# Williston Road Network Transportation Study Phase II

South Burlington, Vermont

#### PREPARED FOR



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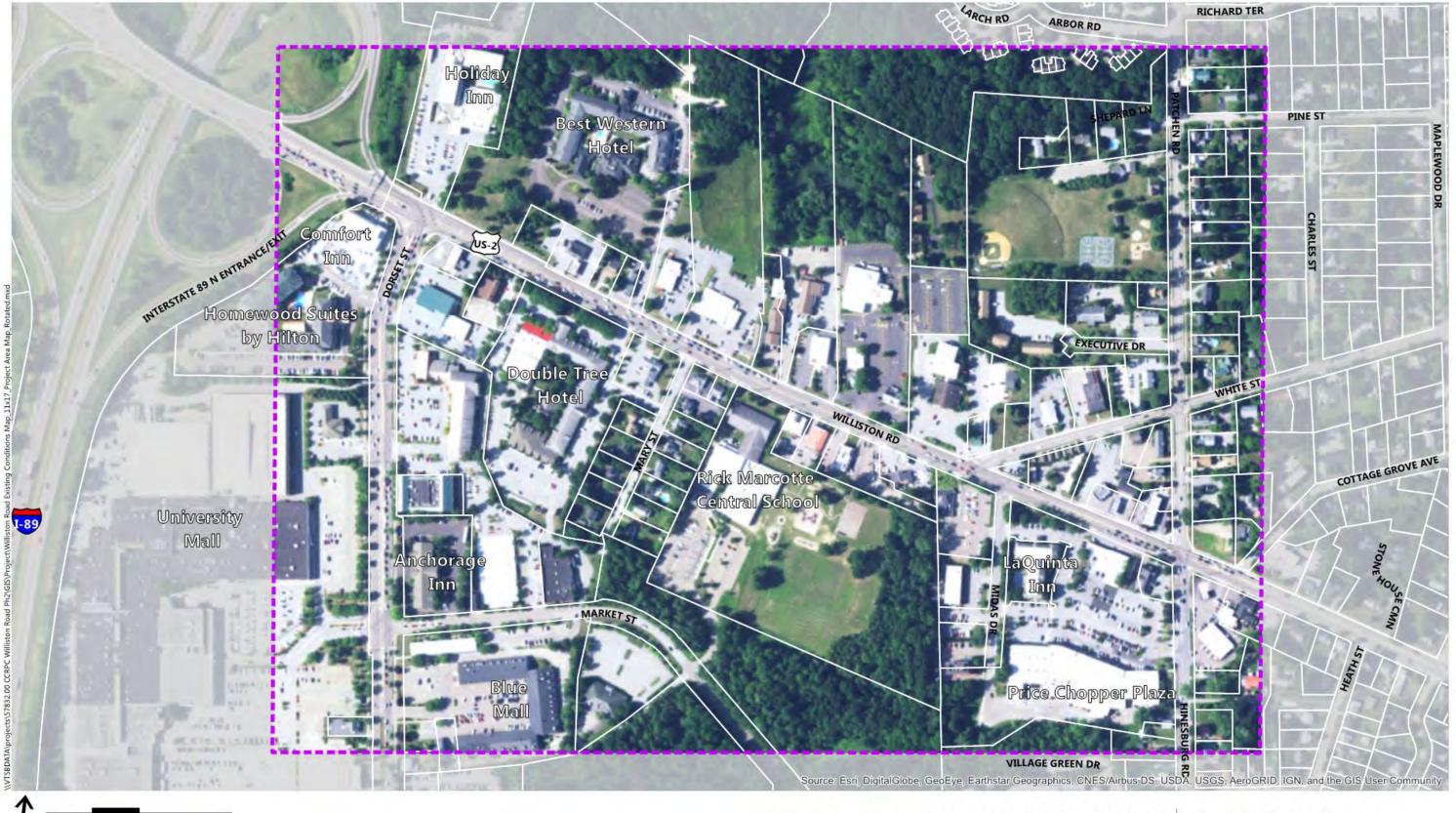


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## Introduction

In 2015, the Williston Road Transportation Study, Phase I – Initial Technical Evaluation was completed. This Study provided a review of transportation alternatives to address safety, operational, and multimodal issues along 0.5 miles of the Williston Road corridor between Dorset Street and Hinesburg Road (VT 116). The improvement plan developed in Phase I conceptualized a five-lane section on Williston Road with exclusive left-turn lanes at signalized intersections and a raised median between signals, six-foot bicycle lanes, a new traffic signal mid-corridor, a new connector roadway north of the corridor, and enhanced parcel connectivity south of the corridor. During this second phase of the project, focused outreach to property owners and other stakeholders was conducted and the Phase I recommendations were evaluated in greater detail. The outcome of this project is an implementation plan that the City can use to update their Official Map and move forward into the design phase. This plan includes short-term improvements and long-range alternatives to enhance safety and multimodal accessibility along Williston Road, as well as accommodate infill development and an expansion of the City Center District along both sides of Williston Road.

The project Study Area can be seen in **Figure 1**. This figure includes streets and connections currently identified in South Burlington's Official Map effective April 11, 2016.





Study Area (VHB)

Williston Road Network Transportation Study - Phase II

South Burlington, Vermont

Sources: Background - ESRI Basemap (2014); VCGI (Vermont Center for Geographic Information - Various Dates); VTrans (Vermont Agency of Transportation - Various Dates) Figure 1: Project Area Map

July 26, 2017

The tasks completed as part of this Scoping Study include the following:

- Review recommendations from Phase I and provide recommended revisions,
- Preliminary review of natural resources along the corridor,
- Public Outreach (with the general public and individual corridor abutters),
- Develop Proposed Purpose and Need Statement,
- Develop short and long term recommendations,
- Develop conceptual level construction cost estimates for recommendations,
- Develop Implementation Plan for short and long term improvements.

## 1.1 Purpose and Need Statement

## **Purpose**

To plan for the development of the northern portion of the South Burlington City Center transportation network consistent with the City's goals for providing a livable, walkable, multi-modal transportation system by providing infrastructure that meets the following measures:

- Provide opportunities to make Williston Road complementary to a new downtown.
- Strike a balance between serving "to" and "through" trips.
- Integrate design elements to facilitate **safe movements** at a reasonable pace.
- Ensure **safe and comfortable accommodations** for all travel modes.
- Identify a grid street network on both sides of Williston Road to **facilitate connectivity** and access to dense, mixed-use infill development.

#### Need

The City of South Burlington recognizes the significance of the Williston Road corridor as a primary transportation system for both local and regional trips. The Williston Road corridor sees significant traffic volumes and is centrally located to Interstate 89, the Burlington International Airport, the University Mall, the City of Burlington (including several colleges/universities) to the west, and Williston to the east. In order to achieve the City's goals, it is pertinent to invest in safe and regionally connected bicycle and pedestrian facilities to promote active transportation and increase the number of people that walk and bike in and through the City.

Existing and planned infrastructure has created a blossoming bike network in South Burlington including major roads such as Dorset Street (side by side five-foot sidewalk and five-foot cycle track), Kennedy Drive (10-foot shared use path), and the planned improvements for Market Street (9 to 14-foot shared use path) and Garden Street (10-foot separated bicycle facilities). Williston Road is a crucial link in this network to make a fully functional and connected network of safe and accessible bicycle accommodations.

Williston Road is one of the more crash-prone corridors in the state of Vermont, with this project's stretch of road containing three VTrans high crash location (HCL) intersections, and one section. There exists a need to improve safety along this corridor through changes to traffic signals and access management, in particular. Access management along this corridor needs to be addressed in order to improve safety through reduced vehicle conflicts, as well as decrease delays and queues at the many mid-block driveways.

Along with the need to revitalize Williston Road, there is also a lack of a grid street network and parallel routes through South Burlington. Market Street is one of the only roads running parallel to Williston Road. In order to create a highly mobile and decongested city, a grid street network with many alternate routes and connections needs to be considered.

## 1.2 Coordination with Other Projects

The following is a list of nearby projects (as shown in **Figure 2**) that are underway or recently completed and in close proximity to the project study area. Consideration of these improvements was given during the development of recommendations.

- New Market Street and Garden Street connectors
- Improvements at White Street/Midas Drive and VT 116/Patchen Road
- Potential bicycle / pedestrian bridge over I-89
- Potential University Mall redevelopment project
- Chamberlin Neighborhood Planning Project



Figure 2: Coordination with Other Projects

p. 4

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# **Existing Conditions Assessment**

This project is located along the Williston Road corridor in South Burlington, Vermont. The project corridor has one of the highest traffic volumes in the state excluding the interstate system, starting just east of the I-89 Exit 14 interchange and running east to the intersection of VT 116 and Patchen Road. This corridor is also a major regional connector between Williston to the east and Burlington to the west.

## 2.1 Roadway Characteristics

Right of Way (ROW): Varies, 66' to 90'. The ROW was originally 60'

along the corridor and as development has occurred the City has been acquiring 90'

ROW along Williston Road.

<u>Roadway Geometry:</u> 2 lanes in each direction (widens to 4 lanes

at turning lanes), 2-foot shoulders, sidewalks

with narrow grass buffers.

Speed Limit: 35 mph

Average Annual Daily Traffic (2015):

36,300 West of Dorset Street

24,300 Dorset Street to White Street

17,400 East of White Street

Characteristics of Corridor:

Span wire traffic signals

Limited transit accommodations

Utility poles in grass buffers

Lack of left turn lanes and controlled

intersections

Multiple driveways

Limited street trees

Frequent curb cuts

<u>Pedestrian facilities</u>: Sidewalks along both sides of road

separated from the road by a narrow green

strip

<u>Bicycle facilities:</u> None present

### 2.2 Crash Assessment

VTrans evaluates annual crash data and identifies High Crash Location (HCL) intersections and sections that meet the following two criteria: 1) have a minimum of five reported crashes in five years, and 2) have an actual-to-critical ratio greater than 1.0. Based on the 2010-2014 VTrans HCL report, the following are HCLs along the project area. Three of these locations fall within the top 50 highest-rated intersection or section crash locations in the State based on the 2010-2014 crash data.

Figure 3: High Crash Locations Summary

Route / Location	Milemarker	AADT	Crashes	Fatalities	Injuries	Property Damage Only	Ratio (Actual / Critical)	Ranking
Intersections								
US 2 / Dorset St	0.49 - 0.50	40960	106	0	10	99	1.813	14
US 2 / White St	0.86 - 0.88	28990	57	0	9	49	1.311	56
US 2 / VT 116 / Patchen Rd	0.99 - 1.01	29890	61	0	5	58	1.367	43
Sections								
US 2	0.558 - 0.858	28700	234	0	27	212	2.443	31

More recent crash data (2011 – 2015) obtained from the VTrans Public Query Tool<sup>1</sup> revealed 454 crashes along the corridor, which is 0.51 miles in length. This is equivalent to an average of 1 crash every 4 days. The following are additional statistics for the 2011-2015 crash data:

Phase I crash research indicates 2009 – 2013 had 8% higher crashes than the 454 crashes during years 2011 – 2015.

- Surface Condition 69% occurred when the road was dry
- Time of Day 70% occurred during daylight hours
- Crash Severity No fatalities, 35 injuries (8% of crashes)
- Roadway Characteristics:
  - o Not at a junction 42%
  - o Four-way intersection 29%
  - o T or Y intersection 9%
  - o Unknown or other 20%
- Two crashes involving a bicyclist, three involving a pedestrian

**Figure 4** shows the distribution of crash types along Williston Road from 2011-2015. The figure identifies rear end collisions as the most common crash type which is indicative of congested corridors containing frequent, unanticipated braking vehicles.

 $<sup>^1\,</sup>V Trans\,Public\,Query\,Tool,\,http://apps.vtrans.vermont.gov/CrashPublicQueryTool/home/index.\,Queried\,on\,08/16/2016$ 

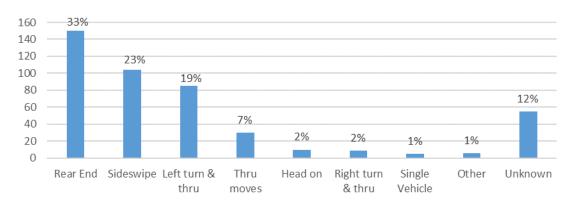


Figure 4: Williston Road Corridor Crashes by Direction of Collision (2011-2015)

## 2.3 Existing Conditions Congestion Analysis

Phase I of this project conducted a 2014 existing conditions congestion analysis of four intersections along the project corridor. As shown in **Figure 5**, the Dorset Street / Holiday Inn intersection has a LOS D during the PM peak hour, and a v/c ratio of 0.98, which means that this intersection operates at 98% of capacity during this peak hour. As indicated in the Phase I report, the westbound approach queues periodically back up to and through the adjacent DoubleTree signalized intersection during the PM peak hour. These queues are largely driven by westbound vehicles favoring the northerly lane to access I-89 northbound beyond the Dorset Street intersection. While the DoubleTree intersection is shown as a LOS B for the PM peak hour, the intersection effectively operates at a LOS F when the queue from the Dorset Street intersection reaches this intersection.

Figure 5: Existing Conditions Congestion Analysis

	Peak			
Intersection	Hour	V/C	Delay	LOS
Dorset St/Holiday Inn	AM	0.66	25	C
	PM	0.98	40	D
Doubletree/Windjammer	AM	0.70	5	A
	PM	1.01	11	В
White St/Midas Way	AM	0.45	10	Α
	PM	0.61	15	В
Hinesburg Rd/Patchen Rd	AM	0.55	27	С
	PM	0.79	31	C

## 2.4 Existing Transit Service

Currently Green Mountain Transit (GMT) operates two local routes along Williston Road: #1 Williston and #1V Williston Village. These routes both originate at the Transit Center in Burlington and travel along US 2 into Williston. The #1 route provides access to Walmart in Williston and the #1V route circles in Williston Village before rejoining the #1 route. Along Williston Road, there are three eastbound bus stops and one westbound stop. None of these stops provide benches or shelter for waiting passengers. The nearest covered bus stops are on Dorset Street or to the east at University Heights.

## 2.5 Existing Land Use

The existing Williston Road is occupied by a variety of uses. There are many restaurants, varying from fast-food (e.g. McDonald's, Moe's Southwest Grill, Dunkin' Donuts) to higher-end casual dining (e.g. Windjammer, Silver Place, Trader Duke's). There are many commercial and retail spaces including Vermont Gift Barn, Cheese and Wine Traders, and Umiak Outdoor Outfitters. Five hotels and three gas stations also exist along this stretch of Williston Road. The five hotels have a very strong presence on the Williston Road corridor, bringing many visitors to the area and providing lodging with close access to many attractions.

The zoning of Williston Road changed in 2016 with the rezoning of the City Center District but the existing land uses were developed under the previous zoning over the past 50 years. A copy of the 2011 and 2016 zoning maps are provided in the Appendix.

## 2.6 Meetings & Public Outreach

The Public Involvement Plan for the Williston Road Network Transportation Study offered an opportunity to present the concepts of the Phase I study to the public and adjacent landowners. The intent of the public involvement effort is to further foster a spirit of inclusiveness among project stakeholders. By including them in discussions, it was determined which improvements will provide the most benefit to

business owners as well as residents and the traveling public. Public involvement was integrated into all aspects of the work plan, including the following:

- Group Landowners Meeting I (Jan. 2016)
- Individual Landowner Meeting (Feb. 2016)
- Public Meeting (March 2016)
- Group Landowners Meeting II (Fall 2016 Spring 2017)
- South Burlington Business Association (June 2017)
- South Burlington Planning Commission Meeting (Aug. 2017)

Breakout groups identified three goals for this project. The top ranked items were the following:

- Provide options to divert through traffic and prioritize only local traffic,
- 2. Improved traffic flow, and
- 3. Safer and more accommodating for cyclists

The following are some opportunities and concerns of the project area received from public input. Minutes from public meetings are provided in the Appendix.

## **Opportunities**

- Williston Road should be perceived as a focal point of activity rather than a connector between Burlington and Williston
- Any corridor improvements should support local business
- This area is eligible to us the Tax Increment Finance (TIF) district to pay for portions of "outside the curb" projects such as streetscaping or landscaping

#### Concerns

- Form based code suggests a median for this type of road (commercial boulevard), but the decision to install or not install is up to the City
- Business owners are concerned that a median would hurt businesses
- Lack of signal coordination
- Perceived lack of safety for pedestrians walking from hotels to University Mall and other locations
- Vehicular access (curb cuts and/or medians)
- Ability to access bus stops is difficult as it is difficult to cross Williston Road on foot
- Desire for more bus pullouts
- Impacts of City Center development to area traffic



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# **Natural Resource Assessment**

A preliminary screening was conducted to assess the potential presence and extent of natural resources within the Study Area. The screening was conducted for the natural resources listed below in order to identify resource constraints in the study area and determine which resources may require more detailed assessment and evaluate the need for environmental permitting. The following is based on data in the Vermont Natural Resources Atlas online query tool<sup>2</sup>.

Figure 6 shows locations of environmental resources within the project area.

Streams: Tributary 3 of the Potash Brook runs southwest and

crosses US 2 east of the project area. Various tributaries to the Winooski River exist in a ravine to the north of the

Holiday Inn.

Surface Water: There is a surface water source protection area (SPA)

beginning at the intersection with White Street and

continuing east beyond the project area.

Hazardous Sites: These are locations including, but not limited to, gas

stations, as well as at the South Burlington Central School, Champlain Oil Company, and Gracey's Store.

Impaired Watershed: A majority of the project area is in the impaired

watershed of the Winooski River, Mouth to Winooski

Dam.

Soils: Hydric - There are hydric soils (type statewide and

statewide (b) to the north and south of the corridor but

not within the roadway ROW.

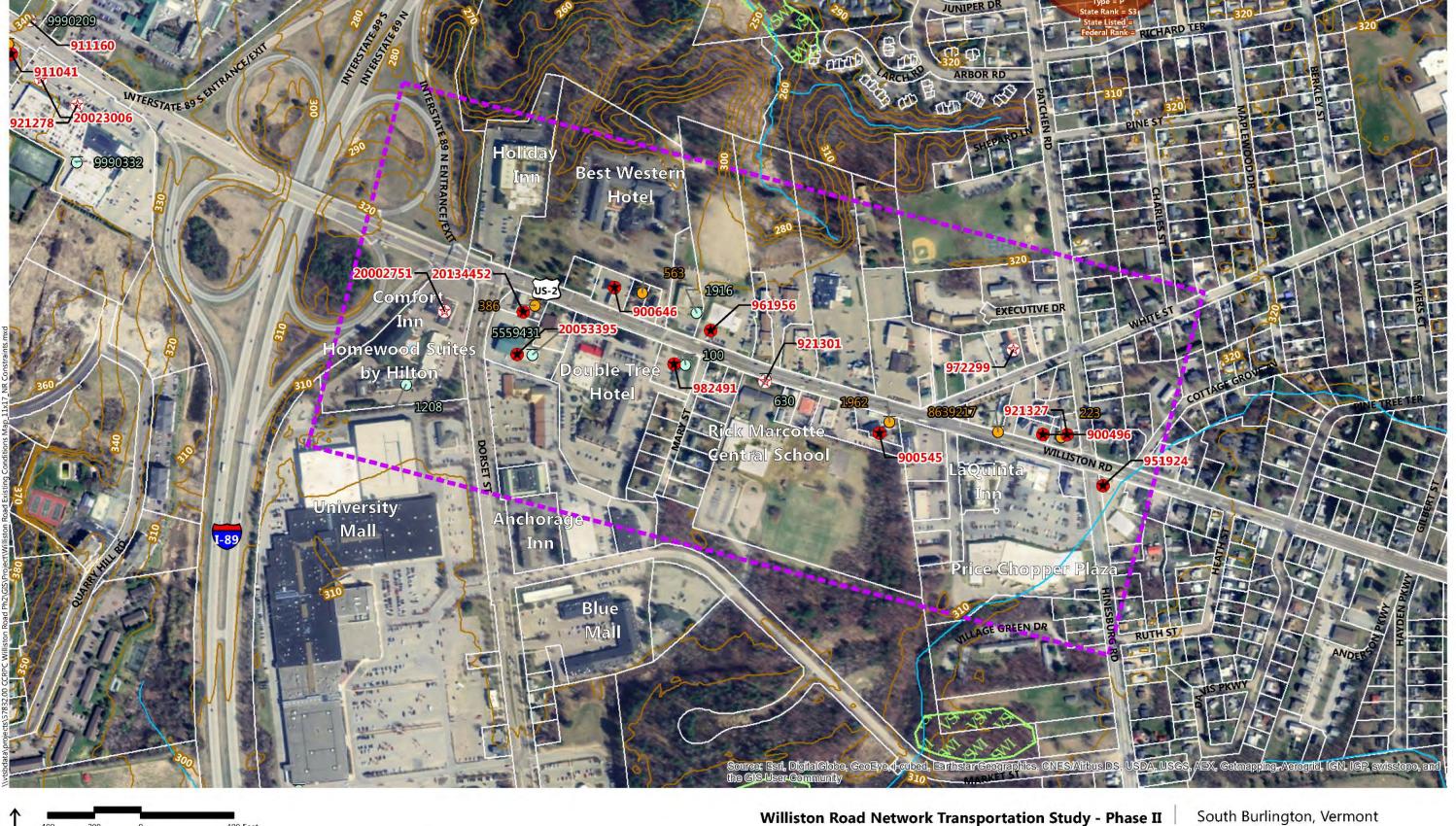
Prime Agricultural – There are prime agricultural soils beginning at the intersection with White Street and

continuing east past VT 116.

Wetlands: Located to the north of the Holiday Inn and Best

Western.

<sup>&</sup>lt;sup>2</sup> Vermont Natural Resrouces Atlas, Vermont Agency of Natural Resources. http://anrmaps.vermont.gov/websites/anra/ - Queried 08/22/2016 for environmental resources





Study Area (VHB) Stream (VCGI)

VSWI Wetland (VT ANR)

Natural Heritage Inventory Element Occurrence (VT FWD) 🚺 Active Deer Wintering Area (VT ANR)\* O Pulled

River Corridor (VT ANR)\*

O Public Well (VT ANR)\* Private Well (VT ANR)\*

Unknown

Underground Storage Tanks (VT ANR) 😾 Closed

Hazardous Waste Site (VT ANR) Town Boundary (VCGI)\*

— 10 ft. Contour (VCGI) 100 Year Flood Zone (FEMA) Conserved Public Lands (VCGI) Waterbody (VCGI)\* \*Feature not present in map extent

Sources: Background - ESRI Basemap (2014); VCGI (Vermont Center for Geographic Information - Various Dates); VT ANR (Vermont Agency of Natural Resources - Various Dates); VT FWD (Vermont Fish and Wildlife Department - Various Dates); VTrans (Vermont Agency of Transportation - Various Dates)

Figure 6: Natural Resources Map

December 13, 2016

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## Williston Road Corridor Plan

This phase of the Williston Road Network Transportation Study used the Phase I Study concepts as a starting point for the development of improvement alternatives. Phase I concepts included the following:

- Providing a full or partial connector roadway north of the Williston Road corridor
- Improving parcel connectivity south of the corridor
- Maintaining two through lanes per direction on Williston Road with exclusive left-turn lanes at signalized intersections
- Planning for the installation of an additional future traffic signal on Williston Road approximately half way between the existing DoubleTree intersection and the soon to be realigned Garden Street / White Street intersection
- Installing bike lanes along Williston Road
- Providing well-defined pedestrian crosswalks at each of the signalized intersections
- Upgrading and widening sidewalks
- Coordinating with and supporting Green Mountain Transit (GMT) in their vision for expanded service along the corridor, including new technologies that provide real time passenger information and traffic signal priority systems.

## The Form-Based Code District in South Burlington considers Williston Road a "Commercial Boulevard". What does this mean?

This classification means that while the roadway acts as a conduit for through traffic, it also provides safe and enjoyable accommodations for pedestrian, bicycle, and transit trips going to and from origins and destinations within the area.

The refining of improvement alternatives evolved through discussions with project team members, public and landowner input, and coordination with ongoing planning and design projects such as Garden Street. In addition to coordination with other projects, improvements need to proceed in accordance with the Form-Based Code zoning along and adjacent to Williston Road.

Phase II of the project recognizes that the ultimate "wish list" for Williston Road improvements will not likely be constructed all at once and that an incremental approach involving short and long term improvements is needed. This approach sets the long-term vision (and right-of-way limits) for the corridor while allowing the City to phase the implementation of improvements along Williston Road when feasible and practical.

As South Burlington continues to advance the development of their City Center, these improvements will ensure that the following goals can be achieved for the Williston Road corridor

- Provide opportunities to make Williston Road complementary to a new downtown.
- Strike a balance between serving "to" and "through" trips.
- Integrate design elements to facilitate **safe movements** at a reasonable pace.
- Ensure safe and comfortable accommodations for all travel modes.
- Identify a grid street network on both sides of Williston Road to **facilitate connectivity** and access to dense, mixed-use infill development.

The recommended improvements and suggested phasing for the Williston Road corridor between Dorset Street and Hinesburg Road (VT 116) is described in the following sections.

### 4.1 Short Term Recommendations

Short term recommendations are approximated to be those that can be feasibly advanced within the next two to five years to coincide with other initiatives that the City and its partners are pursuing to improve mobility, safety, and accessibility to and within the greater City Center District. These projects include a major reconstruction of Market Street, construction of Garden Street, intersection upgrades on Williston Road at the White Street/Midas Drive and Patchen Road/VT 116 intersections, potential advancement of public facilities within the City Center District (e.g. Dumont Park, Public Library, Community Recreation Center) as well as private development along and adjacent to Williston Road.

The short-term recommendations advanced for the Williston Road corridor include the following measures:

- **S-1) Update Official Map:** The City of South Burlington's Official Map was last amended on April 11, 2016. The map identifies planned streets that are required to be integrated into any land development or redevelopment of a parcel crossed by one or more planned street. The Official Map is an important planning tool to ensure long term street connectivity and accessibility goals are advanced as individual parcels are developed. Within the context of the City Center District, the currently defined Official Map streets were reconfigured to accommodate the grid street network developed during this study. For more detail on the grid street network and proposed street hierarchy, see Recommendation L-2, under the long term recommendations. To implement the Official Map changes, City Planning Staff should present potential map revisions to the Planning Commission for review, approval, and submittal to the City Council for adoption.
- **S-2) Establish 100-Foot Right of Way (ROW):** The current public ROW along the corridor varies from 66 to 90 feet in width. During the alternatives evaluation, it was determined that a 100-foot ROW width could sufficiently accommodate all of the features articulated in the long-term vision for the

- corridor. As other land development projects advance along the corridor, the City should be seeking all opportunities to acquire the rights as needed to establish a 100-foot right-of-way.
- **S-3) Traffic Signal Timing & Coordination:** The City should continue to work with the CCRPC and VTrans to manage and optimize signal timing and coordination plans along Williston Road and Dorset Street and take advantage of opportunities to integrate Advanced Traffic Management Systems (e.g. Adaptive signal control and real-time traffic monitoring) into the corridor.

### S-4) Williston Road Improvements - South Side

- Protected Bicycle Lanes: Construct a ten-foot wide, two-way protected bicycle facility along the south side of Williston Road with curbing on both sides and a six-foot landscaped buffer between the roadway and bicycle lanes. This landscaped buffer could also be used for snow storage during the winter months. The design of this facility will need to consider private property impacts, drainage, driveway accommodations, and cyclist treatments at either end of the protected bicycle lanes.
- Southern Sidewalk Relocation & Widening: The new six-foot sidewalk should be constructed with a four-foot offset from the southern curb line of the protected bicycle lanes to accommodate street trees, lighting, landscaping, or hardscape features.

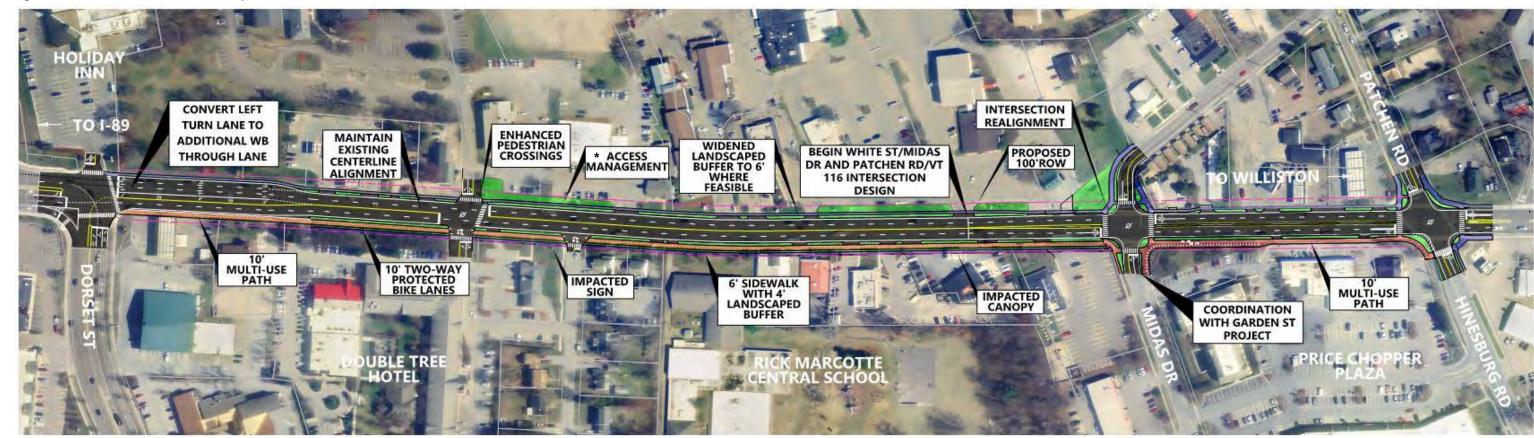
Changes:
- Signal upgrades and optimization
- Access management
- Streetscape enhancements
- Protected bike lanes on south side
- South side sidewalk widened to 6'

Curb to curb (current)
- 66 ft
- Right-of-way (current)
- Some Sections Wider

100 ft
- Right-of-way (planned)

Figure 7: Short Term Williston Road Cross-Section - Looking East

Figure 8: Williston Road - Short Term Improvements Overview



<sup>\*</sup> Possible Access Management Location – Actual locations may vary based on final design

- **S-5) Dorset Street Intersection Improvements:** To enhance the capacity of the Williston Road/Dorset Street intersection and minimize the westbound lane transition issues currently occurring in front of the Sunoco service station, the following intersection modification should be made:
  - On the westbound Williston Road approach to Dorset Street, convert the northerly left-turn only lane into a through lane – resulting in a single westbound left turn lane and three through lanes on Williston Road. This reconfiguration provides additional capacity for the westbound through movement by adding an additional lane and minimizes the current lane deflection for westbound vehicles.

As shown in **Figure 9**, these lane modifications are projected to reduce overall evening peak hour average delays by seven seconds (from LOS D to LOS C) and reduce the intersection's volume-to-capacity ratio from 0.98 to 0.92. This proposed lane reassignment requires further analysis by VTrans and Federal Highway Administration (FHWA) as this recommendations is located in an area under their jurisdiction.

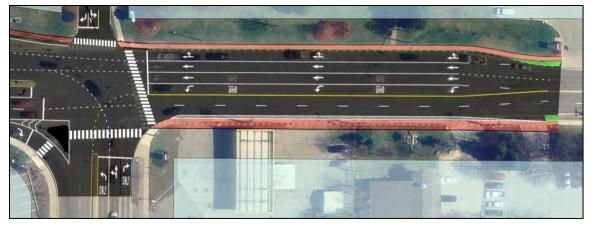
**Figure 10** shows a sketch of the proposed intersection lane reconfiguration.

Figure 9: LOS Summary Before and After Williston Road Lane Reconfiguration

	2014 Existing Conditions						
	Week	Weekday PM Peak Hour					
Location / Approach	<u>v/c</u>	Delay	LOS	<u>v/c</u>	Delay	LOS	
Williston Rd at Dorset St / Holiday Inn	0.66	25	С	0.98	40	D	
	Modif	ied Condi	ition - One	Left-Onl	y and 3 T	hrough	
Williston Rd at Dorset St / Holiday Inn	0.66	25	C	0.92	33	C	

v/c - Volume to capacity ratio.

Figure 10: Westbound Williston Road Approach Lane Re-configuration at Dorset Street



Delay expressed in seconds per vehicle.

LOS - Level of service.

## 4.2 Long Term Improvements

The long-term improvements are intended to be implemented over the next twenty years to coincide with the further development and redevelopment of properties along Williston Road and the construction of the City Center District grid street network. In this section, four options for long term improvements are examined.

#### L-1) Williston Road Improvements - North Side

The short-term recommendation for Williston Road called for the expansion of the southern side of the corridor to include a two-way protected bikeway, a six-foot sidewalk, and landscaped buffers with pedestrian-scale lighting. The long term-recommendation calls for an expansion of the right-of-way on the north side of the corridor in order to accommodate various roadway cross-sections in the future. Outside of the curb, it is proposed to include an eight-foot sidewalk and landscaped buffer with pedestrian-scale lighting and streetscaping. These improvements, which are shown below in Figure 11, take advantage of the full 100-foot planned right-of-way along Williston Road.

Changes:

New center two-way left-turn lane
North side curb line shifted 12' north

Widened north side sidewalk

Widened north side landscaped buffer

Tool for tright-of-way

Figure 11: Williston Road Long-Term Corridor Cross-Section Option One

PROPOSED CONNECTORS

WIDENED L-39 NR

WIDENED L-39 NR

ENTY RAMP
ENTY RAMP

TO 1-89

TWO WAY
SIGNALIZED INTERSECTION

TO WILLSTON

THOM AND SIGNALIZED INTERSECTION

THE SIGNALIZED IN

Figure 12: Williston Road - Long Term Improvements Overview – Option One

In addition to **Figure 11**, the 100-foot planned right-of-way provides the flexibility for other potential configurations of the travel space which may be developed in future years. Possible alternative configurations within the 60-foot curb-to-curb distance include the following cross-sections shown in **Figures 13-15**:

#### Option 2:

Replacing the center two-way left-turn with a raised, landscaped median and protected turn lanes at signals and major driveways. The center median is consistent with the form-based code classification of "Commercial Boulevard" through this area.

#### Option 3:

Replacing the five-lane section with a two-lane Williston Road (i.e. one lane in each direction), with angled parking on each side of the street. This option has the same 60-foot curb-to-curb dimension but favors direct property accessibility and "to" trips over expanded roadway capacity and "through" trips. While no specific traffic modeling was conducted to evaluate this scenario, the reduced capacity will likely impact delays and lead to re-routed trips.

#### Option 4:

A third option could include the integration of light rail along the center of Williston Road coupled with a single travel lane in each direction. While this alternative would require significant planning and refinement, it represents the flexibility afforded to the corridor and ability for future transportation policy discussions to factor into the long-term cross-section of Williston Road.

Figure 13: Williston Road Long-Term Corridor Cross-Section Option Two



Figure 14: Williston Road Long-Term Corridor Cross-Section Option Three

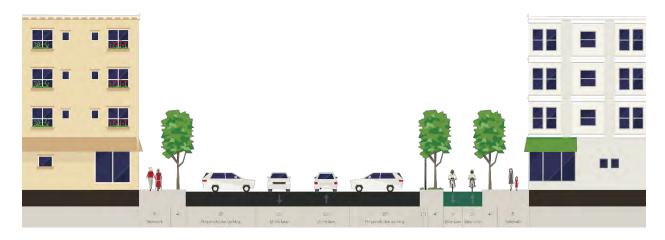


Figure 15: Williston Road Long-Term Corridor Cross-Section Option Four



#### L-2) Grid Streets

Creating a dense, vibrant, mixed-use, and multimodal City Center District is an important priority for the City. An integral part of the City Center vision is a network of grid streets surrounding Williston Road to enhance accessibility, disperse traffic, and optimize opportunities for lot frontage.

The overall grid street network was configured to optimize lot accessibility and interconnectivity, considering existing land uses, and the size, orientation and development potential of each block. To better understand existing and future development and redevelopment potential, the project team met several times with neighbors, property owners and the public. The proposed grid street network is shown in **Figure 16** and includes a hierarchy of streets as follows:

- **Primary Street**: These streets are intend to provide regional and local connectivity for all modes. Adjacent buildings must front along Primary Streets, unless specific site constraints prohibit placement. Intersections of Primary Streets are generally signalized, with safe crossing accommodations provided for all modes. Examples of Primary Streets within the City Center District include Williston Road, Dorset Street, Market Street, and Garden Street.
- Secondary Street: These streets are intended to provide local
  connectivity for all modes, connecting Primary Streets with other
  grid streets and individual properties. Adjacent buildings should
  front on Primary Streets, however, properly landscaped and
  screened parking is permitted along Secondary Streets. Examples of
  Secondary Streets within the City Center District include White
  Street, two new east-west streets paralleling Williston Road to the
  north and south, as well as an extended Mary Street.
- **Tertiary Street**: These street, which may be public or private, are intended to provide access to specific destinations within the District for all modes, including deliveries. Buildings are not required to front on Tertiary Streets, however, the streets should be curbed with landscaped buffers and street trees. Examples of Tertiary Streets include the access road to Dorset Street near the Barnes and Noble, which runs along the northern side of the DMV.
- Intended Cross-Lot Connection: These streets are provided as suggested cross-lot connectors to maintain interconnectivity throughout the District. These are used as cross-property access roads which may run through and between parking lots. The specific configuration and alignment of these streets are flexible and can be refined during the site plan review process.

The grid street configuration calls for one new traffic signal at the crossing of Williston Road with a new north-south Primary Street immediately west of the McDonalds and a relocation of the signal currently adjacent to the DoubleTree hotel to align with Mary Street.

PROPOSED GRID STREET NETWORK LEGEND 1 PRIMARY STREET SECONDARY STREET 6 TERTIARY STREET

Figure 16: Proposed Grid Street Plan

INTENDED CROSS-LOT CONNECTION

### L-3) I-89 Northbound Ramp Improvements

West of the Dorset Street intersection, add a second lane to the I-89 northbound on-ramp to accommodate two westbound approaching lanes. Drivers traveling in the middle westbound lane approaching the I-89 northbound on-ramp will have the option to travel onto I-89 or to continue west on US 2 towards Burlington. This second lane should taper to a single-lane part-way down the ramp, prior to reaching I-89.



Figure 17: Lane Reconfiguration & Expansion at Dorset Street & I-89 Northbound On-Ramp

5

# **Implementation Plan**

This chapter provides an Implementation Matrix to assist the City of South Burlington in advancing the recommendations developed during the course of this study. The Implementation Matrix is shown in **Figure 18** on the following page and provides a summary of the study's recommendations, identified implementing parties, an order of magnitude cost estimate, and next steps to advance the recommendation towards completion.

Also listed in the Implementation Matrix are specific attributes of each recommendation that satisfies the identified goals for this study, which include the following:

- Provide opportunities to make Williston Road complementary to a new downtown.
- Strike a balance between serving "to" and "through" trips.
- Integrate design elements to facilitate safe movements at a reasonable pace.
- Ensure safe and comfortable accommodations for all travel modes.
- Identify a grid street network on both sides of Williston Road to facilitate connectivity and access to dense, mixed-use infill development.



Figure 18: Project Implementation Matrix

			Meeting Purpos	se and Need		r Approximate Construction Cost	Next Steps
	Implementing Parties	Elements that  Compliment a New  Downtown	Serving Both "to" and "through" Trips	Facilitate Safe Movements at a Reasonable Pace	Provides Accommodations for all Road Users		
Short Term Projects							
S-1) Update Official Map: Update map to accommodate planned grid street network	South Burlington Planning Commission and City Council	- Essential for providing grid street network	- Incorporates street hierarchy to accommodate both circulation and access			N/A, administrative change	Present revised Official Map to City Council
S-2) Acquire 100-Foot Right of Way: The City should acquire the rights as needed to establish a 100-foot right-of-way along Williston Road from Dorset Street to Hinesburg Road	City of South Burlington, Land Owners	- Essential for providing Williston Road improvements				TBD; based on appraisals and property owner negotiations	Acquire property rights in fee or by easement during land development process
S-3) Traffic Signal Timing & Coordination: Optimize signal timing & coordination plans along Williston Road and Dorset Streets.	City of South Burlington, CCRPC, VTrans		- Enhances capacity of Williston Road without physical expansion			TBD; awaiting recommendations from Systems Engineering (SE) study	Cotinue with routine re-timing. Implement recommendations from Williston Road SE study.
S-4) Williston Road Improvements - South Side: Construct protected bike lanes, landscaped buffer and 6' sidewalk on south side of Williston Road	City of South Burlington, CCRPC, VTrans	- Streetscaping - Bike/Ped Accommodations	- Access Management	- Curbs and buffer for bike lanes	- Protected Bike Lanes - Widened Sidewalk	\$1.3 million	Secure funding and advance design, permitting, and property acquisitions
S-5) Williston Road / Dorset Street Intersection Improvements: Restripe westbound Williston Road lane assignments	City of South Burlington, VTrans		- Decreased congestion	- Decrease lane weaving conflicts		\$5,000	Prepare signing and striping plan, traffic control plan, and solicit bids for construction.
Long Term Projects							
L-1) Williston Road Improvements - North Side: Construct an additional travel lane (two-way center left-turn lane), an eight-foot sidewalk, and landscaped buffer on the north side of Williston Road.	City of South Burlington, CCRPC, VTrans	- Streetscaping - Pedestrian accommodations	- Removes left-turning vehicles from through lanes	- Enhanced lighting and landscaping will calm speeds	- Widened Sidewalk	\$5.3 million	Continue planning for final Williston Road cross-section.
L-2) Grid Street Network: Construct grid streets as opportunities arise.	City of South Burlington, Property Owners	- Grid Network	- Increased Connectivity	- Improved Mobility	- Include bike/ped facilities on new streets	\$14.2 million	Identify opportunities for construction of grid street segments during development review process.
I-89 NB On-Ramp Expansion: Widen the I-89 northbound on ramp to include a second lane for several hundred feet.	City of South Burlington, VTrans, FHWA		- Decreased congestion for "to" trips -Improved access to I-89 for "through" trips	- Decreased congestion at corridor terminus		\$3.5 million	Initiate conversation with VTrans and FHWA about lane widening and complete permitting and design



# Appendices

South Burlington Zoning and Official Maps
Williston Road Crash Data
Meetings and Public Outreach
Proposed Improvements
Cost Analysis and Summary



# Appendix A

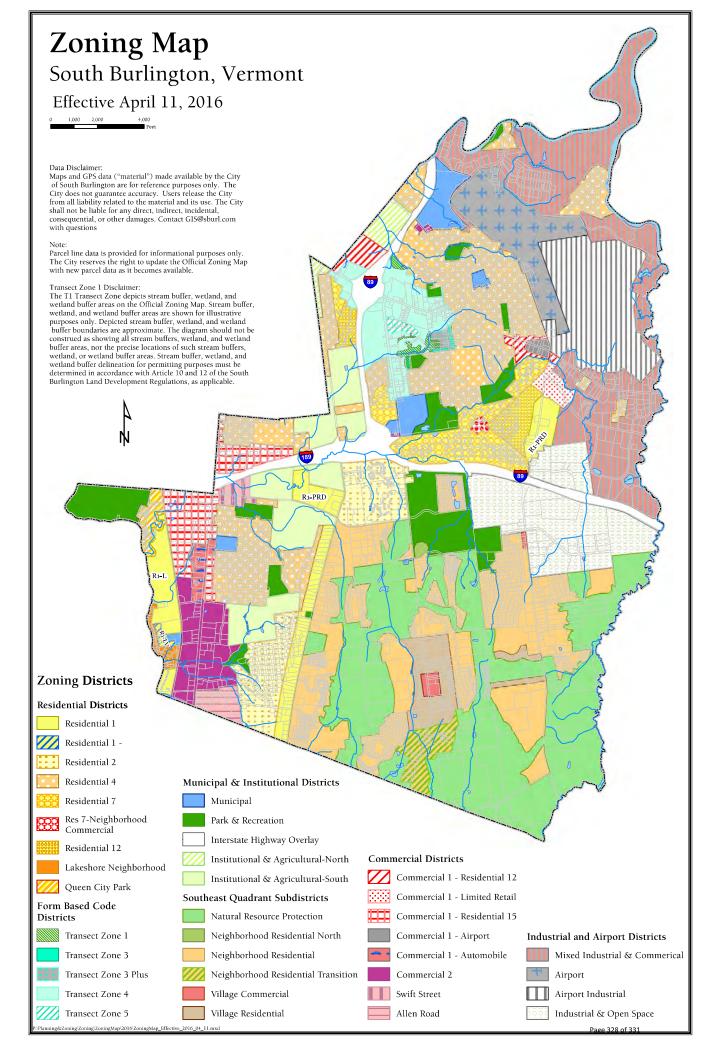
South Burlington Zoning and Official Maps

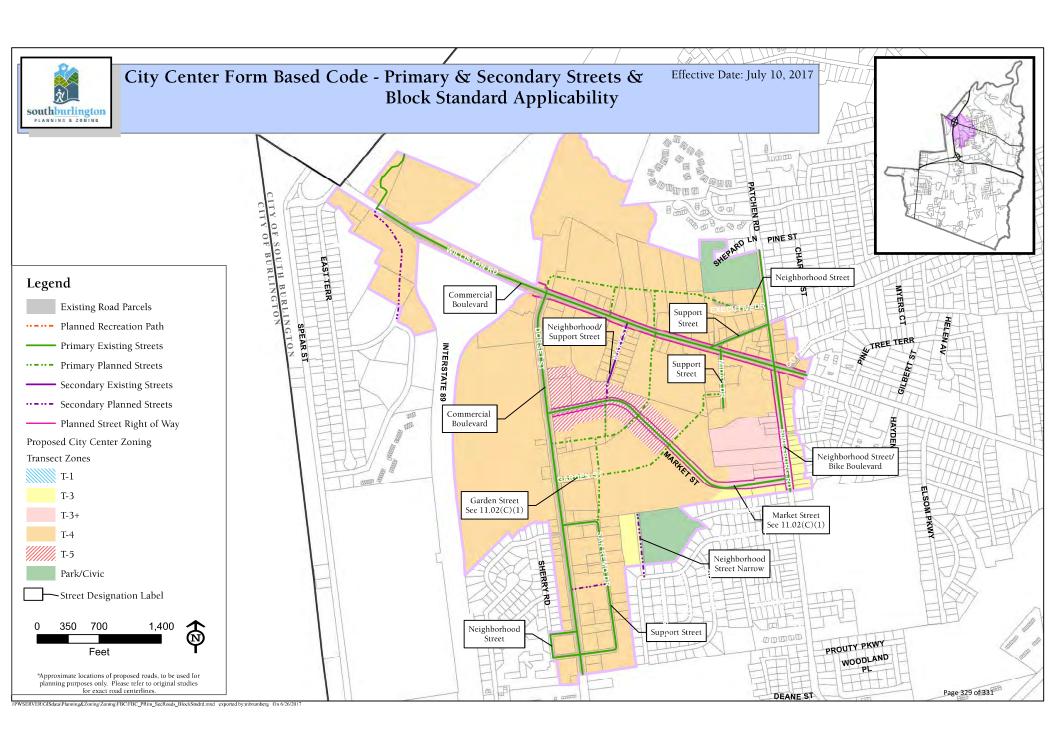
# **Official Map**



Amendments Adopted June 20, 2017

Effective July 10, 2017



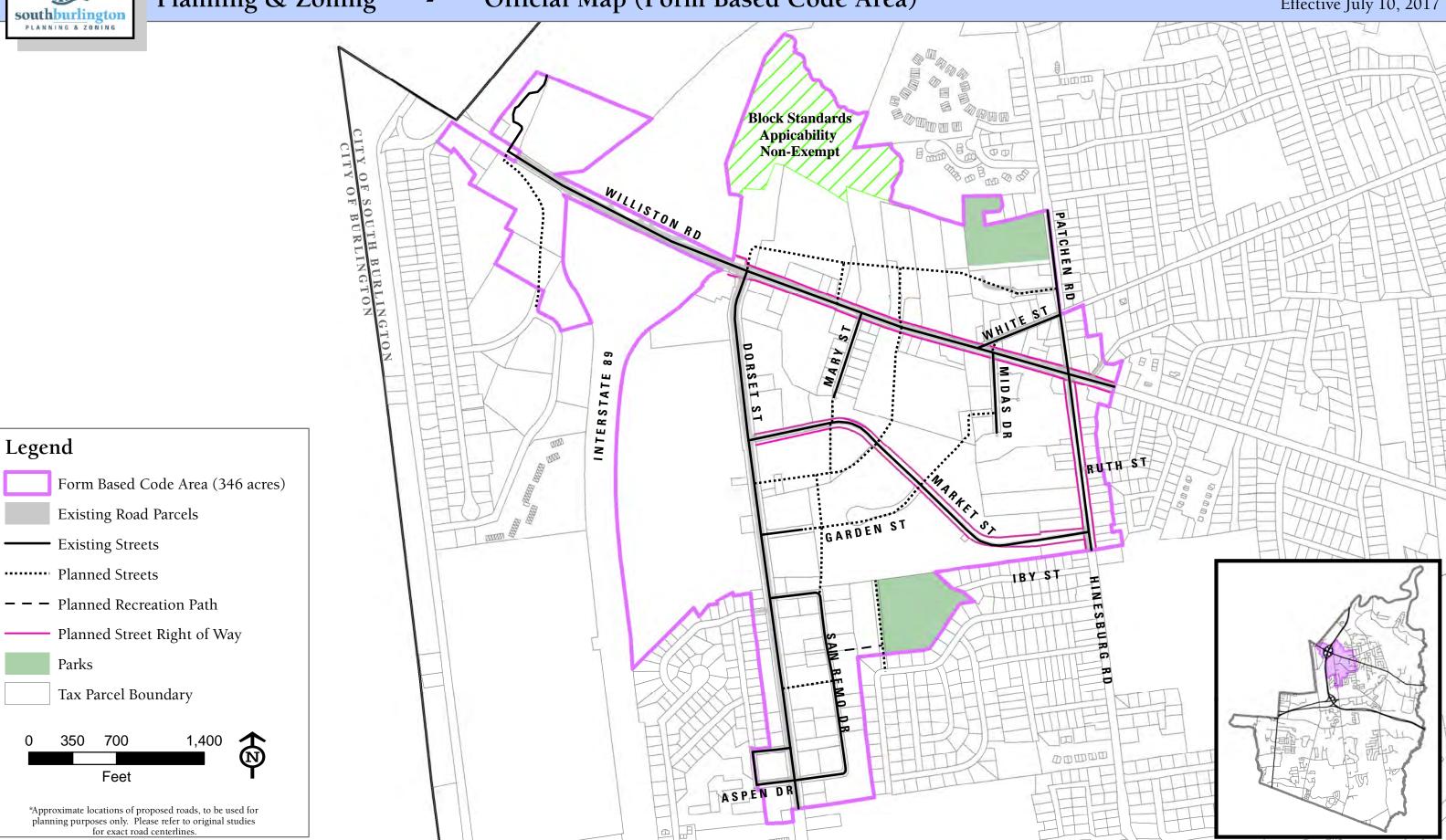




City of South Burlington Planning & Zoning

Official Map (Form Based Code Area)

Effective July 10, 2017





# Appendix B

Williston Road Crash Data

Date	MM		Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
1/4/2011	0.49		Wet	Property Damage Only	T - Intersection	None	Traffic Signal	Same Direction Sideswipe
1/13/2011	0.49		Wet	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/15/2011	0.49		Snow	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Rear End
1/22/2011	0.49		Unknown	Property Damage Only	4-way intersection	None	Traffic Signal	Unknown
2/1/2011	0.49		Snow	Property Damage Only	T - Intersection	Road Surface Condition	Traffic Signal	Same Direction Sideswipe
2/5/2011	0.49		Wet	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
3/4/2011	0.49		Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
3/8/2011			Slush	. , , ,				
	0.49			Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal (Flashing)	Rear End
3/26/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/12/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
1/22/2011	0.49		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
5/13/2011	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Same Direction Sideswipe
6/3/2011	0.49		Dry	Injury	4-way intersection	None	Traffic Signal	Unknown
6/28/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
7/12/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
7/15/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broads
7/40/2044	0.40		D=:	Imirom .	Not at a lunation	None	No Control	
7/19/2011	0.49		Dry	Injury	Not at a Junction	None	No Control	Rear End
3/26/2011	0.49		Dry	Property Damage Only	Shared-use path or trail	None	No Control	Same Direction Sideswipe
3/30/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
9/30/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Same Direct Sideswipe/Angle Crash vv
0/30/2011	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/22/2011	0.49		Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Rear End
2/1/2011	0.49		Dry	Property Damage Only	Shared-use path / trail	None	Traffic Signal	Same Direction Sideswipe
2/17/2011	0.49		Ice	Property Damage Only	Off Ramp	Road Surface Condition	Traffic Signal	Rear End
								Rear End
2/17/2011	0.49		Ice	Property Damage Only	Off Ramp	Road Surface Condition	Traffic Signal	
2/21/2011	0.49		Wet	Property Damage Only	Driveway	None	No Control	Left Turn and Thru, Angle Broads
3/2/2012	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
/13/2012	0.49		Dry	Property Damage Only	4-way intersection	None	No Control	Same Direction Sideswipe
/29/2012	0.49		Wet	Property Damage Only	Not at a Junction	None	Traffic Signal (Flashing)	Head On
6/7/2012	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
5/7/2012	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Rear End
/27/2012	0.49		Wet	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
/11/2012	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
/16/2012	0.49		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Same Direction Sideswipe
/20/2012	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Same Direction Sideswipe
9/3/2012	0.49	tion	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broads
		Dorset Intersection						>V
9/5/2012	0.49	ers	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
/14/2012	0.49	≝	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
0/30/2012	0.49	ĕ	Wet	Property Damage Only	4-way intersection	None	Unknown	Unknown
2/18/2012	0.49	ors	Wet	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
1/5/2013	0.49		Dry	Property Damage Only	Unknown	None	No Control	Same Direction Sideswipe
2/2/2013	0.49	US 2 /	Dry	Injury	4-way intersection	None	Traffic Signal	Head On
2/22/2013	0.49	_	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broads >v
3/16/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/1/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Head On
/22/2013	0.49		Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broa
/6/2013	0.49		Unknown	Injury	On Ramp	Unknown	Unknown	Single Vehicle Crash
24/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
18/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
29/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turns, Opposite Directions, On/Angle Crash^v
/20/2013	0.49		Unknown	Property Damage Only	Shared-use path or trail	None	Traffic Signal	Same Direction Sideswipe
				Property Damage Only		None	Traffic Signal	
/29/2013	0.49		Dry		4-way intersection			Rear End
/29/2013	0.49		Unknown	Property Damage Only	Unknown	Unknown	Traffic Signal	Rear End
2/5/2013	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
19/2013	0.49		Wet	Property Damage Only	T - Intersection	None	Traffic Signal	Same Direction Sideswipe
16/2014	0.49		Ice	Property Damage Only	Not at a Junction	Unknown	Traffic Signal	Rear End
5/2014	0.49		Unknown	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
7/2014	0.49		Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
26/2014	0.49		Unknown	Property Damage Only	Not at a Junction	Unknown	Traffic Signal	Rear End
13/2014	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Rear End
/21/2014	0.49		Wet	Property Damage Only	4-way intersection	None		
2/1/2014							Traffic Signal	Rear End
	0.49		Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
/23/2014	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
26/2015	0.49		Dry	Property Damage Only	4-way intersection	Unknown	Traffic Signal	Unknown
13/2015	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Rear End
10/2015	0.49		Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Unknown
	0.49		Dry	Property Damage Only	Unknown	Unknown	Traffic Signal	Unknown
14/2015	0.49		Unknown	Property Damage Only	4-way intersection	Unknown	Traffic Signal	Opp Direction Sideswipe Left Turn and Thru, Angle Broads
/26/2015	0.49		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	>V
/26/2015 /16/2015			Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
/26/2015 /16/2015 /10/2011	0.5		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
/26/2015 /16/2015 /10/2011 20/2014	0.5		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
/26/2015 /16/2015 /10/2011 20/2014					4-way intersection	None	Traffic Signal	Rear End
/26/2015 /16/2015 /10/2011 /20/2014 /10/2014	0.5		Dry	Property Damage Only	- way intersection			
0/26/2015 0/16/2015 0/10/2011 0/20/2014 0/3/2015	0.5 0.5		Dry Dry	Property Damage Only  Property Damage Only	4-way intersection	None	No Control	
/14/2015 //26/2015 2/16/2015 2/16/2015 0/10/2011 //20/2014 1/3/2015 6/5/2015 3/7/2015	0.5 0.5 0.5				•		No Control  No Control	Same Direction Sideswipe No Turns, Thru moves only, Broa ^< Same Direction Sideswipe

Date	MM	Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
7/5/2012	0.51	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside ^<
4/5/2014	0.51	Dry	Property Damage Only	On Ramp	None	No Control	Unknown
6/26/2013	0.52	Wet	Property Damage Only	T - Intersection	Road Surface Condition	Traffic Signal	Unknown
							No Turns, Thru moves only, Broadside
1/25/2012	0.53	Dry	Property Damage Only	Driveway	None	No Control	^<
6/15/2012	0.52	D=:	Proporty Domess Only	Not at a lunation	None	No Control	Left Turn and Thru, Angle Broadside -
6/15/2012	0.53	Dry	Property Damage Only	Not at a Junction	None	No Control	>V
3/24/2013	0.53	D	Property Damage Only	Darking Lat	None	No Control	Single Vehicle Crash
3/24/2013	0.53	Dry	Property Damage Only	Parking Lot	None	No Control	Single Venicle Crash
4/11/2013	0.52	Dn/	Bronorty Domogo Only	Drivouov	None	No Control	Left Turn and Thru, Angle Broadside -
4/11/2013	0.53	Dry	Property Damage Only	Driveway	None	No Control	>V
5/30/2013	0.53	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
8/12/2013	0.53	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
3/15/2014	0.53	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
8/8/2011	0.54	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
11/11/2013	0.54	Dry	Property Damage Only	Not at a Junction	None	No Control	Single Vehicle Crash
44/00/0040	0.55	D	December December Oak	Not at a location	News	No Control	Left Turn and Thru, Angle Broadside -
11/29/2012	0.55	Dry	Property Damage Only	Not at a Junction	None	No Control	>V
7/25/2013	0.55	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
12/18/2013	0.55	Wet	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Opp Direction Sideswipe
4/17/2014	0.55	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
9/14/2011	0.56	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
1/5/2012	0.56	Ice	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Rear End
							Left Turn and Thru, Angle Broadside -
4/26/2013	0.56	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	>v
1/4/2012	0.57	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
							Left Turn and Thru, Angle Broadside -
12/18/2013	0.57	Wet	Property Damage Only	4-way intersection	Unknown	Traffic Signal	>V
6/6/2013	0.58	Wet	Property Damage Only	Unknown	None	Unknown	Rear End
1/9/2014	0.58	Dry	Property Damage Only  Property Damage Only	Driveway	None	No Control	Rear End
							Left Turn and Thru, Angle Broadside
2/27/2014	0.58	Dry	Property Damage Only	Driveway	None	No Control	>V
7/18/2014	0.58	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
12/15/2014	0.58	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
1/15/2015	0.58	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
2/1/2015	0.58	Snow	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Rear End
9/11/2015	0.58	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
12/7/2015	0.58	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
4/8/2011	0.59	Dry	Property Damage Only	Parking Lot	None	No Control	Unknown
8/10/2011	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
10/1/2011	0.59	Wet	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Rear End
9/6/2012	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
11/1/2012	0.59	Wet	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
7/22/2013	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Unknown
9/7/2013	0.59	Unknown	Property Damage Only	Unknown	None	Unknown	Unknown
10/4/2013	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
10/4/2013	0.55	ы	Froperty Damage Only	NOT at a Junction	None	No Control	
10/29/2013	0.59	Dry	Property Damage Only	Driveway	None	No Control	Left Turn and Thru, Angle Broadside >v
11/1/2013	0.59	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
11/1/2013	0.00	Diy	r roperty Damage Only	4-way intersection	None	Traine Oignai	Right Turn and Thru, Same Direction
4/16/2014	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Sideswipe/Angle Crash ^
5/30/2014	0.59	Dn/	Droporty Domogo Only	Not at a Junction	None	No Control	Rear End
		Dry	Property Damage Only				
7/16/2014	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
9/8/2014	0.59	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
12/4/2014	0.59	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
8/24/2015	0.59	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
12/10/2015	0.59	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
1/11/2013	0.6	Wet	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
1/16/2013	0.6	Wet	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Left Turn and Thru, Angle Broadside -
				•		<u> </u>	>V
2/26/2013	0.6	Wet	Injury	Not at a Junction	None	No Control	Single Vehicle Crash
11/19/2013	0.6	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
2/13/2014	0.6	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
2/21/2014	0.6	Wet	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
8/8/2014	0.6	Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Rear End
9/10/2014	0.6	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
2/18/2015	0.6	Unknown	Injury	Unknown	Unknown	Unknown	Unknown
8/6/2015	0.6	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
5/2/2011	0.61	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
6/23/2011	0.61	Wet	Property Damage Only	Shared-use path or trail	None	No Control	Same Direction Sideswipe
3/24/2012	0.61	Unknown	Property Damage Only	Not at a Junction	None	No Control	Rear End
6/8/2012	0.61	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
8/3/2012	0.61	Dry	Property Damage Only  Property Damage Only	T - Intersection	None	No Control	Same Direction Sideswipe Same Direction Sideswipe
							·
8/5/2012	0.61	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
							Loft Turn and Thru Angle Breadelds
9/21/2012	0.61	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside - >v
1/29/2013	0.61	Dry	Property Damage Only	T - Intersection	None	Stop Signs on Cross Street Only	No Turns, Thru moves only, Broadside
		•				• •	^<
9/6/2011	0.62	Wet	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
			- ,				>V
3/21/2015	0.62	Dry	Property Damage Only	4-way intersection	None	No Control	Left Turn and Thru, Same Direction
		•		-			Sideswipe/Angle Crash vv

	2424					5 1 6 111	- " o	51 (0.00)
Date	MM	Surface	Crash Typ		Road	Road Condition	Traffic Signals	Dir. of Collision
10/28/2012	0.63	Dry	Property Damage		4-way intersection	None	Traffic Signal	Right Turn and Thru, Broadside \^
12/29/2014	0.63	Dry	Property Damage	Only	Not at a Junction	None	No Control	Rear End
2/13/2015	0.63	Snow	Property Damage	Only	4-way intersection	Road Surface Condition	Traffic Signal	Left Turn and Thru, Angle Broadside>v
12/4/2015	0.63	Dry	Property Damage	Only	Not at a Junction	None	No Control	Same Direction Sideswipe
11/17/2011	0.64	Dry	Property Damage		Not at a Junction	None	Traffic Signal	Rear End
11/15/2012	0.64	Dry	Property Damage		Not at a Junction	None	No Control	Rear End
	0.64	Wet				None		Rear End
6/28/2013	0.04	wet	Property Damage	Offig	4-way intersection	None	Traffic Signal	
9/17/2013	0.64	Dry	Property Damage	Only	Unknown	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
9/28/2013	0.64	Unknown	Property Damage	Only	4-way intersection	None	Unknown	Rear End
2/26/2014	0.64	Dry	Property Damage	Only	4-way intersection	None	Traffic Signal	Rear End
9/15/2014	0.64	Dry	Property Damage	Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
2/13/2015	0.64	Snow	Property Damage		T - Intersection	Obstruction in roadway	Traffic Signal	Left Turn and Thru, Angle Broadside>v
4/1/2015	0.64	Dry	Property Damage	Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside>v
5/19/2015	0.64	Dry	Property Damage	Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside
6/6/2015	0.64	Dry	Property Damage	Only	Parking Lot	None	No Control	Rear-to-rear
8/17/2015	0.64	Dry	Property Damage		Not at a Junction	None	No Control	Rear End
0/17/2013	0.04	Diy	1 Toperty Damage	Office	Not at a suriction	None	140 Control	
10/28/2015	0.64	Wet	Property Damage	Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
9/2/2011	0.65	Dry	Property Damage	Only	4-way intersection	None	Traffic Signal	Rear End
6/26/2012	0.65	Wet	Property Damage	Only	Not at a Junction	None	No Control	Rear End
9/27/2012	0.65	Dry	Property Damage		Not at a Junction	None	No Control	Rear End
								Right Turn and Thru, Same Direction
12/26/2012	0.65	Dry	Property Damage		4-way intersection	Unknown	Traffic Signal	Sideswipe/Angle Crash ^^
4/6/2013	0.65	Dry	Property Damage		4-way intersection	None	Traffic Signal	Opp Direction Sideswipe
5/14/2013	0.65	Dry	Property Damage	Only	Not at a Junction	None	No Control	Same Direction Sideswipe
8/9/2013	0.65	Wet	Property Damage	Only	Not at a Junction	None	No Control	Right Turn and Thru, Broadside ^<
8/27/2015	0.65	Dry	Property Damage		Not at a Junction	None	No Control	Rear End
9/26/2011	0.66	Dry	Property Damage		T - Intersection	None	Stop Signs on Cross Street Only	Same Direction Sideswipe
1/9/2012	0.66	Unknown	Property Damage		Not at a Junction	Unknown	No Control	Rear End
8/11/2012	0.66	Unknown	Property Damage		4-way intersection	None	Traffic Signal	Rear End
1/18/2013	0.66	Dry	Property Damage		Not at a Junction	Unknown	No Control	Same Direction Sideswipe
9/21/2013	0.66	Dry	Property Damage	Only	Not at a Junction	None	Traffic Signal	Rear End
10/8/2013	0.66	Dry	Property Damage	Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
5/19/2015	0.66	Dry	Property Damage		Not at a Junction	None	No Control	Same Direction Sideswipe
11/17/2015	0.66	Dry	Property Damage		4-way intersection	None	No Control	Right Turn and Thru, Angle Broadside
		,	1 . ,	,	,		140 00111101	->^
1/1/1/2011	0.67	•		- ,				
1/14/2011	0.67	Snow	Injury		Not at a Junction	Road Surface Condition	No Control	Rear End
6/15/2011	0.67	Snow Dry	Injury Property Damage	e Only	Not at a Junction Shared-use path or trail	Road Surface Condition None	No Control No Control	Rear End Rear End
6/15/2011 9/16/2011	0.67 0.67	Snow Dry Dry	Injury Property Damage Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection	Road Surface Condition None None	No Control No Control Traffic Signal	Rear End Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011	0.67 0.67 0.67	Snow Dry Dry Dry	Injury Property Damage Property Damage Property Damage	e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction	Road Surface Condition None None None	No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End
6/15/2011 9/16/2011	0.67 0.67	Snow Dry Dry	Injury Property Damage Property Damage	e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection	Road Surface Condition None None	No Control No Control Traffic Signal	Rear End Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011	0.67 0.67 0.67	Snow Dry Dry Dry	Injury Property Damage Property Damage Property Damage	e Only e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction	Road Surface Condition None None None	No Control No Control Traffic Signal	Rear End Rear End Same Direction Sideswipe Rear End
6/15/2011 9/16/2011 11/11/2011 1/12/2012	0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow	Injury Property Damage Property Damage Property Damage Property Damage Property Damage	e Only e Only e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction	Road Surface Condition None None None None None	No Control No Control Traffic Signal Traffic Signal	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011 1/12/2012 11/13/2012 1/10/2014	0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry	Injury Property Damage Property Damage Property Damage Property Damage Property Damage Property Damage	e Only e Only e Only e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End
6/15/2011 9/16/2011 11/11/2011 1/12/2012 11/13/2012 1/10/2014 2/5/2015	0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Snow Dry Snow Dry Wet	Injury Property Damage	e Only e Only e Only e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011 1/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Snow Dry Dry Dry Dry	Injury Property Damage Injury	e Only e Only e Only e Only e Only e Only e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction Not at a Junction Autorion Not at a Junction 4-way intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v<
6/15/2011 9/16/2011 11/11/2011 1/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015	0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry Vet Dry Unknown	Injury Property Damage Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction Not at a Junction Not at a Junction Unknown	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside ^< Left Turn and Thru, Angle Broadside -
6/15/2011 9/16/2011 11/11/2011 11/12/2012 11/13/2012 11/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry	Injury Property Damage Injury Property Damage Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction 4-way intersection Not at a Junction Not at a Junction Hot at a Junction Vinknown Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control Traffic Signal No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside
6/15/2011 9/16/2011 11/11/2011 1/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry Vet Dry Unknown	Injury Property Damage Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction Not at a Junction Not at a Junction Unknown	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal  Traffic Signal No Control No Control Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside \cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry Wet Dry Unknown Dry Wet Dry	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction Not at a Junction A-way intersection Unknown Not at a Junction	Road Surface Condition  None  Road Surface Condition	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control Traffic Signal No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 1/10/2014 2/5/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Dry Wet Dry Unknown Dry Wet Dry Unknown Dry	Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction Not at a Junction At a Junction Vot at a Junction 4-way intersection Unknown Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control Traffic Signal No Control No Control No Control No Control	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside  Same Direction Sideswipe Left Turn and Thru, Head On ^v
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction 4-way intersection Unknown Not at a Junction Unknown Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control Traffic Signal No Control No Control No Control No Control To Control No Control No Control No Control No Control No Control	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside -\(\times\)- Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside \(\times\) Same Direction Sideswipe Left Turn and Thru, Head On \(\times\)- Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68	Snow Dry Dry Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Uny Ory Ory Ory Ory Ory Ory Ory Ory Ory Or	Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction  Not at a Junction  Not at a Junction  Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control No Control No Control Traffic Signal No Control Traffic Signal Traffic Signal Traffic Signal	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >v No Turns, Thru moves only, Broadside Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/23/2013	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction Not at Junction Not at Junction Not at Junction Not at Junction T - Intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control Traffic Signal No Control Traffic Signal Traffic Signal No Tontrol No Control Traffic Signal Traffic Signal Traffic Signal	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside A Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v<
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 11/10/2014 2/5/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/23/2013 6/23/2013	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Uny Wet Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry Unknown	Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction T - Intersection T - Intersection 4-way intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control Traffic Signal No Control Traffic Signal No Control No Control Traffic Signal	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside < Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/23/2013 4/1/2014	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Unstromer Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction A Junction A Junction A Junction Not at a Junction Not at a Junction Not at a Junction  Not at a Junction  In Junction A Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control Traffic Signal No Control Traffic Signal	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/23/2013 6/23/2013 4/1/2014 4/18/2014	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Ory Ory Dry Dry Dry Dry Dry Dry Dry Dry Dry D	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction  T - Intersection  T - Intersection  T - Intersection  T - Intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control Traffic Signal No Control Traffic Signal No Control No Control	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside ^< Left Turn and Thru, Broadside of the Turn and Thru, Angle Broadside of the Turn and Thru, Angle Broadside of the Turn and Thru, Head On of the Turn and Thru, Head On of the Turn and Thru, Broadside versear End Left Turn and Thru, Broadside versear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End
6/15/2011 9/16/2011 11/11/2011 11/11/2011 11/12/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 6/23/2013 4/18/2014 4/18/2014 4/19/2014	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Unknown Dry Wet Dry Unknown Dry Wet Dry Unknown Dry	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction Not at a Junction Not at a Junction Not at a Junction Total a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction T - Intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control Traffic Signal No Control Traffic Signal	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside v< V No Turns, Thru moves only, Broadside v< Same Direction Sideswipe Left Turn and Thru, Head On vv Same Direction Sideswipe Left Turn and Thru, Broadside v< Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Rear End Rear End Rear End Rear End Rear End
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 1/10/2014 2/5/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/13/2013 4/1/2014 4/18/2014 4/19/2014 5/10/2014	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction A-way intersection Unknown Not at a Junction Not at a Junction A-way intersection Unknown Not at a Junction T - Intersection Unknown	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control No Control Traffic Signal Signal Traffic Signal No Control No Control Stop Signs on Cross Street Only Unknown	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68 0.68	Snow Dry Dry Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction A star a Junction A star a Junction Not at a Junction Not at a Junction Not at a Junction Not at a Junction Intersection A-way intersection T - Intersection Unknown Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control No Control Traffic Signal No Control Source No Control Traffic Signal Source No Control No Control Stop Signs on Cross Street Only Unknown	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside ->V No Turns, Thru moves only, Broadside ->V Same Direction Sideswipe Left Turn and Thru, Head On ^V Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Rear End Unknown No Turns, Thru moves only, Broadside
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 1/10/2014 2/5/2015 2/14/2015 2/26/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/13/2013 3/13/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/5/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.69 0.68	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Unknown Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction  T - Intersection  Unknown  Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control No Control Traffic Signal No Control	Rear End Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside - >V No Turns, Thru moves only, Broadside - Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Unknown No Turns, Thru moves only, Broadside -
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/12/2012 11/13/2012 11/13/2015 2/26/2015 5/30/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/23/2013 6/23/2013 4/11/2014 4/18/2014 4/18/2014 1/5/2015 1/23/2015 2/18/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.68 0.69 0.68	Snow Dry Dry Dry Snow Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction Not at a Junction A-way intersection Unknown Not at a Junction Not at a Junction Not at a Junction T - Intersection Unknown Not at a Junction T - Intersection Unknown Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control No Control Traffic Signal No Control Source No Control Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside ->v No Turns, Thru moves only, Broadside ->v Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End
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6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2012 1/10/2014 2/5/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 3/33/2013 3/33/2013 3/23/2013 4/12/2014 4/19/2014 5/10/2014 1/5/2015 2/18/2015 3/71/2015 3/71/2015 3/31/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Snow Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction A-way intersection Not at a Junction A-way intersection Unknown Not at a Junction A-way intersection Unknown Not at a Junction T- Intersection Unknown Unknown Unknown Unknown	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control No Control No Control No Control No Control No Control Traffic Signal No Control Signal Traffic Signal No Control Stop Signs on Cross Street Only Unknown No Control Unknown	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Broadside v< Left Turn and Thru, Broadside v< Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Rear End Unknown No Turns, Thru moves only, Broadside  \( \lambda \) Rear End Rear End Unknown Unknown Unknown
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6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction 4-way intersection Unknown Not at a Junction  Not at a Junction  Not at a Junction  Not at a Junction Not at a Junction Not at a Junction  Not at a Junction  T - Intersection Unknown Not at a Junction Unknown T - Intersection Unknown T - Intersection Unknown T - Intersection Unknown T - Intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control Signal Traffic Signal No Control Unknown Unknown No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Right Turn and Thru, Angle Broadside ->V No Turns, Thru moves only, Broadside ->V Same Direction Sideswipe Left Turn and Thru, Head On ^V Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Unknown No Turns, Thru moves only, Broadside -\(\times\) Rear End On turns, Thru moves only, Broadside -\(\times\) Rear End Onknown No Turns, Thru moves only, Broadside -\(\times\) Rear End Onknown Unknown Opp Direction Sideswipe
6/15/2011 9/16/2011 1/11/2011 11/11/2011 11/13/2012 11/13/2012 11/10/2014 2/5/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/13/2013 4/1/2014 4/18/2014 4/18/2014 1/5/2015 1/23/2015 2/18/2015 3/31/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction T- Intersection T- Intersection T- Intersection T- Intersection Unknown Not at a Junction Unknown T- Intersection Not at a Junction Not at a Junction Unknown T- Intersection Unknown T- Intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control No Control Signal Traffic Signal No Control Unknown Unknown Unknown No Control No Control No Control No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside - >V No Turns, Thru moves only, Broadside - Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Unknown No Turns, Thru moves only, Broadside Rear End Unknown Unknown Unknown Opp Direction Sideswipe Left Turn and Thru, Angle Broadside - >V Left Turn and Thru, Angle Broadside - >V
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction 4-way intersection Unknown Not at a Junction  Not at a Junction  Not at a Junction  Not at a Junction Not at a Junction Not at a Junction  Not at a Junction  T - Intersection Unknown Not at a Junction Unknown T - Intersection Unknown T - Intersection Unknown T - Intersection Unknown T - Intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control Signal Traffic Signal No Control Unknown Unknown No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside < Left Turn and Thru, Angle Broadside < Sume Direction Sideswipe Left Turn and Thru, Angle Broadside < Sume Direction Sideswipe Left Turn and Thru, Head On < Same Direction Sideswipe Left Turn and Thru, Broadside v< Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Rear End Rear End Rear End Unknown No Turns, Thru moves only, Broadside < Rear End Left Turn and Thru, Angle Broadside - Sume Direction Sideswipe Left Turn and Thru, Angle Broadside - Sume Direction Sideswipe Left Turn and Thru, Angle Broadside - Sume Direction Sideswipe Left Turn and Thru, Angle Broadside - Sume Direction Sideswipe
6/15/2011 9/16/2011 11/11/2011 11/11/2012 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction A-way intersection Not at a Junction 4-way intersection Unknown Not at a Junction T- Intersection Unknown Not at a Junction Unknown T- Intersection Unknown T- Intersection Unknown T- Intersection Unknown T- Intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Signal Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside
6/15/2011 9/16/2011 1/11/2011 11/11/2011 11/11/2012 11/13/2012 11/10/2014 2/5/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/13/2013 3/13/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 3/31/2015 1/23/2015 2/18/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Unknown Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only Only Only Only Only Only Only Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction T- Intersection Unknown T- Intersection Unknown T- Intersection Unknown T- Intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control No Control Signal Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside < Left Turn and Thru, Angle Broadside < Some Direction Sideswipe Left Turn and Thru, Angle Broadside < Some Direction Sideswipe Left Turn and Thru, Head On ^v, Same Direction Sideswipe Left Turn and Thru, Broadside v< Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Rear End Rear End Rear End Unknown No Turns, Thru moves only, Broadside < \( \lambda \) Rear End Unknown Opp Direction Sideswipe Left Turn and Thru, Angle Broadside \( \lambda \) Rear End Same Direction Sideswipe No Turns, Thru moves only, Broadside \( \lambda \) Rear End
6/15/2011 9/16/2011 1/1/1/2011 11/11/2011 11/13/2012 11/13/2012 11/13/2015 12/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/3/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 5/10/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction 1- Intersection T - Intersection Unknown T - Intersection Unknown T - Intersection Unknown T - Intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Signal Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside
6/15/2011 9/16/2011 1/11/2011 11/11/2011 11/11/2012 11/13/2012 11/10/2014 2/5/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/13/2013 3/13/2013 3/13/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 3/31/2015 1/23/2015 2/18/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction A-way intersection Unknown Not at a Junction T- Intersection Unknown T- Intersection Unknown T- Intersection Not at a Junction	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control No Control No Control Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Same Direction Sideswipe Left Turn and Thru, Broadside V< Left Turn and Thru, Broadside N Left Turn and Thru, Angle Broadside Same Direction Sideswipe Left Turn and Thru, Head On N Same Direction Sideswipe Left Turn and Thru, Broadside V< Rear End Rear End Same Direction Sideswipe Rear End Rear End Rear End Rear End Unknown No Turns, Thru moves only, Broadside V< Rear End Left Turn and Thru, Angle Broadside N Rear End Left Turn and Thru, Broadside N Rear End Left Turn and Thru, Broadside N Rear End Left Turn and Thru, Angle Broadside N N Left Turn and Thru, Angle Broadside N N Rear End Same Direction Sideswipe Left Turn and Thru, Angle Broadside N N Rear End Same Direction Sideswipe No Turns, Thru moves only, Broadside N N Rear End Same Direction Sideswipe
6/15/2011 9/16/2011 1/1/1/2011 11/11/2011 11/13/2012 11/13/2015 2/14/2015 2/26/2015 5/30/2015 12/31/2015 11/12/2012 2/1/2013 3/3/2013 3/3/2013 3/23/2013 3/23/2013 4/1/2014 4/18/2014 4/19/2014 1/5/2015 1/23/2015 2/18/2015 1/23/2015 2/18/2015 1/23/2015	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67	Snow Dry Dry Dry Dry Snow Dry Dry Snow Dry Dry Wet Dry Unknown Dry Unknown Dry	Injury Property Damage	e Only o Only	Not at a Junction Shared-use path or trail 4-way intersection Not at a Junction Not at a Junction Not at a Junction Not at a Junction A-way intersection Not at a Junction 4-way intersection Unknown Not at a Junction T- Intersection Unknown Not at a Junction Unknown T- Intersection Unknown T- Intersection Unknown Unknown T- Intersection Unknown Unknown Unknown T- Intersection Not at a Junction Unknown Driveway T- Intersection	Road Surface Condition None None None None None None None No	No Control No Control Traffic Signal Traffic Signal Traffic Signal No Control Traffic Signal No Control No Control Signal Traffic Signal No Control	Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Left Turn and Thru, Broadside v< Right Turn and Thru, Broadside v< Left Turn and Thru, Angle Broadside >V No Turns, Thru moves only, Broadside v< Same Direction Sideswipe Left Turn and Thru, Head On ^v Same Direction Sideswipe Rear End Left Turn and Thru, Broadside v< Rear End Same Direction Sideswipe Rear End Same Direction Sideswipe Rear End Rear End Rear End Rear End Unknown No Turns, Thru moves only, Broadside   Rear End Same Direction Sideswipe Left Turn and Thru, Angle Broadside >V Rear End Same Direction Sideswipe No Turns, Thru moves only, Broadside >V Rear End Same Direction Sideswipe No Turns, Thru moves only, Broadside >V Rear End Same Direction Sideswipe No Turns, Thru moves only, Broadside

Date	MM	Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
10/16/2012	0.7	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
10/18/2012	0.7	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsic
10/28/2013	0.7	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
9/30/2014	0.7	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsid
2/23/2015	0.7	Wet	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Rear End
9/24/2015	0.7	Dry	Injury	Driveway	None	No Control	Left Turn and Thru, Broadside v<
10/14/2015	0.7	Dry	Property Damage Only	Parking Lot	None	No Control	Unknown
1/27/2012	0.71	Wet	Property Damage Only	Driveway	Road Surface Condition	No Control	Left Turn and Thru, Angle Broadside >v
11/7/2012	0.71	Dry	Injury	Not at a Junction	None	No Control	Rear End
2/1/2013	0.71	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
8/14/2013	0.71	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
2/19/2014	0.71	Wet	Property Damage Only	Not at a Junction	None	No Control	Rear End
9/11/2015	0.71	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
1/13/2014	0.72	Dry	Property Damage Only	Not at a Junction	None	No Control	Head On
1/14/2015	0.72	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
6/11/2011	0.73	Unknown	Property Damage Only	4-way intersection	None	No Control	Rear End
9/27/2012	0.73	Dry	Injury	Not at a Junction	None	No Control	Rear End
1/17/2013	0.73	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
3/13/2014	0.73	Snow	Property Damage Only	Unknown	Road Surface Condition	No Control	Unknown
8/25/2011	0.74	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsic
10/6/2011	0.74	Dry	Injury	Not at a Junction	None	No Control	Rear End
12/2/2011	0.74	Unknown	Injury	Unknown	None	Unknown	Unknown
5/7/2012	0.74	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
10/3/2014	0.74	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
3/19/2015	0.74	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Vnknown
1/3/2011	0.75	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsic
1/7/2011	0.75	Wet	Property Damage Only	Not at a Junction	None	Unknown	No Turns, Thru moves only, Broadsid
2/7/2011	0.75	Wet	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
8/10/2011	0.75	Dry	Property Damage Only	Shared-use path / trail	None	No Control	Same Direction Sideswipe
12/30/2011	0.75	Snow	Property Damage Only	Unknown	Unknown	No Control	Left Turns, Opposite Directions, Hea On/Angle Crash^v
2/11/2014	0.75	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
7/15/2011	0.76	Dry	Property Damage Only	Driveway	None	No Control	No Turns, Thru moves only, Broadsic
5/19/2015	0.76	Dry	Injury	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
6/14/2014	0.77	Dry	Property Damage Only	Parking Lot	None	No Control	Rear-to-rear
12/1/2012	0.78	Dry	Property Damage Only	4-way intersection	None	No Control	Opp Direction Sideswipe
5/23/2013	0.78	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
11/3/2014	0.78	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
6/1/2015	0.78	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsid
4/18/2011	0.79	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
6/1/2011	0.79	Dry	Property Damage Only	Not at a Junction	None	Unknown	Same Direction Sideswipe
6/23/2011	0.79	Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsic ^<
10/14/2011	0.79	Wet	Injury	Driveway	None	No Control	Head On
10/25/2011	0.79	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
8/8/2014	0.79	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
5/31/2011	0.8	Dry	Property Damage Only	Shared-use path or trail	None	No Control	Same Direction Sideswipe
11/16/2011	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
12/21/2011	0.8	Wet	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Left Turn and Thru, Head On ^v
6/2/2012	0.8	Wet	Injury	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
6/19/2012	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
1/12/2013	0.8	Wet	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
1/18/2013	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
2/12/2013	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
3/21/2013	0.8	Dry	Property Damage Only	Not at a Junction	Unknown	No Control	Left Turn and Thru, Broadside v<
3/27/2013	8.0	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
4/7/2013	8.0	Dry	Property Damage Only	Parking Lot	None	No Control	Rear End
4/29/2013	0.8	Dry	Injury	Not at a Junction	None	No Control	Rear End
5/21/2013	0.8	Dry	Property Damage Only	T - Intersection	None	No Control	Lett Turri and Triru, Angle broadside
11/23/2013	0.8	Dry	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Left Turn and Thru, Same Direction Sideswipe/Angle Crash vv
12/13/2013	0.8	Wet	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadsi
5/2/2014	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	^< Same Direction Sideswipe
5/23/2014	0.8	Wet	Property Damage Only	Not at a Junction	Unknown	No Control	Left Turn and Thru, Same Direction
JIZJIZU 14	0.0	vvet	. Topotty Damage Only	INOLAL A JUNULUN	CHAHOWH	NO CONTO	Sideswipe/Angle Crash vv

Date	MM	Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
6/11/2014	0.8	Wet	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
6/13/2014	8.0	Wet	Property Damage Only	Not at a Junction	None	No Control	Rear End
7/15/2014	0.8	Dry	Property Damage Only	Driveway	None	No Control	Right Turn and Thru, Angle Broadside
8/8/2014	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Right Turn and Thru, Broadside ^< Left Turn and Thru, Angle Broadside
9/26/2014	0.8	Dry	Injury	Not at a Junction	None	No Control	>V
10/2/2014	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Head On
10/7/2014	0.8	Unknown	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
10/31/2014	0.8	Dry	Injury	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside>v
11/28/2014	0.8	Snow	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Same Direction Sideswipe
1/3/2015	0.8	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
4/6/2015	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
5/29/2015	0.8	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
6/8/2015	0.8	Unknown	Property Damage Only	Unknown	Unknown	Unknown	>v Unknown
6/17/2015	0.8	Dry	Property Damage Only	T - Intersection	None	No Control	Left Turn and Thru, Angle Broadside>v
5/2/2011	0.81	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
10/22/2011	0.81	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
5/20/2012	0.81	•		Unknown	None	No Control	Unknown
		Dry	Property Damage Only				No Turns, Thru moves only, Broadside
7/22/2012 7/31/2012	0.81	Dry	Property Damage Only	Driveway Driveway	None	No Control	^< Left Turn and Thru, Broadside v<
		·	Injury  Proporty Damage Only			No Control	Left Turn and Thru, Angle Broadside
11/1/2012	0.81	Wet	Property Damage Only	Not at a Junction	None	NO CONTROL	>V
11/6/2012	0.81	Dry	Property Damage Only	Driveway	None	No Control	Opp Direction Sideswipe
12/30/2012	0.81	Slush	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Left Turn and Thru, Broadside v<
2/7/2013	0.81	Dry	Property Damage Only	Not at a Junction	None	Unknown	No Turns, Thru moves only, Broadside ^<
2/10/2013	0.81	Snow	Property Damage Only	Not at a Junction	None	No Control	Opp Direction Sideswipe
6/11/2013	0.81	Wet	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
11/12/2013	0.81	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
1/23/2014	0.81	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
9/17/2014	0.81	Dry	Property Damage Only	Driveway	None	No Control	Left Turn and Thru, Angle Broadside>v
9/19/2014	0.81	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
6/16/2015	0.81	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
10/30/2015	0.81	Dry	Property Damage Only	Parking Lot	None	No Control	Unknown
4/24/2013	0.82	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
1/5/2014	0.82	Wet	Property Damage Only	Not at a Junction	Unknown	No Control	Rear End
1/15/2015	0.82	Ice	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Rear End
1/16/2013	0.83	Snow	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside>v
7/29/2013	0.83	Dry	Property Damage Only	Unknown	None	No Control	Rear End
10/12/2013	0.83	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End  Left and Right Turns, Simultaneous
1/23/2014	0.83	Dry	Property Damage Only	Driveway	None	No Control	Turn Crashvv
1/4/2011	0.84	Wet	Property Damage Only	Not at a Junction	None	Unknown	Left Turn and Thru, Head On ^v
1/5/2011	0.84	Dry	Property Damage Only	Driveway	None	No Control	Unknown
8/2/2011	0.84	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
9/19/2012	0.84	Unknown	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
1/21/2013	0.84	Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside >v
1/21/2013	0.84	Dry	Property Damage Only	T - Intersection	None	No Control	Same Direction Sideswipe
9/18/2013	0.84	Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Rear End
11/22/2014	0.84	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
12/2/2014	0.84	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
8/3/2015	0.84	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
4/19/2012	0.85	Dry	Property Damage Only	Driveway	None	No Control	No Turns, Thru moves only, Broadside
7/25/2013	0.85	Dry	Property Damage Only	Driveway	None	No Control	No Turns, Thru moves only, Broadside
5/2/2044	0.06	\A/~+	Proporty Domesta Only	Not at a lunation	Hakaawa	No Control	
5/3/2011 3/23/2012	0.86	Wet	Property Damage Only	Not at a Junction	Unknown	No Control	Rear End
11/13/2012	0.86	Dry Dry	Property Damage Only Property Damage Only	4-way intersection 4-way intersection	None None	Traffic Signal Traffic Signal	Rear End Rear End
1/1/2014	0.86	Dry Wet	Property Damage Only	T - Intersection	None	Traffic Signal	Rear End Rear End
3/3/2014	0.86	- Dn/	Property Damage Only	Driveway	Obstruction in roadway	No Control	Rear End
9/11/2014	0.86	Wet Dry Wet	Injury	Not at a Junction	None	No Control	Head On
4/15/2011	0.87	Dry	Property Damage Only	T - Intersection	None	Traffic Signal	Same Direction Sideswipe
7/6/2011	0.87	Wet Wet	Injury	Y - Intersection	Road Surface Condition	Traffic Signal	Rear End
8/25/2011	0.87	.⊑ Wet	Property Damage Only	Not at a Junction	None	No Control	Rear End
	0.87	0)	Property Damage Only	Not at a Junction	None	No Control	Rear End
u/22/2011	0.07	Wet Dry	Injury	Y - Intersection	None	Traffic Signal	Rear End
9/22/2011	0.87	وات ح	• •	4-way intersection	None	Traffic Signal	Rear End
11/25/2011	0.87	< \\/\pt	Injury		INCIE	rramo olynai	ingai Liiu
11/25/2011 2/22/2012	0.87	Net De:	Injury Property Damage Only	•		No Control	Same Direction Sideswins
11/25/2011 2/22/2012 4/24/2012	0.87 0.87	S Dry	Property Damage Only	Not at a Junction	None	No Control Traffic Signal	Same Direction Sideswipe
11/25/2011 2/22/2012 4/24/2012 5/9/2012	0.87 0.87 0.87	SD Wet Wet	Property Damage Only Property Damage Only	Not at a Junction 4-way intersection	None None	Traffic Signal	Same Direction Sideswipe
11/25/2011 2/22/2012 4/24/2012 5/9/2012 6/30/2012	0.87 0.87 0.87 0.87	Dry Wet Dry	Property Damage Only Property Damage Only Property Damage Only	Not at a Junction 4-way intersection Y - Intersection	None None None	Traffic Signal No Control	Same Direction Sideswipe Same Direction Sideswipe
11/25/2011 2/22/2012 4/24/2012 5/9/2012 6/30/2012 7/18/2012	0.87 0.87 0.87 0.87 0.87	Ory Wet Dry Dry Dry Dry	Property Damage Only Property Damage Only Property Damage Only Property Damage Only	Not at a Junction 4-way intersection Y - Intersection T - Intersection	None None None None	Traffic Signal No Control No Control	Same Direction Sideswipe Same Direction Sideswipe Same Direction Sideswipe
11/25/2011 2/22/2012 4/24/2012 5/9/2012 6/30/2012	0.87 0.87 0.87 0.87	Dry Wet Dry	Property Damage Only Property Damage Only Property Damage Only	Not at a Junction 4-way intersection Y - Intersection	None None None	Traffic Signal No Control	Same Direction Sideswipe Same Direction Sideswipe

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Date	MM		Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
10/5/2012	0.87		Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Angle Broadside
								>V
12/10/2012	0.87		Wet	Property Damage Only	Unknown	None	Traffic Signal	Same Direction Sideswipe
12/15/2012	0.87		Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside ^<
12/28/2012	0.87		Wet	Property Damage Only	4-way intersection	Unknown	Traffic Signal	Left Turn and Thru, Angle Broadside >v
1/5/2013	0.87		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
2/22/2013	0.87		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
4/23/2013	0.87		Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
4/24/2013	0.87	_	Dry	Property Damage Only	Not at a Junction	Unknown	No Control	Left Turn and Thru, Broadside v<
5/3/2013	0.87	.6	Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Same Direction Sideswipe
6/3/2013	0.87	60	Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Same Direction Sideswipe
3/13/2014	0.87	ers	Unknown	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Rear End
5/6/2014	0.87	St intersection	Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
5/9/2014	0.87	White	Dry	Property Damage Only	Unknown	None	Traffic Signal	Unknown
6/21/2014	0.87	≥	Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
12/8/2014	0.87	US 2 /	Dry	Injury	Y - Intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
2/8/2015 3/18/2015	0.87 0.87	-	Snow Dry	Property Damage Only Property Damage Only	4-way intersection 4-way intersection	Unknown None	Traffic Signal Traffic Signal	Rear End Rear End
7/15/2015	0.87		Dry	Property Damage Only	Y - Intersection	None	Traffic Signal	Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^
7/21/2015	0.87	-	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
8/15/2015	0.87	-	Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
9/17/2015	0.87	-	Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
8/7/2014	0.88	-	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Unknown
		-		_ , , , , ,				
9/26/2014	0.88	-	Unknown	Property Damage Only	Not at a Junction	Unknown	Unknown	Unknown
6/16/2015	0.88	-	Unknown	Property Damage Only	Unknown 4 way interportion	Unknown	Unknown Troffic Signal	Unknown Boor End
7/14/2015	0.88		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
5/13/2011	0.89		Dry	Property Damage Only	T - Intersection	None	No Control	Rear End
10/31/2011	0.89		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
12/1/2013	0.89		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Same Direction Sideswipe
6/22/2014 3/25/2015	0.89		Dry Dry	Property Damage Only Property Damage Only	T - Intersection 4-way intersection	None None	Traffic Signal  Traffic Signal	Rear End  Left Turn and Thru, Angle Broadside
5/14/2015	0.89		Dry	Property Damage Only	Not at a Junction	None	No Control	>v Same Direction Sideswipe
7/13/2015	0.89		Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside
7/29/2015	0.89		Dry	Property Damage Only	Not at a Junction	None	No Control	^< Single Vehicle Crash
8/11/2015	0.89		Wet	Property Damage Only	Unknown	Road Surface Condition	Unknown	Unknown
8/29/2015	0.89		Dry	Property Damage Only	Unknown	None	Traffic Signal	Head On
11/5/2015	0.89		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
8/3/2011	0.9		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	No Turns, Thru moves only, Broadside ^<
12/1/2011	0.9		Dry	Property Damage Only	Not at a Junction	None	Unknown	Left Turn and Thru, Angle Broadside >v
2/8/2012	0.9		Dry	Injury	4-way intersection	None	Traffic Signal	Rear End
8/2/2012	0.9		Dry	Property Damage Only	Parking Lot	None	No Control	Rear-to-rear
6/6/2013	0.9		Unknown	Injury	Unknown	None	Unknown	Unknown
10/17/2012	0.91		Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
7/2/2015	0.91		Dry	Property Damage Only	Not at a Junction	None	No Control	Head On
4/16/2012	0.93		Dry	Property Damage Only	Not at a Junction	Unknown	Traffic Signal	Rear End
3/8/2012	0.94		Wet	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside
11/16/2012	0.94		Dry	Property Damage Only	Not at a Junction	None	No Control	Same Direction Sideswipe
7/25/2011	0.95		Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
5/11/2012	0.95		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
12/10/2012	0.95		Dry	Property Damage Only	Not at a Junction	None	No Control	Unknown
8/3/2013	0.95		Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
3/13/2014	0.95		Snow	Property Damage Only  Property Damage Only	Not at a Junction  Not at a Junction	Road Surface Condition	No Control	Rear End Rear End
5/13/2014						None None		
	0.95		Dry	Property Damage Only Property Damage Only	Not at a Junction		No Control	Unknown
6/6/2014 8/18/2015	0.95		Unknown	Property Damage Only  Property Damage Only	Unknown Driveway	Unknown	Unknown No Control	Unknown  No Turns, Thru moves only, Broadside
					<u> </u>			^<
11/27/2012	0.96		Dry	Property Damage Only	Not at a Junction	None	No Control	Left Turn and Thru, Broadside v<
1/5/2012	0.97		Wet	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
2/10/2012	0.97		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
3/13/2014	0.97		Snow	Property Damage Only	Not at a Junction	Road Surface Condition	No Control	Rear End
6/29/2011	0.98		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Same Direction Sideswipe
7/29/2011	0.98		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
3/2/2012	0.98		Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Rear End
12/3/2012	0.98		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/12/2013	0.98		Dry	Property Damage Only	Not at a Junction	None	No Control	Rear End
5/29/2013	0.98		Dry	Property Damage Only	Not at a Junction	None	No Control	No Turns, Thru moves only, Broadside  ^<
7/30/2015	0.98		Dry	Property Damage Only	Parking Lot	None	No Control	Unknown
1/17/2013	0.99	ω.	Dry	Property Damage Only	4-way intersection	None	No Control	Same Direction Sideswipe
11/6/2013	0.99	US 2 / VT 116 intersection	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
4/2/2015	0.99	₽ <u>Š</u>	Unknown	Property Damage Only	Not at a Junction	None	No Control	Rear End
10/23/2015	0.99	. \	Dry	Property Damage Only	Not at a Junction	None	Unknown	Unknown
	0.99	S 2	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
11/23/2015		·=	·y					air Ena
11/23/2015 1/27/2011	1	_	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End

Vertical Control   Vertical Co	Date	MM		Surface	Crash Type	Road	Road Condition	Traffic Signals	Dir. of Collision
915/2011	6/23/2011	1		Wet	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Left Turn and Thru, Angle Broadside >v
101/22011   1	7/20/2011	1	-	Dry	Property Damage Only	Not at a Junction	None	Traffic Signal	Same Direction Sideswipe
1/1/2011   1	9/15/2011	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
11/12/2011   1	10/12/2011	1	-	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
11/11/2011   1	11/2/2011	1		Dry	Property Damage Only	4-way intersection	None		Same Direction Sideswipe
1272012   1	11/11/2011	1					None		Left Turn and Thru, Broadside v<
2/13/2012   1	1/27/2012	1		Wet		4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
Miscolar   1	2/13/2012	1		Dry		•	None		
	4/16/2012	1		Dry	Property Damage Only	•	Unknown	•	
621/2012   1	5/24/2012	1		Unknown		•	None		Unknown
Property Damage Only   Not at a Junction   None   No Control   Left Turn and Thru, Same Directic Sideswipe/Angle Crash Inv-   Side	6/21/2012	1			Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
1/22/2012   1	6/25/2012	1				•	None	•	Left Turn and Thru, Same Direction Sideswipe/Angle Crash vv
10/27/2012   1   1   2   2   3   3   4   5   5   5   5   5   5   5   5   5	7/25/2012	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
6/17/2013   1   1   2   2   3   3   3   3   4   4   5   5   5   5   5   5   5   5	8/17/2012	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
6/17/2013   1   2   5   5   Dry   Property Damage Only   4-way intersection   None   Traffic Signal   Left Turn and Thru, Angle Broadsid	10/27/2012	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
6/17/2013   1   2   2   2   2   2   2   2   2   2	6/1/2013	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
12/5/2013   1   2   2   2   2   2   2   2   2   2	6/17/2013	1	. E	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
12/5/2013   1   2   2   2   2   2   2   2   2   2	6/17/2013	1	ersecti	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Angle Broadside >v
12/5/2013   1   2   2   2   2   2   2   2   2   2	7/8/2013	1	. <u>₹</u>	Dry	Property Damage Only	Unknown	Unknown	No Control	Same Direction Sideswipe
12/5/2013   1   2   2   2   2   2   2   2   2   2	8/2/2013	1	16	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Rear End
2012/01/2014   1   2   2   2   2   2   2   2   2   2	12/5/2013	1		Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Same Direction Sideswipe
Show   Property Damage Only   4-way intersection   Road Surface Condition   Traffic Signal   Rear End	12/6/2013	1	>	Dry	Property Damage Only	4-way intersection	None	Traffic Signal	Left Turn and Thru, Broadside v<
4/12/2014 1 Unknown Property Damage Only Unknown Unknown Unknown Unknown Unknown Traffic Signal Same Direction Sideswipe  8/31/2014 1 Wet Injury 4-way intersection None Traffic Signal No Turns, Thru moves only, Broads of No Turns, Th	2/5/2014	1	2 2	Snow	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Same Direction Sideswipe
Type   Property Damage Only   4-way intersection   None   Traffic Signal   No Turns, Thru moves only, Broads of No Turns	3/12/2014	1	Š	Snow	Property Damage Only	4-way intersection	Road Surface Condition	Traffic Signal	Rear End
8/31/2014 1 Wet Injury 4-way intersection None Traffic Signal No Turns, Thru moves only, Broads (	4/12/2014	1		Unknown	Property Damage Only	Unknown	Unknown	Unknown	Unknown
10/31/2014 1 Dry Property Damage Only 4-way intersection None Traffic Signal Left Turn and Thru, Angle Broadsid >ν-  11/4/2014 1 Dry Property Damage Only Unknown Unk	7/26/2014	1		Dry	Property Damage Only	4-way intersection	Unknown	Traffic Signal	Same Direction Sideswipe
11/4/2014 1 Dry Property Damage Only Not at a Junction None No Control Rear End 11/21/2014 1 Unknown Property Damage Only Unknown Unkn	8/31/2014	1		Wet	Injury	4-way intersection	None	Traffic Signal	No Turns, Thru moves only, Broadside ^<
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# Appendix C

Meetings and Public Outreach



Place: CCRPC - Small Conference Room

Date: December 16, 2015 Notes Taken by: Erin Parizo, VHB

Meeting Notes

Project #: 57832.00 Re: Williston Road Network Transportation Study - Phase II

**ATTENDEES:** Charlie Baker & Christine Forde (CCRPC), Justin Rabidoux & Paul Connor (City of South Burlington), Diane Meyerhoff (Third Sector Associates), David Saladino & Erin Parizo (VHB)

#### 1. Review Phase I Findings & Goals for Phase II

- a. The Phase I Assessment included a comprehensive traffic analysis of the Williston Road corridor from Dorset Street to Hinesburg Road with 2025 and 2035 forecast years. The study included one presentation to the Planning Commission. The Phase I Conceptual Improvement Plan included the following elements:
  - i. Five-lane cross-section with bike lanes, green belts, and sidewalks on each side of Williston Road. Includes a short median between intersections which tapers into a left turn lane at the intersections. Each major intersection approach has a left turn lane, a thru lane, and a shared thru/right turn lane.
  - ii. A new signalized intersection located mid-way between Garden/White Street and the Windjammer/Doubletree signal.
  - iii. A new connector road running from Dorset Street to Patchen Road.
- b. Phase II Goal Develop the northern portion of the City Center transportation network consistent with the City's goals for providing a livable, walkable, multi-modal transportation system for the area.

#### 2. Scope of Work & Schedule

- a. Investigate Local Concerns
  - i. Abutter Meeting (Group) Mid-late January
    - 1. It will be beneficial to have a more general representation of the concept that was developed during Phase I to show the abutters and public so they don't get the impression everything has been engineered already and they don't have input.
    - 2. Should provide some background on Phase I but express that it was a technical analysis without getting too specific. Make it clear that the concept coming out of Phase I is not final and that now is the time for input.
    - 3. This group meeting can be held at City Hall.
    - 4. This should be an early afternoon timeframe and should be scheduled and advertised as least a few weeks in advance to be sure as many abutters as possible can attend.
    - 5. An initial site visit with flyers would be helpful to make initial contact with the property owners in the area.
  - ii. Abutter Meetings (Individual) February

- 1. These can be scheduled at the Century 21 Jack Associates building and will held throughout the course of a day.
- 2. We may need to spend time calling abutters and extending additional times for them to meet as they may not all be able to make it the same day.
- 3. Meetings should be scheduled and advertised at least a few weeks in advance.
- iii. Public Meeting #1 February/March
  - 1. This can be scheduled at City Hall in the evening as a standalone meeting.
- iv. City Council Meeting March
  - 1. City staff will present the input gathered from the abutters and the public meeting along with the project's next steps to the City Council.
    - a. VHB will provide a project summary to City staff for the City Council Presentation.
- b. Alternatives Assessment
  - i. Develop & Evaluate Alternatives (up to 3) March April
  - ii. Technical Committee Meeting #2 April
    - 1. VHB will provide a project summary to City staff for the City Council Presentation.
    - 2. A Draft Report will be available prior to this meeting
  - iii. Abutter Meetings (Group) May
- c. Select Preferred Alternative
  - i. Public Meeting #2 May
  - ii. City Council Meeting #2 June
    - 1. City staff will summarize the alternatives assessment, preferred alternative, recommendations for the Official Map, and next steps to the City Council.
      - a. VHB will provide a project summary to City staff for the City Council Presentation.
      - b. A Draft Report will be available prior to this meeting.
- d. Scoping Report
  - i. Draft & Final June-July

#### 3. Review Project Details

- a. Project Limits
  - i. Western Include the intersection at Dorset Street up to the interstate ramps.
  - ii. Eastern Extend to Patchen/Hinesburg Road and coordinate with improvements that Stantec is working on between Hinesburg Road and White/Garden Street.
  - iii. North approximately 1-2 lots deep
  - iv. South approximately 1 lot deep
  - v. Current public Right-of-Way (ROW) limits are 66' but the City is shifting to 80' along this corridor, with easements in place with a few landowners.

Ref: 57832.00 December 16, 2015 Page 3

- b. Incorporate connector roadway from Dorset Street to Patchen Road in the alternatives.
  - i. In the future the City would imagine a more developed network of streets in this area as well to accommodate the new Form-Based Code frontage requirements.
- c. State involvement This section of Williston Road is a Class 1 Town Highway but as it is on a state route there are key people at VTrans that should be included in major correspondence so they are aware of the project progress and can weigh in if needed. Amy Bell (general progress updates), Jon Kaplan (input on bike/ped concepts), and Derek Lyman (input on signals). Relevant correspondence will be conveyed to Amy with a request to distribute internally to the appropriate contacts.

#### 4. Approach to Outreach

- a. Provide enough background on the other projects and Phase I that everyone can understand the goals of the project, but need to make them realize that decisions have not been finalized and their input is important.
- b. Abutter group to target will likely be on the scale of 40 +/- property owners.
  - i. Justin will send Diane property owner information for outreach.
- c. A site walk with flyers including project information and meeting information will help to connect with abutters.
- d. Schedule meetings well in advance.
- e. Project information can be posted on the CCRPC website as they already have a page for Williston Road from Phase I.

#### 5. Integrating with Garden Street Concepts

a. These two projects will need to be designed in conjunction with each other. Concepts from one can't contradict with the next as this needs to be a cohesive network.

#### 6. Action Items

- a. Diane will reach out to team members to schedule dates for the first round of group, individual, and public meetings.
- b. Justin will send property owner information to Diane.

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The recorder has attempted to summarize discussions held during this meeting as accurately as possible. If there are any items that are misrepresented, please contact the recorder within ten working days. In the absence of any corrections or clarifications, it will be understood that these notes accurately summarize the discussions at the meeting.

# **Williston Road Study Meetings**

(from Dorset Street to Hinesburg Road)

# Three Opportunities to be Heard

**Group Landowners' Meeting** 

Jan. 28th, 2-3:30PM S. Burlington City Hall

**Individual Landowners' Meetings** 

Feb. 3rd, 10AM-5PM Location TBA\*

**Public Meeting** 

March 3rd, 7-9PM S. Burlington City Hall



http://www.ccrpcvt.org/transportation/corridors/williston-road-network/

For more information, or to \*register for an individual meeting on February 3rd, contact Diane at 865-1794. The Williston Road Study is sponsored by the City of South Burlington and the Chittenden County Regional Planning Commission.





City of South Burlington c/o Third Sector Associates 60 Blodgett Street Burlington, VT 05401



110 West Canal Street, Suite 202 Winooski, VT 05404 802.846.4490 www.ccrpcvt.org

## Williston Road Network Study Group Landowner Meeting Notes

**DATE:** Thursday, January 28, 2016

**TIME:** 2:00 PM – 3:15 PM

**PLACE:** South Burlington City Hall, 575 Dorset Street

**PRESENT: Landowners** 

Sean Bartlett Jolley Properties Bert Camerlengo 19 Mary Street

Rene LaBerge

Lainnie Lacroix DoubleTree by Hilton
Tim McKenzie City Center/S. Burl. Realty
Dale Metz Century 21 Jack Associates

Laura O'Conner Windjammer Group
Heather Parizo Northfield Savings
Brian Precourt Precourt Investment Co.
Jack Russell Century 21 Jack Associates

**Others:** Paul Conner and Ilona Blanchard; City of South Burlington; Christine Forde, CCRPC; Dave Saladino and Erin Parizo, VHB; Diane Meyerhoff, Third Sector Associates.

The meeting was called to order by David Saladino of VHB and introductions were made. Christine Forde of the CCRPC explained that the Williston Road Study is funded by federal planning dollars with additional funding from the City.

David made a presentation about the Study which encompasses Williston Road from Dorset Street to Hinesburg Road. The Study will consider improvements in the short, medium, and long term. He discussed the draft form-based code zoning in which Williston Road is considered a "commercial boulevard." This boulevard acts as a major thoroughfare meant to provide access to principal commercial concentrations and other predominantly automobile-orientated land uses. While commercial boulevards serve as conduits for through traffic and as the origin and destination of many motor vehicle trips, they also provide safe and enjoyable accommodations for pedestrian, bicycle, and transit trips. Moderate delay is acceptable at peak periods and medians are required with left turns only permitted within medians.

Paul Conner of the City of South Burlington would like to see Williston Road as a focal point of activity in South Burlington rather than the major connector between Burlington and Williston. The character of this road could change dramatically, especially with the City Center development. The City is interested in supporting local businesses rather than easing commuter traffic to outlying municipalities. Ilona Blanchard of the City Manager's Office noted that 50 percent of new "outside the curb" projects (such as streetscaping or lighting) on this portion of

Williston Road could be paid for through the Tax Increment Finance (TIF) district that is already in place. Dave noted that there is a separate project underway at Garden Street/Hinesburg Road/White Street and the City and the project team are working closely with that project to be sure that the recommendations align.

#### David provided the Study schedule:

Group Land Owner Meeting	Today
Individual Land Owner Meetings	February 3, 2016
Public Meeting #1	March 3, 2016
City Council Meeting #1	March –April
Alternatives Evaluation	April –May
Selection of Preferred Alternative	June
Public Meeting#2 / City Council Meeting	
Scoping Report	July

The meeting was opened for discussion. Rene LaBerge can't exit his driveway at the Dunkin' Donuts due to backups in the right-hand, westbound lane toward the Interstate. He believes this is primarily due to the new lane configuration further east on Williston Road. He recommends a single left-turn lane to Dorset Street (with two through lanes westbound, one right lane for Interstate only). He also felt that a median would be unsafe and hurt businesses.

There was discussion of the goals of the Study. Paul responded that this study will help us anticipate future development and how to move more people to accommodate this new activity. There are also opportunities to look at short term (up to three years) solutions that are consistent with longer term goals.

There was concern about the lack of signal coordination along Williston Road into Burlington. Christine noted that there is currently a project underway to synchronize the signals. The issue was also raised that a few years back when the paving project came through Williston Road, the vehicle detection was changed and it may not be working as well as it used to. It also seems that since a power outage a few months back the timing may be off in some areas. The City is currently looking into addressing.

A number of participants felt the "road diet" east of the project area is causing additional vehicle stacking and delays. A median would negatively impact businesses (evidenced by the addition of the median near Hinesburg Road in front of the Jolley's store which led to a 40% decrease in business per the owner), devalue properties, and make it even more difficult to develop the four-story, mixed use buildings envisioned by the form-based code.

Brian Precourt feels that City Center should stand on its own and not negatively impact Williston Road. For his properties, he has interest from food establishments and services businesses, not retail. He's concerned about the existing traffic cap. Paul is looking to change the traffic overlay district and update the vehicle trip end cap.

There was a discussion of bicycle and pedestrian accommodations that compete with parking. Businesses need parking and parking is what makes South Burlington attractive to businesses looking to relocate. Some felt that bicycle lanes were dangerous on such a high volume road. It can be difficult to see bicycles on the sidewalk as vehicles exit driveways onto Williston Road.

Bert Camerlengo lives on Mary Street and noted that turning left out of his street is very difficult due to congestion. The lane shift near the Dorset Street/Williston Road intersection is dangerous and has poor pavement markings. Locals have learned routes through back streets to access Williston Road. Dave suggested that this supports the creating of additional grid streets to move traffic more efficiently.

Others noted groundwater issues near Patchen Road and the potential difficulty of developing property there.

Representatives of the hospitality industry do not encourage guests to walk to the University Mall and other locations because it is dangerous (especially crossing Williston Road). Although they support pedestrian amenities, they need additional parking too. The signal at the Doubletree/Windjammer is particularly short (perhaps a "Don't Block the Box" sign and check the vehicle detection loops/cameras).

One landowner suggested that the City procure a planning grant for the private landowners to work on their own solutions for access and improvements. He feels that landowners are forced to react to solutions rather than part of designing solutions.

There was concern that the possible new road in dashed lines on the draft Form Based Code which parallels Williston Road passes through parking lots and buildings. It was suggested that for public meetings it be made clear that these connector roads are iterative and conceptual; they will be refined and developed in the future.

The meeting was adjourned at 3:15PM.

# Williston Road Study Community Meeting Notes from Landowner Interviews - February 3, 2016 Century 21 Jack Associates, 1161 Williston Road, South Burlington

#### **SCHEDULE**

12:00	Shawn Bartlett	Jolley Properties	363-2552	sbartlett@sbcjolley.com
12:30	Jason Shunk	McDonald's	603-312-0168	Jason.shunk@us.stores.mcd.com
1:00	Jack Russell	Century 21 Jack	309-8216	keelimetz@c21jack.com;
		Associates		jackrussell@c21jack.com;
				dalemetz@c21jack.com
1:30	Bill & Lee Bisonnette	Al's French Frys	343-5495	Alsfrys@comcast.net
2:00	Craig Bensen	Executive Drive	238-3982	craig@bensen.biz
2:30	Fred Peet	Peet Law	860-4767	fpeet@peetlaw.com
3:00	Bert Camerlengo	19 Mary Street	864-9010	shiningitn@aol.com
4:00	Joe Larkin	Larkin Realty	734-8337	joelarkin@larkinrealty.net
4:30	Bob Eddy	Accent Travel	876-7521	robertweddy@aol.com

#### 12:00 - Shawn Bartlett, Jolley Associates

Shawn is concerned about vehicular access to his gas station at the corner of Williston Road and Patchen/Hinesburg Road. He lost one curb cut (20 years ago?) and can't lose another. The loss of one curb cut reduced his business by 40 percent. Losing one more curb cut will close the business. A median won't matter one way or another.

Someone should do an accident study for the road diet, but it doesn't impact his business.

Putting bikes on this road is very scary.

He agrees that secondary roads make sense.

#### 12:30 – Jason Shunk, McDonald's

Most of his employees arrive by bus and it is difficult for them to cross Williston Rod to access the bus stop (signal is far away).

It's difficult for customers to access the business, especially making left turns onto Williston Road. It's very dangerous and they see accidents often. Sometimes cars queue all around the building. But, a median would restrict flow into the business. He's concerned about both customer vehicular access and safety for employees and pedestrian customers.

McDonald's is open 24 hours and the business from Higher Ground is high as is business from the airport. They have the highest night traffic of any McDonald's in Chittenden County. However, their site is the most difficult store to access in the County.

McDonald's is open to combining driveways and looking at creative solutions to improve access.

They don't want medians which would restrict access, but would consider a median with a turn signal.

#### 1:00 - Jack Russell, Century 21 Jack Associates

The issue for businesses looking to relocate to SB is scale. Look to combine properties to have one entrance and one exit – rather than a lot of small lots with individual access. Crossing Williston Road is a problem for pedestrians. Making lefts is very difficult out of Century 21's parking lot.

#### 1:30 - Bill and Lee Bisonnette, Al's French Fry's

Their business has a traffic signal so access is good. They do not support a median if there aren't left access points because it would increase traffic congestion. Safe access to property is a big concern; a median can make this a challenge.

If Garden Street is extended, then the queues will back up more than they do now. Redesigning the intersection is a possibility – that should help. Coming to Williston Road from Midas Drive from the east, a left-turn lane will help (with a green arrow). What's there now isn't great.

#### 2:00 - Craig Bensen, Executive Drive Developer

Backage road on north side is fine – but where is it exactly? Not interested in new road from Patchen to Executive Drive – would be problematic for his apartment buildings. The entrance to the new road should be further back from Williston Road (north of Executive Drive). This would maximize our development opportunity and make a good use of the Executive Drive space (see drawings of new road).

#### 2:30 - Fred Peet, Peet Law

We can't get out of our driveway due to the traffic congestion. Doing things to reduce congestion would be helpful (like alternate routes and realigning intersections).

At the intersection of Williston Road and Dorset Street, add a lane like they have in Shelburne Road to Interstate 189. The right lane backs up on Williston Road for a long way.

Fred and his employees walk to nearby restaurants and shops. However, the pedestrian-protected crossing slows traffic; Fred would prefer removing the pedestrian phase to reduce vehicle congestion.

#### 3:00 - Bert Camerlengo, 19 Mary Street

Accessing Williston Road is very difficult from Mary Street, especially during rush hour. He is concerned about the City Center development and Williston Road changes and how they might impact them. Don't want to have Mary Street opened to traffic (now it's a dead end). He's also concerned about construction issues.

Supports: a service road entrance from Interstate 89 to enter the mall, new access ramp westbound on Williston Road to Interstate northbound, new backage road on north side of Williston Road.

Crossing Williston Road is very difficult, especially at rush hour.

#### 4:00 - Joe Larkin, Larkin Realty, Holiday Inn and Homewood Suites

Dorset Street entrance into hotel is dangerous (no signal). Leaving property making a left onto Dorset is very difficult. He's willing to talk about changes to Holiday Inn access, but not interested in making it into an "island" that isn't accessible.

Guests walk from Holiday Inn to Windjammer; Homewood Suites guests drive to Healthy Living.

#### 4:30 - Bob Eddy, Accent Travel

The business is very visible on Williston Road and they like that; but they realize that they might not be able to stay there long term. If they need to relocate, they would like to have significant notice and a timeline to prepare.

110 West Canal Street, Suite 202 Winooski, VT 05404 802.846.4490 www.ccrpcvt.org

# Williston Road Network Transportation Study Phase II Community Meeting #1 Notes

**DATE:** Thursday, March 3, 2016

**TIME:** 7:00 PM – 9:00 PM

**PLACE:** South Burlington City Hall, 575 Dorset Street

**PRESENT:** See Page 4

#### 1) Welcome & Presentation

Ilona Blanchard of the City of South Burlington welcomed everyone. She introduced David Saladino and Evan Miller of VHB who made a presentation about the project. The presentation is available at: <a href="http://www.ccrpcvt.org/transportation/corridors/williston-road-network/">http://www.ccrpcvt.org/transportation/corridors/williston-road-network/</a>

The study area encompasses Williston Road from Dorset Street to Hinesburg Road. The goals of the study:

- Identify opportunities to make Williston Road complementary to a new downtown
- · Strike a balance between serving "to" and "through" trips
- Integrate design elements to facilitate safe movements at a reasonable pace
- Ensure safe and comfortable accommodations for all travel needs

The study will consider improvements in the short, medium, and long term. Dave discussed form-based code zoning in which Williston Road is considered a "commercial boulevard." This boulevard acts as a major thoroughfare meant to provide access to principal commercial concentrations and other predominantly automobile-orientated land uses. While commercial boulevards serve as conduits for through traffic and as the origin and destination of many motor vehicle trips, they also provide safe and enjoyable accommodations for pedestrian, bicycle, and transit trips. Moderate delay is acceptable at peak periods and medians are required with left turns only permitted within medians. Dave reviewed other proposed projects for the area.

#### The Study Schedule

Phase 1: Preliminary Traffic Analysis	Completed in 2015
Phase 2: Public Outreach	January-February
Group/Individual Land Owner Meetings	2016
Community Meeting #1	Today
Alternatives Evaluation	April –May
Selection of Preferred Alternative	June
Community Meeting#2 / City Council	
Scoping Report	July
Implementation	Phased

#### **Questions & Comments**

What is the traffic volume along Williston Road and how much of the traffic is through traffic moving east-west to access the Interstate? A new interchange would significantly reduce through traffic. David: Average daily traffic is 28,000 cars and the majority of the traffic is through traffic. Ilona: City policy supports a new interchange.

Will your report be as detailed as the 2007 US Route 2 Corridor Study? Dave: This study is targeted towards this area of Williston Road between Dorset Street and Hinesburg Road; a preferred alternative will be chosen for short-term and long-term improvements.

Ilona encouraged participants to consider other modes of transportation and things like <u>Transportation</u> <u>Demand Management (TDM)</u>.

What are the physical dimensions of space and width available on Williston Road? Ilona: The City owns varied amounts of right-of-way throughout the Williston Road corridor. There is an opportunity to acquire easements as parcels are redeveloped.

Will the utility poles disappear? Dave: We can talk about this in the breakout groups as that may depend on the input received and alternatives developed.

Why is the study limited to such a small section of Williston Road? Ilona: The boundaries were set from Dorset Street to Hinesburg Road because there are a number of new projects proposed in this area.

Are there any givens (foregone conclusions) that we should be aware of? Is the median a given? Dave: There are no foregone conclusions; this study is a process. Form based code would suggest a median for this type of road (commercial boulevard), but it's the City's decision.

Let's add prioritizing the reduction of through traffic and increasing South Burlington-focused traffic to the break-out group priorities.

#### 2) Discussion/Small Group Work and Report Back

Three breakout groups discussed a series of questions (see next page for results).

Break-out Group Discussion: Results of Three Groups					
1. What is the top issue or concern you have for the Williston Road Corridor?					
Diverting/Accommodating Traffic	Safety and Improved Flow	Divert through traffic to intelligently promote and control local traffic for both safety and complete streets emphasis. Lane shift at Dorset Street – I wouldn't ride a bike through there. New right-turn lanes at Hinesburg Road			
2. What is the most important to you o	n the corridor (Pick 3) Numbers in n				
(4) Provide options to divert through	(4) Improved traffic flow	(11) Provide options to divert through traffic			
traffic and prioritize only local traffic	(4) Provide options to divert	and prioritize only local traffic			
(4) Additional parallel streets;	through traffic and prioritize only	(6) Improved traffic flow			
extended grid network	local traffic	(6) Put utilities underground			
(3) Improved traffic flow	(3) Reduce speed	(5) Safer and more accommodating for cyclists			
(2) Safer and more accommodating	(2) Safer and more	(4) Safer and more accommodating for transit			
for cyclists	accommodating for cyclists	users			
(2) Safer and more accommodating	(2) Safer and more	(2) Fewer curb cuts			
for pedestrians	accommodating for transit users	(1) Safer and more accommodating for transit			
(2) Fewer curb cuts	(2) Additional parallel streets;	users (1) More trees and landscaping			
(1) Safer and more accommodating for transit users	extended grid network (1) Raised median	(1) More trees and landscaping			
(1) Raised median	(1) More trees and landscaping				
(1) Naisca Median	(1) More development				
3. How can cyclists be better accommo		nad?			
Reduce curb cuts	Alternate route with bike bridge	Wide shoulders/continuous lane; don't dump			
Separate facilities – unidirectional	Grade separated, commuter lane	snow on bike lane; separate bike/pedestrian			
Divert cyclists off Williston Road to	Protected commuter bike lane	facilities; separation of bikes from roadway;			
Market Street with a bike/ pedestrian	Family bike lanes	continuation along rest of road to Kennedy			
bridge	•	Drive or Williston			
4. How can pedestrians be better acco	mmodated in this section of Willisto	on Road?			
Crosswalks; pedestrian signal	Signalized crosswalks; sidewalks	Fewer curb cuts; benches; crosswalks;			
technology and integration; refuge	separated from curb	garbage cans; wider walkways; plows don't			
islands; bike/ped bridge		dump snow on sidewalks (landscape strips?);			
		separate bike/pedestrian facilities; safer			
		lighting (lights!); aesthetically pleasing; no			
		right-on-red during pedestrian crossings			
5. How can transit riders be better acco		_			
Pull-offs; extended service; shelters,	Lighting at bus stops; covered	More bus pullouts so buses are out of travel			
technology (app)	waiting area; stops close to	lanes; get more people to use the bus; give			
	crosswalks; dedicated stop area	perks for riding bus; benches/shelters; easier			
		to cross Williston Rd; make bus routes more			
		transit friendly, more bus stops, better facilities for folks who are differently-abled.			
6. Do you support the idea of an expar	ded street network (grid) to the no	·			
√++	Yes	More cross streets and less curb cuts; more			
7 11	163	network to spread traffic/multiple choices;			
		take out all curb cuts in front of Chicken			
		Charlie's			

Dave made an observation that the raised median did not garner much support. The group responded that many consider the raised median as a means to achieve the priority of safely improving traffic flow and that in the list of "most important" features when they could only choose 3, this just did not top the list. Not to be mistaken with no support, but only that they wanted their opinion to be heard louder on other aspects. The common denominator of all the groups was the need to strike a balance between users and transportation modes. There are a number of suggestions that could be addressed in the short-term.

There was a concern about raised crosswalks and the difficulty of gasoline trucks to access Gracie's for delivery. The median would also make it difficult to make left-turns into many of the businesses — Shelburne Road saw a lot of businesses close because of the median. If the traffic volumes were reduced, a middle turn lane would make sense.

For cyclists, turning cars are a dangerous. Opportunities for turning vehicles would be reduced with fewer curb cuts, medians, and creating access only at signals and/or cross streets. Justin Rabidoux of DPW noted that the City has requested funds to consider a bike/ped bridge over the Interstate. Justin also suggested that South Burlington doesn't have to accommodate all the county's through traffic. He also suggested that as properties are redeveloped there are opportunities to improve the roadway for more modes.

There were a number of ideas presented that landowners could make happen in partnership with the City. A meeting with a group of landowners could solve some issues in the short term.

#### 3) Thank You, Next Steps, and Adjourn

Next steps will be to evaluate a series of short and long-term improvements based on input from this meeting and engineering practices, followed by another community meeting and City Council meeting to approve a preferred alternative. The Scoping Report will be drafted recommending the preferred alternative and implementation can be phase as appropriate.

The meeting was adjourned at 8:50PM.

This meeting was videotaped by Channel 17/CCTV. See: <a href="https://www.cctv.org/watch-tv/municipalities/south-burlington">https://www.cctv.org/watch-tv/municipalities/south-burlington</a>

#### **Participants**

Nic	Anderson
Bissonnette	Lee
Bob	Britt
Nancy	Chamberland
John	Dinklage
Sandy	Dooley
Matt	Drew
David	Duell
Rebecca	Dutil

Joshua	Goldstein	
Greg	Goyette	
Anthony	Handy	
Rick	Hubbard	
Miranda	Jonswold	
Lainnie	LaCroix	
RJ	Lalumiere	
Debbie	LaRose	
Roy	Neuer	

Pat	Nowak		
R.	Nowak		
Merrilee	Phelps		
Russell	Jack		
Gerry	Silverstein		
Mike	Simoneau		
Margaret	Sunderland		
Peter	Taylor		
Maida	Townsend		

**Staff/Consultants:** Ilona Blanchard and Justin Rabidoux; City of South Burlington; Christine Forde, CCRPC; Dave Saladino, Erin Parizo, Evan Miller, Geoffrey Morrison-Logan, VHB; Diane Meyerhoff, Third Sector Associates.

## **Comments Received Prior to the Community Meeting**

Sent: Thursday, March 03, 2016 9:21 AM

To: Ilona Blanchard

Subject: RE: Reminder - Workshop Tonight!

Thanks for the notice. Have a previous engagement at that time. My idea is to make Williston Road look like Shelburne Road from Dorset Street to Harvest Lane starting with this initial segment from Hinesburg to Dorset. R, Paul Lyon

From: Ilona Blanchard

Sent: Monday, February 29, 2016 8:31 AM

**To:** Barbara P. Sirvis **Subject:** RE: Williston Road

Thank you Barbara – I am forwarding your comments to the project team – sorry you will not be at the meeting. It will be the first, so hopefully the second will work with your schedule. Ilona

From: Barbara P. Sirvis

Sent: Friday, February 26, 2016 9:38 PM

**To:** Ilona Blanchard **Subject:** Williston Road

Ilona, Thank you for the informative email about the continuing evolution of City Center and South Burlington. Unfortunately, I cannot attend the Williston Road meeting on March 3<sup>rd</sup>. I'm hoping it is appropriate to send along some thoughts by email.

The "Bike-Ped Committee" is mostly a bike committee, so I want to be sure the "voice" for pedestrians is heard. I walk 3-4 miles daily, often on or around Williston Road. When I need to go to U.Mall, Trader Joe's, the Library, or other places within two miles or so of Summer Woods, I walk. My experience is much like that in the report. Most bicyclists do NOT use the "complete streets" bike lane. Those I ask indicate they are fearful of being hit by cars; it does not feel safe to them. When they ride on the sidewalk, it is not safe to me as a pedestrian. That said, we need a different configuration so bikers and walkers can coexist peacefully AND safely!! We are all trying to do the right and healthy thing, but there is not enough space for us.

Another major impact of the "complete street" was the elimination of a lane for traffic. It appears that is not a consideration for the section of Williston Road under study here. If so, I need comment no further. If I am incorrect, my vote is not to eliminate a lane!

I am also very concerned about thinking ahead if the Catamount Center is to become reality. Williston Road will be a nightmare when there is an event. I have great concern about excited fans (dare I say students who may have consumed a bit of alcohol?) emerging onto sidewalks that are not large enough to accommodate them.

So, there are some initial thoughts. I can only hope there will be another meeting I might attend. If not, I have great faith in you to listen to all the voices and create a plan that does the most to accommodate all of the concerns.

Thanks so much for listening. Barbara P. Sirvis 24 Arbor Road

# Williston Road Study Community Meeting – Evaluation Form South Burlington City Hall, March 3, 2016, 7:00PM

(4 responses received)

### 1. How did you hear about the Meeting? (check all that apply)

a) Email from Friend/Colleague	
b) Email from Sponsors	1
c) Email from Other	
d) Flyer	
e) Postcard	
f) Front Porch Forum	2
g) Burlington Free Press	
h) Seven Days	
i) Television	
j) The Other Paper	2
k) Other - Facebook	1

### 2. Please rate the following aspects of the meeting:

Aspect	Fantastic	Very Good	Good	ОК	Poor	Terrible
Welcome & Presentation	1		2			
Quality of the Discussion		2	2			
Physical facilities for this event	1	2	1			
Amount of time allowed for input		2		1	1	
Overall value of this event to you		3		1		

#### **Comments:**

Need to get serious about moving traffic off Williston Road by having a northbound I-89 ramp at Hinesburg Road – Exit 12B.

Need handout of who's who, printout of first slide.

### 3. Anything else you'd like to share with us?

Crosswalks needed on Hinesburg Road between Williston Road and Kennedy Drive - at Roth Street and others.

Need alternative Interstate exchange for traffic. 12B or Exchange by Technology Park – whale's tails area, or north. Patchen Road can't take the traffic that is increasing on it. At Burlington/South Burlington boundary, the road is within 2 yards of cliff/gully to the north. Needs barrier and planning how to protect from erosion.



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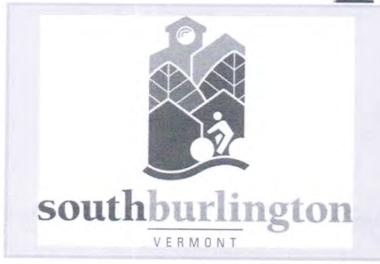
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# Community Meeting: A New Vision for the Williston Road Area

Home » City » Community Meeting: A New Vision for the Williston Road Area

#### Thursday February 25, 2016

Thursday, March 3, 7-9 p.m. South Burlington City Hall, 575 Dorset Street

The public is invited to participate in a community discussion about a new vision for the Williston Road area between Dorset Street and Hinesburg Road. The study seeks to understand how the transportation system in South Burlington can better accommodate the community's needs and the city's future land use objectives and growth in the City Center area, which includes Williston Road. In addition, the study will develop short, medium, and long-term transportation improvements strategies for the Williston Road corridor. The city council will review and approve a final package of recommendations. The project is funded by the Chittenden County Regional Planning Commission (CCRPC) and the City of South Burlington.

For more information, visit www.ccrpcvt.org/transportation/corridors/williston-road-network/ or contact Diane at 802-865-1794 or diane@thirdsectorassociates.com.



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# Should main roadway renovation happen in South Burlington? - WCAX.COM Local Vermont News, Weather WAX.com

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BTV Current Conditions:

## Should main roadway renovation happen in South Burlington?

Posted: Mar 03, 2016 5:04 PM EST Updated: Mar 03, 2016 6:40 PM EST

By Alex Apple CONNECT

SOUTH BURLINGTON, Vt. - Construction on a major road in Chittenden County could mean headaches for drivers, but locals say it's long overdue.

Williston Road is an important link between South Burlington and Burlington. It's a haven for businesses and is packed with rush hour cars running all the way to Main Street in Burlington. New development in the area has the town rethinking its transportation.

Williston Road connects Burlington to South Burlington. It's the link between a good burger at Al's and a drink downtown.

But...

"It can be a nightmare if you're trying to do it at the wrong time. Trying to get in this place can sometimes take upward of 10 minutes," said Jesse Lauer, Cheese and Wine Traders.

Traffic on Williston Road causes headaches. Lauer struggles every morning to make a left-hand turn into Cheese Traders where he works and stops traffic behind him while he waits.

South Burlington is gearing up to develop a new city center off Dorset Street, renovate the University Mall, add 600 new housing units and has proposed a new sports arena, all bringing more people to the area.

"Sort of the knee-jerk reaction is widening that road and so, we want to make sure before that comes that we've looked at all the options," said Ilona Blanchard, South Burlington project manager.

Thursday the city and residents looked at ways to improve Williston Road.

"Here and there on a Friday afternoon it might get a little clogged up, but I haven't experienced too much trouble," said Rob Kostov, South Burlington.

No plans are finalized and no start date is nailed down. Even building new roadways between Dorset Street and Hinesburg Road is an option and new development necessitates new travel options.

Reporter Alex Apple: Is the ultimate goal alleviating congestion then?

Blanchard: I think the ultimate goal is ensuring it's a safe and vibrant place that people want to come to.

Thursday at 7 p.m. the city is hosting a workshop to discuss ideas for Williston Road renovation. They're encouraging input from the community.

Click here for more information.

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ECONOMY

# COMMUNITY MEETING ON A NEW VISION FOR THE WILLISTON ROAD AREA

FEB. 17, 2016, 9:55 AM BY PRESS RELEASE LEAVE A COMMENT

News Release — Third Sector Associates Feb. 15, 2016

#### Contact:

Diane Meyerhoff, Principal Third Sector Associates Grant Writing, Research, Training 60 Blodgett Street, Burlington, VT 05401 802.865.1794

www.thirdsectorassociates.com

Williston Road Transportation Study Community Meeting South Burlington City Hall, 575 Dorset Street Thursday, March 3, 2016, 7:00-9:00 PM

http://www.ccrpcvt.org/transportation/corridors/williston-road-network/

A New Vision for the Williston Road Area

Community Meeting Announced

Join us on Thursday, March 3rd, from 7:00-9:00PM at South Burlington City Hall (575 Dorset Street) to participate in a community discussion about a new vision for the Williston Road area between Dorset Street and Hinesburg Road.

The study seeks to understand how the transportation system in South Burlington can better accommodate the community's needs and the City's future land use objectives and growth in the City Center area, which includes Williston Road. The study will develop short, medium, and long term transportation improvements strategies for the Williston Road corridor. The City Council will review and approve a final package of recommendations.

For more information, see: <a href="http://www.ccrpcvt.org/transportation/corridors/williston-road-network/">http://www.ccrpcvt.org/transportation/corridors/williston-road-network/</a> or contact Diane at 802.865.1794 or <a href="mailto:diane@thirdsectorassociates.com">diane@thirdsectorassociates.com</a>.

All are welcome and encouraged to attend. The project is funded by the Chittenden County Regional Planning Commission (CCRPC) and the City of South Burlington. In accordance with provisions of the Americans with Disabilities Act (ADA) of 1990, the CCRPC and the City will ensure that public meeting sites are accessible to people with disabilities. Requests for free interpretive or translation services, assistive devices, or other accommodations should be made to Emma Vaughn, CCRPC Title VI Coord., at 802-846-4490 ext.\*21 (711 for Telecommunications Relay Services), or <a href="mailto:evaughn@ccrpcvt.org">evaughn@ccrpcvt.org</a>, at least 72 hours in advance.

Filed Under: <u>Vermont Press Releases</u>

Tagged With: South Burlington

### Diane Meyerhoff

From: Ilona Blanchard [iblanchard=sburl.com@mail80.atl31.mcdlv.net] on behalf of Ilona Blanchard

[iblanchard@sburl.com]

Sent: Friday, February 26, 2016 4:04 PM

To: << Test First Name >>

Subject: [Test] City Center Update - February 2016

"If you have a chance, please make sure this makes sense. I'm planning to send it out in about 20 minutes.

Ilona" - Ilona Blanchard

To send feedback about this test campaign, reply with a message above this bar

2016 has been busy - advancing Garden Street, initiating Williston Road, announcing a joint UVM arena study...

View this email in your browser



# CREATE place citycenter

# 2016 is off to a roaring start...

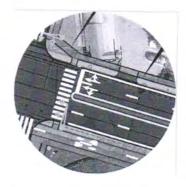
So much going on with City Center projects and more coming in the months ahead, from reports, studies, and engineering to private property and developer decisions, plans are falling into place.

In this year voters will be asked to consider approving financing options for TIF District public projects. Much more outreach is expected to ensure that voters understand and have lots of venues in which to ask questions about the TIF District.

Look for our City Center table at Pre-Town Meeting Day on Monday, February 29 - come by and ask questions! We are also seeking <u>volunteers</u> to help make City Center a vibrant place. Lots of material is on the City's website as well!



Williston Road Area Community Meeting





Chamberlin Student Lend a Hand to Park Play Area Design

A New Vision for Williston Road Thursday, 3/3, 7 PM. South Burlington City Hall, 575 Dorset St

First community meeting for the Williston Road Transportation Study (Dorset Street to Hinesburg Road area) Let your voice be heard on issues such as congestion, safety, pedestrian routes, and bicycle travel. Questions? 865-1794

Williston Road Workshop learn more...

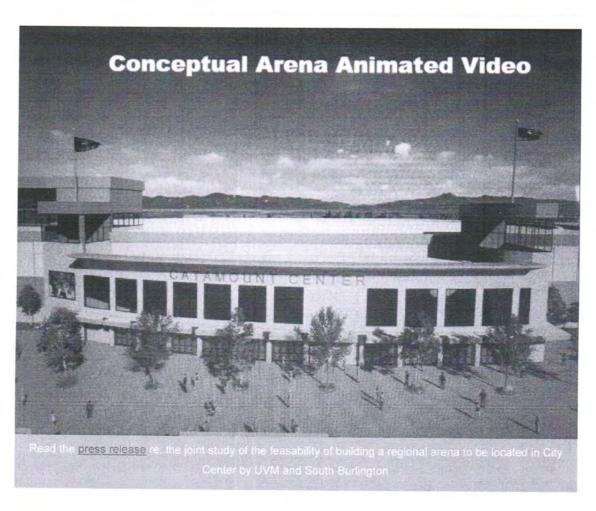
# Council approves concept

for Garden Street

The Council approved short and long recommendations for the Williston Rd intersections and Midas Drive. Short term safety improvements will move into engineering, and longer term recommendations will be incorporated into planning documents.

Approved Garden Street Concept learn more... The Dumont Park team led a workshop with Chamberlin students who visited Dumont Park in February. Kids enthusiastically provided preferences, drawings, observations and a wish list for the design of Dumont Park natural play and experience area planned for the center of the park. Thanks Chamberlin for all your help!

Dumont Park learn more...











# A New Vision for the Williston Road Area

(between Dorset Street and Hinesburg Road)

Thursday, March 3rd, 7:00PM South Burlington City Hall 575 Dorset Street

Come to the first community meeting for the Williston Road Study and let your voice be heard on transportation issues, such as traffic congestion, safety, pedestrian routes, and bicycle travel.

### www.ccrpcvt.org



Hosted by the City of South Burlington and the Chittenden County Regional Planning Commission. Refreshments will be served. Questions? Call Diane at 865-1794.

# Municipal Matters

# A New Vision for the Williston Road Area Community Meeting

Thursday, March 3, 7-9 p.m. South Burlington City Hall, 575 Dorset Street

The public is invited to participate in a community discussion about a new vision for the Williston Road area between Dorset Street and Hinesburg Road. The study seeks to understand how the transportation system in South Burlington can better accommodate the community's needs, the city's future land use objectives and growth in the City Center area, which includes Williston Road. In addition, the study will develop short, medium, and long-term transportation improvement strategies for the Williston Road corridor. The city council will review and approve a final package of recommendations. The project is funded by the Chittenden County Regional Planning Commission (CCRPC) and the City of South Burlington.

For more information, visit www.ccrpcvt.org/transportation/corridors/williston-road-network/ or contact Diane at 802-865-1794 or diane@thirdsectorassociates.com.







# A New Vision for the Williston Road Area

(between Dorset Street and Hinesburg Road)

Thursday, March 3rd, 7:00PM South Burlington City Hall 575 Dorset Street

Come to the first community meeting for the Williston Road Study and let your voice be heard on transportation issues, such as traffic congestion, safety, pedestrian routes, and bicycle travel.

### www.ccrpcvt.org



Hosted by the City of South Burlington and the Chittenden County Regional Planning Commission. Refreshments will be served. Questions? Call Diane at 865-1794.

# **Municipal** Matters

# A New Vision for the Williston Road Area Community Meeting

Thursday, March 3, 7-9 p.m. South Burlington City Hall, 575 Dorset Street

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For more information, visit www.ccrpcvt.org/transportation/corridors/williston-road-network/ or contact Diane at 802-865-1794 or diane@thirdsectorassociates.com.

# **DRB Synopsis**

MIRANDA JONSWOLD

CORRESPONDENT

South Burlington Police Station Community Room Tuesday, February 16, 2016, 7:00-8:37 p.m.

There were no additions, deletions, or changes in order of agenda items. There were no comments from the public not related to the agenda. There were no announcements.

#### **Applications**

Continued site plan application #SP-15-69 of Greer Family, LLC for after-the-fact approval to amend a previously approved plan for a 15,608 sq. ft. multiuse commercial building. The amendment consists of converting 775 sq. ft. of retail use to tavern/night club use, 10 Dorset Street. There was confusion regarding estimating traffic generation since the use did not have an Institute of Traffic Engineers (ITE) classification. At the January meeting, the board requested the applicant conduct trip generation counts at three locations similar to Growler Garage. The results conclude that the existing 42.3 vte/hours could support up to 17 seats at Growler Garage. Miller moved to close the application, Wilking seconded, and the vote was unanimously in favor.

Continued sketch plan application #SD-15-40 of John P. Larkin for a planned unit development consisting of: 1) razing a 54 unit hotel (Larkin Terrace), 2) constructing a 100 room hotel, 3) constructing a 51 room extended stay hotel, 4) constructing 77 residential units, and 5) constructing 9,000 sq. ft. of commercial space, 1185 & 1195 Shelburne Road. The applicant requested that this item be continued to a future meeting. Miller moved to continue the application to March 15, Wilking seconded, and the vote was unanimously in favor.

Continued sketch plan application #SD-15-41 of Eric Farrell for a planned unit development consisting of: 1) subdividing an undeveloped 6.7 acre parcel into two (2) lots of 4.1 acres & 2.6 acres, and 2) construction of a 50 unit multi-family dwelling on the 4.1 acre parcel, 1195 Shelburne Road. The applicant requested that this item be continued to a future meeting. Miller moved to continue the application to March 15, Wilking seconded, and the vote was unanimously in favor.

Sketch plan application #SD-15-48 of Gardner & Sons Development Corporation for a planned unit development to further develop a 2.16 acre parcel developed with a two (2) family dwelling. The proposal consists of: 1) constructing a single family dwelling, and 2) constructing a 3-unit multi-family dwelling, O'Brien Drive. David Burke of O'Leary Burke explained that the single family home needed a front facade appearance and plans to include a six-foot front porch. There will also be a garage parallel to the home. Regarding whether it meets PUD standards, Burke said that the triplex would provide variety in a dominantly single-family neighborhood. The applicant is also proposing an easement across the northern portion of the Gardner lot and will include formal delineation (fencing). The board and Burke also discussed fire chief requests (sprinklers) as well as comments from public works regarding erosion control, wastewaster and stormwater infiltration. Burke will return with renderings. Resident Kent Stevenson, who lives across the street, shared concerns. Increased traffic, subsequent safety of children in the neighborhood, lighting from headlights entering his home, the triplex being an outlier in the neighborhood, and using a parcel that's largely wetlands were a few concerns. He also requested a written agreement that his lawn would be restored to its existing state after water service work is complete. He suggested eliminating the proposed single-family home and requested debris in the ravine be cleared. Wilking said he was concerned about the location of the single family home. The applicant will return for preliminary and final plat.

### Minutes

Miller moved to approve the minutes of January 19 and February 2, 2016 as written, Wilking seconded, and the vote was unanimously in favor.

There were no items under Other Business.

Meeting adjourned at 8:37 p.m.

Members present: Chair Tim Barritt, Vice Chair Bill Miller, Clerk David Parsons, Jennifer Smith, and John Wilking

Staff present: Administrative Officer Ray Belair

## City Council CONTINUED FROM PAGE 5

recommendations, the purpose and need statement, next steps, and a resolution for the council to consider. The council unanimously approved the preferred alternative. Emery made the motion, Riehle seconded.

The council continued their discussion regarding amendments to the Land Development Regulations and Official Map. The council agreed that the amendments and edits staff had made were appropriate. Emery motioned acceptance of the edits and warned the full amended LDRs and Official Map for a pub-

lic hearing Monday, March 21 at 7 p.m., Riehle seconded, and the decision was unanimous.

The council entered executive session for 30 minutes to review the tentative agreement between the City of South Burlington and Local 3671 of the International Association of Fire Fighters AFL-CIO (South Burlington Fire Fighters). When councilors emerged, Emery made the motion to approve the tentative agreement, Shaw seconded, and the decision was unanimous.

Tom Hubbard reviewed the Janu-

ary financial statements. The city is 58 percent through the budget year and revenues are at 58 percent while expenses are at 57 percent. Planning and zoning revenue continues to trend above expectations and expenses for the ongoing tax appeal with BTV continue to rise. Fire Department ambulance maintenance was above projections.

Other business: Riehle requested that Bernie Paquette and Barbara Bull's concerns be placed on the 'parking lot' for future consideration.

otherpapervt.com



Place: South Burlington City Hall
Second Floor Conference Room

Date: March 22, 2016 Notes Taken by: VHB

Project #: 57832.00 Re: Williston Road Network Transportation Study - Phase II

**ATTENDEES:** Christine Forde (CCRPC), Justin Rabidoux, Paul Connor, Ilona Blanchard (City of South Burlington), David Saladino & Erin Parizo (VHB)

#### 1. Review Proposed Williston Road Cross Sections

- a. 80' Right of Way (ROW)
  - i. Currently proposed in the new regulations
  - ii. The City doesn't necessarily need to use standard ROW widths (even rods)
  - iii. With an 80' ROW it would allow for two of three general improvements:
    - 1. Median, bike facilities, or additional green space/plantings
  - iv. Bike facilities should be included regardless of the remaining configuration.
  - v. There are some areas through the corridor with irrevocable rights, but those already extend to 80'

#### b. 100' ROW

- i. Garden Street had looked into how a 100' ROW could be used in the area
- ii. The project should consider a 100' ROW as a long-term option for Williston Road
- iii. Now would be the time to know if a 100' ROW really is the best solution
- c. Every option investigated needs to consider substantial pedestrian volumes along and across Williston Road
- d. 10' travel lanes would be acceptable if there are designated turn lanes to accommodate vehicle turning movements

#### 2. Review Grid Street Locations

- a. The City's Revised Land Development Regulations and Official Map with City Center grid street network was approved at last night's City Council meeting
  - i. If there are changes to be made to the street locations, now is the time to define the locations for a future update to the Official Map
  - ii. In order to get shown on the Official Map, we need to know which properties the roads will cross
- b. The Land Development Regulations identify the intersections of the existing roads and proposed roads as fixed points but allow flexibility in how the proposed streets cross individual parcels between those fixed points.
- c. New streets shown will need to have development along 70% of the street frontage
  - i. Primary streets are defined as 70% frontage blocks

- ii. Secondary streets may be a way to characterize the streets that the City would not want to require frontage on
- d. The northern connector street along the park is favored in the location shown (as opposed to along Executive Drive)
  - i. Justin and Paul will discuss this further with the Parks and Recreation Department
- e. Edits to the grid concepts:
  - i. Turn on property lines
  - ii. Connections should be added to Market Street
  - iii. Show proposed streets as dotted lines and think about how to characterize primary vs. secondary
  - iv. Show short term and long term connections as some may be able to be made earlier than others

#### 3. Review Alternatives Matrix

- a. Think about these as "Phases" as opposed to "Alternatives", but perhaps each phase has different alternatives
- b. Short Term
  - i. Operational improvements, turn lanes, signal improvements
  - ii. Regulatory changes on the Official Map
- c. Medium Term
  - i. Garden Street cross-section extended w/o median
  - ii. Garden Street cross section extended w/ median and turn lanes
- d. Long Term
  - i. 80' or 100' build out scenario
- e. Keep the alternatives matrix high level
  - i. Highlight the amenities added in each phase
  - ii. No need to get caught up in the detail of each phase (i.e. 10' travel lanes vs. 11' travel lanes)
- f. Design Year
  - i. Currently using 2026 design year
  - ii. Should the project include a 20 year design (2036) and/or include Exit 12B in the analysis?
  - iii. Christine will run it by others at the CCRPC to confirm
- g. An illustrative graphic to show the future build-out potential of the area would be good to see in conjunction of consideration of primary and secondary streets

#### 4. Next Steps

- a. Refine Alternatives
  - i. VHB to update alternatives and redistribute for additional input
- b. Natural/Cultural Resources Assessment

Ref: 57832.00 December 16, 2015

Page 3

- i. VHB to prepare
- c. Evaluation Matrix
  - i. To be prepared once alternatives have been defined
- d. Technical Committee Meeting (If needed)
- e. Land Owner Meetings
  - i. This could be small group meetings or individual meetings
  - ii. City will take the lead on developing potential groups to have joint meetings
    - 1. Either Diane or City will reach out to discuss land owner preferences
- f. Public Meeting #2
- g. City Council Meeting

#### 5. Action Items

- a. VHB to refine alternatives matrix, grid street network, and cross sections
- b. VHB to develop an illustrative graphic for the area after the grid street locations have been decided on
- c. CCRPC to verify whether a 2036 build-out scenario should be included and/or Exit 12B
- d. City to break out landowners into small groups and reach out to each on preferences (singular or group meetings)
- e. City to discuss location of northern connector street (near park) with the Parks and Recreation Department

The recorder has attempted to summarize discussions held during this meeting as accurately as possible. If there are any items that are misrepresented, please contact the recorder within ten working days. In the absence of any corrections or clarifications, it will be understood that these notes accurately summarize the discussions at the meeting.



Date: May 24, 2016 Agenda Prepared By: David Saladino

**Place:** South Burlington City Hall

Project No.: 57832.00 Williston Road Network Transportation

Study - Phase II

Attendees: Paul Conner, Ilona Blanchard, Justin Rabidoux, Christine Forde, David Saladino, Mark Hamelin

#### 1. Review & Confirm Project Phases / Alternatives

- Review Williston Road Cross-Sections
  - i. Cross-sections were reviewed and will be modified to include the following three phases:
    - 1. <u>Short-Term</u>: signal optimization, streetscape enhancements, access management
    - 2. <u>Mid-Term</u>: reduce from 11' to 10' lanes, add protected bike lane on south side, ROW expanded to 100', south side sidewalk expanded to 8', curb-to-curb width remains at 48'
    - 3. <u>Long-Term</u>: 12' median added, north side sidewalk and buffer expanded, curb-to-curb width expanded to 60'
- Review Proposed Street Network & Potential Land Use Configuration
  - i. Proposed street network and land use configuration was presented. Potential changes include the development of three scenarios showing 1) reasonable configuration (no major building impacts), 2) middle, and 3) "visionary" ignoring building configurations and parcel boundaries.

#### 2. Questions/Clarifications:

- How to integrate CCTA input?
  - Christine to reach out to David Armstrong
- Should project include 20-year design (2036) and/or Exit 12B in analysis?
  - Yes, future design year is 2036
  - o Do not include effects of Exit 12B
- Any input from Parks & Recreation re: Jaycee Park Configuration?
- Provide input to City on proposed ROW by mid- to late-June.

#### 3. Next Steps

- Alternatives Evaluation & Evaluation Matrix
- Property Owner Meetings
  - i. This could be small group meetings or individual meetings



- ii. City will take the lead on developing potential groups to have joint meetings
  - Joe Larkin & Laura O'Connell (Best Western)
  - Jack Russell, Rick Milliken, Sam Judge
  - David Young School Superintendent
  - Brian Precourt with adjacent land owners (e.g. Alpine Shop)
- Public Meeting #2
- City Council Meeting
- Draft & Final Report



**Date:** July 29, 2016 **Agenda Prepared By:** David Saladino

Place: South Burlington City Hall

**Project No.:** 57832.00 **Project Name:** Williston Road Study - Phase II Tilley Drive Area Study

#### **AGENDA: Williston Road Phase II**

#### 1. Finalize Stakeholder Meeting Logistics

Review stakeholder list; strategies for finding contacts

#### 2. Review Williston Road Phased Improvement Plan And Proposed Cross-Sections

- <u>Williston Road Proposed Cross-Sections</u>: Revised cross-sections for short-, medium, and long-term phases of Williston Road based on our discussion at our last meeting.
- <u>100' ROW Layout</u>: Aerial overlay showing where the proposed 100' ROW lines would fall, with an identification of impacted structures within this expanded ROW.

#### 3. Review approach for development of grid network and infill sketches

- Before or after stakeholder meetings?
- Low impact & "visionary" alternatives
- Still provide environmental resources assessment

#### 4. Next Steps

- Property Owner Meetings (August)
- Public Meeting #2 (September)
- Finalize Phase Improvement Plan (October)
- City Council Meeting (November)
- Draft & Final Report (December)

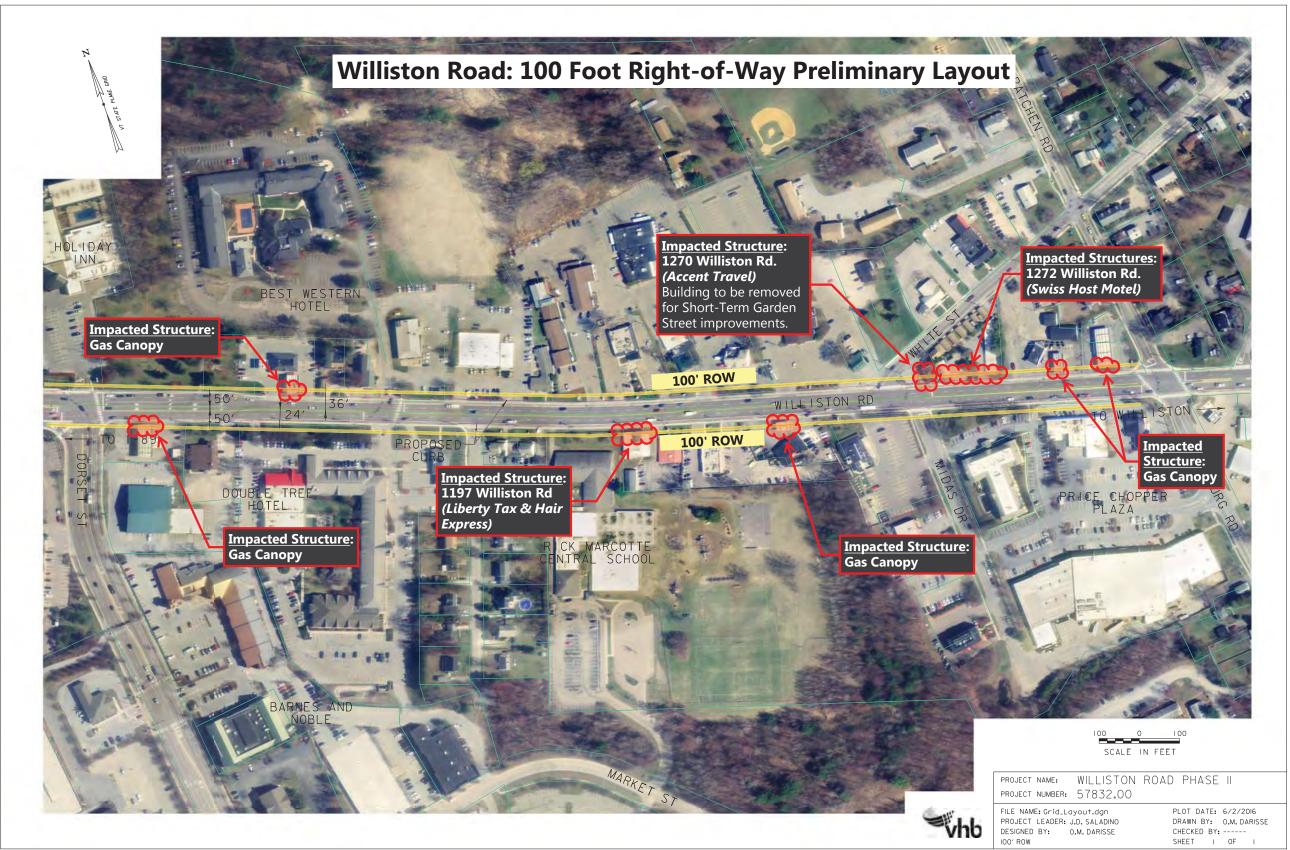
#### **AGENDA: Tilley Drive Area Study**

#### 1. Future Land Use & Trip Generation

- Review details of potential development in project area as identified by property owners/developers.
- Discuss whether the scale of the identified development is reasonable prior to finalizing our traffic analysis that incorporates this development

#### 2. Next Steps

- Evaluate Future No-Build Traffic Performance (August)
- Meetings (September)
  - o VTrans, ANR, Act 250, Public



## **DRAFT MINUTES**

# SOUTH BURLINGTON PLANNING COMMISSION MEETING MINUTES 8 AUGUST 2017

The South Burlington Planning Commission held a regular meeting on Tuesday, 8 August 2017, at 7:00 p.m., in the Conference Room, City Hall, 575 Dorset Street.

MEMBERS PRESENT: J. Louisos, Chair; T. Riehle, B. Gagnon, D. Macdonald, M. Ostby

ALSO PRESENT: P. Conner, Director of Planning & Zoning; C. Forde, CCRPC; J. Weith, E. J. Nekrasen, D. Saladino, L. Brown

Mr. Conner presided over the meeting until the election of officers.

#### 1. Directions on emergency evacuation procedure from conference room:

Mr. Conner provided directions on emergency evacuation in the event of an emergency.

#### 2. Agenda: Additions, deletions or changes in order of agenda items:

No changes were made to the Agenda.

#### 3. Open to the public for items not related to the agenda:

Mr. Nekrason asked about the new analysis of east-west roads that is in the plans. He felt this is very important piece of work because you can't base new roads on studies that are 16 years old.

Mr. Conner said this has not yet risen to the level of a formal project. He noted to Commissioners that their next opportunity to identify priority projects will be this fall's round of project requests to the Chittenden County Regional Planning Commission. Ms. Forde noted the 2001 study is available on the CCRPC website. She will send a link to Mr. Conner to distribute to Commission members.

#### 4. Planning Commissioner announcements and staff reports:

Ms. Ostby: Attended the Affordable Housing Committee meeting. They continue to discuss extension of inclusionary zoning city-wide.

Mr. Riehle: Noted the well-attended Bikes and Bites event at Veterans Park. Mr. Conner said there were over 200 bicycles counted. There will be 2 more events (every other Thursday).

Mr. Macdonald: Was amazed to see bike lanes in Chicago, even with the chaotic traffic. They are very well used.

Ms. Louisos noted that she and Mr. Conner attended a meeting at which "river corridors" were discussed. These differ slightly from a flood plain. The Rivers Management Program and others are looking at areas that should/shouldn't be considered candidates for modified "river corridors" because of existing buildout. She suggested there could be language in the LDRs about this.

Mr. Conner: noted an event this night at Underwood property. He reminded members of the visioning plan adopted by the City Council a few years ago. The Project Team is developing a Master Plan based on the Vision Framework that had been developed by a task force a couple of years ago..

City Fest will take place on 12 August at Veterans Park, 5-9 p.m. followed by fireworks.

Attended a conference regarding geographic mapping. There are many things the city could be doing in this regard.

Construction is ongoing on both Hinesburg Road and Market Street. There is a pedestrian lane open on Hinesburg Road so people can see the hugeness of the project. The Market St. project will result in improved water quality.

- 5. Planning Commission Reorganizational Meeting:
  - a. Elect Chair, Vice Chair and Clerk
  - b. Set Regular Meeting Dates and Times

Mr. Conner noted that the City Council did not get any applicants for the vacant seat on the Commission. The position will be re-advertised.

Mr. Conner then opened the floor for nominations.

Mr. Riehle nominated a slate as follows: Ms. Louisos as Chair; Mr. Gagnon as Vice Chair; Ms. Ostby as Clerk. Mr. Macdonald seconded the nominations.

There were no further nominations.

In the vote that followed, Ms. Louisos, Mr. Gagnon and Ms. Ostby were elected unanimously.

Mr. Riehle then moved to continue to meet on the second and fourth Tuesdays of the month at 7 p.m. Mr. Macdonald seconded. Motion passed unanimously.

Ms. Louisos presided over the remainder of the meeting.

- 6. <u>Initial Review of Requests for Amendments to the Land Development Regulations:</u>
  - a. Allow Radio/TV Studio in the I-O district
  - b. Modify City Center Form Based Code T3 Door Standards

Ms. Louisos explained the process followed for LDR amendments.

a. Mr. Weith of White and Burke said they represent a client who is interested in constructing and occupying a new studio in Meadowlands Park in the I-O District. There would be a clear unobstructed site line to the transmitter in Mt. Mansfield, which makes this area appealing. Mr. Weith said he can't think of a reason why this use should not be allowed in that district. It is similar to other uses that are allowed as it is primarily an office use and it complies with the purpose statement of the I-O district.

Mr. Conner was asked why this area would not have previously permitted such a use. Mr. Conner said that he suspected that at the time the TV studio on Joy Drive was made permissible in that district, the City had simply not done a city-wide analysis. He said the proposed request appears to staff to be consistent with what is allowed in the I-O District. He noted there is a scenic overlay district that covers part of that district. An accessory structure would be behind the building. Mr. Weith said the applicant knows the regulations and would comply with them.

Mr. Conner showed a map of the area and where the height limits apply.

Commission members did not see a problem. Mr. Conner said the amendment could be part of the next round of amendments. Mr. Weith noted the applicant's time crunch and said they would appreciate any expediting that can be done. Mr. Conner said he would provide the Commission with schedule options at its next meeting.

b. Mr. Brown described a piece of property he has on Hinesburg Road which he is trying to develop. It is long and narrow (it was shown on a map). When considering what will work, they have run into issues with the Form Based Code. They are looking at a residential duplex, something that goes along with what is already on Hinesburg Road. A previous plan was approved by the DRB, and the applicant would like to "cut that in half." He showed the concept and noted that one door would face Hinesburg Road and the other would face a 20-foot right-of-way.

Mr. Conner noted that in the T3 district, one way the regulations keep the neighborhood scale is that each unit must have a door facing the street. Mr. Macdonald noted that this property does not lend itself it doors facing the street. Mr. Conner added that there are about 10 properties of a similar nature. He asked where members stand on this issue.

Members agreed to consider it. Mr. Gagnon was concerned with "unintended consequences."

#### 7. Williston Road Network Study, Phase II presentation, discussion and possible action:

Ms. Forde noted that South Burlington requested 2 studies which are represented in this item and the following item. This study is a long-term vision for Williston Road.

Mr. Saladino then showed the project area and noted that the goals for the area include:

- a. Providing opportunities to make Williston Rd. complementary to the new downtown
- b. Striking a balance between "to" and "through" trips
- c. Integrating design elements to facilitate all modes of traffic

He then showed slides of the existing conditions. He noted that the road now handles 28,000 vehicles per day. There is heavy use for "through trips." There is also a lack of turn lanes and limited transit accommodations.

Slides of a possible "Williston Road Tomorrow" showed a strong building edge up to the curb, fewer curb cuts, trees, parking behind buildings, etc.

Mr. Saladino then outlined potential short term recommendations, including:

- a. Updating official map to define a grid street network
- b. An estimated 100-foot right-of-way (currently 66-90 feet)
- c. Traffic signal crossing and coordination (advanced traffic management system)
- d. South side improvements including a cycle track and sidewalk
- e. Dorset Street Intersection improvements

Four types of streets have been identified: primary, secondary, tertiary, and intended cross-lot connections. Meetings have been held with property owners who were shown where these types of streets are located and where there can be "cross-lot" connections. Blocks have been tested to be sure they are economically viable. The city could acquire property over time to achieve the wider right-of-way. Mr. Conner noted that the 100-foot right-of-way along Williston Road has just been adopted into the city's regulations. As a property comes in, it will have to conform to that.

Mr. Saladino then showed pictures of what exists on the south side today. A cycle track would be added, and the sidewalk would be moved back and replaced by a landscaped area. A grant has been filed to undertake these improvements.

At Dorset Street/Williston Road, the road could be restriped to indicate only one turn lane from Williston Road to Dorset Street. There would be 3 other traffic lanes. This would result in the level of service going from "D" to "C."

Long term improvements include north side opportunities, including bringing buildings to the edge of the right-of-way. The study identifies 4 options:

Option 1: adding 12 feet of width with a center 2-way turn lane

Option 2: a 12-foot landscaped median with turn lanes where needed

Option 3: one lane in each direction with angled parking on each side of the road (comparable to Main Street in Burlington)

Option 4: One lane in each direction with light rail.

These were all shown as possibilities for how the 100-foot right of way could be used in the future to meet the city's needs.

There would also be northbound ramp improvement which would add a second lane to the I-89 northbound on-ramp.

Mr. Gagnon asked about utilities and noted the number of power poles. He asked about underground utilities. Mr. Saladino said that is an expensive option. He noted that the curb line would stay the same, so most of the poles could stay where they are.

Mr. Macdonald asked if there is right-of-way for the south side bike lane. Mr. Conner said there is "intermittent right-of-way." It would be a property-by-property discussion to get that done.

Mr. Riehle suggested signage above in addition to arrows on the road which are hard to see in winter.

Ms. Ostby asked about reducing curb cuts so there aren't so many accesses to a property. Mr. Conner said there may be a way to do that, working with property owners and establishing incentives. Mr. Gagnon said if you reduce curb cuts you may increase queueing lines. Mr. Conner suggested the possibility of controlled turn-ins to a number of properties.

#### 8. Tilley Drive/Kimball Ave Network Analysis Phase I presentation and discussion:

Ms. Forde said the purpose of the study is to develop a comprehensive land use and transportation plan.

Mr. Saladino showed a map of the project area and reviewed what has been done to date, including a public meeting. He showed photos of the history of the area and the buildings that now exist. He described the area as a "gateway from the south."

There is a mix of zoning in the area including: I-Open Space, Mixed I & C, Commercial 1 (limited retail), Residential 1, and Residential 12. There are both traffic and transit overlay districts (transit being very limited at present). Mr. Saladino showed a map of the existing sidewalk, paths and bike lanes and indicated where there are gaps. He also showed a map of where there have been crashes in recent years and described the area as "high-crash."

There are about 40,000 cars per day on I-89 in the area, about 12,000 on Kennedy Drive and about 10,000 on Kimball Ave.

Mr. Saladino indicated an "enterprise area" for future employment (taken from the Regional Plan).

The goals of the project include:

- a. Developing a safe transportation plan
- b. A focus on employment from land use
- c. Mixes uses as supported in the Comprehensive Plan
- d. A potential Exit 12B

Mr. Saladino noted the lack of east-west roadways and the potential extension of Swift Street on the city's Official Map.

Part of the study looked at recent applications and concepts from developers (none of which are final). It was noted that what developers are looking for would generate twice as much traffic as now exists on the Interstate (2750 peak hour trips approximately). Initial traffic modeling indicated what would happen at intersections if all that development occurs, with only the known planned street improvements taking place. Mr. Conner noted that this assumes no other improvements happen, and that is not realistic, but was done to get a baseline.

The Project Team conducted a public survey which yielded 325 respondents. Parks/open space ranked as the top favored land use to encourage in the area. Single family homes, offices, medical offices, multi-family units, and retail followed in that order; with hotels, services, and light industrial being ranked nearer the bottom. Respondents were given options for individual transportation improvements to pursue, and then given a series of four "packages" of improvements to pursue, each with an associated cost.

When people were asked what they felt would best address future growth, 26% supported a multi-modal approach (this was ranked #1 amongst SB residents living outside the study area), 34% said interchange access (ranked #1 amongst non-residents), 25% said connected streets and paths (ranked #1 among those living in the study area), and 15% said modest improvements.

The Project Team used this information to develop two distinct alternatives, one focused on a multi-modal network and one with an Interchange and connections. Both were designed to accommodate the *same* number of total trips, but in different ways.

The cost for the first alternative (paths, transit service, new bike/ped bridge) would be about \$14,500,000 (with \$600,000 operating costs). Alternative #2, including the new interchange would cost \$42,000,000.

Mr. Riehle felt bikes should be accommodated first on Hinesburg Road before an interchange is considered. It should also be determined where people are coming from and going to. Mr. Saladino said traffic on Hinesburg Rd. would increase with the interchange, but Williston Rd. traffic would significantly decrease.

Ms. Ostby noted there is a lot of controversy about the Swift St. extension. Ms. Louisos said it is on the Official Map.

Ms. Ostby asked if other cities have looked at capturing created solar energy and using that capital to budget multi-modal. Mr. Conner explained how revenue from the new solar installation in the city will be used for energy efficiency.

Mr. Saladino suggested a third alternative could bring traffic off the interchange into a parking lot with transit service from that lot.

Mr. Riehle asked the timeline for an interchange. Estimated varied from 10 to 30 years if funding were identified. Mr. Conner noted how long it took to get Market St. done due to all of the moving parts and permits associated with such a project.

Ms. Ostby asked about a north-bound entrance to I-89 from Kennedy Drive. Ms. Forde said you cannot build just the northbound access. The feds will not allow it. Mr. Saladino said he didn't think that would help Tilley Drive much.

Mr. Saladino asked if anyone is opposed to Alternative 2. Ms. Louisos said it would be very long-term. #1 has more short-term tasks. She wasn't prepared to say yes or no now.

Mr. Conner stressed that there is no easy answer to this. The question is where a community wants to spend its energy. Right now it's on City Center. He suggested the Commission prioritize where it wants to put its energy.

Ms. Ostby said it would be good to state the economic drivers for an Interchange and whether there is enough to make it a priority.

Mr. Riehle asked about building the bike/ped "bridge" before the interchange. Mr. Saladino said that would be great if there were still "earmark" dollars from Congress.

Mr. Saladino said they will continue to work with staff to pull together the package, with the Interchange as a possibility but focusing on multi-modal.

#### 9. Street Names:

Mr. Conner said this is a preview to consider a street to connect to Garden Street near the previous "Venue" building. Names suggested include Morris, Wentworth, Peace Lane, 71<sup>st</sup> Street.

It was suggested that somewhere in the Market St. area there be something names for Senator Jeffords whose last act as a Senator was to secure the funding for Market Street. Commissioners agreed that Senator Jeffords should be recognized in the area for his efforts.

#### 10. Minutes of 11 July 2017:

Mr. Riehle moved to approve the Minutes of 11 July as written. Ms. Louisos seconded. Motion passed 5-0.

As there was no further business to come before the Commission, the meeting was adjourned by common consent at 10:05 p.m.

## **DRAFT MINUTES**

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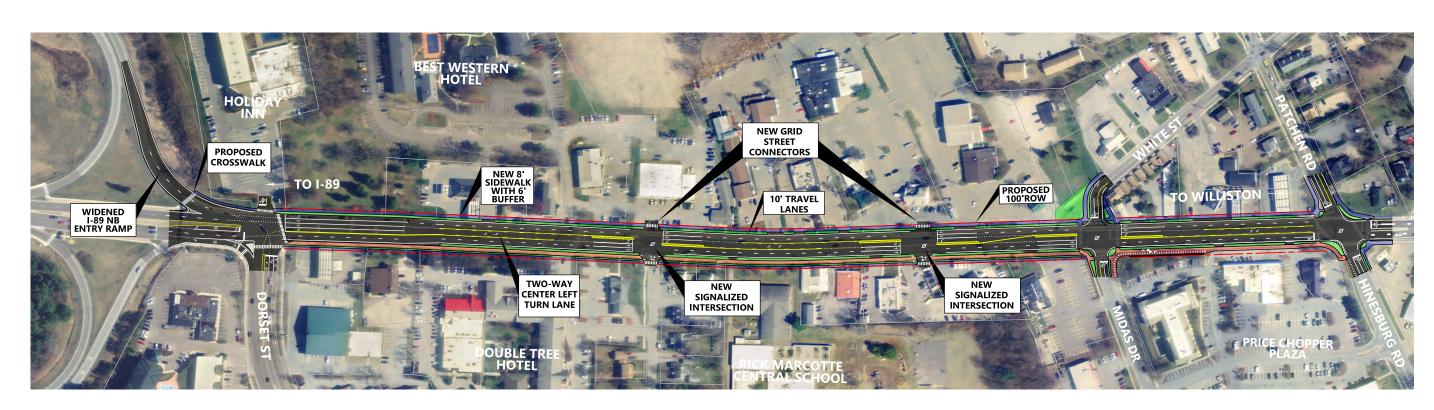
# Appendix D

Proposed Improvements

## SHORT TERM IMPROVEMENT RECOMMENDATIONS



## LONG TERM IMPROVEMENT CONCEPT



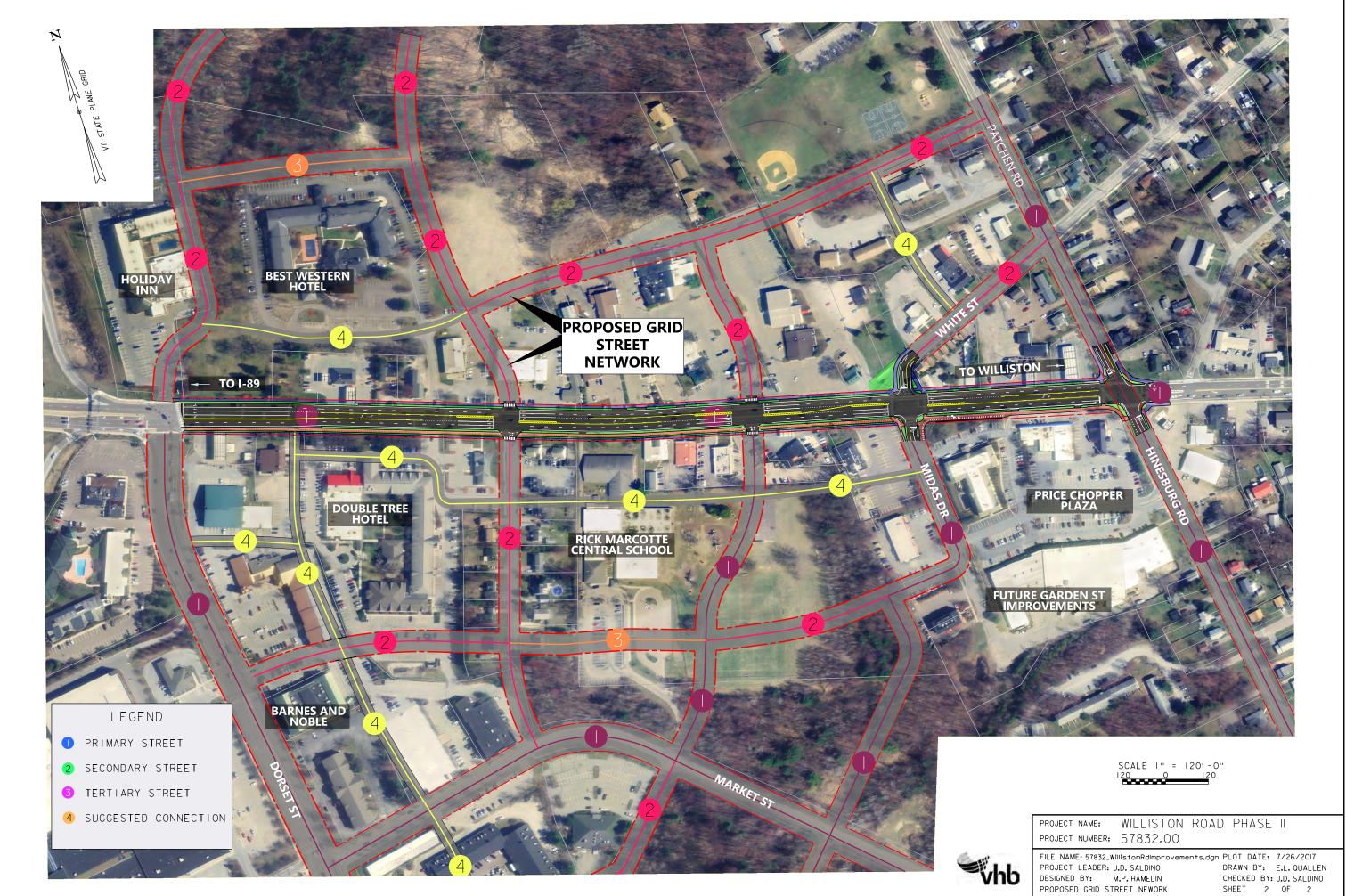
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WILLISTON ROAD PHASE II PROJECT NAME: PROJECT NUMBER: 57832.00

FILE NAME: 57832\_WillistonRdImprovements.dgn PLOT DATE: 7/26/2017 PROJECT LEADER: J.D. SALADINO DESIGNED BY: J.D. SALADINO

DRAWN BY: E.L. QUALLEN CHECKED BY: J.D. SALADINO SHORT AND LONG TERM RECOMMENDATIONS SHEET I OF 2





# Appendix E

Cost Analysis and Summary



## Concept Design Cost Estimates for Improvements

Williston Road Network Transportation Study Phase II South Burlington, VT July 7, 2017

## SHORT-TERM IMPROVEMENTS (WILLISTON RD)

## LONG-TERM IMPROVEMENTS (WILLISTON RD)

Item Cost

\$103,800.00

\$2,059,800.00

\$200.00

\$975.00

\$69,000.00

\$327,600.00

\$250,600.00

\$32,000.00

\$450.00

\$6,330.00

Rounded

Qty

6920

20

68660

15

600

8190

2110

3580

400

9

Qty

6918.6

20.0

68641.7

14.7

594.0

8180.0 2100.0

3570.0

396.7

8.9

## LONG-TERM IMPROVEMENTS (GRID NETWORK)

## LONG-TERM IMPROVEMENTS (I-89 RAMP MODIFICATION)

Item Cost

\$2,480,000.00

\$2,480,000.00

\$496,000.00

\$198,400.00

\$198,400.00

Cost per ramp

modification\*\*\*

\$2,480,000

Qty

Pay Item No.	Description	Unit	Unit Cost
203.15	Common Excavation	CY	\$15
203.30	Earth Borrow	CY	\$10
301.35	Dense Graded Crushed Stone for Subbase	CY	\$30
404.65	Emulsified Asphalt	CWT	\$65
406.25	Bituminous Concrete Pavement	Ton	\$115
601.815	18" RCP Class III	LF	\$56
604.18	Precast Concrete Drop Inlet with Cast Iron Grate	EA	\$2,900
616.21	Vertical Granite Curb	LF	\$40
616.41	Remove Existing Curb	LF	\$3
618.10	Portland Cement Concrete Sidewalk, 5 in	SY	\$70
618.11	Portland Cement Concrete Sidewalk, 8 in	SY	\$80
618.30	Detectable Warning Surface	SF	\$50
	EPSC Plan, Monitoring, and Maintenance	LS	\$2,000
900.675	Painted Bike Lane**	SY	\$15
631.1	Field Office, Engineers	EA	\$30,000
678.15	Traffic Control Signal System	EA	\$275,000
	Landscaping	EA	\$100,000
	Removal of Building	EA	\$100,000

Qty	Rounded	Item Cost
Qty	Qty	item cost
3125.0	3125	\$46,875.00
20.0	20	\$200.00
1971.3	1980	\$59,400.00
9.2	10	\$650.00
373.1	380	\$43,700.00
1990.0	2000	\$112,400.00
6.0	6	\$17,400.00
4850.0	4860	\$194,400.00
1400.0	1410	\$4,230.00
1566.1	1570	\$109,900.00
1566.1	1570	\$125,600.00
8.9	10	\$500.00
1.0	1	\$2,000.00
2933.3	2935	\$44,025.00
1.0	1	\$30,000.00
1.0	1	\$100,000.00
	Subtotal:	\$891,280.00

20% Contingency: 10% Mobilization:

10% Traffic Control:

5% Signing and Striping:

SHORT-TERM

\$2,000.00		1.0	1	\$2,000.00
\$44,025.00				\$0.00
\$30,000.00		1.0	1	\$30,000.00
		2.0	2	\$550,000.00
\$100,000.00		2.0	2	\$200,000.00
\$891,280.00			Subtotal:	\$3,632,755.00
\$178,256.00		20% Contingency:		\$726,551.00
\$89,128.00		10% Mobilization:		\$363,275.50
\$89,128.00		10% Traffic Control:		\$363,275.50
\$44,564.00	5	% Signing and Striping:		\$181,637.75

\$44,564.00	5% Signing and Striping:	\$181,637.
\$1,292,356.00		\$5,267,494.75
\$1,300,000	LONG-TERM	\$5,270,000
-		-

Street Type	Cost per mile Length, mi	Item Cost
Primary Street	\$ 3,250,000.00	\$3,693,183.00
Primary Street	1.14	\$3,033,103.00
Secondary	\$ 3,100,000.00	¢4,000,521,00
Street	1.61	\$4,990,531.90
Tanking Charact	\$ 3,000,000.00	¢1 262 626 00
Tertiary Street	2.45	\$1,363,636.80
	0.45	
	Subtotal:	\$10,047,351.70
	20% Contingency:	\$2,009,470.34

LONG-TERM IMPROVEMENTS

	\$ 3,000,000.00					
ry Street	0.45	\$1,363,636.80				
	Subtotal:	\$10,047,351.70	L		Subtotal:	
	20% Contingency:	\$2,009,470.34		20	% Contingency:	
8% Mobilization:		\$803,788.14		8% Mobilization:		
	8% Traffic Control:	\$803,788.14		8%	6 Traffic Control:	
5% Sig	gning and Striping:	\$502,367.59	_	5% Signi	ng and Striping:	
		\$14,166,765.90				

\$14,170,000

9	5% Signing and Striping:	\$124,000.00
1		\$3,496,800.00
	LONG-TERM	\$3,500,000

<sup>\*</sup> Not listed in individualized pay item listing

<sup>\*\*</sup> VTrans bid project Burl.-S.Burl 2624(1) in 2012 had unit cost bids of \$13, \$12.5, and \$55

<sup>\*\*\*&</sup>quot;Planning Level Cost Estimation", Murshed, Delwar and McCorkhill, Paul. Washington State Department of Transportation, December 2012.

# Comput

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Project: Williston Rd Phase 2 Project #: 57832.00

Location: S. Burlington, VT Sheet:

Calculated by: ELQ Date: 9/23/16

Checked by: JDA Date: 9/29/16

Title: Quantity Calculations - Short-Term Improvements

#### **Short-Term Improvements**

#### 203.15 Common Excavation

3125.0 CY

To be used for removal of surfaces and ground material for placement of new bike lanes, sidewalks, etc.

	Area, sf	Depth, in	Vol, CY
South - green belt	9000	24.0	666.7
South - bike lanes	19000	19.0	1114.2
South - sidewalk	16825	20.0	1038.6
North - sidewalk	5500	18.0	305.6
			3125.0 CY

203.30 Earth Borrow

20.0 CY

Estimate, to be used as needed: 20 CY

#### 301.35 Subbase of Dense Graded Crushed Stone

1971.3 CY

To be used under new facilities

Location	Length, ft	Width, ft	Depth, ft	Vol., CY
South - green belt	1500	6	1	333.3
South - bike lanes	1990	10	1	737.0
South - Sidewalk (near Dorset)	365	5	1	67.6
South - Sidewalk (full width)	1500	10	1	555.6
North - sidewalk	1500	5	1	277.8

1971.3 CY

#### 404.650 Emulsified Asphalt

9.2 CWT

Assume 2 applications

Assume 1 GAL = 8.34 LBS, Assume application of 0.025 GAL / SY

Location	Area, SY	CWT	# applications
Under bike lanes	2211	5	2

9 CWT

#### 406.25 Bituminous Concrete Pavement

373.1 TON

To be used for the bike lanes

Location	Length, ft	Width, ft	Depth, ft	Vol, CF	Vol, Ton
Bike Lanes - south side of rd	1990	10	0.25	4975	373.125
* assume 150 LB / CF					373 125

# Computations

Project:	Williston Rd Phase 2	Project #:	57832.00
Location:	S. Burlington, VT	Sheet:	
Calculated by:	ELQ	Date:	9/23/16
Checked by:	JDA	Date:	9/29/16

Title: Quantity Calculations - Short-Term Improvements

601.08	18"	<b>RCP</b>	Class I	ш
--------	-----	------------	---------	---

1990 LF

Location	Length, ft
Bike Lanes	1990
	1990 LF

#### 604.18 Precast Concrete Drop Inlet with Cast Iron Grate

6 EA

To be used on bike lanes. Assume 1 every 500 linear feet

Location	Length, ft	No.
Bike Lanes	1990	6
		6 Each

#### 616.21 Vertical Granite Curb

4850.0 LF

Location	Length, ft	
South side of road	1300	
North side of road	300	
North side of bike lane	1750	
South side of bike lane	1500	
	4850 L	F

#### 616.41 Removal of Existing Curb

1400.0 LF

Location	Length, ft
North side of road	100
South side of road	1300
	1400 LF

#### 618.10 Portland Cement Concrete Sidewalk, 5 in

1566.1 SY

Location	Length, ft	Width, ft	Area, sf A	Area, sy
Sidewalk, south side (past 1st DT Entrance)	1500	10	15000	1666.7
Sidewalk, south side (near Dorset)	365	5	1825	202.8
Minus length for 8" thick sidewalk	273	10	2730	303.3
	1592		14095.0	1566.1 SY

#### 618.11 Portland Cement Concrete Sidewalk, 8 in

303.3 SY

To be used where sidewalks continue through driveways

	Length, ft	Width, ft	Area, st	Area, sy
Sidewalk, south side (through drives)	273	10	2730	303.3
	•			303.3 SY

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Project:	Williston Rd Phase 2	Project #:	57832.00
Location:	S. Burlington, VT	Sheet:	
Calculated by:	ELQ	Date:	9/23/16
Checked by:	JDA	Date:	9/29/16
Title:	Quantity Calculations	- - Short-Term Im	provements

618.30	Detectable Warning Surface	8.9 SY
To be used for	compliance with ADA guidelines at drives/side roads as needed	

Area, SF Area subtotal, SY No. 8 10 8.9

8.9 SY

#### 900.675 **Painted Bike Lane**

2933.3 SY

Furnishing and placing painted bike lane pavement markings Width, ft Area, SY Location Length, ft Bike Lanes 2933 2640 10 2933

SY

#### INTERSECTION LANE RECONFIGURATION

646.850	Removal of Existing Pavement Markings			
Symbol	Area, SF	Quantity	Area Subtot	al
LEFT	15.5	2	31	
			31	SF

31 SF 17.67

#### 646.494 **Durable Letter or Symbol, Polyurea** 2 EA Symbol **Quantity Subtotal** 127.22 THROUGH 2 2 EΑ EΑ

#### **Modify Signal Controller**

1 EA 4,000.00

**Quantity Subtotal** EA EΑ

> TOTAL \$ 4,973.87



Project: Williston Rd Phase 2 Project #: 57832.00 Location: S. Burlington, VT Sheet: Calculated by: CKF Date: 6/26/17 7/7/17 Checked by: ELQ Date:

**Quantity Calculations - Long-Term Improvements (Williston** Title: Rd)

#### Long-Term Improvements (Williston Rd)

#### 203.15 Common Excavation

4478.9 CY

To be used for removal of surfaces and ground material for placement of new bike lanes, sidewalks, etc.

	Area, sf	Depth, in	Vol, CY
Pavement removal			0.0
North - Add'l roadway width	31680	26.0	2542.2
North - widened sidewalk	34860	18.0	1936.7
			4478.9 CY

#### 203.30 Earth Borrow

20.0 CY

Estimate, to be used as needed:

20 CY

#### 301.35 Subbase of Dense Graded Crushed Stone

2405.6 CY

To be used under new facilities

	Length, ft	Width, ft	Area, sf	Depth, ft	Vol., CY
North - Add'l roadway width	2640	12	31680	1.50	1760.0
North - widened sidewalk	2490	14	34860	0.5	645.6
					2405.6 CY

#### 404.650 Emulsified Asphalt

14.7 CWT

Assume 2 applications

Assume 1 GAL = 8.34 LBS, Assume application of 0.025 GAL / SY

Location	Area, SY	CWT	# applications
North - Add'l roadway width	3520	7	2
			15 CWT

#### **406.250 Bituminous Concrete Pavement**

594.0 TON

Location	Length, ft	Area, SF	Depth, ft	Vol, CF	Vol, Ton
North - Add'l roadway width	2640	31680	0.25	7920	594
* assume 150 LB / CF					594 Ton

#### 616.21 Vertical Granite Curb

2900.0 LF

Location	Length, ft
North side of road	2500
South side of road	400
	2900 LF



## Computations

Project:	Williston Rd Phase 2	Project #:	57832.00	
Location:	S. Burlington, VT	Sheet:		
Calculated by:	CKF	Date:	6/26/17	
Checked by:	ELQ	Date:	7/7/17	

Title: Quantity Calculations - Long-Term Improvements (Williston

616.41 F	Removal of	Existing	Curb
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2180.0 LF

Location	Length, ft	
South side of road (new curb cuts)	80	
North side of road	2100	
	2180	LF

#### 618.10 Portland Cement Concrete Sidewalk, 5 in

3570.0 SY

Location	Length, ft	Width, ft	Area, sf	Area, sy
Sidewalk, north side (total length)	2550	14	35700	3966.7
Minus length for 8" thick sidewalk (north)	255	14	3570	396.7
	2295		32130.0	3570.0 SY

#### 618.11 Portland Cement Concrete Sidewalk, 8 in

396.7 SY

To be used where sidewalks continue through driveways

	Length, ft	Width, ft	Area, sf	Area, sy
Sidewalk, south side (through drives)			0	0
Sidewalk, north side (through drives)	255	14	3570	396.7
				396.7 SY

### 618.30 Detectable Warning Surface

8.9 SY

To be used for compliance with ADA guidelines at drives/side roads as needed

No.	Area ea, SF	Area subtotal, S
8	10	8.9

8.9 SY

#### **Traffic Control Signal**

2.0 EA

Location	No.
White St/ Midas Dr	1
Patchen Rd/ Hinesburg	1
·	

2 EA

#### **Computations**

**Project: Williston Rd Phase 2** Project #: 57832.00 Location: S. Burlington, VT Sheet: Calculated by: CKF 6/26/17 Date:

Checked by: ELQ

Date: 7/7/17 **Quantity Calculations - Long Term Improvements (Grid Street** 

Title: **Network and Ramp Modifications)** 

#### Long Term Improvements (Grid Street Network and Ramp Modifications)

#### New Poads in Grid

New Roads In Grid	Length, ft	Length, mi
1 - Primary Street	6,000	1.136
2 - Secondary Street	8,500	1.610
3 - Tertiary Street	2,400	0.455
	TOTAL	3.201
Cost per mile (1) Cost per mile (2) Cost per mile (3)	3,250,000 3,100,000 3,000,000	

**Total Cost:** \$10,047,352

#### I-89 NB On Ramp Lane Addition

Average Cost: \$2,480,000

Costs Source: "Planning Level Cost Estimation", Murshed, Delwar and McCorkhill, Paul. Washington

State Department of Transportation, December 2012.

http://www.wsdot.wa.gov/mapsdata/travel/pdf/PLCEManual 12-12-2012.pdf