TABLE OF CONTENTS

A. COMPREHENSIVE PERMIT SITE APPROVAL APPLICATION/HOMEOWNERSHIP

1. **SECTION 1**
   - Location Map
   - Tax Map
   - Directions to Site
2. **SECTION 2**
   - Existing Conditions Plan
   - Aerial Photographs
   - Site/Context Photographs
   - Documentation Regarding Site Characteristics/Constraints
   - By-Right Site Plan
3. **SECTION 3** REQUIRED ATTACHMENTS
   - Preliminary Site Layout
   - Preliminary Architectural Plans
   - Narrative Description of Design Approach
   - Tabular Zoning Analysis
   - Sustainable Development Principles Evaluation Assessment Form
4. **SECTION 4** REQUIRED ATTACHMENTS
   - Evidence of Site Control
5. **SECTION 5** REQUIRED ATTACHMENTS
   - Initial Capital Budget
   - New England Fund Letter of Interest
   - Market Sales Comparables
6. **SECTION 6** REQUIRED ATTACHMENTS
   - Development Team Qualifications
7. **Section 7** Required Attachments
   - Narrative Describing Prior Meetings with Municipal Officials
   - Evidence that Copy of Complete Application was Submitted to Town of Sherborn
   - Copy of DHCD Notification Letter
   - Processing Fee Check Payable to Mass Housing [$2,500.00] [Submitted to MassHousing Only]
   - Technical Assistance/Mediation Fee Check Payable to MassHousing [$5,140.00]
   - Executed W-9 Form [Submitted to MassHousing only]

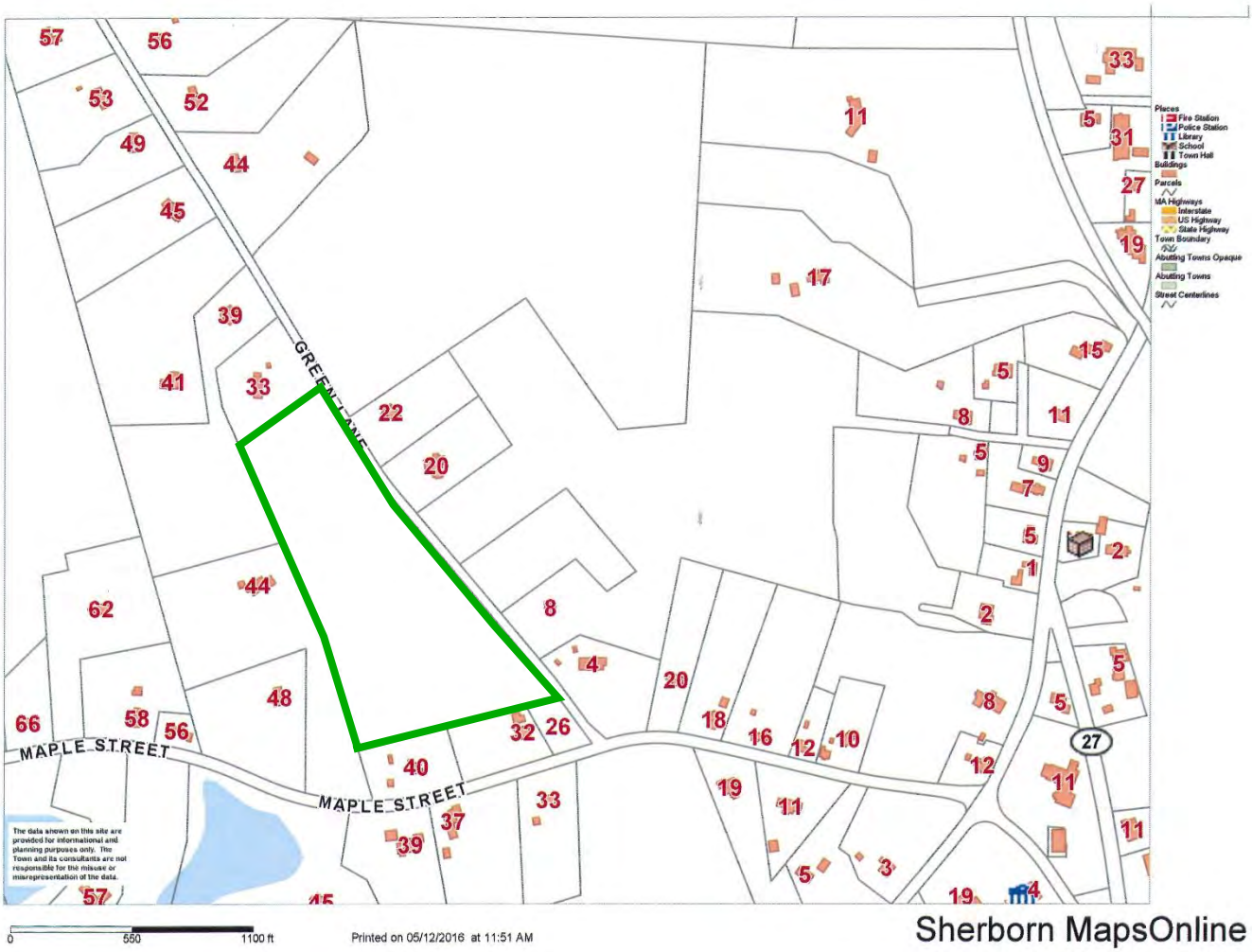
SECTION 1

- Location Map
- Tax Map
- Directions to Site

TAB 1.1 Location Map

1 Green Lane, Sherborn, MA

TAB 1.2 Assessor's Plan

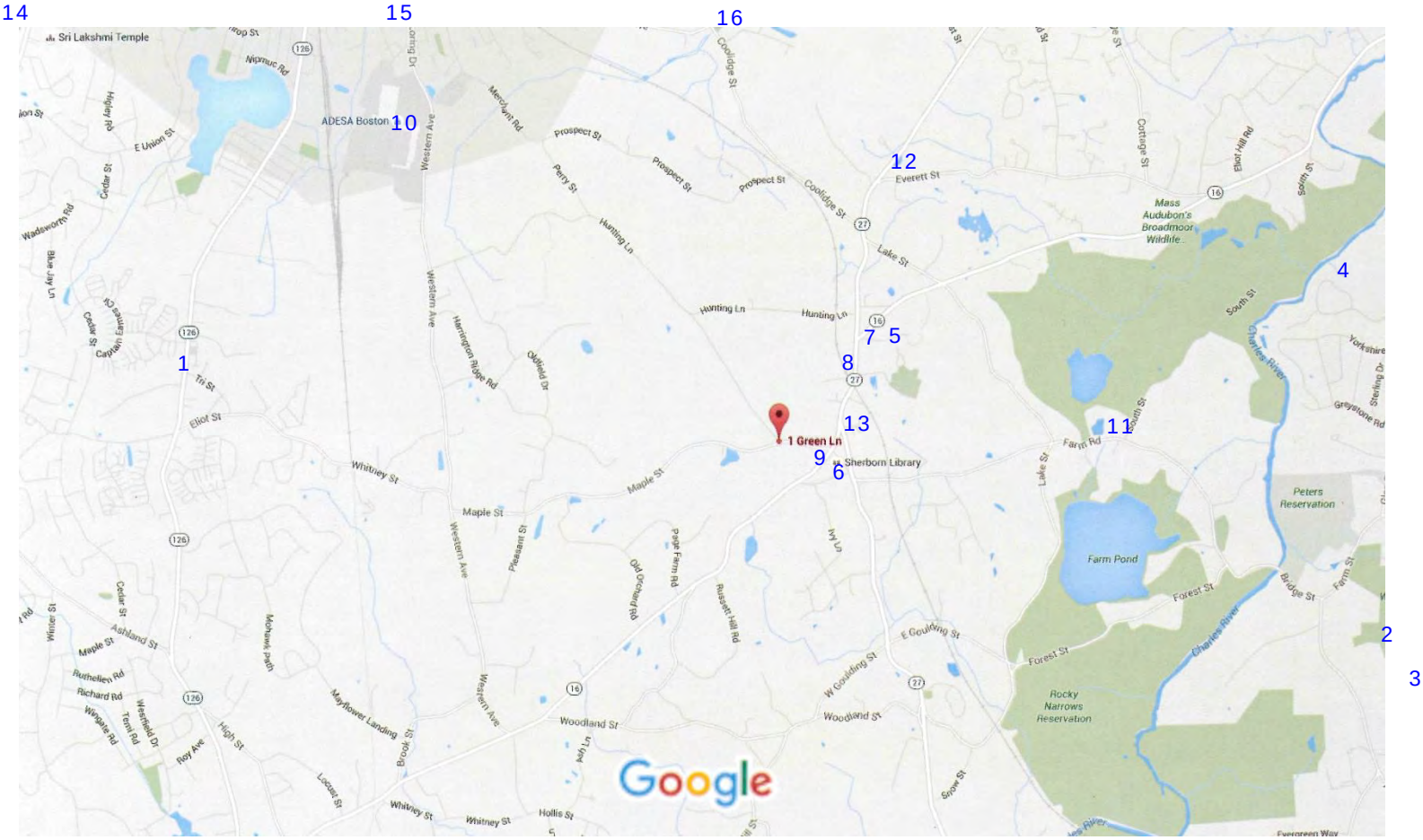


1 Green Lane, Sherborn, MA

TAB 1.3 Directions

Directions from the North [Route 9]

- East bound side of Route 9, Exit Route 27 South.
- Continue South on Route 27 for 4.9 miles.
- Turn left onto Maple Street and drive 0.25 miles. Green Lane will be on the right.



Locations Close by Green Lane continued on next page.

Available close to Green Lane

1. **Shaw's - Ashland, MA**
   301 Pond Street
   Ashland, MA 01721
   3.3 miles from Green Lane

2. **Dover- Sherborn Middle School**
   155 Farm Street
   Dover, MA 02030
   4.3 miles from Green Lane

3. **Dover-Sherborn High School**
   9 Junction Street
   Dover, MA 02030
   4.6 miles from Green Lane

4. **Chickering Elementary School**
   29 Cross Street
   Dover, MA 02030
   7.4 miles from Green Lane

5. **Pine Hill Elementary School**
   10 Pine Hill Lane
   Sherborn, MA 01770
   0.9 miles from Green Lane

6. **Sherborn Town Hall**
   19 Washington Street
   Sherborn, MA 01770
   0.5 miles from Green Lane

7. **Abby Road**
   2 North Main Street
   Sherborn, MA 01770
   0.5 miles from Green Lane

8. **Sherborn Fire Department**
   22 Main Street
   Sherborn, MA 01770
   0.6 miles to Green Lane

9. **Sherborn Police Department**
   17 Washington Street
   Sherborn, MA 01770
   0.3 miles from Green Lane

10. **ADESA Framingham**
    63 Western Ave
    Framingham, MA 01702
    3.6 miles from Green Lane

11. **Broadmoor Wildlife Sanctuary**
    127 Farm Road
    Sherborn, MA 01770
    2.0 miles from Green Lane

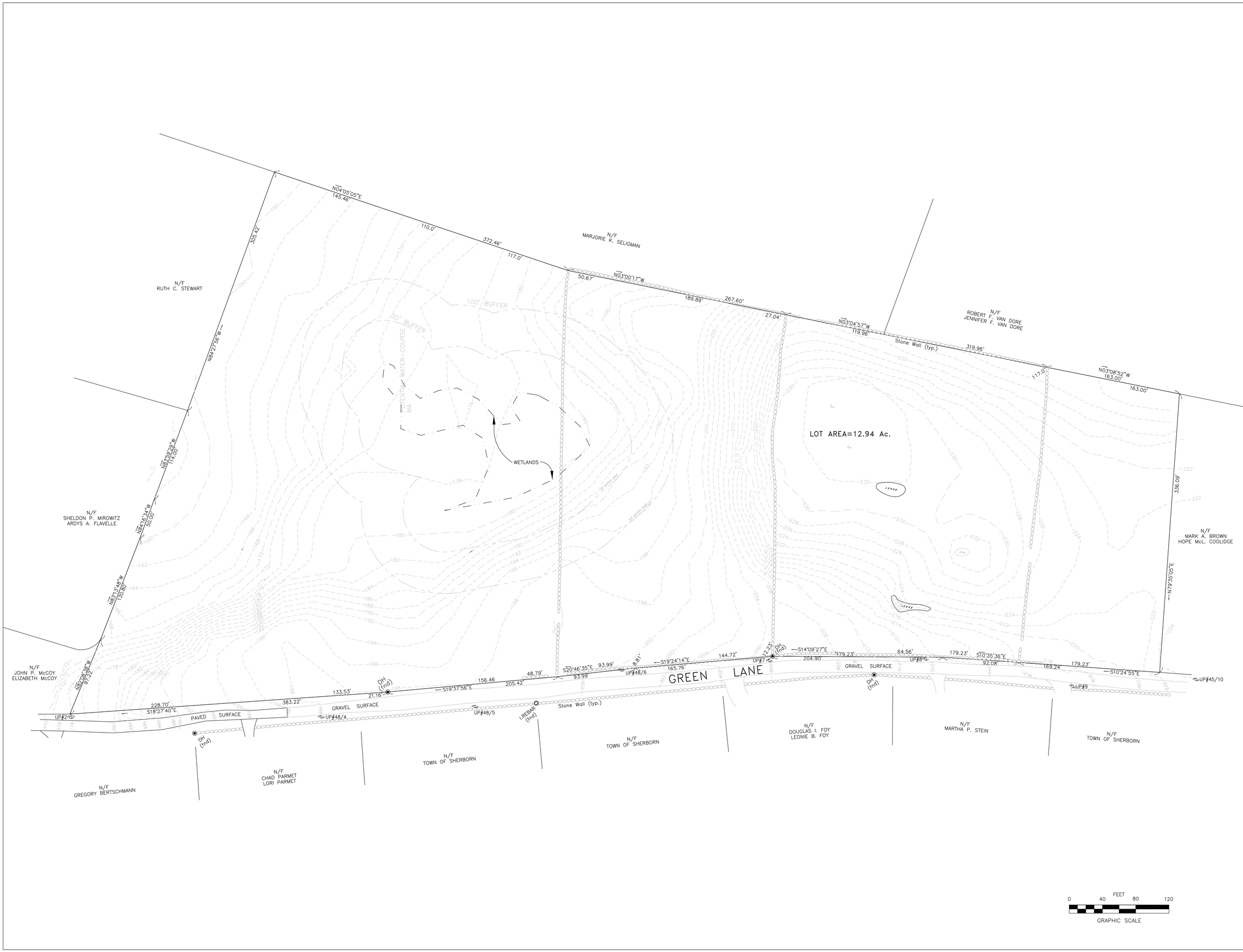
12. **Laurel Farm Recreational Area**
    150 North Main Street
    Sherborn, MA 01770
    1.8 miles from Green Lane

13. **Unitarian Universalist**
    11 Washington Street
    Sherborn, MA 01770
    0.3 miles from Green Lane

14. **MBTA Ashland Station**, 6.7 miles
15. **MBTA Framingham Station**, 3.5 miles
16. **MBTA West Natick Station**, 4.0 miles

SECTION 2

- Existing Conditions Plan
- Aerial Photographs
- Site/Context Photographs
- Documentation Regarding Site Characteristics/Constraints
- By-Right Site Plan



NO.	DATE	DESCRIPTION	BY

PREPARED BY:
BRUCE SALUK & ASSOC., INC.
CIVIL ENGINEERING & LAND SURVEYING
576 BOSTON POST ROAD EAST
MARLBOROUGH, MA 01752

EXISTING CONDITIONS

GREEN LANE
SHERBORN,MA

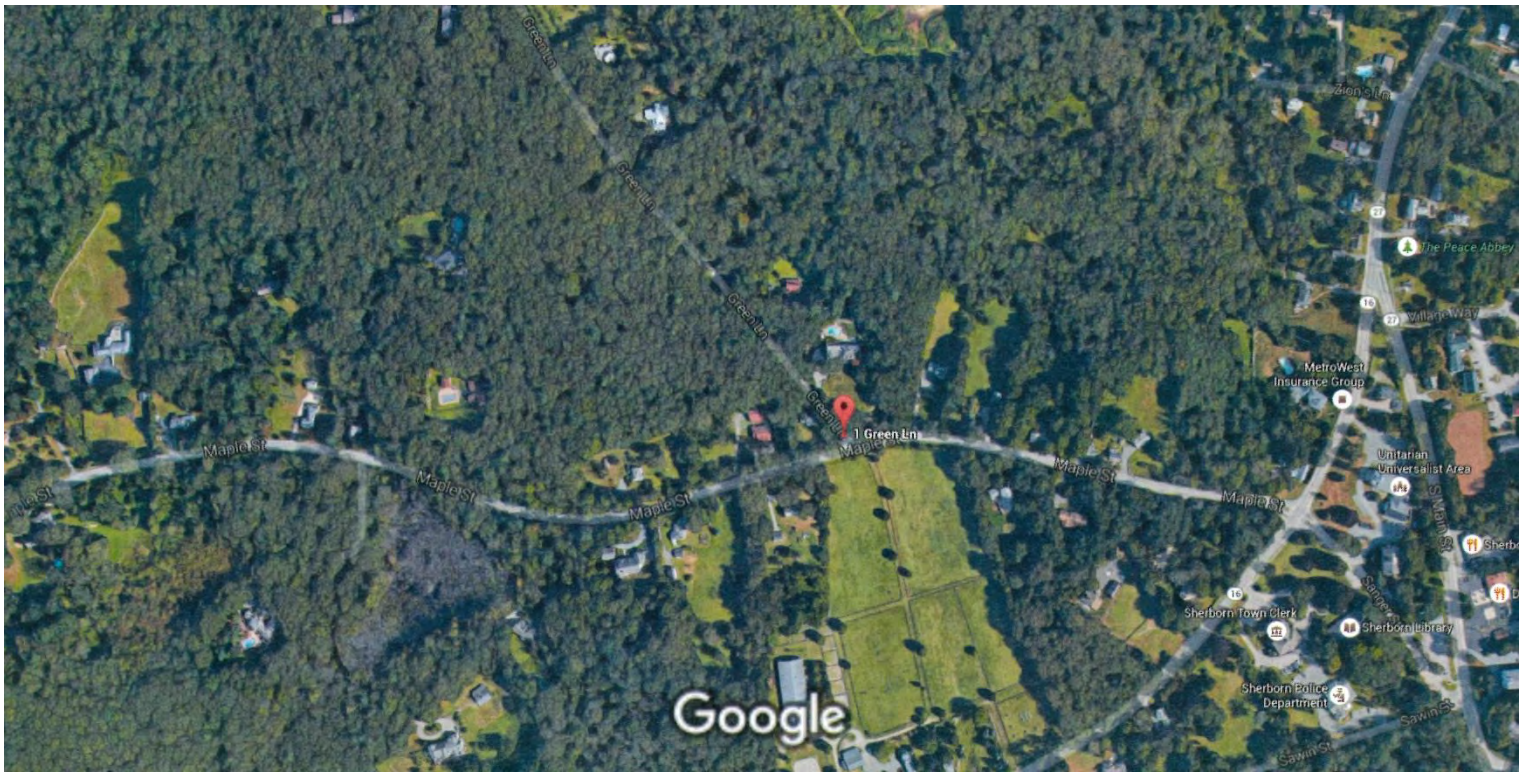
PREPARED FOR:
30 TURNPIKE RD
SOUTHBOROUGH,MA 01772

DATE: MARCH 24, 2016

EX

FILE: 2628cp.dwg

TAB 2.1 Ariel Map



1 Green Lane, Sherborn, MA

Green Lane

A Trask Development Community in Sherborn, MA

20 Green Lane

Lot adjacent to 20 Green Lane

North on Green Lane

South on Green Lane

Green Lane

A Trask Development Community in Sherborn, MA

Lot adjacent to 22 Green Lane

22 Green Lane, Sherborn, MA 01770

33 Green Lane, Sherborn, MA 01770

Lot adjacent to 33 Green Lane

NO.	DATE	DESCRIPTION	BY

PREPARED BY:
BRUCE SALUK & ASSOC., INC.
CIVIL ENGINEERING & LAND SURVEYING
576 BOSTON POST ROAD EAST
MARLBOROUGH, MA 01752

PRELIMINARY LAYOUT PLAN

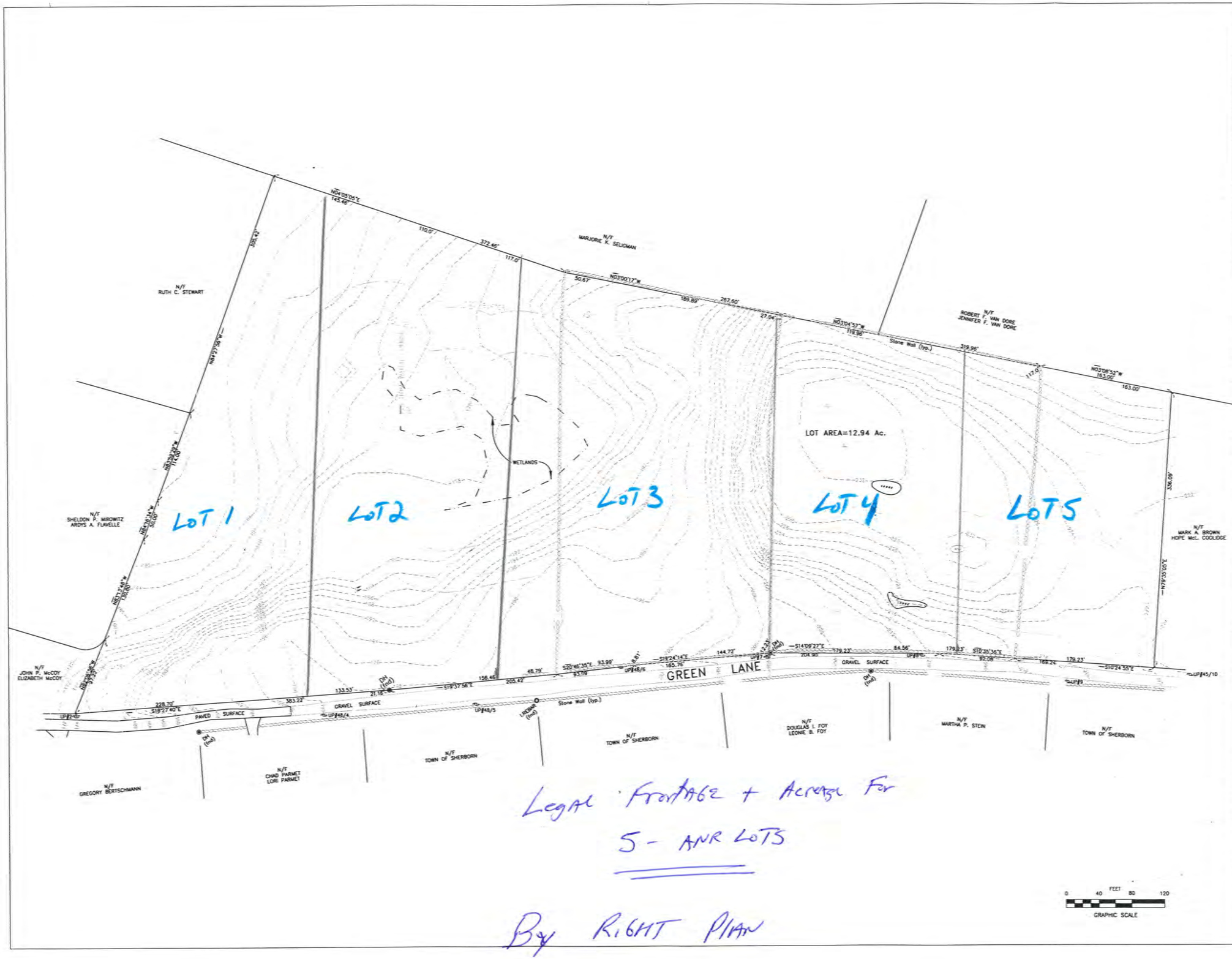
GREEN LANE
SHERBORN,MA

PREPARED FOR:
30 TURNPIKE RD
SOUTHBOROUGH,MA 01772

DATE: MARCH 24, 2016

C1

FILE: 2628cp.dwg



Legal Frontage + Acreage For
5 - ANR LOTS

By RIGHT PLAN

NO.	DATE	DESCRIPTION	BY

PREPARED BY:
BRUCE SALUK & ASSOC., INC.
CIVIL ENGINEERING & LAND SURVEYING
576 BOSTON POST ROAD EAST
MARLBOROUGH, MA 01752

EXISTING CONDITIONS

GREEN LANE
SHERBORN, MA

PREPARED FOR:
30 TURNPIKE RD
SOUTHBOROUGH, MA 01772

DATE: MARCH 24, 2016

EX

FILE: 2628cp.dwg

SECTION 3 REQUIRED ATTACHMENTS

- Preliminary Site Layout
- Preliminary Architectural Plans
- Narrative Description of Design Approach
- Tabular Zoning Analysis
- Sustainable Development Principles Evaluation Assessment Form

NO.	DATE	DESCRIPTION	BY

PREPARED BY:
BRUCE SALUK & ASSOC., INC.
CIVIL ENGINEERING & LAND SURVEYING
576 BOSTON POST ROAD EAST
MARLBOROUGH, MA 01752

PRELIMINARY LAYOUT PLAN

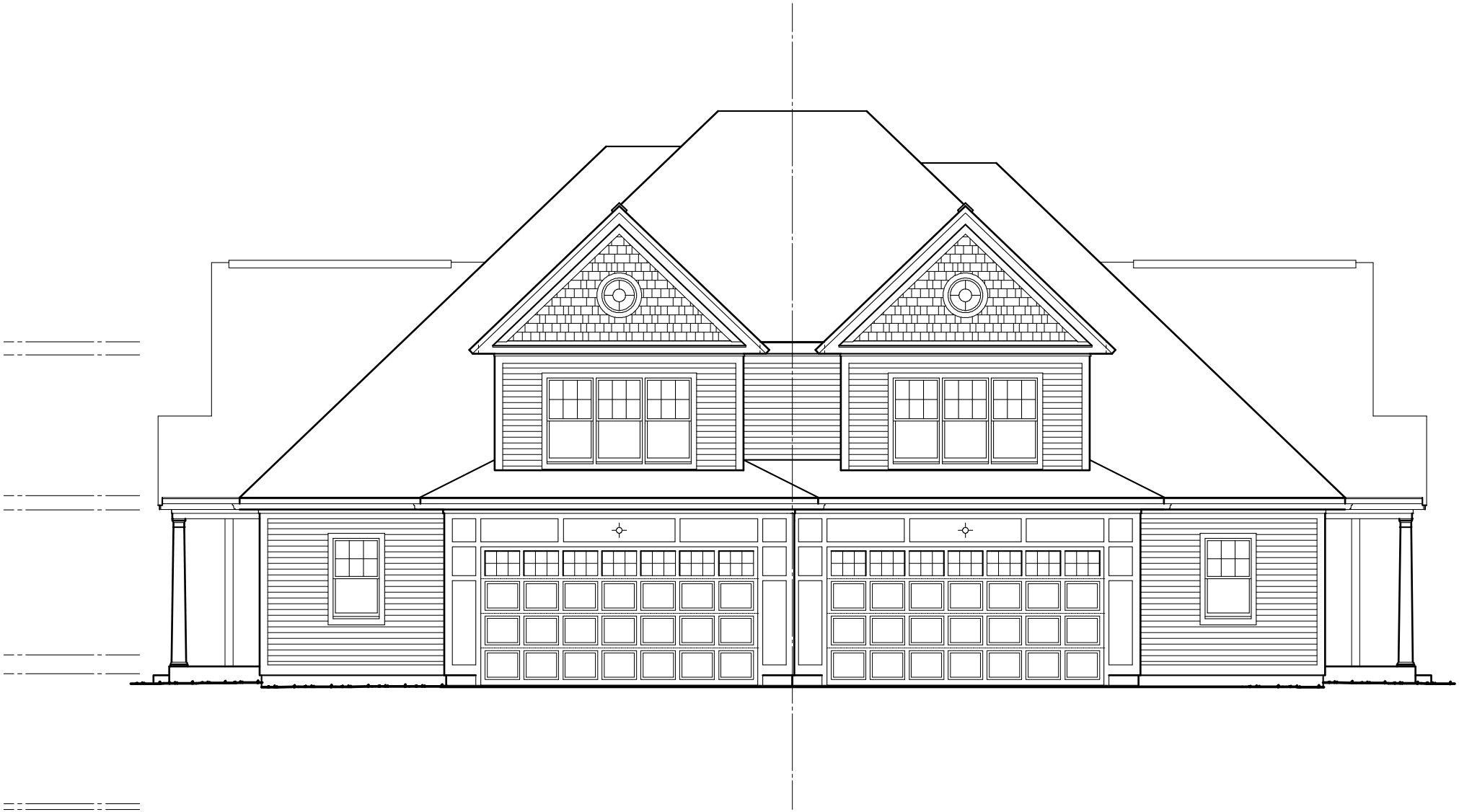
GREEN LANE
SHERBORN,MA

PREPARED FOR:
30 TURNPIKE RD
SOUTHBOROUGH,MA 01772

DATE: MARCH 24, 2016

C1

FILE: 2628cp.dwg



DUPLEX TOWNHOME CONCEPT ELEVATION

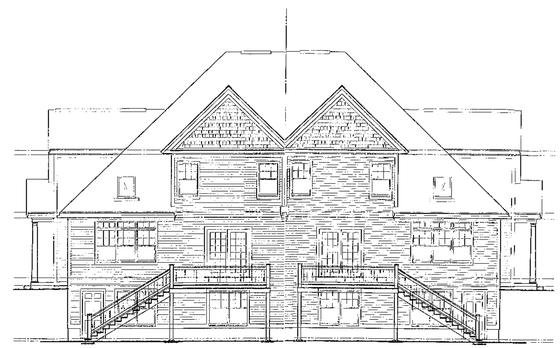
REEVES DESIGN ASSOCIATES

TRASK INCORPORATED - DEVELOPER

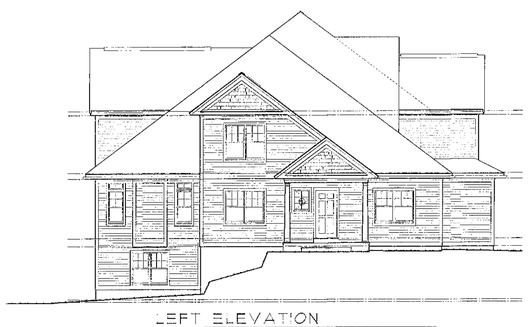
5/11/2016 All Rights Reserved

0 1 2 4 8 16

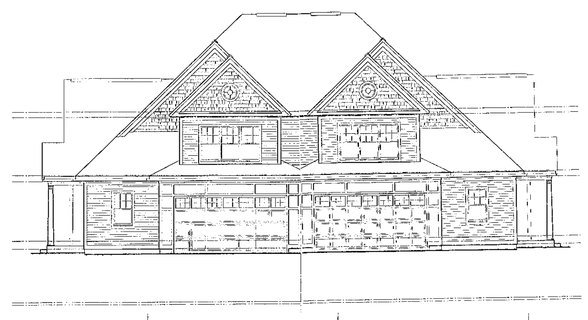
RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION



FRONT ELEVATION

2-Unit Building

THIS DOCUMENT IS THE PROPERTY OF REAVES DESIGN ASSOCIATES AND SHALL NOT BE REPRODUCED OR PLACED IN THE PUBLIC DOMAIN. THE DESIGNS SHOWN HEREIN ARE INTENDED FOR USE ON THIS PROJECT ONLY AND NOT FOR USE ON OTHER PROJECTS. BY REUSE OF THESE DOCUMENTS, THE OWNER AGREES TO SUBMIT ANY CLAIMS, DISPUTES AND OTHER MATTERS IN QUESTION TO ARBITRATION PURSUANT TO THE AMERICAN ARBITRATION ASSOCIATION CONSTRUCTION INDUSTRY ARBITRATION RULES. THE OWNER FURTHER AGREES TO WAIVE MADE AGAINST REAVES DESIGN ASSOCIATES, INC. BY ARBITRATION OR OTHERWISE, ARE UNFAVORABLE FOR USE ON OTHER PROJECTS OR PROJECTS NOT ARBITRATED. THE OWNER FURTHER AGREES TO NOT ARBITRATE ANY PAST RENTS IN LEGAL FEES. ALL RIGHTS RESERVED.

Coolidge Crossing
A Residential Townhouse Community, Sherborn, MA

RDA
REEVES DESIGN ASSOCIATES
• ARCHITECTS • PLANNERS • DEVELOPERS •
79 Highland Street
Marlborough, Massachusetts 01752

SCALE: 1/4" = 1'-0"

DATE:

REVISIONS:

DATE:

PERMIT REVIEW SET

Green Lane

A Trask Development Community in Sherborn, MA

Green Lane

A Trask Development Community in Sherborn, MA

Green Lane

A Trask Development Community in Sherborn, MA

Green Lane

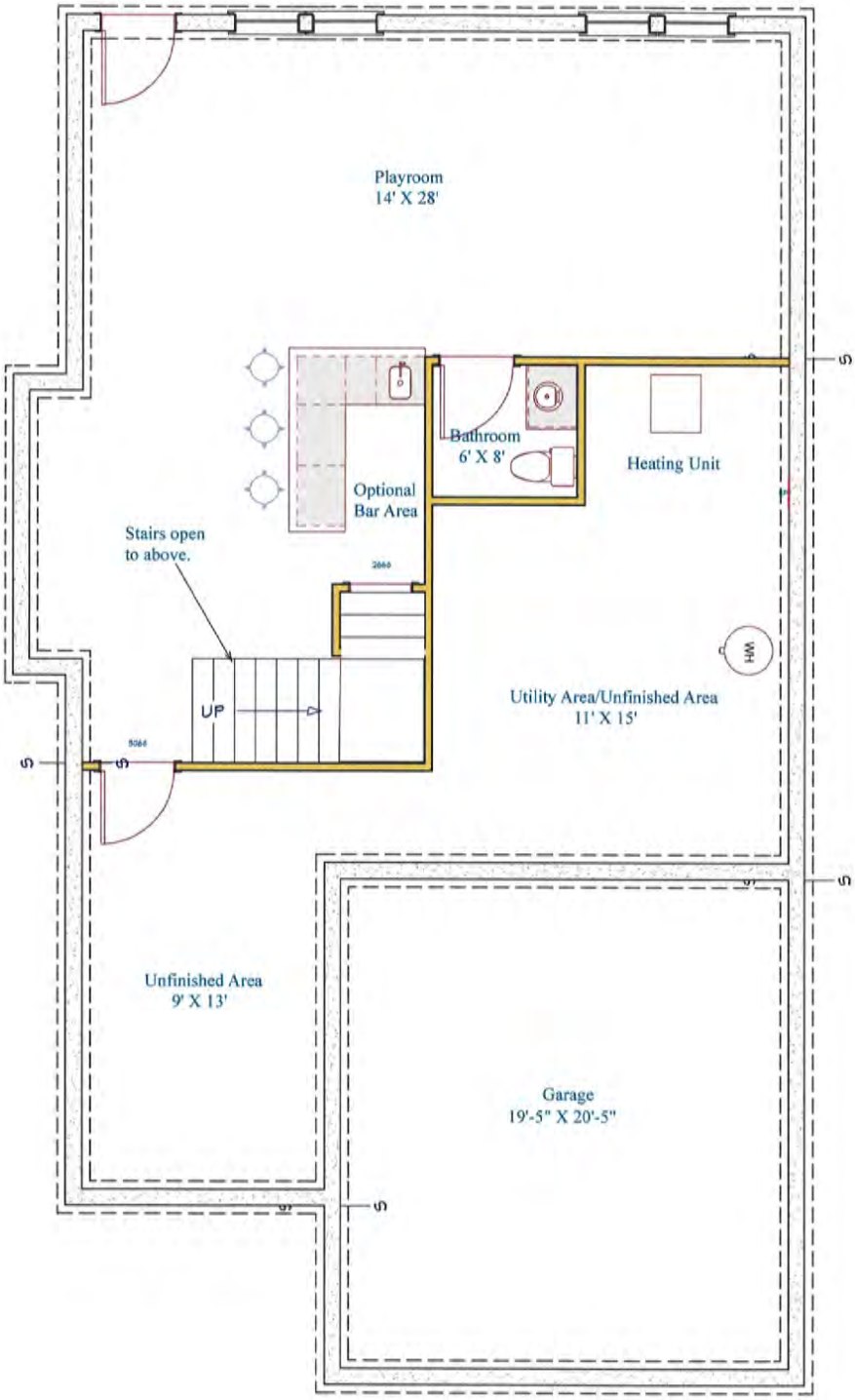
A TRASK DEVELOPMENT COMMUNITY IN SHERBORN, MA

Kirkland 3-Bedroom

FIRST FLOOR PLAN

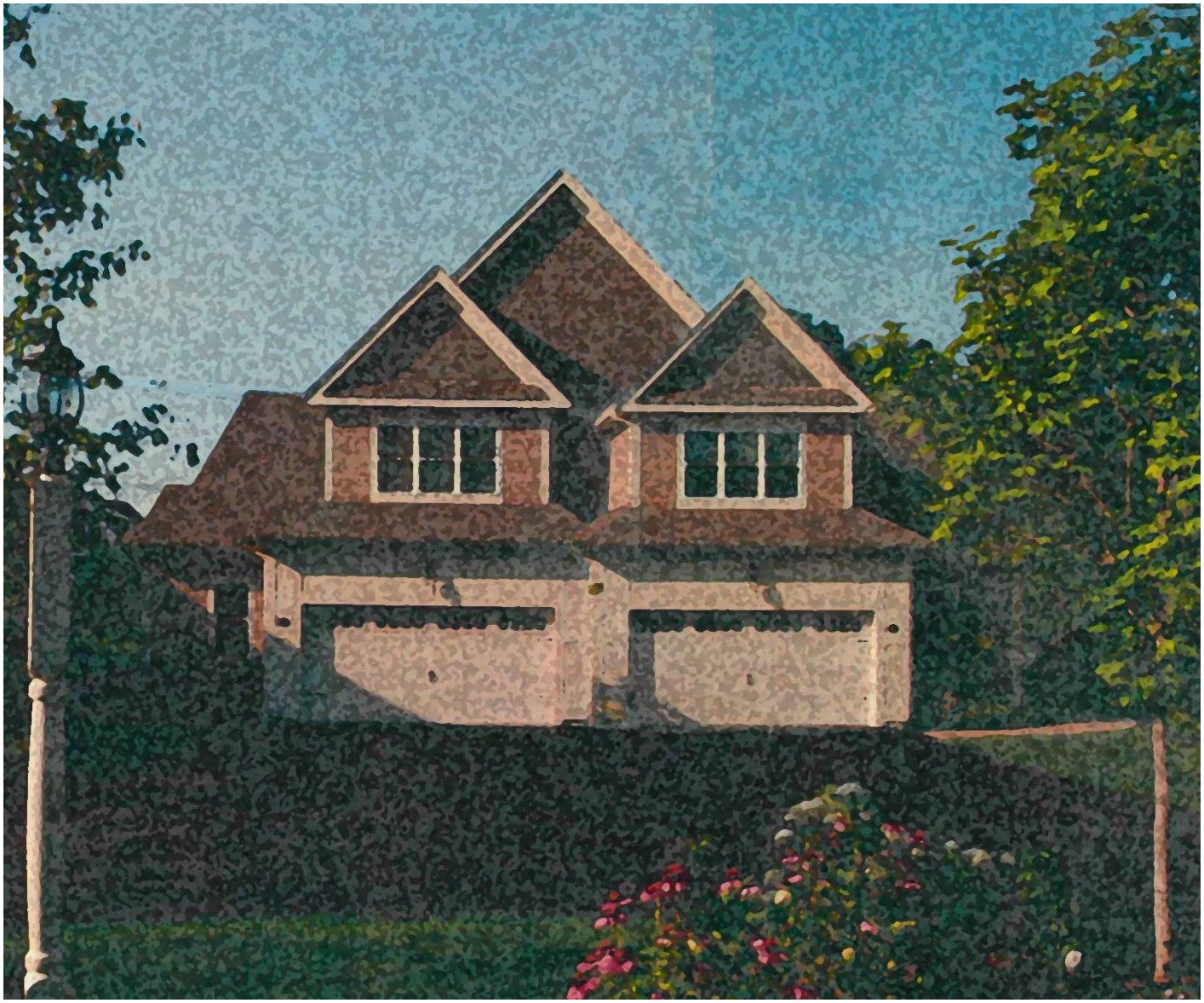
SECOND FLOOR PLAN

Green Lane Kirkland Floorplan



Green Lane Kirkland Optional Basement Plan

Tab 3.2 Artist Rendering



Tab 3.3 Narrative Description of Design Approach

PROJECT DESCRIPTION AND DESIGN APPROACH NARRATIVE

Green Lane is located at Green Lane in Sherborn, MA on a 12.94 ± acre site currently zoned Residential District B [2 acre minimum lot size]. This property is primarily open land with surrounding wooded areas and thick foliage. Some of the parcel appears to have been cleared of vegetation but does not appear to have been farmed or utilized for any particular activity. The site is generally level with a small drop and then a rise towards the back open area.

The site includes a small isolated wetlands area. The soils are excellent for both septic and subsurface recharge drainage systems. Suitable areas for individual septic systems and have been recently tested. This testing was witnessed by the Town of Sherborn Board of Health Agent. The site's topography is such that little imported or exported fill should be required for the completion of the site infrastructure.

Green Lane is located on Green Lane approximately 5 miles South/Southeast from Route 9 in Natick. The location has direct access to Routes 16 and 27. Within a six mile radius residents will have access to public transportation, food shopping centers, the Natick Collection, Police & Fire Stations, Sherborn's Town Hall and even a wildlife Sanctuary. The neighborhood structures that surround the site combine an architectural mix from Split Levels to Contemporary Ranches, and Colonials to Farm House styles.

Green will be concentrated near the front of the lots, preserving the open space.

Green Lane will consist of 8 [16] total units all of which will be three [3] bedroom duplex-townhouses. There will be 4 Affordable Units and 12 Market Rate Units. The Units will average 2,700 Sq. Ft. and will have Exclusive Use driveway parking and a 2-Car garage. All units will be served by private wells and a private septic systems as there is no public water or sewer service in the Town of Sherborn. Natural gas and electricity will be provided by Eversource.

The stylized New England architectural design will feature two [2] Unit duplex-townhouse buildings designed to complement the size and massing of other homes built in the area. The buildings have been sited to maximize backyard privacy. They will be completed with roof line details, façade details, color shifts, and overhangs to lessen the overall building height and size impact. The roof lines are based upon a single level or cape style that has gables and dormers added to visually downplay the roof lines. The units will be constructed with covered entranceways, detailed Carriage House Style garage doors with glass-lites and extensive exterior trim and moldings. The exterior of the buildings will be constructed using Hardi-plank pre-colored cementitious boards with Azek-style trim. Both products are earth friendly and made of recycled materials that need little to no maintenance overtime. Each unit will have a deck using Trek-style materials or a concrete paver patio depending upon site grading conditions. All the homes will be constructed to Energy Star standards. The units that are proposed are very similar to the Developer's recently completed Chapter 40B townhouse development in Sudbury, MA, Landham Crossing www.landhamcrossing.com.

Tab 3.4 Tabular Zoning Analysis for the Fields at Sherborn [Residence District A]

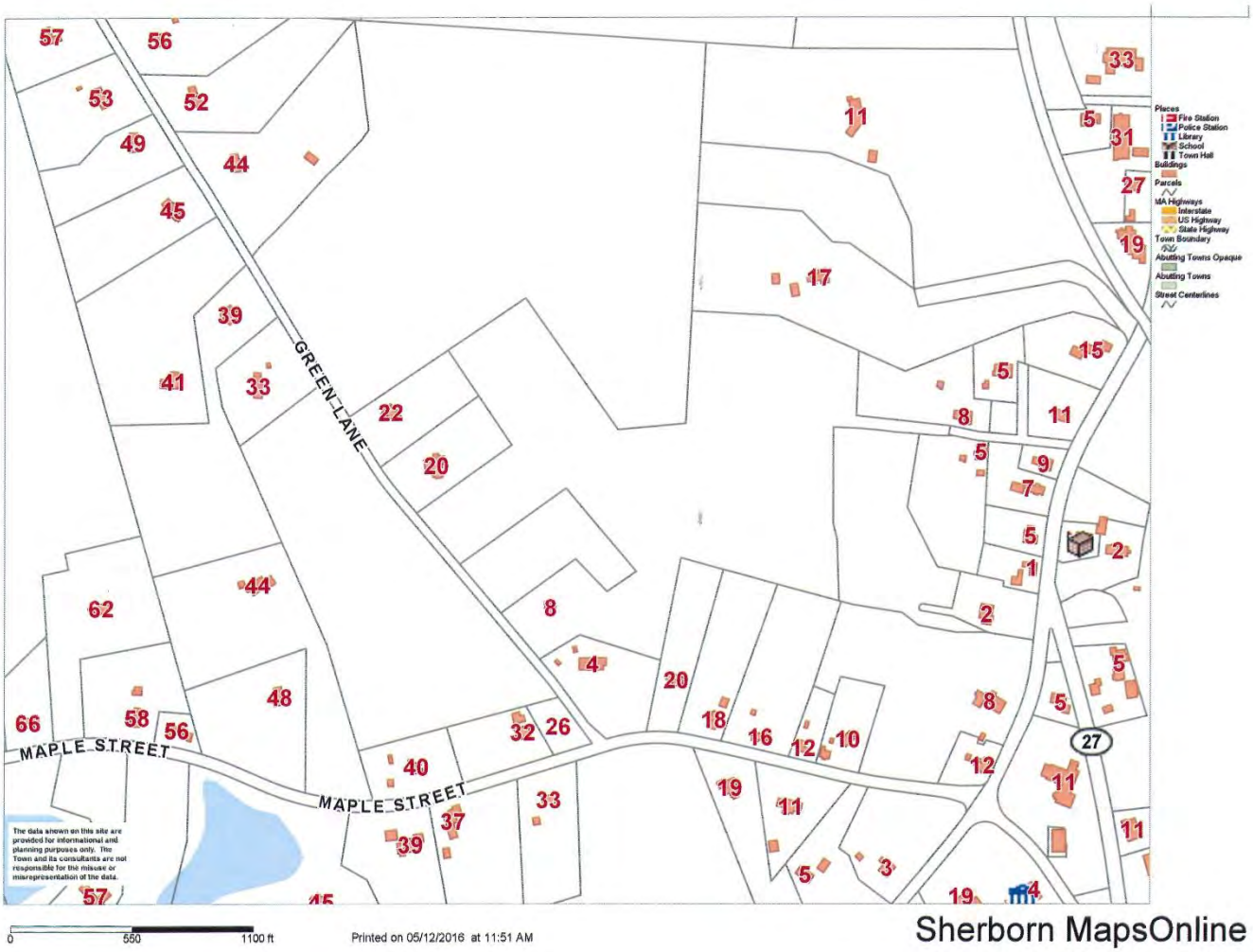
CATEGORY	UNDERLYING ZONING REQUIREMENT	PROPOSED	WAIVER REQUIRED
Use	Single-Family B	Multi-Family	Yes
Lot Area	2 Acre Minimum	1.5 Acres	Yes
Lot Frontage	200’	TBD	Yes
Minimum Lot Width	200’	TBD	Yes
Front Yard Setback	60’	40’+	Yes
Side Yard Setback	40’	10’+	Yes
Rear Yard Setback	30’	30’+	No
Maximum Height - Stories	2.5 Stories	2.5 Stories	No
Maximum Height - Feet	35’	38’	Yes
Permanent Entrance Sign	Allowed - 25’ Maximum [No Illumination]	Allowed - 25’ Maximum [No Illumination]	No

This is a preliminary listing of the primary anticipated waiver [Exception] requests. Modifications to this list are likely as more definitive engineering and architectural exhibits are prepared.

SECTION 4 REQUIRED ATTACHMENTS

- Evidence of Site Control

TAB 4.1 Assessor's Plan



1 Green Lane, Sherborn, MA

Date: March 28, 2016

Buyer: Trask Inc

Option to Purchase

Sellers: Mary Buntin and Jane Hamrock as trustees of the AB Trust.

RECEIVED
APR 05 2016
BY:

Parcel: Approximately 12.94 acres of land on Green Lane; Sherborn; recorded in Book 45884-268; known as Sherborn Accessor Map 6 Block 44

Terms:

- Upon execution of this Option, Buyer will perform due diligence including field studies, wetland studies, perc and deep hole tests to determine the suitability of the parcel for development.

-Testing and engineering shall be at Buyers sole expense, and Buyer will make all data and reports available to Sellers. Buyer will return parcel to original condition as much as possible

-Buyer will hold Seller harmless for any claims by Buyer or Buyer's agents or employees for any liability or worker compensation for work performed on Buyers behalf at project location.

-Buyer will have 6 months from execution of this Option to perform said tests, and gather reports, and potentially file for permits. Upon the expiration of this 6 months, Buyer shall have the right to exercise the option of entering into Purchase and Sales agreement for the purchase of the parcel with a closing time to be determined but in no event more than 6 months from the date of the Purchase and Sales Agreement. If the Buyer is unable to obtain three lots he may still exercise the option to purchase but the price will not be reduced from $750,000.00.

-Closing shall be either within 6 months of executing P&S or upon issuing of septic permit approvals for a minimum 3 building lots, whichever is sooner, unless a 40B proposal is required, per below.

-If the Buyer is able to obtain 1-3 lots the price for land shall be $750,000.00; If the Buyer can develop 4 or 5 lots, the price will increase by $250,000/lot

-In the event Buyer determines that conventional lots cannot be developed due to ground water septic off-set regulations under the Sherborn Board of Health, then Buyer shall have right to pursue a 40B type development, and closing shall be extended to a minimum of 12 months from execution of P&S as determined at execution of P&S. Price for 40B type project will also be $750.000.00

-Buyer shall pay $2,500 with for this option which is nonrefundable, but is applied to purchase price at closing.

Signed:

Buyer:_____ Benjamin Stevens; Trask Inc.

Seller:_____ Mary Buntin; Trustee

Seller: Jane Ashbrook Hamrock Jane Hamrock Trustee

SECTION 5 REQUIRED ATTACHMENTS

- Initial Capital Budget
- New England Fund Letter of Interest
- Market Sales Comparables

Green Lane
SHERBORN MA
PROJECT DESCRIPTION

	Units	BA
Market Units		
3BR End Unit	12	2.5
Subtotal Market Units	12	
Affordable Units		
3BR End Unit	4	2.5
Subtotal Affordable Units	4	
Total Units	16	
Total Bedrooms	48	

Total Gross Square Feet (GSF)* 43,200 Average GSF* 2,700
*Not including basements, attics, decks, and garages

Total Garage Parking Spaces	32
Total Driveway Parking Spaces	32
Total Guest Parking Spaces	0
Total Parking Spaces in Development	64
Parking Ratio (Spaces/Unit)	4.00

Sales Revenue	**Units**	**Average Price**	**Total Revenue**
Market Units			
3BR End Unit	12	$750,000	$9,000,000
Subtotal Market Units	12		$9,000,000
Affordable Units			
			$0
			$0
3BR End Unit	4	$208,000	$832,000
Subtotal Affordable Units	4		$832,000
Total Sales Revenue			$9,832,000

Green Lane/ SHERBORN, MA
INITIAL CAPITAL BUDGET

SALES/REVENUE

Market Homes (See Project Description)	$9,000,000
Affordable Homes (See Project Description)	$832,000
Identity of Interest (Market Homes)	$0
Other Income	$0
Total Sales/Revenue	***$9,832,000***

TOTAL DEVELOPMENT COSTS (TDC)	***Budgeted Cost***
ACQUISITION COST	
Pre-permit estimated land value (final value to be established by MassHousing-commissioned appraisal)	$750,000
Carrying Costs	$0
Subtotal Acquisition Costs	**$750,000**
CONSTRUCTION COSTS-RESIDENTIAL CONSTRUCTION (HARD COSTS)	
Building Structure Costs	$4,550,000
Residential Construction Hard Cost Contingency (5%)	$227,500
Subtotal-Residential Construction (Hard Costs)	**$4,777,500**
CONSTRUCTION COSTS-SITE WORK (HARD COSTS)	
Earthwork (including Clearing and Grubbing)	$150,000
Utilities: On-Site	$550,000
Utilities: Off-Site	$0
Storm Drainage	$35,000
Roads and Walks (Driveways)	$80,000
Street Repair (Off-Site)	$0
Site Improvement	$0
Lawns and Planting; hardscape	$128,000
Geotechnical Condition	$0
Environmental Remediation	$0
Demolition	$0
Unusual Site Conditions (Retaining Walls)	$0
Site Improvements Hard Cost Contingency (5%)	$47,150
Subtotal-Site Work (Hard Costs)	**$990,150**
CONSTRUCTION COSTS-GENERAL CONDITIONS, BUILDER'S OVERHEAD AND PROFIT (HARD COSTS)	
General Conditions (6%)	$346,059
Builder's Overhead (2%)	$115,353
Builder's Profit (6%)	$346,059
Subtotal-General Conditions, Builder's Overhead and Profit (Hard Costs)	**$807,471**
GENERAL DEVELOPMENT COSTS (SOFT COSTS)	
Appraisal and Market Study (not 40B "as-is" appraisal)	$10,000
Lottery for Affordable Homes (3%)	$24,960
Advertising-Affordable Homes	$0
Commissions/Advertising-Market	$450,000
Model Unit	$0
Real Estate Taxes (during construction)	$25,000

GENERAL DEVELOPMENT COSTS (SOFT COSTS)-Continued	***Budgeted Cost***
Utility Usage (during construction)	$10,000
Insurance (during construction)	$10,000
Security (during construction)	$0
Inspecting Engineer	$5,000
Fees to Others	$0
Construction Loan Interest	$175,000
Fees to Construction Lender	$30,000
Architectural	$25,000
Engineering	$125,000
Surveys, Permits, etc.	$0
Clerk of the Works	$0
Construction Manager	$0
Bond Premium (Payment/Performance/Lien)	$0
Legal	$74,000
Title & Recording (including title insurance)	$20,000
Deed Stamps	$44,834
Accounting and 40B Cost Certification	$20,000
Relocation	$0
40B Site Approval Processing Fee	$2,500
40B Technical Assistance/Mediation Fund Fee	$2,980
40B Final Approval Processing Fee	$2,500
40B Subsidizing Agency Cost Certification Examination Fee	$5,000
40B Eligibility Monitoring Agent Fees	$5,000
40B Land Appraisal Cost (as-is value)	$2,500
40B Surety Fee (LOC)	$2,500
Application/Financing Fees	$20,000
Other Financing Fees	$0
40B Advisor	$20,000
Other Consultants	$35,000
Other General Development Costs (Soft Costs)	$0
Soft Cost Contingency (5% all Soft Costs except Commissions on Market Units)	$34,839
Subtotal-General Development Costs (Soft Costs)	**$1,181,613**
DEVELOPER OVERHEAD	
Developer Overhead	$68,000
Subtotal-Developer Overhead	**$68,000**

Summary of Subtotals	
Total Sales/Revenues	
Total Development Costs (TDC)	
Site Acquisition	$750,000
Residential Construction	$4,777,500
Site Work	$990,150
General Conditions, Builder's Overhead and Profit	$807,471
General Development Costs (Soft Costs)	$1,181,613
Developer Overhead	$68,000
Subtotal Summary of Total Development Costs (TDC)	$8,574,734
Project Summary	
Total Sales/Revenues	$9,832,000
Total Development Costs (TDC)	$8,574,734
Profit	$1,257,266
Profit as a Percentage of Total Development Costs (TDC)	14.66%

Middlesex Savings Bank
WHERE YOU'RE WORTH MORE™

EQUAL HOUSING LENDER MEMBER FDIC MEMBER DIF

April 22, 2016

Manager, Comprehensive Permit Program
Massachusetts Housing Finance Agency
One Beacon Street
Boston, MA 02108

RE: #1-31 Green Lane, Sherborn, MA - 40B Project

Dear Sirs,

Middlesex Savings Bank is pleased to present you a letter of interest for the 16 Unit 1-31 Green Lane, Sherborn 40B project in Sherborn, Mass. The bank understands that the Borrower/Developer will be Green Lane, LLC or a Nominee entity acceptable to the bank, with Ben Stevens as its manager.

Trask Development and company President Ben Stevens have been customers of Middlesex Savings Bank for over 20 years. In that period of time the bank has financed many residential construction projects ranging from single family construction to multiple unit developments. All obligations to the bank have been handled in a most satisfactory manner.

Middlesex Savings Bank has reviewed the preliminary development plans for the proposed 16 home for sale project to be known as #1-31 Green Lane. We would be interested in potentially financing the project.

Final approval would be subject to standard underwriting criteria, appraisal, environmental review and economic feasibility at that time.

Middlesex Savings Bank is a current FHLB member and would utilize NEF to fund the project.

If I can be of any further assistance please contact me at (978) 344-5065.

Very truly yours,

Richard P. Cole
Vice President
Construction Lending

April 21, 2016

Ben Stevens, President
Trask Development
30 Turnpike Road – Suite 8
Southborough, MA 01772

RE: Proposal for 40B Townhome Development

This letter is in response to your request for an "opinion of value" for the proposed plan for townhomes on a plot of land located on Green Lane, Sherborn, MA.

We are real estate professionals with more than 40 years of experience in the Metrowest area. William Raveis Real Estate has awarded the Barber Real Estate Group as the #1 Top Producing Team in Massachusetts for Exceptional Properties, #5 Sales Team in Massachusetts-Sales Volume, #7 Team in Massachusetts-Closed Units & the Chairman's Elite Club Member for the last 3 years. We also belong to Boston's Top 20 and the Top Agent Network which is eligible to the top 2% of all real estate agents.

This analysis is based on a review of similar projects and market data taken from public record and the Multiple Listing Service. The proposed project will be non-age restrictive 40B development.

Project Location: 1-31 Green Lane, Sherborn, MA 01772

Project Specifications: 8 Duplex-style townhouses totaling 16 units.
12 units to be sold at market value & 4 as affordable.

Unit Specifications: 3 bedroom, 2.5 bath units with 2600 square feet of living space, 2 car garage

The suggested listing price range for the above noted property is $739,900 to $759,900.

Our market research shows a strong absorption rate for properties in this price point.

As with all price analysis, final price is determined by all factors including market timing, other competing properties at the time of marketing, overall market conditions and interest rates.

We appreciate this opportunity.

Sincerely,

Ken Barber
Barber Real Estate Group
William Raveis Real Estate
73 Central Street
Wellesley, MA 02482
508.740.8812
Ken@BarberRealEstateGroup.com

Barber Real Estate Group
BarberRealEstateGroup.com

TAN TOP AGENT NETWORK

SECTION 6 REQUIRED ATTACHMENTS

- Development Team Qualifications

The Applicant:

Green Lane L.L.C
Benjamin Stevens; Manager
30 Turnpike Road, Suite #8
Southborough, MA 01772
(O) 508-485-0077
(F) 508-485-4879
(E) benstevens@traskdevelopment.com

Architect:

Reeves Design Associates
Lawrence Reeves; Architect
22 Union Avenue, Suite #6
Sudbury, MA 01776
(O) 978-443-4966
(F) 978-443-4936
(E) lzreeves@hotmail.com

Engineer:

Bruce Saluk & Associates
Bruce Saluk; Civil Engineer
220 Boylston Street
Marlborough, MA 01752
(O) 508-485-1662
(F) 508-481-9929
(E) bruce@salukassoc.com

Landscape Architect:

Hawk Design, Inc.
Bart Lipinski, Project Manager
P.O. Box 1309
Sandwich, MA 02563
(O) 508-833-8800
(F) 774-413-9841
(E) bart@hawkdesigninc.com

Traffic Consultant:

MDM Transportation Consultants
288 Lord Road, Suite 280
Marlborough, MA 01752
(O) 508-303-0370
(F) 508-303-0371
(E) info@mdmtrans.com

Wetland Scientist:

Creative Lane & Water Engineering, LLC
Environmental Science & Engineering
Desheng Wang; Wetlands Scientist
P.O. Box 584
Southborough, MA 01772
(O) 508-281-4370
(E) desheng@creative-land-water-eng.com

40B Consultant:

EHM/Real Estate Advisor
Edward H. Marchant; Consultant
9 Rawson Road
Brookline, MA 02445
(O) 617-739-2543
(F) 617-739-9234
(E) emarchant@msn.com

BENJAMIN T. STEVENS

4 BAYPATH LANE | SOUTHBOROUGH, MASSACHUSETTS 01772
(O) 508-485-0077 | (F) 508-485-4879 | (E) benstevens@traskdevelopment.com

SUMMARY

LAND DEVELOPMENT & CONSTRUCTION MANAGEMENT PROFESSIONAL with experience working in a fast-paced environment that required effective organizational, technical and interpersonal skills. Ability to work collaboratively and cross-functionally through multiple project scopes and program types. Proven project execution capabilities with a strong sense of ownership and attention to detail. Attained in-depth knowledge and experience in local & state permitting procedures and regulations. Demonstrated ability to prioritize workload and work within tight deadlines.

EXPERIENCE

TRASK, INC. *Southborough, MA* 1994-Present

Founded in 1993 as a Custom Home Builder, Trask, Inc., has evolved into a full-service, residential developer of single family homes, townhomes, duplexes and condominiums.

President and Owner

- Specialized in the development of high-quality, high-end home products in the Metro-West Massachusetts territory. Trask development has built over 280 homes in this area ranging from townhouses to single family homes, duplexes, and apartment buildings.
- Maintained site development division of Trask that manages all phases of construction process that including site selections & testing, vegetation and surface soil removal, locating and surveying roads and property lines, preparing ingress road and work area utilities, and completing final grade and land evaluations.
- Committed to creating unique & aesthetically appealing homes and developments that have character and add quality to the towns where constructed.
- Dedicated to working with local officials, neighbors and project abutters to minimize development impacts to the surrounding properties.
- Built a strong foundation with professional contractors and the most qualified craftsmen to ensure the highest quality finished product.
- Hired project managers with land development and site preparation experience to assure the finest quality product is built and delivered in a timely fashion with minimal offsite disruption.
- Managed the design, development and financing of High-end Single Family residential properties that include:
  - **Hunters Hill**, *Natick, Massachusetts*; 24 Single-Family High End Homes
  - **Covered Bridge Lane**, *Wayland, Massachusetts*, 14 Single-Family High End Homes
  - **Parmenter Meadows,** *Southborough, Massachusetts*, 7 Single-Family High End Homes
  - **Villages at Pond Street,** *Natick, Massachusetts,* 9 Single-Family High End Townhouses
- Developed and managed the design and construction of Mass Chapter 40B developments that include:
  - **Meeting House Farm**, *Southborough, Massachusetts*, 29 units For Sale Housing
  - **The Villages at Old County,** *Sudbury, Massachusetts*; 37 units For Sale Housing
  - **Landham Crossing**, *Sudbury, Massachusetts*, 31 units For Sale Housing
  - **Ashland Woods**, *Ashland, Massachusetts*, 60 units For Rent Housing

(O) 508-485-0077 | (F) 508-485-4879 | (E) BENSTEVENS@TRASKDEVELOPMENT.COM

PERSONAL LICENSES/PROFESSIONAL AFFILIATIONS

- Licensed Massachusetts Builder
- Licensed Septic Installer, Wayland, Southborough, Sudbury
- Licensed Drain Layer, Natick, Westborough

- Member Builders and Remodelers Association of Greater Boston
- Member National Home Builder's Association

AWARDS / PUBLICATIONS / ACKNOWLEDGEMENTS

- 2009 Greater Boston Builder/Architect Magazine, Builder of the Month; "A Passion to Do it Right."
- 2009 Greater Boston Builder/Architect Magazine, Builder of the Month; "The Villages at Old County Road."
- 2014 BRAGB Prism Award Winner

EDUCATION

.

HARVARD UNIVERSITY, *Cambridge, MA* 1988.
BS, Applied Mathematics Concentration in Economics

HARVARD UNIVERSITY GRADUATE SCHOOL OF DESIGN, *Cambridge MA,*
Architecture & Construction Management.

BRUCE M. SALUK, P.E. & P.L.S.

REGISTERED CIVIL ENGINEER AND LAND SURVEYOR

QUALIFICATIONS

Over twenty-five years experience in civil engineering and land surveying. Professional expertise includes the following areas:

- Civil Engineering
- Stormwater Management System Design
- Project management
- Value Engineering
- Report Preparation
- Land Surveying
- Hydrology

EXPERIENCE

- **Affordable Housing Developments(Chapter 40B)**

  Landham Crossing, Sudbury is a 31 residential condominium that included an extensive Stormwater management system using an underground detention system. An onsite BioClere wastewater treatment and pressure doing system was designed for Nitrogen reduction.

  Ashland Woods, Ashland is a 60unit rental on 14.5 Acres. This development includes interior garage parking as well as exterior parking Lots.

  The Villages at Old County Road, Sudbury: A 37-unit town house style Condominium.

  The Residences at River Run, Berlin: A 32 unit single house style Condominium. Approved and sold to Riverbridge Glen, LLC

- **Elderly Housing Condominium Developments**

  Southborough Meadows, Route 30 Southborough: 52 unit elderly housing condominium development consisting of approximately 2600 L.F. of roadway and associated design work. This project has been constructed and all units are occupied. Work entailed civil and surveying services for design, permits and construction.

  Villages at Crane Meadow, Williams Street, Marlborough: 91-unit condominium elderly housing project includes a community center.

  The Villages at Hudson: This elderly housing project consists of 150 Town house Condominium units with a community center on a 33 acre parcel. We took advantage of the steep site grades to design a terraced cluster layout. And, each residential cluster was enclosed to become a separate neighborhood. The dwelling units were also located

far away from the adjacent roads to maximize open space between the development and the existing single family residences located nearby.

The Residences at Chestnut Ridge, Marlborough is a 210-unit Condominium development was fully permitted then sold to Toll Bros., Inc.

Vickery Hills Condominium, Southborough: This elderly project includes 40 Condominium Townhouse units located near the new Town Center.

- **Stormwater Management Designs and Hydrological Studies**

Stormwater Management designs on Industrial Commercial, Residential and Institution projects. Experience includes containment and treatment for compliance to DEP Stormwater Management Policy Standards and the Wetlands Protection Act.

Developed hydrologic flood routing using on several watersheds in Connecticut and Massachusetts. Tasks included computer aided design for detention requirements and outlet control facilities for storm detention reservoirs. Performed hydrological analysis with the HEC-HMS, SCS TR-20 & HYDROCAD storm water modeling software on various drainage areas in many communities in Massachusetts.

River routing calculations using HEC-RAS and HEC-2 in Massachusetts, Connecticut and New Hampshire.

- **Residential and Industrial and Commercial Designs**

Site design for various commercial and industrial buildings in Westborough, MA, Natick, MA, Dennis, MA, Andover, MA and Marlborough, MA

- **Subdivisions**

Civil engineering design and Land Surveying services on subdivisions in the Towns of Natick, Holliston, Southborough, Sudbury, Mendon, Northborough, Maynard, Upton, Marlborough and Shrewsbury.

- **Municipal Consulting**

Consulting for the Town of Hubbardston Board of Selectmen and Planning Board 1986-2006. Services included peer review design of drainage infrastructure and design of athletic field.

Peer review for the Town of Andover Conservation Commission 2001-2004. Work entailed, peer review of stormwater management and site designs by other engineering firms.

Peer review for the Town of Southborough Conservation Commission on select projects during 2002 and 2004. Work entailed, review stormwater management and site designs by other engineering firms.

Stormwater design on new school construction projects in Worcester and the (Sullivan Middle School) and in Fall River.

City of Marlborough-Design and permitting for the Bolton Street (Route 85) Culvert at Fort Meadow Reservoir.

City of Marlborough-Hydrologic Study of the Millham Brook watershed and Elm Street Culvert Design and permitting.

Value Engineering

Conducted an overview study on a design by another consulting firm for a proposed storm and sanitary sewer system in the City of Stamford Connecticut. Client realized approximately $2 million savings from changes recommended.

Provided value engineering consultation on subdivision in the Town of Natick, MA. Recommendations were incorporated into the design by the prime consultant realizing two (2) additional developable lots for the client.

- **Commercial Retail and Restaurant site design and permitting**

  Site design and permitting for several retail, restaurants, shops ranging from small donuts shops to retail plaza developments. The smaller projects include Dunkin donuts, Honey Dew donuts, TD Bank, Sovereign Bank, Chipotle Mexican Grill, Wendy's, Valvoline, Jiffy Lube, Walgreens, Town Fair Tire store in Marlborough, Subaru Dealership in Natick, Nissan Dealership expansion in Marlborough, Etc.

- **Land Surveying**

  Performed original and retracement property line surveys, experience also includes planimetric, topographic, utility, hydrographic, construction layout, ALTA title insurance surveys, Land court survey and Road alignment surveys.

  Expertise in annotated laws relative to land surveying matters in Massachusetts and Connecticut.

  Application of AutoCad in developing property topographic and utility survey plans on electronic media for use by other design team consultants.

- **Wastewater Systems and Treatment**

  Worked as Project Engineer on the design and specifications of a Massachusetts Water Resources project consisting of a 23 mgd pumping station, 4.3 miles of 36-inch diameter force main and 2.0 miles of 30 to 66-inch diameter interceptor sewer.

As Project Manager for the Lake Wononscopomuc (Salisbury, Connecticut) pollution abatement design project, incorporated a sewer and pumping station facility and sediment/erosion control program.

As Project Engineer for Massachusetts Water Resources Authority, Deer Island Remote Headworks Project, preliminary design for $25 million rehabilitation of three (3) facilities in the communities of Boston, Winthrop and Roxbury, MA.

Wastewater Pumping Station designs for projects in Andover, Marlborough and Hudson, Massachusetts.

Large septic systems for Commercial and Residential communities using pressure dosing and Pretreatment.

EMPLOYMENT HISTORY

BRUCE SALUK & ASSOCIATES, INC., 576 Boston Post Road East, Marlborough, MA
Civil Engineering & Land Surveying
1986 - Present

ANDERSON NICHOLS, 150 Causeway Street, Boston, MA
Engineers/Environmental Consultants/Architects
1983 - 1986

STEARNS & WHEELER, 106 Norton Ave., Darien, CT
Civil Engineers and Scientists
1979 - 1983

IGOR VECHESLOFF, 51 Lorraine Street, Hartford, CT
Civil Engineering and Land Surveying
1973 - 1979

EDUCATION

Polytechnic Institute of New York, Brooklyn, NY
Graduate Course Work in Environmental Engineering

University of Connecticut, Storrs, CT
Bachelor of Science in Civil Engineering

Hartford Technical College, Hartford, CT
Land Surveying Certificate

PROFESSIONAL AFFILIATIONS

Registered Professional Engineer in the States of, Massachusetts and Connecticut.

Registered Land Surveyor in the States of Massachusetts and Connecticut.

Approved Soil Evaluator, Massachusetts

Order of the Engineer member

DESHENG WANG, Ph.D., P.E.

Registered Licensed Professional Engineer (MA #39511)
Certified Wetland Scientist (NH#065) & Soil Evaluator (MA#2548)
Certified Wildlife Habitat Evaluator (HEP)

Creative Land & Water Engineering, LLC
P.O. Box 584
Southborough, MA 01772
Email: deshengw@yahoo.com or
desheng@creative-land-water-eng.com

GENERAL BACKGROUND

- Extensive experienced in soil and groundwater studies. Conducted **hydrogeological** studies for on-site sewage treatment and flood control facilities including **in-situ permeability** tests, **deep hole soil profile observations, groundwater mounding** calculations under septic leaching fields, and groundwater impact by detention basins.
- Experienced in on-site domestic wastewater treatment and disposal system design ranging from single family house to packaged treatment plant for small community.
- Extensive experience with (**river) hydrology/hydraulics** modeling related with **flood control** and **storm water best management practices** (**BMPs**). Conducted studies in river flooding forecast, river morphology, contaminant transport in rivers, for the World Bank, U.S. Army Corps of Engineers, New York Power Authority, St. Lawrence Seaway, Yellow River Water Conservation Commission, DOT of China, NSF of China. Have investigated and modeled **the St. Lawrence River, the Ohio River, the upper Niagara River, the lower Yellow River**, and many other small streams concerning flood control and contamination remediation.
- Extensive experience with laboratory hydraulics, pumping station and pump line design for water supply and irrigation system. Taught hydraulics and hydraulic laboratory courses in **Universities** in **Sweden** and **China**. Designed a self-circulation system for hydraulic experiment including pump station, pipe lines, a glass-sided flume, and a flow control sluice gate, and a flow measurement weir.
- Extensive experience with **general environmental impact analysis** related with land development and urbanization including on-site flood control and stormwater management design, water budget analysis, wildlife habitat evaluation, wetland delineation and creation, **sediment and erosion control**. Have designed stormwater BMPs and flood control systems for more than **280 subdivisions and commercial sites** per requirements of **wetland and rivers protection** and **stormwater management policy**.
- Over decade of experience with **wetland and river delineation, restoration, mitigation, and replication**.
- Expertise with filing **permit applications** with local, state, and federal governments, **public hearings**, and **expert witness** related with resource protection (land value impact, water supply, wetlands, and rivers), surface water flooding, basement flooding, and groundwater impact to wells and subsurface systems (septic system, swimming pool, and etc.).
- Experienced with **sediment and erosion control**. Designed slope protection for steep slopes. Monitored on-site sediment and erosion control plan and generated reports for DEP, MA. Restored streams and overtopped detention basins for land developers and communities.
- Experienced with Chapter 21E Site Assessment and Downgradient Property Status (DPS) study in Massachusetts.
- Experimented and field investigated **local scouring** around **bridge piers**, **abutments**, and **spur-dikes** relating to their foundation design and protection.
- Experience with using hydrological and environmental models by Natural Resources Conservation Service (NRCS, previous SCS), Hydrologic Engineering Center (HEC), Environmental Protection Agency (EPA), Federal Highway Administration (FHWA), such as **TR20, TR55, HEC1, HEC2, HECRAS, HECHMS HYDRAIN, SWMM**.
- Experienced **computer model developer**. Have developed computer models for simulating **unsteady state flows** in rivers, **transport and remediation of sediment, ice and other contaminants** in rivers and lakes. Have developed a **computer model to analyze and predict air temperature variation.** Have developed computer models for calculating watershed **runoff hydrographs**, **flood routing** through ponds and reservoirs, **infiltration trench design, water quality inlet and outlet configuration and rating cures, pollutant removal rates** of ponds, infiltration trenches, and swales, and **water budget** in watersheds.
- Published **more than 40 papers** in technical journals and national and international conference proceedings.

EDUCATION

Ph.D., Civil and Environmental Engineering, Clarkson University, USA, specialty: *Computer Modeling of River Hydraulics and River Transport*. 1994

Licenciate/M.S., Environmental Planning and Design, Luleå University, Sweden, specialty: *Experimental study of bedload sediment transport*. 1992

M. S. (Honors), Hydraulic Engineering, Hefei University of Technology, China, specialty: *Field and laboratory study of local scouring around bridge piers and abutments*. 1986

B. S. (Honors), Hydraulic Engineering, Hefei University of Technology, China, specialty: Irrigation and Drainage System 1983

HONORS AND ACTIVITIES

- Reviewer, Journal of Hazardous Materials, Taiwan.
- Reviewer, Journal of Hydrological Science and Technology, American Institute of Hydrology.
- Reviewer, Journal of Hydraulic Engineering, ASCE
- Reviewer, Journal of Hydrodynamics
- Reviewer, Sediment Research, CHES
- Member, American Society of Civil Engineers (ASCE)
- Member, National Ground Water Association (NGWA)
- Member, Association of Massachusetts Wetland Scientists (AMWS)
- Member, Sterling WHO'S WHO
- Member, International WHO'S WHO of Professionals
- Member, Chinese Hydraulic Engineering Society (CHES)
- Public Health Advisory Committee Member, Town of Southboro, MA, August 14, 207 – June 30, 2009
- Invited Speaker, Boston Asian Landlord Association "Real Estate Development In Massachusetts – Environmental/Permitting Issues," October 12, 2013, MIT, Cambridge, MA.
- Keynote speaker, Massachusetts Manufactured Housing Association (MMHA) 15th Annual Meeting, "On-site wastewater treatment and permitting: sustainable water use", October 21, 2010, Taunton, MA.
- Invited Speaker, Association of Massachusetts Wetland Scientists (AMWS), "Wetland Hydrology,", September 2001.
- Invited presenter at Water Sensitive Ecological Planning & Design, **Harvard University**, "Successful Stormwater Management Ponds," February 25-26, 2000.
- Guest Speaker, **Society of American Military Engineers**, Boston, MA, "Stormwater Best Management Practices in Land Development and Urbanization," November 1999.
- Guest Speaker, Graduate School of Design, **Harvard University**, "Integrated River Restoration", March 1999.
- Guest Speaker, Graduate School of Design, **Harvard University**, "Stormwater Best Management Practices in Land Development and Urbanization", November 1998.
- Invited Speaker, **Massachusetts Municipal Engineers Association**, ``Performance Standards and Guidelines for Stormwater Management in Massachusetts", 1996.
- Certified Wetland Scientist (#065), State of New Hampshire since 1999.
- Licensed Professional Engineer, State of Mass. #39511 since 1996.
- Certified Wildlife Habitat Evaluator, U.S. Fish and Wildlife Service since 1995.
- Certified Soil Evaluator, Dept. of Environmental Protection, MA since 1995.
- Best Paper Award, Chinese Hydraulic Engineering Society, Anhui Province, 1989.
- Distinguished Young Researcher Award, Chinese Hydraulic Engineering Society,1989.
- Outstanding Paper Award, Chinese Hydraulic Engineering Society, 1989.
- Second Place in the Contest of Advanced Mathematics, Hefei University of Technology, 1980.
- Vice President (89-90), Chinese Student Association, Potsdam, NY.
- Chief Editor (84-86), Graduate Communication, Hefei University of Technology, China.

SPECIAL TRAINING

- University of New Hampshire (Karen P. Bennett) Fern Identification, July 28, 2006.
- Vernal Pool Ecology Workshop (Mr. Brian O. Butler) sponsored by Association of Massachusetts Wetland Scientists, Tower Hall, Acton, MA, April 9, 1999.
- Botany of Sedges Workshop (Dr. Lisa Standley) sponsored by Association of Massachusetts Wetland Scientists, Tower Hill Botanical Gardens Boylston, MA, June 26, 1998.
- Botany of Grasses Workshop (Dr. Elizabeth Kellogg) sponsored by Association of Massachusetts Wetland Scientists, Tower Hill Botanical Gardens Boylston, MA, June 5, 1998.
- Introduction to HEC-HMS - Computational Hydrologic Modeling System, sponsored by American Society of Civil Engineers, Boston, MA, May 1998.
- Introduction to HEC-RAS - Computational River Analysis System, sponsored by American Society of Civil Engineers, Boston, MA, May 1998.
- The FEMA National Flood Insurance Program, sponsored by American Society of Civil Engineers, Boston, MA, May 1998.
- Fundamentals of Seismic Design (earthquake effects, Seismology, geotechnical earthquake engineering, seismic provisions in national and Mass. Building codes, etc.), organized by Northeastern University, Massachusetts Emergency Management Agency, and New England Stages Emergency Consortium, June 12-13, 1997.
- Bordering Vegetated Wetland Workshop, sponsored by MADEP, West Barnstable, MA, May 10, 1997.
- Interpretation of Analytical Results of Water and Soil Samples, by James Todaro, Matrix Analytical, Inc., January 23, 1997.
- Dam Inspection, Analysis, and Rehabilitation (dam safety regulation and permitting, sink holes and dam failure, hydraulic analysis and emergency action plans, liquefaction, seismic safety, dam failure case study, etc.) Bentley College, Waltham, MA, BSCE/ASCE, November 1996.
- Wildlife Habitat Evaluation Procedures (emphasis on the use of HSI and HEP), Colorado State University Graduate Course, U.S. Fish and Wildlife Service Certificate, Sept. 1995.
- Water Resource Engineering (Watershed Management for 21st Century, Groundwater Management, Stormwater Best Management Practices, Bridge Scouring, and River Dynamics), ASCE, San Antonio, Texas, August, 1995.
- Soil Evaluator Short Course (Geology and Soils of Massachusetts, Principles of On-site Sewage Treatment and Disposal, Soil Profile Description and Evaluation, Groundwater, Estimating Seasonal High Water Tables, Documenting Site Conditions), Ashland, MA, April to June, 1995, Sponsored by DEP, MASS.
- Movement and Fate of Contaminants in Surface Water, Groundwater and Soils , Short Course (given by Eugene R. Weiner), Wakefield, MA, March 6-7, 95, Sponsored by ASCE.
- Hydric Soil Workshop, Westford, November 9, 94, sponsored by Middlesex Conservation District, Mass.
- Urban Watershed Management - Stormwater Best Management Practices (BMPs) Short Course (given by Thomas R. Schueler), Brookline, MA, October 24-25, 94, Sponsored by ASCE.
- Prediction of Turbulent Flows, Clarkson University, June 90, By Professor Ching Jen Chen, Department of Mechanical Engineering, University of Iowa.

PROFESSIONAL EXPERIENCE

Operating Manager and Chief Engineer (April 2012- present) Creative Land &Water Engineering, LLC

- **Land development strategic planning**
- **Environmental planning and design for Chapter 4B land development**
- **Wetland and river delineation, mitigation, replication, and permitting**
- **On-site wastewater treatment system design and permitting**
- **River hydrology/hydraulics and FEMA floodplain study**
- **Stormwater management design and permitting**
- Renewable energy development coordination and environmental impact analysis and permitting
- **Environmental Site Assessment (21E) for commercial property transactions**
- Lead wildlife habitat survey and impact mitigation by land development.
- Lead investigation and design for mitigation of property flooding due to surface water and groundwater including basement.

- Retaining wall and footing design

  - ✓ Remedy non-uniform footing settlement, correct and strengthen footing pad for a roof runoff collection cistern based on field soil evaluation for Chabarb Center, Natick, MA, 2012
  - ✓ Sediment and Erosion Control design and implement supervision and monitoring for a hilly site with very erosive soil condition using sediment basins, swales, mulch, tackifier, and flocculants for a 95-unit **40B** residential subdivision, the Willows, Ayer, MA, 2012 - present
    Sediment and Erosion Control design and implement supervision and monitoring for a hilly site with very erosive soil condition using sediment basins, swales, mulch, tackifier, and flocculants for a 160+ lot residential subdivision, Pingry Hills, Ayer, MA 2013 - present
  - ✓ Design stream channel stabilization in an open bottom culvert when other's design failed, Academy Hill, Groton, MA, 2012
  - ✓ Wetland delineation and permitting, environmental monitoring for construction, and stormwater management design, 9 unit **40B** residential Subdivision, Pond Street, Natick, MA, 2012.
  - ✓ Wetland delineation and permitting, environmental monitoring for construction for a 37-unit **40B** residential subdivision, The Villages at Old County Road, Sudbury, MA, 2010 – 2014.
  - ✓ Wetland delineation and permitting, environmental monitoring for construction for a 31-unit **40B** residential subdivision, Landham Crossing, Sudbury, MA, 2010 – 2014.
  - ✓ Wetland delineation and permitting, environmental monitoring for construction for a 60-unit **40B** residential subdivision, Ashland woods, Ashland, MA, 2006 – present.
  - ✓ Wetland replication, erosion control and monitoring for a 60-unit **40B** residential subdivision, Overlook at Lake Williams, Marlborough, MA, 2014-
  - ✓ Wetland delineation and permitting, 21E site assessment, stormwater Management design and construction supervision, and construction environmental monitoring for a 21 acre industrial subdivision off Lawrence Street, Northboro, MA, 2009-present.

  - ✓ Hydrogeological Study and groundwater discharge permitting for on-site wastewater treatment system for a 178 home site, Oakhill Avenue, Attleboro, MA 2009 - present

  - ✓ Hydrogeological and geotechnical study for a row house renovation in City of Boston, MA, 2014.

  - ✓ Modular retaining wall design, Newton, MA, 2013.

  - ✓ Conduct environmental study and permitting for a 1.5 MW Solar Farm, 2012-2013.

  - ✓ Design stormwater pollution prevention plan for an old Digital Industrial Park redevelopment, 2013.

Director of Engineering Services (1997- March 2012)
Senior Environmental/Hydraulic Engineer (1996-1997)
Environmental Engineer (1994-1996) Carr Research Laboratory, Inc., Natick, Mass.

- Designed and supervised construction of a 40-ft high 300-ft long retaining wall at Wellesley Hill MBTA station using earth reinforcement and anchoring technology. My work also included site geological evolution and compaction tests. Before I took over the project, there was a landslide at the site, which caught attention of many local and state government agencies including Town of Wellesley, MA Department of Safety, OSHA, and MBTA. My work started with public relation and education of the site condition and presented my design as how to stabilize the site slope with limited access in short term and long-term. My short term solution prevent further landslide during the heavy rain storm of March 2010. The permanent wall was completed in early 2011.
- Delineated hundreds of wetlands/Rivers and obtained local, state, and federal conservation permits (Notices of Intent, 401 Water Quality Certificates, 404 U.S. Amy Corps of Engineer's permits, MEPA ENF, EPA NPDES general construction permits, etc.) for individual land owners, land developers, and corporations in more than 50 towns in MA since 1994. Gained wetlands and rivers protection related permits for land owners and land developers. Most of the time, I am contacted for projects when other people failed to success first and/or no one wants to take such a project.
- Successfully designed and permitted a 54-lot residential subdivision on 113.54 acres land in Mendon, Northbridge, and Upton; work including wetland delineation and permitting (NOI, 401 Water Quality Certificate, 404 Army Corps

of Engineer permit, EPA NPDES permit, and local permit), wetland crossing design for footing of bridge and wetland replication and monitoring, stormwater management system design. Now is the environmental monitor for construction environmental compliance and construction quality control (2003- present).

- Hydrogeological Study for groundwater discharge permit and permitting coordinator for a 175-unit mobile home community on-site wastewater treatment system upgrade in Attleboro, MA, 2009 - present.
- Hydrogeologic design for groundwater discharge and groundwater Monitoring (1999 – 2005) for an on-site wastewater treatment plan and its groundwater discharge, Queen-Anne Nursing Home, Hingham, MA.
- Packaged on-site wastewater treatment plant design and hydrogeological study (9900 gpd, 21600 gpd, 80,000 gpd) in Attleboro, Norwell, Topsfield, Framingham, Berlin, and Southborough, MA.
- Northern Harrier Habitat (*Circus cyaneus*) Field Survey and Habitat Impact analysis for 175 acres of ocean front property, NHESP File #: 07-21351, 12 & 30 Allens Neck Road, Dartmouth, MA, 2007.
- Marbled Salamander (*Ambystoma opacum*) Habitat Evaluation and Impact Mitigation (NHESP file # 04-16147), Pike avenue, Attleboro, MA, 2005.
- Easton Box Turtle (*Terrapene Carolina*) survey for a 150-unit elderly housing project (NHESP file # 05-17854, EOEA# 13451R), Southborough, MA, 2005.
- Habitat evaluation and impact mitigation for spotted turtle (*Clemmys guttata*) and wood turtle (*Clemmys insculpta*) for a residential subdivision (NHESP file # 04-17094), 252 Harvey Street, Taunton, MA, March 2005.
- Hydrogeological Study and soil evaluation for groundwater discharge permit and permitting coordinator, and package on-site wastewater treatment plant integrating design (using Bioclere) for a 21,600 gpd flow in Berlin, MA, 2006 - 2008.
- Permeability evaluation of porous pavers, Reading, MA, October 2004.
- Hydrogeological Study for groundwater discharge permit and general coordinator for an 80,000 gpd on-site wastewater treatment plan in Southborough, MA, August 2006.
- Flood Control and Stormwater Management study and design for a 100-acre (39 2-acre lots) residential subdivision, Sutton, MA, 2003.
- Food Control and Stormwater Management study, 9900 gpd on-site wastewater treatment and disposal system design, Ford's Meadow Subdivision, Nixon Road, Framingham, MA, 2002.
- Groundwater study for a common 7350 gpd on-site wastewater treatment system a proposed subdivision at 470 Boston Street in Topsfield, MA according to DEP Guidelines for Hydrogeologic Evaluations in 310CMR15.000 and Topsfield Board Health Regulations, 2002.
- Stormwater Engineer responsible for the flood Control and Stormwater Management study and Design for Wrentham Business Park (1 million square ft buildings on over 360 acre parcel), Wrentham, MA, 2001-2003.

- Hydrogeological Study, Wrentham Business Park (1 million square ft buildings on over 360 acre parcel), Wrentham, MA, May 2000.
- Conducted a **Stream Morphological, Hydrological, and Hydraulic investigation of Bussey Brook through Arnold Arboretum, Harvard University, Jamaica Plain, MA (2000-2003).** The major purposes of the study include:

    1. Quantifying the hydraulic and hydrologic conditions under different watershed scenarios in the section of the brook proposed for bank reconstruction, which include discharges, flow velocities, and water levels in the brook for 1-year to 100-year storm events;
    2. Quantifying stream bed and bank erosion depths under the worst flow condition for bank stabilization;
    3. Recommending an optimized river morphology for restoration of the brook, including width, depth, and armoring requirements;
    4. Cooperate with Arboretum staff and Harvard Graduate School of Design faculty and students to incorporate staff and student observations and recommendations for the entire Bussey Brook watershed into a final report;
    5. Assist Arboretum staff in securing federal and state funds to finance a remediation program.

- Reviewed the design of Weathervane Golf Club and Village at Weathervane in south Weymouth (126 house subdivision and 9-hole golf course) including: wetland delineation and replication, wildlife habitat mitigation, stormwater management system, groundwater monitoring and impact, fertilizer and pesticide management, water budget calculations for turf irrigation and wetland impacts.

- Designed stormwater management system including oil/water separator for an Mobil Gas Station near Merrimac River in Chelmsford, MA.
- Calculated monthly detailed water budget and designed flood control for a perennial multi-purpose pond creation in city park of Long Island, NY.
- Designed stormwater management system including oil/water separator for an office complex building at 2 Granite Avenue near Neponset River in Milton, MA.
- Studied velocity distribution and erosion impact in floodplain for a proposed residential house in the floodplain of Traphole Brook in Walpole, MA.
- Laurelwood subdivision in Scituate, MA: Computed floodplain for an intermittent stream; designed gabion retaining wall considering seismic force for a detention basin; designed perimeter infiltration drain for dewatering detention basins; evaluated and mitigated wildlife habitat impact for a road crossing; presented the above studies at Scituate Public Hearings.
- Reviewer of flood control, stormwater management studies and wetland delineation for the Towns of **Holbrook, Mendon, Milford, Westford, Walpole, and Weymouth, MA**.
- Expert representative at public hearings for permits with town planning boards and conservation commissions.
- Expert witness in court for drinking well study, river status study, wetland impact, and stormwater management, in Mass., and flooding study in Meriden, CT.
- Carrying out computer analysis and field study for flood profile analysis, debris jam impact, and sediment transport in Harbor Brook, Meriden, CT.
- Hydrogeological studies and groundwater mounding calculations for shared/common septic systems and stormwater management infiltration trenches/basins in numerous cities and towns including Attleboro, Berlin, Framingham, Hingham, Norwell, Plainville, Southborough, Topsfield, and Wrentham, MA.
- Designed on-site wastewater treatment system including single-family septic systems and packaged treatments and related permitting.
- Evaluated and mitigated wildlife habitat impact, MacIntire Crossing, North Reading, MA.
- Calculated drainage basin water budget and evaluated groundwater impact due to subdivision development, MacIntire Crossing Subdivision, North Reading, MA.
- Calculated groundwater mounding due to leaching fields of septic systems and stormwater detention ponds, North Reading, Braintree, and Hingham, MA.
- Conducted field test of soil permeability and designed groundwater recharge facilities in numerous cities and towns including Attleboro, Braintree, Framingham, Milton, Natick, Plainville, Plymouth, and Wrentham, MA.
- Conducted flood and environmental impact analysis for Balster Brook on Curry College Campus, Milton, MA, a tributary watershed to Neponset River which is an Area of Critical Environmental Concern (ACEC), Milton, MA.
-

- Completed road drainage calculations, development impact report including water pressure analysis related to water supply system, and watershed water budget analysis for Bellows Farm Subdivision (237 acres), Acton, MA.
- Assessed soil suitability for on-site sewage disposal and groundwater recharge, Acton and Norton, MA.
- Developed computer models for calculating groundwater mounding and drainage basin water budget, designing flood control and stormwater quality detention ponds, sediment and erosion control riprap, and groundwater recharge trenches.
- Developed a computer model for flood routing computation in reservoirs and detention ponds. The model is being applied to flood control analysis and stormwater management design.
- Improved a computer model by SCS *Modified Soil Cover Complex Method* to calculate detailed inflow hydrograph. The improved model can give a more accurate definition of starting time of direct runoff in a watershed. The model is being used for flood control analysis.
- Studied flood impact of the change in land use for Dartmouth Heritage Industrial Park, Dartmouth, MA.
- Analyzed and implemented stormwater quality management for the Bradlees retail development, West Main Road, Middletown, Rhode Island.
- Conducted flood control analysis and designed flow control structures and detention basins for Willis Hill Subdivision, Sudbury, MA.
- Carried out environmental impact analysis and best management practices, Arborway Estates, Scituate, MA.
- Participated the revision in hydrological study, flood boundary and flood way map (FBFW) for the Federal Emergency Management Agency (FEMA) in Sudbury, Milton, Milford, Easton of MA.
- Delineated hundreds of wetlands and created wetland replication plans.

- Conducted 21E Hazardous Waste inspections for various sites in MA per 310 CMR40.000.
- Conducted Downgradient Property Status (DPS) Submittal study for 63 Morton Street in Framingham (RTN 3-19707), MA.
- Conducted water sampling for groundwater and sewage treatment study.

Research Engineer, Research Associate, Clarkson University, Potsdam, NY 8/93-9/94

- Developed and calibrated a computer model to simulate unsteady flow and ice conditions in the Lower Yellow River for flood control and analysis. Trained four engineers from China to use this model (sponsored by **the World Bank**).
- Served as a consultant for the St. Lawrence Seaway Administration. Studied the effect of flow discharge at the seaway power dam on the navigation depth along the St. Lawrence River.
- Served as a consultant for the Yellow River Water Conservancy Commission of China for flood control and analysis in the lower Yellow River.

Research Assistant, Clarkson University, Potsdam, NY 7/91-7/93, 3/89-8/90

- Developed and calibrated computer models to simulate flow conditions and contaminant transport processes in regards to clean-up and flood control in large river systems.
- Developed and validated an integrated menu-driven oil spill model to calculate oil slick movement, quantities of oil beached, evaporated into air, and dissolved into water column in concern of environmental protection. The model is being used for scenario analysis and contingent clean-up support in the Ohio-Monongahela-Allegheny River System by the Pittsburgh Division of U. S. Army Corps of Engineers, and for the St. Lawrence River (Sponsored by **the St. Lawrence Seaway Administration** (SLSA), U.S. Dept. of Transportation).
- Developed and calibrated a river flow and ice model to calculate discharge, water surface profile, and ice formation and movement relating to flood analysis and control. The model was applied to the upper Niagara River and the St. Lawrence River (Sponsored by **the New York Power Authority and SLSA**).
- Tutored and graded homework of students in Civil and Environmental, Mechanical, and Chemical Engineering Fluid Mechanics.

Visiting Researcher, Luleå University of Technology, Sweden 9/90-6/91

- Developed a new concept and transport rate formula for irregular solid particle transport from laboratory and field study relating to solid contaminant remediation (sponsored by **Swedish National Science Research Council**).

- Taught a laboratory course and conducted recitation for senior and sophomore classes in Hydraulics.

Research Engineer (6/86-2/89), **Research Assistant** (9/83-5/86), Hefei University of Technology, China

- Taught Hydraulics to undergraduate in civil engineering. Conducted laboratory studies and field investigations relating to river flood control, protection and design of bridge and dike foundations.
- Lectured to undergraduate classes in Fluid Mechanics and Open Channel Flow.
- Term project supervisor in Hydraulics.
- Supervised graduate students on laboratory work and field investigation in the field of river hydraulics and river ice problems relating to flood control and analysis.
- Participated in physical model investigation of hydraulic conditions at the Highway Bridges on the Upper Yellow River (sponsored by **the Department of Transportation, China**).
- Designed a self-circulation system for hydraulic experiment including pump station, pipe lines, a glass-sided flume, and a flow control sluice gate, and a flow measurement weir.
- Experimented with local scouring around spur-dikes and bridge piers with the objective to understand and predict local scouring processes, design and protect their foundations (sponsored by **Academy of Highway Transportation, China**).

- Supervised field investigation on a flood event concerning the effect of construction of a hydro-power dam in the middle Yellow River. This helped to optimize the operation of the power plant so as to avoid a $200,000 loss annually (sponsored by **the Water Conservancy Bureau of Shanxi Province**).
- Researched the formation and evolution of ice jams in rivers (sponsored by **the National Science Foundation of China**).

OTHER RELEVANT EXPERIENCE

- Design of a 45 m (147.6 ft) high double arched concrete dam: determined hydraulic force, flood discharge tunnel, emergency spill way, dam dimension, and reinforcement of the dam, 1983.
- Design of a Small Irrigation System: Determining flow capacity of channels and furrows, and flow control structure dimensions, 1982.
- Design of a Pump Station: Determined the Pump Capacity and Pipe Lines, pump intake, and designed sediment basin, pump station house 1982.
- Analysis of BOD and DO in a Stream, 1993.
- Application of Unsteady Flow Model to Flood Wave Propagation in the St. Lawrence River, 1993.
- Calculation of Water Surface Profile of the lower Niagara River using HEC2, 1989.
- Calculation of Recharge Rate and Hydraulic Head Distributions on a Small Island, 1989.
- Concentration Distribution of Solute Transport in a Confined Aquifer, 1989.

COMPUTER SKILLS

- More than ten years experience doing simulations on Unix and MS-DOS computers. Skillful in using WordPerfect, Latex, QuattroPro, MS-Office, Harvard Graphics, Tecplot, AutoCAD, etc.
- Upgrading World Wide Web Site and Internet Information search.

SPECIAL SKILLS

Fluent in both English and Chinese.

PUBLICATIONS

Book:

1. Wang, D.S. (1991). "Hydraulic Engineering", *Encyclopedia,* Ed. by Z. M. Ang, et al, Huaxia Press, China, 1991 (in Chinese).
2. Wang, D.S. (2002). "Successful Stormwater Management Pond", Chapter I.2, *Handbook of Water Sensitive Planning and Design*, Ed. by Robert L. France, CRC Press, USA.

Journal Papers:

1. Sui, Jueyi, Karney, B. W., Sun, Z., and Wang, D. S. (2002). "Field Investigation of frazil jam evolution: A case study," J. of Hydraulic Engrg., ASCE, Vol. 128, No. 8, 781-787.
2. Wang, D.S. (1999) "A simple mathematical model for infiltration BMP design," presented at the 4th USA/CIS Joint Conference on Environmental Hydrology and Hydrogeology, November 7-11, 1999, and published in *Hydrological Science and Technology*, American Institute of Hydrology, Vol. 15, No. 1-4.
3. Wang, D. S., Shen, H. T., and Crissman, R. D.(1995). ``Simulation and analysis of upper Niagara River ice jam conditions," *J. of Cold Region Engrg.*, ASCE, Vol. 9, No. 3, 119-134.
4. Shen, H. T., Wang, D. S., and Lal, A. M. W.(1995). ``Numerical Simulation of River Ice Processes," *J. of Cold Region Engrg*., ASCE, Vol. 9, No. 3, 107-118.
5. Shen, H. T. and Wang, D. S., (1995). ``Undercover transport and accumulation of frazil granules," *Journal of Hydraulic Engineering*, ASCE, No.2, 184-195.
6. Wang, D. S., Shen, H. T., and Sun, C. Z., (1994). ``Analysis of frazil jam data from Hequ reach of the yellow River," *Journal of Hydrodynamics*, Ser. B Vol.6 No. 1, 23-32.
7. Yapa, P. D., Shen, H. T., Wang, D. S., and Angammana, K., (1992). ``An integrated Computer model for simulating oil spills in the upper St. Lawrence River," *Journal of Great Lakes Research*, Vol. 18, No. 2, 340-351.
8. Wang, D. S., Shen, H. T., and Sun, C. Z., (1993). ``Transport of frazil granules in Hequ each of the Yellow River," *Sediment Research*, No. 4, 1-11.
9. Sun, Z. C., and Wang, D. S., (1988). ``Preliminary studies on the calculation of thickness distribution of ice jams," *Journal of Hydraulic Engineering*, No 11 (in Chinese).
10. Wang, D. S., (1988). ``Study of local scour around submerged spur-dikes," *Journal of hydrodynamics*, Vol. 2, No. 2, 60-69 (in Chinese).
11. Wang, D. S., (1987). ``On the similarity law of distorted hydraulic models," *Journal of Sediment Research*, Vol. 4 (in Chinese).

Conference/Proceeding Papers:

1. Wang, D. S. (2000). "Successful Stormwater Management Ponds," invited presentation at Water Sensitive Ecological Planning & Design, Harvard University, February 25-26, 2000.
2. Wang, D. S. (1999). "A simple mathematical model for infiltration BMP design," Proceeding of Fourth USA/CIS Joint Conference: Hydrologic Issues of the 21st Century: Ecology, Environment and Human Health, November 7-10, 1999, San Francisco, CA, p117.
3. Wang, D. S., Shen H. T., Zhu, Q., Huo, S., Li, Z., and Wang, Z. (1996). ``Simulation and analysis of ice conditions in the lower Yellow River," *Proceeding of the 13th IAHR Int. Ice Symp*., Beijing, China, Aug. 27-29.
4. Wang, D. S., and Carr, B. J., (1996). ``Pollutant removal rates for stormwater detention ponds," *Proceeding of 1996 AIH Annual Meeting*, Boston, AMBP 12-21.
5. Wang, D. S., and Carr, B. J., (1996). ``Integrated river modeling and river management," *Proceeding of 1996 AIH Annual Meeting*, Boston, IP47-58.
6. Wang, D. S., and Shen, H. T., (1995). ``A modified Newton-Raphson scheme for Unsteady river flow simulation," *Proceedings, 1995 First International Conference on Water Resources Engineering*, 410-414.
7. Shen, H. T., Wang, D. S., and Lal, A. M. W., (1994). ``The river ice model RICE: theory and applications," River Ice Seminar, North Central River Forecast Center, Minneapolis, National Oceanic and Atmospheric Administration, U. S. Department of Commerce.
8. Shen, H. T., and Wang, D. S., (1994). ``Numerical simulation of ice jam progression in the upper Niagara River," *Proceeding of the Twelfth IAHR Int. Ice Symp*., Trondheim, Norway.

9. Wang, D. S., Shen, H. T., and Sun, Z. C., (1992). ``Analysis of frazil jam data from Hequ reach of the Yellow River," *Proceeding of the First National Conference on Ice Problems*, Baode, Shanxi, 103-114.
10. Wang, D. S., and Shen, H. T., (1992). ``Frazil and anchor ice evolution in rivers," *Proceeding of the First National Conference on Ice Problems*, Baode, Shanxi, 115-127.
11. Wang, D. S., (1992). ``Frazil growth in turbulent flows," *9th Annual Iroquois Fluids Conference*, Casowasco, NY.
12. Shen, H. T., and Wang, D. S., (1992). ``Frazil jam evolution and cover load transport," *Proceeding of the Eleventh IAHR Int. Symp. on Ice Problems*, Banff, Alberta, 418-429.
13. Yapa, P. D., Wang, D. S., Shen, H. T., Yang, X. Q, and Perry, J., (1991). ``An integrated model for fate and transport of oil in rivers," *Proceedings of the 1991 National Conference*, Hydraulic Engineering, ASCE, Nashville, TN, 638-643.
14. Shen, H. T., Yapa, P. D., Wang, D. S., and Yang, X. Q., (1990).``A mathematical model for transport and mixing of oil slick in rivers," *Hydraulics' 90*, ASCE, San Diego, 75-80.
15. Wang, D. S., Sui, J. Y, Zhou, M., and Li, Y. S., (1989). ``Particularities of scouring and deposit in riverbed at the Hequ reach of the Yellow River," *Proceeding of the Fourth International Symposium on River Sedimentation*, Beijing, China, 897-904.
16. Yang, S. R., Wang, D. S., Sun, H. S., and Yao, K. Z, (1988). ``Studies on the formation and evolution of frazil ice jams," *Proceeding of the Ninth IAHR International Symposium on Ice Problems*, Vol.2, Sapporo, Japan..
17. Wang, D. S., (1988). ``A preliminary study of movement of drifting bodies in rivers," *Proceeding of the Second National Symposium on Hydrodynamics*, Suzhou, China (in Chinese).
18. Ni, J. X., and Wang, D. S., (1988). ``Studies on open leads in Hequ reach of the Yellow River," *Proceeding of the Second National Symposium on Hydrodynamics*, Suzhou, China (in Chinese).
19. Wang, D. S., and Hu, L. B., (1987). ``On the Calculation of dividing flow resistances in channels with complex boundaries," presented at the Second Summer Seminar of hydrodynamics, Guangzhou, China (in Chinese).

Representative Technical Reports:

1. Wang, D.S. (2008). "On-site Wastewater Treatment Facility, Operation and Maintenance Manual, Sawyer Hill Cohousing, Sawyer Hill Road, Berlin, MA," for Sawyer Hill LLC, Carr Research Laboratory, Inc., July 18
2. Wang, D.S. (2007) . "Wastewater Treatment Facility Engineering Report, Sawyer Hill Cohousing, Sawyer Hill Road, Berlin, MA," for Sawyer Hill LLC, Carr Research Laboratory, Inc., July 6
3. Wang, D.S. (2007). "Geological Evaluation Report, Sawyer Hill Cohousing, Sawyer Hill Road, Berlin, MA," for Sawyer Hill LLC, Carr Research Laboratory, Inc., July 11
4. Wang, D.S. (2007). "Geological Evaluation Report, Kimlo Road, Wellesley, MA," Carr Research Laboratory, Inc. Feb. 15.
5. Wang, D.S. (2004). "Hydrogeologic Evaluation Report, School Street, Southborough, MA," for Security Realty Trust, 303 Worcester Road, Framingham, MA 01701, Carr Research Laboratory, Inc., July 30.
6. Wang, D.S. (2002). "Groundwater Discharge Monitoring Report (monthly)," Queen-Anne Nursing Home, DEP permit No. 111243 (0-625), Hingham, MA.
7. Wang, D.S. (2000). "Downgradient Property Status Submittal," 63 Morton Street, Framingham, MA, Carr Research Laboratory, Inc., November.
8. Wang, D. S. (2000). "Hydrogeological Study Report, Wrentham Business Park, Wrentham, MA," Carr Research Laboratory, Inc., May.
9. Wang, D.S. (1999). "Chapter 21E Site Assessment (Phase II)," 80 Lawrence Street, Northboro, MA, Carr Research Laboratory, Inc., April.
10. Wang, D. S. (1999) "Flood Control and Stormwater Management Design, Sippican Elementary School, Marion, MA," Carr Research Laboratory, Inc., July.
11. Wang, D. S. (1999) "Floodplain Calculations, Depot Street, Easton, MA," Carr Research Laboratory, Inc., March.
12. Wang, D. S. (1999) "Preliminary Hydrogeologic Study for a Potential Septic System Leaching Bed, Amber Road, North Reading, MA," Carr Research Laboratory, Inc., January.
13. Carr J. and Wang, D. S. (1997) "Hydrogeologic Study - Proposed Common Septic System, Laurelwood Subdivision, Norwell, MA," Carr Research Laboratory, Inc., March.

14. Wang, D. S. (1997) ``1992 Flood Investigation and Analysis, Harbor Brook, Meriden, Connecticut," *Report*, Carr Research Laboratory, Inc, Natick, MA.

15. Wang, D. S. (1996) "Groundwater Mounding (Analysis) for the Proposed Septic System, Queen-Anne Nursing Home, Hingham, MA," Carr Research Laboratory, Inc., December.
16. Wang, D. S., and Carr, B. J. (1995) ``Environmental Impact analysis and Best Management Practices, Arborway Estates, Scituate, MA," *Report*, Carr Research Laboratory, Inc, Natick, MA.
17. Wang, D. S. (1995) ``Flood condition impact evaluation , Arborway Estates, Scituate, MA," *Report*, Carr Research Laboratory, Inc, Natick, MA.
18. Wang, D. S. (1994) ``Flood condition impact evaluation Willis Hill Subdivision, Sudbury, MA," *Report*, Carr Research Laboratory, Inc, Natick, MA.
19. Wang, D. S., Shen, H. T., Zhu, Q., Huo, S., and Wang, Z. (1994) `` Simulation and analysis of Lower Yellow River flow and ice conditions," *Report submitted to the World Bank*, Department of Civil and Environmental Engineering, Clarkson University, Potsdam.
20. Shen, H. T., Yapa, P. D., Wang, D. S., and Yang, X. Q., (1993). ``A mathematical model for oil slick transport and mixing in rivers," *Special Report No. 93-21*, CRREL, US Army Corps of Engineers.
21. Wang, D. S., and Shen, H. T., (1993). ``Model validation," *Report No. 1*, submitted to the World Bank for the Yellow River ice project.
22. Wang, D. S., and Shen, H. T., (1993). Model preliminary results," *Report No. 2*, submitted to the World Bank for the Yellow River ice project.
23. Shen, H. T., Yapa, P. D., Wang, D. S., and Yang, X. Q., (1993).``A mathematical model for oil slick transport and mixing in rivers," *Special Report No. 93-21*, CRREL, US Army Corps of Engineers.
24. Wang, D. S., and Shen, H. T., (1993). ``User's guide for river ice simulation model -- RICEN," *Report No. 93-8*, Department of Civil and Environmental Engineering, Clarkson University (submitted to New York Power Authority).
25. Shen, H. T., Wang, D. S., Lal, A. M. W., (1993a). ``A river ice simulation model -- RICEN (Model formulation and program guide, " *Report No. 93-8*, Department of Civil and Environmental Engineering, Clarkson University (submitted to New York Power Authority).
26. Shen, H. T., and Wang, D. S., (1993b). ``Simulation and analysis of upper Niagara River ice conditions," *Report No. 93-10*, Department of Civil and Environmental Engineering, Clarkson University (submitted to New York Power Authority).
27. Shen, H. T., and Wang, D. S., (1993c). ``Frazil and anchor ice evolution in rivers," *Report No. 93-9*, Department of Civil and Environmental Engineering, Clarkson University.
28. Shen, H. T., and Wang, D. S., (1992). ``Frazil jam evolution and transport of low density granules," *Report No. 92-10*, Department of Civil and Environmental Engineering, Clarkson University.
29. Shen, H. T., Yapa, P. D., Wang, D. S., and Yang, X. Q., (1991). ``A mathematical model for oil slick transport and mixing in rivers," *Report No. 91-1*, Department of Civil and Environmental Engineering, Clarkson University.
30. Yang, X. Q., Yapa, P. D., Shen, H. T., and Wang, D. S., (1990). ``Unsteady flow simulation or the Ohio River System," *Report No. 90-10*, Department of Civil and Environmental Engineering, Clarkson University.
31. Yapa, P. D., Wang, D. S., Shen, H. T., Yang, X. Q., and Pery, J. B., (1990). ``An integrated oil spill model for the Ohio-Monongahela-Allegheny river system (User's Guide)," *Report No. 90-11*, Department of Civil and Environmental Engineering, Clarkson University.
32. Yapa, P. D., Shen, H. T., Yang, X. Q., Wang, D. S., and Pery, J. B., (1990). ``User's manual for an integrated oil spill model for the St. Lawrence River," *Report No. 90-7*, Department of Civil and Environmental Engineering, Clarkson University.
33. Wang, D. S., (1988). ``Studies on the formation and evolution of ice jams in the Hequ each of the Yellow River," *Report submitted to Natural Science Foundation of China* (in Chinese).

Edward H. Marchant

Edward H. Marchant has been actively involved with the development, financing, construction, and management of real estate over the past forty-three years. In addition to his experience as a real estate developer and consultant, Mr. Marchant has been a real estate educator at Harvard University over the past thirty-six years.

As a Project Manager and then as Director of Development at Greater Boston Community Development, Inc. (GBCD), Mr. Marchant worked from 1971-1980 with a wide range of community-based housing sponsors in the successful development of numerous affordable housing projects. GBCD, a non-profit corporation and one of the leading affordable housing development firms in the country, is now known as The Community Builders, Inc. (TCB). Mr. Marchant served on its Board of Directors from 1985 to 1997 until he began providing real estate consulting services to TCB. Mr. Marchant no longer provides consulting services to TCB and was reelected as a member of the TCB Board of Directors in December 2010.

As a Vice President at John M. Corcoran & Co. (Corcoran), a private Boston real estate development and management company, Mr. Marchant was responsible for initiating real estate projects and serving as a development project manager on those projects that he initiated. As a development project manager, Mr. Marchant was responsible for identifying suitable sites and gaining site control, preparing feasibility studies, assembling development teams, negotiating required zoning approvals, securing construction and permanent financing, coordinating the design/construction process, and establishing and monitoring marketing programs. Mr. Marchant's real estate development experience at Corcoran included the development of residential, office, and R&D projects. One of his projects at Corcoran was the rehabilitation of a 392-unit Boston public housing project now known as Commonwealth Apartments. That project, owned by the Boston Housing Authority but privately managed by Corcoran, was awarded an Urban Land Institute Award of Excellence in 1989.

Since 1990 Mr. Marchant has worked as an independent real estate advisor. Clients have included developers, investors, private and quasi-public financial institutions, universities, foundations, and municipalities. Representative assignments have included advising Zoning Boards of Appeals and developers in Massachusetts on 147 proposed rental or for-sale Comprehensive Permit mixed-income residential developments; quasi-public agencies on redevelopment planning, implementation, and/or developer selection for closing military bases (Ft. Devens, MA / Watertown, MA / and Bermuda); major urban universities on the development of a strategic neighborhood revitalization plan (with TCB) and on the development and/or acquisition of graduate student/faculty housing; a federal housing agency on the implementation of a public housing funding program for severely distressed public housing projects; the Ford Foundation (with Brophy & Reilly LLC) on its mixed-income/mixed-race communities initiative; a non-profit on the development and financing of an assisted-living facility; private developers on structuring and negotiating joint venture development agreements; a private corporation on a valuation and disposition strategy for corporate real estate assets; a local foundation on pre-development loan due diligence reviews of proposed mixed-income housing developments; investors on acquiring real estate assets; and a private developer on the development of an ambulatory care center.

In addition to his direct real estate consulting work, he has served as a court-appointed Trustee or Examiner for the Office of the United States Trustee on four Chapter 11 bankruptcy cases, including two where the primary assets were real estate. These two cases included a mixed-use building (retail and office) and a mobile home park. Creditors in the two cases in which Marchant served as Chapter 11 Trustee received a 100 cent and 129 cent on the dollar dividend distribution respectively. Mr. Marchant has also served as a real estate expert for the United States Attorney, District of Massachusetts.

Since 1980, Mr. Marchant has been an Adjunct Lecturer in Public Policy at the Kennedy School of Government, Harvard University, where he has taught courses on real estate development and finance and on the development, financing, and management of affordable housing. Mr. Marchant also serves as a Core Faculty member of the Real Estate Academic Initiative at Harvard University. The quality of Mr. Marchant's teaching at the Kennedy School has been recognized numerous times through a Dean's Office award. Mr. Marchant also teaches a real estate finance and investment course at the Harvard University Extension School where he received the JoAnne Fussa Distinguished Teaching Award in 1997. Mr. Marchant has participated as a faculty member in professional educational programs offered by Harvard Graduate School of Design (GSD), Harvard Business School (HBS), Harvard Kennedy School (HKS), and Harvard Divinity School (HDS). These programs have included the Advanced Management Development Program in Real Estate, the Affordable Housing Institute and Real Estate Finance Fundamentals (GSD); Real Estate Management Program, Real Estate Executive Seminar, and Leading Complex Capital Projects Program (HBS); HUD/CPD Community and Economic Development Institute and the HUD-sponsored Community Builders Fellowship and Public Trust Officers Training Program (HKS); and the Summer Leadership Institute (HDS).

Mr. Marchant has frequently served as an evaluator for the Innovations in American Government program, a program administered by the Ash Center at the Harvard Kennedy School. Mr. Marchant also designs and teaches corporate real estate training programs, including programs for Jones Lang LaSalle, Boston Financial Investment Management, Copley Real Estate Advisors, the City of Boston's Department of Neighborhood Development and The Community Builders, Inc.

A graduate of Cornell University and Harvard Business School, Mr. Marchant is a member of the Urban Land Institute and a former Chairman of ULI's Boston District Council Executive Committee. Mr. Marchant is also a member of the Cornell University Real Estate Council and a member of the Cornell Baker Program in Real Estate Advisory Board.

Edward H. Marchant
EHM/Real Estate Advisor
9 Rawson Road
Brookline, MA 02445-4507

617-739-2543
617-739-9234 (FAX)
emarchant@msn.com

May 2014

Section 7 Required Attachments

- Narrative Describing Prior Meetings with Municipal Officials
- Evidence that Copy of Complete Application was Submitted to Town of Sherborn
- Copy of DHCD Notification Letter
- Processing Fee Check Payable to Mass Housing [$2,500.00] [Submitted to MassHousing Only]
- Technical Assistance/Mediation Fee Check Payable to MassHousing [$2,980.00]
- Executed W-9 Form [Submitted to MassHousing only]

Tab 7.1 Narrative Describing Meetings with Municipal Officials

There have been no conversations or meetings held with Municipal Officials regarding Green Lane.

Trask

TRASK INCORPORATED

30 Turnpike Road • Suite 8
Southborough, MA 01772
PH: (508) 485-0077
FX: (508) 485-4879

Mr. Michael S. Giaimo
Chairman, Board of Selectmen
Town of Sherborn
19 Washington Street
Sherborn, Massachusetts 01770

24 May 2016

RE: Green Lane, MA - Green Lane, Sherborn, MA
40[B] Comprehensive Permit Affordable Housing Development
Site Eligibility & Acceptance Application Filing

Dear Mr. Giaimo;

Please find enclosed a copy of the site eligibility and acceptance application package that is being filed regarding the above referenced affordable housing project. This development will consist of a total of 16 units of which 4 will be affordable units consistent with MGL 40[B] regulations.

The developer is Green Road LLC., C/o Benjamin T. Stevens of Trask Inc., and any additional information requests should be directed to my office.

Thank you for your time and attention to this matter.

Regards,

Benjamin T. Stevens
President, Trask Inc.

RECEIVED
MAY 25 2016
BY:

Enclosure

Trask
TRASK INCORPORATED

30 Turnpike Road • Suite 8
Southborough, MA 01772
PH: (508) 485-0077
FX: (508) 485-4879

BY CERTIFIED MAIL

25 May 2016

Chrystal Kornegay
Undersecretary
Massachusetts Department of Housing & Community Development (DHCD)
100 Cambridge Street, Suite 300
Boston, MA 02110

RE: Green Lane
Green Lane, Sherborn, MA 01770

Dear Ms. Kornegay:

Pursuant to 760 CMR 56.04(2), Green Lane LLC is pleased to notify DHCD that a Project Eligibility Letter application for Green Lane was submitted to MassHousing on 13 April 2016.

Green Lane has been designed to provide 16-townhouse units of family ownership housing in Sherborn, MA under the state's Comprehensive Permit program.

If you have any questions or desire additional information, please do not hesitate to contact me (508-485-0077 or benstevens@traskdevelopment.com) or our Chapter 40B Advisor, Edward Marchant (617-739-2543 or emarchant@msn.com).

Sincerely yours,

Ben Stevens
Green Lane LLC, Manager

Trask
TRASK INCORPORATED

30 Turnpike Road • Suite 8
Southborough, MA 01772
PH: (508) 485-0077
FX: (508) 485-4879

BY CERTIFIED MAIL

25 May 2016

Jessica Malcolm
40B Project Coordinator
MassHousing
1 Beacon Street
Boston, MA 02108

RE: Green Lane
Green Lane, Sherborn, MA 01770

Dear Ms. Malcolm:

Pursuant to 760 CMR 56.04(2), Green Lane LLC is pleased to notify DHCD that a Project Eligibility Letter application for Green Lane was submitted to MassHousing on 13 April 2016.

Green Lane has been designed to provide 16-townhouse units of family ownership housing in Sherborn, MA under the state's Comprehensive Permit program.

If you have any questions or require additional information, please do not hesitate to contact me (508-485-0077 or benstevens@traskdevelopment.com) or our Chapter 40B Advisor, Edward Marchant (617-739-2543 or emarchant@msn.com).

Sincerely yours,

Ben Stevens
Green Lane LLC, Manager

TRASK INC.
30 TURNPIKE RD. STE 8
SOUTHBOROUGH, MA 01772

MIDDLESEX SAVINGS BANK
SOUTHBORO, MA 01772

1386

53-7122/2113

CHECK ARMOR

5/24/2016

PAY TO THE ORDER OF MASSHOUSING $ **2,500.00

Two Thousand Five Hundred and 00/100********** DOLLARS

MASSHOUSING
One Beacon Street
Boston, MA 02108

MEMO

AUTHORIZED SIGNATURE

Security Features Included. Details on Back.

⑈001386⑈ ⑆211371227⑆ 165267032⑈

TRASK INC. 1386

MASSHOUSING		5/24/2016	
5041 · Permits & Licenses	application fee		2,500.00

NEW MSB Cheching 2,500.00

TRASK INC.
30 TURNPIKE RD. STE 8
SOUTHBOROUGH, MA 01772

MIDDLESEX SAVINGS BANK
SOUTHBORO, MA 01772

1387

53-7122/2113

CHECK ARMOR FRAUD PROTECTION

5/24/2016

PAY TO THE ORDER OF MASSHOUSING $ **2,980.00

Two Thousand Nine Hundred Eighty and 00/100********** DOLLARS

MASSHOUSING
One Beacon Street
Boston, MA 02108

MEMO

AUTHORIZED SIGNATURE

Security Features Included Details on Back.

⑈001387⑈ ⑆211371227⑆ 165267032⑈

TRASK INC. 1387

MASSHOUSING 5041 · Permits & Licenses	mediation fee	5/24/2016	2,980.00

NEW MSB Cheching 2,980.00