

Regency at Methuen Condominium Trust
2 Sherwood Drive
Methuen, MA 01844

October 21, 2023

Methuen Zoning Board
41 Pleasant Street
Methuen, MA 01844

The Honorable Neil Perry
Office of the Mayor
41 Pleasant St. # 305
Methuen, MA 01844

Methuen Community Development
41 Pleasant St. # 217
Methuen, MA 01844

Re: The Homes at Murphy's Farm 40B, 90 Wheeler Street, Methuen, No. 2023-25

Dear Members of the Zoning Board, Mayor Perry, and Members of the Community Development Board:

On behalf of the *Regency at Methuen* condominium development, we are writing to notify you of the Regency at Methuen Condominium Trust's opposition to the developer's application for the comprehensive permit referenced above ("The Homes at Murphy's Farm 40B, 90 Wheeler Street, Methuen, No. 2023-25").

Regency at Methuen ("RAM") is an over-55 condominium development in Methuen, consisting of 240 single family homes and townhouses, with 475 residents. We are located in the southwest corner of the city, just east of Wheeler St. and just south of the proposed Murphy's Farm project.

The Murphy's Farm developer proposes to construct 300 4-bedroom apartments in Dracut, just west of Wheeler St., 23 of which will be served by the comprehensive permit. At the September 27, 2023 Zoning Board hearing, counsel for the developer stated that he has been asked by the Town of Dracut to design the project with only one access point to the entire project, on Wheeler St. in Methuen, even though all 300 homes will be in Dracut!

It is outrageous that Dracut would seek to dump the entire traffic load from this project into Methuen, and it is outrageous that this Developer would consider doing so.

Using a conservative estimate of just 2 vehicles for each of the 300 4-bedroom units, the potential addition of at least 600 vehicles to an already overburdened Wheeler St. traffic load

would be a traffic disaster, as the road is already dangerously overloaded with passenger vehicles and heavy trucks.

In 2016, Bayside Engineering performed a traffic study on Wheeler St. in connection with a proposed heavy truck exclusion (Exhibit A). Wheeler St.'s average daily traffic volume was **3,734 vehicles per day**, mostly headed southbound towards the intersection with Route 110.¹

Here is a map of Wheeler St.:



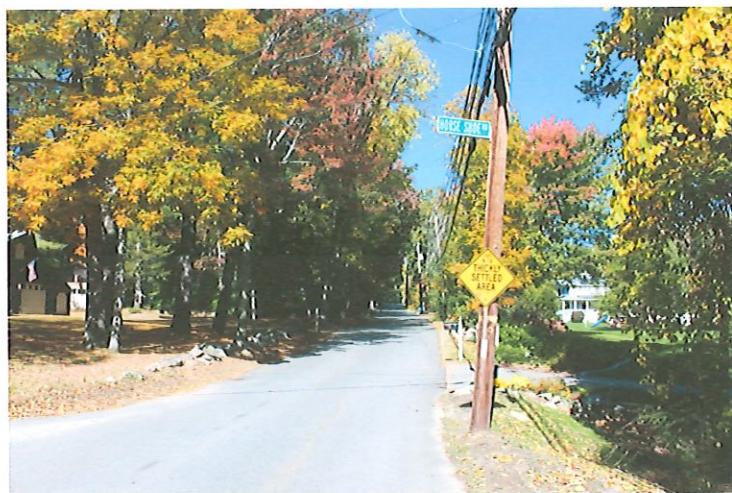
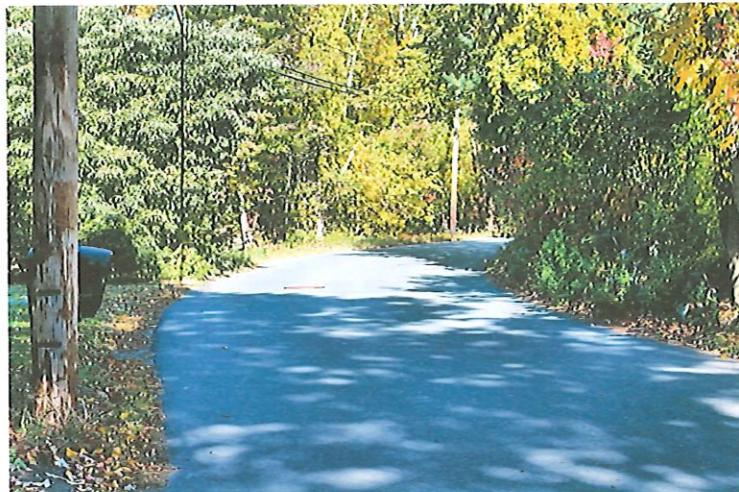
Legend:

- A: Wheeler St. and Route 110
- B: Wheeler St. and Route 113
- MF: The proposed Murphy's Farm development
- RAM: Regency at Methuen
- BROX: The Brox Quarry

Wheeler St. north of RAM is a narrow, winding residential road with no sidewalks. It is commonly used by pedestrians and bicyclists and is populated by multiple school bus stops. There are many homes, driveways, children playing in their front yards, and blind turns. It can barely accommodate cars passing in opposite directions.

¹ See Bayside report, Table 1, page 10, attached as Exhibit A (attachment 2 (raw traffic count data) not printed. The full report can be downloaded from <https://tinyurl.com/baysidereport>). The 3,734 figure is the sum of two counts: 1,458 vehicles on Wheeler St. north of Lowell St., and 2,276 vehicles on Wheeler St. south of Lowell St.

Here are some representative pictures of this constricted, twisting roadway:



Just south of RAM, the Wheeler St./Route 110 intersection is overburdened by **2,276** vehicles per day, **552 of which are heavy trucks** coming from and going to the nearby Bronx quarry.² It is not uncommon to see heavy trucks lined up on Wheeler St. southbound waiting to enter Route 110, as shown in the below picture:



Additionally, trucks entering Wheeler St. from Route 110 commonly take a wide right turn, into the oncoming traffic lane:



² See Bayside report, Table 2, page 11, attached as Exhibit A (attachment 2 (raw traffic count data) not printed. The full report can be downloaded from <https://tinyurl.com/baysidereport>). The existing heavy truck exclusion on Wheeler St. does not include the portion of Wheeler St. that lies south of Lowell St. and intersects with Route 110.

Westbound trucks on Route 110 that seek to enter Wheeler St. often stop on Route 110, waiting for the southbound trucks on Wheeler St. to clear, as the trucks entering Wheeler St. from Route 110 do not have enough room to make their wide right turn. This causes vehicles behind them to stop, and it is common to see vehicles try and pass these stopped trucks on the left, while:

- (a) vehicles approach in the opposite direction at 50 mph or more, and
- (b) trucks and passenger vehicles try to enter Route 110 from Wheeler St.

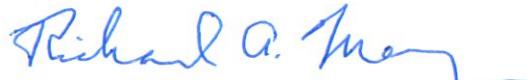
It is a very dangerous situation, and there have been multiple accidents.

The addition of 600 more vehicles to this already congested traffic would create a traffic catastrophe. Wheeler St. was not designed to handle its present traffic load, and there does not exist room for roadway improvements that would enable the street and the Route 110 intersection to handle over 4,300 vehicles per day.

The proposed Murphy's Farm development was not designed with any consideration of whether Methuen (or Dracut, for that matter) can reasonably absorb 300 families and 600 vehicles in the proposed location. The developer did not consult with the City of Methuen in the planning. The Developer did not conduct a traffic study before proposing this monstrosity of a project to see if there would be a negative impact to the involved communities.

There is no benefit whatsoever to Methuen from this development, and it poses significant, serious threats to the safety and welfare of Methuen residents. For these reasons, the Regency at Methuen Condominium Trust requests that the Zoning Board deny the requested permit.

The Regency at Methuen Condominium Trust



By: Richard Merz, President of the Board of Trustees

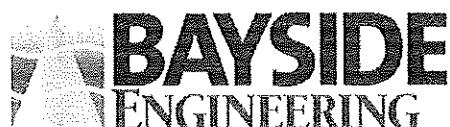
Heavy Commercial Vehicle Exclusion Study

Wheeler Street



Methuen, MA
November 9, 2016

Prepared by:



600 Unicorn Park Drive
Woburn, MA 01801
781-932-3201
www.baysideengineering.com

Prepared for:

City of Methuen

Exhibit A

TABLE OF CONTENTS

Section	Title	Page
1	Executive Summary	1
2	Introduction	3
3	Existing Conditions	6
	Study Area	6
	Field Survey	6
	Geometrics	7
	Traffic Volumes	8
4	Analysis	13
	Alternate Route	13
	Exclusion Hours	13
	Municipality Statement	13
 Attachments		
Attachment 1 - Project Locus		
Attachment 2 - Traffic Count Data		
Attachment 3 - Proposed Alternate Route		
Attachment 4 - Truck Turning Movements		
Attachment 5 - Photos		
Attachment 6 - Dracut Zoning		

TABLES

No.	Title	Page
1	Existing Weekday Traffic-Volume Summary	8
2	Existing Vehicle Classification Summary	9

FIGURES

No.	Title	Page
1	Site Location Map	2
2	2016 Existing Weekday Morning Peak-Hour Traffic Volumes	10
3	2016 Existing Weekday Evening Peak-Hour Traffic Volumes	11

SECTION 1: EXECUTIVE SUMMARY

The City of Methuen is seeking a Massachusetts Department of Transportation (MassDOT) Heavy Commercial Vehicle Exclusion (HCVE) permit to restrict trucks from Wheeler Street. Wheeler Street serves a high density residential neighborhood. Bayside Engineering has prepared this study to assess existing traffic volumes and to evaluate alternate truck routes. Figure 1 shows the study area. The following provides a brief summary of the study findings.

Under the State's Standard Municipal Traffic Code of 1987, Section 10A-9, a truck exclusion from a municipal way may be authorized provided a suitable alternative route is available. Such an alternative route is required to have an effective width and pavement structure which can safely accommodate the additional truck traffic, and must meet one of the following conditions:

1. Lie wholly within the community making application,
2. Lie partially in an adjacent community but only on State Highway, or
3. Lie partially in an adjacent community but have the adjacent community's written approval.

Warrants for a heavy commercial vehicle exclusion include roadways serving 5-8 percent of volume as trucks, reduces utilization of the roadway and is cause for substantial reduction in capacity or safety; and that the condition of pavement structure of the route to be excluded indicates that further repeated heavy wheel loads will result in severe deterioration of the roadway. Roadway and traffic assessment of Wheeler Street, south of Lowell Street in Methuen, indicates that warrants for commercial heavy vehicle exclusion are supported; and the alternative route meets condition specified under (2) above, as the trucks on Wheeler Street are generated primarily by the neighboring Brox facility in Dracut and Brox has direct access to Route 110. The City of Methuen believes that the HCVE does meet the alternate route criteria of MUTCD Section 10A-9, as the truck volume significantly exceeds the volume criteria of 5%-8%. Direct evidence of roadway deterioration and tire tracks over sidewalks and wheelchair ramps on Wheeler Street were observed. As such, the HCVE is necessary to prevent deterioration of the roadway and sidewalks on Wheeler Street.

Further, with an exclusion on this southerly section of Wheeler Street, the City believes that trucks would divert and use the northerly portion of Wheeler Street. This section of Wheeler Street is all residential and is a narrow and curvy road, not conducive to heavy truck traffic. As such, the truck exclusion should also include the northerly section of Wheeler Street.



N
Z
N.T.S.

Wheeler Street HCVE
Methuen, MA

Figure 1
Study Area

BAYSIDE
ENGINEERING



600 Unicorn Park Drive ▲ Woburn, MA 01801
Phone: 781.932.3201 ▲ Fax: 781.932.3413
www.baysideengineering.com

SECTION 2: INTRODUCTION

Cities and towns do not have the authority to create their own truck bans. Municipalities must request a permit for a Heavy Commercial Vehicle Exclusion from the Massachusetts Department of Transportation (MassDOT). The Massachusetts Amendments to the 2009 Manual of Uniform Traffic Control Devices (MUTCD) identifies criteria, known as warrants, which define a heavy commercial vehicle truck exclusion. A truck exclusion from a municipal way may be authorized provided a suitable alternate route is available. The alternate route shall have an effective width and pavement structure which can safely accommodate the additional truck traffic. In addition the alternate route must meet one of the following conditions: (1) Lie wholly within the community making application, (2) Lie partially in an adjacent community but only on State Highway, or (3) Lie partially in an adjacent community but have the adjacent community's written approval. Numbered routes are ineligible for heavy commercial vehicle exclusions, per Board of Commissioners, November 22, 1995. An engineering study, as outlined in the Data requested below, must be made. In addition, one or more of the following may be sufficient justification for truck exclusion:

1. Warrants

- A. A volume of heavy commercial vehicles, which usually is in the range of five (5) to eight (8) percent, reduces the utilization of the facility and is cause for a substantial reduction in capacity or safety.
- B. The condition of the pavement structure of the route to be excluded indicates that further repeated heavy wheel loads will result in severe deterioration of the roadway. (subject to Department review)
- C. Notwithstanding the foregoing, in certain instances where land use is primarily residential in nature and a municipality has requested exclusion only during hours of darkness, a specific night exclusion may be granted.

2. Data Before the Department can consider an exclusion proposal; the following data must be submitted by the municipality:

- A. A twenty-four hour consecutive count of all vehicles using the subject street. (If the exclusion is requested for only twelve hours, a twelve-hour count will

suffice.) The count shall be broken into one-half hour intervals showing: (1) Commercial vehicles with a carrying capacity over 2½ tons (2) Other vehicles

- B. Map of the area, with the excluded street marked in red, the alternate route in green.
- C. Physical characteristics of excluded and alternate streets in question, i.e, length, width, type and condition of surface and sidewalk.
- D. Types of buildings or property abutting street (Residential, Business, School, Playground, etc).
- E. Zoning of Street (Residential, Industrial, etc.).
- F. Proximity of probable alternate route to the proposed excluded route and the additional distance to be traveled using the alternate route.
- G. Types of traffic control existing on street.
- H. Hours during which exclusion is to be in effect.
- I. A written statement from the municipality as to the need for the exclusion, and acknowledgement of acceptance of the responsibility for installation and maintenance of appropriate signage.

EXEMPTIONS: Exclusions shall not apply to heavy commercial vehicles going to or coming from places upon said streets for the purpose of making deliveries of goods, materials, or merchandise to or similar collections from abutting land or buildings or adjacent streets or ways to which access cannot otherwise be gained; or to vehicles used in connection with the construction, maintenance and repair of said streets or public utilities therein; or to Federal, State, Municipal or public service corporation owned vehicles.

This study has assessed existing conditions within the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities and traffic counts. Existing traffic counts were performed at the study area intersections and roadways as follows:

Roadways

Wheeler Street
 Hillside Drive (private way)
 Lowell Street
 Route 113 (North Lowell Street)
 Route 110 (Lowell Boulevard)

Intersections

Route 113 and Wheeler Street
 Route 110 and Hillside Drive
 Route 110 and Wheeler Street
 Lowell Street and Wheeler Street

In the second stage of the study, the traffic volumes were evaluated to determine the percentage of trucks using the key roads in the study area, and heavy commercial vehicle exclusion warrants evaluated.

6

6

SECTION 3: EXISTING CONDITIONS

STUDY AREA

Roadway geometry and traffic control information was collected for the following locations:

Roadways

Wheeler Street
Hillside Drive (private way)
Lowell Street
Route 113 (North Lowell Street)
Route 110 (Lowell Boulevard)

Intersections

Route 113 and Wheeler Street
Route 110 and Hillside Drive
Route 110 and Wheeler Street
Lowell Street and Wheeler Street

FIELD SURVEY

A comprehensive field inventory of the proposed site was conducted in August 2016. The inventory included collection of existing roadway geometrics and traffic volume data for the existing study area intersections and roadways. Traffic volumes were measured by means of automatic traffic recorder (ATR) counts and substantiated by manual turning

movement counts (TMCs) conducted at the study area intersections.

GEOMETRICS

Primary study area roadways are described below.

Roadways

North Lowell Street (Route 113)

North Lowell Street is a State numbered, State maintained two lane Urban Minor Arterial which runs in a general east/west direction. In the vicinity of the site, the roadway is approximately 26 feet wide and provides one travel lane per direction. Travel lanes are separated by double yellow centerline. The posted speed limit on North Lowell Street in the vicinity of the site is 35 miles per hour (mph). Land use along North Lowell Street in the study area consists of a mix of commercial and residential uses.

Lowell Street (Route 110)

Lowell Street is a State numbered, State maintained two lane Urban Principal Arterial which runs in a general east/west direction. In the vicinity of the site, the roadway is approximately 30 feet wide and provides one travel lane per direction. Travel lanes are separated by double yellow centerline. The posted speed limit on Lowell Street in the vicinity of the site is 45 mph. Land use along Lowell Street in the study area consists primarily of commercial uses.

Wheeler Street

Wheeler Street is a City of Methuen maintained two lane local roadway which runs in a general north/south direction. In the vicinity of Lowell Street, the roadway is approximately 30 feet wide and provides one travel lane per direction. North of Lowell Street, the roadway is approximately 26 feet in width that narrows northerly towards North Lowell Street and traverses a primarily residential neighborhood where it then terminates at North Lowell Street (Route 113). Travel lanes are separated by double yellow centerline. The posted speed limit on Wheeler Street in the vicinity is 30 mph. Land use along Wheeler Street in the study area consists primarily of residential uses.

Hillside Drive

Hillside Drive is a private way, owned and maintained by the Brox Corporation and is a two lane roadway which runs in a general north/south direction. In the vicinity of Lowell Street, the roadway is approximately 30 feet wide and provides one travel lane per direction. Land use along Hillside Drive in the study area consists primarily of wooded land.

Intersections

North Lowell Street and Wheeler Street

North Lowell Street forms the east and west legs of this three legged unsignalized intersection with Wheeler Street (south leg). The North Lowell Street approaches each consist of a single lane permitting left or right-turns. The Wheeler Street approach consists of a single lane, permitting left or right turns. A bituminous concrete sidewalks exists along the north side of North Lowell Street. Wheeler Street operates under STOP-sign control. Land use at the intersection consists of residential homes and wooded land.

Route 110 and Hillside Drive

Route 110 (known as Merrimack Avenue in Dracut) forms the east and west legs of this three legged unsignalized intersection with Hillside Drive (north leg). The Route 110 approaches each consist of single lanes, permitting left or right-turn movements. The Hillside Drive approach consists of a single lane that permits left or right-turns. The Hillside Drive approach operates under STOP-sign control. Land use at the intersection consists of a residential home, wooded land and the Merrimack River.

Route 110 and Wheeler Street

Route 110 (known as Lowell Boulevard at Wheeler Street in Methuen) forms the east and west legs of this three legged unsignalized intersection with Wheeler Street (north leg). The Route 110 approaches each consist of single lanes, permitting left or right-turn movements. The Wheeler Street approach consists of a single lane that permits left or right-turns. A bituminous concrete sidewalks exists along the north side of Route 110. The Wheeler Street approach operates under STOP-sign control. Land use at the intersection consists of small commercial properties, wooded land and the Merrimack River.

Lowell Street and Wheeler Street

Lowell Street forms the east and west legs of this four legged unsignalized intersection with Wheeler Street (north and south legs). All approaches to the intersection consist of single lanes permitting all movements. The Wheeler Street approaches operate under STOP-like control. Land use at the intersection consists of wooded land.

TRAFFIC VOLUMES

Existing Traffic Volumes

To establish base traffic conditions within the study area, manual turning movement and vehicle classification counts were obtained in August 2016. Peak-period turning movement counts were conducted on Thursday, August 10, 2016 during the weekday

morning peak period (7:00 to 9:00 AM) weekday evening period (4:00 to 6:00 PM) at the following intersections:

- Route 113 and Wheeler Street
- Route 110 and Hillside Drive
- Route 110 and Wheeler Street
- Lowell Street and Wheeler Street

Daily traffic counts were conducted on Route 113, Route 110, Hillside Drive, Lowell Street and Wheeler Street for a two day period using automatic traffic recorders (ATR) on August 9 and 10, 2016.

The 2016 existing daily and peak-hour traffic volumes are summarized in Table 1. The 2016 existing weekday morning and weekday evening peak hour traffic flow networks are shown graphically on Figures 2 and 3.

Table 2 summarizes the existing breakdown of vehicles by volume and percentages.

TABLE 1
EXISTING WEEKDAY TRAFFIC-VOLUME SUMMARY^a

Location	Weekday Traffic Volume ^b	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		Traffic Volume ^c	K Factor ^d	Directional Distribution ^e	Traffic Volume	K Factor	Directional Distribution
Route 113, east of Wheeler Street	14,780	956	6.5	64.9% EB	1,312	8.9	64.6% WB
Wheeler Street, north of Lowell Street	1,458	111	7.6	87.4% SB	117	8.0	72.6% NB
Wheeler Street, south of Lowell Street	2,276	192	8.4	78.1% SB	136	6.0	70.6% NB
Lowell Street, west of Wheeler Street	1,097	82	7.5	65.9% EB	47	4.3	57.4% WB
Route 110, east of Wheeler Street	16,139	1,081	7.0	53.5% EB	1,398	8.7	53.0% EB
Hillside Drive, north of Route 110	827	68	8.2	61.8% NB	30	3.6	53.3% SB

^aTwo-way traffic volume

^bDaily traffic expressed in vehicles per day.

^cExpressed in vehicles per hour.

^dPercent of daily traffic volumes which occurs during the peak hour.

^ePercent of peak-hour volume in the predominant direction of travel.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

TABLE 2
EXISTING VEHICLE CLASSIFICATION SUMMARY^a

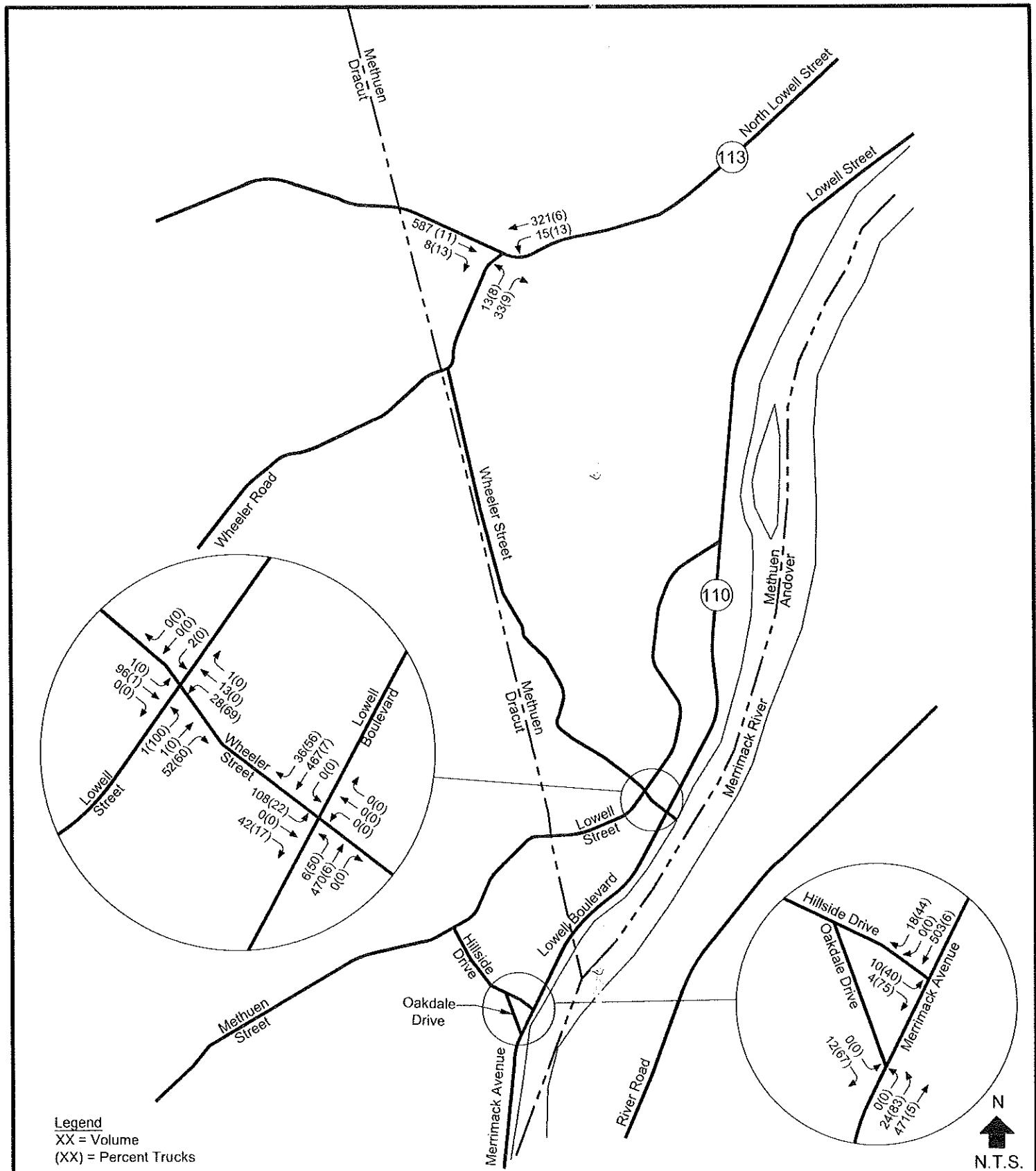
Location	Daily Traffic Volume ^b	Classification ^c					
		Bicycles	Motorcycles	Cars	Light Trucks	Buses	Heavy/Articulated Trucks
Route 113, east of Wheeler Street	14,780	2 (0.0%)	63 (0.4%)	11,388 (77.1%)	2,054 (13.9%)	68 (0.5%)	1,205 (8.1%)
Wheeler Street, north of Lowell Street	1,458	3 (0.2%)	9 (0.6%)	1,310 (89.9%)	107 (7.3%)	2 (0.1%)	27 (1.9%)
Wheeler Street, south of Lowell Street	2,276	1 (0.0%)	12 (0.5%)	1,492 (65.6%)	217 (9.5%)	2 (0.1%)	552 (24.3%)
Lowell Street, west of Wheeler Street	1,097	4 (0.4%)	4 (0.4%)	431 (39.3%)	112 (10.2%)	0 (0.0%)	546 (49.8%)
Route 110, east of Wheeler Street	16,139	15 (0.1%)	191 (1.2%)	13,319 (82.5%)	1,526 (9.5%)	72 (0.4%)	1,016 (6.3%)
Hillside Drive, north of Route 110	827	2 (0.2%)	3 (0.4%)	384 (46.4%)	156 (18.9%)	1 (0.1%)	281 (34.0%)

^aTwo-way traffic volume.

^bDaily traffic expressed in vehicles per day.

^cNumber of Vehicles (Percent of Total Vehicles).

While all of the observed truck origins and destinations are not known, The Brox properties in Dracut abut the Methuen City Limits and are zoned industrial. With the exception of the Industrial zone, Methuen Street in Dracut is zoned (R-1 and R-3) and developed as residential. As such, it is very likely that the trucks using Wheeler Street are all associated with the Brox facility in Dracut. Any heavy commercial vehicles currently requiring access to Methuen Street for destinations other than the Brox facility would likely use Varnum Ave or other Dracut roadway because it would provide more direct access to points west. Hillside Drive, a private way owned by Brox (based on the review of available assessor's information), was observed to have a large volume of truck traffic.



Legend

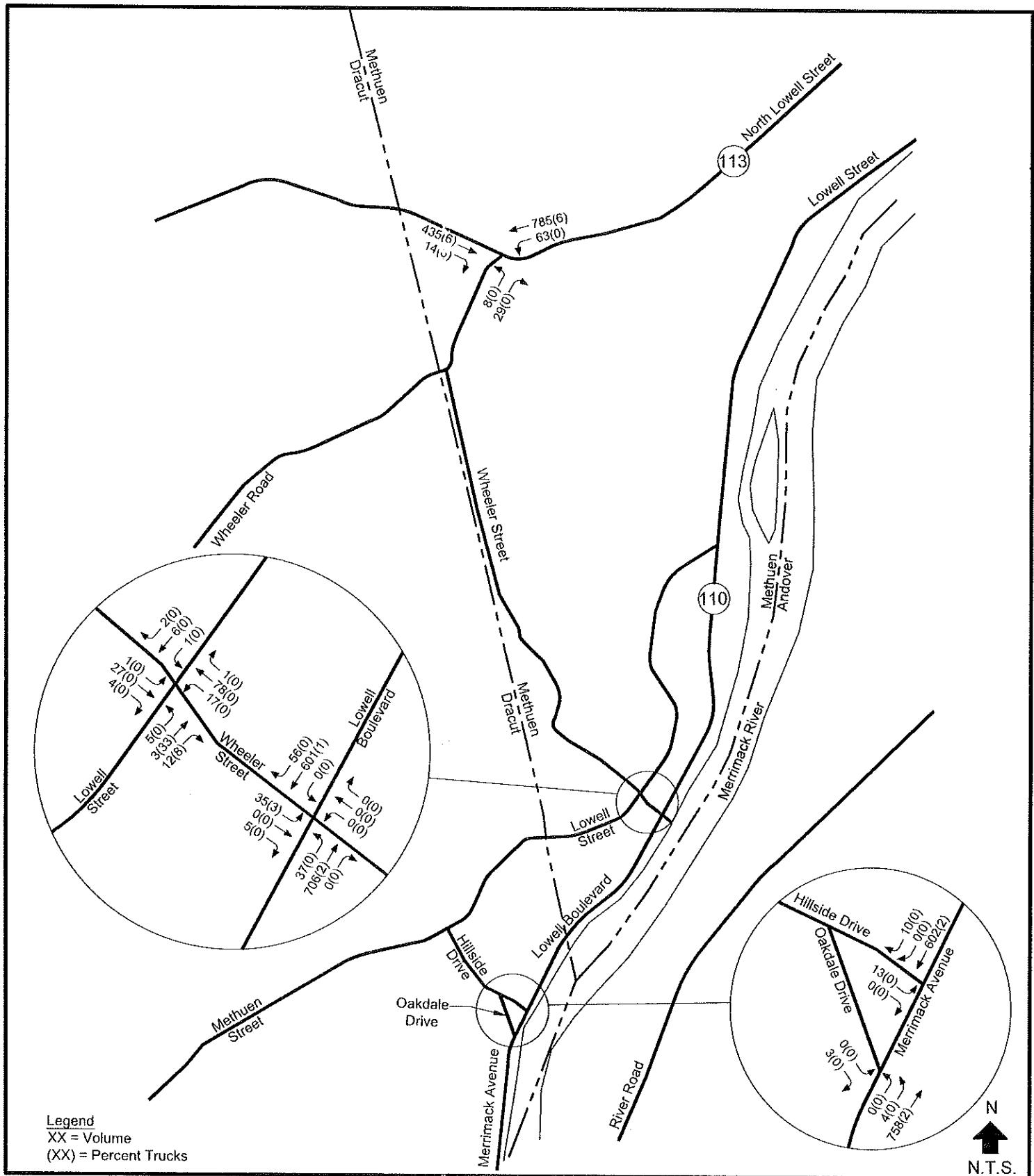
BAYSIDE ENGINEERING

600 Unicorn Park Drive ▲ Woburn, MA 01801
Phone: 781.932.3201 ▲ Fax: 781.932.3413

Wheeler Street HCVE
Methuen, MA

Figure 2

2016 Existing Weekday Morning Peak Hour Traffic Volumes



SECTION 4: ANALYSIS

ALTERNATE ROUTE

Heavy vehicles traveling south on Wheeler Street (south of Lowell Street) primarily come from Lowell Street, within the neighboring Town of Dracut. Almost all of these trucks are destined to Route 110.

For the proposed alternate route, trucks may travel west on Lowell Street approximately 1,400 feet to a left turn onto Hillside Drive; then approximately 1,700 feet for a total maximum route length of approximately 3,100 feet (0.65 mile). (See Attachment 3 – Alternate Route)

Swept-path truck turning movements were performed using AutoTurn software for the proposed alternate route. A large tractor trailer truck/tractor with dump trailer (WB-50) can complete the proposed alternate route within the limits of the travelled way. (See Attachment 4 – Truck Turning Movements).

With an exclusion on the southerly section of Wheeler Street, trucks would potentially divert and use the northerly portion of Wheeler Street. This section of Wheeler Street is all residential and is a narrow and curvy road, not conducive to heavy truck traffic. As such, the truck exclusion should include the northerly section of Wheeler Street.

For the proposed alternate route, trucks may travel east on Route 110 to a left turn onto North Lowell Street for a total maximum route length of approximately 3.78 miles. (See Attachment 3 – Alternate Route)

EXCLUSION HOURS

Based on the nature of the factors that necessitate the truck exclusion, the proposed HCVE would be for 24 hours per day on Wheeler Street.

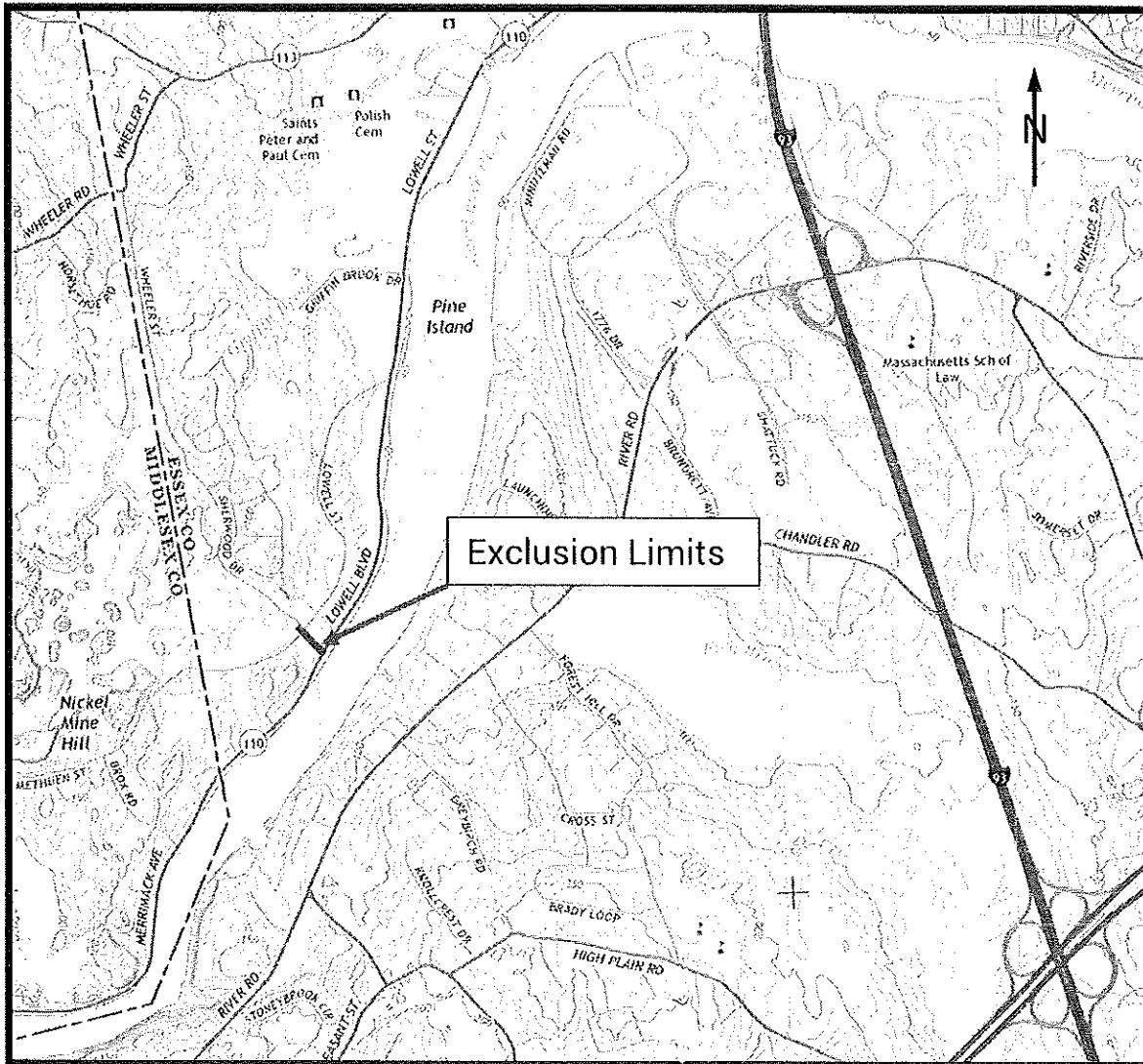
MUNICIPALITY STATEMENT

Based on the data presented in this report, the City of Methuen believes that the HCVE does meet the alternate route criteria of MUTCD Section 10A-9, as the truck volume significantly exceeds the volume criteria of 5%-8%. Direct evidence of roadway deterioration and tire tracks over sidewalks and wheelchair ramps on Wheeler Street were observed. As such, the HCVE is necessary to prevent deterioration of the roadway and sidewalks on Wheeler Street. Trucks using Wheeler Street come primarily from Lowell Street and are generated primarily by the neighboring Brox facility in Dracut and Brox has direct access to Route 110.

Further, with an exclusion on this southerly section of Wheeler Street, the City believes that trucks would divert and use the northerly portion of Wheeler Street. This section of Wheeler Street is all residential and is a narrow and curvy road, not conducive to heavy truck traffic. As such, the truck exclusion should also include the northerly section of Wheeler Street.

PROJECT LOCUS MAP

HEAVY COMMERCIAL VEHICLE EXCLUSION WHEELER STREET - CITY OF METHUEN



**BAYSIDE
ENGINEERING**

600 Unicorn Park Drive
Woburn, MA 01801

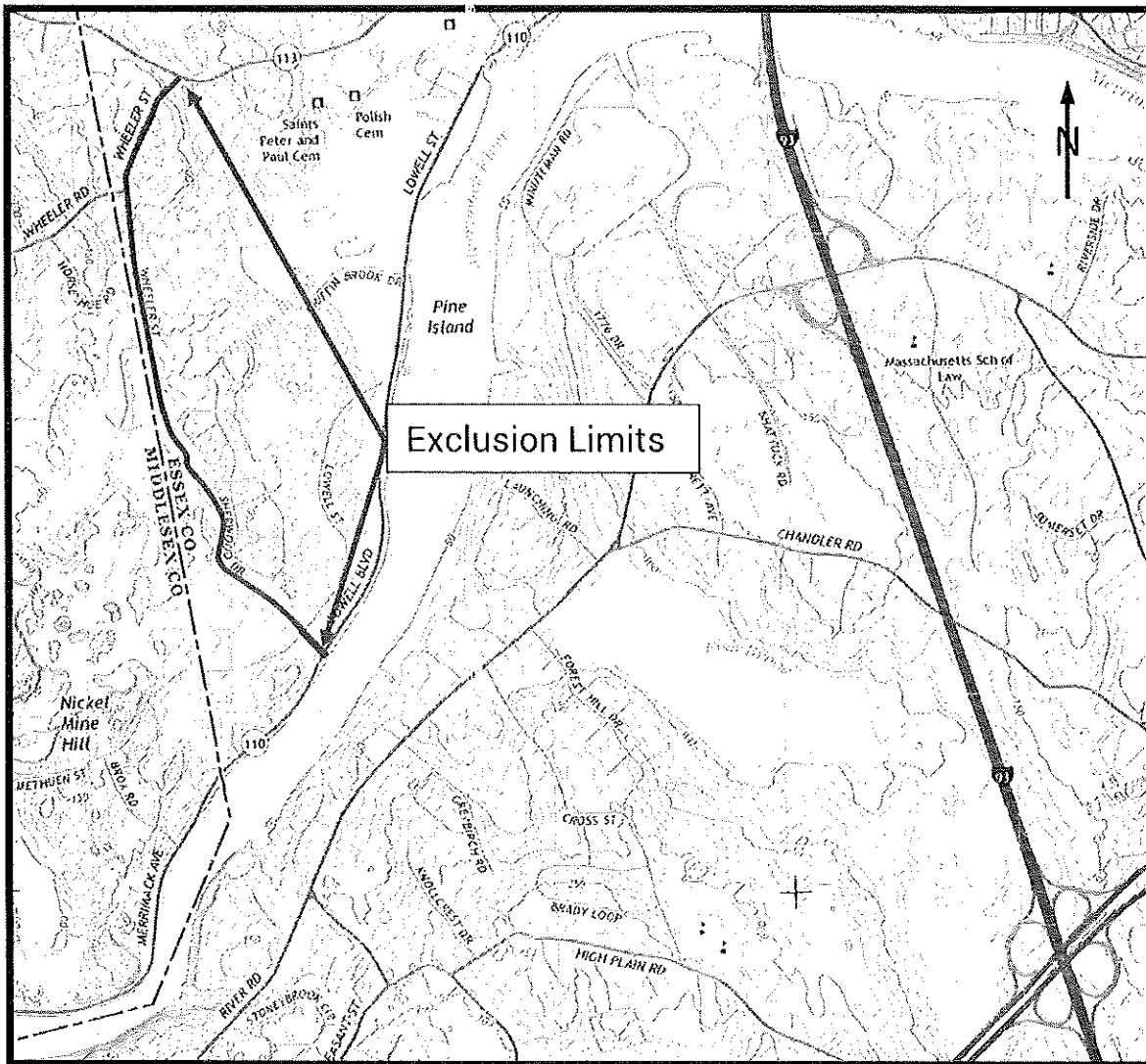
781-932-3201

www.baysideengineering.com

Attachment 1

PROJECT LOCUS MAP

HEAVY COMMERCIAL VEHICLE EXCLUSION WHEELER STREET – CITY OF METHUEN

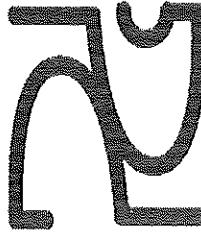


600 Unicorn Park Drive
Woburn, MA 01801

781-932-3201

www.baysideengineering.com

Attachment 1



PRECISION DATA INDUSTRIES, LLC
Office: 508.875.0100 Fax: 508.875.0118
Email: datarequests@pdilc.com

Traffic Counts with Precision

PRECISION
D A T A
INDUSTRIES, LLC

Legend

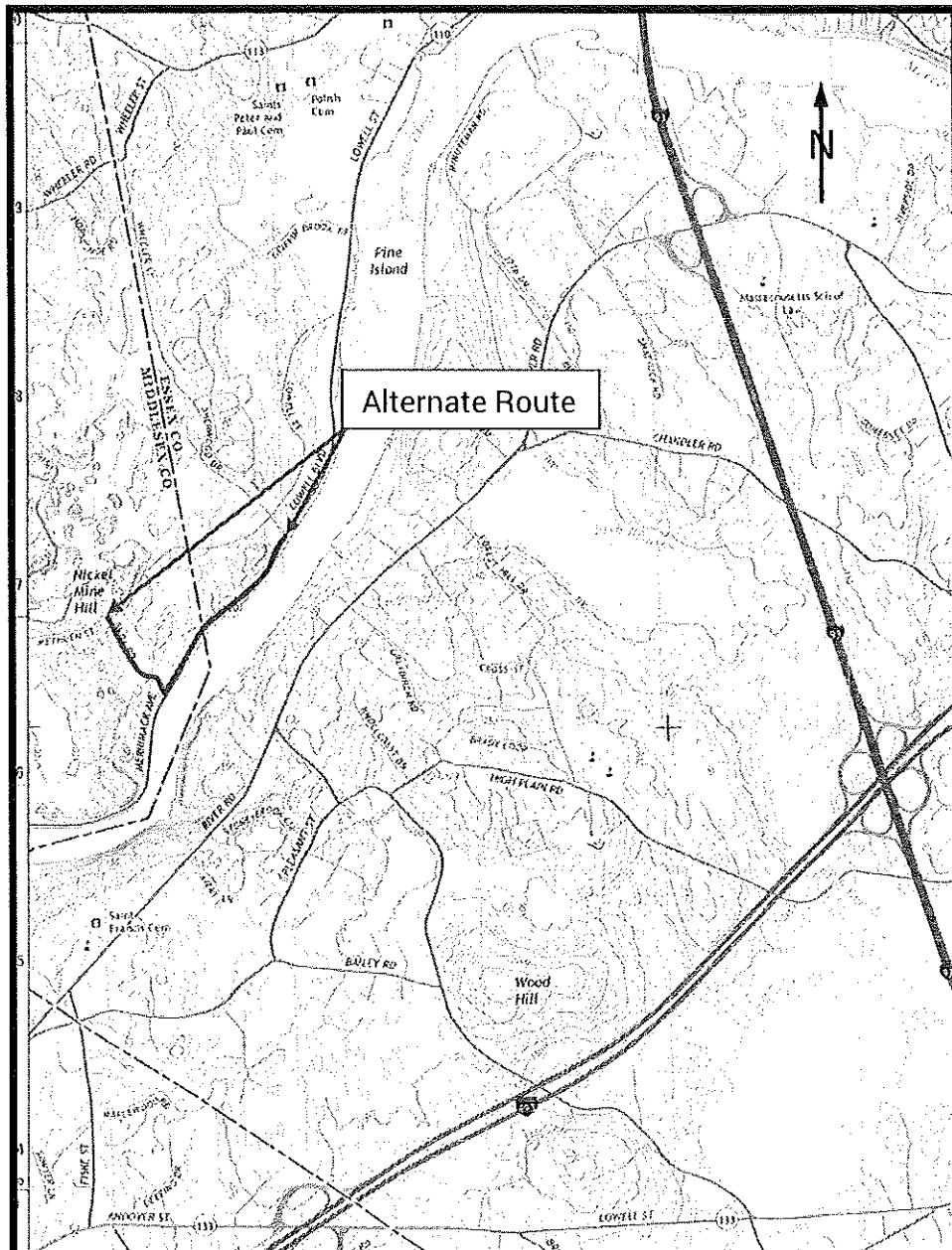


Google earth
©2014 Google

Client:	Engineer:	Site Code:	Date:	PDI Job Number:	City, State:
Bayside Engineering	K. Cram	2162179	Tues 8/9 thru Wed 8/10/16	165210	Methuen, MA

PROPOSED ALTERNATE ROUTE

HEAVY COMMERCIAL VEHICLE EXCLUSION
WHEELER STREET – HILLSIDE DRIVE
CITY OF METHUEN – 3,100 FEET (0.7 MILE)



 **BAYSIDE**
ENGINEERING

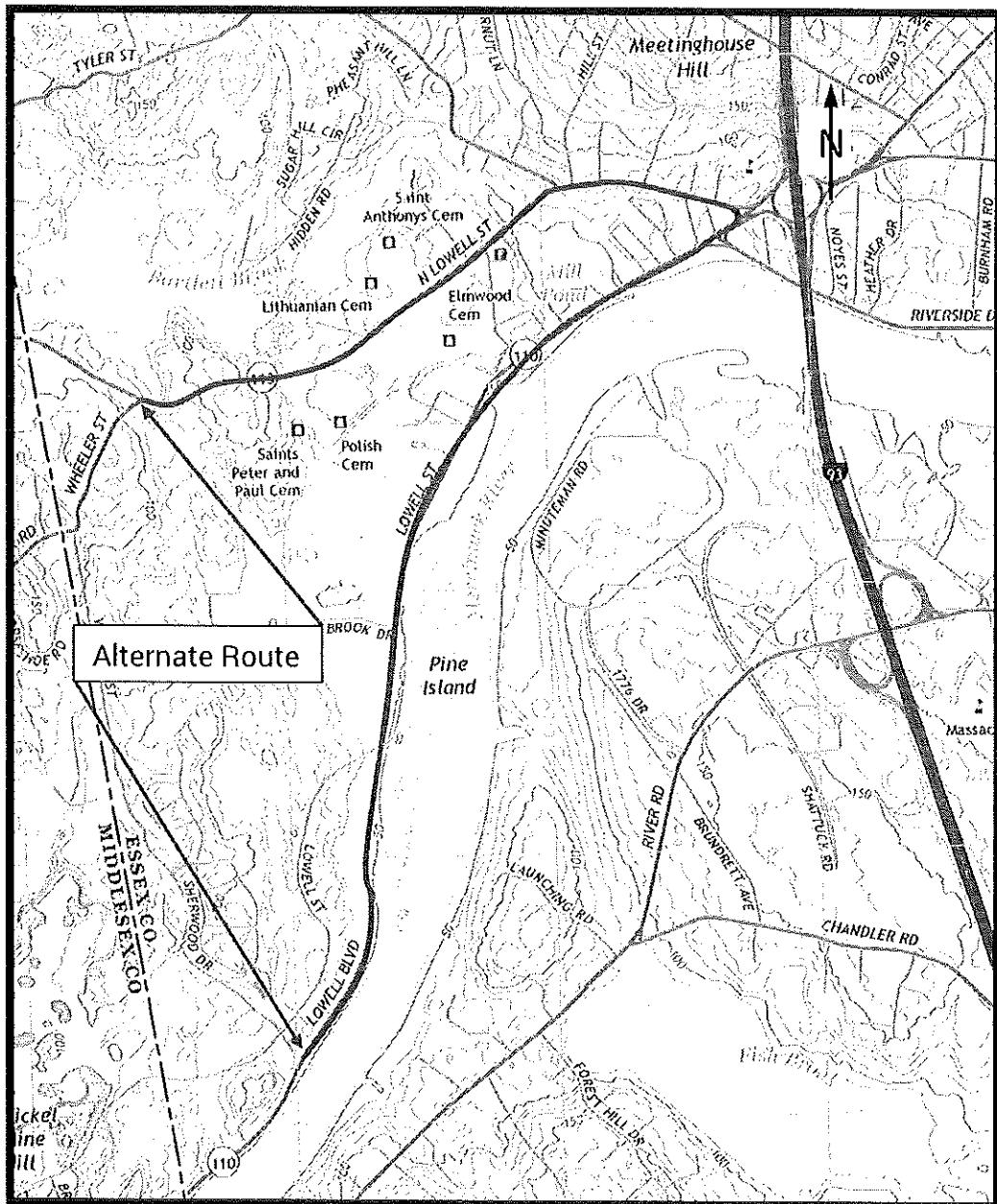
600 Unicorn Park Drive
Woburn, MA 01801

Attachment 3

781-932-3201
www.baysideengineering.com

PROPOSED ALTERNATE ROUTE

**HEAVY COMMERCIAL VEHICLE EXCLUSION
WHEELER STREET - HILLSIDE DRIVE
CITY OF METHUEN - 3.78 MILES**

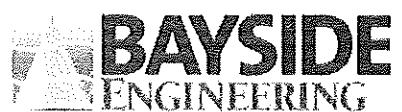


The logo for Bayside Engineering features a stylized graphic of a building or bridge on the left, composed of vertical lines and small circles. To the right of the graphic, the word "BAYSIDE" is written in a large, bold, black, sans-serif font. Below "BAYSIDE", the word "ENGINEERING" is written in a smaller, black, sans-serif font.

600 Unicorn Park Drive
Woburn, MA 01801

TRUCK TURNING MOVEMENTS

HEAVY COMMERCIAL VEHICLE EXCLUSION WHEELER STREET - CITY OF METHUEN



600 Unicorn Park Drive
Woburn, MA 01801

781-932-3201
www.baysideengineering.com

TRUCK TURNING MOVEMENTS

HEAVY COMMERCIAL VEHICLE EXCLUSION WHEELER STREET – CITY OF METHUEN



600 Unicorn Park Drive
Woburn, MA 01801

781-932-3201
www.baysideengineering.com

Heavy Commercial Vehicle Excitation – Wheeler Street – Melhutin



Photo No. 1 – Lowell Blvd. looking southwest at Wheeler Street

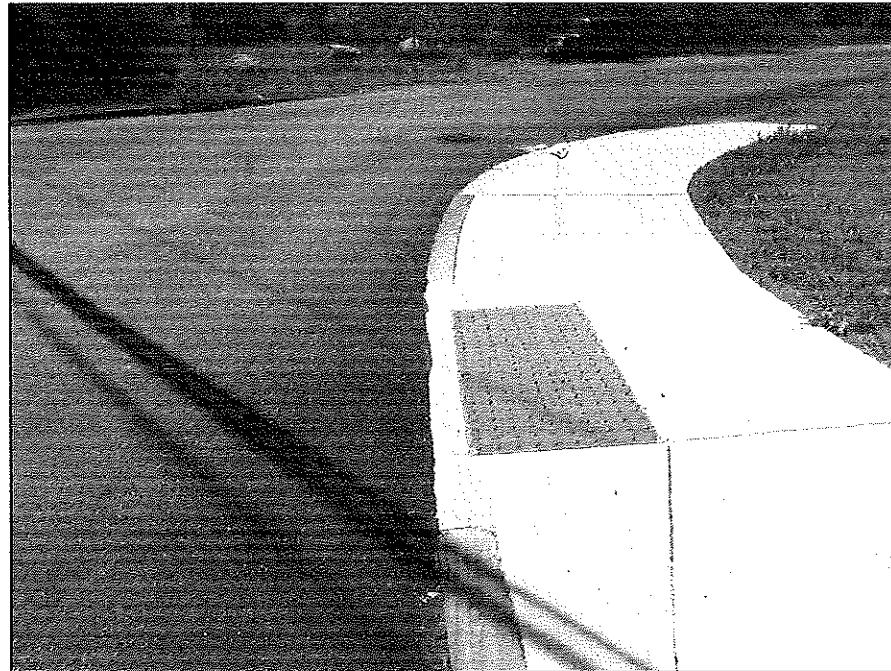


Photo No. 2 – Northeast corner of Wheeler Street – tire tracks on sidewalk and ramp

Attachment 5

Heavy Commercial Vehicle Exclosure – Wheeler Street – Methuen

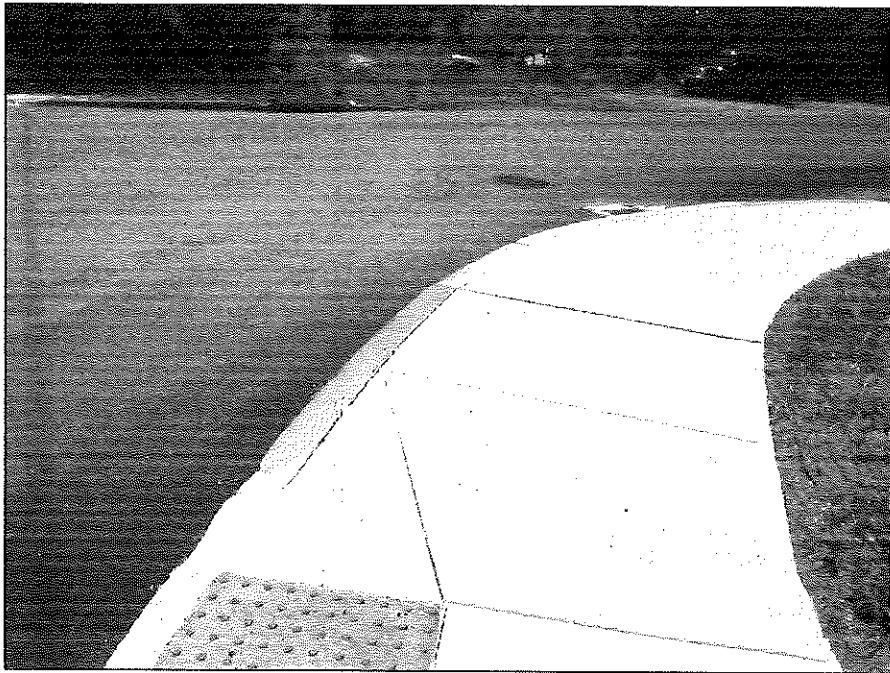


Photo No. 3 – Northeast corner of Wheeler Street – tire tracks on sidewalk and ramp

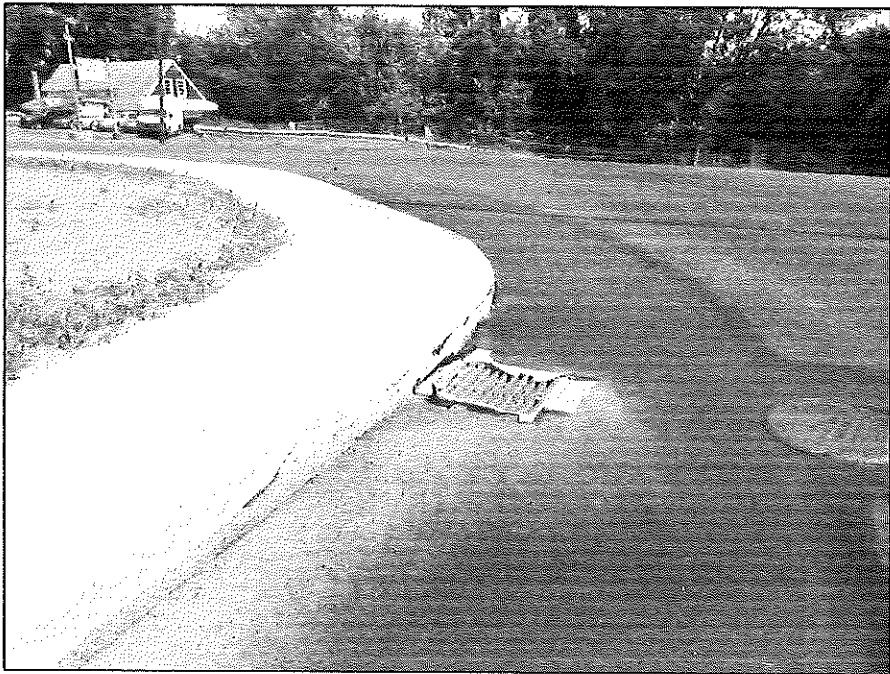


Photo No. 4 – Northeast corner of Wheeler Street

Heavy Commercial Vehicle Exclusion – Wheeler Street – Methuen



Photo No. 5 – Southwest corner of Wheeler Street – tire tracks on sidewalk

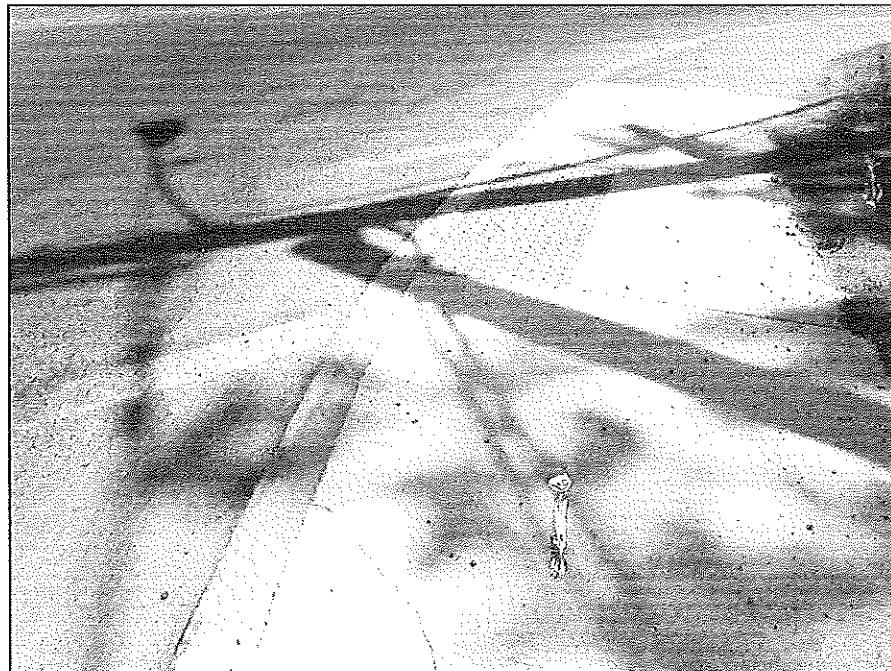


Photo No. 6 – Southwest corner of Wheeler Street – cracked sidewalk

Heavy Commercial Vehicle Exclusion – Wheeler Street – Methuen

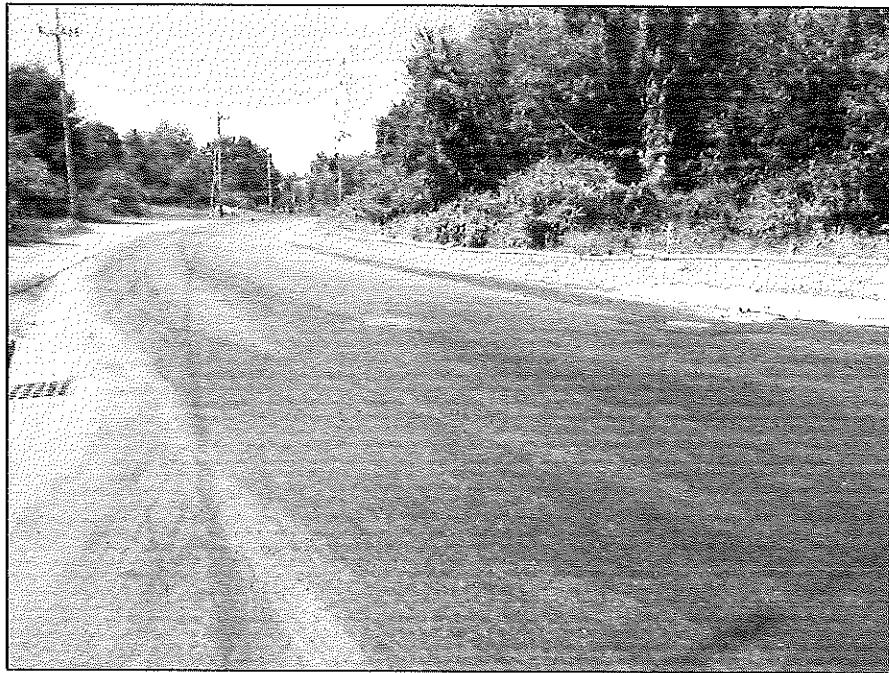


Photo No. 7 – Wheeler Street at Lowell Blvd looking northwest – pavement condition

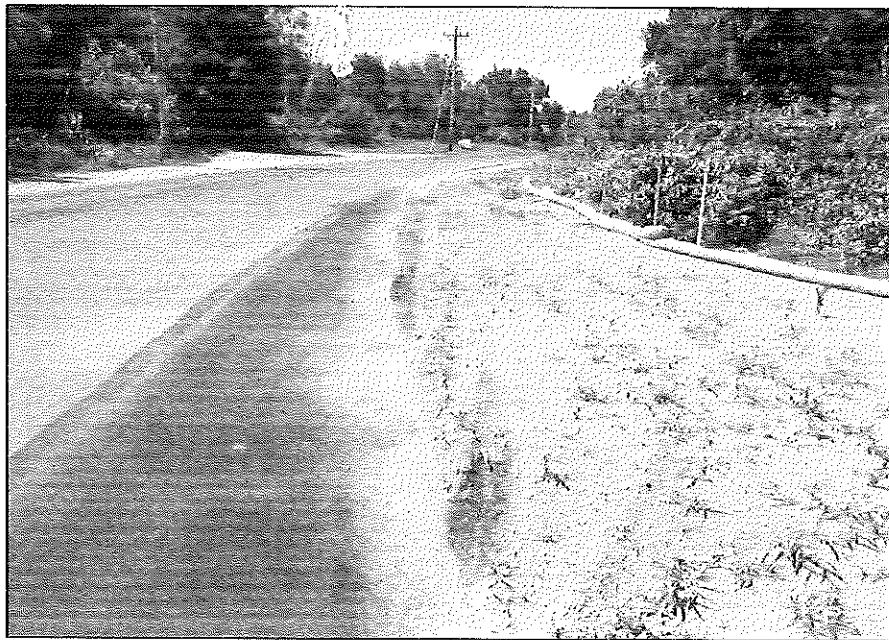


Photo No. 8 – Wheeler Street at Lowell Blvd looking northwest – tire tracks in loam

Heavy Commercial Vehicle Exclusion – Wheeler Street – Methuen



Photo No. 9 – Wheeler Street looking southeast at Lowell Blvd



Photo No. 10 – Wheeler Street looking southeast at Lowell Blvd – extensive shoulder use

Attachment 5

Heavy Commercial Vehicle Exclusion – Wheeler Street – Methuen

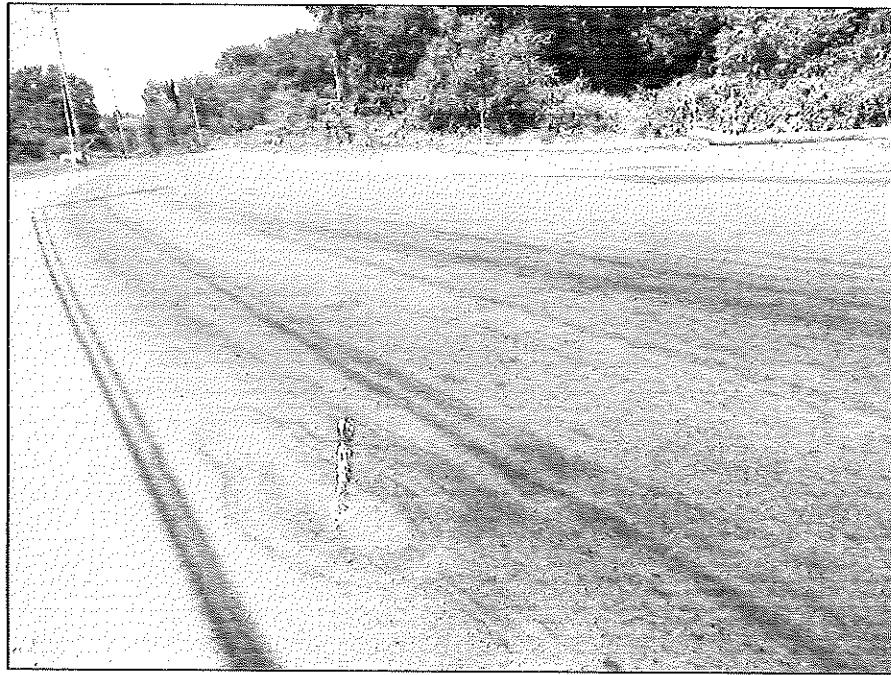
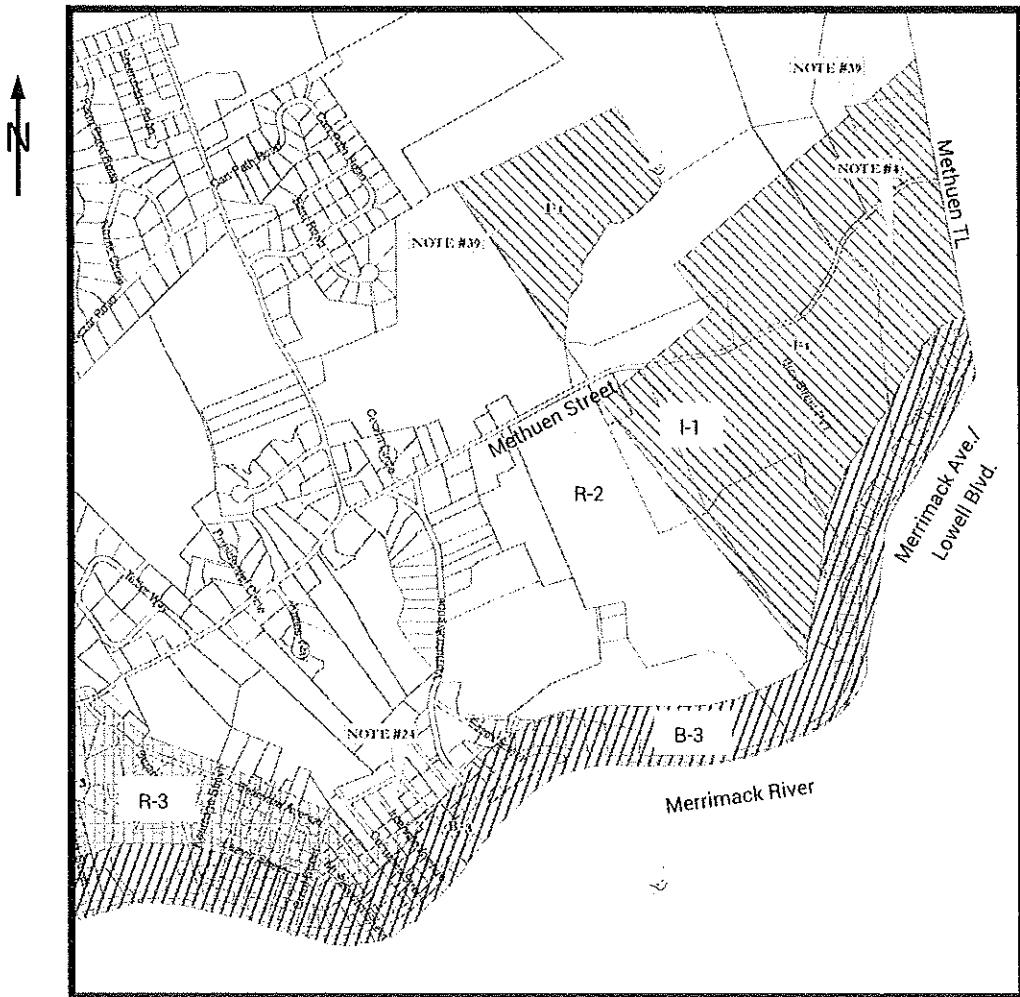


Photo No. 11 – Pavement condition – Wheeler Street looking northwest



Photo No. 12 – Wheeler Street looking northwest at Lowell Street intersection

**HEAVY COMMERCIAL VEHICLE EXCLUSION
WHEELER STREET - CITY OF METHUEN**



600 Unicorn Park Drive
Woburn, MA 01801

