# VT-30 Corridor Brattleboro – Winhall Crash Summary

**Introduction**

VTrans collects data on all reported crashes on local and state highways. These reports can be used to evaluate the types and causes of crashes along defined corridors in order to help identify potential solutions. The data is also used to identify official high crash locations (HCLs). High crash locations consist of intersections and roadway segments three tenths of a mile in length that have high crash rates over five years compared to other intersections or segments with similar functional classifications and traffic levels.

**VT-30 High Crash Location Segments**

The VTrans High Crash Location Report: Sections and Intersections, 2012-2016 shows seven high crash location road segments across the 40-mile span of the corridor with more than half of the segments occurring within the village centers of Newfane, Townshend, and Jamaica. The remaining high crash location segments were located along the rural stretches of VT-30 between the village centers. Most of the crashes that occurred at these high crash locations were within the village centers and were vehicular damage only with only a few crashes having minor injuries such as bumps and bruises. The minor nature of these crashes is mainly attributable to the slower speeds that vehicles travel within these areas. Almost all the crashes within the village centers were also related to driver behavior such as inattentiveness or following too closely which is not uncommon for these types of roads. The more common crashes that occurred on the rural or higher speed portion of VT-30 between the villages tended to be attributable to "excess speed" or "failure to stay in lane". These crashes also tend to be single vehicle crashes where wet, snow, or icy road conditions can be an issue. It should also be noted that the 40-mile VT-30 corridor has a lower crash rate than the statewide crash rate for rural minor arterial roads. The statewide crash rate for rural minor arterial roads is 1.25 crashes per million vehicle miles and the crash rate for this segment of VT-30 is 1.16 crashes per million vehicle miles.

**VT-30 High Crash Intersections**

There is one intersection along the VT-30 corridor being analyzed that has been classified as a High Crash Intersection. The intersection is at the end of the corridor where VT-30 intersects with VT-11 in Winhall. The primary pattern of crashes at this location concerns vehicles travelling eastbound on VT-11 in the outside lane not realizing the lane becomes a right turn only lane on to VT-30 with a separation gore. Vehicles wishing to remain on VT-11 then make a swerving movement to quickly get in the other lane without checking if another vehicle was present in that inside lane and a same direction sideswipe or other type of collision occurs.

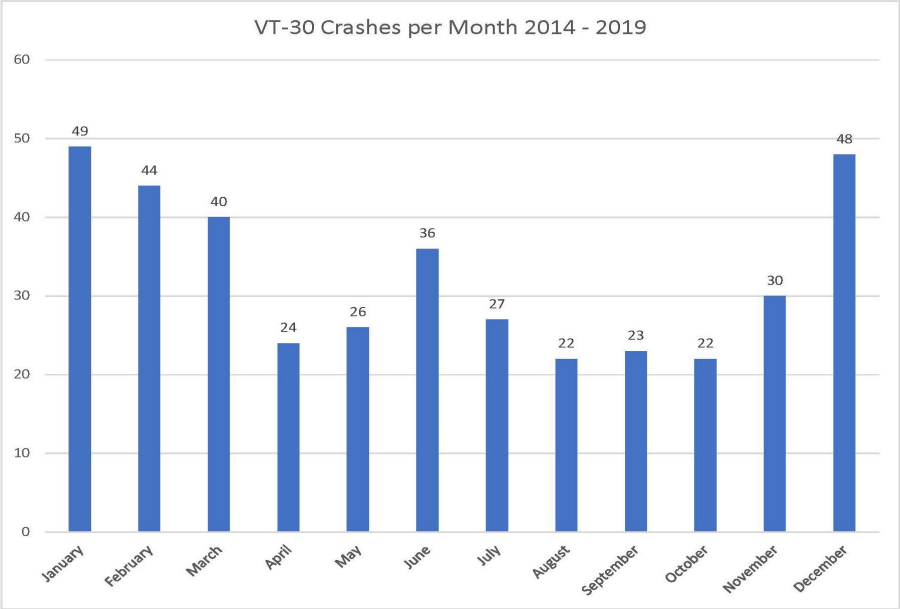
During the 2019 VT-11 repaving project from Manchester to Peru, VTrans will be merging the existing lanes on VT-11 eastbound into a single lane before the intersection of VT-30. The single lane should eliminate any confusion and swerving before the intersection with VT-30.

**Total Five-Year Crash Data Along the Corridor 2014-2019**

The following graphs show the total number of crashes along the VT-30 corridor. These graphs vary from time of day to day of week to months of year as well as displaying types and directions of crashes and contributing circumstances.

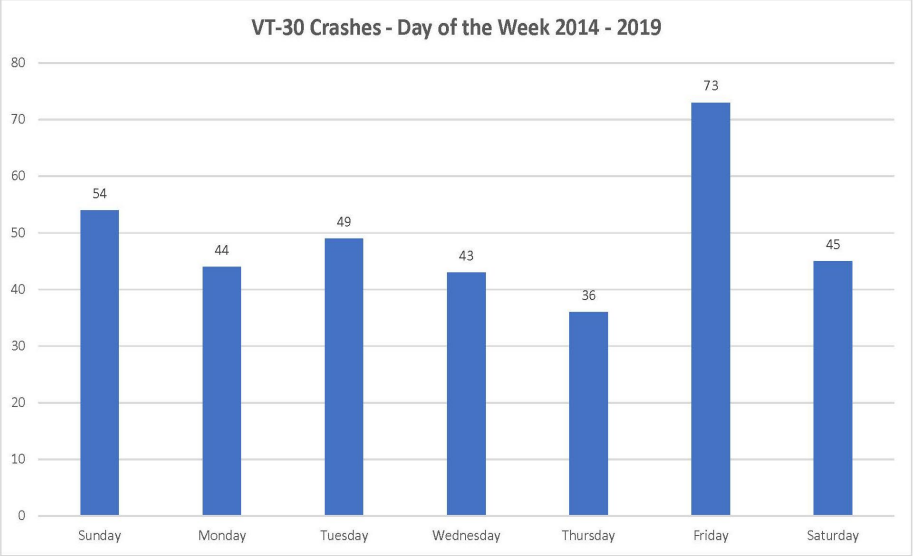
**VT-30 Crashes per Month**

The VT-30 Crashes per Month graph shows that the highest volume of crashes occurs between December and March. This it typical for rural Vermont roads that are also near ski areas. There is the higher volume of recreational ski traffic combined with the winter conditions of the roads themselves.



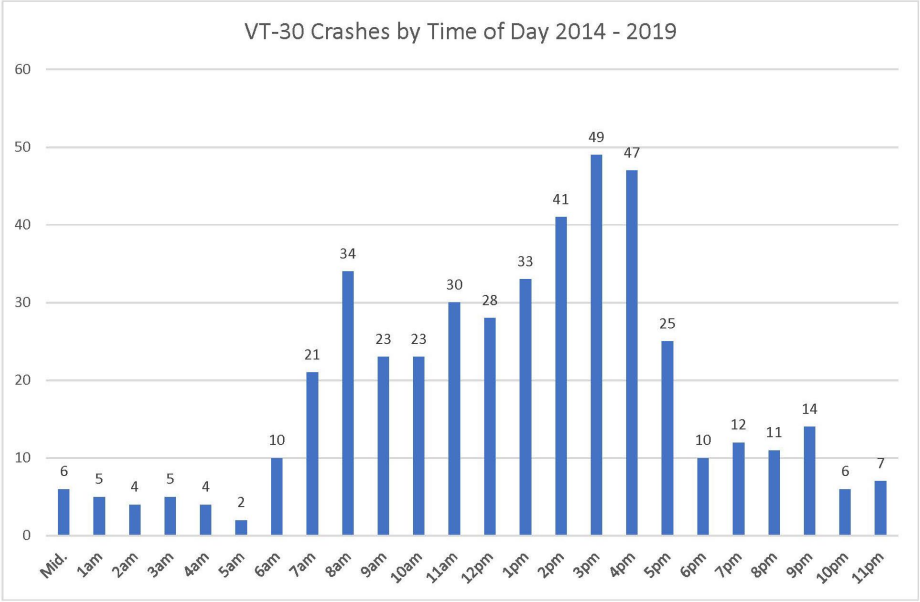

**VT-30 Crashes by Day of Week**

The highest volumes of crashes during the day of the week along the VT-30 corridor occur on Friday and Sunday. This would coincide with weekend recreational skiing volumes at Stratton Mountain and other areas where the out of town travelers would arrive on a Friday and depart on Sunday.




**VT-30 Crashes by Time of Day**

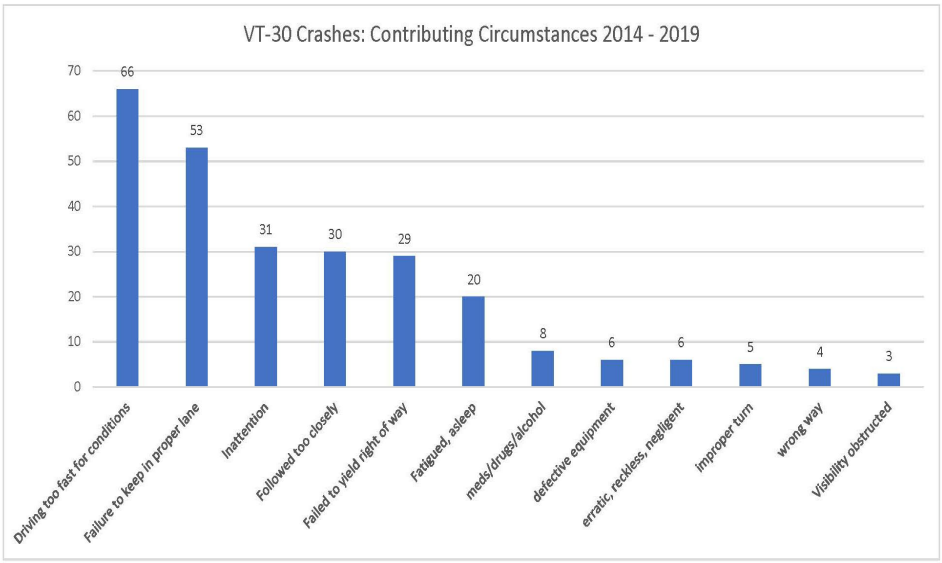
The highest numbers of crashes during the time of day along the VT-30 corridor is during the morning peak hour of 8AM while the crash numbers in the afternoon tend to be higher between the hours of 2PM to 4PM in the afternoon. This can be attributed to crashes that occur when schools get out or tourists heading back home early in the afternoon from skiing. Even though



the number of crashes is higher during these times, the crash rate (crashes per roadway volume) is lower relative to the other times in the day due to the higher morning and afternoon traffic volumes travelling the corridor.

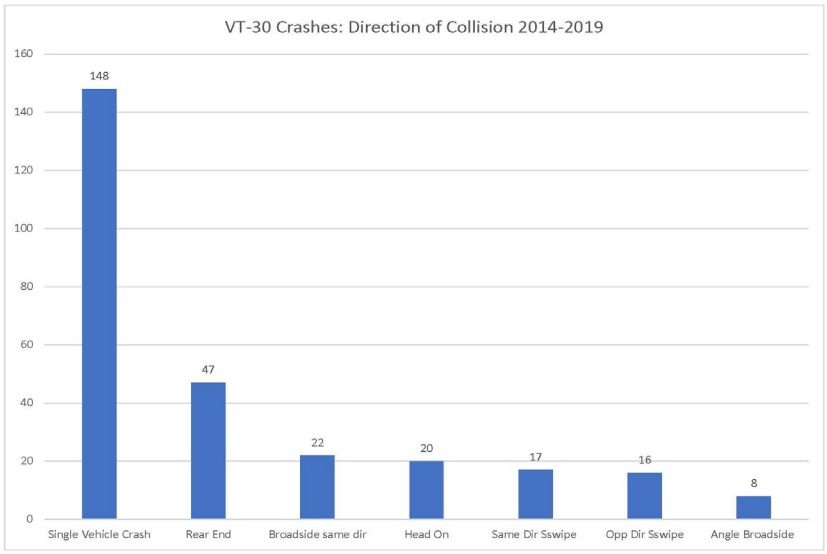
## VT-30 Crashes – Contributing Circumstances

Most of these contributing circumstances are self-explanatory. Driving too fast for conditions can not only mean exceeding the speed limit but also means driving too fast on roads that are slick due rain, snow, or ice. Failure to keep in proper lane can mean drifting over the centerline or executing too wide a turn out of a road or driveway and going into the other lane. Inattention is usually due to driver daydreaming, eating or drinking, calling or texting, or looking at scenery. Following too closely is the main contributing circumstance to rear end collisions where the driver is too close to the car in front of them and cannot brake in time when that car stops. Failed to yield right of way usually involves vehicles that pull out of a road or driveway and not looking for oncoming vehicles. It also is attributable to vehicles making a left turn without yielding right of way to oncoming vehicles. Defective equipment tends to be problems with the vehicle's operating systems, usually the braking or steering system. Improper turn crashes tend to involve vehicles making a U-Turn or and not checking for traffic appropriately. Wrong way crashes involve vehicles travelling in the opposite lane or turning into the exit side of driveways and not the entrance side. Finally, visibility obstructed crashes occur when the vehicle's line of sight may be blocked by a rock, sign, hill, or tree. Visible obstructions can also be oncoming headlights at night or the angle of sun at certain times of day. For the VT-30 corridor the highest frequency of crashes was due to driving too fast for conditions as well as failure to keep in proper lane. These types of crashes usually occur when the road conditions are slippery due to rain, snow, or ice.

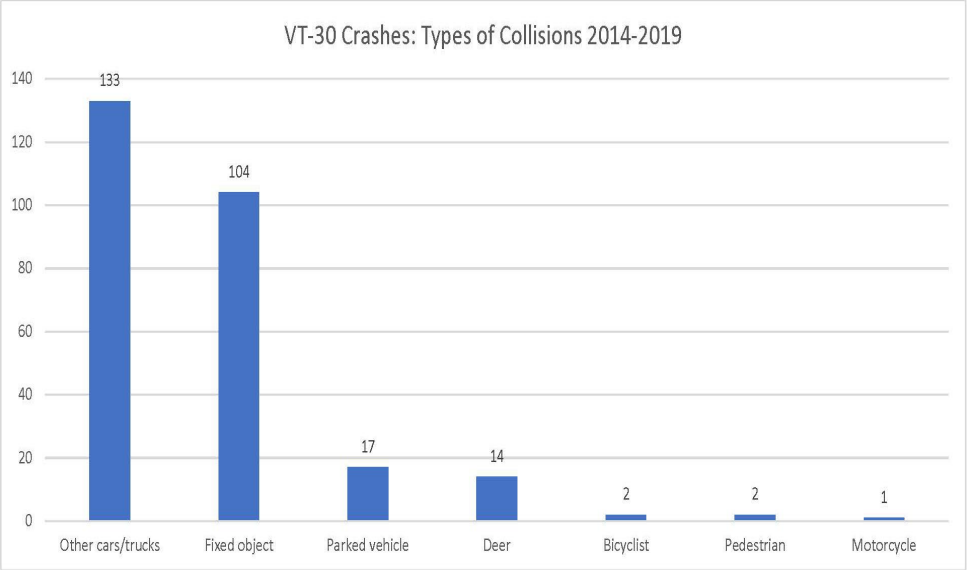



## VT-30 Crashes – Direction of Collision

The Single Vehicle Crash was the most frequent crash type along the VT-30 corridor. Single vehicle crashes could involve vehicles sliding off the road in weather conditions, vehicles crashing or going off the road due to faulty equipment, cars striking debris on the road, or cars striking other objects such as trees, signs, or deer.



## VT-30 Crashes – Types of Collisions




Approximately 48% of collisions on VT-30 involved other vehicles while approximately 42% involved fixed objects. Fixed objects along a roadway corridor can include: trees, poles, signs, guardrails, ledge or rock, and work zone equipment. Vehicular collisions are more common in the village or urban areas where there is a higher density of vehicles. Fixed object strikes are not uncommon when vehicles are driving too fast for conditions, usually in inclement weather, and the vehicles start to drift in the other lane or go off the road. It also tends to happen along the higher speed portions of the corridor which are usually the open rural locations between the villages.

## Crash Mitigation Strategies Along Rural Roads and Villages

For crashes that occur in the lower speed areas of rural villages and the higher speed areas of rural roads between villages, several strategies exist that can help mitigate crash frequency.

For the lower speed areas of villages, it is important to make sure traffic is calmed and is proceeding at the posted village speed limit. This will aid in making the village area safer for not only vehicles, but also bicyclists and pedestrians in the area. Strategies for calming traffic in villages include:

- Village welcome signs letting drivers know they are entering a village area. This can accompany road demarcations identifying the village border and encouraging slower speeds.
- Traffic speed enforcement through the local or state law enforcement either through car patrol or speed radar signs trailers.
- Permanently mounted solar powered speed limit radar signs at both ends of the village can also be used to help calm traffic without the expense and constant coordination with law enforcement.
- Pedestrian crossing signs can be used at both pedestrian crossing areas and crosswalk locations. The signs can be fitted with light emitting diodes (LEDs) around the perimeter for better notification or rapid rectangular flashing beacons (RRFBs) can be investigated at pedestrian crossings where there has been a history of issues on conflicts.
- Vertical deflection solutions for traffic calming include speed bumps or tables and/or raised crosswalks but this tends to be more problematic in northern areas where snow plows could damage the raised tables. This type of traffic calming measure also causes delays to first responders and other emergency vehicles.
- Horizontal deflection solutions included medians in the road that can only serve as a refuge for pedestrians in crosswalk locations but also narrows the roadway encouraging vehicles to go slower through the area. Medians can also be problematic in northern areas if not properly marked for snow plowing operations.

For the higher speed rural portions of road between villages there are also solutions that can help mitigate crashes. These solutions include:

- Law enforcement monitoring excessive speeding
- Centerline and/or edge line rumble strips in the pavement
- Regular maintenance of snow and ice removal along the road
- Widening the shoulders where possible and creating extra areas beyond the side of the road for clear recovery zones.
- Adding traffic control devices where needed. This includes curve ahead warning signs, curve chevron arrows, or solar powered LED flashing versions of these signs to help alert drivers to the oncoming curves.