

**FletcherTilton**<sub>pc</sub>  
Attorneys at law

June 18, 2019

Steven Boulay, Chair  
Shrewsbury Planning Board  
Town of Shrewsbury  
100 Maple Avenue  
Shrewsbury, MA 01545

RE: Edgemere Crossing at Flint Pond  
Application for Special Permit

Dear Chairman Boulay and Member of the Board:

On behalf of Route 20 Nominee Trust and DeMoulas Supermarket, Inc., I am pleased to submit this Application for Special Permit and Site Plan Approval for the Edgemere at Flint Pond Mix Use Development: Horizontal as specifically authorized by Section VII(N) of the Shrewsbury Zoning Bylaw. Enclosed please find the following:

1. Form L, Site Plan Special Permit Application;
2. Form M, Certificate of Ownership;
3. Filing Fees in the following amounts:
  - A. Application fee for Site Plan: \$20,060.00
  - B. Site Plan Review Fee: \$40,120.00
  - C. Special Permit Application and Review Fee: \$ 800.00
4. Certified List of Abutters within 300 feet of Property;
5. Memorandum of Applicant in Support of Application for Special Permit;
6. Transportation Impact and Access Study dated June, 2019 prepared by Vanasse Hangen Brustlin, Inc.;
7. Stormwater Management Report dated June, 2019 prepared by RJ O'Connell & Associates, Inc.;

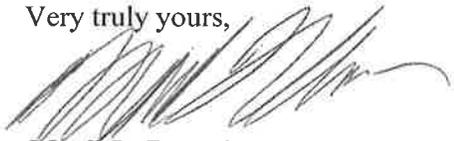
Steven Boulay, Chair  
Shrewsbury Planning Board  
June 18, 2019  
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8. Four (4) full size Site Plans and Development Plans entitled "Edgemere at Flint Pond prepared by RJ O'Connell & Associates, Inc. (the "Site Plan"); and
9. Eight (8) 11" x 17" versions of the Site Plan.

If your Board believes any other information would be of assistance in your review, kindly advise and the Applicant will do its utmost to provide such information.

I understand that this matter will be scheduled for hearing on your next available Planning Board Meeting of July 11, 2019. I look forward to the opportunity to present this exciting development to the Board at that time.

Very truly yours,



**Mark L. Donahue**  
Fletcher Tilton PC  
The Guaranty Building  
370 Main Street, 11<sup>th</sup> Floor  
Worcester, MA 01608  
Tel: 508.459.8029  
Email: [mdonahue@fletchertilton.com](mailto:mdonahue@fletchertilton.com)

MLD/mmp  
Enclosures

**FORM L**  
**APPLICATION FOR SITE PLAN APPROVAL/SPECIAL PERMIT/MODIFICATION BY THE PLANNING BOARD**

Application made for:  Site Plan Approval by Planning Board (Section VII F)  
 Special Permit: Type Mixed Use Development: Horizontal Mix  
Section VII(N)  
 Modification: Section \_\_\_\_\_

File two (2) completed forms together with the original plan, five (5) copies of the full size site plan, eight (8) copies of reduced 11"x17" size site plan, AutoCAD and pdf or tif design on a disk, and the filing fee with the Town Clerk.

June 4, 2019

To the Shrewsbury Planning Board:

The undersigned, herewith, submits the accompanying Site Plan entitled "Site Plan for Edgemere Crossing at Flint Pond" and dated June, 2019 for approval under the provisions of the Zoning Bylaw of the Town of Shrewsbury covering Site Plans.

Name of Applicant(s): See attached  
Address of Applicant(s): \_\_\_\_\_  
Phone Number & Email of Applicant(s): \_\_\_\_\_

Name of Owner(s): See attached  
Address of Owner(s): \_\_\_\_\_  
Phone Number & Email of Owner(s): \_\_\_\_\_

Name of Engineer: RJ O'Connell & Associates, Inc.  
Address of Engineer: 80 Montvale Avenue, Suite 201, Stoneham, MA 02180  
Phone Number & Email of Engineer: (781) 279-0180/(781) 279-0173

The owner's title to said land is by deed dated May 6, 1995 and recorded in the Worcester District Registry of Deeds Book 21355, Page 284 and 286 and is shown on Assessor's Tax Plate See attached, Plot \_\_\_\_\_.

Location and Description of Property: Former Edgemere Drive-In location consisting of approximately 67.74 acres of land

Purpose of Site Plan/Modification/Special Permit: Redevelopment of the site for an approximately 145,000 sf retail complex with 250 units of multi-family residential development

Signature of Applicant(s): Kelley Realejo

Signature of Owner(s): Kelley Realejo

The Certificate of Ownership Form must be completed and submitted along with this application.



**NAME OF APPLICANT:**

Kelly Realejo, Trustee  
Route 20 Nominee Trust  
c/o Boston Concessions Group  
55 Cambridge Parkway, Suite 200  
Cambridge, MA 02142  
(617) 844-1717

and

Demoulas Supermarkets, Inc.  
c/o DSM Realty, Inc.  
875 East Street  
Tewksbury, MA 01867

**NAME OF OWNER:**

Kelly Realejo, Trustee  
Route 20 Nominee Trust  
c/o Boston Concessions Group  
55 Cambridge Parkway, Suite 200  
Cambridge, MA 02142  
(617) 844-1717

**ASSESSORS MAP REFERENCES:**

180 Hartford Turnpike  
52/126000

200 Hartford Turnpike  
52/128000

228 Hartford Turnpike  
53/054000

# **ITEM 2**

FORM M  
CERTIFICATE OF OWNERSHIP

I, the undersigned Applicant, do hereby certify to the Town of Shrewsbury, through its Planning Board, that all parties of interest to the below-listed plan are identified in Section B: below.

**Section A:**

Title of Plan: Edgemere at Flint Pond

Date of Plan: June 17, 2019

Assessor's Tax Plate: See attached Plot: \_\_\_\_\_

Prepared By: RJ O'Connell & Associates, Inc.

**Section B:**

Name of Record Owner(s)\*: Kelly Realejo, Trustee of the Route 20 Nominee Trust

Address of Record Owner(s): c/o Boston Concessions Group, 55 Cambridge Parkway, Suite 200, Cambridge, Massachusetts, 02142

Phone Number and Email of Record Owner(s): (617) 844-1717

\* If in the name of a Trust, Corporation or Partnership, list the names and addresses of all Trustee(s), Corporate Officer(s) or Partner(s) on a separate sheet.

\* If in the name of a Trust or Corporation, list the Beneficiary(ies) of the Trust or the Shareholder(s) of the Corporation: Shrewsbury, LLC

\* If in the name of a Trust or Corporation, list the date, county, book and page of recording of the Trust Instrument, or the date and State of incorporation:

Worcester District Registry of Deeds Book 21355, Page 279

Does the applicant(s) own or have contractual rights to develop the above-mentioned land? Yes

Executed as a sealed instrument this 18th day of June, 2019

Kelly Realejo  
Signature of Applicant

Route 20 Nominee Trust  
Print name of Applicant

Kelly Realejo  
Signature of Owner

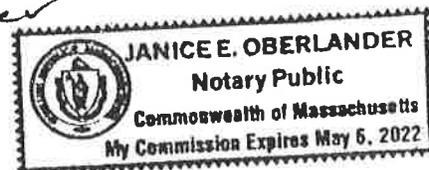
Toute 20 Nominee Trust  
Print name of Owner

Middlesex  
Worcester, ss

COMMONWEALTH OF MASSACHUSETTS

Kelly Realejo personally appeared before me and provided his/her identification through satisfactory evidence which were NH drivers license and acknowledged he/she signed the foregoing instrument voluntarily for its stated purpose on this 18 day of June, 2019.

Notary Signature: Janice E Oberlander



**ASSESSORS MAP REFERENCES:**

180 Hartford Turnpike  
52/126000

200 Hartford Turnpike  
52/128000

228 Hartford Turnpike  
53/054000

# ITEM 3

Application and Review Fee Payments  
(checks made out to Town of Shrewsbury)

Images Removed

# ITEM 4



CERTIFIED ABUTTERS LIST  
180 200 & 228 HARTFORD TPKE 300 FT

TOWN OF SHREWSBURY

Richard D. Carney Municipal Office Building

100 Maple Avenue

Shrewsbury, Massachusetts 01545-5398

Parcel ID	Location	Grantee	Co_grantee's Name	Mailing Address	Mailing Address 2	City	State	Zip
53 047000 25	1 APPLE SEED DR	BOURKE VIRGINIA A		1 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 30	2 APPLE SEED DR	SONIER PAUL E	SONIER TERI L	2 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 26	3 APPLE SEED DR	LISKIEWICZ ROBERT S	LISKIEWICZ LORRAINE M	3 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 29	4 APPLE SEED DR	THE CUTLER REALTY TRUST	CUTLER STEPHEN, TRUSTEE	4 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 27	5 APPLE SEED DR	MARY E GRILLO FAMILY TRUST	GRILLO ROSARIO J TRUSTEE	5 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 28	7 APPLE SEED DR	VICTORIA J OBRIEN CREDIT SHELTER TRUST	OBRIEN JAMES T JR TRUSTEE	7 APPLE SEED DR		SHREWSBURY	MA	01545
53 047000 97	1 BLOSSOM TREE DR	DENTCH MILTON P	DENTCH SUSAN M	1 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 84	2 BLOSSOM TREE DR	ELLSWORTH RONALD F	ELLSWORTH JOAN I	2 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 98	3 BLOSSOM TREE DR	JOSE WILLIAM A TRUSTEE	JOSE JEAN A TRUSTEE	3 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 83	4 BLOSSOM TREE DR	JOHNSON SANDRA M		4 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 99	5 BLOSSOM TREE DR	NEDDO ROBERT G	NEDDO MARY C	5 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 82	6 BLOSSOM TREE DR	COLEMAN SUE ANN TRUSTEE	SUE ANN COLEMAN 1995 TRUST	17366 KENNEDY DR		NO REDINGTON BEACH	FL	33708
53 047000 100	7 BLOSSOM TREE DR	HITCHCOCK ANNA E		7 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 81	8 BLOSSOM TREE DR	LIZOTTE DOROTHY L	LIZOTTE JANET M	8 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 101	9 BLOSSOM TREE DR	HEGARTY JOHN J	HEGARTY JUDITH	9 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 102	11 BLOSSOM TREE DR	PHYLLIS B DEAN TRUST	DEAN PHYLLIS B TRUSTEE	11 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 80	14 BLOSSOM TREE DR	FOX JONATHAN A	FOX MAUREEN H	14 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 79	16 BLOSSOM TREE DR	MAYNARD BRIAN P	MAYNARD ROBERTA A	16 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 78	18 BLOSSOM TREE DR	AMOROSO JOHN C		18 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 77	20 BLOSSOM TREE DR	MILLER ANDREA M		20 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 76	34 BLOSSOM TREE DR	DINJIAN RICHARD K	DINJIAN LORRAINE F	34 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 75	36 BLOSSOM TREE DR	STEERE DIANE C		36 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 74	38 BLOSSOM TREE DR	MCILVANE WILLIAM J	KLEDARAS JOANNE B	38 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 73	40 BLOSSOM TREE DR	DELLAGALA ESTER E	DELLAGALA JOSEPH J TRUSTEE	40 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 72	46 BLOSSOM TREE DR	GOLAND DAVID L	GOLAND JANE P	46 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 71	48 BLOSSOM TREE DR	BRADY EUGENE J	BRADY MARY P	48 BLOSSOM TREE DR		SHREWSBURY	MA	01545
53 047000 70	50 BLOSSOM TREE DR	MAYNARD JUDITH A		50 BLOSSOM TREE DR		SHREWSBURY	MA	01545

53 047000 69	52 BLOSSOM TREE DR	LANDMESSER DAVID G	LANDMESSER BONNIE H	52 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 48	58 BLOSSOM TREE DR	CHARLES & JOANNE FITZPATRICK REV TRUST	FITZPATRICK CHARLES R TRUSTEE	800 DUSKY SAP CT	GRIFFIN	GA	30223
53 047000 47	60 BLOSSOM TREE DR	CARROLL KATHRYN M		60 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 46	62 BLOSSOM TREE DR	LIVINGTON DEBORAH T		62 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 45	64 BLOSSOM TREE DR	LITTLE ALLYN F	LITTLE DIANE C	64 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 44	66 BLOSSOM TREE DR	THIBEAULT RAYMOND J	THIBEAULT RITA M	66 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 43	68 BLOSSOM TREE DR	CONNOLLY JOHN F	CONNOLLY SUSAN B	68 BLOSSOM TREE DR	SHREWSBURY	MA	01545
53 047000 56	2 CIDER MILL DR	HOWARD PAULA L		2 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 55	4 CIDER MILL DR	CROWLEY WILLIAM E JR		4 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 54	6 CIDER MILL DR	FAGAN JOHN M	FAGAN JUDITH	6 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 53	8 CIDER MILL DR	HOKANSON BEVERLY E		8 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 52	10 CIDER MILL DR	BEDELL PETER B	BEDELL JEANETTE T	10 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 51	12 CIDER MILL DR	COLLINS JOHN P	BRENNAN MARY M	12 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 50	14 CIDER MILL DR	MATARESE WILLIAM S TRUSTEE	BEVERLY A MATARESE TRUSTEE	14 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 49	16 CIDER MILL DR	ENMAN ANGELA C TRUSTEE	RICHARD & LINDA MANNA IRREV TRUST	16 CIDER MILL DR	SHREWSBURY	MA	01545
53 047000 111	15 CORTLAND GROVE DR	ANDERSON JOHN	ANDERSON MAUREEN	15 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 112	17 CORTLAND GROVE DR	MCCARTHY ROBERT J	MCCARTHY ANN T	17 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 113	19 CORTLAND GROVE DR	DOUGHERTY JANET M		19 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 114	21 CORTLAND GROVE DR	HELIE SANDRA		21 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 85	25 CORTLAND GROVE DR	H&E JOHNSON FAMILY TRUST	JOHNSON HAZEL A IRVINE TRUSTEE	25 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 86	27 CORTLAND GROVE DR	BRENNEISE DONALD L	BRENNEISE ADELINE B	27 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 87	29 CORTLAND GROVE DR	BUDUO DOROTHY B	BUDUO ANDREW III	29 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 88	31 CORTLAND GROVE DR	WU FAMILY TRUST	WU CHANG N TRUSTEE	31 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 89	37 CORTLAND GROVE DR	MCNAMARA REALTY TRUST	MCNAMARA F MICHAEL TRUSTEE	37 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 90	39 CORTLAND GROVE DR	NEEDHAM WILLIAM	NEEDHAM JANE	39 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 91	41 CORTLAND GROVE DR	COSMAS JOHN G		41 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 92	43 CORTLAND GROVE DR	ACCOMANDO LEONARD TRUSTEE	ACCOMANDO JOANNE TRUSTEE	43 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 93	49 CORTLAND GROVE DR	AKERSON DONALD E	AKERSON BEVERLEY A	49 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 94	51 CORTLAND GROVE DR	HERBERT M KOHLER IRREVOC TRUST	KOHLER ERIC P TRUSTEE	51 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 95	53 CORTLAND GROVE DR	WAGNER BRUCE	WAGNER LINDA	53 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 96	55 CORTLAND GROVE DR	MAHONEY JAMES M	MAHONEY TERESA	55 CORTLAND GROVE DR	THE VILLAGE AT ORCHARD MEADOWS	MA	01545
53 047000 31	63 CORTLAND GROVE DR	CATALLOZZI DAVID J	CATALLOZZI MARILEA L	63 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 32	65 CORTLAND GROVE DR	BENT DEBORAH D		65 CORTLAND GROVE DR	SHREWSBURY	MA	01545
53 047000 33	67 CORTLAND GROVE DR	GUSTAFSON NORMAN F	GUSTAFSON DORIS M	67 CORTLAND GROVE DR	SHREWSBURY	MA	01545

53 047000 34	69 CORTLAND GROVE DR	LUCINDA B DAY TRUST	DAY LUCINDA B TRUSTEE	2 KALAMAT FARMS CIR		SHREWSBURY	MA	01545
52 127001	144 HARTFORD TPKE	DILLON JOSEPH J	DILLON JUDITH M	480 LAKE ST		SHREWSBURY	MA	01545
52 127000	152 HARTFORD TPKE	ELLIS DOUGLAS B	ELLIS JOHN L III	152 HARTFORD TPKE		SHREWSBURY	MA	01545
52 087000	155-173 HARTFORD TPKE	COLES POND NOMINEE TRUST DEFEUDIS EDWARD	KERR LORETTA J TRUSTEE	63 CHERRY ST		NORTHBORO	MA	01532
52 126000	180 HARTFORD TPKE	REALEJO KELLY TRUSTEE	ROUTE 20 NOMINEE TRUST	C/O BOSTON CONCESSIONS GROUP	55 CAMBRIDGE PKWY-STE 200	CAMBRIDGE	MA	02142
52 125000	193 HARTFORD TPKE	LAKE 20, LLC		6 MCINTOSH CT	PO BOX 1205	WESTBOROUGH	MA	01581
52 128000	200 HARTFORD TPKE	REALEJO KELLY TRUSTEE	ROUTE 20 NOMINEE TRUST	C/O BOSTON CONCESSIONS GROUP	55 CAMBRIDGE PKWY-STE200	CAMBRIDGE	MA	02142
53 064000	223 HARTFORD TPKE	DEFEUDIS EDWARD M TRUSTEE	KERR LORETTA J TRUSTEE	63 CHERRY ST		NORTHBORO	MA	01532
53 054000	228 HARTFORD TPKE	REALEJO KELLY TRUSTEE	ROUTE 20 NOMINEE TRUST	C/O BOSTON CONCESSIONS GROUP	55 CAMBRIDGE PKWY-STE 200	CAMBRIDGE	MA	02142
53 001001	235 HARTFORD TPKE	CHAPUT ROSEMARY		104 PUTNAM HILL RD		SUTTON	MA	01590
53 002000	249-253 HARTFORD TPKE	249 HARTFORD TURNPIKE LLC		133 PEARL ST SUITE 400		BOSTON	MA	02110
53 057000	4 HAYDEN LN	WESTDIJK MARCELLINUS J	MOURA-WESTDIJK MARIA I	4 HAYDEN LN		SHREWSBURY	MA	01545
53 058001	10R HAYDEN LN	THORPE DANA	THORPE ROSALIE	10 HAYDEN LANE		SHREWSBURY	MA	01545
52 124000	625 LAKE ST	TRIMOUNT BITUMINOUS PRODUCTS CO INC		C/O AGGREGATE INDUSTRIES	1715 BROADWAY	SAUGUS	MA	01906
53 047000 MSTR	2-5 ORCHARD MEADOW DR	J J FARRELL INC		24 GLEN ST		WESTBORO	MA	01581
53 047000 24	20 ORCHARD MEADOW DR	LOISEAU JOHN ALFRED	LOISEAU PATRICIA LUCILLE	20 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 23	22 ORCHARD MEADOW DR	FARRELL JOSEPH J	FARRELL LINDA	24 GLEN ST		WESTBOROUGH	MA	01581
53 047000 22	24 ORCHARD MEADOW DR	KENNEDY LIVING TRUST	KENNEDY PAUL F TRUSTEE	24 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 01	25 ORCHARD MEADOW DR	ROSSI EDWARD R JR	CARLSON HELEN	25 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 21	26 ORCHARD MEADOW DR	GRAVEL JAY A	GRAVEL DONNA M	8836 MUSTANG ISLAND CIR		NAPLES	FL	34113
53 047000 02	27 ORCHARD MEADOW DR	FENTON JOHN D	FENTON NANCY E	27 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 20	28 ORCHARD MEADOW DR	MURPHY IRREVOCABLE TRUST	SCOTT KERREN A TRUSTEE	28 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 03	29 ORCHARD MEADOW DR	COHEN RUTH		29 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 19	30 ORCHARD MEADOW DR	SILVA WAYNE E		30 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 04	31 ORCHARD MEADOW DR	ROMANO JANICE I		31 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 05	33 ORCHARD MEADOW DR	TONELLI M JANET		33 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 06	35 ORCHARD MEADOW DR	NATTINVILLE JOANNE L	NATTINVILLE FAMILY TRUST	35 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 18	36 ORCHARD MEADOW DR	36 ORCHARD MEADOW DRIVE REALTY TRUST	ROSS JOHN S TRUSTEE	36 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 17	38 ORCHARD MEADOW DR	VINTON RICHARD F		38 ORCHARD MEADOW DR		Shrewsbury	MA	01545
53 047000 16	40 ORCHARD MEADOW DR	BUONOMO PAULA J		40 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 07	41 ORCHARD MEADOW DR	41 ORCHARD MEADOW DR REALTY TRUST	LINK FREDERICK J TRUSTEE	41 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 15	42 ORCHARD MEADOW DR	QUARREY MICHAEL P JR		C/O MICHAEL QUARREY	30 CANNA DR	SHREWSBURY	MA	01545
53 047000 08	43 ORCHARD MEADOW DR	CARLSON PAULINE M	CARLSON REALTY TRUST	43 ORCHARD MEADOW DR		SHREWSBURY	MA	01545
53 047000 14	44 ORCHARD MEADOW DR	ARSENAULT MARK TRUSTEE	ARSENAULT KEVIN TRUSTEE	C/O MARK ARSENAULT TRUSTEE	103 LONG AVE	BELMONT	MA	02478

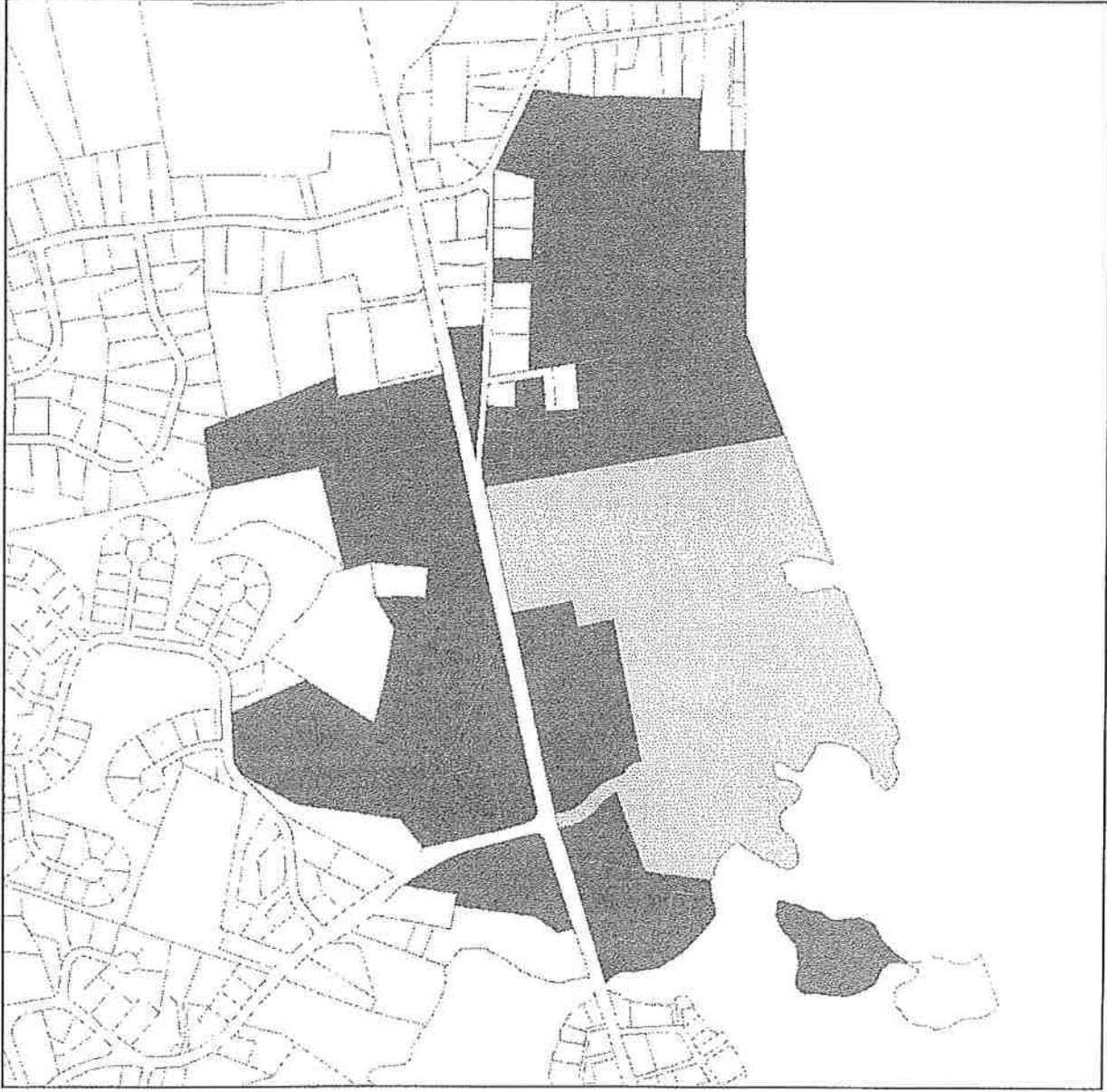
53 047000 09	45 ORCHARD MEADOW DR	HOGAN CAROL		45 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 13	46 ORCHARD MEADOW DR	MALKOWSKI PETER C	MALKOWSKI CHARLENE R	46 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 10	47 ORCHARD MEADOW DR	CAMPBELL BEVERLY F TRUSTEE		47 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 11	49 ORCHARD MEADOW DR	MOINEAU MAUREEN A	MOINEAU WILFRED E	49 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 12	51 ORCHARD MEADOW DR	PHANEUF RICHARD A	PHANEUF PATRICIA M	51 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 35	69 ORCHARD MEADOW DR	QUAGLIERI RICHARD F	QUAGLIERI CYNTHIA A	13 RAWSON HILL DR	SHREWSBURY	MA	01545
53 047000 110	70 ORCHARD MEADOW DR	BARNHART BRIAN K	BARNHART CAROL M	70 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 36	71 ORCHARD MEADOW DR	DOHENY JOSEPH M	DOHENY JEANNE	71 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 109	72 ORCHARD MEADOW DR	WELSH REVOCABLE LIVING TRUST	WELSH MARGARET B TRUSTEE	72 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 37	73 ORCHARD MEADOW DR	WENSKY ARNOLD H	WENSKY JILL O	73 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 108	74 ORCHARD MEADOW DR	DATTIS MARIE A	MARIE A DATTIS 2016 IRREV TRUST	74 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 38	75 ORCHARD MEADOW DR	ROZAK CHARLES T	ROZAK ANNETTE T	75 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 107	76 ORCHARD MEADOW DR	COSMAS GEORGE V	COSMAS CHERYL	76 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 39	77 ORCHARD MEADOW DR	MARJORIE A MORAN IRREVOCABLE TRUST	MCCARTHY, TRUSTEE PATRICIA M	77 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 106	78 ORCHARD MEADOW DR	SEYMOUR MARY D		78 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 40	79 ORCHARD MEADOW DR	ESPER RICHARD J	ESPER ANTOINETTE	79 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 105	80 ORCHARD MEADOW DR	FEDERICO ROBERT A	FEDERICO FRANCES M	80 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 41	81 ORCHARD MEADOW DR	HAVENS HOPE V		81 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 104	82 ORCHARD MEADOW DR	COBURN ALLEN K	COBURN PAMELA A	82 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 42	83 ORCHARD MEADOW DR	MCGOLDRICK KENNETH F JR	MCGOLDRICK DONNA J	83 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 103	84 ORCHARD MEADOW DR	KASOK EDWARD L	KASOK BARBARA J	84 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 57	97 ORCHARD MEADOW DR	CAMERON LAWRENCE E	CAMERON KAREN A	97 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 58	99 ORCHARD MEADOW DR	BRANCONNIER JOHN J	BRANCONNIER MURIEL C	99 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 59	101 ORCHARD MEADOW DR	ELIZABETH A CLEMENZI LIVING REV TRUST		101 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 60	103 ORCHARD MEADOW DR	CONWAY-SIMONCINI REVOCABLE TRUST	SIMONCINI THERESE L TRUSTEE	103 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 61	109 ORCHARD MEADOW DR	PAMELA J SCOTT NOMINEE TRUST SCOTT PAMEL		109 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 62	111 ORCHARD MEADOW DR	LORION FRANCIS H TRUSTEE	LORION ELAINE L TRUSTEE	111 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 63	113 ORCHARD MEADOW DR	SKEHAN THERESA A	SKEHAN MICHAEL J	113 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 64	115 ORCHARD MEADOW DR	COLONERO BENJAMIN H JR	COLONERO JERRILYNE J	115 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 65	121 ORCHARD MEADOW DR	MURGIDA NANCY C		121 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 66	123 ORCHARD MEADOW DR	MATTALIANO JOSEPH S	MATTALIANO LORRAINE D	123 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 67	125 ORCHARD MEADOW DR	GUERTIN RALPH P	GUERTIN ANNE M	125 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 047000 68	127 ORCHARD MEADOW DR	CAPALBO BARBARA-JEANNE		127 ORCHARD MEADOW DR	SHREWSBURY	MA	01545
53 053000	54 PURINTON ST	RICHARDS STEVEN W		54 PURINTON ST	SHREWSBURY	MA	01545-4603

53 055000	61 PURINTON ST	WILKINS LAURA M		61 PURINTON ST		SHREWSBURY	MA	01545-4606
53 054002	63 PURINTON ST	NAIK SANJAY	NAIK KIRAN	63 PURINTON ST		SHREWSBURY	MA	01545
53 054003	65 PURINTON ST	SHADID MOHAMMAD	SHADID ASMAA	65 PURINTON ST		SHREWSBURY	MA	01545
53 054004	67 PURINTON ST	DURU FLORENT	DURU HELENE	67 PURINTON ST		SHREWSBURY	MA	01545
58 029000	1 SARGENTS ISLAND	ZINKEVICH JOSEPH P	ZINKEVICH JOAN A	PO BOX 4063		SHREWSBURY	MA	01545-7063

This is to certify that the owners listed above as shown in the latest Assessors records.

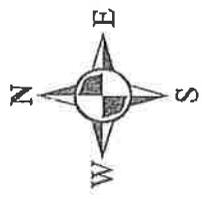
  
 \_\_\_\_\_  
 Christopher R. Reidy, Chairman  
 5/31/19  
 \_\_\_\_\_  
 Date

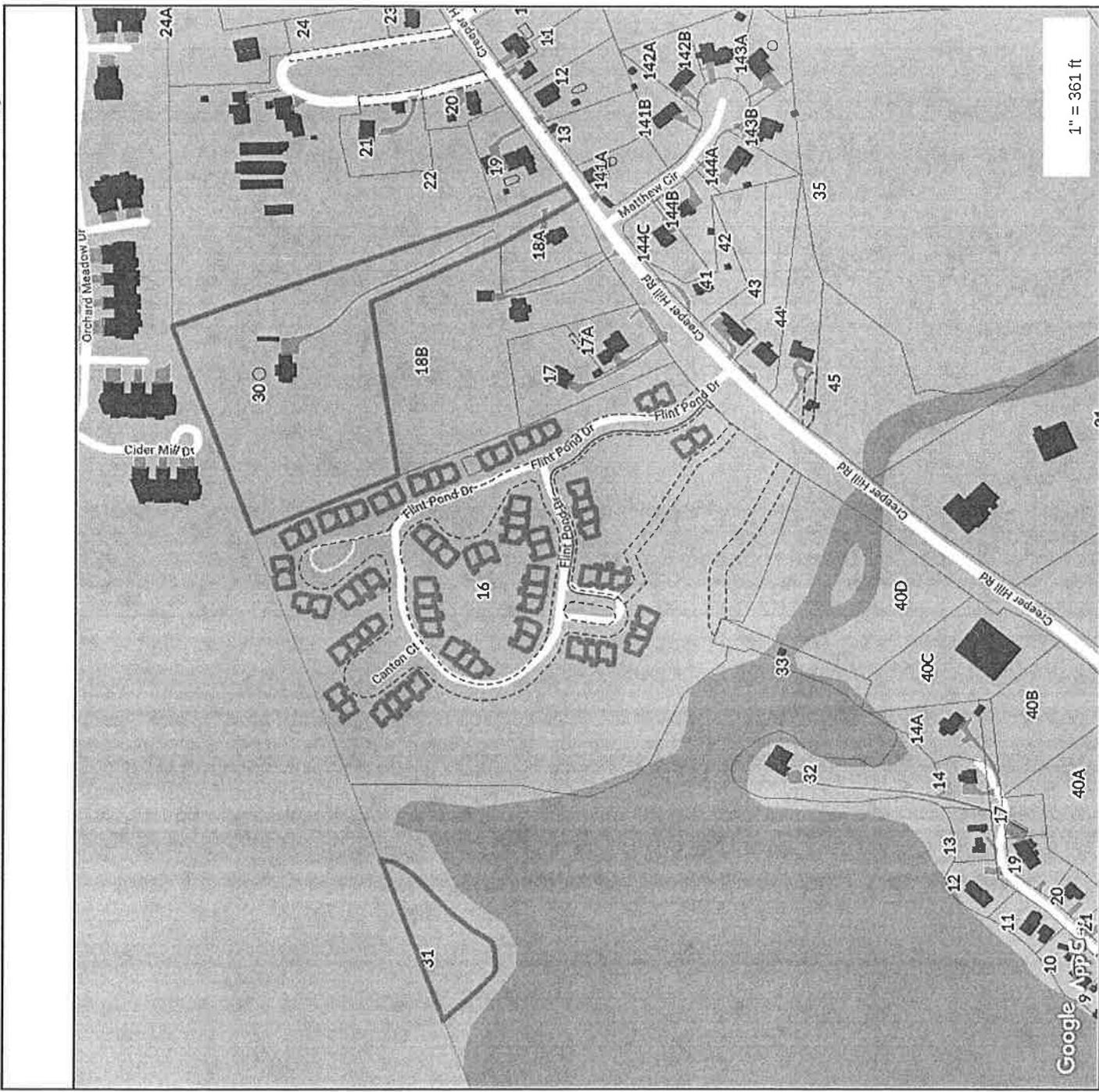
MAP TITLE



Department 1

Department 2





**MAP FOR REFERENCE ONLY  
NOT A LEGAL DOCUMENT**

Town of Grafton, MA makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 4/1/2018  
Data updated 4/1/2018

*Ken O'Brien*  
Ken O'Brien, MAA  
Grafton Data Collector

ID	Site Address	Owner Name	Co-Owner Name	Address	City	State	Zip	Book	Page
110/010.0-0000-0030.0	28 CREEPER HILL ROAD	BEDENICE DANIELA		28 CREEPER HILL ROAD	N GRAFTON	MA	01536	38806	200
110/010.0-0000-0031.0	40 REAR CREEPER HILL	REALEJO KELLY TRUST	ROUTE 20 NOMINEE	TR 55 CAMBRIDGE PKWY	CAMBRIDGE	MA	02141	21355	286
110/010.0-0101-0016.0	2 FLINT POND DRIVE	PHIPPARD MICHAEL S	KENNEDY LISA M	2 FLINT POND DRIVE	N GRAFTON	MA	01536	44854	324
110/010.0-0102-0016.0	4 FLINT POND DRIVE	OLIVEIRA JAIRO G	OLIVEIRA JOSELIA D	4 FLINT POND DRIVE	N GRAFTON	MA	01536	56014	125
110/010.0-0203-0016.0	6 FLINT POND DRIVE	TRAN THU		6 FLINT POND DRIVE	N GRAFTON	MA	01536	46215	193
110/010.0-0204-0016.0	8 FLINT POND DRIVE	KAZALSKI JACEK P	JAKUBIK-KAZALSKI RYZ/8	FLINT POND DRIVE	N GRAFTON	MA	01536	47336	273
110/010.0-0205-0016.0	10 FLINT POND DRIVE	CLARK ROBERT H III	CLARK ROBERT H SR	10 FLINT POND DRIVE	N GRAFTON	MA	01536	51378	278
110/010.0-0306-0016.0	12 FLINT POND DRIVE	MANIAR VAIBHAV	LOKHANDWALA UJAL	12 FLINT POND DRIVE	N GRAFTON	MA	01536	55165	366
110/010.0-0307-0016.0	14 FLINT POND DRIVE	WISE PETER		14 FLINT POND DRIVE	N GRAFTON	MA	01536	49504	199
110/010.0-0308-0016.0	16 FLINT POND DRIVE	MORANA SHARI		6 HEMLOCK CIRCLE	SHREWSBURY	MA	01545	56677	158
110/010.0-0409-0016.0	18 FLINT POND DRIVE	MCNATT BRIAN W	LOJA ERIKA	18 FLINT POND DRIVE	N GRAFTON	MA	01536	49240	92
110/010.0-0410-0016.0	20 FLINT POND DRIVE	LEROUX MICHELLE A		20 FLINT POND DRIVE	N GRAFTON	MA	01536	51825	228
110/010.0-0411-0016.0	22 FLINT POND DRIVE	HONG VANGALA VENKATA S	YADAVALLI SWARNA D	22 FLINT POND DRIVE	N GRAFTON	MA	01536	48620	142
110/010.0-0512-0016.0	24 FLINT POND DRIVE	SHANMUGAM PUGAZHEI	ANBARASAN AARTHY	24 FLINT POND DRIVE	N GRAFTON	MA	01536	50933	41
110/010.0-0513-0016.0	26 FLINT POND DRIVE	TRAN CINDY		26 FLINT POND DRIVE	N GRAFTON	MA	01536	50732	256
110/010.0-0614-0016.0	2 WOODBRIDGE COURT	CHANDRA SHIVA	PRAKASH ROOPARANI	2 WOODBRIDGE COURT	N GRAFTON	MA	01536	57521	312
110/010.0-0615-0016.0	4 WOODBRIDGE COURT	HSIAO CLAIRE YING	HSIAO DAVID HONG	4 WOODBRIDGE COURT	N GRAFTON	MA	01536	53501	154
110/010.0-0616-0016.0	6 WOODBRIDGE COURT	TENG BRIAN L	TENG ELLEN C	6 WOODBRIDGE COURT	N GRAFTON	MA	01536	53831	270
110/010.0-0717-0016.0	8 WOODBRIDGE COURT	KAMREDDI SESHAREDD		8 WOODBRIDGE COURT	N GRAFTON	MA	01536	53138	369
110/010.0-0718-0016.0	10 WOODBRIDGE COURT	LINGASAMY NANDAKUM	RANGASWAMY RENUKA	10 WOODBRIDGE COURT	N GRAFTON	MA	01536	60264	108
110/010.0-0819-0016.0	12 WOODBRIDGE COUR	SCHLIEVE CHRISTOPHE	JIN XIN	12 WOODBRIDGE COUR	N GRAFTON	MA	01536	57250	350
110/010.0-0820-0016.0	11 WOODBRIDGE COUR	BALU SIVAKUMAR SURY	KUMAR ANITHA SURIYA	11 WOODBRIDGE COUR	N GRAFTON	MA	01536	52347	55
110/010.0-0921-0016.0	9 WOODBRIDGE COURT	WILLIAMS LYNNE A		9 WOODBRIDGE COURT	N GRAFTON	MA	01536	52632	6
110/010.0-0922-0016.0	7 WOODBRIDGE COURT	NOVY BRIAN B		7 WOODBRIDGE COURT	N GRAFTON	MA	01536	52133	392
110/010.0-1023-0016.0	5 WOODBRIDGE COURT	PATEL MAULIK	PATEL POOJA	5 WOODBRIDGE COURT	N GRAFTON	MA	01536	54981	231
110/010.0-1024-0016.0	3 WOODBRIDGE COURT	IZQUIERDO MARIA E		3 WOODBRIDGE COURT	N GRAFTON	MA	01536	53464	268
110/010.0-1025-0016.0	1 WOODBRIDGE COURT	FONDELL CARL F	FONDELL ELINOR R	1 WOODBRIDGE COURT	N GRAFTON	MA	01536	52803	241
110/010.0-1126-0016.0	2 CANTON COURT	PALMITER CHRISTOPHE	PALMITER CHRISTINE	2 CANTON COURT	N GRAFTON	MA	01536	55007	15
110/010.0-1127-0016.0	4 CANTON COURT	TONA MARINELA		4 CANTON COURT	N GRAFTON	MA	01536	54936	149
110/010.0-1128-0016.0	6 CANTON COURT	CIOCIOLA ANGELA	LABRIE NICOLAS	6 CANTON COURT	N GRAFTON	MA	01536	54872	14
110/010.0-1129-0016.0	8 CANTON COURT	KITCHINGS LAURA		8 CANTON COURT	N GRAFTON	MA	01536	54621	79
110/010.0-1231-0016.0	9 CANTON COURT	TARPEY FRANCIS X JR	TARPEY DIANNE M	10 CANTON COURT	N GRAFTON	MA	01536	53944	165
110/010.0-1332-0016.0	7 CANTON COURT	BARBOSA MARGARETH		9 CANTON COURT	N GRAFTON	MA	01536	54022	130
110/010.0-1333-0016.0	5 CANTON COURT	COVINO PAULA M		7 CANTON COURT	N GRAFTON	MA	01536	53569	197
110/010.0-1334-0016.0	3 CANTON COURT	RIEMER JONATHAN A	HARDY TERRY	3 CANTON COURT	N GRAFTON	MA	01536	54861	32
110/010.0-1335-0016.0	1 CANTON COURT	WILSON ALMA SUSAN	TALMA SUSAN WILSON	21 CANTON COURT	N GRAFTON	MA	01536	57749	168
110/010.0-1436-0016.0	2 PAXTON COURT	THORNE EDWARD H IV	THORNE NOREEN J	2 PAXTON COURT	N GRAFTON	MA	01536	45036	88
110/010.0-1437-0016.0	4 PAXTON COURT	WALSH MEAGHAN		4 PAXTON COURT	N GRAFTON	MA	01536	45022	288
110/010.0-1438-0016.0	6 PAXTON COURT	MURPHY BRIAN V	MURPHY CHERYL P	6 PAXTON COURT	N GRAFTON	MA	01536	57482	116
110/010.0-1539-0016.0	8 PAXTON COURT	FELDMAN ROBERT G	FELDMAN DOROTHY A	8 PAXTON COURT	N GRAFTON	MA	01536	44939	107
110/010.0-1540-0016.0	10 PAXTON COURT	CHARPENTIER KAREN N		10 PAXTON COURT	N GRAFTON	MA	01536	45040	36
110/010.0-1541-0016.0	12 PAXTON COURT	LIEDELL STEVEN J	LIEDELL SARA K	12 PAXTON COURT	N GRAFTON	MA	01536	53536	58
110/010.0-1642-0016.0	5 PAXTON COURT	MEYER GREGORY A		5 PAXTON COURT	N GRAFTON	MA	01536	58036	196
110/010.0-1643-0016.0	3 PAXTON COURT	DOOLEY ROBERT F	DOOLEY ANNE M	35 HARRINGTON AVE #4	N GRAFTON	MA	01536	59243	206
110/010.0-1644-0016.0	1 PAXTON COURT	MORE SAMEER	SKPAL DARSHANA	1 PAXTON COURT	N GRAFTON	MA	01536	44020	198
110/010.0-1745-0016.0	56 FLINT POND DRIVE	NACIMIENTO DOROTHY		56 FLINT POND DRIVE	N GRAFTON	MA	01536	44820	238
110/010.0-1746-0016.0	58 FLINT POND DRIVE	GOWEN KAREN B		58 FLINT POND DRIVE	N GRAFTON	MA	01536	44723	96
110/010.0-1747-0016.0	60 FLINT POND DRIVE	KARACHI ILHAME	NIYAKI NABIL	60 FLINT POND DRIVE	N GRAFTON	MA	01536	54724	342
110/010.0-1748-0016.0	62 FLINT POND DRIVE	JONES CLARK J	JONES LOUISE S	62 FLINT POND DRIVE	N GRAFTON	MA	01536	44028	221
110/010.0-1849-0016.0	3 FLINT POND DRIVE	TAFT ELIZABETH J	TRUSE EDWARD P	TAFT II REV C3 FLINT POND DRIVE	N GRAFTON	MA	01536	55014	356

110/010.0.0-1850-0016.0	1 FLINT POND DRIVE	SMITH LINDA E	GRADY LIZETTE A	1 FLINT POND DRIVE	N GRAFTON	MA	01536	52670	330
110/010.0.0-1951-0016.0	15 FLINT POND DRIVE	LAKO ERSIDA	LAKO ELVIS	15 FLINT POND DRIVE	N GRAFTON	MA	01536	51620	298
110/010.0.0-1952-0016.0	17 FLINT POND DRIVE	SHAMAIL BUSHRA	SHAMAIL TAHIR	17 FLINT POND DRIVE	N GRAFTON	MA	01536	51817	119
110/010.0.0-1953-0016.0	19 FLINT POND DRIVE	KAKULARAPU SHIVA CH	GUDBANDI ANUSHARET	19 FLINT POND DRIVE	N GRAFTON	MA	01536	55798	332
110/010.0.0-2054-0016.0	21 FLINT POND DRIVE	PERRONE JOSEPH F	PERRONE PAMELA S	21 FLINT POND DRIVE	N GRAFTON	MA	01536	48293	80
110/010.0.0-2055-0016.0	23 FLINT POND DRIVE	PRADELLA FERRUCCIO	PRADELLA JOANNE C	23 FLINT POND DRIVE	N GRAFTON	MA	01536	49617	255
110/010.0.0-2156-0016.0	25 FLINT POND DRIVE	DACIER KIMBERLY L	TR125 FLINT POND REALTY	92 WOODLAND ST	SHERBORN	MA	01770	57452	83
110/010.0.0-2157-0016.0	27 FLINT POND DRIVE	BRANCHAUD DANIELLE		27 FLINT POND DRIVE	N GRAFTON	MA	01536	53461	140
110/010.0.0-2158-0016.0	29 FLINT POND DRIVE	MCCARTHY JOHN J	MCCARTHY KATHLEEN	29 FLINT POND DRIVE	N GRAFTON	MA	01536	49815	29
110/010.0.0-2259-0016.0	31 FLINT POND DRIVE	ARCARI JANICE L	ARCARI DAVID B	31 FLINT POND DRIVE	N GRAFTON	MA	01536	52246	368
110/010.0.0-2260-0016.0	33 FLINT POND DRIVE	FARRELL BETH A		33 FLINT POND DRIVE	N GRAFTON	MA	01536	51900	303
110/010.0.0-2261-0016.0	35 FLINT POND DRIVE	GREEN MARIAL		35 FLINT POND DRIVE	N GRAFTON	MA	01536	49194	336
110/010.0.0-2262-0016.0	37 FLINT POND DRIVE	EVERETT MICHAEL I	EVERETT LAURAL	37 FLINT POND DRIVE	N GRAFTON	MA	01536	48484	271
110/010.0.0-2363-0016.0	39 FLINT POND DRIVE	CLARK DAVID Z	CLARK CAROLYN A	39 FLINT POND DRIVE	N GRAFTON	MA	01536	45797	114
110/010.0.0-2364-0016.0	41 FLINT POND DRIVE	HOLTGREFFE DENNIS G		41 FLINT POND DRIVE	N GRAFTON	MA	01536	45925	81
110/010.0.0-2365-0016.0	43 FLINT POND DRIVE	WILKINS JOHN P	WILKINS LINDA A	43 FLINT POND DRIVE	N GRAFTON	MA	01536	57073	214
110/010.0.0-2466-0016.0	45 FLINT POND DRIVE	KORAB MITCHELL		45 FLINT POND DRIVE	N GRAFTON	MA	01536	58107	341
110/010.0.0-2467-0016.0	47 FLINT POND DRIVE	MCCULLOUGH PATRICIA		47 FLINT POND DRIVE	N GRAFTON	MA	01536	45960	154
110/010.0.0-2568-0016.0	49 FLINT POND DRIVE	ORKISES JOHN D		49 FLINT POND DRIVE	N GRAFTON	MA	01536	56948	261
110/010.0.0-2569-0016.0	51 FLINT POND DRIVE	STEINBRUECK JUDITH A		51 FLINT POND DRIVE	N GRAFTON	MA	01536	54884	163
110/010.0.0-2570-0016.0	53 FLINT POND DRIVE	RANGASWAMY SIVAKUMAR	SIVAKUMAR SUDHA	53 FLINT POND DRIVE	N GRAFTON	MA	01536	57167	37
110/010.0.0-2671-0016.0	55 FLINT POND DRIVE	BOWDITCH WILLIAM E	FLINT POND DRIVE REALTY	55 FLINT POND DRIVE	N GRAFTON	MA	01536	52982	108
110/010.0.0-2672-0016.0	57 FLINT POND DRIVE	DESAL KULDEEP	DESAL ZANKAR	57 FLINT POND DRIVE	N GRAFTON	MA	01536	46266	180

*Ken O'Brien*  
Ken O'Brien, MAA  
Grafton Data Collector

# ITEM 5

## TOWN OF SHREWSBURY PLANNING BOARD

RE: APPLICATION OF ROUTE 20 NOMINEE TRUST AND DEMOULAS SUPERMARKETS, INC. FOR SPECIAL PERMIT PURSUANT TO SECTION VII(N) OF THE SHREWSBURY ZONING BYLAW.  
**EDGEMERE CROSSING AT FLINT POND**

### MEMORANDUM OF THE APPLICANT IN SUPPORT OF APPLICATION FOR SPECIAL PERMIT

#### I. INTRODUCTION

Route 20 Nominee Trust (the “**Trust**”) is the owner of the property at 180-228 Hartford Turnpike commonly known as the Edgemere Drive-In (the “**Property**”). The Trust has owned the property since 1986. Prior to 2016, the Trust had pursued various forms of development proposals for the property and a number of those proposals were rejected by the Town as inappropriate for the site for various purposes.

In 2006 the Shrewsbury Planning Board granted Site Plan Approval and Special Permit for senior housing consisting of one hundred fifty eight (158) town house type and garden type units upon the site with commercial development was also proposed along the Route 20 frontage. There was no identified user of the commercial development identified in the 2006 application process. Economic conditions did not permit that development to proceed.

Beginning in 2016, the Trust and its development partner, Demoulas Supermarkets, Inc. (“**Market Basket**”) began discussion with the Town relative to a mixed use development to be constructed on the site. Through 2016, the Trust and Market Basket continue to work with Town officials to craft an appropriate amendment to the Route 20 Overlay District so as to permit the residential component to be an allowed use and to further the development of the commercial component. Those efforts culminated with the submittal by the Shrewsbury Planning Board to the 2017 Annual Town Meeting of 2 Warrant Articles relating to the proposed development. The first Zoning Article (Article 23) altered in a minor fashion the Zoning Map so that the entire parcel owned by the Trust was contained within the Commercial Business Zoning District and the Route 20 Overlay Zoning District.

The more significant modification (set forth in Article 24) was the wording of Section VII(N) of the Zoning Bylaw so as to create a new use referred to as a Mixed Use Development:Horizontal which would be a use requiring a Special Permit. The proposed changes to the Zoning Bylaw were ultimately adopted by a vote in excess of 2/3 in the affirmative of the 2017 Annual Town Meeting.

Since 2017, the Trust and Market Basket (hereinafter collectively referred to as “**Applicant**”) have been working with the Town to resolve challenges relative to providing public utilities to the Property adequate to support the development and to work toward collaborative improvements the Route 20 Corridor. The collaborative efforts with the Town have been successful due to the efforts of the Town so that public sewer and water are now readily

available to the development. In addition, with the assistance of the Town, the conceptual improvements in the applicable portion of Route 20, including the Lake Street intersection, have been supported by the Commonwealth of Massachusetts through the issuance of a MassWorks Grant to the Town and the coordinated effort between the Town, the Applicant and the Massachusetts Department of Transportation (MassDOT) have led to a comprehensive agreement as to the nature of improvements required to benefit traffic flow and manager stormwater flow from Route 20 in the area of the Property.

In addition, since 2017 the Applicant has reevaluated the development and has expanded the commercial component. In the material provided to Town Meeting Members and various Town Boards in 2017, the Applicant had anticipated approximately one hundred twenty thousand (120,000) square feet of commercial retail space. The Plans submitted as part of the Special Permit expand the commercial development to approximately one hundred forty five thousand (145,000) square feet while maintaining the same mix of one (1) and two (2) bedroom units and a total residential unit count of two hundred fifty (250) as represented to the Town in 2017.

## **II. SPECIAL PERMIT REQUESTED**

The Applicant has submitted a request for Special Permit pursuant to Section VII(N)(3)(b)(11) so as to permit a Mixed Use Development:Horizontal Mix to be known as Edgemere Crossing at Flint Pond (the “**Development**”). By definition, a Mixed Use Development:Horizontal Mix may include one (1) or more structures on more than one (1) lot and may integrate a series of permitted or specially permitted uses in the Commercial Business District, the Limited Business District or the Route 20 Overlay District and may also incorporate residential structures containing not more than three (3) stories. The Mixed Use Development:Horizontal Mix incorporates the following uses permitted as of right in the Route 20 Overlay District:

1. Banks; and
2. Retail Store Establishment of up to fifteen thousand (15,000) square feet.

The Mixed Use Development:Horizontal Mix further incorporates the following uses which may be granted by a Special Permit in the Route 20 Overlay District:

1. Large retail development;
2. Medical clinic or veterinary clinic; and
3. Structures for dwelling units containing not more than three (3) stories or having a height in excess of forty five (45) feet.

## **III. DESCRIPTION OF DEVELOPMENT**

The Property consists of approximately 67.74 acres of land benefitting from more than two thousand twenty eight (2,028) feet of frontage along Route 20. Its current topography provides for a relatively flat and previously graded property in the area of the former drive-in with significant rise in topography sloping occurring on the northerly part of the site as the site approaches Flint Pond. The area or the eastside of the site also has significant grade changes which are being maintained to a large extent in the proposed development as undisturbed areas.

The myriad of curb cuts that the site current benefits from on Route 20 are being wholly redesigned as part of the development so as to cause the primary entrance to be configured in line with a four (4) way intersection at Lake Street and a separate entrance/exit point on the easterly end of the site which is restricted to right in/left in but only right out movements. Traffic configurations are reviewed in more detail in this memorandum.

The Property contains three (3) identified archaeological sites. The project has been designed to avoid these sites in their totality. A previous developer retained the services of The Public Archaeology Laboratory, Inc. ("PAL") to permit the Phase I portion of the site with the Massachusetts Historical Commission ("MHC"). An application to MHC was filed on February 21, 2001 and discussions with MHC were initiated. An intensive (locational) archaeological survey was conducted in accordance with MHC regulations in 2001. The intensive survey investigated a thirty six (36) acre project area proposed for the previous development proposal. The 2001 survey identified two (2) archaeological sites associated with the Native American settlement of the Shrewsbury area. These sites were designated as Quinsigamond I Site (MHC #19-WR-817) and the Quinsigamond II Site (MHC #19-WR-818).

Subsequent to the 2001 study a second study of the entire seventy six (76) acre parcel was conducted. In December 2004 PAL filed an amended report titled, *Intensive (Locational) Archaeological Survey, Shrewsbury Edgemere Development, Shrewsbury, Massachusetts*. This later study identified an additional area associated with the Quinsigamond II Site and two (2) new sites within the project area, designated Quinsigamond III Site and Quinsigamond Find Spot. Given this information, MHC determined that the Quinsigamond I, II and III sites have the potential to contained additional artifacts. The Quinsigamond Find Spot was determined to not have the attributes requiring further study or future avoidance. Therefore, MHC has concluded that the Quinsigamond I, II and II areas should be avoided during construction.

Quinsigamond Site I is located in the southeastern of the site and Quinsigamond Site II is located near the main entrance to the project site. Both of these sites are to remain in their present undisturbed site and no construction and/or activities are proposed at these locations. Quinsigamond Site III shall remain untouched as well. Please refer to the January 7, 2005 letter from State Archaeologist Brona Simon for the Massachusetts Historical Commission's findings and recommendations with regard to development of the site.

The proposed development breaks into two (2) separate and distinct components.

1. Commercial Development. The proposed Commercial Development consists of four (4) separate and distinct structures, two (2) of which are capable of further subdivision for the purposes of tenants. The primary tenant, Market Basket Supermarkets, intends to occupy a portion of the primary building of approximately eighty thousand (80,000) square feet. It is contained within a building which also houses an additional 25,785 square feet of retail area. It is anticipated that a portion of that will be additional space used potentially for separate use by Market Basket and that one (1) or two (2) other retail users will occupy the balance of that building.

Parcel 2 has two (2) “out buildings” on both the east and west ends of Parcel 2 proximate to Route 20 as shown on the Site Plan. While the specific users have not been identified, the Applicant believes that the propose thirteen thousand one hundred eleven (13,111) square foot structure on the westerly end of the site would be an appropriate use for a pharmacy while the smaller building on the easterly portion of the site consisting of two thousand thirty (2,030) square feet would be well suited for a banking operation.

There is a separate retail building as part of Parcel 1 as shown on the Site Plan consisting of twenty four thousand two hundred fifty (24,250) square feet. It is anticipated that this building will have multiple tenants, none of which have been identified.

2. Residential Development. The Residential Development has been designed to integrate throughout the remaining fifty (50±) acres of the site not utilized for commercial purposes and is grouped in two (2) separate nodes. Three (3) residential buildings which will be supported by separate garage structures are located on the easterly end of the site most proximate to Route 20. This node also includes the leasing office and the community amenities available for residents including the recreational opportunities be made available to residents of the Development. The second (2<sup>nd</sup>) node is located in the northerly section of the site and has been carefully designed between the two (2) large wetland resource areas on the site and consists of a total of six (6) buildings. The buildings are in three (3) separate configurations. All of the buildings are three (3) story buildings. The smaller of the buildings contain twenty four (24) units. Building four (4) as shown on the Site Plan contain thirty four (34) units. Building one (1) and Building eight (8) is the largest of the buildings and contains thirty six (36) units.

The residential units are accessed through a private drive system that loops around the commercial development and once northerly of the commercial development becomes exclusive for use of the residential users. The entire looped road system will be privately maintained. The residential units consist of a mix of units. The proposed unit mix is described in Exhibit A to this Memorandum. Pursuant to the requirements of Article VII(N)(10)(i), ten (10%) percent of the total dwelling units shall be maintained in perpetuity so as to be available to households with income at or below eighty (80%) percent of the area median income as determined by the United States Department of Housing and Urban Development.

#### **IV. OFFSITE IMPROVEMENTS**

While more fully delineated and explained as to its specific operation in the Traffic Impact and Access Study prepared by Vanasse Hangen Brustlin, Inc. (“VHB”) dated June, 2019, it is worth noting that in concert with efforts by the Town and the Commonwealth of Massachusetts, the Applicant will be participating in causing significant improvements to be made to the Route 20 Corridor along the expansive frontage of the Development. As shown the Site Plan, the primary entrance to both the Commercial Development and the Residential Development will be a controlled signalized intersection at Lake Street designed to provide for a separate queuing line for left hand turns into the Development while permitting two (2) lanes of pass by traffic. The overall intersection is being further improved for overall service so as to provide for a dedicated queuing line for the left hand turn for traffic travelling westerly on Route 20 desiring to turn onto Route 20. A significant portion of the Route 20 area fronting in the Development will provide

for the dedicated turning lanes but at the same time afford for two (2) lanes for pass by traffic. These improvements are consistent with the Route 20 Corridor Study that has been undertaken by the MassDOT and which study calls for significant improvements over a period of time along the entirety of the Corridor between Northborough and Worcester. In fact, separately, MassDOT will be undertaking improvements further westerly of the site at and around the Route 140 intersection of Route 20. It is anticipated that the traffic improvements along the frontage of the Development on shown on the Site Plan will be completed prior to the opening of any components of the proposed Development. In the unforeseen event that the MassWorks Grant were not to be awarded to the Town the Applicant would need to evaluate the required mitigation in light of only the impacts of the proposed Development. The improvements reflected in the Traffic Study and on the Site Plans are designed to alleviate existing deficiencies in service not attributable to the proposed Development.

## V. STANDARD FOR REVIEW

Article VII(N)(6) of the Shrewsbury Zoning Bylaw establishes certain criteria to be reviewed by the Shrewsbury Planning Board in making determination whether to issue a Special Permit. Overall, the Planning Board may grant a Special Permit upon a finding that the application complies with the purposes of the Route 20 Overlay District Section of the Bylaw and constitutes a use that is consistent with the reasonable use of the proposed site. The Bylaw establishes six (6) specific criteria for the Board to review which are as follows:

1. The Proposed Development Conforms to all Requirements of the Zoning Bylaw. All of the proposed uses as reflected on the Site Plan and set forth in the application are consistent with uses permitted either as of right or by Special Permit in the Commercial Business Zoning District and/or the Route 20 Overlay District. Article VII(N)(4) establishes certain dimensional and intensity regulations that the Development must meet, all of which are met or exceeded by the Development in the manner as shown in the Zoning Chart made a part of the Site Plan. While the overall intent would be to have a separate owner of the Commercial Parcel and the Residential Parcel, dimensional compliance is still met as authorized by Article VII(N) of the Zoning Bylaw where the site, being subject to, common management, can be treated as contiguous tracks of real estate designed, constructed and continued to be operated and maintained as a single unit.

2. The Development provides adequate space for vehicular access to the site and off street parking and loading/unloading on the site. Primary access to the Property will be provided at a signalized intersection of Lake Street which is being significantly improved through the award of a Three Million Seven Hundred Thousand (\$3,750,000.00) Dollar MassWorks Grant. The improvements proposed to be contributed as part of the MassWorks Grant include a new traffic signal at the intersection of Route 20 and Lake Street. The design plans for the intersection of the primary entrance to the site and approximately 3,300 foot section of Route 20 Corridor from the bridge at Flint Pond/Lake Quinsigamond to just past Puritan Way are at twenty five (25%) percent design stage with MassDOT and will continue to be finalized through a collaborative effort. The Applicant is participating significantly in the costs of such design funding and providing right of way varying between five (5) and fifteen (15) feet along the site frontage so as to construct the full width of the roadway corridor and to provide for

bicycle/pedestrian amenities. The Applicant is further providing areas on the site to be used for stormwater detention/retention dedicated for stormwater being generated from the widened Route 20 Corridor.

In addition, a secondary access has been provided by means of an unsignalized driveway approximately one thousand (1000) feet east of the Lake Street Signal. Left turns from this driveway onto Route 20 will be restricted but all other movements will be provided for. The left turn in from traffic travelling in a westerly direction has been afforded a dedicated line for queuing of that traffic. The specific operation of the intersections and the projected operation under the 20/26 Built Conditions are set forth in the Traffic Study prepared by VHB and submitted with the Application.

Within the site, the parking field for the majority of the Commercial Development is in a unified parking field located between the primary commercial building and Route 20. It has the benefit of four (4) different means of access to the privately contained loop drive that services the entire Property so as to provide a myriad of alternative methods to enter the parking field and avoid any backup of traffic onto Route 20. The ancillary or out buildings each have parking proximate to those buildings which will be used predominately by the patrons of those buildings. The internal roadway configuration has been designed so as to provide adequate width and turning movements so as to meet all of the requirements of public safety concerns in the Town of Shrewsbury. As shown on the Site Plan there has provided means for pedestrian travel from the residential components of the development to the commercial components so as to potentially reduce the number of vehicle trips required.

Loading for the large commercial building will occur to the rear of the building in an area segregated from the residential component to the south by stormwater detention features and other landscaping. Truck traffic will be directed to the primary entrance at the Lake Street intersection for all movements on to or off of Route 20.

3. There are Provisions Adequate Water Supply and Distribution for Domestic Use and Fire Protection. The Town has confirmed that there is adequate water supply for both domestic use for the Development and for fire protection.

4. The Development Provides Adequate Methods of Storage and Disposal for Sewage, Refuse and Other Wastes Resulting from the Uses Permitted on the Site and the Methods of Drainage or Retention of Surface Water. Arranging methodologies for transmission of sewage from the site has been a challenge but has been rectified by actions taken by the Town with a new pump station being located off of Lake Street which will be operational prior to the occupancy of any portions of Development. The anticipated sewer flows are set forth in Exhibit B to this Memorandum.

Refuse and waste generated by the Commercial Development will be stored and ultimately transported off site through closed container systems located as shown on the site plan and operated under the ordinary course of business. Trash disposal for the residential component will also be by private contractor and will be organized through internal methodology within each building and disposed of in a regular manner through the management company.

With regard to surface drainage, it is interesting to note that the total quantity of impervious area has been reduced from the 2006 plan previously approved by the Planning Board. In addition, significant portions of the easterly portion of the Site previously planned for development are now being left in an open state. RJ O'Connell & Associates, Inc., civil engineers for the development, have prepared a comprehensive study of the stormwater system which is implanted as part of the development and will be subject to peer review by consultants retained by the Town.

5. The Development Could Not Reasonably be Altered.

- (i) Achieve greater consistency with the Route 20 Overlay District Design Standards in Section N(8) of this Bylaw;
- (ii) Improve protection for adjoining premises against detrimental or offensive uses on the Site;
- (iii) Improve safety for vehicular and pedestrian movement within the site and in relation to adjacent ways and land;
- (iv) Reduce stormwater runoff through best management practices or increase groundwater recharge; and
- (v) Improve water conservation.

The Commercial Development and Residential Development have been designed consistent with the requirements of the Route 20 Overlay District design. Attached as Exhibit C are specific summaries from each of the design architects involved as to the means by which the particular buildings both meet with the language of the Zoning Bylaw but also provide for a unified and aesthetically pleasing environment. CUBE 3 has been retained as designers of the residential buildings and HFA has been lead designer for the Commercial component.

Consistent with the requirements of the Shrewsbury Zoning Bylaw and as set forth in the narrative, ten (10%) of the residential units will meet the inclusionary housing requirements more specifically set forth in Section VII(K) of the Bylaw. The Applicant will enter into the appropriate affordable housing restriction to meet the requirements of the Town and the Department of Housing and Community Development for the Local Initiative Program which restriction shall be in force in perpetuity.

The Development has been designed so as to center the most active uses both away from abutting properties and in a sensitive fashion in relation to wetland resources areas. Unlike the 2006 Plan, while there is work shown on the Site Plan which will fall under the jurisdiction of the Shrewsbury Conservation Commission, no alteration of an existing wetland resource area is proposed. Most significantly, the Site has been designed in a more consolidated fashion so as to leave large undeveloped and undisturbed areas on the easterly portion of the site abutting the Orchard Meadow condominiums. But for other consistent and compatible residential uses

located along the Route 20 Corridor, as shown the Site Plan there is no plan disruption to the easterly boundary of the site.

For the reasons set forth in the VHB Traffic Impact and Access Study, the significant work done in the Route 20 Corridor by the developer, the Town and MassDOT along the frontage of the property will greatly improve existing vehicular movements in front of the site. The majority of movements into the site are through a state of the art four (4) way signalized intersection which will be in operation prior to occupancy of any portion of the Development. The restriction on left hand movements from the easterly driveway will limit any conflicting movements in an organized fashion.

With regard to stormwater, the series of integrated detention basins reflected on the Site Plan and subject to the detailed Memorandum provided by RJ O'Connell & Associates, Inc. demonstrates that no adverse impacts to abutting properties or the abutting public way will be experienced from the Development. In fact, the Applicant has made available to the Town portions of the frontage of the Site so as to attenuate stormwater from Route 20 which is currently wholly uncontrolled. The overall stormwater plan demonstrates best management practices.

Water conservation will be achieved through a number of steps being taken by the primary tenant of the Commercial Development, Market Basket. Certain advances that have been made by Market Basket in many of its stores have dramatically increased its water consumption which is expected to occur within this store also. The residential component of the Development will be outfitted with low flow fixtures so as to reduce water consumption.

6. The Retail Components of the Development Complies with Section N(9) of the Zoning Bylaw. Reference is made to Exhibit C to this Memorandum outlining with specific detail the criteria for the residential and commercial components from a design requirement and the manner that the design has incorporated the specific requirements.

## **VI. CONCLUSION**

The appropriate reuse of the Edgemere Drive-In site has been an issue facing the Town of Shrewsbury for more than thirty (30) years. Through the efforts of the 2017 Town Meeting and the efforts of Town staff in resolving access and utility infrastructure, the Property is now poised to be a transformative development for the Route 20 Corridor. The Development is anticipated to be an economic engine for the Town. Attached as Exhibit D to this Memorandum is the Fiscal Impact Studies submitted to the Shrewsbury Town Meeting and various Town Board in 2017 supporting the positive economic revenue to be realized from the Development.

More importantly, the magnitude of the proposed development will change the face and future of the westerly end of Route 20. With Edgemere at Flint Pond being the pioneering Mixed Use Development, combined with expansion of sewer service along the Route 20 Corridor and the magnitude of improvements to vehicular travel in the Route 20 Corridor resulting from work associated with the development plus other work proposed by MassDOT, this portion of Shrewsbury is on the cusp of a renaissance.

The Applicants respectfully request that the Shrewsbury Planning Board grant the Special Permit for a Mixed Use Development:Horizontal as shown the submitted Site Plans.

Respectfully submitted,

Kelly Realejo, Trustee of Route 20 Nominee Trust  
Demoulas Supermarkets, Inc.

By their attorneys,



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# EXHIBIT A

**PROPOSED RESIDENTIAL APARTMENT UNIT DATA**

UNIT TYPE	DESCRIPTION	BEDS/UNIT	UNIT NSSF	1ST FLOOR	2ND FLOOR	3RD FLOOR	TOTAL UNITS	TOTAL BEDS	TOTAL NSSF	UNIT MIX
A1	1 BED/1 BATH	1	752	36	0	0	108	108	81,216	43.2%
A1 G2	1 BED/1 BATH	1	0	0	0	0	0	0	0	0.0%
A2	1 BED/1 BATH	1	808	6	6	6	18	18	14,544	7.2%
Average SF				42	42	42	126	126	95,760	50%
B1	2 BED/2 BATH	2	1,120	6	6	6	18	36	20,160	7.2%
B1-G2	2 BED/2 BATH	2	0	0	0	0	0	0	0	0.0%
B2	2 BED/2 BATH	2	1,154	34	36	36	106	212	122,324	42.4%
Average SF				40	42	42	124	248	147,484	50%
Average SF				32	34	34	250	374	238,244	100%
<b>TOTALS</b>										

**TOTAL PROJECT GSF 282,420**

**TOTAL RESIDENTIAL NSSF 238,244**  
**EFFICIENCY 84%**

Mixed-Use Project  
 Shrewsbury, MA  
 March 27, 2019

Proposed Unit Mix  
 Conceptual Massing  
 CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978.989.9900 | cube3.com



# EXHIBIT B

RJ O'CONNELL AND ASSOCIATES, INC.  
 CIVIL ENGINEERS, SURVEYORS AND LAND PLANNERS  
 80 Montvale Ave., Suite 201  
 Stoneham, MA 02180

Project Name: The Residences at Flint Pond  
 200 Hartford Turnpike  
 Shrewsbury, MA 01545

Project Number: 15048  
 Checked By: R. Smith  
 Progress Print: 05/15/2019

**Project Flow Estimates**  
**144,636 SF Commercial Development, 250 Apartment Units, 24,200 SF Retail**

Development Use	Unit	Unit Flow (gpd)	Design Units (gpd) <sup>(2)</sup>	Average Flow (gpd)	Peaking Factor	Peak Flow (gpd)
<b>Residential Housing Development</b>						
Residential Apartment Units	250 Units					
One Bedroom (A1)	per bedroom	110	126	13,860		
Two Bedroom (B1)	per bedroom	110	70	15,400		
Two Bedroom (B2)	per bedroom	110	54	11,880		
6,040 SF Amenities Bldg.	per 1,000 SF	75	6,040	453		
Infiltration <sup>(1)</sup> - Gravity Estimate (length and diameter)	4,025	8		2,744		
<b>Residential Housing Totals</b>				<b>41,593</b>		
<b>Retail Development on Residential Lot</b>						
24,200 SF Dry Good Retail	per 1,000 SF	50	24,200	1,210		
<b>Future Development Totals</b>				<b>1,210</b>		
<b>Commercial Development</b>						
79,650 SF Supermarket <sup>(3)</sup>	per 1,000 SF	97	79,650	7,726		
25,570 SF Dry Good Retail <sup>(3)</sup>	per 1,000 SF	50	25,570	1,279		
13,186 SF Pharmacy <sup>(3)</sup>	per 1,000 SF	50	13,186	659		
2,030 SF Bank <sup>(3)</sup>	per 1,000 SF	50	2,030	102		
Infiltration <sup>(1)</sup> - Gravity Estimate (length and diameter)	700	8		477		
<b>Commercial Totals</b>				<b>9,765</b>		
<b>On-site Totals</b>				<b>52,568</b>		

<sup>(1)</sup> Infiltration = 450 gpd/in. dia./mile

<sup>(2)</sup> Average flow rates for Massachusetts are based on 310 CMR 15.00

<sup>(3)</sup> Estimated Commercial Development

Residential flows, Commercial flows, and offsite tributary flows will all be directed to the proposed municipal pump station

# EXHIBIT C



With respect to the proposed Parcel II, located within the overall development of *Edgemere Crossing at Flint Pond*, this narrative describes design compliance with Shrewsbury's mixed-use development guidelines Sections 9 and 10. The numbering/labeling for each line item below corresponds directly with the overlay district design guidelines numbering.

9. **Large Retail Development Standards:** Parcel II exceeds 15,000 SF in built area and shall conform to the design guidelines as follows.

**a. Articulation, exterior materials and patterns:**

- i. The proposed supermarket and retail buildings have an overall 'front façade' (south façade) elevation width of 462 feet. Over the width of this façade, three primary footprint jogs occur, each at least 16' in depth. Each jog is separated by a distance greater than 20 feet. Projecting entry canopies in depths of at least three feet also occur within façade areas that are more than 100 feet in length. The east façade of this building, having no main points of entry or storefront, contains pilasters, accent banding, various materials and projecting clerestory window canopies in depths greater than three feet, with no flat facades greater than 100 feet in length. The north façade of this building comprises footprint jogs greater than 20 feet in depth which are spaced less than 100 feet apart, and makes use of pilaster details, accent bands and various materials. The west façade of this building is greater than 100 feet in length and contains no projecting elements since that would be non-conducive to the function of the intended occupant, but does make use of pilasters, accent bands, various materials, and signage areas. The combined area of arcades, display windows, entry areas and awnings occupies at least 60% of the front (south) façade area.
- ii. The proposed pharmacy building is based on a tenant prototype, and uses various different materials, parapet height steps, and makes use of projecting elements at the main entrance feature which are greater than three feet in depth.
- iii. The proposed bank building does not have a footprint greater than 60 feet in any dimension, and uses various different materials, window treatments, projecting elements, cornice treatments and colors.

**b. Windows:**

- i. The Proposed supermarket and retail buildings have a combined 'front façade' (south façade) linear length/perimeter of 509 feet. The combined linear length/width of storefronts and glazing areas totals out to 312 feet, which results in a window/wall length ratio of 61%, which exceeds the design guidelines criteria of 40%. The combined wall area of this front façade is approximately 13,750 SF, of which approximately 4,050 SF is comprised of storefront, resulting in a window/wall area ratio of 29%, which exceeds the design guidelines criteria of 20%. The front face of these proposed buildings will not be reduced below criteria guidelines. For the rear and side walls of these proposed buildings, excessive amounts of glazing would be non-conducive to interior layouts for the intended retail and supermarket tenants, thus these facades are primarily opaque in nature. Due to interior layout requirements of the supermarket tenant, most windows have sills located higher than 3 feet above the ground, but span heights in excess of 10 feet.
- ii. The proposed pharmacy building is based on a tenant prototype. The overall perimeter of this building totals to approximately 472 feet. The combined window length totals out to approximately 206 linear feet, which comprises approximately 44% of the building's perimeter, which exceeds the design guidelines criteria. The overall wall area of this building is approximately 10,400 SF, of which approximately 1,300 SF is comprised of windows, resulting in a window/wall area



## Special Permit Design Narrative

June 19, 2019

-- Prepared by Harrison French & Associates --

ratio of roughly 12%. While the window area is less than what is set forth in the design guidelines, this tenant's interior layout would be adversely affected by glazing heights in excess of the current design, which are primarily clerestory in nature.

- iii. The proposed bank building has an overall perimeter of roughly 186 feet. The combined window length totals out to approximately 78 feet, which comprises roughly 44% of the building's perimeter, which exceeds the design guidelines criteria. The overall wall area of this building is approximately 3,760 SF, of which approximately 970 SF is comprised of windows, resulting in a window/wall area ratio of 25%, which exceeds the design guidelines criteria. All windows on this building span the minimum vertical distances set forth in the design guidelines.

### **c. Roof**

- i. The proposed supermarket and retail buildings have varied parapet heights located less than 100 feet apart along the entire front (south) and side (west) facades. The rear (north) façade maintains a consistent parapet height along the back of the supermarket tenant, but uses a lower parapet height for the loading dock footprint bumpout. The east façade maintains a consistent parapet height along its length which exceeds 100 feet. Roof top equipment will be concealed to the largest extent possible
- ii. The proposed pharmacy building makes use of parapet height steps around its entire perimeter in intervals of less than 100 feet. Roof top equipment will be concealed to the largest extent possible
- iii. The proposed bank building makes use of parapet height steps around its entire perimeter in intervals of less than 100 feet. Roof top equipment will be concealed to the largest extent possible

### **d. Outdoor amenities**

- i. See separate document prepared by Cube 3

### **e. Architectural Focal Points**

- i. The proposed supermarket & retail buildings makes use of canopies, overhangs, recess/projections, raised corniced parapets above doors and display windows.
- ii. The proposed pharmacy building makes use of canopies, overhangs, recesses/projections and raised corniced parapets above doors.
- iii. The proposed bank building makes use of canopies, overhangs, recesses/projections and raised corniced parapets above doors.

### **f. Landscaping**

- i. See separate document prepared by Cube 3

10. **Mixed-Use Development: Horizontal Mix** – See descriptions for each building in Section 9. Large Retail Development Standards above.

## 8. Design Standards

The residential buildings are three story walk up style, with open corridors to the units, pitched roofs, and spacious balconies. The design incorporates strong traditional forms with more modern detailing, integrating the project with the existing fabric along the south side of Route 20. The average roof height to be within the design guidelines of 40'-0". The exterior materials consist of fiber cement lap siding of varying exposures, as well as fiber cement paneling, a warmer wood tone accent, asphalt shingles, residential windows and doors, and metal mesh balconies. The additional features on the clubhouse and retail building include higher ceilings as well as storefront windows and doors. This clubhouse serves as a bridge between the architecture and aesthetics of the residential building and the retail building, balancing the two in one modern expression.

**9. Large Retail Development Standards** – See separate document prepared by Harrison French & Associates

## 10. Mixed-Use Development

### a. Mixed-Use Development

The Proposed Parcels combined are approximately 68 acres, which is more than the 25 acres required.

### b. Articulation, Exterior Materials and Patterns

- The proposed 36 unit residential buildings are approximately 218'-0" in length along the front facades. There are three major jogs along the façade, roughly 8'-7" in depth and roughly 50'-0" in length. The proposed 24 unit residential buildings are approximately 145'-0" in length along the front facades and feature two major jogs of the same depths and lengths. Within these major jogs on both the 36 and 24 unit buildings there are additional shifts to the façade. Made up of balconies and/or projections, these shifts are approximately 5'-0" to 6'-0" in variation.

- The proposed clubhouse has a front façade of approximately 112'-0", which is divided into three section, approximately 52'-0", 43'-0", and 17'-0". These sections are recessed a minimum of 7'-0".

- The proposed retail building has a front façade of approximately 260'-0". This façade is divided into eight sections, with the recess being approximately 3'-0". The majority of this façade is articulated with storefront, awnings, and entry areas which will total more than the 60% requirement.

### c. Windows

- The proposed residential buildings utilize standard 3'-0" x 6'-0" double hung windows for the units, along with glazed unit patio doors, which exceed the 40% requirement for length, and 20% requirement for wall area (see below):

### 36 Unit Residential Building

- Front / Rear Façade
  - approx. 90'-0" linear feet, divided by the 218'-0" length = **41.2%**  
approx. 540 SF wall area for windows, divided by the total wall area of 1,962 SF = **27.5 %**
- Side Façades
  - approx. 30'-0" linear feet, divided by the 66'-2" length = **45.3%**  
- approx. 180 SF wall area for windows, divided by the total wall area of 595.5 SF = **30.2%**

### 24 Unit Residential Building

- Front / Rear Façade
  - approx. 60'-0" linear feet, divided by the 145'-4" length = **41.3%**  
- approx. 360 SF wall area for windows, divided by the total wall area of 1,308 SF = **27.5 %**
- Side Façades
  - approx. 30'-0" linear feet, divided by the 66'-2" length = **45.3%**  
- approx. 180 SF wall area for windows, divided by the total wall area of 595.5 SF = **30.2%**

- The proposed clubhouse utilizes a storefront system, and larger windows along the front façade, which exceed the 40% requirement for length, and 20% requirement for wall area (see below):

- Front Façade
  - approx. 85'-0" linear feet, divided by the 112'-0" length = **75.8%**  
- approx. 426 SF wall area for windows, divided by the total wall area of 1,008 SF = **42.2%**

- The proposed retail building utilizes multiple storefront systems and entries along the front façade, which are transparent between the height of 3'-0" and 8'-0" above the walkway grade for no less than the 60% requirement of the horizontal length of the building (see elevations).

#### d. Roof

- The proposed residential buildings, both the 36 and 24 unit styles, have varied pitched roof heights across their footprint. The shorter, 24 unit building type has one main ridgeline which runs approx. 147'-0", but is broken up into three gable ends along the façade.

- The proposed clubhouse has a mixture of gabled roofs, and flat roofs with parapets, to conceal the rooftop equipment.

- The proposed retail building is comprised solely of flat roofs with parapets at varying heights. This is designed to break down the architecture of the building and hide the roof top equipment.

**e. Notwithstanding the provisions of Section VII.N.7.d. of the Shrewsbury Zoning Bylaws, off-street parking for a Mixed-Use Development**

- The proposed parking complies with the Zoning Bylaw and is adequate for both the residential and commercial portions of the Project. Sufficient loading spaces are also provided for the operational needs of the development. The site includes a significant amount of landscaping around the perimeter and throughout the site that provides screening and helps minimize visual intrusion of the parking and loading areas.

**f. Outdoor Amenities**

- The proposed development offers a range of seven amenity areas of varying scales and character located through-out the site, offering convenient access to pedestrians and bicyclists from the residential clusters and retail areas. A large gathering area offering café tables, seating areas, flowering plant beds and ornamental trees is provided alongside the easterly residential drive. Smaller amenity areas providing more personal scaled seating opportunities and plantings are interspersed throughout the development. A dog park is also provided alongside the easterly residential drive for convenience of the residents. Walkways link the amenity areas together, creating a comprehensive network of public spaces.

**g. Architectural Focal Points**

- The proposed retail building has clearly defined and highly visible customer entries along the front façade. These entries incorporate a variety of different features along the front of the building, including canopies, articulated overhangs, recesses in the front façade, and corniced parapets over the entry doors and storefront.

**h. Landscaping**

- The landscape design offers a comprehensive palette of shade, ornamental and evergreen trees framing drives and public spaces, providing year-round visual interest. The project entrances introduce a layered approach of ornamental trees as backdrop, stone walls defining spaces and shrub and perennial flowering beds offering colorful visual interest. Parking areas feature a range of tree species that provide shade and reduce visual scale. Residential buildings and the clubhouse/pool area are graced with extensive shrub and groundcover beds for a rich visual experience and a sense of personal scale. The palette of plant materials features predominantly native plant species to develop a theme emblematic of New England and proven with proven durability.

**i. Low-income Affordable Housing**

Special Permit Design Narrative Dated June 19, 2019

Prepared by Cube 3 in association with R J O'Connell & Associates, Inc and Vanasse Hagen Brustlin



architecture | interiors | planning

- The proposed residential portion of the project complies with providing 10% of the dwelling units as affordable in perpetuity to households with incomes at or below 80% of area median income as determined by the US Department of Housing and Urban Development (HUD).

# EXHIBIT D

# **Fiscal Impact Analysis**

**Flint Pond Village  
Shrewsbury, MA**

**April 27, 2017**

**Prepared By  
Fougere Planning & Development, Inc.**

**Prepared For  
Route 20 Nominee Trust**

***FOUGERE PLANNING & DEVELOPMENT, Inc.***

***Mark J. Fougere, AICP***

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**Flint Pond Village  
Shrewsbury, MA**

**FISCAL IMPACT ANALYSIS  
Comparative Analysis**

**April 27, 2017**

**Introduction**

Route 20 Nominee Trust is proposing the redevelopment a vacant (former drive-in) 68.23 acre property located at 180 – 228 Hartford Turnpike presently zoned Route 20 Overlay-District. The proposal is to construct a mixed use community consisting of 286 apartment units along with 119,250 square feet of commercial space anchored by a grocery store. The surrounding neighborhood consist of a mix of industrial (asphalt plant), commercial and residential uses. This fiscal impact report will analyze potential revenue streams from the proposed residential and commercial developments, along with impacts that may occur to individual town departments.

Table One and Two outline the specific project breakdown, 10% of the apartment units (29) will be affordable.

**Table One  
Apartment Unit Mix**

<b>Unit Type</b>	<b>10% Set aside</b>	<b>One Beds</b>	<b>Two Beds</b>
<b>Townhomes</b>			
<b>Market Rate</b>	<b>14</b>	<b>0</b>	<b>14</b>
<b>Affordable</b>	<b>2</b>	<b>0</b>	<b>2</b>
<b>Garden</b>			
<b>Market Rate</b>	<b>243</b>	<b>126</b>	<b>117</b>
<b>Affordable</b>	<b>27</b>	<b>14</b>	<b>13</b>
<b>Total</b>	<b>286</b>	<b>140</b>	<b>146</b>

**Table Two  
Commercial Mix**

<b>Commercial Space</b>	<b>Square Footage</b>
<b>Supermarket</b>	<b>80,000</b>
<b>General Retail</b>	<b>32,250</b>
<b>Restaurant</b>	<b>5,000</b>
<b>Coffee Shop</b>	<b>2,000</b>

It should be noted that this development will be operated privately and as such, all proposed access ways will be maintained by the owner, along with trash disposal. Public water and wastewater will be provided site through municipal services; providing improved access to these utilities in the neighborhood. Off site road improvements will also be undertaken to mitigate and improve traffic movements into the site and along the corridor.

### **Local Trends**

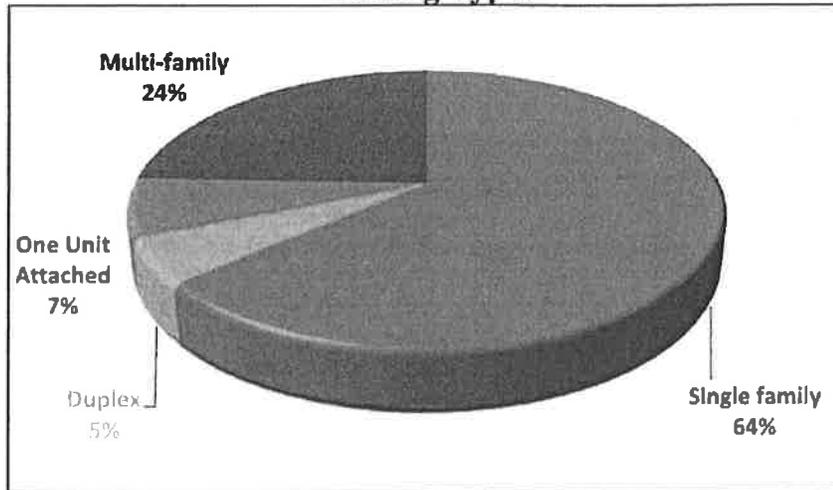
Census figures report that from 2000 to 2010 Shrewsbury's population increased from 31,608 to 35,608, showing positive population growth over the 10 year time period. The most recent population estimates from the US Census Bureau<sup>1</sup> report a population of 36,352.

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<sup>1</sup> 2011-2015 American Factfinder

A majority of Shrewsbury's housing stock consists of single family homes, with 2015 US Census data reporting 8,780 single family homes out of a total housing stock of 13,807 units; Figure One.

**Figure One  
Housing Types**



### **Budget History**

Shrewsbury's total operating budget for 2017 is \$113,641,000, which has increased 18.49% over the last four years. Public Safety and Education account for 59% of the total budget; Figure Two. These departments have the largest personnel and the most direct impact on municipal expenditures. Given the large budgetary impact these departments have on the community and the fact that they will experience the most direct measurable impact from the proposed development, they are the primary focus of this Report.

**Figure Two  
Department Budget Allocation**

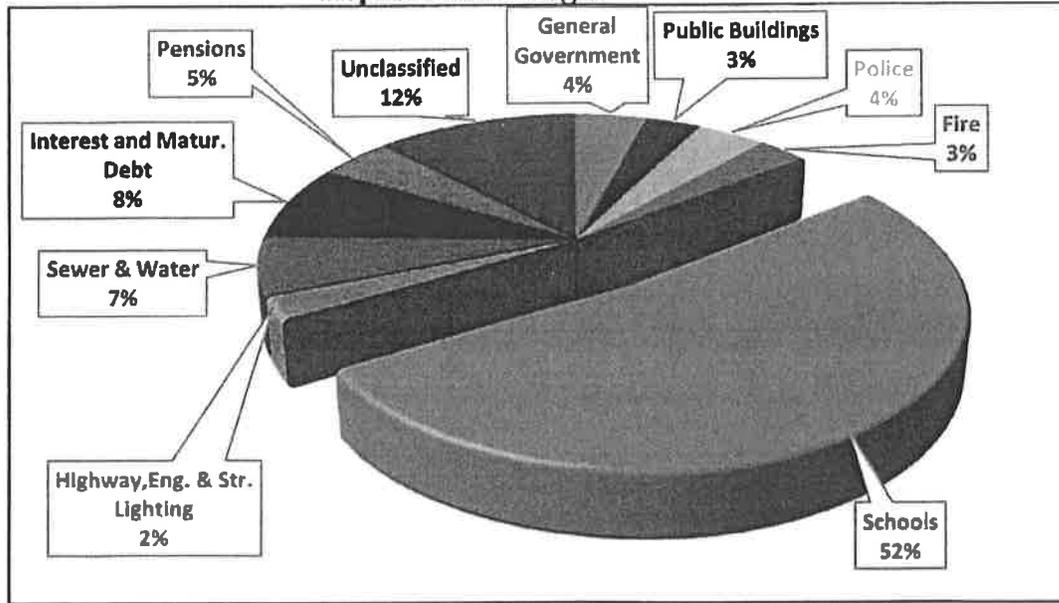


Table Three outlines total appropriations of all Departments over the last four years, with the Police Department showing a 13.41% increase, the Fire Department increasing 9.44% and Schools increasing 13.68%.

**Table Three  
Town Budget Breakdown 2014 - 2017**

	2014	2015	2016	2017	% Change
General Administration	\$4,001,060	\$4,028,666	\$4,834,174	\$4,795,269	19.85%
Public Buildings	\$3,322,147	\$3,727,947	\$4,332,776	\$3,837,211	15.50%
Police	\$4,067,580	\$4,151,100	\$4,674,144	\$4,612,888	13.41%
Fire	\$3,059,513	\$3,136,477	\$3,240,196	\$3,348,370	9.44%
Schools	\$52,000,000	\$57,210,000	\$58,455,519	\$59,112,145	13.68%
Highway, Eng. & Str. Lighting	\$2,650,186	\$2,903,304	\$3,377,364	\$2,827,471	6.69%
Sewer & Water	\$6,325,308	\$6,318,947	\$7,462,887	\$7,392,296	16.87%
Interest and Matur. Debt	\$9,481,084	\$9,424,913	\$9,417,490	\$8,978,680	-5.30%
Pensions	\$4,270,034	\$4,450,015	\$4,922,794	\$5,125,289	20.03%
Unclassified	\$10,735,567	\$11,023,222	\$12,113,414	\$13,612,120	26.79%
<b>Total</b>	<b>\$95,911,419</b>	<b>\$102,345,925</b>	<b>\$112,830,758</b>	<b>\$113,641,739</b>	<b>18.49%</b>

## **A. Methodology Approach**

There are a number of methodologies that are used to estimate the fiscal impacts of proposed developments. The Per Capita Multiplier Method is the most often used to determine municipal cost allocation. This method is the classic “average” costing method for projecting the impact of population growth on local spending patterns and is used to establish the costs of existing services for new development. The basic premise of this method is that current revenue/cost ratios per person and per unit are a potential indicator of future revenue/cost impacts occasioned by growth. The advantage of this approach is its simplicity of implementation; however, its downside is that it calculates the “average” cost as being the expected cost. This is often not the case, and costs can be exaggerated—in some cases significantly. As cost averaging is used in this analysis, the cost findings should be viewed as worse case and in all likelihood, such costs to the town will not materialize. The costs finding reported here are very conservative.

In reviewing exclusively those town departments that may realize a measurable impact from the proposed development, a truer picture of anticipated costs impacts can be determined. For most new land uses, many department budgets are not measurably impacted in any long term way.

## **Local Revenues From Development**

### **A) Property Taxes**

Local taxation provides more than half of municipal revenues for Shrewsbury, totaling 56.5% of all revenues to the General Fund<sup>2</sup>. Shrewsbury’s present tax rate is \$12.83 per \$1,000 valuation. In order to estimate future property tax revenue from the proposed development, two methodologies were used. For apartment properties, the Income Approach is typically used to estimate project value. However, given the preliminary nature of the development project a detail pro forma has not been developed for the proposed apartment community at this time. As an alternative, three apartment complexes within

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<sup>2</sup> Fiscal Year 2017, Figure Nine Budget Report.

Shrewsbury, all which have an affordable component, were used as comparable properties to arrive at an estimated value; Table Four

**Table Four**  
**Estimated Yearly Residential Property Taxes**

<b>Project</b>	<b>Units</b>	<b>Assessment</b>	<b>Assessment/Unit</b>
Audubon Shrewsbury <sup>3</sup>	251	\$40,543,000	\$161,525.90
Madison Place	96	\$14,912,600	\$155,339.58
The Commons - Haynes Farm	302	\$47,494,700	\$157,267.22
Total Averages	649	\$102,950,300	\$158,629
<b>Proposed Project</b>		<b>Estimated Value</b>	<b>Total Value</b>
<b>Proposed Apartments</b>	286	\$158,629	\$45,367,929
	Est. Property Taxes		<b>\$582,071</b>

To estimate a value of the proposed commercial space, area assessments were reviewed for similar type uses; Table Five.

**Table Five**  
**Estimated Yearly Commercial Property Taxes**

<b>Commercial Space</b>	<b>Est. Value/Sq. Ft.</b>	<b>Square Footage</b>	<b>Est. Assessment</b>
Supermarket	\$160	80,000	\$12,800,000
General Retail	\$220	32,250	\$7,095,000
Restaurant	\$250	5,000	\$1,250,000
Coffee Shop	\$240	2,000	\$480,000
			\$21,625,000
		<b>Est. Taxes</b>	<b>\$277,449</b>

**B) Miscellaneous Yearly Revenues**

*Motor Vehicle Excise Tax* - Another major revenue source for the community is motor vehicle excise taxes. In fiscal year 2016 the Town of Shrewsbury received a total of \$5,250,000<sup>4</sup> from this revenue source. Given the proposed apartment use and the affordable

<sup>3</sup> This property sold for \$60,500,000 in June/2016 and noted assessment may increase during town revaluation process.

<sup>4</sup>January 26,2016, estimated 2016 revenue

housing component, the estimated tax is discounted<sup>5</sup> by 50%. Table Six outlines the projected vehicle excise tax for the proposed project.

**Table Six  
Motor Vehicle Excise Tax**

# Cars	Value	Total Value
343	\$15,000	\$5,145,000
50%x \$5,145,000/1,000		\$2,573
\$25 x \$2,572		<b>\$64,313</b>

C) Estimated Yearly Project Revenues

The proposed Flint Pond Village development is estimated to generate \$923,883 in local revenues from property tax, and vehicle excise taxes; Table Seven. It should be noted that this revenue estimate assumes full project build out and stabilization of occupancy for the apartment complex.

**Table Seven  
Estimated Yearly Revenue**

Estimated Taxes	
Residential	\$582,071
Excise Tax	\$64,313
Commercial Uses	\$277,449
<b>Total Revenue</b>	<b>\$923,883</b>

Additional one-time payment revenues will also be realized as part of the development, these will be detailed further below.

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<sup>5</sup> This analysis was development through discussions with a number of town clerks to arrive at a conservative estimate of vehicle excise taxes. Cars are discounted by 50% to account for value variations of those who own cars.

## **B. Municipal Service Costs**

Given the nature of the proposed development project, as will be seen in the analysis below, measurable impacts will be limited to a few key Town Departments including schools, police and fire departments. All onsite maintenance will be addressed by the property owner, including road repairs and trash removal.

### **Department Impacts**

#### **Police & Fire**

The Police and Fire Departments will experience some increased demand for services from the proposed project. For fiscal year 2017 the Police Department budget was \$4,612,888 and the Fire Department budget was \$3,348,370. To assess the degree of impact this project would have on these departments, comparable data from similar uses were analyzed. For the proposed apartments, local data from three complexes were used and for the commercial space, emergency call database obtained by Fougere Planning was used, including a grocery store uses<sup>6</sup>. These ratios were then totaled to derive an average call volume per unit, which was then used to generate projected emergency calls for each Department.

Extrapolating from the comparable call data, increases are projected in the Town's Police and Fire Department call volume. The Police Department responds to an average 13,600 Calls for Service a year and the Fire Department reported 3,904 calls in 2015 (2,491 EMS related). Annual Police calls are projected to increase by 192 calls (1.4% increase, or 3.7 calls per week), annual fire/ambulance calls are projected to increase by 66 (32/34) calls (1.6% increase, or 1.2 calls per week), creating marginal operational impacts; Table Eight.

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<sup>6</sup> Local police calls were obtained for the supermarket center at 551 Boston Turnpike which reported much lower call volume for than noted in Table Eight, while the local coffee shop at 32 Maple Street showed a higher activity. Given the overall figures in Table Eight are higher than the local figures, to be conservative, the call volume reported in Table Eight will be used.

**Table Eight  
Projected Emergency Service Calls**

Project	Units	Total Police Calls <sup>7</sup>	Avg. Call Per Year	Avg. Call Per Unit	Projected Calls Yr.
<b>Apartments<sup>8</sup></b>					
Avalon Shrewsbury	250	279	93	0.37	
Madison Place	96	73	24	0.25	
The Commons - Haynes	302	385	128	0.42	
<b>Total Apartments</b>	<b>648</b>		<b>246</b>	<b>0.38</b>	
<b>Projected Apt. Calls</b>	<b>286</b>				<b>108</b>
<b>Retail Mix</b>					
Supermarket Centers	198,482	341	114	0.0006	
<b>Proposed Center</b>	<b>112,250 sq. ft.</b>				<b>64</b>
<b>Sit Down Rest.</b>					
Restaurants (435 Seats)	11,124	45	15	0.0013	
<b>Proposed Restaurants</b>	<b>5,000</b>				<b>7</b>
<b>Coffee Shops</b>					
Coffee Shops	5,577	106	35	0.0063	
<b>Proposed Coffee</b>	<b>2,000</b>				<b>13</b>
<b>Total Police Calls</b>					<b>192</b>
<b>Project</b>	<b>Units</b>		<b>Avg. Call Per Year</b>	<b>Avg. Call Per Unit</b>	<b>Projected Calls Yr.</b>
<b>Apartments</b>					
Avalon Shrewsbury	250	64	21.33	0.085	
Madison Place	96	9	3.00	0.031	
The Commons - Haynes	302	65	21.67	0.072	
<b>Totals</b>	<b>648</b>		<b>46</b>	<b>0.071</b>	
<b>Proposed Apt.</b>	<b>286</b>				<b>20</b>
<b>Retail Mix</b>					
Supermarket Centers	198,482	21	7.00	0.00004	
<b>Proposed Center</b>	<b>112,250</b>				<b>4</b>
<b>Sit Down Rest.</b>					
Restaurants (435 Seats)	11,124	45	15.00	0.0013	
<b>Proposed Restaurant</b>	<b>5,000</b>				<b>7</b>
<b>Coffee Shops</b>					
Coffee Shops	5,577	2	0.67	0.0001	
<b>Proposed Coffee</b>	<b>2,000</b>				<b>1</b>
<b>Total Fire Calls</b>					

<sup>7</sup> The apartment calls are over a four period, commercial uses over a three year period.

<sup>8</sup> Call data obtained from Connery Associates Fiscal Report, The Pointe at Hills Farm, March 9, 2016.

Project	Units	Total Amb. Calls	Avg. Call Per Year	Avg. Call Per Unit	Projected Calls Yr.
<b>Apartments</b>					
Avalon Shrewsbury	250	55	18.33	0.073	
Madison Place	96	7	2.33	0.024	
The Commons - Haynes	302	75	25.00	0.083	
<b>Totals</b>	<b>648</b>		<b>46</b>	<b>0.070</b>	
<b>Proposed Apt.</b>	<b>286</b>				<b>20</b>
<b>Retail Mix</b>					
Supermarket Centers	198,482	65	21.67	0.0001	
<b>Proposed Center</b>	<b>112,260</b>				<b>12</b>
<b>Sit Down Rest.</b>					
Restaurants (435 Seats)	11,124	9	3.00	0.0003	
<b>Proposed Restaurant</b>	<b>5,000</b>				<b>1</b>
<b>Coffee Shops</b>					
Coffee Shops	5,577	5	1.67	0.0003	
<b>Proposed Coffee</b>	<b>2,000</b>				<b>1</b>
<b>Total Ambulance Calls</b>					<b>34</b>

## Police Department

To assign costs as a result of the increased demand for services, a number of options were reviewed including cost per call and cost per capita. Since calls for service provides a clear measure of impact on the Department, this approach was used and results in an estimated annual impact of \$65,088; Table Nine. This cost estimate is not inferring the Police Budget will increase as a result of the proposed development, but assigns a “cost” to account for these new land uses in the community.

**Table Nine**  
**Police Department Impact**

Department	FY 2017 Budget	Calls <sup>9</sup>	Cost/call	Est. Calls	Annual Cost
Police	\$4,612,888	13,601	\$339	192	\$65,088

<sup>9</sup> Four year average, Calls for Service, as reported in Connery Associates Fiscal Report, The Pointe at Hills Farm, March 9, 2016.

## **Fire Department**

Although a private ambulance service operates within Shrewsbury, the Fire Department responds to most calls. In fact, 64% of the Departments' total calls in 2015 were EMS related. To be conservative, we will assume that the Department will respond to all of the estimated ambulance calls to the proposed project. As with the Police Department, to account for some impact from the proposed development a cost per call ratio was used which provides a gross estimated annual cost of \$56,628; Table Ten.

**Table Ten**  
**Gross Fire Department Impact**

<b>Department</b>	<b>FY 2017 Budget</b>	<b>Calls Per Year<sup>10</sup></b>	<b>Cost/call</b>	<b>Est. Calls</b>	<b>Annual Cost</b>
Fire	\$3,348,370	3,904	\$858	66	\$56,628

## **Other Departments/Revenues:**

### **Building**

Building Department costs were not included in this analysis because they are not permanent annual impacts and will be offset by building permit fees.

### **Public Works**

All roads within the development will be private and maintained by the complex operator. Solid waste will be handled by a private contractor with no expense incurred by the Town.

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<sup>10</sup> 2015 Calls, 2015 Town Report.

**Health Department**

The proposed development will place a demand for services on the Health Department. Inspections will be required for the grocery store, restaurant and coffee shop. In addition, a pool is proposed as part the recreation facilities for the apartment complex. The 2017 budget for the Department was \$205,958. Given the limited demand for services required for the proposed residential use, using per unit or per capita cost allocation would not be appropriate. Based upon similar commercial developments reviewed by Fougere Planning in the past, \$7,500 in cost will be allocated for this Department's impact.

**Other Departments**

It is not anticipated that measurable impacts will occur to other town departments and therefore no other costs were analyzed. To be conservative, a \$5,000 cost will be carried to account for potential other impacts.

## School Department

The Town of Shrewsbury public schools presently have an enrollment of 6,191 students housed in nine schools (one PK, five elementary, two middle, and one high school). The 2017 School budget was \$59,112,145, which is an increase of 13.68% since 2014.

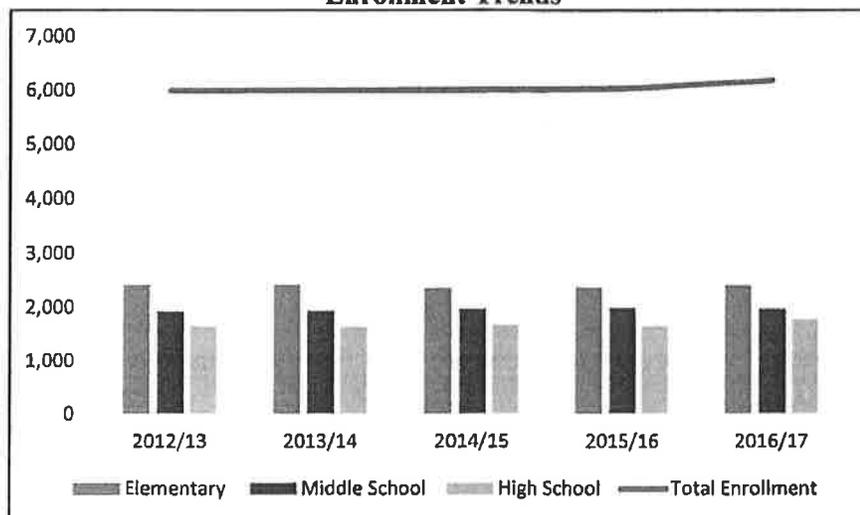
### Enrollment History

Overall school enrollment has been slowly increasing over the last five years, showing a total school growth of 3.03% during this time period; Table 11 and Figure Three. At the elementary grade level, enrollment has remained flat, with the middle schools showing a small 2.64% increase. The High School has shown the largest increase over this five year time period.

**Table 11**  
**Enrollment Trends 2012-2017**

	2012/13	2013/14	2014/15	2015/16	2016/17	% Change
<b>Elementary</b>	2,421	2,423	2,369	2,378	2,419	-0.08%
<b>Middle School</b>	1,929	1,941	1,965	1,999	1,980	2.64%
<b>High School</b>	1,659	1,647	1,684	1,668	1,792	8.02%
<b>Total Enrollment</b>	6,009	6,011	6,018	6,045	6,191	3.03%

**Figure Three**  
**Enrollment Trends**



## Projected School Enrollment Estimates

In reviewing the potential number of school children that may reside in an apartment complex, a number of factors must be taken into consideration. This includes the number of bedrooms per unit, one bedroom units typically do not house children and three bedroom units generate a high rate of children. The location of the complex also plays a role, with developments located within mixed use environments or within mixed use corridors, discouraging the attractiveness of the site for families. As noted previously, the subject site will be a mixed use complex with the apartment units sharing access to a 119,000 square foot retail center. Many of the units will overlook parking lots, access ways and loading docks of the commercial operation. In addition, the site lies adjacent to a mixed use corridor with both industrial and commercial uses adjoining the site. A review of mixed use apartment complexes and a local non-mixed example (Madison Place), demonstrates the marked difference in per unit school age children (SAC); Table 12.

**Table 12**  
**Comparison – Traditional v. Non-traditional Locations**

<b>Apartment Complex</b>	<b>Two Bedroom SAC/Unit</b>
<b>Madison Place</b>	<b>0.229</b>
<b>University Station - Westwood</b>	<b>0.164</b>
<b>Powder Mill Sq. - Andover</b>	<b>0.068</b>
<b>Avalon Newton Highland</b>	<b>0.148</b>
<b>Avalon Newton Chestnut</b>	<b>0.149</b>
<b>Long View Waltham</b>	<b>0.032</b>
<b>Cronin's Landing Waltham</b>	<b>0.005</b>

The impact of site specific characteristics on the attractiveness of an apartment complex to families is reported.<sup>11</sup> The proposed development will be mixed use neighborhood, creating a non-traditional environment that typically generates less school age children. Key factors associated in non-traditional housing environments include:

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<sup>11</sup> Connery Associates.

- Multi-family residential development located above commercial uses.
- Multi-family residences accessed primarily by elevators such as high rise development.
- Multi-family locations located in the midst of commercial strips, mixed use developments, or are visually and operationally a part of general locations developed primarily for commercial / industrial use and major employment centers.
- Multi-family developments that are within or in close proximity to high intensity commercial or mixed use developments.
- Multi-family developments located on local high traffic ways or where primary access is via a highway interchange or a major collector roadway leading to close by highway access.

Based upon the fact that the subject site is consistent with a number of these points, leads to the conclusion that the use of SAC ratios from traditional apartment complexes are not applicable for this project. The proposed apartment complex will have a mix of one bedroom and two bedroom units within 18 townhome units and 268 garden style units; Table 13. One bedroom units do not generate school age children and therefore this analysis reviewed the impact from the proposed 146 two bedroom units.

**Table 13  
Bedroom Mix Breakdown**

<b>Unit Type</b>	<b>10% Set aside</b>	<b>One Beds</b>	<b>Two Beds</b>
<b>Townhomes</b>			
Market Rate	14	0	14
Affordable	2	0	2
<b>Garden</b>			
Market Rate	243	126	117
Affordable	27	14	13
<b>Total</b>	<b>286</b>	<b>140</b>	<b>146</b>

To estimate the number of school age children (SAC) that may live in the proposed apartment complex, Fougere Planning gathered information from a number of sources. This analysis includes the noted projects detailed in Table 12, but also existing apartment complexes within the community including Avalon Shrewsbury and The Commons at

Haynes Farm. These two projects were excluded from consideration because both are 40B developments, requiring 25% of the units to be affordable, but also include a high percentage of three bedroom units and even four bedroom units (The Commons). Given the unique locational considerations that will tend to reduce the number of children living within the development, the Consultant believes that the lower .164 per unit SAC found at University Station is an appropriate and justifiable estimate on the number of children that may reside within the apartment complex. However, to be conservative we will use the higher local Madison Place SAC of .229 per unit; Table 14.

**Table 14  
Estimated School Age Children**

<b>Unit Type</b>	<b>10% Set aside</b>	<b>One Beds</b>	<b>SAC/Unit</b>	<b>Two Beds</b>	<b>SAC/Unit</b>	<b>Total SAC</b>
<b>Townhomes</b>						
Market Rate	14	0	0	14	0.229	3.206
Affordable	2	0	0	2	0.229	0.458
<b>Garden</b>						
Market Rate	243	126	0	117	0.229	26.79
Affordable	27	14	0	13	0.229	2.977
<b>Total</b>	<b>286</b>	<b>140</b>	<b>0</b>	<b>146</b>		<b>34</b>

Based upon this analysis, an anticipated 34 school children could reside within the proposed apartment complex, with a range of 25 to 40 students occurring over time. This is a very conservative estimate and most likely will not be reached given the site's locational considerations. Reviewing the grade profile of three Shrewsbury apartment complexes, Table 15 outlines the expected grade breakdown of students.

**Table 15  
Estimated School Age Children – By Grade**

<b>Grades K - 5</b>	<b>17 Students</b>
<b>Grades 6 – 8</b>	<b>10 Students</b>
<b>Grades 9 - 12</b>	<b>7 Students</b>

It is not expected that all of the potential students will appear in the school system simultaneously. Based on construction and lease-up periods, there is an expected lag between construction and full occupancy of the complex. It is anticipated that the project will take three to four years to be fully built out and leased.

### **Estimated School Costs**

Based upon information received from the Massachusetts Department of Education, the Actual Net School Spending in 2015 was \$11,430 per student. Applying this cost to the estimated 34 school age children that may reside at the apartment complex, an estimated school cost of \$388,620 is calculated. If Chapter 70 Aid is taken into account, which equates to \$3,200 per student, the estimated yearly cost is reduced to \$279,820. With either calculation, these estimated costs are very conservative given that many fixed costs (administrative staffing, lighting, maintenance) are included in the school budget that will not be impacted by the addition of 34 students. We also believe the estimated 34 school children is will not be realized because of locational considerations. In addition, it can be argued that only measurable cost that may be realized is the addition of a new teacher (\$80,000), but the report assumes a higher costs estimates to insure all potential costs are included.

## **One-time Revenue Benefits**

With the construction of Flint Pond Village, a number of offsite improvements and one time payments will take place. This significant investment will improve traffic flow in the area, enhance public health by providing valuable access to sewer for the neighborhood and utility payments. These improvement/payments include:

- **\$2,000,000: Road Widening, signal work, intersection improvements and utility extensions.**
- **\$3,022,045 in commercial and residential payments for sewer and water connections fees.**

## FISCAL SUMMARY

Table 16 summarizes the fiscal impact from the proposed development. It should be noted that this is an estimated cost impact and we are not suggesting additional staffing levels be increased because of this development. Appropriate town administrative officials will assess local needs for service and will make decisions based upon facts that are before them.

**Table 16**  
**Estimated Annual Fiscal Impact**

Gross Rev. Taxes & Excise Taxes	\$923,883	\$923,883
Estimated Municipal Costs		
Police	-\$65,088	-\$65,088
Fire	-\$56,628	-\$56,628
Health	-\$7,500	-\$7,500
Other Departments	-\$5,000	-\$5,000
School Costs	-\$338,620	-\$279,820 <sup>12</sup>
Total Costs	-\$472,836	-\$414,036
Net Annual Positive Fiscal Impact	+\$451,047	+\$509,847

<sup>12</sup> This cost takes into account Chapter 70 Aid at \$3,200 per student.

## **Summary of Findings**

- The proposed development project will result in a net annual positive fiscal impact ranging from \$509,847 - \$451,047. Anticipated costs will range from \$414,036 - \$472,836.
- Manageable increased emergency call volume will occur to emergency service departments, with police calls increasing 1.4% a year and fire department calls increasing 1.6%.
- An estimated 26 school age children are anticipated to reside at the development site. A majority of the students will be elementary grade level, which has seen the least amount of enrollment growth over the last five years.
- Anticipated revenues will increase Shrewsbury taxation income by 1.4%.
- Limited measurable impacts are foreseen to other town departments.
- Analysis does not take into account intangible economic benefit of creating additional affordable and market rate housing.
- Positive economic growth will occur during the construction phase of the project and at buildout, additional jobs will be added to the market place.



## TOWN OF SHREWSBURY

Richard D. Carney Municipal Office Building  
100 Maple Avenue  
Shrewsbury, Massachusetts 01545-5338

### MEMORANDUM

TO: Shrewsbury Board of Selectmen  
FROM: Kristen D. Las, Assistant Town Manager/Economic Development Coordinator  
CC: Daniel J. Morgado, Town Manager  
SUBJECT: School Children in Housing Developments-October 2016  
DATE: November 2, 2016

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I am providing an update to the Board regarding the number of school children in housing developments in Shrewsbury. The last update was provided in November 2015.

#### Developments Reviewed

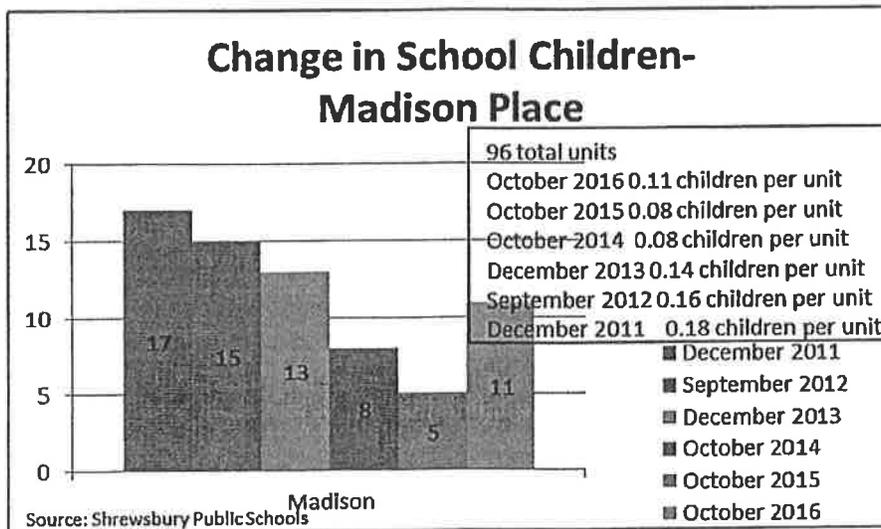
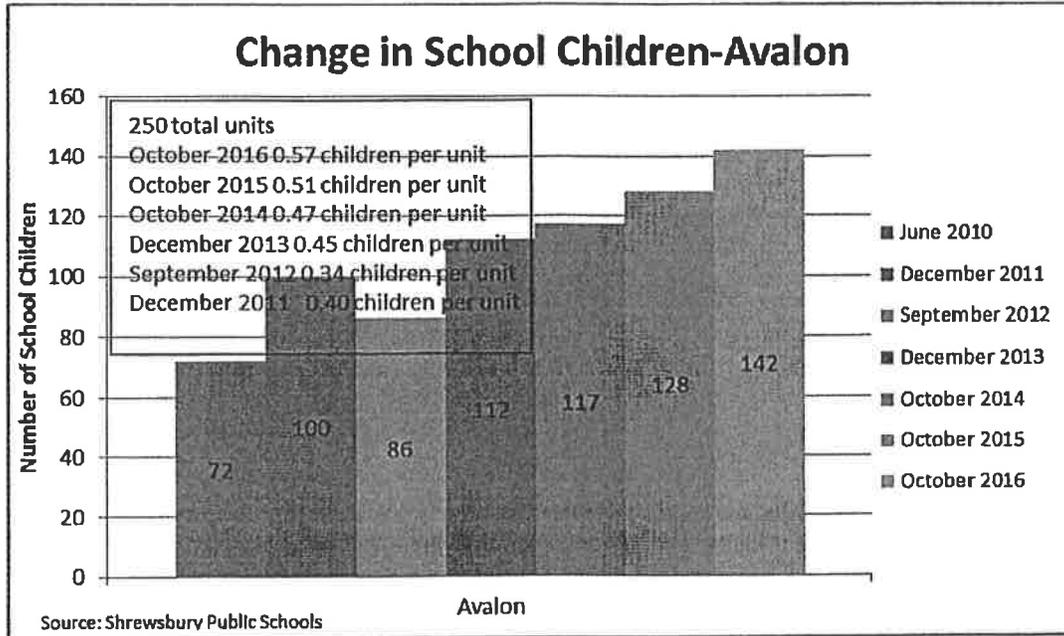
In June 2010, five (5) housing developments were studied:

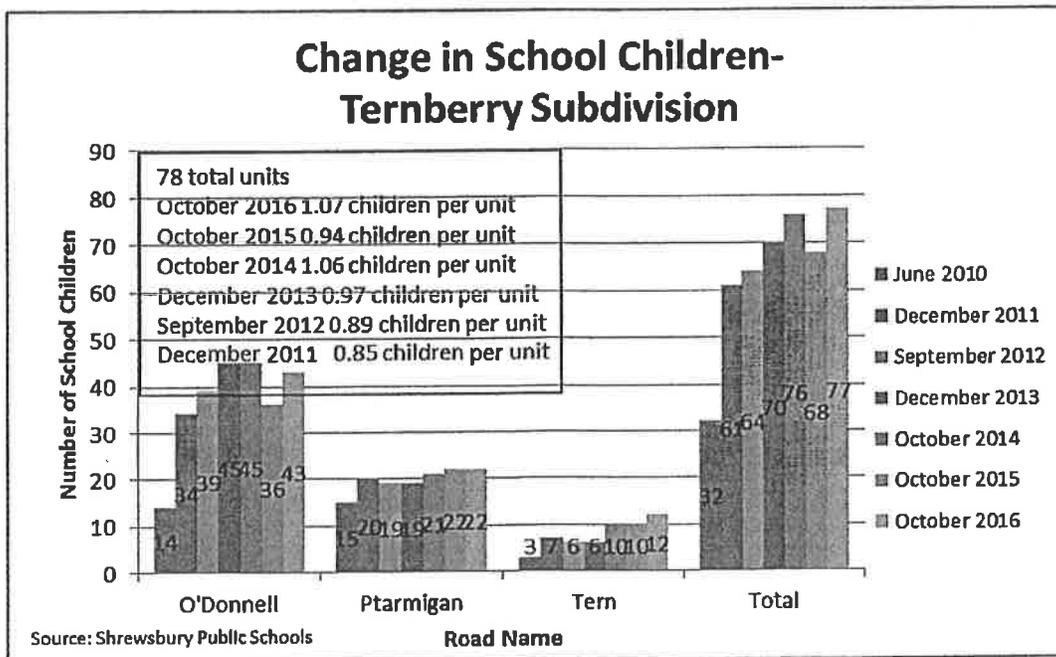
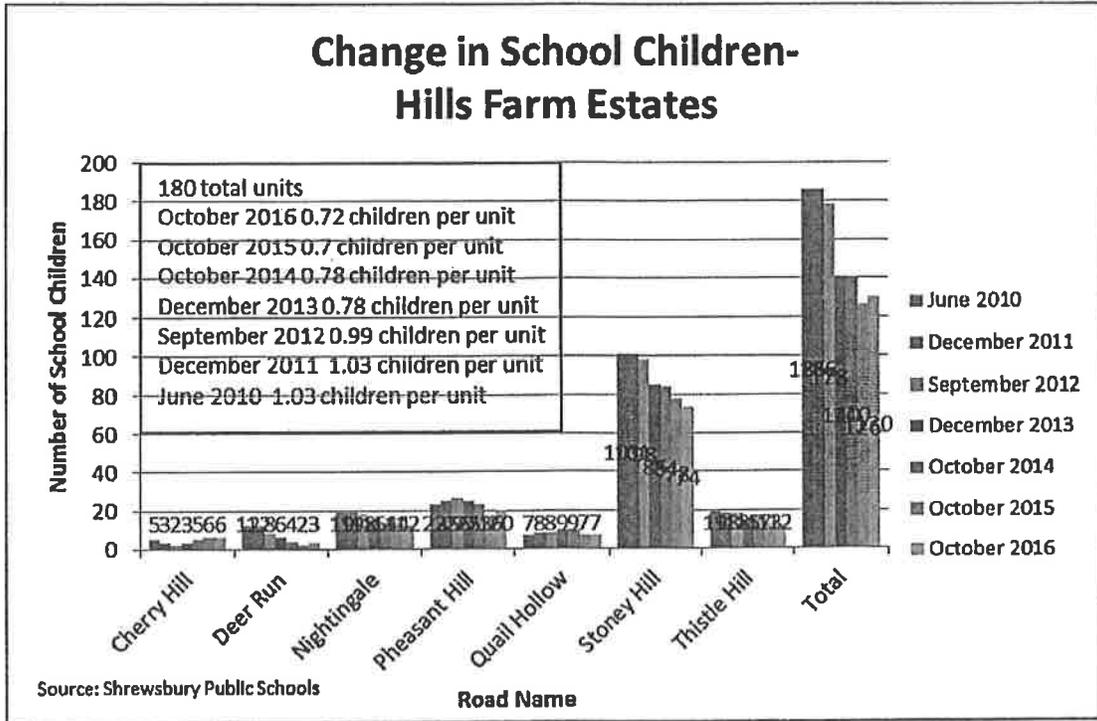
- Avalon Shrewsbury: 250 rental units
- Hills Farm Estates: 180 ownership single family dwelling units on individual lots
- Ternberry: 39 lots with 78 ownership units
- Tobin Hill Estates: 46 ownership single family dwelling units on individual lots
- West Hill Homes: 77 ownership single family dwelling units on individual lots

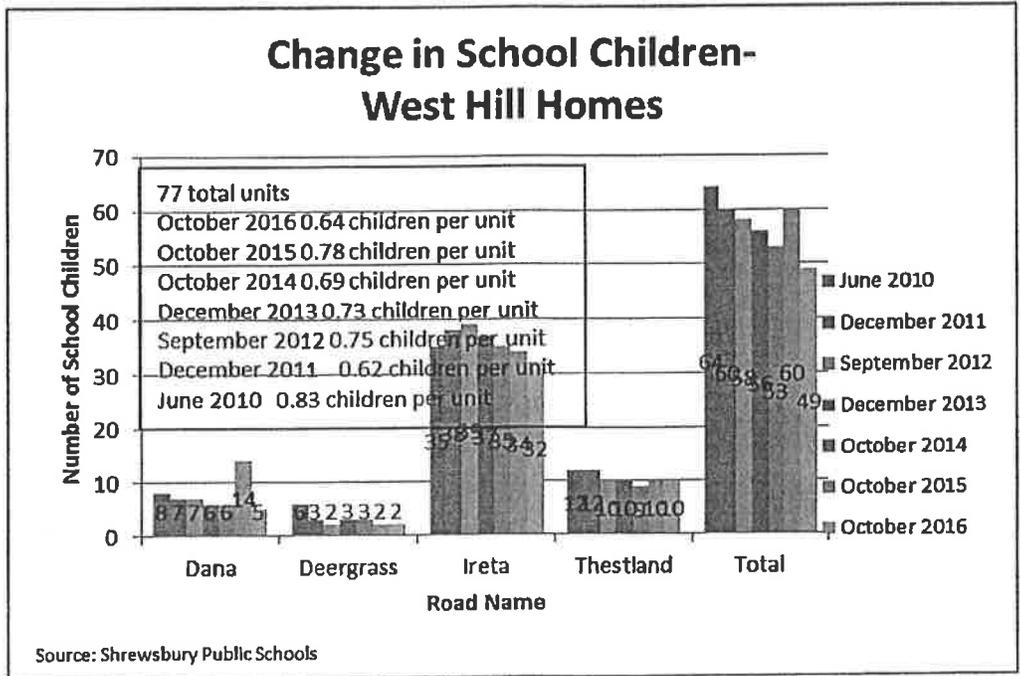
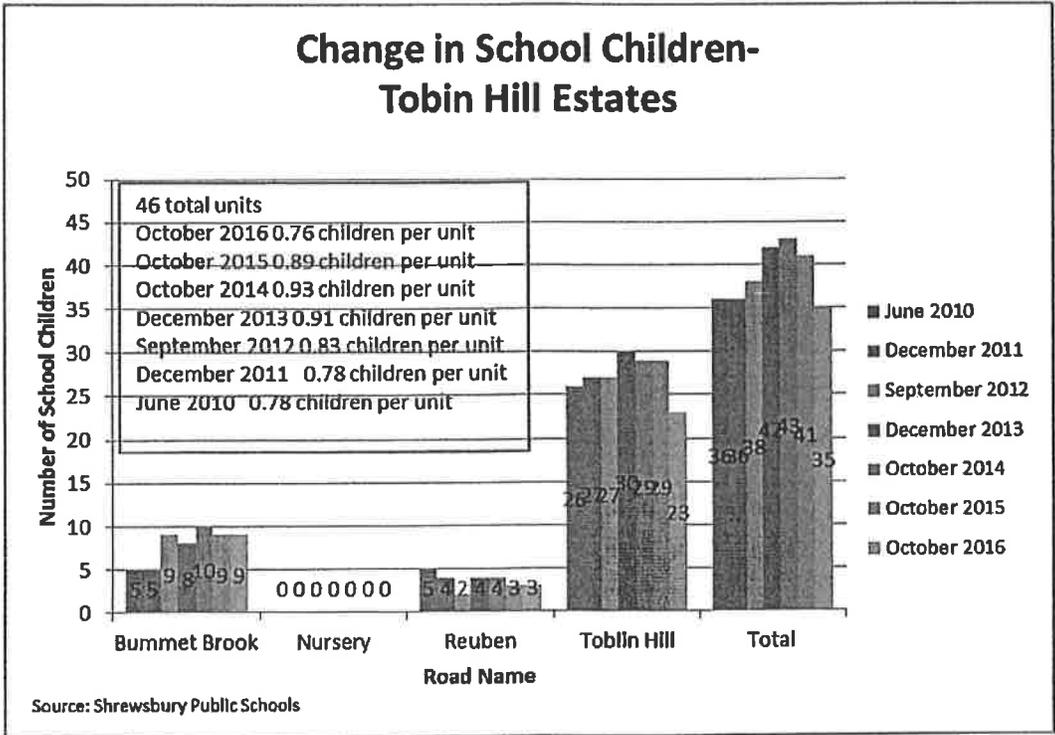
In December 2011, one (1) housing development was added to the study list:

- Madison Place: 96 rental units

Please see charts below identifying total overall change in school children from June 2010 to October 2016.







**Change in Children per Unit Over Time**

Development	Avalon	Hills Farm	Ternberry	Tobin Hill	West Hill	Madison Place
Children/Unit 06-2010	0.29	1.03	0.44	0.78	0.83	--
Children/Unit 12-2011	0.40	1.03	0.85	0.78	0.62	0.18
Children/Unit 09-2012	0.34	0.99	0.89	0.83	0.75	0.16
Children/Unit 12-2013	0.45	0.78	0.97	0.91	0.73	0.14
Children/Unit 10-2014	0.47	0.78	1.06	0.93	0.69	0.08
Children/Unit 10-2015	0.51	0.70	0.94	0.89	0.78	0.08
Children/Unit 10-2016	0.57	0.72	1.07	0.76	0.64	0.11
Change from 2016-2016	+0.06	+0.02	+0.13	-0.13	-0.14	+0.03

The Avalon, Hills Farm, Ternberry and Madison Place saw an increase in children per unit from October 2015 to October 2016. Toblin Hill and West Hill saw a decrease in the number of school children during that timeframe.

Summary

This memorandum summarized the number of children in Shrewsbury neighborhoods based upon six (6) existing developments including apartments, duplexes and single family units. This information was used to summarize the potential number of school children associated with potential subdivision development. It can also be used for budgeting purposes in the future for other potential developments.

The school age children population at Avalon continues to increase over the past four years by approximately 56 school age children. This is perhaps due to the rental and affordability component of the development. The number of school children in other housing developments has remained steady with the exception of Hills Farm Estates that has continued to decrease.

The housing developments studied still have less than 1 child per household with the exception of Ternberry.

As newer housing developments are being completed, I anticipate adding Hickory Hills and Saxon Woods subdivisions to our counts in the future as they were accepted public roadways in May 2014.

Additional information on number of school children by grade and school is available upon request.

# **ITEM 6**

# Edgemere Crossing at Flint Pond

Shrewsbury, Massachusetts

PREPARED FOR

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Route 20 Nominee Trust and  
Demoulas Super Markets, Inc.  
881 East Street  
Tewksbury, MA 01876

PREPARED BY

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PO Box 9151  
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JUNE 2019

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# 1

## Introduction

Vanasse Hangen Brustlin, Inc. (VHB), on behalf of Route 20 Nominee Trust and Demoulas Super Markets, Inc. (collectively, the "Proponent"), has prepared this transportation impact and access study (the "Study") for the construction of a mixed use development of approximately 145,000 square feet (SF) of commercial space and approximately 250 rental residential units (the "Project"), to be built on an approximately 68-acre site located along Route 20 in Shrewsbury, Massachusetts (the "Site", or "Project Site"). This traffic study has been prepared in conformance with the Massachusetts Department of Transportation's (MassDOT) Transportation Impact Assessment (TIA) Guidelines<sup>1</sup> and is consistent with the Town of Shrewsbury's local requirements for site plan and special permit submissions.

### Project Summary

The proposal involves the construction of a mixed-use development located on an approximately 68-acre Site along Route 20 in Shrewsbury, Massachusetts (the "Project"). The existing Site was formerly the Edgemere Drive-In Theater and is currently abandoned. Figures 1 and 2 show the Site location and Project Site context, respectively.

The Project includes the construction of an approximately 80,000 square foot (SF) Market Basket supermarket, 50,000 SF of general retail space, 13,000 SF of pharmacy space, a 2,000 SF drive-in bank, and 250 units of rental residential units. Access to the Site will be provided via an unsignalized driveway along Route 20 (which restricts left-turns exiting the site) in the general location of the current driveway and a signalized, full-access driveway at the

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<sup>1</sup> *Transportation Impact Assessment (TIA) Guidelines*, Massachusetts Department of Transportation, March 13, 2014.



Source: USA Topo Maps



Figure 1  
Site Location Map

**Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts**



Source: MassGIS



Figure 2  
Project Site Context

**Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts**

intersection of Route 20 and Lake Street. Full internal access for vehicles and pedestrians will be provided between the residential and commercial components of the Project.

## **Project Permitting Status**

The Project is subject to local review through the Town of Shrewsbury's typical site plan and special permit review process. Additionally, it is subject to review pursuant to the Massachusetts Environmental Policy Act (MEPA) office because the proposed development requires one or more state agency permits and exceeds review thresholds established under the MEPA implementing regulations (301 CMR 11.03). MEPA jurisdiction is limited to those aspects of the Project that are within required or potentially-required state permits that may cause Damage to the Environment as defined in the MEPA regulations, including traffic and transportation, greenhouse gas emissions and air quality, wetlands, and stormwater.

The Project meets/exceeds the following MEPA review thresholds requiring an Environmental Notification Form (ENF) and an Environmental Impact Report (EIR):

- › 11.03(1)(b)(2): Creation of five or more acres of impervious area;
- › 11.03(6)(a)(6): Generation of 3,000 or more New adt on roadways providing access to a single location; and
- › 11.03(6)(a)(7): Construction of 1,000 or more New parking spaces at a single location.

This study is being submitted to the Town of Shrewsbury for use in the local approval process. The Draft and Final Environmental Impact Reports which will be submitted to MEPA and MassDOT as well as the Town of Shrewsbury, and other interested stakeholders, will include

## **Study Methodology**

This traffic assessment was conducted in three stages consistent with the MassDOT traffic study guidelines. The first stage involved an assessment of existing traffic conditions within the Project area, including an inventory of existing roadway geometry, observations of traffic flow, collection of daily and peak period traffic counts, and a review of traffic safety in the area.

The second stage of the Study established the framework for evaluating the transportation impacts of the Project. Specific travel demand forecasts for the Project were assessed along with future traffic demands on the study area roadways due to projected background traffic growth and other proposed area development that may occur independent of the Project. Per MassDOT guidelines, the year 2026 (a seven-year time horizon) was selected as the design year for analysis in the preparation of this Study. Analysis of area traffic operations in the year 2026 would fully reflect the effects of the proposed development as well as background traffic independent of the proposed development.

The third and final stage of the study discusses possible measures to mitigate, improve, and address long-standing existing and potential future traffic operations in the area.

# 2

## Existing Conditions

Evaluation of the transportation impacts associated with the Project requires a thorough understanding of the existing transportation system in the Project study area. The analysis of existing transportation conditions is based on the existing roadway network, roadway/intersection geometry, traffic control, existing daily and peak hour traffic volumes, traffic safety conditions, and existing public transportation.

### Site Conditions

The 68-acre Site currently includes the abandoned Edgemere Drive-In Theater. The Site is abutted by Route 20 to the north, Flint Pond to the west, the North Grafton Town Line to the south, and residences to the east. The property is located within the Town of Shrewsbury's Commercial-Business Zoning District and Route 20 Overlay District.

### Site Access

Access to the existing Site is currently provided via a driveway along Route 20, east of Lake Street. The driveway along Route 20 provided access to the Edgemere Drive-In Theater that is no longer operational.

### Parking

Parking on the existing site for the former drive-in theater is now predominantly broken asphalt and there are no striped parking spaces provided on the parcel.

## Study Area

The following study area intersections were discussed with representatives of the Central Massachusetts Regional Planning Commission, Town of Shrewsbury, and MassDOT. The following 14 intersections comprise the study area for this assessment and are illustrated in Figure 3:

- › Route 20 at Massasoit Road/Millbury Avenue
- › Route 20 eastbound ramps at Route 122 (Grafton Street) (east intersection)
- › Route 20 eastbound ramps at Route 122 (Grafton Street) (west intersection)
- › Route 20 westbound ramps at Route 122 (Grafton Street)
- › Route 122 (Grafton Street) at Blithewood Avenue
- › Route 122 (Grafton Street) at Sunderland Road
- › Sunderland Road at Lake Avenue
- › Route 20 at Sunderland Road/Westborough Street
- › Route 20 at Edgemere Boulevard
- › Route 20 at Grafton Street
- › Route 20 eastbound ramps at Route 140 (Memorial Drive)
- › Route 20 westbound ramps at Route 140 (Memorial Drive)
- › Route 20 at Lake Street/Site Driveway (west)
- › Route 20 at Site Driveway (east)

Figure 4 presents the existing intersection lane geometry and traffic control at each of the study area intersections.

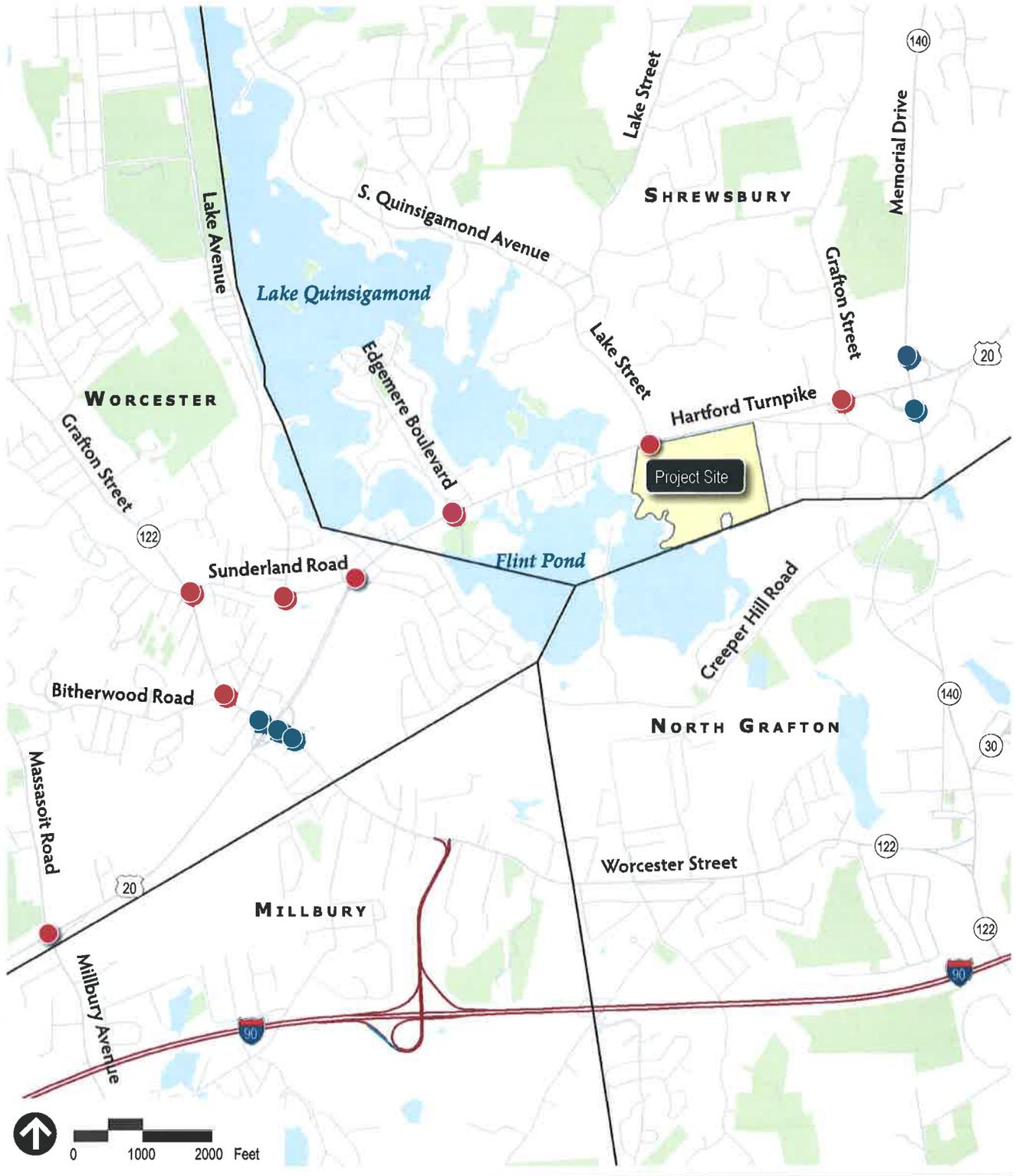
## Roadway Network

The Project Site is bounded by Hartford Turnpike (US Route 20) to the north. Figure 5 shows the study area roadway jurisdiction.

- › **Hartford Turnpike (US Route 20)** is generally oriented in the east/west direction, providing access to/from Worcester in the west and Northborough in the east. Route 20 is classified as an urban principal arterial under the jurisdiction of MassDOT. Within the vicinity of the Site, Route 20 is comprised of two lanes in the east direction and one lane in the west direction. The posted speed limit is 40 miles per hour (mph) within the vicinity of the Site. No sidewalks are provided along the roadway within the vicinity of the site. Land use consists of a mix of industrial, commercial, and residential uses.

## Traffic Volumes

Daily traffic volumes were collected at three locations over a 72-hour period in January 2019 (Saturday through Tuesday, excluding Sunday) using automatic traffic recorders (ATR). These



Source: MassGIS

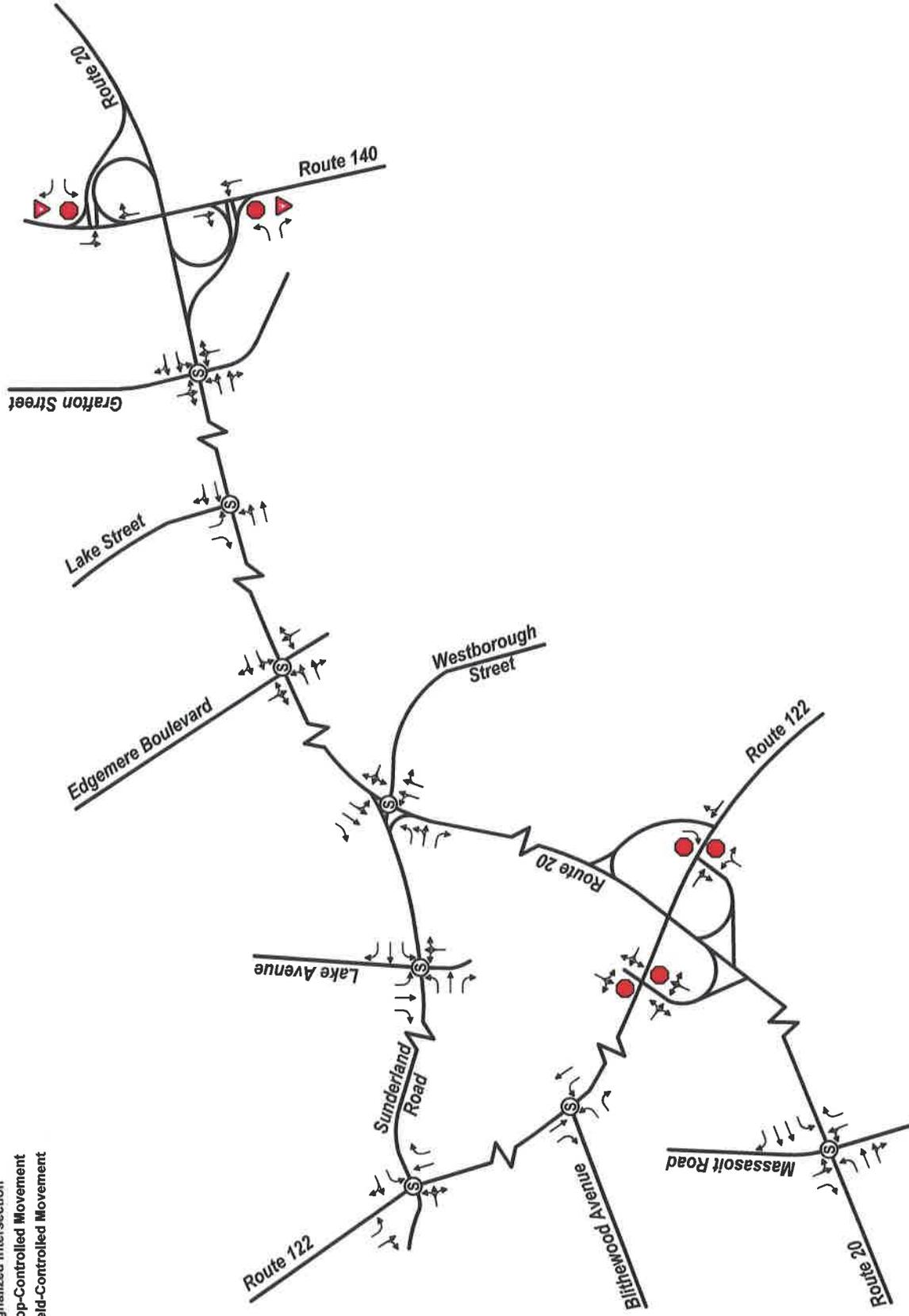
- Signalized Intersection
- Unsignalized Intersection



Figure 3  
Study Area Intersections

**Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts**

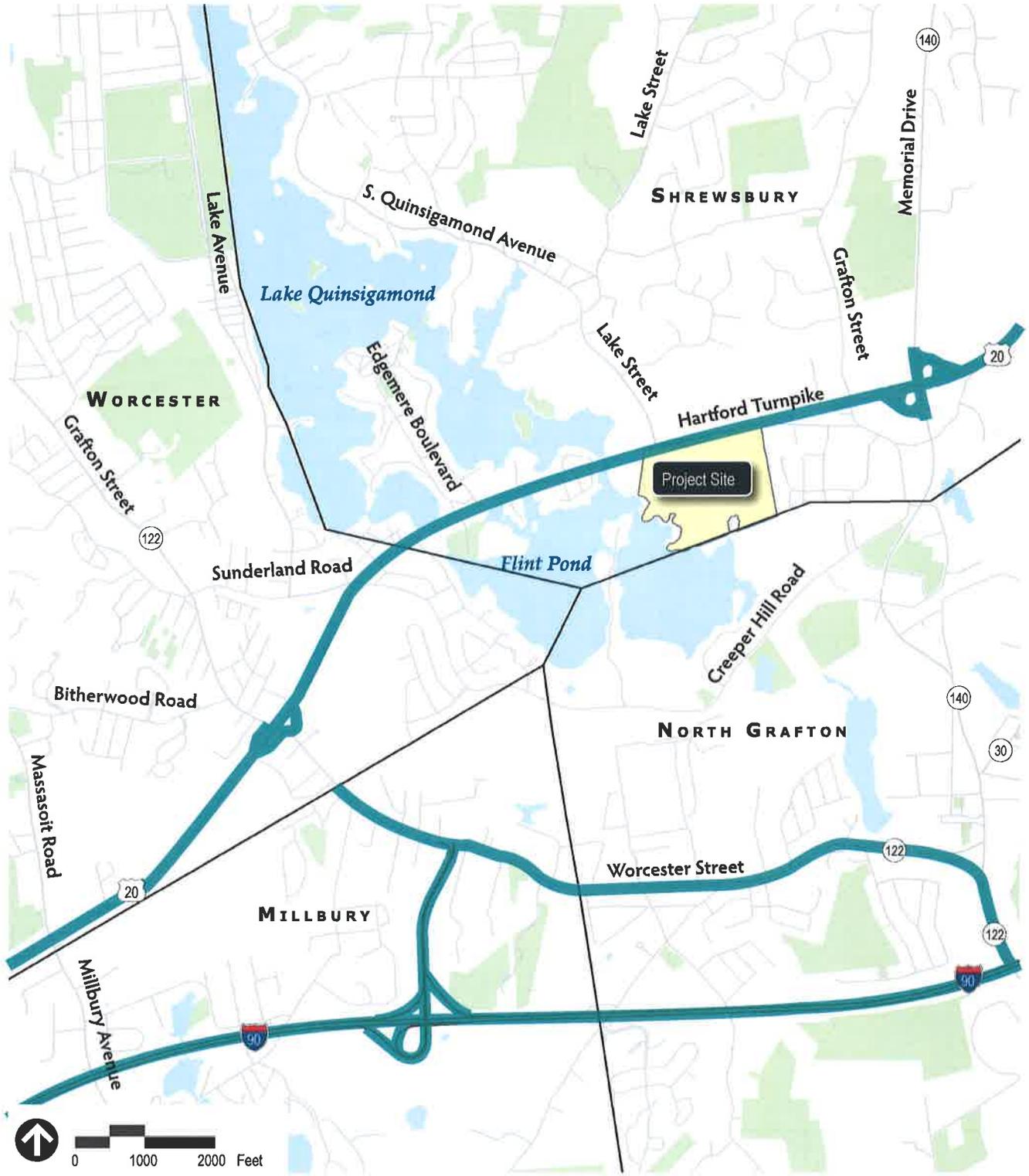
- Ⓢ Signalized Intersection
- Stop-Controlled Movement
- ▲ Yield-Controlled Movement



Not to Scale



**Figure 4**  
Intersection Lane Geometry and Traffic Control  
Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts



Source: MassGIS

- MassDOT Roadway
- Local Roadway



Figure 5  
Roadway Jurisdiction

**Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts**

dates represent typical days for traffic count purposes (non-holidays) while local schools were in session. The volumes are summarized in Table 1 and included in the Appendix.

As shown in Table 1, Route 20 between the Route 122 ramps carries approximately 19,400 vehicles on a typical weekday with the morning and evening peak hours accounting for 7.6% and 9.2% of the weekday daily traffic flow, respectively. On a typical Saturday, Route 20 between the Route 122 ramps carries approximately 16,300 vehicles with the midday peak hour accounting for 8.5% of the Saturday daily traffic flow. Traffic flow along Route 20 is heavier in the eastbound direction during the weekday morning peak hour and heavier in the westbound direction during the weekday evening and Saturday midday peak hours.

Route 20 east of Lake Street carries approximately 22,400 vehicles on a typical weekday with the morning and evening peak hour accounting for 7.6% and 8.0% of the weekday daily traffic flow, respectively. On a typical Saturday, Route 20 east of Lake Street carries approximately 17,600 vehicles with the midday peak hour accounting for 8.2% of the Saturday daily traffic flow. Traffic flow along Route 20 is heavier in the eastbound direction during the weekday morning peak hour and heavier in the westbound direction during the weekday evening and Saturday midday peak hours.

**Table 1 Existing Traffic Volume Summary**

Location	Weekday ADT <sup>1</sup>	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour				
		Volume <sup>2</sup>	K Factor <sup>3</sup>	Dir. Dist. <sup>4</sup>	Volume	K Factor	Dir. Dist.	Volume	K Factor	Dir. Dist.
Route 20 Between Route 122 Ramps	19,400	1,480	7.6%	58% EB	1,790	9.2%	65% WB	1,385	8.5%	53% WB
Route 20 East of Lake Street	22,400	1,705	7.6%	64% EB	1,795	8.0%	63% WB	1,440	8.2%	52% WB
Route 20 Between Route 140 Ramps	21,000	1,745	8.3%	72% EB	1,650	7.9%	66% WB	1,395	8.4%	50% WB

Source: VHB based on automatic traffic recorder counts conducted in January 2019.

Note: Peak hours do not necessarily coincide with the peak hours of turning movement counts.

- 1 Average Daily Traffic volume expressed in vehicles per day.
- 2 Peak Hour traffic volumes expressed in vehicles per hour.
- 3 Represents the percent of daily traffic that occurs during the peak hour.
- 4 Directional distribution of peak hour traffic.

Route 20 between the Route 140 ramps carries approximately 21,000 vehicles on a typical weekday with the morning and evening peak hour accounting for 8.3% and 7.9% of the weekday daily traffic flow, respectively. On a typical Saturday, Route 20 between the Route 140 ramps carries approximately 16,600 vehicles with the midday peak hour accounting for 8.4% of the Saturday daily traffic flow. Traffic flow along Route 20 is heavier in the eastbound direction during the weekday morning peak hour and heavier in the westbound direction during the weekday evening and Saturday midday peak hours.

Concurrent with the ATR counts, turning movement counts (TMCs) were conducted at the study area intersections in January 2019 during the weekday morning and evening peak periods from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. TMCs were also conducted at the study area intersections during the Saturday midday peak period from 11:00 AM to 2:00 PM. The TMC data indicates that, within the study area, the weekday morning and evening peak hours generally occur between 7:30 AM and 8:30 AM and 5:30 PM and 6:30 PM, respectively. In addition, the Saturday midday peak hour generally occurs between 11:30 AM and 12:30 PM.

### **Seasonal Variation**

MassDOT historical traffic counts were reviewed to understand the seasonality of traffic count data collected in the month of January within the study area. Data for seasonal variation of traffic volumes on Route 9 in Shrewsbury indicate that traffic counts in January are generally lower (by as much as eight-percent) than during the average month. Since the January count data were found to be lower than annual average conditions, an eight-percent seasonal adjustment factor was applied to the traffic data. The MassDOT traffic count data are included in the Appendix.

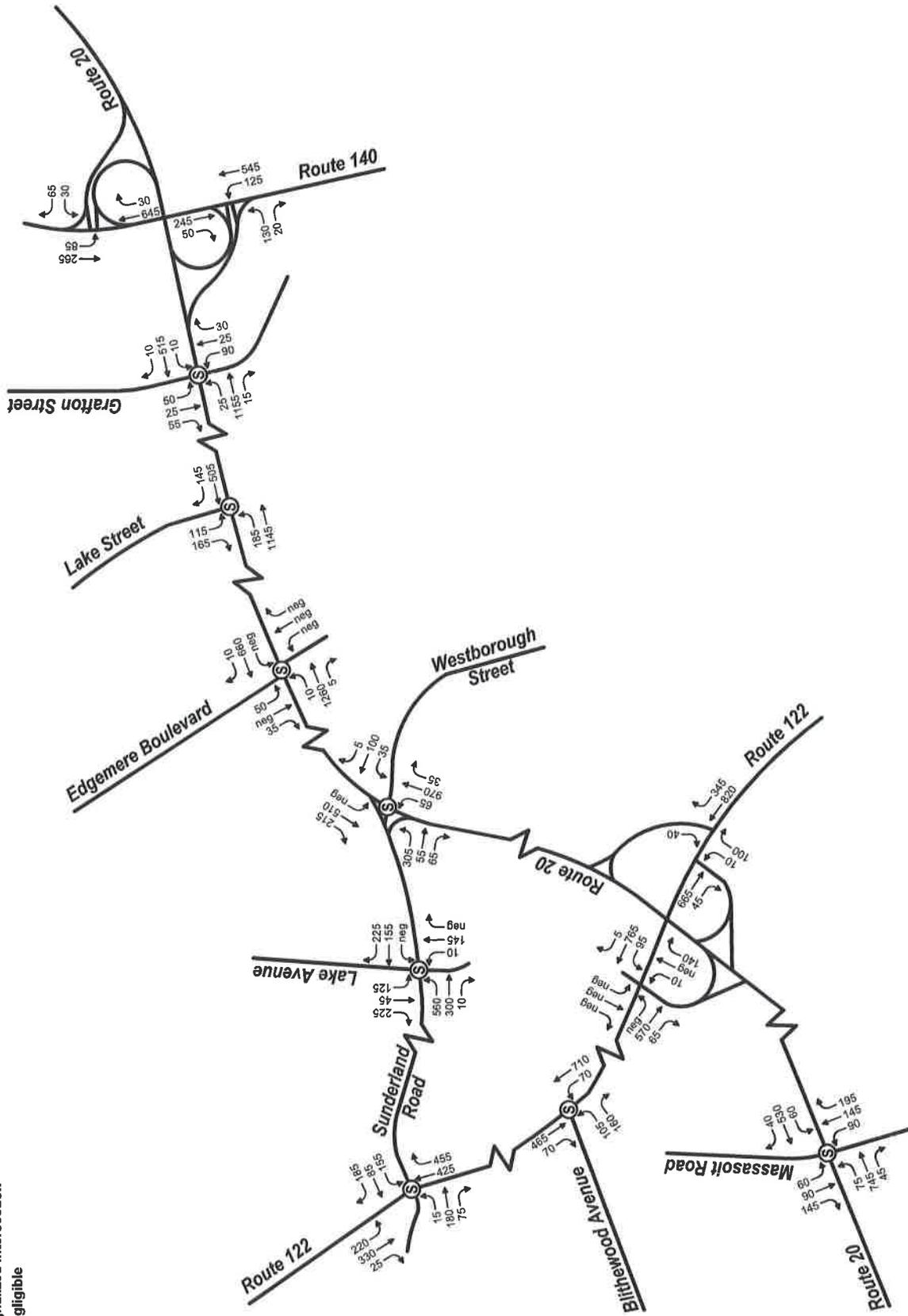
Figures 6, 7, and 8 illustrate the resulting 2019 Existing traffic volume conditions during the weekday morning, weekday evening and Saturday midday peak hours, respectively.

### **Crash History**

To identify motor vehicle crash trends in the Project study area, the most current crash data for the study area intersections were obtained from MassDOT for the five-year period from 2012 through 2016. A summary of the vehicular crash data is presented in Table 2 and included in the Appendix.

In addition to the collision summary, incident occurrence was compared to the volume of traffic through an intersection to determine degree of significance. Accordingly, crash rates were calculated for each study area intersection and compared with the statewide and district-wide averages. MassDOT average crash rates for District 3 (the MassDOT district designation for Shrewsbury) are 0.89 and 0.61 for signalized and unsignalized intersections, respectively. In other words, on average, 0.89 crashes occurred per million vehicles entering signalized intersections, and 0.61 crashes occurred per million vehicles entering unsignalized intersections throughout District 3. A potential safety problem may exist when an intersection's crash rate exceeds these averages. The crash rate worksheets for the study area intersections are included in the Appendix.

Ⓢ Signalized Intersection  
 neg = Negligible

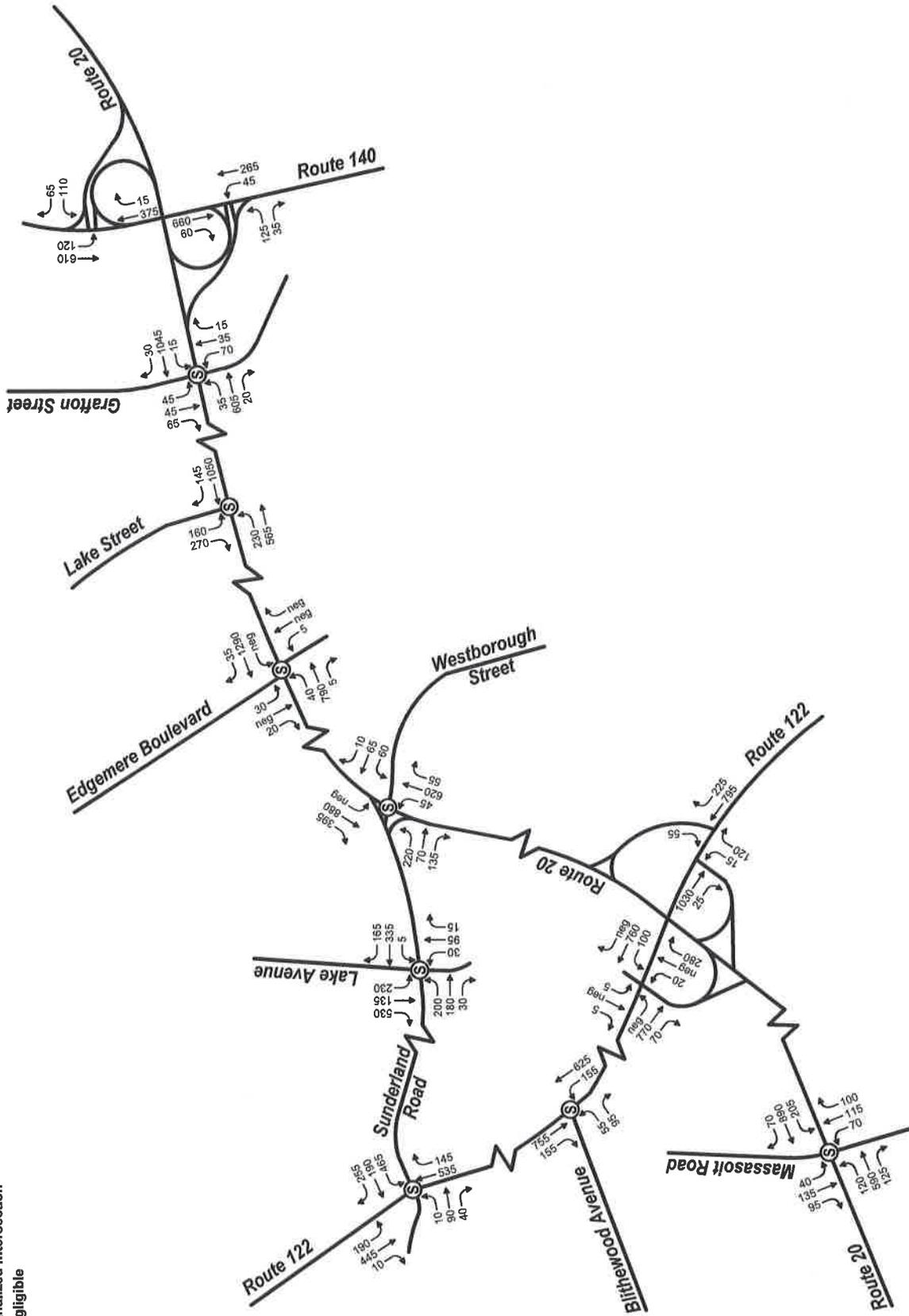


↶ Not to Scale



**Figure 6**  
 2019 Existing Conditions  
 Weekday Morning Peak Hour Traffic Volumes  
**Edgemere Crossing at Flint Pond**  
 Shrewsbury, Massachusetts

Ⓢ Signalized Intersection  
 neg = Negligible



↻ Not to Scale



**Figure 7**  
 2019 Existing Conditions  
 Weekday Evening Peak Hour Traffic Volumes  
 Edgemere Crossing at Flint Pond  
 Shrewsbury, Massachusetts



As shown in Table 2, the following study area intersections have a calculated crash rate over the district average:

- › Route 122 at Sunderland Road,
- › Route 20 at Sunderland Road/Westborough Street,
- › Route 20 at Lake Street, and
- › Route 20 at Grafton Street

Most reported crashes at the study area intersections were identified as angle and rear-end collisions that resulted in property damage only. One fatal crash was reported at intersection of Route 20 at Grafton Street. Crashes involving non-motorists (bike, pedestrian) occurred at the following intersections:

- › Route 122 at Blithewood Avenue (one crash),
- › Route 122 at Sunderland Road (three crashes),
- › Sunderland Road at SW Commons Driveway/ Lake Avenue (one crash), and
- › Route 20 at Sunderland Road/Westborough Street (one crash).

**Table 2 Intersection Vehicular Crash Summary (2012 – 2016)**

	1 Rt 20 at Massicot Rd/ Milbury Ave		2 Rt 122 at Rt 20 EB Ramps (East)		3 Rt 122 at Rt 20 EB Ramps (West)		4 Rt 122 at Rt 20 WB Ramps/ Davis Dwy		5 Rt 122 at Bithwood Ave		6 Rt 122 at Sunderland Rd		7 Sunderland Rd at SW Commons Dwy/Lake Ave		8 Sunderland Rd/ Edgemere Blvd/ Parking Lot		9 Rt 20 at Lake St		10 Rt 20 at Grafton St		11 Rt 20 at Rt 20 EB Ramps Rt 20 WB Ramps		12 Rt 140 at Rt 20 EB Ramps Rt 20 WB Ramps		13 Rt 140 at Rt 20 EB Ramps Rt 20 WB Ramps												
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No									
MassDOT Average Crash Rate	0.89	0.61	0.61	0.03	0.89	0.35	0.89	0.08	0.89	1.23	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89									
Calculated Crash Rate	0.85	0.17	0.03	0.03	0.35	0.08	0.08	0.08	0.35	1.23	1.23	0.57	1.37	1.37	0.53	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01								
Exceeds Average?	No	No	No	No	No	No	No	No	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes								
<b>Year</b>																																					
2012	5	1	0	1	1	1	1	1	1	10	10	7	4	4	5	2	2	10	10	10	10	10	10	10	10	10	10	10	10	10							
2013	13	0	1	0	2	0	0	0	2	14	14	2	19	19	5	10	10	23	23	23	23	23	23	23	23	23	23	23	23	23	23						
2014	4	2	0	1	3	1	1	1	3	12	12	2	17	17	4	8	8	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18					
2015	5	3	0	1	1	1	1	1	1	9	9	6	10	10	2	18	18	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27				
2016	14	1	0	0	5	0	0	0	5	10	10	4	16	16	6	8	8	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21				
Total	41	7	1	3	7	12	12	3	7	55	55	21	66	66	22	46	46	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99			
<b>Collision Type</b>																																					
Angle	18	1	0	1	2	2	2	1	2	20	20	10	29	29	3	15	15	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60				
Head-On	2	0	0	0	0	0	0	0	0	4	4	0	4	4	1	0	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			
Rear-End	15	4	1	2	4	4	4	2	4	23	23	6	14	14	9	21	21	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
Sideswipe, Opposite Direction	1	1	0	0	2	2	0	0	2	0	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Sideswipe, Same Direction	1	0	0	0	1	1	0	0	1	4	4	0	11	11	8	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
Single Vehicle Crash	4	1	0	0	3	3	0	0	3	4	4	3	4	4	0	2	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Unknown/Not Reported	0	0	0	0	0	0	0	0	0	0	0	1	3	3	0	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
<b>Severity</b>																																					
Fatal Injury	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Non-Fatal Injury	17	2	1	1	2	2	1	1	2	10	10	6	20	20	7	6	6	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	
Property Damage Only	23	4	0	1	9	9	4	1	9	41	41	15	42	42	15	39	39	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Unknown/Not Reported	1	1	0	1	1	1	1	1	1	4	4	0	4	4	0	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
<b>Time of Day</b>																																					
Weekday, 7:00 AM – 9:00 AM	5	4	0	1	2	2	4	1	2	4	4	4	7	7	3	4	4	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13		
Weekday, 9:00 AM – 12:00 PM	7	1	0	0	2	2	9	2	2	9	9	2	10	10	3	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
Saturday, 11:00 AM – 2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Weekday, Other Time	19	1	1	2	6	6	29	10	6	29	29	10	32	32	13	22	22	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	
Weekend, Other Time	10	1	0	0	2	2	13	5	2	13	13	5	15	15	3	7	7	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
<b>Pavement Conditions</b>																																					
Dry	32	5	1	2	10	10	44	15	10	44	44	15	44	44	17	37	37	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	
Wet	6	1	0	1	2	2	7	3	2	7	7	3	12	12	5	7	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Snow	1	0	0	0	0	0	1	3	0	1	1	3	8	8	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sand, Mud, Dirt, Oil, Gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ice	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Slush	1	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Unknown/Not Reported	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Non-Motorist (Bike, Pedestrian)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Source: MassDOT crash portal, accessed February 2019.

## Road Safety Audits

The Highway Safety Improvement Program (HSIP)<sup>2</sup> identifies crash clusters which are eligible for possible safety funding. Based on MassDOT designations, there are three 2014-2016 intersection HSIP clusters identified within the study area:

- › Route 20 at Grafton Street,
- › Route 20 at Sunderland Road/Westborough Street,
- › Route 20 at Massasoit Road.

Consistent with MassDOT guidelines, and at the request of MassDOT officials, a Road Safety Audit (RSA)<sup>3</sup> was conducted by VHB at the intersection of Lake Street and Route 20 (as this was previously an HSIP-eligible location and will serve as the main entrance and exit for the site. As part of the MEPA process, the Proponent will work with MassDOT to identify if RSAs are required at these other three locations and will prepare them as required.

For the Lake Street and Route 20 location noted above, detailed crash reports were obtained from the Town of Shrewsbury and Massachusetts State Police and were summarized as part of the preparation of the RSA. The Proponent worked with MassDOT, the Town of Shrewsbury, and other appropriate parties to arrange the RSA, and the RSA was conducted on May 14, 2019. The RSA report identifies safety issues and potential enhancements.

## Public Transportation

There is currently one transit service, provided by the Worcester Regional Transit Authority (WRTA) that operates within the study area. The following section describes the existing local services.

It should be noted that the Grafton Commuter Rail Station (located over 4.5 miles from the Project Site), which is part of the Worcester Line and is provided by the Massachusetts Bay Transportation Authority (MBTA). Bus service is provided by the Worcester Regional Transit Authority (WRTA) along Route 9 to the north of the Project Site but is not expected to offer any real benefit to this Project Site.

The Proponent will work with the Town of Shrewsbury in discussions with the WRTA to explore the possibility of expanding bus service to the Project Site. Should the WRTA be open to potentially modifying an adjacent bus route if the demand to/from the Project Site warrants, the Proponent will make appropriate accommodations within the site to provide for a bus shelter, as needed. Please refer to Chapter 5 for a discussion of the full Transportation Demand Management (TDM) program proposed as part of the Project.

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<sup>2</sup> According to the MassDOT website, "an HSIP-eligible location is a crash cluster that ranks within the Top 5% of each Regional Planning Agency, based on a combination of factors including crash incidence and severity (Using the Equivalent Property Damage Only (EPDO) index where Property Damage Only crashes = 1 Point; Injury crashes = 5 Points; Fatal crashes = 10 points)."

<sup>3</sup> *Road Safety Audit, Route 20 at Lake Street, May 14, 2019* prepared by VHB

## **Worcester Regional Transit Authority**

The WRTA operates one bus route within 1.25 miles of the Site. No bus routes provided by the WRTA are immediately adjacent to the Site. The WRTA has fixed bus stops and operates on a wave system. The wave system allows a rider to wait in a designated location on the same side of the street as the bus along the route and simply wave a hand to alert the bus driver to stop. The WRTA provides service Monday through Sunday with buses departing from and returning to the Union Station HUB located in downtown Worcester.

The WRTA bus route that operates within the vicinity of the Site is Route 5 (Southwest Commons via Grafton Street). WRTA Bus Route 5 provides service between the Central Hub at Union Station and Southwest Commons in Shrewsbury. The route operates along Grafton Street and Route 20 in the study area with the closest fixed stop at Southwest Commons off Route 20. Service runs from 5:30 AM to 8:50 PM on weekdays with approximate one-hour peak headways and from 6:00 AM to 8:35 PM on Saturdays with approximate one-hour peak headways. Transit route and service details are included in the Appendix.

## **Pedestrian and Bicycle Accommodations**

Within the vicinity of the Site, there are essentially no pedestrian nor bicycle accommodations (sidewalks, crosswalks, bike lanes, etc.) provided along Route 20 or along Lake Street. At some of the more remote locations and intersections, there are these amenities, but they would not directly benefit this location. See Chapter 5 (Mitigation) for a more detailed discussion on how these amenities will be addressed and provided as part of the Project Buildout.

# 3

## Future Conditions

To determine future roadway operations, traffic volumes in the study area were projected to the year 2026 to reflect a seven-year planning horizon from the 2019 Existing conditions. The seven-year planning horizon is consistent with Massot's TIA Guidelines.

Traffic volumes on the roadway network under future conditions without the Project (No-Build) have been estimated to include existing traffic, new traffic due to regional and area background traffic growth, and traffic related to any specific nearby development projects expected to be completed by the 2026 horizon year. Roadway improvements proposed within the boundaries of the study area were also considered and incorporated where appropriate. The anticipated traffic volumes from the Project were added to the No-Build traffic volumes to reflect future conditions with the Project in place (Build).

### No-Build Conditions

The 2026 No-Build traffic volumes were determined by considering existing traffic volumes and adding regional traffic growth and traffic from other known nearby developments. Traffic growth is generally a function of expected new development, fluctuations in demographics, and changes in automobile usage and ownership in the region. Regional traffic growth is projected by examining historic traffic growth trends.

### Regional Traffic Growth

To establish a rate at which traffic volumes can be expected to grow within the design horizon, discussions were held with Town of Shrewsbury officials and a review was conducted of growth rates used in traffic studies conducted for other developments in the

Town of Shrewsbury as well as historic count data. Based on this research, an annual growth rate of 1.0% was used for this Study.

### **Planned/Approved Developments**

In addition to accounting for background growth, the traffic associated with other planned/ approved developments near the Site was also considered. Based on discussions with Town of Shrewsbury officials, there are two planned/approved developments within the vicinity of the study area that were considered as part of the background development.

- › **Senior Housing (579 & 585 Lake Street)** – The project includes the construction of 33 Senior housing Units. The project is located at 579 and 585 Lake Street in Shrewsbury, Massachusetts.
- › **The Botanist** – The project includes the redevelopment of an existing building, retrofit to be a retail/medical marijuana dispensary. The existing building is approximately 4,000 SF. The project is located at 235 Hartford Turnpike in Shrewsbury, Massachusetts.

Traffic volumes to be generated by these projects were produced using Institute of Transportation Engineers (ITE) data<sup>4</sup> as no published traffic studies submitted as part of the permitting process for these projects were identified. The projected trips for these background developments are included in the Appendix.

It should be noted that there were several potential projects were highlighted by Town of Shrewsbury officials. These projects were not included as part of the specific background traffic growth due to their distance from the Site or because there are limited details on the development program/timeline available at this time. However, to some degree, these Project-related trips are anticipated to be accounted for as part of the annual regional traffic growth. When new projects are proposed to the Town of Shrewsbury, it would be expected that their impacts would be detailed in a similar traffic impact study as this one.

Of note is the proposed project located at 939 Boston Turnpike (a marijuana dispensary). While the impacts of this project are not specifically known, the proponent and the highway design being proposed in Chapter 5 (Mitigation) has considered the driveways for this site and have been providing input through the town and MassDOT on the long-range plans for the Route 20 corridor.

### **No-Build Traffic Volumes**

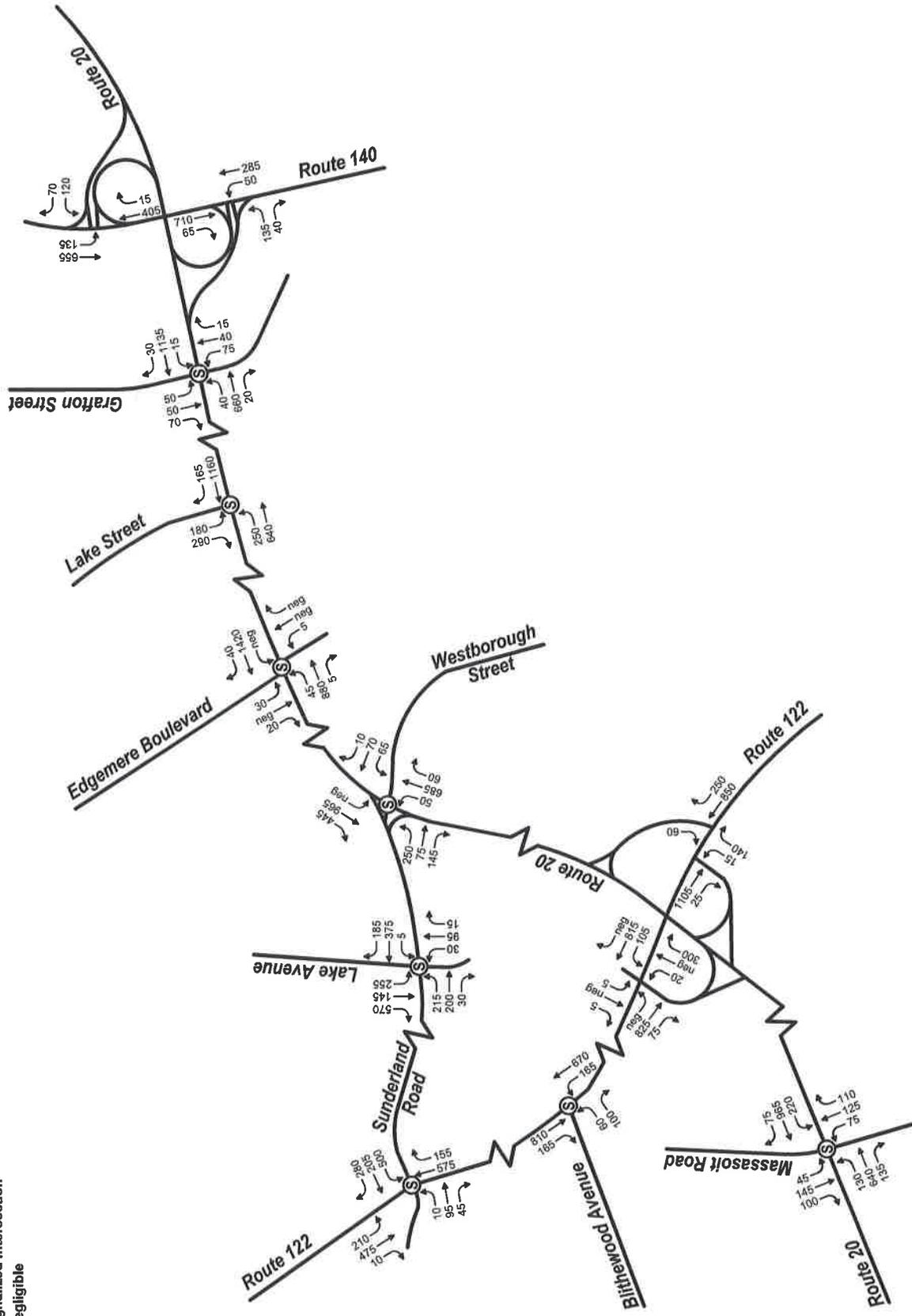
The year 2026 No-Build conditions traffic volume networks were developed by applying a 1.0% annual growth rate over seven years to the 2019 Existing conditions traffic volume networks and adding the traffic volumes associated with the two-background development described above. Figures 9, 10, and 11 show the resulting 2026 No-Build conditions peak hour traffic volume networks for the weekday morning, weekday evening and Saturday midday peak hours, respectively.

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<sup>4</sup> *Trip Generation Manual, 10<sup>th</sup> Edition*, Institute of Transportation Engineers, Washington, D.C., 2017.



Ⓢ Signalized Intersection  
 neg = Negligible

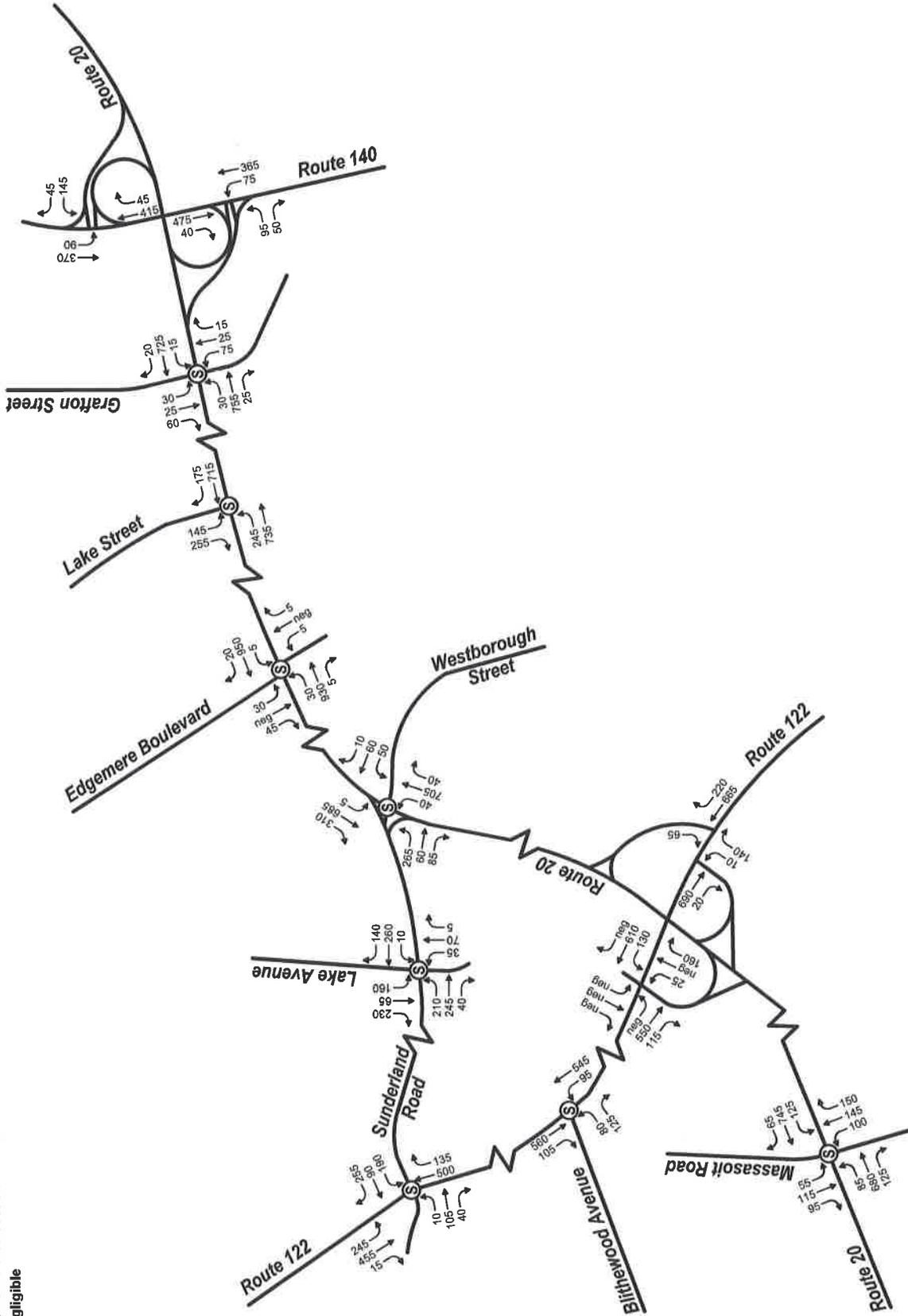


Not to Scale



**Figure 10**  
 2026 No-Build Conditions  
 Weekday Evening Peak Hour Traffic Volumes  
**Edgemere Crossing at Flint Pond**  
 Shrewsbury, Massachusetts

Ⓢ Signalized Intersection  
 neg = Negligible



Not to Scale



**Figure 11**  
 2026 No-Build Conditions  
 Saturday Midday Peak Hour Traffic Volumes  
**Edgemere Crossing at Flint Pond**  
 Shrewsbury, Massachusetts

## Future Roadway Conditions

In assessing future traffic conditions, proposed roadway improvements within the study area were considered. Based on discussions with Town of Shrewsbury officials and from information available from MassDOT, there are two planned roadway improvement projects identified within the study area.

- **Shrewsbury – Intersection & Signal Improvement at US 20 (Hartford Turnpike) at Grafton Street (MassDOT Project #607764):** Improvements consist of intersection safety upgrades for signs, pavement markings (including the addition of an eastbound left turn only lane), and traffic signals. This work is intended to address some of the issues noted through the Road Safety Audit process completed in April 2015. The 25% design plans were completed in February 2018. MassDOT and their consultant is working with the VHB and the Proponent to coordinate the two highway elements. There is no specific date that construction is expected to begin for this project, but it is expected to be within the next several years. This roadway project is funded through the Statewide HSIP Program.
- **Shrewsbury – Resurfacing and Related Work on a Section of Route 20 (MassDOT Project #602102):** Improvements include milling and resurfacing with the widening of the existing roadway from two lanes to four lanes between Edgemere Boulevard and the Route 140 interchange (including the Route 140 interchange ramps). The total project length is 1.4 miles. As part of the proposed Flint Pond Mixed-Use Development project and as identified in the Mitigation section of this Study, the proponent is committed to extending these efforts along Route 20 to Lake Street.

## Build Conditions

Build traffic volumes were determined by estimating Site-generated traffic volumes, distributing these volumes over the study area roadways, and adding to the 2026 No-Build traffic volumes. The Site generated traffic volumes include new trips that are projected to be generated by the Project.

## Site-Generated Traffic Volumes

The rate at which a development generates traffic is dependent upon several factors such as size, location, and concentration of surrounding developments. As previously discussed, the Project consists of approximately an 80,000 SF Market Basket supermarket, 65,000 SF of general retail space, and 250 residential units. The general retail space would be comprised of approximately 13,000 SF of pharmacy space, a 2,000 SF drive-in bank, and 50,000 SF of other commercial space. Trip generation estimates for the proposed uses were projected using data published in the ITE Trip Generation Manual for Land Use Code (LUC) 850 (Supermarket), LUC 820 (Shopping Center), LUC 221 (Mid-Rise Multifamily Housing). The trip generation worksheets are included in the Appendix.

### **Shared Trips**

Because the Project proposes a mix of uses, the trip generation characteristics of the Site will be different from a single-use project. Some of the traffic to be generated by the Project will be contained on Site as “internal” or “shared vehicle” trips. This concept means that some patrons could visit more than one of the uses on the site. For example, patrons of the supermarket may also visit the general retail on Site. While these shared trips represent new traffic to the individual uses, they would not show up as new vehicle trips on the surrounding roadway network. To account for shared trips between the proposed uses, the shared trip methodology outlined in the ITE Trip Generation Handbook, 2<sup>nd</sup> Edition<sup>5</sup> was applied. The shared trip calculations are included in the Appendix.

### **Pass-by Trips**

Not all the trips generated by the Project will be new traffic that is added to the study area intersections and roadways. Retail uses typically attract a significant percentage of their traffic from the traffic streams passing the Site, particularly during peak periods. These trips, which are considered pass-by trips, are already on the roadway system traveling to and from locations other than the Site (such as home, work or other shopping destinations).

Pass-by trips are attracted to the Site as they pass through the area. The rate at which pass-by trips are attracted to a Site is highly dependent on the type of land use at that Site, the proximity of the Site to major traffic corridors, and the location and type of nearby land uses. ITE data shows pass-by rates for supermarkets of 36-percent during the weekday evening peak hour and pass-by rates for shopping centers of 34-percent during the weekday evening peak hour and 26-percent during the Saturday midday peak hour. Pass-by rates were assumed to be 25-percent for peak hours in which no data was available. Based on the MassDOT TIA Guidelines, pass-by trips should not account for more than 15-percent of an adjacent street traffic volume; the remaining “non-primary” trips come from existing traffic streams as diverted-link trips. Using the ITE pass-by rates does not result in the pass-by volumes exceeding 15-percent of the adjacent street traffic. As such, the unadjusted ITE rates were used for the projections. The pass-by trip calculations are included in the Appendix. The Project trip generation summary is provided in Table 3.

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<sup>5</sup> *Trip Generation Handbook, 2<sup>nd</sup> Edition*, Institute of Transportation Engineers, Washington, D.C., June 2004.

**Table 3 Trip Generation Summary**

	<b>Gross Residential Trips<sup>1</sup></b>	<b>Gross Supermarket Trips<sup>2</sup></b>	<b>Gross Retail Trips<sup>3</sup></b>	<b>Shared Trips</b>	<b>Pass-by Trips<sup>4</sup></b>	<b>Total New Trips</b>
<b>Weekday Daily</b>						
Enter	680	3,442	1,735	482	1,234	4,141
Exit	<u>680</u>	<u>3,442</u>	<u>1,735</u>	<u>482</u>	<u>1,234</u>	<u>4,141</u>
Total	1,360	6,884	3,470	964	2,468	8,282
<b>Weekday Morning</b>						
Enter	22	183	62	1	51	215
Exit	<u>62</u>	<u>122</u>	<u>38</u>	<u>1</u>	<u>51</u>	<u>170</u>
Total	84	305	100	2	102	385
<b>Weekday Evening</b>						
Enter	65	338	154	48	166	343
Exit	<u>42</u>	<u>325</u>	<u>167</u>	<u>48</u>	<u>166</u>	<u>320</u>
Total	107	663	321	96	332	663
<b>Saturday Daily</b>						
Enter	589	7,105	2,515	418	2,353	7,438
Exit	<u>589</u>	<u>7,105</u>	<u>2,515</u>	<u>418</u>	<u>2,353</u>	<u>7,438</u>
Total	1,178	14,210	5,030	836	4,706	14,876
<b>Saturday MIDDAY</b>						
Enter	55	388	194	49	137	451
Exit	<u>57</u>	<u>373</u>	<u>179</u>	<u>49</u>	<u>137</u>	<u>423</u>
Total	112	761	373	98	274	874

- 1 Trip generation estimate based on ITE LUC 221 (Multifamily Housing Mid-Rise)
- 2 Trip generation estimate based on ITE LUC 850 (Supermarket)
- 3 Trip generation estimate based on ITE LUC 820 (Shopping Center)
- 4 Pass-by trip rates based on ITE rates for LUC 850 (Supermarket) and LUC 820 (Shopping Center), 25-percent rate assumed for time periods with no available data

As shown in Table 3, the Project is estimated to generate approximately 385 new trips (215 entering/170 exiting) during the weekday morning peak hour, 663 new trips (343 entering/320 exiting) during the weekday evening peak hour, and 874 new trips (451 entering/423 exiting) during the Saturday midday peak hour.

In addition to the Project, trip generation estimates were completed for the As-of-Right alternative which includes 357,500 SF of general retail space and 80,000 SF of general office space. The estimate is included in the Appendix. This alternative was developed to demonstrate what could be constructed on the Project Site as-of-right under the existing zoning.

### Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the Site is a function of the land use, population densities, the location of employment, existing travel patterns, competing uses, and the efficiency of the existing roadway system.

The directional distribution of Site-generated traffic was developed using a gravity model based on population data from the 2010 U.S. Census and a review of the regional roadway network. Existing supermarket locations, which may serve as competition to the proposed Market Basket supermarket, were also considered. The distribution has been developed to consider that it would be unlikely for customers of competing supermarket uses to bypass a similar store to visit the proposed supermarket. Table 4 and Figures 12 and 13 show the anticipated Site-generated trip distribution for the residential and retail/supermarket uses, respectively. The census data is provided in the Appendix.

**Table 4 Trip Distribution**

Major Roadway	Direction (From/To)	Percent Site Traffic	
		Residential	Retail/Supermarket
Route 20	West	8%	14%
Massasoit Road	South	0%	3%
Route 122	South	10%	15%
Route 122	North	10%	10%
Lake Avenue	North	0%	8%
Lake Street	North	23%	5%
Route 140	North	19%	10%
Route 140	South	1%	10%
Route 20	East	29%	21%
<b>Total</b>		<b>100%</b>	<b>100%</b>

### Build Traffic Volumes

The Site-generated traffic volumes were assigned to the roadway network according to the distribution and travel patterns described above and added to the 2026 No-Build conditions traffic volumes. Figures 14, 15 and 16 show the resulting 2026 Build conditions peak hour traffic volume networks for the weekday morning, weekday evening, and Saturday midday peak hours, respectively.

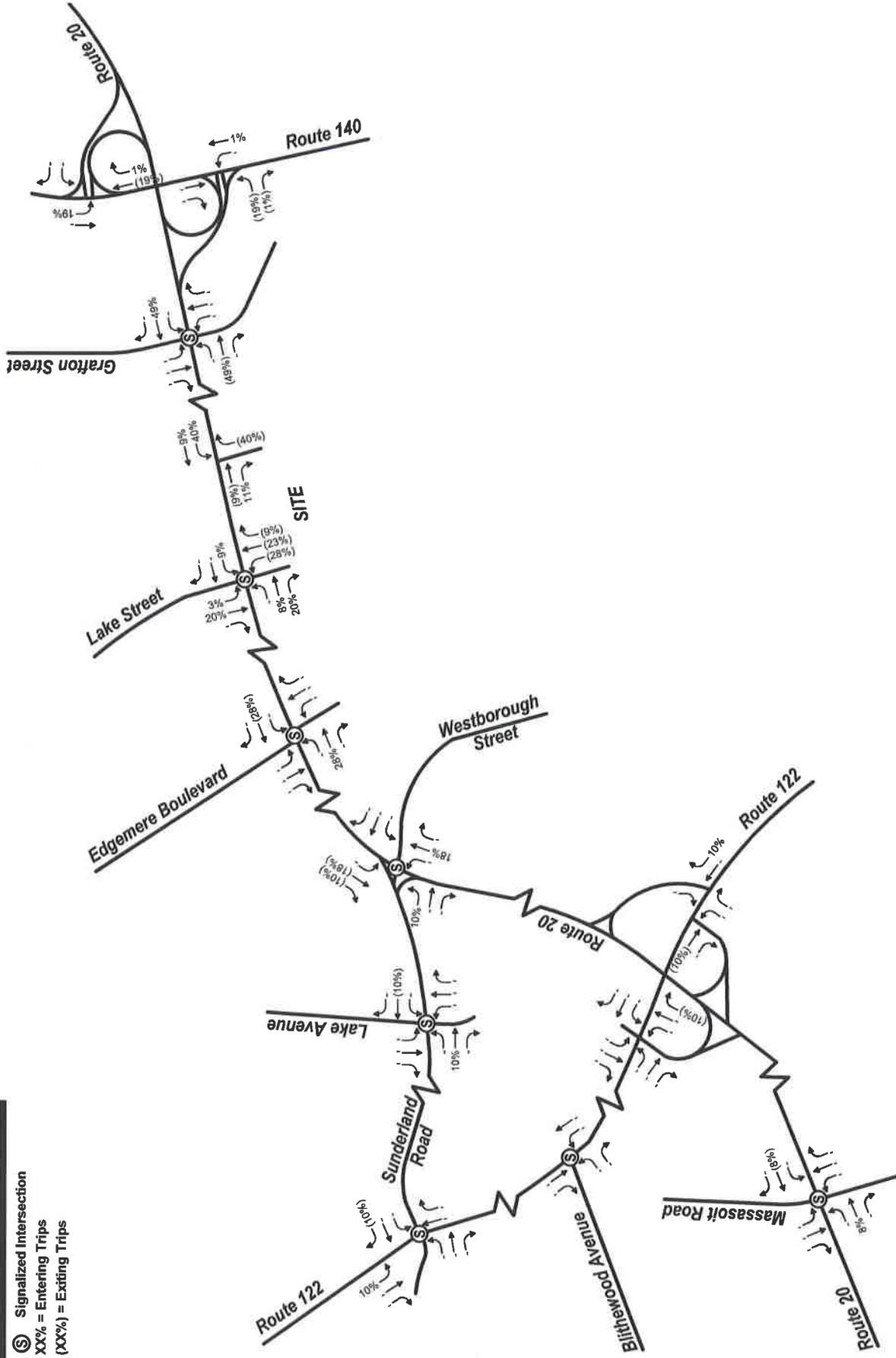
### Proposed Site Access

Access to the Site will be provided via an unsignalized right-out driveway along Route 20 in the general location of the existing driveway and a signalized full access driveway at the intersection of Lake Street and Route 20. Internal driveway connections between the retail, residential, and Market Basket supermarket parking areas will be provided.

### Proposed Parking

Parking for the proposed Project is based on an evaluation of the likely demands at the Project Site, consideration of zoning requirements in the Town of Shrewsbury, and the

Ⓢ Signalized Intersection  
 XX% = Entering Trips  
 (XX%) = Exiting Trips



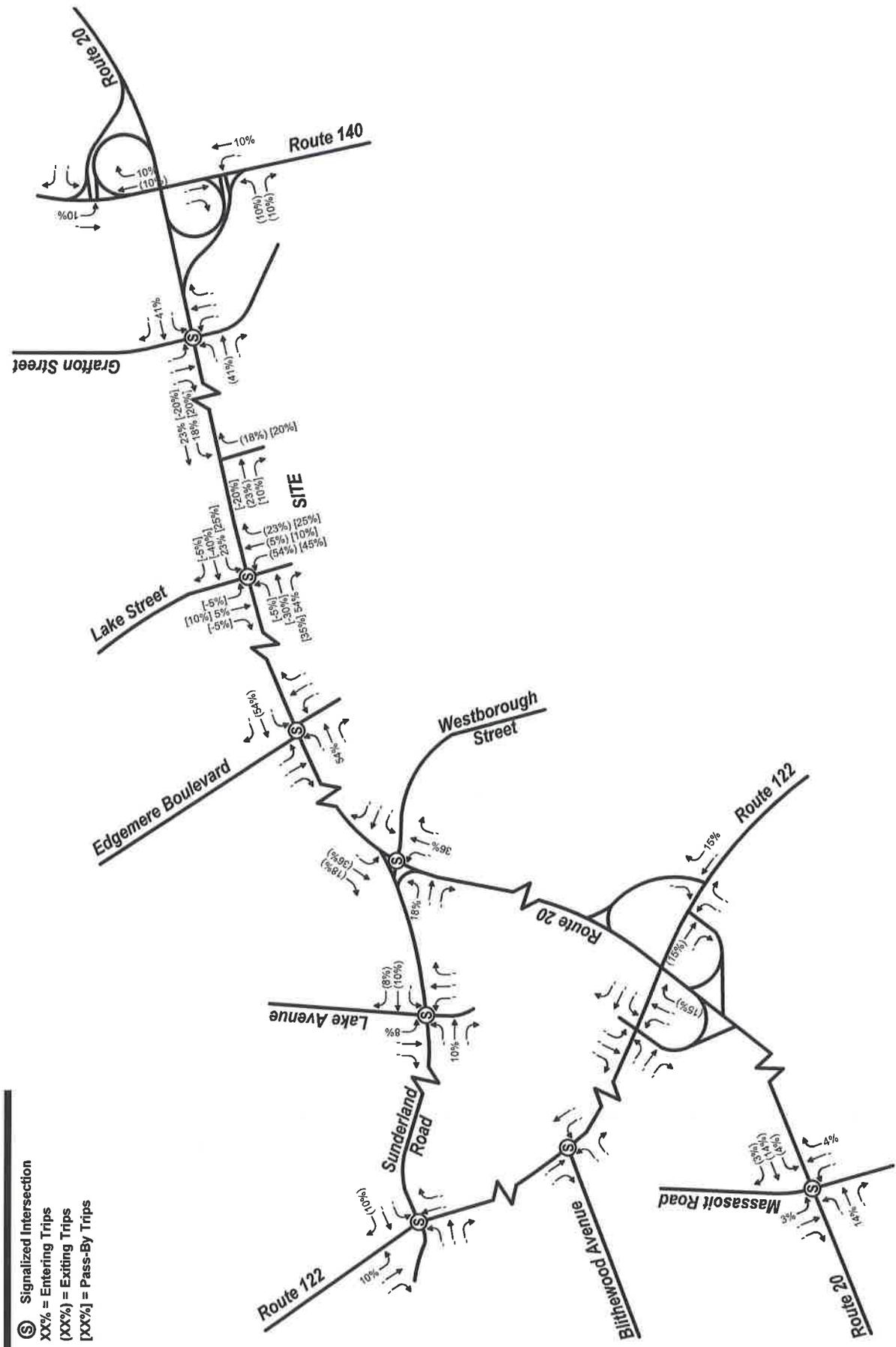
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**Figure 12**  
Trip Distribution - Residential

**Edgemere Crossing at Flint Pond**  
Shrewsbury, Massachusetts

(S) Signalized Intersection  
 XX% = Entering Trips  
 (XX%) = Exiting Trips  
 [XX%] = Pass-By Trips

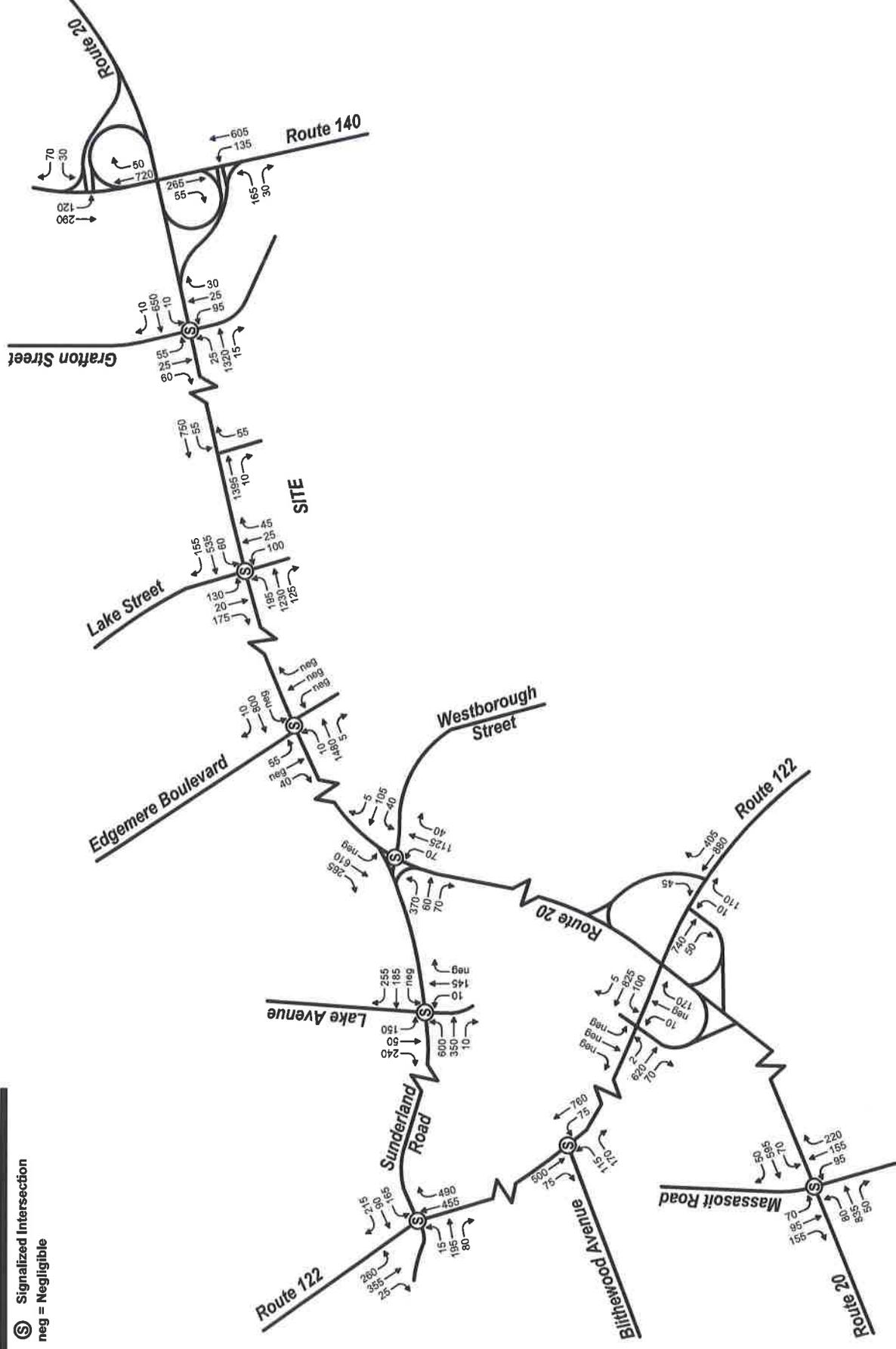


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**Figure 13**  
 Trip Distribution - Retail/Supermarket

Edgemere Crossing at Flint Pond  
 Shrewsbury, Massachusetts



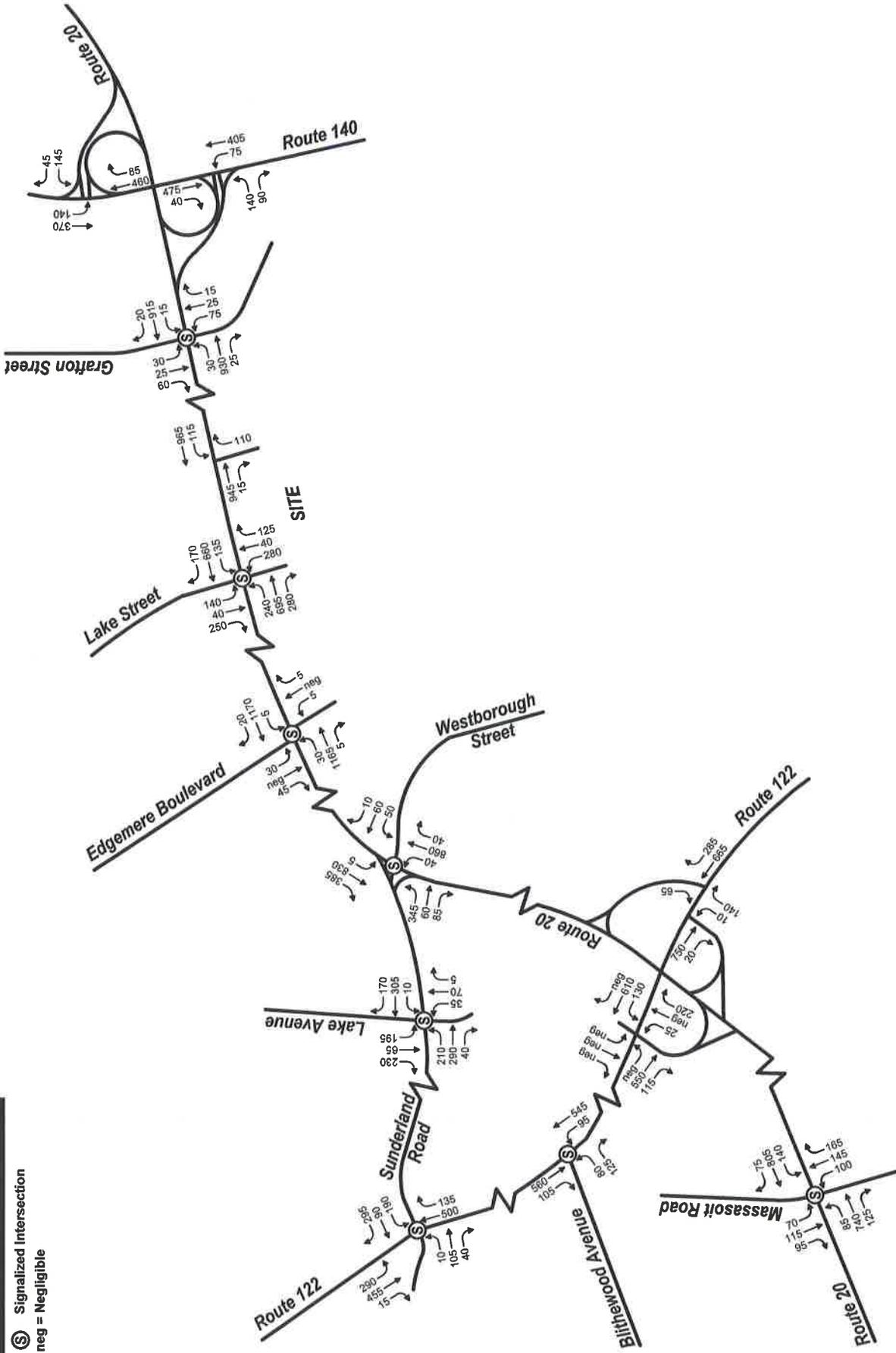
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**Figure 14**  
 2026 Build Conditions  
 Weekday Morning Peak Hour Traffic Volumes  
**Edgemere Crossing at Flint Pond**  
 Shrewsbury, Massachusetts



Ⓢ Signalized Intersection  
neg = Negligible



Not to Scale



**Figure 16**  
2026 Build Conditions  
Saturday Midday Peak Hour Traffic Volumes  
**Edgemere Crossing at Flint Pond**  
Shrewsbury, Massachusetts

physical layout of the Project Site. The number of spaces provided was generated, in part, based on rates provided in the ITE Parking Generation, 4th Edition<sup>6</sup> and Town of Shrewsbury Zoning Ordinance.

Based on the Proponent’s experience in developing this type of retail development, the average parking ratio to support the Project during peak shopping periods is anticipated in the range of four spaces per 1,000 SF of supermarket and retail uses. Table 5 summarizes the parking requirements based on ITE, zoning, and the proposed parking supply to be provided.

**Table 5 Parking Summary**

Land Use	ITE <sup>1</sup>		Zoning <sup>2</sup>	Proposed Supply <sup>3</sup>
	Weekday	Saturday	Weekday/ Saturday	Peak Weekday/ Saturday
Supermarket	221	362	319	336
Retail	166	187	260	410
Residential	300	258	375	458
<b>Total</b>	<b>687</b>	<b>807</b>	<b>954</b>	<b>1,204</b>

- 1 Parking generation estimate based on LUC 850 (Supermarket), LUC 820 (Shopping Center), and LUC 221 (Multifamily Housing Mid-Rise)
- 2 Parking requirements based on the Town of Shrewsbury Zoning Ordinance
- 3 Proposed parking supply to be provided on the whole Project Site

As shown in Table 5, the parking estimate for the development based on ITE is 687 spaces on a weekday and 807 spaces on a Saturday. The required parking based on zoning is 954 spaces (250 units of apartments at 1.5 space/unit and 260ksf of retail space at 4.0 spaces/ksf). The project will be providing a total of 1,204 spaces which includes an average of 1.8 spaces per residential unit and an average of just over 5.1 spaces per thousand square feet of retail space on the site.

<sup>6</sup> Parking Generation, 4th Edition, Institute of Transportation Engineers, Washington, D.C., 2010.

# 4

## Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic within the study area. To assess quality of flow, roadway capacity analyses were conducted with respect to 2019 Existing conditions and projected 2026 No-Build and Build traffic volume conditions. These analyses are included in the Appendix. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed on them. Calculated levels of service classify roadway operating conditions.

### Level-of-Service Criteria

Level of service (LOS) is the term used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers several factors including roadway geometry, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

For signalized intersections, the evaluation criteria used to analyze study area intersections are based on the percentile-delay method (SYNCHRO results). For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. The level of service is only determined for left-turns from the main street and all movements

from the minor street. The evaluation criteria used to analyze unsignalized intersections are based on the 2010 Highway Capacity Manual (HCM)<sup>7</sup>.

It should be noted that the analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters such as high critical gaps. Actual field observations indicate that drivers on minor streets generally accept smaller gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The net effect of these procedural limitations of the analysis software is the over-estimation of calculated delays at unsignalized intersections. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections.

### **Intersection Capacity Analysis**

Intersection capacity analyses were conducted at all intersections in the study area. Analyses were conducted for the 2019 Existing, 2026 No-Build, and 2026 Build conditions. Tables 6 and 7 summarize the capacity analyses for signalized and unsignalized intersections, respectively.

As shown in Tables 6 and 7, the addition of Project related trips is expected to have minor impacts at the study area intersections except for:

- › Route 122 at Sunderland Road; and
- › Sunderland Road at Lake Avenue/Southwest Commons Rear Driveway

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<sup>7</sup> Transportation Research Board, Highway Capacity Manual, Washington, D.C., 2010.

**Table 6 Signalized Intersection Capacity Analysis**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>1: Route 20 at Massasoit Road/Millbury Avenue</b>															
<i>Weekday Morning</i>															
EB L	0.47	48	D	52	93	0.46	48	D	50	99	0.47	49	D	51	99
EB T/R	0.74	28	C	244	301	0.74	29	C	240	329	0.73	28	C	253	347
WB L	0.40	48	D	40	80	0.40	48	D	41	85	0.43	49	D	45	90
WB T	0.41	22	C	138	188	0.42	22	C	142	202	0.42	21	C	148	210
WB R	0.07	0	A	0	0	0.07	0	A	0	0	0.07	0	A	0	0
NB L/T	0.61	35	C	144	224	0.58	33	C	135	237	0.61	36	D	142	240
NB R	0.29	8	A	34	72	0.28	8	A	32	79	0.30	8	A	35	82
SB L/T	0.43	30	C	85	146	0.41	30	C	82	154	0.46	32	C	89	162
SB R	0.28	6	A	2	42	0.27	6	A	1	47	0.28	6	A	3	50
<b>Total</b>		<b>25</b>	<b>C</b>				<b>25</b>	<b>C</b>				<b>25</b>	<b>C</b>		
<i>Weekday Evening</i>															
EB L	0.55	47	D	73	138	0.58	49	D	80	150	0.59	51	D	82	150
EB T/R	0.75	32	C	211	277	0.76	32	C	228	297	0.77	32	C	248	321
WB L	0.66	44	D	124	214	0.68	46	D	133	#249	0.70	49	D	144	#266
WB T	0.74	28	C	256	331	0.74	27	C	274	358	0.74	27	C	293	381
WB R	0.11	2	A	0	13	0.11	2	A	0	14	0.12	3	A	0	20
NB L/T	0.54	36	D	106	189	0.60	40	D	115	213	0.66	44	D	120	#234
NB R	0.13	5	A	8	35	0.14	5	A	9	41	0.15	5	A	10	43
SB L/T	0.44	33	C	100	171	0.47	35	C	105	191	0.56	39	D	117	207
SB R	0.21	6	A	0	33	0.21	6	A	0	38	0.22	6	A	0	38
<b>Total</b>		<b>29</b>	<b>C</b>				<b>30</b>	<b>C</b>				<b>31</b>	<b>C</b>		
<i>Saturday Midday</i>															
EB L	0.42	50	D	42	126	0.49	55	D	51	136	0.51	57	E	56	136
EB T/R	0.74	33	C	185	400	0.80	37	D	233	#471	0.80	37	D	264	#549
WB L	0.52	50	D	61	172	0.60	56	E	75	#205	0.66	59	E	91	#240
WB T	0.56	28	C	166	372	0.62	30	C	202	422	0.68	32	C	223	465
WB R	0.10	1	A	0	3	0.11	2	A	0	9	0.12	3	A	0	18
NB L/T	0.59	38	D	104	#327	0.65	42	D	132	#395	0.72	48	D	151	#411
NB R	0.18	6	A	13	45	0.20	7	A	19	53	0.22	7	A	23	57
SB L/T	0.37	33	C	65	202	0.43	36	D	85	231	0.56	42	D	107	#283
SB R	0.18	5	A	0	30	0.19	6	A	0	37	0.19	6	A	0	37
<b>Total</b>		<b>30</b>	<b>C</b>				<b>33</b>	<b>C</b>				<b>35</b>	<b>C</b>		

- a Volume to capacity ratio.
  - b Average total delay, in seconds per vehicle.
  - c Level-of-service.
  - d 50th percentile queue, in feet.
  - e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
  - # 95th percentile volume exceeds capacity, queue may be longer.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>5: Route 122 at Blithewood Avenue</b>															
<i>Weekday Morning</i>															
EB L	0.40	30	C	34	118	0.41	32	C	35	134	0.41	32	C	35	134
EB R	0.26	5	A	0	37	0.26	5	A	0	50	0.26	5	A	0	50
NB L	0.18	7	A	8	38	0.19	7	A	8	40	0.19	7	A	8	40
NB T	0.75	15	B	148	492	0.74	15	B	151	535	0.74	15	B	151	535
SB T	0.71	22	C	120	344	0.73	22	C	135	380	0.73	22	C	135	380
SB R	0.12	4	A	0	25	0.12	4	A	0	25	0.12	4	A	0	25
<b>Total</b>		<b>16</b>	<b>B</b>				<b>16</b>	<b>B</b>				<b>16</b>	<b>B</b>		
<i>Weekday Evening</i>															
EB L	0.30	37	D	24	75	0.37	43	D	32	81	0.37	43	D	32	81
EB R	0.22	7	A	0	34	0.21	7	A	0	41	0.21	7	A	0	41
NB L	0.41	8	A	14	68	0.53	13	B	16	95	0.53	13	B	16	95
NB T	0.47	7	A	90	338	0.53	8	A	104	390	0.53	8	A	104	390
SB T	0.74	20	B	213	#618	0.80	22	C	299	#816	0.80	22	C	299	#816
SB R	0.17	4	A	4	41	0.19	4	A	9	52	0.19	4	A	9	52
<b>Total</b>		<b>13</b>	<b>B</b>				<b>15</b>	<b>B</b>				<b>15</b>	<b>B</b>		
<i>Saturday Midday</i>															
EB L	0.35	32	C	26	95	0.33	33	C	25	102	0.33	33	C	25	102
EB R	0.22	6	A	0	32	0.21	6	A	0	45	0.21	6	A	0	45
NB L	0.22	6	A	8	45	0.24	6	A	9	47	0.24	6	A	9	47
NB T	0.46	8	A	68	267	0.49	8	A	76	297	0.49	8	A	76	297
SB T	0.69	20	B	140	401	0.70	20	B	145	432	0.70	20	B	145	432
SB R	0.15	3	A	0	27	0.14	3	A	0	29	0.14	3	A	0	29
<b>Total</b>		<b>13</b>	<b>B</b>				<b>13</b>	<b>B</b>				<b>13</b>	<b>B</b>		

- a Volume to capacity ratio.
  - b Average total delay, in seconds per vehicle.
  - c Level-of-service.
  - d 50th percentile queue, in feet.
  - e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
  - # 95th percentile volume exceeds capacity, queue may be longer.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>6: Route 122 at Sunderland Road</b>															
<i>Weekday Morning</i>															
EB L/T/R	>1.20	>120	F	~171	#430	>1.20	>120	F	~169	#458	>1.20	>120	F	~170	#458
WB L	0.53	27	C	52	143	0.55	28	C	56	152	0.55	28	C	56	152
WB T/R	0.50	17	B	59	184	0.53	18	B	66	202	0.56	19	B	70	212
NB T	0.75	34	C	162	#482	0.84	40	D	191	#557	0.84	40	D	191	#557
NB R	0.61	10	B	32	174	0.68	13	B	51	#247	0.68	13	B	51	#247
SB L	0.67	26	C	52	#237	0.83	39	D	57	#281	0.90	49	D	63	#316
SB T/R	0.44	17	B	94	290	0.47	17	B	103	312	0.47	17	B	103	312
<b>Total</b>		<b>45</b>	<b>D</b>				<b>46</b>	<b>D</b>				<b>47</b>	<b>D</b>		
<i>Weekday Evening</i>															
EB L/T/R	0.91	88	F	91	#245	>1.20	>120	F	~114	#307	>1.20	>120	F	~144	#337
WB L	>1.20	>120	F	~323	#711	>1.20	>120	F	~387	#796	>1.20	>120	F	~387	#796
WB T/R	0.86	47	D	230	#562	0.96	62	E	272	#654	1.02	74	E	296	#706
NB T	0.72	32	C	256	#591	0.81	37	D	307	#715	0.81	37	D	307	#715
NB R	0.21	7	A	10	61	0.23	8	A	16	76	0.23	8	A	16	76
SB L	0.59	21	C	51	#155	0.78	35	C	58	#257	0.91	53	D	79	#328
SB T/R	0.47	17	B	152	375	0.51	17	B	168	414	0.51	17	B	168	414
<b>Total</b>		<b>68</b>	<b>E</b>				<b>92</b>	<b>F</b>				<b>113</b>	<b>F</b>		
<i>Saturday Midday</i>															
EB L/T/R	0.73	51	D	69	#205	0.71	49	D	65	#223	0.71	49	D	65	#224
WB L	0.56	28	C	62	162	0.57	28	C	65	173	0.57	28	C	65	173
WB T/R	0.58	19	B	74	215	0.60	19	B	79	236	0.66	20	C	88	265
NB T	0.80	37	D	191	#548	0.87	43	D	216	#610	0.87	43	D	216	#610
NB R	0.21	5	A	0	40	0.23	6	A	1	49	0.23	6	A	1	49
SB L	0.76	33	C	52	#247	0.91	55	E	63	#315	1.09	99	F	~100	#392
SB T/R	0.51	18	B	124	360	0.55	19	B	139	397	0.55	19	B	139	397
<b>Total</b>		<b>27</b>	<b>C</b>				<b>31</b>	<b>C</b>				<b>38</b>	<b>D</b>		

- a Volume to capacity ratio.
  - b Average total delay, in seconds per vehicle.
  - c Level-of-service.
  - d 50th percentile queue, in feet.
  - e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
  - # 95th percentile volume exceeds capacity, queue may be longer.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>7: Sunderland Road at Lake Avenue/Southwest Commons Rear Driveway</b>															
<i>Weekday Morning</i>															
EB L	>1.20	>120	F	~524	#744	>1.20	>120	F	~582	#799	>1.20	>120	F	~592	#799
EB T	1.00	88	F	~182	#361	1.11	118	F	~232	#405	1.18	>120	F	~262	#434
EB R	0.03	0	A	0	0	0.03	0	A	0	0	0.03	0	A	0	0
WB L	0.00	31	C	1	5	0.00	31	C	1	5	0.00	31	C	1	5
WB T	0.67	48	D	90	155	0.69	49	D	97	166	0.72	50	D	107	#191
WB R	0.57	10	B	0	64	0.58	10	B	0	66	0.61	12	B	10	82
NB L	0.08	39	D	6	22	0.08	39	D	6	22	0.08	39	D	6	22
NB T/R	0.26	22	C	64	114	0.25	22	C	63	112	0.25	23	C	64	112
SB L	0.73	61	E	75	#168	0.77	66	E	81	#182	0.86	79	E	92	#206
SB T	0.06	14	B	13	41	0.06	15	B	15	44	0.06	15	B	15	44
SB R	0.28	3	A	0	45	0.29	3	A	0	48	0.29	3	A	0	48
<b>Total</b>		<b>&gt;120</b>	<b>F</b>				<b>&gt;120</b>	<b>F</b>				<b>&gt;120</b>	<b>F</b>		
<i>Weekday Evening</i>															
EB L	0.78	63	E	137	#299	0.79	63	E	146	#323	0.75	59	E	146	#323
EB T	0.69	56	E	122	#245	0.72	57	E	133	#283	0.81	63	E	160	#360
EB R	0.09	1	A	0	0	0.09	1	A	0	0	0.09	1	A	0	0
WB L	0.02	40	D	3	16	0.01	40	D	3	16	0.01	40	D	3	16
WB T	1.09	116	F	~282	#572	1.14	>120	F	~308	#648	>1.20	>120	F	~360	#707
WB R	0.47	20	B	35	112	0.49	21	C	40	134	0.56	25	C	57	165
NB L	0.26	55	D	21	61	0.26	55	E	21	61	0.26	56	E	21	61
NB T/R	0.20	27	C	51	126	0.20	27	C	52	126	0.20	28	C	53	126
SB L	>1.20	>120	F	~216	#474	>1.20	>120	F	~261	#532	>1.20	>120	F	~304	#583
SB T	0.19	26	C	63	151	0.21	26	C	70	164	0.21	26	C	72	164
SB R	0.57	5	A	0	96	0.61	6	A	0	101	0.61	6	A	0	101
<b>Total</b>		<b>71</b>	<b>E</b>				<b>84</b>	<b>F</b>				<b>104</b>	<b>F</b>		
<i>Saturday Midday</i>															
EB L	0.71	54	D	110	#279	0.78	59	E	123	#317	0.78	59	E	123	#317
EB T	0.80	60	E	127	#325	0.90	74	E	147	#381	1.07	112	F	~185	#466
EB R	0.10	1	A	0	0	0.11	1	A	0	0	0.11	1	A	0	0
WB L	0.04	38	D	5	25	0.04	38	D	5	25	0.04	38	D	5	25
WB T	0.82	62	E	135	#346	0.94	80	F	158	#407	1.11	>120	F	~207	#491
WB R	0.36	9	A	0	48	0.41	11	B	3	63	0.50	16	B	19	97
NB L	0.36	49	D	29	56	0.26	48	D	21	61	0.26	48	D	21	61
NB T/R	0.19	25	C	43	79	0.13	25	C	30	84	0.13	25	C	30	84
SB L	0.84	79	E	87	#253	0.94	97	F	98	#286	1.15	>120	F	~136	#355
SB T	0.09	24	C	23	71	0.10	23	C	26	76	0.10	23	C	26	76
SB R	0.31	5	A	0	59	0.31	5	A	0	60	0.31	5	A	0	60
<b>Total</b>		<b>42</b>	<b>D</b>				<b>51</b>	<b>D</b>				<b>74</b>	<b>E</b>		

- a Volume to capacity ratio. ~ Volume exceeds capacity, queue is theoretically infinite.
- b Average total delay, in seconds per vehicle. # 95th percentile volume exceeds capacity, queue may be longer.
- c Level-of-service.
- d 50th percentile queue, in feet.
- e 95th percentile queue, in feet.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>8: Route 20 at Sunderland Road/Westborough Road</b>															
<i>Weekday Morning</i>															
EB L	0.71	45	D	140	209	0.71	45	D	141	#244	0.74	46	D	152	#271
EB T/R	0.71	42	D	129	197	0.70	42	D	128	#220	0.73	44	D	143	#261
WB L/T/R	0.77	60	E	105	#144	0.68	52	D	88	#172	0.68	53	D	88	#172
NB L/T/R	0.93	38	D	328	#480	1.00	53	D	~384	#535	1.11	87	F	~465	#600
SB L/T	0.43	18	B	109	153	0.47	19	B	124	172	0.52	20	B	139	191
SB R	0.15	0	A	0	0	0.17	0	A	0	0	0.19	0	A	0	0
<b>Total</b>		<b>33</b>	<b>C</b>				<b>39</b>	<b>D</b>				<b>54</b>	<b>D</b>		
<i>Weekday Evening</i>															
EB L	0.65	42	D	115	193	0.69	44	D	134	220	0.80	51	D	169	#305
EB T/R	0.69	36	D	105	190	0.71	37	D	117	#210	0.72	39	D	129	#246
WB L/T/R	0.69	52	D	94	138	0.67	52	D	85	#166	0.68	52	D	85	#166
NB L/T/R	0.66	22	C	176	245	0.78	27	C	213	296	0.96	46	D	278	#424
SB L/T	0.64	21	C	216	286	0.71	23	C	248	324	0.80	27	C	292	379
SB R	0.27	0	A	0	0	0.30	1	A	0	0	0.34	1	A	0	0
<b>Total</b>		<b>23</b>	<b>C</b>				<b>25</b>	<b>C</b>				<b>32</b>	<b>C</b>		
<i>Saturday Midday</i>															
EB L	0.62	40	D	107	182	0.67	43	D	123	205	0.73	45	D	151	#269
EB T/R	0.58	34	C	88	161	0.62	36	D	102	180	0.69	41	D	134	#243
WB L/T/R	0.58	45	D	72	115	0.59	47	D	68	126	0.60	48	D	68	126
NB L/T/R	0.58	19	B	152	222	0.62	20	C	189	255	0.77	26	C	251	334
SB L/T	0.46	18	B	121	177	0.50	18	B	155	209	0.62	21	C	202	266
SB R	0.18	0	A	0	0	0.21	0	A	0	0	0.26	0	A	0	0
<b>Total</b>		<b>21</b>	<b>C</b>				<b>22</b>	<b>C</b>				<b>25</b>	<b>C</b>		
<b>9: Route 20 at Edgemere Boulevard/Parking Lot</b>															
<i>Weekday Morning</i>															
EB L/T/R	0.56	4	A	78	153	0.62	5	A	94	184	0.67	5	A	108	214
WB L/T/R	0.38	10	A	95	155	0.45	11	B	117	184	0.50	12	B	134	210
NB L/T/R	0.02	0	A	0	0	0.02	0	A	0	0	0.02	0	A	0	0
SB L/T/R	0.53	22	C	5	48	0.56	24	C	8	55	0.56	24	C	8	55
<b>Total</b>		<b>7</b>	<b>A</b>				<b>8</b>	<b>A</b>				<b>8</b>	<b>A</b>		
<i>Weekday Evening</i>															
EB L/T/R	0.39	3	A	36	61	0.46	3	A	45	68	0.56	4	A	58	87
WB L/T/R	0.65	10	B	202	315	0.71	12	B	258	387	0.83	18	B	365	#608
NB L/T/R	0.06	1	A	0	0	0.04	0	A	0	0	0.04	0	A	0	0
SB L/T/R	0.39	13	B	0	15	0.33	9	A	0	18	0.34	10	A	0	18
<b>Total</b>		<b>8</b>	<b>A</b>				<b>9</b>	<b>A</b>				<b>12</b>	<b>B</b>		
<i>Saturday Midday</i>															
EB L/T/R	0.40	5	A	41	194	0.44	5	A	46	215	0.54	6	A	65	294
WB L/T/R	0.44	11	B	101	283	0.51	12	B	132	350	0.65	16	B	203	501
NB L/T/R	0.09	1	A	0	0	0.06	1	A	0	0	0.06	1	A	0	0
SB L/T/R	0.50	20	C	1	35	0.47	18	B	0	42	0.47	19	B	0	43
<b>Total</b>		<b>8</b>	<b>A</b>				<b>9</b>	<b>A</b>				<b>11</b>	<b>B</b>		

- a Volume to capacity ratio.
  - b Average total delay, in seconds per vehicle.
  - c Level-of-service.
  - d 50th percentile queue, in feet.
  - e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
  - # 95th percentile volume exceeds capacity, queue may be longer.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>10: Route 20 at Lake Street/Site Driveway (west)</b>															
<i>Weekday Morning</i>															
EB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.70	48	D	118	191
EB L/T	0.81	12	B	176	280	0.88	17	B	195	#346	n/a	n/a	n/a	n/a	n/a
EB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.77	18	B	322	420
WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.53	59	E	38	#94
WB T/R	0.34	8	A	96	149	0.38	9	A	112	173	0.56	19	B	152	215
NB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.52	42	D	55	103
NB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.44	28	C	15	59
SB L	0.69	69	E	101	156	0.69	68	E	105	173	0.58	44	D	73	#156
SB R (SB T/R for Build)	0.56	13	B	0	52	0.55	13	B	0	67	0.70	22	C	12	#100
<b>Total</b>		<b>14</b>	<b>B</b>				<b>17</b>	<b>B</b>				<b>24</b>	<b>C</b>		
<i>Weekday Evening</i>															
EB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.93	78	E	153	#299
EB L/T	0.61	9	A	78	134	1.01dl	14	B	108	178	n/a	n/a	n/a	n/a	n/a
EB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.56	18	B	179	243
WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.63	54	D	71	127
WB T/R	0.55	11	B	234	361	0.64	14	B	308	466	0.91	34	C	377	#527
NB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.97	83	F	138	#255
NB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.63	28	C	31	#100
SB L	0.73	67	E	129	208	0.77	69	E	148	233	0.83	62	E	96	#176
SB R (SB T/R for Build)	0.73	26	C	58	159	0.80	35	D	98	207	1.05	79	E	~90	#263
<b>Total</b>		<b>16</b>	<b>B</b>				<b>20</b>	<b>B</b>				<b>43</b>	<b>D</b>		
<i>Saturday MIDDAY</i>															
EB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.76	51	D	147	#262
EB L/T	0.56	7	A	80	134	0.68	10	A	106	175	n/a	n/a	n/a	n/a	n/a
EB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.75	26	C	263	343
WB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.71	59	E	85	#172
WB T/R	0.36	8	A	114	182	0.42	9	A	153	230	0.79	33	C	244	321
NB L	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.73	39	D	148	#239
NB T/R	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.47	19	B	35	96
SB L	0.69	67	E	103	172	0.71	68	E	118	191	0.54	35	C	63	113
SB R (SB T/R for Build)	0.62	13	B	0	76	0.63	12	B	0	79	0.78	29	C	78	#198
<b>Total</b>		<b>12</b>	<b>B</b>				<b>14</b>	<b>B</b>				<b>33</b>	<b>C</b>		

- a Volume to capacity ratio.
- b Average total delay, in seconds per vehicle.
- c Level-of-service.
- d 50th percentile queue, in feet.
- e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
- # 95th percentile volume exceeds capacity, queue may be longer.
- dl De facto left turn lane.

**Table 6 Signalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Conditions					2026 No-Build Conditions					2026 Build Conditions				
	v/c <sup>a</sup>	Del <sup>b</sup>	LOS <sup>c</sup>	50 Q <sup>d</sup>	95 Q <sup>e</sup>	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
<b>11: Route 20 at Grafton Street</b>															
<i>Weekday Morning</i>															
EB L	n/a	n/a	n/a	n/a	n/a	0.06	8	A	5	17	0.07	8	A	5	17
EB T/R (L/T/R for Existing)	0.69	14	B	215	314	0.73	15	B	231	355	0.75	15	B	256	393
WB L/T/R	0.36	9	A	74	109	0.45	15	B	81	190	0.50	16	B	98	226
NB L/T/R	0.49	30	C	63	122	0.53	34	C	65	150	0.56	37	D	71	150
SB L/T/R	0.45	24	C	48	95	0.50	30	C	52	130	0.52	32	C	57	131
<b>Total</b>		<b>14</b>	<b>B</b>				<b>17</b>	<b>B</b>				<b>18</b>	<b>B</b>		
<i>Weekday Evening</i>															
EB L	n/a	n/a	n/a	n/a	n/a	0.17	8	A	8	23	0.20	9	A	8	23
EB T/R (L/T/R for Existing)	0.42	9	A	88	126	0.36	9	A	91	151	0.43	9	A	114	188
WB L/T/R	0.60	11	B	176	237	0.73	21	C	306	467	0.82	24	C	370	#617
NB L/T/R	0.45	30	C	59	104	0.59	43	D	73	136	0.59	43	D	73	136
SB L/T/R	0.45	24	C	57	113	0.63	38	D	89	161	0.62	39	D	86	157
<b>Total</b>		<b>13</b>	<b>B</b>				<b>20</b>	<b>B</b>				<b>21</b>	<b>C</b>		
<i>Saturday Midday</i>															
EB L	n/a	n/a	n/a	n/a	n/a	0.09	7	A	5	18	0.11	7	A	5	17
EB T/R (L/T/R for Existing)	0.42	9	A	100	139	0.47	10	A	90	158	0.51	9	A	123	203
WB L/T/R	0.38	9	A	90	126	0.62	18	B	143	236	0.65	17	B	200	313
NB L/T/R	0.44	29	C	61	91	0.43	30	C	44	108	0.47	35	D	54	118
SB L/T/R	0.31	17	B	29	67	0.37	22	C	31	89	0.41	27	C	39	98
<b>Total</b>		<b>11</b>	<b>B</b>				<b>15</b>	<b>B</b>				<b>15</b>	<b>B</b>		

- a Volume to capacity ratio.
  - b Average total delay, in seconds per vehicle.
  - c Level-of-service.
  - d 50th percentile queue, in feet.
  - e 95th percentile queue, in feet.
- ~ Volume exceeds capacity, queue is theoretically infinite.
  - # 95th percentile volume exceeds capacity, queue may be longer.

**Table 7 Unsignalized Intersection Capacity Analysis**

Location / Movement	2019 Existing Condition					2026 No-Build Conditions					2026 Build Conditions				
	D <sup>a</sup>	v/c <sup>b</sup>	Del <sup>c</sup>	LOS <sup>d</sup>	95 Q <sup>e</sup>	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
<b>2: Route 122 at Route 20 EB Ramps (east)</b>															
<i>Weekday Morning</i>															
EB L	5	0.01	13	B	0	5	0.01	14	B	0	5	0.01	14	B	0
SB L/R	40	0.20	24	C	18	45	0.22	26	D	20	45	0.23	27	D	23
<i>Weekday Evening</i>															
EB L	2	0.00	11	B	0	2	0.00	11	B	0	2	0.00	11	B	0
SB L/R	55	0.28	23	C	28	60	0.27	25	C	28	60	0.28	26	D	28
<i>Saturday Midday</i>															
EB L	2	0.00	10	A	0	2	0.00	10	A	0	2	0.00	10	B	0
SB L/R	60	0.17	16	C	15	65	0.20	17	C	18	65	0.21	18	C	20
<b>3: Route 122 at Route 20 EB Ramps (west)</b>															
<i>Weekday Morning</i>															
WB L	5	0.01	9	A	0	5	0.01	10	A	0	5	0.01	10	A	0
NB L/R	110	0.42	25	D	50	120	0.49	31	D	63	120	0.50	32	D	65
<i>Weekday Evening</i>															
WB L	5	0.01	11	B	0	5	0.01	11	B	0	5	0.01	12	B	0
NB L/R	135	0.74	61	F	123	155	1.03	>120	F	208	155	1.10	>120	F	225
<i>Saturday Midday</i>															
WB L	1	0.00	9	A	0	1	0.00	9	A	0	1	0.00	10	A	0
NB L/R	130	0.42	22	C	53	150	0.47	24	C	60	150	0.52	28	D	70
<b>4: Route 122 at Route 20 WB Ramps/Davis Driveway</b>															
<i>Weekday Morning</i>															
EB L	2	0.00	10	A	0	2	0.00	10	A	0	2	0.00	10	A	0
WB L	95	0.12	10	A	10	100	0.14	10	B	13	100	0.14	10	B	13
NB L/T/R	150	0.59	35	D	88	160	0.71	50	E	120	180	0.77	55	F	143
SB L/T/R	0	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0
<i>Weekday Evening</i>															
EB L	0	0.00	0	A	0	0	0.00	0	A	0	0	0.00	0	A	0
WB L	100	0.14	11	B	13	105	0.17	11	B	15	105	0.17	11	B	15
NB L/T/R	300	>1.20	>120	F	445	320	>1.20	>120	F	658	365	>1.20	>120	F	775
SB L/T/R	10	>1.20	>120	F	85	10	>1.20	>120	F	*	10	>1.20	>120	F	*
<i>Saturday Midday</i>															
EB L	1	0.00	9	A	0	1	0.00	9	A	0	1	0.00	9	A	0
WB L	120	0.14	10	A	13	130	0.17	10	B	15	130	0.17	10	B	15
NB L/T/R	175	0.74	48	E	135	185	0.81	61	F	155	245	0.95	83	F	230
SB L/T/R	1	0.01	12	B	0	1	0.00	13	B	0	1	0.00	13	B	0

- a Demand.
- b Volume to capacity ratio.
- c Average total delay, in seconds per vehicle.
- d Level-of-service.
- e 95th percentile queue, in feet.

\* Error, Synchro cannot calculate delay and/or queue.

**Table 7 Unsignalized Intersection Capacity Analysis (continued)**

Location / Movement	2019 Existing Condition					2026 No-Build Conditions					2026 Build Conditions				
	D <sup>a</sup>	v/c <sup>b</sup>	Del <sup>c</sup>	LOS <sup>d</sup>	95 Q <sup>e</sup>	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
<b>14: Route 20 at Site Driveway (east)</b>															
<i>Weekday Morning</i>															
WB L											55	0.14	15	B	13
NB R											55	0.17	17	C	15
<i>Weekday Evening</i>															
WB L	<i>Intersection does not exist under Existing Conditions</i>					<i>Intersection does not exist under No-Build Conditions</i>					100	0.15	11	B	13
NB R											95	0.19	13	B	18
<i>Saturday Midday</i>															
WB L											115	0.19	12	B	18
NB R											110	0.24	14	B	23
<b>12: Route 140 at Route 20 EB Ramps</b>															
<i>Weekday Morning</i>															
EB L/R	150	0.90	86	F	183	160	0.93	100	F	183	195	1.15	>120	F	270
NB L	125	0.11	8	A	10	135	0.12	8	A	10	135	0.12	8	A	10
<i>Weekday Evening</i>															
EB L/R	160	0.92	80	F	205	175	0.82	65	F	155	240	1.11	>120	F	293
NB L	45	0.06	9	A	5	50	0.07	10	A	5	50	0.07	10	A	5
<i>Saturday Midday</i>															
EB L/R	130	0.55	28	D	80	145	0.50	27	D	65	230	0.78	47	E	158
NB L	70	0.08	9	A	5	75	0.08	9	A	8	75	0.08	9	A	8
<b>13: Route 140 at Route 20 WB Ramps</b>															
<i>Weekday Morning</i>															
WB L/R	95	0.23	13	B	23	100	0.22	14	B	20	100	0.26	17	C	25
SB L	85	0.12	10	B	10	95	0.13	10	B	13	120	0.17	11	B	15
<i>Weekday Evening</i>															
WB L/R	175	1.00	115	F	210	190	>1.20	>120	F	285	190	>1.20	>120	F	380
SB L	120	0.13	9	A	10	135	0.14	9	A	13	175	0.19	9	A	18
<i>Saturday Midday</i>															
WB L/R	175	0.62	34	D	98	190	0.72	44	E	128	190	0.97	103	F	213
SB L	80	0.08	9	A	8	90	0.09	9	A	8	140	0.15	9	A	13

- a Demand.
- b Volume to capacity ratio.
- c Average total delay, in seconds per vehicle.
- d Level-of-service.
- e 95th percentile queue, in feet.

# 5

## Mitigation

The following sections discuss improvement measures that will be implemented to minimize Project-related impacts. The result of these mitigation actions will not only mitigate the direct Project-related traffic demands but will also contribute to improving the overall traffic operations and pedestrian experience in the immediate vicinity of the project site. Mitigation measures presented in this chapter are set to take place prior to the introduction of the buildout of the Project.

### Site Access

The first stage in defining the recommended improvements to the roadway system surrounding the Project site is to identify the improvements necessary to gain safe and efficient access to and from the site driveways along Route 20. The analysis of existing and future conditions in Chapter 4 indicate that with the suggested roadway improvements in place along Route 20, efficient movements into and out of the Project are expected. This section provides a summary of the roadway and intersection improvements that will address both existing deficiencies as well as the Project-related impacts.

### Route 20/MassWorks

As part of the Commonwealth's MassWorks grant program, the Town of Shrewsbury was awarded \$3.75 million to design and construct a portion of the Route 20 corridor in front of the Project site. The project is being led by the Town of Shrewsbury in conjunction with MassDOT and the project proponent with an expected initial construction start in 2020 and completion shortly thereafter. The MassWorks project includes an approximate 3,300-foot

section of the Route 20 corridor from the bridge at Flint Pond/Lake Quinsigamond to just past Puriton Way that will be widened to provide a full four-lane cross-section with appropriate shoulders, a shared-use bicycle/pedestrian pathway on the southern side of the corridor and turn lanes into the Project site. Additionally, it will include upgrades to the stormwater system, a new traffic signal at the intersection of Route 20 and Lake Street which will also serve as the main access point to the Project. Figure 17 shows the conceptual Site and design plan which have been conceptually reviewed by MassDOT and the Town of Shrewsbury and formed the basis of the MassWorks grant application. These plans are being refined now and are being advanced towards 25 percent design stage with MassDOT. Lastly, the proposed Edgemere at Flint Pond Project was fully accounted for (along with the potential for additional growth) in the development of these roadway plans.

As part of the MassWorks grant, the Proponent has committed to providing:

- › Design funding for up to 75% of the total engineering and permitting of the overall project;
- › Dedication of a significant amount of right-of-way (varying between five and 15-feet along the site frontage) to MassDOT, at no cost, which is required to construct the full width of the Route 20 roadway corridor and bicycle/pedestrian amenities; and
- › Dedication of areas within the development site to MassDOT, at no cost, where stormwater from the widened Route 20 corridor can be detained, treated, and discharged in an appropriate manner along with the necessary infrastructure to support these BMPs.

As noted, the MassWorks project includes a significant investment in the Route 20 corridor near the Project. The timing of this roadway project has been relied upon by the Proponent as forming the basis for their project schedule. While both the Town of Shrewsbury and State continue to push this project forward with the expectation that the construction of the roadway work will commence in 2020, there is the possibility that delays may occur that are out of the control of any of the three parties. With this in mind, it is the Proponent's intention to proceed with the on-Site Project schedule independent of the MassWorks project schedule. In the case of a delay of the MassWorks project, the Proponent will work with MassDOT and the Town of Shrewsbury to develop an interim mitigation plan which will address the Project's transportation access needs.

### **Route 20 Site Access**

As proposed, the MassWorks project considers the inclusion of two driveway access points into the Project. The primary access would be a signalized driveway opposite Lake Street. The secondary access would be an unsignalized driveway to the east that would provide for all movements except for left-turns out of the driveway.

#### **Route 20 at Western Site Driveway/Lake Street (signalized)**

Primary access to the project site will be provided at a signalized intersection opposite Lake Street. As shown in Chapter 4, Traffic Operations, this intersection under 2026 Build Conditions will operate at Level of Service C and D during the morning and evening peak

- Project Site
- Supermarket
- Retail
- Residential
- Residential Amenities/Garages

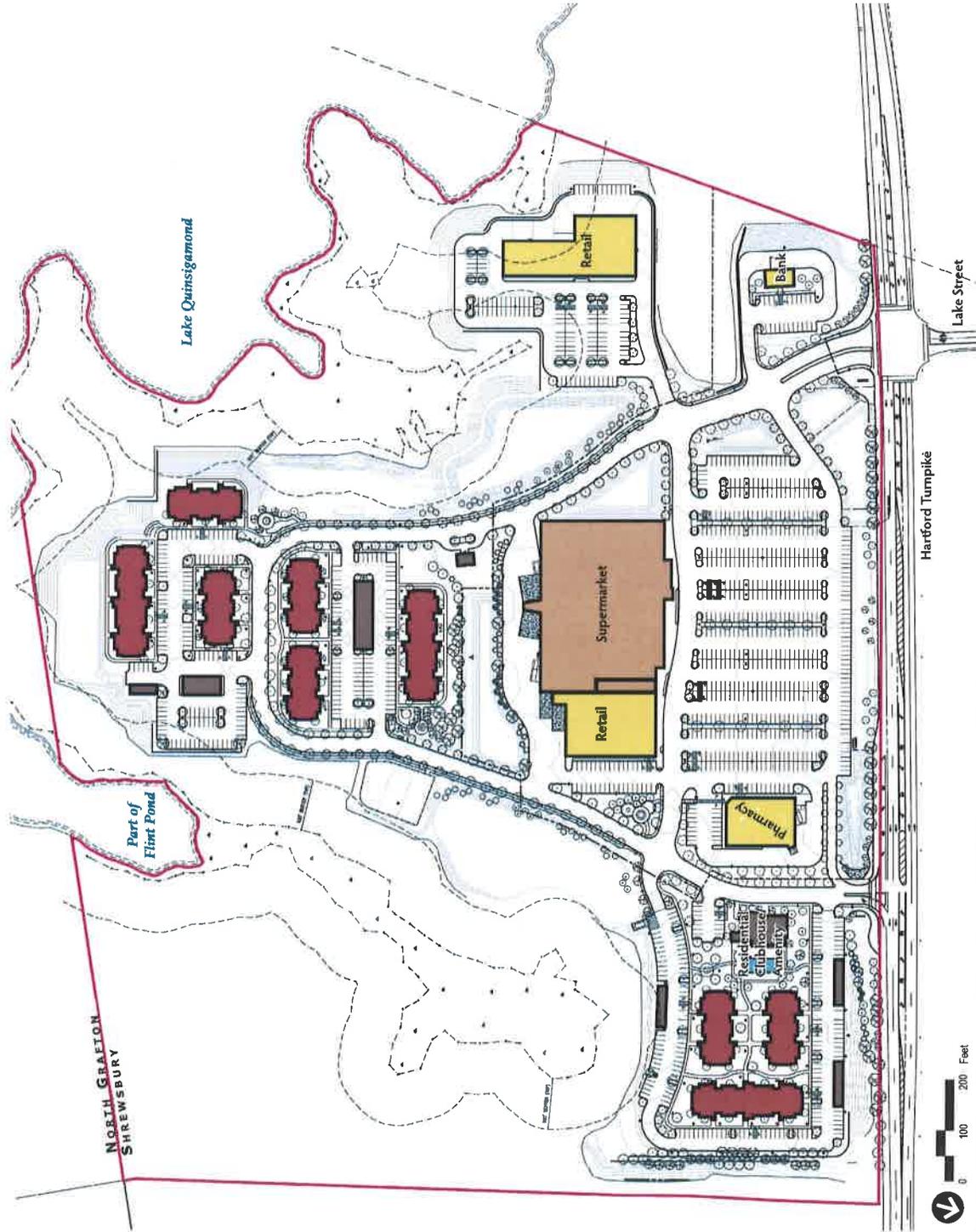


Figure 17  
Conceptual Site and Route 20 Design Plan

Edgemere Crossing at Flint Pond  
Shrewsbury, Massachusetts

hours, respectively. Saturday midday operations will also operate at LOS C during the peak periods. This intersection will include the following (subject to MassDOT design review):

- › Left-turn lanes along Route 20 for traffic turning into Lake Street and the site driveway;
- › Sidewalks on all four corners of the intersection, with a 10-foot shared bike/pedestrian pathway on the south side of Route 20;
- › Highly visible crosswalks on all four legs of the intersection;
- › Signage that is appropriate set back from the Route 20 mainline to not interfere with sight lines; and
- › A new state-of-the-art, fully actuated traffic signal which will replace the existing antiquated signal.

#### **Route 20 at Eastern Site Driveway (unsignalized)**

Secondary access will be provided via an unsignalized driveway approximately 1,000 feet east of the signal with Lake Street. Because of sight-line issues, left-turns from this driveway onto Route 20 will be restricted via a raised divider island, but all other movements will be provided for.

As shown in Chapter 4, Traffic Operations, all critical movements at this intersection under 2026 Build Conditions will operate at Level of Service B and C during the various peak hour conditions. This intersection will include the following (subject to MassDOT design review):

- › A protected left-turn lane along Route 20 for traffic turning into the site driveway;
- › a 10-foot shared bike/pedestrian pathway on the south side of Route 20 across the site frontage; and
- › Highly visible crosswalks across the site driveways.

Figure 17 illustrates the proposed driveways along the site frontage.

### **On-Site Circulation**

The Site design will consider, from a transportation perspective, a well-planned series of connections amongst the residential development areas and the commercial areas. The Site Engineer has identified through layout and design a plan that promotes safe circulation for all modes (vehicular, bicycle, and pedestrian) within the Site, particularly between the residential and commercial areas. The site will include MUTCD compliant signage, sidewalks, appropriate grade lighting, and will also incorporate transition areas between the commercial and residential areas that could include one or a combination of speed limit signs, speed tables, crosswalks, and other traffic calming measures. Through the site plan review process, these elements will be identified and incorporated into the final site plan.

### **Off-Site Locations**

In addition to those locations within the Town of Shrewsbury, the traffic study has identified two intersections within the City of Worcester that will see some additional traffic impact

associated with the Project's traffic. As part of the MEPA process, the proponent will be working with MassDOT and the City of Worcester to identify and quantify those impacts and develop reasonable mitigation actions designed to address the Project's traffic impacts on those locations.

## **Pedestrian and Bicycle Accommodation Improvements**

As part of the Project, pedestrian and bicycle accommodations will be constructed on-site that will connect to the existing sidewalk network surrounding the Project Site. The on-site facilities include; crosswalks across the site driveways and at entrances to the proposed supermarket and retail buildings, sidewalks providing connections to the street and connecting parking areas, and bicycle racks. Along the site frontage, the Proponent will donate appropriate right of way to provide room for the MassWorks project to install a 10-foot wide shared use pathway connecting Puriton Way to the main entry point to the Project, approximately 2,400 feet.

## **Transportation Demand Management (TDM) Measures**

In recognition of the existing and future traffic demands on the study area roadway system, several TDM measures are proposed and will be implemented by the Proponent to help reduce the number of single occupant vehicles (SOV) traveling to and from the Site, and to encourage the use of alternative modes of transportation to reach the Site and better manage the traffic generated by the Project.

Given the suburban nature of the Project and the limited transit options that are available, the Proponent expects to achieve at least a five (5) percent reduction in vehicle trips as compared to the projected ITE trip generation estimates. These TDM measures include the following:

- › Provide an on-site and dedicated Transportation Management Coordinator (TMC) to facilitate and assist with the various TDM measures with both the commercial and residential users on the site;
- › Install conduit in support of potential future electric vehicle charging stations where appropriate in parking areas;
- › The Proponent will work with the Town of Shrewsbury in discussions with the WRTA to explore the possibility of expanding bus service to the Project Site. Should the WRTA be open to potentially modifying an adjacent bus route if the demand to/from the Project Site warrants, the Proponent will make appropriate accommodations within the site to provide for a bus shelter, as needed;
- › Provide secure bicycle storage areas in the residential area and locate racks in areas near the entrances to the retail users;
- › Provide an on-site ATM machine, cafeteria, and mail drop boxes for retail employees and customers that is customary for large commercial employers such as Market Basket;
- › Review and evaluate employee and resident's transportation needs, and support a carpool and ride-matching coordination program through the promotion of NuRide or other MassRIDES initiatives;

- › Designate preferential low emissions vehicle only spaces within general and employee parking areas;
- › Use direct deposit for employee paychecks;
- › Promote internet and shop-by-phone shopping alternatives where appropriate;
- › Schedule supplier deliveries during weekday afternoon and off-peak hours where possible; and
- › Construct the proposed pedestrian site access facilities (including sidewalks and crosswalks) to facilitate safe and easy pedestrian and bicycle access from the public roadway into the Project Site.

## **Transportation Monitoring Program**

### **Traffic Monitoring Program**

The Proponent will conduct an annual traffic monitoring program (TMP) to begin six months after initial occupancy of the Project and extend for a period of five years. The data collected as part of the TMP will be distributed to MassDOT (through MassRIDES) and MassDEP per their reporting requirements. The TMP will include ATR counts for a 24-hour period on a typical weekday and Saturday at the following locations:

- › Western Site driveway;
- › Eastern Site driveway; and
- › Lake Street near Route 20

In addition, TMCs will be conducted on a typical weekday from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00PM and on a typical Saturday from 11:00 AM to 2:00 PM at the following locations:

- › Route 20 at Site driveway (west);
- › Route 20 at Site driveway (east);
- › Route 20 at Sunderland Road/Westborough Street;
- › Route 20 at Grafton Street;
- › Route 20 at Puriton Way

### **TDM Monitoring Program**

In addition to the traffic monitoring program, the Proponent is also required to monitor the participation in, and effectiveness of the proposed TDM program on Site. The Proponent will work with the appointed on-site TDM coordinator to provide a summary of the participation rate for each business on-site and the estimated reduction in Site-generated traffic associated with the TDM measures in place throughout the Site. Consistent with the TMP, the annual TDM monitoring program will begin six months after full occupancy of the Project, and extend for a period of five years.

# 6

## Conclusion

Vanasse Hangen Brustlin, Inc. (VHB) has presented this transportation impact and access study for the construction of a mixed use development. The Project includes the construction of an approximately 80,000 square foot (SF) Market Basket supermarket, 50,000 SF of general retail space, 13,000 SF of pharmacy space, a 2,000 SF drive-in bank, and 250 units of rental residential units. Access to the Site will be provided via an unsignalized driveway along Route 20 (which restricts left-turns exiting the site) in the general location of the current driveway and a signalized, full-access driveway at the intersection of Route 20 and Lake Street. Full internal access for vehicles and pedestrians will be provided between the residential and commercial components of the Project.

Additionally, as part of the Commonwealth's MassWorks grant program, the Town of Shrewsbury was awarded \$3.75 million to design and construct a portion of the Route 20 corridor in front of the Project site. The project is being led by the Town of Shrewsbury in conjunction with MassDOT and the project proponent with an expected initial construction start in 2020 and completion shortly thereafter. The MassWorks project includes an approximate 3,300-foot section of the Route 20 corridor from the bridge at Flint Pond/Lake Quinsigamond to just past Purinton Way that will be widened to provide a full four-lane cross-section with appropriate shoulders, a shared-use bicycle/pedestrian pathway on the southern side of the corridor and turn lanes into the Project site. Additionally, it will include upgrades to the stormwater system, a new traffic signal at the intersection of Route 20 and Lake Street which will also serve as the main access point to the Project.

The traffic analysis has identified locations impacted by the Project and the Proponent has developed a comprehensive mitigation package that effectively addresses both the potential

impacts of the development on the roadway network and existing issues. The Proponent is also committed to implementing a robust TDM plan.