7 • Safety and Security Planning

Overview/Summary

Transportation safety has been and continues to be a national and statewide priority. The Fixing America's Surface Transportation (FAST) Act of 2015 continues the basic framework of the federal highway safety program first established under SAFETEA-LU in 2005. The Highway Safety Improvement Program (HSIP) remains the core Federal-Aid safety program, focused on achieving a significant reduction in fatalities and serious injuries on all public roads.

HSIP requires each state to prepare and periodically update a Strategic Highway Safety Plan (SHSP). Minnesota adopted an updated 2020-2024 SHSP in July of 2020. The Plan identifies updated Emphasis Areas that were prioritized through a data driven, collaborative process with the state's safety partners, including MPOs. The HSIP program provides federal funds to states to implement the strategies identified in the SHSP.

As part of efforts to facilitate safety planning across the state, MnDOT also prepares District-level safety plans and funds, in partnership with Counties, the preparation of County Highway Safety Plans (CHSP), which apply the same data driven process at the county level to understand what specific factors and conditions in a given county are important contributors to vehicle crashes. The current MnDOT District 6 Safety Plan was prepared in 2016 and the current Olmsted County Highway Safety Plan dates to 2009. A planned update of the Olmsted County Plan is expected to occur during Phase 1 of a proposed statewide project to update CHSPs across the state and is scheduled to commence by the end of 2020.

ROCOG's planning process is consistent with the State, District, and County Highway Safety Plans and with transit safety/security plans and programs. ROCOG recognizes engineering, education and enforcement as three key components of the highway safety effort, and local law enforcement, public works, emergency responders, and community education organizations are actively involved with the statewide Towards Zero Death initiative to advance and improve safety outcomes across the state.

Safety is a factor considered in the programming of funds in the MPO Transportation Improvement Program (TIP). ROCOG also reviews and comments on projects that

come forward through the state managed HSIP funding process, eventually including recommended projects in the TIP. HSIP project applications are subject to a rigorous evaluation to ensure consistency with state and federal guidelines prior to funding.

Given the strong behavioral focus of many of the safety programs, the collaboration of safety partners is important to achieving beneficial outcomes. At the regional level, the key organization for coordinating information and programs is Southeast Minnesota Towards Zero Deaths, an initiative managed out of the District 6 MnDOT office. Locally, the City of Rochester, Olmsted County, MnDOT District 6, Olmsted County Sheriff, Rochester Police, and Minnesota State Patrol maintain a Safety Working Group that meets periodically to review crash incidents that involve fatal or serious injuries and coordinate education and enforcement efforts across the ROCOG area.

Transportation security was added as a primary planning element in SAFTEA-LU and is also continued in the FAST Act. 23 U.S.C. § 134 now states "The metropolitan transportation plan should include appropriate emergency relief and disaster preparedness plans policies and strategies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users".

Primary security planning and preparedness activities in the ROCOG area are generally handled by emergency management staff with MnDOT, Olmsted County, and the City of Rochester. ROCOG staff coordinated Olmsted County's 2009 All Hazard Mitigation Plan and worked with Olmsted County Emergency Management on its 2017 update. ROCOG staff and Rochester Emergency Management teamed up to lead the planning effort for Rochester's first All Hazard Mitigation Plan, also adopted in summer 2017.

A Hierarchy of Plans Guiding Safety Planning and Programming

As noted in the introduction, recent federal transportation legislation, beginning with SAFETEA-LU in 2005, directed a new framework for safety planning anchored around a focus on reducing crashes involving fatalities and serious injury. The phrasing "Towards Zero Deaths" has come to characterize the national highway safety strategy and essentially marks the vision set forth in federal legislation.

State Departments of Transportation and Public Safety are charged with leading this nationwide effort. States are required to produce and periodically update a State level Strategic Highway Safety Plan (SHSP). This new national strategy, while not minimizing the impact of design and operations as a cause of fatal and injury crashes, placed more emphasis on considering the behavioral causes of crashes in safety planning and programs.

In Minnesota, MnDOT has led the way in terms of safety planning under this new framework, preparing and updating periodically a SHSP. MnDOT is in the process of preparing its third iteration of a SHSP in 2020. MnDOT has also supported the extension of a more rigorous, data driven planning process to lower levels of its organization as well as local governments. A District 6 Strategic Safety Plan was prepared in 2016, and MnDOT provided support for development of an Olmsted County Highway Safety Plan in 2009—an update is scheduled to get underway with MnDOT support in the latter part of 2020.

An important part of the approach to highway safety planning that has evolved in Minnesota as a result of the national "Towards Zero Death" strategy is the organization of regional Towards Zero Death (TZD) Committees in each MnDOT District across the state. The TZD Committee in each MnDOT district has become a central organizing collaborative of local public works and public safety agencies, local law enforcement, private highway safety advocates and non-profit safety groups for educating and encouraging the public to practice good driving habits.

The following sections provide a summary of the highway safety activities and strategies relative to the ROCOG area that currently are being actively implemented. A summary of relevant highlights from each level of plan (state, district, county) is provided. Each planning level (state, district, county) have adopted plans organized around the idea of safety "Emphasis Areas", as described in the next section.

Emphasis Areas from the State to the County Level

At the federal level, a total of twenty focus areas have been identified as being important in the quest to reduce the number of fatal and serious injury crashes. Focus areas represent crash types or factors that contribute to crashes and are often connected to one another. These twenty factors reflect a broad cross section of behavioral, modal, design and enforcement considerations that all play a role in creating a culture of safety. The universe of emphasis areas currently recognized have been driven by work at the national level; states and their regional and local partners are asked to select particular focus areas based on a participatory planning process including agency and community interests involved in the process of improving safety outcomes.

In the 2020 draft SHSP, the focus areas have been grouped into four areas to better clarify the role of each in pushing for progress on the overall vision of zero deaths. These four groupings are:

- **Core** focus areas have been given a high degree of emphasis in the traffic safety community and will continue to be strong areas of focus. These areas

factor into a large portion of fatal and serious injury crashes and require continued attention.

- **Strategic** focus areas are emerging priorities. They are rising in importance due to factors such as changes in prevalence, public/stakeholder perception, and demographics. These focus areas may require new initiatives to address changing demands.
- **Connected** focus areas represent a smaller portion of crashes compared to other focus areas, but most crashes are correlated with other focus areas.
- **Support solutions** are focus areas involving safety techniques and systems that enhance multiple strategies. Support Solutions are wide ranging and an integral part of other focus areas.

Table 7-1 illustrates how the twenty primary emphasis areas identified have been classified for purposes of the SHSP. For comparison, it also indicates which of the factors were identified in the last Olmsted County Highway Safety Plan as core areas of concern.

Table 7-1: Minnesota's Emphasis Area Hierarchy

Categories	Emphasis Area	2020 Strategic Highway Safety Plan (DRAFT)	County Highway Safety Plan (2009)
Drivers	Younger drivers	Strategic	✓
	Unlicensed drivers	Connected	
	Older drivers	Strategic	
	Aggressive driving		✓
	Impaired Roadway Users	Core	✓
	Inattentive Drivers	Core	
	Safety awareness	Support	
	Seat belt usage	Core	✓
Special Users	Pedestrians	Strategic	
	Bicyclists	Connected	✓
Vehicles	Motorcycles	Strategic	
	Commercial Vehicles	Strategic	

Categories	Emphasis Area	2020 Strategic Highway Safety Plan (DRAFT)	County Highway Safety Plan (2009)
	Vehicle Safety Enhancements	Support	
Highways	Train collisions	Connected	
	Lane Departure	Core	✓
	Speed	Core	
	Intersections	Core	✓
	Head-On		
	Safer work zones	Strategic	
EMS	EMS & Trauma Systems	Support	
Management	Data Management	Support	
	More effective processes	Support	

Source: MnDOT Draft 2020-2024 SHSP; Olmsted County 2009 County Safety Highway Plan

The focus area priorities were established to ensure a data-driven outcome that will be understood and supported by everyone. Past versions of the SHSP have demonstrated through analyses that focus areas are often correlated with one another as crashes in one focus area can have a similar positive or negative effect in another area. For this reason, the priorities established in SHSP are inclusive of all the focus areas to reflect the nature of these relationships.

Minnesota Strategic Highway Safety Plan

The Draft 2020-2024 Minnesota Strategic Highway Safety Plan (SHSP) highlights Minnesota's commitment to Towards Zero Deaths, the cornerstone program aimed at reducing traffic related crashes in the state of Minnesota. The draft SHSP modifies the intermediate target for the state related to fatalities and serious injury, as shown in Figure 7-1.

Figure 7-1

The SHSP identifies a list of specific strategies for each of the focus areas identified in the Core and Strategic Focus Area groups shown in the previous section. These strategies have been selected based on input from stakeholders across the state through various events and venues as promising actions for helping the state achieve its stated goal of zero deaths and serious injuries. The strategies and supporting tactics have been further prioritized into two groups, as follows:

1. Five Year Priority Strategies—key opportunities identified to reduce the number of deaths and serious injury on Minnesota roadways
2. Year One Priority Tactics—31 specific tactics have been identified for initial 2020 efforts

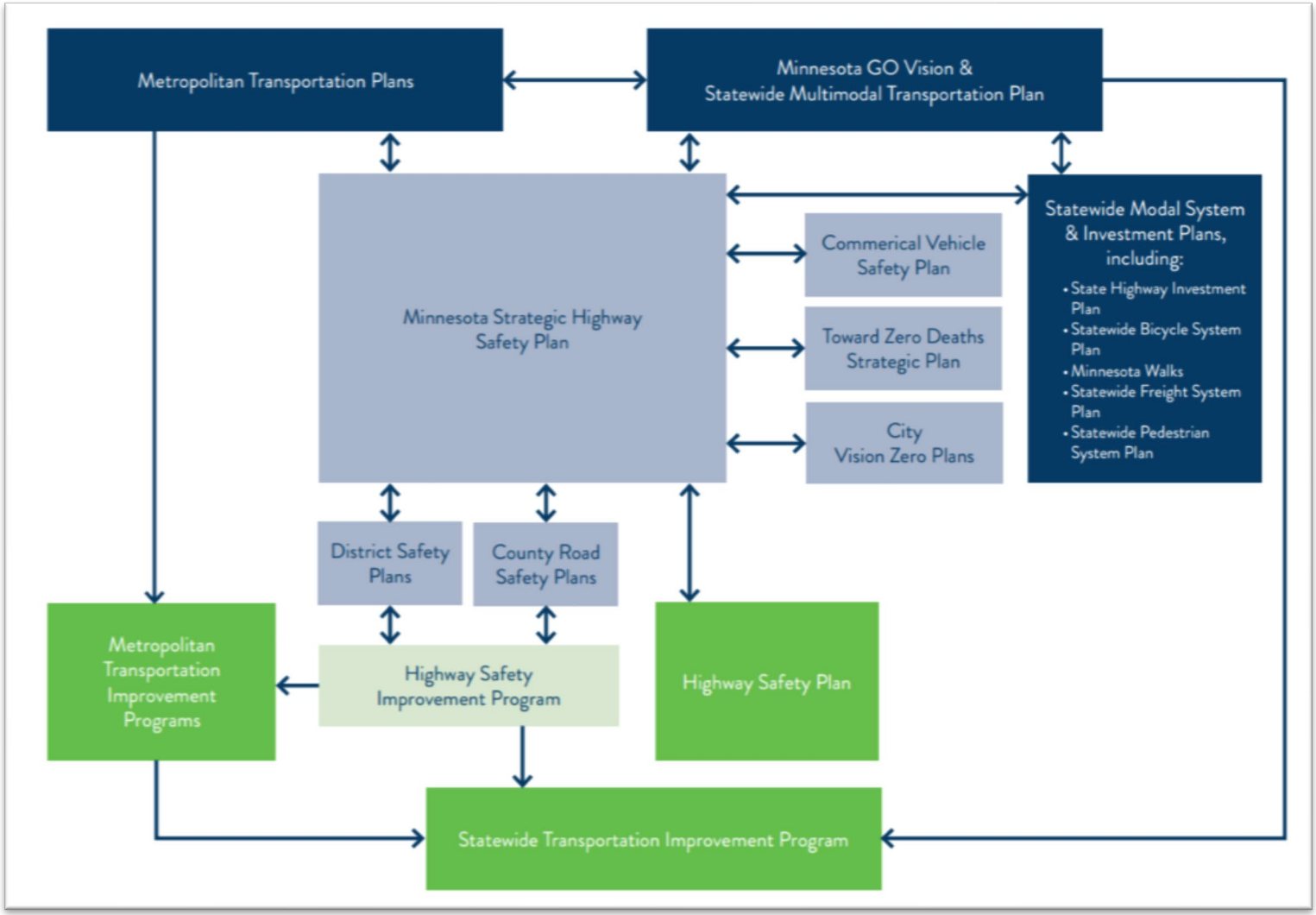
The ten Priority Strategies for the next five years include:

- Provide more enforcement and legislative actions to lower inattentive driver rates
- Provide funding, training, and technology for impaired driving law enforcement
- Improve safety through intersection roadway design changes and alternative intersections
- Update planning policy
- Utilize enforcement to reduce speeding
- Design roadways to reduce the frequency and severity of lane departure crashes
- Provide funding and training for seat belt law enforcement
- Increase public awareness of the safety risks faced by older drivers
- Increase education and awareness for drivers and pedestrians
- Improve driver education and the graduated driver license law
- Reduce speeding in work zones
- Improve motorcycle safety-related policies

These policies all dovetail with the priorities of local jurisdictions in the ROCOG Planning Area who will continue their active participation, coordinated through the Southeast Minnesota Towards Zero Deaths team, to advance the outcomes these policies strive to achieve in the name of reaching the overall goals of the SHSP.

As noted in the draft SHSP, a key aspect of implementing the SHSP is for traffic safety partners to integrate relative strategies and targets into their own plans and programs. Figure 7-2 shows where, in terms of public plans and programs, these linkages can be achieved. Particularly in regard to enforcement and education, local law enforcement and local traffic safety advocates have been active in partnering with state agencies on various efforts over the years.

Figure 7-2: Summary of SHSP Linkages to Other Plans



Source: MnDOT Strategic Highway Safety Plan

MnDOT District 6 Highway Safety Plan

In 2015, MnDOT undertook an effort to update safety plans for its eight districts across the state. The focus of this effort was to do a deeper dive on the data related to state highways across Minnesota to confirm high crash locations while conducting a systematic assessment of risk across the system. The outcome of this effort was to identify a prioritized list of safety projects based on appropriate strategies for each priority location. Figure 7-3 highlights the locations identified in the ROCOG Planning Area.

The project areas shown in Figure 7-3 fall into one of five groups

- Rural multi-lane segments
- Rural multilane/expressway
- Urban segments
- Rural intersections
- Urban intersections

Common improvements recommended for each category are listed below.

Rural 2-Lane Segments

- Shoulder rumble strips
- Paved shoulders
- Centerline rumble strips

Rural Multi-Lane Segments

- Cable median barrier
- Rumble strips both sides
- Recessed lane markings

Rural Expressways

- Cable median barrier
- Wide edge reflective markings
- Clear zone maintenance

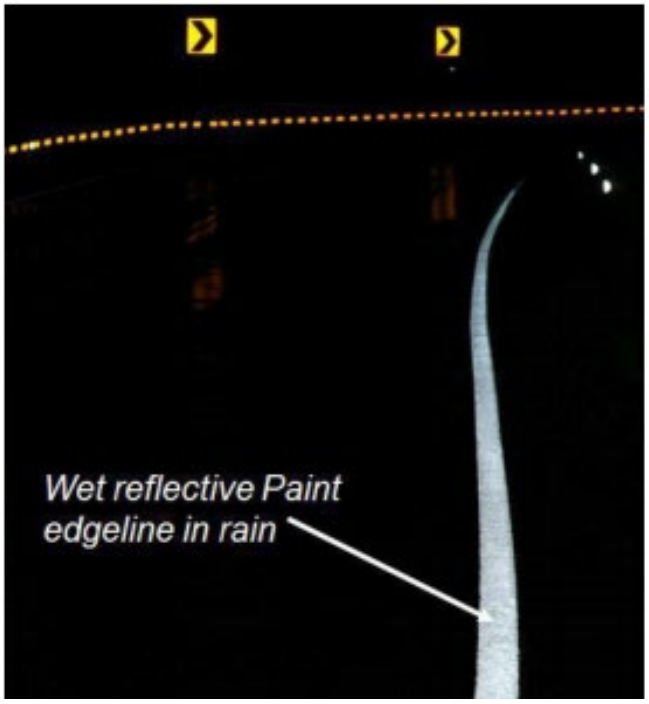
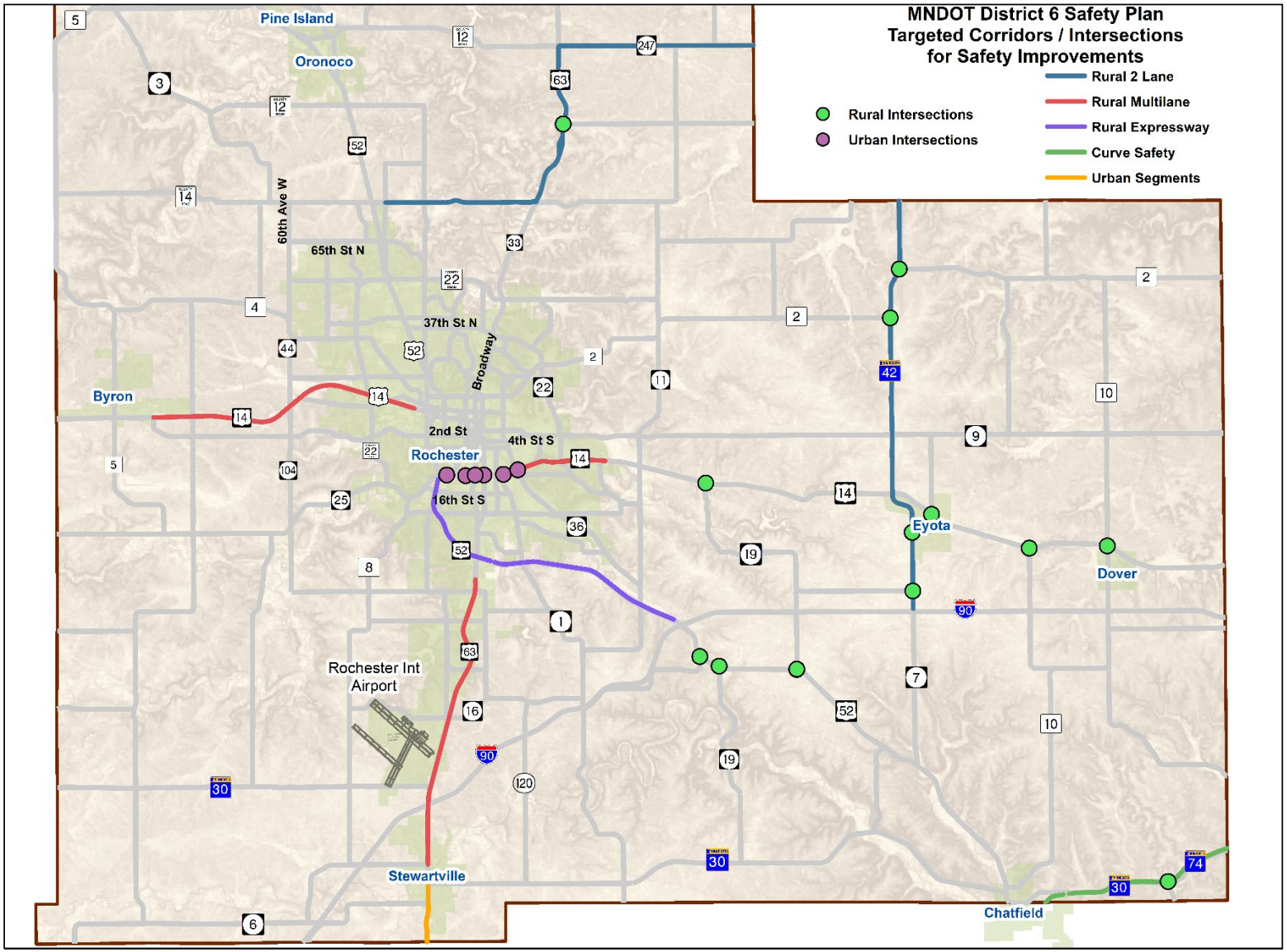


Figure 7-3: Corridors & Intersections Identified for Safety Investment in MnDOT District 6 Safety Plan



Rural Roads with Crash Risk on Curves

- Chevron or arrow boards
- Lighting

Urban Segments

- Dynamic speed feedback signs
- Traffic signal updates
- Lane conversion

Rural Intersections

- Upgraded signs and pavement markings
- Streetlights
- Mainline dynamic warning signs
- Rural intersection conflict warning systems

Urban Intersections

Two types of issues were identified for urban intersections: the risk associated with right angle crashes and the risk of crashes involving pedestrians and bicyclists.

Right Angle Crashes

- Offset turn lanes
- Red light confirmation lights

Crashes Involving Pedestrians and Bicyclists

- Installation of countdown timers
- Provision of leading pedestrian walk interval
- Curb extension
- Median refuge

Olmsted County Highway Safety Plan

The 2009 Olmsted County Highway Safety Plan was developed using the same data driven process that emerged from preparation of the first SHSP for the State of Minnesota. Based on technical analysis and discussion with local staff and community members, a set of lower cost safety projects and programs were supported.

- Increased use of edge line rumble strips, wide edge lines, and chevron warning signs were recommended for rural highway projects.
  - 38 segments involving 164 miles were targeted for the addition of edge line rumble strips
  - 18 projects involving approximately 84 miles will add wide edge lines to better delineate road lanes
  - Chevron warning signs will be placed at 22 high risk locations to alert drivers to curves ahead
- Six urban, two-way stop-controlled intersections were identified for risk reduction. Recommendations for median restriction or closure were the primary outcome from the safety study.
- Twenty-five rural two-way stop-controlled intersections were identified for risk reduction related to right angle crashes. With most crashes occurring after dusk, a package of improvements including street lighting, upgraded signs and pavement markings, and dynamic mainline warning were suggested for implementation.
- Olmsted County and ROCOG involvement in various partnerships was recommended to continue.
  - Countywide Fatal Crash Review Committee
  - Southeast Minnesota TZD
  - Safe Community Coalitions
  - Coordination with Olmsted County Public Health around efforts to educate drivers about seat belt usage, impaired driving, and speeding
  - Coordination with the Olmsted County Sheriff and other law enforcement regarding snow and ice issues and efforts to reduce red light running
- With a focus on bicycle safety, the plan recommended increased coordination with ROCOG and other local road authorities on planning for paved shoulders and off-road trails and paths in new construction and reconstruction projects along county roads.

City of Rochester Safety Planning

The City of Rochester annually reviews traffic accident data to identify those locations with five or more crashes per year in order to monitor trends and review for needed safety improvements. The City routinely reviews its roadway system to identify potential locations that would benefit from low cost safety improvements.

Improvements

- Traffic signals adjacent to the Canadian Pacific mainline were wired to the RR crossing signals to provide for RR signal preemption (allows the tracks to clear before the gates come down for safety). These locations also have battery backup systems in place to ensure the signals operate even during a power outage.
- LED flashing stop signs were installed at high crash intersections that are approaching signal volume warrants.
- Pedestrian activated flashers were installed at pedestrian crossings.
- In-street pedestrian crossing signs on 4-lane streets with high pedestrian volumes were installed as pilot projects at two locations.
- Driver feedback speed signs were installed at different school speed zones.
- Battery back-up systems for signals were installed at critical high-volume intersections.

Annual Asset Management Strategies

- Pavement marking repainting, funded at an annual level of $50,000 to $100,000 per year
- Installing Audible Pedestrian push buttons (APS) funded at $10,000 per year
- Capital Improvements Program budgeting to
  - Replace old LED signal indicators
  - Replace two older signal systems on an annual basis
- Installing pedestrian ramps at various locations, funded at $50,000 per year
- Adding Safe Routes to School infrastructure, funded at $25,000 per year

Public Transit Safety Plan

Rochester Public Transit has developed an Agency Safety Plan which is in the process of being revised in the second half of 2020 to address transit safety performance planning elements required under federal legislation. The updated plan will identify safety performance targets in addition to the following plan elements:

- Safety management policies
- Safety risk management controls and procedures
- Safety performance monitoring and measurement procedures
- Safety promotion, with a focus on employee training and education

Discussion of Transit Safety Performance targets is included in Chapter 10 in a larger discussion of

performance planning and ROCOG area targets and outcomes.

Minnesota Toward Zero Deaths

Minnesota has a long history of developing and implementing programs focused on improving traffic safety. Before 2001, these activities were primarily the responsibility of individual state agencies. In response to an increasing trend in the number of traffic-related fatalities and serious injuries in Minnesota, and concerns about the effectiveness of individual safety efforts, the Minnesota Departments of Public Safety, Transportation, and Health in 2003 established the Toward Zero Deaths (TZD) program to integrate safety programs in the state.

Today, Minnesota TZD is the State's cornerstone traffic safety program, employing an interdisciplinary approach to reducing traffic crashes, injuries, and deaths on Minnesota roads. TZD aims to tie agency efforts with a common vision and mission for even greater success, with a focus on proven safety countermeasures in the areas of education, enforcement, engineering, and emergency medical and trauma services (the "4Es").

Local Coordination

Within the Rochester area, there are several agencies and organizations that work closely with the TZD program on initiatives and programming, particularly in the area of education. Recent examples include:

- Olmsted County Seat Belt Challenge involving students from seven schools
- Regional TZD event at a Rochester Honkers baseball game, where people were invited to explore emergency vehicles and visit with emergency responders
- Rochester Police and Olmsted County Sheriff Departments partnered with TZD to recognize a young traffic safety leader from John Marshall High School in Rochester who produced the video "No text is worth a death"
- The Olmsted County Sheriff's office partnered with TZD and Rochester Community and Technical College to raise awareness about distracted driving by

assisting students to create a video about the dangers of distracted driving

The Olmsted County Sheriff's Office has also partnered with the Southeast Minnesota TZD program staff to produce a series of videos to coincide with different enforcement periods that have been conducted in the District 6 areas in recent years. These have included:

- Distracted Driving

  https://www.facebook.com/OlmstedSheriff/videos/447549989329425/

  This video locally supported a Distracted Driving Community Outreach event at the greater Rochester University Center. It included a distracted driving simulator for students and the public to experience.

- Impaired Driving

  https://www.facebook.com/OlmstedSheriff/videos/568938030195708/

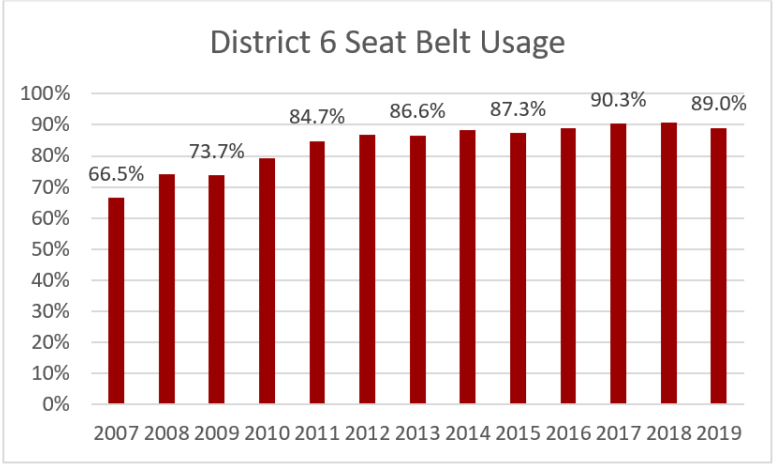
  Related to impaired driving, the Rochester Police Department received national recognition for their Drive Sober or Get Pulled Over DWI efforts. Rochester PD is one of only five law enforcement agencies in NHTSA's Region 5 to receive this recognition.

- Seat Belt Usage

  https://www.facebook.com/OlmstedSheriff/videos/2189490487794008

  Seat belt efforts have focused on educational activities along with various enforcement mobilizations. The rate of compliance has been trending upward and was 89.3% in 2019. The regional trend in seatbelt compliance is shown in Figure 7-4.

Figure 7-4: Regional Seatbelt Compliance Rates



Source: SE Minnesota TZD 2019 Annual Report

- Motorcycle Safety

  https://www.facebook.com/OlmstedSheriff/videos/351788675680333/

In addition to education events, local law enforcement has also worked with TZD and state patrol staff on enforcement activities such as the Border to Border Speed Saturation initiative. This effort targeted TH 14 throughout District 6 for one day which included

outreach, use of media such as electronic message boards, and local news organizations to raise awareness about the impact of speeding.

A major area of emphasis in 2019 were efforts to promote hands free mobile phone usage when driving. The Rochester Police and Olmsted County Sheriff Offices participated in events including Safe City Nights, a local Governor's media event, and multiple other community events to get the message out about the new hands-free law adopted in 2019. These examples highlight ongoing local involvement of ROCOG area organizations in ongoing TZD efforts.

Regional TZD

The Southeast Minnesota TZD organization has two major goals identified in its Strategic Plan:

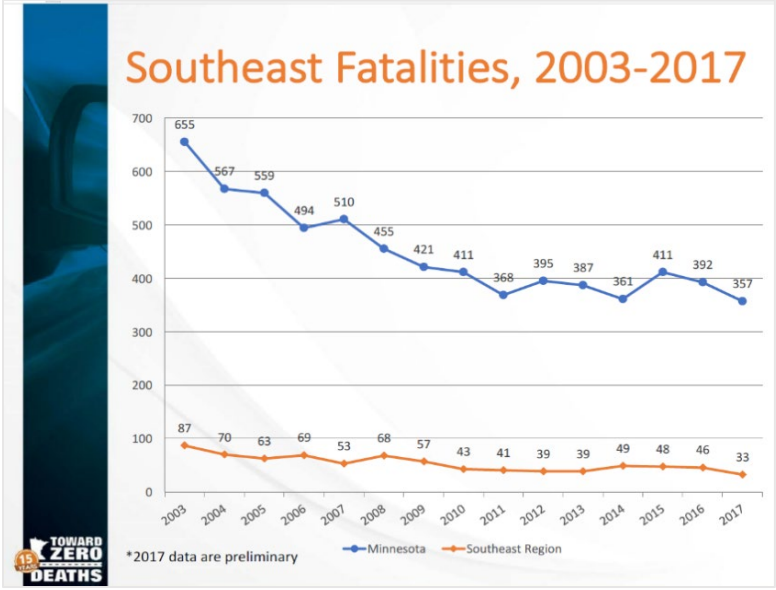
1. Reduce fatalities and serious injuries related to traffic related crashes
2. Pursue partnership goals to increase TZD awareness and partnerships across southeast Minnesota for both the general public and traffic safety professionals

With respect to Goal 1, there were 44 fatalities and 154 serious injuries reported from 2014-2018 in the SE TZD area, as shown in Figure 7-5. To reduce this number, the organization is focusing on increasing seat belt law compliance rates as a major effort in 2020.

In regard to Goal 2, the organization wants to expand engagement with local government in TZD workshops and increase education and promotion of traffic safety among city/county officials and staff. A major piece of this effort will be to promote and implement effective traffic safety initiatives through the following means:

- Develop and distribute resource materials
- Provide enforcement wave support
- Promote evidence-based countermeasure implementation
- Collect regional data and statistics
- Implement regional best practices

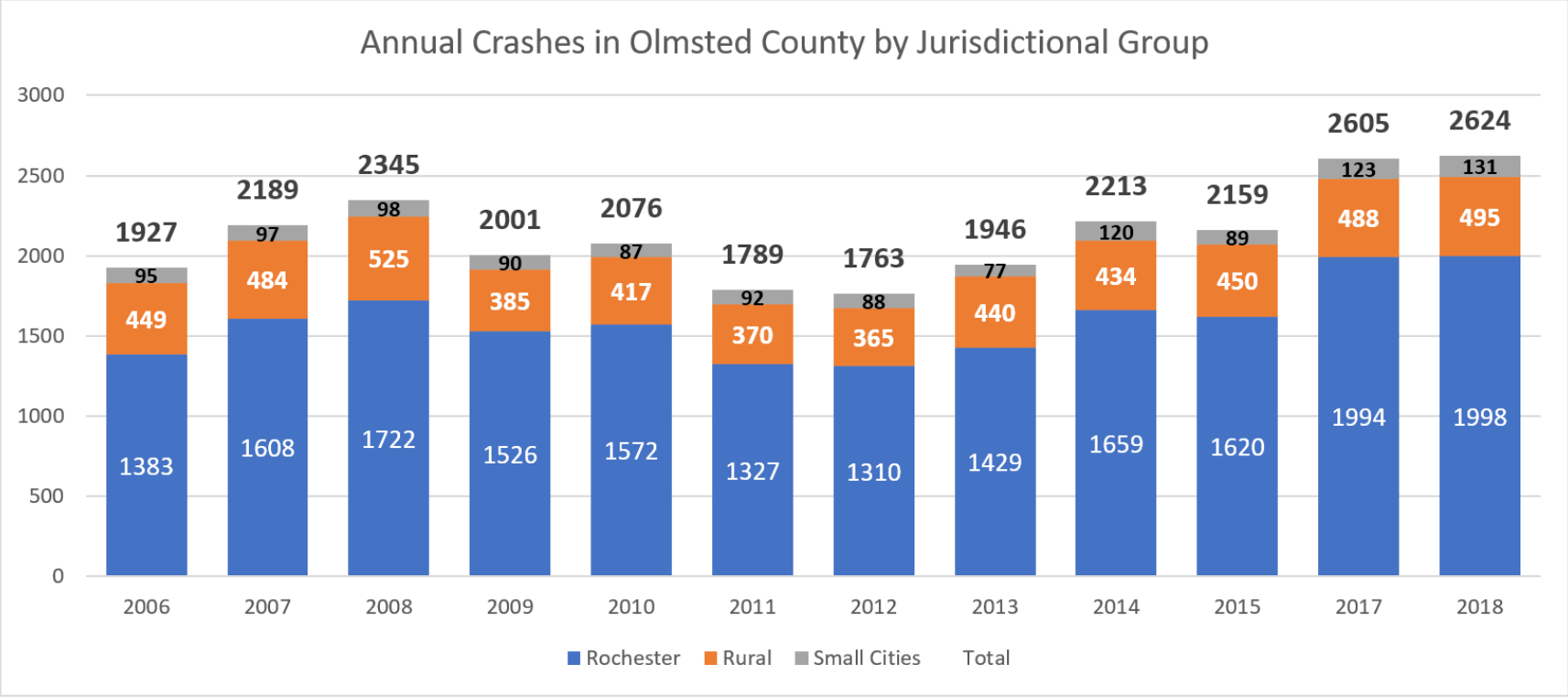
Figure 7-5: Fatalities in District 6



Crash Trends in the ROCOG Area

Figure 7-6 illustrates the trend in total crashes across Olmsted County in terms of total numbers and by general geographic area (Rochester, small cities, rural area). Noticeable was the decline that occurred during the Great Recession, which may be related to the decline in employment and economic activity that was observed to reduce vehicle miles of travel in the area during the same time period. The numbers for 2017/2018 reflect preliminary data that was obtained from MnDOT prior to the full rollout of MnCMAT2 and include some elements that result in an artificially high number of crashes that is not directly comparable to data from 2015 and earlier years.

Figure 7-6: Annual Crashes by Jurisdictional Group



Fatal and Serious

Table 7-2 reports the total number of crashes along with a breakdown of the number of fatalities and serious injuries resulting from crashes in Olmsted County and the number of crashes involving commercial vehicles.

Figure 7-7 provides a comparison of changes in crash numbers, population and vehicle miles of travel over four recent time periods in an effort to show the impact of the Great Recession on travel and crashes, as well as the impacts of the economic recovery through 2018.

Table 7-2: Total Crashes, Fatalities and Serious Injury Crashes in Olmsted County, 2006-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total Crashes	1927	2189	2345	2001	2076	1789	1763	1946	2213	2159	2723	2605	2624
Fatal Crash	13	14	7	12	2	8	2	11	9	14	12	7	7
Serious Injury Crash	44	52	39	29	27	26	30	17	24	28	38	48	36
Commercial Vehicle Crash	67	87	98	64	84	52	58	83	99	92	103	124	129

Figure 7-7: Comparison of Travel Growth, Crash Incidents and Population Growth in Olmsted County

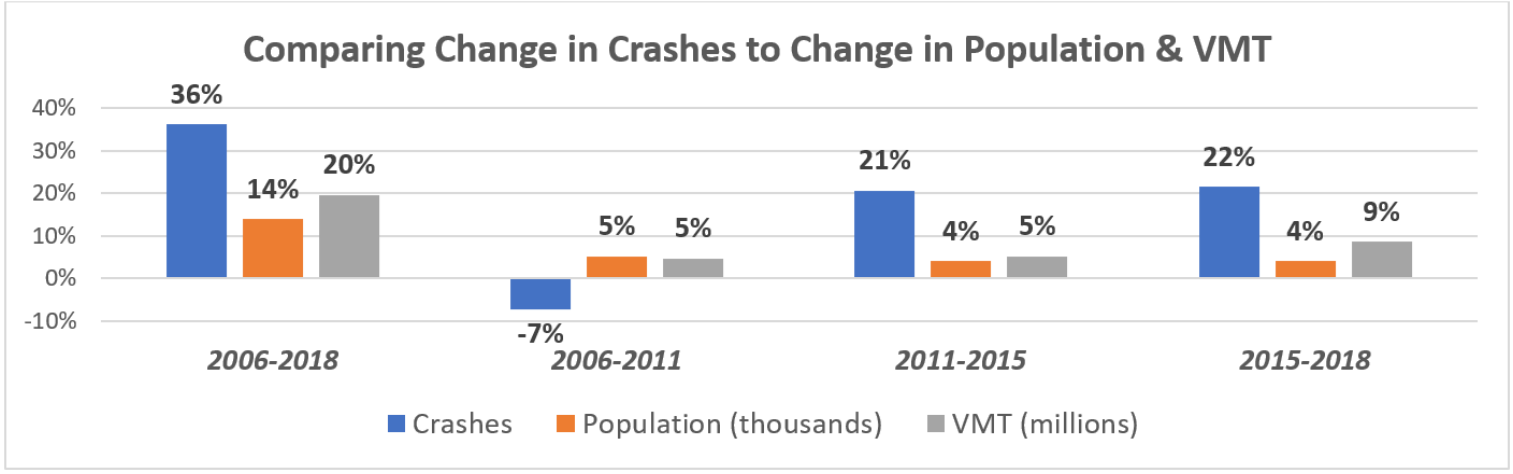


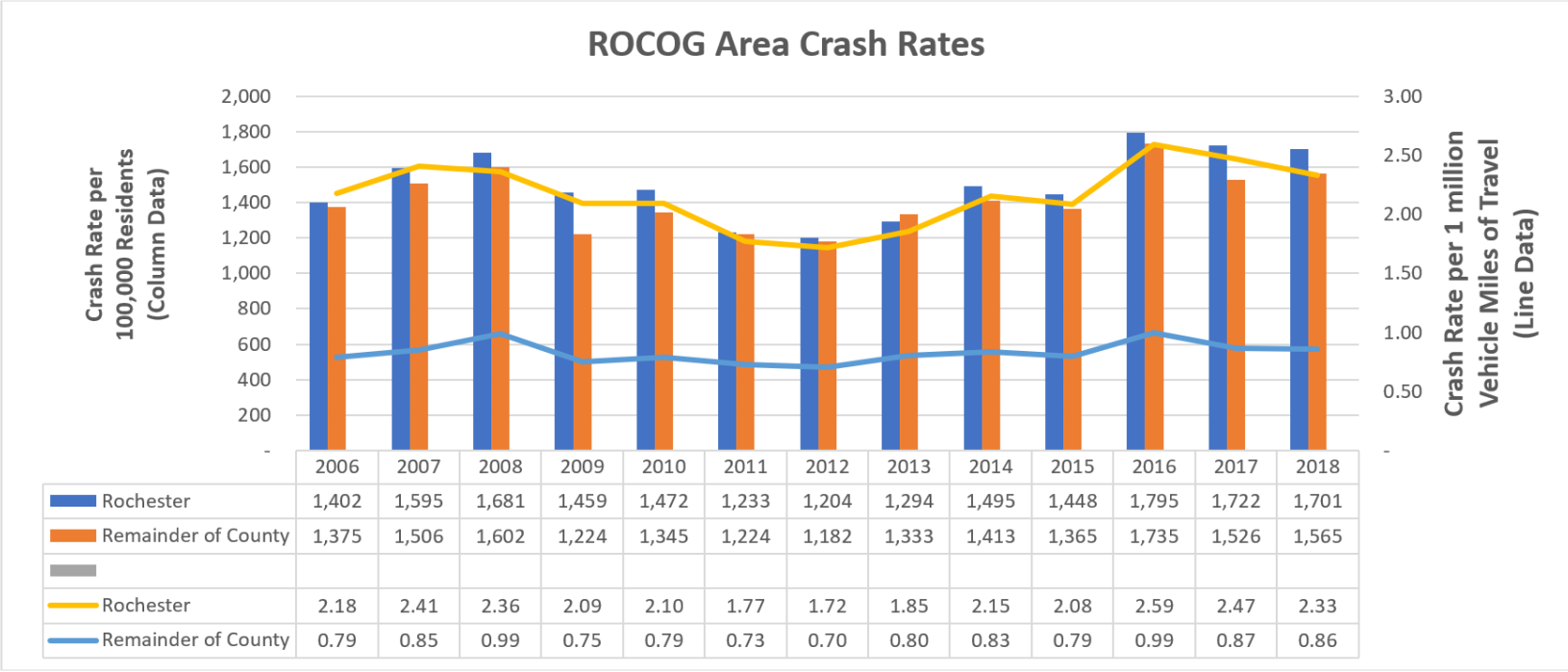
Figure 7-8 provides rate-based comparisons of crash experience in the core urban area of Rochester with experience in the Greater Olmsted County area outside the city. Data points in the chart compare crashes per 100,000 residents in each area as well as comparing the number of crashes per one million vehicle miles of travel in each area.

The column data showing the crash rate per 100,000 residents show that crash rates inside and outside of Rochester were very similar across the years.

Conversely, the line data showing the crash rate per one million vehicle miles of travel show a significant difference is observed, with the crash rate in Rochester at more than twice the rate outside the city.

Figure 7-9 reports on and compares the statewide performance target and local experience in the ROCOG Planning area relative to Fatalities per 100 million vehicle miles of travel, which is one of the standard safety performance measures required to be tracked under the federal performance planning guidelines. The chart

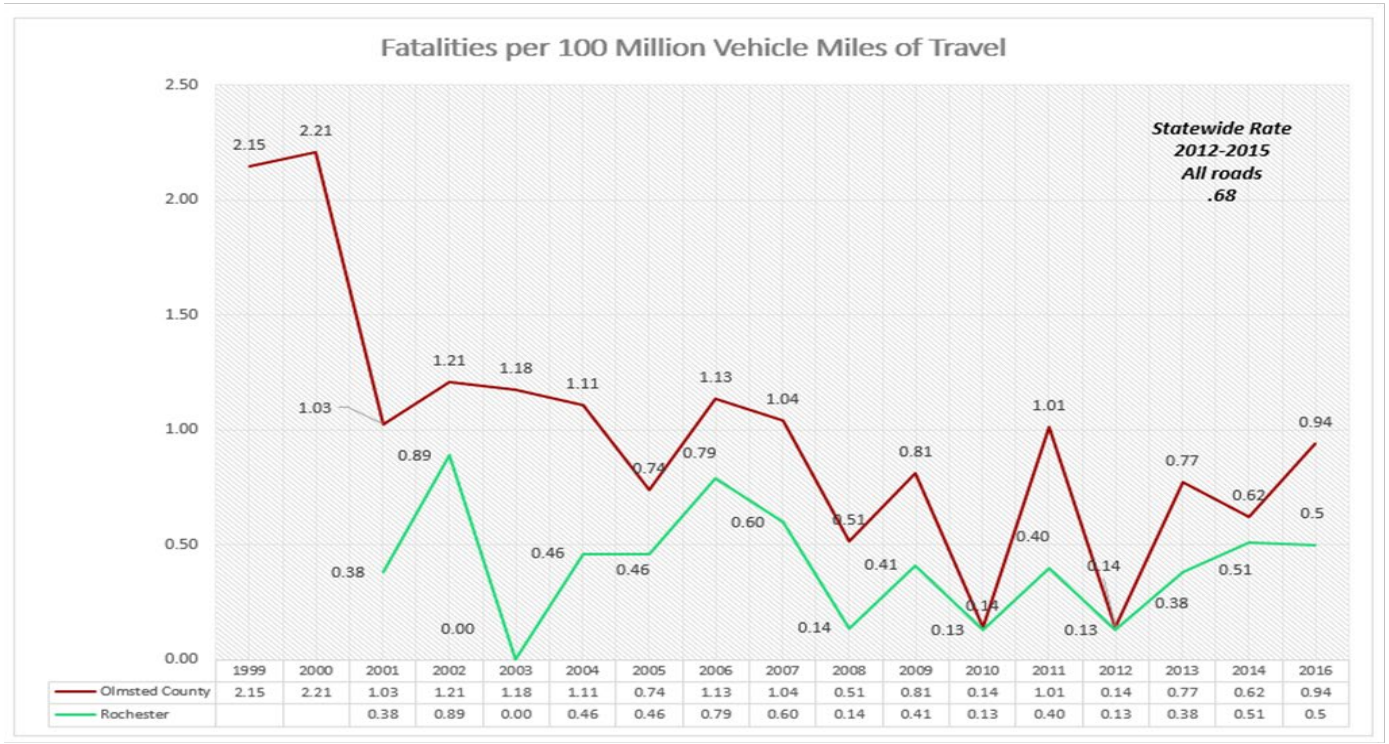
Figure 7-8: Comparison of Crash Rates in Rochester and Greater Olmsted County



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Rochester	1,402	1,595	1,681	1,459	1,472	1,233	1,204	1,294	1,495	1,448	1,795	1,722	1,701
Remainder of County	1,375	1,506	1,602	1,224	1,345	1,224	1,182	1,333	1,413	1,365	1,735	1,526	1,565
Rochester	2.18	2.41	2.36	2.09	2.10	1.77	1.72	1.85	2.15	2.08	2.59	2.47	2.33
Remainder of County	0.79	0.85	0.99	0.75	0.79	0.73	0.70	0.80	0.83	0.79	0.99	0.87	0.86

shows the actual breakdown of rates from the City of Rochester and the Greater Olmsted County area, while the legend to the right shows the overall rate for the ROCOG Area. The 5-year rolling average for the ROCOG area, at 0.66, is comparable to the statewide rolling average for 2014-2018 of 0.648. Locally, the rate has trended downward significantly since reaching a peak in 2015.

Figure 7-9: Local Results on Federal Performance Measures Related to Fatalities



Minnesota 2020 Safety Performance Target

0.626

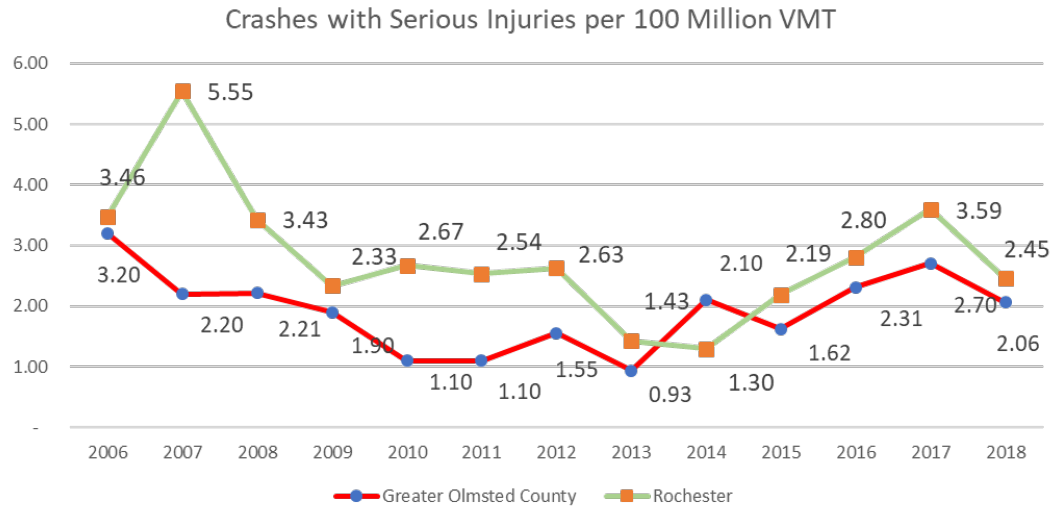
Overall ROCOG Area Rate

2014 **0.63**
2015 **0.96**
2016 **0.81**
2017 **0.46**
2018 **0.44**

5 Year Average 0.66

Figure 7-10 reports on and compares the statewide performance target and local experience in the ROCOG planning area relative to serious injury per 100 million vehicle miles of travel, which is one of the standard safety performance measures required to be tracked under the federal performance planning guidelines. The chart shows the actual breakdown of rates from Rochester and the Greater Olmsted County area, while the legend to the right shows the overall rate for the ROCOG Area. The 5-year rolling average for the ROCOG area, at 2.32, is below the state performance target of 2.85, although locally the rate has trended upward since reaching a low point in the years of 2013/2014.

Figure 7-10: Local Results on Federal Performance Measures Related to Serious Injury Crashes



Minnesota 2020 Safety Performance Target

2.854

Overall ROCOG Area Rate

2014
1.67
2015
1.92
2016
2.57
2017
3.18
2018
2.27

5 Year Average 2.32

The following tables show the distribution of crashes by crash type for all crashes and those involving bicyclists, pedestrians, and commercial vehicles for the period 2006-2018. Notice in particular the elevated percentage of crashes involving fatality or serious injury for pedestrians and bicycles in Tables 8-4 and 8-5.

Table 7-3: Crash Type Distribution – All Crashes

Distribution of Crashes by Injury Severity	All Crashes
Fatality	0.4%
Serious Injury	1.6%
Minor Injury	10.0%
Possible Injury	18.1%
No Injury	69.7%

Table 7-4: Crash Type Distribution – Bicycle Crashes

Distribution of Crashes by Injury Severity	Cycle Crashes
Fatality	1.5%
Serious Injury	4.1%
Minor Injury	45.9%
Possible Injury	43.3%
No Injury	5.2%

Table 7-5: Crash Type Distribution – Pedestrians

Distribution of Crashes by Injury Severity	Ped Crashes
Fatality	3.7%
Serious Injury	14.8%
Minor Injury	44.1%
Possible Injury	37.0%
No Injury	3.0%

Table 7-6: Crash Type Distribution – Commercial Vehicles

Distribution of Crashes by Injury Severity	Truck Crashes
Fatality	1.1%
Serious Injury	1.8%
Minor Injury	8.8%
Possible Injury	12.0%
No Injury	76.3%

Figure 7-11 provides one means of comparing the frequency of fatal or serious injury crashes by looking at the average number of days between these events for a given year. Lower numbers will represent poorer performance as crashes are happening more frequently.

Figure 7-11

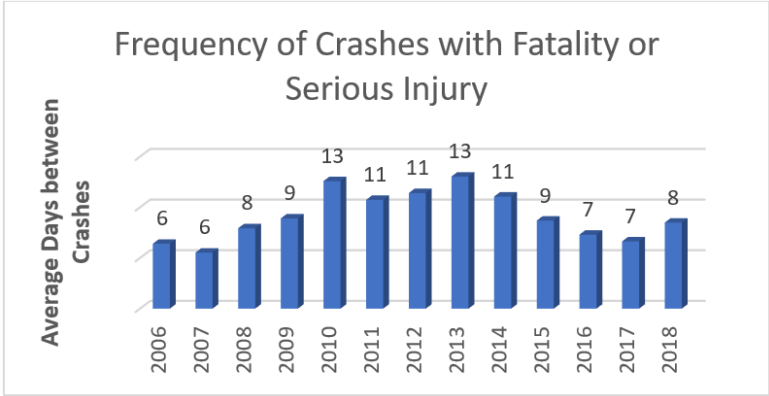
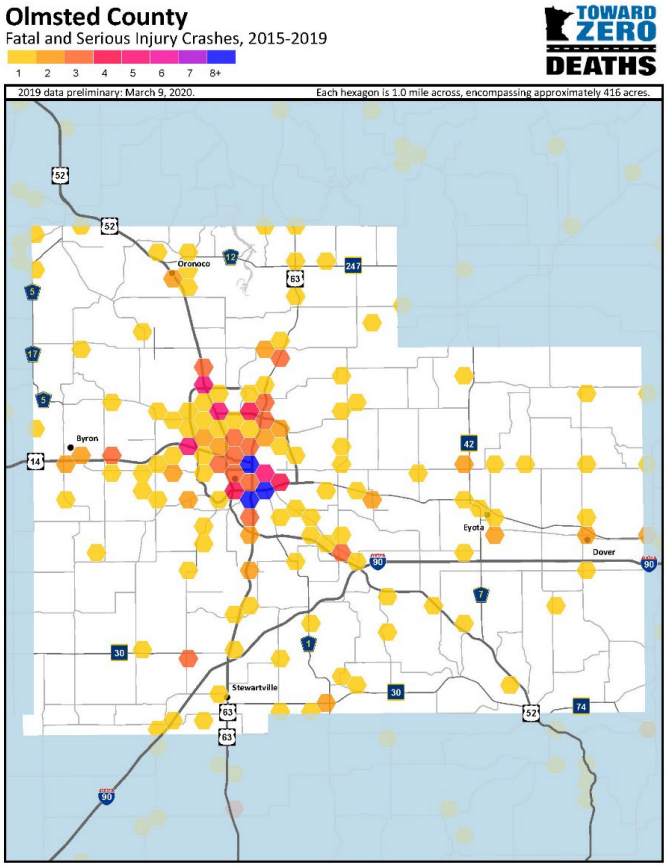


Figure 7-12 is produced by the Towards Zero Death staff and illustrates the location of crashes in Olmsted County/ROCOG Planning Area over the last five years that resulted in a fatality or serious injury. There is an

observed cluster of crashes around Rochester's central business district (CBD), with one location immediately north of the CBD at the intersection of Civic Center Dr and Broadway Ave, and two locations on the south side of the CBD, along TH 14/12th St SE, where more than eight crashes involving a fatality of serious injury occurred.

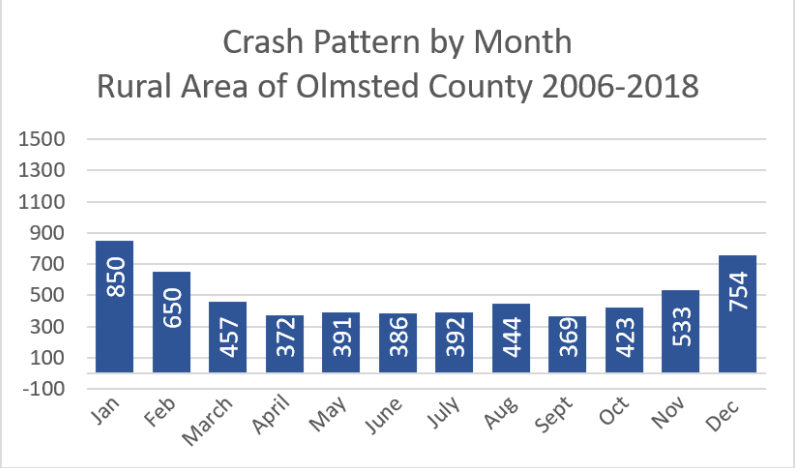
Figure 7-12: Fatal and Serious Injury Crashes



Figures 7-13 and 7-14 illustrate a pattern that was found throughout all jurisdictional levels in the ROCOG Planning Area, including the small cities (which are not reported). This pattern is the occurrence of a higher number of reported crashes occurring in the months of December and January, which is likely related to a cluster of factors including weather-related causes, less daylight hours, and more peak periods of travel due to holiday shopping.

Figure 7-13 reports rural travel data while Figure 7-14 reports data for just the city of Rochester.

Figure 7-13: Monthly Crash Pattern - Olmsted County



An interesting observation to note is that while the number of crashes occurring in the dead of winter are higher, the amount of travel occurring during that same period is noticeably lower. Figure 7-15 illustrates the

monthly level of vehicle miles of travel in the ROCOG Area, which is about 25% lower in winter. This suggests crash rates observed in winter months are approaching 3 times the rate seen in the peak summer driving months.

Figure 7-14: Monthly Crash Pattern - Rochester

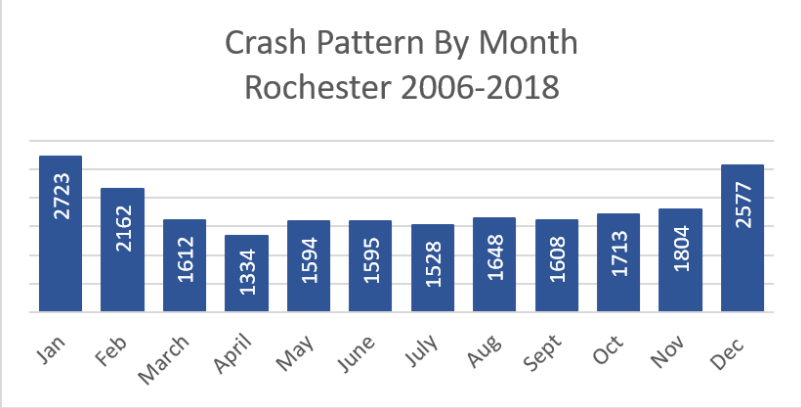


Figure 7-15: Annual Share of VMT by Month

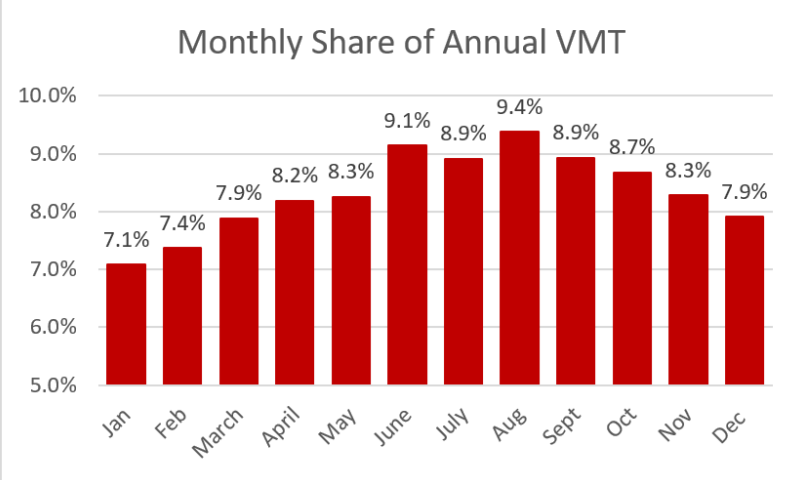
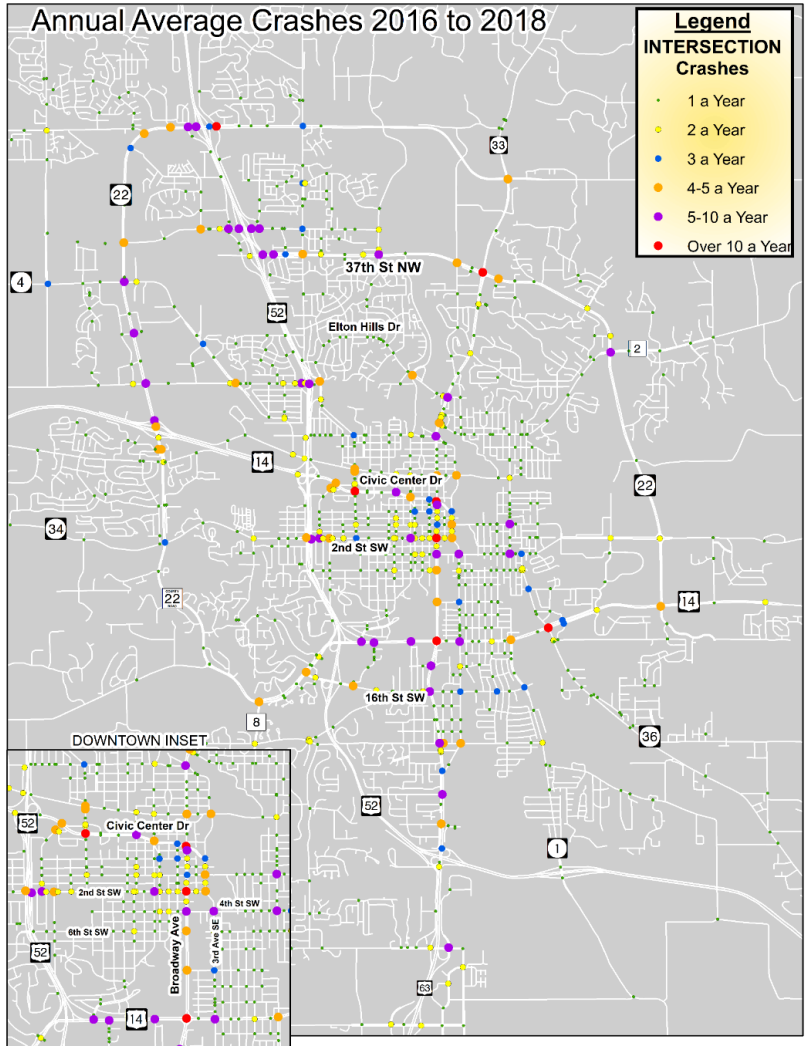


Figure 7-16: Intersection Crash Numbers – Rochester Urban Area



Crash Rate Maps

Figures 7-17 through 7-19 on the following pages represent an effort to conduct a high-level screening of road segments to identify corridors that are seeing elevated crash rates when compared to other roads with similar volume and design character. This analysis is focused on the network of roadways for which periodic annual average daily traffic (AADT) counts are collected as part of the State Aid Traffic Count Program. A total of 670 road segments are included in the traffic county database.

For the analysis, these were stratified into eight categories for which traffic count data was collated along with a three-year (2016-2018) history of traffic crashes. Crash numbers for the purposes of this analysis included both intersection crashes and non-intersection crashes, so results indicating a high crash rate need further analysis to identify whether issues along a given segment are more of an intersection problem or a non-intersection problem.

Road corridors studied were grouped into eight categories based on volume and character as listed in Table 7-7, which resulted in between 40 and 110 road segments per category. After crash rates were calculated for each group, the results within the group were ranked by decile and illustrated on the maps as shown in the legend accompanying each map.

Table 7-7: Roadway Groups for Crash Analysis

Group	Description
1	Freeways
2	High Volume Four Lane Divided Expressways
3	Moderate Volume Four Lane Arterials
4	Urban 2 & 3 Lanes Secondary Arterials and Collectors – 2500 to 10,000 AADT
5	Urban 2 & 3 Lanes Secondary Arterials and Collectors – 500 to 2500 AADT
6	Rural 2 & 3 Lanes Secondary Arterials and Collectors – 2500 to 10,000 AADT
7	Rural 2 & 3 Lanes Secondary Arterials and Collectors – 500 to 2500 AADT
8	Low Volume Collectors < 500 ADT

An appropriate path forward would be to conduct further analysis on those corridors which ranked in deciles 1-2 as exhibiting high crash rates to better understand the reason for the high rate and whether feasible mitigation measures exist to address these results.

Figure 7-17: Rochester Urban Area Crash Rate Results ("CR" = Crash Rate per MVM)

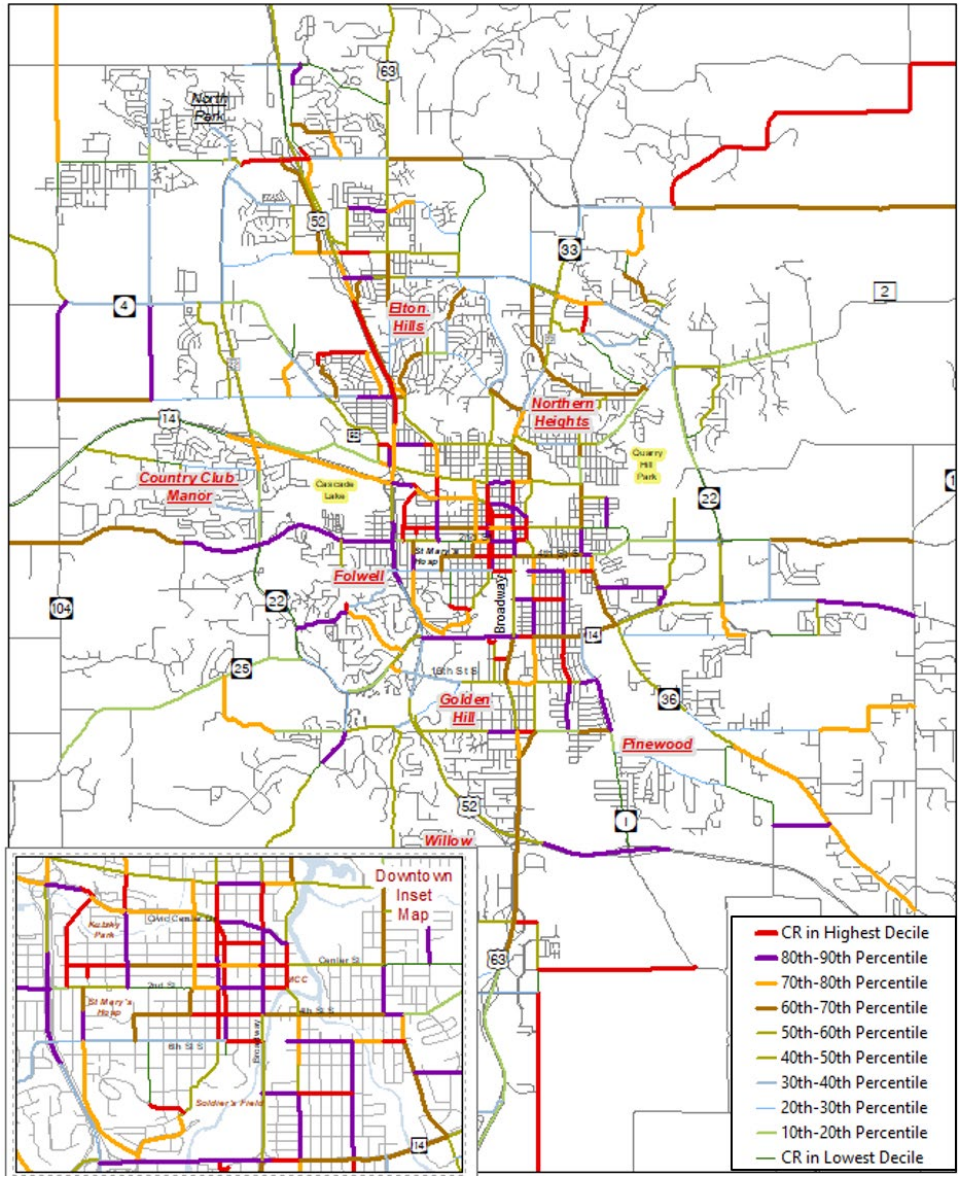


Figure 7-18: Crash Rate Map for Greater Olmsted Area

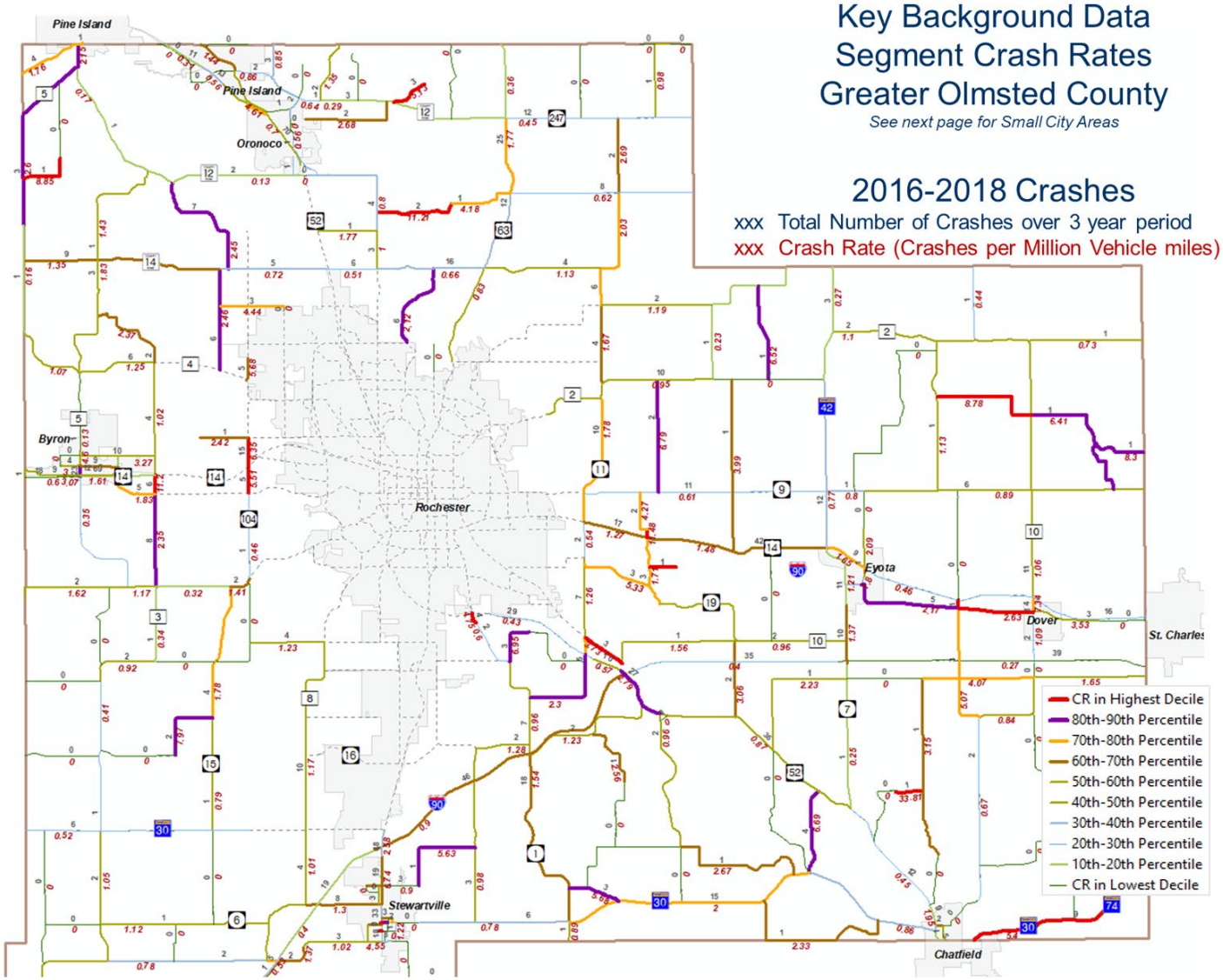
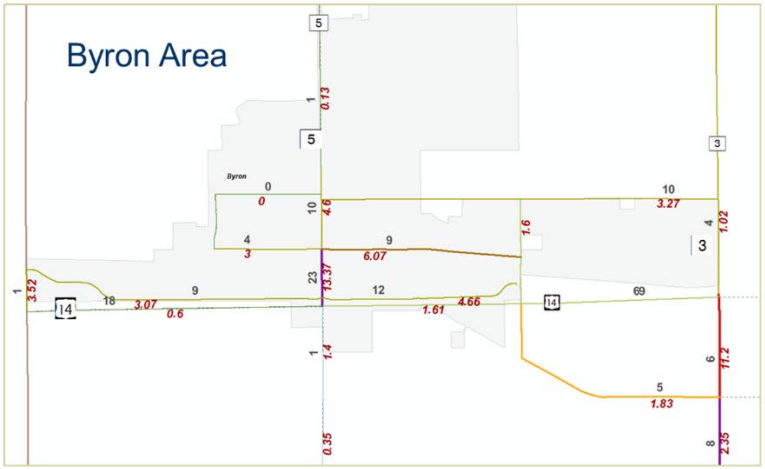
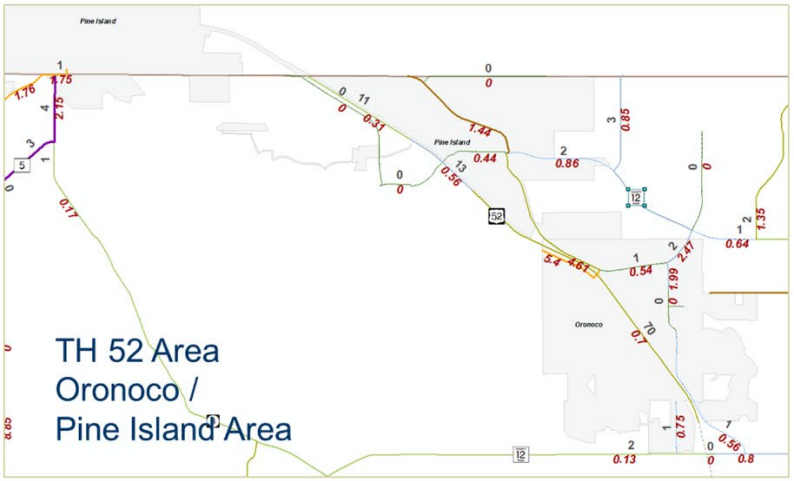
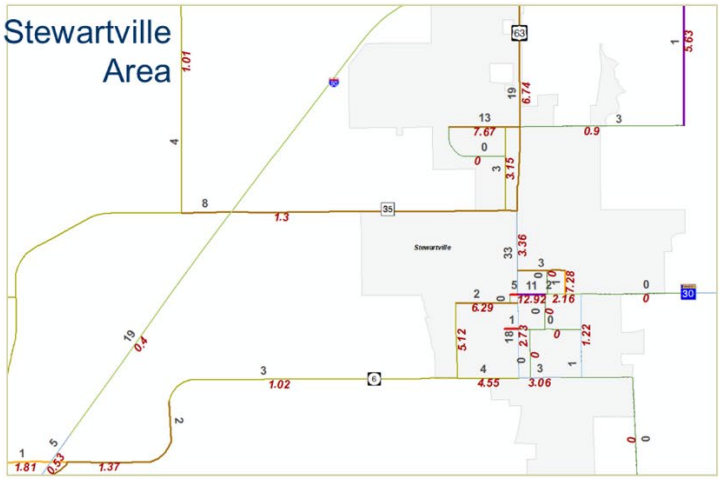


Figure 7-19: Crash Rates for Small Cities in Greater Olmsted County Area







Legend to Road Color

- CR in Highest Decile
- 80th-90th Percentile
- 70th-80th Percentile
- 60th-70th Percentile
- 50th-60th Percentile
- 40th-50th Percentile
- 30th-40th Percentile
- 20th-30th Percentile
- 10th-20th Percentile
- CR in Lowest Decile

Crash Statistics by Facility for Larger Small Cities

2016-2018 Crashes

xxx Total Number of Crashes over 3 year period
xxx Crash Rate (Crashes per Million Vehicle miles)

Pedestrian Crashes

Figure 7-20 illustrates the number of pedestrian crashes per year that have occurred. This data is based on crash reports filed with the Minnesota State Patrol, which will involve only crashes with confirmed injury or a level of property damage exceeding $1000.

Figure 7-20: Pedestrian Crashes per Year

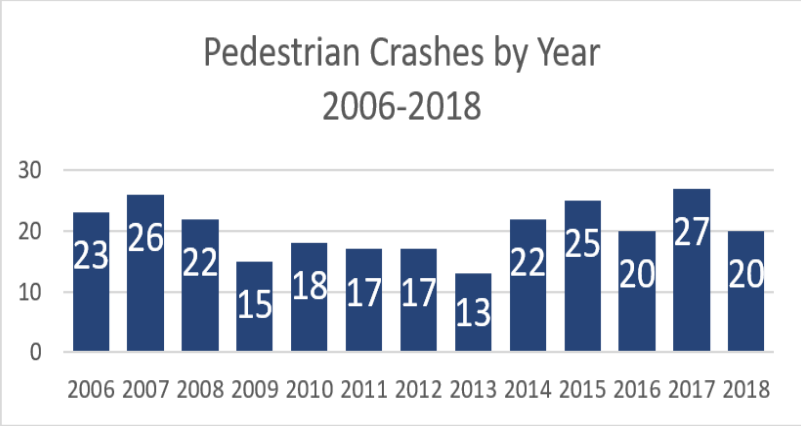


Figure 7-21 provides a second look at pedestrian injury, provided by the MIDAS data system maintained by the Minnesota Department of Health and based on reports from local emergency admissions where the cause of injury was reported as an accident involving a motor vehicle.

Figure 7-22 highlights the geographic distribution of crashes involving pedestrians in Rochester for a 12-year period between 2006 and 2018. An extended time period was used to illustrate location patterns as the number of annual crashes reported involving pedestrians is small and locations in any one year may not be representative of where issues for pedestrians are occurring.

Figure 7-21: Rate of Pedestrian Injuries per 100,000 Persons

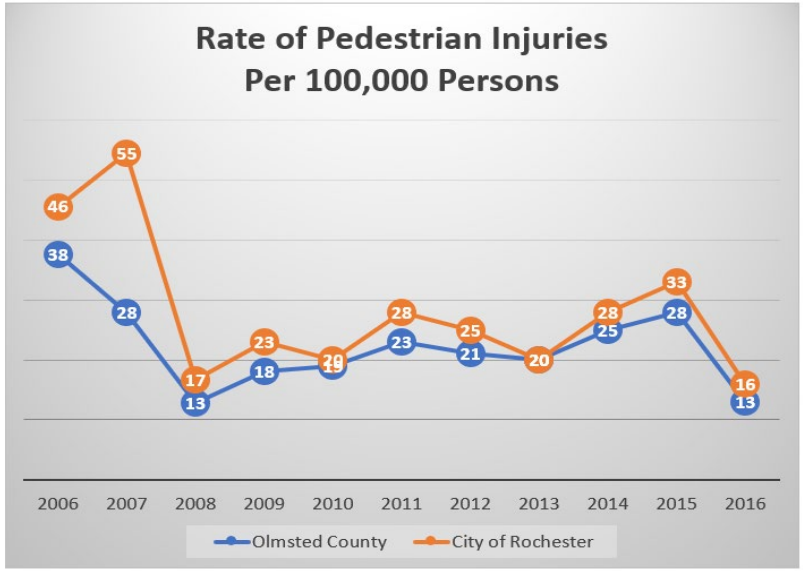
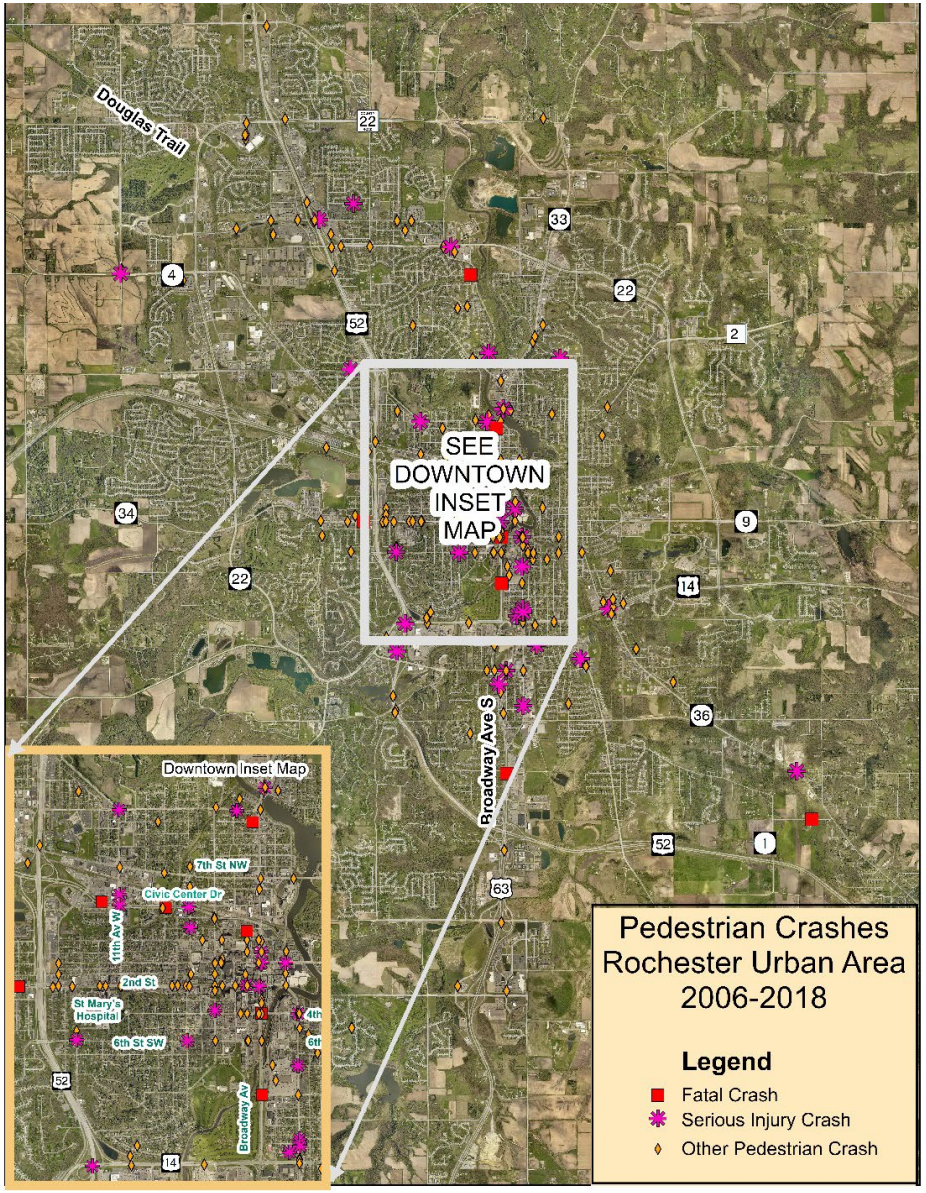


Figure 7-22: Crashes Involving Pedestrians



Bicycle Crashes

Figure 7-23 illustrates the number of bicycle crashes per year that have occurred. This data is based on crash reports filed with the Minnesota State Patrol, which will involve only crashes with confirmed injury or a level of property damage exceeding $1000.

Figure 7-23: Crashes Involving Cyclists per Year

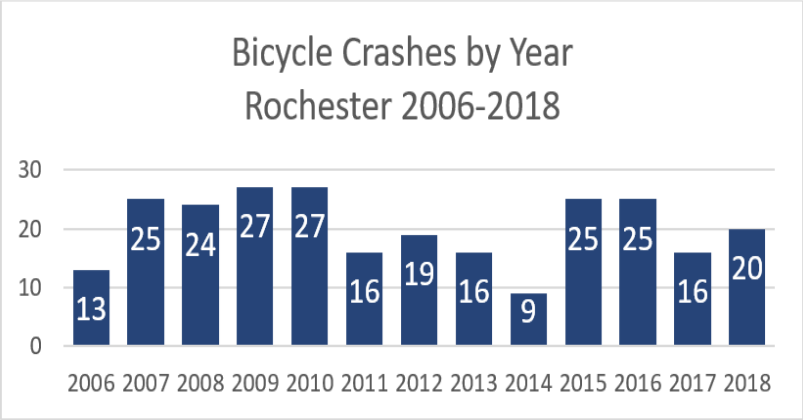


Figure 7-24 provides a 2nd look at bicyclist injury, provided by the MIDAS data system maintained by the Minnesota Department of Health and based on reports from local emergency admissions where the cause of injury was reported as an accident involving a motor vehicle.

Figure 7-25 highlights the geographic distribution of crashes involving bicyclists in the Rochester area for a 12-year period between 2006 and 2018. An extended time period was used to illustrate location patterns as the number of annual crashes reported involving bicyclists is small and locations in any one year may not be representative of where issues for bicyclists are occurring.

Figure 7-24: Rate of Bicycle Injuries per 100,000 Persons

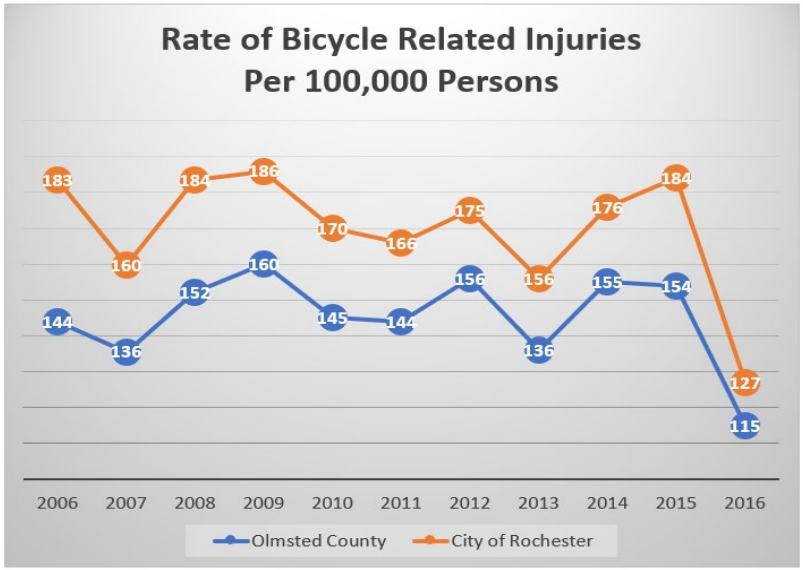
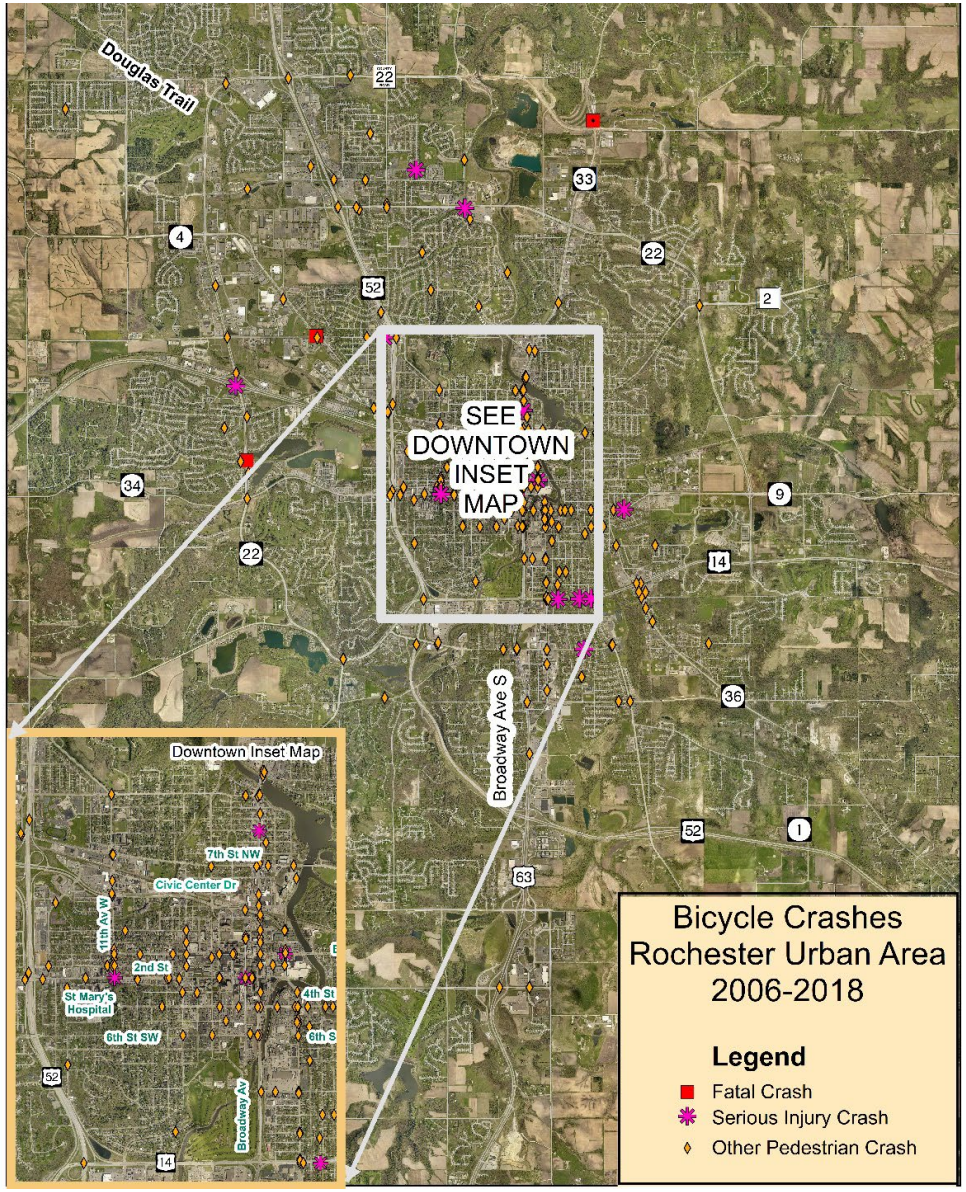


Figure 7-25: Crashes Involving Bicyclists



Commercial Vehicle Crashes in Olmsted County

Crashes involving commercial vehicles include those incidents where at least one vehicle involved was a truck with more than two axles and/or more than four tires. As shown in Figure 7-26, the majority of crashes involving commercial vehicles occur in Rochester, although the overall rate of crashes involving commercial vehicles is relatively low, at less than 5%.

Figure 7-27 illustrates where crashes involving commercial vehicles have occurred. Outside of the urban area, they are largely concentrated on the State Highway system, while in the urban area most are seen on the arterial street network. This is to be expected since these roads are built to support commercial vehicle weight limits or are designated as truck routes.

Figure 7-26: Number of Crashes Involving Commercial Vehicles by Jurisdiction

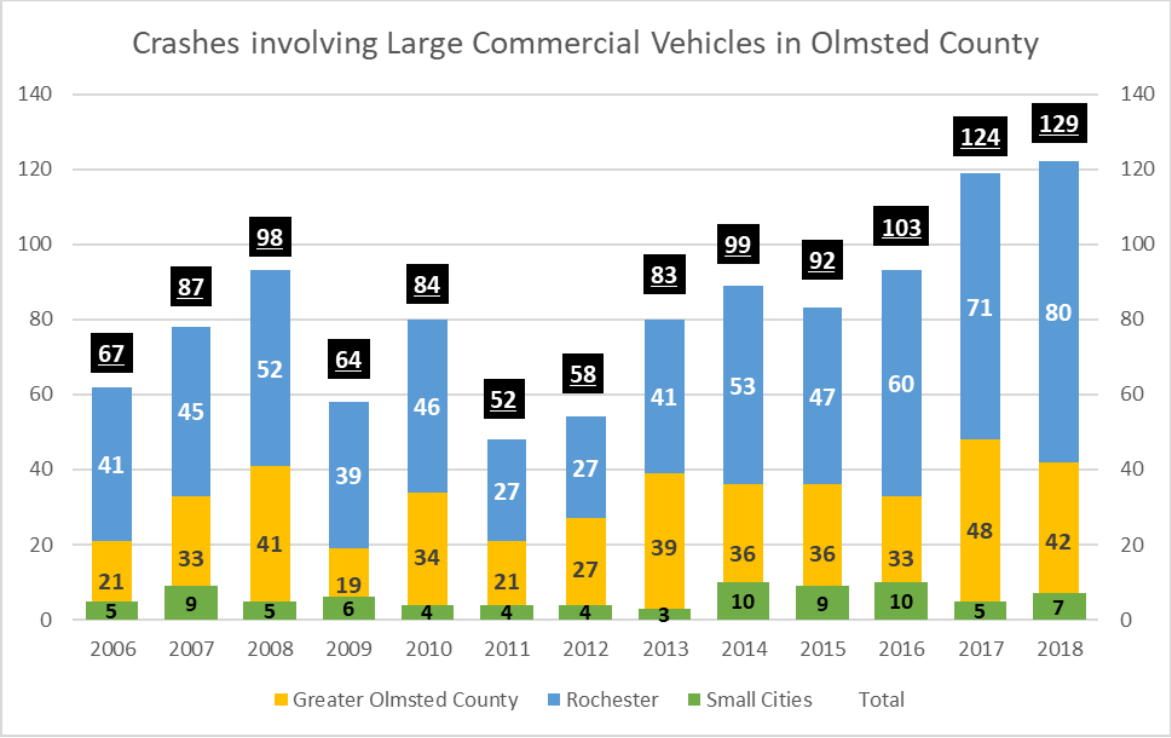
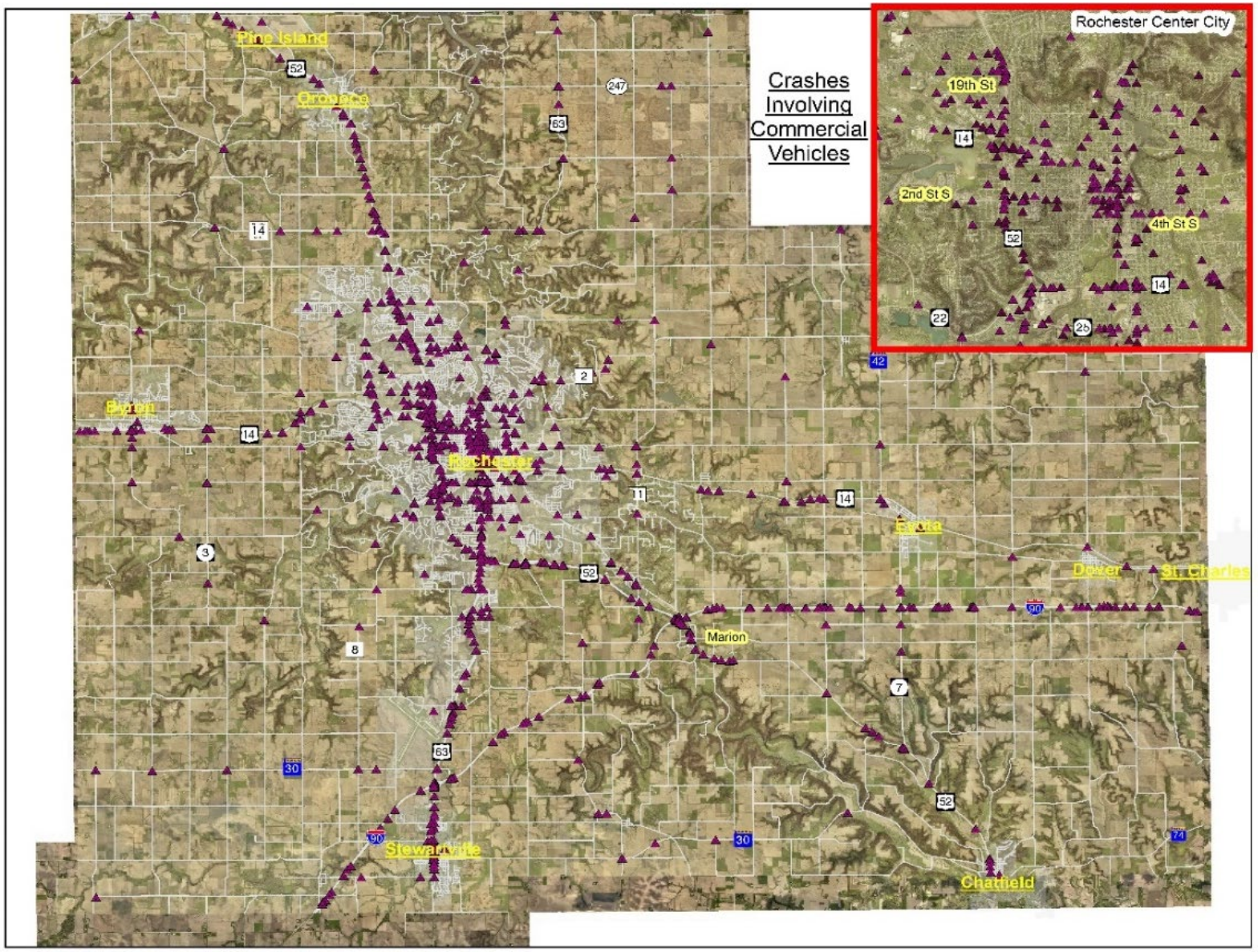


Figure 7-27: Crashes Involving Commercial Vehicles in Rochester & Olmsted County



Safety Planning Directions and Strategies for the ROCOG Area

We can significantly save lives and reduce injuries when we decrease traffic crashes and better respond to traffic emergencies. Traffic safety on the regional transportation system can be improved by creating a travel environment that is consistent with the community context, reduces risk, and incorporates safety considerations into all investment decisions.

ROCOG's planning process is consistent with the State and District Highway Safety Plans and with local transit safety/security planning and programs. ROCOG recognizes engineering, education and enforcement as three key components of safety.

The work of ROCOG and its partners in the area of highway safety reflects the approach that has become embedded in work on safety at the national, state and local level as a result of the new strategic focus first established under SAFETEA-LU in 2005 and continuing to this day. This risk-based approach differs from approaches commonly used prior to adoption of that legislation. Table 7-8 describes some of fundamental differences between the "old" (convention) and "new" (risk-based) approaches.

Table 7-8: Contrast Between Historic Conventional Approach and Current Strategic Approach to Safety

	Conventional Approach	Risk-Based Approach
What is the problem?	Try to prevent all crashes	Prevent crashes from resulting in fatalities and serious injuries
What is the appropriate goal?	Reduce the number of fatalities and serious injuries	Zero fatalities and serious injuries
What are the major planning approaches?	- Reactive to incidents - Incremental approach to reduce the problem	- Proactively target and treat risk - Systematic approach to build a safe road system
What causes the problem?	Non-Compliant road users	People make mistakes and people are physically vulnerable in crashes. Varying quality and design of infrastructure and design of infrastructure and operating speeds provides inconsistent guidance to users about what is safe road use behavior
Who is ultimately responsible?	Individual road users	Shared responsibility by individuals with system designers
How does system work?	Actions are largely composed on isolated interventions	Different elements of a safe system combine to produce a summary effect greater than the sum of individual treatments, so that if one part of system fails other parts provide protection.

To support ongoing safety planning and investment, ROCOG will focus its efforts on safety based on the following strategic directions.

Planning

- ROCOG and its partner agencies should consider establishing a process to identify high priority projects that would be eligible for funding under the various targeted safety funding programs in order to have a set of projects "on the shelf" that have demonstrated community support in advance of responding to solicitation notices.
- A website dedicated to ROCOG area transportation safety should be created, incorporating links to the regional safety reports and plans, current safety initiatives, news links, and contact information.
- Crash data should be monitored on a regular basis to review of historic crash experience and identify locations that exceed standard crash thresholds, using the MnCMAT2 Crash Mapping Tool maintained by MnDOT. Consideration should be given to establishing systematic methods of identifying critical crash locations through use of a standard set of performance measures and prioritizing critical accident locations for further detailed study.
- ROCOG should periodically review its safety planning directions and federal/state performance measures to determine if existing directions and performance measures adequately respond to highway traffic safety concerns.
- Whereas other agencies lead project design and engineering, influencing project development and design is a challenge for ROCOG, given its focus is on system and corridor planning. While there is no standard for what "great projects" look like, illustrating typologies and connecting design elements to regional goals is critical to moving the needle on safety and mobility. Early input on major roadway projects from ROCOG could provide a multi-jurisdictional perspective on the important goals a project should be designed to achieve.
- ROCOG should consider preparing Planning Area Safety Reports that would periodically present goals, emphasis areas, statistics, and initiatives to help identify the depth and breadth of safety issues in the area.

Programming and Funding

- ROCOG is responsible for evaluating and programming federally funded transportation projects on the Transportation Improvement Program (TIP). Safety benefits will continue to be a factor considered in TIP project selection.
- For Highway Safety Improvement (HSIP) projects, a rigorous evaluation is used to ensure consistency with state and federal guidelines. Where needed, ROCOG

could consider using a part of the regular federal allocation it programs to support HSIP projects if additional funding is needed to enhance project outcomes.

- With the proposed update of the Olmsted County Highway Safety Plan to be started in late 2020, Olmsted County will be positioned to pursue additional funding to implement safety improvements in targeted areas.

Education

Safety education is an ongoing effort that relies primarily on cooperation among partners in the SE Minnesota Towards Zero Deaths coalition as well as partnerships at the local level among local law enforcement, public works agencies, emergency responders, educational institutions, and community groups. ROCOG should continue to participate where possible in these efforts and would advocate for the following safety directions.

- Support and participate in the ongoing work of Towards Zero Deaths Initiative and the annual targeted focus areas established by SEMN TZD.
- Continue education and training targeting younger and older drivers as these age cohorts continually turnover as children reach driving age and adults reach senior age. Given these populations are more likely to be involved in serious injury crashes than other age groups, it is important that education targeting these groups is an ongoing endeavor.
- Support Olmsted County programs facilitated by the Olmsted County Public Health Department, such as the Healthy Communities Program, that are working to message the need for traffic safety and the safe sharing of road space among various types of users. Emphasis should be placed on pedestrians and bicyclists.

Engineering

- ROCOG and its partners should continue to identify low cost safety improvements that can help to minimize the risk of crashes due to factors such as lane departure or intersection navigation.
- Identify and promote a toolbox of strategies to reduce fatal and serious injury crashes that will help build support for such investments through dissemination of information to the public.
- ROCOG should continue to work closely with local partners on access management along the major street system by assisting in development of access management ordinances, coordinating with partners on corridor improvement studies, and providing review and comment on development applications.
- The City of Rochester works with individual neighborhood associations in the administration of a traffic calming program targeting speed management

and cut-through traffic concerns. These efforts also draw on the resources of the Rochester Police Department as most traffic calming projects include not only physical measures but education and enforcement components as well.

Enforcement

- ROCOG supports ~~the~~ targeted enforcement using well publicized enforcement saturation events and targeted enforcement to deter impaired and aggressive drivers.

Safe Routes Programs

- ROCOG should consider working with its local partners on targeted safe routes programs that go beyond the well-established Safe Routes to Schools efforts discussed in the next section, focusing on issues related to Safe Routes to Transit, Safe Routes for Seniors, and investment in targeted areas where concentrations of low income, disabled, and other disadvantaged populations live. These populations typically see higher numbers who cannot rely on private transportation to meet their daily travel needs and must depend more heavily on alternative modes. Focused work on these areas could help solve some of the daily challenges they face.

School Safety

- ROCOG has facilitated Safe Routes to School planning which has benefitted communities in terms of successfully applying for funding and implementing projects and programs. ROCOG should continue to provide services to interested partners as needs arise.
- The Rochester Public School District works closely with Rochester and Olmsted County Public Works staff on a crossing guard program and provides regular consultation on walking and bicycling routes to serve neighborhood schools.
- Olmsted County Public Health works with selected school locations on programs to teach students traffic safety skills and the benefits of walking and bicycling.

Transit

- As the public manager of transit services in the ROCOG planning area, the City of Rochester works closely with First Transit Corporation (the provider of fixed route transit in the urbanized area) and dial-a-ride providers to address safety issues related to the delivery of transit service on an ongoing basis.

Active Transportation

- The City of Rochester coordinates with the Mayo Clinic, downtown lodging establishments, and the Downtown Business Alliance to address the safety

needs of the high volume of pedestrians in downtown Rochester. Most efforts involve infrastructure investment in tools such as countdown timers, ADA-compliant intersection ramps, installation of crosswalks and providing adequate pedestrian lighting.

Figure 7-28 illustrates a range of measures that have been considered and implemented in the Rochester Urban area to improve safety for pedestrians.

Figure 7-28: Common Pedestrian & Bicycle Safety Measures That Have Been Implemented in the Rochester Urban Area

ROCOG will continue to work with the City of Rochester, Olmsted County, and MnDOT to improve pedestrian and bicycle facilities to reduce conflicts between motorists and non-motorists. Of particular concern to ROCOG, given its planning focus on major road corridors, is improving conditions along high volume roads where walkers and bicyclists may be discouraged if sidewalks or paths are absent or inadequate due to minimal setback or surface width.

Transportation Security Planning in ROCOG Area

Current federal transportation legislation continues the metropolitan planning requirements on security planning that were specified in 2005's Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Security planning involves planning and preparing for impacts on transportation system due to factors such as natural disasters (e.g. flooding, hurricanes, blizzards), terrorist attacks, shooting and hostage situations, accidents, technical failures, and cyber threats.

Although the immediate organizational response to security incidents and disasters will be the responsibility of security and public safety agencies, MPOs can promote coordinated planning through regional coordination efforts, data depository, technical support, and funding. ROCOG's staff has provided Rochester and Olmsted

County with project leadership, data, technical analysis, and document writing in their hazard mitigation planning projects. These documents can be viewed at the following locations:

City of Rochester All Hazard Mitigation Plan:

https://www.rochestermn.gov/home/showdocument?id=14140

Olmsted County Multi-Hazard Mitigation Plan

https://www.co.olmsted.mn.us/planning/ordinances/Documents/Olmsted%20County/MHMP_Olmsted_2017.pdf

Aside from this direct involvement in hazard mitigation planning, ROCOG's involvement in security planning is minimal. Transportation security planning relies on the transit agencies, MnDOT, and local and state entities for these operations. Figure 7-29 summarizes ROCOG's role and relationship to primary security planning areas undertaken in the ROCOG Area.

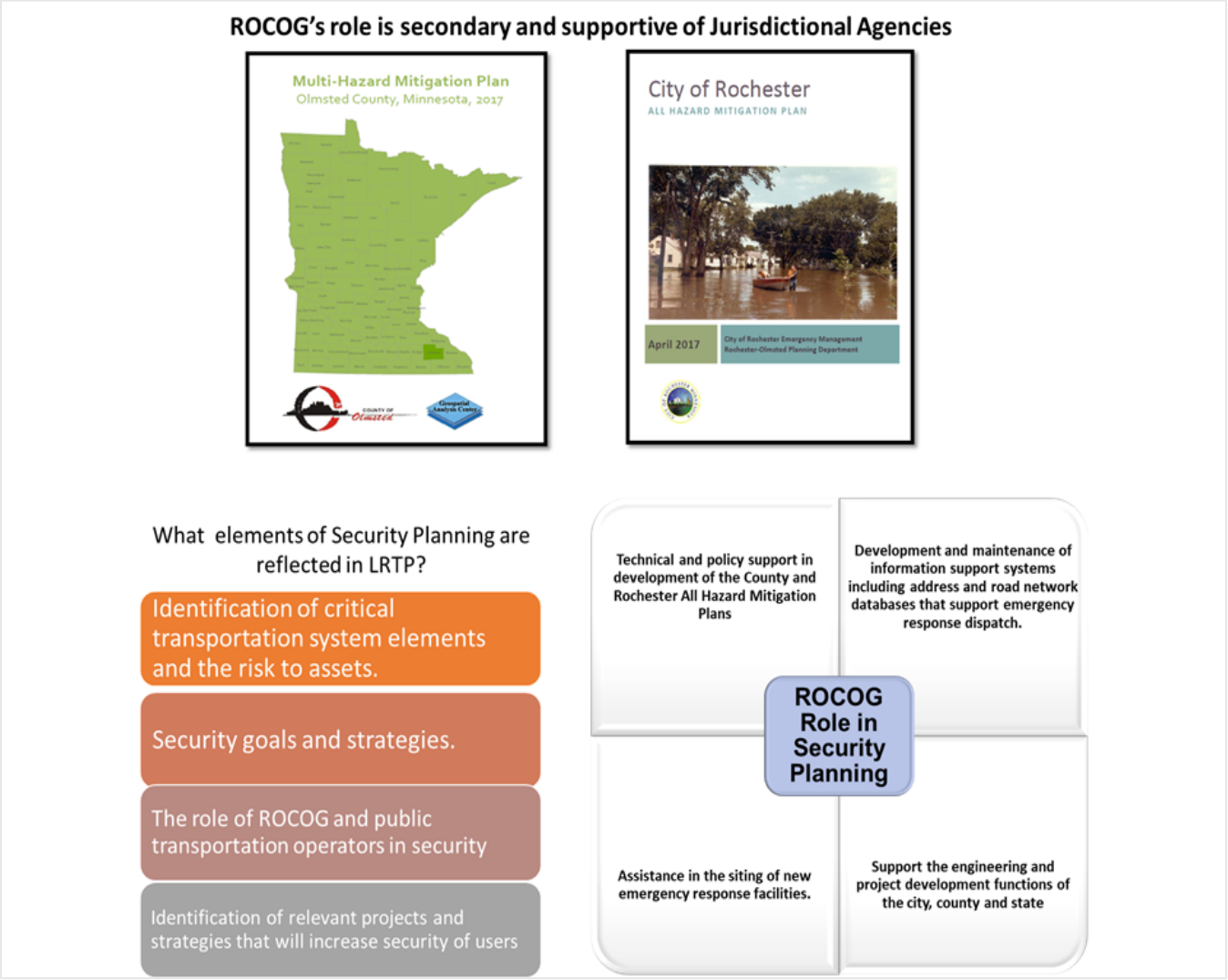
Local Assets

MnDOT has undertaken extensive efforts to plan for impacts to state managed facilities which include many of the major highways, airports and rail corridors in the regional area.

Transportation security planning focuses on protecting critical infrastructure by preventing, preparing against, expediting responses to, and aiding in recovery from major natural and man-made events. For the ROCOG Area, the infrastructure of particular interest includes:

- The Interstate highway system, particularly at key nodes, such as the I90/TH 63 and I-90/TH 52 interchanges
- Non-Interstate highways on the National Highway System (e.g., TH 52, TH 14 west of Rochester, and TH 63 south of Rochester) that serve as high capacity links for moving and evacuating vehicles and the interchanges and bridges/overpasses on these routes that connect regional highways with important local arterial routes
- The Rochester International Airport and the portion of State Highway 30 that serves as the intermodal connector for the airport to the National Highway System
- The Rochester Public Transit Downtown Transfer Area and the Public Transit Operations Center
- Important freight corridors which generally correspond with the major arterial network, as well as the Canadian Pacific rail corridor that traverses east-west through Rochester and Olmsted County
- The Rochester Traffic Management Center (TMC) and its data collection/dissemination assets

Figure 7-29: ROCOG Role in Hazard Mitigation Planning



Local Emergency Management

Emergency management activities in Olmsted County are directed by the Olmsted County Office of Emergency Management. Their Emergency Operations Center is staffed by the Olmsted County Sheriff's Department and was established to help coordinate local response to disasters.

Given Rochester's position as the 3rd largest city in the state, it established a city-level emergency management office which is responsible for their emergency preparedness operations. The office is responsible for coordinating efforts with county, state, and federal agencies during those times. The primary responsibility of Rochester Emergency Management is to implement and coordinate emergency response programs and efforts and provide training for community partners.

MnDOT Flash Flood Vulnerability and Adaptation Assessment Pilot Project

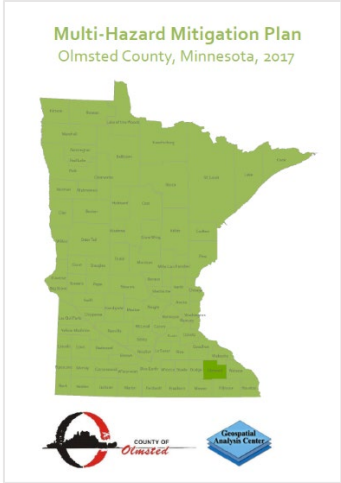
Flooding presents a challenge to fulfilling the Minnesota Department of Transportation's (MnDOT) mission to, "Plan, build, operate, and maintain a safe, accessible, efficient, and reliable multimodal transportation system." Climate change challenges assume and call for new approaches to understanding vulnerabilities across the highway system and at specific transportation facilities so that appropriate actions and adaptations can be taken to minimize expanding risks. This project, one of 19 Federal Highway Administration (FHWA) climate vulnerability pilot studies nationwide, is looking at the effects of climate hazards on the transportation system and represents a starting point for developing these new approaches. The focus of the pilot study was on flash flooding risks to the highway system. While flooding is not the only threat to the state's highway system posed by climate change, it is likely to be one of the most significant and has already caused extensive disruptions to the transportation system in many areas. Recognizing this, MnDOT planners and engineers have long considered minimizing the risk of flash flooding in the siting and design of the state's roadway network.

Olmsted County Multi-Hazard Mitigation Plan 2017

In 2009, under the leadership of the Olmsted County Homeland Security and Emergency Response Coordinator, the first Countywide All Hazard Mitigation Plan (AHMP) was completed in accordance with the requirements set forth in Section 104 of the Disaster Mitigation Act of 2000.

The Olmsted County Emergency Management Office, with the assistance of the University of Minnesota Duluth Geospatial Analysis Center, updated the plan to reflect evolving risks and threats and new knowledge about best practices in preparedness, response, recovery and mitigation. The intent of the 2017 Multi-Hazard Mitigation

Plan (MHMP) is to reduce the actual threat of specific hazards by limiting the impact of damages and losses.



Risk Assessment and Mitigation Strategies

The hazard mitigation plan is built upon the principle of building disaster-resistant communities by protecting lives and reducing the future impacts of hazards including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist with recovery. A risk assessment was completed involving quantifying the potential loss resulting from disaster by assessing the vulnerability of buildings, infrastructure, and people. The major transportation related risk factor that was identified was road washouts, with the following list representative of the major county roads impacts, while also noting that many gravel township roads are also subject to washout, though risk related to townships roads is normally limited to a fairly small population. The county roads flagged for attention included:

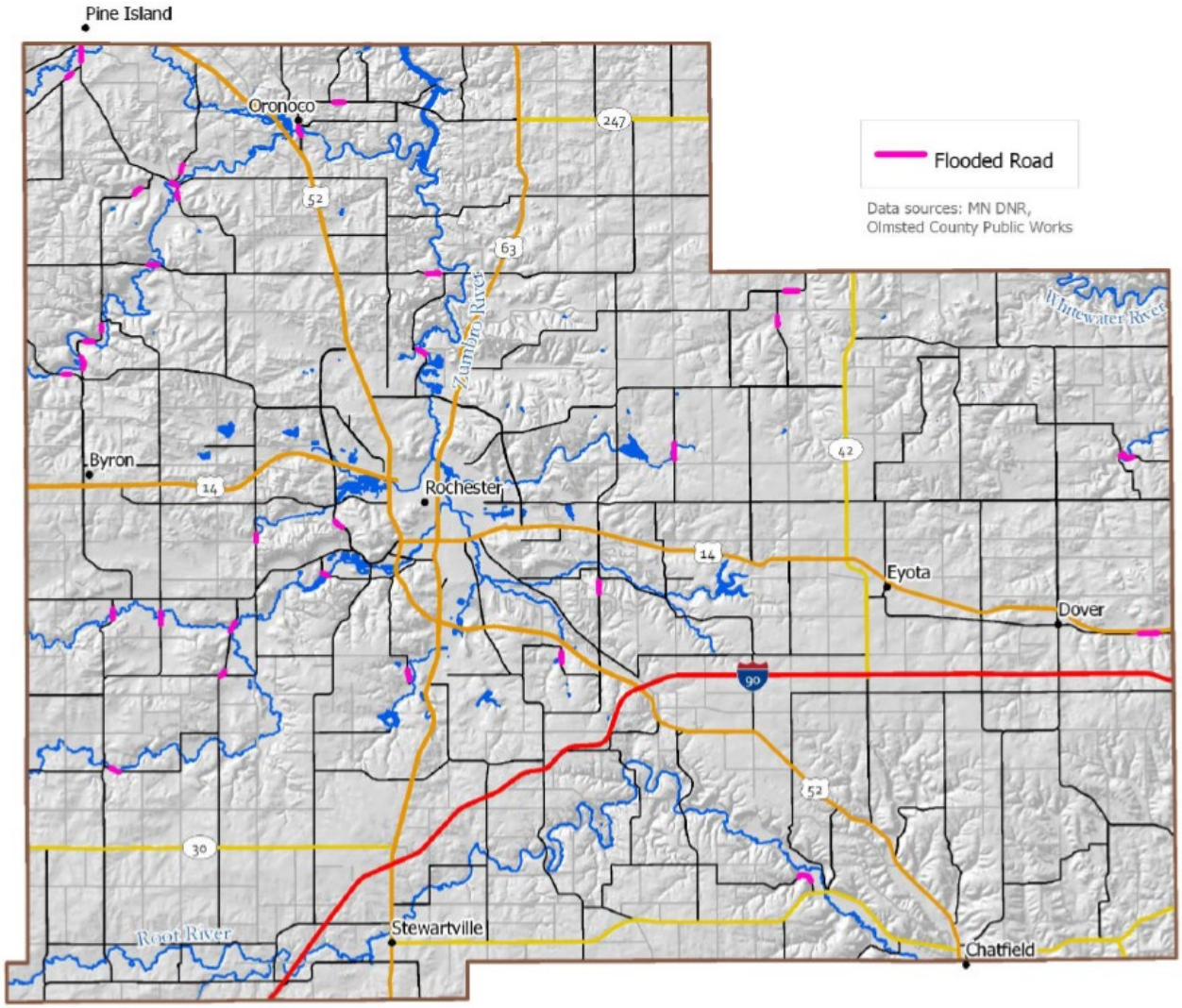
- Multiple areas on CR 105 NW
- The intersection/bridge on CR 3 at CR 12 NW
- The bridge on CR 31 NE
- CR 5 NW just north of CR 4 NW
- CR 142 SE west of the county line
- The bridges and roadways on CR 107 at CR 152 NE
- CR 139 SE just north of Highway 30 SE
- CR 101/40th Ave SE south of 37th St SE
- CR 119 NE north of Silver Creek Rd NE
- CR 102 NE south of 65th St NE
- CR 24 east of 97th Ave NE
- CR 150 SW south of CR 25
- CR 3 SW south of CR 25
- CR 126 SW east of CR 3 SW

Figure 7-30 illustrates the location of these facilities in Olmsted County.

The primary transportation-related mitigation measures the MHMP plan identified and mitigation measures recommended included the following:

- **Flooding**
  The plan recommends maintaining an inventory of roads, bridges, and culverts where flooding has been an issue and identifying required mitigation measures to reduce future flood damages. This is considered a "HIGH" priority, targeted for completion by 2021. A complementary mitigation action recommended related to the flooding issue is the subsequent programming of projects to mitigation flood damage

Figure 7-30: Location of Frequent Road Flooding on the County Road Network



Source: Olmsted County 2017 All Hazard Mitigation Plan

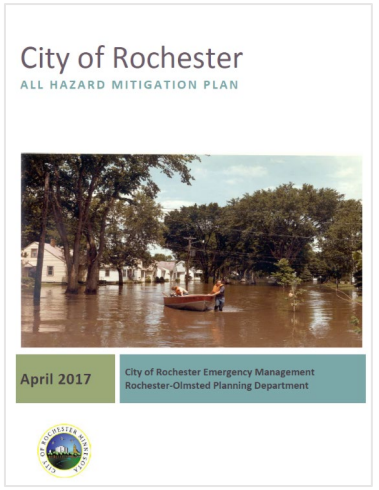
potential such as raising road elevations, modifying culverts, and creation of retention facilities.

- **Erosion-Landslides & Karst**
  The MHMP recommends a study of unstable slopes to include an inventory of such areas and development of a plan to address unstable slopes, particularly near public roads and other critical facilities. This is considered a "HIGH" priority targeted for completion by 2021.
- **Dam Failure**
  Dam failure is a very infrequent event in Olmsted County, but when it does occur can pose life, property, and the environment. There have been instances where road washouts have occurred due to dam failure. More frequent inspection paired with robust flood warning systems and, when warranted, flood upgrading are key mitigation strategies.

Rochester All Hazard Mitigation Plan

Rochester is charged with the protection of the health, safety, and welfare of their residents and visitors. Natural and human related events such as tornadoes, hazardous chemical spills, and terrorist attacks may result in the loss of life, property, infrastructure and income. While mitigation strategies and efforts cannot eliminate all threats and hazards, the City of Rochester endeavors to limit their potential physical, economic, and social impacts as much as possible.

Risk assessment is important to assess the hazards and threats to community assets in order to establish policies and actions that serve to mitigate their potential impact. The risk assessment completed for the Rochester AHMP identified the following transportation related concerns:



- **Winter Storms**
  Winter Storms can provide a danger to life and property when traveling due to decreased visibilities and ice-covered roadways, putting drivers at greater crash risk and pedestrians at greater risk of personal injury from falls. Conditions associated with winter storms also can impact emergency response while affecting transit systems.
- **Flood Risk**
  Due to washout or overtopping of roads, floods create hazards to life and property.
- **Landslides**
  Landslides can affect access and traffic safety during storm events while also adding to costs of infrastructure repair.
- **Train Derailment**
  Train derailment is a local risk, though limited given

the low number of trains that travel through Rochester each day. A derailment can cause traffic and emergency response disruption and, depending on materials being hauled, can create problems from hazardous materials release.

- **Natural Gas**
  Natural gas over pressurization leading to explosion is a risk since much of the underground natural gas infrastructure serving the community is found in right of ways. An explosion poses significant risk to property including transportation infrastructure and can disrupt travel patterns for a period of time if it occurs.

The Rochester AHMP lays out an extensive set of mitigation measures for these various risks including local planning and regulation measures, education and awareness programs, preparedness support, and natural systems protection.

ROCOG Implementation Directions and Strategies Related to Security

Strategy #1: Work with the Olmsted County and Rochester Emergency Management officials and other agencies and organizations involved in emergency management and homeland security on the following transportation related issues based on priorities established in cooperation with local partners.

- Assist in development of key evacuation routes from important activity areas and include an assessment of improvement needs in future Long-Range Plan Updates
- Assist in preparation of alternate route/detour planning to facilitate response to closing major transportation arteries
- Assist in preparation of demographic profile information and a geographic inventory of transportation-disadvantaged populations that may need assistance during a disaster to facilitate evacuation and determine if current deployable assets will be available and adequate, including
  - Assessment of the number of people who may not be able to self-evacuate
  - Planning of staging areas for pickup and drop-off
  - Assistance in targeted community outreach on emergency preparedness to populations such as those with limited English proficiency

Strategy #2: Continue to support Homeland Security/Emergency Management functions. This will include:

- Continued maintenance of geographic information system (GIS) electronic base-map for use by dispatchers and emergency management personnel

- Continued assistance in preparing workshop materials for training exercises and continue to participate in emergency management workshops
- Continued assistance to agencies such as the Rochester Fire Department and Gold Cross Ambulance in facility siting and other studies of emergency management needs as needed

Strategy #3: Identify and collaborate with other state and local agency efforts and/or private sector efforts to enhance security planning for the transportation system.

Strategy #4: Work to provide safe and secure facilities and transportation infrastructure for residents, visitors, and commerce in the ROCOG planning area through efforts to reduce injuries, fatalities, and property damage for all modes of transportation. Minimize security risks at airports, rail stations, rest areas, on roadways and bikeways, and at public transportation facilities.