

Supplemental Traffic Assessment

Date: July 6, 2022

To: Mike Gotto, Owner

Stoneybrook Land Use, Inc.

From: John Q. Adams, PE, PTOE

Associate

Barton & Loguidice, LLC.

Re: Revised Additional Traffic Assessment – Expected Trip Generation, Trip Composition & Crash

Data Analysis

Proposed Five Guys Restaurant 223 Center Street, Auburn, ME

The purpose of this supplemental traffic assessment is to focus on an accurate methodology to predict typical expected peak hour trip generation for the Five Guys Restaurant and to perform a safety analysis of the section of Center Street where the restaurant is located. In this traffic assessment we have reviewed and analyzed trip generation and crash data from Maine DOT.

TRIP GENERATION

In discussing and reviewing expected trip generation and restaurant operations with the Applicant, it is our opinion that the trip generation data provided in the previously used ITE Trip Generation Manuals ($10^{th} \& 11^{th}$) do not accurately estimate site trip generation. This Five Guys restaurant does not utilize a typical walk-in and/or drive-thru ordering operation. Many fast food restaurants across the industry, including Five Guys, are utilizing online ordering through your computer, or application on your phone or device, in addition to being able to call-in your order. The restaurant is also able to track your location when ordering and also track your arrival on site.

Therefore, we have requested existing process and transaction (sales) data from the Applicant for another of their locations that is currently utilizing these modern technologies and operations program. We have identified their Five Guys restaurant located at 300 Quaker Lane (Route 2) in Warwick, Rhode Island as an appropriate example. This facility consists of the same layout and provides the same operating features and program as the proposed Five Guys restaurant in Auburn. In addition, both locations exist in areas with commercial development surrounding it, and residential communities in the nearby vicinity. The sales data was comprehensive for the site and captured all sales data throughout the day.

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We received and analyzed sales data from the example Five Guys restaurant in Rhode Island for Fridays and Saturdays through June and July of 2021. This time period was specifically selected as it is typically the restaurants highest sales time of year, and Fridays and Saturdays are typically the highest sales days of the week. In total, we received the hourly sales data for nine (9) Fridays, and seven (7) Saturdays (for reference, the sales data is attached in the Appendix). To be conservative in this study, we took the highest identified peak hour from each of the days for the Weekday AM and PM peak hour and the Saturday peak hour. The identified peak hours typically varied throughout the months. We then averaged the highest peak hours for each relevant time period. Also to be conservative, we assumed each individual transaction (sale) caused two trips (one vehicle entering, and one exiting). Table 1, below, shows the average weekday AM and PM peak hours of the generator, and the average Saturday peak hour of the generator.

Table 1							
Facility Trip Generation	Calculations						
Time Period Sales Average Facility)							
Weekday	222	444					
AM Weekday Peak Hour (Generator)	25	50					
PM Weekday Peak Hour (Generator)	36	72					
Saturday Peak Hour	30	60					

Trip Generation Conclusions

As shown in Table 1 above, the development is expected to generate 50 trips during the AM peak hour, a maximum volume of 72 trips during the PM peak hour, and 60 trips during the Saturday peak hour. Based on our analysis of expected trip generation utilizing actual transaction data from an operating Five Guys with the same program and operating conditions, it is our opinion that the proposed Five Guys restaurant on Center Street will not generate over 100 new peak hour trips, and therefore will not require a Traffic Movement Permit.

In the next section, we will break down these total comprehensive trips into trips generated inside at the counter, and trips generated through the alternative methods i.e. (Uber, Doordash and call ahead, etc.) which will be picked up via the drive-through pick-up window



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Trip Composition

As defined earlier in this report, the fast food restaurant industry is changing from the traditional model where you can only order inside at the counter, or via a drive-through method. Today, people in the vicinity of the restaurant are able to choose alternative methods to skip queue times and have their food delivered directly to them, or be able to order it ahead of time and arrive at the restaurant when their order is ready. To make this process more convenient, the drive-through pick-up window will allow people to stay inside of their car while they receive the food for either delivery or pickup.

When given the opportunity, people will typically choose whatever method is more convenient to them, whether it be the traditional method, or the order ahead/delivery method. To determine the number of trips that will choose to utilize the order methods which use the drive-through pick-up window, we analyzed comprehensive payment data from the Rhode Island facility, which indicate the following trip composition percentages for the peak hours of the facility.

Table 2						
Rhode Island 5-Guys Indoor Existing	ng Trip Distr	ibutions				
Time Period Trip Distribution Indoor Order / Pickup Window						
AM Weekday Peak Hour (Generator)	47%	/	53%			
PM Weekday Peak Hour (Generator)	57%	/	43%			
Saturday Peak Hour	38%	/	62%			

As shown in the prior table, during the AM peak hour 53% of the trips will utilize the drive-through pick-up window, 43% will use the window during the PM peak hour, and a maximum of 62% of the trips will choose the delivery/order ahead option during the Saturday peak hour.

When these trip composition percentages are applied to the total trips generated by the facility, as shown in Table 1, we are able to further break down the total comprehensive data into trips generated by the drive-through pick-up window use, and the traditional indoor at the counter use. The table on the following page, Table 3, depicts this trip composition breakdown.

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Table 3 Trip Composition Breakdown						
Time Period Total Facility Trips Total Indoor Trips Total Drive-Through Pickup Window Trips						
AM Weekday Peak Hour (Generator)	50	24	26			
PM Weekday Peak Hour (Generator) 72 41 31						
Saturday Peak Hour	60	23	37			

As shown in the preceding table, when given the opportunity to skip queue lines and receive their order relatively faster, generally about half of the people will choose to use the alternative order methods instead of the traditional method. Out of the facility's total generated trips, during the AM peak hour 26 trips will be generated by the pick-up window, while the remaining 24 will continue to order inside at the counter. During the PM peak hour, we see more people choosing to order inside, generating 41 indoor trips, while the remaining 31 PM peak hour trips are generated by alternative methods through the drive-through pick-up window. In the Saturday peak hour, we see a greater shift in trips generated via the pick-up window at 37 trips, and a low of 23 trips being generated by the indoor counter.

Trip Composition Summary

In summary, when people are given the opportunity to choose alternative methods of purchasing and receiving their order, they most often do whatever is more convenient. As a result there will be a shift in trip composition, with 26 of the total 50 AM peak hour trips using the drive-through pick-up window. 31 of the 72 PM peak hour trips will order online for pick-up/delivery at the window, and a maximum of 37 out of the total 60 Saturday peak hour trips will utilize the pick-up window.

CRASH DATA ANALYSIS

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- 8 or more accidents in a three-year period
- A Critical Rate Factor greater than 1.00

An analysis of MaineDOT's most recent safety data (2019-2021) indicates that there is a high crash location (HCL) in the vicinity of the proposed project. The HCL is located on a section of Center Street between Cross Street and Lake Auburn Avenue Cut-Through. These are identified as Nodes 3683 and 3684, respectively, as shown on the Crash Data Map enclosed in the Appendix.

On this HCL segment of Center Street, MaineDOT has identified a total of 18 crashes, of which the predominant pattern includes 10 angle crashes and 7 rear-end/sideswipe crashes. The majority (9) of these crashes are grouped on the northbound travel lane in immediate vicinity of

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the Little Caesars restaurant, which is located approximately 600-feet north of the existing curb cut (site entrance) of the Five Guys Restaurant. The area of Center Street fronting the proposed Five Guys restaurant has had two (2) crashes within the 3-year study period. These crashes consisted of one sideswipe, and one animal in the road type crash. On the southbound travel lane, opposite of the proposed development, there was one rear-end crash and one angle crash.

Based on this review there does not appear to be any significant crash patterns or frequency of crashes in the vicinity of the Five Guys restaurant.

Attached in the Appendix is the collision diagram provided by MaineDOT which shows the 3-year crash characteristics, and summary reports.

SUMMARY / CONCLUSIONS

Based on our supplemental review and analysis of expected trip generation and Maine DOT Crash Data, we offer the following summary and conclusions.

1. We received and analyzed sales data from the example similar Five Guys restaurant in Rhode Island for Fridays and Saturdays through June and July of 2021. This time period was specifically selected as it is typically the restaurants highest sales time of year, and Fridays and Saturdays are typically the highest sales days of the week. In total, we received the hourly sales data for nine (9) Fridays, and seven (7) Saturdays. For reference, the sales data is attached in the Appendix. To be conservative in this study, we took the highest identified peak hour from each of the days for the Weekday AM and PM peak hour and the Saturday peak hour.

The development is expected to generate 50 trips during the sites AM peak hour, a maximum volume of 72 trips during the sites PM peak hour, and 60 trips during the sites Saturday peak hour. Based on our analysis of expected trip generation utilizing actual transaction data from an operating Five Guys with the same program and operating conditions, it is our opinion that the proposed Five Guys restaurant on Center Street will not generate over 100 new peak hour trips, and therefore will not require a Traffic Movement Permit.

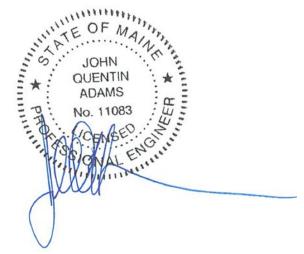
2. On this HCL segment of Center Street, MaineDOT has identified an HCL which extends from Cross Street to Lake Auburn Avenue, these are identified as Nodes 3683 and 3684, respectively, as shown on the Crash Data Map enclosed in the Appendix. This section of Center Street experienced a total of 18 crashes, of which the predominant pattern includes 10 angle crashes and 7 rear-end/sideswipe crashes. The majority (9) of these crashes are grouped on the northbound travel lane in immediate vicinity of the Little Caesars restaurant, which is located approximately 600-feet north of and away from the existing curb cut (site entrance) of the Five Guys Restaurant. The area of Center Street fronting the proposed Five Guys restaurant has had two (2) crashes within the 3-year study period. These consist of one



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sideswipe crash, and one animal in the road crash. On the southbound travel lane, opposite of the proposed development, there was one rear-end crash and one angle crash.

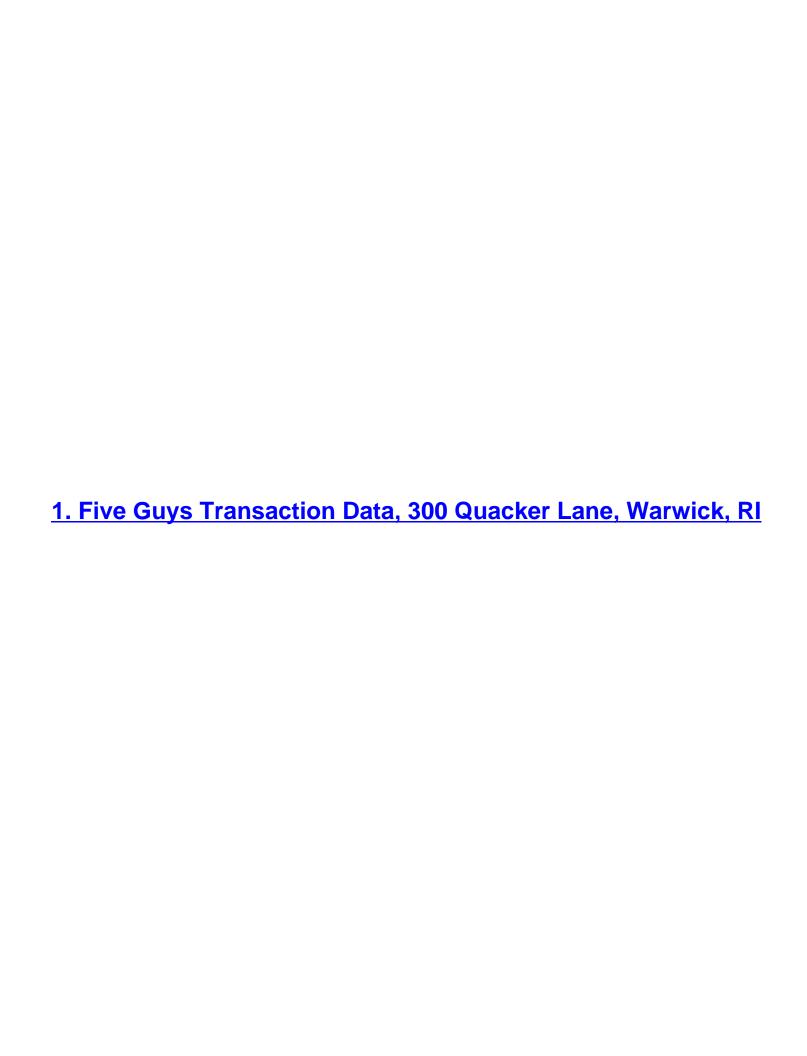
Based on this review there does not appear to be any significant crash patterns or frequency of crashes in the vicinity of the Five Guys restaurant.



John Q. Adams, PE, PTOE, Date: 06/30/2022

APPENDIX

- 1. Five Guys Transaction Data, 300 Quacker Lane, Warwick, RI, Store
- 2. Maine DOT Crash Data



Hourly Sale	es Report		RI-1989 Warwick Friday, June 4, 2021	Hourly Sa	les Report		RI-1989 Warwick Friday, June 18, 2021
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$236.99	13	\$18.23	11:00 AM	\$493.65	27	\$18.28
12:00 PM	\$428.69	23	\$18.64	12:00 PM	\$493.11	31	\$15.91
1:00 PM	\$293.99	17	\$17.29	1:00 PM	\$293.90	16	\$18.37
2:00 PM	\$160.49	11	\$14.59	2:00 PM	\$244.67	14	\$17.48
3:00 PM	\$137.71	8	\$17.21	3:00 PM	\$196.97	15	\$13.13
4:00 PM	\$469.99	19	\$24.74	4:00 PM	\$416.22	19	\$21.91
5:00 PM	\$918.95	34	\$27.03	5:00 PM	\$703.85	31	\$22.70
6:00 PM	\$929.37	40	\$23.23	6:00 PM	\$756.31	36	\$21.01
7:00 PM	\$462.78	24	\$19.28	7:00 PM	\$602.06	28	\$21.50
8:00 PM	\$383.99	21	\$18.29	8:00 PM	\$567.75	26	\$21.84
9:00 PM	\$234.93	15	\$15.66	9:00 PM	\$288.71	16	\$18.04
Summary	\$4,657.88	225	\$20.70	Summary	\$5,057.20	259	\$19.53

		Sa	turday, June 5, 2021	Saturday, June 19				
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average	
11:00 AM	\$313.39	14	\$22.39	11:00 AM	\$178.86	9	\$19.87	
12:00 PM	\$208.01	13	\$16.00	12:00 PM	\$480.56	21	\$22.88	
1:00 PM	\$428.36	23	\$18.62	1:00 PM	\$518.05	22	\$23.55	
2:00 PM	\$331.16	15	\$22.08	2:00 PM	\$343.73	21	\$16.37	
3:00 PM	\$366.21	17	\$21.54	3:00 PM	\$349.38	15	\$23.29	
4:00 PM	\$341.32	15	\$22.75	4:00 PM	\$612.74	30	\$20.42	
5:00 PM	\$563.68	26	\$21.68	5:00 PM	\$681.65	26	\$26.22	
6:00 PM	\$741.61	32	\$23.18	6:00 PM	\$457.32	20	\$22.87	
7:00 PM	\$925.82	36	\$25.72	7:00 PM	\$386.68	23	\$16.81	
8:00 PM	\$501.08	21	\$23.86	8:00 PM	\$388.58	19	\$20.45	
9:00 PM	\$235.41	12	\$19.62	9:00 PM	\$342.73	16	\$21.42	
Summary	\$4,956.05	224	\$22.13	Summary	\$4,740.28	224	\$21.16	

		F	riday, June 11, 2021	Friday, June 25, 2021				
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average	
11:00 AM	\$196.41	8	\$24.55	11:00 AM	\$173.33	8	\$21.67	
12:00 PM	\$603.74	28	\$21.56	12:00 PM	\$460.13	26	\$17.70	
1:00 PM	\$198.99	15	\$13.27	1:00 PM	\$257.29	13	\$19.79	
2:00 PM	\$190.42	8	\$23.80	2:00 PM	\$379.07	19	\$19.95	
3:00 PM	\$206.71	12	\$17.23	3:00 PM	\$230.46	10	\$23.05	
4:00 PM	\$422.52	17	\$24.85	4:00 PM	\$348.57	12	\$29.05	
5:00 PM	\$717.55	31	\$23.15	5:00 PM	\$726.19	31	\$23.43	
6:00 PM	\$866.78	36	\$24.08	6:00 PM	\$872.29	34	\$25.66	
7:00 PM	\$969.50	44	\$22.03	7:00 PM	\$706.21	26	\$27.16	
8:00 PM	\$359.94	19	\$18.94	8:00 PM	\$345.41	22	\$15.70	
9:00 PM	\$225.28	9	\$25.03	9:00 PM	\$183.67	10	\$18.37	
Summary	\$4,957.84	227	\$21.84	Summary	\$4,682.62	211	\$22.19	

		Satı	ırday, June 12, 2021	6/9/2022 1:12	2:05 PM		Friday, July 2, 2021
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$212.94	10	\$21.29	11:00 AM	\$255.44	14	\$18.25
12:00 PM	\$590.26	23	\$25.66	12:00 PM	\$402.10	21	\$19.15
1:00 PM	\$558.90	26	\$21.50	1:00 PM	\$406.46	22	\$18.48
2:00 PM	\$579.30	30	\$19.31	2:00 PM	\$258.53	12	\$21.54
3:00 PM	\$430.24	16	\$26.89	3:00 PM	\$162.72	8	\$20.34
4:00 PM	\$344.21	18	\$19.12	4:00 PM	\$496.96	25	\$19.88
5:00 PM	\$392.19	16	\$24.51	5:00 PM	\$718.32	32	\$22.45
6:00 PM	\$707.95	33	\$21.45	6:00 PM	\$855.49	40	\$21.39
7:00 PM	\$591.30	27	\$21.90	7:00 PM	\$511.30	27	\$18.94
8:00 PM	\$534.02	24	\$22.25	8:00 PM	\$654.44	29	\$22.57
9:00 PM	\$189.13	8	\$23.64	9:00 PM	\$142.38	8	\$17.80
Summary	\$5,130.44	231	\$22.21	Summary	\$4,864.14	239	\$20.35

Hourly Sa	les		RI-1989 Warwick Saturday, July 3, 2021	Hourly Sa	les Report	F	RI-1989 Warwick Saturday, July 17,
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$193.10	10	\$19.31	11:00 AM	\$257.61	11	\$23.42
12:00 PM	\$495.22	20	\$24.76	12:00 PM	\$557.96	24	\$23.25
1:00 PM	\$444.88	24	\$18.54	1:00 PM	\$685.35	26	\$26.36
2:00 PM	\$302.32	16	\$18.90	2:00 PM	\$423.46	17	\$24.91
3:00 PM	\$215.69	14	\$15.41	3:00 PM	\$319.27	11	\$29.02
4:00 PM	\$408.90	15	\$27.26	4:00 PM	\$404.78	19	\$21.30
5:00 PM	\$616.84	27	\$22.85	5:00 PM	\$562.51	28	\$20.09
6:00 PM	\$638.53	29	\$22.02	6:00 PM	\$473.43	19	\$24.92
7:00 PM	\$698.35	33	\$21.16	7:00 PM	\$647.86	30	\$21.60
8:00 PM	\$336.63	16	\$21.04	8:00 PM	\$509.69	29	\$17.58
9:00 PM	\$197.20	11	\$17.93	9:00 PM	\$229.08	9	\$25.45
Summary	\$4,547.66	216	\$21.05	Summary	\$5,071.00	223	\$22.74

			Friday, July 9, 2021			ı	Friday, July 23, 202
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$299.43	16	\$18.71	11:00 AM	\$318.67	12	\$26.56
12:00 PM	\$503.94	22	\$22.91	12:00 PM	\$539.40	26	\$20.75
1:00 PM	\$405.65	18	\$22.54	1:00 PM	\$183.19	9	\$20.35
2:00 PM	\$269.82	13	\$20.76	2:00 PM	\$198.15	11	\$18.01
3:00 PM	\$237.64	13	\$18.28	3:00 PM	\$170.07	7	\$24.30
4:00 PM	\$316.41	13	\$24.34	4:00 PM	\$503.32	24	\$20.97
5:00 PM	\$589.13	24	\$24.55	5:00 PM	\$497.93	22	\$22.63
6:00 PM	\$680.78	27	\$25.21	6:00 PM	\$933.71	40	\$23.34
7:00 PM	\$697.34	27	\$25.83	7:00 PM	\$516.42	23	\$22.45
8:00 PM	\$346.83	17	\$20.40	8:00 PM	\$440.37	20	\$22.02
9:00 PM	\$166.60	11	\$15.15	9:00 PM	\$283.26	12	\$23.61
Summary	\$4,513.57	201	\$22.46	Summary	\$4,584.49	206	\$22.25

		S	Saturday, July 10, 2021	_			Saturday, July 2
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$186.39	14	\$13.31	11:00 AM	\$168.01	7	\$24.00
12:00 PM	\$415.34	21	\$19.78	12:00 PM	\$441.26	22	\$20.06
1:00 PM	\$473.78	19	\$24.94	1:00 PM	\$310.16	17	\$18.24
2:00 PM	\$262.14	12	\$21.85	2:00 PM	\$386.55	19	\$20.34
3:00 PM	\$284.54	12	\$23.71	3:00 PM	\$341.68	18	\$18.98
4:00 PM	\$435.42	15	\$29.03	4:00 PM	\$390.51	17	\$22.97
5:00 PM	\$663.88	22	\$30.18	5:00 PM	\$617.95	27	\$22.89
6:00 PM	\$482.45	23	\$20.98	6:00 PM	\$600.79	22	\$27.31
7:00 PM	\$577.29	23	\$25.10	7:00 PM	\$483.67	19	\$25.46
8:00 PM	\$532.41	22	\$24.20	8:00 PM	\$374.84	17	\$22.05
9:00 PM	\$275.12	13	\$21.16	9:00 PM	\$245.87	12	\$20.49
Summary	\$4,588.76	196	\$23.41	Summary	\$4,361.29	197	\$22.14

			Friday, July 16, 2021	6/9/2022 1:4	8:31 PM (UTC-	l	Friday, July 30, 2021
Hour	Net Sales	Orders	Order Average	Hour	Net Sales	Orders	Order Average
11:00 AM	\$331.54	17	\$19.50	11:00 AM	\$242.30	15	\$16.15
12:00 PM	\$446.86	24	\$18.62	12:00 PM	\$649.38	28	\$23.19
1:00 PM	\$372.89	21	\$17.76	1:00 PM	\$429.49	20	\$21.47
2:00 PM	\$129.45	5	\$25.89	2:00 PM	\$208.50	12	\$17.38
3:00 PM	\$187.19	12	\$15.60	3:00 PM	\$362.24	15	\$24.15
4:00 PM	\$314.87	14	\$22.49	4:00 PM	\$167.00	6	\$27.83
5:00 PM	\$679.47	25	\$27.18	5:00 PM	\$447.70	20	\$22.39
6:00 PM	\$850.95	33	\$25.79	6:00 PM	\$503.09	19	\$26.48
7:00 PM	\$890.13	38	\$23.42	7:00 PM	\$688.50	28	\$24.59
8:00 PM	\$612.12	26	\$23.54	8:00 PM	\$535.68	25	\$21.43
9:00 PM	\$285.96	16	\$17.87	9:00 PM	\$258.08	12	\$21.51
Summary	\$5,101.43	231	\$22.08	Summary	\$4,491.96	200	\$22.46

2. Maine DOT Crash Data	

H. C. L. CRASH COLLISION DIAGRAM DATA PACKAGE

COUNTY: ANDROSCOGGIN TOWN: AUBURN

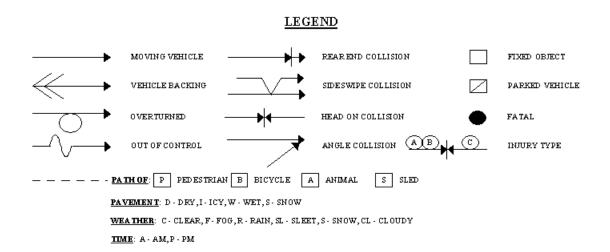
LOW NODE: 3683 HIGH NODE: 3684 REGION: 1 U/R: URBAN

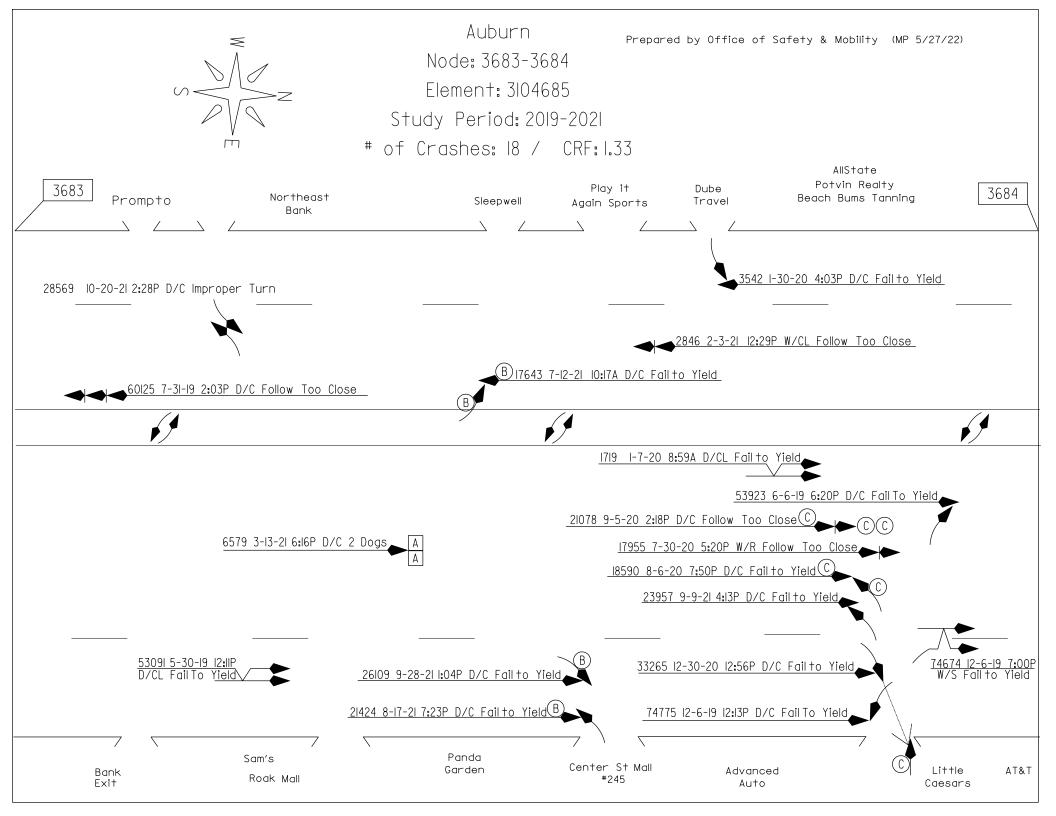
DESCRIPTION: Center St from Cross St to Lake Auburn Ave cut

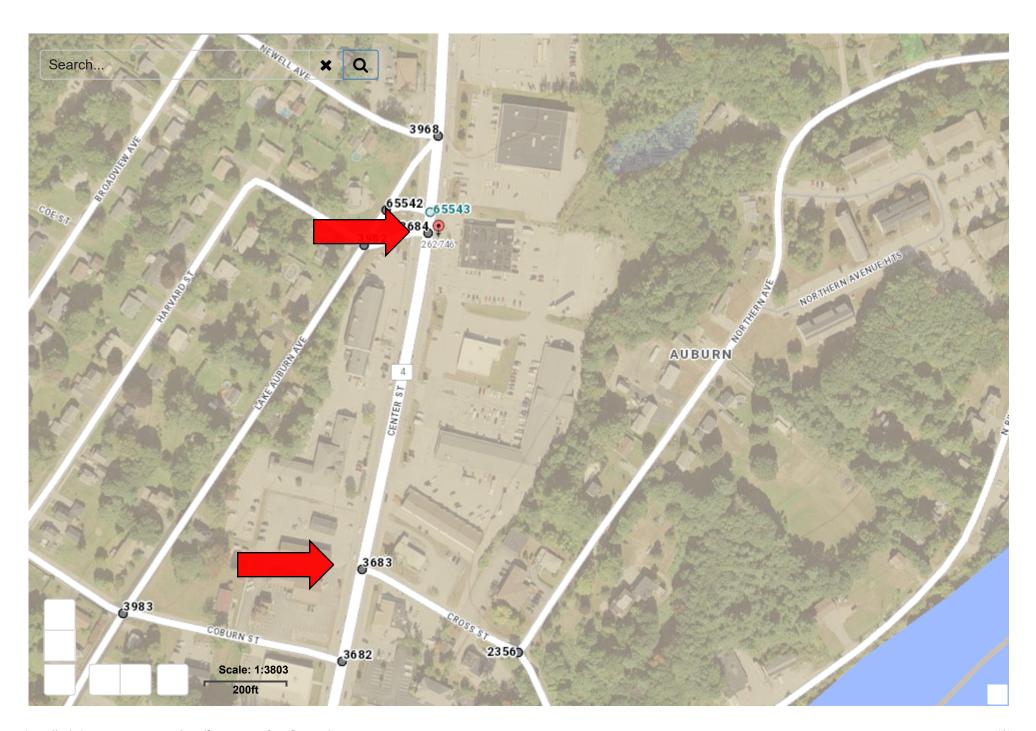
RTE # / RD #: 0004X DATE DRAWN: 5/26/2022 DRAWN BY: Michelle

STUDY FROM: 1/1/2019 STUDY TO: 12/31/2021

CRASH RATE: 470.06 CRF: 1.33 % INJURY: 33.3 TOTAL CRASHES: 18







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

Crash Summary Report

Report Selections and Input Parameters

Crash Summary I - Single Element

✓ Crash Summary II

☐ 1320 Public ☐ 13

☐ 1320 Private

☐1320 Summary

REPORT DESCRIPTION

Auburn

Center St from Cross St to Lake Auburn Ave cut

REPORT PARAMETERS

Year 2019, Start Month 1 through Year 2021 End Month: 12

Route: 0004X Start Node: 3683

Start Offset: 0

✓ Exclude First Node

End Node: 3684

Section Detail

End Offset: 0

✓ Exclude Last Node

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

Crash Summary I

	Sections																
Start	End	Element	Offset	Route - MP	Section U/R Total			Inju	ry Cr	ashes		Percent	Annual	Crash Rate	Critical	CRF	
Node	Node		Begin - End		Length		Crashes	K	Α	В	С	PD	Injury	HMVM		Rate	
3683 Int of CENT		3104685 ROSS ST	0 - 0.15	0004X - 76.14 ST RTE 4	0.15	2	18	0	0	3	3	12	33.3	0.01276	470.06 Statewide Crash F	354.31 Rate: 187.24	1.33
Study Ye	ears: 3	3.00		Section Totals:	0.15		18	0	0	3	3	12	33.3	0.01276	470.06	354.31	1.33