Appendix B

Assessment of Current Conditions

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Brewer South Main Street Corridor Study

City of Brewer, Maine

August 21, 2024

Prepared for:

Bangor Area Comprehensive Transportation System (BACTS)

Prepared by:

Stantec

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STUDY CONTEXT

Brewer sits along the Penobscot River, just across from its sister city Bangor. Together, Brewer and Bangor serve as the urban and cultural center of Northern and Eastern Maine. Brewer's rich history of industry and culture in the heart of Maine, central to key regions in the state make it a desirable place to live, work, and visit. This study seeks to improve the safety and accessibility for all transportation users along the South Main Street corridor. Additional goals of this project are to improve active transportation connections and facilities along this corridor, examine land uses and support the City's paths toward sustainable development, and review ways to improve operations of vehicular traffic and safety along the corridor.

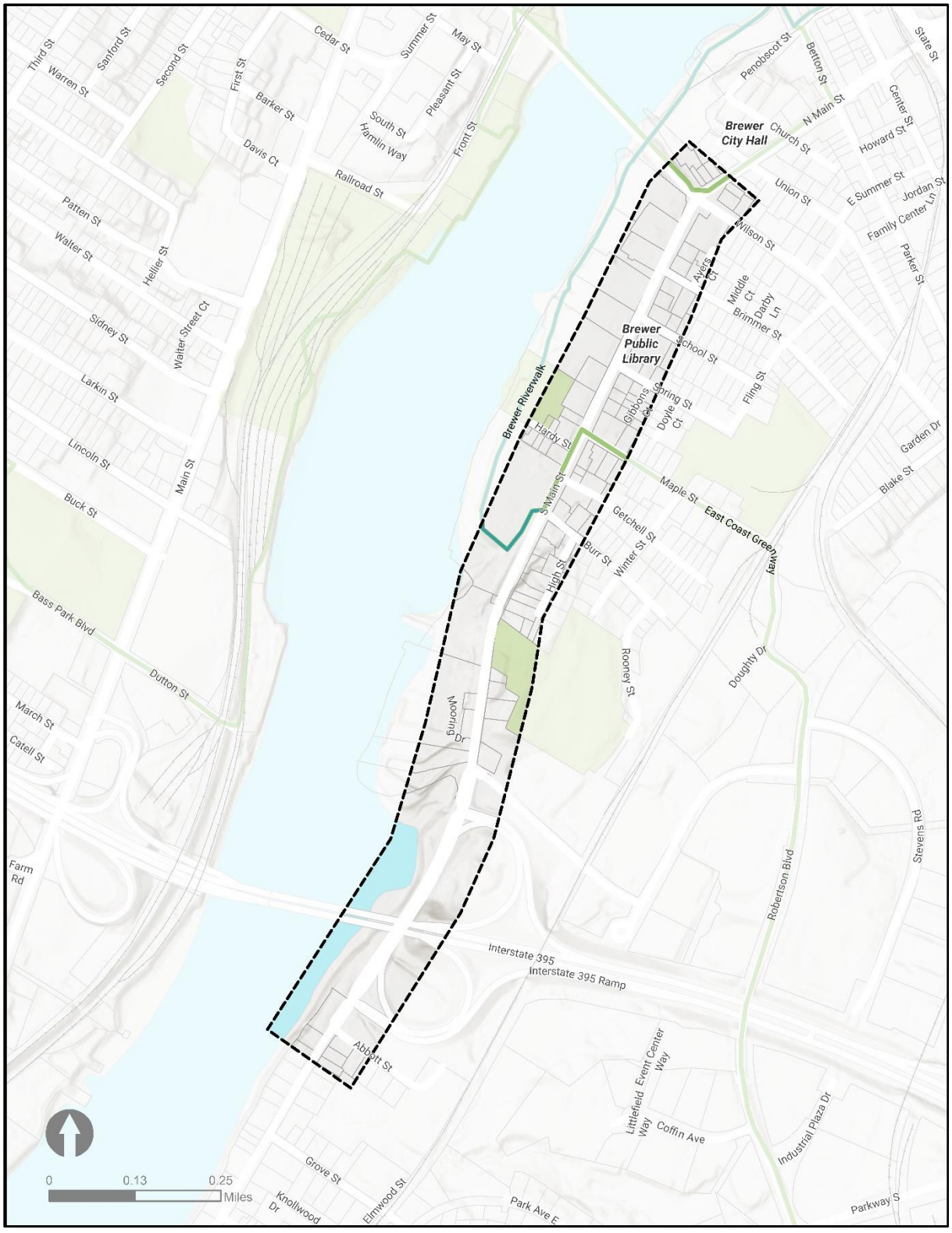
South Main Street in Brewer is co-signed with Maine State Route 15 and Maine State Route 15 Business and provides Brewer's access between Downtown Brewer and Interstate 395 (Exit 4 Interchange). The successful development of the Brewer Riverwalk has lured additional recreational travelers to the area, providing an influx of multiple user types to the transportation system, including pedestrians, bicyclists, and vehicles. Navigating an assessment of a crucial connections for so many users – local, regional, interstate, and international – requires careful review of the current transportation systems.

This report intends to detail the existing conditions of the assessment for the study area, defined in the **Figure 1.** The study area for the South Main Street Corridor Study encompasses South Main Street from the signalized intersection with Wilson Street (US Route 1A / ME Route 9 / ME Route 179) south to the unsignalized intersection of South Main Street with Abbott Street.

Included in this assessment are key elements for a planning-level understanding of the South Main Street Corridor Study area's transportation infrastructure:

- Multimodal Traffic Analysis
- Road Safety Audit (RSA) and Field Assessment
- Land Use Analysis

Figure 1 – Brewer South Main Street Corridor Study Area



MULTIMODAL TRAFFIC ANALYSIS

TRAFFIC VOLUMES

Factored Average Annual Daily Traffic Volumes for the Study Area were accessed through the MaineDOT Public Map Viewer. As **Figure 2** shows, traffic volumes are highest along the state corridors (Main Street, State Street, and Willson St) and is significantly lower on the surrounding residential streets.

To further evaluate existing and future traffic operations, BACTS led the turning movement count (TMC) data collection at priority intersections within the South Main Street Corridor Study area. The traffic data was collected using video-based traffic counting equipment and conducted over twelve-hour, mid-week periods to capture the operations of a general workday. The data collection not only included general vehicle counts, but were distributed by vehicle category (motorcycle, bus, truck, etc.). In addition, pedestrian and bicycle traffic data was collected at the intersections.

Within the South Main Street Corridor Study area, the following intersections were collected by BACTS in the months of April and May of 2024 and between the hours of 7:00 AM and 7:00 PM:

- North Main Street and South Main Street at Wilson Street – Collected April 23, 2024
- South Main Street at Brimmer Street – Collected May 9, 2024
- South Main Street at Getchell Street – Collected May 23, 2024
- South Main Street at Baker Boulevard – Collected June 13, 2024
- South Main Street at Abbott Street – Collected June 13, 2024

Stantec also reviewed MaineDOT's traffic data, available on its public interactive traffic data map, for TMCs and continuous count sites (CCSs) available. The traffic data reviewed from MaineDOT's public map consisted of peak hour intersection TMCs and CCSs from, at a minimum, the most recent five years. Stantec further filtered traffic counts that are likely impacted by COVID pandemic-related policies and practices that would have affected normal traffic volumes and movements in the study area.

Maine Department of Transportation (MaineDOT) provides publicly available traffic data through its Transportation Data Management System (TDMS) portal. Stantec reviewed this portal for additional traffic data and found recent TMCs for the following intersections:

- South Main Street at Interstate 395 Exit 4 Westbound Ramps – Collected September 30, 2021
- South Main Street at Interstate 395 Exit 4 Eastbound Ramps – Collected September 30, 2021

From the TMCs collected above, Stantec identified the morning and afternoon peak hour periods for each respective intersection and identified an appropriate seasonal adjustment to adjust the collected data to

the sixth highest week, according to the most recent version of MaineDOT's Annual Traffic Count Report and each intersections' roadways' grouping category. As the study area roadways are considered Group 1 (Urban) roadways in Maine, seasonal adjustment factors were applied to each intersection TMC in relation to its gap to the sixth highest volume week for comparable Group 1 roadways. This amounted to the following seasonal adjustments to their respective intersections:

- North Main Street and South Main Street at Wilson Street – Twelve percent (12%) increase to counted volumes.
- South Main Street at Brimmer Street – Six percent (6%) increase to counted volumes.
- South Main Street at Getchell Street – Four percent (4%) increase to counted volumes.
- South Main Street at Baker Boulevard – Two percent (2%) increase to counted volumes.
- South Main Street at Interstate 395 Exit 4 Westbound Ramps – Four percent (4%) increase to counted volumes
- South Main Street at Interstate 395 Exit 4 Eastbound Ramps – Four percent (4%) increase to counted volumes
- South Main Street at Abbott Street – Two percent (2%) increase to counted volumes.

Based on the existing information available from MaineDOT, City of Brewer, the data collected from BACTS, and a review of the results that would come from the Brewer South Main Street Study, Stantec determined the following intersections of public streets within the South Main Street Corridor Study area would not be collected as potential recommendations can be provided without capacity analysis:

- South Main Street at School Street
- South Main Street at Spring Street
- South Main Street at Maple Street
- South Main Street at Hardy Street

The raw traffic data collection can be found in **Appendix A**.

Figure 2 – Factored Average Annual Daily Traffic

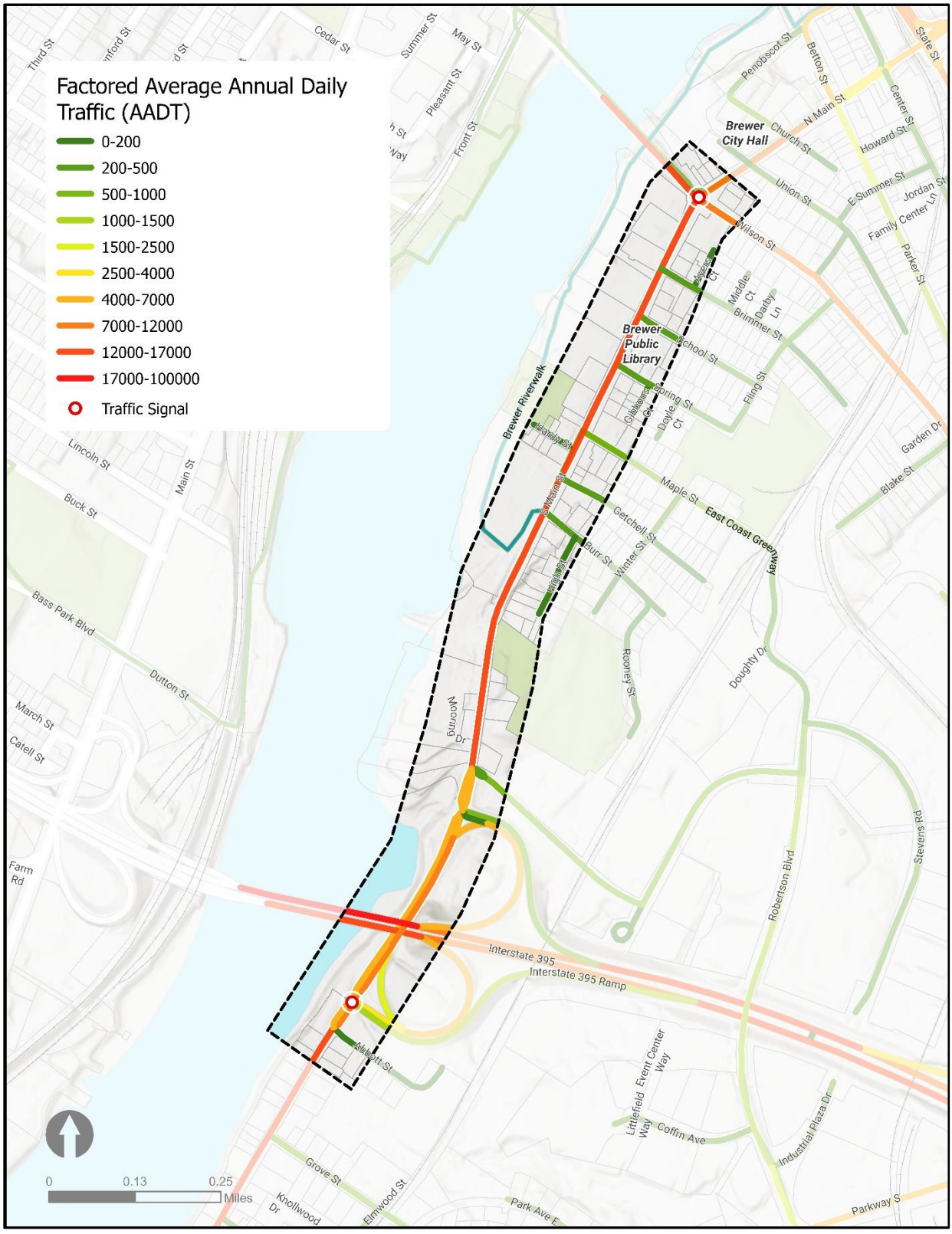


Figure 3 – Morning Peak Hour Vehicle Volumes at Study Area Intersections

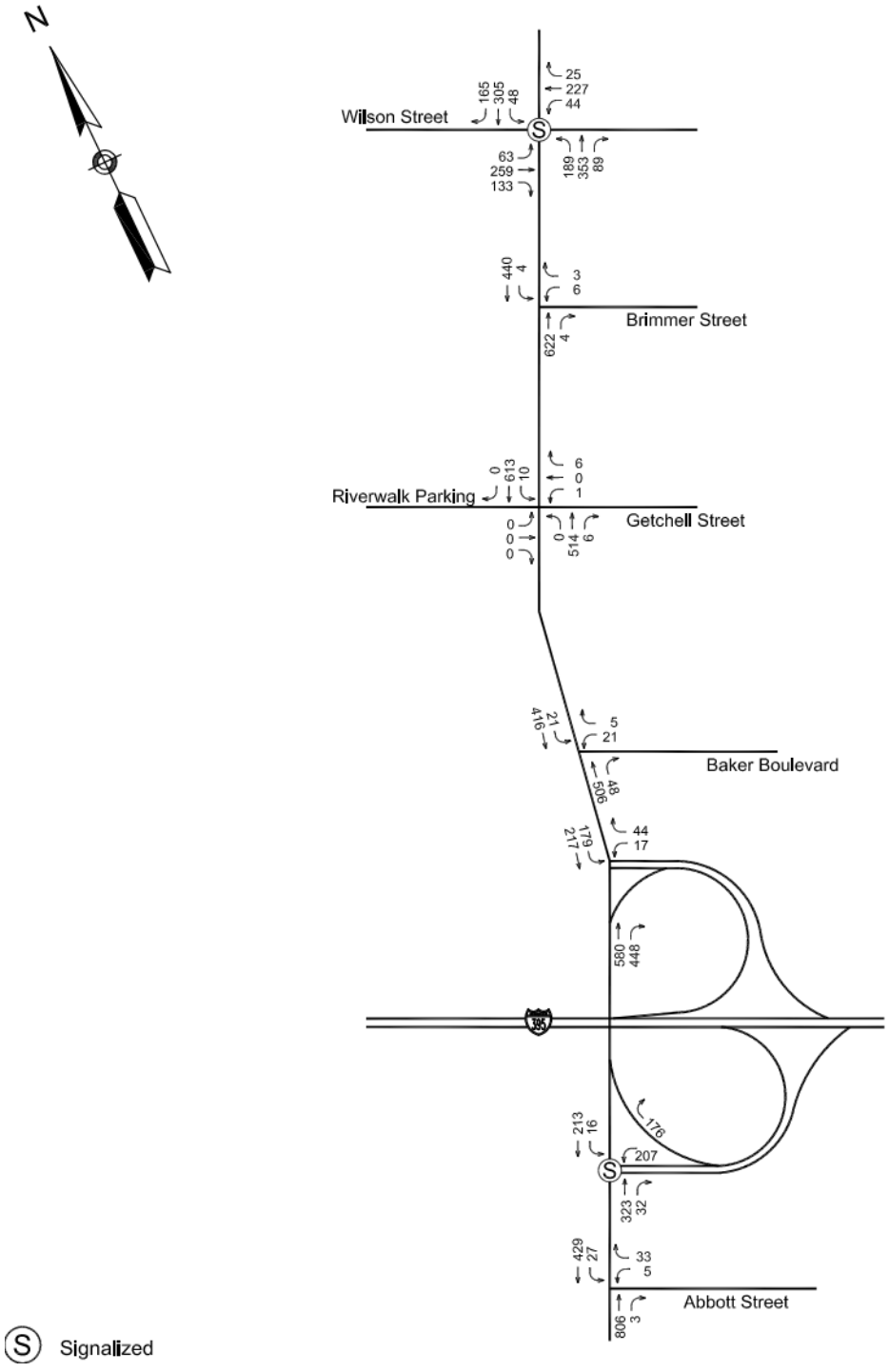


Figure 4 – Morning Peak Hour Truck Volumes at Study Area Intersections

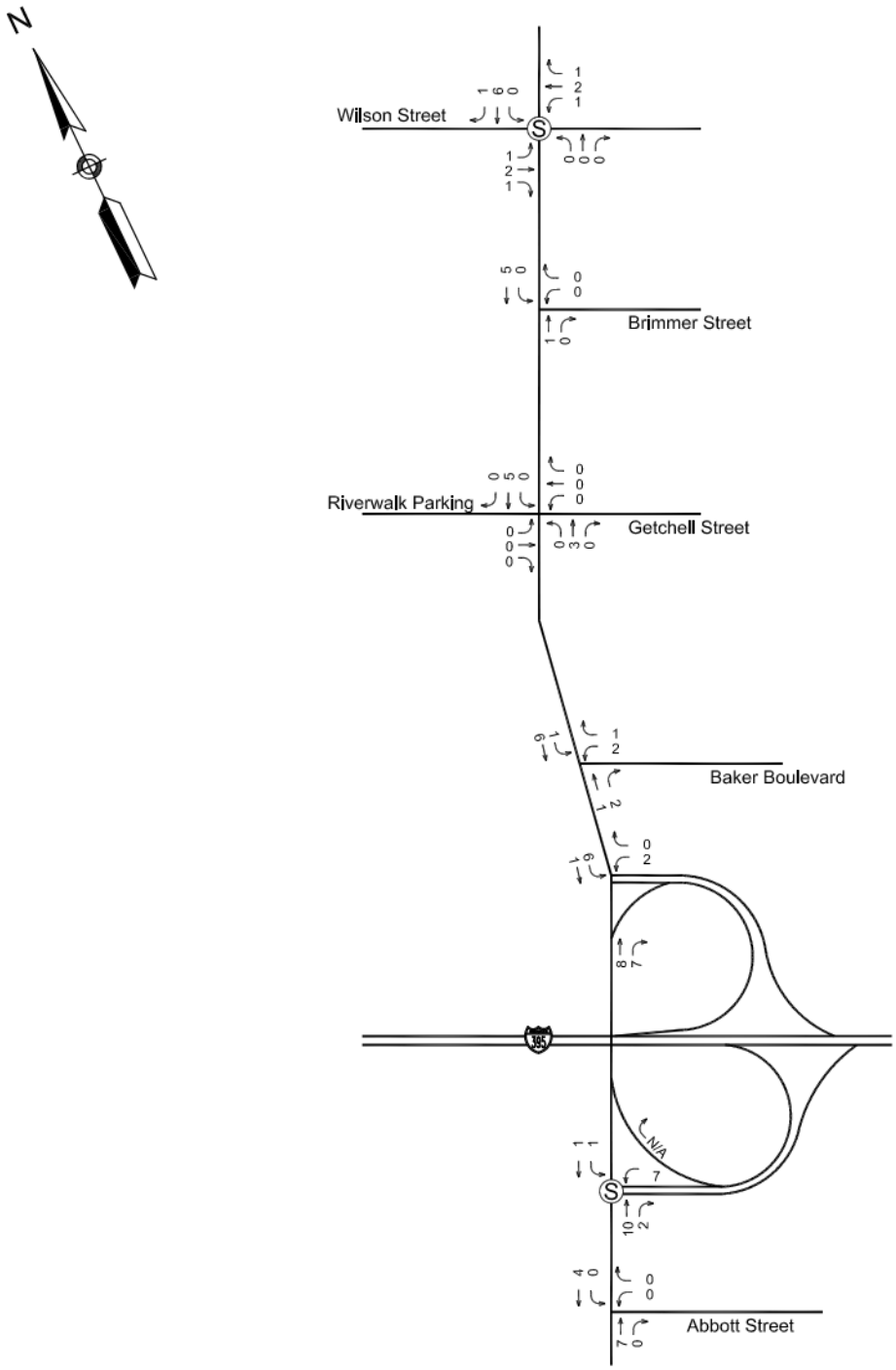


Figure 5 – Evening Peak Hour Vehicle Volumes at Study Area Intersections

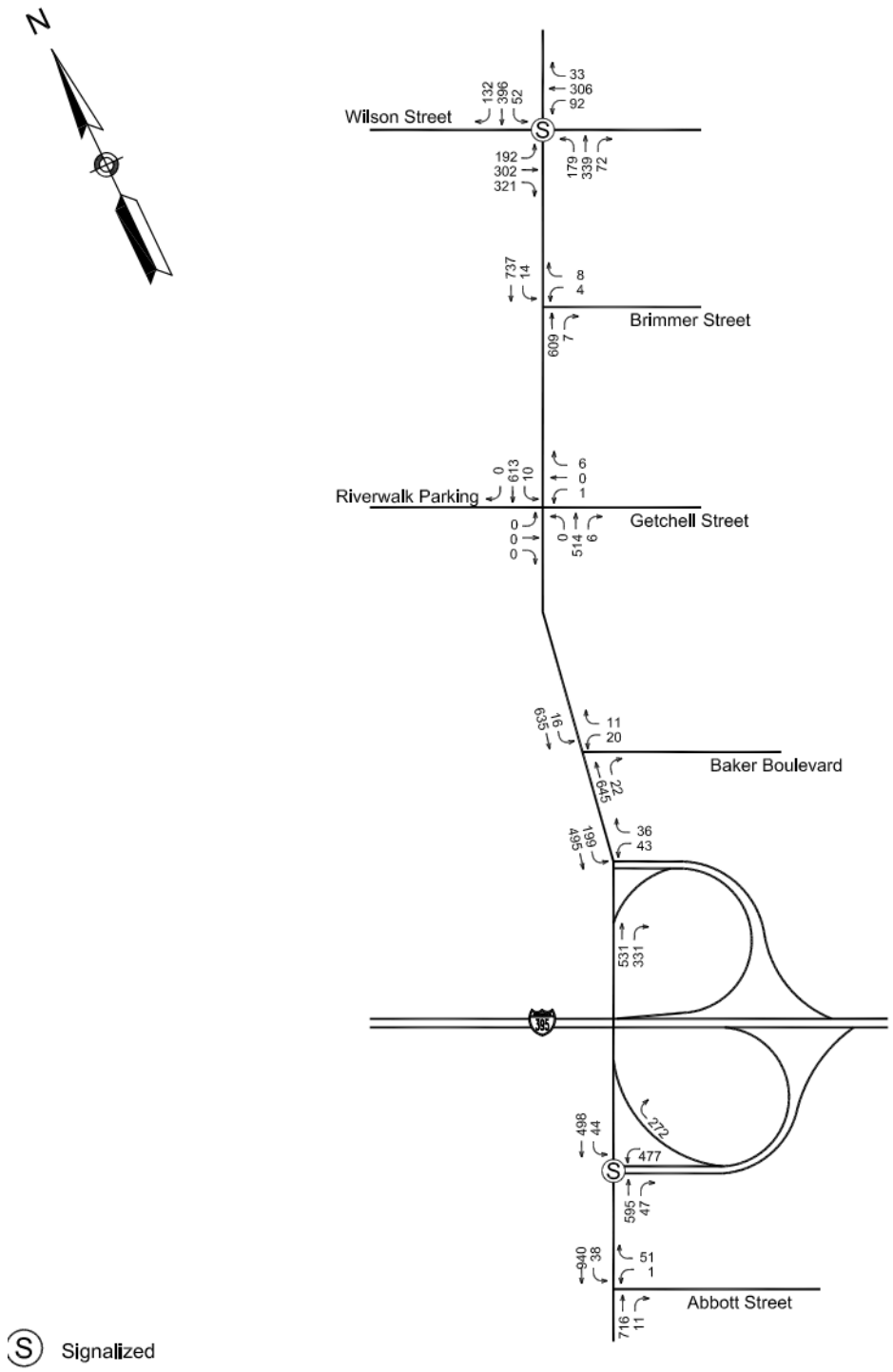
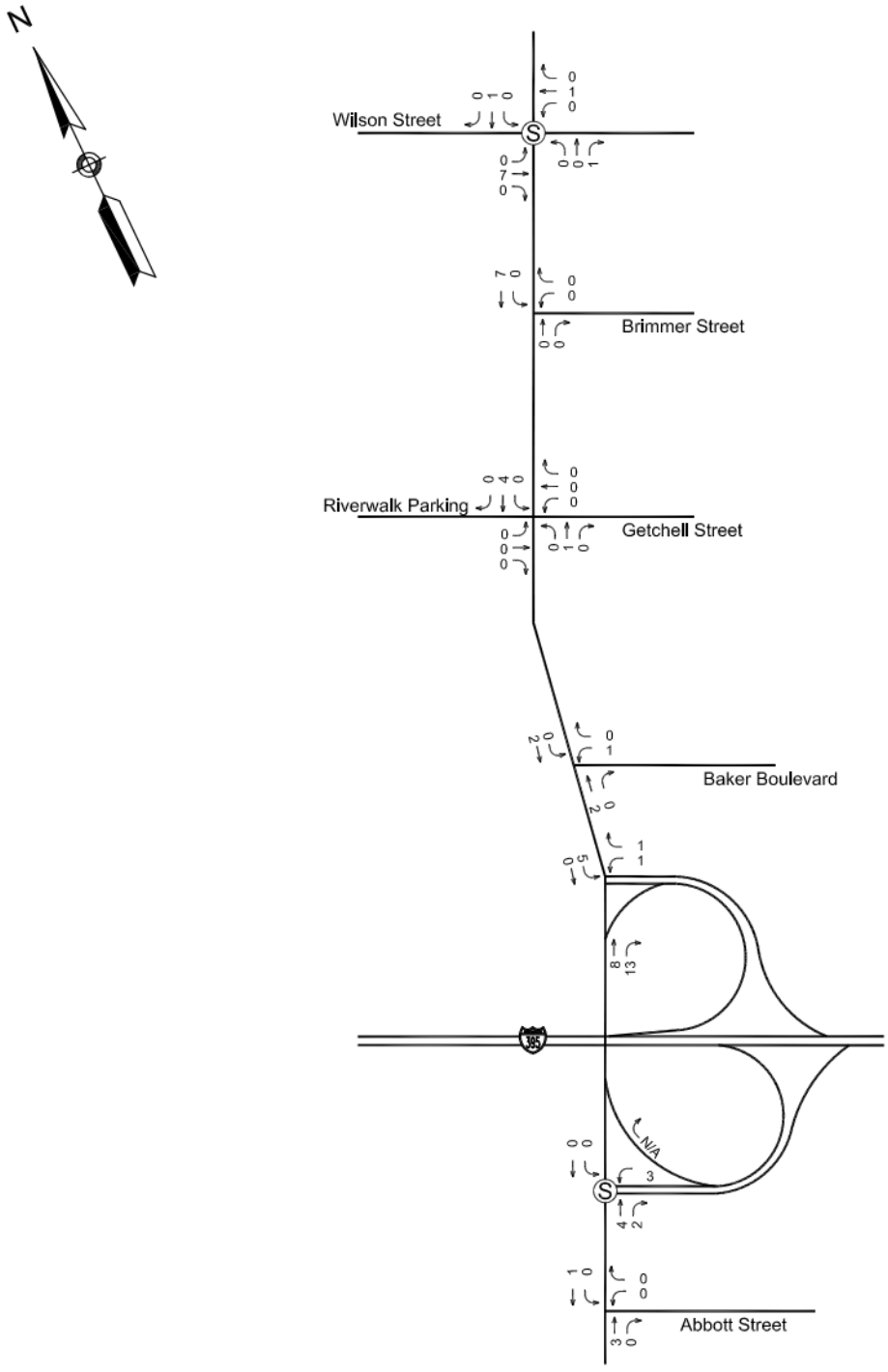


Figure 6 – Evening Peak Hour Truck Volumes at Study Area Intersections



VEHICULAR OPERATIONS

This section summarizes the existing vehicular conditions and operations for the Brewer South Main Street study area. Stantec has evaluated the existing conditions and operations of the morning and afternoon peak hour traffic associated with the study area. The Transportation Research Board's (TRB's) Highway Capacity Manual (HCM) was used as reference for the estimation of vehicular delays and queues at intersections. The transportation system within the study area was reviewed according to standard engineering practices to document and understand the flow of traffic related to vehicular (passenger vehicles, buses, and trucks) traffic in the study area.

Existing Traffic Operating Conditions

Measuring existing traffic volumes alongside the existing geometries and classification of traffic provides calculated traffic flow within a study area. To assess quality of existing traffic flow for vehicles, capacity analyses were conducted for the project intersections under existing traffic volume, traffic control, and intersection geometry. The capacity analyses provide a standardized indication of the ability of the intersections to accommodate traffic demands placed upon them.

Existing Operating Conditions of Signalized Intersections

On May 24, 2024, Stantec and the City of Brewer entered traffic signal controller cabinets at intersections within the Brewer South Main Street Corridor study area to inventory existing conditions of the signal hardware and software, including comparisons of recorded design or as-built engineering plans with controller timing programming.

The signalized intersections of North and South Main Street at Wilson Street and South Main Street at I-395 Exit 4 Eastbound Ramps were reviewed for their current signal phasing and timings in addition to any time-of-day plans for use in operations and capacity analysis for the South Main Street Corridor Study. This information was used in establishing the existing conditions of these intersections while serving as the foundation for assessing impacts of potential recommendations. Overall, the intersections' signal equipment is in acceptable to good working order and replacement or upgrades to the equipment will not be included in assessment of future conditions or recommendations unless linked to other safety-based improvements to the intersections requiring modifications to the existing signal systems. The City's recent efforts for "low-hanging fruit" improvements to its intersections (North Main Street at State Street visibility and turn prohibitions) are successful applications of safety-based improvements to existing signalized systems.

Level of Service Criteria

Level of Service (LOS), an expression of traffic flow, is a commonly used and accepted measure of effectiveness of peak-hour traffic operating conditions. It considers such factors as automobile and truck volumes, roadway width, speed, grades, parking restrictions, pedestrian activity, and traffic control devices.

LOS is designated in a range from Level “A”, which is where a roadway’s operating conditions are at their least delayed and congested, to Level “F”, which indicates excessive delays and typically jamming level of congestion. Levels “A” through “D” are typically associated with acceptable levels of peak-hour traffic operation within urban areas. At Level “E”, the ratio of the approach volume to capacity, or v/c ratio, of an intersection is between 90 and 100 percent of its theoretical capacity. When approach volumes reach or exceed the v/c ratio of 1.00, or 100 percent, this approach is designated as LOS “F”, regardless of the delays reported.

All capacity analysis for this study was performed in accordance with the methodologies set forth in the Highway Capacity Manual.1 As defined in the Highway Capacity Manual, LOS for unsignalized intersections is defined in terms of the average control delay in seconds per vehicle approaching the intersection for the peak 15-minute analysis period of a peak hour. The thresholds are different for unsignalized intersections than signalized intersections. The delay criteria and their associated LOS rankings for unsignalized intersections are given in Table 1 and signalized intersections are given in Table 2.

The Synchro traffic analysis software package (Version 11) was employed to evaluate operating conditions at Study area signalized intersections for existing traffic analyses. The analysis methodology is based on HCM to conduct the analyses and is widely accepted for use by MaineDOT.

Table 1 – Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (s/veh)
A	[10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	> 50.0
Source: Highway Capacity Manual 2010, TRB	

[1] *Highway Capacity Manual*, Transportation Research Board, 2010

Table 2 – Level of Service Criteria for Signalized Intersections

Level of Service	Average Control Delay (s/veh)
A	[10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	> 80.0
Source: Highway Capacity Manual 2010, TRB	

Existing Weekday Traffic Operating Conditions

The existing (2024) morning and afternoon peak hour traffic volumes, shown in **Figure 3** and **Figure 5**, were used in the capacity analyses conducted on the study area intersections where traffic data was available. The peak hour truck volumes (**Figure 4** and **Figure 6**) were used as percentages of heavy vehicles per approach. Pedestrian and bicycle volumes (**Figure 8**,and **Figure 9**), approach grades, and general roadway geometries were included in the capacity analysis. The results of this analysis are summarized in **Table 3**.

All studied intersections within the Brewer South Main Street Corridor Study area operate acceptably at LOS C or better during the morning peak hour period. Some left-turn lanes throughout the study area's intersections operate at LOS D and LOS E due to their projected average vehicular delays but see v/c ratios with some available capacity and relatively low 95th percentile queues (when compared to their available storage). The South Main Street northbound left-turn lane onto Wilson Street towards the Chamberlain Bridge operates at LOS E, with average vehicle delays estimated at 56.5 seconds and 95th percentile queue of 276 feet (approximately eleven vehicles). The Baker Boulevard stop-controlled approach operates at LOS D with average vehicle delays estimated at 30.1 seconds and 95th percentile queue of 30 feet. The stop-controlled I-395 Westbound Off-Ramp operates at LOS E with average vehicle delays of 36.9 seconds and 95th percentile queue of 65 feet.

During the afternoon peak hour period, all studied intersections within the South Main Street Corridor Study area operate acceptably at LOS C or better, expect for the signalized intersection of North / South Main Street at Wilson Street which operates at LOS D, with an average vehicular delay of 37.9 seconds. For operations of lanes of this intersection, the worst performing lane is the Wilson Street eastbound left-turn lane operates at LOS F, with an average vehicular delay of 93.6 seconds, v/c ratio of 0.98, and 95th percentile queue of 313 feet, exceeding the existing storage by approximately 100 feet. These excess impacts the operations of the other lanes approaching this intersection from the Chamberlain Bridge.

The next worse performing lanes of this intersection during the afternoon peak hour period are the Wilson Street left-turn lane, Wilson Street westbound through-right lane, North Main Street southbound left-turn lane, and Main Street southbound through lane, which all operate at LOS D.

At the intersection of South Main Street and I-395 Westbound Ramps, the stop-controlled approach of the I-395 Westbound Off-Ramp operates at LOS F with an average vehicle delay of 91.7 seconds and 95th percentile queue of 113 feet, or just under five passenger vehicles in length.

Synchro outputs for the traffic analysis is profiled in **Appendix B**.

Table 3 – Existing Weekday Peak Hour Intersection Level of Service

Approach	Direction/ Turning Movement	AM Peak				PM Peak			
		Delay[1]	LOS[2]	v/c[3]	Queue[4] 95th %	Delay[1]	LOS[2]	v/c[3]	Queue[4] 95th %
North Main Street / South Main Street @ Wilson Street (Signalized)									
Wilson St	EB L	36.6	D	0.35	84	93.6	F	0.98	313
Wilson St	EB T	25.2	C	0.51	231	29.7	C	0.61	266
Wilson St	EB R	11.8	B	0.09	31	16.0	B	0.35	125
Wilson St	WB L	40.5	D	0.41	64	42.0	D	0.55	120
Wilson St	WB T/R	29.5	C	0.60	219	36.9	D	0.77	294
S. Main St	NB L	56.5	E	0.83	276	63.9	E	0.85	278
S. Main St	NB T/R	27.4	C	0.71	452	31.9	C	0.72	435
N. Main St	SB L	40.6	D	0.40	67	41.4	D	0.34	73
N. Main St	SB T	27.6	C	0.59	265	36.3	D	0.75	367
N. Main St	SB R	13.6	B	0.11	36	14.5	B	0.08	35
OVERALL		**28.9**	**C**			**37.9**	**D**		
South Main Street @ Brimmer Street (Stop-Controlled)									
Brimmer St	WB L/R	23.8	C	0.08	8	20.0	C	0.08	8
S. Main St	SB L	9.6	A	0.01	0	8.9	A	0.02	3
OVERALL		**0.3**	**A**			**0.4**	**A**		
South Main Street @ Getchell Street (Stop-Controlled)									
S. Main St	SB L	8.6	A	0.01	0	8.6	A	0.01	0
Getchell St	WB L/R	15.0	C	0.03	3	15.0	C	0.03	3
OVERALL		**0.2**	**A**			**0.2**	**A**		
South Main Street @ Baker Boulevard (Stop-Controlled)									
Baker Blvd	WB L/R	30.1	D	0.30	30	33.5	D	0.30	30
S. Main St	SB R	9.2	A	0.03	3	9.0	A	0.02	3
OVERALL		**1.7**	**A**			**1.3**	**A**		
South Main Street @ Interstate 395 Exit 4 Westbound Ramps (Stop-Controlled)									
I-395 Exit 4 WB	WB L/R	36.9	E	0.51	65	91.7	F	0.77	113
S. Main St	SB L	9.9	A	0.22	20	9.6	A	0.22	23
OVERALL		**3.7**	**A**			**6.5**	**A**		
South Main Street @ Interstate 395 Exit 4 Eastbound Ramps (Signalized)									
I-395 Exit 4 EB	WB L	18.9	B	0.44	177	22.5	C	0.70	418
I-395 Exit 4 EB	WB R	16.6	B	0.12	49	15.2	B	0.19	57
S. Main St	NB T T/R	13.2	B	0.57	267	23.1	C	0.58	241
S. Main St	SB L	28.3	C	0.15	29	35.4	D	0.29	63
S. Main St	SB T	6.3	A	0.22	90	16.6	B	0.60	313
OVERALL		**13.6**	**B**			**20.4**	**C**		
South Main Street @ Abbott Street (Stop-controlled)									
Abbott St	WB L/R	16.4	C	0.13	10	14.1	B	0.14	13
S. Main St	SB L	10.3	B	0.04	3	10.2	B	0.06	5
OVERALL		**0.7**	**A**			**0.6**	**A**		

1. Delay in seconds per vehicle 2. Level of Service according to HCM 3. Volume to Capacity Ratio
4. Queue in feet per lane: 95th percentile (25 feet per vehicle)

BICYCLE INFRASTRUCTURE

One of Downtown Brewer's highlights in transportation infrastructure is the Brewer Riverwalk, a multiuse path along the Penobscot River, beginning at the intersection of Betton Street and Penobscot Street to the north and Burr Street and South Main Street at its southern terminus, approximately 0.60 miles long. The East Coast Greenway, a 3,000-mile continuous multi-use route for biking, walking, and other activities between Florida and Maine, passes through Brewer The official route of the East Coast Greenway enters Brewer from the south on Maple Street and is follows South Main Street for approximately 485 feet between Maple Street and Burr Street, where it crosses the road and follows the Brewer Riverwalk. There is also an on-road segment of the East Coast Greenway going through the intersection of Wilson Street and North/South Main Street (see **Figure 7**). Despite these designated on-road sections, there are no on-street bicycle facilities provided. The City has shown tremendous interest to expand their bicycle infrastructure off of the success of the Brewer Riverwalk trail and encourage multi-use transportation from the Downtown area to past the I-395 intersection.

As part of the Maine Rail Trail Plan 2020-2030 by Maine Trails Coalition and discussions with City staff, the intent for the City is to extend off-road multi-use pathways from the existing Brewer Riverwalk to points south and east along the Calais Branch of the railroad corridor, either through rail-to-trail conversion or rail-with-trail conversions, depending on available right-of-way and future agreements.

Figure 8 and **Figure 9** represent the peak hour bicycle volumes along the roadways within the Brewer South Main Street study area for the morning and afternoon periods, respectively.

Figure 10 shows a heatmap from Strava, a fitness-based geospatial service for tracking exercises and commutes related to running, biking, and other physical modes of travel. The "Global Heatmap" provided by Strava aggregates public activities from the past calendar year. The heatmap shows the priority roadways and pathways used by cyclists in Brewer and neighboring towns for bicycle modes of travel. The heatmap shows that the many cyclists using Strava are on the East Coast Greenway, including Maple Street and the Brewer Riverwalk. However, many cyclist are also using South Main Street and Wilson Street despite the lack of bicycle infrastructure. The map also highlights the importance of other minor streets for cyclists, including Hardy Street, Spring Street, Fling Street, and others.

Figure 7 – East Coast Greenway Map – Brewer South Main Street Corridor Study Area

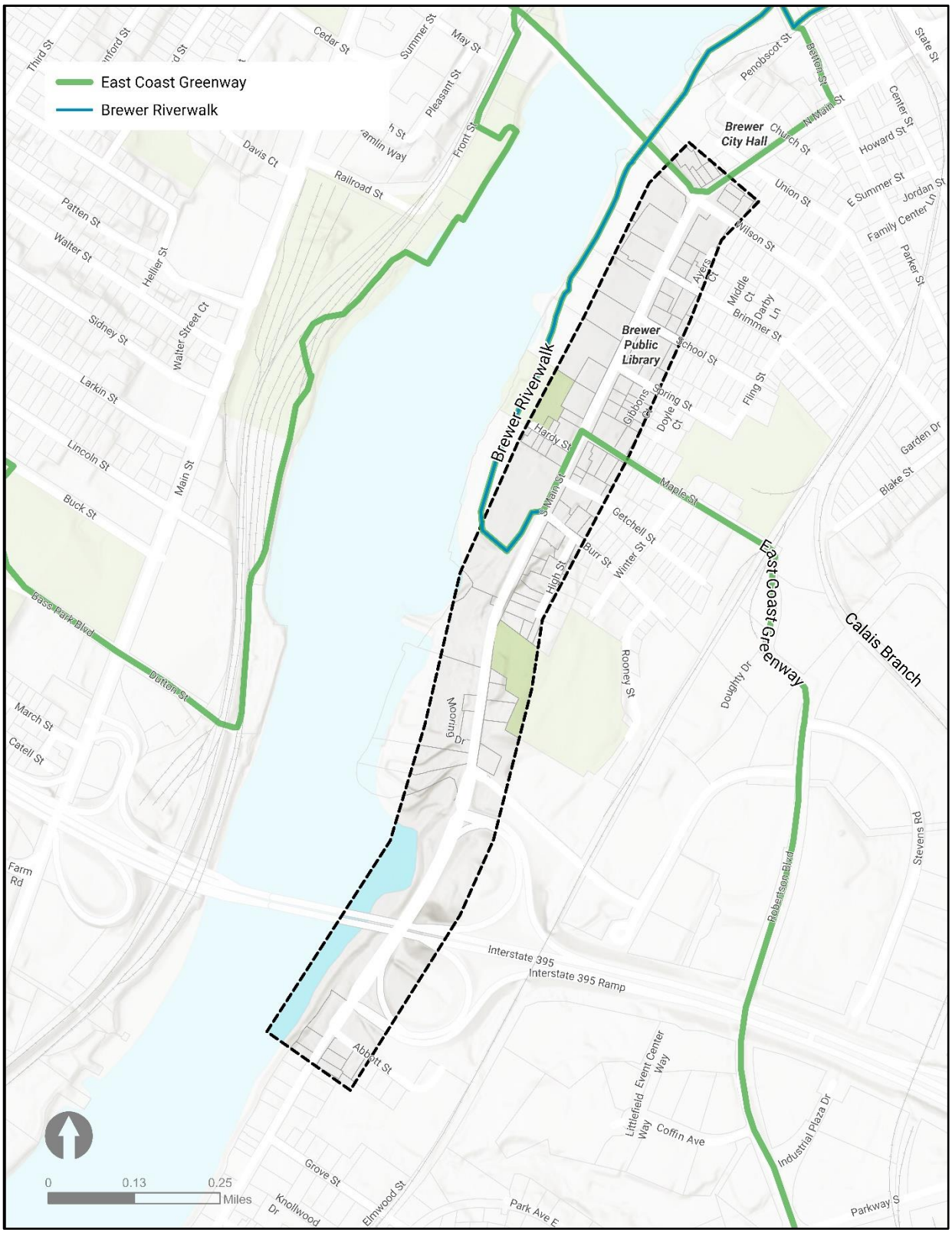


Figure 8 – Morning Peak Hour Bicycle Volumes at Study Area Intersections

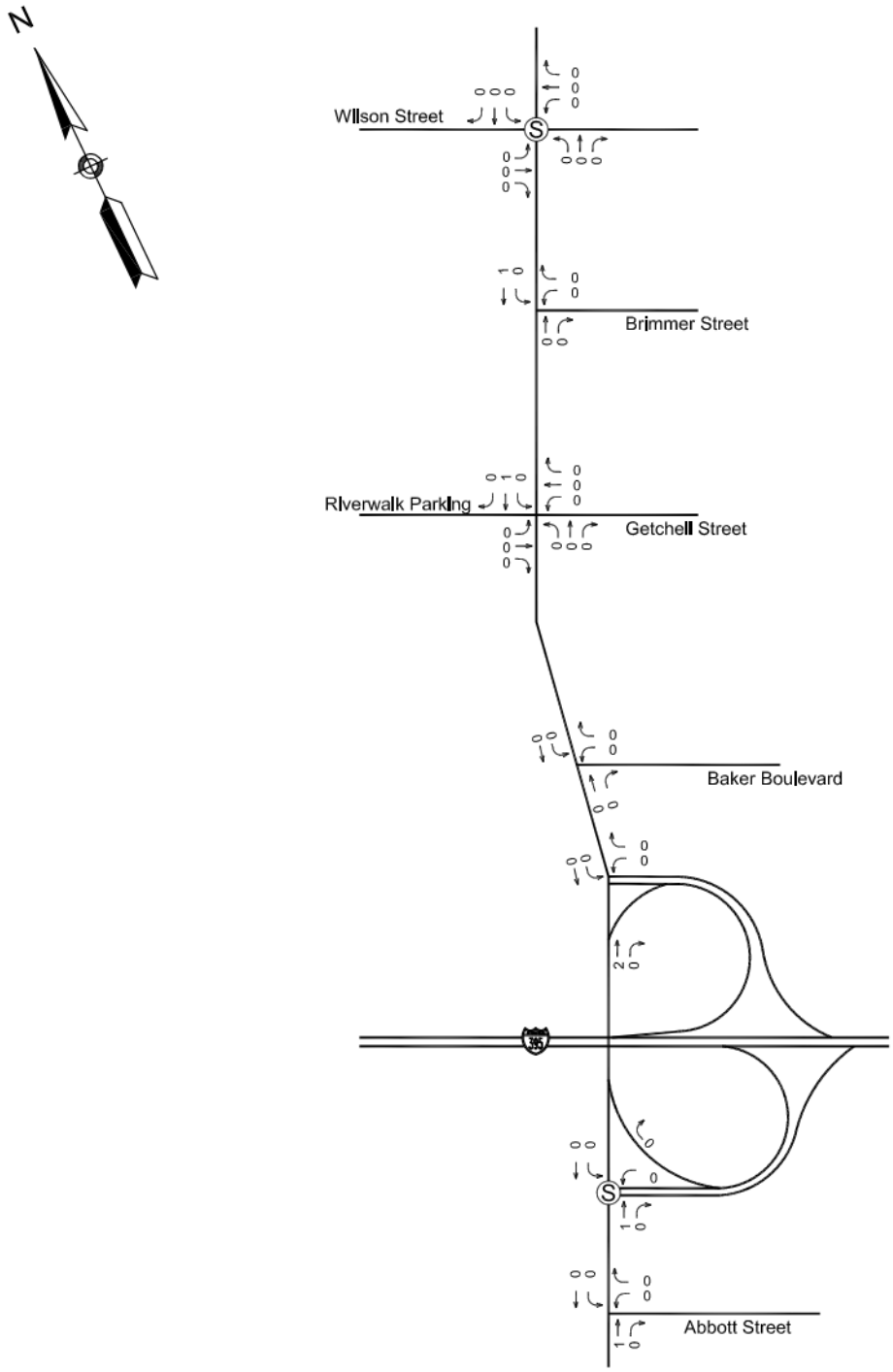


Figure 9 – Evening Peak Hour Bicycle Volumes at Study Area Intersections

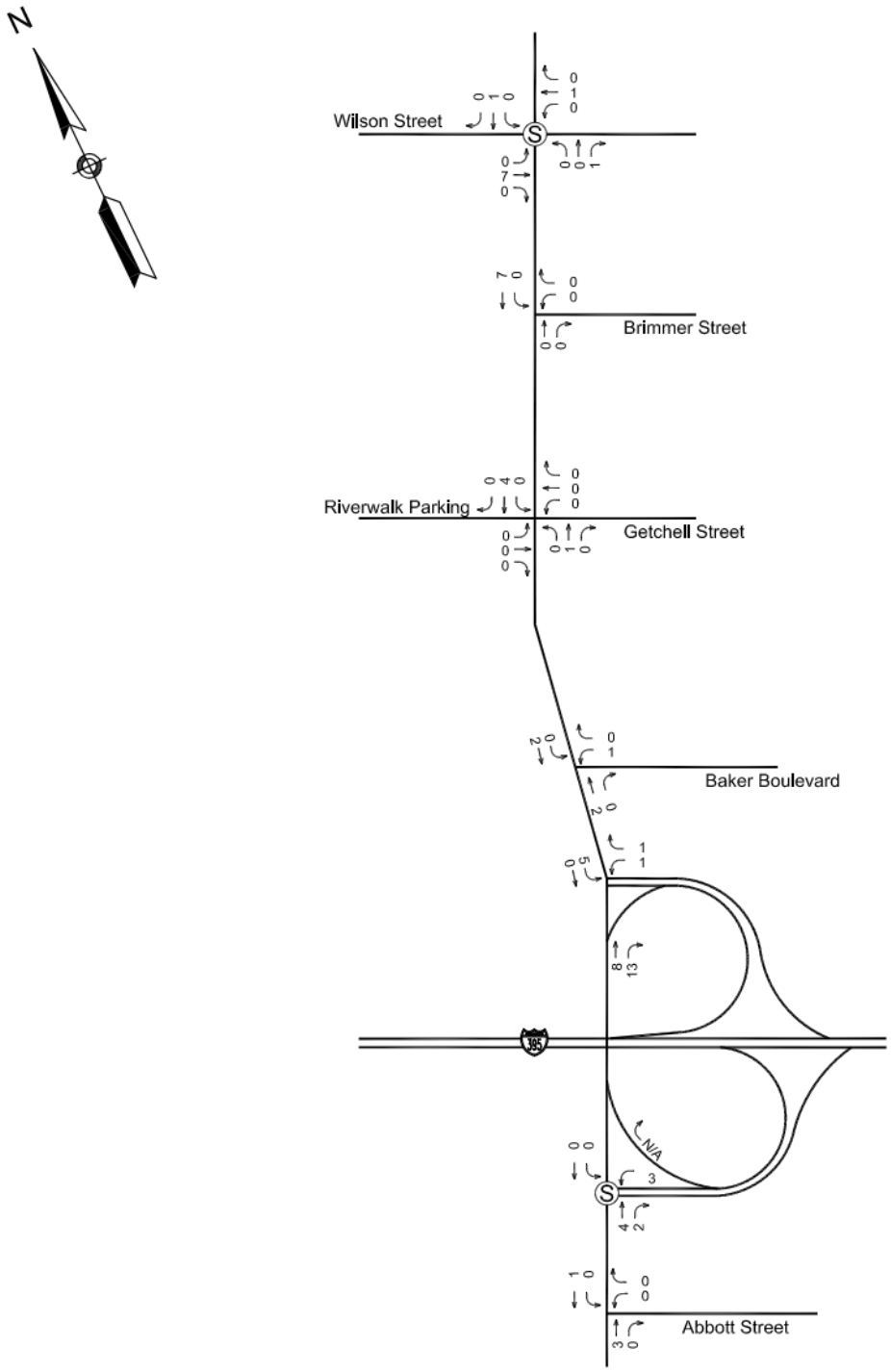


Figure 10 – Strava Heatmap of Local Bicycle Activity

PEDESTRIAN INFRASTRUCTURE AND OPERATIONS

To gain a holistic understanding of the infrastructure in the study area affecting pedestrians, a desktop asset analysis was completed, identifying sidewalk gaps, crosswalks, curb cuts, on-street parking, and wayfinding signage. **Figure 11** shows this analysis, divided into three sections. There is no sidewalk on the western side of South Main Street from Burr Street south to beyond the I-395 intersection. There are also many large curb cuts, on South Main Street, particularly between Wilson Street and Getchell Street, which makes the environment less safe for pedestrians.

The presence of sidewalks does not mean conformance to the most current PROWAG for accessibility, MUTCD for signing, and access management of driveways along the major roadways, as there are many areas where some of the guidelines identified are not met:

- Four feet of continuous clear width of a pedestrian access route
    - Some sidewalks are noted to have less than four feet available for navigating utility poles, signs, and other impedances to pedestrians.
- Grades of sidewalks and curb ramps
- Detectable warning surfaces at pedestrian crossings of the roadway

- Minimum seven-foot clearance to the bottom of signs along pedestrian access routes / sidewalks and crosswalks
- Excessive access driveway openings onto the roadways with no curbing or delineation of roadway and sidewalk.

Due to recent safety-based work in Brewer, it is notable that steps were made by the City to improve pedestrian crossings of South Main Street with the addition of a rectangular rapid flashing beacon (RRFB) to provide visibility to the crossing between Hardy Street and Maple Street.

Figure 12 and **Figure 13** represent the peak hour pedestrian crossing volumes along the roadways within the Brewer South Main Street Corridor Study area for the morning and afternoon periods, respectively.

Figure 11 – Brewer South Main Street Corridor Asset Map

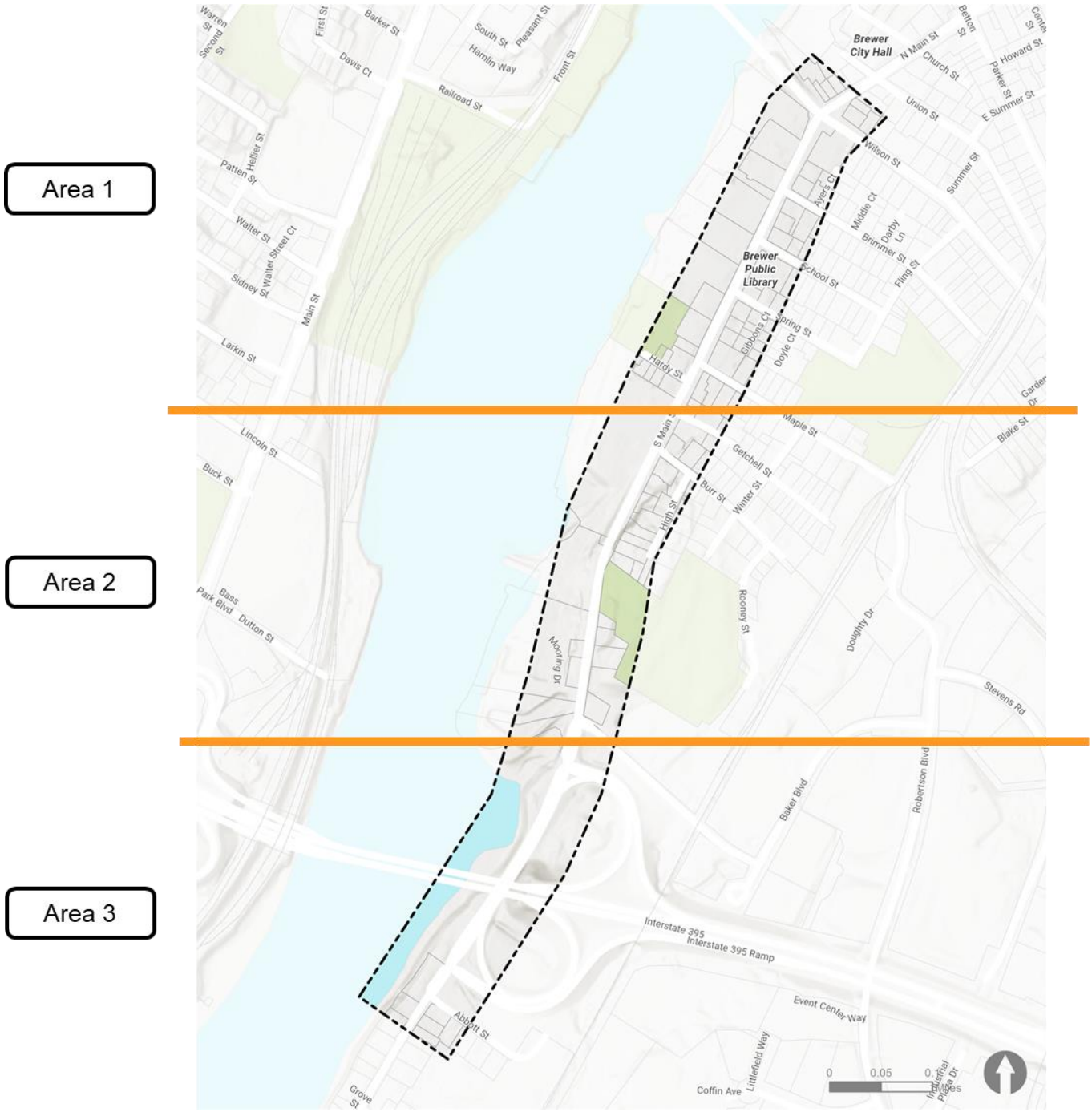


Figure 11 – Brewer South Main Street Corridor Asset Map – Area 1

Figure 11 – Brewer South Main Street Corridor Asset Map – Area 2

Figure 11 – Brewer South Main Street Corridor Asset Map – Area 3

Figure 12 – Morning Peak Hour Pedestrian Crossings at Study Area Intersections

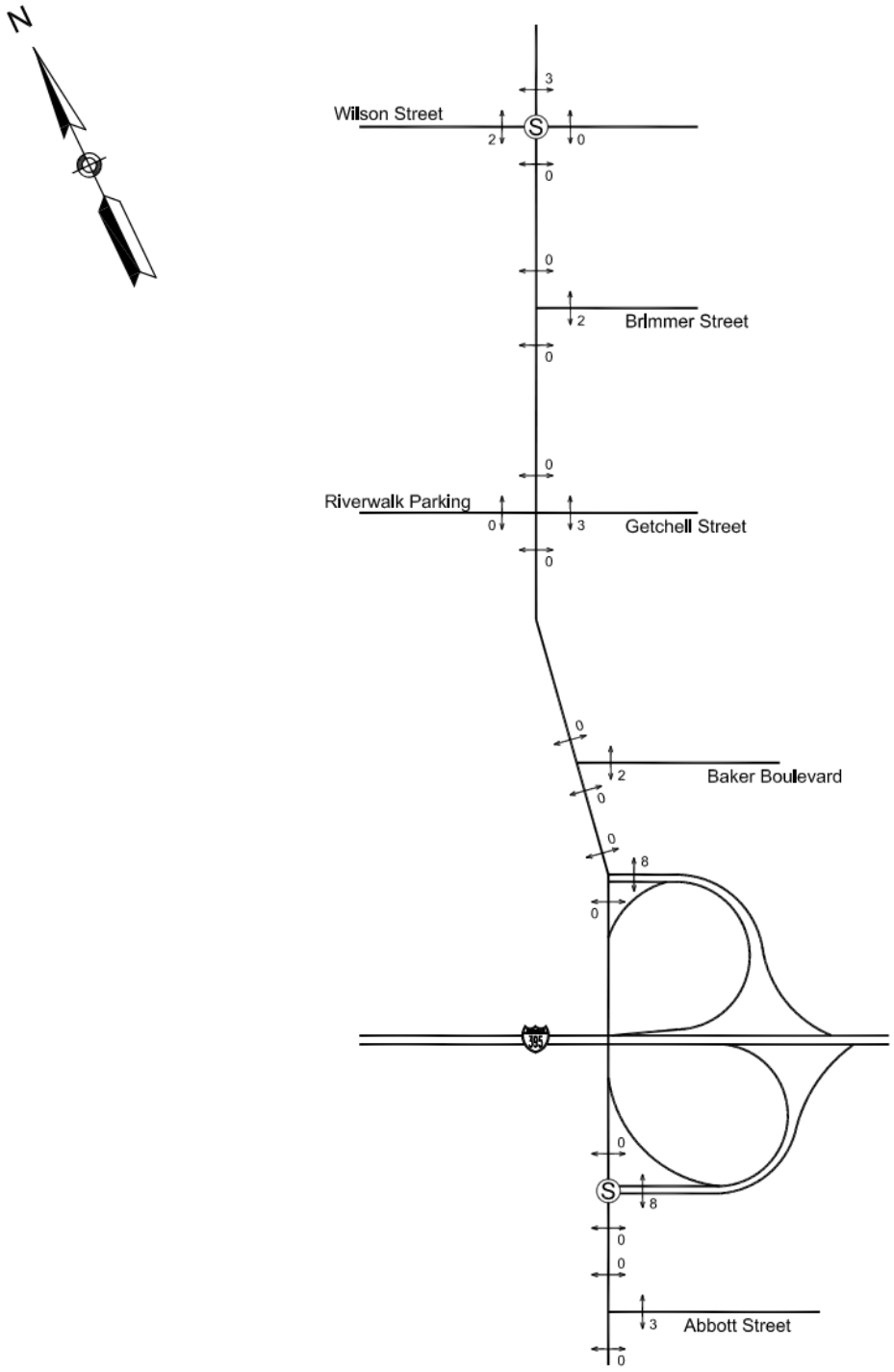
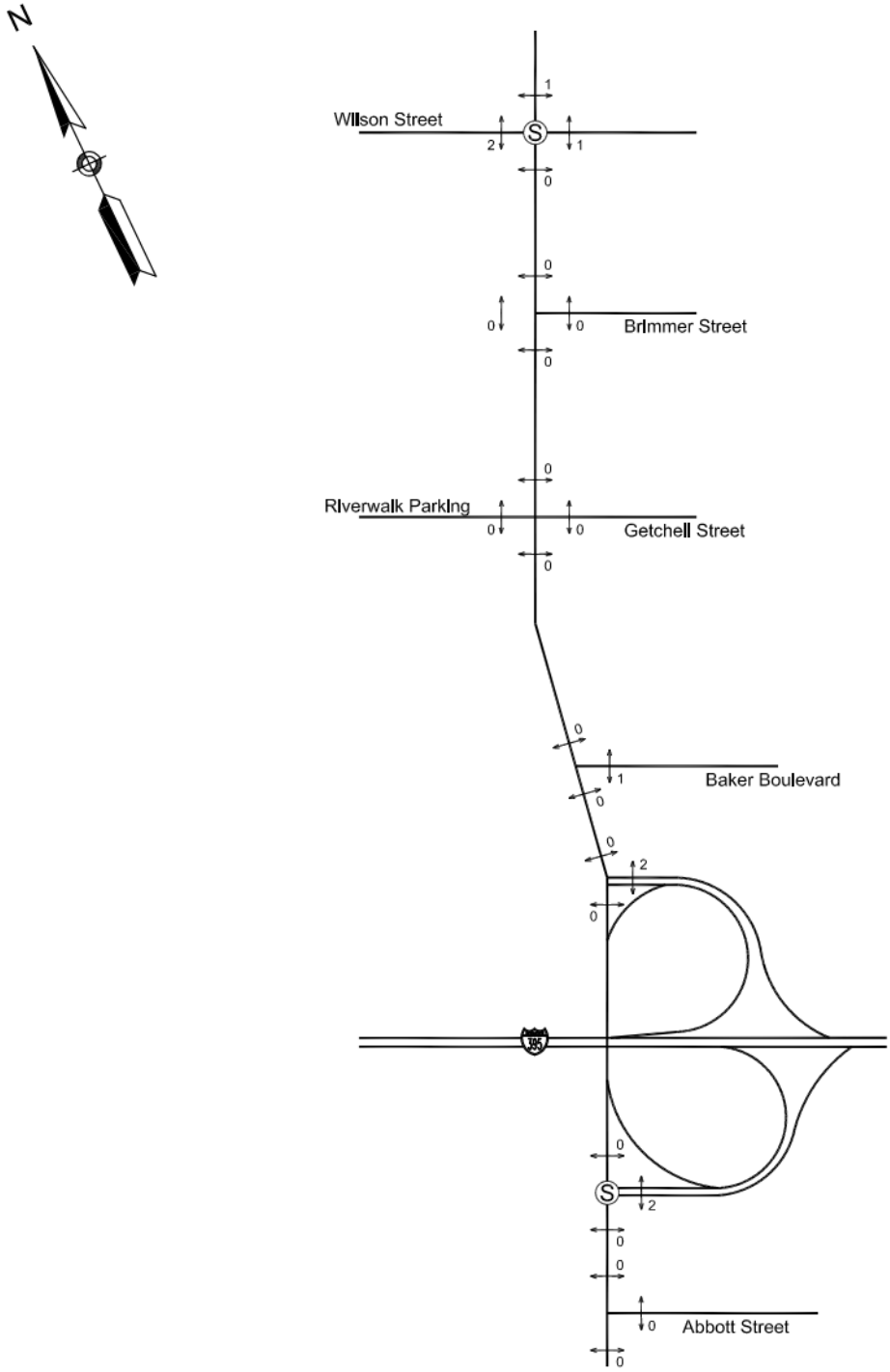


Figure 13 – Evening Peak Hour Pedestrian Crossings at Study Area Intersections



TRANSIT

The only public transportation in Brewer is the Community Connector Bus based in Bangor, which has two routes in Brewer: Brewer North and Brewer South. Brewer North is in the study area at the intersection of Wilson and North/South Main Street. Brewer South is in the study area along the length of South Main Street. In June 2024, the Community Connector transitioned from a flagging system to having fixed stops across its entire system. Both routes in Brewer have hourly service, and there are currently no bus shelters along this corridor. Ridership on both routes declined from 2019 to 2023 but is starting to increase again in 2024. Given the Covid 19 pandemic, this dip in ridership is expected and consistent with national trends. **Table 4** and **Table 5** show annual ridership since 2019 for each route. **Figure 14** shows a map of the Brewer North and Brewer South bus routes and bus stops.

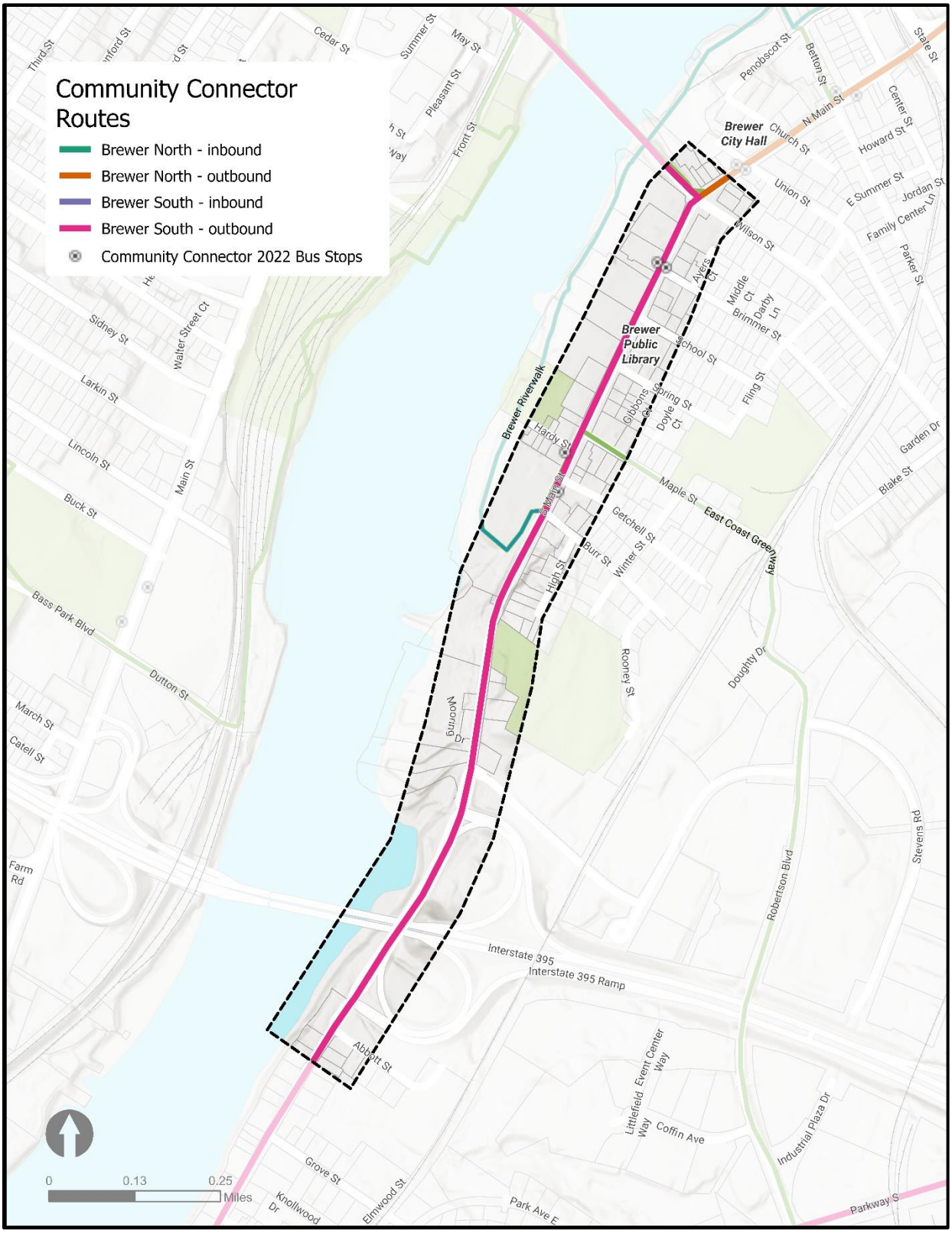
Table 4 – Annual Transit Ridership – Brewer North

Fiscal Year	Annual Ridership
2019	53,272
2020	48,652
2021	31,853
2022	30,936
2023	28,510
2024	40,506
Source: BACTS	

Table 5 – Annual Transit Ridership – Brewer South

Fiscal Year	Annual Ridership
2019	46,997
2020	40,822
2021	30,849
2022	30,909
2023	28,855
2024	37,269
Source: BACTS	

Figure 14 – Brewer South Main Street Corridor Routes and Stops



ROAD SAFETY ASSESSMENT

Included in the scope of the Brewer South Main Street Corridor Study is the analysis of safety for all modes of travel within the South Main Street corridor, which included the review of available crash data and conducting a road safety audit.

MaineDOT provides a public map, called the Maine Public Crash Query Tool, using Geographic Information Systems (GIS) to identify and make available crash data throughout the State of Maine for download and analysis, as well as identifying High Crash Locations (HCLs) as indicated through calculations of recent crash histories, average daily traffic, and comparison to similar intersection of roadway attributes.

CRASH HISTORY

The most recent complete five-year period, from 2019 through 2023 was reviewed using the MaineDOT's Public Crash Query Tool and GIS files downloaded. A heatmap of crashes in the Study Area since 2014 is show in **Figure 15**. An analysis of the crash data was performed for all reported crashes available through the Tool along the South Main Street corridor is summarized in **Table 6**.

Figure 15 – Brewer South Main Street Corridor Crash History Heatmap (2014-2024)

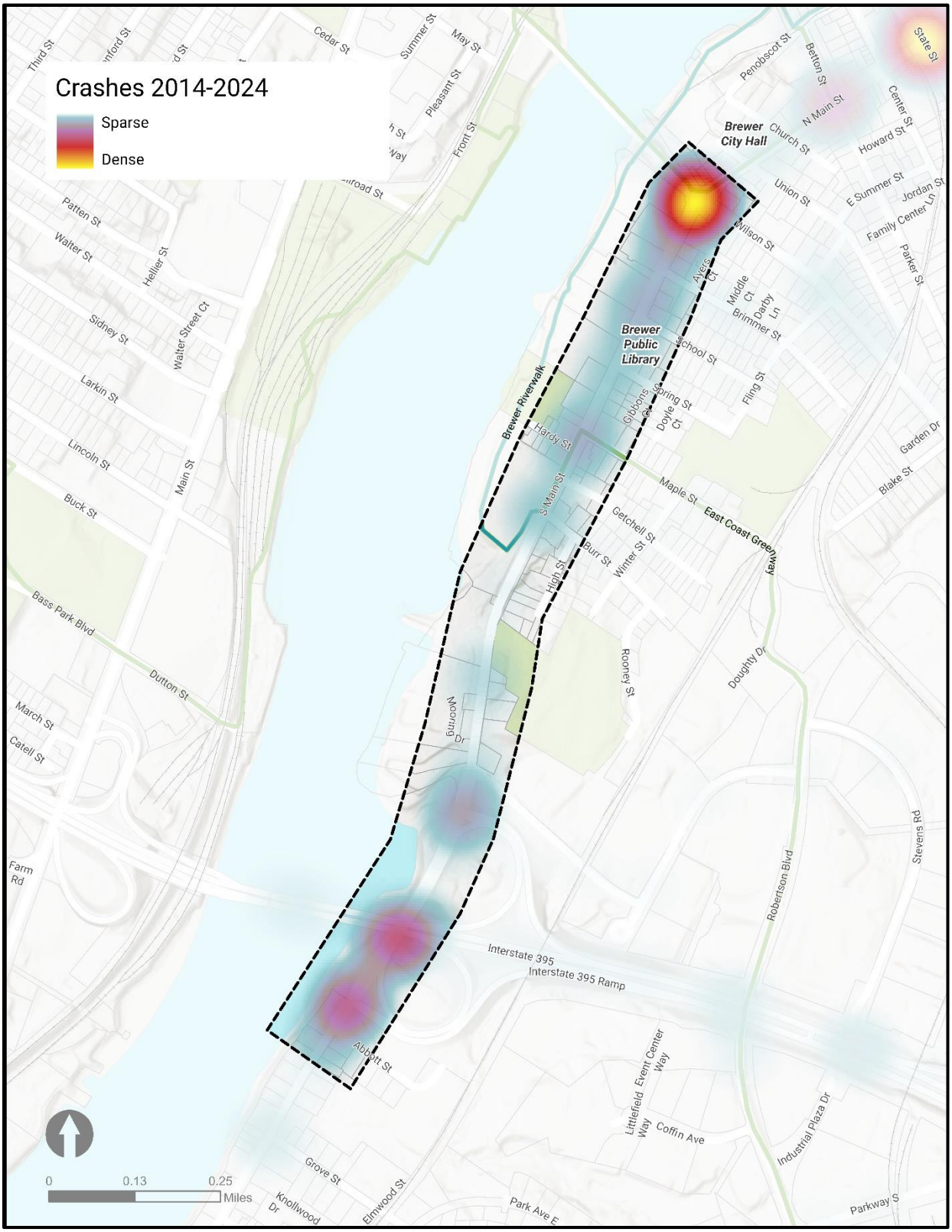


Table 6 – Crash Data & Analysis (2019 – 2023)

	South Main Street between Wilson Street and School Street	South Main Street between Maple Street and Burr Street	South Main Street between Baker Boulevard and Abbott Street	North Main Street / South Main Street at Wilson Street
2019	7	5	6	9
2020	3	1	2	10
2021	6	5	5	13
2022	8	3	6	11
2023	4	4	6	10
Total	***28***	***18***	***25***	***53***
Average crashes per year	*5.60*	*3.60*	*5.00*	*13.25*
Intersection Crash Rate (crashes per million entering vehicles)	*-*	*-*	*-*	*1.30*
Crash Severity				
Property Damage Only	21	11	21	42
Non-Fatal Injury	7	7	4	11
Fatal Injury	0	0	0	0
Total	***28***	***18***	***25***	***53***
Crash Type				
Intersection Movement	12	0	14	17
Rear-End / Sideswipe	9	15	9	34
Went Off Road	3	2	2	0
Pedestrian	1	1	0	0
Bicycle	1	0	0	1
Head-On	1	0	0	1
Other	1	0	0	0
Total	***28***	***18***	***25***	***53***

Table 6 – Crash Data & Analysis (2019 – 2023) – Continued

	South Main Street between Wilson Street and School Street	South Main Street between Maple Street and Burr Street	South Main Street between Baker Boulevard and Abbott Street	North Main Street / South Main Street at Wilson Street
Crash by Month				
January	1	1	3	3
February	1	1	1	3
March	2	1	2	3
April	3	1	3	6
May	2	3	0	4
June	3	1	0	3
July	3	0	3	3
August	5	1	1	6
September	1	0	2	8
October	1	2	3	5
November	1	2	2	5
December	5	5	5	4
Total	***28***	***18***	***25***	***53***
Crash by Time of Day				
12 AM – 2 AM	2	0	0	0
2 AM – 4 AM	0	0	0	0
4 AM – 6 AM	0	0	1	0
6 AM – 8 AM	0	1	3	2
8 AM – 10 AM	0	1	2	4
10 AM – 12 PM	1	5	1	5
12 PM – 2 PM	4	5	5	9
2 PM – 4 PM	9	0	5	6
4 PM – 6 PM	8	3	7	17
6 PM – 8 PM	3	3	0	8
8 PM – 10 PM	0	0	1	2
10 PM – 12 AM	1	0	0	0
Total	**28**	**18**	**25**	***53***

Table 6 – Crash Data & Analysis (2019 – 2023) Continued

	South Main Street between Wilson Street and School Street	South Main Street between Maple Street and Burr Street	South Main Street between Baker Boulevard and Abbott Street	North Main Street / South Main Street at Wilson Street
Crash by Day of Week				
Sunday	1	1	2	3
Monday	4	2	6	7
Tuesday	4	5	5	9
Wednesday	6	2	5	12
Thursday	7	2	4	9
Friday	3	3	2	7
Saturday	3	3	1	6
Total	***28***	***18***	***25***	***53***
Crash Road Surface				
Dry	24	9	20	38
Wet	4	7	3	12
Slush	0	1	0	0
Ice/Frost	0	1	0	0
Snow	0	0	2	3
Total	***28***	***18***	***25***	***53***
Crash Light Condition				
Daylight	23	15	19	41
Dark – Lighted	4	2	3	5
Dark – Not Lighted	1	0	2	1
Dusk	0	1	1	6
Dawn	0	0	0	0
Total	***28***	***18***	***25***	***53***

HIGH CRASH LOCATIONS

As referenced by the Androscoggin Transportation Resource Center, High Crash Locations (HCLs) are locations that have eight or more traffic crashes and a Critical Rate Factor (CRF) greater than 1.00 in a three-year period. A highway location with a CRF greater than 1.00 has a frequency of crashes that is greater than the statewide average for similar locations. A CRF is a statistical measure to determine the "expected crash rate" as compared to similar intersections in the State of Maine.

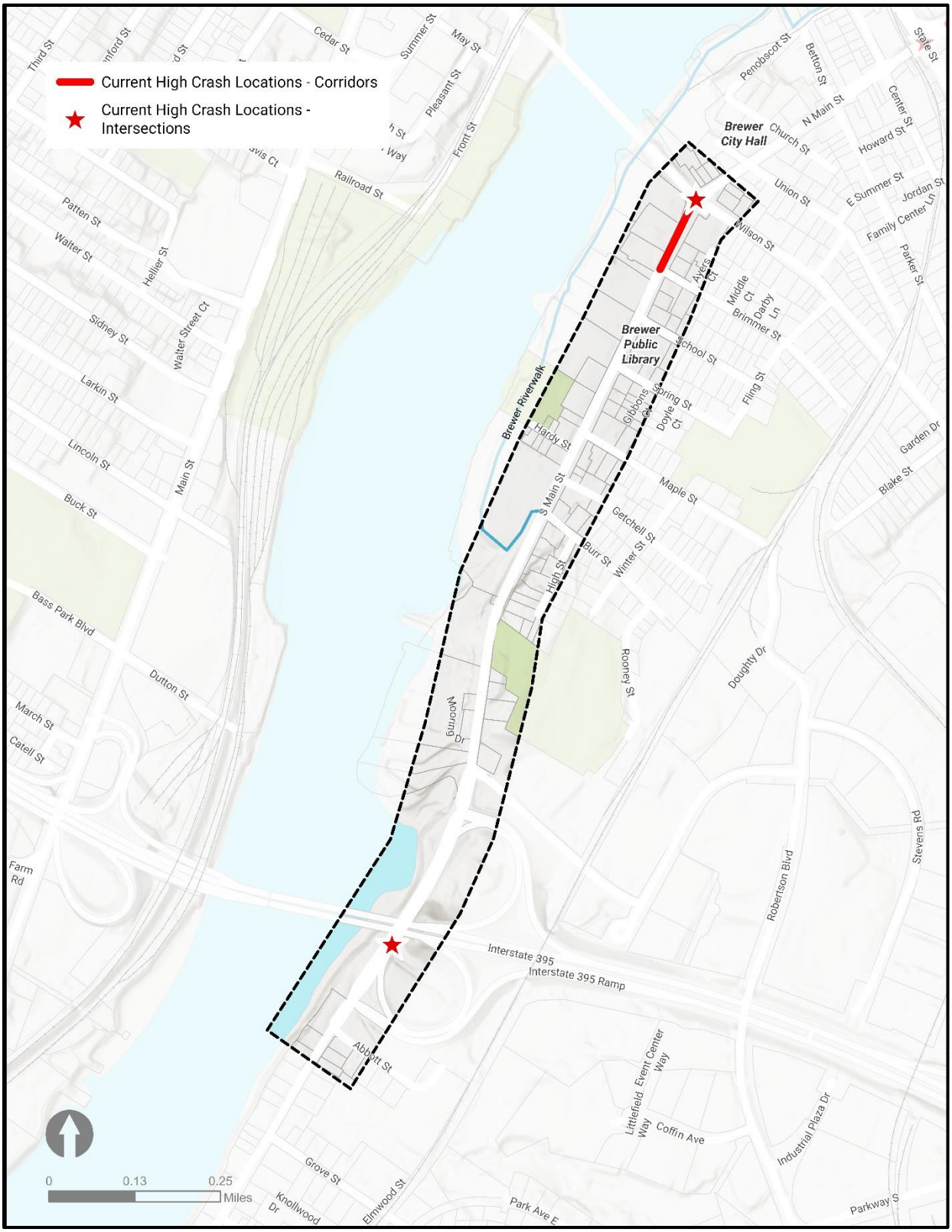
For the years of 2020 through 2023, the following locations were identified as HCLs in the Brewer South Main Street Corridor Study area:

- North Main Street / South Main Street at Wilson Street (Intersection)
- South Main Street, between Wilson Street and Brimmer Street (Segment)
- South Main Street at Interstate 395 Eastbound Off-Ramp Merge with South Main Street northbound (Intersection)

A map of high crash locations is snow in **Figure 16**.

MaineDOT provides crash diagrams for identified HCLs and these were collected from Maine's GIS website after the RSA, so they were not available during the RSA for discussion. The crash diagrams can be found in **Appendix C**.

Figure 16 – Brewer South Main Street Corridor High Crash Locations



ROAD SAFETY AUDIT (RSA)

The Road Safety Audit (RSA) was conducted on May 24, 2024 for both the Brewer VPI project and South Main Street Corridor Study, where representatives from MaineDOT, the City of Brewer, and Stantec met at the Joeseph L. Ferris Community Center at 318 Wilson Street. After the RSA team reviewed the Brewer VPI Study area intersections and roadways along North Main Street, the RSA team conducted a site visit to evaluate and observe the segment of South Main Street from the intersection with Wilson Street south to the intersection with Getchell Street and the I-395 Exit 4 Interchange and adjacent minor streets (Baker Boulevard and Abbott Street) prioritized for the audit. After visiting the locations, participants discussed their observations of the areas and identified positive elements of the existing infrastructure as well as safety concerns and deficiencies.

The following locations were visited during the RSA field audit and discussed later in the return to the Community Center:

- Site 1 – North Main Street / South Main Street at Wilson Street
- Site 2 – South Main Street, between Wilson Street and School Street
- Site 3 – South Main Street, between Maple Street and Burr Street
- Site 3 – South Main Street, between Baker Boulevard and Abbott Street

Site 1 – North Main Street / South Main Street at Wilson Street

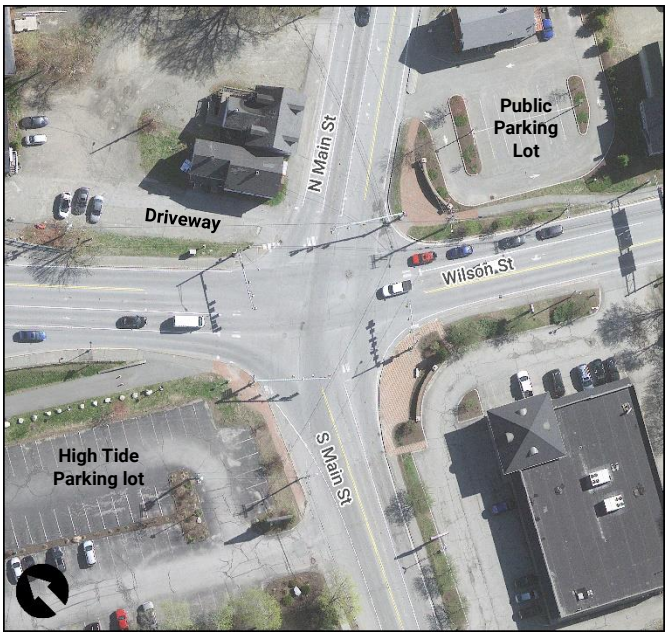


Figure 17 – North Main Street/South Main Street at Wilson Street Intersection.

Figure 18 – Uncontrolled driveway at northwest corner of the North Main Street at Wilson Street intersection.

The first HCL identified in the study area is the North / South Main Street at Wilson Street signalized intersection. The North Main Street and Wilson Street westbound approaches consist of a left turn lane, a through lane and a right turn lane. South Main Street and Wilson Street eastbound consist of one left turn lane and one shared through/right lane. A public parking lot is provided at the northeast corner of the intersection and the parking lot at the southwest corner of the intersection is for the High Tide Restaurant and Bar. This intersection is shown in **Figure 17.**

Sidewalks are present along both sides of along all four legs of the intersection, with signalized pedestrian crossings provided across all four controlled legs of the intersection. A direct pedestrian walkway is provided between the southwest corner of the intersection to the Brewer Riverwalk. There are no bike lanes provided for any approaches.

Based on crash data, most crashes occur in dry conditions during the day, with a peak between 4 PM and 6 PM. Ninety-six percent (96%) of all crashes are either rear end/side swipe or intersection movement crashes. There is a recorded bicycle crash at this location. Majority of the crashes occur mid-week in this location.

The City of Brewer has invested in wayfinding signs at the intersection, as well as beautification and brick pavers to define the pedestrian placemaking of the intersection. The City has also invested in improvements to the pavement surface, pavement markings, and pedestrian crossings along North Main Street between this intersection and the signalized intersection with Betton Street and Parker Street.

A driveway is located at the northeast corner of the intersection, with access located within the North Main Street approach to the signalized intersection. The driveway is uncontrolled, with no intersection control sign provided, nor inclusion into the signal system. Observed during the RSA visit and noted by local stakeholders, access into and out of the driveway is difficult for vehicles that require access to the businesses and residences which utilize this roadway (**Figure 18**). Providing a controlled access to the intersection was discussed by the RSA attendees and would require further engineering review for inclusion into the existing signalized intersection. Another alternative discussed was to provide improved access through other access points provided farther north on North Main Street or access points onto Union Street.

Although there is ample access for pedestrians in the area, lighting is lacking for safe crossings at night. The curb ramps at this site are causing drainage issues. The intersection is very wide which allows for options for possible reworking of intersection.

Site 2 – South Main Street between Wilson Street and School Street

Figure 19 –South Main Street from Wilson to Brimmer and School Street

This segment was a noted high crash segment by MaineDOT, containing two intersections with stop-controlled minor roadways (Brimmer Street and School Street) and several residential and commercial driveways. South Main Street is generally one travel lane for each direction, with South Main Street northbound adding a lane approaching the signalized intersection with Wilson Street just north of Brimmer Street. South of Brimmer Street, on-street parking is permitted in spaces marked along both east and west sides of the street. The posted speed limit through this segment is a continuance of Downtown Brewer's 25 miles per hour.

Based on this segment's crash data, most crashes occur in dry conditions during the day, with a peak between 2 PM and 6 PM. Seventy-five percent (75%) of all crashes are either rear end/side swipe or intersection movement type. There's a recorded bicycle crash and pedestrian crash in this location and the majority of the crashes occur mid-week.

There are two midblock crossing in this segment: one just north of the Brimmer Street intersection leading to the First United Methodist Church and 55 South Main Street and one between the Brewer Public Library and Dead River Company (between the intersections of School Street and Spring Street with South Main Street). Brimmer Street and School Street both connect east of South Main Street via Fling Street as an alternative travel way to Wilson Street (US Route 1A).

The crosswalks are not compliant with current ADA/PROWAG standards for ramp treatments on sidewalks, with one ramp missing at the School Street crossing due to concurrent MaineDOT construction. Wide roadways increase the crossing distances required by pedestrians across South Main Street. Sightlines for both pedestrians and vehicles can be difficult due to encroachments by utility poles and parked vehicles along the east curbline of the roadway.

At the Brimmer Street intersection, the offset of the access driveway to the now closed Tozier Market increases the number of potential conflicts with turning vehicles in a relatively short segment of South Main Street, as shown in **Figure 20**. Aside from the parallel Brewer Riverwalk along the Penobscot River, there are no bicycle-specific facilities provided.

Drainage issues were seen along the roadway segment after a storm prior to the RSA site visit. The City noted that this area is difficult for stormwater management due to flat grading along the roadway segment. Another observation during the RSA site visit was the limited lighting available along the segment, as luminaires are present on utility poles for roadway illumination, but no pedestrian-scale lighting is provided.

Figure 20 – View from Brimmer Street looking at the then open Tozier Market access driveway.

Figure 21 – View from Hardy Street looking north at active transit alighting alongside active vehicle traffic.

Site 3 – South Main Street between Maple Street and Burr Street / Brewer Riverwalk Southern Terminus

Figure 22 – South Main Street from School Street to Burr Street and Brewer Riverwalk Terminus.

This segment envelopes four intersections with stop-controlled minor roadways (Maple Street, Hardy Street, Getchell Street, and Burr Street) and several residential and commercial driveways. There is single travel lane for both directions of South Main Street, with eight to ten-foot paved shoulders on both sides. On-street parking appears legal along the segment. The posted speed limit through this segment is 25 miles per hour.

Based on crash data, most crashes occur during the day, with a peak between 10 AM and 2 PM. Eighty three percent (83%) of all crashes are either rear-end/sideswipe type crashes. There is a recorded pedestrian crash in this location in the data reviewed. There is a notable high of twenty-eight percent (28%) of crashes occurring on Tuesdays. The majority of crashes occur in October, November, and December (the peak).

There is a public park and parking lot on the eastern side of South Main Street, accessible via Maple Street and adjacent to South Main Street. A mid-block pedestrian crossing is provided between the Maple Street and Hardy Street intersections. There is a raised bump-out of the sidewalk into the roadway to shorten the crossing and rectangular rapid-flashing beacons (RRFBs) are there to enhance the visibility of the crossing to approaching vehicles (**Figure 23**). This crossing is a frequently used connection between the Brewer Riverwalk and public parking. City staff noted improvements are underway for the south side of Hardy Street, including demolition of existing housing (as shown in **Figure 23**) and the construction of improved parking and sidewalk.

Figure 23 – RRFB and bump outs at crossing at Hardy Street and South Main Street.

The southern terminus of the Brewer Riverwalk is located on the west side of South Main Street at the intersection with Burr Street. The parcel with which this southern segment of the Brewer Riverwalk Trail goes around a large, abandoned parcel (151 South Main Street / Parcel 28-174) which acts as an unofficial parking area for users of the Brewer Riverwalk Trail.

Due to a storm prior to the RSA audit, drainage issues were noted, with City staff explaining grades of South Main Street are relatively flat and stormwater management difficult, especially for pedestrian curb ramps. Any potential geometric changes to paved areas, curbing, and ramps through this segment would require significant review of stormwater management.

Site 4 – South Main Street between Baker Boulevard and Abbott Street

This segment of South Main Street sees a sudden change of adjacent uses and acts as a gateway to Brewer, as Interstate 395, the most traveled east-west roadway and crossing of the Penobscot River, has an interchange (Exit 4) with South Main Street.

South Main Street has two general travel lanes, one northbound and one southbound with two-foot paved shoulders with vertical curb provided for both travel lanes. A raised median with sloped curb and paved surface is provided along this segment of South Main Street. Conditions of the existing pavement, pavement markings, and signing is variable through the segment. Lane use signs are provided overhead at intersections or in advance of intersections, but no ground mounted lane use signs are provided and pavement markings of turn lanes are limited or non-existent. The posted speed through the segment is 35 miles per hour.

At the intersection with Baker Boulevard, two travel lanes are provided for the northbound approach that are not well marked or signed but operate as a through lane and through-right lane. During the RSA, the audit team noted vehicles appeared confused over the rightmost lane's use. This issue not only impacts the northbound lanes' merge condition just north of the intersection, but also for traffic from Baker Boulevard making decisions on entering available gaps onto South Main Street. South Main Street's single southbound lane begins to widen in advance of Baker Boulevard; however no lane use signs or pavement markings are provided to identify if the lane is added prior to the intersection or is a lane specific to the additional lane for the I-395 Exit 4 Westbound intersections.

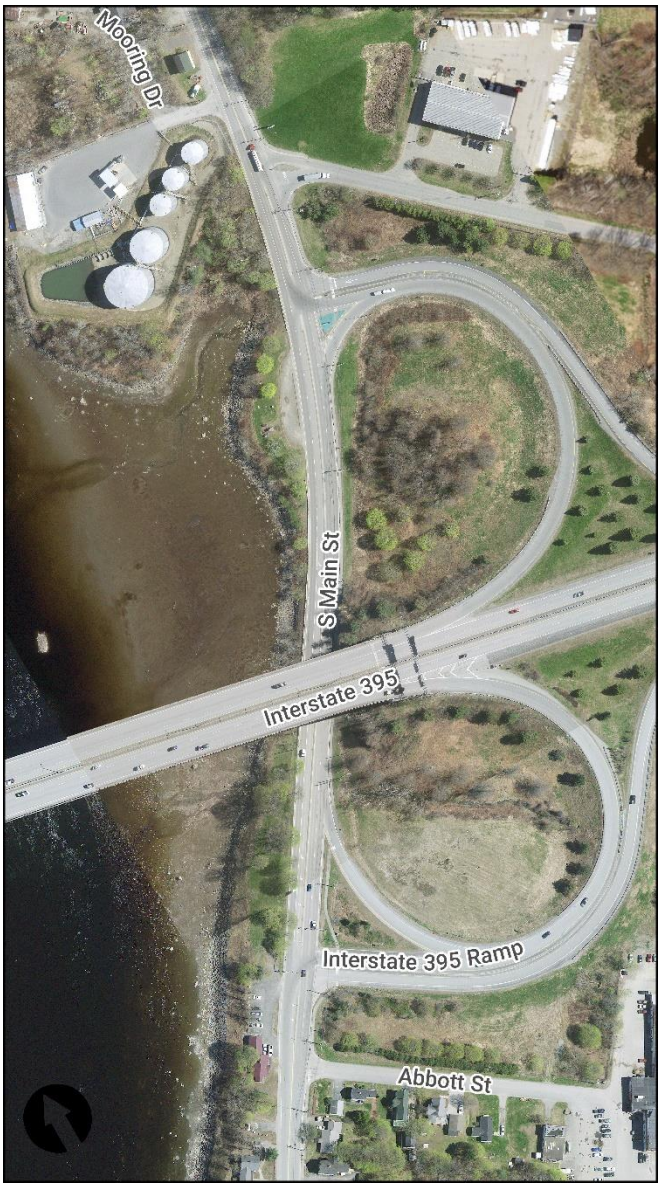


Figure 24 – South Main Street, between Baker Boulevard and Abbott Street including the I-395 Exit 4 Interchange

The Baker Boulevard approach to the intersection with South Main Street is a single, stop-controlled lane and a 36-foot entering lane, separated by a raised median that is 15 feet at its maximum width. A pedestrian crosswalk is provided across the Baker Boulevard leg, using the raised median as a pedestrian refuge for the crossing. Due to the skew of the leg, the paved area is notably wide for the crossing.

The I-395 Exit 4 Westbound ramp is stop controlled at the intersection of South Main Street, with a single, wide approach lane for all movements from the off-ramp. Entering the Westbound ramp, a right-turn slip ramp is provided for South Main Street northbound from the rightmost through-right lane. Left turns into the Westbound ramp from South Main Street southbound originates from the leftmost travel lane, acting as a left-through lane. However, no lane use signs (ground mounted or overhead) or pavement markings provide clarity to the intended lane uses. An uncontrolled pedestrian crossing is provided across the Westbound ramp with refuge provided at two islands and detectable warning fields provided for all curb ramps. These ramps and pathways for pedestrians did not appear to meet current ADA/PROWAG standards or MaineDOT policies. The RSA team noted improvements could be identified for approach pavement markings and signing to improve visibility to the intersection, as well as highway and pedestrian-scale lighting to more current standards.

Figure 25 – Low-light conditions at I-395 Exit 4 Westbound Ramp intersection

Figure 26 – Queues at I-395 Exit 4 Eastbound Ramp encroaching on signalized pedestrian crosswalk

Figure 27 – Pedestrian crossing at I-395 Exit 4 Westbound Ramp encroaching on signalized pedestrian crosswalk

The I-395 Exit 4 Eastbound Ramp intersects with South Main Street at a signalized intersection. There are two approach lanes from the off-ramp, one left turn lane that is controlled at the signal and one sweeping right turn slip lane that is yield-controlled at its intersection. This slip lane is noted by MaineDOT as a high crash location and the RSA field visit noted confusion in operations, as it is not clear whether the right-turn movement is into a South Main Street lane or if it is an added lane for the off-ramp. In addition, the speeds maintained around the sweeping ramp remain above what may be considered reasonable on the approach to the yield-control. The South Main Street southbound approach has a left turn lane at the signal for access onto I-395 Eastbound. South Main Street northbound accesses the on-ramp via the through-right lane with no “right turn on red” prohibition provided. A signalized pedestrian crossing is provided across the Eastbound ramp with some updates noted for pedestrian push buttons accessibility. The ramps and pathways for pedestrians did not appear to meet current ADA/PROWAG standards or MaineDOT policies. The RSA team noted improvements could be identified for approach pavement markings and signing to improve visibility at the intersection, as well as highway and pedestrian-scale lighting to more current standards.

LAND USE ANALYSIS

ZONING AND CURRENT LAND USES

Existing zoning and current land uses were reviewed to gain an understanding of both the current and potential future uses. Most of the corridor is zoned Convenience Business, switching to Industrial near I-395. Current land use on the western side (river side) of the corridor is quite diversified, ranging from mixed use to retail, commercial, and industrial uses. There are also several large vacant parcels in this area. The eastern side of South Main Street is primarily residential, with some retail mixed in along the frontage of South Main Street. **Figure 28** shows zoning in and around the study area, and **Figure 29** show current land uses.

Figure 28 – Brewer South Main Street Corridor Zoning

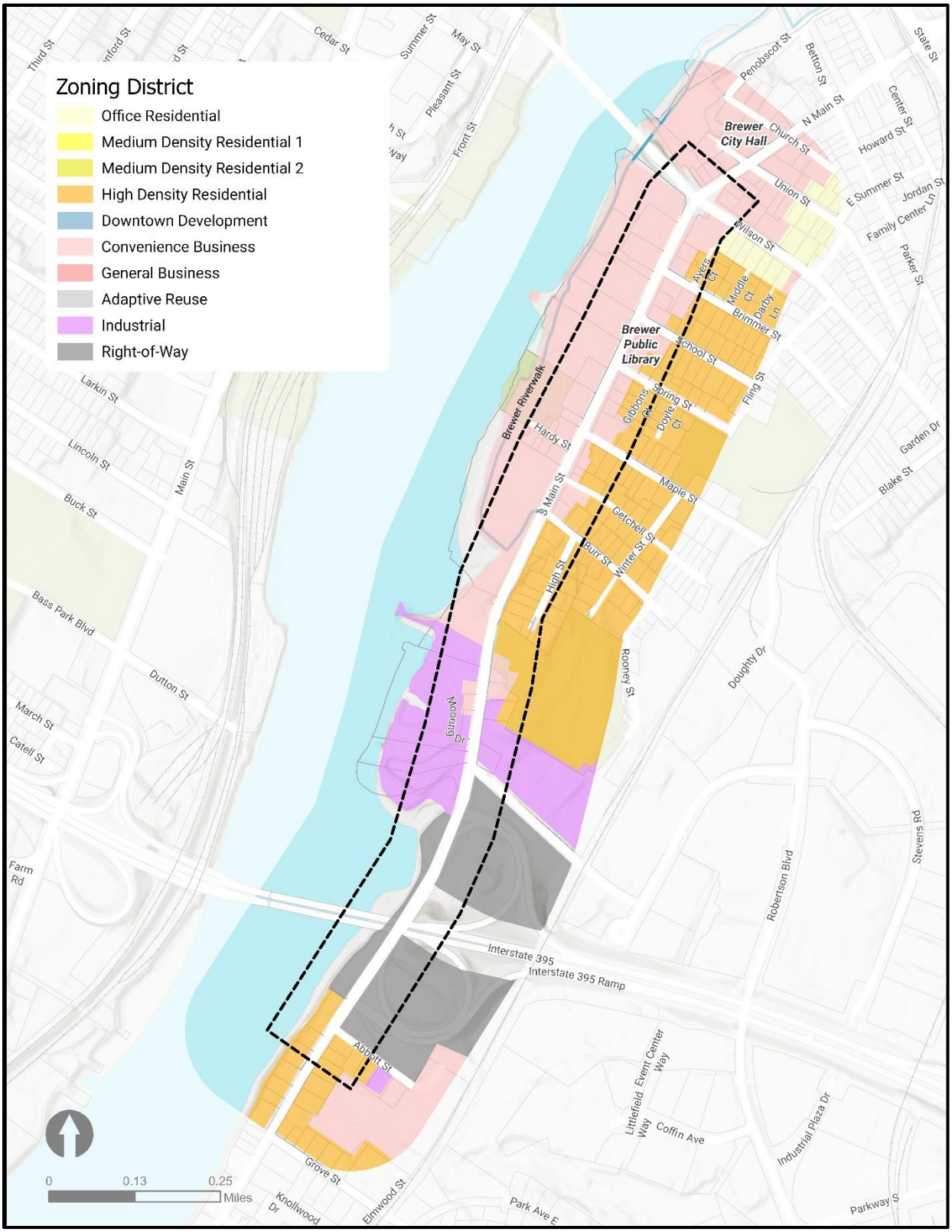
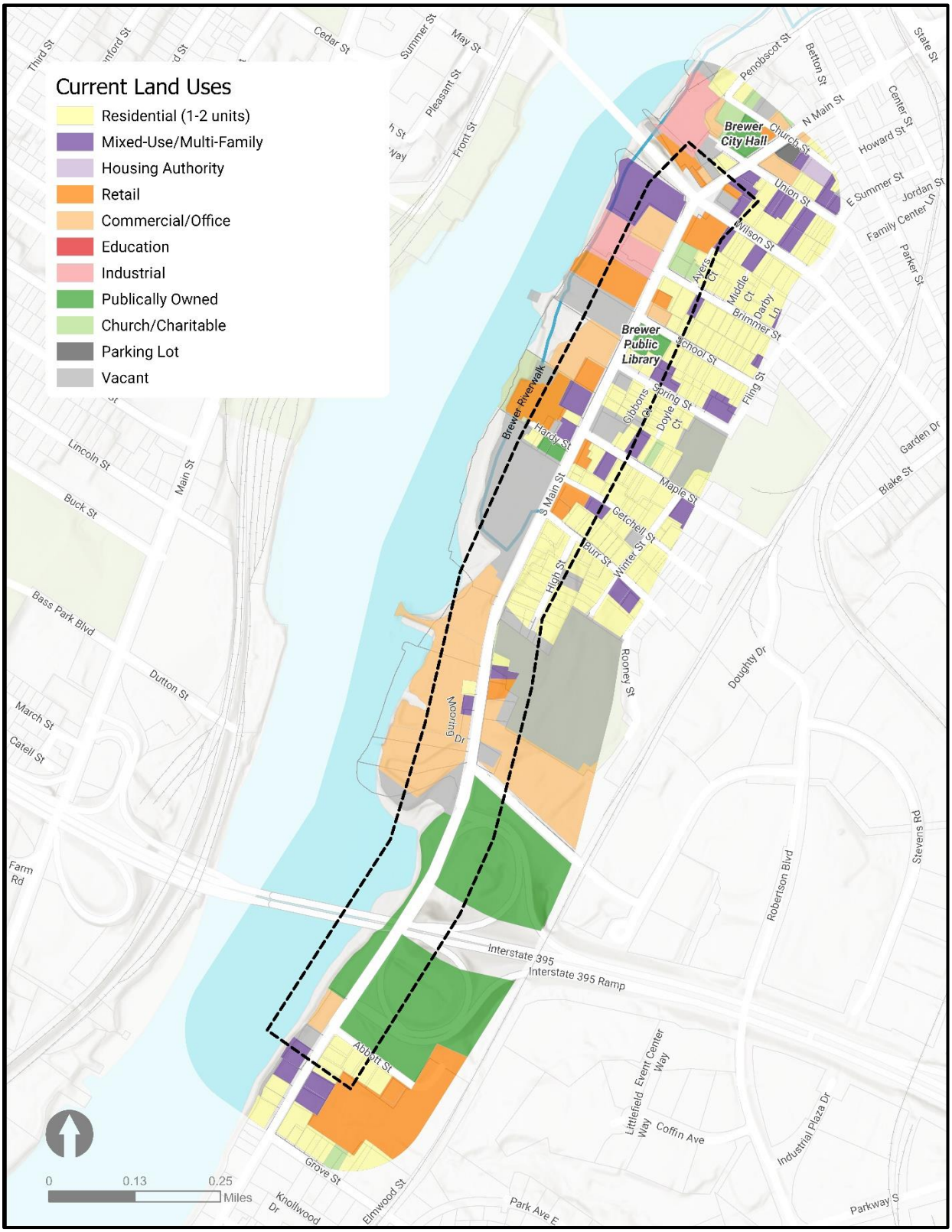


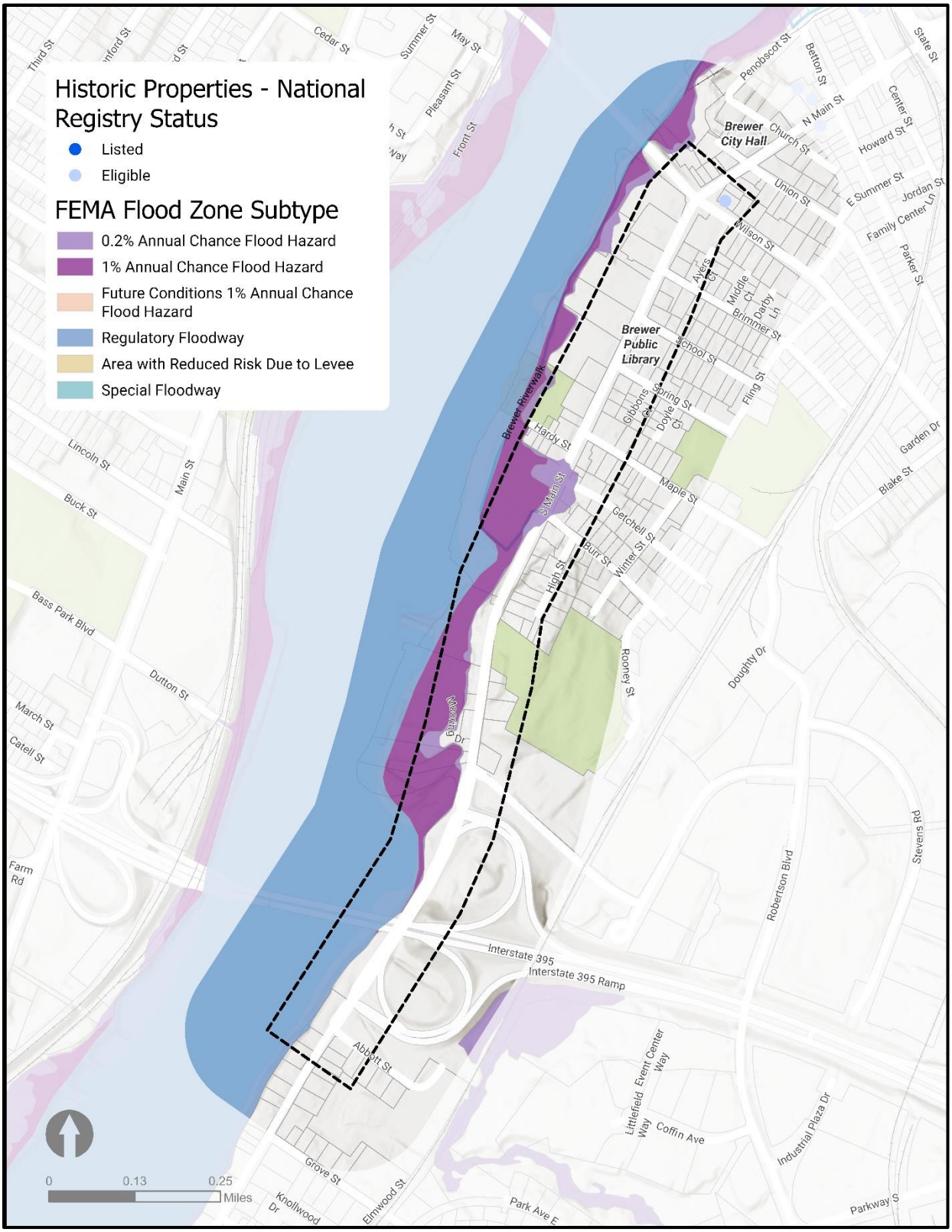
Figure 29 – Brewer South Main Street Corridor Current Land Uses



ENVIRONMENTAL AND HISTORIC RESOURCES

A desktop environmental and historic resources screening was performed for the study area to identify any environmental characteristics in or around the project boundary limits. The characteristics searched for include historic properties, aquifers, wildlife habitats, FEMA flood zones, conservation zones, and wetlands. The characteristics found came from the following sources: Maine Department of Environmental Protection data maps, Maine Fish and Wildlife maps, the National Register of Historic Places and the City of Brewer's Axis GIS Map. Much of the area in and around the river side of the study area is in a FEMA Flood Zone. The area abutting the river, including the Brewer Riverwalk, is in the FEMA Flood Zone Subtype with a 1% Annual Chance Flood Hazard. A small portion of South Main Street itself, between Burr Street and Getchell Street, is in the FEMA Flood Zone Subtype with a 0.2% Annual Chance Flood Hazard. There are no properties on the National Historic Registry in and around the study area, but there is one eligible property at the northeastern corner of Wilson Street and North Main Street. **Figure 30** shows the environmental and historic resources in and around the study area.

Figure 30 – Brewer South Main Street Corridor Environmental and Historic Resources



APPENDIX A TRAFFIC DATA

Study Nam Main Street at Wilson Street
Start Date 4/23/2024
Start Time 7:00 AM
Site Code

***NewClass
Combined Cars and Trucks

	Southbound				Westbound				Northbound				Eastbound						
	Southbound Approach				Westbound Approach				Northbound Approach				Eastbound Approach						
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn			
Movement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
7:00 AM	24	65	6	0	3	34	5	0	4	56	33	0	27	36	12	0			
7:15 AM	25	73	7	0	2	43	6	0	14	69	36	0	17	49	13	0			
7:30 AM	33	82	10	0	6	59	9	0	24	87	48	0	33	51	10	0			
7:45 AM	38	78	13	0	5	69	8	0	18	92	48	0	36	63	22	0	1601	7:00 AM	PHF
8:00 AM	41	66	10	0	5	38	9	0	21	61	45	0	29	79	11	0	1711	7:15 AM	Southbound
8:15 AM	41	56	11	0	7	44	15	0	19	87	34	0	25	47	15	0	1758	7:30 AM	0.93
	153	282	44	0	23	210	41	0	82	327	175	0	123	240	58	0			
8:30 AM	25	51	9	0	3	41	5	0	11	66	45	0	23	67	11	0	3421	7:45 AM	
8:45 AM	36	54	13	0	4	36	12	0	27	50	31	0	23	45	26	0	3288	8:00 AM	
9:00 AM	10	36	15	0	4	42	11	0	19	41	32	0	22	65	13	0	3183	8:15 AM	
9:15 AM	22	40	17	0	5	47	11	0	9	60	20	0	23	55	16	0	1349	8:30 AM	
9:30 AM	21	32	8	0	11	56	10	0	13	54	26	0	31	43	13	0	1310	8:45 AM	
9:45 AM	23	66	4	0	7	68	18	0	9	64	35	0	35	55	18	0	1355	9:00 AM	
10:00 AM	30	43	7	0	2	57	15	0	8	46	20	0	32	54	20	0	1379	9:15 AM	
10:15 AM	21	41	9	0	9	52	11	0	10	60	33	0	25	59	26	0	1410	9:30 AM	
10:30 AM	21	37	12	0	6	53	11	0	14	45	37	0	27	61	26	0	1442	9:45 AM	
10:45 AM	25	51	8	0	11	47	10	0	16	53	29	0	34	68	27	0	1419	10:00 AM	
11:00 AM	15	59	10	0	9	52	12	0	12	54	27	0	23	63	26	0	1447	10:15 AM	
11:15 AM	15	48	14	0	7	53	16	0	21	57	48	0	38	68	28	0	1504	10:30 AM	
11:30 AM	16	58	10	0	11	51	15	0	14	59	23	0	36	46	18	0	1511	10:45 AM	
11:45 AM	12	58	11	0	5	47	15	0	17	65	27	0	40	64	28	0	1521	11:00 AM	
12:00 PM	18	58	17	0	6	69	18	0	11	64	33	0	40	66	23	0	1582	11:15 AM	
12:15 PM	17	63	7	0	12	53	10	0	17	46	27	0	35	55	29	0	1540	11:30 AM	
12:30 PM	15	52	9	0	8	54	15	0	17	65	48	0	38	72	23	0	1599	11:45 AM	
12:45 PM	23	59	18	0	7	53	18	0	23	58	26	0	42	58	35	0	1630	12:00 PM	
1:00 PM	32	53	10	0	3	60	17	0	19	53	34	0	45	70	20	0	1623	12:15 PM	
1:15 PM	30	63	11	0	7	40	16	0	20	55	47	0	43	68	25	0	1677	12:30 PM	
1:30 PM	21	47	10	0	15	62	19	0	14	52	27	0	33	59	14	0	1634	12:45 PM	
1:45 PM	31	54	8	0	8	56	12	0	16	46	39	0	52	64	25	0	1625	1:00 PM	
2:00 PM	21	61	17	0	3	65	10	0	21	59	40	0	36	83	24	0	1649	1:15 PM	
2:15 PM	29	50	11	0	14	70	19	0	13	55	36	0	49	78	37	0	1685	1:30 PM	
2:30 PM	22	65	18	0	8	60	13	0	15	66	42	0	51	66	24	0	1762	1:45 PM	
2:45 PM	27	76	13	0	3	51	14	0	21	85	31	0	45	53	26	0	1796	2:00 PM	
3:00 PM	20	63	15	0	10	65	11	0	12	75	53	0	48	66	25	0	1819	2:15 PM	
3:15 PM	23	76	9	0	8	51	17	0	24	62	47	0	55	72	36	0	1838	2:30 PM	
3:30 PM	20	82	13	0	10	53	23	0	23	82	39	0	64	44	39	0	1880	2:45 PM	
3:45 PM	25	82	21	0	8	58	14	0	18	78	20	0	53	69	27	0	1908	3:00 PM	
4:00 PM	27	72	17	0	3	56	19	0	16	88	43	0	56	74	58	0	1974	3:15 PM	
4:15 PM	36	81	5	0	4	66	17	0	25	78	43	0	64	81	42	0	2036	3:30 PM	
4:30 PM	33	96	8	0	10	68	14	0	15	91	39	0	62	44	44	0	2068	3:45 PM	
4:45 PM	29	95	16	0	9	58	22	0	18	64	39	0	77	92	49	0	2163	4:00 PM	PHF
5:00 PM	31	80	12	0	7	99	19	0	20	85	40	0	84	74	36	0	2221	4:15 PM	Southbound
5:15 PM	29	96	12	0	5	58	30	0	14	74	48	0	74	70	49	0	2238	4:30 PM	0.98
	122	367	48	0	31	283	85	0	67	314	166	0	297	280	178	0			
5:30 PM	26	82	14	0	4	44	17	0	25	68	31	0	48	59	34	0	4404	4:45 PM	
5:45 PM	25	70	17	0	7	49	16	0	19	66	37	0	45	55	26	0	4268	5:00 PM	
6:00 PM	15	50	13	0	5	47	17	0	13	65	45	0	39	39	19	0	4048	5:15 PM	
6:15 PM	17	46	12	0	2	50	12	0	13	69	29	0	31	37	20	0	1589	5:30 PM	
6:30 PM	11	64	13	0	6	31	8	0	18	50	39	0	34	32	23	0	1466	5:45 PM	
6:45 PM	9	38	8	0	8	37	11	0	15	38	16	0	28	46	20	0	1308	6:00 PM	

Southbound	Westbound	Northbound	Eastbound
0.93	0.84	0.92	0.88

Southbound	Westbound	Northbound	Eastbound
0.98	0.80	0.94	0.87

***NewClass
Articulated Trucks

Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
Movement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	1	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
8:15 AM	0	3	0	0	1	1	0	0	0	0	0	0	0	1	0	0
8:30 AM	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
10:00 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:15 AM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0
10:30 AM	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0
10:45 AM	1	0	0	0	1	2	0	0	0	1	0	0	0	1	0	0
11:00 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
11:45 AM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:00 PM	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1:00 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
1:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0
2:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0
3:15 PM	0	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0
3:30 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	3	0	0	0	1	0	0	0	1	0	0	1	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
5:45 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
6:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

%Trucks			
Southbound	Westbound	Northbound	Eastbound
0.01	0.01	0.00	0.01

%Trucks			
Southbound	Westbound	Northbound	Eastbound
0.01	0.00	0.00	0.00

***NewClass
Bicycles on Road

Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
Movement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

***NewClass
Bicycles on Crosswalk

Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
Movement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM																
7:15 AM																
7:30 AM																
7:45 AM																
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***NewClass
Pedestrians

Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
Movement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM																
7:15 AM																
7:30 AM																
7:45 AM																
8:00 AM																
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6:15 PM																
6:30 PM																

Study Name: Main Street at Brimmer Street
Start Date: 5/9/2024
Start Time: 7:00 AM
Site Code:

***NewClass
All Vehicles

	Southbound			Westbound			Northbound				
	Southbound Approach			Westbound Approach			Northbound Approach				
Start Time	Thru	Bear Left	Left	Right	Left	U-Turn	Right	Thru	U-Turn		
Movement ID	1	0	1	1	1	1	1	1	1		
7:00 AM	87	0	0	1	0	0	0	111	0		
7:15 AM	108	0	1	0	0	0	0	123	0		
7:30 AM	110	0	1	0	4	0	2	173	0		
7:45 AM	111	0	2	0	1	0	1	207	0	1043	7:00 AM
8:00 AM	98	0	0	3	1	0	1	101	0	1048	7:15 AM
	427	0	4	3	6	0	4	604	0		
8:15 AM	95	0	0	0	0	0	1	107	0	2067	7:30 AM
8:30 AM	98	0	1	0	3	0	0	94	0	1973	7:45 AM
8:45 AM	93	0	1	0	1	0	1	110	0	1857	8:00 AM
9:00 AM	76	0	0	0	0	0	2	95	0	778	8:15 AM
9:15 AM	65	0	1	0	2	0	2	71	0	716	8:30 AM
9:30 AM	67	0	1	1	1	0	0	91	0	681	8:45 AM
9:45 AM	74	0	4	5	0	0	1	107	0	666	9:00 AM
10:00 AM	85	0	2	2	0	0	1	78	0	661	9:15 AM
10:15 AM	82	0	0	0	2	0	2	92	0	698	9:30 AM
10:30 AM	92	0	2	0	0	0	0	88	0	719	9:45 AM
10:45 AM	112	0	1	1	2	0	4	104	0	752	10:00 AM
11:00 AM	78	0	3	2	1	0	1	84	0	753	10:15 AM
11:15 AM	90	0	0	1	0	0	1	89	0	756	10:30 AM
11:30 AM	127	0	3	0	1	0	2	90	0	797	10:45 AM
11:45 AM	100	0	3	5	0	0	0	124	0	805	11:00 AM
12:00 PM	108	0	1	0	0	0	1	99	0	845	11:15 AM
12:15 PM	90	0	4	2	1	0	4	114	0	879	11:30 AM
12:30 PM	120	0	2	1	2	0	2	124	0	907	11:45 AM
12:45 PM	86	0	3	1	0	0	0	110	0	875	12:00 PM
1:00 PM	114	0	1	1	1	0	0	107	0	890	12:15 PM
1:15 PM	92	0	0	2	1	0	4	104	0	878	12:30 PM
1:30 PM	113	0	4	2	0	0	1	100	0	847	12:45 PM
1:45 PM	117	0	3	7	0	0	1	97	0	872	1:00 PM
2:00 PM	109	0	5	5	1	0	0	110	0	878	1:15 PM
2:15 PM	128	0	1	2	0	0	1	100	0	907	1:30 PM
2:30 PM	159	0	1	4	1	0	0	112	0	964	1:45 PM
2:45 PM	113	0	1	5	0	0	2	131	0	991	2:00 PM
3:00 PM	125	0	0	1	1	0	1	136	0	1025	2:15 PM
3:15 PM	165	0	3	3	1	0	3	144	0	1112	2:30 PM
3:30 PM	152	0	4	5	2	0	4	142	0	1144	2:45 PM
3:45 PM	158	0	7	5	1	0	2	154	0	1219	3:00 PM
4:00 PM	137	0	5	4	0	0	3	117	0	1221	3:15 PM
4:15 PM	155	0	5	2	0	0	4	124	0	1192	3:30 PM
4:30 PM	189	0	3	1	0	0	3	135	0	1214	3:45 PM
4:45 PM	174	0	5	2	3	0	2	151	0	1224	4:00 PM
5:00 PM	179	0	5	4	0	0	2	158	0	1306	4:15 PM
5:15 PM	174	0	1	1	1	0	0	147	0	1340	4:30 PM
	716	0	14	8	4	0	7	591	0		
5:30 PM	141	0	3	0	0	0	3	123	0	2619	4:45 PM
5:45 PM	121	0	1	2	2	0	0	95	0	2503	5:00 PM
6:00 PM	91	0	6	2	0	0	1	95	0	2350	5:15 PM
6:15 PM	98	0	3	4	1	0	1	84	0	877	5:30 PM
6:30 PM	70	0	3	0	1	0	1	93	0	775	5:45 PM
6:45 PM	73	0	1	3	0	0	1	72	0	704	6:00 PM

PHF

Southbound	Westbound	Northbound
0.95	0.56	0.73

PHF

Southbound	Westbound	Northbound
0.95	0.60	0.93

***NewClass
Articulated Trucks

Start Time	Thru	Bear Left	Left	Right	Left	U-Turn	Right	Thru	U-Turn
Movement ID	1	0	1	1	1	1	1	1	1
7:00 AM	1		0	0	0	0	0	0	0
7:15 AM	1		0	0	0	0	0	1	0
7:30 AM	1		0	0	0	0	0	0	0
7:45 AM	3		0	0	0	0	0	0	0
8:00 AM	0		0	0	0	0	0	0	0
8:15 AM	0		0	0	0	0	0	2	0
8:30 AM	1		0	0	0	0	0	1	0
8:45 AM	3		0	0	0	0	0	0	0
9:00 AM	0		0	0	0	0	0	1	0
9:15 AM	2		0	0	0	0	0	0	0
9:30 AM	1		0	0	0	0	0	1	0
9:45 AM	1		0	0	0	0	0	1	0
10:00 AM	0		0	0	0	0	0	0	0
10:15 AM	2		0	0	0	0	0	0	0
10:30 AM	1		0	0	0	0	0	0	0
10:45 AM	2		0	0	0	0	0	1	0
11:00 AM	2		0	0	0	0	0	2	0
11:15 AM	0		0	0	0	0	0	1	0
11:30 AM	0		0	0	0	0	0	2	0
11:45 AM	0		0	0	0	0	0	2	0
12:00 PM	2		0	0	0	0	0	1	0
12:15 PM	1		0	0	0	0	0	1	0
12:30 PM	1		0	0	0	0	0	1	0
12:45 PM	2		0	0	0	0	0	0	0
1:00 PM	0		0	0	0	0	0	3	0
1:15 PM	0		0	0	0	0	0	1	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.00	0.00

1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	2	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	1	0
2:45 PM	1	0	0	0	0	0	0	0
3:00 PM	2	0	0	0	0	0	0	0
3:15 PM	3	0	0	0	0	0	0	0
3:30 PM	1	0	0	0	0	0	1	0
3:45 PM	0	0	0	0	0	0	1	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	2	0	0	0	0	0	1	0
4:30 PM	3	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	2	0	0	0	0	0	0	0
5:15 PM	2	0	0	0	0	0	0	0
5:30 PM	2	0	0	0	0	0	1	0
5:45 PM	1	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0
6:15 PM	3	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	1	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.00	0.00

***NewClass
Bicycles on Road

Start Time	Thru	Bear Left	Left	Right	Left	U-Turn	Right	Thru	U-Turn
Movement	1	0	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	1	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	1	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	1	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0

***NewClass
Bicycles on Crosswalk

Start Time	Thru	Bear Left	Left	Right	Left	U-Turn	Right	Thru	U-Turn
Movement	0	0	0	0	0	0	0	0	0
7:00 AM									
7:15 AM									
7:30 AM									
7:45 AM									
8:00 AM									
8:15 AM									
8:30 AM									
8:45 AM									
9:00 AM									
9:15 AM									
9:30 AM									
9:45 AM									
10:00 AM									
10:15 AM									

10:30 AM	
10:45 AM	
11:00 AM	
11:15 AM	
11:30 AM	
11:45 AM	
12:00 PM	
12:15 PM	
12:30 PM	
12:45 PM	
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4:15 PM	
4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
6:00 PM	
6:15 PM	
6:30 PM	
6:45 PM	

***NewClass
Pedestrians

Start Time	Thru	Bear Left	Left	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement	0	0	0	0	0	0	0	0	0	0
7:00 AM										
7:15 AM										
7:30 AM										
7:45 AM										
8:00 AM										
8:15 AM										
8:30 AM										
8:45 AM										
9:00 AM										
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11:15 AM										
11:30 AM										
11:45 AM										
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4:45 PM										
5:00 PM										
5:15 PM										
5:30 PM										
5:45 PM										
6:00 PM										
6:15 PM										
6:30 PM										
6:45 PM										

Study Name: Main Street at Getchell Street
Start Date: 5/23/2024
Start Time: 7:00 AM
Site Code:

***NewClass
All Vehicles

	Southbound			Westbound			Northbound				
	Southbound Approach			Westbound Approach			Northbound Approach				
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru			
Movement Present	1	1	1	1	1	1	1	1			
7:00 AM	39	0	0	0	0	0	1	45			
7:15 AM	118	0	0	0	1	0	2	116			
7:30 AM	98	0	0	2	0	0	0	178			
7:45 AM	115	0	0	0	1	0	0	172	888	7:00 AM	PHF
8:00 AM	105	2	0	2	2	0	0	123	1037	7:15 AM	Southbound
8:15 AM	95	1	0	1	1	0	0	142	1040	7:30 AM	0.90
	413	3	0	5	4	0	0	615			
8:30 AM	87	1	0	1	0	0	0	129	2020	7:45 AM	
8:45 AM	79	1	0	1	2	0	0	130	1945	8:00 AM	
9:00 AM	58	0	0	2	0	0	1	100	1872	8:15 AM	
9:15 AM	95	1	0	2	0	0	0	93	783	8:30 AM	
9:30 AM	74	0	0	0	0	0	0	113	752	8:45 AM	
9:45 AM	97	0	0	1	0	0	1	101	739	9:00 AM	
10:00 AM	67	1	0	1	0	0	0	101	748	9:15 AM	
10:15 AM	71	0	0	1	0	0	0	80	709	9:30 AM	
10:30 AM	72	0	0	0	0	0	1	90	685	9:45 AM	
10:45 AM	86	1	0	0	1	0	0	94	667	10:00 AM	
11:00 AM	76	1	0	0	1	0	0	102	677	10:15 AM	
11:15 AM	97	1	0	1	0	0	0	96	720	10:30 AM	
11:30 AM	119	0	0	3	0	0	0	98	777	10:45 AM	
11:45 AM	99	1	0	1	0	0	1	109	806	11:00 AM	
12:00 PM	110	0	0	0	0	0	0	110	846	11:15 AM	
12:15 PM	84	1	0	1	1	0	2	116	856	11:30 AM	
12:30 PM	117	0	0	2	2	0	0	116	873	11:45 AM	
12:45 PM	118	2	0	5	0	0	2	92	881	12:00 PM	
1:00 PM	120	3	0	0	0	0	0	92	876	12:15 PM	
1:15 PM	120	2	0	3	0	0	1	102	899	12:30 PM	
1:30 PM	116	0	0	0	2	0	1	96	877	12:45 PM	
1:45 PM	119	1	0	0	0	0	0	125	903	1:00 PM	
2:00 PM	132	1	0	0	0	0	0	102	923	1:15 PM	
2:15 PM	117	3	0	1	0	0	1	96	913	1:30 PM	
2:30 PM	135	0	0	2	1	0	0	92	928	1:45 PM	
2:45 PM	129	1	0	0	0	0	0	144	957	2:00 PM	
3:00 PM	132	0	0	0	1	0	1	150	1006	2:15 PM	
3:15 PM	146	1	0	2	0	0	0	124	1061	2:30 PM	
3:30 PM	136	1	0	1	0	0	3	148	1120	2:45 PM	
3:45 PM	133	3	0	1	1	0	0	112	1096	3:00 PM	
4:00 PM	149	2	0	4	0	0	1	131	1099	3:15 PM	
4:15 PM	144	4	0	3	0	0	1	109	1087	3:30 PM	
4:30 PM	149	0	0	1	1	0	0	132	1081	3:45 PM	PHF
4:45 PM	136	3	0	2	0	0	2	124	1098	4:00 PM	Southbound
5:00 PM	172	3	0	0	0	0	3	139	1128	4:15 PM	0.87
	601	10	0	6	1	0	6	504			
5:15 PM	127	1	0	2	1	0	0	111	2237	4:30 PM	
5:30 PM	105	0	0	0	0	0	1	100	2160	4:45 PM	
5:45 PM	96	2	0	2	0	0	0	92	2085	5:00 PM	
6:00 PM	71	1	0	0	0	0	0	84	796	5:15 PM	
6:15 PM	91	1	0	4	0	0	0	65	715	5:30 PM	
6:30 PM	87	2	0	0	0	0	0	74	672	5:45 PM	
6:45 PM	85	1	0	0	0	0	0	56	622	6:00 PM	

	Westbound	Northbound
	0.56	0.86
	Westbound	Northbound
	0.58	0.90

***NewClass
Articulated Trucks

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru
Movement Present	1	1	1	1	1	1	1	1
7:00 AM	1	0	0	0	0	0	0	1
7:15 AM	1	0	0	0	0	0	0	2
7:30 AM	2	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	1
8:00 AM	3	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1
8:30 AM	3	0	0	0	0	0	0	1
8:45 AM	1	0	0	0	0	0	0	2
9:00 AM	2	0	0	0	0	0	0	2
9:15 AM	1	0	0	0	0	0	0	0
9:30 AM	1	0	0	0	0	0	0	2
9:45 AM	4	0	0	0	0	0	0	1
10:00 AM	2	0	0	0	0	0	0	1
10:15 AM	4	0	0	0	0	0	0	0
10:30 AM	1	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0
11:00 AM	1	0	0	0	0	0	0	1
11:15 AM	2	0	0	0	0	0	0	1
11:30 AM	1	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	2	0	0	0	0	0	0	0
12:45 PM	2	0	0	0	0	0	0	0
1:00 PM	2	0	0	0	0	0	0	0
1:15 PM	1	0	0	0	0	0	0	0
1:30 PM	1	0	0	0	0	0	0	1
1:45 PM	2	0	0	0	0	0	0	2
2:00 PM	1	0	0	0	0	0	0	0
2:15 PM	1	0	0	0	0	0	0	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.00	0.00

2:30 PM	1	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	3
3:00 PM	0	0	0	0	0	0	0	1
3:15 PM	2	0	0	0	0	0	0	0
3:30 PM	3	0	0	0	0	0	0	1
3:45 PM	3	0	0	0	0	0	0	0
4:00 PM	2	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	3	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	0
6:00 PM	2	0	0	0	0	0	0	0
6:15 PM	2	0	0	0	0	0	0	0
6:30 PM	2	0	0	0	0	0	0	0
6:45 PM	2	0	0	0	0	0	0	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.00	0.00

***NewClass
Bicycles on Road

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru
Movement Present	1	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0
6:30 PM	1	0	0	0	0	0	0	0
6:45 PM	1	0	0	0	0	0	0	0

***NewClass
Bicycles on Crosswalk

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru
Movement Present	0	0	0	0	0	0	0	0
7:00 AM								
7:15 AM								
7:30 AM								
7:45 AM								
8:00 AM								
8:15 AM								
8:30 AM								
8:45 AM								
9:00 AM								
9:15 AM								
9:30 AM								
9:45 AM								
10:00 AM								
10:15 AM								
10:30 AM								
10:45 AM								
11:00 AM								
11:15 AM								
11:30 AM								
11:45 AM								
12:00 PM								
12:15 PM								
12:30 PM								

	12:45 PM
	1:00 PM
	1:15 PM
	1:30 PM
	1:45 PM
	2:00 PM
	2:15 PM
	2:30 PM
	2:45 PM
	3:00 PM
	3:15 PM
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	3:45 PM
	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	6:00 PM
	6:15 PM
	6:30 PM
	6:45 PM

***NewClass
Pedestrians

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru
Movement Present	0	0	0	0	0	0	0	0
7:00 AM								
7:15 AM								
7:30 AM								
7:45 AM								
8:00 AM								
8:15 AM								
8:30 AM								
8:45 AM								
9:00 AM								
9:15 AM								
9:30 AM								
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5:00 PM								
5:15 PM								
5:30 PM								
5:45 PM								
6:00 PM								
6:15 PM								
6:30 PM								
6:45 PM								

Study Nam Main Street at E West Industrial Park
Start Date 6/13/2024
Start Time 7:00 AM
Site Code

***NewClass
All Vehicles

	Southbound			Westbound			Northbound				
	Southbound Approach			Westbound Approach			Northbound Approach				
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn		
Movement I	1	1	1	1	1	1	1	1	1		
7:00 AM	79	6	0	2	7	0	16	109	0		
7:15 AM	94	4	0	2	4	0	9	93	0		
7:30 AM	105	6	0	1	5	0	11	123	0		
7:45 AM	98	6	0	0	2	0	16	148	0	946	7:00 AM
8:00 AM	111	8	0	1	2	0	14	97	0	960	7:15 AM
8:15 AM	94	1	0	3	12	0	6	128	0	998	7:30 AM
	408	21	0	5	21	0	47	496	0		
8:30 AM	68	2	0	0	8	0	10	136	0	1969	7:45 AM
8:45 AM	92	1	0	1	3	0	12	113	0	1921	8:00 AM
9:00 AM	58	3	0	0	6	0	3	81	0	1839	8:15 AM
9:15 AM	52	5	0	0	0	0	2	80	0	736	8:30 AM
9:30 AM	73	2	0	4	4	0	3	81	0	679	8:45 AM
9:45 AM	93	2	0	3	7	0	2	120	0	684	9:00 AM
10:00 AM	92	3	0	1	2	0	7	73	0	711	9:15 AM
10:15 AM	90	1	0	2	1	0	1	67	0	734	9:30 AM
10:30 AM	80	4	0	2	4	0	5	93	0	755	9:45 AM
10:45 AM	82	3	0	2	4	0	6	98	0	723	10:00 AM
11:00 AM	93	3	0	4	4	0	4	108	0	761	10:15 AM
11:15 AM	94	3	0	4	4	0	8	91	0	803	10:30 AM
11:30 AM	99	4	0	2	4	0	10	89	0	823	10:45 AM
11:45 AM	120	2	0	3	6	0	1	122	0	882	11:00 AM
12:00 PM	109	3	0	3	4	0	5	90	0	880	11:15 AM
12:15 PM	99	2	0	4	7	0	6	107	0	901	11:30 AM
12:30 PM	85	4	0	4	2	0	5	122	0	915	11:45 AM
12:45 PM	99	7	0	3	5	0	6	128	0	909	12:00 PM
1:00 PM	95	4	0	4	7	0	2	91	0	898	12:15 PM
1:15 PM	114	1	0	2	4	0	10	102	0	906	12:30 PM
1:30 PM	119	3	0	4	2	0	3	109	0	924	12:45 PM
1:45 PM	117	3	0	1	4	0	8	102	0	911	1:00 PM
2:00 PM	128	4	0	1	0	1	3	112	0	957	1:15 PM
2:15 PM	117	2	0	5	3	0	10	95	0	956	1:30 PM
2:30 PM	126	5	0	4	5	0	8	133	0	997	1:45 PM
2:45 PM	124	9	0	5	2	0	10	128	0	1040	2:00 PM
3:00 PM	111	1	0	11	10	0	8	130	0	1062	2:15 PM
3:15 PM	117	2	0	5	8	0	7	113	0	1082	2:30 PM
3:30 PM	140	2	0	11	15	0	5	120	0	1094	2:45 PM
3:45 PM	148	2	0	2	4	0	5	111	0	1088	3:00 PM
4:00 PM	128	5	0	5	14	0	5	132	0	1106	3:15 PM
4:15 PM	150	4	0	4	7	0	6	140	0	1165	3:30 PM
4:30 PM	149	4	0	2	7	0	8	148	0	1190	3:45 PM
4:45 PM	165	6	0	4	9	0	5	159	0	1266	4:00 PM
5:00 PM	156	4	0	3	4	0	5	160	0	1309	4:15 PM
5:15 PM	153	2	0	2	0	0	4	165	0	1324	4:30 PM
	623	16	0	11	20	0	22	632	0		
5:30 PM	144	2	0	3	3	0	7	131	0	2620	4:45 PM
5:45 PM	124	1	0	3	2	0	5	116	0	2523	5:00 PM
6:00 PM	100	3	0	1	4	0	2	114	0	2415	5:15 PM
6:15 PM	120	9	0	3	4	0	2	86	0	989	5:30 PM
6:30 PM	86	6	0	4	1	0	4	71	0	871	5:45 PM
6:45 PM	59	0	0	10	3	0	0	18	1	711	6:00 PM

PHF

Southbound	Westbound	Northbound
0.90	0.43	0.83

PHF

Southbound	Westbound	Northbound
0.93	0.60	0.97

***NewClass
Articulated Trucks

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
Movement I	1	1	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	1	0	1	0	0
7:15 AM	1	0	0	0	0	0	1	0	0
7:30 AM	1	0	0	0	0	0	0	1	0
7:45 AM	2	1	0	0	0	0	0	0	0
8:00 AM	3	0	0	1	1	0	1	0	0
8:15 AM	0	0	0	0	1	0	1	0	0
8:30 AM	1	0	0	0	1	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	1	0
9:00 AM	1	0	0	0	3	0	0	1	0
9:15 AM	1	0	0	0	0	0	0	2	0
9:30 AM	2	0	0	1	0	0	0	0	0
9:45 AM	3	1	0	0	2	0	0	0	0
10:00 AM	0	0	0	0	0	0	1	0	0
10:15 AM	1	0	0	0	0	0	1	0	0
10:30 AM	0	0	0	0	3	0	0	0	0
10:45 AM	1	0	0	0	0	0	2	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	1	0	0	0	0	0	2	1	0
11:30 AM	1	0	0	0	0	0	0	0	0
11:45 AM	2	0	0	0	1	0	0	0	0
12:00 PM	2	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	1	0	0	0	0
12:30 PM	2	0	0	0	0	0	1	0	0
12:45 PM	0	0	0	0	0	0	1	2	0
1:00 PM	1	0	0	0	0	0	0	1	0
1:15 PM	4	0	0	0	0	0	0	0	0

%Trucks

Southbound	Westbound	Northbound
0.07	0.20	0.01

1:30 PM	2	0	0	0	0	0	0	1	0
1:45 PM	1	0	0	0	0	0	1	3	0
2:00 PM	4	0	0	0	0	0	0	4	0
2:15 PM	2	0	0	0	0	0	0	0	0
2:30 PM	1	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	0	0	0	1	0
3:00 PM	0	0	0	0	0	0	1	0	0
3:15 PM	2	0	0	0	0	0	0	0	0
3:30 PM	1	0	0	0	0	0	0	0	0
3:45 PM	1	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	1	0	0	0	0
4:15 PM	3	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	0
4:45 PM	1	0	0	0	0	0	0	1	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	0	0	0	0	1	0
5:30 PM	1	0	0	0	0	0	1	0	0
5:45 PM	0	0	0	0	0	0	2	0	0
6:00 PM	3	0	0	0	0	0	0	2	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	2	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	1	0	0	0	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.14	0.00

***NewClass
Bicycles on Road

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement	1	1	1	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	1	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	1	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0
1:00 PM	1	0	0	0	0	0	0	0	0	0
1:15 PM	2	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0
2:30 PM	1	0	0	0	0	0	0	0	0	0
2:45 PM	1	0	0	0	0	0	0	1	0	0
3:00 PM	0	0	0	0	0	0	0	1	0	0
3:15 PM	3	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	1	0	0	0	1	0	0
4:15 PM	1	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0
6:15 PM	2	1	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0

***NewClass
Bicycles on Crosswalk

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement	0	0	0	0	0	0	0	0	0	0
7:00 AM										
7:15 AM										
7:30 AM										
7:45 AM										
8:00 AM										
8:15 AM										
8:30 AM										
8:45 AM										
9:00 AM										
9:15 AM										
9:30 AM										
9:45 AM										
10:00 AM										
10:15 AM										

10:30 AM
10:45 AM
11:00 AM
11:15 AM
11:30 AM
11:45 AM
12:00 PM
12:15 PM
12:30 PM
12:45 PM
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4:30 PM
4:45 PM
5:00 PM
5:15 PM
5:30 PM
5:45 PM
6:00 PM
6:15 PM
6:30 PM
6:45 PM

***NewClass
Pedestrians

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement	0	0	0	0	0	0	0	0	0	0
7:00 AM										
7:15 AM										
7:30 AM										
7:45 AM										
8:00 AM										
8:15 AM										
8:30 AM										
8:45 AM										
9:00 AM										
9:15 AM										
9:30 AM										
9:45 AM										
10:00 AM										
10:15 AM										
10:30 AM										
10:45 AM										
11:00 AM										
11:15 AM										
11:30 AM										
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4:45 PM										
5:00 PM										
5:15 PM										
5:30 PM										
5:45 PM										
6:00 PM										
6:15 PM										
6:30 PM										
6:45 PM										

Study Name: Main Street at Abbott Street
Start Date: 6/13/2024
Start Time: 7:00 AM
Site Code:

***NewClass
All Vehicles

	Southbound			Westbound			Northbound				
	Southbound Approach			Westbound Approach			Northbound Approach				
Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn		
Movement I	1	1	1	1	1	1	1	1	1		
7:00 AM	84	6	0	12	2	0	2	164	0		
7:15 AM	105	5	0	9	1	0	3	177	0		
7:30 AM	115	4	0	10	1	0	0	242	0		
7:45 AM	101	10	0	6	2	0	0	210	0	1271	7:00 AM
8:00 AM	91	6	0	8	0	0	2	163	0	1271	7:15 AM
8:15 AM	114	6	0	8	2	0	1	175	0	1277	7:30 AM
	421	26	0	32	5	0	3	790	0		
8:30 AM	78	6	0	7	1	0	4	162	0	2440	7:45 AM
8:45 AM	107	9	0	6	1	0	3	128	0	2365	8:00 AM
9:00 AM	72	5	0	9	0	0	3	113	0	2297	8:15 AM
9:15 AM	79	6	0	5	1	0	4	116	0	925	8:30 AM
9:30 AM	94	6	0	7	1	0	2	119	0	896	8:45 AM
9:45 AM	102	14	0	10	2	0	3	138	0	911	9:00 AM
10:00 AM	92	5	0	11	1	0	0	87	0	905	9:15 AM
10:15 AM	106	3	0	4	1	0	0	93	0	901	9:30 AM
10:30 AM	86	2	0	1	0	0	1	115	0	877	9:45 AM
10:45 AM	95	7	0	9	1	0	2	106	0	828	10:00 AM
11:00 AM	96	7	0	17	1	0	1	123	0	877	10:15 AM
11:15 AM	131	8	0	7	2	0	3	105	0	926	10:30 AM
11:30 AM	141	7	0	9	1	0	1	139	0	1019	10:45 AM
11:45 AM	120	10	0	2	0	0	1	128	0	1060	11:00 AM
12:00 PM	144	6	0	7	0	0	1	106	0	1079	11:15 AM
12:15 PM	131	6	0	11	0	0	2	140	0	1113	11:30 AM
12:30 PM	115	1	0	6	2	0	3	148	0	1090	11:45 AM
12:45 PM	117	1	0	6	1	0	1	145	0	1100	12:00 PM
1:00 PM	126	2	1	3	1	0	1	130	0	1100	12:15 PM
1:15 PM	134	6	0	3	0	0	1	142	0	1096	12:30 PM
1:30 PM	139	8	0	12	3	0	0	112	0	1095	12:45 PM
1:45 PM	159	5	0	4	0	0	3	125	0	1120	1:00 PM
2:00 PM	137	8	0	4	0	0	0	141	0	1146	1:15 PM
2:15 PM	164	5	0	2	3	0	2	136	0	1172	1:30 PM
2:30 PM	160	5	0	5	2	0	2	161	0	1233	1:45 PM
2:45 PM	160	11	0	7	0	0	4	141	0	1260	2:00 PM
3:00 PM	155	7	0	4	1	0	0	155	0	1292	2:15 PM
3:15 PM	178	13	0	9	3	0	4	139	0	1326	2:30 PM
3:30 PM	173	10	0	8	4	0	3	158	0	1347	2:45 PM
3:45 PM	192	11	0	10	2	0	3	114	0	1356	3:00 PM
4:00 PM	192	12	0	17	1	0	4	137	0	1397	3:15 PM
4:15 PM	205	7	0	11	0	0	2	154	0	1430	3:30 PM
4:30 PM	224	9	0	10	0	0	2	159	0	1478	3:45 PM
4:45 PM	254	11	0	15	1	0	6	160	0	1593	4:00 PM
5:00 PM	239	10	0	14	0	0	1	229	0	1723	4:15 PM
	922	37	0	50	1	0	11	702	0		
5:15 PM	209	6	0	7	2	0	4	147	0	3442	4:30 PM
5:30 PM	197	4	0	8	2	0	0	133	0	3382	4:45 PM
5:45 PM	162	7	0	4	2	0	4	119	0	3233	5:00 PM
6:00 PM	140	3	0	19	3	0	0	112	0	1294	5:15 PM
6:15 PM	147	6	0	4	1	0	1	95	0	1173	5:30 PM
6:30 PM	85	5	1	11	3	0	1	47	0	982	5:45 PM
6:45 PM	95	7	0	4	2	0	1	59	0	852	6:00 PM

PHF

Southbound	Westbound	Northbound
0.93	0.84	0.82

PHF

Southbound	Westbound	Northbound
0.90	0.80	0.78

***NewClass
Articulated Trucks

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
Movement I	1	1	1	1	1	1	1	1	1
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	1	0	0	0	0	0	0	1	0
7:30 AM	3	0	0	0	0	0	0	4	0
7:45 AM	0	0	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	1	0
8:15 AM	1	0	0	0	0	0	0	1	0
8:30 AM	1	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0
9:00 AM	1	0	0	0	0	0	0	1	0
9:15 AM	2	0	0	0	0	0	0	2	0
9:30 AM	1	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	1	0
10:00 AM	1	0	0	0	0	0	0	1	0
10:15 AM	2	0	0	0	0	0	0	0	0
10:30 AM	1	0	0	0	0	0	0	3	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	2	0
11:30 AM	3	0	0	0	0	0	0	2	0
11:45 AM	1	0	0	0	0	0	0	2	0
12:00 PM	2	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	3	0
12:30 PM	1	0	0	0	0	0	0	1	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0

%Trucks

Southbound	Westbound	Northbound
0.01	0.00	0.00

1:15 PM	1	0	0	0	0	0	0	2	0
1:30 PM	2	0	0	0	0	0	0	1	0
1:45 PM	0	0	0	0	0	0	0	1	0
2:00 PM	0	0	0	0	0	0	0	1	0
2:15 PM	1	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	1	0	0	0	0	0	0	0	0
3:00 PM	1	0	0	0	0	0	0	3	0
3:15 PM	1	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	3	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	1	0
5:00 PM	1	0	0	0	0	0	0	1	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0
5:45 PM	0	0	0	0	0	0	0	1	0
6:00 PM	1	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	1	0
6:45 PM	0	0	0	0	0	0	0	1	0

%Trucks

Southbound	Westbound	Northbound
0.00	0.00	0.00

***NewClass
Bicycles on Road

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement I		1	1	1	1	1	1	1	1	1
7:00 AM		0	0	0	0	0	0	0	0	0
7:15 AM		0	0	0	0	0	0	0	0	0
7:30 AM		0	0	0	0	0	0	0	0	0
7:45 AM		0	0	0	0	0	0	0	0	0
8:00 AM		0	0	0	0	0	0	0	0	0
8:15 AM		0	0	0	0	0	0	0	0	0
8:30 AM		0	0	0	0	0	0	0	0	0
8:45 AM		0	0	0	0	0	0	0	0	0
9:00 AM		0	0	0	0	0	0	0	0	0
9:15 AM		1	0	0	0	0	0	0	1	0
9:30 AM		1	0	0	0	0	0	0	0	0
9:45 AM		0	0	0	0	0	0	0	0	0
10:00 AM		0	0	0	0	0	0	0	1	0
10:15 AM		0	0	0	0	0	0	0	0	0
10:30 AM		0	0	0	0	0	0	0	0	0
10:45 AM		0	0	0	0	0	0	0	1	0
11:00 AM		0	0	0	0	0	0	0	0	0
11:15 AM		0	0	0	0	0	0	0	0	0
11:30 AM		0	0	0	0	0	0	0	0	0
11:45 AM		0	0	0	0	0	0	0	0	0
12:00 PM		0	0	0	0	0	0	0	0	0
12:15 PM		0	0	0	0	0	0	0	0	0
12:30 PM		0	0	0	0	0	0	0	0	0
12:45 PM		0	0	0	0	0	0	0	0	0
1:00 PM		1	0	0	0	0	0	0	0	0
1:15 PM		3	0	0	0	0	0	0	0	0
1:30 PM		0	0	0	0	0	0	0	1	0
1:45 PM		0	0	0	0	0	0	0	1	0
2:00 PM		0	0	0	0	0	0	0	0	0
2:15 PM		0	0	0	0	0	0	0	0	0
2:30 PM		1	0	0	0	0	0	0	0	0
2:45 PM		1	0	0	0	0	0	0	0	0
3:00 PM		1	0	0	0	0	0	0	1	0
3:15 PM		1	0	0	0	0	0	0	0	0
3:30 PM		0	0	0	0	0	0	0	0	0
3:45 PM		0	0	0	0	0	0	0	0	0
4:00 PM		0	0	0	0	0	0	0	1	0
4:15 PM		1	0	0	0	0	0	0	0	0
4:30 PM		0	0	0	0	0	0	0	0	0
4:45 PM		0	0	0	0	0	0	0	0	0
5:00 PM		1	0	0	0	0	0	0	0	0
5:15 PM		0	0	0	0	0	0	0	0	0
5:30 PM		0	0	0	0	0	0	0	1	0
5:45 PM		0	0	0	0	0	0	0	0	0
6:00 PM		0	0	0	0	0	0	0	0	0
6:15 PM		0	0	0	0	0	0	0	0	0
6:30 PM		0	0	0	0	0	0	0	0	0
6:45 PM		0	0	0	0	0	0	0	0	0

***NewClass
Bicycles on Crosswalk

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
Movement I		0	0	0	0	0	0	0	0	0
7:00 AM										
7:15 AM										
7:30 AM										
7:45 AM										
8:00 AM										
8:15 AM										
8:30 AM										
8:45 AM										
9:00 AM										
9:15 AM										
9:30 AM										
9:45 AM										
10:00 AM										

10:15 AM	
10:30 AM	
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11:00 AM	
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4:30 PM	
4:45 PM	
5:00 PM	
5:15 PM	
5:30 PM	
5:45 PM	
6:00 PM	
6:15 PM	
6:30 PM	
6:45 PM	

***NewClass
Pedestrians

Start Time	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
Movement	0	0	0	0	0	0	0	0	0
7:00 AM									
7:15 AM									
7:30 AM									
7:45 AM									
8:00 AM									
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6:00 PM									
6:15 PM									
6:30 PM									
6:45 PM									

APPENDIX B SYNCHRO TRAFFIC ANALYSIS REPORTS

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	6	604	427
Future Volume (vph)	6	604	427
Lane Group Flow (vph)	17	858	467
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	604	4	4	427
Future Vol, veh/h	6	3	604	4	4	427
Conflicting Peds, #/hr	1	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	56	56	73	73	95	95
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	11	6	852	6	4	463

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1329	857	0	0	860	0
Stage 1	857	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	173	360	-	-	786	-
Stage 1	419	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	359	-	-	785	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	207	785	-
HCM Lane V/C Ratio	-	-	0.08	0.006	-
HCM Control Delay (s)	-	-	23.9	9.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	16	558	209
Future Volume (vph)	16	558	209
Lane Group Flow (vph)	112	1143	456
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	42	558	431	172	209
Future Vol, veh/h	16	42	558	431	172	209
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	54	54	90	90	87	87
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	31	81	645	498	206	250

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1432	573	0	0	646	0
Stage 1	895	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	125	463	-	-	935	-
Stage 1	359	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	93	463	-	-	934	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	409	-	-	-	-	-

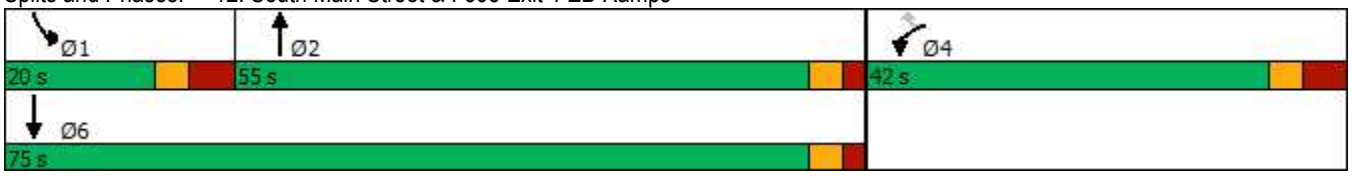
Approach	WB	NB	SB
HCM Control Delay, s	36.9	0	4.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	221	934	-
HCM Lane V/C Ratio	-	-	0.505	0.22	-
HCM Control Delay (s)	-	-	36.9	9.9	0.5
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	2.6	0.8	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	199	169	791	15	205
Future Volume (vph)	199	169	791	15	205
Lane Group Flow (vph)	225	191	939	17	237
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	9.0	9.0	12.0	5.0	12.0
Minimum Split (s)	16.0	16.0	24.0	12.0	17.0
Total Split (s)	42.0	42.0	55.0	20.0	75.0
Total Split (%)	35.9%	35.9%	47.0%	17.1%	64.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	4.0	2.0	4.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-1.0	-3.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.40	0.30	0.53	0.05	0.24
Control Delay	21.1	5.3	12.2	29.9	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	5.3	12.2	29.9	7.9
Queue Length 50th (ft)	48	0	83	4	34
Queue Length 95th (ft)	177	49	267	29	90
Internal Link Dist (ft)	277		92		1107
Turn Bay Length (ft)					
Base Capacity (vph)	1290	1205	3105	548	1787
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.16	0.30	0.03	0.13

Intersection Summary
Cycle Length: 117
Actuated Cycle Length: 57.9
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 12: South Main Street & I-395 Exit 4 EB Ramps



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	199	169	791	31	15	205
Future Volume (vph)	199	169	791	31	15	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3587		1787	1881
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3587		1787	1881
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.90	0.90
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	225	191	904	35	17	237
RTOR Reduction (vph)	0	136	2	0	0	0
Lane Group Flow (vph)	225	55	937	0	17	237
Confl. Peds. (#/hr)				1	1	
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	2%	2%	0%	0%	1%	1%
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		2		1	6
Permitted Phases		4				
Actuated Green, G (s)	15.0	15.0	27.7		1.0	35.7
Effective Green, g (s)	18.0	18.0	28.7		4.0	36.7
Actuated g/C Ratio	0.29	0.29	0.46		0.06	0.59
Clearance Time (s)	7.0	7.0	5.0		7.0	5.0
Vehicle Extension (s)	3.0	3.0	5.0		3.0	4.0
Lane Grp Cap (vph)	508	454	1641		114	1101
v/s Ratio Prot	c0.13		c0.26		0.01	c0.13
v/s Ratio Perm		0.03				
v/c Ratio	0.44	0.12	0.57		0.15	0.22
Uniform Delay, d1	18.3	16.5	12.5		27.7	6.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.8		0.6	0.1
Delay (s)	18.9	16.6	13.2		28.3	6.3
Level of Service	B	B	B		C	A
Approach Delay (s)	17.8		13.2			7.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	5	790	26	421
Future Volume (vph)	5	790	26	421
Lane Group Flow (vph)	45	987	29	462
Sign Control	Stop	Free		Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	32	790	3	26	421
Future Vol, veh/h	5	32	790	3	26	421
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	82	82	93	93
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	6	39	983	4	29	462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1505	494	0	0	987	0
Stage 1	985	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.115	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2095	-
Pot Cap-1 Maneuver	124	526	-	-	703	-
Stage 1	327	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	119	526	-	-	703	-
Mov Cap-2 Maneuver	119	-	-	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	360	703	-
HCM Lane V/C Ratio	-	-	0.125	0.041	-
HCM Control Delay (s)	-	-	16.4	10.3	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Lane Group	WBT	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	504	601
Future Volume (vph)	0	504	601
Lane Group Flow (vph)	13	578	717
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	6	0	504	6	10	601	0
Future Vol, veh/h	0	0	0	1	0	6	0	504	6	10	601	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	58	58	58	90	90	90	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	0	0	0	2	0	11	0	571	7	12	705	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1309	1307	705	1304	1304	575	705	0	0	578	0	0
Stage 1	729	729	-	575	575	-	-	-	-	-	-	-
Stage 2	580	578	-	729	729	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	138	161	440	139	162	521	902	-	-	1001	-	-
Stage 1	417	431	-	507	506	-	-	-	-	-	-	-
Stage 2	504	504	-	417	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	133	158	440	137	159	521	902	-	-	1001	-	-
Mov Cap-2 Maneuver	133	158	-	137	159	-	-	-	-	-	-	-
Stage 1	417	422	-	507	506	-	-	-	-	-	-	-
Stage 2	494	504	-	409	422	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15	0	0.1
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	902	-	-	-	372	1001	-	-
HCM Lane V/C Ratio	-	-	-	-	0.033	0.012	-	-
HCM Control Delay (s)	0	-	-	0	15	8.6	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	21	496	408
Future Volume (vph)	21	496	408
Lane Group Flow (vph)	62	668	486
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	5	496	47	21	408
Future Vol, veh/h	21	5	496	47	21	408
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	43	43	83	83	90	90
Heavy Vehicles, %	20	20	1	1	7	7
Mvmt Flow	50	12	610	58	24	462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1150	335	0	0	669	0
Stage 1	640	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Critical Hdwy	6.9	7.2	-	-	4.205	-
Critical Hdwy Stg 1	6.1	-	-	-	-	-
Critical Hdwy Stg 2	5.7	-	-	-	-	-
Follow-up Hdwy	3.69	3.49	-	-	2.2665	-
Pot Cap-1 Maneuver	183	618	-	-	891	-
Stage 1	450	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	176	617	-	-	890	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	450	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	30.1	0	0.4
HCM LOS	D		

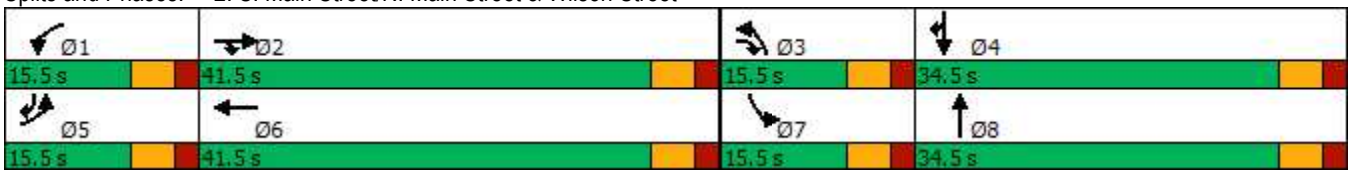
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	204	890	-
HCM Lane V/C Ratio	-	-	0.302	0.027	-
HCM Control Delay (s)	-	-	30.1	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

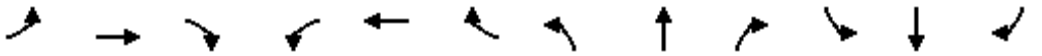
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	58	240	123	41	210	175	327	44	282	153
Future Volume (vph)	58	240	123	41	210	175	327	44	282	153
Lane Group Flow (vph)	71	295	151	53	300	205	480	51	327	178
Turn Type	Prot	NA	pt+ov	Prot	NA	Prot	NA	Prot	NA	pt+ov
Protected Phases	5	2	2 3	1	6	3	8	7	4	4 5
Permitted Phases										
Detector Phase	5	2	2 3	1	6	3	8	7	4	4 5
Switch Phase										
Minimum Initial (s)	5.0	8.0		5.0	8.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	34.5		10.5	34.5	10.5	29.5	10.5	29.5	
Total Split (s)	15.5	41.5		15.5	41.5	15.5	34.5	15.5	34.5	
Total Split (%)	14.5%	38.8%		14.5%	38.8%	14.5%	32.2%	14.5%	32.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.5	-1.5		-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?										
Recall Mode	None	None		None	None	None	None	None	None	
v/c Ratio	0.33	0.48	0.17	0.26	0.64	0.78	0.67	0.25	0.62	0.22
Control Delay	41.8	28.7	3.3	41.0	34.9	60.3	30.3	40.9	31.9	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	28.7	3.3	41.0	34.9	60.3	30.3	40.9	31.9	3.1
Queue Length 50th (ft)	36	144	0	27	147	111	221	26	144	0
Queue Length 95th (ft)	84	231	31	64	219	#276	#452	67	265	36
Internal Link Dist (ft)		1706			2618		355		855	
Turn Bay Length (ft)	150		150					150		150
Base Capacity (vph)	259	890	911	259	878	262	724	259	724	850
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.33	0.17	0.20	0.34	0.78	0.66	0.20	0.45	0.21

Intersection Summary

Cycle Length: 107
Actuated Cycle Length: 82
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: S. Main Street/N. Main Street & Wilson Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	240	123	41	210	23	175	327	82	44	282	153
Future Volume (vph)	58	240	123	41	210	23	175	327	82	44	282	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	1881	1599	1787	1849		1805	1835		1787	1881	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1787	1881	1599	1787	1849		1805	1835		1787	1881	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.84	0.84	0.84	0.92	0.92	0.92	0.93	0.93	0.93
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	71	295	151	53	270	30	205	384	96	51	327	178
RTOR Reduction (vph)	0	0	77	0	4	0	0	8	0	0	0	97
Lane Group Flow (vph)	71	295	74	53	296	0	205	472	0	51	327	81
Confl. Peds. (#/hr)	1					1	2		1	1		2
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA	pt+ov	Prot	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	5	2	2 3	1	6		3	8		7	4	4 5
Permitted Phases												
Actuated Green, G (s)	8.3	25.3	41.2	4.8	21.8		10.4	29.9		4.7	24.2	38.0
Effective Green, g (s)	9.8	26.8	42.7	6.3	23.3		11.9	31.4		6.2	25.7	39.5
Actuated g/C Ratio	0.11	0.31	0.49	0.07	0.27		0.14	0.36		0.07	0.30	0.46
Clearance Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	581	787	129	496		247	664		127	557	728
v/s Ratio Prot	c0.04	c0.16	0.05	0.03	c0.16		c0.11	c0.26		0.03	0.17	0.05
v/s Ratio Perm												
v/c Ratio	0.35	0.51	0.09	0.41	0.60		0.83	0.71		0.40	0.59	0.11
Uniform Delay, d1	35.5	24.5	11.7	38.4	27.6		36.4	23.8		38.5	26.0	13.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.7	0.1	2.1	1.9		20.1	3.6		2.1	1.6	0.1
Delay (s)	36.6	25.2	11.8	40.5	29.5		56.5	27.4		40.6	27.6	13.6
Level of Service	D	C	B	D	C		E	C		D	C	B
Approach Delay (s)		22.9			31.2			36.1			24.3	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	86.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	4	591	716
Future Volume (vph)	4	591	716
Lane Group Flow (vph)	21	663	791
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	8	591	7	14	716
Future Vol, veh/h	4	8	591	7	14	716
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	60	60	93	93	95	95
Heavy Vehicles, %	0	0	0	0	1	1
Mvmt Flow	7	14	655	8	15	776

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1467	661	0	0	665	0
Stage 1	661	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.209	-
Pot Cap-1 Maneuver	142	466	-	-	929	-
Stage 1	517	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	138	465	-	-	927	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	260	927	-
HCM Lane V/C Ratio	-	-	0.079	0.016	-
HCM Control Delay (s)	-	-	20	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	41	511	476
Future Volume (vph)	41	511	476
Lane Group Flow (vph)	100	937	779
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	6.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	41	35	511	318	191	476
Future Vol, veh/h	41	35	511	318	191	476
Conflicting Peds, #/hr	0	0	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	92	92	89	89
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	54	46	578	359	223	556

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1486	473	0	0	582	0
Stage 1	762	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	117	543	-	-	1002	-
Stage 1	427	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	79	541	-	-	998	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	425	-	-	-	-	-
Stage 2	302	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	91.7	0	3.4
HCM LOS	F		

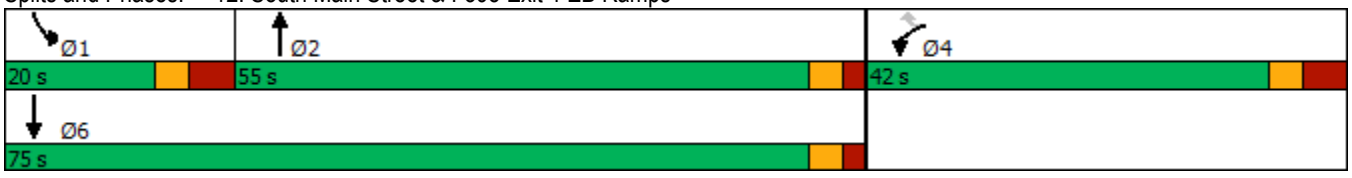
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	130	998	-
HCM Lane V/C Ratio	-	-	0.77	0.224	-
HCM Control Delay (s)	-	-	91.7	9.6	0.9
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	4.5	0.9	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	459	262	572	42	479
Future Volume (vph)	459	262	572	42	479
Lane Group Flow (vph)	519	296	705	49	554
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		2	1	6
Permitted Phases		4			
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	9.0	9.0	12.0	5.0	12.0
Minimum Split (s)	16.0	16.0	24.0	12.0	17.0
Total Split (s)	42.0	42.0	55.0	20.0	75.0
Total Split (%)	35.9%	35.9%	47.0%	17.1%	64.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	4.0	4.0	2.0	4.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-1.0	-3.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.67	0.35	0.56	0.19	0.64
Control Delay	25.9	4.2	24.3	37.9	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	4.2	24.3	37.9	19.9
Queue Length 50th (ft)	225	3	173	25	218
Queue Length 95th (ft)	418	57	241	63	313
Internal Link Dist (ft)	277		92		1107
Turn Bay Length (ft)					
Base Capacity (vph)	922	963	2420	392	1628
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.31	0.29	0.13	0.34

Intersection Summary

Cycle Length: 117
Actuated Cycle Length: 78.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 12: South Main Street & I-395 Exit 4 EB Ramps



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	459	262	572	45	42	479
Future Volume (vph)	459	262	572	45	42	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1787	1599	3528		1805	1900
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1787	1599	3528		1805	1900
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.90	0.90
Growth Factor (vph)	104%	104%	104%	104%	104%	104%
Adj. Flow (vph)	519	296	654	51	49	554
RTOR Reduction (vph)	0	167	6	0	0	0
Lane Group Flow (vph)	519	129	699	0	49	554
Confl. Peds. (#/hr)				4	4	
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		2		1	6
Permitted Phases		4				
Actuated Green, G (s)	31.0	31.0	26.8		4.6	38.4
Effective Green, g (s)	34.0	34.0	27.8		7.6	39.4
Actuated g/C Ratio	0.42	0.42	0.34		0.09	0.48
Clearance Time (s)	7.0	7.0	5.0		7.0	5.0
Vehicle Extension (s)	4.0	4.0	5.0		3.0	4.0
Lane Grp Cap (vph)	746	667	1204		168	919
v/s Ratio Prot	c0.29		0.20		0.03	c0.29
v/s Ratio Perm		0.08				
v/c Ratio	0.70	0.19	0.58		0.29	0.60
Uniform Delay, d1	19.5	15.0	22.0		34.4	15.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.1	0.2	1.1		1.0	1.3
Delay (s)	22.5	15.2	23.1		35.4	16.6
Level of Service	C	B	C		D	B
Approach Delay (s)	19.9		23.1			18.1
Approach LOS	B		C			B

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	81.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	1	702	37	922
Future Volume (vph)	1	702	37	922
Lane Group Flow (vph)	65	932	42	1045
Sign Control	Stop	Free		Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	50	702	11	37	922
Future Vol, veh/h	1	50	702	11	37	922
Conflicting Peds, #/hr	0	0	0	3	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	78	78	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	64	918	14	42	1045

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2057	469	0	0	935	0
Stage 1	928	-	-	-	-	-
Stage 2	1129	-	-	-	-	-
Critical Hdwy	6.6	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	55	546	-	-	741	-
Stage 1	350	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	544	-	-	739	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	294	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	459	739	-
HCM Lane V/C Ratio	-	-	0.142	0.057	-
HCM Control Delay (s)	-	-	14.1	10.2	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Lane Group	WBT	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	0	504	601
Future Volume (vph)	0	504	601
Lane Group Flow (vph)	13	578	717
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	6	0	504	6	10	601	0
Future Vol, veh/h	0	0	0	1	0	6	0	504	6	10	601	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	58	58	58	90	90	90	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	0	0	0	2	0	11	0	571	7	12	705	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1309	1310	705	1307	1307	578	705	0	0	581	0	0
Stage 1	729	729	-	578	578	-	-	-	-	-	-	-
Stage 2	580	581	-	729	729	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	138	160	440	138	161	519	902	-	-	998	-	-
Stage 1	417	431	-	505	504	-	-	-	-	-	-	-
Stage 2	504	503	-	417	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	133	156	440	136	157	518	902	-	-	995	-	-
Mov Cap-2 Maneuver	133	156	-	136	157	-	-	-	-	-	-	-
Stage 1	417	422	-	503	502	-	-	-	-	-	-	-
Stage 2	494	501	-	409	422	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15.1	0	0.1
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	902	-	-	-	370	995	-	-
HCM Lane V/C Ratio	-	-	-	-	0.033	0.012	-	-
HCM Control Delay (s)	0	-	-	0	15.1	8.7	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Lane Group	WBL	NBT	SBT
Lane Configurations			
Traffic Volume (vph)	20	632	623
Future Volume (vph)	20	632	623
Lane Group Flow (vph)	53	688	701
Sign Control	Stop	Free	Free

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	11	632	22	16	623
Future Vol, veh/h	20	11	632	22	16	623
Conflicting Peds, #/hr	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	60	60	97	97	93	93
Heavy Vehicles, %	14	14	0	0	1	1
Mvmt Flow	34	19	665	23	18	683

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1398	346	0	0	690	0
Stage 1	679	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Critical Hdwy	6.81	7.11	-	-	4.115	-
Critical Hdwy Stg 1	6.01	-	-	-	-	-
Critical Hdwy Stg 2	5.61	-	-	-	-	-
Follow-up Hdwy	3.633	3.433	-	-	2.2095	-
Pot Cap-1 Maneuver	131	622	-	-	908	-
Stage 1	441	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	127	621	-	-	906	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	440	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.7	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	177	906	-
HCM Lane V/C Ratio	-	-	0.298	0.019	-
HCM Control Delay (s)	-	-	33.7	9.1	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	178	280	297	85	283	166	314	48	367	122
Future Volume (vph)	178	280	297	85	283	166	314	48	367	122
Lane Group Flow (vph)	221	348	369	115	424	191	438	53	404	134
Turn Type	Prot	NA	pt+ov	Prot	NA	Prot	NA	Prot	NA	pt+ov
Protected Phases	5	2	2 3	1	6	3	8	7	4	4 5
Permitted Phases										
Detector Phase	5	2	2 3	1	6	3	8	7	4	4 5
Switch Phase										
Minimum Initial (s)	5.0	8.0		5.0	8.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	10.5	34.5		10.5	34.5	10.5	29.5	10.5	29.5	
Total Split (s)	15.5	41.5		15.5	41.5	15.5	34.5	15.5	34.5	
Total Split (%)	14.5%	38.8%		14.5%	38.8%	14.5%	32.2%	14.5%	32.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-1.5	-1.5		-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize?										
Recall Mode	None	None		None	None	None	None	None	None	
v/c Ratio	0.97	0.60	0.42	0.55	0.76	0.83	0.71	0.29	0.78	0.17
Control Delay	95.9	32.7	9.2	52.0	39.3	72.6	37.2	46.0	43.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.9	32.7	9.2	52.0	39.3	72.6	37.2	46.0	43.7	3.8
Queue Length 50th (ft)	~135	179	62	66	227	114	230	30	218	0
Queue Length 95th (ft)	#313	266	125	120	294	#278	#435	73	367	35
Internal Link Dist (ft)		1706			2618		355		855	
Turn Bay Length (ft)	150		150					150		150
Base Capacity (vph)	229	786	876	229	776	229	641	226	633	783
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.44	0.42	0.50	0.55	0.83	0.68	0.23	0.64	0.17

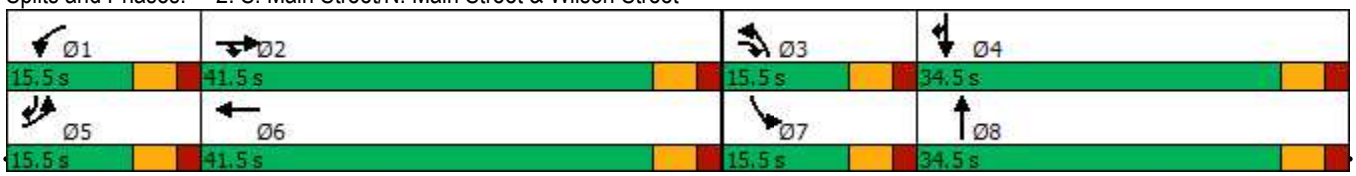
Intersection Summary

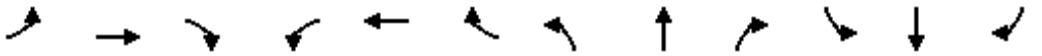
Cycle Length: 107
Actuated Cycle Length: 92.2
Natural Cycle: 95
Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: S. Main Street/N. Main Street & Wilson Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	280	297	85	283	31	166	314	67	48	367	122
Future Volume (vph)	178	280	297	85	283	31	166	314	67	48	367	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	1900	1615	1805	1867		1805	1850		1787	1881	1599
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	1900	1615	1805	1867		1805	1850		1787	1881	1599
Peak-hour factor, PHF	0.87	0.87	0.87	0.80	0.80	0.80	0.94	0.94	0.94	0.98	0.98	0.98
Growth Factor (vph)	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%	108%
Adj. Flow (vph)	221	348	369	115	382	42	191	361	77	53	404	134
RTOR Reduction (vph)	0	0	102	0	4	0	0	7	0	0	0	73
Lane Group Flow (vph)	221	348	267	115	420	0	191	431	0	53	404	61
Confl. Peds. (#/hr)	3					3	2					2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA	pt+ov	Prot	NA		Prot	NA		Prot	NA	pt+ov
Protected Phases	5	2	2 3	1	6		3	8		7	4	4 5
Permitted Phases												
Actuated Green, G (s)	10.2	26.6	42.3	9.3	25.7		10.2	28.7		6.6	25.1	40.8
Effective Green, g (s)	11.7	28.1	43.8	10.8	27.2		11.7	30.2		8.1	26.6	42.3
Actuated g/C Ratio	0.13	0.30	0.47	0.12	0.29		0.13	0.32		0.09	0.29	0.45
Clearance Time (s)	5.5	5.5		5.5	5.5		5.5	5.5		5.5	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	226	572	758	209	544		226	599		155	536	725
v/s Ratio Prot	c0.12	0.18	0.17	0.06	c0.22		c0.11	c0.23		0.03	0.21	0.04
v/s Ratio Perm												
v/c Ratio	0.98	0.61	0.35	0.55	0.77		0.85	0.72		0.34	0.75	0.08
Uniform Delay, d1	40.6	27.8	15.7	38.9	30.2		39.9	27.8		40.0	30.3	14.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.0	1.8	0.3	3.1	6.7		24.0	4.1		1.3	6.0	0.1
Delay (s)	93.6	29.7	16.0	42.0	36.9		63.9	31.9		41.4	36.3	14.5
Level of Service	F	C	B	D	D		E	C		D	D	B
Approach Delay (s)		39.4			38.0			41.6			31.8	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX C HIGH CRASH LOCATION CRASH DIAGRAMS AND SUMMARIES (FROM MAINEDOT)

H. C. L.
CRASH COLLISION DIAGRAM
DATA PACKAGE

COUNTY: **PENOBSCOT** TOWN: **BREWER**

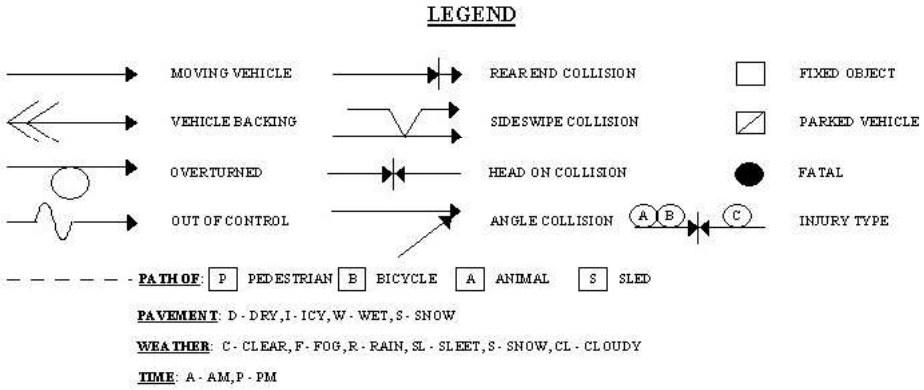
LOW NODE: **39684** HIGH NODE: **39685** REGION: **4** U/R: **URBAN**

DESCRIPTION: **S Main St from Brimmer St to Wilson St**

RTE # / RD #: **0015B** DATE DRAWN: **10/11/2023** DRAWN BY: **BOB K**

STUDY FROM: **1/1/2020** STUDY TO: **12/31/2022**

CRASH RATE: **916.98** CRF: **1.91** % INJURY: **20** TOTAL CRASHES: **10**



Brewer

Link: 39684-39685

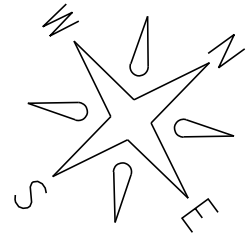
Element: 3111000

Study Period: 2020-2022

# of Crashes: 10 / CRF: 1.91

Prepared by Office of Safety & Mobility

RFK3 10-11-23



High Tide
Rand & Rand Dentistry

39684

Chapel

39685

pole

C

35933 12-18-21 1:05A
D/C Ran red light

South Main St
Rt 15

14771 6-23-20 10:09A D/C Avoiding vehicle
street sweeper going opposite way

17399 7-23-20 3:40P D/CL Fail to yield

36293 11-28-22 1:54P D/C Unknown

20816 8-11-21 5:13P D/CL Fail to yield

28099 10-15-21 4:55P D/C Fail to yield

22769 8-4-22 3:23P D/C Unknown

12034 4-28-22 4:37P D/C Ped error

P

B

18014 6-14-22 3:05P D/C Hit and run

10250 4-28-21 3:45P D/C Fail to yield

Church

Tiller & Rye Grocer


Search...
73939
39686
N MAIN ST
Penobscot River
72576
9
780919
39685
15B
1A
BREWER
WILSON ST
S MAIN ST
38303
39684
AYERS CT
38304
BRIMMER ST
MIDDLE CT
38302
38305
Scale: 1:2087
100ft

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I - Single Element**	☐ **Section Detail**	☑ **Crash Summary II**	☐ **1320 Public**	☐ **1320 Private**	☐ **1320 Summary**

REPORT DESCRIPTION

Brewer
S Main St from Brimmer St to Wilson St

REPORT PARAMETERS

Year 2020, Start Month 1 through Year 2022 End Month: 12

Route: **0015B**	Start Node: **39684**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **39685**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
39684	39685	3111000	0 - 0.08	0015B - 0.64	0.08	2	10	0	0	1	1	8	20.0	0.00364	916.98	479.10	1.91
Int of BRIMMER ST	S MAIN ST			ST RTE 15B											Statewide Crash Rate: 187.33		
Study Years:	3.00			**Section Totals:**	0.08		10	0	0	1	1	8	20.0	0.00364	916.98	479.10	1.91

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
39684	39685	3111000	0 - 0.08	0015B - 0.64	10	0	0	1	1	8	2022-12034	04/28/2022	0.67	B
											2021-28099	10/15/2021	0.68	PD
											2020-17399	07/23/2020	0.68	PD
											2021-10250	04/28/2021	0.68	PD
											2021-20816	08/11/2021	0.68	PD
											2022-36293	11/28/2022	0.68	PD
											2022-22769	08/04/2022	0.68	PD
											2022-18014	06/14/2022	0.69	PD
											2020-14771	06/23/2020	0.70	PD
											2021-35933	12/18/2021	0.71	C
				Totals:	10	0	0	1	1	8				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TUESDAY	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
SATURDAY	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	4	2	1	0	0	0	0	0	0	0	**10**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	5
2-(Sport) Utility Vehicle	7
3-Passenger Van	0
4-Cargo Van (10K lbs or Less)	0
5-Pickup	3
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	0
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	1
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	1
23-Bicyclist	0
24-Witness	1
25-Other	1
26-Construction	0
27-Farm Vehicle	0
28-Horse and Buggy	0
Total	**19**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	2	6	0	0	0	0	8
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	3	0	0	0	0	0	3
Ran Red Light	1	0	0	0	0	0	1
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	0	0	0	0	0	0
Wrong Way	1	0	0	0	0	0	1
Followed Too Closely	0	0	0	0	0	0	0
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	3	0	0	0	0	0	3
Unknown	0	0	0	0	0	0	0
Total	**10**	**6**	**0**	**0**	**0**	**0**	**16**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	9	6	0	0	0	1	16
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	1	0	0	0	0	0	1
Other	0	0	0	0	0	0	0
Total	**10**	**6**	**0**	**0**	**0**	**1**	**17**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	2	0	0	0	0	2
20-24	2	0	0	0	0	2
25-29	1	0	0	0	0	1
30-39	5	0	0	0	0	5
40-49	2	0	0	0	0	2
50-59	2	0	0	0	0	2
60-69	1	0	0	0	0	1
70-79	1	0	0	0	0	1
80-Over	0	0	0	0	0	0
Unknown	1	0	0	1	0	2
Total	**17**	**0**	**0**	**1**	**0**	**18**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**16**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	1		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	13		
14-Parked Motor Vehicle	0		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	2		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	1	1
C	1	1
PD	8	0
Total	**10**	**2**

Road Character

Road Grade	Total
1-Level	10
2-On Grade	0
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**10**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	3
2-Traffic Signals (Flashing)	1
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	0
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	5
14-Other	1
Total	**10**

Light

Light Condition	Total
1-Daylight	9
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	1
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**10**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2020	2021	2022	Total
JANUARY	0	0	0	0
FEBRUARY	0	0	0	0
MARCH	0	0	0	0
APRIL	0	1	1	2
MAY	0	0	0	0
JUNE	1	0	1	2
JULY	1	0	0	1
AUGUST	0	1	1	2
SEPTEMBER	0	0	0	0
OCTOBER	0	1	0	1
NOVEMBER	0	0	1	1
DECEMBER	0	1	0	1
Total	**2**	**4**	**4**	**10**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6
Pedestrians	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**4**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	7	0	0	0	0	0	0	0	0	0	0	7
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	2	0	0	0	0	0	0	0	0	0	0	2
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**

H. C. L.
CRASH COLLISION DIAGRAM
DATA PACKAGE

COUNTY: **PENOBSCOT** TOWN: **BREWER**

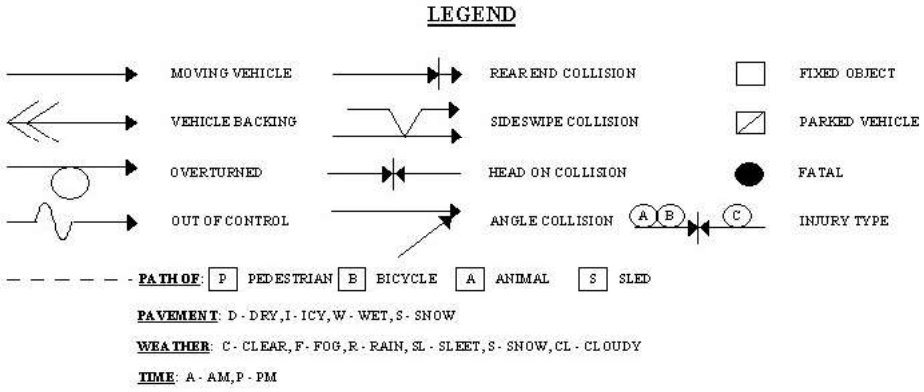
LOW NODE: **40457** HIGH NODE: **0000** REGION: **4** U/R: **URBAN**

DESCRIPTION: **Int of 395EB offramp to Main St and Main St**

RTE # / RD #: **0015X** DATE DRAWN: **10/10/2023** DRAWN BY: **BOB K**

STUDY FROM: **1/1/2020** STUDY TO: **12/31/2022**

CRASH RATE: **1.31** CRF: **4.26** % INJURY: **30.8** TOTAL CRASHES: **13**



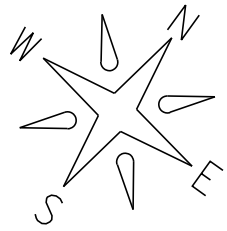
Prepared by Office of Safety & Mobility
RFK3 10-10-23

Brewer

Node: 40457

Study Period: 2020-2022

# of Crashes: 13 / CRF: 4.26



S. Main St.

16286 6-23-21 9:16A D/C Swerved to Avoid

12131 5-20-21 8:05A D/C Fail to keep in lane

S. Main St.

14683 6-14-21 3:04P D/C Unknown (C)

20402 8-4-21 3:27P D/C Fail to yield (C)

16562 7-2-21 4:48P D/C Fail to yield (C)

1402 1-19-21 4:40P D/C Follow Too Close

29078 11-20-20 2:00P D/C Hit and run

23354 9-29-20 4:47P D/C Follow Too Close

22057 7-29-22 2:40P D/C Follow Too Close

23213 8-12-22 2:43P D/C Follow Too Close (B)

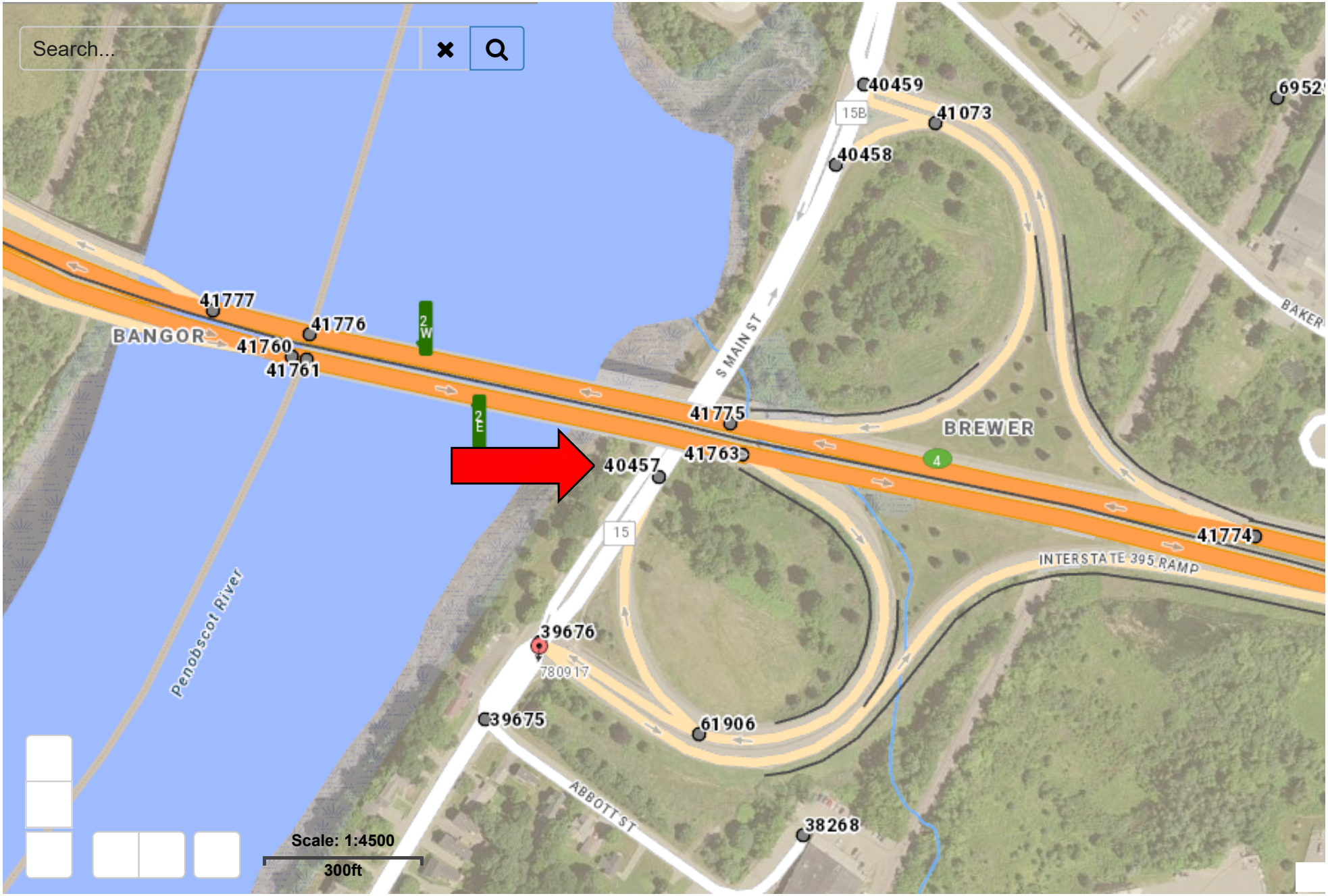
29970 11-3-21 8:22A D/C Follow Too Close

22706 9-23-20 6:57P D/C Follow Too Close (C)

4731 2-11-22 7:54A I/C Unsafe speed (C)

Stop

I-395 EB off ramp


Search...
40459
41073
40458
41777
41776
BANGOR
41760
41761
2 W
2 E
S MAIN ST
41775
BREWER
41763
40457
4
15
41774
INTERSTATE 395 RAMP
Penobscot River
39676
780917
39675
61906
ABBOTT ST
38268
Scale: 1:4500
300ft

Maine Department Of Transportation - Office of Safety, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I - Single Node**	☐ **Section Detail**	☑ **Crash Summary II**	☐ **1320 Public**	☐ **1320 Private**	☐ **1320 Summary**

REPORT DESCRIPTION

Brewer
Int I-395 EB off to Main St & Main St

REPORT PARAMETERS

Year 2020, Start Month 1 through Year 2022 End Month: 12

Route: **0015X**	Start Node: **40457**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **40457**	End Offset: **0**	☐ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
40457	0015X - 58.04	Int of RD INV 3201090 S MAIN ST	2	13	0	0	1	3	9	30.8	3.296	1.31	0.31	4.26
												Statewide Crash Rate:	0.10	
Study Years:	3.00	**NODE TOTALS:**		13	0	0	1	3	9	30.8	3.296	1.31	0.31	4.26

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM												
	Hour of Day																								
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
WEDNESDAY	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
THURSDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
FRIDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	5
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	1	2	1	0	0	0	0	3	2	3	0	1	0	0	0	0	0	0	**13**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	8
2-(Sport) Utility Vehicle	7
3-Passenger Van	1
4-Cargo Van (10K lbs or Less)	0
5-Pickup	7
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	1
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	1
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	0

Unit Type	Total
23-Bicyclist	0
24-Witness	1
25-Other	1
26-Construction	0
27-Farm Vehicle	0
28-Horse and Buggy	0
Total	**27**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	2	10	1	0	0	0	13
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	1	1	0	0	0	0	2
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	1	0	0	0	0	0	1
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	6	0	0	0	0	0	6
Failed to Keep in Proper Lane	1	0	0	0	0	0	1
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	1	0	0	0	0	0	1
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	1	0	0	0	0	0	1
Unknown	0	0	0	0	0	0	0
Total	**13**	**11**	**1**	**0**	**0**	**0**	**25**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	13	11	1	0	0	0	25
Physically Impaired	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	**13**	**11**	**1**	**0**	**0**	**0**	**25**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	3	0	0	0	0	3
25-29	1	0	0	0	0	1
30-39	2	0	0	0	0	2
40-49	4	0	0	0	0	4
50-59	10	0	0	0	0	10
60-69	5	0	0	0	0	5
70-79	0	0	0	0	0	0
80-Over	0	0	0	0	0	0
Unknown	1	0	0	0	0	1
Total	**26**	**0**	**0**	**0**	**0**	**26**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	1	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**25**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	24		
14-Parked Motor Vehicle	0		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post, Pole, or Support	0		

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	1	1
C	3	4
PD	9	0
Total	**13**	**5**

Road Character

Road Grade	Total
1-Level	9
2-On Grade	3
3-Top of Hill	0
4-Bottom of Hill	1
5-Other	0
Total	**13**

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	0
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	0
6-Yield Sign	10
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	3
14-Other	0
Total	**13**

Light

Light Condition	Total
1-Daylight	11
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	2
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**13**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2020	2021	2022	Total
JANUARY	0	1	0	1
FEBRUARY	0	0	1	1
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	0	1	0	1
JUNE	0	2	0	2
JULY	0	1	1	2
AUGUST	0	1	1	2
SEPTEMBER	2	0	0	2
OCTOBER	0	0	0	0
NOVEMBER	1	1	0	2
DECEMBER	0	0	0	0
Total	**3**	**7**	**3**	**13**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	0	0	12	0	0	0	0	0	0	0	0	0	0	0	12
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	2	0	0	0	0	0	0	0	0	0	0	2
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	10	1	0	0	0	0	0	0	0	0	0	11
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**

APPENDIX D ROAD SAFETY AUDIT PRESENTATION AND FIELD VISIT NOTES

BREWER VILLAGE PARTNERSHIP INITIATIVE & SOUTH MAIN STREET STUDY

ROAD SAFETY AUDIT

Joseph L. Ferris Community Center, Brewer, ME
May 23, 2024

BANGOR AREA COMPREHENSIVE TRANSPORTATION SYSTEM
BACTS

CITY OF BREWER
INCORPORATED FEB. 8, 1889

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Brewer VPI & South Main Street Road Safety Audit

Agenda

- Study Team Introductions and Agenda
- Introductions to Road Safety Audits
- Initial Data Presentation
- Highlighting Audit Locations

  - Including Local/Regional Perspectives and Discussion
- Field Visit
- Recap Observations (Pros and Cons, Things to Keep, Things to Change/Add)
- Next Steps and Schedule of Projects

STANTEC MOMENT

HSSE: Safety

What is Situational Awareness?

SaferTogether™

Situational Awareness involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives.

Ask questions about your work environment and consider the consequences:

1. **LOOK** – What is happening?
2. **THINK** – What will happen next and how will it affect me?
3. **ACT** – Identify a hazard and do something about it.

Remember to communicate with your team and others involved.

What is a Road Safety Audit?

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT

Per Federal Highway Administration (FHWA):

"The formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users."

Holistic review by all stakeholders (local and regional) with expertise to assist but work with the team.

No "putting the cart before the horse" until fully discussed and reviewed.

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The Costs of Crashes

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT

ASHES	AMOUNT OF LOSS	INJURY (A) CRASHES	AMOUNT OF LOSS	INJURY (B) CRASHES	AMOUNT OF LOSS	INJURY (C) CRASHES	AMOUNT OF LOSS	ONLY CRASHES	AMOUNT OF LOSS	ANNUAL COST
127	$1,282,446,000	593	$347,260,800	1977	$350,917,500	5430	$609,789,000	27105	$287,313,000	$2,877,726,3

K
A
B
C
PD

Average Comprehensive Costs are based on 2018 Federal Highway Administration estimates.

Death (Per Crash)	$10,098,000
Suspected serious injury (Per Crash)	$585,600
Suspected minor injury (Per Crash)	$177,500
Possible injury (Per Crash)	$112,300
Property damage only (Per Crash)	$10,600

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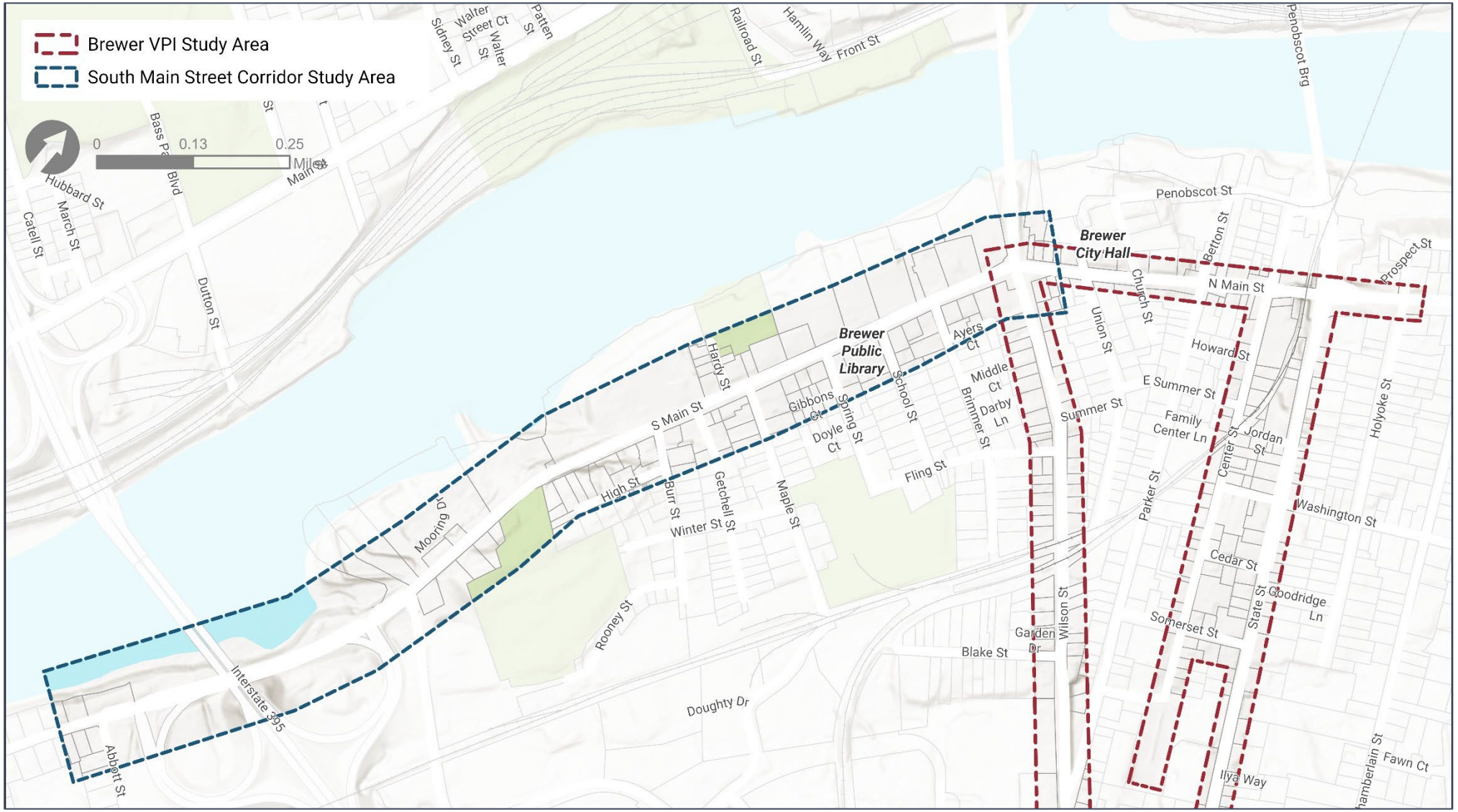
Study Areas

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT



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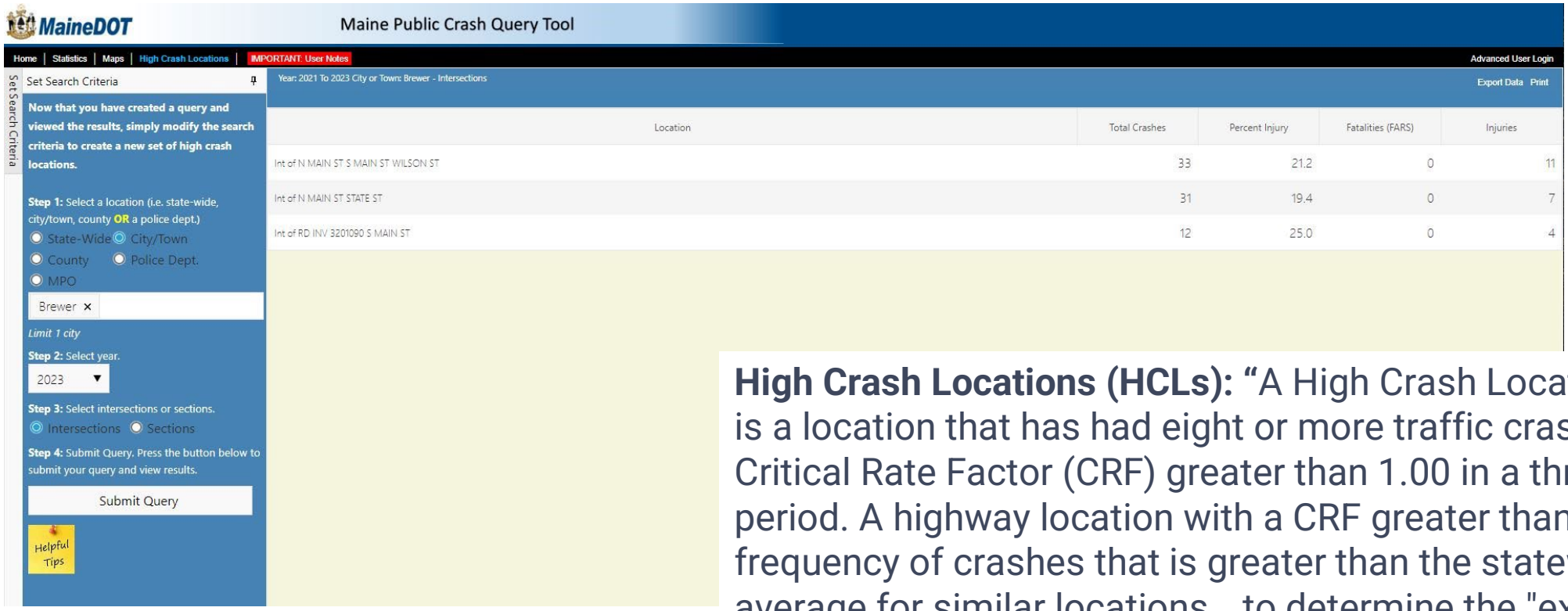
Study Areas

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT



High Crash Locations (HCLs): "A High Crash Location (HCL) is a location that has had eight or more traffic crashes and a Critical Rate Factor (CRF) greater than 1.00 in a three-year period. A highway location with a CRF greater than 1.00 has a frequency of crashes that is greater than the statewide average for similar locations… to determine the "expected crash rate" as compared to similar intersections in the State of Maine..."

– Androscoggin Transportation Resource Center

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Study Areas

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT

High Crash Locations in Study Areas (2020 – 2023):

- North Main Street / South Main Street at Wilson Street
- North Main Street at State Street
- North Main Street between State Street and Holyoke Street
- South Main Street between Wilson Street and Brimmer Street
- South Main Street at I-395 Exit 4 Interchange

Heat Map is most recent 10 years of data (2014-2023)

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Study Areas – Focus of RSA

BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT

Morning Field Visit Area

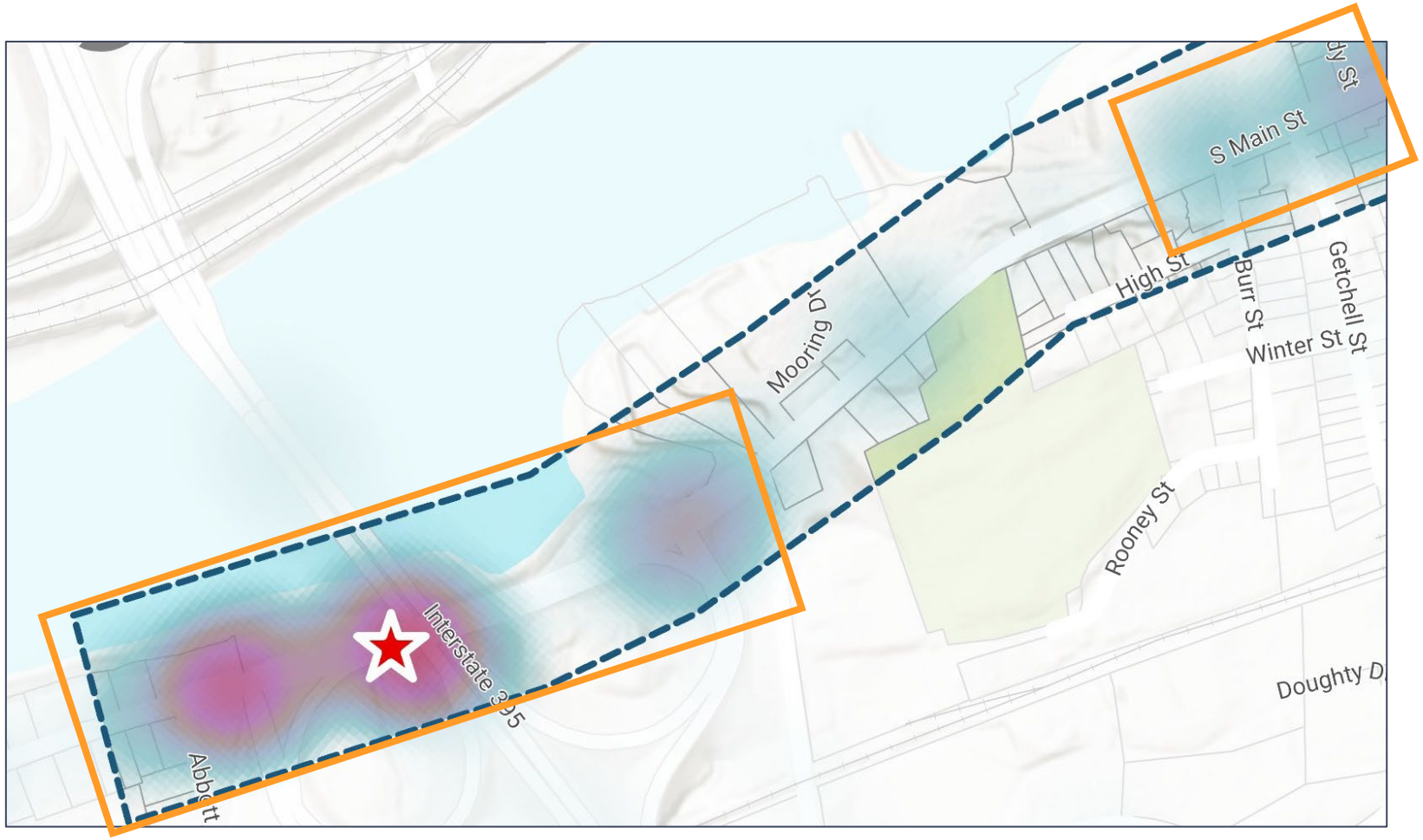
- North Main Street at State Street
- North Main Street between State Street and Holyoke Street
- North Main Street at Center Street
- North Main Street and Benton Street / Parker Street

Afternoon Field Visit Area

- Main Street at Wilson Street
- South Main Street at Brimmer Street

Study Areas – Focus of RSA

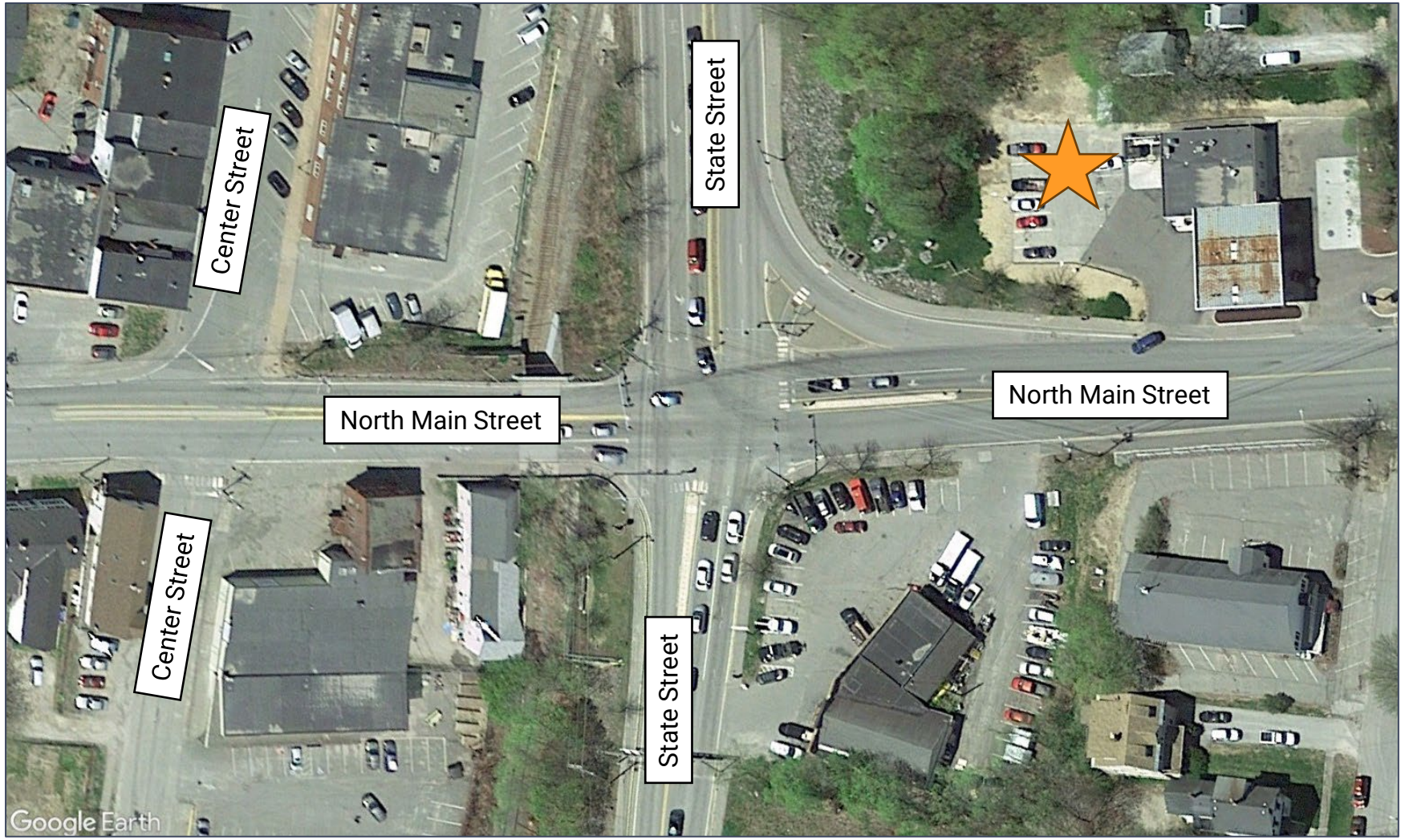
BREWER VPI & SOUTH MAIN STREET ROAD SAFETY AUDIT



Afternoon Field Visit Area (cont.)

- South Main Street at Maple Street /Hardy Street / Gretchell Street / Burr Street (Segment)
- South Main Street, from Industrial Park to Abbott Street (incl. I-395 Exit 4 Interchange)

Study Area – North Main Street at State Street



Crash Summary (2019 – 2023):

- 55 total crashes
  - 13.75 crashes per year
- 9 injury Crashes
  - 16.4 percent

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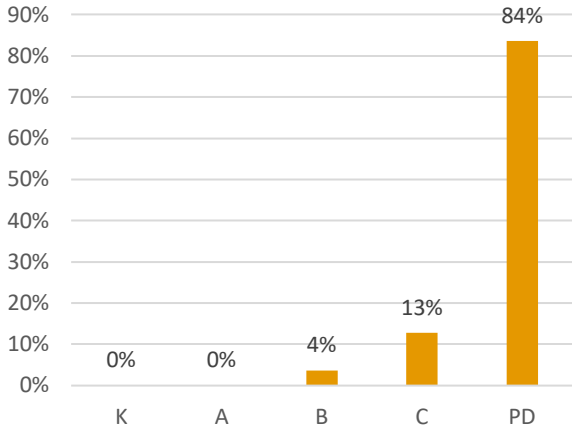
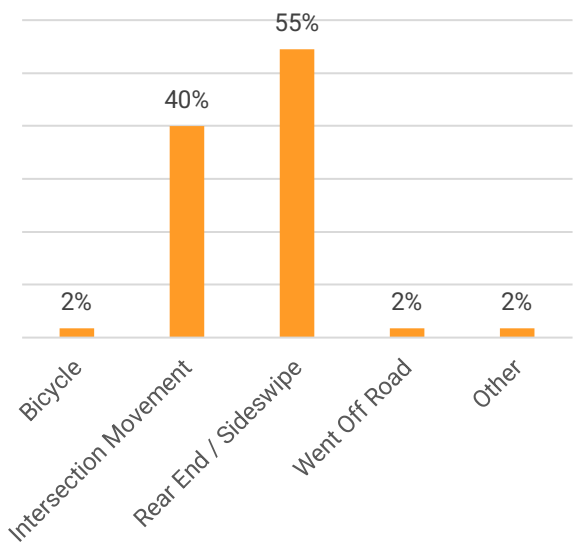
Study Area – North Main Street at State Street

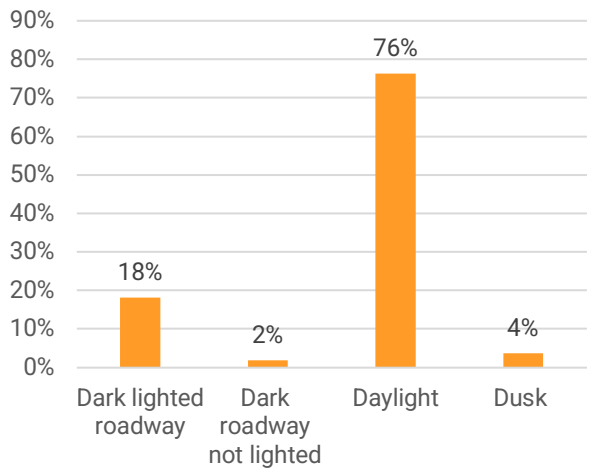
CRASH SEVERITY



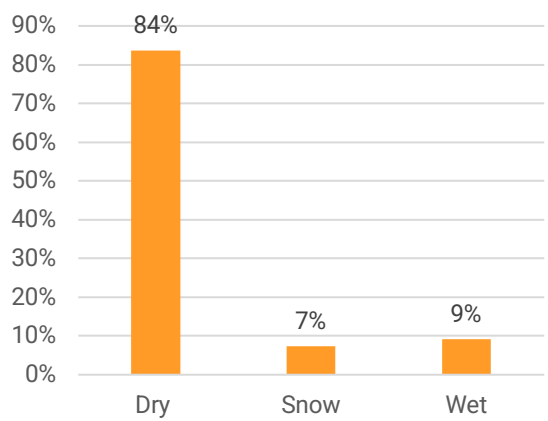
TYPE OF CRASH



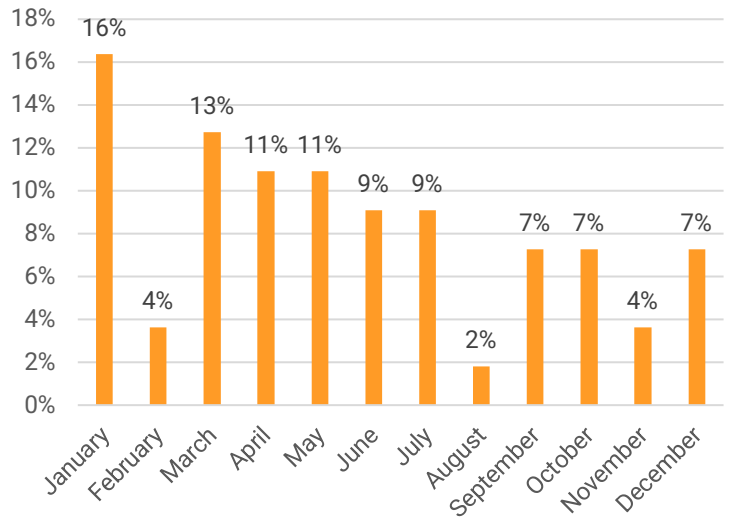
CRASH LIGHT CONDITION



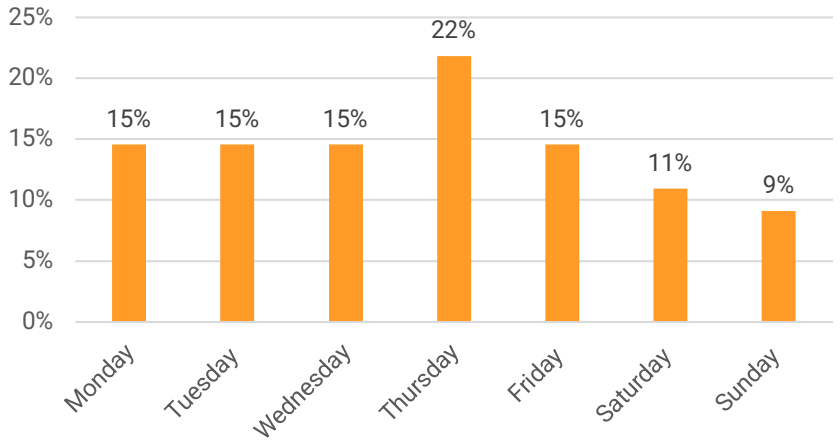
CRASH ROAD SURFACE



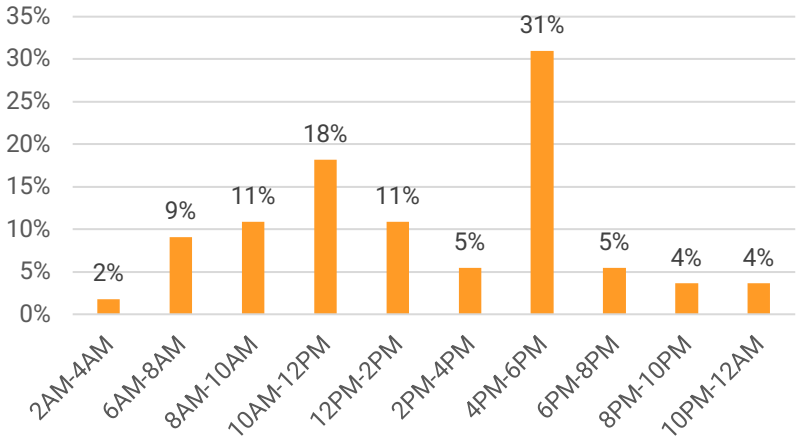
CRASH MONTH



DAY OF WEEK



CRASH TIME OF DAY



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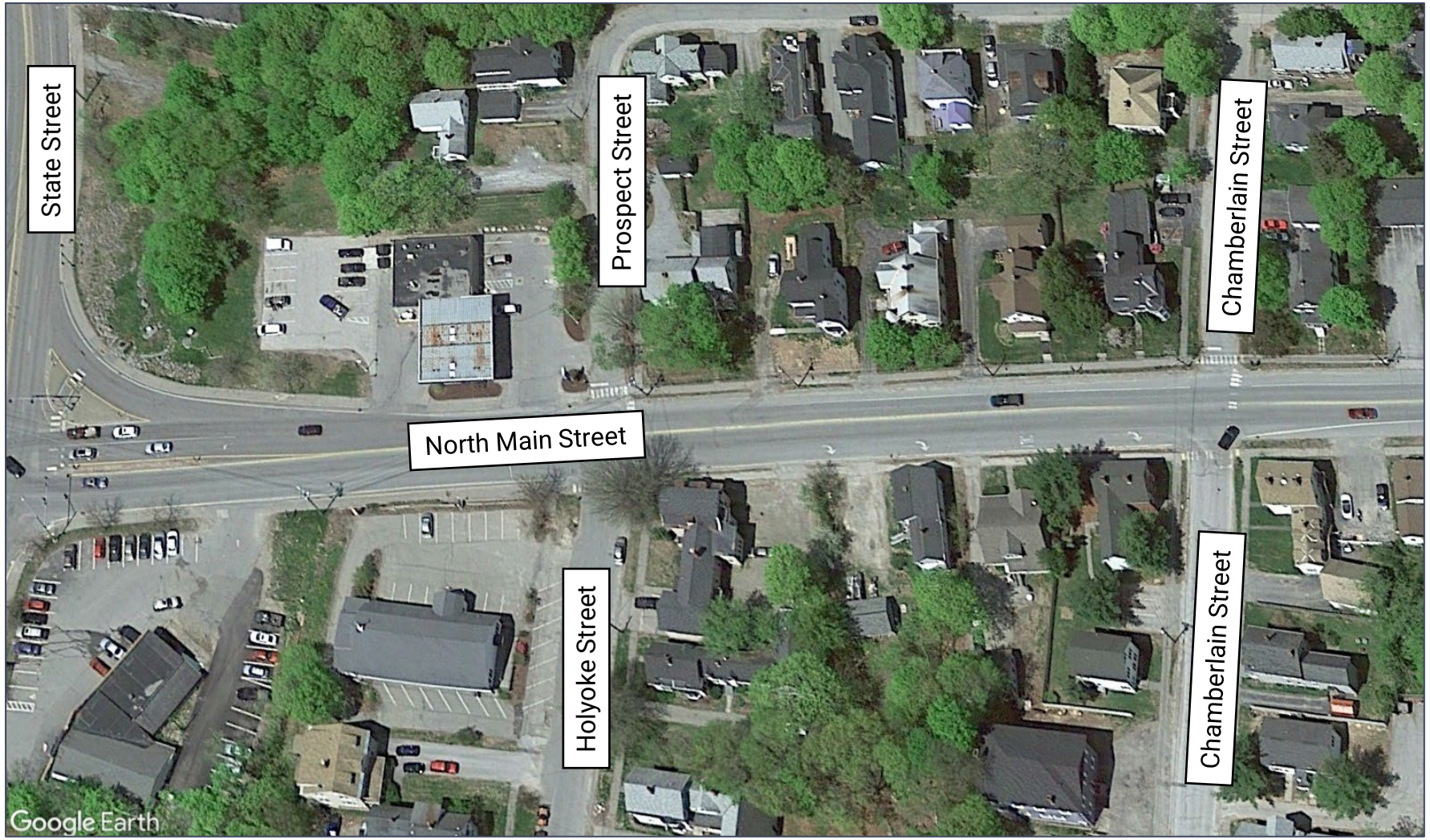
Study Area – North Main Street from State Street to Chamberlain Street



Crash Summary (2019 – 2023):

- 22 total crashes
  - 5.5 crashes per year
- 2 injury crashes
  - 9 percent

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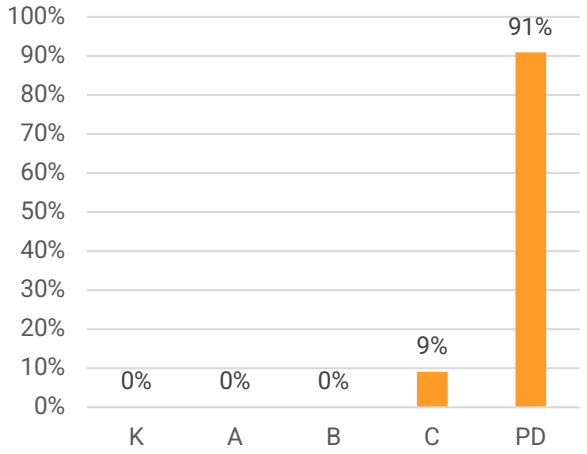
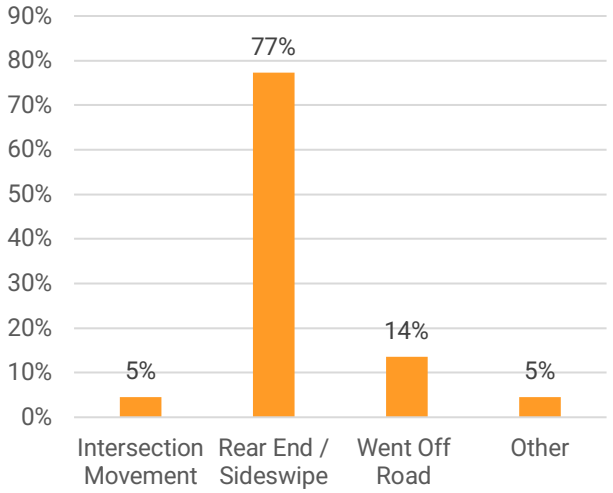
Study Area – North Main Street from State Street to Chamberlain Street

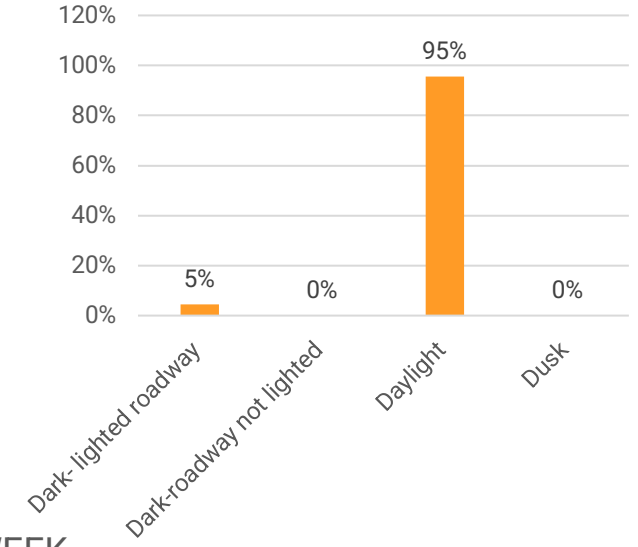
CRASH SEVERITY



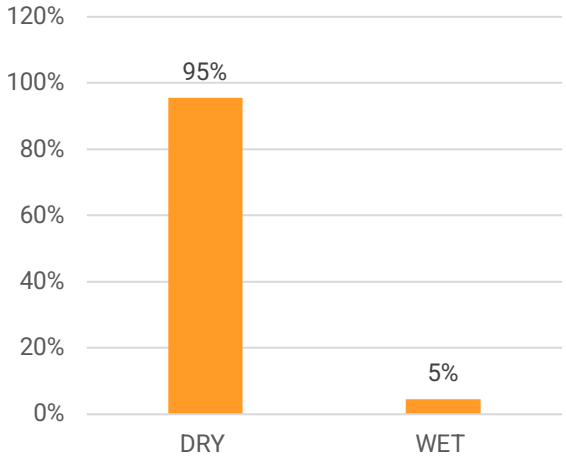
TYPE OF CRASH



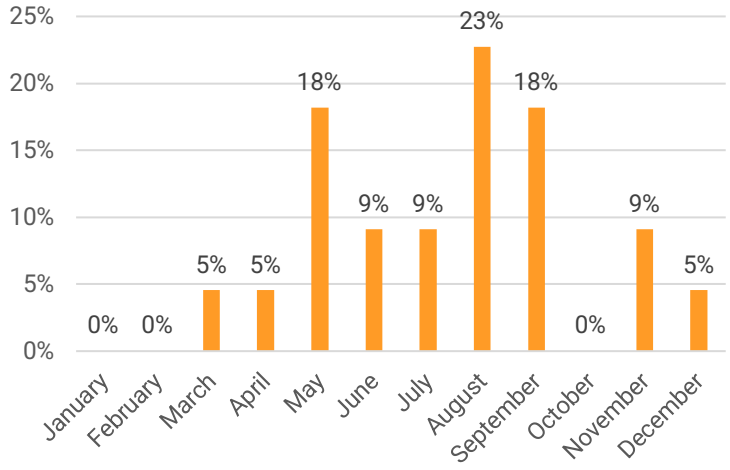
CRASH LIGHT CONDITION



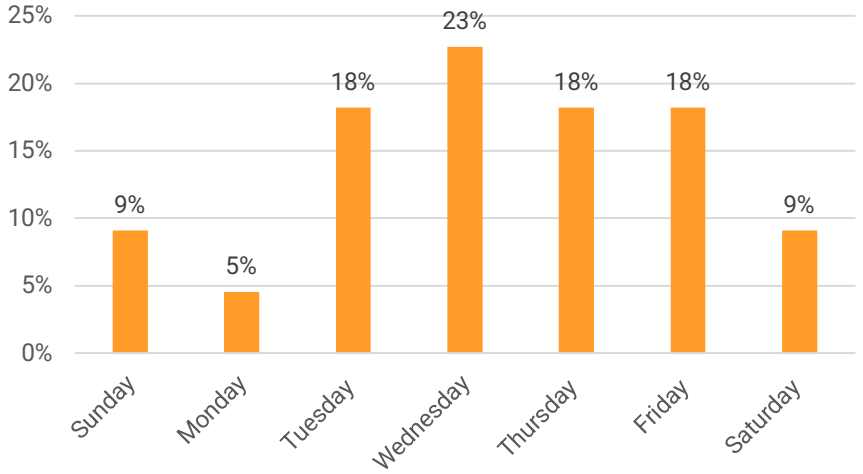
CRASH ROAD SURFACE



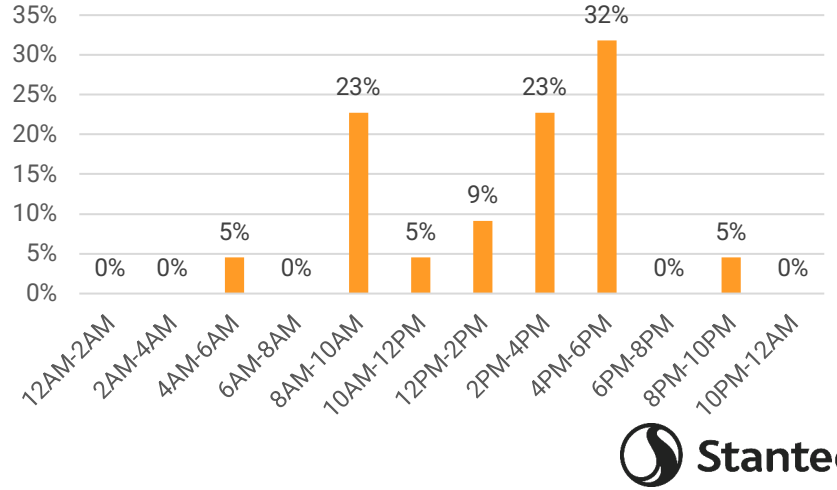
CRASH MONTH



DAY OF WEEK



CRASH TIME



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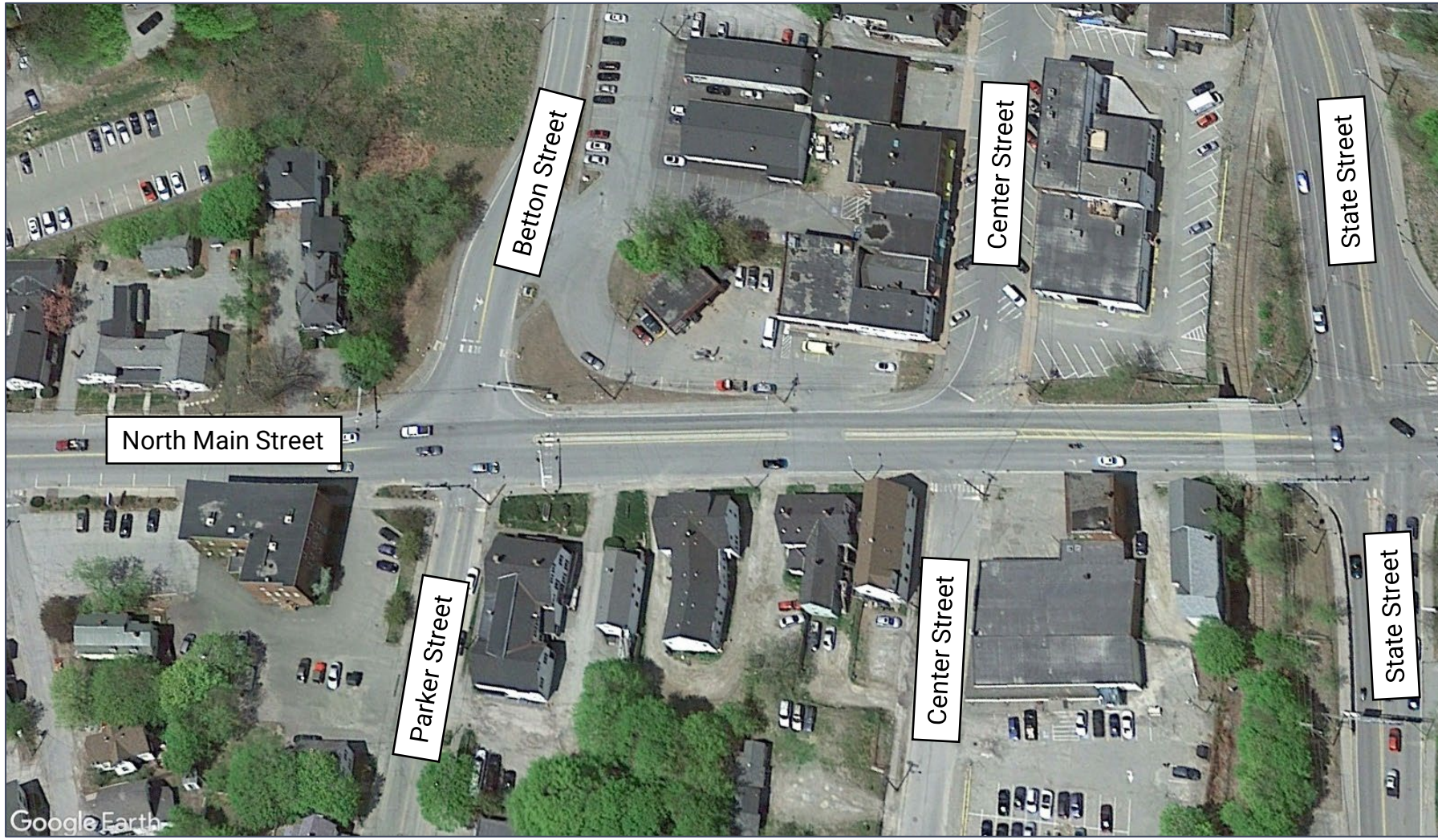
Study Area – North Main Street from State Street to Betton / Parker Street



Crash Summary (2019 – 2023):

- 44 total crashes
  - 11 crashes per year
- 8 injury crashes
  - 18 percent
  - All eight noted at the intersection of North Main Street and Betton Street / Parker Street

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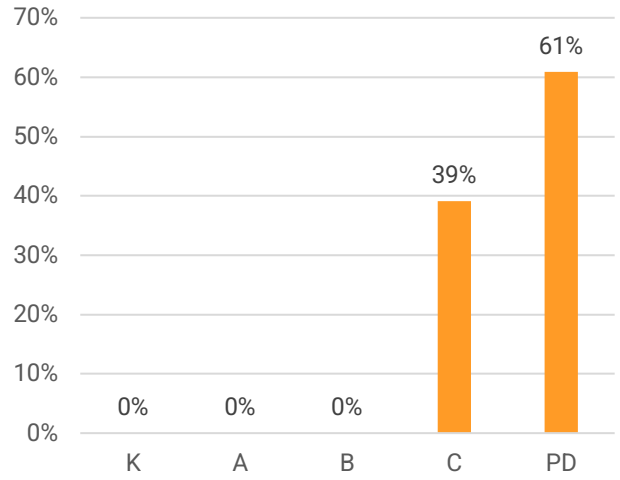
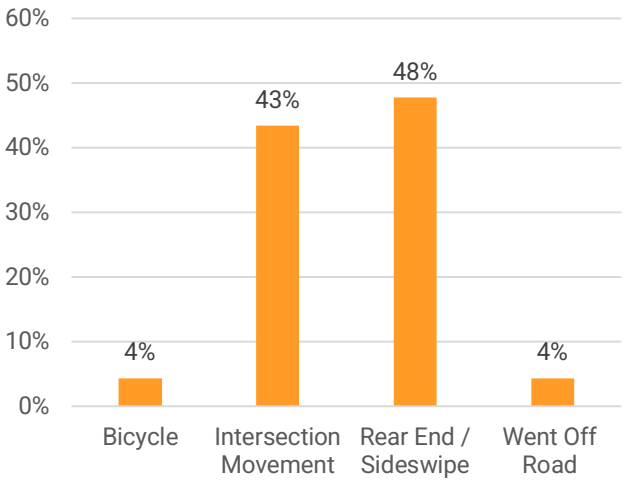
Study Area – North Main Street from State Street to Betton / Parker Street

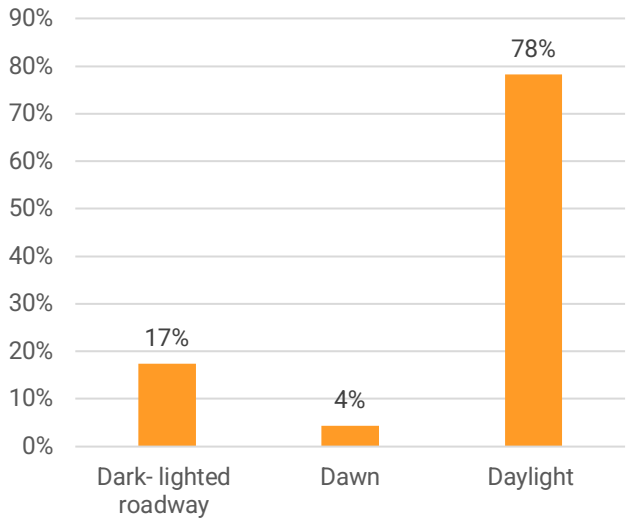
CRASH SEVERITY



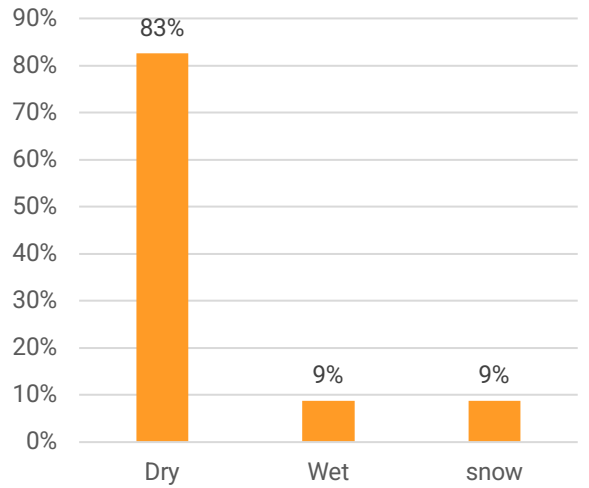
TYPE OF CRASH



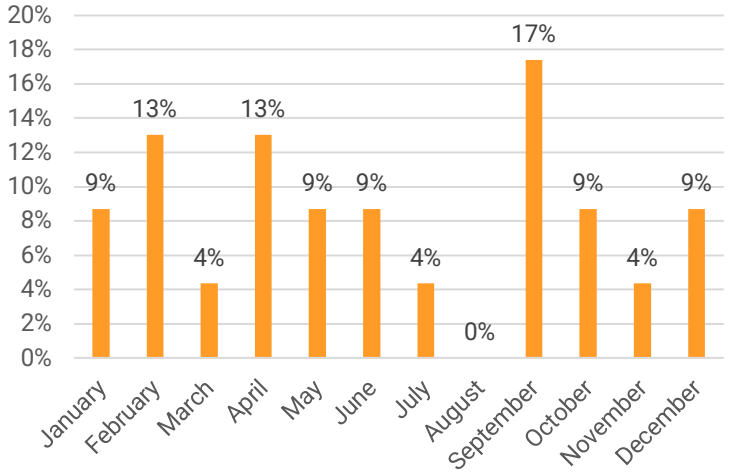
CRASH LIGHT CONDITION



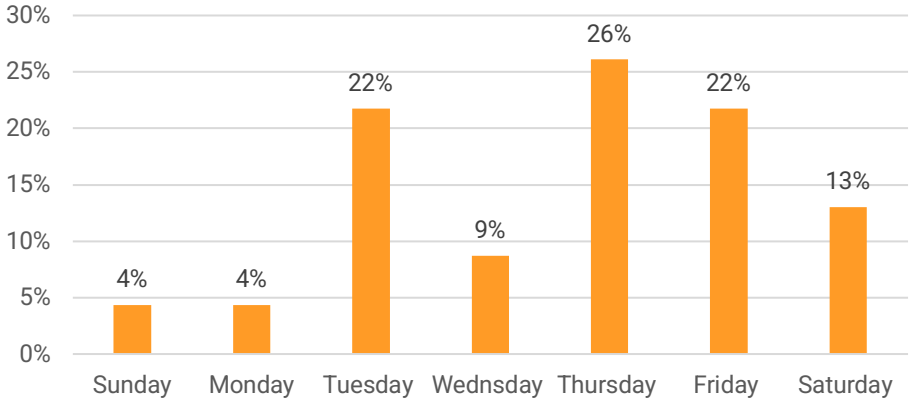
CRASH ROAD SURFACE



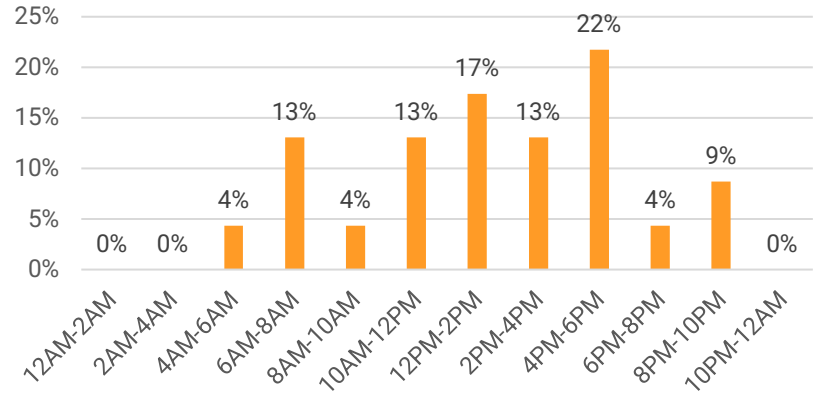
CRASH MONTH



DAY OF WEEK



CRASH TIME



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Field Visit for Audit

Prompt Sheets Available

Things to consider - GORE

- Geometric attributes and condition of roadway
- Operations - Traffic movements, signs, pavement markings, lighting
- Road Users - All possible users and their needs
- Environment - effect of weather, vegetation and flooding

Field Visit for Audit

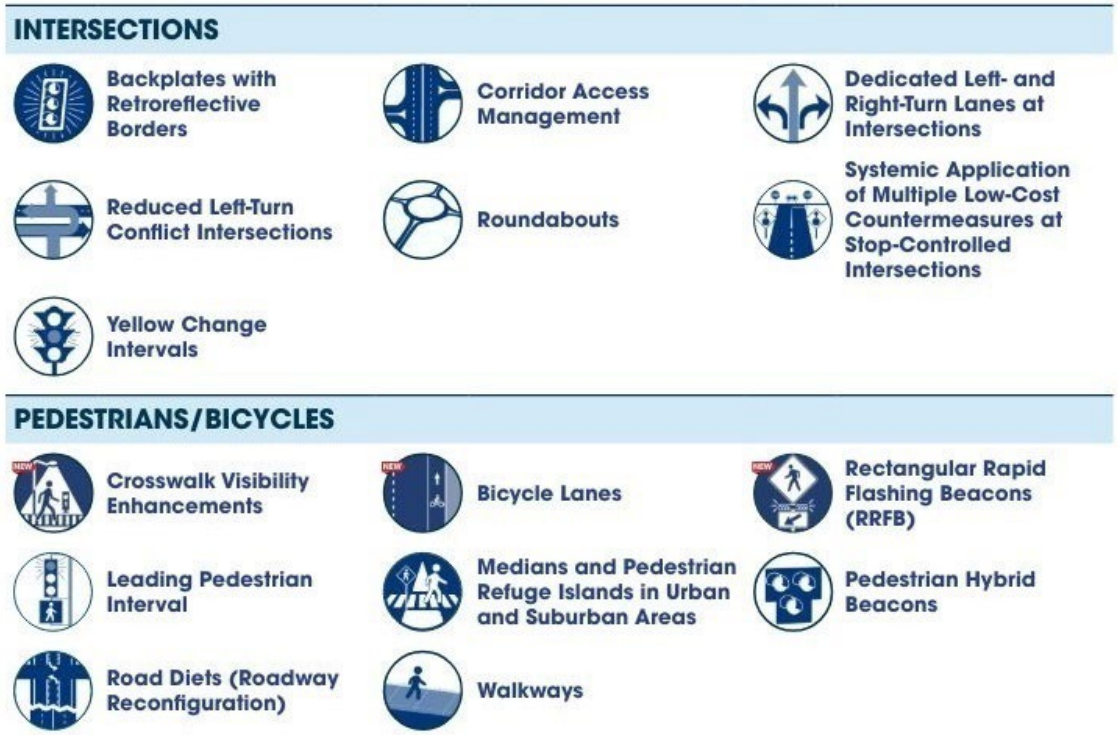
Stay Together as a Group

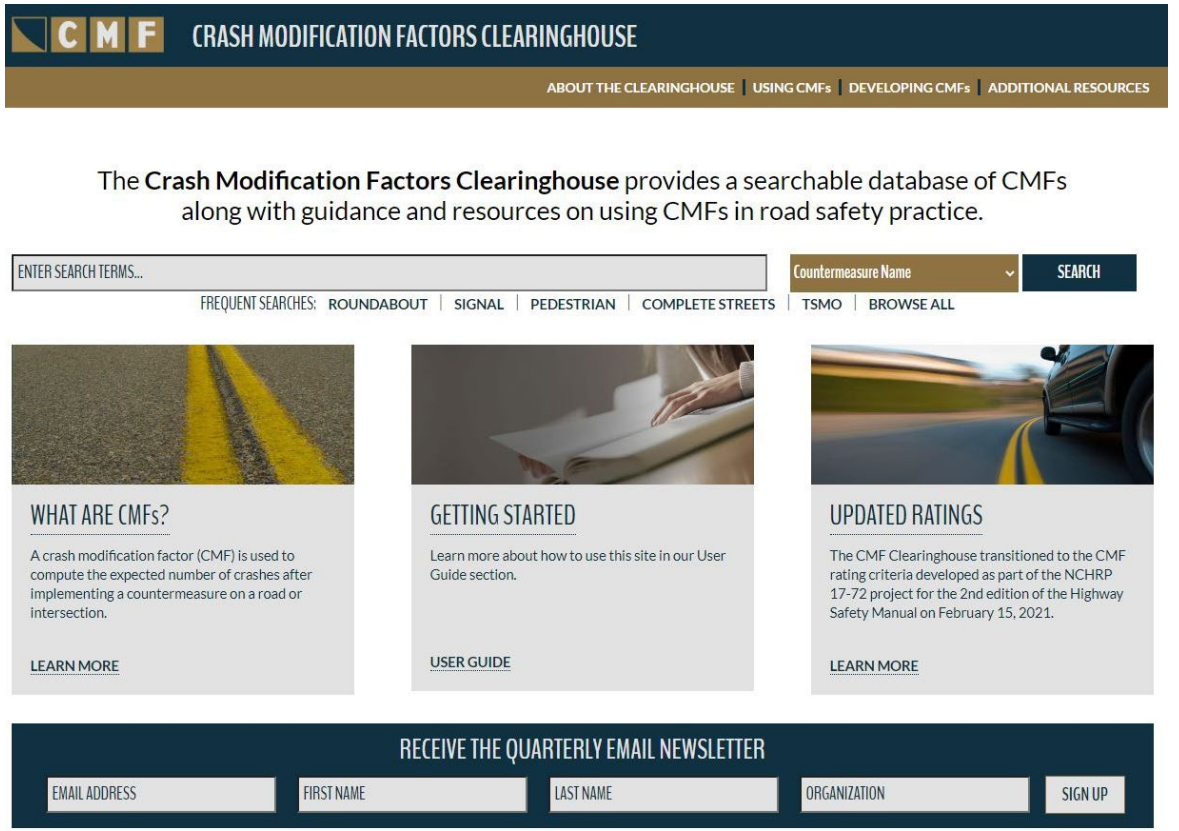
- Promote Group Discussion

Safety First

- Wear a safety vest
- Be careful of traffic, roadside ditches, culverts, manholes and vegetation
- Do not block vehicle sight lines
- Be aware of your surroundings
- Try not to distract

Countermeasure Tools and Guidance





https://highways.dot.gov/safety/proven-safety-countermeasures/search

https://www.cmfclearinghouse.org/index.php

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Field Visit Recap – North Main Street at State Street

Pros

- *Dot/Brewer have implemented ped improvements using signs and signal equipment. No Right Turn on Red*
- *Adaptive Signals – This Month*
- *City – Wayfinding Signs*
- *Pedestrian Crossings across available legs*
- *Restricted Left-Turns – Based sightlines*

Cons

- *Drainage – Crossing Locations*
- *ADA – Sidewalk grades / condition of sidewalk*
- *Geometry – Grades for all approaching legs*
- *Lighting*
- *Uneven queuing for State Street EB Left Turns*
- *Uneven use of North Main Street NB Through and Through-Right*

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Study Area – North Main Street from State Street to Chamberlain Street

Pros

- *Pedestrian Crossings – heavily preferred/used*
- *Ped Signs*
- *Pavement to work with*
- *Freight Plan in 2 Years*

Cons

- *Ped Signs need to be per MUTCD dimensions*
- *Pedestrian Scale Lighting / Character Lighting*
- *Needs Gateway*
- *Freight Plan from early 2000s*
- *Proximity of crosswalk and gas station entrance*

Study Area – North Main Street from State Street to Betton / Parker Street

Pros

- *Center Median*
- *Right-Turn Only from Side Streets*
- *Realigned Betton Street*
- *Cross-Section allows for some modifications*
- *Parker Street – Ped Improvements underway/planned*
- *Historic District*
- *Wayfinding*

Cons

- *U-Turns through median break*
- *Width of mouth of Center Street*
- *Lighting*
- *No Ped/Bike Crossing, however people cross anyway/jaywalk*
- *Median signs and other ways to delineate median*
- *Grades!!!*
- *Evaluate Center Street and Parker Street improving ped/bike circulation and connection to Riverwalk*
- *Wayfinding*
- *Ped Signs need to be per MUTCD dimensions*

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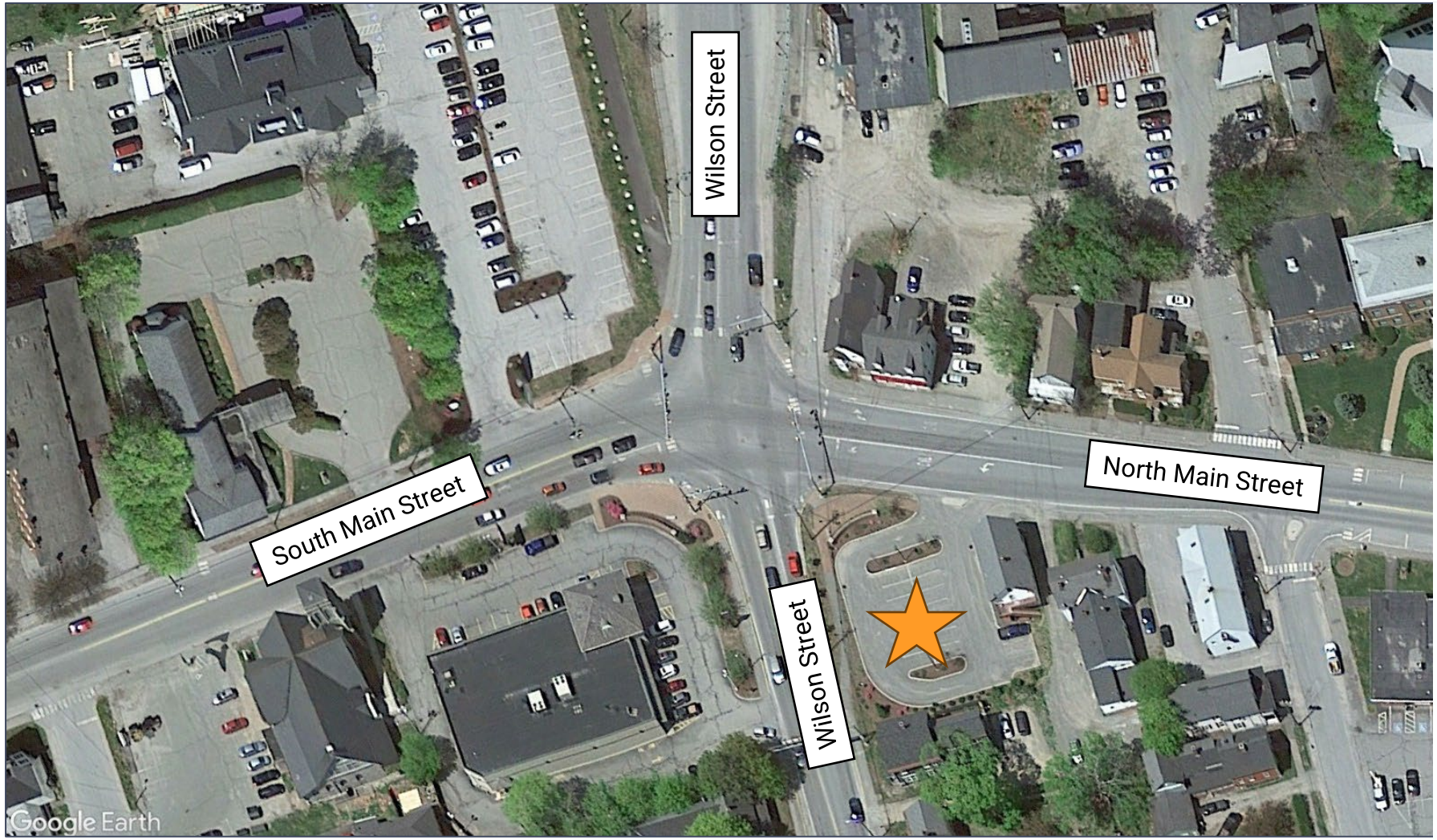
Study Area – North Main Street / South Main Street at Wilson Street



Crash Summary (2019 – 2023):

- 53 total crashes
  - 13.25 crashes per year
- 11 injury Crashes
  - 21 percent

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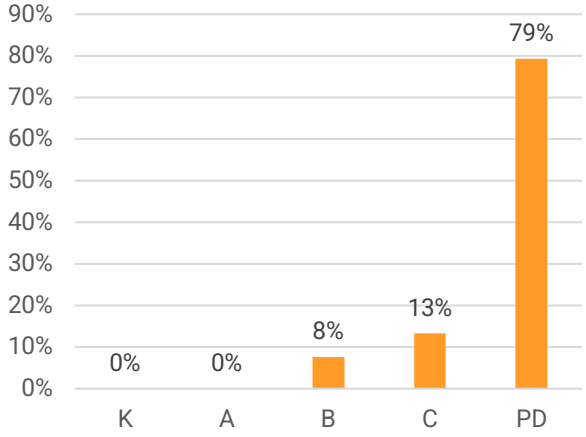
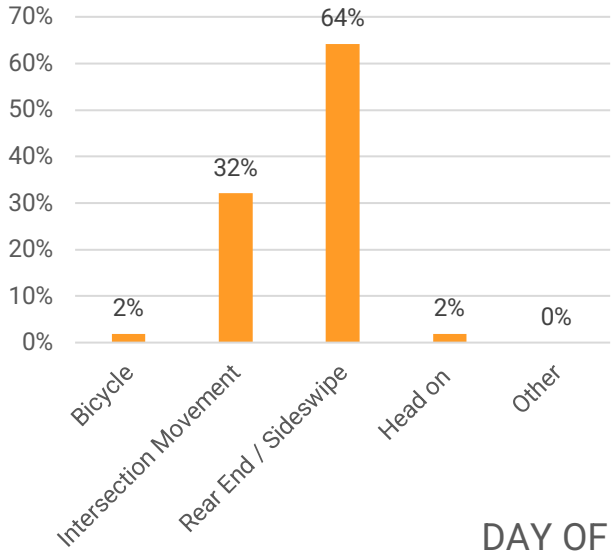
Study Area – North Main Street / South Main Street at Wilson Street

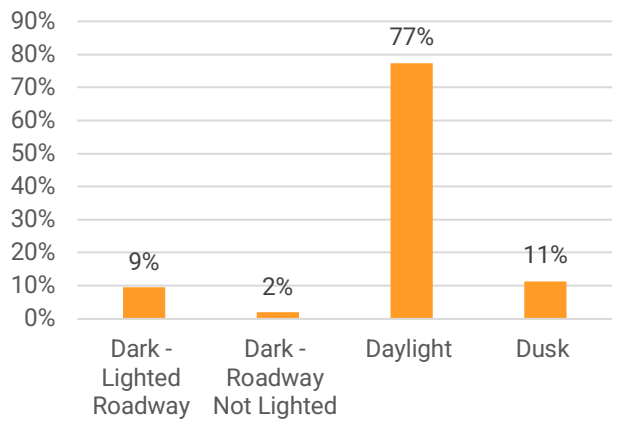
CRASH SEVERITY



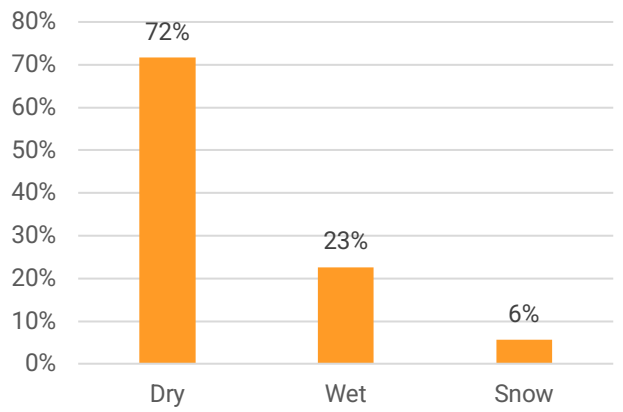
TYPE OF CRASH



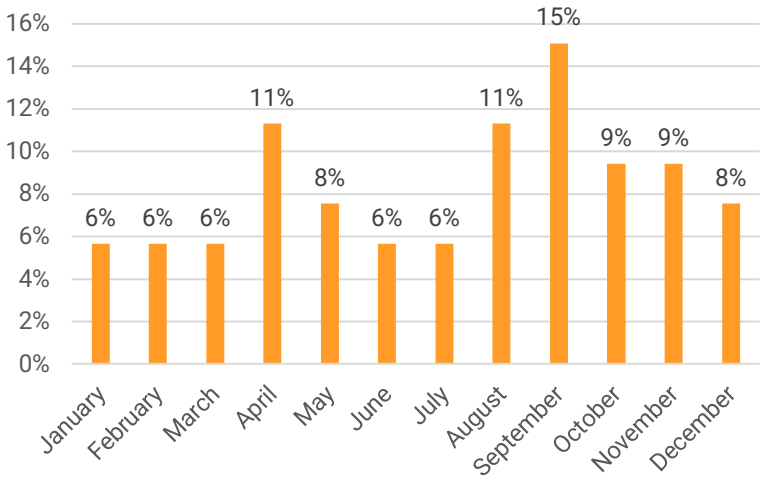
CRASH LIGHT CONDITION



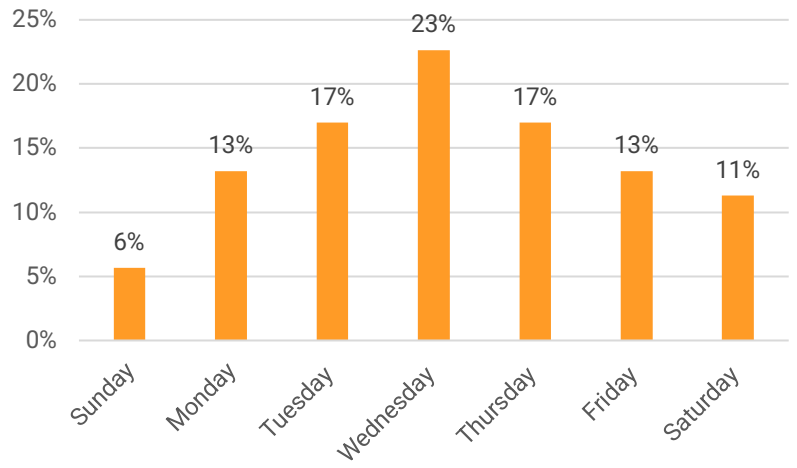
CRASH ROAD SURFACE



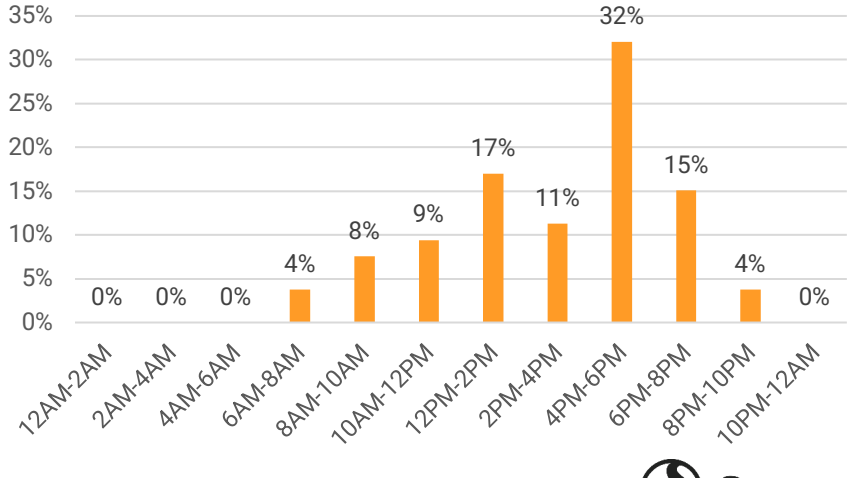
CRASH MONTH



DAY OF WEEK



CRASH TIME



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Study Area – South Main Street from Wilson Street to Brimmer Street and School Street

Crash Summary (2019 – 2023):

- 28 total crashes
  - 7 crashes per year
- 7 injury crashes
  - 25 percent

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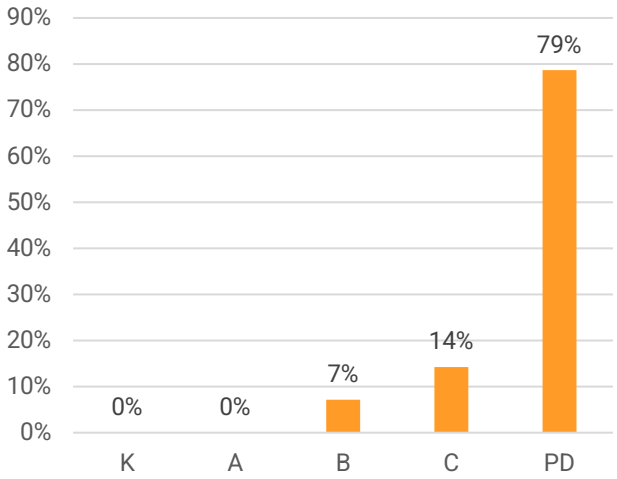
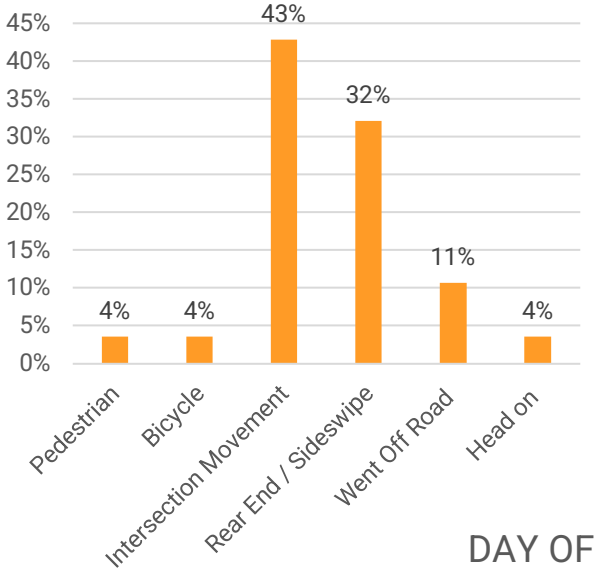
Study Area – South Main Street from Wilson Street to Brimmer Street and School Street

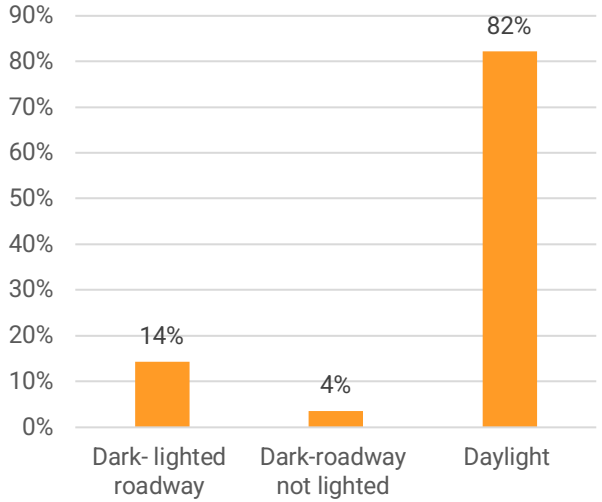
CRASH SEVERITY



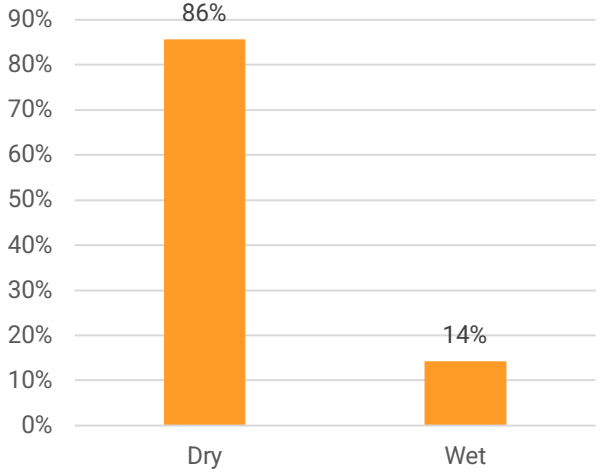
TYPE OF CRASH



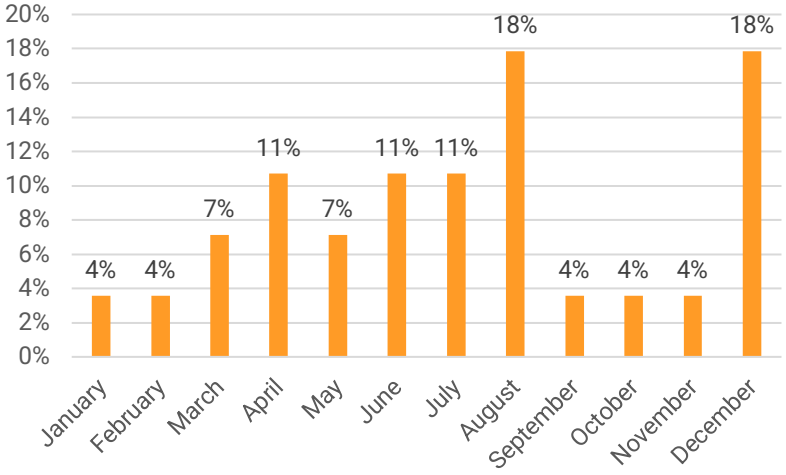
CRASH LIGHT CONDITION



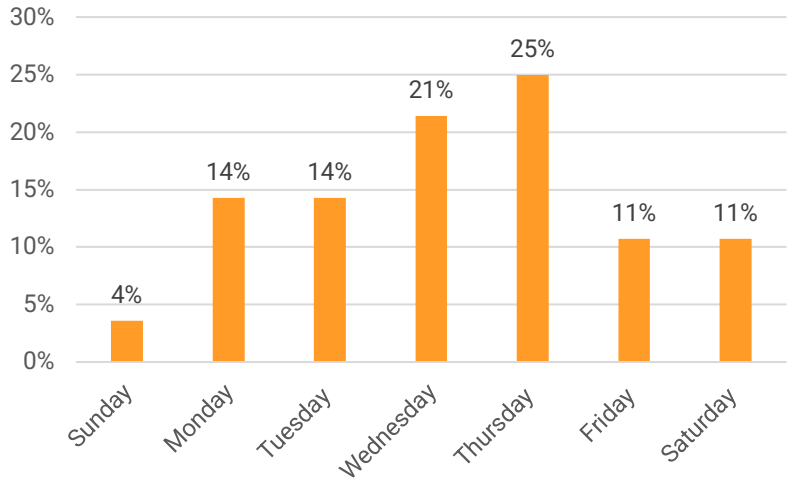
CRASH ROAD SURFACE



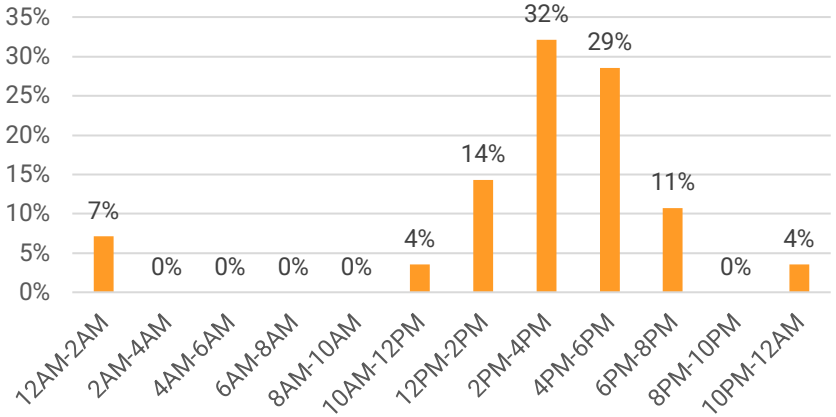
CRASH MONTH



DAY OF WEEK



CRASH TIME



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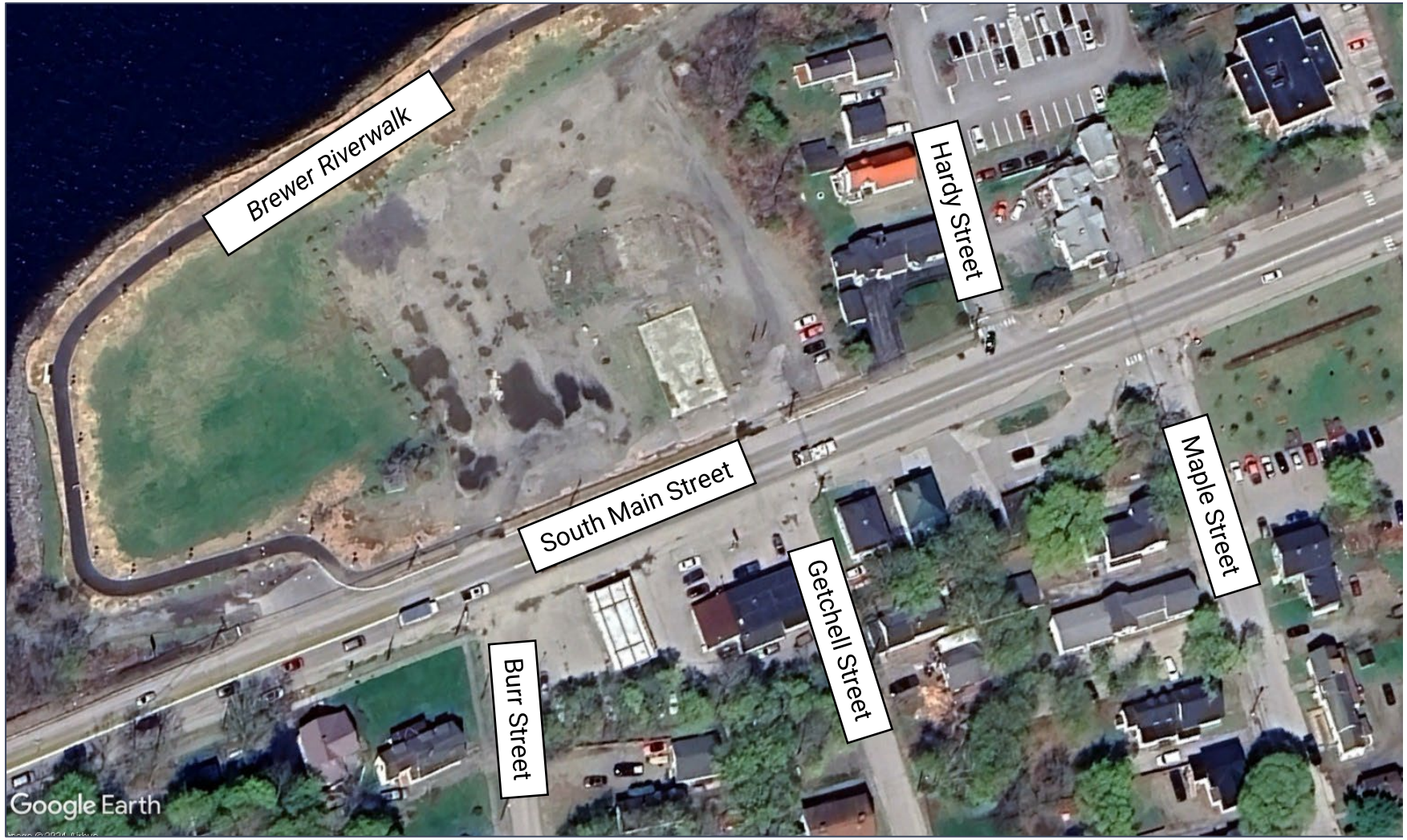
Study Area – South Main Street from Maple Street to Burr Street and Riverwalk Terminus



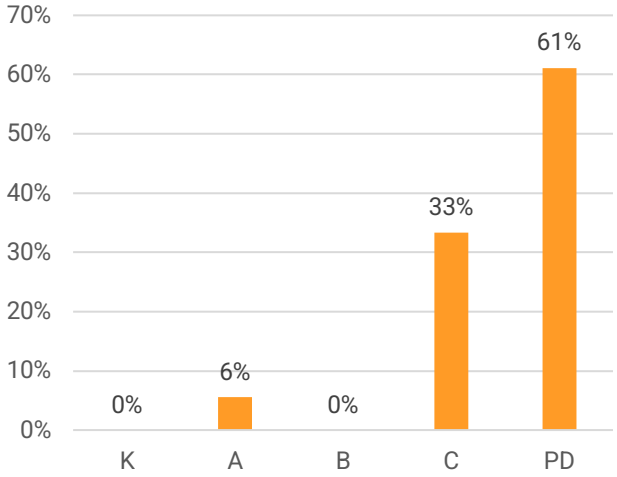
Crash Summary (2019 – 2023):

- 18 total crashes
  - 4.5 crashes per year
- 7 injury crashes
  - 39 percent

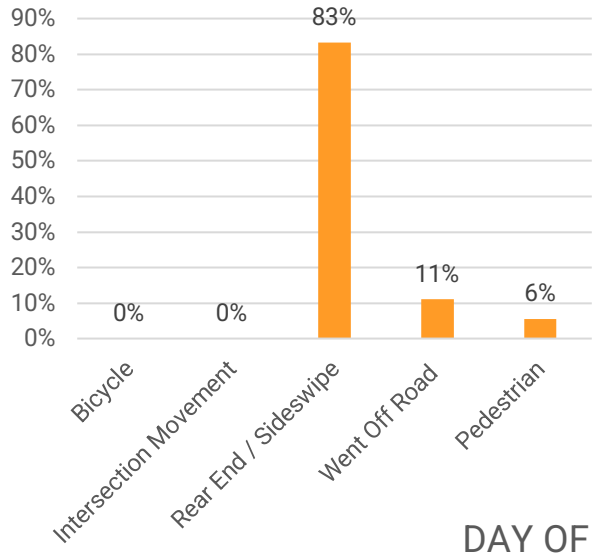
Stantec

Study Area – South Main Street from Maple Street to Burr Street and Riverwalk Terminus

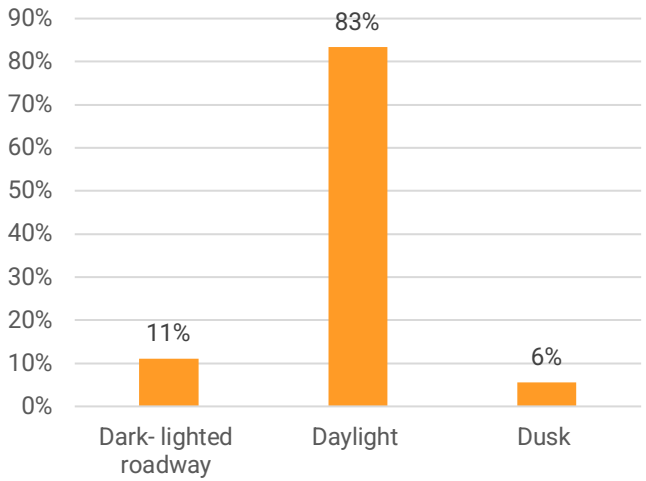
CRASH SEVERITY



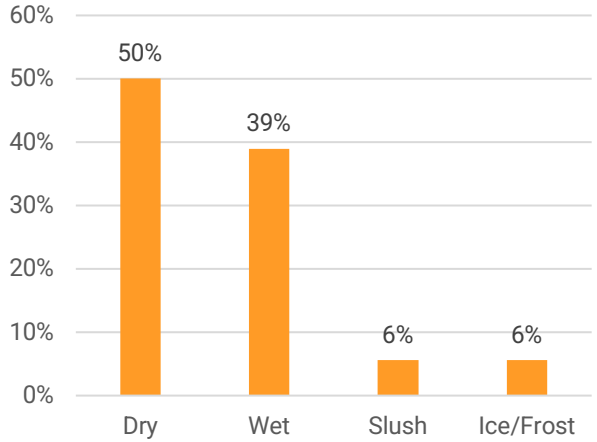
TYPE OF CRASH



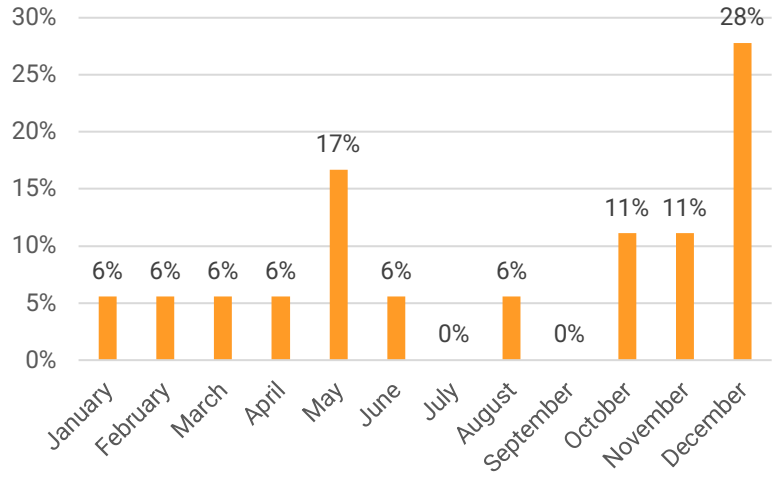
CRASH LIGHT CONDITION



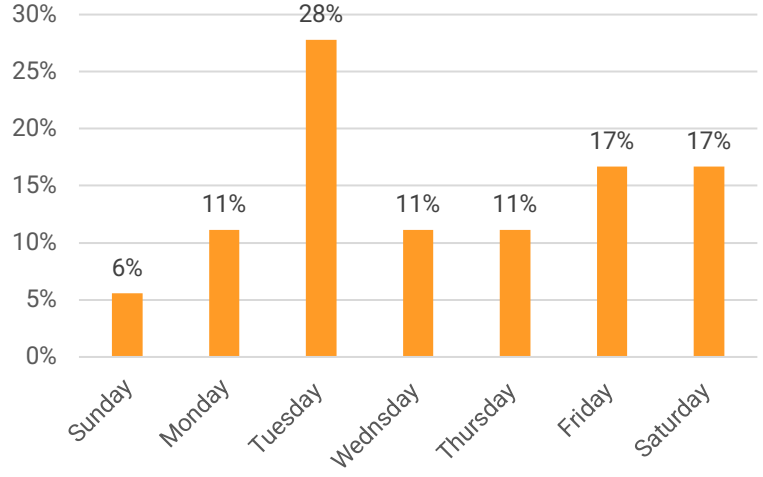
CRASH ROAD SURFACE



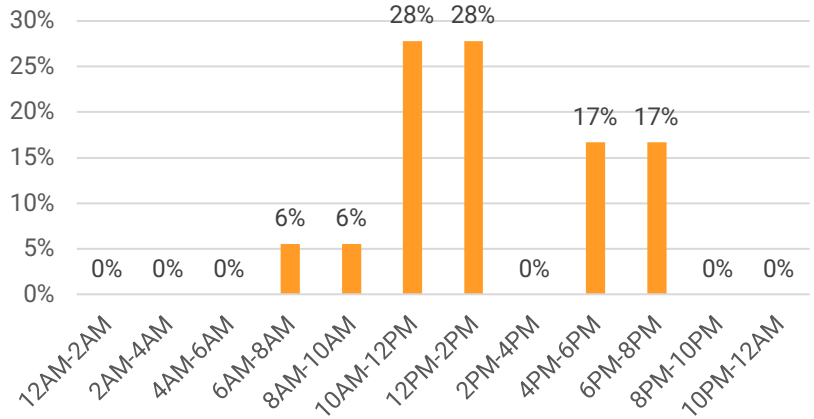
CRASH MONTH



DAY OF WEEK



CRASH TIME



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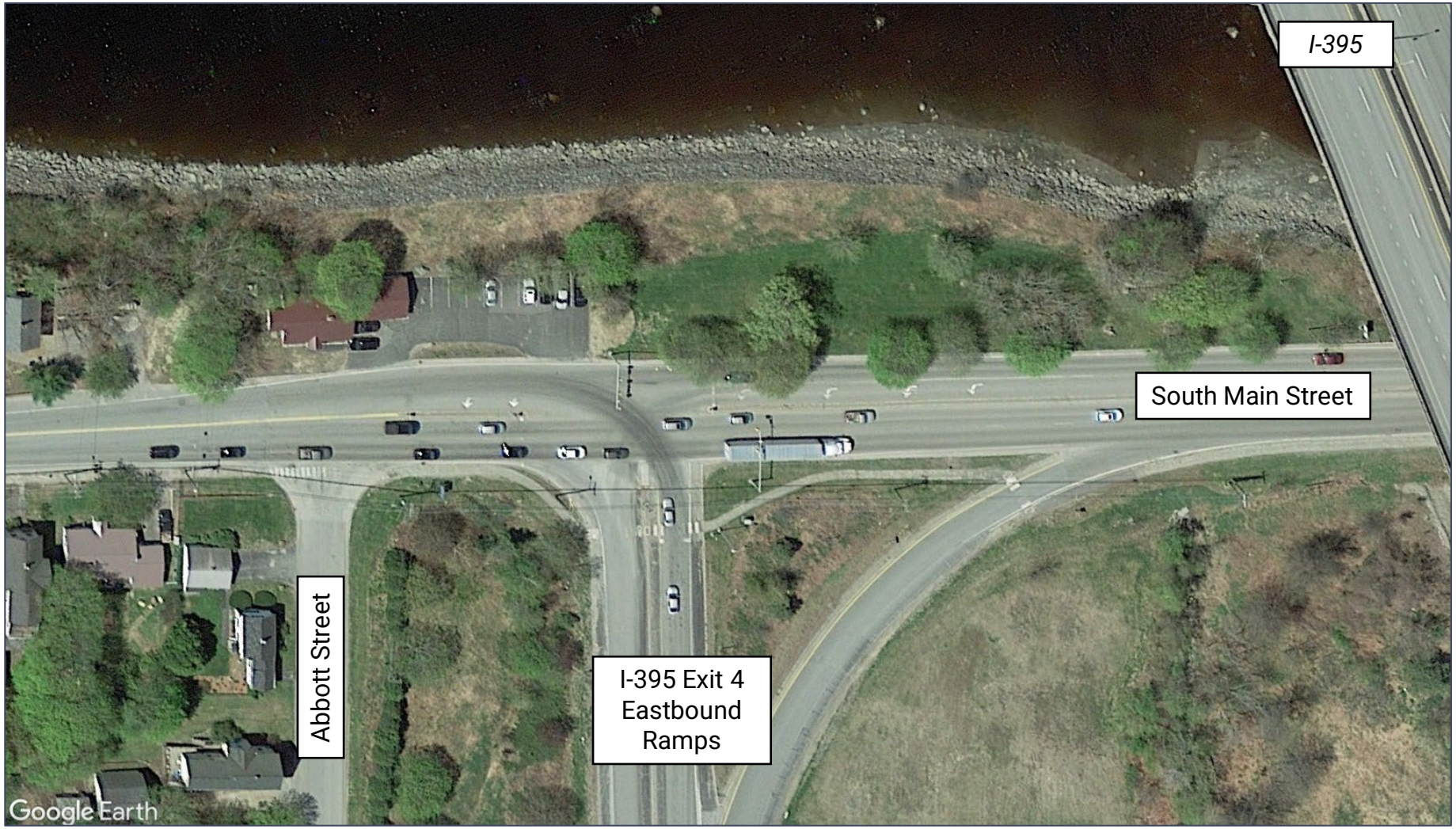
Study Area – South Main Street from Industrial Park to Abbott Street (incl. I-395 Interchange)

Crash Summary (2019 – 2023):

- 25 total crashes
  - 6.25 crashes per year
- 4 injury crashes
  - 16 percent

Stantec

Study Area – South Main Street from Industrial Park to Abbott Street (incl. I-395 Interchange)



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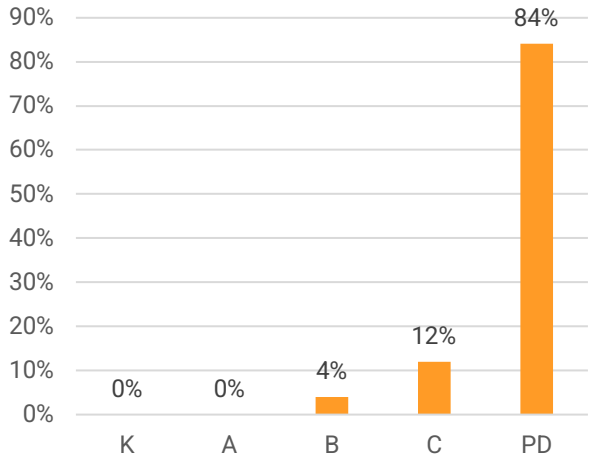
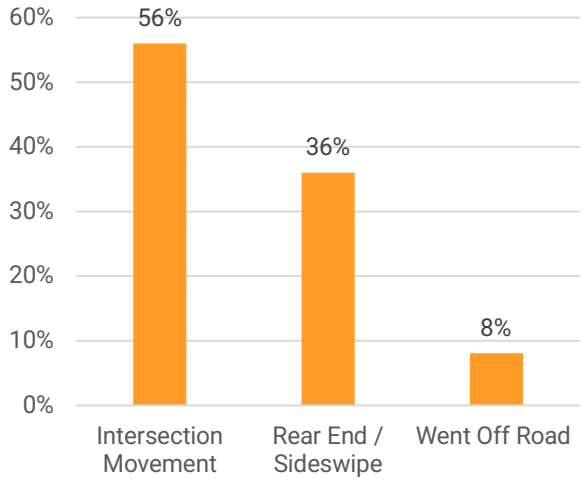
Study Area – South Main Street from Industrial Park to Abbott Street (incl. I-395 Interchange)

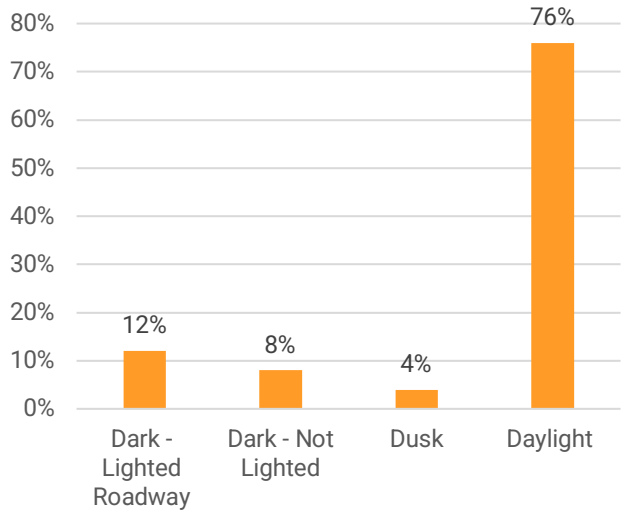
CRASH SEVERITY



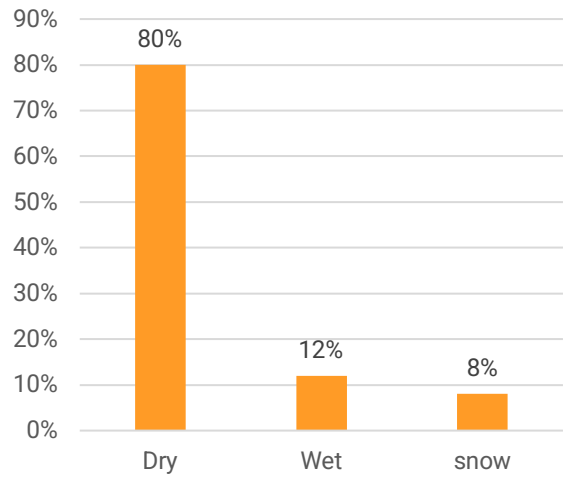
TYPE OF CRASH



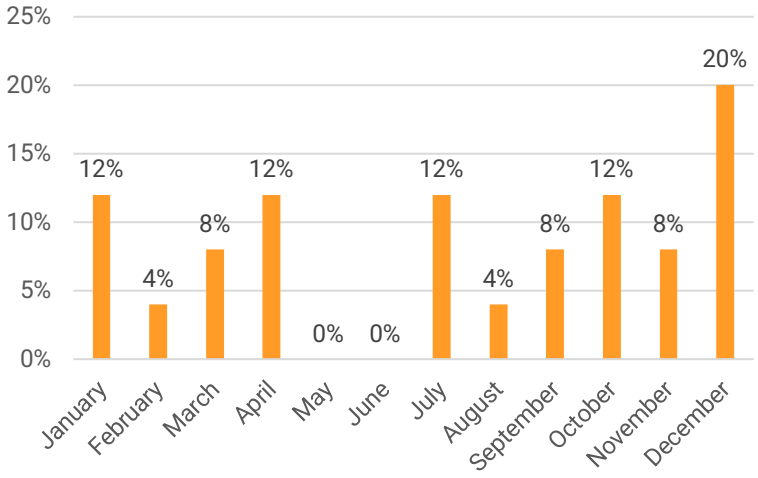
CRASH LIGHT CONDITION



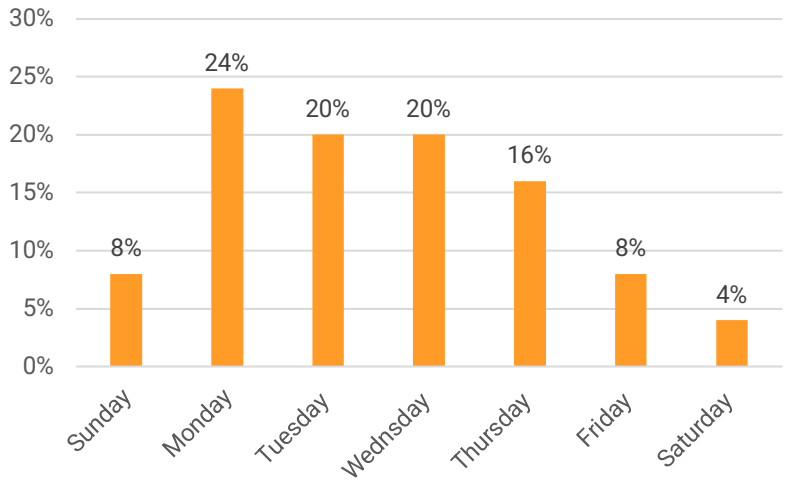
CRASH ROAD SURFACE



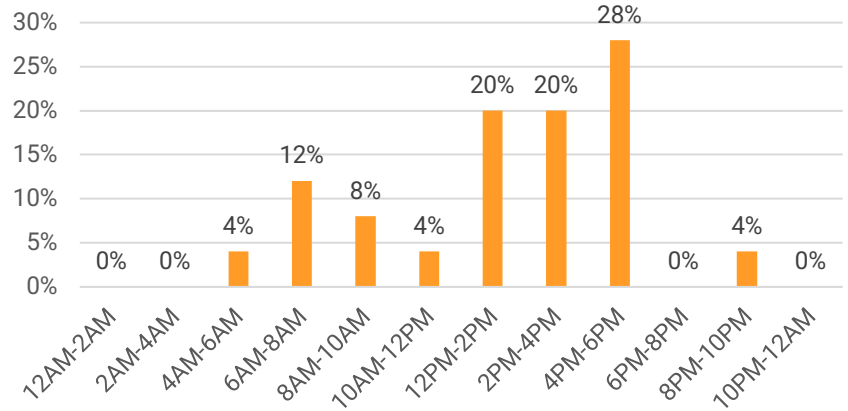
CRASH MONTH



DAY OF WEEK



CRASH TIME



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Study Area – North Main Street / South Main Street at Wilson Street

Pros

- *Pedestrian Crossings on All Side*
- *Access to Riverwalk*
- *Access to City-owned parking*
- *City provided wayfinding signs*
- *Roadway is wide enough to work with*
- *City landscaping present*
- *Efforts have been made regarding EV charging locations and policy making*

Cons

- *Pedestrian curb ramps and drainage*
- *Access to/from High Tide, apartment uncontrolled driveway (NW corner)*
- *Roadway width is long for mid-block ped crossings*
- *Placemaking / Gateway is difficult*
- *"Big" intersection with difficult compromises to reduce*
- *Lighting – Consumer survey highlighted this as something to improve*
- *EV Charging – cost prohibitive*

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Study Area – South Main Street from Wilson Street to Brimmer Street and School Street

Pros

- *Roadway is wide enough to work with*
- *RRFB at Hardy*
- *City is working on improvements to Hardy St intersection*
- *Access to Riverwalk*
- *Access to City parking*
- *Access to Library*
- *Relocating crosswalk existing Toziers Market to Library*
- *Mid-block crossings exist and expected by roadway users*
- *Side streets on east side connect along the back*
- *Wayfinding signs exist*
- *Redevelopment in Planning stages encourages re-look into access management along public roadways*
- *Existing City Park on DOT property*

Cons

- *Pedestrian curb ramps and drainage*
- *Mid-block crossings visibility*
- *Mid-block crossings length (roadway width)*
  - *Bumpouts could help with adjacent street parking*
- *Segment is flat – difficult drainage*
- *Difficult utility locations/relocation*
- *Lighting*
- *Brimmer – Offset from Toziers and close to Wilson signal*
  - *Could certain movements be prohibited*
- *Wayfinding to be reviewed as changes occur on corridor*
- *Sidewalk conditions*
  - *Project not improving sidewalks*
- *Solutions for continuing Riverwalk connections*
- *Solutions for parallel South Main Street Riverwalk pathway*
- *Curb management*
- *Lighting – Improve both vehicular and ped-scale*

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Study Area – South Main Street from Industrial Park to Abbott Street (incl. I-395 Interchange)

Pros

- *Crosswalks present along east side*
- *Ped signals at EB ramps*
- *Median present*
- *Trucks/commuters may be diverted due to I-395 Extension*
- *Vision to connect Riverwalk to points south*

Cons

- *Difficult ROW for Riverwalk extension south*
- *Sidewalks only on interchange side (none along river)*
- *Expand, substantiate median on South Main Street*
- *EB Off-Ramp to South Main Street NB – Look into T-ing into S. Main Street for reducing speeds and improving sightlines*
- *No ped crossings of South Main Street*
- *Abbott is close to interchange*
- *Stop line at Industrial is not where they are stopping*
  - *Stopping over crosswalk, may need to relocate both*
- *Sightline issues from Industrial to Main Street southbound due to utility poles and low Stop sign*
- *Main St NB right-turn only lane operations*
- *Trucks/commuters diverting from Main Street to I-395 Extension will be ramp turns instead of Main Street through movements*

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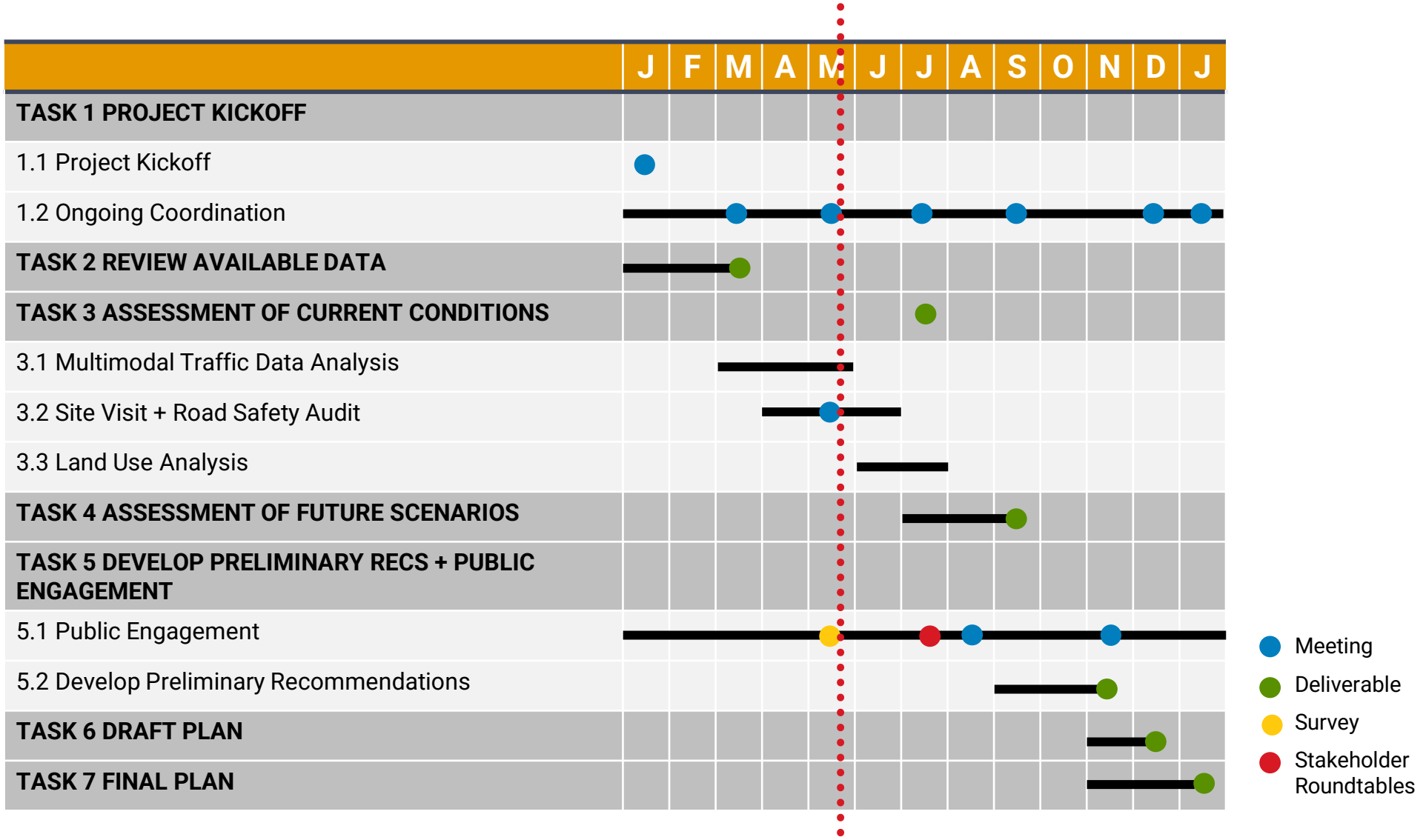
Project Schedule

BREWER VILLAGE PARTNERSHIP INITIATIVE

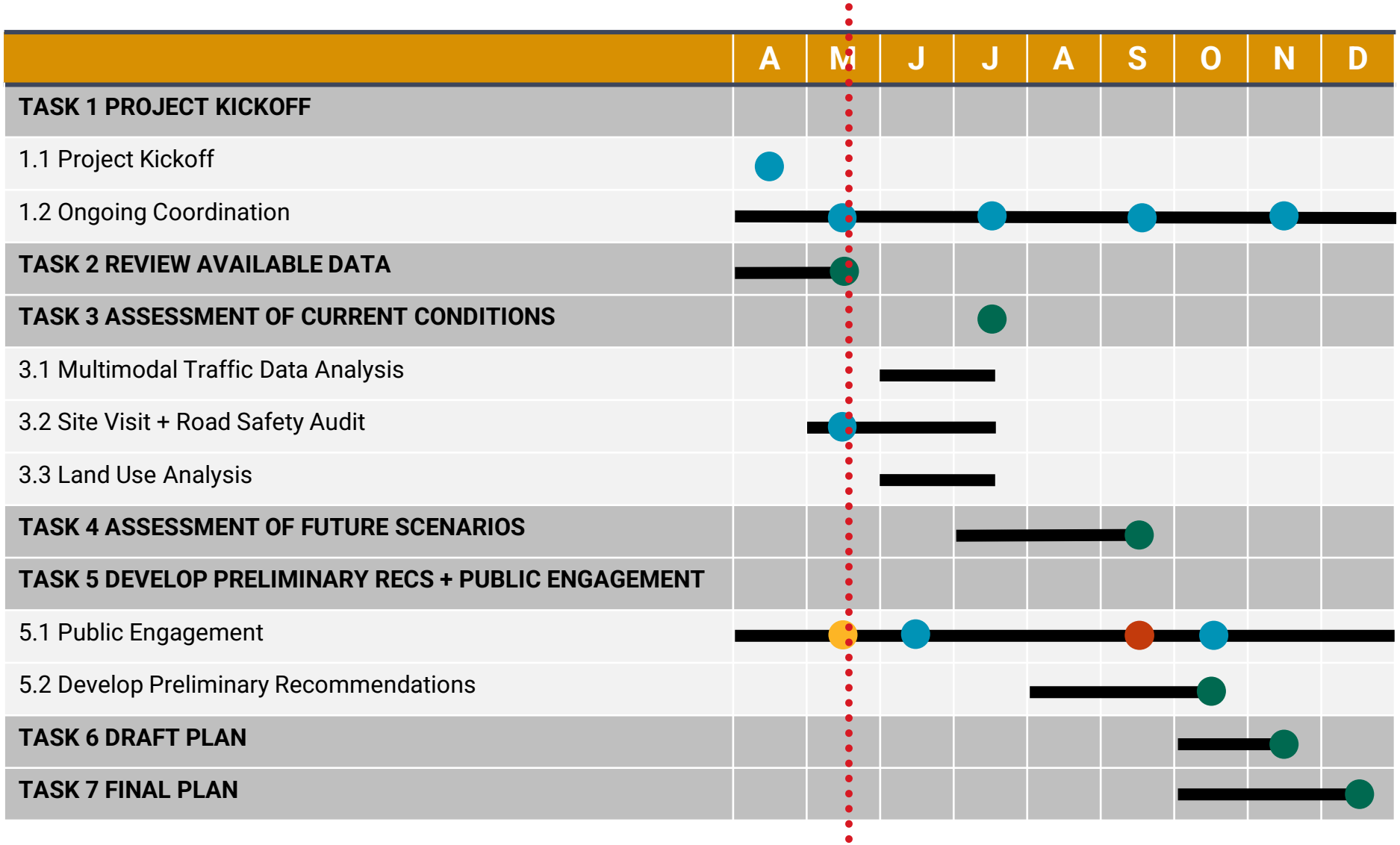
Meeting
Deliverable



Project Schedule

SOUTH MAIN STREET CORRIDOR

Meeting
Deliverable



Meeting
Deliverable
Survey
Stakeholder Roundtables

Thank you for participating!