CITY OF JANESVILLE
ROAD SAFETY PLAN

CRASH DATA ANALYSIS: 2016 - 2020
DATE SUBMITTED: FEBRUARY 18, 2022

PREPARED FOR:

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2021 City of Janesville Road Safety Plan Summary Checklist

TADI was hired by the City of Janesville to prepare a Road Safety Plan focusing on 20 of the city's local intersections (including connecting highway intersections). TADI also reviewed crashes at three local roadway corridors and assessed pedestrian crash risk at ten pedestrian crossing locations. Below is a checklist of recommended safety improvements that include links to collision diagrams of the intersections, to safety statistics sheets for the corridors, as well as links to the pedestrian crossing locations. Also included is information on whether the improvements could be eligible for federal aid through the Highway Safety Improvement Program (HSIP), which can provide up to a 90 percent federal funding contribution for safety improvements or the Signals and ITS Standalone Program (SISP), which can provide up to a 90 percent state funding contribution for signal and ITS work.

*Connecting Highway Intersections**

* Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.

- ☐ [STH 26 & Holiday Drive](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements, such as positively offset left-turn lanes and potential modifications to access at the frontage roads. A traffic study is recommended to identify specific geometric, access, and operational needs.

- ☐ [STH 26 & Black Bridge Road](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (all directions). A traffic study is recommended to identify specific geometric, access, and operational needs.

- ☐ [STH 26 & Mt. Zion Avenue](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (all directions). A traffic study is recommended to identify specific geometric, access, and operational needs.

- ☐ [STH 26 & Lodge Drive](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements, such as positively offset left-turn lanes and potential modifications to access at the frontage roads. A traffic study is recommended to identify specific geometric, access, and operational needs.

- ☐ [STH 26 & Kennedy Road/Randolph Road](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (NB/SB). A traffic study is recommended to identify specific geometric, access, and operational needs.

- ☐ [USH 51 & Kellogg Avenue](#) 🚦 → **SISP Candidate** – Intersection could benefit by adding signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. To better accommodate pedestrians, high visibility crosswalks and adding pedestrian countdown timers could be considered. Access management is also recommended as there were several driveway-related crashes.

- ☐ [STH 26 & Memorial Drive](#) 🚦 → **Might be a HSIP Candidate, Traffic Study Recommended** – Intersection could benefit from safety improvements to improve signal head visibility (signals over each approach lane), pedestrian accommodations (consider leading pedestrian interval), and geometric modifications to improve capacity and/or left-turn operations. A traffic study is recommended to identify the geometric and operational needs of the intersection before determining HSIP feasibility.

- ☐ [USH 14 & Kennedy Road](#) 🚦 → **Might be a HSIP Candidate, Traffic Study Recommended** – Intersection could benefit by converting signals to monotubes with signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. Monotubes may help reduce visual clutter of the signal poles, guidance signs and RR signs/crossing arms. Improving the offset of the left-turn lanes and/or implementing protected-only left-turn phasing (where warranted) would also help reduce crash risk. Consider options for adding pedestrian accommodations and servicing pedestrians in the area (the only sidewalk is in the NW corner). A traffic study is recommended to identify the geometric and operational needs of the intersection before determining HSIP feasibility.

- □ [USH 51/Parker Drive & STH 26/Centerway Street](#) 🚦 → **SISP Candidate** – Intersection currently has 8" signal lenses. Signal visibility could be improved by upgrading to 12" lenses and adding signal heads over each approach lane. Retro-reflective backplates could be considered as well. To improve pedestrian accommodations, consider adding high-visibility crosswalks.
- □ [USH 51 & Main Street](#) 🚦 → **SISP Candidate** – Intersection could benefit by adding signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. Consider adding high visibility crosswalks and pedestrian countdown timers.

Local Intersections

- □ [Milwaukee Street & Pontiac Drive](#) 🚦 → **HSIP Candidate** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane. Positively offsetting the EB/WB left-turn lanes is a geometric improvement that could also be considered.
- □ [Court Street & Main Street](#) 🚦 → **HSIP Candidate, Traffic Study Recommended** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane. To help mitigate nighttime crashes, consider improving lighting at this intersection. A traffic study is recommended to evaluate signal timing and operations at the intersection. It is also recommended that the study evaluate leading pedestrian intervals.
- □ [Main Street & Racine Street](#) 🚦 → **HSIP Candidate** – Intersection is a good candidate to upgrade 8" lenses to 12" lenses and adding signal heads over each approach lane. Adding retroreflective backplates to all signal heads would help to improve signal head visibility. Consider adding high-visibility crosswalks and pedestrian countdown timers.
- □ [Black Bridge Road & Randall Road](#) 🛑 – Improve stop sign visibility with dual stop signs on each approach with reflective tape on posts. Consider adding blinking lights to the stop signs to help mitigate nighttime crashes.
- □ [Milwaukee Street & Morningside Drive](#) 🛑 – To better accommodate pedestrians, consider adding high visibility crosswalks.
- □ [Harmony Drive & Milwaukee Street](#) 🚦 → **HSIP Candidate** – Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane with retro-reflective backplates on each signal head. This intersection currently has 8" signal lenses and should be upgraded to 12" lenses. To improve pedestrian accommodations, consider adding high-visibility crosswalks and pedestrian countdown timers.
- □ [Garfield Avenue & Milwaukee Street](#) 🛑 – Improve stop sign visibility NB/SB with dual stop signs on each approach with reflective tape on posts.
- □ [Harding Street & Memorial Drive](#) 🛑 – Consider adding high visibility crosswalks on all legs. Improve stop sign visibility with dual stop signs and reflective tape on posts.
- □ [Holmes Street & Randall Avenue](#) 🛑 – Consider improving the visibility of the stop signs with dual signs on all legs and reflective tape on each post.
- □ [Pearl Street & Ravine Street](#) 🛑 – Consider improving the visibility of the stop signs with dual signs on all legs and reflective tape on each post.

Corridors

- □ [E. Memorial Avenue (S. Oakhill Ave to Milton Ave)](#) → **HSIP Candidate, Traffic Study Recommended** - Improvements along this corridor could be eligible for HSIP funding based on the crash history. A traffic study is recommended to determine a lane configuration that will provide acceptable operations while improving safety. For instance, there are portions of this corridor that appear to be good candidates for a reconfiguration from 4-lane undivided cross section to a three-lane cross section with a center left-turn lane. Upon completion of a traffic study, HSIP eligibility can then be more closely evaluated.

- □ [Mt. Zion Street (Milton Ave to Pontiac Dr)](#) → **HSIP Candidate, Traffic Study Recommended** - Improvements along this corridor could be eligible for HSIP funding based on the crash history. A traffic study is recommended to determine a lane configuration that will provide acceptable operations while improving safety.

- □ [N. Pontiac Drive (Holiday Dr to Milton Ave)](#) → **HSIP Candidate, Traffic Study Recommended** - Improvements along this corridor could be eligible for HSIP funding based on the crash history. A traffic study is recommended to determine a lane configuration that will provide acceptable operations while improving safety. For instance, there are portions of this corridor that appear to be good candidates for a reconfiguration from 4-lane undivided cross section to a three-lane cross section with a center left-turn lane. Upon completion of a traffic study, HSIP eligibility can then be more closely evaluated.

Pedestrian Risk Assessment

- □ [Kellogg Avenue & S. Oakhill Avenue](#) (Minor Stop Control, West Leg, Existing Unmarked Crosswalk) – It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs, adding school crossing signs due to the proximity of the school zone speed limit sign, and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, median refuge, PHB, or adding curb extensions. According to the count taken at this intersection in September 2021, pedestrian volumes are not high enough to warrant an RRFB or a PHB, however volumes could be reevaluated if either of those improvements are pursue.

- □ [Ruger Avenue & Ringold Avenue](#) (Minor Stop Control, West Leg, Existing Standard Crosswalk) – It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, median refuge, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

- □ [W. Memorial Drive & N. Pine Street](#) (Minor Stop Control, West Leg, Existing Standard Crosswalk with Flashing Beacon) – It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity.

  If a 4-lane cross-section remains, it is recommended to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

  If Memorial Drive is converted to a 3-lane TWLTL, improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

- □ [S. Pontiac Drive & Plymouth Avenue](#) (Minor Stop Control, South Leg, Existing High Visibility Crosswalk) – It is recommended that to add advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include adding curb extensions, an RRFB, or median refuge.

Pedestrian Risk Assessment Continued

- [ ] [E. Memorial Drive & Harding Street](#) (Minor Stop Control, East Leg, Existing Standard Crosswalk) – It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs.

  If a 4-lane cross-section remains, it is recommended to add double lane lines between the two eastbound approach lanes leading up to the crosswalk to deter lane changing near the crossing.

  If Memorial Drive is converted to a 3-lane TWLTL, improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

- [ ] [Ruger Avenue & Randall Avenue](#) (All-Way Stop Control, South Leg, Existing Standard Crosswalk) – It is recommended that a high-visibility crosswalk is added at this crossing. Consideration could be given to adding curb extensions to the crossing to shorten the crossing distance.

- [ ] [Ice Age Trail & Beloit Avenue](#) (Trail Crossing, Existing Standard Crosswalk) – It is recommended that a high-visibility crosswalk is added at this crossing. It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing. Additional upstream warning signs could be considered. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB or a PHB. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

- [ ] [E. Milwaukee Street & Morningside Drive](#) (Minor Stop Control, West Leg, Existing High Visibility Crosswalk) – It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

- [ ] [W. Milwaukee Street & Middle School Road](#) (Minor Stop Control, West Leg, Existing Standard Crosswalk) - It is recommended that a high-visibility crosswalk is added at this crossing. Consideration could be given to adding an RRFB, but volumes should be counted to verify whether volume thresholds are met. Also, it is recommended to count pedestrians to achieve a more accurate assessment of the pedestrian risk score. It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

- [ ] [S. Oakhill Ave & Lapham Street](#) (Minor Stop Control, South Leg, Existing High Visibility Crosswalk) – It is recommended to count pedestrians to achieve a more accurate assessment of the pedestrian risk score.

City of Janesville Road Safety Plan

February 18th, 2022

To: Ahnaray Bizjak, P.E., Senior Engineer – City of Janesville

From: John Campbell, P.E., RSP1,
Amy Pomeroy, P.E., RSP1
Christian R. Sternke, P.E., RSP1

Subject: City of Janesville Road Safety Plan (Study Period: 2016 thru 2020)

Introduction

TADI was hired by the City of Janesville to prepare a Local Road Safety Plan. Local Road Safety Plans are a proven approach for reducing crash risk in communities. The study focused on the city roadway network, including connecting highways. TADI worked with the city to determine the locations to evaluate, which included 20 intersections, three corridors and ten pedestrian crossing locations. The analysis was conducted using electronic crash data retrieved through the WisTransPortal system provided by the Wisconsin Traffic Operations Laboratory. Five-years of crash data (2016–2020) were screened.

Objective

The study had the following objectives:

1. To identify safety issues that could be eligible for remediation through:

    a. Highway Safety Improvement Program (HSIP), which can provide up to a 90 percent federal funding contribution for safety improvements,

    b. Signals and ITS Standalone Program (SISP), which can provide up to a 90 percent state funding contribution for signal and ITS work.

2. To identify safety issues that the City of Janesville may want to address locally.

3. To provide a five-year summary (2016 – 2020) of the crash data at intersections and corridors within the City of Janesville to be used as a reference resource in addressing safety-related issues and questions.

4. To evaluate pedestrian crash risk at select locations in the community and prioritize potential improvement options.

Google Maps

Intersection crash data compiled for this report is available on Google Maps using the link below.

Google Login Link: https://accounts.google.com/Login
Google Username: janesvillesafetyscreening@gmail.com
Google Password: 2savelives!

Map Link: Click Here

CRASH RANKING DESCRIPTIONS & DEFINITIONS

The crash data was ranked using multiple techniques to assist in the identification of potential safety issues. Below is a description of the various rankings:

Appendix A1 – Intersection Rankings

A1.1 Intersection Database
An intersection database was assembled for 20 intersections in the City of Janesville. The database includes the following information about each intersection: intersection name, traffic control (traffic signal, all-way stop, minor street stop, other-stop, uncontrolled, modern roundabout), number of legs, entering AADT (if available), and GIS coordinates. Also provided in the database is the five-year crash frequency, intersection crash rate, and economic loss associated with crashes.

A1.2 Economic Loss Ranking
A common and helpful method for measuring the severity of crashes is to associate economic loss values with different injury severities. There are a multitude of ways to assign and define economic loss. For this study, a basic methodology that assigns $684,000 for crashes resulting in a fatality (K-Level) and incapacitating injury (A-Level), and $217,000 for non-incapacitating injury (B-Level) was used. These are referred to as KAB crashes. For possible injury (C-Level), a value of $123,000 was assigned to each crash and for non-injury (i.e., property damage only or PDO) a value of $10,800 was assigned.

Ranking the intersections by economic loss is an effective method for identifying intersections that not only could warrant safety improvements, but also may be eligible for funding through the HSIP program administered by the Wisconsin Department of Transportation (WisDOT). The HSIP program uses economic loss as a measure when determining a project's eligibility. While they may not match the exact figures WisDOT uses (economic appraisals are performed internally at WisDOT), we are comfortable making recommendations based on our past experiences using these values.

A1.3 Crash Frequency Ranking
A ranking of the intersections by the number of crashes that occurred in the five-year time span of 2016 thru 2020, categorized by crash severity.

A1.4 Crash Rate Ranking
Intersection crash rate, which is reported as the number of crashes per million entering vehicles, is a commonly used statistic. It measures the risk of a crash occurring per one million entering vehicles. It can be a helpful statistic for measuring crash risk and comparing to other locations.

A1.5 Night-Time Crash Ranking
The number of crashes occurring in low-light (dawn/dusk) or at night are considered night-time crashes in this analysis and are summarized in this ranking. A high number of night-time crashes can indicate a need to add or upgrade street lighting.

A1.6 Slippery Conditions Crash Ranking
The number of crashes occurring in slippery pavement conditions (wet, snow, or ice) are summarized in this ranking. A high number of slippery pavement crashes can indicate a need to improve the pavement friction or to consider more aggressive winter maintenance.

A1.7 Pedestrian Crash Ranking
The number of crashes and economic loss associated with crashes involving pedestrians at intersections are displayed in this ranking.

A1.8 Bicycle Crash Ranking
The number of crashes and economic loss associated with crashes involving bicyclists at intersections are displayed in this ranking.

A1.9 Top Crash Types
The overall top 50 crash types (e.g., rear-end crashes at the intersection of STH 26 & Holiday Drive) were ranked by economic loss and are provided in this ranking. This information is helpful in identifying the most frequent crash patterns at intersections in the City of Janesville.

A1.10 Top Crash Types (by direction)
The overall top 50 specific crash types by direction were ranked by economic loss and are provided in in this ranking. The crash patterns are directionally specified, such as "NB/EB Rt-angle". This analysis is helpful in identifying specific crash patterns that might be overlooked when looking at total intersection crash statistics.

Appendix A2 - Intersection Collision Diagrams
Intersection collision diagrams and crash statistics are provided in Appendix A2 and are also available via the Google Maps link. The visualization of the data in a collision diagram format is helpful in identifying potential safety issues. It should be noted that the collision diagrams are based on the directional information provided in the electronic crash data, but fatal and injury crashes have been validated with a review of each individual crash report form. For each of the 20 intersections, there is a collision diagram on the first page and details about each individual crash on the second page.

Appendix B1 – Corridor Safety Analysis
Safety analysis sheets that summarize the number and type of crashes along the corridors screened in the study are provided in Appendix B1.

> B1.1 *E. Memorial Drive (S. Oakhill Avenue to Milton Avenue) – 1.46 miles*
> B1.2 *Mt. Zion Avenue (Milton Avenue to Pontiac Drive) – 1.02 miles*
> B1.3 *N. Pontiac Drive (Holiday Drive to Milton Avenue) – 0.32 mile*

The safety analysis was used to help identify safety issues and recommendations for the corridors. The analysis was also used to identify crash patterns and behavior characteristics (e.g., percent speed-related) that the city may want to target.

PEDESTRIAN RISK ASSESSMENT

The pedestrian risk assessment was performed at ten locations selected by the city using a methodology TADI developed that utilizes risk factors to score each roadway crossing and roadway segment. Higher scores imply a greater risk to the pedestrian when crossing the roadway at a particular crossing or walking along the roadway on a particular segment. The resultant numerical values are based on research of hazards which have been shown to impact risk to pedestrians.

Walking Along Criteria	**Crossing Criteria**
Distance Walked	Crossing Width
Available Walking Path	Traffic Volume
Traffic Volume	Vehicle Speeds
Vehicle Speeds	Risk Adjustments
Parking Activity	Existing Safety Features
Pedestrian Activity	Pedestrian Activity

The walking along exposure score for each segment is calculated by multiplying the factors of each of the six *Walking Along* criteria.

$$Walking\ Along\ Exposure\ Score = \ W_D * W_P * W_V * W_S * W_R * W_{PED}$$

The crossing exposure score for each crossing is calculated by multiplying the factors of each of the six *Crossing* criteria.

$$Crossing\ Exposure\ Score = \ C_W * C_V * C_S * C_R * C_E * C_{PED}$$

To estimate pedestrian activity for each segment and crossing, STRAVA Metro was used[1]. STRAVA is a crowd-sourced activity tracking app that is primarily used by walkers, runners, and cyclists to track their workouts. However, STRAVA shares more detailed data with public agencies through STRAVA Metro for use in improving pedestrian/cyclist safety in their communities. According to STRAVA and the Center for Disease Control (CDC), research suggests that STRAVA Metro pedestrian and cyclist data is representative of the general public as a whole and not just athletes utilizing the app for workout tracking[2].

The STRAVA Metro data was used to identify activity on each segment and crossing and they were placed into five categories: very low, low, medium, high, very high. Segments and crossings with more pedestrian/cyclist activity have higher exposure scores since there would be a greater risk of a crash with more pedestrians/cyclists using the segment or crossing.

More detailed information on the development of the pedestrian risk scoring criteria and the factor definitions/numerical values can be found in Appendix C.

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[1] Strava Metro FAQ. Strava Metro. (2020, September 23). Retrieved October 1, 2021, from https://metro.strava.com/faq.

[2] Davies, R. (2021, May 4). CDC finds Strava Metro data correlates strongly with census active commuting data. Medium. Retrieved October 1, 2021, from https://medium.com/strava-metro/cdc-finds-strava-metro-data-correlates-strongly-with-census-active-commuting-data-8ab1be0fe130.

There were ten locations identified by the City of Janesville to be analyzed for pedestrian risk assessment.

C1.1   E. Memorial Drive & Harding Street
C1.2   Ruger Avenue & Randall Avenue
C1.3   E. Milwaukee Street & Morningside Drive
C1.4   Kellogg Avenue & S. Oakhill Avenue
C1.5   Ruger Avenue & Ringold Avenue
C1.6   W. Memorial Drive & N. Pine Street
C1.7   W. Milwaukee Street & Middle School Road
C1.8   Ice Age Trail & Beloit Avenue
C1.9   S. Pontiac Drive & Plymouth Avenue
C1.10 S. Oakhill Ave & Lapham Street

The pedestrian risk assessment was used to help identify safety issues and recommendations at the identified crossings. The pedestrian risk score, as calculated as part of the assessment, was used to help prioritize improvement options by potential cost-effectiveness.

RECOMMENDATIONS

The recommendations of the study are meant to serve as a planning tool for the City of Janesville to prioritize safety improvements throughout the city.

Intersection Evaluation

Recommendations for intersections are organized into three tier categories. Because the HSIP program is both dynamic (crash modification factors are constantly evolving) and competitive (applications are received from all over the state), our recommendations are broadly categorized as a Tier 1 – a good chance treatments would be eligible for HSIP funding, a Tier 2 - maybe treatments would be eligible for HSIP funding, a Tier 3 - low chance treatments would be eligible for HSIP funding. Intersections with a "M" – are suggested for monitoring traffic volumes. A checkmark "√" indicates that a traffic study is recommended to evaluate the best solutions to the safety issues identified.

The categories represent our interpretation of the data available to estimate the likelihood of HSIP eligibility. HSIP eligibility is a function of the expected crash reduction benefits weighed against the anticipated construction costs. The calculations to determine eligibility are performed internally by WisDOT. While we do not have access to the calculations, our experience with similar projects and HSIP applications helps us to estimate the eligibility of potential projects. Improvements with the potential for assistance through the SISP are also noted.

Recommendations for individual intersections are shown on the tables spanning the subsequent pages. The intersections are labeled by number in order of economic loss and are sorted into the 3 groups shown below.

    A. State Intersections (there are no State intersections in this project)
    B. Connecting Highway Intersections
    C. Local Intersections

Road Safety Plan (crash data from 2016-2020)

Legend:
- ✓ Traffic Study Recommended
- M Monitoring Traffic Volumes Recommended
- 1 Tier 1 - Good chance treatments would be eligible for HSIP funding
- 2 Tier 2 - Maybe treatments would be eligible for HSIP funding
- 3 Tier 3 - Low chance treatments would be eligible for HSIP funding

Econ Loss Rank	Intersection Name	Traffic Control [Entering AADT] - Total Crashes - Economic Loss	Modern Roundabout	Traffic Signal	All-Way Stop	Full Traffic Signal Replacement	Partial Traffic Signal Upgrades	Retroreflective Backplates	Countdown Ped Timers	Signal Timing	Geometric Modifications	High-Friction Surface	Street Lighting Improvements	Pavement Marking/Signing	High-Visibility Crosswalks	Upgrade Curb Ramps	Other	Monitor Traffic Volumes	Traffic Study Recommended	NOTES
6	Milwaukee Street & Pontiac Drive	Traffic Signal [13,600] - 27 - $3.01 mil				1		1		1	2		1		1					Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane. Positively offsetting the EB/WB left-turn lanes is a geometric improvement that could also be considered.
8	Court Street & Main Street	Traffic Signal [12,950] - 28 - $2.40 mil				1		1		1			2		1				✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane. 36% of crashes occurred in dark conditions with flashing red-yellow signals. Consider improving lighting at this intersection. NOTE: 6 NB vehicles ran the red light, 2 NB vehicles ran flashing red, 2 EB vehicles ran red and 4 SB vehicles ran flashing red. A traffic study is recommended to evaluate signal timing and operations at the intersection. It is also recommended that the study evaluate leading pedestrian intervals.
12	Main Street & Racine Street	Traffic Signal [13,200] - 24 - $1.87 mil				1		1		1					2					Intersection is a good candidate to upgrade 8" lenses to 12" lenses and adding signal heads over each approach lane. Adding retroreflective backplates to all signal heads would help to improve signal head visibility. Consider adding high-visibility crosswalks and pedestrian countdown timers.
13	Black Bridge Road & Randall Avenue	All-Way Stop [7,650] - 23 - $1.82 mil											3							Improve stop sign visibility with dual stop signs on each approach with reflective tape on posts. 30% of the crashes occurred during dark conditions. Consider adding blinking lights to the stop signs. These improvements would not be a good candidate for a standalone HSIP project.
15	Milwaukee Street & Morningside Drive	Minor Street Stop [9,600] - 23 - $1.67 mil													3					To better accommodate pedestrians, consider adding high visibility crosswalks. These improvements would not be a good candidate for a standalone HSIP project.
16	Harmony Drive & Milwaukee Street	Traffic Signal [10,100] - 30 - $1.62 mil				1		1	1	1					1					Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane with retro-reflective backplates on each signal head. This intersection currently has 8" signal lenses and should be upgraded to 12" lenses. To improve pedestrian accommodations, consider adding high-visibility crosswalks and pedestrian countdown timers.
17	Garfield Avenue & Milwaukee Street	Minor Street Stop [5,050] - 28 - $1.50 mil											3							Improve stop sign visibility NB/SB with dual stop signs on each approach with reflective tape on posts. These improvements would not be a good candidate for a standalone HSIP project.
18	Harding Street & Memorial Drive	Minor Street Stop [11,760] - 22 - $1.40 mil											3		3					Consider adding high visibility crosswalks on all legs. Improve stop sign visibility with dual stop signs and reflective tape on posts. These improvements would not be a good candidate for a standalone HSIP project.
19	Holmes Street & Randall Avenue	All-Way Stop [7,900] - 14 - $1.05 mil											3							Consider improving the visibility of the stop signs with dual signs on all legs and reflective tape on each post. These improvements would not be a good candidate for a standalone HSIP project.
20	Pearl Street & Ravine Street	All-Way Stop [5,800] - 11 - $0.76 mil											3							Consider improving the visibility of the stop signs with dual signs on all legs and reflective tape on each post. These improvements would not be a good candidate for a standalone HSIP project.

Road Safety Plan (crash data from 2016-2020)

Legend:
- ✓ Traffic Study Recommended
- M Monitoring Traffic Volumes Recommended
- 1 Tier 1 - Good chance treatments would be eligible for HSIP funding
- 2 Tier 2 - Maybe treatments would be eligible for HSIP funding
- 3 Tier 3 - Low chance treatments would be eligible for HSIP funding

Econ Loss Rank	Intersection Name	Traffic Control [Entering AADT] - Total Crashes - Economic Loss	Modern Roundabout	Traffic Signal	All-Way Stop	Full Traffic Signal Replacement	Partial Traffic Signal Upgrades	Retroreflective Backplates	Countdown Ped Timers	Signal Timing	Geometric Modifications	High-Friction Surface	Street Lighting Improvements	Pavement Marking/Signing	High-Visibility Crosswalks	Upgrade Curb Ramps	SISP	Monitor Traffic Volumes	Traffic Study Recommended	NOTES
1	STH 26 & Holiday Drive	Traffic Signal [28,200] - 95 - $4.94 mil				1		1		1	1		1	1	1	1			✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements, such as positively offset left-turn lanes and potential modifications to access at the frontage roads. A traffic study is recommended to identify specific geometric, access, and operational needs. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
2	STH 26 & Black Bridge Road	Traffic Signal [30,250] - 93 - $3.87 mil				1		1		1	1		1	1	1	1			✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (all directions). A traffic study is recommended to identify specific geometric, access, and operational needs. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
3	STH 26 & Mount Zion Avenue	Traffic Signal [25,050] - 52 - $3.59 mil				1		1		1	1		1	1	1	1			✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (all directions). A traffic study is recommended to identify specific geometric, access, and operational needs. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
4	STH 26 & Lodge Drive	Traffic Signal [26,100] - 81 - $3.25 mil				1		1		1	1		1	1	1	1			✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements, such as positively offset left-turn lanes and potential modifications to access at the frontage roads. A traffic study is recommended to identify specific geometric, access, and operational needs. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
5	STH 26 & Kennedy Road/Randolph Road	Traffic Signal [29,650] - 69 - $3.10 mil				1		1		1	1		1	1	1	1			✓	Intersection is a candidate for a full signal replacement to provide signal heads over each approach lane and incorporating geometric improvements such as positively offset left-turn lanes (NB/SB). A traffic study is recommended to identify specific geometric, access, and operational needs. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
7	USH 51 & Kellogg Avenue	Traffic Signal [17,200] - 41 - $2.67 mil				3		3		3	3				3		1			Intersection could benefit by adding signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. To better accommodate pedestrians, high visibility crosswalks and adding pedestrian countdown timers could be considered. Access management is also recommended as there were several driveway-related crashes. * Note: Because connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications, this intersection is not a good candidate for HSIP funding.
9	STH 26 & Memorial Drive	Traffic Signal [22,700] - 68 - $2.27 mil				2		2		2	2				2				✓	Intersection could benefit from safety improvements to improve signal head visibility (signals over each approach lane), pedestrian accommodations (consider leading pedestrian interval), and geometric modifications to improve capacity and/or left-turn operations. A traffic study is recommended to identify the geometric and operational needs of the intersection before determining HSIP feasibility. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.

Road Safety Plan (crash data from 2016-2020)

Econ Loss Rank	Intersection Name	Traffic Control [Entering AADT] - Total Crashes - Economic Loss	CHANGE TRAFFIC CONTROL			TRAFFIC SIGNAL IMPROVEMENTS					DESIGN IMPROVEMENTS						SISP	Monitor Traffic Volumes	Traffic Study Recommended	NOTES
			Modern Roundabout	Traffic Signal	All-Way Stop	Full Traffic Signal Replacement	Partial Traffic Signal Upgrades	Retroreflective Backplates	Countdown Ped Timers	Signal Timing	Geometric Modifications	High-Friction Surface	Street Lighting Improvements	Pavement Marking/Signing	High-Visibility Crosswalks	Upgrade Curb Ramps				
10	USH 14 & Kennedy Road	Traffic Signal [26,950] - 46 - $2.24 mil				2		2		2	2				2				✓	Intersection could benefit by converting signals to monotubes with signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. Monotubes may help reduce visual clutter of the signal poles, guidance signs and RR signs/crossing arms. Improving the offset of the left-turn lanes and/or implementing protected-only left-turn phasing (where warranted) would also help reduce crash risk. Consider options for adding pedestrian accommodations and servicing pedestrians in the area (the only sidewalk is in the NW corner). A traffic study is recommended to identify the geometric and operational needs of the intersection before determining HSIP feasibility. * Note: connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications.
11	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal [18,300] - 27 - $2.05 mil				3		3		3					3		1			Intersection currently has 8" signal lenses. Signal visibility could be improved by upgrading to 12" lenses and adding signal heads over each approach lane. Retro-reflective backplates could be considered as well. To improve pedestrian accommodations, consider adding high-visibility crosswalks. * Note: Because connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications, this intersection is not a good candidate for HSIP funding. However, the intersection appears to be a good candidate for upgrading old signal equipment through the SISP program.
14	USH 51 & Main Street	Traffic Signal [19,350] - 38 - $1.74 mil				3		3		3					3		1			Intersection could benefit by adding signal heads over each lane and adding retro-reflective backplates to improve signal head visibility. Consider adding high visibility crosswalks and pedestrian countdown timers. * Note: Because connecting highway intersections require more than 50 percent of the work to be qualifying roadwork in HSIP applications, this intersection is not a good candidate for HSIP funding.

Legend:
- ✓ Traffic Study Recommended
- M Monitoring Traffic Volumes Recommended
- 1 Tier 1 - Good chance treatments would be eligible for HSIP funding
- 2 Tier 2 - Maybe treatments would be eligible for HSIP funding
- 3 Tier 3 - Low chance treatments would be eligible for HSIP funding

Corridor Evaluation

Crashes were analyzed on three highway corridors as specified by the city. A one-page summary of the crash statistics is provided for each of the corridors in Appendix B1 and has information about the crash trends observed. Target crash types the city may want to aim to reduce are listed for each corridor.

The corridors that were evaluated are listed on subsequent pages in order of overall economic loss. A corridor map and notable crash types to consider targeting for reduction are provided, in addition to a discussion of safety issues and potential solutions.

1. **E. Memorial Avenue (S. Oakhill Ave to Milton Ave)**   **1.46 miles**

    229 Crashes, $13,665,800 Economic Loss
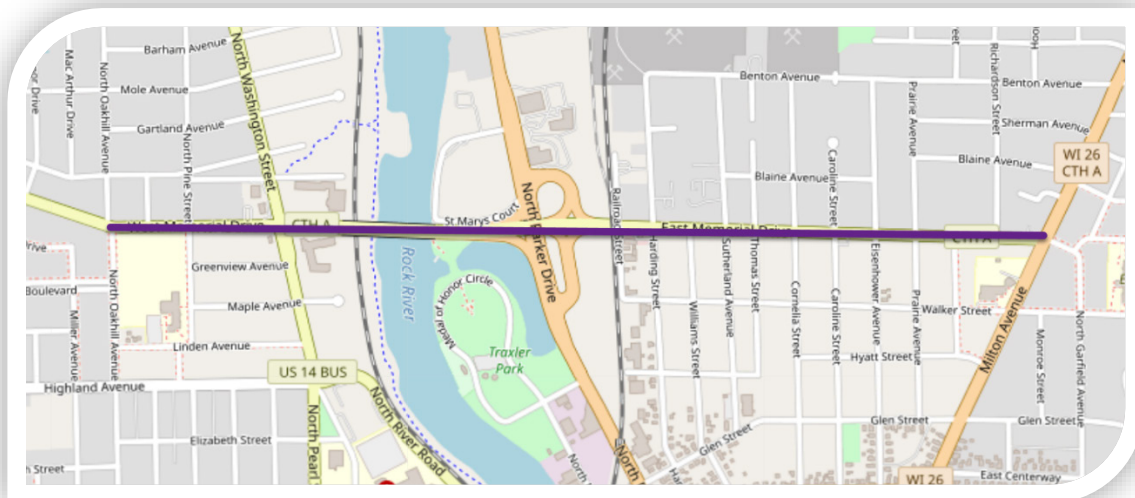
Target crash types	Statistics
b. Left-turn angle	17 crashes, $2,521,600 in economic loss
c. Run-off-the-road	25 crashes, $2,253,200 in economic loss
d. Right angle	41 crashes, $2,110,600 in economic loss
e. Head-On	20 crashes, $896,800 in economic loss
f. Side-Swipe Same	29 crashes, $537,600 in economic loss
g. Pedestrian(1)/Bicycle(1)	2 crashes, $246,000 in economic loss

Discussion

Based on the crash history of rear-end, left-turn angle, run-off-the-road and right-angle crashes, improvements along this corridor is a good candidate for HSIP funding. A traffic study is recommended to determine a lane configuration that will provide acceptable operations while improving safety. For instance, there are portions of this corridor that appear to be good candidates for a reconfiguration from 4-lane undivided cross section to a three-lane cross section with a center left-turn lane (also called a road diet, 3-lane TWLTL, or safety conversion). Upon completion of a traffic study, HSIP eligibility can then be more closely evaluated.

2. Mt. Zion Street (Milton Ave to Pontiac Dr)   1.02 miles

132 Crashes, $6,404,800 Economic Loss
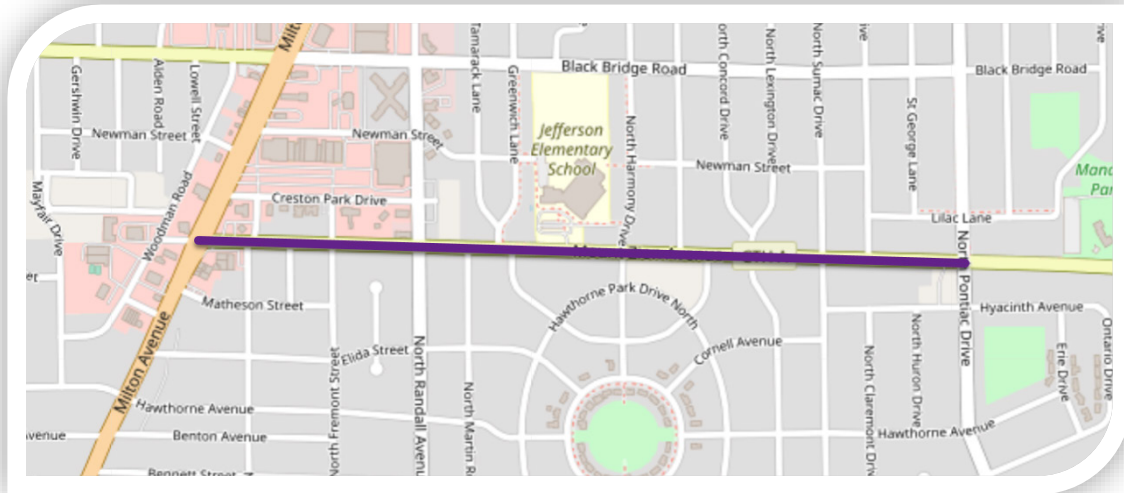
Target crash types	Statistics
b. Rear-end	49 crashes, $1,839,200 in economic loss
c. Left-turn angle	10 crashes, $1,099,600 in economic loss
d. Pedestrian(1)/Bicycle(2)	3 crashes, $557,000 in economic loss
e. Run-off-the-road	12 crashes, $448,000 in economic loss
f. Side-Swipe Same	17 crashes, $389,800 in economic loss

Discussion

Based on the crash history of right-angle, rear-end, and left-turn angle crashes, improvements along this corridor may be a good candidate for HSIP funding. A traffic study is recommended to determine a lane configuration and intersection improvements that will provide acceptable operations while improving safety. Upon completion of a traffic study, HSIP eligibility can then be more closely evaluated.

3. N. Pontiac Drive (Holiday Dr to Milton Ave)   0.32 mile

106 Crashes, $4,626,000 Economic Loss

Target crash types	Statistics
b. Right angle	14 crashes, $882,000 in economic loss
c. Head-On	5 crashes, $578,600 in economic loss
d. Side-Swipe Same	26 crashes, $505,200 in economic loss
e. Left-turn angle	11 crashes, $455,400 in economic loss
f. Run-off-the-road	7 crashes, $187,800 in economic loss

Discussion

Based on the crash history of rear-end and right-angle crashes, improvements along this corridor may be a good candidate for HSIP funding. A traffic study is recommended to determine a lane configuration that will provide acceptable operations while improving safety. For instance, there are portions of this corridor that appear to be good candidates for a reconfiguration from 4-lane undivided cross section to a three-lane cross section with a center left-turn lane (also called a road diet, 3-lane TWLTL, or safety conversion). Upon completion of a traffic study, HSIP eligibility can then be more closely evaluated.

Pedestrian Risk Assessment

Ten pedestrian crossings at locations specified by the city were analyzed and were given a pedestrian risk assessment score (hazard rating) based on the aforementioned criteria. The intersections were prioritized by recommendations by anticipated cost-effectiveness and shown in Table 1.

Table 1: Pedestrian Crossing Recommendations Summary

Pedestrian Crossing Location	Traffic Control	Existing Hazard Rating	Improvements in Order of Anticipated Cost Effectiveness (New Hazard Rating)
Kellogg Ave & Oakhill Ave (west leg, unmarked crosswalk)	Minor Stop	150	**[R] High Visibility Crosswalk (90)** [C] RRFB (75) [C] Median Refuge (105) [C] Pedestrian Hybrid Beacon (38) [C] Curb Extensions (120) **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Add School Crossing Signs Since School Speed Limit Sign Nearby*** **[R] Update School Signs to Current Standards of Color and Retroreflectivity***
Ruger Ave & Ringold St (west leg, standard crosswalk)	Minor Stop	90	**[R] High visibility crosswalk (54)** [C] RRFB (45) [C] Median Refuge (63) [C] Pedestrian Hybrid Beacon (23) [C] Curb Extensions (68) **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Update School Signs to Current Standards of Color and Retroreflectivity***
W Memorial Dr & Pine St (west leg, standard crosswalk/flashing beacon)	Minor Stop	50	***Recommendations for Both Options*** **[R] High visibility crosswalk (30)** **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Update School Signs to Current Standards of Color and Retroreflectivity*** ***If 4-Lane Cross-Section Remains:*** **[R] Double Lane Lines Leading Up to Crossing to Deter Lane Changing Approaching Crossing*** ***If 3-Lane TWLTL Implemented:*** [C] RRFB (25) [C] PHB (13) [C] Curb Extensions (40)

[R] Recommended; [C] Consider; *Research is limited about treatment's effectiveness and, therefore, is not a part of the pedestrian risk score. Although not included in the scoring method, the treatment is low-cost and incorporate principles that are known to reduce pedestrian risk.

Table 1: Pedestrian Crossing Recommendations Summary (Continued)

Pedestrian Crossing Location	Traffic Control	Existing Hazard Rating	Improvements in Order of Anticipated Cost Effectiveness (New Hazard Rating)
Pontiac Dr & Plymouth Ave (south leg, high visibility crosswalk)	Minor Stop	24	[C] Curb Extensions (18) [C] RRFB (20) [C] Median Refuge (24) **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Update School Signs to Current Standards of Color and Retroreflectivity***
Memorial Dr & Harding St (east leg, standard crosswalk)	Minor Stop	495	***Recommendations for Both Options*** **[R] High visibility crosswalk (297)** **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** ***If 4-Lane Cross-Section Remains:*** **[R] Double Lane Lines Leading Up to Crossing to Deter Lane Changing Approaching Crossing*** ***If 3-Lane TWLTL Implemented:*** [C] RRFB (248) [C] PHB (124) [C] Curb Extensions (413)
Ruger Ave & Randall Ave (south leg, standard crosswalk)	All-Way Stop	263	**[R] High visibility crosswalk (158)** [C] Curb extensions (210)
Ice age Trail & Beloit Ave (standard crosswalk)	Stop On Trail	263	**[R] High visibility crosswalk (158)** [C] RRFB (131) [C] Pedestrian Hybrid Beacon (66) **[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Double Lane Lines Leading Up to Crossing to Deter Lane Changing Approaching Crossing*** [C] Additional Upstream Warning Signs*
E Milwaukee St & Morningside Dr (west leg, high visibility crosswalk)	Minor Stop	101	**[R] Advanced Yield Lines with "Yield to Pedestrian" Signs*** **[R] Double Lane Lines Leading Up to Crossing to Deter Lane Changing Approaching Crossing***

[R] Recommended; [C] Consider; *Research is limited about treatment's effectiveness and, therefore, is not a part of the pedestrian risk score. Although not included in the scoring method, the treatment is low-cost and incorporate principles that are known to reduce pedestrian risk.

Table 1: Pedestrian Crossing Recommendations Summary (Continued)

Pedestrian Crossing Location	Traffic Control	Existing Hazard Rating	Improvements in Order of Anticipated Cost Effectiveness (New Hazard Rating)
W Milwaukee St & Middle School Rd (west leg, standard crosswalk)	Minor Stop	84	[R] High visibility crosswalk (50) [C] RRFB (42) [R] Count Pedestrian Traffic to Achieve a More Accurate Assessment of the Pedestrian Risk Score [R] Advanced Yield Lines with "Yield to Pedestrian" Signs* [R] Double Lane Lines Leading Up to Crossing to Deter Lane Changing Approaching Crossing*
S Oakhill Ave & Lapham St (south leg, high visibility crosswalk)	Minor Stop	5	[C] Count Pedestrian Traffic to Achieve a More Accurate Assessment of the Pedestrian Risk Score

Images of each recommended mitigation technique are shown below.

High-Visibility Crosswalk

Rapid Rectangular Flashing Beacon (RRFB)

Median Refuge Island

Pedestrian Hybrid Beacon (PHB)
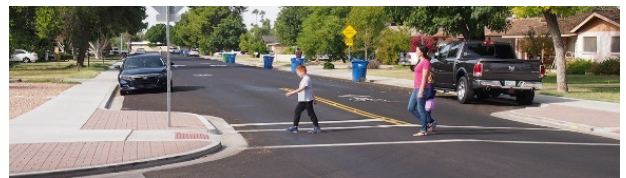
Curb Extentions

Advanced Yield Lines

Yield to Pedestrians Sign

School Related Signs Should Be Neon Yellow

Rectangular Rapid Flashing Beacon (RRFB) Information

Pedestrian actuated RRFBs are a type of warning beacon that are used at uncontrolled pedestrian crossings to assist pedestrians in crossing the roadway. WisDOT received statewide interim approval from FHWA to allow all jurisdictions in Wisconsin to install an RRFB (WisDOT IA-21 Memo). The WisDOT Traffic Engineering, Operations and Safety (TEOpS) Manual 4-5 provides eight criteria that should be met prior to installing an RRFB:

1. The location is an uncontrolled pedestrian crossing.

2. A minimum volume of 20 or more pedestrians during a single hour (any four consecutive 15-minute periods) of an average day should be met. Young (<12), elderly (>85) and disable pedestrians count 2 times toward volume thresholds.

3. A minimum vehicular volume of 1,500 vehicles per day.

4. Maximum of four lanes crossed, unless there is a raised median, in which case it can be six lanes.

5. There exists a minimum of 300 feet between the subject crossing and the nearest controlled pedestrian crossing or intersection traffic control device.

6. Adequate stopping sight distance exists.

7. Flash rate of 75 flashes per minute.

8. Greater than 1,200 feet from another RRFB.

Additionally, TEOpS 4-5 states that RRFBs may not be appropriate at locations where there is a combination of both high traffic volumes and high pedestrian volumes.

Pedestrian Hybrid Beacon (PHB) Information

Per the WisDOT Manual on Uniform Traffic Control Devices (MUTCD) Chapter 4F, a PHB is a special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk. WisDOT MUTCD Figures 4F-1 & 4F-2 on the following page provide guidelines for the installation of PHBs on roadways with speeds lower than 35-mph and speeds more than 35-mph, respectively. If any one hour of a day has a major street volume total and corresponding pedestrian volume total that falls above the applicable line in the appropriate figure, a PHB may be considered for installation.

WisDOT MUTCD Chapter 4F Figures 4F-1 & 4F-2

Figure 4F-1. Guidelines for the Installation of Pedestrian Hybrid Beacons on Low-Speed Roadways

Speeds of 35 mph or less

L = crosswalk length

TOTAL OF ALL PEDESTRIANS CROSSING THE MAJOR STREET - PEDESTRIANS PER HOUR (PPH)

L = 100 ft, L = 72 ft, L = 50 ft, L = 34 ft

20*

MAJOR STREET — TOTAL OF BOTH APPROACHES — VEHICLES PER HOUR (VPH)

* Note: 20 pph applies as the lower threshold volume
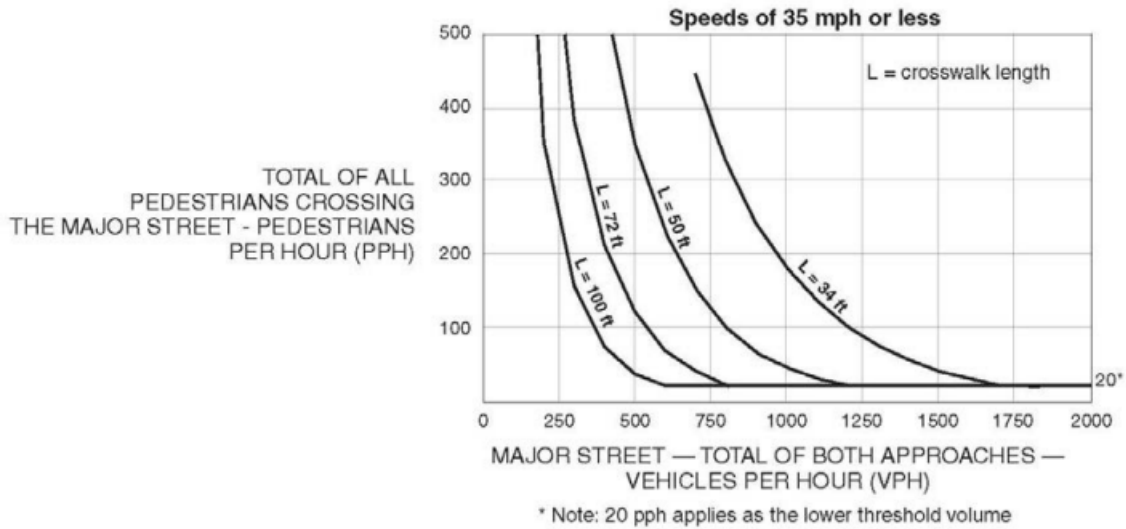
Figure 4F-2. Guidelines for the Installation of Pedestrian Hybrid Beacons on High-Speed Roadways

Speeds of more than 35 mph

L = crosswalk length

TOTAL OF ALL PEDESTRIANS CROSSING THE MAJOR STREET - PEDESTRIANS PER HOUR (PPH)

L = 100 ft, L = 72 ft, L = 50 ft, L = 34 ft

20*

MAJOR STREET — TOTAL OF BOTH APPROACHES — VEHICLES PER HOUR (VPH)

* Note: 20 pph applies as the lower threshold volume
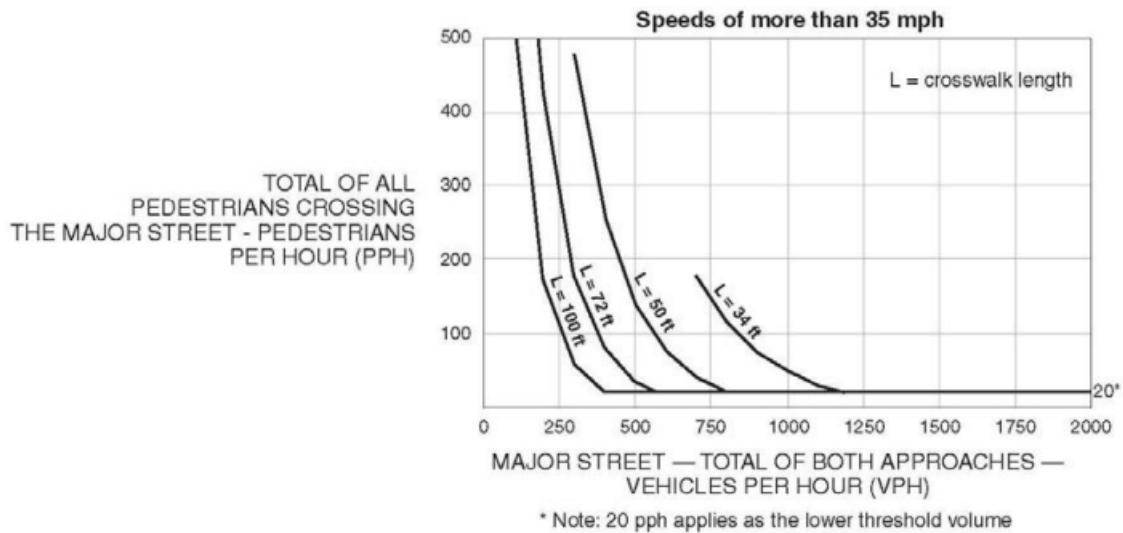
Recommendations for the ten pedestrian risk assessment crossings are noted below.

Kellogg Avenue & S. Oakhill Avenue (Minor Stop Control, West Leg, Existing Unmarked Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs, adding school crossing signs due to the proximity of the school zone speed limit sign, and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, median refuge, PHB, or adding curb extensions. According to the count taken at this intersection in September 2021, pedestrian volumes are not high enough to warrant an RRFB or a PHB, however volumes could be reevaluated if either of those improvements are pursued.

Ruger Avenue & Ringold Avenue (Minor Stop Control, West Leg, Existing Standard Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, median refuge, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

W. Memorial Drive & N. Pine Street (Minor Stop Control, West Leg, Existing Standard Crosswalk with Flashing Beacon)
It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity.

If a 4-lane cross-section remains, it is recommended to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

If Memorial Drive is converted to a 3-lane TWLTL, improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

S. Pontiac Drive & Plymouth Avenue (Minor Stop Control, South Leg, Existing High Visibility Crosswalk)
It is recommended that to add advanced yield lines with "yield to pedestrian" signs and updating the existing school signs to the current standards of color and retroreflectivity. Other improvements that could be considered, in order of anticipated cost-effectiveness, include adding curb extensions, an RRFB, or median refuge.

E. Memorial Drive & Harding Street (Minor Stop Control, East Leg, Existing Standard Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. Additional recommended improvements include adding advanced yield lines with "yield to pedestrian" signs.

If a 4-lane cross-section remains, it is recommended to add double lane lines between the two eastbound approach lanes leading up to the crosswalk to deter lane changing near the crossing.

If Memorial Drive is converted to a 3-lane TWLTL, improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB, PHB, or adding curb extensions. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

Ruger Avenue & Randall Avenue (All-Way Stop Control, South Leg, Existing Standard Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. Consideration could be given to adding curb extensions to the crossing to shorten the crossing distance.

Ice Age Trail & Beloit Avenue (Trail Crossing, Existing Standard Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing. Additional upstream warning signs could be considered. Other improvements that could be considered, in order of anticipated cost-effectiveness, include an RRFB or a PHB. Pedestrian volumes should be counted if an RRFB or PHB are pursued to verify whether volume thresholds are met.

E. Milwaukee Street & Morningside Drive (Minor Stop Control, West Leg, Existing High Visibility Crosswalk)
It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

W. Milwaukee Street & Middle School Road (Minor Stop Control, West Leg, Existing Standard Crosswalk)
It is recommended that a high-visibility crosswalk is added at this crossing. Consideration could be given to adding an RRFB, but volumes should be counted to verify whether volume thresholds are met. Also, it is recommended to count pedestrians to achieve a more accurate assessment of the pedestrian risk score. It is recommended to add advanced yield lines with "yield to pedestrian" signs and to add double lane lines between the two approach lanes leading up to the crosswalk to deter lane changing near the crossing.

S. Oakhill Ave & Lapham Street (Minor Stop Control, South Leg, Existing High Visibility Crosswalk)
It is recommended to count pedestrians to achieve a more accurate assessment of the pedestrian risk score.

CONCLUSIONS

This Local Road Safety Plan identified opportunities to improve traffic safety throughout the City of Janesville. Twenty intersections were evaluated on the connecting highway and local networks. Three local corridors segments and ten pedestrian crossing locations were also evaluated. Electronic crash data for the years 2016-2020 were used to perform the analysis at these locations.

The study found there appear to be five connecting highway intersections and four local intersections that are good candidates for 90 percent Federal Funding through the HSIP program. Three connecting highway intersections were identified as having the potential to qualify for 90 percent State Funding through the SISP program. There were also potential safety improvements identified at various intersections and pedestrian crossings that could be considered using local funding.

The three corridors examined in the study each appear to be good candidates for reconfiguration to a 3-lane cross section, potentially with 90 percent funding through the HSIP program. Traffic studies are recommended along these corridors to validate a 3-lane cross section would provide adequate capacity. The studies could also further examine the HSIP opportunities for modifications recommended by the capacity analysis.

It is recommended to use the information in this memorandum as a planning tool for prioritizing local safety improvements and applying for HSIP/SISP funding.

NEXT STEPS

HSIP application are due on February 15th, 2022 for the next cycle of applications. If the City of Janesville is interested in pursuing any of the potential projects listed in this study, it is suggested that such applications are begun as soon as possible to ensure time to prepare the applications and proactively coordinate with WisDOT. For the locations and projects in the Tier 1 – "good" and Tier 2 – "maybe" categories that the City of Janesville has interest in potentially improving through the HSIP program, it is suggested that the City of Janesville meet with WisDOT to discuss potential safety solutions, strategies, and HSIP eligibility. If the February 15th, 2022 deadline is not able to be met, the next HSIP application deadline is six months later, on August 15th, 2022. The later application date would afford the City of Janesville to complete the recommended traffic studies and prioritize locations to include in the HSIP application.

If the City of Janesville has interest in improvements to the signal equipment at the intersection of USH 51/Parker Drive & STH 26/Centerway Street, the SISP municipal applications are due to regional contacts on April 8th, 2022 for the next cycle of applications. If the April deadline is unable to be met, the next SISP application is six months later and is due to regional contacts on September 9, 2022. An overview of the SISP program can be found in Appendix D.

APPENDIX A1

INTERSECTION RANKINGS

APPENDIX A1.1

Intersection Database

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	LEGS	ENTERING AADT	COORDINATES	CRASH FREQ.	CRASH RATE	ECONOMIC LOSS
1	STH 26 & Holiday Drive	Traffic Signal	4	28,200	42.713819, -89.000824	95	1.84	$4,937,800
2	STH 26 & Black Bridge Road	Traffic Signal	4	30,250	42.704386, -89.006708	93	1.68	$3,867,000
3	STH 26 & Mount Zion Avenue	Traffic Signal	4	25,050	42.700868, -89.008946	52	1.14	$3,594,000
4	STH 26 & Lodge Drive	Traffic Signal	4	26,100	42.716255, -88.999289	81	1.70	$3,252,200
5	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	4	29,650	42.706589, -89.005348	69	1.27	$3,104,400
6	Milwaukee Street & Pontiac Drive	Traffic Signal	4	13,600	42.695566, -88.987891	27	1.09	$3,005,600
7	USH 51 & Kellogg Avenue	Traffic Signal	4	17,200	42.649761, -89.031155	41	1.31	$2,671,600
8	Court Street & Main Street	Traffic Signal	4	12,950	42.681902, -89.021376	28	1.18	$2,397,800
9	STH 26 & Memorial Drive	Traffic Signal	4	22,700	42.693606, -89.013558	68	1.64	$2,268,800
10	USH 14 & Kennedy Road	Traffic Signal	4	26,950	42.722699, -89.006063	46	0.93	$2,237,400
11	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	4	18,300	42.686372, -89.024755	27	0.81	$2,050,400
12	Main Street & Racine Street	Traffic Signal	4	13,200	42.677275, -89.016218	24	1.00	$1,869,400
13	Black Bridge Road & Randall Avenue	All-Way Stop	4	7,650	42.704296, -89.003280	23	1.65	$1,819,200
14	USH 51 & Main Street	Traffic Signal	4	19,350	42.685802, -89.025671	38	1.08	$1,738,600
15	Milwaukee Street & Morningside Drive	Minor Street Stop	4	9,600	42.698284, -88.979226	23	1.31	$1,670,600
16	Harmony Drive & Milwaukee Street	Traffic Signal	4	10,100	42.692711, -88.997050	30	1.63	$1,615,800
17	Garfield Avenue & Milwaukee Street	Minor Street Stop	4	5,050	42.687968, -89.012391	28	3.04	$1,500,200
18	Harding Street & Memorial Drive	Minor Street Stop	4	11,760	42.693884, -89.025649	22	1.02	$1,399,000
19	Holmes Street & Randall Avenue	All-Way Stop	4	7,900	42.683358, -89.002897	14	0.97	$1,048,800
20	Pearl Street & Ravine Street	All-Way Stop	4	5,800	42.683898, -89.035908	11	1.04	$755,600
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Averages per Intersection						42	1.37	$2,340,210
Totals						840		$46,804,200

1) Ranked by total economic loss. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, and $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.2

Economic Loss Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	CRASH FREQUENCY TOTAL	ECONOMIC LOSS (ALL CRASHES)
1	STH 26 & Holiday Drive	Traffic Signal	0	1	7	16	71	95	$4,937,800
2	STH 26 & Black Bridge Road	Traffic Signal	0	2	3	8	80	93	$3,867,000
3	STH 26 & Mount Zion Avenue	Traffic Signal	0	1	6	10	35	52	$3,594,000
4	STH 26 & Lodge Drive	Traffic Signal	0	0	5	12	64	81	$3,252,200
5	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	0	0	6	10	53	69	$3,104,400
6	Milwaukee Street & Pontiac Drive	Traffic Signal	1	1	5	3	17	27	$3,005,600
7	USH 51 & Kellogg Avenue	Traffic Signal	0	0	7	7	27	41	$2,671,600
8	Court Street & Main Street	Traffic Signal	0	2	2	3	21	28	$2,397,800
9	STH 26 & Memorial Drive	Traffic Signal	0	0	2	10	56	68	$2,268,800
10	USH 14 & Kennedy Road	Traffic Signal	0	0	3	10	33	46	$2,237,400
11	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	0	1	2	6	18	27	$2,050,400
12	Main Street & Racine Street	Traffic Signal	0	1	4	1	18	24	$1,869,400
13	Black Bridge Road & Randall Avenue	All-Way Stop	0	1	0	8	14	23	$1,819,200
14	USH 51 & Main Street	Traffic Signal	0	1	1	4	32	38	$1,738,600
15	Milwaukee Street & Morningside Drive	Minor Street Stop	0	0	2	9	12	23	$1,670,600
16	Harmony Drive & Milwaukee Street	Traffic Signal	0	0	3	6	21	30	$1,615,800
17	Garfield Avenue & Milwaukee Street	Minor Street Stop	0	0	2	7	19	28	$1,500,200
18	Harding Street & Memorial Drive	Minor Street Stop	0	0	4	3	15	22	$1,399,000
19	Holmes Street & Randall Avenue	All-Way Stop	0	1	0	2	11	14	$1,048,800
20	Pearl Street & Ravine Street	All-Way Stop	0	0	2	2	7	11	$755,600
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Averages per Intersection			0.05	0.60	3.30	6.85	31.20	42.00	$2,340,210

Totals			1	12	66	137	624	840	$46,804,200

Avg. by Traffic Control	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	CRASHES	ECONOMIC LOSS
Traffic Signal	0.07	0.71	4.00	7.57	39.00	51.36	$2,757,914
All-Way Stop	0.00	0.67	0.67	4.00	10.67	16.00	$1,207,867
Modern Roundabout	---	---	---	---	---	---	---
Minor Street Stop	0.00	0.00	2.67	6.33	15.33	24.33	$1,523,267
Minor Street Yield	---	---	---	---	---	---	---
Other	---	---	---	---	---	---	---

1) Ranked by total economic loss. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, and $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.3

Crash Frequency Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	CRASH FREQUENCY TOTAL
1	STH 26 & Holiday Drive	Traffic Signal	0	1	7	16	71	95
2	STH 26 & Black Bridge Road	Traffic Signal	0	2	3	8	80	93
3	STH 26 & Lodge Drive	Traffic Signal	0	0	5	12	64	81
4	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	0	0	6	10	53	69
5	STH 26 & Memorial Drive	Traffic Signal	0	0	2	10	56	68
6	STH 26 & Mount Zion Avenue	Traffic Signal	0	1	6	10	35	52
7	USH 14 & Kennedy Road	Traffic Signal	0	0	3	10	33	46
8	USH 51 & Kellogg Avenue	Traffic Signal	0	0	7	7	27	41
9	USH 51 & Main Street	Traffic Signal	0	1	1	4	32	38
10	Harmony Drive & Milwaukee Street	Traffic Signal	0	0	3	6	21	30
11	Court Street & Main Street	Traffic Signal	0	2	2	3	21	28
12	Garfield Avenue & Milwaukee Street	Minor Street Stop	0	0	2	7	19	28
13	Milwaukee Street & Pontiac Drive	Traffic Signal	1	1	5	3	17	27
14	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	0	1	2	6	18	27
15	Main Street & Racine Street	Traffic Signal	0	1	4	1	18	24
16	Black Bridge Road & Randall Avenue	All-Way Stop	0	1	0	8	14	23
17	Milwaukee Street & Morningside Drive	Minor Street Stop	0	0	2	9	12	23
18	Harding Street & Memorial Drive	Minor Street Stop	0	0	4	3	15	22
19	Holmes Street & Randall Avenue	All-Way Stop	0	1	0	2	11	14
20	Pearl Street & Ravine Street	All-Way Stop	0	0	2	2	7	11
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Averages per Intersection			0.05	0.60	3.30	6.85	31.20	42.00

Totals			1	12	66	137	624	840

Avg. by Traffic Control	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	CRASH FREQUENCY
Traffic Signal	0.07	0.71	4.00	7.57	39.00	51.36
All-Way Stop	0.00	0.67	0.67	4.00	10.67	16.00
Modern Roundabout	---	---	---	---	---	---
Minor Street Stop	0.00	0.00	2.67	6.33	15.33	24.33
Minor Street Yield	---	---	---	---	---	---
Other	---	---	---	---	---	---

1) Ranked by total crash frequency in five-year period.

APPENDIX A1.4

Crash Rate Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	ENTERING AADT	CRASH FREQUENCY	CRASH RATE
1	Garfield Avenue & Milwaukee Street	Minor Street Stop	5,050	28	3.04
2	STH 26 & Holiday Drive	Traffic Signal	28,200	95	1.84
3	STH 26 & Lodge Drive	Traffic Signal	26,100	81	1.70
4	STH 26 & Black Bridge Road	Traffic Signal	30,250	93	1.68
5	Black Bridge Road & Randall Avenue	All-Way Stop	7,650	23	1.65
6	STH 26 & Memorial Drive	Traffic Signal	22,700	68	1.64
7	Harmony Drive & Milwaukee Street	Traffic Signal	10,100	30	1.63
8	USH 51 & Kellogg Avenue	Traffic Signal	17,200	41	1.31
9	Milwaukee Street & Morningside Drive	Minor Street Stop	9,600	23	1.31
10	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	29,650	69	1.27
11	Court Street & Main Street	Traffic Signal	12,950	28	1.18
12	STH 26 & Mount Zion Avenue	Traffic Signal	25,050	52	1.14
13	Milwaukee Street & Pontiac Drive	Traffic Signal	13,600	27	1.09
14	USH 51 & Main Street	Traffic Signal	19,350	38	1.08
15	Pearl Street & Ravine Street	All-Way Stop	5,800	11	1.04
16	Harding Street & Memorial Drive	Minor Street Stop	11,760	22	1.02
17	Main Street & Racine Street	Traffic Signal	13,200	24	1.00
18	Holmes Street & Randall Avenue	All-Way Stop	7,900	14	0.97
19	USH 14 & Kennedy Road	Traffic Signal	26,950	46	0.93
20	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	18,300	27	0.81
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Totals			341,360	840	1.35

Avg. by Traffic Control	ENTERING AADT	CRASH FREQUENCY	CRASH RATE
Traffic Signal	20,971	51.36	1.34
All-Way Stop	7,117	16.00	1.23
Modern Roundabout	---	---	---
Minor Street Stop	8,803	24.33	1.51
Minor Street Yield	---	---	---
Other	---	---	---

1) Ranked by total number of crashes per million entering vehicles in five-year period.

APPENDIX A1.5

Night-Time Crash Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	NIGHT-TIME CRASHES	TOTAL NUMBER OF CRASHES	PERCENT NIGHT-TIME	ECONOMIC LOSS (NIGHT-TIME)
1	Milwaukee Street & Pontiac Drive	Traffic Signal	6	27	22%	$1,523,400
2	STH 26 & Black Bridge Road	Traffic Signal	21	93	23%	$1,218,400
3	STH 26 & Holiday Drive	Traffic Signal	23	95	24%	$1,109,600
4	STH 26 & Mount Zion Avenue	Traffic Signal	11	52	21%	$755,600
5	STH 26 & Lodge Drive	Traffic Signal	21	81	26%	$751,400
6	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	17	69	25%	$726,400
7	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	4	27	15%	$716,400
8	Main Street & Racine Street	Traffic Signal	1	24	4%	$684,000
9	Harding Street & Memorial Drive	Minor Street Stop	6	22	27%	$589,400
10	USH 14 & Kennedy Road	Traffic Signal	7	46	15%	$506,200
11	Harmony Drive & Milwaukee Street	Traffic Signal	6	30	20%	$495,400
12	STH 26 & Memorial Drive	Traffic Signal	13	68	19%	$477,000
13	USH 51 & Kellogg Avenue	Traffic Signal	14	41	34%	$469,600
14	Court Street & Main Street	Traffic Signal	10	28	36%	$220,200
15	Black Bridge Road & Randall Avenue	All-Way Stop	7	23	30%	$187,800
16	Garfield Avenue & Milwaukee Street	Minor Street Stop	5	28	18%	$166,200
17	Holmes Street & Randall Avenue	All-Way Stop	4	14	29%	$155,400
18	USH 51 & Main Street	Traffic Signal	6	38	16%	$64,800
19	Pearl Street & Ravine Street	All-Way Stop	2	11	18%	$21,600
20	Milwaukee Street & Morningside Drive	Minor Street Stop	2	23	9%	$21,600
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Averages per Intersection			**9.30**	**42.00**	**22%**	**$543,020**
Totals			**186**	**840**	**22%**	**$10,860,400**

1) *Crashes ranked by economic loss of night-time crashes. Night-time includes night, or during low-light (dawn/dusk) conditions. Economic Loss calculated by using $684k per Fatal K-Level,*
$684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.6

Slippery Conditions Crash Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	SLIPPERY CONDITIONS CRASHES	TOTAL NUMBER OF CRASHES	PERCENT SLIPPERY CONDITIONS	ECONOMIC LOSS (SLIPPERY CONDITIONS)
1	STH 26 & Lodge Drive	Traffic Signal	26	81	32%	$1,554,400
2	Main Street & Racine Street	Traffic Signal	7	24	29%	$955,000
3	STH 26 & Memorial Drive	Traffic Signal	22	68	32%	$780,400
4	USH 14 & Kennedy Road	Traffic Signal	14	46	30%	$712,200
5	STH 26 & Mount Zion Avenue	Traffic Signal	16	52	31%	$697,400
6	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	9	27	33%	$640,000
7	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	22	69	32%	$574,200
8	USH 51 & Main Street	Traffic Signal	13	38	34%	$571,000
9	USH 51 & Kellogg Avenue	Traffic Signal	8	41	20%	$517,000
10	STH 26 & Black Bridge Road	Traffic Signal	20	93	22%	$440,400
11	Harmony Drive & Milwaukee Street	Traffic Signal	8	30	27%	$423,000
12	Harding Street & Memorial Drive	Minor Street Stop	9	22	41%	$415,600
13	Garfield Avenue & Milwaukee Street	Minor Street Stop	7	28	25%	$412,200
14	STH 26 & Holiday Drive	Traffic Signal	13	95	14%	$346,600
15	Court Street & Main Street	Traffic Signal	6	28	21%	$289,200
16	Milwaukee Street & Morningside Drive	Minor Street Stop	6	23	26%	$271,000
17	Milwaukee Street & Pontiac Drive	Traffic Signal	4	27	15%	$155,400
18	Pearl Street & Ravine Street	All-Way Stop	3	11	27%	$32,400
19	Holmes Street & Randall Avenue	All-Way Stop	3	14	21%	$32,400
20	Black Bridge Road & Randall Avenue	All-Way Stop	3	23	13%	$32,400
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Averages per Intersection			**11**	**42**	**26%**	**$492,610**
Totals			**219**	**840**	**26%**	**$9,852,200**

1) Crashes ranked by economic loss of slippery pavement conditions crashes. Slippery conditions includes wet, snowy, or icy. Economic Loss calculated by using $684k per Fatal K-Level,

$684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.7
Pedestrian Crash Ranking
City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	TOTAL PEDESTRIAN CRASHES	ECONOMIC LOSS (PED CRASHES)
1	STH 26 & Black Bridge Road	Traffic Signal	0	2	0	0	0	2	$1,368,000
2	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	0	1	0	0	0	1	$684,000
3	STH 26 & Mount Zion Avenue	Traffic Signal	0	0	2	1	0	3	$557,000
4	USH 51 & Kellogg Avenue	Traffic Signal	0	0	1	0	1	2	$227,800
5	Harmony Drive & Milwaukee Street	Traffic Signal	0	0	1	0	0	1	$217,000
6	Main Street & Racine Street	Traffic Signal	0	0	1	0	0	1	$217,000
7	Milwaukee Street & Morningside Drive	Minor Street Stop	0	0	1	0	0	1	$217,000
8	USH 14 & Kennedy Road	Traffic Signal	0	0	1	0	0	1	$217,000
9	Harding Street & Memorial Drive	Minor Street Stop	0	0	1	0	0	1	$217,000
10	STH 26 & Memorial Drive	Traffic Signal	0	0	0	1	0	1	$123,000
11	STH 26 & Lodge Drive	Traffic Signal	0	0	0	0	1	1	$10,800
12	Holmes Street & Randall Avenue	All-Way Stop	0	0	0	0	0	0	$0
13	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	0	0	0	0	0	0	$0
14	Black Bridge Road & Randall Avenue	All-Way Stop	0	0	0	0	0	0	$0
15	Milwaukee Street & Pontiac Drive	Traffic Signal	0	0	0	0	0	0	$0
16	STH 26 & Holiday Drive	Traffic Signal	0	0	0	0	0	0	$0
17	USH 51 & Main Street	Traffic Signal	0	0	0	0	0	0	$0
18	Garfield Avenue & Milwaukee Street	Minor Street Stop	0	0	0	0	0	0	$0
19	Pearl Street & Ravine Street	All-Way Stop	0	0	0	0	0	0	$0
20	Court Street & Main Street	Traffic Signal	0	0	0	0	0	0	$0
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Averages per Intersection			0.00	0.15	0.40	0.10	0.10	0.75	$368,690.91
Totals			0	3	8	2	2	15	$4,055,600.00

1) Ranked by economic loss of crashes involving pedestrians. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.8

Bicycle Crash Ranking

City of Janesville (2016 thru 2020)

RANK[1]	INTERSECTION	TRAFFIC CONTROL	FATAL	A-LEVEL	B-LEVEL	C-LEVEL	PDO	TOTAL BICYCLE CRASHES	ECONOMIC LOSS (BICYCLE CRASHES)
1	Harding Street & Memorial Drive	Minor Street Stop	0	0	0	0	0	0	$0
2	STH 26 & Holiday Drive	Traffic Signal	0	0	0	0	0	0	$0
3	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	0	0	0	0	0	0	$0
4	Black Bridge Road & Randall Avenue	All-Way Stop	0	0	0	0	0	0	$0
5	Garfield Avenue & Milwaukee Street	Minor Street Stop	0	0	0	0	0	0	$0
6	Milwaukee Street & Pontiac Drive	Traffic Signal	0	0	0	0	0	0	$0
7	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	0	0	0	0	0	0	$0
8	USH 14 & Kennedy Road	Traffic Signal	0	0	0	0	0	0	$0
9	Main Street & Racine Street	Traffic Signal	0	0	0	0	0	0	$0
10	USH 51 & Main Street	Traffic Signal	0	0	0	0	0	0	$0
11	Milwaukee Street & Morningside Drive	Minor Street Stop	0	0	0	0	0	0	$0
12	Harmony Drive & Milwaukee Street	Traffic Signal	0	0	0	0	0	0	$0
13	Holmes Street & Randall Avenue	All-Way Stop	0	0	0	0	0	0	$0
14	STH 26 & Black Bridge Road	Traffic Signal	0	0	0	0	0	0	$0
15	Pearl Street & Ravine Street	All-Way Stop	0	0	0	0	0	0	$0
16	STH 26 & Mount Zion Avenue	Traffic Signal	0	0	0	0	0	0	$0
17	STH 26 & Lodge Drive	Traffic Signal	0	0	0	0	0	0	$0
18	USH 51 & Kellogg Avenue	Traffic Signal	0	0	0	0	0	0	$0
19	Court Street & Main Street	Traffic Signal	0	0	0	0	0	0	$0
20	STH 26 & Memorial Drive	Traffic Signal	0	0	0	0	0	0	$0
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Averages per Intersection			0.00	0.00	0.00	0.00	0.00	0.00	$0.00

Totals			0	0	0	0	0	0	$0.00

1) Ranked by economic loss of crashes involving bicyclists. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level.

APPENDIX A1.9

Top Crash Types

City of Janesville (2016 thru 2020)

RANK[1]	CRASH TYPES	INTERSECTION	TRAFFIC CONTROL	NUMBER OF CRASHES	ECONOMIC LOSS
1	REAR-END	STH 26 & Holiday Drive	Traffic Signal	31	$1,981,400
2	RT-ANGLE	Court Street & Main Street	Traffic Signal	17	$1,493,600
3	RT-ANGLE	Garfield Avenue & Milwaukee Street	Minor Street Stop	26	$1,478,600
4	PEDESTRIAN	STH 26 & Black Bridge Road	Traffic Signal	2	$1,368,000
5	DRIVEWAY-RELATED	STH 26 & Holiday Drive	Traffic Signal	29	$1,156,200
6	REAR-END	STH 26 & Mount Zion Avenue	Traffic Signal	27	$1,152,800
7	RT-ANGLE	Milwaukee Street & Pontiac Drive	Traffic Signal	6	$1,150,400
8	LT-ANGLE	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	13	$1,113,800
9	REAR-END	STH 26 & Memorial Drive	Traffic Signal	31	$1,102,000
10	DRIVEWAY-RELATED	Milwaukee Street & Pontiac Drive	Traffic Signal	10	$1,099,600
11	LT-ANGLE	STH 26 & Mount Zion Avenue	Traffic Signal	7	$973,200
12	LT-ANGLE	STH 26 & Lodge Drive	Traffic Signal	19	$954,200
13	RT-ANGLE	USH 51 & Kellogg Avenue	Traffic Signal	8	$929,400
14	REAR-END	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	23	$903,400
15	LT-ANGLE	USH 14 & Kennedy Road	Traffic Signal	14	$900,200
16	DRIVEWAY-RELATED	USH 51 & Kellogg Avenue	Traffic Signal	12	$878,600
17	REAR-END	STH 26 & Black Bridge Road	Traffic Signal	38	$859,200
18	REAR-END	STH 26 & Lodge Drive	Traffic Signal	19	$842,000
19	REAR-END	Court Street & Main Street	Traffic Signal	3	$817,800
20	LT-ANGLE	STH 26 & Black Bridge Road	Traffic Signal	18	$813,000
21	MISC. OTHER	Black Bridge Road & Randall Avenue	All-Way Stop	2	$807,000
22	RT-ANGLE	STH 26 & Holiday Drive	Traffic Signal	11	$792,000
23	RT-ANGLE	Milwaukee Street & Morningside Drive	Minor Street Stop	7	$730,600
24	LT-ANGLE	USH 51 & Main Street	Traffic Signal	5	$727,200
25	RT-ANGLE	Black Bridge Road & Randall Avenue	All-Way Stop	15	$723,000
26	PARKED-VEHICLE	Holmes Street & Randall Avenue	All-Way Stop	3	$705,600
27	MISC. OTHER	STH 26 & Mount Zion Avenue	Traffic Signal	6	$701,600
28	MISC. OTHER	Main Street & Racine Street	Traffic Signal	2	$694,800
29	PEDESTRIAN	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	1	$684,000
30	DRIVEWAY-RELATED	STH 26 & Lodge Drive	Traffic Signal	21	$675,600
31	RT-ANGLE	Harmony Drive & Milwaukee Street	Traffic Signal	10	$650,800
32	RT-ANGLE	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	9	$621,800
33	LT-ANGLE	STH 26 & Holiday Drive	Traffic Signal	6	$607,600
34	PEDESTRIAN	STH 26 & Mount Zion Avenue	Traffic Signal	3	$557,000
35	RT-ANGLE	STH 26 & Lodge Drive	Traffic Signal	11	$549,400
36	REAR-END	USH 51 & Kellogg Avenue	Traffic Signal	8	$517,000
37	LT-ANGLE	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	7	$506,200
38	RT-ANGLE	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	5	$484,600
39	RT-ANGLE	Harding Street & Memorial Drive	Minor Street Stop	6	$477,200
40	REAR-END	USH 14 & Kennedy Road	Traffic Signal	12	$466,200
41	REAR-END	USH 51 & Main Street	Traffic Signal	13	$458,800
42	LT-ANGLE	Main Street & Racine Street	Traffic Signal	3	$444,800
43	RT-ANGLE	USH 51 & Main Street	Traffic Signal	9	$433,800
44	MISC. OTHER	STH 26 & Black Bridge Road	Traffic Signal	6	$401,400
45	RT-ANGLE	USH 14 & Kennedy Road	Traffic Signal	4	$379,800
46	RT-ANGLE	Pearl Street & Ravine Street	All-Way Stop	4	$361,600
47	REAR-END	Milwaukee Street & Pontiac Drive	Traffic Signal	4	$361,600
48	PARKED-VEHICLE	Pearl Street & Ravine Street	All-Way Stop	3	$350,800
49	SIDE-SWIPE-SAME	STH 26 & Holiday Drive	Traffic Signal	13	$346,600
50	RT-ANGLE	Main Street & Racine Street	Traffic Signal	2	$340,000

Totals for Top 50 Crash Types				**564**	**$ 38,525,800**

1) *Ranked by economic loss per crash type. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level, $123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level. Most crashes within 300 feet of intersection, per the accident report form.*

APPENDIX A1.10

Top Crash Types by Direction

City of Janesville (2016 thru 2020)

RANK[1]	CRASH PATTERN	INTERSECTION	TRAFFIC CONTROL	NUMBER OF CRASHES	ECONOMIC LOSS
1	NB_REAR	STH 26 & Holiday Drive	Traffic Signal	13	$1,356,400
2	NB/EB_RT-ANGLE	Court Street & Main Street	Traffic Signal	12	$1,327,400
3	WB/NB_RT-ANGLE	Garfield Avenue & Milwaukee Street	Minor Street Stop	22	$1,229,200
4	WB_DRIVEWAY_FARSIDE	STH 26 & Holiday Drive	Traffic Signal	21	$1,069,800
5	SB_REAR	STH 26 & Memorial Drive	Traffic Signal	18	$849,400
6	SB_REAR	STH 26 & Lodge Drive	Traffic Signal	18	$831,200
7	SB_LT-ANGLE	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	9	$752,200
8	SB_PARKED_VEHICLE	Holmes Street & Randall Avenue	All-Way Stop	3	$705,600
9	WB_LT-ANGLE	STH 26 & Mount Zion Avenue	Traffic Signal	3	$705,600
10	SB_REAR	STH 26 & Mount Zion Avenue	Traffic Signal	16	$697,400
11	WB_LT-ANGLE	USH 51 & Main Street	Traffic Signal	2	$694,800
12	EB_DRIVEWAY_NEARSIDE	Milwaukee Street & Pontiac Drive	Traffic Signal	2	$694,800
13	NB/EB_RT-ANGLE	Milwaukee Street & Pontiac Drive	Traffic Signal	2	$694,800
14	MISC._SOUTH-LEG	Main Street & Racine Street	Traffic Signal	1	$684,000
15	MISC._WEST-LEG	Black Bridge Road & Randall Avenue	All-Way Stop	1	$684,000
16	NB_PED_FARSIDE	STH 26 & Black Bridge Road	Traffic Signal	1	$684,000
17	SB_PED_NEARSIDE	STH 26 & Black Bridge Road	Traffic Signal	1	$684,000
18	EB_REAR	Court Street & Main Street	Traffic Signal	1	$684,000
19	NB_REAR	STH 26 & Black Bridge Road	Traffic Signal	24	$595,800
20	SB_REAR	STH 26 & Holiday Drive	Traffic Signal	15	$592,600
21	WB_LT-ANGLE	USH 14 & Kennedy Road	Traffic Signal	6	$589,400
22	SB/WB_RT-ANGLE	USH 51 & Kellogg Avenue	Traffic Signal	3	$557,000
23	NB_LT-ANGLE	STH 26 & Lodge Drive	Traffic Signal	10	$538,600
24	WB_DRIVEWAY_FARSIDE	STH 26 & Lodge Drive	Traffic Signal	15	$498,600
25	SB_REAR	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	15	$498,600
26	EB/SB_RT-ANGLE	Harmony Drive & Milwaukee Street	Traffic Signal	5	$484,600
27	NB_REAR	STH 26 & Mount Zion Avenue	Traffic Signal	11	$455,400
28	SB/WB_RT-ANGLE	Harding Street & Memorial Drive	Minor Street Stop	3	$444,800
29	NB_DRIVEWAY_FARSIDE	USH 51 & Kellogg Avenue	Traffic Signal	3	$444,800
30	WB_DRIVEWAY_NEARSIDE	USH 51 & Kellogg Avenue	Traffic Signal	8	$423,000
31	SB_LT-ANGLE	STH 26 & Lodge Drive	Traffic Signal	8	$404,800
32	EB/SB_RT-ANGLE	STH 26 & Holiday Drive	Traffic Signal	4	$379,800
33	NB/EB_RT-ANGLE	STH 26 & Kennedy Road/Randolph Road	Traffic Signal	4	$361,600
34	SB_LT-ANGLE	STH 26 & Holiday Drive	Traffic Signal	2	$340,000
35	WB_DRIVEWAY_FARSIDE	Harmony Drive & Milwaukee Street	Traffic Signal	2	$340,000
36	EB_DRIVEWAY_FARSIDE	Milwaukee Street & Pontiac Drive	Traffic Signal	2	$340,000
37	NB/EB_RT-ANGLE	USH 51 & Kellogg Avenue	Traffic Signal	2	$340,000
38	NB_LT-ANGLE	USH 14 & Kennedy Road	Traffic Signal	7	$300,000
39	SB/WB_RT-ANGLE	Black Bridge Road & Randall Avenue	All-Way Stop	7	$300,000
40	NB_LT-ANGLE	STH 26 & Black Bridge Road	Traffic Signal	8	$292,600
41	WB_REAR	USH 14 & Kennedy Road	Traffic Signal	4	$267,600
42	SB_LT-ANGLE	STH 26 & Mount Zion Avenue	Traffic Signal	3	$256,800
43	EB_REAR	USH 51 & Main Street	Traffic Signal	4	$249,400
44	WB_LT-ANGLE	STH 26 & Black Bridge Road	Traffic Signal	4	$249,400
45	SB/WB_RT-ANGLE	STH 26 & Holiday Drive	Traffic Signal	2	$246,000
46	SB/WB_RT-ANGLE	USH 14 & Kennedy Road	Traffic Signal	2	$246,000
47	WB/NB_RT-ANGLE	USH 51/Parker Drive & STH 26/Centerway Street	Traffic Signal	2	$246,000
48	EB/SB_RT-ANGLE	Milwaukee Street & Morningside Drive	Minor Street Stop	2	$246,000
49	SB/WB_RT-ANGLE	Milwaukee Street & Morningside Drive	Minor Street Stop	3	$238,600
50	EB_LT-ANGLE	STH 26 & Black Bridge Road	Traffic Signal	3	$238,600

Totals for Top 50 Crash Patterns				339	$ 27,035,000

1) Ranked by economic loss per crash pattern by direction. Economic Loss calculated by using $684k per Fatal K-Level, $684k per Incapacitating Injury A-Level, $217k per Non-Incapacitating Injury B-Level,
$123k per Possible Injury C-Level, and $10.8k per Property Damage Only PD-Level. Most crashes within 300 feet of intersection, per the accident report form.

APPENDIX A2

INTERSECTION COLLISION DIAGRAMS

A2.1 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	STH 26 & Holiday Drive	**From:**	1/1/2016 — 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 — 0 Months
County:	Rock	**AADT:**	28,200 — MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.713819, -89.000824

TOTAL CRASHES: 95

AVG. CRASHES/YEAR: 19.0

CRASH RATE: 1.84 per MEV

KAB CRASH RATE: 0.16 per MEV

ECONOMIC LOSS*: $ 4,937,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	2	6	18	26	$ 1,366,400
2017	0	0	1	2	15	18	$ 625,000
2018	0	1	1	1	10	13	$ 1,132,000
2019	0	0	3	4	18	25	$ 1,337,400
2020	0	0	0	3	10	13	$ 477,000
TOTAL	0	1	7	16	71	95	$ 4,937,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STH 26

Entering ADT 12,000

SB_6 — 6
SB_5 — 15
SB↓

M_x 1 — Other Crashes Within Intersection

WB← 2,850 — Entering ADT

N

WB^d WB Driveway Related 21 — Misc. Crashes West Leg — M^W 1

Holiday Drive
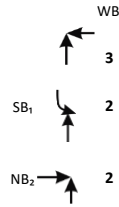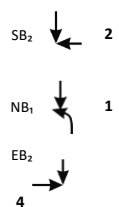
SB_2 — 2
WB_2 — 3
WB_5 3 — WB_6 1

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

NB_1 — 1
SB_1 — 2

Holiday Drive

EB_6 — 4
EB_2 — 4
WB_1 — 3
NB_2 — 2
M^E 2 — Misc. Crashes East Leg
EB^d EB Driveway Related 8

Entering ADT 1,000 — EB→

NB↑ Entering ADT 12,350
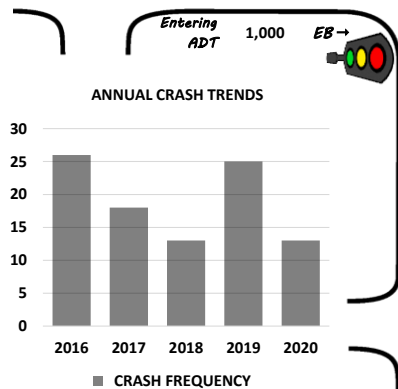
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	1	3	2	6	$ 607,600
RT-ANGLE	0	0	0	6	5	11	$ 792,000
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	1	2	5	23	31	$ 1,981,400
SIDE-SWIPE-SAME	0	0	1	0	12	13	$ 346,600
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	3	2	24	29	$ 1,156,200
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	5	5	$ 54,000
TOTAL	0	1	7	16	71	95	$ 4,937,800

NB_5 — 13
NB_6 — 2

Misc. Crashes South Leg — M^S 1

STH 26

ANNUAL CRASH TRENDS

(bar chart: 2016 ≈ 26, 2017 ≈ 18, 2018 ≈ 13, 2019 ≈ 25, 2020 ≈ 13)
■ CRASH FREQUENCY

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	82	86%	DAY	72	76%	ALCOHOL	3	3%	SPRING	15	16%	NB	1	1%	NB	2	2%	OTHER/UNK.	1	1%
WET	10	11%	DARK	23	24%	DRUGS	0	0%	SUMMER	26	27%	SB	2	2%	SB	4	4%	NONE	2	1%
SNOW	2	2%	TOT.	95		SPEED	6	6%	FALL	22	23%	EB	1	1%	EB	2	2%	VERY MINOR	12	6%
ICE	1	1%							WINTER	32	34%	WB	3	3%	WB	1	1%	MINOR	52	28%
OTH.	0	0%							TOT.	95		TBD	1	1%	TBD	0	0%	MODERATE	80	43%
TOT.	95											TOT.	8	8%	TOT.	9	9%	SEVERE	38	21%

NOTES: Injury crashes have been vetted. NOTE: 21 crashes at West service road and 8 crashes at East service road (shown as driveway crashes).

TBD = verification from crash report needed for direction

VEHICLE DAMAGE		
VERY SEVERE	0	0%
TOTAL VEHICLES	185	

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	2	0	2	1	2	0	1	0	0	2	1	0	0	0	0	0	MON	11
TUE	0	0	0	0	0	0	0	0	0	1	3	0	1	2	0	2	0	1	0	1	0	0	0	0	0	TUE	11
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	1	3	0	1	0	0	0	0	WED	12
THU	0	0	0	0	0	0	0	0	0	0	0	1	3	1	3	2	1	3	0	2	0	0	0	0	0	THU	16
FRI	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	1	0	4	2	1	1	3	1	1	0	FRI	22
SAT	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	3	2	0	1	1	0	1	2	1	0	SAT	17
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	SUN	6
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	0	0	0	0	0	0	0	0	0	3	3	8	7	9	14	10	4	10	10	6	2	4	3	2	0	TOT.	95

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Holiday Drive	**From:**	1/1/2016		
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**	
County:	Rock	**AADT:**	28,200	**5**	Years
Traffic Control:	Traffic Signal	**Area Type:**	Urban	**0**	Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB2	LWC72NN	5/26/2016	RT-ANGLE	2 PM	C						SB ran red
2	EB2	CML19QKRB3	4/5/2018	RT-ANGLE	1 PM					Y		EB ran red
3	EB2	CML184FB64	8/6/2018	RT-ANGLE	11 AM	C						EB ran red
4	EB2	CML1BC3B0B	7/9/2019	RT-ANGLE	1 PM	C						SB ran red
5	EB6	LW9GH42	7/12/2016	SIDE-SWIPE-SAME	10 AM							
6	EB6	CML179QKSR	3/11/2017	SIDE-SWIPE-SAME	3 PM							
7	EB6	CML18QXVTB	5/8/2018	SIDE-SWIPE-SAME	10 AM							
8	EB6	CML19T1TR3	12/9/2020	SIDE-SWIPE-SAME	5 PM			DARK				Passing
9	EBd	LW9FQNJ	2/4/2016	DRIVEWAY-RELATED	3 PM							SBR-WBT E service rd
10	EBd	LW8ZNLG	2/11/2016	DRIVEWAY-RELATED	2 PM							SBL-WBT E service rd
11	EBd	LWC72P9	7/23/2016	DRIVEWAY-RELATED	10 PM		WET	DARK	Y			SB-tree E service rd
12	EBd	LW9JPM9	11/21/2016	DRIVEWAY-RELATED	1 PM							SBT-EBT E service rd
13	EBd	LWC72PW	12/22/2016	DRIVEWAY-RELATED	3 PM		WET					SBR-NBT E service rd
14	EBd	CML18F2KTH	6/30/2017	DRIVEWAY-RELATED	11 AM							SBT-EBT E service rd
15	EBd	CML18JRP5P	10/27/2017	DRIVEWAY-RELATED	2 PM							SBL-WBT E service rd
16	EBd	CML0XVN040	1/25/2019	DRIVEWAY-RELATED	7 PM			DAY				SBL-WBT E service rd
17	Mw	CML184FB2K	6/20/2017	MISC. OTHER	7 PM							SBR improper turn
18	WB1	LW93CN2	6/10/2016	LT-ANGLE	9 PM			DARK				EB ran red
19	WB1	CML18368XF	10/21/2017	LT-ANGLE	7 PM	C		DARK				WB FTY
20	WB1	CML19RSSLR	12/30/2019	LT-ANGLE	6 PM		WET	DARK				
21	WB2	LW9JPLS	9/28/2016	RT-ANGLE	2 PM	C						NB ran red
22	WB2	CML19KMM3W	7/10/2019	RT-ANGLE	6 PM							
23	WB2	CML1BQ6N0C	10/26/2020	RT-ANGLE	12 PM							NBT-WBR
24	WB3	LW95L84	1/31/2016	REAR-END	1 PM		WET					
25	WB3	LW9GH1H	4/2/2016	REAR-END	6 PM							Sun glare
26	WB3	CML179QKS3	2/3/2017	REAR-END	2 PM							
27	WB6	LW90DXQ	11/17/2016	SIDE-SWIPE-SAME	7 PM			DARK				
28	WBd	LW8ZNLP	2/22/2016	DRIVEWAY-RELATED	7 PM			DARK				NBT-WBT W service rd
29	WBd	LW8ZNLT	3/4/2016	DRIVEWAY-RELATED	2 PM							NBT-WBT W service rd
30	WBd	LW9KFT7	5/13/2016	DRIVEWAY-RELATED	5 PM	B	WET		Y			NBT-WBT W service rd
31	WBd	LW9GH3D	6/17/2016	DRIVEWAY-RELATED	5 PM							NBT-WBT W service rd
32	WBd	LW90DZD	12/20/2016	DRIVEWAY-RELATED	12 PM		WET					SBT-EBT W service rd
33	WBd	LW9VBG8	12/28/2016	DRIVEWAY-RELATED	6 PM			DARK				NBT-WBT W service rd
34	WBd	CML18QXVPC	6/28/2017	DRIVEWAY-RELATED	2 PM							SBT-EBT W service rd
35	WBd	CML18L0Q8S	10/6/2017	DRIVEWAY-RELATED	11 AM	C						SBT-EBT W service rd
36	WBd	CML179QKW9	11/23/2017	DRIVEWAY-RELATED	5 PM			DARK				NBT-WBT W service rd
37	WBd	CML19N3P44	4/29/2018	DRIVEWAY-RELATED	3 PM							NBT-WBT W service rd
38	WBd	CML189CGLT	6/23/2018	DRIVEWAY-RELATED	1 PM	B						NBT-EBT W service rd
39	WBd	CML1B000K0	8/19/2018	DRIVEWAY-RELATED	4 PM							NBT-WBT W service rd
40	WBd	CML184FB7D	10/17/2018	DRIVEWAY-RELATED	1 PM							NBT-WBT W service rd
41	WBd	CML184FB7K	10/25/2018	DRIVEWAY-RELATED	12 PM							NBT-WBT W service rd
42	WBd	CML18JRP9V	1/6/2019	DRIVEWAY-RELATED	6 PM	C		DARK				WB at W service rd
43	WBd	CML19KMM23	2/18/2019	DRIVEWAY-RELATED	3 PM		WET					NBT-EBT W service rd
44	WBd	CML19KMM3M	6/13/2019	DRIVEWAY-RELATED	4 PM							SBT-EBT W service rd
45	WBd	CML19KMM45	7/31/2019	DRIVEWAY-RELATED	2 PM	B						WBL at W service rd
46	WBd	CML1BFKD71	8/29/2019	DRIVEWAY-RELATED	12 PM							NBT-WBT W service rd
47	WBd	CML1BGSFCZ	2/14/2020	DRIVEWAY-RELATED	5 PM							SBT-EBT W service rd
48	WBd	CML1B9V90F	7/15/2020	DRIVEWAY-RELATED	2 PM		WET					NBT-WBT W service rd
49	Me	CML18F2KWX	12/9/2017	MISC. OTHER	2 PM							EBL-WBT
50	Me	CML1BGSFC4	11/9/2019	MISC. OTHER	3 PM							WBT-NBL
51	NB1	CML1BC3B2N	11/16/2017	LT-ANGLE	3 PM	C				Y		NBL on Yellow
52	NB2	CML19N3PS3	9/4/2018	RT-ANGLE	5 PM							NB ran red
53	NB2	CML19KMM6G	6/4/2020	RT-ANGLE	5 PM							EB ran red
54	NB3	LW8ZNNR	6/30/2016	REAR-END	5 PM	C						Stopped in traffic
55	NB3	LW9PW2Z	10/9/2016	REAR-END	5 PM	C						NBR-NBT
56	NB3	CML17GNQ89	7/7/2017	REAR-END	6 PM							
57	NB3	CML18L0Q9L	12/9/2017	REAR-END	11 AM							Stopped in traffic
58	NB3	CML19KMLX6	6/12/2018	REAR-END	3 PM							
59	NB3	CML19KMM17	12/14/2018	REAR-END	3 PM	A						Stopped in traffic
60	NB3	CML184FB8L	1/10/2019	REAR-END	12 PM	C						
61	NB3	CML18QXVWS	3/2/2019	REAR-END	11 AM							
62	NB3	CML19KMM4R	9/13/2019	REAR-END	12 PM	B						Slowing in traffic
63	NB3	CML1BC3B44	3/3/2020	REAR-END	9 AM		WET			Y		
64	NB3	CML19KMM6S	8/20/2020	REAR-END	2 PM							
65	NB3	CML19QKRF7	8/29/2020	REAR-END	12 PM							
66	NB3	CML1BZLVND	11/16/2020	REAR-END	6 PM			DAY				
67	NB6	CML19RSSFT	4/15/2018	SIDE-SWIPE-SAME	6 PM		SNOW					
68	NB6	CML18JRPCQ	8/23/2019	SIDE-SWIPE-SAME	11 PM	B		DARK	Y			Motorcycle
69	Ms	CML19KMM4Q	9/10/2019	MISC. OTHER	10 AM							SB SSS S Leg
70	SB1	CML192T5K9	4/19/2017	LT-ANGLE	2 PM	B						SBL on yellow-red
71	SB1	CML19RSSN8	7/16/2020	LT-ANGLE	11 AM	C						SBL on yellow-red
72	SB2	LW9JPK9	4/4/2016	RT-ANGLE	1 PM	C						SB ran red
73	SB2	CML1BFKDBJ	9/3/2020	RT-ANGLE	7 PM	C		DARK				WB ran red
74	SB3	LW9BRRV	1/2/2016	REAR-END	11 PM	B		DARK				Stopped in traffic
75	SB3	LW95L7W	1/2/2016	REAR-END	4 PM							
76	SB3	LW92MDT	3/4/2016	REAR-END	2 PM							
77	SB3	LW9VBF2	9/5/2016	REAR-END	11 AM							Foot slip off brake
78	SB3	LW9TL6P	10/12/2016	REAR-END	8 PM	C		DARK				Moved on green
79	SB3	CML08HJN03	12/12/2017	REAR-END	3 PM							
80	SB3	CML185NC71	1/5/2018	REAR-END	8 PM			DARK				
81	SB3	CML19N3P5P	1/12/2019	REAR-END	4 PM		SNOW			Y		Slid on ice
82	SB3	CML19T1TML	2/22/2019	REAR-END	9 PM			DARK				
83	SB3	CML184FBBX	4/29/2019	REAR-END	9 AM		WET					Moved on green
84	SB3	CML19T1TP0	9/20/2019	REAR-END	10 PM			DARK				Stop for NBL
85	SB3	CML11GFB29	12/6/2019	REAR-END	6 PM			DARK	Y			
86	SB3	CML19KMM5R	12/7/2019	REAR-END	1 PM							
87	SB3	CML18JRPFQ	2/28/2020	REAR-END	9 PM			DARK				
88	SB3	CML1BXCTJV	12/15/2020	REAR-END	1 PM	C						Stopped in traffic
89	SB6	CML18S5WRQ	2/17/2017	SIDE-SWIPE-SAME	11 AM							
90	SB6	CML192T5JZ	2/20/2017	SIDE-SWIPE-SAME	9 AM							
91	SB6	CML08HJN06	12/22/2019	SIDE-SWIPE-SAME	5 PM			DARK				
92	SB6	CML1B2G27N	7/27/2019	SIDE-SWIPE-SAME	10 PM			DARK				
93	SB6	CML18JRPCM	8/14/2019	SIDE-SWIPE-SAME	2 PM							
94	SB6	CML11GFB26	11/16/2019	SIDE-SWIPE-SAME	9 PM			DARK				
95	Ms	CML18368VR	1/11/2017	MISC. OTHER	6 PM		ICE	DARK		Y		EB signal
96												
97												
98												
99												
100												

Ref # 101–200: no crash data recorded.

A2.2 Intersection Collision Diagram

TADi — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	STH 26 & Black Bridge Road	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	30,250
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.704386, -89.006708

Duration

MAP

TOTAL CRASHES: 93

AVG. CRASHES/YEAR: 18.6

CRASH RATE: 1.68 per MEV

KAB CRASH RATE: 0.09 per MEV

ECONOMIC LOSS*: $ 3,867,000
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K
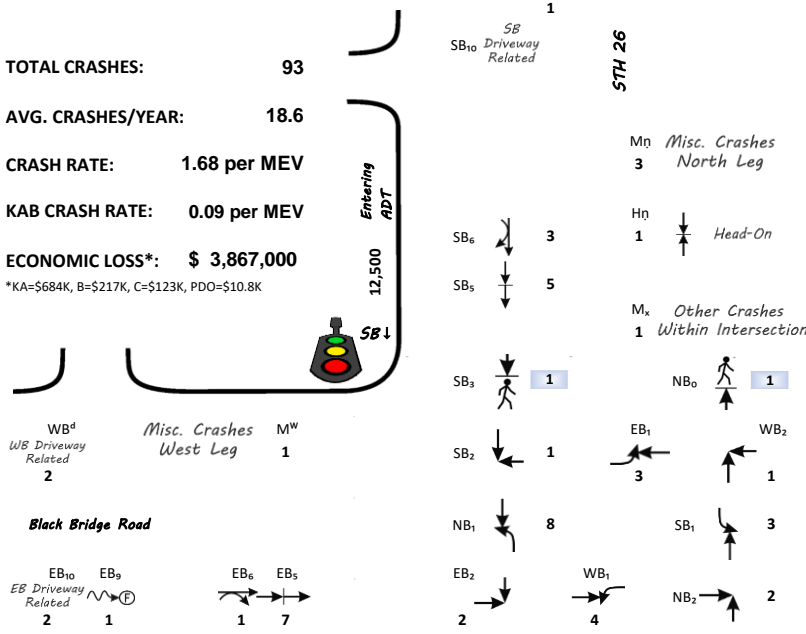
YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	5	15	20	$ 777,000
2017	0	0	1	0	15	16	$ 379,000
2018	0	0	1	1	22	24	$ 577,600
2019	0	1	0	1	18	20	$ 1,001,400
2020	0	1	1	1	10	13	$ 1,132,000
TOTAL	0	2	3	8	80	93	$ 3,867,000

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STH 26

SB Driveway Related — 1 — SB_{10}

M_n 3 — Misc. Crashes North Leg

H_n 1 — Head-On

M_x 1 — Other Crashes Within Intersection

Entering ADT 12,500

SB_6 3

SB_5 5

SB ↓

SB_3 1 NB_0 1

SB_2 1 EB_1 3 WB_2 1

NB_1 8 SB_1 3

EB_2 2 WB_1 4 NB_2 2

WB ← 2,500 Entering ADT

WB_5 2 WB_6 2 WB_9 2

1 Head-On H_E

Black Bridge Road

EB^d EB Driveway Related 2

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

WB^d WB Driveway Related 2

Misc. Crashes West Leg — M_W 1

Black Bridge Road

EB_{10} 2 / EB_9 1 — EB Driveway Related

EB_6 1 / EB_5 7

Entering ADT 3,950   EB →

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	20
2017	16
2018	24
2019	20
2020	13

■ CRASH FREQUENCY

NB ↑   Entering ADT 11,300

NB_5 24

NB_6 1

Misc. Crashes South Leg — M_S 1

NB_9 4

STH 26

CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	3	0	15	18	$ 813,000
RT-ANGLE	0	0	0	1	5	6	$ 177,000
PEDESTRIAN	0	2	0	0	0	2	$ 1,368,000
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	4	34	38	$ 859,200
SIDE-SWIPE-SAME	0	0	0	0	7	7	$ 75,600
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	7	7	$ 75,600
DRIVEWAY-RELATED	0	0	0	0	7	7	$ 75,600
HEAD-ON	0	0	0	0	2	2	$ 21,600
MISC. OTHER	0	0	0	3	3	6	$ 401,400
TOTAL	0	2	3	8	80	93	$ 3,867,000

ROAD CONDITIONS
DRY	73	78%
WET	15	16%
SNOW	5	5%
ICE	0	0%
OTH.	0	0%
TOT.	93	

LIGHT CONDITIONS
DAY	72	77%
DARK	21	23%
TOT.	93	

DRIVER BEHAVIOR
ALCOHOL	2	2%
DRUGS	0	0%
SPEED	6	6%

SEASON
SPRING	26	28%
SUMMER	18	19%
FALL	27	29%
WINTER	22	24%
TOT.	93	

FAILURE TO YIELD
NB	1	1%
SB	0	0%
EB	2	2%
WB	1	1%
TBD	18	19%
TOT.	22	24%

DISRGRD. CONTROL
NB	1	1%
SB	0	0%
EB	1	1%
WB	0	0%
TBD	3	3%
TOT.	5	5%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	4	2%
NONE	9	5%
VERY MINOR	5	3%
MINOR	54	31%
MODERATE	75	43%
SEVERE	26	15%
VERY SEVERE	0	0%
TOTAL VEHICLES	173	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	1	2	1	0	1	4	0	2	0	5	1	0	0	0	0	0	0	MON	17
TUE	0	0	0	0	0	0	0	0	2	1	0	0	3	1	0	0	1	3	1	0	1	1	0	0	0	TUE	14
WED	0	1	0	0	0	0	0	0	1	0	0	3	1	2	2	1	4	1	2	0	1	0	1	0	0	WED	20
THU	0	0	0	0	0	0	0	0	0	1	1	0	1	0	5	0	4	0	0	0	1	0	0	1	0	THU	14
FRI	0	0	0	0	0	0	1	1	0	1	1	2	0	2	0	0	0	2	1	0	2	2	0	0	0	FRI	15
SAT	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0	1	0	0	0	0	0	2	2	0	0	SAT	10
SUN	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	SUN	3
TOT.	0	1	0	0	0	0	1	1	4	6	3	7	9	9	7	3	10	12	5	0	6	3	3	3	0	**TOT.**	93

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Black Bridge Road
Municipality:	City of Janesville
County:	Rock
Traffic Control:	Traffic Signal

From:	1/1/2016	
To:	12/31/2020	**Duration**
AADT:	30,250	**5 Years**
Area Type:	Urban	**0 Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	CML101713H	2/4/2017	LT-ANGLE	11 PM	B		DARK				EB FTY
2	EB₁	CML179QKW6	11/21/2017	LT-ANGLE	5 PM			DARK				
3	EB₁	CML19KMM46	8/1/2019	LT-ANGLE	9 AM							
4	EB₂	CML18L0QFB	1/21/2019	RT-ANGLE	10 AM	C	WET					EB ran red
5	EB₂	CML19LVN4G	3/5/2019	RT-ANGLE	8 PM			DARK				SBT-EBR
6	EB₅	CML18368XH	10/25/2017	REAR-END	11 AM							Foot slip off brake
7	EB₅	CML18368XG	10/25/2017	REAR-END	8 AM			DAY				EBL backing on red
8	EB₅	CML185NC66	10/27/2017	REAR-END	1 PM							EB backing on red
9	EB₅	CML19426TD	5/17/2018	REAR-END	8 PM			DAY				
10	EB₅	CML184FB7J	10/24/2018	REAR-END	6 PM	C				Y		Backing
11	EB₅	CML18JRP9T	12/31/2018	REAR-END	1 PM		WET					
12	EB₅	CML18F2LF2	3/19/2019	REAR-END	8 AM							
13	EB₅	LWC72N7	3/23/2016	SIDE-SWIPE-SAME	8 PM		WET	DARK	Y			
14	EB₉	CML18FKD87	12/18/2019	FIXED-OBJECT	5 PM			DARK				
15	EB₁₀	LW9PW2W	10/4/2016	DRIVEWAY-RELATED	4 PM							WBL-EBT
16	EB₁₀	6RL0SZCGMZ	8/2/2019	DRIVEWAY-RELATED	1 PM							NBL-EBT
17	EBᵈ	CML19V8VP1	8/21/2018	DRIVEWAY-RELATED	8 AM		WET					SBL-EBT
18	EBᵈ	CML1B9V8ZZ	6/1/2020	DRIVEWAY-RELATED	3 PM							SBL-EBT
19	Mʷ	LW9FQQ3	10/26/2016	MISC. OTHER	1 AM	C	WET	DARK				WB SSS W Leg
20	WB₁	CML19RSSG9	5/18/2018	LT-ANGLE	10 AM	B						WB FTY
21	WB₁	CML184FB53	6/11/2018	LT-ANGLE	5 PM							
22	WB₁	CML184FB7T	11/15/2018	LT-ANGLE	4 PM							
23	WB₁	CML1BZLVNB	11/16/2020	LT-ANGLE	1 PM							
24	WB₂	CML19N3PHV	2/19/2020	RT-ANGLE	4 PM		SNOW					
25	WB₅	CML18JRPB5	2/18/2019	REAR-END	8 AM		SNOW				Y	
26	WB₅	CML133SSFP	6/1/2020	REAR-END	5 PM							
27	WB₆	LW9GH1R	4/18/2016	SIDE-SWIPE-SAME	5 PM							
28	WB₆	CML10FKD82	6/12/2018	SIDE-SWIPE-SAME	5 PM							
29	WB₉	CML179QKRD	1/5/2017	FIXED-OBJECT	10 AM							
30	WB₉	CML19426VM	10/5/2018	FIXED-OBJECT	9 AM		WET					
31	WBᵈ	LW9VBFP	11/16/2016	DRIVEWAY-RELATED	4 PM							SBL-EBT
32	WBᵈ	CML1B9V923	12/8/2020	DRIVEWAY-RELATED	12 PM							WBT-SBL
33	Hᵈ	CML19QKRDQ	3/18/2020	HEAD-ON	2 PM		WET					
34	NB₀	CML18F2LFJ	5/21/2019	PEDESTRIAN	12 PM	A						EBL-Ped in cross
35	NB₁	CML18F2KXW	1/25/2018	LT-ANGLE	4 PM		WET					
36	NB₁	CML18F2L01	4/18/2018	LT-ANGLE	4 PM		WET					
37	NB₁	CML18F2LC1	10/4/2018	LT-ANGLE	2 PM							
38	NB₁	CML184FB7V	11/17/2018	LT-ANGLE	9 AM		WET			Y		
39	NB₁	CML19KMM2J	3/25/2019	LT-ANGLE	3 PM							
40	NB₁	CML18F2LFH	5/17/2019	LT-ANGLE	11 AM							
41	NB₁	CML19T1TQ6	5/7/2020	LT-ANGLE	4 PM	B						NB FYA
42	NB₁	CML1B9V90D	7/8/2020	LT-ANGLE	10 PM			DARK				
43	NB₂	CML179QKS9	2/16/2017	RT-ANGLE	2 PM							
44	NB₂	CML1B2G28P	12/5/2019	RT-ANGLE	11 PM			DARK				NB ran red
45	NB₅	LW8ZNLK	2/13/2016	REAR-END	5 PM	C		DAY				Moved on green arrow
46	NB₅	LW92MF1	3/8/2016	REAR-END	6 PM			DARK				
47	NB₅	LW8ZNM3	3/17/2016	REAR-END	2 PM							
48	NB₅	LW95L8T	6/21/2016	REAR-END	1 PM							
49	NB₅	LW9GH55	9/12/2016	REAR-END	1 PM	C						Stopped in traffic
50	NB₅	LW9MNL5	10/13/2016	REAR-END	4 PM	C						Stopped in traffic
51	NB₅	LW9JPM1	10/17/2016	REAR-END	5 PM							
52	NB₅	CML17BZLWL	3/11/2017	REAR-END	12 PM							
53	NB₅	CML17MLVNX	5/10/2017	REAR-END	11 AM							
54	NB₅	CML18L0Q85	7/28/2017	REAR-END	6 AM							
55	NB₅	CML18L0Q8H	8/28/2017	REAR-END	12 PM							
56	NB₅	CML18JRP5S	11/6/2017	REAR-END	1 PM							
57	NB₅	CML184FB4H	4/19/2018	REAR-END	2 PM							
58	NB₅	CML19KMLXP	7/6/2018	REAR-END	7 AM							
59	NB₅	CML184FB66	8/9/2018	REAR-END	12 PM							
60	NB₅	CML19KMLZS	9/1/2018	REAR-END	12 PM		WET					
61	NB₅	CML18QXVVF	9/19/2018	REAR-END	1 PM							
62	NB₅	CML19QKRC3	3/6/2019	REAR-END	11 AM							
63	NB₅	CML19KMM28	3/8/2019	REAR-END	9 PM			DARK				
64	NB₅	CML19N3PDZ	4/13/2019	REAR-END	11 PM			DARK				
65	NB₅	CML19RSSL5	10/11/2019	REAR-END	6 PM			DARK				
66	NB₅	CML1BC3B4P	5/10/2020	REAR-END	12 PM		WET			Y		
67	NB₅	CML19N3PJB	6/12/2020	REAR-END	5 PM							
68	NB₅	CML1BMQKSQ	11/13/2020	REAR-END	11 AM							
69	NB₆	CML1B9V8WR	9/25/2019	SIDE-SWIPE-SAME	1 PM							
70	NB₉	LW8ZNMZ	5/22/2016	FIXED-OBJECT	8 PM			DAY				
71	NB₉	LW8ZNN0	5/23/2016	FIXED-OBJECT	9 AM							
72	NB₉	CML19T1TKR	5/23/2018	FIXED-OBJECT	3 PM							
73	NB₉	CML1BC3B2H	11/11/2019	FIXED-OBJECT	9 AM		SNOW				Y	
74	M₅	CML18S5WT8	7/21/2017	MISC. OTHER	5 PM		WET					NBT-WBL thru traffic
75	SB₁	LW8ZNLM	2/17/2016	LT-ANGLE	4 PM							
76	SB₁	LW92MDN	2/26/2016	LT-ANGLE	9 PM			DARK				
77	SB₁	CML18L0QDT	12/26/2018	LT-ANGLE	6 PM			DARK				
78	SB₂	CML18L0Q6V	3/7/2017	RT-ANGLE	9 AM							
79	SB₀	CML19T1TRB	12/22/2020	PEDESTRIAN	9 PM	A		DARK				Ped in crosswalk
80	SB₅	CML19426QW	12/5/2017	REAR-END	5 PM			DARK				
81	SB₅	CML08HJN05	12/9/2017	REAR-END	10 PM			DARK				
82	SB₅	CML086WD73	1/6/2018	REAR-END	11 AM							
83	SB₅	CML1884FFN	7/14/2018	REAR-END	10 PM			DARK				
84	SB₅	CML18L0QFK	2/17/2019	REAR-END	4 PM		SNOW				Y	
85	SB₆	LW95LB0	10/14/2016	SIDE-SWIPE-SAME	8 PM			DARK				
86	SB₆	LW9GH5V	10/26/2016	SIDE-SWIPE-SAME	12 PM		WET					
87	SB₆	LW9GH6D	11/29/2016	SIDE-SWIPE-SAME	12 PM							
88	SB₁₀	CML19KMM4D	8/12/2019	DRIVEWAY-RELATED	6 PM							SBT-EBR
89	M₉	LW9F0F2	6/30/2016	MISC. OTHER	2 PM	C						NB rear N Leg
90	M₉	CML185NC7J	2/5/2018	MISC. OTHER	5 PM		SNOW	DARK			Y	Passing, spun out
91	M₉	CML1BC3B18	9/6/2019	MISC. OTHER	8 PM			DARK				WBR-Improper turn
92	H₉	CML19KMM10	12/1/2018	HEAD-ON	11 AM		WET					
93	M*	CML19RSSML	4/22/2019	MISC. OTHER	2 PM	C						WBL-signal
94												
95												
96												
97												
98												
99												
100												

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
101												
102												
103												
104												
105												
106												
107												
108												
109												
110												
111												
112												
113												
114												
115												
116												
117												
118												
119												
120												
121–200												

41

A2.3 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	STH 26 & Mount Zion Avenue	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	25,050 MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.700868, -89.008946

TOTAL CRASHES: 52

AVG. CRASHES/YEAR: 10.4

CRASH RATE: 1.14 per MEV

KAB CRASH RATE: 0.15 per MEV

ECONOMIC LOSS*: $ 3,594,000
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K
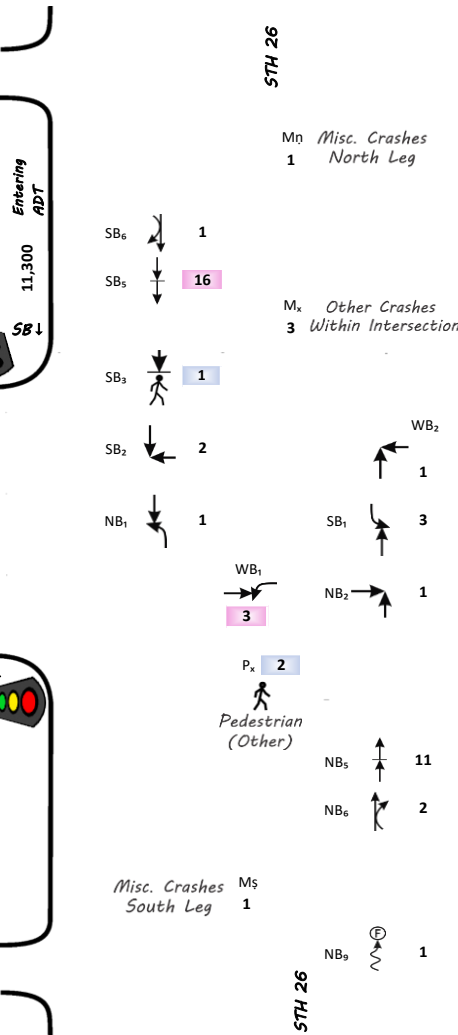
YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	1	5	6	12	$ 896,800
2017	0	1	2	0	7	10	$ 1,193,600
2018	0	0	2	1	8	11	$ 643,400
2019	0	0	0	1	7	8	$ 198,600
2020	0	0	1	3	7	11	$ 661,600
TOTAL	0	1	6	10	35	52	$ 3,594,000

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STH 26

Mn Misc. Crashes North Leg   1

Mx Other Crashes Within Intersection   3

Entering ADT 11,300

SB6   1
SB5   16
SB↓
SB3   1
SB2   2
NB1   1

WB← 3,200   Entering ADT

WB2   1
WB6   1

N

SB1   3

Mount Zion Avenue

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

ME Misc. Crashes East Leg   1

WB1   3
NB2   1

Px   2
Pedestrian (Other)

NB↑ Entering ADT 10,050

NB5   11
NB6   2

Mount Zion Avenue

Entering ADT 500   EB→

Misc. Crashes South Leg   Ms   1

NB9   1

STH 26

ANNUAL CRASH TRENDS

Year	Crashes
2016	12
2017	10
2018	11
2019	8
2020	11

■ CRASH FREQUENCY
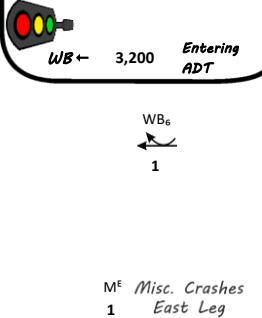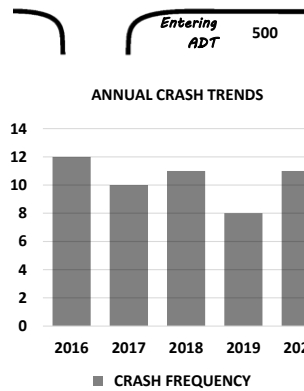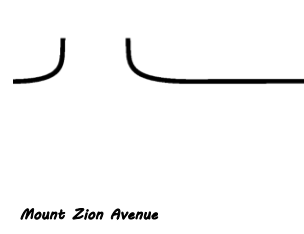
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	1	0	2	4	7	$ 973,200
RT-ANGLE	0	0	0	1	3	4	$ 155,400
PEDESTRIAN	0	0	2	1	0	3	$ 557,000
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	2	4	21	27	$ 1,152,800
SIDE-SWIPE-SAME	0	0	0	0	4	4	$ 43,200
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	1	1	$ 10,800
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	2	2	2	6	$ 701,600
TOTAL	0	1	6	10	35	52	$ 3,594,000

ROAD CONDITIONS
DRY	36	69%
WET	14	27%
SNOW	2	4%
ICE	0	0%
OTH.	0	0%
TOT.	52	

LIGHT CONDITIONS
DAY	41	79%
DARK	11	21%
TOT.	52	

DRIVER BEHAVIOR
ALCOHOL	1	2%
DRUGS	1	2%
SPEED	4	8%

SEASON
SPRING	13	25%
SUMMER	10	19%
FALL	17	33%
WINTER	12	23%
TOT.	52	

FAILURE TO YIELD
NB	2	4%
SB	2	4%
EB	0	0%
WB	1	2%
TBD	4	8%
TOT.	9	17%

DISRGRD. CONTROL
NB	0	0%
SB	1	2%
EB	0	0%
WB	0	0%
TBD	2	4%
TOT.	3	6%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	3	3%
NONE	4	4%
VERY MINOR	5	5%
MINOR	34	34%
MODERATE	37	37%
SEVERE	17	17%
VERY SEVERE	0	0%
TOTAL VEHICLES	100	

NOTES:
Injury crashes have been vetted. SB ped was bike in cross. Other Ped was SB bike mid-int.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	MON	6
TUE	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	2	2	1	0	0	0	0	1	0	0	TUE	10
WED	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	1	0	0	0	0	0	0	WED	6
THU	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	1	0	0	0	1	1	1	0	THU	8
FRI	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	2	0	0	2	0	0	0	2	1	0	FRI	10
SAT	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	2	0	0	1	1	0	0	SAT	8
SUN	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	SUN	4
TOT.	1	0	0	0	0	0	1	2	2	0	0	2	5	5	3	5	7	5	5	0	0	2	5	2	0	**TOT.**	52

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Mount Zion Avenue	**From:**	1/1/2016		
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**	
County:	Rock	**AADT:**	25,050	5	Years
Traffic Control:	Traffic Signal	**Area Type:**	Urban	0	Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	WB₁	LW8ZNM0	3/15/2016	LT-ANGLE	8 AM							
2	WB₁	CML18QXVPJ	7/3/2017	LT-ANGLE	5 PM	A						Stop for peds
3	WB₁	CML1C22XW9	7/7/2017	LT-ANGLE	6 PM							
4	WB₂	CML17MLVN6	1/31/2017	RT-ANGLE	2 PM		WET					
5	WB₆	CML184FB4G	4/19/2018	SIDE-SWIPE-SAME	1 PM							
6	Mᵉ	CML19LVN68	9/21/2019	MISC. OTHER	10 PM			DARK				SBL improper turn
7	NB₁	CML18QXVNB	3/30/2017	LT-ANGLE	12 PM		WET					NBL FYA
8	NB₂	CML1BRFP3D	8/7/2020	RT-ANGLE	7 AM	C						Signal unknown
9	NB₅	LW8ZNKT	1/20/2016	REAR-END	12 PM		WET					
10	NB₅	LW90DTF	4/20/2016	REAR-END	6 PM	C					Y	Stopped in traffic
11	NB₅	LW9MNHN	4/22/2016	REAR-END	3 PM	C						Construction
12	NB₅	CML18F2KW3	9/29/2017	REAR-END	10 PM			DARK				
13	NB₅	CML0XVN01K	1/3/2018	REAR-END	4 PM		WET	DAY				
14	NB₅	CML19RSSFQ	4/13/2018	REAR-END	6 PM		WET					
15	NB₅	CML189CGMV	9/18/2018	REAR-END	4 PM							
16	NB₅	CML19KMM3T	6/24/2019	REAR-END	4 PM		WET					
17	NB₅	CML1BC3B2C	10/31/2019	REAR-END	7 AM	C	WET	DAY			Y	Snowy road
18	NB₅	CML133SSFK	5/9/2020	REAR-END	6 PM							
19	NB₅	CML1BC3B5Q	9/18/2020	REAR-END	12 PM							
20	NB₆	LW9MNH2	3/13/2016	SIDE-SWIPE-SAME	11 AM		WET					
21	NB₆	CML1B3P3BN	3/13/2019	SIDE-SWIPE-SAME	6 AM		WET	DAY	Y			
22	NB₉	CML179QKW5	11/20/2017	FIXED-OBJECT	4 PM							
23	M$	CML19KMM01	9/18/2018	MISC. OTHER	3 PM	C						SB rear S Leg
24	SB₁	LW90DSJ	2/18/2016	LT-ANGLE	5 PM	C		DAY				OUT of study area
25	SB₁	CML19QKRDH	1/14/2020	LT-ANGLE	8 AM		WET					
26	SB₁	CML19N3PJX	10/3/2020	LT-ANGLE	9 PM	C		DARK				On yellow-red
27	SB₂	CML189CGLS	6/22/2018	RT-ANGLE	10 PM			DARK				SB ran red
28	SB₂	CML19KMM4F	8/13/2019	RT-ANGLE	5 PM							SBR-WBT
29	SB₄	CML19LVN15	6/11/2018	PEDESTRIAN	3 PM	B						Bike in cross hit SB
30	SB₅	LW9GH0F	2/9/2016	REAR-END	3 PM		SNOW					
31	SB₅	LW9GH51	9/1/2016	REAR-END	10 PM			DARK				
32	SB₅	LW9MNLZ	10/27/2016	REAR-END	11 AM	C						OUT of study area
33	SB₅	LW92MGM	10/28/2016	REAR-END	2 PM							
34	SB₅	CML17MLVNF	3/18/2017	REAR-END	1 PM							
35	SB₅	CML1884FBX	4/2/2017	REAR-END	1 PM							
36	SB₅	CML17MLVP5	6/26/2017	REAR-END	5 PM	B						Slowing in traffic
37	SB₅	CML1C22XXG	5/7/2018	REAR-END	5 PM							
38	SB₅	CML19KMM0B	10/6/2018	REAR-END	2 PM		WET			Y		
39	SB₅	CML18L0QDW	12/29/2018	REAR-END	12 PM							
40	SB₅	CML19KMM1K	1/2/2019	REAR-END	4 PM		WET	DARK				
41	SB₅	CML19N3PGQ	11/8/2019	REAR-END	3 PM							
42	SB₅	CML19N3PJ3	3/15/2020	REAR-END	4 PM	B						Moving on green
43	SB₅	CML19T1TQ8	6/9/2020	REAR-END	4 PM		WET					
44	SB₅	CML1BSNQ85	11/13/2020	REAR-END	11 PM			DARK				
45	SB₅	CML1BZLVNC	11/17/2020	REAR-END	1 PM							
46	SB₆	CML18JRPCR	8/31/2019	SIDE-SWIPE-SAME	6 PM			DAY				
47	Mn	CML18QXVSC	2/8/2018	MISC. OTHER	11 PM	B	SNOW	DARK	Y		Y	EBL-improper turn
48	Pₓ	LW9MNLT	10/13/2016	PEDESTRIAN	9 PM	C		DARK				NBL-SB bike
49	Pₓ	CML184FB0R	2/11/2017	PEDESTRIAN	12 PM	B						Ped on sidewalk-Drwy
50	Mₓ	LW9H74F	1/31/2016	MISC. OTHER	12 AM	B	WET	DARK				EBL-improper turn
51	Mₓ	CML11R2KTD	2/18/2020	MISC. OTHER	10 PM			DARK				SB SSS Mid Int
52	Mₓ	CML1B9V912	9/16/2020	MISC. OTHER	1 PM	C						SBL rear mid-int

A2.4 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	STH 26 & Lodge Drive	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	26,100
Traffic Control:	Traffic Signal	**Area Type:**	Urban

Duration

MAP

GPS Coordinates: 42.716255, -88.999289

TOTAL CRASHES: 81

AVG. CRASHES/YEAR: 16.2

CRASH RATE: 1.70 per MEV

KAB CRASH RATE: 0.10 per MEV

ECONOMIC LOSS*: $ 3,252,200
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	1	4	16	21	$ 881,800
2017	0	0	3	15	18	$ 531,000
2018	0	0	0	1	15	16	$ 285,000
2019	0	0	2	1	10	13	$ 665,000
2020	0	0	2	3	8	13	$ 889,400
TOTAL	0	0	5	12	64	81	$ 3,252,200

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STH 26

Mn 3   *Misc. Crashes North Leg*

Mx 1   *Other Crashes Within Intersection*

Entering ADT 12,000

SB₆ 3
SB₅ 18
SB↓

WB← 1,000   Entering ADT

N

WBᵈ *WB Driveway Related* 15

Lodge Drive

SB₂ 2
EB₁ 1
WB₂ 4
NB₁ 10
SB₁ 8
EB₂ 2
NB₂ 3
NB₃ 1

Lodge Drive

EBᵈ *EB Driveway Related* 6

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

Entering ADT 750   EB→

NB↑
Entering ADT 12,350

NB₅ 1
NB₆ 1

ANNUAL CRASH TRENDS
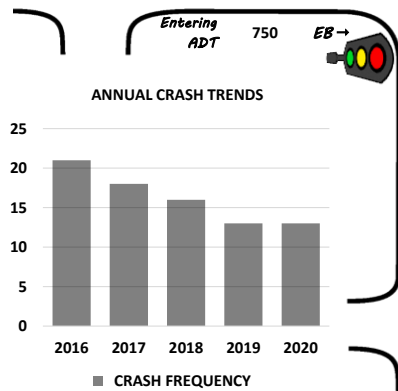
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	2	3	14	19	$ 954,200
RT-ANGLE	0	0	1	2	8	11	$ 549,400
PEDESTRIAN	0	0	0	0	1	1	$ 10,800
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	2	2	15	19	$ 842,000
SIDE-SWIPE-SAME	0	0	0	0	4	4	$ 43,200
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	4	17	21	$ 675,600
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	1	5	6	$ 177,000
TOTAL	0	0	5	12	64	81	$ 3,252,200

Misc. Crashes South Leg   Mₛ 2

STH 26

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	55	68%	DAY	60	74%	ALCOHOL	1	1%	SPRING	15	19%	NB	21	26%	NB	2	2%	OTHER/UNK.	1	1%
WET	16	20%	DARK	21	26%	DRUGS	0	0%	SUMMER	17	21%	SB	15	19%	SB	5	6%	NONE	1	1%
SNOW	10	12%	TOT.	81		SPEED	8	10%	FALL	20	25%	EB	0	0%	EB	2	2%	VERY MINOR	5	3%
ICE	0	0%							WINTER	29	36%	WB	0	0%	WB	0	0%	MINOR	51	32%
OTH.	0	0%							TOT.	81		TBD	3	4%	TBD	0	0%	MODERATE	58	36%
TOT.	81											TOT.	39	48%	TOT.	9	11%	SEVERE	44	28%

NOTES: Crashes have been vetted. NB ped was a bike in the crosswalk. 15 crashes were at the West service road and 6 crashes were at the East service road (shown as driveway crashes).

TBD = verification from crash report needed for direction

VERY SEVERE 0 0%
TOTAL VEHICLES 160

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	MON	3
TUE	0	0	1	0	0	0	0	0	0	0	0	1	0	2	2	1	4	3	1	1	0	0	0	0	0	TUE	16
WED	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	2	0	0	0	0	0	0	WED	8
THU	0	0	0	0	0	1	0	0	1	0	0	1	2	0	0	0	1	0	2	0	0	0	0	0	0	THU	8
FRI	0	0	0	0	0	0	0	0	0	0	0	0	4	1	2	1	1	3	1	0	0	1	1	1	0	FRI	16
SAT	1	1	0	0	0	0	0	0	0	1	1	2	1	0	1	1	3	1	2	0	0	1	0	1	0	SAT	17
SUN	0	0	0	1	0	0	0	0	1	0	0	0	3	1	4	0	3	0	0	0	0	0	0	0	0	SUN	13
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	1	1	1	1	0	1	0	1	1	2	1	4	11	4	11	3	17	7	8	1	0	2	1	2	0	**TOT.**	81

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Lodge Drive	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Traffic Signal	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	26,100	**5**	**Years**
Area Type:	Urban	**0**	**Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	CML19KMM0X	11/27/2018	LT-ANGLE	7 PM		WET	DARK				Head on mid Int
2	EB₂	CML1B8M7VK	12/12/2020	RT-ANGLE	9 AM		SNOW				Y	SB ran red
3	EB₂	CML1B8M7VL	12/12/2020	RT-ANGLE	11 AM	B	SNOW				Y	SB ran red
4	EBᵈ	LW8ZNLH	2/13/2016	DRIVEWAY-RELATED	11 AM	C						SB-EB E service dr
5	EBᵈ	LW8ZNLJ	2/13/2016	DRIVEWAY-RELATED	4 PM							SB-EB E service dr
6	EBᵈ	LW9H77L	11/4/2016	DRIVEWAY-RELATED	4 PM							SB-EB E service dr
7	EBᵈ	CML19KMM0W	11/27/2018	DRIVEWAY-RELATED	5 PM		WET	DARK				SB-EB E service dr
8	EBᵈ	CML19KMM14	12/11/2018	DRIVEWAY-RELATED	4 PM			DARK				SB-EB E service dr
9	EBᵈ	CML19KMM1Q	1/20/2019	DRIVEWAY-RELATED	12 PM							SB-EB E service dr
10	WB₂	LW9GH6T	12/11/2016	RT-ANGLE	4 PM		SNOW	DARK			Y	NB slid into Int
11	WB₂	CML18F2KSK	4/3/2017	RT-ANGLE	9 AM		WET					
12	WB₂	CML179QKTZ	6/15/2017	RT-ANGLE	4 PM	C						Signal unknown
13	WB₂	CML19QKRDJ	1/23/2020	RT-ANGLE	5 AM		SNOW	DARK			Y	NB ran red
14	WBᵈ	LW93CN4	6/12/2016	DRIVEWAY-RELATED	12 PM							NB-WB W service rd
15	WBᵈ	LW9VBFL	11/10/2016	DRIVEWAY-RELATED	11 AM							NB-WB W service rd
16	WBᵈ	LW9PW3C	11/22/2016	DRIVEWAY-RELATED	4 PM							NB-WB W service rd
17	WBᵈ	CML17MLVNB	2/23/2017	DRIVEWAY-RELATED	12 PM	C						NB-WB W service rd
18	WBᵈ	CML184FB1G	3/28/2017	DRIVEWAY-RELATED	5 PM							NB-WB W service rd
19	WBᵈ	CML19KMLZJ	8/11/2018	DRIVEWAY-RELATED	4 PM							WBL-EBT W service dr
20	WBᵈ	CML19KMM07	10/3/2018	DRIVEWAY-RELATED	2 PM							NB-WB W service rd
21	WBᵈ	CML19N3P5M	12/28/2018	DRIVEWAY-RELATED	3 PM		WET					NB-WB W service rd
22	WBᵈ	CML1B3P3B9	1/12/2019	DRIVEWAY-RELATED	3 PM		SNOW					NB-WB W service rd
23	WBᵈ	CML19LVN5G	7/9/2019	DRIVEWAY-RELATED	2 PM							NB-WB W service rd
24	WBᵈ	CML19RSSKR	8/26/2019	DRIVEWAY-RELATED	2 PM	C	WET					NB-WB W service rd
25	WBᵈ	CML18JRPDC	10/26/2019	DRIVEWAY-RELATED	4 PM		WET					NB-WB W service rd
26	WBᵈ	CML1BFKD88	11/12/2019	DRIVEWAY-RELATED	1 PM							SB-WB W service rd
27	WBᵈ	CML1BDBC5T	6/12/2020	DRIVEWAY-RELATED	5 PM		WET					NB-WB W service rd
28	WBᵈ	CML1BGSFFB	12/19/2020	DRIVEWAY-RELATED	2 PM	C	WET					NB-WB W service rd
29	NB₁	LW9GH2D	5/16/2016	LT-ANGLE	4 PM	C						
30	NB₁	LW9H77N	11/8/2016	LT-ANGLE	11 AM							On yellow-red
31	NB₁	LW9PW3D	11/20/2016	LT-ANGLE	2 PM						Y	On yellow-red
32	NB₁	LW8ZNRS	12/23/2016	LT-ANGLE	6 PM		SNOW	DARK				SB ran red
33	NB₁	CML18JRP3L	1/29/2017	LT-ANGLE	1 PM							
34	NB₁	CML19LVN5H	7/10/2019	LT-ANGLE	4 PM							
35	NB₁	CML1B2G27M	7/25/2019	LT-ANGLE	8 AM							
36	NB₁	CML19RSSKW	9/6/2019	LT-ANGLE	5 PM	B						Motorcycle
37	NB₁	CML1BQ6N0G	11/5/2020	LT-ANGLE	6 PM			DARK				
38	NB₁	CML1BMQKT2	12/22/2020	LT-ANGLE	2 PM	C						On yellow-red
39	NB₂	LWC72N5	3/6/2016	RT-ANGLE	2 PM							EB ran red
40	NB₂	LW9GH68	11/25/2016	RT-ANGLE	12 PM	C						EB ran red
41	NB₂	CML08L0Q6Z	12/26/2017	RT-ANGLE	4 PM			DAY				
42	NB₃	CML19426P1	5/18/2017	PEDESTRIAN	6 PM							NBL-Bike in cross
43	NB₃	CML1B9V91Z	12/5/2020	REAR-END	9 PM			DARK				
44	NB₆	CML19426Q0	8/22/2017	SIDE-SWIPE-SAME	6 PM							
45	M₅	CML18QXVNW	5/24/2017	MISC. OTHER	4 PM							WBL-EBR SSS S Leg
46	M₅	CML18F2KWL	11/18/2017	MISC. OTHER	1 AM		UNKN	DARK				SB rear S Leg
47	SB₁	LW9GH2B	5/10/2016	LT-ANGLE	3 PM		WET					
48	SB₁	CML18368VX	2/10/2017	LT-ANGLE	12 PM							SB FTY
49	SB₁	CML08L0Q6W	12/24/2017	LT-ANGLE	7 AM		SNOW					
50	SB₁	CML19N3P41	4/14/2018	LT-ANGLE	10 AM		WET					thru traffic
51	SB₁	CML19QKRBH	8/24/2018	LT-ANGLE	5 PM		WET					
52	SB₁	CML1B3P3B7	1/4/2019	LT-ANGLE	9 PM	B	WET	DARK				SB FYA
53	SB₁	CML19T1TMT	4/3/2019	LT-ANGLE	4 PM							
54	SB₁	CML19QKRFN	10/31/2020	LT-ANGLE	12 PM	C						
55	SB₂	LW9GH50	8/27/2016	RT-ANGLE	5 PM							SB ran red
56	SB₂	CML19T1TPM	2/16/2020	RT-ANGLE	4 PM							SB ran red
57	SB₃	LW90DS5	1/9/2016	REAR-END	6 PM	B	SNOW	DARK			Y	Snowy road
58	SB₃	LW9JPK0	1/31/2016	REAR-END	2 PM		WET					
59	SB₃	LW90DW6	8/30/2016	REAR-END	4 PM							
60	SB₃	LW9GH64	11/4/2016	REAR-END	11 PM			DARK				Moved on green
61	SB₃	LW90DZB	12/11/2016	REAR-END	4 PM		SNOW	DARK			Y	
62	SB₃	CML184FB07	1/11/2017	REAR-END	6 PM	C	WET	DARK				
63	SB₃	CML18QXVP1	5/28/2017	REAR-END	2 PM							
64	SB₃	CML18JRP4N	6/30/2017	REAR-END	12 PM							
65	SB₃	CML18JRP5J	10/15/2017	REAR-END	12 PM							
66	SB₃	CML08N GSG2	2/2/2018	REAR-END	12 PM							
67	SB₃	CML18QXVSS	3/9/2018	REAR-END	10 PM			DARK	Y		Y	
68	SB₃	CML19WHWVW	5/26/2018	REAR-END	11 PM			DARK				
69	SB₃	CML19QKRB6	6/27/2018	REAR-END	4 PM							
70	SB₃	CML18M7RBH	7/5/2018	REAR-END	12 PM	C						
71	SB₃	CML19KMLXV	7/18/2018	REAR-END	12 PM							
72	SB₃	CML184FB7P	11/7/2018	REAR-END	6 PM			DARK				
73	SB₃	CML1B2G26X	3/9/2019	REAR-END	12 AM			DARK				
74	SB₃	CML19RSSNW	9/11/2020	REAR-END	2 PM	B	WET					
75	SB₆	CML086WD7L	2/3/2018	SIDE-SWIPE-SAME	6 PM		SNOW	DARK				
76	SB₆	CML18QXVZ6	12/10/2019	SIDE-SWIPE-SAME	5 PM			DAY				
77	SB₆	CML1BSNQ7T	10/27/2020	SIDE-SWIPE-SAME	1 PM							
78	Mₙ	LW9FQQM	12/23/2016	MISC. OTHER	1 PM	C	WET					NB rear N Leg
79	Mₙ	CML17BZLXH	5/16/2017	MISC. OTHER	2 AM			DARK				NB curb N Leg
80	Mₙ	CML179QKV6	8/11/2017	MISC. OTHER	2 PM							WBR-NB SSS N Leg
81	Mₓ	CML19N3PJ8	5/31/2020	MISC. OTHER	3 AM			DARK				Fell Asleep-signal
82												
83												
84												
85												
86												
87												
88												
89												
90												
91												
92												
93												
94												
95												
96												
97												
98												
99												
100												

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
101												
102												
103												
...												
200												

A2.5 Intersection Collision Diagram

TADi — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	STH 26 & Kennedy Road/Randolph Road	**From:**	1/1/2016 **5** Years
Municipality:	City of Janesville	**To:**	12/31/2020 **0** Months
County:	Rock	**AADT:**	29,650
Traffic Control:	Traffic Signal	**Area Type:**	Urban

Duration

MAP

GPS Coordinates: 42.706589, -89.005348

TOTAL CRASHES: 69

AVG. CRASHES/YEAR: 13.8

CRASH RATE: 1.27 per MEV

KAB CRASH RATE: 0.11 per MEV

ECONOMIC LOSS*: $ 3,104,400
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	2	4	20	26	$ 1,142,000
2017	0	0	0	1	8	9	$ 209,400
2018	0	0	2	1	10	13	$ 665,000
2019	0	0	2	1	9	12	$ 654,200
2020	0	0	0	3	6	9	$ 433,800
TOTAL	0	0	6	10	53	69	$ 3,104,400

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STH 26

Entering ADT 12,350

SB6 4
SB5 15
SB↓

Mx Other Crashes
2 Within Intersection

WB← 2,550 Entering ADT

N

Misc. Crashes West Leg Mw 1

Kennedy Road

SB2 ← 3
NB1 ↓ 1

EB1 2
WB2 2

WB1 1

WB5 ← 3
SB1 9

Randolph Road

WB10 WB Driveway Related 1

1 Head-On
HE

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

EB10 EB9 EB Driveway Related 2 1
EB6 2

NB2 ↓ 4

Entering ADT 2,250 EB→

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	26
2017	9
2018	13
2019	12
2020	9

■ CRASH FREQUENCY

NB4 1
NB5 5
NB6 5

NB9 (F) 3
NB NB10 Driveway Related 1

STH 26

NB↑ Entering ADT 12,500

CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	2	5	6	13	$ 1,113,800
RT-ANGLE	0	0	2	1	6	9	$ 621,800
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	0	1	4	18	23	$ 903,400
SIDE-SWIPE-SAME	0	0	0	0	11	11	$ 118,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	4	4	$ 43,200
DRIVEWAY-RELATED	0	0	0	0	4	4	$ 43,200
HEAD-ON	0	0	0	0	1	1	$ 10,800
MISC. OTHER	0	0	1	0	2	3	$ 238,600
TOTAL	0	0	6	10	53	69	$ 3,104,400

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	47	68%	DAY	52	75%	ALCOHOL	1	1%	SPRING	22	32%	NB	1	1%	NB	1	1%	OTHER/UNK.	3	2%
WET	16	23%	DARK	17	25%	DRUGS	0	0%	SUMMER	21	30%	SB	5	7%	SB	1	1%	NONE	3	2%
SNOW	5	7%	TOT.	69		SPEED	10	14%	FALL	8	12%	EB	1	1%	EB	0	0%	VERY MINOR	8	6%
ICE	1	1%							WINTER	18	26%	WB	0	0%	WB	0	0%	MINOR	47	37%
OTH.	0	0%							TOT.	69		TBD	11	16%	TBD	5	7%	MODERATE	45	35%
TOT.	69											TOT.	18	26%	TOT.	7	10%	SEVERE	22	17%

NOTES:
Injury crashes have been vetted.

TBD = verification from crash report needed for direction

VEHICLE DAMAGE		
VERY SEVERE	0	0%
TOTAL VEHICLES	128	

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	2	2	1	1	0	0	0	0	0	MON	9
TUE	0	0	0	0	0	0	0	0	1	0	1	1	1	1	2	2	0	2	0	0	0	0	0	0	0	TUE	11
WED	0	0	0	0	0	0	0	1	1	1	2	1	2	0	0	0	0	2	0	1	0	0	0	0	0	WED	11
THU	0	0	0	0	0	0	2	0	0	0	3	0	1	1	0	1	1	1	1	2	0	0	0	0	THU	15
FRI	0	0	0	0	0	0	0	1	0	0	1	0	1	2	2	2	0	0	0	0	1	1	2	0	FRI	13
SAT	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	SAT	5
SUN	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	SUN	5
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	1	0	1	0	0	0	0	2	4	3	5	5	7	7	5	5	3	7	2	4	1	4	1	2	0	TOT.	69

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Kennedy Road/Randolph Road	**From:**	1/1/2016	
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**
County:	Rock	**AADT:**	29,650	**5** Years
Traffic Control:	Traffic Signal	**Area Type:**	Urban	**0** Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	CML19T1TMF	2/5/2019	LT-ANGLE	5 PM		ICE	DARK				
2	EB₁	CML1B9V90M	7/30/2020	LT-ANGLE	9 PM	C		DARK				On yellow
3	EB₆	LW8ZNNB	6/15/2016	SIDE-SWIPE-SAME	12 PM							
4	EB₆	LW92MGB	8/31/2016	SIDE-SWIPE-SAME	7 AM							
5	EB₉	LW93CMC	1/12/2016	FIXED-OBJECT	2 PM		SNOW				Y	EB-curb, snowbank
6	EB₁₀	LW92MFM	5/31/2016	DRIVEWAY-RELATED	10 AM							EB backing-NBR
7	EB₁₀	CML184FB4P	5/18/2018	DRIVEWAY-RELATED	10 AM							NB-EBT
8	Mʷ	LW9QM9L	8/12/2016	MISC. OTHER	11 PM			DARK			Y	SBR improper turn
9	WB₁	CML184FB9F	2/11/2019	LT-ANGLE	7 PM		SNOW	DARK				
10	WB₂	LW943T7	4/27/2016	RT-ANGLE	9 AM							
11	WB₂	CML1884FBD	1/16/2017	RT-ANGLE	10 AM		WET	DARK			Y	NB slid into Int
12	WB₃	LW943ST	3/1/2016	REAR-END	2 PM		SNOW					
13	WB₃	CML18QXVT9	5/7/2018	REAR-END	1 PM	B						
14	WB₁₀	CML1BDBC71	10/20/2020	REAR-END	11 AM						Y	
15	WB₁₀	CML18QXVN9	3/26/2017	DRIVEWAY-RELATED	9 AM		WET					NBL-WBT
16	Hꟸ	LW9FQQK	12/18/2016	HEAD-ON	1 PM		SNOW				Y	NBR improper turn
17	NB₁	LW90DW1	7/25/2016	LT-ANGLE	4 PM	B						Construction
18	NB₂	LW9H765	7/21/2016	RT-ANGLE	9 PM	C	WET	DARK				Unknown signal
19	NB₂	CML184FB0P	2/11/2017	RT-ANGLE	9 AM							
20	NB₂	CML1884FCV	10/10/2017	RT-ANGLE	1 PM		WET					
21	NB₂	CML19LVN52	5/31/2019	RT-ANGLE	9 PM	B		DARK				NB ran red
22	NB₄	CML184FB9C	2/8/2019	RT-TURN REAR-END	12 PM							
23	NB₅	LW9GH1T	4/21/2016	REAR-END	8 AM	C						Construction
24	NB₅	LW9MNHP	4/22/2016	REAR-END	11 PM			DARK				
25	NB₅	LW8ZNP8	8/5/2016	REAR-END	2 PM							
26	NB₅	CML19N3P54	9/12/2018	REAR-END	12 PM							
27	NB₅	CML19RSSJ1	1/2/2019	REAR-END	10 AM		WET				Y	
28	NB₆	CML18S5WS3	4/21/2017	SIDE-SWIPE-SAME	10 PM			DARK				
29	NB₆	CML19T1TK2	3/30/2018	SIDE-SWIPE-SAME	1 PM							
30	NB₆	CML19LVN2T	11/10/2018	SIDE-SWIPE-SAME	9 PM			DARK				
31	NB₆	CML19WHWRM	7/12/2020	SIDE-SWIPE-SAME	12 AM		WET	DARK				
32	NB₆	CML1BW4SFH	7/14/2020	SIDE-SWIPE-SAME	3 PM							
33	NB₉	LW9GH41	7/12/2016	FIXED-OBJECT	8 AM			DAY				
34	NB₉	CML19RSSJW	4/25/2019	FIXED-OBJECT	11 AM							
35	NB₉	CML1BDBC5R	6/13/2020	FIXED-OBJECT	2 AM			DARK				
36	NB₁₀	LW9HZCB	8/3/2016	DRIVEWAY-RELATED	7 PM							WBL-EBT
37	SB₁	LW9MNK1	7/14/2016	LT-ANGLE	12 PM							On yellow-red
38	SB₁	CML18F2KV4	8/7/2017	LT-ANGLE	11 AM	C						SB FTY
39	SB₁	CML19426QX	12/8/2017	LT-ANGLE	3 PM							
40	SB₁	CML1C22XX7	2/5/2018	LT-ANGLE	5 PM		WET	DARK				
41	SB₁	CML19KMM13	12/6/2018	LT-ANGLE	2 PM	C						SB FYA
42	SB₁	CML19KMM1V	1/24/2019	LT-ANGLE	7 PM			DAY				
43	SB₁	CML18QXVXT	6/13/2019	LT-ANGLE	12 PM	C						SB FYA
44	SB₁	CML11R2KSV	8/1/2019	LT-ANGLE	3 PM	B						SB FYA
45	SB₁	CML19QKRFM	10/16/2020	LT-ANGLE	2 PM	C						SB FTY
46	SB₂	CML18JRP5W	11/12/2017	RT-ANGLE	1 PM		WET					
47	SB₂	CML18L0QBP	3/14/2018	RT-ANGLE	10 AM							
48	SB₂	CML184FB6F	8/22/2018	RT-ANGLE	8 AM	B						SB ran red
49	SB₅	LW9GH19	3/11/2016	REAR-END	1 PM							
50	SB₅	LW8ZNM5	3/22/2016	REAR-END	12 PM							
51	SB₅	LW9JPKD	4/28/2016	REAR-END	8 PM	C	WET	DARK			Y	Moved on green
52	SB₅	LW9GH2S	5/26/2016	REAR-END	12 PM	C						
53	SB₅	LW9GH2W	6/1/2016	REAR-END	11 AM							
54	SB₅	LW8ZNNC	6/17/2016	REAR-END	7 AM							
55	SB₅	LW9GH5N	10/12/2016	REAR-END	5 PM		WET	DAY				
56	SB₅	CML184FB0L	2/1/2017	REAR-END	5 PM			DARK				
57	SB₅	CML184FB4Q	5/20/2018	REAR-END	4 PM							
58	SB₅	CML19T1TM2	12/27/2018	REAR-END	11 AM		WET					
59	SB₅	CML19KMM1C	12/28/2018	REAR-END	3 PM		WET					
60	SB₅	CML184FBC6	5/20/2019	REAR-END	6 PM							
61	SB₅	CML1BC3B2S	12/2/2019	REAR-END	5 PM			DARK	Y			
62	SB₅	CML19KMM61	1/18/2020	REAR-END	1 PM		SNOW				Y	
63	SB₅	CML19RSSNV	8/31/2020	REAR-END	4 PM	C	WET				Y	Hydroplaned-wet road
64	SB₆	LW9BRT4	3/31/2016	SIDE-SWIPE-SAME	5 PM		WET					
65	SB₆	LW92MF6	4/5/2016	SIDE-SWIPE-SAME	3 PM							
66	SB₆	CML184FB83	12/1/2018	SIDE-SWIPE-SAME	7 PM		WET	DARK				
67	SB₆	CML1BC3B24	10/10/2019	SIDE-SWIPE-SAME	6 PM		WET	DAY				
68	Mₓ	LW9MNHW	5/3/2016	MISC. OTHER	5 PM	B					Y	SBL-signal
69	Mₓ	CML19QKRF1	6/18/2020	MISC. OTHER	8 AM							NB signal
70												
71												
72												
73												
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Ref # 101–200 (no data recorded)

A2.6 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

			Duration	
Location:	Milwaukee Street & Pontiac Drive	**From:**	1/1/2016	5 Years
Municipality:	City of Janesville	**To:**	12/31/2020	0 Months
County:	Rock	**AADT:**	13,600	MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban	
		GPS Coordinates:	42.695566, -88.987891	

TOTAL CRASHES: 27

AVG. CRASHES/YEAR: 5.4

CRASH RATE: 1.09 per MEV

KAB CRASH RATE: 0.28 per MEV

ECONOMIC LOSS*: $ 3,005,600
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	1	2	1	4	8	$ 1,284,200
2017	0	0	1	1	4	6	$ 383,200
2018	1	0	0	1	3	5	$ 839,400
2019	0	0	2	0	3	5	$ 466,400
2020	0	0	0	0	3	3	$ 32,400
TOTAL	1	1	5	3	17	27	$ 3,005,600

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Pontiac Drive

SB $_{10}$ — SB Driveway Related — 1

NB^d Driveway Related — 1

Entering ADT 2,800

SB ↓

WB ← 4,300 Entering ADT

N

Misc. Crashes West Leg — M^w 1

SB$_2$ ← 3

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

Milwaukee Street

EB$_{10}$ EB Driveway Related — 2

EB$_6$ 2 EB$_5$ 3 EB$_2$ 1 WB$_1$ 2 NB$_2$ → 2

EB^d EB Driveway Related — 2

Entering ADT 3,600 EB →

NB↑ NB$_5$ ↕ 1 NB$_6$ 2 NB ↑ Entering ADT 2,900
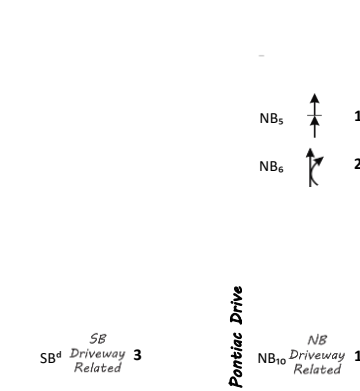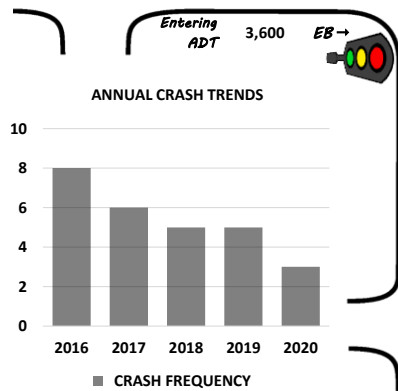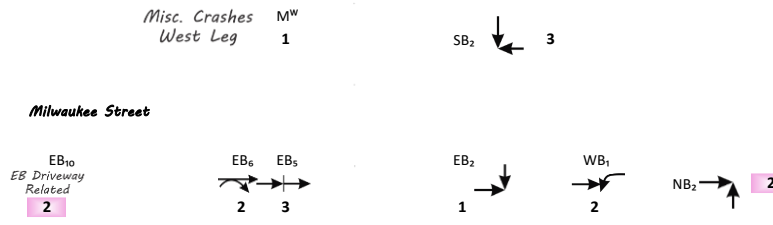
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	1	0	1	2	$ 227,800
RT-ANGLE	1	0	2	0	3	6	$ 1,150,400
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	1	1	2	4	$ 361,600
SIDE-SWIPE-SAME	0	0	0	1	3	4	$ 155,400
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	1	1	1	7	10	$ 1,099,600
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	1	1	$ 10,800
TOTAL	1	1	5	3	17	27	$ 3,005,600

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	8
2017	6
2018	5
2019	5
2020	3

■ CRASH FREQUENCY

SB^d Driveway Related — 3

Pontiac Drive

NB$_{10}$ Driveway Related — 1

ROAD CONDITIONS		
DRY	23	85%
WET	3	11%
SNOW	1	4%
ICE	0	0%
OTH.	0	0%
TOT.	27	

LIGHT CONDITIONS		
DAY	21	78%
DARK	6	22%
TOT.	27	

DRIVER BEHAVIOR		
ALCOHOL	2	7%
DRUGS	1	4%
SPEED	2	7%

SEASON		
SPRING	6	22%
SUMMER	8	30%
FALL	7	26%
WINTER	6	22%
TOT.	27	

FAILURE TO YIELD		
NB	0	0%
SB	0	0%
EB	0	0%
WB	2	7%
TBD	0	0%
TOT.	2	7%

DISRGRD. CONTROL		
NB	1	4%
SB	0	0%
EB	2	7%
WB	1	4%
TBD	0	0%
TOT.	4	15%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE		
OTHER/UNK.	0	0%
NONE	2	4%
VERY MINOR	0	0%
MINOR	19	36%
MODERATE	18	34%
SEVERE	13	25%
VERY SEVERE	1	2%
TOTAL VEHICLES	53	

NOTES:
Crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	MON	3
TUE	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	TUE	5
WED	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	1	0	0	0	0	0	WED	5
THU	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	THU	5
FRI	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	FRI	4
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	SAT	1
SUN	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	SUN	4
TOT.	1	0	0	0	0	0	0	0	1	1	1	0	5	1	2	4	4	1	3	2	0	1	0	0	0	TOT.	27

Crash Data

Corresponds to Collision Diagram

Location:	Milwaukee Street & Pontiac Drive
Municipality:	City of Janesville
County:	Rock
Traffic Control:	Traffic Signal

From:	1/1/2016	
To:	12/31/2020	**Duration**
AADT:	13,600	5 Years
Area Type:	Urban	0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₂	CML1B2G278	5/3/2019	RT-ANGLE	2 PM	B						EB ran red-tree
2	EB₃	LW92MG5	8/25/2016	REAR-END	4 PM	B						
3	EB₆	CML18QXVVS	10/28/2018	REAR-END	6 PM			DARK				
4	EB₆	CML18F2LD6	1/15/2019	REAR-END	8 AM							
5	EB₆	LW95L8V	6/28/2016	SIDE-SWIPE-SAME	3 PM							Changing lanes
6	EB₆	LW90DVM	7/1/2016	SIDE-SWIPE-SAME	9 AM	C						Passing
7	EB₁₀	LW8ZNNT	7/12/2016	DRIVEWAY-RELATED	12 AM	A		DARK			Y	NB-EBT
8	EB₁₀	CML179QKW3	11/13/2017	DRIVEWAY-RELATED	3 PM							Waved thru traffic
9	EBᵈ	LW9MNJK	6/15/2016	DRIVEWAY-RELATED	5 PM	B						EB rear E Leg
10	EBᵈ	CML19RSSHT	11/5/2018	DRIVEWAY-RELATED	3 PM	C	WET	DARK				NBL-EBT
11	Mʷ	LWC72P3	7/10/2016	MISC. OTHER	6 PM					Y		WB SSS W Leg
12	WB₁	CML19KMM51	9/26/2017	LT-ANGLE	4 PM	B						Signal unknown
13	WB₁	CML19RSSLL	12/3/2019	LT-ANGLE	12 PM							
14	NB₂	CML19N3P3L	3/9/2018	RT-ANGLE	9 PM	K		DARK	Y	Y		EB ran red-tree
15	NB₂	CML1BMQKSR	11/25/2020	RT-ANGLE	6 PM			DARK				NB ran red
16	NB₅	CML1C22XW2	5/14/2017	REAR-END	12 PM	C						Shoe stuck on brake
17	NB₆	LW90DTL	4/28/2016	SIDE-SWIPE-SAME	4 PM							Changing lanes
18	NB₆	CML18JRP90	10/16/2018	SIDE-SWIPE-SAME	4 PM							
19	NB₁₀	CML18JRPFB	1/29/2020	DRIVEWAY-RELATED	12 PM							EB-SBL
20	NBᵈ	CML17BZLW8	2/6/2017	DRIVEWAY-RELATED	1 PM							Sun glare
21	SB₂	LW8ZNKP	1/9/2016	RT-ANGLE	7 PM		SNOW	DARK			Y	SB slid into Int
22	SB₂	CML18F2KTD	6/25/2017	RT-ANGLE	2 PM	B						WBR improper turn
23	SB₂	CML19QKRFG	10/8/2020	RT-ANGLE	12 PM							WB ran red
24	SB₅	CML18S5WSK	5/26/2017	DRIVEWAY-RELATED	3 PM		WET					SBT-backing
25	SBᵈ	CML17BZLX2	4/20/2017	DRIVEWAY-RELATED	12 PM							WB-SBT
26	SBᵈ	CML18QXVS4	1/24/2018	DRIVEWAY-RELATED	10 AM		WET					SB rear S Leg
27	SBᵈ	CML1B9V8WH	8/28/2019	DRIVEWAY-RELATED	7 PM							SB rear S Leg

A2.7 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location: USH 51 & Kellogg Avenue
Municipality: City of Janesville
County: Rock
Traffic Control: Traffic Signal

Duration
From: 1/1/2016   5 Years
To: 12/31/2020   0 Months
AADT: 17,200
Area Type: Urban
GPS Coordinates: 42.649761, -89.031155

MAP

TOTAL CRASHES: 41

AVG. CRASHES/YEAR: 8.2

CRASH RATE: 1.31 per MEV

KAB CRASH RATE: 0.22 per MEV

ECONOMIC LOSS*: $ 2,671,600
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	1	1	6	8	$ 404,800
2017	0	0	3	2	4	9	$ 940,200
2018	0	0	0	2	4	6	$ 289,200
2019	0	0	1	2	10	13	$ 571,000
2020	0	0	2	0	3	5	$ 466,400
TOTAL	0	0	7	7	27	41	$ 2,671,600

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

USH 51

NB^d Driveway Related 3
SB$_9$ 1
SB↓
SB$_5$ 2
Entering ADT 7,150

NB$_0$ 1
WB← 2,750 Entering ADT
N

SB$_2$ 3
WB$_2$ 1   WB$_3$ 1   WB$_5$ 1   WB$_6$ 1   WB$_9$ 1   WB$_{10}$ 8   WB Driveway Related

Kellogg Avenue

NB$_1$ 2   SB$_1$ 1   1 Head-On H^E Kellogg Avenue

EB$_6$ 1   EB$_5$ 3   EB$_4$ 1   EB$_2$ 2   NB$_2$ 2   EB^d EB Driveway Related 1

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

Entering ADT 2,500   EB→

ANNUAL CRASH TRENDS

Bar chart — CRASH FREQUENCY by year (2016–2020): 2016 ≈ 8, 2017 ≈ 9, 2018 ≈ 6, 2019 ≈ 13, 2020 ≈ 5.

NB↑   NB$_5$ 2   Entering ADT 4,800   NB$_9$ 2   USH 51
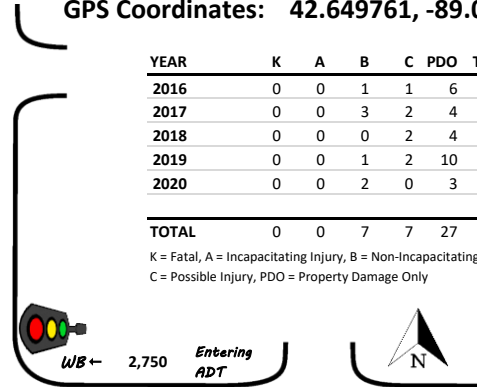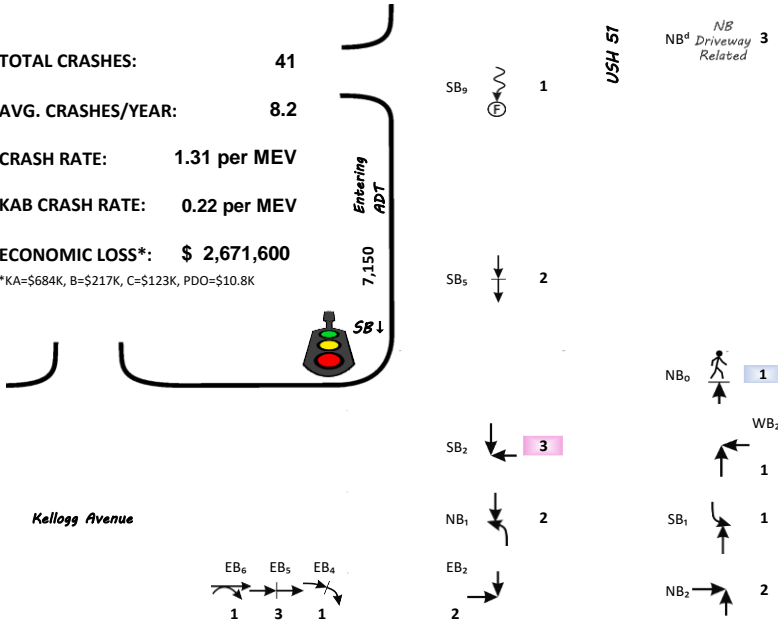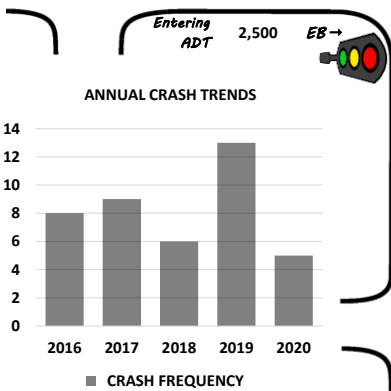
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	0	3	3	$ 32,400
RT-ANGLE	0	0	3	2	3	8	$ 929,400
PEDESTRIAN	0	0	1	0	1	2	$ 227,800
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	0	1	2	5	8	$ 517,000
SIDE-SWIPE-SAME	0	0	0	0	2	2	$ 21,600
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	4	4	$ 43,200
DRIVEWAY-RELATED	0	0	2	3	7	12	$ 878,600
HEAD-ON	0	0	0	0	1	1	$ 10,800
MISC. OTHER	0	0	0	0	0	0	$ -
TOTAL	0	0	7	7	27	41	$ 2,671,600

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	33	80%	DAY	27	66%	ALCOHOL	2	5%	SPRING	10	24%	NB	0	0%	NB	1	2%	OTHER/UNK.	0	0%
WET	5	12%	DARK	14	34%	DRUGS	0	0%	SUMMER	9	22%	SB	1	2%	SB	2	5%	NONE	3	4%
SNOW	3	7%	TOT.	41		SPEED	3	7%	FALL	13	32%	EB	0	0%	EB	2	5%	VERY MINOR	2	3%
ICE	0	0%							WINTER	9	22%	WB	0	0%	WB	0	0%	MINOR	20	27%
OTH.	0	0%							TOT.	41		TBD	4	10%	TBD	2	5%	MODERATE	27	36%
TOT.	41											TOT.	5	12%	TOT.	7	17%	SEVERE	22	30%
																		VERY SEVERE	0	0%

TBD = verification from crash report needed for direction

TOTAL VEHICLES 74

NOTES: Injury crashes have been vetted. WB Ped is bike in crosswalk.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	MON	3
TUE	0	0	0	0	0	0	0	1	0	0	1	2	0	0	1	1	0	0	0	0	1	0	0	0	0	TUE	7
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	0	0	WED	4
THU	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	2	1	0	2	0	0	0	0	0	0	THU	9
FRI	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	1	1	0	0	2	0	0	0	FRI	9
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	SAT	3
SUN	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	1	0	SUN	6
TOT.	1	0	0	0	1	0	0	1	0	2	1	3	4	1	4	4	3	3	3	2	3	2	1	2	0	**TOT.**	41

Crash Data

Corresponds to Collision Diagram

Location:	**USH 51 & Kellogg Avenue**	
Municipality:	**City of Janesville**	
County:	**Rock**	
Traffic Control:	**Traffic Signal**	

From:	**1/1/2016**	
To:	**12/31/2020**	Duration
AADT:	**17,200**	**5** Years
Area Type:	**Urban**	**0** Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB$_2$	LW95L8M	5/17/2016	RT-ANGLE	10 AM							
2	EB$_2$	CML1B2G270	3/12/2019	RT-ANGLE	8 PM			DARK				EB ran red
3	EB$_4$	CML1BDBC4H	2/7/2020	RT-TURN REAR-END	2 PM							
4	EB$_1$	LW95L82	1/15/2016	REAR-END	5 PM	C		DARK		Y		
5	EB$_5$	CML19426N6	2/2/2017	REAR-END	3 PM		WET					
6	EB$_5$	CML19N3PFT	9/3/2019	REAR-END	3 PM							
7	EB$_6$	CML1B000K8	11/8/2018	SIDE-SWIPE-SAME	4 PM			DARK				
8	EB^d	CML18L0QG5	4/13/2019	DRIVEWAY-RELATED	8 PM			DARK				EB rear
9	WB$_2$	LWC72P8	7/22/2016	RT-ANGLE	6 PM							
10	WB$_5$	CML0XVN049	4/19/2019	PEDESTRIAN	9 PM	B		DARK				Bike in crosswalk
11	WB$_5$	CML1B7D6PP	4/5/2019	REAR-END	12 PM							
12	WB$_6$	CML1BMQKSD	10/9/2020	SIDE-SWIPE-SAME	9 AM							
13	WB$_9$	CML19RSSKL	7/25/2019	FIXED-OBJECT	9 AM							
14	WB$_{10}$	LW9L60H	1/5/2016	DRIVEWAY-RELATED	7 AM			DAY				WB-SB
15	WB$_{10}$	LW9HZC8	7/23/2016	DRIVEWAY-RELATED	10 PM		WET	DARK				WB-SB
16	WB$_{10}$	CML18QXVN5	5/1/2017	DRIVEWAY-RELATED	12 PM	C	WET					WBL-WBT thru traffic
17	WB$_{10}$	CML10FKD7J	2/9/2018	DRIVEWAY-RELATED	3 PM	C	SNOW					EBL thru traffic
18	WB$_{10}$	CML19RSSH2	9/7/2018	DRIVEWAY-RELATED	9 PM			DARK				EBL-WBT
19	WB$_{10}$	CML18F2LCQ	12/6/2018	DRIVEWAY-RELATED	6 PM							SB-WB
20	WB$_{10}$	CML18JRPCX	9/12/2019	DRIVEWAY-RELATED	3 PM							SBR-WBT rear
21	WB$_{10}$	CML1B8M7RX	10/29/2019	DRIVEWAY-RELATED	11 AM	C						WBR from left ln
22	H^f	CML17MLVPF	10/29/2017	HEAD-ON	7 PM			DARK			Y	WB crossed CL
23	NB$_0$	CML1884FHL	1/23/2019	PEDESTRIAN	8 PM		SNOW	DARK				WBR-Ped in cross
24	NB$_1$	CML189CGGH	6/9/2017	LT-ANGLE	2 PM							
25	NB$_1$	CML1B9V90R	8/11/2020	LT-ANGLE	11 AM							
26	NB$_2$	CML1B000K2	8/26/2018	RT-ANGLE	11 AM	C						NB ran red
27	NB$_2$	CML19KMM5Z	1/2/2020	RT-ANGLE	2 PM	B						EB ran red
28	NB$_5$	CML189CGG6	5/3/2017	REAR-END	5 PM	B						
29	NB$_5$	CML1B8M7RG	7/22/2019	REAR-END	12 PM							
30	NB$_9$	CML19QKRCT	9/1/2019	FIXED-OBJECT	12 AM			DARK	Y			
31	NB$_9$	CML1BGSFBL	9/28/2019	FIXED-OBJECT	11 PM			DARK	Y			
32	NB^d	CML185NC4H	4/23/2017	DRIVEWAY-RELATED	4 PM	B						EBL-NBT rear
33	NB^d	CML1884FCC	6/22/2017	DRIVEWAY-RELATED	1 PM							WBL-NBT
34	NB^d	CML1BSNQ7V	11/2/2020	DRIVEWAY-RELATED	4 PM	B						WBL-NBT
35	SB$_1$	LW9VBF3	9/7/2016	LT-ANGLE	7 PM		WET	DARK				
36	SB$_2$	LW9JPLT	10/5/2016	RT-ANGLE	5 PM	B						SB ran red
37	SB$_2$	CML192T5KL	7/6/2017	RT-ANGLE	6 PM	C						WBR-WBT
38	SB$_2$	CML19426R4	12/24/2017	RT-ANGLE	12 PM	B	SNOW				Y	SB slid into Int
39	SB$_5$	LW9H7SJ	4/28/2016	REAR-END	4 AM		WET	DARK				Backing
40	SB$_5$	CML1B7D6PL	3/12/2019	REAR-END	2 PM	C						
41	SB$_9$	CML19V8VPH	11/11/2018	FIXED-OBJECT	11 PM			DARK				

Ref # 42–100 (blank)
Ref # 101–200 (blank)

A2.8 Intersection Collision Diagram

TADI TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	Court Street & Main Street	**From:**	1/1/2016 — 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 — 0 Months
County:	Rock	**AADT:**	12,950 — MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.681902, -89.021376

TOTAL CRASHES: 28

AVG. CRASHES/YEAR: 5.6

CRASH RATE: 1.18 per MEV

KAB CRASH RATE: 0.17 per MEV

ECONOMIC LOSS*: $ 2,397,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	1	0	0	4	5	$ 727,200
2017	0	1	1	1	4	7	$ 1,067,200
2018	0	0	0	0	6	6	$ 64,800
2019	0	0	0	2	5	7	$ 300,000
2020	0	0	1	0	2	3	$ 238,600
TOTAL	0	2	2	3	21	28	$ 2,397,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Main Street
Court Street
Entering ADT 2,400
SB↓ SB₅ 2
WB← 3,950 Entering ADT

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

WB₂ 1
NB₁ 1
EB₂ 4
WB₁ 1
SB₁ 1
NB₂ 12
WB₆ 1
EB₆ 1 EB₅ 1 EB₄ 1
Entering ADT 3,250 EB→
NB↑ 3,350 Entering ADT
NB₆ 1
Misc. Crashes South Leg M$ 1
Main Street
Court Street

ANNUAL CRASH TRENDS

2016	2017	2018	2019	2020
5	7	6	7	3

■ CRASH FREQUENCY
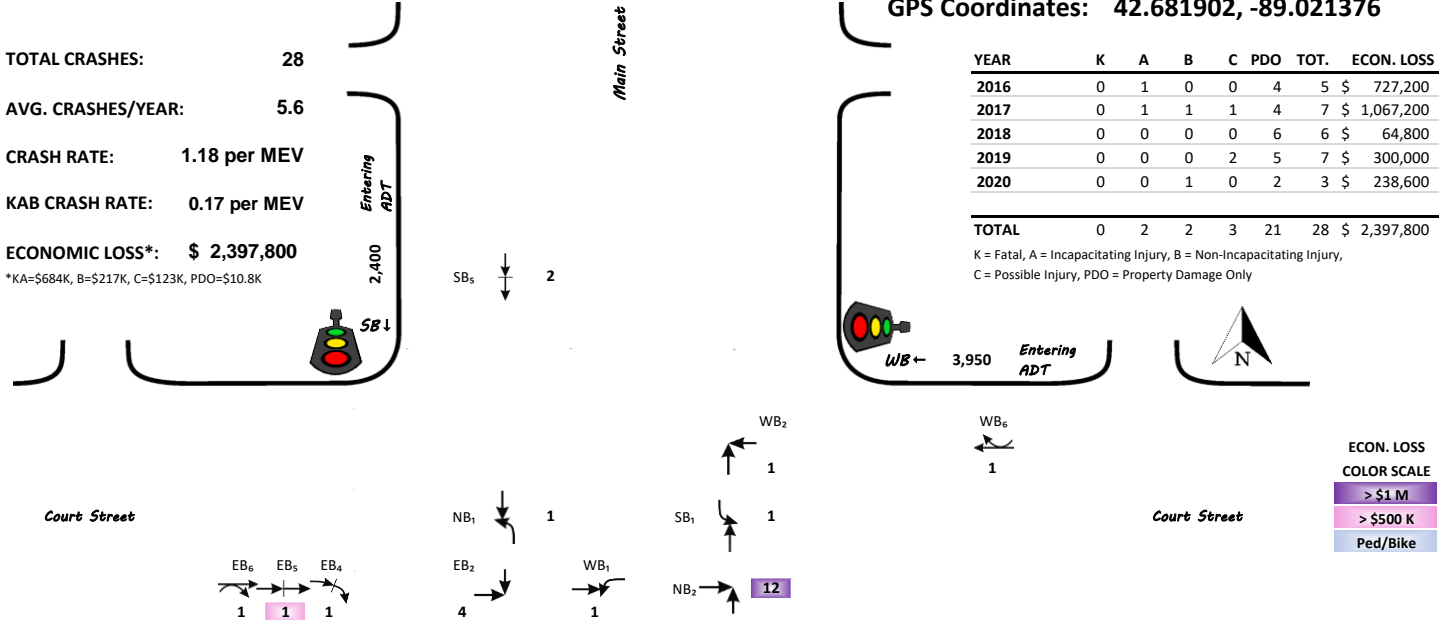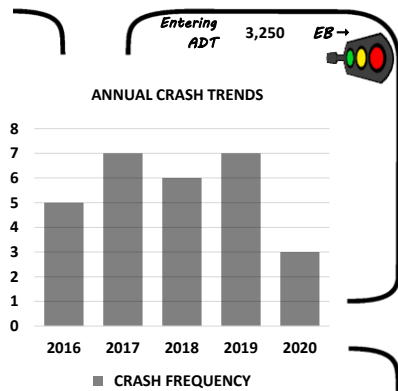
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	0	3	3	$ 32,400
RT-ANGLE	0	1	2	2	12	17	$ 1,493,600
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	1	0	1	1	3	$ 817,800
SIDE-SWIPE-SAME	0	0	0	0	3	3	$ 32,400
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	1	1	$ 10,800
TOTAL	0	2	2	3	21	28	$ 2,397,800

ROAD CONDITIONS
DRY	22	79%
WET	5	18%
SNOW	1	4%
ICE	0	0%
OTH.	0	0%
TOT.	28	

LIGHT CONDITIONS
DAY	18	64%
DARK	10	36%
TOT.	28	

DRIVER BEHAVIOR
ALCOHOL	3	11%
DRUGS	0	0%
SPEED	1	4%

SEASON
SPRING	6	21%
SUMMER	5	18%
FALL	7	25%
WINTER	10	36%
TOT.	28	

FAILURE TO YIELD
NB	4	14%
SB	3	11%
EB	1	4%
WB	1	4%
TBD	0	0%
TOT.	9	32%

DISRGRD. CONTROL
NB	6	21%
SB	2	7%
EB	2	7%
WB	1	4%
TBD	0	0%
TOT.	11	39%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	4	7%
NONE	1	2%
VERY MINOR	3	5%
MINOR	15	27%
MODERATE	15	27%
SEVERE	17	31%
VERY SEVERE	0	0%
TOTAL VEHICLES	55	

NOTES:
Injury crashes have been vetted.
Prior to 2018 Court St one-way EB; by Oct 2018 Court St two-way

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	MON	2
TUE	0	0	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	TUE	4
WED	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	WED	3
THU	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	THU	6
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	FRI	2
SAT	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	SAT	3
SUN	1	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	SUN	8
TOT.	2	0	2	0	3	1	0	2	2	0	1	0	2	3	2	3	1	2	1	0	1	0	0	0	0	**TOT.**	28

Crash Data

Corresponds to Collision Diagram

Location:	**Court Street & Main Street**	
Municipality:	**City of Janesville**	
County:	**Rock**	
Traffic Control:	**Traffic Signal**	

From:	**1/1/2016**	
To:	**12/31/2020**	**Duration**
AADT:	**12,950**	**5 Years**
Area Type:	**Urban**	**0 Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₂	CML18JRP3N	2/7/2017	RT-ANGLE	4 AM	C	WET	DARK				SB FTY-Flash red
2	EB₂	CML1884FBN	2/21/2017	RT-ANGLE	4 AM		WET	DARK				SB ran flash red
3	EB₂	CML18JRP6M	1/14/2018	RT-ANGLE	2 AM			DARK	Y			SB FTY-Flash red
4	EB₂	KRL07GNQBT	5/26/2019	RT-ANGLE	2 AM			DARK	Y			SB ran flash red
5	EB₄	CML19QXRC9	6/19/2019	RT-TURN REAR-END	12 PM		WET					Stop for Ped
6	EB₅	CML184FB0V	2/21/2017	REAR-END	1 PM	A						Motorcycle
7	EB₆	LW9MNH7	3/17/2016	SIDE-SWIPE-SAME	12 PM							Semi wide right turn
8	WB₂	CML19KMM5F	11/15/2019	LT-ANGLE	5 PM			DARK				WBL on yellow
9	WB₂	CML19V8VN3	3/3/2018	RT-ANGLE	12 AM			DARK	Y			NBR-WB wrong way
10	WB₄	CML19T1TLP	10/29/2018	SIDE-SWIPE-SAME	7 AM							WBT from Lt lane
11	NB₁	CML1B9V8WS	9/23/2019	LT-ANGLE	3 PM							NBL on yellow
12	NB₂	LW9H74B	1/24/2016	RT-ANGLE	3 PM	A						NB ran red
13	NB₂	LW9MNGW	3/1/2016	RT-ANGLE	7 AM		SNOW	DAY			Y	NB slid on ice
14	NB₂	LW9MNM9	11/23/2016	RT-ANGLE	8 AM		WET					NBR-EBT
15	NB₂	CML17MLVNH	3/23/2017	RT-ANGLE	4 PM	B						NB ran red
16	NB₂	CML19426P5	6/8/2017	RT-ANGLE	10 AM							NB ran red
17	NB₂	CML18F2KWV	12/8/2017	RT-ANGLE	6 PM			DARK				EB ran red
18	NB₂	CML19RSSGW	8/19/2018	RT-ANGLE	5 PM							NB ran red
19	NB₂	CML0XVN03H	11/18/2018	RT-ANGLE	4 AM			DARK				NB ran flash red
20	NB₂	CML19LVN43	2/13/2019	RT-ANGLE	5 AM	C	WET	DAY				NB ran flash red
21	NB₂	CML18L0QJ5	11/23/2019	RT-ANGLE	2 PM							NBR-EBT
22	NB₂	CML19QKRDP	3/8/2020	RT-ANGLE	12 AM			DARK				EB ran red
23	NB₂	CML1BFKDC2	12/26/2020	RT-ANGLE	1 PM	B						NB ran red
24	NB₆	CML19KMLZ9	8/5/2018	SIDE-SWIPE-SAME	2 PM							NBT from Rt lane
25	M₅	LW9FQPB	8/4/2016	MISC. OTHER	8 AM			DAY				SB Park S Leg
26	SB₁	CML1C22XWV	12/10/2017	LT-ANGLE	8 PM			DARK				SBL on yellow
27	SB₅	CML1B8M7RP	9/12/2019	REAR-END	3 PM	C						
28	SB₅	CML1B2G299	2/6/2020	REAR-END	1 PM							

A2.9 Intersection Collision Diagram

TADI TRAFFIC ANALYSIS & DESIGN, INC.

Location:	STH 26 & Memorial Drive	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	22,700 MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.693606, -89.013558

Duration

TOTAL CRASHES: 68

AVG. CRASHES/YEAR: 13.6

CRASH RATE: 1.64 per MEV

KAB CRASH RATE: 0.05 per MEV

ECONOMIC LOSS*: $ 2,268,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

STH 26

Entering ADT 10,050

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	2	2	17	21	$ 863,600
2017	0	0	0	4	6	10	$ 556,800
2018	0	0	0	1	14	15	$ 274,200
2019	0	0	0	3	12	15	$ 498,600
2020	0	0	0	0	7	7	$ 75,600
TOTAL	0	0	2	10	56	68	$ 2,268,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

SB_6 2 H_n 2 Head-On
SB_5 18 M_x 3 Other Crashes Within Intersection
SB_4 1
$SB\downarrow$

$WB\leftarrow$ 2,050 Entering ADT

N

Misc. Crashes West Leg M^w 1

Memorial Drive

EB_1 3 WB_2 1
SB_2 1
NB_1 4 SB_1 1
EB_2 5 NB_2 1

WB_5 2 WB_9 1 WB_{10} 1 WB Driveway Related

Memorial Drive

EB_9 1 EB_6 1 EB_5 8 EB_3 1

Entering ADT 5,100 $EB\rightarrow$

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

$NB\uparrow$ Entering ADT 5,500

NB_5 3
NB_6 5
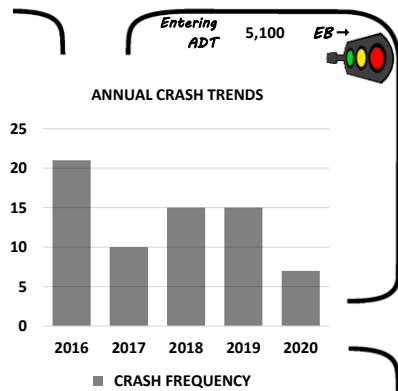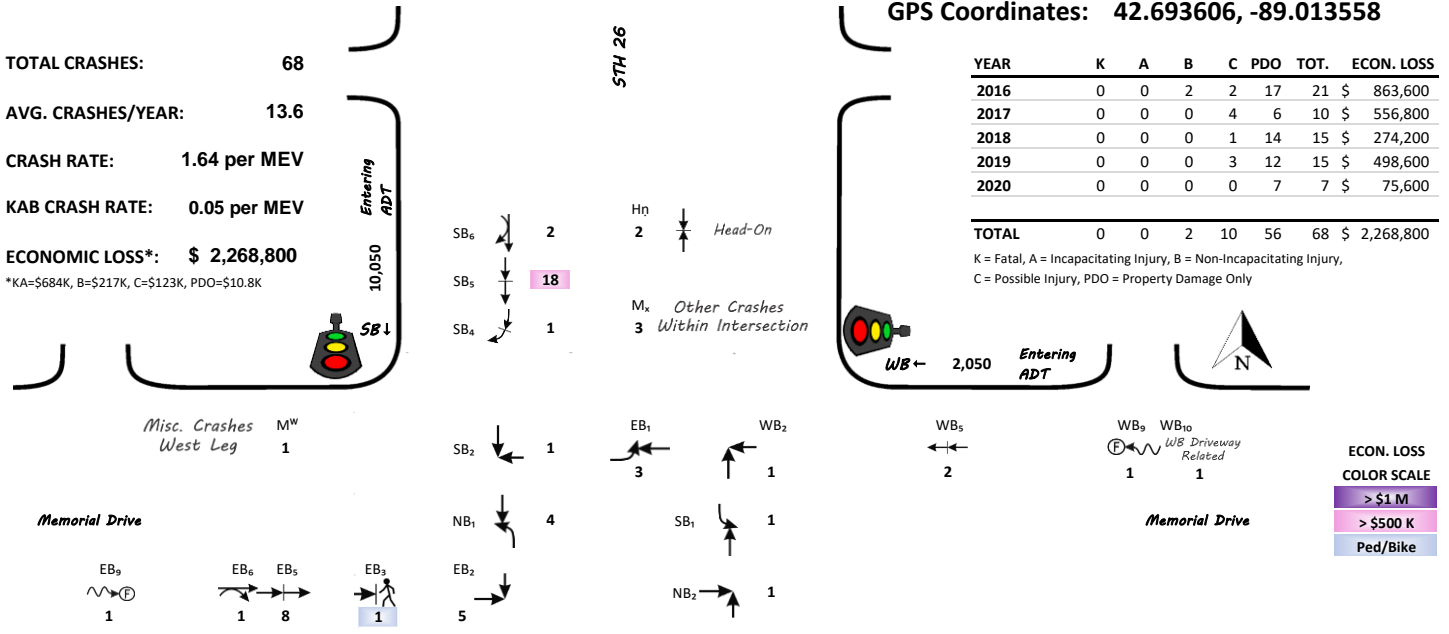
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	1	0	7	8	$ 292,600
RT-ANGLE	0	0	0	1	7	8	$ 198,600
PEDESTRIAN	0	0	0	1	0	1	$ 123,000
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	0	1	5	25	31	$ 1,102,000
SIDE-SWIPE-SAME	0	0	0	0	8	8	$ 86,400
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	2	2	$ 21,600
DRIVEWAY-RELATED	0	0	0	1	2	3	$ 144,600
HEAD-ON	0	0	0	1	1	2	$ 133,800
MISC. OTHER	0	0	0	1	3	4	$ 155,400
TOTAL	0	0	2	10	56	68	$ 2,268,800

ANNUAL CRASH TRENDS

	2016	2017	2018	2019	2020
CRASH FREQUENCY	21	10	15	15	7

SB^d SB Driveway Related 1 STH 26 NB_{10} NB Driveway Related 1

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	46	68%	DAY	55	81%	ALCOHOL	1	1%	SPRING	14	21%	NB	0	0%	NB	0	0%	OTHER/UNK.	6	5%
WET	12	18%	DARK	13	19%	DRUGS	2	3%	SUMMER	12	18%	SB	0	0%	SB	2	3%	NONE	4	3%
SNOW	9	13%	TOT.	68		SPEED	9	13%	FALL	20	29%	EB	1	1%	EB	0	0%	VERY MINOR	5	4%
ICE	1	1%							WINTER	22	32%	WB	0	0%	WB	0	0%	MINOR	44	34%
OTH.	0	0%							TOT.	68		TBD	5	7%	TBD	6	9%	MODERATE	44	34%
TOT.	68											TBD	5	7%	TOT.	8	12%	SEVERE	27	21%

NOTES:
Injury crashes have been vetted. EB Ped was a bike in the crosswalk.

FAILURE TO YIELD TOT. 6 9%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE:
VERY SEVERE 0 0%
TOTAL VEHICLES 130

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	1	2	0	0	0	0	0	1	0	MON	9
TUE	0	0	0	0	0	0	0	0	0	3	1	2	1	1	0	1	0	1	1	0	0	2	0	0	0	TUE	13
WED	0	0	0	0	0	0	1	1	0	0	1	1	0	1	1	1	2	2	0	2	0	0	0	0	0	WED	13
THU	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	1	1	2	0	0	0	0	0	0	THU	8
FRI	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	2	1	2	3	0	0	0	0	0	FRI	13
SAT	0	0	0	0	0	0	0	0	1	0	0	2	0	2	0	0	0	0	1	1	1	0	0	0	0	SAT	8
SUN	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	SUN	4
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	0	0	0	0	0	0	1	1	1	6	4	7	1	6	4	8	6	7	5	6	1	3	0	1	0	TOT.	68

Crash Data

Corresponds to Collision Diagram

Location:	STH 26 & Memorial Drive	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Traffic Signal	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	22,700	**5**	**Years**
Area Type:	Urban	**0**	**Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	LW943TG	6/3/2016	LT-ANGLE	3 PM	B						
2	EB₁	LW943TH	6/9/2016	LT-ANGLE	6 PM		WET					
3	EB₁	LW92MGK	10/3/2016	LT-ANGLE	9 AM							
4	EB₂	CML18F2KS5	3/7/2017	RT-ANGLE	10 AM							
5	EB₂	CML19T1TKX	6/10/2018	RT-ANGLE	11 AM		WET					EBL Improper turn
6	EB₂	CML19426XC	2/26/2019	RT-ANGLE	9 PM	C		DARK				SB ran red
7	EB₂	CML19LVN4S	4/10/2019	RT-ANGLE	3 PM							
8	EB₂	CML1BFKD8V	1/27/2020	RT-ANGLE	11 PM		WET	DARK	Y			SB ran red
9	EB₃	CML120GSFW	9/4/2019	PEDESTRIAN	7 PM	C		DARK				Bike - against light
10	EB₆	LW943T4	4/1/2016	REAR-END	6 PM							
11	EB₆	LW9GH32	6/9/2016	REAR-END	11 AM		WET					
12	EB₆	LW9TL65	7/23/2016	REAR-END	3 PM							
13	EB₆	LW9MNLG	9/30/2016	REAR-END	7 PM			DARK				
14	EB₆	LW9MNLK	10/6/2016	REAR-END	6 PM							
15	EB₆	LW9MNLQ	10/11/2016	REAR-END	11 AM							
16	EB₆	CML18F2LBW	10/3/2018	REAR-END	10 AM							
17	EB₆	CML1BFKD97	2/27/2020	REAR-END	9 AM							
18	EB₆	LW9GH2H	5/17/2016	SIDE-SWIPE-SAME	6 PM							
19	EB₉	CML17MLVN1	1/9/2017	FIXED-OBJECT	5 PM		SNOW	DARK				
20	Mʷ	CML18F2LF8	4/16/2019	MISC. OTHER	12 PM							2 Backing out drive
21	WB₂	CML19LVN1L	7/31/2018	RT-ANGLE	9 AM							
22	WB₅	LW9PW3H	12/6/2016	REAR-END	9 PM	C		DARK				
23	WB₅	CML11R2KSG	4/26/2019	REAR-END	2 PM							
24	WB₉	CML18TDXWM	4/29/2020	FIXED-OBJECT	1 PM		WET				Y	
25	WB₁₀	CML17GNQ7P	6/7/2017	DRIVEWAY-RELATED	5 PM							Backing out drive
26	NB₁	CML19426RX	2/3/2018	LT-ANGLE	8 PM		SNOW	DARK			Y	
27	NB₁	CML19V8VNV	8/17/2018	LT-ANGLE	4 PM							
28	NB₁	CML1BFKD72	9/4/2019	LT-ANGLE	5 PM					Y		
29	NB₁	CML1B9V91J	10/22/2020	LT-ANGLE	4 PM		WET					
30	NB₂	LW9MNHF	4/6/2016	RT-ANGLE	7 AM		WET					
31	NB₅	CML18F2KZL	3/27/2018	REAR-END	5 PM							
32	NB₅	CML18F2LDH	1/27/2019	REAR-END	10 AM		ICE					
33	NB₅	CML18L0QFF	1/28/2019	REAR-END	5 PM		SNOW				Y	
34	NB₆	CML179QKVL	9/25/2017	SIDE-SWIPE-SAME	1 PM							
35	NB₆	CMLD8NGSFQ	1/5/2018	SIDE-SWIPE-SAME	11 AM							
36	NB₆	CML1C22XZ0	9/5/2018	SIDE-SWIPE-SAME	4 PM		WET					
37	NB₆	CML1B3P3B6	12/25/2018	SIDE-SWIPE-SAME	9 AM							
38	NB₆	CML18L0QGT	7/10/2019	SIDE-SWIPE-SAME	4 PM							
39	NB₁₀	CML19LVN2R	11/8/2018	DRIVEWAY-RELATED	5 PM			DARK				Backing out drive
40	SB₁	CML1BFKD7Q	11/6/2019	LT-ANGLE	7 PM		WET	DARK				
41	SB₂	LWC72NW	6/14/2016	RT-ANGLE	11 AM							
42	SB₄	LW92MHC	12/10/2016	RT-TURN REAR-END	7 PM		SNOW	DARK			Y	
43	SB₅	LW9GH1S	4/19/2016	REAR-END	3 PM		WET					
44	SB₅	LW9MNKG	8/17/2016	REAR-END	6 AM	B	WET	DAY				
45	SB₅	LW9MNKT	9/2/2016	REAR-END	1 PM							
46	SB₅	LW9MNMN	12/31/2016	REAR-END	10 AM					Y		
47	SB₅	CML18368VZ	2/14/2017	REAR-END	9 AM	C						Slow on green
48	SB₅	CML18F2KW6	10/9/2017	REAR-END	3 PM	C						Slow on green
49	SB₅	CML1884FD8	12/30/2017	REAR-END	1 PM							
50	SB₅	CML18F2KXD	12/30/2017	REAR-END	3 PM	C	SNOW					
51	SB₅	CML19426SR	4/24/2018	REAR-END	1 PM	C						
52	SB₅	CML19LVN1R	8/9/2018	REAR-END	8 AM							
53	SB₅	CML18F2LBV	9/28/2018	REAR-END	4 PM							
54	SB₅	CML18F2LC4	10/5/2018	REAR-END	6 PM			DAY				
55	SB₅	CML18F2LC5	10/5/2018	REAR-END	7 PM			DARK				
56	SB₅	CML0XVN03Z	1/23/2019	REAR-END	2 PM		WET					
57	SB₅	CML18F2LF6	4/10/2019	REAR-END	11 AM							
58	SB₅	CML18JRPDZ	12/23/2019	REAR-END	2 PM							
59	SB₅	CML18JRPFG	2/6/2020	REAR-END	3 PM							
60	SB₅	CML1BC3B67	11/6/2020	REAR-END	5 PM			DARK				
61	SB₆	CML18QXVQ8	9/1/2017	SIDE-SWIPE-SAME	7 PM					Y		
62	SB₆	CML1B2G286	10/21/2019	SIDE-SWIPE-SAME	3 PM							
63	SBᵈ	CML18F2KSN	4/8/2017	DRIVEWAY-RELATED	1 PM	C						SB rear S Leg
64	Hɴ	LW90DTQ	5/8/2016	HEAD-ON	9 AM							SB cross CL
65	Hɴ	CML184FB93	1/28/2019	HEAD-ON	4 PM	C	SNOW	DAY			Y	Cross CL-Snowy road
66	M*	LW9VBG2	12/16/2016	MISC. OTHER	2 PM	C	SNOW				Y	EBL-signal
67	M*	LW8ZNRK	12/17/2016	MISC. OTHER	9 PM		SNOW	DARK			Y	EBL-signal
68	M*	CML1BGSFCS	2/9/2020	MISC. OTHER	11 AM		SNOW				Y	EBL-snow, ice mound

A2.10 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location: USH 14 & Kennedy Road
Municipality: City of Janesville
County: Rock
Traffic Control: Traffic Signal

Duration
From: 1/1/2016 — 5 Years
To: 12/31/2020 — 0 Months
AADT: 26,950
Area Type: Urban
GPS Coordinates: 42.722699, -89.006063
MAP

TOTAL CRASHES: 46

AVG. CRASHES/YEAR: 9.2

CRASH RATE: 0.93 per MEV

KAB CRASH RATE: 0.06 per MEV

ECONOMIC LOSS*: $ 2,237,400
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	2	2	8	12	$ 766,400
2017	0	0	0	3	3	6	$ 401,400
2018	0	0	1	4	8	13	$ 795,400
2019	0	0	0	1	6	7	$ 187,800
2020	0	0	0	0	8	8	$ 86,400
TOTAL	0	0	3	10	33	46	$ 2,237,400

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Kennedy Road — SB_9 1, SB_6 1, $SB\downarrow$, SB_2 2, NB_1 7

USH 14 (west) — EB_9 1, EB_6 1, EB_5 5, EB_4 4

Entering ADT 1,650 (SB), 10,550 (EB), 11,400 (WB), 3,350 (NB)

$WB\leftarrow$ 11,400 Entering ADT

WB_5 4, WB_6 2, WB_9 2

USH 14 (east)

M^E Misc. Crashes East Leg 1

SB_1 1, NB_2 2, WB_1 6, P_x 1 Pedestrian (Other), NB_5 3

$NB\uparrow$

M^S Misc. Crashes South Leg 1

Kennedy Road — NB_9 1

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike
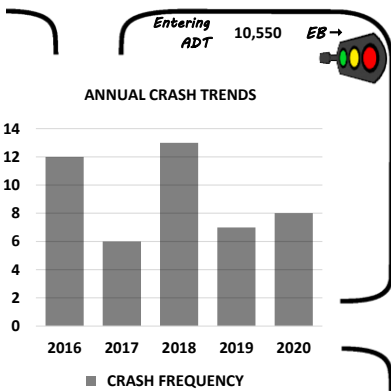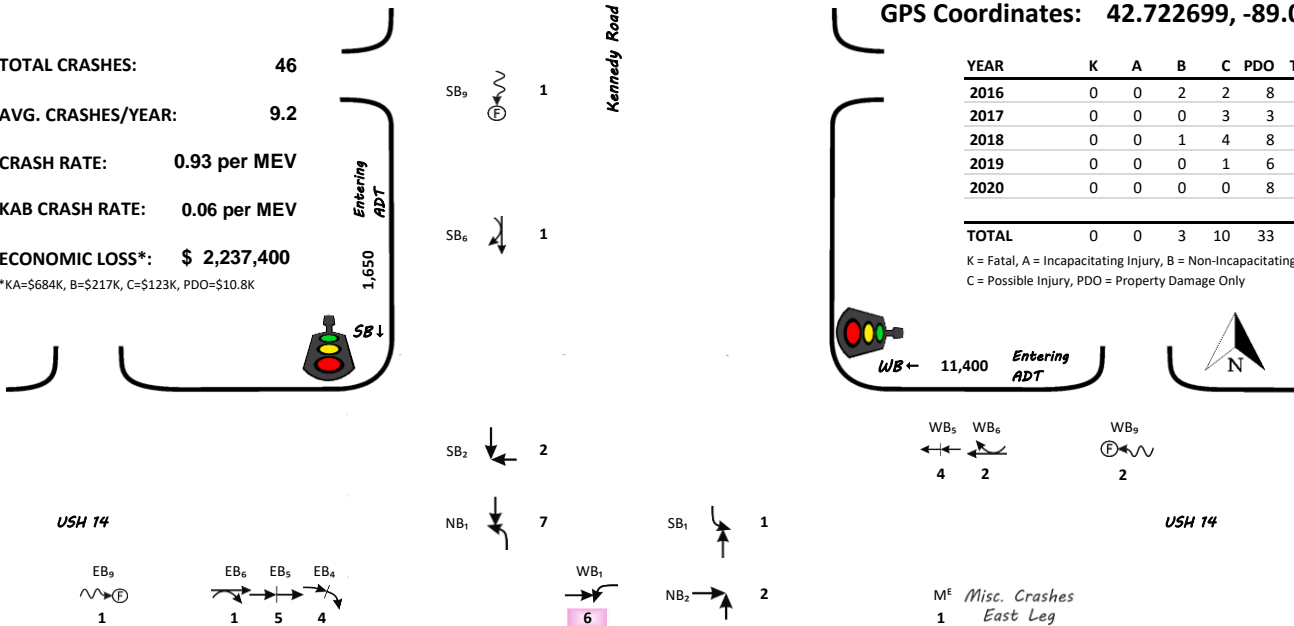
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	2	3	9	14	$ 900,200
RT-ANGLE	0	0	0	3	1	4	$ 379,800
PEDESTRIAN	0	0	1	0	0	1	$ 217,000
RT-TURN REAR-END	0	0	0	0	4	4	$ 43,200
REAR-END	0	0	0	3	9	12	$ 466,200
SIDE-SWIPE-SAME	0	0	0	0	4	4	$ 43,200
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	5	5	$ 54,000
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	1	1	2	$ 133,800
TOTAL	0	0	3	10	33	46	$ 2,237,400

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	12
2017	6
2018	13
2019	7
2020	8

CRASH FREQUENCY

ROAD CONDITIONS
DRY	32	70%
WET	11	24%
SNOW	3	7%
ICE	0	0%
OTH.	0	0%
TOT.	46	

LIGHT CONDITIONS
DAY	39	85%
DARK	7	15%
TOT.	46	

DRIVER BEHAVIOR
ALCOHOL	1	2%
DRUGS	1	2%
SPEED	4	9%

SEASON
SPRING	9	20%
SUMMER	16	35%
FALL	10	22%
WINTER	11	24%
TOT.	46	

FAILURE TO YIELD
NB	3	7%
SB	0	0%
EB	1	2%
WB	4	9%
TBD	6	13%
TOT.	14	30%

DISRGRD. CONTROL
NB	0	0%
SB	0	0%
EB	0	0%
WB	2	4%
TBD	1	2%
TOT.	3	7%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	4	5%
NONE	8	9%
VERY MINOR	1	1%
MINOR	17	20%
MODERATE	36	42%
SEVERE	18	21%
VERY SEVERE	1	1%
TOTAL VEHICLES	85	

NOTES: Injury crashes have been vetted. Other Ped was ped walking along road south side of east leg - struck by wrong way vehicle.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	2	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	MON	6
TUE	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	1	0	0	0	1	0	0	0	TUE	7
WED	0	0	1	0	0	0	0	0	0	1	0	1	1	2	0	1	0	0	1	1	0	0	0	0	0	WED	9
THU	0	0	0	0	0	0	0	3	0	1	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	THU	8
FRI	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	2	0	3	1	0	0	0	0	0	0	FRI	11
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	SAT	3
SUN	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	SUN	2
TOT.	0	0	1	0	0	1	0	5	3	2	2	2	6	5	1	4	2	7	2	1	0	1	1	0	0	TOT.	46

Crash Data

Corresponds to Collision Diagram

Location:	USH 14 & Kennedy Road	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Traffic Signal	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	26,950	5	Years
Area Type:	Urban	0	Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₄	CML086WD70	1/3/2018	RT-TURN REAR-END	1 PM							
2	EB₄	CML18QXVVR	10/24/2018	RT-TURN REAR-END	6 PM							
3	EB₄	CML19KMM3R	6/25/2019	RT-TURN REAR-END	5 PM							
4	EB₄	CML1BDBC6F	8/3/2020	RT-TURN REAR-END	12 PM							
5	EB₅	LW9GH73	12/18/2016	REAR-END	12 PM		SNOW				Y	
6	EB₅	CML19N3P51	8/28/2018	REAR-END	3 PM	C	WET				Y	
7	EB₅	CML19N3PHJ	1/17/2020	REAR-END	1 PM							RR arm came down
8	EB₅	CML1B9V91S	11/16/2020	REAR-END	12 PM							
9	EB₅	CML1B9V921	12/7/2020	REAR-END	7 AM							
10	EB₆	LW9VBFF	10/19/2016	SIDE-SWIPE-SAME	7 PM			DARK				
11	EB₆	LW9QM9R	8/30/2016	FIXED-OBJECT	4 PM		WET					
12	WB₁	LW9GH48	7/21/2016	LT-ANGLE	5 PM	B						On yellow-red
13	WB₁	LW9SL9D	8/11/2016	LT-ANGLE	7 AM							
14	WB₁	LW9H788	12/28/2016	LT-ANGLE	1 PM	B						View obscured
15	WB₁	CML184FB1F	3/28/2017	LT-ANGLE	8 AM	C						WB FTY
16	WB₁	CML18S5WTT	9/8/2017	LT-ANGLE	12 PM							
17	WB₁	CML18F2LFN	6/5/2019	LT-ANGLE	3 PM							On yellow-red
18	WB₅	CML184FB58	6/21/2018	REAR-END	2 PM		WET			Y		Semi roll back
19	WB₅	CML189CGLR	6/22/2018	REAR-END	3 PM	C	WET					
20	WB₅	CML184FB5X	7/20/2018	REAR-END	5 PM		WET					
21	WB₅	CML19LVN6R	11/30/2019	REAR-END	1 PM	C	WET					Stopped for train
22	WB₆	LW9GH10	3/1/2016	SIDE-SWIPE-SAME	9 PM		SNOW	DARK				
23	WB₆	CML18QXVZK	1/15/2020	SIDE-SWIPE-SAME	9 AM		WET					
24	WB₉	CML19N3P3T	3/22/2018	FIXED-OBJECT	7 AM							RR arm came down
25	WB₉	CML133SSG1	7/9/2020	FIXED-OBJECT	7 AM							RR arm came down
26	Mᴱ	CML18L0QCG	5/8/2018	MISC. OTHER	4 PM							SBL-NBR merge
27	NB₁	LWC72PK	9/21/2016	LT-ANGLE	12 PM	C	WET					NB FTY
28	NB₁	LW9PW39	11/18/2016	LT-ANGLE	5 AM			DARK				
29	NB₁	CML18L0Q8D	8/4/2017	LT-ANGLE	6 PM							
30	NB₁	CML08HJN07	12/23/2017	LT-ANGLE	5 PM	C		DARK				NB FTY
31	NB₁	CML18JRP88	7/6/2018	LT-ANGLE	5 PM							WBL-EBR SSS
32	NB₁	CML184FB91	1/25/2019	LT-ANGLE	5 PM		WET	DARK				
33	NB₁	CML18QXVX3	3/26/2019	LT-ANGLE	8 AM							
34	NB₂	LW9GH04	1/18/2016	RT-ANGLE	7 AM	C						RR vehicle on track
35	NB₂	CML1BFKD78	10/6/2019	RT-ANGLE	8 AM				Y			
36	NB₅	LW8ZNQ6	9/22/2016	REAR-END	5 PM							
37	NB₅	CML19426RC	12/29/2017	REAR-END	3 PM		SNOW				Y	
38	NB₅	CML19T1TL1	7/12/2018	REAR-END	9 AM							
39	NB₉	CML19LVN76	1/9/2020	FIXED-OBJECT	10 AM		WET					RR arm came down
40	M₅	CML18F2KZ9	3/3/2018	MISC. OTHER	10 PM	C		DARK				NB cross CL-SSO
41	SB₁	LW9GH5S	10/24/2016	LT-ANGLE	10 AM							
42	SB₂	CML19426NH	3/6/2017	RT-ANGLE	11 AM	C	WET					WB ran red
43	SB₂	CML19KMLX2	5/16/2018	RT-ANGLE	11 AM	C						WB ran red
44	SB₆	CML184FBBB	4/5/2019	SIDE-SWIPE-SAME	1 PM							
45	SB₉	CML1BDBC5Q	6/12/2020	FIXED-OBJECT	12 PM							
46	Pₓ	CML184FB5N	7/4/2018	PEDESTRIAN	2 AM	B		DARK	Y			Wrong way-Ped
47												
48												
49												
50												

(Ref # rows 51–200 are blank.)

A2.11 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	USH 51/Parker Drive & STH 26/Centerway Street	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	18,300 MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.686372, -89.024755

Duration

TOTAL CRASHES: 27

AVG. CRASHES/YEAR: 5.4

CRASH RATE: 0.81 per MEV

KAB CRASH RATE: 0.09 per MEV

ECONOMIC LOSS*: $ 2,050,400
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

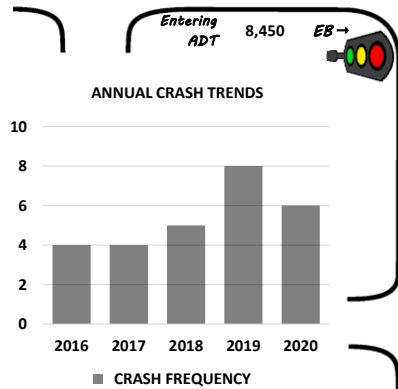| YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	4	4	$ 43,200
2017	0	1	1	2	0	4	$ 1,147,000
2018	0	0	0	0	5	5	$ 54,000
2019	0	0	1	3	4	8	$ 629,200
2020	0	0	0	1	5	6	$ 177,000
TOTAL	0	1	2	6	18	27	$ 2,050,400

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

USH 51/Parker Drive

Misc. Crashes North Leg — Mn 1

Entering ADT 5,150

SB 6   2
SB ↓

Misc. Crashes West Leg — M W 1

USH 51/STH 26

SB 2   2   EB 1   3   WB 2   2
NB 1   2   SB 1   1
EB 5   3   EB 2   1   WB 1   1

Entering ADT 8,450   EB →

Px 1
Pedestrian (Other)
NB 5   1

WB ← 3,700 Entering ADT

WB 5 WB 6
4   1

STH 26/Centerway Street

EB d
EB Driveway Related
1

N

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

NB ↑   Entering ADT 1,000

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	4
2017	4
2018	5
2019	8
2020	6

■ CRASH FREQUENCY

Parker Drive
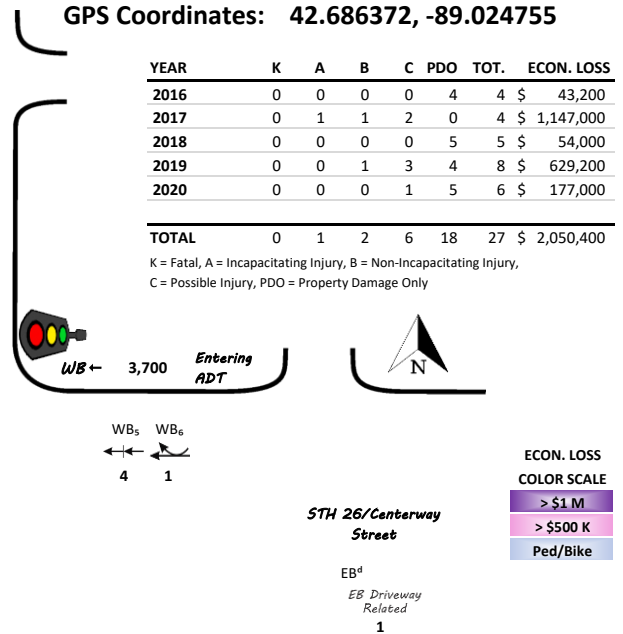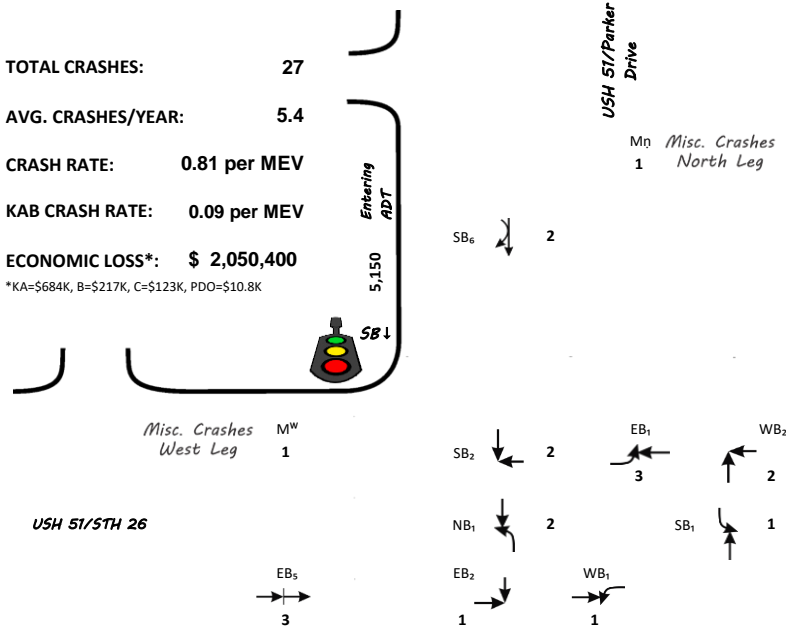
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	1	2	4	7	$ 506,200
RT-ANGLE	0	0	1	2	2	5	$ 484,600
PEDESTRIAN	0	1	0	0	0	1	$ 684,000
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	1	7	8	$ 198,600
SIDE-SWIPE-SAME	0	0	0	0	3	3	$ 32,400
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	1	0	1	$ 123,000
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	2	2	$ 21,600
TOTAL	0	1	2	6	18	27	$ 2,050,400

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			FAILURE TO YIELD			DISRGRD. CONTROL			VEHICLE DAMAGE		
DRY	18	67%	DAY	23	85%	ALCOHOL	1	4%	SPRING	4	15%	NB	1	4%	NB	0	0%	OTHER/UNK.	0	0%
WET	4	15%	DARK	4	15%	DRUGS	1	4%	SUMMER	6	22%	SB	1	4%	SB	0	0%	NONE	3	6%
SNOW	5	19%	TOT.	27		SPEED	5	19%	FALL	4	15%	EB	1	4%	EB	0	0%	VERY MINOR	0	0%
ICE	0	0%							WINTER	13	48%	WB	1	4%	WB	2	7%	MINOR	17	33%
OTH.	0	0%							TOT.	27		TBD	2	7%	TBD	2	7%	MODERATE	20	38%
TOT.	27											TOT.	6	22%	TOT.	4	15%	SEVERE	12	23%

TBD = verification from crash report needed for direction

VERY SEVERE	0	0%
TOTAL VEHICLES	52	

NOTES:
Injury crashes have been vetted. Other Ped was on north leg crossing mid-block.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	MON	3
TUE	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	TUE	6
WED	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	WED	6
THU	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	THU	1
FRI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	FRI	5
SAT	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SAT	2
SUN	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	SUN	4
TOT.	0	0	0	0	1	0	1	1	1	0	3	1	1	3	3	4	4	0	1	1	1	1	0	0	0	**TOT.**	27

Crash Data

Corresponds to Collision Diagram

Location:	USH 51/Parker Drive & STH 26/Centerway Street	**From:**	1/1/2016	
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**
County:	Rock	**AADT:**	18,300	5 Years
Traffic Control:	Traffic Signal	**Area Type:**	Urban	0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB$_1$	CML19426QG	10/25/2017	LT-ANGLE	4 PM	C						EB FTY
2	EB$_1$	CML19T1TPK	2/11/2020	LT-ANGLE	1 PM							
3	EB$_1$	CML1BSNQ79	8/26/2020	LT-ANGLE	3 PM							
4	EB$_2$	CML0D7W13N	1/17/2018	RT-ANGLE	2 PM							
5	EB$_5$	CML1B3P3BG	2/19/2019	REAR-END	2 PM							
6	EB$_5$	CML1B3P3C0	8/9/2019	REAR-END	2 PM							
7	EB$_5$	CML19T1TNV	9/3/2019	REAR-END	12 PM							
8	EB^d	CML184FBBH	4/15/2019	DRIVEWAY-RELATED	4 PM	C						EB rear
9	M^w	CML19T1TJV	3/5/2018	MISC. OTHER	6 PM		SNOW			Y		Slid on snowy road
10	WB$_1$	CML19426NC	2/21/2017	LT-ANGLE	3 PM	B			Y			WB FTY
11	WB$_1$	CML18F2KRN	1/21/2017	RT-ANGLE	10 AM	C	WET					WB ran red
12	WB$_2$	CML18F2LDS	2/10/2019	RT-ANGLE	1 PM	C	SNOW			Y		WB slid into Int
13	WB$_5$	LW9H75R	5/25/2016	REAR-END	7 AM							
14	WB$_5$	LW9QMB3	12/16/2016	REAR-END	3 PM		SNOW			Y		
15	WB$_5$	LW9VBG5	12/23/2016	REAR-END	7 PM		SNOW	DARK		Y		
16	WB$_5$	CML19RSSN3	6/28/2020	REAR-END	4 PM	C						Fell asleep
17	WB$_6$	CML1B8M7VN	12/15/2020	SIDE-SWIPE-SAME	3 PM							
18	NB$_1$	LW9MNJJ	6/15/2016	LT-ANGLE	10 AM							NBL-SBR
19	NB$_1$	CML19426X8	2/26/2019	LT-ANGLE	4 PM	C	WET					On yellow
20	NB$_5$	CML133SSGC	8/24/2020	REAR-END	1 PM							
21	SB$_1$	CML18L0QCW	6/10/2018	LT-ANGLE	8 AM		WET					
22	SB$_2$	CML185NC7N	2/11/2018	RT-ANGLE	6 AM		SNOW	DAY		Y		WB slid thru Int
23	SB$_2$	CML19N3P60	2/27/2019	RT-ANGLE	10 AM	B	WET					WB ran red
24	SB$_6$	KRL125DXXN	3/9/2018	SIDE-SWIPE-SAME	9 PM			DARK	Y			
25	SB$_6$	CML19N3PHN	1/30/2020	SIDE-SWIPE-SAME	11 AM							
26	M$_n$	CML120GSGB	11/23/2019	MISC. OTHER	4 AM			DARK				EBL-improper turn
27	P$_x$	CML18S5WTX	9/22/2017	PEDESTRIAN	8 PM	A		DARK				SBT-Ped Mid block
28												
29–100												
101–200												

A2.12 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	Main Street & Racine Street	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	13,200
Traffic Control:	Traffic Signal	**Area Type:**	Urban
		GPS Coordinates:	42.677275, -89.016218

Duration

MAP

TOTAL CRASHES: 24

AVG. CRASHES/YEAR: 4.8

CRASH RATE: 1.00 per MEV

KAB CRASH RATE: 0.21 per MEV

ECONOMIC LOSS*: $ 1,869,400
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	3	3	$ 32,400
2017	0	1	1	0	2	4	$ 922,600
2018	0	0	1	0	4	5	$ 260,200
2019	0	0	0	1	5	6	$ 177,000
2020	0	0	2	0	4	6	$ 477,200
TOTAL	0	1	4	1	18	24	$ 1,869,400

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Main Street — NB, NB_d Driveway Related 1

Entering ADT 3,350

SB_6 1
SB_5 2
$SB \downarrow$

M_x Other Crashes Within Intersection 1

NB_o (pedestrian) 1

$WB \leftarrow$ 3,850 Entering ADT

N

WB^d WB Driveway Related 1

Racine Street

SB_2 1 EB_1 1

WB_4 1 WB_5 3 WB_6 2

SB_1 1

Racine Street

ECON. LOSS COLOR SCALE

| > $1 M |
| > $500 K |
| Ped/Bike |

EB_5 1 EB_2 1 WB_1 1

EB^d EB Driveway Related 1

Entering ADT 3,300 $EB \rightarrow$

ANNUAL CRASH TRENDS

Year	Crashes
2016	3
2017	4
2018	5
2019	6
2020	6

■ CRASH FREQUENCY

Misc. Crashes South Leg M_s 1

$NB \uparrow$ Entering ADT 2,700

NB_6 1
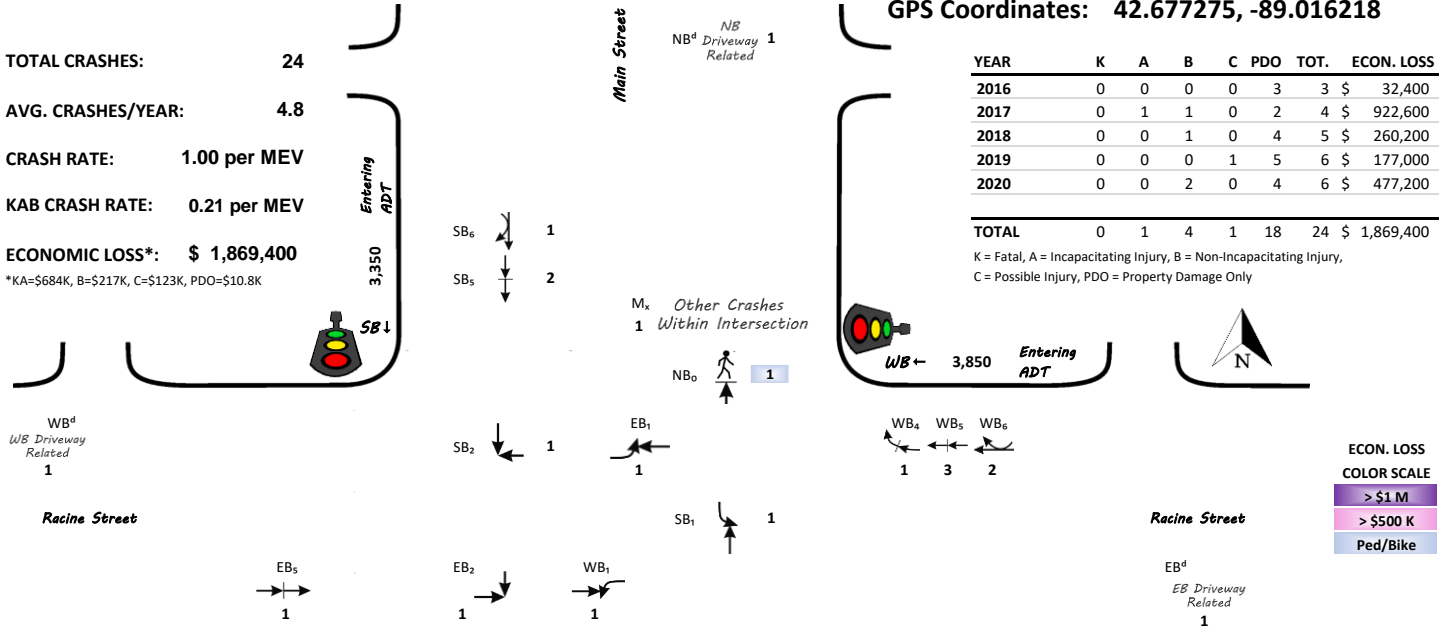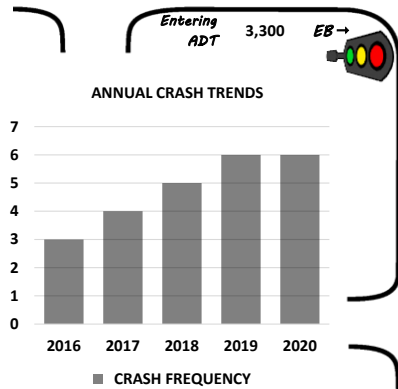
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	2	0	1	3	$ 444,800
RT-ANGLE	0	0	1	1	0	2	$ 340,000
PEDESTRIAN	0	0	1	0	0	1	$ 217,000
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	0	0	0	6	6	$ 64,800
SIDE-SWIPE-SAME	0	0	0	0	4	4	$ 43,200
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	5	5	$ 54,000
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	1	0	0	1	2	$ 694,800
TOTAL	0	1	4	1	18	24	$ 1,869,400

Main Street — NB, NB_{10} Driveway Related 2

ROAD CONDITIONS
DRY	17	71%
WET	5	21%
SNOW	1	4%
ICE	1	4%
OTH.	0	0%
TOT.	24	

LIGHT CONDITIONS
DAY	23	96%
DARK	1	4%
TOT.	24	

DRIVER BEHAVIOR
ALCOHOL	1	4%
DRUGS	0	0%
SPEED	1	4%

SEASON
SPRING	6	25%
SUMMER	4	17%
FALL	9	38%
WINTER	5	21%
TOT.	24	

FAILURE TO YIELD
NB	0	0%
SB	0	0%
EB	1	4%
WB	1	4%
TBD	2	8%
TOT.	4	17%

DISRGRD. CONTROL
NB	0	0%
SB	1	4%
EB	1	4%
WB	1	4%
TBD	0	0%
TOT.	3	13%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	0	0%
NONE	0	0%
VERY MINOR	2	4%
MINOR	16	35%
MODERATE	17	37%
SEVERE	11	24%
VERY SEVERE	0	0%
TOTAL VEHICLES	46	

NOTES:
Injury crashes have been vetted. NB ped is bike in crosswalk.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	MON	4
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	TUE	3
WED	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	WED	5
THU	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	THU	3
FRI	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	FRI	4
SAT	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	SAT	1
SUN	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	SUN	4
TOT.	0	0	0	0	1	0	0	1	3	0	0	0	4	4	0	4	2	3	0	1	0	0	1	0	0	**TOT.**	24

Crash Data

Corresponds to Collision Diagram

Location:	Main Street & Racine Street
Municipality:	City of Janesville
County:	Rock
Traffic Control:	Traffic Signal

From:	1/1/2016
To:	12/31/2020
AADT:	13,200
Area Type:	Urban

Duration

5 Years
0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	LW9H75N	5/4/2016	LT-ANGLE	7 PM							
2	EB₂	CML1884FBG	1/27/2017	RT-ANGLE	12 PM	B						SB ran red
3	EB₅	LW9H761	7/7/2016	REAR-END	3 PM							
4	EBᵈ	LW92MH4	11/23/2016	DRIVEWAY-RELATED	1 PM		WET					EB rear E Leg
5	WB₁	CML1BDBC6P	8/18/2020	LT-ANGLE	5 PM	B						
6	WB₄	CML19T1TR7	12/28/2020	RT-TURN REAR-END	8 AM		ICE				Y	
7	WB₅	CML18JRP7B	2/12/2018	REAR-END	4 PM		SNOW					
8	WB₅	CML18JRP95	10/26/2018	REAR-END	8 AM							
9	WB₅	CML1BC3B6V	12/17/2020	REAR-END	3 PM							
10	WB₆	CML18JRP8W	10/9/2018	SIDE-SWIPE-SAME	1 PM							
11	WB₆	CML19N3PJZ	10/11/2020	SIDE-SWIPE-SAME	3 PM							Changing lanes
12	WBᵈ	CML18F2LFF	5/1/2019	DRIVEWAY-RELATED	12 PM							SB-WBT
13	NB₀	CML189CGLN	5/27/2018	PEDESTRIAN	1 PM	B						Bike in crosswalk
14	NB₆	CML19RSSHR	10/28/2019	SIDE-SWIPE-SAME	12 PM		WET					NB wide right turn
15	NB₁₀	CML18QXVXF	4/29/2019	DRIVEWAY-RELATED	4 PM							WB-NBT
16	NB₁₀	CML1B8M7RS	10/4/2019	DRIVEWAY-RELATED	7 AM							WB-NBT
17	NBᵈ	CML17GNQ9D	10/18/2017	DRIVEWAY-RELATED	5 PM							NB rear N Leg
18	M₅	CML17GNQ7K	5/17/2017	MISC. OTHER	10 PM	A	WET	DARK	Y			SB fixed on S Leg
19	SB₁	CML1BW4SFM	9/28/2020	LT-ANGLE	5 PM	B	WET					WBL on yellow-red
20	SB₂	CML121PTK8	12/21/2019	RT-ANGLE	1 PM	C						WB ran red
21	SB₅	CML19N3PFR	8/27/2019	REAR-END	3 PM							
22	SB₅	CML19KMM6J	6/12/2020	REAR-END	12 PM							Pull ahead on green
23	SB₆	CML17GNQ99	10/12/2017	SIDE-SWIPE-SAME	8 AM		WET					SBL went straight
24	Mₓ	CML1B2G272	3/24/2019	MISC. OTHER	4 AM			DAY				SB signal Mid Int
25												
26												
27												
28												
29												
30												
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50												
51–100												
101–200												

A2.13 Intersection Collision Diagram

Duration

Location:	Black Bridge Road & Randall Avenue
Municipality:	City of Janesville
County:	Rock
Traffic Control:	All-Way Stop

From:	1/1/2016	5 Years
To:	12/31/2020	0 Months
AADT:	7,650	MAP
Area Type:	Urban	
GPS Coordinates:	42.704296, -89.003280	

TOTAL CRASHES: 23

AVG. CRASHES/YEAR: 4.6

CRASH RATE: 1.65 per MEV

KAB CRASH RATE: 0.07 per MEV

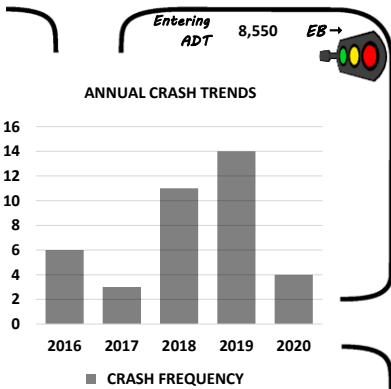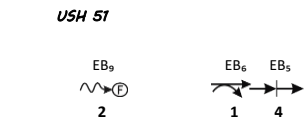**ECONOMIC LOSS*:** $ 1,819,200
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	1	0	3	2	6	$ 1,074,600
2017	0	0	0	0	2	2	$ 21,600
2018	0	0	0	3	5	8	$ 423,000
2019	0	0	0	2	5	7	$ 300,000
2020	0	0	0	0	0	0	$ -
TOTAL	0	1	0	8	14	23	$ 1,819,200

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Randall Avenue

Entering ADT 2,950 — SB↓ — STOP

STOP — WB← — 1,000 — Entering ADT

N

Misc. Crashes West Leg M^W 1

SB₂ 7

WB₂ 1

Black Bridge Road — Head-On H^W 1

NB₁ 2

EB₅ 2

EB₂ 4

NB₂ 3

Black Bridge Road

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

Entering ADT 1,000 — EB→ — STOP

NB↑ — STOP

NB₅ 1

Misc. Crashes South Leg M^S 1

Entering ADT 2,700
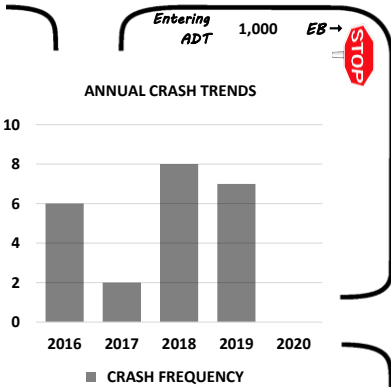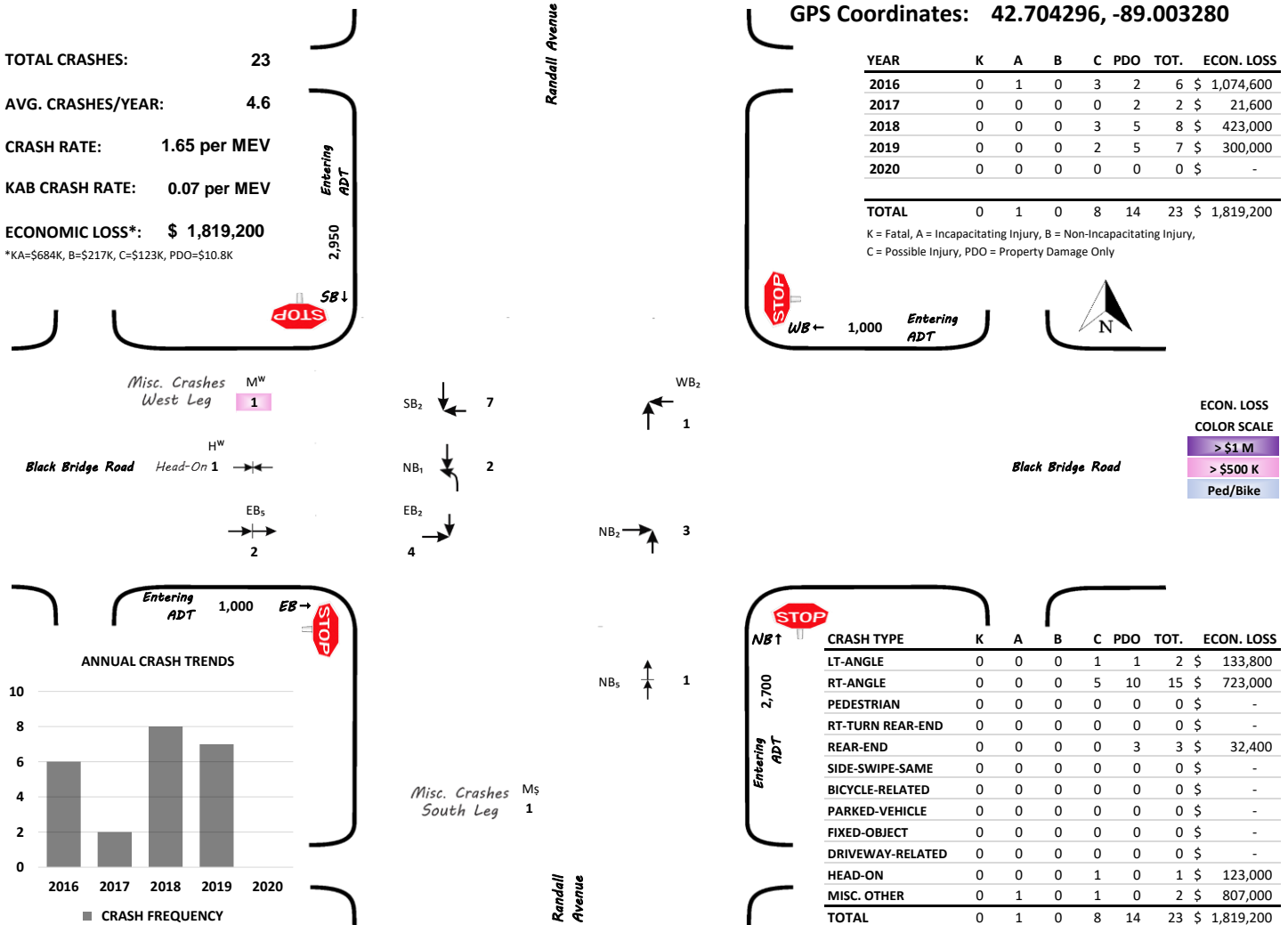
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	1	1	2	$ 133,800
RT-ANGLE	0	0	0	5	10	15	$ 723,000
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	0	3	3	$ 32,400
SIDE-SWIPE-SAME	0	0	0	0	0	0	$ -
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	1	0	1	$ 123,000
MISC. OTHER	0	1	0	1	0	2	$ 807,000
TOTAL	0	1	0	8	14	23	$ 1,819,200

Randall Avenue

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	6
2017	2
2018	8
2019	7
2020	0

■ CRASH FREQUENCY

ROAD CONDITIONS
DRY	20	87%
WET	3	13%
SNOW	0	0%
ICE	0	0%
OTH.	0	0%
TOT.	23	

LIGHT CONDITIONS
DAY	16	70%
DARK	7	30%
TOT.	23	

DRIVER BEHAVIOR
ALCOHOL	0	0%
DRUGS	0	0%
SPEED	1	4%

SEASON
SPRING	5	22%
SUMMER	8	35%
FALL	4	17%
WINTER	6	26%
TOT.	23	

FAILURE TO YIELD
NB	1	4%
SB	1	4%
EB	0	0%
WB	0	0%
TBD	11	48%
TOT.	13	57%

DISRGRD. CONTROL
NB	1	4%
SB	1	4%
EB	1	4%
WB	1	4%
TBD	2	9%
TOT.	6	26%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	2	4%
NONE	0	0%
VERY MINOR	0	0%
MINOR	7	15%
MODERATE	24	52%
SEVERE	13	28%
VERY SEVERE	0	0%
TOTAL VEHICLES	46	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	MON	5
TUE	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	TUE	1
WED	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	WED	5
THU	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	THU	2
FRI	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	2	0	0	0	0	0	0	FRI	5
SAT	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	SAT	3
SUN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	SUN	2
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	1	0	0	0	0	0	0	1	1	1	3	2	2	0	1	0	1	2	5	0	3	0	0	0	0	TOT.	23

Crash Data

Corresponds to Collision Diagram

Location:	Black Bridge Road & Randall Avenue	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	All-Way Stop	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	7,650	**5**	**Years**
Area Type:	Urban	**0**	**Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₂	LW82NR8	12/6/2016	RT-ANGLE	4 PM							
2	EB₂	CML1B2G271	3/20/2019	RT-ANGLE	10 AM	C						EB ran stop
3	EB₂	CML1B2G27T	8/29/2019	RT-ANGLE	8 PM			DARK				
4	EB₂	CML18JRPDQ	12/2/2019	RT-ANGLE	8 PM			DARK				
5	EB₃	CML18L0QBL	3/11/2018	REAR-END	12 AM			DARK				
6	EB₃	CML18JRP8Q	9/21/2018	REAR-END	11 AM			DARK		Y		
7	Mʷ	LW9MNJD	6/6/2016	MISC. OTHER	10 AM	A						NBL swerve miss SBT
8	Hʷ	CML18QXVZ9	12/11/2019	HEAD-ON	8 PM	C		DARK				NBL-EB stopped
9	WB₂	LW92MHJ	12/29/2016	RT-ANGLE	7 AM	C						NB FTY
10	NB₁	LW95L99	7/30/2016	LT-ANGLE	11 AM							
11	NB₁	CML19KMLX3	6/4/2018	LT-ANGLE	12 PM	C						
12	NB₂	CML18F2KWK	11/17/2017	RT-ANGLE	6 PM		WET	DARK				
13	NB₂	CML19KMLWZ	5/14/2018	RT-ANGLE	9 AM		WET					
14	NB₂	CML18L0QD6	8/24/2018	RT-ANGLE	2 PM	C						NB ran stop
15	NB₃	CML19RSSJN	3/30/2019	REAR-END	5 PM							
16	M₅	CML18F2KZJ	3/19/2018	MISC. OTHER	6 PM	C						SB rear-S Leg
17	SB₂	LW9MNKV	9/2/2016	RT-ANGLE	6 PM	C		DAY				WB ran stop
18	SB₂	LW8ZNRX	12/30/2016	RT-ANGLE	10 AM	C						SB ran stop
19	SB₂	CML086WD6W	12/30/2017	RT-ANGLE	12 PM		WET					
20	SB₂	CML18F2LB6	7/15/2018	RT-ANGLE	6 PM							
21	SB₂	CML19RSSGQ	7/18/2018	RT-ANGLE	6 PM							
22	SB₂	CML19KMM43	7/24/2019	RT-ANGLE	8 AM							SB FTY
23	SB₂	CML19KMM5J	11/20/2019	RT-ANGLE	5 PM			DARK				

63

A2.14 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	USH 51 & Main Street	**From:**	1/1/2016	5 Years
Municipality:	City of Janesville	**To:**	12/31/2020	0 Months
County:	Rock	**AADT:**	19,350	MAP
Traffic Control:	Traffic Signal	**Area Type:**	Urban	

Duration

GPS Coordinates: 42.685802, -89.025671

TOTAL CRASHES: 38

AVG. CRASHES/YEAR: 7.6

CRASH RATE: 1.08 per MEV

KAB CRASH RATE: 0.06 per MEV

ECONOMIC LOSS*: $ 1,738,600
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	6	6	$ 64,800
2017	0	0	0	0	3	3	$ 32,400
2018	0	0	1	1	9	11	$ 437,200
2019	0	0	0	3	11	14	$ 487,800
2020	0	1	0	0	3	4	$ 716,400
TOTAL	0	1	1	4	32	38	$ 1,738,600

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Main Street

Entering ADT 250

SB↓

WB← 8,450 Entering ADT

N

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

USH 51

SB_2 ← 1 EB_1 ⤵ 2 WB_2 ⤴ 3 WB_5 ← WB_6 ⬅ 8 4

NB_1 ⤵ 1

EB_9 〰️Ⓕ 2 EB_6 ↗ EB_5 → 1 4 EB_2 ↘ 1 WB_1 → 2 NB_2 ↗ 4

M^E Misc. Crashes East Leg 1

Entering ADT 8,550 EB→

ANNUAL CRASH TRENDS

	2016	2017	2018	2019	2020
CRASH FREQUENCY	6	3	11	14	4

NB_5 ↕ 1

NB_6 ⬆ 2

NB↑

Entering ADT 2,100

Main Street NB_9 〰️Ⓕ 1
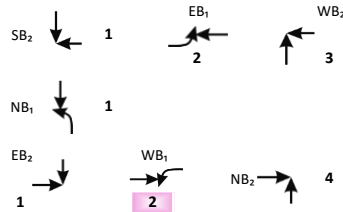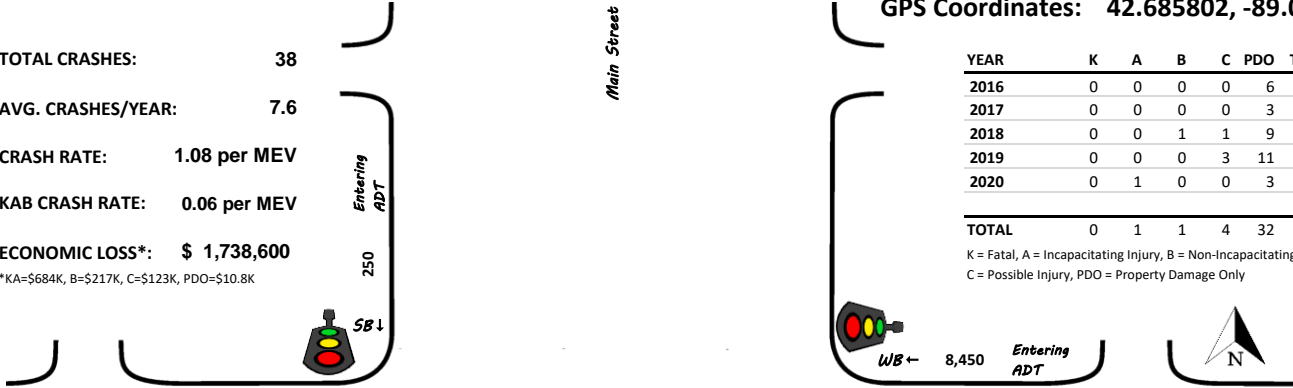
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	1	0	0	4	5	$ 727,200
RT-ANGLE	0	0	0	3	6	9	$ 433,800
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	1	1	11	13	$ 458,800
SIDE-SWIPE-SAME	0	0	0	0	7	7	$ 75,600
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	3	3	$ 32,400
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	1	1	$ 10,800
TOTAL	0	1	1	4	32	38	$ 1,738,600

ROAD CONDITIONS
DRY	25	66%
WET	10	26%
SNOW	3	8%
ICE	0	0%
OTH.	0	0%
TOT.	38	

LIGHT CONDITIONS
DAY	32	84%
DARK	6	16%
TOT.	38	

DRIVER BEHAVIOR
ALCOHOL	0	0%
DRUGS	0	0%
SPEED	3	8%

SEASON
SPRING	6	16%
SUMMER	6	16%
FALL	10	26%
WINTER	16	42%
TOT.	38	

FAILURE TO YIELD
NB	0	0%
SB	0	0%
EB	1	3%
WB	1	3%
TBD	8	21%
TOT.	10	26%

DISRGRD. CONTROL
NB	0	0%
SB	0	0%
EB	2	5%
WB	1	3%
TBD	2	5%
TOT.	5	13%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	0	0%
NONE	3	4%
VERY MINOR	0	0%
MINOR	33	47%
MODERATE	19	27%
SEVERE	15	21%
VERY SEVERE	0	0%
TOTAL VEHICLES	70	

NOTES:
Injury crashes have been vetted with crash reports.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	2	0	0	0	0	0	0	0	MON	7
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	TUE	2
WED	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	1	1	0	0	1	0	0	0	0	WED	7
THU	0	0	0	0	0	0	0	1	1	0	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	THU	6
FRI	0	0	0	0	0	0	0	0	0	0	2	2	0	0	1	0	1	1	1	0	2	0	0	0	0	FRI	10
SAT	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	SAT	2
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	SUN	4
TOT.	0	0	0	0	0	0	0	1	1	2	3	3	0	4	6	4	3	6	1	1	3	0	0	0	0	**TOT.**	38

Crash Data

Corresponds to Collision Diagram

Location:	USH 51 & Main Street	**From:**	1/1/2016
Municipality:	City of Janesville	**To:**	12/31/2020
County:	Rock	**AADT:**	19,350
Traffic Control:	Traffic Signal	**Area Type:**	Urban

Duration

5 Years

0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB₁	LW9L64V	12/23/2016	LT-ANGLE	6 PM		SNOW	DARK				
2	EB₁	CML19T1TNS	8/30/2019	LT-ANGLE	4 PM							
3	EB₂	CML18F2LDW	2/23/2019	RT-ANGLE	9 AM	C	WET					EB ran red
4	EB₅	CML18F2KZ8	2/23/2018	REAR-END	11 AM	B	WET					
5	EB₅	CML19426V8	8/23/2018	REAR-END	3 PM							
6	EB₅	6RL0T32KV6	1/28/2019	REAR-END	2 PM		WET					
7	EB₅	CML1B3P3BG	2/19/2019	REAR-END	2 PM							
8	EB₆	CML1884FG3	8/24/2018	SIDE-SWIPE-SAME	8 PM		WET	DARK				
9	EB₈	LWC72PT	12/12/2016	FIXED-OBJECT	5 PM		SNOW	DARK				
10	EB₉	CML18F2LCZ	12/28/2019	FIXED-OBJECT	8 PM		WET	DARK			Y	Bridge barrier
11	WB₁	CML1BLVN63	9/9/2019	LT-ANGLE	1 PM							WB FTY
12	WB₁	KRL0H5JN07	5/7/2020	LT-ANGLE	7 PM	A					Y	EB speeding
13	WB₂	CML185NC7C	1/29/2018	RT-ANGLE	3 PM							
14	WB₂	CML18L0QJ9	12/15/2019	RT-ANGLE	1 PM							
15	WB₂	CML1B2G291	1/15/2020	RT-ANGLE	9 AM		WET					
16	WB₅	LW9MNGB	1/9/2016	REAR-END	5 PM		SNOW	DARK			Y	
17	WB₅	LW9MNH6	3/17/2016	REAR-END	7 AM							
18	WB₅	CML1C22XW0	4/5/2017	REAR-END	8 PM		WET	DARK				
19	WB₅	CML18F2KXS	1/25/2018	REAR-END	8 AM		WET					
20	WB₅	CML184FB71	9/24/2018	REAR-END	3 PM							
21	WB₅	CML18F2LBQ	9/26/2018	REAR-END	5 PM							
22	WB₅	CML1B7D6P8	1/31/2019	REAR-END	2 PM	C						
23	WB₅	CML1BFKD6S	6/19/2019	REAR-END	4 PM							Slowing to turn left
24	WB₆	LW92MFD	5/5/2016	SIDE-SWIPE-SAME	2 PM							
25	WB₆	CML18QXVTW	7/1/2018	SIDE-SWIPE-SAME	5 PM							
26	WB₆	CML18F2LD7	1/16/2019	SIDE-SWIPE-SAME	10 AM							
27	WB₆	CML19QKRD4	10/18/2019	SIDE-SWIPE-SAME	5 PM							
28	Mᴱ	CML1B2G29G	2/14/2020	MISC. OTHER	11 AM							EB rear E Leg
29	NB₁	CML18F2LBZ	10/3/2018	LT-ANGLE	1 PM							
30	NB₂	CML18F2KW4	10/1/2017	RT-ANGLE	4 PM							
31	NB₂	CML18JRP63	11/20/2017	RT-ANGLE	1 PM							
32	NB₂	CML18L0QCD	5/4/2018	RT-ANGLE	10 AM	C	WET					EB ran red
33	NB₂	CML18L0QJ1	11/13/2019	RT-ANGLE	11 AM							
34	NB₅	CML1B2G27J	7/16/2019	REAR-END	2 PM							
35	NB₆	LW9MNLF	9/30/2016	SIDE-SWIPE-SAME	2 PM							
36	NB₆	CML18L0QJK	1/26/2020	SIDE-SWIPE-SAME	3 PM		WET					
37	NB₉	CML19RSSL4	10/7/2019	FIXED-OBJECT	5 PM							
38	SB₂	CML18JRPBF	3/22/2019	RT-ANGLE	10 AM	C						WB ran red
39												
40												
...												
100												

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
101												
102												
...												
200												

A2.15 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Location:	Milwaukee Street & Morningside Drive	**From:**	1/1/2016 5 Years (Duration)
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	9,600 MAP
Traffic Control:	Minor Street Stop	**Area Type:**	Urban
		GPS Coordinates:	42.698284, -88.979226

TOTAL CRASHES: 23

AVG. CRASHES/YEAR: 4.6

CRASH RATE: 1.31 per MEV

KAB CRASH RATE: 0.11 per MEV

ECONOMIC LOSS*: $ 1,670,600
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	2	4	6	$ 289,200
2017	0	0	0	0	1	1	$ 10,800
2018	0	0	1	3	2	6	$ 607,600
2019	0	0	0	3	4	7	$ 412,200
2020	0	0	1	1	1	3	$ 350,800
TOTAL	0	0	2	9	12	23	$ 1,670,600

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Morningside Drive

Entering ADT 500

SB₆ 1
SB₅ 5
SB₄ 1
SB↓
STOP

Misc. Crashes West Leg Mᵂ 1

SB₂ 3   EB₁ 2   WB₂ 1   WB₅ 2

WB← 4,300 Entering ADT

N

Milwaukee Street   Milwaukee Street

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

EB₅ 2   EB₂ 2   WB₁ 1   NB₂ 1   EB₀ 1

Entering ADT 4,300 EB→

NB↑ STOP
Entering ADT 500
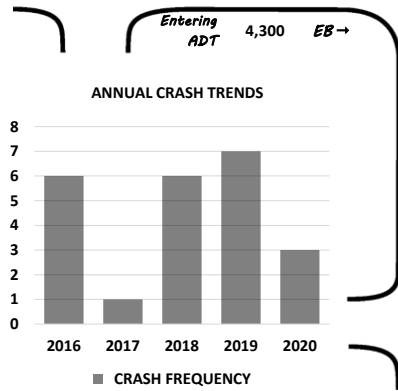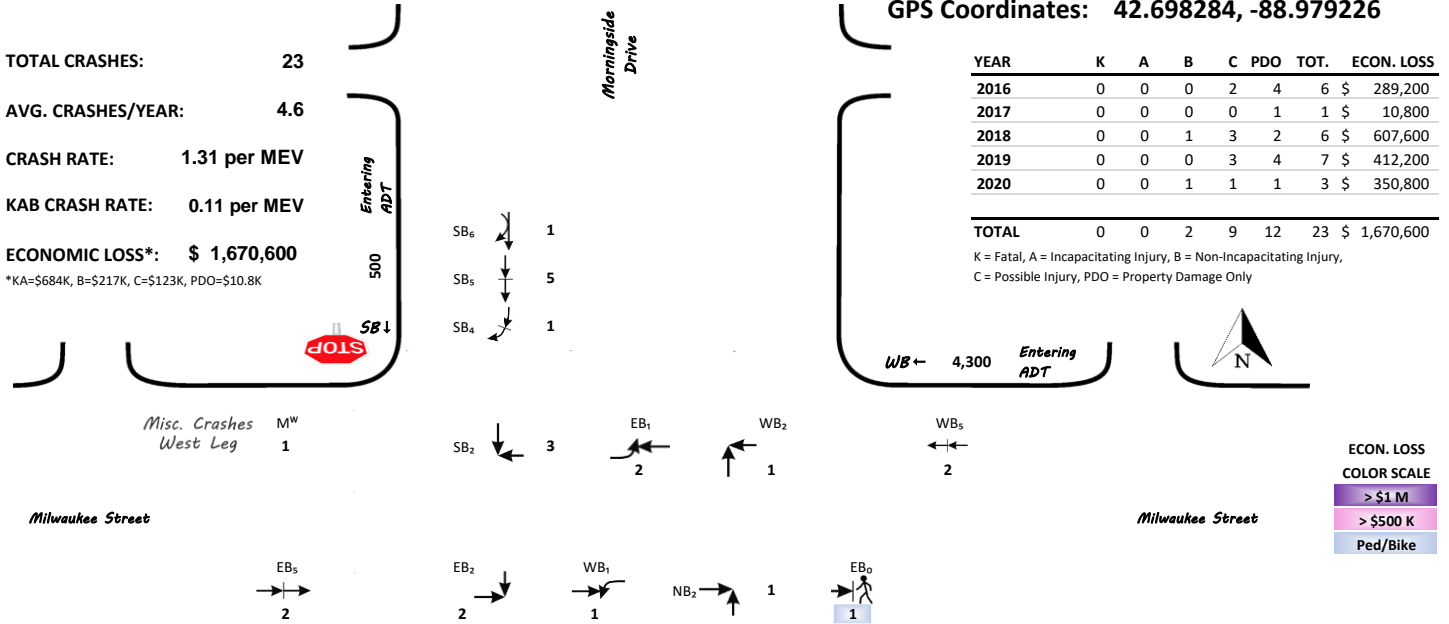
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	2	1	3	$ 256,800
RT-ANGLE	0	0	1	4	2	7	$ 730,600
PEDESTRIAN	0	0	1	0	0	1	$ 217,000
RT-TURN REAR-END	0	0	0	1	0	1	$ 123,000
REAR-END	0	0	0	2	7	9	$ 321,600
SIDE-SWIPE-SAME	0	0	0	0	1	1	$ 10,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	1	1	$ 10,800
TOTAL	0	0	2	9	12	23	$ 1,670,600

ANNUAL CRASH TRENDS

Bar chart — CRASH FREQUENCY:
- 2016: 6
- 2017: 1
- 2018: 6
- 2019: 7
- 2020: 3

Morningside Drive

ROAD CONDITIONS
DRY	17	74%
WET	4	17%
SNOW	1	4%
ICE	1	4%
OTH.	0	0%
TOT.	23	

LIGHT CONDITIONS
DAY	21	91%
DARK	2	9%
TOT.	23	

DRIVER BEHAVIOR
ALCOHOL	1	4%
DRUGS	0	0%
SPEED	1	4%

SEASON
SPRING	5	22%
SUMMER	9	39%
FALL	5	22%
WINTER	4	17%
TOT.	23	

FAILURE TO YIELD
NB	1	4%
SB	3	13%
EB	1	4%
WB	1	4%
TBD	5	22%
TOT.	11	48%

DISRGRD. CONTROL
NB	0	0%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	0	0%
TOT.	0	0%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	0	0%
NONE	1	2%
VERY MINOR	3	7%
MINOR	12	28%
MODERATE	15	35%
SEVERE	12	28%
VERY SEVERE	0	0%
TOTAL VEHICLES	43	

NOTES:
Injury crashes have been vetted. EB Ped is SBL-Ped in cross.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	MON	4
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	TUE	5
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	WED	2
THU	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	1	0	0	1	0	0	0	0	0	0	THU	5
FRI	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	FRI	3
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	SAT	2
SUN	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	SUN	2
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	0	0	0	0	0	0	0	0	0	0	2	3	2	3	1	4	2	2	2	1	0	0	0	1	0	TOT.	23

Crash Data

Corresponds to Collision Diagram

Location:	Milwaukee Street & Morningside Drive	**From:**	1/1/2016	
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**
County:	Rock	**AADT:**	9,600	5 Years
Traffic Control:	Minor Street Stop	**Area Type:**	Urban	0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB$_0$	CML1B8M7V0	9/25/2020	PEDESTRIAN	11 AM	B						SBL-Ped in cross
2	EB$_1$	LW90DWG	9/6/2016	LT-ANGLE	1 PM	C						
3	EB$_1$	CML19KMM34	5/15/2019	LT-ANGLE	4 PM							
4	EB$_2$	CML19KMLZP	8/30/2018	RT-ANGLE	12 PM	C						EB FTY
5	EB$_2$	CML1BC3B5D	8/24/2020	RT-ANGLE	10 AM	C						SBL-EBT
6	EB$_3$	LWC72MW	1/14/2016	REAR-END	3 PM		WET					
7	EB$_3$	LW9GH2R	5/24/2016	REAR-END	1 PM	C						
8	M^W	CML18L0QSFDK	7/23/2020	MISC. OTHER	10 AM			DAY				WB fixed W Leg
9	WB$_1$	CML18L0QBW	3/23/2018	LT-ANGLE	2 PM	C						
10	WB$_2$	CML18QXVV8	9/2/2018	RT-ANGLE	11 AM	C						NB did not see WB
11	WB$_3$	CML18L0QDV	12/27/2018	REAR-END	7 PM		WET	DARK				
12	WB$_3$	CML19KMM3J	6/10/2019	REAR-END	3 PM							
13	NB$_2$	CML18TDXWG	8/23/2019	RT-ANGLE	11 AM	C						NB did not see EB
14	SB$_2$	LW9VBDQ	6/4/2016	RT-ANGLE	11 PM			DARK	Y			
15	SB$_2$	CML184FB6N	9/2/2018	RT-ANGLE	6 PM	B	WET	DAY				SB rolled thru stop
16	SB$_2$	CML19LVN3X	1/29/2019	RT-ANGLE	5 PM		ICE	DAY				
17	SB$_4$	CML19RSSK4	6/10/2019	RT-TURN REAR-END	6 PM	C						Pull ahead, stop
18	SB$_5$	LW9BRS4	1/11/2016	REAR-END	3 PM		SNOW			Y		
19	SB$_5$	LW90DT3	3/31/2016	REAR-END	12 PM		WET					
20	SB$_5$	CML191L4FP	6/19/2018	REAR-END	1 PM							
21	SB$_5$	CML11GFB1N	6/15/2019	REAR-END	4 PM							
22	SB$_5$	CML18JRPDJ	11/13/2019	REAR-END	3 PM	C						Pull ahead, stop
23	SB$_6$	CML17BZLWQ	3/21/2017	SIDE-SWIPE-SAME	5 PM							

A2.16 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	Harmony Drive & Milwaukee Street	**From:** 1/1/2016 — 5 Years
Municipality:	City of Janesville	**To:** 12/31/2020 — 0 Months
County:	Rock	**AADT:** 10,100 — MAP
Traffic Control:	Traffic Signal	**Area Type:** Urban

GPS Coordinates: 42.692711, -88.997050

TOTAL CRASHES: 30

AVG. CRASHES/YEAR: 6.0

CRASH RATE: 1.63 per MEV

KAB CRASH RATE: 0.16 per MEV

ECONOMIC LOSS*: $ 1,615,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

Harmony Drive

Entering ADT 1,150

SB9 ⌇ Ⓕ 2
SB5 ↓ 1
SB↓
WB^d — WB Driveway Related — 2
SB2 ← 3
NB_o 🚶 1
WB2 ↑ 1
WB← 4,050 — Entering ADT
WB5 ← WB6 ↖ — 7 — 3

Milwaukee Street

N

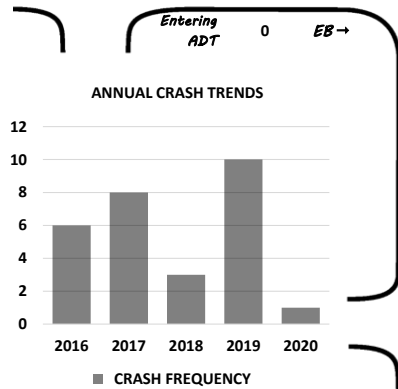| YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	1	1	3	5	$ 372,400
2017	0	0	0	1	5	6	$ 177,000
2018	0	0	1	2	5	8	$ 517,000
2019	0	0	0	1	5	6	$ 177,000
2020	0	0	1	1	3	5	$ 372,400
TOTAL	0	0	3	6	21	30	$ 1,615,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

EB6 ↙ EB5 ↔ — 1 — 2
EB2 ↘ 5
WB1 ↱ 1
NB2 → 1

Entering ADT 3,750 — EB →

NB↑ — Entering ADT 1,150

Harmony Drive

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	5
2017	6
2018	8
2019	6
2020	5

■ CRASH FREQUENCY
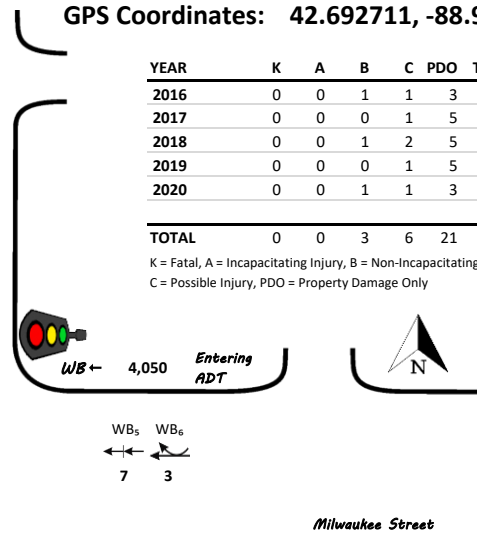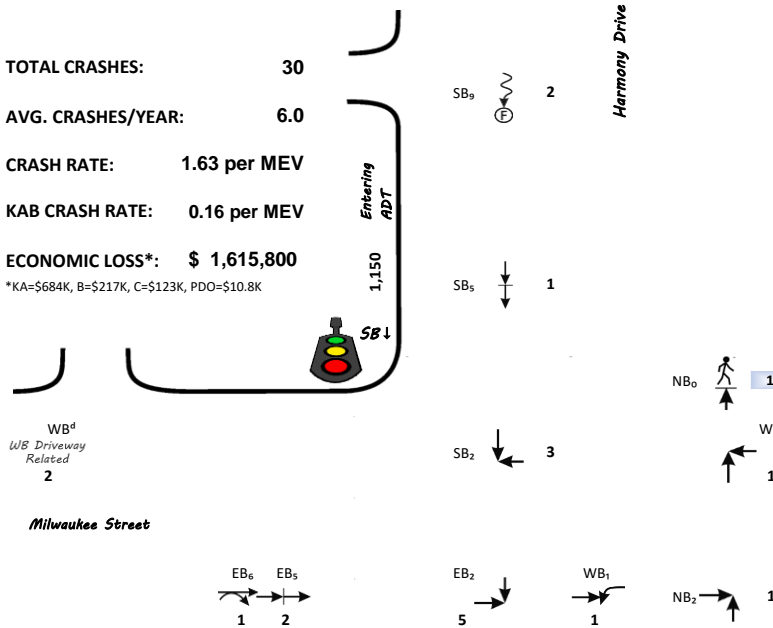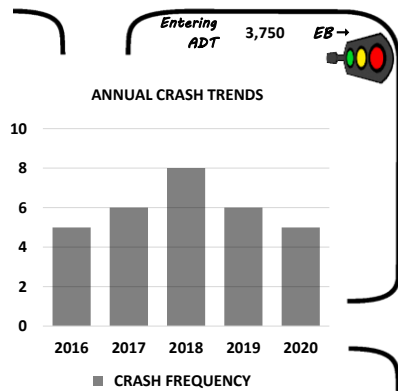
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	1	0	1	$ 123,000
RT-ANGLE	0	0	1	3	6	10	$ 650,800
PEDESTRIAN	0	0	1	0	0	1	$ 217,000
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	1	9	10	$ 220,200
SIDE-SWIPE-SAME	0	0	0	0	4	4	$ 43,200
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	2	2	$ 21,600
DRIVEWAY-RELATED	0	0	1	1	0	2	$ 340,000
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	0	0	$ -
TOTAL	0	0	3	6	21	30	$ 1,615,800

ROAD CONDITIONS
DRY	22	73%
WET	5	17%
SNOW	2	7%
ICE	1	3%
OTH.	0	0%
TOT.	30	

LIGHT CONDITIONS
DAY	24	80%
DARK	6	20%
TOT.	30	

DRIVER BEHAVIOR
ALCOHOL	2	7%
DRUGS	0	0%
SPEED	4	13%

SEASON
SPRING	6	20%
SUMMER	11	37%
FALL	6	20%
WINTER	7	23%
TOT.	30	

FAILURE TO YIELD
NB	0	0%
SB	0	0%
EB	0	0%
WB	2	7%
TBD	0	0%
TOT.	2	7%

DISRGRD. CONTROL
NB	0	0%
SB	1	3%
EB	2	7%
WB	1	3%
TBD	5	17%
TOT.	9	30%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	0	0%
NONE	1	2%
VERY MINOR	0	0%
MINOR	21	38%
MODERATE	18	32%
SEVERE	16	29%
VERY SEVERE	0	0%
TOTAL VEHICLES	56	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	MON	5
TUE	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	2	0	0	0	0	1	0	0	0	TUE	6
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	WED	4
THU	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	THU	5
FRI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	0	FRI	4
SAT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	SAT	3
SUN	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	SUN	3
TOT.	0	0	0	0	0	0	0	1	3	0	0	4	1	1	1	5	5	4	3	0	0	1	1	0	0	**TOT.**	30

Crash Data

Corresponds to Collision Diagram

TADI TRAFFIC ANALYSIS & DESIGN, INC.

Location:	Harmony Drive & Milwaukee Street	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Traffic Signal	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	10,100	5	Years
Area Type:	Urban	0	Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB2	LW92MFX	7/9/2016	RT-ANGLE	5 PM	B						EB could not stop
2	EB2	LW9H767	7/27/2016	RT-ANGLE	1 PM	C						On yellow-red
3	EB2	CML17BZLXZ	7/28/2017	RT-ANGLE	4 PM							
4	EB2	CML18SNC82	4/16/2018	RT-ANGLE	7 AM	C	WET				Y	EB slid thru red
5	EB2	CML1BFKD7G	10/27/2019	RT-ANGLE	3 PM							
6	EB6	CML18S5WSP	6/6/2017	REAR-END	11 AM							
7	EB6	CML18F2KT6	6/8/2017	REAR-END	8 AM							
8	EB6	LW9FQPX	10/8/2016	SIDE-SWIPE-SAME	11 AM							
9	WB1	CML18QXVS1	1/22/2018	LT-ANGLE	5 PM	C	WET	DARK				
10	WB2	CML1B000K1	8/22/2018	RT-ANGLE	2 PM							
11	WB5	LW90DX2	10/20/2016	REAR-END	6 PM			DARK				
12	WB5	LW9VBG4	12/19/2016	REAR-END	5 PM		SNOW	DAY			Y	
13	WB5	CML17BZLWP	3/21/2017	REAR-END	4 PM							
14	WB5	CML19LVN2J	10/30/2018	REAR-END	4 PM		WET				Y	
15	WB5	CML19V8VPJ	11/11/2018	REAR-END	11 AM					Y		
16	WB5	CML1B2G296	1/22/2020	REAR-END	3 PM							
17	WB5	CML1B8M7TF	7/13/2020	REAR-END	10 PM	C		DARK		Y		
18	WB6	CML179QKSX	3/30/2017	SIDE-SWIPE-SAME	3 PM		WET					
19	WB6	CML19KMLZF	8/17/2018	SIDE-SWIPE-SAME	3 PM							
20	WB6	CML19LVN55	6/15/2019	SIDE-SWIPE-SAME	4 PM							
21	WBd	CML18M7RBJ	7/6/2018	DRIVEWAY-RELATED	11 AM	B						WB rear W Leg
22	WBd	CML18L0QHF	9/29/2019	DRIVEWAY-RELATED	12 PM	C	WET					WB rear W Leg
23	NB0	CML1BZLVNJ	12/1/2020	PEDESTRIAN	9 PM	B		DARK				WBR-Ped in cross
24	NB2	CML19RSSGD	5/31/2018	RT-ANGLE	4 PM							
25	SB2	CML17GNQ7M	5/25/2017	RT-ANGLE	8 AM	C						SBL on yellow-red
26	SB2	CML19LVN3W	1/28/2019	RT-ANGLE	6 PM		SNOW	DARK			Y	
27	SB2	CML19LVN41	2/8/2019	RT-ANGLE	5 PM							
28	SB5	CML19N3P5W	2/6/2019	REAR-END	6 PM		ICE	DARK				
29	SB9	CML19LVN7T	5/26/2020	FIXED-OBJECT	8 AM							
30	SB9	CML1BFKD9W	7/21/2020	FIXED-OBJECT	3 PM							

A2.17 Intersection Collision Diagram

TADI TRAFFIC ANALYSIS & DESIGN, INC.

Location:	Garfield Avenue & Milwaukee Street	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Minor Street Stop	

Duration

From:	1/1/2016	5	Years
To:	12/31/2020	0	Months
AADT:	5,050		MAP
Area Type:	Urban		

GPS Coordinates: 42.687968, -89.012391

TOTAL CRASHES: 28

AVG. CRASHES/YEAR: 5.6

CRASH RATE: 3.04 per MEV

KAB CRASH RATE: 0.22 per MEV

ECONOMIC LOSS*: $ 1,500,200
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

Garfield Avenue

Entering ADT 1,570

STOP SB↓

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	6	6	$ 64,800
2017	0	0	1	2	5	8	$ 517,000
2018	0	0	0	2	1	3	$ 256,800
2019	0	0	1	3	6	10	$ 650,800
2020	0	0	0	0	1	1	$ 10,800
TOTAL	0	0	2	7	19	28	$ 1,500,200

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

WB ← 2,120 Entering ADT

N

SB₂ ↓ 3   EB₁ → 1   WB₂ ↑ 22   WB₆ ← 1

NB₂ → 1

ECON. LOSS COLOR SCALE
> $1 M
> $500 K
Ped/Bike

Milwaukee Street   Milwaukee Street

Entering ADT 0 EB →

NB↑ STOP NB↑ Entering ADT 1,360

ANNUAL CRASH TRENDS

Year	Crash Frequency
2016	6
2017	8
2018	3
2019	10
2020	1

■ CRASH FREQUENCY

Garfield Avenue
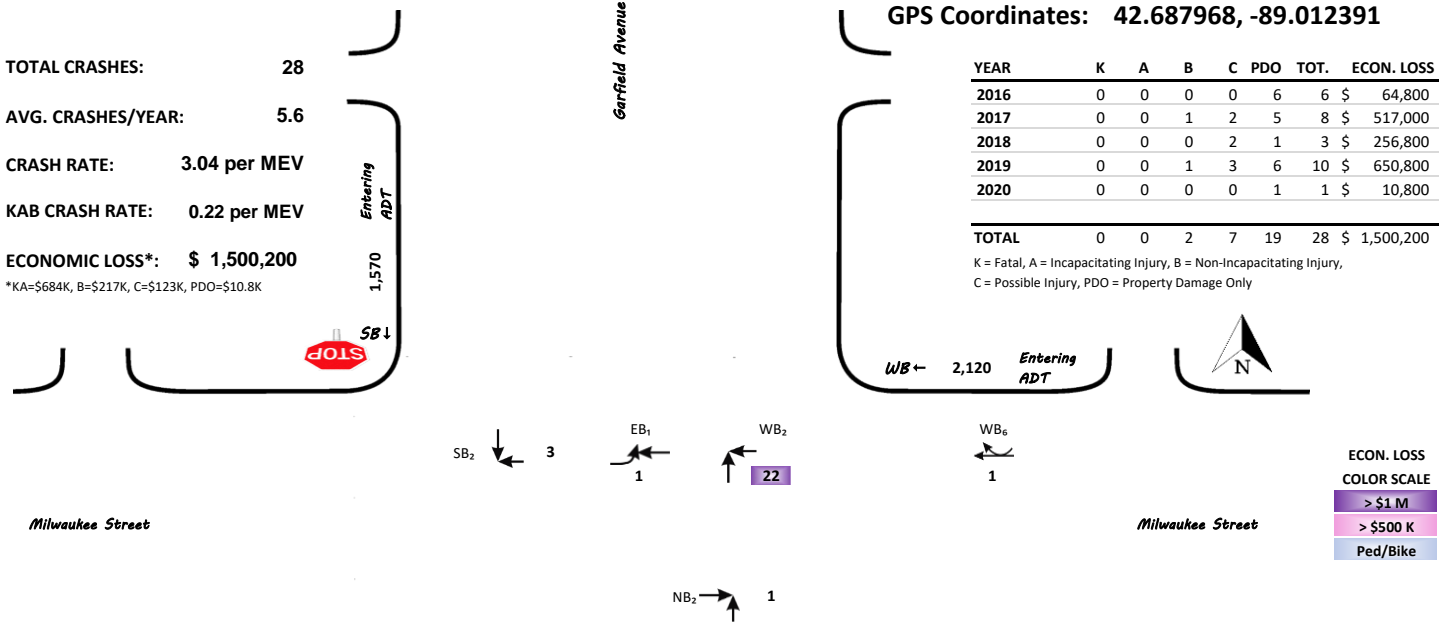
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	0	1	1	$ 10,800
RT-ANGLE	0	0	2	7	17	26	$ 1,478,600
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	0	0	0	$ -
SIDE-SWIPE-SAME	0	0	0	0	1	1	$ 10,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	0	0	$ -
TOTAL	0	0	2	7	19	28	$ 1,500,200

ROAD CONDITIONS
DRY	21	75%
WET	6	21%
SNOW	1	4%
ICE	0	0%
OTH.	0	0%
TOT.	28	

LIGHT CONDITIONS
DAY	23	82%
DARK	5	18%
TOT.	28	

DRIVER BEHAVIOR
ALCOHOL	2	7%
DRUGS	0	0%
SPEED	2	7%

SEASON
SPRING	8	29%
SUMMER	7	25%
FALL	8	29%
WINTER	5	18%
TOT.	28	

FAILURE TO YIELD
NB	8	29%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	16	57%
TOT.	24	86%

DISRGRD. CONTROL
NB	1	4%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	1	4%
TOT.	2	7%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	2	4%
NONE	0	0%
VERY MINOR	0	0%
MINOR	3	5%
MODERATE	18	32%
SEVERE	33	59%
VERY SEVERE	0	0%
TOTAL VEHICLES	56	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	2	0	0	0	1	0	0	2	1	0	0	1	0	0	0	0	0	0	MON	7
TUE	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	TUE	4
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	WED	3
THU	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	2	1	0	0	1	0	0	0	0	0	THU	7
FRI	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	FRI	3
SAT	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SAT	1
SUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	SUN	3
TOT.	0	0	0	0	0	0	1	2	1	1	1	2	0	1	5	5	1	1	5	0	1	1	0	0	0	**TOT.**	28

Crash Data

Corresponds to Collision Diagram

Location:	Garfield Avenue & Milwaukee Street
Municipality:	City of Janesville
County:	Rock
Traffic Control:	Minor Street Stop

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	5,050	5	Years
Area Type:	Urban	0	Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB$_1$	CML17BZLXW	7/11/2017	LT-ANGLE	9 PM		WET	DARK	Y			
2	WB$_2$	LW9MNGV	2/27/2016	RT-ANGLE	9 AM							
3	WB$_2$	LW95L8G	3/31/2016	RT-ANGLE	3 PM					Y		
4	WB$_2$	LW9GH34	6/9/2016	RT-ANGLE	8 PM		WET	DARK				
5	WB$_2$	LW9MNM8	11/21/2016	RT-ANGLE	7 AM							
6	WB$_2$	CML1C22XVZ	4/5/2017	RT-ANGLE	2 PM	C	WET					NB FTY
7	WB$_2$	CML17BZLX1	4/18/2017	RT-ANGLE	5 PM							
8	WB$_2$	CML18F2KST	5/4/2017	RT-ANGLE	3 PM	C						NB FTY
9	WB$_2$	CML101714G	9/17/2017	RT-ANGLE	3 PM							
10	WB$_2$	CML1884FD6	12/11/2017	RT-ANGLE	11 AM		WET					
11	WB$_2$	CML18QXVRV	1/3/2018	RT-ANGLE	2 PM	C	WET					NB FTY
12	WB$_2$	CML19LVN0Z	5/28/2018	RT-ANGLE	3 PM							
13	WB$_2$	CML19LVN1F	7/16/2018	RT-ANGLE	2 PM	C				Y		NB FTY
14	WB$_2$	CML11R2KS9	3/31/2019	RT-ANGLE	6 PM	C						NB FTY
15	WB$_2$	CML19LVN4M	3/31/2019	RT-ANGLE	6 PM	C						NB FTY
16	WB$_2$	CML19N3PF4	6/28/2019	RT-ANGLE	11 AM							
17	WB$_2$	CML19RSSKH	7/22/2019	RT-ANGLE	6 PM					Y		
18	WB$_2$	CML19KMM4P	9/5/2019	RT-ANGLE	8 AM							
19	WB$_2$	CML11R2KT2	10/17/2019	RT-ANGLE	6 AM			DARK				
20	WB$_2$	CML19N3PGH	10/17/2019	RT-ANGLE	4 PM	B						NB ran stop
21	WB$_2$	CML18L0QJ4	11/22/2019	RT-ANGLE	6 PM			DARK				
22	WB$_2$	CML19LVN74	12/31/2019	RT-ANGLE	6 PM	C	SNOW	DARK				NB FTY
23	WB$_2$	CML1B8M7TG	7/14/2020	RT-ANGLE	10 AM							
24	WB$_6$	LW90DXT	11/21/2016	SIDE-SWIPE-SAME	7 AM							
25	NB$_2$	CML17GNQ8H	8/2/2017	RT-ANGLE	2 PM	B						NB FTY
26	SB$_2$	LW92MCX	1/4/2016	RT-ANGLE	2 PM							
27	SB$_2$	CML18F2KSS	4/27/2017	RT-ANGLE	1 PM		WET					
28	SB$_2$	CML1BGSFC3	11/8/2019	RT-ANGLE	3 PM							

A2.18 Intersection Collision Diagram

TADI — TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	Harding Street & Memorial Drive	**From:** 1/1/2016 5 Years
Municipality:	City of Janesville	**To:** 12/31/2020 0 Months
County:	Rock	**AADT:** 11,760
Traffic Control:	Minor Street Stop	**Area Type:** Urban

GPS Coordinates: 42.693884, -89.025649   MAP

TOTAL CRASHES: 22

AVG. CRASHES/YEAR: 4.4

CRASH RATE: 1.02 per MEV

KAB CRASH RATE: 0.19 per MEV

ECONOMIC LOSS*: $ 1,399,000
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	1	3	4	$ 155,400
2017	0	0	0	1	2	3	$ 144,600
2018	0	0	0	1	5	6	$ 177,000
2019	0	0	1	0	4	5	$ 260,200
2020	0	0	3	0	1	4	$ 661,800
TOTAL	0	0	4	3	15	22	$ 1,399,000

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Harding Street

Entering ADT 500 SB↓ STOP

WB ← 5,100 Entering ADT   N

Mx **1** Other Crashes Within Intersection

WBd / WB Driveway Related / 1
WBo / 1
SB2 / 3
EB1 / 2
WB2 / 1
WB5 WB6 / 1 1

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

Memorial Drive

EB10 EB9 / EB Driveway Related / 3 1
EB4 / 1
EB2 / 1
WB1 / 2
NB2 / 1

ME **1** Misc. Crashes East Leg

Entering ADT 5,660 EB →

NB↑ STOP 500 Entering ADT
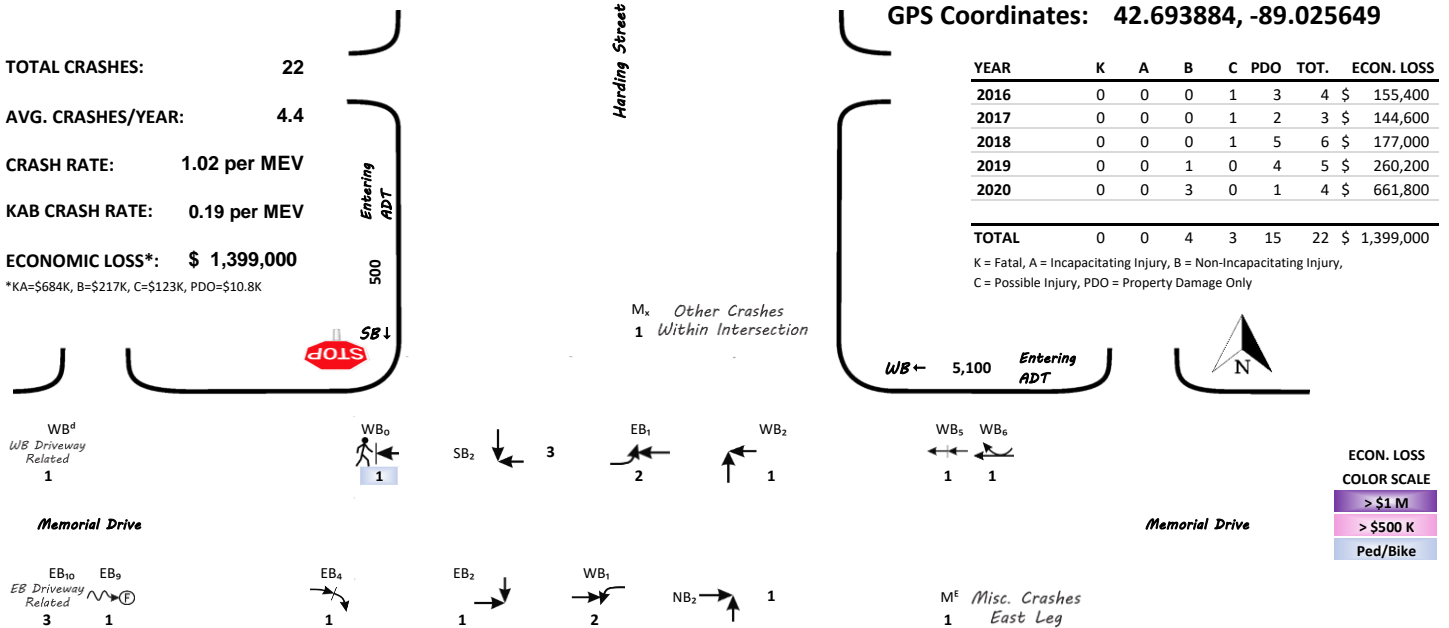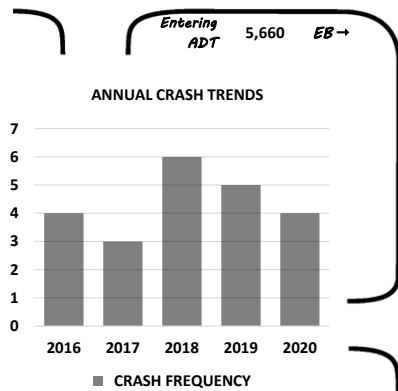
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	2	2	4	$ 267,600
RT-ANGLE	0	0	2	0	4	6	$ 477,200
PEDESTRIAN	0	0	1	0	0	1	$ 217,000
RT-TURN REAR-END	0	0	0	0	1	1	$ 10,800
REAR-END	0	0	0	0	1	1	$ 10,800
SIDE-SWIPE-SAME	0	0	0	0	1	1	$ 10,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	0	0	0	0	$ -
FIXED-OBJECT	0	0	0	0	1	1	$ 10,800
DRIVEWAY-RELATED	0	0	0	1	4	5	$ 166,200
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	1	0	1	2	$ 227,800
TOTAL	0	0	4	3	15	22	$ 1,399,000

Harding Street NB10 NB Driveway Related 1

ANNUAL CRASH TRENDS

2016	2017	2018	2019	2020
4	3	6	5	4

■ CRASH FREQUENCY

NOTES: Injury crashes have been vetted.

ROAD CONDITIONS		
DRY	13	59%
WET	5	23%
SNOW	4	18%
ICE	0	0%
OTH.	0	0%
TOT.	22	

LIGHT CONDITIONS		
DAY	16	73%
DARK	6	27%
TOT.	22	

DRIVER BEHAVIOR		
ALCOHOL	1	5%
DRUGS	0	0%
SPEED	2	9%

SEASON		
SPRING	4	18%
SUMMER	8	36%
FALL	1	5%
WINTER	9	41%
TOT.	22	

FAILURE TO YIELD		
NB	1	5%
SB	2	9%
EB	1	5%
WB	1	5%
TBD	6	27%
TOT.	11	50%

DISRGRD. CONTROL		
NB	0	0%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	0	0%
TOT.	0	0%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE		
OTHER/UNK.	1	3%
NONE	1	3%
VERY MINOR	0	0%
MINOR	11	28%
MODERATE	14	36%
SEVERE	12	31%
VERY SEVERE	0	0%
TOTAL VEHICLES	39	

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	1	1	1	0	0	0	0	0	0	0	MON	6
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	TUE	1
WED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	WED	3
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	THU	3
FRI	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	FRI	5
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	SAT	2
SUN	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	SUN	2
TOT.	0	1	0	0	0	0	0	1	1	0	0	0	3	1	0	3	4	2	2	1	1	2	0	0	0	**TOT.**	22

Crash Data

Corresponds to Collision Diagram

Location:	Harding Street & Memorial Drive	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	Minor Street Stop	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	11,760	**5**	**Years**
Area Type:	Urban	**0**	**Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB_1	CML19LVN22	8/30/2018	LT-ANGLE	6 PM	C						EBL thru traffic
2	EB_1	CML19RSSMG	4/8/2020	LT-ANGLE	4 PM		WET					
3	EB_2	CML19XQXVS	6/4/2018	RT-ANGLE	12 PM							
4	EB_4	CML18L0Q8J	8/30/2017	RT-TURN REAR-END	5 PM							
5	EB_9	CML19426WC	12/9/2018	FIXED-OBJECT	1 AM			DARK	Y			
6	EB_{10}	CML18L0QCM	5/21/2018	DRIVEWAY-RELATED	7 AM		WET					NB-EB
7	EB_{10}	CML18F2LBC	7/30/2018	DRIVEWAY-RELATED	4 PM							NB-EB
8	EB_{10}	CML19N3PFQ	8/22/2019	DRIVEWAY-RELATED	6 PM							NB-EB
9	WB_0	CML19KMM6P	7/30/2020	PEDESTRIAN	9 PM	B		DARK				NBL-Ped in cross
10	WB_1	CML179QKTR	5/26/2017	LT-ANGLE	3 PM	C	WET					WB FTY
11	WB_1	CML11GFB1C	1/28/2019	LT-ANGLE	5 PM		SNOW	DARK				
12	WB_2	CML18F2LDN	2/1/2019	RT-ANGLE	8 AM		SNOW					
13	WB_5	LWC72PX	12/23/2016	REAR-END	4 PM		SNOW				Y	
14	WB_6	LWC72N3	2/26/2016	SIDE-SWIPE-SAME	7 PM			DARK				
15	WB^d	LW93CN3	6/11/2016	DRIVEWAY-RELATED	3 PM							Backing-WBT
16	M^g	CML184FB8T	1/18/2019	MISC. OTHER	12 PM						Y	
17	NB_2	CML18F2KXF	12/30/2017	RT-ANGLE	4 PM		SNOW					NB FTY
18	NB_{10}	LW9MNH5	3/16/2016	DRIVEWAY-RELATED	9 PM	C		DARK				NB-EB
19	SB_2	CML18L0QCV	6/10/2018	RT-ANGLE	1 PM		WET					
20	SB_2	CML1BFKD8L	1/6/2020	RT-ANGLE	3 PM	B		DAY				SB FTY
21	SB_2	CML1BFKD8Q	1/13/2020	RT-ANGLE	12 PM	B	WET					SB tree block view
22	M_x	CML1B8M7RN	9/10/2019	MISC. OTHER	8 PM	B		DARK				EB swerve miss WBL

A2.19 Intersection Collision Diagram

TADI TRAFFIC ANALYSIS & DESIGN, INC.

Duration

Location:	Holmes Street & Randall Avenue	**From:**	1/1/2016 5 Years
Municipality:	City of Janesville	**To:**	12/31/2020 0 Months
County:	Rock	**AADT:**	7,900
Traffic Control:	All-Way Stop	**Area Type:**	Urban
		GPS Coordinates:	42.683358, -89.002897

MAP

TOTAL CRASHES: 14

AVG. CRASHES/YEAR: 2.8

CRASH RATE: 0.97 per MEV

KAB CRASH RATE: 0.07 per MEV

ECONOMIC LOSS*: $ 1,048,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

Randall Avenue

Entering ADT 3,200

SB$_8$ PARKED 3

SB$_5$ 2

SB↓ STOP

SB$_2$ 1

Holmes Street

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	2	2	$ 21,600
2017	0	0	0	2	3	5	$ 278,400
2018	0	1	0	0	1	2	$ 694,800
2019	0	0	0	0	3	3	$ 32,400
2020	0	0	0	0	2	2	$ 21,600
TOTAL	0	1	0	2	11	14	$ 1,048,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

STOP WB← 500 Entering ADT

N

WB$_6$ 1

Holmes Street

ECON. LOSS COLOR SCALE

| > $1 M |
| > $500 K |
| Ped/Bike |

NB$_2$ → 2

Entering ADT 1,000 EB→ STOP

ANNUAL CRASH TRENDS

	2016	2017	2018	2019	2020
CRASH FREQUENCY	2	5	2	3	2

NB↑ STOP

NB$_5$ 3

NB$_6$ 1

Entering ADT 3,200

SB^d SB Driveway Related 1

Randall Avenue
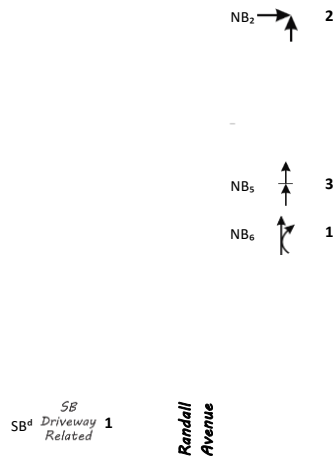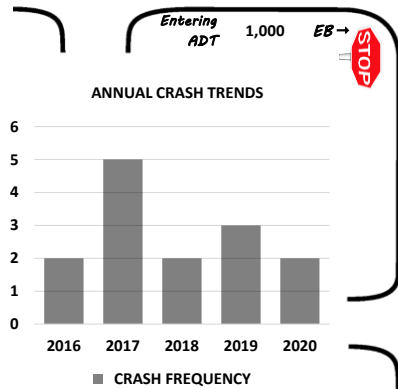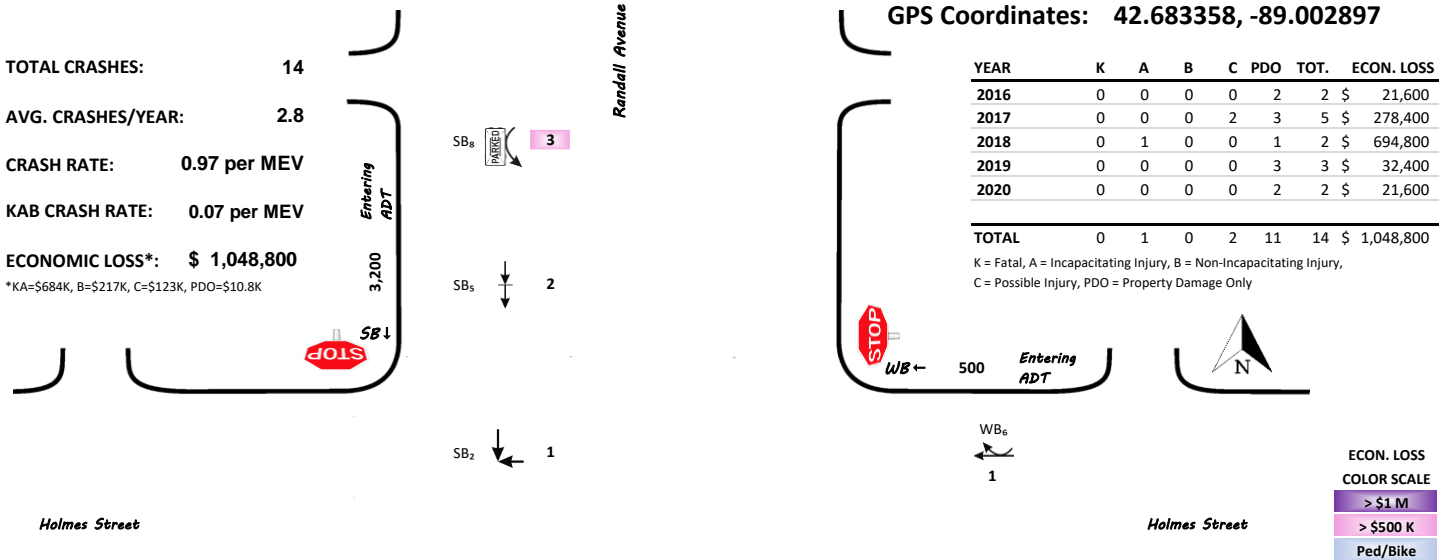
CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	0	0	0	$ -
RT-ANGLE	0	0	0	1	2	3	$ 144,600
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	0	5	5	$ 54,000
SIDE-SWIPE-SAME	0	0	0	1	1	2	$ 133,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	1	0	0	2	3	$ 705,600
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	1	1	$ 10,800
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	0	0	$ -
TOTAL	0	1	0	2	11	14	$ 1,048,800

ROAD CONDITIONS

DRY	11	79%
WET	2	14%
SNOW	1	7%
ICE	0	0%
OTH.	0	0%
TOT.	14	

LIGHT CONDITIONS

DAY	10	71%
DARK	4	29%
TOT.	14	

DRIVER BEHAVIOR

ALCOHOL	2	14%
DRUGS	1	7%
SPEED	1	7%

SEASON

SPRING	4	29%
SUMMER	2	14%
FALL	5	36%
WINTER	3	21%
TOT.	14	

FAILURE TO YIELD

NB	0	0%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	0	0%
TOT.	0	0%

DISRGRD. CONTROL

NB	1	7%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	0	0%
TOT.	1	7%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE

OTHER/UNK.	2	7%
NONE	0	0%
VERY MINOR	1	4%
MINOR	7	25%
MODERATE	12	43%
SEVERE	6	21%
VERY SEVERE	0	0%
TOTAL VEHICLES	28	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	MON	4
TUE	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	TUE	3
WED	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	WED	1
THU	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	THU	2
FRI	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	FRI	2
SAT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	SAT	1
SUN	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUN	1
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	2	1	1	0	3	1	0	1	0	0	TOT.	14

Crash Data

Corresponds to Collision Diagram

Location:	Holmes Street & Randall Avenue	
Municipality:	City of Janesville	
County:	Rock	
Traffic Control:	All-Way Stop	

From:	1/1/2016		
To:	12/31/2020	**Duration**	
AADT:	7,900	**5**	**Years**
Area Type:	Urban	**0**	**Months**

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	WB$_a$	CML18NGSG3	1/3/2019	SIDE-SWIPE-SAME	8 AM							
2	NB$_2$	CML18F2KSQ	4/17/2017	RT-ANGLE	8 PM	C		DARK				NB ran stop
3	NB$_2$	CML17BZLXJ	5/16/2017	RT-ANGLE	4 PM							
4	NB$_3$	LW9QM9T	9/23/2016	REAR-END	7 PM			DARK				
5	NB$_3$	CML1BFKD7S	11/11/2019	REAR-END	3 PM		SNOW					
6	NB$_3$	CML18NGSGM	1/22/2020	REAR-END	12 PM		WET					
7	NB$_a$	CML1C22XWN	9/11/2017	SIDE-SWIPE-SAME	5 PM	C						Merge from parked
8	SB$_2$	CML19RSSM7	2/10/2020	RT-ANGLE	7 PM			DARK				
9	SB$_3$	CML18L0Q9F	11/18/2017	REAR-END	10 PM			DARK				
10	SB$_3$	CML18QXVTK	5/17/2018	REAR-END	3 PM				Y			
11	SB$_a$	LW92MFK	5/24/2016	PARKED-VEHICLE	1 PM						Y	
12	SB$_a$	CML18SNC57	7/25/2017	PARKED-VEHICLE	7 PM			DAY				
13	SB$_a$	CML19426V5	8/19/2018	PARKED-VEHICLE	5 AM	A		DAY	Y	Y		Motorcycle-Park Veh
14	SB$_d$	CML1B2G281	10/11/2019	DRIVEWAY-RELATED	7 AM		WET					

A2.20 Intersection Collision Diagram

TADi TRAFFIC ANALYSIS & DESIGN, INC.

Location:	**Pearl Street & Ravine Street**
Municipality:	**City of Janesville**
County:	**Rock**
Traffic Control:	**All-Way Stop**

Duration

From:	**1/1/2016**	**5**	**Years**
To:	**12/31/2020**	**0**	**Months**
AADT:	**5,800**		MAP
Area Type:	**Urban**		

GPS Coordinates: **42.683898, -89.035908**

TOTAL CRASHES:	**11**
AVG. CRASHES/YEAR:	**2.2**
CRASH RATE:	**1.04 per MEV**
KAB CRASH RATE:	**0.19 per MEV**
ECONOMIC LOSS*:	**$ 755,600**

*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

Crashes by Year

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	0	1	1	$ 10,800
2017	0	0	0	0	4	4	$ 43,200
2018	0	0	2	1	0	3	$ 557,000
2019	0	0	0	1	0	1	$ 123,000
2020	0	0	0	0	2	2	$ 21,600
TOTAL	**0**	**0**	**2**	**2**	**7**	**11**	**$ 755,600**

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

Pearl Street / **Ravine Street**

SB6 1
SB5 1
SB↓ STOP
SB2 2
WB2 1
WB← 750 Entering ADT
EB8 PARKED 1
Entering ADT 750 EB→ STOP
NB2 1
NB↑ STOP
NB5 2
NB8 PARKED 2
2,150 Entering ADT

ECON. LOSS COLOR SCALE
- > $1 M
- > $500 K
- Ped/Bike

ANNUAL CRASH TRENDS

Year	2016	2017	2018	2019	2020
CRASH FREQUENCY	1	4	3	1	2
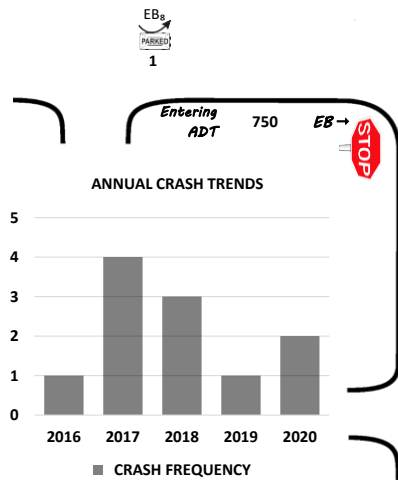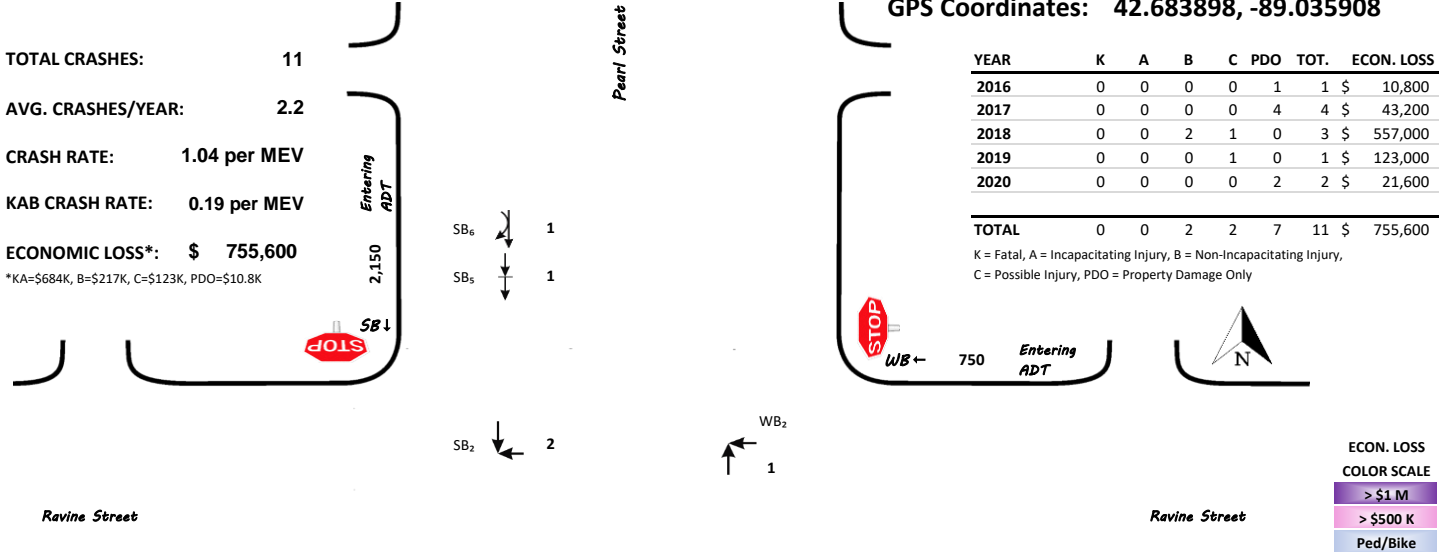
Crash Type

CRASH TYPE	K	A	B	C	PDO	TOT.	ECON. LOSS
LT-ANGLE	0	0	0	0	0	0	$ -
RT-ANGLE	0	0	1	1	2	4	$ 361,600
PEDESTRIAN	0	0	0	0	0	0	$ -
RT-TURN REAR-END	0	0	0	0	0	0	$ -
REAR-END	0	0	0	0	3	3	$ 32,400
SIDE-SWIPE-SAME	0	0	0	0	1	1	$ 10,800
BICYCLE-RELATED	0	0	0	0	0	0	$ -
PARKED-VEHICLE	0	0	1	1	1	3	$ 350,800
FIXED-OBJECT	0	0	0	0	0	0	$ -
DRIVEWAY-RELATED	0	0	0	0	0	0	$ -
HEAD-ON	0	0	0	0	0	0	$ -
MISC. OTHER	0	0	0	0	0	0	$ -
TOTAL	**0**	**0**	**2**	**2**	**7**	**11**	**$ 755,600**

ROAD CONDITIONS
DRY	8	73%
WET	2	18%
SNOW	1	9%
ICE	0	0%
OTH.	0	0%
TOT.	11	

LIGHT CONDITIONS
DAY	9	82%
DARK	2	18%
TOT.	11	

DRIVER BEHAVIOR
ALCOHOL	2	18%
DRUGS	0	0%
SPEED	0	0%

SEASON
SPRING	4	36%
SUMMER	3	27%
FALL	2	18%
WINTER	2	18%
TOT.	11	

FAILURE TO YIELD
NB	1	9%
SB	1	9%
EB	0	0%
WB	0	0%
TBD	1	9%
TOT.	3	27%

DISRGRD. CONTROL
NB	0	0%
SB	0	0%
EB	0	0%
WB	0	0%
TBD	1	9%
TOT.	1	9%

TBD = verification from crash report needed for direction

VEHICLE DAMAGE
OTHER/UNK.	1	5%
NONE	0	0%
VERY MINOR	0	0%
MINOR	3	14%
MODERATE	8	38%
SEVERE	9	43%
VERY SEVERE	0	0%
TOTAL VEHICLES	21	

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	MON	1
TUE	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TUE	2
WED	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	WED	3
THU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	THU	2
FRI	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	FRI	1
SAT	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	SAT	0
SUN	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SUN	2
TOT.	0	0	1	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	2	1	1	0	1	0	0	**TOT.**	11

Crash Data

Corresponds to Collision Diagram

Location:	Pearl Street & Ravine Street	**From:**	1/1/2016	
Municipality:	City of Janesville	**To:**	12/31/2020	**Duration**
County:	Rock	**AADT:**	5,800	5 Years
Traffic Control:	All-Way Stop	**Area Type:**	Urban	0 Months

Ref #	Label	Doc. #	Date	Crash Type	Time	Severity	Road Cond.	Light Cond.	Alc. Flag	Drug Flag	Speed Flag	Notes
1	EB_8	CML18L0QG8	4/21/2019	PARKED-VEHICLE	2 AM	C			Y			Dropped cigarette
2	WB_2	LW943TD	6/2/2016	RT-ANGLE	7 PM							
3	NB_2	CML19426SX	5/1/2018	RT-ANGLE	7 AM	C		DAY				NB did not see EB
4	NB_5	CML18368WT	7/10/2017	REAR-END	8 PM						Y	
5	NB_5	CML1BDBC7J	12/29/2020	REAR-END	10 AM		SNOW	DARK				
6	NB_6	CML185NC59	8/4/2017	PARKED-VEHICLE	7 AM		WET					Passing SB semi
7	NB_8	CML18F2L0B	5/16/2018	PARKED-VEHICLE	6 PM	B						Lost control cycle
8	SB_2	CML19RSSH0	9/6/2018	RT-ANGLE	6 PM	B						SB rolled thru stop
9	SB_2	CML1B9V8XL	1/22/2020	RT-ANGLE	9 AM		WET					
10	SB_5	CML19426Q4	9/17/2017	REAR-END	10 AM							
11	SB_6	CML18JRP4D	5/24/2017	SIDE-SWIPE-SAME	10 PM			DARK				
12–100												
101–200												

APPENDIX B1

CORRIDOR SAFETY ANALYSIS

Corridor Safety Analysis

TADi — TRAFFIC ANALYSIS & DESIGN, INC.

			Duration	
Location:	E. Memorial (S. Oakhill Ave to Milton Ave)	**From:**	1/1/2016	5 Years
Municipality:	Janesville	**To:**	12/31/2020	0 Months
County:	Rock	**AADT:**	11,050	MAP
Length of Corridor:	1.5 miles	**Peer Group:**	Urban Streets	
GPS Coordinates (Start): 42.693884, -89.042328		**GPS Coordinates (End):** 42.693610, -89.013569		

TOTAL CRASHES 229

AVG. CRASHES/YEAR: 45.8

CRASH RATE: 777.4 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

KAB CRASH RATE: 84.9 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

ECONOMIC LOSS*: $ 13,665,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

WI AVG. CRASH RATE & (UCL): 343.55, (377.71)
WI AVG. KAB CRASH RATE & (UCL): 39.69, (51.3)

ANNUAL CRASH TRENDS

Year	Value
2016	58
2017	44
2018	57
2019	35
2020	35
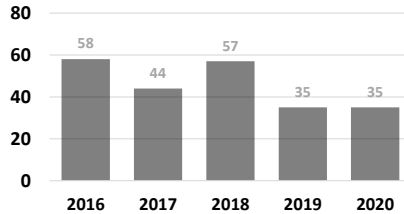
■ CRASH FREQUENCY

YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	1	3	8	46	58	$ 2,815,800
2017	0	0	5	10	29	44	$ 2,628,200
2018	1	1	2	6	47	57	$ 3,047,600
2019	0	0	4	5	26	35	$ 1,763,800
2020	0	2	6	4	23	35	$ 3,410,400
TOTAL	1	4	20	33	171	229	$ 13,665,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

MAP
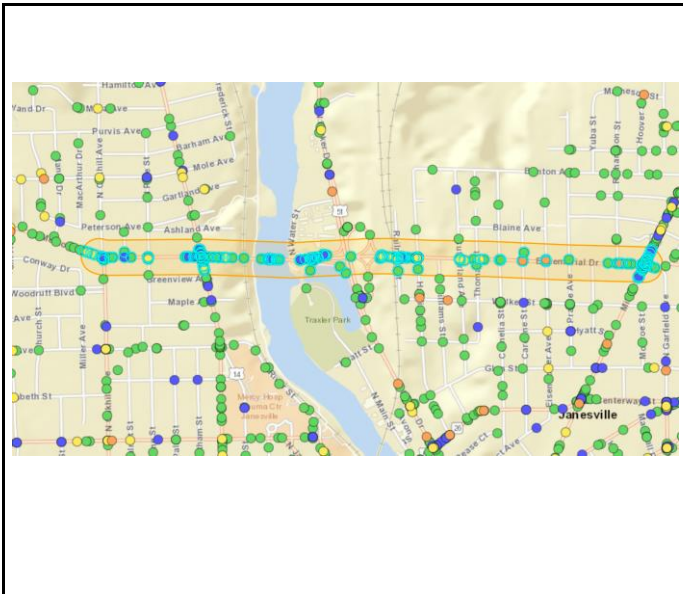
RUN-OFF-ROAD CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Other	1	1	0	0	4	6	$ 1,411,200
Fixed-Object	0	0	1	1	7	9	$ 415,600
Overturn	0	0	1	0	0	1	$ 217,000
Ditch	0	0	0	1	2	3	$ 144,600
Bridge	0	0	0	0	4	4	$ 43,200
Median Barrier	0	0	0	0	1	1	$ 10,800
Immersion	0	0	0	0	1	1	$ 10,800
Tree	0	0	0	0	0	0	$ -
Guardrail	0	0	0	0	0	0	$ -
Fence	0	0	0	0	0	0	$ -

MULTI-VEHICLE CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Rear-End	0	0	8	18	73	99	$ 4,738,400
Left-Turn Angle	0	3	1	1	12	17	$ 2,521,600
Right-Angle	0	0	7	2	32	41	$ 2,110,600
Head-On	0	0	1	5	6	12	$ 896,800
Side-Swipe-Same	0	0	0	2	27	29	$ 537,600
Other	0	0	1	1	2	4	$ 361,600
Side-Swipe-Opposite	0	0	0	0	0	0	$ -

MULTI-MODAL CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Pedestrian	0	0	0	1	0	1	$ 123,000
Bicycle	0	0	0	1	0	1	$ 123,000
ALL CRASH TYPES	1	4	20	33	171	229	$ 13,665,800

ROAD CONDITIONS
DRY	176	77%
WET	32	14%
SNOW	18	8%
ICE	3	1%
OTH.	0	0%
TOT.	229	

LIGHT CONDITIONS
DAY	184	80%
DARK	45	20%
TOT.	229	

DRIVER BEHAVIOR
ALCOHOL	10	4%
DRUGS	3	1%
SPEED	19	8%

SEASON
SPRING	45	20%
SUMMER	63	28%
FALL	60	26%
WINTER	61	27%
TOT.	229	

CURVE TYPE
HORZ	12	5%
VERT	45	20%

INTERSECTION
INT	113	49%

CAUSATION
ROR	25	11%
FTY	42	18%
DTC	16	7%

ROR = RUN-OFF-ROAD
FTY = FAILURE TO YIELD
DTC = DISREGARDED TRAFFIC CONTROL

VEHICLE DAMAGE
OTHER/UNK.	10
NONE	18
VERY MINOR	14
MINOR	140
MODERATE	157
SEVERE	84
VERY SEVERE	1
TOTAL VEHICLES	424

NOTES:
Injury crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	1	0	0	0	0	1	0	1	0	1	1	3	6	2	4	6	3	5	1	0	0	0	1	1	0	MON	37
TUE	0	0	0	0	0	0	0	2	0	4	1	2	4	2	1	7	3	3	3	1	4	2	0	1	0	TUE	40
WED	0	0	0	0	0	1	2	1	1	1	2	0	3	4	5	5	5	0	3	0	1	0	0	0	WED	34
THU	0	0	0	1	1	0	0	0	2	2	1	3	2	1	0	3	1	8	5	1	0	1	0	0	0	THU	32
FRI	0	1	0	0	0	1	0	1	3	0	0	3	2	2	2	4	5	4	4	5	3	1	0	1	0	FRI	42
SAT	0	0	0	0	0	0	1	1	3	2	1	2	0	3	2	0	1	3	1	0	0	0	0	0	SAT	23
SUN	1	1	0	0	0	0	0	0	0	3	2	2	2	2	0	0	3	1	2	1	0	1	0	0	0	SUN	21
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	2	2	0	1	2	2	1	6	7	12	9	17	17	14	11	28	22	28	15	12	10	7	1	3	0	TOT.	229

Corridor Safety Analysis

Location:	Mt. Zion (Milton Ave to Pontiac Dr)		**From:**	1/1/2016	**Duration** 5 Years
Municipality:	Janesville		**To:**	12/31/2020	0 Months
County:	Rock		**AADT:**	7,301	MAP
Length of Corridor:	1.0 miles		**Peer Group:**	Urban Streets	
GPS Coordinates (Start):	42.700855, -89.008954		**GPS Coordinates (End):**	42.700453, -88.988934	

TOTAL CRASHES 132

AVG. CRASHES/YEAR: 26.4

CRASH RATE: 970.7 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

KAB CRASH RATE: 80.9 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

ECONOMIC LOSS*: $ 6,404,800
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

WI AVG. CRASH RATE & (UCL): 343.55, (393.83)
WI AVG. KAB CRASH RATE & (UCL): 39.69, (56.78)

ANNUAL CRASH TRENDS

2016	2017	2018	2019	2020
23	25	31	28	25

■ CRASH FREQUENCY
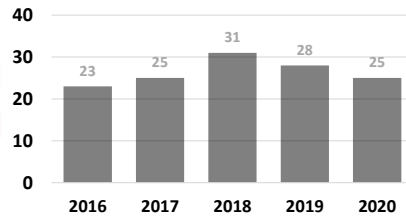
YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	2	4	17	23	$ 1,109,600
2017	0	1	4	3	17	25	$ 2,104,600
2018	0	0	2	4	25	31	$ 1,196,000
2019	0	0	1	5	22	28	$ 1,069,600
2020	0	0	1	4	20	25	$ 925,000
TOTAL	0	1	10	20	101	132	$ 6,404,800

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

MAP
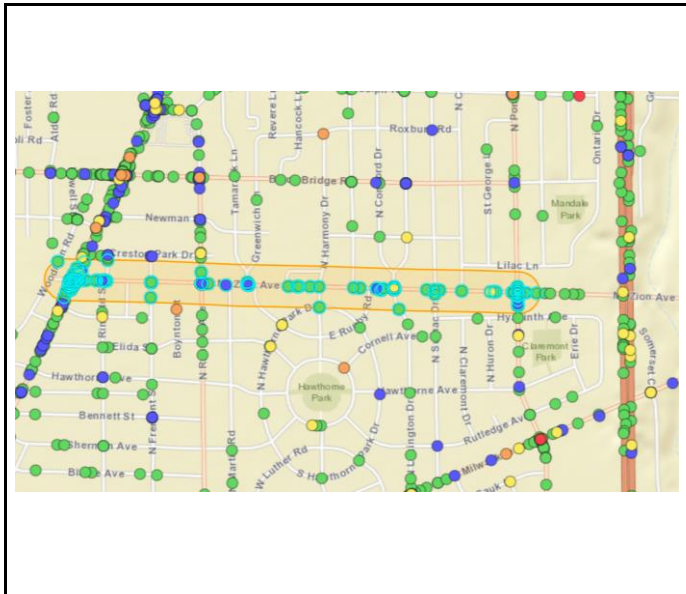
RUN-OFF-ROAD CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Fixed-Object	0	0	1	0	6	7	$ 281,800
Other	0	0	0	1	2	3	$ 144,600
Ditch	0	0	0	0	1	1	$ 10,800
Tree	0	0	0	0	1	1	$ 10,800
Overturn	0	0	0	0	0	0	$ -
Guardrail	0	0	0	0	0	0	$ -
Median Barrier	0	0	0	0	0	0	$ -
Fence	0	0	0	0	0	0	$ -
Bridge	0	0	0	0	0	0	$ -
Immersion	0	0	0	0	0	0	$ -

MULTI-VEHICLE CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Right-Angle	0	0	3	9	24	36	$ 2,017,200
Rear-End	0	0	2	8	39	49	$ 1,839,200
Left-Turn Angle	0	1	1	1	7	10	$ 1,099,600
Side-Swipe-Same	0	0	1	0	16	17	$ 389,800
Other	0	0	0	0	4	4	$ 43,200
Head-On	0	0	0	0	1	1	$ 10,800
Side-Swipe-Opposite	0	0	0	0	0	0	$ -

MULTI-MODAL CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Bicycle	0	0	1	1	0	2	$ 340,000
Pedestrian	0	0	1	0	0	1	$ 217,000
ALL CRASH TYPES	0	1	10	20	101	132	$ 6,404,800

ROAD CONDITIONS			LIGHT CONDITIONS			DRIVER BEHAVIOR			SEASON			CURVE TYPE			CAUSATION			VEHICLE DAMAGE	
DRY	97	73%	DAY	97	73%	ALCOHOL	4	3%	SPRING	32	24%	HORZ	1	1%	ROR	12	9%	OTHER/UNK.	9
WET	23	17%	DARK	35	27%	DRUGS	4	3%	SUMMER	31	23%	VERT	0	0%	FTY	37	28%	NONE	8
SNOW	12	9%	TOT.	132		SPEED	8	6%	FALL	34	26%				DTC	13	10%	VERY MINOR	4
ICE	0	0%							WINTER	35	27%				ROR = RUN-OFF-ROAD			MINOR	77
OTH.	0	0%							TOT.	132		**INTERSECTION**			FTY =			MODERATE	78
TOT.	132											INT	85	64%	FAILURE TO YIELD			SEVERE	75
			NOTES:												DTC = DISREGARDED			VERY SEVERE	0
			Injury crashes have been vetted.												TRAFFIC CONTROL			TOTAL VEHICLES	251

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	2	1	3	0	0	0	1	0	0	0	MON	12
TUE	0	0	0	0	0	0	0	0	2	2	1	1	0	1	2	4	2	3	0	1	1	1	2	0	0	TUE	23
WED	0	0	0	0	0	0	1	1	1	1	0	0	1	1	1	2	5	2	0	1	2	0	0	0	0	WED	19
THU	0	0	0	0	0	0	0	0	1	2	0	1	1	1	1	1	0	1	0	0	0	1	2	1	0	THU	14
FRI	0	0	0	0	1	1	0	1	1	0	2	1	1	1	0	2	3	1	3	0	1	2	2	1	0	FRI	24
SAT	0	1	1	0	0	0	1	1	2	3	1	2	3	2	1	2	1	0	4	1	0	3	1	0	0	SAT	28
SUN	1	0	0	0	0	0	0	0	0	0	1	2	3	0	2	1	1	0	0	0	1	0	0	0	0	SUN	12
TOT.	2	1	1	0	1	1	2	3	7	6	5	7	10	9	5	15	14	11	7	3	4	9	7	2	0	TOT.	132

Corridor Safety Analysis

TADI Traffic Analysis & Design, Inc.

		Duration	
Location:	N Pontiac Dr (Holiday Dr to Milton Ave)	**From:** 1/1/2016	5 Years
Municipality:	Janesville	**To:** 12/31/2020	0 Months
County:	Rock	**AADT:** 8,427	MAP
Length of Corridor:	0.3 miles	**Peer Group:** Urban Streets	
GPS Coordinates (Start): 42.713741, -88.989278		**GPS Coordinates (End):** 42.718289, -88.989551	

TOTAL CRASHES 106

AVG. CRASHES/YEAR: 21.2

CRASH RATE: 2152.8 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

KAB CRASH RATE: 121.9 per 100MVM
Orange = Higher than average, Red = Higher than Upper Control Limit (UCL)

ECONOMIC LOSS*: $ 4,626,000
*KA=$684K, B=$217K, C=$123K, PDO=$10.8K

WI AVG. CRASH RATE & (UCL): 343.55, (427.1)
WI AVG. KAB CRASH RATE & (UCL): 39.69, (68.09)

ANNUAL CRASH TRENDS

Year	Value
2016	31
2017	16
2018	21
2019	22
2020	16

■ CRASH FREQUENCY
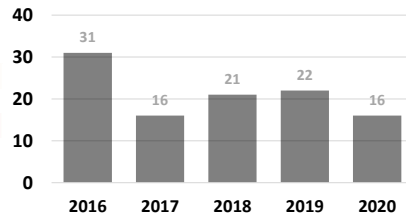
YEAR	K	A	B	C	PDO	TOT.	ECON. LOSS
2016	0	0	0	7	24	31	$ 1,120,200
2017	0	0	2	3	11	16	$ 921,800
2018	0	0	2	6	13	21	$ 1,312,400
2019	0	0	0	4	18	22	$ 686,400
2020	0	0	2	0	14	16	$ 585,200
TOTAL	0	0	6	20	80	106	$ 4,626,000

K = Fatal, A = Incapacitating Injury, B = Non-Incapacitating Injury,
C = Possible Injury, PDO = Property Damage Only

MAP
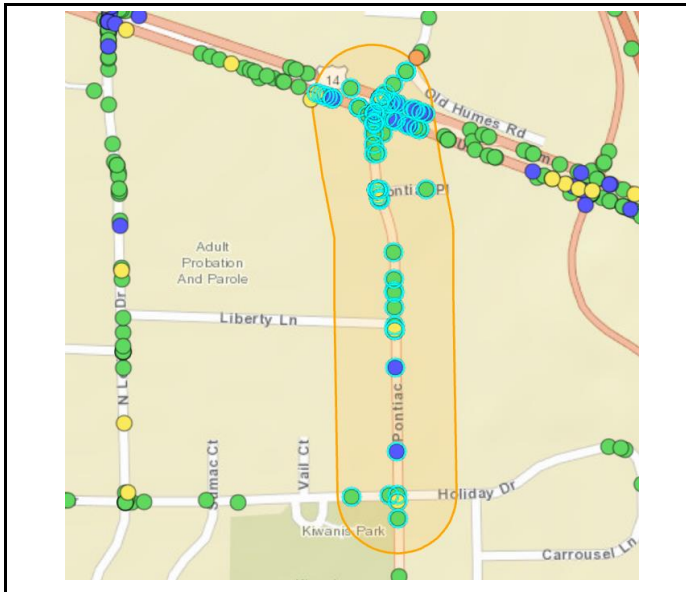
RUN-OFF-ROAD CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Fixed-Object	0	0	0	1	2	3	$ 144,600
Other	0	0	0	0	2	2	$ 21,600
Ditch	0	0	0	0	2	2	$ 21,600
Tree	0	0	0	0	0	0	$ -
Overturn	0	0	0	0	0	0	$ -
Guardrail	0	0	0	0	0	0	$ -
Median Barrier	0	0	0	0	0	0	$ -
Fence	0	0	0	0	0	0	$ -
Bridge	0	0	0	0	0	0	$ -
Immersion	0	0	0	0	0	0	$ -

MULTI-VEHICLE CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Rear-End	0	0	1	12	30	43	$ 2,017,000
Right-Angle	0	0	3	1	10	14	$ 882,000
Head-On	0	0	2	1	2	5	$ 578,600
Side-Swipe-Same	0	0	0	2	24	26	$ 505,200
Left-Turn Angle	0	0	0	3	8	11	$ 455,400
Other	0	0	0	0	0	0	$ -
Side-Swipe-Opposite	0	0	0	0	0	0	$ -

MULTI-MODAL CRASH TYPES	K	A	B	C	PDO	TOT.	ECON. LOSS
Pedestrian	0	0	0	0	0	0	$ -
Bicycle	0	0	0	0	0	0	$ -
ALL CRASH TYPES	0	0	6	20	80	106	$ 4,626,000

ROAD CONDITIONS
DRY	80	75%
WET	20	19%
SNOW	5	5%
ICE	1	1%
OTH.	0	0%
TOT.	106	

LIGHT CONDITIONS
DAY	86	81%
DARK	20	19%
TOT.	106	

DRIVER BEHAVIOR
ALCOHOL	3	3%
DRUGS	1	1%
SPEED	6	6%

SEASON
SPRING	28	26%
SUMMER	21	20%
FALL	20	19%
WINTER	37	35%
TOT.	106	

CURVE TYPE
HORZ	2	2%
VERT	1	1%

INTERSECTION
INT	73	69%

CAUSATION
ROR	7	7%
FTY	23	22%
DTC	9	8%

ROR = RUN-OFF-ROAD
FTY = FAILURE TO YIELD
DTC = DISREGARDED TRAFFIC CONTROL

VEHICLE DAMAGE
OTHER/UNK.	5
NONE	7
VERY MINOR	5
MINOR	71
MODERATE	77
SEVERE	40
VERY SEVERE	0
TOTAL VEHICLES	205

NOTES:
Injury Crashes have been vetted.

DAY/TIME TRENDS

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
MON	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2	1	0	0	0	1	0	0	1	0	MON	9
TUE	0	0	0	0	0	0	0	0	2	0	0	0	3	6	0	3	4	0	0	1	0	0	1	0	0	TUE	20
WED	1	0	0	0	0	0	0	2	1	0	0	3	2	0	1	1	4	1	3	0	0	0	0	0	0	WED	19
THU	0	0	0	0	0	0	0	1	0	1	1	3	1	2	2	2	1	3	1	0	0	0	0	0	0	THU	18
FRI	0	0	0	0	0	0	0	0	1	0	2	2	3	2	1	2	2	1	1	1	0	0	0	0	0	FRI	18
SAT	0	0	0	1	0	0	1	1	0	2	1	1	2	1	0	0	2	0	0	0	0	0	0	0	0	SAT	13
SUN	1	0	0	0	0	0	0	1	1	0	3	0	0	1	0	1	1	0	0	0	0	0	0	0	0	SUN	9
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	UNK		TOT.
TOT.	2	0	0	1	0	0	0	2	5	3	4	6	16	11	7	12	14	6	8	5	2	0	1	1	0	TOT.	106

APPENDIX C

PEDESTRIAN RISK ASSESSMENT CRITERIA DEVELOPMENT

Pedestrian Risk Assessment Criteria Development

PEDESTRIAN RISK ASSESSMENT CRITERIA DEVELOPMENT

Pedestrian crashes occur less frequently than motor vehicle crashes, therefore, traditional (reactive) methods of safety analysis based on pedestrian crash history can do a poor job at predicting where pedestrian crashes are most likely to occur.

Thus, TADI's team of Road Safety Professionals (RSP), certified through the Transportation Professional Certification Board, sought solutions for proactively evaluating pedestrian safety. TADI's team developed a method using objective, science-based criteria to calculate pedestrian crash risk based on the amount of exposure to a potential hazard a pedestrian would be subjected to walking along and crossing a roadway. This approach, which relies on research regarding the impact various roadway and traffic characteristics have on pedestrian safety, provides a data-driven method to proactively evaluate pedestrian safety.

The fundamental criteria shown below is then used to calculate a numerical pedestrian risk at a specific location or along a specific walking route.

Walking Along Criteria	**Crossing Criteria**
Distance Walked	Crossing Width
Available Walking Path	Traffic Volume
Traffic Volume	Vehicle Speeds
Vehicle Speeds	Risk Adjustments
Parking Activity	Existing Safety Features
Pedestrian Activity	Pedestrian Activity

WALKING ALONG EXPOSURE SCORE

The walking along exposure score for each segment is calculated by multiplying the factors of each of the six *Walking Along* criteria.

$$Walking\ Along\ Exposure\ Score = \ W_D * W_P * W_V * W_S * W_R * W_{PED}$$

where:

W_D = distance walked (mi),
W_P = available walking path,
W_V = hourly traffic volume,
W_S = posted speed limit,
W_R = parking activity and sight distance restrictions, and
W_{PED} = pedestrian activity.

Distance Walked (W_D)
The numerical value for walking distance, W_D, is the number of miles a pedestrian walks along the particular segment being analyzed.

Available Walking Path (W_P)

Numerical values for available walking path, W_P, are based on crash modification factors developed from research that showed sidewalks resulted in an 88% reduction in pedestrian crash risk[1] and that paved shoulders of at least 4 feet results in a 71% reduction in pedestrian crash risk[2]. The categories used in selecting W_P are shown in the following table.

Category	W_P
Walking Path ≥ 10 feet from Thru Lane	1
Sidewalk without Driveways	5
Sidewalk with Driveways	10
≥4 feet	25
<4 feet*	50
None	85

The values above were estimated based on the results of the referenced research. For example, the value of 10 used for the "*Sidewalk with Driveways*" category is 88 percent less than the value of 85 used for the "*None*" category [85 * (1 - 0.88) = 10].

Most sidewalk crashes occur at driveway conflict points, thus stretches of sidewalk that do not have conflicting driveways are expected to have lower crash risk. Roadways with no access points have been shown to have crash reductions of up to 44 percent for all crash types[3]. Thus, stretches of sidewalk that do not have conflicting driveways, "Sidewalks without Driveways", are expected to have a lower crash risk than sidewalks that cross driveways. The lower risk for sidewalks without driveways is reflected in the scoring criteria.

Lastly, when sidewalks or pathways do not have conflicting driveways, and have a large buffer zone from the travel lane, the risk to pedestrians is further reduced. To account for pathways with a large buffer, a category for pathways separated from the thru-lane of roadway travel by 10 feet or more was included and assigned a low risk exposure factor.

Hourly Traffic Volume (W_V)

Numerical values for hourly traffic volume, W_V, assumes a linear relationship that more traffic volume will lead to more risk exposure to a pedestrian. The categories used in selecting W_V are shown in the following table and represent the peak hour of traffic volumes. If peak hour volumes were not available but daily traffic counts were available, the peak hour volumes were estimated to be 10 percent of the daily traffic volumes.

Category	W_V	Category	W_V	Category	W_V
≤ 200	1	1,001-1,200	11	2,001-2,200	21
201-400	3	1,201-1,400	13	2,201-2,400	23
401-600	5	1,401-1,600	15	2,401-2,600	25
601-800	7	1,601-1,800	17	2,601-2,800	27
801-1,000	9	1,801-2,000	19	2,801-3,000	29

[1] McMahon, P., Zegeer, C., Duncan, C., Knoblauch, R., Stewart, R., and Khattak, A., "An Analysis of Factors Contributing to 'Walking Along Roadway' Crashes: Research Study and Guidelines for Sidewalks and Walkways," FHWA-RD-01-101, (March 2002).

[2] Gan, A., Shen, J., and Rodriguez, A., "Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects." Florida Department of Transportation, (2005).

[3] Lee, C., Xu, X., and Nguyen, V, "Non-intersection-related Crashes at Mid-block in an Urban Divided Arterial Road with High Truck Volume." Presented at the 90th Meeting of the Transportation Research Board, Washington, D.C., (2011).

Posted Speed Limit (W_S)

Numerical values for posted speed limit, W_S, are based on a AAA research[4] regarding speed and pedestrian injury risk. The categories used in selecting W_S are shown in the following table.

Category	W_S	Category	W_S
≤25 or NP^	1.0	40	3.0
25	1.5	45	3.1
30	2.0	50	3.2
35	2.5	55	3.3

^NP = not posted

Parking Activity & Sight Distance Restrictions (W_R)

Limited research is available that specifically isolates the impact of parking on pedestrian crash risk with regard to walking along roadways, but it is known that limiting sight distance increases crash risk[5]. When a sidewalk is not available, parking activity is expected to increase the risk of pedestrian crashes as pedestrians would need to navigate around parked vehicles. This activity would put pedestrians closer to the travel lanes and could create sight distance restrictions as they navigate around vehicles.

The numerical values for parking activity and sight distance restrictions, W_R, were estimated based on research regarding sight distance for injury crashes of all crash types. The categories used in selecting W_R are shown in the following table and defined below.

Category	W_R	Definitions
N/A - Sidewalk	1.0	A sidewalk is present.
No Parking	1.0	Parking is not allowed or rarely used.
Light Parking	1.2	Sporadically parked vehicles.
Moderate Parking	1.5	Approximately half of available on-street parking spaces are parked in.
Heavy Parking **or** Other Sight Distance Restriction	2.0	Majority of the available parking spaces are parked in **or** another sight distance restriction, such as horizontal or vertical curvature exists that could impede the visibility of pedestrians.

Pedestrian Activity (W_{PED})

A greater number of pedestrians walking along a roadway will increase the overall chance of a pedestrian crash occurring due to greater pedestrian exposure. Therefore, the numerical values for pedestrian activity factor, W_{PED}, increase as the pedestrian activity increases on a segment and are shown in the table below.

Category	W_{PED}
Very Low	1.0
Low	2.0
Medium	3.0
High	4.0
Very High	5.0

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[4] Tefft, B.C. (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death. AAA Foundation for Traffic Safety.
[5] Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004)

CROSSING EXPOSURE SCORE

The crossing exposure score for each crossing is calculated by multiplying the factors of each of the six *Crossing* criteria.

$$Crossing\ Exposure\ Score = \ C_W * C_V * C_S * C_R * C_E * C_{PED}$$

where:

C_W = crossing width,
C_V = hourly traffic volume,
C_S = posted speed limit,
C_R = risk adjustments,
C_E = existing safety feature adjustment, and
C_{PED} = pedestrian activity.

Crossing Width (C_W)

Numerical values for crossing width, C_W, are based on an assumed linear relationship that more distance to cross will lead to more risk exposure. The categories used in selecting C_W are shown in the following table.

Category	C_W	Category	C_W
≤ 10 ft	1	51-60 ft	6
11-20 ft	2	61-70 ft	7
21-30 ft	3	71-80 ft	8
31-40 ft	4	81-90 ft	9
41-50 ft	5	>90 ft	10

Hourly Traffic Volume (C_V)

Numerical values for hourly traffic volume, C_V, assumes a linear relationship that more traffic volume will lead to more risk exposure to a pedestrian. The categories used in selecting C_V are shown in the following table and represent the peak hour of traffic volumes. If peak hour volumes were not available but daily traffic counts were available, the peak hour volumes were estimated to be 10 percent of the daily traffic volumes.

Category	C_V	Category	C_V	Category	C_V
≤ 200	1	1,001-1,200	11	2,001-2,200	21
201-400	3	1,201-1,400	13	2,201-2,400	23
401-600	5	1,401-1,600	15	2,401-2,600	25
601-800	7	1,601-1,800	17	2,601-2,800	27
801-1,000	9	1,801-2,000	19	2,801-3,000	29

Posted Speed Limit (C_S)

Numerical values for posted speed limit, C_S, are based on a AAA research[6] regarding speed and pedestrian injury risk. The categories used in selecting C_S are shown in the following table and represent the posted speed of the roadway to be crossed.

Category	C_S	Category	C_S
≤25 or NP^	1.0	40	3.0
25	1.5	45	3.1
30	2.0	50	3.2
35	2.5	55	3.3

^NP = not posted

Risk Adjustments (C_R)

Numerical values for risk adjustments, C_R, are based on *CMF Clearinghouse* data regarding the impact of all-way stop control[7], traffic signals with right-turn-on-red allowed[8] and sight distance restrictions[9]. Research has shown that these characteristics impact the likelihood of pedestrian related crashes. Intersections with all-way stop control, for instance, require all vehicles to stop thereby reducing vehicle speeds and reducing the risk to pedestrians. At signalized intersections, right-turn-on-reds (RTORs) can increase the risk to pedestrians as drivers can be focused on looking for approaching traffic to their left rather than looking for pedestrians in their path. Lastly, if the crossing has sight-distance restrictions, such as roadway curvature or nearby parking, applying the sight distance restrictions adjustment is suggested. The categories used in selecting C_R are shown in the following table and include combination categories if all-way stop control or traffic signals with RTORs are combined with a sight distance restriction.

Category	C_R
Sight Distance Restriction	2.0
All-Way Stop Control	0.6
All-Way Stop Control with Sight Distance Restriction	1.2
Traffic Signal with RTORs	1.7
Traffic Signal with RTORs and Sight Distance Restriction	3.4

[6] Tefft, B.C. (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death. AAA Foundation for Traffic Safety.

[7] Lovell, J. and Hauer, E., "The Safety Effect of Conversion to All-Way Stop Control." Transportation Research Record 1068, Washington, D.C., Transportation Research Board, National Research Council, (1986) pp. 103-107.

[8] American Association of State Highway and Transportation Officials. Highway Safety Manual. Washington, DC, 2010.

[9] Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004)

Existing Safety Features (C_E)

At roadway and intersection crossings, there are several safety improvements that have been shown to reduce the risk of pedestrian crashes. Numeric values for safety treatment adjustment, C_E, are based on research showing certain treatments reduce the risk of pedestrian crashes. Note that only one treatment can be selected for this analysis and it is suggested that the most effective treatment be chosen. For example, if the crossing has a high visibility crosswalk and a pedestrian countdown timer, the factor of 0.3 for pedestrian countdown timer is suggested. The categories used in selecting C_E are shown in the following table and are based on crash modification factors from either the Wisconsin DOT's Crash Modification Factor Spreadsheet[10] or the Crash Modification Factor Clearinghouse[11].

Research is limited on the specific safety benefit of crossing guards – which are difficult to isolate in studies. It is reasonable to conclude, however, that the safety benefits of crossing guards are expected to exceed that of engineering countermeasures. In a 2009 study of school zones in Florida[12], it was stated "perhaps the clearest observation from the site visits and data analysis conducted for the 14 school sites throughout Florida was the great beneficial value of school crossing guards". It is suggested that sites with a crossing guard or guards be provided with a high-visibility crosswalk to help users of the crosswalk and the roadway recognize the importance of the crossing.

Category	C_E	Category	C_E
Multiple Crossing Guards	0.1	Rectangular Rapid Flash Beacon	0.5
Single Crossing Guard	0.2	High-Visibility Crosswalk	0.6
Pedestrian Hybrid Beacon	0.25	Median Refuge	0.7
Pedestrian Countdown Timer	0.3	Standard Crosswalk	1.0

Pedestrian Activity (C_{PED})

A greater number of pedestrians crossing a roadway will increase the overall chance of a pedestrian crash occurring due to greater pedestrian exposure. Therefore, the numerical values for the pedestrian activity factor, C_{PED}, increase as the pedestrian activity increases at a crossing and are shown in the table below.

Category	W_{PED}
Very Low	1.0
Low	2.0
Medium	3.0
High	4.0
Very High	5.0

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[10] https://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/teops/ch12.aspx

[11] www.cmfclearinghouse.org/

[12] Study of school zones with traffic signals: final report, June 2009. M3 - Tech Report M1 - Report No. 7762-110 UR - https://rosap.ntl.bts.gov/view/dot/17495/dot_17495_DS1.pdf

APPENDIX D

SIGNALS AND ITS STANDALONE PROGRAM OVERVIEW
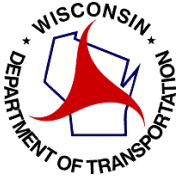
Signals and ITS Standalone Program

General

In 2013, the Wisconsin State Legislature provided the ability for the State to appropriate funds for installation, replacement or rehabilitation of traffic signals and intelligent transportation systems (ITS) not incidental to another highway improvement in **Wisconsin Statute 84.06(13)**.

The Signals and ITS Standalone Program was established in 2013 to manage the appropriated funds for the purpose of addressing signals and ITS needs not incidental to another highway improvement project. The following sections describe the program and how projects are developed, evaluated, prioritized, and awarded.

Applicability

The SISP funds are available for projects with greater than fifty percent cost associated with traffic signal or ITS hardware and construction. All state (including Interstate) and connecting highways are eligible for program funds. Statewide or State maintained facility projects are eligible for full program funds. Maximum project award is limited to a total of $600,000 with a limit of $500,000 per State fiscal year.

Those projects on connecting highways are eligible for 90% program funds with a 10% cost sharing component from the maintaining agency. All funds are required to be encumbered within the fiscal year of award. Multi-year projects are eligible for program funds, however, must be released and encumbered within each designated fiscal year.

Project Identification & Development Resources

The SISP is focused on the installation, replacement or rehabilitation of traffic signals and ITS projects. Projects are developed by local, regional, or statewide Bureau of Traffic Operations (BTO) staff.

Project identification and development resources are available through the Transportation Systems Management and Operations Traffic Infrastructure Process (TSMO–TIP) which is an annual process to consider operational needs and potential solutions throughout the State. Needs identification and project benefit tools have been created to assist with project development. Although the process is primarily focused on ITS project types, the information can be used to assist with several project types.

Those projects required to be vetted through the TSMO – TIP must be supported by the sponsoring WisDOT region prior to applying for funding within the SISP. The following project types are identified within the program application and defined as follows. SISP program funds cannot be used to fund decorative signal poles, decorative cabinets, or decorative signal infrastructure.

1. New Signal Installation – Install new traffic signal.
2. Signal Rehabilitation – Upgrade, install or replace existing signal detection, controllers, battery backup, etc.; construct minor geometric improvement.
3. Signal Retrofit – Install monotubes, flashing yellow arrows, or other safety improvements at existing traffic signal; install adaptive signal systems.

4. Signal Retiming – Collect and evaluate data; develop signal timing plan; develop and implement corridor coordination plan. Municipal projects are not eligible for SISP funding to retime signals.
5. Intersection Communication – Construct and integrate fiber communication for signals; install and integrate wireless communication, including cellular modems and radios, for signals.
6. New ITS Device Installation – Install new ITS infrastructure, including cameras, backbone fiber, network equipment, etc.
7. ITS Device Rehabilitation – Upgrade, install or replace existing detection, controllers, battery backup, cameras, ramp meter LED's, etc.
8. System Software – Upgrade, install, or replace software.
9. Life Cycle Replacements - Replace existing end-of-life signals and/or ITS equipment components including cameras, controllers, LED's, etc. Municipal projects are not eligible for SISP funding to replace life cycle components.
10. Other – Examples include:
    - Performance Measures Applications
    - Research and Development Projects
    - CAV Deployments and Applications
    - Studies, Plans, and Evaluations

Project Application Process & Requirements

Application Cycle

The SISP applications are evaluated and awarded on a biannual cycle. Project applications are considered in the Spring and Fall prior to the disbursement of funds at the beginning of the following fiscal year which begins July 1st.

Application Submittal

The SISP application consists of general project information; explanation of anticipated benefits that will be provided by the proposed project; project cost and schedule information; project contact; and managerial support. Any other relevant information, such as maps, support documentation, etc., is requested to be attached to the application. Those projects that are required to complete a TSMO-TIP package should attach the supported documentation with the application as well.

Completed regional and connecting highway application forms should be submitted to the Regional SISP Liaison. The Region will consider all the applications for the upcoming funding cycle and rank the projects according to regional priority. It is critical that the municipality work with the Regional SISP Liaison to communicate the need for a particular project so that it is ranked accurately within the Region. Each Region will submit the applications and regional rankings by the deadline each application cycle. Municipalities may only submit two applications per calendar year (i.e.-2 applications in Spring, 1 application in Spring and 1 application in Fall, or 2 applications in Fall) for consideration.

Project Evaluation and Prioritization Process

The SISP evaluation and prioritization methodology is established to consistently and objectively appropriate funds. Projects are evaluated, scored, and prioritized by an evaluation committee. The SISP Evaluation Committee is created each programming cycle with one representative from each Region as well as statewide representation from BTO, safety, and signals.

The Evaluation Committee reviews project applications and populates a prioritization matrix. The prioritization matrix is used to score projects based on set criteria which are weighted based on the intent of the Program and input provided the Evaluation Committee. The Evaluation Committee reviews each application and determines the appropriate score for each criterion. Scoring is based on evaluation criteria rubrics that provide a guide to the Committee for consistent scoring. The scoring criteria include:

- Mobility
- Accountability
  — Operations and Maintenance
- Preservation
  — Lifecycle Replacement
  — Energy and Environment
- Safety

The Evaluation Committee scores are compiled, reviewed, and discussed during a one-day Prioritization Workshop. The Evaluation Committee prioritizes the applications and considers any multi-year project commitments for the forthcoming fiscal year. The Evaluation Committee then recommends projects for award based on available program funding and the committee prioritization. Regional representatives are notified of project awards.

Project contacts are asked to prepare project work plans for those awarded projects in advance of funding disbursement. It is expected that project managers will prepare for project implementation in advance of the appropriation disbursement such that funds may be encumbered as soon as possible.

Project Funding

Approved statewide and regional SISP projects are funded with 100% Program funds. Sponsored projects on connecting highways are funded with 90% Program funds and a 10% match from local sources. Maximum project award is limited to a total of $600,000 with a limit of $500,000 per State fiscal year. In general, the agency sponsoring the project application (the signee of the SISP Project Application Form) is responsible for paying the 10% match. The agency responsible for the 10% match is also responsible for any costs over the project funding cap. Applicants have the flexibility to explore partnerships with other government agencies to share the responsibility of the required 10% match and any overages exceeding a project funding cap. It is important that the terms of any negotiated shared responsibility of a 10% match and any overages exceeding a project funding cap between the State and a municipality be codified appropriately in a State Municipal Agreement (SMA).

All funds must be encumbered by the close of the fiscal year of award. A change in scope after formal SISP approval must be approved through the scope change process.