Connecticut Department of Transportation

Local Transportation Capital Improvement Program Application

Municipality:	Borough of Naugatuck	RPO:	Naugatuck Valley COG
Route/Road:	North Main Street (Calvin Street to City Hill Street)		
Project Title:	North Main Street Reconstruction		
Roadway Functional Classification (if applicable):	Urban Minor Arterial		
RPO Contact Information:	Mark Nielsen		Assistant Director
	Name		Title
	203-757-0535		mnielsen@nvcogct.org
	Phone Number		Email
Municipal Contact Information:	James R. Stewart, P.E. & L.S.		Director of Public Works
	Name		Title
	203-720-7071		jstewart@naugatuck-ct.gov
	Phone Number		Email

The applicant must answer the questions below which are intended to address basic issues about existing conditions, project management, project costs, impacts on private property, utilities, wetlands, etc. **You may provide your answer in the space provided below or submit separate answer sheets. It is important that the application be as thorough as possible as missing information will delay the review process. All project- related sections must be completely filled out or the application will be returned and will require resubmittal.**

The intent of the application is to establish eligibility, service life, and to ensure the municipality is considering all pertinent aspects associated with major infrastructure improvements consistent with the purpose and need of the project.

(A) Project Information

1. Select the type of proposed improvement (select all that apply):

Please note: The entire application must be completed for all projects in addition to any necessary supplemental sections (K through P) as determined by the type of project.

- ☐ Roadway Geometric Improvement
- ☑ Stand-Alone Sidewalk Construction
- ☐ Bicycle/Pedestrian Improvement, including Multi-Use Trail Facilities
- ☐ Intersection Improvement

  Provide additional information as required in section K
- ☐ Bridge Rehabilitation/Replacement

  Provide additional information as required in section L
- ☑ Major Drainage Improvement

  Provide additional information as required in section M
- ☑ Pavement Structure Improvement

  Provide additional information as required in section N
- ☐ Traffic Signal Replacement/Upgrade/New Installation/Coordination

  Provide additional information as required in section O
- ☐ Other (please specify): _____

  Provide additional information as required in section P

2. Describe the purpose and need of the project. Please include specific information and describe in enough detail for those unfamiliar with the project. Provide a range of digital photographs to document the existing conditions and support the purpose and need.

North Main Street extends northeasterly from Calvin Street to Union Street. It is a two lane urban minor arterial and serves mostly residential uses, a church and some commercial uses along the corridor. The existing pavement surface is in poor condition with an average Road Surface Rating (RSR) of 51 within the project limits. Existing sidewalks are deteriorated and there is little to no curb reveal. Road drainage is limited and inadequate and ponding of water is a significant problem during heavy rain events. Existing trolley tracks located beneath the pavement are reflecting through the surface and must be removed.

3. Provide a project description and specifically describe how the proposed improvements address the purpose and need. What alternates were considered?

   The existing pavement is in poor condition and deteriorating and the storm drainage is inadequate. Since a new storm drainage systems is proposed, and the existing trolley tracks and concrete base must be removed, full depth reconstruction is recommended which includes 2.5" HMA S0.375 on 2.5" HMA S0.5 on a 10" subbase. New granite curbing and concrete sidewalks on the east side of the road and areas of driveway reconstruction are proposed.

4. Provide concept plans of the proposed improvement. The plans must be sufficiently developed and provide enough detail on a scaled drawing (including aerial photography base mapping if possible) to identify the following:

   a. Project location

   b. Limits of project

   c. Approximate limits and extent of any pavement widening or realignment

   d. Proposed number of lanes, widths, and arrangements

   e. Approximate limits and extent of any anticipated ROW acquisitions (based on available ROW information from Assessors maps, GIS data, etc.)

   f. Structures (i.e. Retaining walls, bridges)

   g. Watercourses

   h. Typical Cross Section including lane and shoulder widths, pavement structure, etc.

5. Have the improvements at this location been submitted to the Department previously for funding? ☑ No ☐ Yes

   If yes, when?_____

6. Does the project impact any State-owned Facilities (i.e. roads, bridges, etc.)? ☑ No ☐ Yes

   If yes, describe the impacts:

7. In the area of the project, are there any known proposed developments?

☑ No ☐ Yes

If yes, describe the proposed developments:

8. Design Standards to be used:

☑ Established municipal standards

☑ AASHTO Policy on Geometric Design of Highways and Streets

☑ Connecticut Department of Transportation Highway Design Manual

☐ AASHTO LRFD Bridge Design Specifications and Connecticut Department of Transportation Bridge Design Manual

☐ Other, please specify: _____

(B) Rights of Way

1. Are any Right of Way (ROW) impacts anticipated? ☐ No ☑ Yes

If yes, describe the nature, extent, and type of impacts:

Temporary rights will be required to install the concrete sidewalk and reconstruct driveways. No permanent easements or impacts are anticipated.

2. If ROW acquisitions will be required, who does the municipality plan to have perform acquisition activities?

☑ Municipal staff ☐ Consultant hired by municipality ☐ State

3. If ROW acquisitions are to be performed by the Municipality's staff or their consultant, will the municipality be seeking reimbursement for ROW costs?

☑ No ☐ Yes

(C) Utilities

1. List all utilities within the project area, including their owners.

Overhead	Underground
Frontier Communications (Cable)	Eversource & Spectra Energy(Gas)
Eversource (Electric)	Eversource (Electric)
Comcast (Cable)	Comcast (Cable)
	The Connecticut Water Company

2. Are any utility impacts anticipated? ☑ No ☐ Yes

   If yes, explain the nature and extent of the impacts:

   See Appendix A for Utility Correspondence.

   Note: Costs associated with utility betterments/upgrades that are not required to accommodate the proposed transportation improvement are not eligible project costs.

3. Have the utility companies identified any plans to expand or improve existing utilities that would that would compromise the service life of the proposed improvements?

   ☐ No ☑ Yes

   If yes, describe any proposed improvements and their schedule:

   Eversource Gas will be replacing their gas main in the summer of 2016. CT Water recently completed the replacement of their water main in the summer of 2015.

(D) Storm water drainage system and under drains

1. Do any existing storm water drainage problems exist? ☐ No ☑ Yes

   If yes, describe the problem(s):

   There are limited catch basins and storm drainage systems that currently exist within the project limits that are inadequate and can't handle major storm events. Ponding water during heavy rainfalls is a significant problem, which would be vastly improved with more catch basins and larger diameter pipe to receive the flow.

2. Is any storm water drainage system work anticipated, including any new or modified drainage outlets? ☐ No ☑ Yes

If yes, explain the nature and extent of the improvements:

New storm drainage systems, including catch basins and pipes, will be installed as part of this project. Existing drainage outlets will be utilized and not affected.

3. Are there any existing watercourse crossings that are proposed to be modified, rehabilitated, or replaced as part of the project? ☑ No ☐ Yes

If yes, indicate the type of improvement needed and the reason for it. Please also indicate if any existing watercourse crossings have inadequate hydraulic capacity:

(E) Rail Crossings

1. Are there any railroad crossings that are likely to be impacted as part of the project?

☑ No ☐ Yes
☐ At-grade
☐ Grade separated

If yes, describe impacts and any necessary modifications:

There are NO existing railroad crossings that will be impacted, but the existing trolley tracks and associated concrete base, beneath the existing pavement, will be removed as part of this project.

(F) Pedestrian/Bicycle Safety and Mobility

1. Complete and attach the Department's Bicycle and Pedestrian Needs Assessment Form to this application (a copy of this form is included in Appendix C). In accordance with Connecticut General Statutes, Section 13a – 153f, and the Department's focus on accommodating non-motorized travel modes, accommodation of all users shall be a routine part of the planning, design, construction, and operating activities of all highways. The need for inclusion of accommodations for bicyclists and pedestrians, including those with disabilities, must be reviewed for every project, regardless of funding source.

See Appendix B for Department's Bicycle and Pedestrian Needs Assessment Form.

(G) Traffic

The information below needs to be provided or reviewed (as specified) by the designer for all project types except for stand-alone sidewalk projects and bicycle/pedestrian improvements, and multi-use trail facilities that do not involve pedestrian crossings

1. Volumes - see Appendix C

   Provide existing and 20-year Projected ADTs and Turning Volumes. Refer to the Preliminary Engineering/Preliminary Design section for guidance on traffic volumes.

2. Accident Experience

   A total of 18 non-life-threatening accidents have occurred since January 2013. All accidents involved two vehicles, except two which were fixed object collisions. See Appendix B for Accident Reports.

   Provide a summary of accident experience (most current three years data. An accident diagram is preferred.)

3. Traffic Signals

   Review the existing traffic signal plans for projects involving signalized intersections

4. Speed Data

   Provide 85th percentile speeds in the project area - see Appendix C

   Provide all posted speed limits in the project area - Posted Speed Limit is 25 mph.

(H) Environmental Resource Involvement

Refer to Application Process/Preliminary Project Submittals - Information Provided by the Department for more information.

1. Parks, Cemeteries, Historic Structures

   a. Are there any parks, cemeteries, or historic structures that are likely to be affected by the project? ☑ No ☐ Yes

      If yes, describe the type and extent of the anticipated impact.

2. Wetlands

    a. Are there any wetlands that are likely to be affected by the project?

    ☑ No ☐ Yes

    If yes, describe the type and extent of the anticipated impact.

3. Hazardous or Contaminated Sites

    a. Has the potential for hazardous or contaminated sites and materials in the project area been investigated? ☑ No ☐ Yes

    If yes, describe the type and extent of the anticipated impact.

(I) Public Involvement

Refer to Preliminary Engineering/Project Design - Public Involvement section for more information.

1. Has public involvement been conducted? ☑ No ☐ Yes

    If yes, was there significant public opposition to the project? Describe below:

(J) Cost Estimate - See Appendix D for Cost Estimate.

Attach a preliminary cost estimate identifying:

1. Rights of Way
2. Approximate quantities and assumed unit prices of the major contract items
3. An allowance for minor items

4. Standard lump sum items (i.e. clearing & grubbing, mobilization, construction staking, maintenance & protection of traffic) as applicable

5. Eligible Utility Relocation Costs (in accordance with CGS13a-98f)

6. Incidentals to Construction, i.e. construction inspection, materials testing (10% of items 2, 3, and 4 above)

7. Contingencies (10% of items 2, 3, 4 above)

Refer to the Department's most current Cost Estimating Guidelines for cost estimate guidance or use town generated unit prices. The anticipated costs for each phase of the project shall be well documented and based on reasonable anticipated costs.

The guidelines are located at: http://www.ct.gov/dot/cwp/view.asp?a=3194&q=484094

ADDITIONAL INFORMATION TO BE PROVIDED BASED ON IMPROVEMENT TYPE SELECTED IN SECTION (A)1:

(K) Intersection Improvements

Capacity Analyses (For build and no-build conditions using existing and projected traffic volumes).*

(L) Bridge Rehabilitation/Replacement

Latest Condition Report

(M) Major Drainage Improvement

Material, Age, Hydraulic adequacy assessment of existing drainage system (Condition Report, post-cleaning is preferred) - Existing condition survey in accordance with CDOT Drainage Manual requirements will be provided as part of Preliminary Design.

(N) Pavement Structure Improvement

The level of investigation will be dependent upon the proposed improvements. Cores or test pits must be performed such that a representative sample of the existing roadway condition is obtained. If varying pavement conditions exist along the roadway indicating the possibility of different pavement conditions, a test pit should be performed in each roadway section. Pavement thickness and type, sub-base thickness and type, and the presence of fines and/or groundwater should be noted. Attach the data obtained. If full depth reconstruction is proposed, cores or test pits are not required.

Approximate percentage of heavy vehicles: N/A

What is the existing pavement type, condition, and thickness?

The existing bituminous concrete pavement varies in thickness and in some areas is placed on the concrete base which supports the old trolley tracks and in other areas on varying thicknesses of gravel subbase given the numerous utility trenches. Significant pavement cracking and deterioration is visible.

What is the anticipated pavement design? Describe the type and depth of each course including the base that is suitable for the ADT and percentage of heavy vehicles. Does it meet current design standards? Describe the cross-section (i.e. lanes and shoulder widths, etc.).

The proposed full-depth roadway section will be 2.5" HMA S0.375 wearing course on 2.5" HMA S0.5 binder course on a 10" subbase. The two travel lanes will be 10' wide with 7'-8' wide on-street parking on both sides of the road. A 2'-8' shoulder will be provided where there is no on-street parking.

Describe how the service life requirement for the proposed pavement design was determined:

The design service life is 20 years, in accordance with LOTCIP Guidelines. This was confirmed using CDOT's Flexible Pavement Design Calculator which determines the pavement structural number (SN) required for the Equivalent Single Axle Loads (ESALs). See Appendix E for pavement design.

(O) Traffic Signal Replacement/Upgrade/New Installation/Coordination

Who is/will be responsible for ownership, maintenance, and electrical costs (N/A)

Age of existing signals - N/A

Capacity Analyses (For build and no-build conditions using existing and projected traffic volumes).* - N/A

Warrant Analysis for new signals - N/A

(P) Other

To be determined based on type of improvement proposed

***Capacity Analysis:** For the purposes of this application, a simplified analysis may be performed for signalized intersections that do not require detailed assumptions, proprietary software or specialized traffic engineering skills. The “Quick Estimation Method” is described in detail in the 2010 Highway Capacity Manual, with accompanying worksheets that can be completed by hand. A brief description of the method is also described in Section 3.3.6 of the FHWA Signal Timing Manual, where it is referred to as a “Critical Movement Analysis.” The relevant section of the FHWA publication can be accessed at: http://ops.fhwa.dot.gov/publications/fhwahop08024/chapter3.htm#3.3. This simplified analysis will yield an approximate critical volume/capacity ratio that can be used to assess overall operation of the intersection. The build and no-build conditions should be analyzed for the existing and projected traffic volumes.

APPLICATION SUBMISSION

This application and supporting documents must be submitted by the municipality to their RPO. At such time when the application is to be forwarded to the Department of Transportation by the RPO, it must be addressed to:

Mr. Hugh H. Hayward, P.E.
Department of Transportation
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131-7546

Prepared by: Michael Joyce, P.E. (Milone and MacBroom, Inc.) Date: 6/30/16

Name & Title of Responsible P.E. (Municipal or Consultant)

_____

Signature

Reviewed/Recommended by: Mayor N. Warren "Pete" Hess, III Date: _____

Name & Title of Municipal Chief Administrative Officer

_____

Signature

Endorsed/Recommended by: Richard T. Dunne, Exec. Director Date: _____

Name & Title of RPO Executive Director (or equivalent)

_____

Signature

APPENDIX A

UTILITY CORRESPONDENCE

Paul DeStefano

From: Paul DeStefano
Sent: Thursday, May 05, 2016 4:35 PM
To: 'Richard_Frey@cable.comcast.com'; 'eclark@lightower.com'; 'raymond.puzemis@ftr.com'; 'NUMAPREQUEST@EVERSOURCE.COM'; befranzese@spectraenergy.com; 'dlesnieski@ctwater.com'
Cc: 'barry.lashley@eversource.com'; 'bret.factora@eversource.com'
Subject: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT
Attachments: LocationMap.pdf; Ex.1.pdf; Ex.2.pdf; Ex.3.pdf; Ex.4.pdf

To Whom It May Concern,

Milone and MacBroom Inc. is currently completing a LOTCIP Application for the Reconstruction of North Main Street in Naugatuck, CT. If accepted, the design will be advanced quickly and preliminary design plans will be developed and submitted as soon as possible.

A project location map and survey plans have been attached for your convenience. The existing underground utilities shown on the plans are based on CBYD markings that were surveyed. Please review the plans and verify the accuracy of your facilities, as shown.

Please provide us with available information regarding the horizontal and vertical locations and sizes of your facilities, which may exist within or adjacent to the project area. If your utilities are not located within or adjacent to the site, please state that in your response. The utility locations provided will be shown on our plans and will be labeled "approximate."

In addition to providing information regarding the horizontal and vertical locations and sizes of your facilities we are also asking that you please evaluate the conditions of your facilities. Please notify us in writing of any short or long-term plans you have to upgrade or modify your facilities so that we can coordinate our work.

Please do not hesitate to call if you have any questions. We will continue to keep you informed as the design develops and would be happy to meet with you to discuss the project. As always, your cooperation is greatly appreciated.

Paul DeStefano, P.E.
Project Engineer, Transportation

MILONE & MACBROOM
99 Realty Drive / Cheshire, Connecticut 06410
203.271.1773 Ext. 289 / 203.272.9733 (Fax)
www.miloneandmacbroom.com

Paul DeStefano

From: robert.catino@eversource.com on behalf of numaprequest@eversource.com
Sent: Monday, May 09, 2016 8:13 AM
To: Paul DeStefano
Subject: Gas Distribution Mapping, EMR-35542
Attachments: EMR35542_5.pdf; EMR35542_4.pdf; EMR35542_3.pdf; EMR35542_2.pdf; EMR35542_1.pdf

EVERSOURCE ENERGY

Dear Paul,

Site: North Main St, Naugatuck, CT

We have received and researched your request for copies of our underground gas facilities in your area of interest. Attached is a PDF file of the requested area which shows our current as-built mapping status for our gas facilities. Mapping conditions in the field can change from day to day which may not be currently indicated on our mapping system and therefore contractors are urged to contact Call Before You Dig (811 or CBYD.com) prior to construction. If you should have any further questions regarding this request please feel free to contact me.

The data contained on this attachment shall be considered proprietary to Eversource Energy and user (which is defined as any person or entity who has received this data through sale, purchase, exchange, gift, or otherwise) and shall keep it in confidence and shall not furnish or disclose it to any third party without the prior written permission of Eversource. Information shown is not guaranteed and Eversource Energy assumes no responsibility. Contractors are urged to call Eversource Energy for further information.

Please make note of our new email address numaprequest@eversource.com

Thank You

Robert Catino
GIS Technician
Eversource
107 Selden St.
Berlin, CT 06037
Phone: (860)-665-5833

Paul DeStefano

From: Quint, Fred <FQuint@lightower.com>
Sent: Monday, May 09, 2016 8:38 AM
To: Paul DeStefano
Cc: Clark, Eric
Subject: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT

Thank you for your request, Lightower Fiber Networks **Does Not** have utilities at those locations.

Fred Quint
Fiber Construction Engineer
Lightower Fiber Networks
Cell: 585-694-4544
Email: fquint@lightower.com
www.lightower.com

Paul DeStefano

From: darlene.lewoc@eversource.com on behalf of numaprequest@eversource.com
Sent: Tuesday, May 10, 2016 7:53 AM
To: Paul DeStefano
Subject: Electric Mapping, EMR-#5553
Attachments: EMR #5553.pdf; AutoCAD 8.5 x 11 SYMBOL LIBRARY-.pdf

EVERSOURCE ENERGY

Paul DeStefano ,

Site: N. Main St. Reconstruction, Naugatuck, Ct.

We have received and researched your request for copies of our underground electric facilities in your area of interest. Overhead Exists. Attached is a PDF file of the requested area which shows our current as-built mapping status for our electric facilities. Mapping conditions in the field can change from day to day which may not be currently indicated on our mapping system and therefore contractors are urged to contact Call Before You Dig (811 or CBYD.com) prior to construction. If you should have any further questions regarding this request please feel free to contact me.

The data contained on this attachment shall be considered proprietary to Eversource Energy and user (which is defined as any person or entity who has received this data through sale, purchase, exchange, gift, or otherwise) and shall keep it in confidence and shall not furnish or disclose it to any third party without the prior written permission of Eversource. Information shown is not guaranteed and Eversource Energy assumes no responsibility. Contractors are urged to call Eversource Energy for further information.

Please make note of our new email address numaprequest@eversource.com

Thank You

Darlene Lewoc
GIS Technician
Eversource
107 Selden St.
Berlin, CT 06037
Phone: (860)-665-3938
Fax: (860)-665-4545

Paul DeStefano

From: Chris Wojciak <CWojciak@ctwater.com>
Sent: Tuesday, May 10, 2016 9:45 AM
To: Paul DeStefano
Cc: Dan Lesnieski
Subject: North Main St, Naugatuck
Attachments: North Main Street, Naugatuck - As-Built 10-13-15.pdf

Paul,

Attached are the as builts for CT Water's recently completed main replacement project on North Main Street in Naugatuck. Please contact me if you have any questions.

Respectfully,

Christopher Wojciak, P.E.
Infrastructure Rehabilitation Supervisor

The Connecticut Water Company
25 North Road
East Windsor, CT 06088

Phone – 860-292-2840
Cell – 860-712-8618
Fax – 860-627-6344
cwojciak@ctwater.com

Paul DeStefano

From: McCallister, Joseph (Contractor) <Joseph_McCallister@cable.comcast.com>
Sent: Friday, May 13, 2016 8:55 AM
To: Paul DeStefano; Frey, Richard
Cc: Quint, Ted; John, Lori; Camacho, Ed
Subject: RE: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT
Attachments: Naugatuck_NorthMainSt.pdf

Hello Paul,
Attached are maps of the area you requested with all existing Comcast underground infrastructure highlighted. This documentation is the most current we have on file to date. Please feel free to contact Ted Quint, our Design Supervisor at Ted_Quint@cable.comcast.com or myself if you have any questions or need additional information.

Sincerely,

Joe McAllister
Joseph_McCallister@cable.comcast.com

From: John, Lori
Sent: Monday, May 09, 2016 7:43 AM
To: McCallister, Joseph (Contractor)
Subject: FW: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT

HI,
Here's a survey.

From: Camacho, Ed
Sent: Friday, May 06, 2016 7:19 AM
To: John, Lori
Cc: Merrick, Brian (Contractor); Guy, Rich (Contractor); Frey, Richard; Bitzas, Jim
Subject: FW: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT

Good morning Lori,

Can you please provide a mapping of our facilities of the marked area as indicated on the first attachment.

Rich,
Brian is on vacation. After you receive the mapping from Lori please respond to Paul with the rest of the requested information as stated below. Thanks everyone.

From: Frey, Richard
Sent: Thursday, May 05, 2016 5:01 PM
To: Camacho, Ed; Bitzas, Jim
Subject: FW: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT

Another…

From: Paul DeStefano [mailto:pauld@miloneandmacbroom.com]
Sent: Thursday, May 05, 2016 4:35 PM
To: Frey, Richard <Richard_Frey@cable.comcast.com>; eclark@lightower.com; raymond.puzemis@ftr.com; NUMAPREQUEST@EVERSOURCE.COM; befranzese@spectraenergy.com; dlesnieski@ctwater.com
Cc: barry.lashley@eversource.com; bret.factora@eversource.com
Subject: Utility Mapping Request - North Main Street Reconstruction, Naugatuck, CT

To Whom It May Concern,

Milone and MacBroom Inc. is currently completing a LOTCIP Application for the Reconstruction of North Main Street in Naugatuck, CT. If accepted, the design will be advanced quickly and preliminary design plans will be developed and submitted as soon as possible.

A project location map and survey plans have been attached for your convenience. The existing underground utilities shown on the plans are based on CBYD markings that were surveyed. Please review the plans and verify the accuracy of your facilities, as shown.

Please provide us with available information regarding the horizontal and vertical locations and sizes of your facilities, which may exist within or adjacent to the project area. If your utilities are not located within or adjacent to the site, please state that in your response. The utility locations provided will be shown on our plans and will be labeled "approximate."

In addition to providing information regarding the horizontal and vertical locations and sizes of your facilities we are also asking that you please evaluate the conditions of your facilities. Please notify us in writing of any short or long-term plans you have to upgrade or modify your facilities so that we can coordinate our work.

Please do not hesitate to call if you have any questions. We will continue to keep you informed as the design develops and would be happy to meet with you to discuss the project. As always, your cooperation is greatly appreciated.

Paul DeStefano, P.E.
Project Engineer, Transportation

MILONE & MACBROOM
99 Realty Drive / Cheshire, Connecticut 06410
203.271.1773 Ext. 289 / 203.272.9733 (Fax)
www.miloneandmacbroom.com

APPENDIX B

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

In accordance with Connecticut General Statutes, Section 13a-153f, and the Department's focus on accommodating non-motorized travel modes, accommodation of all users shall be a routine part of the planning, design, construction and operating activities of all highways. The need for inclusion of accommodations for bicyclists and pedestrians, including those with disabilities, must be reviewed for every project. This form provides the documentation and information needed to make decisions on the need and extent of bicycle and pedestrian features. This form is not intended to dictate what features should be included in a project design - guidance on those questions can be found in numerous other reference documents. This form should be completed to the extent practical (at least Sections 1-3) during the project scoping phase and fully completed no later than at the completion of the Preliminary Design and attached to the Preliminary Design Statement.

Project Number(s): MMI# 2129-33
Type of work: Pavement Rehabilitation and Sidewalk installation
Municipality(s): Naugatuck, CT
Route(s): North Main Street
Planning Region(s): Naugatuck Valley Council of Governments

SECTION 1 - APPLICABILITY

Although bicycle and pedestrian accommodations should be considered for all projects, certain types of projects (e.g. bridge deck patching, culvert re-lining, projects on expressway mainlines) do not typically provide reasonable opportunity to provide improvements for these travel modes. If this project falls into this category, please explain why below, then skip to Conclusions section on the last page, sign the form, and file this form with the project documents. For all other projects, skip this section, go to Section 2 and complete the rest of the form.

~~N/A~~

SECTION 2 – EXISTING CONDITIONS

1. What is the suitability of the project area for bicycle travel according to the ConnDOT Bicycle Map website (http://www.ctbikemap.org/bikemap.html)? For town roads, is any portion of the project located on a road identified in a Regional Planning Organization, or Municipal Bicycle Plan? If the route is designated as "less suitable" or "least suitable", would it be feasible to include improvements in the project to improve these ratings?

The ConnDOT Bicycle Map is still being updated, but the previously available GIS data was reviewed (see attached image). While "suitability" is not specifically indicated on the earlier mapping, North Main Street appears to be a suitable route which provides pedestrian and bicycle access to Linden Park and the recently completed Naugatuck River Greenway (NRG), connecting areas of Naugatuck on both sides of the river.

2. Describe any existing bicycle and pedestrian facilities within or just beyond the project limits, including features such as sidewalks (include width and material type), shoulder widths, bicycle markings/signs, and bike racks. Also describe any current or proposed features that hinder bicycle or pedestrian travel and the practicality of removing any such obstacles.

In addition to the NRG and Linden Park, sidewalks exist along the west side of North Main Street the entire length of the project. The east side of the roadway currently has concrete and bit. concrete sidewalks from Orchard Street to the northern project limit. Limited sidewalks exist south of Orchard St. There are no striped shoulders, signage, bike racks on the existing roadway and there are no bicycle markings, signs or racks.

3. Is the project located on, or in close proximity to, a route identified in the Department's Americans with Disabilities Act (ADA) Transition Plan?
http://www.ct.gov/dot/lib/dot/documents/ddbe/ADATransition_Plan_March_2011.pdf

No.

4. Is there a history of bicycle or pedestrian crashes/incidents in the project area? If so, provide details. In addition to ConnDOT crash records, crash information can be found at ctcrash.uconn.edu.

There have been NO bike accidents within the past 5 years.

SECTION 3 – ASSESSMENT OF CURRENT AND FUTURE NEEDS

Using a location map or aerial photograph, indicate the location of any of the following currently existing or planned typical bicycle and/or pedestrian generators, using the letters indicated (for planned facilities, precede the letter with a P). If the preparer's knowledge of the area is insufficient, consult with appropriate municipal officials. Generally, any facilities within approximately one-half mile of the project limits should be noted. Use this information to answer the following questions.

- Residential Areas (R): Indicate any general areas of dense residential housing
- Parks (P): Include areas that would attract people, whether officially designated as a park or not
- Recreational Areas (RA): Examples include athletic fields, dog parks
- Religious Facilities (C)
- Schools (S)
- Town Centers (TC): typically would include areas where Town Halls, Libraries and other public facilities exist
- Shopping Centers (M): especially centers with businesses where non-motorized customers might be expected (restaurants, bookstores, drug stores, etc.)
- Large Employment Businesses (E): Factories, large office buildings, hospitals, government offices
- Bus Stops (B)
- Public Transit Facilities (T): train/bus stations, airports
- Other (O): other known facilities expected to generate or attract non-motorized users

5. Does the project provide unique or primary access (defined as access which is not otherwise available within approximately one-half mile of the project):

	Yes	No
a. Across a river, highway corridor or other natural and/or man-made barrier?	☐	☑
b. Into or out of any of the bicycle and pedestrian generators listed above?	☑	☐
c. Between communities?	☐	☑

6. Characterize the existing and future anticipated pedestrian and bicycle travel within the study area, with emphasis on locations and corridors of high demand.

~~The new Naugatuck River Greenway and pedestrian bridge provide a shared use trail connection between East and West Naugatuck which which can be accessed via North Main Street through Linden Park or at the sidewalk along Rte. 8 on-ramp at Union St.~~

SECTION 4 – EVALUATION OF BICYCLE AND PEDESTRIAN ACCOMMODATION

7. Describe any bicycle/pedestrian accommodation features that were considered for inclusion in the project, including benefits, approximate costs and other factors that were considered (e.g. environmental effects, feasibility).

The elimination of parking on one side of the street to create bike lanes was considered but not pursued given existing land use parking demand. The use of "sharrows" on the new 10' travel lanes plus improved sidewalks are appropriate given the low 2,000 vpd.

8. Summarize the results of any coordination with stakeholders and general public outreach with regards to bicycle and pedestrian needs, including accommodations proposed during construction. Some of the stakeholder organizations that may be considered for coordination include: Regional Planning Organization, Local Municipalities, ConnDOT Non-Motorized Transportation Coordinator, ConnDOT Bureau of Public Transportation, CT Department of Public Health, Bike Walk Connecticut, and Board of Education Services for the Blind (BESB).

The Borough of Naugatuck has not performed specific stakeholder or public outreach regarding the pedestrian needs for this project which is primarily a road reconstruction project.

SECTION 5 - CONCLUSION

Describe how the anticipated bicycle/pedestrian travel, including those with disabilities, will be accommodated through existing infrastructure, project-proposed features and features that are planned for the future. If no bicycle/pedestrian features are proposed to be included, explain the reasons for not including them (e.g. project scope applicability from Section 1, excessive environmental or social impacts or costs, safety concerns, etc.).

Sidewalks will be widened where feasible and new compliant pedestrian ramps will,be provided where required. The resulting travel lanes will be 10' wide with 7'-8' wide on-street parking areas on each side. The low traffic volumes along N. Main Street support on street bicycle

Prepared by: _____ Date Prepared: _____
Project Engineer

Approved by: _____ Date Approved: _____
Project Manager

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

GUIDELINES FOR COMPLETING THE FORM:

Section 1: If the type of improvement does not lend itself to including bicycle and/or pedestrian improvements, describe that condition in this section. This section does not apply to reasons such as the project limits are felt to be too short to include meaningful improvements, there is an absence of need, the cost would be too high or the impacts would be too severe.

Section 2, Question 1: For projects on roads that are deemed suitable, designers should consider that the volume of bike traffic is already likely to be significant. For projects on roads deemed "less suitable" or "least suitable", designers should consider what factors have led to this rating and consider whether the project could improve these ratings.

Question 2: Describe in general terms the existing bicycle and pedestrian facilities (i.e. "Five foot wide concrete sidewalks are provided throughout the project limits with the exception of _____ to ____ where no sidewalks exist"). Also, describe any existing hindrances to bicycle and/or pedestrian travel (such as a narrow bridge, steep side slopes, busy commercial driveways, etc.) and the feasibility of removing or improving the hindrances.

Question 3: If the project is on or close to a route identified in the Department's ADA Transition Plan, coordination with those improvements is required. Leo Fontaine is in charge of the Department's Transition Plan. Note: ADA related improvements are still required even if the project is not on one of these routes.

Section 3, Question 6: Based on the information provided on the map, describe where it can be reasonably expected that pedestrians and bicyclists will travel to and from and a general expectation of where these volumes will be high. For example, in an area of dense residential development relatively close to a school, high pedestrian volumes would be expected if sidewalks are present and high volumes of bicyclists could be expected between residential developments and large businesses.

Question 7: List bicycle and/or pedestrian features that were considered for inclusion in the project, regardless of whether or not they were actually included in the design. Describe why these features were, or were not, included.

Question 8: List the stakeholders the designers coordinated with regarding bicycle and pedestrian accommodations. The stakeholders listed are some suggestions. It is not necessary to contact all of these groups and there also may be other groups that could provide useful information.

Section 5: Summarize the results of this form by describing the methods in which bicycle and pedestrian travel is accommodated. For projects described in Section 1 as not being conducive to including these accommodations, describe why.

APPENDIX C

TRAFFIC DATA

Connecticut Counts LLC
63 Sugar Maple Lane
Kensington, Connecticut 06037
_(860) 828-1693_

North Main Street North of Orchard Street
Naugatuck, Connecticut

Site Code: 3926
Station ID:

Latitude: 0' 0.0000 Undefined

Start	16-May-16		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Northboun	Southbo	Northbou	Southbo	Northbou	Southbo	Northbou	Southbo	Northbou	Southbo	Northbou	Southbo	Northbou	Southbo	Northbou	Southbo
12:00 AM	*	*	*	*	4	8	*	*	*	*	*	*	*	*	4	8
01:00	*	*	*	*	6	2	*	*	*	*	*	*	*	*	6	2
02:00	*	*	*	*	5	3	*	*	*	*	*	*	*	*	5	3
03:00	*	*	*	*	4	1	*	*	*	*	*	*	*	*	4	1
04:00	*	*	*	*	5	5	*	*	*	*	*	*	*	*	5	5
05:00	*	*	*	*	37	6	*	*	*	*	*	*	*	*	37	6
06:00	*	*	*	*	45	13	*	*	*	*	*	*	*	*	45	13
07:00	*	*	*	*	55	25	*	*	*	*	*	*	*	*	55	25
08:00	*	*	*	*	**65**	32	*	*	*	*	*	*	*	*	**65**	32
09:00	*	*	*	*	53	37	*	*	*	*	*	*	*	*	53	37
10:00	*	*	*	*	47	28	*	*	*	*	*	*	*	*	47	28
11:00	*	*	*	*	51	**38**	*	*	*	*	*	*	*	*	51	**38**
12:00 PM	*	*	*	*	44	43	*	*	*	*	*	*	*	*	44	43
01:00	*	*	64	35	**50**	**48**	*	*	*	*	*	*	*	*	57	42
02:00	*	*	82	67	*	*	*	*	*	*	*	*	*	*	82	67
03:00	*	*	78	63	*	*	*	*	*	*	*	*	*	*	78	63
04:00	*	*	85	57	*	*	*	*	*	*	*	*	*	*	85	57
05:00	*	*	85	**70**	*	*	*	*	*	*	*	*	*	*	85	**70**
06:00	*	*	**273**	70	*	*	*	*	*	*	*	*	*	*	**273**	70
07:00	*	*	47	62	*	*	*	*	*	*	*	*	*	*	47	62
08:00	*	*	43	40	*	*	*	*	*	*	*	*	*	*	43	40
09:00	*	*	33	21	*	*	*	*	*	*	*	*	*	*	33	21
10:00	*	*	45	19	*	*	*	*	*	*	*	*	*	*	45	19
11:00	*	*	12	10	*	*	*	*	*	*	*	*	*	*	12	10
Lane	0	0	847	514	471	289	0	0	0	0	0	0	0	0	1261	762
Day	0		1361		760		0		0		0		0		2023	
AM Peak	-	-	-	-	08:00	11:00	-	-	-	-	-	-	-	-	08:00	11:00
Vol.	-	-	-	-	65	38	-	-	-	-	-	-	-	-	65	38
PM Peak	-	-	18:00	17:00	13:00	13:00	-	-	-	-	-	-	-	-	18:00	17:00
Vol.	-	-	273	70	50	48	-	-	-	-	-	-	-	-	273	70

Comb. Total	0	1361	760	0	0	0	0	2023

ADT ADT 1,998 AADT 1,998

Daily Vehicle Volume Report

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	Northbound Volume	Southbound Volume	Total Volume
00:00 - 00:59	5	5	**10**
01:00 - 01:59	0	0	**0**
02:00 - 02:59	2	1	**3**
03:00 - 03:59	1	2	**3**
04:00 - 04:59	3	0	**3**
05:00 - 05:59	4	13	**17**
06:00 - 06:59	25	26	**51**
07:00 - 07:59	26	51	**77**
08:00 - 08:59	48	31	**79**
09:00 - 09:59	33	25	**58**
10:00 - 10:59	45	23	**68**
11:00 - 11:59	36	30	**66**
12:00 - 12:59	42	28	**70**
13:00 - 13:59	45	21	**66**
14:00 - 14:59	58	39	**97**
15:00 - 15:59	58	50	**108**
16:00 - 16:59	56	59	**115**
17:00 - 17:59	68	54	**122**
18:00 - 18:59	68	50	**118**
19:00 - 19:59	39	53	**92**
20:00 - 20:59	39	34	**73**
21:00 - 21:59	35	19	**54**
22:00 - 22:59	44	18	**62**
23:00 - 23:59	17	11	**28**
Totals	**797**	**643**	**1440**
AM Peak Time	**07:55 - 08:54**	**06:58 - 07:57**	**07:17 - 08:16**
AM Peak Volume	**49**	**53**	**88**
PM Peak Time	**17:39 - 18:38**	**16:17 - 17:16**	**17:39 - 18:38**
PM Peak Volume	**80**	**66**	**133**

Daily Northbound Classes Report

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	1	0	0	0	1	0	0	0	0	0	0	0	**2**
03:00 - 03:59	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
04:00 - 04:59	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
05:00 - 05:59	0	3	0	1	0	0	0	0	0	0	0	0	0	**4**
06:00 - 06:59	0	15	7	1	2	0	0	0	0	0	0	0	0	**25**
07:00 - 07:59	0	19	6	0	1	0	0	0	0	0	0	0	0	**26**
08:00 - 08:59	1	40	5	1	0	0	1	0	0	0	0	0	0	**48**
09:00 - 09:59	2	23	4	0	3	0	0	0	1	0	0	0	0	**33**
10:00 - 10:59	0	37	4	1	3	0	0	0	0	0	0	0	0	**45**
11:00 - 11:59	1	26	7	0	2	0	0	0	0	0	0	0	0	**36**
12:00 - 12:59	1	32	8	0	1	0	0	0	0	0	0	0	0	**42**
13:00 - 13:59	0	35	6	1	3	0	0	0	0	0	0	0	0	**45**
14:00 - 14:59	0	46	7	3	2	0	0	0	0	0	0	0	0	**58**
15:00 - 15:59	0	47	7	3	1	0	0	0	0	0	0	0	0	**58**
16:00 - 16:59	0	46	9	0	1	0	0	0	0	0	0	0	0	**56**
17:00 - 17:59	4	61	1	0	2	0	0	0	0	0	0	0	0	**68**
18:00 - 18:59	0	62	4	0	1	0	1	0	0	0	0	0	0	**68**
19:00 - 19:59	0	38	1	0	0	0	0	0	0	0	0	0	0	**39**
20:00 - 20:59	2	33	4	0	0	0	0	0	0	0	0	0	0	**39**
21:00 - 21:59	0	34	1	0	0	0	0	0	0	0	0	0	0	**35**
22:00 - 22:59	0	41	3	0	0	0	0	0	0	0	0	0	0	**44**
23:00 - 23:59	0	15	1	1	0	0	0	0	0	0	0	0	0	**17**
Totals	**11**	**663**	**85**	**12**	**22**	**1**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**797**
Percent of Total	**1.4**	**83.2**	**10.7**	**1.5**	**2.8**	**0.1**	**0.3**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**1.8**	**75.9**	**14.5**	**1.8**	**4.8**	**0.4**	**0.4**	**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**1.2**	**86.1**	**9.1**	**1.4**	**1.9**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**

Truck Summary:

Total Trucks: 38 % Trucks: 4.8 AM % Trucks: 7.9 PM % Trucks: 3.5

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles
#2 Passenger Cars - 2 Axles
#3 Pickup Trucks, Vans - 2 Axles
#4 Buses
#5 Single Unit - 2 Axles, 6 Tires
#6 Single Unit Truck - 3 Axles
#7 Single Unit - 4 Axles
#8 Single Unit - 4 Axles or Less
#9 Double Unit - 5 Axles
#10 Double Unit - 6 Axles or More
#11 Multi-Unit - 5 Axles or Less
#12 Multi-Unit - 6 Axles
#13 Multi-Unit - 7 Axles or More

Daily Southbound Classes Report

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	4	0	0	0	0	1	0	0	0	0	0	0	**5**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
03:00 - 03:59	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
05:00 - 05:59	0	10	1	0	2	0	0	0	0	0	0	0	0	**13**
06:00 - 06:59	0	20	1	0	4	1	0	0	0	0	0	0	0	**26**
07:00 - 07:59	0	39	4	2	5	0	1	0	0	0	0	0	0	**51**
08:00 - 08:59	0	24	4	1	2	0	0	0	0	0	0	0	0	**31**
09:00 - 09:59	1	17	4	0	3	0	0	0	0	0	0	0	0	**25**
10:00 - 10:59	0	18	2	0	3	0	0	0	0	0	0	0	0	**23**
11:00 - 11:59	0	20	7	0	3	0	0	0	0	0	0	0	0	**30**
12:00 - 12:59	0	21	3	0	4	0	0	0	0	0	0	0	0	**28**
13:00 - 13:59	0	15	2	0	3	0	1	0	0	0	0	0	0	**21**
14:00 - 14:59	1	33	2	0	3	0	0	0	0	0	0	0	0	**39**
15:00 - 15:59	0	38	7	1	4	0	0	0	0	0	0	0	0	**50**
16:00 - 16:59	1	48	7	0	3	0	0	0	0	0	0	0	0	**59**
17:00 - 17:59	0	48	4	0	2	0	0	0	0	0	0	0	0	**54**
18:00 - 18:59	0	47	1	0	2	0	0	0	0	0	0	0	0	**50**
19:00 - 19:59	0	43	9	0	1	0	0	0	0	0	0	0	0	**53**
20:00 - 20:59	1	28	2	0	3	0	0	0	0	0	0	0	0	**34**
21:00 - 21:59	0	19	0	0	0	0	0	0	0	0	0	0	0	**19**
22:00 - 22:59	0	16	1	0	1	0	0	0	0	0	0	0	0	**18**
23:00 - 23:59	0	10	1	0	0	0	0	0	0	0	0	0	0	**11**
Totals	**4**	**520**	**63**	**4**	**48**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**643**
Percent of Total	**0.6**	**80.9**	**9.8**	**0.6**	**7.5**	**0.2**	**0.5**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**0.5**	**74.4**	**11.6**	**1.4**	**10.6**	**0.5**	**1.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**0.7**	**83.9**	**8.9**	**0.2**	**6.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**

Truck Summary:

Total Trucks: 56 % Trucks: 8.7 AM % Trucks: 13.5 PM % Trucks: 6.4

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles
#2 Passenger Cars - 2 Axles
#3 Pickup Trucks, Vans - 2 Axles
#4 Buses
#5 Single Unit - 2 Axles, 6 Tires
#6 Single Unit Truck - 3 Axles
#7 Single Unit - 4 Axles
#8 Single Unit - 4 Axles or Less
#9 Double Unit - 5 Axles
#10 Double Unit - 6 Axles or More
#11 Multi-Unit - 5 Axles or Less
#12 Multi-Unit - 6 Axles
#13 Multi-Unit - 7 Axles or More

Daily Total Classes Report

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	Total
00:00 - 00:59	0	9	0	0	0	0	1	0	0	0	0	0	0	**10**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	1	1	0	0	1	0	0	0	0	0	0	0	**3**
03:00 - 03:59	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
04:00 - 04:59	0	3	0	0	0	0	0	0	0	0	0	0	0	**3**
05:00 - 05:59	0	13	1	1	2	0	0	0	0	0	0	0	0	**17**
06:00 - 06:59	0	35	8	1	6	1	0	0	0	0	0	0	0	**51**
07:00 - 07:59	0	58	10	2	6	0	1	0	0	0	0	0	0	**77**
08:00 - 08:59	1	64	9	2	2	0	1	0	0	0	0	0	0	**79**
09:00 - 09:59	3	40	8	0	6	0	0	0	1	0	0	0	0	**58**
10:00 - 10:59	0	55	6	1	6	0	0	0	0	0	0	0	0	**68**
11:00 - 11:59	1	46	14	0	5	0	0	0	0	0	0	0	0	**66**
12:00 - 12:59	1	53	11	0	5	0	0	0	0	0	0	0	0	**70**
13:00 - 13:59	0	50	8	1	6	0	1	0	0	0	0	0	0	**66**
14:00 - 14:59	1	79	9	3	5	0	0	0	0	0	0	0	0	**97**
15:00 - 15:59	0	85	14	4	5	0	0	0	0	0	0	0	0	**108**
16:00 - 16:59	1	94	16	0	4	0	0	0	0	0	0	0	0	**115**
17:00 - 17:59	4	109	5	0	4	0	0	0	0	0	0	0	0	**122**
18:00 - 18:59	0	109	5	0	3	0	1	0	0	0	0	0	0	**118**
19:00 - 19:59	0	81	10	0	1	0	0	0	0	0	0	0	0	**92**
20:00 - 20:59	3	61	6	0	3	0	0	0	0	0	0	0	0	**73**
21:00 - 21:59	0	53	1	0	0	0	0	0	0	0	0	0	0	**54**
22:00 - 22:59	0	57	4	0	1	0	0	0	0	0	0	0	0	**62**
23:00 - 23:59	0	25	2	1	0	0	0	0	0	0	0	0	0	**28**
Totals	**15**	**1183**	**148**	**16**	**70**	**2**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**1440**
Percent of Total	**1.0**	**82.2**	**10.3**	**1.1**	**4.9**	**0.1**	**0.3**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**1.1**	**75.2**	**13.1**	**1.6**	**7.6**	**0.5**	**0.7**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**1.0**	**85.2**	**9.1**	**0.9**	**3.7**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**

Truck Summary:

Total Trucks: 94 % Trucks: 6.5 AM % Trucks: 10.6 PM % Trucks: 4.8

Classification Scheme: FHWA (ID: 1)

#1 Motorcycles - 2 Axles
#2 Passenger Cars - 2 Axles
#3 Pickup Trucks, Vans - 2 Axles
#4 Buses
#5 Single Unit - 2 Axles, 6 Tires
#6 Single Unit Truck - 3 Axles
#7 Single Unit - 4 Axles
#8 Single Unit - 4 Axles or Less
#9 Double Unit - 5 Axles
#10 Double Unit - 6 Axles or More
#11 Multi-Unit - 5 Axles or Less
#12 Multi-Unit - 6 Axles
#13 Multi-Unit - 7 Axles or More

Daily Northbound Speeds (MPH)

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	**5**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	**2**
03:00 - 03:59	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
04:00 - 04:59	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	**3**
05:00 - 05:59	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	**4**
06:00 - 06:59	0	3	8	8	6	0	0	0	0	0	0	0	0	0	0	**25**
07:00 - 07:59	0	5	5	6	8	1	1	0	0	0	0	0	0	0	0	**26**
08:00 - 08:59	3	1	13	16	11	2	0	2	0	0	0	0	0	0	0	**48**
09:00 - 09:59	0	8	6	8	9	0	0	0	0	0	0	0	0	0	0	**31**
10:00 - 10:59	2	3	10	21	5	4	0	0	0	0	0	0	0	0	0	**45**
11:00 - 11:59	1	1	10	11	9	3	1	0	0	0	0	0	0	0	0	**36**
12:00 - 12:59	0	3	9	18	11	1	0	0	0	0	0	0	0	0	0	**42**
13:00 - 13:59	0	4	12	16	10	3	0	0	0	0	0	0	0	0	0	**45**
14:00 - 14:59	0	3	9	22	15	7	2	0	0	0	0	0	0	0	0	**58**
15:00 - 15:59	2	0	12	18	21	4	1	0	0	0	0	0	0	0	0	**58**
16:00 - 16:59	0	0	8	28	14	5	1	0	0	0	0	0	0	0	0	**56**
17:00 - 17:59	3	2	12	28	19	3	1	0	0	0	0	0	0	0	0	**68**
18:00 - 18:59	2	7	18	29	9	3	0	0	0	0	0	0	0	0	0	**68**
19:00 - 19:59	0	4	7	15	11	2	0	0	0	0	0	0	0	0	0	**39**
20:00 - 20:59	0	2	6	21	8	2	0	0	0	0	0	0	0	0	0	**39**
21:00 - 21:59	2	4	10	11	7	0	1	0	0	0	0	0	0	0	0	**35**
22:00 - 22:59	2	7	18	11	4	2	0	0	0	0	0	0	0	0	0	**44**
23:00 - 23:59	0	1	3	10	2	0	0	0	0	0	0	1	0	0	0	**17**
Totals	**17**	**60**	**178**	**305**	**182**	**42**	**8**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**795**
Percent of Total	**2.1**	**7.5**	**22.4**	**38.4**	**22.9**	**5.3**	**1.0**	**0.3**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**2.7**	**10.2**	**23.9**	**34.5**	**22.6**	**4.4**	**0.9**	**0.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**1.9**	**6.5**	**21.8**	**39.9**	**23.0**	**5.6**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**100**

Standard Deviation: 6.2 MPH
Mean Speed: 27.2 MPH
Median Speed: 27.3 MPH
Modal Speed: 27.5 MPH

Ten Mile Pace: 25 to 34 MPH
Percent in Ten Mile Pace: 61.3%

85th Percentile: 33.2 MPH
15th Percentile: 21.2 MPH
90th Percentile: 34.3 MPH
95th Percentile: 36.5 MPH

Daily Southbound Speeds (MPH)

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	1	0	0	1	2	1	0	0	0	0	0	0	0	0	0	**5**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
03:00 - 03:59	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	**2**
04:00 - 04:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
05:00 - 05:59	0	0	1	3	7	2	0	0	0	0	0	0	0	0	0	**13**
06:00 - 06:59	0	1	3	6	12	2	2	0	0	0	0	0	0	0	0	**26**
07:00 - 07:59	0	5	12	11	13	8	2	0	0	0	0	0	0	0	0	**51**
08:00 - 08:59	0	0	4	10	9	5	2	1	0	0	0	0	0	0	0	**31**
09:00 - 09:59	2	1	6	6	8	2	0	0	0	0	0	0	0	0	0	**25**
10:00 - 10:59	0	1	3	6	7	6	0	0	0	0	0	0	0	0	0	**23**
11:00 - 11:59	0	0	4	13	6	6	0	1	0	0	0	0	0	0	0	**30**
12:00 - 12:59	0	0	4	7	8	8	1	0	0	0	0	0	0	0	0	**28**
13:00 - 13:59	1	0	4	6	5	4	0	1	0	0	0	0	0	0	0	**21**
14:00 - 14:59	0	3	9	9	9	7	2	0	0	0	0	0	0	0	0	**39**
15:00 - 15:59	0	3	6	21	15	5	0	0	0	0	0	0	0	0	0	**50**
16:00 - 16:59	1	1	5	20	18	10	2	1	1	0	0	0	0	0	0	**59**
17:00 - 17:59	0	1	4	25	14	9	1	0	0	0	0	0	0	0	0	**54**
18:00 - 18:59	1	2	9	12	20	6	0	0	0	0	0	0	0	0	0	**50**
19:00 - 19:59	0	0	8	13	20	12	0	0	0	0	0	0	0	0	0	**53**
20:00 - 20:59	0	2	7	10	11	4	0	0	0	0	0	0	0	0	0	**34**
21:00 - 21:59	0	1	2	11	4	0	1	0	0	0	0	0	0	0	0	**19**
22:00 - 22:59	0	1	4	9	3	1	0	0	0	0	0	0	0	0	0	**18**
23:00 - 23:59	1	0	2	6	2	0	0	0	0	0	0	0	0	0	0	**11**
Totals	**7**	**23**	**97**	**206**	**193**	**98**	**13**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**643**
Percent of Total	**1.1**	**3.6**	**15.1**	**32.0**	**30.0**	**15.2**	**2.0**	**0.8**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**1.4**	**4.3**	**15.9**	**27.5**	**30.9**	**15.5**	**2.9**	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**0.9**	**3.2**	**14.7**	**34.2**	**29.6**	**15.1**	**1.6**	**0.5**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**

Standard Deviation: 6.3 MPH
Mean Speed: 29.7 MPH
Median Speed: 29.7 MPH
Modal Speed: 27.5 MPH

Ten Mile Pace: 25 to 34 MPH
Percent in Ten Mile Pace: 62.1%

85th Percentile: 36.0 MPH
15th Percentile: 23.4 MPH
90th Percentile: 37.7 MPH
95th Percentile: 39.3 MPH

Daily Total Speeds (MPH)

Study Date: Tuesday, 06/07/2016
Unit ID: 2
Location: NAUGNorthMain

	5-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-99	Total
00:00 - 00:59	1	0	0	6	2	1	0	0	0	0	0	0	0	0	0	**10**
01:00 - 01:59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 - 02:59	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	**3**
03:00 - 03:59	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	**3**
04:00 - 04:59	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	**3**
05:00 - 05:59	0	1	1	6	7	2	0	0	0	0	0	0	0	0	0	**17**
06:00 - 06:59	0	4	11	14	18	2	2	0	0	0	0	0	0	0	0	**51**
07:00 - 07:59	0	10	17	17	21	9	3	0	0	0	0	0	0	0	0	**77**
08:00 - 08:59	3	1	17	26	20	7	2	3	0	0	0	0	0	0	0	**79**
09:00 - 09:59	2	9	12	14	17	2	0	0	0	0	0	0	0	0	0	**56**
10:00 - 10:59	2	4	13	27	12	10	0	0	0	0	0	0	0	0	0	**68**
11:00 - 11:59	1	1	14	24	15	9	1	1	0	0	0	0	0	0	0	**66**
12:00 - 12:59	0	3	13	25	19	9	1	0	0	0	0	0	0	0	0	**70**
13:00 - 13:59	1	4	16	22	15	7	0	1	0	0	0	0	0	0	0	**66**
14:00 - 14:59	0	6	18	31	24	14	4	0	0	0	0	0	0	0	0	**97**
15:00 - 15:59	2	3	18	39	36	9	1	0	0	0	0	0	0	0	0	**108**
16:00 - 16:59	1	1	13	48	32	15	3	1	1	0	0	0	0	0	0	**115**
17:00 - 17:59	3	3	16	53	33	12	2	0	0	0	0	0	0	0	0	**122**
18:00 - 18:59	3	9	27	41	29	9	0	0	0	0	0	0	0	0	0	**118**
19:00 - 19:59	0	4	15	28	31	14	0	0	0	0	0	0	0	0	0	**92**
20:00 - 20:59	0	4	13	31	19	6	0	0	0	0	0	0	0	0	0	**73**
21:00 - 21:59	2	5	12	22	11	0	2	0	0	0	0	0	0	0	0	**54**
22:00 - 22:59	2	8	22	20	7	3	0	0	0	0	0	0	0	0	0	**62**
23:00 - 23:59	1	1	5	16	4	0	0	0	0	0	0	1	0	0	0	**28**
Totals	**24**	**83**	**275**	**511**	**375**	**140**	**21**	**7**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1438**
Percent of Total	**1.7**	**5.8**	**19.1**	**35.5**	**26.1**	**9.7**	**1.5**	**0.5**	**0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**100**
Percent of AM	**2.1**	**7.4**	**20.1**	**31.2**	**26.6**	**9.7**	**1.8**	**1.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100**
Percent of PM	**1.5**	**5.1**	**18.7**	**37.4**	**25.9**	**9.8**	**1.3**	**0.2**	**0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**100**

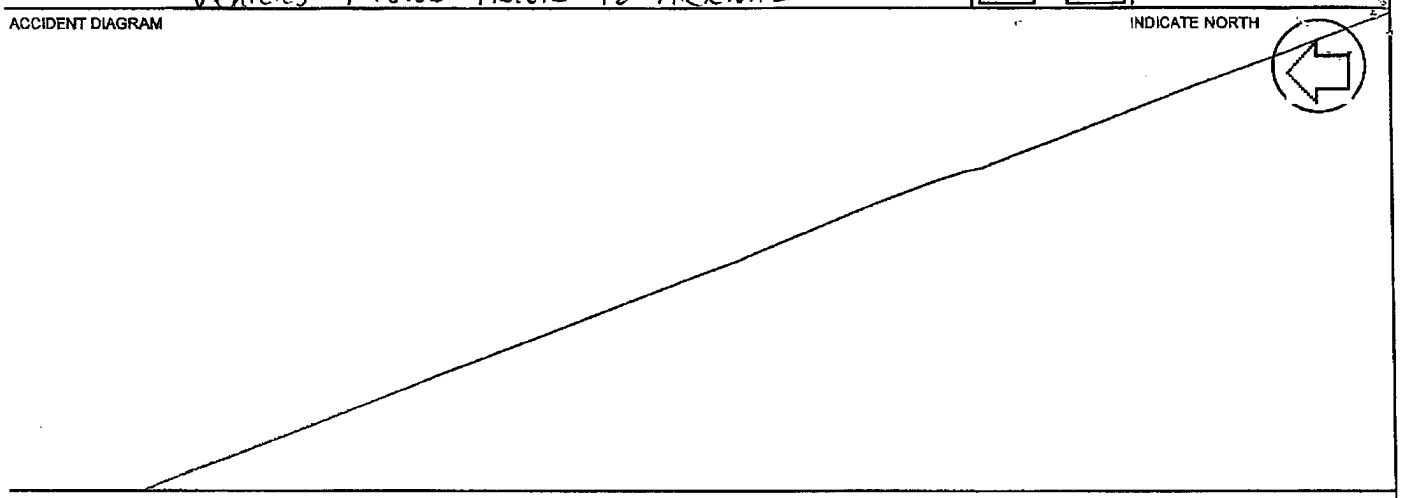
Standard Deviation: 6.3 MPH
Mean Speed: 28.3 MPH
Median Speed: 28.3 MPH
Modal Speed: 27.5 MPH

Ten Mile Pace: 25 to 34 MPH
Percent in Ten Mile Pace: 61.6%

85th Percentile: 34.4 MPH
15th Percentile: 22.0 MPH
90th Percentile: 35.9 MPH
95th Percentile: 38.5 MPH

FORM PR-1 | Vehicles Moved Prior To Arrival | PAGE # 2 of 3 | POLICE CASE NO 13-215

ACCIDENT DIAGRAM | INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling S on North Main Street | Traffic Unit # 2 Traveling E on Union Street

Vehicle #1: Operator # 1 stated he was attempting to turn left onto North Main Street from Union Street. Operator #1 stated he continued into the intersection thinking he had the right of way, due to the opposing traffic having a red light. Operator #1 stated his vehicle was then struck by Vehicle #2 in the rear end of the vehicle while making the turn. Operator #1 stated he thought she had a clear intersection and that the opposing traffic had a red light. Operator #1 stated he had no injuries at the time of the accident.

Vehicle #2: Operator # 2 stated he was traveling east from the off Ramp of Route 8 North to union Street when Vehicle # 1 came out of nowhere taking a left hand turn into the intersection. Operator #2 stated he swerved to avoid Vehicle #2 to the left. Operator #2 stated his vehicle then struck Vehicle #1 with the passenger front end of the vehicle. Operator #2 stated he didn't see the vehicle until the last minute. Operator #2 stated Vehicle #2 just tried to get through the intersection in front of him. Operator #2 stated he had no injuries at the time of the accident.

OFFICER: I saw damage to both vehicles as follows: Vehicle #1 sustained moderate damage to the rear passenger bumper of the vehicle in the form of small scratches, dents, and paint transfer. Vehicle #2 sustained minor damage to the driver side front end of the vehicle in the form of small scratches, dents, and paint transfer. Operator #1 left the scene when confronted by Operator #2. Operator #1 stated he didn't like the tone for which Operator #2 was speaking to him. Operator #1 stated he left the scene due to not seeing any real damage. Operator #2 stated he wasn't overbearing, but did confront Operator #1 to file a report with police. Operator #1 didn't realize that when his green turn goes away the opposing traffic also has a green light.

DAMAGED PROPERTY OTHER THAN MOTOR VEHICLES

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Bryan Coney PL13	Naugatuck Police	1/6/2013	C (O - Open, C - Closed)	Sgt [illegible]

NAUGATUCK POLICE DEPARTMENT

CONTINUATION OF INVESTIGATION REPORT

CASE NUMBER	INCIDENT TYPE	
13-215	MV Accident	

Operator #1 stated I was wrong, but I advised him of the latter due to my experience with previous accidents in the listed intersection. Based on the above facts and circumstances, Operator #1 was found at fault for the accident. Operator #1 was given a Verbal Warning for Failure to Grant the Right of Way at an Intersection in accordance with Connecticut General Statute #14-245. Nothing Follows.

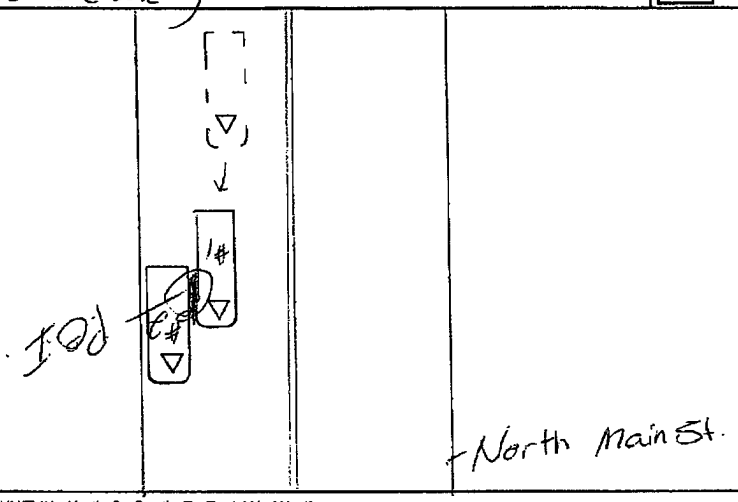
SUPERVISOR'S SIGNATURE	INVESTIGATOR'S SIGNATURE	PAGE NUMBER
Sgt S2.	Ptl. Bryan Coney Pl13	3 OF 3

FORM PR-1 (Not to Scale)

PAGE # 2 of 2 | POLICE CASE NO 13-12293

ACCIDENT DIAGRAM

INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling N on North Main Street | Traffic Unit # 2 Traveling / on Parked North Main Street

On May 7th, 2013, at 17:35 hours, I was dispatched to North Main Street by number 292, for a reported motor vehicle collision. No injuries reported.

Operator #1 stated she was traveling south on North Main Street, she spilt coffee in her vehicle and veered to the right, striking vehicle #2, which was parked. Operator #1 stated she was not injured, vehicle #1 sustained damage to the passenger side, front fender and door.

Vehicle # 2 was unoccupied, parked legally, and sustained damage to the driver side rear quarter and doors.

I find the statement made by operator #1 consistent with the damage sustained to both vehicles. I find operator #1 at fault for failing to drive right - C.G.S. 14-230(a).

DAMAGED PROPERTY / CRIMINAL MISCHIEF / MV POLICE VEHICLES

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Nicholas Kehoss PL32	Naugatuck Police	5/7/2013	C (O - Open, C - Closed)	Sgt. Peter Bosco S6

NAUGATUCK POLICE DEPARTMENT

CONTINUATION OF INVESTIGATION REPORT

CASE NUMBER	INCIDENT TYPE	
13-14489	MV Accident	

Upon my arrival at the accident scene, I observed both vehicles at their final resting spots. Vehicle #1 was completely in the south bound traveling lane on North Main Street facing north at a slight west angle. Vehicle #2 was completely in the south bound lane of North Main Street facing west. The area of impact was the front passenger side of Vehicle #1 and the rear driver-side door of Vehicle #2.

I observed damage to the front passenger side bumper, fender, and hood of Vehicle #1. I observed damage to the rear driver side door of Vehicle #2.

Due to the statements provided and my investigation, I find Operator #1, Rachel Carpentier (DOB 11/04/1952) at fault for the collision. Operator #1 was issued and explained a written warning for violation of C.G.S. 14-240 "Following to Close".

No further action taken.

SUPERVISOR'S SIGNATURE	INVESTIGATOR'S SIGNATURE	PAGE NUMBER
Sgt. Peter Bosco S6	Ptl. Andre Moutela P130	3 OF 3

FORM PR-1

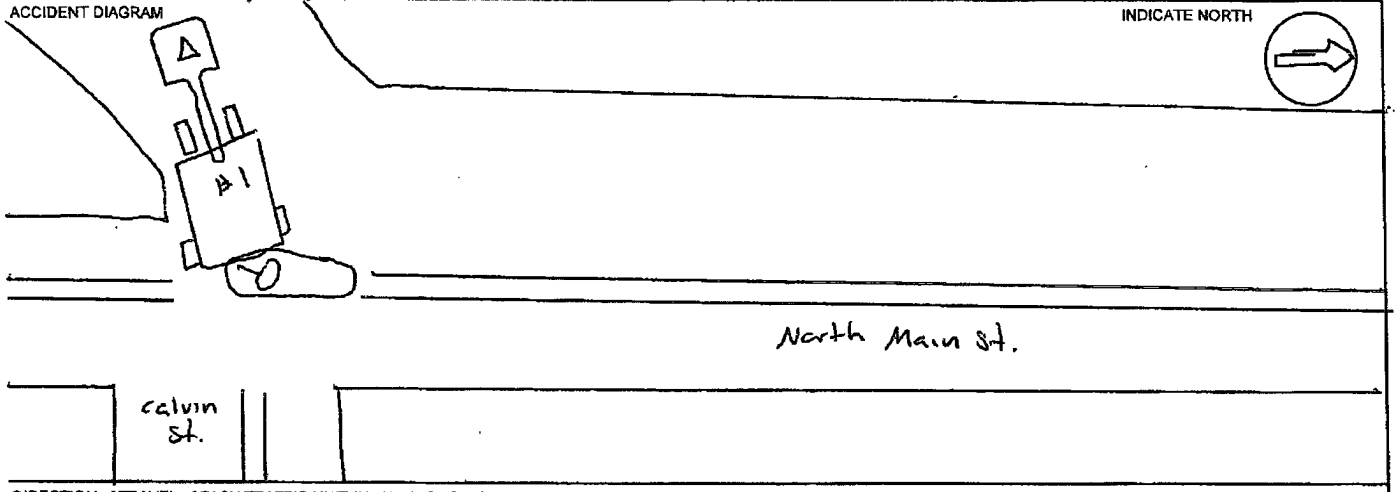
NOT TO SCALE

PAGE # 2 of

POLICE CASE NO 13-17570

ACCIDENT DIAGRAM

INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling E on Calvin Street

Traffic Unit # 2 Traveling on

On 6/26/13 at 1100 hours, I was dispatched to the intersection of North Main Street and Calvin Street for a motor vehicle accident. Upon arrival OP#1 stated he exited the North Main Street exit North. OP#1 stated he turned left to go back on the highway South. OP#1 stated when he realized there was not sufficient vertical clearance for his vehicle to fit under the bridge he backed up. OP#1 stated the trailer of his vehicle backed over the stop sign that was on a traffic island. OP#1 stated he was not injured and refused medical attention. I did not observe any visible damage to the trailer of the semi.

I observed the stop sign was broken at the base.

Based on my investigation OP#1 was at fault for the accident and given a verbal warning for 14-243 Unsafe backing.

No further action.

DAMAGED PROPERTY
OTHER THAN VEHICLE

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

Stop Sign knocked down, broken at the base

NAME and ADDRESS of PROPERTY OWNER

Borough of Naugatuck

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Jasen Markette PL18	Naugatuck Police	6/26/2013	C (O - Open, C - Closed)	Sgt. Mark Pettinicchi S2

Lt. Sethmet

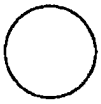
FORM PR-1

PAGE # 2 of 2

POLICE CASE NO 13-19431

ACCIDENT DIAGRAM

INDICATE NORTH



Not Observed

DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling W on /

Traffic Unit # 2 Traveling / on /

On July 12th, 2013, at 1745 hours, I was dispatched to 376 North Main Street, for a private property collision. Caller stated it occurred earlier in the day. I made contact with operator #2 via telephone.

Vehicle #1 was unoccupied, parked on private property, vehicle #1 sustained damage to the rear and front bumpers. It was pushed by vehicle #2 into a wooden support post.

Operator #2 stated he was backing up to turn around and struck vehicle #1, pushing it into a wooden post. He stated due to the size of vehicle #2, he did not see vehicle #1.

I find the statement made by operator #2 to be consistent with the damage sustained to vehicle #1. I find operator #2 at fault for this collision. The wooden post was not damaged, Naugatuck Fire Department Responded and ensured the integrity of the structure.

DAMAGED PROPERTY OF VEHICLES IF NOT USED PREVIOUS

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

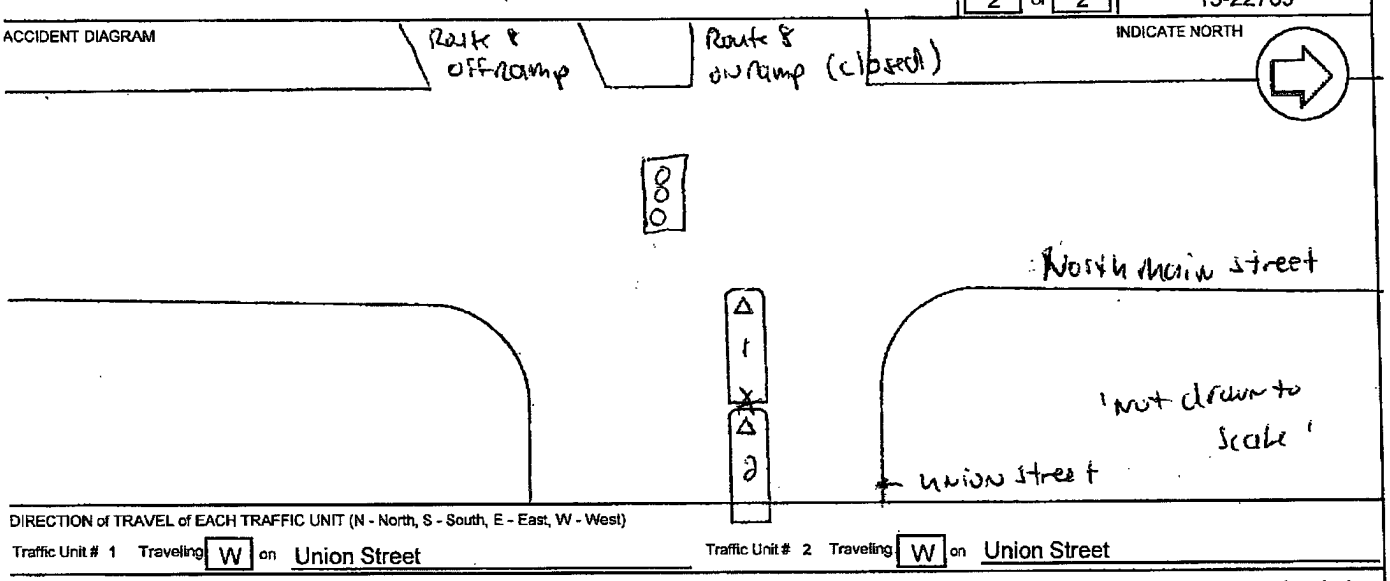
NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Nicholas Kehoss PL32	Naugatuck Police	7/30/2013	C (O - Open, C - Closed)	Sgt. Peter Bosco S6

FORM PR-1

PAGE # 2 of 2 | POLICE CASE NO 13-22705

ACCIDENT DIAGRAM



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling W on Union Street

Traffic Unit # 2 Traveling W on Union Street

On 08/14/13 at 07:54 hours, I was dispatched to a two car motor vehicle accident. Upon my arrival, I spoke with both operators and there passengers in there vehicles and all stated they were fine and didn't need medical attention.

Operator #1 stated he was traveling west on Union Street towards where it intersects with North Main Street. Operator #1 stated as he approached the traffic light at the North Main Street intersection he put his turn signal on to turn left. Operator #1 stated while his vehicle was stopped and waiting for traffic to clear to make his left turn, this is when his vehicle was struck in the rear by Vehicle #2. Vehicle # 1 sustained minor damage to the rear bumper.

Operator #2 stated she was traveling west on Union Street. Operator #2 stated when she approached the intersection she didn't see vehicle #1 stopped. Operator #2 stated this is when she struck vehicle #1 in the rear. Vehicle #2 sustained damage to the front fender.

Conclusion- After investigating this accident and speaking to both operators, Operator #2 was given a verbal warning for Following to Close 14-240. Nothing further.

DAMAGED PROPERTY OTHER THAN VEHICLE INVOLVED IN THIS CRASH

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
T/O Marcus Jacoboski PL4	Naugatuck Police	8/19/2013	C (O - Open, C - Closed)	Sgt Mark Pettinicchio

T.O. Marcus Jacoboski #4

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FORM PR-1

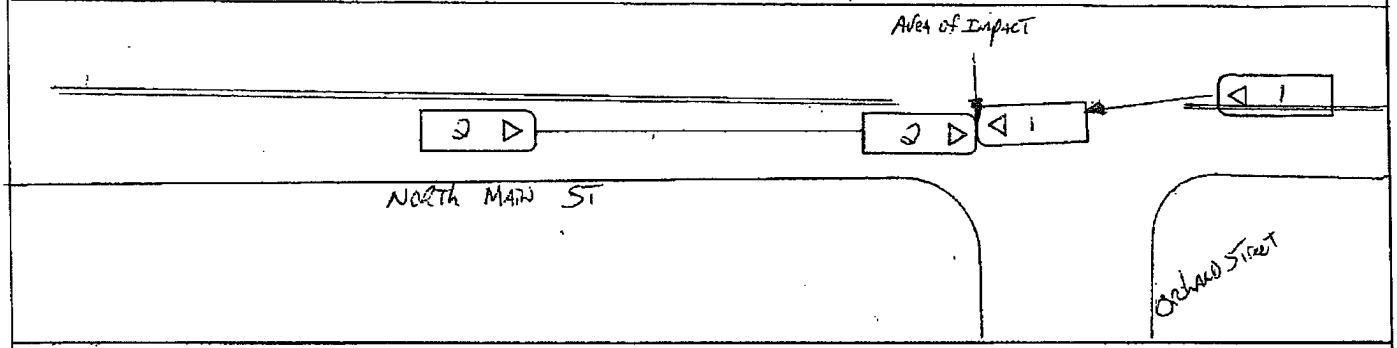
PAGE # 2 of 2

POLICE CASE NO 13-27366

ACCIDENT DIAGRAM

NOT TO SCALE

INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling S on North Main Street

Traffic Unit # 2 Traveling N on North Main Street

This was a two vehicle head on type collision that occurred on the northbound lane on North Main Street at its intersection with Orchard Street. There were no injuries reported and no witnesses to the collision. At the time of the collision the weather was clear and the roadway surface was dry.

Operator #1 explained that he was traveling south on North Main Street approaching its intersection with Orchard Street. As he continued south he took his eyes off the roadway to pickup his wallet on the floor. When he looked up his vehicle had crossed over the center line and collided with Vehicle #2.

Operator #2 explained that he was traveling north on North Main Street just south of its intersection with Orchard Street. As he continued north, Vehicle #1 which was traveling southbound, crossed over the center line and collided with the front of his vehicle. He stated that he attempted to apply his brakes but he could not avoid the collision.

There was physical debris from Vehicle #1 and Vehicle #2 located in the northbound lane. Both Vehicles sustained heavy damage to the front end as a result of the collision. Both Vehicles were towed from the scene by Sibby's garage.

Operator #1 was found to have caused the collision as he failed to drive in the southbound lane while traveling on North Main Street. Operator #1 was issued an Infraction Compliant Ticket for Failure to Drive in the Proper Lane in violation of C.G.S. 14-236 and Distracted Driving in violation of C.G.S. 14 -296aa(i1st offense). End of Report

DAMAGED PROPERTY OTHER THAN MOTOR VEHICLES

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Jonathan Slavin PL25	Naugatuck Police	10/4/2013	C (O - Open, C - Closed)	~~Sgt. Mark Pettinicchi S2~~ Sgt. Derek Vanasten S4

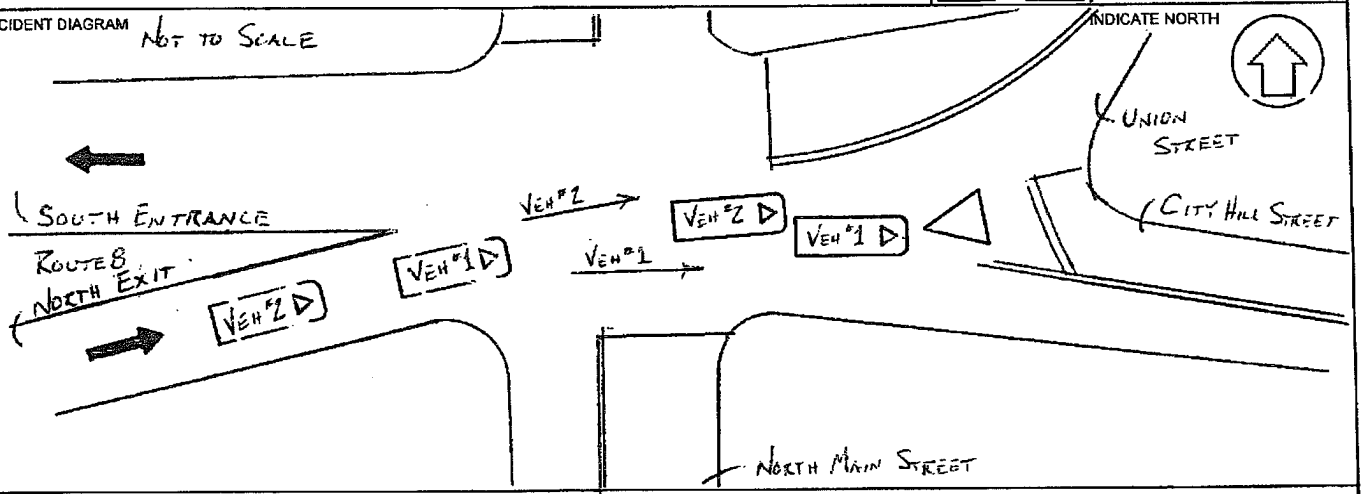
Sgt. Derek Vanasten S4

FORM PR-1

PAGE # 2 of 2

POLICE CASE NO 13-30832

ACCIDENT DIAGRAM Not to Scale



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling E on City Hill Street

Traffic Unit # 2 Traveling E on Union Street

Operator #1 stated she was traveling east across North Main Street from the Route 8 North Exit 28 exit ramp. Operator #1 stated she intended to drive east on City Hill Street. Operator #1 stated she became confused when she saw a stone traffic median in the roadway, so she stopped. Operator #1 stated her vehicle was then struck from behind by Vehicle #2. Operator #1 stated she did not move her vehicle after the collision. Operator #1 stated she was not injured.

Operator #2 stated she was traveling east across North Main Street from the Route 8 North Exit 28 exit ramp. Operator #2 stated she was following Vehicle #1. Operator #2 stated she intended to drive east on Union Street. Operator #2 stated Vehicle #1 came to a sudden stop and she swerved her vehicle to the left, but was unable to avoid a collision. Operator #2 stated the front of her vehicle struck the rear of Vehicle #1. Operator #2 stated she did not move her vehicle after the collision. Operator #2 stated she was not injured.

Officer: Upon my arrival I both operators standing outside of their vehicles. Neither operator appeared injured. Both vehicles were in their positions of final rest. Vehicle #1 was facing east toward the median separating City Hill Street from Union Street. Vehicle #2 was facing east behind Vehicle #1 and offset to the left. I saw moderate damage to the rear bumper, left rear tail light, and trunk lid of Vehicle #1. I saw moderate damage to the right front bumper and headlight of Vehicle #2. The damage to, and position of, the vehicles was consistent with the type of collision described by both operators.

Photographs were taken of the scene and damaged vehicles.

Based on the above facts and circumstances Operator #2 was found to be at fault, and issued a written warning, for Following Too Closely {CGS 14-240}.

-----End of Report-----

DAMAGED PROPERTY (OTHER THAN VEHICLES INVOLVED IN THIS CRASH)

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Sgt. Derek Vostinak S7	Naugatuck Police	11/9/2013	C (O - Open, C - Closed)	Lt. Brian Newman Lt3

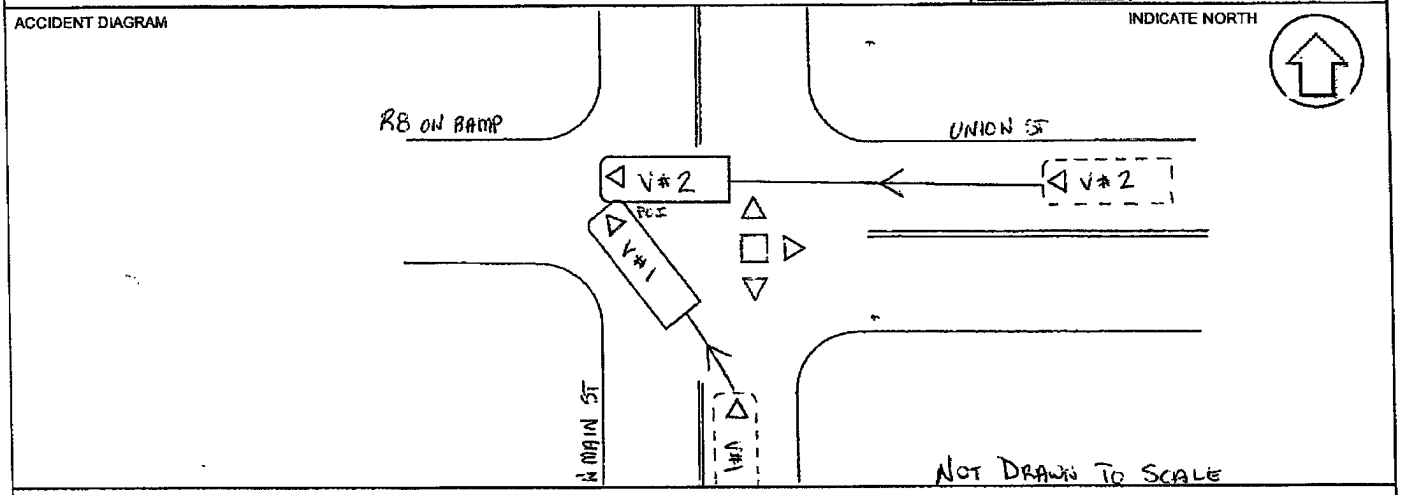
FORM PR-1

PAGE # 2 of 2

POLICE CASE NO 13-35167

ACCIDENT DIAGRAM

INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling N on North Main Street

Traffic Unit # 2 Traveling W on Union Street

Operator #1 stated he was traveling northbound on North Main Street approaching the intersection of Union Street. Op #1 stated that he was not paying attention to the control signal at the intersection and attempted to make a left turn onto the Route 8 Exit 28 Southbound On-Ramp. Op #1 stated while negotiating the left turn his vehicle collided with Vehicle #2. Op #1 stated he did not see Vehicle #2 approaching prior to making the left turn. I observed damage in the form of a dent and an broken head lamp on the passenger side front bumper of Vehicle #1. Op #1 and passenger refused EMS.

Operator #2 stated he was traveling westbound on Union Street approaching the intersection of North Main Street. Op #2 stated while approaching the intersection he had a green traffic light. As he entered the intersection, Vehicle #1 turned in front if him causing the collision. I observed damage in the form of dents and scratches on the front driver side of Vehicle #2. Op #2 and passenger refused EMS.

Op #1 was found to have caused the collision as he failed to stop in obedience to a red traffic control signal. Op #1 received a verbal warning for Failure to Obey a Traffic Control Signal in violation of C.G. S. 14-299.

DAMAGED PROPERTY IF NOT RELATED TO VEHICLE(S) INVOLVED

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Thomas McGarvey PL43	Naugatuck Police	12/29/2013	Clos (O - Open, C - Closed)	

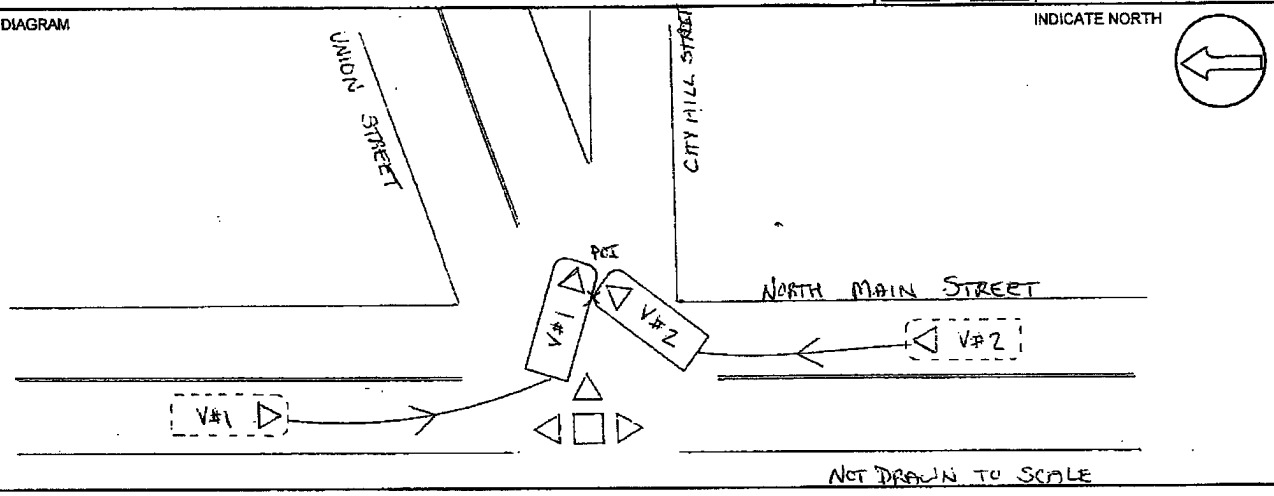
FORM PR-1

PAGE # 2 of 2

POLICE CASE NO 14-1489

ACCIDENT DIAGRAM

INDICATE NORTH



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling S on North Main Street

Traffic Unit # 2 Traveling N on North Main Street

Operator #1 stated she was traveling southbound on North Main Street approaching the intersection of Union Street. Op #1 stated she continued into the intersection believing she had a green arrow allowing her to turn left onto Union Street. Op #1 stated as she pulled onto Union Street her vehicle was struck on the front passenger side by Vehicle #2. Op #1 stated she did not see Vehicle #2 approaching her position prior to the collision. I observed damage to Vehicle #2 on the front passenger side wheel in the form of scratches and scuff marks. Naugatuck EMS responded to the scene however Operator #1 and passenger refused medical treatment.

Operator #2 stated she was traveling northbound on North Main Street approaching the intersection of Union Street. Op #2 stated she continued into the intersection, turning right onto Union Street towards City Hill Street. Op #2 stated as she entered the intersection the traffic light was green. Op #2 stated as she turned right onto Union Street, she was struck by Vehicle #1. I observed damage to Vehicle #2 in the form of scratches and dents on the front driver side bumper. Op #2 complained on non apparent injuries and was transported to Waterbury Hospital for further medical evaluation and treatment. Vehicle #2 was removed from the area by a licensed operator.

Upon observation of the traffic control signals at the intersection of North Main Street and Union Street, I did not observe a green arrow signal for the southbound lane of the intersection, only a solid green signal. As a result, Operator #1 was found at fault for failure to yield while turning left in violation of C.G.S. 14-242(e) as she failed to yield to a vehicle approaching in the opposite direction. No enforcement action taken.

DAMAGED PROPERTY OTHER THAN INVOLVED VEHICLES

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

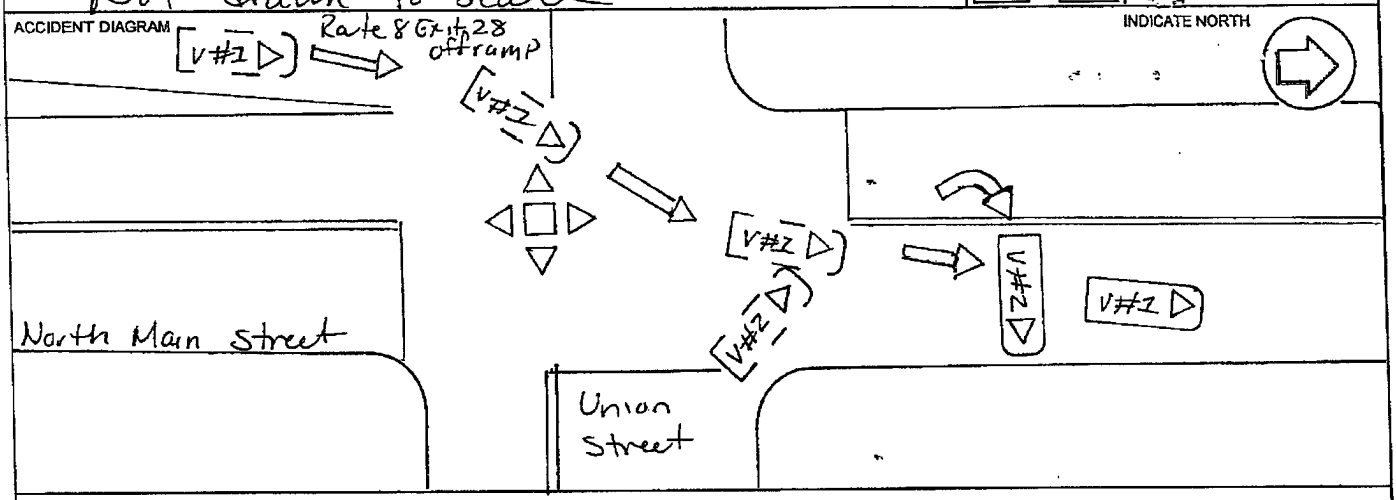
NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Thomas McCarvey PL39	Naugatuck Police	1/18/2014	C (O - Open, C - Closed)	

FORM PR-1 Not drawn to scale

PAGE # 2 of 3. POLICE CASE NO 14-2042

ACCIDENT DIAGRAM



INDICATE NORTH

DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling E on Route 8 North Exit 28 off ramp Traffic Unit # 2 Traveling W on Union Street

On 01/24/2014 at 18:47 hours, I was dispatched to the intersection of North Main Street at Union Street for a motor vehicle collision.

Upon my arrival, I was met by Operator #1, [redacted] Operator #2, [redacted] and his passenger, [redacted]. All parties stated they were not injured.

Operator #1 stated he was traveling on the Route 8 north exit 28 off-ramp. Operator #1 stated when he approached the intersection of the Route 8 north exit 28 off-ramp and North Main Street, he did not see any vehicles and took a left turn onto North Main Street. Operator #1 stated he did not stop at the intersection of the Route 8 north exit 28 off-ramp and North Main Street because the traffic light at the intersection was green. Operator #1 stated once he took the left turn onto North Main Street, the passenger side of his vehicle collided with the front of Vehicle #2. Operator #1 stated he never saw Vehicle #2.

Operator #2 stated he was traveling on Union Street and when he approached the intersection of Union Street and North Main Street, he took a right turn onto North Main Street. Operator #2 stated as he as making the right turn onto North Main Street, his passenger yelled car and the front of his vehicle collided with the passenger side of Vehicle #1. Operator #2 stated Vehicle #1 as traveling so fast that Vehicle #1 spun his vehicle around.

Upon my arrival on scene, I observed Vehicle #2 facing east bound in the north bound traveling lane. I also observed heavy front end damage to Vehicle #2. I observed moderate damage to the

DAMAGED PROPERTY

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE
/

NAME and ADDRESS of PROPERTY OWNER
/

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE
/

NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Andre Moutela #127	Naugatuck Police	1/27/2014	C (O - Open, C - Closed)	Sgt. Randy Ireland S1

passenger side bed in front of the rear tire and damage to the passenger side rear tire.

Due to the statements provided and my investigation, I find Operator #1 at fault for the collision for violation of C.G.S. 14-242(e) "Failure to Grant Right of Way to Oncoming Traffic When Making a Left Turn". Operator #1 was issued a verbal warning.

No further action.

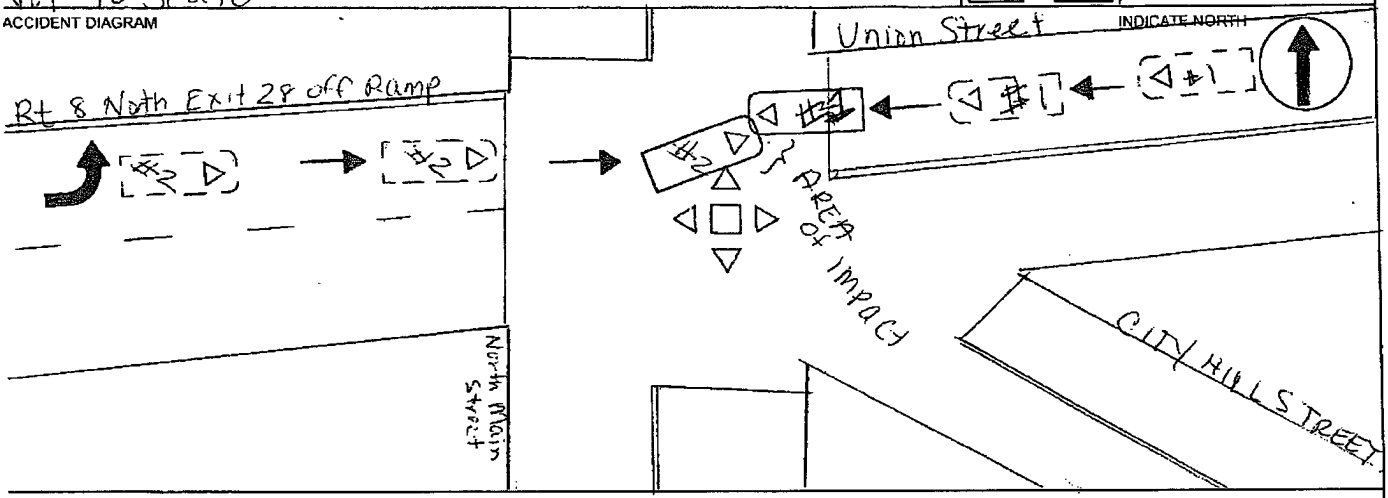
FORM PR-1

Not to Scale

PAGE # 2 of 2

POLICE CASE NO 14-7070

ACCIDENT DIAGRAM



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling SW on Union Street

Traffic Unit # 2 Traveling NE on Exit 28 off ramp RT 8 north

This was a two-vehicle turning intersecting paths type collision that occurred intersection of North Main Street and City Hill Street. No injuries were reported and there are no known witnesses to the collision. At the time of the collision the weather condition was clear and the roadway surface was dry.

Operator #1 stated she was traveling southwest on Union Street approaching the intersection with City Hill Street and North Main Street and a solid green traffic light. Operator #1 stated as she entered the intersection, Vehicle #2 turned left in front of her vehicle, where the collision occurred.

Operator #2 explained she was traveling northeast on the Exit 28 off ramp of Route 8 north in the left turn only lane approaching the intersection with North Main Street and City Hill Street and a solid green traffic light. Operator #2 stated she was negotiating the left turn onto North Main Street when she saw Vehicle #1 approaching for the first time and the collision occurred. Operator #2 stated she did not see Vehicle #1 approaching the intersection prior to making the decision to make the left turn.

On 3/19/14, I observed fresh damage to both vehicles. Vehicle #1 had scratches on the left side of the front bumper and Vehicle #2 had scratches on the right side of the front bumper.

Operator #2 was found to have caused the collision, as she failed to grant the right of way to Vehicle #1 while attempting to turn left onto North Main Street. Operator #1 was given a verbal warning for violation of CGS 14-242(e)-Failure to yield while turning left.

End of report.

DAMAGED PROPERTY OF PERSONS OTHER THAN YOU OR VEHICLES

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

NAME and ADDRESS of PROPERTY OWNER

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE

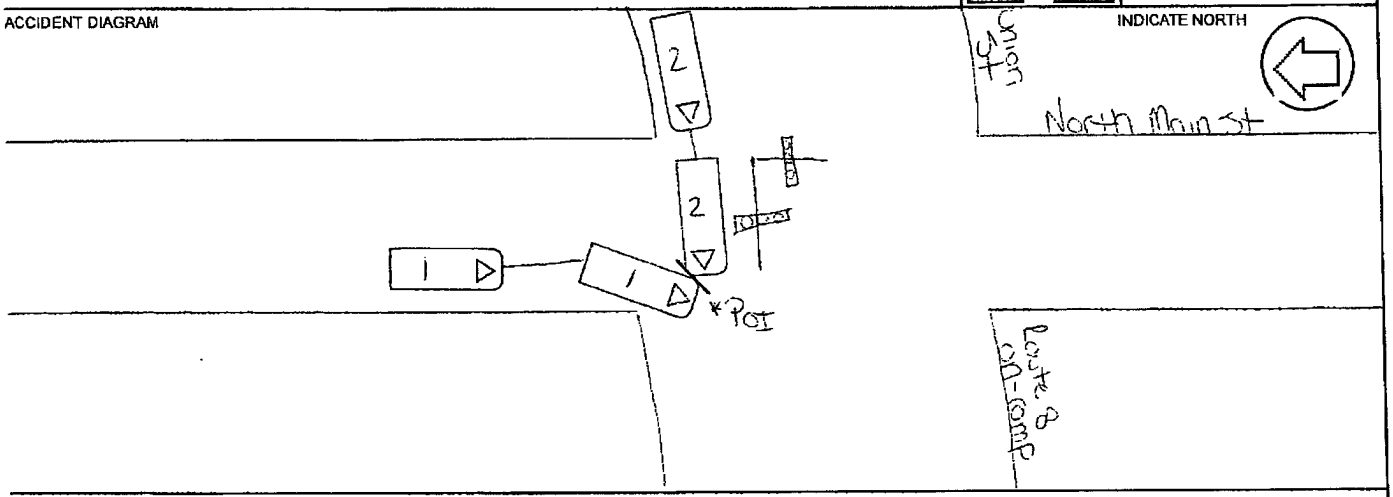
NAME and ADDRESS of PROPERTY OWNER

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Alexia Castro PL38	Naugatuck Police	3/27/2014	C (O - Open, C - Closed)	Sgt. Derek Vostinak S7

FORM PR-1 Not to Scale

PAGE #	POLICE CASE NO
2 of 2	14-17860

ACCIDENT DIAGRAM



DIRECTION of TRAVEL of EACH TRAFFIC UNIT (N - North, S - South, E - East, W - West)

Traffic Unit # 1 Traveling S on North Main Street

Traffic Unit # 2 Traveling W on Union Street

Operator #1: Shane Esposito stated he was traveling South on North Main Street and approached the ntersection with Union Street. Esposito stated he then began to make a right hand turn onto the Route 8 South onramp despite having a red traffic control light. Espositio stated he struck Vehicle #2 in attempting to do so.

Operator #2: stated he was traveling West on Union Street and approached the intersection with North Main Street. stated he proceeded through the intersection as he had a green traffic control light. stated he was struck by Vehicle #1.

Officer: Upon arrival, both vehicles were in their original position of rest. Esposito and ?? stated they did not sustain any injuries and refused medical evaluation. As a result of the collision, Vehicle #1 incurred minor damage to the left (driver) front tire well while Vehicle #2 incurred moderate damage to the right (passenger) front corner and fender.

The weather was clear and the roadway was dry. Through my investigation, I determined Operator #1 was at fault for the collision as he failed to come to a stop for the red traffic control light. He was given a verbal warning for ***{CGS 14-299}.***

---End of Report---

DAMAGED PROPERTY (OTHER THAN TO YOU OR VEHICLES IN YOUR CARE)

1. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE
/

NAME and ADDRESS of PROPERTY OWNER
/

2. DESCRIBE the NATURE and EXTENT of PROPERTY DAMAGE
/

NAME and ADDRESS of PROPERTY OWNER
/

RANK and SIGNATURE of INVESTIGATING OFFICER	POLICE AGENCY ID	REPORT DATE	CASE STATUS	SUPERVISOR
Ptl. Danielle Bailey PL26	Naugatuck Police	7/19/2014	C (O - Open, C - Closed)	Sgt. John Hutt S5

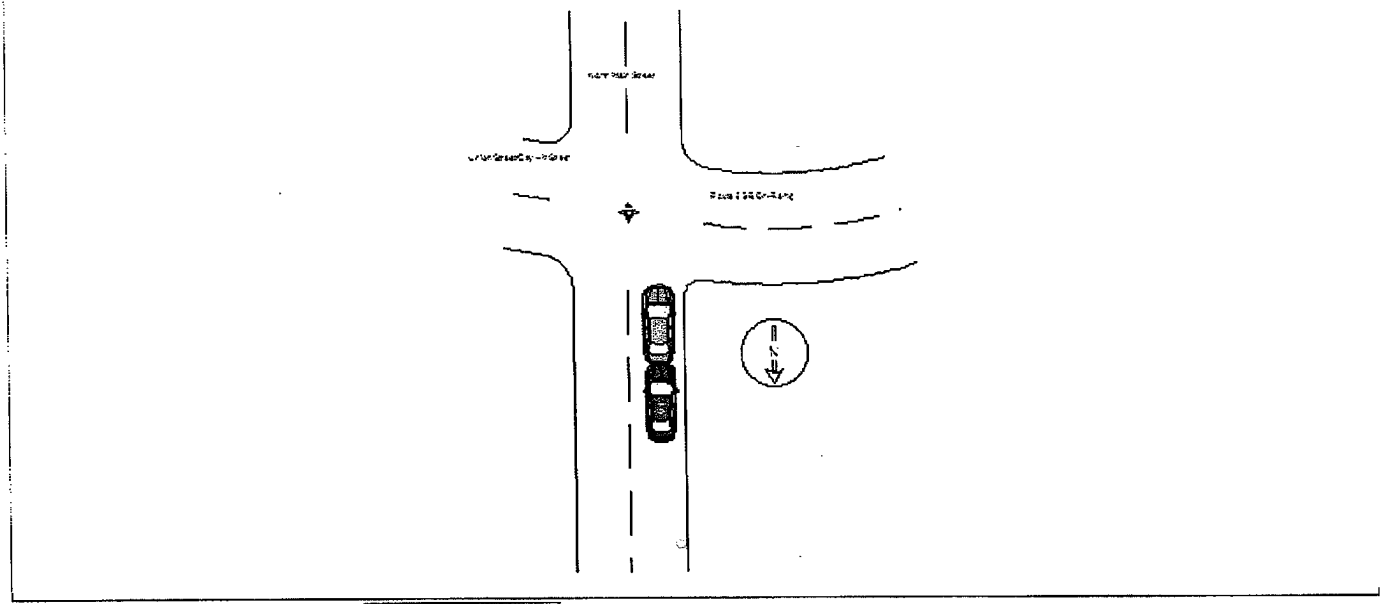
Dilyzc

Sgt Hutt S5

CONNECTICUT UNIFORM POLICE CRASH REPORT
Form PR-1 REV Feb 12, 2015
Crash Summary (Back)

Case Number: 15-15313
DOT Identifier: *For DOT use only*

DIAGRAM



☐ Vehicles were moved prior to police arrival Delete Diagram

NARRATIVE

Officers Narrative: Describe any unusual circumstances associated with the crash, including officer's observations.
Refer to each by motor vehicle number and/or non-motorist number

Vehicle #1 and Vehicle #2 were both S/B on North Main Street at the intersection with City Hill Street when Veh #1 struck Veh #2 in the rear.

Op #1 said that she was stopped at a red traffic signal prior to the intersection when her foot slipped off the brake and she accelerated into the rear of Veh #2.

Op #2 stated that he was stopped at a red traffic signal on S/B North Main Street when Veh #1 accelerated from a stopped position and struck his vehicle in the rear.

It should be noted that both vehicles left the original scene of the collision and moved to the parking lot of City Hill School a short distance away. However, the vehicle damage and the operator statements were consistent with their accounts of the collision. Both vehicles sustained light damage and were able to leave under their own power. There were no reported injuries.

This collision was caused by Operator #1 Failing to Drive a Reasonable Distance from Veh #2.

Related Incident Number	Officer First Name	Officer Last Name	Badge Number	Police Agency Code
	Colin	McAllister	PL20	088

Case Status: O - Open, C - Closed: C

Officer Name: McAllister
Date & Time: 2015062111126

Supervisor: Sgt. Poundstone
Date & Time: 2015062111126

☐ This report is a revision to a previously submitted report

CONNECTICUT UNIFORM POLICE CRASH REPORT
Form PR-1 REV Feb 12, 2015
Appendix A: Narrative Continued
Complete this sheet if more space is needed for the narrative

Case Number: 15-5727
DOT Identifier: *For DOT use only*

NARRATIVE CONTINUED (i)

As a result of the collision, Vehicle #1 incurred heavy damage to the front end, while Vehicle #2 incurred moderate damage to the right (passenger) side. Photographs were taken. The weather was clear and the roadway was partially wet. Through my investigation, I determined Operator #1 was at fault for the collision due to her failure to grant the right of way to Operator #2. She was given a verbal warning for Failure to Grant Right of Way as stated in {CGS 14-245}.

The Naugatuck Fire Department responded to the scene and cleared the roadway of fluids. A&T Transmission removed Vehicle #1 from the scene due to disabling damage.

—End of Report—

CONNECTICUT UNIFORM POLICE CRASH REPORT

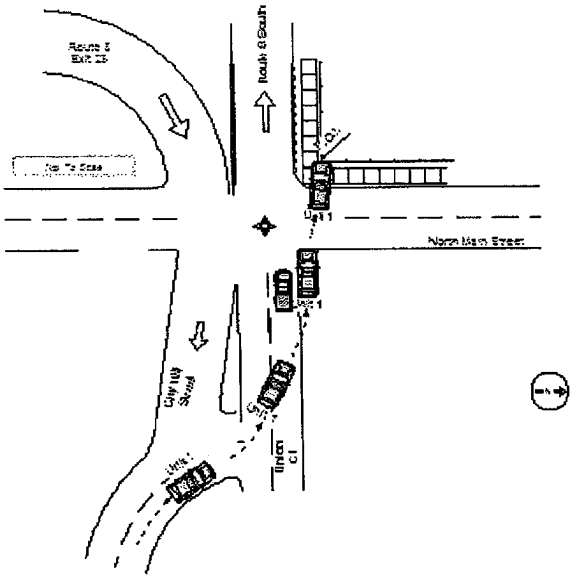
Form PR-1 REV Feb 12, 2015

Crash Summary (Back)

Case Number: 15-6090

DOT Identifier: *For DOT use only*

DIAGRAM



☐ Vehicles were moved prior to police arrival Delete Diagram

NARRATIVE

Officers Narrative: Describe any unusual circumstances associated with the crash, including officer's observations.
Refer to each by motor vehicle number and/or non-motorist number

On March 14, 2015 I was dispatched to a motor vehicle accident involving one vehicle into a fence at the intersection of North Main Street and Union Ct. No injuries reported.

Upon arrival I observed vehicle #1 had collided with a fence just North of the on ramp of Route 8 South. Op#1 stated she lost her brakes as she was driving down a small hill of City Hill Street. Op#1 stated she avoided colliding with a vehicle stopped on Union Ct. Op#1 stated she guided the vehicle across the intersection and collided with a fence next to the on ramp. Op#1 stated she was not injured. I verified that the brakes were malfunctioning and not working properly.

My investigation found that due to equipment failure on the vehicles braking system, Op#1 collided with a fixed object off the road way. AT Transmission removed the vehicle.

Related Incident Number	Officer First Name	Officer Last Name	Badge Number	Police Agency Code
	Ian	Kosky	PL17	088

Case Status O - Open C - Closed: C

Officer Name: Kosky

Date & Time: 2015032019 45

Supervisor: Sgt. Daniel Norck

Date & Time: 20150320 2022

☐ This report is a revision to a previously submitted report

CONNECTICUT UNIFORM POLICE CRASH REPORT
Form PR-1 REV Feb 12, 2015
Crash Summary (Back)

Case Number: 15-26043
DOT Identifier: *For DOT use only*

DIAGRAM

☐ Vehicles were moved prior to police arrival Delete Diagram

NARRATIVE

Officers Narrative: Describe any unusual circumstances associated with the crash, including officer's observations.
Refer to each by motor vehicle number and/or non-motorist number

Operator #1 stated he was behind vehicle #2 stopped in traffic and his foot slipped off the brake petal causing him to rear end vehicle #2. Operator #1 stated he was not injured, vehicle #1 did not sustain any visible damage.

Operator #2 stated he was stopped in traffic and was suddenly struck by vehicle #1. Vehicle #2 sustained heavy damage to the rear end, operator #2 stated he was not injured.

Officer: These two vehicles were moved two streets away from the supposed location. I find the damage sustained to both vehicles to be consistent with the statements made by both operators. I find operator #1 at fault for this collision for unsafe start from a stopped position.

Related Incident Number	Officer First Name	Officer Last Name	Badge Number	Police Agency Code
	Nick	Kehoss	PL28	088

Case Status (O - Open, C - Closed): C

Officer Name: N Kehoss
Date & Time: 2015092919 52

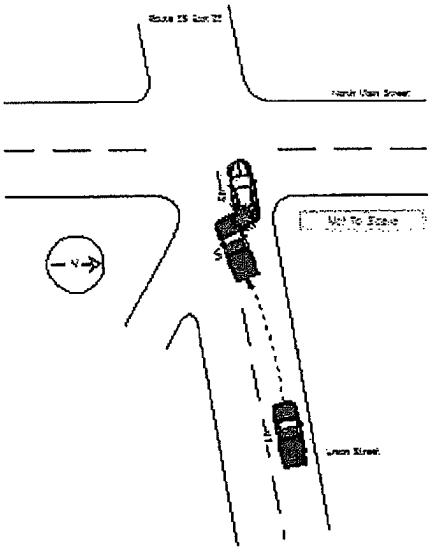
Supervisor: Sgt. Daniel Norck
Date & Time: 20151001 1723

☐ This report is a revision to a previously submitted report

CONNECTICUT UNIFORM POLICE CRASH REPORT
Form PR-1 REV Feb 12, 2015
Crash Summary (Back)

Case Number: 15-27686
DOT Identifier: *For DOT use only*

DIAGRAM



☐ Vehicles were moved prior to police arrival Delete Diagram

NARRATIVE

Officers Narrative: Describe any unusual circumstances associated with the crash, including officer's observations.
Refer to each by motor vehicle number and/or non-motorist number

Operator #1 stated he was traveling westbound on Union Street approaching the intersection of North Main Street. Op #1 stated he was attempting to continue striaght onto Route 8 South Exit 28 on ramp. Op#1 stated he observed Vehicle #2 directly in front of him and believed Vehicle #2 was traveling straight onto the on ramp. Op#1 stated Vehicle #2 then made a sudden stop. Op#1 stated he attempted to pass the vehicle on the left to avoid a collision but could not avoid Vehicle #2. Op#1 stated he then struck Vehicle #2 with his front passenger side tire. Op#1 contributed the accident to the sunlight directly in his face. I observed minor damage on he front passenger side tire of Vehicle #1

Op #2 stated she was stopped at the intersection of Union Street and North Main Street attempting to make a left turn into North Main. Op #2 stated while stopped she was struck from behind by vehicle #1. Op #1 stated she did have her left turn signal activated.

Op #1 was found to have caused the collision as he failed to leave a safe stopping distance between his vehicle and the rear of Vehicle #2. The sun in the eyes of Op #1 was verified and determined to be a contributing factor.

Related Incident Number	Officer First Name	Officer Last Name	Badge Number	Police Agency Code
15-27686	Thomas	McGarvey	PL36	088

Case Status (O - Open, C - Closed): C

Officer Name: McGarvey
Date & Time: 2015101315 11

Supervisor: Sgt. Daniel Norck
Date & Time: 2015101317 14

☐ This report is a revision to a previously submitted report

APPENDIX D

PRELIMINARY COST ESTIMATE

ENGINEER'S OPINION OF CONSTRUCTION COSTS
INTERSECTION IMPROVEMENTS - ROUTE 177 (S. MAIN ST.) AT NEW BRITAIN AVE. & MILL ST.
FARMINGTON, CONNECTICUT
PRELIMINARY DESIGN SUBMISSION
STATE PROJECT NO. 051-269
MMI# 2412-21
MAY 16, 2016

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
0202003	Earth Excavation	CY	4,500	$ 30.00	$135,000.00
0202102	Rock Excavation	CY	100	$ 80.00	$8,000.00
0202451A	Test Pit	Ea.	10	$ 400.00	$4,000.00
0202529	Cut Bituminous Concrete Pavement	LF	380	$ 3.00	$1,140.00
0202563	Removal of Trolley Tracks	LF	10,000	$ 20.00	$200,000.00
0205001	Trench Excavation (0 - 4' Deep)	CY	1,050	$ 16.00	$16,800.00
0205002	Rock In Trench Excavation (0 - 4' Deep)	CY	60	$ 100.00	$6,000.00
0205003	Trench Excavation (0 - 10' Deep)	CY	680	$ 18.00	$12,240.00
0205004	Rock In Trench Excavation (0 - 10' Deep)	CY	40	$ 120.00	$4,800.00
0209001	Formation of Subgrade	SY	10,200	$ 3.00	$30,600.00
0212003	Subbase	CY	2,900	$ 35.00	$101,500.00
0219011A	Sedimentation Control at Catch Basin	Ea.	30	$ 150.00	$4,500.00
0406170	HMA S1.0	Ton	1,500	$ 105.00	$157,500.00
0406171	HMA S0.5	Ton	1,500	$ 105.00	$157,500.00
0406236	Material For Tack Coat	Gal.	1,100	$ 4.00	$4,400.00
0507001	Type "C" Catch Basin	Ea.	22	$ 2,800.00	$61,600.00
0507022	Type "C" Catch Basin Double Grate - Type II	Ea.	1	$ 4,300.00	$4,300.00
0507222	Type "C-L" Catch Basin Double Grate - Type II	Ea.	1	$ 4,300.00	$4,300.00
0507601	Manhole	Ea.	12	$ 3,000.00	$36,000.00
0507781	Reset Manhole	Ea.	3	$ 800.00	$2,400.00
0651001	Bedding Material	CY	150	$ 35.00	$5,250.00
0651011	12" R.C.Pipe	LF	430	$ 45.00	$19,350.00

ENGINEER'S OPINION OF CONSTRUCTION COSTS
INTERSECTION IMPROVEMENTS - ROUTE 177 (S. MAIN ST.) AT NEW BRITAIN AVE. & MILL ST.
FARMINGTON, CONNECTICUT
PRELIMINARY DESIGN SUBMISSION
STATE PROJECT NO. 051-269
MMI# 2412-21
MAY 16, 2016

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
0651012	15" R.C.Pipe	LF	750	$ 55.00	$41,250.00
0651013	18" R.C.Pipe	LF	800	$ 65.00	$52,000.00
0811001	Concrete Curbing	LF	460	$ 27.00	$12,420.00
0813001	5" Granite Stone Curbing	LF	3050	$ 38.00	$115,900.00
0813011	5" Granite Curved Stone Curbing	LF	90	$ 55.00	$4,950.00
0921001	Concrete Sidewalk	SF	15,500	$ 11.00	$170,500.00
0921005	Concrete Sidewalk Ramp	SF	730	$ 14.00	$10,220.00
0921039	Detectable Warning Strip	Ea.	6	$ 150.00	$900.00
0922500	Bituminous Concrete Driveway (Commercial)	SY	40	$ 45.00	$1,800.00
0922501	Bituminous Concrete Driveway	SY	40	$ 40.00	$1,600.00
0924006	Concrete Driveway Ramp	SF	970	$ 20.00	$19,400.00
0944003	Furnishing and Placing Topsoil	SY	200	$ 7.00	$1,400.00
0950019	Lawn Seed Mix	SY	200	$ 2.00	$400.00
0969061A	Construction Field Office (Small)	Month	12	$ 1,500.00	$18,000.00
0970006A	Trafficperson (Municipal Police Officer)	Est. Cost	1	$ 120,000.00	$120,000.00
0970007A	Trafficperson (Uniformed Flagger)	Hr.	1,600	$ 55.00	$88,000.00
1302061A	Adjust Gate Box (Water)	Ea.	25	$ 250.00	$6,250.00
1302062A	Adjust Gate Box (Gas)	Ea.	13	$ 250.00	$3,250.00
1403501A	Reset Manhole (Sanitary Sewer)	Ea.	12	$ 700.00	$8,400.00
	Landscaping	L.S.	1	$ 50,000.00	$50,000.00
	Minor Items (±25%)	L.S.	1	$ 426,000.00	$426,000.00
ROADWAY CONTRACT ITEMS SUBTOTAL					**$2,129,820.00**

ENGINEER'S OPINION OF CONSTRUCTION COSTS
INTERSECTION IMPROVEMENTS - ROUTE 177 (S. MAIN ST.) AT NEW BRITAIN AVE. & MILL ST.
FARMINGTON, CONNECTICUT
PRELIMINARY DESIGN SUBMISSION
STATE PROJECT NO. 051-269
MMI# 2412-21
MAY 16, 2016

ITEM NO.	ITEM/DESCRIPTION	UNIT	QTY	UNIT COST	AMOUNT IN FIGURES
LUMP SUM CONTRACT ITEMS					
0201001	Clearing and Grubbing (±2%)	L.S.	1	$ 43,000.00	$43,000.00
0971001	Maintenance & Protection of Traffic (±4%)	L.S.	1	$ 86,000.00	$86,000.00
0975002	Mobilization and Project Closeout (±7%)	L.S.	1	$ 150,000.00	$150,000.00
0980001	Construction Staking (±1%)	L.S.	1	$ 22,000.00	$22,000.00
LUMP SUM CONTRACT ITEMS SUBTOTAL					**$301,000.00**

CONTRACT ITEMS TOTAL	**$2,430,820.00**
INFLATION ESTIMATE (±4% PER YEAR TO 2018)	**$200,000.00**
2017 CONTRACT ITEMS TOTAL	**$2,630,820.00**
CONTINGENCIES (±10%)	**$264,000.00**
INCIDENTALS TO CONSTRUCTION (±25%)	**$658,000.00**
2017 PROJECT TOTAL CONSTRUCTION COST	**$3,552,820.00**

2017 PROJECT TOTAL CONSTRUCTION COST (ROUNDED)	**$3,560,000.00**

APPENDIX E

PAVEMENT DESIGN

PAVEMENT MANAGEMENT E.S.A.L. CALULATIONS

Project No. 2129-33

PROJECT DESCRIPTION: North Main Street Reconstruction

VEHICLE TYPES	PERCENTAGES	CURRENT TRAFFIC	GROWTH FACTORS	DESIGN TRAFFIC	E.S.A.L. FACTOR	DESIGN E.S.A.L.
MOTORCYCLES	0.390	4	24.30	34587	0.0001	3
PASSENGER CARS	85.880	859	24.30	7616302	0.0020	15233
FOUR TIRE	9.540	95	24.30	846059	0.0389	32912
HEAVY VEHICLES						
BUSES	0.420	4	24.30	37248	0.4111	15313
SINGLE UNITS						
SIX TIRE TRUCKS	1.090	11	24.30	96667	0.2004	19372
THREE AXLE TRUCKS	0.750	8	24.30	66514	1.1384	75720
FOUR AXLE TRUCKS	0.150	2	24.30	13303	3.4784	46272
SINGLE-TRAILER TRUCKS						
FOUR OR LESS AXLES	0.300	3	24.30	26606	0.8005	21298
FIVE AXLES	0.640	6	24.30	56759	1.3377	75926
SIX OR MORE AXLES	0.500	5	24.30	44343	1.2303	54555
MULTI-TRAILER TRUCKS						
FIVE OR LESS AXLES	0.340	3	24.30	30153	3.0655	92434
SIX AXLES	0.000	0	24.30	0	2.1102	0
SEVEN OR MORE AXLES	0.000	0	24.30	0	2.1102	0
UNCLASSIFIED	0.000	0	24.30	0	1.4500	0
SUM OF ALL TYPES	100.000	1000				449037 ESALs

AVERAGE DAILY TRAFFIC	2000		
LANE DISTRIBUTION	100		
GROWTH RATE OF CARS	2.0	20	24.30
GROWTH RATE OF TRUCKS	2.0	20	24.30
	Annual G.Rate in %	Life (yrs)	Growth Factor

G.F. = ((1+g)^n - 1) / g

1. W18 [Accumulated ESALs]	449,037				
Z_r	-1.28	ZR			
Std Dev	0.45	S			
ΔPSI	1.70	DPSI			
2. Subgrade M[r]	10000	psi			
	Surface mix	Base mix	P.A.B.	subbase	
a[i]	0.44	0.34	0.14	0.11	
D[i], inches	2.50	2.50	0.00	10.00	inches
m[i]		1.00	1.00	1.00	
3. Reliability, %	90	R			

4. Initial and terminal serviceability	Po	Pt
ΔPSI	4.20	2.50
Provided SN	3.05	
Required SN (Solver will fill in)	**2.72**	Adequate
log10(W18) =	5.65	left side
	5.65	right side
target cell	0.00	

KEYS: Fill in cells in light blue. (D[i] cells aren't necessary but they can help see the adequacy of a design)

1. The W18 value is the value obtained in the bright yellow cell in ESALCALC.xls, the ESAL calculator.

2. Subgrade resilient modulus.

Gravels	10,000-12,000 psi	
Tills	10,000 psi	<---- this value should be used unless there is clear information to use something else.
Sands	7500-10000 psi	(low end for silty/clayey sands, high end for gravelly sands)
Silts	6000-7500 psi	
Clays	4000-6000 psi	

3. Reliability should be 95% for Interstates, Expwys, 90% elsewhere.

4. Terminal serviceability should be 2.5, but collectors and local roads may use 2.0.

The remaining inputs, Std Dev and Zr should not be varied from defaults.

D[i] Depth of each layer being constructed.

This is not related to the required SN but rather to the provided SN. It is not necessary except to check the adequacy of the design. For rehabilitation, existing layers will have different coefficients. That calculation needs to be done separately but is straightforward. (depth x coeff, add layers).

Instructions

1. If the Excel-> Add-ins--> Solver has not been activated, do that first. (Excel 2003: Tools->Add-ins, check the Solver option)
In Excel 2010, it's File->Options->Add-ins->click on [Go…] Button at the bottom by "Manage Excel Add-ins", then select Solver Add-In in the dialog box that opens, click OK.

2. Fill in the values for the cells in light blue for reconstruction (all new layers).
It is not necessary to fill in these values here. Filling them in allows the labeling of "Adequate" in yellow. This is a quick shortcut for reconstructed pavement.
For rehabilitation, please check the value in B16 against the result of filling in the table in the SN eff tab (next Excel tab).
The value in B16 gets carried onto that tab, so once the Solver has been run (step 3) you can move over to the SN eff tab to do those calculations.

3. Open the Solver (Tools->Solver). Cell B20 should already be the target cell. "By Changing" should be "sn" (B16).
In Excel 2010, it's in the [Data] tab at the top toolbar, then under the "Analysis" category at the far right top, there is the "Solver" option. Click it.
It is already set up to run in the appropriate cell with the appropriate values. Click OK and then "Keep Solver Solution".

4. The structure provided is adequate when the provided SN exceeds the required SN (and is indicated on cell C16).
You may use either the a[i] and D[i] rows here for the provided SN or you may use the next tab (SN eff).
If you use the next sheet, do not change the Provided SN in the green cell because it will override the formula.

NOTE:
Disclaimer: No claims of accuracy are made about the answers provided by this tool.

This tool calculates the required SN. The Provided SN depends on whether this is new construction or a rehabilitation.
Please see the AASHTO 1993 Pavement Design Guide for guidance on rehabilitation design as well as calculations for ESALs.
(There are some calculators online, too).

Please note that the structural coefficient of the base layer (0.34) is a function of its position within the pavement structure and not necessarily material properties. It was derived from empirical relationships at the AASHTO Road Test and therefore a hot-mix-asphalt base should be considered at 0.34 per inch and not 0.44 per inch.