Special Study of Thanksgiving Week Crashes
To Reduce Fatalities, Injuries and Property Damage Loss
During this Holiday Week

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1.0 Introduction and Findings

1.1 Introduction

The purpose of this study is to determine as much as possible about crashes that occur on Thanksgiving Weeks (TWs) so that recommendations can be made to reduce the pain and suffering of these crashes. It is recognized that TW is one of the most "traveled" time of the year, and most people take advantage of the long four-day holiday to visit with family and friends. This large traffic volume makes them quite vulnerable, especially if they are on unfamiliar highways traveling at odd hours.

The following table gives an overview of TW crashes. Note that the year column is in reverse chronological order (most recent at the top).

Dates and Crash Frequencies for Thanksgiving Days and Weeks

Year	November	Crashes Thanksgiving	Crashes Thanksgiving Week
2020	26	225	2774
2019	28	226	2699
2018	22	254	2743
2017	23	234	2628
2016	24	244	2695

The data used for this study consisted of five calendar years, 2016 through 2020, of crash records that were made available by the Alabama Law Enforcement Agency (ALEA), and we greatly appreciate their efforts in collecting and maintaining these data. As can be seen from the numbers above, the crashes on TWs were quite stable, and the most recent data that were available will produce estimates that can be reliably applied to TW in 2021.

The procedure for mining information out of the available data employed the Information Mining Performance Analysis Control Technique (IMPACT) module of the Critical Analysis Reporting Environment (CARE), which was developed by faculty and students within the University of Alabama Center for Advanced Public Safety (CAPS). IMPACT is a unique analytics tool that automatically mines information out of databases by comparing any two user-defined subsets of the data. For more information on these capabilities, see: Technolytix - Home.

The study is divided into four major sections according to the IMPACT comparisons that were made, including the following comparisons of:

- All TW crashes against all non-TW crashes;
- All TW fatal crashes against all fatal crashes;

- All TW fatal crashes against all TW crashes; and
- All TW crashes in the dark against all those in daylight.

Each of these major comparisons has different objectives in surfacing crash frequency and severity causes and their correlations to other crash characteristics. The major goal was to formulate recommendations from the findings of the research. These findings and some recommendations will be given in the next two sections.

1.2 General IMPACT Findings

Findings in this section will be referenced to the IMPACT studies that were done, which are presented in Sections 2, 3, 4 and 5. In cases where a conclusion is based on multiple sections, generally, all will be given together. The subjects covered in each of these studies covered included the following:

- Section 2 – Thanksgiving week (TW) crashes against NonTW crashes (all severities);
- Section 3 – TW Fatal Crashes against NonTW Fatal Crashes;
- Section 4 – TW Fatal Crashes against all TW crashes (all severities); and
- Section 5 – Effect of Darkness on TW crashes.

The findings from Sections 2-4 will be given in this section, while the findings from Section 5 will be in the next.

The subsection number (which we will also call the Findings number) will be given for ease of reference generally ordered by those of Section 2. Omitted section numbers indicate that there were no additional findings of any significance for that aspect of the analysis.

- 2.1, Severity: The distributions of crash severities for TW were essentially the same as for NonTW weeks, the only exception being Possible Injury, which was significantly under-represented in the TW weeks. There were five TWs considered, one for each of the five years (2016-2020).
- 2.2, Day of the Week: this is a very significant attribute in that it indicates which days are the best and worst to be on the road. As is true of most holidays, the holiday itself is dramatically under-represented, since most people have reached their destination at this point and are not occupied with travel. In this case Thursday had a significant reduction in crashes that was close to half. All of the weekdays prior to Thursday were significantly over-represented by from 15% to 30% higher than expected. The Wednesdays before Thanksgiving had the highest over-representations of almost 30% above what would be expected in a non-holiday week. All of the days after Thanksgiving were significantly under-represented, with the exception of Sunday, which was about 40% higher than expected. Interpretation: for best avoiding the high crash days, get on the road before Wednesday and do not put off the return trip until Sunday.
- 2.3, Time of Day for crashes in general: over-representations 1-2:59 PM and 5 PM and after and early morning until 3 AM. Under- representations: 6 AM through 8:59 AM –

morning rush hour; 3-4:59 PM early PM rush. Further studies of crashes in darkness vs. those in daylight indicate that this is a more significant factor than the time itself. See Sections 1.3 and 5 for these findings.

- 3.2 and 4.2, Time of Day for Fatal Crashes: Significant over-representations shift to the early morning and late night hours both in the comparison with all nonTW crashes and with nonTW fatal crashes.
- 2.4, Time of Day by Day of the week: the typical weekend over-representations hold: Saturday morning, Saturday night and Sunday morning are most heavily over-represented. The major difference found for the TW data was that Thanksgiving itself behaved much as a Saturday, with over-representations in the early morning hours and the late evening and night (after 6 PM). The recent suspension of daylight saving time creates a special problem in the TW. This will be addressed in separate sections, Section 5 contains the IMPACT displays, and it is also discussed below in Section 1.3.
- 2.5, Day of the Week Crashes including Fatal Crashes: see the narrative under the display in Section 2.5 for an explanation of this display, which elaborates on the day-of-the-week findings given above.
- 2.6, 3.3 and 4.3, Rural or Urban.: While only having about 25% of the total crashes, the rural crashes are significantly over-represented in comparison to the nonTW data. This disappears when TW fatal crashes are compared to non-TW fatal crashes (Finding 3.3) because both the fatal subsets have over 60% of their crashes in the rural areas. In contrast, when fatal TW week crashes are compared to all TW crashes, the over-representation skyrockets to over 2.5 times its expectation. The bottom line is that it is best not to venture out into the rural areas in those times when alcohol and drug use may be high.
- 2.7, 3.4 and 4.4, Highway Classification: Interstates and Federal highways are significantly over-represented for crashes in general during the TWs. These differences largely disappear in the comparison of TW Fatal crashes with all Fatal crashes (Finding 3.4). However, State and County roadways rise in over-representation when fatal crashes are compared to all crashes (Finding 4.4). These mixed results should not alter the fact that Interstate highways are generally safer on a per mile basis, and it is highly recommended that the safest roadways be traveled, especially when the routes taken might be new to TW travelers.
- 2.8, 3.5 and 4.5, Primary Contributing Circumstances (PCCs): the highest crash causes as indicated by the PCC (Finding 2.8) in order of Max Gains were DUI, Following too Close, Unseen Object/Person/Vehicle, Swerved to Avoid Deer, and Distracted by Use of other Electronic Device. Findings 3.5 and 4.5 did not have enough fatal crashes to determine significance. However, considering the crash frequency for each of the fatal PCCs yielded the following (in order of fatal crash frequency of 5 or greater): Over the Speed Limit (9), DUI (9), Ran off of Road (6), Driving too Fast for Conditions (5), Failed to Yield the Right of Way from a Stop Sign (5). When fatal crashes are considered, speed, speed related items, and DUI (which generally involves a combination of speed and a failure to use proper restraints) always show up as the major causative factors.
- 2.9, First Harmful Event: for all TW crashes in general, the highest over-represented factor was Collision with Animal Deer. There were 334 (2.5%) such crashes and they had a

proportion that was 1.818 times that found in the general population of crashes. This shows that this time period within the year is a time when Deer are very active, and all drivers, especially those in rural areas, need to be extremely aware of this hazard. The most significantly over-represented times during TWs was from 5 PM through 7 AM. So, darkness is a major factor, as will be discussed further in Section 1.3 and Section 5.

- 4.6, First Harmful Event for Fatal Crashes: in order of crash frequency: Ran Off Road left or right combined (9), Overturned/Rollover (8), Collision with Tree (6), Collision with Non-Motorist: Pedestrian (5), and Collision with Embankment (5). Other than pedestrian crashes, these are effects and not causes. When vehicles get out of control and leave the roadway, they will strike whatever is in their path.
- 2.10, Manner of Crash for all crashes: Single Vehicle Crash (all types) was the only significantly over-represented attribute (about 13% higher than expected from the proportion in the nonTW weeks).
- 4.7, Manner of Crash for fatal crashes: single vehicle crashes were significantly over-represented by 2.317 with 46 (54.76%) of the fatal crashes. Single vehicle fatal crashes are highly correlated to drug and alcohol abuse; 78.57% of the fatal crashes involved alcohol were single vehicle crashes, and 80.89% of those that involved drugs were single vehicle crashes. Single vehicle crashes occurring late night are heavily indicative of DUI.
- 2.11, Lighting Conditions: This result indicates clearly that darkness is a factor in most TW crashes, especially those of high severity. For this reason, a separate study was initiated to isolate darkness as a separate consideration. This is quite relevant not only because of the darkness causation per se, but because daylight savings time ends on the first Sunday in November (Nov. 7th), which is just two weeks before TW. This short time is not sufficient for most drivers to adjust to the time change, especially for long trips in dissimilar area. Please see Section 5 for the IMPACT displays as well as the Darkness Findings discussion in Section 1.3 section immediately below.
- 2.12, Effects of Alcohol: considering all TW crashes, alcohol plays a very significant role, in increasing both the number and the severity of crashes during TW. It is about 42% higher than its proportion in NonTW weeks, and it is particularly problematic in darkness (see the special Darkness Findings discussion, Section 1.3 below). Finding 3.9 shows that alcohol was over 13% more of an issue in fatal crashes during TW than in nonTW weeks. Finding 4.8 shows that Alcohol was over 6 times more prevalent for fatal crashes as opposed to all crashes.
- 2.13, Effects of Drugs: in general, drugs did not have the significantly increasing effects on all crashes during TWs that alcohol did. However, Finding 3.10 showed that it did have a significant effect during TW in increasing the number of drug-related fatal crashes; the 9 cases were about 43% higher in their proportion than expected of fatalities in general. Finding 4.9 showed that these 9 cases were almost 18 times what would be expected in a comparison of fatal TW crashes with all TW crashes.
- 2.14, Speed at Impact: obviously speed is the major cause of a crash being fatal. All impact speeds above 60 MPH were over-represented, with 70 and 75 being significantly so. Finding 3.11 showed that fatal crashes during TW were not significantly different from those fatal crash speeds at other times. However, Finding 4.11, which compared the fatal

crashes of TW against all TW crashes established that fatal crashes during TW were extremely over-represented in the 60 and above impacts speed ranges, with odds ratios ranging from 2.18 to 34.34, and several in the 3.00 to 7.00 range. Crashes in the highest impact speed range are almost certain to be fatal.

- 2.15, Safety Equipment (mainly seatbelts): for all crashes the "None Used …" proportion was significant at about 15% higher than expected. This is strange since we would expect that they would be used on the large number of longer trips characterized by TW. On the other hand, when we just look at fatal TW crashes, the None Used comes out to about 10.5 times what it is to TW crashes in general. This again proves that seatbelts are the number one defensive preventative action.

1.3 IMPACT Findings: Darkness

The amount of darkness during TW increases not only by the month of the year, but also because of the change in Alabama's Daylight Savings Time, which ends in the first week of November, adding an hour of darkness to each day. In 2021, this is just two weeks before the TW. The objective of the analysis and the presentation of these findings is to counter crash increases in frequency and severity caused by darkness. These findings will show the rationale behind our strong recommendations: to avoid traveling in the darkness during TW if at all possible. The following Findings numbers correspond to the IMPACT analyses in Section 5.

The reasons for not traveling at night will be given first followed by the more technical information. Please note that while many of these items are true of night driving in general (throughout the year), the ones given below were obtained by comparing the dark with the non-dark hours of TW, so they are particularly applicable to the TW.

- 5.1 Lighting Conditions: used to define the filter for subsequent comparisons. All possible Dark combinations were included. The non-dark descriptors are given for the remaining items.
- 5.2 Time of Day: this gives the actual times that are being compared.
- 5.3 Rural or Urban: rural roads are particularly dangerous in darkness, due to lack of lighting and increased speed, among many other factors. If you must travel at night, try to avoid purely rural roads and use the Interstates.
- 5.4 Highway Classification: the main roads to avoid in darkness are County and State roadways. Interstates, although largely rural, are lighted around major intersections, and they are generally built for a higher degree of safety.
- 5.5 Primary Contributing Circumstances: DUI is over 4 times as prevalent in darkness than in daylight. You do not have to be drinking to be killed by a DUI driver. These crashes are also characterized by speed and the results of speed: Out-Running Headlights (Unseen …), Too Fast for Conditions, Swerved to Avoid Animal (we discuss deer in Finding 5.6 below), Aggressive Operation (seems to be more prevalent at night), Ran off Road, Over Speed Limit, Ran Stop Sign, Fatigues/Asleep, Failed to Yield the Right of Way, and several others below of lesser frequency. Aggressive Operation is indicated when two or more PCCs exist simultaneously, indicating that there are psychological causes as opposed to just one PCC.
- 5.6 First Harmful Event: Deer, at the top of the list, are particularly active at night and especially in the evening hours when a larger amount of travel is anticipated. The deer hunting season is about a week or so underway, and deer which had ventured out during the day are now waiting for the cover of darkness. While striking a deer is not typically fatal to the vehicle occupants, swerving to avoid a deer can involve other vehicles, and can be deadly (see Finding 5.5 above: Swerved to Avoid Animal). Deer cannot be avoided if out-running the headlights. "According to the National Highway Traffic Safety Administration, the average distance illuminated by low-beam headlights is about

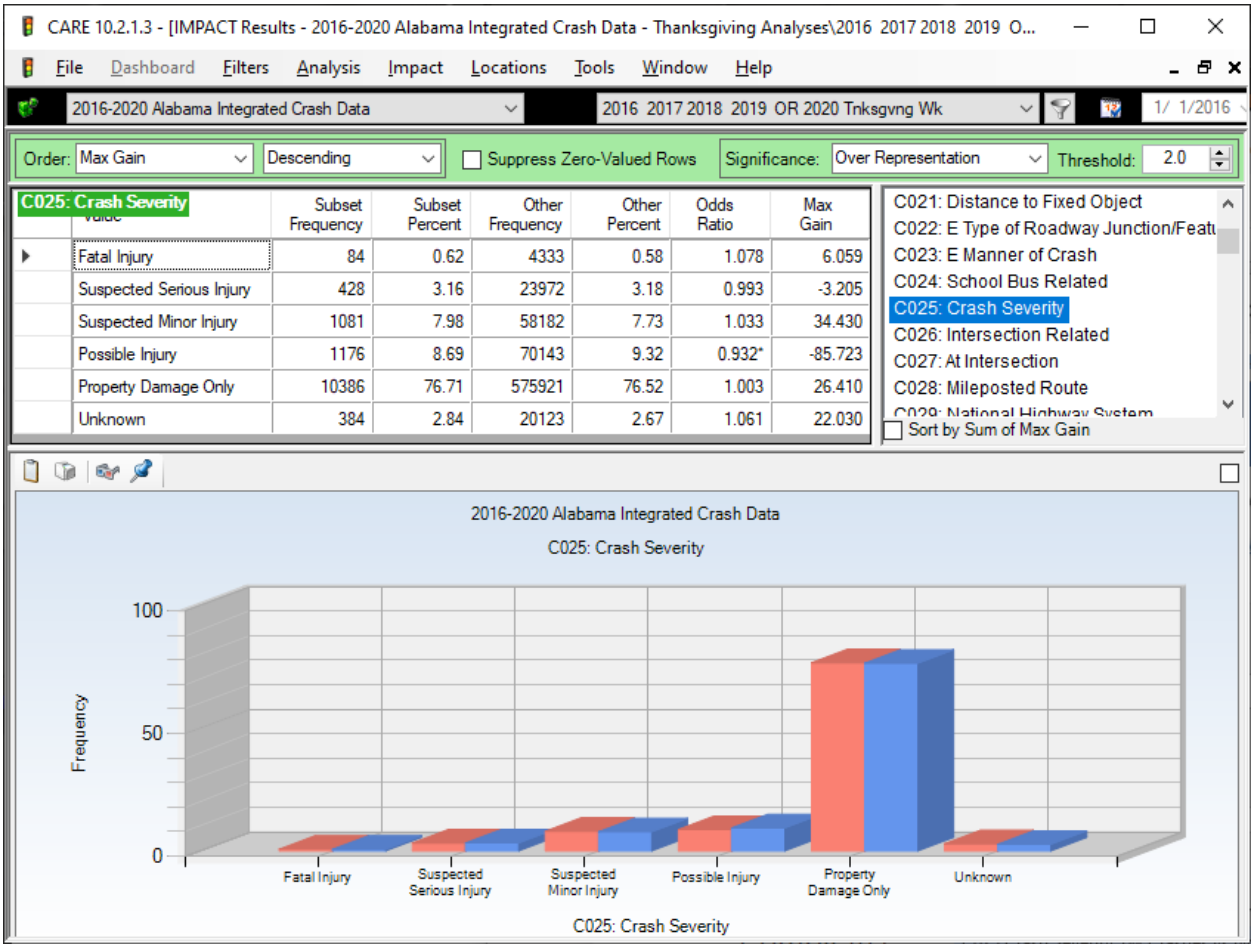
160 feet. Unfortunately, stopping distance at 40mph is 189 feet, and at 70 mph a whopping 464 feet. So it is very easy to outrun your headlights." Source: https://www.informit.com/articles/article.aspx?p=2982114&seqNum=5

- 5.7 Distracted Driving (DD): Fatigue/Asleep is listed with the Distracted Driving items on the crash report form. Do not think that you are immune to this – the remedial actions of coffee and other breaks with some exercise should be applied, but never depended on. The best countermeasure is to avoid the hours of darkness. In this case Fatigue/Asleep is the number one "DD" item and it is over-represented at night by about 60% more than during the daylight hours. No other DDs were significantly over-represented due to darkness. Most people can feel when they are feeling drowsy. When that happens, pull over and take a nap, or do whatever is needed to get you out of that dangerous state. If you fall asleep while driving the results are totally predictable, and they are not good.
- 5.8, Manner of Crash: the doubly (1.986) over-represented Single Vehicle Cash is indicative of DUI and other risk-taking. Innocent victim drivers and passengers can be involved in any of these with a fairly high probability. If you know of areas where alcohol or drugs are used, avoid them even if it requires a few extra miles. Better yet, avoid the dark hours when these hazards are greatly increased. See 5.15 and 5.16 below.
- 5.9 Crash Severity: fatal crashes in dark are over three times their expect daylight hour expectation (55 compared to 29). Note that the two other most severe injuries are also significantly over-represented in darkness.
- 5.10 Weather: for the most part the "bad" weather for travel was in the dark hours. While there is no guarantee that weather in the coming TW will be similar to the TWs of the past five years, it does not hurt to see what the typical weather picture has been. Rain was over-represented at night by a significant 1.785. More highly over-represented in darkness were even more dangerous conditions: Mist (3.02) and Fog (3.39).
- 5.11 Locale: as expected from the other area results above, Open Country and Residential were both significantly over-represented by 1.278 and 1.260, respectively.
- 5.12 Adjusted EMS Arrival Delay: response is expected to be slower in darkness than in the light. The very dangerously long delays of 31 to 90 minutes were all over-represented, so there were no exceptions to that anticipated. The longer cases could be caused by a single-vehicle run-off-the-road that is not discovered for hours. Such rarely happens in daylight.
- 5.13 Number of Vehicles: consistent with the 5.8 findings, single vehicle crashes were about double their expectations compared to the hours of light.
- 5.14 Pedestrians and Bicycles: About 70.0% of the (80) pedestrian strikes occurred in darkness, which was over three times the expected proportion. If you must venture out at night observed ALL of the night-time pedestrian safety recommendations. But better yet, wait until morning. Over 50% of the 17 bicycle crashes occurred in darkness, which was about 79% higher than expected when compared to those in daylight. Clearly, darkness is the enemy of both pedestrians and bicyclists, and is best avoided.

- 5.15 Alcohol. Alcohol use is much more common in dark hours. In this case the total of 543 alcohol related crashes had all but 133 occurring in the dark, an over-representation of 5.244 (Odds Ratio) times the expected proportion. This confirms the findings above for single vehicle crashes, speed, failure to be restrained and other risky behaviors.
- 5.16 Drugs. While not as dramatically over-represented, drugs caused 67 crashes in the dark and 69 in light. This was still a 1.702 Odds Ratio, which shows the negative effects of drivers under the influence of drugs. Obviously to avoid the negative effects of alcohol and drugs it is wise to avoid the hours of darkness.

2.0 Thanksgiving Week (TW) Crashes vs Non-TW Crashes

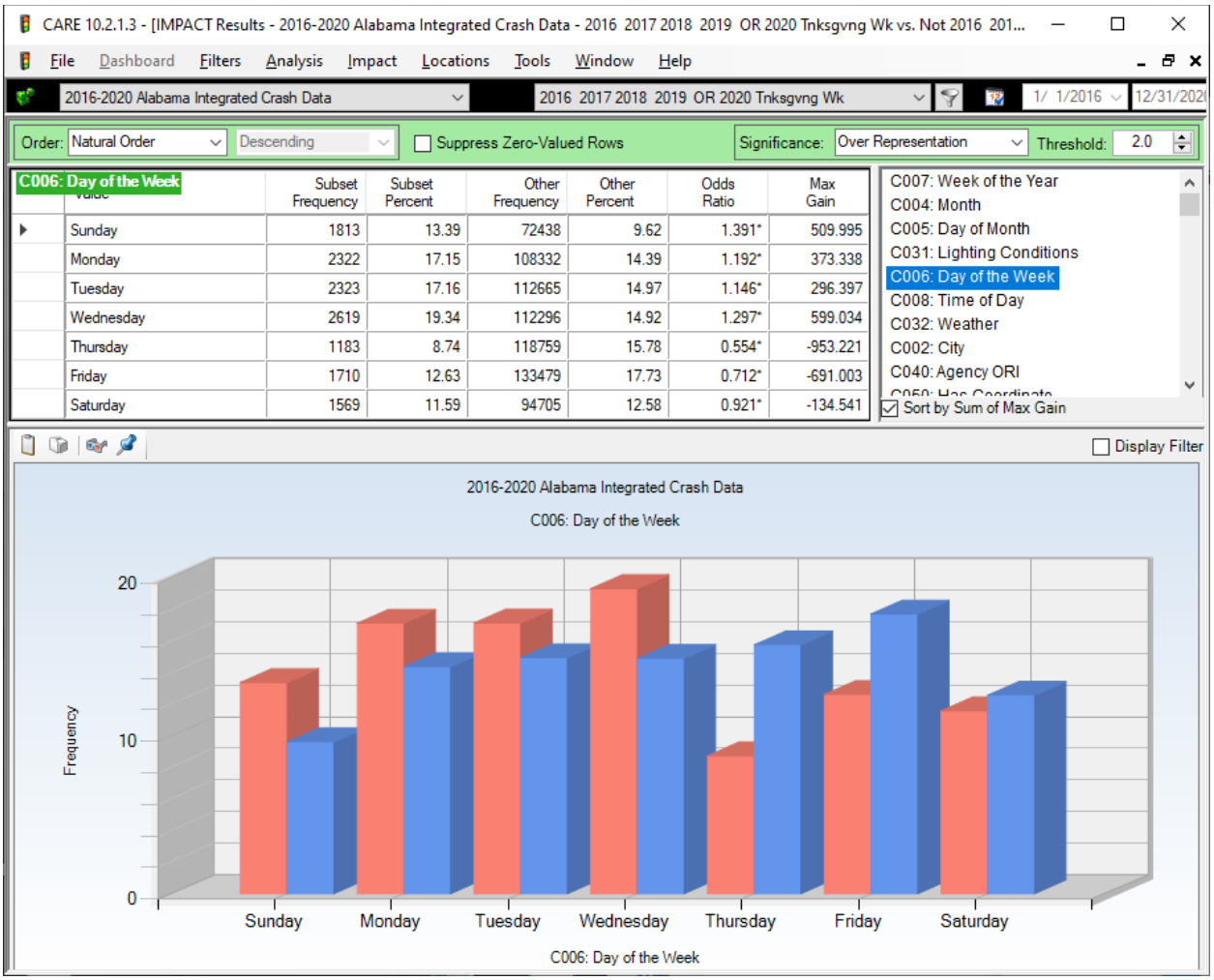
2.1 C025 Crash Severity TW Crashes vs Non-TW Crashes



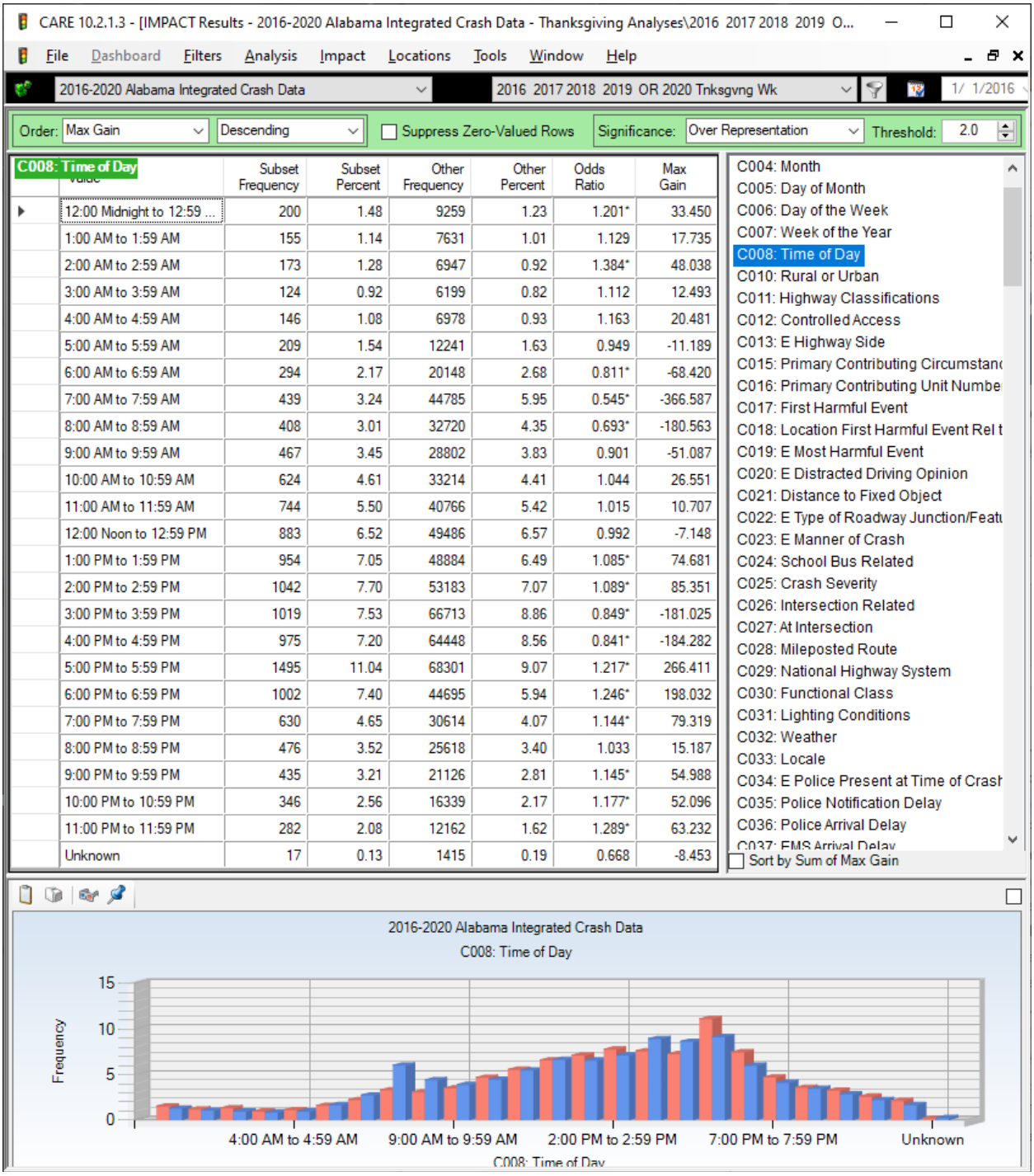
Higher severities are not significantly different from other weeks.

2.2 C006 Day of the Week TW Crashes vs Non-TW Crashes

The Sunday below is at the end of the Thanksgiving Week.

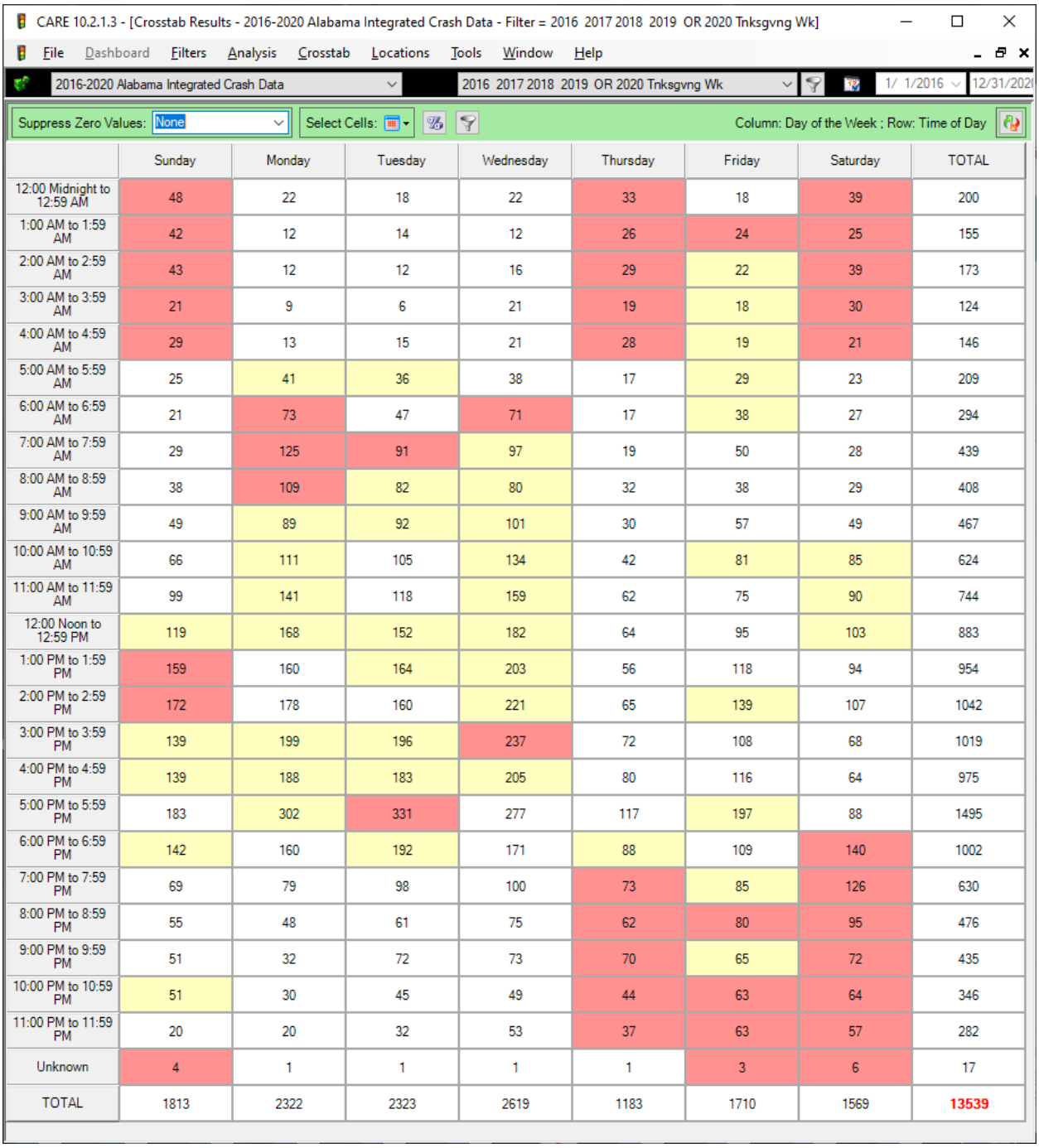


2.3 C008 Time of Day TW Crashes vs Non-TW Crashes



Collectively: over-representations 1-2:59 PM and 5 PM and after and early morning until 3 AM. Under- representations: 6 AM through 8:59 AM – morning rush hour; 3-4:59 PM early PM rush.

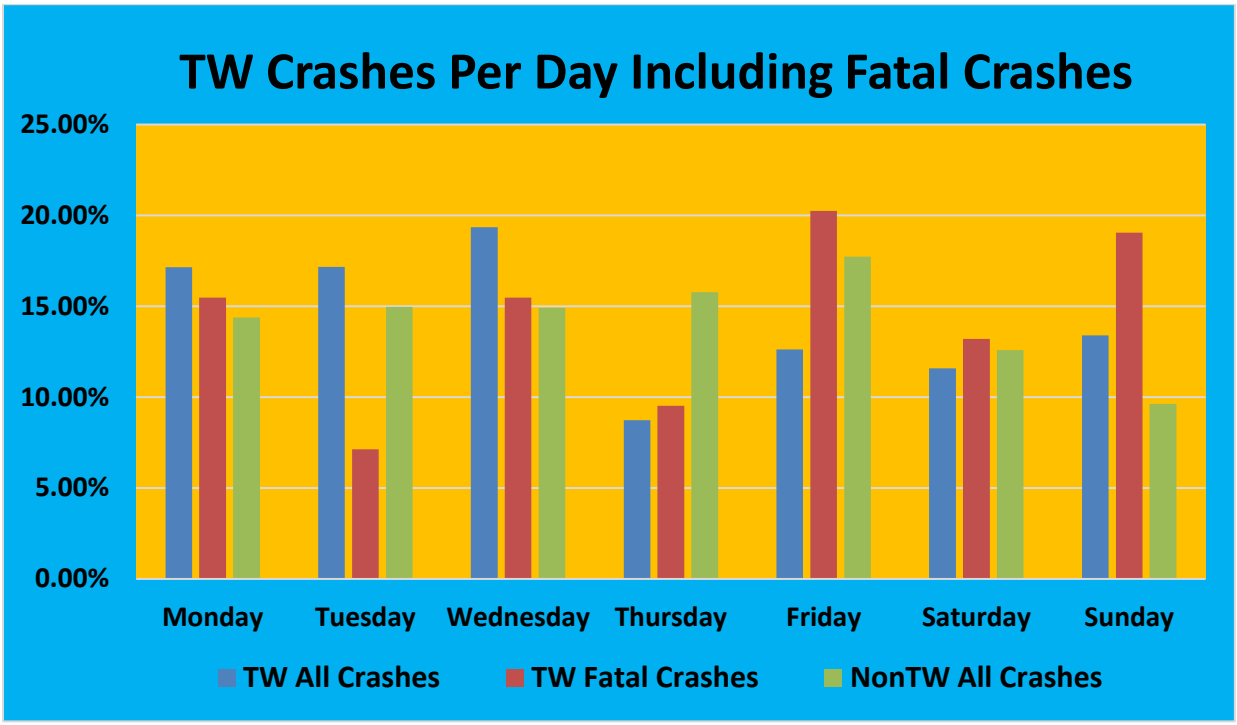
2.4 Crosstab of Time of Day by Day of the Week



	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	TOTAL
12:00 Midnight to 12:59 AM	48	22	18	22	33	18	39	200
1:00 AM to 1:59 AM	42	12	14	12	26	24	25	155
2:00 AM to 2:59 AM	43	12	12	16	29	22	39	173
3:00 AM to 3:59 AM	21	9	6	21	19	18	30	124
4:00 AM to 4:59 AM	29	13	15	21	28	19	21	146
5:00 AM to 5:59 AM	25	41	36	38	17	29	23	209
6:00 AM to 6:59 AM	21	73	47	71	17	38	27	294
7:00 AM to 7:59 AM	29	125	91	97	19	50	28	439
8:00 AM to 8:59 AM	38	109	82	80	32	38	29	408
9:00 AM to 9:59 AM	49	89	92	101	30	57	49	467
10:00 AM to 10:59 AM	66	111	105	134	42	81	85	624
11:00 AM to 11:59 AM	99	141	118	159	62	75	90	744
12:00 Noon to 12:59 PM	119	168	152	182	64	95	103	883
1:00 PM to 1:59 PM	159	160	164	203	56	118	94	954
2:00 PM to 2:59 PM	172	178	160	221	65	139	107	1042
3:00 PM to 3:59 PM	139	199	196	237	72	108	68	1019
4:00 PM to 4:59 PM	139	188	183	205	80	116	64	975
5:00 PM to 5:59 PM	183	302	331	277	117	197	88	1495
6:00 PM to 6:59 PM	142	160	192	171	88	109	140	1002
7:00 PM to 7:59 PM	69	79	98	100	73	85	126	630
8:00 PM to 8:59 PM	55	48	61	75	62	80	95	476
9:00 PM to 9:59 PM	51	32	72	73	70	65	72	435
10:00 PM to 10:59 PM	51	30	45	49	44	63	64	346
11:00 PM to 11:59 PM	20	20	32	53	37	63	57	282
Unknown	4	1	1	1	1	3	6	17
TOTAL	1813	2322	2323	2619	1183	1710	1569	13539

2.5 Day of the Week Crashes Including Fatal Crashes

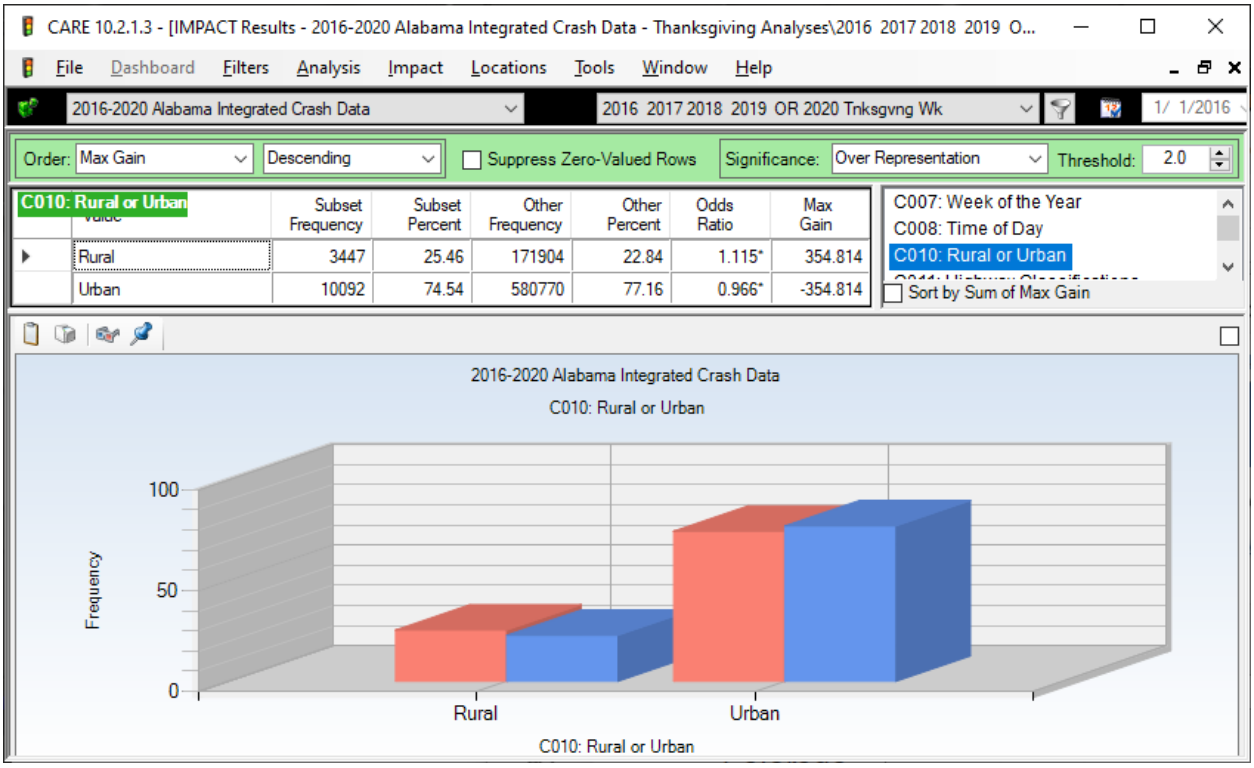
In the following chart, Sunday is depicted properly at the end of Thanksgiving Week (TW).



Interpretation of the above Day of the Week Chart (2016-2020 data):

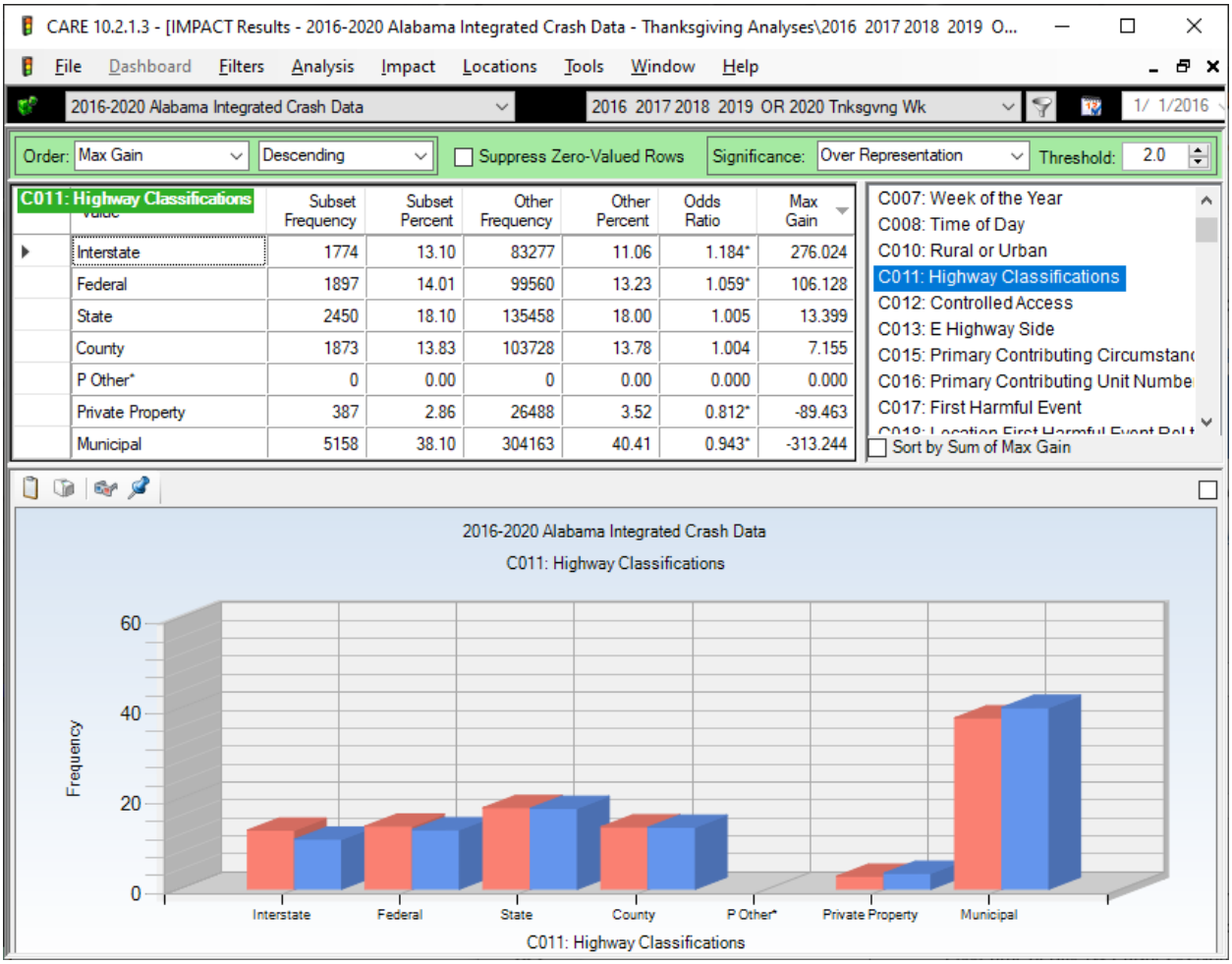
- The green bars effectively show how crashes in general are distributed over the week with Mondy through Thursday being higher than the weekend, and Friday being higher than Monday through Tursday. This reflects Friday being a commuting day as well as many who are departing for a break over the weekend. Weekends (especially Sunday) are down in the absence of much of the commercial traffic.
- The blue bars show how this distribution just for the five Thanksgiving Weeks (TWs). Note the buildup prior to Thanksgiving, and the drop-off on Thanksgiving itself. Crashes return to a higher level after Thanksgiving, but not to the much higher pre-Thanksgiving level. No doubt, getting an earlier start in the week and traveling during daylight is recommended. The best day to travel is Thanksgiving itself, when most are not on the road.
- The red bars are for fatal crashes that were recorded in the five-year time period. Clearly, the worst days indicated are the Friday and Sunday after Thanksgiving when most are on a return trip. Thanksgiving itself is low consistent with the overall travel pattern. Monday and Wednesday are about as expected.

2.6 C010 Rural or Urban TW Crashes vs NonTW Crashes



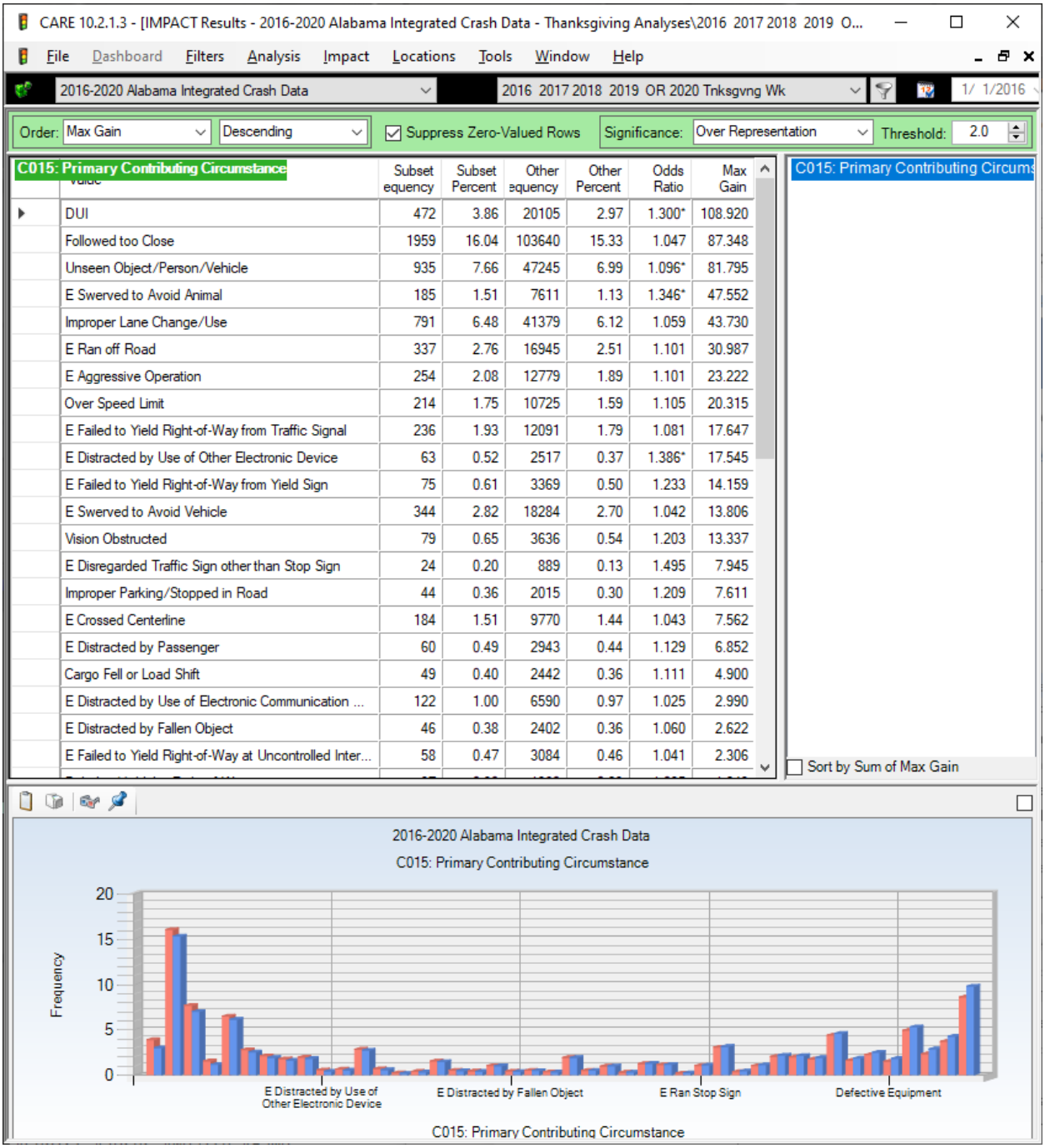
Rural are significantly over-represented.

2.7 C011 Highway Classification TW vs NonTW



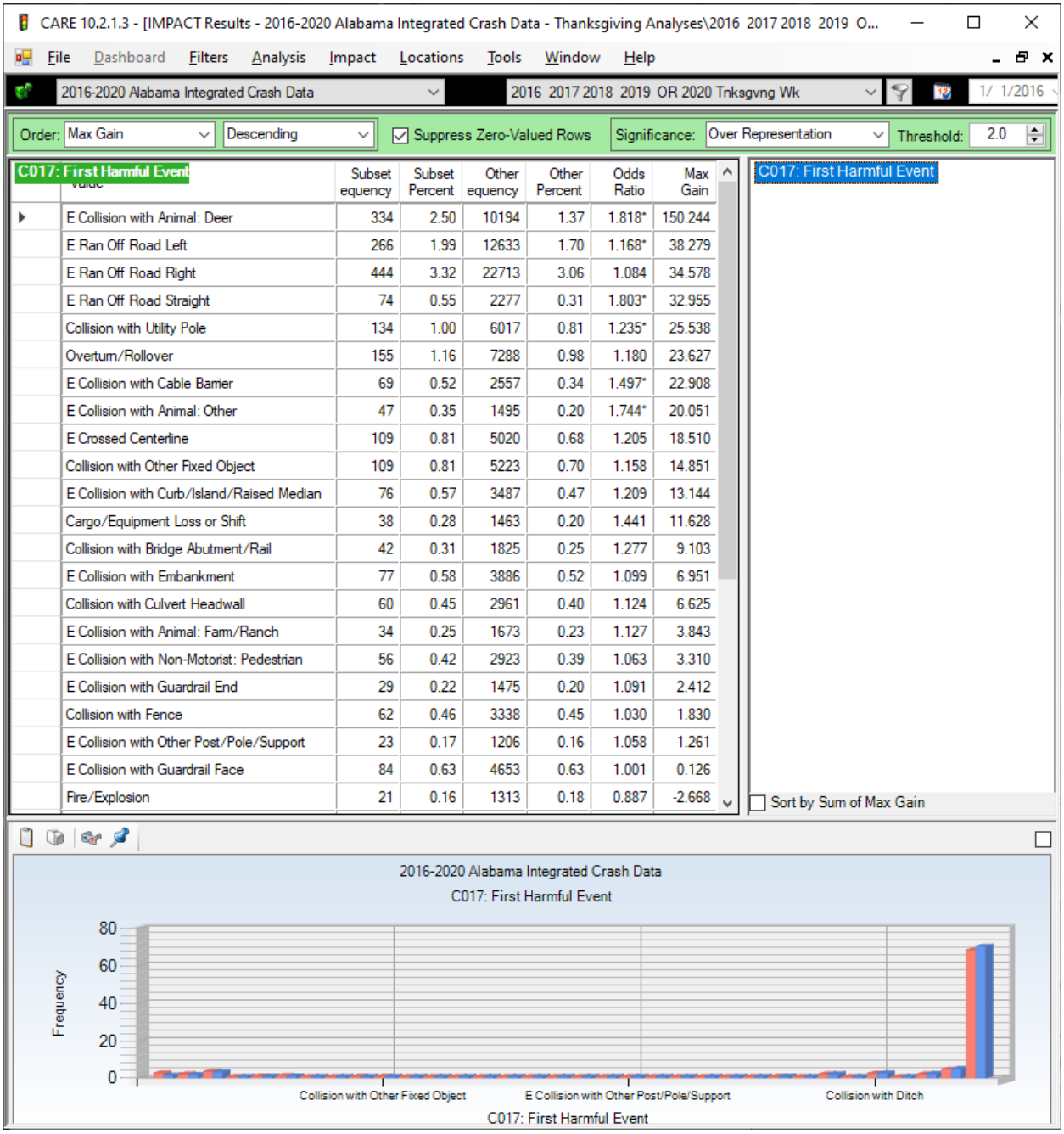
Interstate and Federal roads are significantly over-represented; Municipal are under-represented.

2.8 C015 Primary Contributing Circumstances TW vs NonTW



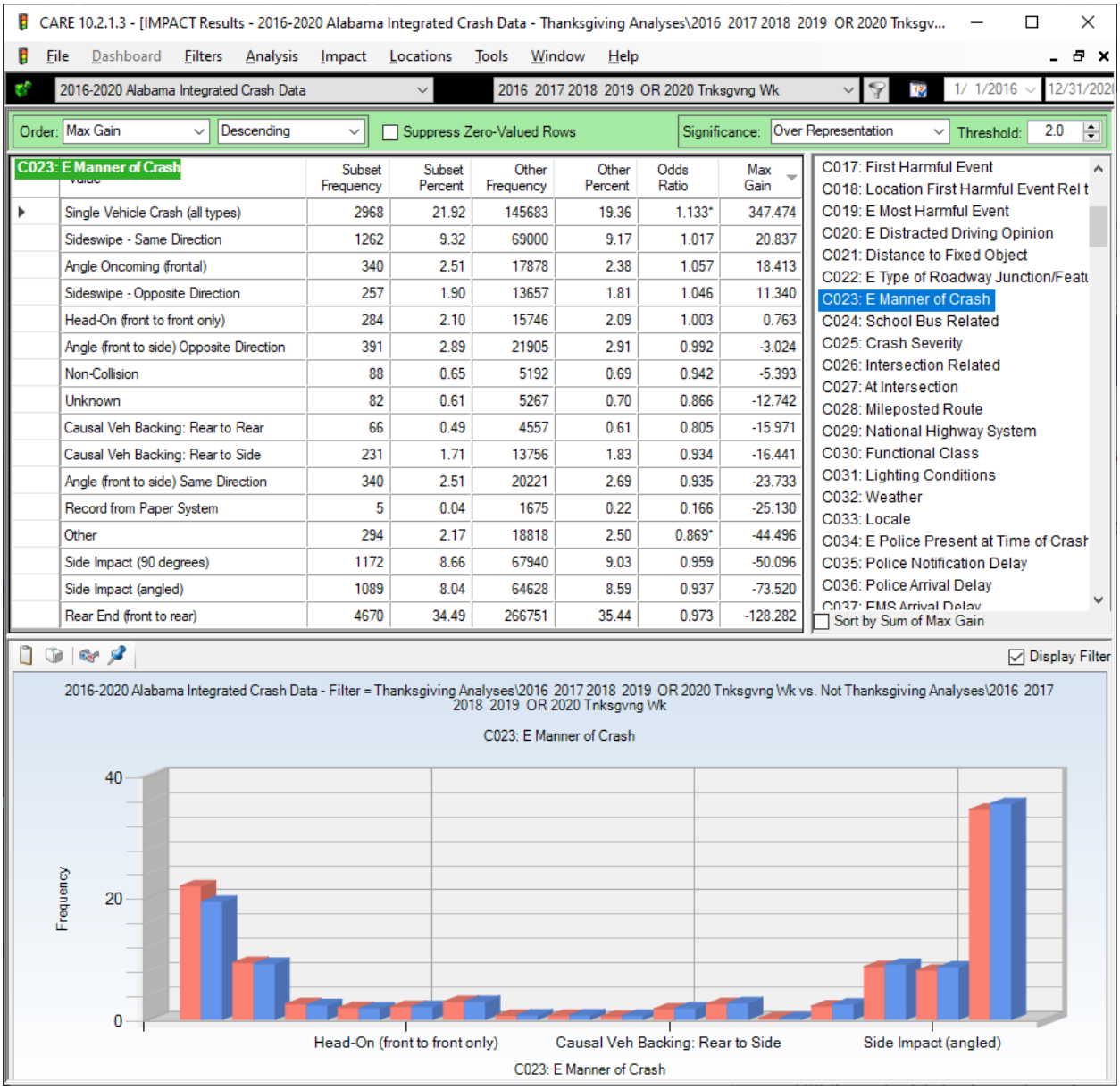
Items with less than 20 crashes were removed. Display shows all positive Max Gain items.

2.9 C017 First Harmful Event TW vs NonTW

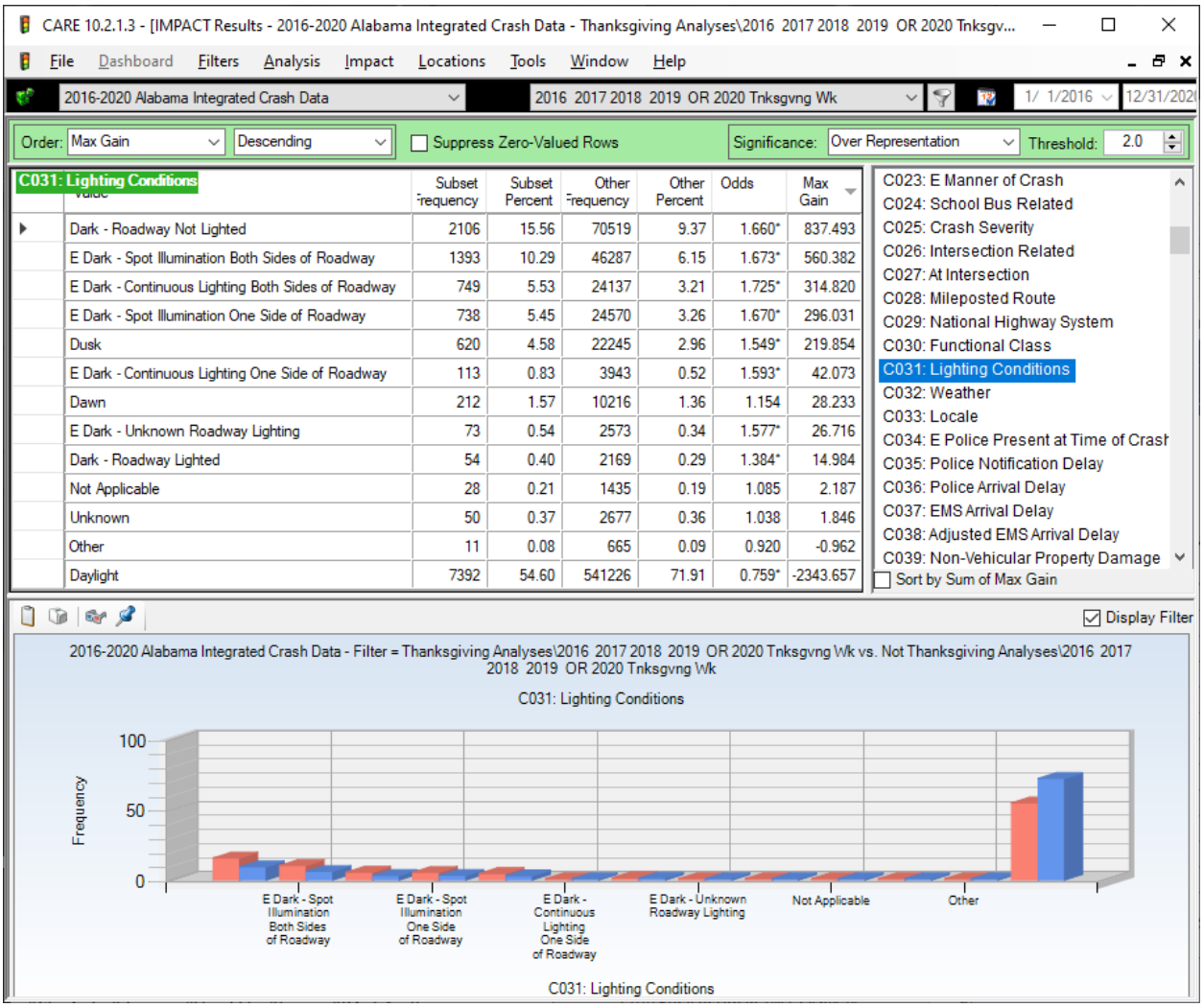


Items with less than 20 crashes were removed. Display shows all positive Max Gain items.

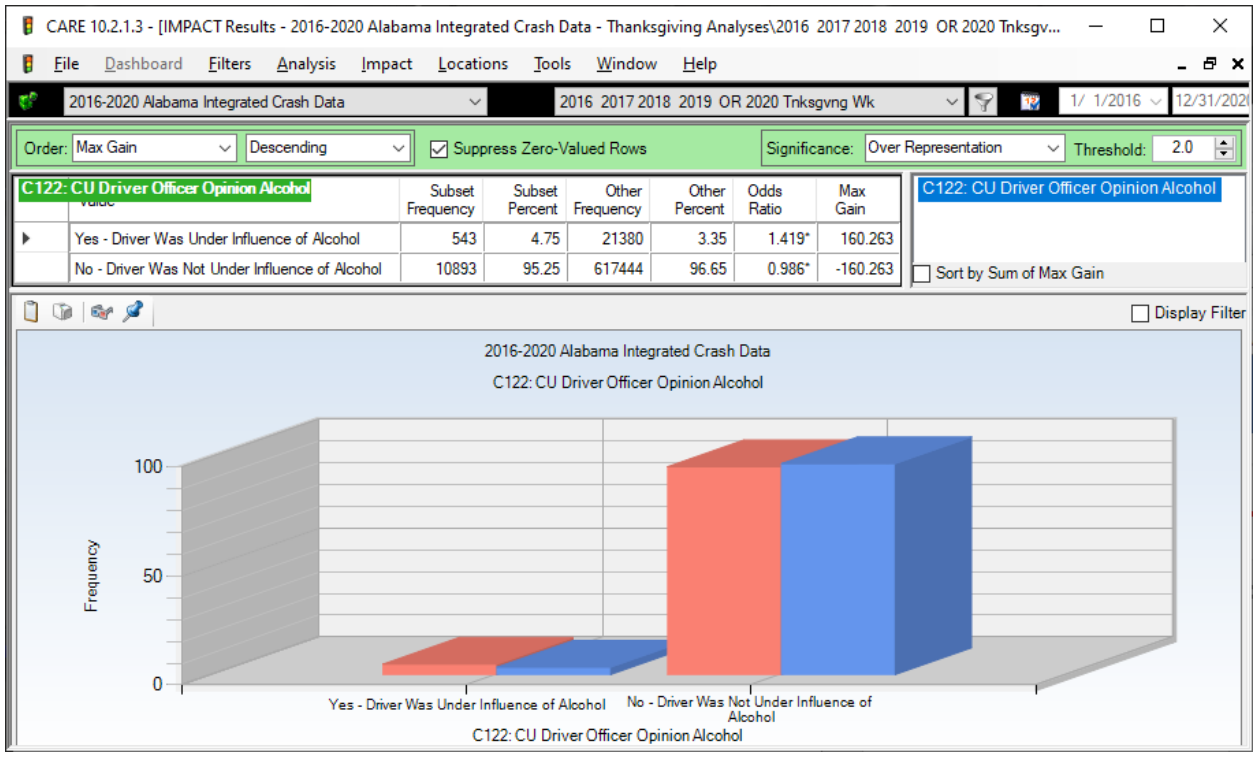
2.10 C023 Manner of Crash TW vs NonTW



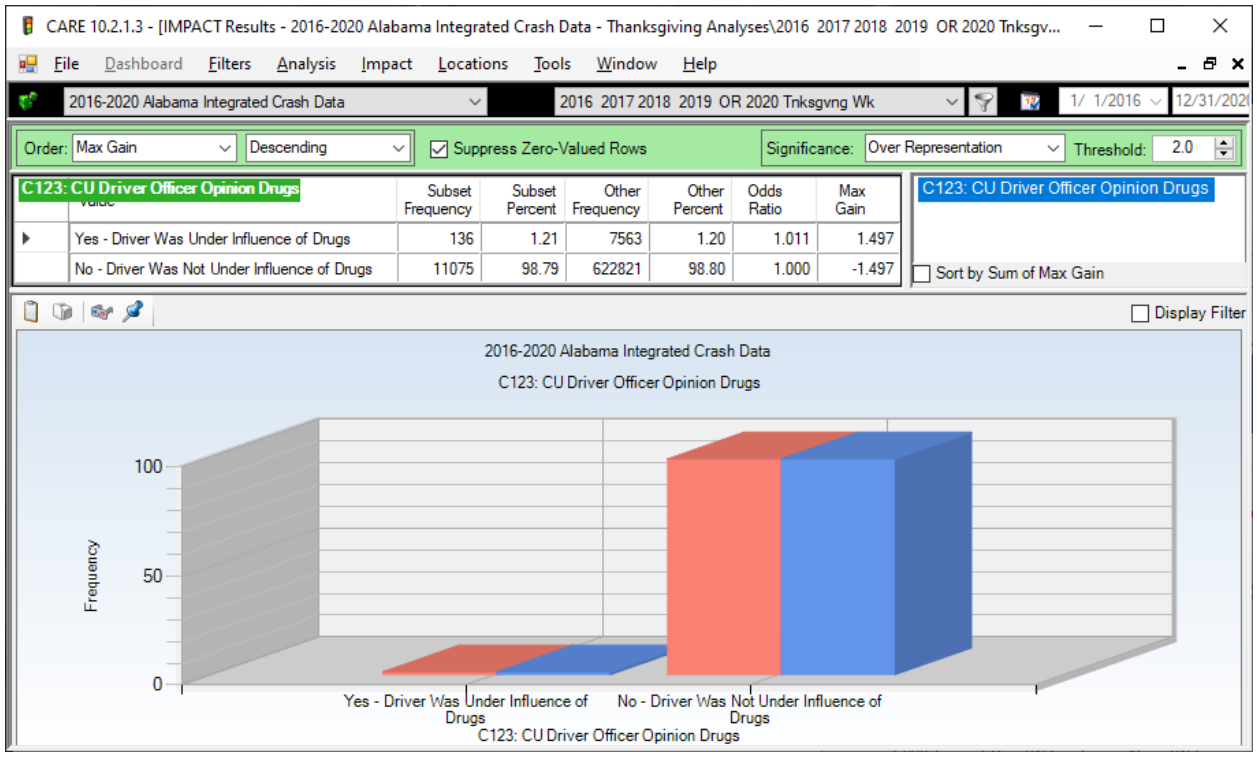
2.11 C031 Lighting Conditions TW vs NonTW



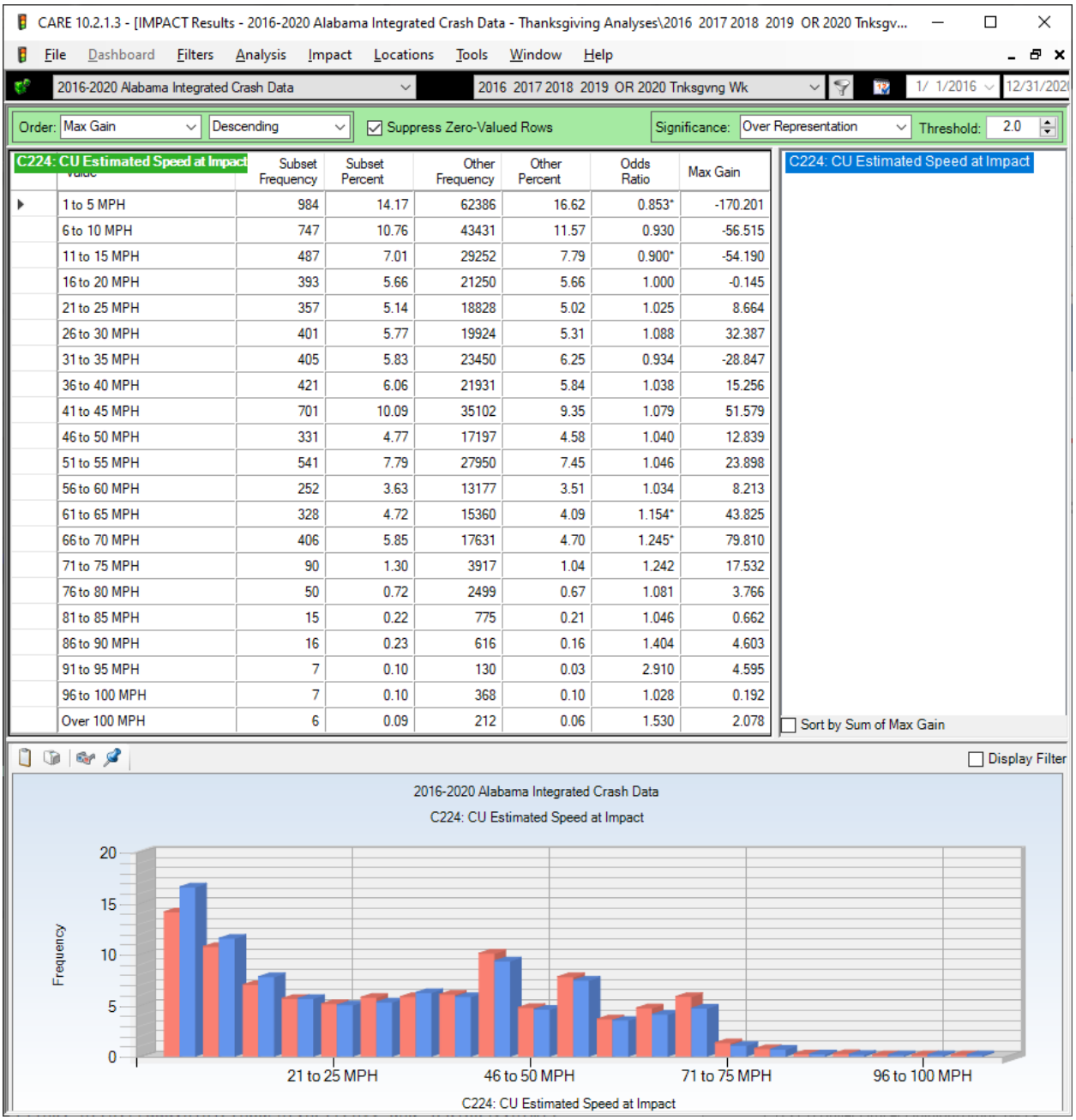
2.12 C122 CU Driver Officer Opinion/Alcohol TW vs NonTW



2.13 C123 CU Driver Officer Opinion/Drugs TW vs NonTW

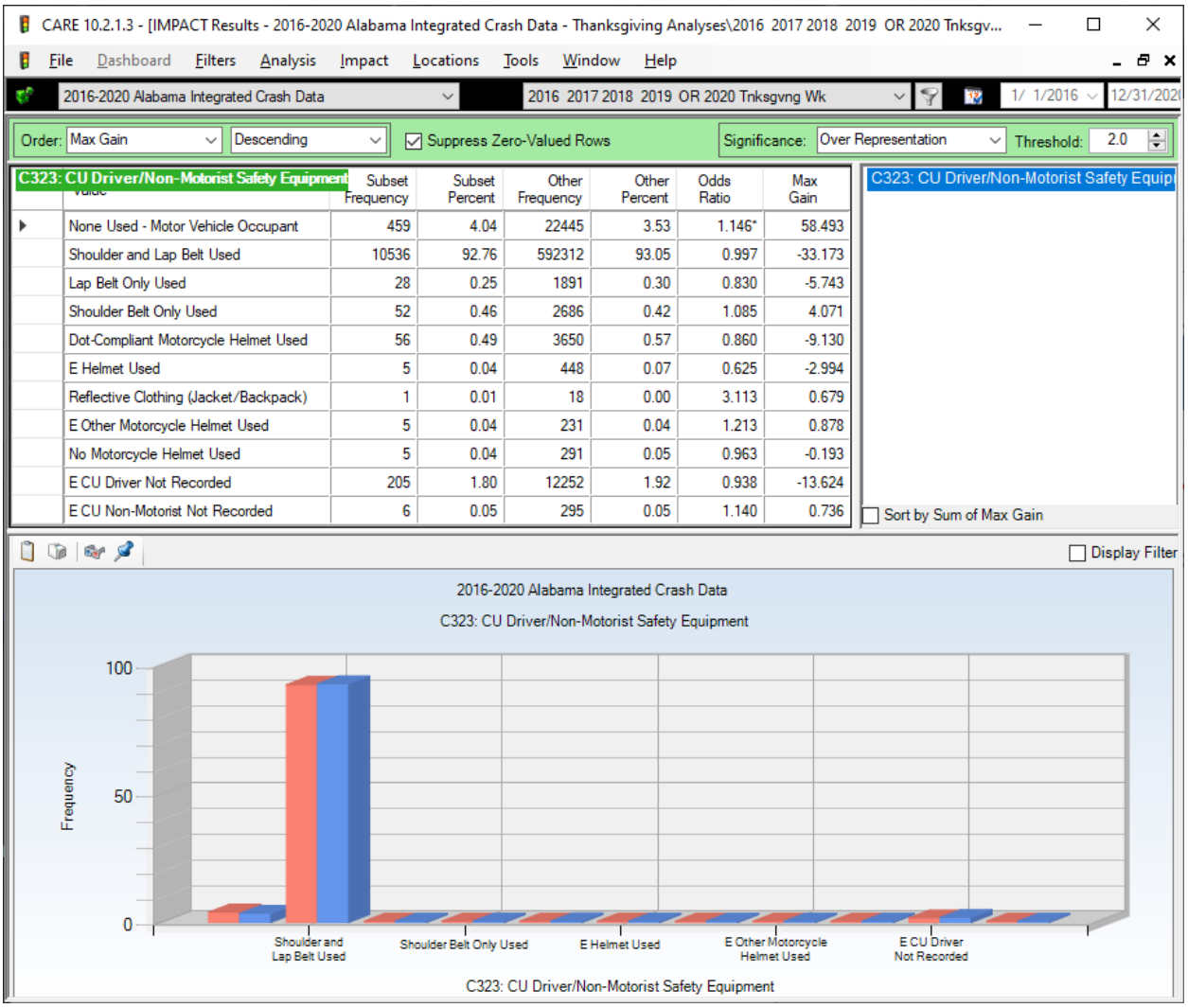


2.14 C224 CU Estimated Speed at Impact TW vs NonTW



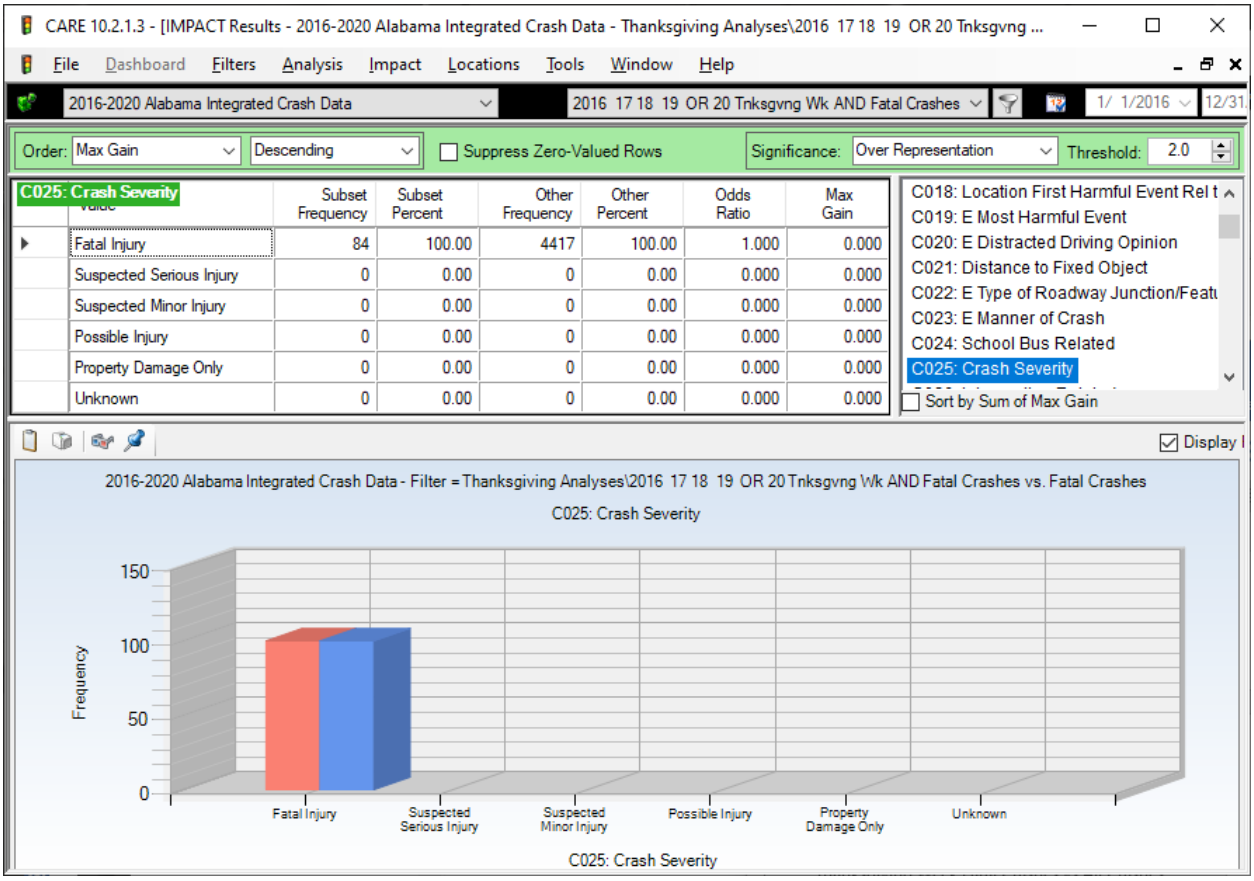
C224: CU Estimated Speed at Impact	Subset Frequency	Subset Percent	Other Frequency	Other Percent	Odds Ratio	Max Gain
1 to 5 MPH	984	14.17	62386	16.62	0.853*	-170.201
6 to 10 MPH	747	10.76	43431	11.57	0.930	-56.515
11 to 15 MPH	487	7.01	29252	7.79	0.900*	-54.190
16 to 20 MPH	393	5.66	21250	5.66	1.000	-0.145
21 to 25 MPH	357	5.14	18828	5.02	1.025	8.664
26 to 30 MPH	401	5.77	19924	5.31	1.088	32.387
31 to 35 MPH	405	5.83	23450	6.25	0.934	-28.847
36 to 40 MPH	421	6.06	21931	5.84	1.038	15.256
41 to 45 MPH	701	10.09	35102	9.35	1.079	51.579
46 to 50 MPH	331	4.77	17197	4.58	1.040	12.839
51 to 55 MPH	541	7.79	27950	7.45	1.046	23.898
56 to 60 MPH	252	3.63	13177	3.51	1.034	8.213
61 to 65 MPH	328	4.72	15360	4.09	1.154*	43.825
66 to 70 MPH	406	5.85	17631	4.70	1.245*	79.810
71 to 75 MPH	90	1.30	3917	1.04	1.242	17.532
76 to 80 MPH	50	0.72	2499	0.67	1.081	3.766
81 to 85 MPH	15	0.22	775	0.21	1.046	0.662
86 to 90 MPH	16	0.23	616	0.16	1.404	4.603
91 to 95 MPH	7	0.10	130	0.03	2.910	4.595
96 to 100 MPH	7	0.10	368	0.10	1.028	0.192
Over 100 MPH	6	0.09	212	0.06	1.530	2.078

2.15 C323 CU CU Driver/Non Motorist Safety Equipment TW vs NonTW

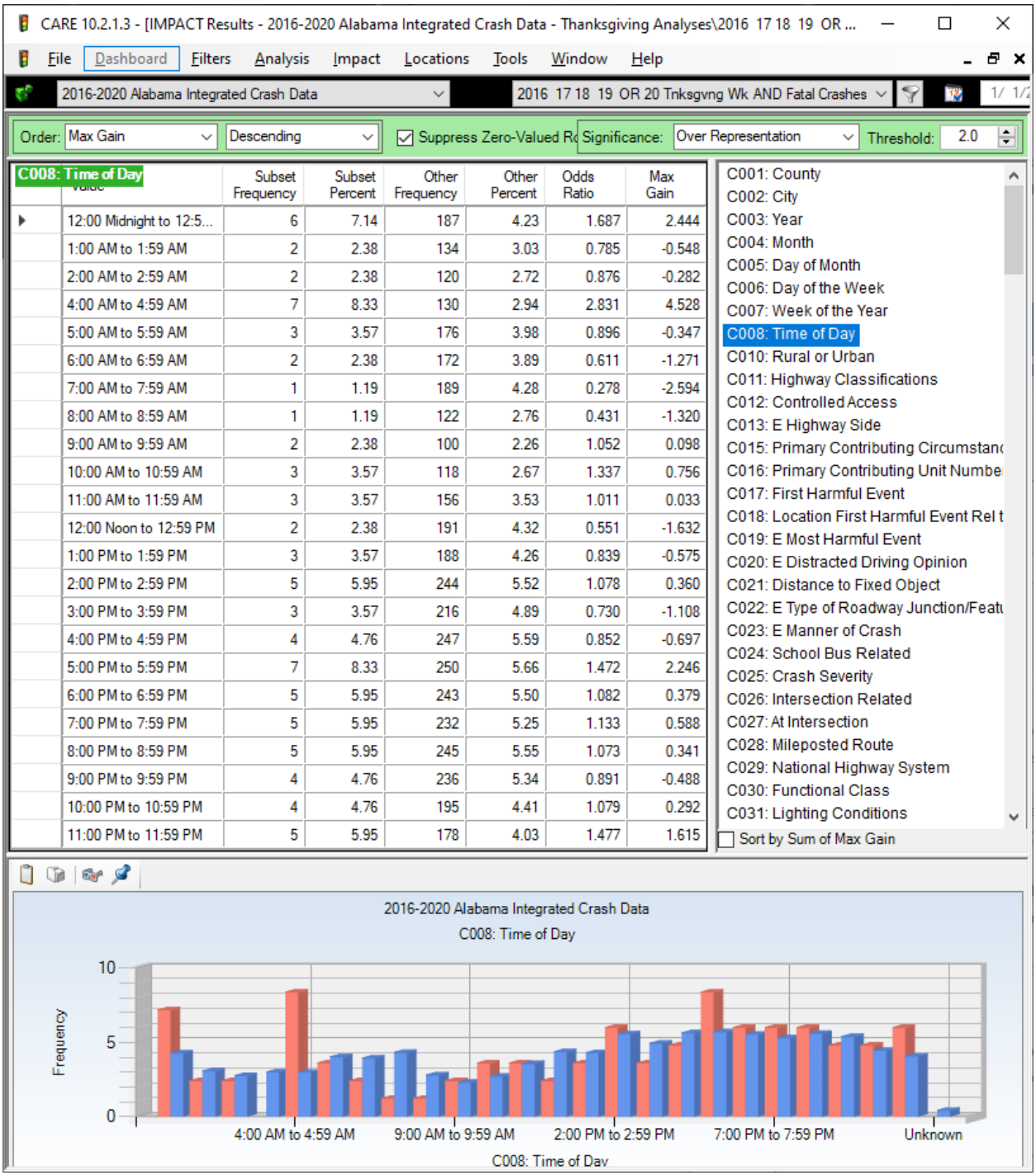


3.0 Thanksgiving Week Fatal Crashes vs All Fatal Crashes

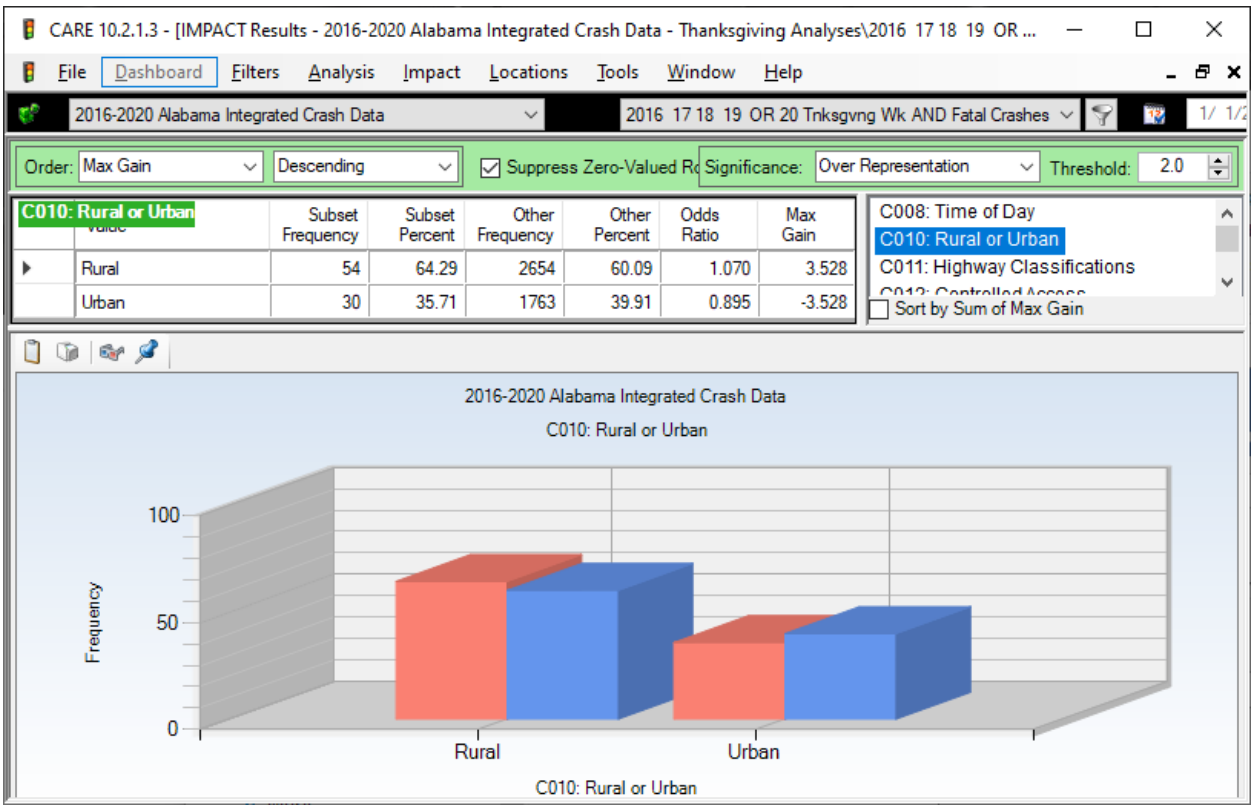
3.1 C025 Crash Severity TW Fatal vs All Fatal



3.2 C008 Time of Day TW Fatal vs All Fatal

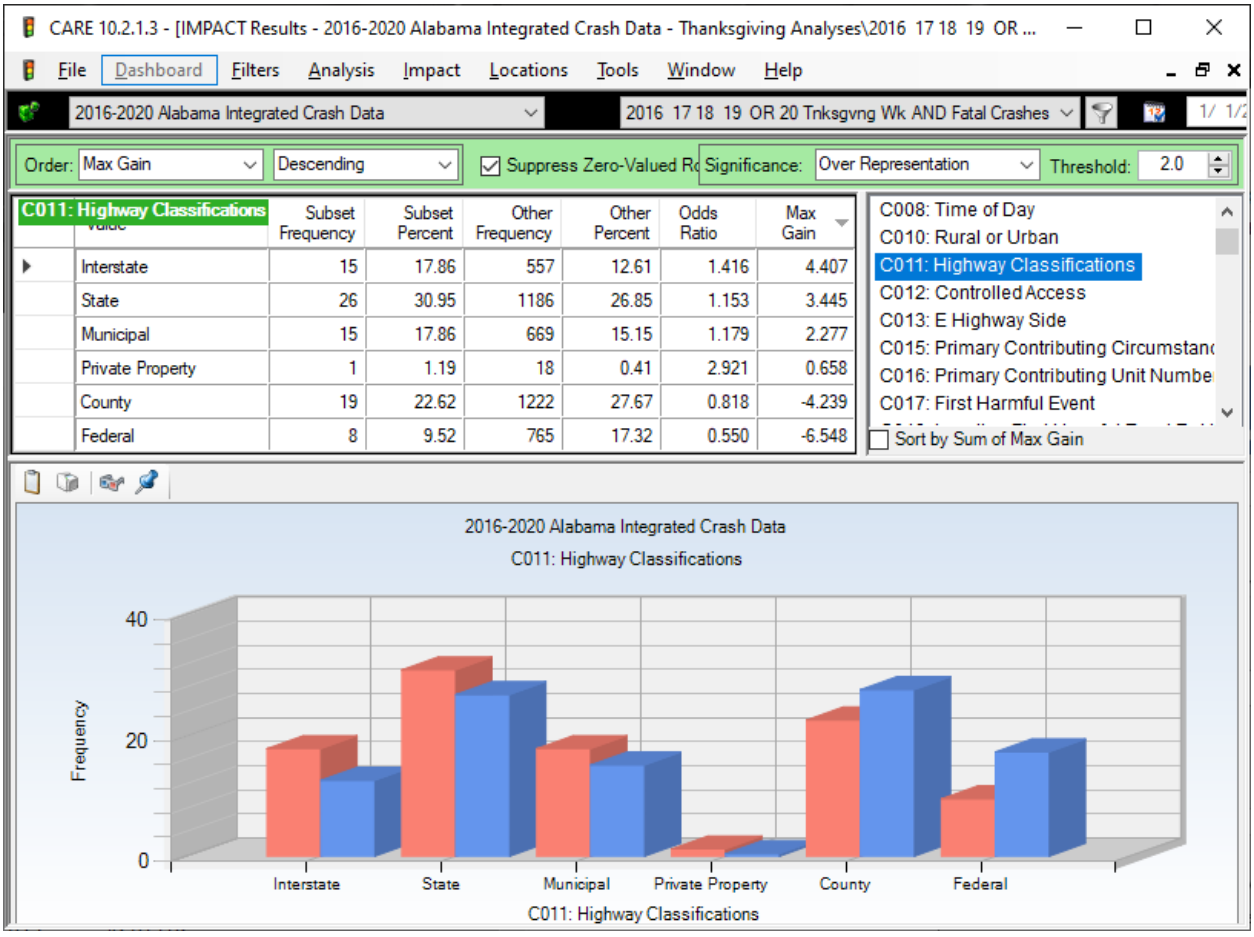


3.3 C010 Rural or Urban TW Fatal vs All Fatal



Little difference in TW as opposed to fatal crashes in general.

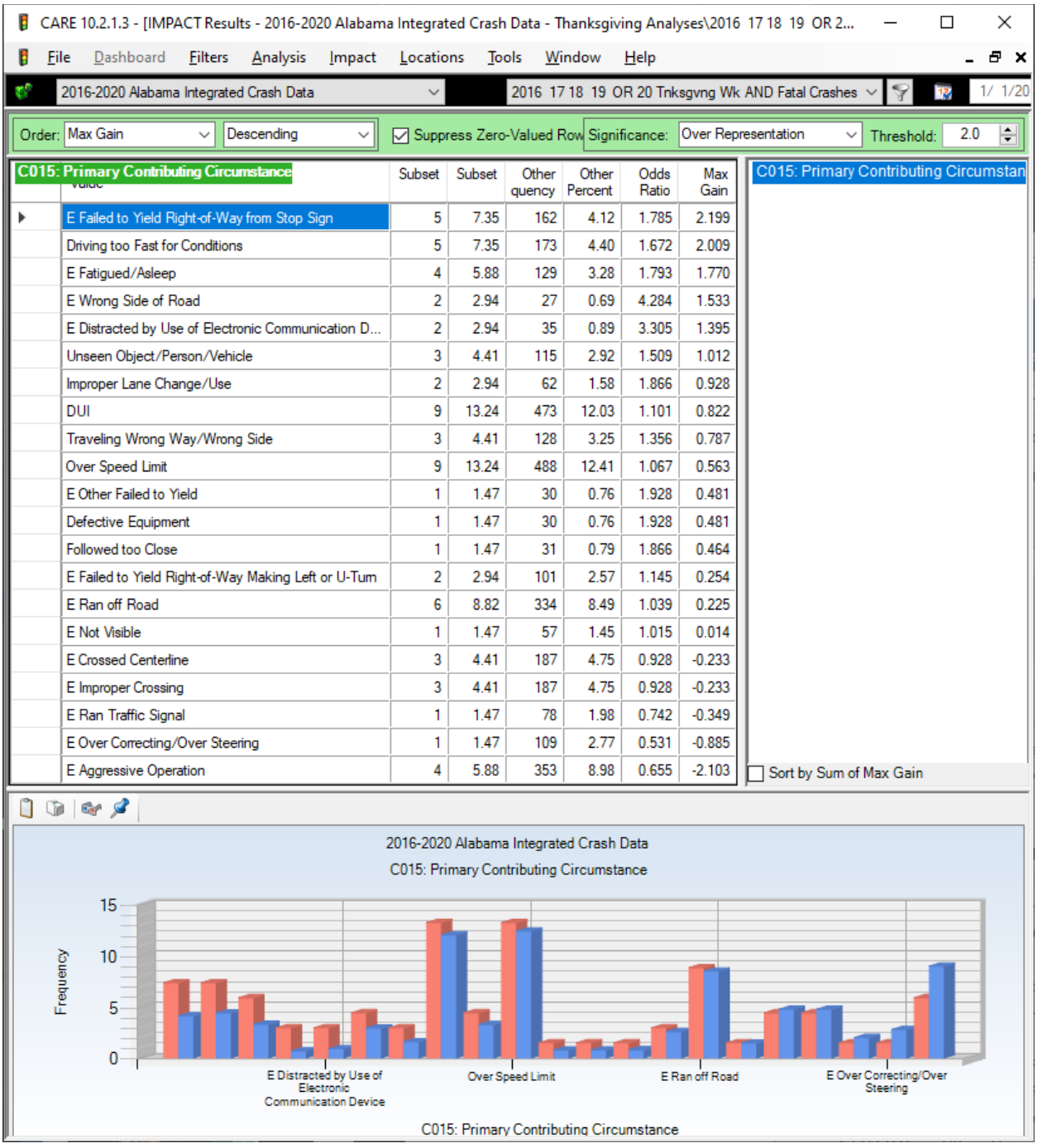
3.4 C011 Highway Classification TW Fatal vs All Fatal



Major difference from the all crash comparison.

3.5 C015 Primary Contributing Circumstances TW Fatal vs All Fatal 1

Ordered by Max Gain



C015: Primary Contributing Circumstance	Subset	Subset	Other quency	Other Percent	Odds Ratio	Max Gain
E Failed to Yield Right-of-Way from Stop Sign	5	7.35	162	4.12	1.785	2.199
Driving too Fast for Conditions	5	7.35	173	4.40	1.672	2.009
E Fatigued/Asleep	4	5.88	129	3.28	1.793	1.770
E Wrong Side of Road	2	2.94	27	0.69	4.284	1.533
E Distracted by Use of Electronic Communication D...	2	2.94	35	0.89	3.305	1.395
Unseen Object/Person/Vehicle	3	4.41	115	2.92	1.509	1.012
Improper Lane Change/Use	2	2.94	62	1.58	1.866	0.928
DUI	9	13.24	473	12.03	1.101	0.822
Traveling Wrong Way/Wrong Side	3	4.41	128	3.25	1.356	0.787
Over Speed Limit	9	13.24	488	12.41	1.067	0.563
E Other Failed to Yield	1	1.47	30	0.76	1.928	0.481
Defective Equipment	1	1.47	30	0.76	1.928	0.481
Followed too Close	1	1.47	31	0.79	1.866	0.464
E Failed to Yield Right-of-Way Making Left or U-Turn	2	2.94	101	2.57	1.145	0.254
E Ran off Road	6	8.82	334	8.49	1.039	0.225
E Not Visible	1	1.47	57	1.45	1.015	0.014
E Crossed Centerline	3	4.41	187	4.75	0.928	-0.233
E Improper Crossing	3	4.41	187	4.75	0.928	-0.233
E Ran Traffic Signal	1	1.47	78	1.98	0.742	-0.349
E Over Correcting/Over Steering	1	1.47	109	2.77	0.531	-0.885
E Aggressive Operation	4	5.88	353	8.98	0.655	-2.103

3.6 C015 Primary Contributing Circumstances TW Fatal vs All Fatal 2

Ordered by TW Fatal frequency

CARE 10.2.1.3 - [IMPACT Results - 2016-2020 Alabama Integrated Crash Data - Thanksgiving Analyses\2016 17 18 19 OR 2...

File Dashboard Filters Analysis Impact Locations Tools Window Help

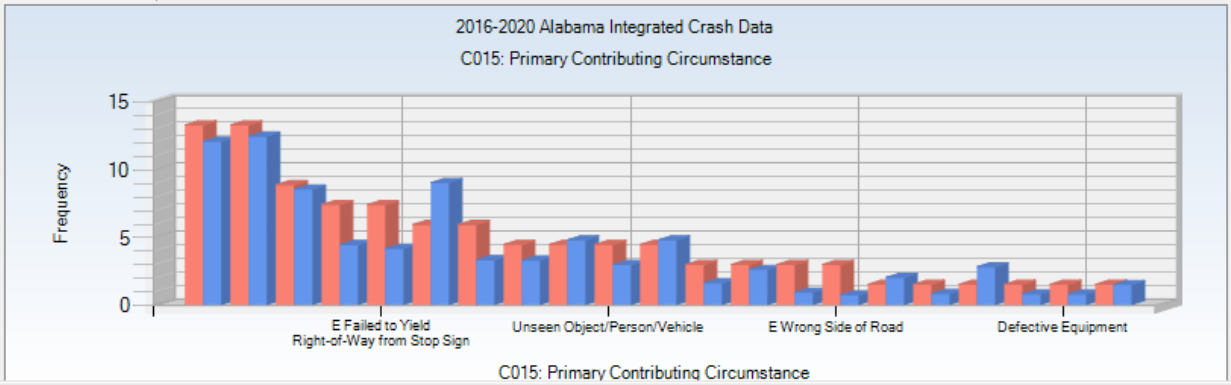
2016-2020 Alabama Integrated Crash Data | 2016 17 18 19 OR 20 Tnksgvng Wk AND Fatal Crashes | 1/ 1/20

Order: Subset Frequency | Descending | Suppress Zero-Valued Row | Significance: Over Representation | Threshold: 2.0

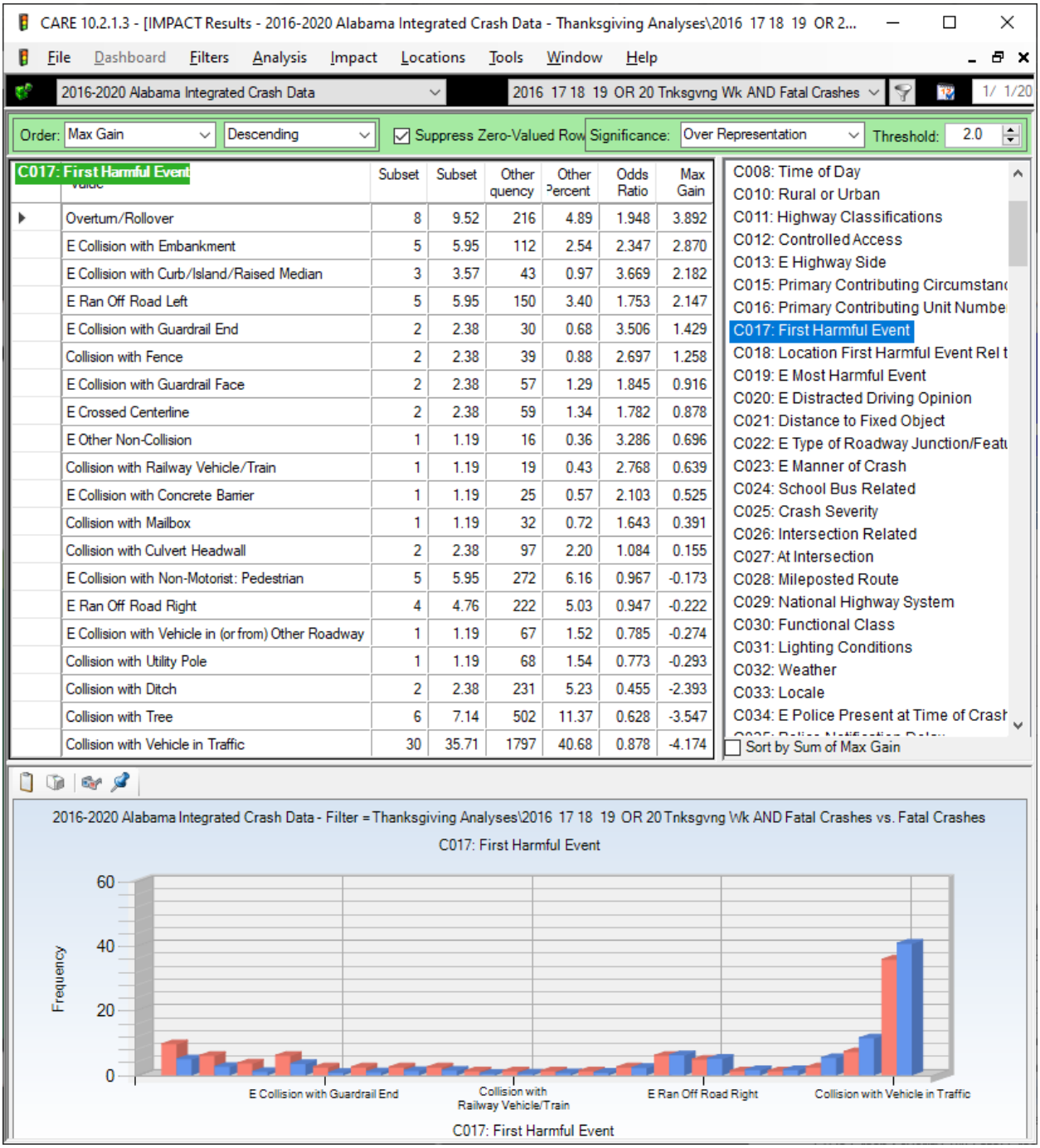
C015: Primary Contributing Circumstance	Subset	Subset	Other quency	Other Percent	Odds Ratio	Max Gain
DUI	9	13.24	473	12.03	1.101	0.822
Over Speed Limit	9	13.24	488	12.41	1.067	0.563
E Ran off Road	6	8.82	334	8.49	1.039	0.225
Driving too Fast for Conditions	5	7.35	173	4.40	1.672	2.009
E Failed to Yield Right-of-Way from Stop Sign	5	7.35	162	4.12	1.785	2.199
E Aggressive Operation	4	5.88	353	8.98	0.655	-2.103
E Fatigued/Asleep	4	5.88	129	3.28	1.793	1.770
Traveling Wrong Way/Wrong Side	3	4.41	128	3.25	1.356	0.787
E Crossed Centerline	3	4.41	187	4.75	0.928	-0.233
Unseen Object/Person/Vehicle	3	4.41	115	2.92	1.509	1.012
E Improper Crossing	3	4.41	187	4.75	0.928	-0.233
Improper Lane Change/Use	2	2.94	62	1.58	1.866	0.928
E Failed to Yield Right-of-Way Making Left or U-Turn	2	2.94	101	2.57	1.145	0.254
E Distracted by Use of Electronic Communication D...	2	2.94	35	0.89	3.305	1.395
E Wrong Side of Road	2	2.94	27	0.69	4.284	1.533
E Ran Traffic Signal	1	1.47	78	1.98	0.742	-0.349
Followed too Close	1	1.47	31	0.79	1.866	0.464
E Over Correcting/Over Steering	1	1.47	109	2.77	0.531	-0.885
E Other Failed to Yield	1	1.47	30	0.76	1.928	0.481
Defective Equipment	1	1.47	30	0.76	1.928	0.481
E Not Visible	1	1.47	57	1.45	1.015	0.014

C015: Primary Contributing Circumstan

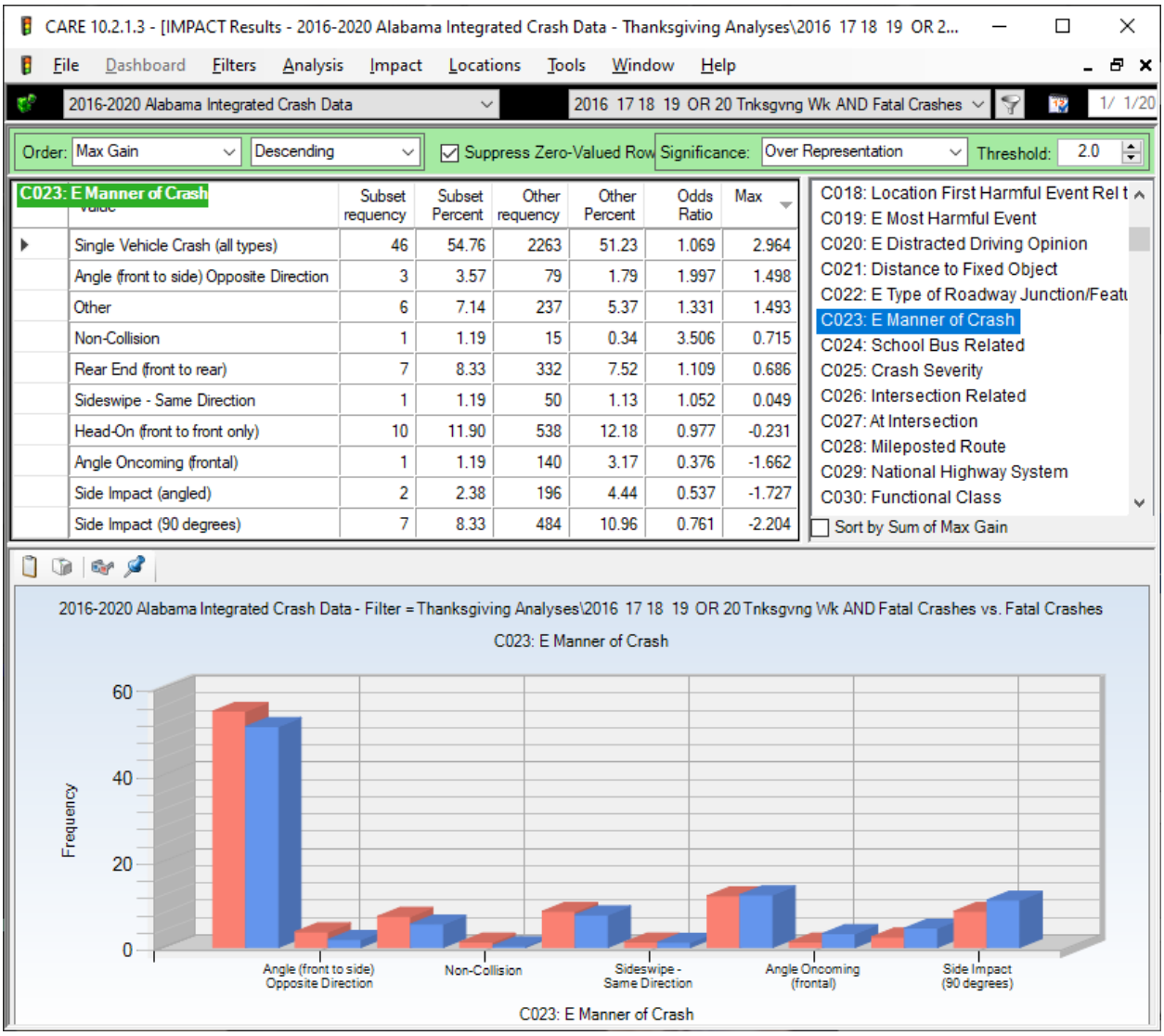
Sort by Sum of Max Gain



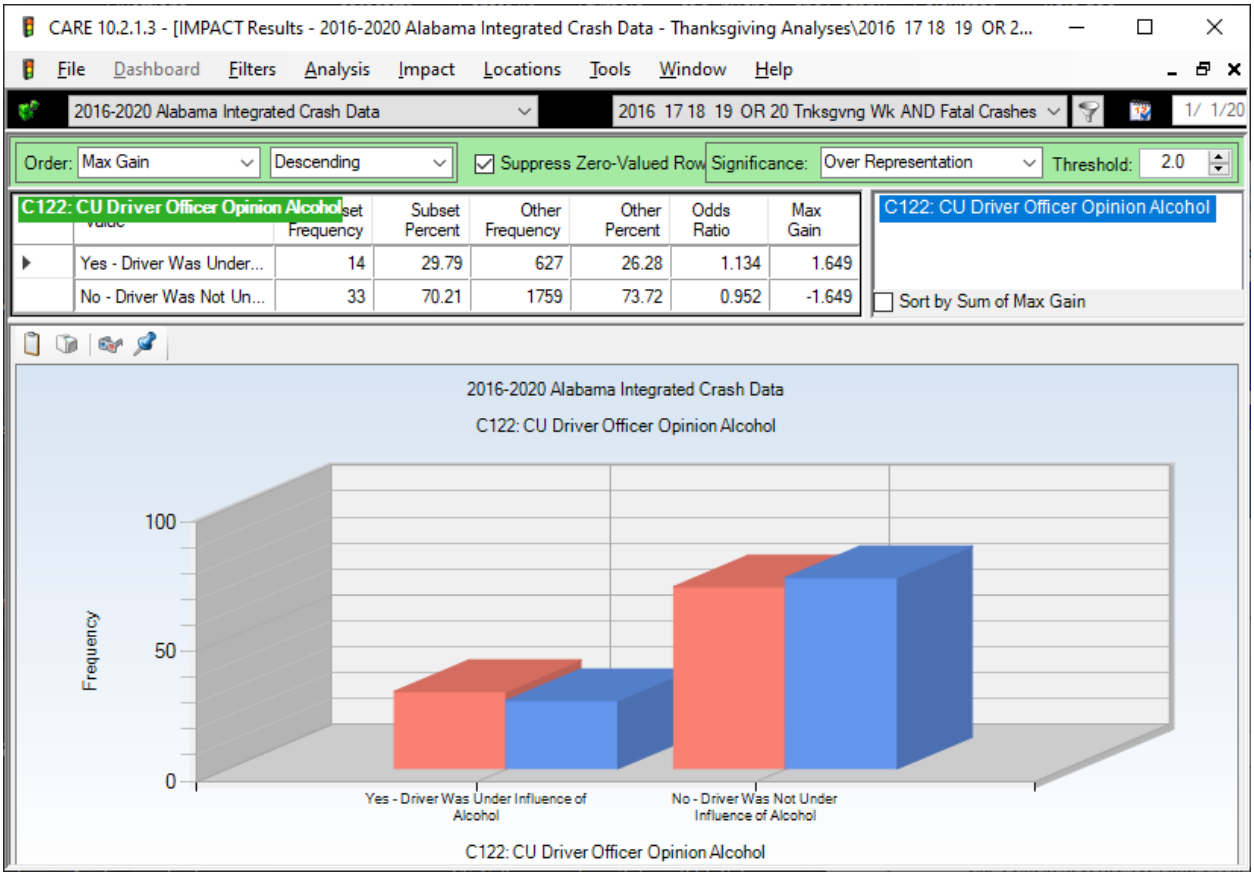
3.7 C017 First Harmful Event TW Fatal vs All Fatal



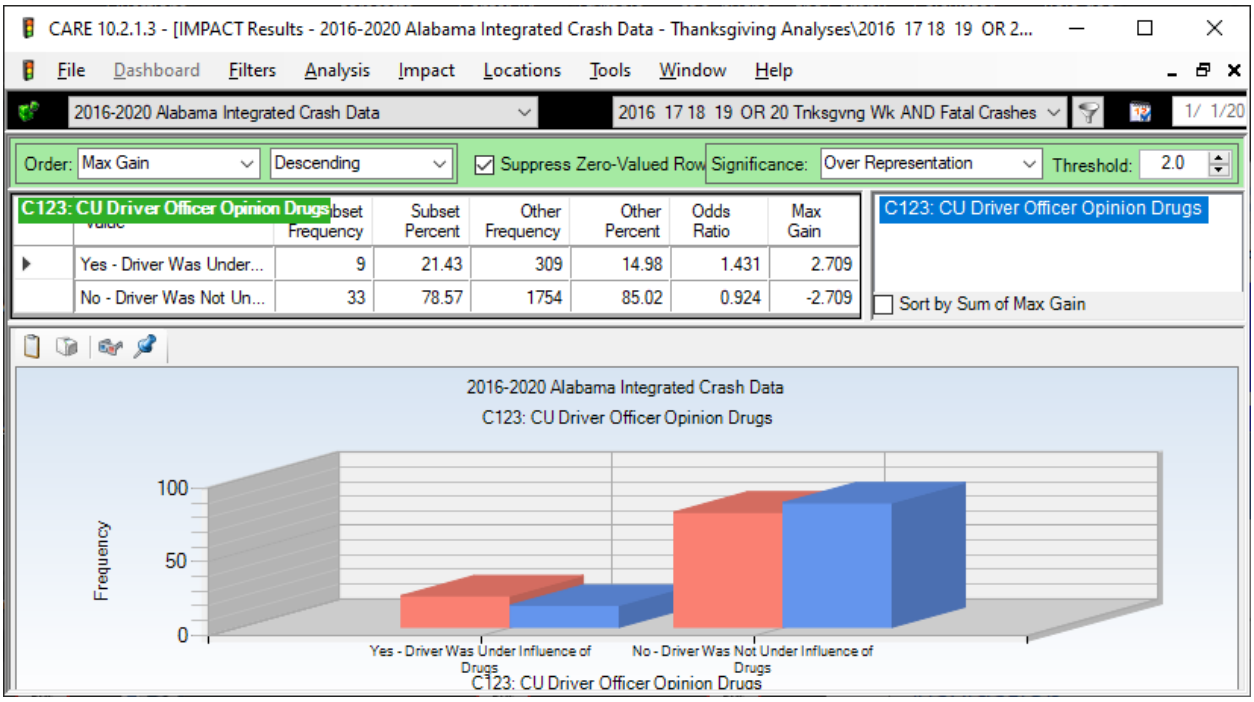
3.8 C023 Manner of Crash TW Fatal vs All Fatal



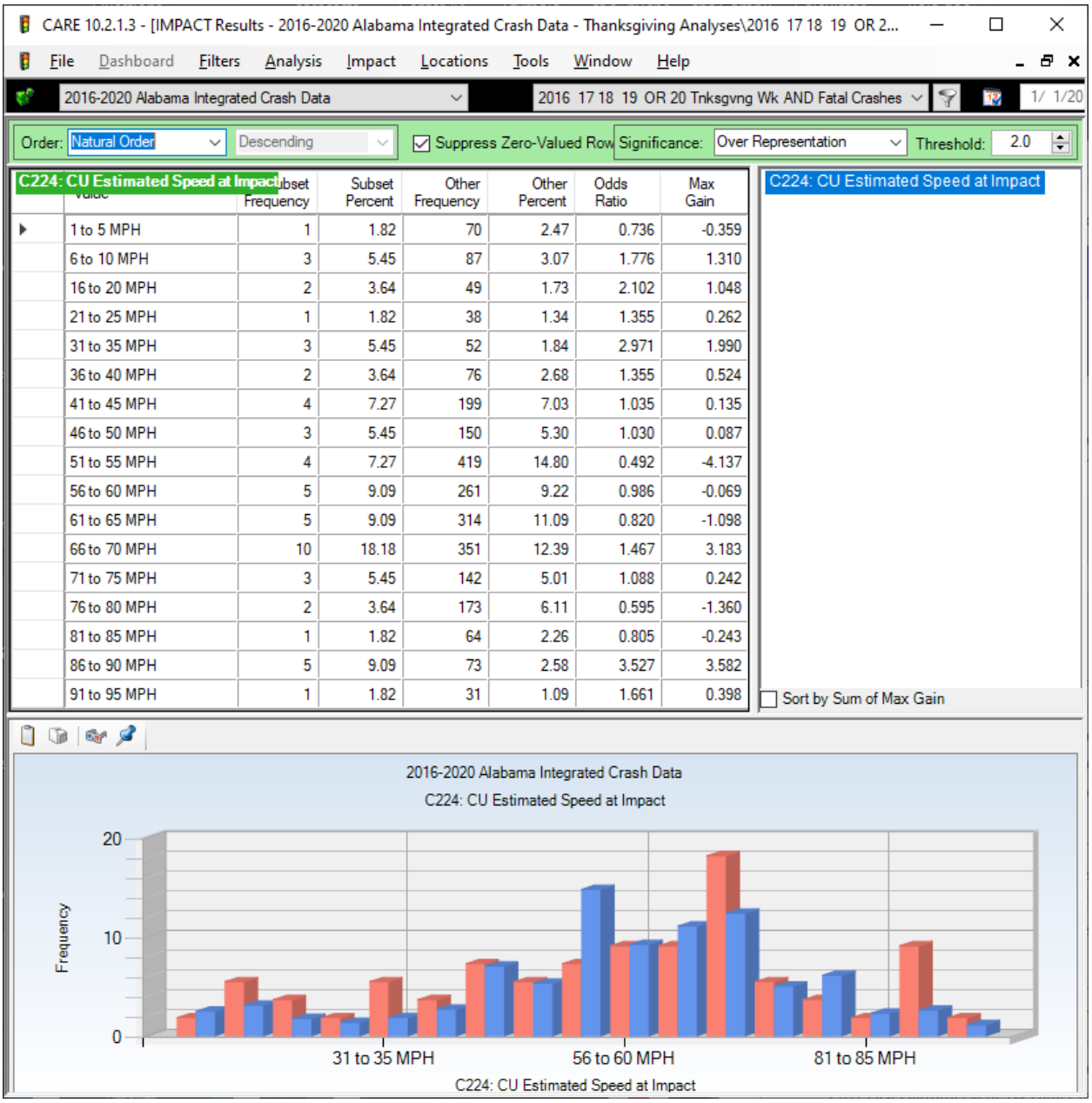
3.9 C122 CU Driver Officer Opinion/Alcohol TW Fatal vs All Fatal



3.10 C123 CU Driver Officer Opinion/Drugs TW Fatal vs All Fatal

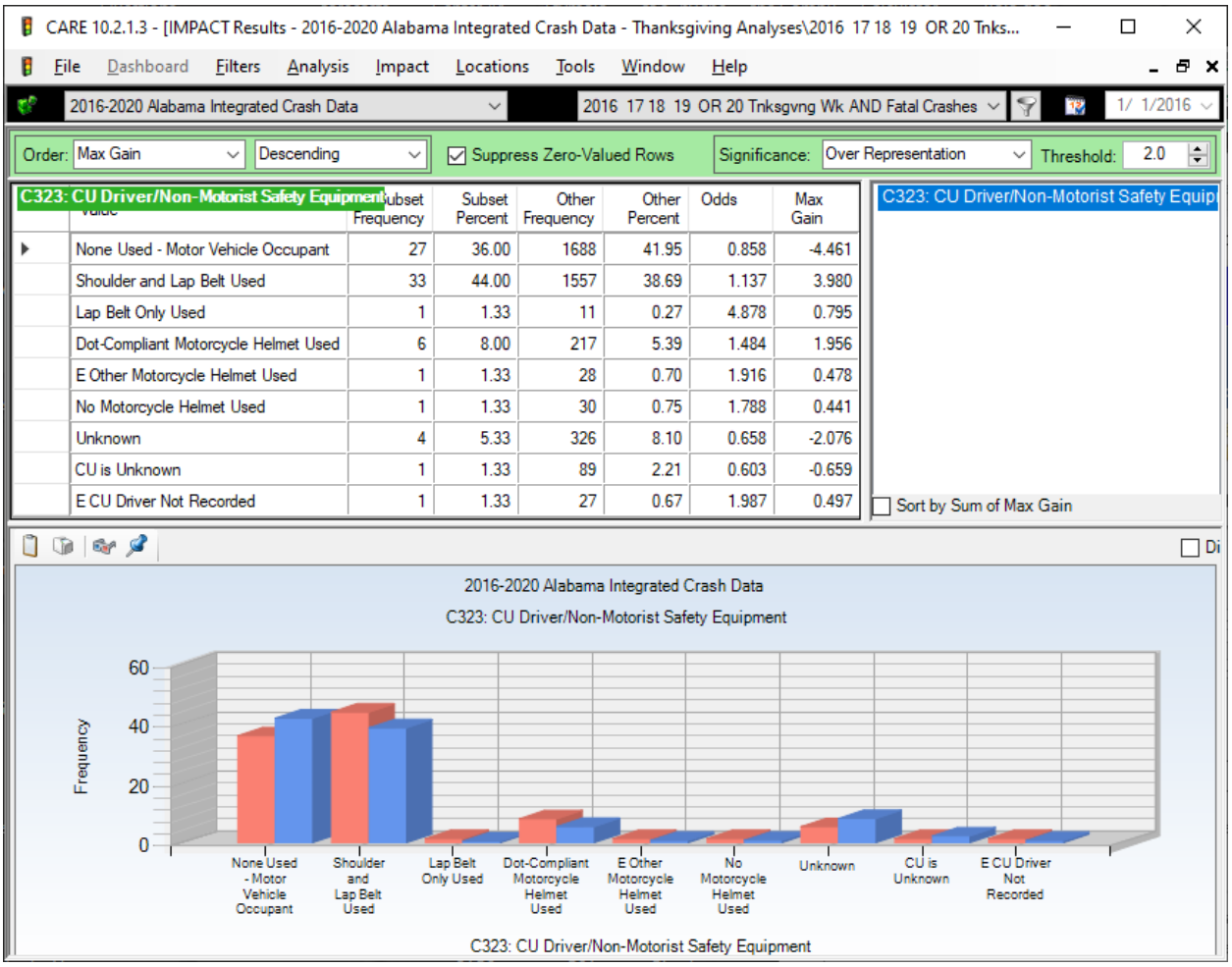


3.11 C224 CU Estimated Speed at Impact TW Fatal vs All Fatal



C224: CU Estimated Speed at Impact	Subset Frequency	Subset Percent	Other Frequency	Other Percent	Odds Ratio	Max Gain
1 to 5 MPH	1	1.82	70	2.47	0.736	-0.359
6 to 10 MPH	3	5.45	87	3.07	1.776	1.310
16 to 20 MPH	2	3.64	49	1.73	2.102	1.048
21 to 25 MPH	1	1.82	38	1.34	1.355	0.262
31 to 35 MPH	3	5.45	52	1.84	2.971	1.990
36 to 40 MPH	2	3.64	76	2.68	1.355	0.524
41 to 45 MPH	4	7.27	199	7.03	1.035	0.135
46 to 50 MPH	3	5.45	150	5.30	1.030	0.087
51 to 55 MPH	4	7.27	419	14.80	0.492	-4.137
56 to 60 MPH	5	9.09	261	9.22	0.986	-0.069
61 to 65 MPH	5	9.09	314	11.09	0.820	-1.098
66 to 70 MPH	10	18.18	351	12.39	1.467	3.183
71 to 75 MPH	3	5.45	142	5.01	1.088	0.242
76 to 80 MPH	2	3.64	173	6.11	0.595	-1.360
81 to 85 MPH	1	1.82	64	2.26	0.805	-0.243
86 to 90 MPH	5	9.09	73	2.58	3.527	3.582
91 to 95 MPH	1	1.82	31	1.09	1.661	0.398

3.12 C323 CU CU Driver/Non Motorist Safety Equipment TW Fatal vs All Fatal

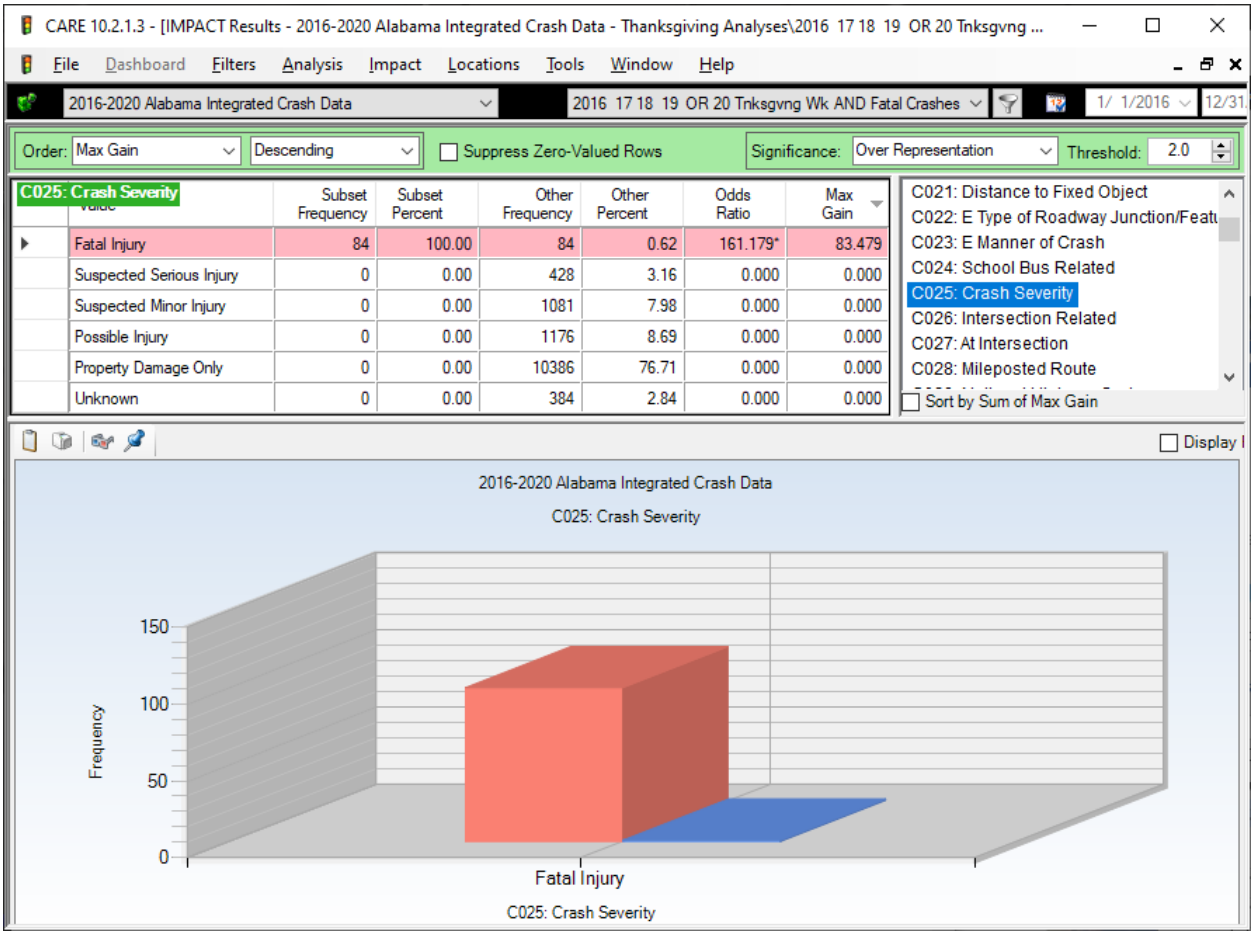


C323: CU Driver/Non-Motorist Safety Equipment	Subset Frequency	Subset Percent	Other Frequency	Other Percent	Odds	Max Gain
None Used - Motor Vehicle Occupant	27	36.00	1688	41.95	0.858	-4.461
Shoulder and Lap Belt Used	33	44.00	1557	38.69	1.137	3.980
Lap Belt Only Used	1	1.33	11	0.27	4.878	0.795
Dot-Compliant Motorcycle Helmet Used	6	8.00	217	5.39	1.484	1.956
E Other Motorcycle Helmet Used	1	1.33	28	0.70	1.916	0.478
No Motorcycle Helmet Used	1	1.33	30	0.75	1.788	0.441
Unknown	4	5.33	326	8.10	0.658	-2.076
CU is Unknown	1	1.33	89	2.21	0.603	-0.659
E CU Driver Not Recorded	1	1.33	27	0.67	1.987	0.497

Does not look so bad when compared to other fatalities.

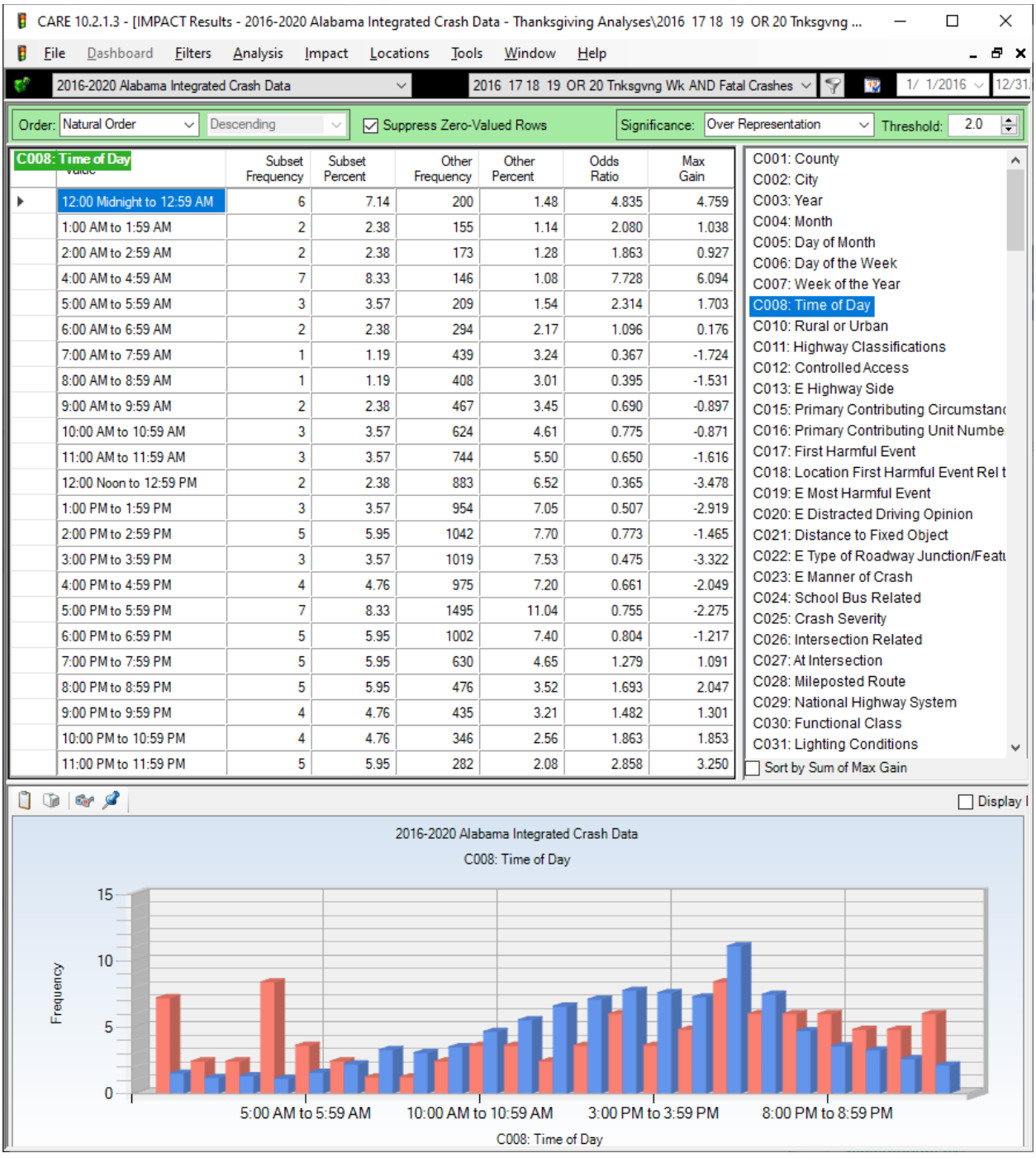
4.0 Thanksgiving Week (TW) Fatal Crashes vs All Crashes for TWs

4.1 C025 Crash Severity TW Fatal Crashes vs All Crashes for TWs



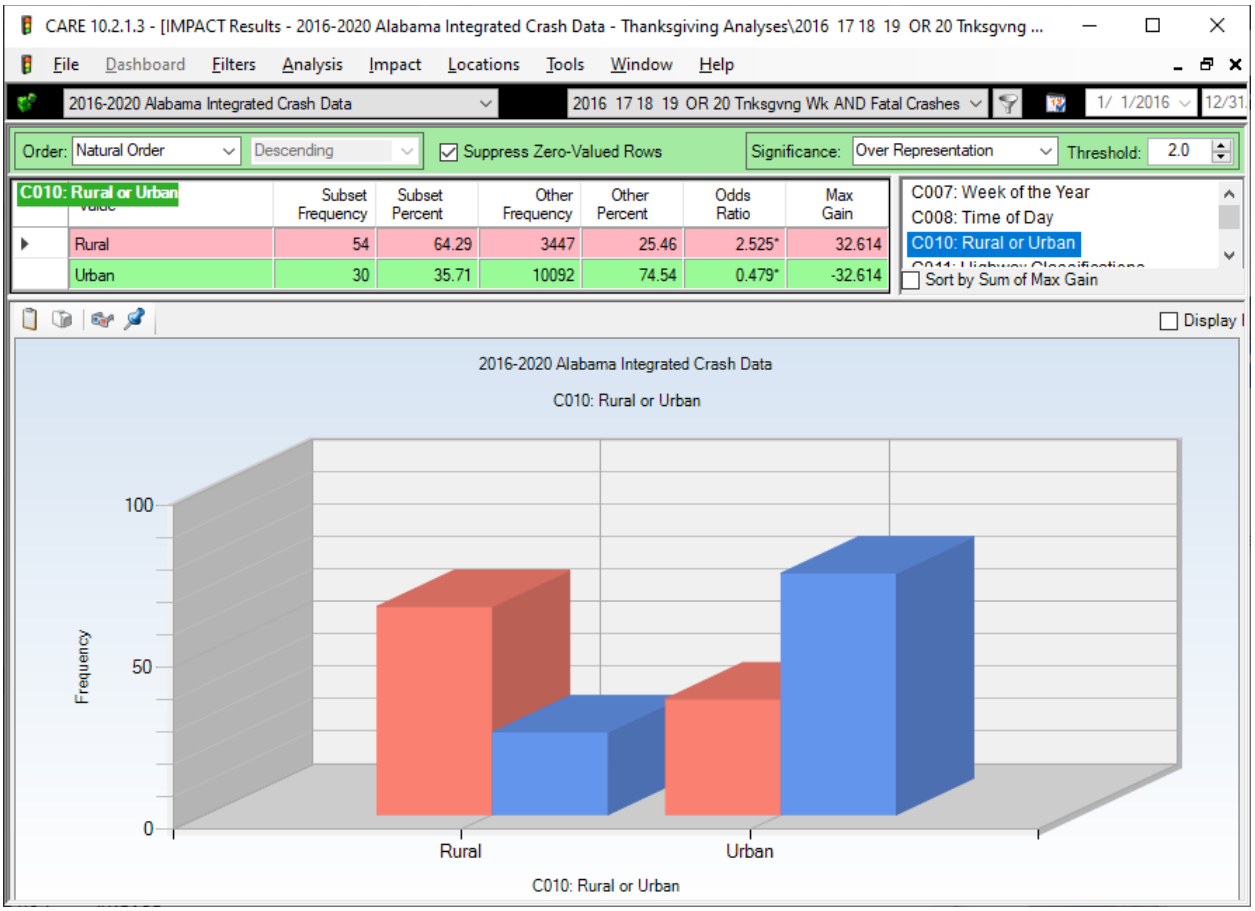
4.2 C008 Time of Day -- TW Fatal Crashes vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



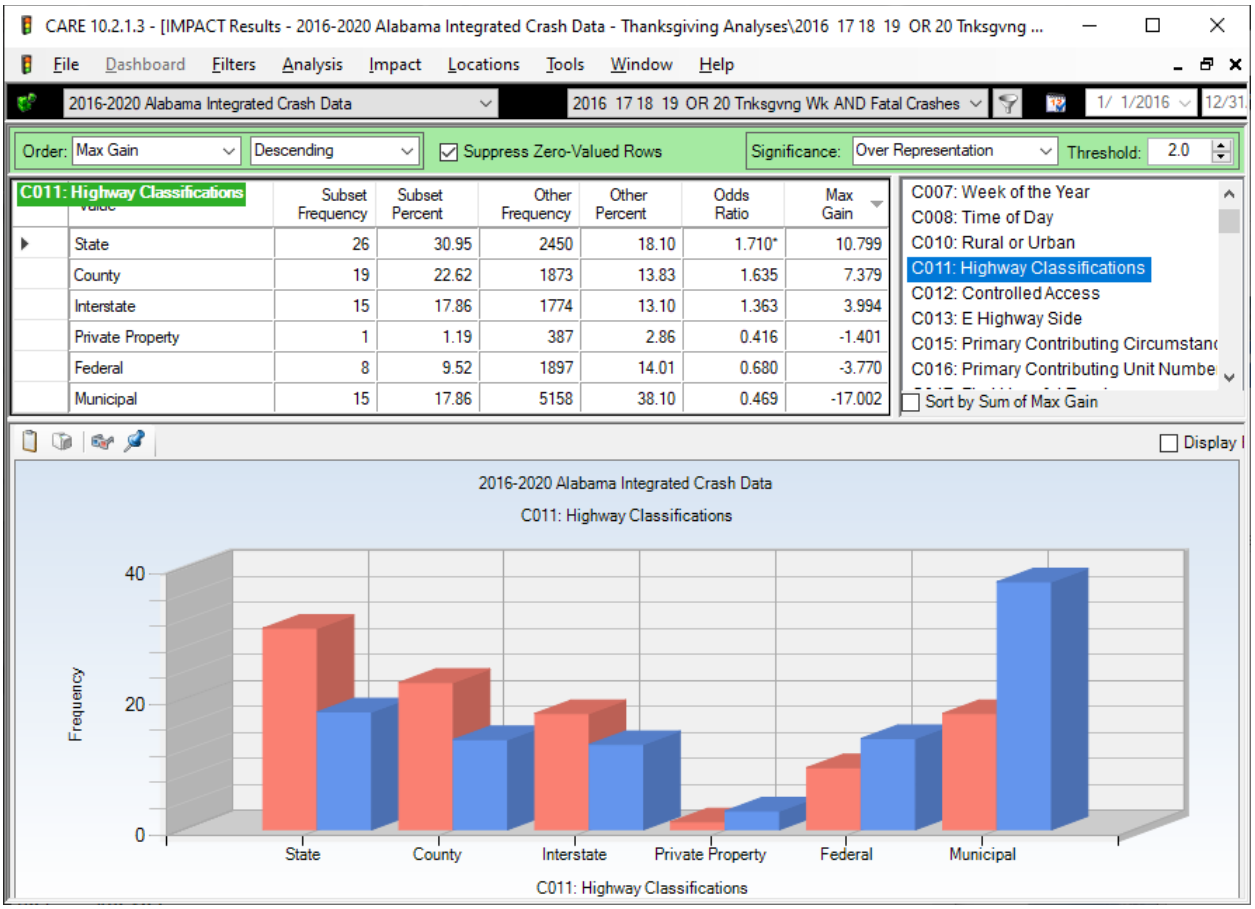
4.3 C010 Rural or Urban -- TW Fatal Crashes vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



4.4 C011 Highway Classification -- TW Fatal Crashes vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



4.5 C015 Primary Contributing Circumstances TW Fatal vs All TW Crashes

Thanksgiving Week Fatal Crashes vs All Crashes for that week

CARE 10.2.1.3 - [IMPACT Results - 2016-2020 Alabama Integrated Crash Data - Thanksgiving Analyses\2016 17 18 1...

File Dashboard Filters Analysis Impact Locations Tools Window Help

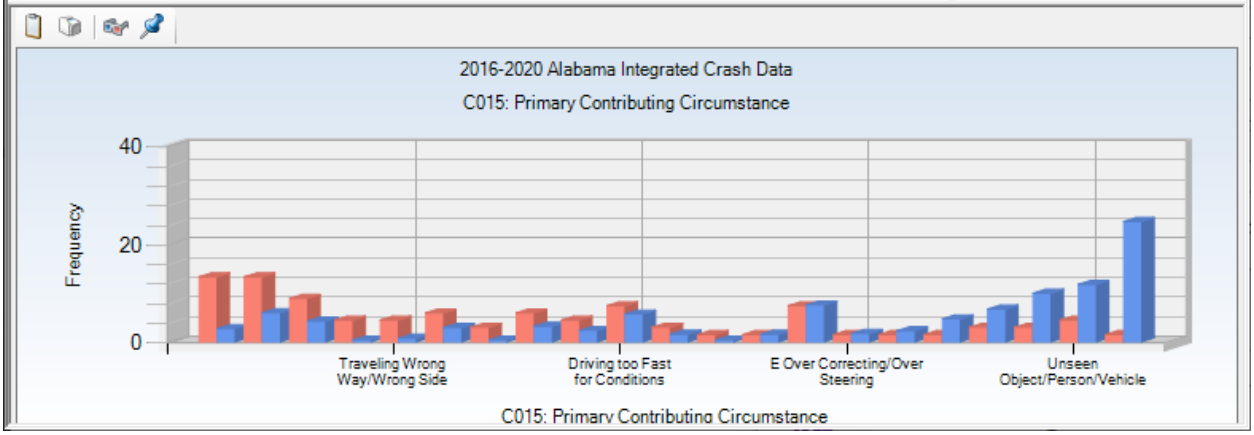
2016-2020 Alabama Integrated Crash Data | 2016 17 18 19 OR 20 Tnksgvng Wk AND Fatal Crashes

Order: Max Gain | Descending | Suppress Zero-Valu | Significance: Over Representation | Threshold: 2.0

C015: Primary Contributing Circumstance	Subset Frequency	Subset Percent	Other Frequency	Other Percent	Odds Ratio	Max Gain
Over Speed Limit	9	13.24	214	2.68	4.935	7.176
DUI	9	13.24	472	5.91	2.238	4.978
E Ran off Road	6	8.82	337	4.22	2.089	3.128
E Improper Crossing	3	4.41	18	0.23	19.559	2.847
Traveling Wrong Way/Wrong Side	3	4.41	57	0.71	6.176	2.514
E Fatigued/Asleep	4	5.88	232	2.91	2.023	2.023
E Wrong Side of Road	2	2.94	10	0.13	23.471	1.915
E Aggressive Operation	4	5.88	254	3.18	1.848	1.836
E Crossed Centerline	3	4.41	184	2.31	1.913	1.432
Driving too Fast for Conditions	5	7.35	449	5.63	1.307	1.174
E Distracted by Use of Electronic Commu...	2	2.94	122	1.53	1.924	0.960
E Not Visible	1	1.47	9	0.11	13.039	0.923
E Other Failed to Yield	1	1.47	121	1.52	0.970	-0.031
E Failed to Yield Right-of-Way from Stop ...	5	7.35	599	7.51	0.980	-0.104
E Over Correcting/Over Steering	1	1.47	134	1.68	0.876	-0.142
Defective Equipment	1	1.47	179	2.24	0.656	-0.525
E Ran Traffic Signal	1	1.47	371	4.65	0.316	-2.161
E Failed to Yield Right-of-Way Making Le...	2	2.94	533	6.68	0.440	-2.542
Improper Lane Change/Use	2	2.94	791	9.91	0.297	-4.740
Unseen Object/Person/Vehicle	3	4.41	935	11.72	0.377	-4.967
Followed too Close	1	1.47	1959	24.55	0.060	-15.693

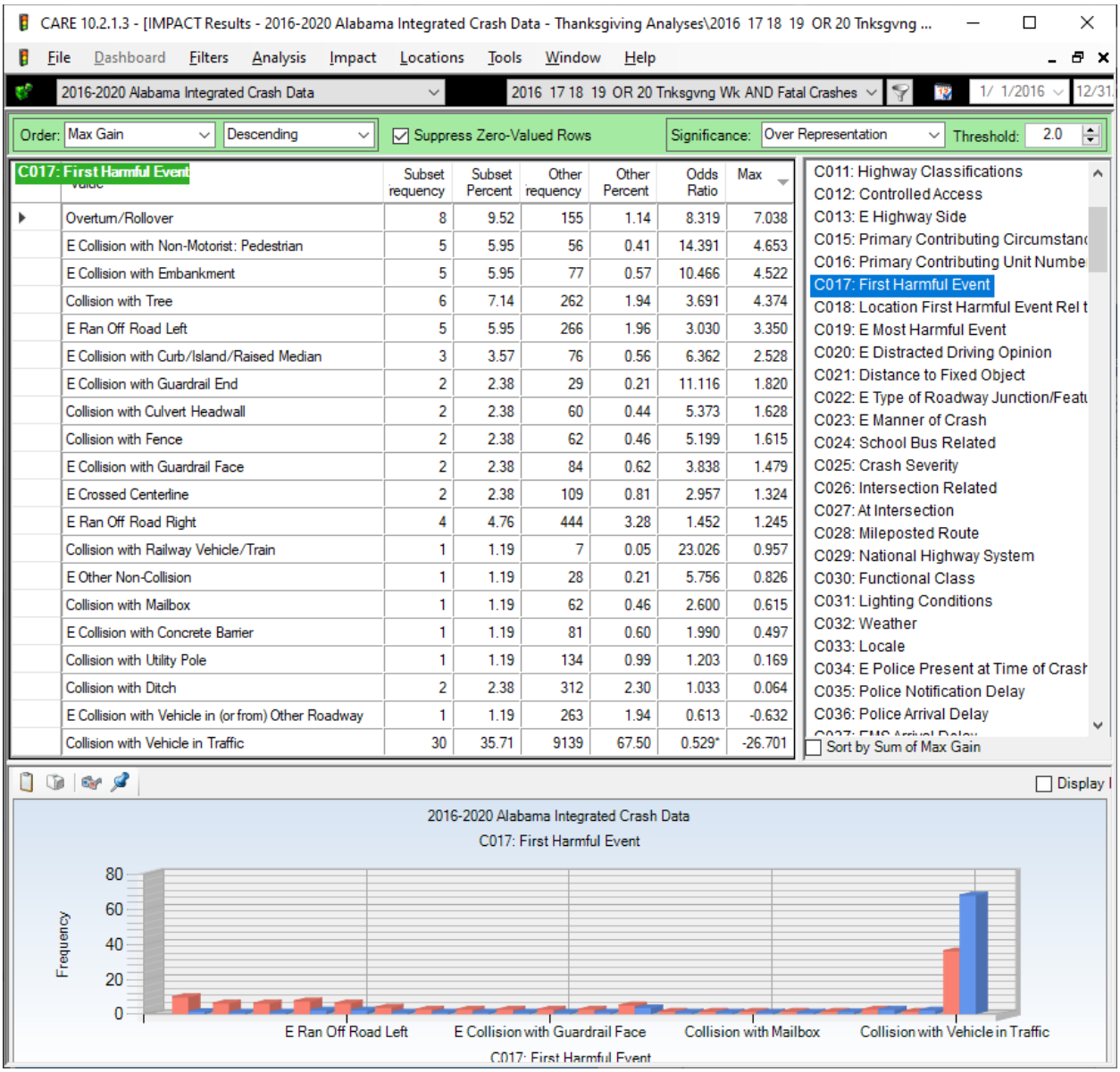
C015: Primary Contributing Cir

Sort by Sum of Max Gain



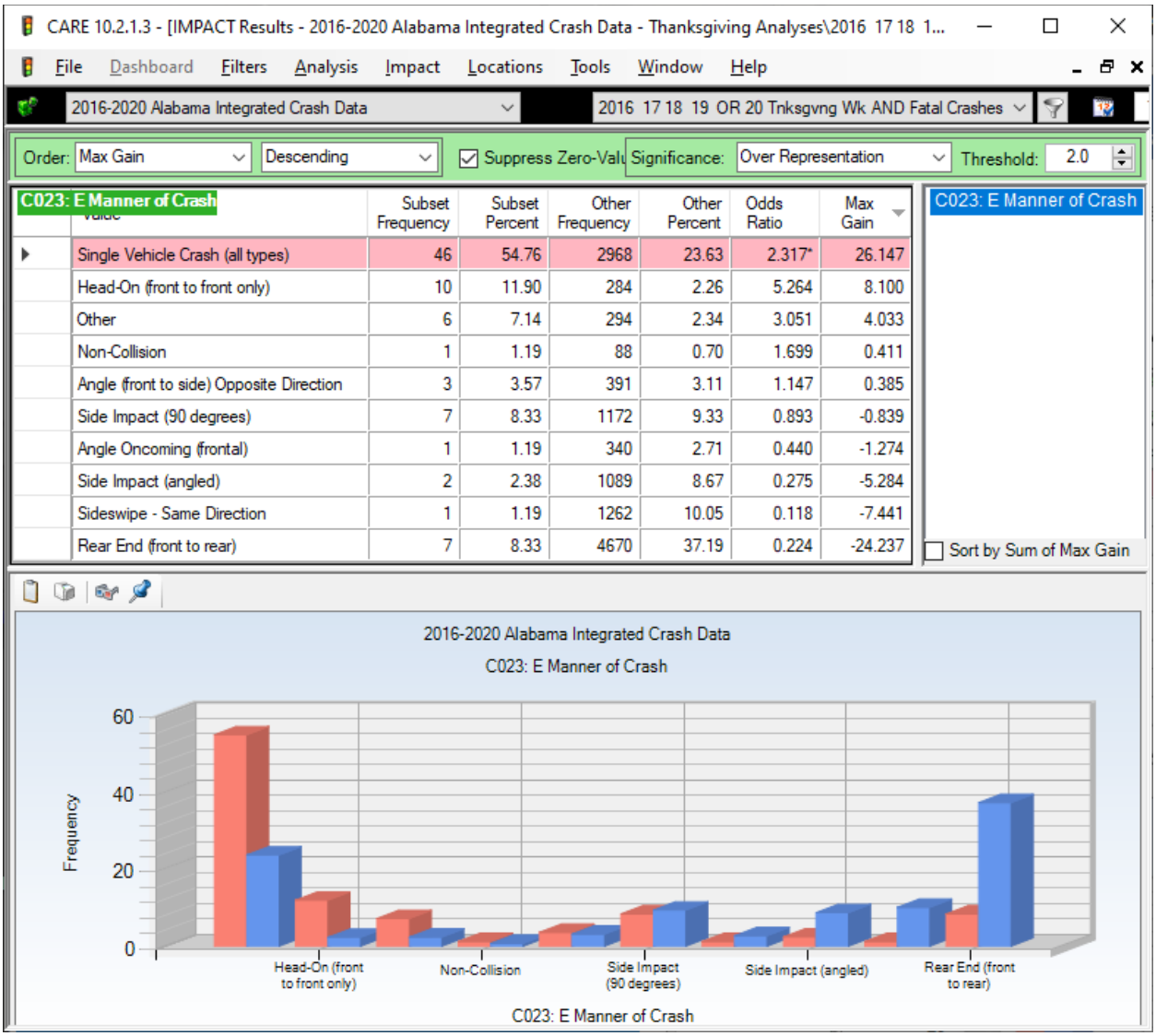
4.6 C017 First Harmful Event TW Fatal Crashes vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



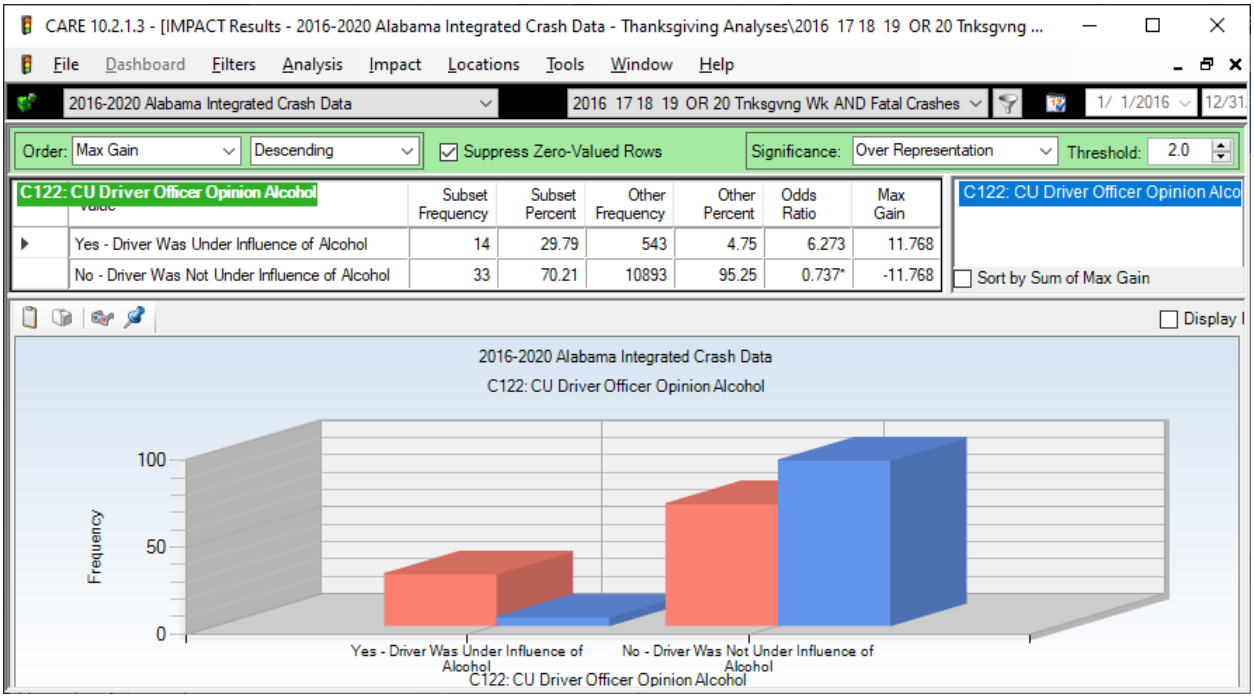
4.7 C023 Manner of Crash -- TW Fatal Crashes vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



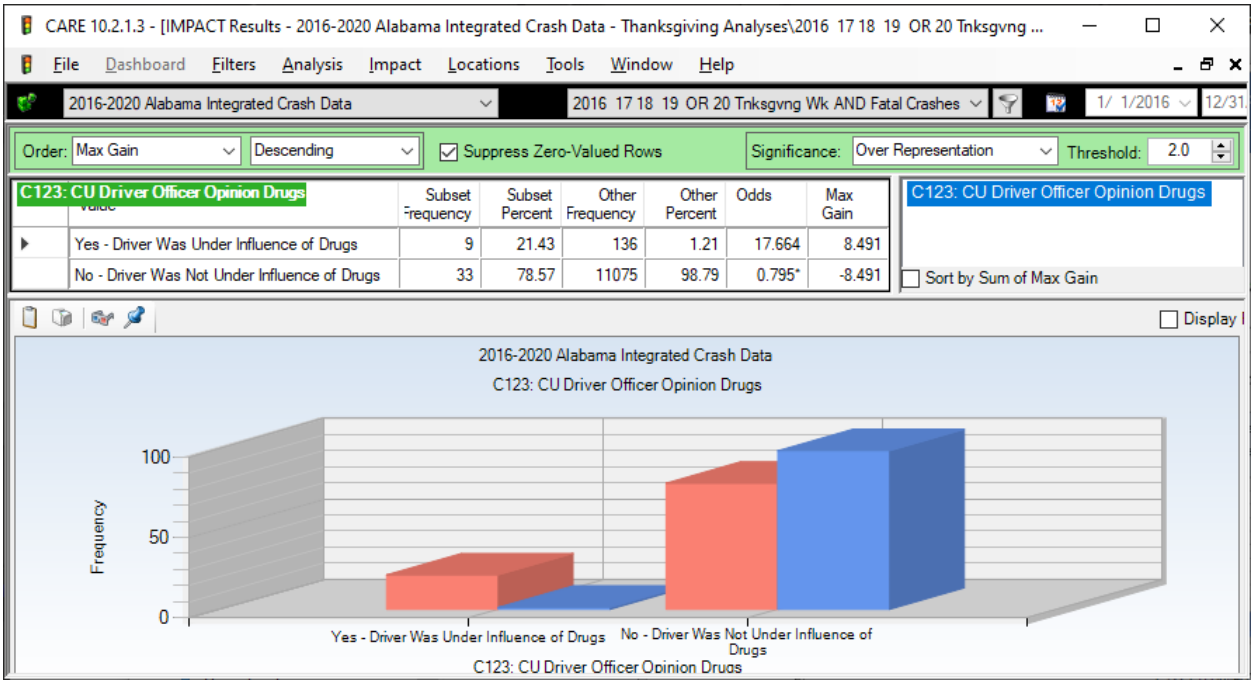
4.8 C122 CU Driver Officer Opinion/Alcohol -- TW Fatal vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



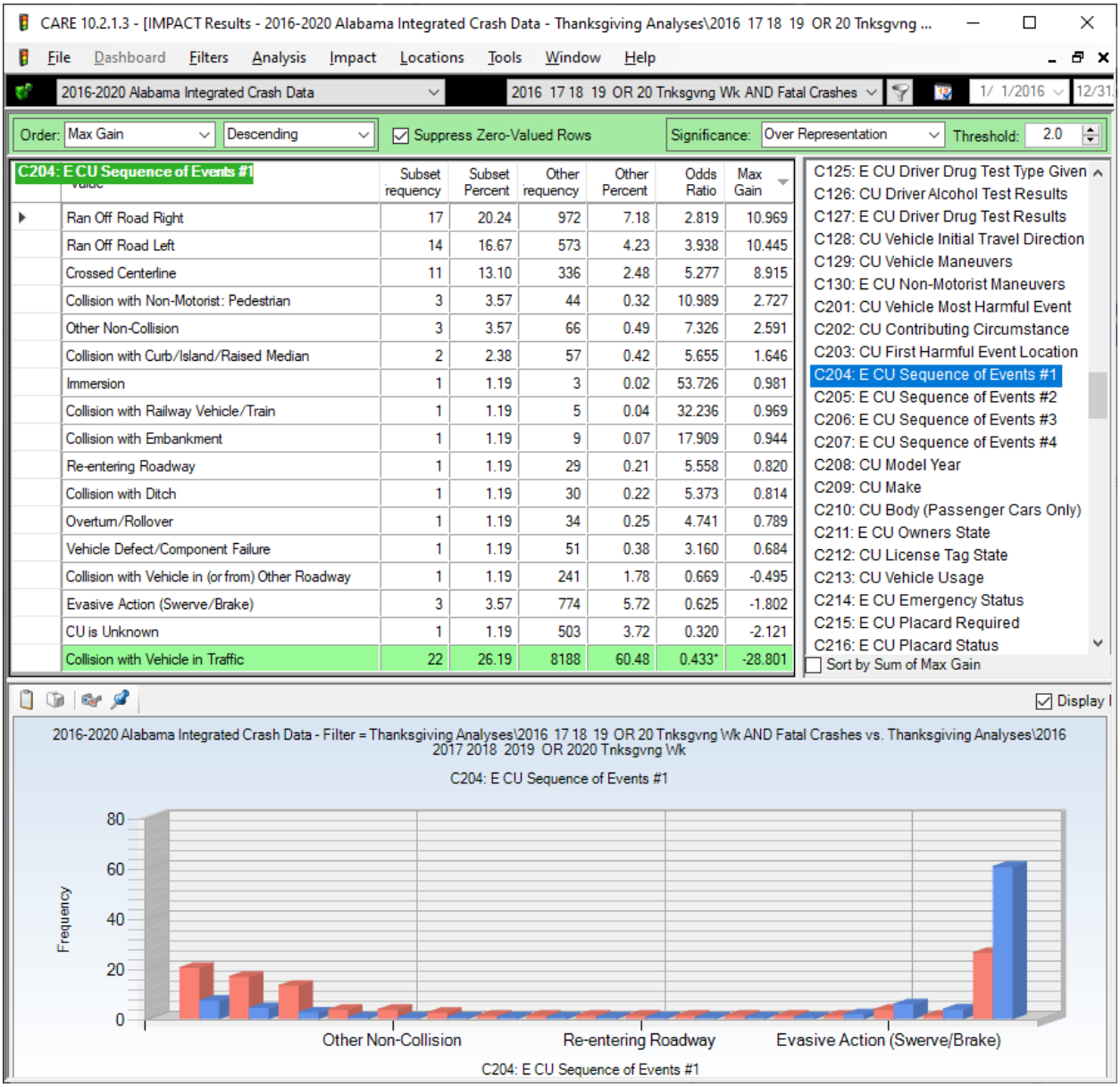
4.9 C123 CU Driver Officer Opinion/Drugs -- TW Fatal vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



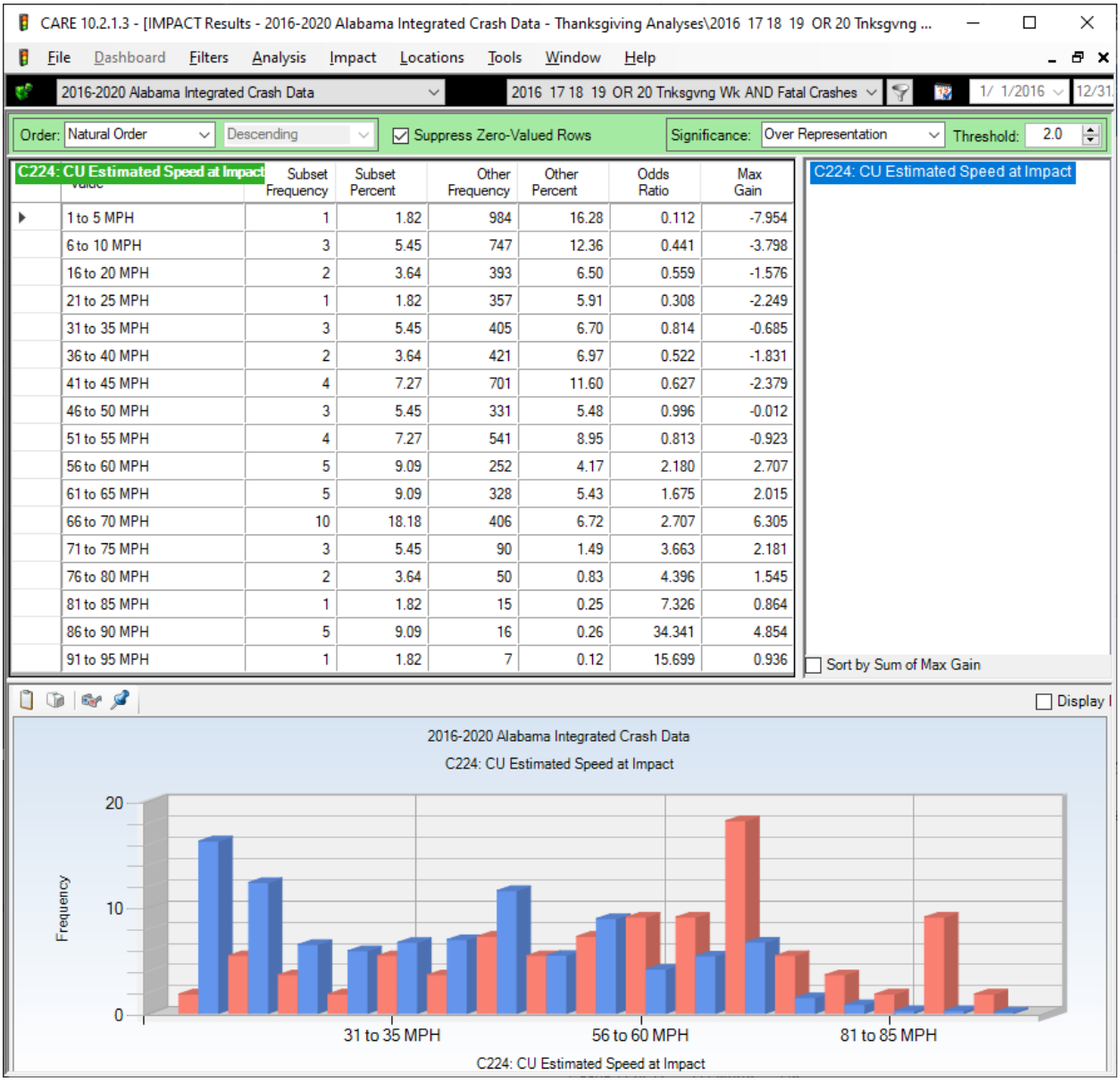
4.10 C204 CU Sequence of Events #1 -- TW Fatal vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



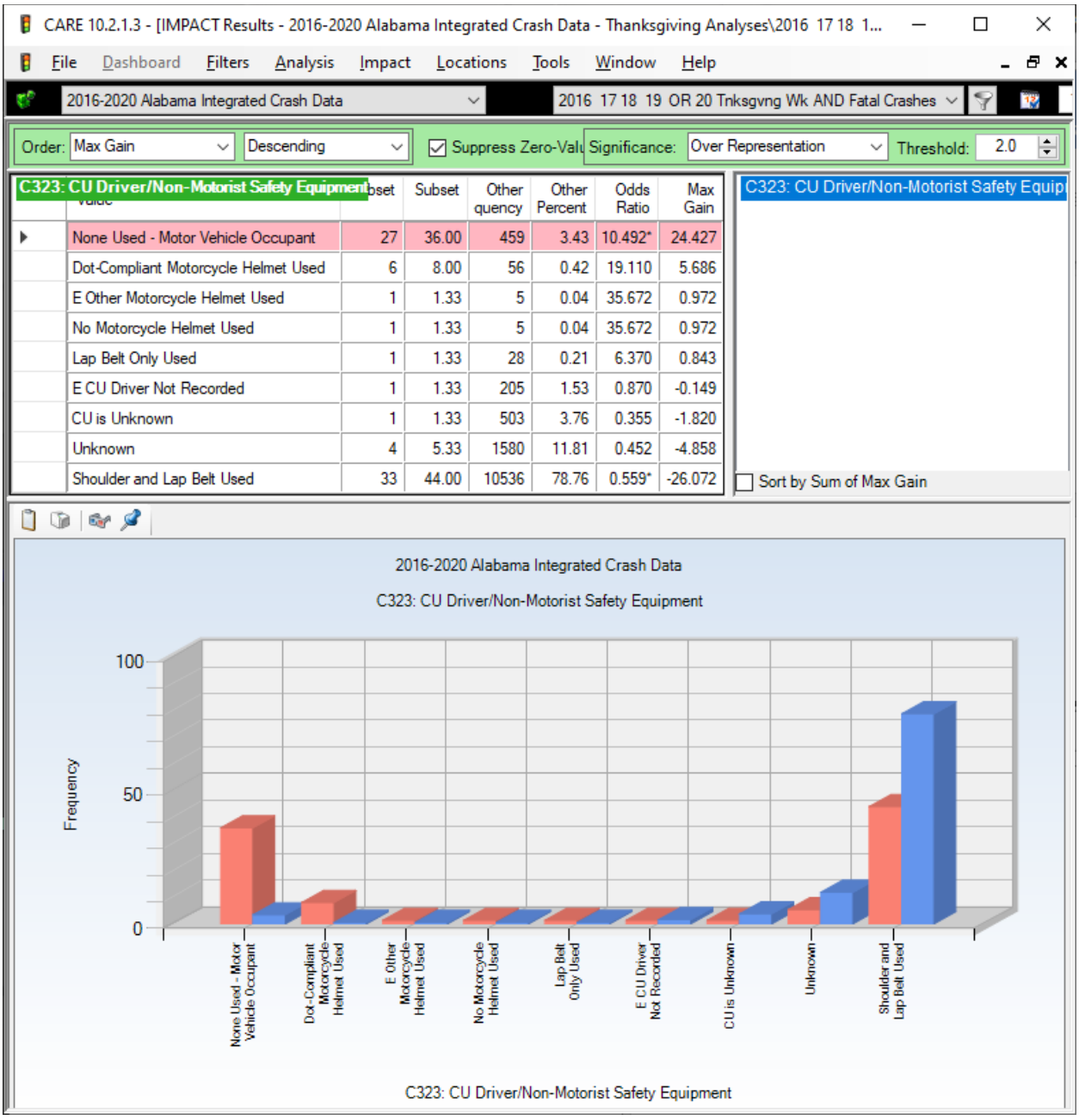
4.11 C224 CU Estimated Speed at Impact -- TW Fatal vs All Crashes for TWs

Thanksgiving Week Fatal Crashes vs All Crashes for that week



4.12 C323 CU Safety Equipment -- TW Fatal vs All TW Crashes

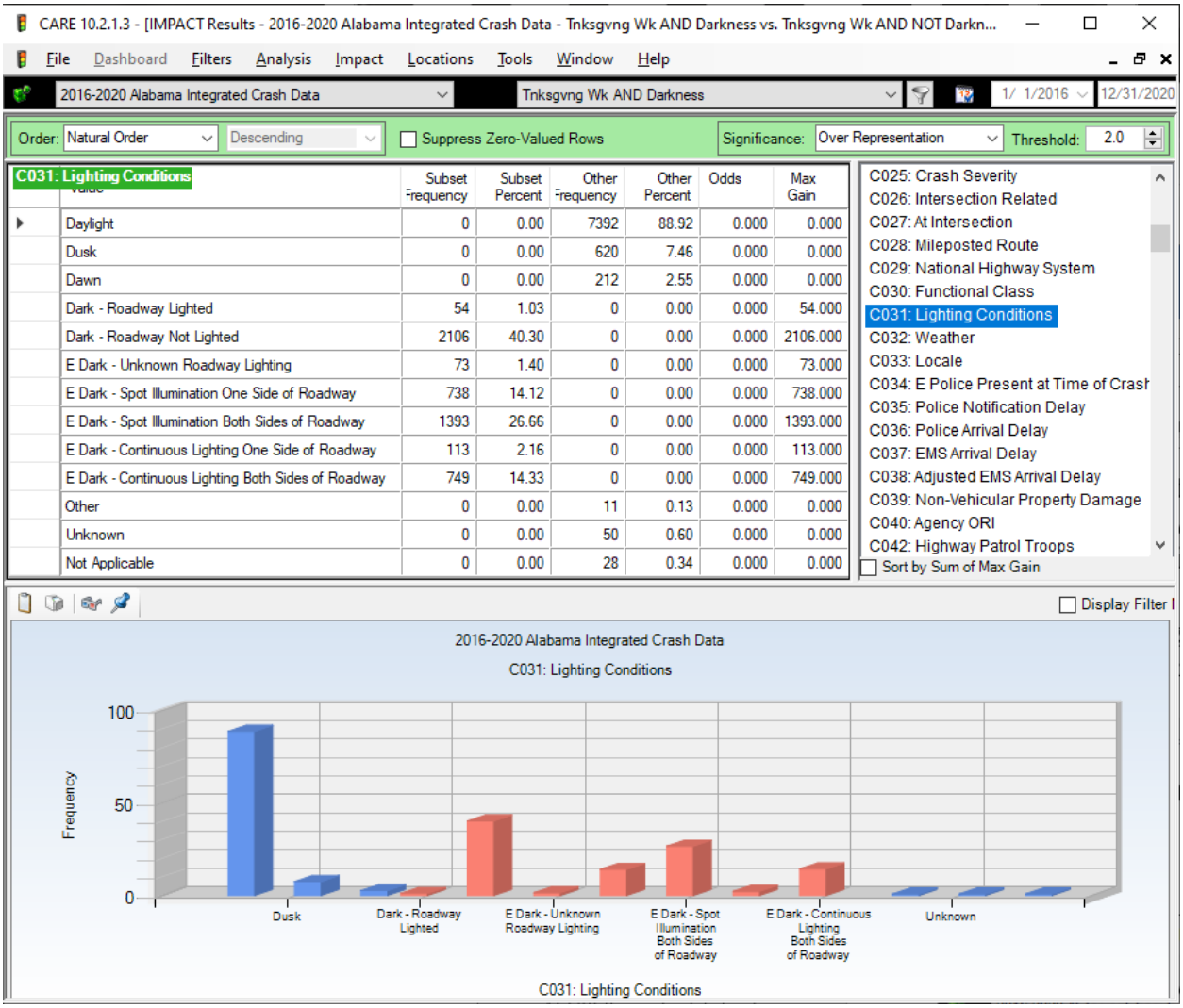
Thanksgiving Week Fatal Crashes vs All Crashes for that week



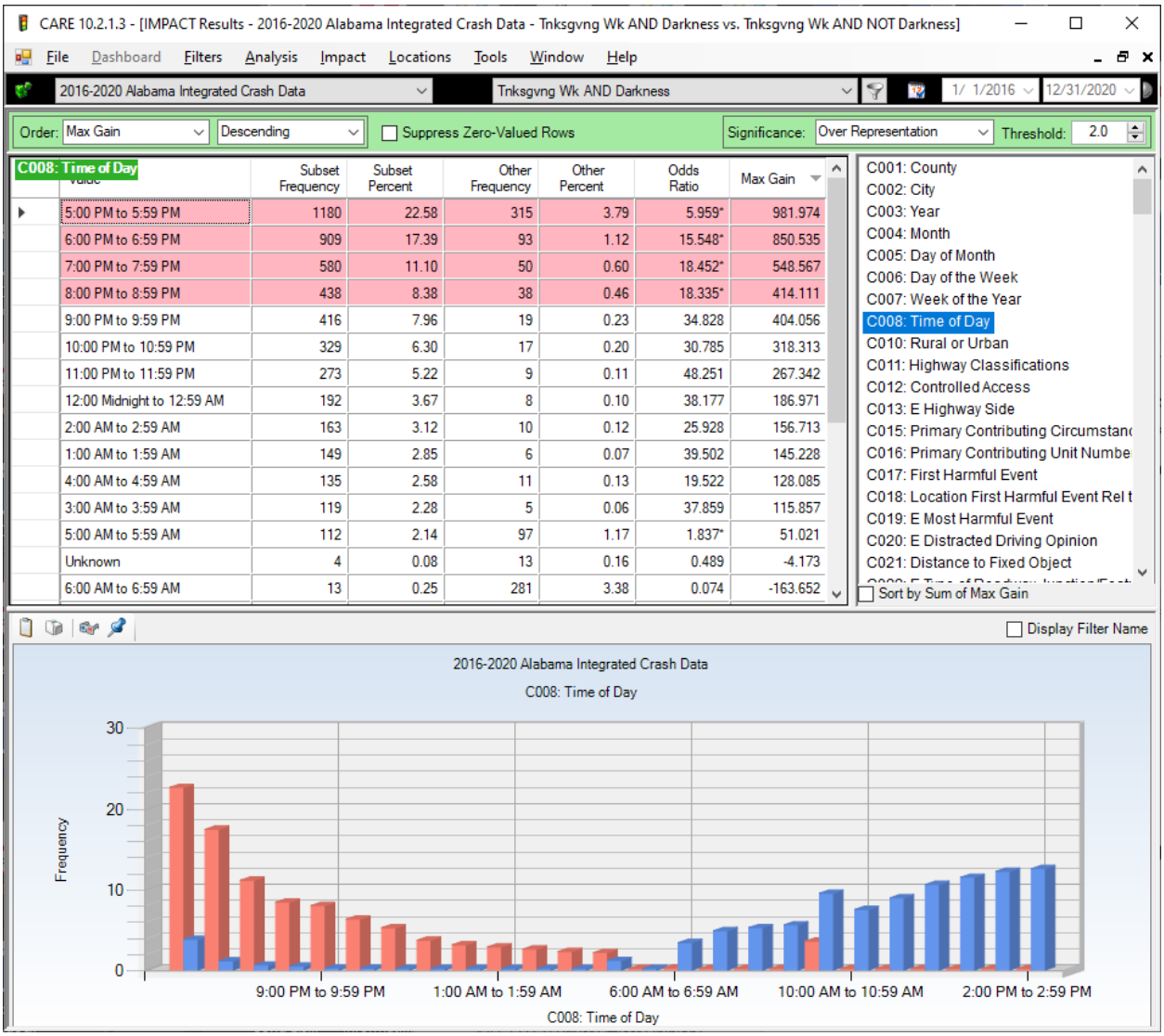
C323: CU Driver/Non-Motorist Safety Equipment	Subset	Subset	Other quency	Other Percent	Odds Ratio	Max Gain
None Used - Motor Vehicle Occupant	27	36.00	459	3.43	10.492*	24.427
Dot-Compliant Motorcycle Helmet Used	6	8.00	56	0.42	19.110	5.686
E Other Motorcycle Helmet Used	1	1.33	5	0.04	35.672	0.972
No Motorcycle Helmet Used	1	1.33	5	0.04	35.672	0.972
Lap Belt Only Used	1	1.33	28	0.21	6.370	0.843
E CU Driver Not Recorded	1	1.33	205	1.53	0.870	-0.149
CU is Unknown	1	1.33	503	3.76	0.355	-1.820
Unknown	4	5.33	1580	11.81	0.452	-4.858
Shoulder and Lap Belt Used	33	44.00	10536	78.76	0.559*	-26.072

5.0 Thanksgiving Week Darkness vs Light

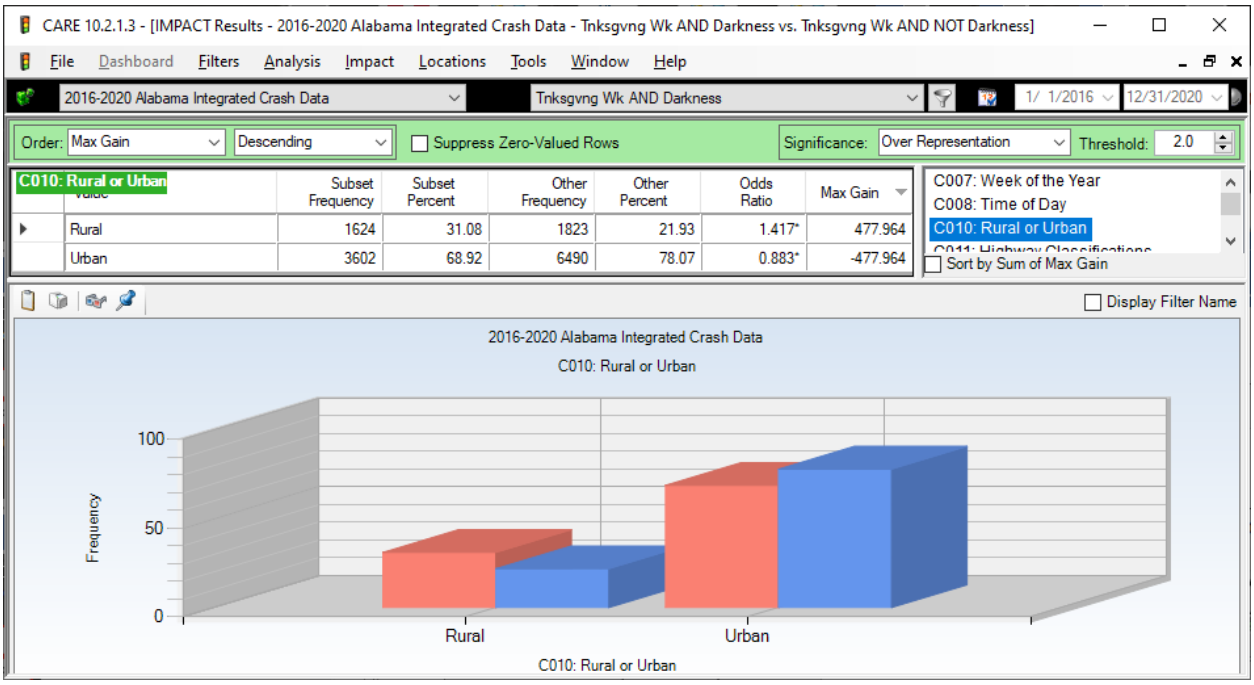
5.1 C031 Lighting Conditions: Definition of Subsets Being Compared



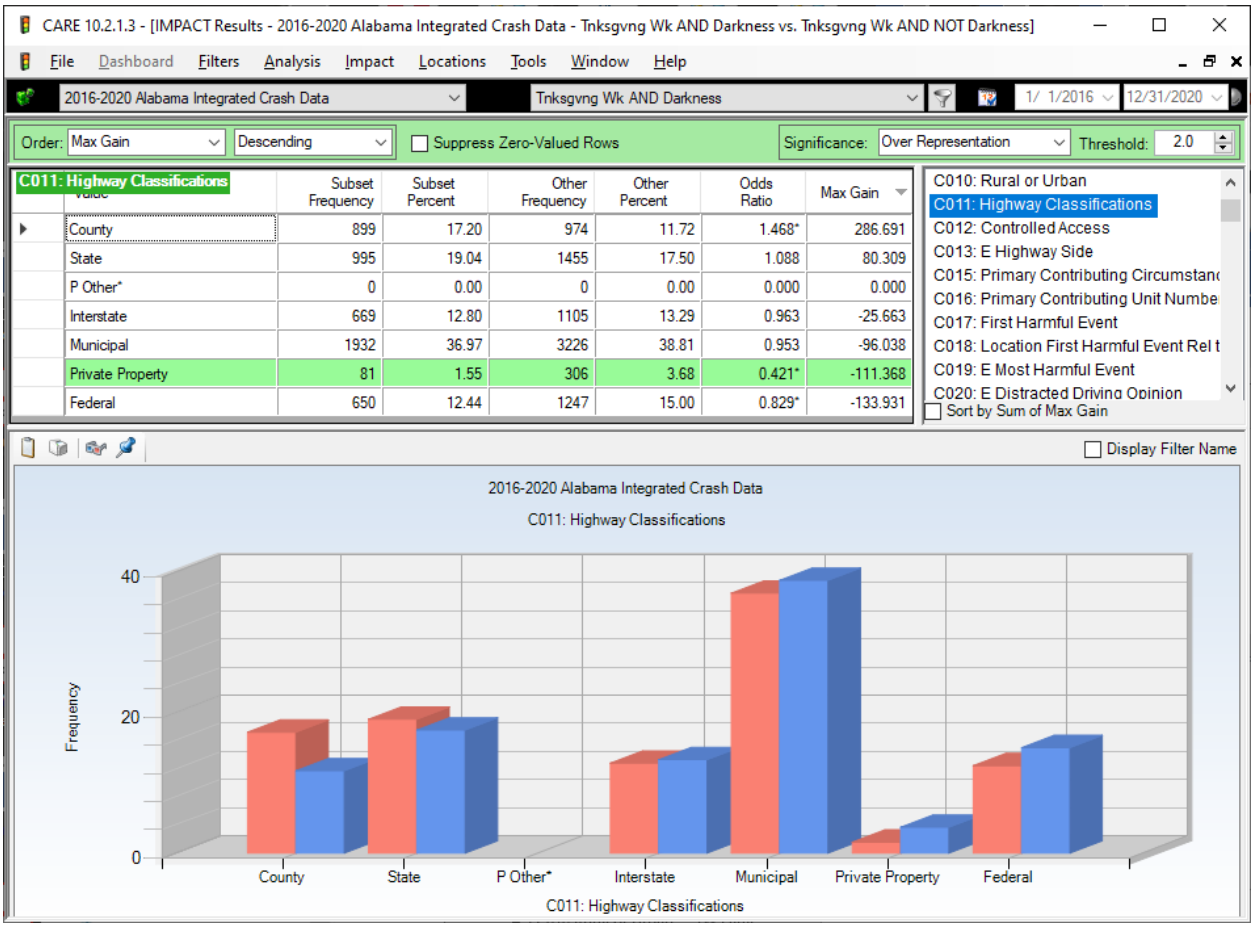
5.2 C008 Time of Day



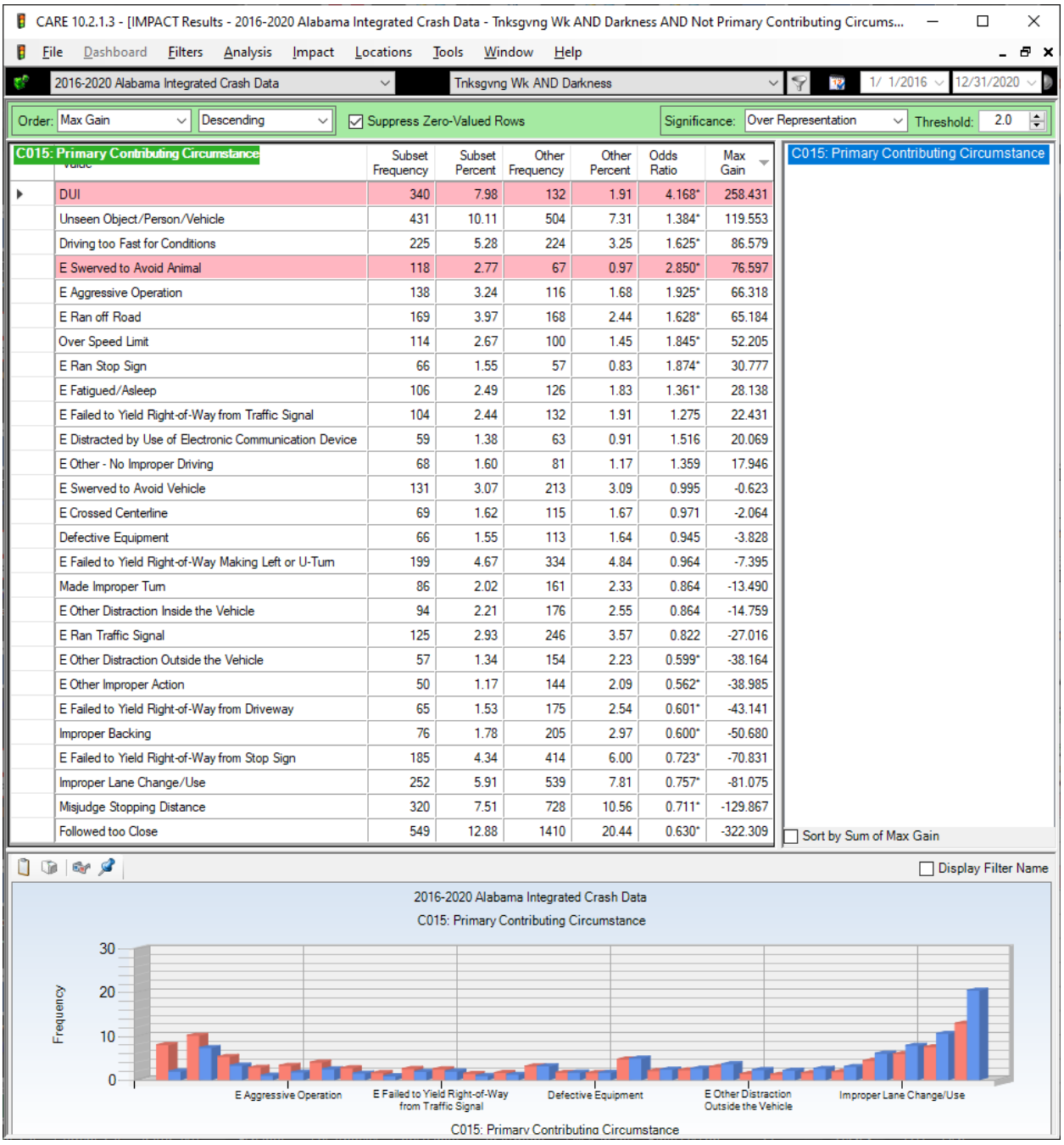
5.3 C010 Rural or Urban



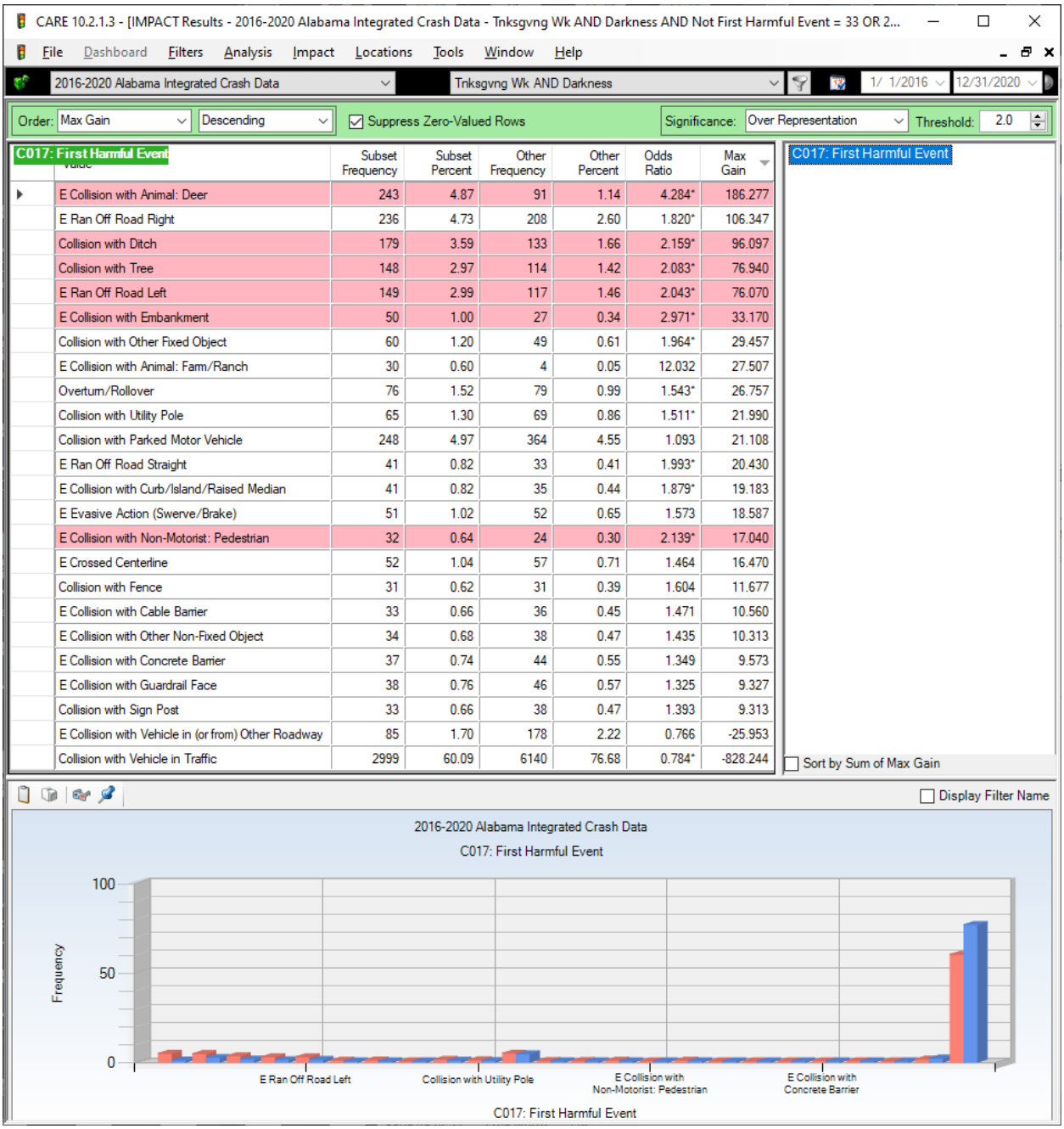
5,4 C011 Highway Classification



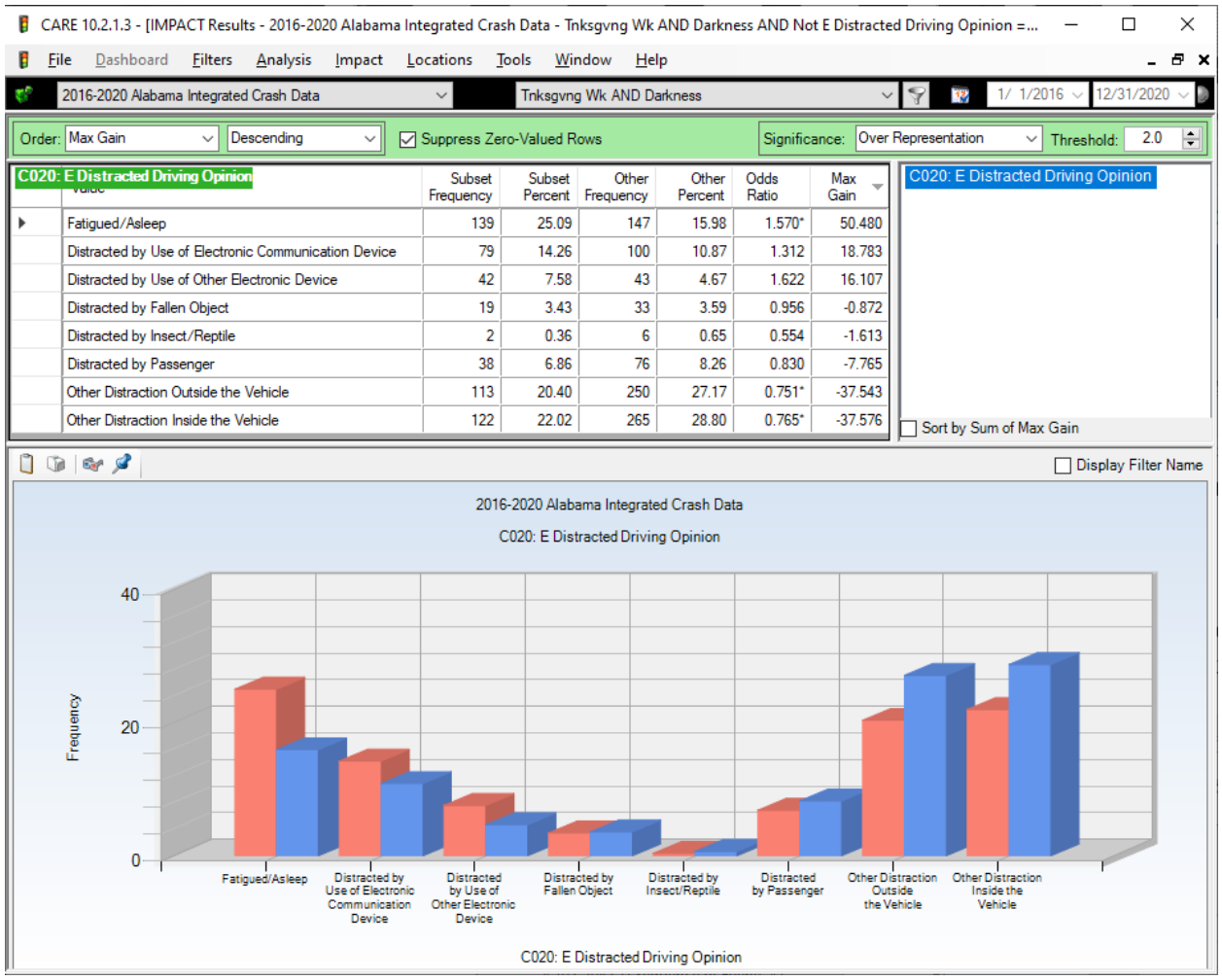
5.5 C015 Primary Contributing Circumstances (items < 50 removed)



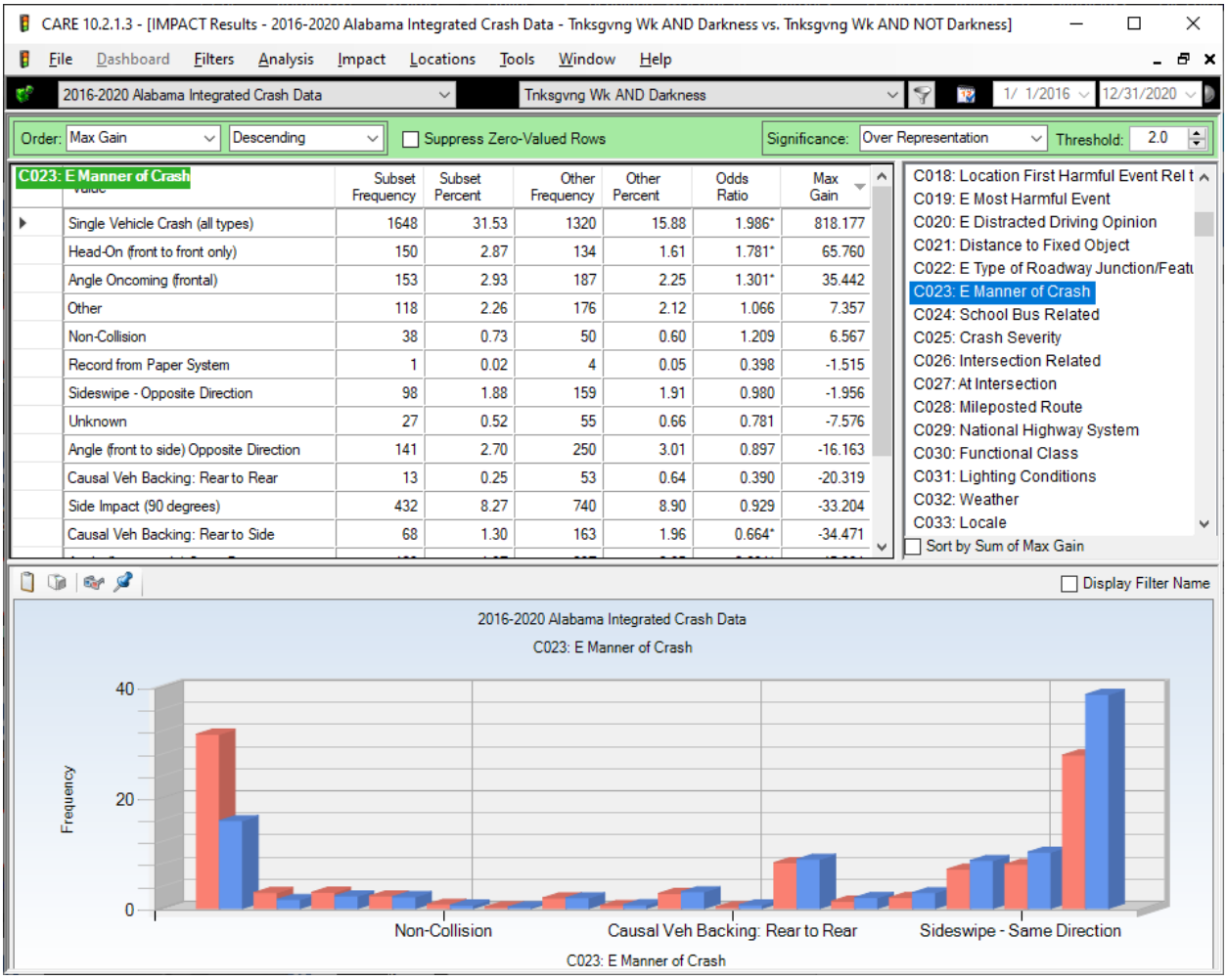
5.6 C017 First Harmful Event (items < 30 removed)



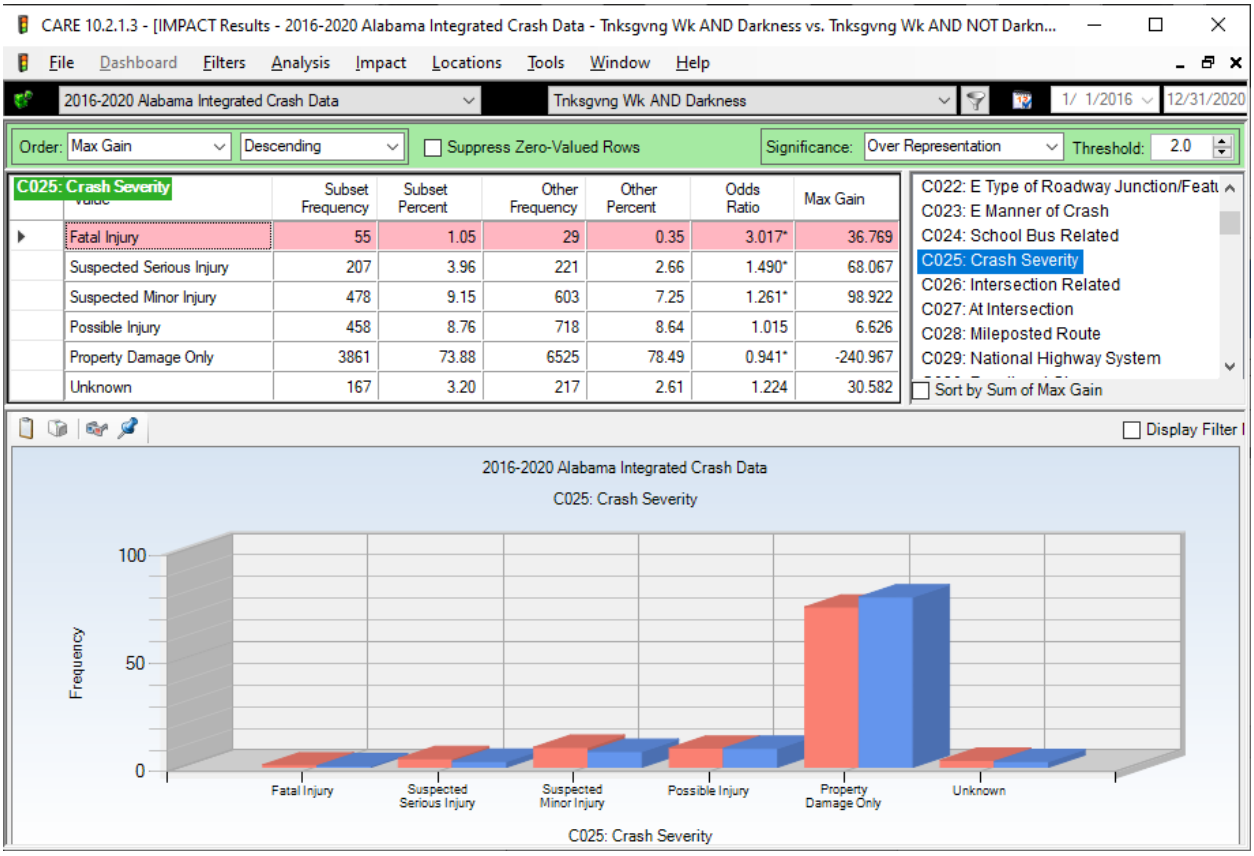
5.7 C020 Distracted Driving Opinion



5.8 C023 Manner of Crash

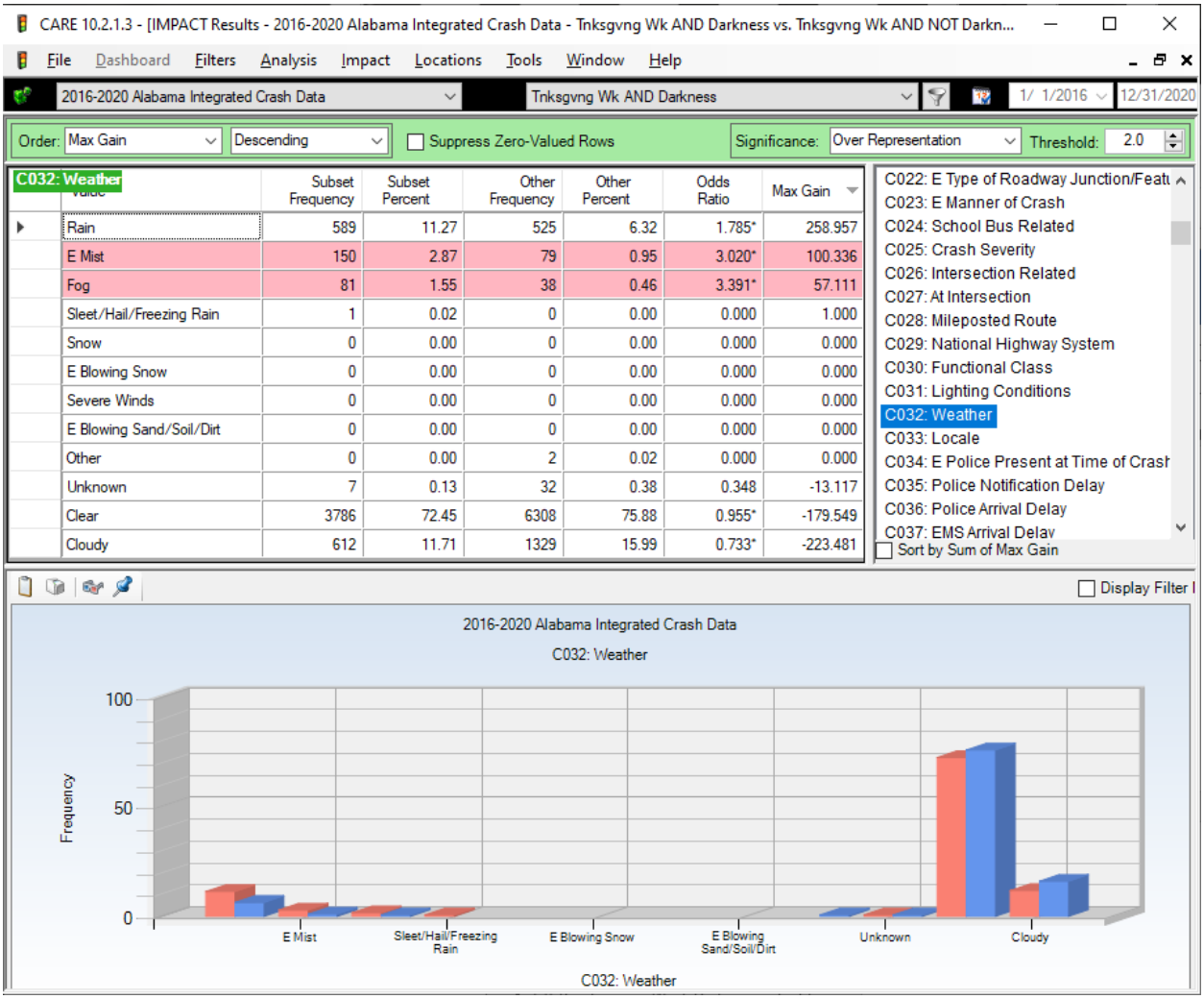


5.9 C025 Crash Severity

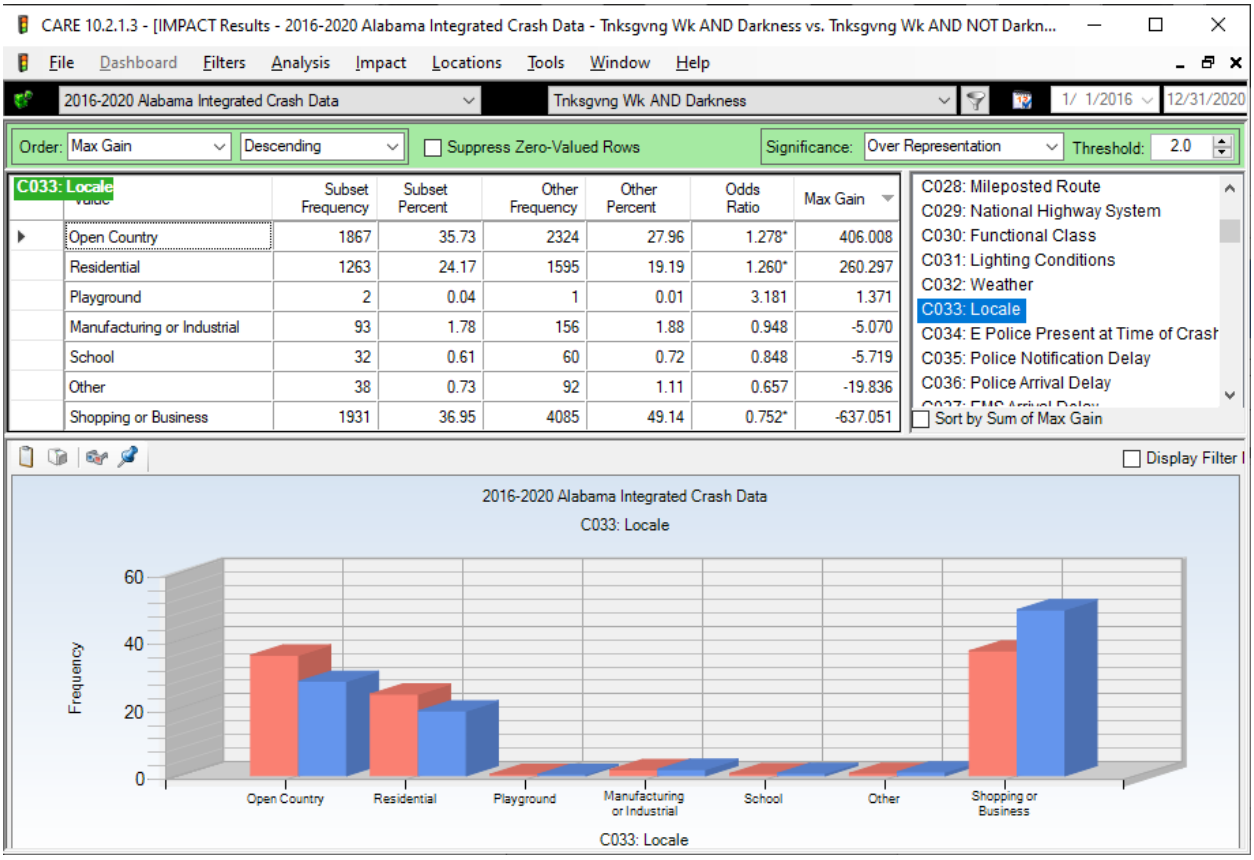


65% of fatal crashes occurred in dark, which was over three times the expected proportion.

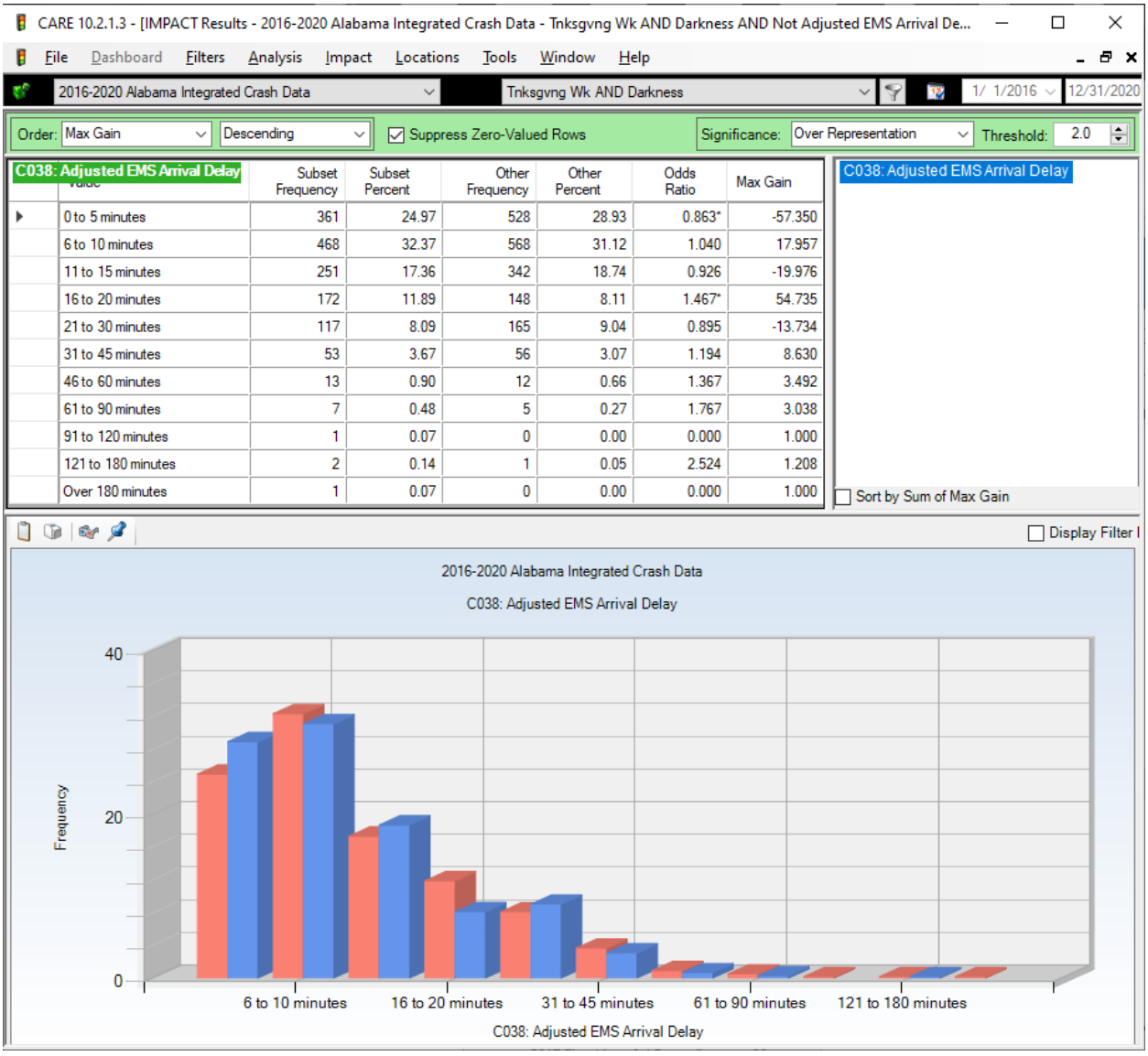
5.10 C032 Weather



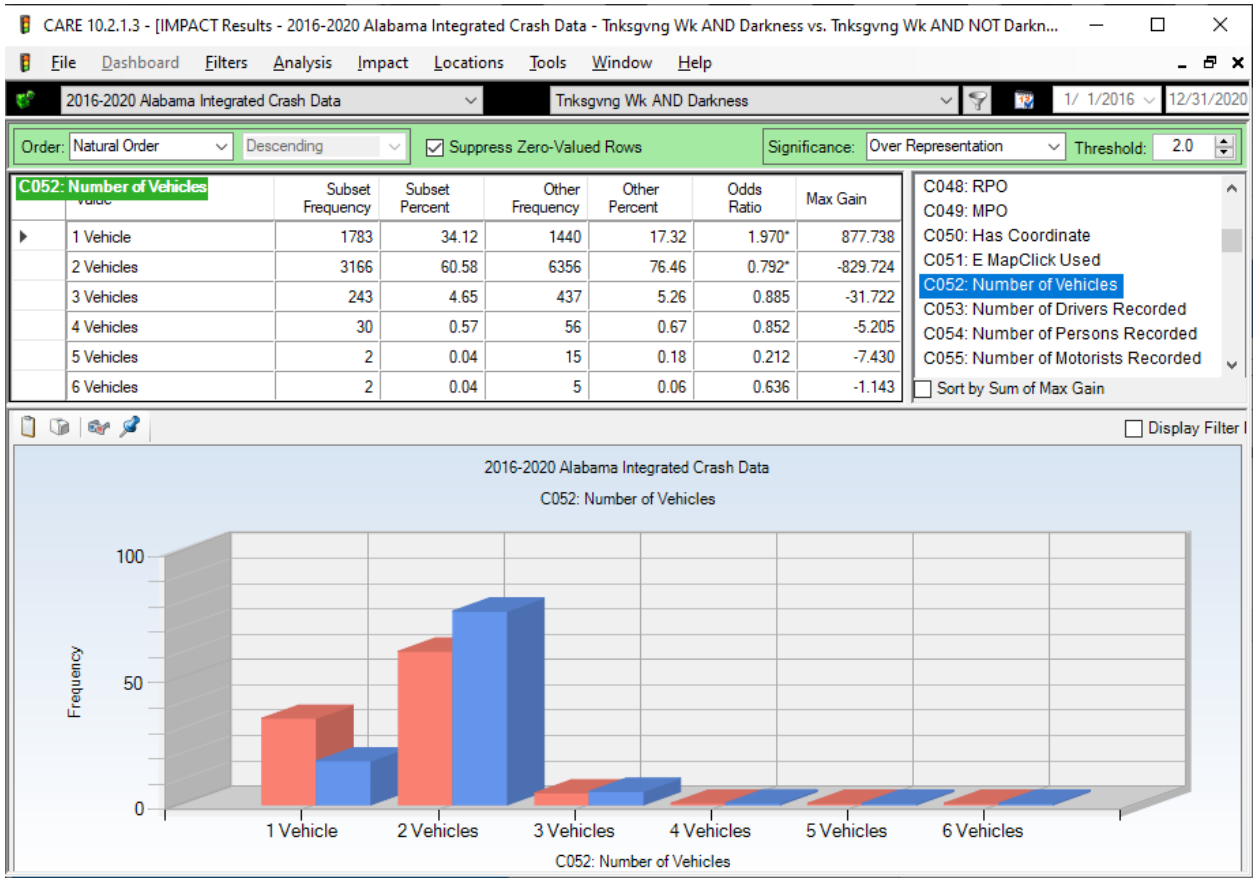
5.11 C033 Locale



5.12 C028 Adjusted EMS Arrival Delay

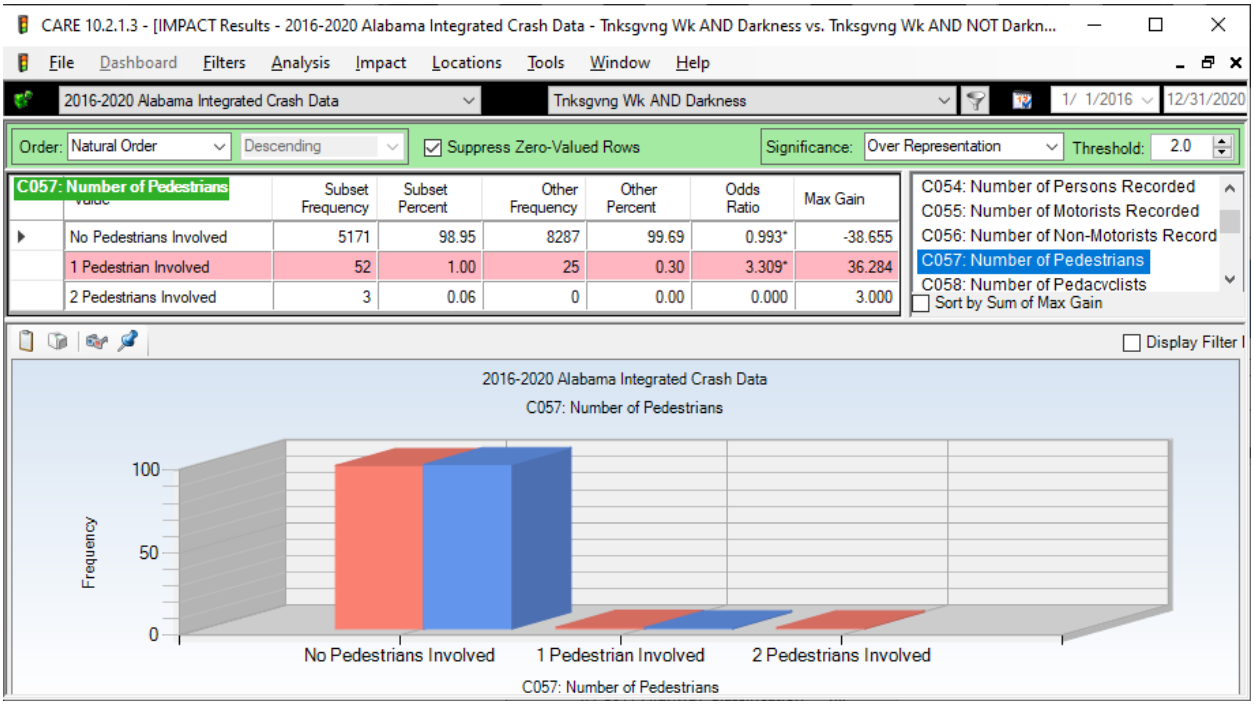


5.13 C052 Number of Vehicles



55% of single vehicle crashes occur in dark – this is about twice (1.970) what is expected.

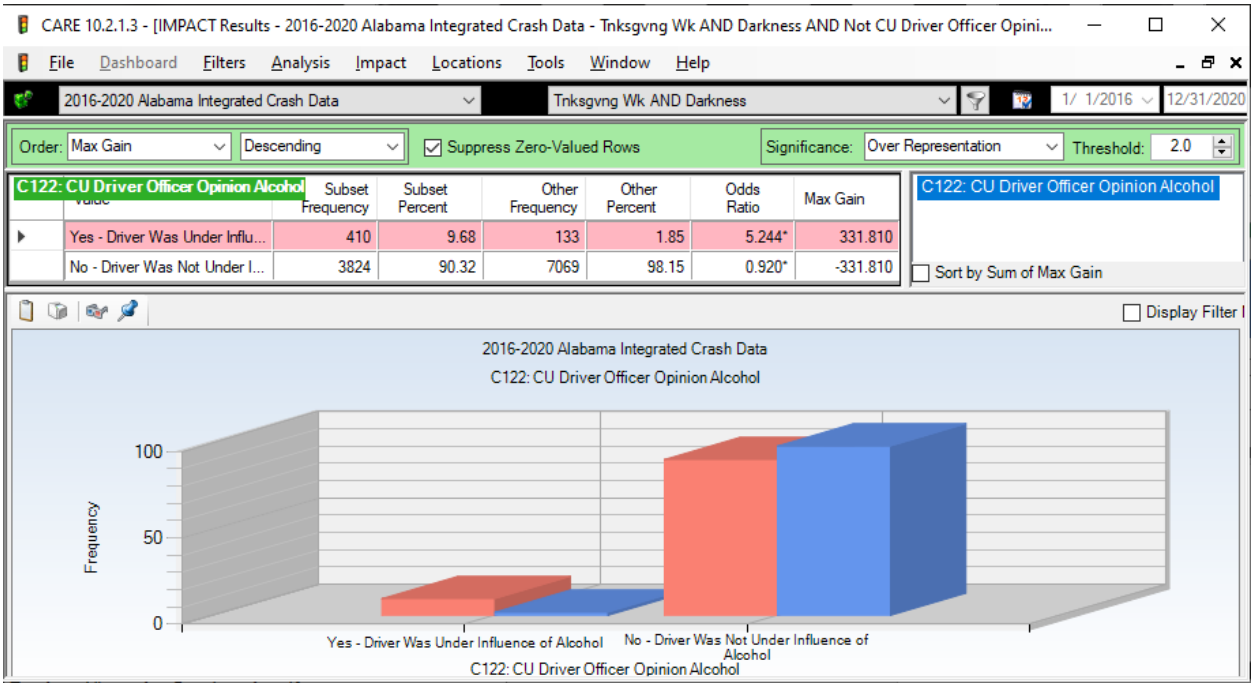
5.14 C067 Number of Pedestrians



70.0% of pedestrian strikes occurred in darkness, which was over three times the expected number.

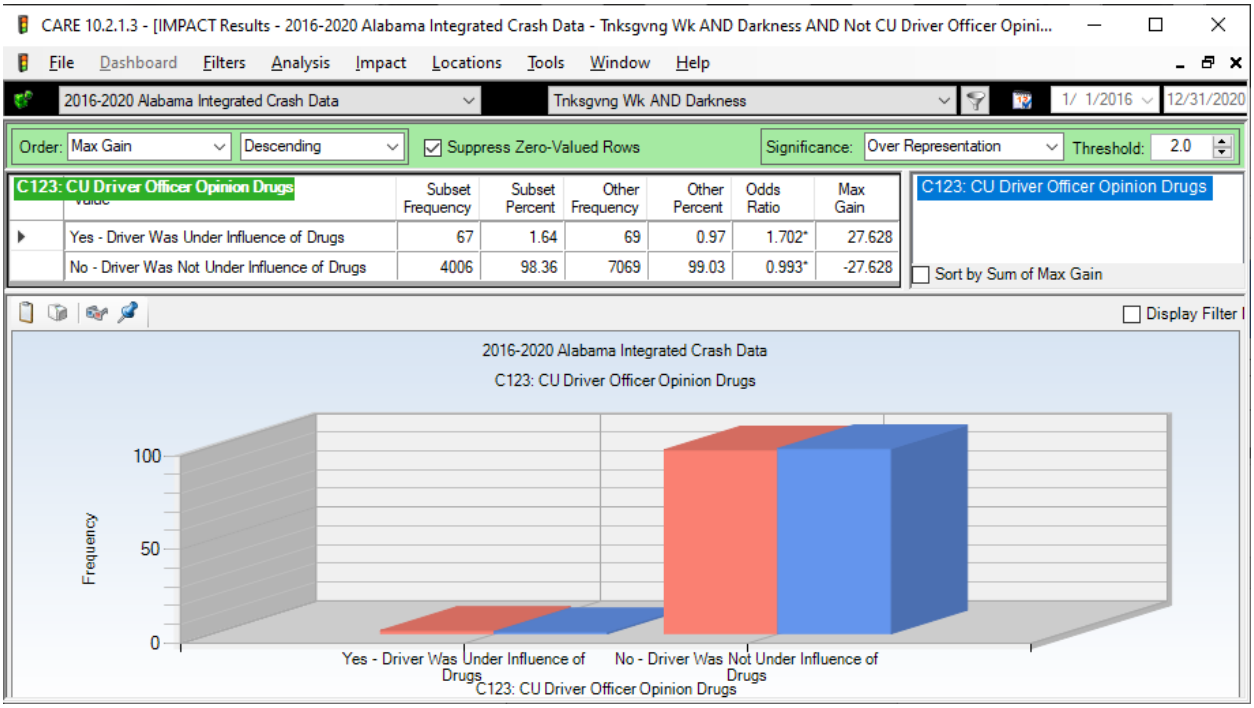
Over 50% of the 17 bicycle crashes occurred in darkness, which was about 79% higher than expected.

5.15 C122 CU Driver Officer Opinion Alcohol



76% of Alcohol DUI were after dark (five times what was expected).

5.16 C123 CU Driver Officer Opinion Drugs



Over 50% of drugs were after dark, which was 70% more than expected.