



TECHNICAL MEMORANDUM #2

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CC: Project Management Team

RE: Existing Safety Plans and Practices and Peer Review Summary

One component of the COMPASS Regional Safety Action Plan (RSAP) will be recommended actions for COMPASS and member agency policies and practices. This memorandum documents existing safety plans and practices implemented by agencies across the COMPASS planning area. It also summarizes findings from national peer plan reviews and interviews, along with best practices from the Federal Highway Administration (FHWA) and other guidance. These findings will be used in conjunction with the data analysis results (documented in Technical Memorandum #3) to inform future policy and strategy recommendations for the Regional Safety Action Plan.

EXECUTIVE SUMMARY

This memorandum summarizes a review of member agency safety plans and practices and those of other agencies around the country, as well as international sources for context and background in completing the COMPASS RSAP. The reviews covered existing practices in the Treasure Valley and identified best practices and lessons learned from national and international sources. Together, the findings from these reviews will inform strategy development as this project progresses. This section summarizes key findings to be considered as this project progresses.

SAFETY PLANS AND PRACTICES

A review was conducted of current safety planning practices at the member agency, regional, and state levels. Key findings are as follows:

- **Regional Planning:** While the RSAP is the first dedicated safety planning effort for the entirety of the Treasure Valley, COMPASS incorporates safety-related goals and criteria in the Communities in Motion 2050 (CIM) document and incorporates safety in the project prioritization and performance measure processes. This plan should develop strategies within the four roles COMPASS has identified that it plays in regional planning: planner, facilitator, expert, and implementor.
- **State Planning:** ITD's vision for transportation safety is set out in its Strategic Highway Safety Plan (SHSP). The SHSP emphasis areas should be considered in this plan to identify an overlap between regional and statewide priority areas. Its Vulnerable Road User Assessment also identifies high pedestrian and bicycle crash locations and general countermeasures to consider.
- **Member Agencies:** The project team conducted interviews with, and reviewed plans and other

documents from, COMPASS member agencies. Findings from this review are shown below:

- **Goals:** All agencies had at least one goal related to transportation safety. The City of Boise's Vision Zero Plan and the Canyon County Local Road Safety Plan are the only adopted plans with a goal of zero fatal crashes. Boise is the only member agency with a goal and target date for reducing fatal and serious injury crashes.
- **Existing Practices:** Most member agencies don't have formal processes for identifying safety-focused projects or integrating safety into projects. However, many agencies have informal processes for identifying safety projects (i.e., annual review of crash data, coordination with partner agencies) and some agencies have begun incorporating safety related improvements into maintenance projects. In addition, most agencies require development to build walking and biking infrastructure or safety related improvements.
- **Successes:** Many agencies cited successful implementation and political support for low-cost improvements, particularly walking and biking projects focused on serving school-aged children. Most agencies also noted that they had ongoing and successful coordination with other partner agencies (i.e., school districts, law enforcement).
- **Challenges:** Member agency challenges generally fall into one of two categories: events that may be directly contributed to crashes (i.e., incomplete bike network, driving over the speed limit, red light running, lack of pedestrian crossings) or challenges that prevent them from doing more to address safety (i.e., lack of funding, limited staff, competing priorities, lack of support for certain countermeasures, coordination with development).

Best Practices

The project team reviewed Federal Highway Administration (FHWA) guidance and reviewed plans from, and interviewed, six other agencies, in addition to reviewing some international practices. Key findings from these reviews include:

- The Safe System Approach (SSA) has been adopted as a core strategy by the United States Department of Transportation in its National Roadway Safety Strategy.
 - The SSA is a mindset shift *from crash prevention to injury/fatality prevention* - putting emphasis on *designing for mistakes that people make so those mistakes don't result in a fatal or serious injury crash*.
 - The SSA is being implemented by leading agencies around the country, including those reviewed for this plan.
 - FHWA has published two documents that that should be used to help develop strategies for this plan: the *Safe System Roadway Design Hierarchy* and *Safe System-Based Framework and Analytical Methodology for Intersections*.
- Common threads pulled from peer agencies included the following approaches for a successful regional transportation safety plan:
 - Conduct a robust and targeted stakeholder outreach effort, with a steering committee to guide the plan implementation and evolution. Continued engagement after the plan encourages member agencies to implement projects and facilitate subsequent updates.
 - Data analysis should identify systemic trends and develop a HIN that focuses on fatal and serious injury crashes.
 - There is some variance in whether regional plans have included specific projects. Most regional plans provide a toolbox of potential solutions to address systemic trends, allowing member agencies to develop projects to address identified trends. Some MPOs have successfully identified projects as part

- of their safety plans.
- Successful elements of regional safety plans include:
 - MPO-specific strategies related to education, engagement, coordination, and technical support.
 - Strong political support and a commitment from elected officials and staff to prioritize their safety goals.
 - Other successful strategies for implementation include:
 - Quick-build and low-cost projects for quick-wins.
 - Making incremental progress to build toward the ultimate goal.
 - Providing funding and other support to agencies to simplify the project development process.
 - Coordination across agencies to share resources and prepare joint project applications.
 - Adapting strategies to changing data and sharing success stories.

TREASURE VALLEY SAFETY PLANS AND PRACTICES

This section summarizes the existing plans and practices in place at the regional and state levels, as well as those used by COMPASS member agencies.

COMPASS SAFETY PLANNING

COMPASS' approach to regional safety planning is detailed in the *Communities in Motion 2050* (CIM 2050) plan, which serves as the region's Long Range Transportation Plan (LRTP). CIM 2050 outlines safety goals, COMPASS' role in regional safety planning, a project prioritization process, performance measures, and recommended actions and projects. COMPASS also maintains the transportation improvement program (TIP), which programs regionally significant projects and all federally funded projects in the Treasure Valley. COMPASS also reports how projects in the TIP relate to CIM 2050 performance measures.

COMPASS approaches regional safety planning through the four roles detailed in Table 1 (Reference 1).

Table 1: COMPASS' Roles in Transportation Safety and Security

Role	Responsibilities
Planner	<ul style="list-style-type: none"> • Research and identify transportation safety and security strategies and countermeasures. • Support the development of regional transportation safety and security policies.
Facilitator	<ul style="list-style-type: none"> • Identify regional transportation safety and security needs by working with COMPASS stakeholders and workgroups. • Promote transportation safety and security strategies through public outreach and communication campaigns. • Provide opportunities for peer exchange and education regarding transportation safety and security.
Expert	<ul style="list-style-type: none"> • Perform safety data analyses. • Develop new and additional tools to analyze safety data. • Disseminate safety data to member agencies. • Develop transportation safety and security measures and targets.
Implementor	<ul style="list-style-type: none"> • Prioritize safety and security projects in CIM 2050 and the transportation improvement program (TIP). • Identify funding sources for safety and security projects.

Source: *Communities in Motion 2050, Transportation Safety and Security*. December 19, 2022.

<https://cim2050.compassidaho.org/wp-content/uploads/SafetySecurity.pdf>

GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Alongside economic vitality, convenience, and quality of life, CIM 2050 includes safety as one of its goal categories and sets safety objectives. The CIM 2050 safety category also includes security and resiliency objectives; however, this plan is focused only on safety. CIM 2050's safety goal is to *provide a safe transportation system for all users* (Reference 1).

COMPASS uses the federal Transportation Performance Management (TPM) performance measures, along with one additional measure, total injury crashes, to evaluate progress toward this goal. Technical Memorandum #1 (TM#1) - Vision and Goals, summarizes these measures and their current targets.

PROJECT PRIORITIZATION

COMPASS oversees two significant project prioritization processes. CIM 2050, the LRTP, prioritizes long-term regionally significant projects, while the TIP programs the next seven years of federally funded projects, as well as regionally significant non-federally funded projects.

Communities in Motion 2050

CIM 2050 plans and prioritizes projects that contribute towards the four goals noted in the previous section, one of which is safety. The prioritization process is guided by three policies/strategies:

- CIM 2050 Funding Policy
- Complete Network Policy
- Congestion Management Process

COMPASS analyzes the extent to which each project supports the four CIM 2050 goal areas. The following metrics are used for the safety goal area:

- Bike Level of Traffic Stress
- Bike/Ped Trips
- Crashes
- Pedestrian Level of Service

The analysis allocates 100 points to each of the four goal categories. COMPASS then averages scores across the four categories for the final CIM 2050 Goals score. This score is combined with another score, worth 30 points, related to system performance with respect to vehicle miles traveled (VMT), congested VMT, and hours of delay. This final total score, out of 130 points, is used to rank projects. Safety considerations account for under 20% of the final score (i.e., 25 out of 130 points). Projects are split into separate categories based on whether they are on the state or local roadway system. The Regional Transportation Advisory Committee (RTAC) and the Board of Directors review these rankings and determine the final rankings.

Roadway projects include on-street active transportation infrastructure. Off-street pathways are prioritized separately, as are public transportation projects. There are no explicitly safety-oriented priority measures for these categories (e.g., number of crashes); however, pathways are prioritized based on their proximity to activity generators and connectivity. Equity is also a prioritization consideration for these two project categories (Reference 2).

Transportation Improvement Program

COMPASS programs projects into the TIP based on its Resource Development Plan, which considers regionally planned projects, as well as projects submitted by member agencies (Reference 3). Prioritized needs from CIM 2050 and other regional plans are given priority over other projects (Reference 4). Member agencies applying for projects outside CIM 2050 must identify how their projects affect the CIM 2050 performance measures described in the previous subsection and how they will improve safety. COMPASS staff score the projects submitted by member agencies similarly to how CIM 2050 projects are evaluated. RTAC then recommends final rankings (Reference 5).

PREVIOUSLY RECOMMENDED ACTIONS

To meet their performance measures, COMPASS has identified a list of recommended actions. These actions, shown below in Table 2: COMPASS Recommended Safety Actions were recommended by an RTAC subcommittee to leverage COMPASS' four roles as a regional planning partner, previously described in Table 1. These actions were identified to address the underperforming 2021 results of COMPASS' progress towards its safety targets.

Table 2: COMPASS Recommended Safety Actions

Type of Action	Recommended Actions
Plan	<ul style="list-style-type: none"> Develop a Regional Safety Action Plan Discuss the potential of adopting a Vision Zero goal/policy and adopting the Federal Highway Administration's safe systems approach to transportation safety. Focus on regional crash and safety trends to support long-range planning.
Implement	<ul style="list-style-type: none"> Prioritize safety projects in COMPASS' Project Development Program and CIM Implementation Grant program. Fund safe routes to school with off-the-top federal funding.
Provide Technical Expertise	<ul style="list-style-type: none"> Make crash data, statistics, and analyses more easily accessible to member agencies to use in their planning and decision making. Work with member agencies and safety experts to further analyze safety data to identify regional trends and solutions. Acquire useful data and analyses to support member agencies and COMPASS planning efforts.
Facilitate	<ul style="list-style-type: none"> Conduct public outreach, such as hosting transportation safety-related speakers and training, sponsoring bicycle safety public service announcements, and raising awareness of safety issues through social media.

Source: *Communities in Motion 2050, Transportation Safety and Security*. December 19, 2022.

<https://cim2050.compassidaho.org/wp-content/uploads/SafetySecurity.pdf>.

The action items in the *Plan* row of Table 2 are expected to be accomplished by this RSAP. The remaining action items will all be considered in developing the plan's recommendations.

COMPLETE NETWORK POLICY

COMPASS' Complete Network Policy, adopted by the COMPASS Board of Directors in December 2021, details a vision of the Treasure Valley with a transportation system that is "designed, constructed, and maintained to be safe, efficient, and viable, and provides an appropriate balance for all users, including pedestrians, cyclists, transit

riders, motorists, freight haulers, and emergency responders” (Reference 6). This vision is expanded upon through three goals:

1. Provide policy direction to help implement the vision of the regional long-range transportation plan for local land use agencies, transportation agencies, and other stakeholders.
2. Provide a performance-based planning and programming approach to help identify and prioritize transportation infrastructure investments to promote the goals and objectives of the regional long-range transportation plan.
3. Enable COMPASS to provide appropriate information and best practices to support local land use decision-making, through participation in land use and transportation planning.

The Complete Network Policy is intended to help implement the vision set by CIM 2050 – including its safety-related goals and targets. The accompanying guide describes how the policy is implemented for each mode, including considerations related to the CIM 2050 safety goals. The Complete Network Policy also includes a Complete Network map, which describes the hierarchy of the system for Freight, Transit, Bicycle, and Auto modes. A Development Review Checklist is provided to assist member agencies in assessing how developments align with the Complete Network Policy.

STATE SAFETY PLANNING

Idaho Transportation Department’s vision for transportation safety is set out in its Strategic Highway Safety Plan (SHSP), a federally required document as part of the Highway Safety Improvement Program (HSIP). Per the SHSP, ITD’s vision is to “continue to move toward zero deaths on all roadways” in Idaho by providing “the safest transportation system possible” (Reference 7).

To achieve this vision, ITD has established the following focus areas:

1. Impaired Driving
2. Occupant Protection
3. Vulnerable Roadway Users
 - a. Motorcycles
 - b. People who Walk or Bike
 - c. Youthful Drivers
 - d. Mature Drivers
4. Vulnerable Roadway Behaviors
 - a. Aggressive Driving
 - b. Distracted Driving
5. Infrastructure
 - a. Lane Departure
 - b. Intersections

Each focus area is assigned a leader responsible for moving the area forward (Reference 7).

Similar to COMPASS, ITD adopts targets for the five safety performance measures required by the federal TPM:

- Number of fatalities.
- Rate of fatalities.
- Number of serious injuries.
- Rate of serious injuries.
- Number of non-motorized fatalities and serious injuries.

ITD recently completed its federally required vulnerable road user assessment (VRUA, Reference 8). This study analyzed all crashes involving people walking and biking in Idaho from 2012 to 2021. The VRUA looked at common crash types and locations, including locations in Boise, Nampa, and Meridian. It also recommended countermeasures, including adding bike lanes/paths, improving sight distance, adding lighting, tightening curb radii, better enforcing distracted driving laws, and advanced medical training to improve survivability after a crash.

MEMBER AGENCY SAFETY PLANNING

The project team investigated the existing safety plans, policies, and practices of COMPASS General Member agencies. The first step of this process was to compile and review relevant plans and policies for each member agency (e.g. Comprehensive Plans, Transportation Safety Plans). The project team also interviewed staff from most member agencies, as shown in Table 3¹. These interviews confirmed the relevance of the reviewed safety documents and expanded on other practices, challenges, and successes each member agency has faced. The following sections summarize key findings from these interviews in each of the topical areas discussed. Appendix A contains a more detailed summary.

Table 3: Interviewed COMPASS Member Agencies

COMPASS Member Agencies			
Ada County	Ada County Highway District (ACHD)	City of Boise	City of Eagle
City of Caldwell	City of Garden City	City of Greenleaf	City of Kuna
City of Melba	City of Meridian	City of Middleton	City of Nampa
City of Notus	City of Parma	City of Wilder	Highway District #4 (HD4)

SAFETY RELATED GOALS

All agencies had safety goals outlined in one or more of the following plans:

- Comprehensive plans of land-use agencies. Some agencies are in the process of updating their comprehensive plans to feature more robust transportation sections.
- Transportation plans, including plans focused on specific modes or areas (e.g., pathways plans, Greenbelt access plans, and policies).

¹ As of the writing of this memorandum, only Canyon County and the City of Star had not responded to interview requests

- Safety plans, which include the City of Boise’s Vision Zero Plan and the Canyon County Local Road Safety Plan (LRSP). The Canyon County LRSP involved representatives of Canyon County and the Cities of Nampa and Caldwell.

Safety goals varied in detail. Many agencies specifically targeted fatal and serious injuries. Some common themes capture the member agencies’ efforts:

- Providing walking and biking infrastructure and connecting gaps in existing biking and walking networks.
- Improving safety along school routes.
- Focusing traffic safety efforts on neighborhood facilities.

EXISTING PRACTICES

The project team interviewed agencies to understand their existing safety-related practices. This included topics related to projects, analysis practices, and resources used. The following subsections summarize the findings from these interviews.

Project Identification

All agencies have some process, whether formal or informal, to regularly identify transportation safety projects. The largest member agencies with roadway authority, ACHD and City of Nampa, have the most formal practices. Those two agencies review crash data annually to identify high crash locations. These reviews consider crash frequency and severity. ACHD can have specific emphasis areas in certain years (e.g., pedestrian crashes). Nampa primarily focuses its reviews on intersections and pedestrian crossings. Both agencies conduct field reviews and other analyses at the selected high crash locations to develop projects. Smaller projects (e.g., traffic design) may be completed in-house, while larger projects are often sent to consultants for concept development, analysis, and/or design.

Other agencies with road authority identify projects through a variety of means, which are also sometimes used by ACHD and the City of Nampa, including:

- Community members' submitted complaints.
- Input shared by police departments, fire departments, and parks departments either through direct staff-to-staff communication or through City Council members delivering information on behalf of a department.
- Walk or drive audits completed by agency staff or police.
 - These audits typically do not follow the formal FHWA road safety audit (RSA) process.

Land-use agencies in Ada County nominate projects to ACHD for its Integrated Five-year Work Plan (IFYWP). These agencies use input from staff, committees, elected officials, and/or the public to identify their requests. They prioritize their requests using various processes. Some cities (e.g., Eagle and Nampa) use formal criteria, of which safety is one criterion. The City of Boise is working on a new methodology for prioritizing its IFYWP requests.

Integrating Safety into Other Projects

Most agencies did not identify a formal process to integrate safety into other maintenance and capital projects occurring in their jurisdiction. ACHD has started doing this as part of its maintenance projects with new initiatives set to come. As a theme, most cities identified a lack of funding and roadway ownership as key impediments to integrating their transportation safety goals into projects.

Among those agencies that have found some success integrating transportation safety into other projects, the following were common approaches:

- Leveraging the development process to implement safety-focused projects.
 - Many agencies require walking and biking infrastructure to be built along the development frontage.
 - ACHD also uses the development process for this purpose by:
 - Conditioning development with safety-focused mitigation measures (e.g., guardrail, traffic calming).
 - When possible, use development to accelerate a safety project.
 - Allowing developments to propose safety-focused improvements as alternatives to capacity increasing measures; however, this process has rarely been used according to staff.
- Contributing funds to ACHD projects to enhance walking and biking infrastructure (this is unique to land-use agencies in Ada County).
- Capitalizing on roadway maintenance projects to restripe roadways for narrower lanes, wider shoulders, and space for walking and/or biking.

Crash Data Analysis

Agencies vary in their approach to crash data analysis. Most agencies rely on ITD, ACHD, consultants, and/or development applications for crash data analysis support. Many also work with law enforcement agencies. As noted previously, the largest agencies conduct data analysis in-house annually and sometimes as notable crashes occur (i.e., the recently formed City of Boise/ACHD Traffic Fatality Review Taskforce). Smaller agencies showed the strongest reliance on police department staff or other external resources for crash data analysis.

Safety-Focused Staff

At the time of these interviews, no agency had dedicated safety staff, though ACHD has recently hired a Safety Engineering Manager and is building out a dedicated safety team in its Development and Technical Services Division. Generally, the responsibility for transportation safety planning and implementation falls on one or two agency staff. In smaller agencies, the staff person may have many other duties, such as a city clerk or public works director, or an elected official, such as the mayor, may be the lead on transportation safety initiatives.

Outside of city staff, agencies utilize transportation safety-oriented task forces, boards, or commissions to help guide their safety practices. City staff are not always represented in these groups, but law enforcement is. Many agencies noted that elected officials also play an important role in guiding practice.

Countermeasure Resources

Countermeasures are employed by each agency. None of the member agencies have a defined set of preferred safety countermeasures to employ. In some cases, the knowledge of proven countermeasures and their efficacy is held by a few members of a transportation commission or by a single staff member.

PARTNER ORGANIZATIONS

During individual interviews, agencies were asked what partner agencies and organizations they work with on transportation safety. Common responses included transportation-focused agencies (i.e., ACHD, ITD, LHTAC, FHWA). All agencies also noted police department collaboration, although to varying degrees and with different relationships. Smaller agencies indicated an increased engagement with local school districts, often in relation to the focus on safe routes to school or child pedestrian safety grant efforts. Fire departments and EMS services were also noted among smaller agencies. All agencies indicated some working relationship with adjacent agencies, although larger agencies often indicated more coordination of projects while smaller agencies coordinated shared resources (police/ fire departments, street maintenance equipment, etc.).

SUCSESSES

The successes shared by member agencies can be divided into two broad categories: projects successfully implemented and intrinsic organizational strengths. Member agencies frequently cited implementing walking and biking safety-related projects as a success, including crossing enhancements, school and youth focused projects, and pathway improvements; the latter item was often cited by land-use agencies that own and operate pathway systems, but not the rest of the transportation network. Agencies also have found success with signing, striping, and maintenance related activities.

Common themes related to organizational strength included:

- Effective internal coordination.
- Support from elected officials and community members for safety improvements, especially for people walking and biking.
 - Smaller agencies noted their councils are involved and enthusiastic.

CHALLENGES

The challenges communicated by member agencies fell into two categories:

1. Challenges that may directly contribute to crashes.
2. Challenges that prevent doing more to address safety.

Challenges that may directly contribute to crashes include:

- Motor vehicle speeds, including people driving over the speed limit, as well as the magnitude of the posted speed limit itself.

- Not having a connected biking network.
- Red light running.
- Distracted driving.
- Lack of pedestrian crossings on large roads.
- Access frequency on higher speed and volume roadways.

Compounding the factors contributing to crashes, a number of shared challenges prevent agencies from doing more to address safety:

- Lack of funding, as well as having difficulty navigating the process of applying for funding.
- Limited staff resources.
- Limited guidance on what to prioritize.
- Competing priorities within agencies, as well as between agencies that own streets in other agency's limits.
- Coordination with land developers to ensure new transportation facilities are adequate. Retroactive improvements to sidewalks and drainage are challenges to smaller agencies integrating new developments.
- Lack of public and/or political support for lowering speed limits and implementing roundabouts.
- Lack of contractors bidding for relatively smaller projects (this was largely expressed by smaller agencies; though it is also sometimes a challenge for larger ones, too).

Political Support

Member agencies generally indicated that there was political support for at least some facets of transportation safety. Some agencies noted that public support for a project or initiative is often important to securing elected officials' support. Smaller agencies indicated strong political support for transportation safety improvements, with many of these interviews being attended by the City's mayor.

BEST PRACTICES AND LESSONS LEARNED

This section summarizes the best practices from Federal guidelines, as well as those learned by reviewing case studies from similar peer agencies' safety action plans.

SAFE SYSTEM APPROACH

The Safe System Approach (SSA) has been in use in countries around the world for decades to help them move towards a goal of zero roadway deaths and serious injuries. It has proven to be effective, with countries adopting the approach in a variety of contexts, generally seeing decreases of 33% to nearly 70% in roadway fatalities from 2000 to 2019 (Reference 9). In January 2022, the United States Department of Transportation released its National Roadway Safety Strategy (Reference 10) that adopted the SSA as its core strategy for achieving this goal. The SSA is a mindset shift *from crash prevention to injury/fatality prevention*. It puts less emphasis on improving behavior and more emphasis on *designing for mistakes that people make so that those mistakes don't result in fatal or severe injury crashes*.



Figure 1 Safe System Approach Principles and Objectives (Source: FHWA)

Figure 1 illustrates the six principles and five objectives of the SSA. The six SSA principles encompass the fundamental beliefs the approach is built on. A successful Safe System Approach weaves together all six principles. The six principles are shown around the outside ring of the graphic.

The five SSA objectives are conduits through which the approach is implemented. They are presented in the middle ring of the graphic. These promote a holistic approach to safety across the entire roadway system and employ the six principles.

Figure 2 contrasts the Safe System Approach with how transportation safety has been more historically addressed.



Figure 2 Historical Approach Compared to SSA (Adapted from FHWA)

SAFE SYSTEM ROADWAY DESIGN HIERARCHY

To help agencies put the SSA into practice, FHWA recently published the *Safe System Roadway Design Hierarchy* (Reference 11). This guide is intended to help practitioners make project-specific decisions on treatments. It places strategies into four tiers with respect to their alignment with the SSA. Figure 3 illustrates this hierarchy. It places removing severe conflicts mostly likely to result in fatal or serious injuries (e.g., separating vulnerable road users from motor vehicles, removing roadside fixed objects) at the top, followed by managing motor vehicle speeds (reducing kinetic energy), using traffic control devices to manage conflicts in time, and, finally, making road users more aware of potential conflicts (e.g., signing, striping).

Practitioners are encouraged to start at the top of the hierarchy when identifying potential treatments. The guide includes several countermeasures in each tier for practitioners to consider when evaluating a site. It is a valuable reference guide for COMPASS and its member agencies when developing projects.

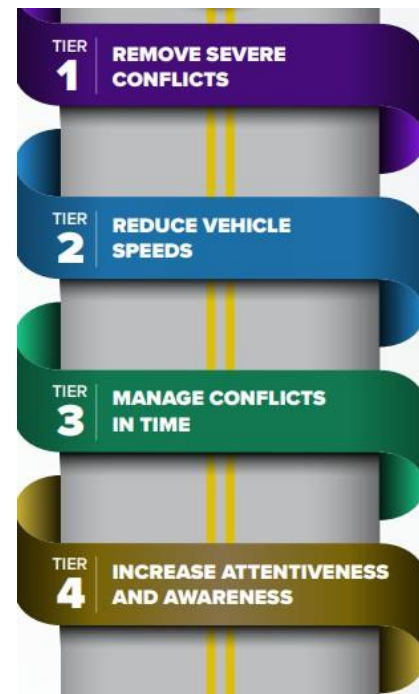


Figure 3 Safe System Roadway Design Hierarchy

Source: FHWA. *Safe System Roadway Design Hierarchy*. January 2024.

INTERNATIONAL EXAMPLES

The Safe System Approach, as well as the goal of zero fatalities and serious injuries, has been adopted by multiple countries over the last few decades. Figure 4 shows the success these countries have had in reducing fatalities by adopting the Safe System Approach. From 2000-2019, countries that have been leaders in adopting the Safe System Approach have seen fatalities drop from 33% to nearly 70%, while they have only decreased by about 6% in the United States.

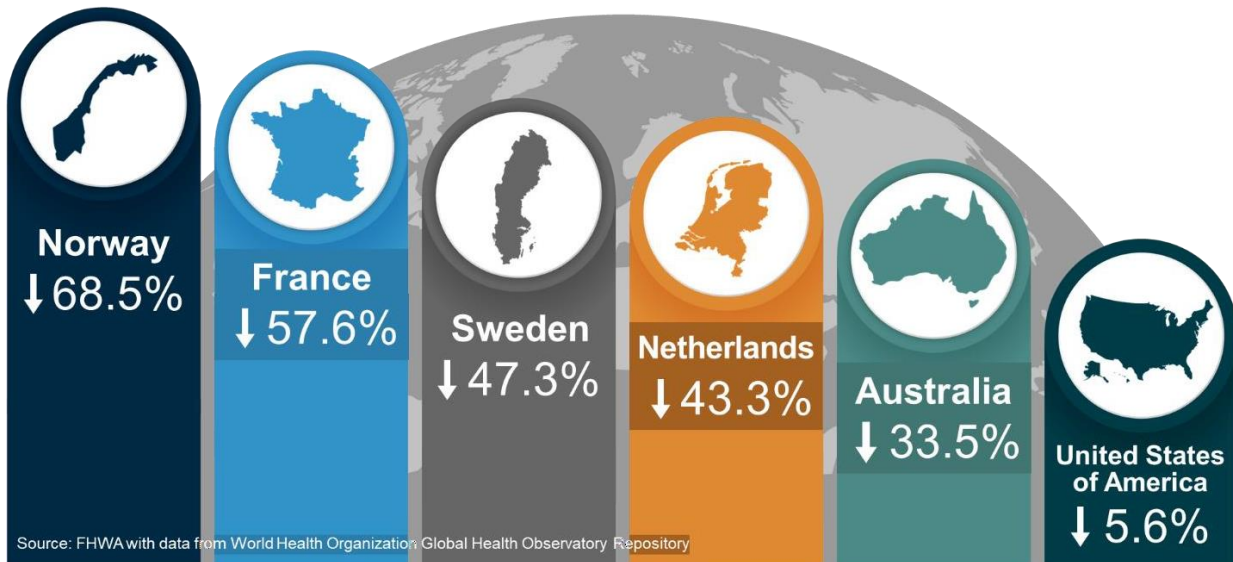


Figure 4 Change in Fatalities from 2000 to 2019

Source: FHWA. *The Safe System Approach Presentation*. <https://highways.dot.gov/safety/zero-deaths/safe-system-approach-presentation-0>. Last updated January 6, 2023.

These countries have incorporated the SSA into many facets of how they plan for, design, and operate their transportation system, as well as into traffic laws and enforcement practices. Some examples of common tactics employed in these countries to achieve this level of success include:

- **Speed management** – recognizing that speed plays a significant role in the severity of a crash when it occurs, these countries prioritize speed management, sometimes based on the types of crashes that might be expected to occur (e.g., a maximum speed of 20 miles-per-hour (20 MPH) when people walking and biking are expected to be present [Reference 12]). Roundabouts, raised crossings, and other forms of horizontal or vertical deflection are some of the treatments used.
- **Reducing conflict points and separating modes** – These strategies aim to reduce the likelihood of a crash occurring and include treatments such as separated infrastructure and signal phasing for different modes, roundabouts, and frequent passing lanes on rural high-speed roads (i.e., 2+1 roads).
- **Incorporating the SSA into analysis and design practices** – For example, Australia conducts Safe System Assessments to evaluate how well project designs align with Safe System principles. These assessments focus on major crash types and consider crash severity potential, road user exposure, and crash likelihood (Reference 13).

FHWA INTERSECTION SAFETY ANALYSIS METHODOLOGY

FHWA recently published a *Safe System-Based Framework and Analytical Methodology for Intersections*. This report introduces a method for analyzing intersection design and operations in accordance with the Safe System Approach, referred to as the Safe System for Intersections (SSI) method. The SSI method emphasizes strategies that include the following (Reference 14):

- Minimize and modify conflict points.
- Evaluate exposure for different road user types.
- Reducing complexity.
- Reduce the speed of vehicles.
- Improve visibility at intersections.
- Provide space and protection for pedestrians and bicyclists.

PEER REVIEW FINDINGS

The project team investigated the safety action plans and practices of six other agencies. Table 4: Peer Agencies and Respective Document summarizes the agencies and plans reviewed. It also includes a brief description of why each agency was selected.

Table 4: Peer Agencies and Respective Documents Reviewed

Agency	Document Reviewed	Reason for Selection
City of Fremont ¹	Fremont Vision Zero (May 2021)	City has achieved significant reductions in fatal crashes in a relatively short period.
Fresno Council of Governments (COG)	Regional Safety Plan (Dec 2021)	MPO with a similar mix of member agency sizes and land-use contexts.
Space Coast Transportation Planning Organization	Space Coast TPO Vision Zero Action Plan (July 2020)	MPO with a similar mix of member agency sizes and land-use contexts.
Delaware Valley Regional Planning Commission	Transportation Safety Analysis and Plan (April 2022)	MPO with an advanced safety planning program.
Denver Regional Council of Governments	Regional Vision Zero Plan (2019)	MPO recognized for leading safety planning practices.
Minnesota Department of Transportation	County Roadway Safety Plans Program (Ongoing Program)	Rural road safety focus.

¹Agency previously interviewed for another project and notes used from that interview.

The purpose of these reviews was to identify best practices and lessons learned from agencies as they have

advanced safety planning and implementation in their respective areas. The first step of the peer review process was to identify comparable agencies and review their relevant safety action plans. The second step was to interview involved staff at each peer agency with questions that broadly fall into two criteria:

2. Questions to confirm the context of their safety goals and how they might parallel those of COMPASS.
3. Successes and challenges of implementing their regional safety action plans.

Peer review findings indicated a range of plan contexts, successes, and challenges. These are summarized for each agency in the following sections. For each agency reviewed, this section provides:

- Background of the agency and the plan.
- Plan overviews that detail the common content themes. These details highlight how the peer agency approached each of the foundational areas of their safety plan.
- Key takeaways from the interviews, which were often focused on plan implementation.

Appendix B contains a detailed summary of the interviews conducted.

CITY OF FREMONT

Background

The City of Fremont is a city of just over 200,000 residents located in the Bay Area in California. In 2015, they were one of the first cities in the country to adopt a Vision Zero policy. In 2022, after years of concentrated efforts to improve transportation safety, the City met their goal of zero fatalities. The City's 2021 Vision Zero Plan is an update of their original 2015 Vision Zero Plan. The update was intended to capture changes in hot spots, changes in trends, and exploration of changing dynamics in vulnerable road users. Non-engineering countermeasures were the focus of the Vision Zero plan revision, as many specific project locations are identified in other planning efforts of the City.

Overview of Fremont Vision Zero (May 2021)

- *Stakeholder Engagement:* The city already has active, stakeholder engagement groups focused on transportation safety and relationships with partner agencies prior to plan development.
- *Existing Data Analysis:* Data analysis focused on high-level trends and vulnerable road users and mapped fatal and severe crash locations.
- *Strategy Development:* Focuses on 10 high-level strategies, including policy-related strategies (i.e., lobbying for safe-speed legislation in California) and engineering countermeasures that can be applied to a wide range of locations (e.g., leading pedestrian intervals, protected left-turns at intersections). This plan put more emphasis on non-engineering strategies than the City's previous plan.
- *Implementation:* Fremont has a five-person staff team dedicated to planning and implementing safety projects.

Key Takeaways

- Reaching Vision Zero has been part of a concentrated effort by the City over the past decade to improve safety.
 - Fremont Vision Zero 2021 is one of many planning, implementation, and education efforts that has contributed to the City's Vision Zero goal.
- An updated look at overall crash trends and vulnerable users was a key outcome of the 2021 Plan.
 - The characteristics of vulnerable users had changed since the previous plan (the previous Vision Zero Plan showed school-aged children as a focus area and after years of school-area improvements, senior and displaced individuals were found to be a key safety theme). This provided:
 - A new area for the City to focus future improvements on, and
 - Validation for the City that previous efforts on school-aged children had been successful in reducing fatalities and serious injury crashes for that group of people.
 - Shifted some of their focus toward improving non-engineering strategies, including coordination with health and other departments.
- Achieving their goal is a priority for elected officials and City staff.

- Quick-build projects have been an important tool in achieving their goal.

FRESNO COUNCIL OF GOVERNMENTS (COG)

Background

The Fresno COG is an MPO in the Central Valley of California. The Fresno COG represents 16 member agencies ranging from larger cities with urban-contexts (i.e., City of Fresno) to rural, agriculture-based communities. The Regional Safety Plan, adopted in 2021, was the first safety plan developed and adopted by the Fresno COG. The Regional Safety Plan was developed concurrently with Local Road Safety Plans (LRSPs) for each jurisdiction, which provided local-level assessments of roadway safety as opposed to the more regional focus of the Regional Safety Plan.

Overview of the Regional Safety Plan

- *Stakeholder Engagement:* Consultant and COG staff hosted targeted events with community-based organizations. Due to COVID-19 pandemic concerns, engagement efforts were largely virtual – via an online public survey. The survey was made available in multiple languages.
- *Existing Data Analysis:* Crashes of all severities were analyzed by road user, crash type, location, and collision factor. These filters were used to develop a relative severity index to quantify and compare locations where crashes occur. A social equity index was used in parallel with the severity index to incorporate equity considerations. A web-based tool was also created as part of the plan to allow easy access to the data.
- *Strategy Development:* A countermeasures toolbox was developed and applied to 20 example locations with high crash severity scores. Crash modification factors, cost, eligibility for Federal funding, and application types were outlined for potential projects. Education and promotion strategies and equitable enforcement strategies were identified.
- *Implementation:* Potential projects had specific funding sources and implementation partners identified. A monitoring program was outlined with performance targets, annual updates from the COG, and a continuing Vision Zero steering committee.

Key Takeaways

- The Plan's web-based tool for reviewing and analyzing crash data was made available to local agencies. However, the data in the tool has not been updated since plan completion and is not used by the Fresno COG anymore. In hindsight, the Fresno COG would recommend creating a tool for crash analysis that is simple to update and replicate with updated datasets.
- The plan was useful in helping agencies obtain funding for identified projects.
- The Vision Zero steering committee has not continued to meet. This has hampered the Fresno COG's ability to maintain momentum to meet the safety targets identified in the Plan and continue regional coordination with local agencies.

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION

Background

The Space Coast Transportation Planning Organization (SCTPO) in Florida is comprised of 10 member agencies serving a population of 616,000. The SCTPO serves an urban region with a considerable tourism industry. This plan was the latest in a series of safety focused efforts, including the Countywide Safety Project (2014), Safety Audits on High Crash Corridors (2016), Pedestrian / Bicycle Safety Action Plan (2016), Bicycle and Pedestrian Master Plan (2019), and an Annual State of the System Report. The Space Coast TPO has a Vision Zero goal, as well as the goal of bringing stakeholders together. This Vision Zero plan was developed when Vision Zero was still a relatively new concept. As such, the Vision Zero Plan had a heavy focus on an education campaign to get all jurisdictions bought into the goal of zero fatal and serious injury crashes.

Overview of Space Coast TPO Vision Zero Action Plan

- *Stakeholder Engagement:* A Vision Zero Task Force was used in collaboration with local police departments, schools, and a tourist development council. The goal of stakeholder engagement was focused on building consensus on safety issues through four group workshops. Additionally, workshops were aimed at engaging with a diverse group of nonprofit organizations. The Florida Department of Transportation (FDOT) was a key participant in the process.
- *Existing Data Analysis:* A high injury network (HIN) was developed considering all crash severities, but crashes were weighted based on severity. Speed, daylight, lighting, driver behaviors, and age were also examined. Separate HIN maps were developed for cars, motorcycles, bicycles, and pedestrians. Census demographics in the HIN were reviewed to identify areas of systemic transportation safety inequity. These communities of concern were prioritized for countermeasure implementation.
- *Strategy Development:* Four strategy areas were developed to identify projects: leadership, education, safer roadways, and safer speeds. Safety efforts were focused on addressing safety concerns on certain corridors where most severe crashes were occurring. These corridors were identified by overlaying the HIN with the master plans of individual member agencies. By establishing these targeted safety corridors, the existing data analysis of the MPO included in this plan, paired with relevant systemic safety strategies, could be used by individual member agencies to formulate their own action plans for implementation. The focus of strategy development was to develop new projects that address systemic trends with education campaigns and workshops.
- *Implementation:* The action plan identifies a target number of trainings / workshops per year. It also identifies non-infrastructure improvements with relevant leads for each focus area. Performance metrics are established for every action plan item, with a continuing Vision Zero Steering Committee overseeing progress and development. Interviews with the TPO staff indicated that it has been a challenge to get member agencies to commit to actions after plan adoption. There is a need for member agencies to develop their own implementation action plans.

Key Takeaways

- A key success of the plan was that each of its member agencies adopt the goal of zero deaths and serious injuries. This required collaboration with each agency to work out the specific wording of their resolutions.
 - Flexibility is important when working with a range of agencies.
- The MPO is offering grant application assistance, workshops, and a toolkit to member agencies to help them develop their own plans.
 - They have also adjusted their prioritization criteria to prioritize larger safety projects and projects on the HIN.
- A point person acted as a champion of the plan, coordinating and communicating between member agencies and consultants to ensure everyone had buy-in and the plan reflected the interests and concerns of the community.
 - FDOT's level of engagement as the State authority was critical to the success of the plan.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Background

The Delaware Valley Regional Planning Commission (DVRPC) advises a 9-county region in the Philadelphia metropolitan area. The DVRPC has a Vision Zero (VZ) goal of zero fatalities/ serious injuries by 2050. The VZ plan was formally included in the long-range plan, establishing regional safety targets that supersede the state's targets. The current plan is being updated to make the plan implementable on a county level and include branding around the VZ effort (for use by county partners to get community buy-in).

Overview of Transportation Safety Analysis and Plan

- *Stakeholder Engagement:* A Regional Safety Task Force with interdisciplinary membership was established as part of the plan.
- *Existing Data Analysis:* Emphasis areas were identified, focusing on fatal and serious injury crashes - defined by road user age, vehicle type, behavior mode, and location. KSI crashes were analyzed by census tract areas for communities of concern to add an equity filter.
- *Strategy Development:* No specific projects were identified in the plan. Strategies were developed for systemic trends, with a menu of approaches provided. DVRPC is developing a HIN for the region.
- *Implementation:* The Regional Safety Task Force continues to meet and share updates across a wide range of focus areas. The meetings are well attended by agency representatives, consultants, and advocacy groups. The development of regional safety targets separate from the State's has been successful. Some of its member agencies are developing their own local safety plans.

Key Takeaways

- DVRPC's efforts are focused on coordinating efforts and educating its member agencies. In addition to educating about the systemic trends and HIN, it is also tying its safety planning efforts to the Safe System Approach.
 - The continuing steering committee meetings have been integral to the success of the plan.
- The MPO has focused on the high level and is supporting its members as they complete their own plans by providing the regional HIN and trends and other support as needed.

DENVER REGIONAL COUNCIL OF GOVERNMENTS

Background

The Denver Regional Council of Governments (DRCOG) serves 9 counties in the Denver Metropolitan region. The first Vision Zero plan was developed in 2019 and is currently undergoing updates. The plan is being adjusted to emphasize a Safe System Approach, clarifying project impact and implementation, identifying and reevaluating stakeholder priorities – in the short term, mid-term, and long-term – and updating the recommended countermeasures toolbox to be more focused and relevant.

Overview of Vision Zero Plan

- *Stakeholder Engagement:* Collected feedback virtually via Mural. Virtual engagement was considered more successful than in-person events. The Regional Vision Zero Group has continued to meet since 2020, with monthly workshops for member governments, State DOT, and advocacy groups.
- *Existing Data Analysis:* An HIN of critical corridors and crash profiles was used in the development of a story map, and a list of 120 corridors in all counties is currently being created. An environmental justice lens was used to add an equity consideration of corridor analysis.
- *Strategy Development:* DRCOG has a tool that allows local governments to import or draw in their projects and then easily see what safety or other factor data could go into their TIP application. The TIP includes projects on the HIN or critical corridor and applies a score to them for prioritization purposes.
- *Implementation:* Local governments are currently using the plan, and two local governments have adopted a VZ plan and goal. In 2022, 9 member agencies received Safe Streets and Roads for All grants for their action plans. DRCOG is currently identifying target years for Vision Zero goals.

Key Takeaways

- DRCOG maintains a regional working group of around 50 members. They have found it most successful to have fewer, but longer meetings, as opposed to regular short meetings.
- TIP criteria have been refined to better emphasize safety.
- They have created a regional funding pool that is set aside for projects related to the safety plan.
- Critical Corridors are designated within each county so there is geographic diversity of where projects are prioritized, which helps distribute projects and obtain buy-in from member agencies.

MINNESOTA DEPARTMENT OF TRANSPORTATION (MNDOT)

Background

Unlike the other reviews, this one focused on a program, not a plan. MnDOT started the County Roadway Safety Plans (CRSP) program to help achieve the state's goal of reducing fatal and serious injury crashes. The DOT recognized that it was impossible to achieve its goal for the state without local agencies also addressing their roadways given that more than half of all fatal and serious injury crashes occur on the local system (Reference 15).

Overview of County Roadway Safety Plans Program

The program provides funding for consultant support in preparing a plan. The DOT also manages the process. All counties were required to complete a plan in the first round of plans. MnDOT provided 100% funding for these initial plans. They are now being updated and require a 20% contribution from the local agency.

The plans focus on low-cost, systemic countermeasures addressing the most common factors associated with fatal and serious injury crashes in each county. MnDOT has a pre-defined set of countermeasures that are used for the plans. They are primarily focused on rural areas.

Key Takeaways

- The program has been successful. According to MnDOT staff, about 70% of fatal and serious injury crashes were in rural areas before the program started and now about 50% of these crashes occur in rural areas.
- The plans provide valuable technical and funding guidance for County engineers who are stretched across multiple job requirements.
- Smaller agencies have had success in bundling projects together, or in joining with other adjacent counties, to create successful project packages that fit well within the federally funded Highway Safety Improvement Program (HSIP) process.
- Agencies also use the plans to incorporate low-cost improvements into capital maintenance projects.
- Counties are given latitude in deciding which projects to apply for. This has helped create buy-in and most counties prioritize implementing their plans.
- MnDOT has been working to educate elected officials about the systemic process and the benefits of treating areas with limited crash history.

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APPENDIX A: COMPASS MEMBER AGENCY SUMMARY

Agency	Safety Related Goals		Existing Practices					Successes	Challenges	Partner Organizations	Needs	Political Challenges
	Does the agency have goals?	Notes	Process for Identifying Projects	Integration into other projects	Crash data analysis process	Safety focused staff	Countermeasure resources					
Ada County	Yes	Transportation Action Plan.	Nominate projects to ACHD.	N/A	Rely on ITD/ACHD.	No	No	Pathways improvements.	None	Neighboring cities, ACHD, VRT, ACSO, Fire, Paramedics.	N/A	N/A
ACHD	Yes	Present in several plans; Complete Streets Policy.	Review crash data (annual review), review citizen complaints, review neighborhood plans.	Has several initiatives underway; leverage development to accelerate projects.	High crash location analysis every year; consultant projects for alternatives analysis.	In-process of hiring new safety-specific staff.	No defined set	Range of perspectives in development; internal coordination; PHBs/RRBs; Commission support; PSAs/bike lights.	ROW limitations; competing priorities across modes, goals, and involved agencies and limited guidance on deciding what to prioritize; ability to maintain (quantity and types of treatments).	Land-use agencies, fire, police (share data and sometimes review).	N/A	Commission supportive of safety investments.
Boise	Yes	Vision Zero Plan	In the process of reworking this right now.	Contributes funds to enhance walking/biking safety on ACHD projects.	Access to police data, but otherwise rely on ACHD/ITD.	No, but have a traffic fatality review task force (with ACHD).	Education on priority areas and some enforcement.	Pathways; contributing funds to ACHD for behind the curb improvements; advocating to ACHD; e-scooter safety improvements.	Not having the authority to implement their vision on streets; speeding; not having a connected bike network; agencies with different priorities.	Police - hoping to test out effectiveness of education and enforcement campaign with police staff.	N/A	Council has set a goal of 50% fatal crash reduction in 10 years.
Eagle	Yes	Comprehensive Plan	Safety is a criterion in their 5-year capital plan; projects come from nominations.	Contributes funds to enhance walking/biking safety on ACHD projects.	Rely on ITD/ACHD	No	No	Walking and biking safety is supported; connectivity is a priority.	Large roads without regular pedestrian crossings; not having roadway authority; limited collector system; desire to maintain rural feel; competing against other cities for projects.	Fire, police, ACHD, ITD, VRT.	More walking/biking infrastructure; What can be done in the interim while waiting for capital projects?	Generally supportive; leadership wants to see implementation; aesthetics are important.
Caldwell	Yes	Transportation Master Plan; Capital Improvement Plan / TIF	Police department notes locations and trends; fire department provides input.	Integrates striping into maintenance projects.	Police department analyzes crash trends and conveys to transportation commission.	Someone in police department is directly responsible - sits on board	no	strong political support for projects; lack of internal conflict.	Large volume of projects to address - recent spike in failing intersections.	Police department; fire department; HDR; nearby agencies (Nampa, Middleton).	Staff resources and funding sources.	Very supportive.
Garden City	Yes	Comprehensive Plan, Transportation Needs Plan, Livable Streets	N/A	N/A	Reaches out to police department/ITD when they need data for a TIS.	No	No	Agency collaboration finding funding for State Street and Chinden; bike/ped improvements with ACHD; continuation of Greenbelt.	Land use development coordination; retroactive street improvement; design speeds are too high.	Local schools; Garden City Community Collaborative.	More agency collaboration; street trees and drainage included in designs.	None perceived.
Greenleaf	yes	Comprehensive Plan; Golden Gate Transportation Plan	N/A	N/A	Contact Wilder PD to look at crash data.	No	No	Stable council and good leadership; city is well plugged in and active on board.	HWY 19 as main street - several safety concerns but no agency/funding to address them.	Golden Gate HD; ITD; LHTAC; Wilder collaboration.	Funding	Very supportive.
Kuna	yes	Comprehensive plan, sidewalk gaps, regional pathways and trails plan	Review Regional Pathways and Trails / Greenbelt Master Plan; analyze gaps in walking trails; community reaches out to provide input.	N/A	Contracts with JUB engineers.	No specific staff - gets contracted out.	No	Communication has been successful.	Transportation agencies need education on infrastructure implementation; no dedicated staff.	Steering committee for overpass feasibility; ACHD, FHWA, ITD, Fire, EMS, Police.	Funding	Elected officials are hesitant to keep growing.
Melba	yes	Transpo plan; Sign Replacement Map; Comprehensive Plan (being redone)	informal process; has a Capital Improvement Plan.	Informal plan for sidewalks and roadways.	Responsibility for planning and zoning department; contract out data analysis.	City clerk is responsible.	No	Child pedestrian sidewalk improvements; LHRP grant for signs.	Developments do not always integrate into sidewalk system/curb and gutter system - have to get funding to rebuild roads.	Nampa HWD; rural fire department; Canyon County law enforcement; school resource officer patrols town.	Working close with Mike Davis as he sends out the opportunity for more funding.	N/A

Agency	Safety Related Goals		Existing Practices					Successes	Challenges	Partner Organizations	Needs	Political Challenges
	Does the agency have goals?	Notes	Process for Identifying Projects	Integration into other projects	Crash data analysis process	Safety focused staff	Countermeasure resources					
Meridian	Yes	Defer to ACHD; Comprehensive plan; Pedestrian and Intersection Safety Task Force Report	Works with Parks Department for pathway segments.	N/A	Asks ACHD to provide data; data evaluated by transportation commission.	Transportation Commission (not technically city staff).	Transportation Commission suggests countermeasures to city.	N/A	Internal conflicting priorities; sometimes different goals from road authorities; roundabout education; pushback on lowering speed limit.	School districts; general safety meeting (ex-officio members); fire department; police.	Lack of local control.	N/A
Middleton	yes	Comprehensive Plan (being redone); Transportation Plan; Capital Plan; Corridor Study (2016)	Uses OSH grants for police to do strategic patrols; crosswalk improvements determined by council; traffic study on intersections being improved by ITD.	N/A	N/A	Police department monitoring; city council.	No	N/A	N/A	Police department.	Developments to extend pathways to link up in pathway network; funding and coordination.	N/A
Nampa	Yes	Transportation Plan; Pedestrian Crossing Policy; Local Road Safety Plan	Conducts a yearly crash review for priority intersections.	Conducts a road safety audit every year; has projects on CIP.	Use ITD data	Mostly responsibility of city council	Good internal knowledge but not formally recorded.	Sign conversions to 4-way stops; roundabouts accepted; street lighting to improve safety; LPI and Red on ped.	Pushback from public; council issues – auto-centric concerns; funding; red light running/ left-turn interactions; access management challenges.	COMPASS; LHTAC; ACHD; Caldwell; Hwy district (canyon and Nampa); police; ITD.	Something to stop red light running.	Travel time is sometimes prioritized over safety. There is limited support for transit.
Notus	Yes	Unified Work Program	Public Works identifies potential projects.	N/A	Relies on COMPASS / other entities.	N/A	No	Painting curb lines; chipseal project with LHTAC.	Struggles filling out funding applications; speeding; need drainage improvements; need sidewalk system/ped facilities.	School district; COMPASS; LHTAC; ITD; Notus-Parma jurisdiction; Black Canyon Irrigation District.	Dollar projections for improvements; improved markings for crosswalks; structural changes to process; street sweeper for city maintenance.	None perceived.
Parma	Yes	Transportation Plan (being updated); Comprehensive Plan (being updated)	N/A	N/A	Requires new developments to do impact statements.	Mayor; public works; police chief	No	N/A	Speeding.	Police; schools; fire department; communication with nearby cities.	Funding; partnerships with nearby cities.	N/A
Wilder	Yes	Comprehensive Plan (being updated); Transportation Plan	City Staff drive around to spot deficiencies.	N/A	Look at ITD crash data.	General responsibility of city staff.	No	Safe routes to school; pedestrian safety grant; sign grant (LHTAC).	Funding; working with ITD (difficult to get permit approval); crash data at high crash area (Hwy 19 junction) is not always complete; difficulty getting contractors for their projects (no bids).	COMPASS; ITD: ACHD; LHTAC; police department; fire; EMS.	Described in <i>Challenges</i> .	Strong support.
Highway District 4	Yes	Bring rebuilds up to AASHTO guidelines.	Focus on intersections with high crash rates	N/A	Use last five years of data - track locations with high crashes.	Few staff - general consideration of all staff.	Splitter islands, beacons, additional signage - identified during maintenance.	Roads have been widened and slopes have been flattened.	Right of way is the biggest challenge, alongside grant funding delays and the federal funding process.	Fire departments; exchange maintenance agreements with other jurisdictions.	Funding.	Strong Commission Support.

APPENDIX B: PEER REVIEW NOTES

Agency Statistics and Characteristics

Agency Name: City of Fremont
Agency Type: City
Population: 227,514 (2021)
Planning Area Size: 90 square miles
Year of Plan: 2021
Number of Member Agencies: 1

Goals and Vision

- Vision Zero – zero deaths / serious injuries
 - 2025 to get to zero deaths/serious injuries

Stakeholder Engagement

- Did they utilize a stakeholder committee or other advisory committee? **Mobility action plan task force.**
 - Outside of the usual engineering/planning groups, what members did it have (e.g., Fire, Police, non-profits/other community groups)? **Partnerships with traffic enforcement officers, fire department, major healthcare providers, and the Fremont school district.**
 - What were their goals for engagement with the committee and what were the key outcomes?
- How did they handle public engagement?
 - In-person vs. virtual? **Open City Hall survey, pop-up events**
 - What were their goals for the engagement and what were the key outcomes? **Identified top safety interest was more enforcement. Formation of a permanent Mobility Commission.**
 - How did they incorporate equity considerations? **Meetings to target participation from seniors, youth, and community leaders.**

Existing Data Analysis

- Did they identify hot spots or a high-injury network (HIN)? **Created a high injury network map.**
 - Did they focus on certain crash severities or all crashes? **Detailed crash reports were analyzed within 30 days of crash**
 - What measures did they use to define the HIN? **Location specific recommendations from Mobility Action Plan, Bicycle Master Plan, Pedestrian Master Plan, and Safe Routes to Schools Plans.**
- Did they identify systemic trends to be addressed? **Identified hot spots using historical data that share characteristics.**
 - How did they identify these trends (e.g., all crashes, fatal/severe only, consistency with State or other policy)?
- How did they incorporate equity into this stage? **Work with partner agencies to educate public on high-risk behaviors that disproportionately impact specific demographics. (Page 53)**

Strategy Development

- How did they identify projects and other strategies? **Pulled from other plans that provide location specific recommendations / identify priority projects.**
 - Did they develop new projects or were they coming from other plans/nominated by member agencies? **Projects came out of other plans.**
 - Did they develop systemic projects or just location-specific projects? Or did they just recommend a menu of treatments for different things? **An action plan that outlines systemic changes to improve safety in specific applications (allow lower speed limits, cameras, encourage regional partnerships, etc.)**
 - Did the plan identify non-infrastructure projects? **Education campaigns, legislation for safer speeds, traffic signal timing**
 - What is the key information they provided for projects (e.g., CRF/CMF, cost)? **No Information**

Implementation Plan

- Did they prioritize projects into timeframes? **“20 projects in 20 months” (pg 8)**
- What prioritization criteria were used? **Pedestrian/bicyclist vulnerability, Elderly/unhoused vulnerability, high crash rates on wide/fast streets**
- Did they identify funding sources for specific projects (or all projects)? Or did they just discuss sources generally? **Redirection of \$2.5 million in city funding to develop action plan – generally mentions grant funding**
- How did they handle non-engineering items? Are they also included here with responsible orgs and timeframes? **No timeframes, but indicated what organizations would be involved.**
- What does their monitoring program look like? **No Information**
 - Are there performance measures? Other recommendations (i.e., before and after studies)? **No Information**
 - Is there a continuing workgroup? **Core staff (pg 17)**

Caltrans Road Safety Infrastructure Plans – Literature Review

Interview Questions

Plan Development Approach

1. What was the overall vision for the plan and reason for developing it? Why did you choose to do a Vision Zero Action Plan instead of a Local Road Safety Plan?

Safety and Demographic Data

2. The VZAP mentions that the Public Works staff coordinate closely with the Police Department and have access to detailed information about each major crash in Fremont. How did this come about? Is this generally feasible to do for other jurisdictions and agencies?
3. Were there challenges you faced with the data you had or any additional data that you wish would have been available to support analyses?
4. How did you decide demographic indicators (such as Gender, Age Group, and Race) of the community to be reviewed for the Plan?

Equity

5. The Plan includes data on Fatal and Severe Injuries categorized by Race, along with Crash narratives that have sensitive details like age group and gender. Can you provide insight into the origins of this approach, and was there any resistance from the staff/council regarding the inclusion of such information?

Community and Stakeholder Engagement

6. Were there opportunities for public input on the 2025 Action Plan? OR was it more of a focused update to the 2020 Action Plan? Moving forward, will there be an opportunity for the community to provide input in the next update?
7. How are you coordinating the Vision Zero engagement efforts with the other plans such as ATP?
8. Tell us more about the Engage Fremont initiative.

Recommendations and Prioritization

9. What did the jurisdiction consider when identifying countermeasures and prioritizing locations? (Sidenote – The Plan mentions High Injury Network but we were unable to find the map)
10. Were there any recommendations related to emerging technologies?

Implementation and Funding Opportunities

11. Tell us more about the behind-the-scenes implementation of the Vision Zero Action Plan. Do you dedicate staff and committee to ensure that the plan is strictly implemented?
12. Did you compete for an infrastructure/planning grant to help fund improvements identified in the safety plan?
 - a. If yes, what source of funding – HSIP, OTS, AHSC, STEP, RAISE, SS4A, or others?
13. Your department actively monitors the safety performance measures in the plan, and you are sharing that information externally. Were there any concerns that this would provoke the community members if the City were not on the path to Vision Zero?

What would you recommend?

14. What would you do differently to update this Plan in the future?
15. What lessons were learned during the preparation and implementation of this plan?
16. If you were to have had more funding for your effort or received additional funding in the future, what more would you like to cover in this safety plan?
17. Does the City have dedicated funds to periodically update the Plan or does the City require grant funding?

Eric – Principal Transportation engineer/transportation manager

Lilian – Senior Transportation Engineer (support bike/ped plans & project, VZ)

- Fremont 7th City to adopt VZ policy (one of the first in CA)
- Development
 - Predates safety systems approach & SSAR
 - SSAR came out later as part of HSIP development
 - Provides details on how to address safety components
 - Mobility Action plan also developed
 - VZ & MAP go hand in hand to guide projects and policies
 - Focus on managing growth and mode shift in Fremont; object for City Council to embrace smart growth (no space to grow out, need to be efficient in how they expand transportation and land use)
- Why adopt VZ?
 - City Council wanted it
 - New City Manager used to work at San Jose and pushed VZ there – wanted it adopted in Fremont
 - Easy to get electives on board (sounds like a good idea), but the challenge is keeping momentum going and implementing projects for safety
- Why update the plan?
 - Lots of data driven documents are only as good if they are “fresh”
 - Things change over five years – initial hot spots have improvements, crashes change
 - Wanted to revisit the data and compare what had happened and what was currently happening
 - Vulnerable users were still the victims but saw that more senior residents and displaced individuals were involved in crashes
 - In some cases, seniors passed away from crashes after the crash occurred (e.g., days to weeks to months later)
 - Improvements at schools were an initial focus; once those areas were improved, senior and displaced user fatalities “rose to the top”
- Non-engineering countermeasures are more of a focus now

- Working with human services and service programs to educate and raise awareness about potential users
- Overall decrease in high severity/fatal crashes
- Crossroads used for Fremont
 - Regular meetings with police department to discuss crash history
 - Fatal/severe crash alerts are sent to the City to keep track of collisions and aftermath
 - More updated than SWTIRS/TIMS – helps make more informed decisions
 - City gets redacted collision reports to also review and document narratives
 - Able to take out additional data that allows City to see that some of this is beyond City infrastructure
- How did the Task Force/collaboration work? Are groups generally interested or is it because of City VZ policy?
 - All departments have been interested in VZ policy and implementing the policy - they take it seriously
 - Unusual for a city to review the police reports In depth
 - Staff and financial resources can be limited, but a conscious effort is being made to prioritize VZ
- Partnerships with employers/health providers?
 - Regional health and social services are in town – easy to get them on board
 - City trying to get them accredited as a trauma center to address response times in crashes
- Safer vehicles – City works with Tesla to encourage safer vehicles on roadways
 - Lots of AV R&D in Fremont – City can work with them to provide input and build relationships
- Brochures and pamphlets passed out at medical offices
- Educational videos to educate community
- Any data challenges, or data you would like to have been available?
 - Police reports have most of the details that are needed
 - Time lag does still exist, there is a desire to mitigate it immediately and have consequences to the person at fault
 - Hard to respond to community that wants answers immediately
- Are the community residents supportive of VZ?
 - Those walking/biking are generally supportive; driving is still # 1, especially those who like Tesla/technology in driving
 - Safety improvements not always accepted
 - Will use VZ as ammo to say VZ doesn't work because someone died in a crash
- Have you applied for any grants to help with safety improvements?
 - Apply to whatever we can
 - HSIP (a few grants awarded), Measure B/BB funds

- ATP & SS4A not competitive – too focused on equity priority communities, which aren't in Fremont limits; or, focus is on agencies who have not developed safety plans and Fremont has several
 - Safe Routes to BART – awarded equity points in grant
 - Crash data, lack of equity areas, and previous planning efforts generally make Fremont ineligible for grant funding
 - Utilize maintenance/repaving projects to implement buffered bike lanes
- City prefers grade separated bikeways – bring curb out
- City looking at before/after crash data, collecting volume data to understand how implementation supports VZ
 - Hard to get the after data with the lag in data
 - Questions about operations – people want to know how their driving is affected
- Public engagement is to share knowledge of crashes/policies, educate public on what is going on
- HIN mentioned in the report, but not included in the VZ update
 - Reference to 2020 HIN
 - May refer to MTC HIN
- What would you do differently for the next update?
 - Forced to do more public outreach & engagement – will be focused on VZ project scope
 - Focus on operations/traffic signal technology – adding to the toolkit
 - Don't feel like they successively implemented speed management (aimed at road diets, narrow lanes – it isn't doing anything for speed management in the City)
 - AADT data may be helpful in understanding where people are driving
 - Incentives to get people to stop speeding
 - Signal timing changes to improve travel times and user experience
 - Reduce number of red lights people have to hit
 - Time for 35-440 mph even if the road is 45 mph
- Choose to include state highway system in the VZ, but have no agency over those roads
 - Lots of FSI crashes on state routes

Agency Statistics and Characteristics

Agency Name: Fresno COG
Agency Type: Regional Council of governments
Population: 544,000
Planning Area Size: No Information
Year of Plan: 2021
Number of Member Agencies: 16

Goals and Vision

- A region of diverse partners sharing the resources and responsibility to improve roadway safety for all communities.
 - No key target dates
- Foster collaboration among partner agencies to help implement improvements / share resources / establish HIN database.

Stakeholder Engagement

- Did they utilize a stakeholder committee or other advisory committee? **Consultant and COG staff hosted targeted events – established goals of events in advance. (pg 10)**
 - Outside of the usual engineering/planning groups, what members did it have (e.g., Fire, Police, non-profits/other community groups)? **Community-Based Organizations (CBO) (pg 10)**
 - What were their goals for engagement with the committee and what were the key outcomes? **Engage authentically, center equity, promote balance, support implementation (pg 10)**
- How did they handle public engagement? **Online public survey (pg 11)**
 - In-person vs. virtual? **Pandemic considerations – virtual (pg 11)**
 - What were their goals for the engagement and what were the key outcomes? **Specific travel concern % (pg 12)**
 - How did they incorporate equity considerations? **Center equity, multiple major languages, separate analysis of latino/x survey responses. (pg 12)**

Existing Data Analysis

- Did they identify hot spots or a high-injury network (HIN)? **Severity Score (pg 19)**
 - Did they focus on certain crash severities or all crashes? **All crashes (pg 16)**
 - What measures did they use to define the HIN? **Road user, severity, crash type, location, and collision factor / relative severity index (pgs 16-17)**
- Did they identify systemic trends to be addressed? **5 trends: veh-ped severity, faster speed=more severe, etc. (pg 18)**
 - How did they identify these trends (e.g., all crashes, fatal/severe only, consistency with State or other policy)? **Used relative severity index to quantify severity and compare across categories (pg 17/18)**
- How did they incorporate equity into this stage? **Social equity index (pg 39)**

Strategy Development

- How did they identify projects and other strategies? **Severity score locations more competitive for grants (pg 19)**
 - Did they develop new projects or were they coming from other plans/nominated by member agencies? **Developed countermeasures toolbox, with example locations. (pg 34-39)**
 - Did they develop systemic projects or just location-specific projects? Or did they just recommend a menu of treatments for different things? **Menu of items (pg 35-38)**
 - Did the plan identify non-infrastructure projects? **Education and promotion strategies / equitable enforcement strategies (pg 62 / 66)**
 - What is the key information they provided for projects (e.g., CRF/CMF, cost)? **CRF, cost, fed eligibility, application type. (pg 35)**

Implementation Plan

- Did they prioritize projects into timeframes? **No Information**
- What prioritization criteria was used? **No Information**
- Did they identify funding sources for specific projects (or all projects)? Or did they just discuss sources generally? **Specific funding sources (pg 69)**
- How did they handle non-engineering items? Are they also included here with responsible orgs and timeframes? **Implementation partners (pg 77)**
- What does their monitoring program look like? **Performance tracking with measure targets (pg 77-78)**
 - Are there performance measures? Other recommendations (i.e., before and after studies?) **COG provides brief annual update – suggested 3-year rotation of committee members.**
 - Is there a continuing workgroup? **Vision Zero steering committee**

PEER AGENCY INTERVIEW - FRESNO

Date/Time:

- 11-17-23, 1:00-1:30 pm (Interview w/ Matt Braughton)
- 12-04-23, 3:00-3:30 pm (Interview w/ Santosh Bhattarai)

ATTENDEES

- Fresno COG: Santosh Bhattarai
- COMPASS: Hunter Mulhall
- Kittelson: Nick Foster, Mark Heisinger, Matt Braughton, Matt Steele

NOTES: FRESNO RSP

Interview with Matt Braughton:

- What other general plans, policies, or practices does your agency have related to transportation safety?
 - Standard MPO plans – RTP, reporting federal requirements
 - First plan like this
- Plan Development
 - How did you handle a wide range of partner agencies (especially for MPOs with rural and urban agencies)?
 - Separated smaller and larger meetings during stakeholder meetings
 - To what extent did you use feedback from partner agencies in the plan?
 - Successfully identified projects that got funding (small agencies)
- Existing Conditions/Data Analysis
 - *Review existing conditions data analysis – identify any questions based on review*
 - Did you have any challenges in the existing conditions/crash data analysis?
 - Regional datasets hard to QAQC – differing quality for different jurisdictions
 - What components of the existing conditions/crash data analysis were most useful in the plan development?
 - Establishing HIN and priority locations
 - Helped with stakeholder engagement and getting buy-in for recommendations
 - Identifying general trends – emphasis areas (i.e., run off the road, bike/ped safety) – big picture vision
- Project/Strategy Identification
 - How did you decide to focus on/split resources between systemic and location-specific treatments?
 - Focus on location-specific (consistent with HSIP)
 - Kittelson identified a long list based on EPDO -> agencies provide additional context/feedback, some filtering based on representation
 - In RTP -> no big focus on the project for each jurisdiction

-
- MLRSP -> jurisdiction-specific
 - Emphasis area/systemic was helpful for smaller jurisdictions with fewer crashes
 - What were the primary factors driving how you identify strategies?
 - EPDO, crash analysis for priority crash types, includes education campaigns
 - Implementation
 - What is going well with respect to implementation so far?
 - Multiple jurisdictions were successful in getting funding
 - Fresno County got SS4A funds for action plan
 - Fresno is developing a Vision Zero action plan (RFP out)
 - What lessons have been learned from implementation?
 - Next steps
 - What plans do you have related to future or ongoing monitoring of safety-related improvements?
 - Some guidelines in plan on this – web-based tool to do the analysis
 - **Are they still using this?**
 - General Questions
 - If you were to go back, is there anything you would change in the plan development?
 - SS4a compliance – no equity or vision zero
-

Interview with Santosh Bhattarai:

- Almost 2 years into implementation plan
- Education campaign
 - A bit of a gap with coordination between MPO and local agencies
 - Health agency recently wanted to do a public display
 - Future plans include working with other agencies
 - Could not secure funding – funding was focused more on engineering projects
- Been using existing conditions reports for safety target development
- Recently shared the C SHSP findings
 - Was able to use countermeasures that were developed as part of data in the report
- Web-based tools is still being used
 - Agencies using this?
 - Not really – there are some other data sets that are being used instead for safety analysis
 - Data is old (2015-2019)
- MPO has a safety committee that meets once a year -> focuses on safety targets
 - Steering committee hasn't continued to meet.
- Recommendations
 - Easy to replicate web tool/analysis
- Have any of the processes/project prioritization methodologies changed at the MPO?
 - There are some funding mechanisms that they've been able to go after
- Developed concurrently with jurisdictional plans. Realized a couple agencies part of COG were missing implementation plans.

-
- Presented plan to sister agencies. They were also very interested. Able to convince SS4A qualifies. Education component as one of the strategies (countermeasure) – plan was to do demonstration projects to showcase safe systems – could not secure funds for the demonstration project, only funded engineering strategies/projects as opposed to behavioral projects. Using existing conditions report for safety target development, supposed to update safety targets every year – able to utilize some of the data to develop safety targets.
 - Shared engineering strategies with strategic highway safety plan. Used to help develop vulnerable road users. Went into a larger statewide vulnerable road users report.
 - Fresno is MPO – do high- level planning. Assist local agencies in development of plans. Local agency is responsible for executing physical projects. A gap between the MPO and the local agency. Unincorporated area department of health worked with a consultant to do a demonstration project. Education campaign funding was attempted by MPO, not successful. Local Road safety plan should be eligible for implementation funds – local agencies say it might not be enough for VZ funding – local agencies go for funding to develop vision zero plans this year.
 - No continued discussion with steering committee since completion of the plans.
 - Web-based tool created to do some of the analysis. Tool developed as part of the project. Have not made much use of that tool. City of Ridley doing some safety analysis, requested safety data set. Fresno has some other data sets (SSP and one other). Want to access more recent data, going forward it has to be updated every year to be usable – have not worked on this.
 - Not much coordination has been done to understand the effect of the plan after the fact.
 - In hindsight, make tool easier to access/efficient to update going forward/simple input of data files. Make the process easier to replicate.
 - Have not made any changes based solely on this plan / would have liked to see some changes due to this plan. Have not made any policy changes. Not sure what they need to take away from this project to make some changes.
 - Steering committee and community engagement did not face resistance from community leaders during the VZ approach.

Agency Statistics and Characteristics

Agency Name: Delaware Valley Regional Planning Commission

Agency Type: MPO - advisory

Population: 9-county region

Planning Area Size: see previous

Year of Plan: 2022

Number of Member Agencies: 9

Goals and Vision

- What is the overarching goal of the plan (i.e., zero fatalities/serious injuries)? **Vision Zero 2050**
 - Are there any key target dates or interim dates for reaching the goal (i.e., X% by Year Y?)
- Does the plan identify specific objectives? What are they generally? **reduce roadway crashes and eliminate serious injuries and fatalities from crashes in the Greater Philadelphia region**

Stakeholder Engagement

- Did they utilize a stakeholder committee or other advisory committee? **Regional Safety Task Force**
 - Outside of the usual engineering/planning groups, what members did it have (e.g., Fire, Police, non-profits/other community groups)? **“Interdisciplinary”**
 - What were their goals for engagement with the committee and what were the key outcomes? **- No Information**
- How did they handle public engagement? **No Information**
 - In-person vs. virtual? **No Information**
 - What were their goals for the engagement and what were the key outcomes? **No Information**
 - How did they incorporate equity considerations? **No Information**

Existing Data Analysis

- Did they identify hot spots or a high-injury network (HIN)? **Emphasis Areas**
 - Did they focus on certain crash severities or all crashes? **KSI**
 - What measures did they use to define the HIN? **Road user age, vehicle type, behavior, mode, location**
- Did they identify systemic trends to be addressed? **Many identified in Emphasis Areas**
 - How did they identify these trends (e.g., all crashes, fatal/severe only, consistency with State or other policy)? **See above**
- How did they incorporate equity into this stage? **KSI in census tract areas for communities of concern**

Strategy Development

- How did they identify projects and other strategies? **Strategies attached to systemic trends**
 - Did they develop new projects or were they coming from other plans/nominated by member agencies? **No specific projects identified**
 - Did they develop systemic projects or just location-specific projects? Or did they just recommend a menu of treatments for different things? **Recommended systemic menu**
 - Did the plan identify non-infrastructure projects? **Yes, different SSA groupings**
 - What is the key information they provided for projects (e.g., CRF/CMF, cost)? **Priority**

Implementation Plan

- Did they prioritize projects into timeframes? **No**
- What prioritization criteria was used? **Unclear, exclamation point scale**
- Did they identify funding sources for specific projects (or all projects)? Or did they just discuss sources generally? **No**
- How did they handle non-engineering items? Are they also included here with responsible orgs and timeframes? **Non-specific organizations attached to some systemic strategies**
- What does their monitoring program look like?
 - Are there performance measures? Other recommendations (i.e., before and after studies?) **Coordination among partners regional safety performance measure targets**
 - Is there a continuing workgroup?

PEER AGENCY INTERVIEW - DVRPC

Date/Time: 12-19-23, 13:30 pm

ATTENDEES

- DVRPC: Kevin Murphy
- COMPASS: Hunter Mulhall
- Kittelson: Nick Foster, Andrew Thompson, Matt Steele

NOTES: DVRPC CECIL B. MOORE VISION ZERO PLAN

- Safe Streets group has evolved to explore ways to advance goals of TSAP.
- Could bring in speakers to talk about emphasis areas.
- Now that they have a Vision Zero (VZ) plan, trying to make good on it
- Formally included into long-range plan.
- Establish regional safety targets.
 - Broke away from state's targets.
- Trying to develop VZ plus plan now.
 - Working with regional partners to make plan implementation at county level.
 - Create some branding around VZ effort that identifies county partners.
- Developing HIN network for the region
 - Counties need to sign off on it.
 - Meeting with DOT/FHWA partners
 - State has created a network screening list.
 - Looking at this to add more weight.
 - Making analysis complementary, not competitive.
- Do not consider this work to be a replacement for anything already done.
 - Asking counties to bring them studies/reports with safety analysis.
 - Looking for useful safety analysis.
 - Resolutions for recommendations.
 - HIN locations.
 - Not starting from scratch.
- Present information in a way where people see the value.
- Process to measure how TIP projects align with your long-range plan.
 - Safety was the highest rated criteria.
 - [Microsoft Word - CO_23001_Final_FY2023PATIP \(dvrpc.org\)](#)
 - Breaks down given that they are only implementation.
- Where something works in one spot should work for another.
 - [Speed cameras on Roosevelt Boulevard are saving lives. Philly needs the program to continue and expand. | Office of the Mayor | City of Philadelphia](#)
- Take HIN and additional analysis counties work with municipalities to set a list of priority projects

Agency Statistics and Characteristics

Agency Name: Space Coast Transportation Planning Organization
Agency Type: MPO
Population: 616,000 (2023)
Planning Area Size: No Information
Year of Plan: 2020
Number of Member Agencies: 10

Goals and Vision

- **Achieve zero traffic deaths and serious injuries directing TPO staff to coordinate the development of a Vision Zero Action Plan.**
- **Generally bring stakeholders together (pg 8)**

Stakeholder Engagement

- Did they utilize a stakeholder committee or other advisory committee? **Vision Zero Task Force (pg 12)**
 - Outside of the usual engineering/planning groups, what members did it have (e.g., Fire, Police, non-profits/other community groups)? **Local police departments, schools, tourist dev council (pg 12)**
 - What were their goals for engagement with the committee and what were the key outcomes? **Discover consensus on safety issues through group workshops – focus on walkability and single user vehicles (pg 12-13)**
- How did they handle public engagement? **Four vision zero task force workshops (pg 12)**
 - In-person vs. virtual? **No Information**
 - What were their goals for the engagement and what were the key outcomes? **Diverse Vision Zero task force membership (many nonprofits, too many to list here) (pg 12)**
 - How did they incorporate equity considerations? **(see above)**

Existing Data Analysis

- Did they identify hot spots or a high-injury network (HIN)? **Developed high injury network (pg 24)**
 - Did they focus on certain crash severities or all crashes? **All severity levels considered, fatal and severe focus (pg 24)**
 - What measures did they use to define the HIN? **Crash severity score: EPDO average crash frequency method (pg 24) Identified speed, daylight, lighting, driver behaviors, and ages (pgs 19-23)**
- Did they identify systemic trends to be addressed? **Higher severity score locations experiencing more crashes (pg 24)**
 - How did they identify these trends (e.g., all crashes, fatal/severe only, consistency with State or other policy)?
- How did they incorporate equity into this stage? **Crashes analyzed by census tract normalized per 1000 people (pg 17/18) Also developed separate car, motorcycle, bicycle, and ped HIN.**

Strategy Development

- How did they identify projects and other strategies? **4 focus areas: leadership, education, safer roadways, safer speeds, data driven approach (pg 34). ONLY STRATEGIES**
 - Did they develop new projects or were they coming from other plans/nominated by member agencies? **Developed new projects (pgs 35-40)**
 - Did they develop systemic projects or just location-specific projects? Or did they just recommend a menu of treatments for different things? **Systemic projects (pgs 35-40)**
 - Did the plan identify non-infrastructure projects? **Education campaigns/workshops, etc. (pgs 35-40)**
 - What is the key information they provided for projects (e.g., CRF/CMF, cost)? **No Information**

Implementation Plan

- Did they prioritize projects into timeframes? **Trainings, workshops, etc. per year (pgs 35-40)**
- What prioritization criteria was used? **Level of resources (pgs 35-40)**
- Did they identify funding sources for specific projects (or all projects)? Or did they just discuss sources generally? **No Information**
- How did they handle non-engineering items? Are they also included here with responsible orgs and timeframes? **Action Plan focus areas span non-infrastructure improvements with leads (pgs 35-40)**
- What does their monitoring program look like? **Performance metrics for every action plan item (pgs 35-40)**
 - Are there performance measures? Other recommendations (i.e., before and after studies?)
 - Is there a continuing workgroup? **Vision Zero Steering Committee.**

PEER AGENCY INTERVIEW - SPACE COAST TPO

Date/Time:

- 12-19-23, 1:00-1:30 pm

ATTENDEES

- Space Coast TPO: Shelby Villatoro, Laura Carter
- COMPASS: Hunter Mulhall
- Kittelson: Nick Foster, Matt Steele

NOTES: SPACE COAST VISION ZERO ACTION PLAN

- Successes with implementing the safety plan:
 - Started when VZ was new
 - More of an education campaign
 - All jurisdictions signed on
 - Doing an action plan now
 - Getting everyone on the same page
 - Getting everyone to agree to zero deaths
 - Some revision because too detailed
 - Being flexible was important
 - Smaller steps to get to ultimate goal
 - Updating their plan now to have actual projects
- Federal funds are unavailable
 - LAP
 - Requires all the same strings as federal funds
- Challenges
 - Political standpoint
 - Actions after resolutions not occurring
 - Implementation plan needed some rework
 - Not an implementing agency (what can they do, what can't they do, how can they be a resource to their member agencies)
- Continuing workgroup
 - Currently a leadership team with members from every muni and community partners
- Local entities need resources to develop their own implementation plan
 - Here's your HIN/Action Plan/Etc.
- Action plan toolkit for member agencies
- Master plan for each emphasis area within the vision zero plan.
 - State of the system report (very data driven)
 - Integrated into project planning
 - TIP requires project ticks of performance measure.

PEER AGENCY INTERVIEW - DRCOG

January 25, 2024

Peer Agency Conversation with Denver Regional Council of Governments (DRCOG) on Jan. 5, 2024

ATTENDEES

- DRCOG: Emily Kleinfelter, Safety/Regional Vision Zero Planner and Alvan-Bidal Sanchez, Program Manager
- COMPASS: Hunter Mulhall
- Kittelson: Nick Foster
- High Street Consulting Group: Rebecca Van Dyke, Yousef Dana, and Kevin Ford

NOTES: REGIONAL VISION ZERO PLAN

1. Background and Context

- The first Vision Zero Plan was developed around 2019 by a consultant (they think Fehr and Peers).
- DRCOG is updating the plan now; started update effort at the beginning of 2023.
- Chapter 6 on Implementation is the only section being updated.
 - Needed to call out Safe System Approach (SSA) more.
 - It was more of a “to-do list” and needed more clarity on the impact and implementation.
 - They needed to understand the most important actions.
 - First step was looking at current actions, considering progress, and suggesting new actions.
 - Consulted stakeholders on what is most important, short-term, mid-term, long-term.
 - Removed actions that weren’t moving the needle.
 - Updating list of countermeasures to make it less detailed; using FHWA proven countermeasures instead.
 - Updated countermeasure list will include some that are not in FHWA’s guidance like Right Turn on Red.

2. Local Adoption of Regional Vision Zero Plan

- Local governments are using the plan.
- DRCOG has a tool that allows governments to select where their project would be.
- TIP considers projects on the high-injury network HIN or critical corridor. Applies to score: <https://drcog.maps.arcgis.com/apps/webappviewer/index.html?id=438c8406070d4b34bc9e892b56146ed8>
- Two governments have adopted a vision zero plan and goal.
- In 2022, nine SS4A recipients were awarded funding for their action plans.
- By this time next year, DRCOG hopes to have 10 member governments.

- Region very supportive; sometimes board pushes them faster than they can keep up.
- They're also identifying target years for vision zero goals, which they didn't the first round. 2040/2045 for fatalities/serious injuries.

3. Stakeholder Engagement

- Used Mural for virtual meeting feedback on each action. (Next two screenshots are of Mural boards.)

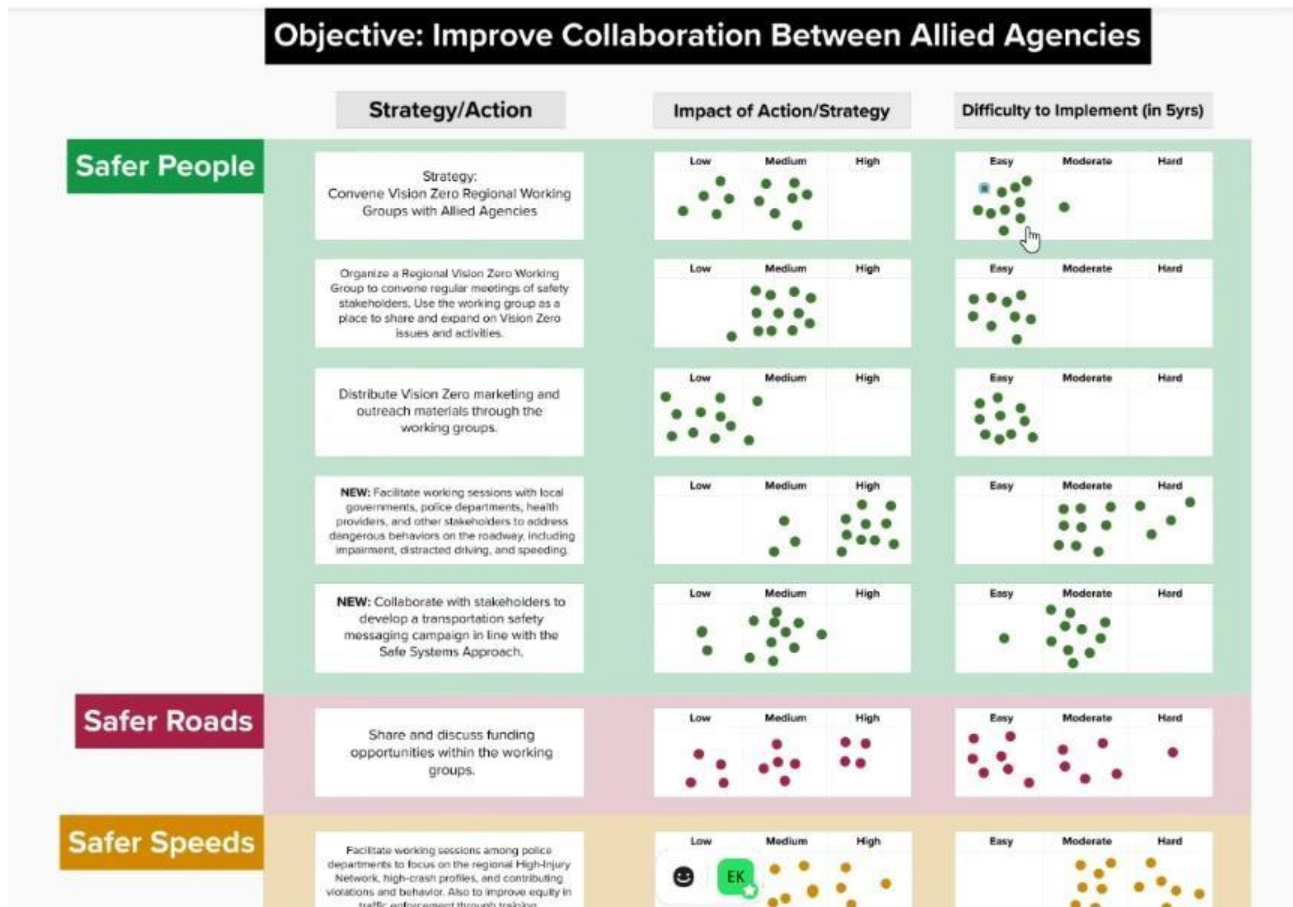
STATUS OF SAFETY

This progress report is not intended to be an exhaustive inventory nor is it a quantitative assessment; it is intended to provide examples and a general understanding of what has been achieved since Taking Action on Regional Vision Zero was adopted by the DRCOG Board in June 2020

Key	
Action Completed	●
Substantial progress made	●
Progress made, but more action is needed	●
Minimal progress made	●
No progress made	○

Agree with Status	👍
Disagree with Status	🗨️

Objective 1: Improve Collaboration Between Allied Agencies	Status	Feedback on Status
Organize a regional Vision Zero working group to convene regular meetings of safety stakeholders. Use the working group as a place to share and expand on Vision Zero updates in regard to data, resources, policy evolution and emerging issues. This group will also further develop details of future action initiatives.	●	👍👍👍
Facilitate working sessions among police departments to focus on the regional High-Injury Network, crash profiles, contributing violations and behaviors, and equity and empathy. Use these sessions to help promote prioritizing enforcement with empathy on the regional High-Injury Network.	○	👍👍🗨️
Distribute Vision Zero marketing and outreach materials through the working groups.	●	👍🗨️
Share and discuss funding opportunities within the working groups.	●	👍👍👍👍
Collaborate with the Advanced Mobility Partnership to support transportation technology efforts that support Regional Vision Zero through data collection, planning, programming and decision-making.	●	👍
Working with allied organizations, create support systems for victims of traffic violence such as counseling, memorializing and storytelling.	●	👍👍



- Mural engagement was better than in-person engagement, but weather may have had an impact.
- Regional Vision Zero Group continued to meet since 2020, mostly for resource sharing.
- Changed to monthly workshops; made up of member governments, state DOT, advocacy groups.
- Only 1 or 2 disengaged stakeholders that feel like they're not moving in the same direction as DRCOG.
- Tweaking the language for each member agency is important to get actions moved.
- Stakeholder interest in driving under the influence of substances.

4. High-injury Network (HIN)

- DRCOT took the HIN, network of critical corridors, and crash profiles and developed a story map: <https://storymaps.arcgis.com/collections/1007942fed964b3596895462fa9e076a?item=7> (Developed internally, by Emily.)
- Now they're manually creating a list of 120 corridors in all counties.
- A lot of the HIN is interstates; relationship with the Colorado DOT is growing as they have their own safety priorities. They were involved in prioritization workshops.

5. Disadvantaged Communities

- Unsure of the extent of project implementation in underserved communities; would have to do a scan of projects.

- Seen interest in underserved communities in other, more recurring pipelines like the Community Based Transportation Plans
- Use environmental justice areas in critical corridor planning.
- Rely on a particular definition for EJ zones and address concerns through conversation. EJ zones are now a tighter region.
- Careful about using “geographic equity;” now talk more about balance. Main message is that we’re taking into consideration geographical context.

6. Resource Availability

- DRCOG is at the disposal of local governments as a resource.
- If local agencies can’t develop their own plan, the Regional Safety Action Plan can be used.
- Critical corridors exist in all counties for this reason.
- DRCOG is researching whether the Regional Action Plan counts as a local government’s action plan for funding requests.
- Currently piloting a technical assistance program; may be stepping into this area more.
- For some resource-strapped agencies, they remove some local match and handle some procurement.

7. Funding

- Just begun thinking about framework for a regional safety set-aside.
- They would be taking money off the top for every TIP.
- Another option is a regional funding pool.

PEER AGENCY INTERVIEW - MNDOT

January 25, 2024

Peer Agency Conversation with Minnesota Department of Transportation (MnDOT) on Jan. 4, 2024

ATTENDEES

- MnDOT: Derek Leuer
- COMPASS: Hunter Mulhall
- Kittelson: Nick Foster
- High Street Consulting Group: Rebecca Van Dyke, Yousef Dana, Kevin Ford

NOTES: COUNTY ROADWAY SAFETY PLANS (CRSP) PROGRAM

1. Background and Context

- At the time the first program was developed, 50% of fatal and serious crashes occurred off of the main trunk.
 - MnDOT decided that to achieve Road to Zero, they needed to work with local partners.
 - The next major chunk of crashes were county roadways, mostly rural, and the next logical place to focus on.
- Decided to open up funding.
 - Told locals that half the problems are on your network, so half the money is available to you. Asked locals to send safety projects.
 - Received expensive, ineffective projects like shoulder paving, highway reconstruction, and intersection rebuilds.
 - Reassessed and decided to tell locals the type of projects needed – low-cost, high-impact, and distributed across the state.
 - They still didn't get it – received the same type of projects. Often came down to one engineer doing all the planning.
 - Realized they needed to tell them what to do and where to do it or all 87 counties.
 - MnDOT doesn't do the analysis and work; they hire consultants and work closely with county engineers and staff.
 - Collaboration with the MnDOT State Aid Department, which gets money to counties. This partnership already existed, which helped a lot. They were the full project managers.
 - MnDOT doesn't recommend projects, they suggest the "right type."

2. Local Reactions to CRSP Program

- Received some pushback, but county engineers often didn't fully appreciate the problems they had. They often didn't know what to do.

- This program was mostly a breath of fresh air, especially in less dense counties with less population and expertise.

3. Plan Funding

- First round used internal state funding at 100%. Lots of political will at the time in 2008; commissioner was very enthusiastic about safety planning.
 - Received \$3 million for 87 counties
- One challenge was getting all 87 counties to do it. Significant peer pressure worked, especially at 100% funding.
- For second round, they have used “164 funds” because MN doesn’t have a DWI reoffender law.
 - This is about \$18 million a year; 100% funded - no match required.
- Received some complaints about “cookie cutter” process – applying same methods for all counties. Now there’s an option to customize with 20% match requirement.
 - One Tribe approached and received a match exemption.

4. Effectiveness

- At least 85% of counties have submitted for projects and gotten funding. Try to give little counties a leg up; big affluent counties are still submitting for more projects.
- First CRSPs were intended to be primarily rural. Seen a recent change in the data across the state.
 - Now about 50% urban and 50% rural. Maybe that society is becoming more urban.
- Hard to directly tie CRSPs to overall crash reductions; also difficult because of a new crash data system in 2018.
 - “A” went from incapacitating to suspected serious injuries; saw a 60-80% increase in “As.”
- A lot of agencies don’t implement with HSIP because they don’t want to go through the federal process.
 - Smaller counties are more likely to apply for HSIP funding.
- County engineers are more politically connected on the ground and are therefore politically sensitive.
 - Rumble strips are hard to implement because of noise concerns. Received pushback on intersection lighting, too.
 - Striping is easy. Chevrons on curves are very popular.
 - Helps to get in front of county boards early and explain what and why they do what they do. Maybe no crashes yet, but that’s what systemic planning is.

5. Project Funding

- Try to encourage counties to “bundle” projects by intervention; example is applying chevrons on dangerous curves.
- State Aid has helped counties streamline process.
- Lack of Resources, desire, and expertise are all barriers to project submission.
- Northwest corner of state – 13 counties got together and id curves that needed chevrons
 - \$2M funding request
 - Broke up the work so that one county wasn’t navigating the whole federal process.
- Smaller agencies are concerned about maintenance afterwards.
 - Continues to be a challenge; try to frame it as “reconstruction.”
- The challenge with intersection lighting involves paying for power.

- Locals have to pay for power costs, and they often don't want to, or they don't have staff to maintain.
- MnDOT hasn't completely figured out a solution to this; one county approached the power coop to help maintain the lights and pay for the power.

6. Prioritization Process

- MnDOT makes suggestions for projects; counties apply for funding.
- Keep cost estimates at high-, planning-level; encourage counties to apply more accurate, updated data if available.
- Identify risk factors based on characteristics of the roadway.
 - On curves, for example, characteristics might include vertical trap and intersection on roadway. If a curve meets criteria of a risky curve, it's a high-risk curve.

7. Non-engineering Interventions

- First plans included some programs they could apply to, more as a "goodwill gesture" for public safety. Not sure how much they were used.
- In second round, since the program geared toward county engineers, not as big about this. There are other programs for these types of interventions.

8. Safe System Approach

- SSA approach has applied to the CRSPs all along.
- New SHSP and other plans will talk more about it.
- It's a good educational tool, especially around humans making mistakes. Better way of talking about traffic safety.

9. Closing Thoughts

- MnDOT had this great effort 15 years ago; lots of excitement from county engineers. In 10-15 years, people retire, move on, etc. so there is a lost knowledge base.
- In 2024 the department is doing a big outreach project to talk about traffic safety and the funding available for traffic safety infrastructure. They'll do 24 workshops across the state.
- MnDOT strongly encourages counties to do this. Told them they need 100% participation to do this. No policy/legislation/state requirement.