both east and westbound stopping distances with emphasis on the marginal westbound stopping distance?
 - (b) Please advise what you would revise the safe stopping distance down to under those conditions?
- 6-
 - (a) Is it possible that the Omni's reported site distance of 336 feet exaggerated to create a report that exceeds the minimum safe distance of 335' by 1'?
 - (b) Is it possible at another traffic engineer could come up with a different conclusion for site distance on the easterly side of 15 Great Rd. by less than 335 feet?
 - (c) Would most traffic engineers come up with less than, more than or the same as the 335 feet for site distance on the easterly side of 15 Great Rd. that Omni came up with?
- 7-
 - (a) Does Omni's estimate for the 30 to 40 vehicle entries in the evening seem reasonable given a 200 unit complex where most residents are one and two bedroom units le; working couples?
 - (b) Please provide an opinion on the accuracy of the estimated anticipated turns into and out of 15 Great Rd. at full buildout.
- 8-
 - (a) Review the Littleton Police report and explain differences between Omni's report and the Littleton police report.
 - (a) If an explanation is not possible please comment on what weaknesses the Omni report may have that caused the Omni report to be significantly different than the police report.
- 9-
 - (a) Please review the accident history portion of the report and advise how closely it reflects the true accident history for this vicinity.
 - (b) Please advise what you would expect for future incremental increases in accidents at full buildout.
- 10-
 - (a) Please review the Intersection Rating portion grade of the Omni report and advise how closely it reflects a true intersection report grade for this vicinity?
 - (b) Please advise what you would expect the grading to change too with a full buildout?
 - (c) Would it change from a C to a D or an F?

11- (a) Is there any subjectivity in this traffic report?

(b) If so what portions are subjective?

(c) Comment on those areas that are subjective from your viewpoint in terms of disagreement, agreement, or other conclusion.

Richard P. Crowley

Planning Board

(4)

Subject: Re: Traffic Study Report - 15 Great Road
From: ted.doucette@comcast.net (ted.doucette@comcast.net)
To: KBergman@littletonma.org;
Cc: emarchant@msn.com; tom@miyares-harrington.com; sherryesq@yahoo.com;
Date: Thursday, October 20, 2011 4:32 PM

Ted

Ms. Gould:

I won't be able to attend the meeting but provide my thoughts to the Board, I am not a traffic engineer and did not give a thorough review but a few questions arose as I reviewed the study.

The analysis shows LOS E/F under un-signalized conditions and LOS A with a signal, but then the engineer sets that aside and states the intersection does not need to be signalized due to the volume. I did not see a reference specifically to the signalization warrants provided by the MUTCD. The recommendations for signal or no signal would carry more merit if compared to these standards.

Could the intersection safety be improved with a semi-actuated signal during peak hours and possibly flashing yellow/red during non peak hours to increase the safety.

Also the report states that the Sight Stopping Distance was calculated based on the speed limit. It appears that the speed data referenced in the report are based on average speed; this does not seem to be the worst-case scenario when the data indicate several vehicles exceeded the posted speed limit. Should the SSD be calculated based peak speeds to increase the safety factor? I am sure they will say no because some book tells them to the standard practice is average speed, but this does not represent worst-case scenario.

Ted

From: "Keith Bergman" <KBergman@littletonma.org>
To: "Sherrill Gould" <sherryesq@yahoo.com>, "Tom Harrington" <tom@miyares-harrington.com>, "Jennifer Gibbons" <JGibbons@littletonma.org>, "Alan Bell" <abellfinancial1@aol.com>, "Cheryl Cowley Hollinger" <cheryl@cowleyassoc.com>, "Bill Farnsworth" <bfarnsworth@town.northborough.ma.us>, "Jeff Yates" <jeff@jyatesarch.com>, "Marc Saucier" <msaucier@earthlink.net>, "John Cantino" <cantinojohn@yahoo.com>, "Rod Stewart" <stewarts@stewartsnet.com>
Cc: "Edward Marchant" <emarchant@msn.com>, "Tom Harrington" <tom@miyares-harrington.com>, "Jennifer Gibbons" <JGibbons@littletonma.org>, "Maren Toohill" <MToohill@littletonma.org>, alexmccurdy@yahoo.com, greggchampney@gmail.com, jfkarr@yahoo.com, josephknox@verizon.net, "ted doucette" <ted.doucette@comcast.net>
Sent: Thursday, October 20, 2011 3:44:52 PM
Subject: RE: Traffic Study Report - 15 Great Road

I've uploaded the report and appendix to the Town website at the links shown below

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RE: Traffic RFP

Monday, October 17, 2011 3:36 PM

From: "Maren Toohill" <MToohill@littletonma.org>
To: "Sherrill Gould" <sherryesq@yahoo.com>, "Tom Harrington" <tom@myares-harrington.com>
Cc: "Keith Bergman" <KBergman@littletonma.org>, "Edward Marchant" <emarchant@msn.com>, "Daniel C. C. Hill" <dhill@danhilllaw.com>

Yup. I can do that. On the list:

Potential Traffic Review Consulting Firms:

Fay, Spofford & Thorndike – Doug Prentiss and Gary Hebert
Green International – staff traffic specialist
Nitsch Engineering - Fayssal Hussein
Professional Services Corporation – Thomas C. Houston
Vanasse Hangen Brustlin, Inc - Rob Nagi

Excluded by applicant:
Beals and Thomas
Bob Michaud of MDM
R D Vanasse and Associates, Andover MA

Applicant excluded

Any others ON the list?
Maren

From: Sherrill Gould [mailto:sherryesq@yahoo.com]
Sent: Monday, October 17, 2011 3:12 PM
To: Tom Harrington; Maren Toohill
Cc: Keith Bergman; Edward Marchant; Daniel C. C. Hill
Subject: Re: Traffic RFP

*SRG list
of questions
for Reviewer*

Hello,

Can we get a start on this by asking Jen or Maren to email each of the traffic peer review consulting forms under review and ask them for

1. A list of the principals of the firm
2. Any affiliation or experience they have had with applicant or Attorney Levine
3. A name and resume of the individual who will work on our peer review.
4. Their availability to review this within the next month.

Thank you.

Sherry

Sherrill R. Gould

Gould Law Offices

P. O. Box 752 - 311 Great Road

Littleton, Ma 01460

Ph: 978-486-9566

Fax: 978-486-9434

Private: 978-501-2744

Subject: FW: Traffic RFP
From: Jennifer Gibbons (JGibbons@littletonma.org)
To: sherryesq@yahoo.com;
Date: Monday, October 17, 2011 1:47 PM

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FY

From: Daniel Hill [mailto:dhill@danhilllaw.com]
Sent: Monday, October 17, 2011 1:06 PM
To: Maren Toohill
Cc: Tom Harrington; Keith Bergman; Jennifer Gibbons
Subject: RE: Traffic RFP

Maren,

Thank you for forwarding the developer's proposed Scope. My comments are as follows:

- DAN Hill
1. I actually don't read Section 3.0 as limiting the engineer to reviewing only the developer's traffic report and submissions. I agree that the engineer should be able to review all available, pertinent materials.
 2. I think Sections 3.1-3.5 is broad enough to adequately cover safety and sight distances, and all other potentially important issues.
 3. I actually think 2 weeks is pretty short for the size of this project. Recommend 4 weeks. Also, don't understand what is meant by "draft" report, and "final" report under Section 6.0. Typically, consultant issues a preliminary report, which is followed up by a supplemental report after the developer and others make comments and responses.
 4. Other than the above, the Scope and RFP is fine.

Also, I had mentioned the name of Gary Hebert from Fay Spofford as an excellent traffic peer review consultant. I have worked with him on a few 40B projects as either ZBA or neighborhood counsel and have been impressed. I would get quotes from him, Prentiss and Houston. The name of VHB was floated by a ZBA member as a possible reviewer for traffic and/or general civil. My experience with this firm is that, while it is a talented civil engineering firm, they tend to exhibit developer-oriented biases, and therefore I would question their willingness to engage in a truly critical review of this project. I have the same concern with Wetland Preservation, Inc. (Curt Young).

I also have concerns with "Green International Affiliates, Inc., which appears on the ZBA's referral list. In my 12 years of experience doing these kinds of projects, I have never even heard of this firm, and have not seen them in any related litigation. In my opinion it is critical for the ZBA to employ engineers who are well-established in their fields, and who will perform well in any subsequent administrative or judicial process. I also question "Bryant Associates" out of Lincoln, Rhode Island for the same reasons. They may be well-known in Rhode Island, but not in Massachusetts.

Finally, I would like to add the firm Horsley Witten Group to the general civil/hydrology category. This firm has impeccable credentials especially in the area of hydrology. Scott Horsley literally wrote the book on stormwater drainage in Massachusetts for DEP.

Thanks, Dan

Daniel C. Hill, Esq.

Law Offices of Daniel C. Hill

31 Fifth Street

Charlestown, MA 02129

p: 617-242-0004

f: 617-307-9010

www.landusereport.com

 Law Offices of
Daniel C. Hill

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GREEN INTERNATIONAL AFFILIATES, INC.
239 LITTLETON ROAD, SUITE 3 WESTFORD, MA 01886
TEL: (978) 923-0400 FAX: (978) 923-0404

October 20, 2011

Maren Toohill
Planning Administrator
Town of Littleton

RE: Town of Littleton Traffic Peer Review Services

Dear Ms. Toohill:

In response to your memo dated 10/19/2011, please find the requested information below:

1. Ko Ishikura and Peter A. Richardson are both principals of Green International Affiliates, Inc.
2. We have no direct relationship with Omni Development. However, for the purpose of full disclosure, please be advised that our landlord, Aegean Capital, LLC., uses Omni Property as its exclusive real estate broker.
3. Ko Ishikura, P.E. and Wing Wong, E.I.T. are assigned to work on the Traffic Peer Review Services, both of their resumes are enclosed.
4. Mr. Ishikura and Mr. Wong are available and able to review this project within the next month.

Very Truly Yours,

Green International Affiliates, Inc.

Ko Ishikura, P.E.
President

CIVIL AND STRUCTURAL ENGINEERS

**Ko Ishikura, P.E.
President**



Project Role

Principal-in-
Charge/Traffic
Engineering

Education

Bachelor of Science
in
Civil Engineering,
Osaka University,
Japan, 1983

Licenses

Professional
Engineer
MA, RI, VT, ME,
CT

**Professional
Affiliations**

ACEC/MA Board of
Directors, Director

National Society of
Professional
Engineers, Member

Institute of
Transportation
Engineers, Member

New England Water
Works Association,
Member

Experience

Mr. Ishikura, as President of Green, is responsible for the management and technical aspects for all of the firm's design projects. Mr. Ishikura's technical ability, ability to keep projects on schedule and budget, anticipation of potential design concerns and ability to create proper recommendations and solutions has earned him a reputation of excellence with the Massachusetts Department of Transportation, the Rhode Island Department of Transportation, the Vermont Agency of Transportation and many Massachusetts municipalities Department of Public Works agencies. Demonstrating Mr. Ishikura's capabilities is a partial listing of projects completed within the past 10 years.

Marshfield Board of Health, Traffic Consulting Services, Marshfield, MA

Mr. Ishikura has testified on behalf of the Marshfield Board of Health related to traffic issues for a proposed transfer station in Marshfield. He has assisted the Town Counsel at depositions by reviewing proponent's technical documents, preparing technical documents and testifying as an expert witness.

Town of Natick Planning Board, Traffic Consulting Services, Natick, MA

Mr. Ishikura served as a traffic consultant for the Natick Planning Board and reviewed site developments as they related to traffic issues. He has evaluated traffic impact studies prepared by proponents and advised the Board with his recommendations at Board hearings.

Traffic Management Plan on McGrath Highway, Somerville, MA, MWRA Phase II Valve Replacement (Zenone, Inc.)

Mr. Ishikura developed detailed traffic management plans for valve replacement work on McGrath Highway at Broadway in Somerville, a heavily traveled urban arterial (Route 28) and an MDC maintained roadway. The traffic management plans were submitted to MDC and allowed the Contractor to perform required valve replacement work.

Traffic Remediation Plan, MWRA Heath Hill Section 52, Phase 2 Rehabilitation, Contract 6288, Brookline/ Boston, MA

Mr. Ishikura was the Principal-in-Charge and Traffic Engineer for this project. He developed a traffic management plan for investigation work on Section 52 in the center of Route 9 in Brookline, which required MassDOT permits and approval. Mr. Ishikura also developed a Traffic Remediation Plan for the project as part of the Preliminary Design Phase. The project involved the evaluation and rehabilitation of 11,500 linear feet of 54" steel water main.

Traffic Impact Study, Spot Pond Pipeline Improvements, Stoneham/Medford/Malden, MA

Mr. Ishikura has completed a traffic report addressing impacts to the traffic of the area which may result from the proposed pipeline work. In the report, he recommended various mitigative measures to minimize the impacts including various detours, staged construction at rotaries, temporary bypass



Project Role

**Principal-in-
Charge/Traffic
Engineering**

road, signing and striping. The report was submitted to applicable municipalities and the DCR, and necessary permits were obtained.

Traffic Impact Study, Southern High Service Pipeline Improvements, Boston, MA

Mr. Ishikura completed a traffic report addressing impacts to the area traffic which may be caused from the proposed pipeline work along Jamaica Way, Arborway and Morton Street in Jamaica Plain, DCR maintained roadways. The report included traffic volume data and capacity analyses at signalized intersections and roadway segments as required by DCR. The report addressed various mitigative measures to minimize the construction impacts including bypass detours, lane reduction method, staged construction at a rotary, sign and pavement marking.

Traffic Impact Study, Sections 95 and 100 Water Transmission Mains, Brookline, MA

Mr. Ishikura completed a traffic report addressing impacts to vehicular and pedestrian traffic which may be caused from the proposed water main work along West Roxbury Parkway, a DCR maintained roadway in Brookline. The traffic report was prepared in an expeditious manner after all of the design work has been completed in response to the DCR's requirements for traffic impact analyses. The report identified traffic volumes and capacity of roadway segments and signalized intersections and addressed traffic control set-up, signing, work hour restriction and pedestrian protection at each segment, intersection and rotary. MWRA submitted the report to DCR and successfully obtained the DCR permit.

Traffic Impact Study, Sections 13 and 64 Water Transmission Mains, Stoneham, MA

Mr. Ishikura completed the Traffic Impact Study for cleaning and lining and valve replacement on Ravine Road, a DCR maintained roadway in Stoneham, MA. As part of the study, Mr. Ishikura completed a traffic report and identified the impacts of the Ravine Road closure onto an adjacent roadway system.

Safety and Traffic Improvements, Route 9 at Oak Street and Overbrook Drive, Natick, Wellesley, MA

Mr. Ishikura is the Principal-in-Charge for design services for this project. Currently Green is preparing 100% Design Submittal materials in accordance with MassDOT requirements. Route 9 is a major arterial with over 60,000 ADT, serving commuters to Boston. The proposed design includes the widening of Route 9 to six lanes from four lanes. The Oak Street intersection will be completely redesigned with new geometry. The proposed design also includes signal timing and signal coordination at Overbrook Drive to improve the operation of the Route 9 corridor.

**Wing Wong, E.I.T.
Civil/Traffic Engineer**



Project Role

Traffic Engineering

Experience

Mr. Wong is a Civil/Traffic Engineer at Green and has served a critical role for many of Green's transportation projects. His transportation experience includes: traffic data collection, crash analysis, capacity analysis, roadway and intersection geometry improvements, sign and pavement marking design, traffic signal design and design of traffic management plans. Mr. Wong has received training from the MassDOT to conduct peer reviews. His expertise in CADD programs includes MicroStation and InRoads and he is well versed in various CAD standards and procedures which allows Green to complete projects accurately and on time for transportation agencies throughout New England. He has a thorough knowledge of MassDOT design guidelines and standards, including roadway design, hydrologic/hydraulic design and stormwater management policies. He is proficient in numerous traffic engineering computer applications including Synchro and SimTraffic. Relevant projects demonstrating Mr. Wong's recent experience are included below:

Education

Bachelor of Science
in Civil Engineering
Technology,
Wentworth Institute
of Technology, 2003

Licenses

Engineer-in-Training
- Massachusetts

**Professional
Affiliations**

- Boston Society of
Civil Engineers,
Transportation
Technical Group –
Member

Peer Review – Traffic Study for 90 Eames Street, Wilmington, MA

Mr. Wong was a Staff Civil/Traffic Engineer for this project. He performed a peer review for the Town of Wilmington on a traffic study which was prepared by a developer's traffic consultant to address the impacts of additional truck traffic generated by a site development project. The traffic data and analyses reviewed by Mr. Wong included traffic volume data, trip generation and distribution analysis, proposed truck routes to and from the site, safety analysis, capacity analysis and the conclusion of the traffic study. As requested by the Town, Mr. Wong also reviewed the existing conditions of two intersections directly impacted by the site development and provided recommendations for possible geometric and safety improvements at those locations. Additionally, Mr. Wong attended a Zoning Board of Appeals meeting to present the findings of the peer review and to answer questions that the Board had regarding the peer review.

Safety and Traffic Improvements, Route 9 at Oak Street and Overbrook Drive, Natick, Wellesley, MA

Mr. Wong is a Traffic Engineer for this project to improve the safety and traffic operations at the Route 9 intersections at Oak Street and Overbrook Drive. Currently Green is preparing 100% design in accordance with the MassDOT requirements. The proposed design includes widening Route 9 to six lanes from four. The Oak Street intersection will be redesigned with new geometry. The proposed design includes signal timing/coordination at Overbrook Drive to improve the operation of the Route 9 corridor.

Intersection Improvements, Route 62/Glen Road, Wilmington, MA

Mr. Wong is serving as the Project Engineer on this project to improve safety and traffic operational conditions in Wilmington, MA. His work on this project included extensive traffic/safety evaluation and analysis to develop two options to improve safety and traffic operational conditions: roundabout and traffic signalization. The town opted to proceed with traffic signalization after public



Project Role

Traffic Engineering

review. Mr. Wong was responsible for design of geometric improvements and a new traffic signal system at this intersection.

Intersection Improvements, Washington Street/Allens Lane/Hingston Street, Peabody, MA

Mr. Wong was a Staff Civil Engineer for this project to improve the safety and operational deficiencies at the intersection of Washington Street/Allens Lane/Hingston Street. This project also included roadway reconstruction along Allens Lane, minor intersection geometry modifications, and new sidewalks. Mr. Wong performed capacity analysis in accordance with the Highway Capacity Manual (HCM) using the Highway Capacity Software (HCS); assisted in the development of Traffic Signal Plans, which depict the proposed signal hardware, signal timing and new pavement markings; reviewed traffic signal shop drawings; and performed punch list and final traffic signal inspections in the field.

MassDOT, Roadway/Bridge Reconstruction, Route 1A (Main Street), Walpole, MA

Mr. Wong is responsible for all aspects of traffic design for the project. Road reconstruction is 2.1 miles. Traffic and safety improvements include installation of new traffic signals at the North Street, Fisher Street, and the Bullard/Willett Street intersections; signal equipment upgrades at Stop N' Shop intersection; and geometry modifications at the North Street and Fisher Street intersections, which includes a new exclusive left-turning lane for the Route 1A northbound approaches. The signals within the project limits will be coordinated such that optimized traffic operation along the Route 1A corridor is provided. He also evaluated existing and future traffic conditions in the study area using Synchro/SimTraffic computer software.

Roadway Reconstruction, Front Street, Chicopee, Massachusetts

Green International Associates was responsible for the design and engineering services for the Front Street Reconstruction Project. Responsibilities included pavement structure rehabilitation and/or reconstruction, sidewalks, curbing, drainage improvement, utility relocations, right-of-way easements, and/or acquisitions, geometric and traffic flow improvements, including replacement and/or modifications to the existing signal systems, signing and pavement marking. The project limits are from Front Street from the western end of the roadway to the eastern end at Grove Street, a distance of approximately 1.9 miles. The project is presently under construction. Mr. Wong was a Staff Civil Engineer for the project, assisting Green's Project Engineer on all design aspects of the project.

The Intersection of I-89 NB Exit 15 and VT Rte. 15 Winooski, VT

Mr. Wong is a Staff Civil Engineer for this project. Work under this project includes: widening and realignment of Ramp "B"; geometric modifications along VT 15; traffic signal timing modification at the intersection of Ramp "B" and VT 15 and traffic signal timing coordination with an adjacent traffic signal system; pavement marking and signing; stormwater management; permitting; and traffic management plans.



Company Introduction



Nitsch Engineering specializes in providing civil engineering, land surveying, transportation engineering, sustainable site consulting, planning, and GIS services. Founded in 1989, we have now worked with a wide range of clients on major private development and public infrastructure projects in 17 states and five countries. Nitsch Engineering is the largest Women-Owned Business Enterprise (WBE) civil engineering firm in Massachusetts, and is a certified WBE in New York, Pennsylvania, and Virginia. We have earned the respect and confidence of our clients; in 2010, 93% of our work came from repeat clients.

Nitsch Engineering has four principals:

Judith Nitsch, PE, LEED AP BD+C, Founding Principal and Chairman
Lisa Brothers, PE, LEED AP BD+C, President and CEO
Michael E. Kenealy, CPA, Vice President and CFO
Gary F. Pease, PE, LEED AP BD+C, Vice President – Civil Engineering

Nitsch Engineering provides a full range of transportation and traffic services, from transportation master planning through roadway design and improvement. We have comprehensive experience in the design of roadways and bicycle paths for cities and towns, state agencies, and private entities that design and construct roadways in cooperation with municipalities.

Municipal Consulting (Peer Reviews) and Technical Assistance

Nitsch Engineering has been retained by many municipal Planning and Zoning Boards to advise them on development proposals that are before the local boards. Nitsch Engineering provides technical on-call assistance to a number of communities in numerous areas, including the proper use of signing, traffic signals, pavement markings, and traffic control devices.

Roadway Improvement

Nitsch Engineering has worked with a wide range of public and private clients to redesign roadways to improve the user experience. We assess existing conditions and identify safety and capacity deficiencies. Our services include designing improvements to facilitate multi-modal traffic flow (including pedestrians and bicycles), and roadway rehabilitation and rejuvenation.

Utility Infrastructure Improvement

Understanding utility infrastructure is a critical element of roadway improvement projects. By addressing utility, drainage, grading, and permitting issues in the initial stages of the design process, we proactively identify and resolve problems before they become critical issues.

Traffic Signal and Intersection Design

Nitsch Engineering develops Intersection designs that address deficiencies and improve safety for all road users. We provide signal design, including emergency preemption, video detection, coordinated operation, and other technological advances, including the latest computer modeling technologies.

Traffic Impact Studies

Since all development generates traffic, knowing how to efficiently and safely process and direct this traffic is critical to the success of a project. Nitsch Engineering identifies underlying issues, such as site access, geometric constraints, parking, circulation, roadway or intersection capacity, and intersection operation.

- Services**
- Roadway Design, Improvement, and Permitting services
 - Recreational Trail and Bicycle Path Design
 - Sustainable Design
 - Utility Infrastructure Improvement
 - Traffic Signal and Intersection Design
 - Traffic Impact Studies
 - Site Access Feasibility Studies
 - Accessibility Retrofit Design
 - Transportation Access Plans
 - Parking and Pedestrian Studies
 - Transportation Funding Program Identification
 - Traffic Calming Studies
 - Transportation Master Plans
 - Municipal Consulting (Peer Reviews) Technical Assistance
 - Community Outreach/ Public Information Programs
 - Litigation Support



www.nitscheng.com

Company Introduction

Site Access Feasibility Studies

Nitsch Engineering recognizes that transportation and traffic elements often create the initial arrival experience and set the tone for how a project is balanced in the surrounding environment. We are experienced in conducting feasibility studies to assess site access for communities and private entities.

Parking Studies

To help communities and developers who are looking for ways to optimize on- and off-street parking facilities, our transportation engineers undertake parking studies in downtown areas, campus settings, and suburban communities.

Pedestrian Studies

Nitsch Engineering performs studies to quantify pedestrian activity, determine desired paths, locate critical crossing paths, and identify conflict points, with the goal of making roadways and travel paths safe for both vehicles and pedestrians.

Traffic Calming

As urban sprawl increases and cut-through or diverted traffic spreads to nearby neighborhoods, Nitsch Engineering often performs traffic calming studies to identify solutions for reducing or slowing traffic in these sensitive areas.

Transportation Master Plans

The transportation elements of a master plan are critical for future vibrancy, safety, and growth. Nitsch Engineering measures traffic, pedestrian, and bicycle volumes; reviews traffic operations; and quantifies parking conditions to identify deficiencies and create a plan that meets the client's goals and budget.

Green and Complete Streets – Sustainable Design

At Nitsch Engineering, we have long embraced the engineering concepts and approaches that exemplify "green" and "complete" streets: roadways that address the needs of all users – vehicles, pedestrians, and cyclists – while using sustainable best practices during design and construction. This may include finding opportunities to pave less and recycle more, integrating rain gardens or bioretention, exploring reduced lane widths, and using permeable pavement.

Transportation Funding Programs

Obtaining transportation funding can be a complex process. Nitsch Engineering's transportation staff has experience with the funding programs administered by MassDOT. We help our clients navigate this process by identifying potential sources of funding, providing information to the funding agencies, and acting as an advocate for our clients' projects.

Community Outreach and Public Information Programs

Due to the diverse interests and agendas for many projects, Nitsch Engineering often supports our clients in implementing a strong outreach program to the community. We use neighborhood and local association meetings to develop workshops that solicit input and suggestions for possible and acceptable improvements. We inform abutters of the project progress and provide a forum for those affected by the changes to express concerns and ideas. The Nitsch Team has participated in many successful public coordination projects and has used a variety of mediums to distribute information about projects.

Fayssal Hussein, PE, PTOE, LEED Green Associate Transportation Department Manager

Years of Experience	26 in Industry 3 at Nitsch Engineering
Registration	Massachusetts: Professional Engineer (Civil) #36900, 1992 Certified Professional Traffic Operations Engineer (PTOE), 2011 LEED Green Associate, 2011
Education	M.S., Transportation Engineering, Northeastern University, 1992 B.S., Civil Engineering, Northeastern University, 1984
Availability	Fayssal has the availability to oversee the review of the Town of Littleton's project within the next month.
Expertise	Fayssal has 26 years of experience in providing transportation and traffic engineering services. A registered Professional Engineer, he has gained expertise in everything from negotiating contracts to preparing design documents and conducting public hearings, making him an excellent leader for Nitsch Engineering's transportation department. Fayssal's project experience includes highway and roadway design, traffic signal design, parking lot design, airport terminal roadway design, and site planning/design projects in Massachusetts, New Hampshire, Rhode Island, and Maine. Supplementing his project experience, Fayssal is an experienced user of computer applications used for transportation engineering (planning and design), including Adobe and Microsoft Office software, AutoCAD, Trafficware Synchro, and TSIS/CORSIM. Fayssal shares his knowledge and skills as an adjunct professor and member of the Advisory Board for the Civil Engineering Department at the University of Massachusetts Lowell. He is very active in the New England Section of the Institute of Transportation Engineers (ITE), and has served as the President and Secretary of the Massachusetts Chapter. He was the Chairman of the ADA Compliance Committee for the Town of Stoughton for four years.
Key Projects	Bow Road Traffic Assessment: Project Manager working with the residents of Bow Road to review the DEIR for the Town Center Project and determine its impacts on the neighborhoods. Prepared an alternative layout to eliminate cut-through traffic, attended board of selectmen meetings, and prepared a memorandum assessing the impacts and recommendations. Wayland, MA. Owner: Town of Wayland Lancaster Mills: Project Manager conducting a peer review of a traffic study completed by other consultants for the expansion on Lancaster Mills. The scope included parking management, traffic generation and impacts, and recommendations for realigning Green Street. Prepared a memorandum of findings and recommendations. Clinton, MA. Owner: Town of Lancaster Planning Board 90 Libby Industrial Parkway: Project Manager reviewing a parking evaluation study for the expansion of a medical facility building. Completed a parking occupancy and turnover study to quantify the number of parking spaces based on demand and local zoning regulations. Provided traffic trip generation and distribution, prepared a traffic report, and attended meetings with the local zoning board. Weymouth, MA. Owner: Town of Weymouth City of Boston On-Call Contract: Project Manager for on-call contract with the Boston

Fayssal Hussein, PE, PTOE, LEED Green Associate
Transportation Department Manager

Public Works Department to provide on-call engineering services from 2007 – 2009. Led 16 task assignments under the contract, including intersection improvements, bicycle lanes, stone wall repairs, and studies. Evaluated project scopes, schedules, and cost; reviewed other consultants' scope, fee, and schedules; reviewed and approved design standards and guidelines to which consultants must adhere; reviewed monthly status reports to assure that work is being done in a timely manner; represented the City in pre-bid and pre-construction conferences; provided engineering services, plans, and studies of various City-owned problems; and provided planning and engineering services for various projects related to street improvements. Boston, MA

Owner: City of Boston

Cleary Square Improvements: Project Manager responsible for design of improvements to intersection. Scope of services included collecting traffic data, analyzing capacity, reconfiguring the roadway to accommodate automobile and bicycle traffic, providing traffic signal design, designing pedestrian paths and ramps, addressing utility constraints, designing lighting, preparing a functional design report, preparing the PIC plan to secure approval, and coordinating with the MBTA to install a bus shelter. Developed plans, specifications, and quantity and cost estimates for the reconstruction project, and produced bid documents ready for advertisement and construction. Hyde Park, MA.

Owner: City of Boston

Fenway Intersections: Project Manager for traffic engineering services for improvements at Fenway area intersections. Inventoried existing signal equipment and street signs, collected traffic data (vehicular, pedestrian and bicycle), analyzed crash data, performed a traffic queue study, provided an intersection signal warrant analysis, performed a sight distance analysis, and analyzed intersection capacity. Prepared a functional design report (FDR). Designed the signal system, designed the new pavement markings and signage, and prepared contract documents, special provisions, and construction cost estimates to the 25%, 75%, and 100% submission levels. Boston, MA.

Owner: City of Boston Public Works Department

Beverly High School: Project Traffic Engineer responsible for preparing a traffic impact and feasibility study for the expansion and construction of athletic fields. Provided data collection and analysis, traffic circulation evaluation, access/egress analysis and traffic projection. Prepared a report that documented the data and presented our findings and recommendations. Attended coordination meetings and public hearings. Beverly, MA.

Owner: City of Beverly

Haverhill High School: Traffic Engineer responsible for the preparation of a traffic impact analysis in connection with the reconstruction and expansion of the existing High School. Provided data collection, capacity analysis, parking layout design, access and egress analysis and design, and internal circulation analysis and design. Coordinated with and presented information to the school committee, coordinated with fire and police departments, and prepared design documents. Haverhill, MA.

Owner: City of Haverhill

Runkle Elementary School: Project Manager for preparation of traffic impact and feasibility analysis. The project scope included traffic data collection, analysis, and recommendations for operational and safety improvements. Attended coordination meetings with the Town Departments, and the School Committee. Brookline, MA.

Owner: Town of Brookline

Jeffrey T. Bandini, PE, LEED Green Associate
Transportation/Traffic Designer

Years of Experience	6 In Industry 1 at Nitsch Engineering
Registration	Massachusetts: Professional Engineer (Civil), #49187, 2011 LEED Green Associate, 2011
Education	B.S., Civil and Environmental Engineering, University of Massachusetts Dartmouth, 2005
Availability	Jeff has the availability to review of the Town of Littleton's project within the next month.
Expertise	<p>Jeff has six years of experience as a transportation designer and traffic analyst. During this time, his experience has included performing all aspects of traffic impact studies for site development; designing roadway segments, intersections, and roundabouts; and creating full engineering plan sets of roadway and intersection projects, including construction, signing/stripping, signal, and traffic management plans. Jeff has conducted traffic analysis and timing determination of signalized intersections, including coordination; and he has performed highway design and engineering, including geometry, specifying signage, and quantity take-off estimates. He has used his strong communication skills as a representative at municipal local meetings.</p> <p>Jeff supports his strong technical skills with his in-depth understanding of industry-standard and advanced computer programs, including AutoCAD 2007, including Land Desktop, AutoTURN, and MColor applications; Microsoft Visio; HCS; Synchro 7 with CORSIM; and aaSIDRA. Jeff is familiar with the standards required by the ITE Trip Generation Manual; A Policy on Geometric Design of Highways and Streets; Highway Capacity Manual; Manual on Uniform Traffic Control Devices; and the MassDOT Project Development & Design Guide</p>
Key Projects	<p>Municipal Design: Performed various tasks for municipal clients. Hanover, Hingham, Hull, Needham, Norfolk, Norwell, and Pembroke, MA. <i>Project experience with prior firm.</i> Owner: Various municipalities</p> <p>Leverett Circle: Traffic designer responsible for pedestrian overpass feasibility study. Wrote report and performed various field tasks including analyzing bicycle, pedestrian, and vehicular travel patterns. Boston, MA. Owner: Massachusetts Department of Transportation</p> <p>Franklin High School: Traffic designer responsible for writing report, assessing existing conditions and making recommendations based on planned renovations. Franklin, MA. Owner: Town of Franklin</p> <p>ARRA Solar Pilot Project: Transportation designer responsible for conducting field survey and plan construction of existing traffic signal equipment for upgrade to solar power at intersections. Boston, MA. Owner: Boston Public Works Department</p> <p>Fenway/Westland Avenue Intersection: Transportation designer responsible for developing 25% plans for traffic signal, signage, and lane marking upgrades. Boston, MA. Owner: City of Boston</p>

Jeffrey T. Bandini, PE, LEED Green Associate
Transportation/Traffic Designer

NSTAR: Transportation designer responsible for creating traffic management plans for various utility line replacements. Various municipalities, MA.
Owner: NSTAR

Springfield Street/South Street/Fairview Avenue Intersection: Traffic designer responsible for designing geometric improvements and updating existing traffic signal equipment. Prepared full plan set. Chicopee, MA. *Project experience with prior firm.*
Owner: City of Springfield

Route 14 Reconstruction: Transportation designer responsible for performing highway design and quantity take-off estimates for reconstruction of 3-miles of roadway. Pembroke, MA. *Project experience with prior firm.*
Owner: Town of Pembroke

South Coast Rail: Traffic analyst responsible for performing HCS analyses for freeway segments in southeastern Massachusetts. Re-designed park-and-ride lots as part of project no-build report. Boston, MA
Owner: MBTA

Accelerated Bridge Program: Estimator responsible for construction and transportation quantity take-off estimates. Various municipalities, MA.
Owner: Commonwealth of Massachusetts

Wolomolopoag Street/South Main Street Intersection: Traffic designer responsible for intersection improvements. Signalized stop-controlled intersection into a fully-actuated traffic signal system. Prepared full plan set. Sharon, MA. *Project experience with prior firm.*
Owner: Town of Sharon

High Street and Free Street Intersection: Traffic designer responsible for signalizing two-way stop-controlled intersection into a fully-actuated traffic signal system. Prepared full plan set. Hingham, MA. *Project experience with prior firm.*
Owner: Town of Hingham

Brockton VA Hospital: Traffic designer responsible for writing report, assessing existing conditions and making recommendations based on the construction of a new building on site. Brockton, MA.
Owner: VA Boston Healthcare System

Beach Street Parking Garage: Transportation designer for concept plan design and report for proposed two-way traffic flow on existing one-way street. Boston, MA. *Project experience with prior firm.*
Owner: Beach Street Parking Garage Associates, Inc.

Hadley Corner: Traffic designer responsible for writing traffic monitoring report and conducting signal coordination along Route 9 corridor. Hadley, MA. *Project experience with prior firm.*
Owner: Home Depot USA Inc.

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FAY, SPOFFORD &
THORNDIKE
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October 19, 2011

Maren Toohill, Planning Administrator
Room 303, 37 Shattuck Street
Shattuck Street Municipal Building
PO Box 1305
Littleton, MA 01460

Subject: Traffic Impact Peer Review of a Proposed Apartment Comprehensive
Permit Application for 15 Great Road, Littleton, Massachusetts

Dear Ms. Toohill:

Fay Spofford & Thorndike (FST) is pleased to respond to your request for information concerning a traffic impact peer review of the 15 Great Roads apartment complex proposed in Littleton, Massachusetts.

- 1) List of principals in the firm (listing attached).
- 2) We have no affiliations with the Applicant, Omni Development, or its attorney, Lou Levine.
- 3) Gary L. Hebert, PE, PTOE, FITE (resume attached)
- 4) I am available to review this Application and prepare a peer review letter and meet with the ZBA, if necessary, within the next month.

If you or the Zoning Board of Appeals (ZBA) members have questions on any aspect of this information, please feel free to contact me. FST appreciates the potential opportunity to provide these services to the Town of Littleton Zoning Board of Appeals. I will be available to meet with the Planning Board at your discretion.

Very truly yours,

FAY, SPOFFORD & THORNDIKE

By

Gary L. Hebert, PE, PTOE
Vice President



FAY, SPOFFORD & THORNDIKE

MEMORANDUM

DATE: October 20, 2011
TO: Ms. Maren Toohill, Planning Administrator
FROM: Douglas C. Prentiss, P.E., PTOE *DCP*
SUBJECT: Traffic Peer Review Services – Town of Littleton

Introduction

This memo is in response to an inquiry received from the Town on 10/19/11 regarding traffic peer review services for a project located at 15 Great Road Littleton, Massachusetts.

Responses

1. The principals of the firm and organization structure of FST is as follows:

Directors

- Dean Groves, President
- Peter Howe, Executive VP
- Christopher Yannoni, Sr. VP & Treasurer
- Leonard Dzengelewski, Sr. VP & Secretary
- William Reed, Sr. VP
- Thomas Jenkins, Sr. VP
- Michael Roache, Sr. VP
- Paul Harrington, Sr. VP
- Robert Bertolino, Director
- Emile Hamwey, Director

Associates and Vice Presidents

- Richard Azzalina, Dennis Boucher, James Branch, Brian Brenner, Michael Carroll, Creg Cascadden, Stephen Chapman, Victor Govoni, Gary Hebert, John Hendrickson, Edward Hollingshead, John Krawczyk, S.D Daniel Lee, David Mariano, William Moore, Frederick Moseley, Jeffrey Paul, Brian Shea, Michael Sorrentino, James Taylor and Meredith Zona.

Associates

- Parviz Amirhor

Vice Presidents

- Paul Ferguson, Peter Piattoni and Paul Yannoni

**DOUGLAS C. PRENTISS, P.E.,
PTOE**
Senior Principal Engineer

EDUCATION
M.S. 1982, Transportation,
University of Connecticut
B.S. 1971, Civil Engineering, Lowell
Technological Institute

PROFESSIONAL AFFILIATIONS
Institute of Transportation
Engineers - MA and NH
ITE District 1 - Membership
Chairman 1993-1996
NEITE Executive Board, 1988-
1994 (President in 1992)
ITE International Nominating
Committee - 1997
NEITE Awards Committee- 2005
to present
Vermont Society of Engineers
Barnstable County Public Works
Association

YEARS EXPERIENCE
With this firm: 4
With other firms: 30

AWARDS
1983 Technical Paper Award,
NEITE
NEITE Distinguished Service
Award, 1996

**PROFESSIONAL
REGISTRATIONS**
MA 1985, Traffic, #33014
NH 1990, #7818
VT 1980, #3871
ME 1990, #6629

PROJECT ROLE: x

Doug Prentiss assists on a variety of projects in our transportation department including traffic and highway design projects as well as planning studies, traffic signal design projects as well as parking and feasibility studies. He is responsible for senior level management, analysis and assessment of traffic engineering projects including assisting clients through the state and local permitting process.

REPRESENTATIVE RELEVANT EXPERIENCE

Route 137 Improvements, Town of Brewster, MA. Project Manager for the planning and design of the geometric improvements and realignment alternatives for a two-mile corridor section of Long Pond Road (Route 137) in Brewster. Bike lanes are included as part of the roadway section.

Milford Alternate Route Transportation Study, Milford, MA. Project Manager responsible for completing a traffic/transportation feasibility study for the planning of an Alternative Route (or Veterans memorial Drive Extension) that will serve as a by-pass to the Route 16 (Main Street) corridor and run along a Town-owned right-of-way (ROW) from and abandoned railroad corridor.

Lots Hollow Road, Orleans, MA. - PWED Grant. Project Manager and grant writer for a Public Works Economic Development (PWED) grant that was administered by the MassDOT. Working with the Town, the \$550,000 grant was awarded and allowed the Town to design and relocate a critical intersection that leads to the Town's only transfer station and industrial park.

Massachusetts Avenue East Arlington Traffic Operations Study, Arlington, MA. Project Manager for the traffic component operations study and concept plan development for the improvement to Tabnick Square area, an area of three closely spaced intersections. Improvements included traffic signal modifications and coordination; turn lane modifications and circulation changes.

Beach Road Improvements, Orleans, MA. As Project Manager provided the Town with the transportation engineering assistance related to the location of a proposed sidewalk from Main Street to the very-popular Nauset Beach. A concept plan was developed showing the cross section and an estimate developed that gave the Town the necessary information for the feasibility planning of the project.

Technical Assistance/Peer Review - Various Communities. Project Manager for a number of traffic peer reviews in various communities around the Commonwealth including Tewksbury, Deerfield, Littleton, Dartmouth, North Andover, Dracut, Haverhill, Taunton and Dighton, to name a few. For the Town of Dartmouth project,

ENCLOSURE
ECL
May 2011

DOUG PRENTISS
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PUBLICATIONS

Public Works, June 1984 - *A Pavement Management Program Designed for Multi-Community Use*
ITE Compendium of Technical Papers, August 2002 - *Transportation Peer Reviews - Big Business or Bust?*
Central Vermont Regional Planning Commission, March 1984 - *Barre-Berlin-Montpelier Transportation Plan Update - 1984*
NEITE - various articles over the years

RECENT PROFESSIONAL PRESENTATIONS

ITE District 1 Meeting, Cooperstown, NY; May 2006 - *Non-Traditional Funding for Transportation Improvements*
NEITE/UMass Section Meeting; April 2005 - *Cape Cod Rail Trail At-Grade Conflicts-Who has the Right of Way?*
ITE District 1 Meeting, Burlington, VT; May 2004 - *Cape Cod Solutions to Bicycle, Vehicle and Pedestrian Crossings*
ITE International Meeting, Philadelphia, PA; August 2002 - *Transportation Peer Reviews - Big Business or Bust?*

technical assistance was provided to the Town on a 40R-Smart Growth project, that required Town Meeting re-zoning, and Selectboard approval.

On-Call Traffic Services, Winchester, MA. Project Manager for the various traffic/transportation projects throughout the Town of Winchester. Assignments included assessing the traffic and pedestrian safety of all the public schools in Town including school zone analysis, traffic peer review of the re-development of one of the last open-space areas in Town, various intersection studies and assessments.

Expert Witness Testimony, Various Locations. For a variety of private and municipal clients, provided expert testimony in many public forums around the state and in Massachusetts Land Courts in Middlesex, Bristol and Dukes Counties. Also has provided expert testimony in the Act 250 process in Vermont.

Route 140 Corridor Transportation Study, Boylston, MA. As Project Manager provided the Town with the transportation engineering assistance related to the existing assessment and likely future build out of the corridor from the Shrewsbury Town line to the West Boylston Town line.

Route 28 Chatham Intersections, Town of Chatham, MA. Project Manager for developing improvement alternatives for Route 28 in the Town of Chatham. Meetings with various boards, committees are on-going to develop consensus building for optimum traffic improvements along the corridor. Improvement alternatives consist of roundabouts, traffic signals while providing accommodations for bicycle and pedestrians. MassDOT will review the submitted Project Initiation Form (PIF) so the project can ultimately be placed on the Transportation Improvement Program (TIP).

Orleans Town Center to South Orleans Bike Feasibility Study, Orleans, MA. Project Manager for the undertaking of a comprehensive bike feasibility study that is proposed to connect South Orleans to the Town Center Village area, and provide gateways to the Cape Cod Rail Trail.

FORMER FIRMS

Gateway Center Environmental Impact Report, Everett, MA. Project Manager for transportation elements of a 714,000 GSF shopping center located on former brownfields site that fronted on a DCR roadway. Review elements included, MassDOT- Transit Division bus lines, bikeway connections, traffic analysis and conceptual design of the obsolete rotary, Santilli Circle.

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Springfield College Traffic Calming Studies, Springfield, MA. Project Manager for Traffic Management Plan that evaluated the closure of Alden Street, which bisected academic and residential components of the campus. Intent was to make the campus more pedestrian friendly by preparing an aggressive traffic-calming plan that included the closure of two other minor campus roadways.

Orleans Town Center Transportation Study, Orleans, MA. Project Manager for undertaking comprehensive transportation study for downtown area that included an evaluation of excessive vehicles queues, conflicts at pedestrian cross walks, bike conflicts at the Cape Cod Rail Trail, limited public parking facilities and changes to traffic circulation.

Three DCR Bridges Hyde Park and Dorchester, MA. In charge of developing the Traffic Management Plans for three DCR-owned bridges that were undergoing rehabilitation work. Evaluation of detour routes, signing and agency coordination were included in the plan development.

Worcester State College Traffic and Parking Study, Worcester, MA. Project Manager for traffic and parking study that assessed short and long-term ramifications of campus expansion and the needs for additional campus parking. Evaluation included the construction of a parking garage, modifications to the shuttle bus service and satellite parking lots, as well as assessing off-site mitigation.

Wilbraham Village EIR and Signal Design, Wilbraham, MA Was responsible for the traffic

component of the Environmental Impact Report (EIR) of the Wilbraham Village, over-55 housing project on State Route 20. Transportation impacts were assessed and mitigation developed which included a new traffic signal at the site drive, coordinated with the existing signal at Old Boston Road.

Saints Memorial Medical Center, Lowell, MA. Was responsible for an on- and off-site traffic and parking study that was submitted as part of MEPA review for a proposed Cancer Center on the campus. New access/egress schemes and street closure options were reviewed as part of mitigation.

Tobin Bridge Traffic Management Plans, Charlestown, MA. Was responsible for managing the development of Traffic Management Plans (TMP) for Massport to accommodate the scheduled maintenance of the upper and lower decks of the Bridge, while keeping toll booths open to the public.

Tatnuck Square Operations Study, Worcester, MA. Project Manager for the traffic operations study and concept plan development for the improvement to Tatnuck Square area, an area of three closely spaced intersections. Improvements included traffic signal modifications and coordination; turn lane modifications and circulation changes.

Beverly High School Traffic and Parking Study, Beverly, MA. Managed traffic and parking study elements of the renovated and expanded Beverly School. Preliminary assessment included developing alternate access and egress schemes to separate student pick-up/drop-off, bus circulation and staff parking. Traffic analysis was undertaken to quantify site impacts and a mitigation package was developed to offset project impacts.

West Road Improvements, Orleans, MA. As Project Manager provided the Town with the traffic engineering assistance related to the location of a new cross walk from an assisted living complex, to a regional shopping center on the opposite side of the road. A concept plan was developed that showed how stopping sight distance along West Road could be increased to satisfy safety standards, and an improved alignment developed.

Dean College Master Plan - Franklin, MA. Project Manager for the transportation component of the 2006 Master Plan for the College. Areas studied and analyzed included traffic and parking issues, with the primary focus on parking supply and demand and safe pedestrian crossings.

Woods Hole Oceanographic Institution Master Plan, Woods Hole, MA. Project Manager for the transportation component of the Master Plan for the campus. An assessment was undertaken of the campus parking supply and utilization to quantify actual lot usage and better accommodate facility needs. Traffic analysis was completed along

with recommendations for pedestrian and bicycle accommodations. Permitting included the Cape Cod Commission (CCC) and MassDOT.

Town of Littleton Traffic Peer Review Assistance, Littleton, MA.
Project Manager over the years on a number of projects with the Town on peer reviews through the Planning and Zoning Boards and Board of Selectmen. Projects reviewed include the Andrews Crossing project on Great Road and a few housing projects around Town Center.

Ocean Beach Study, Eastham, MA.
Project Manager for the transportation impact study that assessed the impacts of developing a new ocean beach for the Town, adjacent to Cape Cod National Sea Shore property. Assessment included the impacts of traffic, bus, bike and pedestrian activity on surrounding roadways and intersections.

SARAH E. BORENSTEIN
Assistant Engineer

Education
B.S. 2007, Architectural
Engineering, Wentworth Institute
of Technology

Project Role: Traffic Engineer

Sarah Weimer assists on a variety of projects in our transportation department including traffic and highway design projects as well as planning studies, traffic signal design projects, and feasibility studies.

Representative Relevant Experience

Malden Center Malden, MA. Conducted field reconnaissance and a feasibility study to provide traffic engineering assistance to evaluate the potential changes in circulation of a section of Washington Street and Garnet Road, in downtown Malden.

Proposed Mixed Use Development, Brookhaven, New York. Assessed and compared the project vehicle trip generation of the proposed mixed-use development located along the Long Island Expressway (I-495) and William Lyod Parkway (Route 46).

Route 134 Safety Improvements Dennis, MA. Conducted field reconnaissance and signal analysis of the corridor in order to enhance safety in the area. Developed intersection layout concepts to improve bicycle and pedestrian access along Route 134.

DCR Anderson Memorial Bridge Cambridge/Boston, MA. Prepared graphics presentations for public hearings to be used to discuss traffic issues on the bridge. Developed existing and proposed traffic circulation and cross section concepts to analyze the possible traffic modifications considered part of the rehabilitation of the Anderson Memorial Bridge.

Route 28 Chatham, MA. Conducted signal analysis along with corridor layout concepts in order to develop a community and business consensus for the area in order to accommodate motorists, pedestrians, and bicycle needs. Attended public hearings to explain the proposed concepts to the residents and businesses.

2. Neither FST, nor our proposed assigned staff that would be assigned to the 15 Great Road project has any dealings with Attorney Lou Levine with Omni Development or AKA Fifteen Great Road II LLC.
3. The primary contact individual/project manager will be Doug Prentiss, who has performed numerous peer reviews for both the Appeals Board and the Planning Board over the years. His most recent review for the Town was on the Barking Dog project on King Street, where Doug was hired to be the expert witness on the project. Assisting Doug on the 15 Great Road project will be Sarah Borenstein. Their resumes are attached.
4. Both Doug's and Sarah workloads are such that they can both devote their time to review this project in the next month for the Town.

April 15, 2011

**2011 Organizational Structure
of
Fay, Spofford & Thorndike, Inc. and Subsidiaries**

Fay, Spofford & Thorndike, Inc.

Directors

Dean L. Groves	President & Chief Executive Officer
Peter J. Howe	Executive Vice President
Christopher C. Yannoni	Senior Vice President & Treasurer
Leonard V. Dzengelewski	Senior Vice President & Secretary
William J. Reed	Senior Vice President & Assistant Treasurer
Thomas D. Jenkins	Senior Vice President & Assistant Secretary
Michael A. Roache	Senior Vice President & Security Officer
Paul F. Harrington	Senior Vice President
Robert E. Bertolino	Director
Emile J. Hamwey	Director

Associates and Vice Presidents

Richard A. Azzalina	Edward D. Hollingshead
Dennis P. Boucher	John T. Krawczyk
James R. Branch	S.D. Daniel Lee
Brian R. Brenner	David P. Mariano
Michael E. Carroll	William R. Moore
Creg W. P. Cascadden	Frederick A. Moseley
Stephen A. Chapman	Jeffrey R. Paul
Victor M. Govoni	Brian E. Shea
Gary L. Hebert	Michael A. Sorrentino
John K. Hendrickson	James M. Taylor
	Meredith S. Zona

Associates

Parviz Amirhor

Vice Presidents

Paul G. Ferguson
Peter F. Piattoni
Paul G. Yannoni

GARY L. HEBERT, PE, PTOE
Vice President

PROFESSIONAL ACTIVITIES

PE –Maine /Massachusetts
Professional Traffic Operations
Engineer (PTOE)

Fellow: Institute of Transportation
(ITE) Engineers

2011 – ITE Northeastern District
Chair

2008 – Selected by ITE to represent
practitioners on an International
Committee to update ITE's *Manual
on Transportation Engineering
Studies* (published 2010).

ITE New England Section:

2007 - Distinguished Service Award

2007 - Co-chair: ITE District 1

Meeting, Providence, RI

2002 - President

2001 - Vice President

2000 - Treasurer

1998-1999 - Director

Author: NEITE PDH Policy

Instructor: PTOE Refresher Course
October, 2004

Conference presentations include:

"Lafayette Street safety
improvements, Salem, MA (May,
2010)

"Long Term Trip Generation of a
Mixed Use Development in
Cambridge, MA (2010)

"Road and Intersection Safety
Comparing the New England
States" May 2004

"Vineyard Haven Ferry Terminal,
Designing a Strategy for Traffic,
Pedestrian, and Parking
Improvements", May, 2001

Editor: New England ITE Chronicle
1995-96 and Fall 2001

EDUCATION

B.S.E.E. University of Buffalo

A.A.S. Engineering Science SUNY
at Canton

PROJECT ROLE: Peer Reviewer

Gary is a transportation engineer and planner with extensive experience in project management, and community participation within the public, non-profit, and private sectors. His skills include transportation engineering and transit planning, multi-modal access plans, parking studies, safety studies, peer reviews, demographic/land use analysis, data collection, ferry access studies, and environmental impact assessments.

REPRESENTATIVE RELEVANT EXPERIENCE

Peer Reviews Has conducted traffic and parking impact peer reviews of many developments in a wide array of Massachusetts communities including Arlington, Billerica, Braintree, Lynnfield, Lenox, Gardner, Groton, Groveland, Kingston, Hamilton, Marblehead, Norfolk, Plymouth, Somerville, Stoneham, Swampscott, Westford, and Winchester. Developments evaluated included single and multi-family residential under Massachusetts Comprehensive Permit Chapter 40B legislation, medical office buildings, shopping centers, regional high schools, fast food, and major retail/office developments. He assisted the Town of Groton in brokering a land swap needed to mitigate the impacts of a housing development under the Chapter 40B, Massachusetts Affordable Housing law. For the downtown Groton, MA Station Avenue redevelopment site, developed a 'Shared Parking Ordinance', parking occupancy study, and traffic calming measures.

Conducted traffic impact studies and mitigation strategies for a so-called friendly Chapter 40B project on behalf of the Town of Edgartown, Massachusetts for a 60-unit apartment development. Prepared a traffic impact study on behalf of the Applicant for a 270-unit Chapter 40B development in Georgetown, Massachusetts.

Multi-modal studies Project Manager of Citywide bike circulation master plan for Salem, MA and design of follow up 5 mile pilot route. Developed recently-constructed Jamaica Pond pedestrian/bike access improvements, Lynn Parkway system traffic improvements, Gallivan Boulevard pedestrian study, Storow Drive analysis, and Cambridge Parkway directionality studies under FST's general traffic engineering services contract with DCR. Developed a high visibility crosswalk on behalf of Wentworth Institute of Technology. Produced a corridor plan for a half-mile segment of Pleasant Street in Marblehead, MA identifying multi-modal safety enhancements to pedestrian crosswalks and landing areas to accommodate 521 CMR accessibility guidelines. Conducts annual multi-modal surveys of a 3 million + square foot mixed use development in Kendall Square of Cambridge, MA. Conducted downtown parking studies for Fitchburg, Stoneham, MA and Winooski, VT.

ENGINEERS
FST
Since 1914

GARY HEBERT, PE, PTOE
Page 2

Public transportation planning and multi-modal mitigation experience Under contract to the MBTA, Gary developed measures to improve the ADA compliance of the Malden Government Center Orange Line station. Annually prepares an analysis of the effectiveness of Wentworth Institute of Technology's multi-modal mitigation measures in connection with the City of Boston Transportation Access Plan Agreement (TAPA) and Massachusetts DEP ridesharing reports.

Analyzed Martha's Vineyard Hospital, York Hospital, and Chambersburg, PA parking and pedestrian circulation systems. Developed and evaluated bike path and bike route circulation options. Developed *arterial* traffic calming measures for Stow Lower Village, MA, Dublin Center and Tamworth, NH.

Communitywide and Areawide Transportation Studies
Project Manager for the circulation element of the Groton, MA master plan underway at this time. Was FST's Project Manager responsible for setting priorities for a pedestrian circulation action plan for Boston's Fenway, Longwood, and Kenmore neighborhood including Emerald Necklace crossings in the Sears Rotary/Boylston Street area. Prepared a roadway infrastructure master plan for the Town of Merrimack, NH and Braintree, MA. Prepared a bicycle circulation master plan for Salem, MA. Earlier, prepared Town-wide circulation plans for Littleton and Medford, MA.

Work experience prior to FST:

MBTA Program Development Section – Traffic Planning Analyst, Boston, MA evaluating system-wide park-ride program, bus system reporting, and Traffic Demand Management enhancements.

Public Technology Inc. – Senior Engineer, Washington, DC, Principal author of a USDOT *Manual for Planning and Implementing Priority Techniques for High Occupancy Vehicles*. Worked with Dallas, TX, St Louis, MO, San Jose and San Francisco, CA to develop demonstration projects using the Manual. Prepared nationally-circulated Information Bulletins on Traffic Signal Systems, Parking Management, and Center City Circulation.

Alan M. Voorhees and Associates – Engineer/Planner in its Buffalo, NY, San Diego, San Bernardino, Los Angeles, and San Francisco, CA offices involved in many traffic and parking studies on the east and west coasts.



10



Professional Services
Corporation, PC

RECENT SIMILAR PROJECTS

While serving with PSC, and with other engineering firms, Thomas C. Houston, AICP, PE has successfully completed engineering peer reviews of site plans, subdivision plans, Ch 40B Comprehensive Permit plans, and traffic impact and access studies on behalf of municipal planning boards and boards of appeal as listed below:

PEER REVIEW OF CH 40B COMPREHENSIVE PERMIT PLANS

Acorn Estates 40B Project, Canton • Autumn Woods 40B Project, Norwell, MA • Avalon Cohasset 40B Project, Cohasset • Avalon Cohasset HAC Appeal, Cohasset • Brickmitten Place 40B Project, Taunton • Bridge Commons 40B Project, Tisbury, MA • Cedar Ridge 40B HAC Appeal, Holliston • Cedar Ridge 40B Project, Holliston • Covenant Residence on Commonwealth 40B Project, Newton • Deerhaven Estates 40B Project, Tewksbury • Estates at Borderland 40B Project, Sharon • Glendale Village 40B Project, Sharon • Greenlodge Gardens 40B Project, Canton • Groveland Commons 40B Project, Groveland • High Point Acres 40B Project, Grafton • Highlands at Canton Meadows 40B Project, Canton • Hingham Shipyard, Hingham • Hollis Hills 40B Project, Lunenburg • Indian Ridge 40B Project, Canton • L Dias HAC Appeal, Nantucket • Little Pond Landing HAC Appeal, Falmouth • Lodge at Stoughton 40B Project, Stoughton • Lodge at Stoughton, Stoughton • Lowell Street Townhouse 40B Project, Lexington • Lynnfield Crossing (470 Salem Street) 40B Project, Lynnfield • Lynnfield Village (2 Broadway) 40B Project, Lynnfield • Mapleridge 40B Project, Tyngsboro • Marion Village Estates 40B Project, Marion • Massapoag Estates 40B Project Tyngsboro • Merrimack Landing 40B Project Tyngsboro • Norfolk Landing 40B Project, Norfolk • Norfolk Town Center Condominiums 40B Project, Norfolk • Norfolk Town Center Condominiums Phase V Modification Project, Norfolk • Page Place Apartments 40B Project, Stoughton • Pease's Point Way (#65) 40B Project • Pequit Estates 40B Project, Canton • Pequit View 40B Project, Canton • Pequit Village 40B Project, Canton • Pine Ridge 40B Project, Taunton • Pine Woods 40B Development, Sharon • Powhattan Estates 40B Project, Taunton • Ramsdell Way (Grandview Estates) 40B Project, Lynnfield • Rattlesnake Hill 40B Project, Sharon • Residences at Stagecoach Village, Stoughton • Ridgecrest 40B Project, Bradford • Ridgefield Village 40B Project, Grafton • River View Landing 40B Project, Marion • Settlement 40B Project, Taunton • Tiffany Hill 40B Project, Norwell • Village at Stonegate 40B Project, Stoughton • Webster Point Village of Duxbury & Marshfield 40B, Duxbury & Marshfield • Whispering Pines Estates 40B Project, Tyngsboro • Windsor Village at Canton 40B Project, Canton • Winter Woods 40B Project 40B Project, Holliston • Woodlands at Laurel Hill 40B Project, Acton & Westford • Wynbrook at Tyngsborough 40B Project, Tyngsboro.

PEER REVIEW OF TRAFFIC IMPACT AND ACCESS STUDIES

Acorn Estates, Canton • Back River Condominiums, Hingham • Blue Hill Commons MOD Project, Canton • Blue Hill Lincoln Mercury Project, Canton • Blue View Corporate Center,



Professional Services
Corporation, PC

Canton • Blue View Corporate Parking Structure, Canton • Boston Equiserve Project, Canton • Campanelli Circle Project, Canton • Canton Buick, Pontiac, GMC Project, Canton • Canton High School Expansion, Canton • Canton Police Headquarters, Canton • Canton Public Library Expansion, Canton • Cedar Ridge 40B Project, Holliston • Central Dodge Project, Canton • Coastal Nissan Project, Norwell • Residential and Commercial Washington & Ames Streets, Canton • Covenant Residence on Commonwealth 40B Project, Newton • Deerhaven Estates Project, Tewksbury • Dreamwold Estates Subdivision, Scituate • Dunkin Donuts 600 Neponset Street, Canton • Dunkin Donuts Drive-Through at Blue Hills, Canton • Dunkin Donuts 450 Wareham Street Marion • Emerson & Cumings Washington Street, Canton • Energy Retailers Neponset Street, Canton • Enterprise Rent A Car Project, Canton • Famoso Food Imports Project, Canton • Glendale Village 40B Project, Sharon • Greenlodge Gardens 40B Project, Canton • Grover Estates Project, Canton • Grover Estates Revisions, Canton • Hebrew Senior Life ("HSL") Senior Campus Community, Dedham • Highpoint Acres 40B HAC Testimony, Grafton • Hingham Shipyard Project, Hingham • Holbrook Crossing Project, Norfolk • Indian Ridge 40B Project, Canton • The Lodge at Stoughton, Stoughton • Lowell Street Townhouses 40B Project, Lexington • Marion Marketplace Traffic Review • Marion Village Estates 40B Project, Marion • McDonalds Restaurant, Canton • Norfolk Commons Phase I Project, Norfolk • Norfolk Commons Phase II Project, Norfolk • Norfolk Public Library Expansion Project, Norfolk • Norfolk Town Center Condominiums 40B Project, Norfolk • Offices at 130 Royal Street, Canton • Offices at Lot 43 New Boston Road, Canton • Office-Warehouse 1010 Turnpike Street, Canton • Old Post Road Improvements Peer Review, Sharon • Page Place Apartments, Stoughton • Paul Revere Village, Canton • Pepsi Bottling Group Project, Canton • Pequit Estates 40B Project, Canton • Pequit View 40B Project, Canton • Pequit Village Project, Canton • Pine Ridge Project • Reebok World Headquarters, Canton • Retail-Lodging 1032 Turnpike Street, Canton • Riverview Way Subdivision Traffic Peer Review, Canton • Senior Care/Brighton Gardens Project, Canton • Sharon Business District D Traffic Peer Review, Sharon • Sharon Commons Lifestyle Center Traffic Peer Review, Sharon • Shaw Saab Project, Norwell • South Main Street Improvements Peer Review, Sharon • Stonehill Marketplace Johnston, RI • The Residences at Old Post Road • The Highlands at Canton Meadows, Canton • The Village Mall, Canton • Tiffany Hill 40B Project, Norwell • Village at Forge Pond Project, Canton • Village on the River Apartments, Canton • Washington and Ames Project, Canton • Washington Street (943), Canton • Windsor Estates Elderly Housing, Lynnfield • Windsor Village at Canton Project, Canton • Woodlands at Laurel Hill, Acton and Westford. Acorn Estates, Canton • Back River Condominiums, Hingham • Blue Hill Commons MOD Project, Canton • Blue Hill Lincoln Mercury Project, Canton • Blue View Corporate Center, Canton • Blue View Corporate Parking Structure, Canton • Boston Equiserve Project, Canton • Campanelli Circle Project, Canton • Canton Buick, Pontiac, GMC Project, Canton • Canton High School Expansion, Canton • Canton Police Headquarters, Canton • Canton Public Library Expansion, Canton • Cedar Ridge 40B Project, Holliston • Central Dodge Project, Canton • Coastal Nissan Project, Norwell • Residential and Commercial Washington & Ames Streets, Canton • Covenant Residence on Commonwealth 40B Project, Newton • Deerhaven Estates Project, Tewksbury • Dreamwold Estates Subdivision, Scituate • Dunkin Donuts 600 Neponset Street, Canton • Dunkin Donuts Drive-Through at Blue Hills, Canton • Dunkin Donuts 450 Wareham Street Marion • Emerson &



Professional Services
Corporation, PC

Cummings Washington Street, Canton • Energy Retailers Neponset Street, Canton • Enterprise Rent A Car Project, Canton • Famoso Food Imports Project, Canton • Glendale Village 40B Project, Sharon • Greenlodge Gardens 40B Project, Canton • Grover Estates Project, Canton • Grover Estates Revisions, Canton • Hebrew Senior Life ("HSL") Senior Campus Community, Dedham • Highpoint Acres 40B HAC Testimony, Grafton • Hingham Shipyard Project, Hingham • Holbrook Crossing Project, Norfolk • Indian Ridge 40B Project, Canton • The Lodge at Stoughton, Stoughton • Lowell Street Townhouses 40B Project, Lexington • Marion Marketplace Traffic Review • Marion Village Estates 40B Project, Marion • McDonalds Restaurant, Canton • Norfolk Commons Phase I Project, Norfolk • Norfolk Commons Phase II Project, Norfolk • Norfolk Public Library Expansion Project, Norfolk • Norfolk Town Center Condominiums 40B Project, Norfolk • Offices at 130 Royal Street, Canton • Offices at Lot 43 New Boston Road, Canton • Office-Warehouse 1010 Turnpike Street, Canton • Old Post Road Improvements Peer Review, Sharon • Page Place Apartments, Stoughton • Paul Revere Village, Canton • Pepsi Bottling Group Project, Canton • Pequit Estates 40B Project, Canton • Pequit View 40B Project, Canton • Pequit Village Project, Canton • Pine Ridge Project • Reebok World Headquarters, Canton • Retail-Lodging 1032 Turnpike Street, Canton • Riverview Way Subdivision Traffic Peer Review, Canton • Senior Care/Brighton Gardens Project, Canton • Sharon Business District D Traffic Peer Review, Sharon • Sharon Commons Lifestyle Center Traffic Peer Review, Sharon • Shaw Saab Project, Norwell • South Main Street Improvements Peer Review, Sharon • Stonehill Marketplace Johnston, RI • The Residences at Old Post Road • The Highlands at Canton Meadows, Canton • The Village Mall, Canton • Tiffany Hill 40B Project, Norwell • Village at Forge Pond Project, Canton • Village on the River Apartments, Canton • Washington and Ames Project, Canton • Washington Street (943), Canton • Windsor Estates Elderly Housing, Lynnfield • Windsor Village at Canton Project, Canton • Woodlands at Laurel Hill, Acton and Westford.

PEER REVIEW OF SITE PLANS

Acres of Green 10 Sherwood Drive, Norfolk • Apartments, 333 Bolivar Street, Canton • AT&T Wireless, Blue Hill Road, Canton • AT&T Wireless Ponkapoag School, Canton • AT&T Wireless, 7 Blue Hill Road, Canton • AT&T Wireless, University Road, Canton • Audio Sound, Canton • Back River, Hingham • Backlund Electric, Norfolk • Bank of Canton, Canton • Banknorth at Village Mall, Canton • Battery Engineering, Canton • Bearing Specialties, Canton • Blue Hill Commons (MOD) Project, Canton • Blue Hill Lincoln Mercury, Canton • Blue View Corporate Center Parking Structure, Canton • Blue View Corporate Center, Canton • Boston Equiserve, Canton • Brookmeadow Golf Course, Canton • Call and Wait Auto, Canton • Campanelli Circle, Canton • Canton Buick, Pontiac, GMC, Canton • Canton High School Expansion, Canton • Canton Police Headquarters, Canton • Canton Public Library, Canton • Canton Taxi, Canton • Canton Veterinary Hospital, Canton • Capen Place Condominiums, Canton • Captiva Recycling Corp, Canton • Car Wash/Warehouse Turnpike Street, Canton • CEI Boston, Norfolk • Central Dodge, Canton • Chapman Street (#656), Canton • Coastal Nissan, Norwell • Cole-Harrington Classrooms, Canton • Colonial Woodworkers Site Plan Modification, Norfolk • Colonial Woodworkers, Norfolk • Commercial and 26 Apartments, Washington Street



**Professional Services
Corporation, PC**

and Ames Street, Canton • Corkery Communications Tower, Canton • Cox Engineering, Canton
• Daley Service Station, Norfolk • Dan Road (#30), Canton • Dan Road (#45), Canton • Dan
Road (#65), Canton • Decembrele, Washington St, Canton • Dedham Street (#770) • Donovan
Place and Pilates Studio, Canton • Dunkin Donuts Drive-Through, Canton • Dunkin Donuts, 240
Dedham Street, Norfolk • Dunkin Donuts, 600 Neponset St, Canton • Elite Foods, Shire Drive,
Norfolk • EM Duggan Warehouse, Canton • Emerson & Cummings, Washington St, Canton •
Endicott Street (#15), Canton • Energy Retailers, Neponset St, Canton • Enterprise Rent-A-Car,
Canton • Famoso Food Imports, Canton • Fore Kicks, Norfolk • Four Residences 213-217
Neponset St, Canton • Fuller Street, Canton • Fulton Street, Canton • Geologic Site Plan,
Norfolk • Gomes Landscaping, Norfolk • Gorman Landscaping, Norfolk • Great Spring Waters
of America, Canton • Grimes Crossing, Canton • Grover Estates Revisions, Canton • Grover
Estates, Canton • Harbar, Canton • Hebrew Senior Life ("HSL") Senior Campus Community,
Dedham • Hellenic Nursing Home, Canton • Highway Garage • Hingham Shipyard, Hingham •
Holbrook Crossing, Norfolk • Homeward Suites Hotel, Canton • HT Berry, Canton • Humbolt
Moving & Storage, Canton • H-Vac, Canton • IBITE, LLC, Norfolk • Independent Pipe, Canton
• Industrial Drive (#35), Canton • Infinity, 363 Neponset Street, Canton • Irish Cultural Center,
Canton • Jackson Street (#120), Canton • Jackson Street (#68), Canton • Jackson Street (#72),
Canton • Jofran, Norfolk • John Road (#85), Canton • Kevnick Pine St, Canton • Kindercare,
Canton • King Philip School, Norfolk • Kradin Metals, Canton • Lamb Riggers, Canton •
Lampasona Concrete Corp, Norfolk • Liberty Place • Luce School Addition, Canton • Luce
School Parking, Canton • Main Street (#220) Site Plan Modification, Norfolk • Main Street
(#220), Norfolk • Mary Nora Office Building, Canton • Mason Meow, Canton • McDonalds
Restaurant, Canton • Mitchell Landscape, Norfolk • Multi-family, 333 Bollivar Street, Canton •
Naughton, 956 Turnpike St, Canton • Neponset Street (#313), Canton • Neponset Street (#399R),
Canton • Neponset Street (#433), Canton • New Boston Road (Lot 43), Canton • New Eng
Audio Addition, Canton • New England Audio, Canton • Nextel at Meditech, Canton • Norfolk
Federal Credit Union, Norfolk • Norfolk Public Library Expansion, Norfolk • Norfolk Senior
Center, Norfolk • Norfolk Storage Center, Norfolk • North Street (#35), Canton • North Street
School Maintenance Facility, Canton • Office Building "A" University Road, Canton • Office
Warehouse Dan Road, Canton • Offices at 130 Royal St, Canton • Offices at 17 Pine Street,
Norfolk • Offices New Boston Road (Lot 43), Canton • Office-Warehouse, 1010 Turnpike St,
Canton • Office-Warehouse, Dan Road (Lot 45), Canton • Omnipoint, Canton • One Beacon
Insurance, 150 Royall St, Canton • Organogenesis, Canton • Parking Lot, 130 Jackson St.,
Canton • Paul Revere Village, Canton • Pepsi Bottling Group, Canton • Pickering Garage,
Canton • Pin Oaks, Norfolk • Plymouth Rubber Revers St, Canton • Pond Street (#100)
Wireless, Norfolk • Pond Street (#77), Norfolk • Pond Street (#81), Norfolk • Pond Street (#98),
Norfolk • Pond Street Commercial Center Lots 1 & 2, Norfolk • Porier's Garage, Canton •
Prospect Place (#17), Canton • Provo Liquors, 282 Dedham Street, Norfolk • Reebok World
Headquarters, Canton • Reiser & Co. Dedham Street, Canton • Residences at Massapoag Brook,
Canton • Retail at 2738 Washington St, Canton • Retail Store in Norfolk Commons Phase I,
Norfolk • Retail-Lodging at 1032 Turnpike St, Canton • Rocco Plaza, 17 Pine Street, Norfolk •
Senior Care/Brighton Gardens, Canton • Service Station at 2740 Washington Street, Canton •
Sharon Commons Lifestyle Center, Sharon • Shaw Saab, Norwell • Shawmut Avenue (#125),



Professional Services
Corporation, PC

Canton • Shawmut Avenue (#25), Canton • Shawmut Road (#35), Canton • Sherman Woods, Canton • Sherwood Drive (#6), Norfolk • ShopLink, Canton • Sketch Plan Rockland Street Residence, Canton • Slope Repair Integrated Environmental Products, Canton • Springdale Avenue (#5), Canton • Springdale Realty, Canton • Stanetsky Memorial Chapel, Canton • Stonehill Marketplace, Johnston, RI • Storage Facility Lincoln Street (#2), Canton • Stormdrain and Slope Repair Integrated Environmental Products, Canton • Sumner & Dunbar, Canton • Supermarket in Norfolk Commons Phase I, Norfolk • Teamsters Local #25 Training Facility, Canton • Texaco, 693-705 Turnpike, Canton • The Park, 955 Turnpike Street, Canton • Three Apartments House, 141-143 Bolivar St, Canton • TKO Sheas, Canton • Town Houses Bolivar St, Canton • Town Taxi, Canton • Transit Seeding, 161 Dedham St, Norfolk • Turnpike Street (#160), Canton • Turnpike Street (#275), Canton • Turnpike Street (#465), Canton • Twenty Four Apartments, Canton • United Rentals, Canton • University Road (#15-21), Canton • Variety Store in Norfolk Commons Phase I, Norfolk • Village at Crescent Beach, Mattapoiset • Village at Forge Pond, Canton • Village Mall, Canton • Village on the River Apartments, Canton • Village on the River Modification, Canton • Wall Street (#21 and 24-26), Canton • Wareham Road (#313) Parking Study, Marion • Washington and Ames, Canton • Washington Street (#110), Canton • Washington Street (#550), Canton • Water Main and Tank, Norfolk • Windsor Estates Elderly Housing, Lynnfield • Woodlands at Laurel Hill, Acton & Westford • YD Auto Body, Canton.

PEER REVIEW OF SUBDIVISION PLANS

Acorn Estates, Canton • Albert Street Subdivision, Canton • Avoca Village, Norfolk • Berry Lane Street Acceptance, Norfolk • Bristols Pond Estates, Norfolk • Burr Lane Estates • Camille Terrace Subdivision, Marblehead • Canterbury Estates, Norfolk • Cantondale, Canton • Cedarcrest Road Extension, Canton • Chapman Knoll Subdivision Modification, Canton • Chapman Knoll Subdivision, Canton • Chapman Street (363) Subdivision, Canton • Christina Estates Hingham • Christina Estates, Norfolk • Common Street Development, Dedham • Conifer Lane Subdivision, Canton • Cranberry Heights Subdivision, Norfolk • Crisileo Way Subdivision, Canton • David Road and Sherwood Drive Street Acceptance, Norfolk • Dedhamshire Estates, Canton • Dracor, Canton • Eagle Farm I Estates, Canton • Eagle Farm II Estates, Canton • Evelyn Estates, Canton • Fern Ridge Estates, Norfolk • Gordon Road Subdivision, Canton • Greenlodge Gardens, Canton • High Point Acres • Liberty Place Subdivision, Canton • Maple Park Estates, Norfolk • Maple Valley Estates, Norfolk • New Boston Road, Canton • Noon Hill Acres Subdivision, Norfolk • Norfolk Commons Phase I Subdivision, Norfolk • Norfolk Commons Phase II Subdivision, Norfolk • Norway Farms Open Space Subdivision, Norfolk • Oak Knoll Open Space Subdivision Special Permit, Norfolk • Old Mill Meadow Subdivision, Norfolk • Overlook Estates, Canton • Overlook Road Extension, Canton • Pine Ridge Subdivision, Norfolk • Pineridge Subdivision, Canton • Pleasant Street (448) Subdivision, Canton • Pond Street Commercial Center Subdivision, Norfolk • Preserve at Keeney Pond Subdivision, Norfolk • Rockwood Estates II, Canton • Rustic Woods Subdivision • Saddle Ridge, Norfolk • Sandy Knoll Subdivision, Norfolk • Shire Industrial Park Subdivision, Norfolk • Southfield Estates, Canton • Spruce Acres Subdivision, Norfolk • Stony Brook Estates,



Norfolk • Stop River Estates, Norfolk • Swan Pond Estates, Norfolk • The Reserve • Turtle Creek Subdivision, Canton • Village at Pine Creek Subdivision, Norfolk • Walpole Street (343) Preliminary Subdivision, Canton • Washington Commons Subdivision, Canton • Washington Street (943) Subdivision, Canton • Willowbrook Farm Subdivision, Canton • Woodcliff Road Extension, Canton,



EXPERIENCE

Extensive experience in peer reviews of traffic impact and access studies, traffic and transportation engineering, and expert testimony and public presentations.

- ◆ Traffic & Transportation Engineering – Prepared traffic impact and access studies for diverse land development projects. Completed preliminary and final design documents for local roadways, arterial streets, highways, intersections and traffic signal controls including interconnected closed loop systems.
- ◆ Peer Review of Traffic Impact and Access Studies – Completed peer reviews Traffic Impact and Access Studies (TIAS) for over one hundred fifty (150) land development projects including numerous Comprehensive Permit 40B projects. Prepared traffic impact and access study regulations included in municipal subdivision regulations.
- ◆ Transportation Planning - Completed intermodal transportation planning projects and prepared area wide traffic volume models. Prepared corridor studies and functional design reports encompassing programs of transportation improvements. Prepared traffic impact and access sections of EIS/EIR reports for numerous transportation projects.

EDUCATION

MS, Master of Science, Transportation, 1979, Northeastern University
MUA, Masters of Urban Affairs, 1974, Boston University
BSCE, Bachelor of Science Civil Engineering, 1971, Northeastern University

EXPERT WITNESS

Qualified as an expert witness traffic and transportation engineering in numerous cases before the Land Court and Superior Court in Massachusetts and before DHCD's Housing Appeals Committee.

HONORS

Tau Beta Pi, national engineering honor society

ACADEMIC

Former Instructor, Transportation Program, Northeastern University Graduate School of Engineering

PUBLIC SERVICE

Former Member, Sharon Planning Board for 10 years

PROFESSIONAL

Member, American Society of Civil Engineers
Member, American Planning Association

REGISTRATIONS

Professional Engineer in Massachusetts and Rhode Island
American Institute of Certified Planners



Resume of
Thomas C. Houston, AICP, PE
Project Principal

TRAFFIC & TRANSPORTATION PEER REVIEW EXPERIENCE

Experience in the completion of peer reviews of the traffic impact and access studies for over 100 land development projects including over twenty 40B projects.

Canton Planning Board, Canton, MA

Peer review of the Traffic Impact and Access Studies for over eighty (80) site plans and subdivision plans including:

- Peer Review of the Traffic Impact and Access Study submitted for the 450,000 sq. ft. Reebok World Headquarters.
- Peer Review of the Traffic Impact and Access Study for the 350,000 sq. ft. Blue View Corporate Center including coordination of traffic volume projections and off-site traffic impact mitigation commitments for several other major office parks and a hotel along the Royal Street Corridor.
- Peer Review of the Traffic Impact and Access Studies for three Dunkin Donuts Shops including detailed analysis of service times and vehicle queuing at drive through windows.
- Peer Review of the Traffic Impact and Access Study for expansion and rehabilitation of the Cobbs Corner Shopping Mall.
- Peer Review of the Traffic Impact and Access Studies for development of major office, warehouse, and industrial sites in the 1,000,000 sq. ft. Canton Commerce Center.
- Peer Review of the Traffic Impact and Access Studies for fast food shops including a McDonalds.
- Prepared the traffic impact and access study requirements of the *Land Subdivision Rules & Regulations*.

Norfolk Planning Board, Norfolk, MA

Peer review of the Traffic Impact and Access Studies for over fifty (50) site plans and subdivision plans including:

- Peer review of Traffic Impact and Access Studies for the Norfolk Commons Phases I and II which involve construction of a new town center including a commuter rail station and new retail stores and housing centered about a New England common. Transportation improvements evaluated in the peer review include new intersections and roundabouts and a new bridge over the commuter rail line.
- Peer review of the Traffic Impact and Access Study for the overall 26 lot Shire Industrial Park and review of supplemental traffic information for individual warehouse and industrial sites within the park.
- Prepared the traffic impact and access study requirements of the *Land Subdivision Rules & Regulations*.

Town of Sharon, Sharon, MA

- Peer review of the Traffic Impact and Access Study as well as the transportation section of the Environmental Impact Report for the one half million square foot Sharon Commons Lifestyle Center. The Traffic Study Area included twelve major intersections throughout the Town of



**Resume of
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Sharon. Also completed the peer review of the final design plans for South Main Street Improvements including major widening to provide turning lanes and a closed loop signal system encompassing the I-95 interchange ramps and additional intersections along the South Main Street corridor. Also completed the peer review of final design plans for reconstruction of Old Post Road as a divided commercial arterial street connecting South Main Street with the Sharon Commons Lifestyle Center.

- Peer review of the Traffic Impact and Access Study for Sharon Hills, a six hundred twenty four (624) unit continuing care retirement community (CCRC) and a one hundred fifty (150) bed nursing home. Also, peer review of a construction phase TIAS for staged construction access that included extensive off-site intersection upgrades and a truck scheduling plan to control the timing and direction of truck trips.

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Peer review of the Traffic Impact and Access Studies for various land development projects including:

- Peer review of the traffic impacts section of the *Draft, Final, and Supplemental Environmental Impact Reports for the Wareham Crossing* regional shopping center and development of an area wide traffic volume model to identify traffic impacts of the shopping center on the Town of Marion.
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- Peer review of the Traffic Impact and Access Study for an office/retail center including small retail shops, offices, and a Dunkin Donuts shop with a drive-through window.

Dedham Planning Board, Dedham, MA

Preparation of comprehensive updates to the traffic impact and access requirements of the Planning Board's *Land Subdivision Rules & Regulations*.

Hingham Planning Board, Hingham, MA

Review of various land development projects including:

- Peer review of the Traffic Impact and Access Study for a proposed golf course.
- Peer review of the Traffic Impact and Access Study for multi-family housing development and related renovations to a Town owned recreation complex.

Norwell Planning Board, Norwell, MA

Peer review of site and subdivision plans including:

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Peer review of traffic impacts for the Dreamwold Estates subdivision including offsite impacts and mitigation.

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Peer review of Comprehensive Permit projects including:

- Peer review of the Traffic Impact and Access Studies for six (6) 40B projects processed under the State's Comprehensive Permit Process.
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TRAFFIC & TRANSPORTATION ENGINEERING EXPERIENCE

Experience in the preparation of traffic impact reports and in the preparation of the traffic impact sections of environmental impact reports for major land development projects. Completed preliminary and final design documents for arterial streets, intersections including traffic signal systems, and limited access highways for MassHighway, RIDOT, and municipal clients. Representative traffic and transportation engineering projects include:

Bridge and North Street Intersection Improvement Project, Salem, MA



Preparation of a feasibility study for redesign of a grade-separated urban intersection that included development of an area wide traffic volume model, intersection capacity analysis, safety analysis, development of three alternative intersection improvements plan to relocate existing ramps to accommodate expansion of the Salem Trial Courts complex. The extensive public participation process included public presentations at meetings in Salem attended by the Salem Partnership, City Officials, citizens and neighborhood groups and a presentation to MassHighway officials in Boston.

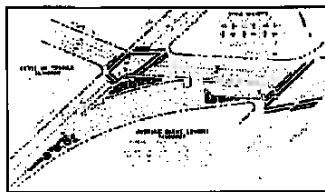
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Traffic Impact Report Star Market, Allston, MA

Preparation of an area-wide traffic impact analysis encompassing Packard's Corner and other intersections along the Commonwealth Avenue corridor. The multi-modal transportation analysis included evaluation of vehicular, transit, and pedestrian modes. The traffic analysis included evaluation of the complex Packard's Corner intersection that includes five intersection approaches, a median at grade light rail line, and extensive pedestrian usage. The transportation analysis was incorporated as part of the BRA/Boston PIR processes and involved extensive public participation on the part of community groups in Brighton and Allston. Mitigating measures developed for this project included intersection upgrades and coordination with the Commonwealth Avenue Section B Improvements Project. The work also involved final design of off-site roadway improvements including reconstruction of city streets and channelization and traffic control measures at existing intersections impacted by project traffic.

Traffic Impact Report Retail Shopping Center, East Boston, MA



Area wide traffic impact analysis for construction of a new retail shopping center on Route 1A (McClellan Highway) in the Orient Heights section of East Boston. The transportation planning process included extensive hearings and public meetings, and agency approvals. The technical analysis included a detailed traffic analysis that incorporated changes in background traffic based upon the Logan Airport Generic EIR and the Central Artery/Tunnel (CAT) Project. Measures developed to mitigate traffic impacts include a new grade-separated highway interchange and frontage roads on

McClellan Highway and reconstruction of the Boardman and Saratoga Streets intersection providing new signalization and off-street parking.



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Preliminary Design Route 57, Agawam and Southwick, MA

Preparation of design alternatives for reconstruction of Route 57 as a limited access highway in Agawam and Southwick including highway mainline and interchange alternatives to minimize noise and wetland impacts.

Traffic Impact and Access Study, Proposed Dunkin Donuts Shop, Marion, MA

Preparation of a traffic impact and access study for a proposed Dunkin Donuts shop on Wareham Street (Route 6) in Marion.

Functional Design Report Sudbury Plaza, Sudbury, MA

Preparation of a Functional Design Report to reconstruct a segment of Route 20 to provide turning lanes and a new signalized intersection serving the Sudbury Plaza Shopping center and a Raytheon manufacturing plant. The functional design report addressed roadway and intersection reconstruction and inclusion of both existing and new traffic signals as part of a closed loop system.

Traffic Impact Analysis and Circulation Study for the Peabody-Essex Museum, Salem, MA

Planning and design of off-site roadway improvements involving reconstruction of City streets and intersections including provision of new traffic controls to implement changes in the area-wide traffic circulation pattern in downtown Salem. The analysis included mitigation for abandonment of a City street and coordination of streetscape improvements with new parks and gardens constructed as part of the museum expansion.

Highway Improvements for the Port of Galilee, Narragansett, Rhode Island

For RIDOT, final design of an area wide roadway system including reconstruction of approximately one (1) mile of existing roadways and extension of the Galilee Connector Road on a new alignment to the Galilee Escape Road. The project incorporating landscaping and streetscape elements to mitigate impacts on visual quality and special drainage and roadway design elements to mitigate impacts on coastal features and freshwater wetlands.

Traffic Impact and Access Study for 705 Mt. Auburn Street, Watertown, MA



Preparation of an area wide traffic impact analysis for a 450,000 SF office building including analysis of traffic volumes, intersection operations, and planning of traffic impact mitigation measures. These mitigating measures included a new traffic signal system for the Mt. Auburn and Arlington Streets Intersection and reconstruction of segments of three streets to provide channelization and turning lane improvements. The traffic impact mitigating measures also included development of a program of TDM measures including use of shuttle vans and mandatory flexible working hours.

Traffic Impact Report for the Plains Shopping Plaza, Milford, MA

Preparation of a traffic impact report for modifications to shopping center access and off-site roadway improvements including deletion of a planned divided highway segment and redesign of key shopping center entrances. Alternatives evaluated included analysis of an arterial bypass road.



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Traffic Impact and Access Studies for Taco Bell Restaurants, Connecticut

Preparation of a Traffic Impact and Access Studies for development of new Taco Bell restaurants in East Hartford and Rocky Hill Connecticut.

Traffic Impact and Access Studies Exxon Service Stations, Massachusetts and New Hampshire

Preparation of Traffic Impact and Access Studies for retail service station modernization projects including retail stores and carwashes in Stratham, New Hampshire and Marlborough, Massachusetts.

Parking Improvement Plan, New England Baptist Hospital

Preparation of a campus-wide plans for at grade parking areas and structured parking facilities for the hospital's main campus.

Star Market Traffic Impact and Access Study, Belmont, Massachusetts

Preparation of a Traffic Impact and Access Study for a new 39,800 sq.-ft. supermarket and pharmacy. The project also involved development of an area wide program of transportation improvements including the widening and realignment of Trapelo Road, and channelization and signalization of the Trapelo Road/Lexington/Moraine Streets intersection. Final design documents were developed for an interconnected closed loop intersection signalization system, for widening and channelization of the Trapelo Road and Pleasant Street intersection, and for the widening of Route 60.

Traffic Circulation and Parking Study Newton Wellesley Hospital, Newton, Massachusetts

Preparation of a Traffic Circulation & Parking Study, including a conceptual analysis of on site parking and circulation issues.

Traffic Impact Report Crossroads Plaza, Lunenburg, MA

Preparation of a Traffic Impact Report for a new retail shopping center and final design for widening of Route 2A to provide new turning lanes.

Traffic Impact Report Beverly Commerce Park, Beverly, MA

Preparation of an area-wide traffic study evaluating the impacts of developing over 1 million SF of industrial and retail space on eleven intersections and intervening roadway segments.

Dresser Hill Bridge Improvements, Southbridge, Massachusetts

Maintenance of traffic plan for bridge redecking project including construction signing and final design of a temporary traffic signal to facilitate alternating one way traffic across the bridge during construction.

Thunderbird Plaza Signal System Design, Tyngsboro, MA

Final design of channelization and a traffic signal system at shopping center entrance.

Addition Hill Industrial Park, Marlborough, MA

Final design of intersection channelization and an entrance road for a high tech business park.

D.W. Fish Traffic Study, South Windsor, Connecticut

Preparation of a traffic study identifying the impacts of development of 120 single and multi-family dwelling units on traffic volumes and intersection operations.



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Dunkin Donuts Shop, Weymouth, MA

Preparation of a Traffic Impact and Access Study for a Dunkin Donuts shop providing drive through service only. The site is located at a key entrance to the former South Weymouth Naval Shipyard and the work included coordination with traffic generated by redevelopment of the former 1,400 acre navy base.

Traffic Impact and Access Study, Marsh Hill Subdivision, Marshfield, Massachusetts

Preparation of a Traffic Impact and Access Study for Marsh Hill Subdivision prepared for the Marshfield Planning Board involving two new subdivision roads intersecting with Route 139 just north of the Duxbury town line at the existing Tremont and Careswell Streets intersection.

Traffic Impact Study, Preachers Path Definitive Subdivision on Route 139, Marshfield, MA

Preparation of a Traffic Impact and Access Study for the Preachers Path Definitive Subdivision on Plain Street (Route 139) prepared for the Marshfield Planning Board evaluating sight distance, intersection operations, measurements of existing travel speed, future sight distance and intersection operations. The report also included development of a coordinated program of intersection and roadway improvements for three intersections along Route 139.

Traffic Impact Study for Chestnut Hill Subdivision Marshfield, Massachusetts

For the Marshfield Planning Board, preparation of a *Traffic Impact Study for the Chestnut Hill Subdivision* involving spot speed studies, sight distance, safety and accident history, and development of new access strategies including alternative intersection locations and designs.

Route 109 Reconstruction, Milford, Massachusetts

Final design of highway improvements including major roadway widening and extending from the existing signalized intersection of Routes 16 and 109 to the new signalized intersection of Route 109 and Veterans Memorial Drive.

Traffic Impact Study for Retail Shopping Center, Norwood, MA

Preparation of a traffic impact report for development of a retail shopping center on Nahatan Street in Norwood. The report included analysis of traffic volumes and intersection operations for intersections along Nahatan Street. The report also encompassed operational analysis of the grade separated rotary at Nahatan Street and Route 1 including Level-of-Service evaluations for rotary weaving sections and highway access ramps.

Traffic Impact Study for Star Market, Lexington Street, Waltham, MA

Preparation of a *Traffic Impact Study for a new Star Market on Lexington Street in Waltham*. The report addresses safety, traffic volume projections, and intersection Levels-of-Service. Mitigating measures evaluated for the report include off-site intersection modifications along the Lexington Street corridor.

Traffic Study for West Street, Randall Road, and Nash Hill Road Intersection, Ludlow, MA

Preparation of a Traffic Impact and Access Study for the West Street, Randall Road, and Nash Hill Road intersection including analysis and development of traffic mitigation measures in conjunction with expansion of the Hampden County Correctional Facility.

Environmental Impact Report (EIR), Shopping Center, Milford, MA

Preparation of the traffic impacts section of an Environmental Impact Report for a new retail shopping center. The environmental analysis included an area-wide traffic analysis that incorporated traffic impacts of other area projects that were the subject of earlier Environmental Impact Reports.



**Professional Services
Corporation, PC**

**Resume of
Thomas C. Houston, AICP, PE
Project Principal**

EXPERIENCE

Extensive experience in peer reviews of traffic impact and access studies, traffic and transportation engineering, and expert testimony and public presentations.

- ◆ Traffic & Transportation Engineering – Prepared traffic impact and access studies for diverse land development projects. Completed preliminary and final design documents for local roadways, arterial streets, highways, intersections and traffic signal controls including interconnected closed loop systems.
- ◆ Peer Review of Traffic Impact and Access Studies – Completed peer reviews Traffic Impact and Access Studies (TIAS) for over one hundred fifty (150) land development projects including numerous Comprehensive Permit 40B projects. Prepared traffic impact and access study regulations included in municipal subdivision regulations.
- ◆ Transportation Planning – Completed intermodal transportation planning projects and prepared area wide traffic volume models. Prepared corridor studies and functional design reports encompassing programs of transportation improvements. Prepared traffic impact and access sections of EIS/BIR reports for numerous transportation projects.

EDUCATION

MS, Master of Science, Transportation, 1979, Northeastern University

MUA, Masters of Urban Affairs, 1974, Boston University

BSCE, Bachelor of Science Civil Engineering, 1971, Northeastern University

EXPERT WITNESS

Qualified as an expert witness traffic and transportation engineering in numerous cases before the Land Court and Superior Court in Massachusetts and before DHCD's Housing Appeals Committee.

HONORS

Tau Beta Pi, national engineering honor society

ACADEMIC

Former Instructor, Transportation Program, Northeastern University Graduate School of Engineering

PUBLIC SERVICE

Former Member, Sharon Planning Board for 10 years

PROFESSIONAL

Member, American Society of Civil Engineers

Member, American Planning Association

REGISTRATIONS

Professional Engineer in Massachusetts and Rhode Island

American Institute of Certified Planners



Resume of
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Project Principal

TRAFFIC & TRANSPORTATION PEER REVIEW EXPERIENCE

Experience in the completion of peer reviews of the traffic impact and access studies for over 100 land development projects including over twenty 40B projects.

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Peer review of the Traffic Impact and Access Studies for over eighty (80) site plans and subdivision plans including:

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Preparation of comprehensive updates to the traffic impact and access requirements of the Planning Board's *Land Subdivision Rules & Regulations*.

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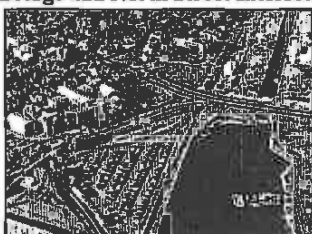


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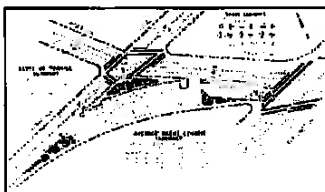
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Resume of
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Preparation of the traffic impacts section of an Environmental Impact Report for a new retail shopping center. The environmental analysis included an area-wide traffic analysis that incorporated traffic impacts of other area projects that were the subject of earlier Environmental Impact Reports.



EXPERIENCE

Extensive experience in peer reviews of traffic impact and access studies, traffic and transportation engineering, and expert testimony and public presentations.

- ◆ Traffic & Transportation Engineering – Prepared traffic impact and access studies for diverse land development projects. Completed preliminary and final design documents for local roadways, arterial streets, highways, intersections and traffic signal controls including interconnected closed loop systems.
- ◆ Peer Review of Traffic Impact and Access Studies – Completed peer reviews Traffic Impact and Access Studies (TIAS) for over one hundred fifty (150) land development projects including numerous Comprehensive Permit 40B projects. Prepared traffic impact and access study regulations included in municipal subdivision regulations.
- ◆ Transportation Planning - Completed intermodal transportation planning projects and prepared area wide traffic volume models. Prepared corridor studies and functional design reports encompassing programs of transportation improvements. Prepared traffic impact and access sections of EIS/EIR reports for numerous transportation projects.

EDUCATION

MS, Master of Science, Transportation, 1979, Northeastern University
MUA, Masters of Urban Affairs, 1974, Boston University
BSCE, Bachelor of Science Civil Engineering, 1971, Northeastern University

EXPERT WITNESS

Qualified as an expert witness traffic and transportation engineering in numerous cases before the Land Court and Superior Court in Massachusetts and before DHCD's Housing Appeals Committee.

HONORS

Tau Beta Pi, national engineering honor society

ACADEMIC

Former Instructor, Transportation Program, Northeastern University Graduate School of Engineering

PUBLIC SERVICE

Former Member, Sharon Planning Board for 10 years

PROFESSIONAL

Member, American Society of Civil Engineers
Member, American Planning Association

REGISTRATIONS

Professional Engineer in Massachusetts and Rhode Island
American Institute of Certified Planners



Resume of
Thomas C. Houston, AICP, PE
Project Principal

TRAFFIC & TRANSPORTATION PEER REVIEW EXPERIENCE

Experience in the completion of peer reviews of the traffic impact and access studies for over 100 land development projects including over twenty 40B projects.

Canton Planning Board, Canton, MA

Peer review of the Traffic Impact and Access Studies for over eighty (80) site plans and subdivision plans including:

- Peer Review of the Traffic Impact and Access Study submitted for the 450,000 sq. ft. Reebok World Headquarters.
- Peer Review of the Traffic Impact and Access Study for the 350,000 sq. ft. Blue View Corporate Center including coordination of traffic volume projections and off-site traffic impact mitigation commitments for several other major office parks and a hotel along the Royal Street Corridor.
- Peer Review of the Traffic Impact and Access Studies for three Dunkin Donuts Shops including detailed analysis of service times and vehicle queuing at drive through windows.
- Peer Review of the Traffic Impact and Access Study for expansion and rehabilitation of the Cobbs Corner Shopping Mall.
- Peer Review of the Traffic Impact and Access Studies for development of major office, warehouse, and industrial sites in the 1,000,000 sq. ft. Canton Commerce Center.
- Peer Review of the Traffic Impact and Access Studies for fast food shops including a McDonalds.
- Prepared the traffic impact and access study requirements of the *Land Subdivision Rules & Regulations*.

Norfolk Planning Board, Norfolk, MA

Peer review of the Traffic Impact and Access Studies for over fifty (50) site plans and subdivision plans including:

- Peer review of Traffic Impact and Access Studies for the Norfolk Commons Phases I and II which involve construction of a new town center including a commuter rail station and new retail stores and housing centered about a New England common. Transportation improvements evaluated in the peer review include new intersections and roundabouts and a new bridge over the commuter rail line.
- Peer review of the Traffic Impact and Access Study for the overall 26 lot Shire Industrial Park and review of supplemental traffic information for individual warehouse and industrial sites within the park.
- Prepared the traffic impact and access study requirements of the *Land Subdivision Rules & Regulations*.

Town of Sharon, Sharon, MA

- Peer review of the Traffic Impact and Access Study as well as the transportation section of the Environmental Impact Report for the one half million square foot Sharon Commons Lifestyle Center. The Traffic Study Area included twelve major intersections throughout the Town of



**Resume of
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Sharon. Also completed the peer review of the final design plans for South Main Street Improvements including major widening to provide turning lanes and a closed loop signal system encompassing the I-95 interchange ramps and additional intersections along the South Main Street corridor. Also completed the peer review of final design plans for reconstruction of Old Post Road as a divided commercial arterial street connecting South Main Street with the Sharon Commons Lifestyle Center.

- Peer review of the Traffic Impact and Access Study for Sharon Hills, a six hundred twenty four (624) unit continuing care retirement community (CCRC) and a one hundred fifty (150) bed nursing home. Also, peer review of a construction phase TIAS for staged construction access that included extensive off-site intersection upgrades and a truck scheduling plan to control the timing and direction of truck trips.

Marion Planning Board, Marion, MA

Peer review of the Traffic Impact and Access Studies for various land development projects including:

- Peer review of the traffic impacts section of the *Draft, Final, and Supplemental Environmental Impact Reports for the Wareham Crossing* regional shopping center and development of an area wide traffic volume model to identify traffic impacts of the shopping center on the Town of Marion.
- Peer review of the Traffic Impact and Access Study for a shopping center including small retail shops and a Cape Cod Bank and Trust branch office with drive-through tellers.
- Peer review of the Traffic Impact and Access Study for an office/retail center including small retail shops, offices, and a Dunkin Donuts shop with a drive-through window.

Dedham Planning Board, Dedham, MA

Preparation of comprehensive updates to the traffic impact and access requirements of the Planning Board's *Land Subdivision Rules & Regulations*.

Hingham Planning Board, Hingham, MA

Review of various land development projects including:

- Peer review of the Traffic Impact and Access Study for a proposed golf course.
- Peer review of the Traffic Impact and Access Study for multi-family housing development and related renovations to a Town owned recreation complex.

Norwell Planning Board, Norwell, MA

Peer review of site and subdivision plans including:

- Peer review of the Traffic Impact and Access Study for the Coastal Nissan site plan for adaptive reuse of an industrial building as an automobile dealership
- Peer review of the Traffic Impact and Access Study Shaw Saab site plan involving updating and expansion of an automobile dealership.



**Resume of
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Scituate Planning Board, Scituate, MA

Peer review of traffic impacts for the Dreamwold Estates subdivision including offsite impacts and mitigation.

Canton Board of Appeals, Canton, MA

Peer review of Comprehensive Permit projects including:

- Peer review of the Traffic Impact and Access Studies for six (6) 40B projects processed under the State's Comprehensive Permit Process.
- Provision of expert testimony before the Housing Appeals Committee on traffic and transportation impacts of the Acorn Estates and the Highlands at Canton Comprehensive Permit Projects

Hingham Board of Appeals, Hingham, MA

Peer review of the Traffic Impact and Access Study for the Hingham Shipyard project, which included retail and marine uses and an MBTA commuter boat terminal in addition to market rate and affordable housing.

Holliston Board of Appeals, Holliston, MA

Peer review of the Traffic Impact and Access Study for the 200 unit Cedar Ridge 40B project.

Lynnfield Board of Appeals, Lynnfield, MA

Review of the Traffic Impact and Access Study for the Windsor Estates Elderly Housing development.

Marion Board of Appeals, Marion, MA

Peer review of the Traffic Impact and Access Study for the 168 unit Marion Village Estates Comprehensive Permit Project.

Norfolk Board of Appeals, Norfolk, MA

Peer review of the Comprehensive Permit Projects including:

- Peer Review of the Traffic Impact and Access Study for the 44-unit Norfolk Town Center Condominium Project.
- Peer review of the Traffic Impact and Access Study for the Norfolk Landing Project.

Norwell Board of Appeals, Norwell, MA

- Peer review of the Traffic Impact and Access Study for the Tiffany Hill 40B project.
- Expert testimony on traffic and transportation issues on the Tiffany Hill project before the Housing Appeals Committee.

Stoughton Board of Appeals, Stoughton, MA

- Provision of expert testimony on traffic and transportation impacts of the 48 unit Page Place Apartments project before the Housing Appeals Committee.



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- Peer review of the Traffic Impact and Access Study for the Woodbridge Crossing 40B project that included an extensive program of off-site transportation improvements including intersection reconstruction and provision of a closed loop traffic signal system.
- Peer review of the Traffic Impact and Access Study for the Lodges at Stoughton 40B project that included comprehensive revision of the TIAS for the Stoughton Technology Center to address replacement of office and warehouse use with housing.
- Peer review of the Traffic Impact and Access Study for the Residences at Stagecoach Village 40B project off Route 138.

CDNA – Citizens for Dedham Neighborhood Alliance, Dedham, MA

Peer review of the traffic impacts of a 160 acre campus encompassing educational and healthcare facilities including a health care facility, assisted living units, a private elementary school, and an early childhood facility.

K. Bilzerian, Tisbury, MA

Expert testimony in the Dukes County Land Court encompassing traffic and access impacts caused by construction of a 48 unit Chapter 40B project.

Massapoag Brook Neighborhood Association, Sharon, MA

Peer review of the Traffic Impact and Access Study for the 32 unit Glendale Village 40B project.

Nagog Woods Community Corp., Acton, MA

Peer review of the traffic and access impacts of the Woodlands at Laurel Hill 40B Project.

Partridge, Snow, and Hann, Johnston, Rhode Island

Review of the traffic and access impacts of the Stonehill Marketplace project involving phased expansion of a 600,000 sq. ft. regional shopping center encompassing traffic operations on Atwood Avenue and the Route 6 highway interchange ramps.

Rattlesnake Hill Open Space Association, Inc., Sharon, MA

Expert testimony regarding the traffic and access impacts of the Estates at Borderland 40B project involving development of 250 residential units on 230 acres

Thomas J. Philips, Esquire, Newton, MA

Peer review of the traffic impacts of the high rise Covenant Residence on Commonwealth 40B Project on local and major arterial roadways including Route 9.

Traffic Impact Review, Tufts Medical Center Parking Garage, Boston, Massachusetts

Review of the Traffic Impact Report for a new parking garage for Tufts Medical Center and preparation of a technical review comments submitted to the MEPA Unit of the Executive Office of Environmental Affairs on behalf of a citizens group.

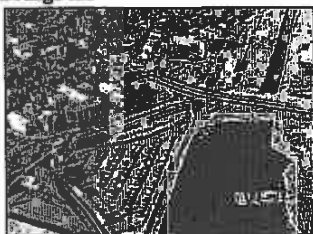


Resume of
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TRAFFIC & TRANSPORTATION ENGINEERING EXPERIENCE

Experience in the preparation of traffic impact reports and in the preparation of the traffic impact sections of environmental impact reports for major land development projects. Completed preliminary and final design documents for arterial streets, intersections including traffic signal systems, and limited access highways for MassHighway, RIDOT, and municipal clients. Representative traffic and transportation engineering projects include:

Bridge and North Street Intersection Improvement Project, Salem, MA



Preparation of a feasibility study for redesign of a grade-separated urban intersection that included development of an area wide traffic volume model, intersection capacity analysis, safety analysis, development of three alternative intersection improvements plan to relocate existing ramps to accommodate expansion of the Salem Trial Courts complex. The extensive public participation process included public presentations at meetings in Salem attended by the Salem Partnership, City Officials, citizens and neighborhood groups and a presentation to MassHighway officials in Boston.

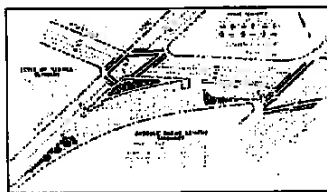
Expert Testimony, Standish Gas, Taunton, MA

Expert testimony in Taunton Superior Court on traffic and access issues in the matter of Hamie versus the Taunton Board of Appeals that resulted in the superior court sustaining the city's denial of the project based primarily on its traffic impacts.

Traffic Impact Report Star Market, Allston, MA

Preparation of an area-wide traffic impact analysis encompassing Packard's Corner and other intersections along the Commonwealth Avenue corridor. The multi-modal transportation analysis included evaluation of vehicular, transit, and pedestrian modes. The traffic analysis included evaluation of the complex Packard's Corner intersection that includes five intersection approaches, a median at grade light rail line, and extensive pedestrian usage. The transportation analysis was incorporated as part of the BRA/Boston PIR processes and involved extensive public participation on the part of community groups in Brighton and Allston. Mitigating measures developed for this project included intersection upgrades and coordination with the Commonwealth Avenue Section B Improvements Project. The work also involved final design of off-site roadway improvements including reconstruction of city streets and channelization and traffic control measures at existing intersections impacted by project traffic.

Traffic Impact Report Retail Shopping Center, East Boston, MA



Area wide traffic impact analysis for construction of a new retail shopping center on Route 1A (McClellan Highway) in the Orient Heights section of East Boston. The transportation planning process included extensive hearings and public meetings, and agency approvals. The technical analysis included a detailed traffic analysis that incorporated changes in background traffic based upon the Logan Airport Generic EIR and the Central Artery/Tunnel (CAT) Project. Measures developed to mitigate traffic impacts include a new grade-separated highway interchange and frontage roads on

McClellan Highway and reconstruction of the Boardman and Saratoga Streets intersection providing new signalization and off-street parking.



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Preliminary Design Route 57, Agawam and Southwick, MA

Preparation of design alternatives for reconstruction of Route 57 as a limited access highway in Agawam and Southwick including highway mainline and interchange alternatives to minimize noise and wetland impacts.

Traffic Impact and Access Study, Proposed Dunkin Donuts Shop, Marion, MA

Preparation of a traffic impact and access study for a proposed Dunkin Donuts shop on Wareham Street (Route 6) in Marion.

Functional Design Report Sudbury Plaza, Sudbury, MA

Preparation of a Functional Design Report to reconstruct a segment of Route 20 to provide turning lanes and a new signalized intersection serving the Sudbury Plaza Shopping center and a Raytheon manufacturing plant. The functional design report addressed roadway and intersection reconstruction and inclusion of both existing and new traffic signals as part of a closed loop system.

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(12)

CONTRACT FOR SERVICES

TOWN: The Town of Littleton

TOWN'S REPRESENTATIVE: _____

VENDOR: _____

PROJECT: Engineering Review Services for Board of Appeals

SITE: 15 Great Road, Littleton, MA

DATE: _____, 2011

BUDGET:

The Town hereby accepts the Vendor's proposal to perform services ("Services") in connection with the Project in accordance with and subject to: (i) the Terms and Conditions attached hereto as **Exhibit A**; (ii) Scope of Service attached hereto as **Exhibit B**; and (iii) the salary or hourly rate attached hereto as **Exhibit C**. Collectively, these documents constitute this Agreement.

COMMENCEMENT OF WORK (check applicable box):

- ☒ This Agreement constitutes a notice to proceed with services.
- ☐ Services shall not be performed under this Agreement until the Town so advises the Vendor in writing.

INSURANCE:	MINIMUM INSURANCE LIMITS
General Liability (Bodily Injury & Property Damage):	\$1,000,000.00
General Liability – Aggregate:	\$2,000,000.00
Worker's Compensation:	\$ (as required by law)
Automobile Liability:	\$1,000,000.00
Umbrella Liability:	\$2,000,000.00
Umbrella Liability – Aggregate:	\$2,000,000.00
Professional Liability (Errors & Omissions):	\$1,000,000.00
Professional Liability – Aggregate:	\$2,000,000.00

TOWN:

By: _____

Title: _____

Date Signed: _____

Approved as to availability of funds:

By: _____

Title: _____

Approved as to form by Town Counsel – DATE

VENDOR:

By: _____

Title: _____

Date Signed: _____

Exhibit A

TERMS AND CONDITIONS

1. PERFORMANCE OF SERVICES

All Services of the Vendor shall be performed by qualified personnel. The Vendor's Project team shall consist of those persons identified in Exhibit C of this Agreement. The employment by the Vendor of additional Subcontractors for any of the Services shall be subject to the prior written approval of the Town. No member of the Project team shall be replaced without the consent of the Town. The Town shall have the right to require the Vendor to remove any personnel from the Project for reasonable cause. The Vendor shall perform its Services in accordance with the highest professional standards of skill, care, and diligence. Without limiting the foregoing, the Town shall have the right to require the Vendor to cease providing Services immediately upon written notice.

2. TIME

The Vendor shall perform its Services as expeditiously as is consistent with the standards of professional skill and care required hereby. The Vendor shall perform its Services in coordination with the operations of the Town and with any party engaged by the Town in connection with the Project. It shall be the obligation of the Vendor to request any information necessary to be provided by the Town for the performance of the Vendor's Services. Time is of the essence of this Agreement.

3. REIMBURSABLE EXPENSES

Automobile mileage shall be reimbursed at the government rate. The Town shall compensate the Vendor for reimbursable expenses actually incurred; provided, however, that reimbursable expenses shall only be eligible for reimbursement if they have been submitted in advance and approved in writing by the Town. The Vendor agrees to use reasonable efforts to minimize expenses which are reimbursable by the Town.

4. VENDOR'S COMPENSATION

a. Lump Sum. If Services are to be provided on a Lump Sum basis, the total amount of compensation due to the Vendor in consideration of the full performance of Services by the Vendor is the amount set forth on page one of this Agreement. The Town shall pay the Vendor as Services are performed by the Vendor based upon the portion of Services completed.

b. Upset Limit. If Services are to be provided subject to an Upset Limit, the total amount of compensation due to the Vendor in consideration of the full performance of Services by the Vendor shall in no event exceed the amount set forth on page one of this Agreement. Unless otherwise agreed, payments shall be made to the Vendor on a Time Card/Unit Price basis as provided in paragraph c. below, subject to the Upset Limit.

c. Time Card/Unit Price. If Services are to be provided on a Time Card/Unit Price basis, payments shall be made to the Vendor for Services performed based upon the salary or hourly rate or unit price schedule included in the Proposal or attached as Exhibit C. If the agreed rate schedule is not included in the Proposal or attached as Exhibit C, the Vendor shall submit to the Town, before proceeding with Services, a rate schedule listing the maximum rates to be charged for the various employees or categories of employees performing Services or categories or services. Compensation for services performed by authorized Subcontractors shall be on the basis of the actual costs to the Vendor unless otherwise specified herein or in the Proposal. The Vendor shall use his best efforts to complete the performance of his Services within the Estimated Amount set forth on the first page of this Agreement. The Vendor shall advise the Town at such time as the Estimated Amount has been reached. The Town shall not be obligated to pay for any amount in excess of the Estimated Amount, unless the Town gives the Vendor a written notice authorizing the further performance of Services and the incurring of additional costs for such Services.

d. No Compensation for Certain Services. Neither the Vendor nor any of its Subcontractors shall be compensated for any services involved in preparing changes that are required for additional work that should have been anticipated by the Vendor in the preparation of construction documents or other work products, as reasonably determined by the executive head of the Town, nor for any services made necessary by the fault or negligence of the Vendor or its Subcontractors.

e. Subject to Appropriation. The obligations of the Town hereunder shall be subject to appropriation on a fiscal year basis. In the absence of appropriation, this agreement shall be terminated immediately without liability of the Town for damages, lost profits, penalties, or other charges arising from early termination.

5. PAYMENT

The Vendor shall submit, not more often than monthly, statements for fees for Services rendered and reimbursable expenses (stated separately) incurred. The Vendor's statements shall include a description of the Services performed for the period in question with a progress report, and shall be in such form and detail and with such supporting data as the Town may reasonably require to show the computational basis for all charges (including reimbursable expenses), including a statement explaining any substantial deviation from the Vendor's anticipated work schedule, staffing plan and costs. Payment shall be due within thirty (30) days after the Town receives a proper statement. In no event shall the Town be liable for interest, penalties, expenses or attorney's fees. No payment made hereunder shall constitute or be construed as final acceptance or approval of that part of the Services to which such payment relates or relieve the Vendor of any of its obligations hereunder with respect thereto.

6. VENDOR'S ACCOUNTING RECORDS

The Vendor shall keep records pertaining to Services performed (including complete and detailed time records) and reimbursable expenses incurred, employing sound bookkeeping practices and in accordance with generally accepted accounting principles. All records

pertaining to Services performed on a time card or unit price basis and reimbursable expenses shall be available to the Town or its authorized representatives for review and audit during normal business hours.

7. REPORTS, DRAWINGS, ETC.

All reports, drawings, plans and other data and material, including computer programs and other material in electronic media (collectively, "Materials") furnished to the Town shall become the Town's property and may be used by the Town (or such parties as the Town may designate) thereafter in such manner and for such purposes as the Town (or such parties as the Town may designate) may deem advisable, without further employment of or additional compensation to the Vendor. The Vendor shall not release or disclose to any third party any Materials produced for the Town without obtaining the Town's prior written consent. At no time shall the Vendor release or disclose to any third party any Materials furnished to the Vendor by the Town in connection with the performance of the Vendor's Services.

8. INSURANCE

The Vendor shall obtain and maintain the following insurance in amounts not less than the Minimum Insurance Limits set forth on page one of this Agreement during all times that the Vendor is performing Services and for at least one year after termination of this Agreement in the case of Commercial General Liability, Worker's Compensation and Employer's Liability insurance, and for at least the applicable period of limitations on actions provided by law in the case of Professional Liability insurance:

- a. Commercial General Liability insurance covering claims for injury to persons and damage to property. Such insurance shall include contractual liability and shall cover the use of all equipment and motor vehicles on the Site or transporting persons, equipment, materials or debris to and from the Site. Products and Completed Operations insurance shall be maintained for at least three years after completion of this Agreement.
- b. Professional Liability insurance for protection from claims arising out of the performance of professional services, including contractual coverage.
- c. Worker's Compensation Liability insurance in amounts not less than those required by law and Employer's Liability insurance.
- d. Automobile Liability insurance applicable for any contractor who has an automobile operating exposure for protection against bodily injury and property damage.
- e. Umbrella Liability insurance, which shall be maintained for at least three years after completion of this Agreement.

Certificates of insurance evidencing the coverage required hereunder, together with evidence that all premiums for such insurance have been paid, shall be filed with the Town prior to the commencement of the Services to be rendered by the Vendor hereunder. All such policies and certificates shall be written through companies and in forms acceptable to the Town's lender or lenders, if any. All policies shall contain a provision that coverages afforded by them will not

be cancelled or amended until at least thirty (30) days prior written notice has been given to the Town. The insurance provided under clause a, b, d and e, above, shall name the Town and such other parties as the Town shall require as "Additional Insured" parties.

At the request of the Town, a Subcontractor employed by the Vendor shall obtain and maintain a professional liability insurance policy covering negligent errors, omissions and acts of such Subcontractor or of any person or business entity for whose performance the Subcontractor is legally liable arising out of the performance of the contract for Subcontractor services. The Subcontractor shall furnish a certificate or certificates of such insurance coverage to the Town prior to the employment of such Subcontractor by the Vendor. A liability insurance policy maintained under this paragraph shall provide for coverage of such type and duration and in such amount as the Town shall require.

9. INDEMNIFICATION

To the maximum extent permitted by law, the Vendor agrees to indemnify, defend with counsel acceptable to the Town and save harmless the Town from all suits, actions, claims, demands, damages, losses, expenses and costs, including attorneys' fees, of every kind and description which the Town may incur or suffer resulting from, in connection with, or arising out of any act, error or omission of, or breach of contractual duties to the Town by, the Vendor, its agents, servants, employees or Subcontractors. The extent of the foregoing indemnification and hold harmless provisions shall not be limited by any provision of insurance required by this Agreement and shall survive the termination of this Agreement.

10. COMPLIANCE WITH LAW

It is the responsibility of the Vendor that the Project be conducted, and that all Services and other work performed by the Vendor hereunder be performed so as to comply with all applicable federal, state and municipal laws, regulations, codes, ordinances and orders, and any permit conditions as to which the Vendor has knowledge, as the same may be in effect as of the time of the performance of such work. In particular, without limitation, the Vendor agrees to comply with (a) all regulations pertaining to approvals for federal and state grants, and with all federal and state environmental laws and regulations, and assist in making any submissions with respect thereto and (b) all applicable requirements of the Massachusetts public construction and procurement laws, which are incorporated by reference herein.

11. TERMINATION OF AGREEMENT

The Town may terminate this Agreement as follows:

- a. Without cause, on ten days' prior written notice; or
- b. Immediately, by written notice to the Vendor, if the Vendor violates any of the provisions of this Agreement, or fails to perform or observe any of the terms, covenants or conditions of this Agreement, or abandons in whole or in part its Services, or becomes unable to perform its Services, hereunder. For purposes of this Paragraph 12, it is acknowledged that the Vendor's Services under this Agreement are personal services and may not be assumed by or assigned by a trustee in bankruptcy.

In the event of termination, the Vendor shall promptly deliver to the Town all Materials, including all documents, work papers, studies, calculations, computer programs, data, drawings, plans, specifications and other tangible work product or materials pertaining to the Services performed under this Agreement to the time of termination, and thereupon the Town shall pay to the Vendor any unpaid and undisputed balance owing for Services rendered prior to the date of termination. Any termination of this Agreement shall not affect or impair the right of the Town to recover damages occasioned by any default of the Vendor or to set off such damages against amounts otherwise owed to the Vendor.

12. MISCELLANEOUS PROVISIONS

- a. Successors and Assigns. Subject to the provisions of Subparagraph (b) below, the Town and the Vendor each binds itself, its partners, successors, assigns, and legal representatives to the other party.
- b. Assignment by Vendor. The Vendor shall not assign, sublet or transfer any of its obligations, responsibilities, rights or interests (including, without limitation, its right to receive any moneys due hereunder) under this Agreement without the written consent of the Town. Any assignment, subletting, or transfer by the Vendor in violation of this Paragraph 13(b) shall be void and without force or effect.
- c. Entire Agreement. This Agreement represents the entire and integrated agreement between the Town and the Vendor with respect to the subject matter hereof and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Town and the Vendor.
- d. Confidentiality. The Vendor shall not, without the Town's prior written consent, release or disclose any information relating to the Project to anyone except as necessary to perform its duties hereunder.
- e. Certifications. The Vendor shall, from time to time, make such certifications and statements to the Town and to such of the Town's architects, designers, vendors and lenders, and such other parties, as the Town shall reasonably request, in such form as the Town shall reasonably request, provided that the Vendor determines that such certifications are true and correct based upon the Services performed by the Vendor hereunder.
- f. Additional Services. If the Town requests the Vendor to perform additional services beyond the scope of Services hereunder, the Vendor shall perform such additional services only upon obtaining written authorization from the Town including written agreement as to the method and amount of compensation for such additional services.
- g. Disputes. All claims, disputes and other matters in question between the Town and the Vendor arising out of or relating to this Agreement or the breach thereof shall be submitted for resolution to a court of competent jurisdiction in Suffolk or Middlesex County, Massachusetts, unless otherwise agreed by the parties. No such action shall be

brought, however, until the completion of all Services under this Agreement or the earlier termination thereof as provided in Paragraph 11 above, the parties agreeing to negotiate in good faith any claims, disputes or other matters in question during the term of this Agreement before resorting to litigation.

h. Limited Liability. No officer, director, member, employee, or other principal, agent or representative (whether disclosed or undisclosed) of the Town, nor any participant with the Town, shall be personally liable to the Vendor hereunder, for the Town's payment obligations or otherwise, the Vendor hereby agreeing to look solely to the assets of the Town for the satisfaction of any liability of the Town hereunder. In no event shall the Town ever be liable to the Vendor for indirect, incidental or consequential damages.

i. Governing Law. This Agreement shall be governed by the law of the Commonwealth of Massachusetts.

j. No Waiver. The Town's review, approval, acceptance or payment for Services under this Agreement shall not operate as a waiver of any rights under this Agreement and the Vendor shall be and remain liable to the Town for all damages incurred by the Town as the result of the vendor's failure to perform in conformance with the terms and conditions of this Agreement. The rights and remedies of the Town provided for under this Agreement are in addition to any other rights or remedies provided by law. The Town may assert a right to recover damages by any appropriate means, including but not limited to set-off, suit, withholding, recoupment, or counter-claim either during or after performance of this Agreement.

k. Interpretation. If any provision of this Agreement shall to any extent be held invalid or unenforceable, the remainder of this Agreement shall not be deemed affected thereby. Paragraph headings are included herein for reference purposes only and in no way define, limit or describe the scope or intent of any of the provisions of this Agreement.

j. Non-Exclusive. This Agreement is not exclusive and does not obligate the Town to employ the Vendor on all peer review contracts.

13. EQUAL EMPLOYMENT OPPORTUNITY

a. In connection with the performance of work under this Agreement, the Vendor shall not discriminate against any employee or applicant for employment because of race, color, religion, creed, national origin, ancestry, age, sex or handicap. The Vendor shall post in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination (the "Commission"), setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.

b. In connection with the performance of work under this Agreement, the Vendor shall not discriminate in its relationships with Subcontractors or suppliers on the basis of race, color, religion, creed, national origin, ancestry, age, sex or handicap.

c. The Vendor shall comply with all applicable laws and regulations pertaining to non-discrimination, equal opportunity and affirmative action, including without limitation executive orders and rules and regulations of federal and state agencies of competent jurisdiction.

14. CERTIFICATIONS BY VENDOR

By execution of this Agreement, the Vendor certifies:

a. The Vendor has not given, offered or agreed to give any person, corporation or other entity any gift, contribution or offer of employment as an inducement for, or in connection with, the award of this Agreement.

b. No Vendor to or subcontractor for the Vendor has given, offered or agreed to give any gift, contribution or offer of employment to the Vendor or to any other person, corporation, or entity as an inducement for, or in connection with, the award to the Vendor or subcontractor of a contract by the Vendor.

c. No person, corporation or other entity, other than a bona fide full time employee of the Vendor, has been retained or hired by the Vendor to solicit for or in any way assist the Vendor in obtaining this Agreement upon an agreement or understanding that such person, corporation or other entity be paid a fee or other consideration contingent upon the award of this Agreement to the Vendor.

d. The Vendor shall comply with all applicable requirements of Section 39R of Chapter 30 of the Massachusetts General Laws.

15. TAXES

By execution of this Agreement the vendor, pursuant to Section 49A of Chapter 62C of the Massachusetts General Laws, certifies under the penalties of perjury that it has, to the best knowledge and belief of the person(s) who signed this Agreement on the vendor's behalf, filed all state tax returns and paid all state taxes required under law.

16. CONFLICT OF INTEREST

The Vendor acknowledges that the Town is a municipality for the purposes of Chapter 268A of the Massachusetts General Laws (the Massachusetts conflict of interest statute), and the Vendor agrees, as circumstances require, to take actions and to forbear from taking actions so as to be in compliance at all times with obligations of the Vendor based on said statute.

Exhibit B

SCOPE OF SERVICES

The Vendor and its personnel will serve as agents to the Town of Littleton. The peer review will examine all documents and data submitted and obtained in connection with the comprehensive permit application by 15 Great Road LLC (the "Applicant") and will opine on issues related to background growth; site-generated traffic; trip distribution; traffic operation analysis; accident data, methodologies employed by the Applicant; and the validity of the findings and conclusions advanced by the Applicant.

The Vendor is expected to be familiar with the submission requirements and procedures for comprehensive permit applications and relevant local regulations and bylaws. Employees involved personally in reviews shall include at least one Professional Engineer licensed in the Commonwealth of Massachusetts. The engineer may be requested to attend evening meetings.

The engineer will be expected to review the materials for conformance with good engineering practices, the local regulations relevant to the application, and any relevant state, federal or local law or regulation.

The engineer will be expected to review materials submitted to the Board of Appeals, make an initial report to the Board prior to its public hearing on the matter, and review additional information submitted and/or follow up on outstanding items for the Board during the approval process. The engineer will also be expected to meet with the Applicant and/or their consultants on occasion to review materials and issues to be resolved during the review and approval process. Reports to the Board of Appeals must identify areas of concern and/or problems, reasons why they are of concern/issues, and make specific recommendations to the Board in such cases. Reports must be submitted to the Board in a timely manner, no later than _____, although earlier is preferred so that the Applicant can work to address the outstanding items prior to the meeting date. The Board of Appeals' Comprehensive Permit Rules further describes the consultant review process.

Exhibit C

PRICING SCHEDULE

Contract Year One

Engineering Firm

NAME	TITLE	HOURLY RATE
<i><u>Primary Staff</u></i>		
<i><u>Specialty Staff (Limited use)</u></i>		

13

CERTIFICATE OF COMPLIANCE WITH TAX LAWS

Pursuant to Commonwealth of Massachusetts General Laws, Chapter 62C, Section 49A, I certify
under the pains and penalties of perjury that, _____
(Contractor)

has filed all Commonwealth of Massachusetts state tax returns, has complied with all
Commonwealth of Massachusetts laws relating to taxes, and has paid all Commonwealth of
Massachusetts State Taxes required under law.

(Contractor)

By: _____

Contractor's Federal Tax I.D. No. _____

END OF DOCUMENT

14

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under the pains and penalties of perjury that this contract has been obtained in good faith and without collusion or fraud with any other person. As used in this certification, the word 'person' shall mean any natural person, business, partnerships, corporation, union, committee, club, or other organization, entity, or group of individuals.

Name of Business:

Signature:

Name of Person signing Bid:

END OF DOCUMENT