
TECHNICAL MEMORANDUM

To: Village of Suffern Planning Board

From: Corey Chase, PE / Kevin Savage, PE, PTOE

Date: September 16, 2022
Revised December 9, 2022

Re: Crash Analysis Memo
Proposed Industrial Park
Old Mill Road & Hemion Road (CR 93)
Section 55.22 Block 1, Lot 1
Village of Suffern, Rockland County, NY
DT # 3709-99-004T

This analysis was conducted to analyze the crash history in the vicinity of the proposed industrial park located at Old Mill Road & Hemion Road (CR 93) Village of Suffern, Rockland County, NY.

Crash Analysis

Police reports for crashes occurring from January 2018 to July 2022 in the vicinity of the site at the following intersections were provided for review by the Town of Ramapo Police Department:

- Lafayette Avenue (NYS Route 59) & Campbell Avenue/Hemion Road (CR 93)
- Lafayette Avenue (NYS Route 59) & Airmont Road (CR 89)
- Airmont Road (CR 89) & I-87 SB/I-287 EB Ramps
- Airmont Road (CR 89) & I-87 NB/I-287 WB Ramps
- Airmont Road (CR 89) & North DeBaun Avenue
- Airmont Road (CR 89) & Montebello Road (CR 64)/Rella Boulevard
- Hemion Road (CR 93) & Dunnigan Drive
- Lafayette Avenue (NYS Route 59) & Brookside Avenue
- Montebello Road (CR 64) & Hemion Road (CR 93)/Ryan Mansion Drive
- Airmont Road (CR 89) & Dunnigan Drive
- Hemion Road (CR 93) & Suffern Middle School Driveway
- Montebello Road (CR 64) & Suffern Middle School Driveway
- Montebello Road (CR 64) & Montebello Elementary School Driveway

Further, an Application for Public Access to Town Records was submitted to the Town of Ramapo on December 1, 2022, which requested the following:

“Our office is requesting complete accident reports from the last 4 years (January 2018-Present) for the following roadways. Please note that a FOIL request was submitted on July 19, 2022 for accident reports at specific intersections. This request seeks accident data along the roadways listed below that was not included with the previous request.

- Lafayette Avenue (NY 59) from Hemion Road to Brookside Avenue (not including the intersections with Hemion Road & Brookside Avenue)
- Hemion Road from Lafayette Avenue (NY 59) to Ramapo Cirque Boulevard (not including the intersection with Lafayette Avenue (NY 59))
- Montebello Road from Karsten Drive to Airmont Road (not including the intersection with Airmont Road)”

It should be noted that it is anticipated that the previous request covered all roadway segments not listed above due to the proximity of adjacent intersections. In response to the Records Request, additional crash records were received from the Town of Ramapo on December 6, 2022. No crashes were reports on the roadway segments listed above that were not located at one of the study intersections. Further, additional data was received for more recent crashes at three of the study intersections. Therefore, the crash analysis summaries and this memorandum have been updated to include the additional data received.

The crash rates at each intersection were then calculated using the Average Annual Daily Traffic (AADT) from the NYSDOT Traffic Data viewer and compared to the 2016 Average Accident Rates Table published by the New York State Department of Motor Vehicles. The following details the crash history at each intersection. The crash rate calculations, statewide average crash rates, and full breakdowns of the crash history at each intersection can be found appended to this memo.

Lafayette Avenue (NYS Route 59) & Campbell Avenue/Hemion Road (CR 93)

As shown in the appended table, a total of 49 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 1.28 crashes per million entering vehicles (MEV), which is higher than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Note that 29 of those crashes (approximately 59%) were same direction rear-end crashes that are typical at signalized intersections as a result of driver inattentiveness. Eleven of the reported crashes resulted in minor injuries; no major injuries or fatalities were reported.

Lafayette Avenue (NYS Route 59) & Airmont Road (CR 89)

As shown in the appended table, a total of 90 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 1.72 crashes per million entering vehicles (MEV), which is higher than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Note that 37 of those crashes (approximately 41%) were same direction rear-end crashes that are typical at signalized intersections as a result of driver inattentiveness. Another 19 crashes (approximately 21%) were same-direction sideswipe crashes. Eight of the reported crashes resulted in minor injuries; no major injuries or fatalities were reported.

Airmont Road (CR 89) & I-87 SB/I-287 EB Ramps

As shown in the appended table, a total of 24 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.39 crashes per million entering vehicles (MEV), which is lower than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Eight of the reported crashes (approximately 33%) involved a same-direction sideswipe collision. Note that 13 of the reported crashes (approximately 24%) involved same direction rear-end that are typical at signalized intersections as a result of driver inattentiveness. Four of the reported crashes resulted in minor or moderate injuries; no major injuries or fatalities were reported.

Airmont Road (CR 89) & I-87 NB/I-287 WB Ramps

As shown in the appended table, a total of 26 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.38 crashes per million entering vehicles (MEV), which is lower than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Note that 8 of those crashes (approximately 31%) were same direction rear-end crashes that are typical at signalized intersections as a result of driver inattentiveness. Two of the reported crashes resulted in minor or moderate injuries; no major injuries or fatalities were reported.

Airmont Road (CR 89) & North DeBaun Avenue

As shown in the appended table, a total of 29 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 1.51 crashes per million entering vehicles (MEV), which is higher than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Four of the reported crashes resulted in minor injuries; no major injuries or fatalities were reported.

Airmont Road (CR 89) & Montebello Road (CR 64)/Rella Boulevard

As shown in the appended table, a total of 27 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.45 crashes per million entering vehicles (MEV), which is lower than the statewide average of 0.52 crashes per MEV for urban signalized four-leg intersections. Note that 10 of those crashes (approximately 37%) were same direction rear-end crashes that are typical at signalized intersections as a result of driver inattentiveness. Six of the reported crashes resulted in minor or moderate injuries; no major injuries or fatalities were reported.

Hemion Road (CR 93) & Dunnigan Drive

No crashes were reported at this intersection.

Lafayette Avenue (Route 59) & Brookside Avenue

As shown in the appended table, a total of 16 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.61 crashes per million entering vehicles (MEV), which is higher than the statewide average of 0.18 crashes per MEV for urban unsignalized three-leg intersections. Four of the reported crashes resulted in minor injuries; no major injuries or fatalities were reported.

Hemion Road (CR 93) & Montebello Road (CR 64)

As shown in the appended table, a total of 4 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.16 crashes per million entering vehicles (MEV), which is higher than the statewide average of 0.29 crashes per MEV for urban unsignalized four-leg intersections. Two of the reported crashes (approximately 50%) were same direction rear-end crashes that are typical at stop-controlled intersections. All crashes occurred during the daytime. One of the reported crashes resulted in minor injuries; no major injuries or fatalities were reported.

Airmont Road (CR 89) & Dunnigan Drive

As shown in the appended table, a total of 8 crashes have occurred at the intersection within the 5-year study period. This equates to a crash rate of 0.16 crashes per million entering vehicles (MEV), which is lower than the statewide average of 0.29 crashes per MEV for urban unsignalized four-leg intersections. Two of the reported crashes (approximately 25%) were same direction rear-end crashes that are typical at stop-controlled intersections. Two of the reported crashes resulted in minor or moderate injuries; no major injuries or fatalities were reported.

Hemion Road (CR 93) & Suffern Middle School Driveway

No crashes were reported at this intersection.

Montebello Road (CR 64) & Suffern Middle School Driveway

No crashes were reported at this intersection.

Montebello Road (CR 64) & Montebello Elementary School Driveway

No crashes were reported at this intersection.

AVERAGE ACCIDENT RATES FOR STATE HIGHWAYS BY FACILITY TYPE

(BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

Average accident rates are based on both reportable and available non-reportable crashes.

MAINLINE ACCIDENTS ONLY: "Non-Intersection Accidents/MVM" is used for linear highway sections where there are no intersecting roads or ramp junctions within analysis limits. An example of the correct use of these rates would involve a linear section of highway which contains no intersections with other public highways, but may contain intersections with private roads or driveways.

MAINLINE & JUNCTURE ACCIDENTS: "Intersection & Non-Intersection Accidents/MVM" includes intersection and mainline accidents. They are used for analysis of linear highway sections where intersections are involved within the analysis limits and are the most commonly used rates for accident analysis purposes.

FACILITY TYPE

FREE ACCESS CONTROLLED		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	2.1	0.33	0.58	2.61	0.4	0.68
	3 LANES	1.87	0.24	0.57	2.25	0.27	0.64
	4 LANES	1.9	0.26	0.36	2.55	0.34	0.44
	ALL LANES	2.09	0.33	0.58	2.6	0.4	0.68
DIVIDED							
	2 LANES	1.88	0.27	0.46	2.56	0.36	0.57
	4 LANES	1.92	0.29	0.51	2.15	0.32	0.54
	ALL LANES	1.92	0.29	0.48	2.3	0.33	0.57
URBAN FUNCTION CLASS							
UNDIVIDED							
	2 LANES	2.23	0.33	0.34	3.5	0.52	0.45
	3 LANES	2.71	0.36	0.27	4.31	0.63	0.38
	4 LANES	3.22	0.49	0.22	5.5	0.86	0.31
	ALL LANES	2.46	0.36	0.31	3.95	0.59	0.43
DIVIDED							
	2 LANES	3.13	0.48	0.2	5.14	0.78	0.28
	4 LANES	2.85	0.45	0.18	4.52	0.72	0.24
	6 LANES	3.65	0.53	0.16	4.8	0.71	0.2
	7 LANES	3.05	0.58	0.09	3.99	0.72	0.16
	ALL LANES	3.1	0.48	0.18	4.7	0.73	0.25

PARTIAL CONTROL OF ACCESS		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	1.87	0.35	0.44	2.44	0.48	0.51
	ALL LANES	1.91	0.35	0.43	2.47	0.48	0.53
DIVIDED							
	4 LANES	1.85	0.29	0.81	1.97	0.32	0.85
	ALL LANES	1.84	0.29	0.8	1.96	0.32	0.85

URBAN FUNCTION CLASS		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
	2 LANES	1.73	0.32	0.39	2.51	0.45	0.47
	ALL LANES	2.02	0.39	0.35	3.11	0.58	0.43
DIVIDED							
	4 LANES	1.62	0.27	0.32	1.94	0.32	0.34
	6 LANES	1.73	0.27	0.25	2	0.32	0.27
	ALL LANES	1.73	0.28	0.31	2.1	0.34	0.33

CONTROLLED ACCESS (FULL)		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
RURAL FUNCTION CLASS		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
UNDIVIDED							
	2 LANES	2.13	0.36	0.56	2.64	0.44	0.67
	ALL LANES	2.26	0.37	0.57	2.79	0.44	0.67
DIVIDED							
	4 LANES	1.07	0.16	0.45	1.11	0.16	0.46
	5 LANES	1.01	0.16	0.47	1.04	0.16	0.5
	6 LANES	1.11	0.23	0.51	1.23	0.24	0.55
	ALL LANES	1.08	0.16	0.45	1.11	0.17	0.46

URBAN FUNCTION CLASS		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS		
		ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT
UNDIVIDED		ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM
	ALL LANES	1.46	0.21	0.27	2.1	0.31	0.34
DIVIDED							
	4 LANES	1.08	0.16	0.29	1.18	0.18	0.3
	5 LANES	0.99	0.16	0.29	1.14	0.18	0.31
	6 LANES	1.16	0.18	0.19	1.26	0.19	0.21
	7 LANES	1.42	0.2	0.28	1.47	0.21	0.33
	ALL LANES	1.12	0.17	0.22	1.22	0.19	0.24

AVERAGE INTERSECTION ACCIDENT RATES FOR STATE HIGHWAYS BY INTERSECTION TYPE
 (BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

<u>INTERSECTION TYPE</u>	ALL TYPES ACC/MEV	WET ROAD ACC/MEV	LEFT TURN ACC/MEV	REAR END CC/ME	OVER- TAKING ACC/MEV	RIGHT ANGLE ACC/MEV	RIGHT TURN ACC/MEV	HEAD ON ACC/MEV	SIDE- SWIPE ACC/MEV
RURAL FUNCTION CLASS									
3 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.26	0.04	0.03	0.09	0.03	0.03	0.01	0.00	0.00
SIGN ALL LANES	0.17	0.02	0.01	0.03	0.01	0.01	0.00	0.00	0.00
NO CONTROL ALL LANES	0.11	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00
4 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.58	0.09	0.06	0.16	0.03	0.15	0.02	0.01	0.01
SIGN ALL LANES	0.35	0.05	0.03	0.05	0.01	0.1	0.01	0	0.01
NO CONTROL ALL LANES	0.23	0.05	0.02	0.05	0.01	0.04	0	0.01	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.19	0	0	0.19	0	0	0	0	0
MERGE W/ 2&> LANES	0.03	0.01	--	--	--	--	--	--	--
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0	0	--	--	--	--	--	--	--
MERGE W/ 2&> LANES	0.08	0.01	--	0.01	0	--	--	--	--

INTERSECTION TYPE	ALL TYPES	WET ROAD	LEFT TURN	REAR END	OVER-TAKING	RIGHT ANGLE	RIGHT TURN	HEAD ON	SIDE-SWIPE
URBAN FUNCTION CLASS	ACC/MEV	ACC/MEV	ACC/MEV	CC/ME	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV
3 LEGGED INTERSECTIONS									
SIGNAL 1-4 LANES	0.32	0.05	0.03	0.12	0.04	0.04	0.01	0	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.05	0.03	0.02	0	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.06	0.03	0.01	0	0	0
SIGN 1-3 LANES	0.18	0.03	0.02	0.06	0.01	0.02	0	0	0
SIGN 4 LANES	0.12	0.02	0.01	0.04	0.01	0.02	0	0	0
SIGN 5 & > LANES	0.06	0.01	0	0.02	0.01	0.01	0	0	0
NO CONTROL ALL LANES	0.05	0.01	0	0.02	0.01	0	0	0	0
4 LEGGED &> INTERSECTIONS									
SIGNAL 1-4 LANES	0.52	0.08	0.05	0.21	0.06	0.08	0.02	0.01	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.25	0.04	0.01	0.11	0.04	0.03	0.01	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.2	0.03	0.02	0.06	0.03	0.04	0.01	0	0
SIGN 1-3 LANES	0.29	0.04	0.03	0.08	0.02	0.07	0.01	0	0
SIGN 4 & > LANES	0.16	0.02	0.01	0.05	0.01	0.03	0	0	0
NO CONTROL ALL LANES	0.19	0.03	0.01	0.07	0.02	0.04	0.01	0	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.17	0	0.01	0.12	0.01	0.01	0	0	0
MERGE W/ 2 LANES	0.03	0	0	0.01	0	0	0	0	0
MERGE W/ 3&> LANES	0.01	0	0	0.01	0	0	0	0	0
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.18	0.03	0	0.06	0.06	0.01	--	--	--
MERGE W/ 2 LANES	0.04	0.01	--	0.01	0.01	--	--	--	--
MERGE W/ 3&> LANES	0.02	0	--	0.01	--	--	--	--	--

Crash Rate Calculation



Prepared By: J. Town
 Date: 12/9/2022

Checked By: K. Savage
 Job #: 3709-99-004T

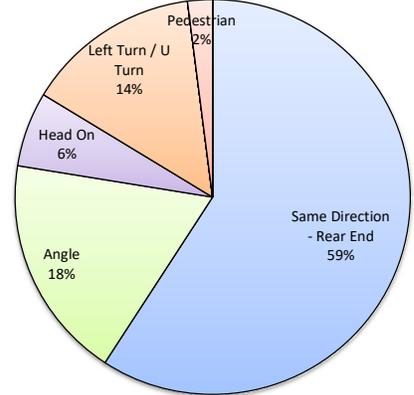
Intersection	Entering AADT	Total Crashes	Injury Crashes	Fatal Crashes	Total Crash Rate (per MEV)	Injury Crash Rate (per MEV)	Fatal Crash Rate (per MEV)
Lafayette Avenue (Route 59) & Hemion Road (CR 93)	21769	49	11	0	1.23	0.28	0.00
Lafayette Ave (Route 59) & Airmont Rd (CR 89)	28709	90	8	0	1.72	0.15	0.00
Airmont Rd (CR 89) & I-87 SB/I-287 EB Ramp	33331	24	4	0	0.39	0.07	0.00
Airmont Rd (CR 89) & I-87 NB/I-287 WB Ramp	37426	26	2	0	0.38	0.03	0.00
Airmont Rd (CR 89) & North DeBaun Avenue	10543	29	4	0	1.51	0.21	0.00
Airmont Rd (CR 89) & Montebello Rd (CR 64)/Rella Blvd	32689	27	6	0	0.45	0.10	0.00
Lafayette Ave (Route 59) & Brookside Avenue	14274	16	4	0	0.61	0.15	0.00
Hemion Road (CR 93) & Montebello Road (CR 64)	13596	4	1	0	0.16	0.04	0.00
Airmont Rd (CR 89) & Dunnigan Drive	26716	8	2	0	0.16	0.04	0.00



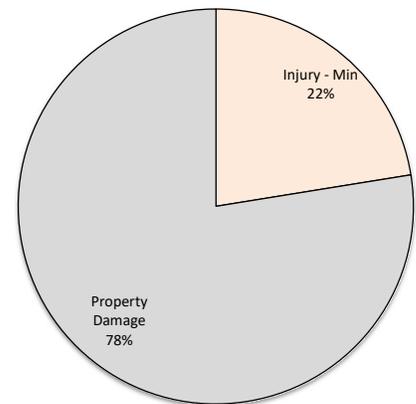
Location: Lafayette Ave (Route 59) & Hemion Rd (CR 93)
 Town, County, State: Village of Montebello, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - November 2022

Crash Analysis

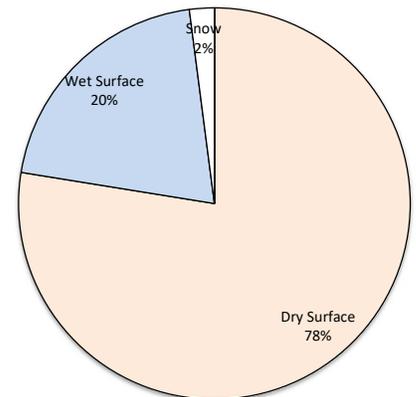
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	11	8	1	4	5	29	59%
Same Direction - Sideswipe	0	0	0	0	0	0	0%
Angle	1	1	2	2	3	9	18%
Head On	1	0	0	1	1	3	6%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	2	1	1	1	2	7	14%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overtuned	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	1	0	0	1	2%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	15	10	5	8	11	49	100%



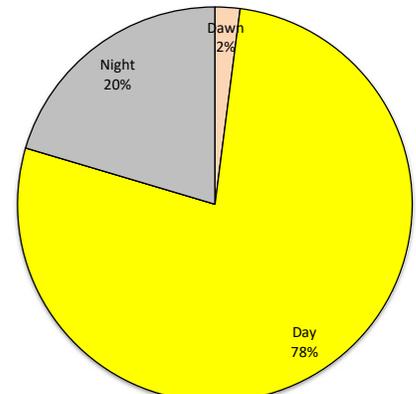
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	0	0	0	0	0	0%
Injury - Min	2	1	3	1	4	11	22%
Property Damage	13	9	2	7	7	38	78%
Total	15	10	5	8	11	49	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	12	8	2	8	8	38	78%
Wet Surface	3	2	3	0	2	10	20%
Snow	0	0	0	0	1	1	2%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	15	10	5	8	11	49	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	1	0	0	0	1	2%
Day	12	9	3	6	8	38	78%
Dusk	0	0	0	0	0	0	0%
Night	3	0	2	2	3	10	20%
Unknown	0	0	0	0	0	0	0%
Total	15	10	5	8	11	49	100%

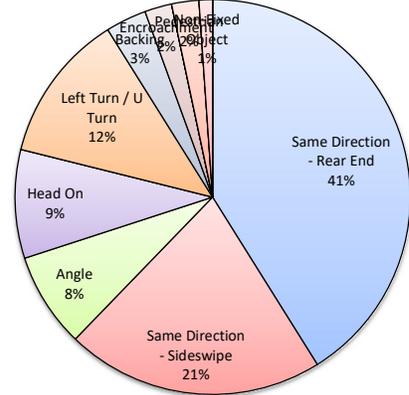




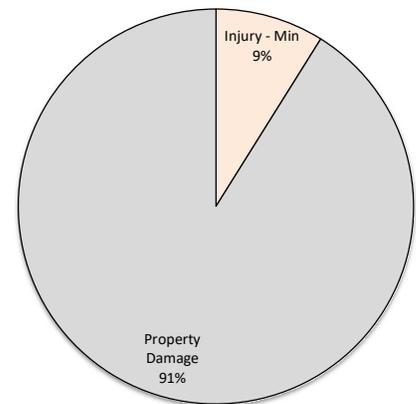
Location: Lafayette Ave (Route 59) & Airmont Rd (CR 89)
 Town, County, State: Village of Airmont, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

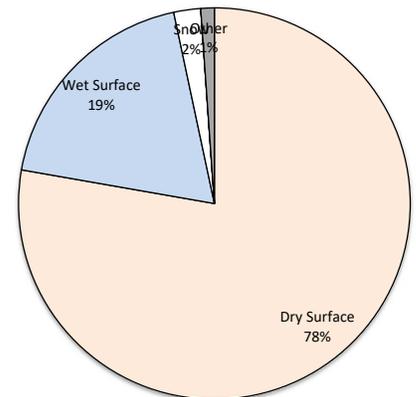
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	6	13	6	7	5	37	41%
Same Direction - Sideswipe	6	5	2	4	2	19	21%
Angle	2	2	2	1	0	7	8%
Head On	3	0	2	2	1	8	9%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	3	3	3	1	1	11	12%
Backing	0	1	1	1	0	3	3%
Encroachment	1	1	0	0	0	2	2%
Overtuned	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Pedestrian	1	1	0	0	0	2	2%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	1	1	1%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	22	26	16	16	10	90	100%



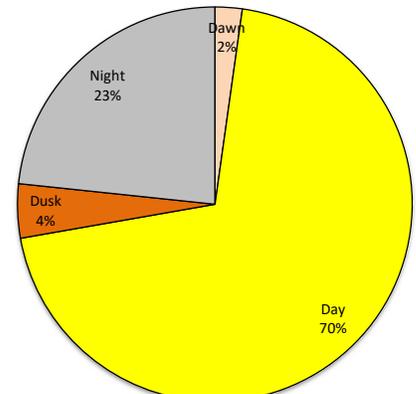
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	0	0	0	0	0	0%
Injury - Min	1	1	3	3	0	8	9%
Property Damage	21	25	13	13	10	82	91%
Total	22	26	16	16	10	90	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	16	23	11	13	7	70	78%
Wet Surface	4	3	5	3	2	17	19%
Snow	2	0	0	0	0	2	2%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	1	1	1%
Total	22	26	16	16	10	90	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	2	0	0	2	2%
Day	15	18	11	11	8	63	70%
Dusk	2	1	0	1	0	4	4%
Night	5	7	3	4	2	21	23%
Unknown	0	0	0	0	0	0	0%
Total	22	26	16	16	10	90	100%

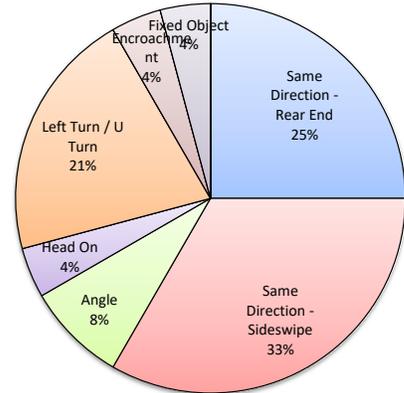




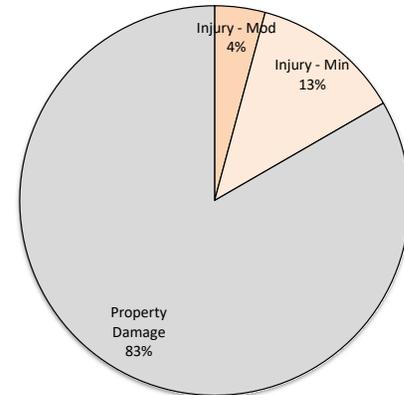
Location: Airmont Rd (CR 89) & I-87 SB/I-287 EB Ramp
 Town, County, State: Village of Montebello, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

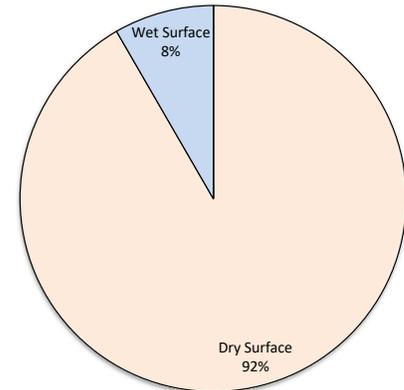
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	2	0	0	2	2	6	25%
Same Direction - Sideswipe	4	1	0	1	2	8	33%
Angle	0	1	1	0	0	2	8%
Head On	0	0	1	0	0	1	4%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	1	1	0	1	2	5	21%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	1	0	1	4%
Overturned	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	1	1	4%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	7	3	2	5	7	24	100%



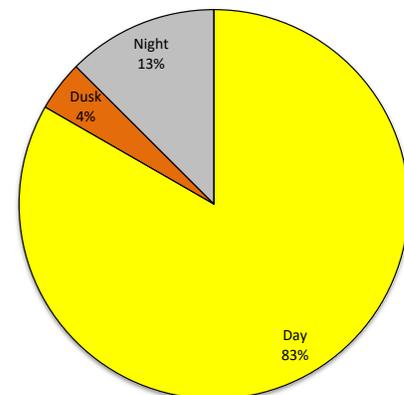
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	1	0	0	0	1	4%
Injury - Min	1	1	1	0	0	3	13%
Property Damage	6	1	1	5	7	20	83%
Total	7	3	2	5	7	24	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	7	3	2	4	6	22	92%
Wet Surface	0	0	0	1	1	2	8%
Snow	0	0	0	0	0	0	0%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	7	3	2	5	7	24	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	7	2	2	3	6	20	83%
Dusk	0	0	0	0	1	1	4%
Night	0	1	0	2	0	3	13%
Unknown	0	0	0	0	0	0	0%
Total	7	3	2	5	7	24	100%

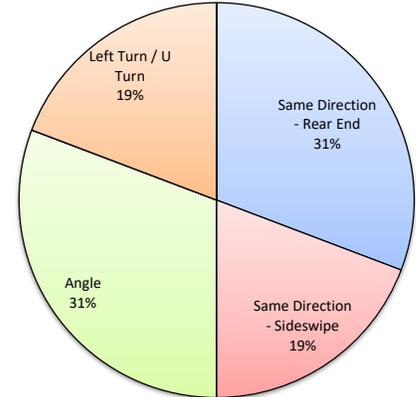




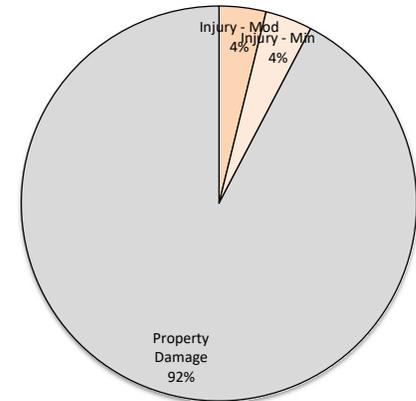
Location: Airmont Rd (CR 89) & I-87 NB/I-287 WB Ramp
 Town, County, State: Village of Montebello, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

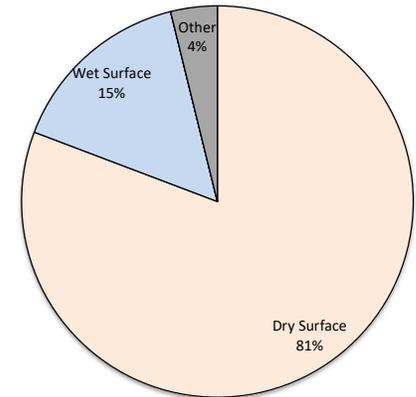
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	3	3	1	1	0	8	31%
Same Direction - Sideswipe	1	2	0	1	1	5	19%
Angle	3	5	0	0	0	8	31%
Head On	0	0	0	0	0	0	0%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	1	1	0	2	1	5	19%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overtuned	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	8	11	1	4	2	26	100%



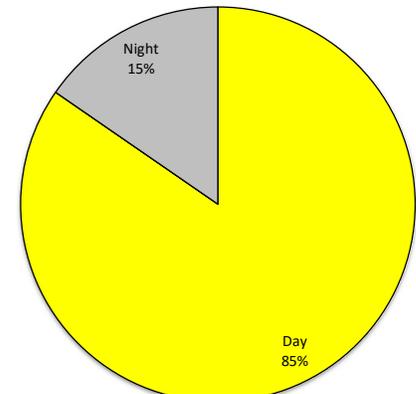
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	1	0	0	0	1	4%
Injury - Min	0	1	0	0	0	1	4%
Property Damage	8	9	1	4	2	24	92%
Total	8	11	1	4	2	26	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	5	10	1	3	2	21	81%
Wet Surface	2	1	0	1	0	4	15%
Snow	0	0	0	0	0	0	0%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	1	0	0	0	0	1	4%
Total	8	11	1	4	2	26	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	7	10	1	2	2	22	85%
Dusk	0	0	0	0	0	0	0%
Night	1	1	0	2	0	4	15%
Unknown	0	0	0	0	0	0	0%
Total	8	11	1	4	2	26	100%

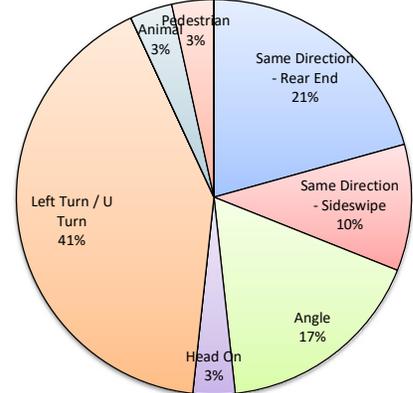




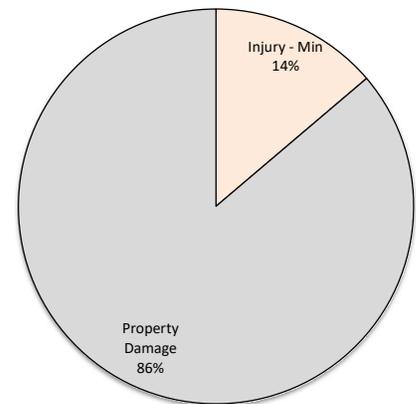
Location: Airmont Rd (CR 89) & North DeBaun Avenue
 Town, County, State: Village of Airmont, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

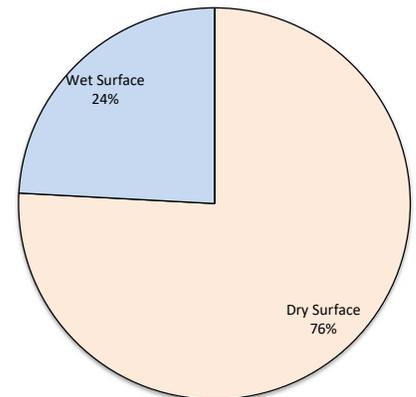
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	1	1	1	3	0	6	21%
Same Direction - Sideswipe	2	0	0	0	1	3	10%
Angle	0	1	1	0	3	5	17%
Head On	0	0	0	1	0	1	3%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	4	4	0	2	2	12	41%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overtaken	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	0	0	0%
Animal	1	0	0	0	0	1	3%
Pedestrian	0	0	1	0	0	1	3%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	8	6	3	6	6	29	100%



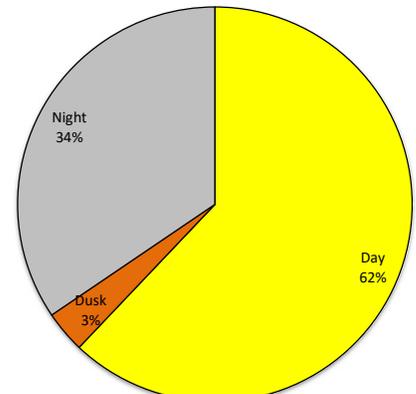
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	0	0	0	0	0	0%
Injury - Min	0	1	2	0	1	4	14%
Property Damage	8	5	1	6	5	25	86%
Total	8	6	3	6	6	29	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	7	4	2	5	4	22	76%
Wet Surface	1	2	1	1	2	7	24%
Snow	0	0	0	0	0	0	0%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	8	6	3	6	6	29	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	4	5	1	4	4	18	62%
Dusk	0	0	1	0	0	1	3%
Night	4	1	1	2	2	10	34%
Unknown	0	0	0	0	0	0	0%
Total	8	6	3	6	6	29	100%

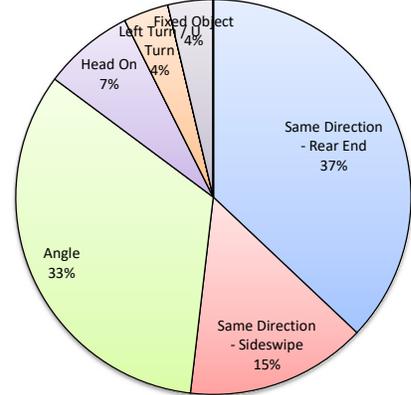




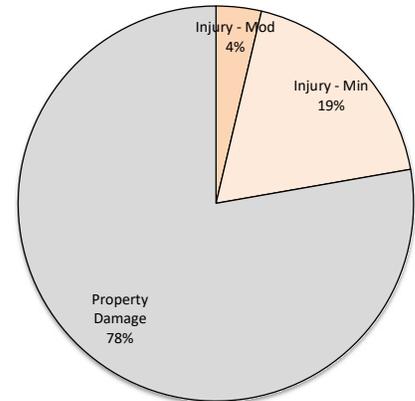
Location: Airmont Rd (CR 89) & Montebello Rd (CR 64)/Rella Blvd
 Town, County, State: Village of Montebello, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - November 2022

Crash Analysis

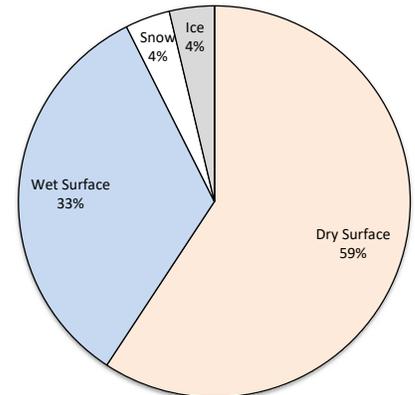
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	4	0	0	4	2	10	37%
Same Direction - Sideswipe	0	0	0	2	2	4	15%
Angle	3	3	0	1	2	9	33%
Head On	0	0	0	0	2	2	7%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	1	0	0	0	0	1	4%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overturned	0	0	0	0	0	0	0%
Fixed Object	0	0	1	0	0	1	4%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	8	3	1	7	8	27	100%



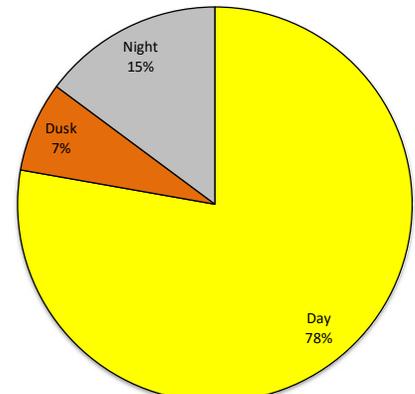
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	1	0	0	0	0	1	4%
Injury - Min	4	0	0	1	0	5	19%
Property Damage	3	3	1	6	8	21	78%
Total	8	3	1	7	8	27	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	5	1	1	4	5	16	59%
Wet Surface	3	1	0	3	2	9	33%
Snow	0	1	0	0	0	1	4%
Ice	0	0	0	0	1	1	4%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	8	3	1	7	8	27	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	7	0	1	6	7	21	78%
Dusk	1	1	0	0	0	2	7%
Night	0	2	0	1	1	4	15%
Unknown	0	0	0	0	0	0	0%
Total	8	3	1	7	8	27	100%

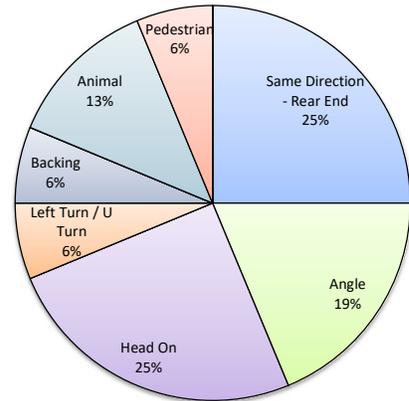




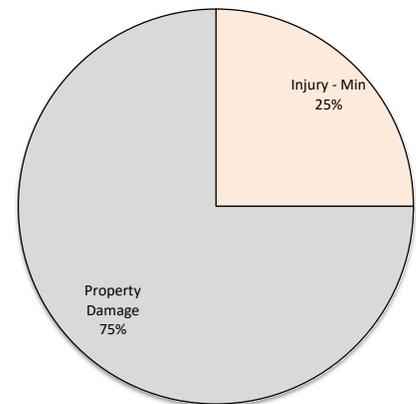
Location: Lafayette Ave (Route 59) & Brookside Avenue
 Town, County, State: Village of Airmont, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - November 2022

Crash Analysis

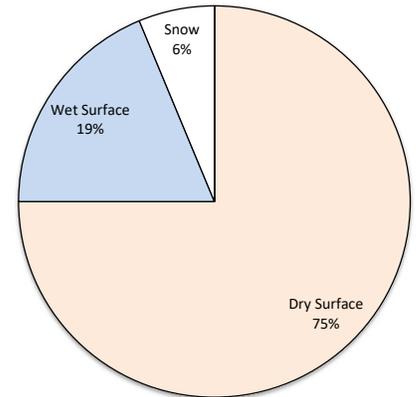
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	0	3	1	0	0	4	25%
Same Direction - Sideswipe	0	0	0	0	0	0	0%
Angle	1	0	0	1	1	3	19%
Head On	1	2	0	0	1	4	25%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	1	0	0	0	0	1	6%
Backing	0	0	0	0	1	1	6%
Encroachment	0	0	0	0	0	0	0%
Overtuned	0	0	0	0	0	0	0%
Fixed Object	0	0	0	0	0	0	0%
Animal	2	0	0	0	0	2	13%
Pedestrian	1	0	0	0	0	1	6%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	6	5	1	1	3	16	100%



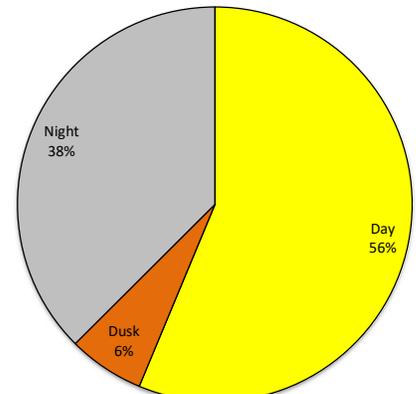
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	0	0	0	0	0	0%
Injury - Min	2	1	0	0	1	4	25%
Property Damage	4	4	1	1	2	12	75%
Total	6	5	1	1	3	16	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	5	4	1	1	1	12	75%
Wet Surface	1	0	0	0	2	3	19%
Snow	0	1	0	0	0	1	6%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	6	5	1	1	3	16	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	2	3	0	1	3	9	56%
Dusk	1	0	0	0	0	1	6%
Night	3	2	1	0	0	6	38%
Unknown	0	0	0	0	0	0	0%
Total	6	5	1	1	3	16	100%

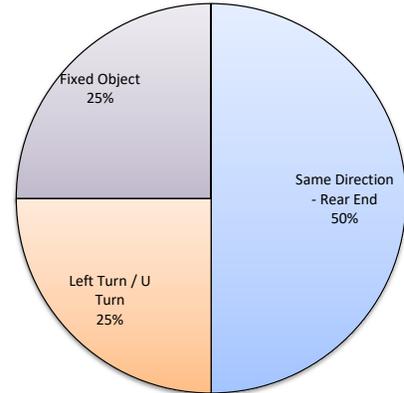




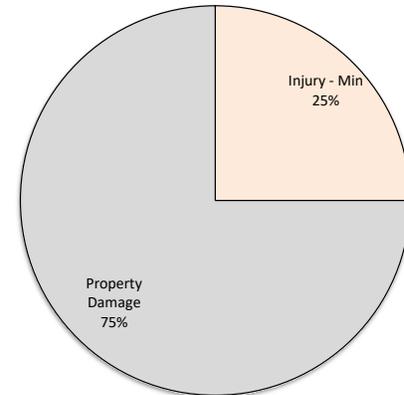
Location: Hemion Road (CR 93) & Montebello Road (CR 64)
 Town, County, State: Village of Montebello, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

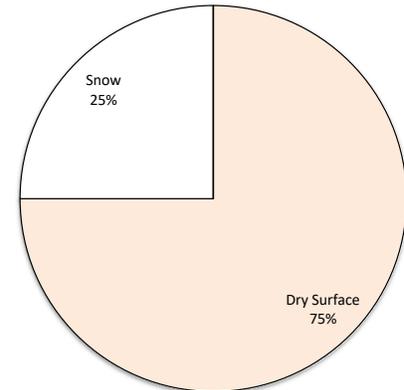
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	2	0	0	0	0	2	50%
Same Direction - Sideswipe	0	0	0	0	0	0	0%
Angle	0	0	0	0	0	0	0%
Head On	0	0	0	0	0	0	0%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	0	0	1	0	0	1	25%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overtuned	0	0	0	0	0	0	0%
Fixed Object	0	0	1	0	0	1	25%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	2	0	2	0	0	4	100%



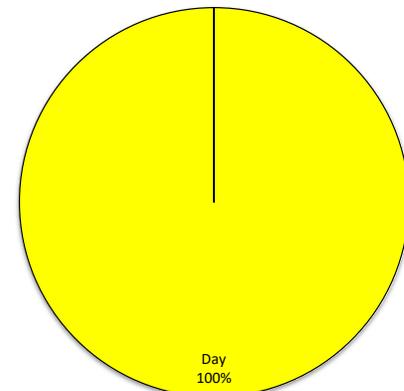
Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	0	0	0	0	0	0%
Injury - Min	0	0	1	0	0	1	25%
Property Damage	2	0	1	0	0	3	75%
Total	2	0	2	0	0	4	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	2	0	1	0	0	3	75%
Wet Surface	0	0	0	0	0	0	0%
Snow	0	0	1	0	0	1	25%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	2	0	2	0	0	4	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	2	0	2	0	0	4	100%
Dusk	0	0	0	0	0	0	0%
Night	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Total	2	0	2	0	0	4	100%

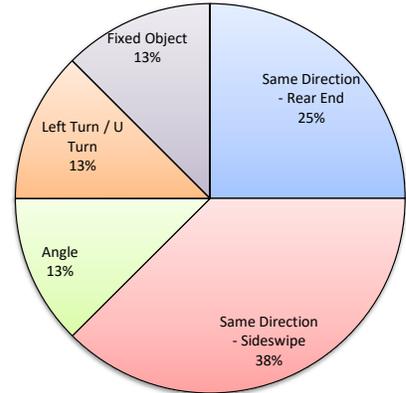




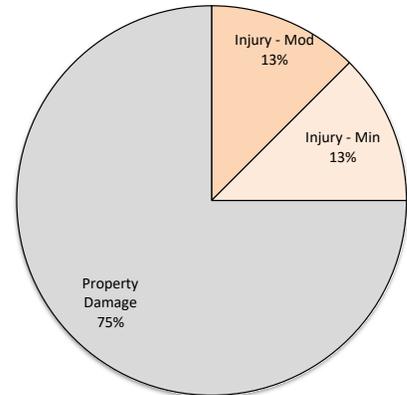
Location: Airmont Rd (CR 89) & Dunnigan Drive
 Town, County, State: Village of Airmont, Rockland County, NY
 DT #: 3709-99-004T
 Time Period: January 2018 - July 2022

Crash Analysis

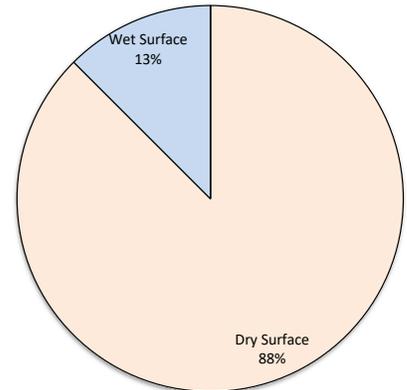
Crash Type	2018	2019	2020	2021	2022	Total	%
Same Direction - Rear End	1	1	0	0	0	2	25%
Same Direction - Sideswipe	2	1	0	0	0	3	38%
Angle	1	0	0	0	0	1	13%
Head On	0	0	0	0	0	0	0%
Parked Vehicle	0	0	0	0	0	0	0%
Left Turn / U Turn	1	0	0	0	0	1	13%
Backing	0	0	0	0	0	0	0%
Encroachment	0	0	0	0	0	0	0%
Overturned	0	0	0	0	0	0	0%
Fixed Object	1	0	0	0	0	1	13%
Animal	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Pedalcycle	0	0	0	0	0	0	0%
Non-Fixed Object	0	0	0	0	0	0	0%
Railcar - Vehicle	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	6	2	0	0	0	8	100%



Severity	2018	2019	2020	2021	2022	Total	%
Fatal	0	0	0	0	0	0	0%
Injury - Maj	0	0	0	0	0	0	0%
Injury - Mod	0	1	0	0	0	1	13%
Injury - Min	1	0	0	0	0	1	13%
Property Damage	5	1	0	0	0	6	75%
Total	6	2	0	0	0	8	100%



Surface Condition	2018	2019	2020	2021	2022	Total	%
Dry Surface	6	1	0	0	0	7	88%
Wet Surface	0	1	0	0	0	1	13%
Snow	0	0	0	0	0	0	0%
Ice	0	0	0	0	0	0	0%
Unkonwn	0	0	0	0	0	0	0%
Other	0	0	0	0	0	0	0%
Total	6	2	0	0	0	8	100%



Light Condition	2018	2019	2020	2021	2022	Total	%
Dawn	0	0	0	0	0	0	0%
Day	4	2	0	0	0	6	75%
Dusk	0	0	0	0	0	0	0%
Night	2	0	0	0	0	2	25%
Unknown	0	0	0	0	0	0	0%
Total	6	2	0	0	0	8	100%

