ROAD SAFETY AUDIT

Plain Street from the Plain Street/West Street Intersection to the Plain Street/Morton Street Intersection

Stoughton, Massachusetts

November 28, 2023

Prepared For: Town of Stoughton

Prepared under MassDOT Contract 123116 By: Old Colony Planning Council 70 School Street, Brockton, MA. 02301



Table of Contents

Contents

Background	1
Project Data	1
Project Location and Description	2
Audit Observations and Potential Safety Enhancements	4
Summary of Road Safety Audit	8

List of Appendices

Appendix A.	RSA Meeting Agenda
Appendix B.	RSA Audit Team Contact List
Appendix C.	Detailed Crash Data
Appendix D.	Additional Information

List of Figures

List of Tables

Table 1: Participating Audit Team Members	. 1
Table 2: Estimated Time Frame and Costs Breakdown	
Table 3: Potential Safety Enhancement Summary Plain Street at West Street	.9
Table 4: Potential Safety Enhancement Summary Plain Street/Swanson Terrace Intersection	.10
Table 5: Potential Safety Enhancement Summary Plain Street/Morton Street Intersection	.11

Background

This Road Safety Audit (RSA) was completed by the Old Colony Planning Council at the request of the Town of Stoughton. This RSA study was funded through the Old Colony Metropolitan Planning Organization's (MPO) FFY 2024 UPWP #3200 Local Technical Assistance, under contract with the Massachusetts Department of Transportation (MassDOT). The objective of the RSA was to review crash history within the study area (Plain Street between the Plain Street/West Street intersection and the Plain Street/Morton Street intersection), identify potential risks to all road users, and improve safety and mobility, particularly for vulnerable roadway users (pedestrians, cyclists, and persons using mobility assistance devices). The findings of this audit will supplement safety projects and assist the town in implementing potential short-term and long-term safety improvements (low cost as well as medium and high cost).

Project Data

This Road Safety Audit was held on November 28, 2023, with an in-person meeting at the Stoughton Police Station and field visit to the site. The Audit consisted of an open discussion in the meeting room to discern observations and concerns, with a field visit to the site to observe the location as a group for its physical and operational attributes. Participants capped off the meeting with a discussion and documentation of potential short-term and long-term improvements. Participants included an interdisciplinary team of planners, engineers, public safety officials, and government officials.

Audit Team Member	Agency/Affiliation
Sgt. James O'Connor	Detective Supervisor/Safety Officer, Stoughton Police Department
Craig Horsfall, PE	Stoughton Engineering
Paul Griffin	Stoughton DPW
Nick Dufresne	Stoughton Engineering
Samuel Hawkins	MassDOT District 5
Yolande Dolezser	MassDOT District 5
Mojtaba.m Moharrer	MassDOT District 5
Derek Jackson	MassDOT District 5
Jason Walters, PE	MassDOT District 5 Projects
Jim Terlizzi	MassDOT Traffic Safety
Joyce Husseini	Stoughton School Department
Bill Roth	Town Planner, Town of Stoughton
Representative Bill Galvin	Massachusetts State Representative
Maggie Burke	Massachusetts SRTS (AECOM)
Ray Guarino	OCPC
Guoqiang Li, PTP, RSP1	OCPC
Kyle Mowatt	OCPC
Shawn Bailey	OCPC

Table 1: Participating Audit Team Members

Project Location and Description

Plain Street is a major collector road running in a general direction of east-west that provides a connection between Bay Road and Washington Street (Route 138) in Stoughton. Both Bay Road and Washington Street (Route 138) are minor arterials that run north-south in Stoughton. Bay Road connects Canton Downtown to the north with I-495 in Taunton. Route 138 connects between I-93/I 95 to the north and I-495 in Raynham.

The study area for this Road Safety Audit for Plain Street in Stoughton includes the section of Plain Street between the Plain Street/West intersection and the Plain Street/Morton Street intersection, approximately one mile. Plain Street is classified as a major urban collector, therefore eligible for federal aid, and provides a two-lane cross section for its entirety.

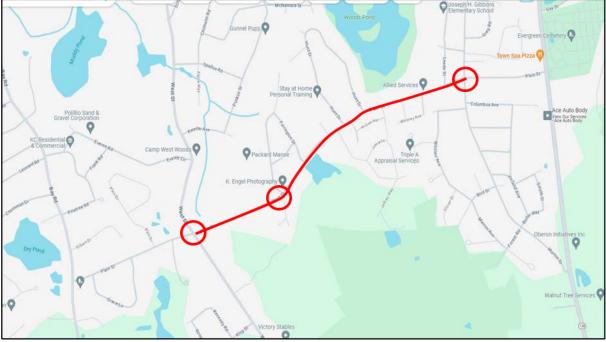
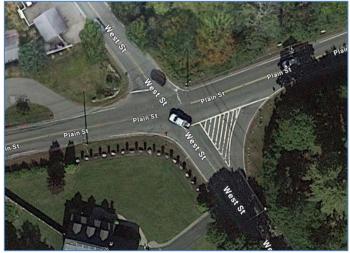


Figure 1: Locus Map

The travel lane width is 12 feet with shoulders varying in width between one and two feet. A sidewalk is provided on the north side of the road from Swanson Terrace to Morton Street. The speed limit is 30 miles per hour based on the prima fascie 30 miles per hour in a thickly settled area. There are advanced 25 MPH advisory speed limit signs coupled with horizontal alignment warning (MUTCD W1-2) signs posted east and west of the Plain Street/Swanson Terrace intersection (in the vicinity of a curve in the road). The average daily traffic (ADT) based on traffic counts conducted by OCPC ranges from 6,036 to 7,302 vehicles per day. Speed studies, also conducted by OCPC via automatic traffic counts range between 39 to 42 miles per hour for the eighty-fifth percentile. The percentage of heavy vehicles in traffic based on the OCPC automatic traffic counts is 9.9 percent.

Plain Street/West Street Intersection

West Street is functionally classified as an urban collector and is under the jurisdiction of the Town of Stoughton. It is a two-lane facility providing north-south access within the western portion of Stoughton, connecting Route 27 to the north with Highland Street to the south to Easton. Plain Street and West Street meet at a skewed angle to form a four-way intersection. The intersection is stop-sign controlled on the West Street northbound and southbound approaches. There is a painted island on the southeast corner of the intersection to channel vehicles turning right from West Street northbound to Plain Street



Aerial view of the Plain Street/West Street intersection showing a painted island on the southeast corner.

eastbound. The skewed nature of the intersection along with vegetative growth on the northeast corner restricts sight distance for vehicles approaching the intersection. The skewed alignment and paved island interfere with sign placement for the stop signs on the northbound approach. There are three stop signs for the northbound approach including one posted approximately 100 feet behind the stop line before the painted island, and another posted at the end of the right turn at Plain Street at the stop line. There is also one on the northwest corner of the intersection for northbound traffic. School buses turning right from Plain Street westbound to West Street northbound take a wide turn encroaching on the travel lane on West Street southbound due to the radius of the northeast corner of the intersection.

<u>Plain Street/ Swanson Terrace</u> <u>Intersection</u>

East of the Plain Street/West Street intersection, Plain Street and Swanson Terrace meet at a skewed angle to form a "T" type intersection, although a common driveway at the south side of the intersection presents the intersection as a four-way to serve several residences to the south. The Plain Street eastbound approach to Swanson Terrace has poor vertical and horizontal alignment, creating hinderances to sight distance and a problem for motorists following the road. The crash experience shows that there is a pattern of lane departure crashes on this approach.



Aerial view of the Plain Street/Swanson Terrace intersection.

Field observations by OCPC staff also show that there is a lack of sight distance for southbound vehicles on the Swanson Terrace approach looking west toward traffic on coming on Plain Street due to the sharp vertical and horizontal curvature along Plain Street. Swanson Terrace is a local residential road with a culde-sac, although outlet back to Plain Street can be achieved on Swanson Terrace via Dutton Road and Farrington Street. Improvements at this location were recently completed by the town on Plain Street through the curve including flashing warning signs for lower speeds through the curve in both the eastbound and westbound direction. New chevron signs were placed for advanced warning to drivers eastbound before entering the curve and for traveling through the curve.

Plain Street/Morton Street Intersection

Plain Street and Morton Street meet east of Swanson Terrace to form a four-way, all-way stop controlled intersection. The intersection has an overhead flashing beacon showing flashing red on all approaches. In addition, the traffic control (stop sign) on the Plain Street eastbound approach has flashing LEG lights. Morton Street is classified as a major urban collector providing connection between



Stoughton center and Route 138 to the **Aerial view of the Plain Street/Morton Street intersection.** south. The Plain Street eastbound approach is skewed as it intersects Morton Street. A convenience store is located on the northeast corner of the intersection, with on-site head-in style parking. Vehicles entering the spaces from the west or reversing out of the spaces for both directions interfere with operations at the intersection. There is no curb or raised sidewalk on the Plain Street westbound approach adjacent to the store parking area to separate the travel lane from the on-site parking. In addition, according to field observations by OCPC staff, the sight distance on the Plain Street eastbound approach is limited looking north toward Morton Street due to the skewed angle that Plain Street intersects Morton Street and the pine hedge row that fronts the property on the corner lot.

Audit Observations and Potential Safety Enhancements

Crash reports were compiled from the Stoughton Police Department and supplemented with data from MassDOT for the years 2018 through 2023. The collision diagrams and a summary of the crash data for the study area are included in the appendix of this report.

During the RSA meeting, an introduction of the RSA process and a summary of the crash information and background data for Plain Street and the study area were presented to the audit participants by OCPC staff. Following the presentation, the members of the audit team discussed the existing issues that affect safety. Safety concerns and deficiencies were identified by the RSA participants and documented by OCPC staff. The study participants continued the discussion in a visit to Plain Street, specifically at the Plain Street/West Street intersection, the Plain Street/Swanson Terrace intersection, and the Plain Street/Morton Street

intersection. The participants returned to the Stoughton Police Department meeting room after the field visit to discuss potential long-term and short-term treatments to address deficiencies, also documented by OCPC staff. The following sections list these safety concerns and the potential enhancements that were identified during the RSA.

Plain Street/West Street Intersection

Safety Issue: Poor intersection alignment, inadequate intersection geometry, and tight turning radii.

Vehicles taking a left turn from Plain Street westbound to West Street southbound sometimes drive on the painted island to make the turning move due to the alignment of the intersection. In addition, the poor alignment and turning radii cause school buses and heavy vehicles to take wide right turns from Plain Street westbound to West Street northbound encroaching on the travel lane on West Street southbound as it approaches the intersection.

Enhancement: Reconstruct and realign the intersection providing proper turning radii and installing a mountable median island on the West Street northbound approach and a mountable island replacing the painted island on the southeast corner of the intersection that channels West Street northbound right turns.



Photo above shows a left turn from Plain Street westbound to West Street southbound encroaching on the painted island. Also shown is the stop sign at the end on the painted island on the West Street northbound approach.

Enhancement: Consider overhead flashing beacons, flashing red on the West Street approaches and flashing yellow on the Plain Street approaches.

Safety Issue: Stop Sign placement, lack of stop lines and pavement markings. Currently, there are three stop signs on the northbound approach: one located before the painted island, another at the end of the painted island adjacent to the channelized right-turn lane, and one located on the other side of Plain Street.

Enhancement: Reconstruct and realign the intersection providing proper turning radii and installing a mountable median island on the West Street northbound approach and a mountable island replacing the painted island



The above photo shows a school bus taking a wide turn due to tight turning radii and utility pole location on the northeast corner of the intersection.

on the southeast corner of the intersection that channels West Street northbound right turns. Remove the stop signs posted on the northbound approach prior to the island and on the other side of Plain Street and replace with one stop sign posted adjacent to the stop line on the mountable island that replaces the painted island.

Enhancement: Consider Intersection Control Evaluation (ICE) to address traffic control and sign location and to evaluate alternative intersection geometries.

Enhancement: Consider posting a "Stop Sign Ahead" warning sign (MUTCD W3-1) on the West Street northbound approach.

Enhancement: Place new centerline, edge line striping, and stop line pavement markings throughout the intersection.

<u>Safety Issue: Limited sight distance on the West Street southbound approach</u>. Currently, the sight distance is limited on the West Street southbound approach due to vegetation and the location of a utility pole on the northeast corner of the intersection, (the property on the northeast corner and along the north portion of Plain Street east of the intersection is owned by the Town of Stoughton).

Enhancement: Relocate the utility pole and clear the vegetation on the northeast corner of the intersection to improve sight lines.

Plain Street near Swanson Terrace Intersection

Safety issue: It is difficult for motorists to follow the road eastbound on Plain Street as it nears Swanson Terrace due to a curve in the road and a vertical slope. The crash experience for this location includes a pattern of lane departure crashes in the eastbound direction as vehicles negotiate the curve as it nears Swanson Terrace. The Town of Stoughton has recently implemented improvements on Plain Street at Swanson Terrace including posting flashing 25 MPH warning signs in the eastbound and westbound direction on Plain Street and placing chevrons in advance of and through the curve in the eastbound direction.

Enhancement: Consider wider edge lines with reflective paint, (and new striping throughout), rumble strips on the edge of the road, and flexible median pylons or reflectors in the center of the road (to enhance the visibility of the double yellow line in the center of the road).

Enhancement: Consider relocating a utility pole and removing a tree both on the south side of Plain Street on the outside of the horizontal curve that have a history of crashes.

Enhancement: Consider high friction pavement surface to increase the friction of the road surface through the curve.



Photo above shows the recent improvements to Plain Street at Swanson Terrace on the EB and WB approaches with advance flashing warning signs for 25 MPH through the curve.

Enhancement: Consider an engineering study to evaluate the super-elevation through the curve eastbound on Plain Street.

Enhancement: Consider adding chevrons on Plain Street in the westbound direction through the curve past Swanson Terrace.

Enhancement: Monitor the crash experience over the next three years to discern the effectiveness of the recent town improvements to Plain Street at Swanson Terrace (chevrons and the flashing 25 MPH warning signs).

Safety Issue: Speeding through the curve at Swanson and throughout the corridor.

Enhancement: Consider traffic calming methods including narrower travel lanes, wider edge lines, and rumble strips at edge lines (to prevent lane departure crashes).

Plain Street at Morton Street Intersection

<u>Safety Issue: The Plain Street westbound approach to the intersection lacks a curb and definition</u> between the travel way and the parking area at the convenience store located on the northeast corner

<u>of the intersection.</u> The lack of a defined curb or delineation between the westbound Plain Street vehicle lane and the parking area also results in a lack of location for the stop sign to be posted on this approach. The lack of curb and definition between parking and travel way contribute to pedestrian exposure to vehicles in traffic and vehicles making turning movements in and out of the parking area. In addition, vehicles entering and exiting the parking area via the wide-open curb cut interfere with traffic operations at the intersection.

Enhancement: Evaluate parking space layout and access management at the convenience store parking area for curbing, pedestrian travel safety, and sidewalk location.

Enhancement: Install a curb and island at the northeast corner of the intersection and a refuge island for the Plain Street westbound approach. A stop sign can be posted adjacent to the stop line on the island at the northeast corner.

Safety Issue: Stop Sign placement and sign visibility.

Enhancement: Evaluate placement, height, and visibility of stop signs on all approaches to the intersection and install according to the Manual on Uniform Traffic Control Devices (MUTCD). Some MUTCD standards include Section 2A.01 for height and lateral offset and Section 2B.06 which states that the STOP sign shall be installed on the right side of the traffic lane to which it applies, and it shall be located as close as practical to the intersection.

Enhancement: Evaluate for signal installation based on signal warrants in MUTCD.

Safety Issue: Pavement marking confuses drivers.

Enhancement: Evaluate pavement marking and crosswalks and install based on MUTCD conformity.

Safety Issue: Poor intersection alignment, along with a hedgerow on the northwest corner and a fence on the southwest corner, leading to sight distance limitations on the northbound and westbound approaches and tight turning radius for the right turns from Morton Street northbound to Plain Street eastbound.

Enhancement: Evaluate realignment and reconstruction of the intersection to improve geometric and alignment of the intersection.

Enhancement: Consider relocating the utility pole on the southeast corner of the intersection.

Safety Issue: Lack of ADA access for sidewalks and lack of bicycle accommodation.

Enhancement: Consider long-term plan for bicycle and pedestrian accommodation and amenities consistent with regional bicycle and pedestrian plan, including adding sidewalks to the west side of Morton Street from Plain Street northward to approximately 1,000 feet.

Enhancement: Consider in-street portable pedestrian crossing signs at crosswalks.

<u>Safety Issue: Sun glare to the vehicle drivers in the EB travel direction on Plain Street during the A.M. and in the WB direction during the P.M.</u>

Enhancement: Consider back plates on the overhead flashing beacons.

Summary of Road Safety Audit

Based on the review of data, observations of the intersections and study area, and group discussion, possible enhancements that could improve safety at the study location were identified by RSA participants. Further study and design work will need to be conducted to determine the feasibility of improvements. Table 2 summarizes the estimated time frame and costs and Tables 3 through 5 summarize the safety issues, possible enhancements, estimated safety payoff, time frame, cost, and jurisdiction responsibility. Safety payoff estimates are based on engineering judgment and are categorized as low, medium, and high. The time frame is categorized as short-term (<1 year), mid-term (1 to 3 years), or long-term (typically >3 years). Long-term improvements are typically considered to be substantial improvements with an expected time frame for implementation greater than 3 years. The costs are categorized as low (<\$10,000), medium (\$10,001 to \$50,000), or high (>\$50,000).

Time Frame				Costs
Short-Term	<1 Year		Low	<\$10,000
Mid-Term	1-3 Years		Medium	\$10,001-\$50,000
Long-Term	ng-Term >3 Years		High	>\$50,000

Table 2: Estimated Time Frame and Costs Breakdown

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Poor intersection alignment, inadequate intersection geometry, and tight turning radii.	Reconstruct/realign the intersection, provide proper turning radius, and install a mountable median on the West Street NB approach and a mountable island on the southeast corner to channels West Street NB right turns.	High	> 3 Years	High	Municipality
Poor intersection alignment, inadequate intersection geometry, and tight turning radii.	Consider overhead flashing beacons, flashing red on the West Street approaches and flashing yellow on the Plain Street approaches.	Medium	1-3 Years	Medium	Municipality
Stop Sign placement, lack of stop lines markings.	Reconstruct and realign the intersection providing proper turning radii and installing a mountable median island on the West Street northbound approach and a mountable island replacing the painted island on the southeast corner of the intersection that channels West Street northbound right turns.	High	> 3 Years	High	Municipality
Stop Sign placement, lack of stop lines markings.	Relocate NB Stop signs.	Medium	1 Year	Low	Municipality
Stop Sign placement, lack of stop lines markings.	Consider Intersection Control Evaluation (ICE) to address traffic control and sign location.	Medium	1-3 Years	Medium	Municipality
Stop Sign placement, lack of stop lines markings.	Consider "Stop Sign Ahead" warning sign on the West Street northbound approach.	High	> 3 Years	High	Municipality
Stop Sign placement, lack of stop lines markings.	Install new striping and stop lines throughout the intersection.	Medium	1 Year	Low	Municipality
Limited sight distance on the West Street SB approach.	Relocate the utility pole and clear the vegetation on the northeast corner of the intersection to improve sight lines.	Medium	1-3 Years	Medium	Municipality

Table 3: Potential Safety Enhancement Summary Plain Street at West Street Intersection

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Consider wider edge lines with reflective paint, (and new striping throughout), rumble strips on the edge of the road, and flexible median pilons or reflectors in the center of the road (to enhance the double yellow line in the center of the road).	High	1-3 Years	Medium	Municipality
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Consider relocating a utility pole and removing a tree both on the south side of Plain Street that have a history of crashes.	Medium	1-3 Years	Medium	Municipality
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Consider high friction pavement surface to increase the friction of the road surface through the curve.	Medium	1-3 Years	Medium	Municipality
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Consider an engineering study to evaluate the super- elevation through the curve eastbound on Plain Street.	Medium	1-3 Years	Medium	Municipality
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Consider adding chevrons on Plain Street in the westbound direction through the curve at Swanson Terrace.	Low	1 Year	Low	Municipality
Difficult to follow the road on the EB Plain Street approach due to a curve in the road and a vertical slope. Crash experience includes a pattern of lane departure crashes in the EB direction.	Monitor the crash experience over the next three years to discern the effectiveness of the recent town improvements to Plain Street at Swanson Terrace (Chevrons and flashing 25 MPH warning signs).	Medium	> 3 Years	Low	Municipality/ Regional Planning
Speeding through the curve at Swanson and throughout the corridor.	Consider traffic calming methods including narrower travel lanes, wider edge lines, and rumble strips at edge lines (to prevent lane departure crashes).	Medium	1-3 Years	Medium	Municipality

Table 4: Potential Safety Enhancement Summary Plain Street/Swanson Terrace Intersection

Safety Issue	Potential Safety Enhancement	Safety Payoff	Time Frame	Cost	Jurisdiction
Plain Street WB lacks a curb and definition between the travel way and the parking area at the convenient store on the northeast corner, resulting in a lack of location for the stop sign. This contributes to pedestrian exposure. Vehicles entering and exiting the parking interfere with traffic operations.	Evaluate access management at the convenient parking area for curbing, pedestrian safety, and sidewalk location.	High	> 3 Years	Medium	Municipality
The Plain Street WB lacks a curb and definition between the travel way and the parking area at the convenient store on the northeast corner of the intersection.	Install a curb and island at the northeast corner of the intersection and a refuge island for the Plain Street westbound approach. A stop sign can be placed in the island at the northeast corner.	High	> 3 Years	High	Municipality
Stop Sign placement and sign visibility.	Evaluate placement, height, and visibility of stop signs on all approaches to the intersection and install according to the MUTCD.	Medium	1-3 Years	Low	Municipality
Stop Sign placement and sign visibility.	Evaluate for signal installation based on signal warrants in MUTCD.	High	> 3 Years	High	Municipality
Pavement marking confuses drivers.	Evaluate pavement marking and crosswalks and install based on MUTCD conformity.	Medium	1 Year	Low	Municipality
Poor intersection alignment with sight distance limitations on the NB and WB approaches, tight turning radius for the right turns from Morton Street NB to Plain Street EB.	Evaluate realignment and reconstruction of the intersection to improve geometric and alignment of the intersection.	High	> 3 Years	High	Municipality
Poor intersection alignment with sight distance limitations on the NB and WB approaches, tight turning radius for the right turns from Morton Street NB to Plain Street EB.	Consider relocating the utility pole on the southeast corner of the intersection.	Medium	1-3 Years	Medium	Municipality
Lack of ADA access for sidewalks and lack of bicycle accommodation.	Consider long-term plan for bicycle and pedestrian accommodation and amenities consistent with regional bicycle and pedestrian plan	Medium	> 3 Years	Medium	Municipality
Lack of ADA access for sidewalks and lack of bicycle accommodation.	Consider in-street portable pedestrian crossing signs at crosswalks.	Medium	1 Year	Low	Municipality
Sun glare in EB on Plain Street in the A.M. and on the WB direction in the P.M.	Consider back plates on the overhead flashing beacons.	Medium	1 Year	Low	Municipality

Table 5: Potential Safety Enhancement Summary Plain Street/Morton Street Intersection

Appendix A. RSA Meeting Agenda

......

	Road Safety Audit			
Agenda	Stoughton, MA Plain Street Between West Street and Morton Street			
	In-person Meeting Location: Stoughton Police Department, 26 Rose Street, Stoughton, MA 02072			
	Tuesday, November 28th, 2023 1 PM – 3 PM			
Type of meeting:	Road Safety Audit			
Attendees:	Invited Participants to Comprise a Multidisciplinary Team			
Please bring:	Thoughts and Enthusiasm			
1:00 PM	Welcome and Introductions			
1:05 PM	Review of Site-Specific Material - Review and Discuss Project			
	Review of traffic and collision data			
	 Review of operational and physical known challenges 			
1:30 PM	Field Road Safety Audit			
	RSA in a group			
	Car-pool recommended			
2:30 PM	Meeting Discussion Return to Meeting Room for discussion of findings, improvement strategies and action plan			
3:00 PM	Adjourn for the Day			
Instructions for Partic	ipants:			
and complete/c	ng the <u>RSA</u> participants are encouraged to drive through the intersection consider elements on the RSA Prompt List with a focus on safety. All Il be actively involved in the process throughout.			
After the RSA r	neeting, participants will be asked to comment and respond to the erials to assure it is reflective of the RSA completed by the multidisciplinary			
 CONTACT: Please direct questions regarding this RSA to Raymond Guarino, OCPC, (774) 539-2989, <u>rguarino@ocpcrpa.org;</u> or Guoqiang Li, OCPC, 774-539-5149 <u>gli@ocpcrpa.org.</u> 				
	Old Colony Planning Council			
	70 School Street, Brockton, MA 02301			

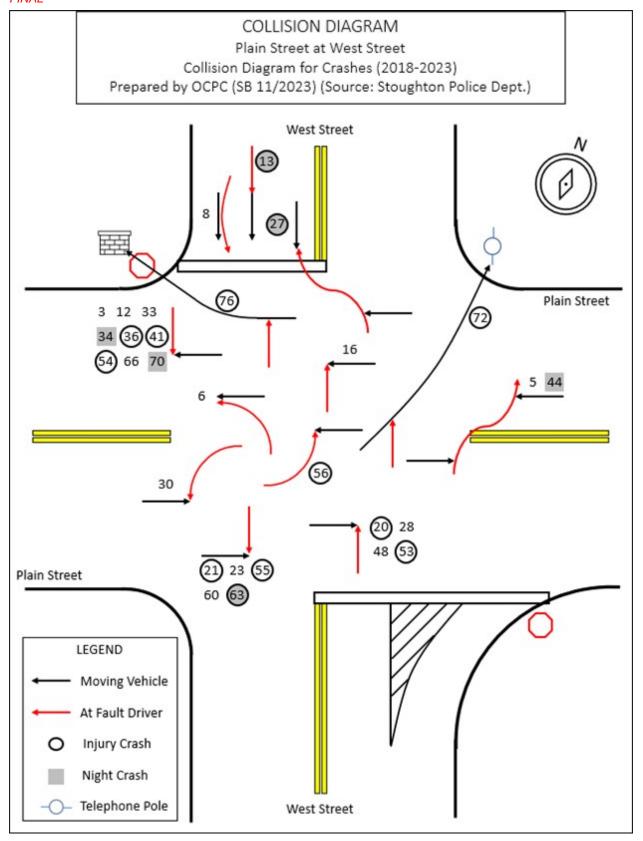
Appendix B. RSA Audit Team Contact List

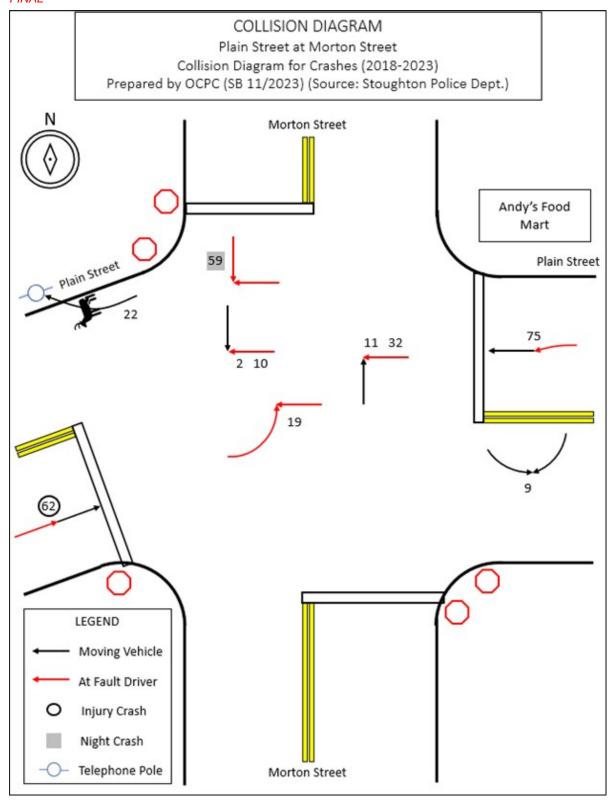
Participating Audit Team Members Date: November 28, 2023

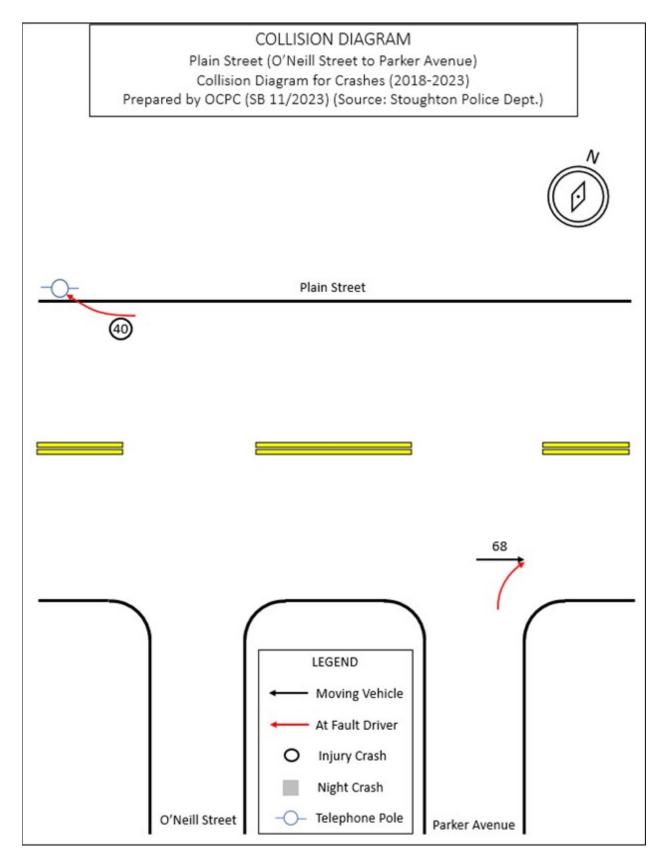
Location: Plain Street, Stoughton

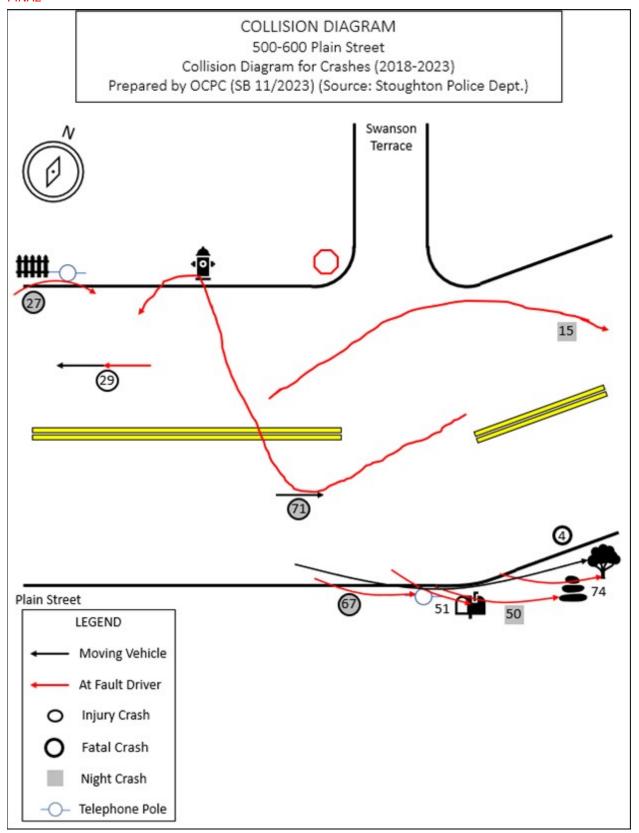
Audit Team Members	Agency/Affiliation	Email Address		
Sgt. James O'Connor	Detective Supervisor/Safety Officer, Stoughton Police Department	joconnor@stoughton-ma.gov		
Samuel Hawkins	MassDOT District 5	samuel.g.hawkins@dot.state.ma.us		
Yolande Dolezser	MassDOT District 5	ydolezser@dot.state.ma.us		
Mojtaba.m Moharrer	MassDOT District 5	mojtaba.m.moharrer@dot.state.ma.us		
Paul Griffin	Stoughton DPW	pgriffin@stoughton-ma.gov		
Joyce Husseini	Stoughton School Department	jhusseini@stoughton-ma.gov		
Derek Jackson	MassDOT District 5	derek.jackson@dot.state.ma.us		
Jason Walters	MassDOT District 5 Projects	jason.walters@state.ma.us		
Craig Horsfall	Stoughton Engineering	chorsfall@stoughton-ma.gov		
Nick Dufresne	Stoughton Engineering	ndufresne@ stoughton-ma.gov		
Jim Terlizzi	MassDOT Traffic Safety	James.v.terlizzi@dot.state.ma.us		
William Galvin	State Representative	william.galvin@mahouse.gov		
Bill Roth	Planner, Town of Stoughton	broth@ stoughton-ma.gov		
Maggie Burke	Massachusetts SRTS (Aecom)	maggie.burke@aecom.com		
Guoqiang Li PTP, RSP1	OCPC	gli@ocpcrpa.org		
Ray Guarino	OCPC	rguarino@ocpcrpa.org		
Kyle Mowatt	OCPC	kmowatt@ocpcrpa.org		
Shawn Bailey	OCPC	sbailey@ocpcrpa.org		

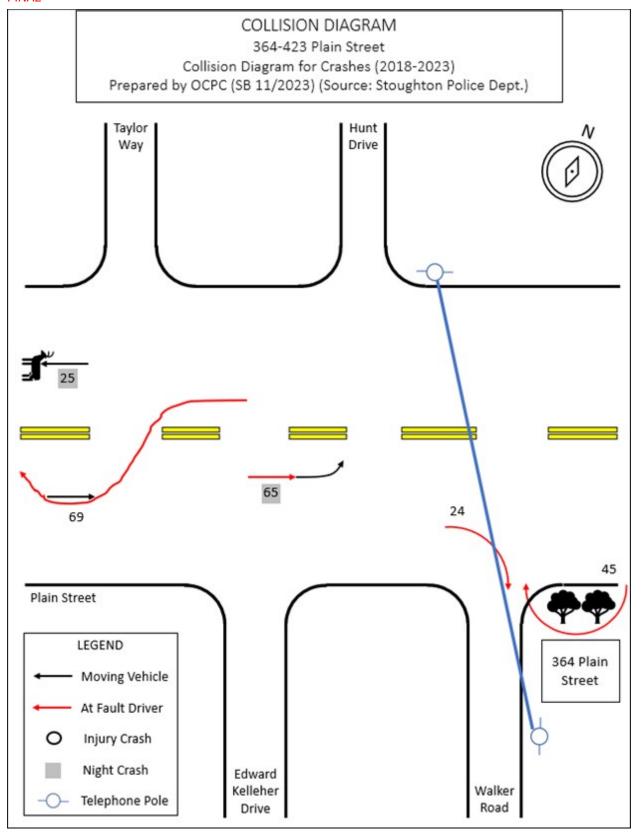
Appendix C. Detailed Crash Data

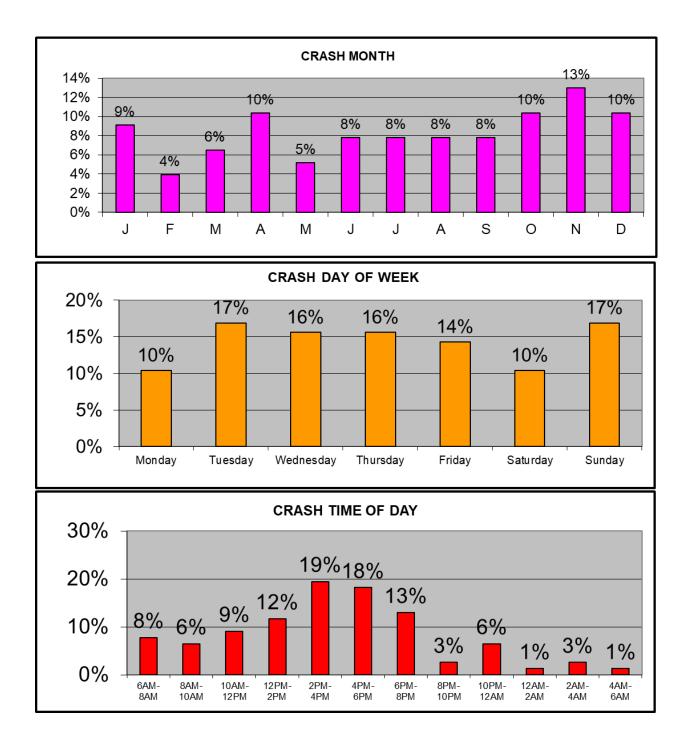


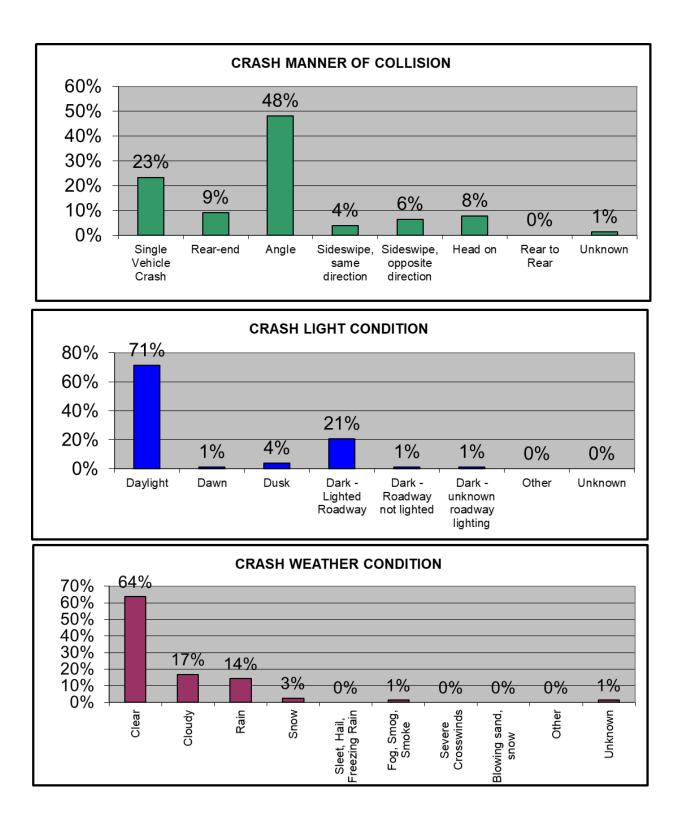


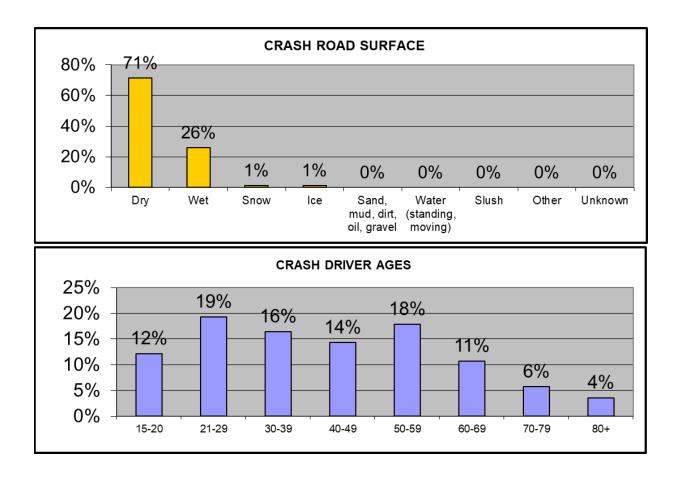












Crash Diagram	Crash Date		Time of Day	Manner of Collision	Light Condition	Weather	Road Surface	Driver Contributin g Code
Ref #	m/d/y			Туре	Туре	Туре	Туре	Туре
1	3/9/18	Friday	1:57 PM	Angle	Daylight	Cloudy	Dry	Failed to yield right of way
								Disregarded traffic signs, signals, road
2	4/13/18	Friday	5:12 PM	Angle	Daylight	Clear	Dry	markings
3	4/20/18	Friday	2:30 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
4	5/8/18	Tuesday	5:09 PM	Head on	Daylight	Clear	Dry	Unknown
5	7/15/18	Sunday	5:29 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
				Sideswipe, same				
6	7/17/18	Tuesday	3:09 PM	direction	Daylight	Cloudy	Dry	Inattention
7	7/26/18	Thursday	9:25 PM	Angle	Dark - lighted roadway	Cloudy	Wet	Failed to yield right of way
	1720/10	maroday	0.20 T W	Sideswipe, same	Toddwdy			Failure to keep in proper lane or running
8	9/11/18	Tuesday	5:08 PM	direction	Daylight	Cloudy	Wet	off road
9	11/2/18	Friday	7:07 AM	Angle	Dawn	Cloudy	Wet	No Improper Driving
10	11/9/18	Friday	7:54 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way
11	11/14/18	Wednesday	1:31 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
12	11/16/18	Friday	3:36 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
					Dark - lighted			
13	11/22/18	Thursday	5:08 PM	Rear-end	roadway	Clear	Dry	Inattention Failed to
14	6/5/19	Wednesday	7:26 AM	Angle	Daylight	Clear	Dry	yield right of way
15	6/9/19	Sunday	10:29 PM	Single Vehicle Crash	Dark - lighted roadway	Unknown	Dry	Operating Vehicle in erratic, reckless, careless, negligent, or aggressive manner
16	8/22/19	Thursday	7:11 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way

	1	I		1	1	1	1	1
17	9/11/19	Wednesday	10:44 AM	Rear-end	Daylight	Cloudy	Dry	Inattention
18	9/30/19	Monday	11:49 PM	Unknown	Dark - lighted roadway	Clear	Dry	Unknown
19	11/18/19	Monday	9:27 AM	Head on	Daylight	Rain	Wet	Unknown
								Failed to yield right of
20	12/2/19	Monday	2:28 PM	Angle	Daylight	Rain	Wet	way
21	12/16/19	Monday	7:46 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way
22	12/25/19	Wednesday	4:09 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving
22	1/7/20	Tuesday	11:05	Angle	Doulight	Clear		Failed to yield right of
23	1/7/20	Tuesday	AM	Angle	Daylight	Clear	Dry	way
24	1/18/20	Saturday	10:14 AM	Single Vehicle Crash	Daylight	Cloudy	Dry	Inattention
25	3/27/20	Friday	10:52 PM	Single Vehicle Crash	Dark - roadway not lighted	Clear	Dry	No Improper Driving
	0,21,20	Thoug		Single	ignou	Cicai		No
26	4/13/20	Monday	2:07 PM	Vehicle Crash	Daylight	Rain	Wet	Improper Driving Operating
27	4/18/20	Saturday	3:09 AM	Single Vehicle Crash	Dark - lighted roadway	Snow	Wet	Vehicle in erratic, reckless, careless, negligent, or aggressive manner
								Failed to yield right of
28	8/25/20	Tuesday	6:42 PM	Angle	Daylight	Clear	Dry	way
29	9/3/20	Thursday	8:28 AM	Rear-end	Daylight	Cloudy	Wet	Followed too closely
		,						Failed to yield right of
30	9/5/20	Saturday	7:15 PM	Head on	Dusk	Clear	Dry	way
31	9/11/20	Friday	5:47 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
32	10/13/20	Tuesday	11:30 AM	Angle	Daylight	Rain	Wet	Disregarded traffic signs, signals, road markings
								Disregarded traffic signs, signals, road
33	10/21/20	Wednesday	4:10 PM	Angle	Daylight Dark - lighted	Clear	Dry	markings Failed to yield right of
34	12/10/20	Thursday	9:51 PM	Angle	roadway	Clear	Dry	way

FIN								
35	12/18/20	Friday	4:58 PM	Angle	Dark - lighted roadway	Clear	Snow	Inattention
36	3/20/21	Saturday	2:23 PM	Angle	Daylight	Cloudy	Dry	No Improper Driving
37	4/12/21	Monday	2:45 PM	Angle	Daylight	Rain	Wet	Failed to yield right of way
								Failure to keep in proper lane or running
38	5/18/21	Tuesday	4:07 PM	Angle	Daylight	Cloudy	Dry	off road
39	6/3/21	Thursday	4:15 PM	Angle Single	Daylight	Clear	Dry	Unknown
40	6/10/21	Thursday	7:45 PM	Vehicle Crash	Daylight	Clear	Dry	Unknown Disregarded
41	8/15/21	Sunday	5:16 PM	Angle	Daylight	Clear	Dry	traffic signs, signals, road markings
42	8/15/21	Sunday	7:27 PM	Single Vehicle Crash	Daylight	Clear	Dry	Swerving or avoiding due to wind, slippery surface, vehicle, object, non- motorist in roadway, etc.
43	8/26/21	Thursday	12:32 AM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	No Improper Driving
44	10/9/21	Saturday	6:26 PM	Angle	Dark - lighted roadway	Clear	Dry	Failed to yield right of way
45	10/30/21	Saturday	3:30 PM	Single Vehicle Crash	Daylight	Cloudy	Wet	No Improper Driving
46	10/31/21	Sunday	11:42 AM	Sideswipe, opposite direction	Daylight	Clear	Dry	Unknown
47	11/21/21	Sunday	4:28 PM	Sideswipe, same direction	Dusk	Clear	Dry	Unknown
48	11/24/21	Wednesday	12:48 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way
49	12/26/21	Sunday	11:58 AM	Angle	Daylight	Cloudy	Dry	Inattention
50	1/2/22	Sunday	7:22 AM	Single Vehicle Crash	Daylight Dark - lighted roadway	Fog, Smog, Smoke	Wet	No Improper Driving
51	1/6/22	Thursday	7:25 AM	Single Vehicle Crash	Daylight	Clear	lce	No Improper Driving

FIN	-	,	ng Council					
52	2/8/22	Tuesday	1:09 PM	Rear-end	Daylight	Rain	Wet	Inattention
				Sideswipe, opposite				Disregarded traffic signs, signals, road
53	3/17/22	Thursday	1:15 PM	direction	Daylight	Rain	Wet	markings
54	4/13/22	Wednesday	12:37 PM	Angle	Daylight	Clear	Dry	Inattention
55	5/1/22	Sunday	1:21 PM	Angle	Daylight	Clear	Dry	Failed to yield right of way Failed to
56	5/17/22	Tuesday	2:37 PM	Single Vehicle Crash	Daylight	Clear	Dry	yield right of way
57	6/1/22	Wednesday	3:27 PM	Single Vehicle Crash	Daylight	Clear	Dry	No Improper Driving
58	6/15/22	Wednesday	11:09 AM	Sideswipe, opposite direction	Daylight	Clear	Dry	No Improper Driving
59	7/4/22	Monday	10:18 PM	Angle	Dark - lighted roadway	Clear	Dry	Unknown
60	7/18/22	Monday	12:37 PM	Head on	Daylight	Clear	Dry	Disregarded traffic signs, signals, road markings
61	7/24/22	Sunday	4:44 PM	Single Vehicle Crash	Daylight	Clear	Dry	Swerving or avoiding due to wind, slippery surface, vehicle, object, non- motorist in roadway, etc.
62	8/11/22	Thursday	9:19 AM	Rear-end	Daylight	Cloudy	Dry	Followed too closely
					Dark, unknown			Disregarded traffic signs, signals, road
63	10/2/22	Sunday	7:15 PM	Angle	roadway lighting	Clear	Dry	markings
64	10/11/22	Tuesday	8:18 AM	Angle	Daylight	Clear	Dry	Failed to yield right of way
65	10/13/22	Thursday	6:38 PM	Rear-end	Dark - lighted roadway	Rain	Wet	Visibility Obstructed
								Disregarded traffic signs, signals, road
66	11/25/22	Friday	1:36 PM	Angle	Daylight	Rain	Wet	markings
67	11/26/22	Saturday	4:10 AM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	Unknown
68	12/6/22	Tuesday	2:29 PM	Head on	Daylight	Clear	Dry	Visibility Obstructed

69	12/21/22	Wednesday	9:47 AM	Sideswipe, opposite direction	Daylight	Clear	Dry	Visibility Obstructed
70	4/4/00				Dark - lighted		6	
70	1/4/23	Wednesday	6:35 PM	Angle	roadway	Clear	Dry	Unknown Operating
								Vehicle in
								erratic, reckless,
								careless,
								negligent, or
			10:49		Dark - lighted			aggressive
71	1/7/23	Saturday	PM	Head on	roadway	Clear	Dry	manner
								Disregarded traffic signs,
				Sideswipe,				signals,
72	1/13/23	Friday	3:04 PM	opposite direction	Daylight	Rain	Wet	road markings
12	1/10/20	Thay	0.0411	direction	Dayiigin		Wet	Made an
70	2/8/23	Madaaaday		Angle	Dovident	Clear	Dru	improper
73	2/0/23	Wednesday	2:54 PM	Angle	Daylight	Clear	Dry	turn Exceeded
				Single				authorized
74	2/21/23	Tuesday	3:54 PM	Vehicle Crash	Daylight	Rain	Wet	speed limit
75	3/14/23	Tuesday	3:24 PM	Rear-end	Dovident	Snow	Wet	Unknown
75	3/14/23	Tuesday	3.24 FIVI	Real-ellu	Daylight	SHOW	wei	Disregarded
								traffic signs,
								signals, road
76	4/2/23	Sunday	6:21 PM	Angle	Dusk	Clear	Dry	markings
								Failure to
								keep in proper lane
				Single	Dark - lighted			or running
77	4/23/23	Sunday	2:40 AM	Vehicle Crash	roadway	Clear	Wet	off road

Appendix D. Road Safety Audit References

Road Safety Audit References

- *FHWA Office of Safety Proven Safety Countermeasures,* U.S. Department of Transportation, Federal Highway Administration <u>https://safety.fhwa.dot.gov/provencountermeasures/</u>.
- *Road Safety Audits, A Synthesis of Highway Practice*. NCHRP Synthesis 336. Transportation Research Board, National Cooperative Highway Research Program, 2004.
- *Road Safety Audits*. U.S. Department of Transportation, Federal Highway Administration, <u>https://safety.fhwa.dot.gov/rsa/</u>
- FHWA Road Safety Audit Guidelines. U.S. Department of Transportation, Federal Highway Administration, 2006.
- Road Safety Audit, 2nd edition. Austroads, 2000.
- *Road Safety Audits*. ITE Technical Council Committee 4S-7. Institute of Transportation Engineers, February 1995.