

SUBREGIONAL WORK PROGRAM OF FY 2012

(TASK III)

Road Safety Audit of Central Avenue-CR 542, Moss Mill/Egg Harbor Road-CR 561/602, and Chew Road-CR 559 Hammonton, New Jersey



July 2012

**Atlantic County
Department of Regional Planning and Economic
Development**



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Table of Contents

Sr. #	Description	Pages
1	Introduction	3-3
2	Map of RSA Roads	4-4
3	Egg Harbor Road Crash Data Pre-Audit Analysis Map Crash Data Locations Year 2003-2011 Analysis Intersection locations/Data Analysis Diagrams	5-17
4	Central Avenue Crash Data Pre-Audit Analysis Map Crash Data Locations Year 2003-2011 Analysis Intersection locations/Data Analysis Diagrams	18-30
5	Chew Road Crash Data Pre-Audit Analysis Map Crash Data Locations Year 2003-2011 Analysis Intersection locations/Data Analysis Diagrams	31-42
6	Road Safety Audit Pictures	43-47
7	List of Safety Issues and Proposed Remedies	48-51

Introduction

Atlantic County has conducted a Road Safety Audit of three Hammonton roads, Central Avenue CR 542 (Rt. 30 to Rt. 54, 2.45 miles), Moss Mill/Egg Harbor Road CR 561/602 (from Rt. 30 to Chew Road, 3.8 miles) and Chew Road CR 559 (from Rt. 54 to Egg Harbor Road, 1.7 miles). This audit was conducted as part of Task III of FY 2012 Subregional Work Program. Prior to the audit activities, the Audit team collected and reviewed traffic data and other related material in order to assist the team in conducting the audit. The team consisted of following members:

Hammonton-Road Safety Audit Team

Name	Agency
John Peterson	Atlantic County
Jenn Marandino	SJTPO
John Masi	Atlantic County
James Mason	Atlantic County



Everest John	Atlantic County
Ed Newman	Atlantic County
Andy Kaplan	Rutgers University
Scott McPherson	Atlantic County
Sally Karasov	Rutgers University
Sophia Azam	NJDOT
Patricia Ott	MBO
Lt. Nick Salvatore	Hammonton Police Department
Chief Robert Jones	Hammonton Police Department

A description of the materials that were reviewed is provided below:

- Aerial Photos: Aerial photographs of the roadway segments;
- Straight Line Plan: Straight line plans, 1" = 400 feet were developed of the study sections of the roads;
- Traffic Volume Data:

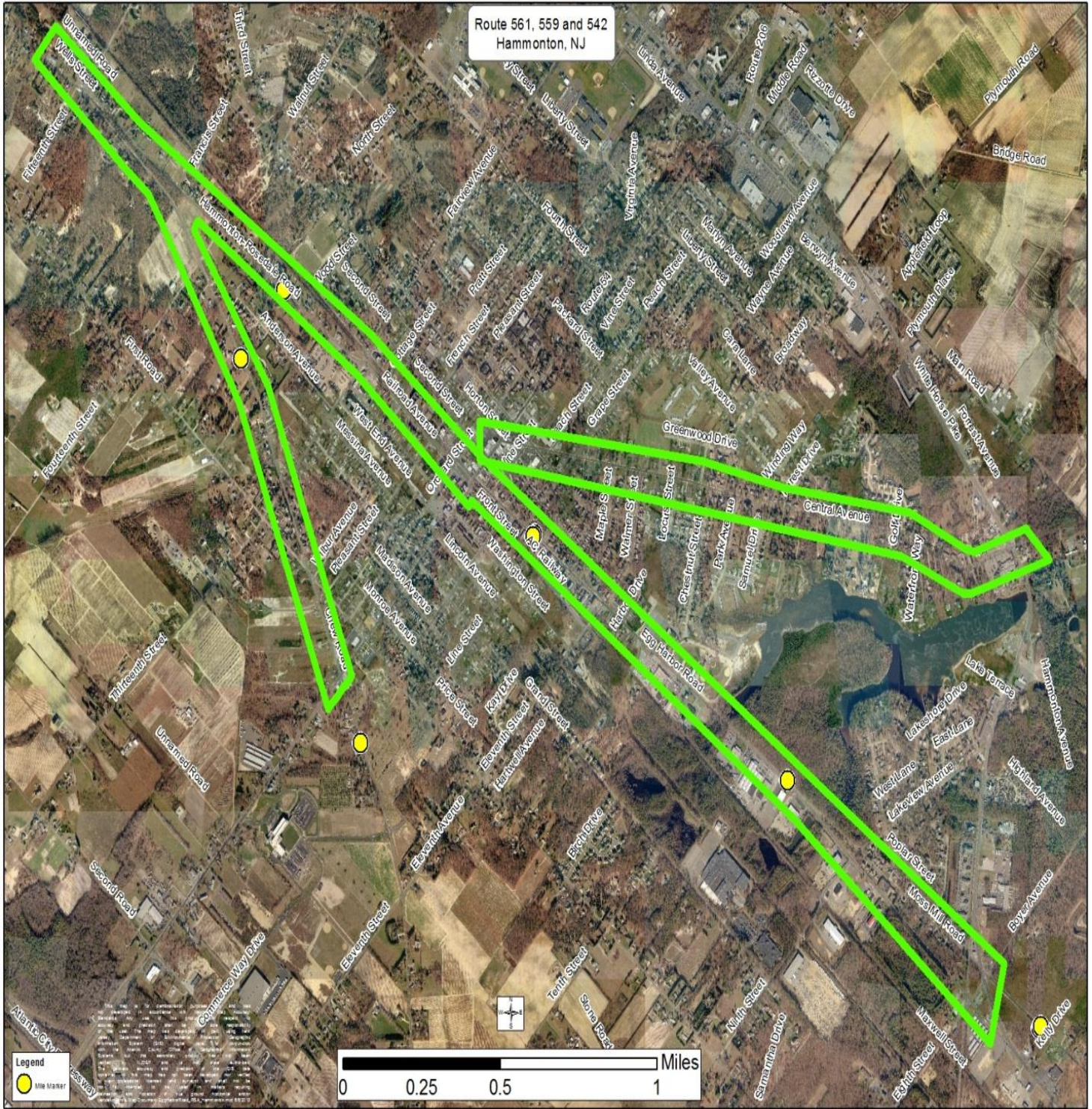


- Traffic Signals Plans and Timing/phasing schedules:
- Crash Data: Crash data was obtained through Plan4Safety; January 1, 2003 through December 31, 2011. The formatted tables and graphs are attached for reference. An investigation of the crash data for the three-year period of 2009, 2010 and 2011 has been summarized in this report. *(Pre-audit crash data collection and analysis was made by SJTPO)*

The Audit team listed the safety issues and recommended remedial actions and level of effort required and safety benefits that can be expected for implementation. The Audit was conducted in June 2012.







Egg Harbor Road-CR 561

Pre-Audit Data Collection and Analysis – Crash Data

Crash data was obtained through Plan4Safety; January 1, 2003 through December 31, 2011. A summary sheet with formatted tables and column charts is provided for reference. A closer investigation of the crash data for the three-year period of 2009, 2010, and 2011 was prepared with a short summarization herein.

Egg Harbor Road (Route 561) MP 20.24-23.88 and Egg Harbor Road (Atlantic County 602) MP 0.00-0.95

For the three-year period, a total of 66 crashes occurred along Route 561/602. 39 crashes occurred in 2009, 46 in 2010, and 62 occurred in 2011.

The types of crashes are categorized as follows:

Fatal Crashes = 0



Injury Crashes = 44 (30%)

Property Damage Only (Non-injury) Crashes = 103 (70%)

The most prevalent crash type along the studied roadway is ***Right Angle*** = 65 (44%); the next highest crash type is ***Same Direction – Rear End*** = 36 (24%).

The highest concentration of crashes occurred at the intersection of Route 561 (Egg Harbor Road) and Atlantic County 640 (Mays Landing De Casta Road) with a total of 27 occurrences. The next highest occurrence of crashes was at the intersection of Route 561 (Egg Harbor Road) and Atlantic County 678 (13th Street) with 11 occurrences.

There were two crashes involving a Pedestrian, both occurring in 2007 along Route 561 (Egg Harbor Road) one at its intersection with Orchard Street (November, Clear/Dark with Street Lights on) and the second at approximately 125 feet north of Line Street (April, Rain/Daylight – Incapacitating Injury) Alcohol was not involved in either crash.



There was a single crash involving a Pedalcyclist occurring in 2011 at Route 561 (Egg Harbor Road) and Atlantic County 640 (Mays Landing De Casta Road). The crash occurred during clear and daylight conditions in January. Alcohol was not involved in the crash.

A review of the crashes established the following:

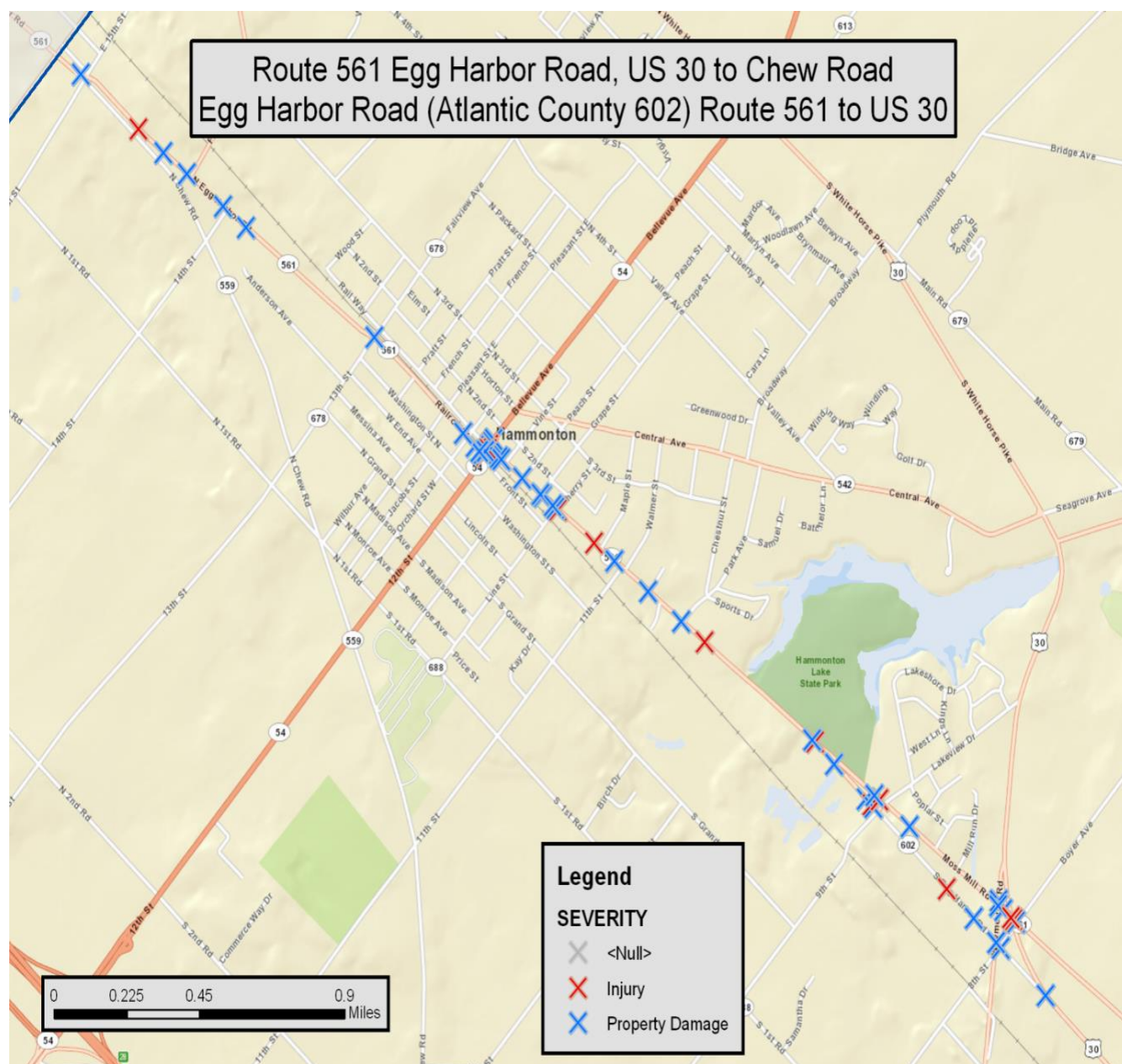
- The highest concentration of crashes occurred in **November** with 22 crashes followed by 18 crashes in March.
- The highest frequency of crashes occurred on **Monday and Wednesday** with 27, followed by Tuesday and Thursday both with 25 crashes.
- The highest frequency of crashes occurred during the **2 and 5 o'clock** PM hours with 17/18 crashes, followed by the 4PM hour with 15 crashes.
- The percentage of crashes occurring with **dry road surface conditions** is 84% while the percentage of crashes for **wet surface conditions** is 11%.
- The percentage of crashes occurring under **clear** environmental (weather) conditions (84%) is slightly more than the SJTPO Regional average for roads in the region (80%).



- The percentage of crashes during hours of **darkness** (18%) is lower than the SJTPO Regional average for roads in the region (24%).
- The percentage of crashes with **injuries** is 30% with 70% of the crashes being **property damage only**.
- The percentage of **right angle** type crashes (44%) is significantly higher than the SJTPO Regional average for roads in the region (16%).
- The percentage of **same direction – rear end type crashes** (24%) is slightly higher than the SJTPO Regional average for roads in the region (22%).
- Approximately 83% of the crashes along the studied section of roadway occurred **at an intersection**, which is significantly higher than the SJTPO Regional average for roads in the region (28%).
- **Alcohol was involved** in approximately 3% of the total crashes within the last three years, which is slightly less than the SJTPO Regional average for roads in the region (5%).







Roadway Name	Route	SRI	Mileposts	
Intersecting Roadway			Start	End
<i>Egg Harbor Road</i>	<i>Atlantic County</i> 602	01000602	0.00	0.95
Moss Mill Road	Route 561	00000561	20.98	



	Atlantic County			
Weymouth Road	640	01000640	2.01	
White Horse Pike	US 30	000000030	32.33	
<i>Egg Harbor Road</i>	<i>Route 561</i>	<i>00000561</i>	<i>20.24</i>	<i>23.85</i>
White Horse Pike	US 30	000000030	32.11	
	Atlantic County			
Weymouth Road	640	01000640	2.10	
	Atlantic County			
Egg Harbor Road	602	01000602	0.00	
11th Street		01131129	0.95	
Walmer Road		01131129	0.97	
Bellevue Avenue	NJ 54	00000054	10.62	10.65
	Atlantic County			
13th Street	678	01000678	10.40	10.42



Active Filter Summary	602/561	602 Cross Streets	561 Cross Streets	Total
Crash Count	412	6	76	494
Geocoded Count	403	6	76	485
Fatal Crashes	3	0	0	3
Total Fatalities	3	0	0	3
Pedestrians Injured	3	0	1	4
Total People Killed	3	0	0	3
Total Injuries	195	3	19	217
All Crashes with Injuries	131	2	15	148
Pedestrian Fatal	0	0	0	0

Data in System For:



1/1/2003 - 3/29/2012

Year	Number of Crashes
2003	61



2004	51
2005	61
2006	62
2007	57
2008	38
2009	39
2010	46
2011	62
Grand Total	477
2009-2011 Total	147

Month	Number of Crashes by Year										Grand Total	2009-2011	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				



											Total		
January	4	5	7	4	5	5	2	3	6	41	11	7%	
February	3	5	5	4	5	4		1	1	28	2	1%	
March	3	4	4	4	3	2	2	6	10	38	18	12%	
April	7	5	4	6	5	2	3	1	6	39	10	7%	
May	5	3	2	4	3	2	4	5	5	33	14	10%	
June	4	6	5	6	5	1	4	4	4	39	12	8%	
July	10	5	3	9	8	6	5	3	5	54	13	9%	
August	8	5	3	3	6	3	2	3	3	36	8	5%	
September	3	3	5	6	4	2	4	6	4	37	14	10%	
October	3	1	7	5	5	6	5	6	2	40	13	9%	
November	3	5	7	7	6	3	5	6	11	53	22	15%	
December	8	4	9	4	2	2	3	2	5	39	10	7%	
											47	14	
Grand Total	61	51	61	62	57	38	39	46	62	7	7	100%	



Day of Week	Number of Crashes by Year									Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011			
Sunday	5	5	3	6	8	3	1	2	3	36	6	4%
Monday	15	8	9	9	8	8	8	10	9	84	27	18%
Tuesday	13	8	9	7	11	6	8	5	12	79	25	17%
Wednesday	12	7	11	4	4	6	7	3	17	71	27	18%
Thursday	10	8	13	13	10	7	7	9	9	86	25	17%
Friday	4	10	9	17	12	5	6	12	6	81	24	16%
Saturday	2	5	7	6	4	3	2	5	6	40	13	9%
Grand Total	61	51	61	62	57	38	39	46	62	477	147	100%



Time of Day	Number of Crashes by Year										Grand Total	20 09- 20 11 Total	Percentage
	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11				
12:00 MIDNIGHT-1:00 AM	1		1	1		1		1		5	1	1%	
1:00-2:00 AM		1	1							2	0	0%	
2:00-3:00 AM			1	1		1				3	0	0%	
3:00-4:00 AM	1		1						1	3	1	1%	
4:00-5:00 AM	1			2		1			1	5	1	1%	
5:00-6:00 AM		2	1	2	1			1		7	1	1%	
6:00-7:00 AM		2	1			2			2	7	2	1%	
7:00-8:00 AM	1	2	10	4	1	1	2	3	2	26	7	5%	
8:00-9:00 AM	1	2	3		3	4	1	3	3	20	7	5%	
9:00-10:00 AM	5	3	2	1	4	2	1	2		20	3	2%	
10:00-11:00 AM	2	4	3	5	1		2	3	6	26	11	7%	



11:00AM-12:00 NOON	4	5	2	4		1	3	3	4	26	10	7%
12:00-1:00 PM	3	1	5	3	8	2	1	1	7	31	9	6%
1:00-2:00 PM	4	3	1	9	3	4	3	5	3	35	11	7%
2:00-3:00 PM	2	4	6	5	4	1	7	4	6	39	17	12%
3:00-4:00 PM	5	2	6	7	8	4	2	3	3	40	8	5%
4:00-5:00 PM	6	4	7	4	4	4	3	5	7	44	15	10%
5:00-6:00 PM	9	4	2	4	10	5	4	5	9	52	18	12%
6:00-7:00 PM	6	5	3	3	3	2	1	2		25	3	2%
7:00-8:00 PM	1	2		2	2		2	2		11	4	3%
8:00-9:00 PM	3	3	1	3	2	2	2		4	20	6	4%
9:00-10:00 PM	4		1	2			3	1	2	13	6	4%
10:00-11:00 PM	1		2		2		2	2	1	10	5	3%
11:00PM-12:00												
MIDNIGHT	1	2	1		1	1			1	7	1	1%
UNKNOWN										0	0	0%
Grand Total	61	51	61	62	57	38	39	46	62	477	147	100%



Road Surface Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Dry	47	40	47	46	43	32	34	38	51	378	123	84%	
Wet	13	10	6	16	11	6	4	6	6	78	16	11%	
Snowy		1	6		3			1		11	1	1%	
Icy	1		2					1	3	7	4	3%	
Slush							1		2	3	3	2%	
Water (Standing/Moving)										0	0	0%	
Sand, Mud, Dirt										0	0	0%	
Unknown										0	0	0%	



Grand Total	61	51	61	62	57	38	39	46	62	47	14	100%
										7	7	

Weather Condition	Number of Crashes by Year									Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011			
Clear	50	43	52	47	44	34	35	37	52	394	124	84%
Rain	10	8	4	12	9	3	3	3	5	57	11	7%
Snow			5	1	3	1		2		12	2	1%
Fog/Smog/Smoke	1									1	0	0%
Overcast				2	1		1	4	1	9	6	4%
Sleet/Hail/Freezing												
Rain									3	3	3	2%
Unknown									1	1	1	1%



Grand Total	61	51	61	62	57	38	39	46	62	47	14	100%
										7	7	

Light Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Daylight	41	40	48	47	44	28	30	37	50	365	117	79%	
Dawn		1		2					1	4	1	1%	
Dusk	2	2			4	1		2		11	2	1%	
Dark - Street Lights Off	1	1		1						3	0	0%	
Dark - No Street Lights			2	2						4	0	0%	
Dark - Street Lights On/ continuous	17	7	11	5	6	6	5	5	10	72	20	14%	



Dark - Street Lights												
On/ spot				5	2	3	4	2	1	17	7	5%
Unknown							1			1	1	1%
Grand Total	61	51	61	62	56	38	40	46	62	47	14	100%
										7	8	

Severity	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Fatal					2	1					3	0	0%
Injury	19	19	19	17	15	9	12	13	19		142	44	30%
Property Damage Only	42	32	42	45	40	28	27	33	43		332	103	70%
Grand Total	61	51	61	62	57	38	39	46	62		477	147	100%



Crash Type	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Same Direction - Rear End	18	14	10	12	8	7	15	11	10	105	36	24%	
Same Direction - Side Swipe	7	2	3	7	4	3	4	1	2	33	7	5%	
Right Angle	21	18	29	20	25	14	11	22	32	192	65	44%	
Opposite Direction - Head On, Angular	1	1	2	2	1				3	10	3	2%	
Opposite Direction - Side Swipe				2	1			2		5	2	1%	
Struck Parked Vehicle	2	1	2	1	1		1			8	1	1%	



Left Turn / U Turn	1	8	4	5	5	3	4	1	6	37	11	7%
Backing	2	1	1	6	1	2	1	3	2	19	6	4%
Encroachment										0	0	0%
Overtaken				1		1				2	0	0%
Fixed Object	1		1	5	8	6	2	6	3	32	11	7%
Animal				1			1		2	4	3	2%
Pedestrian					2					2	0	0%
Pedalcyclist									1	1	1	1%
Non-fixed Object					1	1				2	0	0%
Railcar - Vehicle						1			1	2	1	1%
Other	7	6	9							22	0	0%
Unknown	1									1	0	0%
Grand Total	61	51	61	62	57	38	39	46	62	47	14	100%



Crash Location At/Not at Intersection Nearest Cross Street	Fat al	Injur y	Proper ty Damag e Only	Gran d Total	Percenta ge
Egg Harbor Road (Atlantic County 602)	0	6	12	18	12.24%
<i>At Intersection</i>	<i>0</i>	<i>5</i>	<i>10</i>	<i>15</i>	
8TH STREET/BOYER AVENUE			1	1	
9TH STREET/LAKEVIEW DRIVE		4	3	7	
ATLANTIC COUNTY 640 (WEYMOUTH ROAD)			3	3	



ROUTE 561 (MOSS MILL ROAD)			1	1	
US 30 (WHITEHORSE PIKE)		1	2	3	
<i>Not at Intersection</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	
ATLANTIC COUNTY 640 (WEYMOUTH ROAD)		1	1	2	
ROUTE 561 (MOSS MILL ROAD)			1	1	
Weymouth Road (Atlantic County 640)	0	0	1	1	0.68%
<i>At Intersection</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	
ROUTE 561 (MOSS MILL ROAD)			1	1	
12th Street/Bellview Avenue (NJ 54)	0	3	8	11	7.48%
<i>At Intersection</i>	<i>0</i>	<i>2</i>	<i>6</i>	<i>8</i>	
ROUTE 561 (EGG HARBOR ROAD)		1	4	5	
ROUTE 561 (RAILROAD AVENUE/FRONT STREET)		1	2	3	
<i>Not at Intersection</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	
ROUTE 561 (EGG HARBOR ROAD)			2	2	
ROUTE 561 (RAILROAD AVENUE/FRONT STREET)		1		1	
Route 561	0	34	81	115	78.23%



<i>At Intersection</i>	<i>0</i>	<i>27</i>	<i>69</i>	<i>96</i>
11TH STREET		2	2	4
14TH STREET			1	1
15TH STREET		1	4	5
8TH STREET/BOYER AVENUE		1	2	3
9TH STREET/LAKEVIEW DRIVE		3	2	5
ATLANTIC COUNTY 602 (EGG HARBOR ROAD)			1	1
ATLANTIC COUNTY 640 (MAYS LANDING DE CASTA ROAD)		9	18	27
ATLANTIC COUNTY 678 (13TH STREET)			11	11
CHERRY STREET		2		2
GRAPE STREET			2	2
LINE STREET			2	2
NJ 54 (12TH STREET/BELLVIEW AVENUE)		1	6	7
ORCHARD STREET		2	4	6
PARK AVENUE		1	3	4
PASSMORE AVENUE		2	1	3



PEACH STREET	1	7	8
ROUTE 559 / 15TH ST / CHEW RD		1	1
US 30 (WHITEHORSE PIKE)	2		2
VINE STREET		2	2

Crash Location At/Not at Intersection Nearest Cross Street	Fat al	Injur y	Proper ty Damag e Only	Gran d Total	Percenta ge
Route 561 continued	0	28	56	84	57.14%
<i>Not at Intersection</i>	<i>0</i>	<i>7</i>	<i>12</i>	<i>19</i>	
14TH STREET		1	1	2	
8TH STREET/BOYER AVENUE			1	1	
9TH STREET/LAKEVIEW DRIVE			2	2	
ATLANTIC COUNTY 602 (EGG HARBOR ROAD)		1		1	
CHERRY STREET			1	1	



LINE STREET			1	1	
MAPLE STREET	1			1	
NJ 54 (12TH STREET/BELLVIEW AVENUE)	1		2	3	
PARK AVENUE	1			1	
SAINT FRANCIS STREET	1		3	4	
US 30 (WHITEHORSE PIKE)	1			1	
VETERANS PLACE			1	1	
Route 561 (Moss Mill Road)	0	1	1	2	1.36%
<i>At Intersection</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>2</i>	
ATLANTIC COUNTY 602 (EGG HARBOR ROAD)		1	1	2	
2009-2011 Grand Total	0	44	103	147	100.00%
<i>At Intersection</i>	<i>0</i>	<i>35</i>	<i>87</i>	<i>122</i>	<i>82.99%</i>
<i>Not at Intersection</i>	<i>0</i>	<i>9</i>	<i>16</i>	<i>25</i>	<i>17.01%</i>

Crash Type	Fat al	Injur y	Proper ty	Percenta ge
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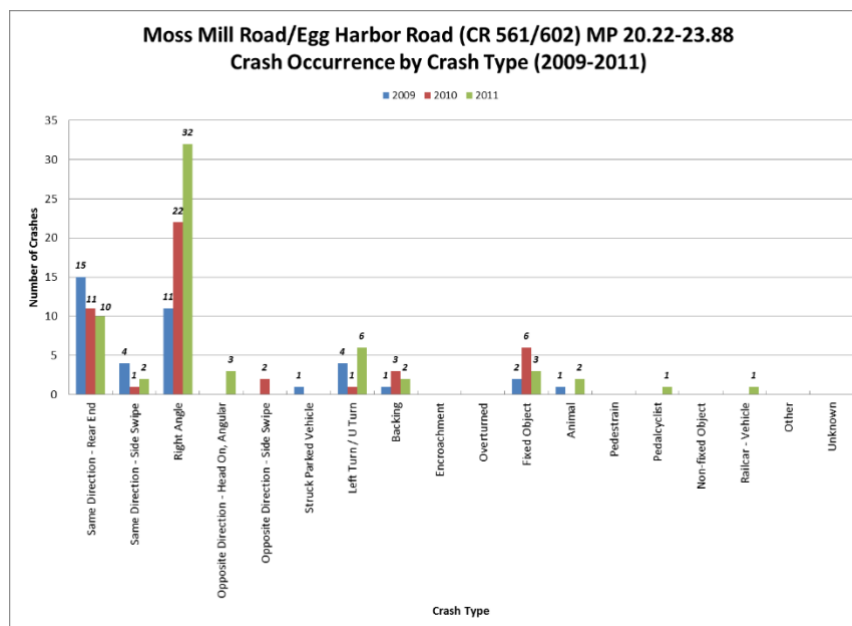


		Damage Only	Grand Total	
Same Direction - Rear End	11	25	36	24.49%
Same Direction - Side Swipe		7	7	4.76%
Right Angle	21	44	65	44.22%
Opposite Direction - Head On, Angular		3	3	2.04%
Opposite Direction - Side Swipe	1	1	2	1.36%
Struck Parked Vehicle	1		1	0.68%
Left Turn / U Turn	3	8	11	7.48%
Backing		6	6	4.08%
Encroachment			0	0.00%
Overturned			0	0.00%
Fixed Object	6	5	11	7.48%
Animal		3	3	2.04%
Pedestrian			0	0.00%

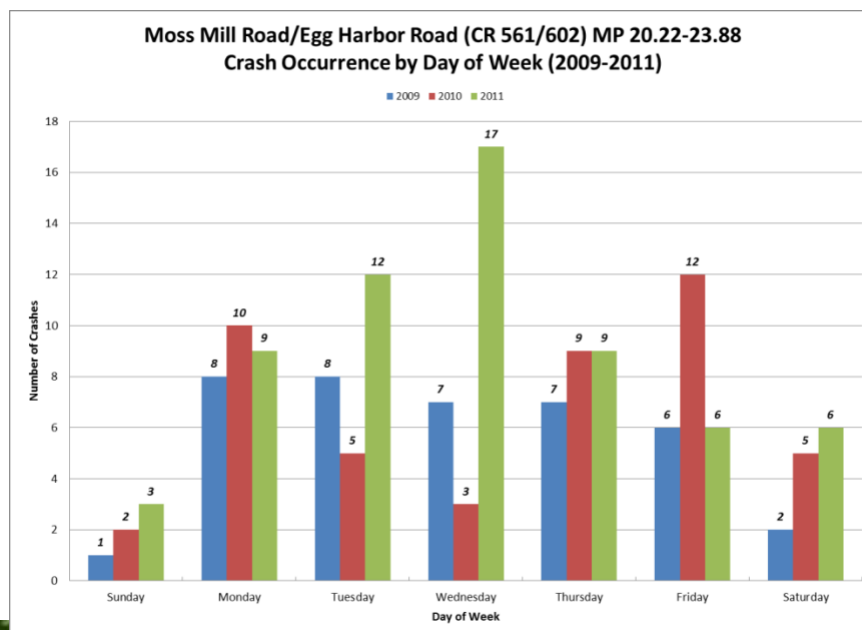


Pedalcyclist	1		1	0.68%	
Non-fixed Object			0	0.00%	
Railcar - Vehicle		1	1	0.68%	
Other			0	0.00%	
Unknown			0	0.00%	
2009-2011 Grand Total	0	44	103	147	100.00%
<i>Alcohol NOT Involved</i>		<i>42</i>	<i>100</i>	<i>142</i>	<i>96.60%</i>
<i>Alcohol Involved</i>		<i>2</i>	<i>3</i>	<i>5</i>	<i>3.40%</i>

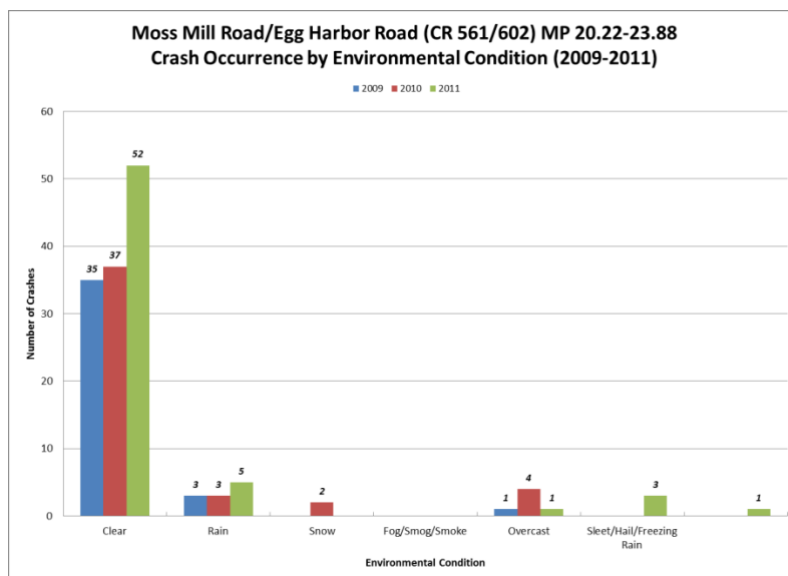




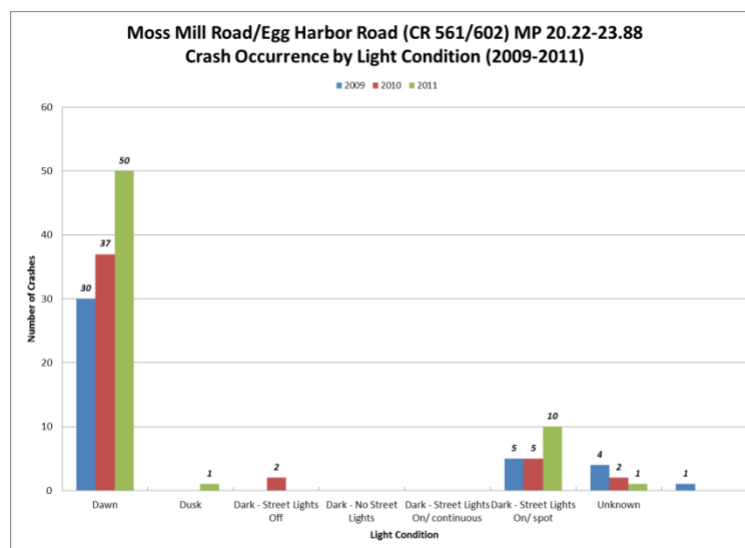


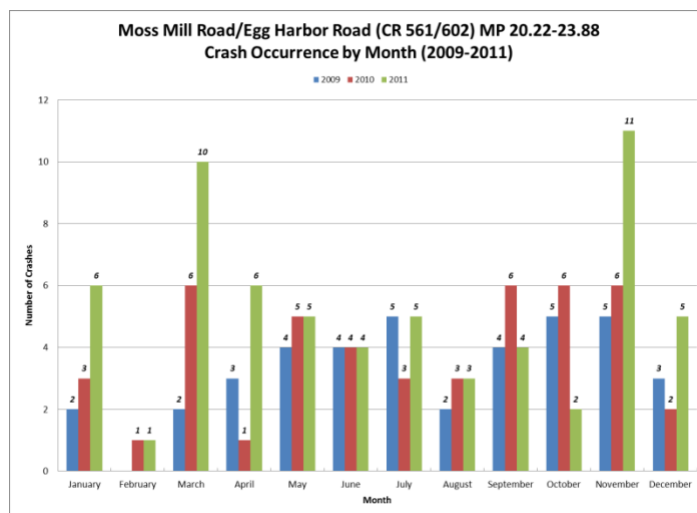


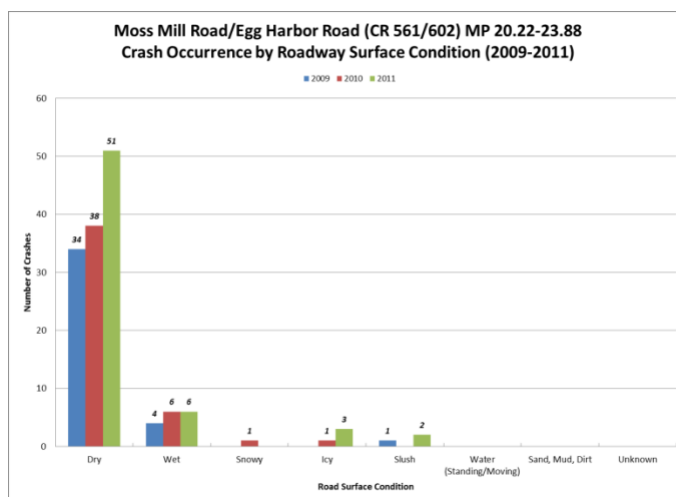


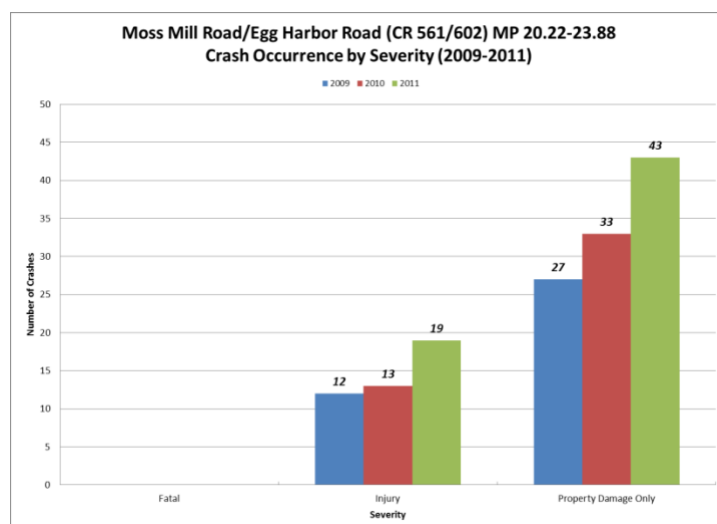


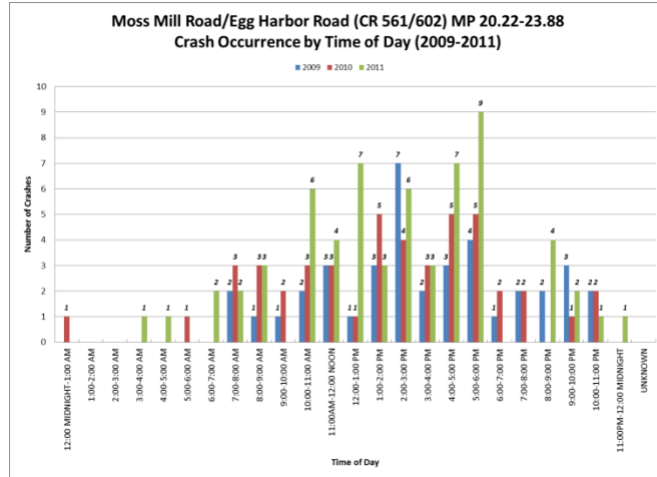


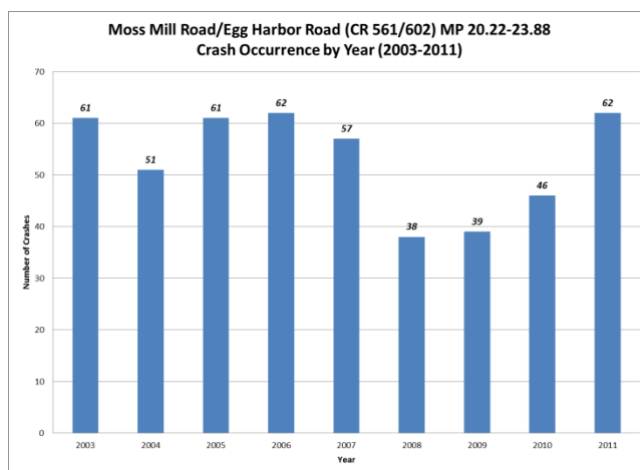












Central Road – CR 542

Pre-Audit Data Collection and Analysis – Crash Data

Crash data was obtained through Plan4Safety; January 1, 2003 through March 19, 2012. A summary sheet with formatted tables and column charts is provided for reference. A closer investigation of the crash data for the three-year period of 2009, 2010, and 2011 was prepared with a short summarization herein.

Route 542 Central Avenue, 12th Street (NJ 54) to White Horse Pike (US 30) (MP 0.00-1.68)

For the three-year period, a total of 111 crashes occurred along Route 542 or at the Federal Aid cross streets. 34 crashes occurred in 2009, 43 in 2010, and 34 occurred in 2011.



The types of crashes are categorized as follows:

Fatal Crashes = 0

Injury Crashes = 44 (40%)

Property Damage Only (Non-injury) Crashes = 67 (60%)

The most prevalent crash type along the studied roadway is ***Same Direction Rear End*** = 34 (31%); the next highest crash type is ***Right Angle*** = 30 (27%).

Crash Clusters

Central Avenue (Route 542)



Along Central Avenue (Route 542) the highest concentration of crashes was at the intersection with 3rd Street (Atlantic County Route 724) with a total of five (5) occurrences; four of which were of the **Right Angle** type. Another five (5) crashes occurred at Grape Street with the cluster having four (4) occurrences of **Right Angle** crashes. A total of three (3) **Struck Parked Vehicle** crashes occurred at 12th Street (NJ Route 54) with another three (3) crashes (**Fixed Object** type) occurred at White Horse Pike.

Bellevue Avenue (NJ 54)

A total of ten (10) crashes occurred at Bellevue Avenue at 2nd Street with another ten (10) at Horton Street/Central Avenue (Route 542). Within that total number of crashes there were several clusters of **Same Direction Rear End** crashes at 2nd Street, with five (5) occurrences and a second cluster at Horton Street/Central Avenue (Route 542), with five (5) occurrences.

White Horse Pike (US 30)



At the signalized intersection of White Horse Pike (US 30) and Seagrove Avenue/Central Avenue (Route 542) there were seven (7) ***Same Direction Rear End*** crashes and four (4) ***Right Angle*** crashes with a total of 19 crashes. At the adjacent un-signalized intersection of White Horse Pike (US 30) and Pleasant Mills Road (Route 542) there is a cluster of 11 ***Same Direction Rear End*** crashes and ten (10) crashes of the ***Right Angle*** type with a total of 30 crashes.

Pedestrian/Pedalcyclist Crashes

There was a crash involving a Pedestrian in 2009 at the intersection of Bellevue Avenue (NJ 54) and 2nd Street as well as in 2011 at the intersection of Bellevue Avenue (NJ 54) and Horton Street/Central Avenue (Route 542). Both crashes occurred in April at approximately 2:30/2:45PM. There was a single crash involving a Pedalcyclist occurring in July of 2006 at the intersection of Central Avenue (Route 542) and Main Road (CR 679). All three crashes occurred during clear and daylight; alcohol was not involved in the crash.



Crash Statistics

A review of the crashes established the following:

- The highest concentration of crashes occurred in **June** with 17 (15%) crashes followed by 14 (13%) crashes in November, and 11 (10%) crashes in both May and July.
- The highest frequency of crashes occurred on **Wednesday** with 21 (19%); although the crashes are nearly even distributed throughout each day of the week.
- The highest frequency of crashes occurred during the **2PM and 4PM** hours, each with 14 (13%) crashes, followed by the noon with 11 (10%) crashes.
- The percentage of crashes occurring with **dry road surface conditions** is 69% while the percentage of crashes for **wet surface conditions** is 22%.
- The percentage of crashes occurring under **clear** environmental (weather) conditions (74%) is slightly less than the SJTPO Regional average for roads in the region (80%).

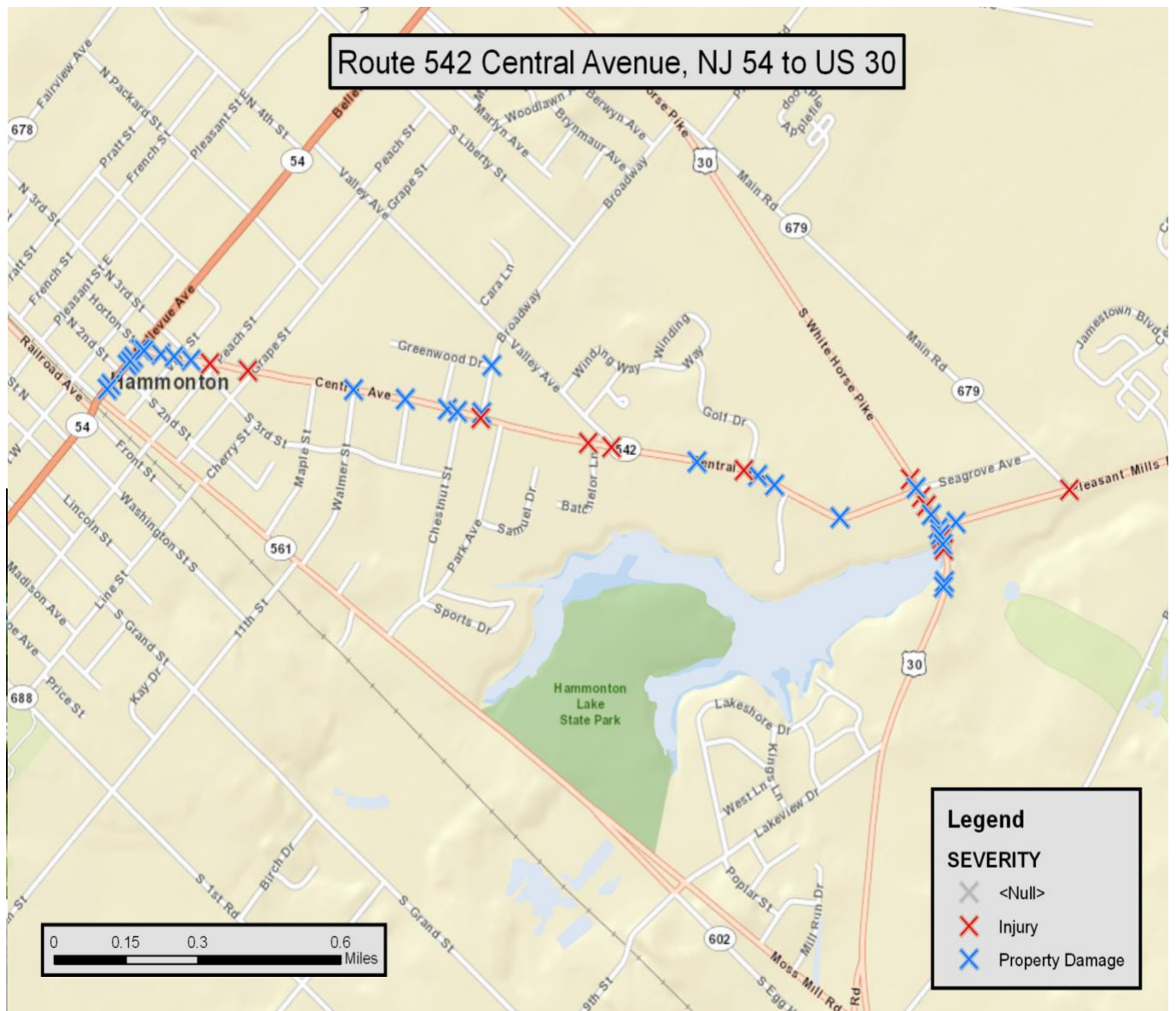


- The percentage of crashes during hours of **darkness** (18%) is lower than the SJTPO Regional average for roads in the region (24%).
- The percentage of crashes with **injuries** is 40% with 60% of the crashes being **property damage only**.
- The percentage of **same direction – rear end type crashes** (31%) is higher than the SJTPO Regional average for roads in the region (22%).
- The percentage of **right angle** type crashes (27%) is significantly higher than the SJTPO Regional average for roads in the region (16%).



- Approximately 57% of the crashes along the studied section of roadway occurred ***at an intersection***, which is significantly higher than the SJTPO Regional average for roads in the region (28%).
- **Alcohol was involved** in approximately 4% of the total crashes within the last three years, which is substantially similar to the SJTPO Regional average for roads in the region (5%).





Year	Number of Crashes
2003	41
2004	34
2005	44
2006	37
2007	34
2008	30
2009	34
2010	43
2011	34
Grand Total	331



2009-2011 Total 111

Month	Number of Crashes by Year									Grand Total	20 09- 20 11 Total	Percentage
	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11			
January	2	4	2	1	5	5	2	2	6	29	10	9%
February	4	1	2	1		2	3	3	1	17	7	6%
March	1	2	3	4	2		1	1	1	15	3	3%
April	3	3	3	3	1	3	3	3	3	25	9	8%
May	3	6	7	1	4		6		5	32	11	10%
June	5	2	3	2	6	1	7	7	3	36	17	15%
July		4	4	7	2	4	2	7	2	32	11	10%
August	8	3	1	4	5	4	1	2	4	32	7	6%



September	4	1	4	2	4	4	1	5	2	27	8	7%
October	3	2	6	6	2		3	3	3	28	9	8%
November	4		7	2	2	3	3	9	2	32	14	13%
December	4	6	2	4	1	4	2	1	2	26	5	5%
Grand Total	41	34	44	37	34	30	34	43	34	33	11	100%

Day of Week	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Sunday	5	2	6	6	3	1	6	4	5	38	15	14%	
Monday	5	4	5	7	4	6	2	5	4	42	11	10%	
Tuesday	2	7	5	5	7	4	6	7	6	49	19	17%	
Wednesday	6	6	5	6	5	3	7	10	4	52	21	19%	



Thursday	9	6	6	2	5	6	7	4	5	50	16	14%
Friday	9	4	8	7	5	3	3	7	6	52	16	14%
Saturday	5	5	9	4	5	7	3	6	4	48	13	12%
Grand Total	41	34	44	37	34	30	34	43	34	33	11	100%

Time of Day	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
12:00 MIDNIGHT-1:00 AM	1	1				1					3	0	0%
1:00-2:00 AM											0	0	0%
2:00-3:00 AM							1				1	1	1%
3:00-4:00 AM		1			1					1	3	1	1%



4:00-5:00 AM	1				1					2	0	0%
5:00-6:00 AM	1	1							1	3	1	1%
6:00-7:00 AM		1	1	1		1		1		5	1	1%
7:00-8:00 AM	4		3	1	1	1	2	2		14	4	4%
8:00-9:00 AM	1		1	1		1	2		2	8	4	4%
9:00-10:00 AM	1	1	2		3	2	1		3	13	4	4%
10:00-11:00 AM	1	1		3	3	3		2	1	14	3	3%
11:00AM-12:00 NOON	2	4	4	3	4	2	4	1	1	25	6	5%
12:00-1:00 PM	5	2	7	6	2	2	2	7	2	35	11	10%
1:00-2:00 PM	4	2	3	1	1	3	1	4	3	22	8	7%
2:00-3:00 PM	6	2	2	6	5	1	7	4	3	36	14	13%
3:00-4:00 PM	4	5	3	4	2	4	5		6	33	11	10%
4:00-5:00 PM	4	2	5	3	3	3	3	6	5	34	14	13%
5:00-6:00 PM	1	2	5	3	2		2	6	2	23	10	9%
6:00-7:00 PM	2	2	1	1	1	1	4	3		15	7	6%
7:00-8:00 PM	1	1	3	1	2	3		1		12	1	1%
8:00-9:00 PM		3	3	2	2	1		3	3	17	6	5%



9:00-10:00 PM	1	2	1	1		1		2	1	9	3	3%
10:00-11:00 PM								1		1	1	1%
11:00PM-12:00												
MIDNIGHT	1	1			1					3	0	0%
UNKNOWN										0	0	0%
Grand Total	41	34	44	37	34	30	34	43	34	33	11	100%
										1	1	

Road Surface Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Dry	29	24	27	33	30	21	19	33	25	241	77	69%	
Wet	12	10	15	4	4	8	11	6	7	77	24	22%	
Snowy			1					1		2	1	1%	



Icy						1		1	2	2	1	7	5	5%
Slush												0	0	0%
Water												0	0	0%
(Standing/Moving)												0	0	0%
Sand, Mud, Dirt												0	0	0%
Unknown									2	1	1	4	4	4%
Grand Total	41	34	44	37	34	30	34	43	34			33	11	100%
												1	1	

Weather Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Clear	31	25	30	34	30	24	21	34	27	256	82	74%	
Rain	10	9	12	3	4	5	8	5	5	61	18	16%	



Snow				2				1	2		5	3	3%
Fog/Smog/Smoke											0	0	0%
Overcast								3	1		4	4	4%
Sleet/Hail/Freezing													
Rain								1			1	1	1%
Unknown						1			1	2	4	3	3%
Grand Total	41	34	44	37	34	30	34	43	34		33	11	100%
											1	1	

Light Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Daylight	30	22	36	32	26	24	27	33	28	258	88	79%	
Dawn	1		1			1				3	0	0%	



Dusk	3	2	1		2		1	1		10	2	2%
Dark - Street Lights Off					1					1	0	0%
Dark - No Street Lights	1							1	1	3	2	2%
Dark - Street Lights On/ continuous	6	10	6	3	3	4	3	5	3	43	11	10%
Dark - Street Lights On/ spot				2	2	1	2	3	2	12	7	6%
Unknown							1			1	1	1%
Grand Total	41	34	44	37	34	30	34	43	34	33	11	100%
										1	1	

Severity	Number of Crashes by Year										Grand Total	2009-2011	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				



											Total	
Fatal											0	0%
Injury	16	16	18	18	15	18	16	18	10	145	44	40%
Property Damage Only	25	18	26	19	19	12	18	25	24	186	67	60%
Grand Total	41	34	44	37	34	30	34	43	34	331	111	100%

Crash Type	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Same Direction - Rear End	15	8	10	17	10	6	12	11	11	100	34	31%	



Same Direction - Side Swipe	5	3	6	3	2	2	4	4	3	32	11	10%
Right Angle	9	9	15	5	9	11	7	14	9	88	30	27%
Opposite Direction - Head On, Angular			1		1	1			1	4	1	1%
Opposite Direction - Side Swipe					1			1		2	1	1%
Struck Parked Vehicle	4	1	1	1	2	1	1	3	2	16	6	5%
Left Turn / U Turn	4	5	6	5	3	4	2	4		33	6	5%
Backing				1			1		1	3	2	2%
Encroachment										0	0	0%
Overturned				1	2					3	0	0%
Fixed Object				3	3	3	4	5	6	24	15	14%
Animal										0	0	0%
Pedestrian							1		1	2	2	2%
Pedalcyclist				1						1	0	0%
Non-fixed Object										0	0	0%



Railcar - Vehicle											0	0	0%
Other	4	8	5		1	2	1	1			22	2	2%
Unknown							1				1	1	1%
Grand Total	41	34	44	37	34	30	34	43	34		33	11	100%



Crash Location At/Not at Intersection Nearest Cross Street	Fatal	Injury	Property Damage Only	Grand Total	Percentage
Central Avenue (Route 542)	0	11	26	37	33.33%
<i>At Intersection</i>	<i>0</i>	<i>6</i>	<i>16</i>	<i>22</i>	
VINE STREET			2	2	
3RD STREET (CR 724)		1	4	5	
PEACH STREET		1	1	2	
GRAPE STREET		1	3	4	
WALMER STREET			2	2	
CHESTNUT STREET			2	2	
LOCUST STREET			1	1	
BROADWAY AVENUE (CR 680)		1	1	2	
VALLEY AVENUE		1		1	
MAIN ROAD (CR 679)		1		1	



<i>Not at Intersection</i>	<i>0</i>	<i>5</i>	<i>10</i>	<i>15</i>	
12TH STREET (NJ ROUTE 54)			3	3	
GRAPE STREET		1		1	
ALLEN LANE			1	1	
BROADWAY AVENUE (CR 680)		2		2	
BACHELOR LANE		1		1	
GOLF DRIVE		1	2	3	
WHITE HORSE PIKE (US 30)			2	2	
WHITE HORSE PIKE (US 30)/SEAGROVE AVENUE			2	2	
Broadway (Atlantic County 680)	0	0	2	2	1.80%
<i>Not at Intersection</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>2</i>	
CENTRAL AVENUE (ROUTE 542)			1	1	
GREENWOOD DRIVE			1	1	
Bellevue Avenue (NJ 54)	0	6	16	22	19.82%
<i>At Intersection</i>	<i>0</i>	<i>5</i>	<i>4</i>	<i>9</i>	
2ND STREET		1	1	2	
HORTON STREET/CENTRAL AVENUE (ROUTE 542)		4	3	7	



<i>Not at Intersection</i>	<i>0</i>	<i>1</i>	<i>12</i>	<i>13</i>	
EGG HARBOR ROAD (ROUTE 561)			2	2	
2ND STREET		1	7	8	
HORTON STREET/CENTRAL AVENUE (ROUTE 542)			3	3	
White Horse Pike (US 30)	0	27	23	50	45.05%
<i>At Intersection</i>	<i>0</i>	<i>19</i>	<i>13</i>	<i>32</i>	
SEAGROVE AVENUE/CENTRAL AVENUE (ROUTE 542)		8	6	14	
PLEASANT MILLS ROAD (ROUTE 542)		11	7	18	
<i>Not at Intersection</i>	<i>0</i>	<i>8</i>	<i>10</i>	<i>18</i>	
SEAGROVE AVENUE/CENTRAL AVENUE (ROUTE 542)		3	3	6	
PLEASANT MILLS ROAD (ROUTE 542)		5	7	12	
2009-2011 Grand Total	0	44	67	111	100.00%
<i>At Intersection</i>	<i>0</i>	<i>30</i>	<i>33</i>	<i>63</i>	<i>56.76%</i>
<i>Not at Intersection</i>	<i>0</i>	<i>14</i>	<i>32</i>	<i>46</i>	<i>41.44%</i>



Crash Type	Fatal	Injury	Property Damage Only	Grand Total	Percentage
Same Direction - Rear End		14	20	34	30.63%
Same Direction - Side Swipe		3	8	11	9.91%
Right Angle		14	16	30	27.03%
Opposite Direction - Head On, Angular			1	1	0.90%
Opposite Direction - Side Swipe			1	1	0.90%
Struck Parked Vehicle			6	6	5.41%
Left Turn / U Turn		5	1	6	5.41%
Backing			2	2	1.80%
Encroachment				0	0.00%
Overtaken				0	0.00%
Fixed Object		6	9	15	13.51%



Animal				0	0.00%
Pedestrian	2			2	1.80%
Pedalcyclist				0	0.00%
Non-fixed Object				0	0.00%
Railcar - Vehicle				0	0.00%
Other		2		2	1.80%
Unknown		1		1	0.90%
2009-2011 Grand Total	0	44	67	111	100.00%
<i>Alcohol NOT Involved</i>		42	64	106	95.50%
<i>Alcohol Involved</i>		2	3	5	4.50%

Roadway Name	Route	SRI	Mileposts
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<i>Intersecting Roadway</i>			<i>Start</i>	<i>End</i>
Central Avenue	Route 542	00000542	0.00	1.68
Bellevue Avenue	NJ 54	00000054	10.76	
	Atlantic County			
3rd Street	724	01000724	1.83	
	Atlantic County			
Broadway	680	01000680	0.00	
White Horse Pike	US 30	00000030	31.05	31.13

Active Filter Summary

Crash Count	345
Geocoded Count	332
Fatal Crashes	0
Total Fatalities	0

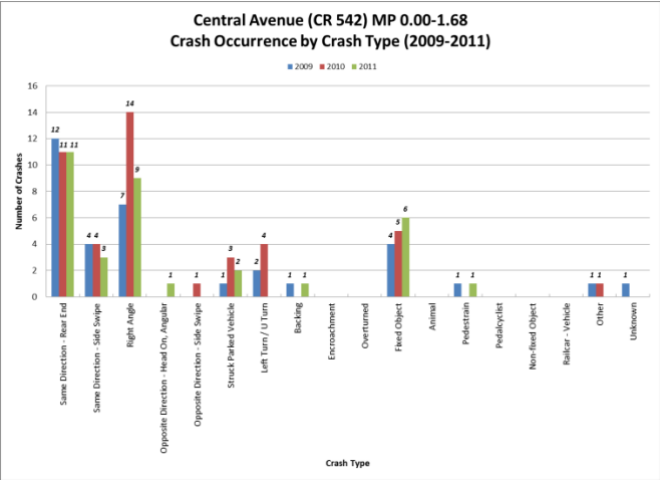
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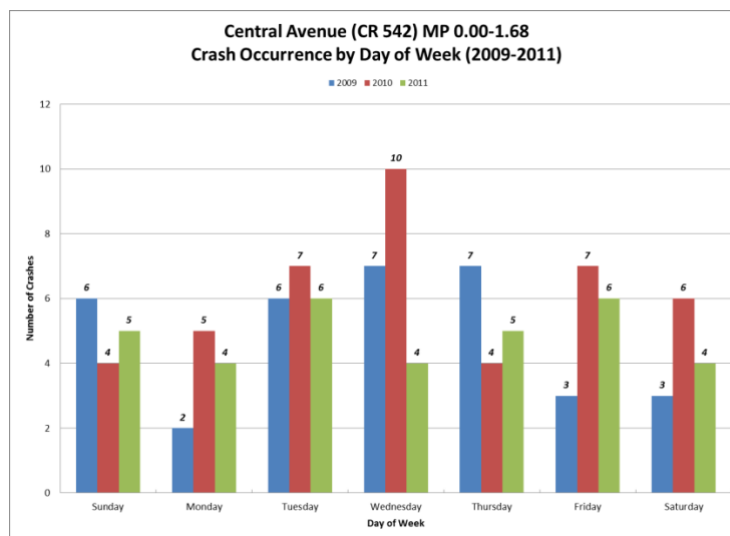


Pedestrians Injured	3
Total People Killed	0
Total Injuries	242
All Crashes with Injuries	145
Pedestrian Fatal	0

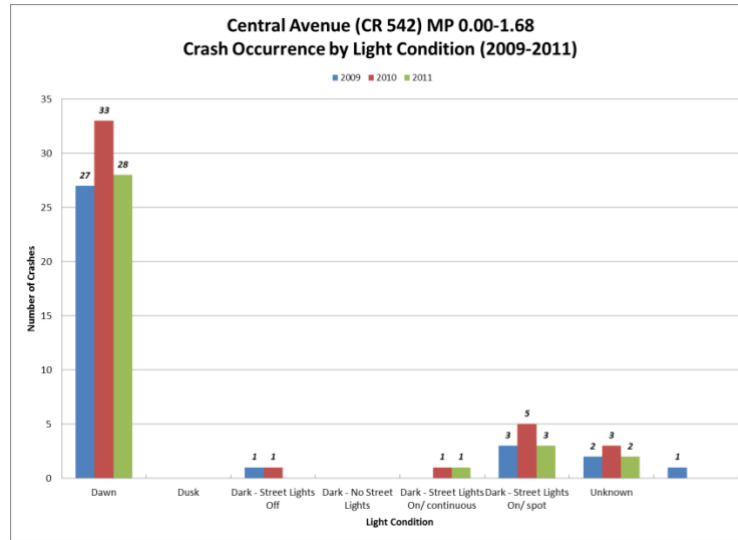
1/1/2003 - 3/19/2012

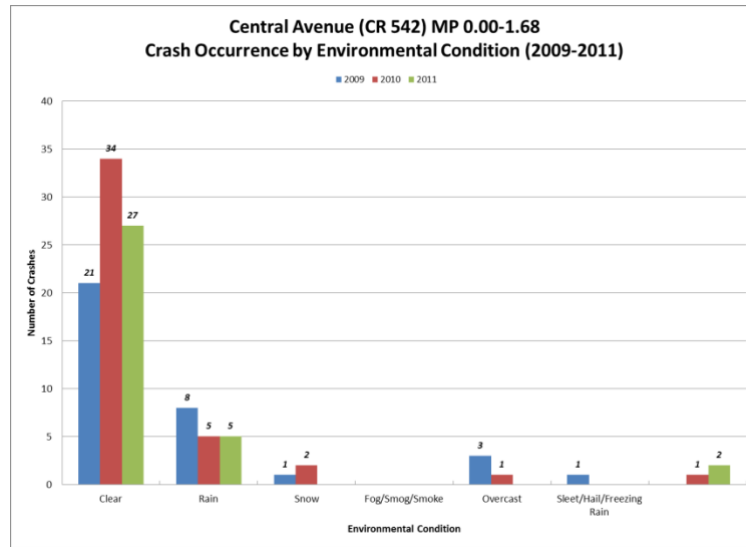




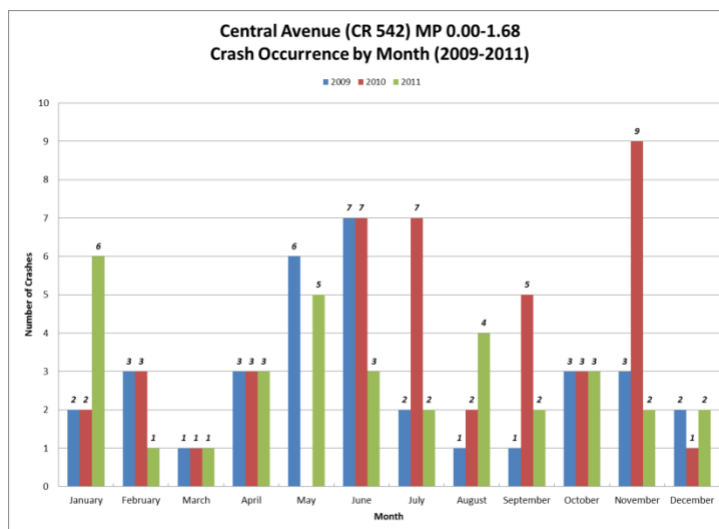


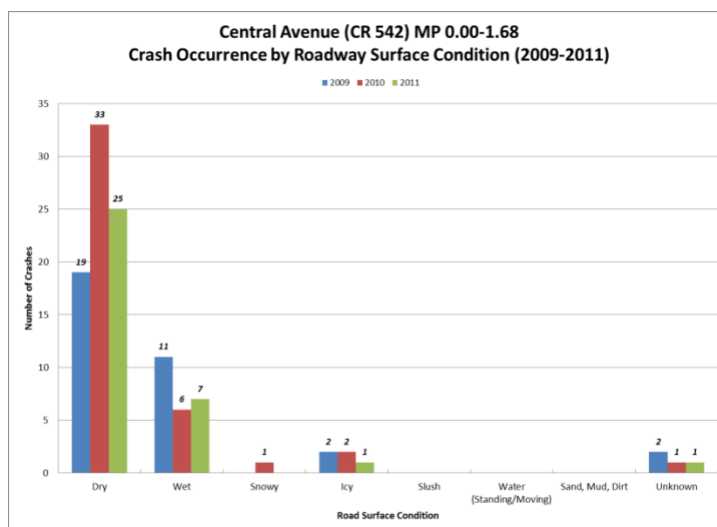


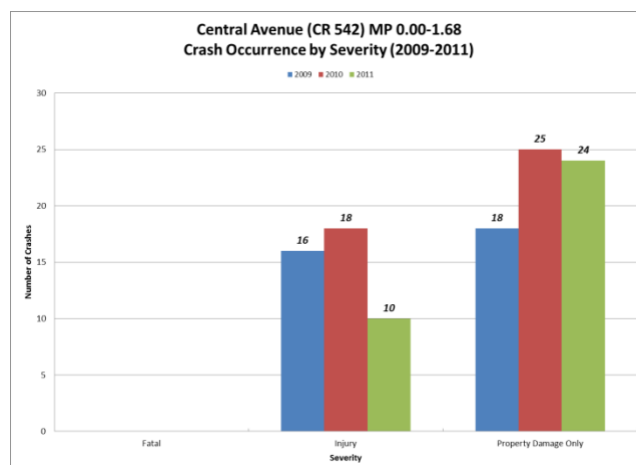


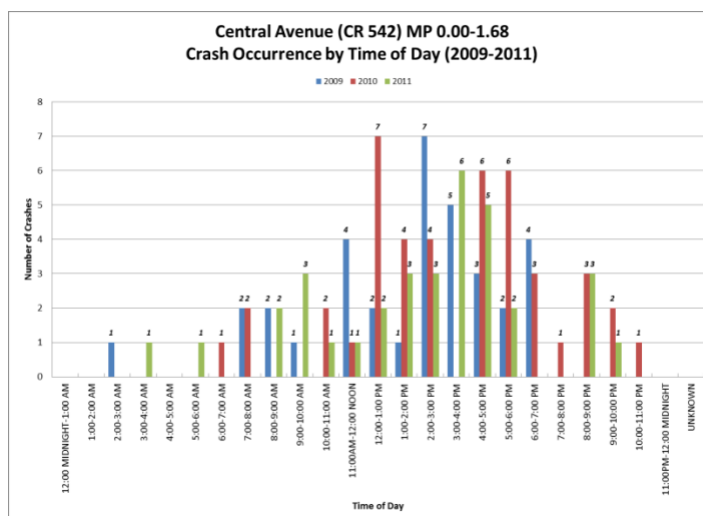


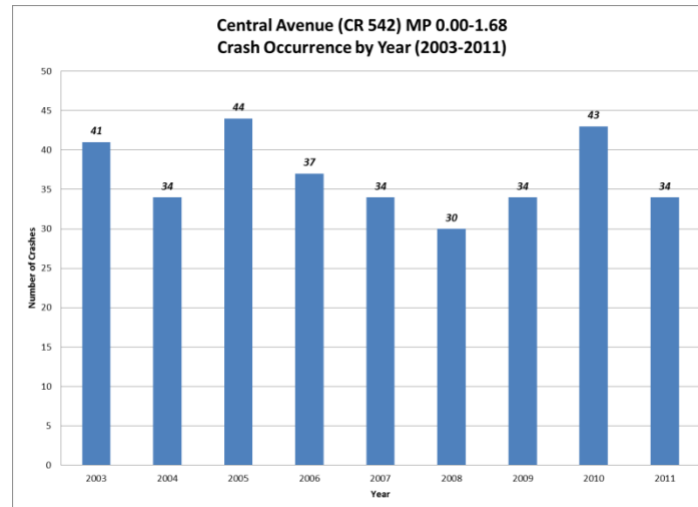
















Chew Road – CR 559

Pre-Audit Data Collection and Analysis – Crash Data

Crash data was obtained through Plan4Safety; January 1, 2003 through December 31, 2011. A summary sheet with formatted tables and column charts is provided for reference. A closer investigation of the crash data for the three-year period of 2009, 2010, and 2011 was prepared with a short summarization herein.

Route 559, Chew Road (MP 29.15-30.84)

For the three-year period, a total of 66 crashes occurred along Route 559. 19 crashes occurred in 2009, 22 in 2010, and 25 occurred in 2011.



The types of crashes are categorized as follows:

Fatal Crashes = 0

Injury Crashes = 21 (32%)

Property Damage Only (Non-injury) Crashes = 45 (68%)

The most prevalent crash type along the studied roadway is **Same Direction – Rear End** = 22 and **Right Angle** = 22 (33%); the next highest crash type is **Fixed Object** = 7 (11%).

Crash Clusters

Chew Road (Route 559)

Along Chew Road (Route 559) the highest concentration of crashes was at the intersection with 13th Street with a total of six (6) occurrences, of which four (4) were of the **Right Angle** type, the



other two crashes were **Fixed Object** type. At Chew Road and 14th Street there were a total of six (6) crashes with three (3) being of the **Right Angle** type.

12th Street (NJ 54)

The highest concentration of crashes occurred along 12th Street (Route 54) at the intersection of Chew Road (Route 559) with a total of 31 occurrences; 12 of which were **Same Direction – Rear End** type crashes, 11 **Right Angle** type, three (3) **Left Turn / U Turn**, and two (2) were **Fixed Object** type.

A total of 18 crashes occurred at the intersection of 12th Street (Route 54) and 1st Road (CR 688), nine (9) of which were **Same Direction – Rear End** crashes, three (3) **Right Angle** type, two (2) **Backing** and **Left Turn / U Turn**.

Pedestrian/Pedalcyclist Crashes



There were no crashes involving a Pedestrian. However, there was a single crash involving a Pedalcyclist occurring in 2011 at the intersection of Chew Road (CR 559) and 13st Street (CR 678). The crash occurred during clear and daylight conditions in April. Alcohol was involved in the crash.

Crash Statistics

A review of the crashes established the following:

- The highest concentration of crashes occurred in **July** and **September** with eight (8) crashes followed by seven (7) crashes in April.
- The highest frequency of crashes occurred on **Monday** with 15, followed by Wednesday both with 11 crashes.
- The highest frequency of crashes occurred during the **3 o'clock** PM hour with eight (8) crashes, followed by the 11AM hour with seven (7) crashes.



- The percentage of crashes occurring with ***dry road surface conditions*** is 73% while the percentage of crashes for ***wet surface conditions*** is 26%.
- The percentage of crashes occurring under ***clear*** environmental (weather) conditions (76%) is slightly less than the SJTPO Regional average for roads in the region (80%).
- The percentage of crashes during hours of ***darkness*** (18%) is lower than the SJTPO Regional average for roads in the region (24%).
- The percentage of crashes with ***injuries*** is 32% with 68% of the crashes being ***property damage only***.



- The percentage of ***same direction – rear end type crashes*** (33%) is significantly higher than the SJTPO Regional average for roads in the region (22%).
 - The percentage of ***right angle*** type crashes (33%) is significantly higher than the SJTPO Regional average for roads in the region (16%).
 - The percentage of ***fixed object*** type crashes (11%) is slightly lower than the SJTPO Regional average for roads in the region (17%).
-
- Approximately 85% of the crashes along the studied section of roadway occurred ***at an intersection***, which is significantly higher than the SJTPO Regional average for roads in the region (28%).
 - **Alcohol was involved** in approximately 3% of the total crashes within the last three years, which is substantially similar to the SJTPO Regional average for roads in the region (5%).



<i>Roadway Name</i>	<i>Route</i>	<i>SRI</i>	<i>Mileposts</i>
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<i>Intersecting Roadway</i>			<i>Start</i>	<i>End</i>
<i>Chew Road</i>	<i>Route 559</i>	<i>00000559</i>	<i>29.15</i>	<i>30.84</i>
12th Street	NJ 54	00000054	10.01	
13th Street	Atlantic County 678	01000678	0.00	

Active Filter Summary

Crash Count	202
Geocoded Count	197
Fatal Crashes	0
Total Fatalities	0
Pedestrians Injured	1
Total People Killed	0

Data in System For:

1/1/2003 - 3/29/2012



Total Injuries	120
All Crashes with Injuries	74
Pedestrian Fatal	0



Year



	Number of Crashes
2003	16
2004	19
2005	25
2006	28
2007	24
2008	15
2009	19
2010	22
2011	25
Grand Total	193
2009-2011 Total	66

Month	Number of Crashes by Year
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	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11	Grand Total	200 9- 201 1 Total	Percent age
January	3	3	3	2	3	1	2		3	20	5	8%
February	2	1	1	1			1	2	2	10	5	8%
March		2		3	1	3	2	1	3	15	6	9%
April		4	6	2	2	1	1	2	4	22	7	11%
May			2	1			1	4	1	9	6	9%
June	1		4	3	1	1		3	1	14	4	6%
July	1	3		2	4	1	2	4	2	19	8	12%
August	1	1	1		3		1		1	8	2	3%
September	2	2	3	5			5	1	2	20	8	12%
October	2	1	1	4	3	4	1	1		17	2	3%
November	3		1	2	5	2	1	2	4	20	7	11%
December	1	2	3	3	2	2	2	2	2	19	6	9%



Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%
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Day of Week	Number of Crashes by Year										Grand Total	200 9- 201 1 Total	Percent age
	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11				
Sunday	4	6	4	2	1			5	2	24	7	11%	
Monday	1	1	2	3	1		2	7	6	23	15	23%	
Tuesday	1	3	2	3	4	4	3		2	22	5	8%	
Wednesday	3	2	3	8	3	1	3	5	3	31	11	17%	
Thursday	2	1	4	1	3	4	4	2	4	25	10	15%	
Friday	1	4	4	6	6	3	3	2	4	33	9	14%	
Saturday	4	2	6	5	6	3	4	1	4	35	9	14%	
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%	



Time of Day	Number of Crashes by Year										Grand Total	200 9- 201 1 Total	Percent age
	20 03	20 04	20 05	20 06	20 07	20 08	20 09	20 10	20 11				
12:00 MIDNIGHT-1:00 AM		1									1	0	0%
1:00-2:00 AM											0	0	0%
2:00-3:00 AM	1		1								2	0	0%
3:00-4:00 AM											0	0	0%
4:00-5:00 AM											0	0	0%
5:00-6:00 AM	1								1		2	1	2%
6:00-7:00 AM		1		3		1					5	0	0%
7:00-8:00 AM	1	1			1			2			5	2	3%
8:00-9:00 AM				4		2	2	3			11	5	8%
9:00-10:00 AM			2	1	2		1	2	2		10	5	8%



10:00-11:00 AM	1	2	4	2	1	2			1	13	1	2%
11:00AM-12:00 NOON	2			2	3	3	1	2	4	17	7	11%
12:00-1:00 PM	2	2	2	1	3	1	1		3	15	4	6%
1:00-2:00 PM		1	1	1	2	1		1	1	8	2	3%
2:00-3:00 PM	2		3				2	2	2	11	6	9%
3:00-4:00 PM	2		1	4	3		2	4	2	18	8	12%
4:00-5:00 PM		2	5		3	1	2	2	2	17	6	9%
5:00-6:00 PM	1	2	2	4			2	1	1	13	4	6%
6:00-7:00 PM	1		2	3		1		3	3	13	6	9%
7:00-8:00 PM	1	1			4		2		1	9	3	5%
8:00-9:00 PM				1		1	2			4	2	3%
9:00-10:00 PM		1	1		1		1			4	1	2%
10:00-11:00 PM	1	4	1	1	1	2			1	11	1	2%
11:00PM-12:00												
MIDNIGHT		1		1			1		1	4	2	3%
UNKNOWN										0	0	0%
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%



Road Surface Condition	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				
Dry	11	13	19	26	20	13	12	17	19	150	48	73%	
Wet	4	5	6	2	4	2	7	5	5	40	17	26%	
Snowy									1	1	1	2%	
Icy	1	1								2	0	0%	
Slush										0	0	0%	
Water (Standing/Moving)										0	0	0%	
Sand, Mud, Dirt										0	0	0%	
Unknown										0	0	0%	
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%	



Weather Condition	Number of Crashes by Year									Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011			
Clear	13	16	21	22	19	14	12	19	19	155	50	76%
Rain	1	3	3	2	4	1	6	3	5	28	14	21%
Snow	1						1		1	3	2	3%
Fog/Smog/Smoke			1	3						4	0	0%
Overcast				1	1					2	0	0%
Sleet/Hail/Freezing Rain										0	0	0%
Unknown	1									1	0	0%
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%

Light Condition	Number of Crashes by Year									
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	2003	2004	2005	2006	2007	2008	2009	2010	2011	Grand Total	2009-2011 Total	Percentage
Daylight	12	9	18	21	17	10	12	18	19	136	49	74%
Dawn				2		1		1		4	1	2%
Dusk			1		1		3	1		6	4	6%
Dark - Street Lights Off				1						1	0	0%
Dark - No Street Lights					1					1	0	0%
Dark - Street Lights On/continuous	4	10	6	2	5	3	4	1	5	40	10	15%
Dark - Street Lights On/spot				2		1		1	1	5	2	3%
Unknown										0	0	0%
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%



Severity	Number of Crashes by Year									Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011			
Fatal										0	0	0%
Injury	8	7	10	7	10	9	7	7	7	72	21	32%
Property Damage Only	8	12	15	21	14	6	12	15	18	121	45	68%
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%

Crash Type	Number of Crashes by Year										Grand Total	2009-2011 Total	Percentage
	2003	2004	2005	2006	2007	2008	2009	2010	2011				



Same Direction - Rear End	5	3	8	8	5	4	8	8	6	55	22	33%
Same Direction - Side Swipe	1	1		1	3	1			2	9	2	3%
Right Angle	4	11	10	14	10	9	8	7	7	80	22	33%
Opposite Direction - Head On, Angular				1	1	1		1	1	5	2	3%
Opposite Direction - Side Swipe								1	1	2	2	3%
Struck Parked Vehicle				1						1	0	0%
Left Turn / U Turn	1		4	2	1		2		3	13	5	8%
Backing				1	2			1	1	5	2	3%
Encroachment										0	0	0%
Overturned										0	0	0%
Fixed Object		1	1		2		1	3	3	11	7	11%
Animal								1		1	1	2%
Pedestrian										0	0	0%
Pedalcyclist									1	1	1	2%



Non-fixed Object											0	0	0%
Railcar - Vehicle											0	0	0%
Other	5	3	1								9	0	0%
Unknown			1								1	0	0%
Grand Total	16	19	25	28	24	15	19	22	25	193	66	100%	

Crash Location At/Not at Intersection Nearest Cross Street	Fatal	Injury	Property Damage Only	Grand Total	Percentage
CHEW ROAD (ROUTE 559)	0	9	5	14	21.21%
<i>At Intersection</i>	<i>0</i>	<i>8</i>	<i>2</i>	<i>10</i>	



13th STREET (CR 678)		4		4	
14TH STREET		4	1	5	
1ST ROAD (CR 688)			1	1	
<i>Not at Intersection</i>	<i>0</i>	<i>1</i>	<i>3</i>	<i>4</i>	
13th STREET (CR 678)			2	2	
14TH STREET		1		1	
NJ 54			1	1	
12TH STREET (NJ 54)	0	10	39	49	74.24%
<i>At Intersection</i>	<i>0</i>	<i>8</i>	<i>36</i>	<i>44</i>	
1ST ROAD (CR 688)		4	13	17	
CHEW ROAD (CR 559)		4	23	27	
<i>Not at Intersection</i>	<i>0</i>	<i>2</i>	<i>3</i>	<i>5</i>	
1ST ROAD (CR 688)		1		1	
CHEW ROAD (CR 559)		1	3	4	
13TH STREET (ATLANTIC COUNTY 678)	0	2	1	3	4.55%
<i>At Intersection</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>2</i>	
CHEW ROAD (ROUTE 559)		2		2	



<i>Not at Intersection</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	
CHEW ROAD (ROUTE 559)			1	1	
2009-2011 Grand Total	0	21	45	66	100.00%
<i>At Intersection</i>	<i>0</i>	<i>18</i>	<i>38</i>	<i>56</i>	<i>84.85%</i>
<i>Not at Intersection</i>	<i>0</i>	<i>3</i>	<i>7</i>	<i>10</i>	<i>15.15%</i>

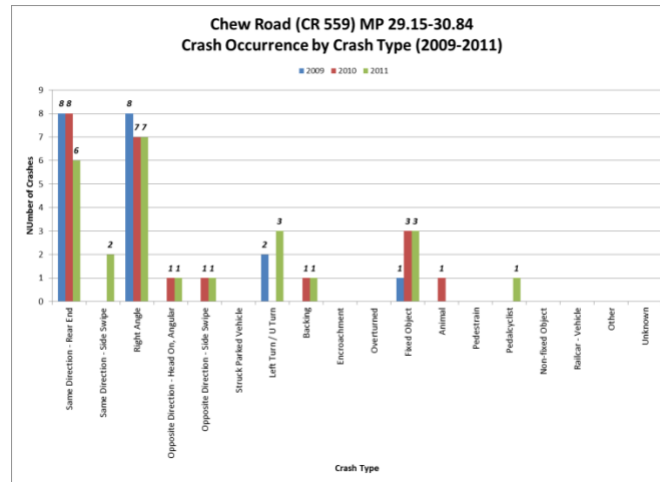
Crash Type	Fatal	Injury	Property Damage Only	Grand Total	Percentage
Same Direction - Rear End		5	17	22	33.33%
Same Direction - Side Swipe		1	1	2	3.03%
Right Angle		12	10	22	33.33%
Opposite Direction - Head On, Angular		2		2	3.03%

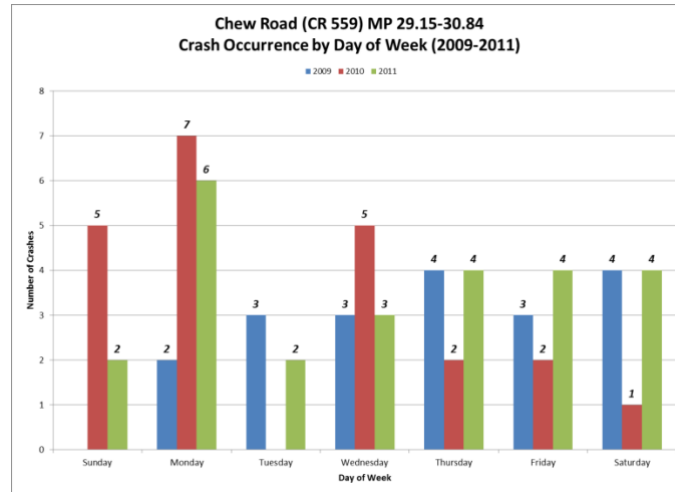


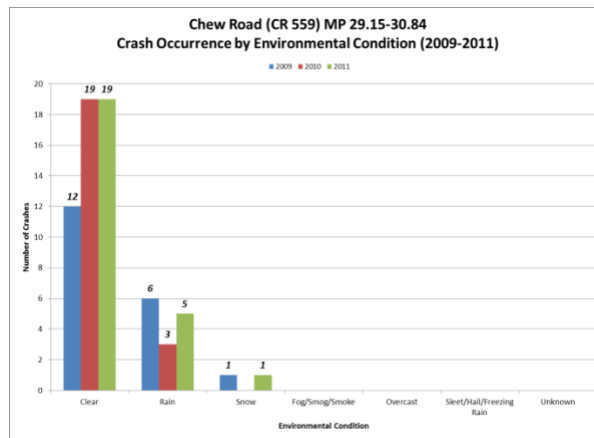
Opposite Direction - Side Swipe			2	2	3.03%
Struck Parked Vehicle				0	0.00%
Left Turn / U Turn	0		5	5	7.58%
Backing	0		2	2	3.03%
Encroachment				0	0.00%
Overturned				0	0.00%
Fixed Object	0		7	7	10.61%
Animal	0		1	1	1.52%
Pedestrian				0	0.00%
Pedalcyclist	1		0	1	1.52%
Non-fixed Object				0	0.00%
Railcar - Vehicle				0	0.00%
Other				0	0.00%
Unknown				0	0.00%
2009-2011 Grand Total	0	21	45	66	100.00%
<i>Alcohol NOT Involved</i>		<i>20</i>	<i>44</i>	<i>64</i>	<i>96.97%</i>
<i>Alcohol Involved</i>		<i>1</i>	<i>1</i>	<i>2</i>	<i>3.03%</i>

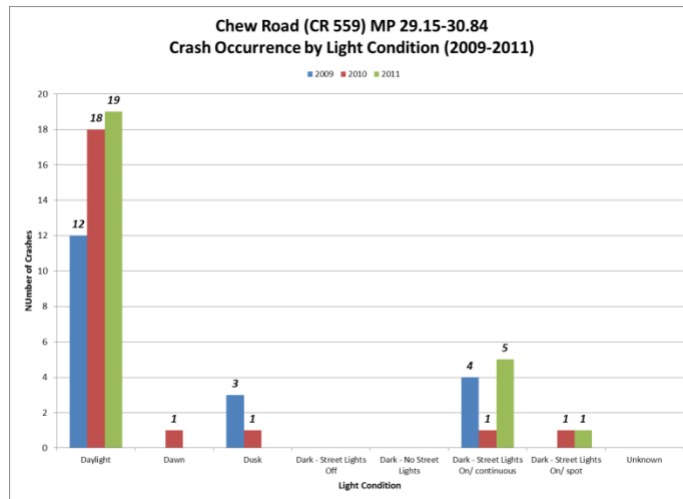


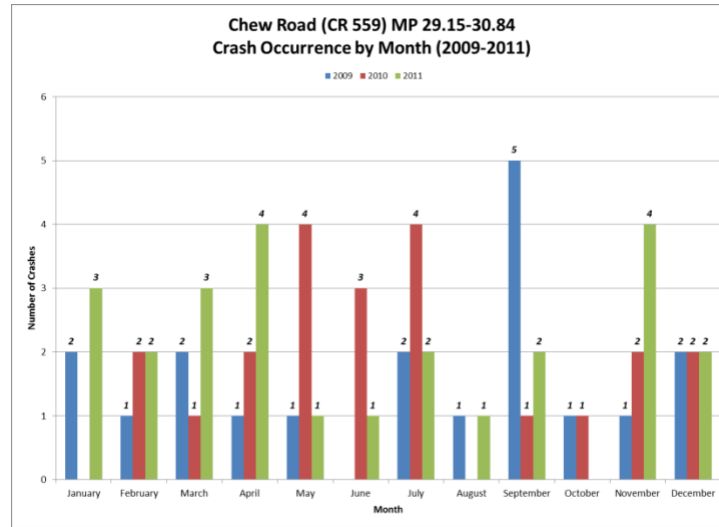


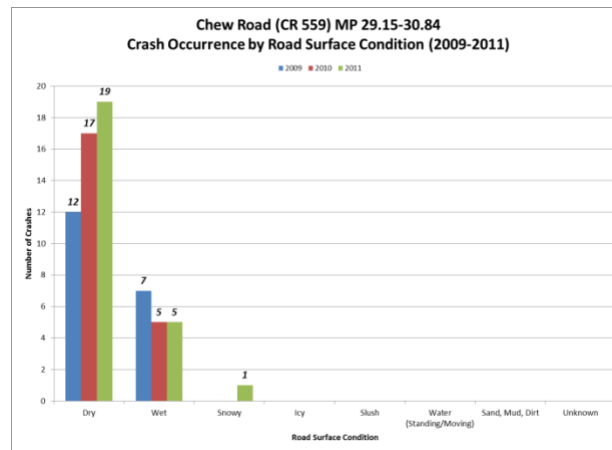


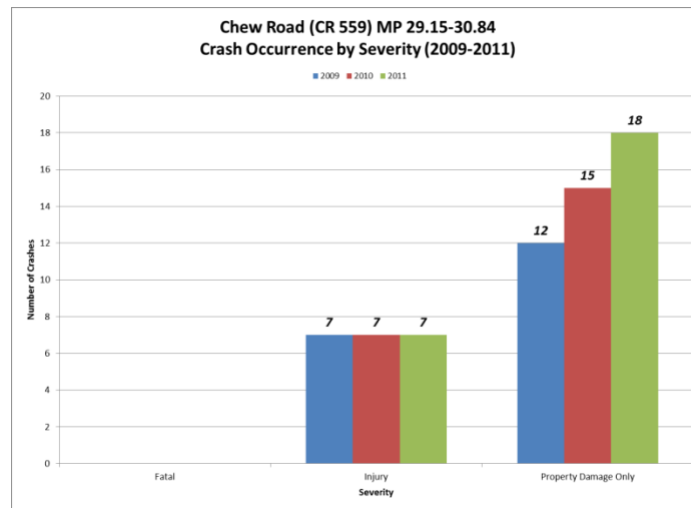


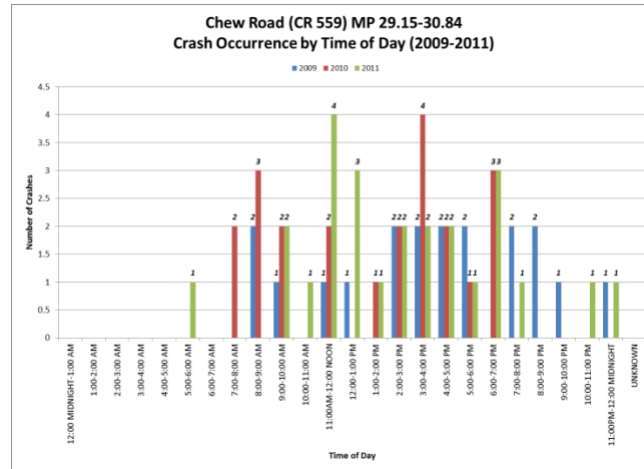


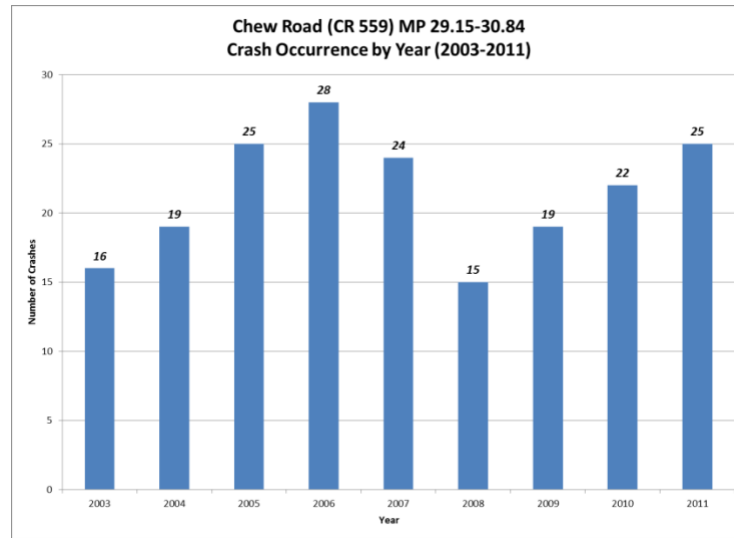














Road Safety Audit Pictures

























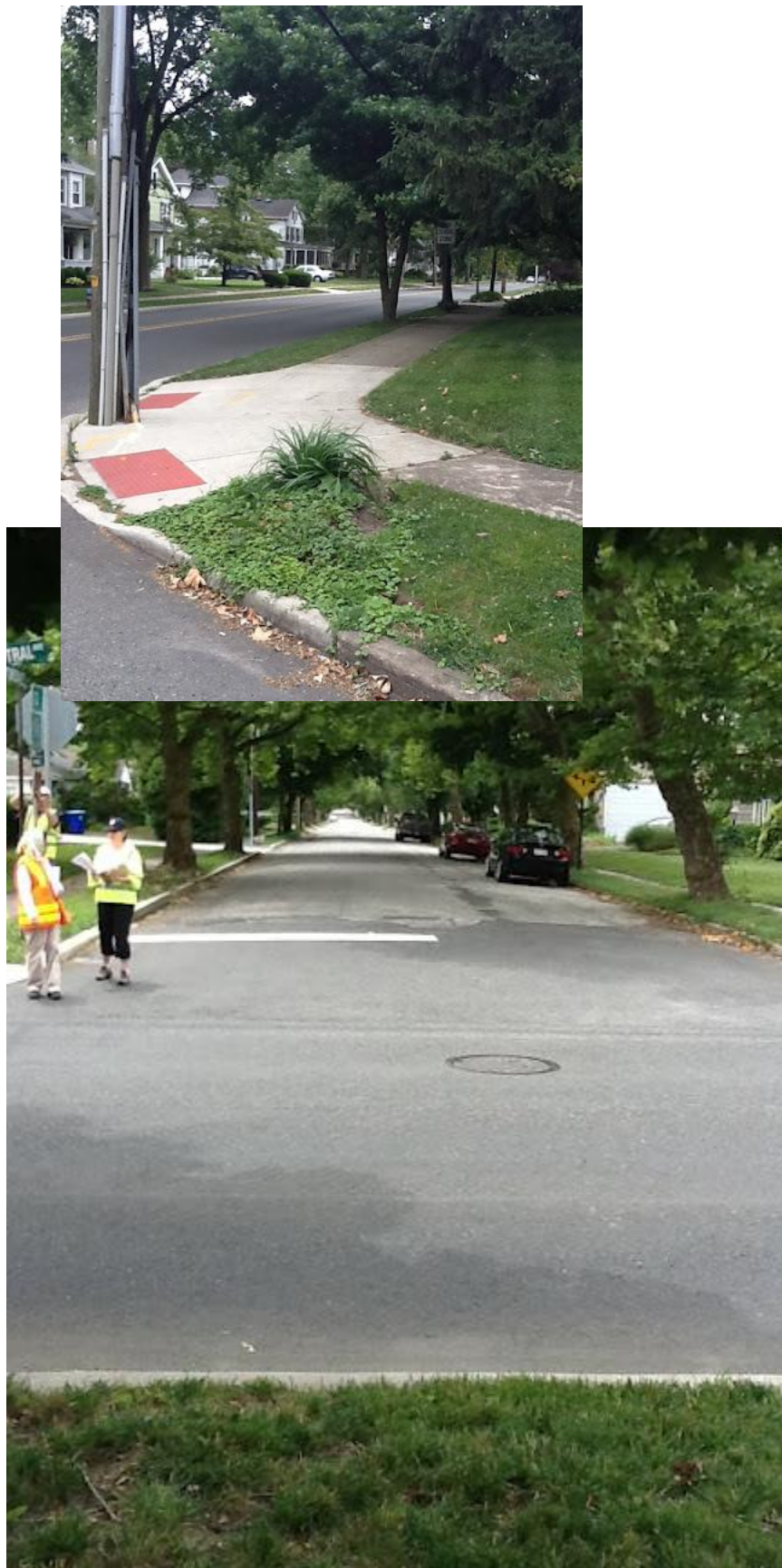








































Road Safety Issues and Remedial Actions

<u>Sr. #</u>	<u>Road Safety Issue and Remedial Action</u>	<u>Level of Effort</u> <u>L= Low</u> <u>M=Medium</u> <u>H=High</u>	<u>Level of Benefit</u> <u>L=Low</u> <u>M=Medium</u> <u>H=High</u>
1	At 602/WHP- CR 602 End sign dead, needs replacement	L	M
2	At 602/WHP- segment edge line faded, needs repainting	M	M



3	At 602/WHP- Nearside jug at Moss Mill/Boyer, make East 602 one-way	M	M
4	At 602/WHP- Move End- 602 in front of utility pole	L	L
5	At 602/WHP- Extra space, moving it to other pole	L	M
6	At 640/602, design a roundabout to reduce the conflicts	H	M
7	SB 640 at 602- sight triangle blocked by vegetation, clear it up	L	M
8	At 561/640, shrubs and vegetation, remove to clear up sight view	L	M
9	At 640/602- broken sign post west of 602, replace	L	M
19	At 561/Lakeview, stop sign bad, replace	L	M
11	At 602/9 th trim vegetation	L	M
12	At 602/9 th - worn stop bar, refresh paint	L	M
13	At 561/Peach- remove trees for clear sighting	M	M



14	At 561/Peach/Passmore- Add crosswalk	M	M
15	At 561/Peach/Passmore- Suggestion flashing beacon	M	M
16	At 561/Passmore- W2-1 Needs to be relocated, stop bar worn out, refresh paint	L	M
17	At 561/NJ 54- Add one-way between Las Lomas & Tienda	L	M
18	At 561/NJ 54- Add one-way between Tienda and strip mall	L	M
19	At 561/NJ 54-Add crosswalk,	M	M
20	At 561/Orchard-Add crosswalk	M	M
21	At 561-No breakaway on stop sign	L	M
22	At 561/Orchard no R/R pavement marking	M	M
23	At 561/Orchard-SB W3-1 dead	L	M
24	At 561/Orchard- SB 561 Direction sign relocate	L	M



25	At 561/Orchard-beyond stop sign W/O blocking by stop sign	L	M
26	At 561/13 th Street- Add do not enter back of stop sign	L	M
27	At 561/13 th Street pavement on 13 th poor	H	M
28	At 561/13 th Street- Add Only – Right arrow sign	L	M
29	At 561/15 th – Move CR 678 sign to other side of road	L	L
30	At 561/15 th – Add keep right sign at the edge of island	L	M
31	At 561/15 th – R2-1 3S dead, replace	L	M
32	At 561/15 th - Maintenance of weed work required	L	L
33	At 561/15 th – No breakaway on Stop Sign/Do not enter sign	L	M
34	At 561/15 th – Rt. Turn channel from Wells Ave, remove single Chevron	L	M
35	At 561/15 th – No left turn sign not on breakaway	L	M



36	At 561/15 th – Remove Chevons sign on SB side	L	L
37	At 561/15 th – add Chevron sign to NB side	L	M
38	At 561/15 th – Lane use sign has no breakaway	L	M
39	At 561/15 th – Guide rail along SB 559/561 may not be required	M	L
40	At 561/15 th – Substandard and lane use sign back to back one-way	L	M
41	At 561/15 th – NB 15 th R1-1 damaged and vacated post, guide rail substandard	H	M
42	At 561/15 th – No breakaway SB 559 sign blocked by lines	L	M
43	At 561/15 th NB 559 dead	L	M
44	At 561/15 th – Pavement poor condition	M	M
45	At 561/15 th – Add dual arrow signs to island	L	M
46	At 561/15 th – Add 561 arrow to SE corner Wells/15 th	L	M



47	At 561/15 th – second R1-1 no breakaway-	L	M
48	At 561/15 th – SB 561 sign no breakaway hospital, replace with 30" by 30" sign, arrow sign dead	L	M
49	At 561/15 th – NB 561 LLMTL no breakaway, left lane must turn left R3-7L be added	L	M
50	At 561/15 th – NB junction 559 arrow sign no breakaway	L	M
51	At 561/15 th – SB 15 th R1-1 no breakaway	L	M
52	At 561/15 th – pavement marking out of Wells dead	M	M
53	At Rt. 30/Central – remove Ped sign at mid-block – crosswalk at hospital	L	L
54	At Rt. 30/Central - # 929 retaining wall in clear zone, inlet clogged	H	M
55	At Rt. 30/Central – Rt. 30 arrow sign to far from curve	L	M



56	At Central Ave/Rt. 30 - WB and EB Valley intersection sign & Valley Ave plaque needed to improve motorists awareness	L	M
57	At Central/Valley Ave – Stop bar move close to Central Ave	L	M
58	At Central/Valley Ave – Add DYSL along Valley Ave approaching to central	L	M
59	At Central/Valley – EB Central line and edge line needed to be connected from patch work of edge line along Central Ave	M	M
60	At Central/Valley – EB object marking OM 3'5 needed at culvert	L	M
61	At Central/Valley – WB hydrant needs OM 3R	L	M
62	At Central/ Bachelor Ave – sight triangle blocked to the left by vegetation	L	M



63	At Central/Park – R2-1 east to Park –dead no breakaway	L	M
64	At Central/Broadway – Edge line on WB only, EB – east of 680 snow sign dead/no breakaway, Broadway approach 542 dead/no breakaway	L	M
65	At Central/Broadway- edge line would promote traffic calming	M	M
66	At Central/Grape- Paint X-walk across Central Ave, R1-1 could be moved forwards	M	M
67	At Central/Peach- Inadequate one-way sign, R2-1, 25 MPH sign dead	L	M
68	At Central/Vine – signage too close	L	M
69	At Central- Close Central Ave in front of Town hall	H	H
70	At Chew/54- NP2 SB 559 worn stop ahead pavement marking symbols	L	M
71	At Chew/54- 48"-48" w3-1A to far from intersection	L	M



72	At Chew/1 st – EB R1-1 dead no breakaway	L	M
73	At Chew/Wilber – WB R1-1 dead, no breakaway	L	M
74	At Chew/Wilber – NB Chew W3-1A too far install distance plague, move to pavement marking symbols should be 30"	L	M
75	At Chew/Wilber- SB Chew X-Road sign no breakaway, install 1 st Rd. plaque	L	M
76	At Chew/Wilber- SB 559 South dead replace, no breakaway	L	M
77	At Chew 13 th – MTMC-Warrant for all-way, pavement in poor condition	M	H
78	At Chew/ 13 th – NB 45 MPH dead, no breakaway	L	M
79	At Chew/13 th – SB Jct. 678 dead	L	M
80	Third Street SB approach Stop instead of yield controlled	L	M



81	At Chew/13 th – W3-1A too far reinstall at existing SB pavement marking	L	M
82	At Chew/13 th – R2-1 40 MPH dead	L	M
83	At Chew/13 th – SB W1-2R dead, Mile post 30 sign dead	L	M
84	At Chew/13 th – SB speed zone ahead replace with warning sign	L	M
85	At Chew/13 th – R2-1 50 MPH dead, no breakaway	L	M
86	At Chew/14 th Add street sign plaque for 14 th street	L	M
87	At Chew/14 th NB DYSL approach incorrect, too short	L	M
88	At Chew/14 th WB R1-1 no breakaway	L	M
89	At Chew/14 th – R1-1 oversized stop make all NPZ	L	M
90	At Chew/14 th – Add stop sign to 14 th Street	L	M
91	At Chew/14 th – Stop bar location, add stop sign ahead pavement marking	L	M



92	At Chew/14 th – NB & SB Install curve combo signs @ PC, install new curve warning sign with advisory speed plaque	L	M
93	At Chew/14 th – Remove 36" W3-1A, install 30" W3-1A	L	M



