Rapid City Comprehensive Safety Action Plan

Chapter 1. Introduction

In 2023, the City of Rapid City was awarded $160,000 to develop a Comprehensive Safety Action Plan (CSAP) as part of the U.S. Department of Transportation's Safe Streets and Roads for All (SS4A) grant program. This funding provides our community with the opportunity to develop a plan that expands on existing transportation goals and objectives to create a safer community with zero roadway deaths.

What Is Safe Streets for All?

SS4A is a competitive grant program established in 2021 through the Infrastructure Investment and Jobs Act passed by Congress. The U.S. Department of Transportation manages the SS4A fund, with $5 billion in funding available from 2022 to 2026. The program helps fund regional and local safety projects that will prevent roadway fatalities and serious injuries, with an overall goal of zero roadway deaths.

Safe System Approach

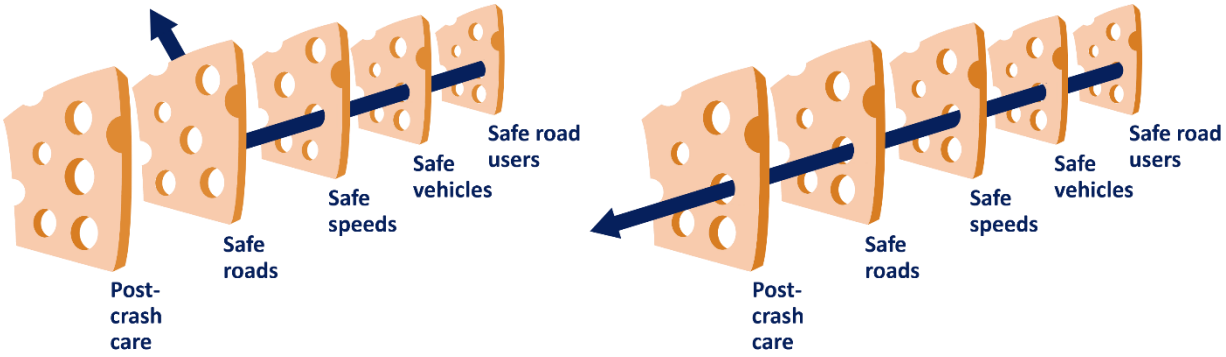
The aim for zero roadway deaths is guided by the Federal Highway Administration's (FHWA) Safe System Approach (SSA), which views safety as a shared responsibility among all individuals involved in the use, planning, design, or construction of the transportation network (**Figure 1**). SSA is a shift from conventional road safety thinking because it focuses on

Figure 1. FHWA Safe System Approach

Source: FHWA

both human mistakes and human vulnerabilities by designing systems with layers of protection. If one layer of safety fails, another will help prevent a crash or lessen the likelihood of serious injury or death (**Figure 2**).

Figure 2. Shared Responsibility Through SSA



Source: FHWA

Why Is a CSAP Needed?

To be eligible for SS4A funding, Rapid City must complete a CSAP that outlines the region's safety goals and creates an actionable framework for identifying safety issues and appropriate strategies to move toward zero roadway deaths (**Figure 3**).

Figure 3. Components of a Project Plan

Who Was Engaged in the SS4A CSAP?

The CSAP allows Rapid City to engage with stakeholders and the public to identify policy changes that will improve safety and determine what safety strategies are suitable for the area. Rapid City actively led the development of the CSAP; however, it actively engaged the South Dakota Department of Transportation (SDDOT), the Federal Transit Administration, FHWA, and citizen and stakeholder focus groups. The feedback from the public was essential in developing the CSAP, and timely opportunities for public engagement were held through open houses, social media, and online meetings.

What Did the Safety Analysis Indicate?

The safety analysis identified key contributing factors that informed the development of a focused street network for safety interventions. This analysis revealed that 70 percent of fatal or serious injury crashes occur on just 11 percent of Rapid City's road network, underscoring the importance of concentrating strategies in this high-priority area.

The CSAP targets the 11 percent, focusing on eliminating fatalities and serious injuries. These contributing factors, also referred to as emphasis areas, included the following:

- Angle crashes
- Speeding
- Vulnerable road users (pedestrians and bicyclists)
- Alcohol/impairment
- Motorcycles
- Younger drivers
- Older drivers

The overarching goal of the CSAP will be to implement safety strategies in a new, strategic way based in the SSA. The SSA will guide the choice of effective strategies at the worst locations based on the risk of loss of life and the contributing factors most associated with those crashes. The safety analysis used these contributing factors to construct a focused street network, called the High-Priority Network (HPN), which will be the key for Rapid City in targeting safety interventions.

What Happens Next?

With the CSAP now complete, Rapid City will transition from planning to implementation. The next step is to pursue a 2025 SS4A Implementation Grant, which would provide federal funds to carry out priority projects identified in the CSAP. Implementation funds can be used for design, engineering, construction, and quick-build strategies that directly address the HPN and the key contributing crash factors identified in the safety analysis.

In parallel, Rapid City has also submitted a FY25 SS4A Supplemental Planning and Demonstration Grant application (status pending), which outlines several key initiatives to strengthen the CSAP. These include developing an Americans with Disabilities (ADA) Transition Plan to bring pedestrian infrastructure into compliance with Public Right-of-Way Accessibility Guidelines, pilot-testing cell- and radio-based emergency management system signal pre-emption technology to improve emergency response reliability, and conducting road safety screenings at high-need intersections to collect data and guide future safety investments.

Together, these efforts position Rapid City to not only advance implementation of near-term safety projects but also address critical systemic gaps, ensuring the CSAP continues to evolve and support the long-term goal of eliminating roadway fatalities and serious injuries.

Chapter 2. Commitment to Reaching Zero

Rapid City Governance

Rapid City departments work together to provide a local transportation system by directly investing in construction and managing major streets and through oversight functions for planning and zoning, public safety, and enforcement. Key Rapid City departments included in the safety action planning process follow:

- Mayor's Office
- City Council
- Community Development
- Public Works
- Police
- Fire

- Parks & Recreation

Rapid City also collaborates with state and federal agencies to manage the transportation system and funding and oversight for major streets. Partner agencies include the following:

- SDDOT
- FHWA
- Federal Transit Administration

Study Advisory Team

A Study Advisory Team (SAT) met three times during CSAP creation, directing the development of the document. The SAT included members of city, state, and federal agencies with the intent of levering their expert perspectives in directing and developing the safety analysis, safety projects and strategies, and the plan development process.

The SAT met during the following months:

- **Fall 2024**: Kickoff
- **November 2024**: Safety Findings
- **February 2025**: Policy Assessment/Stakeholder Meetings
- **July 2025**: Project/Strategy Recommendations/ Stakeholder Meetings
- **October 2025**: Plan Review

Rapid City Leadership Commitment

Rapid City pledges that the only sensible goal for loss of life or life-changing injury on the City's streets is zero. The City wants to engage in safety planning to work toward a goal of zero, while recognizing that: 1) it will take time, and 2) it will require everyone to lean into the SSA to make this goal possible.

From 2019 to 2023, Rapid City experienced 31 fatalities and 203 serious injuries; the City has used this level of severe crash frequency to determine a path to zero for fatal and serious injury crashes by the year 2050. Strategically, this goal will guide City staff to implement and manage a safety program that reduces roughly three fatal and serious injury crashes per year until the target year of 2050. On the following pages is the resolution adopted by the City Council of Rapid City.

Resolution No. 2025-129

A RESOLUTION SETTING A TARGET OF ZERO TRANSPORTATION-RELATED DEATHS AND SERIOUS INJURIES BY 2045 IN RAPID CITY

WHEREAS, the City of Rapid City received funding through the federal Safe Streets and Roads for All (SS4A) program and is completing a Comprehensive Safety Action Plan (CSAP) for the City's transportation network;

WHEREAS, adoption of a CSAP is a prerequisite for seeking additional federal funding for infrastructure safety projects through the SS4A program;

WHEREAS, the CSAP was developed consistent with the U.S. Department of Transportation's Safe System Approach, which creates a positive, proactive roadway safety culture;

WHEREAS, as of 2023, the five-year average number of people suffering from fatal and serious injury crashes in the City is 47 per year, and traffic crashes are among the leading causes of deaths in the United States;

WHEREAS, the health, safety, and wellbeing of all persons living and traveling within the City are our utmost priority, and no one should be killed or seriously injured while traveling in the region;

WHEREAS, the Common Council of the City of Rapid City recognizes that transportation safety is a shared responsibility with member communities and requires a holistic approach to eliminate fatalities and serious injuries in the City;

WHEREAS, improving safety for all roadway users requires coordinated projects, strategies, and initiatives of stakeholders and community support of safety objectives and action plans that are guided by community input;

WHEREAS, City staff and residents have participated in the development of the CSAP to inform the resulting projects and priorities; and

WHEREAS, the City intends to advance the priority projects and initiatives recommended in the CSAP to reduce and ultimately eliminate traffic-related deaths and serious injuries.

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Rapid City, State of South Dakota, as follows:

The City of Rapid City commits to a target goal of reducing traffic-related deaths and serious injuries to zero by the year 2045.

Dated this 19 day of Nov, 2025.

CITY OF RAPID CITY

Jason Salamun, Mayor

ATTEST:

Daniel Ainslie, Finance Director

(seal)

Chapter 3. Safety Analysis

CRASH TRENDS AND CHARACTERISTICS

The safety analysis reviewed crash data across Rapid City to identify patterns in fatal and serious injury crashes. Key factors included travel mode, time of day, location type (urban versus rural), and contributing behaviors.

HIGH-INJURY NETWORK

The High-Injury Network (HIN) highlights corridors with the highest concentration of severe crashes. This network includes all travel modes and helps focus resources on the 4 percent of roads where more than half of fatal or serious injury crashes occur.

SYSTEMIC RISK NETWORK

This proactive analysis identifies locations with high crash risk based on roadway design, speed, lighting, and surrounding land use. These areas may not have a history of severe crashes but share characteristics with high crash locations.

Rapid City is committed to eliminating fatalities and serious injuries on its multimodal transportation network. This chapter documents the safety analysis completed for the CSAP using 2019 through 2023 crash data from SDDOT and local records by doing the following:

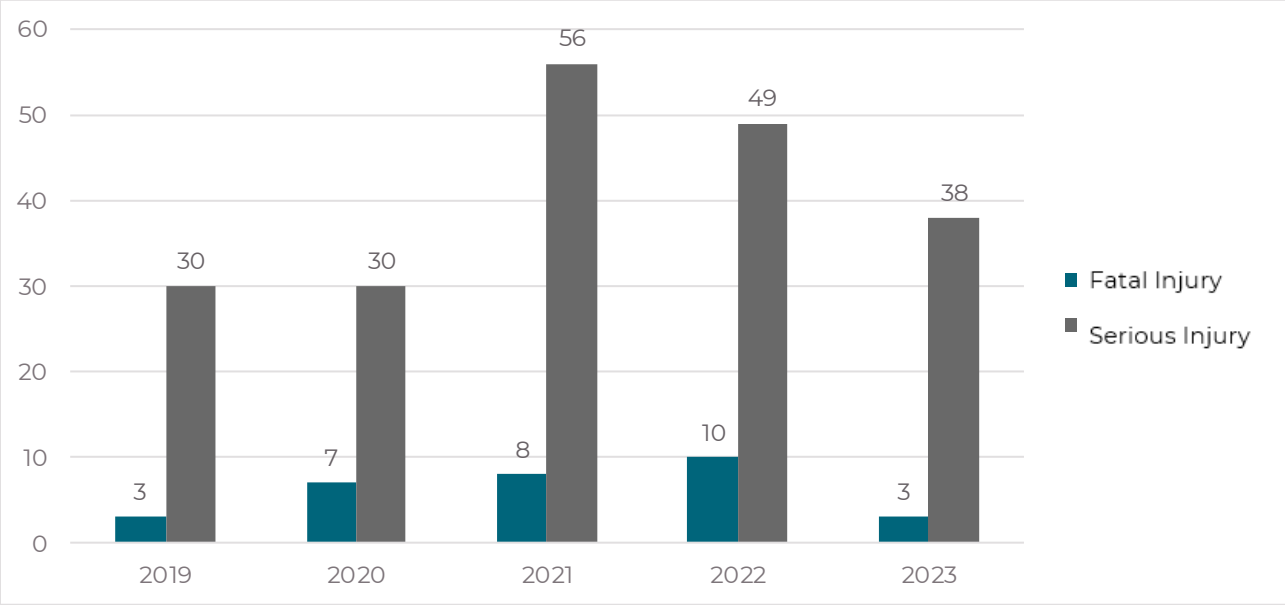
- Analyzing suspected serious injury crash trends by year, severity, travel mode, time of day, roadway type, and contributing behaviors
- Defining safety emphasis areas used throughout the plan (angle crashes, speed, vulnerable road users, alcohol/impairment, motorcycles, younger drivers, older drivers, and dark/night conditions)
- Developing a HIN based on weighted crash severities and a Systemic Risk Network that flags locations with risk conditions similar to known high crash sites
- Combining the results with local insight to identify the HPN for targeted interventions
- Evaluating equity and community context by overlaying crash risk with demographic indicators, including areas of persistent poverty

The chapter concludes with key findings that link directly to the policy and process recommendations in **Chapter 5** and the systemic and capital project strategies in **Chapter 6**. Figures and tables in this chapter (e.g., crash severity by year, emphasis area maps, HIN and HPN maps) provide the analytical basis for prioritizing locations and countermeasures.

Crash Trends and Characteristics

Between 2019 and 2023, Rapid City experienced 234 fatal and serious injury crashes. Crash trends between 2019 and 2023 have seen a variable level of fatalities, with an average of six fatalities per year. Fatal or serious injury crashes are disproportionately concentrated in specific months (July to October), times of day (evening hours), and roadway types. **Figure 4** shows crash severity from 2019 to 2023 .

Figure 4. Rapid City Crash Severity by Year, 2019–2023



Analysis of fatal and serious injury crashes in the Rapid City area highlights several recurring patterns and contributing factors:

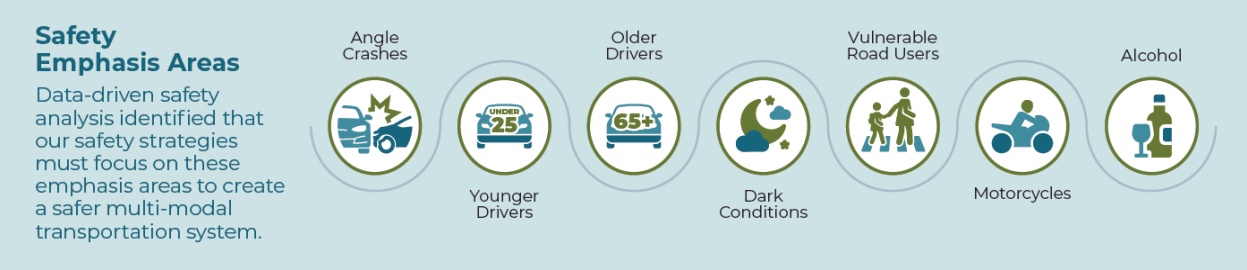
- **Crash types**: A significant proportion of fatal or serious injury crashes involved single vehicles, particularly those resulting from roadway departures or collisions with fixed objects.
- **Contributing behaviors**: Speeding, failure to yield, and distracted driving were among the most frequently identified contributing factors.
- **Safety emphasis areas**: To guide future safety strategies, several crash contributing factors – also known as emphasis areas – were identified based on crash trends and risks common to users and the built environment. The

following shows emphasis areas and the percentage of total crashes that they represent:

- 40 percent angle crashes
- 36 percent young drivers (25 years old or younger)
- 30 percent older drivers (65 years old or older)
- 30 percent dark/night crashes
- 25 percent motorcycle involved
- 22 percent vulnerable road users (VRU)
- 21 percent alcohol impairment
- 19 percent speed related

These findings have been used to inform targeted recommendations to improve roadway safety throughout the Rapid City region.

Figure 5. Safety Emphasis Areas in Rapid City



To guide the development of these emphasis areas and other safety strategies, a structured safety analysis process was conducted. The process began with compiling and analyzing crash data and then applied both systemic and location-specific methods to identify risk. This framework ultimately informed the development of the HPN, which will be discussed in the following sections.

The key findings that follow provide further insight into how the safety analysis supports Rapid City in progressing toward zero traffic-related deaths and serious injuries by 2050.

Key Safety Findings

- Angle crashes are dominant on urban arterials.
  - Angled crashes were concentrated on Mt Rushmore Road, Cambell Street, 5th Street, and South Dakota Highway 44 (SD 44).
- Recurring crash patterns along U.S. Highway 16 (US 16), U.S. Highway 16B (US 16B), SD 44, and Skyline Drive.
  - This pattern indicates systemic safety issues, such as speeding, driver behavior, and lack of pedestrian infrastructure.

- Young and older drivers' risk zones overlap.
    - Along SD 44, US 16, and Skyline Drive, frequent crashes involving drivers under 25 and over 65 highlight corridors where age-specific safety interventions could be prioritized.
- VRU crashes cluster downtown and along arterial corridors.
    - VRU crashes were pedestrian related and heavily concentrated in the downtown core, on Lacrosse Street, and on major arterial connectors.
- Speed-related crashes on scenic or curvy roads.
    - Speed-related crashes were notably high along Skyline Drive, suggesting issues with road geometry, speeding, and lack of roadway warnings or enforcement.

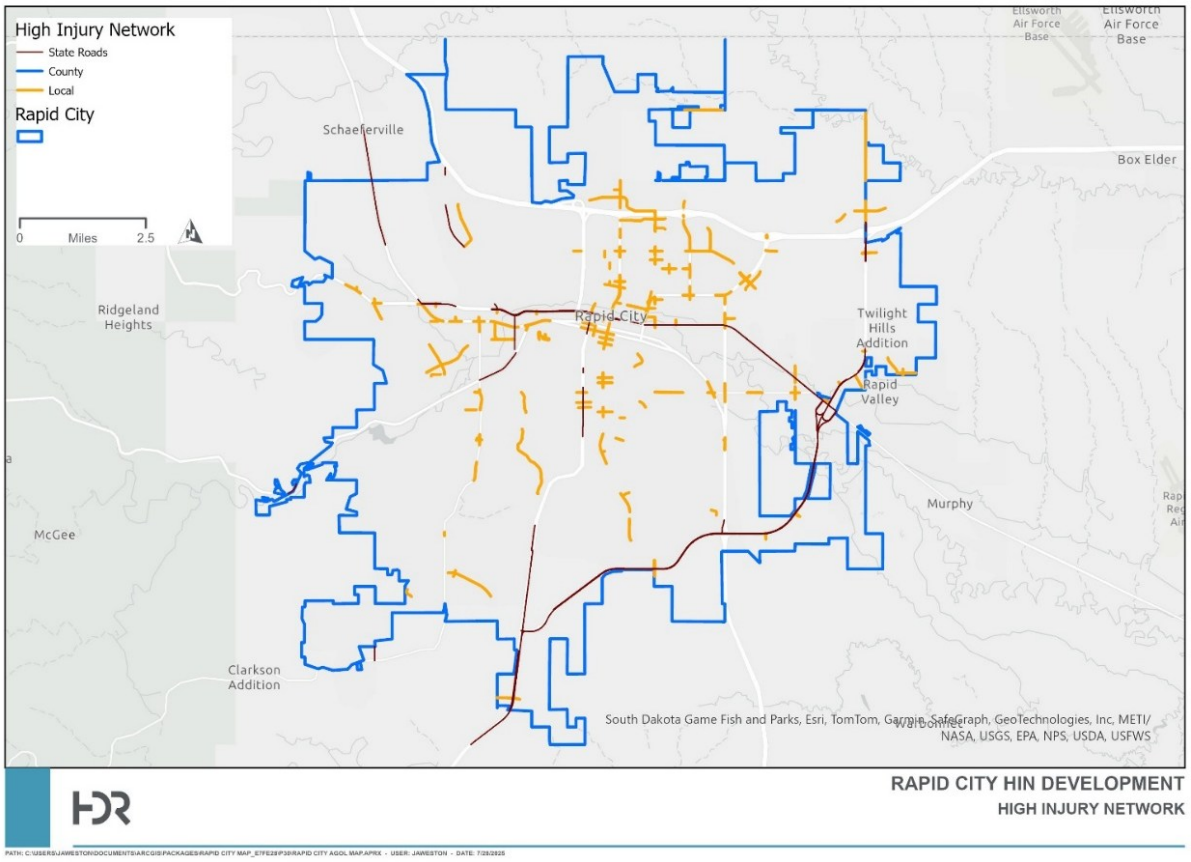
High-Injury Network

The HIN identifies corridors with the highest concentrations of fatal or serious injury crashes between 2019 and 2023. Rather than focusing solely on total crash counts, the HIN prioritizes locations where fatal or serious injury crashes are most concentrated. Each crash was assigned a severity weight—giving greater emphasis to more severe outcomes—to better reflect the impact of these incidents. This approach aligns with the SSA, which emphasizes reducing the most harmful crashes. While lower-severity crashes were included as early indicators of risk, they were weighted less heavily. The resulting network highlights corridors with the greatest need for intervention. For the Rapid City CSAP, the HIN serves as a complement to other tools like systemic analysis. The HIN used a weighted crash scale that gives more preference to severe crashes. The weighted scale is as follows:

- Fatal and serious injury: 3
- Minor injury: 2
- Possible and unknown injury: 1

It is recommended that the corridors with the highest score be prioritized for safety improvements due to their elevated crash risk and strategic importance in the transportation network. **Figure 6** shows the complete HIN.

Figure 6. High-Injury Network



High-Priority Network

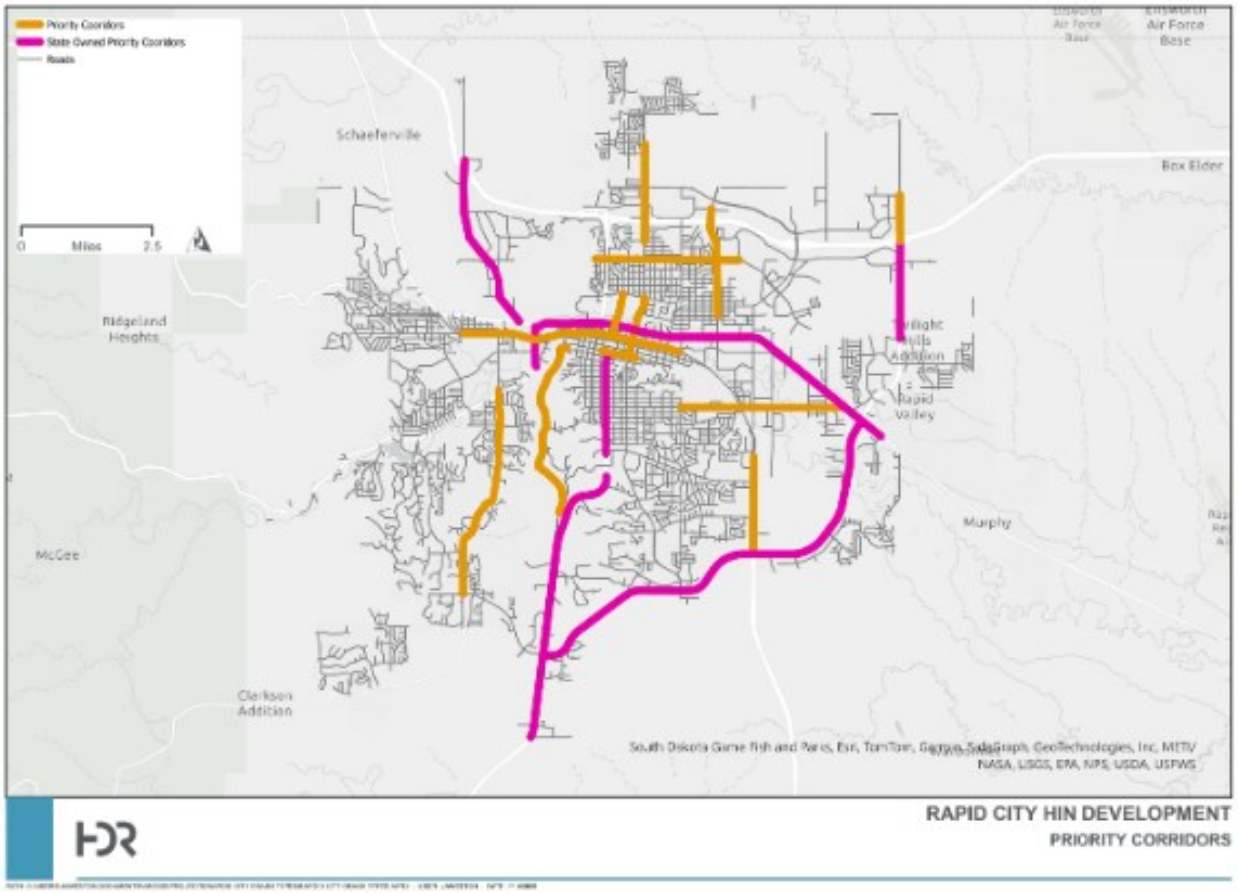
The HPN represents the most critical corridors for safety investment, combining data-driven analysis with local insight. To develop the HPN, results from the HIN and systemic crash analysis were layered with input from Rapid City staff and the public. Each roadway segment was evaluated based on how many key emphasis areas—such as speeding, impaired driving, or vulnerable road user crashes—it met or exceeded. Segments with multiple overlapping risk factors were prioritized, regardless of which specific emphasis areas were present. This approach ensures that the HPN reflects both the most pressing safety concerns and the greatest opportunities for impact. **Figure 7** shows the resulting HPN identified as part of this CSAP. The pink corridors represent state-owned facilities, and the orange corridors represent City-owned facilities.

Key corridors in the HPN include the following:

- Haines Avenue (Lindbergh Avenue to Kathryn Avenue)

- Main Street (32nd Street to St Joseph Street and St Joseph Street to Maple Avenue)
- St Patrick Street (Elm Avenue to SD 44)
- Campbell Street (Bridge View Drive to US 16)
- Anamosa Street (Silver Street to Luna Avenue)
- N 5th Street (North Street to Quincy Street)
- Lacrosse Street (Disk Drive to E Philadelphia Street)
- Quincy Street (9th Street to 4th Street)
- Skyline Drive (Tower Road to Quincy Street)
- Sheridan Lake Road (SD 44 to Catron Boulevard)
- Mt Rushmore Road (North Street to Main Street)
- Elk Vale Road (Mall Drive to Seger Drive)
- SD 44 (Jackson Boulevard to Omaha Street and Omaha Street to Twilight Drive)
- South Dakota Highway 445 (SD 445)/Deadwood Avenue (Tatanka Road to South Dakota Highway 231)
- US 16 (Quincy Street to Tower Road and Moon Meadows Drive to Cathedral Drive)
- US 16B (US 16 to SD 44 and Anamosa Street to Mall Drive)

Figure 7. High-Priority Network

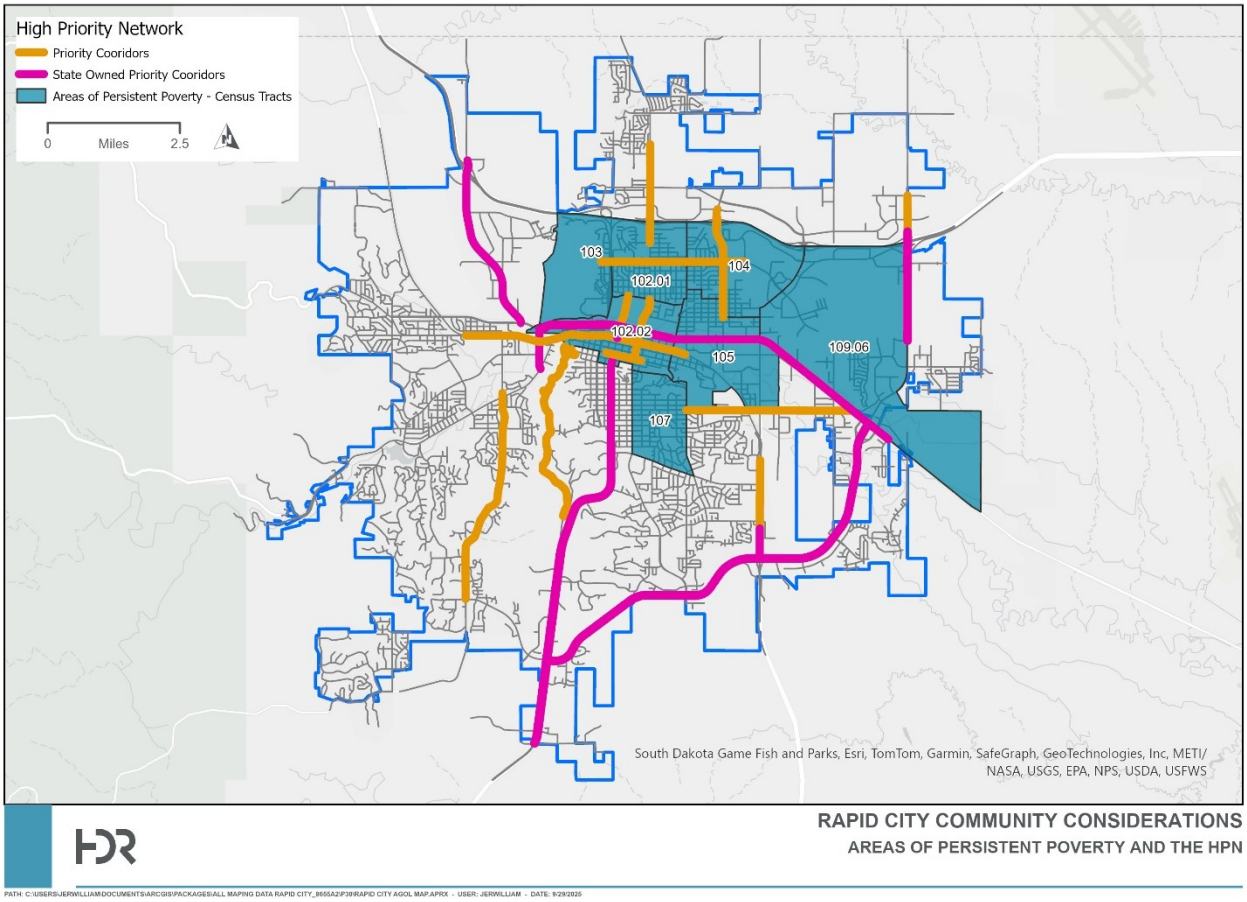


Community Considerations

Crash data was overlaid with demographic and socioeconomic indicators to identify disparities in safety outcomes. Areas with higher concentrations of low-income households, renters, and communities of color often coincide with higher crash rates and gaps in safety infrastructure.

Addressing these disparities is central to the SSA. Strategies must promote safe travel by all residents, regardless of income, age, or ability. **Figure 8** Figure 8shows the HPN overlaid with census tracts located in Rapid City that have been identified as areas of persistent poverty. These tracts represent potential focus areas for directing safety-oriented investments for HPN corridors.

Figure 8. Areas of Persistent Poverty and the HPN



Chapter 4. Engagement and Collaboration

Community outreach played a vital role in shaping the CSAP by offering valuable insights into how residents and stakeholders perceive transportation safety across Rapid City. Through both virtual and in-person outreach, the project team gathered input from a range of residents and stakeholders, including community leaders, residents, technical experts, and groups disproportionately affected by traffic safety issues. This engagement not only informed the planning process but also helped raise awareness of traffic safety as a regional priority and educated the public about countermeasures to improve traffic safety. This chapter outlines the methods used to engage the community and highlights the feedback received.

In-Person Engagement

Pop-Up Meetings

The Rapid City CSAP team attended three large public events in the community, timed with the project kickoff. The pop-up meetings raised awareness about what the CSAP is and how it will involve the public. In October 2024, the CSAP team attended two events, the Rapid City Bike Fest and the Trunk or Treat, engaging with 40 attendees and 200 families, respectively. In November 2024, the CSAP team distributed 1,200 brochures in race packets at the Turkey Trot.

Focus Group Sessions

The focus groups allowed the community to provide feedback for the CSAP and helped inform the public about safety efforts. The focus groups were held on two different dates: July 15 and July 17, 2025. The focus groups were divided into three areas: young drivers; downtown visitors, businesses, and residents; and HIN for Rapid City staff and City Council members.

Online Engagement

Website

The CSAP project website served as an information hub for sharing information and engaging the community throughout the CSAP process and provided an online comment form for the public to share feedback. The site outlined the CSAP's purpose and its connection to the SS4A program, provided updates about the safety analysis and project timeline, and highlighted partner agencies such as SDDOT, FHWA, and the Federal Transit Administration. It also offered interactive tools, including a survey link, comment map, and mailing list sign-up, giving residents multiple ways to provide input and stay informed.

While the site generated limited direct comments, one submission received in June 2025 highlighted concerns about vehicles exceeding the speed limit on Flormann Street and suggested that installing speed bumps could improve safety. This comment reinforces community concerns around speeding and the desire for traffic-calming measures, which were also reflected in survey and focus group input. No additional comments have been received through the website since that time.

Survey

To capture a broader range of community input, the CSAP team conducted an online survey that asked residents about their perceptions of safety and priorities for improvement. The survey collected more than 30 responses, with questions focused on how safe people feel using different travel modes, what concerns them most about transportation safety, and which improvements they would most like to see.

Results showed that driving was generally viewed as the safest mode, while biking and walking were perceived as less safe. Distracted driving, failure to yield, and limited crosswalks, sidewalks, and bike facilities were among the top community concerns. Respondents also identified impaired driving and speeding as ongoing issues. When asked about potential solutions, participants most frequently supported adding separated pedestrian and bicyclist facilities, encouraging alternative intersection designs such as roundabouts, and implementing traffic-calming strategies.

The survey responses helped shape the focus areas of the CSAP by highlighting the importance of designing for vulnerable road users, addressing high-risk driver behaviors, and prioritizing infrastructure improvements that create a safer, more comfortable environment for all travelers.

Key Engagement Results

The following key safety findings were developed based on feedback:

- Speed as a factor in crashes and general safety issues were seen as the largest concerns.
- Rapid City intersections could improve, with issues such as congestion, unprotected left turns leading to crashes, inattentive drivers and drivers choosing to ignore posted signage or rules of the road, and problems for pedestrians feeling comfortable or safe when crossing the road.
- Generally, participants think driving was significantly safer than using other modes of transportation (walking, biking, rolling, or using public transportation).
- The top improvement to enhance safety in Rapid City was adding more separated bicycle and pedestrian facilities.

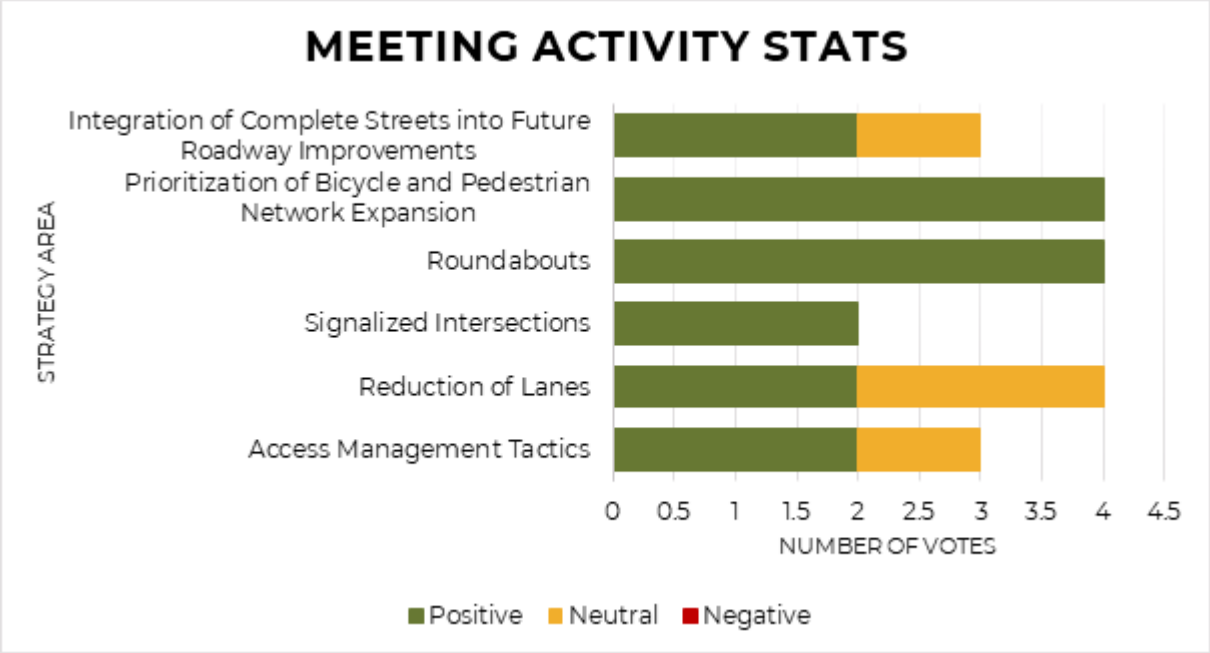
During the focus group sessions, participants voted on the following six strategies to improve transportation safety in Rapid City:

- Access management tactics

- Reduction of lanes
- Signalized intersections
- Roundabouts
- Prioritization of bicycle and pedestrian network expansion
- Integration of Complete Streets into future roadway improvements (a policy and design approach that ensures streets are planned, designed, operated, and maintained to enable safe, comfortable travel for all users, including people walking, biking, rolling, taking transit, and driving, across ages and abilities)

Participants indicated their opinions on each strategy using colored stickers. Green stickers signified that respondents prefer a strategy, yellow signified a neutral opinion on the item, and red signified that respondents did not prefer a strategy. **Figure 9** shows the results of the activity.

Figure 9. Sticker Activity Results



Chapter 5. Policy and Process Changes

Rapid City's commitment to safety extends beyond infrastructure investments; it includes a deliberate shift in how transportation policy, planning, and internal processes support the SSA. While this CSAP identifies specific corridors and projects,

sustainable safety outcomes will depend on Rapid City's ability to integrate safety into everyday practices and decision-making structures.

This chapter outlines a forward-looking framework to align Rapid City policies and internal processes with the vision of eliminating fatal and serious injury crashes. These recommendations support a long-term strategy that enhances project delivery, improves design consistency, and ensures that all projects, from routine maintenance to major capital investments, advance community safety goals. Additional details about the underlying review of existing policies and procedures and proposed areas of policy focus are included in **Appendix C** and **Appendix D**, respectively.

Existing Rapid City Safety Policy

The CSAP established the existing state of safety policy by reviewing the following:

- **Rapid City Comprehensive Plan** (2014): Provides a vision for land use, transportation, housing, and community growth, with an update underway to reflect new development pressures and community needs.
- **RapidTRIP 2050 Metropolitan Transportation Plan** (2025): The region's long-range transportation plan, which sets strategies for roadway, transit, bicycle, and pedestrian investments, including safety goals and performance measures.
- **Rapid City Area Bicycle and Pedestrian Master Plan** (2011): Establishes priorities for expanding bicycle and pedestrian facilities, filling network gaps, and improving connectivity for nonmotorized users.
- **Rapid City Transit Development Plan** (2022): Outlines service improvements, route planning, and infrastructure needs to strengthen public transit and support safe, reliable mobility options.
- **City of Rapid City Infrastructure Design Criteria Manual** (2022): Provides engineering and design standards for roadway and infrastructure projects, with direct implications for safety-related design elements such as intersections, crosswalks, and accessibility.
- **South Dakota Strategic Highway Safety Plan** (2024): Sets statewide priorities for safety, such as lane departure, impaired driving, speed management, and VRU. By linking local strategies to these emphasis areas, the CSAP supports state goals while focusing on Rapid City's HPN.

During the early development of the CSAP, existing plans and policies were inventoried and several safety-related practices identified. In general, Rapid City has several safety topics that are starting to be addressed or discussed but that have not

been developed into everyday practices. There were also several components of the seven required elements of an SS4A that did not have current practices associated with them, which suggests potential opportunities exist to initiate such practices. The following list summarizes the key findings from the existing safety policy review:

- Pedestrian and bicycle safety-related projects are widespread, but there is room to expand funding for such projects and identify or prioritize other safe system projects and strategies.
- Safety-related goals should be well defined, and consistent practices should be developed for project prioritization and transparency.
- Existing practices and policies can be aligned with the SSA by implementing policies such as Complete Streets or Access Management.
- A safety committee should be organized to provide oversight of the CSAP; the inaugural committee could come from the project SAT.
- Opportunities exist to increase public awareness and education and engage with local leadership and disadvantaged communities.

Foundations of a Safe Policy Framework

The eight emphasis areas outlined in this section were derived from historic Rapid City crash data, South Dakota's Strategic Highway Safety Plan, and SS4A planning guidance. Each emphasis area is analyzed at both the crash-event level and systemic level. These categories reflect the five elements of the SSA and allow Rapid City to consider not only where crashes have occurred but also where risk conditions exist so that they can be addressed before crashes happen through targeted design, behavior modification, and policy interventions.

The following lists the eight emphasis areas:

- Angle crashes
- VRU
- Speed related
- Lighting conditions
- Alcohol/impairment
- Motorcycles
- Young drivers
- Older drivers

These emphasis areas are listed intentionally in this order based on the Safe System Roadway Design Hierarchy (**Figure 10**). Angle crashes and VRU safety are closely related to Tier 1 (Remove Severe Conflicts, which has the highest potential for severe crash reduction and elimination). Speed management corresponds to Tier 2, focusing on keeping operating speeds appropriate for the context. Lighting is the last design-focused emphasis area and most closely aligns with Tier 4.

Figure 10. FHWA Safe System Roadway Design

While the remaining emphasis areas are not design or engineering focused, alcohol and impairment have some potential to be addressed by Rapid City through policy and law enforcement activity. Motorcycles, young drivers, and older drivers use the system; street designs and policy can change to better accommodate these users, but working with users on behavior modifications may take partnerships for Rapid City to implement.

Crash Emphasis Areas Linked to Policy

Each emphasis area from the crash analysis maps is directly related to policy needs based on federal, state, and local guidance:

- **Angle crashes**: Roundabout-first policies, Access Management standards.

- **VRU**: Complete Streets adoption, crossing warrants, ADA upgrades.
- **Speed**: Context-based speed policy, lane narrowing, raised crosswalks.
- **Lighting conditions**: Pedestrian-scale lighting in all crossings and pathways (e.g., sidewalk, bike lane).
- **Alcohol/impairment**: Increased separation of modes, roundabouts, barriers.
- **Motorcycles**: Enhanced curve signing, high-friction surface treatments, access controls.
- **Young drivers**: Simplified intersections, clearer signage, speed feedback technology.
- **Older drivers**: Larger font signage, extended crossing times, simplified geometry.

Implementation Steps and Recommended Safety Processes

The following list outlines next steps and recommended safety practices for Rapid City:

- Revise design manuals and standard drawings to include best practices, such as a Complete Streets policy
- Conduct road safety audits on priority corridors and intersections to identify near-term fixes and longer-term capital needs
- Develop and adopt a speed management plan that sets context-appropriate target speeds and outlines engineering, enforcement, and education actions
- Establish a sidewalk and trail snow removal program that defines responsibilities, time frames, and enforcement to maintain year-round accessibility
- Update capital improvement plan (CIP) project scoping forms to require a safety policy checklist
- Adopt resolutions or ordinances for key policies (e.g., roundabout-first, Complete Streets)
- Train staff and consultants on updated standards
- Monitor compliance through project review processes

Chapter 6. Projects and Strategies

Project and Strategy Philosophy

The Rapid City CSAP philosophy for safety projects and strategies can be summarized by the three tiers in **Figure 11**. In short, policy strategies are the foundation for systemic projects (which creates a proactive safety approach), and the top tier identifies the limited but critical major safety infrastructure projects. The following paragraphs unpack each tier in more detail.

Figure 11. Projects and Strategies

Policy strategies are foundational; they cover how agencies, their partners, and the traveling public approach safe travel and the development of safe multimodal travel networks. Policy strategies have the greatest potential impact on future severe crash reductions because modified behaviors, proactive planning, meaningful changes to policies, and adoption of safety best practices can affect all local multimodal travel facilities over time. That broad geographic coverage will outweigh a focus on any one hot spot. The Rapid City CSAP is the building block for all other strategies for policy and process recommendations in **Chapter 5** and its supporting appendices.

The second layer of safety recommendations are **systemic projects**. Systemic approaches focus on the risk of severe crashes and where those risks may be elevated. For example, a systemic approach may be useful for severe road departure crashes because they are most often related to common contributing factors (e.g., level of travel, road geometry, features of the built and natural environment like curves and steep slopes). In the Rapid City dataset, the data limitations led the project team to focus on history of property damage crashes and lower severity injury crashes as a proxy for future severe crash risk. In the systemic framework, each risk area (emphasis area) is paired with appropriate low-cost treatments that can be deployed in standalone safety projects over multiple higher risk locations. Systemic thinking can also be put in action by using risk maps to add safety value to smaller-scope maintenance and rehabilitation projects (even projects that focus on nontransportation infrastructure like water and gas utility projects).

The final layer accounts for **major projects**. These projects reshape the built environment, so streets and intersections may have features added (e.g., medians, curb bulb-outs) or resized (e.g., intersections converted to roundabouts; walkways or bikeways widened). Major safety projects typically apply one or more best practice countermeasures in areas with severe crash history or higher risk levels and more moderate crash history. These more significant infrastructure countermeasures often provide the best means to reduce severe conflicts, manage the balance of speed to context, increase user separation in time, and improve traveler awareness. However, due to their cost and time to develop and deliver, major projects are used in a limited manner and must focus on addressing the highest priority locations first.

Segment and Intersection Countermeasures

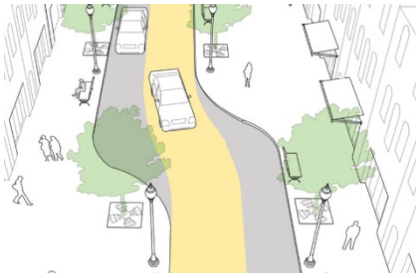
Rapid City's CSAP resulted in the development of a Safer Street Toolkit, which summarizes available safety countermeasures for use in infrastructure projects aimed at reducing crashes. The Toolkit is foundational to the projects and strategies defined in this CSAP and serves as a key reference for both systemic and major (also known as location-specific) projects.

The Toolkit is organized into segment and intersection countermeasures, which may be applied alone or combined into a more comprehensive project. Each category includes subgroups of targeted strategies designed to address crash trends and local context. These strategies were vetted through safety analysis (based on the 2019–2023 crash dataset), input from Rapid City staff and emergency responders, and a review of systemic risk factors.

Segment- and intersection-level strategies in Rapid City reflect patterns of recurring safety concerns:

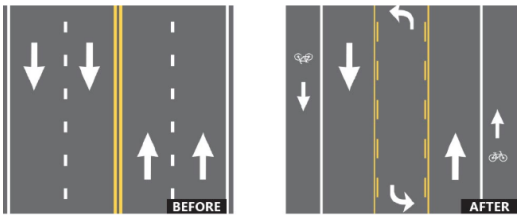
- Angle crashes at unsignalized or complex intersections
- Roadway departure crashes in high-speed corridors
- Speed-related crashes near key institutions (e.g., schools)
- Rear-end and turning crashes on multilane arterials
- Crashes involving VRUs

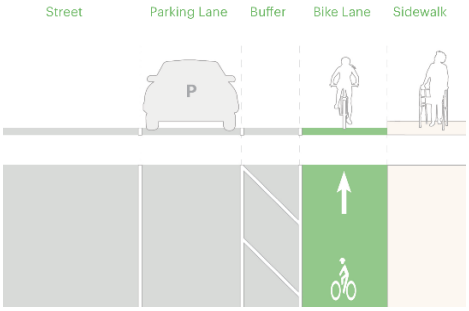
These countermeasures include systemic improvements (low-cost, widespread treatments) and major capital projects and were selected based on effectiveness, crash reduction potential, and feasibility:



- **Vertical and horizontal traffic calming** (e.g., speed humps, bulb-outs, chicanes)

- **Roadway reconfigurations** (e.g., 4-to-3 lane conversions)
- Protected or buffered bike lanes
- **Systemic intersection treatments** (e.g., signal upgrades, rectangular rapid flashing beacons (RRFBs), left-turn hardening)
- **Access management** (e.g., raised medians and driveway consolidation)





Full descriptions, cost tiers, crash reduction factors, and implementation guidance are included in the Safer Street Toolkit (see **Appendix D**).

Systemic Projects

Systemic projects aim to reduce risk conditions citywide, even in locations without a significant crash history, by applying proven countermeasures to similar roadway environments. These projects are typically low to moderate in cost and are ideal for implementation during routine maintenance, resurfacing, or asset preservation cycles.

Low-Cost Safety Enhancements

Systemic safety projects may include the following low-cost safety enhancements:

- High-visibility crosswalks and advance yield markings
- Reflective signal backplates
- Radar speed feedback signs
- Pedestrian refuge islands
- Lighting enhancements at intersections and midblock crossings
- RRFBs at uncontrolled pedestrian crossings
- Edge line rumble strips on curves and rural transitions
- Chevron signs and dynamic curve warnings
- Speed cushions or striping changes to narrow perceived lane widths

These improvements are not corridor specific but rather context specific and are based on adjacent land use, crash type history, geometry, and user conflict potential.

Policy and Planning Integration

Rapid City's systemic safety approach can integrate with ongoing City processes and capital planning cycles. Systemic safety treatments will become most effective when incorporated into the following:

- **CIP project programming**: By using the Safer Street Toolkit in concept development and sequencing and intentionally reserving some funding for safety projects (potentially to serve as match for federal or state safety funds)
- **Asset rehabilitation processes and resurfacing schedules**: By applying context-sensitive and street rightsizing principles
- **Land development permit and land use or zoning change requests**: By focusing reviews on access management policies and safety impact mitigation from traffic impact studies
- **Community and economic development projects** (particularly in areas of persistent poverty): By intentionally scoping improvements to fill gaps in limited pedestrian infrastructure and reduce crashes in historically underrepresented streets and intersections

Integration with Crash Emphasis Areas

Each systemic project should align with one or more of the emphasis areas from the safety analysis. **Table 1** lists applicable countermeasures mapped to specific crash types. The following pages focus deeper on combining observed safety needs from individual emphasis areas to targeted portions of the Rapid City streets network where each emphasis area is prevalent and could be treated with systemic strategies.

Table 1. Emphasis Area to Applicable Systemic Strategies Alignment

Emphasis Area	Applicable Systemic Strategies
Angle Crashes	Reflective backplates, protected left-turn phasing, access management, roundabouts
Young Drivers	Radar feedback signs, simplified signage, painted centerlines
Older Drivers	Larger font signage, advanced warning signs, simplified intersection geometry
Lighting Conditions	LED lighting retrofits, illumination at key intersections and crossings

VRUs	RRFBs, midblock crossings, sidewalk gap closures, curb extensions, pedestrian refuges, updated ADA transition plan (status pending)

Integration with the 2050 Metropolitan Transportation Plan

The CSAP aligns closely with the RapidTRIP 2050 Metropolitan Transportation Plan (MTP), which establishes long-range transportation strategies for the region. While the MTP addresses safety at a high level, its strategies were designed to overlap with those in the CSAP and reinforce a shared goal of reducing fatalities and serious injuries. Importantly, the MTP safety strategies were introduced during public engagement for the CSAP, and the feedback informed the CSAP's emphasis areas. This integration ensures consistency between local safety planning and the region's federally required MTP.

Major Projects: High-Priority Capital Improvement

While systemic strategies address risk across the network, some corridors require significant capital investment due to the scale of safety issues present in their design relative to current use. These **major projects** target locations with high concentrations of fatal and serious injury crashes, repeated appearance across multiple crash emphasis areas (including angle crashes, speed, and VRU incidents), and alignment with capital planning opportunities.

These corridors are not stand-alone safety efforts. Safety improvements will be integrated into larger capital projects through the City's CIP, ensuring that infrastructure upgrades address both current deficiencies and long-term safety priorities. Some corridors are already programmed in the CIP, while others may advance through separate funding sources or be addressed incrementally.

Typical project elements may include the following:

- Corridor reconstruction or redesign with integrated pedestrian and bicycle facilities
- Intersection conversions (e.g., roundabouts, reduced conflict intersections) as stand-alone or corridor-wide improvements

- Signalization upgrades
- Context-sensitive speed reduction design and Access Management strategies
- Multimodal enhancements, including lighting, ADA upgrades, and drainage improvements

Project Prioritization and Implementation

To guide implementation of the CSAP, recommendations for corridors, intersections, and systemic strategies were prioritized using the following criteria:

- Crash history and severity
- Alignment with the HIN
- Context-specific feasibility
- Support from technical stakeholders

Priority corridors and intersections are shown on maps included in **Chapter 3**. These maps guide the implementation of countermeasures, ensuring that selected projects are evidence based and locally relevant. The emphasis area countermeasures, major project definitions, and prioritization process ensure that both proactive and location-specific solutions address the Rapid City's most critical crash patterns. By integrating these strategies into the CIP and routine project delivery, Rapid City can systematically reduce fatal and serious injury crashes while building a safer, more consistent transportation network for all users.

2050 MTP Projects on the HPN

Several projects included in the fiscally constrained plan of the 2050 MTP are located on the HPN and are safety oriented. These projects include roadway and bicycle and pedestrian improvements and are considered in the MTP as higher priority projects to meet the needs of the region's existing multimodal transportation system. **Table 2** lists the 2050 MTP fiscally constrained projects that are located on the HPN.

Table 2. 2050 MTP Fiscally Constrained Safety Projects on the HPN

Project Type	Location	Time Frame	Cost (2025)	Cost (YOE)	Responsible Agency
Street Projects					
Safety Improvements	Main Street and Mountain View Road	2025–2030	$70,000	$70,000	Rapid City
Safety Improvements	Main Street and Mt Rushmore Road	2025–2030	$480,000	$500,000	Rapid City
Bicycle and Pedestrian Projects					
Shared Use Path	Anamosa Street from Haines Avenue to Silver Street	2025–2030	$1,090,000	$1,150,000	Rapid City
Sidewalk	East St. Patrick Street from East St. Joseph Street to Cherry Avenue	2025–2030	$30,000	$30,000	Rapid City
Buffered Bicycle Lane	Mt Rushmore Road from North Street to Omaha Street	2041–2050	$90,000	$140,000	Rapid City

Notes: YOE = year of expenditure

The 2050 MTP's fiscally constrained projects are not committed but rather identified for future programming when funds are available. The anticipated federal funding sources for these projects include Safe Streets and Roads for All (SS4A), Surface Transportation Block Grant (STBG), Highway Safety Improvement Program (HSIP), Transportation Alternatives Program (TAP).

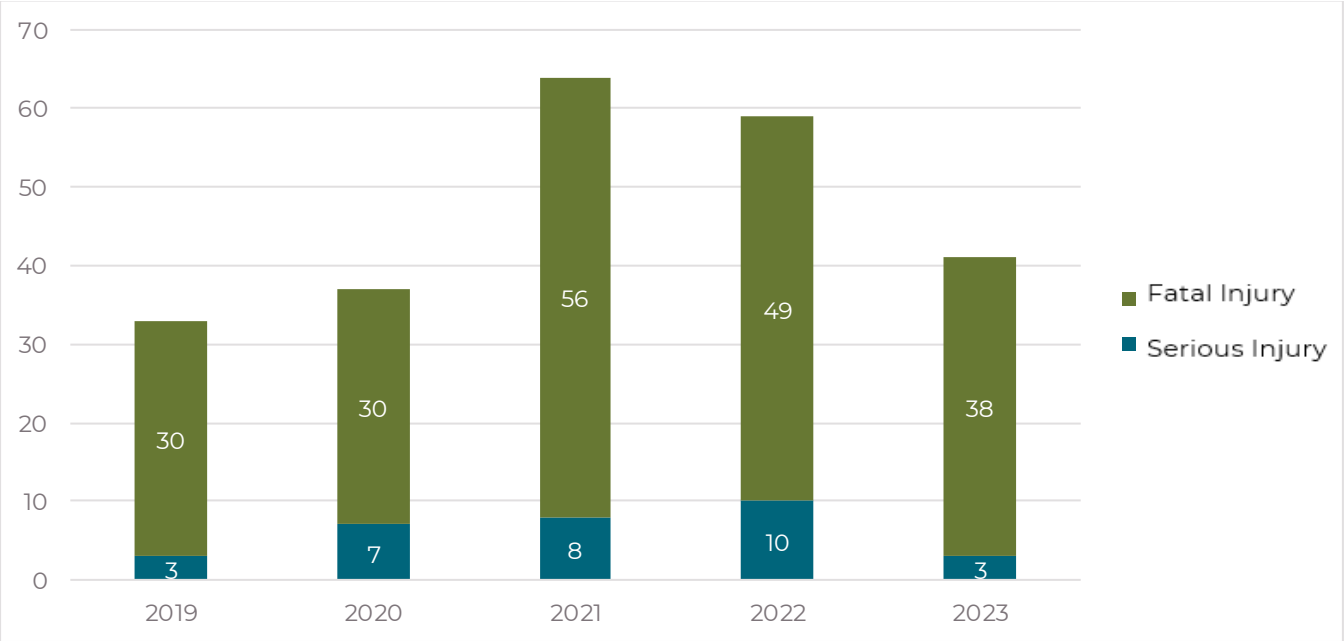
Chapter 7. Progress and Transparency

The Rapid City CSAP establishes a data-driven foundation for reducing fatal and serious injury crashes across the region. To ensure accountability and maintain momentum toward the goal of zero traffic deaths by 2050, it is essential to track progress over time and make safety progress available to the public. This chapter outlines proposed performance metrics, transparency strategies, and recommendations for sustaining long-term safety improvements.

Annual Fatal and Serious Injury Crashes

Fatal and serious injury crashes are the primary metric for evaluating the success of the CSAP because it allows Rapid City to track both the total number of fatal or serious injury crashes and the rate per 100 million vehicle miles traveled. Although both measures have declined since 2021 (**Figure 12**), the current trajectory will not achieve the CSAP goal of zero by 2050 without additional action. To close the gap, this CSAP establishes an interim performance path that reduces fatal or serious injury crashes by approximately three per year and updates the metrics annually to reflect the impact of implemented strategies and projects.

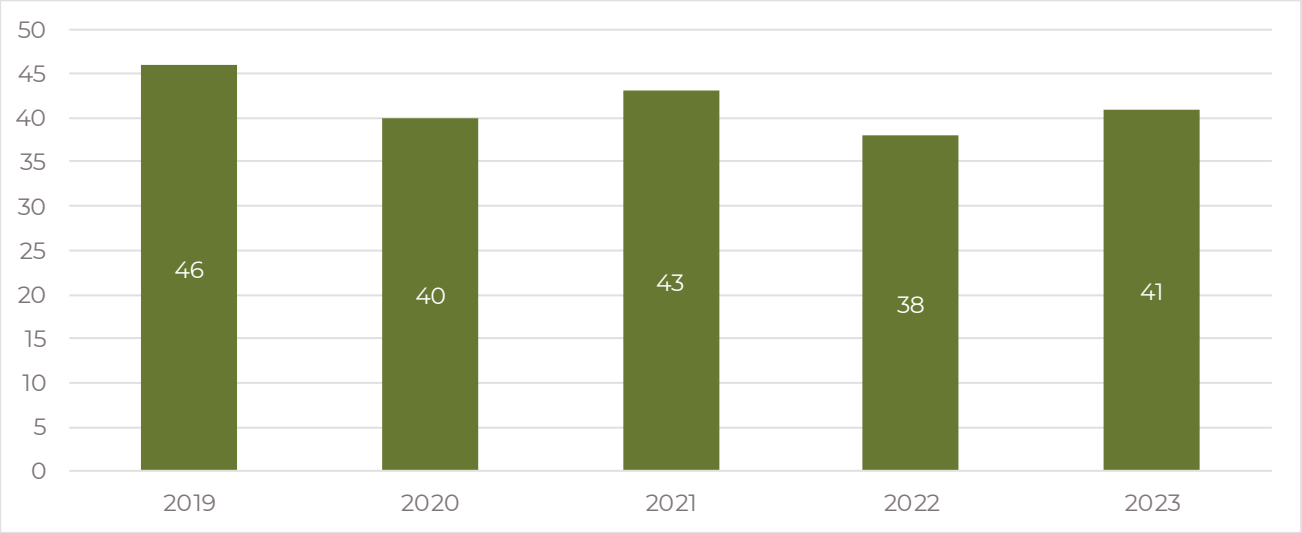
Figure 12. Fatal Crashes per Year in Rapid City



Annual Pedestrian and Bicycle Fatal or Serious Injury Crashes

VRUs account for 3 percent of fatal or serious injury crashes in Rapid City. This section tracks the annual number of pedestrian fatal or serious injury crashes and the annual number of bicycle serious injury crashes separately, as countermeasures differ by mode. **Figure 13** shows the annual counts for each mode. Improvements to high-risk corridors identified in the HIN are expected to reduce these numbers over time.

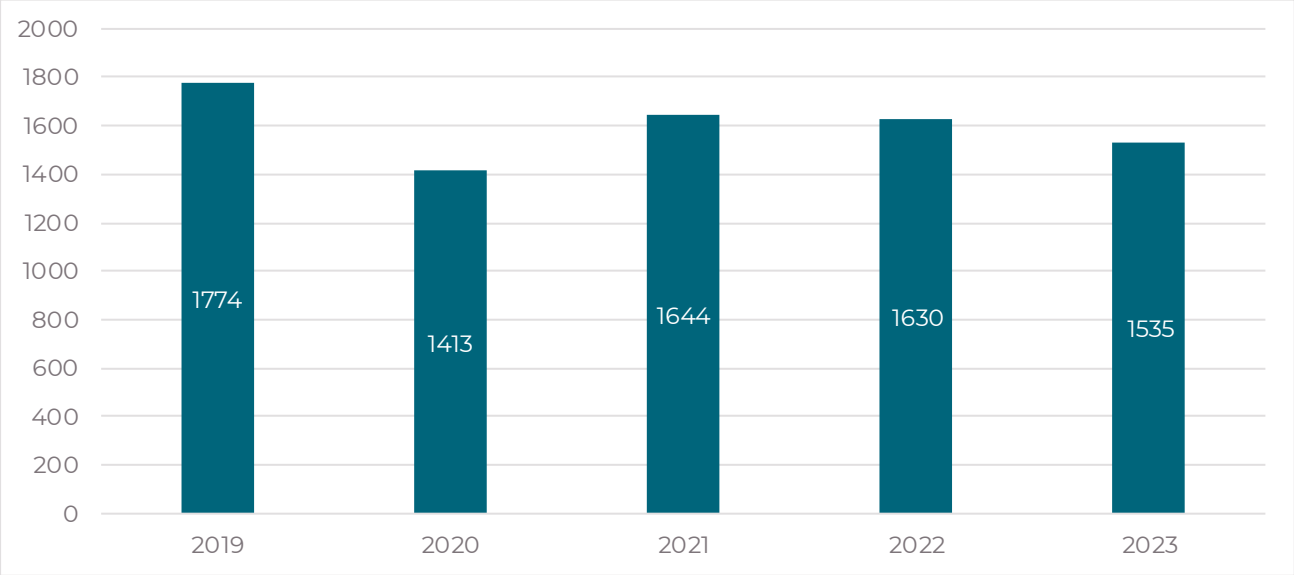
Figure 13. Collisions with a VRU by Year, 2019–2023



Annual Crashes by Severity – Totals

While the focus of the CSAP is on severe crashes, tracking all crash severities provides a broader view of safety trends. This metric includes annual totals for fatal, serious injury, minor injury, and property-damage-only crashes, along with crash rates. **Figure 14** show the total crashes that occurred in Rapid City between 2019 and 2023. Monitoring these trends helps identify whether reductions in severe crashes are accompanied by increases in lower-severity incidents.

Figure 14. Total Crashes in Rapid City, 2019–2023



Project-Level Safety Performance Metrics

To evaluate the effectiveness of the CSAP, Rapid City may track more detailed performance measures annually, including the following:

- Implementation status of priority projects (projects completed or projects in design)
- Crash trends before and after project implementation
- Fatal or serious injury crashes
- VRU crashes
- Emphasis area crash types

Public Access and Transparency

Annual progress reports should be posted on the Rapid City website to keep the public informed about key actions, performance metrics, project milestones, and funding updates. To further support transparency, the City could develop a dedicated safety dashboard or webpage that displays real-time performance indicators, crash trends, project status updates, and links to annual progress reports.

Public input gathered through the project website provided valuable on-the-ground insights, including observations about aggressive driving, signal timing issues, sightline and visibility challenges, and pavement or roadway condition concerns. This type of localized knowledge helps the City identify emerging safety issues and intervene proactively—long before concerns escalate into severe crash outcomes.

Community feedback also highlighted strong support for both manual and automated enforcement as tools to improve roadway safety. Continued engagement throughout implementation will be essential, helping Rapid City strengthen trust, maintain transparency, and ensure residents feel meaningfully involved in shaping the City's overall transportation safety strategy.

Needs and Recommendations

Ensuring the CSAP is implemented successfully and that progress is tracked and kept public is important for sustaining support for safety initiatives. A safety committee should be organized to ensure continuous implementation of the CSAP. If additional funds are available, an additional position specializing in CSAP implementation could be considered.

The CSAP also aligns with the RapidTRIP 2050 MTP, where safety is identified as a core goal area with objectives that mirror the CSAP's progress metrics. By comparing CSAP implementation to the MTP's safety objectives and performance measures, Rapid City can meet federal performance targets while ensuring that local and regional planning efforts move forward together.

Appendices

Appendix A. Policy Review Memo

Introduction

Vision Zero and the Safe Streets and Roads for All (SS4A) program is an international movement dedicated to implementing strategies that eliminate traffic deaths and serious injuries and improve the overall safety of the transportation network for all users. Reaching zero deaths can be achieved through the implementation of a Safe System Approach (SSA), which is comprised of five core elements and six principles, detailed later in this memorandum. The City of Rapid City is leading the development of a regional Comprehensive Safety Action Plan (CSAP) that will utilize the SSA to locate key areas of safety concern and establish solutions targeting these areas. This document identifies how the plans and policies implemented across the City of Rapid City align with the SSA and highlights opportunities for refining and strengthening policies and processes.

Safe System Approach[1]

The SSA is a holistic and comprehensive approach that provides the guiding framework to make the transportation system safer for everyone. Making a commitment to zero traffic deaths means addressing all aspects of safety through the framework, as depicted in **Figure 1**.

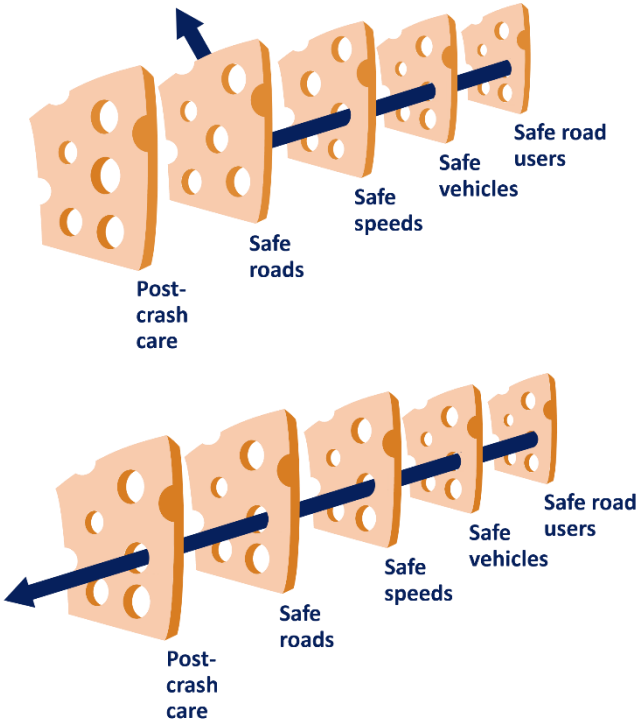
[1] Foundational definitions of the Safe System Approach have been included in their original form from the U.S. Department of Transportation website: What Is a Safe System Approach?

Figure 1. What Is a Safe System Approach?

Source: U.S. Department of Transportation

The SSA is a shift from conventional road safety thinking because it focuses on both human mistakes and human vulnerability by designing systems with layers of protection. If one countermeasure fails, another will help prevent a crash or lessen the likelihood of serious injury or death, as shown in **Figure 2**.

Figure 2. Layers of protection.



Source: Federal Highway Administration

In the SS4A grant program, comprehensive safety action plans (referred to as "Action Plans") are the basic building block to significantly improve roadway safety. They are aimed at reducing and eliminating serious injury and fatal crashes for all roadway users. A successful CSAP includes seven key components (**Figure 3**).

Figure 3. Comprehensive Safety Action Plans

Source: U.S. Department of Transportation

Specifically, the eight key components are:

- **Leadership Commitment & Goal Setting** – An official public commitment by a high-ranking official and/or governing body to eliminate roadway fatalities and serious injuries based on a timeline and set of goals.
- **Planning Structure** – A committee, task force, implementation group, or similar body charged with oversight of the Action Plan's development, implementation, and monitoring.
- **Safety Analysis** – An analysis of existing conditions, historical trends, contributing factors, crash types, and crash severity to provide a baseline understanding of crashes involving fatalities and serious injuries across a jurisdiction.
- **Engagement & Collaboration** – Engagement with the public and stakeholders to allow for community representation and feedback.
- Policy & Process Changes – An assessment of current policies, plans, guidelines, and standards to identify opportunities to improve how processes prioritize transportation safety.
- **Strategy & Project Selections** – Using data, noteworthy practices, stakeholder input, and equity considerations, a comprehensive set of

projects and strategies will be identified that will address the safety problems and focus on a SSA approach.

- **Progress & Transparency** – Ongoing efforts to measure progress to ensure transparency is established with community members and stakeholders.

Policy Review

The policy review involved examining current transportation and land use plans, policies, and standards from Rapid City. The list below provides a summary of the document types reviewed for this task:

- **Comprehensive Plan** – Identifies goals, policies, strategies, and actions in the areas of land use, public facilities and utilities, transportation, and housing and makes recommendations for plan implementation and plan maintenance.
- **Metropolitan Transportation Plan** – Provides an assessment of the region's transportation system and its future needs, including a list of regionally significant transportation projects based on reasonably anticipated local, state, and federal revenues.
- **Bike/Pedestrian Master Plan** – Establishes a series of recommendations for specified corridors that create a system of bikeways and walkways to provide local and regional connectivity and develop a set of efforts focused on putting the plan into action.
- **Transit Plan** – Provides a strategic blueprint for future transit investments and priorities by supporting mobility, accessibility, sustainability, and equity.
- **Design Criteria Manual** – Summarizes and outlines policy, methods, practice, procedures, and design standards that are adopted to obtain consistency in the design and development of infrastructure.
- **Master Fee Ordinance** – Establishes the permits, fees, and charges to be collected by the jurisdiction for various services.

The purpose of this memo is to perform a high-level document review and provide an overview of how practices and policies in Rapid City align with the seven Action Plan components and six SSA principles previously noted. The document types listed were identified for review due to their impact on the transportation network and the relevancy of their goals and policies to the SS4A planning efforts. The Vulnerable Road User (VRU) Safety Assessment and Strategic Highway Safety Plan (SHSP) from the South Dakota Department of Transportation (DOT) were also reviewed due to their alignment with the SSA principles and elements. The following sections highlight key findings organized by Action Plan component topics.

Leadership Commitment and Goal Setting

Based on the document review, there is a need to identify and document safety-related goals that align with the SS4A program. These goals will provide clarity and direction and allow for key decision-makers to track the CSAP's progress. Additionally, providing a public commitment from local leadership to these goals will garner additional public support and encourage action toward safety improvements and initiatives for targeted and systemic safety.

Planning Structure

Rapid City currently does not have a pre-existing safety committee, task force, or implementation group dedicated to enhancing and advocating for safety-focused projects and programs. Establishing a group to oversee the development, implementation, and monitoring of the CSAP will prove vital to the overall success of the Plan. The City may hold key roles in the implementation group, but it could also involve other safety interest groups in the planning structure. For example, the Rapid City Area Bike and Pedestrian Master Plan notes that the City is looking to reapply for the League of American Bicyclist's Bicycle Friendly Community designation. Allowing organizations with specific interests, such as bicyclists, to participate on the safety committee or similar body will provide additional support. The project to develop a CSAP has already initiated a body to serve as Study Advisory Team. The City has added several safety advocates to the Study Advisory Team, and one practical path to an ongoing implementation group would be to formalize the Study Advisory Team at plan completion to be the inaugural implementation group.

Safety Analysis

The South Dakota SHSP has identified Rapid City as one of the two cities with the highest frequency of VRU fatal or serious injury crashes in South Dakota. Therefore, traffic safety has been identified as a priority for the City with crash analyses focused on several variables identified through federal safety performance measures. The Metropolitan Transportation Plan (MTP) notes that these measures (from the 2019 HSIP and 2019 Annual Report) were used to identify intersections with the highest number of crashes so the City could focus on those locations and improve overall regional safety. Several tables and figures focusing on traffic safety and crashes are also included in the MTP. They primarily focus on:

- The 20 highest crash frequency intersections
- Fatal and serious injury crashes
- The 20 intersections with the highest crash rate (crashes/million entering vehicles)

- Bicycle and pedestrian crashes

Engagement and Collaboration

The SHSP notes one statewide educational campaign occurring in Rapid City known as "Don't Thump Your Melon." The program promotes helmet safety and education and is supported by the Monument Health Rapid City Hospital. However, there is an opportunity to expand educational outreach in the City through the CSAP and place a greater emphasis on the Safer People objective of the SSA.

Policy and Process Changes

Several key policies and processes were referenced throughout the material reviewed for this memo. The City of Rapid City Infrastructure Design Criteria Manual provides guidance on traffic-calming devices, such as roundabouts, street islands and boulevards, and curb line flares. Additionally, the MTP notes that two of the key emphasis areas identified in the SHSP are speeding and aggressive drivers. Key strategies to address these issues include setting speed limits consistent with design and development context, enhanced enforcement, effective communication and outreach campaigns, and increased use of advisory speed signs and radar speed feedback signs. Both signage strategies align with the Safer Speeds objective of the SSA.

General development principles are in place to emphasize pedestrian facilities and access. These principles place an emphasis on Safer Users, another objective of the SSA. A goal outlined in the Rapid City Comprehensive Plan is to prioritize sidewalk and trail improvements that complete gaps or "missing links" between existing neighborhoods and other community destinations, such as schools, parks, or shopping areas. The Comprehensive Plan also identified a general design principle that focuses on pedestrian and access orientation. The goal is to design sites and orient buildings with an emphasis on the character and safety of the pedestrian realm.

While Rapid City does not have an Access Management policy, South Dakota DOT provides guidance on access management criteria. A table is provided in South Dakota's administrative rules that shows highway classifications and access location criteria. This table is a good starting point, but it would be beneficial to provide additional guidance for the more urban development pattern in Rapid City to better meet the specific needs of the community. It would also be recommended to consider developing additional policies such as a Complete Streets policy.

Strategy and Project Selections

Transportation safety-related projects are widespread throughout Rapid City, especially for pedestrian and bicycles facilities, which are growing in transportation infrastructure. The Comprehensive Plan identifies a list of recommended actions to support the implementation of the CSAP. The recommended actions are organized by three key time frames: near term (0 to 2 years) for policy updates and quick-build and low-cost systemic treatments; midterm (3 to 7 years) for programmatic rollouts and corridor projects that require design and standard procurement; and long term (8 to 20 years) for major capital reconstructions and network build-out. In the Bike and Pedestrian Master Plan, pedestrian and bicycle projects were evaluated and prioritized based on a set of criteria. One of the criteria is "project addresses a location of a fatality of a person walking."

The Bike and Pedestrian Master Plan outlines goals and objectives to enhance transportation choices by developing a network of safe and comfortable on-street and off-street bicycle and pedestrian facilities. Each objective has a set of action items to support implementation and benchmarks to evaluate progress. One of the goals included in the plan is to "integrate bicycle and pedestrian planning into Rapid City's Planning Process." This includes reviewing and updating the project and program priorities every 5 years. The Bike and Pedestrian Master Plan also identifies bicycle and pedestrian facility types and crossing treatments that could be considered for implementation. All of these treatments have references and guidance from national resources like National Association of City Transportation Officials (NACTO), Federal Highway Administration (FHWA), Institute of Transportation Engineers (ITE), etc.

The current Rapid City MTP identifies multimodal mobility and accessibility as two of the metrics used to prioritize future projects. Projects receive a higher score if they complete a planned bicycle or pedestrian facility that connects to a regional bicycle and pedestrian system or if they improve traffic mobility or provide a new bicycle, pedestrian, or transit connection to a designated growth area in the region.

The MTP also notes that 26.33 miles of side paths and 18.47 miles of shoulder bikeways are located in the RCAMPO boundaries. The metropolitan planning organization has identified an additional 28.25 miles of bike lanes and 28.01 miles of shared use paths that are planned for future investments. The current MTP also discusses emerging transportation trends and technologies and identifies some strategies to help address these trends.

Facility Type	Length
Bike Lane	9.68
Bike Path	16.42
Cycle Track	0.28
Shared Lane	1.79
Shoulder Bikeway	18.47
Side Path	26.33
Total Existing Mileage	72.97

Rapid City MTP Multimodal Total Existing Mileage

All of the preceding examples of strategy and project selection show that Rapid City is committed to implementing safety-related projects, especially projects related to pedestrians and bicycles. This correlates with the Safer Roads objective of the SSA. However, there may be a potential to expand safety-focused project selection even further through adjustments to directly target safety data analysis findings and through expanded or optimized funding to increase strategy implementation.

Progress and Transparency

Rapid City is dedicated to transparency and measuring progress of safety-related goals over time. The Comprehensive Plan discusses how the Rapid City Progress Report, issued quarterly through the Mayor's Office, provides an update on projects in progress, long-term goals, and actions taken. The public can subscribe to the Progress Report and stay up to speed on City indicators and achievements. The Comprehensive Plan also discusses developing an Annual Report to monitor the Comprehensive Plan's implementation and to track achievements.

Key Findings

The Study Advisory Team inventoried existing plans and policies for Rapid City and identified several safety-related practices. In general, Rapid City has several safety topics that are being addressed or discussed but that have not necessarily been developed into everyday practices. Several CSAP components also do not have current practices associated with them, which suggests potential opportunities exist to initiate such practices. The Rapid City CSAP project will expressly consider opportunities with high benefit but limited resource cost to implement to support fatality and serious injury reductions.

Overall, the following list summarizes the key findings from the review:

- Pedestrian and bicycle safety-related projects are widespread, but there is room to expand funding for such projects and identify and prioritize other safe system projects and strategies.
- Safety-related goals should be well defined, and consistent practices should be developed for project prioritization and transparency.
- Opportunities exist to increase public awareness and education and engage with local leadership and disadvantaged communities.
- Existing practices and policies can be aligned with the SSA by implementing policies such as Complete Streets or Access Management.
- A safety committee should be organized to provide oversight of the CSAP; the inaugural safety committee could come from the project's Study Advisory Team.

Following the completion of this existing practices and policy review, the Study Advisory Team will continue to refine the safety analysis to identify a high-priority safety network based on reducing existing fatal and serious injury crash patterns. The project team will also further develop Rapid City-approved policy and process change recommendations to support the CSAP plan document.

Appendix B. Engagement Summary

CITY OF RAPID CITY
SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

Table of Contents

Rapid City Safe Streets for All (SS4A) Safety Action Plan: 2025-2050 Public Engagement Summary

Community outreach played a vital role in shaping the Rapid City Safe Streets for All Safety Action Plan (SS4A) by offering valuable insights into how residents and stakeholders perceive the safety of all forms of transportation in Rapid City. Through both virtual and in-person outreach, the project team gathered input from a broad range of residents and stakeholders of/for Rapid City. This summary outlines the methods used to engage with these audiences and details the feedback received.

In-Person Engagement

Pop-Up Events

The SS4A project team hosted pop-up events at three different venues of largely attended events to introduce the plan and gather feedback on various transportation safety topics and strategies in Rapid City. The first pop-up event was at the Rapid City Bike Fest in October 2024, the second pop-up event was a Trunk or Treat event in October 2024, and the third event was at the Black Hills Runner's Club Turkey Trot in November 2024.

Rapid City Bike Fest

Figure 15: Pop-up event at the 2024 Rapid City Bike Fest

The Rapid City Bike Fest took place as part of the Family Day at Raider Park event in Rapid City, SD on Sunday, Oct. 27 from 1-3 p.m. The SS4A pop-up at this event garnered approximately 40 adult and children attendees throughout the duration of the Bike Fest event. A handout was provided to attendees with a promotion code guiding people to the project website (located in Appendix B2). A total of 10 people had in-depth conversations with the project team, but the overall sentiment of all conversation at the event centered around public interest in further participation in the project with attendees stating that they could think of specific examples of areas in Rapid City where they have safety concerns. All attendees were encouraged to submit any comments they had on the project website. The comments collected from the project website can be found in Appendix B2.

Trunk or Treat Event

The second pop-up event took place in the parking lot of the Our Lady of Perpetual Help Church in Rapid City, SD from 6:00-7:30 p.m. on Sunday, Oct. 27, 2024. Approximately 200 families attended the event with handouts passed out to around 150 attendees (located in Appendix B2). Those who stopped by the table to speak with the project team expressed interest in the project and noted particular examples of the safety issues they have observed in Rapid City. Attendees were encouraged to submit their comments on the project website. The comments collected from the project website can be found in Appendix B2.

Figure 2: Pop-up event at the Trunk or Treat Event

Black Hills Runners Club Turkey Trot

The third pop-up was at the Black Hills Runner's Club Turkey Trot took place on Thursday, Nov. 28, 2024. At the event, 1,200 brochures (located in Appendix B2) were distributed in the race packets given to participants. No HDR or city staff attended the event.

Pop-up Meetings Key Feedback and Themes

Feedback at the three pop-up events hosted for the SS4A Safety Action Plan centered around attendees interest in getting involved with the plan. Much of the feedback collected highlighted that attendees had specific concerns for safety in particular areas of town, those areas were featured in comments gathered on the project website. Some key takeaways from the website comments included:

- Increasing congestion brings about the need for more traffic enforcement and stoplights throughout town.
- Improved markings for crosswalks (including signage and flashing beacons) are needed in multiple areas throughout town with many commenters noting that there are areas that are unmarked crosswalks that are very unsafe for pedestrians.
- The need for separated bike lanes is prevalent, especially on high-speed roads.
- Speeding and light-times make crossing difficult for pedestrians throughout the city.

Focus Group Sessions

The SS4A project team hosted a set of three focus group sessions in an effort to get feedback on various transportation safety topics, issues, and strategies in Rapid City from specific target audiences. The focus group sessions included a Young Drivers Focus Group, a Downtown Visitors Focus Group, a Businesses, and Residents Focus Group, and a High-Injury-Network Focus Group for City Staff and

City Council members. These focus group sessions were held in Rapid City City Hall on both Tuesday, July 15, 2025, and Thursday, July 17, 2025.

The groups and individuals invited to these focus groups received letters and emails with meeting details located in Appendix B3 on Monday, June 30, 2025.

Focus Group Session #1: Young Drivers

Figure 3: Focus Group Session #1: Young Drivers

The first focus group session was hosted on Tuesday, July 15, 2025, from 1:30-2:30 p.m. in the Circle of Friends Room of Rapid City City Hall. The meeting had the purpose of allowing Driver's Education teachers and Rapid City residents to provide feedback in regards to the safety concerns and issues they see their students struggling with, to recognize specific parts of the road or pedestrian spaces in the city that are in need of safety upgrades or do safety very well, and to identify any gaps in learning materials or methodology utilized by new drivers. Six attendees signed in for the meeting, including the Black Hills Special Services Manager for Driver's Education in charge of drivers education courses throughout the region, a tenured Driver's Education instructor who works for the Rapid City School District, the Driver's Education Coordinator for the State of South Dakota Department of Public Safety, a private Driver's Education instructor that works in the Rapid City area, members of the consultant team, and City of Rapid City staff. An attendance sheet for the focus groups can be found in Appendix B3.

Comments from the focus group attendees could be provided in multiple forms including submission of a paper comment form (Appendix B3), notes attached to the maps/markers exercise (Appendix B3), written comments by email, or digital comments via the project website. No written comments were received.

The meeting also included the use meeting boards (Appendix B3) by presenters, a PowerPoint presentation (Appendix B3) and the distribution of a handout document (Appendix B2) for attendees interested in learning more about the project. A meeting sticker voting activity (Appendix B3) was also featured at the focus group session to gather feedback from attendees on a variety of safety improvements proposed in the SS4A Safety Action Plan. A description of this activity and its results is provided in the Key Engagement section of the Focus Group section of this report.

In general, discussions at this focus group session centered on concerns with unclear/hard-to follow signage (too few or too many signs in different areas),

frequent speeding, areas with speed limits that are too high, lack of driver attentiveness to the "rules of the road" (i.e., the opinion that red lights are optional), and issues with large vehicles protruding into the roadway downtown. Many of the attendees noted that some of the one-way roads in town are confusing for new drivers or tourists that are unfamiliar with the area and that paint markings on the road are in need of more frequent maintenance. Protected vs. unprotected left-turns were also discussed at this meeting as attendees remarked that they see many angle crashes and issues with pedestrians.

This group provided very detailed feedback regarding specific areas of town that could see safety improvements. Those areas are shown in Appendix B3.

Focus Group Session #2: Downtown Visitors, Businesses, and Residents

The second focus group session was hosted on Tuesday, July 15, 2025, from 3:00-4:00 p.m. in the Circle of Friends Room of Rapid City City Hall. The meeting had the purpose of allowing Rapid City residents and commuters, specifically those who live, work, or own a business downtown to provide feedback in regards to the safety concerns and issues they see in the area, to recognize specific parts of the road or pedestrian spaces in downtown Rapid City that are in need of safety upgrades or that do safety very well, and to provide any feedback they have on bicycle/pedestrian and parking safety downtown.

Five attendees signed in for the meeting, including a City Council representative, a bike shop owner, a Federal Highway Administration staff member, members of the consultant team, and City of Rapid City staff. An attendance sheet for the focus group session can be found in Appendix B3.

Comments from the focus group attendees could be provided in multiple forms including submission of a paper comment form (Appendix B3), comments in the maps/markers exercise (Appendix B3), written comments by email, or digital comments via the project website. No written comments were received.

The meeting also included the use meeting boards (Appendix B3) by presenters, a PowerPoint presentation (Appendix B3) and the distribution of a handout document (Appendix B2) for attendees interested in learning more about the project. A meeting sticker voting activity (Appendix B3) was also featured at the focus group session to gather feedback from attendees on a variety of safety improvements proposed in the SS4A Safety Action Plan. A description of this activity and its results is provided in the Key Engagement section of the Focus Group section of this report.

In general, discussions at this focus group session centered on concerns with intersections for multi-modal transportation users and pedestrians (difficult to cross, too many lanes, speed issues), line-of-sight issues for drivers exiting and entering parking garages downtown, the need for more pedestrian access and

sidewalks in neighborhoods near downtown, and interest in the implementation of a road diet downtown to slow down traffic.

This group provided very detailed feedback regarding specific areas of town that could see safety improvements. Those areas are shown in Appendix B3.

Focus Group Session #3: High-Injury-Network (HIN) Corridors Focus Group for City Staff and City Council Members

The third focus group session was hosted on Thursday, July 17, 2025, from 9:00-10:00 a.m. in the Circle of Friends Room of Rapid City City Hall. The meeting had the purpose of allowing Rapid City City Council members and staff to voice any concerns or issues they see in the HIN corridors throughout town or to recognize additional specific parts areas within Rapid City that are in need of safety upgrades or that appear to currently have effective safety measures in place.

Six people signed in for the meeting, including the patrol captain for the Rapid City Police Department, a Federal Highway Administration staff member, members of the consultant team, and City of Rapid City staff. No attendance sheet was collected for this focus group session.

Comments from the focus group attendees could be provided in multiple forms including submission of a paper comment form (Appendix B3), written comments by email, or digital comments via the project website. No written comments were received.

The meeting also included the use meeting boards (Appendix B3) by presenters, a PowerPoint presentation (Appendix B3) and the distribution of a handout document (Appendix B2) for attendees interested in learning more about the project. A meeting sticker voting activity (Appendix B3) was also featured at the focus group session to gather feedback from attendees on a variety of safety improvements proposed in the SS4A Safety Action Plan. A description of this activity and its results is provided in the Key Engagement section of the Focus Group section of this report. Additionally, this meeting included a right-sizing activity, the handouts for this are located in Appendix B3.

In general, discussions at this focus group session included considering the addition of drug use to the alcohol category in analysis of substance related crashes and the prevalence of speed in fatal crashes. It was noted that all the fatal crashes in Rapid City in 2024 had speed listed as a contributing factor.

Key Engagement and Themes

The key safety findings from the various engagement opportunities include:

- Speed is seen as the largest safety overall in Rapid City with discussions at each of the outreach activities focusing on speed as a factor in crashes, fatal crashes, and general safety issues.

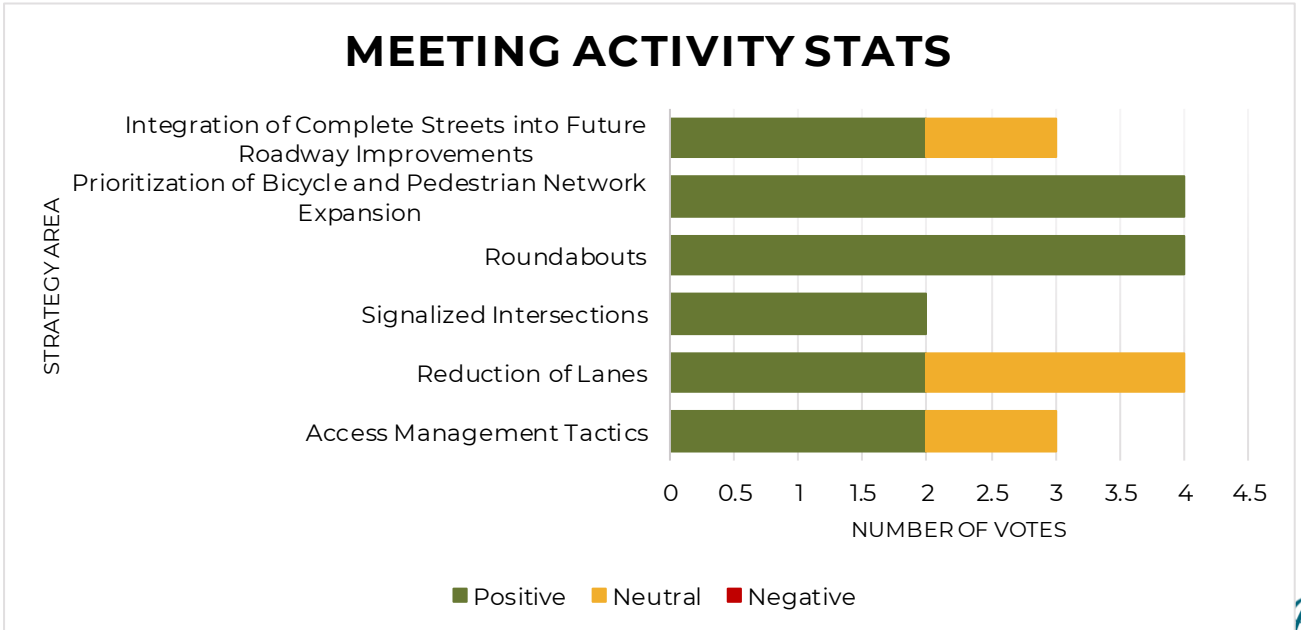
- Intersections in Rapid City could improve, with issues such as congestion, unprotected left turns leading to crashes, inattentive drivers/drivers choosing to ignore posted signage or rules of the road, and problems for pedestrians feeling comfortable/safe when crossing the road.
- There are specific problem areas that are easily identifiable to meeting participants throughout town, many of which overlap with one another.

Additionally, a sticker activity was utilized in all three focus group sessions to maximize participation, inviting respondents to vote, utilizing green, yellow, or red sticker dots on six strategies to improve transportation safety in Rapid City, including access management tactics, reduction of lanes, signalized intersections, roundabouts, prioritization of bicycle and pedestrian network expansion, and integration of complete streets into future roadway improvements. Those responding provided their opinions on the way each strategy. Green stickers signified that respondents prefer a strategy, yellow signifies a neutral opinion on the item, and red signified that respondents did not prefer a strategy.

A description of specific responses and a graph summarizing this activity's results are provided below and in **Figure 4**:

- **Access Management Tactics:** Mixed responses (two green, one yellow).
- **Reduction of Lanes:** Mixed responses (two green, two yellow).
- **Signalized Intersections:** Positive (two green).
- **Roundabouts:** Very positive (four green).
- **Prioritization of Bicycle and Pedestrian Network Expansion:** Very positive (four green).
- **Integration of Complete Streets into Future Roadway Improvements:** Mixed (two green, one yellow).

Figure 4: Graph of Sticker Activity Results



Meeting-in-a-Box

In lieu of a traditional public meeting, the team opted to perform a meeting-in-a-box style of engagement to gather feedback on the draft and finalized forms of the Rapid City Comprehensive Safety Action Plan. A meeting-in-a-box involves a package of materials that can be used with versatility at a variety of pop-up style events and locations, rather than at one specifically planned or scheduled event. This meeting-in-a-box kit contains:

- three social media posts and captions
- a drafted stakeholder email and email contact list
- a press release promoting the draft CSAP
- a poster display board with the project title
- a handout with a QR code to the project website
- a bifold handout that walks viewers through the CSAP

The materials within this kit were used in promotion of the CSAP both before and after the plan was finalized. Community feedback was collected and details of the plan were shared with the public.

All meeting-in-a-box materials can be found in Appendix B5.

Digital Engagement

Online Public Meeting

An online public meeting was hosted as a landing page on the SS4A website from Wednesday, October 22, 2025 – Wednesday, November 26, 2025. The online public meeting was hosted on a landing page that could be accessed from the main project website home page. The URL for the landing page was www.rcsafestreets.com/safetyplan/. This page allowed users to download the draft CSAP and included a section for collecting public feedback where website visitors could provide their name, email address, phone number, and comments on the plan. The contact information for the project contact was also shared on this landing page for public access in providing comments if so desired. A screen snip of the online public meeting is available in Appendix B6.

Comments from the online public meeting can be found in Appendix B6. Feedback in the meeting discussed a variety of areas of interest. Respondents provided input regarding inadequate maintenance of roadways and rough rides in various parts of town, interest in speed camera installation, desires for more speed limit enforcement, cyclist and pedestrian safety concerns, and issues as a result of increased traffic and congestion in different areas of town. Other concerns mentioned in commentators' responses included impaired drivers, reckless or aggressive driving maneuvers, unauthorized use of private alleys, and line of sight issues. One commentator offered extensive recommendations to

each issue proposed in their comments. Overall eight comments were received as part of the online public meeting.

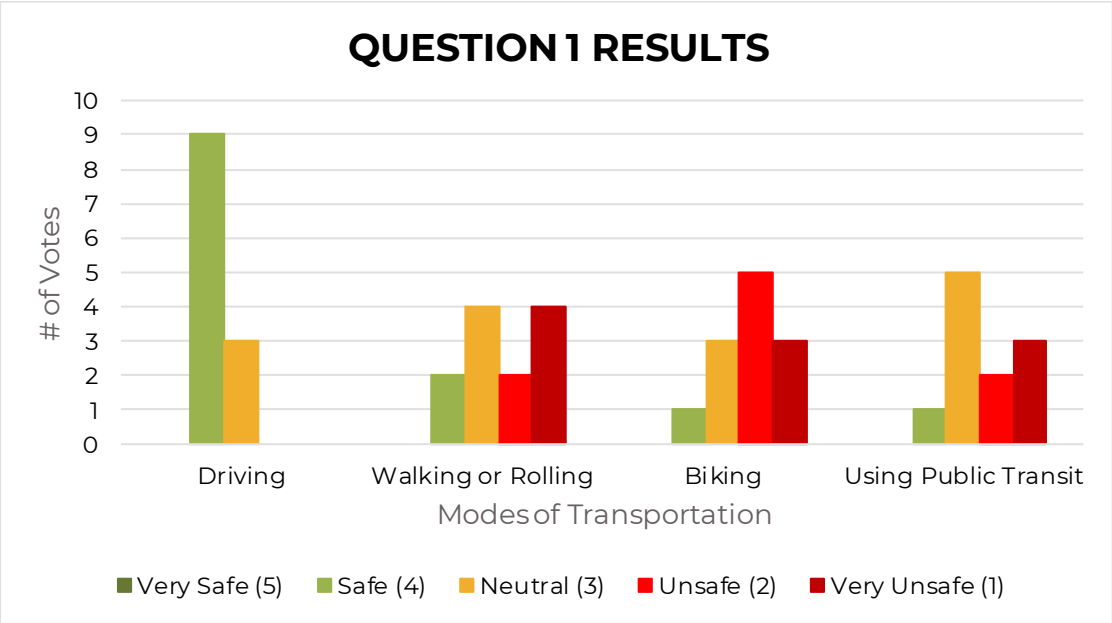
Survey

A project survey was hosted on the SS4A website from September 19 - Oct. 22, 2025. This survey can be found in Appendix B4. The survey collected input from the public regarding their top safety concerns in Rapid City allowed them to share their thoughts on what improvements to traffic safety they support and provided them the ability to rate how safe they feel using different forms of transportation around the city. 15 individuals filled out the survey in total.

The results of the survey feedback were as follows:

Question 1: How safe do you feel using the following modes of transportation with 1 being the most unsafe and 5 being the safest.

Figure 5: Graph of Survey Question 1 Results



With the highest safety rating, nine respondents rated driving in Rapid City as feeling safe and three rated it as being neutral. Two respondents said they felt safe while walking or rolling, four felt neutral, two felt unsafe, and four felt very unsafe. For biking, one respondent said they felt safe, three felt neutral, five felt unsafe, and three felt very unsafe. Finally, one respondent felt safe while using public transit, five felt neutral, two felt unsafe, and three felt very unsafe.

Question 2: What are your top three safety concerns within your community?

Figure 6: Graph of Survey Question 2 Results

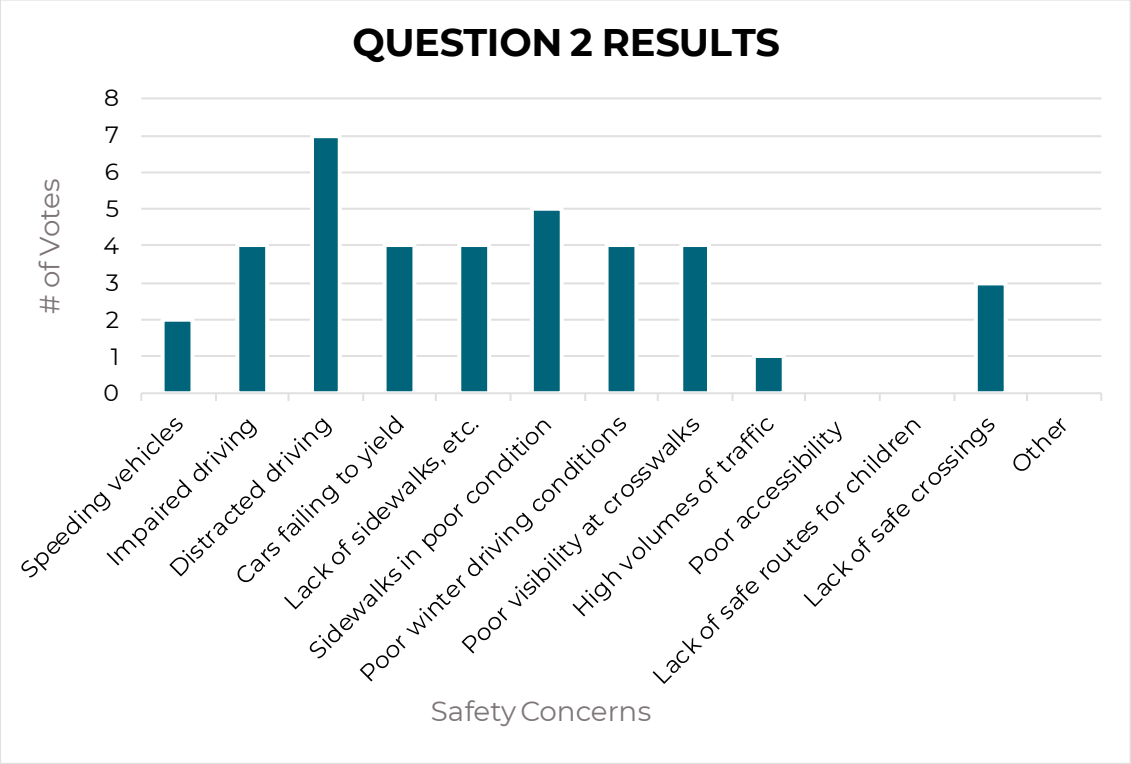


Table 3: Survey Question 2 Voting Results

Categories	# of Votes
Speeding vehicles	2
Impaired driving (e.g., alcohol, drugs, other substance abuse)	4
Distracted driving (e.g. cellphones, vehicle screens)	7
Cars failing to yield	4
Lack of sidewalks, trails, or bike lanes	4
Sidewalks, trails, or bike lanes in poor condition	5
Poor winter driving conditions	4
Poor visibility at intersections/crosswalks	4
High volumes of vehicle or truck traffic	1
Poor accessibility for people with disabilities	0
Lack of safe routes for children to walk to school	0
Lack of safe crossings (unmarked crosswalks or pedestrian signals)	3
Other	0

The top two safety concerns as broken down in this chart are “Distracted driving,” “Sidewalks, bike lanes, and trails in poor condition.” “Impaired driving,” “Cars failing to yield,” “Lack of sidewalks, bike lanes, and trails,” “Poor winter driving conditions,” and “Poor visibility at crosswalks” are all tied for third place, with four votes each.

Question 3: What are the top two improvements you support to enhance traffic safety in Rapid City?

Figure 16 Graph of Survey Question 3 Results

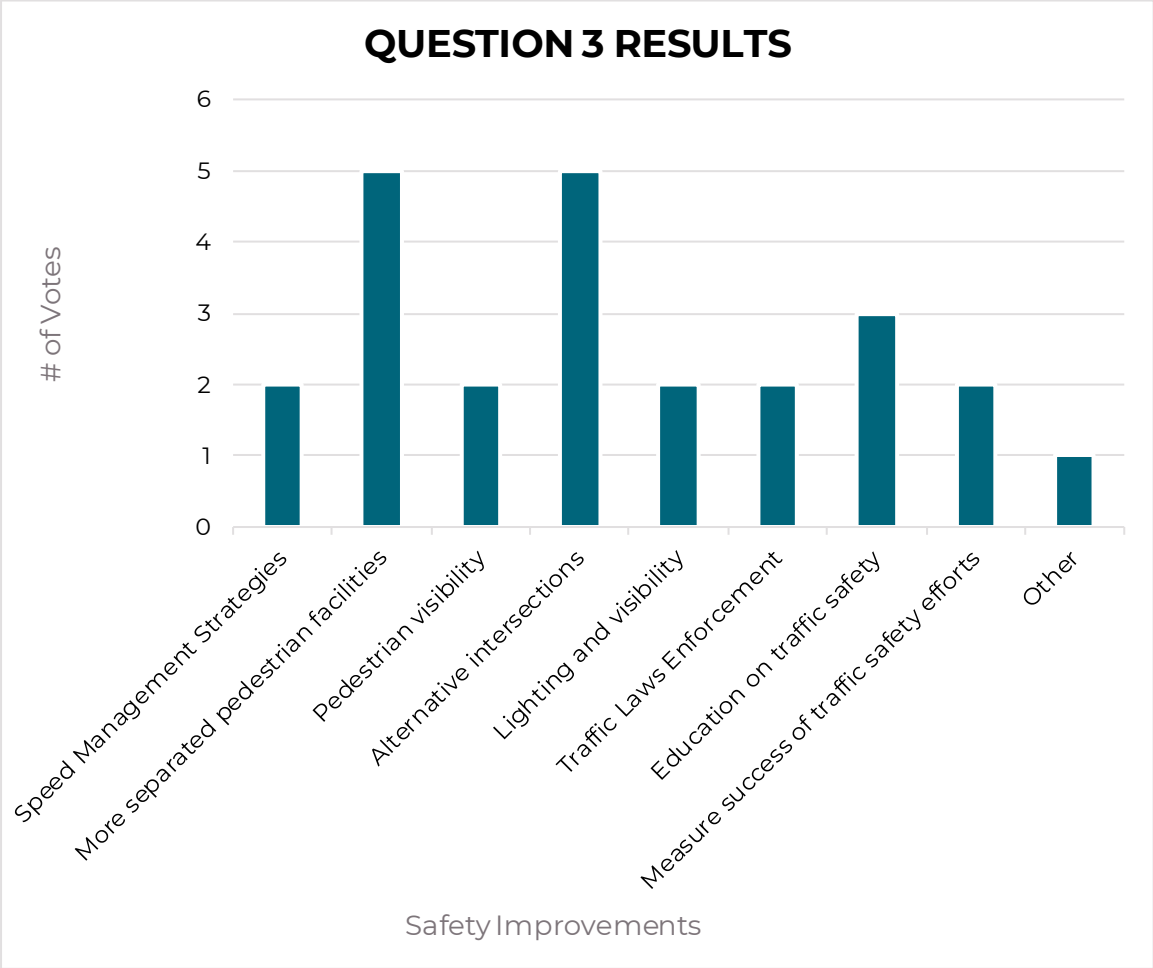


Table 4: Survey Question 3 Voting Results

Categories	# of Votes
Implement speed management strategies to discourage speeding (e.g. speed bumps, traffic calming devices, lane narrowing, and/or speed safety cameras)	2
Add more separated bicyclist/pedestrian facilities	5
Improve pedestrian crosswalk visibility and crossing conditions for pedestrians and bicyclists	2
Encourage alternative intersections such as roundabouts	5
Improve lighting and increase visibility for people walking, biking, driving, or riding public transit	5
Improve enforcement of traffic laws (e.g. speed limits, cars running red lights)	2
Encourage the community and offer education about traffic safety	2
Collect analyze, and share data to measure the success of traffic safety improvement efforts	3
Other	2

The two areas with the most votes in this survey question were “Add more separated bicyclist/pedestrian facilities” and “Encourage alternative intersections such as roundabouts,” each receiving five votes. One “Other” response was received stating “Move sidewalks away from roads, add grass in between.”

Comment Map

A comment map was hosted on the project website from its launch until November 26, 2025. 62 comments were submitted on the comment map during this time period, with issues discussed involving poor road conditions, maintenance concerns, pedestrian and bicyclist challenges, observations of the prevalence of speeding in certain areas, and more. The intersection that stood out as having the most concerns from area residents is that of 5th Street and Enchanted Pines Drive, with residents citing congestion, traffic volume issues, and the need for traffic enforcement as primary areas of interest. Specific comments are located in Appendix B2.

Comment Form

A comment form, located on the project website from the project website’s launch until November 26, 2025. Four comments were submitted in this timeframe with comments covering issues such as speed concerns, interest in roundabouts, and the popularity of rideshare. Specific comments are located in Appendix B2.

Appendix B2 – Pop-Up Event Materials

Handout:

Brochure:

SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

PROJECT BACKGROUND

In 2023, Rapid City was awarded $160,000 to develop a Safety Action Plan as part of the U.S. Department of Transportation's Safe Streets and Roads for All (SS4A) grant program.

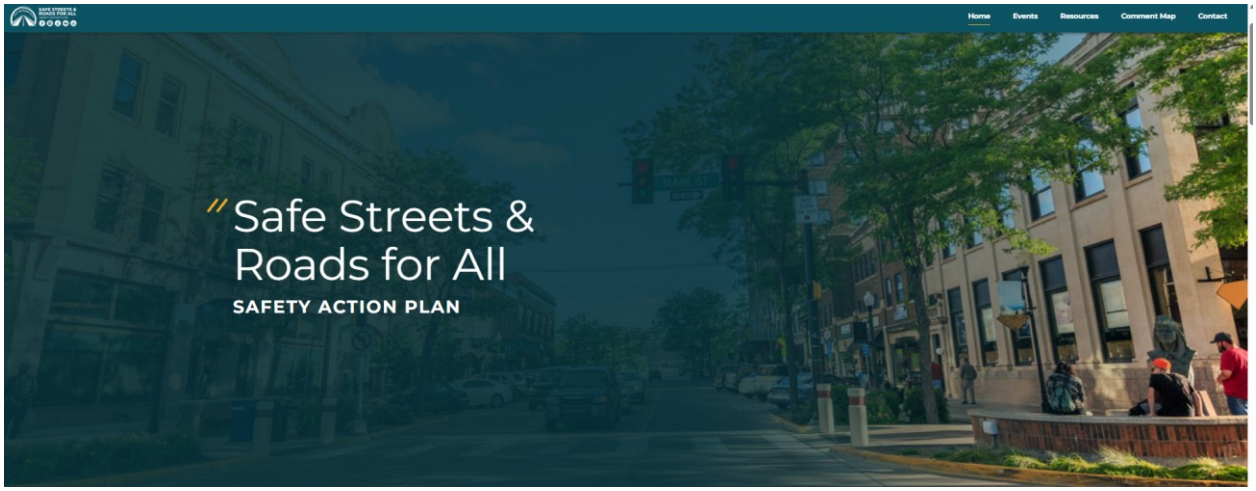
This funding provides our community the opportunity to develop a plan that expands upon existing transportation goals and objectives to create a safer community with zero roadway deaths.

PROJECT WEBSITE

www.RCSafeStreets.com

Appendix B2 – Project Website

Project Website:



PLAN BACKGROUND

In 2023, Rapid City was awarded $160,000 to develop a Safety Action Plan as part of the U.S. Department of Transportation's Safe Streets and Roads for All (SS4A) grant program.

This funding provides our community the opportunity to develop a plan that expands upon existing transportation goals and objectives to create a safer community with zero roadway deaths.

The Safety Action Plan will include a safety analysis of:

Severe Crash Events

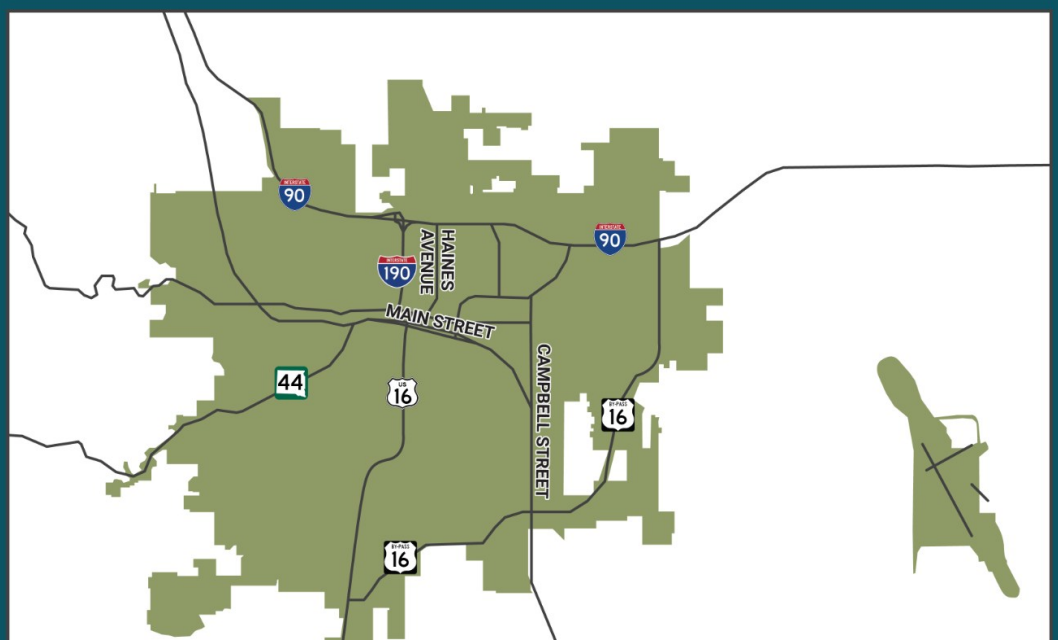
Current Conditions

Road Users

The SS4A Safety Action Plan will utilize that data, along with future forecasted conditions, to develop a plan that will analyze the entire transportation system to identify high priority safety locations and provide recommendations to address issues at these locations. The recommendations will be prioritized into short-, mid- and long-term projects to create an implementation plan.

PLAN AREA MAP

Rapid City is located in western South Dakota in Pennington County.

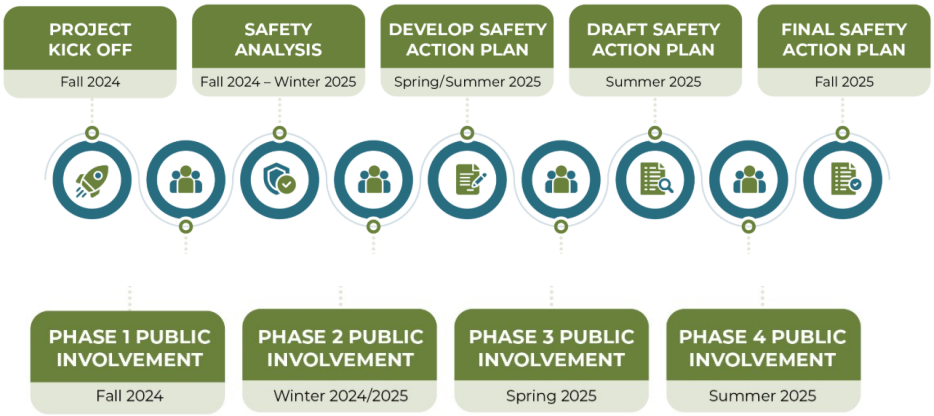


SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

CITY OF Rapid City
LIVE. WORK. GROW.

Click image to enlarge

// PLAN SCHEDULE



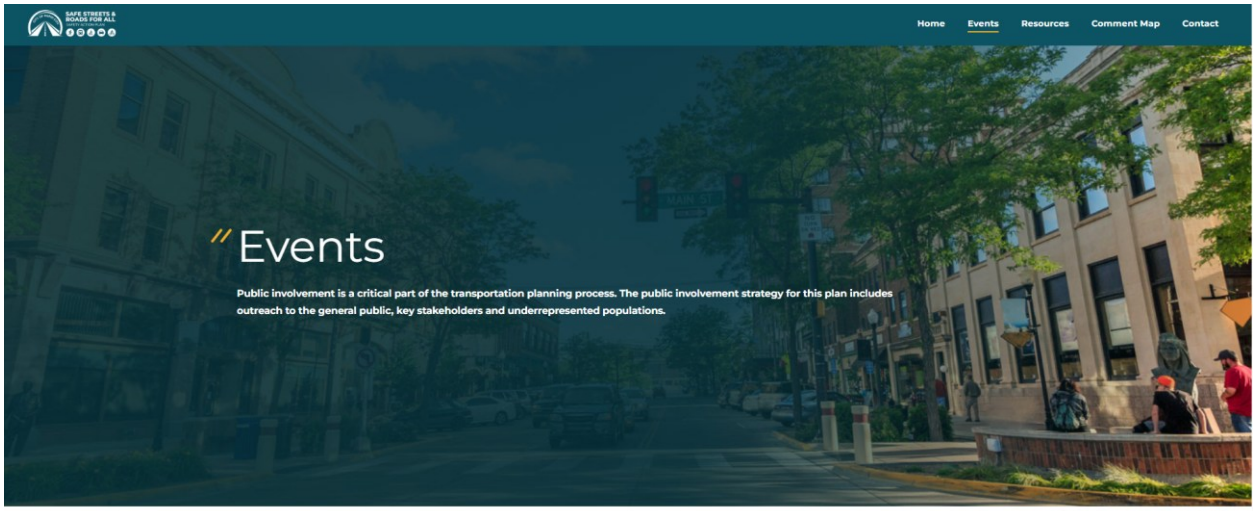
Click image to enlarge

// ABOUT THE CITY OF RAPID CITY LONG RANGE PLANNING

The Long Range Planning Division oversees several long-range planning programs regarding the future growth and development of Rapid City, including the promotion, maintenance and updating of the City's Comprehensive Plan.

The Division also acts as the sponsor and administrator of the Metropolitan Planning Organization (MPO), overseeing transportation planning for the Rapid City Area MPO. Other long-range planning programs and functions include neighborhood planning, growth analysis and projections, Future Land Use Plan amendments, and annexations. The Division provides staff support for the Metropolitan Planning Organization and Committees.

// PARTNER AGENCIES



CURRENT AND UPCOMING EVENTS

The City of Rapid City will be hosting pop-up events at community events to share the draft Rapid City Comprehensive Safety Action Plan with community members. Keep an eye out for our the pop-ups to engage with the project team!

At these pop-up events, this bifold will be shared with participants, containing more information on the plan:

Bifold

PAST EVENTS

July 15, 2025 Focus Group Sessions Meeting Materials:

Young Drivers Focus Group #1

PowerPoint Presentation

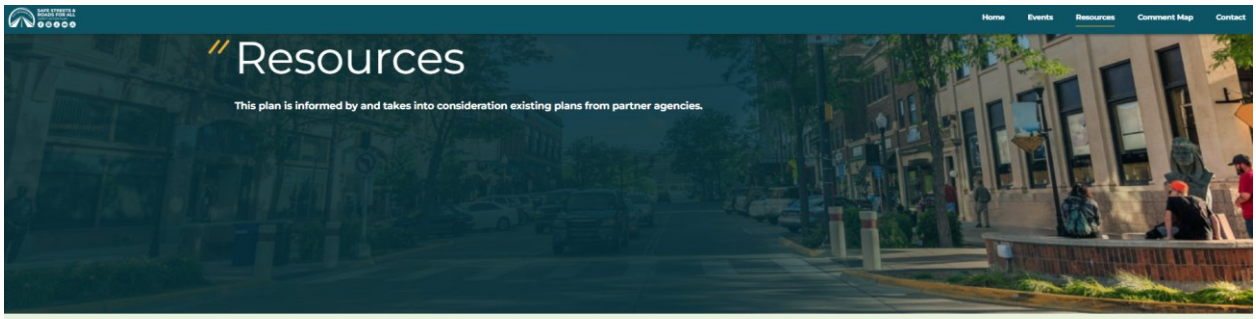
Downtown Commuters Focus Group #2

PowerPoint Presentation

July 17, 2025 Focus Group Session Meeting Materials:

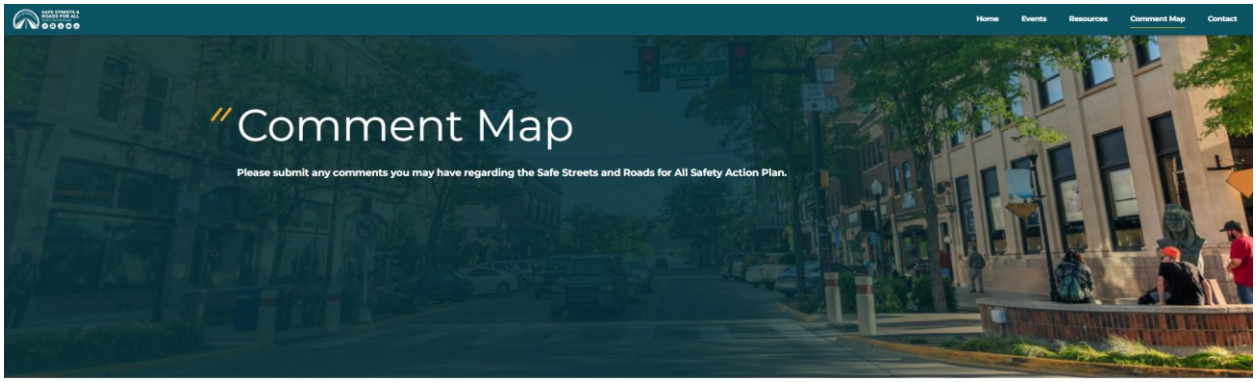
High Injury Network Focus Group #3

PowerPoint Presentation



TOPICS/AREAS

- Safe Streets and Roads for All (SS4A) Grant Program
- Completed Plans
- Ongoing Plans
- Partner Agencies



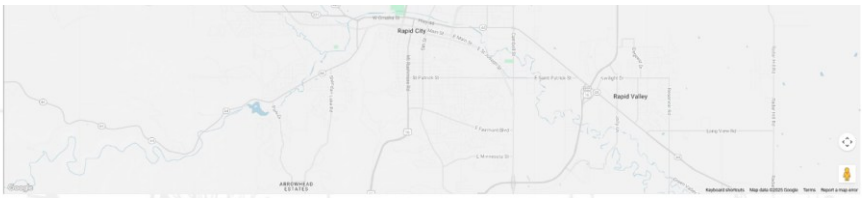
LEAVE A COMMENT

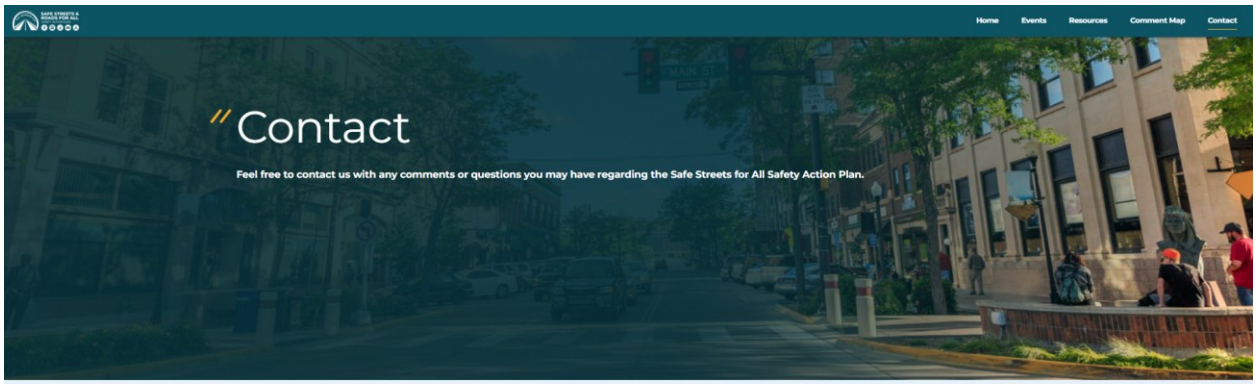
Use the map below to place a pin where you feel unsafe or have traffic safety concerns.

Pan and zoom with your mouse or use the + and - buttons.

Use the search bar for specific addresses.

Click the "Large Map" button (dashed square icon) to enlarge the map.





CONTACT US

Name

First Name

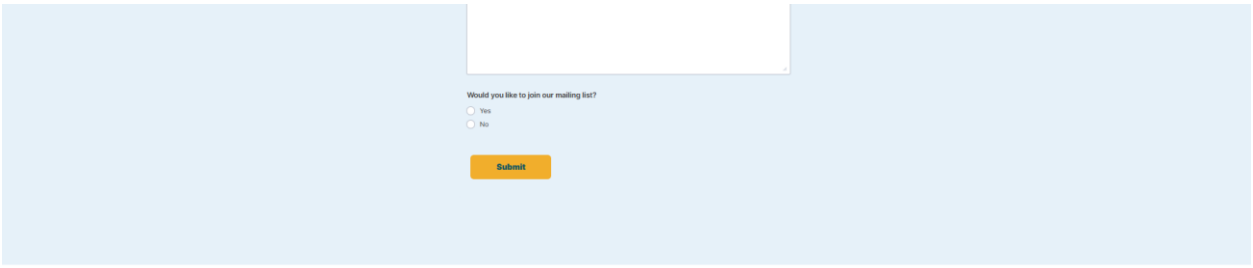
Last Name

Email

Phone Number

(000) 000-0000

Comment



// PROJECT CONTACTS

Kip Harrington
City of Rapid City Project Manager
kip.harrington@rcgov.org

Jon Markt
Consultant Project Manager
jonathan.markt@hdrinc.com

Comment Form Feedback:

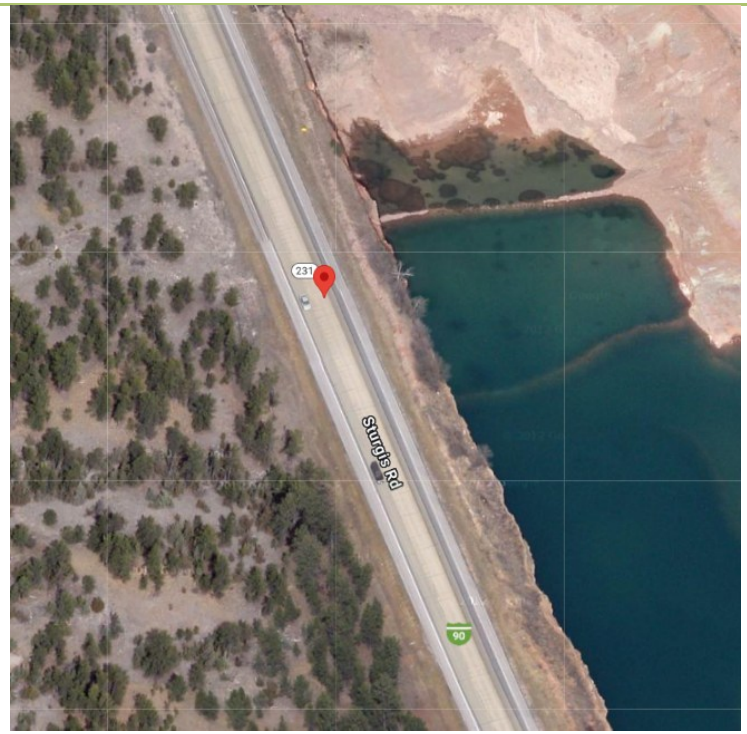
Comments:
Please focus on Catron Blvd as it approaches Hwy. 16 intersection. Speed is supposed to reduce to 45 mph but many continue at 60-70 until the light. Rapid City should also consider Round Abouts for this area as more and more development is increasing traffic and the existing divided highway causes dangerous situations as people navigate turning maneuvers.
Motor vehicles go over the speed limit on Florence st Redwood City and Bay road Redwood City and unincorporated San Mateo County. Often going 40 to 50 mph, making travel very dangerous, Especially on Bay road and Taft school at tenth ave. The speed limit should be lowered to 15 mph.
Hi, My name is Gabriel Spencer, and I recently came across the valuable information you've shared on the Rapid City Safe Streets & Roads for All Safety Action Plan website. I was wondering if you might be interested in adding a new resource to your Resources page. With ridesharing becoming an increasingly popular mode of transportation, it's important for passengers to be aware of how to stay safe while using these services. To help with this, we've put together a comprehensive guide on rideshare safety tips. It covers essential advice, such as verifying your driver, sharing your trip details, and more. You can check it out here: Rideshare Safety Tips - cordiscosaile.com/rideshare-safety-tips/ We've made sure this guide is thorough and practical, and I believe it could be a valuable addition to your site. If you think this would benefit your readers, would you consider sharing a link to it? If you do not want to receive anymore emails from me, please reply letting me know you're not interested. Thank you so much for your time. Have a great day, Gabriel
Important information for the administrator of the website rcsafestreets.com. If you are not the administrator of the website rcsafestreets.com, please forward this letter to the person who manages the website rcsafestreets.com. Hello! I noticed that your website rcsafestreets.com is not using Google AdSense ads. Perhaps you haven't paid attention to it, but AdSense could be a great tool for generating additional income without changing your content. I've prepared a course in which I explain in detail how to start earning with AdSense and use its features to improve your site's monetization. You can review the material here: https://adplacementnotes.online

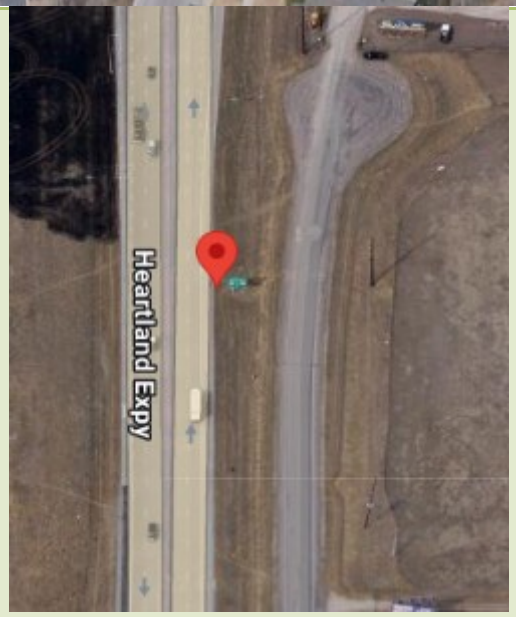
If you'd like to learn more or have any questions, I'd be happy to discuss!

Best regards,
Wyatt

Comment Map Feedback:

Number	What type of location is this?	I feel unsafe as a:	Comment Topic	What do you want us to know about this location and your experience?	Location
1	Road	Bicyclist	Bicycle Facilities	Moon Meadows is frequently used by cyclists. There is no shoulder at all along that stretch of road. Future expansion to add shoulders would help tremendously.	

2	Road	Bicyclist	Roadway Conditions	The road shoulder going north on Sturgis Rd from Simon's plant entrance all the way to Black Hawk is frequently full of gravel, debris, broken glass, etc. This is not conducive to safe cycling. Please increase the frequency of sweeping the shoulders.	
3	Sidewalk/Path	Bicyclist	Bicycle Facilities	There is no safe place to ride along Deadwood Ave. Either expand the shoulders or add sidewalks/bike path.	

4	Road	Bicyclist	Roadway Conditions	The pavement is in really poor condition on 4th Street between 5th Street and Kansas City St.	
5	Road	Bicyclist	Roadway Conditions	The shoulder is frequently full of debris, broken glass, small wires from tires, gravel, etc. Please increase the frequency of sweeping. I've left the same comment with the SDDOT as I'm unsure who's responsibility it is to keep the stretch between Old Folsom and East Minnesota clean.	

6	Road	Bicyclist	Roadway Conditions	The shoulder is frequently full of debris, broken glass, small wires from tires, gravel, etc. Please increase the frequency of sweeping.		
7	Road	Driver	Roadway Conditions	After the construction on Corral Drive, the lane markings proceeding eastbound on Corral Drive towards Sheridan Lake Road are difficult to see.		

8	Road	Driver	Jaywalking	Persons jaywalking over the median on Omaha is happening regularly. Someone is going to get injured/killed.	
9	Intersection	Driver	Signal Timing	It was great that a signal was added to this intersection for morning traffic, but it really could be a flashing yellow for Sheridan Lake Road and a flashing red on Dunsmore after 10:00 am on all days.	

10	Intersection	Driver	Other	There is a three way stop sign at this intersection. It is rare to see anyone come to a full stop at this intersection. Adding a roundabout may help here.	
11		Driver	Roadway Conditions	Attempting to enter or exit on Elgin in Rushmore Crossing from any parking lot is a nightmare. Especially at the intersection with the Circle K. A couple of round-abouts on this roadway would allow better flow of traffic and less daredevil driving for anyone attempting to	

				turn left out of either side of the street.	
12	Intersection	Driver	Other	When using the on ramp from East Highway 44 to Elk Vale Road, the on ramp is at such a weird angle that when attempting to merge you feel like you are almost out of room. The on ramp is long, but the yield and merge lane is quite short.	
13	Intersection	Driver	Other	When travelling southbound on Highway 79 and turning right onto Catron Boulevard, the lane yields into Westbound traffic. The driver is forced to turn their head to see oncoming	

				traffic with little room to maneuver. I have seen many rear end collisions here because people are looking to see traffic and do not see the vehicle in front of them has stopped. This could be avoided by increasing the right hand turning lane 750 feet and then allowing cars to yield and merge safely.	

14	Intersection	Driver	Other	When facing eastbound on Jackson Boulevard in the left turn lane to turn northbound on Mountain View. The angle of to turn is regularly having vehicles cut into the lane for vehicles turning left from Mountain View onto Jackson, or into the outside lane of Mountain View. This intersection was re-designed for pedestrian use, but made it much worse for drivers.		

15	Road	Driver	Roadway Conditions	Roadway conditions for this section of road are deeply uncomfortable to drive. As a result, I can only imagine it's horrible and unsafe for pedestrians or cyclists. The road is pitted and wavy, meaning at the speed limit of 35 MPH, I feel like my car is going to bottom out every time I crest from a dip. It needs some dedicated lights, two lanes of through traffic in each direction, pedestrian crossings, and dedicated turn lanes for left hand turns.	

16	Intersection	Pedestrian	Pedestrian Crossing	This is a dangerous location for pedestrians and vehicles. There are a lot of pedestrians that commute through this area unsafely all day every day. It would be a huge improvement to have a crosswalk to get to the other side of Lacross Street.	

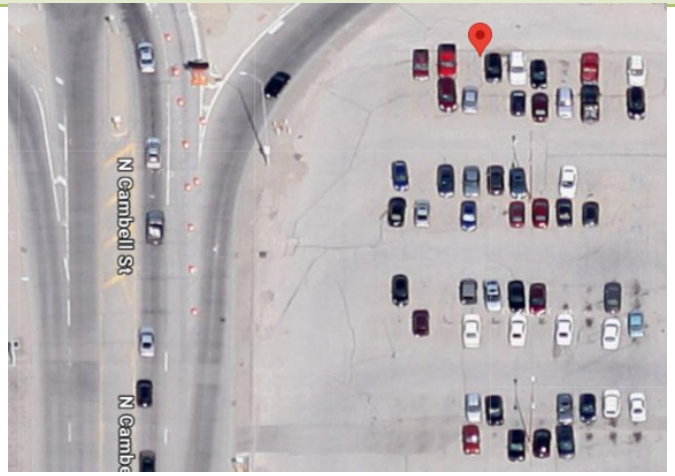
17	Road	Bicyclist	Bicycle Facilities	Mt Rushmore Road does not have any facilities for bicycles, yet it receives quite high bicycle traffic from nearby residents and those working at businesses along the route.		

18	Road	Bicyclist	Bicycle Facilities	Riding a bicycle anywhere in the vicinity of St Patrick St is extremely hazardous. There are no facilities for bicycles. There is also no shade for pedestrians.	
19	Intersection	Pedestrian	Pedestrian Crossing	No pedestrian crossing signals at one of our busiest pedestrian crossing intersections in our community. This is extremely unsafe.	

20	Road	Bicyclist	Bicycle Facilities	No bike lane or facilities for commuter bicyclists to connect West Rapid with downtown Rapid City. The current conditions are extremely unsafe.	
21	Sidewalk/Path	Pedestrian	Other	No sidewalk in a high-traffic pedestrian area necessary to connect the West Boulevard Neighborhood with the bike path.	

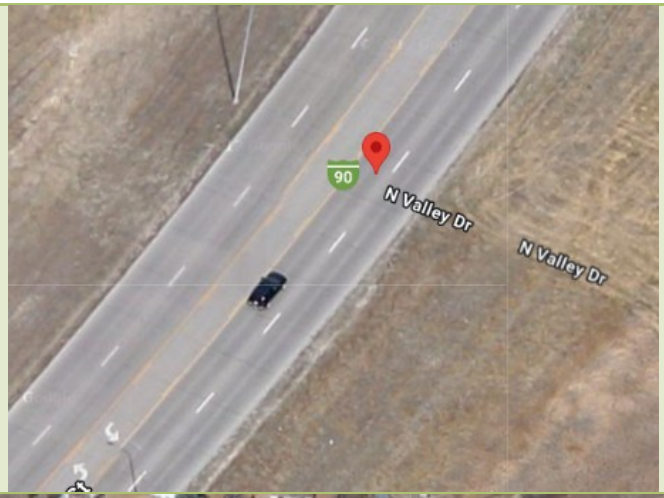
22	Intersection	Bicyclist	Pedestrian Crossing	There is approximately 24' of unutilized pavement on the north leg of this intersection due to the new intersection installed. Maybe additional signing could be installed to recognize this as a safe pedestrian refuge island for crossing on the north leg. Thank you for your consideration.	

23	Road	Pedestrian	Roadway Conditions	There is a small hole on the road surface approximately 6"x5" that has eroded beneath the road and is roughly 1' deep and much wider under the initial hole on the surface.	
24	Intersection	Driver	Signal Timing	The left turn lane from WB E North St onto Cambel St backs up severely during peak times.	

25	Intersection	Driver	Other	Poor turn-lane layout/geometry. Somewhat frequently people mistake the eastbound thru lane on Eglin for a left turning lane (for heading north on E North St) which puts westbound left turn lane traffic (for heading south onto E North St) at risk due to the limited space.	
26	Intersection	Driver	Accessibility Issues	Double Left turn lane needed for Westbound E. North St to south bound Cambell. Traffic backs up and prevents business access during peak times. Eastbound E. North St should have only 1 thru	

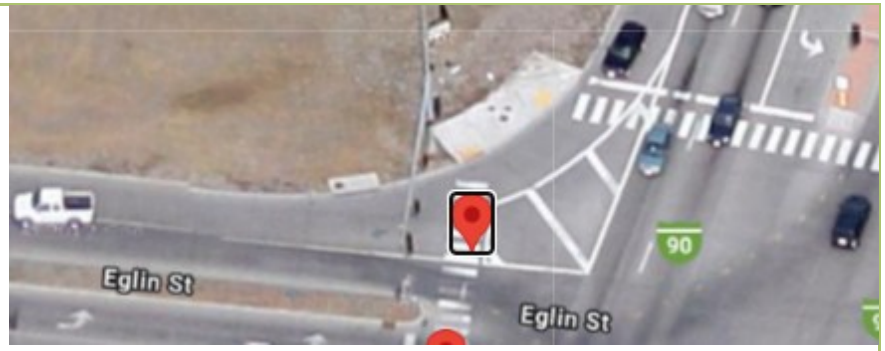
				lane at the Cambell intersection. this would allow for a continuous turn lane from Northbound Cambell to Eastbound E. North st to keep traffic moving and eliminate the merge	
27	Intersection	Driver	Signal Timing	Remove traffic light at this intersection. Monument can reconfigure traffic flow on their property to utilize the Regional Way access to 5th street. This would provide a good opportunity to create a signalized intersection for access to the hospital off of 5th while	

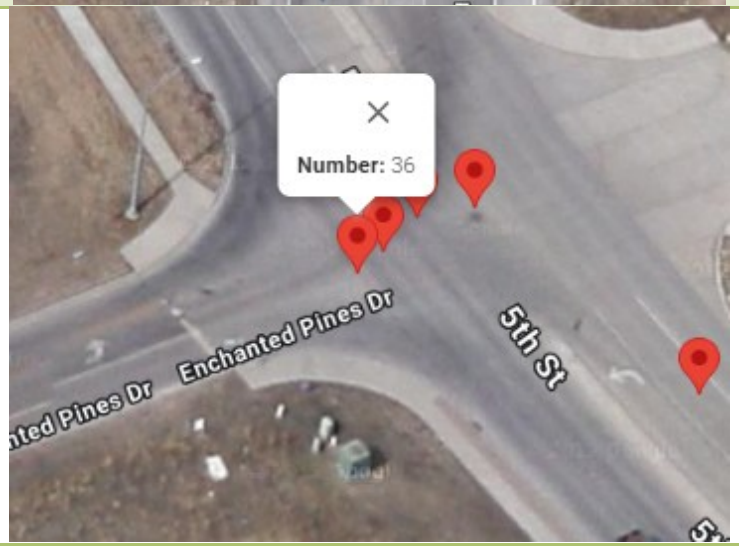
				enhancing accessibility to the clinics off of Regional Way	
28	Intersection	Other	Other	eliminate traffic light at this intersection. Direct school traffic to utilize Indiana st to Elm and then upgrade Elm and St Pat's with a signal or traffic circle to accommodate traffic better	

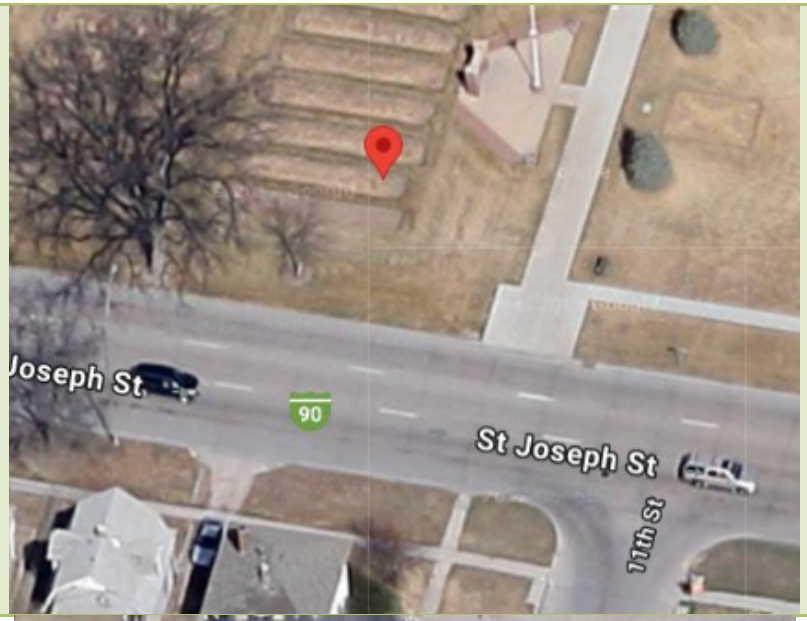
29	Intersection	Driver	Visibility	Eliminate left turns at this intersection in all directions. Direct drivers to use signalized intersections at Eglin or Anamosa to make left turns. *safety	
30	Sidewalk/Path	Bicyclist	Bicycle Facilities	A true bike/walking path needs to be constructed to connect the Rapid Valley area to the rest of the city.	

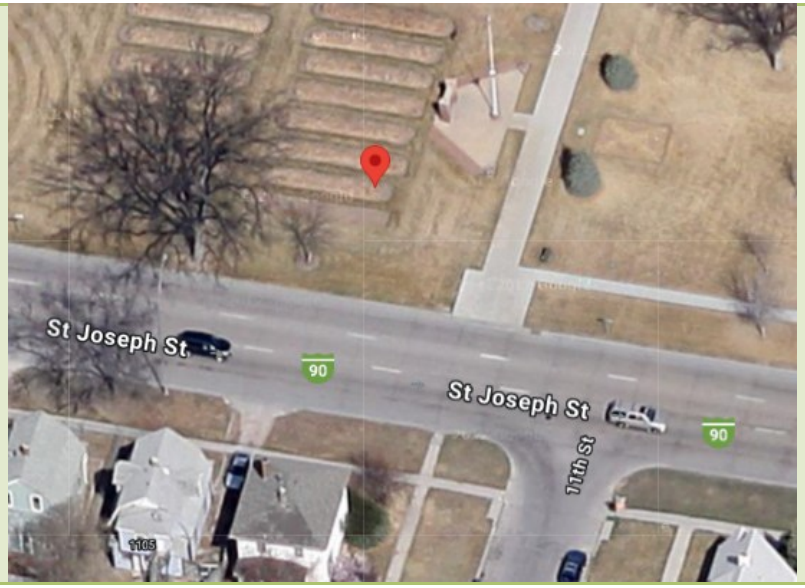
31	Road	Other	Roadway Conditions	Connect Anamosa to Concourse or Turbine Dr. Too much thru traffic is traveling on a densely populated residential street. which makes it very unsafe for all residents who want to walk up and down their neighborhood street. also due to the high usage and poor construction Road is in terrible shape. This situation is a poor result of city planning and development and should not have been allowed to be left in this manner. it is unfair to the residents of	

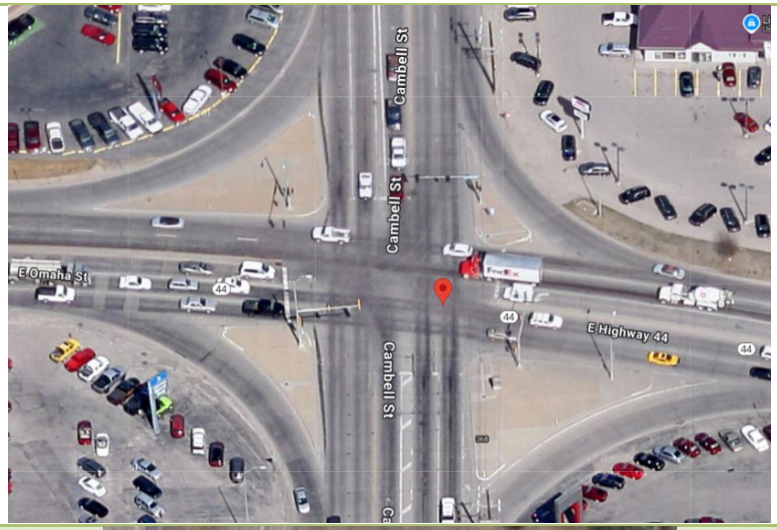
				Diamond Ridge Blvd to have to deal with this.	
32	Intersection	Other	Other	Remove traffic signal and replace with a 4 way stop or possible traffic circle. Rapid city already has too many traffic lights.	
33	Intersection	Driver	Accessibility Issues	Eliminate this intersection. To avoid accident potential, traffic should use the signalized intersection at Concourse Dr to enter Elk Vale.	

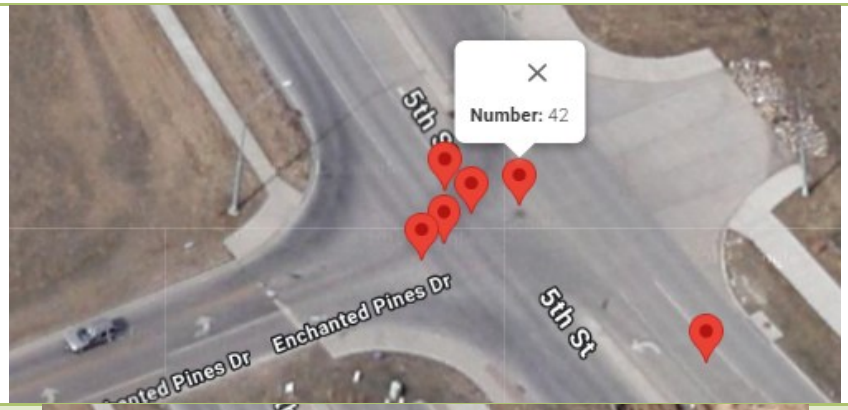
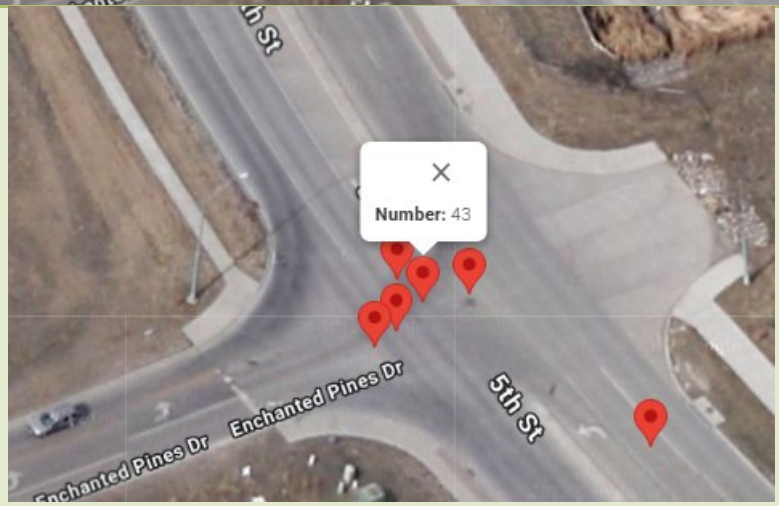
34	Intersection	Other	Signal Timing	Intersect upgrades are needed to address the volume of traffic in the area. this may need to include Widing intersection to accommodate double left turn lanes. add no turn on red for right hand turns to eliminate accidents	

35	Intersection	Driver	Signal Timing	Needs dedicated left turn traffic light for both sides of Homestead. Needs dedicated right turn lane & light for all directions at intersection		
36	Intersection	Driver	Speeding	This intersection needs a stop light and the speed needs to be raised back up or more traffic enforcement.		

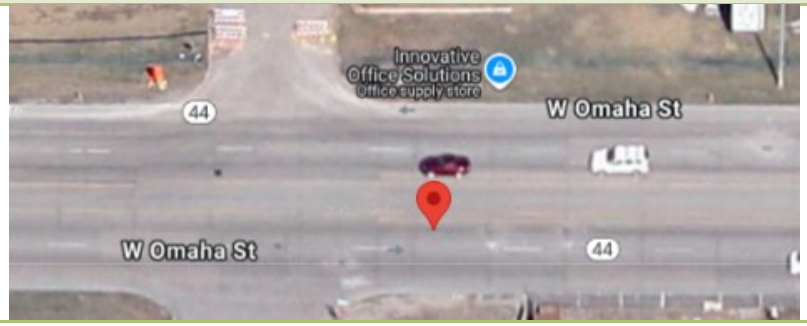
37	Road	Driver	Other	With the new apartments that have been built, there has been a huge influx of traffic. There should be a traffic light here	
38	Intersection	Pedestrian	Pedestrian Crossing	The new sidewalk they put in at this intersection has a very small spot to stand and wait for the light to change. Especially with dogs, strollers, and other people. I usually press the button then back up because the buttons are so	

				close to fast traffic (no one goes 30mph on 5th street we all know that)	
39	Sidewalk/Path	Bicyclist	Pedestrian Crossing	There is a path in the middle that goes through Halley Park but no crosswalk painted on the roads or crosswalk signs.	

40	Intersection	Driver	Distracted Drivers	No right hand turn to get to Omaha St when heading north or south on Campbell St. Makes for backed up traffic and near misses when people dont use blinkers or arent paying attention	
41	Intersection	Driver	Accessibility Issues	Amount of traffic, to many spots to check before proceeding and when there is fog, it's crazy dangerous!	

42	Intersection	Driver	Other	Speeding and lots of traffic	
43	Intersection	Driver	Other	This is getting to be a very busy intersection and the lane separation curb in fifth Street is poorly positioned. Biggest issue is making a left hand turn from enchanted pines onto North bound 5th. Because of the median vehicles must make a slow turn or swing wide. Shortening the curb would	

				allow cats to make the left hand turn easier and merge with traffic at a speed that is more appropriate for conditions.	
44	Intersection	Bicyclist	Distracted Drivers	Husband was hit on his bicycle near here	N/A
45	Intersection	Driver	Speeding	Unsafe intersection with increasing congestion all the time	

46	Intersection	Driver	Speeding	Due to speedng and increased traffic, it is almost impossible to make a left hand turn from Enchanted Pines on to 5th Street	
47	Intersection	Bicyclist	Pedestrian Crossing	There is a way path to get across the median but a crosswalk painted on the road and push button flashy flashy lights would help cars actually stop	N/A
48	Road	Bicyclist	Bicycle Facilities	Designate as a Bicycle Boulevard	

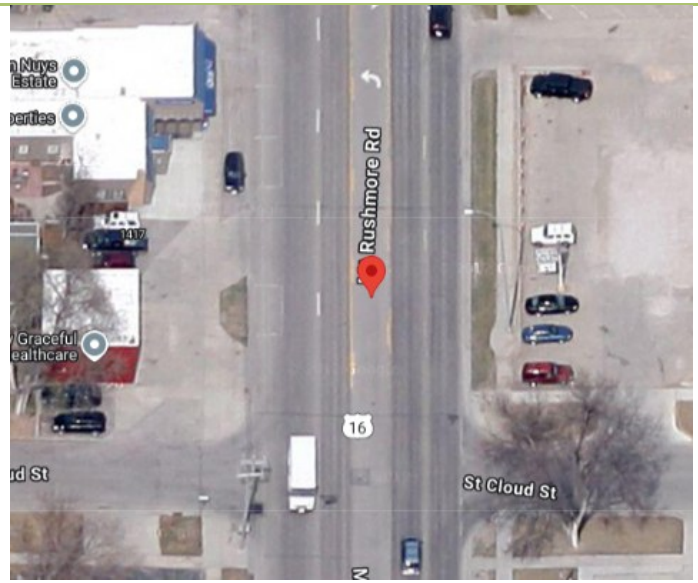
49	Intersection	Pedestrian	Roadway Conditions	The crossing has some large heaves in the roadway that are big trip hazards for pedestrians and those in wheelchairs and those with strollers. Also, the crosswalk lines could benefit from new paint, especially the crosswalks that go across Central Blvd. So many kids cross here.	

50	Intersection	Pedestrian	Pedestrian Crossing	There are lots of people, especially neighborhood children, that cross at this intersection and there are no formal, marked crosswalks. This intersection could definitely benefit from marked crosswalks.	
51	Intersection	Driver	Visibility	Wells Fargo extremely bright LED lighting - blinds drivers at Mt. Rushmore Rd / Kansas City Street	
52	Intersection	Driver	Visibility	The increasing use of LED light technology in commercial	N/A

				buildings, vehicles turns night into day, but also creates driver hazards. For example Wells Fargo installed a very bright LED fixture cover lanes across from the Y. Drivers at Kansas City / Mt. Rushmore Rd at night are blinded by the point light which is like the sun setting at Wells Fargo. Wilson School has installed bright LEDs to replace other bright outside lights - now driving on Franklin at night casts a bright, daylight color, glaring light on the street in front of the school.	

				Vehicles are another matter, but LEDs as we all know are blinding if not properly aimed. Founders' Park is an example of good lighting, where the light is bright, focused on the lot; it does not cover the street. The proliferation LEDs is a positive, but without some sort of spec or guideline, the City will become a glaring annoying maze of daylighted streets. This can be reviewed, fixed and guided by the City. (There is no evidence either that saturating an	

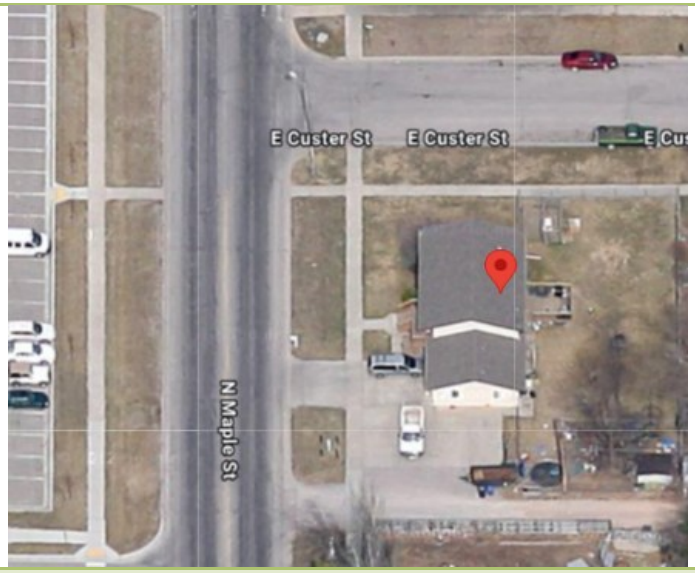
				area with bright daylight LED light reduces crime or other problems. NAME AND ADDRESS REDACTED	
53	Intersection	Pedestrian	Pedestrian Crossing	The signal timing here is terrible. It takes forever to actually change once you click the button, so I often see people cross well before it change. It also is the longest red light for drivers. It could be two lights instead of one so it only stops traffic in one direction, but needs to be much quicker to change when pressed.	

54	Intersection	Pedestrian	Pedestrian Crossing	The pedestrian crossings in the middle of the street are super awkward. I usually see people cross at regular corners because it's more efficient to where they're going. When you do use the crosswalks, cars often don't notice them and don't stop (despite a LOT of signage).	
55	Road	Bicyclist	Bicycle Facilities	Biking downtown is a constant game of vigilance with cars backing out. The other issue is extended cab trucks that stick out into the lane. I bike downtown frequently, but have the experience to	

				do so. It's a high barrier to convince others to do so.	
56	Road	Bicyclist	Bicycle Facilities	Biking here is interesting. The road is a bit fast (which can be scary), but also wider than most. Both outside lanes (of 3 total) are very wide. It would be an amazing spot to divide cyclists away from traffic with a separated bike lane.	
57	Intersection	Bicyclist	Pedestrian Crossing	Cars only look left here. If you're on foot or a bike on the sidewalk moving west, they just never look. If you're going east, cars can't see around the building and tend to come	

				to the stop sign a bit hot--crossing the invisible line where pedestrians would be walking.	
58	Intersection	Pedestrian	Pedestrian Crossing	Drivers coming off the interstate barely look into the crossing for pedestrians. I've been stuck waiting in the middle of the road for one car to see me and let me cross.	

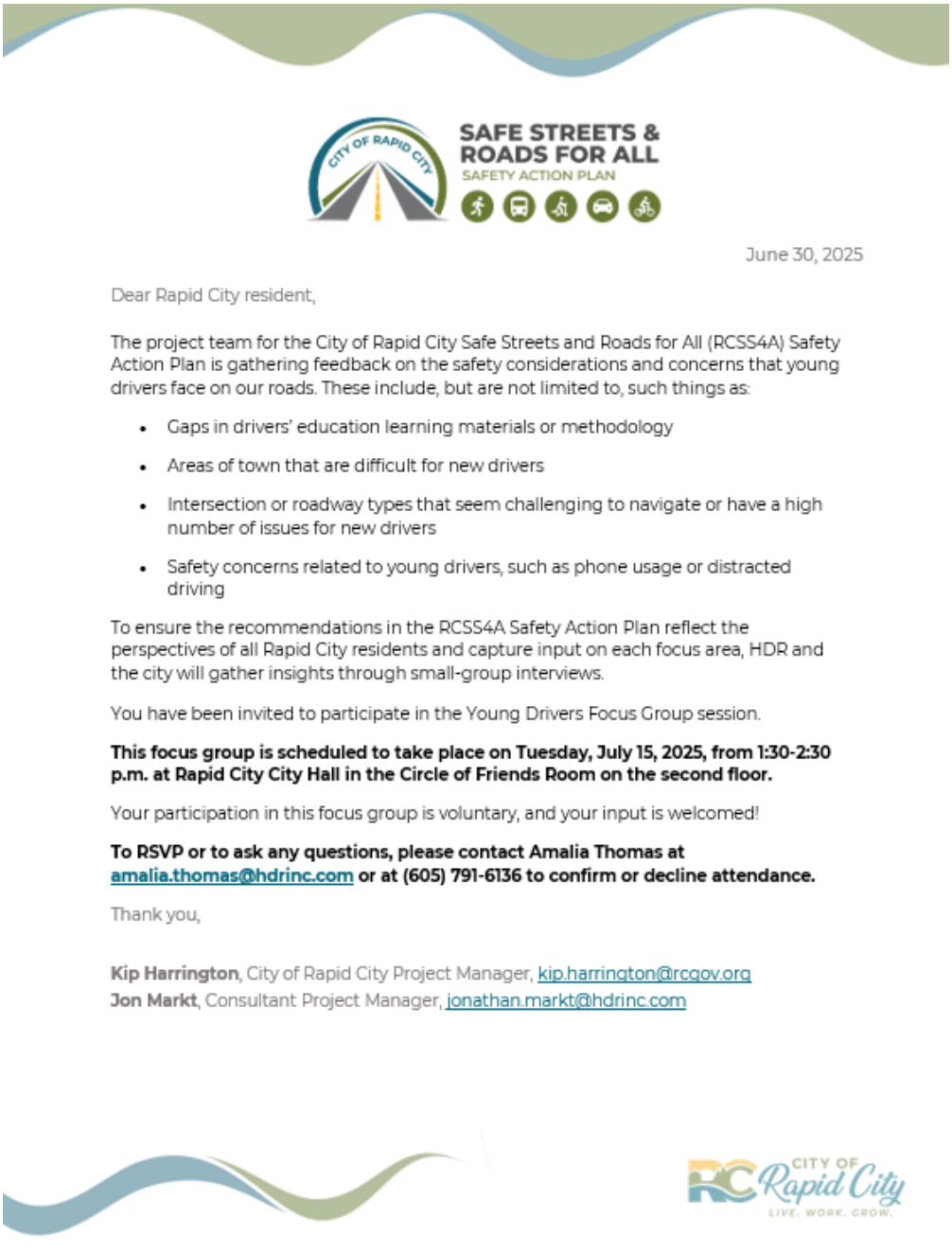
59	Intersection	Bicyclist	Pedestrian Crossing	The crossing from the HLMP parking lot to Lost Cabin and the bike shop is horrible to cross. There are two trees that completely block drivers ability to see who's in the crosswalk. There's no markings indicating it's actually a crossing location. Sometimes drivers will stop but only in one lane so you have to watch the other lanes to ensure it's still safe.	

60	Road	Driver	Other	All of North 7th road, needs to be repaved. Unfortunately, so does most of Rapid City.	
61	Road	Driver	Roadway Conditions	Lots of potholes	N/A
62	Intersection	Bicyclist	Speeding	Hard to cross the street with all the speeding.	N/A

Appendix B3 – Focus Group Materials

Meeting Invitations

Young Drivers Focus Group #1:



June 30, 2025

Dear Rapid City resident,

The project team for the City of Rapid City Safe Streets and Roads for All (RCSS4A) Safety Action Plan is gathering feedback on the safety considerations and concerns that young drivers face on our roads. These include, but are not limited to, such things as:

- Gaps in drivers' education learning materials or methodology
- Areas of town that are difficult for new drivers
- Intersection or roadway types that seem challenging to navigate or have a high number of issues for new drivers
- Safety concerns related to young drivers, such as phone usage or distracted driving

To ensure the recommendations in the RCSS4A Safety Action Plan reflect the perspectives of all Rapid City residents and capture input on each focus area, HDR and the city will gather insights through small-group interviews.

You have been invited to participate in the Young Drivers Focus Group session.

This focus group is scheduled to take place on Tuesday, July 15, 2025, from 1:30-2:30 p.m. at Rapid City City Hall in the Circle of Friends Room on the second floor.

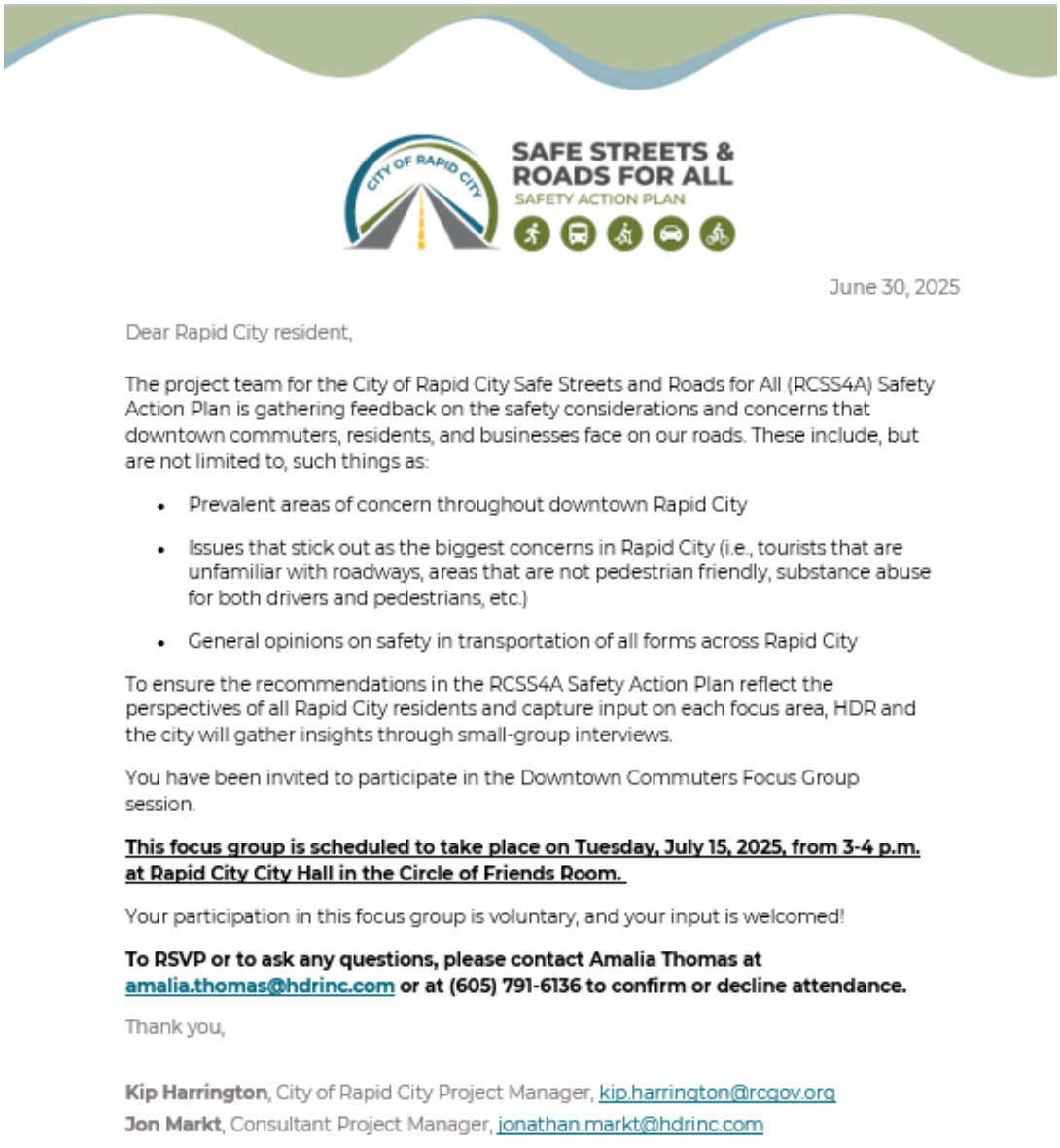
Your participation in this focus group is voluntary, and your input is welcomed!

To RSVP or to ask any questions, please contact Amalia Thomas at amalia.thomas@hdrinc.com or at (605) 791-6136 to confirm or decline attendance.

Thank you,

Kip Harrington, City of Rapid City Project Manager, kip.harrington@rcgov.org
Jon Markt, Consultant Project Manager, jonathan.markt@hdrinc.com

Downtown Commuters Focus Group #2:



June 30, 2025

Dear Rapid City resident,

The project team for the City of Rapid City Safe Streets and Roads for All (RCSS4A) Safety Action Plan is gathering feedback on the safety considerations and concerns that downtown commuters, residents, and businesses face on our roads. These include, but are not limited to, such things as:

- Prevalent areas of concern throughout downtown Rapid City
- Issues that stick out as the biggest concerns in Rapid City (i.e., tourists that are unfamiliar with roadways, areas that are not pedestrian friendly, substance abuse for both drivers and pedestrians, etc.)
- General opinions on safety in transportation of all forms across Rapid City

To ensure the recommendations in the RCSS4A Safety Action Plan reflect the perspectives of all Rapid City residents and capture input on each focus area, HDR and the city will gather insights through small-group interviews.

You have been invited to participate in the Downtown Commuters Focus Group session.

This focus group is scheduled to take place on Tuesday, July 15, 2025, from 3-4 p.m. at Rapid City City Hall in the Circle of Friends Room.

Your participation in this focus group is voluntary, and your input is welcomed!

To RSVP or to ask any questions, please contact Amalia Thomas at amalia.thomas@hdrinc.com or at (605) 791-6136 to confirm or decline attendance.

Thank you,

Kip Harrington, City of Rapid City Project Manager, kip.harrington@rcgov.org
Jon Markt, Consultant Project Manager, jonathan.markt@hdrinc.com

HIN Corridors and City Council/City Staff Focus Group #3:

June 30, 2025

Dear Rapid City City Council or City Staff Member,

The project team for the City of Rapid City Safe Streets and Roads for All (RCSS4A) Safety Action Plan is gathering feedback on the safety considerations and concerns drivers face on our roads, particularly high-injury network corridors (HINs). These include, but are not limited to:

- St. Patrick Street
- Anamosa Street
- Campbell Street
- Main Street
- Lacrosse Street
- Sheridan Lake Road

To ensure the recommendations in the RCSS4A Safety Action Plan reflect the perspectives of all Rapid City residents and capture input on each focus area, HDR and the city will gather insights through small-group interviews.

You have been invited to participate in the City Council and City Staff Focus Group session.

This focus group is scheduled to take place on Thursday, July 17, 2025, from 9-10 a.m. at Rapid City City Hall in the Circle of Friends Room.

Your participation in this focus group is voluntary, and your input is welcomed!

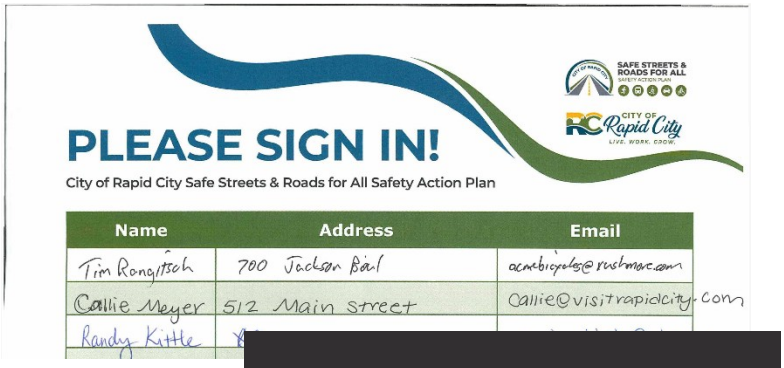
To RSVP or to ask any questions, please contact Amalia Thomas at amalia.thomas@hdrinc.com or at (605) 791-6136 to confirm or decline attendance.

Thank you,

Kip Harrington, City of Rapid City Project Manager, kip.harrington@rcgov.org
Jon Markt, Consultant Project Manager, jonathan.markt@hdrinc.com

Sign-In Sheets:

Young Driver's Focus Group #1:



Downtown Commuters F

HIN Corridors and City Staff/Council Focus Group #3:

N/A

Comment Card:

COMMENT FORM

City of Rapid City Safe Streets & Roads for All Safety Action Plan

COMMENT: _____

_____

_____

_____

_____

_____

_____

_____

CONTACT INFORMATION

First and Last Name: _____

Phone Number: _____

Email: _____

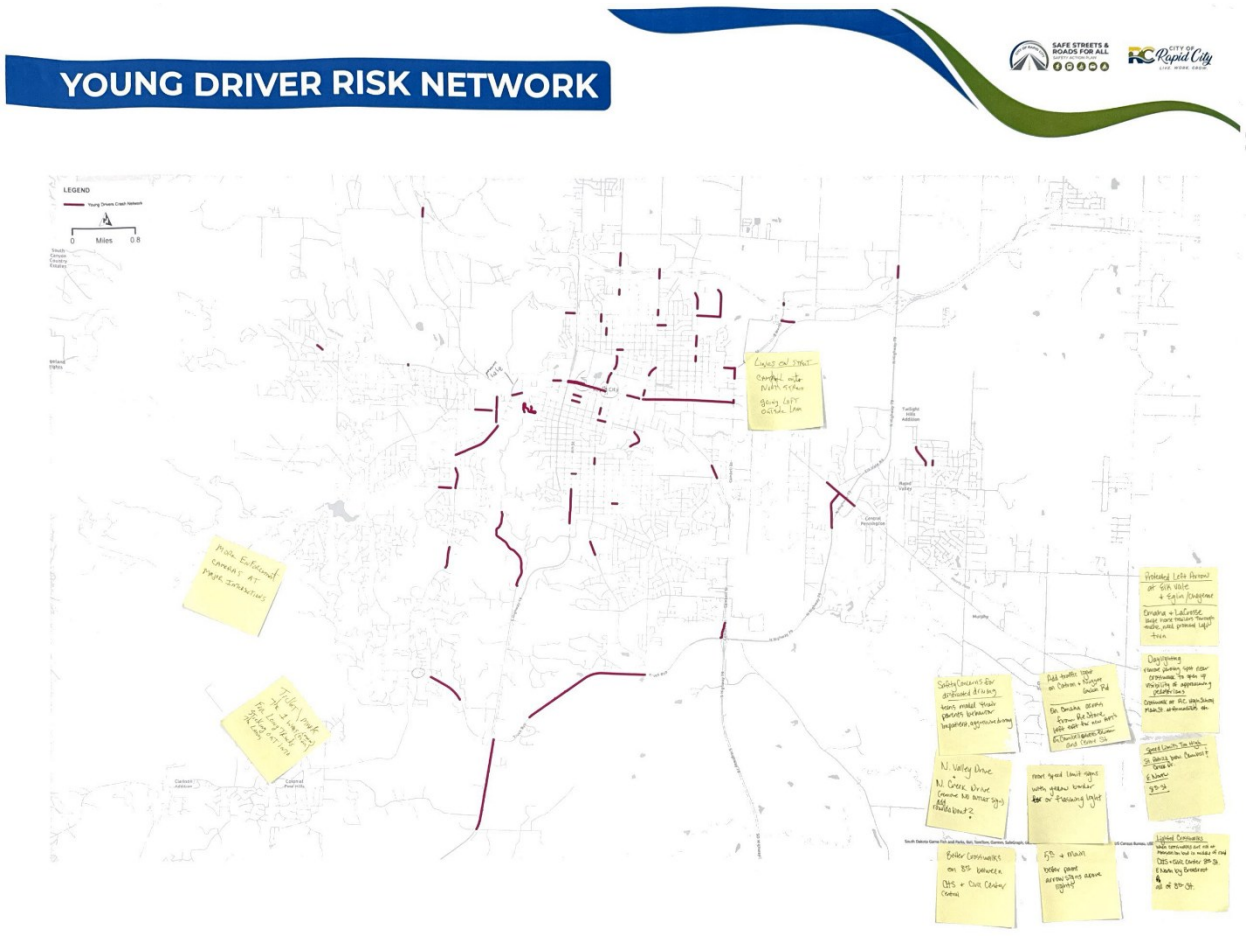
Please return comments to the project team by **July 31, 2025.**

VIA EMAIL: amalia.thomas@hdrinc.com

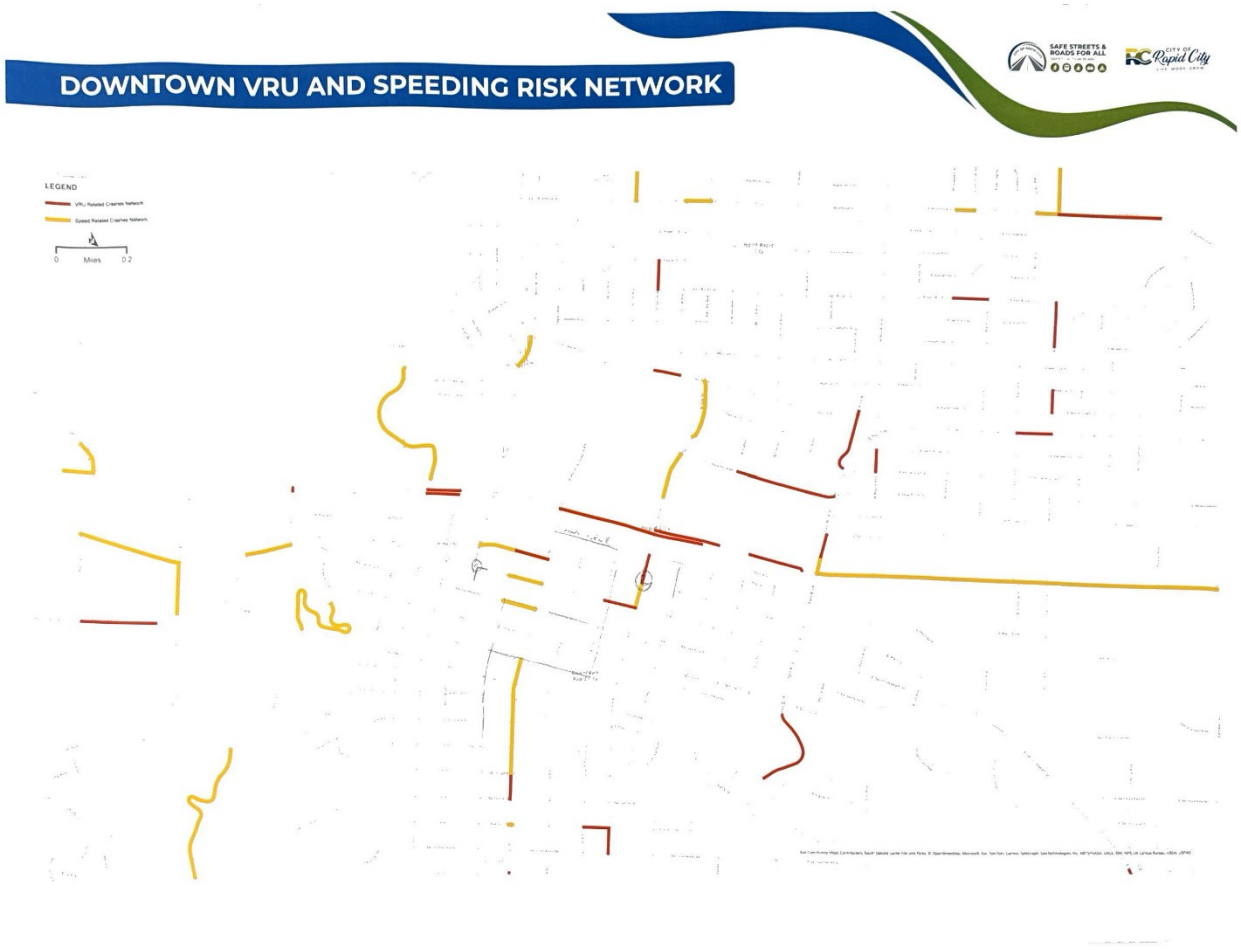
VIA MAIL:
Rapid City Area MPO Metropolitan Transportation Plan
C/O HDR
703 Main St., Ste. 200 Rapid City, SD 57701

Meeting Activities

Young Drivers Focus Group #1:



Downtown Commuters Focus Group #2:



All focus groups:

What are your thoughts on the following improvements proposed in the SS4A Safety Action Plan?

PLEASE VOTE

USING DOT STICKERS WHETHER YOU:

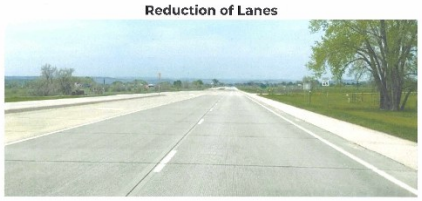
Prefer | Have no strong preference towards | Do not prefer

TOWARDS THE STRATEGIES PROPOSED WITHIN THE PLAN

Access Management Tactics

Prefer	Have no strong preference	Do not prefer
● ●	●	

Reduction of Lanes



Prefer	Have no strong preference	Do not prefer
● ●	● ●	

Signalized Intersections

Prefer	Have no strong preference	Do not prefer
● ●		

Roundabouts

Prefer	Have no strong preference	Do not prefer
● ● ●		

Prioritization of Bicycle and Pedestrian Network Expansion

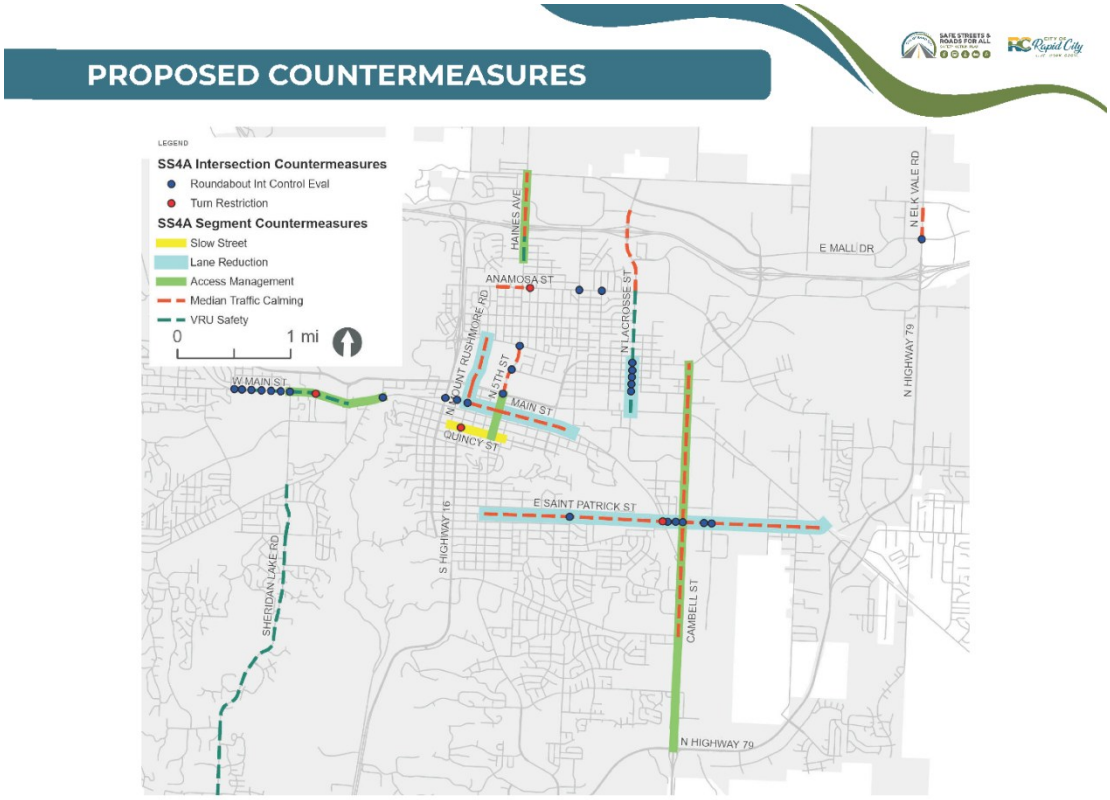
Prefer	Have no strong preference	Do not prefer
● ● ● ●		

Integration of Complete Streets into Future Roadway Improvements

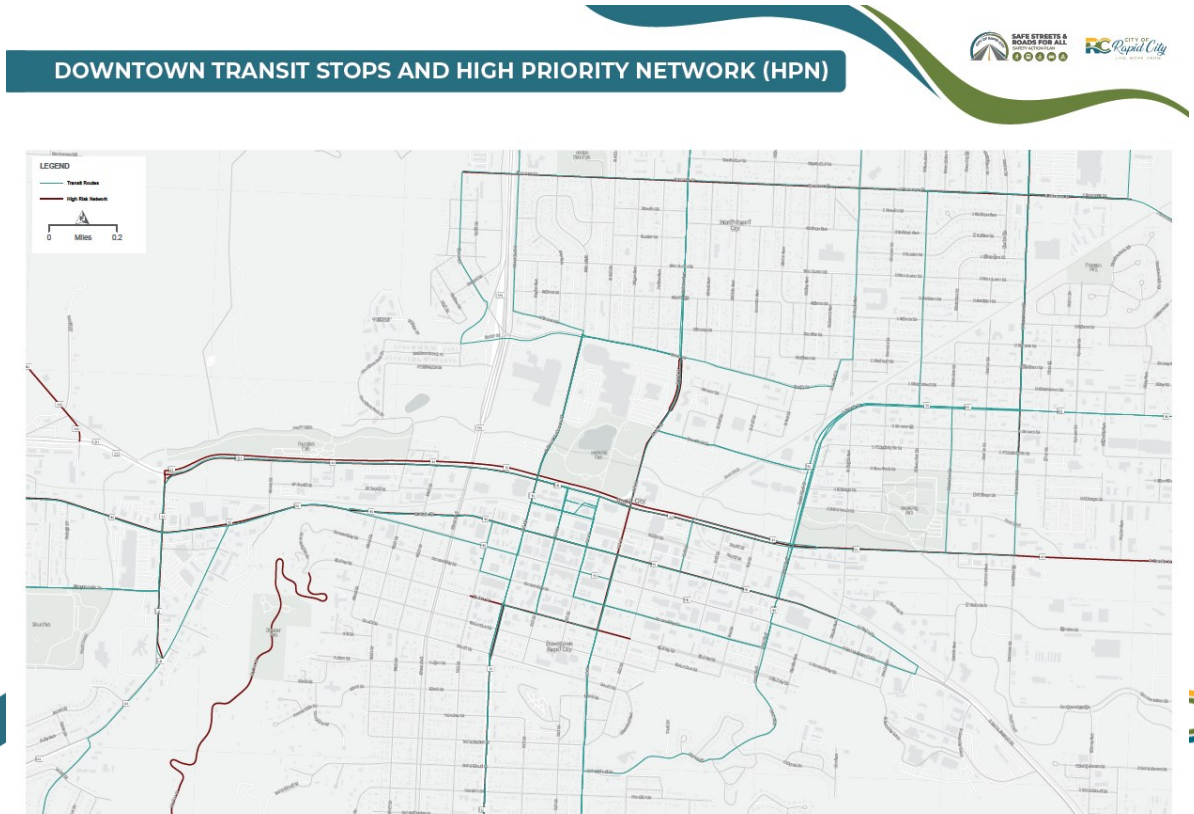
Prefer	Have no strong preference	Do not prefer
● ● ●	●	

Meeting Boards

Young Drivers Focus Group #1:

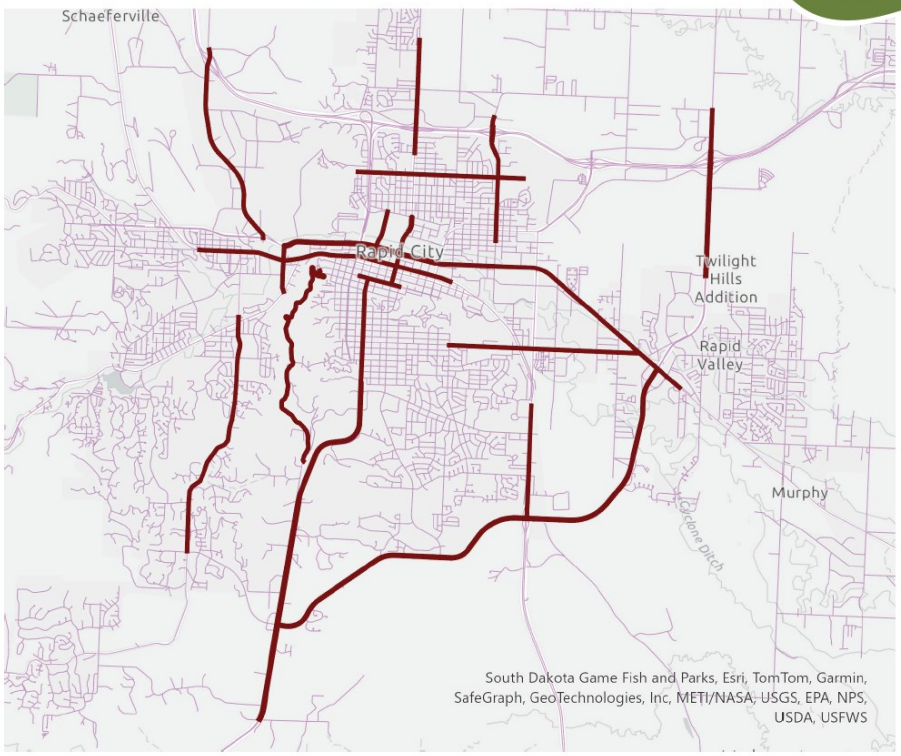


Downtown Commuters Focus Group #2:



HIN Corridors and City Staff/Council Focus Group #3:

HIGH PRIORITY NETWORK MAP



SAINT PATRICK STREET

East of Campbell Street to Rapid Creek

East Saint Patrick is a five-lane street in the area of focus, but it provides few crossing opportunities between housing and services like the grocery store.

Safety options in this area may include narrower lanes, median refuge, and pedestrian signals.

WEST MAIN STREET

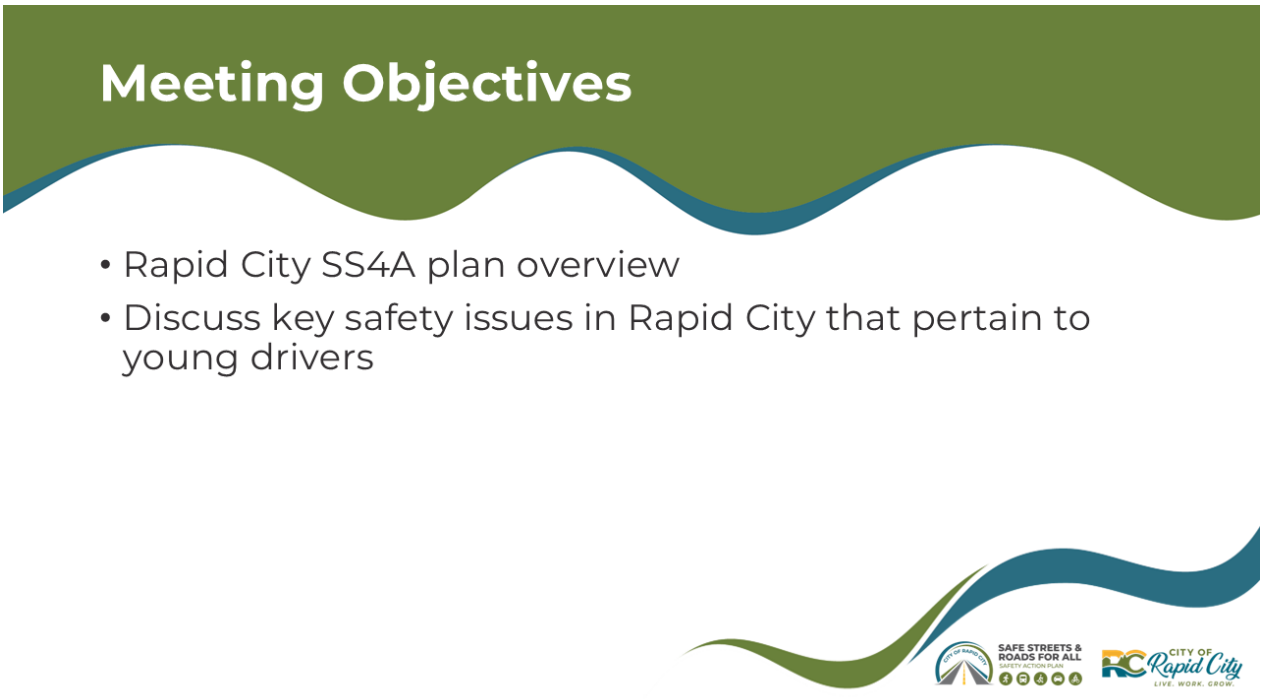
Sheridan Lake Road to Sturgis Road

West Main Street is a five-lane street section with an inviting trail on the south side of the street but frequent retailers and businesses on the north.

West Main Street could use some treatments like raised medians with added multimodal crossings.

PowerPoint Presentations

Young Drivers Focus Group #1:



Introductions

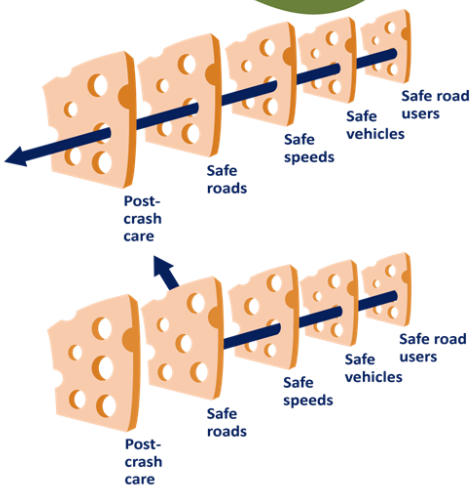
- Name
- Your travel experience in Rapid City
  - Car
  - Foot
  - Bike
  - Etc.

Project Background

Safe System Approach

- Eliminate traffic deaths and serious injuries
- Improve overall safety of the transportation network for all users
- Implement the Safe System Approach (SSA)

Safe System Approach



- Focuses on both **human mistakes** and **human vulnerability**
- Designing systems with layers of protection

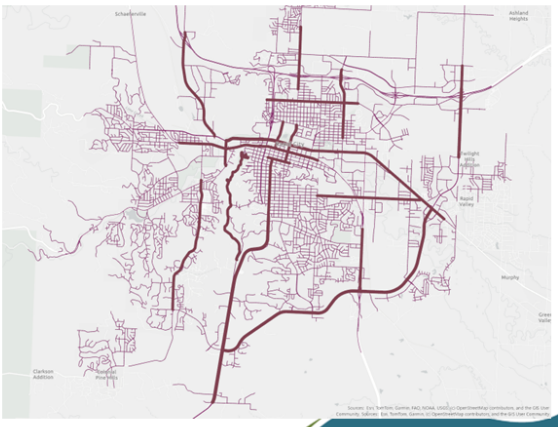
Components of a Project Plan

- A holistic, well-defined strategy
- Prevent roadway fatalities and serious injuries

Study Progress

Study Purpose

- 70% of fatal or serious injury crashes (KA crashes) occur on 11% of Rapid City's road network
- The safety action plan will target this smaller area to focus on eliminating fatalities and serious injuries



Discussion

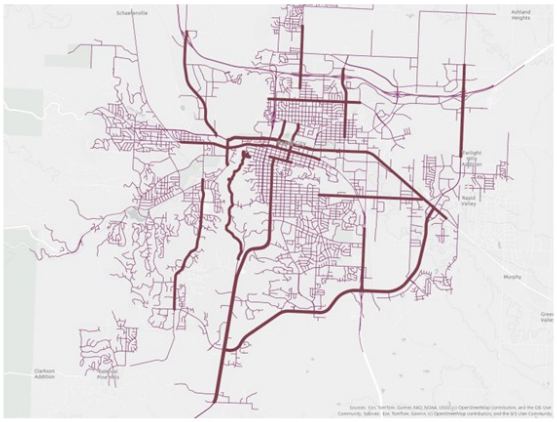
General Feeling of Safety

How safe do you feel traveling in Rapid City?

Very Unsafe	1	2	3	4	5	Very Safe

Why?

Areas of Concern



- Do you agree with these highlighted areas?
- Are there areas missing?

Prevalent Issues

Safety Emphasis Areas

Data-driven safety analysis identified that our safety strategies must focus on these emphasis areas to create a safer multi-modal transportation system.

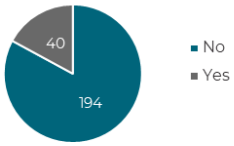
- Do you think these issues are present in Rapid City?
- What issues not listed should be addressed?

Young Drivers Discussion

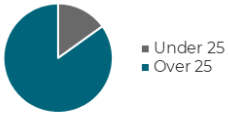
Younger Fatal/Serious Injury (KA) Crashes

Drivers Under 20 in South Dakota

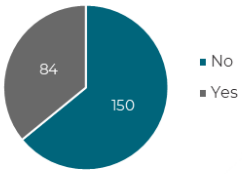
KA Crashes with Drivers Under 20



Drivers under 25 in South Dakota



KA Crashes with Drivers Under 25



- Under 20: 17% of KA crashes
  - 7.7% of South Dakota licensed drivers
- Under 25: 36% of KA crashes
  - 15% of South Dakota licensed drivers

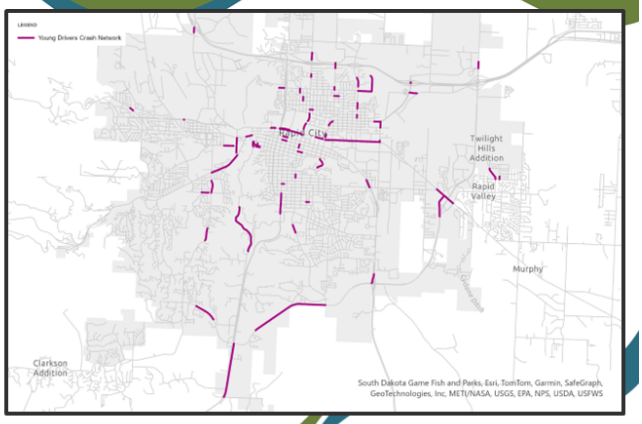
Safety Concerns for Young Drivers

Common Young Driver Safety Concerns
Risk-taking tendencies
Nighttime driving
Driving under the influence
Passenger interactions
Seatbelt use
Cell phone use

- Which of these safety concerns do you agree/disagree with?
- Are there safety concerns not represented that you feel are prevalent to young drivers?

Difficult Areas and Features for New Drivers

- What areas in Rapid City are difficult to navigate as a young driver?
  - What makes those areas difficult?
- Are there particular features that are challenging to navigate?



Driver's Education Effectiveness

- NHTSA generates a publication: "Countermeasures that Work"

- Teens who took an additional driver's education program had a 21% reduction in self-reported risky driving

Young Driver Strategies

- Stronger Training & Licensing Requirements
- Publicize & Enforce Laws
- Assist Parents
- Focus on Schools, Nighttime, Other activities
- Street / Roadway Design Enhancements

Driver's Education

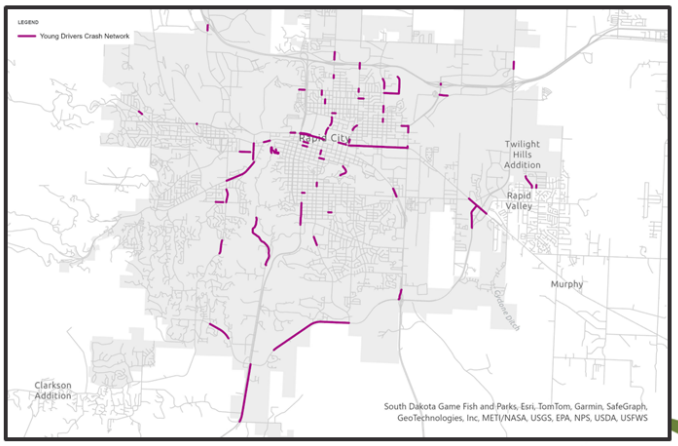
- How prepared do you feel from driver's education?
- What was the most important part of driver's education?
- What should have been better covered?

Open Discussion

- Any questions?
- Any areas we missed?

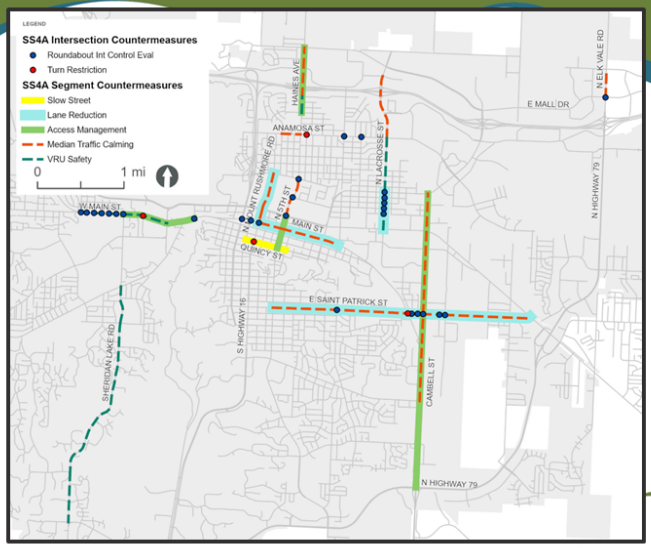
Projects and Strategies

Map Markup



- Mark streets on the map that you think are high risk

Projects and Strategies



- Vote on the HDR provided ideas for countermeasures
- Provide ideas for improvement projects on the map

Thank You

Downtown Commuters Focus Group #2:

Rapid City Downtown Focus Group

July 15, 2025

Meeting Objectives

- Rapid City SS4A plan overview
- Discuss key roadway safety issues in Rapid City, particularly in downtown

Introductions

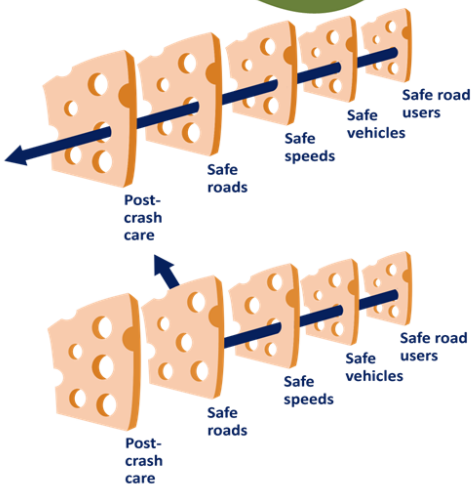
- Name
- Your travel experience in Rapid City
  - Car
  - Foot
  - Bike
  - Etc.

Project Background

Safe System Approach

- Eliminate traffic deaths and serious injuries.
- Improve overall safety of the transportation network for all users.
- Implement the Safe System Approach (SSA).

Safe System Approach



- Focuses on both **human mistakes** and **human vulnerability.**
- Designing systems with layers of protection.

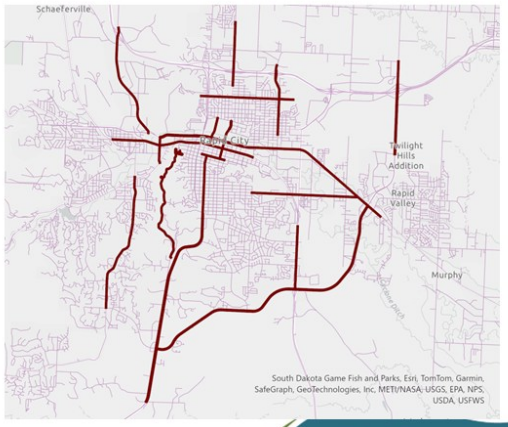
Components of a Project Plan

- A holistic, well-defined strategy.
- Prevent roadway fatalities and serious injuries.

Study Progress

Study Purpose

- 70% of fatal or serious injury crashes (KA crashes) occur on 11% of Rapid City's road network
- The safety action plan will target this smaller area to focus on eliminating fatalities and serious injuries



Discussion

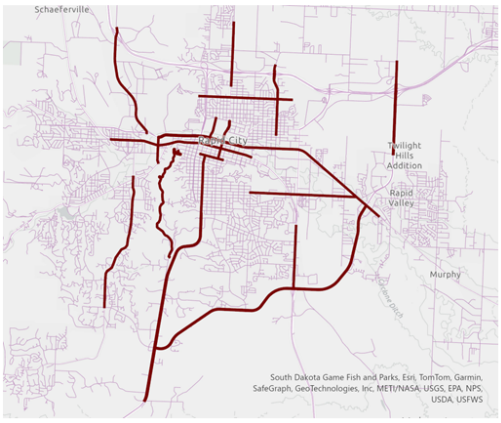
General Feeling of Safety

How safe do you feel traveling in Rapid City?

1	2	3	4	5
1 – Very Unsafe				5 – Very Safe

Why?

Areas of Concern



- Do you agree with these highlighted areas?
- Are there areas missing?

Prevalent Issues

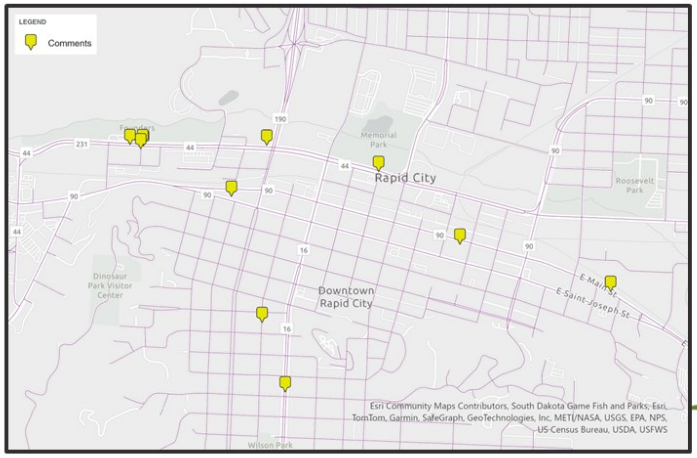
Safety Emphasis Areas

Data-driven safety analysis identified that our safety strategies must focus on these emphasis areas to create a safer multi-modal transportation system.

- Do you think these issues are present in Rapid City?
- What issues not listed should be addressed?

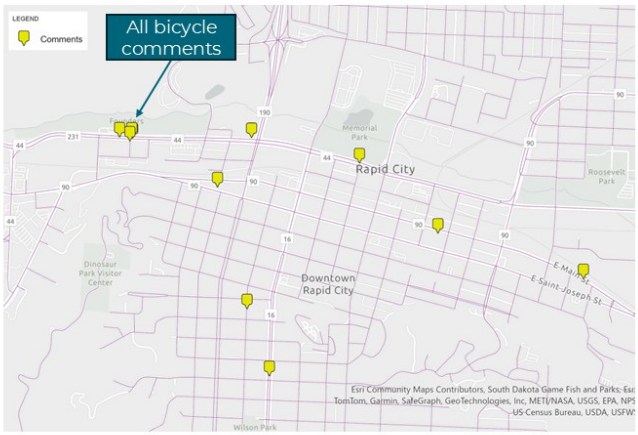
Downtown

Intro Downtown Area



- Safety for all users:
  - Tourism
  - Business
  - Pedestrians and Cyclists
  - Etc.

Comment Map Recap



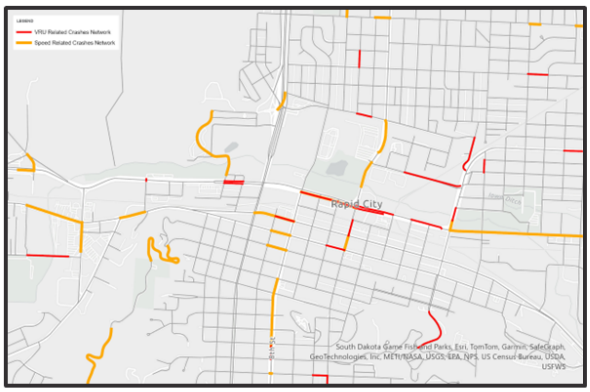
Comment Themes:

- Note in particular pedestrian/bicyclist safety observations
  - Cars not paying attention to walkers/bicyclists

Transit

- Do you use the Rapid City transit system?
- Which stops are you seeing the most utilized?

Pedestrian/Bike Safety



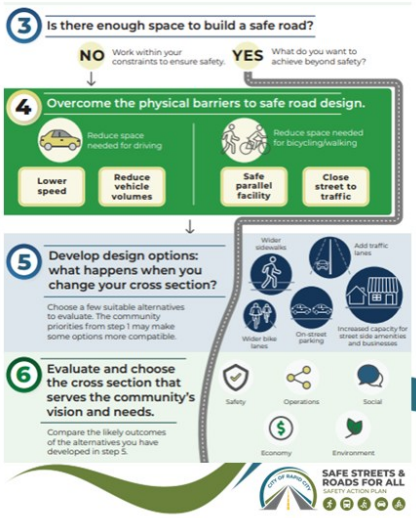
- Does downtown feel safe for pedestrians/bikers
- Do you agree/disagree with the highlighted areas of concern for pedestrians/bikers? Are there others?

Open Discussion

- Any questions?
- Any important points not hit?

Projects and Strategies

Street Rightsizing Tool



Thank You

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SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

CITY OF Rapid City
LIVE. WORK. GROW.

Map Markup

Map 1:

- Mark “slower streets”
  - Better for walking/biking
  - Adjacent homes
  - Adjacent businesses with active movement

Map 2:

- Mark transit stops you use
- Note safety concerns with sticky notes

HIN Corridors and City Staff/Council Focus Group #3:

Rapid City HPN Corridors Focus Group

July 17, 2025

Meeting Objectives

- Rapid City SS4A plan overview
- Discuss key safety issues in Rapid City
- Discuss issues pertaining to the High Priority Network

Introductions

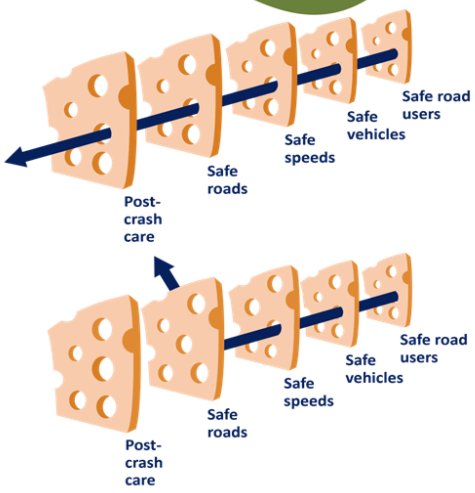
- Name
- Your travel experience in Rapid City
  - Car
  - Foot
  - Bike
  - Etc.

Project Background

Safe System Approach

- Eliminate traffic deaths and serious injuries.
- Improve overall safety of the transportation network for all users.
- Implement the Safe System Approach (SSA).

Safe System Approach



- Focuses on both **human mistakes** and **human vulnerability.**
- Designing systems with layers of protection.

Components of a Project Plan

- A holistic, well-defined strategy.
- Prevent roadway fatalities and serious injuries.

Study Progress

Prevalent Issues

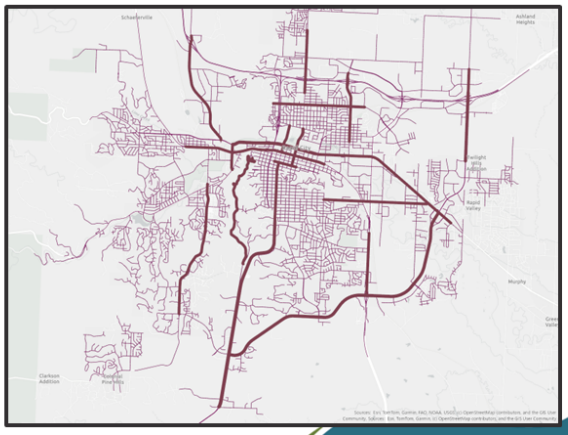
Safety Emphasis Areas

Data-driven safety analysis identified that our safety strategies must focus on these emphasis areas to create a safer multi-modal transportation system.

- Do you think these issues are present in Rapid City?
- What issues not listed should be addressed?

Safety Analysis

- 70% of fatal or serious injury crashes (KA crashes) occur 11% of Rapid City's road network
- The safety action plan will target this smaller area to focus on eliminating fatalities and serious injuries



High Priority Network Discussion

Projects and Strategies

What are your thoughts on signalized intersections?

Preferred				Not Preferred

What are your thoughts on roundabouts?

Preferred				Not Preferred

What are your thoughts on access management?

Preferred				Not Preferred

What are your thoughts on lane reduction?

Preferred				Not Preferred

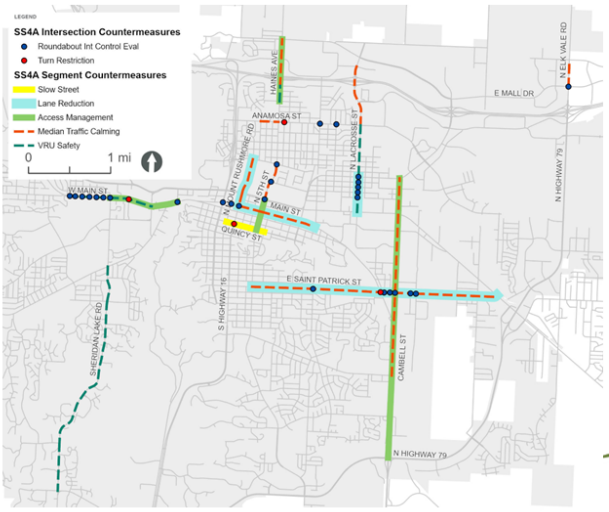
What are your thoughts on prioritizing bicycle and pedestrian network expansion?

Preferred				Not Preferred

What are your thoughts on integrating complete streets into future roadway improvements?

Preferred				Not Preferred

Projects and Strategies



- Vote on the HDR provided ideas for projects
- Provide ideas for improvement projects on the map

Visualizing Right-Sized Streets

Thank You

Right-Sizing Activity

ABOUT SAFE STREETS AND ROADS FOR ALL:

The Bipartisan Infrastructure Law (BIL) established the Safe Streets and Roads for All (SS4A) discretionary program with $6 billion in appropriated funds over 5 years, 2022-2026. The SS4A program funds regional, local and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Over $2 billion is still available for future funding rounds.

The SS4A program supports the U.S. Department of Transportation's (USDOT) National Roadway Safety Strategy and our goal of zero roadway deaths using a Safe System Approach.

Combining the FY22, FY23, and FY24 awards to date, SS4A has provided $2.7 billion in Federal funding to over 1,400 communities in all 50 States and Puerto Rico. Through this important funding source, USDOT is empowering Tribal, local, and regional efforts to save lives and reduce serious injuries on our roadways.

STAY IN TOUCH

www.RCSafeStreets.com

LEARN MORE

www.transportation.gov/grants/SS4A

DESIGNING SAFE ROADS FOR EVERYONE

A NEW APPROACH TO ALLOCATING ROADWAY SPACE

Streets make up the majority of public spaces in urban areas like Rapid City. Who gets to use this space and how they can use it affects a community's mobility, safety, economy, and quality of life. For many years streets have been designed to emphasize mobility for vehicles – leading to many streets that don't support adjacent businesses and places. This tool will help you think through how roadway space can reflect your community's true priorities.

SAFE STREETS & ROADS FOR ALL SAFETY ACTION PLAN

CITY OF Rapid City LIVE. WORK. GROW.

THE DESIGN PROCESS:

1 Define your limits and set your goals.

How much space do you have to work with?

What purpose does the road serve?

What are your community's priorities?

2 Consider the context through a safety lens.

A safe street must be safe for all users!

Determine the minimum safe travel space for people walking, bicycling, riding transit, and driving.

3 Is there enough space to build a safe road?

NO Work within your constraints to ensure safety.

YES What do you want to achieve beyond safety?

4 Overcome the physical barriers to safe road design.

Reduce space needed for driving

Lower speed

Reduce vehicle volumes

Reduce space needed for bicycling/walking

Close street to traffic

Safe parallel facility

5 Develop design options: what happens when you change your cross section?

Choose a few suitable alternatives to evaluate. The community priorities from step 1 may make some options more compatible.

Wider sidewalks

Wider bike lanes

On-street parking

Add traffic lanes

Increased capacity for street side amenities and businesses

6 Evaluate and choose the cross section that serves the community's vision and needs.

Compare the likely outcomes of the alternatives you have developed in step 5.

Safety

Operations

Economy

Environment

Social

Appendix B4 – Survey

Survey:

City of Rapid City: Safe Streets and Roads for All – Safety Action Plan

1. How safe do you feel using the following modes of transportation? With 1 being the most unsafe, and 5 being the safest.

	1 - Very Unsafe	2	3	4	5 - Very Safe
Driving	○	○	○	○	○
Walking or Rolling	○	○	○	○	○
Biking	○	○	○	○	○
Using Public Transit	○	○	○	○	○

2. What are your top three safety concerns within your community?

- ☐ Speeding vehicles
- ☐ Impaired driving (e.g. alcohol, drugs, other substance abuse)
- ☐ Distracted driving (e.g. cellphones, vehicle screens)
- ☐ Cars failing to yield
- ☐ Lack of sidewalks, trails, or bike lanes
- ☐ Sidewalks, trails, or bike lanes in poor condition
- ☐ Poor winter driving conditions
- ☐ Poor visibility at intersections/crosswalks
- ☐ High volumes of vehicle or truck traffic
- ☐ Poor accessibility for people with disabilities
- ☐ Lack of safe routes for children to walk to school
- ☐ Lack of safe crossings (unmarked crosswalks or pedestrian signals)
- ☐ Other

3. What are the top two improvements you support to enhance traffic safety in Rapid City?

- ☐ Implement speed management strategies to discourage speeding (e.g. speed bumps, traffic calming devices, lane narrowing, and/or speed safety cameras)
- ☐ Add more separated bicyclist/pedestrian facilities
- ☐ Improve pedestrian crosswalk visibility and crossing conditions for pedestrians and bicyclists
- ☐ Encourage alternative intersections such as roundabouts
- ☐ Improve lighting and increase visibility for people walking, biking, driving, and riding public transit
- ☐ Improve enforcement of traffic laws (e.g. speed limits, cars running red lights)
- ☐ Encourage the community and offer education about traffic safety
- ☐ Collect, analyze, and share data to measure the success of traffic safety improvement efforts
- ☐ Other

Submit

Appendix B5 – Meeting-in-a-Box Materials

Email:

Dear Rapid City resident,

The City of Rapid City is hosting an online public meeting open house to gather feedback on the draft Rapid City Comprehensive Safety Action Plan. The online public meeting can be accessed via this link: www.rcsafestreets.com/safetyplan/ from Thursday, November 6. 2025 until Wednesday, November 26, 2025.

The purpose of this online public meeting is to:

- Present the draft Rapid City Comprehensive Safety Action Plan to the public
- Gather comments and feedback that community members provide on the draft plan
- Provide the public with the opportunity to ask the project team any questions about the project or the draft plan.

We appreciate your involvement in the shaping of the draft Rapid City Comprehensive Safety Action Plan through engagement in focus groups and pop-ups that have taken place so far.

To ensure the recommendations in the draft Rapid City Comprehensive Safety Action Plan continue to accurately reflect the perspectives of all Rapid City residents and capture input from any interested community members, this email is being sent inviting you to once again share your voice in the review of the draft plan!

Thank you,

Kip Harrington, City of Rapid City Project Manager, kip.harrington@rcgov.org

Jon Markt, Consultant Project Manager, jonathan.markt@hdrinc.com

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Thank you,

Kip Harrington, City of Rapid City Project Manager, kip.harrington@rcgov.org

Jon Markt, Consultant Project Manager, jonathan.markt@hdrinc.com

Press Release:

CITY OF RAPID CITY
NOTICE OF ONLINE PUBLIC MEETING OPEN HOUSE

RAPID CITY SAFE STREETS AND ROADS FOR ALL SAFETY ACTION PLAN

For Immediate Release: Thursday, November 6, 2025

Rapid City, S.D. – The City of Rapid City invites the public to participate in an **online public meeting open house** for the **draft Rapid City Comprehensive Safety Action Plan**, available from Thursday, November 6, 2025, through Wednesday, November 26, 2025.

The online public meeting open house can be accessed at www.rcsafestreets.com/safetyplan. The goal of this online public meeting open house is to share the draft Safety Action Plan with the community and collect public comments and questions for the project team. This input will help the project team to document key community needs and interests which may be addressed in the final Rapid City Comprehensive Safety Action Plan.

For further information regarding the project or draft Safety Action Plan, contact Jon Markt with HDR Engineering, Inc. at jonathan.markt@hdrinc.com or by phone at (402) 399-1080.

Written comments will be accepted via the project website or by email to jonathan.markt@hdrinc.com until Wednesday, November 26, 2025.

Social Media Posts and Caption Recommendations:

Photo	Caption
	**Facebook Post #1:** 🚦 **Want to learn how getting around in Rapid City can be safer?** Whether you're a driver, cyclist, a transit user, or a pedestrian, the **Rapid City Safe Streets & Roads for All Safety Action Plan** helps to improve safety for all modes of transportation. Visit https://rcsafestreets.com to learn how the project aims to help to build a safer community. 🚲 🚶 🚗.
	**Facebook Post #2:** Want to know what's being done to make transportation in Rapid City safer? 🚸 🚌 🔗 Visit https://rcsafestreets.com/ for more information on the **Rapid City Safe Streets & Roads for All Safety Action Plan**!

Poster Display Board:

RAPID CITY SAFE STREETS & ROADS FOR ALL

COMPREHENSIVE SAFETY ACTION PLAN

Handout:

SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

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RAPID CITY SAFE STREETS & ROADS FOR ALL

Safety Action Plan

Please visit the project website for more information on Rapid City Safe Streets & Roads for All Project and to view the Rapid City Comprehensive Safety Action Plan!

SCAN HERE TO VISIT THE PROJECT WEBSITE

www.rcsafestreets.com

SAFE STREETS & ROADS FOR ALL
SAFETY ACTION PLAN

CITY OF Rapid City
LIVE. WORK. GROW.

Bifold Handout:

RAPID CITY
SAFE STREETS & ROADS FOR ALL SAFETY ACTION PLAN

The Draft Comprehensive Safety Action Plan:

A Summary of Findings and Recommendations

// PLAN BACKGROUND

In 2023, Rapid City was awarded $160,000 to develop a Safety Action Plan as part of the U.S. Department of Transportation's (USDOT) Safe Streets and Roads for All (SS4A) grant program.

This funding provides our community the opportunity to develop a plan that expands upon existing transportation goals and objectives to create a safer community with zero roadway deaths.

// WHAT IS SAFE STREETS AND ROADS FOR ALL?

The SS4A grant program is a competitive grant program that helps to fund regional and local safety projects that aim to prevent roadway fatalities and serious injuries, with an overall goal of zero roadway deaths.

// THE SAFE SYSTEM APPROACH

The aim for zero roadway deaths is guided by the Federal Highway Administration's (FHWA) Safety System Approach (SSA), which takes a holistic approach to safety by sharing responsibility amongst all individuals involved in the use, planning, design, or construction of a transportation network.

The SSA is a shift from what many consider to be conventional road safety thinking because it focuses on both human mistakes and human vulnerability by designing systems with built-in layers of protection. The idea is that if one layer of safety fails, another may help prevent a crash or lessen the likelihood of serious injury or death in the event that one takes place.

Source: FHWA

// WHY DO WE NEED A COMPREHENSIVE SAFETY ACTION PLAN?

In order to be eligible for for additional SS4A funding to complete projects, the City of Rapid City completed a Comprehensive Safety Action Plan (CSAP) to outline the region's safety goals and create an actionable framework for identifying safety issues and appropriate strategies to move towards zero roadway deaths. The USDOT requires the following components as part of a Comprehensive Safety Action Plan:

- Leadership Commitment & Goal Setting
- Planning Structure
- Safety Analysis
- Engagement & Collaboration
- Policy & Process Changes
- Strategy & Project Selections
- Progress & Transparency

Source: FHWA

The **purpose** of the safety analysis portion of development of the CSAP is to address the fact that:

70% **of fatal or serious injury crashes** occur on **11%** of Rapid City's road network.

The CSAP utilizes this data, along with future forecasted conditions, to develop a plan that analyzes Rapid City's entire transportation system to identify high priority safety locations and primary contributing factors to fatal or serious injury crashes and provide recommendations to implement safety strategies to address them according to the Safe Systems Approach.

CSAP Focus Areas:

The groups involved in carrying out the recommendations in the CSAP include:

- Mayor's Office
- City Council
- Community Development Division
- Public Works Department
- Police Department
- Fire Department
- Parks & Recreation Department
- South Dakota Department of Transportation
- Federal Highway Administration
- Federal Transit Administration

// RAPID CITY LEADERSHIP COMMITMENT

From the years 2019 to 2023, the City of Rapid City experienced **31 fatalities** and **203 serious injuries** due to traffic crashes.

The City of Rapid City is establishing a goal to **reach zero fatalities and serious injuries** on city streets **by 2050**.

Achieving this goal will take time, but it's **only possible** if we all fully **embrace the Safe System Approach** and commit to making it happen **together**.

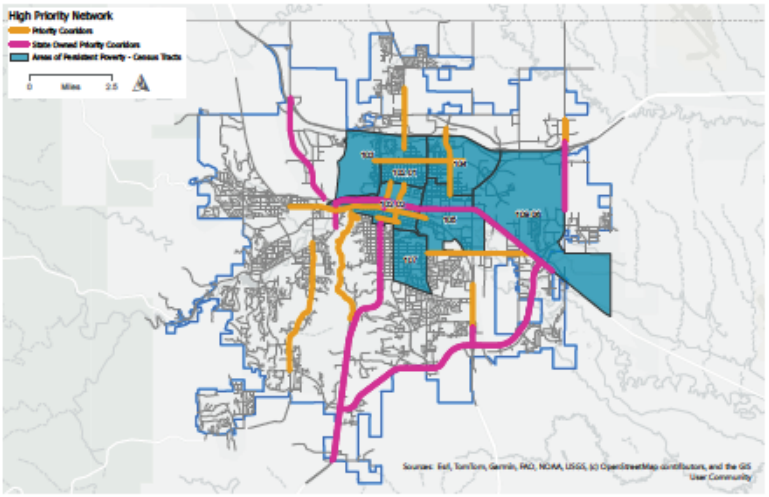
// PUBLIC AND STAKEHOLDER ENGAGEMENT

Public involvement is a critical part of the transportation planning process. The public involvement strategy for this plan includes outreach to the general public and key stakeholders.

Past in-person events have included both pop-up events and focus group sessions. Digital engagement was collected in the form of a project survey, comment map, and comment form all offered on the project website.

// POVERTY AS A FACTOR IN SAFETY OUTCOMES

Crash data was overlaid with demographic and socioeconomic indicators to identify disparities in safety outcomes. Areas with higher concentrations of low-income households, renters, and communities of color often coincide with higher crash rates and gaps in safety infrastructure.



// IMPLEMENTATION OF THE CSAP

The following list outlines next steps and recommended safety practices for Rapid City as presented in the CSAP:

- Adopt safety resolutions
- Revise design manuals and practices
- Conduct road safety audits
- Train staff and partners

// PROJECTS AND STRATEGIES

The Rapid City CSAP philosophy for safety projects and strategies can be summarized by the three tiers graphic. In short, **policy strategies** are the foundation for **systemic projects** (which creates a proactive safety approach), and the top tier identifies the limited but critical **major safety infrastructure projects**.

Major Projects
Highest-Ranking | Project Details
Capital Improvement Plan

Systemic Projects
Low-Cost Strategies | Minimal Investment but Noticeable Countermeasures

Policy Strategies
Behavior Modification | Proactive Prevention
Policy Change | Best Practices


Pop-Up at the 2024 Rapid City Bike Fest

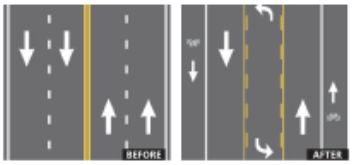

Pop-up at the 2024 Trunk or Treat Event


Focus Group Session #1: Young Drivers in 2025

// THE SAFER STREETS TOOLKIT COUNTERMEASURES

Vertical and Horizontal Traffic Calming
(e.g. speed bumps, bump outs, etc.)

Roadway reconfigurations
(e.g., 4-to-3 lane conversions)



Protected or Buffered Bike Lanes

Source: National Association of City Transportation Officials (NACTO)

Check out the full plan and appendices to view the safer streets toolkit.

// RECOMMENDED FISCALLY CONSTRAINED SAFETY PROJECTS ON THE HIGH PRIORITY NETWORK

PROJECT TYPE	LOCATION	TIMEFRAME
STREET PROJECTS		
Safety Improvements	Main Street and Mountain View Road	2025-2030
Safety Improvements	Main Street and Mount Rushmore Road	2025-2030
BICYCLE AND PEDESTRIAN PROJECTS		
Shared Use Path	Anamosa Street from Haines Avenue to Silver Street	2025-2030
Sidewalk	East Saint Patrick Street from East Saint Joseph Street to Cherry Avenue	2025-2030
Buffered Bike Lane	Mount Rushmore Road from North Street to Omaha Street	2041-2050

// PROGRESS AND TRANSPARENCY

Annual progress reports will be made publicly available on the Rapid City website, summarizing key actions, performance metrics, project milestones, and funding updates.

For more information on the Rapid City Safe Streets & Roads for All project, visit the project website at: *www.rcsafestreets.com.*

SCAN HERE TO LEARN MORE:

www.rcsafestreets.com

// PROJECT CONTACT

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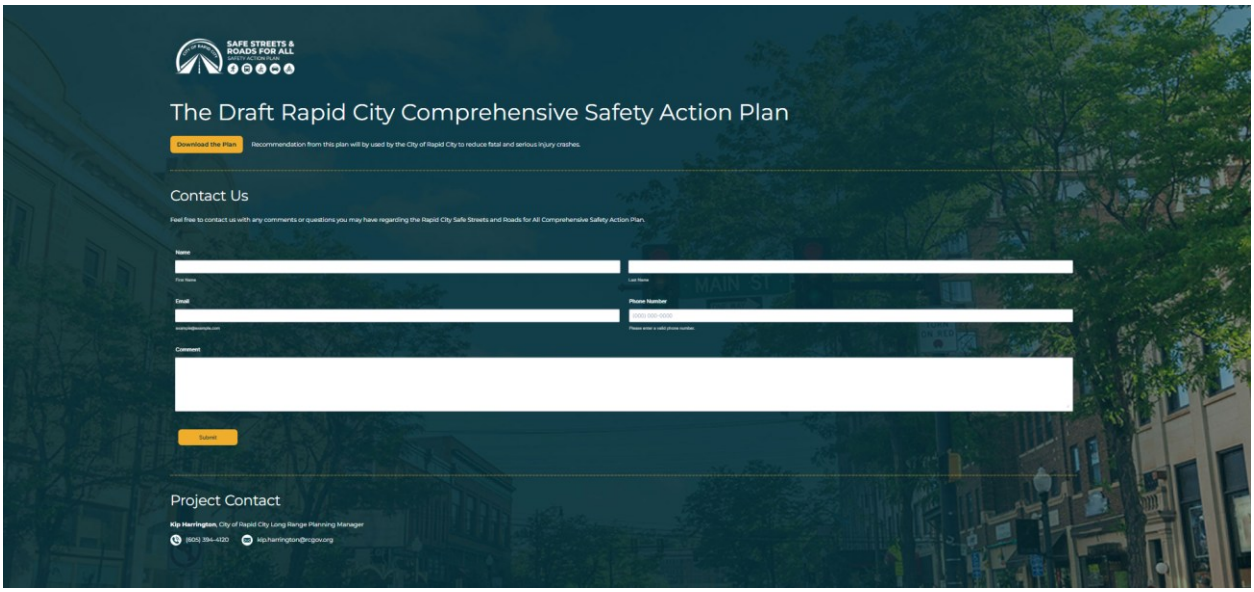
SAFE STREETS & ROADS FOR ALL SAFETY ACTION PLAN

CITY OF Rapid City LIVE. WORK. GROW.

Appendix B6 – Online Public Meeting

Landing Page:



Comment Responses:

Comments:
As it was not very well publicized, I was unaware of the SS4A until mid-November when, as I recollect, I saw a piece on the KOTA Territory website indicating a deadline for comments of 26.Nov.25. For several months I have been communicating concerns to my Ward 4 councilmembers about a specific issue that I will reiterate here along with another suggestion. 1) re: intersection of Haines Avenue and Mall Drive: I note in "Rapid City Comprehensive Safety Action Plan" that the top of the list of Key Corridors in the HPN is Haines Avenue (Lindbergh Avenue to Kathryn Avenue). For the northbound two lanes of Haines Avenue at Mall Drive, the right lane should be "RIGHT TURN ONLY". I previously noted in an email to my councilmembers that on 22.Oct.25 as I was driving home—northbound in the left lane dutifully staged behind multiple vehicles at the stoplight with the right lane empty—a RAM pickup in the right lane "gunned it" through the intersection to what I judged to be in excess of 50 mph to race ahead of the vehicles proceeding as the light turned green. Frankly, there should be a physical barrier—or, at least, a significant speed bump—in the middle of the intersection across that right lane. A recently cited announcement of the possibility of additional commercial development along Mall Drive—to which I am not opposed—will create even more traffic on Mall Drive and will make the Haines Ave/Mall Drive intersection even more dangerous than now. As it is, I believe there is high probability for crashes as someone turning from westbound Mall Drive onto northbound Haines will get T-boned by some idiot like the RAM pickup gunning his way in the right lane through the intersection. 2) There is a general lack of speed limit enforcement in the City. As I live in Auburn Hills, I see the problem most frequently on Haines and on Lacrosse though it's noticeable when I travel on other corridors around the City. There needs to be much more emphasis on intensive speed limit enforcement.
Yellow lights on Deadwood Ave and West chicago streets need to be lengthened. Lot to ask of a passenger vehicle to go from 45 to a stop on almost no notice, let alone all the semi truck traffic on those roads.
I live on E Philadelphia St, and the intersection of E Anamosa St and Mickelson Dr is getting more and more dangerous. When turning left from Mickelson to Anamosa, the shape of the hill blocks you from seeing if any cars are coming behind the car you are currently seeing. If an oncoming car is turning right onto Mickelson, it is often impossible to tell if another car is directly behind them, making it very dangerous to turn there. We need either a 3-way stop here or a roundabout to slow down and control the traffic. Also, all along Rushmore Crossing, it’s getting increasingly more dangerous to turn left at any point along Elgin St during high traffic hours. There is no break in the traffic and people become reckless when they

are trying to fit their way into the oncoming vehicles. We need more stoppage along this road, either stop signs, stop lights, or roundabouts. I purposely avoid Rushmore Crossing at high traffic house because it is so dangerous and congested.

On Elk vale road just north of the Common Sense parking lot there is a stretch of road between the soccer fields and the two trucks tops that is incredibly dangerous as the edges of the north bound lane are collapsing and creating large ruts in the pavement causing a serious traffic hazard and poses the risk of any type of vehicle losing control and having a head on collision. The additional of the 4 way stop should help but this area needs some serious attention and needs to be reconstructed properly with larger road sholders to support the larger trucks and heavy traffic in this spot. There are many homes and businesses going in in this area now and this needs to be looked at seriously.

Rapid City South Dakota

Dear Members of the Rapid City CSAP Planning Committee,

Please accept the following public comments for consideration as part of the Comprehensive Safety Action Plan.

1) Cyclist Non-Compliance on High-Volume Roads

Rapid City continues to experience recurring safety conflicts between cyclists and motorists on major roadways that lack dedicated bicycle lanes. These conflicts often stem from cyclist behaviors such as riding side by side in single width lanes, weaving into traffic during peak periods, and disregarding traffic controls. National safety analysis affirms that all road users including cyclists must follow traffic laws for a transportation system to function safely, and unpredictable cyclist behavior significantly increases crash risk (Federal Highway Administration, 2022). Research shows that when cyclists violate traffic signals or ride outside designated facilities, motorists are forced into evasive maneuvers that elevate the likelihood of side swipe and angle collisions (Johnson et al., 2011). To mitigate this preventable risk, I request that the City incorporate into CSAP implementation a cyclist behavior enforcement and education strategy, including: (1) targeted enforcement waves on high conflict corridors, (2) a “Share the Road = Share the Rules” public education campaign, and (3) annual reporting of cyclist related violations and crash statistics. This balanced approach acknowledges cyclist vulnerability while also addressing cyclist responsibility.

References (APA):
Federal Highway Administration. (2022). Bicyclist safety and roadway interaction patterns. U.S. Department of Transportation.
Johnson, M., Charlton, J., Oxley, J., & Newstead, S. (2011). Why do cyclists infringe at red lights? Accident Analysis & Prevention, 43(3), 1097–1104.

2) Lack of Sidewalks & Need for Lower Residential Speed Limits

Many older Rapid City neighborhoods lack sidewalks, forcing pedestrians including children, seniors, and families to walk directly in the roadway. Narrow residential streets combined with posted speeds of 25–30 mph create an elevated risk for severe pedestrian injuries. The relationship between vehicle speed

and pedestrian fatality risk is well documented: the AAA Foundation (2011) found that a pedestrian struck at 30 mph is over four times more likely to be killed than one struck at 15–20 mph. Similarly, Tefft (2013) showed that the risk of fatality rises exponentially between 20 and 30 mph. These data demonstrate that small decreases in vehicle speeds produce disproportionately large safety benefits. I request that the City conduct a formal evaluation of adopting a 15 mph default speed limit on sidewalk deficient residential streets and establish a prioritized sidewalk infill program targeting older neighborhoods. Actionable measures include: (1) mapping sidewalk gaps, (2) identifying high exposure pedestrian corridors, (3) reducing posted speeds where pedestrian exposure is unavoidable, and (4) publishing annual performance metrics to track pedestrian injuries. Lower speeds and improved pedestrian infrastructure will meaningfully reduce preventable injuries.

References (APA):
AAA Foundation for Traffic Safety. (2011). Impact speed and a pedestrian's risk of severe injury or death.
Tefft, B. (2013). Impact speed and a pedestrian's risk of severe injury or death: Update. AAA Foundation for Traffic Safety.

3) Red-Light Running & Intersection Enforcement

Red light running is a persistent safety problem in Rapid City, particularly at major intersections where drivers routinely enter the intersection during the transition from yellow to red. These behaviors significantly increase the likelihood of right-angle ("T-bone") collisions, which are among the most severe crash types. The Insurance Institute for Highway Safety (2020) reports that red light cameras reduce fatal red light running crashes by 21% and all fatal crashes at signalized intersections by 14%. Given the City's limited police staffing and the high resource demands of manual intersection enforcement, automated enforcement at select high risk intersections represents an evidence based strategy. I request that the City incorporate into CSAP implementation a pilot red light camera program at the three intersections with the highest right angle crash rates. Action steps include: (1) selecting intersections using crash data, (2) implementing 12 month pilot monitoring, (3) tracking violation reductions, and (4) reporting outcomes to the public. Automated enforcement is a proven harm-reduction tool that can significantly decrease severe intersection crashes.

References (APA):
Insurance Institute for Highway Safety. (2020). Effects of red light camera enforcement on fatal crashes in large U.S. cities. IIHS Research Brief.

4) Jaywalking & Unsafe Pedestrian Behavior

Jaywalking and unsafe pedestrian crossings are common throughout Rapid City, especially along high speed corridors where mid-block crossing greatly increases the risk of crashes. Research shows that unsafe pedestrian behavior such as crossing outside marked crosswalks, disregarding signals, or stepping into traffic unexpectedly is a significant contributor to pedestrian injury collisions (National Highway Traffic Safety Administration, 2020). A study by King et al. (2018) found that mid-block crossing increases crash risk because it violates driver expectancy and reduces reaction time. To address this, I request that the City adopt a balanced pedestrian safety strategy acknowledging both driver and pedestrian responsibilities. Action steps include: (1) targeted education campaigns explaining legal crossing requirements, (2) focused enforcement at high-risk corridors, (3) installation of pedestrian refuges or enhanced crosswalks where demand justifies, and (4) annual reporting on pedestrian crash patterns. This promotes a shared-responsibility model where all users must behave predictably for the transportation

system to function safely.

References (APA):
National Highway Traffic Safety Administration. (2020). Pedestrian safety: Risks and behaviors. U.S. DOT.
King, M. R., Soole, D., & Ghafourian, A. (2018). Pedestrian behavior and road safety: A systematic review. Transportation Research Part F: Traffic Psychology and Behaviour, 58, 292–310.

5)Alcohol-Related Crashes & Restricting Sales Hours

Alcohol impairment remains a major contributing factor in traffic fatalities nationwide, with over 10,000 deaths annually linked to impaired driving (National Highway Traffic Safety Administration, 2022). Research consistently finds that restricting alcohol availability reduces alcohol-related crashes. A CDC systematic review of international and U.S. studies concluded that limiting alcohol sales hours leads to measurable reductions in alcohol-related harms, including impaired-driving crashes (Hahn et al., 2010). Restricting sales between 2 a.m. and 11 a.m. reduces opportunities for "after-hours" drinking and minimizes impaired driving during low-light, high-risk early-morning periods. I request that the City evaluate a local ordinance restricting off-premise alcohol sales between 2 a.m. and 11 a.m., or alternatively conduct a 2–3-year pilot program with shorter restricted hours (e.g., 2–8 a.m.) and transparent data evaluation. Action steps include: (1) analyzing local crash data by time of day, (2) coordinating with state licensing authorities, (3) implementing targeted late-night DUI enforcement, and (4) publishing annual alcohol-related crash statistics. Reducing alcohol availability during high-risk times is a proven method to decrease serious roadway injuries.

References (APA):
Hahn, R. A., et al. (2010). Effects of alcohol retail privatization and limiting alcohol outlet density or hours on alcohol consumption and alcohol-related harms. American Journal of Preventive Medicine, 39(6), 556–569.
National Highway Traffic Safety Administration. (2022). Traffic safety facts: Alcohol-impaired driving. U.S. DOT.

6)Unauthorized Cut-Through Traffic on Private Alleys & Driveways

Older Rapid City neighborhoods contain private alleys, shared driveways, and easements that are increasingly used as unauthorized cut through routes by motorists. This exposes residents, children, pets, and parked vehicles to unnecessary danger and generates recurring police calls for trespass or suspicious activity. Research on environmental design shows that controlling vehicular access reduces opportunities for crime and prevents unsafe shortcut seeking behavior in residential areas (Cozens & Love, 2015). Additionally, studies indicate that gated or access controlled residential areas experience significantly fewer unwanted entries and lower rates of certain crimes (Atlas, 2013). To address this, I request that the City adopt a Private Access Control Ordinance allowing property owners with documented private rights-of-way to install non-locked gates that maintain emergency services compliance. Action steps include: (1) establishing a gate permit process, (2) defining design and visibility standards, (3) ensuring Fire/EMS access, and (4) tracking changes in calls for service and trespass incidents at approved locations. Allowing lawful physical access control in private areas can reduce preventable safety risks while easing police workload.

References (APA):

Atlas, R. (2013). 21st century security and CPTED: Designing for critical infrastructure protection and crime prevention. CRC Press.
Cozens, P., & Love, T. (2015). A review and current status of Crime Prevention Through Environmental Design (CPTED). Journal of Planning Literature, 30(4), 393–412.

Put in cameras to photograph violators as they did in Tempe, az. In the first few months 21,000 tickets were generated. $250 / ticket. Police can't be everywhere but cameras do the job. Think of the money it would generate for the city. Offenses has decreased by 20% since cameras were installed.

There are a number of roads that are in very rough condition and one is absolutely dangerous!!!
It seems that roads on the west side of town recieve attention repeatedly, while those on the north side are completely ignored.
Mall Drive behind Lakota Homes is very dangerous as it narrows just as it rises obscuring the view of on coming traffic. There is also a blind enterance coming over to vot Lakota Homes.
Howard Street, after PetSmart, down and around Mount Carmel. Both are in terrible shape!!!
The roads running both north and south of Monroe St are all in terrible condition!!
I know of a number of additional areas of concern throughout Rapid City. Citizens across the city deserve equal respect. One way to show this is by providing decent roads.

Appendix C. Safety Analysis Memos (Parts 1 and 2)

Introduction

Under the general guidelines of the U.S. Department of Transportation (USDOT) Safe Streets and Roads for All (SS4A) program, state and local transportation agencies have shifted to a new approach aimed at reducing fatalities and serious injuries on roadways. The Safe System Approach (SSA) adopted by USDOT is an outline for other agencies to follow suit in effectively addressing the risks associated with driving and incorporates aimed strategies to prevent crash incidents and reduce the severity of crashes when they occur.

The SSA aims to achieve zero deaths on roadways by a certain target date that, in certain cases, can be ambitious without the correct strategies and measures in place. Under a SSA approach, local agencies implement several strategies to address the causes of roadway fatalities, while holding themselves accountable to reducing deaths by using a target date to achieve Vision Zero. **Therefore, it is recommended that Rapid City adopts a safety target of zero deaths by 2050 as part of the Comprehensive Safety Action Plan (CSAP)**. However, the SS4A program also accepts the goal to dramatically reduce fatalities and serious injuries to *near zero* by a target date.

Background on SS4A

A national movement in transportation agencies has recognized that deaths and serious injuries on roadways are unacceptable. An increasing number of agencies are re-evaluating their approach to safety and asserting that crashes are predictable and preventable. The SSA recognizes that humans make mistakes, but loss of life should not be a result of these mistakes. Following the SSA allows municipalities to place safety first when making investments or designing roadways. The SS4A program provides a data-driven approach for agencies to adopt solutions based on practices that are proven to improve safety.

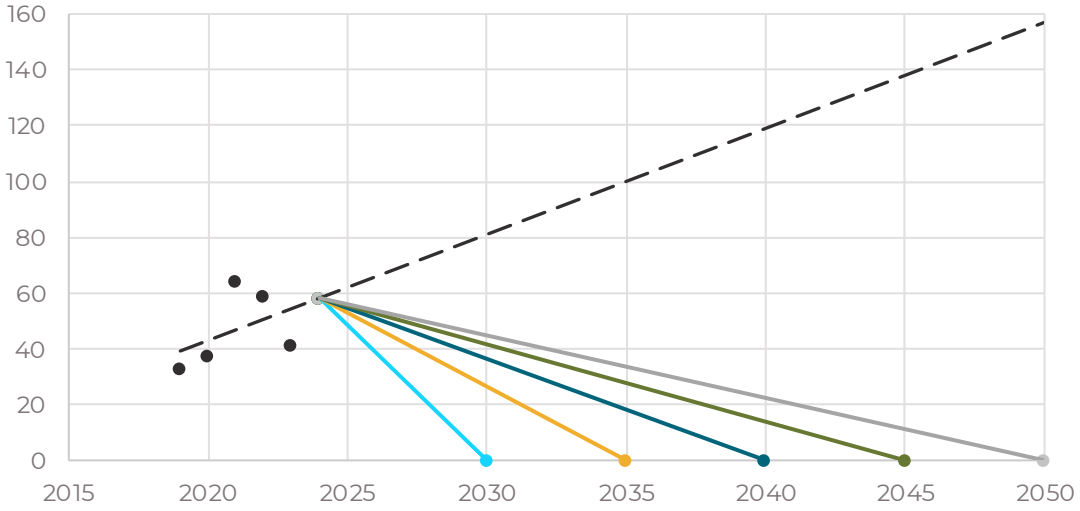
By following the guidelines of the SS4A program, Rapid City can set a safety target that aligns with national goals, sets measurable targets, and utilizes proven countermeasures to address high-risk areas.

Recommendation: Vision Zero by 2050

Figure 1 demonstrates the upward trend of fatal and serious injury crashes of roughly four additional crashes per year in Rapid City. The figure also shows recommended crash reductions required to meet certain Vision Zero targets. Those targeted reductions are as follows:

- **2030**: ~10 crashes per year
- **2035**: ~6 crashes per year
- **2040**: ~4 crashes per year
- **2045**: ~3 crashes per year
- **2050**: ~3 crashes per year

Figure 1. Fatal and Serious Injury Crash Trends and Goals to Achieve Zero Deaths



Rapid City can adopt a phased approach to Vision Zero by setting a target date of 2050 for achieving zero deaths and initially committing to a substantial reduction in crashes. A softer commitment of reducing crashes “substantially” rather than promising Vision Zero allows Rapid City to prioritize measurable progress in a more practical approach. Interim targets, such as a significant reduction of fatalities by a set number or percentage, provides more adaptability to strategies.

Feedback from the Study Advisory Team is recommended for setting a fatality reduction target in Rapid City. Input is essential for ensuring that a recommendation of 2050 as a safety target aligns with regional priorities. The following section will

outline approaches and strategies in the Near Term, Midterm, and Long Term to reach a potential target date of 2050.

Near-Term Target (2024–2030)

A Focus on Non-Capital Infrastructure Strategies

Target: Reduce fatal and serious injury crashes by 15 per year in Rapid City.

- **Speed management and traffic calming**
  - Prioritize key zones for safety enhancements, such as school districts, work zones, and downtown areas
  - Set and design for safe impact speeds by targeting ≤20 mph in areas with vulnerable users and preventing conditions that allow >40 mph using traffic calming, lower posted limits, and enforcement near schools, downtown, and other high-pedestrian corridors
  - Implement measures such as lower speed limits and speed feedback signs through areas with a history of traffic speeding and targeted traffic enforcement campaigns
- **Incorporation into existing projects**
  - Incorporate proven safety measures into projects that are already programmed to allow for quicker implementation of safety measures
  - Utilize tools such as road safety audits to identify opportunities for immediate improvement
- **Enhanced coalitions and emergency response**
  - Collaborate with emergency medical services to reduce response times and implement life-saving techniques at crash sites
  - Partner with advocacy groups, local schools, and community organizations to promote safe roadway behaviors
- **Education and outreach**
  - Enhance public awareness programs focused on traffic safety, including education geared to motorcyclists and enforcement initiatives
  - Partner with local schools, community organizations, and advocacy groups to promote safe behavior

Examples of non-capital infrastructure strategies that have been proven to improve safety include the following:

- **Dynamic speed displays or feedback signs**

- These are low-cost solutions that can be installed in a short time frame but be effective long term.

- **Reduce citywide default speed**
  - Both Denver and Seattle reduced their default citywide speeds from 25 to 20 mph. Seattle measured a 22 percent crash reduction and 54 percent reduction in drivers traveling 40+ mph.[2]
  - Higher speed limits could still be signed and designed toward on higher functionally classified streets.
- **Increase education campaigns**
  - Denver Vision Zero aims to create a multimodal safety curriculum for schools K–12 to promote safety in young and future drivers.[3]
- **Post-crash care**
  - To increase coordination with first responders to improve crash response, MetroPlan Orlando uses strategies such as high-visibility paint, retroreflective striping, and built-in passive lights to improve the safety of arriving responders.[4]

Midterm Target (2030–2037)

Combine Programmatic and Capital Infrastructure Strategies

Target: Reduce fatal and serious injury crashes by 30 per year.

- **Expand on near-term strategies**
  - Continue to expand efforts in speed management, education, enforcement, and partnerships.
  - Evaluate previous non-capital strategies for their effectiveness in crash reduction.
- **Safe streets practices and strategies**
  - Implement policies that prioritize safety into the entire life cycle of the transportation project process.
  - Continue to build on awareness of safe street practices among the public and local agencies.

[2] https://www.visionzeroforyouth.org/wp-content/uploads/NineStrategies.pdf.
[3] https://www.denvergov.org/files/assets/public/v/4/vision-zero/documents/denver-vision-zero-action-plan.pdf.
[4] Safety | MetroPlan Orlando

- **Capital infrastructure improvements**
  - Develop a plan of action with the South Dakota Department of Transportation to program capital safety improvements, such as roundabouts and improved pedestrian crossings on state routes.
  - Address high-risk corridors identified through crash data analyses with infrastructure upgrades.
- **Vehicle fleet safety enhancements**
  - Promote adoption of modern safety technologies in vehicle fleets, such as automatic emergency braking, lane departure warnings, and blind-spot monitoring.
- **Mobility and safety for vulnerable populations**
  - Develop and promote alternative transportation options for older and impaired drivers to reduce unsafe driving incidents.
  - Collaborate with service providers to promote accessibility of safe mobility options.

Long-Term Target (2037–2050)

Achieving a Safe System and Vision Zero

Target: Reduce fatal and serious injury crashes to near-zero or zero by 2050.

- **Build on midterm successes**
  - Continue to implement and scale strategies from the near- and midterm phases.
- **Increased safety capital project implementation**
  - Accelerate implementation of safety-focused capital projects, such as corridor redesigns and systemwide infrastructure upgrades.
  - Target implementation of projects with proven safety benefits.
- **Safe users and speeds through design technology**
  - Adopt user-centered design practices that inherently promote safe behaviors.
  - Leverage advancements in vehicle technology to enhance safety for all road users.

- **Robust enforcement and emergency response systems**
    - Standardize consistent enforcement of safety practices, including compliance with speed limits and prevention of impaired or unrestricted driving.
- **Adopting and achieving Vision Zero**
    - Embed Vision Zero principles into all transportation policies, programs, and practices.
    - Establish a culture of Vision Zero and safety where all stakeholders advocate for zero deaths as a shared responsibility.

Safety Data Analysis Memo (Part 2)

Introduction

This memo builds on the discussion and recommendations from Part 1 of the Safety Analysis for Rapid City's Comprehensive Safety Action Plan (CSAP) under the Safe Streets and Roads for All (SS4A) discretionary grant program. The second part of the safety analysis involved evaluating crash patterns and identifying high-priority locations for safety improvements. The data provided from the South Dakota Department of Transportation (DOT) for the 5-year period of 2019–2023 was used as the foundation of the analysis. Interstate segments were excluded to focus on local and arterial roadways where interventions would be aligned with funding requirements of SS4A.

Crash Data Analysis

Specific crash types were reviewed based on the eight emphasis areas identified in Part 1. The emphasis areas included:

- Angle Crashes
- Young Drivers
- Older Drivers
- Lighting Conditions
- Vulnerable Road Users
- Motorcycles
- Alcohol
- Speed

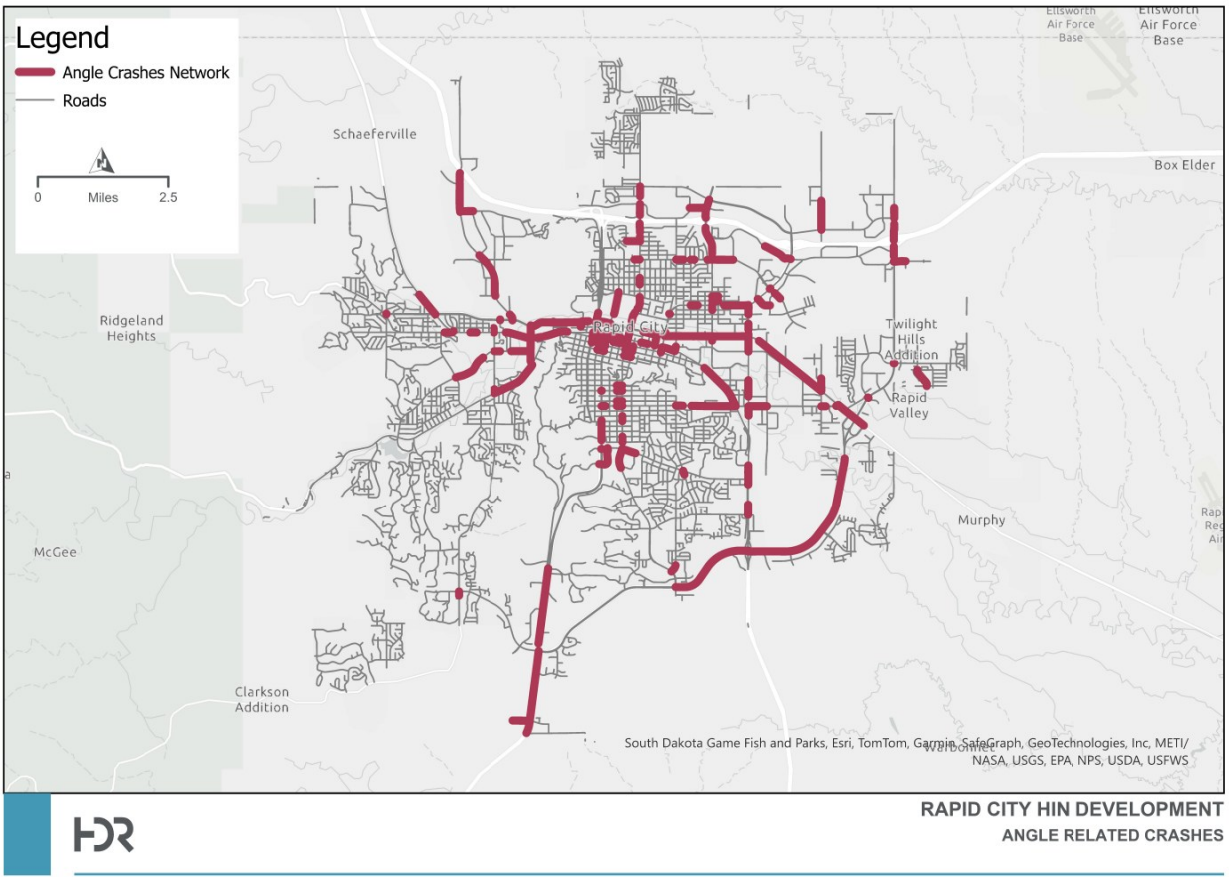
The crash types selected were analyzed to identify locations with recurring safety issues. Each road segment was assessed, and crash types were individually tallied. Thresholds were then established to identify the top 10 to 20 percent highest-frequency crash segments in the network. In cases where the 10 percent threshold

could not be achieved due to limited data, any segment exhibiting that specific crash type was flagged. This led to the development of a combined network of flagged crash segments. The following sections discuss each of the crash types in further detail.

Angle Crashes

The first crash type analyzed manner of collision, specifically angle crashes. In Part 1, it was noted that 68 percent of angle crashes occurred on urban arterial streets, particularly those leading to and from the downtown area. The segments highlighted in red in **Figure 1** are corridors that reported six or more angle crashes of any crash severity level. Key corridors include the downtown area, South Dakota Highway 44 (SD 44), U.S. Highway 16 (U.S. 16)/Mt Rushmore Road, U.S. Highway 16B (U.S. 16B), Cambell Street, and 5th Street/Haines Avenue.

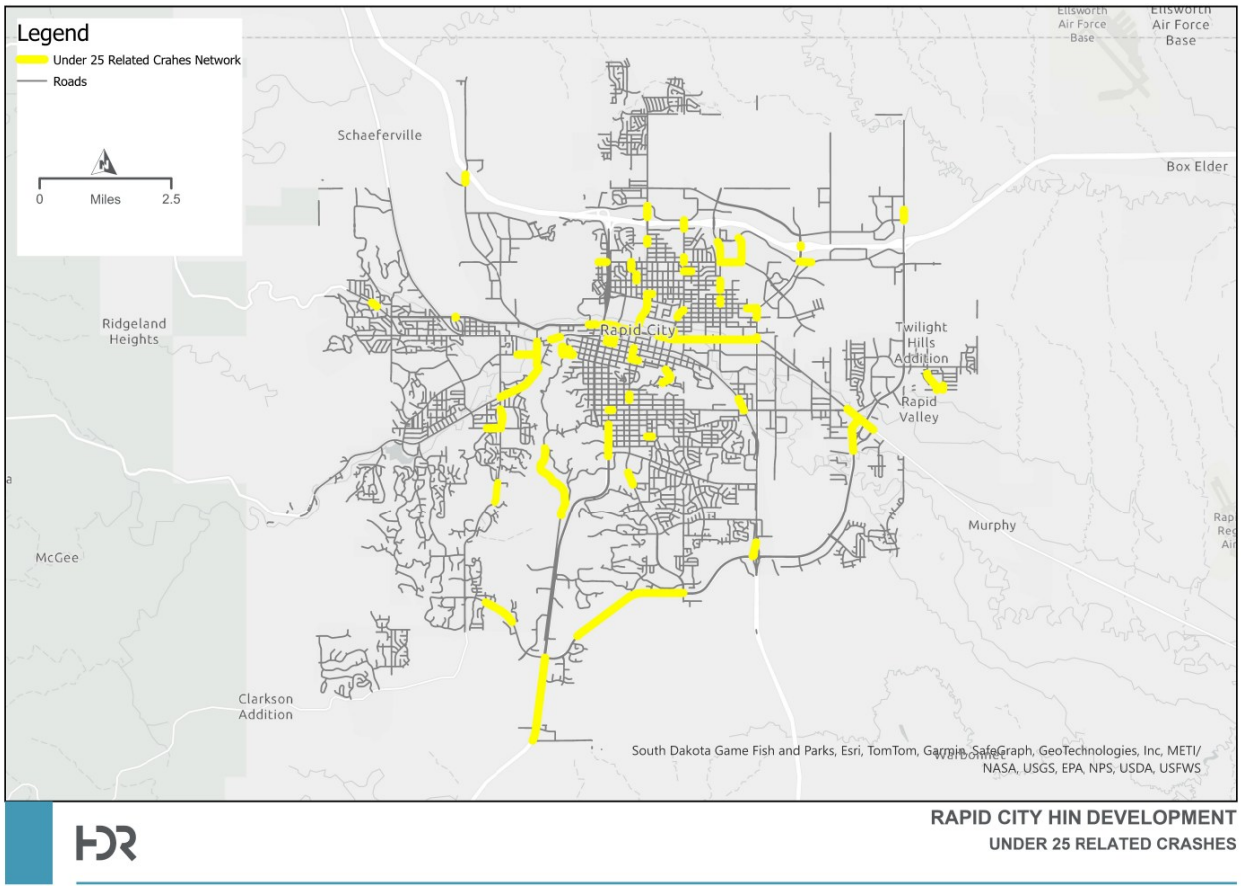
Figure 1. Angle-Related Crashes



Drivers Under 25 Crashes

The next crash type reviewed was for young drivers, specifically drivers under the age of 25. In Part 1, it was noted that impulse control development is ongoing until the age of 25. Therefore, 25-and-under drivers are seen as an elevated crash risk category when it comes to auto insurance purposes. **Figure 2** shows all the segments that included a crash with a driver under the age of 25. Corridors of note include SD 44, U.S. 16, U.S. 16B, Skyline Drive, and the streets around the Walmart Supercenter south of Interstate 90 (I-90).

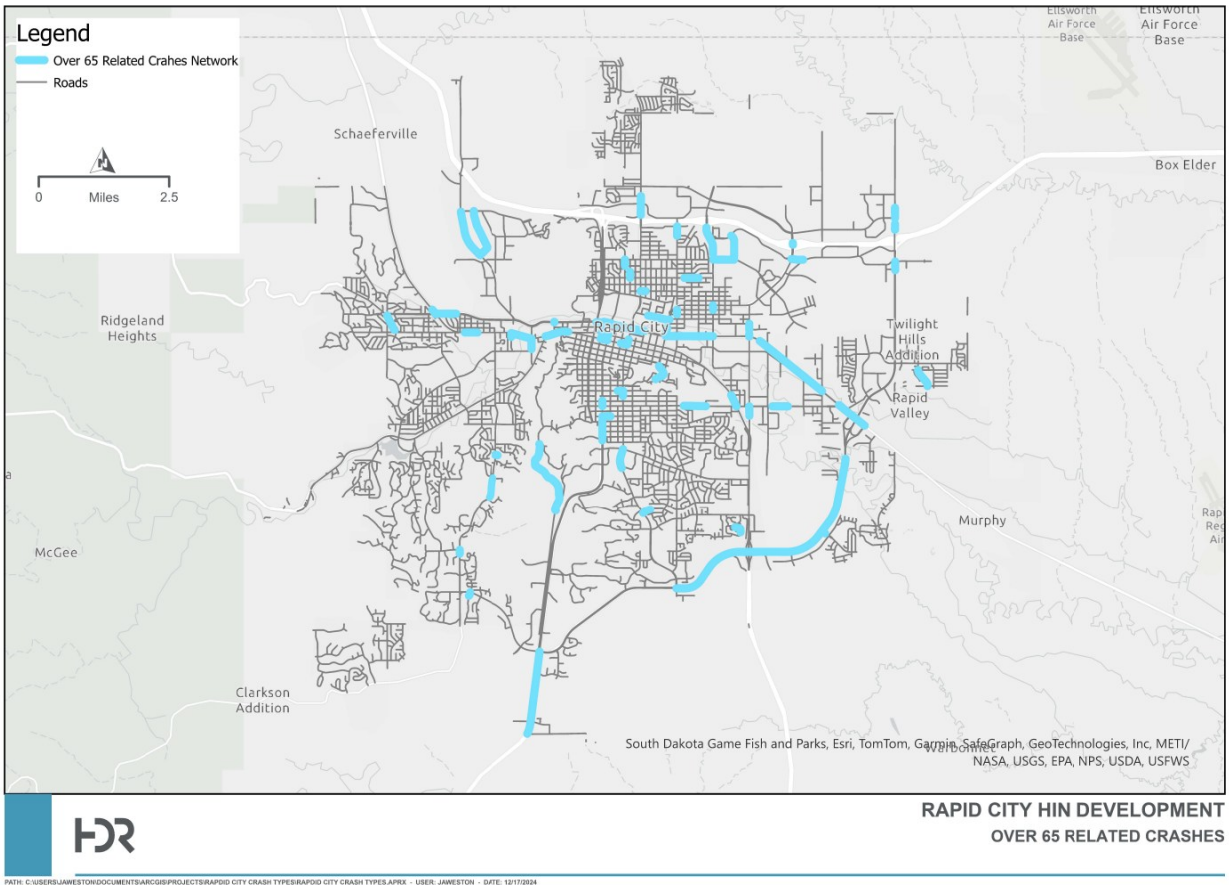
Figure 2. Under 25-Related Crashes



Drivers Over 65 Crashes

In addition to young drivers, crashes involving drivers over the age of 65 (classified as older drivers) were also identified as a crash type of interest. While the onset of driver-inhibiting, age-related physical and cognitive conditions varies widely, 65 was selected as the threshold even though it is assumed to be on the lower end of when these issues may arise. **Figure 3** identifies all the segments that involved drivers over the age of 65 in a crash. Corridors of significance include SD 44, South Dakota Highway 445 (SD 445)/Deadwood Avenue, U.S. 16, U.S. 16B, Skyline Drive, and the streets around the Walmart Supercenter south of I-90.

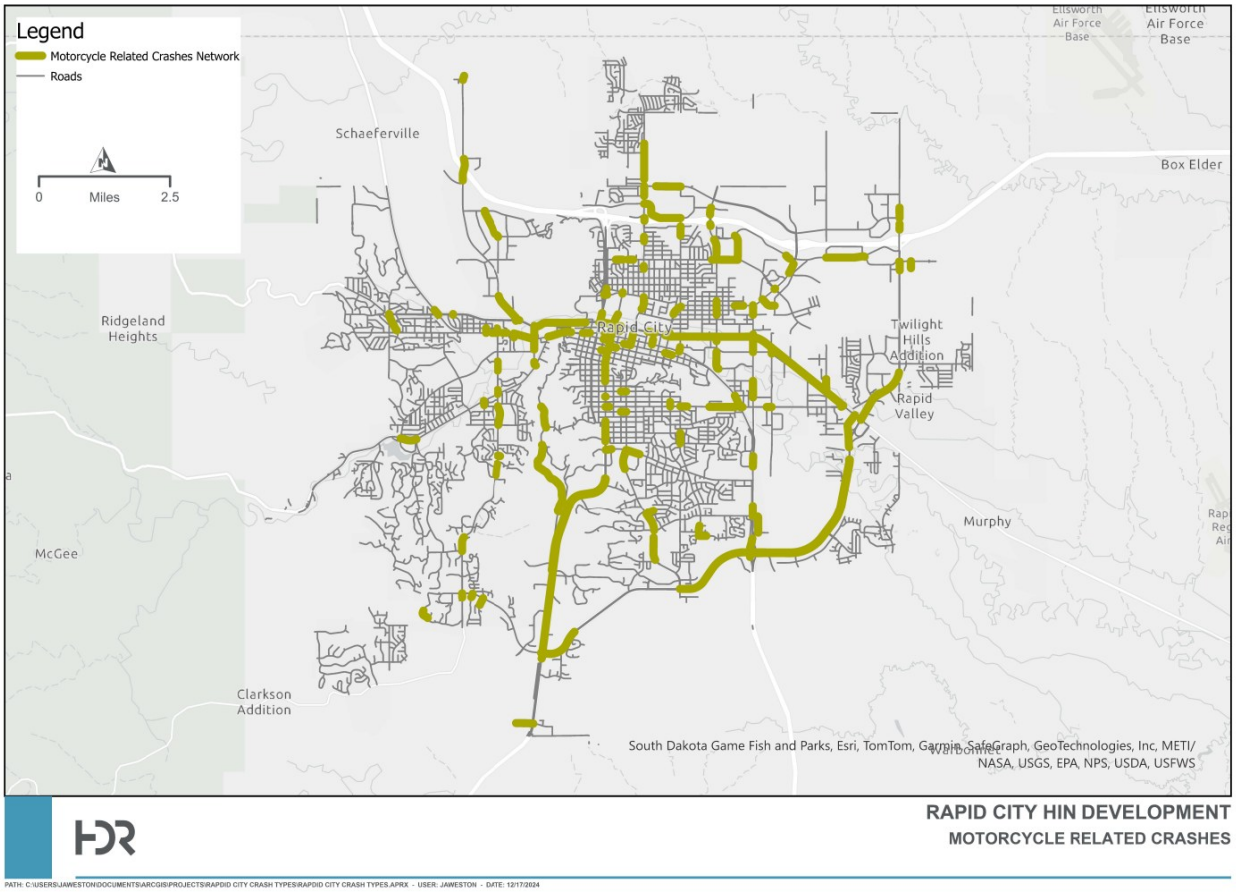
Figure 3. Over 65-Related Crashes



Motorcycle Crashes

Motorcycle crashes were also evaluated as part of the safety analysis. Previously, it was noted that 39 percent of motorcycle crashes occurred on urban minor arterial roads. The segments highlighted green in **Figure 4** show corridors that reported at least one crash involving a motorcycle. Key corridors include SD 44, U.S. 16/Mt Rushmore Road, U.S. 16B, Skyline Drive, Haines Avenue, Sheridan Lake Road, and Cambell Street.

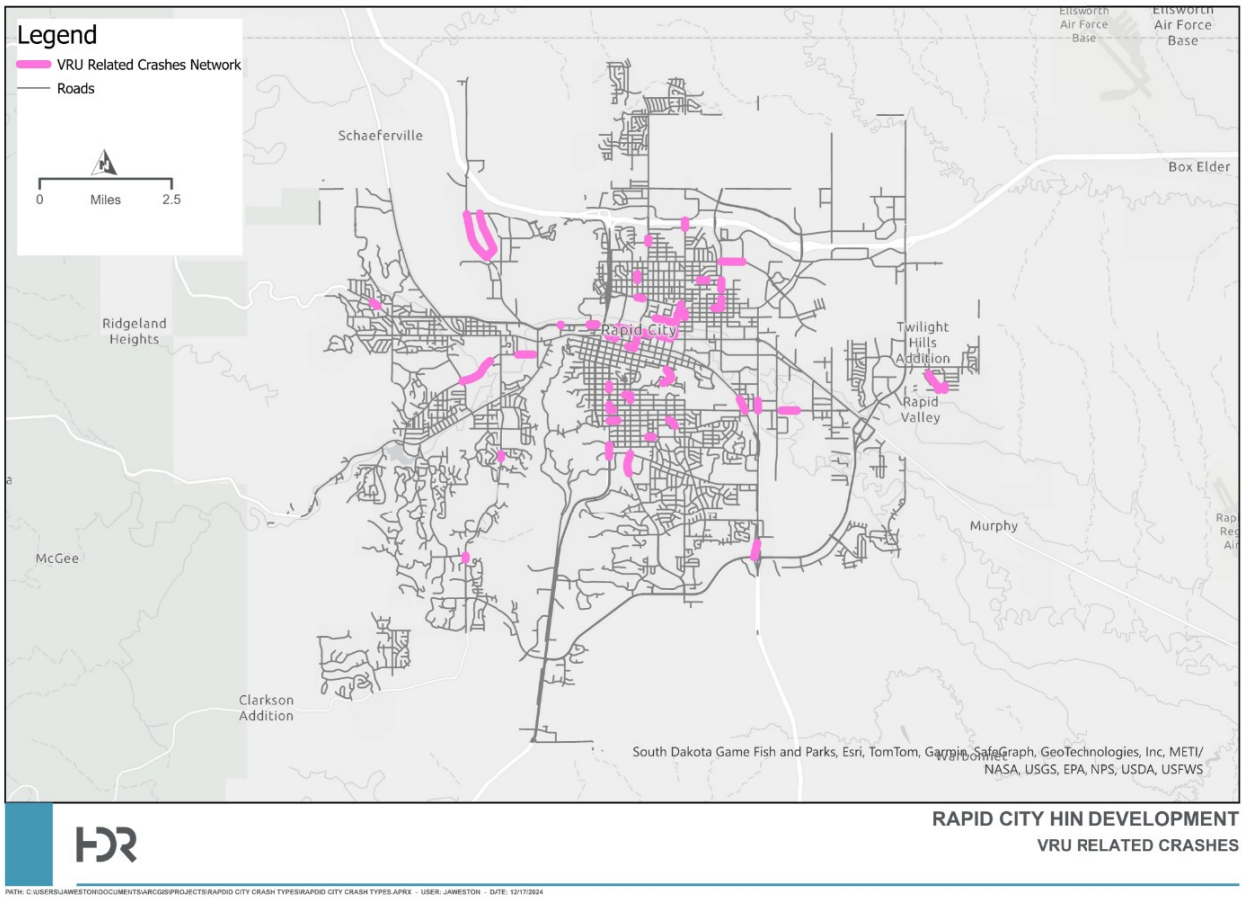
Figure 4. Motorcycle-Related Crashes



Vulnerable Road User Crashes

The fifth crash type reviewed was vulnerable road user (VRU) crashes. VRUs are individuals walking, biking, or rolling. Because VRUs are not protected by shielding technology such as vehicle frames, airbags, or crumple zones, they are at a higher risk of injury or death in a collision. It was identified in Part 1 that the majority of VRU crashes are concentrated in the downtown area and on arterials leading to and from that area. **Figure 5** includes all the segments that had at least one VRU crash reported. The downtown area, SD 445/Deadwood Avenue, U.S. 16/Mt Rushmore Road, and Lacrosse Street are all corridors identified.

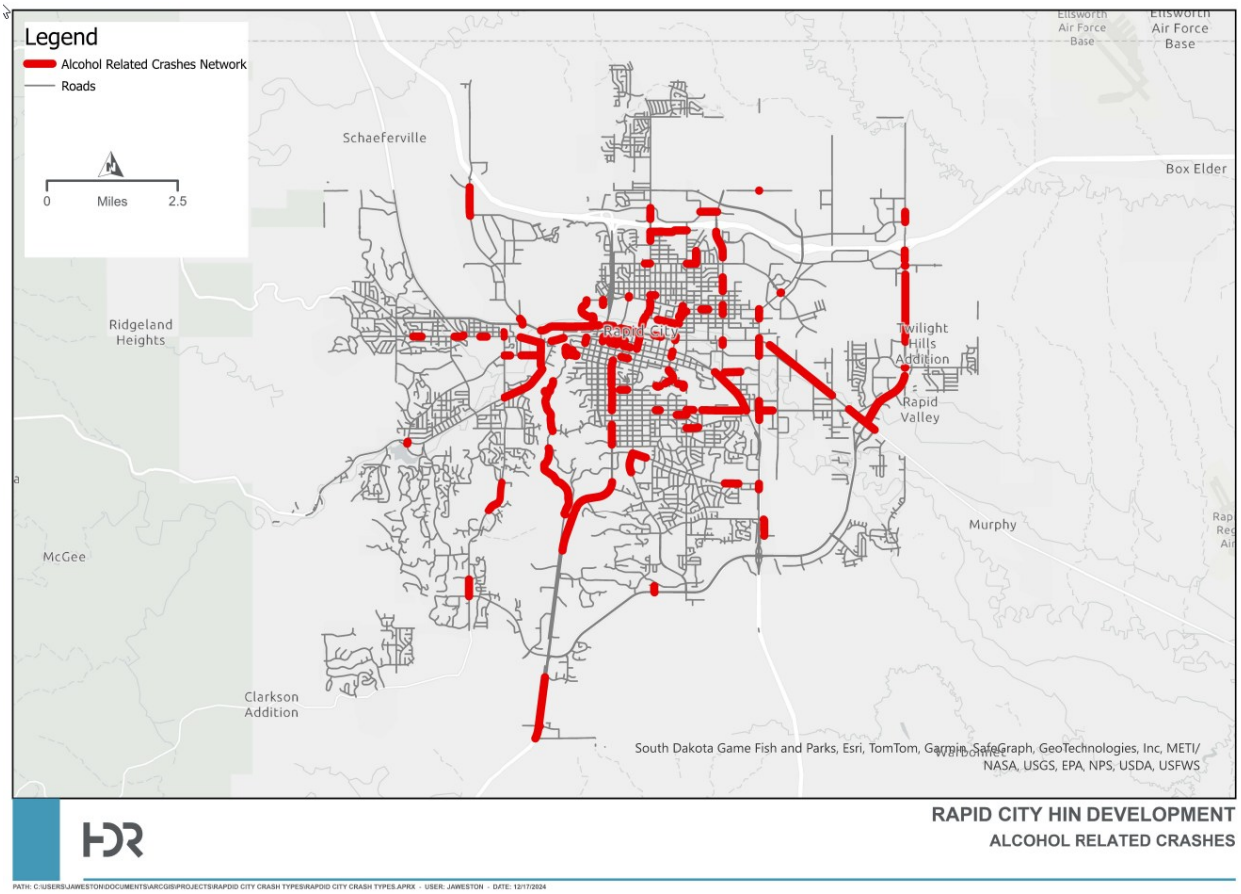
Figure 5. VRU-Related Crashes



Alcohol-Related Crashes

The next crash type identified was alcohol-related crashes. The analysis in Part 1 noted that more than 60 percent of fatal and serious injury crashes that had alcohol involved occurred on city streets. The corridors highlighted in red in **Figure 6** are segments that had two or more alcohol-related crashes. Corridors of significance include the downtown area, SD 44, U.S. 16/Mt Rushmore Road, Skyline Drive, Cambell Street, and Lacrosse Street.

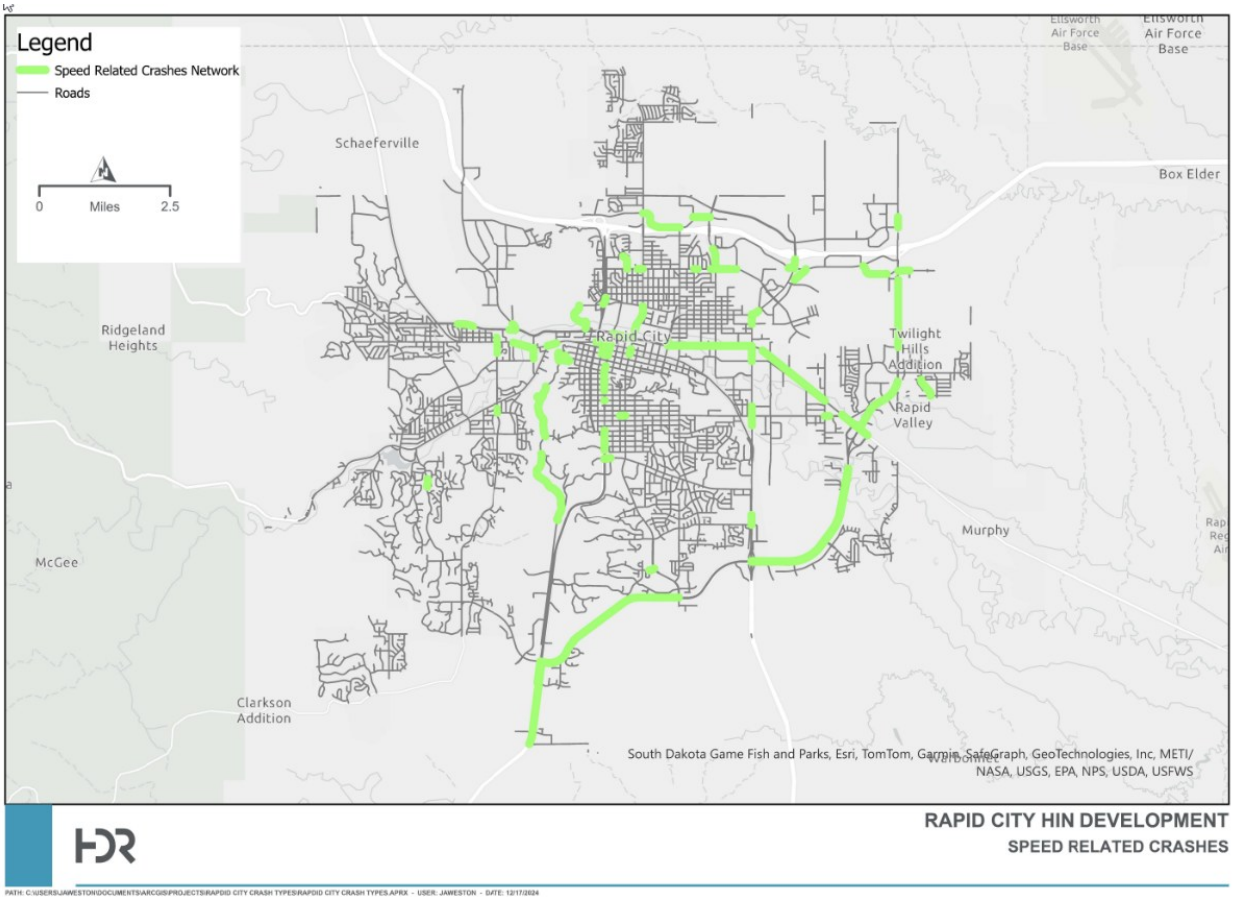
Figure 6. Alcohol-Related Crashes



Speed-Related Crashes

The final crash type analyzed was speed-related crashes. Almost 50 percent of speed-related crashes occurred on city streets as noted in Part 1. **Figure 7** identifies the segments that had three or more crashes labeled as speed related. Corridors to note include SD 44, Mt Rushmore Road, U.S. 16B/Elk Vale Road, Skyline Drive, Cambell Street, and Anamosa Street.

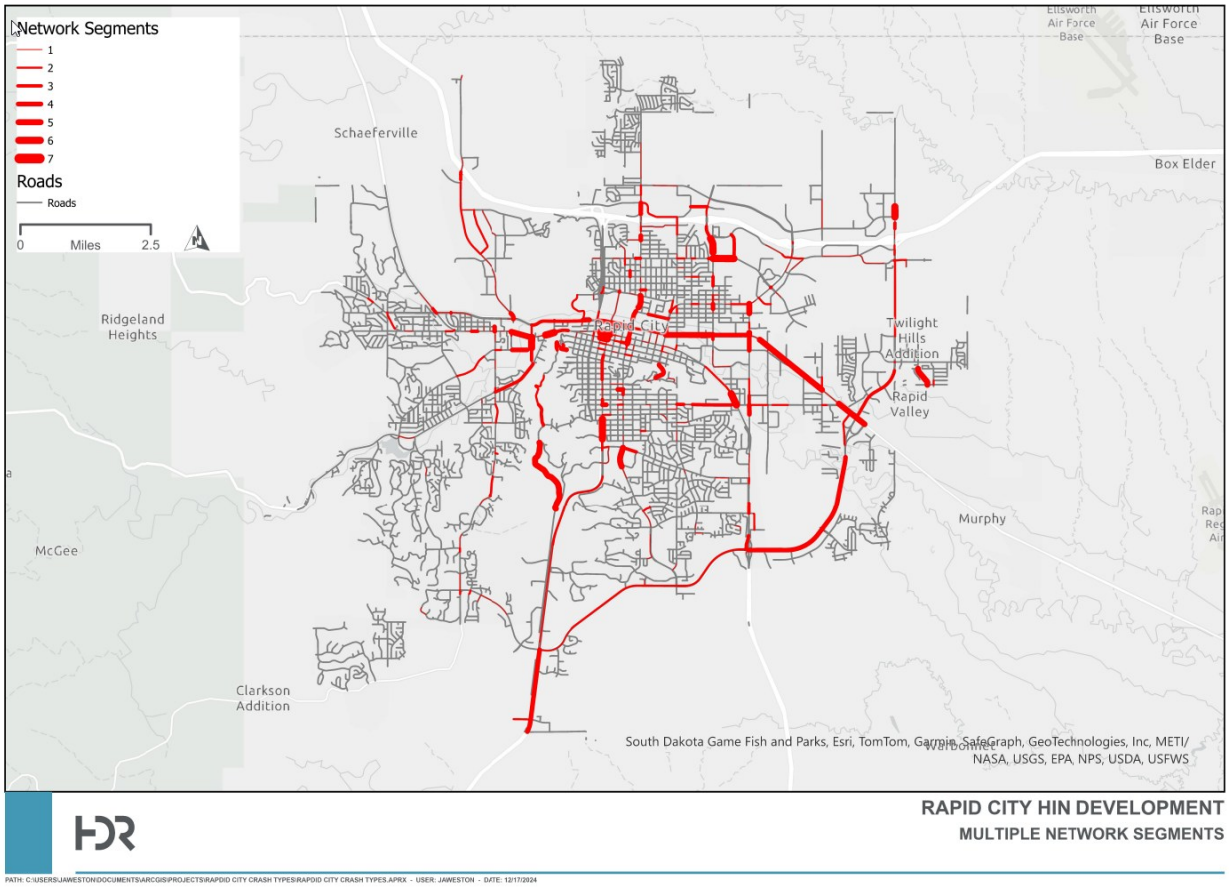
Figure 7. Speed-Related Crashes



All Segments

All crash types were then combined to create **Figure 8**, which assigns a score to all of the segments included in the analysis. Each segment was assigned a score based on the total number of categories the segment was included in. For example, if a segment showed up in just the "Over 65" and "Alcohol-Related" categories, it would have a score of two. Several corridors showed in four or more categories, including SD 44, U.S. 16/Mt Rushmore Road, U.S. 16B/Elk Vale Road, Skyline Drive, Cambell Street, Anamosa Street, and a few streets in the downtown area.

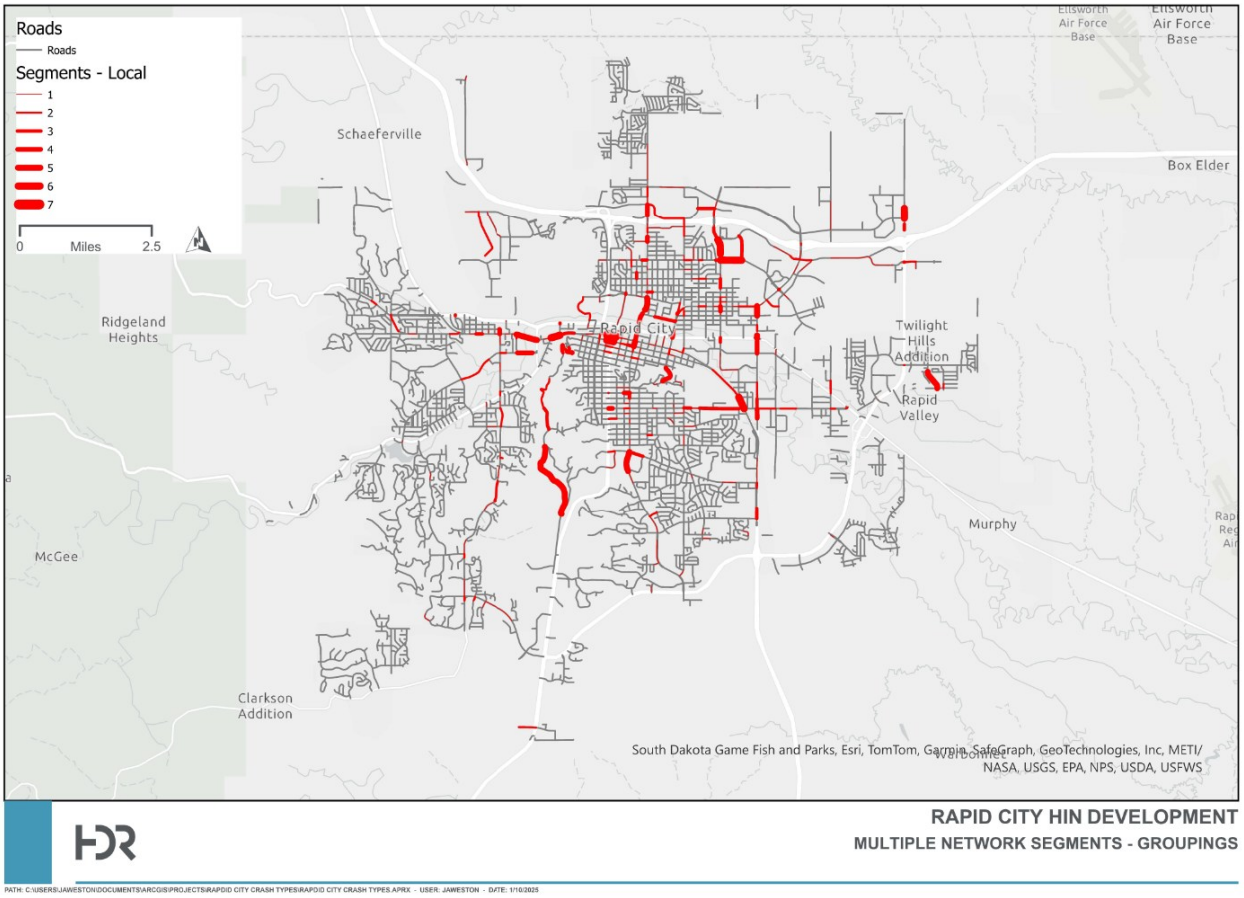
Figure 8. Multiple Network Segments



All City-Owned Segments

The data collected through the safety analysis and discussed in this memo focuses on the entirety of Rapid City's roadway network. While addressing all of these corridors will be crucial to reducing the number of fatal and serious injury crashes in Rapid City to zero, multiple High-Injury Network streets identified are under the jurisdiction of South Dakota DOT. The City's objective for this study is to place a priority on safety measures that can be advanced on City-owned streets. **Figure 9** maps the High-Injury Network as it applies to just City streets. These locations will be the focus of next steps for the SS4A planning process, which will include identifying corridors of focus for safety treatments and infrastructure design concepts.

Figure 9. Multiple Network Segments on City Streets



Safety Findings

Based on the analysis conducted, several key findings and recommendations were noted for segments with significant crash issues:

- The central business district boasts excellent overall network coverage of traffic-calming measures and improvements for VRUs. With the addition of a few targeted enhancements and enforcement, the area could reduce the occurrence of crashes, further promoting safety and accessibility for all users.
- U.S. 16, U.S. 16B, and SD 44 collectively exhibit safety concerns along their full extents. These corridors are critical transportation routes that face a combination of challenges, such as high crash frequency, lack of adequate pedestrian and bicycle facilities, and infrastructure conditions that may contribute to unsafe driving behaviors. Addressing these issues could benefit from a localized education campaign or an enforcement strategy to promote safer behaviors and raise awareness of roadway risks. Combining these approaches holistically is essential to improving transportation safety and mobility in the region.
- Every interstate crossroad presents safety challenges, which is a common occurrence in similar urban settings. However, addressing these issues through targeted interventions, such as optimized traffic flow measures, speed management techniques, improved signage, and enhanced lighting, could greatly enhance safety and efficiency at these critical intersections.
- Skyline Drive, with its winding curves and scenic appeal, frequently experiences excessive speed-related crashes, likely due to joyriding. These incidents are primarily attributed to drivers losing control on the sharp turns. To address this, a combination of targeted safety measures is recommended. The installation of rumble strips along the edges and centerlines can help prevent lane departures, while chevrons placed at key curves can provide visual warnings to encourage safer speeds. Additionally, dynamic speed displays can remind drivers to reduce their speed, particularly in areas prone to violations. Together, with periodic speed enforcement campaigns, these interventions can significantly mitigate crashes on this curvy section, enhancing safety while maintaining the roadway's appeal.

Safety Countermeasures

Proven safety countermeasures from the Federal Highway Administration (FHWA) were referenced as potential solutions for the identified crash types. Countermeasures included, but not limited to, include the following:

- **Speed Management:** Implementing speed management measures, such as speed displays and enforcement cameras, is recommended for corridors with high-speed concerns. These interventions can help mitigate crash risks by encouraging drivers to maintain safe speeds.
- **Crosswalk Enhancements:** Installing painted crosswalks, raised crosswalks, and reflective backplates can improve pedestrian safety by enhancing visibility. Specific intersections and mid-block crossings should also include lighting to ensure pedestrian visibility at night.
- **Traffic Signal Improvements:** The addition of protected traffic signals and reflective backplates is crucial for reducing vehicle-vehicle and vehicle-pedestrian conflicts at intersections. Enhanced signal visibility is particularly important on high-traffic corridors.
- **Pedestrian-Specific Infrastructure:** The installation of rectangular rapid flashing beacons (RRFBs), pedestrian islands, and midblock crossings will create safer opportunities for pedestrians to cross busy streets. These measures are particularly effective on corridors with heavy pedestrian activity.
- **Lighting and Visibility Improvements:** Increasing lighting at intersections and along corridors can address visibility issues during low-light conditions, reducing crashes involving VRUs.
- **Traffic-Calming Measures:** Techniques such as chevrons, rumble strips, and corridor management strategies can reduce aggressive driving behaviors and encourage compliance with traffic rules.
- **Enforcement and Monitoring:** Safety cameras and consistent enforcement of speed and traffic laws can act as deterrents to unsafe driving behaviors. Coupled with educational campaigns, these efforts can have a lasting impact on driver behavior.
- **Sidewalk and Access Enhancements:** Building or repairing sidewalks and managing access points can create safer environments for pedestrians and cyclists, ensuring they are separated from vehicular traffic where possible.

Each FHWA proven countermeasure was mapped to relevant crash types as follows.

Table 1. Countermeasure and Crash Type Relationship

Countermeasure	*Applicable Crash Types*
Speed Management	Speed-related crashes, alcohol-related crashes
Painted Crosswalks	VRU crashes
Protected Traffic Signals	Angle crashes, VRU crashes
RRFBs	VRU crashes
Pedestrian Islands	VRU crashes
Chevron Markings	Angle crashes, speed-related crashes
Rumble Strips	Speed-related crashes, alcohol-related crashes
Reflective Backplates	Intersection crashes (angle and VRU)
Sidewalk Installations	VRU crashes
Midblock Crossings	Pedestrian crashes, VRU crashes
Lighting Improvements	Intersection crashes, VRU crashes
Crosswalk Visibility	Pedestrian crashes, VRU crashes
Radar Speed Displays	Speed-related crashes
Corridor Management	Speed-related crashes, angle crashes
Speed Safety Cameras	Speed-related crashes
Traffic Calming Measures	Speed-related crashes, alcohol-related crashes
Enforcement Strategies	Alcohol-related crashes, speed-related crashes

Priority Corridors

Flagged segments with higher scores that were continuous or had minimal gaps were grouped together and identified for further analysis. **Figure 10** illustrates these priority corridors with pink representing state-owned corridors and orange representing City-owned corridors. These segments were reviewed using satellite imagery and Google Street View to validate crash patterns, assess existing roadway

environment, and identify countermeasures that would improve safety. This step confirmed that appropriate countermeasures were identified based on real-world conditions.

Using the proven safety countermeasures from FHWA and the crash types recognized on each corridor from the safety analysis, potential safety countermeasures were identified for each priority corridor. **Table 2** summarizes the location and extents of the priority corridors and lists any recommended safety countermeasures that would benefit safety and address known crash types.

This safety analysis provides a data-driven framework to address critical crash locations in Rapid City's roadway network. By leveraging FHWA proven safety countermeasures and conducting visual verification, this approach promotes recommended improvements that are targeted, effective, and tailored to the unique challenges of each roadway segment.

Figure 10. Priority Corridors

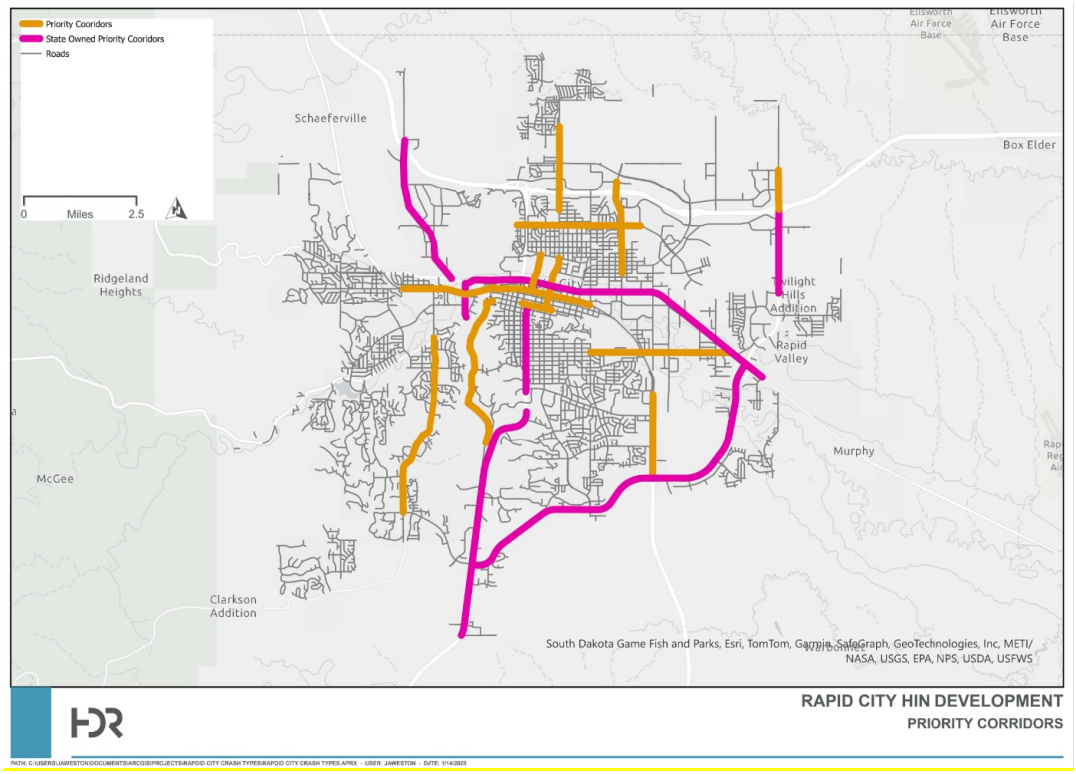


Table 2. Key Roadway Segments and Recommended Countermeasures

Road	Extents	Speed Management	Painted Crosswalks	Protected Traffic Signals	RRFB	Pedestrian Islands	Chevrons	Rumble Strips	Reflective Backplates	Sidewalks	Midblock Crossings	Lighting at Intersections	Crosswalk Visibility Enhancements	Speed Displays	Corridor Management Access	Speed Safety Cameras	Traffic Calming	Enforcement
City-Owned Roads																		
Haines Ave	Lindbergh Ave – Kathryn Ave	X		X					X	X		X	X	X	X	X		
Main St	32nd St – St Joseph St			X	X	X					X							
Main St	St. Joseph St – Maple Ave				X				X					X			X	X
St. Patrick St	Elm Ave – SD 44											X						
Campbell St	Bridge View Dr – U.S. 16			X														X
Anamosa St	Silver St – Luna Ave	X		X							X			X			X	
N 5th St	North St – Quincy St			X											X			X
Lacrosse St	Disk Dr – E Philadelphia St		X	X	X													
Quincy St	9th St – 4th St													X				X
Skyline Dr	Tower Rd – Quincy St						X	X										
Sheridan Lake Rd	SD 44 – Carlton Blvd	X	X											X				X
Mt Rushmore Rd	North St – Main St													X				X
Elk Vale Rd	Mall Dr – Seger Dr	X												X				X
State-Owned Roads																		
SD 44	Jackson Blvd – Omaha St											X						X
SD 44	Omaha St – Twilight Dr	X	X	X								X		X				X
SD 445	Tatanka Rd – SD 231		X	X						X								X
U.S. 16	Quincy St – Tower Rd				X												X	X
U.S. 16	Moon Meadows Dr – Cathedral Dr																	
U.S. 16B	U.S. 16 – SD 44																	X
U.S. 16B	Anamosa St – Mall Dr	X												X				X

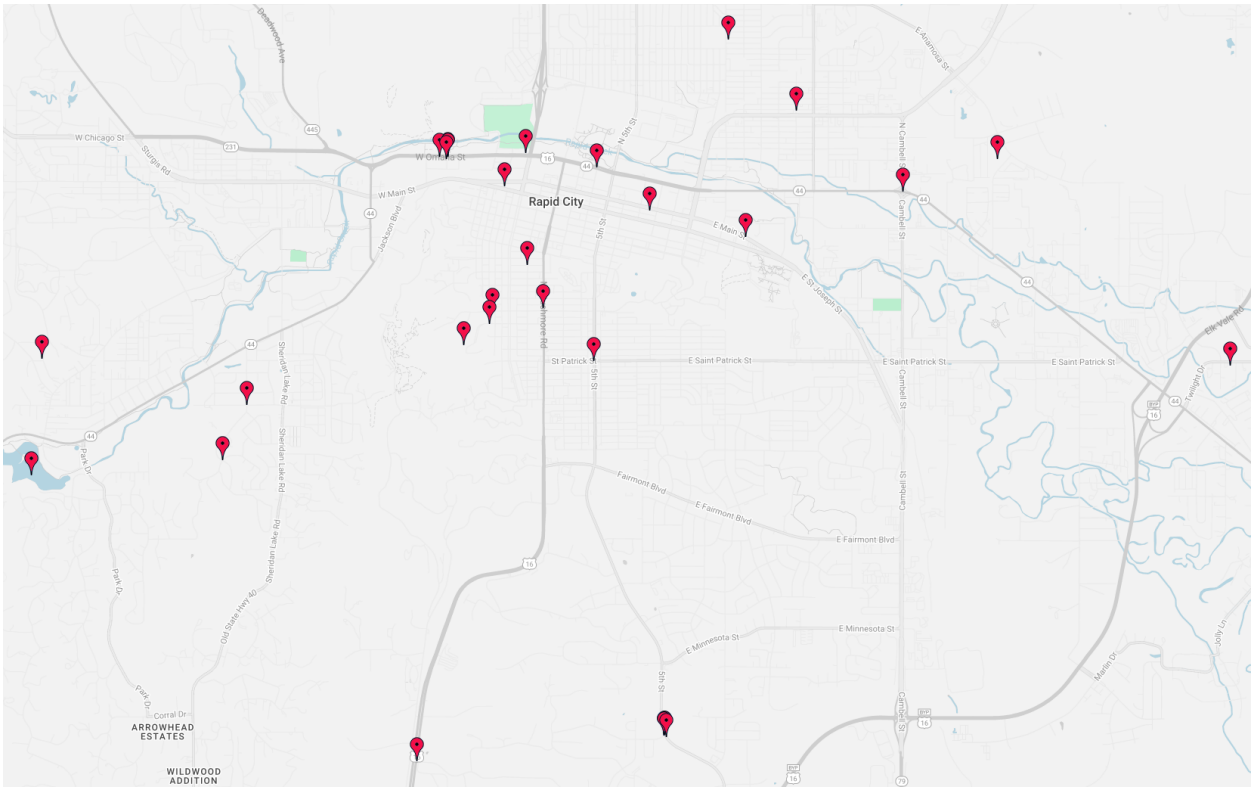
Comment Map

Public input has been collected through the project's website where community members are prompted to leave comments at specific locations on a comment map. To date, 28 comments have been received, ranging from topics covering speeding, pedestrian crossings, bicycle facilities, and roadway conditions. **Figure 11** illustrates where the comments are on Rapid City's roadway network. Key takeaways include the following:

- Four comments related to pedestrian crossing were included at the intersection of SD 44 and Canal Street. The comments note that while there are Americans with Disabilities (ADA) ramps and a pedestrian median refuge island at this location, trees block drivers' views of the crosswalk. Additionally, there are concerns with only one lane of vehicles stopping on SD 44 to allow pedestrians and bicyclists to cross, creating conflicts with vehicles in the second lane who do not see the pedestrians crossing and do not stop. Drivers on Canal Street are also only focused on turning left and miss pedestrians and bicyclists traveling west on SD 44. This intersection connects Founders Park with several businesses, including a bike shop and brewery. High-visibility crosswalks or a pedestrian signal would improve safety in this area.
- Six comments were located at the intersection of 5th Street and Enchanted Pines Drive. Issues reported include speeding, roadway geometry, and an increase in traffic volumes due to the new apartment complex. Recommendations include installing a traffic signal, increasing enforcement, and adjusting medians.
- Bicycle conditions in the downtown area are a concern. Streets like Main Street have speeds that make the roadway feel unsafe, and bicyclists have to constantly be aware of cars parking or extending into the travel lane. Separated bicycle facilities would be valuable in these locations.

Comments received from the public via the website or other engagement activities will continue to be monitored and summarized.

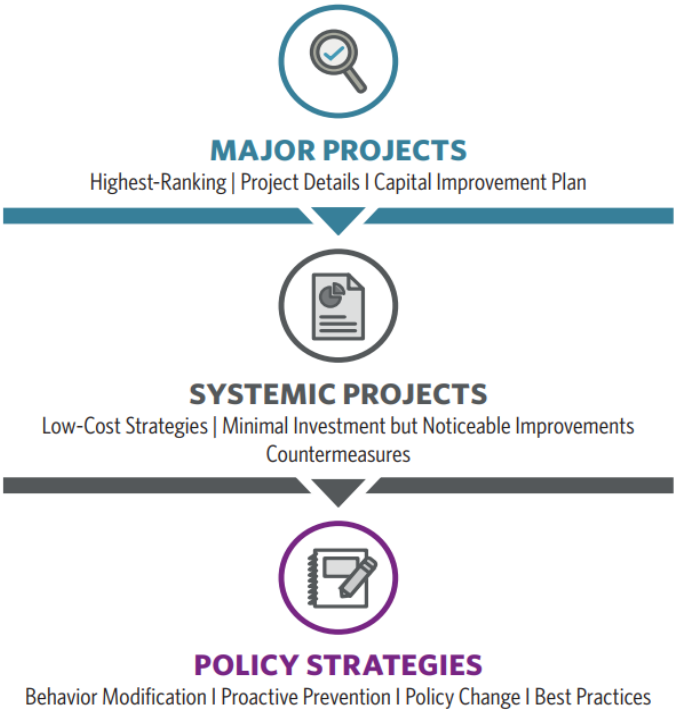
Figure 11. Comment Map



Appendix D. Safe Streets for All Projects and Strategies Memo

Purpose

Figure 1. Projects and Strategies Framework



The recommendations presented here are designed to support the strategy and project selections component of the Rapid City Comprehensive Safety Action Plan (CSAP). From Safe System Approach (SSA) research and principles, it is clear that greater proactivity is foundational to reducing fatalities and serious injuries. The City of Rapid City and project team have proposed recommendations at the policy, systemic, and major project level. As seen in **Figure 1**, policy strategies are foundational, explaining how agencies, their partners, and the traveling public approach safe travel and how developing safe multimodal travel networks has the greatest potential impact on severe crash reductions because modified behaviors, proactive planning, meaningful changes to policies, and adoption of safety best practices can affect every piece of local multimodal travel. That broad geographic coverage will outweigh a focus on any one hot spot. The memo first describes which safety problems have been prioritized (or designated emphasis areas) and then lists policy recommendations pertinent to each. A major part of the City's safety policy is documenting relevant safety aspects of plans and standards.

The second layer of safety recommendations includes systemic strategies and their resulting projects. Systemic approaches focus on the risk of severe crashes and where those risks may be elevated. For example, a systemic approach may be useful for severe road departure crashes because they are most often related to common

combinations of factors (e.g., level of travel, road geometry, features of the built and natural environment like curves and steep slopes). In the Rapid City dataset, the data limitations led the project team to focus on the history of property damage crashes and lower severity injury crashes as a proxy for future severe crash risk. In the systemic framework, each risk area (emphasis area) is paired with appropriate low-cost treatments that could be deployed in stand-alone safety projects over multiple higher risk locations. Systemic thinking can also be put in action by using risk maps to add safety value to smaller scope maintenance and rehabilitation projects (even projects focusing on nontransportation infrastructure like water and gas utility projects).

The final layer considers major safety projects. These projects reshape the built environment so that streets and intersections can have features added (e.g., medians, curb bulb outs) or features resized (e.g., intersection converted to roundabouts, walkways or bikeways widened). Major safety projects typically apply one or more best practice countermeasures in areas with severe crash history or higher risk levels and more moderate crash history. These more significant infrastructure countermeasures often provide the best means to reduce severe conflicts, manage the balance of speed to context, increase user separation in time, and improve traveler awareness. However, due to their cost and time to develop and deliver, major projects must be used in a limited manner and must be focused to address the highest priority locations first.

Policy Strategies

This section outlines how Rapid City can update internal policies, procedures, and design standards to more effectively reduce crash risk. Policy strategies refer to noncapital changes, such as speed-setting practices, design criteria, and project review processes, that shape how streets are planned and built.

These strategies are organized into three roles:

- **Policy Change** – Updates to design standards and guidance. Updates in this category are often public works-led and funded, but some safety findings like SS4A can be used to help agencies incorporate the latest advances into their community.
- **Proactive Prevention** – Ensuring safety is integrated into routine decisions, not just reactive fixes. City staff beyond transportation functions need to play a role here because many proactive fixes are identified by police/public safety, maintenance and inspector staff, and citizen comments. Opportunities for low-cost strategies deployed proactively may depend on high levels of internal collaboration to focus on making each project a safety project.

- **Behavior Modification** – Even with a good approach to projects and increasing how many projects touch safety, travelers on the road share responsibility for safe travel and must be engaged with useful guidance on how they can play their part on the road. Recommendations in this category touch on how safety issues are defined (e.g., speed as a systemwide factor) or how they are communicated meaningfully to travelers. Recommendations in this category may come from outside City staff; from sources like state, regional, and local nonprofit and advocacy groups; and from the public safety space through State Highway Safety Offices. Regardless of outside partner leadership, it is important for the City to engage and coordinate the use of messages targeted to safe travel behaviors.

Together, these changes support a consistent, systemwide approach to delivering safer streets. Together, these changes support a consistent, systemwide approach to delivering safer streets.

Emphasis Area Strategy

The eight emphasis areas outlined below were derived from Rapid City crash data, South Dakota's Strategic Highway Safety Plan, and SS4A planning guidance. Each emphasis area is analyzed at both the crash-event level and systemic level. These categories reflect the five elements of the SSA and allow Rapid City to consider not only where crashes have occurred but also where risk conditions exist and can be addressed before crashes happen through targeted design, behavior modification, and policy interventions.

The eight emphasis areas:

- Angle Crashes
- Vulnerable Road User (VRU)
- Speed-Related
- Lighting Conditions
- Alcohol/Impairment
- Motorcycles
- Young Drivers
- Older Drivers

Figure 2. FHWA Safe System Roadway Design Hierarchy

The order of these emphasis areas is intentional and based on the Safe System Roadway Design Hierarchy (**Figure 2**). Angle crashes and VRU safety are closely related to Tier 1, which involves the removal of severe conflicts and has the highest potential for severe crash reduction or elimination. Then, speeding is related to Tier 2. Lighting is the last design-focused emphasis area and is most closely related to Tier 4.

While the remaining emphasis areas are not design or engineering focused, alcohol and impairment have some potential to be addressed by the City through policy and law enforcement activity. Motorcycles, young drivers, and older drivers are users of the system, but working with these users on behavior modifications may take partnerships for the City to implement. Even so, street designs and policy can change to better accommodate these users.

Angle Crashes

Primary Strategy: Policy + Roadway Conflict Reduction

Angle crashes often occur at intersections or driveways in the transportation network. Many severe angle crashes involve turning movements and the lack of signal protection for movements crossing high-speed travel paths.

Policy-Level Approach:

- Support adoption of intersection design policies that primarily emphasize roundabouts and reduced conflict designs where feasible and secondarily emphasize protected turning movements and signal timing changes over additional signage or striping.
- Consider corridor-level access management strategies and driveway consolidation during City capital projects, including resurfacing and reconstruction due to projects like water main and utility relocations.

Proactive Prevention:

- Apply reflective backplates, protected-phase left turn signals, and advanced warning signage at intersections with documented angle crashes.
- Evaluate reduced conflict (also called 3/4 and right-in, right-out) intersections or roundabouts at skewed intersections or two-way stop control locations on higher-speed corridors.

Behavior Modification:

- Use public awareness campaigns focused on intersection navigation and visibility, particularly for older and younger drivers who may struggle with complex geometries.

Enforcement:

- Prioritize targeted enforcement of red-light running and failure-to-yield violations at high-crash intersections.

Vulnerable Road Users

Primary Strategy: Safe Crossings + Separation

VRUs, including pedestrians, bicyclists, and micromobility users, are disproportionately affected by crashes in the downtown core and on arterial corridors with limited crossings.

Policy-Level Approach:

- Establish a Complete Streets policy to guide infrastructure decisions with VRU safety in mind. Implementation of the Complete Streets policy will likely require the development or adoption of a Complete Street toolkit or design guide for public works and its contracted support.
- Include VRU countermeasures as required elements in project scopes for any resurfacing or redesign.

Proactive Prevention:

- Implement rectangular rapid flashing beacon (RRFBs), high-visibility crosswalks, pedestrian refuge islands, and sidewalk gap closures on identified VRU corridors, regardless of site-specific crash history.

Behavior Modification:

- Develop signage and outreach materials reminding drivers of pedestrian yielding laws, particularly at midblock crossings.

Enforcement:

- Conduct regular pedestrian crosswalk enforcement operations at priority crossings and corridors.

Speed

Primary Strategy: Speed Management + Self-Enforcing Design

Speed-related crashes are among the most common across all emphasis areas, often tied to wide cross-sections, long block lengths, or downhill grades. Speeds can vary widely based on driver preferences, but in multimodal contexts, multiple design opportunities exist to encourage (or have the street self-explain) the most appropriate travel speed.

Policy-Level Approach:

- Establish a Citywide speed management review process, including speed limit setting based on context, not just functional class, and speed audits near VRUs and communities.

Proactive Prevention:

- Implement lane narrowing and corridor management strategies on streets with speed-related crash history.
- Install radar speed signs near schools and key crosswalks, which can help with drivers self-correcting. (Speed safety cameras can play a similar role but must be legally allowable before being considered for deployment.)

Behavior Modification:

- Educate the public on speeding risks through driver feedback tools, neighborhood campaigns, and traffic-calming demonstrations.

Enforcement:

- Expand high-visibility speed enforcement on corridors with a history of speed-related crashes.

Lighting Conditions

Primary Strategy: Visibility Enhancement

Poor lighting conditions contribute to increased crash risk, especially for VRUs and at intersections.

Policy-Level Approach:

- Develop or update a municipal lighting policy that prioritizes illumination (vehicle and pedestrian-scale) on high-risk corridors and midblock crossings.
- Integrate lighting audits into the capital improvement plan (CIP) and corridor planning processes.

Proactive Prevention:

- Add or upgrade lighting at intersections and known VRU conflict points, especially in areas with high nighttime crash rates.

Behavior Modification:

- Include nighttime visibility education (e.g., pedestrian reflectors, headlight use) in public outreach strategies.

Enforcement:

- Enforce headlight-use compliance and impaired-driving checks during nighttime hours.

Alcohol/Impairment

Primary Strategy: Enforcement + Impairment Reduction

A significant portion of fatal and serious injury crashes involve alcohol, often in the downtown area or on scenic drives prone to late-night travel.

Policy-Level Approach:

- Collaborate with law enforcement to increase impaired-driving checkpoints or saturation patrols on known high-risk corridors.

Proactive Prevention:

- Coordinate with South Dakota's Highway Safety Plan and Impaired Driving Plan to determine whether any operational or infrastructure countermeasures are appropriate.

Behavior Modification:

- Partner with local bars, breweries, and event organizers to promote designated driver programs or ride-share partnerships.

Enforcement:

- Increase targeted impaired-driving patrols during high-risk times (e.g., weekend nights, holidays, special events).

Motorcycles

Primary Strategy: Risk Awareness + Visibility

Motorcycle crashes, while fewer in number, often result in serious injuries. These crashes are concentrated on wide arterials and scenic drives.

Policy-Level Approach:

- Encourage helmet use and motorcycle safety training through state and local partnerships.

Proactive Prevention:

- Improve visibility through better signage, reflective backplates, and enhanced delineation along curves and multilane roads.

Behavior Modification:

- Consider seasonal public campaigns during high-riding months focused on driver awareness of motorcycles.

Enforcement:

- Conduct seasonal enforcement of unsafe passing, speeding, and impaired riding during peak motorcycle season.

Young Drivers (Under 25)

Primary Strategy: Behavior Modification + Education

Crashes involving younger drivers often stem from inexperience, speed, or distraction. These crashes cluster near schools, commercial areas, and wider arterial roadways.

Policy-Level Approach:

- Coordinate with local schools and law enforcement to support safe driving programs targeting new drivers.
- Consider school zone speed enforcement policies or youth-targeted road safety programs.

Proactive Prevention:

- Target lower-cost interventions such as radar feedback signs and speed displays on corridors with recurring crashes involving younger drivers.

Behavior Modification:

- Promote education initiatives and media campaigns tailored to early drivers, including social media-based outreach. Use the City's reputable voice to share and amplify already funded education campaigns by State Highway Safety Offices and seek public relations and media training opportunities to grow local roles in safety messaging.

Enforcement:

- Increase graduated driver's license compliance checks and targeted patrols around schools and youth gathering areas.

Older Drivers (Over 65)

Primary Strategy: Design for Clarity + Simplification

Age-related changes in vision, reaction time, and mobility can increase crash risks for older drivers, especially at complex intersections or on higher-speed corridors.

Policy-Level Approach:

- Evaluate adoption of all-age-and-ability friendly design guidelines for City-owned streets. Such guidelines might limit the use of crossings or intersections to a smaller number of lanes for stop-controlled intersections and similar design that simplify choices in safe gaps by drivers.

- Encourage enhanced lighting and clarity review and decluttering of signage and pavement markings as part of standard asset rehab programs.

Proactive Prevention:

- Improve intersection legibility through larger signs (particularly regulatory signs like stop signs), clearer pavement markings, and reduced decision-making complexity.

Behavior Modification:

- Partner with local aging services and healthcare providers to distribute safety materials related to navigation and safe driving practices.
- Work with public health and social services to discuss travel and mobility options for older travelers.

Enforcement:

- Support targeted enforcement of failure-to-yield and red-light violations in areas with high concentrations of older drivers.

Processes Enabling Safety Policy

The above policy strategies are effective methods of reducing multimodal crashes, but they may not be actionable if the next steps are not clear and if the City does not have resources reserved to cover both staff time and any contracted services. The overarching safety action plan may also be too broad to define precise next steps for specific emphasis areas. The SS4A program from the U.S. Department of Transportation defines a valuable next step of the CSAP as conducting supplemental planning. Supplemental planning can help delve into key approaches and actions targeted to specific street types and contexts, specific users, and specific parts of the project development process. While the policy and process change aspect of the CSAP identifies existing processes and plans and their potential opportunities, the related recommendations to change policy and process may just be a starting point.

Table 1 enumerates processes and plans that can use well-established models to help begin to enact enhanced safety policy.

Table 15. Recommended Safety Processes

Safety Study or Process	Aligned Emphasis Areas	Description	Cost	References
Complete Streets Policy	Speeding; Angle Crashes; VRU; Lighting	Complete Streets is an approach to planning, designing, and building streets that enables safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Developing and enacting a Complete Streets policy provides a framework for accommodating VRU needs and conditions that implement a safer road for all users.	$$	Complete Streets
Road Safety Audits	All	Develop City guidance for Road Safety Audit implementation into traffic studies and planning efforts.	$$	Road Safety Audits
Intersection Control Evaluation (ICE)	Angle Crashes; VRU; Lighting	The ICE policy should evaluate safety, traffic, and transit operations; active transportation access; cost; and right-of-way impact, among other factors. Adhering to an ICE policy enables a uniform and data-driven approach that will include the consideration of community and agency priorities, especially from a safety aspect.	$	Intersection Control Evaluation
Traffic Impact Study (TIS)	Angle Crashes; VRU; Lighting	A TIS policy should include safety and crash analysis at its core. All development projects (including infill) of a certain size would trigger the requirement for a study of safe access generated and traveling adjacent to the site, with clarity on cost and responsibility share between the public and private sector. The policy developed can also accomplish safe standards for access management of all development projects, even those that do not meet specific traffic impact thresholds.	$	Traffic Impact Studies
Traffic-Calming Policy	Speeding; VRU	Develop and maintain a policy to identify eligible locations and prioritize interventions for traffic-calming projects. This policy will implement projects that reduce speed and promote a safer environment for all users in a systemic fashion. Factors for identification should include multimodal traffic volume, existing geometry, and vehicular speeds.	$$	Traffic Calming
Speed Management Plan	Speeding; VRU; Motorcycle;	A speed management plan contains several key elements such as Citywide data collection and analysis, review of	$	Speed Management Program

Safety Study or Process	Aligned Emphasis Areas	Description	Cost	References
	Young Driver; Older Driver	speed limit setting practices, traffic-calming strategies, enforcement strategies, public education, and awareness.		
Sidewalk and Trail Snow Removal	VRU	The snow removal strategies should prioritize critical active transportation pathways and Safe Routes to Schools pathways and bus routes or areas that are a higher risk for VRUs. Prioritizing snow removal for these areas builds trust and reliability in non-motorized travel methods in the community. This also improves safety for VRUs in higher-risk transportation conditions.	$$	Sidewalk Snow Removal

Systemic and Location-Specific Safety Project Strategies

A comprehensive safety strategy must address both location-specific, high-risk corridors and systemic conditions that contribute to preventable crashes across the roadway network. While major capital investments will be necessary to mitigate crash severity on the High-Injury Network, systemic safety projects play a vital role in reducing risk exposure, modifying behavior, and enhancing roadway conditions Citywide.

This dual-pronged approach aligns with the SSA, which emphasizes layered protection by recognizing that human error is inevitable and roadway design, speed, visibility, and predictability can reduce the consequences of those mistakes. Whether location-specific or systemic, effective safety planning focuses on continual monitoring and refinement, which is why one foundational approach is the development and use of a Safer Streets Toolkit before moving into how and where the toolkit is recommended for application.

Safer Streets Toolkit

The Safer Streets Toolkit includes safety countermeasures proven to provide safety benefits. Implementing any of the countermeasures would lead to a reduction in the number of crashes, including fatal and serious injury crashes. These strategies align with the SSA, which recognizes that because “people make mistakes,” the system must be proactive and include layers of redundancy. Therefore, these countermeasures can be used independently or in conjunction depending on existing conditions and the needs of the community. The safety countermeasures

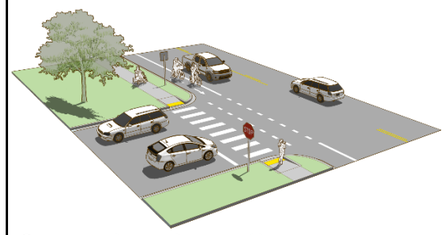
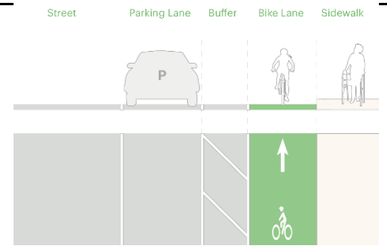
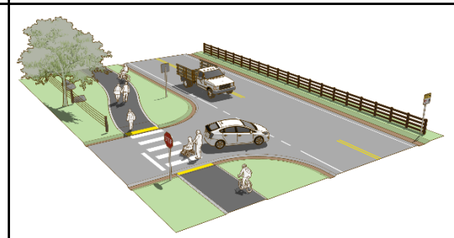
comprising the Safer Streets Toolkit are described in **Table 2**. The Toolkit itself is broken into sections for segment countermeasures and for intersection countermeasures for ease of future application.

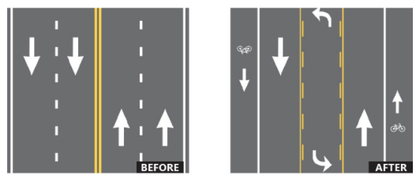
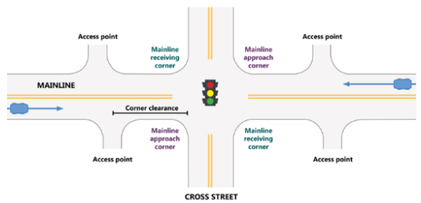
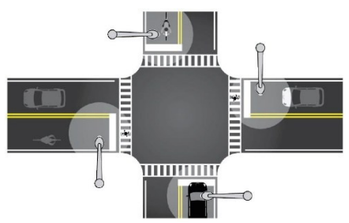
Table 26. Safer Streets Toolkit Outline

Toolkit Feature	Description
Countermeasure Name	Name of the countermeasure
Image	Visual depiction of the strategy
Description	Description of the countermeasure
Crash Types	Crash types addressed by the countermeasure: • Lane Departure: Fixed object, head-on, overturn, sideswipe, parked vehicle, single vehicle • Rear-end • Angle: Left-turn, right angle • Bike/Ped: Bicyclists and pedestrians
Crash Reduction Factor	Potential reduction in all crash severities and types owing to implementation of the countermeasure
Project Type	Each countermeasure is grouped into either major project or systemic project depending on the impact of implementation and required funding
Cost	The estimated cost for implementation of the countermeasure: • **$** = <$10k • **$$** = $10k – $100k • **$$$** = $100k - $1M • **$$$$** = $1M+
Traffic Considerations	Factors that help determine whether a countermeasure may be a good fit for a potential location or project. Some examples include roadway geometry, traffic volume, and speed limits.
References	Links to industry resources and references that provide additional information on each countermeasure.

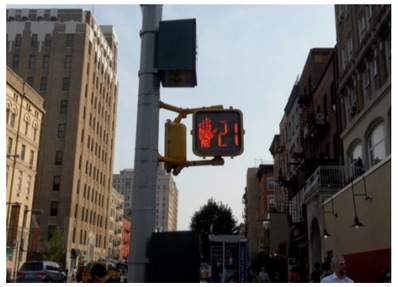
Table 3. Safety and Countermeasure Toolkit.

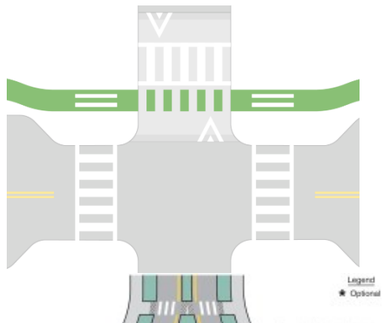
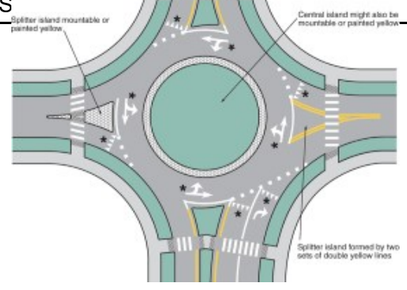
Segment Countermeasures									
Countermeasure		**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
VRU Facilities/Traffic Calming	Horizontal Traffic Calming	 Source: NACTO	Horizontal traffic-calming techniques slow traffic and improve safety. Examples include: • Chicanes • Curb extensions/ bulb-outs • Refuge islands • Pinch points • Lane shifts	All	30%	Systemic Project	$	<20,000 ADT	Speed Reduction Mechanisms
	Vertical Traffic Calming	 Source: NACTO	Vertical-traffic calming techniques slow traffic and improve safety. Examples include: • Speed humps • Raised crosswalks/ intersections • Traffic circles	Speed Bike/Ped Departure Angle	30%	Systemic Project	$$	<10,000 ADT Ensure Compliant with EMS Vehicles	Vertical Speed Control Elements
	Landscaped Buffers/On-Street Parking	 Source: PEDSAFE	Landscaped buffers, on-street parking, and street trees implemented in conjunction or separately can slow traffic and improve safety.	All	–	Major Project	$$$	Evaluate Line of Sight at Intersections	On-Street Parking Enhancements Landscaping
	Lane Narrowing	 Source: Braintree, MA	Lane narrowing reduces roadway width while maintaining the existing lane count, which slows traffic, shortens pedestrian crossings, and adds space for bike/ pedestrian areas.	Speed Bike/Ped Departure	25%	Systemic Project	$$	Avoid on Truck Routes	Lane Narrowing

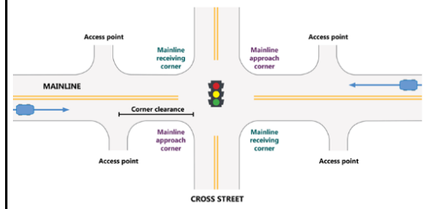
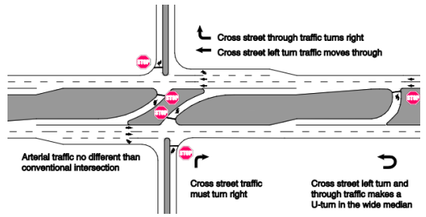
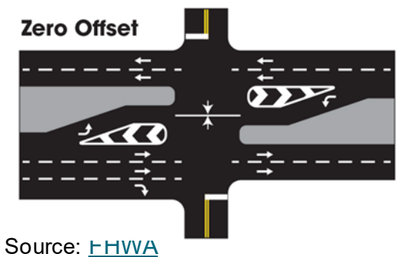
Segment Countermeasures									
Countermeasure		Image	Description	Crash Types	Crash Reduction Factor	Project Type	Cost	Traffic Considerations	References
	Sidewalks	 Source: NACTO	Sidewalks improve pedestrian and cyclist safety by providing designated spaces separate from traffic, including ADA-compliant features.	Ped/Bike	90% (where sidewalks are missing)	Major Project	$$-$$$		Walkways
	Bicycle Lanes	 Source: Rural Design Guide	Bicycle lanes make cycling safer and more comfortable by separating cyclists from traffic and pedestrian facilities using paint or physical barriers.	Ped/Bike	45%	Major Project	$$	<6,000 AADT <35 MPH	Bicycle Lanes
	Protected Bicycle Lanes/Cycle Tracks	 Source: NACTO	Protected bike lanes separate cyclists from traffic with physical barriers, significantly reducing collisions and improving safety.	Ped/Bike	55%	Major Project	$$$	6,000 - 20,000 AADT <45 MPH Evaluate Exclusive Turn-Lanes and Protected Turn Signal Phasing	Separating Protected Bike Lanes
	Shared Use Paths	 Source: Rural Design Guide	Shared use paths (off-street trails) improve safety and accessibility for active transportation and recreation by separating users from traffic.	Ped/Bike	25%	Major Project	$$-$$$	>20,000 AADT >45 MPH	Paths

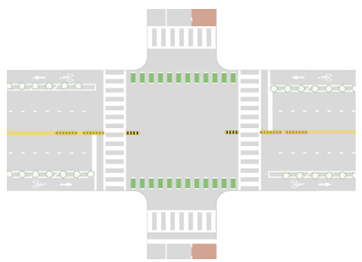
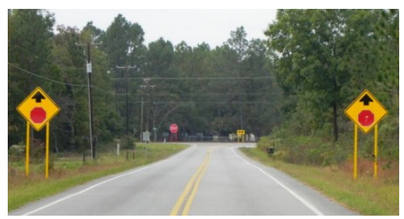
Segment Countermeasures									
Countermeasure		**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
Roadway Reconfiguration	Roadway Reconfiguration	 Source: FHWA	Roadway reconfigurations reduce the number of lanes, resulting in a decrease in conflict points, crossing distances, and vehicle speeds.	All	30%	Major Project	$$-$$$	4-to-3 lanes: <20,000 ADT	Roadway Reconfiguration
Raised Median & Access Management	Raised Medians and Access Management	 Source: FHWA	Medians separate traffic, reducing head-on collisions and providing safe havens for pedestrians. Limiting driveways improves access management and reduces traffic conflicts.	All	40%	Major Project	$$$$	>12,000 ADT	Corridor Access Management Raised Medians
Additional Countermeasures	One-way to Two-way Street Conversions	 Source: NACTO	Converting one-way streets to two-way streets calms traffic, increases connectivity, and creates safer streets for all users.	Bike/Ped	30%	Major Project	$$$	Evaluate Signal Modifications, Access, and Turn Lanes	One-Way to Two-Way Street Conversion
	Roadway Lighting	 Source: FHWA	Street lighting improves visibility, especially at intersections, crosswalks, and other high traffic areas, which reduces crashes and enhances pedestrian safety.	Bike/Ped Angle	20%	Systemic Project	$$		Lighting

Segment Countermeasures									
Countermeasure		Image	Description	Crash Types	Crash Reduction Factor	Project Type	Cost	Traffic Considerations	References
	Dynamic Speed Feedback Sign	 Source: Department of Transportation	Speed feedback signs display approaching drivers' speeds to make them aware of their current speed, with flashing numbers indicating speeding.	Speed	5%	Systemic Project	$		Dynamic Speed Feedback Sign
	Shoulder Installation / Widening	 Source: PEDSAFE	Installing or widening shoulders provides space for disabled vehicles, maintenance, and other safety activities.	Departure	25%	Major Project	$$$	Most effective when ADTs >1,000	Shoulders and Walkways
	Curve Delineation Modifications	 Source: FHWA	Enhanced curve delineation uses reflective chevrons and advance warning signs to significantly reduce curve crashes, especially at night and in rural areas.	Departure	30%	Systemic Project	$$	History of Roadway Departure or Nighttime Crashes	Enhanced Delineation for Horizontal Curves

Intersection Countermeasures									
Countermeasure		**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
Systemic Traffic Signal Modifications	Systemic Traffic Signal Modifications	 Source: PEDSAFE	Traffic signal modifications improve safety and efficiency through both hardware and software upgrades such as: • **Hardware:** Signal light upgrades, retroreflective backplates, pedestrian countdowns, and stop-bar/crosswalk striping, • **Software:** Updated timings, leading pedestrian intervals, and intelligent transportation systems implementation.	All	15%	Systemic Project	$$		Traffic Signal Enhancements
Systemic Crossing Modifications	Systemic Crossing Modifications	 Source: FHWA	Systemic crossing modifications improve pedestrian safety and accessibility across busy streets with marked crosswalks, lighting, refuge islands, and clear signage.	Ped/Bike	30%	Systemic Project	$$	See FHWA STEP Guide, Table 1	Marked Crosswalks Crosswalk Visibility Enhancements
	Rectangular Rapid-Flashing Beacon	 Source: PEDSAFE	RRFBs use flashing lights to improve safety at unsignalized crosswalks, especially crossings of two lanes or less and under 40 mph.	Ped/Bike	45%	Major Project	$$	See FHWA STEP Guide, Table 1	Rectangular Rapid Flashing Beacons (RRFB)

Intersection Countermeasures									
Countermeasure		**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
	Pedestrian Hybrid Beacon	 Source: FHWA	PHBs use flashing lights to improve driver yielding to pedestrians at unsignalized crossings, especially on higher-speed roadways.	Ped/Bike	55%	Major Project	$$$	See FHWA STEP Guide, Table 1	Pedestrian Hybrid Beacons
	Raised Crossing	 S	Raised crossings improve pedestrian safety and accessibility by slowing traffic and providing a level crossing surface.	Ped/Bike	30%	Major Project	$$	See FHWA STEP Guide, Table 1	Design Tools for Intersections
Roundabout	Roundabouts	 Source: FHWA	• **Single-lane** reduce traffic speeds, eliminate dangerous angle crashes, and shorten crossing distances for pedestrians. • **Multilane** handle more traffic but have more conflicts than single-lane roundabouts. • **Mini-roundabouts** are smaller, single-lane versions of traditional roundabouts with traversable centers for larger vehicles without requiring additional ROW.	All	65%	Major Project	$$-$$$$	<30,000 AADT <45,000 AADT <20,000 AADT	Roundabouts

Intersection Countermeasures									
Countermeasure		**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
Access Management	Raised Medians and Access Management	 Source: FHWA	Medians separate traffic, reducing head-on collisions and providing safe havens for pedestrians. Limiting driveways improves access management and reduces traffic conflicts.	All	40%	Major Project	$$$$	>12,000 ADT	Corridor Access Management Raised Medians
Intersection Reconfiguration	Reduced Conflict Intersections	 Source: FHWA	Reduced conflict intersections redesign left turns to reduce crashes and improve safety. Common types include restricted cross U-turns and median U-turns. Right-in, right-out and three-quarter intersections simplify traffic flow by restricting side-street movements, forcing right turns, and reducing crossing paths.	Bike/Ped Angle Rear-End	35%	Major Project	$$$$	Prior Condition Stop-Controlled	Reduced Left-Tum Conflict Intersections
	Turn-Lane Additions	 Source: FHWA	Adding auxiliary lanes separates turning traffic, reducing crashes while improving visibility.	Angle Rear-End	45%	Major Project	$$$	Visibility Concerns History of Left Turn-Related or Rear-End Crashes	Dedicated Left- and Right-Turn Lanes at Intersections

Intersection Countermeasures									
	Countermeasure	**Image**	**Description**	**Crash Types**	**Crash Reduction Factor**	**Project Type**	**Cost**	**Traffic Considerations**	**References**
Additional Countermeasures	All-Way Stop-Control Conversion	 Source: FHWA	All-way stop control converts either two-stops or unwarranted signals to four-way stops, reducing wait times and making intersections more predictable.	Bike/Ped Angle	50%	Major Project	$	<12,000 ADT (each approach) <=2 thru-lanes (each approach)	Stop–Controlled Intersections
	Curb Extensions	 Source: PEDSAFE	Curb extensions and bulb-outs shorten crossing distances, improve visibility, and increase pedestrian comfort at intersections.	Bike/Ped Angle	30%	Systemic Project	$$	See FHWA STEP Guide, Table 1 Avoid at High Truck Volume Intersections	Curb Extensions
	Left Turn Hardening	 Source: NACTO	Left turn hardening reduces vehicle turning speed and increases vehicle yielding to pedestrians by guiding vehicles to take wider turns.	Speed Bike/Ped Angle	30%	Systemic Project	$$	Avoid at High Truck Volume Intersections	Left-Turn Hardening
	Systemic Stop-Control Modifications	 Source: FHWA	Systemic stop-control modifications improve intersection visibility with advanced warning signs, retroreflective panels, enlarged signs, rumble strips, and cross-traffic warning signs.	Departure Angle Rear-End	40%	Systemic Project	$$	History of Stop-sign Running or Nighttime Crashes	Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

Systemic Projects

Systemic projects aim to reduce risk conditions Citywide, even in locations without a significant crash history, by applying proven countermeasures to similar roadway environments. These projects are typically low to moderate in cost and are ideal for implementation during routine maintenance, resurfacing, or asset preservation cycles.

Low-Cost Safety Enhancements

Systemic safety projects may include low-cost safety enhancements, such as:

- High-visibility crosswalks and advance yield markings
- Reflective signal backplates
- Radar speed feedback signs
- Pedestrian refuge islands
- Lighting enhancements at intersections and midblock crossings
- RRFBs at uncontrolled pedestrian crossings
- Edge line rumble strips on curves and rural transitions
- Chevron signs and dynamic curve warnings
- Speed cushions or striping changes to narrow perceived lane widths

These improvements are not corridor specific but rather context specific, based on adjacent land uses to the roadway, crash type history, geometry, and user conflict potential.

Policy and Planning Integration

Rapid City's systemic safety approach can integrate with ongoing City processes and capital planning cycles. Systemic safety treatments will become most effective when incorporated into:

- **CIP project programming** – by using the Safer Streets Toolkit in concept development and sequencing and intentionally reserving some funding for safety projects (potentially to serve as match for federal or state safety funds).
- **Asset rehabilitation processes and resurfacing schedules** – by applying context-sensitive and street rightsizing principles.

- **Land development permit and land use or zoning change requests** – by focusing reviews on access management policies and safety impact mitigation from traffic impact studies.
- **Community and economic development projects** (particularly in areas of persistent poverty) – by intentionally scoping improvements to fill gaps in limited pedestrian infrastructure and reduce crashes in historically overrepresented streets and intersections affecting certain user types.

Integration with Crash Emphasis Areas

Each systemic project should align with one or more emphasis areas from the safety analysis. **Table 3** illustrates examples of applicable countermeasures mapped to specific crash types. The following pages focus deeper on combining observed safety needs from individual emphasis areas to targeted portions of the Rapid City streets network where each emphasis area is prevalent and could be treated with systemic strategies.

Table 37. Emphasis Area to Applicable Systemic Strategies Alignment

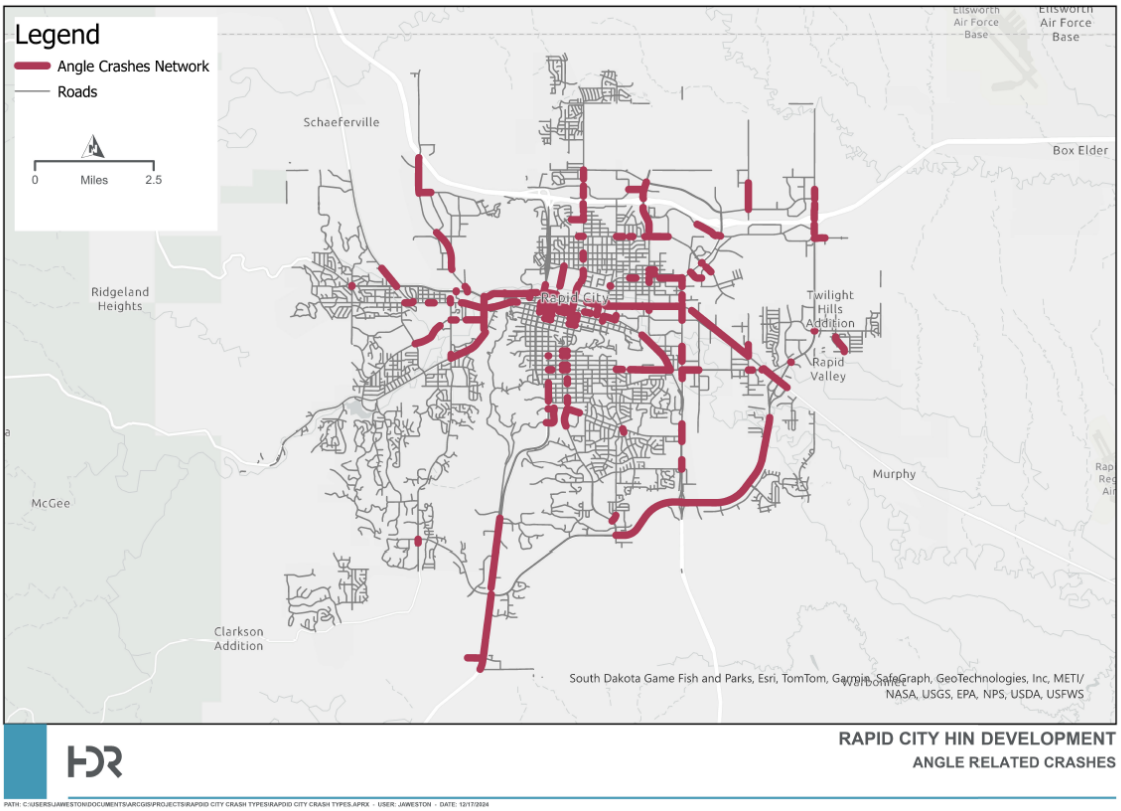
Emphasis Area	Applicable Systemic Strategies
Angle Crashes	Reflective backplates, protected left-turn phasing, access management, roundabouts
Young Drivers	Radar feedback signs, simplified signage, painted centerlines
Older Drivers	Larger font signage, advanced warning signs, simplified intersection geometry
Lighting Conditions	LED lighting retrofits, illumination at key intersections and crossings
Vulnerable Road Users	RRFBs, midblock crossings, sidewalk gap closures, curb extensions, pedestrian refuges
Motorcycles	Enhanced curve delineation, dynamic speed signs, friction surface treatments
Alcohol	Rumble strips, lighting, speed cushions, nighttime speed enforcement
Speed	Road diets, speed feedback signage, narrowed travel lanes, chicanes

Angle-Related Crashes (Systemic Focus)

Angle crashes in Rapid City occur frequently at both signalized and unsignalized intersections, particularly on multilane arterials and where crossroads are skewed or offset. Several high-risk nodes are located along the urban grid and on approach corridors to Interstate 90 (I-90). Risk factors include higher approach speeds on major roads intersecting with two-lane minor roads, skewed geometry that reduces sight distance, and permissive left-turn phasing at high-volume locations. Inconsistent channelization, faded markings, and closely spaced access points can compound these issues.

Systemic countermeasures for these locations include conversion to roundabouts, restricted crossing U-turns (RCUTs)/J-turns on higher-speed divided corridors, and right in-right out access at minor legs. Signal phasing improvements—such as converting to protected/permitted or protected lefts, adding flashing yellow arrows with proper clearance intervals, and retiming for reduced dilemma-zone exposure—can address operational risks. Geometric improvements such as reduced skew, tightened corner radii, and enhanced intersection lighting, along with driveway consolidation, can further reduce angle crash potential.

Figure 3. Angle-Related Crashes Network.

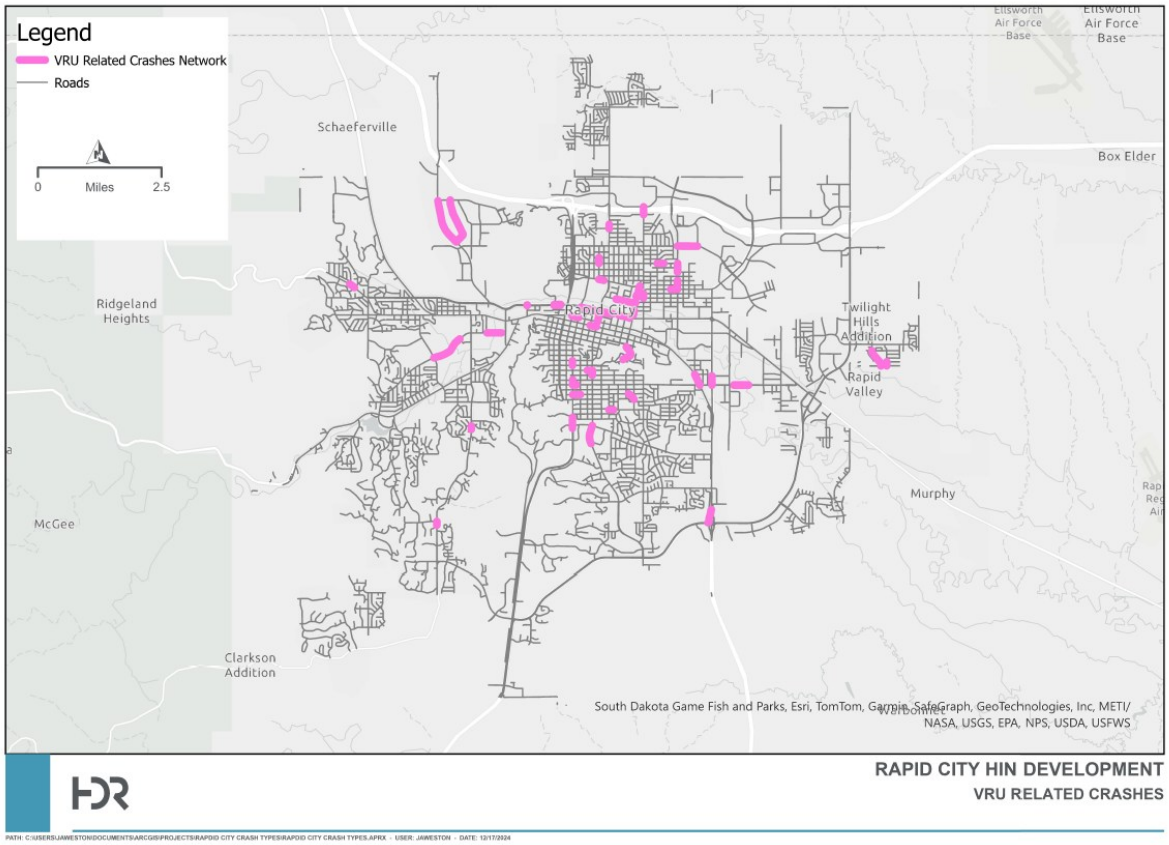


Vulnerable Road Users (Systemic Focus)

VRU-related crashes in Rapid City are concentrated on multilane arterials with long distances between controlled crossings and in activity centers such as downtown, commercial corridors, and approaches to Rapid City. These locations often have four or more lanes with posted speeds of 35 to 45 mph, missing or discontinuous pedestrian and bicycle infrastructure, and inadequate nighttime lighting. Turning conflicts at wide intersections and slip lanes further elevate risk for nonmotorized users.

Systemic countermeasures include adding crossings to meet spacing guidelines, installing refuge islands, and adding leading pedestrian intervals (LPI) and enhanced treatments such as RRFBs or pedestrian hybrid beacons at midblock generators. Filling sidewalk gaps, adding buffered or protected bike lanes, and creating traffic-calmed bike boulevards on parallel streets can improve network connectivity. Corridor speed management, pedestrian-scale lighting, and daylighting at intersections and driveways can further improve VRU safety.

Figure 4. Vulnerable Road Users Network.

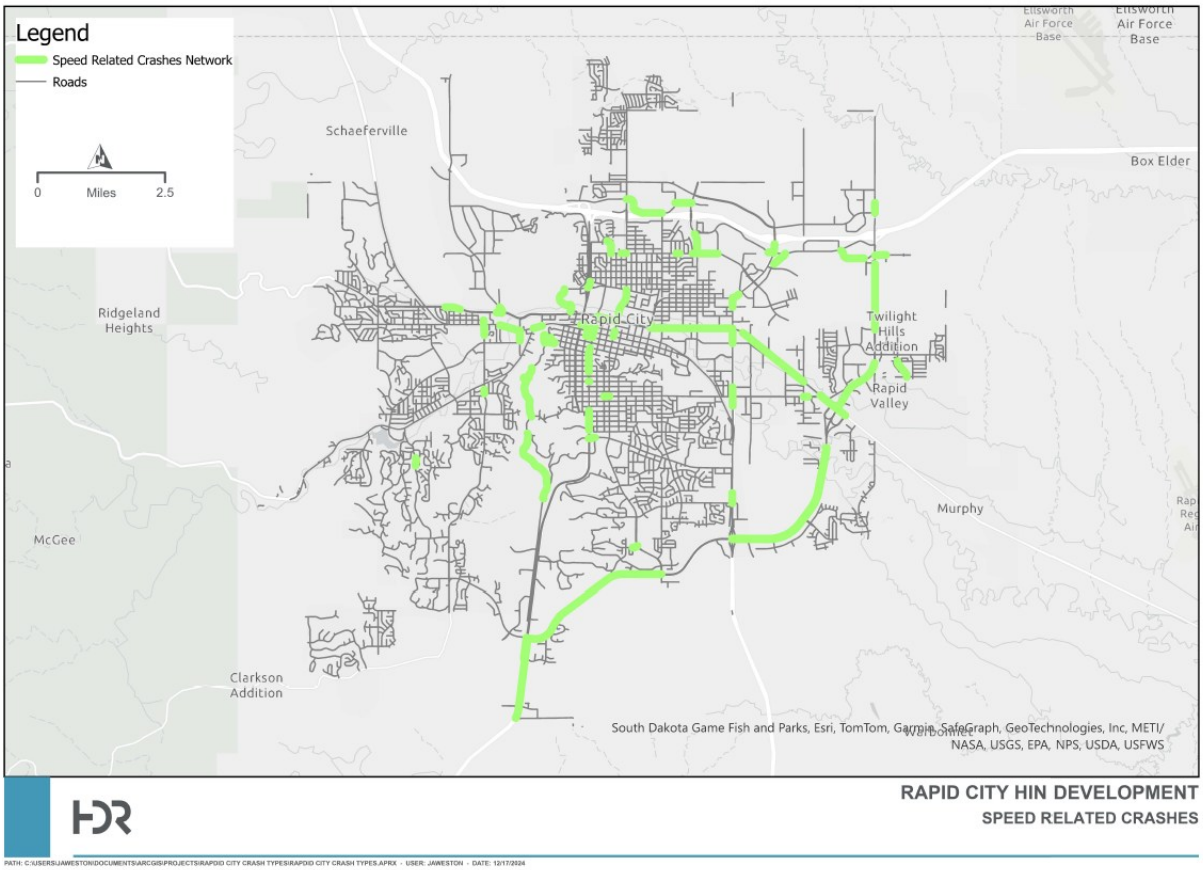


Speed-Related Network (Systemic Focus)

Speed-related crash concentrations in Rapid City occur along continuous arterial segments with posted speeds of 35 to 45 mph, long signal spacing, and wide cross-sections, especially on I-90 connectors and approaches to Rapid City. Wide lanes, extended tangents, and sparse crossing opportunities create conditions for high-operating speeds. Multilane undivided segments with frequent access points further increase exposure to high-severity crashes.

Systemic countermeasures include narrowing lanes, installing center medians, enhancing roadside friction with streetscape elements, and adding speed cushions or tables on local and bike boulevard routes. Operational strategies such as speed feedback signs, enforcement waves, and retimed signal coordination can complement physical changes. Additional crossings, refuge islands, LPIs ,and RRFBs, as well as targeted speed management plans, can support safer travel speeds Citywide.

Figure 5. Speed-Related Network.

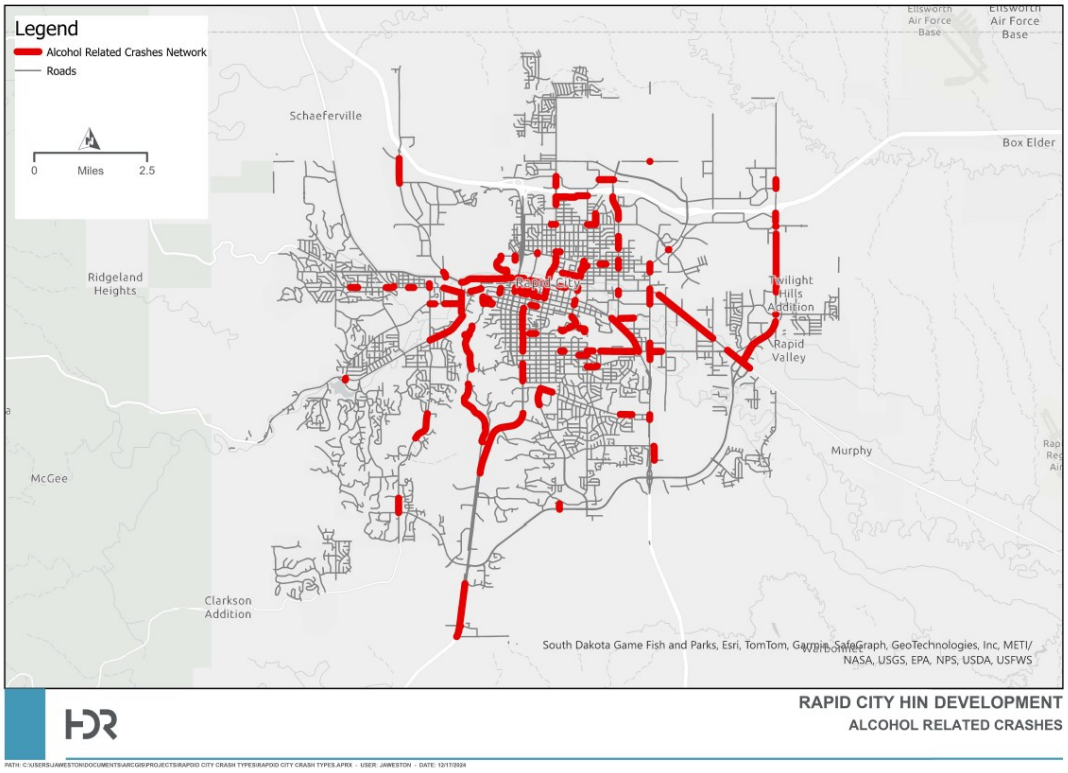


Alcohol-Related Crashes (Systemic Focus)

Crash analysis shows that alcohol-involved crashes in Rapid City tend to cluster along evening-activity corridors and higher-speed arterials that connect entertainment and dining areas to I-90 interchanges. These patterns are especially evident in the core street grid and east toward Rapid City, where recurring late-night incidents have been recorded. These corridors often feature 4 to 5 lane cross-sections with posted speeds between 35 and 45 mph, frequent driveways, and wide intersections with permissive left turns. Nighttime and low-light conditions further elevate risk, particularly where lighting is inconsistent or nonuniform. The combination of commercial land uses, weekend peaking, and complex access points creates high conflict potential for impaired drivers.

Systemic countermeasures may include access consolidation, addition of medians or turn pockets, and road diets to narrow lanes where feasible. Intersection treatments such as protected or protected/permissive lefts, LPIs, targeted lighting upgrades, and minor leg turn restrictions can reduce risk. Operational and policy measures, like targeted impaired-driving enforcement, late-night transit options, and ignition interlock advocacy, paired with seasonal “Drive Sober” campaigns and ride-hailing partnerships, can complement engineering solutions.

Figure 6. Alcohol-Related Crashes Network.



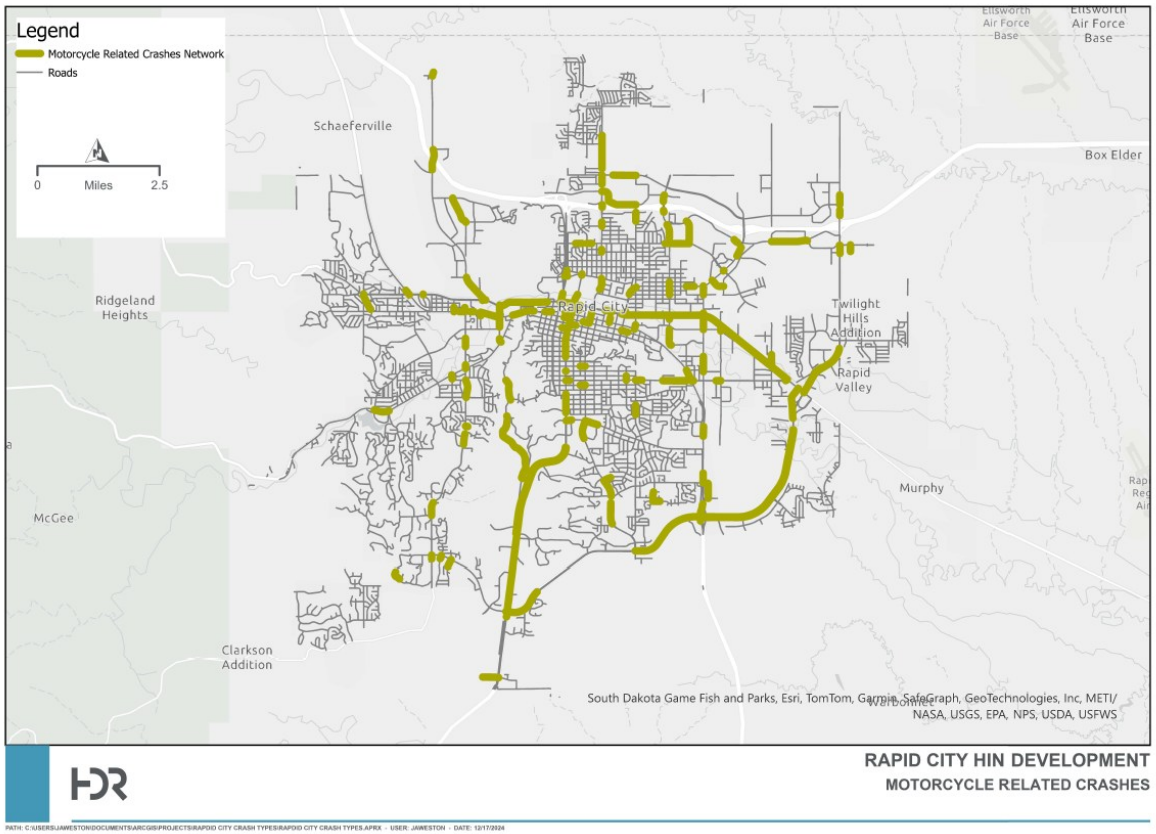
Motorcycle-Related Crashes (Systemic Focus)

Motorcycle crashes are concentrated along higher-speed corridors and curvilinear roadway segments on the urban fringe, as well as at intersections in the City's arterial network. Seasonal peaks align with major regional motorcycle events and tourism.

Key risk factors include high-operating speeds, limited recovery space on shoulders, curves with inconsistent advisory signing or pavement friction, and intersection conflicts where motorcycles are not easily detected by other drivers. Changes in pavement surface, such as utility covers or painted areas, can create additional hazards for riders.

Systemic countermeasures should focus on enhanced curve delineation, dual-posted advisory speeds, high-friction surface treatments, and rumble stripes designed to be motorcycle friendly. Intersection safety can be improved with daylighting, larger signal backplates, protected left turns where warranted, and targeted lighting upgrades. Regular maintenance of surface conditions, detection system calibration for motorcycles, and seasonal safety messaging during peak Sturgis Rally periods can provide additional benefits.

Figure 7. Motorcycle-Related Crashes Network.

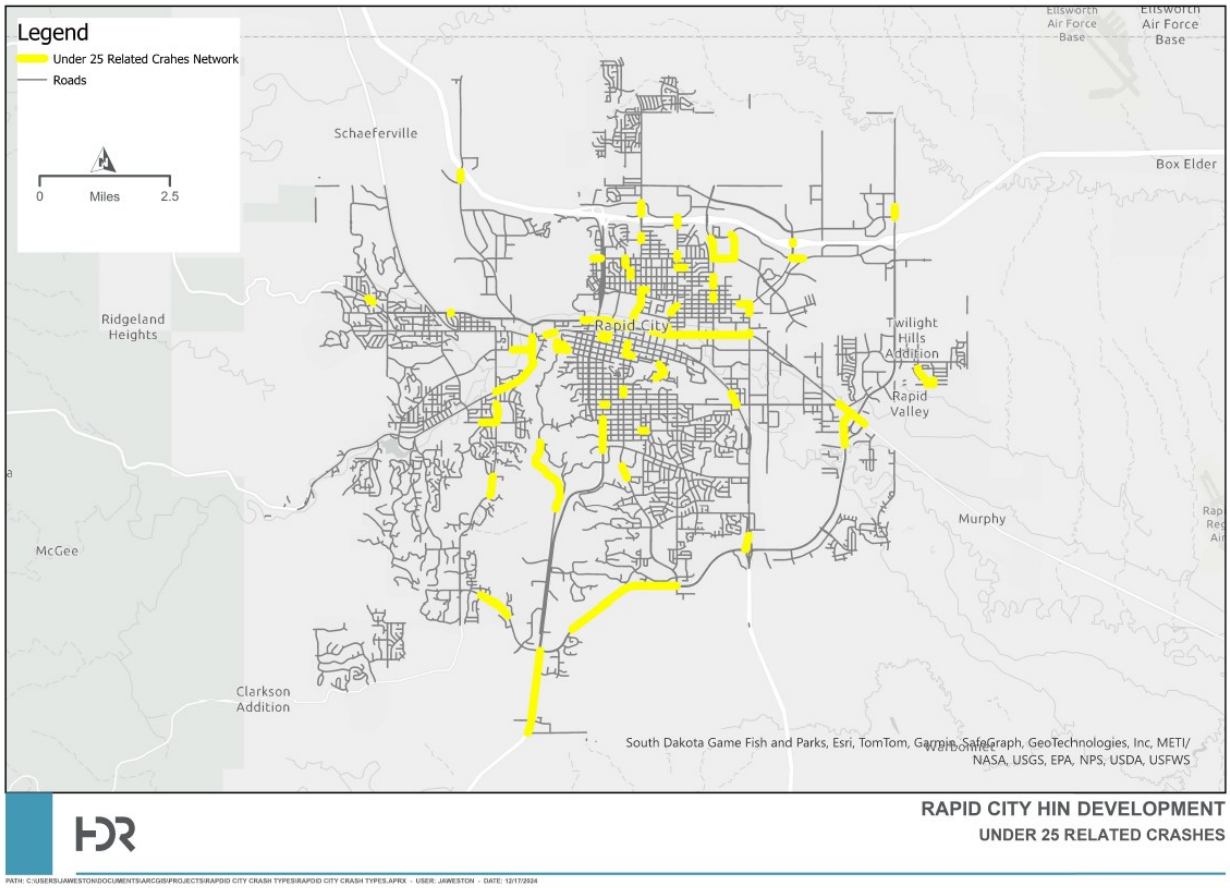


Young Driver-Related Crashes (Systemic Focus)

Crashes involving younger drivers in Rapid City tend to occur near schools, recreational areas, and commercial corridors, with a notable concentration during evenings and weekends. Risk factors include nighttime driving with passengers, distraction, high speeds, and permissive left turns at wide intersections. Access-dense arterials near youth-oriented destinations and inadequate lighting contribute to the risk environment.

Systemic countermeasures include corridor-calming measures such as median and turn pocket upgrades, access management, and conversion to roundabouts or RCUT intersections where appropriate, along with signal improvements such as protected/permitted left-turn phasing, lighting upgrades, and LPIs, can improve safety at intersections. Educational programs, peer-led campaigns, and targeted enforcement around high-risk time periods can complement engineering changes.

Figure 8. Young Driver-Related Crashes Network.

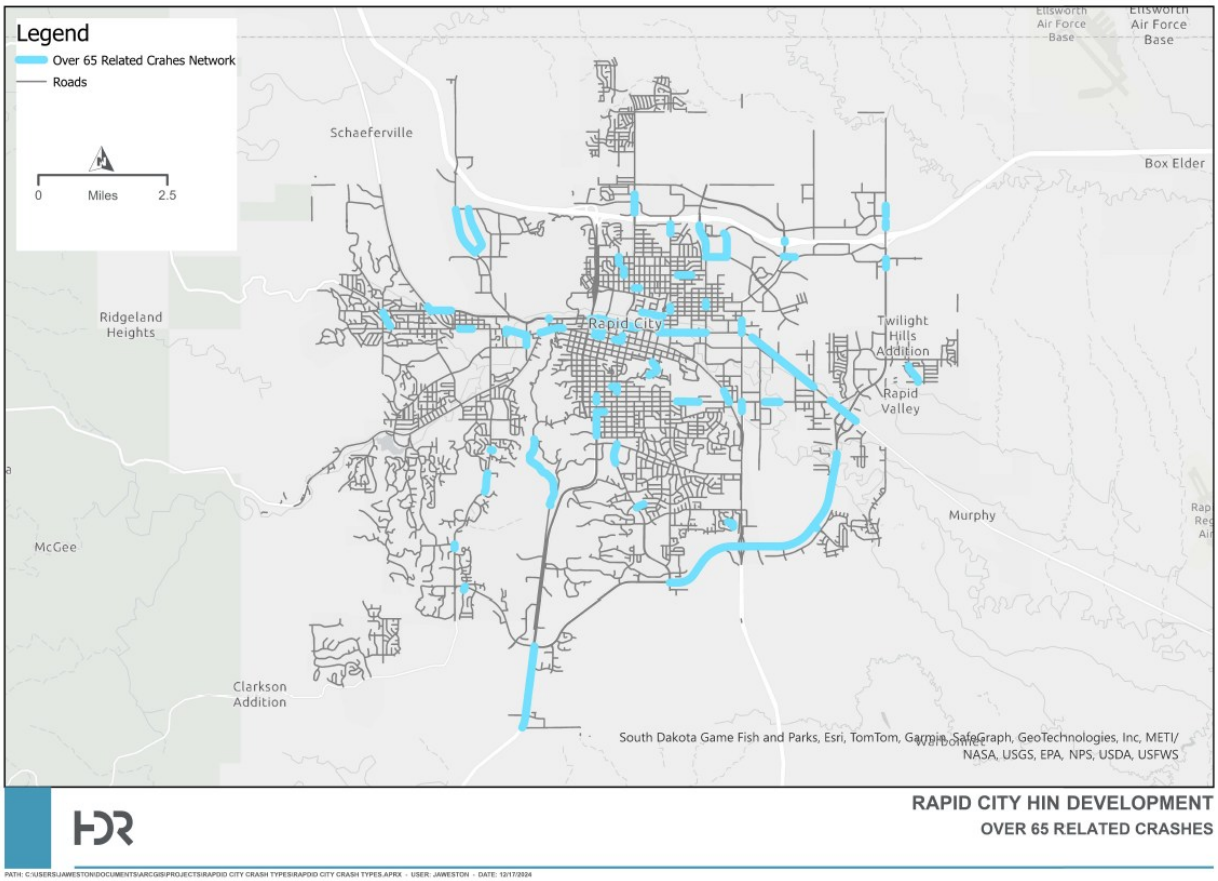


Older Driver-Related Crashes (Systemic Focus)

Older driver-involved crashes in Rapid City are concentrated near medical facilities, shopping areas, and civic destinations, as well as along corridors with complex lane configurations and wide intersections. Risk factors include shorter pedestrian clearance times, long crossing distances, multiple closely spaced driveways, and complex navigation with limited advance signage. Small guide sign legends and permissive left turns in high-volume environments can also contribute to these crashes.

Systemic countermeasures include extending pedestrian clearance intervals, adding LPIs, reducing right-turn radii, installing refuge islands, and adding midblock crossings in long segments. Larger guide signs and advance lane assignment can improve wayfinding, while protected left turns, driveway consolidation, and targeted speed management strategies can reduce conflict potential.

Figure 9. Older Driver-Related Crashes Network.

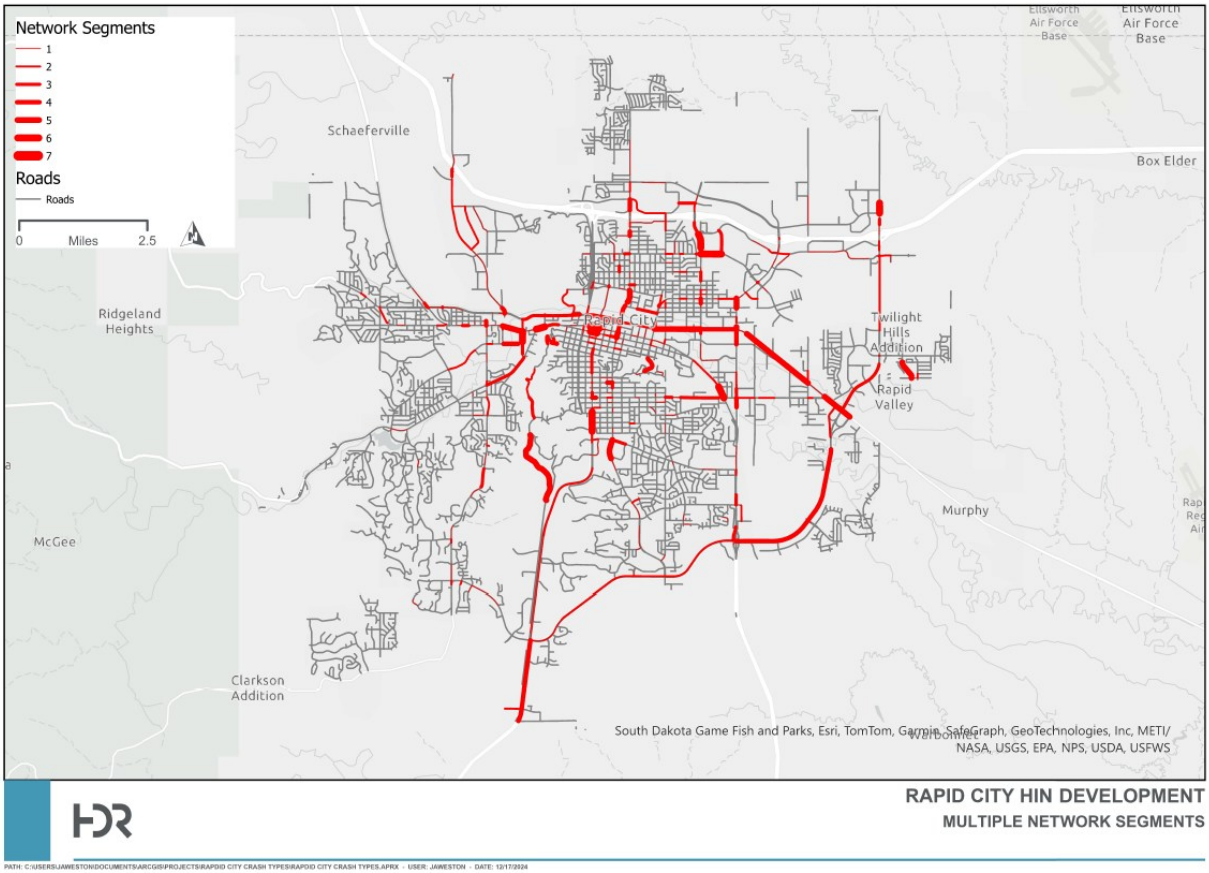


Multiple-Network Groupings (Compounding Risk)

Several corridors and nodes in Rapid City appear in three or more systemic crash networks (e.g., Speed + Angle + VRU or Alcohol + Speed + Under 25). These represent locations where multiple risk factors overlap, creating compounded safety challenges. Such corridors should be approached as programmatic priorities rather than isolated projects, with improvements bundled to address multiple risks simultaneously. This could include combinations of speed management, intersection safety, pedestrian and bicycle accommodations, and lighting improvements.

Systemic countermeasures may be prioritized using a scoring framework that considers the number of overlapping networks, severe crash share, proximity to sensitive land uses (schools, senior housing, activity centers), and equity factors. Quick-build treatments, such as temporary medians, hardened centerlines, and protected crossings, can be deployed to test solutions ahead of major capital investments.

Figure 10. Multiple-Network Groups Network



Major Projects: High-Priority Capital Improvement

While systemic strategies address risk across the network, some corridors require significant capital investment due to the scale of safety issues. These **major projects** target locations with high concentrations of fatal and serious injury crashes, repeated appearance across multiple crash emphasis areas (including angle crashes, speed, and VRU incidents), and alignment with capital planning opportunities.

These corridors are not stand-alone safety efforts. Safety improvements will be integrated into larger capital projects through the City's **CIP**, ensuring that infrastructure upgrades address both current deficiencies and long-term safety priorities. Some corridors are already programmed in the CIP, while others may advance through separate funding sources or be addressed incrementally.

Typical project elements may include the following:

- Corridor reconstruction or redesign with integrated pedestrian and bicycle facilities
- Intersection conversions (e.g., roundabouts, reduced conflict intersections) as stand-alone or corridor-wide improvements
- Signalization upgrades
- Context-sensitive speed reduction design and access management strategies
- Multimodal enhancements, including lighting, Americans with Disabilities (ADA) upgrades, and drainage improvements

Preliminary priority corridors are identified in **Figure 11** and **Table 4**. In all cases, the Safety Action Plan should keep central in scoping, phasing, and delivering major projects. The City and partners should seek opportunities for these corridors with the most significant safety needs, even if the most effective approach based on available resources is to institute interim safety improvements where full reconstruction is not yet scheduled.

Figure 11. Projects Recommended on the High-Priority Network (City-Owned Streets)

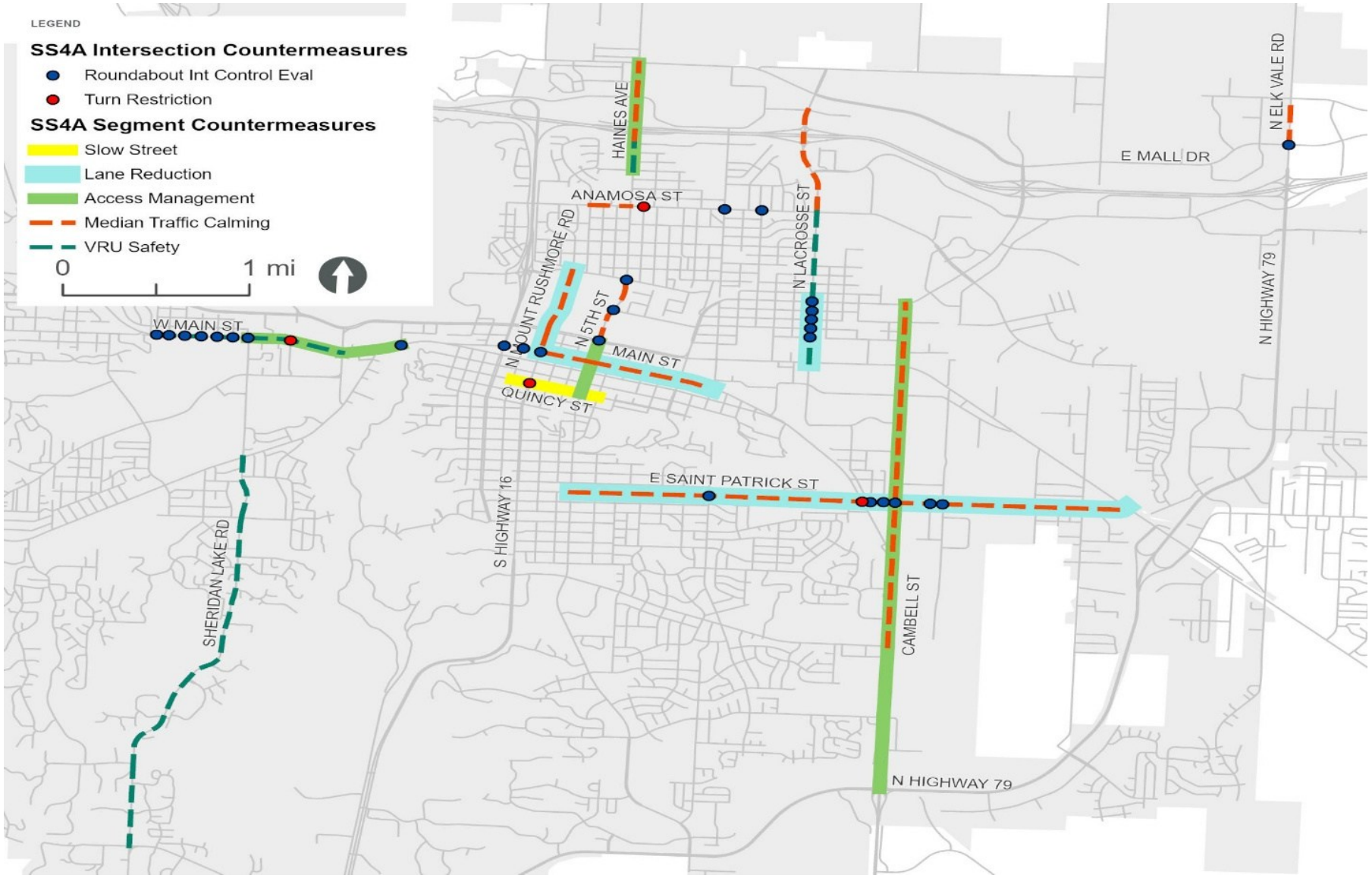


Table 48. Corridor List

Corridor	Starting Segment	Ending Segment	VRU Safety	Access Management	Lane Reduction	Median/Traffic Calming	Slow Street/ Bike Blvd	Turning Restrictions	Roundabout/ Intersection Control Evaluation
Haines Avenue	Lindbergh Avenue	I-90	X	X					
Haines Avenue	I-90	Mall Drive		X		X			
Haines Avenue	Mall Drive	Kathryn Avenue							
Main Street	32nd Street	Sheridan Lake Road	Crossings needed			X			X
Main Street	Sheridan Lake Road	SD 44	Crossings needed	X		Lane narrowing to improve buffer to trail		Dakota Drive - Prohibit NBL	
Main Street	SD 44	Cross Street		X					
Main Street	Cross Street	Mt Rushmore Road							X
Main Street	Mt Rushmore Road	5th Street			X				
Main Street	5th Street	Maple Avenue			X	Gateway at Omaha			
St. Patrick Street	5th Street	E St. Joseph Street			X	X			Maybe at Elm St
St. Patrick Street	E St. Joseph Street	Creek Drive			X	X		Near track and St. Joseph	X
St. Patrick Street	Creek Drive	SD 44			X	X			
Cambell Street	E North Street	E Fairmont Boulevard		X		X			
Cambell Street	E Fairmont Boulevard	E Minnesota Street		X					
Cambell Street	E Minnesota Street	U.S. 16		X					
Anamosa Street	Silver Street	I-190							
Anamosa Street	I-190	N 7th Street							
Anamosa Street	N 7th Street	Haines Avenue				X			
Anamosa Street	Haines Avenue	N Maple Street						At Wood Ave	At Maple
Anamosa Street	N Maple Street	N Lacrosse Street							At Milwaukee

Corridor	Starting Segment	Ending Segment	VRU Safety	Access Management	Lane Reduction	Median/Traffic Calming	Slow Street/ Bike Blvd	Turning Restrictions	Roundabout/ Intersection Control Evaluation
Anamosa Street	N Lacrosse Street	Luna Ave							
N 5th Street	North Street (Extend limits north to Anamosa)	SD 44			X				X
N 5th Street	SD 44	Quincy Street		X		X			
Lacrosse Street	E Disk Drive	Interstate 90				X			
Lacrosse Street	Interstate 90	E Anamosa Street				X			
Lacrosse Street	E Anamosa Street	E North Street	X			X			
Lacrosse Street	E North Street	E Philadelphia/ Limit down to SD 44	X	X	X				X
Quincy Street	9th Street	Mt Rushmore Road					X		
Quincy Street	Mt Rushmore Road	5th Street					X		at Rushmore Road
Quincy Street	5th Street	4th Street					X		
Skyline Drive	Tower Road	Quincy Street							
Sheridan Lake Road	SD 44	W Flormann Street	X			X			
Sheridan Lake Road	W Flormann Street	Corral Drive	X			X			
Sheridan Lake Road	Corral Drive	Catron Boulevard	X			X			
Mt Rushmore Road	North Street	SD 44			X	X			
Mt Rushmore Road	SD 44	Main Street			X	X			
Elk Vale Road	Seger Drive	E Mall Drive (Maybe switch to I-90)				X			Traffic Control at Mall

Crash Scoring Methodology and Policy Prioritization Framework

This section explains how Rapid City selected a focused set of strategies for early project development, drawing from a larger group of potential safety treatments. While the CSAP identifies many applicable countermeasures, only a subset is being advanced immediately due to resource availability, readiness, and alignment with near-term implementation pathways.

To support that narrowing, the City relied on a prioritization framework that blends crash data, local context, and project feasibility.

Prioritization Approach

Two core data elements formed the basis of the crash prioritization strategy:

- **High-Injury Network (HIN):** Identified based on crash severity, specifically corridors with elevated concentrations of fatal and serious injury crashes
- **High-Risk Networks (HRNs):** Developed for each crash emphasis area, identifying segments where specific crash types or contributing factors are overrepresented

These networks were overlaid to develop a High-Priority Network, which represents corridors and intersections where:

- Safety outcomes can be improved through targeted investments in the short to medium term.
- Strategies can be matched to observed crash types and conditions.
- Opportunities exist to integrate treatments with capital planning, maintenance, or external funding.

The High-Priority Network does not reflect a static list of projects. Rather, it represents an initial strategic filter used to identify corridors where Rapid City can most effectively begin advancing the SSA. As additional data, funding, and engagement evolve, new locations and strategies may be incorporated into future iterations of the plan.

Conclusion

This memo provides a structured path for improving transportation safety in Rapid City by aligning policy strategies, systemic treatments, and major capital investments under a unified framework. The emphasis areas and prioritization process ensure that both proactive and location-specific solutions address the City's most critical crash patterns. By integrating these strategies into the CIP and routine project delivery, Rapid City can systematically reduce fatal and serious injury crashes while building a safer, more consistent transportation network for all users.

Appendix E. Roundabout Memo

Roundabout Memo
Rapid City, SD – June 2025

Introduction

Roundabouts are quickly growing in popularity due to their significant safety benefits. Compared to signalized and two-way stop-controlled intersections, roundabouts reduce fatal and injury crashes through slower speeds and a decrease in conflict points. Therefore, Rapid City's goal of reducing crashes and improving roadway safety can be supported through the introduction of roundabouts at key intersections.

This memo recommends actionable items to integrate roundabouts into the Rapid City community through identifying ideal locations, creating preliminary designs using best practices, and building public support through education and engagement. This includes programmatic strategies for community implementation and recommended design choices based on specific needs. The outlined recommendations act as a preliminary road map for the implementation of roundabouts through Rapid City's Comprehensive Safety Action Plan (CSAP).

Existing Data and Ongoing Analyses

Areas of high crash frequency exist throughout Rapid City. Vulnerable road user (VRU) crashes, which involve people unprotected by a vehicle shell, occur mostly downtown and are concentrated on urban arterial streets. Angle crashes occur throughout Rapid City, with 68 percent occurring on urban arterial streets. Speed-related crashes are concentrated in the southeast area of Rapid City and occur on City streets almost 50 percent of the time.

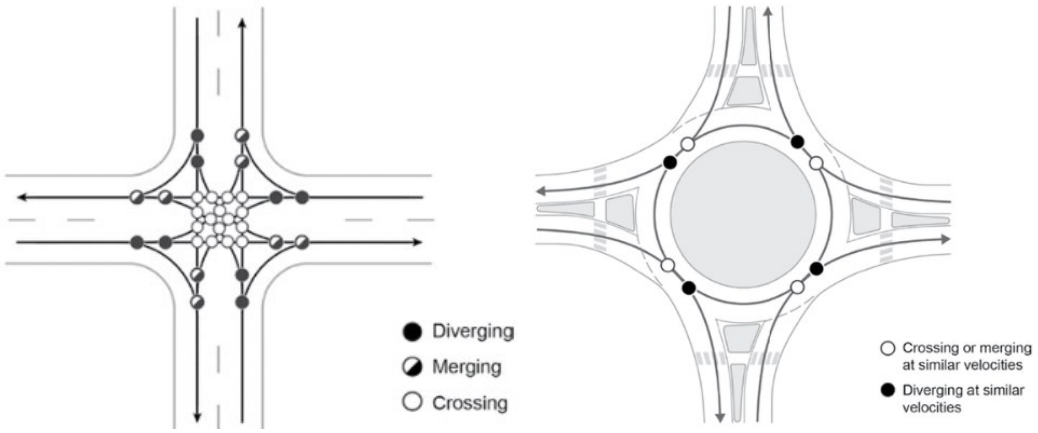
According to the Federal Highway Administration's (FHWA) Proven Safety Countermeasures,[5] roundabouts decrease the occurrence of fatal and injury crashes by 78 percent when replacing a signalized intersections and by 82 percent when replacing two-way stop-controlled intersections. The curved approach causes vehicles to slow before entering the roundabout, leading to lower speeds. Slower

[5] Roundabouts | FHWA

speeds give drivers more time to observe their surroundings, decreasing the necessary sight triangle and allowing them time to see and correct their actions. This creates a safer environment for other vehicles, pedestrians, and bicyclists, decreasing fatal and injury crashes.

Conflict points are key areas with potential for vehicle collisions. **Figure 1** shows a typical four-way intersection with 32 vehicle-to-vehicle conflict points, while a four-way roundabout has 8 vehicle-to-vehicle conflict points. This is a 75 percent decrease in conflict points, greatly decreasing the likelihood of a collision. Furthermore, slower, single-direction traffic in roundabouts decreases the likelihood of serious collisions resulting in injuries or fatalities.

Figure 1. (L) Typical four-way stop vehicle conflict points. (R) Typical roundabout vehicle conflict points.



Source: NCHRP Report 1043 (pg. 106–107)

Programmatic Best Practices

Community acceptance and behavior can be shaped through programmatic strategies, laying a foundation for successful implementation of roundabouts. Therefore, these strategies will play a large role in the inclusion of roundabouts in the CSAP.

Utilize Previous Successful Strategies

Roundabouts are successful in countless communities across the country. Utilizing other communities' strategies can lead to similar success in Rapid City. Showcasing the success of roundabouts in other communities can also increase the public confidence in the success roundabouts will have in their community. For example, Lincoln, Nebraska, a leading city in roundabout usage, added a roundabout at an intersection that had eight crashes resulting in injuries over a 4-year study period. In

the 2 years since the roundabout's installation, no fatal or injury crashes have occurred.

Build Buy-In

Building City staff buy-in through awareness will give the project a strong foundation to build on. Supporting the staff in understanding the benefits of roundabouts and how to implement them can build confidence in an unfamiliar area. The Iowa Department of Transportation (DOT) provides traffic safety engineering services ranging from design review to community engagement, which allows many of Iowa's municipalities to create successful projects.

Connecting with implementers is key to introducing roundabouts in a community. A roundabout team in Austin, Texas, held briefings with public agencies and key stakeholders to present the benefits of roundabouts from subject matter experts, expediting the understanding of roundabouts and growing their support among decision-makers.

Public buy-in can be gained through open public meetings and accessible online resources. The Missouri DOT connected with the community by working with journalists to create accessible informational content and appealing directly to apprehensive groups to answer their questions and address their concerns.

Sequence Implementation

A strong implementation strategy will greatly affect the success of this project. The first roundabouts in the area should be implemented in areas where there is likely higher acceptance. These areas can be identified with higher crash rates, simpler single-lane design, or minimal community disruption.

Develop an Education Plan

The success of roundabouts is dependent on motorists feeling confident while using them; therefore, creating an education plan on how to maneuver roundabouts is an important step in their implementation. The education plan must reach novice drivers, experienced drivers, and pedestrians. With almost 4 million tourists visiting Rapid City every year, having clear instructions for locals and nonlocals will also improve usage. Iowa DOT created an educational video that explained how to use a roundabout, which is applicable to any level of familiarity.

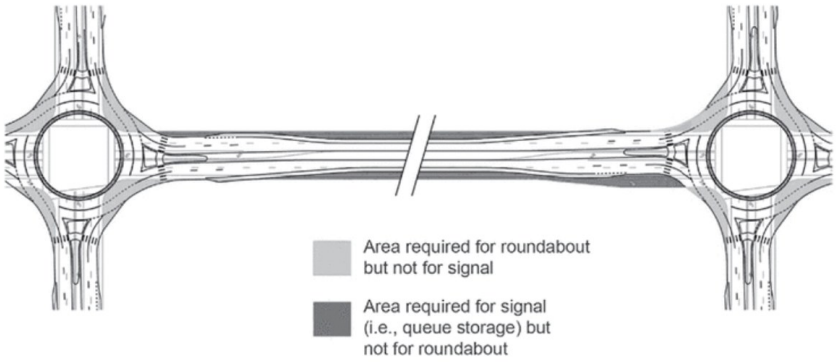
Infrastructure and Design Best Practices

Designing roundabout infrastructure guided by best design practices and local requirements will result in designs that safely meet the community's needs.

Land Utilization

The size of a roundabout varies based on the specifications for the specific intersection, ranging from 45 feet to 200 feet for the inner circle diameter. **Figure 2** shows the geometry of a roundabout, which will often call for more land usage than a four-way intersection; however, it will use less space on the approaching lanes. **Figure 2** shows the amount of land usage needed for both a roundabout and a four-way intersection. While roundabouts use more land, they save money through lower maintenance costs.

Figure 2. Area Required for a Signaled Intersection vs. Roundabout



Source: NCHRP Report 1043 (pg. 30)

Retrofit or New Development Design

Roundabouts can be retrofitted into existing intersections or implemented at new locations. Deciding factors on retrofitting an intersection include the following:

- Permitting right-of-way widths
- Existing geometry's alignment with a roundabout
- Constraints from existing utilities

Approach Design

Being prepared to properly maneuver the roundabout during the approach is an important element in the safety of roundabouts. Splitter islands can be painted but

are typically raised elements that separate entering and exiting traffic. They direct and control the speed of oncoming vehicles, slowing them down before they enter the roundabout. Yield lines can be used to signal entering vehicles to yield to oncoming traffic before entering the traffic circle.

Traffic Density Design

Roundabouts can accommodate many levels of traffic density. Areas with higher traffic volumes can call for multilane designs, while smaller intersections on two-lane roads can use a single-lane roundabout design. Multilane roundabouts use plentiful signage and pavement markings to make the use of the roundabout understandable for motorists at any comfort level.

Vehicle Needs Design

Intersections with small amounts of large truck traffic can use traversable elements. These elements will allow typical vehicles to use the roundabout normally, while larger vehicles can drive over the traversable elements if necessary to get through the intersection.

Pedestrian Design

Pedestrian pathways are typically set back approximately the length of one car from the roundabout entrance. A path of high-visibility markings along the road with a splitter island with an ADA-compliant break for the pedestrian walkway is typical in roundabout design. This allows pedestrians to have a refuge halfway across the road, so they only cross one direction of traffic at a time.

Implementation Pathways and Recommendations

Rapid City can begin roundabout implementation through the CSAP, focusing on implementing projects in phases that build sustainably. This allows public awareness to be slowly introduced, laying the groundwork for improved public opinion due to greater awareness and thought-out implementation in areas where need is strongest.

Identify Key Intersections

Intersection candidates for roundabout implementation can be identified using the following key features:

- The intersection has a history of severe crashes.

- The intersection has high potential of angle crashes.
- The intersection has a wide right-of-way width and sufficient space.
- The intersection is highly active.
- The intersection has multimodal uses.

Concept a Roundabout

After identifying an intersection that fits into the criteria outlined above, a concept design for a roundabout can be started. Data on the intersection, such as pedestrian usage and traffic density, should be used to identify important features needed in the roundabout.

Seek Key Stakeholder Buy-In

Support from key stakeholders can be sought using the roundabout concept and collected data used for its design. Gaining support from both the public and local leadership will drive the project forward. A workshop or seminar format for presenting the plan will create a good foundation for the public's understanding of the design concept. Using clear visualizations such as 2D and 3D drawings and video run-throughs of the conceptual roundabout design will further improve public understanding and support for the proposal. Early initiative in community engagement on the project will build support build on throughout the project.

Next Steps and Integration

This memo provides a framework for supporting the implementation of roundabouts in Rapid City that can be used in the CSAP. These recommendations will evolve as ideal locations for roundabouts are identified and designs are created.

Next steps include the following:

- Identify key intersection candidates through data analysis
- Create a collaborative plan to gather and incorporate public opinion throughout the project's timeline

A well-planned approach is needed to increase support for roundabouts and allow them to be a focal point in Rapid City's CSAP. Implementing roundabouts at key locations will result in a decrease in crashes and overall safer driving in the community.