Gurnee Police Department Memorandum

TO: Chief Woodside

FROM: Traffic Safety Technician Chris Parr

SUBJECT: Follow-up Evaluation Report (Three Year)

DATE:02/14/2018

Chief Woodside,

Per the Illinois Department of Transportation policy on Red Light Running Camera Systems (RLR), we are required to present an evaluation report one year after operation of a photo enforced intersection(s) and every three years after.

In accordance with their policy the following information is needed for the evaluation report:

- Intersection Location(s).
- Date of implementation.
- RLR Camera System manufacturer and contractor name.
- Crash data specific to the RLR location(s) for the 3-year period prior to and for the period post RLR Camera installation. The crash data shall include yearly collision diagrams of the intersection(s).
- An analysis of the crash data, including a summary of any increases or decreases in crash types.
- Signal timings and other settings before and after RLR Camera installation.
- Traffic volumes before and after RLR Camera System installation. The traffic volumes shall include both Average Daily and Peak Period traffic.
- Recommendations to further reduce red light violations and severe crashes and to improve the operation of the intersection(s).
- Summary of adjudication experience and results.

Overview

The Village of Gurnee is required to provide a follow-up evaluation report to the Illinois Department of Transportation for the intersection(s) of Route 41 & Delany, Route 132 & Route 21, Route 132 & Dilleys and Route 132 & Hunt Club Road one year after the installation of a RLR Camera System.

On December 3, 2007, the Village of Gurnee entered into agreement with Redflex Traffic Systems Inc. to install RLR Camera Systems at several intersections throughout the village. The RLR Camera Systems were installed at each of the intersections listed below. Once the testing and warning phase was completed the RLR Systems went fully operational with citations being issued on:

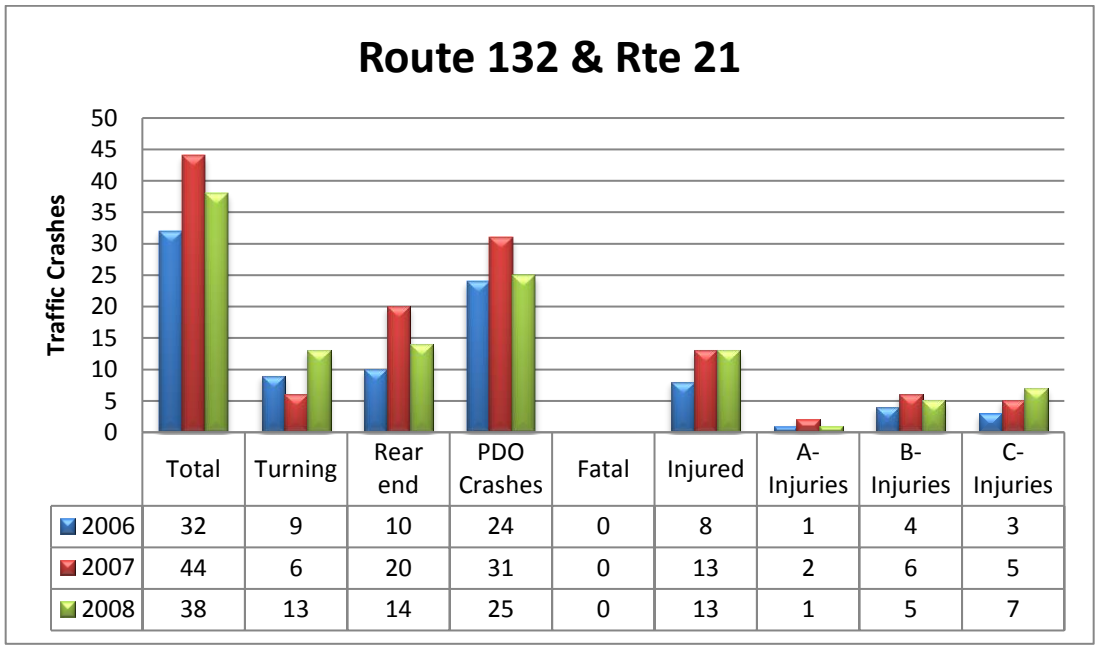
Route 132 & Route 21	June 6, 2009
Route 132 & Hunt Club Road	June 6, 2009
Route 132 & Dilleys Road	June 17, 2009
Route 41 & Delany Road	July 1, 2009

Crash Data

The crash data specific to the RLR location(s) for the 3-year period (Exhibit #1) prior to and for the period post (Exhibit #2, 3, 4, & 5) RLR Camera installation. The crash data shall include yearly collision diagrams of the intersection(s).

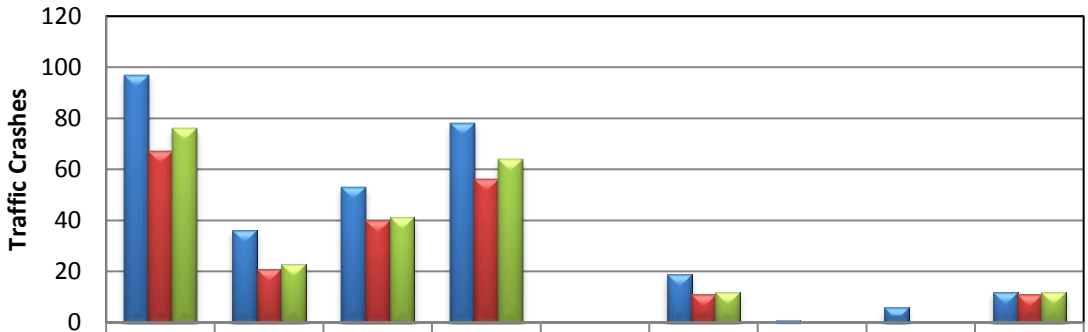
Note**** crash data source http://lake.ms2soft.com/tcds.

Exhibit #1



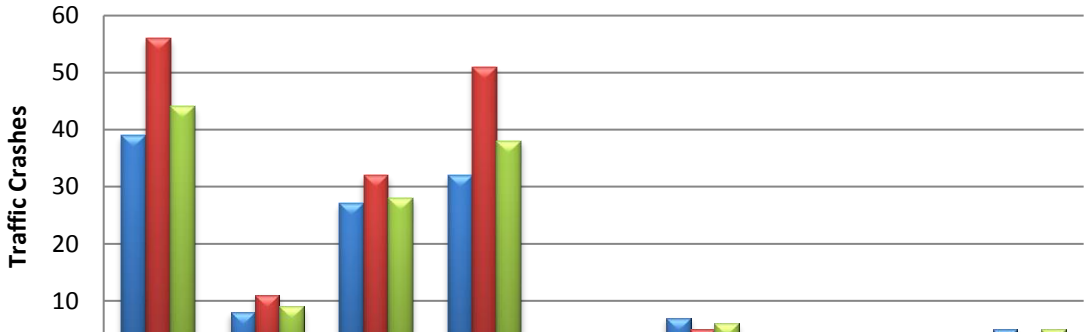
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	32	9	10	24	0	8	1	4	3
2007	44	6	20	31	0	13	2	6	5
2008	38	13	14	25	0	13	1	5	7

Route 132 & Hunt Club Road

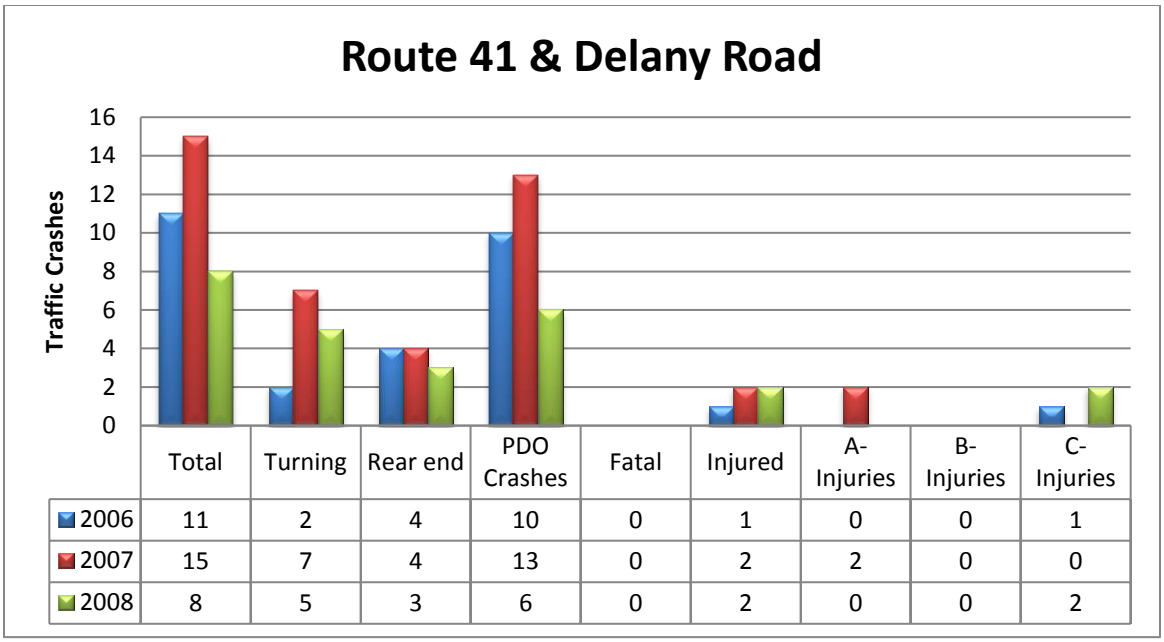


	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	97	36	53	78	0	19	1	6	12
2007	67	21	40	56	0	11	0	0	11
2008	76	23	41	64	0	12	0	0	12

Route 132 & Dilley's Road



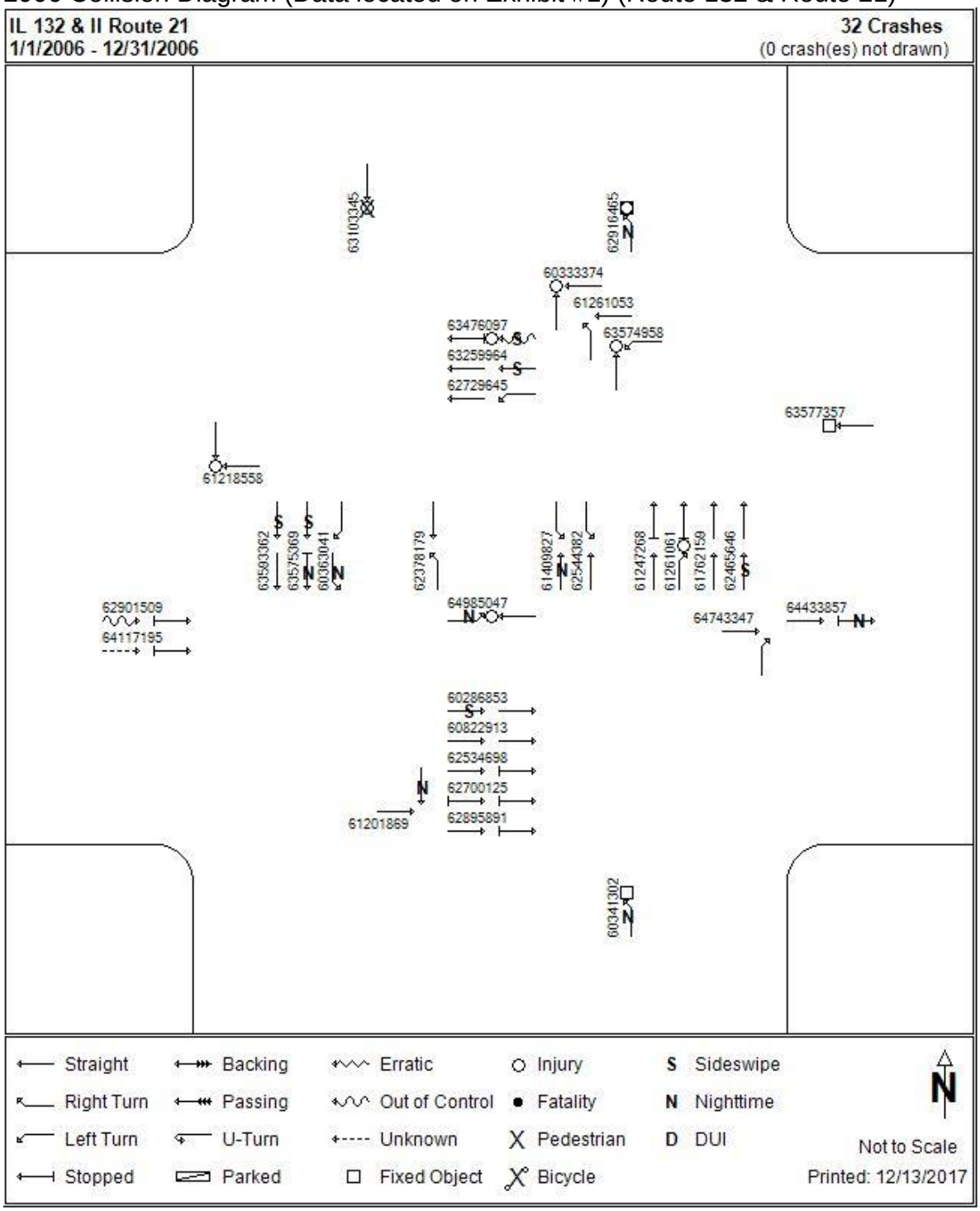
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	39	8	27	32	0	7	0	2	5
2007	56	11	32	51	0	5	0	2	3
2008	44	9	28	38	0	6	1	0	5



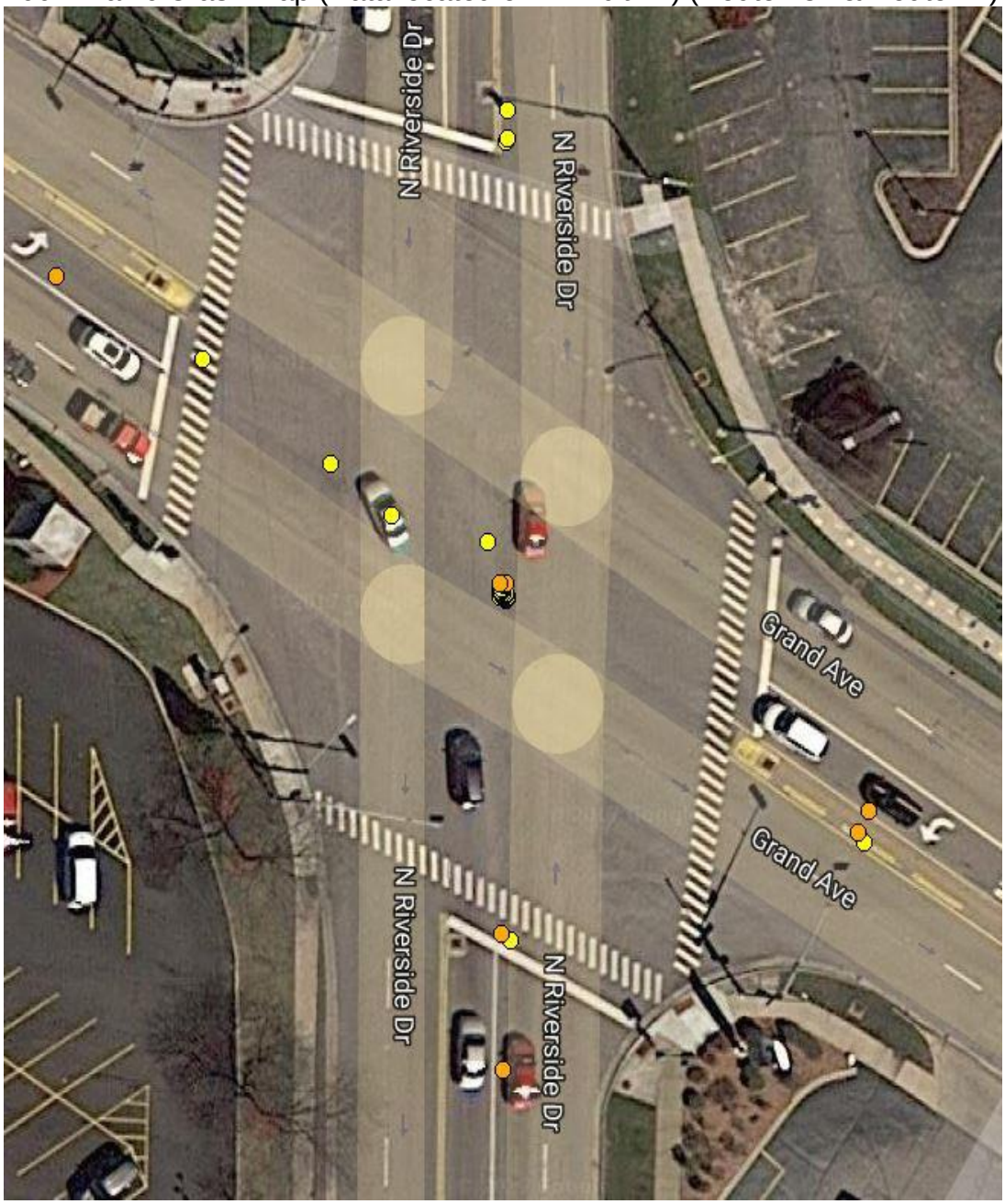
	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2006	11	2	4	10	0	1	0	0	1
2007	15	7	4	13	0	2	2	0	0
2008	8	5	3	6	0	2	0	0	2

2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)

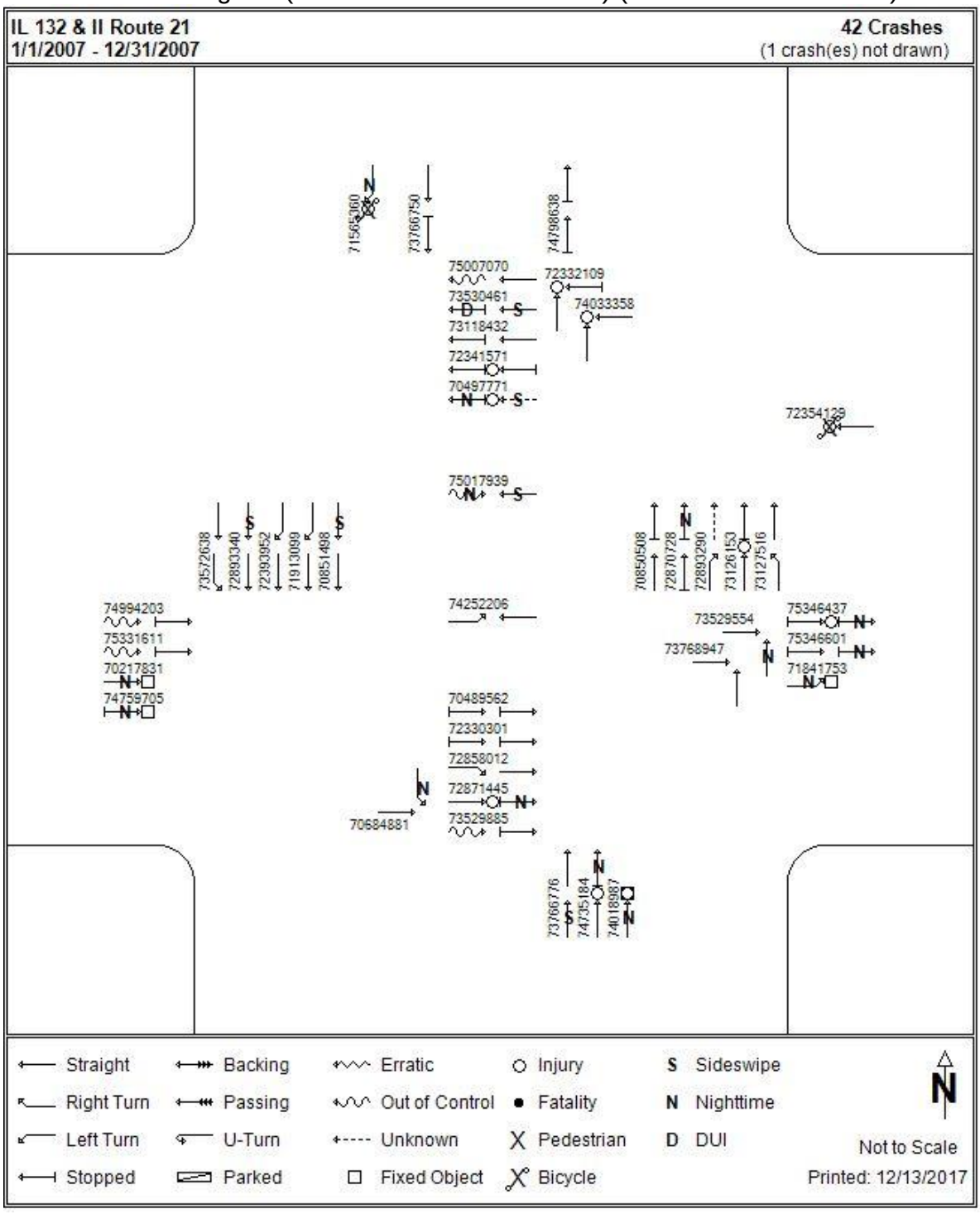
2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



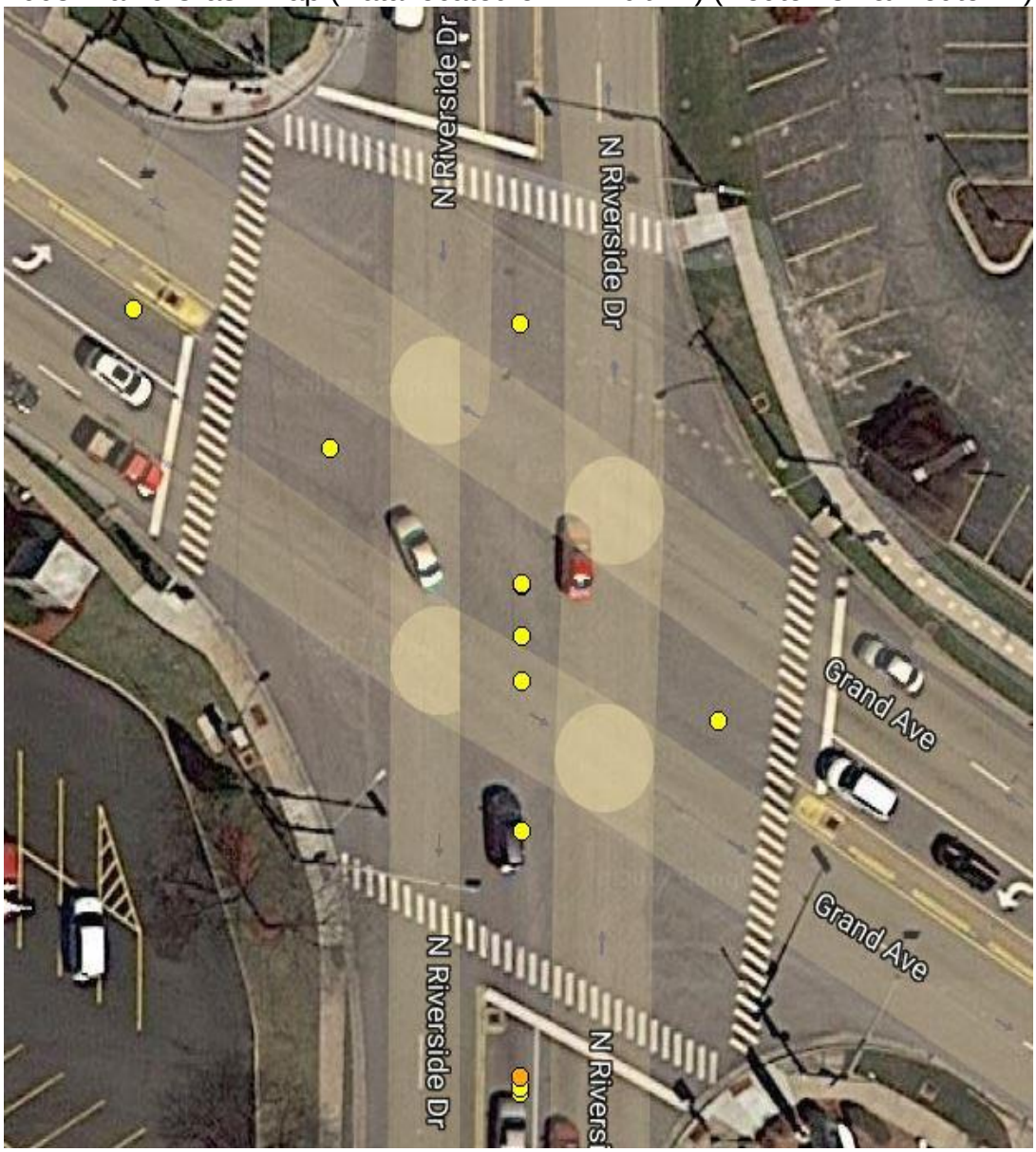
2007 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)



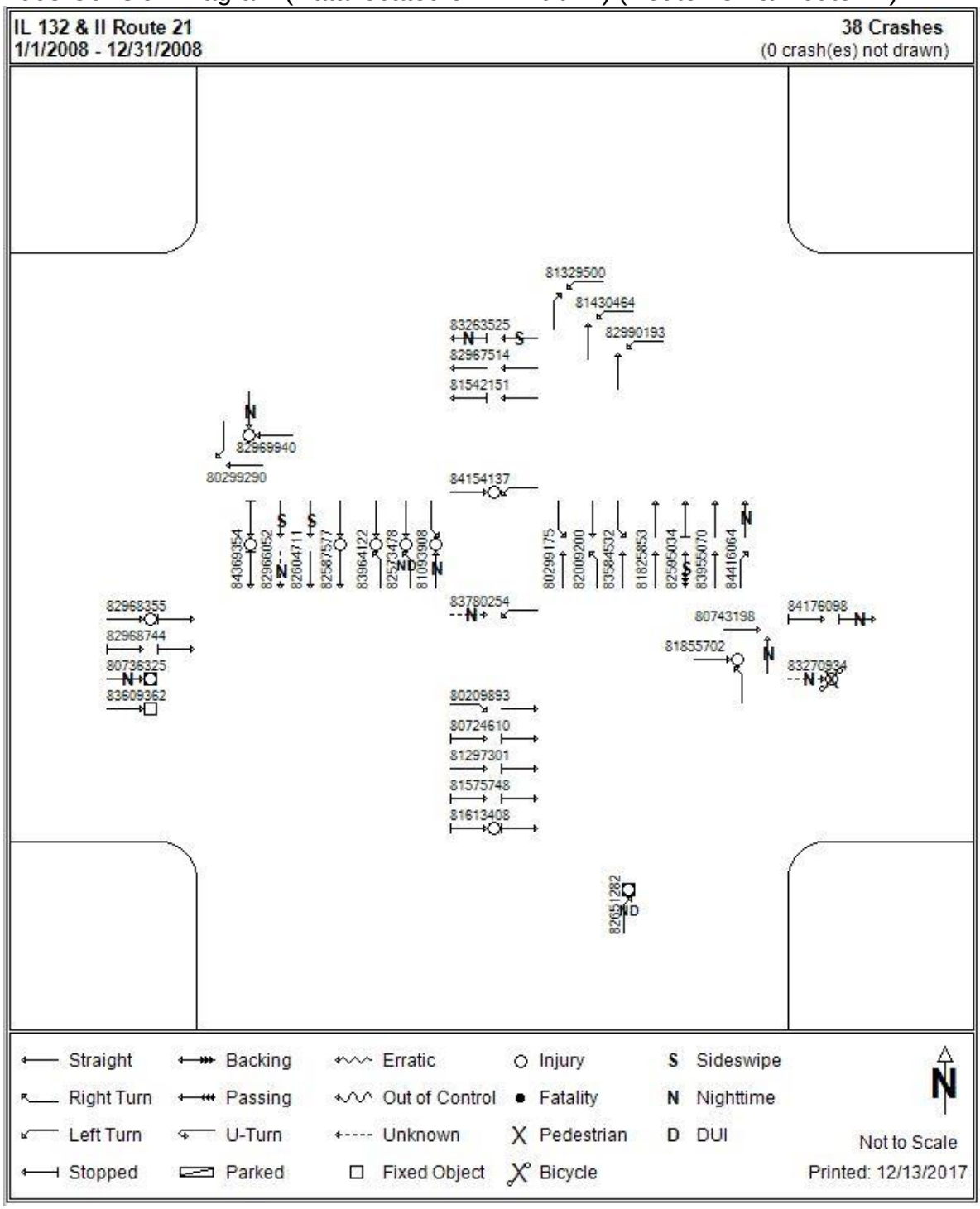
2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)



2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)



2006-2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Route 21)

2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Route 21)

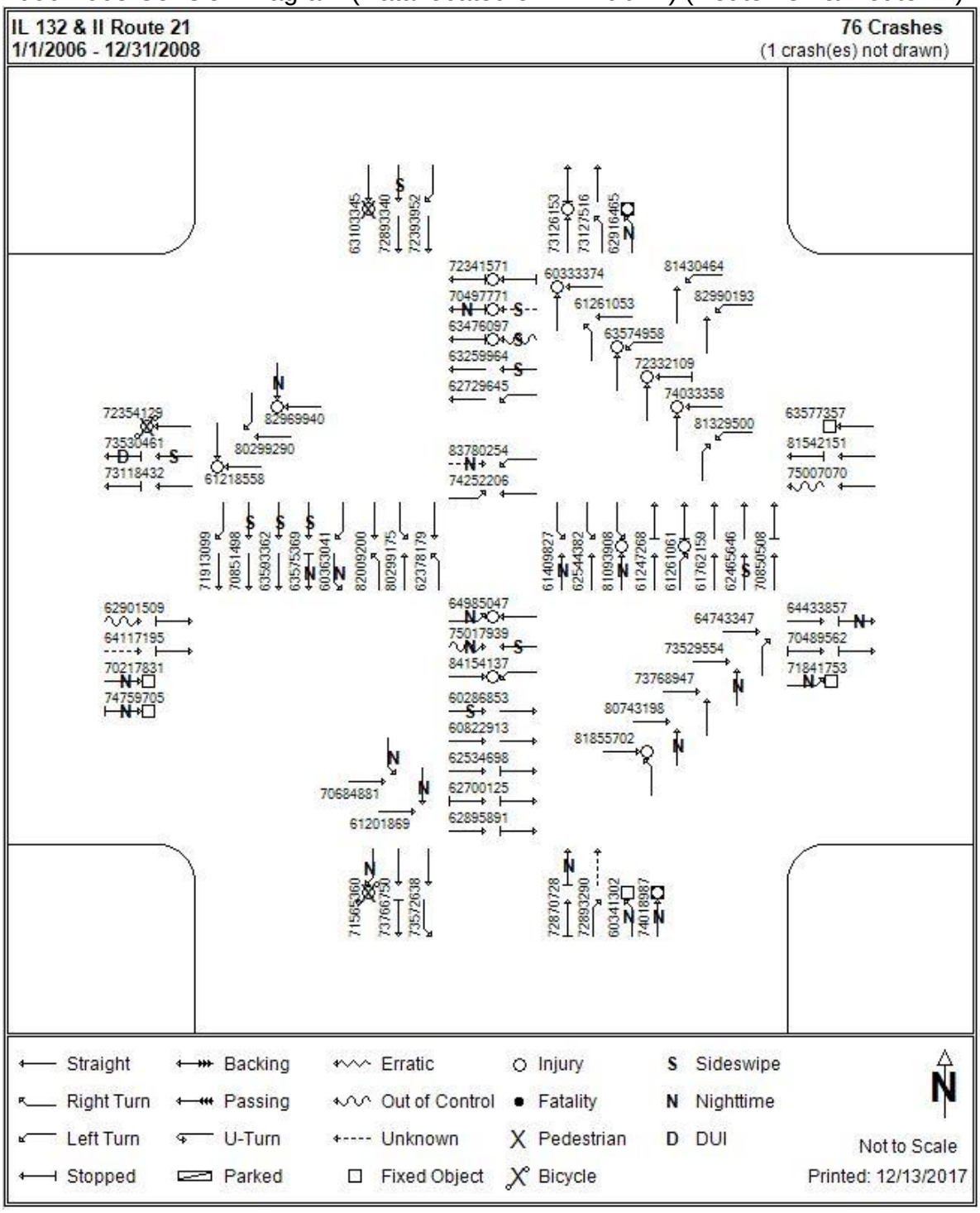
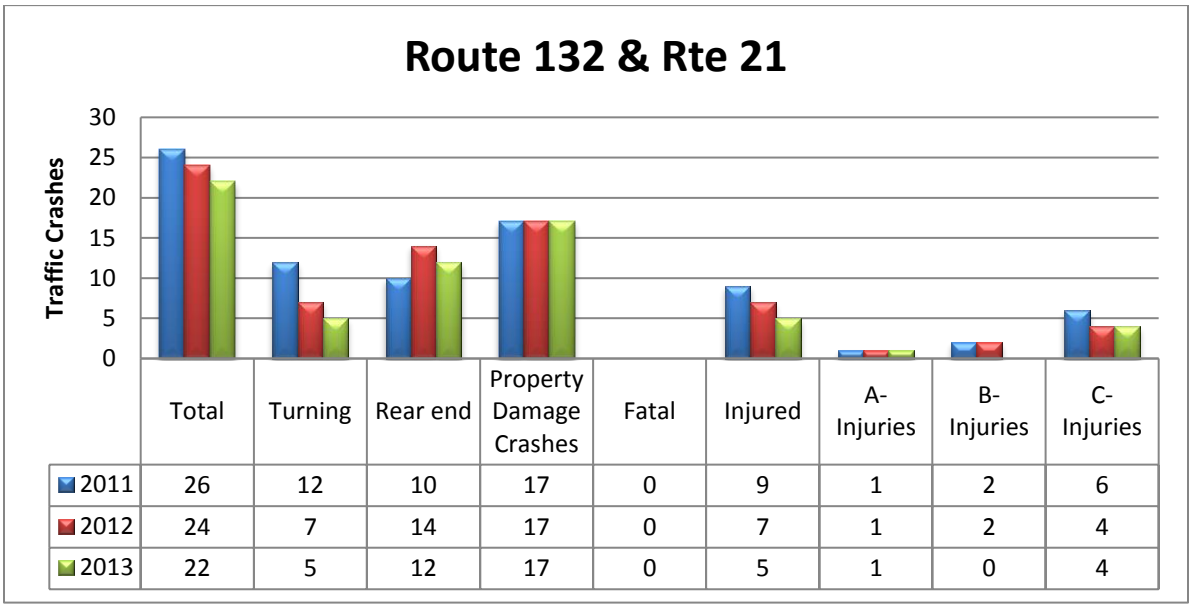


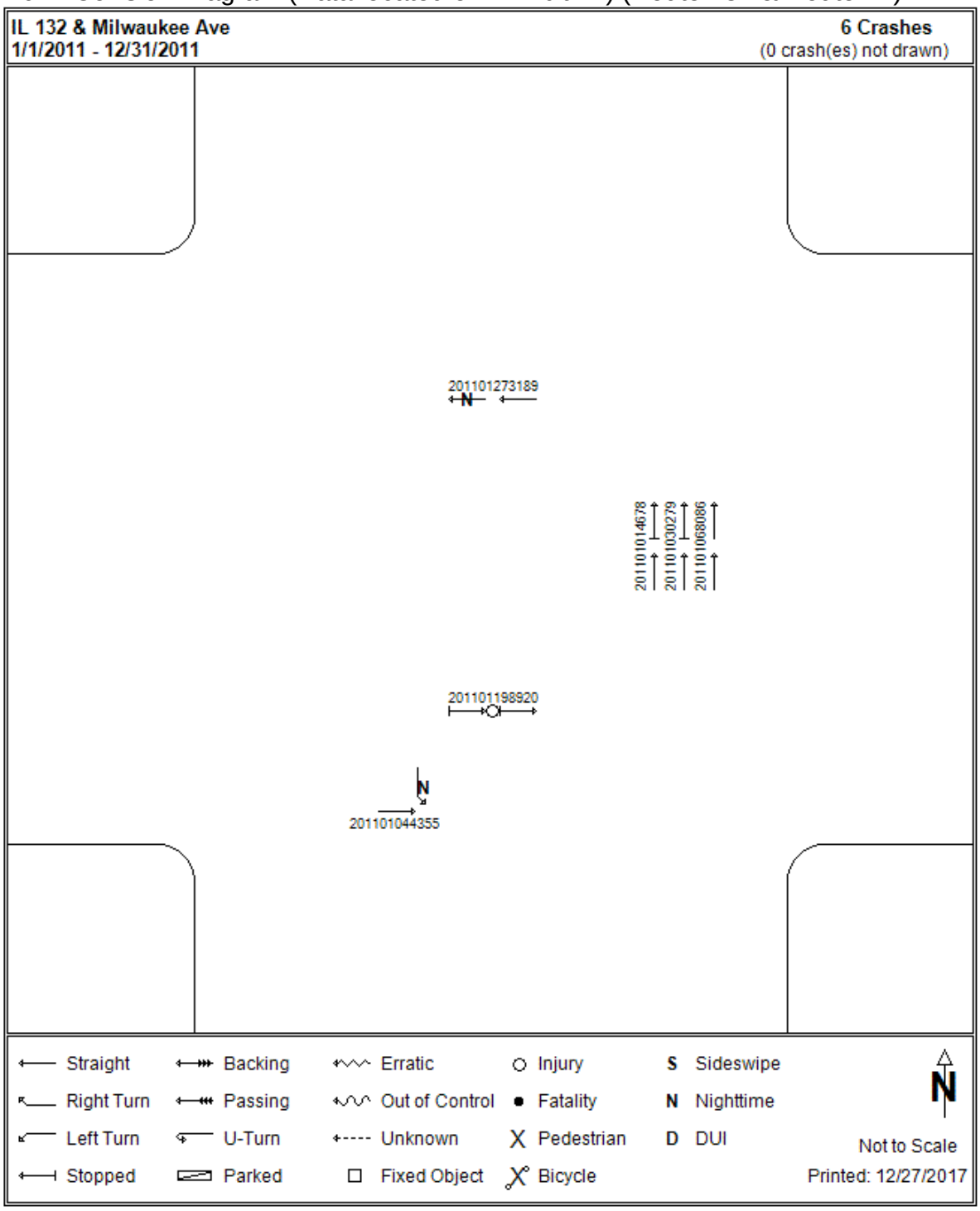
Exhibit #2



	Total	Turning	Rear end	Property Damage Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2011	26	12	10	17	0	9	1	2	6
2012	24	7	14	17	0	7	1	2	4
2013	22	5	12	17	0	5	1	0	4

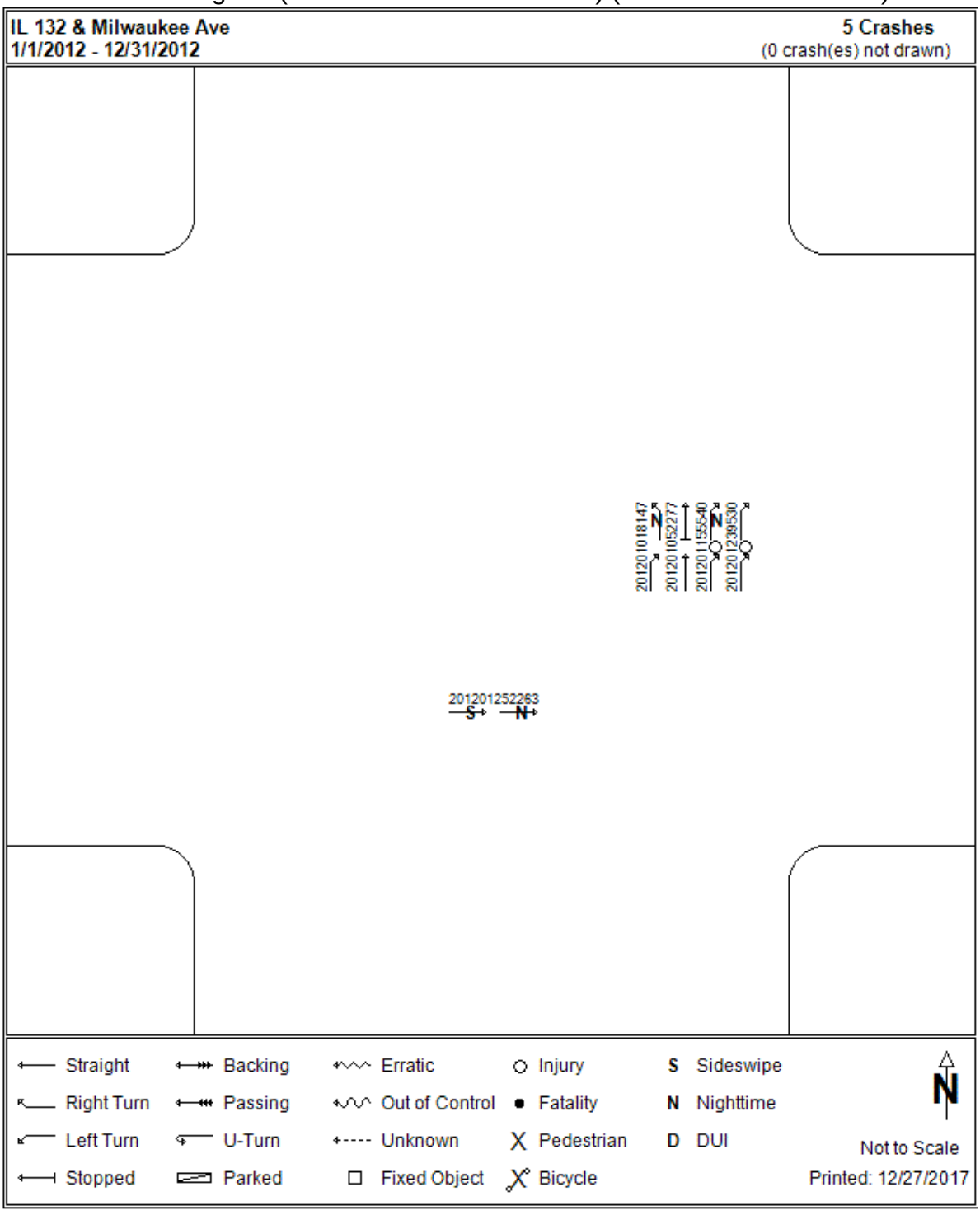
2011 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)

2011 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



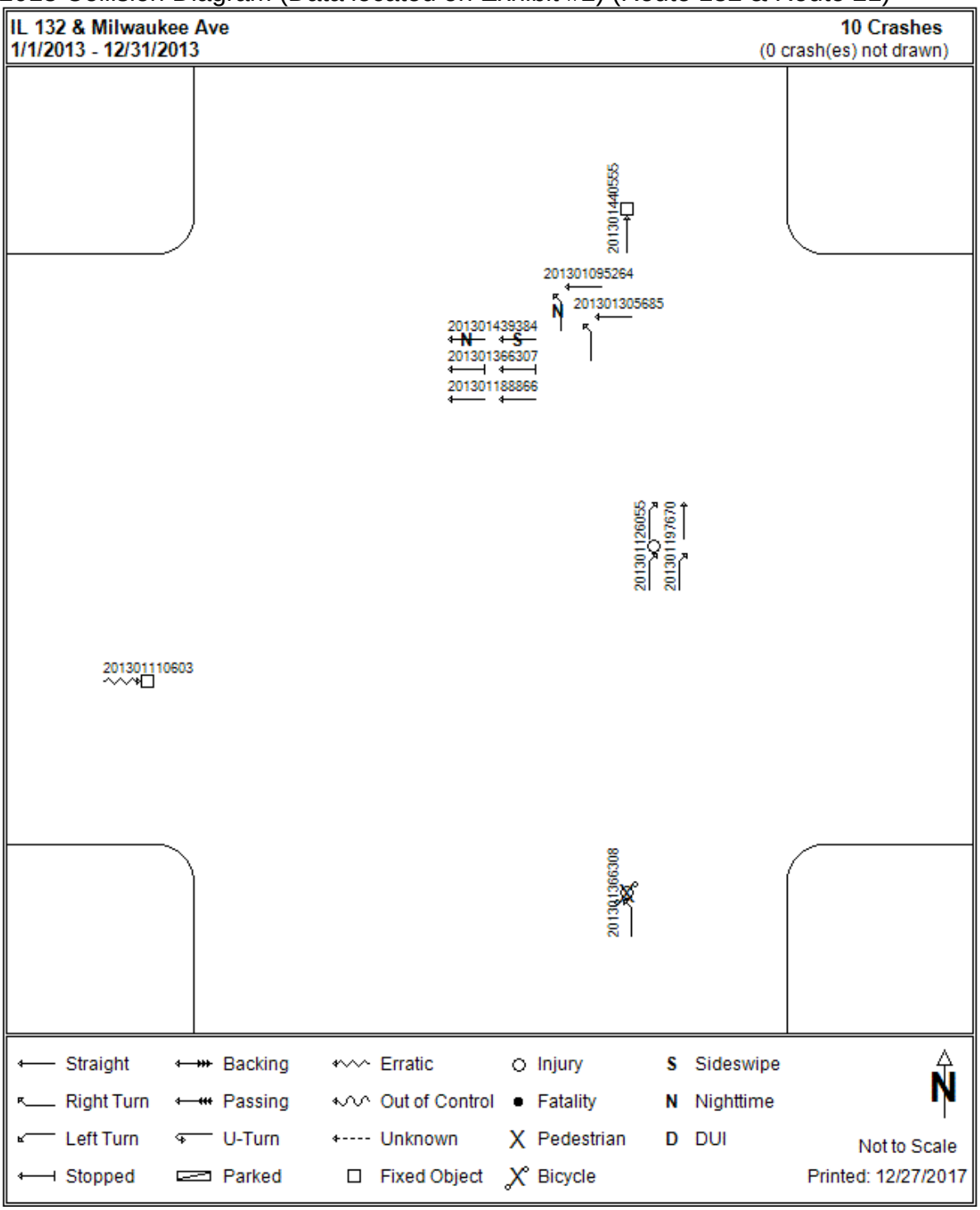
2012 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)

2012 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)

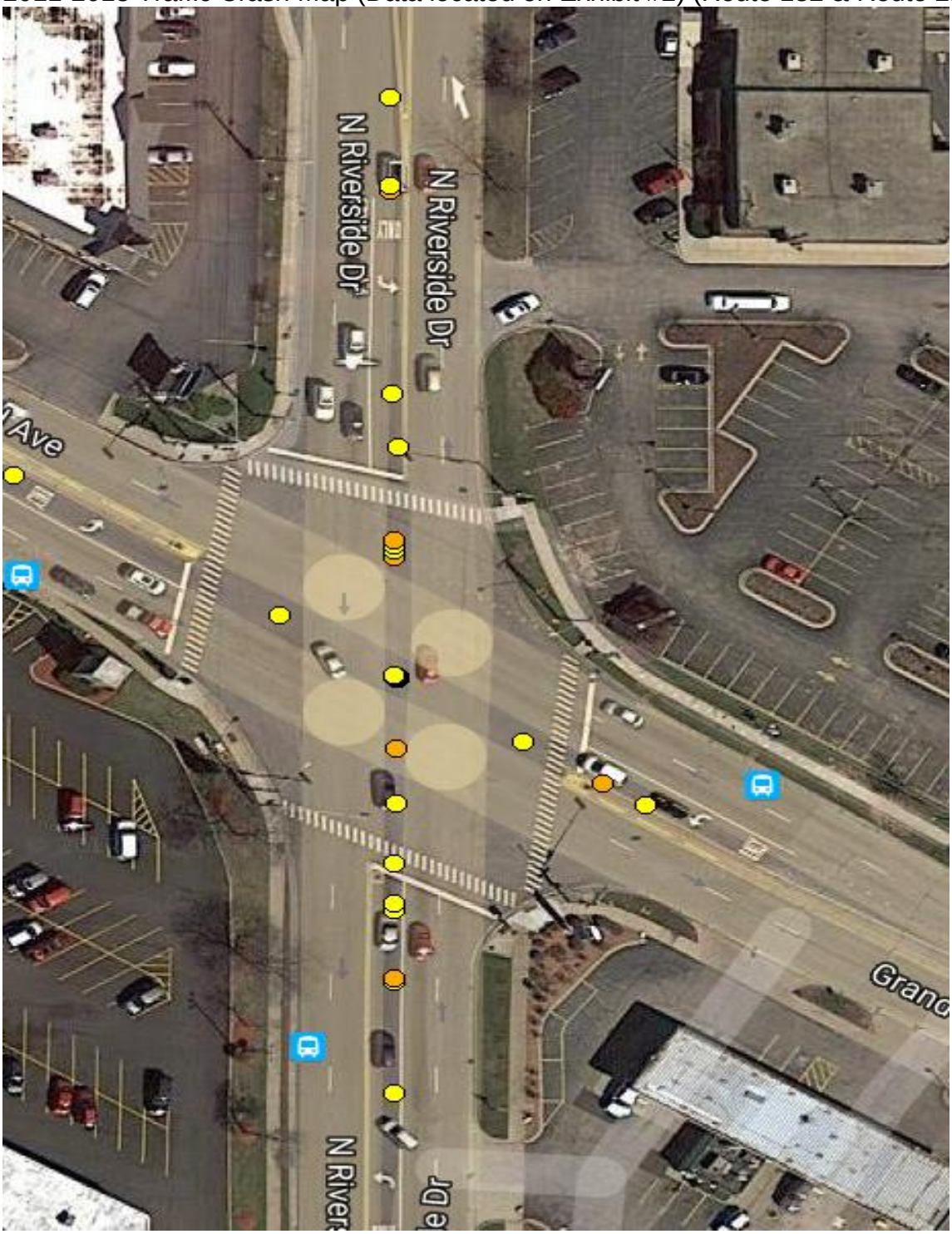


2013 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)

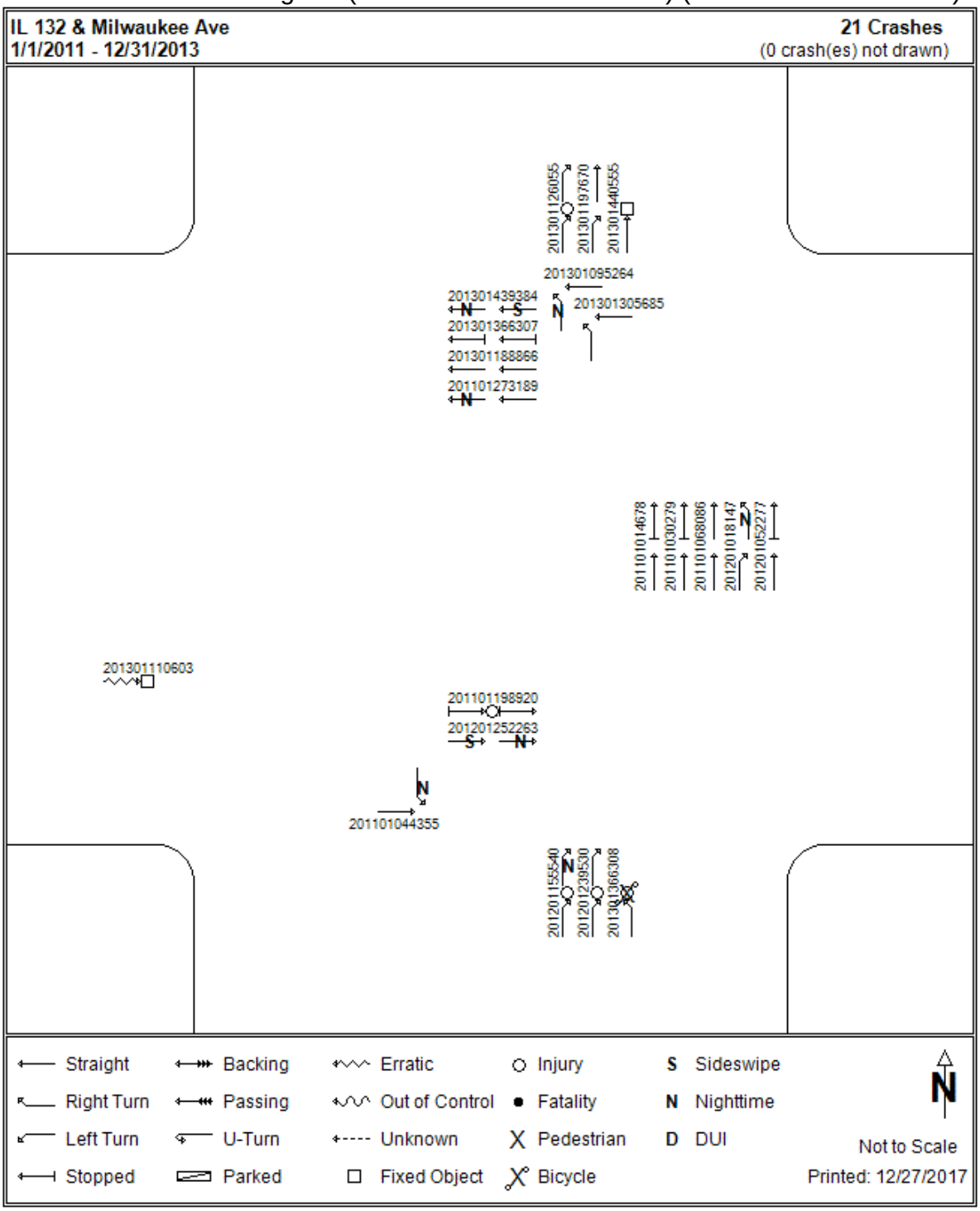
2013 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



2011-2013 Traffic Crash Map (Data located on Exhibit #2) (Route 132 & Route 21)

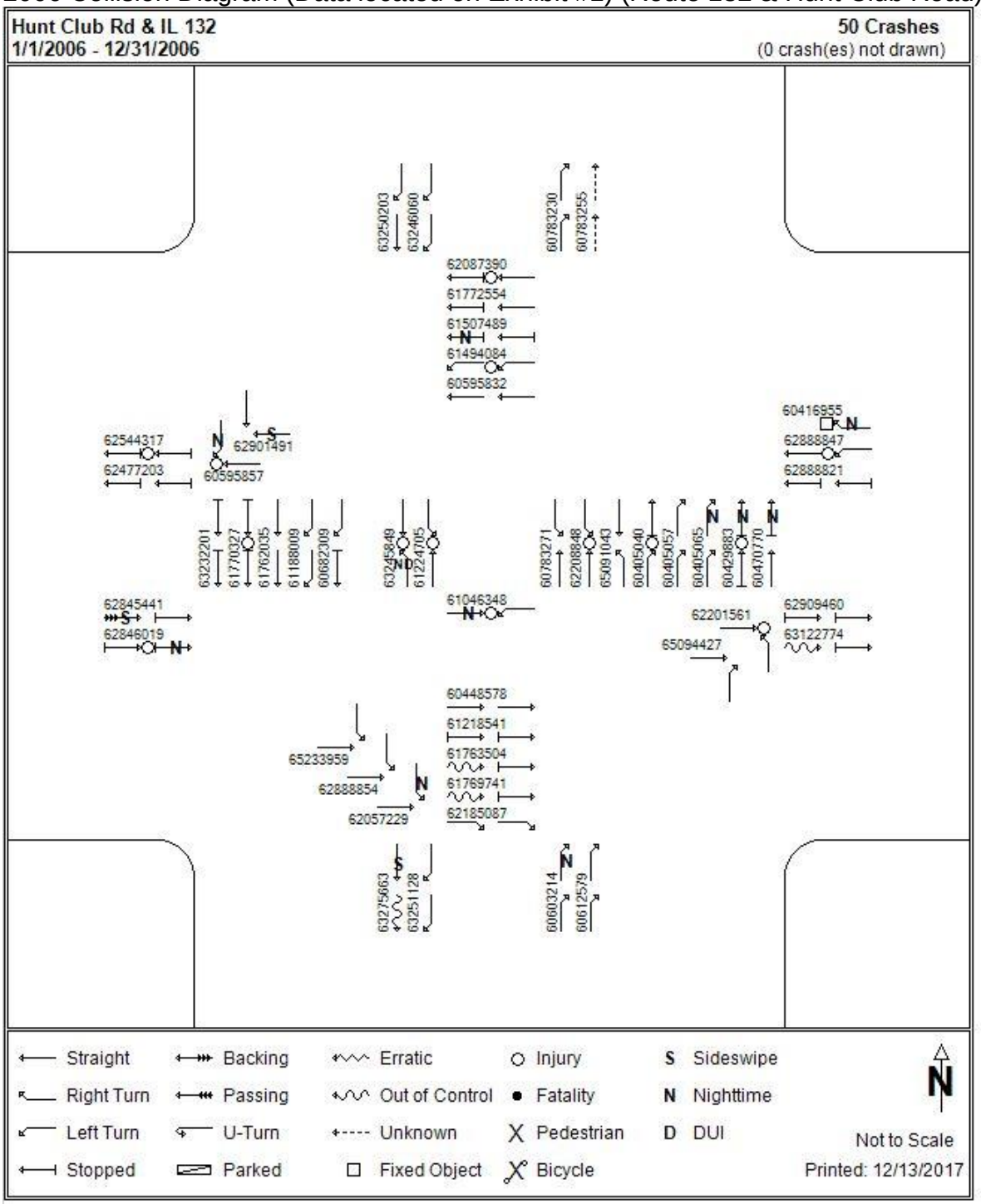


2011-2013 Collision Diagram (Data located on Exhibit #2) (Route 132 & Route 21)



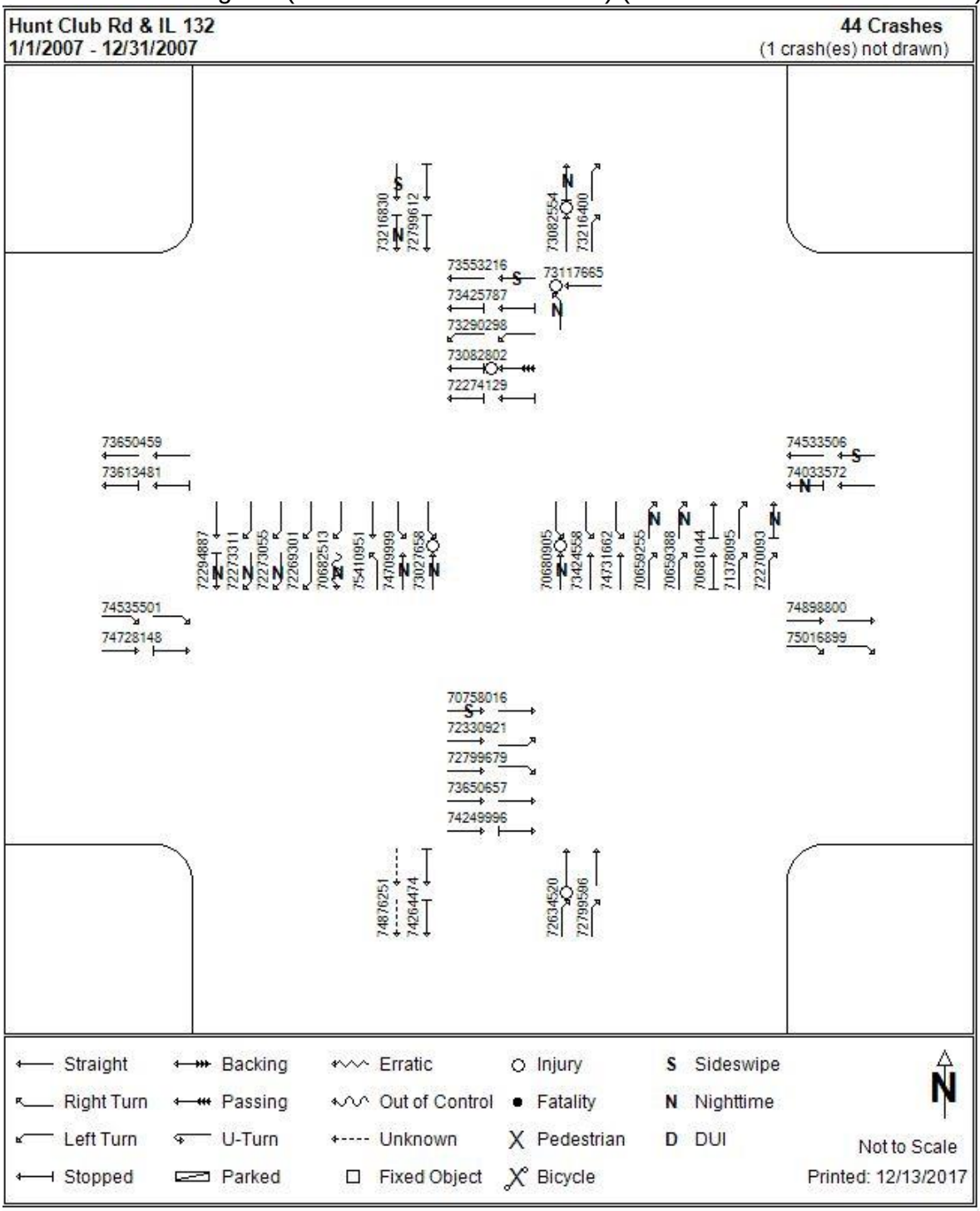
2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



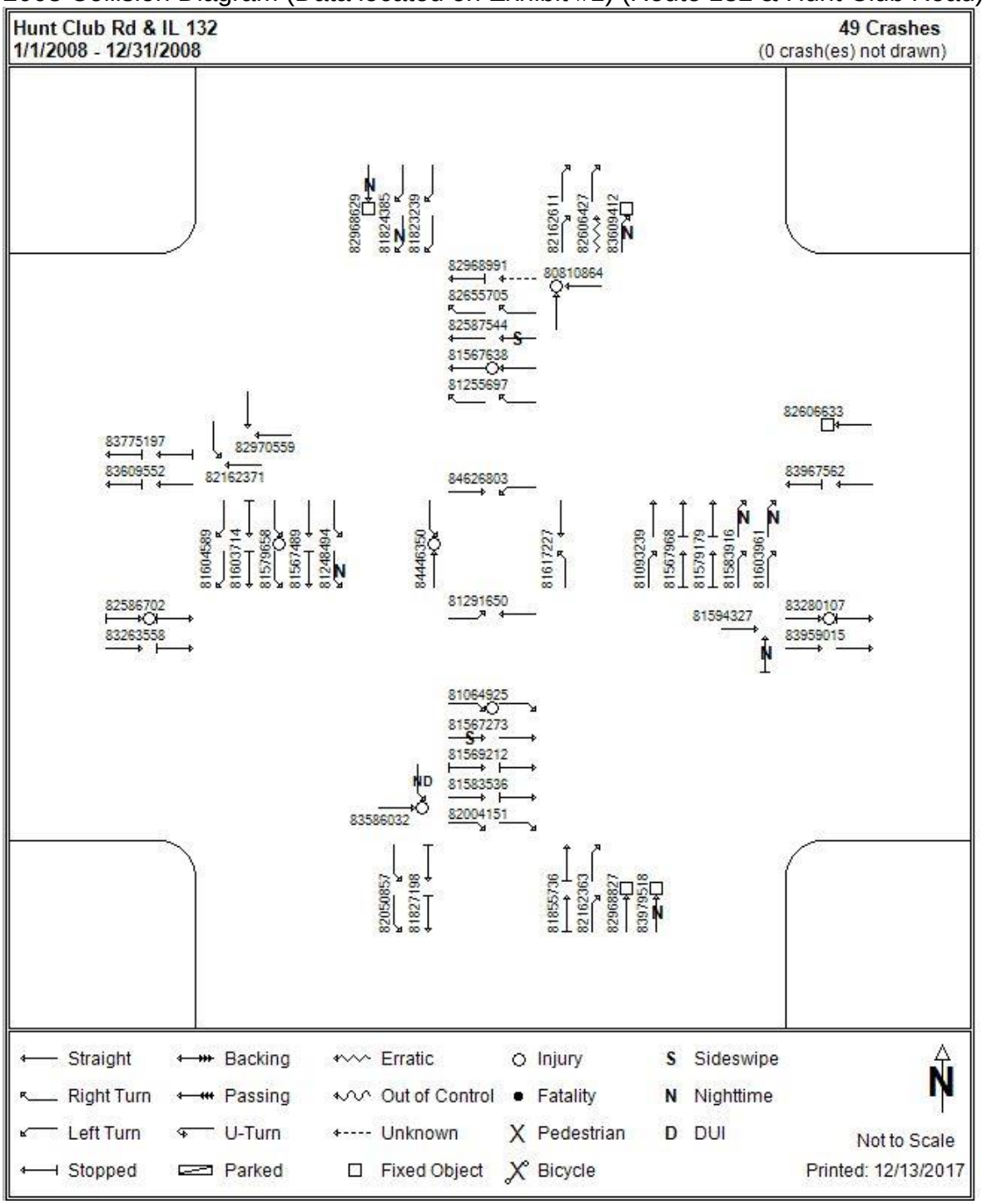
2007 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Hunt Club Road)



2006-2008 Crash Map (Data located on Exhibit #1) (Route 132 & Hunt Club Road)

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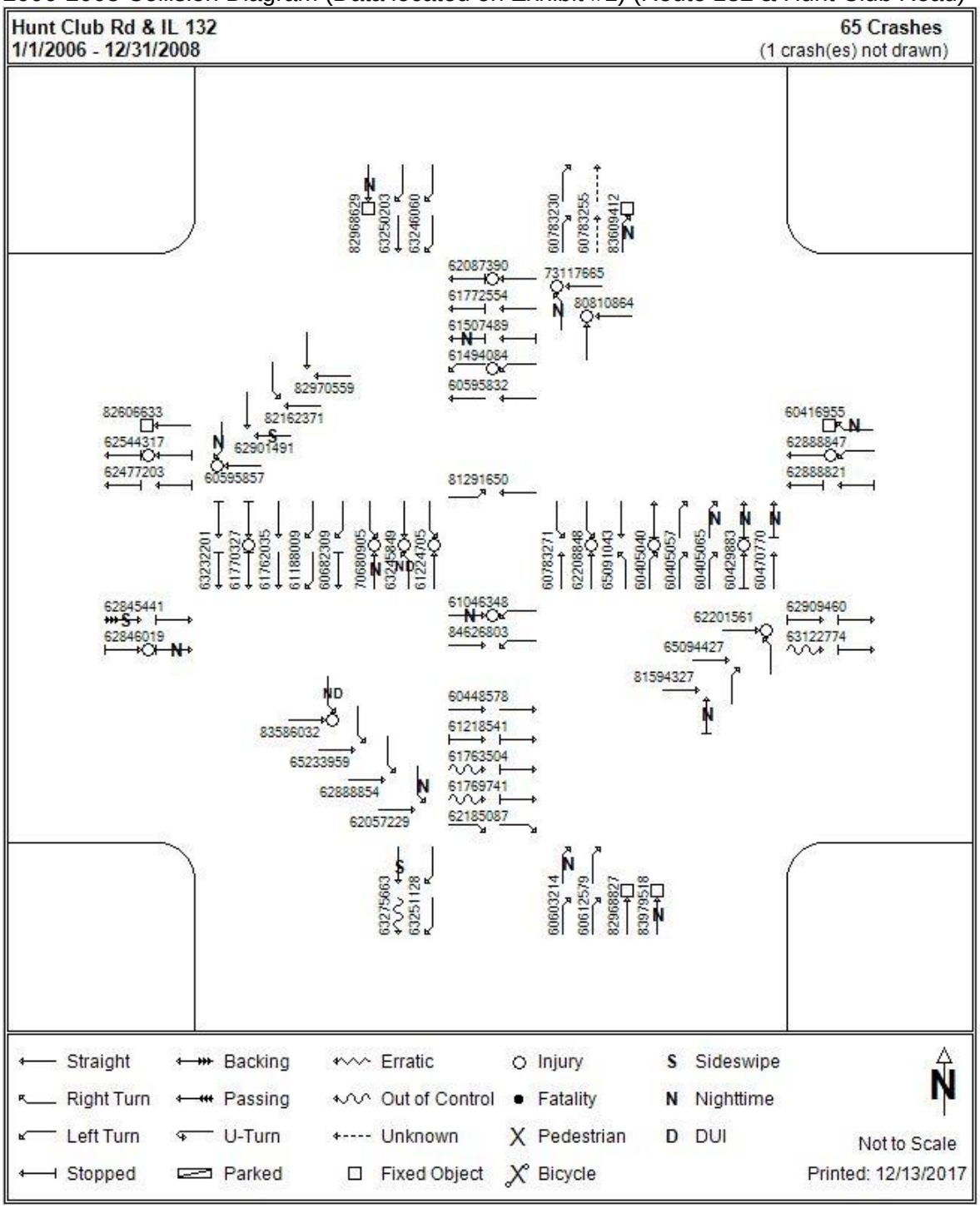
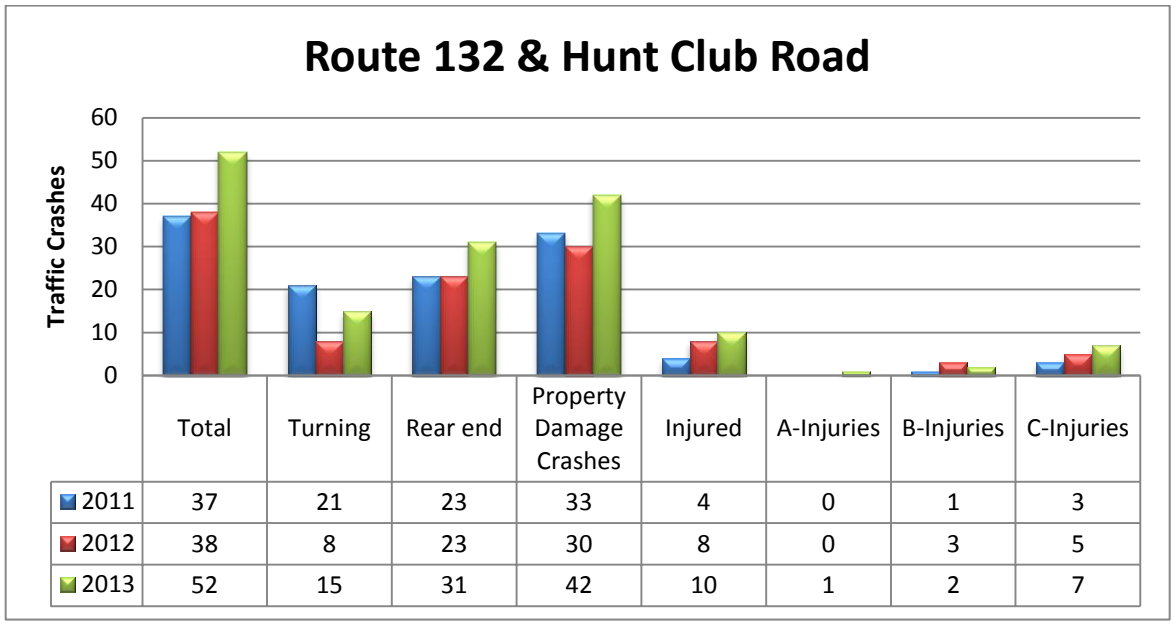


Straight | Backing | Erratic | Injury | S Sideswipe
Right Turn | Passing | Out of Control | Fatality | N Nighttime
Left Turn | U-Turn | Unknown | Pedestrian | D DUI
Stopped | Parked | Fixed Object | Bicycle

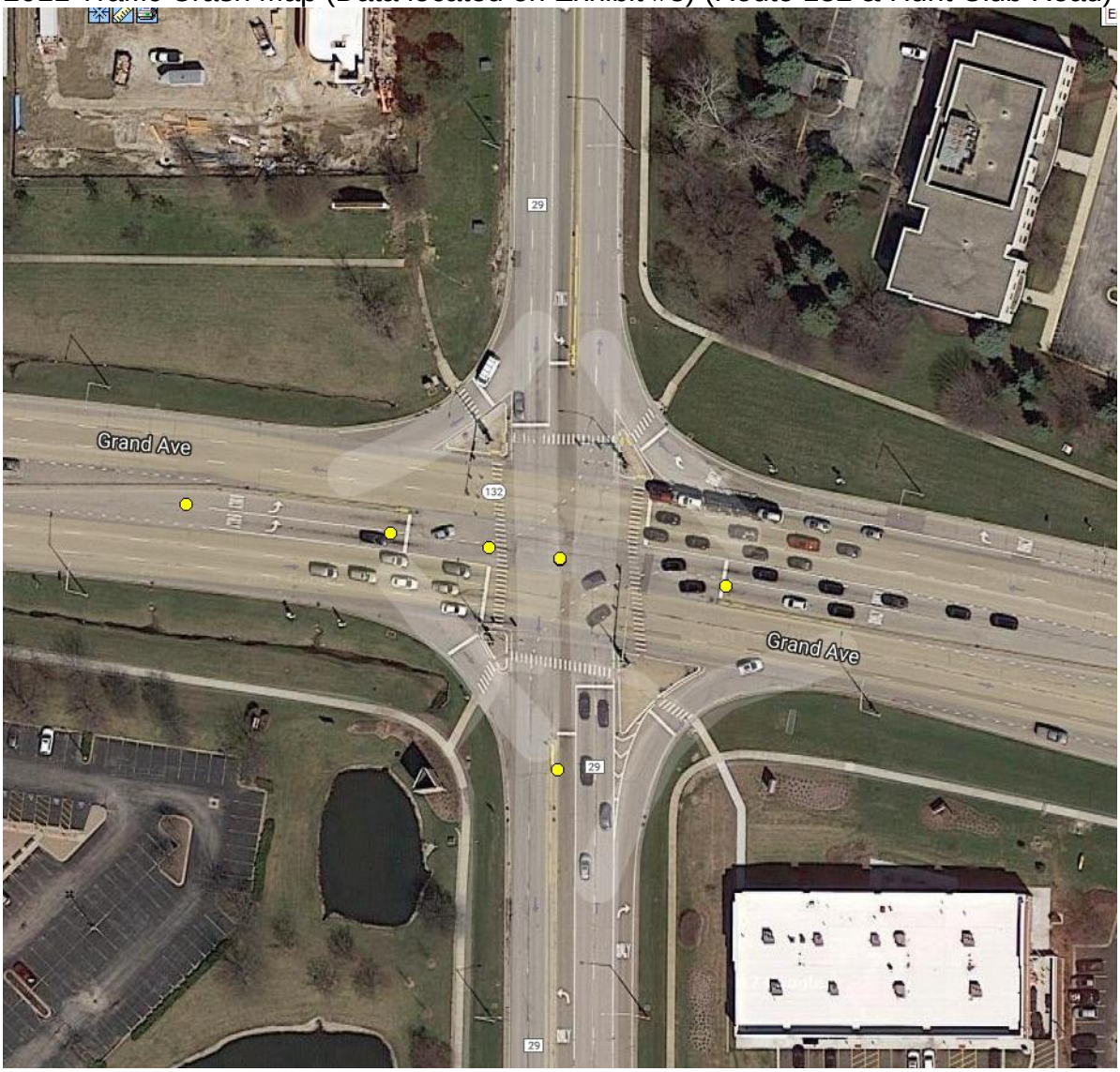
Not to Scale
Printed: 12/13/2017

Exhibit #3

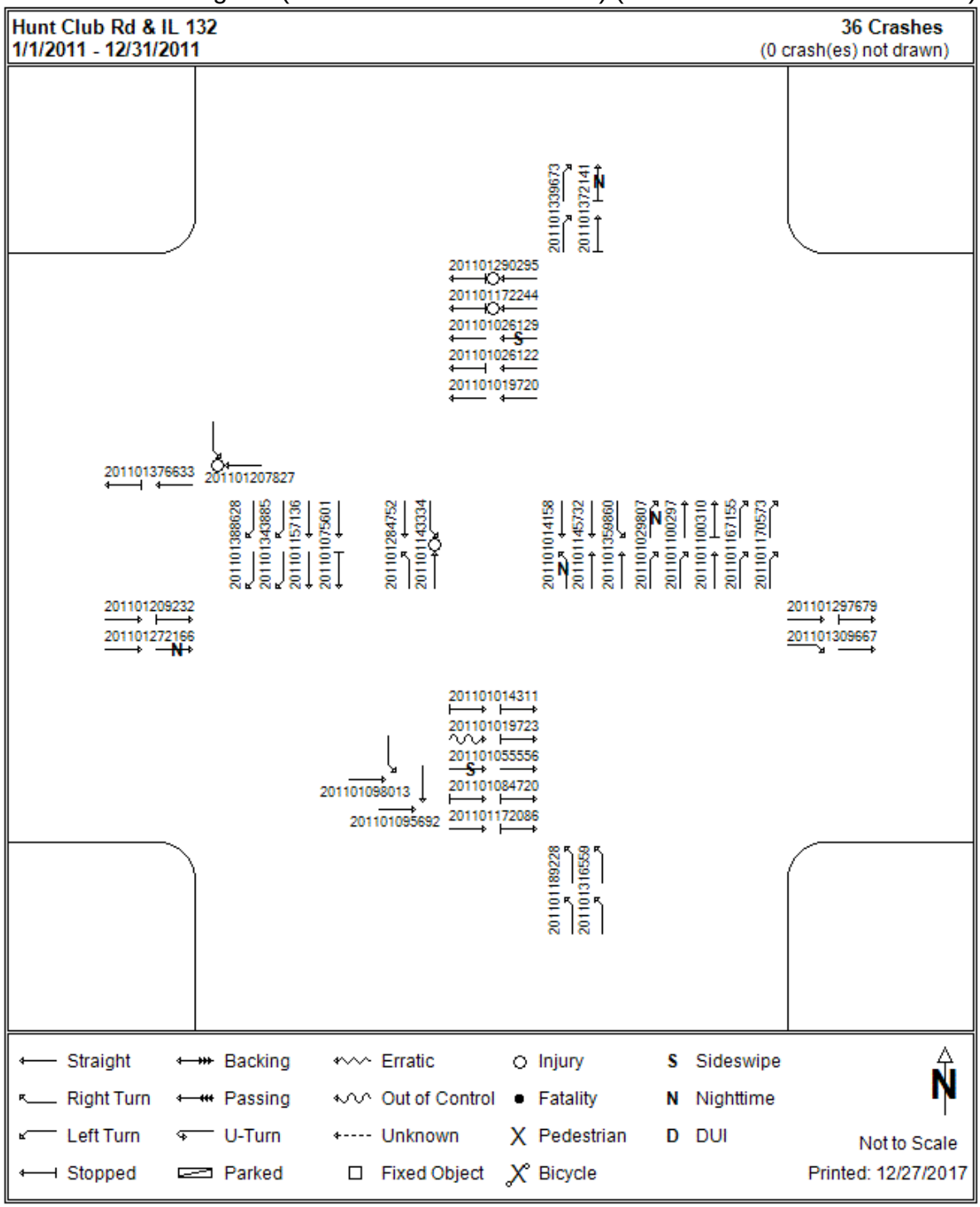


	Total	Turning	Rear end	Property Damage Crashes	Injured	A-Injuries	B-Injuries	C-Injuries
2011	37	21	23	33	4	0	1	3
2012	38	8	23	30	8	0	3	5
2013	52	15	31	42	10	1	2	7

2011 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

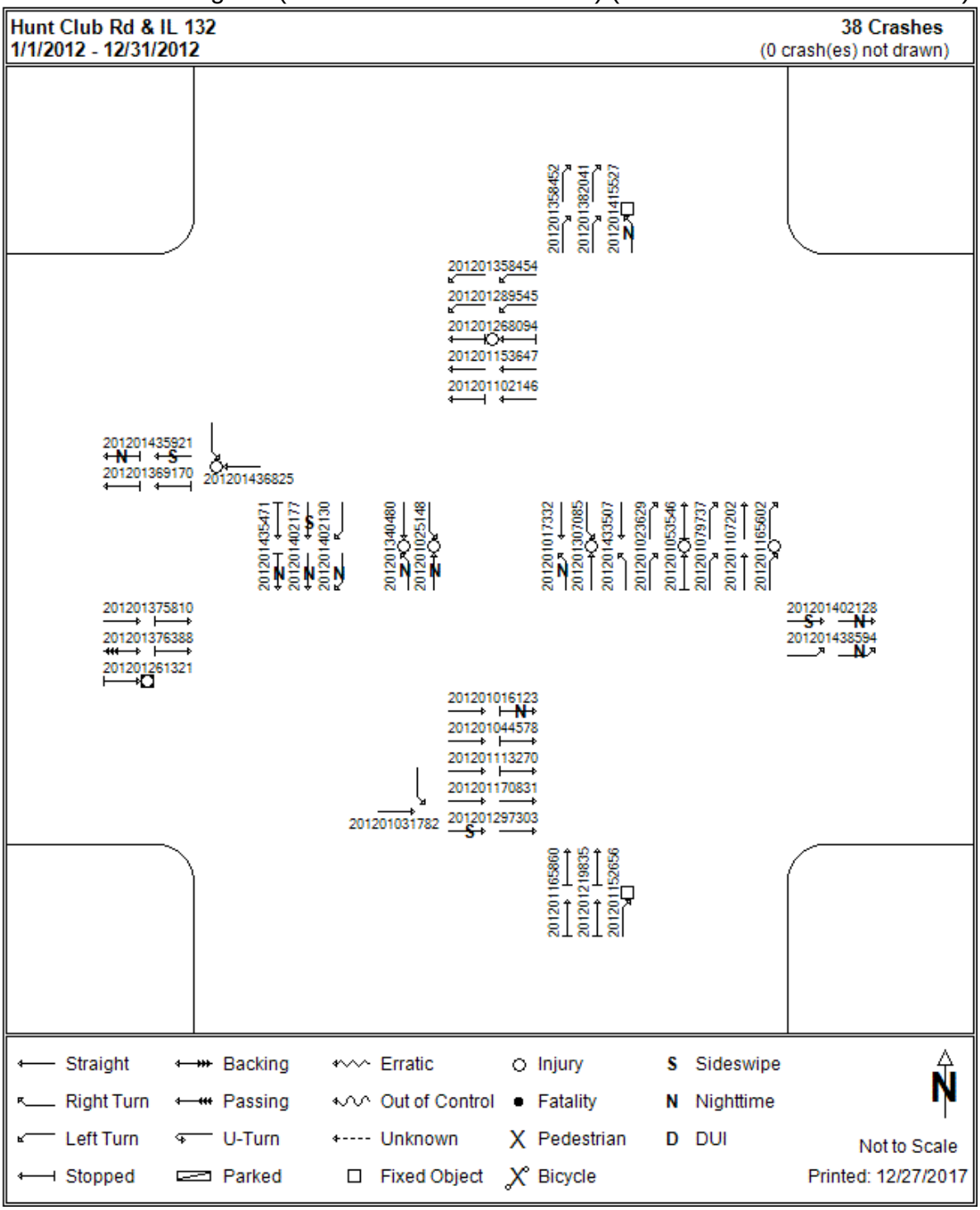


2011 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

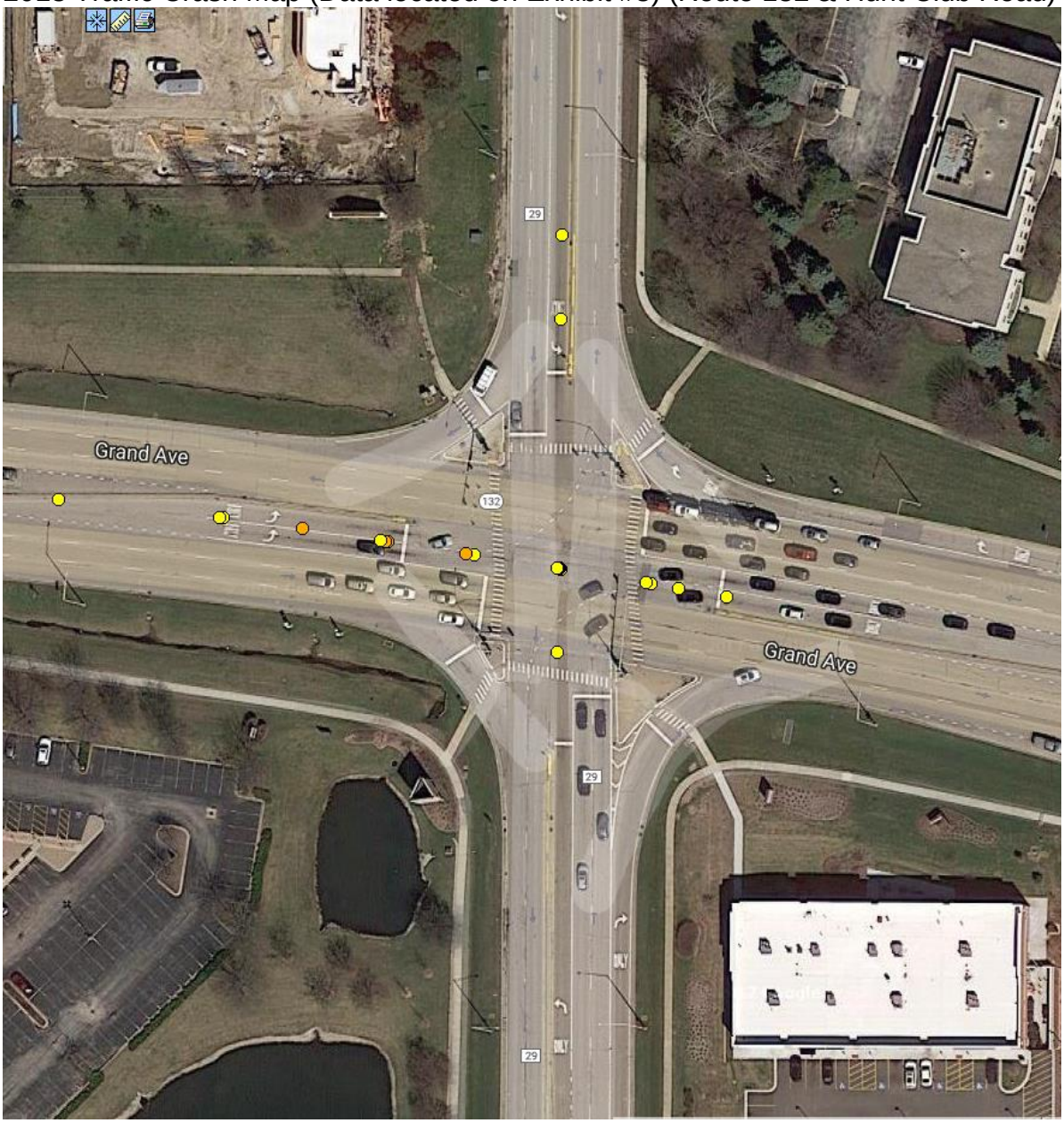


2012 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

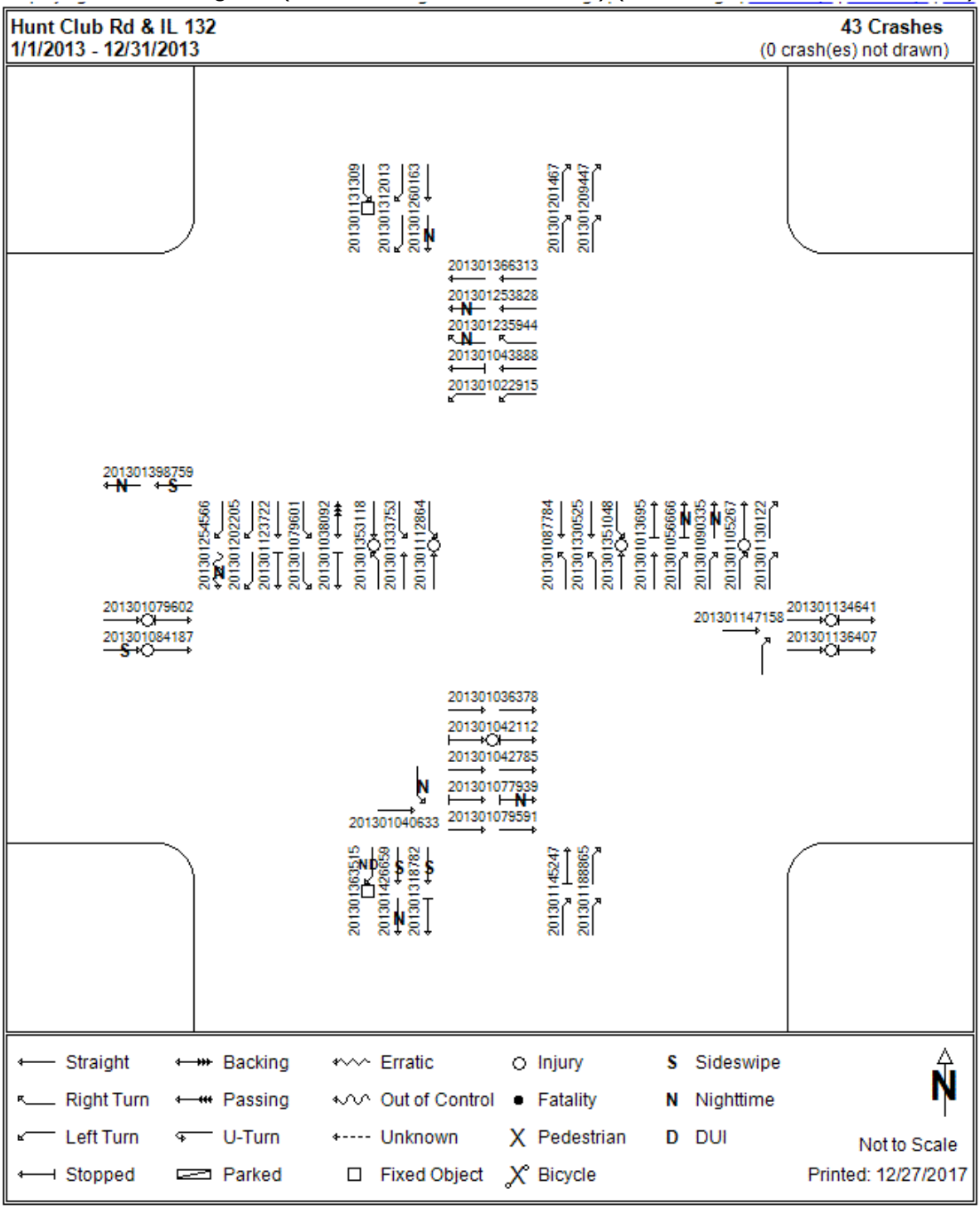
2012 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



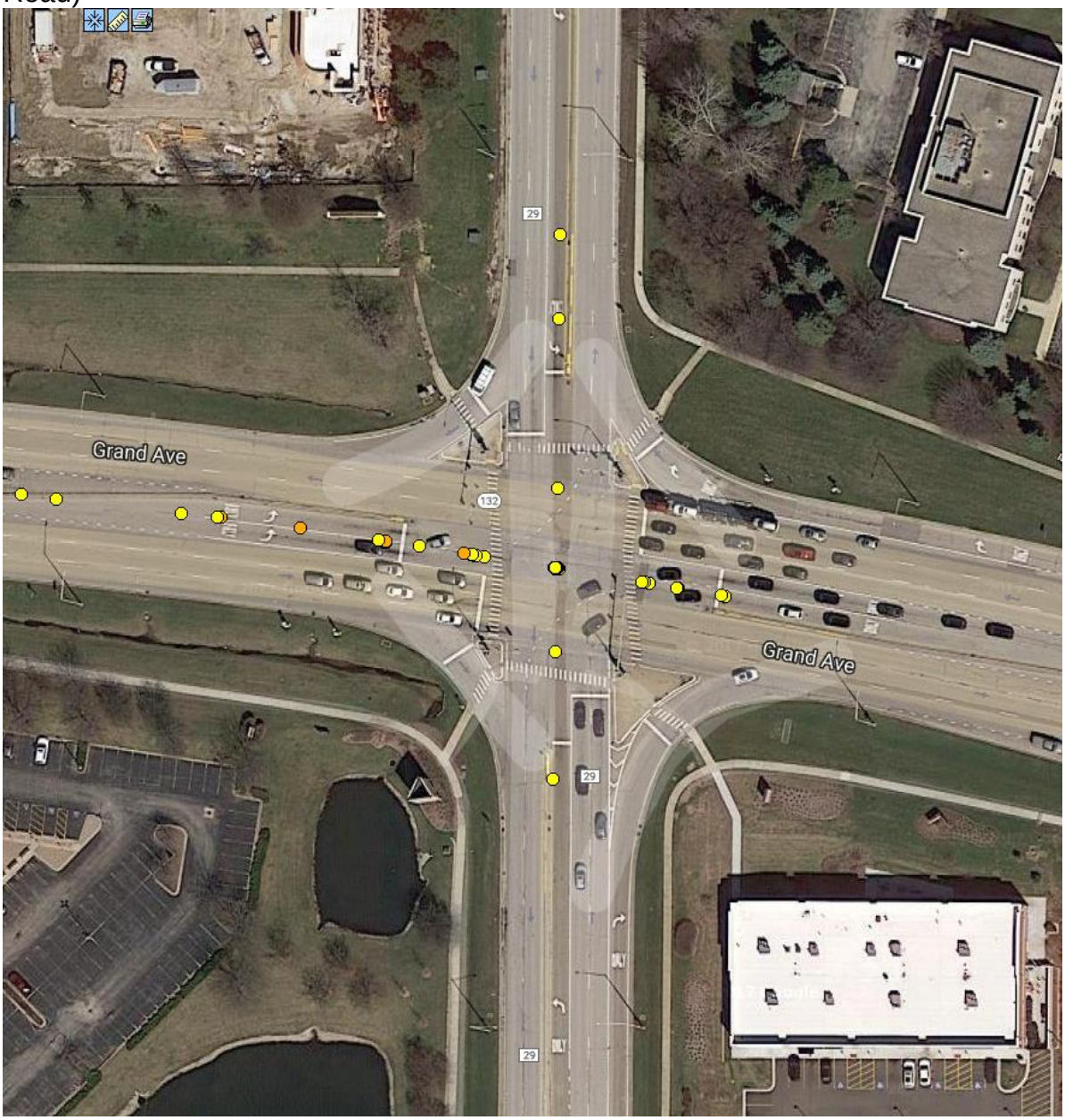
2013 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



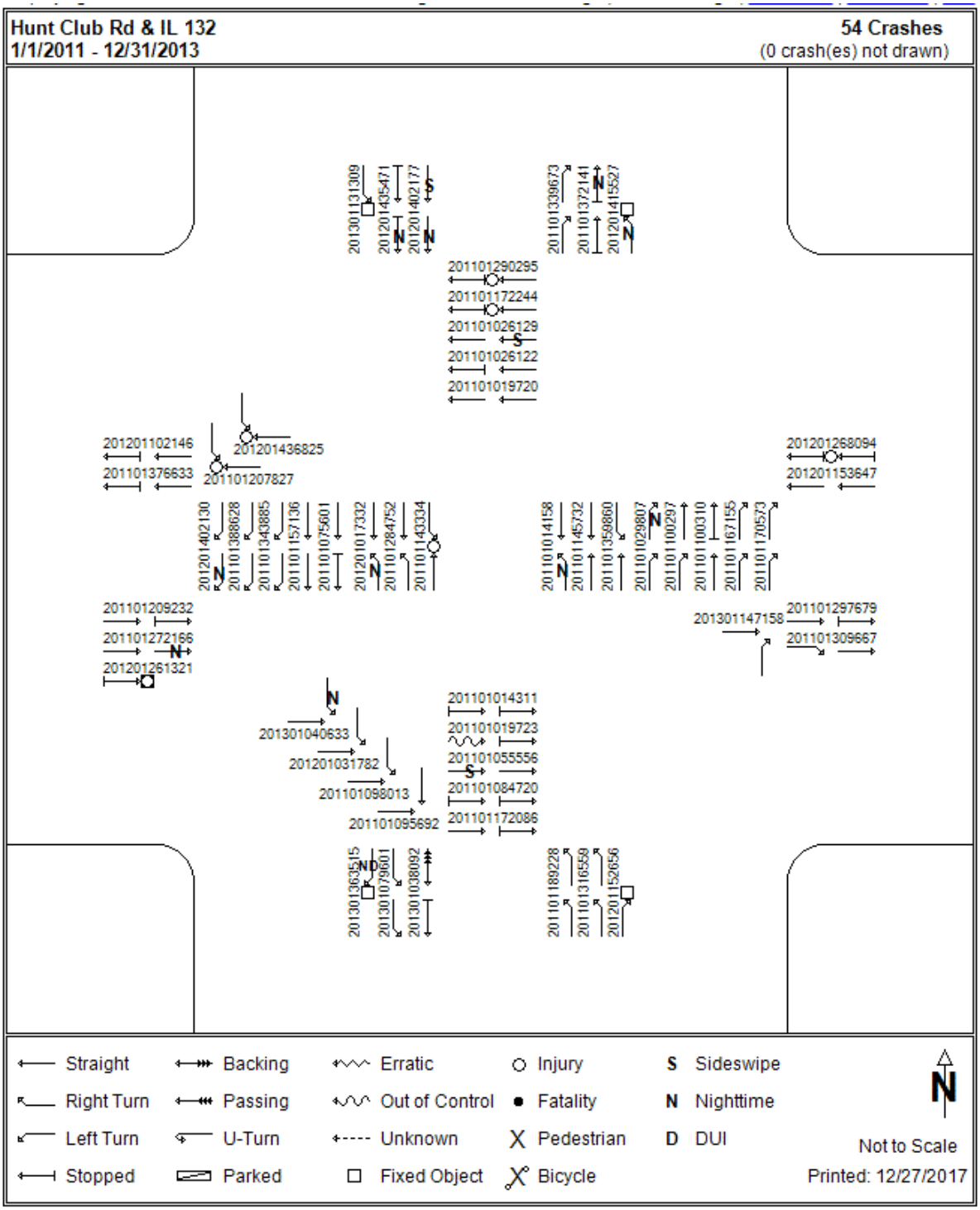
2013 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



2011-2013 Traffic Crash Map (Data located on Exhibit #3) (Route 132 & Hunt Club Road)

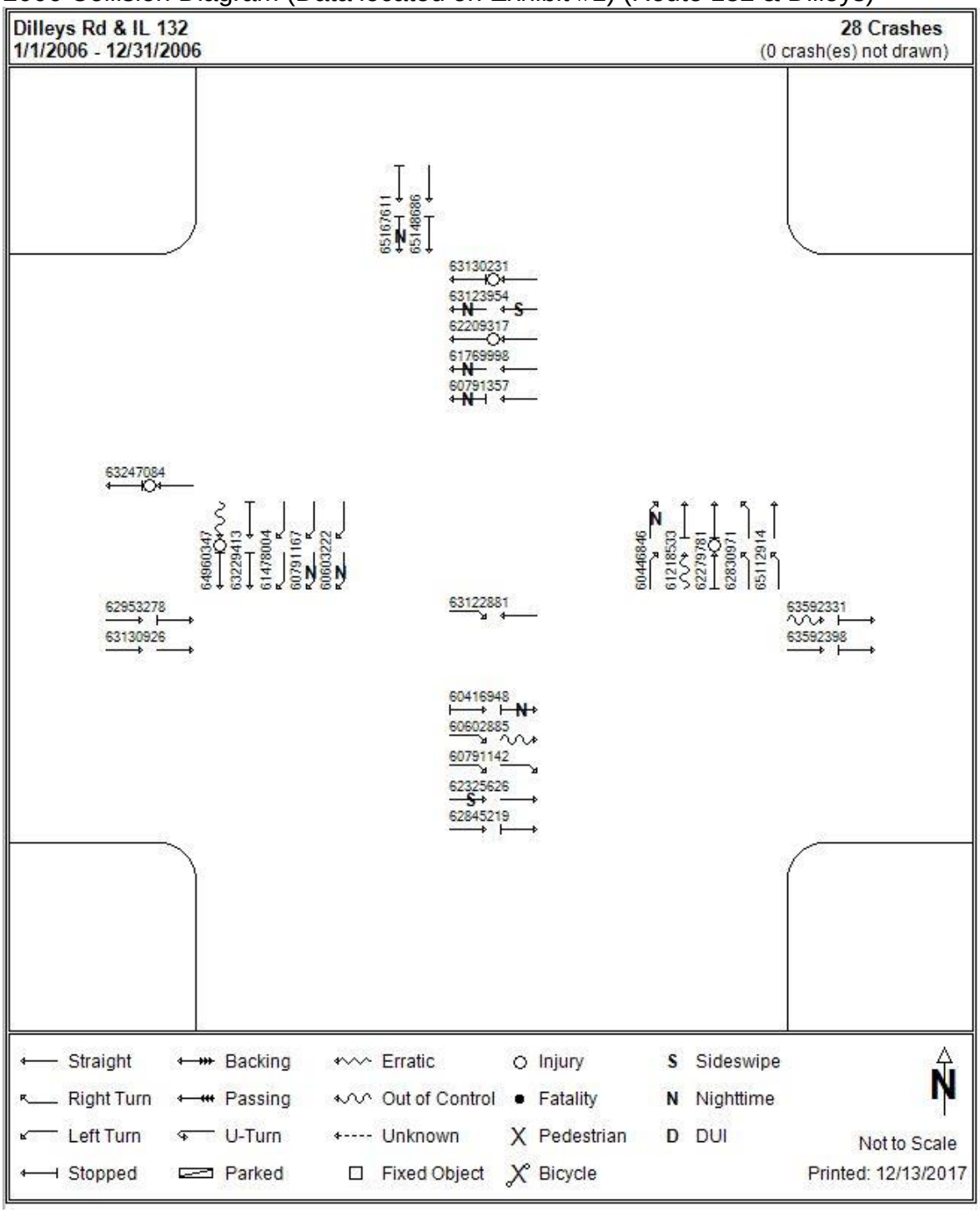


2011-2013 Collision Diagram (Data located on Exhibit #3) (Route 132 & Hunt Club Road)



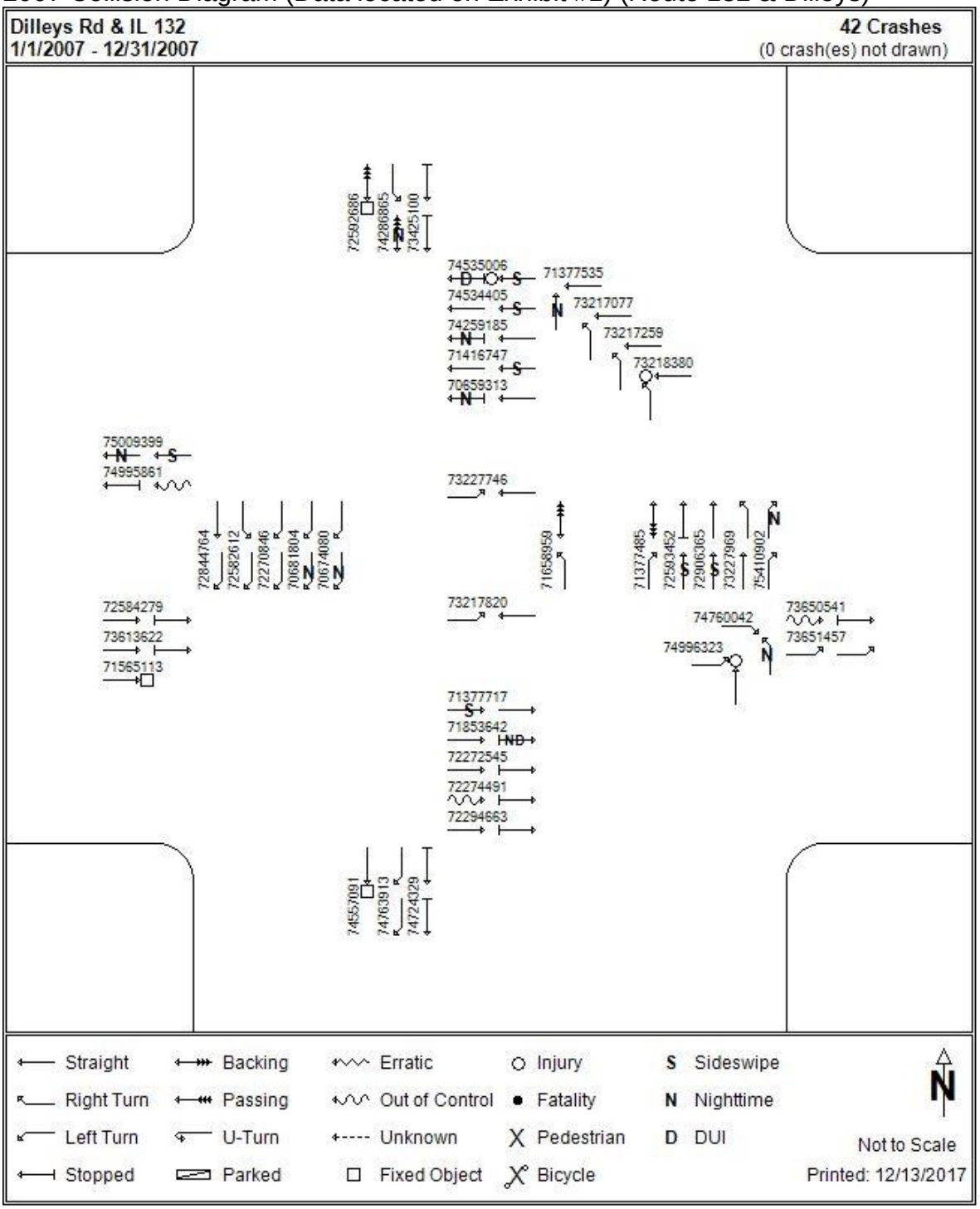
2006 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

2006 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)



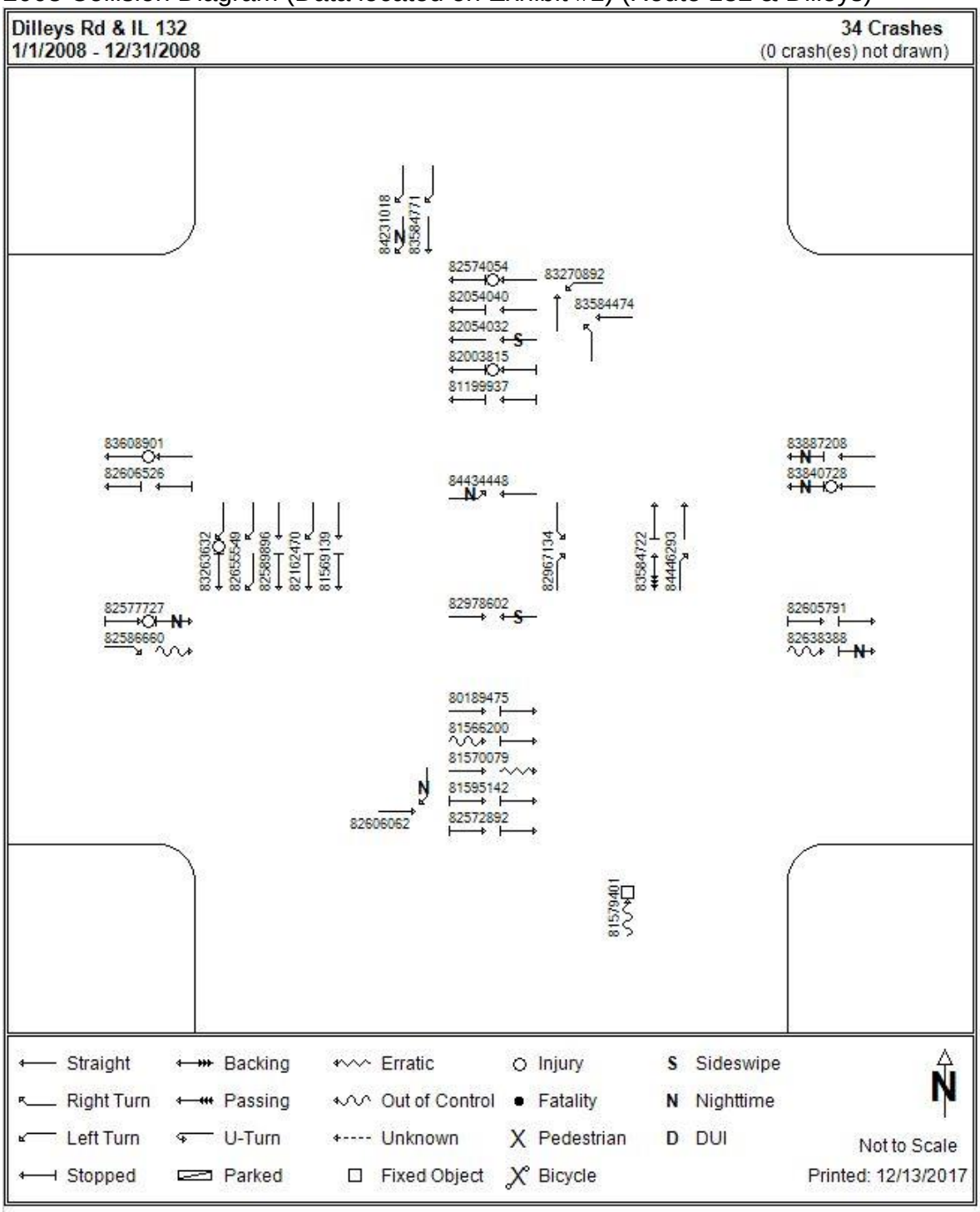
2007 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

2007 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)

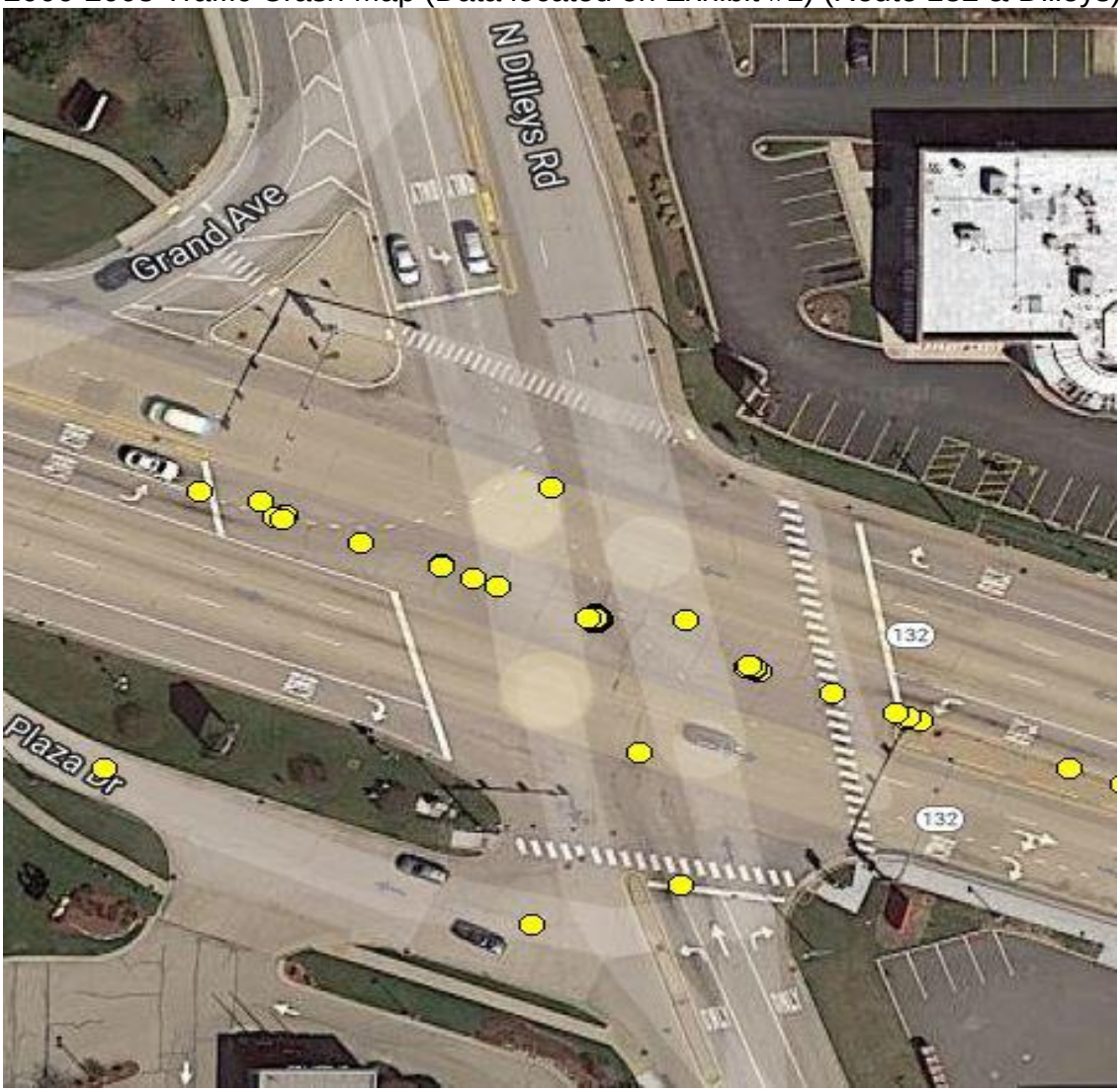


2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)

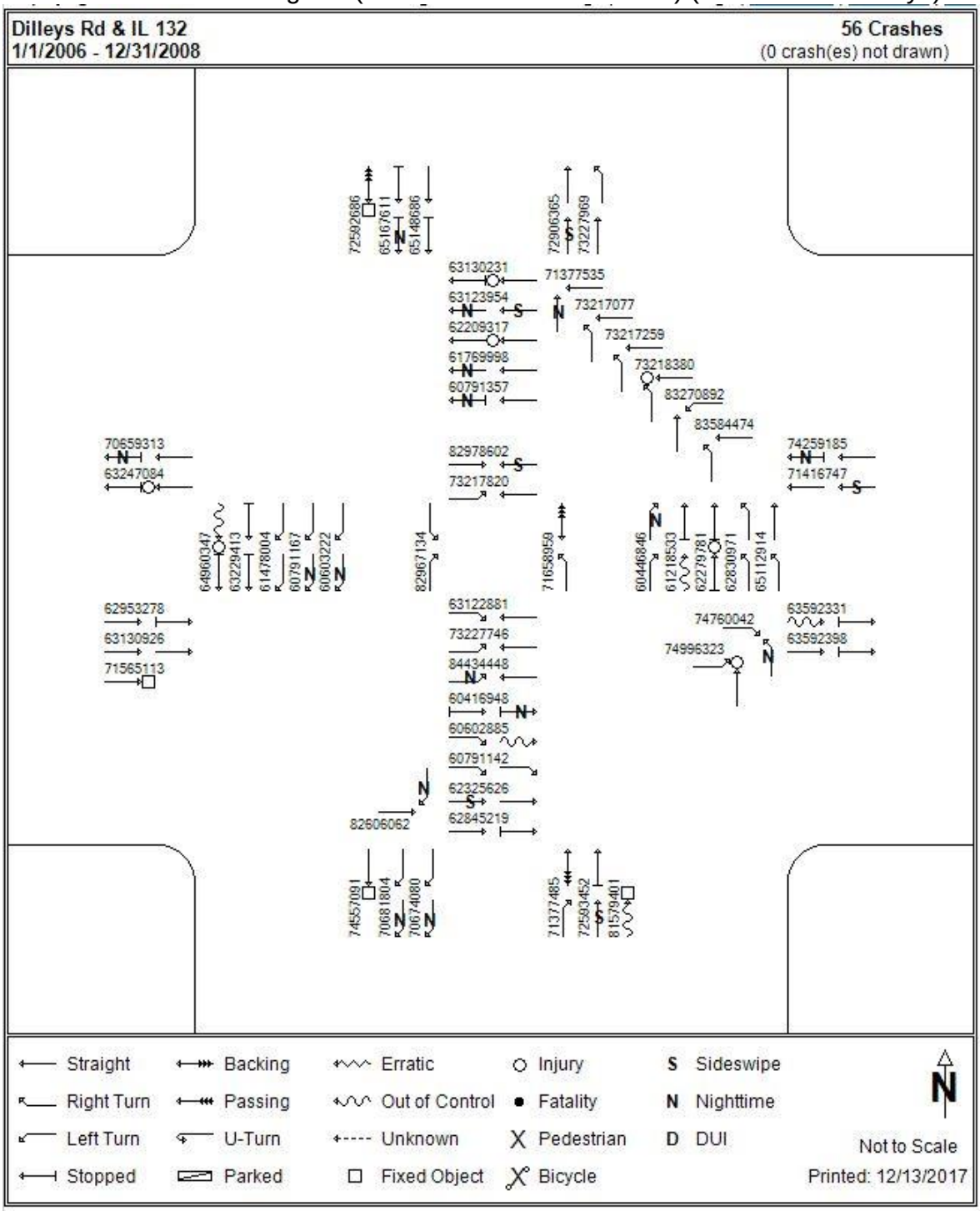
2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)



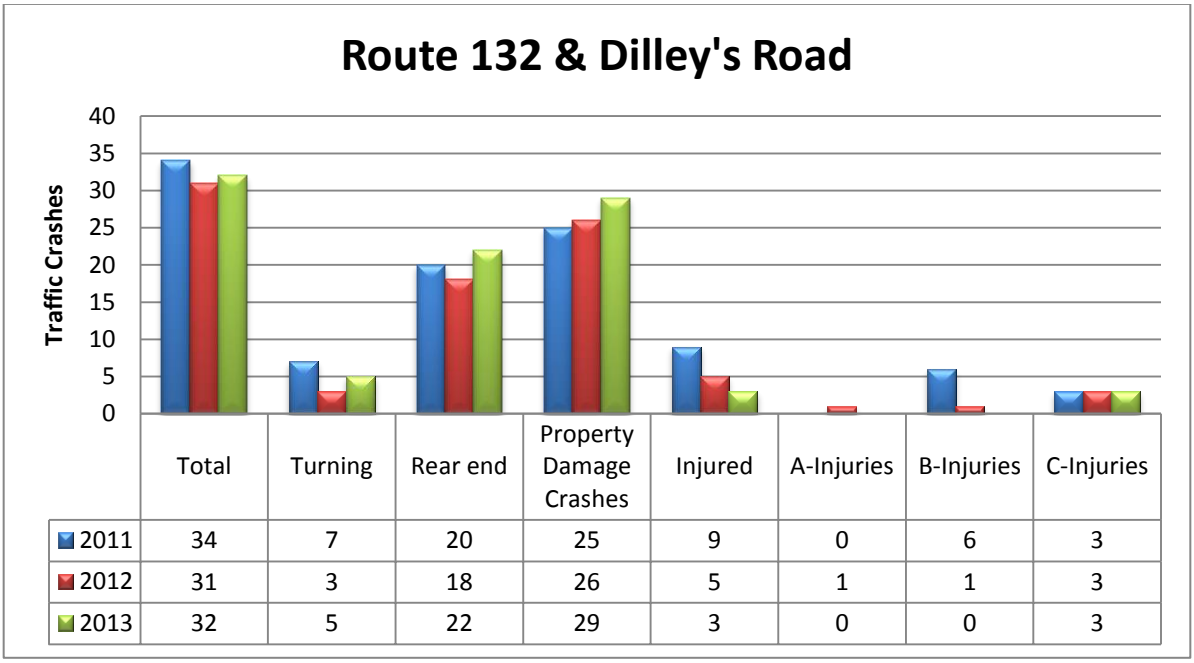
2006-2008 Traffic Crash Map (Data located on Exhibit #1) (Route 132 & Dilleys)



2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 132 & Dilleys)

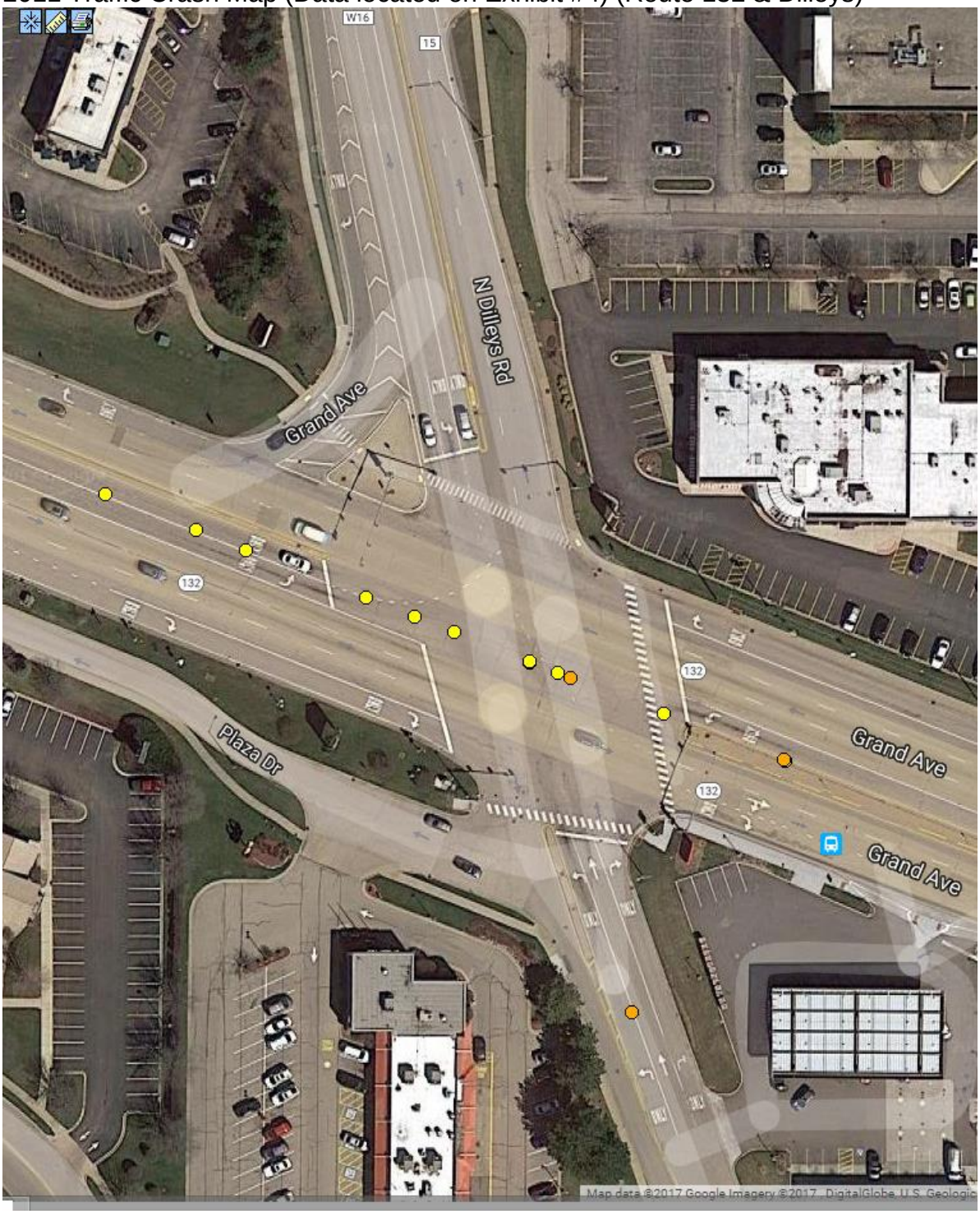


Exhibit# 4

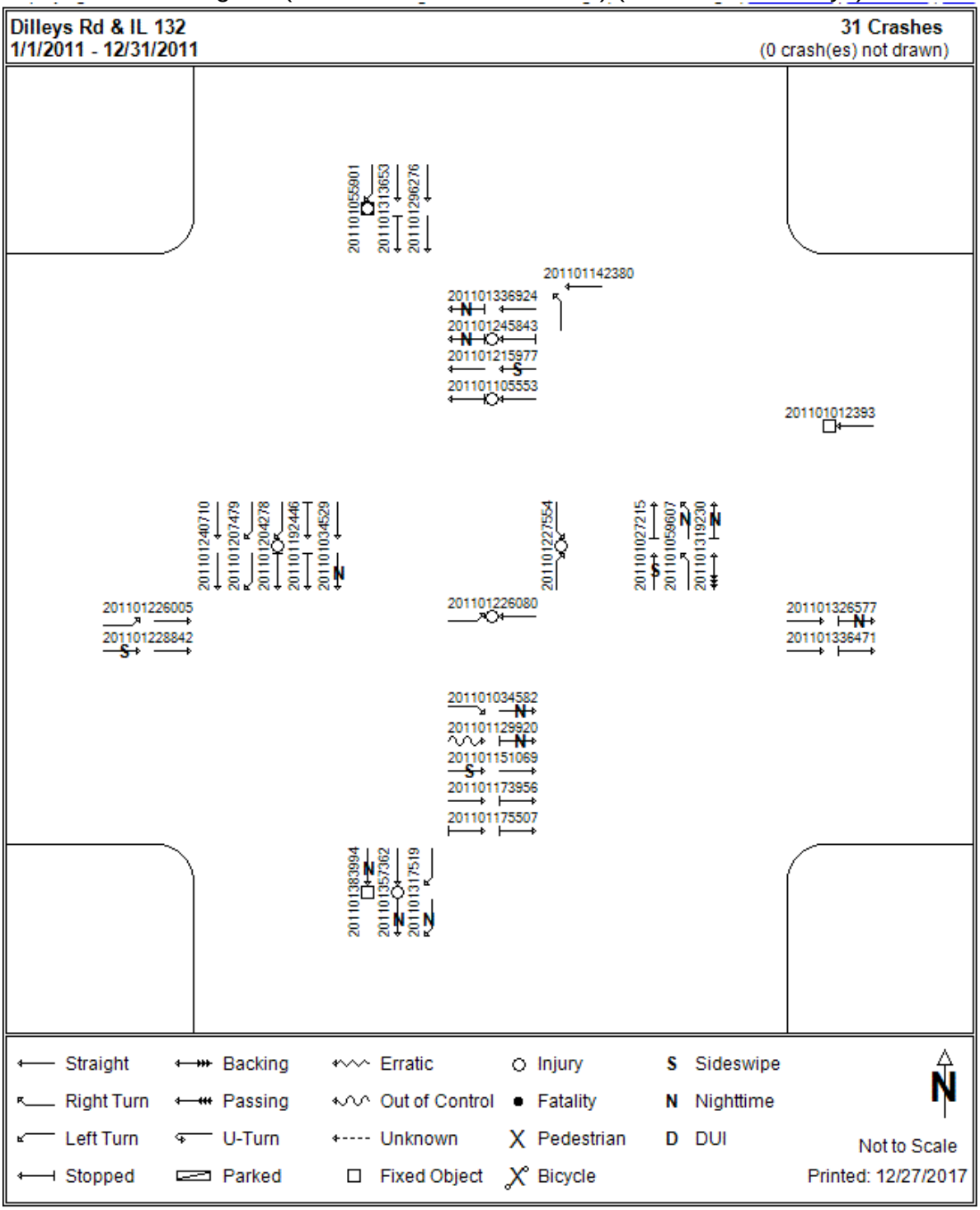


	Total	Turning	Rear end	Property Damage Crashes	Injured	A-Injuries	B-Injuries	C-Injuries
2011	34	7	20	25	9	0	6	3
2012	31	3	18	26	5	1	1	3
2013	32	5	22	29	3	0	0	3

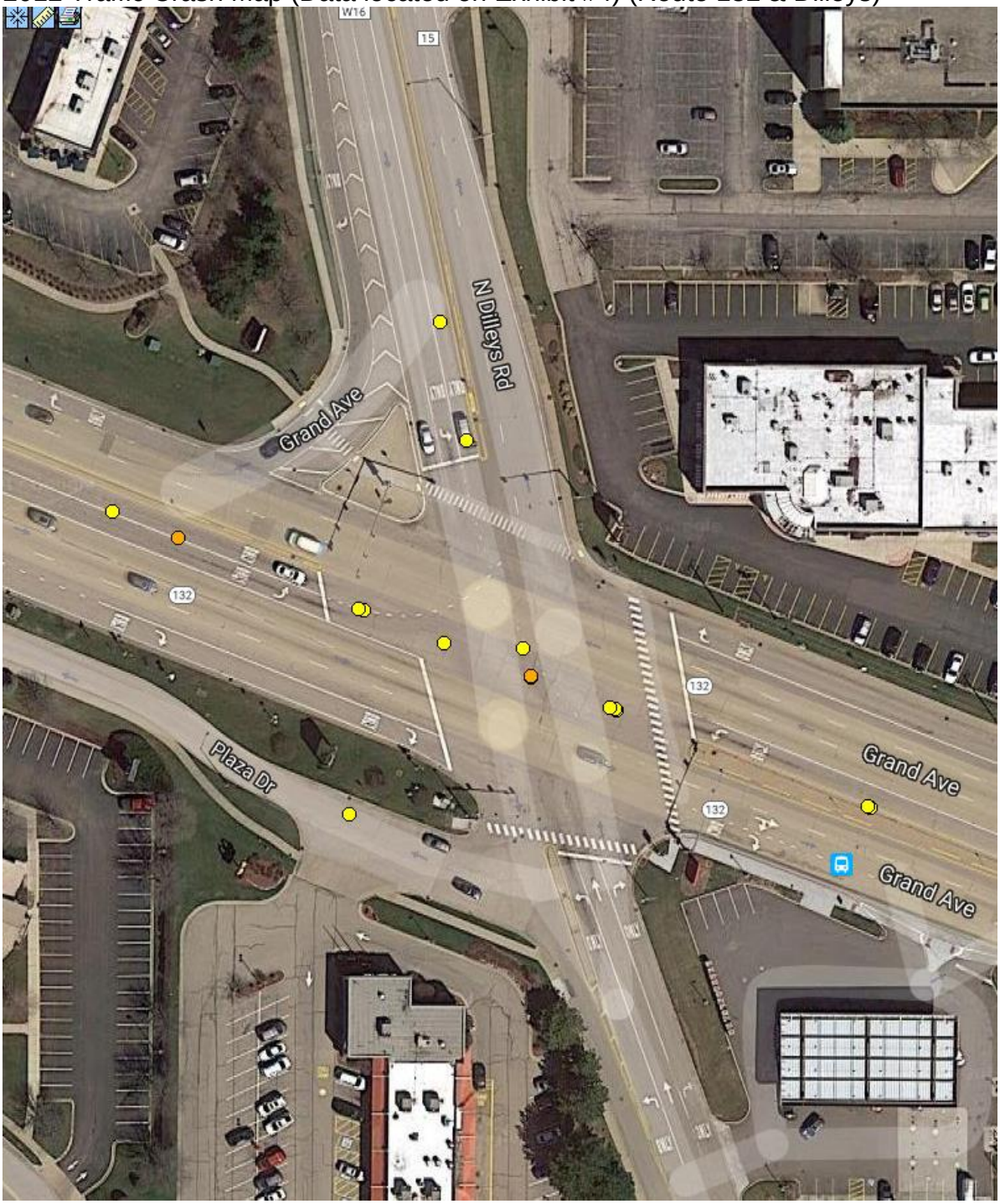
2011 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)



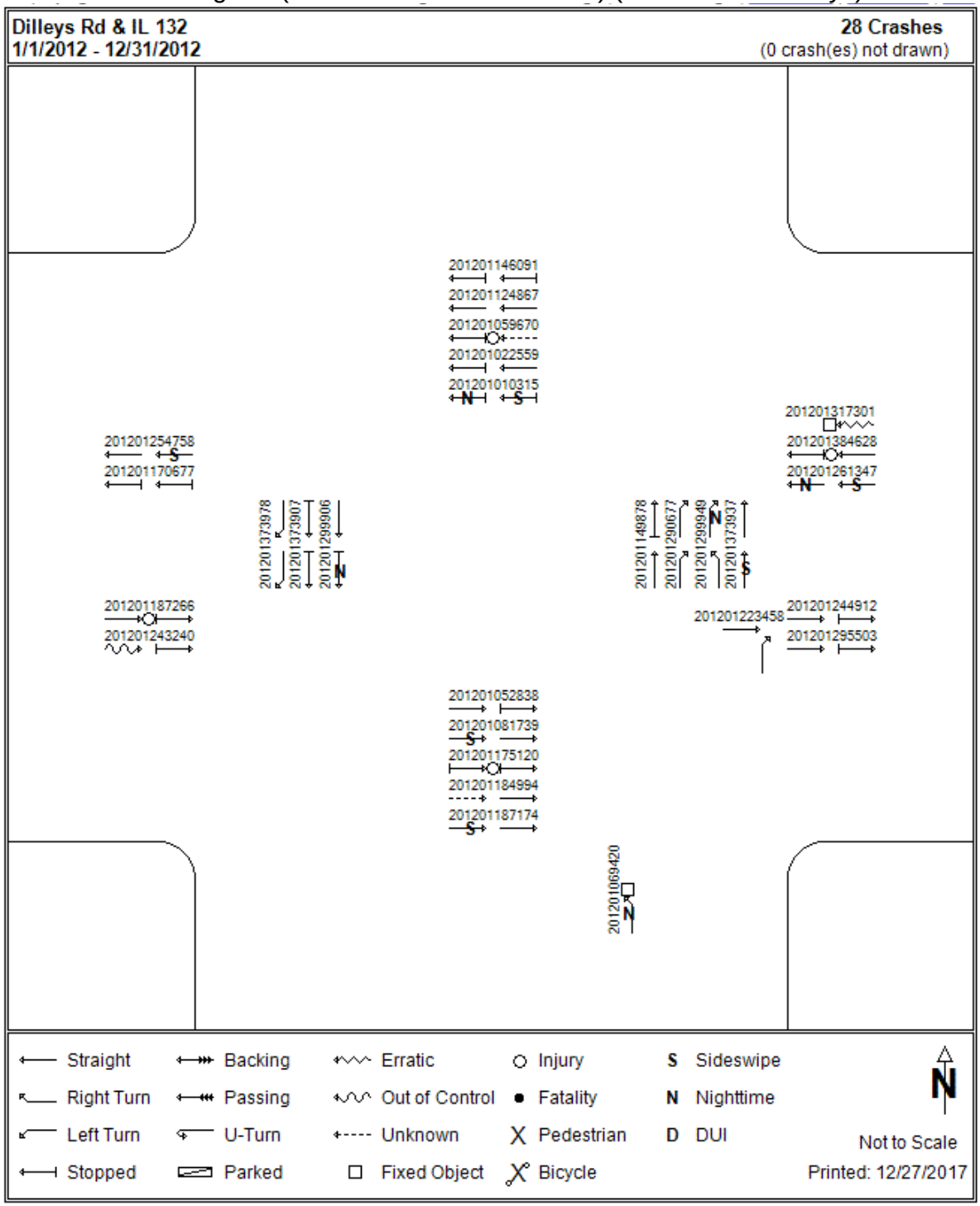
2011 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



2012 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)

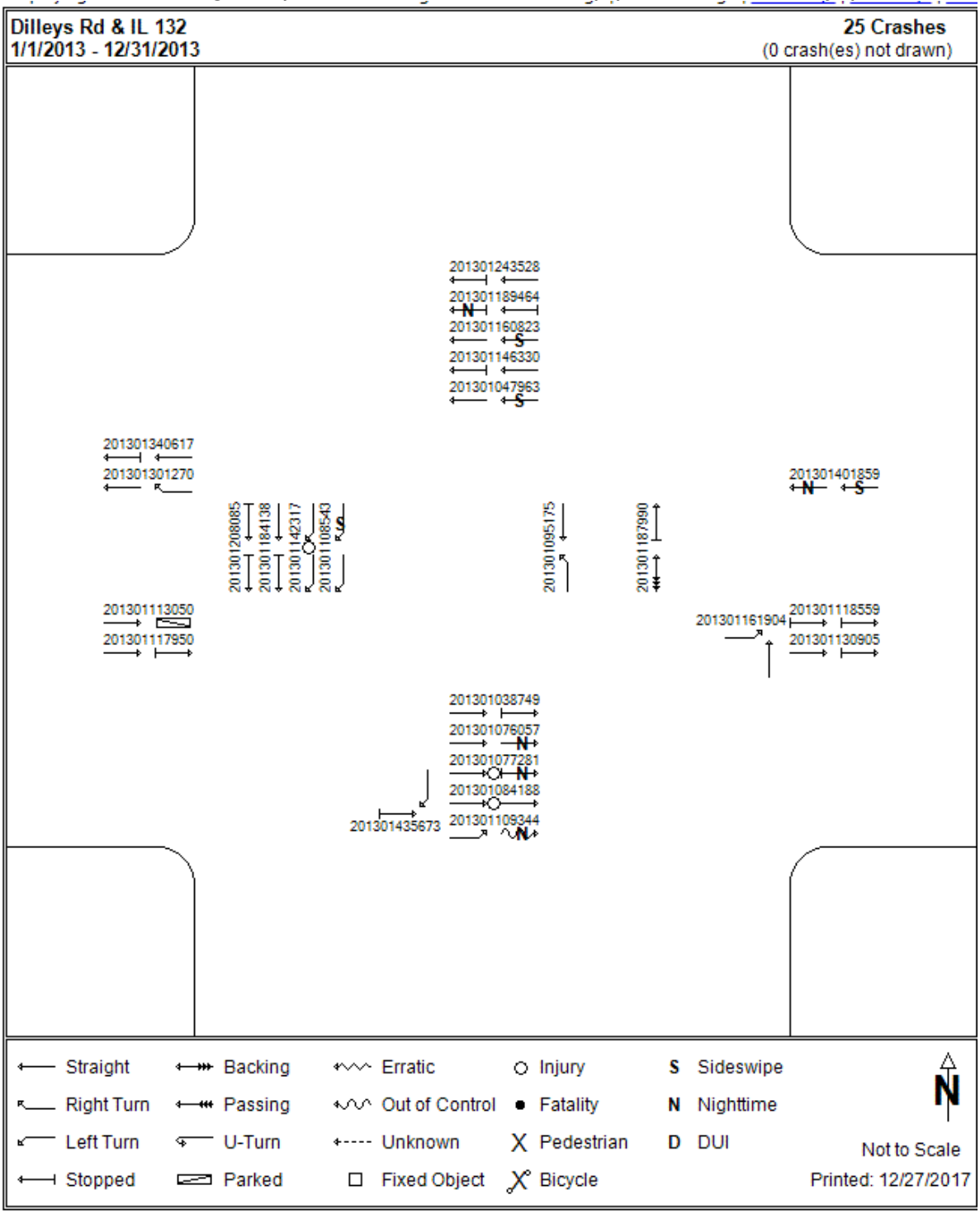


2012 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)

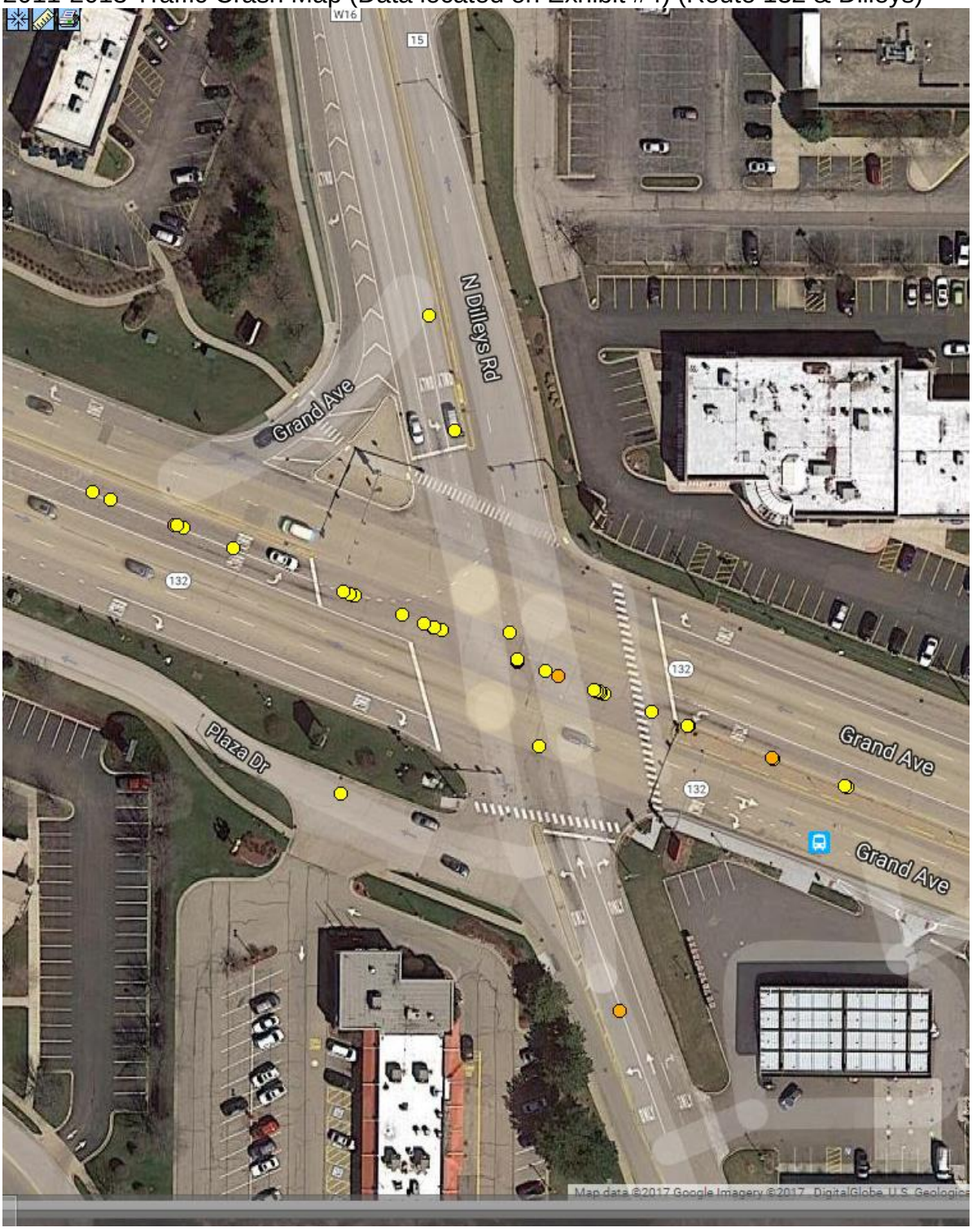


2013 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)

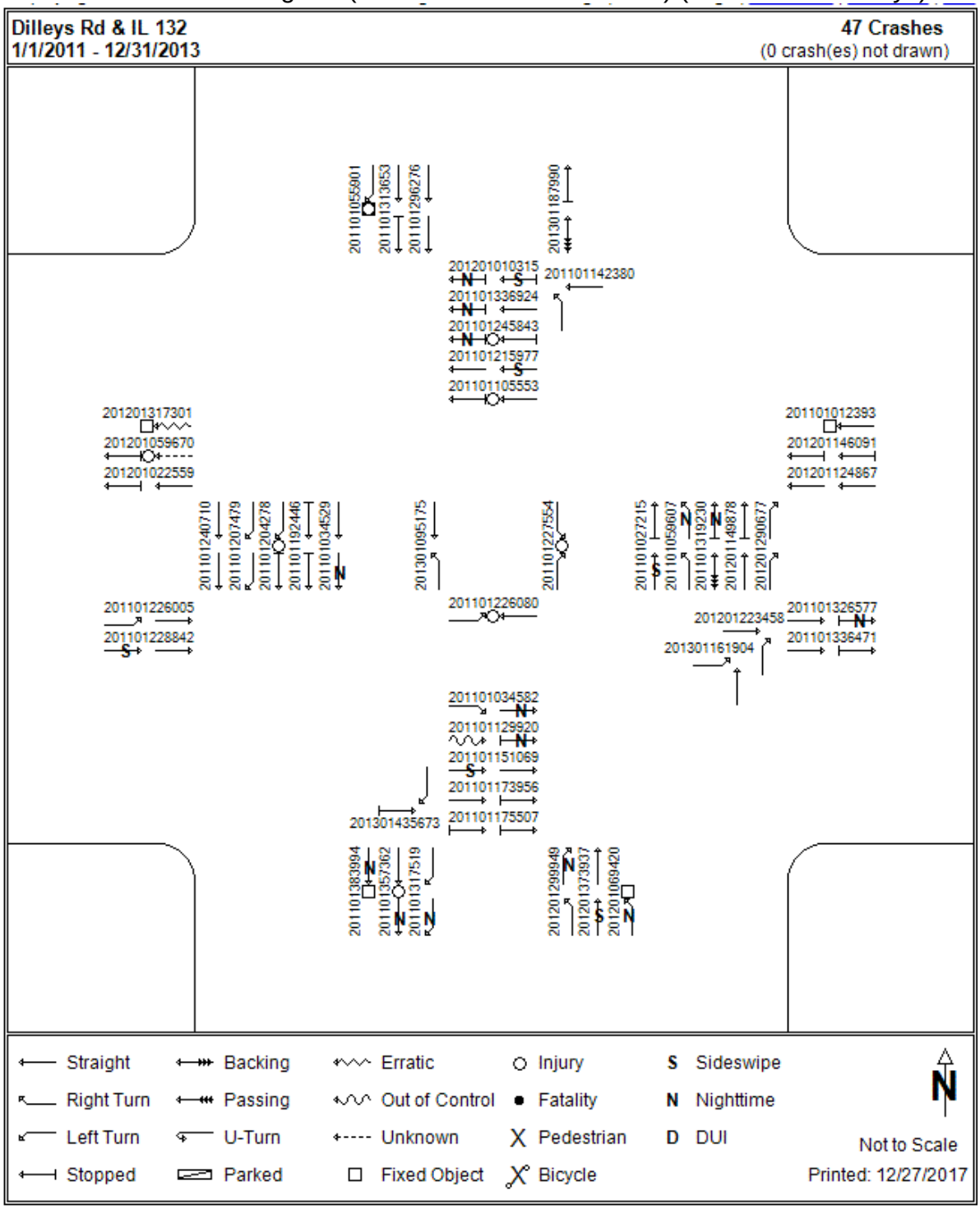
2013 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



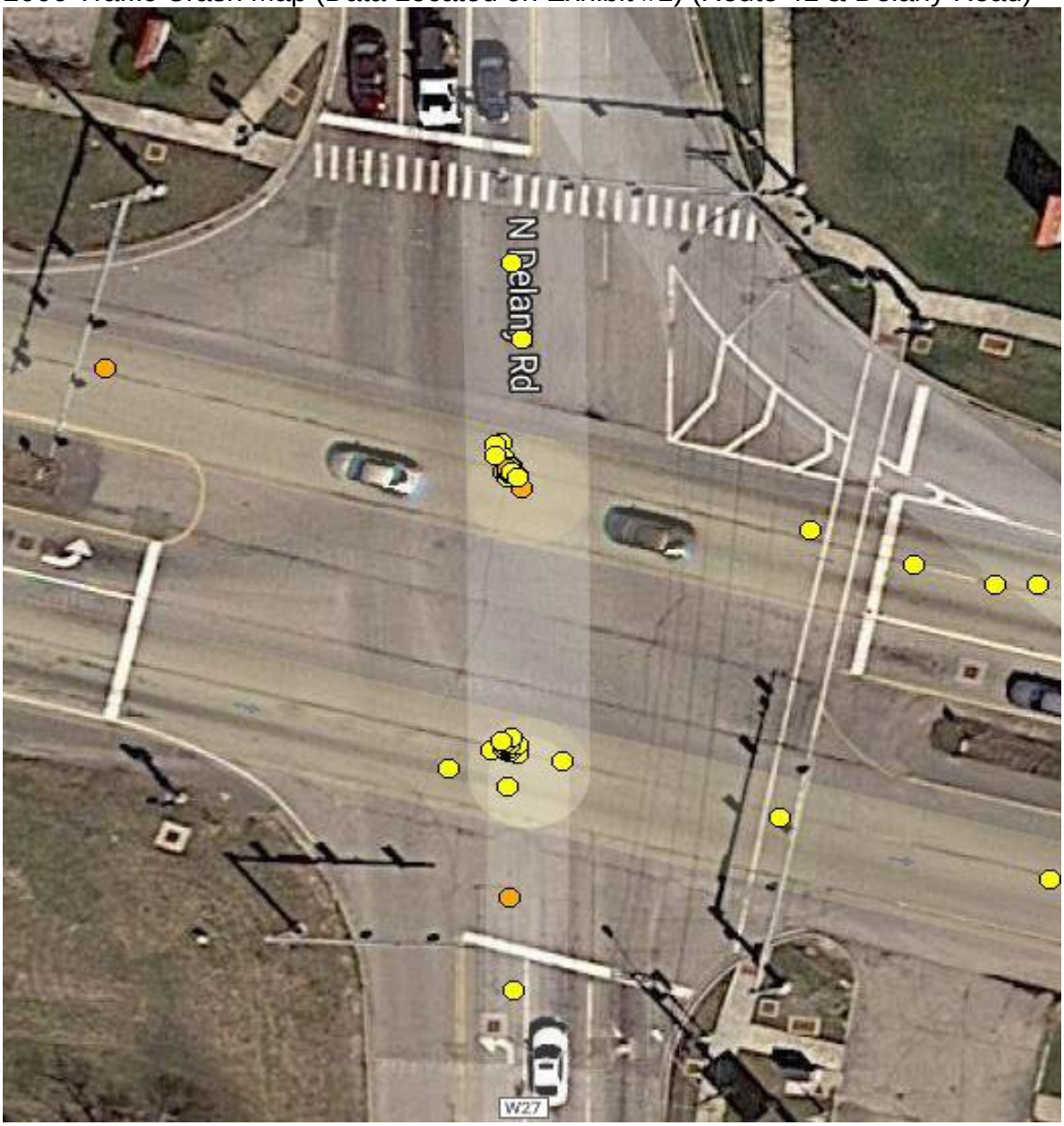
2011-2013 Traffic Crash Map (Data located on Exhibit #4) (Route 132 & Dilleys)



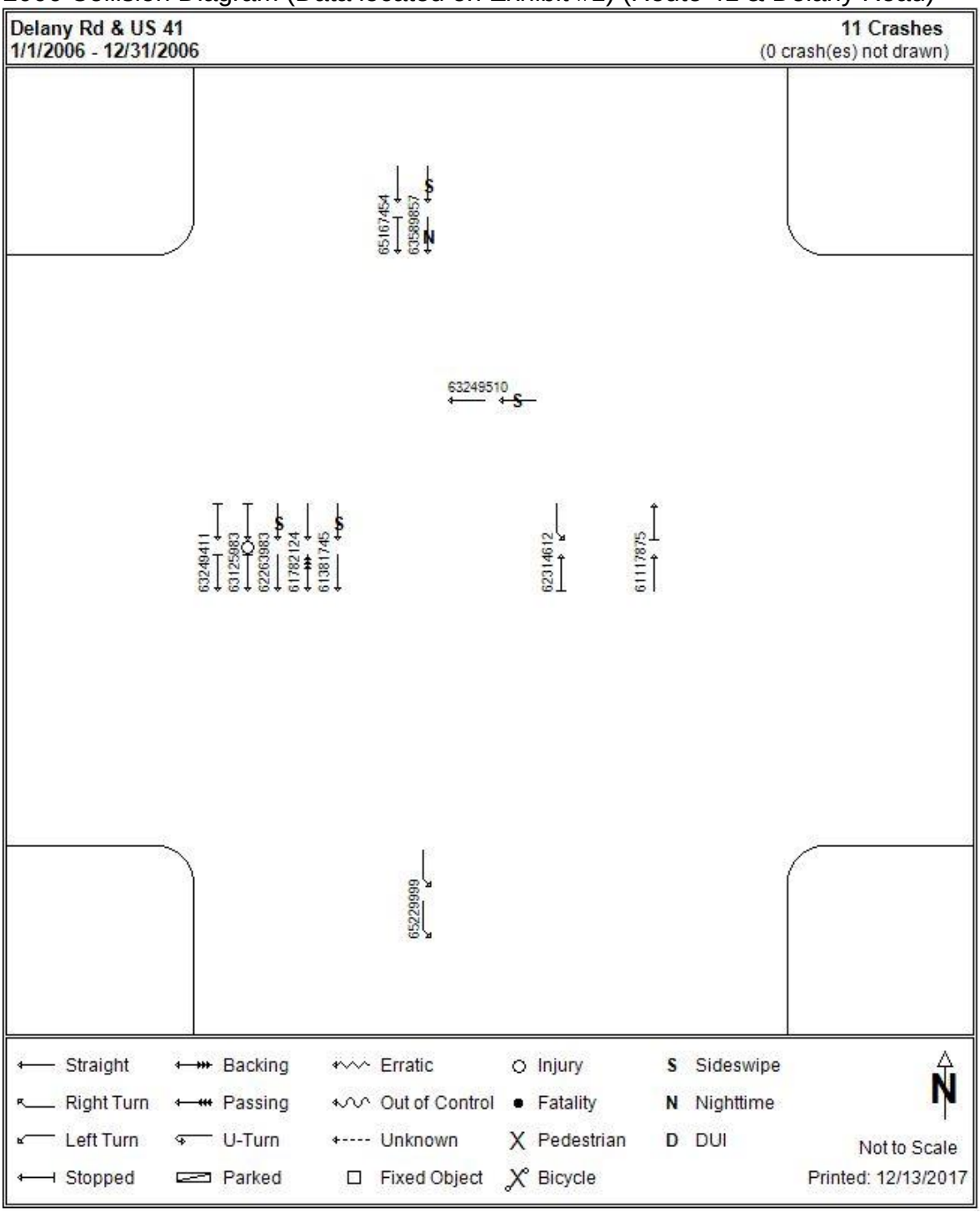
2011-2013 Collision Diagram (Data located on Exhibit #4) (Route 132 & Dilleys)



2006 Traffic Crash Map (Data Located on Exhibit #1) (Route 41 & Delany Road)

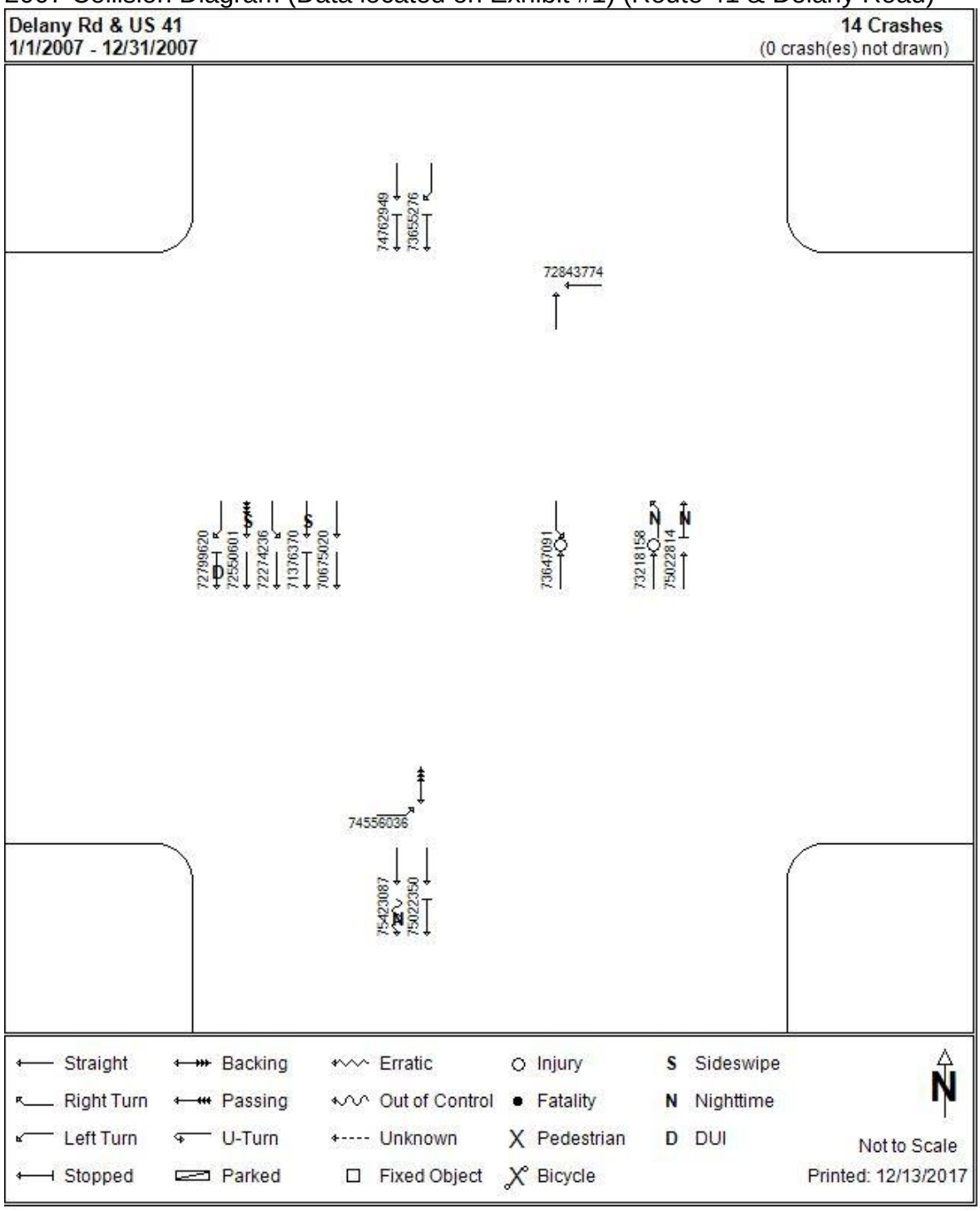


2006 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)



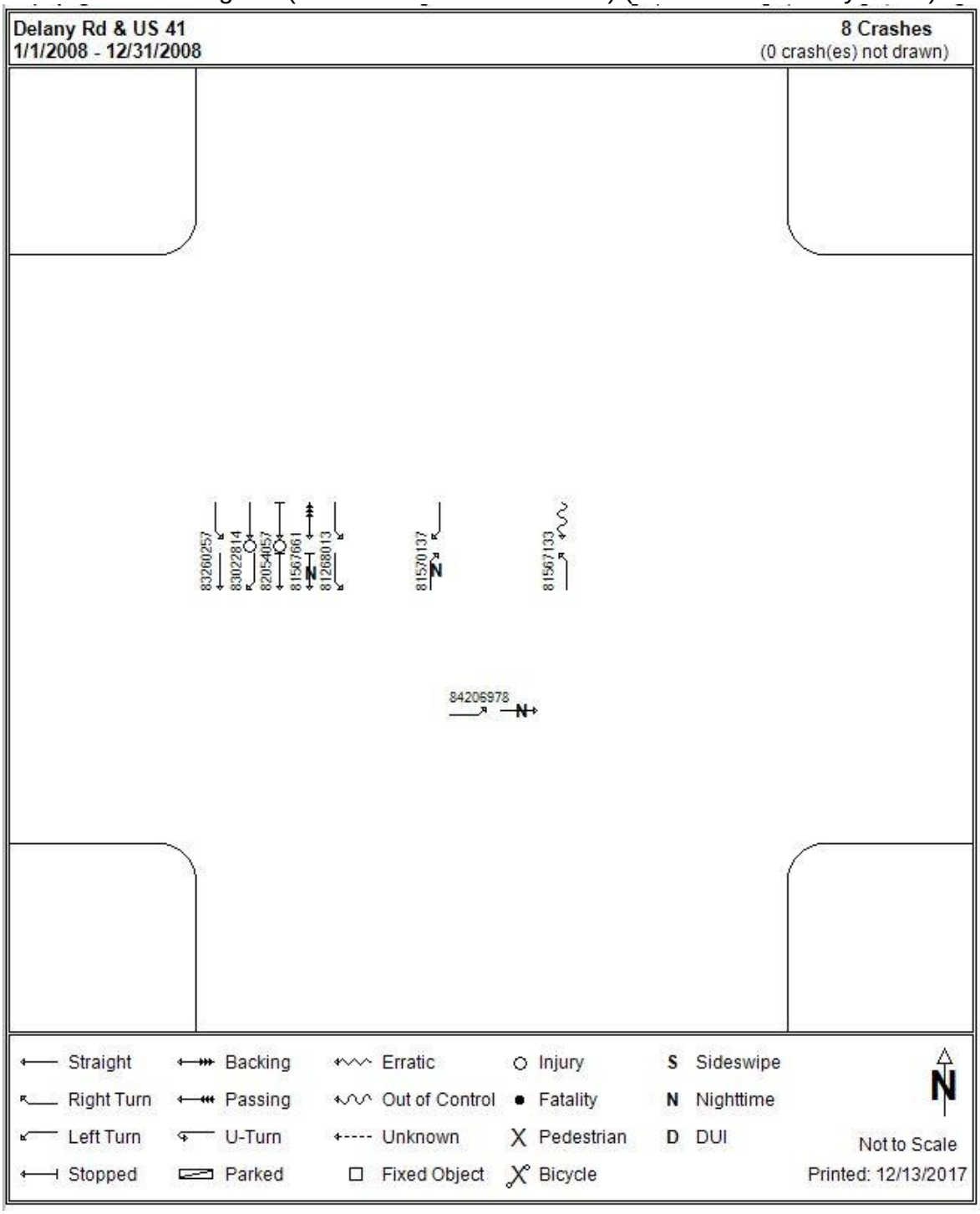
2007 Traffic Crash Map (Data Located on Exhibit #1) (Route 41 & Delany Road)

2007 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)



2008 Traffic Crash Map (Data Located on Exhibit #1) (Route 41 & Delany Road)

2008 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)



2006-2008 Crash Map (Data located on Exhibit #1) (Route 41 & Delany Road)

2006-2008 Collision Diagram (Data located on Exhibit #1) (Route 41 & Delany Road)

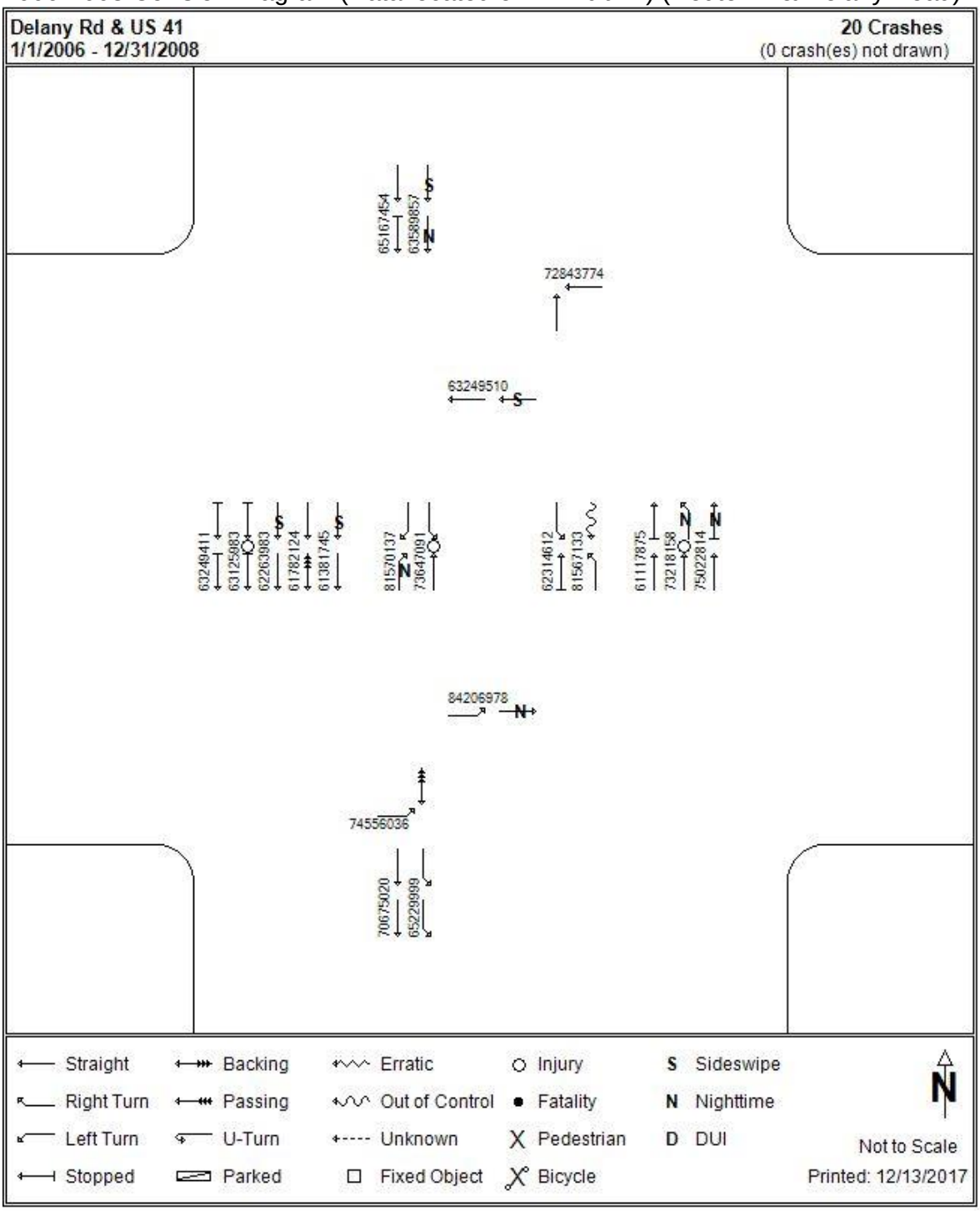
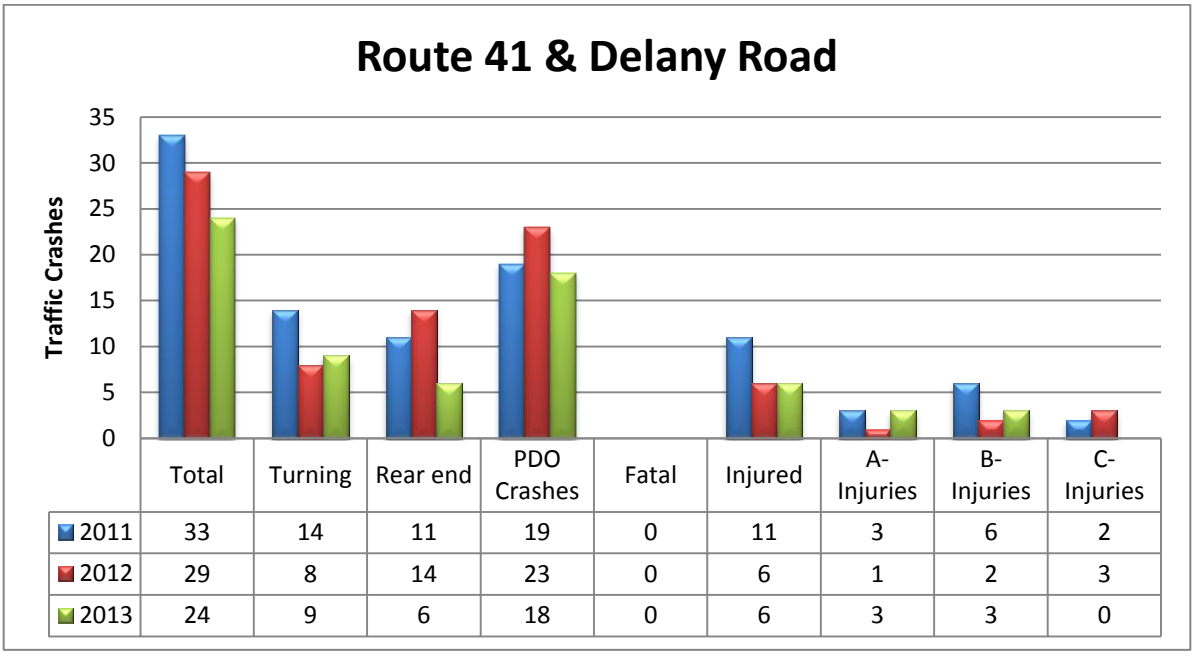


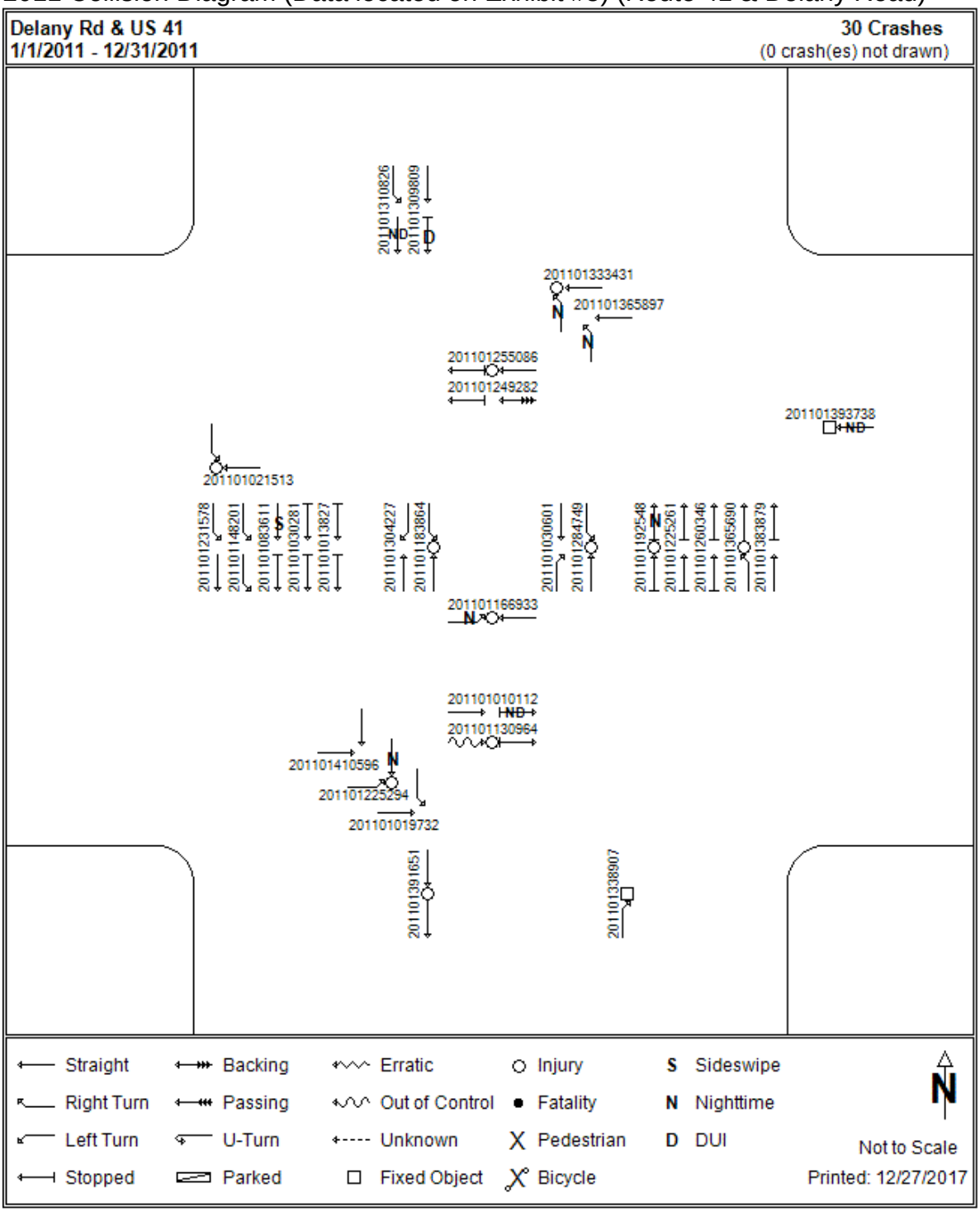
Exhibit #5



	Total	Turning	Rear end	PDO Crashes	Fatal	Injured	A-Injuries	B-Injuries	C-Injuries
2011	33	14	11	19	0	11	3	6	2
2012	29	8	14	23	0	6	1	2	3
2013	24	9	6	18	0	6	3	3	0

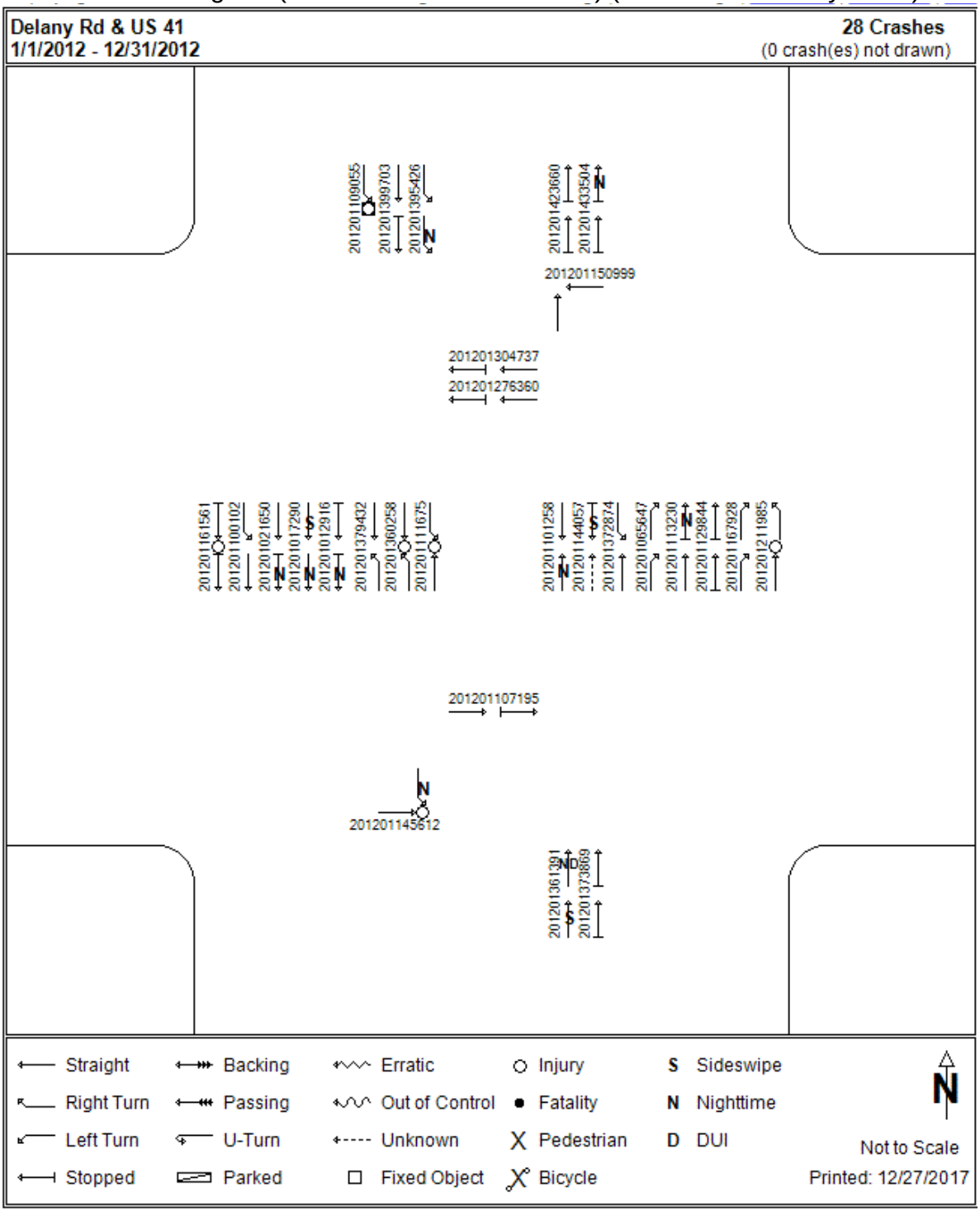
2011 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2011 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



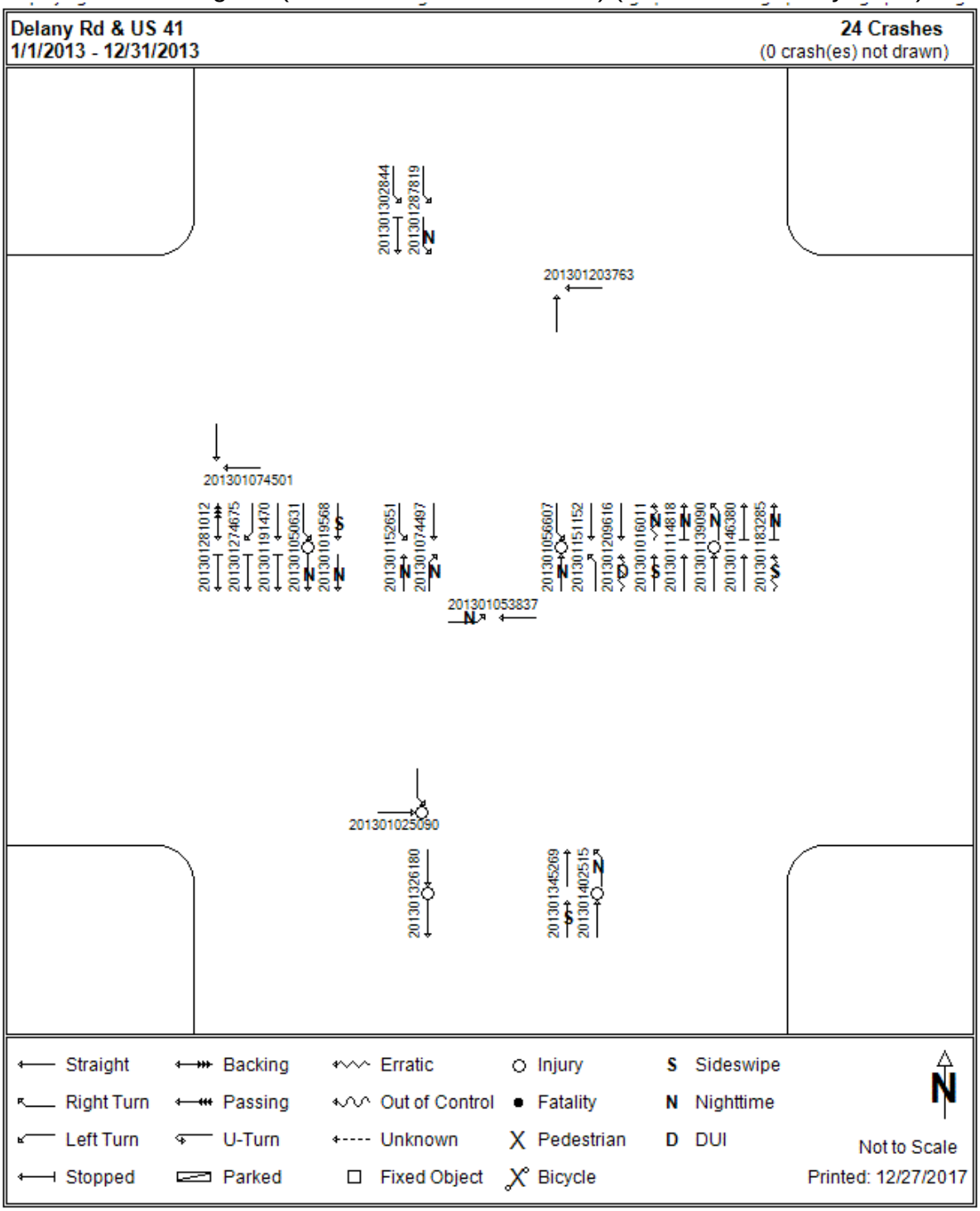
2012 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2012 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



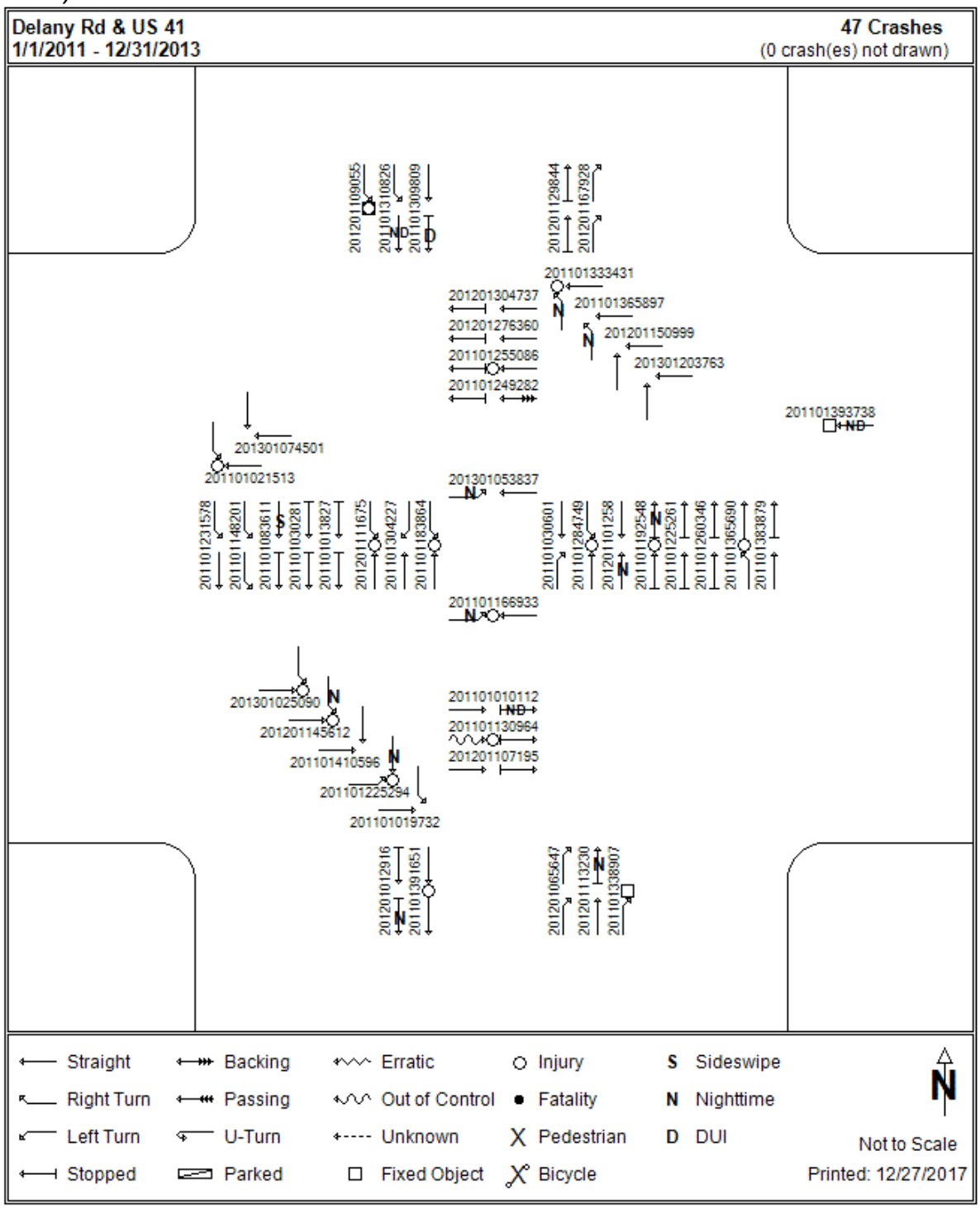
2013 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2013 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



2011-2013 Traffic Crash Map (Data located on Exhibit #5) (Route 41 & Delany Road)

2011-2013 Collision Diagram (Data located on Exhibit #5) (Route 41 & Delany Road)



Crash Data Analysis

The post camera system crash data (Exhibits #2-5) show an increase in crashes at one intersection as compared to Exhibit #1, Route 41 & Delany Road.

The data from Route 41 & Delany Road has seen an increase in traffic crashes (29) (8 of which were on Delany Rd) from the previous three year average of (11). When analyzing the crash data (see chart below) there is no clear common cause for the crash increase. It does suggest two hazardous actions are contributing to the increase: following too closely/failure to reduce speed and Distracted Driving. There were (11) following too closely/failure to reduce speed for the three years prior and (18) for calendar years 2011-2013.

Stated Cause of Crash	Explaination	On Delany
Improper Lane Usage	Motorcycle changing lanes	*
Improper Backing	Backed up in traffic	*
Failure to Reduce Speed	Turning Right	*
Failure to Reduce Speed	No explaination	
Following too closley	Drivers age/Stopped on Yellow	
Following too closley	Light green/traffic sudden stop	*
Following too closley	200 ft E/of intersection Veh's in motion	
Failed to Yield	Wet pavement/Stopped on Yellow RT Turn	
Changing lanes	Slammed on brakes at yellow light	
Following too closley	Semi Sudden stop 100 ft W of Intersection	
Too fast for Conditions (wet)	Distracted/Dropped Phone	
Distracted/Failure to reduece speed	Looking in Rearview Mirror	
Failure to Reduce Speed	Semi Truck rolled forward	*
Failure to Reduce Speed	Light turned green/drove into vehicle infront	
Failure to Reduce Speed	Light turned green/foot slipped off clutch struck vehicle infront	
Failure to Reduce Speed	Light turned green/foot slipped off brake struck vehicle infront	
Following too closley	Right turn/light turned red	
Distraction	Light turned green/looking at phone drove into vehicle infront	
Following too closley	Both stopped at light "accidently" moved forward	
Failure to Reduce Speed	Drivers Skills/ UTL Report	
DUI	Stopped Vehicle struck by Drunk Driver	*
Failure to Reduce Speed	Stopped in heavy traffic/struck in rear	
Driver Condition/Sick Driver	Vehicle stopped in traffic /struck in rear	
Improper Backing	Vehicle backed up to change lanes	
Distraction	Driver looking down struck stopped vehicle	
Failure to Reduce Speed	Following too closley/ UTL Report	
Failure to Reduce Speed	Driver Skills/Lost Control	
Failure to Reduce Speed	Light turned green drove into vehicle infront	
Failure to Reduce Speed/DUI	Stopping at red light struck by Drunk Driver	*

Signal Timings
Signal timings and other settings before and after RLR camera installation. The traffic signal timings are not under control of the Village of Gurnee. As such, we do not possess this information.

Traffic Volumes
Traffic volumes before and after RLR Camera System installation. The traffic volumes shall include both Average Daily and Peak Period traffic.

The average daily traffic counts are supplied by the Illinois Department of Transportation at: https://www.gettingaroundillinois.com.

The average daily traffic volume for the Intersection(s) for the 3-years prior to photo enforcement is:

Route 132 & Route 21	19,850
Route 132 & Hunt Club Road	41,300
Route 132 & Dilleys Road	30,850
Route 41 & Delany Road	43,450

The average daily traffic volume for 3 years post camera installation:

Route 132 & Route 21	13,800
Route 132 & Hunt Club Road	42,400
Route 132 & Dilleys Road	26,700
Route 41 & Delany Road	38,700

Recommendations
There are two recommendations. First, continue to analyze the intersection(s) crash data over the next three years to monitor post photo enforcement data. Second; protect the left turn lanes for east and westbound traffic at Route 41 & Delany Road to reduce the traffic crashes that are a result of failure to yield while turning left.

Adjudication Process
During the examined time period (2011 through 2013) we conducted 2,031 administrative hearings related to photo enforcement citations issued. Of those hearings, 1,561 of those were found to be liable including those who failed to appear at their scheduled hearing.

Financial Report
The total number of citations issued at all intersection(s) from January 1, 2011 through December 31, 2013 was 34,812. When you subtract the lease payments, bank and various fees for the system during the same time period. The net revenue collected was approximately $2,822,364.