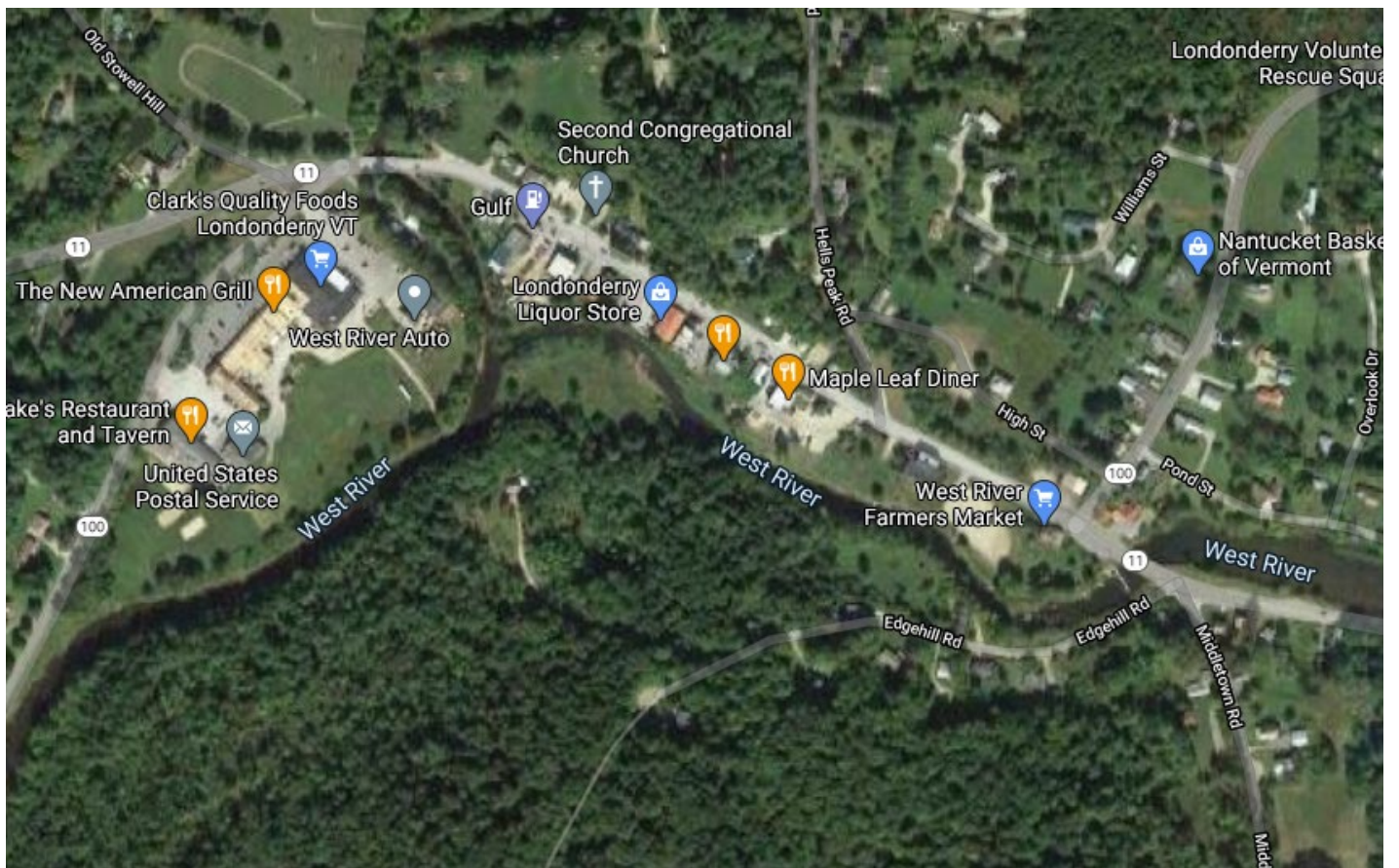


Road Safety Audit Review

VT 11, Londonderry North Village

September 22, 2020

Vermont Agency of Transportation
Operations & Safety Bureau



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RSAR Process

A road safety audit review (RSAR) is a formal examination of an existing road in which an independent, multi-disciplinary team (the Audit team) reports on potential safety issues. According to the Federal Highway Administration (FHWA), the purpose of a RSAR is to determine which elements of the road may present a safety concern, to what extent and under what circumstances as well as to identify opportunities to mitigate the identified safety concerns.

The RSAR process starts with a commencement meeting during which the Audit team reviews data and gathers community concerns. A site inspection is then performed by the Audit team. The site visit involves the identification of safety deficiencies as seen in the field by driving and walking the location. Following the site inspection, the Audit team holds a post inspection meeting. It is during this meeting that the team members discuss their observations and identify safety issues. The team is to reach a consensus on the importance of each safety issue mentioned. Only those issues for which a consensus is reached are included in the RSAR findings which are presented in a written report.

The written report identifies safety concerns and proposes guidance. These issues and solutions are presented in a tabular format associated to a responsible entity for ease of reporting. The responsible entities are any groups who own a roadway feature or who are responsible for making an improvement or for initiating further studies. These could include for example, the VTrans design section, the local town, the local police or the local RPC.

Location

The location of this RSAR is the section of VT 11 within the boundaries of the Londonderry North Village. The main area of concern is between the intersection with VT 100 and the intersection with Middletown Rd. This corresponds to mile points 1.913 to 2.382 on VT 11. VT 11 is a minor arterial.

Purpose of the RSAR

This RSAR was conducted at the request of the Town of Londonderry. The main safety issues as described by the Town and the community are:

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- Excessive speed through the village. Coming from the west seems to be the worst problem, as traffic is barreling down a long steep hill that effectively bottoms out right at the entry to the village. A particular concern is speeding large trucks.
- The intersection of VT 11 and VT 100 with Stowell Hill Rd and the shopping plaza entry is chaotic and confusing and perceived to be dangerous due to speeding trucks.
- There are many access points for vehicles in and out of business parking lots in the village, which often have poor sightlines, and which create an extra hazard when there is speeding traffic.
- The intersection of VT 11 with Edgehill Rd and the one with Middletown Rd at the east end of the village are dangerous. The Edgehill Rd accesses onto VT 11 is blind to the west due to bridge railings while at Middletown Rd, the wide-open access to Middletown Rd encourages traffic turning onto Middletown Rd to maintain high speeds.
- There are no sidewalks or separate bike lanes, and foot and bike traffic are forced to share the road with vehicle traffic.
- There are no safe pedestrian crossings. This and the lack of sidewalks create complex hazards when the busy Saturday Farmer's Market is in operation.

RSAR Participants

Mario Dupigny-Giroux from the Operations & Safety Bureau Data Unit, VTrans, was the RSAR coordinator.

The other participants were:

Chris Campany, WRC

Matthew Bogaczyk, Highway Design & Safety VTrans
Bill Jenkins, Operations & Safety VTrans
Marc Pickering, Dist 2 VTrans
Mandy White, Operations & Safety VTrans

Sharon Crossman, Town of Londonderry (Planning Commission)

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Georgianne Mora, Town of Londonderry (Selectboard)
Shane O'Keefe, Town of Londonderry (Manager)

Other collaborators included:

Jon Kaplan, Bicycle and Pedestrian Program (MAB) VTrans
Marcos Miller, Operations & Safety VTrans

Information Reviewed

Geometry

VT 11 has 11-foot travel lanes and 3 to 4-foot shoulders on the left and 4 to 5-foot shoulders on the right. The roadway width varies within the study area between 33 ft and 40 ft.

Approaching the VT 100 intersection at the shopping plaza, VT 11 has a 6 to 8 % downgrade in the eastbound direction.

Bridge #27 is located at about mile point 1.965 and bridge #28 is located at about mile point 2.381.

Paved Surface

The paved surface condition on VT 11 had been rated as very poor for most of the village section under review (VTransparency). The surface should now be rated as very good as the road was recently paved.

Speed Limit

The speed limit on VT 11 within the RSAR area is 30 mph. From the west, the transition takes place from 45 mph at mile point 1.63. From the east, the transition to 30 mph takes place at mile point 2.60 from 40 mph. The speed limit signs at these transition points are 30 inches by 36 inches in size.

From the east, additional 30 mph speed limit signs are located at mile points 2.260 and 2.147 (the plans for the paving project show this location to be changed to 2.126). From the west,

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additional speed limit signs are located at mile points 1.998, 2.167 and 2.435. These intermediate signs are 24 inches by 30 inches in size.

Enforcement

The Town has a contract for two hours of enforcement per week within the town.

Traffic Calming Devices

There are no known forms of traffic calming devices being used such as a speed cart.

Traffic Volumes

From west to east, the 2018 Average Annual Daily Traffic (AADT) on VT 11 was 4200 vehicles per day west of the VT 100 and shopping plaza intersection, 3700 vehicles per day between the shopping plaza and the intersection with VT 100 north, 2800 vehicles per day between this intersection and Middletown Rd and 2400 vehicles per day east of Middletown Road.

The AADT on VT 100 west of the shopping plaza is 2000 vehicles per day.

Traffic Generators

Major traffic generators along VT 11 include Jelley's Deli and Liquor Store, the Maple Leaf Dinner, Mike and Tammy's Market and Deli, the Vermont Butcher Shop, a car parts store and the Gulf gas station. All of these generators, with the exception of the butcher shop, are located on the south side of VT 11. A major seasonal pedestrian generator is the Farmers' Market which generate foot traffic from various parking areas.

On VT 100, the major traffic generator is the shopping plaza which includes the Londonderry Village Market.

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Crash History

The intersection of VT 11 and VT 100 at the shopping plaza is listed as a high crash location in the most recent high crash locations report (2012-2016). On this list, the intersection is ranked at number 74 out of 111 high crash intersections.

Crashes were reviewed for the period ranging from 2015 to 2019. During this period, a total of twenty-one crashes were listed in the VTtrans database. Of these crashes, ten were reported as non-reportable¹.

In addition, there have been three recorded crashes to date in 2020 with one being non-reportable.

The crash data is further reviewed below within smaller homogeneous sections.

Intersection of VT 11, VT 100 and Shopping Plaza: There were six reportable crashes and six other non-reportable crashes at this intersection. No specific crash patterns were identified but crashes were found to happen at two locations within the triangular intersection.

A very small concentration of crashes happened at the point where a westbound vehicle on VT 11 would turn onto VT 100 to go southbound. At this location, distracted and aggressive driving were the causes of the two crashes that took place there.

The remainder of the crashes at this intersection happened at the small connecting piece of road between VT 100 and VT 11. The crashes here are mostly angle crashes. Vehicles get hit making a left turn onto VT 11 or crossing VT 100. Slippery road conditions were a cause in one case and the view to oncoming traffic being obstructed by other vehicles was the cause in another crash. The narratives for the other crashes did not point to a specific contributing factor.

¹ A motor vehicle incident that did not result in an officer's written report. Rather, it is a brief record existing in a CAD/RMS that indicated a vehicle incident occurred and no injury or damage was conveyed.

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At this intersection, most crashes are happening between the months of June and September. Most crashes are also happening during the afternoon peak hour between 3:30 pm and 4:30 pm.

Gulf Station to Maple Leaf Diner: There were five reportable crashes within this segment and three non-reportable ones. The two locations where the reportable crashes took place were in the area of the Gulf Station and at the Mike and Tammy's Market and Deli.

One of the crashes at the Gulf Station involved an eastbound driver that had a medical issue and that left the road to the right into the gas station sign. The other two crashes were broadside crashes with vehicles coming out of the gas station and vehicles approaching from the west. In one case, the approaching vehicle was a motorcycle. In both cases, the driver who was pulling out of the gas station said that he/she had not seen the other vehicle coming from the left.

There were two crashes at Mike and Tammy's Market and Deli. Both crashes were due to a vehicle coming out of the front parking of Mike and Tammy's Market and Deli. In one case, another vehicle was obstructing the view to coming traffic.

Edge Hill Rd and Middletown Rd Intersections: There were two crashes plus one non-reportable crash in this area. The two reportable crashes happened at the Edge Hill Rd intersection. Both of these crashes were broadside crashes and involved somebody who was making a left turn out of Edge Hill Rd. In one of the crashes, it was mentioned that a tall mount of snow on the left of Edge Hill Rd obstructed the view of eastbound traffic and was a contributing factor in the crash.

A summary table of the crash data is presented in Appendix A along with collision diagrams for each section.

Past Studies

There are no known past studies for this area.

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Past Projects

LONDONDERRY-CHESTER STP PS19(10) is a current project for the reclamation and resurfacing of VT 11 starting in Londonderry at mile point 1.952 and continuing to Chester at mile point 4.373. Signs are also being installed. This project is mostly completed, with the exception of the final wearing course surface that will be installed in spring 2021.

Future Projects

There are no known future projects.

Identified Safety Concerns

The RSAR herein has sought to identify potential safety hazards and physical features which may affect road user safety. However, it is possible that not every deficiency has been identified. It should further be recognized that the implementation of the guidance in this report might contribute to improve the level of safety of the facility reviewed but not necessarily remove all the risks.

The areas of safety concern identified by the audit team along with the potential safety enhancements suggested by the team are summarized in the table below. These concerns and remedial actions are further discussed in the section following the table.

In the table, the entities listed under the column called "Potential Responsibility" are suggested groups that could possibly implement some of the countermeasures. These groups (or any other entities not listed) are not obligated to implement the suggestions mentioned in this report.

For each suggested countermeasure, its safety effectiveness is mentioned in the table if an industry measure is available or a brief description of its purpose is provided.

In formulating suggested remedial actions, time frames and costs were qualified as follows: Short term, < 1 year; mid-term 1-3 years; long term > 3 years; low cost, < \$15,000; medium cost, \$15,001 - \$75,000; high cost, > \$ 75,001.

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The following safety concerns were identified by the audit team (the concerns are not necessarily listed in order of importance):

1. The intersection of VT 11 with Edgehill Rd and the one with Middletown Rd are perceived to be dangerous.
2. The intersection of VT 11 and VT 100 with Stowell Hill Rd and the shopping plaza entry is confusing and perceived to be dangerous due to speeding trucks.
3. Vehicles (and especially large trucks) are perceived to be traveling at excessive speeds through the village.
4. Vehicles are coming in and out of business parking lots at several undefined access points.
5. Walking amenities are not present. Pedestrians and bicyclists are sharing the road with vehicular traffic.

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Potential Safety Enhancements Summary Table

Safety Enhancement	Safety Concerns						Potential Responsibility	Purpose/ Safety Payoff ²	Time Frame	Cost
	1 Middle -town Rd	2 VT 11 @ VT 100	3 High speed	4 Acc Manag ement	5 Walk- ing	6				
Monitor and evaluate the pavement markings improvement made by the paving project	X						VTrans Data Unit (crash data), Town & District (citizens' comments)	Determine effectiveness	Now to Mid	Low
Consider adding a new LEFT TURN YIELD TO THRU TRAFFIC sign (VR-615) at mm 1.941		X					Paving project STP PS19(10)	Reduce confusion about the EB VT movement to SB VT 100	Now	Low

² The CMF Clearinghouse explains that the star quality rating indicates the quality or confidence in the results of the study producing the CMF. The star rating is based on a scale (1 to 5), where a 5 indicates the highest or most reliable rating. The review process considers five categories for each study: study design, sample size, standard error, potential bias, and data source.

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	Safety Concerns						Potential Responsibility	Purpose/ Safety Payoff ²	Time Frame	Cost
Safety Enhancement	1 Middle -town Rd	2 VT 11 @ VT 100	3 High speed	4 Acc Manag ement	5 Walk- ing	6				
Perform a scoping study to develop a redesigned intersection alternative		X					WRC	Maximize safety & mobility	Mid to Long	Medium ³
Consider relocating the EB speed limit sign near bridge #27 further to the east			X				Paving project STP PS19(10)	Improve visibility of sign	Now	Low
Conduct a speed study			X				WRC	Assess the speeding issue	Now to Short	Low

³ The cost of implementing the preferred alternative will be high. Implementation will have to follow the regular prioritization and design processes.

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Potential Safety Enhancements Summary Table

Safety Enhancement	Safety Concerns						Potential Responsibility	Purpose/ Safety Payoff ²	Time Frame	Cost
	1 Middle -town Rd	2 VT 11 @ VT 100	3 High speed	4 Acc Manag ement	5 Walk- ing	6				
Consider the periodic use of a speed cart			X				Town via Sheriff or District 2	45-73% reduction # of vehicles traveling 5 and 10 mph over the speed limit ⁴	Now to Short	Low
If justified by speed study, do recurring enforcement of the high-risk drivers			X				Town via contracts	Serve as deterrent	On-Going	Medium
If justified by speed study, manage speeds using a portable speed radar feedback sign			X				Town	45-73% reduction # of vehicles traveling 5 and 10 mph over the speed limit	Short	Medium

⁴ https://safety.fhwa.dot.gov/speedmgt/ref_mats/rural_transition_speed_zones.cfm

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Potential Safety Enhancements Summary Table

	Safety Concerns						Potential Responsibility	Purpose/ Safety Payoff ²	Time Frame	Cost
Safety Enhancement	1 Middle-town Rd	2 VT 11 @ VT 100	3 High speed	4 Acc Management	5 Walk-ing	6				
Evaluate access management improvements (as a separate study or with a ped facilities scoping study)				X			Town (with help from WRC)	Reduce conflicts with all modes	Short	Medium
Apply for a VTrans grant for the conduct of a pedestrian facilities scoping study ⁵				X	X		Town (with help from WRC)	How to best improve walkability	Short	Medium

⁵ VTrans bike/ped grants could be used for this purpose. These grants are available every year and the application deadline is usually in June.

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Potential Safety Enhancements Summary Table

	Safety Concerns						Potential Responsibility	Purpose/ Safety Payoff ²	Time Frame	Cost
Safety Enhancement	1 Middle -town Rd	2 VT 11 @ VT 100	3 High speed	4 Acc Manag ement	5 Walk- ing	6				
Depending on the ped scoping study, consider the future provision of selective bulbouts			X		X		Town	Reduce speeds by design – Improve Ped Crossing	Mid to Long	Low to Med

Discussion of Safety Concerns

This section lists and discusses the areas of safety concern identified by the audit team during the site inspection and from the analysis of available data. This section also reports the potential safety enhancements suggested by the audit team. The concerns are not listed in order of importance.

Concern: The intersection of VT 11 with Edgehill Rd and the one with Middletown Rd are perceived to be dangerous.

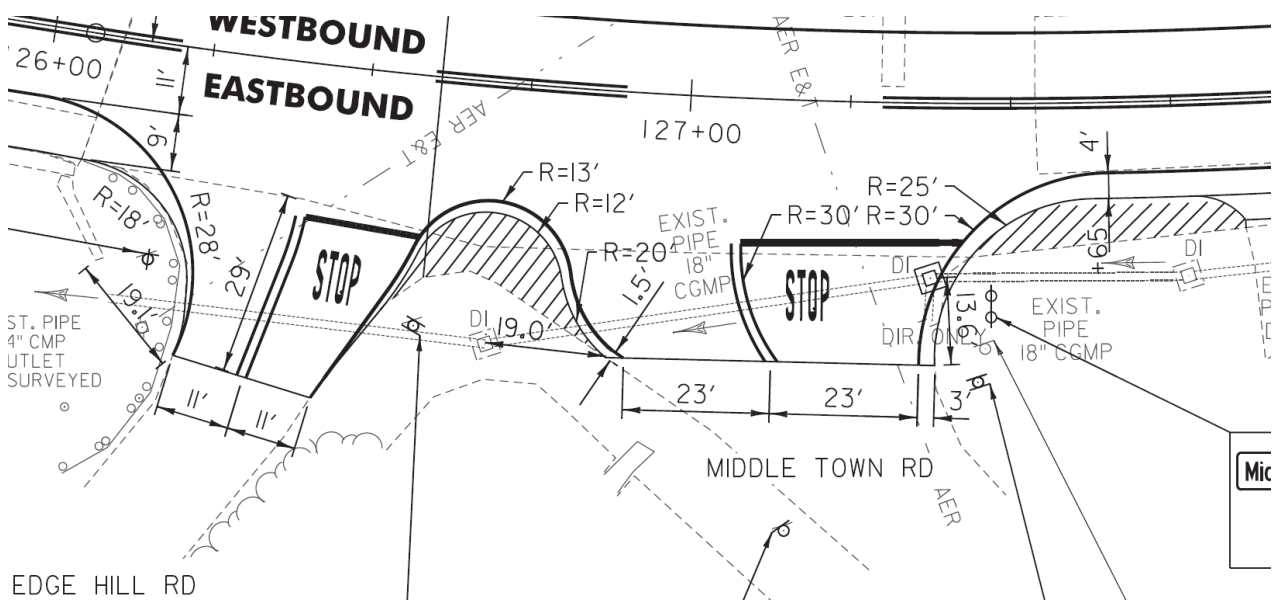
Discussion:

The corner sight distance to the left (looking west to VT 104 oncoming traffic) when stopped at the Edgehill Road is limited due to the bridge railings.

Local representatives mentioned that at the wide-open access to Middletown Rd was encouraging traffic turning onto Middletown Rd to maintain high speeds.

There were two reported crashes at the Edge Hill intersection between 2015 and 2019. There were no crashes reported at the Middletown Rd intersection.

Pavement markings will be installed with the paving project (STP PS19(10)) to help make the approach to Middletown Rd less of a “straight shot”.



Safety Enhancements:

- None proposed for Edge Hill Rd.

Short to Medium Term

- Monitor and evaluate the pavement markings improvement at the Middletown Rd intersection.

The Town and the District could compile comments received from citizens. Crash data could be evaluated yearly up to three years following the placement of the markings by VTrans.

Concern: The intersection of VT 11 and VT 100 with Stowell Hill Road and the shopping plaza entry is confusing and perceived to be dangerous due to speeding trucks.

Discussion:

This intersection was identified as a high crash intersection in the last available HCL report (2012-2016).

Local representatives mentioned that people traveling from VT 11 westbound to VT 100 south did not yield to the eastbound VT 11 oncoming traffic.

Motorists approaching the VT 11 from the south on VT 100 must turn their heads significantly to see the eastbound VT 11 traffic due to the angle of the approach.

The benefits-to-costs ratio for a roundabout at this intersection is 0.12. This is below 1 and the costs of constructing a roundabout (estimated at \$3,000,000) would exceed the benefits obtained. From a safety perspective, a roundabout is not an economical alternative.

The maximum project costs that can support an economical safety alternative is \$250,000.

Safety Enhancements:

Now to Short Term

- Consider adding a new LEFT TURN YIELD TO THRU TRAFFIC sign (VR-615) at mile point 1.941 (station 102+50) facing VT 11 westbound traffic.

Note: THIS DOCUMENT IS EXEMPT FROM DISCOVERY OR ADMISSION UNDER 23 U.S.C. 409

Adding this sign could be done as part of the paving project (STP PS19(10)). While the existing sign locations do not provide enough room to add this new sign, some of the existing guide signs are being relocated by the paving project and this will provide the appropriate amount of space needed to install this new sign.

Medium to Long Term

- Perform a scoping study to develop a redesigned intersection alternative.

Concern: Vehicles (and especially large trucks) are perceived to be traveling at excessive speeds through the village.

Discussion:

Local representatives explained that the worst problem appeared to be coming from the west as vehicles travel down the hill on VT11 approach the west entry of the village.

Speed data was not collected prior to this road safety audit due to the paving project and no prior speed data is available. The extent of the problem cannot be fully assessed.

Research has shown that the risk of severe injury to pedestrians increases significantly with higher traveling speeds and is said to be 75% at speeds near 40 mph⁶.

The placement of the reduce speed limit ahead signs, and of intermediate speed limit signs are appropriate as per the Manual Uniform Traffic Control Devices (MUTCD) and guidance from Vermont Local Roads⁷ (the Vermont Local Roads guide suggests placing intermediate signs every 0.3 to 0.4 miles in 25 mph and 30 mph speed zones).

The eastbound speed limit sign located east of bridge #27 is not very visible due to its positioning around the curve and brush.

⁶ <https://aaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/>

⁷

<https://localroads.vermont.gov/sites/localroads/files/files/resources/materials/Setting%20Speed%20Limits%20Guide%20Update%20August%202016.pdf>

Safety Enhancements:

Data Related

Short Term

- Conduct a speed study and capture speeds at one or two locations.

Signage Related

Immediate to Short Term

- As part of paving project STP PS19(10) consider relocating the eastbound speed limit sign near bridge #27 further to the east.

Ideally, a new location could be just west of the gas station, near the utility pole (site A below). The sign would be more prominent at this location. Placing the sign there will require potentially trimming the branch that is hanging down.

Alternatively, another suggested location is further east of the current location (site B below). Brush cutting to provide a good line of sight to the sign as one travels over the bridge is needed.

Site A:



Site B:



Enforcement related

- Depending on the results of the speed study, plan on conducting recurring speed limit enforcement campaigns for the high-risk drivers.

High risk drivers are normally those who travel at or above the 90th percentile speed when considering the speed differential of vehicles. In determining an enforcement target, also consider the presence of pedestrians and the higher probability of serious injuries when speeds are nearing 40 mph.

Traffic Calming Related

Short Term

- Contact (Town) the Sheriff or the District and have them place a speed cart periodically.
- Depending on the results of the speed study (if the 85th percentile speed is 3 mph or more above the speed limit as per the VTrans speed feedback sign guidance), consider installing a portable speed radar feedback sign that could be moved at two locations within the village (the Town will have to make the request to VTrans and would be responsible for acquiring and maintaining the equipment).

Mid to Long Term

- Depending on the pedestrian amenities provided by the Town in the future, consider as part of these, the provision of selective bulbouts (if a roadway width of 14 to 15 feet from centerline to any curbing could be maintained).

Concern: _____ Vehicles are coming in and out of business parking lots at several undefined access points.

Discussion:

These access points often have limited sightlines due to the curvature of the road and the presence of parked vehicles.

There is a need for access management from Jelley's Deli and Liquor Store to the Gulf Station as well as in the area around the Maple Leaf Dinner and Mike and Tammy's Market and Deli.

The crash data indicates that there were crashes at Mike and Tammy's Market and Deli that were specially related to the lack of access management. Some crashes near the Gulf Station may also have been attributed to the lack of access management .

Safety Enhancements:

Short to Mid Term

- Include the evaluation of access management improvements as part of a comprehensive pedestrian facilities scoping study (see next safety concern).

Concern: Walking amenities are not present.

Discussion:

Pedestrians are sharing the road with vehicular traffic and must walk on the shoulder or off the roadway.

Utility poles are close to the roadway and could be obstacles to pedestrians

Vehicles are coming in and out of businesses at unpredictable locations due to the wide-open accesses.

Parked vehicles in front of businesses may block the view of pedestrians. Parked vehicles in the shoulder may force pedestrians to step in the road or to walk around parked and moving vehicles.



Local representatives reported a particular situation when the Saturday farmer's market is in operation and pedestrians walk from various parking areas and cross VT 11 at different locations.

Safety Enhancements:

Short Term

- Apply for a VTrans grant⁸ for the conduct of a pedestrian facilities scoping study.

A scoping study will permit the Town to evaluate whether a sidewalk should be located only on one side or on both sides of the road and where crossing needs are.

Access management within the village will have to be part of this scoping study or be evaluated separately. Access management of business accesses will be required for the installation of sidewalks.

Once the scoping study is completed, the Town could apply for a second grant for design and construction.

⁸ Grants will be awarded in July 2021. Contact Jon Kaplan for more information on how to apply (jon.kaplan@vermont.gov).

Appendix A

Crash Data

Crash Data 2015-2019 (includes some 2020 data)

Crash #	Incident #	Road	Date	Time	Weather	Contributing Circumstances	Collision Type	# Injuries	# Fatalities	Narrative
1	16D001136	VT 11	08/17/16	15:25	Clear	Visibility obstructed	No Turns- Thru moves only- Broadside ^<	0	0	Veh 1 was entering onto VT 100 from the east in close proximity to the intersection of VT 11. Veh 1 attempted to cross two lanes of travel to approach a stop sign located at the left portion of a Y intersection, with the intention of turning left onto VT 11. As Veh 1 crossed the second lane of traffic and approached the Y section of the intersection, Veh 2 had completed a left turn onto VT 100 and struck Veh 1. A stopped vehicle present at the intersection was a contributing factor in the crash as it hampered OP 1's ability to clearly view oncoming traffic and safely cross the roadway.
2	17B103795	VT 11	06/18/17	16:14	Clear	Followed too closely- Other Activity- Electronic Device- No improper driving	Rear End	0	0	Veh 1 was traveling west on VT 11 in Londonderry, VT. The operator of Veh 1 stated while driving, he was using GPS through his cell phone. The GPS was beeping as if he was being re-routed so he looked down at his phone. At the same time, Veh 2 was also traveling west on VT 11 and stopped to turn left onto VT 100 south. When the operator of Veh 1 looked back up from his phone, to the road, he saw Veh 2 was stopped. The operator of Veh 1 applied his brakes however he was unable to stop and struck the rear of Veh 2.
3	17B107399	VT 11	11/17/17	2:00	Unknown	Fatigued- asleep- Failure to keep in proper lane	Single Vehicle Crash	0	0	Investigation revealed that OP 1 was traveling west on VT 11. He dozed off and failed to negotiate a curve in the roadway. V1 travelled off the right (north) side of the road just east of the bridge and struck a state highway sign then travelled down an embankment where it came to rest.
4	15D103468	VT 11	11/14/15	9:43	Cloudy	Failed to yield right of way- No improper driving	No Turns- Thru moves only- Broadside ^<	0	0	OP 1 advised that she was in the parking lot of the gas station and was intending to pull across the street into the parking lot of the Congregational Church when the crash occurred. OP 1 advised that she did not see Veh 2 approaching from her left. OP 2 advised that she had been eastbound on Main Street at approximately 30 MPH when Veh 1 suddenly pulled in front of her vehicle.
5	18B105131	VT 11	08/24/18	11:13	Clear	Failure to keep in proper lane- Exceeded authorized speed limit- No improper driving	Other - Explain in Narrative	1	0	Veh 1 was traveling eastbound on VT 11. OP 1 experience a medical issue causing him to go unconscious and crashing into the gas station sign and Veh 2.
6	16D000797	VT 11	08/03/16	10:31	[No Weather]		[No Direction of Collision]	0	0	2000 block N Main St
7	15D102364	VT 11	07/25/15	11:42	[No Weather]		[No Direction of Collision]	0	0	2051 N Main St

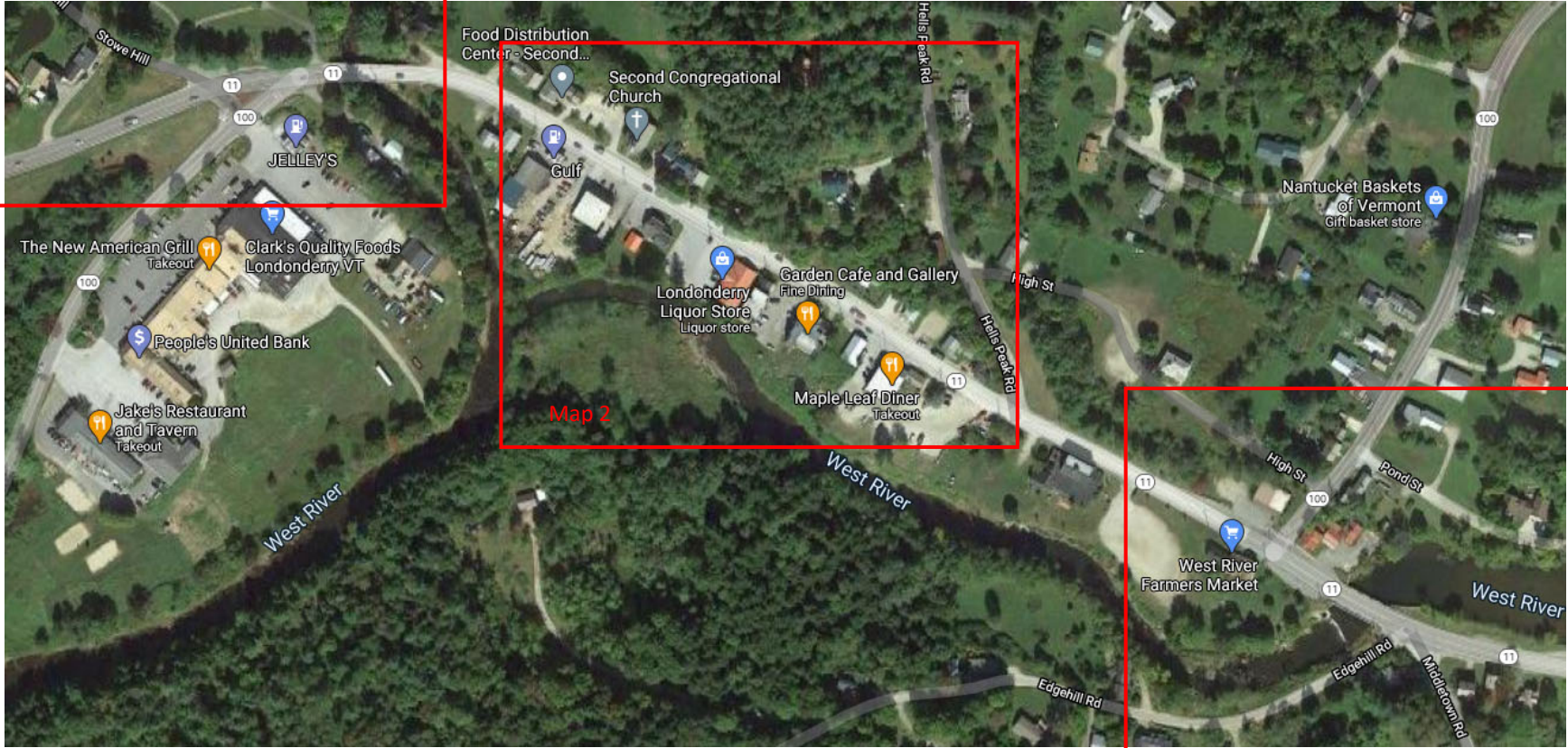
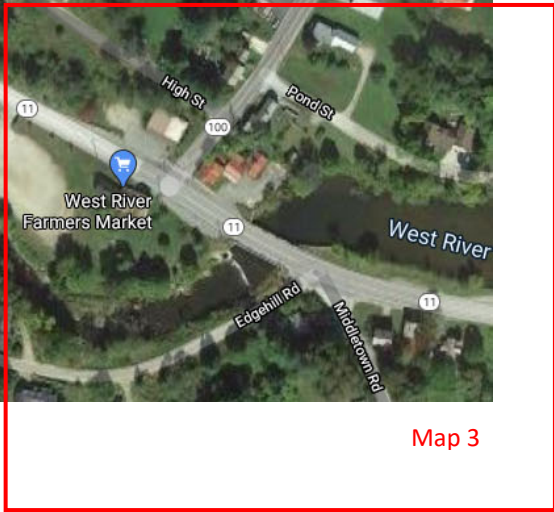
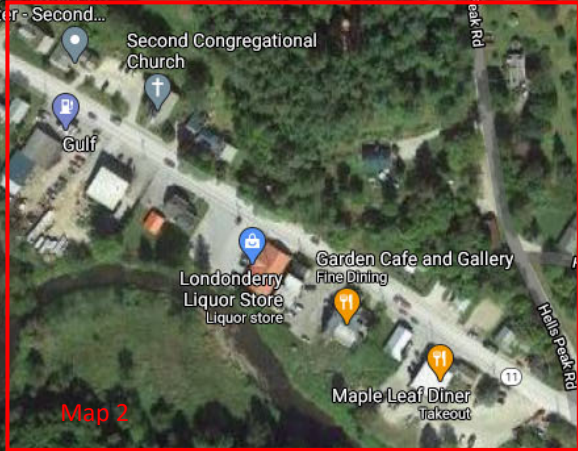
Crash #	Incident #	Road	Date	Time	Weather	Contributing Circumstances	Collision Type	# Injuries	# Fatalities	Narrative
8	15D102530	VT 11	08/08/15	13:27	Cloudy	Failed to yield right of way- No improper driving	No Turns- Thru moves only- Broadside ^<	1	0	Car vs. motorcycle crash. OP1 said that he was pulling out of the gas station parking lot and turning left. He said that he never saw V2 and that the crash happened. OP2 (motorcycle) said that he was traveling east and V1 pulled out in front of him and he could not stop.
9	17B100700	VT 11	02/07/17	7:07	Cloudy	No improper driving- Failed to yield right of way	Right Turn and Thru- Same Direction Sideswipe /Angle Crash ^^--	1	0	OP 1 advised he was stopped in the parking lot of Mike and Tammy's. Main St. Marketplace and preparing to turn right to head eastbound on VT 11. OP 1 advised his view was obstructed by a vehicle that was parked along the shoulder just west of his position blocking his view of eastbound traffic. OP 1 advised he turned right onto VT 11 when he thought it was safe, and at the last second observed Veh 2 traveling eastbound on VT 11, causing Veh 1 to crash into Veh 2.
10	17B100221	VT 11	01/11/17	8:25	[No Weather]		[No Direction of Collision]	0	0	2100 block N Main St
11	19B105126	VT 11	09/03/19	7:05	Unknown	Inattention- No improper driving	Other - Explain in Narrative	0	0	Veh 2 was parked facing west on the north shoulder of VT 11. OP 1 was parked facing south in the Mike & Tammy's parking lot on the south side of VT 11. OP 1 backed in an arcing motion to the east and struck Veh 2's driver's side door with its passenger's side tail light/bumper area.
12	19B100386	VT 11	01/22/19	8:23	Clear	Failed to yield right of way- Visibility obstructed- No improper driving	Left Turn and Thru- Broadside v<--	0	0	Investigation revealed that Veh 1 was stopped at the stop sign on Edge Hill Rd with the intention of turning left/westbound on VT 11. On the left of Edge Hill Rd was a tall mound of snow that had been plowed up from a recent snowstorm that obstructed the view of eastbound traffic on VT 11. OP 1, without the ability to confirm that traffic from the west was clear, made the decision to pull into traffic and attempt to turn left onto VT 11. At that time, Veh 2 was traveling eastbound on VT 11 and crashed into Veh 1.
13	16D001936	VT 11	09/19/16	16:06	Clear	Disregarded traffic signs- signals- markings- No improper driving	Left Turn and Thru- Angle Broadside -->v--	0	0	Operator 1 was traveling east on Edgehill Road, Operator 1 stopped at the stop sign, did not observe any vehicles, and began to turn north on north Main Street. Operator 2 was traveling north on north Main Street and was attempting to turn west onto Edgehill Road. Vehicle 1 crashed into the front driver's side of Vehicle 2.
14	15D100095	VT 11	01/10/15	5:18	[No Weather]		[No Direction of Collision]	0	0	VT 11 Middletown Rd
15	17B105978	VT 11	09/14/17	10:09	Cloudy	Failed to yield right of way- No improper driving	Head On	1	0	OP 1 advised that she was stopped at the stop sign to turn left onto RT 100. She said that she saw V2 coming down the hill toward her. She said that she thought she saw the blinker from V2 on but then said maybe it was the sunlight. She said that she turned left onto RT 100 and they collided into each other. OP2 advised that he was driving down the hill and V1 pulled out and crashed into him. He said that he did not have his blinker on and that he was not turning right at that intersection.

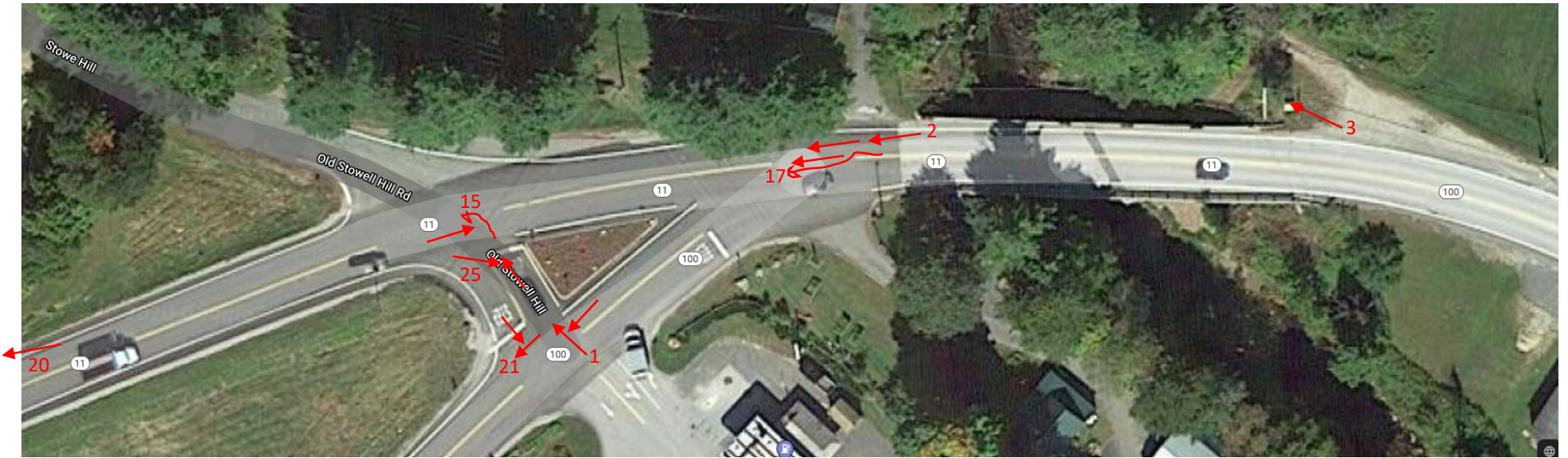
Crash #	Incident #	Road	Date	Time	Weather	Contributing Circumstances	Collision Type	# Injuries	# Fatalities	Narrative
16	17B106221	VT 11	09/26/17	11:18	[No Weather]		[No Direction of Collision]	0	0	2500 block VT 11
17	20B100204	VT 11	01/11/20	7:47	Clear	Passing on the left	Same Direction Sideswipe	0	0	Both Op#2 and Op#1 were westbound on VT 11. Op#2 activated her turn signal and slowed to wait for a safe opportunity to execute a left hand turn into intersection to enter the Londonderry IGA. Op#2 attempted to begin her turn at approximately 1-2 miles per hour, however, Op#1 attempted to pass Veh 2 as it was turning at approximately 35 miles per hour. Op#1 passed on the left hand side and sideswiped Veh 2 as it was turning.
18	17B102165	VT 100	04/10/17	11:59	[No Weather]		[No Direction of Collision]	0	0	5700 Block VT 100
19	16D101092	VT 100	05/09/16	16:11	[No Weather]		[No Direction of Collision]	0	0	5700 VT 100; IAO JAKES MARKET
20	15D103150	VT 100	10/10/15	22:33	Clear	Failure to keep in proper lane- Under the influence of medication/drugs/alcohol	le Vehicle C	0	0	Approximately 100 yards south of the intersection of VT 11. OP 1 stated that he was traveling south on VT 100, when a deer ran in front of his vehicle. OP 1 attempted to avoid the deer and swerved off the roadway. Preliminary breath test indicated that OP 1's blood alcohol concentration was 0.169. Officer believed that OP 1's level of impairment played a contributing role to this crash.
21	18B103067	VT 100	05/25/18	16:04	Clear	Failed to yield right of way- No improper driving	moves only	0	0	OP 1 advised he was stopped at the stop sign at the intersection of Old Stowell Hill and VT 100. OP 1 advised he stopped and looked left to see if traffic was clear to proceed into the intersection. At that time Veh 2 crashed into the driver side door of Veh 1. OP 2 advised he had turned onto VT 100 south from VT Route 11 westbound when he observed Veh 1 proceed into the intersection.
22	18B100185	VT 100	01/08/18	6:39	[No Weather]		[No Direction of Collision]	0	0	VT 100, VT 11, Londonderry
23	18B100376	VT 100	01/17/18	8:36	[No Weather]		[No Direction of Collision]	0	0	VT 100, VT 11, Londonderry
24	19B100952	VT 100	02/18/19	16:48	[No Weather]		[No Direction of Collision]	0	0	VT 100, VT 11, Londonderry

Crash #	Incident #	Road	Date	Time	Weather	Contributing Circumstances	Collision Type	# Injuries	# Fatalities	Narrative
25	20B100339	VT 100	01/18/20	16:47	Snow	Failure to keep in proper lane	1 and Thru Broadside			OP 1 advised she was traveling eastbound on VT 11 at approximately 20 miles per hour slowing down to turn right on to Old Stowell Hill that connects to VT 100 south. OP 1 advised her vehicle began to slide due to the slippery road conditions causing her vehicle to crash into the driver side of Veh 2. OP 2 advised he was stopped at the stop sign at the intersection of Old Stowell Hill Rd waiting to turn left onto VT 11. OP 2 advised as he was waiting for traffic to clear, he observed Veh 1 traveling eastbound on VT 11, attempting to make a right turn onto Old Stowell Hill Rd, but began to slide on the slippery road surface and crash into the driver side of his vehicle.
26	20B103168	VT 100	07/14/20	7:51	[No Weather]		[No Direction of Cr	0	0	5700 VT 100; Londonderry Plaza IGA

Overall Map

Map 1





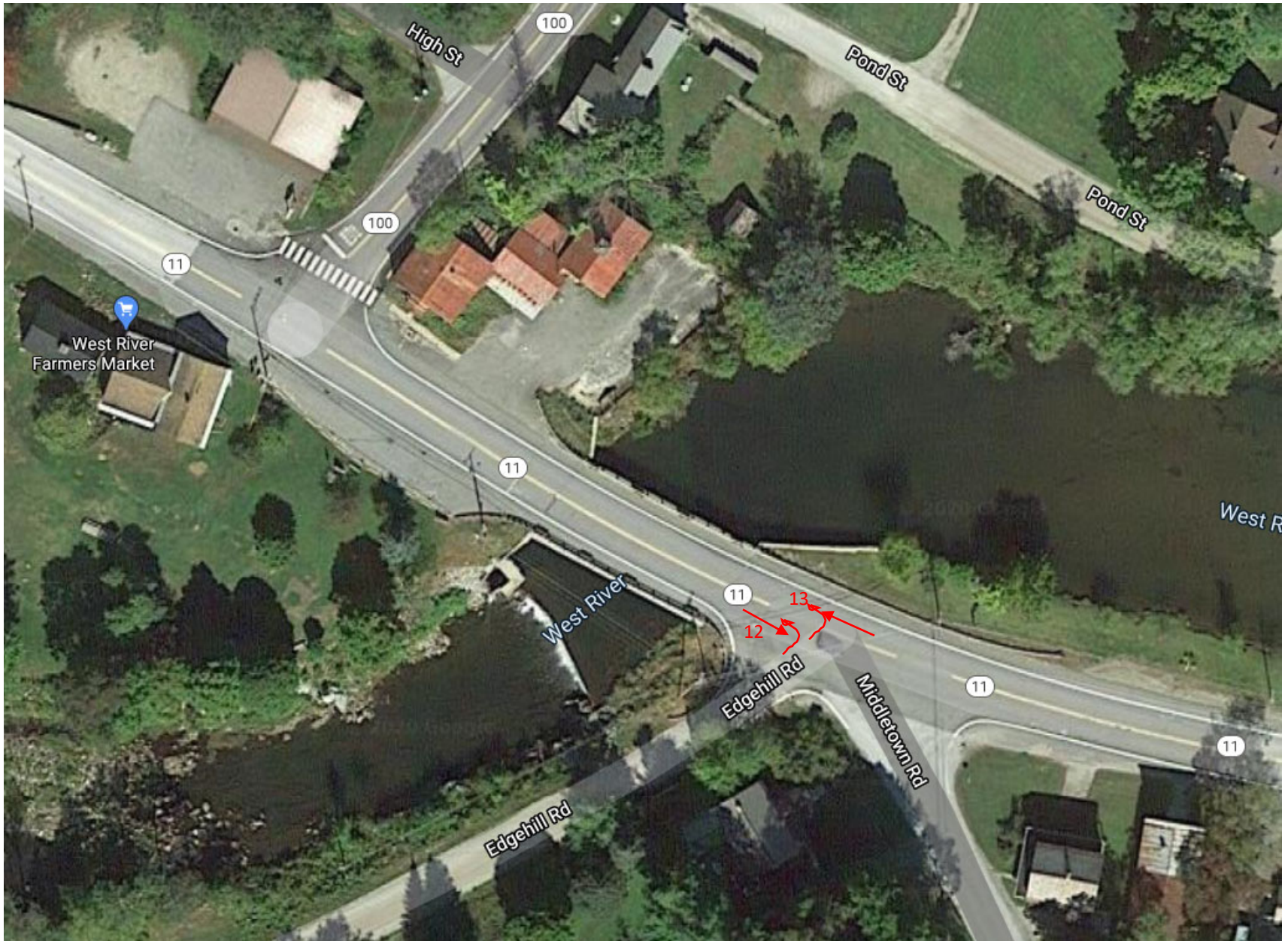
Non-Reportable Crashes: 16, 18, 19, 22, 23, 24

Map 1



Non-Reportable Crashes: 6, 7, 10

Map 2



Non-Reportable Crashes: 14