

AGENDA

TRANSPORTATION ADVISORY COMMITTEE

Monday, April 27, 2020

1:30 p.m.

VIDEO/WEB CONFERENCE

Denver, CO

1. Call to Order
2. Public Comment
3. March 23, 2020 TAC Meeting Summary
(Attachment A)

ACTION ITEMS

4. Discussion of 2020-2023 Transportation Improvement Program (TIP) amendments
(Attachment B) Todd Cottrell
5. Discussion of FY 2019 Transportation Improvements Program (TIP) Project Delays Report amendment
(Attachment C) Todd Cottrell
6. Discussion of Amending the FY 20-FY21 Unified Planning Work Program (UPWP)
(Attachment D) Todd Cottrell
7. Discussion of DRCOG Regional Multimodal Freight Plan adoption
(Attachment E) Matthew Helfant
8. Discussion of Taking Action on Regional Vision Zero adoption
(Attachment F) Beth Doliboa

INFORMATIONAL BRIEFINGS

9. Proposed 2020 technical amendment to the 2040 Metro Vision Regional Transportation Plan (2040 MVRTP)
(Attachment G) Jacob Riger
10. Draft 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) scenario outcome results
(Attachment H) Jacob Riger

ADMINISTRATIVE ITEMS

11. Member Comment/Other Matters
 - Small-area forecast comment period in May
 - AMP Working Group update
12. Next Meeting – May 18, 2020
13. Adjournment



ATTACHMENT A

MEETING SUMMARY
TRANSPORTATION ADVISORY COMMITTEE
Monday, March 23, 2020
Note: Meeting held virtually via GoToMeeting

MEMBERS (OR VOTING ALTERNATES) PRESENT:

Jeff Dankenbring	Arapahoe County – City of Centennial
Bryan Weimer	Arapahoe County
Sarah Grant	Broomfield, City and County
Phil Greenwald	Boulder County – City of Longmont
Megan Davis	Boulder County – City of Louisville
Kent Moorman (Chair)	Adams County – City of Thornton
Eileen Yazzie	Denver, City and County
Ron Papsdorf	Denver Regional Council of Governments
John Cotten	Douglas County-City of Lone Tree
Art Griffith	Douglas County
Tim Hester	Aviation
Andrea LaRew	Business
Carson Priest	TDM/Nonmotorized
Rick Pilgrim	Environmental
Paul Jesaitis	CDOT Region 1
Jim Eussen (Alternate)	CDOT Region 4
Tim Kirby	CDOT - DTD
David Krutsinger	CDOT - DTR
Amanda Brimmer (Alternate)	Regional Air Quality Council
Stephen Strohming	Non-MPO Area
Carol Buchanan	DRMAC
Steve Durian (Vice Chair)	Jefferson County
Debra Baskett	Jefferson County – City of Westminster
Bill Sirois (Alternate)	Regional Transportation District
Kevin Ash	Weld County-Town of Frederick

OTHERS PRESENT:

Mac Callison (Alternate)	Arapahoe County – City of Aurora
Lisa Nguyen (Alternate)	Aviation
Jean Sanson (Alternate)	Boulder County – City of Louisville
Richard Zamora (Alternate)	CDOT Region 1
Brodie Ayers (Alternate)	CDOT - DTR
Eugene Howard (Alternate)	Denver, City and County
Tom Reiff (Alternate)	Douglas County-City of Castle Rock
Chris Hudson (Alternate)	Douglas County – Town of Parker
Kristin Kenyon (Ex Officio)	Federal Transit Administration
Aaron Bustow (Ex Officio)	Federal Highway Administration
Ken Johnstone (Alternate)	Jefferson County – City of Wheat Ridge
Mike Whiteaker (Alternate)	Jefferson County – City of Lakewood

Public: Loretta Daniel, Arapahoe County; Jennifer Carpenter, Michael Baker Intl.; Chessy Brady, John Hersey, Charlie Stanfield, RTD; Bryan Kiel, WSP; Marissa Gaughan, Julie George, Phil von Hake, Danny Herrmann, Jordan Rudel, Michael King, Jan Rowe, JoAnn Mattson, Moira Moon, Karen Schneiders, Erik Sabina, CDOT; Chris Chovan, Adams County; Melanie Choquette, Denver, City and County; Sheryl Machado, Denver South TMA; Lauren Pulver, Douglas County; Jill Jennings-Golich, Libby Tart, Adams County; Erin

Fosdick, City of Longmont; Karen Widomski, City of Thornton; Andrew Spurgin, City of Westminster

DRCOG staff: Jacob Riger, Robert Spotts, Steve Cook, Beth Doliboa, Matthew Helfant, Melinda Stevens, Emily Lindsey, Sang Gu Lee, Brad Calvert, Todd Cottrell, Alvan-Bidal Sanchez, Zach Feldman, Geoffrey Chiapella, Lisa Houde, Greg MacKinnon, Travis Noon, Andy Taylor, Lawrence Tilong, Ala Alnawaiseh

Call to Order

Chair Kent Moorman called the meeting to order at 1:30 p.m.

Public Comment

There was no public comment.

Summary of February 24, 2020 meeting

Kenneth Johnstone noted that Wheat Ridge was spelled incorrectly in the summary. Members were asked to vote via Mentimeter. John Cotten MOVED to approve the summary and it was accepted with 22 voting in favor.

ACTION ITEMS

Discussion of the draft Eligibility Rules and Selection Process for the RTO&T Set-Aside

Steve Cook and Greg MacKinnon presented the rules and process to the committee. The DRCOG Board adopted the 2020-2023 Transportation Improvement Program (TIP) that included the Regional Transportation Operations & Technology (RTO&T) Set-Aside at \$5 million per year. The RTO&T Set-Aside contains the following components:

- RTO&T Improvement Program of projects (~\$3.5 million per year)
- DRCOG Regional Traffic Operations Program (~\$1.5 million per year)

Approximately \$13 million remains for fiscal years 2020-2023 in total. Funding will be allocated to new projects through a call-for-projects this year. The proposed process and criteria were developed in cooperation with the Advanced Mobility Partnership Working Group and the Regional Transportation Operations Working Group. It is anticipated that project recommendations will be made by late summer.

Alex Hyde-Wright asked if the RTO&T funding could be used to fund tolling equipment for arterial BRT/managed lanes. Mr. Cook stated that this set-aside is not geared towards routine tolling equipment. Mr. MacKinnon added that if the intent of the equipment is to improve operations as a part of a system, it might apply, but if it is just general toll collection, probably not. It all depends on the application. Mr. Cook added that when staff receives the LOI (Letter of Intent), staff will work with the sponsor of the proposed project to determine eligibility.

Art Griffith MOVED to recommend to the Regional Transportation Committee the eligibility rules and evaluation process for selecting projects to be funded through the Regional Transportation Operations and Technology Set-Aside of the 2020-2023 Transportation Improvement Program.

Members were asked to vote via Mentimeter. The motion was seconded and passed with 22 voting in favor. There was no opposition or abstentions.

Discussion on urban arterial multimodal safety improvements set-aside

Ron Papsdorf presented the proposed eligibility rules and evaluation process for the selection of projects to be funded to the committee. At its February 24, 2020 meeting, the DRCOG Transportation Advisory Committee recommended the creation of a \$26 million Urban Arterial Multimodal Safety Improvements Program. CDOT and DRCOG have determined that it is desirable to distribute these funds along with CDOT's SB17-267 funding allocations for arterial safety and transit improvements through one consolidated call for projects. In order to meet the required project delivery and spending requirements of the SB17-267 funds, DRCOG and CDOT requested the TAC review and recommend approval of eligibility rules and project selection process for the combined call for projects.

Phil Greenwald wanted to know if CDOT Region 4 will have input in selecting Surface Transportation Block Grant-funded projects. Mr. Papsdorf stated that CDOT has only identified Region 1 DTR staff to serve in the selection process at this time, which was a decision made internally at CDOT.

Debra Baskett suggested the term "road diets" be removed from the "Eligibility Rules and Selection Process" document. Ms. Baskett stated that the term might be unclear and perceived in a negative light.

Art Griffith MOVED to recommend to the Regional Transportation Commission the eligibility rules and process for selecting projects to be funded through the Urban Arterial Multimodal Safety Improvements Program, with the amendment to remove the term "road diets".

Members were asked to vote via Mentimeter. The motion was seconded and passed with 22 voting in favor. There was no opposition or abstentions.

INFORMATIONAL BRIEFING

Draft 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) scenario outcome Results
Jacob Riger, Robert Spotts, Alvan-Bidal Sanchez, and Andy Taylor presented the various scenario outcomes to the committee. At the January TAC meeting, the committee informally endorsed several measures and topics to assess the outcomes of the land use and transportation scenarios as part of developing the 2050 MVRTP. DRCOG staff have been coding, modeling, and compiling the results of five transportation scenarios and two land use scenarios. The presentation defined and illustrated each of the transportation and land use scenarios to help members understand and make sense of the many results. Members were informed that the April meeting is anticipated to focus on how the scenario outcome results should guide the framework for preparing the 2050 MVRTP.

Phil Greenwald wanted to know if State Highway 119, State Highway 7, and State Highway 42 were included in the Managed Lanes & Operations scenario. Mr. Spotts stated that staff strictly used freeway managed lanes in this scenario. Mr. Spotts added that State Highway 119 was already included in the fiscally constraint plan. BRT investments on the other two corridors are included in the Transit Emphasis scenario.

Art Griffith wanted to know, regarding the Travel Choices Scenario, how much of the decrease in delay was due to telecommuting, as telecommuting could be a component to every scenario being evaluated. Mr. Spotts stated that these concepts are being tested individually, but any one of them could contain telecommuting. Telecommuting had a significant effect on the regional metrics, especially regarding peak travel times.

Bryan Weimer wanted to know what assumptions were made on housing costs with the Centers and Infill land uses scenarios. Mr. Taylor stated there were no assumptions made related to housing costs, there could be impacts regarding housing costs, but they cannot be derived from the model presented.

Eileen Yazzie wanted to know, regarding the belief that we can 'move the needle' when land use is intensified, how this differs from the assumed land use and zoning plans for each of the local governments and if jurisdictions will get to review the land use model again to refine the assumptions. Mr. Taylor responded that with the Infill scenario, there were no changes to urban and interior suburban areas. There was a 10% decrease in capacity in surrounding areas. In the centers, there was a 75% increase over what was allowed in the base, derived from local zoning and plans. There was a 25% decrease in capacity outside of those centers. Mr. Taylor added that he is hoping to have a comment map for local jurisdiction review by May for the next iteration of the 2050 land use forecast.

Update and information on the upcoming draft of Taking Action on Regional Vision Zero

Beth Doliboa presented the draft and updated information to the committee. Over the last year, DRCOG has been working with stakeholders to develop a plan that focuses on reducing and eventually eliminating fatal and serious injury crashes in the Denver region. Taking Action on Regional Vision Zero will:

- Reduce fatalities and serious injuries in the Denver region, with a goal of achieving zero fatalities and serious injuries per year
- Support DRCOG's various safety performance measures and targets.
- Increase awareness of Vision Zero to influence safer behaviors on roadways.
- Provide tools and strategies to local jurisdictions to encourage safety in planning and design of the regional transportation system.

Members were asked to review the draft plan and submit comments and suggestions to be incorporated in the final document.

Alex Hyde-Wright wanted to know if there is a target date to achieve the goals set in the plan. Ms. Doliboa stated that in the 2050 Metro Vision Regional Transportation Plan, the goal is to have under 100 fatalities by the year 2040.

ADMINISTRATIVE ITEMS

Member Comment/Other Matters

Carson Priest provided an update from the Advanced Mobility Partnership (AMP) working group to the committee. Mr. Priest stated The AMP group met on March 3rd and elected officers, who are Brian Welch of RTD as Chair, and Ashley Nysten of CDOT as Vice Chair. At the meeting, there was discussion on prioritizing each of the tactical actions in a more thoughtful way so that partner agencies could focus on a few important ones rather than the whole gamut. That message was relayed to the Executive Committee and the AMP will hear back on that prioritization at the next meeting in April. CDOT also reminded everyone of the Mobility Technology Data Scrum on May 6th – 7th, which people can RSVP to Lily.Lizarraga@state.co.us. AMP also gave input on the RTO&T set-aside criteria that was discussed earlier in the TAC meeting.

Next Meeting – April 27, 2020

There were no comments from members. The meeting adjourned at 4:03 p.m.

ATTACH B

ATTACHMENT B

To: Chair and Members of the Transportation Advisory Committee

From: Todd Cottrell, Senior Planner, Short Range Transportation Planning
(303) 480-6737 or tcottrell@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Action	4

SUBJECT

2020-2023 Transportation Improvement Program (TIP) amendments.

PROPOSED ACTION/RECOMMENDATIONS

DRCOG staff recommends approval of the proposed amendments because they comply with the current TIP amendment procedures, as contained within the Board-adopted [2020-2023 TIP Policy](#).

ACTION BY OTHERS

N/A

SUMMARY

DRCOG's transportation planning process allows for Board-approved amendments to the current Transportation Improvement Program (TIP) on an as-needed basis. Typically, these amendments involve the addition or deletion of projects, or adjustments to existing projects and do not impact funding for other projects in the TIP.

The TIP projects to be amended are shown below and listed in Attachment 1. The proposed amendments to the [2020-2023 Transportation Improvement Program](#) have been found to conform with the State Implementation Plan for Air Quality.

TIP Amendments

- **2018-002** **Region 1 Transportation Alternative (TA) Pool**
Add \$9.8 million in State-allocated Transportation Alternatives funds, along with four new pool projects
- **New Project** **I-70 and Picadilly: New Interchange**
Create a new \$58.7 million-dollar project for a new interchange and associated roadway network changes. Federal funding was allocated through the 2019 BUILD grant Call for Projects.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

Move to recommend to the Regional Transportation Committee the attached amendments to the *2020-2023 Transportation Improvement Program (TIP)*.

ATTACHMENT

1. Proposed TIP amendments

ADDITIONAL INFORMATION

If you need additional information, please contact Todd Cottrell, Senior Planner, Short Range Transportation Planning, Transportation Planning and Operations Division at 303-480-6737 or tcottrell@drcog.org.

2018-002: Add four new pool projects and funding in FY 2021 through FY 2023

Existing

Title: **Region 1 Transportation Alternatives (TA) Pool**

Project Type: **Bicycle and Pedestrian Projects (New)**

TIP-ID: **2018-002**

STIP-ID:

Open to Public:

Sponsor: **CDOT Region 1**

Project Scope

Pool contains TA funds and projects selected by CDOT Region 1.



Affected County(ies)
Adams
Arapahoe
Broomfield
Denver
Douglas
Jefferson

Performance Measures	
<input type="checkbox"/>	Bridge Condition
<input checked="" type="checkbox"/>	Congestion
<input type="checkbox"/>	Freight Reliability
<input type="checkbox"/>	Pavement Condition
<input checked="" type="checkbox"/>	Safety
<input checked="" type="checkbox"/>	Travel Time Reliability

All pool project funding depicts federal and/or state funding only.

Facility Name	Start-At and End-At	Cost (1,000s)	Facility Name (Cont)	Start-At and End-At	Cost (1,000s)	Facility Name (Cont)	Start-At and End-At	Cost (1,000s)
Jefferson County Peaks and Plains: Mouth of Clear Creek Canyon Segment		\$852	Denver 47th and York Safe Crossing Project		\$2,500	Golden West Colfax Ave Sidewalk/Connectivity Project		\$530
Evergreen North Lake Trail		\$200	Golden US-8 Wildlife Crossing and Multi-use Trail Improvements		\$400			
Amounts in \$1,000s	Prior Funding	FY20	FY21	FY22	FY23	Future Funding	Total Funding	
Federal (TAP)		\$1,841	\$0	\$0	\$0			
State		\$0	\$0	\$0	\$0			
Local		\$460	\$0	\$0	\$0			
Total	\$4,602	\$2,301	\$0	\$0	\$0	\$0	\$6,903	

ATTACHMENT 1

Revised

Facility Name	Start-At and End-At	Cost (1,000s)	Facility Name (Cont)	Start-At and End-At	Cost (1,000s)	Facility Name (Cont)	Start-At and End-At	Cost (1,000s)
Jefferson County Peaks and Plains: Mouth of Clear Creek Canyon Segment		\$852	Golden US-6 Wildlife Crossing and Multi-use Trail Improvements		\$400	Lakewood Wadsworth Shared Use Path		\$2,004
Evergreen North Lake Trail		\$200	Golden West Colfax Ave Sidewalk/Connectivity Project		\$530	Westminster Citywide Multimodal Transportation Safety, Access, and Connections Improvements		\$199
Denver 47th and York Safe Crossing Project		\$2,500	Jefferson County Peaks to Plains - Huntsman Gulch to Rigor Mortis Rapids		\$1,653	Arvada Alkire St. Sidepath		\$1,200

Amounts in \$1,000s	Prior Funding	FY20	FY21	FY22	FY23	Future Funding	Total Funding
Federal (TAP)		\$1,841	\$1,689	\$1,685	\$1,682		
State		\$0	\$0	\$0	\$0		
Local		\$460	\$1,312	\$1,567	\$1,898		
Total	\$4,602	\$2,301	\$3,001	\$3,252	\$3,580	\$0	\$16,736

New Project: Create a new project as an outcome of the federal 2019 BUILD grant Call for Projects

New Project

Title: **I-70 and Picadilly: New Interchange**

Project Type: **Roadway Capacity**

TIP-ID: **2020-091**

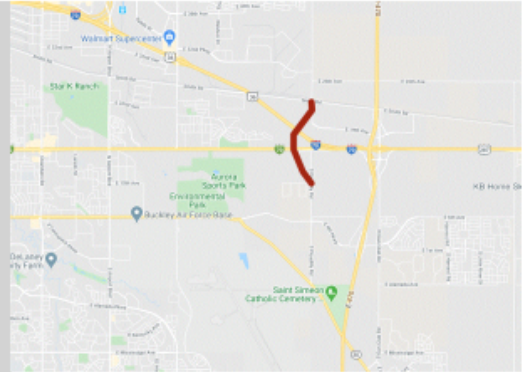
STIP-ID:

Open to Public: **2025**

Sponsor: **Aurora**

Project Scope

This project builds a new diverging diamond interchange at I-70 and Picadilly Rd., just west of E-470, and reconstructs and realigns Picadilly Rd. between 11th Ave. and Smith Rd. This project also adds auxiliary lanes to both eastbound and westbound I-70 between Picadilly Rd. and Tower Rd.



Affected Municipality(ies)

Aurora

Affected County(ies)

Adams

Arapahoe

Performance Measures

- Bridge Condition
- Congestion
- Freight Reliability
- Pavement Condition
- Safety
- Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY20	FY21	FY22	FY23	Future Funding	Total Funding
Federal (BUILD)		\$0	\$5,000	\$5,000	\$5,000		
State		\$0	\$0	\$0	\$0		
Local		\$1,905	\$15,040	\$3,840	\$3,840		
Total	\$1,410	\$1,905	\$20,040	\$8,840	\$8,840	\$17,680	\$58,715

ATTACH C

ATTACHMENT C

To: Chair and Members of the Transportation Advisory Committee
From: Todd Cottrell, Senior Planner, Short Range Transportation Planning
(303) 480-6737 or tcottrell@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Action	5

SUBJECT

FY 2019 Transportation Improvements Program (TIP) Project Delays Report amendment.

PROPOSED ACTION/RECOMMENDATIONS

Staff recommends approval of proposed amendment to the FY 2019 TIP Project Delays Report.

ACTION BY OTHERS

NA

SUMMARY

In December, the DRCOG Board approved the FY 2019 TIP Project Delays Report and followed-up with an amendment in February. As of April 1, three additional projects reached their first-year delay deadline.

In February 2019, the DRCOG Board approved the FY19 Station Area Master Plan/Urban Center (STAMP/UC) studies, one of the set-asides in the previous TIP. Due to the funds not being awarded on or near the beginning of the 2019 federal fiscal year (October 2018), staff noted the first-year delay deadline would not take place until April 1, 2020.

After review, the following projects did not initiate their project phase as of April 1, and therefore are delayed for a first year:

1. Commuting Solutions (Delayed beginning April 1, 2020)

Name: SH-119 First Final Mile Study

TIP ID: 2007-089 (STAMP/UC Pool)

Project Phase: Initiate Study

FY2019 Federal funding: \$100,000

<https://apps.drcog.org/TRIPS/TipProject/2018-2021/details/49478>

Commuting Solutions reports the study is currently working to get the consultant under contract and the kick-off meeting schedule. Study kick-off is expected to be in May.

Recommendation—DRCOG staff recommends the delay be approved subject to the following conditions:

- Commuting Solutions staff continue to aggressively pursue the study kick-off no later than the end of May 2020. If unachieved, Commuting Solutions and DRCOG staff shall discuss this study at the first of each month beginning in June 2020, until the kick-off meeting is held.

2. Denver (Delayed beginning April 1, 2020)

Name: Far NE Denver Mobility Next Steps Study

TIP ID: 2007-089 (STAMP/UC Pool)

Project Phase: Initiate Study

FY2019 Federal funding: \$200,000

<https://apps.drcog.org/TRIPS/TipProject/2018-2021/details/49478>

Denver reports the study is currently working to get the consultant under contract through an on-call contract and the kick-off meeting scheduled. Study kick-off is expected to be in July.

Recommendation—*DRCOG staff recommends the delay be approved subject to the following conditions:*

- Denver staff continue to aggressively pursue the study kick-off no later than the end of July 2020. If unachieved, Denver and DRCOG staff shall discuss this study at the first of each month beginning in August 2020, until the kick-off meeting is held.

3. RTD (Delayed beginning April 1, 2020)

Name: *Wayfinding Signage Design and Programming*

TIP ID: 2007-089 (STAMP/UC Pool)

Project Phase: Initiate Study

FY2019 Federal funding: \$200,000

<https://apps.drcog.org/TRIPS/TipProject/2018-2021/details/49478>

RTD reports the study is currently working to get the consultant under contract and the kick-off meeting scheduled. Study kick-off is expected to be in June.

Recommendation—*DRCOG staff recommends the delay be approved subject to the following conditions:*

- RTD staff continue to aggressively pursue the study kick-off no later than the end of June 2020. If unachieved, DRCOG staff shall discuss this study at the first of each month beginning in July 2020, until the kick-off meeting is held.

As a reminder, the [FY 2016-2021 Policy on TIP Preparation](#) document identifies expectations for project initiation and policy for addressing delays for projects/phases with DRCOG-allocated federal funding for FY19. Timely initiation of TIP projects/phases is an important objective of the Board. Delays, regardless of the reason, tie up scarce federal funds that could have been programmed to other ready projects/phases.

These amendments will be amended into the FY 2019 Project Delays Report upon approval of the RTC and DRCOG Board.

PREVIOUS BOARD DISCUSSIONS/ACTIONS

[December 18, 2019](#) – Action to approve FY 2019 Project Delays report.

[February 19, 2020](#) – Action to approve an amendment to the report.

PROPOSED MOTION

Move to recommend to the Regional Transportation Committee the amendment to the approved TIP project delays report for Fiscal Year 2019.

ATTACHMENT

Link: [TIP Project Delays Report for FY 2019, amended](#)

ADDITIONAL INFORMATION

If you need additional information, please contact Todd Cottrell, Senior Planner, Short Range Transportation Planning, Transportation Planning and Operations Division at 303-480-6737 or tcottrell@drcog.org.

ATTACH D

ATTACHMENT D

To: Chair and Members of the Transportation Advisory Committee

From: Todd Cottrell, Senior Transportation Planner
303-480-6737 or tcottrell@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Action	6

SUBJECT

Amending the *FY 20-FY21 Unified Planning Work Program (UPWP)*.

PROPOSED ACTION/RECOMMENDATIONS

DRCOG staff recommends approval of the proposed FY 2020-FY 2021 UPWP amendments.

ACTION BY OTHERS

N/A

SUMMARY

The *FY 2020-FY 2021 Unified Planning Work Program (UPWP)* describes the transportation planning activities to be conducted in the Denver region. The UPWP, prepared biennially, is the two-year work program for the MPO and serves as the management tool for scheduling, budgeting, and monitoring the planning activities of participating entities. The FY 2020-FY2021 UPWP was adopted in July 2019.

Periodically, amendments to the UPWP are necessary to accurately reflect work to be performed or to comply with changes in federal law. Proposed amendments are shown in the track changes version of the FY 2020-FY 2021 UPWP (see attachment) and fall into three general categories:

- Procedural: modifications to tasks and activities
- Financial: updates to the finance tables in Appendix A
- Schedule: minor update to Appendix B

Staff will further describe the proposed amendments during the meeting.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

Move to recommend to the Regional Transportation Committee amendments to the *FY 2020-FY 2021 Unified Planning Work Program*.

ATTACHMENT

Link: [Amended FY 2020-FY 2021 Unified Planning Work Program](#) (in track-changes)

ADDITIONAL INFORMATION

If you need additional information, please contact Todd Cottrell at (303) 480-6737 or tcottrell@drcog.org.

ATTACHE

ATTACHMENT E

To: Chair and Members of the Transportation Advisory Committee

From: Matthew Helfant, Senior Transportation Planner
303-480-6731 mhelfant@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Action	7

SUBJECT

DRCOG Regional Multimodal Freight Plan adoption.

PROPOSED ACTION/RECOMMENDATIONS

Staff recommends adoption of the DRCOG Regional Multimodal Freight Plan

ACTION BY OTHERS

N/A

SUMMARY

DRCOG's current regional freight plan was last updated in 2016 as part of the 2040 MVRTP. Working with DRCOG staff and an advisory committee that includes industry representatives and jurisdictional staff, Cambridge Systematics has completed a draft of the updated component: the DRCOG Regional Multimodal Freight Plan.

The DRCOG Regional Multimodal Freight Plan includes the following components:

- Significant regional trends and conditions;
- Baseline information, best practices, and data to encourage local planning efforts;
- An inventory of current needs to address freight-related highway and other infrastructure issues;
- A vision regional freight priority network illustrating potential future freight focus areas, and
- Strategies and actions for continued regional coordination and action.

The ultimate purpose for this plan is to serve as a blueprint for the regional planning partners, the private sector, and others to conduct more detailed planning of the movement of goods in the DRCOG region, including implications for the 2050 Regional Transportation Plan. The components listed should be used as tools for these exercises.

Cambridge Systematics and DRCOG staff will provide a briefing on this document, the tools that it provides for communities across the DRCOG region, and the new opportunities for coordination and collaboration born from its development.

PREVIOUS DISCUSSIONS/ACTIONS

[January 28, 2019](#) TAC

[January 27, 2020](#) TAC

PROPOSED MOTION

Move to recommend to the Regional Transportation Committee adoption of the *DRCOG Regional Multimodal Freight Plan*

ATTACHMENTS

1. *Link:* [Draft DRCOG Regional Multimodal Freight Plan](#)
2. DRCOG Regional Multimodal Freight Plan presentation
3. DRCOG Regional Multimodal Freight Plan Comment Matrix

ADDITIONAL INFORMATION

If you need additional information, please contact Matthew Helfant, Senior Transportation Planner, at 303-480-6731 or mhelfant@drcog.org; or Evan Enarson, Cambridge Systematics, at 303-357-4663 or EEnarson@Camsys.com.



Presented by:

Matthew Helfant

DRCOG

Regional Multimodal Freight Plan

Transportation Advisory Committee

April 27, 2020



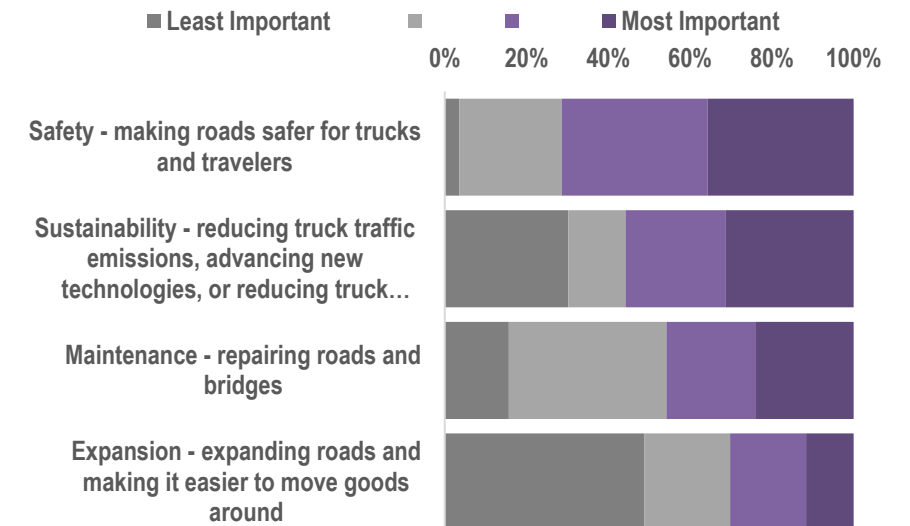
Goals and Outcomes

- **Engage industry**, stakeholders, and local government partners
- Document significant regional freight **trends and conditions**
- Provide **baseline information, data, and best practices** to encourage local planning efforts
- Develop **inventory of current needs to address** freight-related highway and other infrastructure issues
- Identify a **vision regional freight priority network** and illustrating potential **future freight focus areas**
- Craft **strategies and actions** for continued regional **coordination and action**



Stakeholder and Partner Engagement

- **Advisory Committee**
 - Public and private members guided effort
- **Industry Freight Forums**
 - Interactive needs discussion with industry
- **Public Input**
 - Online survey and needs map
- **Ongoing Coordination**
 - Coordination with FAC and industry partners





Advisory Committee Guidance

What should this plan address?

- Describe **impact of regional industry** clusters and economy
- Spotlight **air cargo, spaceport, and aerotropolis** development potential
- Highlight **first-last mile** and delivery issues
- Consider **future distribution and logistics activity** centers
- **Identify potential improvements** for rail, air, intermodal, and highway congestion, safety, and connectivity
- Identify **regional network of priority highway freight corridors**

What should this plan achieve?

- **Tell the story of freight** in the region
- **Prompt discussions** about what the future could look like
- Consider technology and **next generation** of goods movement
- Provide public **information on freight impacts and delivery** needs
- Encourage **integrated freight planning** at local levels
- Link **land use decisions** and goods movement
- Establish **platform for coordination**



Plan Contents & Summary

1 Preparing the Multimodal Freight Plan

- Integration with regional plans
- Industry and planning partner involvement
- Stakeholder and public input and key themes

2 Connecting the Economy

- Information on freight-related jobs and businesses
- Indicators of exports and commodity flows

3 Delivering the Region

- Modal conditions, needs, issues, and challenges
- Vision network of priority highway freight corridors

4 Planning for the Future

- Freight forecasts and estimates
- Emerging industry trends
- Best practices in local and regional freight planning

5 Focusing on Freight

- Regional strategies and recommendations
- Partnership, coordination, and implementation actions

6 Coordinating Investments

- Identified current highway and rail project needs
- Future freight focus areas and potential investments



Preparing the Plan – *Public and Partner Priorities*



Safety

- Truck parking
- Railroad crossings
- Pedestrian and bicyclist safety



Technology

- Vehicle safety
- Emerging delivery modes
- Automation trends



Connectivity

- Future logistics development
- Highway and rail connectors
- Future railroad grade separations



Delivery

- Alternative delivery models and modes
- Consumer behavior shifts
- Urban centers delivery demand



Sustainability

- Energy and fuel technologies
- Public education and information
- Railroad capacity

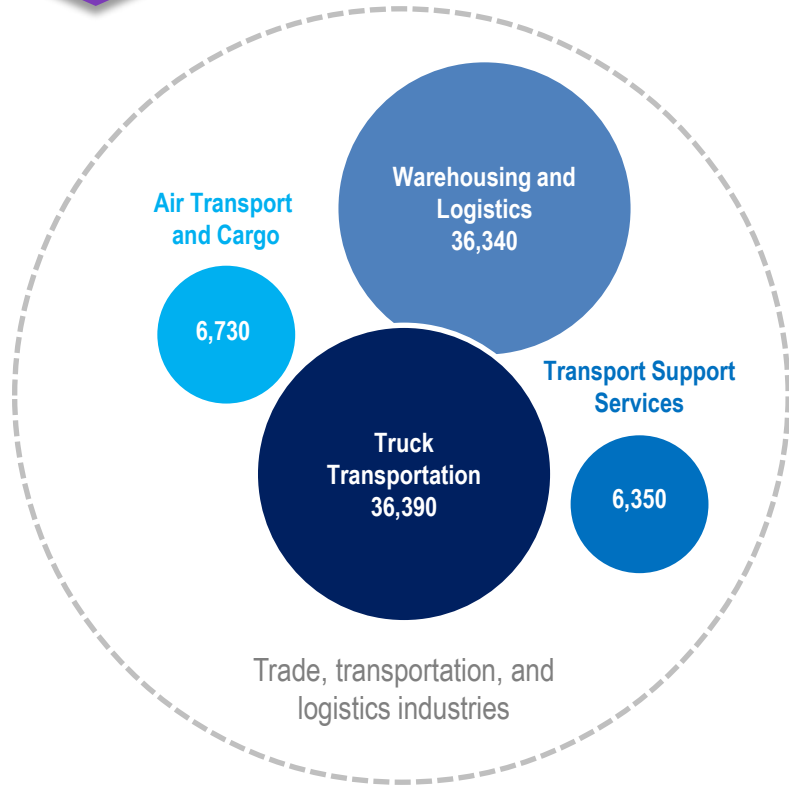


Coordination

- Integrated regional and local planning
- Land use and development
- Freight considerations in planning and project development



Connecting the Economy – Key Economic and Trade Indicators



*Trade and logistics activity directly supported **85,810 jobs** and another **449,159 jobs** in freight-reliant industries in 2017*

*DRCOG region moved over **211.8 million tons** valued at **\$218.7 billion dollars** in 2015*

Top 10 Commodities by Value (\$B)

Rail Intermodal Drayage from Ramp	\$17.9 b
Rail Intermodal Drayage to Ramp	\$14.8 b
Warehouse & Distribution Center	\$12.1 b
Motor Vehicles	\$10.9 b
Petroleum Refining Products	\$8.3 b
Drugs	\$7.5 b
Missile or Space Vehicle Parts	\$7.0 b
Electrical Equipment	\$5.9 b
Misc Manufacturing Products	\$5.3 b
Instrum, Photo Equipment, Optical Eq	\$4.8 b

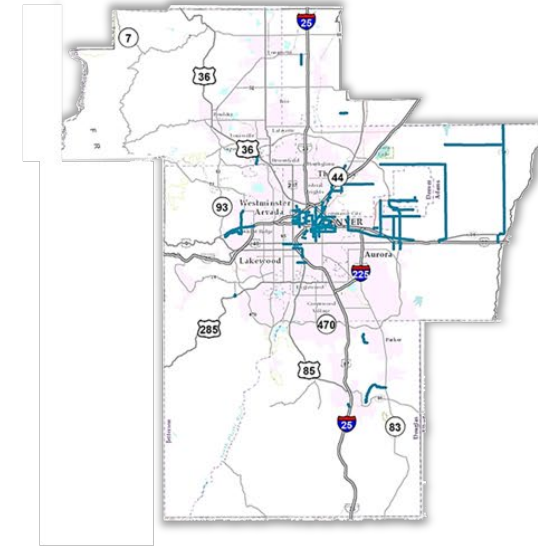
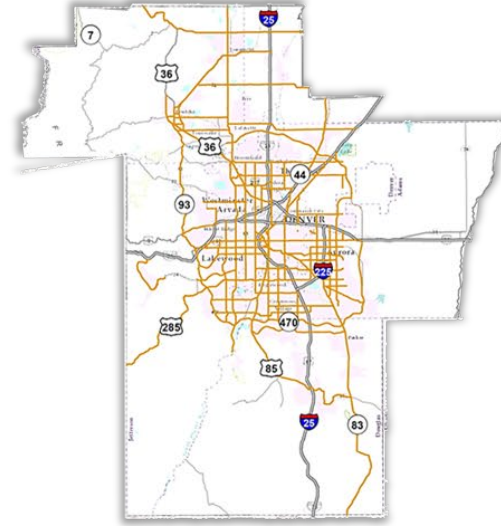
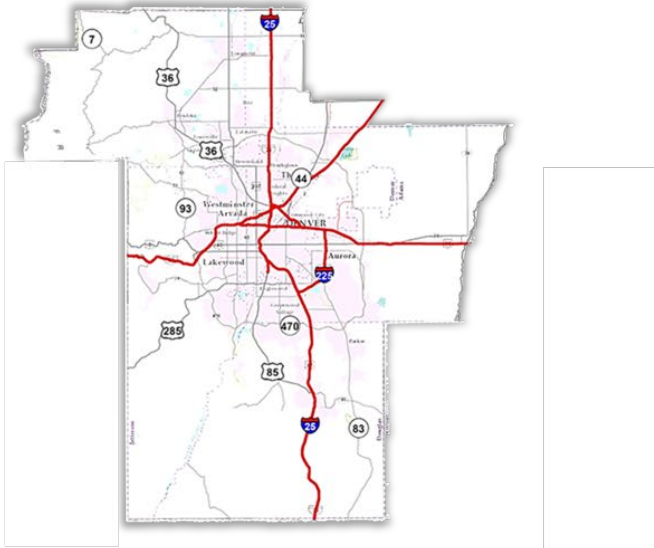
Top 10 Commodities by Tonnage (M)

Gravel or Sand	37.7 m
Misc Waste or Scrap	19.9 m
Broken Stone or Riprap	17.3 m
Petroleum Refining Products	15.5 m
Warehouse & Distribution Center	10.3 m
Crude Petroleum	6.3 m
Ready-mix Concrete, Wet	5.9 m
Concrete Products	5.3 m
Rail Intermodal Drayage from Ramp	4.1 m
Rail Intermodal Drayage to Ramp	3.3 m





Delivering the Region - Regional Highway Freight Vision Network



Tier 1 – National Highway Freight Network

- Federally-designated National Highway Freight Network (NHFN)

Critical highway portions of the national freight transportation system as determined by objective national data.

Examples: I-70, I-25, I-225, I-70, I-76, and portions of US 6, US 85, and SH 470

Tier 2 – National Highway System

- Federally-designated National Highway System (NHS) routes

Nationally, the NHS includes only 4 percent of roadways, but carry more than 75 percent of heavy truck traffic.

Examples: US 36, 40, 85, 287, 285 and state routes such as SH 2, 31, 44, 85, 83, 93, 121, 128

Tier 3 – Intermodal and Local Connectors

- Segments within ½ mile of designated NHFN intermodal connectors
- Recommendations from Advisory Committee

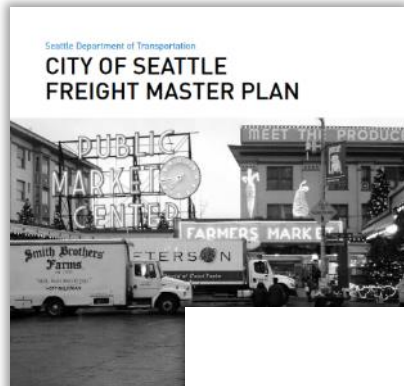
Provide critical links to major regional manufacturing, warehousing, distribution, and intermodal hubs

Examples: 32nd Ave, 44th Ave, Smith Rd, Chambers Rd, Tower Rd



Planning for the Future – Regional and Local Best Practices

- Share ideas, innovations, and examples of effective integrated regional and local freight planning



September 2016

North Metropolitan Industrial Area Connectivity Study

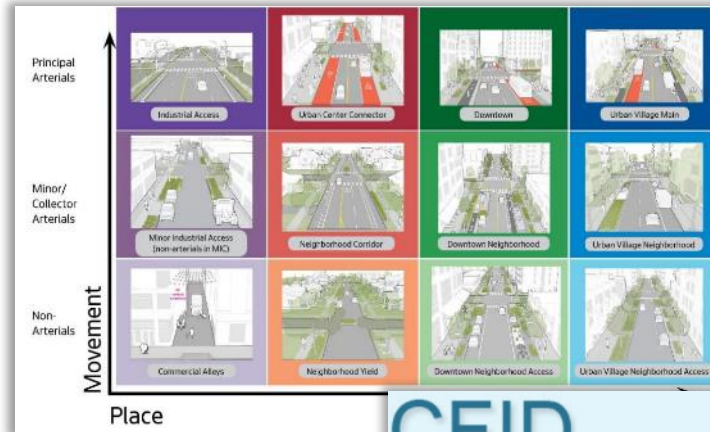
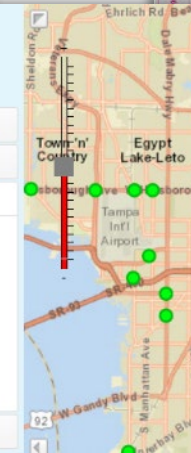
June 2018



CFID

Comprehensive Freight Improvement Database

- ▶ County
- ▶ Implementation Ease (Estimated)
- ▼ Issue Description
 - Access Management
 - Add New Signal
 - Other Capacity Issues
 - Other Operational Issues
 - Railroad Crossing Delay
 - Signage for navigational/directional
 - Turn Radii
- ▶ Transport System



This meal brought to you by Seattle's regional freight networks!

This meal has to travel nearly 2,000 FREIGHT MILES to get to your plate

SDOT is developing the city's Freight Master Plan and we want your input. Please visit seattle.gov/transportation/freight_fm_p.htm to learn more.





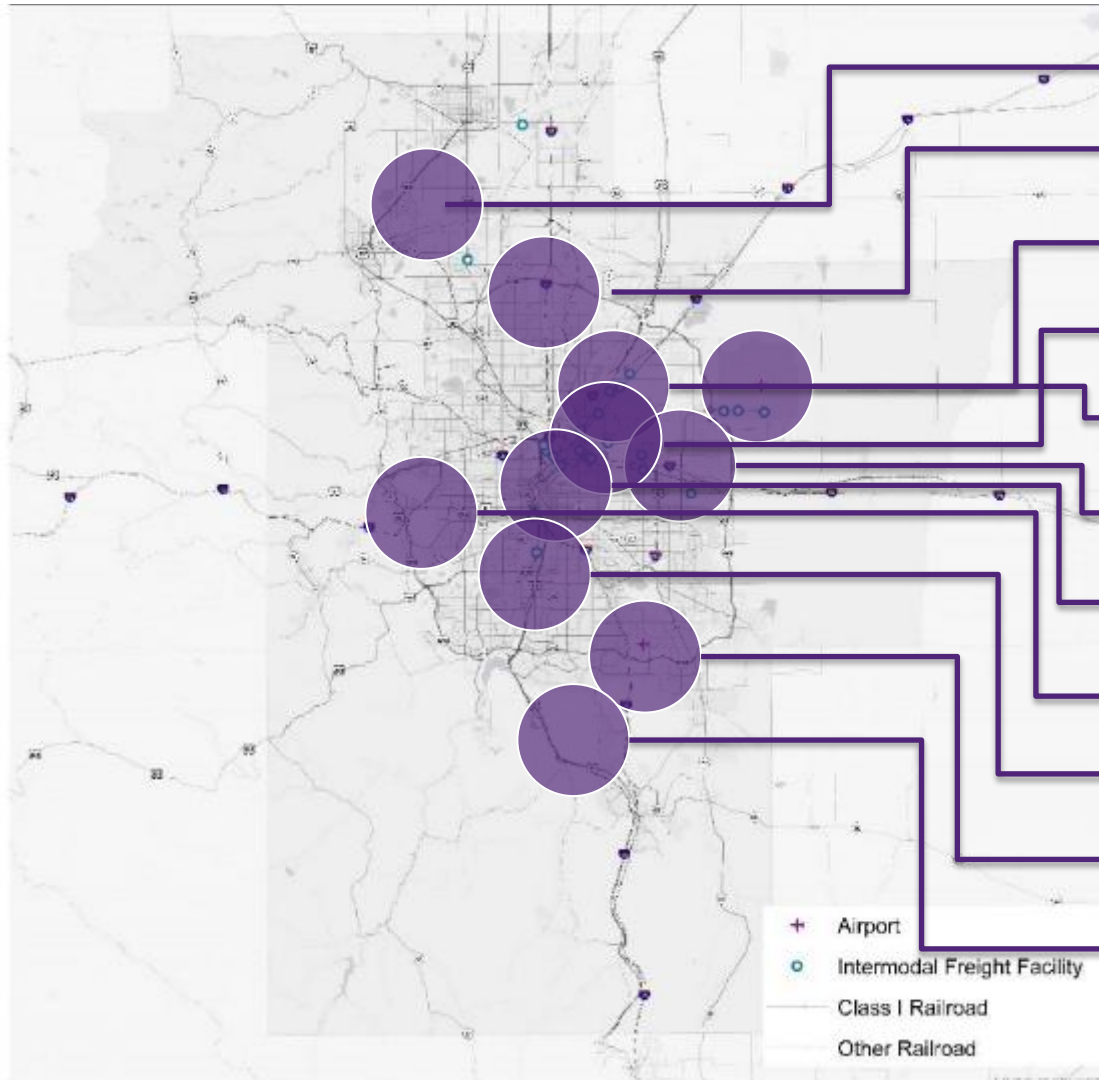
Focusing on Freight – *Key Regional Strategies*

5

- **Develop a comprehensive regional goods movement plan**
- **Encourage local area, corridor, and site-specific freight plans**
- **Consider goods movement issues in multimodal planning and design**
- **Develop coordinated and comprehensive freight land use plans and policies**
- **Preserve regional freight infrastructure and assets for future uses**
- **Compile freight specific regional data and information**
- **Target investments and pursue grant opportunities**



Coordinating Investments – *Regional Freight Focus Areas*



NW Metro

I-25 North

DEN Cargo / Aerotropolis

RiNo Industrial District

I-76 / US 85 Intermodal
Corridor

I-70 East Distribution

Downtown Denver

I-70 and US 6 West

I-25 South

Centennial Airport

US 85 South Corridor



2020 MFP - Summary

- 2020 MFP is a **strategic regional framework** for future coordination, planning, and action
- Provides information and **initial assessment of needs, but local studies and complete data are needed** to identify solutions and investments
- Critical for the region to **consider freight in all plans** and to develop **focused local studies and corridor plans**
- **Partnerships, coordination, and information** are key to implementation
- Freight **planning is still emerging; issues and needs are fast developing**



Recommended Motion

Move to recommend to the Regional Transportation Committee adoption of the *DRCOG Regional Multimodal Freight Plan*

THANK YOU!

DRCOG Regional Multimodal Freight Plan public comments.

Public Comments	Submitted By	Submitted Via	Date Received	DRCOG Response
<p>This is a timely topic to focus on given the increase in state, regional, and local freight needs and impacts, and the importance of movement of good and services for our local communities and regional/state economy.</p> <p>The Plan is comprehensive and covers truck, rail, and air freight system needs for today and into the future, which will provide a good resource for future county and city Transportation Master Plans.</p> <p>Boulder County agrees with the goals that are centered on safety, efficiency, travel time reliability, and sustainability. We suggest noting specific alignment with DRCOG metro vision goals, including safety for vulnerable users, reducing VMT, and achieving air quality and climate goals; and crosschecking the goals for both plans.</p> <p>We note that it is good timing that DRCOG’s freight plan is being developed at the same time as the Vision Zero safety plan. It would be helpful to acknowledge VZ in the freight plan and to recognize that when crashes occur with freight vehicles (trucks and trains), the outcome in almost always tragic for all people involved.</p> <p>We also applaud the fact that the plan addresses new business models (e.g., more people shopping on-line) and emerging technologies, and does a good job of being realistic about what is and isn’t likely to be possible in the next decades (e.g., automation may be more likely within freight transfer facilities and on interstates, and less applicable in more urban areas).</p> <p>Boulder County also likes that the plan identifies concerns with freight pick-up/drop-off locations and how they connect with curbside management practices and policies. This</p>	<p>Elise Jones</p> <p>Boulder County</p>	<p>Email</p>	<p>4/10/2020</p>	<p>Thank you for your comments and observations, especially because safety links both this plan and Regional Vision Zero. We will consider them when editing for the final draft.</p>

Public Comments	Submitted By	Submitted Via	Date Received	DRCOG Response
<p>includes acknowledging that the need for on-street parking of personal vehicles may be declining over time, and the need for pick-up/drop-off space for passengers and goods/services is increasing and needs to be addressed more holistically to support community and regional safety and sustainability goals.</p> <p>Additionally, it's good that the plan includes the vision for larger freight deliveries to be made to regional/sub-regional hubs and then transferred to smaller, potentially electric delivery vehicles, including e-cargo bikes, to bring goods/services into the more urbanized areas.</p> <p>The plan also does a good job recognizing the unique needs of different communities throughout the metro area, including urban, suburban, rural areas. Please keep in mind the needs of mountain communities as well.</p> <p>The Summary of Assets, Issues, and Actions in Freight Focus Areas for NW metro area (page 38) is comprehensive and aligns with regional goals.</p> <p>We suggest in the Coordinated Investment section to seek opportunities to invest in strategies that achieve co-benefits for freight as well as broader community and regional goals, and not have separate projects that may only benefit freight and not be harmonious with other goals. Ideally, projects would benefit freight needs as well as broader safety, mobility, livability, equity and affordability goals (e.g., creating managed/express lanes on regional corridors to improve travel time reliability for all modes of travel, including freight, and also implementing railroad crossing quiet zone projects to support public safety and transit-oriented development districts along BNSF corridor).</p>				

Public Comments	Submitted By	Submitted Via	Date Received	DRCOG Response
<p>Regarding Boulder County specific topics, the Plan is helpful in identifying specific “hot spot” locations with a high number of truck crashes, including on SH119 in Boulder and Longmont, as well as identifying areas within the county that are experiencing high impacts to freight travel time reliability, including SH119, US36, and others. It’s helpful to have this information as we are working on several state and federal grant applications to address a broad array of safety and mobility needs.</p>				
<p>I suggest that the maps on page 15 (Tier 1, 2, 3) are of great enough import to display them at a larger scale, or alternately, include them as full page maps in an appendix.</p>	<p>Debra Baskett City of Westminster</p>	<p>Email</p>	<p>4/14/2020</p>	<p>Thank you for your comments. The maps are being worked will be updated in the final document.</p>
<p>How do we ensure that this plan informs the overall selection and design of projects?</p>	<p>Paul Jesaitis, CDOT Region 1 Transportation Director</p>	<p>Email</p>	<p>3/21/2020</p>	<p>This plan is an element of DRCOG’s MVRTP which informs regional project selection. This plan is intended to highlight opportunities to consider freight needs when designing projects.</p>
<p>Public Private Partnerships - page 31. Currently CDOT is not funded at an adequate level to maintain our rest areas. Federal Regulations prevent partnerships on interstate ROW yet the location of our rest areas take into account nearby services and generally these locations do not compete against private business. It's time for new thinking, if we cannot maintain our rest areas due to funding limitations then public private partnerships offer the best means to provide adequate services.</p>	<p>Paul Jesaitis, CDOT Region 1 Transportation Director</p>	<p>Email</p>	<p>3/21/2020</p>	<p>Thank you for your observations. The plan text will be amended to further include potential for public-private partnerships to address regional freight needs including truck safety, truck parking, and truck rest area maintenance and capacity.</p>
<p>Truck Safety - page 17. Similar to comment #1. CDOT was approached by Gred Fulton about the concept of a modern truck parking area where truckers could use an app to reserve a paid parking spot along the interstate before they actually arrive. Currently there is not enough truck parking and CDOT gets many complaints from citizens near interstate ramps</p>	<p>Paul Jesaitis, CDOT Region 1 Transportation Director</p>	<p>Email</p>	<p>3/21/2020</p>	<p>Thank you for your observations. The plan text will be amended to further include potential for public-private partnerships to address regional freight needs including truck safety, truck parking, and truck rest area maintenance and capacity.</p>

Public Comments	Submitted By	Submitted Via	Date Received	DRCOG Response
<p>where truckers leave their motor running all night to rest. The cost of the reserved spot would cover rest rooms, security and amenities at a location like this. Once again we were told that regulations prevent this pragmatic solution to an unfunded problem. This idea does not compete with any form of existing business.</p>				
<p>We appreciate the recognition in the Plan of the need to focus on curb management and suggest that you note when introducing the topic on page 32 and elsewhere that transit vehicles also need access to the curb. This is an emerging challenge for RTD, particularly in congested urban core settings.</p> <ul style="list-style-type: none"> • We note that technological advancements in first and last mile delivery options, including robotics and automation, may lend themselves to addressing similar opportunities and challenges in transit service delivery. • We observe that the expansion of package handling hubs in exurban and developing fringe locations may prompt demand for greater transit service away from our core markets to provide access for workers. This can present either a challenge for RTD resources or present an opportunity for creative partnerships and solutions. 	<p>William C. Van Meter, RTD AGM, Planning</p>	<p>Letter</p>	<p>4/17/2020</p>	<p>Thank you for your comments. As DRCOG continues to address freight needs at the regional level; further links and integration of transit and freight needs will be examined.</p>

ATTACH F

ATTACHMENT F

To: Chair and Members of the Transportation Advisory Committee

From: Beth Doliboa, Transportation Planner
303-480-5647 or bdoliboa@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Action	8

SUBJECT

Taking Action on Regional Vision Zero adoption.

PROPOSED ACTION/RECOMMENDATIONS

Staff recommends adoption of Taking Action on Regional Vision Zero.

ACTION BY OTHERS

N/A

SUMMARY

Vision Zero is a multi-national safety project with the core principal that “it can never be ethically acceptable that people are killed or seriously injured when moving within the road transport system.” DRCOG staff, with support from Fehr and Peers consulting team, worked alongside the Regional Vision Zero Stakeholder Committee and local partners to develop *Taking Action on Regional Vision Zero* (Attachment 1).

Regional Vision Zero kicked off the planning process in April 2019 and conducted extensive stakeholder and public outreach late summer and fall of 2019. Throughout the winter DRCOG staff and the consultant team developed the draft plan and worked with the Regional Vision Zero Stakeholder Committee to finalize the draft plan.

The draft of *Taking Action on Regional Vision Zero* was released for the 30-day public comment period from March 19th to April 18th. During the public comment period, staff received comments from the public and local stakeholders (Attachment 2) and revised the draft document based on comments received.

A link to the draft of *Taking Action on Regional Vision Zero* is available for review. The draft includes existing analysis as to why Vision Zero is needed for the Denver region, a summary of public engagement that directed plan development, a toolkit on how to use the plan to implement zero throughout communities, action initiatives with a timeline for implementation and measures to track progress as the plan is implemented in upcoming years.

PREVIOUS DISCUSSIONS/ACTIONS

[March 23, 2020](#) TAC

[February 24, 2020](#) TAC

[August 26, 2020](#) TAC

PROPOSED MOTION

Move to recommend to the Regional Transportation Committee adoption of *Taking Action on Regional Vision Zero*.

ATTACHMENTS

1. *Link* - [Draft Taking Action on Regional Vision Zero](#)
2. Taking Action on Regional Vision Zero Comment Matrix
3. Staff presentation

ADDITIONAL INFORMATION

For additional information, please contact Beth Doliboa, Transportation Planner, Long Range Transportation Planning, at 303-480-5647 or bdoliboa@drcog.org

Taking Action on Regional Vision Zero Stakeholder and Public Comments as of April 20, 2020

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/4/2020	DOTI	Rolf Eisinger	Email		Include addition attributes to define Equity including: Female head of households, Vehicle ownership, Key Destinations and Kids, Health, Older adults, Disabilities, Language challenged Populations, Education of less than high school equivalency. Also, include this area on your maps	Thank you for your comment. DRCOG used the following attributes to define vulnerable populations - ages >65, ages <17, minority, low income, linguistically-challenged, disabilities, households w/out vehicle. The vulnerable population layer can be displayed in the regional High Injury interactive map.
3/4/2020	DOTI	Rolf Eisinger	Email		Suggest hospital traffic injury data be added as a future action item	Thank you for your comment. Accomplishing this regionally would be challenging, this is a good suggestion for how local governments can obtain better crash data. This can be discussed in more detail as a future RVZ Working Group topic.
3/4/2020	DOTI	Rolf Eisinger	Email		Will a technical supplement document be posted?	Thank you for your comment. All technical information is included in <i>Taking Action on Regional Vision Zero</i> .
3/4/2020	DOTI	Rolf Eisinger	Email		Suggest they number their action items	Thank you for your comment. This change was made.
3/4/2020	DOTI	Rolf Eisinger	Email		Suggest they reference FHWA's Crash Reduction Factors as part of their countermeasure section	Thank you for your comment. Narrative was added on CRFs/CMFs and the CMF Clearinghouse after the countermeasure glossary.
3/4/2020	DOTI	Rolf Eisinger	Email		Suggest they look into how the Fleet Operation Recognition Scheme or culture of safety component for government agencies can be included as a future action item –	Thank you for your comment. Suggestion to look into this in the future, "vehicle fleet safety" was added as a topic of the RVZ Working Group.
3/4/2020	DOTI	David DiGiacomo	Email		What was their HIN criteria- they used all Killed and Serious Injury crashes to compute the HIN. We are comparing our HIN with their HIN and will provide comments	Thank you for your comment. The regional High Injury Network was developed using KSI crash density. DRCOG removed suggested corridor segments per DOTI's request.
3/4/2020	Westminster	Kristina Evanoff	Email		Create a 2-pager and/or brief executive summary and/or interactive website to roll up 95 pages	Thank you for your comment. A executive summary is not included in project scope. The plan will include an interactive map for the regional HIN and a story data platform that will further support the RVZ toolkit, this is listed as Action Initiative 12.2.
3/4/2020	Westminster	Kristina Evanoff	Email	2	Recommend edit: "Focuses on preventing fatal and severe crashes rather than eliminating all crashes." -- put that sub-text later in the report, not upfront -- having "those other crashes we won't focus on" upfront isn't positive messaging	Thank you for your comment. Regional Vision Zero intentionally focuses on KSI crashes, not to downsize the importance of other crashes, the DRCOG region is so large there are close to 70,000 crashes geolocated every year. DRCOG is trying to prioritize on the more serious crashes as a starting point.
3/4/2020	Westminster	Kristina Evanoff	Email	3	First sentence says "people who commute" – is that statement meant to talk about commute trips only? – if not, change to "people who travel by walking	Thank you for your comment. The content was edited.
3/4/2020	Westminster	Kristina Evanoff	Email		The vision zero approach statement on bottom of page 3 ends with safe travel of all users over motor vehicles – doesn't make sense as everyone should be safe – why not end that sentence at users ?	Thank you for your comment. The sentence reads "The Vision Zero approach is to design Complete Streets that accommodate people using all methods of transportation, prioritizing safe travel for all users over expeditious travel of motor vehicles." This is almost identical to a Vision Zero Network resource about safety for all users over fast vehicle speeds.
3/4/2020	Westminster	Kristina Evanoff	Email		Add a statement up front what the Denver region is – intro for the outside/out of state reader	Thank you for your comment. This change was made and a map was added for clarity.
3/4/2020	Westminster	Kristina Evanoff	Email	6	Is the 2017 stats for peds, all modes? – indicate as such in the text – because when I see all those little people figures, I think peds.	Thank you for your comment. Content reads "people" not "people walking" or "pedestrians".
3/4/2020	Westminster	Kristina Evanoff	Email	9	In the community engagement section (page 9+) – would be great to mention the VZ video and the link to it – it's been a great messaging/outreach tool	Thank you for your comment. This change was made.
3/4/2020	Westminster	Kristina Evanoff	Email		Somewhere in this doc, unless I missed it, add in a description of the how the crash data is sourced and caveats to the data (e.g., police reporting, un-reported data), etc.	Thank you for your comment. This change was made, a Data Used For Analysis section was added to the back of the plan.
3/4/2020	Westminster	Kristina Evanoff	Email		Move the map on page 21 up to page 20 – so you can see the map before the stats (since most folks will view this electronically, not print)	Thank you for your comment. As the maps are important, we would like local jurisdictions to utilize the interactive mapping tool. A link to this map will be added before and after the stats.
3/4/2020	Westminster	Kristina Evanoff	Email	21	Maps on page 21 and 22 – usually documents are viewed electronically, not in print – suggest to have a little overlap of each map extent on each page so the cut off doesn't prevent someone seeing what's there at the edge of the page	Thank you for your comment. Suggest viewing document in "two-page view".

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/4/2020	Westminster	Kristina Evanoff	Email		Barely any critical corridors in many areas that questionable as to why there are not any there. I may have missed something in a meeting – but were the critical corridors vetted and finalized with the committee? It is a must to add in a description of what a critical corridor is and how it was calculated so it can explain to folks why corridors are not identified as critical. – this can be sensitive to jurisdictions as does critical mean corridors are given more priority over others for funding, etc.	Thank you for your comment. The critical corridors are identified using the regional HIN as a bases, which was edited multiple times by stakeholders. More information on critical corridors and the methodology used to identify them has been added to the plan.
3/4/2020	Westminster	Kristina Evanoff	Email		More major highways need labels on the maps on page 21 and 22 especially in those areas that don't have zoomed in maps	Thank you for your comment. More labels were added. It is encouraged that the interactive map link is used instead of relying on the maps in the plan, the zoom feature will allow more details to be viewed, such as street names, to specific areas.
3/4/2020	Westminster	Kristina Evanoff	Email		Same map design comment at previous (apply this comment to all maps that extend to 2 pages) – this time for pages 29 and 30 – overlap the maps a little on each page	Thank you for your comment. Suggest viewing document in "two-page view".
3/4/2020	Westminster	Kristina Evanoff	Email	28	In regards to my comment early in the process, please add in some disclaimer text that these area profiles are generalized for analysis and it is understood that some areas may have multiple area types can be located throughout their community. Some communities might be sensitive to be classified into only one type – so a disclaimer will help address that. Place a similar disclaimer also on the maps on the following pages	Thank you for your comment. Text added.
3/4/2020	Westminster	Kristina Evanoff	Email	28	Add in "as-of ___" (or "currently") to the DRCOG Urban Center text as some Urban Centers are emerging or not designated yet	Thank you for your comment. Text added.
3/4/2020	Westminster	Kristina Evanoff	Email		There are a lot of urban, suburban pics in the doc – add in some rural and other jurisdictions besides Boulder and Denver pics where possible	Thank you for your comment. More regional pictures were added to the plan.
3/4/2020	Westminster	Kristina Evanoff	Email	91	Change the title to something like "How Local Governments Can Stay Engaged" – otherwise, that title sounds like how the public can stay engaged. That said, have a page about how community members can be engaged/active in Vision Zero, too	Thank you for your comment. Text added.
3/4/2020	Westminster	Kristina Evanoff	Email	89	Add in "and across the nation" to peers	Thank you for your comment. Text added.
3/4/2020	Westminster	Kristina Evanoff	Email	86	Is there any type of action to encourage improved/standardized crash data reporting? I know this is more in police side of things, but incomplete and inconsistent reporting/form completion can create incomplete analysis of data	Thank you for your comment. Added language to the crash form action regarding "crash form completeness".
3/4/2020	Westminster	Kristina Evanoff	Email		Wasn't there an early discussion with the committee to not call it Metro Denver like the logo has (e.g. cover and page 77) and instead something like the Denver region – there was concern about Metro doesn't seem to account for rural communities	This was discussed in an early stakeholder committee meeting. The entire DRCOG area is consider to be the "Denver Metro Area," DRCOG is also the Denver region's Metropolitan Planning Organization, it was determined that calling the DRCOG region the Denver Metro Area is consistent with other communication materials that DRCOG creates.
3/4/2020	Lakewood	Matt Duncan	Email	37	Approach Turn Crashes Please note, "Leading Pedestrian Intervals" are problematic for pedestrians that are visually impaired. Blind peds use the start-up sound of vehicles to know when to begin crossing. A blind ped at an LPI intersection begins their start to cross time late, essentially leaving them stranded within the intersection at the end of the ped clear. If LPI is used, it should be in conjunction with an audible ped signal.	Thank you for your comment. Added this to the countermeasure definition.
3/4/2020	Lakewood	Matt Duncan	Email		Left turn crashes signalized; Verify yellow and all-red interval appropriate for left turn Ensure adequate split time (green) for left turn Use lagging left turn phasing/ equally opposed split Ensure positive offset of left turn bay design for visibility	Thank you for your comment. Added these countermeasures as appropriate in the urban and suburban area types.
3/4/2020	Lakewood	Matt Duncan	Email		Unsignalized approach turn: Installing stop bars Double-indication of stop signs (i.e. nearside right and far side left) Consolidate lanes if an all-way stop (replace multiple lanes with shared left/thru/right, or at most left/thru with challenized right, this also reduces crossing width and is good for peds).	Thank you for your comment. Added these countermeasures as appropriate in the urban, suburban and rural area types.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/4/2020	Lakewood	Matt Duncan	Email	45	Left Turn signal Check for positive offset Check clearances and split times	Thank you for your comment. Added these countermeasures as appropriate in the urban and suburban area types.
3/4/2020	Lakewood	Matt Duncan	Email		Left turn unsignalized: Dual indicate signage (if multi-way stop) Stop bars (if multiway stop) Intersection ahead warning signs (+) with supplemental street name plaque Ensure positive left turn offset design in left turn bay	Thank you for your comment. Added these countermeasures as appropriate in the urban, suburban and rural area types.
3/4/2020	Lakewood	Matt Duncan	Email		Broadside crashes; Signalized, verify yellow/red clearance intervals Check coordination parameters to eliminate a stop Intersection ahead or Signal ahead warning signs Overhead flashing beacon at unsignalized locations Lighting	Thank you for your comment. Added these countermeasures as appropriate in the urban, suburban and rural area types.
3/4/2020	Lakewood	Matt Duncan	Email	39	Ped crashes Signalized- intersection lighting Adequate startup time (WALK) and is ped clear crossing appropriate for ped type? (kids, elderly need slower xing time in ped clearance)	Thank you for your comment. Added intersection lighting as appropriate in the urban and suburban area types. Regarding startup time and pedestrian clearance time, "Extend pedestrian crossing time" is already listed as a countermeasure and encompasses both startup and clearance time.
3/4/2020	Lakewood	Matt Duncan	Email		Unsignalized; Consolidate xwalks (more frequent ped use result sin greater driver compliance) Remove underutilized crosswalks (rarely used xwalks means that motorist perception reaction time lengthens over time, making xwalk unsafe) *Remove "STATE LAW YIELD TO PED WITHIN XWALK" (our motorists and peds found these to be MISLEADING, resulting in ped suddenly entering roadway with no regard to imminent vehicle) * Install ped compliance signs (Lakewood is doing this at midblock ped xing locations which basically states law "UNLAWFUL TO CROSS INTO IMMEDIATE PATH OF VEHICLE". This is SHOCKING that this was even a need, but our ped compliance skyrocketed with installation of these signs, and we no longer have people suddenly entering the road directly in front of a car. I'll elaborate as needed.	Thank you for your comment. Added signs per last two suggestions here. Elsewhere in the countermeasure glossary, it is pointed out that a engineering study is necessary to determine whether a marked crossing is appropriate. Having both "Marked crossing" and "Consolidate or remove" in the same list of countermeasures could potentially be confusing for readers.
3/4/2020	Lakewood	Matt Duncan	Email	41	Bikes: Ensure adequate sight distance!! Oftentimes, bike lanes result in a shift of the left turn lanes, which creates a negative offset. This blocks a left turning motorist's view of oncoming traffic AND bikes! In such scenarios, a shared lane is much better option.	Thank you for your comment. Added this countermeasure as appropriate.
3/4/2020	Lakewood	Matt Duncan	Email	42	Red-light running – When calculating yellow interval, ensure you always use approach slope/ kinematic formula Are your signals coordinated? Best way to reduce red-light running is to make sure the signal is green 😊 F&P - done Adequate split times, reasonable offsets. Only frustrated drivers run a red F&P, added appropriate cycle length	Thank you for your comment. Added "Appropriate cycle length" as a countermeasure as appropriate in area types. Elsewhere, there is reference to "Appropriate yellow and all-red interval"; slope/kinematic approach is appropriate but is too detailed in comparison to the other countermeasures.
3/4/2020	Lakewood	Matt Duncan	Email		Stop sign running Dual indicate stop signs (nearside right, far side left) Consolidate lanes to narrow intersection (combine lefts thru) Intersection lighting If rural, overhead red beacon	Thank you for your comment. Added this countermeasure as appropriate in the urban area type.
3/4/2020	Lakewood	Matt Duncan	Email	46	Ped crashes: F&P, done Ensure adequate WALK startup time and ped clear time to cross Ensure timed appropriately for peds in area Intersection lighting	Thank you for your comment. Added intersection lighting as appropriate. Countermeasures already included "Extend pedestrian crossing time" (re: adequate startup time and pedestrian clearance time) and "Shorten signal cycle length" (re: ensure timed appropriately for peds in area).

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/4/2020	Lakewood	Matt Duncan	Email		<p>Unsignalized ped; Remove Xwalks if underutilized Remove/ relocate Xwalk if inadequate approach sight distance Consider consolidating xing locations ! roundabout NOT good option for the blind! Use yield markings with advanced "yield HERE to ped" signage, plus advanced W11-2 sign Lighting High visibility diamond grade signage</p>	<p>Thank you for your comment. Elsewhere in the glossary, it is point out that engineering study is necessary to determine whether a marked crossing is appropriate. This addresses the points related to utilization and sight distance. Having both "Marked crossing" and "Consolidate or remove" in the same list of countermeasures is potentially confusing for readers. Verified that roundabouts do not show up as countermeasures for pedestrian crashes. Signs are recommended as a countermeasures but specifying the type/material is too detailed for this plan. Lighting was added as a countermeasure.</p>
3/4/2020	Lakewood	Matt Duncan	Email	51	<p>Lane departure Chevrons in curve Specialized Pavement textures can increase friction, which prevents vehicles from sliding off roadway Raised pavement marking/ reflector (yes, I hear we are a snow state, Lakewood is in process of testing these) Beacon on curve ahead warning signage Clear zone issues (utility pole within curve, culvert, etc.)</p>	<p>Thank you for your comment. Added signage as a countermeasure in rural and limited access highways. Added high friction pavement, advance warning sign (with optional beacon) and clear distance (re: clear zone issues). Raised pavement marking/reflectors are not yet mainstream enough in Colorado for recommendation in this document.</p>
3/4/2020	Lakewood	Matt Duncan	Email	54	<p>speeding; Consider oversized speed limit sign (use 45mph size sign for 35 or 40 if 85th% speed is 45) Driver education campaign for stopping distances</p>	<p>Thank you for your comment. Added over sided speed limit sign as appropriate. Leaving out education campaigns as those are addressed separately and the crash profiles focus on infrastructure countermeasures.</p>
3/4/2020	Lakewood	Matt Duncan	Email	55	<p>Use intersection ahead warning sign with street name plaques</p>	<p>Thank you for your comment. Added this countermeasure as appropriate.</p>
3/6/2020	CDOT	Charles Meyer	Email		<p>Targets - will the DRCOG establish targets within the Plan or how will targets be set, for one purpose the national safety PM, but also for progress purposes</p>	<p>Thank you for your comment. DRCOG will be reevaluating Metro Vision Targets for the 2050 MVRTP. Staff is suggesting setting a zero target for 2050. There will also potentially be other safety targets added. When those targets are adopted <i>Taking Action on Regional Vision Zero</i> will be amended to include the targets.</p>
3/6/2020	CDOT	Charles Meyer	Email	21	<p>"Critical corridors" how was "critical corridors" determined? Maybe provide some explanation as to how those corridors were highlighted above the HIN.</p>	<p>Thank you for your comment. The critical corridors are identified using the regional HIN as a bases, which was edited multiple times by stakeholders. More information on critical corridors and the methodology used to identify them was added to the plan</p>
3/6/2020	CDOT	Charles Meyer	Email	90	<p>Suggested modified text for the STSP on page 90 of the Regional Vision Zero Plan: slightly different but to emphasize the STSP is a Plan for all of Colorado and all agencies, CDOT only being one of them.</p>	<p>Thank you for your comment. Content was modified.</p>
3/6/2020	CDOT	Charles Meyer	Email	90	<p>CDOT is committed to the vision for Colorado where all people using any transportation mode arrive at their destination safely. CDOT is currently leading the development of the 2020-2023 Strategic Transportation Safety Plan that identifies strategies for CDOT as well as every agency and jurisdiction in the state to cooperatively implement to eliminate transportation system fatalities and severe injury crashes. DRCOG has developed Regional Vision Zero to complement and support CDOT's efforts towards achieving zero fatal and severe injury crashes on roadways throughout Colorado.</p>	<p>Thank you for your comment. Content was added.</p>

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Commitment to Vision Zero - As a "Vision Zero" plan, it's important that it models the Vision Zero guiding principle of prioritizing roadway design over individual responsibility and enforcement. We realize this is challenging since the data was drawn from surveys and crash reports that identify individual behavior, so it's even more important to explicitly call out how infrastructure can guide safe behaviors, and provide concrete examples that help the reader understand this foundational concept. The emphasis on behavior takes away from the true spirit of Vision Zero and can lead people to point fingers at each other, instead of analyzing the built environment. And ultimately, local governments have more control over the design of their streets than they do over behaviors. There also seems to be a focus on enforcement to correct these behaviors but it's worth mentioning interventions that could precede enforcement or other roles law enforcement can play in educating the public	Thank you for your comment. Eliminated some mentions of behavior and caveated the role of behavior in Vision Zero compared to creating safe systems (especially in the Behavior Profiles section). Nonetheless, Vision Zero communities do use communications/campaigns and police departments will be involved, so leaving the proposed actions as-is.
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Urgency - We feel there could be a stronger sense of urgency, that traffic deaths are an epidemic and governments and decision makers have the power (and responsibility) to change the direction of traffic safety through new systems. The tone seems to be more "informational" than a "call to action."	Thank you for your comment. Expanded the narrative in the "Why the Denver Region Needs Vision Zero".
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Equity and enforcement - Equity and empathy are mentioned across the plan without much context or depth. Local governments and communities need to know why equity is important and examples of what this looks like or what strategies they can use, similar to the toolkit of countermeasures that is provided for design and operations. Discussing enforcement in the context of HINs/disinvested communities also needs to be presented very thoughtfully.	Thank you for your comment. Added "Equity Strategies" to the toolbox.
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Vulnerable road users - In a few places, data is introduced in a way that emphasizes "low" pedestrian and bicyclist numbers and crash rates. This detracts from the belief that even one fatality is too many and the main point is really that their KSI rates are disproportionate. We also want to see these modes increase to meet the region's goals and the plan should explicitly note that addressing safety concerns for these modes will be critical for achieving these goals.	Thank you for your comment. Added a note on relationship between walk/bike KSI crashes and reducing overall KSI crashes, as well as increasing walk/bike more share (to pie charts in "Why the Denver Region Needs Vision Zero"). Searched the document for mention of "low" related to walk/bike trips and only found it in this section. Replaced key words of this narrative to focus on percentages rather than whole numbers. Also changed this in the Vision Zero Principles section.
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Speeding - We are glad the Vision Zero Principles section emphasizes the role of speed in crash severity and the importance of setting context sensitive speeds. Given the fundamental importance of speed management, this should be included in the crash profiles and countermeasures for all area types, not just rural and limited-access highways. Furthermore, the countermeasures should include more details on how to mitigate unsafe speeds through street design, with enforcement as a secondary strategy	Thank you for your comment. Added a separate section on Speed Reduction Strategies
3/7/2020	DSP	Maureen McCanna, Jill Locantore, Jack Todd	Email		Charts - Some graphics and page formats could be improved for optimal readability. Re: the last theme, there are some comments on p. 14, the location of the keys (mentioned on p.33 but relevant on other pages as well) and headings of the area profiles with first mention on p. 36	Thank you for your comment. Updated keys/legends where possible to ensure they are intuitive.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/18/2020	Lone Tree	Wynne Shaw	Email	70	We talk about "victim blaming" and do not want to do that. Some examples: If you're a distracted pedestrian -- you've see the phone scrollers who glance up and may or may not see they don't have a walk light downtown, the joggers and cyclists in the suburbs with earphones who don't look before crossing a roadway -- a driver may slow down but may be unable to stop completely for a pedestrian or cyclist entering the roadway when they should not. A child chasing a ball or directing their bicycle into traffic from between parked cars or other visual barrier that even a driver paying full attention might miss could be tragic, or could compound to a vehicle crash because of the first car's rapid stop and the car behind following too closely. I'm not sure how to include a message to pedestrians and cyclists to use commonsense, obey rules, pay attention but I'd like to do it if you think there is an appropriate place to do so. However, I do believe everyone is at least somewhat accountable for their own safety.	Thank you for your comment. Public education and improving messaging around crashes will be part of the implementation of the plan.
3/24/2020	Boulder County	Alex Hyde-Wright	Email		We strongly urge DRCOG to establish a target year for achieving the actual goal of zero deaths. It is our understanding that the current target is less than 100 annual fatalities by 2040, and while we strongly support having intermediate targets and benchmark years to track our progress, we feel the plan would not be complete without also establishing a target year for vision zero.	Thank you for your comment. DRCOG will be reevaluating Metro Vision Targets for the 2050 MVRTP. Staff is suggesting setting a zero target for 2050. There will also potentially be other safety targets added. When those targets are adopted <i>Taking Action on Regional Vision Zero</i> will be amended to include the targets.
3/24/2020	Boulder County	Alex Hyde-Wright	Email		To include: requiring agencies receiving federal funds from DRCOG to have vision zero goals and/or action plans in place; requiring all projects receiving federal funds from DRCOG to clearly document how they will improve traffic safety; or, a at a minimum, giving a larger weight to safety in project scoring/evaluation criteria.	Thank you for your comment. DRCOG is not prepared as part of this plan to require agencies receiving federal funds from DRCOG to have vision zero goals and/or action plans in place. The <i>Taking Action on Regional Vision Zero</i> speaks to making a connection between DRCOG funding investments and safety, which we are committed to doing. The time to get into the specifics of how to do that is during the development of the TIP Policy for the next TIP cycle.
3/24/2020	Boulder County	Alex Hyde-Wright	Email		Under countermeasures for bicycles one suggestion is to "Extend bike lane to intersection". This could be revised to say "Extend bike lane to and potentially through intersections," by using skipped striping and or green paint to highlight conflict zones between bicyclists and motor vehicles. A detail to this countermeasure could also be added recommending that bicycle infrastructure at intersections clearly give the right of way to bicyclists, as opposed to vehicles preparing to turn right (a common source of conflict between bike lanes and right turn lanes). The breakdown of crash profiles by percent is very well done, but it would also be nice to see the percent of intersection crashes in each of the urban, suburban and rural land use contexts. Having a statistic to illustrate the importance of intersections in traffic safety will be very helpful in communicating with the public key stakeholders.	Thank you for your comment. Revise countermeasure and glossary to add "Extend bike lane to and potentially through intersections". There are percent of intersection crashes listed for the crash profiles that have high KSI crashes at intersections (for example urban area pedestrian-involved and bicyclist involved crashes, suburban area failed to yield right-of-way and pedestrian-involved crashes and rural areas failed to yield right-of-way crashes).
3/24/2020	Boulder County	Alex Hyde-Wright	Email		Rumble strips are one countermeasure listed for roadway departure crashes, and while we support this recommendation in the plan, we request that DRCOG add a note that care must be taken when designing rumble strips to not inadvertently decrease safety for cyclists, who often use the shoulder where rumble strips may be installed. We recommend referencing the	Thank you for your comment. This will be included in the Complete Streets toolkit DRCOG will be developing in the next year (Action Initiative 6).
3/24/2020	Boulder County	Alex Hyde-Wright	Email		Could DRCOG include some analysis of the role that seatbelts play in crashes? It is our understanding that not wearing a seatbelt greatly increases the likelihood a crash will be fatal for the unbelted driver/passenger, but this isn't currently addressed in the plan. Having this data may help advance conversations surrounding primary seatbelt laws (which could also be a recommendation included in the plan).	Thank you for your comment. A national seat-belt statistic was added to the plan. Seat-belt use is not complete enough in the data used for this plan to analyze at a regional level. DRCOG encourages local jurisdictions to continue to collect more detailed local crash data on this topic.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/24/2020	Boulder County	Alex Hyde-Wright	Email		Please add the Boulder County logo to page 92 where it lists agencies that have adopted VZ. Boulder County adopted a Vision Zero target of zero serious injury or fatal traffic crashes in unincorporated Boulder County by 2035 as part of our Transportation Master Plan update, adopted February 2020.	Thank you for your comment. This change was made.
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	87	These "objectives" are more strategies than objectives. What ARE the measurable objectives / outcomes you will see once these 6 strategies are in place? You outline the initiative and sub actions and responsible parties, but not the proof points that will be evident if all of this is accomplished. It feels like the accountability piece is very soft. Don't do that. Denver Streets Partnership puts out a report card annually. I'd like to see Dr. Cog self monitoring with something very tangible and specific like that so everyone is using the same yard stick to measure "success and progress".	DRCOG will be doing a annual report to discuss progress made on action initiatives and measures that are included in the plan as a means to track progress.
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	86	What you have listed as #5 + #6 should be listed as #1 and #2 priorities. The single biggest thing you can do is to address the built infrastructure and that requires a prioritization of funding. W/o that all the rest of this is a wish list.	Thank you for your comment. The objectives are not listed by priority.
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	86	I'd reword Objective #3 to say you're prioritizing PEOPLE not "safety". Why? Because all these types of plans and documents are written in a very dry, removed, statistical way that don't allow the reader or end users to really remember WHY we are doing any of this. It's because of people. Bring the human into this. Make it relatable and inspirational.	Thank you for your comment. Changed the content to say "people's safety".
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	12	People First Plan is great language. Look for ways to carry that language and idea throughout this plan. That priority gets lost in the rest of the copy.	Thank you for your comment, we have reviewed the plan and ensured that the people first language is adequately carried throughout and reflects the public and stakeholder engagement completed while developing the plan.
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	69	So interesting to see that the #1 thing those surveyed perceive to be their biggest concern (page 16) is distracted driving, yet page 68 shows that distracted driving is actually NOT the most prevalent behavior involved with crashes or fatalities, careless/wreckless driving is. We need to be educating people about what their priorities should be. (and breaking down what constitutes "wreckless. (Sounds like speeding, which most people don't think is that big a deal, but it's the biggest variable that leads to survival or fatality).	Thank you for your comment. Public education will be a significant part of the implementation of this plan.
3/28/2020	Citizen	Michelle Roche	E-blast - Draft link	35	What is a KSI? Don't use jargon.	Thank you for your comment. KSI = Killed or seriously injured crashes. Content was changed to be more consistent when discussing KSI crashes.
3/28/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	10	This plot should be normalized by the Denver population density	Thank you for your comment.
3/28/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	10	I see you've normalized the plot here	Thank you for your comment.
3/28/2020	Citizen	Annie Rice	E-blast - Draft link	12	remove space	Thank you for your comment. Space removed.
3/28/2020	Citizen	Annie Rice	E-blast - Draft link	12	remove space	Thank you for your comment. Space removed.
3/28/2020	Citizen	Annie Rice	E-blast - Draft link	36	Unclear what each bar on this page represents - LABEL!	Thank you for your comment. Please reference the keys on each page, they were modified to enhance clarity.
3/28/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	44	Some degree of cyclist training would also be helpful. I'm an avid cyclist. What the cyclist should do is make eye contact with the driver before heading into the street. Maybe even a warning at key intersections to this effect. Perhaps "rumble" strips to warn drivers in the left hand turn lanes to watch for pedestrians	Thank you for your comment. Public education of all roadway users will be an important part of the implementation of this plan.
3/28/2020	Citizen	Brian Ross	E-blast - Draft link	21	The beginning of this document stresses physical safety measures that assume drivers will make mistakes. Here the language falls back on "education and encouragement". I prefer the physical measures.	Thank you for your comment. Physical safety measures, education, encouragement, and many other factors will all have to work together to implement this plan.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
3/28/2020	Citizen	Brian Ross	E-blast - Draft link	44	I noticed none of the intersection improvements involve physical means of slowing or stopping cars -- they all rely on the driver following the rules. I was almost killed by a van ignoring a red light on Peoria a couple of years ago -- what can be done about those? I've since seen that happen several times, all at major intersections. None of these solutions seem to help. Until that problem is solved Vision Zero won't happen.	Thank you for your comment.
3/28/2020	Citizen	John Rieke	E-blast - Draft link	44	Agreed. Seems a suspicious oversight to leave out calls for *any* physical infrastructure improvements here.	Thank you for your comment. There are multiple physical infrastructure improvements listed (for example - bike box, prohibited turning, traffic signal/signal bike detection).
3/28/2020	Citizen	Brian Ross	E-blast - Draft link	45	A fair number of drivers simply don't see the red light no matter how long it's been red. All options (except the last?) don't do anything about these folks.	Thank you for your comment.
3/28/2020	Citizen	Brian Ross	E-blast - Draft link	49	This might be right.. but do you mean 75% are on arterials?	Thank you for your comment. Yes, 75% of KSI crashes occur on arterials in Suburban/compact communities as listed in content.
3/28/2020	Citizen	Brian Ross	E-blast - Draft link	51	This is why I'm suspicious of the safety of bike boxes.	Thank you for your comment.
3/29/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	1	I did 118,000 miles on my previous Specialized bicycle and have 8500 miles on my current Trek bicycle so I do feel I should be trusted	Thank you for your comment.
3/29/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	58	It would be very nice to have a webinar where the primary results of this draft could be presented	Thank you for your comment. If you'd like to view a presentation of the draft plan, view the March 23, 2020 presentation to our Transportation Advisory Committee. You can also attend (likely virtually due to COVID-19) our upcoming Transportation Advisory Committee, Regional Transportation Committee, and Board of Directors meetings to watch the presentations in real time - visit drcog.org/calendar to find meeting times and information.
3/29/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	65	Shouldn't each column add to 100%?	Thank you for your comment. These do not add up to 100% because one percentage is for fatal crashes, and the other is for fatal and serious-injury crashes.
3/29/2020	Citizen	Andrew Heymsfield	E-blast - Draft link	88	How will the members of the Working Groups be decided?	Thank you for your comment. DRCOG has a compiled list of safety professionals (local government staff and partners that has participated in previous safety conversations/initiatives) around the region. Staff will use this as a basis for determining members.
3/29/2020	Citizen	David Long	E-blast - Draft link	11	Has it been established why we more pedestrians/bicyclists? Suggest instead: "giving residents more travel options.", or similar.	Thank you for your comment.
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	11	It would be great to see a similar chart alongside Figure 3 showing Percentage of Trips by Travel Mode or modify figure 3 to account for the proportions of trips by each mode. Otherwise, figure 3 could be dismissed by some readers because they know a disproportionate number of trips are by car. I cannot draw any conclusions for making decisions based on the current figure 3. Figure 4 could be interpreted incorrectly by readers for this same reason. Figure 4 should have another figure beside it listing Fatal Accident Rate by mode of travel on a bar chart. Essentially showing the accident rates per number of trips (or miles) for each mode in a side by side comparison. I believe "# of Trips" is the right denominator but not sure.	Thank you for your comment. Graphics in the plan were edited to give clarity on how figures should be interpreted.
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	11	Figure 4. Title is misleading as well. Suggest: Distribution of Fatal Crashes by Travel Mode...	Thank you for your comment. The figure illustrates percentages.
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	32	You may want to consider a different color for highlighting Limited Access Highways since this color was already used for Critical Corridors.	Thank you for your comment.
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	23	The document begins using Fatal and Severe Injury here whereas previously you used KSI or Killed and Severely Injured. (confusing to the reader) Also, it is not clear why you distinguish between just the Fatal crashes and the KSI crashes. For a public document, it would make sense to choose just one and stick with it throughout. My personal opinion would use FSI and stop using just Fatal crashes. Also, avoid using the term "Killed" since, as a verb, it is begging for a subject and something to blame.	Thank you for your comment. We have edited this text to better explain the term. We have also reviewed the plan and removed many of the references to KSI crashes for consistency.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	23	The 75% and 32% numbers could be expressed better than they are in these charts. Maybe an Info Box that says: The Region High Injury Network identifies the locations of the roads where 75% of FSI crashes happen. It also shows Critical Corridors where 32% of FSIs happen.	Thank you for your comment. A key was added for clarification
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	23	The second row of graphs are very confusing especially with the two numbers inside the circle that I assume are showing the Regional High Injury and Critical Corridors in black and orange numbers but it is hard to discern what the point or conclusion should be.	Thank you for your comment. Graphics in the plan were edited to give clarity on how figures should be interpreted.
4/13/2020	Citizen	Theron Makley	E-blast - Draft link	23	Including the black and orange color coding in the title will also help the reader identify what is being shown here.	Thank you for your comment. A key was added for clarification.
4/13/2020	Citizen	Karen Hancock	E-blast - Draft link	27	Need more street names on the maps for context--these are very large geographic areas.	Thank you for your comment. More labels were added. It is encouraged that the interactive map link is used instead of relying on the maps in the plan, the zoom feature will allow more details to be viewed, such as street names, to specific areas.
4/14/2020	Citizen	EC Erb	Email		It's exciting to see a regional take on Vision Zero. This is important work especially when people of lower incomes as well as pedestrians and cyclists are over represented in crash statistics. With today's unusual lower traffic volumes, we need to continue to encourage more walking and cycling. And with the rise we have seen in crash rates, we need to actively work to make modes like walking and cycling feel safer. It's also important to engage in efforts to reduce speeding and illustrate better to the public at large the impacts speeding has on lives and safety.	Thank you for your comment.
4/14/2020	Citizen	Jim Stacy	Email		As a longtime resident of Colorado I have independently noticed a rise in traffic related deaths especially pedestrian/auto incidents that result in KSI outcomes, in the last ten years. I'm impressed that DRCOG is addressing this issues in a timely manner as this is becoming a disincentive to use walking and bicycling as a viable alternative modes of transportation. The actions suggested by the vision zero project are a good approach to being proactive to solve these problems and should be taken seriously and implemented at all levels of Colorado government with all possible speed. Something not mentioned in the draft was the impact that improved public transportation would have on reducing crashes between all modes of transportation. Light rail between urban areas and within urban areas would have as much impact in reducing incidents as most of the proposed improvements put forth in this draft document. Improved Public transportation is a harder goal to achieve but will have higher returns on investment for both safety and economics.	Thank you for your comment. RTD is one of DRCOG's regional partners. We will continue to work with them to achieve safety and public transportation goals.
4/17/2020	Longmont	Erin Fosdick	Email	1	The goal of the plan is safe streets. Consider changing "SAFER STREETS" to "SAFE STREETS."	Thank you for your comment.
4/17/2020	Longmont	Erin Fosdick	Email	1	Consider a different graphic other than a congested freeway. Vision Zero should be about a safe transportation system for all types of transportation users. Perhaps consider a photo of an example of a slow-moving complete street with a lot of different types of users.	Thank you for your comment. The cover was redesigned and a new picture has been added.
4/17/2020	Longmont	Erin Fosdick	Email	4	Consider acknowledging the difference between Vision Zero and Getting to Zero.	Thank you for your comment. The "Vision Zero" concept is explain on page 1. DRCOG would like to work towards consistent messaging across the region, that loss of life is not an acceptable price to pay for mobility.
4/17/2020	Longmont	Erin Fosdick	Email	4	Increase the size of the numbers "1 - 6", so that they are more apparent.	Thank you for your comment. The number size was increased.
4/17/2020	Longmont	Erin Fosdick	Email	4	Consider greater emphasis on disadvantaged communities being a result of economic disinvestments in transportation related infrastructures.	The plan focuses on locating these disadvantaged areas and matching high KSI roadway corridors within these areas in an attempt to locate corridors that should potentially be prioritized for safety improvements. DRCOG will assist local jurisdictions in identifying location through the regional High Injury Network interactive map by providing additional layers, such as the vulnerable populations layer.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/17/2020	Longmont	Erin Fosdick	Email	7	Consider showing a map of the DRCOG region to help visualize the regional effort of this document not just the City of Denver and its immediate suburbs. There was some feeling that the document overall was Denver-centric. If possible, can you make more regional reference and ensure the full region is represented throughout the plan?	Thank you for your comment. A map was added at the beginning of the plan, in addition to two other maps of the region included in the plan. More regionally significant pictures were also added.
4/17/2020	Longmont	Erin Fosdick	Email	7	Consider adding a caveat <u>in front of</u> the following statement: <i>"The Vision Zero approach is to prioritize Complete Streets and roadway design and operation projects in disadvantaged communities . . ."</i> with a statement that reads something like: <i>"While the Vision Zero philosophy recognizes that all communities are subject to serious injury and fatal crashes due to flaws in the transportation system design, disadvantaged communities, where people may be more likely to walk or ride bicycles, are particularly vulnerable to the negative impacts of poorly designed transportation systems. Therefore, . . ."</i>	Thank you for your comment. The suggested caveat seemed duplicative with the antecedent paragraph in the document. The only phrase omitted previously related to increased levels of walking and biking in disadvantaged communities. Language was added to that effect.
4/17/2020	Longmont	Erin Fosdick	Email	9	The Vision Zero approach should consider the design and operation of roads regardless of <i>"context - appropriate" vehicles speeds</i> . A person walking that is hit by a person driving in a crosswalk along an arterial where the context-appropriate vehicle speeds are higher is much more likely to die, than if hit on a local street where the context-appropriate speeds are lower. Consider changing the language to state something like: <i>"The Vision Zero approach recognizes that vehicles speeds vary given the context of the road system and that speed is a chief variable in the severity of crashes. Therefore, the Vision Zero approach seeks to mitigate speeds as a variable in crashes in all situations."</i>	Thank you for your comment. The Vision Zero Network uses "context-appropriate" speeds in the way we describe. To reflect this comment, the phrase "that protect all roadway users" was added.
4/17/2020	Longmont	Erin Fosdick	Email	11	Under the Figure 4 synopsis, change the language <i>"(approximately 4 percent total)"</i> to <i>"(approximately 5 percent total)."</i> 5 percent is consistent with the figure 3 graphic.	Thank you for your comment. This change was made.
4/17/2020	Longmont	Erin Fosdick	Email	12	In the 3 rd paragraph, last sentence, it looks like there was a hard return breaking up the last sentence. Delete the hard return.	Thank you for your comment. This was deleted.
4/17/2020	Longmont	Erin Fosdick	Email	12	In the fourth paragraph, last sentence, it looks like there was a hard return added breaking up the last sentence. Delete the hard return.	Thank you for your comment. This was deleted.
4/17/2020	Longmont	Erin Fosdick	Email	18	Please add a match line to the right side of the map. Please show the City of Longmont which is in the DRCOG region.	Thank you for your comment. This map only shows the comments received on the interactive map. No comments were received within the City of Longmont, because the focus of the map is to show location of comments, this particular map does not show the full extent of the region.
4/17/2020	Longmont	Erin Fosdick	Email	18	Would it be beneficial to post the maps and comments from the in-person sessions?	Thank you for your comment. There has been a link to the interactive map and comments on the Regional Vision Zero website through plan development. The comments are also available for download on DRCOG's Regional Data Catalog. The comments we received from the local agency meetings have been incorporated in the plan.
4/17/2020	Longmont	Erin Fosdick	Email	20	Please change the language that reads: <i>"This section describes how local governments can use this plan to join the effort of achieving Zero in the Denver region."</i> To: <i>"This section describes how local governments can use this plan to join the effort of achieving Zero serious injuries or deaths in the Denver region."</i>	Thank you for your comment. This change was made.
4/17/2020	Longmont	Erin Fosdick	Email	21	In the second paragraph, second sentence, please spell out the word meaning KSI and put KSI in parentheses after spelling out the meaning of the acronym. I believe that this is the first time KSI appears in the document and most people won't know what it means.	Thank you for your comment. This change was made.
4/17/2020	Longmont	Erin Fosdick	Email		It seems like there could be better consistency with overall terminology - i.e. use KSI throughout rather than alternating between this and "fatal and severe injury"	Thank you for your comment. Content was changed to be more consistent throughout the plan.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/17/2020	Longmont	Erin Fosdick	Email	34	Consider taking the opportunity to add a caption encouraging designs that protect people walking, i.e. <i>"This roadway design incorporates a pedestrian refuge island to protect people crossing a busy roadway. What other protective measures could be added to further increase pedestrian safety?"</i>	Thank you for your comment. This picture was changed.
4/17/2020	Longmont	Erin Fosdick	Email	40	In the potential countermeasure box for left turn at signalized intersection, add the following countermeasure: <i>Remove signalized intersection and replace with round-a-bout.</i>	Thank you for your comment. Roundabout was added to the countermeasures list.
4/17/2020	Longmont	Erin Fosdick	Email		On some of the potential countermeasures included in the document, you may want to consider adding language about meeting applicable warrants. In some instances, including countermeasures that do not meet warrants could make an intersection less safe. We understand that the vision zero approach looks at solutions differently – i.e. it is not only based on an engineering solution; however, in some cases it may make sense to consider applicable warrants before installation (like all-way stops and traffic signals).	Thank you for your comment. DRCOG encourages local jurisdictions to conduct further engineering analysis to consider additional relevant design guidance in selecting countermeasures. This is stated in the plan.
4/17/2020	Longmont	Erin Fosdick	Email	40	In the countermeasures, call out "Traffic Circle" apart from traffic calming.	Thank you for your comment. Traffic calming includes several different devices, including traffic circles, in the glossary under traffic calming, "traffic circles" was added as an example.
4/17/2020	Longmont	Erin Fosdick	Email	44	For signalized intersection countermeasures, please add Pedestrian Refuge Islands.	Thank you for your comment. Added pedestrian refuge median to countermeasures.
4/17/2020	Longmont	Erin Fosdick	Email	50	In signalized intersection countermeasures, add <i>"Pedestrian Refuge Islands."</i>	Thank you for your comment. Added pedestrian refuge median to countermeasures.
4/17/2020	Longmont	Erin Fosdick	Email	52	The white font is difficult to distinguish from the colored background. Consider using a dark colored font for this and other similarly colored pages.	Thank you for your comment. These are DRCOG brand colors, graphics that are hard to see were slightly darkened.
4/17/2020	Longmont	Erin Fosdick	Email	65	Gray and white background makes the text hard to read. Consider lightening the gray or bolding more of the text / increasing the size.	Thank you for your comment. These are DRCOG brand colors, graphics that are hard to see were slightly darkened.
4/17/2020	Longmont	Erin Fosdick	Email	66	<i>Under the Key Behavior Profile Statistics</i> , the two words "involved" and "driving" are strung together next to the 28% statistic.	Thank you for your comment. This change was made.
4/17/2020	Longmont	Erin Fosdick	Email	71	The photo is redundant. Consider deleting or replacing with another photo and perhaps adding a useful caption – it might be good to caption all full page images (e.g. 81, 97).	Thank you for your comment. This picture was changed, more regionally significant pictures were added.
4/17/2020	Longmont	Erin Fosdick	Email	74	Consider adding visual references for countermeasures listed in the definitions section.	Thank you for your comment.
4/17/2020	Longmont	Erin Fosdick	Email	75	In the Consolidated Driveways description change "existing" to "exiting."	Thank you for your comment. This change was made.
4/17/2020	Longmont	Erin Fosdick	Email	75	In the Extend bike lane to intersections delete "a" between the words <i>"repurposed"</i> and <i>"to."</i>	Thank you for your comment. This was deleted.
4/17/2020	Longmont	Erin Fosdick	Email	77	For the Speed feedback sign description delete the word <i>"to"</i> between the words	Thank you for your comment. This was deleted.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/17/2020	RTD	William C Van Meter	Email		<p>Thank you for the opportunity to submit comments on the above-referenced document. We are happy that DRCOG has taken a leadership role in this extremely important regional endeavor. RTD appreciates the comprehensive approach that DRCOG has taken in preparing the document and addressing the Vision Zero Principles. RTD staff have reviewed the draft plan and are pleased to have the opportunity to provide the following observations and suggestions:</p> <ul style="list-style-type: none"> •Improving pedestrian-supportive infrastructure benefits transit users given that most transit users (78%, based on 2019 RTD Customer Satisfaction Survey) access transit by walking. These types of improvements were specifically called for in RTD's First and Last Mile Strategic Plan (2019). •Within the Regional High Injury Network and Critical Corridors, RTD maintains several high-productivity routes which are critical to providing transit service to the region. Improving pedestrian safety in these corridors could have a significant impact to transit access and overall ridership. •RTD does not commonly make improvements to the Right-of-Way, however we have made some of the safety recommendations called for in this study with our 15L Improvements project, which added pedestrian bulb-outs at key intersections along E. Colfax Ave. These types of improvements could occur in other locations in the future, as RTD looks for opportunities to partner with DRCOG and local governments to implement transit-priority and BRT along key corridors in the region. •One specific suggestion for the Countermeasure Glossary is to express support for placement of farside bus stops at intersections. Farside stops generally make pedestrians more visible to oncoming traffic and traffic more visible to pedestrians while a bus is in the stop. Near-side stops limit visibility for both. 	<p>Thank you for your comments. Farside stops have been added to the list of countermeasures. DRCOG will continue to look for opportunities to partner with RTD to implement transit-priority and BRT along key corridors in the region and provide support as needed. DRCOG looks forward to RTD's support in implementing <i>Taking Action on Regional Vision Zero</i>.</p>
4/17/2020	DSP/Bicycle Colorado	Pete Piccolo and Jill Locantore	Letter to Doug Rex		<p>Commitment to Vision Zero</p> <p>As a "Vision Zero" plan, it is important that this plan models the Vision Zero guiding principle of prioritizing roadway design over individual responsibility and enforcement. Given that crash reports and survey data tend to focus on behavioral issues, it is particularly important to explicitly call out how infrastructure can guide safe behaviors, and to provide concrete examples that help the reader understand this foundational concept. The emphasis on behavior takes away from the true spirit of Vision Zero and can lead people to place blame on each other, instead of analyzing the built environment and identifying systems-level solutions. And ultimately, local governments have more control over the design of their streets than they do over constituents' behaviors.</p>	<p>Thank you for your comment. Based on DSP's March 7, 2020 comment, thorough filtering was done of mentions of behavior and caveated the role of behavior in Vision Zero compared to creating safe systems. This includes specific disclaimers in the introduction to Behavior Profiles and to Behavior Countermeasures. Given overall support for Action Initiatives and Sub-actions connected to behavior.</p>
4/17/2020	DSP/Bicycle Colorado	Pete Piccolo and Jill Locantore	Letter to Doug Rex		<p>Urgency</p> <p>We feel the plan needs a stronger sense of urgency, that traffic deaths are an epidemic and governments and decision makers have the power (and responsibility) to change the direction of traffic safety through new systems. The plan includes a "call to action," but we feel that the plan should strike this tone throughout.</p>	<p>Thank you for your comment. Content was added to the "Why Vision Zero is needed for the Denver region" stating that "Traffic related deaths and severe injuries are a critical and preventable public health epidemic and social equity issue in the metropolitan Denver area. DRCOG, its member governments and its partner agencies are responsible for reducing crashes through safe systems." A map of the DRCOG region with KSI crashes of years 2013-2017 (data used to create the regional High Injury Networks) was also added. Denver region fatality trends were combined stating that the crash history is the "Need for a call to action." The number of serious-injury crashes was added to the number of people that have been effected through years 2013-2017. Content was also added to the first page of the Taking Action section that identifies DRCOG its member governments and its partnering agencies as leaders in prioritizing projects and initiatives that will reduce KSI crashes in the region.</p>

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/17/2020	DSP/Bicycle Colorado	Pete Piccolo and Jill Locantore	Letter to Doug Rex		<p>Equity and enforcement</p> <p>Equity and empathy are mentioned without much context or depth. Local governments and communities need to know why equity is important and examples of what this looks like or what strategies they can use, similar to the toolkit of countermeasures that is provided for design and operations. An "Equity Strategies" section was added toward the end of the plan, but DRCOG can demonstrate its commitment to equity by strengthening its language throughout the plan so as not to appear a siloed effort.</p> <p>Furthermore, focusing on enforcement as a primary strategy can exacerbate existing racial and social injustices and erode mutual feelings of trust and safety between our police officers and the communities they serve. The plan should highlight other interventions that should precede enforcement and suggest other roles law enforcement can play in building relationships with and educating the public. A specific example of where enforcement needs to be addressed very thoughtfully is in the context of HINs/disinvested communities. Finally, the many graphics in the plan that illustrate people are an opportunity to better represent and emphasize the diversity in gender, age and ability of residents in the region who share our roadways.</p>	<p>Thank you for your comment. Based on DSP's 3/7/2020 comment, we added Equity Strategies to the document and reviewed mentions of enforcement to make sure that enforcement with empathy was specifically mentioned where appropriate. Much of this comment is what needs to be prioritized as this plan is implemented. DRCOG worked to add a more detailed vulnerable user layer to the interactive map for the regional High Injury Network and plans to use this layer in future funding opportunities. Graphics in the plan were reviewed and edited in an attempt to increase the ethnic, age and ability diversity of people shown in the plan.</p>
4/17/2020	DSP/Bicycle Colorado	Pete Piccolo and Jill Locantore	Letter to Doug Rex		<p>Vulnerable road users</p> <p>Vulnerable road user data is introduced in a number of places in a way that emphasizes "low" pedestrian and bicyclist numbers and crash rates. This detracts from the fundamental Vision Zero principle that even one fatality is too many and the main point should be that pedestrian and bicyclist injuries and fatalities are disproportionately high relative to their mode share. Metro Vision establishes goals for increasing non-SOV mode share and decreasing vehicle miles traveled, and the Regional Vision Zero Action Plan should recognize that achieving these goals will require increasing safety for modes other than driving.</p>	<p>Thank you for your comment. By definition, disproportionate indicates that the number of crashes is high relative to the number of people walking/biking. DRCOG would like to partner on future ways to indicate the disproportionate nature of this data.</p>
4/17/2020	DSP/Bicycle Colorado	Pete Piccolo and Jill Locantore	Letter to Doug Rex		<p>Charts</p> <p>Some graphics and page formats could be improved for optimal readability.</p>	<p>Thank you for your comment. Reviewed charts and legends throughout the plan and made changes to improve readability. More specifics on this comment would be helpful.</p>

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
					<p>I urge you to implement a robust and dynamic Vision Zero Action Plan. It is an important part of many other facets of our lives. Vision Zero can have a big impact on our GHG emissions, quality of life, mobility, human health, and local prosperity. Many of my concerns are for climate, bike and ped issues and bringing commercial commuting interests into play. The burden of proof should not be on the impacted, but on the impactor. That is why I am not addressing residential concerns as much. It is a more a social responsibility of the workplace, not the neighbor of the worker.</p> <p>As many municipal and transportation planners around the country recognize, 60% of commuters are interested in bicycling but do not trust traffic enough to do it. Vision Zero has a big role to play in getting people out of their cars. In order to have confidence, there is a need to address aggressive driving, as well as careless and reckless driving. These are the biggest behaviors preventing people from getting out of their cars to bike and walk. You have a great data driven approach which is to be commended, but perception is a prime motivator, especially for those who simply do not trust traffic enough to try bicycling (60% of commuters). A more livable walkable community has many benefits. You can decrease road budgets, create better access to businesses, improve air quality, relieve congestion, and move carbon. In many cases, businesses and commercial buildings are finding their commuter transportation carbon intensity is greater than the operating carbon intensity of their building. Many communities want the responsibility for the impacts of their commuters to fall on the trip generator. This has resulted in the gaining popularity of Trip Reduction Ordinances around the nation. Vision Zero can play an important role in expanding the options available to trip generators in reducing their transportation carbon intensity. Although the burden is placed on the trip generator, businesses gain benefits through reduced congestion, better access to their business, reduced infrastructure demands, and more livable space in their immediate vicinity as well as their greater community.</p> <p>I would like to urge you to consider transportation in terms of carbon intensity as an important metric. Much of the thinking in terms of the metric for reducing has been in terms of parking. Parking can be an important tool but is not as an important goal as reducing carbon, which improves air quality and other things. It is not difficult to measure carbon intensity. It requires a survey of the occupants of the business or commercial building to determine their mode of transport and route. Each segment of their route would be defined by mode such as walk, bike, bus, motorcycle, heavy rail, light rail, single occupant vehicle, high emitting vehicle, low emitting vehicle, car pool, etc. Each travel mode has an established carbon value associated with it that can be multiplied by the distance of that mode. This will also help reach climate goals if transportation carbon intensity is measured. Then there is a much better position to improve it than if it is not measured. A good example of using carbon and performance based metrics is Commutifi's program with the City of Boulder at https://hes32-ctp.trendmicro.com:443/wis/clicktime/v1/query?url=https%3a%2f%2fsites.google.com%2fbouldertc.org%2fclean%2dcommute%2fhome&umid=a19beaaf-2190-4160-b23b-5de71f22cb91&auth=4a58862e89b075465a8326aa92e7bce3c9b29348-f521907558ebe5a13b10b6a6c76ae0326702fa70. Commutifi is an Arc Partner. Arc is the new platform for data entry for LEED O&M (Operations and Maintenance) for transportation, energy, water, waste, and human experience. LEED O&M is central in the USGBC push for carbon and performance based standards. Commutifi also automatically generates a score for Arc. Bikes and pedestrians are very important to a low carbon</p>	

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/18/2020	Citizen	Scott Hatfield	Email		<p>transportation strategy. I thought that a good job was done cataloguing the high injury network. However, I would like to see that overlaid with a low stress network to provide opportunities to improve vision zero goals. Low stress networks can then be designed to avoid the high injury network. This should be done as a separate project for both bikes and peds. There are often gaps that cause problems. There should be an examination of high injury and low stress networks in relation to equity as well. Many gaps can be uncovered looking at how low stress networks under serve while high injury networks over serve disadvantaged communities. Having access to transportation and exercise opportunities can improve community quality of life where it is most needed with a big bang for the buck compared to other options. Vision Zero can play a big role in first mile, last mile strategies for transit users.</p> <p>Often, vision zero emphasizes bikes and peds because they usually bear the most deaths and injuries. I was surprised by your low representation of bikes and peds in the death and severe injury numbers. I would like you to consider that there could be substantial benefits to add a metric for all injuries, not just severe injuries.</p> <p>Livable, walkable communities have many benefits that tie into vision zero. Way too many people in the Denver area feel that exercise is something that risks major obstacles such as aggressive traffic and hazardous infrastructure. Filing in those gaps is critical in low stress network completion. Larger network completion projects should also consider network wide plan for complete streets and green streets. Local economies, bikes, peds, and municipal infrastructure budgets can benefit from prioritizing green spaces for livability, social interaction, exercise, and native habitat to improve livability and walkability.</p>	<p>Thank you for your comment. DRCOG is working on a number of different initiatives that work in concert with this Regional Vision Zero plan. Take a look at our Active Transportation Plan [link: https://drcog.org/sites/default/files/resources/DRCOG_ATP.pdf] that was adopted in January 2019, which includes Active Transportation Corridors and Pedestrian Focus Areas. Over the next year DRCOG will also be developing a Complete Streets Toolkit that will continue to build on the Regional Vision Zero concept and how it links to active transportation modes like biking and walking.</p>
4/18/2020	Citizen	Alexey Davies	Email		<p>Community Cycles supports Boulder County's input on the Vision plan, with the exception of a more aggressive goal for Vision Zero. Community Cycles understands that DRCOG's current safety targets include less than 100 fatalities across the Denver metro region by 2040, and we feel strongly that this is woefully inadequate. Not only does this plan fail to set a true vision zero target (when we as a region will have zero annual traffic fatalities), but the existing target is nowhere ambitious enough. Time and time again, when asked, the public ranks safety as one of, if not the, top transportation priority. We strongly encourage DRCOG to set a more ambitious safety target in this plan and change the 2040 goal to be zero annual traffic fatalities instead of 99 or fewer. Those 99 families who would be irreparably damaged in 2040 by our failure to act boldly now demand more of us.</p> <p>Thank you Community Cycles Advocacy Committee</p>	<p>Thank you for your comment. DRCOG will be reevaluating Metro Vision Targets for the 2050 MVRTP. Staff is suggesting setting a zero target for 2050. There will also potentially be other safety targets added. When those targets are adopted <i>Taking Action on Regional Vision Zero</i> will be amended to include the targets.</p>
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	3	<p>fatal crashes data should be from a different source than the Focus Model, Probably need to list two separate sources here.</p>	<p>Thank you for your comment. Please reference the Data Used for Analysis page on the last page of the plan for further information on the crash data used.</p>
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	4	<p>The multiple colors in this one graphic (yellow, white, blue), plus the different layout of the page, may make it difficult for the reader to connect that pedestrian hit by a vehicle traveling at 40 mph has a 73% likelihood of severe injury or fatality. Use color or boxing to more closely link the different parts of this argument.</p>	<p>Thank you for your comment. Graphics in the plan were edited to give clarity on how figures should be interpreted.</p>
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	4	<p>Does this document need to say stronger that designing for traffic throughput and travel speed should not be prioritized over safety? I read the entire document, and aside from Objective 5, action item 16 at the very back of the document, the report doesn't discuss in any meaningful way the need to prioritize safety over the other measures typically used to justify transportation projects.</p>	<p>Thank you for your comment. Speeds reduction was emphasized in the "Speed Reduction Strategies" section that list potential techniques and through many of the suggested countermeasures listed in the crash profiles. These techniques will continue to be emphasized through the working group and education as the plan is implement.</p>
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	5	<p>Need to have a map upfront defining the DRCOG region. twb.</p>	<p>Thank you for your comment. A map was added.</p>
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	7	<p>a figure showing fatalities by travel mode per a certain unit of (e.g. 10,000) travel volumes might be helpful to show the fatality rate by mode.</p>	<p>Thank you for your comment. DRCOG does not have travel volumes for bicyclist and pedestrians at this time.</p>

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4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	7	Light blue blends into the background.	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	9	who were on the committee?	Thank you for your comment. DRCOG reached out to many stakeholder from each of the 10 counties within the region and had each county select two representatives, the committee also included other DRCOG partners such as CDOT, RTD, FHWA, NHTSA, CSP and other interested advocacy groups.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	9	Formatting.	Thank you for your comment. Formatting resolved.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	9	Formatting	Thank you for your comment. Formatting resolved.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	11	What percentage?	Thank you for your comment. Please reference page 13 for all percentages.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	12	... "to improve safety."	Thank you for your comment. Text added.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	15	This map would be much more usable if high injury network roads were labeled.	Thank you for your comment. This map's purpose is to illustrate the overlap of public comments with the data-driven regional High Injury Network. If you would like to further compare and analyze certain areas, the comments and the regional High Injury network will be available on DRCOG's Regional Data Catalog.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	18	Not sure it's been previously defined.	Thank you for your comment. This KSI text has been removed and replaced with more consistent language.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	18	Is there a place in the plan (appendix?) specifically listing which segments of which roads are in the regional high injury network? Preferable over a map with unlabeled roads.	Thank you for your comment. No, DRCOG will have the regional High Injury Network available for download on the Regional Data Catalog which will have a field with road names. There will also be an interactive map linked to the regional HIN that will have a tool to zoom into specific areas to provide detail such as street names.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	19	the map was developed base on data which is more than 3 years old. Should the map be updated on a yearly basis as more recent data becomes available?	Thank you for your comment. Please reference Action Initiative 12.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	20	Add of fatal and severe injury crashes	Thank you for your comment. Text added.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	20	previous discussion mentioned that top 50% of the HIN in each county are identified as critical corridors?	Thank you for your comment. No, that is incorrect. The the plan states that each of the 10 counties were analyzed separately, the critical corridors identify the top 50 percent of crash density corridors along the regional High Injury Network for each county.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	20	a legend would be helpful to distinguish between HIN and CC	Thank you for your comment. A key was added for better clarification.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	20	Better to more clearly identify which numbers are tied to the high injury network, vs. the critical corridors. Takes a bit of effort to understand that orange is the critical corridor.	Thank you for your comment. A key was added for better clarification.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	21	a map on one page should also be provided	Thank you for your comment. Suggest viewing this document in two page view.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	22	Should be labeled as "Area 1 Denver / Aurora" to reflect the geography, location of the label on the page, and to be aligned with the map title on the following page.	Thank you for your comment. This label was left out on the regional High Injury Network map to avoid covering up High Injury Network. Please refer to the next page for the title that includes Aurora.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	24	North-south streets need to be labeled. Generally, more HIN and critical corridor streets should be labeled.	Thank you for your comment. It is encouraged that the interactive map link is used instead of relying on the maps in the plan, the zoom feature will allow more details to be viewed, such as street names, to specific areas.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	24	I'm not sure what value is provided by the use of the heavy black Denver/Aurora boundary. Black line obscures the underlying high injury network or critical corridor.	Thank you for your comment. A link to a interactive map will be included in the plan to provide more detail on the regional High Injury Network.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	28	intersections with at least one leg with a posted speed of 30 or below?	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	28	clarify that this is posted speed limit of 30 mph	Thank you for your comment. To clarify the text reads " posted speed limited of less than or equal to 30 mph".
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	28	what are the specific density thresh hold?	Thank you for your comment. The density threshold for urban areas was 2015 population + employees per acre \geq 11.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	28	space before " / "	Thank you for your comment. DRCOG's brand/style guide does not support this.

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4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	28	and others (e470, 6 avenue, 285, 470 etc.)	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	29	also need a map on one page	Thank you for your comment. Suggest viewing this document in two page view.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	32	a figure showing KSI and fatal crashes rate by area type might be helpful to better understand the severity of the crashes	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	32	Graphically attractive, but please just label "Urban", "Limited Access Highways", etc. directly next to the circle chart. It's too difficult to go from the circle chart to the key	Thank you for your comment. Please reference key located on the page.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	32	should be a line symbol instead of a dot	Thank you for your comment. Graphics in the plan were edited.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	32	Have the order in the key match the order of the chart above. Makes it easier for the eye to track.	Thank you for your comment. Graphics in the plan were edited.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	33	change the symbol to a block instead of a dot	Thank you for your comment. Graphics in the plan were edited.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	36	Add "Failed to Yield Right of Way and Left Turn" in this blurb.	Thank you for your comment. The title of these stats are directly next to these statistics.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	38	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	38	should be "vehicle speed" or "crashing vehicle speed"	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	40	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	41	Add protected intersection	Thank you for your comment. Countermeasure was added.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	41	Add mid-block crossings, HAWK, etc	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	41	need a section on bike lane designs, e.g. buffered bike lane, separated bike lane, etc.	Thank you for your comment. This will be included in the Complete Streets toolkit DRCOG will be developing in the next year (Action Initiative 6).
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	42	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	43	Make this a more complete clause. Failed to Yield Rights of Way and turning conflicts; pedestrian-involved; and read end and stopped of slowing vehicle, encompasses...	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	46	this should be "vehicle speed" or "crashing vehicle speed"	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	47	Should "pedestrian crossing island" be included?	Thank you for your comment. Pedestrian refuge median was added.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	47	There should also be a section on pedestrian crashing along arterial and crossing mid-blocks which involve mid-block crossing design, street layout, sidewalk width, buffers, block size, etc.	Thank you for your comment. This will be included in the Complete Streets toolkit DRCOG will be developing in the next year (Action Initiative 6).
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	48	how does this figure relate to the figures on the left?	Thank you for your comment. These are additional stats, they do not relate to the figures on the left.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	48	should also have a bike-involved crash sections	Thank you for your comment. Bike-involved numbers are very low outside of Urban areas. Vulnerable users are a priority universally in Vision Zero, but the purpose of this section is to call out data-driven crash types that, if reduced, will have the most significant effect on KSI reduction.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	50	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	52	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	54	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	54	should be oversized	Thank you for your comment. Text has been revised.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	55	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	55	not reflected in the figures on the left	Thank you for your comment. These are additional stats, they do not relate to the figures on the left.

Date Submitted	Agency	Name	Submitted Via	Page	Comment	Responses
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	58	This color combo (light orange against dark orange) might be tough for to see.	Thank you for your comment. Figures were slightly darkened for better visibility.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	58	none of the numbers is reflected in the figures on the left	Thank you for your comment. These are additional stats, they do not relate to the figures on the left.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	58	this section has the same content as the profile description on the top and can potentially be combined.	Thank you for your comment. This section of the plan is meant to be as a toolkit, both will be kept to provide readers quick access to the provided information.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	60	See previous comment	See previous response.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	67	traffic law violations by pedestrians and bicyclists should also be addressed	Thank you for your comment. The appropriate way to address this could be a potential topic for working session with regional law enforcement.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	69	I would like some particular discussion on whether or not over-designing roads is a contributing factor to high speeds. Aligning design speeds of new / redesigned roads, with posted speed limits, should be discussed.	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	69	Almost sounds like you're describing a road diet, without using the term "road diet"... :-)	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	69	urban design should also be an important strategy for reducing speeding. roadside design approaches, such as aspect ratio, street furnishings and on-street parking, can send a message to driver to slow down in an urban area.	Thank you for your comment. This will be included in the Complete Streets toolkit DRCOG will be developing in the next year (Action Initiative 6).
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	70	direct additional resources for capital and operational improvements in vulnerable population concentration area would be another strategy	Thank you for your comment. DRCOG is working to provide additional tools to better locate these important areas, such as the regional High Injury Network interactive map.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	74	Sidewalks should be detached	Thank you for your comment. Adequate space for improvements is at times a factor, DRCOG encourages local jurisdictions to conduct further engineering analysis to consider additional relevant design guidance in selecting countermeasures.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	76	Only defines CRF and CMF, but doesn't provide recommended action. Some of the countermeasures described above, should be listed below with their CRF or CMF factor, to provide additional context.	Thank you for your comment. DRCOG encourages local jurisdictions to use this tool to better analyze countermeasures. It was decided not to add CMF/CRFs specifically because the crash profiles are broad and different. CMF/CRFs could apply to multiple mechanisms within a crash profile.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	77	Vision Zero?	Thank you for your comment. This content has been changed.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	78	These pictures would have more impact if location with listed.	Thank you for your comment.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	84	should critical corridors also be mentioned?	Thank you for your comment. All critical corridors are along the regional High Injury Network.
4/20/2020	Aurora	Tom Worker-Braddock and HuiLiang Lui	E-blast - Draft link	88	?? Double check.	Thank you for your comment.



TAKING ACTION ON

regional vision



SAFER STREETS FOR METRO DENVER

Presented by:

Beth Doliboa

TAC - April 27, 2020



What is Vision Zero?

Vision Zero is a transportation safety philosophy based on the principle that loss of life is not an acceptable price to pay for mobility.

Reframes traffic deaths as
preventable.

Integrates
human error
into the approach.

Focuses on
preventing fatal and severe crashes
rather than eliminating all crashes.

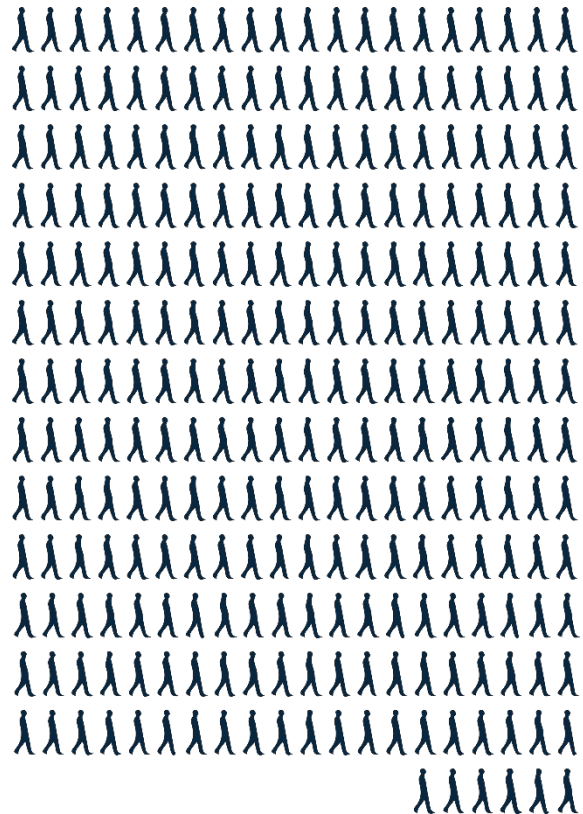
Aims to
establish safe systems
prioritizing human life first and foremost when designing a road network.

Applies
DATA DRIVEN
decision making.

Establishes road safety as a
social equity issue.

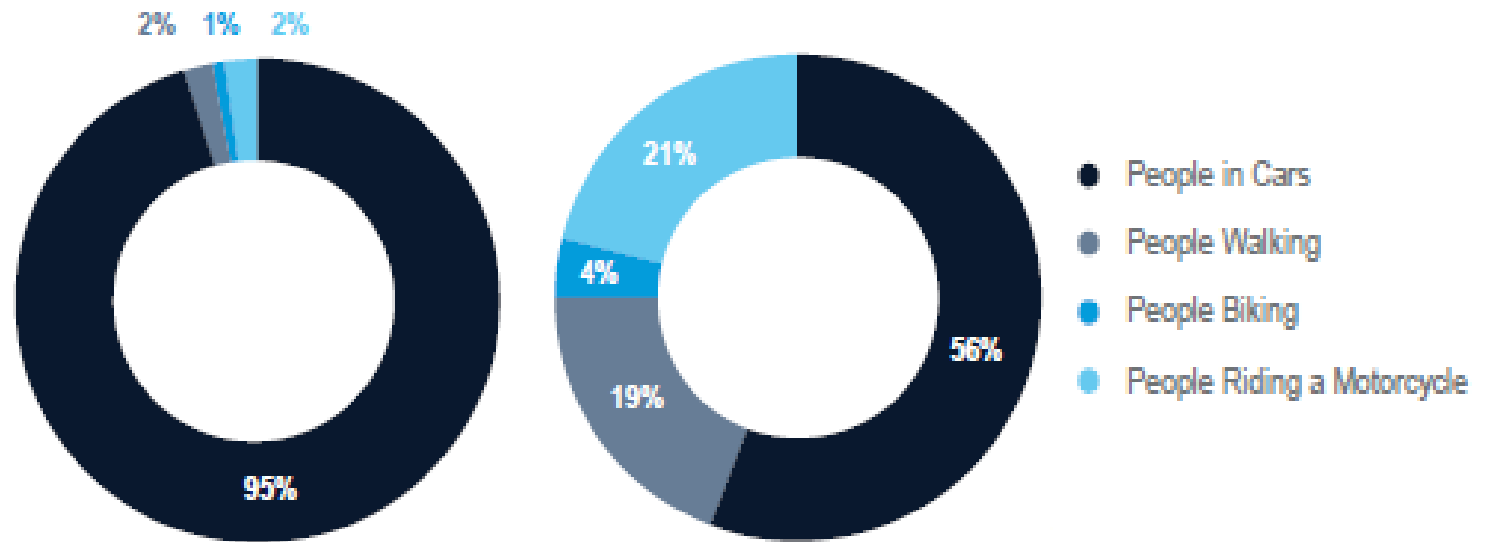


Why the Denver Region Needs Vision Zero



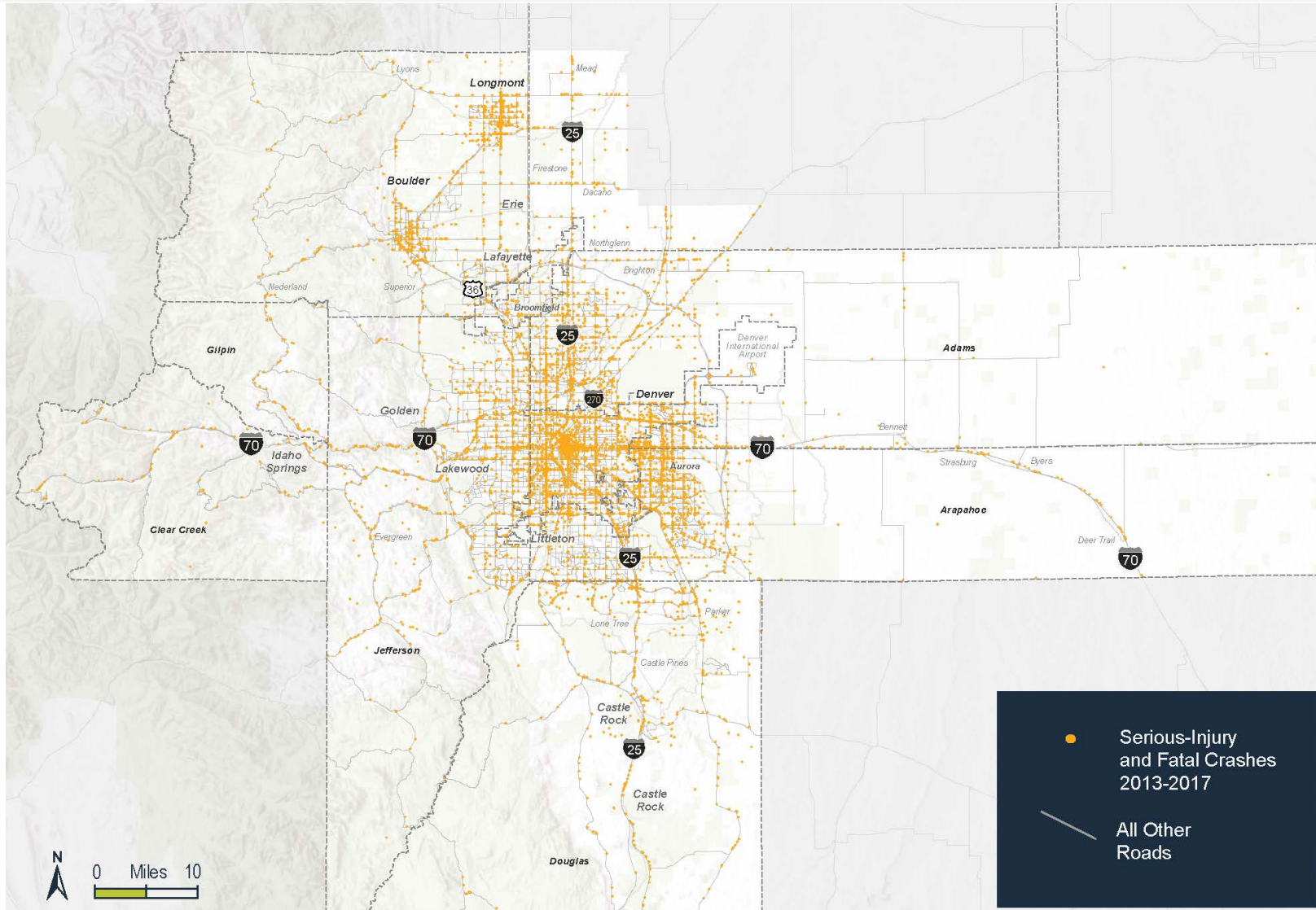
In 2017, 266 people were killed on the Denver region's streets and highways

Percent of all crashes by travel mode vs. percent of fatal crashes by travel mode





A Need for a Call of Action



**1,149 PEOPLE DIED
AND 8,827 PEOPLE
WERE SERIOUSLY
INJURED ON
REGION ROADWAYS
DENVER**

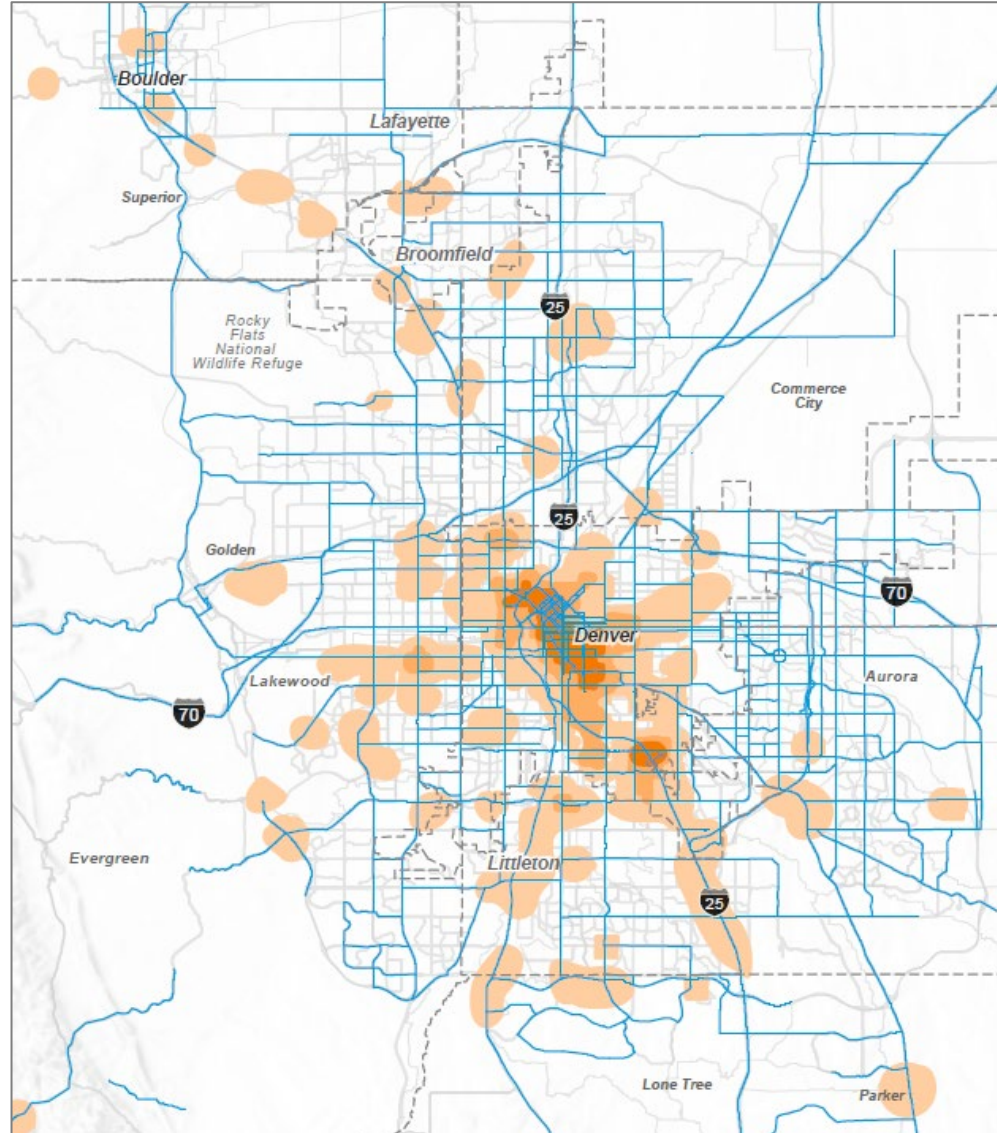


Stakeholder and public comments

The community identified over 1,000 locations on the Regional Vision Zero interactive public comment web map.

DRCOG received over 3300 survey submissions.

DRCOG received over 200 comments during stakeholder comment periods and the 30-public comment period



REGIONAL VISION ZERO TOOLKIT



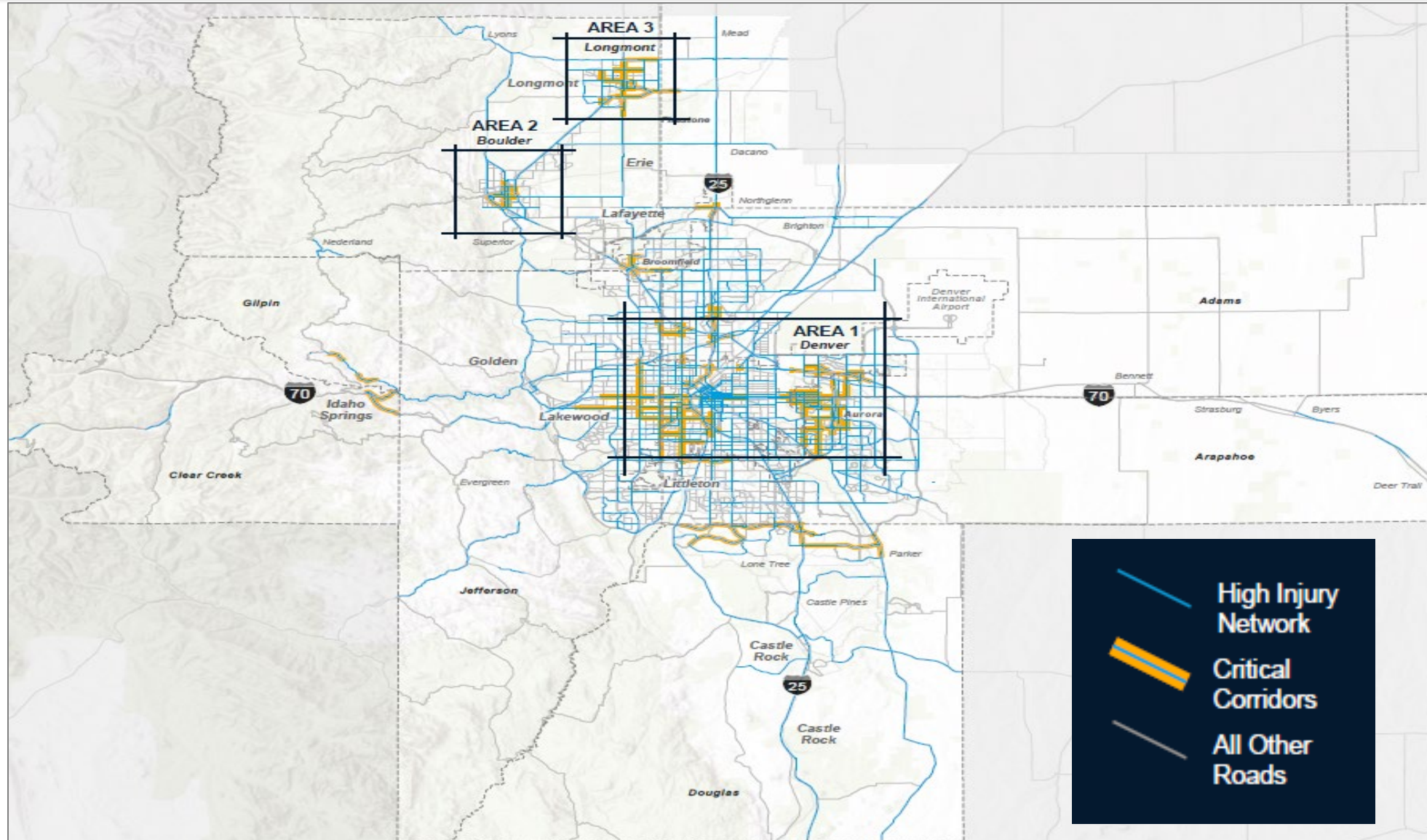
Regional Vision Zero Toolkit – Regional High Injury Network

Regional HIN developed by...

- Identifying the road segments with the highest KSI crash density.
- Connecting the network by adding links based on proximity to high KSI crash density segments and road segment continuity.

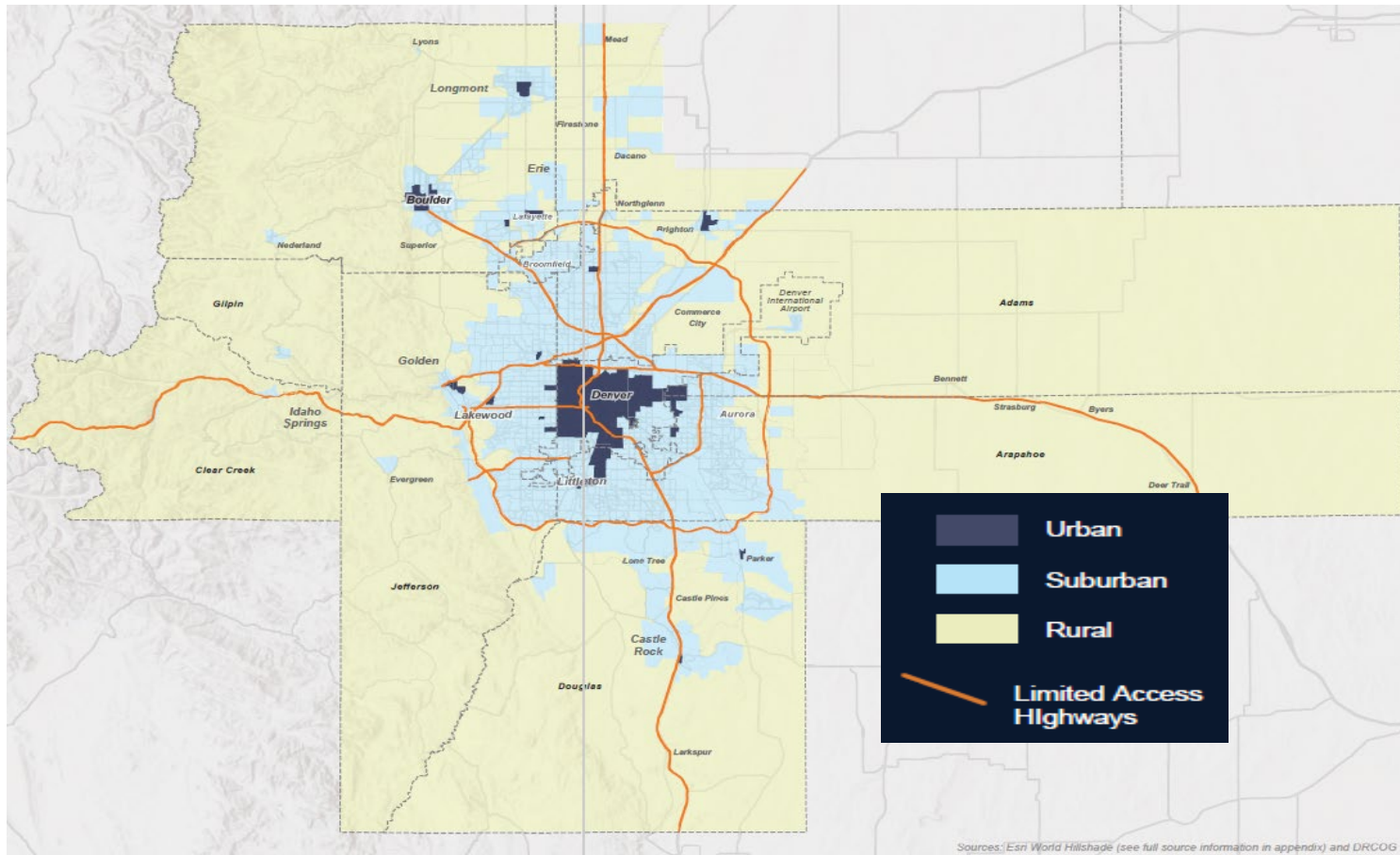
Critical Corridors

- Additional analysis done for each county to identify the most dangerous corridors in terms of KSI crashes





Regional Vision Zero Toolkit – Area Types



AREA TYPE	DEFINING FEATURES	EXAMPLE LOCATIONS
Urban	<ul style="list-style-type: none">• High population/employment density• High density of low-speed (pedestrian-oriented) street intersections• Or, within an existing DRCOG Urban Center	Core Denver neighborhoods, Aurora around Colfax Avenue, Englewood around Broadway, core Boulder neighborhoods, other downtown areas
Suburban/ Compact Communities	<ul style="list-style-type: none">• Medium population/employment density	Denver Tech Center, Broomfield, southeast Aurora, Firestone, Idaho Springs
Rural	<ul style="list-style-type: none">• Low population/employment density	Clear Creek County (excluding Idaho Springs), eastern Arapahoe County, parts of Boulder County
Limited Access Highways	<ul style="list-style-type: none">• Interstates or other limited access state highways or other roads	Interstate 25, Interstate 70, U.S. Route 36 (between Denver and Boulder), Peña Boulevard



Regional Vision Zero Toolkit – Crash and Behavior Profiles

Created by analyzing KSI crash data trends for years 2013 through 2017 by area types

Crash Profiles

- Describe the most frequently occurring crash types that result in fatalities or severe injuries in the Denver region
- Describe the specific events that occur in KSI crashes

Behavior Profiles

- Describe human behavior that led to a crash happening

Countermeasures

- *Strategies with a documented crash reduction factor or otherwise recognized as a best practice for addressing certain crash types.*

TAKING ACTION



Taking Action on Regional Vision Zero – Objectives



Improve collaboration between allied agencies



Increase awareness and adoption of Vision Zero



Design and retrofit roadways to prioritize safety



Improve data collection and reporting



Increase funding and resources



Increase legislative support



Taking Action on Region Vision Zero – 25 Action Initiatives

OBJECTIVE

1

IMPROVE COLLABORATION BETWEEN ALLIED AGENCIES

TRACKING PROGRESS:

1. number of local governments and allied agencies participating in the Regional Vision Zero working group
2. number of police department working sessions
3. number of support events for victims of traffic violence

ACTION INITIATIVES	SUB-ACTIONS	RESPONSIBILITY	ACTION YEAR
<p>1. Convene Vision Zero working groups that will share updates on crash data, resources, current activities, policy evolution, funding opportunities, equity data, traffic safety performance, enforcement, emerging issues, vehicle fleet safety and other relevant safety information. Invite allied organizations to participate in the Vision Zero working groups, including organizations from: public health, social services, economic development, homelessness, religious and spiritual communities, and other community-based organizations.</p>	<p>1.1 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.</p>	<p>DRCOG CDOT Colorado State Patrol Local Governments Advocacy Organizations</p>	2020
	<p>1.2 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 on the regional High-Injury Network.</p>	<p>DRCOG CDOT Colorado State Patrol Local Governments Local Police</p>	2021
	<p>1.3 Distribute Vision Zero marketing and outreach materials through the working groups.</p>	<p>DRCOG</p>	2020
	<p>1.4 Share and discuss funding opportunities within the working groups.</p>	<p>DRCOG CDOT</p>	2020
	<p>1.5 Collaborate with the Advanced Mobility Partnership to support transportation technology efforts that support Regional Vision Zero through data collection, planning, programming and decision-making.</p>	<p>DRCOG Advanced Mobility Partnership partners</p>	2020
<p>2. Working with allied organizations, create support systems for victims of traffic violence such as counseling, memorializing and storytelling.</p>		<p>DRCOG Local Governments</p>	2021



How to Stay Engaged

- Participate in the regional Vision Zero Working Group
- Participate in training opportunities
- Collect and analyze local data or work with the regional crash data sets
- Apply for grants
- Join the Vision Zero network



Recommended Motion

Move to recommend to the Regional Transportation Committee adoption of *Taking Action on Regional Vision Zero*

ATTACH G

ATTACHMENT G

To: Chair and Members of the Transportation Advisory Committee

From: Jacob Riger, Manager, Long Range Transportation Planning
(303) 480-6751 or jriger@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Informational Briefing	9

SUBJECT

Modeling network for air quality conformity associated with a proposed 2020 technical amendment to the *2040 Metro Vision Regional Transportation Plan (2040 MVRTP)*.

PROPOSED ACTION/RECOMMENDATIONS

N/A

ACTION BY OTHERS

N/A

SUMMARY

Since DRCOG is preparing the 2050 MVRTP, staff was not planning to conduct another amendment cycle for the adopted 2040 MVRTP. However, during routine coordination with the E-470 Public Highway Authority, both agencies identified the need for a technical amendment to update the completion timeframe for an E-470 project within the 2040 MVRTP. The project in question is the widening of E-470 from four to six lanes between East Quincy Avenue and I-70. To comply with federal air quality conformity requirements, the completion timeframe (air quality staging period) for the project needs to be updated in the 2040 MVRTP from the 2030-2040 staging period to the 2020-2029 staging period as the project is now anticipated to open by early 2021.

As part of this technical amendment, DRCOG will conduct transportation and air quality conformity modeling for the plan's regional roadway and rapid transit networks. These model networks will include all projects contained in the 2040 MVRTP as adopted in April 2018 as well as the proposed technical amendment for the E-470 project described above. There are no other proposed changes to the plan's regional roadway and rapid transit model networks.

Air quality modeling results will be presented in conformity determination documents associated with a public hearing for the amended 2040 MVRTP this summer.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

N/A

ATTACHMENT

N/A

ADDITIONAL INFORMATION

If you need additional information, please contact Jacob Riger, Manager, Long Range Transportation Planning at 303-480-6751 or jriger@drcog.org

ATTACH H

ATTACHMENT H

To: Chair and Members of the Transportation Advisory Committee

From: Jacob Riger, Manager, Long Range Transportation Planning
303-480-6751 or jriger@drcog.org

Meeting Date	Agenda Category	Agenda Item #
April 27, 2020	Informational Briefing	10

SUBJECT

Draft 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) scenario outcome results.

PROPOSED ACTION/RECOMMENDATIONS

N/A

ACTION BY OTHERS

N/A

SUMMARY

At the March TAC meeting, DRCOG staff presented results from the testing of several conceptual 2050 transportation and land use scenarios. At this month's TAC meeting, the focus will be on exploring the implications of the scenario outcome results for developing the 2050 MVRTP.

Given the volume of information presented in March, the scenario outcome results have been summarized for easy reference in Attachment 1. As a reminder, this assessment is not intended as a rigorous "evaluation" of the scenarios or to "choose" a specific scenario (or hybrid). The objective is to understand how and to what extent each scenario influences regional relationships between urban form, transportation system approaches, and travel and mobility patterns.

Scenario Outcome Results Summary

As discussed at March TAC and as shown in Attachment 1, several of the transportation and land use scenarios show significant change *compared to the 2050 base* on several outcome measures (transit, walk, and bicycle trips, and transportation-related Metro Vision targets). Even greater change was observed when transportation and land use scenarios were tested in combination (e.g. the Travel Choices/Infill scenarios and the Transit/Centers scenarios).

Scenario Outcome Results Implications

While the absolute values of change for each scenario/scenario combination shown in Attachment 1 are informative, a perhaps more useful way to consider the scenario outcome results is via a *relative comparison* of the degree to which the results respond to the outcome measures and Metro Vision targets.

Attachment 2 shows the scenario outcome results from this perspective, as well as the planning-level cost for each scenario (see below). Attachment 2 illustrates the scenario result implications in terms of their responsiveness to the outcome measures and their ability to achieve the Metro Vision targets. For example, the Managed Lanes & Operations (ML&O) and Transit scenarios have similar total planning level costs, but very different results in terms of responsiveness to the outcome measures and Metro Vision targets. As compared to the 2050 base, the ML&O Scenario increases VMT, decreases transit, walk, and bicycle trips, significantly decreases person hours of delay,

and only achieves one Metro Vision Target. In contrast, the Transit scenario decreases VMT, significantly increases transit trips, decreases walk and bicycle trips, also significantly decreases person hours of delay, and does not achieve any of the Metro Vision targets. However, the Transit/Centers scenarios combination has “positive” outcomes on all outcome measures and achieves all transportation Metro Vision targets. The results for the other scenarios show similar variations.

As noted previously, the point is not to judge a particular scenario as “good” or “bad.” Rather, the scenario outcome results shown in Attachment 2 illustrate the choices and tradeoffs associated with the scenario results, and ultimately provide a framework to identify priorities and direction for developing the 2050 MVRTP. This topic will be the focus of discussion at the April TAC meeting.

Scenario Costs

As noted, planning level cost estimates are shown for each scenario in Attachment 2. These are very high-level costs at an overarching planning level of scope. The cost estimates are shown in FY 2020 (base year) values, and primarily represent the level of capital investment associated with each scenario. For the Transit scenario, operations are such a key component of that scenario that those costs are also included. The cost calculations are based on published plans or studies associated with each scenario (such as HPTe’s Express Lanes Master Plan for the ML&O scenario) and project costs from recently completed projects.

As with the scenario outcome results, the cost estimates for individual scenarios are informative, but the greater value is the comparison of costs between scenarios, especially in the context of the scenario results as shown in Attachment 2.

Conclusion

At the April TAC meeting, DRCOG staff will focus on the implications of scenario results as a framework for developing the 2050 MVRTP. Specifically, how should the scenario result implications guide potential investment priorities in the 2050 MVRTP financial plan? Similarly, how should the results guide the identification and evaluation of major projects and project types that will ultimately form the fiscally constrained component of the 2050 MVRTP?

PREVIOUS DISCUSSIONS/ACTIONS

- TAC – [March 25, 2019](#)
- [June 24, 2019](#)
- [September 23, 2019](#)
- [October 28, 2019](#)
- [December 9, 2019](#)
- [January 27, 2020](#)
- [March 23, 2020](#)

PROPOSED MOTION

N/A

ATTACHMENTS

1. Scenario results summary
2. Scenario results implications

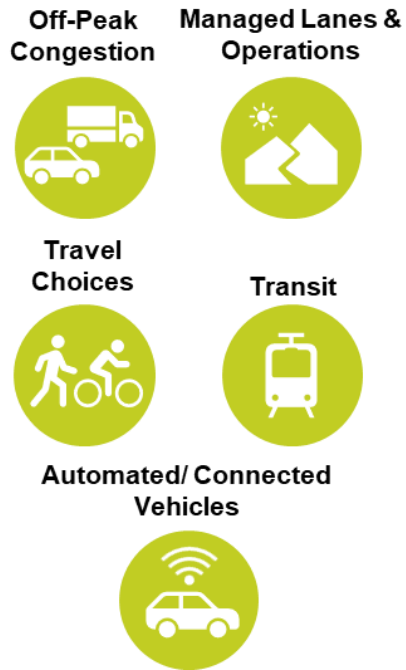
ADDITIONAL INFORMATION

If you need additional information, please contact Jacob Riger, Manager, Long Range Transportation Planning, at 303-480-6751 or jriger@drcog.org

LAND USE SCENARIOS
(Sourced from Metro Vision)



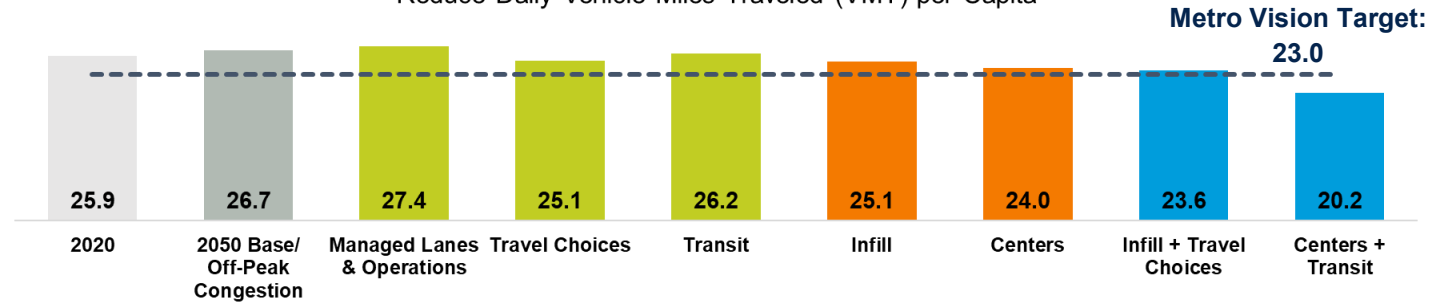
TRANSPORTATION SCENARIOS



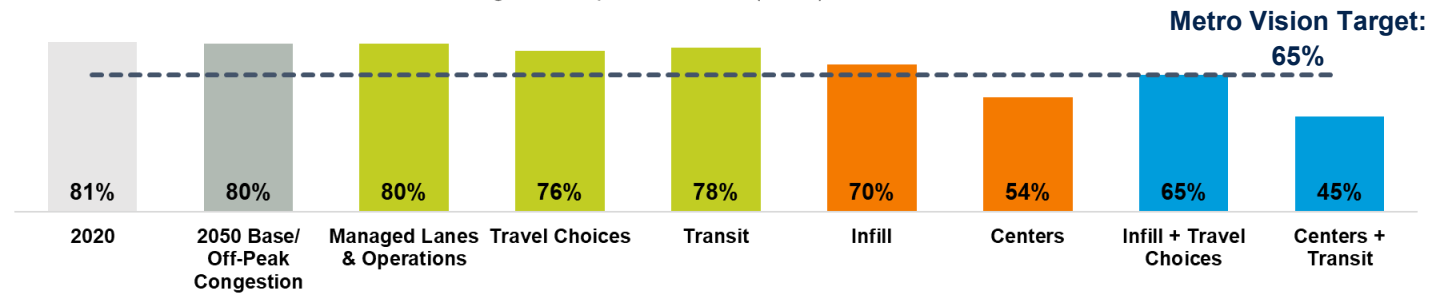
2050 METRO VISION REGIONAL TRANSPORTATION PLAN
SCENARIO PLANNING SUMMARY RESULTS

Objective: To better understand the regional relationships between the location and intensity of new development, transportation system improvements and mobility. Below are some main results of how the transportation scenarios (green), land use scenarios (orange), and combined scenarios (blue) compared against the baselines (grey) and performed in achieving Metro Vision targets.

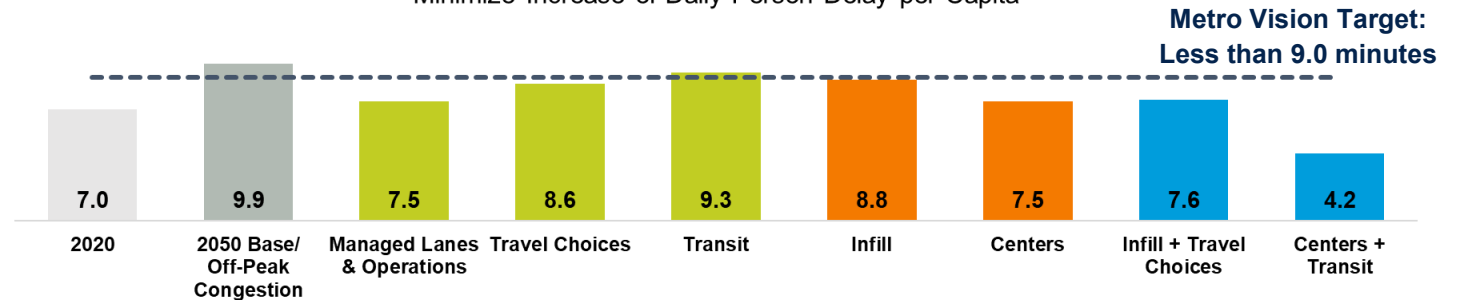
Reduce Daily Vehicle Miles Traveled (VMT) per Capita



Reduce Single-Occupant Vehicle (SOV) Mode Share to Work



Minimize Increase of Daily Person Delay per Capita



Consistent across all the scenarios are the same population and employment growth projections showing another 1 million people and 800,000 jobs in the DRCOG region by 2050.

Future distribution of households and employment were modified through relative adjustments to local zoning. Previously approved developments are included in all scenarios.



SCENARIO OUTCOMES—HIGHLIGHTS
(Compared to 2050 Base)

INFILL

15% of households are in urban centers



People in vehicles experience **11% less delay** on average

CENTERS

88% of single-family areas remain single-family

Over **twice** as many walk & bicycle trips



OFF-PEAK CONGESTION

Less than 1% change in vehicle miles traveled and transit trips

MANAGED LANES & OPERATIONS

People in vehicles experience **25% less delay** on average

CENTERS + TRANSIT

2.4 million transit trips daily

INFILL + TRAVEL CHOICES

Vehicle miles traveled decreased by **14.5 million** each day

TRAVEL CHOICES

400,000 fewer drive-alone work trips every day

AUTOMATED/CONNECTED VEHICLES

The potential effects **range greatly** from positive to negative.

ELECTRIC VEHICLES

Greenhouse gas emissions will be significantly impacted by electric vehicle adoption rates

TRANSIT

79% of households have good transit access to jobs

For more information on the 2050 MVRTP or Scenario Planning, please visit drcog.org to see previous meeting materials, handouts and presentations.

ATTACHMENT 2



2050 METRO VISION REGIONAL TRANSPORTATION PLAN
SCENARIO OUTCOMES ASSESSMENT

OBJECTIVE: To better understand the regional relationships between the location and intensity of new development, transportation system improvements and mobility.

Consistent across all scenarios are the same population & employment growth projections showing another 1 million people & 800,000 jobs in the region by 2050.

LEGEND:



Scenario Overview		Scenario Cost (FY 20 Billions)	Change from 2050 Base				Achieve Metro Vision Targets		
			Vehicle Miles Traveled (VMT) Goal: Decrease VMT	Transit Trips Goal: Increase Transit Trips	Walk & Bicycle Trips Goal: Increase Walk & Bicycle Trips	Person Hours of Delay (PHD) Goal: Decrease PHD	Reduce Daily Vehicle Miles Traveled per Capita	Reduce Single-Occupant Vehicle Mode Share to Work	Minimize Increase of Daily Person Delay Per Capita
	Off-Peak Congestion <i>Build out the freeway/interstate system to address off-peak congestion.</i>	\$4.0	I	I	I	I	N	N	N
	Managed Lanes & Operations <i>Improve operations & traffic flow on region's highways/freeways.</i>	\$7.5	U	D	D	D	N	N	Y
	Travel Choices <i>Increase travel & mobility choices along region's major arterials.</i>	\$3.0	D	D	U	D	N	N	Y
	Transit <i>Improve/expand the region's transit network and service.</i>	\$6.0 (+\$1.0 Operations) Annually	D	U	I	D	N	N	N
	Automated/Connected Vehicles <i>Mobility technology & autonomous vehicles benefit or impact regional mobility.</i>	\$1.0 (Includes Roadway Infrastructure & Maintenance)	NA	NA	NA	NA	NA	NA	NA
	Infill <i>Local governments allow for more urban and suburban redevelopment and infill.</i>	NA	D	U	U	D	N	N	Y
	Centers <i>Local governments focus opportunity for development around key centers and corridors?</i>	NA	D	U	U	D	N	Y	Y
	Infill + Travel Choices <i>Local governments allow for more urban and suburban redevelopment and infill. + Increase travel & mobility choices along region's major arterials.</i>	\$3.0	U	U	U	U	N	Y	Y
	Centers + Transit <i>Local governments focus opportunity for development around key centers and corridors. + Improve/expand the region's transit network and service.</i>	\$7.0	U	U	U	U	Y	Y	Y