CITY OF COMMERCE CITY SAFETY ACTION PLAN

September 2025

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1. Introduction

The City of Commerce City (City) continues to make meaningful progress in creating a safe, connected, and reliable transportation system. The City's recent planning efforts and infrastructure investments make clear that it is committed to a multimodal system that safely accommodates travel for all modes, ages, and abilities. Commerce City recognizes that all traffic-related injuries are preventable and is committed to providing a safer environment for all users. It also recognizes that the transportation system is central to the community's high quality of life, economic vibrancy, and significant population growth that will occur in the next 5-10 years.

This Safety Action Plan (SAP) builds on the City's momentum in creating a safe, reliable, and connected system. This SAP provides a 'playbook' of prioritized and community-informed projects and recommended policy/process changes aimed at reducing significant injuries over time.

1.1 Plan Purpose and Goals

The Commerce City SAP identifies roadway safety issues, prioritizes project improvement locations, and recommends future initiatives**.** This SAP will:

- Focus on current transportation safety concerns and needs for pedestrians, bicyclists, drivers and transit users.
- Evaluate "hot spots" where a large quantity or the most severe crashes occur.
- Identify safety improvements to address crash concerns.

Commerce City is committed to a 50 percent reduction in fatal and serious injury crashes on its transportation network by 2050.

1.2 Safe Systems Approach

This SAP follows the Federal Highway Administrations Safe System Approach (Figure 1). The Safe System Approach is a strategy that addresses and mitigates risks in the transportation system. With this approach, an emphasis is placed on safety programs for infrastructure, human behavior, responsible oversight, and emergency response, all with a goal of zero roadway fatalities and serious injuries. There are six principles of the Safe System Approach:

- Death and serious injuries are unacceptable.
- Humans make mistakes.
- Humans are vulnerable.
- Responsibility is shared.
- Safety is proactive.
- Redundancy is crucial.

Figure 1. Safe Systems Approach Diagram

Objectives of Safe System Approach implementation include five core elements: safer people, safer roads, safer vehicles, safer speeds, and post-crash care. Figure 1 conceptualizes the Safe System Approach with the relationship between the principles and objectives.[1] The safe systems approach expects the roadway system to be planned, designed, and operated to be forgiving of inevitable human mistakes so that serious injuries are less likely to occur.

1.3 Safe Streets and Roads for All

Funded by the U.S. Department of Transportation (U.S. DOT), the Safe Streets and Roads for all (SS4A) grant program supports local initiatives to prevent fatalities and serious injuries on the nation's roadways. The Infrastructure Investment and Jobs Act of 2021 established the SS4A program. This program requires the development of an SAP that identifies the community's most significant roadway safety concerns. This action plan is required to secure SS4A funding for implementation of roadway safety projects.

The Commerce City SAP fulfills the requirements of the SS4A Program by identifying, addressing, and prioritizing roadway safety concerns within the community. Using the projects identified in this plan, Commerce City will be eligible to pursue SS4A funding for implementation.

The Safe Streets and Roads for All Fiscal Year (FY) 2025 Notice of Funding Opportunity (NOFO) outlines the required elements of an SAP to make projects eligible for implementation dollars through the SS4A grant program. The eight required elements are listed in the SS4A Self-Certification Eligibility Worksheet, summarized below, and the location of each within this plan are called out in Table 1 below.

Table 1. SS4A Self-Certification Eligibility Worksheet Components

Action Plan Component	Location in Plan	Page
Leadership Commitment and Goal Setting	1.1. Plan Purpose and Goals	1
Planning Structure Oversight of Plan Development, Implementation and Monitoring	 5.2. Planning Oversight Committee 7. Implementation & Progress Tracking	 24 53
Safety Analysis Crash Analysis Systemic Analysis	 3.1. Crash Analysis 3.2. Systemic Analysis	 5 15
Engagement & Collaboration Stakeholder Engagement Incorporation of Feedback Intergovernmental Collaboration	 5. Public Engagement 6.1.1. Priority Projects 5.2. Planning Oversight Committee	 24 29 24
Policy & Process Changes	6.2. Policy, Process and Design Guidance	40
Strategy & Project Selections Project Prioritization Projects to Address Safety	 4. Project Prioritization 6.1 Safety Countermeasures	 19 29
Progress & Transparency	7.2 Plan Effectiveness Metrics	54
Action Plan Date	2025	N/A

[1] USDOT. (2025). What Is a Safe System Approach?

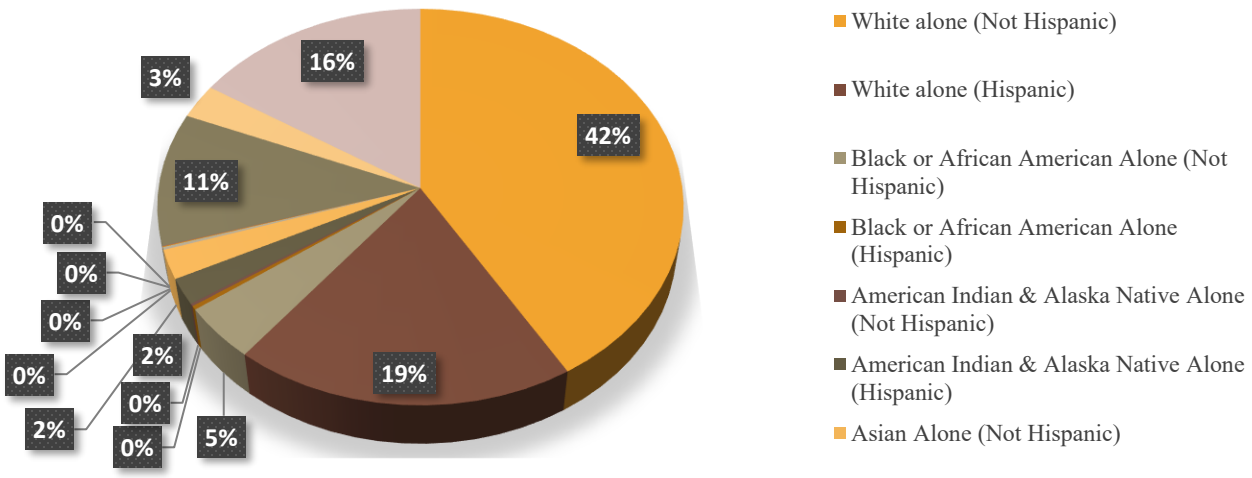
2. Community Profile and Areas of Persistent Poverty

2.1 Community Profile

Commerce City is home to diverse communities, and understanding the community dynamics and needs through this lens informs the development of a safer system of transportation. This section includes a snapshot of findings for community demographics to inform engagement and mobility decision making.

Based on the decennial census, Commerce City's population increased 35.9% from 45,913 in 2010 to 62,418 in 2020[2]. Figure 2 depicts the demographics of Commerce City, based on the 2023 American Community Survey[3].

Figure 2. Commerce City Demographics 2020



The City's population has been trending towards more diversity in the past decade, as shown in Table 2.

Table 2. Commerce City Demographics 2013 to 2023

Category	2013	2023
Total Population	100.0%	100.0%
White alone (Not Hispanic)	46%	41.2%
White alone (Hispanic)	30%	19.2%
Black or African American Alone (Not Hispanic)	3.2%	4.4%
Black or African American Alone (Hispanic)	0.05%	0.3%
American Indian & Alaska Native Alone (Not Hispanic)	0.3%	0.2%
American Indian & Alaska Native Alone (Hispanic)	0.9%	2.1%
Asian Alone (Not Hispanic)	2.7%	2.36%
Asian Alone (Hispanic)	0.1%	0.02%
Native Hawaiian & Other Pacific Islander Alone (Not Hispanic)	0.4%	0.2%
Native Hawaiian & Other Pacific Islander Alone (Hispanic)	0%	0.05%
Some Other Race Alone (Not Hispanic)	0.2%	0.05%
Some Other Race Alone (Hispanic)	11.3%	10.8%
Two or More Races (Not Hispanic)	1.3%	2.8%
Two or More Races (Hispanic)	3%	15.9%

[2] https://www.census.gov/quickfacts/fact/table/commercecitycitycolorado/PST045224
[3] https://datausa.io/profile/geo/commerce-city-co/#:~:text=The%205%20largest%20ethnic%20groups,%2DHispanic)%20(4.42%25)

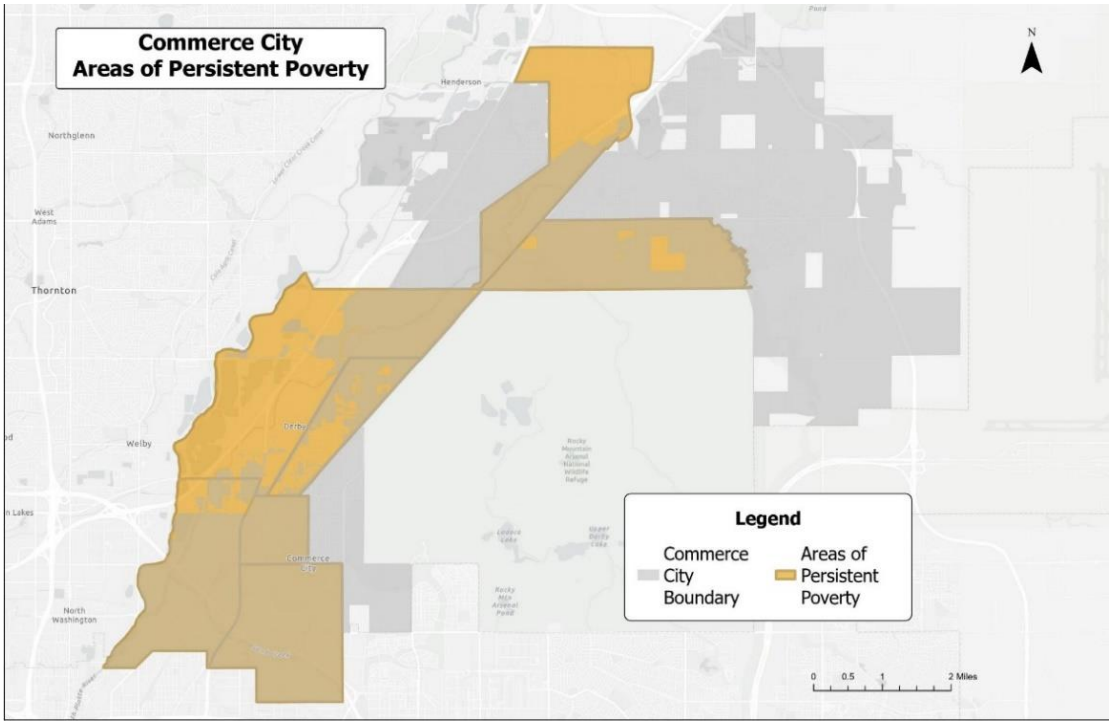
2.2 Areas of Persistent Poverty

It is important to understand where areas of persistent poverty exist when making transportation decisions, as residents in these areas are more likely not to have access to a vehicle, rely on walking, biking or transit, and be cost burdened by transportation. To determine if a project is in an area of persistent poverty for the purpose of applying for a Multimodal Project Discretionary Grant (MPDG) application, the US Department of Transportation (USDOT) suggests referencing the Areas of Persistent Poverty. A project located in an Area of Persistent Poverty is defined by the Bipartisan Infrastructure Law as[4]:

1. the **County** in which the project is located consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent (2022) Small Area Income Poverty Estimates; **OR**
2. the **Census Tract** in which the project is located has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; **OR**
3. the project is located in any territory or possession of the United States.

The census tracts in Figure 3 have been identified by USDOT as Areas of Persistent Poverty, which means that it is above the threshold for the requirements of item number two above. Projects within the yellow shaded areas on Figure 3 should be priority areas when implementing safety and improving access to transit, walking and biking.

Figure 3. Commerce City Areas of Persistent Poverty



[4] https://www.transportation.gov/grants/mpdg-areas-persistent-poverty-and-historically-disadvantaged-communities

3. Safety Analysis

3.1 Crash Analysis

3.1.1 Methodology

The team evaluated historic crash data for a period of five (5) years between January 1, 2019, and December 31, 2023. The crash data only included City-owned and maintained collector and arterial roads. Colorado Department of Transportation (CDOT) state highways and private roads were not included because Commerce City does not have jurisdiction over these facilities.

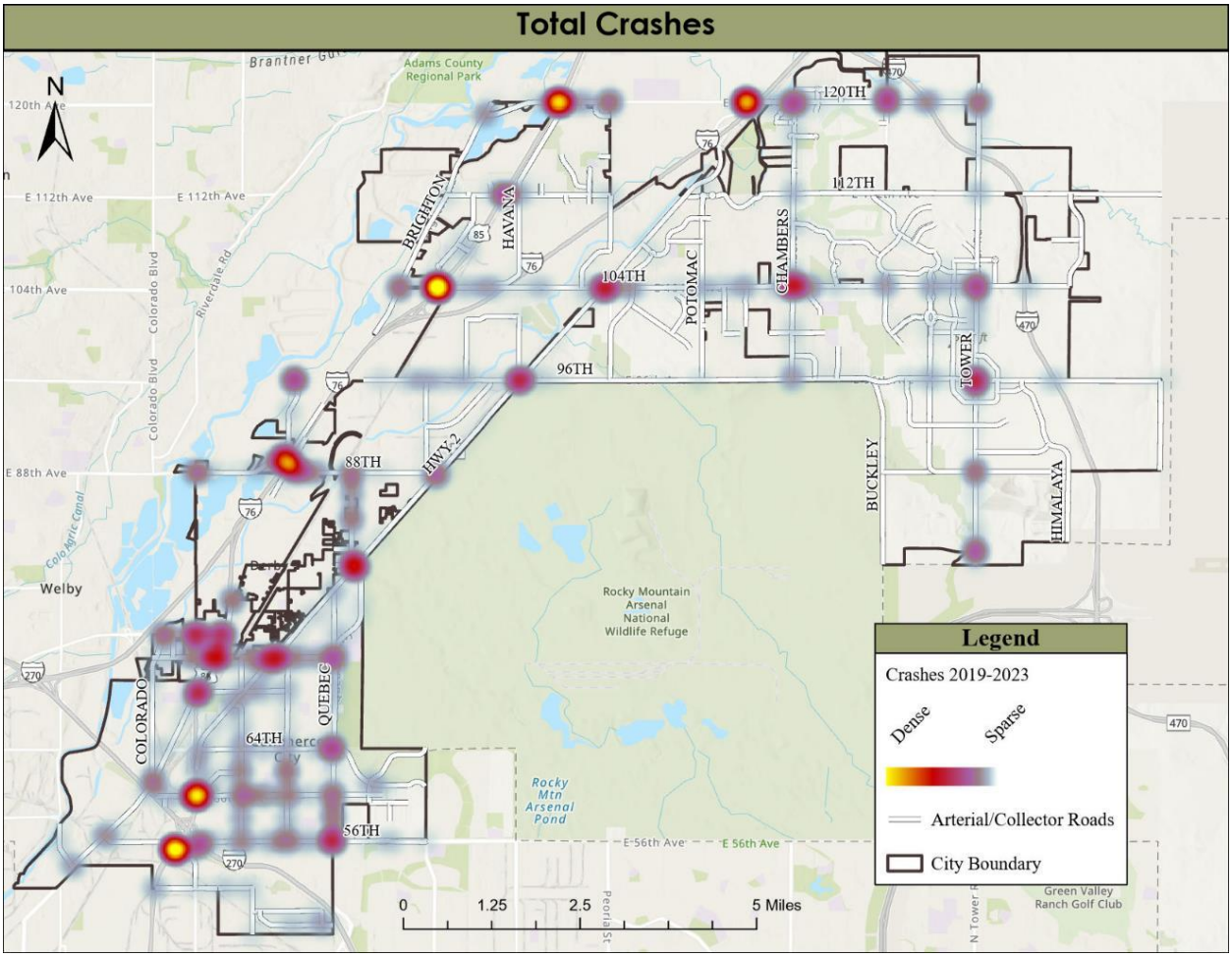
The analysis looked at the number, location, and type of crashes that occurred, as well as the average severity of crashes at various locations across the City. The purpose of this evaluation was to identify crash patterns and trends as well as locations where fewer, but more severe crashes occurred.

3.1.2 Findings

3.1.2.1 Total Crashes

Over the five-year study period, a total of 4,489 crashes were recorded. Figure 4 shows a hot spot map where the crashes occurred. Denser clusters of crashes are indicated by red/yellow highlights.

Figure 4. Commerce City Total Crashes 2019-2023



3.1.2.2 Crash Severity

This study uses the KABCO injury classification scale[5] to classify severity of crashes as noted below.

- K = Fatal
- A = Serious Injury
- B = Minor Injury
- C = Complaint of Injury
- O = Property Damage Only

During the crash period, 118 or 2.6% of crashes resulted in fatality or serious injury, also known as KSI crashes. Figure 5 provides a breakdown of crashes by severity and Figure 6 shows the location of the KSI crashes across the City.

Figure 5. Percent of Crashes by Severity

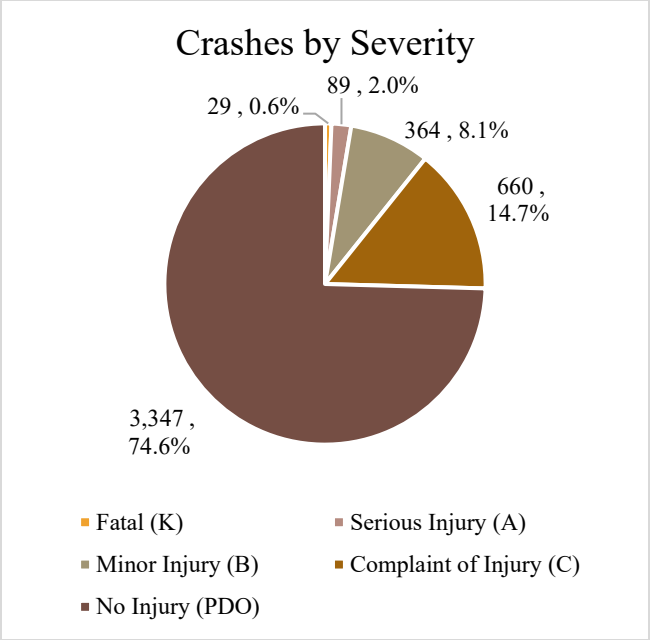
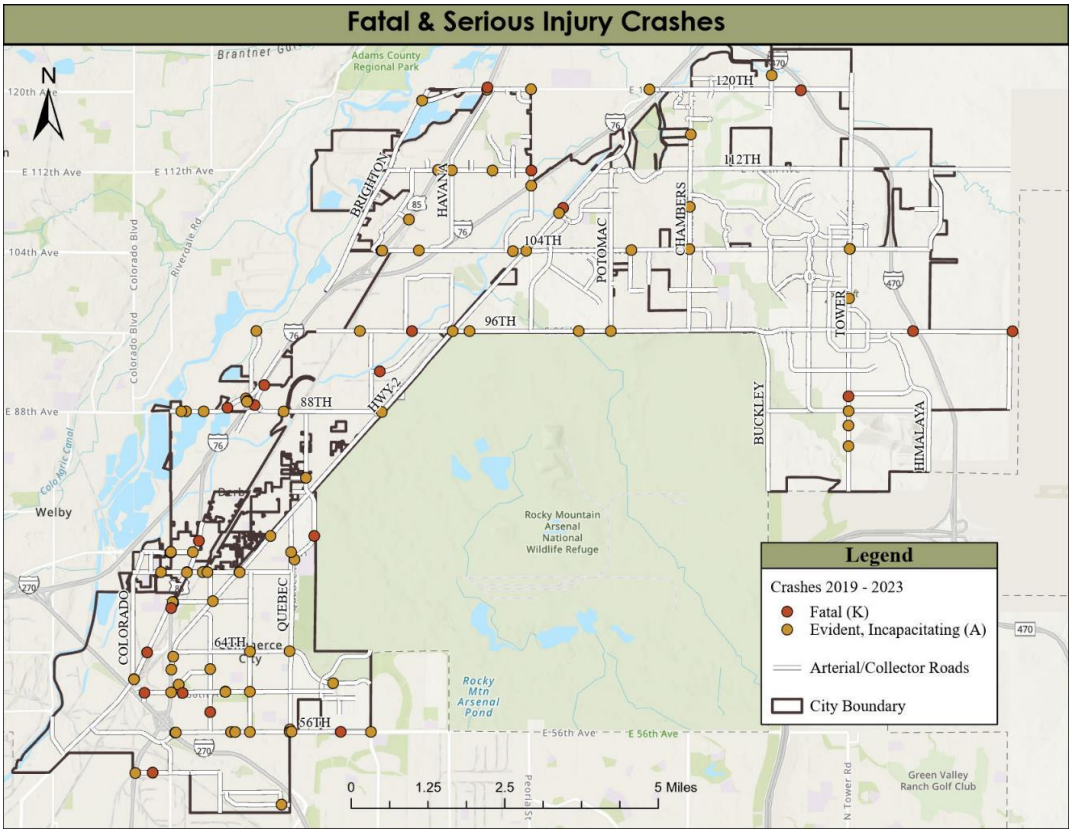


Figure 6. Commerce City Fatal & Serious Injury Crashes 2019-2023



[5] https://highways.dot.gov/media/20141

Commerce City vs State of Colorado

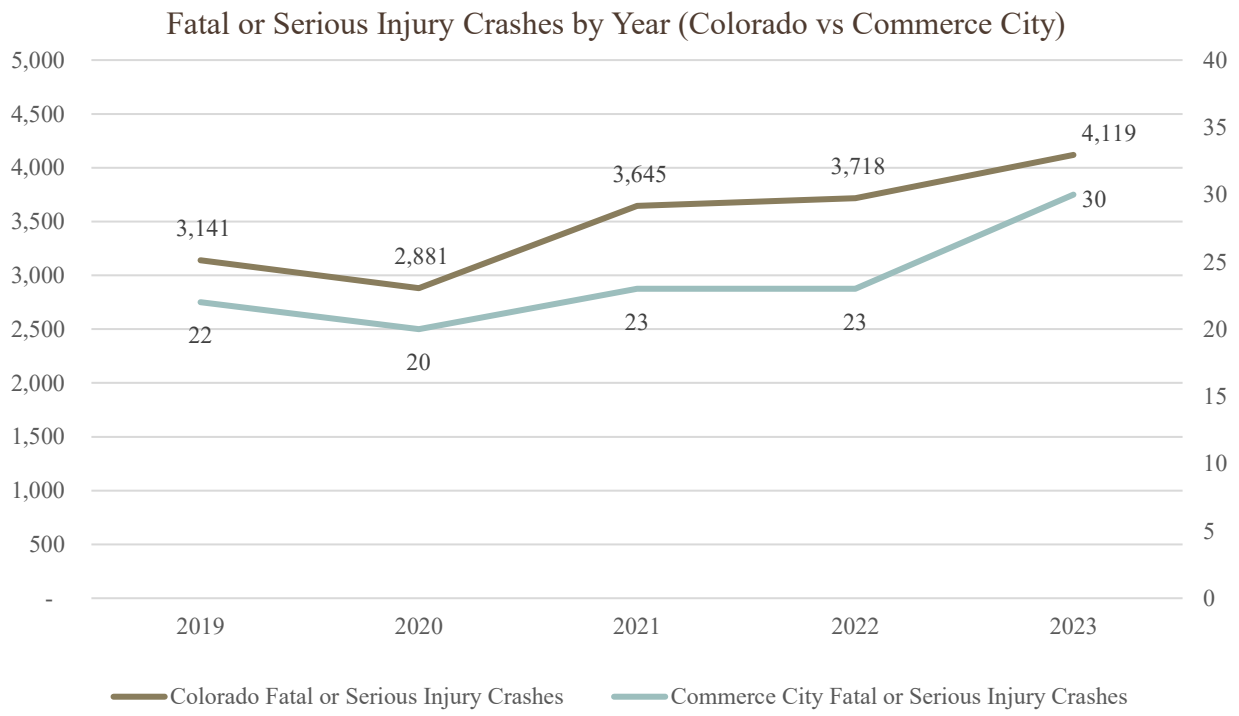
The crash percentages by crash severity align closely with the State of Colorado's crash severity patterns during the same study period (Table 3).

Table 3. Crash Severity Compared to Colorado

Crash Severity	Commerce City Percentage	State of Colorado Percentage
Fatal (K)	0.6%	0.6%
Serious Injury (A)	2.0%	2.9%
Minor Injury (B)	8.1%	8.3%
Complaint of Injury (C)	14.7%	14.6%
No Injury (PDO)	74.6%	73.7%

The Colorado Department of Transportation (CDOT) provides statistics on crash data across the state in the form of a Dashboard[6]. The dashboard provides data on frequency and severity of crashes, heat maps for the state, and crash types. Commerce City's gradual increase in KSI crashes aligns with statewide trends very closely (Figure 7).

Figure 7. Fatal and Serious injury Crashes by Year (Colorado vs. Commerce City)



[6] Workbook: CDOT Crash Summary, https://tableau.state.co.us/t/CDOT/views/CDOTCrashSummaryAVtestver2_0/StatewideSummary?%3Aorigin=card_share_link&%3Aembed=y&%3AisGuestRedirectFromVizportal=y

3.1.2.3 Bicycle & Pedestrian Crashes

Fifty-six (56) of the crashes in the study period involved pedestrians and 23 involved bicyclists. The locations of crashes involving a pedestrian and/or bicyclist are mapped on Figure 9 below.

Of the 118 KSI crashes in the study period, 3% were biking, 12% were walking and 85% were driving. This means that 15% of KSI crashes involved a bicycle or pedestrian.

More than **1 out of 10 people** killed or seriously injured were **walking or biking.**

Figure 8. KSI Crashes by Mode

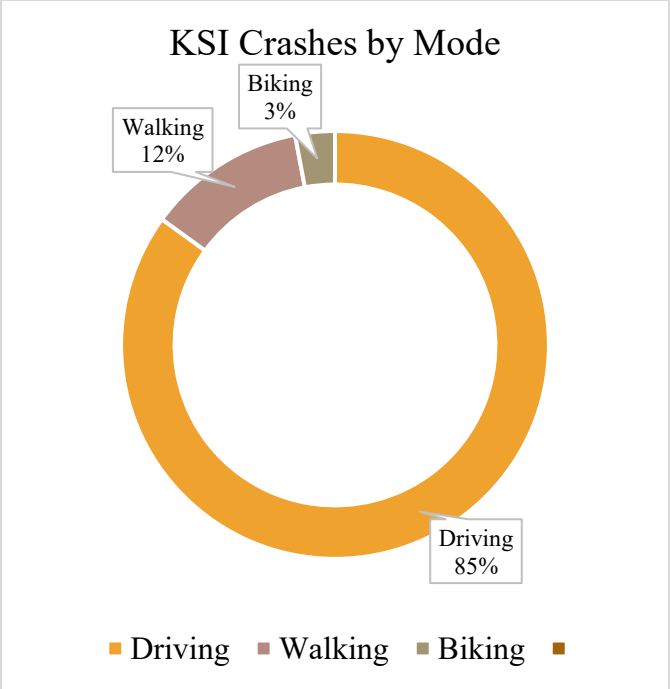
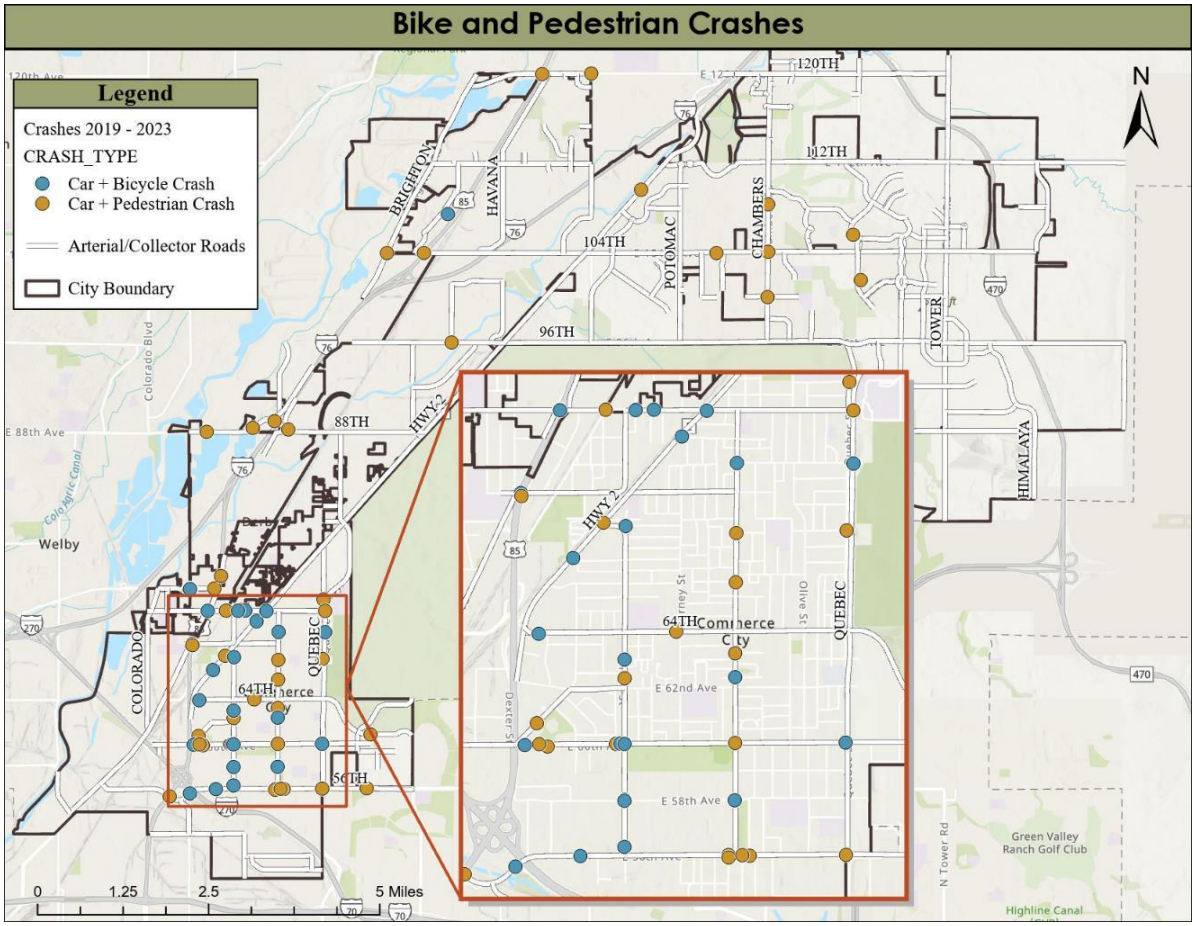


Figure 9. Bicycle and Pedestrian Crashes in Commerce City



3.1.2.4 Crashes by Year

During the five-year study period, crashes in Commerce City generally decreased, with the highest number of crashes in the period being reported in 2019. However, while total crashes have generally gone down, fatal and serious injury (KSI) crashes have increased, with the highest number of KSI crashes occurring in 2023 (Figure 10). Figure 11 shows total crashes in Commerce City aligning with statewide trends, apart from 2021 and 2023 when total crashes in Commerce City were low compared to statewide trends.

Figure 10. KSI and Total Crashes by Year

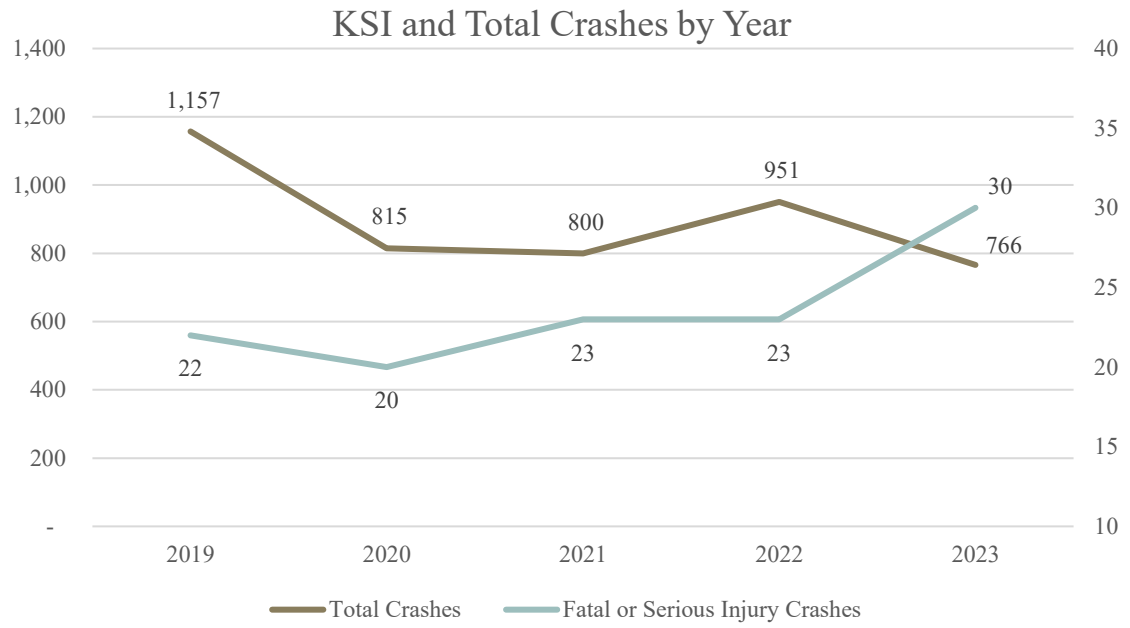
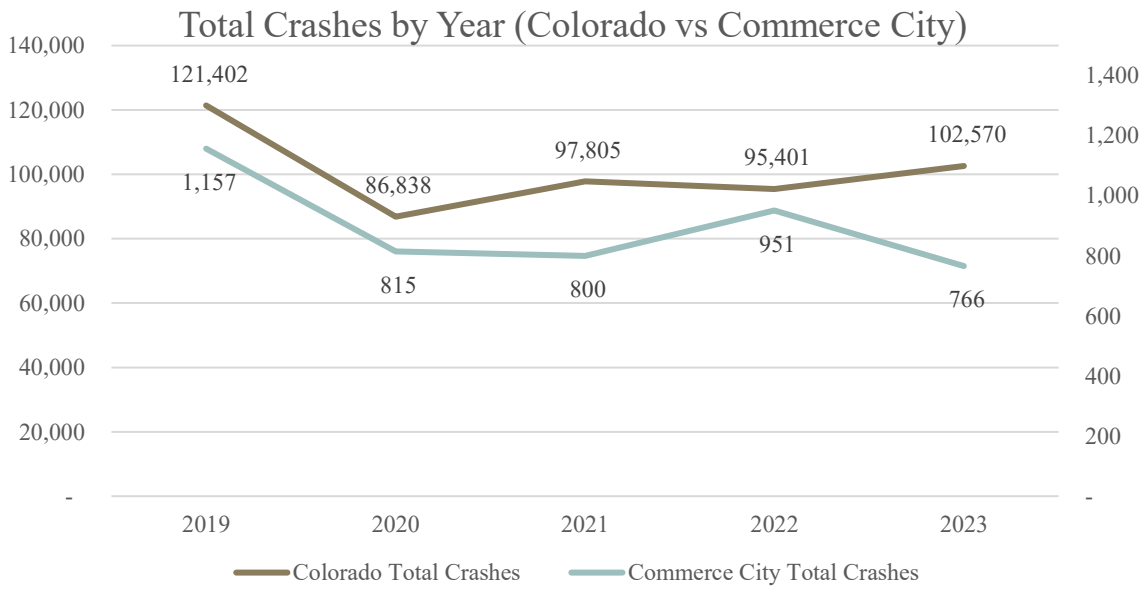


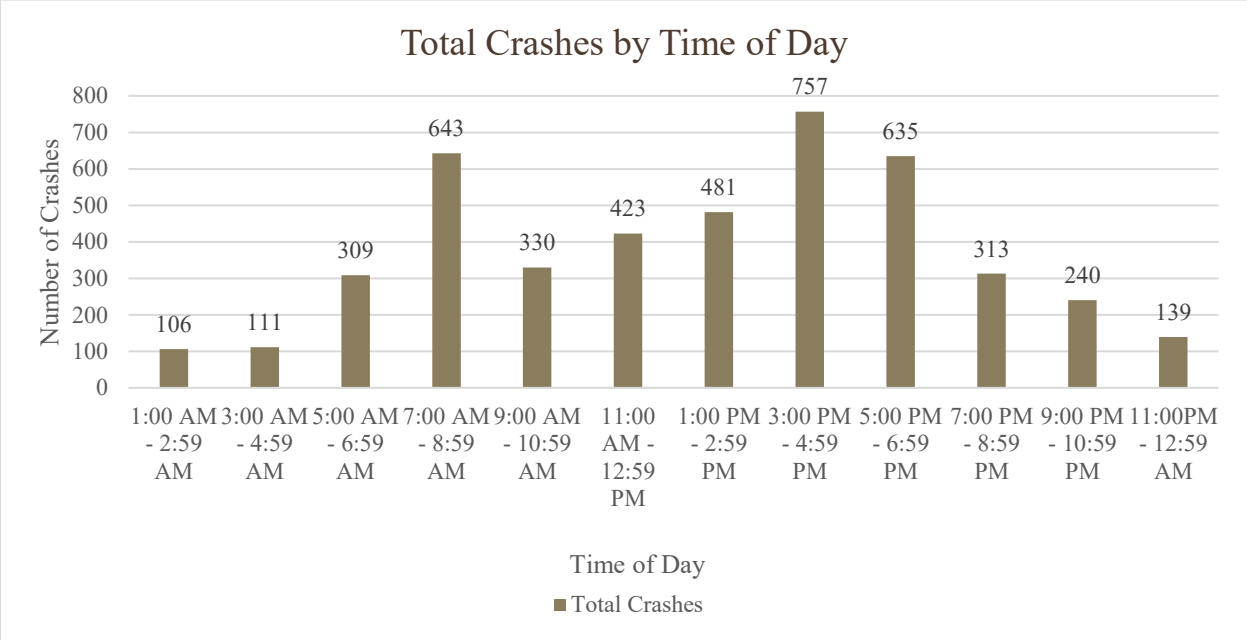
Figure 11. Total Crashes by Year (Colorado vs Commerce City)



3.1.2.5 Crashes by Time of Day/Lighting Conditions

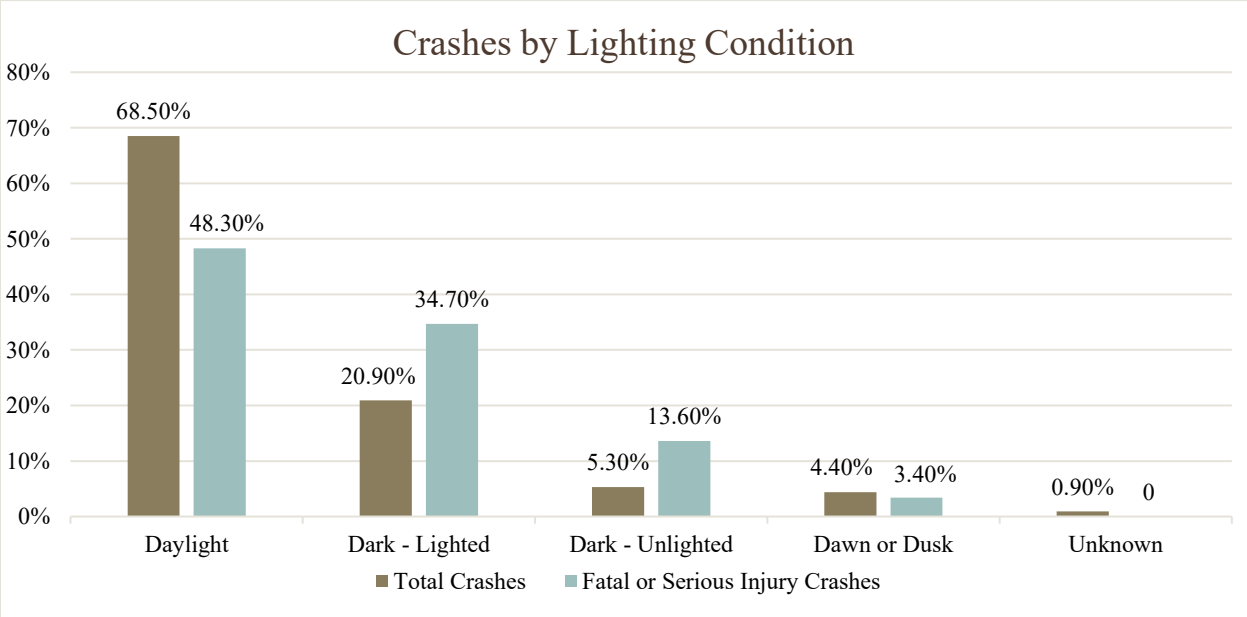
When investigating crashes by time of day, it was revealed that 45.3% of crashes in Commerce City occurred during peak commuting hours (7-9am, 3-7pm) and the time frame with the most crashes was 3-5pm (757 total crashes, 16.8% of all crashes) (Figure 12).

Figure 12. Crashes by Time of Day



Related to crashes by time of day, the role of lighting in crashes was investigated. This data comes from crash reports. While the majority (68.5%) of crashes occur in daylight conditions, about 50% of KSI crashes happened in the dark (Figure 13), indicating that crashes in the dark are more severe.

Figure 13. Crashes by Lighting Condition

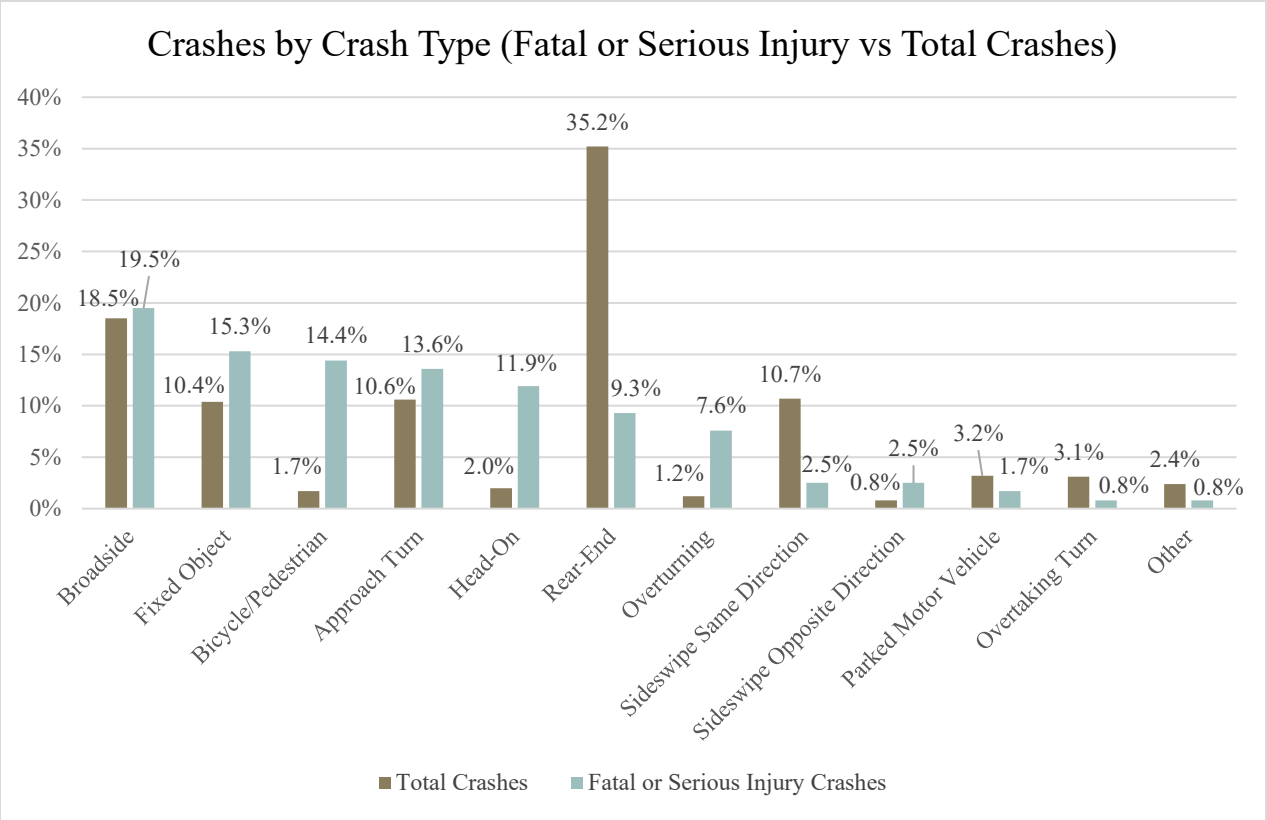


3.1.2.6 Crash Type and Severity

Consistent with the Safe Systems Approach, a goal of this project was to reduce the severity of crashes in Commerce City. The first step was to understand the types of crashes occurring most frequently and those crashes that resulted in the highest percentage of injury.

Figure 14 below shows the breakdown of crash types and their severities; it is organized in order of severity, with the most severe crash types on the left, getting less severe as you move right. The top five fatal or serious injury crash types are: broadside, fixed object, bicycle/pedestrian, approach turn and head-on. These five crash types represent over 65% of all fatal or serious injury crashes in Commerce City within the study period.

Figure 14. Crashes by Crash Type (Fatal or Serious Injury vs Total)



Importantly, bicycle/pedestrian crashes are the most overrepresented crash type, accounting for 1.7% of all crashes but 14.4% of KSI crashes (Figure 15).

Figure 15. Bicycle and Pedestrian Crash Severity

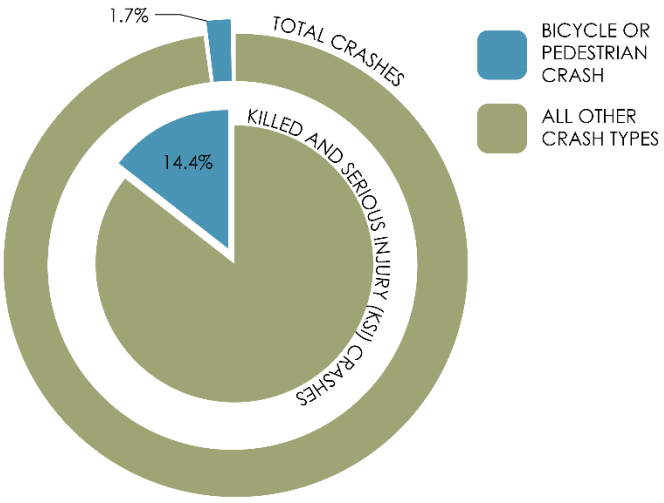
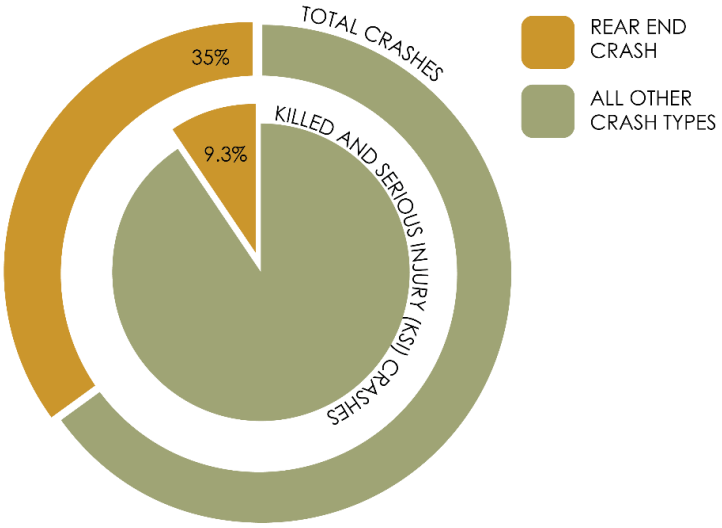


Figure 16. Rear End Crash Severity



Notably, the majority of total crashes are rear end crashes (35%), but the severity of those crashes is significantly less than other crash types in the City (Figure 16).

3.1.2.7 Network Severity – Equivalent Property Damage Only Methodology

In an effort to consider not only the frequency of crashes, but also the severity, the Equivalent Property Damage Only (EPDO) Method was used. The EPDO method equates each crash type in the KABCO Injury Classification Scale to a Property Damage Only (PDO)/Type O Crash.

Crash costs were taken from the National Safety Council (NSC)[7] and each crash's societal crash cost was divided by the societal crash cost for a PDO crash, producing a weighting factor for each crash severity. For example,

$$\text{Weighting Factor}_{\text{Type B Crash}} = \frac{\text{Societal Cost of Type B Crash}}{\text{Societal Cost of PDO Crash}}$$

The results of this calculation can be seen in Table 4 below.

Table 4. Crash Weighting Factors

Crash Severity	NSC Crash Cost (2022)	Crash Weighting Factor
K	$1,869,000*	60.9
A	$1,066,000	60.9
B	$232,000	13.3
C	$126,000	7.2
O	$17,500	1.0

Figure 17. Type B (Minor Injury) Crash EPDO Visualization

The crash weighting factor is the same for Fatal (K) and Serious Injury (A) crashes. While the cost of a fatal crash is much higher than a serious injury crash, there is often very little that separates a fatal crash from a serious injury crash and if the two were not equated, locations with a fatal crash might be overemphasized. The long-term goal of the Safety Action Plan is to minimize or eliminate KSI crashes, and overweighting fatal crashes might make this more difficult in the long term.

The EPDO Method is a unified way to sort and rank the crash data that accounts for both crash frequency and crash severity. The calculation produces a single weighting factor for each crash severity that was then applied to each of the 4,489 crashes on the network in the five-year study period.

[7] https://injuryfacts.nsc.org/all-injuries/costs/guide-to-calculating-costs/data-details/

3.1.2.8 Top Crash Locations

The EPDO method produced a list of high priority intersections with high crash frequency and/or severity. The EPDO score for an intersection was the sum of crash weighting factors for each crash in the intersection. Table 5 shows all intersections with an EPDO score over 100.

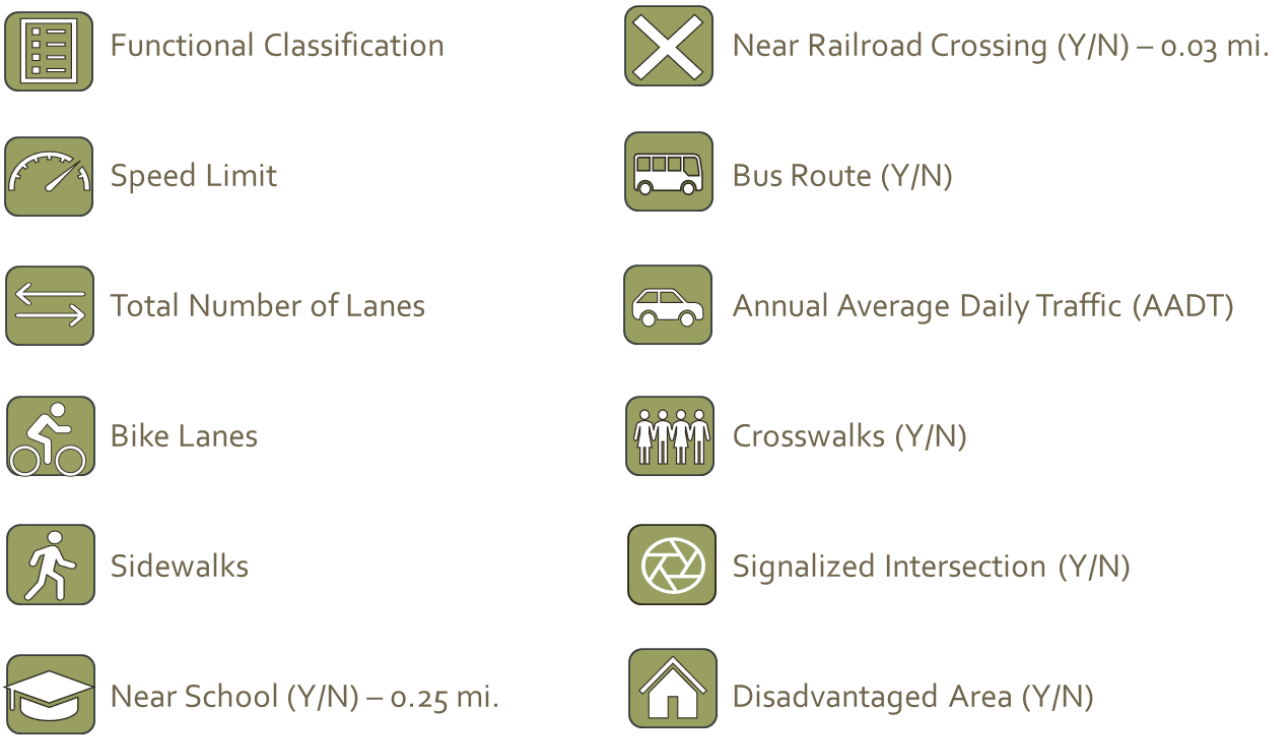
Table 5. Top Crash Locations

	Location (In Priority Order)	EPDO Score	Number of Crashes
1	E 120th Ave & Sable Blvd	717.1	126
2	E 104th Ave & US 85	617.9	154
3	E 120th Ave & US 85	482.7	112
4	E 60th Ave & Vasquez Blvd & Parkway Dr	432.5	135
5	E 56th Ave & US 85	379.5	157
6	E 72nd Ave & US 85 & Brighton Rd	377.0	66
7	E 56th Ave & Quebec St	357.1	54
8	E 96th Ave & Hwy 2	278.4	60
9	E 74th Ave & Dahlia St	276.1	45
10	E 69th Ave & US 85	233.8	46
11	E 104th Ave & Hwy 2	232.2	61
12	W 104th Ave & Tower Rd	230.8	37
13	E 96th Ave & McKay Rd/Monaco Rd	227.6	38
14	E 112th Ave & US 85	226.5	39
15	E 72nd Ave & Hwy 2	225.4	50
16	E 104th Ave & Chambers Rd	216.7	52
17	Brighton Blvd & Colorado Blvd	195.2	26
18	E 88th Ave & Hwy 2	172.1	32
19	E 120th Ave & Brighton Rd	168.7	18
20	E 60th Ave & Monaco St	152.1	18
21	Rosemary St/Quebec Pkwy & Hwy 2	149.5	63
22	E 56th Ave & Eudora St	144.2	12
23	E 74th Ave & US 85	144.1	41
24	E 64th Ave & Quebec Pkwy	132.1	35
25	E 56th Ave & Krameria St	131.0	5
26	Prairie Pkwy & Victory Way	130.0	4
27	E 60th Ave & Rose Ln	129.0	3
28	E 96th Ave & Tower Rd	127.0	53
29	E 120th Ave & Peoria St	124.0	27
30	E 56th Ave & Vasquez Blvd	123.4	14
31	E 81st Ave & Tower Rd	120.5	28
32	E 88th Ave & Tower Rd	116.8	26
33	E 56th Ave & Monaco St (N)	110.0	13
34	E 112th Ave & Havana St	108.9	12
35	E 60th Ave & Quebec St	101.0	27

3.2 Systemic Analysis

3.2.1 Methodology

In addition to the standard crash evaluation, SS4A Safety Action Plans also require completion of a systemic analysis. Systemic Analysis is a proactive approach to safety that identifies areas on a roadway network that are high risk but may or may not have a crash history. A systemic analysis was completed on the arterial and collector roadways in Commerce City using the following 12 roadway characteristics:



Each of the roadway characteristics were applied to the collector and arterial roadway network using the EPDO methodology described below. Then the level of risk for each roadway characteristic was calculated. Roadway characteristics associated with a higher frequency or severity of crashes were considered overrepresented and thus a higher indicator of risk. Risk scores for each of the roadway characteristics were applied to segments of roadway and mapped to identify the systemic risk across the arterial and collector network

3.2.1.1 EPDO Calculations

The Average EPDO score was calculated for the entire network using the following Equation.

Equation 1. Average EPDO Score for Commerce City

$$\text{EPDO for Network} = 20{,}105$$

$$\text{Total Number of Centerline Miles} = 135.9$$

$$\frac{\text{EPDO for Network}}{\text{Total Number of Centerline Miles}} = \frac{20{,}105}{135.9} = 147.9 \frac{\text{EPDO}}{\text{Centerline Mile}}$$

EPDO Scores were then calculated for each roadway characteristic and compared to the average EPDO for the entire network. A characteristic with an EPDO score of 115% or more of the network average would be considered overrepresented and thus a higher indicator of risk. EPDO scores of less than 115% would be considered proportionally represented. Thresholds of risk were determined based on the resulting percentages shown in Table 6.

Table 6. Systemic Risk Score Thresholds

EPDO per Centerline Mile	Risk Score
<115%	0
115% ≤ x < 130%	1
130% ≤ x < 145%	2
≥ 145%	3

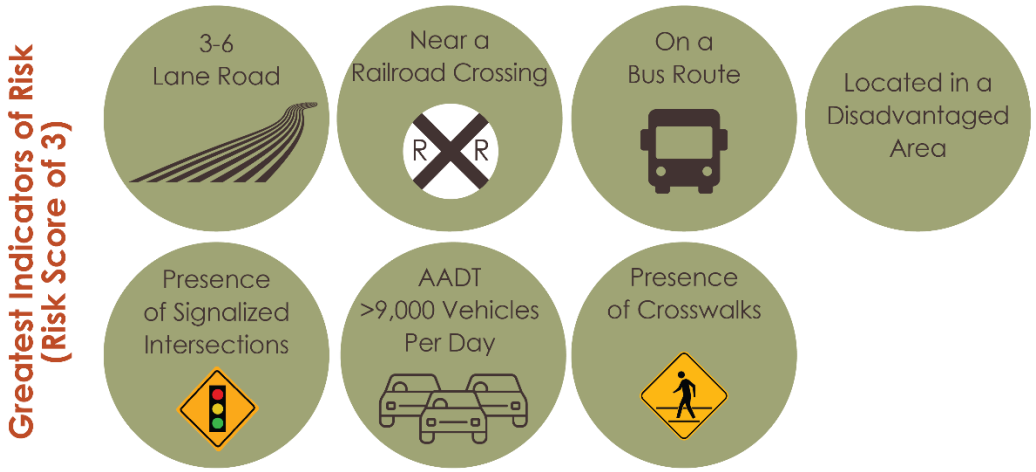
3.2.2 Findings

The risk scores associated with each roadway characteristic are provided in Table 7 below. Categories that were overrepresented were given a score of 1, 2 or 3 as outlined in Table 6. A table with additional detail on how the risk scores were calculated for each roadway characteristic can be found in Appendix A. The characteristics with the greatest indicators of risk are shown in Figure 18.

Table 7. Risk Scores for each Roadway Characteristic

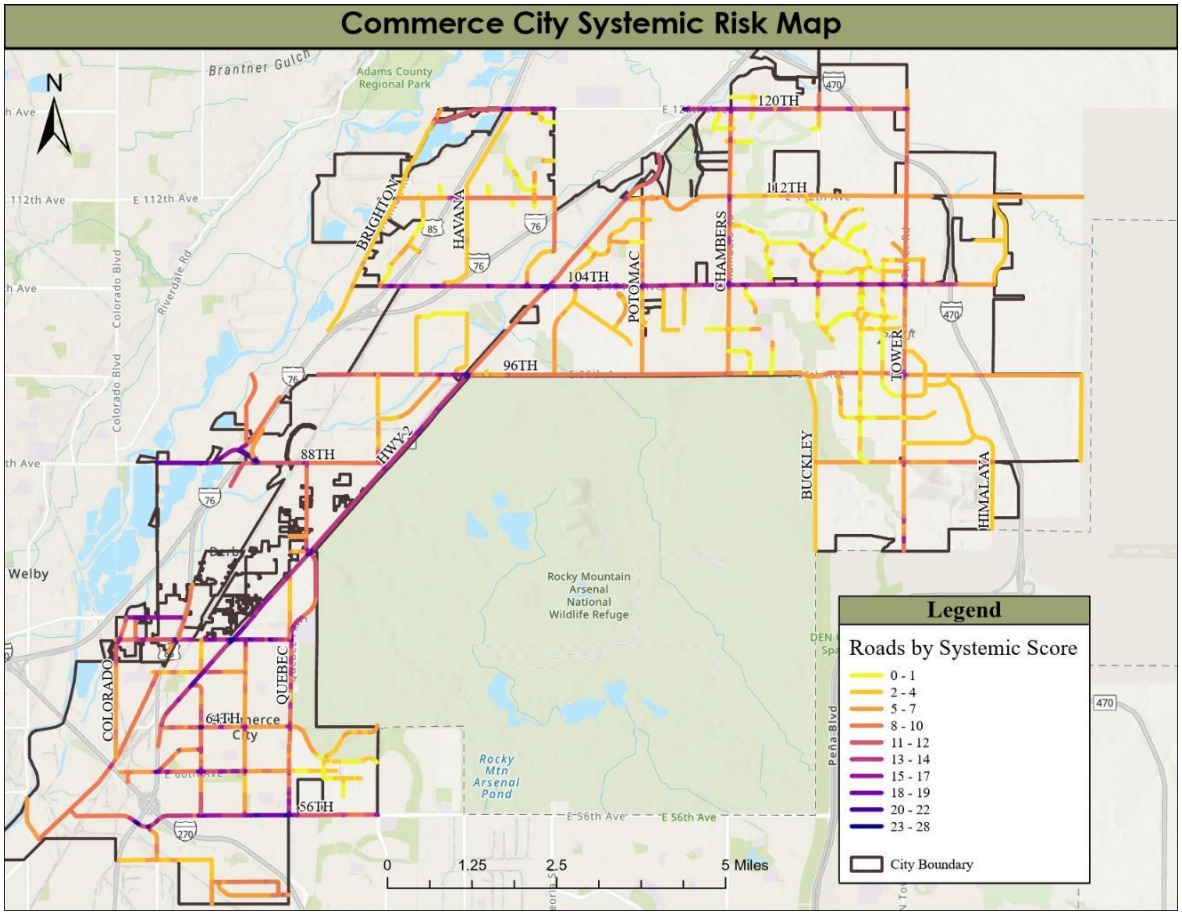
Characteristic	Categories	Risk Scores
Functional Classification	Collector Arterial	0 2
Speed Limit	30 mph and below 35 mph and above	0 2
Total Number of Lanes	0-2 Lanes 3-6 Lanes	0 3
Bike Lanes	Yes No	0 0
Sidewalks	Yes No	0 2
Near School	Yes No	3 0
Near Railroad Crossing	Yes No	3 0
Bus Route	Yes No	3 0
AADT	≤ 3,000 vehicles per day (vpd) 3,000 < x ≤ 9.000 vpd > 9,000 vpd	0 1 3
Crosswalks	Yes No	3 0
Signalized Intersection	Yes No	3 0
Disadvantaged Community	Yes No	3 0

Figure 18. Commerce City Greatest Indicators of Risk



The risk scores from Table 7 were applied to Commerce City's roadway network to produce a Systemic Risk Map (Figure 19) showing roadways with higher or lower risk.

Figure 19. Commerce City Systemic Risk Map



3.2.2.1 Top Systemic Locations

Systemic roadway corridors were selected by identifying the locations with the highest systemic values and averaging the systemic scores within the corridor's bounds. Each corridor is made up of segments that split when a roadway characteristic changes. Because of this, each corridor can be made up of many small segments. Systemic scores of each corridor were calculated as an average of the systemic scores of the segments that make up the corridor.

The result is the following list of locations (Table 8), all of which had an average systemic score of 11 or above, ranging in length from approximately 0.25 mi to 2.25 mi.

Table 8. Top Systemic Locations

	Corridor	Segment Start	Segment End	Length (mi)	Score (Average)
1	E 88th Ave	Dahlia St	Brighton Rd	1.19	17.8
2	E 56th Ave	Holly St	Quebec St	1.00	17.4
3	E 72nd Ave	Holly St	Quebec Pkwy	1.03	16.9
4	E 74th Ave	Colorado Blvd	US 85	0.65	16.2
5	Hwy 2	E 64th Ave	Quebec St	2.28	15.0
6	E 104th Ave	Belle Creek Blvd	Hwy 2	1.90	14.9
7	E 56th Ave	W Colorado Blvd Service Rd	Sand Creek Dr S	0.38	14.8
8	E 104th Ave	Hwy 2	Chambers Rd	2.00	14.6
9	Quebec St	E 56th Ave	E 60th Ave	0.50	14.3
10	E 104th Ave	Chambers Rd	Tower Rd	2.00	14.1
11	E 120th Ave	Sable Blvd	Mobile St	1.19	14.0
12	Hwy 2	Quebec St	E 96th Ave	1.73	13.8
13	E 60th Ave	Hudson St	Monaco St	1.01	13.6
14	Quebec Pkwy	E 72nd Ave	Hwy 2	1.10	13.5
15	E 120th Pkwy	Brighton Rd	Peoria St	1.38	13.3
16	Colorado Blvd	E 70th Ave	E 72nd Ave	0.26	12.8
17	Holly St	E 56th Ave	E 58th Ave	0.24	12.8
18	E 88th Ave	Brighton Rd	Rosemary St	0.59	12.7
19	E 96th Ave	865' East of Brighton Rd	Hwy 2	1.73	12.4
20	E 56th Ave	Quebec St	Central Park Blvd	1.01	12.0
21	Hwy 2	Potomac St	BNSF Railroad	0.41	12.0
22	Holly St	E 63rd Pl	E 65th Way	0.22	11.9
23	E 120th Ave	Buckley Rd	Tower Rd	1.00	11.8
24	E 64th Ave	Hudson St	Kearney St	0.29	11.5
25	Chambers Rd	E 104th Ave	E 112th Ave	1.00	11.3
26	Quebec Pkwy	Prairie Pkwy	E 72nd Ave	0.99	11.3

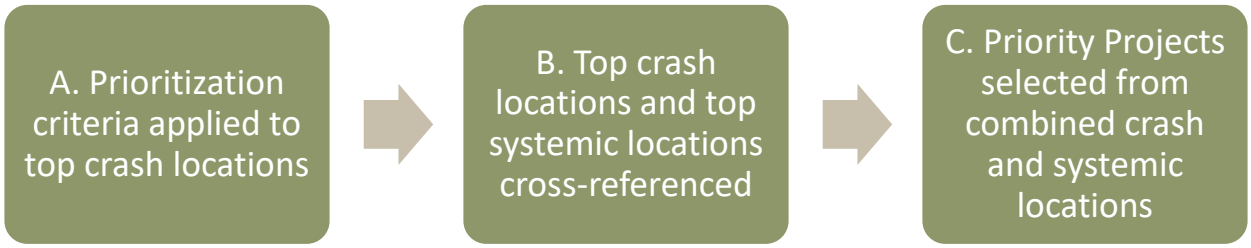
Notably, corridors were limited to 2.25 mi in length to select projects of reasonable lengths. For example, corridors eight and ten, above, are continuous (E 104th Ave from Hwy 2 to Tower Rd), but would've resulted in a four-mile-long corridor, which would have been challenging to accurately evaluate and provide practical countermeasures for.

4. Project Prioritization

4.1 Methodology

A data-driven prioritization process was developed to identify the highest priority safety improvement locations in Commerce City. The methodology used to select priority projects from the top crash and systemic locations is illustrated in the accompanying flow chart (Figure 20) and explained in the proceeding subsections.

Figure 20. Project Prioritization Methodology



A. Prioritization of Top Crash Locations

A set of five criteria were established to prioritize top crash locations. The criteria, their thresholds and corresponding weights were identified and discussed with staff and the Planning Oversight Committee and are outlined in Table 9 below.

Table 9. Prioritization Criteria

Criteria	Thresholds	Score
EPDO	≥ 3 fatalities (EPDO ≥ 182.7) Score = 0.41*EPDO – 25 EPDO ≤ 60.9	50 Varies 0
Systemic Risk	High – x ≥ 20 Medium – 10 ≤ x < 20 Low – x < 10	10 5 0
Area of Persistent Poverty	Yes No	20 0
Schools (within 0.25 mi)	Yes No	10 0
Public Outreach (MetroQuest Comments)	High – 5 or more comments Medium – 1-4 comments Low – 0 comments	10 5 0

Equation 2. EPDO Threshold Calculation

$$\text{Score} = \left(\frac{\text{Max EPDO Criteria Score}}{\text{Max EPDO} - \text{Min EPDO}}\right) * \text{EPDO} - 25$$

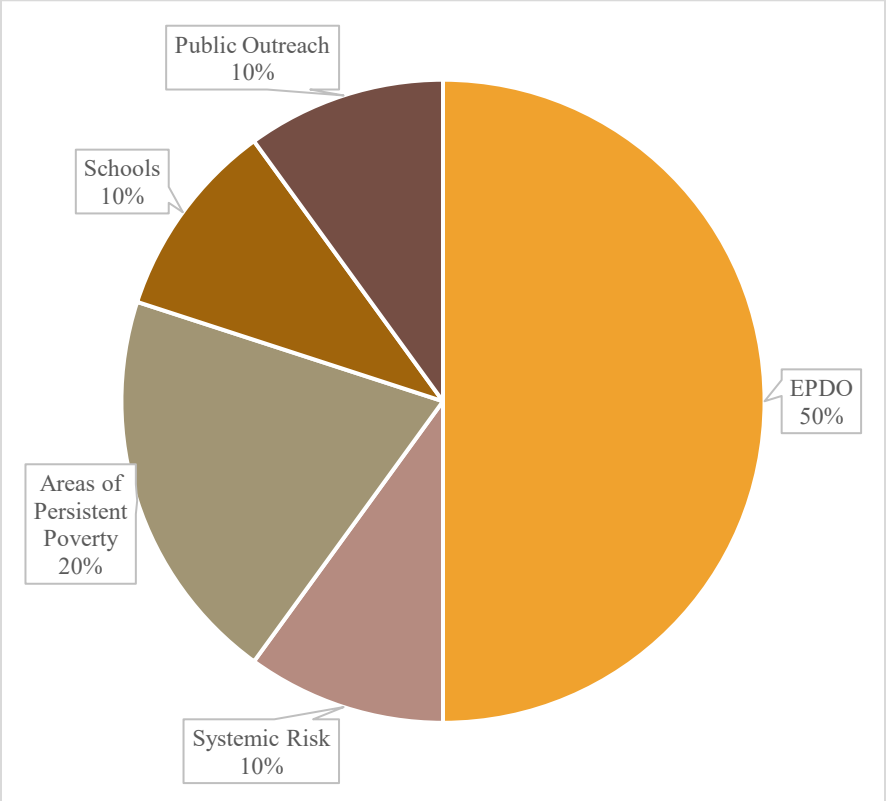
$$\text{Score} = \left(\frac{50}{182.7 - 60.9}\right) * \text{EPDO} - 25 = 0.41 * \text{EPDO} - 25$$

The scoring for the EPDO criteria was a range, explained by Equation 2 above. This equation outputs a score between 0 and 50 that is proportional to the EPDO score of a top crash location.

Each criterion was assigned a weight identifying the relative impact on the overall prioritization (Figure 21). Conversations with staff determined the weight given to each criterion. Since the main purpose of the SAP is to address fatal and serious injury crashes, EPDO was given the highest weight (50%).

The criteria in Table 9 were applied to the top 35 crash locations (see Top Crash Locations). The sums of the scores are shown as the prioritization scores in Table 10.

Figure 21. Prioritization Criteria Weights



Example: A top crash location with an EPDO less than or equal to 60.9, a medium systemic risk, located in an area of persistent poverty, within a quarter mile of a school and with low public outreach would receive a prioritization score of:

$$\text{Prioritization Score} = 0 + 5 + 20 + 10 + 0 = 35$$

Table 10. Top Crash Location Prioritization

#	Location	EPDO Score	Number of Crashes	Prioritization Score
1	E 120th Ave & Sable Blvd	717.1	126	85
2	E 104th Ave & US 85	617.9	154	65
3	E 120th Ave & US 85	482.7	112	60
4	E 60th Ave & Vasquez Blvd & Parkway Dr	432.5	135	80
5	E 56th Ave & US 85	379.5	157	80
6	E 72nd Ave & US 85 & Brighton Rd	377.0	66	75
7	E 56th Ave & Quebec St	357.1	54	90
8	E 96th Ave & Hwy 2	278.4	60	80
9	E 74th Ave & Dahlia St	276.1	45	75
10	E 69th Ave & US 85	233.8	46	70
11	E 104th Ave & Hwy 2	232.2	61	60
12	W 104th Ave & Tower Rd	230.8	37	60
13	E 96th Ave & McKay Rd/Monaco Rd	227.6	38	70
14	E 112th Ave & US 85	226.5	39	65
15	E 72nd Ave & Hwy 2	225.4	50	90
16	E 104th Ave & Chambers Rd	216.7	52	65
17	Brighton Blvd & Colorado Blvd	195.2	26	70
18	E 88th Ave & Hwy 2	172.1	32	71

#	Location	EPDO Score	Number of Crashes	Prioritization Score
19	E 120th Ave & Brighton Rd	168.7	18	54
20	E 60th Ave & Monaco St	152.1	18	67
21	Rosemary St/Quebec Pkwy & Hwy 2	149.5	63	71
22	E 56th Ave & Eudora St	144.2	12	59
23	E 74th Ave & US 85	144.1	41	59
24	E 64th Ave & Quebec Pkwy	132.1	35	59
25	E 56th Ave & Krameria St	131.0	5	54
26	Prairie Pkwy & Victory Way	130.0	4	48
27	E 60th Ave & Rose Ln	129.0	3	53
28	E 96th Ave & Tower Rd	127.0	53	37
29	E 120th Ave & Peoria St	124.0	27	56
30	E 56th Ave & Vasquez Blvd	123.4	14	34
31	E 81st Ave & Tower Rd	120.5	28	28
32	E 88th Ave & Tower Rd	116.8	26	45
33	E 56th Ave & Monaco St (N)	110.0	13	20
34	E 112th Ave & Havana St	108.9	12	41
35	E 60th Ave & Quebec St	101.0	27	85

B. Top Crash Locations Cross-Referenced with Top Systemic Locations

Next, the top crash locations were cross-referenced within the top systemic corridors (see Top Systemic Locations) to identify areas with broader safety concerns (Table 11). The results show both the systemic risk scores for each segment alongside the intersection prioritization scores within the segment. If a systemic corridor included more than one top crash location, the intersection prioritization scores (from Table 10) were summed (Column 5 of Table 11). The agencies responsible in each corridor were also noted (Column 7 of Table 11).

Table 11. Top Crash and Systemic Locations Combined & Scored

Corridor	Segment Start	Segment End	Systemic Score	Prioritization Score	Intersections Included	Responsible Agency
E 88th Ave	Dahlia St	Brighton Rd	17.8	-	N/A	Commerce City, Colorado Department of Transportation, City of Thornton
E 56th Ave	Holly St	Quebec St	17.4	189	Krameria, Monaco St, Quebec	Commerce City, City and County of Denver
E 72nd Ave	Holly St	Quebec Pkwy	16.9	90	Hwy 2	Commerce City
E 74th Ave	Colorado Blvd	US 85	16.2	134	Dahlia St, US 85	Colorado Department of Transportation
Hwy 2	E 64th Ave	Quebec St	15.0	161	72nd, Quebec	Commerce City
E 104th Ave	Belle Creek Blvd	Hwy 2	14.9	125	US 85, Hwy 2	Commerce City, Colorado Department of Transportation

Corridor	Segment Start	Segment End	Systemic Score	Prioritization Score	Intersections Included	Responsible Agency
E 56th Ave	W Colorado Blvd Service Rd	Eudora St	14.4	139	Eudora, US 85	Commerce City, Colorado Department of Transportation
E 104th Ave	Hwy 2	Chambers Rd	14.6	125	Hwy 2, Chambers	Commerce City
Quebec St	E 56th Ave	E 60th Ave	14.3	131	E 56th, E 60th	Commerce City, City and County of Denver
E 104th Ave	Chambers Rd	Tower Rd	14.1	125	Chambers, Tower	Commerce City
E 120th Ave	Sable Blvd	Mobile St	14.0	145	Sable, US 85	Commerce City, Adams County, Colorado Department of Transportation
Hwy 2	Quebec St	E 96th Ave	13.8	222	Rosemary/Quebec, 88th, 96th	Commerce City
E 60th Ave	Hudson St	Monaco St	13.6	120	Rose Ln, Monaco St	Commerce City
Quebec Pkwy	E 72nd Ave	Hwy 2	13.5	71	Rosemary St	Commerce City
E 120th Pkwy	Brighton Rd	Peoria St	13.3	110	Brighton Rd, Peoria	Commerce City, Adams County
Colorado Blvd	E 70th Ave	E 72nd Ave	12.8	-	N/A	Commerce City
Holly St	E 56th Ave	E 58th Ave	12.8	-	N/A	Commerce City
E 88th Ave	Brighton Rd	Rosemary St	12.7	-	N/A	Commerce City, Colorado Department of Transportation
E 96th Ave	865' East of Brighton Rd	Hwy 2	12.4	80	Hwy 2	Commerce City
E 56th Ave	Quebec St	Central Park Blvd	12.0	90	Quebec	Commerce City, City and County of Denver
Hwy 2	Potomac St	BNSF Railroad	12.0	-	N/A	Commerce City
Holly St	E 63rd Pl	E 65th Way	11.9	-	N/A	Commerce City
E 120th Ave	Buckley Rd	Tower Rd	11.8	-	N/A	Commerce City
E 64th Ave	Hudson St	Kearney St	11.5	-	N/A	Commerce City
Chambers Rd	E 104th Ave	E 112th Ave	11.3	65	E 104th	Commerce City
Quebec Pkwy	Prairie Pkwy	E 72nd Ave	11.3	59	E 64th	Commerce City

C. Eight Priority Projects Identified

Finally, eight priority projects were identified from the combined list in Table 11 above. Priority was given to:

- Corridors with High/Medium systemic scores AND High intersection prioritization scores; OR
- Corridors with High/Medium systemic scores AND Medium/Low intersection prioritization scores; AND
- Controlled or primarily controlled by Commerce City; AND
- Do not have projects underway to improve safety.

The eight priority locations and their corresponding systemic and prioritization scores are shown below in Table 12 and are organized in order of highest prioritization score.

Table 12. Eight Priority Projects

Corridor	Segment Start	Segment End	Systemic Score	Prioritization Score	Intersections Included	Responsible Agency
Hwy 2	Quebec St	E 96th Ave	13.8	222	Rosemary / Quebec St, E 88th Ave, E 96th Ave	Commerce City
Hwy 2	E 64th Ave	Quebec St	15.0	161	E 72nd Ave, Quebec St	Commerce City
E 56th Ave	Holly St	Quebec St	17.4	189	Krameria St, Monaco St, Quebec St	Commerce City, City and County of Denver
E 56th Ave	W Colorado Blvd Service Rd	Eudora St	14.4	139	Eudora St, US 85	Commerce City, Colorado Department of Transportation
E 104th Ave	Hwy 2	Chambers Rd	14.6	125	Hwy 2, Chambers Rd	Commerce City
E 104th Ave	Chambers Rd	Tower Rd	14.1	125	Chambers Rd, Tower Rd	Commerce City
E 60th Ave	Hudson St	Monaco St	13.6	120	Rose Ln, Monaco St	Commerce City
E 72nd Ave	Holly St	Quebec Pkwy	16.9	90	Hwy 2	Commerce City

5. Public Engagement

Commerce City conducted joint engagement for related and concurrent transportation efforts, the Safety Action Plan (SAP) and Transportation Master Plan (TMP). This honored the community's time and increased overall participation by offering opportunities to provide input on both. Community and stakeholder feedback is crucial for understanding existing conditions, transportation safety priorities, and the most effective improvements for the transportation network.

This summary presents the outreach and engagement activities conducted during the joint engagement effort, along with feedback received specific to the SAP. The primary goal was to understand the existing travel behaviors within Commerce City and to identify the community's top transportation and safety concerns. The project team employed a range of digital and in-person engagement tools to collect feedback, which are outlined below.

5.1 Outreach

Various outreach methods were utilized to engage community members and stakeholders, promote the project, and gather feedback for the SAP. The Planning Oversight Committee (POC) provided insights and disseminated information. Digital outreach included a project website, social media posts, and advertisements through various city channels. In-person outreach involved sending over 12,300 mailers, distributing flyers at events, and collecting contact information for a project interest sign-up.

5.2 Planning Oversight Committee

The Planning Oversight Committee (POC) was engaged throughout the development of the SAP. The Committee included representatives from Commerce City Public Works, South Adams County Fire Department, Adams County School District 14, Adams County, and Commerce City Police Department.

Collaboration with the POC involved several key touchpoints:

1. **Kick-off Meeting (July 2024)**: This initial meeting was held to provide a comprehensive understanding of the project scope and objectives. Key discussion points included:
    a. Project Overview
    b. POC Roles & Responsibilities
    c. Overview of Historic Crash Data
    d. Discussion of Upcoming Engagement
2. **Safety Brainstorm Meeting (March 2025)**: During this session, the team provided an overview of the crash and systemic analysis and allowed committee members to provide feedback on project prioritization and safety countermeasures.
3. **Draft Plan Review (Summer 2025)**: The Committee was invited to review the draft SAP to ensure thorough oversight and incorporate their input.

These interactions were crucial in aligning the plan's goals with community safety and needs.

5.3 Engagement Activities

Various engagement activities were conducted to facilitate conversation with the community about the SAP. MetroQuest, an online survey tool, was used to ask participants to rank their top transportation priorities, indicate areas of safety concern, and provide feedback on their transportation habits. The survey was promoted through the project website, social media, email, and physical mailers, resulting in 220 participants, nearly 7,000 data points, and over 800 comments. In addition to the survey, three pop-up events were held at community events, where project team members engaged with attendees to solicit feedback. These events included the Back-to-School Resources Fair, Bison Ridge Grand Re-Opening, and the Touch-a-Truck event. Two open house events were also conducted to gather specific input on the project, although attendance was lower than the pop-up events. These efforts provided valuable insights into the community's transportation needs and priorities. The tables below provide details on the locations, dates, and the number of participants at these events.

Table 13. Pop-Up Event Details

Pop-Up Event	Location	Date	# of Participants
Back-to-School Resources Fair	Adams City High School	8/3/2024	80
Bison Ridge Grand Re-Opening	Bison Ridge Recreation Center	9/4/2024	24
Touch-a-Truck	Dick's Sporting Goods Park	9/21/2024	72

Table 14. Open House Event Details

Open House Event	Location	Date	# of Participants
Eagle Point Open House	Eagle Point Recreation Center	8/29/2024	35
Belle Creek Open House	Belle Creek Community Center	9/10/2024	5

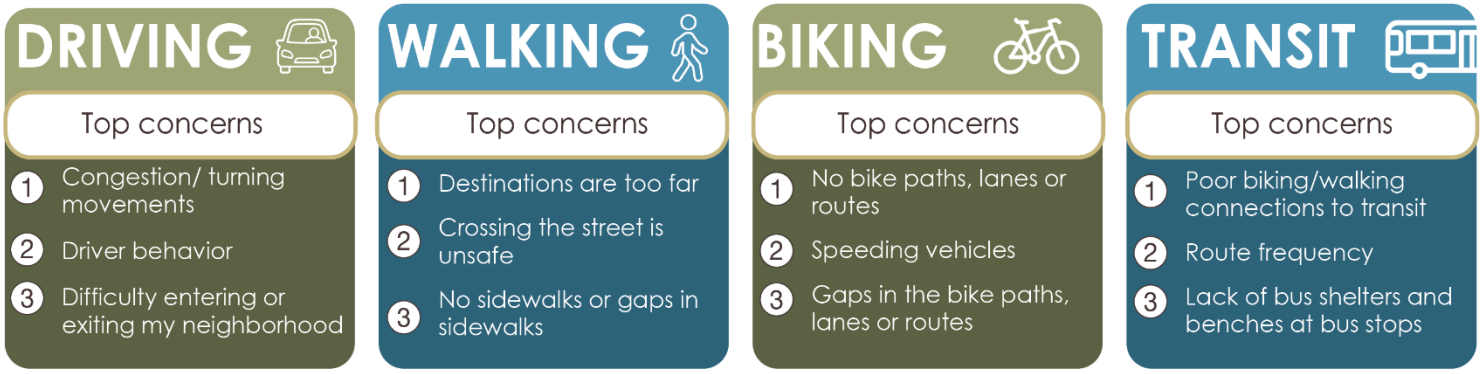
5.4 Community Insights

Feedback gathered at engagement activities for the SAP revealed valuable insights into the community's safety concerns and their priorities for future improvements. Below is a summary of these insights and the common themes that were identified when engaging with the community.

5.4.1 Existing Travel Behavior and Concerns

When survey participants were asked about their travel habits in Commerce City, an overwhelming 95% reported that they primarily drive. In contrast, only 2% said they bike, and less than 1% indicated that they walk, use a personal mobility device, or rely on transit. The survey also highlighted specific concerns associated with these modes of travel, as detailed in the figure below.

Figure 22. Travel Mode Concerns



5.4.2 Priorities

People were asked to select their top four transportation priorities through the survey, at open houses, and pop-up events. The table below illustrates how these priorities were ranked across the different venues. Reducing traffic congestion and maintaining roads and bridges emerged as the clear top priorities.

Table 15. Priority Ranking Results

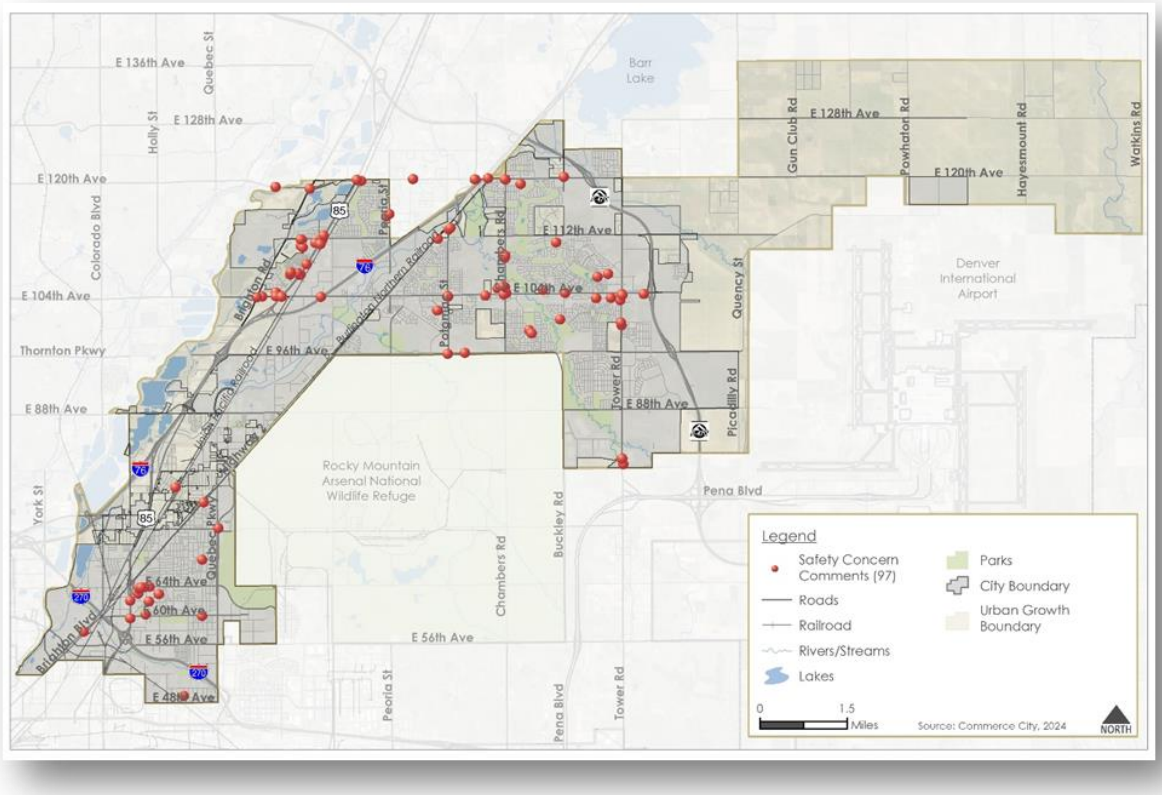
Rank	Priority	Metro Quest Survey	Open Houses	Pop-Up Events	Total
1	Reduce Traffic Congestion	136	29	80	**245**
2	Maintain Roads and Bridges	133	23	82	**238**
3	Improve Connectivity	117	29	41	**187**
4	Bike and Pedestrian Infrastructure	88	14	45	**147**
5	Improve Bike and Pedestrian Safety	72	23	52	**147**
6	Improve Transit Access and Amenities	92	21	26	**139**
7	Improve Lighting	60	10	46	**116**
8	Address Barriers	43	16	12	**71**

5.4.3 Location-Specific Comments

As part of the MetroQuest survey, participants placed map markers on a digital map to identify specific safety concerns across Commerce City. Key takeaways, accompanied by a map that visually highlights the identified hot spots and major areas of concern, are presented below.

Dangerous intersections identified by survey participants included US 85 at E 104th and E 112th Avenues, as well as the entrance to the Belle Creek neighborhood at US 85 and Longs Peak Dr. Additionally, shopping centers such as Second Creek Village at Chambers and E 104th Ave, and the retail area southwest of E 104th and Tower Rd, were noted as problematic and in need of safety measures like identifiable turn lanes and additional traffic signals. Unsafe traffic speeds along E 64th Ave near the Mile High Greyhound Park was also something that was frequently mentioned.

Figure 23. Locations of Safety Concerns



5.4.4 MetroQuest Community Comment Themes

In addition to the comments received on the mapping function of MetroQuest, numerous comments specific to safety in Commerce City were also provided. Below are some of the key transportation safety concerns and ideas for improvement that were noted.

Speeding in residential areas and near schools was noted as a major worry for many residents and there were calls for measures such as speed humps, increased enforcement, and additional traffic lights to enhance safety.

Dangerous bicycle and pedestrian crossings were mentioned repeatedly both citywide and in priority areas. People described feeling uncomfortable walking or biking due to the high amount of traffic volume, the speeds that people drive, and drivers not stopping at designated crosswalks. The lack of infrastructure and connectivity also contributed to people's feelings about not feeling safe or comfortable.

Unsafe intersections like E 104th Ave & Chambers Rd, as well as the crossings of US 85 at E 104th, 112th, and 120th Avenues, were often cited as dangerous due to high traffic volumes, traffic signals are not adequate for pedestrian crossing with long distances between signals, signal timing not allowing sufficient time for crossing and/or poorly placed pedestrian signal buttons, and poor visibility.

5.5 Public Engagement Summary

The feedback gathered for the SAP engagement process underscores a clear desire by the community for a safer, more efficient transportation network. Community members and stakeholders have voiced their eagerness for improvements that will enhance overall walkability and bikeability within Commerce City, while also addressing the pressing issues of traffic congestion and road safety. Input from the community highlighted the need for a comprehensive approach to transportation planning that addresses safety, accessibility, and travel efficiency. By prioritizing these things, the Commerce City SAP will ensure that the transportation network meets the current and future needs of all residents, fostering a safer community for years to come.

6. Recommendations

This SAP was developed to proactively identify traffic safety trends and recommendations to reduce and eventually eliminate fatalities and serious injuries on the City's roadway network.

As required by Safe Streets and Roads for All (SS4A), this section provides:

- A comprehensive set of projects and strategies to address the safety problems in the Action Plan, with information about time ranges when projects and strategies will be deployed; AND
- An assessment of current policies, plans, guidelines and standards to identify opportunities to improve how processes prioritize safety.

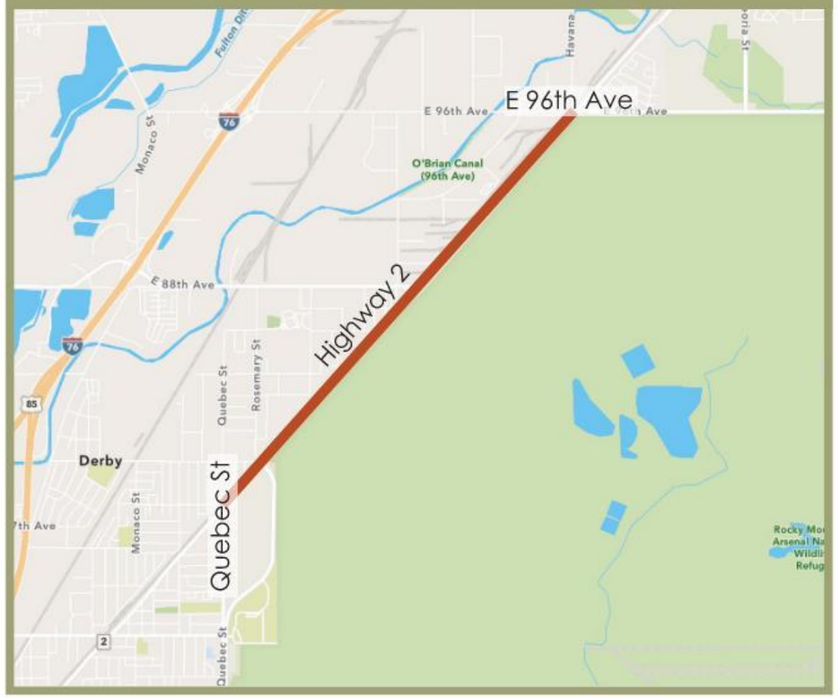
6.1 Safety Countermeasures

6.1.1 Priority Projects

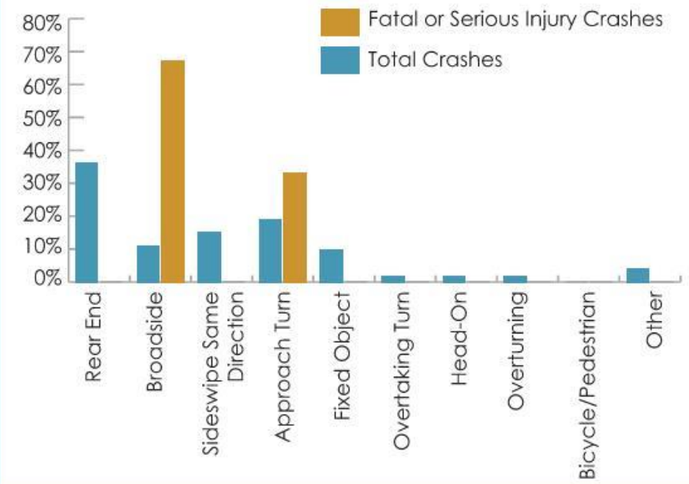
After selecting the priority projects, an evaluation of each location was completed. Available crash data was reviewed to identify patterns in the data or unique characteristics related to each location, and MetroQuest comments were reviewed to better understand existing stakeholder and community concerns. A list of potential countermeasures for each project were identified, based on historic crash patterns, desktop observations, and an understanding of available data. Timeframes for when each of the improvements could be implemented were also provided. For each priority project, a detailed summary of the crash results, public feedback, and safety countermeasures are provided in Figures 24 through 31 below.

Figure 24. Segment A Crash Data, Public Feedback, & Countermeasures

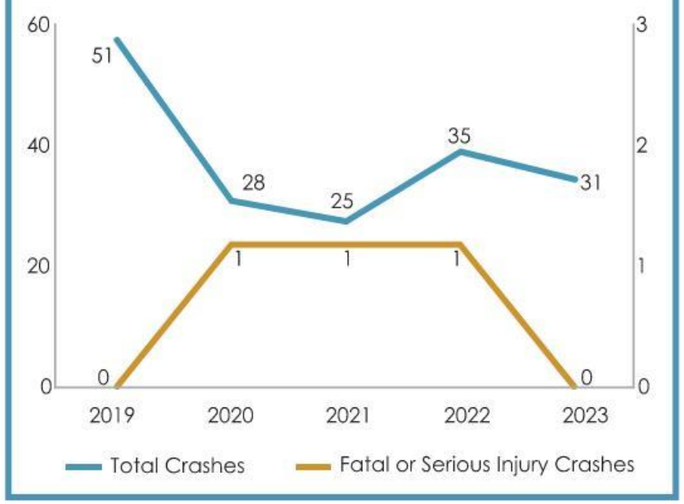
Segment Map



Crashes by Crash Type



Fatal or Severe Injury Crashes



Countermeasures

Short Term · Medium Term · Long Term

	Overrepresented Crash Types					
Countermeasure Name	**Broadside**	**Approach Turn**	**Driver Inexperience**	**Rear End**	**Sideswipe Same Direction**	**Comments**
Convert Permissive or Permissive/Protected Operations to Protected Only		✓	✓			All intersections on this segment are close to meeting warrants for protected left turn operations.
Reconfigure Left Turn Lanes to Provide Zero or Positive Offset		✓	✓			Raised medians are currently being designed for Hwy 2 between E 96th Ave and E 104th Ave. Future median design should include shifting of the left turn lanes to provide a zero or positive offset.
Red Protection/Decision Zone Detection (Sensors)	✓	✓	✓	✓		The City has obtained funding to install these at Rosemary St/Quebec Pkwy, E 88th Ave, and E 96th Ave.
Red Light Cameras	✓	✓				If red light running continues to be an issue after installation of red protection.
Install High Friction Surface Treatment (HFST)	✓	✓	✓	✓	✓	Improves stopping and reaction time thereby addressing all crash types on the corridor.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	Focus on the Rosemary St/Quebec Pkwy intersection, followed by the other signalized intersections where sideswipe, approach turn, and rear-end crashes were prevalent at night.

Public Feedback

Rosemary St/Quebec Pkwy – 3 Add/Improve Crossing Comments

- Three comments indicated the need for better pedestrian infrastructure at this intersection, of which two suggested a grade separated crossing

E 96th Ave – 1 Add/Improve Crossing, 1 Traffic Congestion

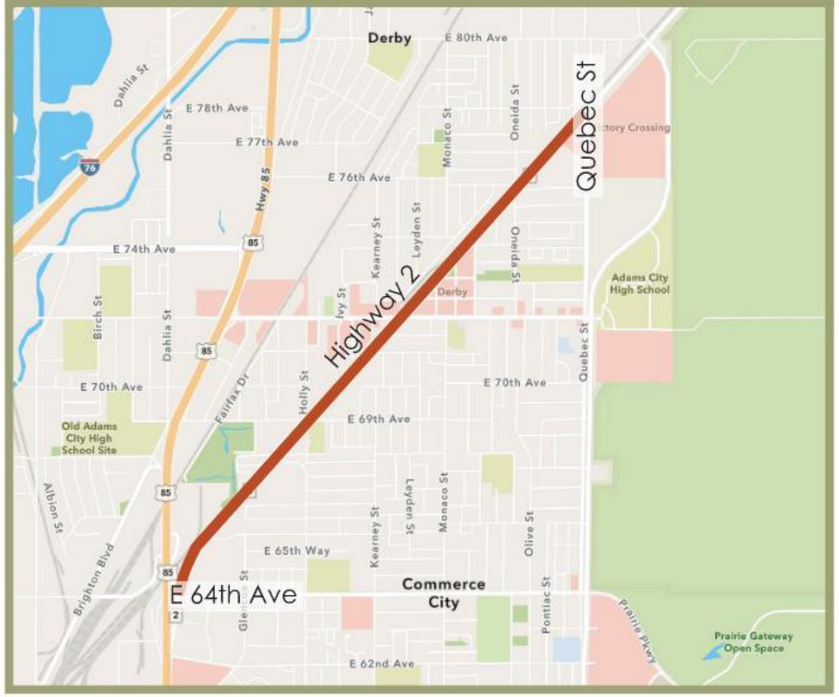
- One public comment indicated a desire for a grade separated crossing.
- One public comment indicated that in morning hours (6am-9am) traffic congestion is a problem in multiple directions at Hwy 2 & E 96th Ave, particularly westbound E 96th Ave turning left onto Hwy 2

3 Add/Improve Transit Comments – Add New Stop

- Quebec Pkwy & Hwy 2
- Yosemite St & Hwy 2
- Midway between E 88th Ave and E 96th Ave on Hwy 2

Figure 25. Segment B Crash Data, Public Feedback, & Countermeasures

Segment Map



Public Feedback

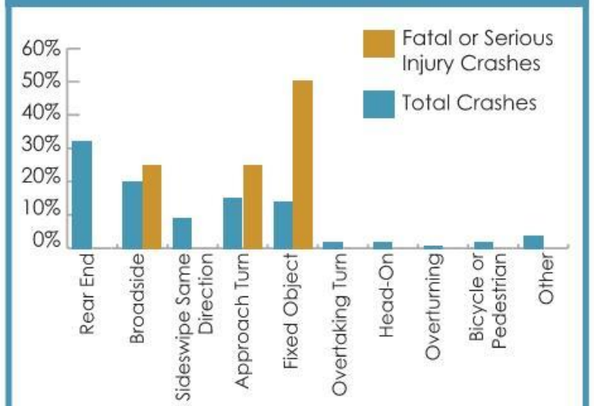
Along Hwy 2 Between E 64th Ave & E 69th Ave

- Poor Walking/Biking – Bike lanes would be great
- Add/Improve Transit – BRT on Hwy 2 to Denver
- Add/Improve Crossing (at E 69th Ave)
- Safety Concern - Install a median along Hwy 2 (near E 75th Pl) to avoid head on collisions

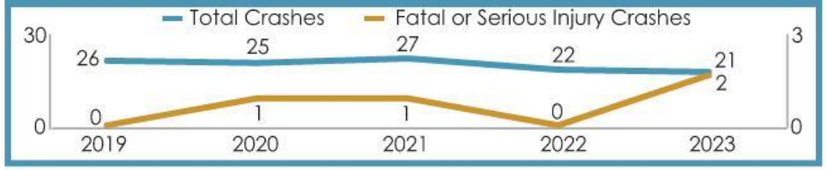
Hwy 2 & Oneida St:

- Poor Walking/Biking – Add a pedestrian/bicycle crossing across the railroad tracks and Highway 2 along Oneida St

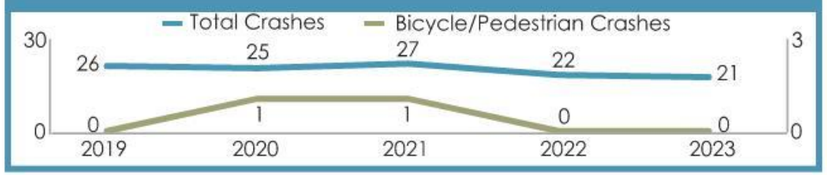
Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes



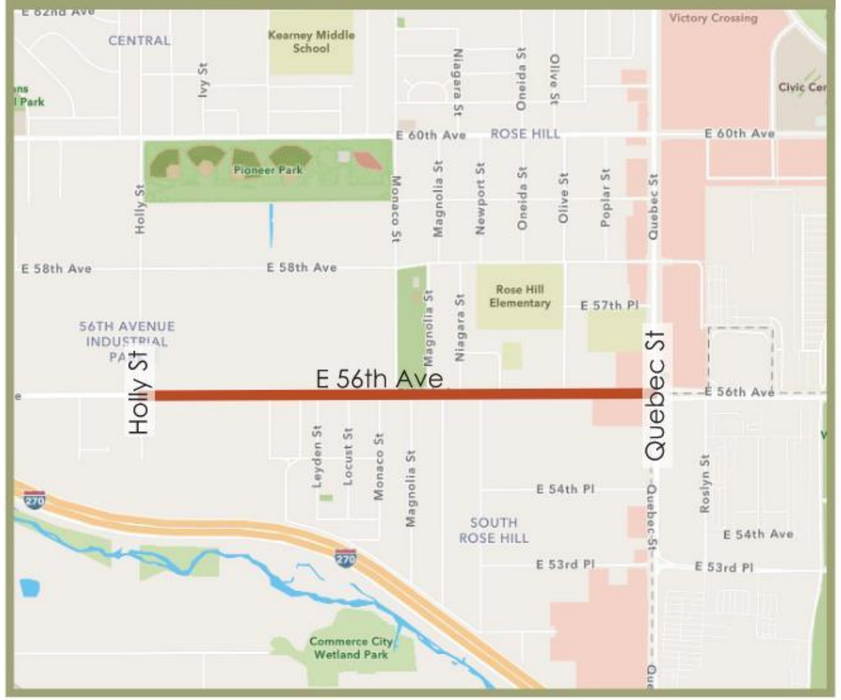
Countermeasures

Short Term | Medium Term | Long Term

	Overrepresented Crash Types						
Countermeasure Name	**Fixed Object**	**Broadside**	**Approach Turn**	**Bike/ Ped**	**Rear End**	**Sideswipe Same Direction**	**Comments**
Convert Permissive or Permissive/ Protected Operations to Protected Only AND/OR Reconfigure Left Turn Lanes to Provide Zero or Positive Offset			✓	✓			E 72nd Ave is close to meeting warrants for a protected left turn operation.
Double Post / Oversized Stop Signs		✓	✓		✓		At Oneida St: serious injury broadside crash.
Determine Appropriate Speed Limit For All Users/Reduce Speed Limits	✓	✓	✓	✓	✓	✓	Along the entire length of the segment.
Rectangular Rapid Flashing Beacon (RRFB) AND Pedestrian Scale Lighting				✓			Evaluate warrants for installation at bike crossing near E 67th Pl.
Curb Extensions (Bulb Outs)				✓			A 2026 CIP project has been proposed to improve the crossing at Holly St and 67th Pl.
Red Light Cameras		✓	✓	✓			Consider for E 72nd Ave: top location for approach turn and broadside crashes.
Reduce Motor Vehicle Lane Widths AND Move Curb to Allow Space for Shared Use Path		✓	✓	✓	✓	✓	Consider south of E 72nd Ave to allow safer travel for bicycles.
Raised Intersections				✓			Consider on Hwy 2 at either end of Derby for traffic calming.
Continuous Raised Median AND Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	✓	Between E 64th Ave and E 72nd Ave to address run-off-the-road and fixed object crashes, and crashes in dark-lit conditions.
Access Control	✓	✓	✓	✓	✓		All approaches of the Hwy 2 & E 72nd Ave intersection.

Figure 26. Segment C Crash Data, Public Feedback, & Countermeasures

Segment Map

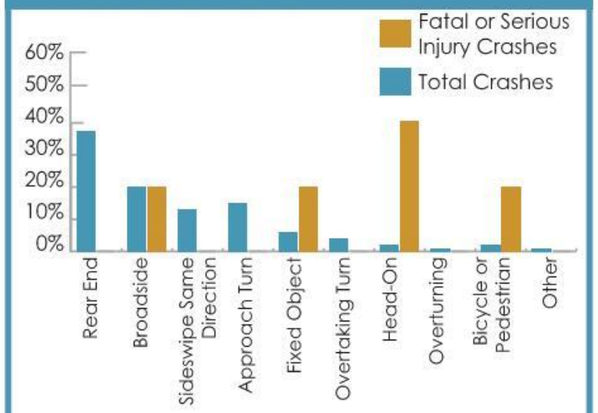


Public Feedback

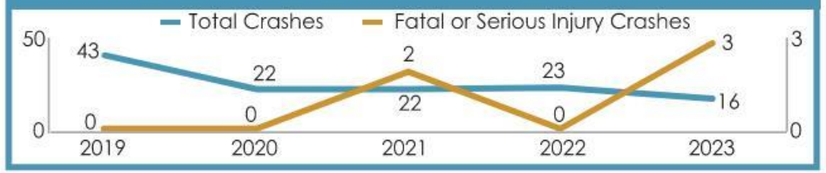
Along E 56th Ave

- Traffic Congestion - Traffic is congested all day in both directions
- Poor Walking/Biking – Poor quality or missing sidewalk; concern for pedestrians

Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes

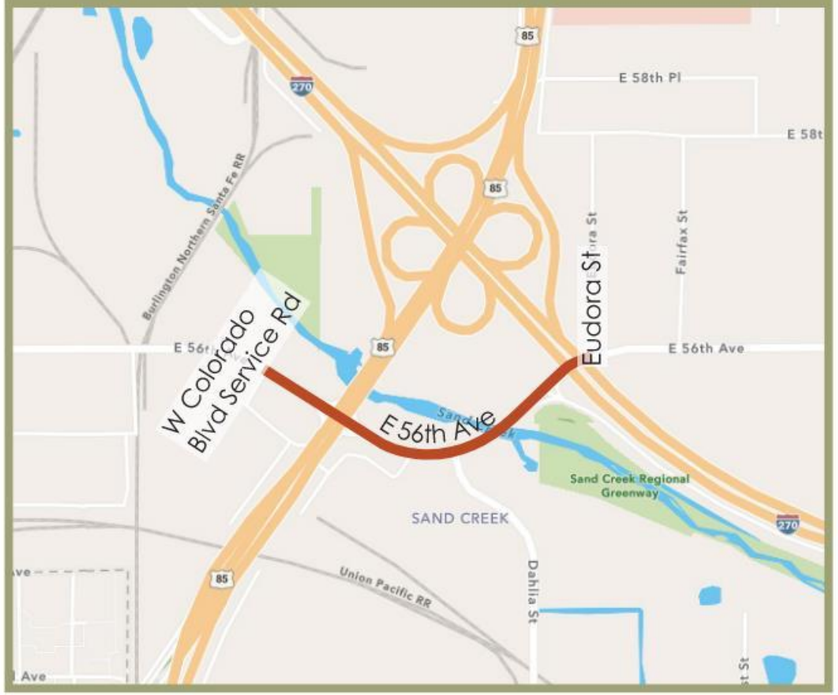
Countermeasures

Short Term · Medium Term · Long Term

	Overrepresented Crash Types							
Countermeasure Name	**Head-On**	**Fixed Object**	**Broadside**	**Rear End**	**Approach Turn**	**Sideswipe Same Direction**	**Bike/ Ped**	**Comments**
Backplates with Retroreflective Borders			✓	✓	✓		✓	To be installed at Monaco St and Holly St in June 2025.
Double Post / Oversized Stop Signs			✓	✓	✓			Consider at Krameria St, Kearney St and the streets on the S side of E 56th Ave that are stop-sign controlled.
Advanced Warning Signage				✓		✓		Signage alerting drivers of the approaching intersection. Consider at Holly St, Quebec St, and Monaco St, which had highest numbers of rear end crashes.
Signal Coordination			✓	✓	✓		✓	Recommend coordination of Commerce City and Denver signals on Quebec St.
Red Light Cameras			✓		✓		✓	Consider at Holly St due to the high number of broadside crashes.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	✓	✓	Focus on Holly St and Kameria St, dark-lit crashes, Monaco St, fixed object, dark-lit crashes, and Niagara St, bike/ped, dark-unlit crash.
Raised Medians AND Access Control AND Reduce Motor Vehicle Lane Widths AND Add Sidewalks	✓	✓	✓	✓	✓		✓	Consider for the entire segment to address the fatal and serious injury crash types. Wider sidewalks also address public feedback while improving sight distance for vehicles exiting side streets.

Figure 27. Segment D Crash Data, Public Feedback, & Countermeasures

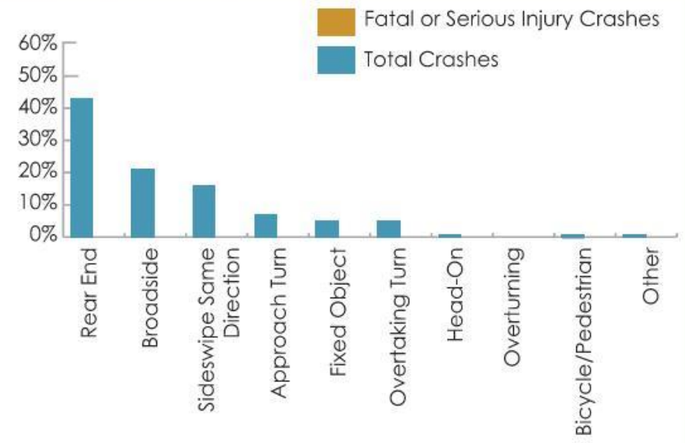
Segment Map



Public Feedback

No Public Comment

Crashes by Crash Type



Bicycle and Pedestrian Crashes

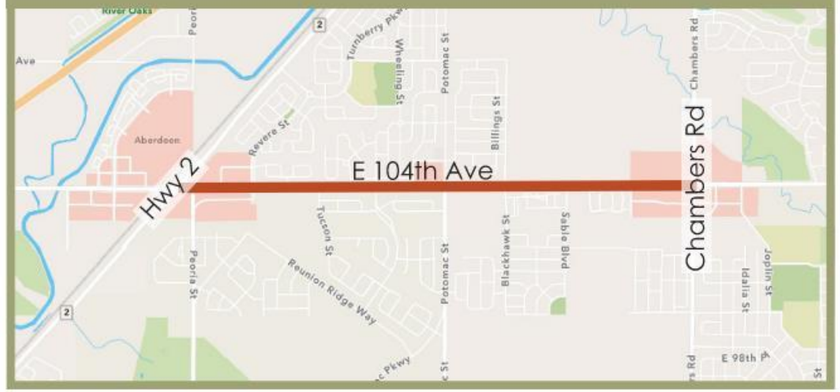
Countermeasures

Short Term | Medium Term | Long Term

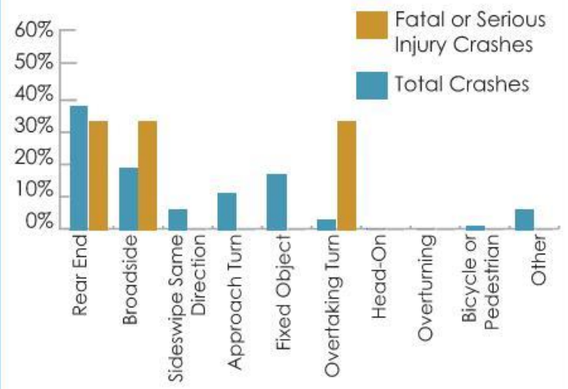
	Overrepresented Crash Types					
Countermeasure Name	**Rear End**	**Broadside**	**Driver Inexperience**	**Bike/Ped**	**Sideswipe Same Direction**	**Comments**
Determine Appropriate Speed Limit for All Users/ Reduce Speed Limits	✓	✓	✓	✓	✓	Recommend for the entire segment. Traffic calming is needed to make it safer for vehicles to get through this area.
Advanced Warning Signage	✓	✓	✓		✓	For WB Dahlia St, alerting drivers of the signal ahead because of roadway curvature. For Sandcreek Dr S, a flashing beacon notifying WB drivers of the intersection.
Backplates with Retroreflective Borders	✓	✓	✓	✓		Needed at US 85 and Dahlia St.
Red Protection / Decision Zone Detection (Sensors)* OR Red Light Cameras^	* ✓	✓	✓	^ ✓		Consider for WB and SB signals of US 85 due to high number of broadside crashes.
Modify Channelized Right Turn Design			✓	✓	✓	Recommend for US 85 to address sideswipe same direction crashes.
Install High Friction Surface Treatment (HFST)	✓	✓	✓	✓	✓	Would benefit this area due to the high volume of heavy vehicles and poor sight distance resulting in less time to react. Conveyed to CIP Manager for 2025 repaving.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	Consider at Sandcreek Dr S, bike/ped crash, and US 85, fixed object, which had patterns of crashes in dark-lit conditions.
Convert Unsignalized to Traffic Signal Control OR Roundabout		✓	✓	✓		Consider a signal that encompasses both Sandcreek Dr S and Eudora St to reduce crashes resulting from poor sight distance due to the bridge and roadway curvature.

Figure 28. Segment E Crash Data, Public Feedback, & Countermeasures

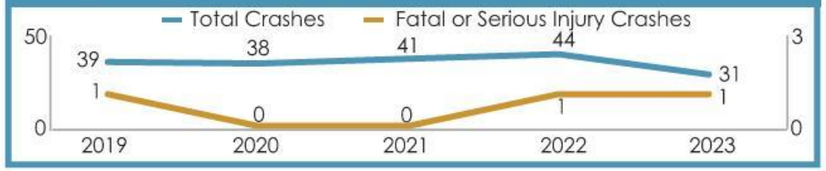
Segment Map



Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes

Public Feedback

Along E 104th Ave – 1 Congestion, 1 Improvement Idea,1 Safety Concern Comment

- Walking is miserable because there is no shade on either side. Please plant trees. Lots of them
- Fast traffic on E 104th Ave makes turning right feel scary - a right turn lane near neighborhoods could help (2 responses)
- Heavy traffic/noise along this road; one response suggests a roundabout at Chambers and E 104th Ave to help

Chambers Rd - 3 Safety Concern, 2 Congestion Comments

- Dangerous Intersection; The turning lane going northbound is dangerous because it is a short yield section
- Intersection is congested all day in all directions

6 Add/Improve Crossing Comments

- Sable Blvd - Access to the bus stop is needed
- Potomac St - (3 responses) Crosswalk is too wide, vehicles do not yield to pedestrians, traffic is fast; pedestrian overpass/underpass/raised crosswalk would make this intersection usable for pedestrians
- Highway 2 - (2 responses) One public comment indicated a desire for a grade separated crossing

7 Add/Improve Transit Comments

- New Stop - E 104th Ave and Chambers Rd
- New Stop - E 104th Ave and Potomac St (3 responses)
- New Stop - E 104th Ave and Vaughn Way
- Improve stops at Chambers Rd; Add a trash can and benches/shelter
- Improve stop at Revere St; Add benches/shelter

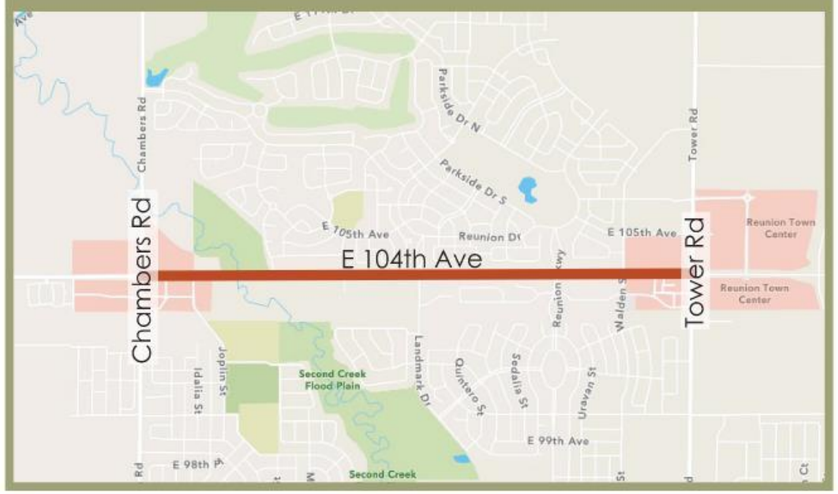
Countermeasures

Short Term · Medium Term · Long Term

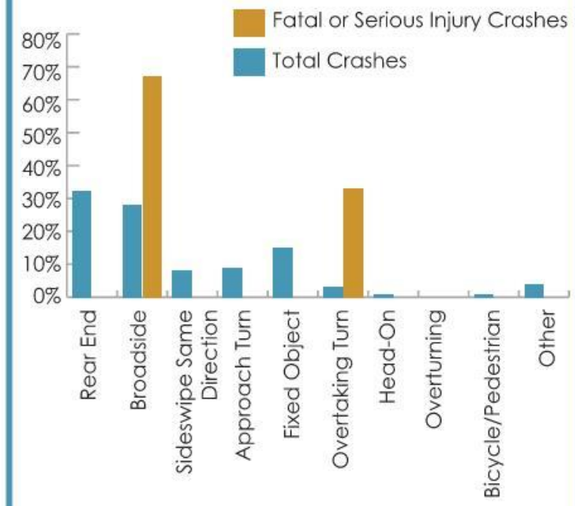
	Overrepresented Crash Types							
Countermeasure Name	**Rear End**	**Broadside**	**Fixed Object**	**Approach Turn**	**Overtaking Turn**	**Driver Inexperience**	**Icy Roads**	**Comments**
Advanced Warning Signage	✓				✓	✓		Signage in the median of E 104th Ave alerting drivers of approaching intersections to address overtaking turn and rear end crashes.
Signal Coordination	✓	✓		✓		✓		Updating signal coordination plans in mid 2025.
Reconfigure Left Turn Lanes to Provide Zero or Positive Offset OR Convert Permissive/ Protected Operations to Protected Only				✓		✓		Recommend positive offset at Hwy 2 and Chambers Rd to address approach turn and inexperience crashes. Hwy 2 and Chambers Rd are close to meeting protected left turn warrants.
Modify Channelized Right Turn Design				✓		✓		Recommend at Hwy 2. In the interim, double post yield signs in the channelized right turn lanes and update striping to narrow the lane.
Install Right Turn Lanes	✓					✓		Consider at WB Potomac St and Sable Blvd to address rear end crashes.
Red Protection/ Decision Zone Detection (Sensors) OR Red Light Cameras	✓	✓		✓		✓		Red protection installation scheduled at Chambers Rd in Jan 2026. History of broadside crashes on the corridor.
Install High Friction Surface Treatment (HFST) AND Windbreak	✓	✓	✓	✓	✓	✓	✓	Along the majority of the segment to address icy conditions. HFST will also reduce other crash types.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	✓	✓	Evaluate Hwy 2 lighting; dark-lighted, fixed object and broadside crashes were common.

Figure 29. Segment F Crash Data, Public Feedback, & Countermeasures

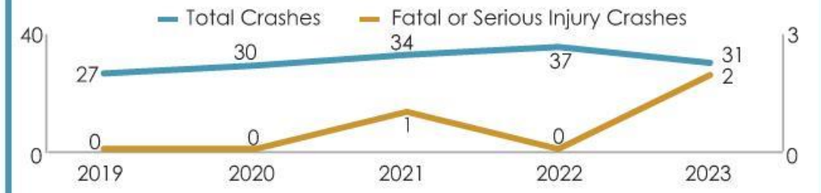
Segment Map



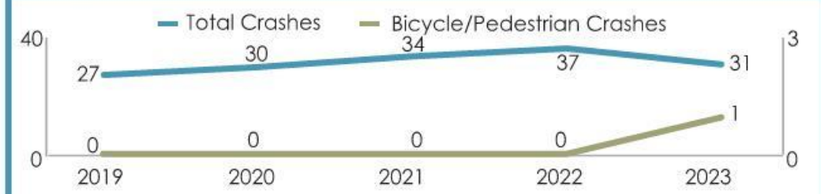
Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes



Public Feedback

Chambers Rd - 3 Safety Concern, 3 Congestion Comments

- Dangerous Intersection; The turning lane going northbound is dangerous because it is a short yield section
- Intersection is congested all day in all directions

Tower Rd - 4 Safety Concern, 6 Congestion Comments

- Dangerous Intersection; Aggressive driving and confusing merging protocol
- Intersection is congested all day in all directions

Along E 104th Ave – 2 Safety Concern Comments

- Traffic speed is a big issue

1 Add/Improve Crossing Comment

- Reunion Pkwy and E 104th Ave encourage vehicles to yield to pedestrians

7 Add/Improve Transit Comments

- New stop at E 104th Ave and Chambers Rd
- Improve stops at Chambers Rd (3 Responses); Add a trash can and benches/shelter
- Improve stops at Landmark Dr (3 Responses); Add a trash can and benches/shelter
- Improve stops at Reunion Pkwy (2 Responses); Add a trash can and benches/shelter
- Improve stops at Walden St (2 Responses); Add a trash can and benches/shelter

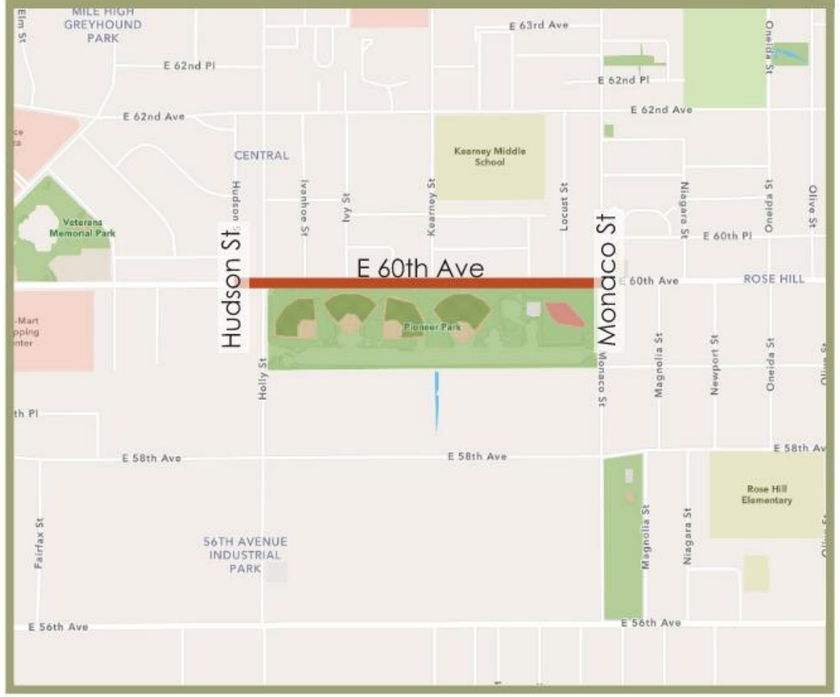
Countermeasures

Short Term · Medium Term · Long Term

	Overrepresented Crash Types						
Countermeasure Name	**Broadside**	**Overtaking Turn**	**Icy Roads**	**Bike/ Ped**	**Rear End**	**Fixed Object**	**Comments**
Advanced Warning Signage		✓			✓		Suggest signage in the median alerting drivers of the approaching intersection.
Signal Coordination	✓			✓	✓		Updating signal coordination plans in mid 2025.
Leading Pedestrian Interval (LPI) AND Prohibit Right Turn on Red AND Accessible Pedestrian Signal (APS)				✓			Consider at Reunion Pkwy.
Red Protection / Decision Zone Detection (Sensors)	✓		✓		✓		Red protect at Tower Rd and Chambers Rd with expected install 2025/2026.
Red Light Cameras	✓			✓			If red light running continues to be an issue after installation of red protection.
Portable Speed Feedback Signs	✓	✓	✓	✓		✓	Consider at locations where speeding is most prevalent to reduce the severity of crashes on the corridor.
Install High Friction Surface Treatment (HFST) AND Windbreak	✓	✓	✓	✓	✓	✓	Along most of the segment to address icy conditions. HFST will also reduce other crash types.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	✓	Along most of the segment, particularly at Chambers Rd, where a pedestrian crash occurred in dark-lit conditions.

Figure 30. Segment G Crash Data, Public Feedback, & Countermeasures

Segment Map



Public Feedback

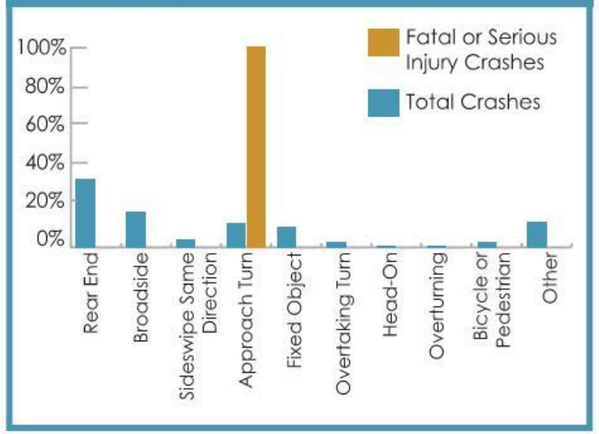
Holly St – 1 Add/Improve Crossing Comments

- Pedestrian crossing (signs, lights and stripes) need to be revitalized

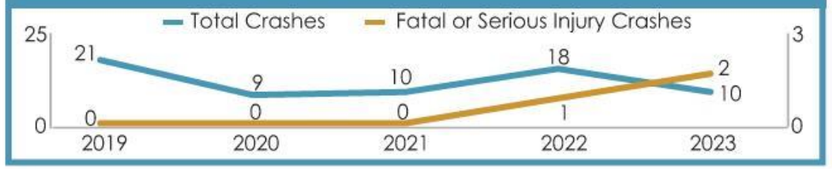
Monaco St - 1 Add/Improve Transit Comments

- Additional public transit options needed to access the City Hall from this area. Monaco St and E 60th Ave is a 20 min walk from City hall and there is no transit available

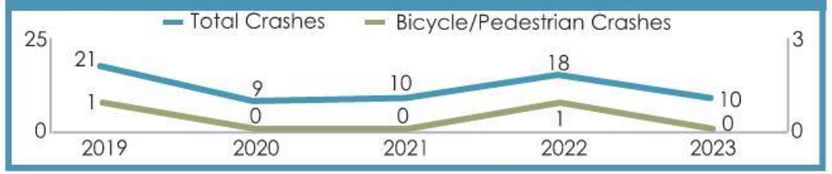
Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes



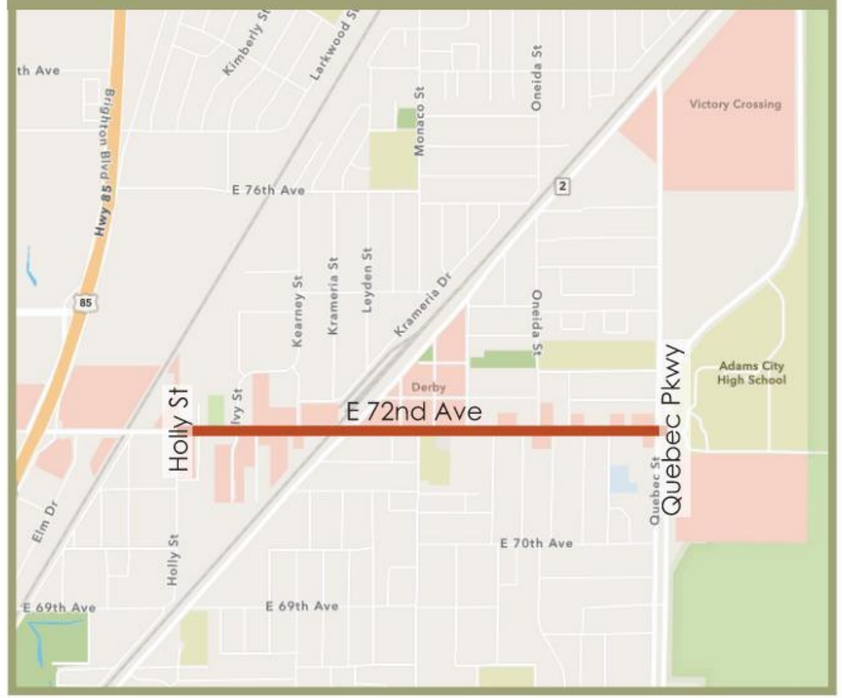
Countermeasures

Short Term | Medium Term | Long Term

	Overrepresented Crash Types					
Countermeasure Name	**Approach Turn**	**Driver Inexperience**	**Bike/ Ped**	**Rear End**	**Broadside**	**Comments**
Backplates with Retroreflective Borders AND Update Signal Heads	✓	✓	✓	✓	✓	12 inch signal heads and reflective backplates to be installed at Holly St and Monaco St in 2025.
All Pedestrian Phase OR Leading Pedestrian Intervals (LPI)			✓			Consider at Holly St and Monaco St. All pedestrian phase might be required prior to lighting upgrades because dark-lighting is an issue on entire segment.
Update Pedestrian Crossing Times OR Passive Bicycle/ Pedestrian Detection			◔			Area has high pedestrian potential, suggest evaluating the pedestrian crossing times at Holly St and Monaco St.
Reconfigure Left Turn Lanes to Provide Zero or Positive Offset	✓	✓	✓			E/W approaches at Holly St have extra space to convert to positive offsets from a zero offset.
Red Protection / Decision Zone Detection (Sensors)	✓	✓		✓	✓	Programmed signal upgrades at Monaco St in 2025.
Access Control	✓	✓	✓	✓	✓	Consider access control at commercial business in the NW corner of Kearney St.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	Given patterns of dark condition crashes (49% of total segment crashes), improve all along the segment.
Pedestrian-Scale Lighting		✓	✓			Along entire segment because of it's adjacency to Pioneer Park and dark-lit, bike/ped crashes.
Raised Intersections* AND Double Post / Oversized Stop Signs	✓	✓	✓	✓	✓	Consider at Kearney St due to two driver inexperience crashes.
"Daylighting" / Parking Restrictions at Crossing Locations AND Curb Extensions (Bulb Outs)	✓	✓	✓	✓	✓	Install bulb outs along E 60th Ave at STOP controlled intersections between Holly St and Monaco St to address poor sight distance, provide traffic calming and help with intersection alignment at Monaco St.
Intersection Geometry Improvements	✓	✓	✓	✓	✓	Install painted median on Holly St (north side) to better align NB and SB through vehicles, narrow EB vehicle lane and tighten turning radii in SW and SE corners, reset stop bars and crosswalks to be perpendicular to traveling vehicles then upgrade curb ramps.

Figure 31. Segment H Crash Data, Public Feedback, & Countermeasures

Segment Map



Public Feedback

Quebec Pkwy – 4 Add/Improve Crossing Comments, 1 Safety Concern Comment

- Two comments indicating the desire for an underground crosswalk for high school students to get to school safely
- Encourage vehicles to yield to pedestrians
- Dangerous Intersection

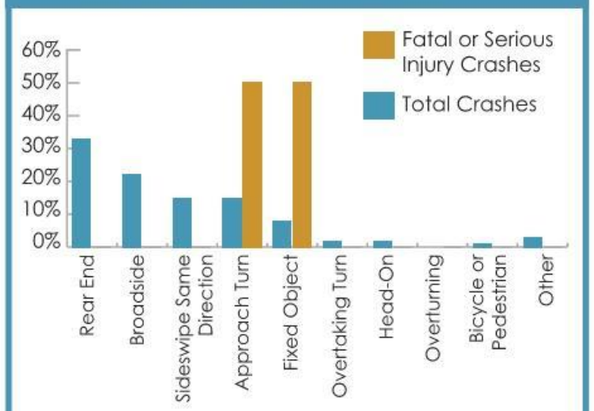
1 Improvement Ideas Comment

- Add a right turn lane for accessing the businesses on E 72nd Ave between Ivanhoe St and Ivy St

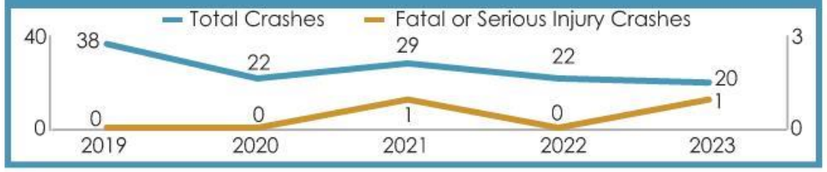
1 Add/Improve Transit Comment

- Improve stop at Ivanhoe St; Add a trash can to reduce the amount of litter in the area

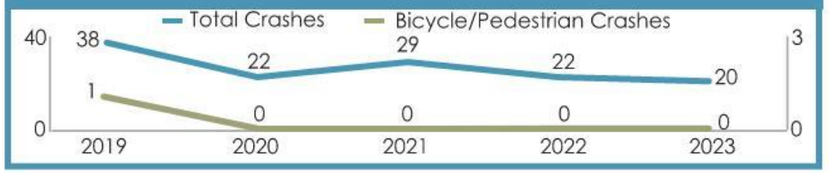
Crashes by Crash Type



Fatal and Severe Injury Crashes



Bicycle and Pedestrian Crashes



Countermeasures

Short Term · Medium Term · Long Term

	Overrepresented Crash Types						
Countermeasure Name	**Approach Turn**	**Fixed Object**	**Bike/ Ped**	**Rear End**	**Broadside**	**Sideswipe Same Direction**	**Comments**
Convert Permissive or Permissive or Permissive/Protected Operations to Protected Only AND Prohibit Right Turn on Red (Static Sign or Blank Out Sign)	✓		✓				Recommend for Ivy St (SB) due to poor sight distance and a bicycle crash at this intersection. Also recommend at Quebec Pkwy, adjacent to the high school.
Modify Channelized Right Turn Design	✓		✓			✓	Recommend at Hwy 2. In the interim, double post yield signs in the channelized right turn lanes and update striping to narrow the lane.
Backplates with Retroreflective Borders	✓		✓	✓	✓		Need at Ivy St, Monaco St, Quebec Pkwy.
Red Light Cameras	✓		✓		✓		Recommend at Hwy 2, if red light running continues to be an issue after 2024 installation of red protection.
New High-Visibility Crosswalk AND Raised Median AND Rectangular Rapid Flashing Beacon (RRFB)			✓				Suggest at crossing east of Ivanhoe St. Evaluate warrants for the RRFB.
Reduce Motor Vehicle Lane Widths AND Curb Extensions (Bulb Outs) AND Convert Separate Bike Lane and Sidewalk to Shared Use Path	✓	✓	✓	✓	✓		Consider for entire segment to address KSI crash types. A curb extension with wider shared use path improves sight distance for many of the side streets with poor sight distance.
Lighting/Lighting Upgrades	✓	✓	✓	✓	✓	✓	Focus on Hwy 2 and Niagara St where fixed object crashes occurred in dark-lit conditions.
Raised Median AND Access Control	✓	✓	✓	✓	✓	✓	Along the entire segment, to reduce conflict points for all users.
"Daylighting" / Remove obstacles that Impair Sight Lines/Parking Restrictions at Crossing Locations	✓		✓		✓		Many of the unsignalized side streets have poor visibility.

6.1.2 Countermeasure Toolbox

In addition to the countermeasures assigned to each of the priority projects, a comprehensive toolbox of countermeasures that address safety concerns identified within this plan were compiled (Appendix B). The toolbox identifies which of the common crash types, such as broadside, fixed object, bicycle/pedestrian, or approach turn would be applicable to each countermeasure. As staff consider improvements for other locations within the top crash and systemic lists, or as they identify new crash hot spots with updated crash data, this toolbox can serve as a starting point for identifying applicable countermeasures.

6.1.3 Citywide Countermeasures

Additionally, Table 16, below, describes certain countermeasures that would improve safety across Commerce City if implemented citywide. This list of countermeasures should be applied across the City and implementation of many countermeasures could start in the near future, but full implementation Citywide could take much longer.

Table 16. Citywide Countermeasures

Citywide Safety Countermeasure	Description	Crash Types Addressed
Backplates with Retroreflective Borders	Retroreflective borders added to the backplate of a traffic signal head improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background.	Broadside Bicycle/Pedestrian Involved Approach Turn Rear End Driver Inexperience
Yellow and Red Change Intervals	It is imperative that the yellow and red change intervals be appropriately timed and assessed frequently. Too brief a yellow interval may result in drivers being unable to stop safely and cause unintentional red-light running. Too long a yellow interval may result in drivers treating the yellow as an extension of the green phase and invite intentional red-light running. Red intervals are designed to minimize the risk of collisions by providing additional time separation between opposing traffic movements.	Broadside Bicycle/Pedestrian Involved Approach Turn Rear End Driver Inexperience
Update pedestrian crossing times	Pedestrian crossing times should be determined based on the distance from the push button, rather than the edge of curb, to ensure that pedestrians have sufficient time to safely cross the street, accommodating varying walking speeds and distances.	Bicycle/Pedestrian Involved
Signal Coordination	Signal coordination enhances safety by synchronizing traffic signals to create smooth traffic flow, reducing stop-and-go driving, and minimizing the likelihood of collisions at intersections. Done correctly, signal timing can result in tighter platoons of vehicles, resulting in larger gaps for left turning vehicles at unsignalized intersections and pedestrians crossing mid-block.	Broadside Bicycle/Pedestrian Involved Approach Turn Rear End Driver Inexperience

Citywide Safety Countermeasure	Description	Crash Types Addressed
Determine Appropriate Speed Limit For All Users / Reduce Speed Limits	Reduced speed limits, when aligned with the geometry and conditions of a road, result in less severe crashes. By evaluating existing speeds and conditions along a road, it can be determined whether the posted speed needs to be adjusted and whether traffic calming elements would improve safety and compliance of the posted speed.	Broadside Fixed Object Bicycle/Pedestrian Involved Approach Turn Head-On Rear End Overturning Sideswipe Same Direction Overtaking Turn Driver Inexperience Icy Roads
Regular Maintenance of Faded Signage / Striping	Regular maintenance of faded signage and striping enhances safety by ensuring that traffic control devices remain visible and effective, helping drivers navigate safely and reducing the risk of accidents. The initial focus for this countermeasure should be collector and arterial roads, followed by local roads.	Broadside Fixed Object Bicycle/Pedestrian Involved Approach Turn Head-On Rear End Overturning Sideswipe Same Direction Driver Inexperience
Pushbutton Upgrades	Pushbutton upgrades enhance safety by improving the accessibility and responsiveness of pedestrian crossing signals, ensuring that all users, including those with disabilities, can safely and easily activate crossing signals.	Bicycle/Pedestrian Involved
Portable Speed Feedback Signs	Speed feedback signs provide a message to drivers exceeding a threshold to slow down.	Broadside Fixed Object Bicycle/Pedestrian Involved Approach Turn Head-On Overturning Sideswipe Same Direction Overtaking Turn Driver Inexperience Icy Roads
Lighting/Lighting Upgrades	Lighting helps reduce the potential for crashes by increasing after-dark visibility for all modes.	Broadside Fixed Object Bicycle/Pedestrian Involved Approach Turn Head-On Rear End Overturning Sideswipe Same Direction Overtaking Turn Driver Inexperience Icy Roads

Citywide Safety Countermeasure	Description	Crash Types Addressed
One Signal Head per Lane	Increases visibility of signal heads, giving motorists more time to react appropriately, and reduces potential for motorist confusion.	Broadside Bicycle/Pedestrian Involved Approach Turn Rear End Sideswipe Same Direction Driver Inexperience
Evaluate School Zone Speeds / Lengths for Consistency with Best Practices	Best practice shows that longer school zones[8] and larger speed differentials[9] result in less compliance from drivers in school zones. Evaluating and adjusting existing school zone signage and striping to align with best practices will provide a safer environment for all users traveling near schools.	Bicycle/Pedestrian Involved
Review / Modify Left-Turn Operations at Signalized Intersections	Left turns represent the riskiest and most disruptive movements in the operation of a signalized intersection. As a result, safe and efficient left turn operation is a critical component of any signalized intersection. The two primary types of left turn signal operations are: "protected" and "protected / permissive". The most common arguments for protected-only left-turn phasing are that high opposing speeds give vehicles less time to turn, make gap selection more difficult, and increase crash severity. The most common arguments for protected / permissive left-turn phasing are to reduce delays, as left turn drivers may have an opportunity to make their turns during the green interval. This allows the use of a shorter cycle length by reducing the time of the fully protected green interval for the left turn movement and less chances of disturbing traffic in the adjacent lane, since cars waiting in the left turn lane are less likely to exceed the length of the turn lane. As traffic patterns evolve and crash history is analyzed, City Staff should evaluate if protected / permissive left-turn operations should be converted to protected only left-turn operations utilizing CDOT's Left-Turn Treatment Guidance document, applicable guidance from other public agencies, crash records, traffic volume / speed data and intersection geometry.	Broadside Approach Turn Bicycle/Pedestrian Involved Driver Inexperience Head-On

[8] Kay Fitzpatrick, et al., "Comprehensive Guide to Traffic Control Near Schools" *(*Austin: Texas Transportation Institute, 2009), http://tti.tamu.edu/documents/0-5470-1.pdf

[9] U.S. Federal Highway Administration, Khattak, Aemal and Yashu Kang. "Research on School Zone Safety," SPR-PI (19) M092 (Lincoln: UNL Nebraska Transportation Center, 2020).

6.2 Policy, Process and Design Guidance

Relevant transportation policies and mobility design standards were reviewed as part of this project. The purpose was to identify prospective additions or amendments that could, through plans, policies, or standards, enhance multimodal safety and contribute to reducing significant injuries and fatalities. This included a review of the City's Engineering Construction Standards and Specifications and the Walk/Bike/Fit Active Transportation Plan. This section covers recommended changes intended to improve roadway safety for all ages, abilities, and modes.

6.2.1 Policy / Process Recommendations

- **Develop and adopt a Complete Streets Policy or Resolution –** This would reinforce and formalize the City's commitment to the design, retrofit, and construction of streets to accommodate safe travel by all users and can better position the City for the pursuit of certain grants (i.e. Safe Routes to School Grants)

- **Develop and adopt a Bicycle / Pedestrian Master Plan –** The Walk, Bike, Fit Plan was completed 13 years ago. A newly developed Bicycle / Pedestrian Master Plan would provide the City with a list of prioritized, phased recommendations based on needs, community concerns, and crash hot spots. It could also include a Safe Routes to School map identifying priority projects for safe walking / biking to and from schools. A prioritized list would enable staff to be more methodical in the allocation of City funds and competitive in the pursuit of grants. This Master Plan would need to account for and minimize duplication with the 2025 Safety Action Plan.

- **Annual Resurfacing Projects –** As part of annual roadway resurfacing projects, the City should maximize opportunities to modify striping for improved safety. Examples include: better defining turn lanes, narrowing vehicle through lanes, adjusting on-street parking locations to improve sight lines, improving pedestrian crosswalk striping, and providing new bike lanes on lower volume road where they don't currently exist.

- **Signage and Striping Maintenance –** Staff should conduct annual maintenance and / or replacement operations to improve the reflectivity of older signage and address roadway striping diminished over time, especially at crosswalks.

6.2.2 Design Guidance

6.2.2.1 Commerce City Engineering Construction Standards and Specifications

The following recommendations are based on a review of the City's Engineering Construction Standards and Specifications[10].

Table 17. Commerce City Engineering Construction Standards and Specifications Review

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Revise to driveway locations, grades, and dimensions. The current item in the checklist only mentions grades and dimensions.	More complete information for staff (plan) reviews.	Page 2-4, checklist table	The proposed location of driveways (in addition to grades and dimensions) can impact safety. It's important for staff to assess where driveways are proposed in relation to intersections (See Table 3-1).
24 hours seems far too short a window for Public Works to receive notification of construction within the public right-of-way. We recommend this be extended to at least 3 weeks so City staff can adequately inform affected members of the community (in the construction area) as necessary.	The safe movement of motorized and non-motorized users through a construction area within the public right-of-way.	Page 2-8, provision # 3	Staff needs adequate time to notify community members of construction near their homes or businesses.
Either in this provision #4, as part of the traffic control plan, or in a new, separate provision, recommend a requirement that a detour plan (if applicable) be submitted to Public Works for review/approval identifying how and where motorized and non-motorized travelers would be diverted to and for how long.	Reliable and safe alternatives to primary routes during a construction period.	Page 2-8, provision # 4	Lack of adequately signed detours may result in unintended diversion of traffic and result in user confusion or erratic movements (e.g. sudden lane changes without signaling).
For any type of arterial or major collector, some form of vertical separation from the travel lane is recommended if a bike lane is to be included on-street (between curbs). Treatments could include half curbs or flex posts, for example.	The safety of vulnerable users traveling by bicycle on higher volume, higher speed roadways.	Page 3-1, Definitions & Roadway and Parking Details[11]- Typical Street Sections- 307-04 & 307-05	Vertical separation of bike lanes increases comfort and safety for the majority of bicyclists. For motorists, it provides greater clarity on where bicyclists are expected to be on the roadway.

[10] https://www.Commerce Citygov.com/home/showpublisheddocument/15023/637725720726670000
[11] https://www.c3gov.com/home/showpublisheddocument/1910/636486947211870000

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
			Lack of any vertical separation is likely to reduce usage (among bicyclists) and increase exposure to conflicts with motor vehicles.
Recommend revision of this text to say .... 'and efficiency in traffic movement for all modes'.	To make clear that 'traffic movement' does not solely pertain to motorized vehicles.	Page 3-2, Section 3.03	As the City seeks continued build out of a multimodal transportation system, its construction standards and specifications need to reflect that traffic refers to private motor vehicles, bicycles, pedestrians, and transit vehicles.
Revise to 'movement of multimodal traffic'	See Importance / Benefit in row above	Page 3-2, Section 3.03.01	See Importance / Benefit in row above.
Recommend requiring properties with frontage on more than one street to provide access to the lower functionally classified roadway unless it causes safety or access concerns.	Reducing the potential for conflict (crashes) for users of the roadway, regardless of mode.	Page 3.2, Section 3.03.1	The primary goal of higher functionally classified roads is to provide mobility. These roadways typically have higher speeds and additional access points create conflict points that can result in a higher frequency and/or severity of crashes.
Recommend that small properties (3 acres or less) provide a roadway connection to adjacent property(s). Such properties should also locate their access on the property line to be shared with adjacent parcels when they redevelop, unless such an access would cause additional safety concerns.	Reducing the potential for conflict (crashes) for users of the roadway, regardless of mode.	Page 3.2, Section 3.03.1	Shared accesses and connections between properties reduce curb cuts and the overall number of points where conflicts can occur between motor vehicles or motor vehicles and bicyclists/pedestrians.
Recommend that Posted Speed Limits identified in Table 3-5 be identified as the maximum speed limit, and a note	Reductions in rates of speeding.	Page 3-7, Table 3-5	Identifying the actual speed limit best suited to a particular roadway

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
be included clarifying that posted speeds could ultimately be reduced if justified through an engineering study.			segment based on context or user (motorist) behavior.
Recommend that design speeds shown in Table 3-5 be equal to the posted speed, which will result in better compliance of the posted speed limit.	Reductions in rates of speeding.	Page 3-7, Table 3-5	Better compliance and consistency between posted speeds and actual average travel speeds.
Suggest including a note below table to clarify that four feet is required for raised medians and that the turn lane itself should be a maximum width of 12-feet, not including gutter pan.	Improving clarity of the City's design standards.	Page 3-12, Table 3-11	Providing designers and roadway engineers working in Commerce City with increased clarity on width specifications for medians and lanes.
Revise text to, 'Traffic calming refers to a series of treatments intended to reduce speeding by motorized vehicles and the severity of crashes when and if they occur. It should be considered on local streets that have a documented speeding problem, are experiencing high-volumes of cut-through traffic, or have high levels of pedestrian activity and/or bicycle traffic.".	Reducing the frequency of speeding in Commerce City.	Page 3-16, Section 3.07.6	Speeding has been identified as a problem on several of Commerce City's roadways as documented through speed studies and reinforced through resident complaints. This revision would provide a brief definition of traffic calming (that does not currently exist) and why it's an important consideration. Traffic calming can reduce the kinetic energy and negative impact of crashes when they occur.
Consider revising cross section exhibits to include the required locations and widths of gutter pans so it's clear that these are not part of the travel lanes.	Improving clarity of the City's design standards.	Roadway and Parking Details- Typical Street Sections- 307-01 307-03, 307-04	Providing designers and roadway engineers working in Commerce City with increased clarity on width specifications for medians and lanes.

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Consider 9-foot sidewalks on both sides of the roadway.	Improving balance between and access to multi-modal travel options on both sides of the road.	Roadway and Parking Details- Typical Street Sections- 307-01	Given the average speeds and volumes of motor vehicles, the majority of those walking and biking will use these facilities, resulting in shared use. A 6-foot facility is pretty narrow for shared use purposes, especially on corridors with higher volumes of bicycle and pedestrian traffic.
In both cross sections, a 5-foot walk is only labeled on right side. Add label for 5-foot walk on the left side.	Improving balance between and access to multi-modal travel options on both sides of the road.	Roadway and Parking Details- Typical Street Sections- 307-05	Clarity for staff during plan review that 5-foot sidewalks are a required part of the cross section (on both sides of the road).
Recommend that curb ramps not be required to be located 6 feet from the point of curvature. (Curb Ramp Type 2B)	Reducing the potential for conflict between motorists approaching an intersection and bicyclists / pedestrians crossing a crosswalk.	Curb Ramp Detail 308-03b	STOP bars should generally be placed behind the crosswalk. Pushing the crosswalk away from the intersection pushes back the STOP bar to a place that is unrealistic for a driver to stop and results in poor compliance.
Recommend this include descriptions of transit stops, sidewalks, on-street bike facilities, off-street shared-use paths in the TIS study area (or that these be shown on a map)	More complete information for staff (plan) reviews.	Page 5-3, Section A-4	Current requirement is limited to existing roadways and intersections and limit's staff ability to assess project's potential impacts on multimodal facilities.
Revise text to 'Pedestrian and bicycle movements'	The safety of people traveling by bicycle, not just pedestrians.	Page 5-6, Section G	Current text is limited to pedestrian movements as part of the analysis, yet it's important for

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
			staff (when reviewing TISs) to also understand the volume and patterns of bicycle movements.
Change 'Accidents to Crashes'	The use of current terminology most commonly applied in the transportation safety planning field.	Page 5-7, 5-8, and 5-9	This shift in language is encouraged by organizations like the National Highway Traffic Safety Administration (NHTSA), who advocate for the use of "crash" or other terms to avoid implying that collisions are simply random occurrences that can't be prevented.

6.2.2.2 Commerce City Walk/Bike/Fit Active Transportation Plan

The following recommendations are based on a review of the City's Walk/Bike/Fit Active Transportation Plan[12] and apply to the development of a future active transportation or bicycle / pedestrian master plan.

Table 18. Commerce City Walk/Bike/Fit Active Transportation Plan Review

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Recommend that vision in a future plan make a clear reference to the importance of safe mobility for all modes, ages, abilities, and incomes.	Making safety a cornerstone to the City's future transportation planning efforts.	Executive Summary - II	The City has invested in a Comprehensive Safety Action Plan. Going forward, safety should be a foundational element to bicycle / pedestrian (active transportation) planning.
The goals of a future plan should make direct reference to the City's fatal & severe injury crash reduction / elimination goal that's in the final	Alignment between the City's plans.	Executive Summary - III	To help ensure that active transportation planning efforts account for the

[12] https://www.Commerce Citygov.com/home/showpublisheddocument/4392/636383975332470000

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Comprehensive Safety Action Plan (or separately adopted through resolution).			City's reduction / elimination goal.
Knowing that (excess) speed is a primary factor in KSI crashes, a future plan should include the question of 'How Can Effective Traffic Calming be Achieved in Areas With Documented Speeding Problems?'	Increased awareness, acceptance, and application of traffic calming measures at locations throughout the City with known speeding problems.	Executive Summary - IV	A reduction in speeding and the intended reduction in total number of crashes, and fatal and severe injury crashes.
If the City decides to maintain a data tracking dashboard, the tracking of crash trends over time and how / if investments are reducing fatal and significant injuries involving bicyclists and pedestrians should be a part of an implementation strategy. Staff should consider conducting before and after studies to determine the effectiveness of transportation safety investments.	Understanding the effectiveness of countermeasures in reducing crash impacts on vulnerable users.	Executive Summary – VI, Implementation Strategy	The City will be able to track, over time, what types of safety countermeasures are proving effective in reducing bicycle and pedestrian-involved crashes, especially those resulting in fatalities and significant injuries. In addition, through a data dashboard, the City will be able to leverage quantitative data in the pursuit of grant funding focused on crash reduction / safety improvements (e.g. Highway Safety Improvement Program Grants).
If this statistic is included in a new plan, cite current data. Also, to make the information more relevant, suggest citation of how many die each year on Colorado roads. Moreover, if Commerce City continues to track	Citing state or local, versus national data.	Page 3, Bicycle / Pedestrian fatalities statistic.	Including data that's specific to Colorado and Commerce City will be more relevant to local

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
fatalities following completion of the Safety Action Plan, it should cite the most current available data (for Commerce City).			planning efforts and will more accurately capture the magnitude of the problem, locally.
Discussion of macro level constraints / issues in a future plan should make reference to the engagement findings of the Safety Action Plan that specifically reveal that a lot of COMMERCE CITY residents don't feel safe walking / biking due to volumes / speeds of motorized traffic and absence of separated yet connected facilities in a lot of locations.	A more complete understanding of residents' concerns that affect their decision of whether or not to walk, bike, or take transit for work trips or other purposes.	Page 4	By identifying these concerns, City staff and stakeholders will be better positioned to identify projects to address them.
If included in a future plan, the challenges and opportunities section should include abbreviated references to the Safety Action Plan and its key findings 1) Crash Hot Spots 2) High Risk Locations 3) Recommended Countermeasures (in the Opportunities).	Alignment between active transportation planning and the Safety Action Plan.	Page 9, Challenges and Opportunities section	A more complete and transparent understanding of the challenges and opportunities central to the improvement of transportation safety throughout the community.
Recommend distinguishing facilities with a different color or line type.	Clarity on what improvements have been completed versus what is still planned, but not yet constructed.	Page 12, Existing and Proposed Major Greenways and Trail Network	Enhance staff's and Council's ability to phase and fund projects over time.
If a similar framework of Goals and Actions is followed in a future plan, recommend that the fatal and significant injury reduction / elimination goal from the Safety Action Plan be referenced. A supporting action could be the continued implementation of priority countermeasures identified in the plan.	Integration of safety action planning into active transportation planning.	Page 15, Goals and Actions	A primary deterrent to active travel (walking and biking) is that people don't feel safe due to the volumes and speeds of cars, and motorists not paying attention.

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Confirm this information is still current if cited in a future plan.	Citing current, accurate data from NHTSA.	Page 23, Speed Affects Crash Avoidance Exhibit.	So the plan accurately documents the relationship between speed and severity for crashes involving pedestrians.
If cross-sections are shown in a future plan, recommend that any roadway carrying more than one lane of travel in each direction include a protected / vertically separated bike lane.	Safety of people traveling by bicycle.	Page 25, Cross section for a Boulevard Street	Providing some form of vertical separation from the adjacent lane of motorized travel increases the comfort and safety of those traveling by bicycle. For motorists, vertical separation also provides greater clarity on where bicyclists are likely to be on the roadway.
For any arterial roadway, if there has to be an on-street bike lane, recommend the use of vertical separation from traffic.	Safety of people traveling by bicycle	Page 26, Multimodal Arterial Cross Section	Anticipated volumes and speeds anticipated on any arterial warrant the installation of vertical separation for the comfort and safety of bicyclists.
Recommend 9-foot sidewalks on each side of the road.	More balanced access to facilities for walking and biking (on both sides of the road).	Pages 26 and 27, Minor Arterial and Principal Arterial	Only 6-feet on one side, as shown, could reduce access for bicyclists due to the narrower width and having to share facility with pedestrians.
If comparable technical guidance from the Federal Highway Association (FHWA) and Pedestrian & Bicycle Information Center (PBIC) is provided in a new plan, make sure it is current.	Citing current guidance.	Page 29, Study findings and recommendations for crosswalks	Provides the City with assurance that they are following best practices and complying with current guidance.

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Recommend a future plan also describe/illustrate a Rectangular Rapid Flashing Beacon (RRFB) as well.	Staff having flexibility in what equipment it installs on different roadway types.	Page 32, Description and illustrations of HAWK signals.	HAWKS are not well suited to all crossings based on speeds, volumes, and roadway geometry.
Include specifications that a shared roadway designation only apply to local, neighborhood streets with volumes not exceeding 2,000 VPD and posted speed not exceeding 25 mph.	Improved clarity on roadway characteristics that are appropriate for a shared designation.	Page 33, Simple Shared Roadway	Ensuring the comfort and safety of all modes using a Simple Shared Roadway.
The NACTO Urban Bikeway Design Guide was updated in 2024. If a future plan is to include images of facility types from NACTO guidance, refer to the 2024 guide.	Citing current and accurate information.	Page 34	To ensure that the Plan accounts for best design practices, as identified by NACTO.
Recommend a future plan distinguish different types of facilities on map so staff and residents can readily see how the different active route facility types relate to each other.	A clearer illustration of how different active travel routes relate to each other across the network.	Page 44 (graphic)	To better equip staff to make decisions in relation to project funding and phasing.
For a future plan, recommend that one of the prioritization criteria be 1) seeks to address an identified crash hot spot or high-risk intersection/segment identified in the City's Safety Action Plan.	Ensuring that opportunities to improve safety are accounted for in the project evaluation process.	Page 47, list of priority criteria	Improving safety of the transportation network is a priority for the City.
If a similar graphic is created for a future plan, it should illustrate or at least make reference to high-priority projects identified in the Safety Action Plan. In addition, if a planned projects map is included in a future plan, consider providing an on-line version to provide the community with greater transparency on planned projects.	Integration of projects identified in the Safety Action Plan.	Page 48 (graphic)	Ensuring that safety projects remain in the forefront of future capital investments
The new plan will need to account for projects completed since the Walk-Bike-Fit plan was completed.	Streamlining focus to projects not yet completed.	Pages 52-82	Will help staff more effectively allocate capital and phase projects.

Recommended Updates	Importance and Benefits	Reference or Change Location	Justifications
Image at far right shows a buffered bike lane.	Accurately defining facility types shown in plan.	Page 58	Staff can accurately assign types/treatments to routes, differentiating between a standard bike lane and buffered bike lane, if necessary.
The center image is an example of what 'not to do'. A four-lane road like the one shown (likely w/ a posted speed of 35+) is not appropriate for a sharrow.	Assigning the appropriate treatment based on roadway type and anticipated volumes / speeds.	Page 64	So the City can reserve shared lanes/sharrows to low-volume, low-speed streets in local neighborhood settings.
If similar images are used in a future plan, correctly label them as protected bike lanes.	Accurately defining facility types shown in plan.	Page 66, Two lower images	Assigning the appropriate treatment based on roadway type and anticipated volumes / speeds. Protected bike lanes should be reserved for higher speed, higher volume roadways.
Change to a 10-foot path on the right side and a 9-foot path on the left side.	Improving balance between and access to multi-modal travel options on both sides of the road.	Page 69	A 7-foot facility is pretty narrow for shared use purposes, especially on corridors with higher volumes of bicycle and pedestrian traffic.
The Funding and Resources section needs to include mention of regional funding sources, including DRCOG TIP Grants, and State sources, including TAP and HSIP.	City staff has a more complete framework of funding options to consider in its pursuit of grants.	Page 91	Effective pursuit of grant opportunities to implement active transportation and safety improvements.

7. Adams County Comprehensive Safety Action Plan

Concurrent with the development of this SAP, Adams County partnered with the following agencies to create a community informed vision for improving transportation safety that is consistent across borders:

- City of Arvada
- City of Aurora
- City of Brighton
- City of Commerce City
- City of Federal Heights
- City of Northglenn, and
- City of Westminster

As part of this effort, the County also coordinated with the City of Thornton and Town of Bennett on their similar, concurrent efforts.[13]

The primary goal of the Adams County Comprehensive Safety Action Plan (CSAP) was to prepare individualized SAP's for each of the participating agencies (including Commerce City), making them eligible for SS4A implementation funding. Rather than preparing two separate SAPs for Commerce City, supplemental materials from the Adams County CSAP are included in Appendix C. While some of the processes used to analyze data in the two studies varied, attempts were made to provide consistency across the studies. Examples of this include:

1) Engagement data gathered during this SAP was incorporated into the Adams County CSAP to reduce duplicative engagement efforts between studies and provide a comprehensive look at Commerce City through multiple engagement outlets,
2) The Systemic Risk Map prepared for this SAP was taken one step further with the Adams County CSAP to create a High Risk Network and High Risk Intersections for the City,
3) Level of Service of Safety analysis was completed on intersections across the City to identify those that have an over representation of crashes compared to similar intersections, and
4) Sliding window analysis that resulted in a list of top speed management, access management and pedestrian crossing corridors.

The Adams County CSAP trailed the Commerce City SAP, making it challenging to incorporate relevant data directly into this SAP. As such, data applicable to Commerce City that was prepared during the Adams County CSAP, such as items 2 and 3 above, have been incorporated into Appendix C of this SAP. Despite being in the Appendix of this report, these materials should be considered an integral part of this SAP and relevant when considering future implementation funding.

[13] https://adcogov.org/adams-county-safety-study

8. Implementation & Progress Tracking

Commerce City is committed to implementation of the roadway safety projects identified in this plan. The Safety Action Plan will serve as a guide for the City to achieve the established goal of a 50% reduction in fatal and serious injury crashes by 2050. The City will continue monitoring progress towards reducing traffic deaths and serious injuries alongside the Planning Oversight Committee using data and metrics, which will be available on the Commerce City website.

8.1 Funding Opportunities

Implementation of safety countermeasures is key to achieving the goals stated in this SAP but funding can sometimes be a challenge. Below is a list of potential funding opportunities that should be considered to progress this plan forward. This list includes the agency who manages each funding opportunity, whether it is a regional, state or federal opportunity, and when the next call for project grant applications will occur.

Table 19. Funding Opportunities

Funding Opportunity	Agency	Regional, State or Federal	Next Call for Applications
Better Utilizing Investments to Leverage Development (BUILD)*	U.S. Department of Transportation	Federal	N/A
Safe Streets for All*	Federal Highways Administration	Federal	N/A
Reconnecting Communities*	U.S. Department of Transportation	Federal	N/A
Transportation Alternatives Program (TAP)	CDOT	State	Early 2026
Nonattainment Area Air Pollution Mitigation Enterprise / Community Clean Transportation Assistance Program (CCTAP)	CDOT	State	2027
Highway Safety Improvement Program (HSIP)	CDOT	State	December 2025
Safe Routes to School	CDOT	State	2027
Transportation Improvement Program (TIP)	DRCOG	Regional	Early-Mid 2027
Community Based Transportation Plan Set Aside	DRCOG	Regional	Late 2025
Regional Transportation Operations and Technology (RTOT) Program	DRCOG	Regional	Spring 2026

**Continuation of these programs and issuance of future Notices of Funding Opportunities is currently uncertain, however the City should continue to track the status of them.*

8.2 Plan Effectiveness Metrics

The SAP serves as a roadmap for the City to improve its transportation network to better accommodate safe multimodal travel for all ages and abilities. A key to success is the City's ability to track safety improvements as they occur and measure effectiveness over time. Select members of the Planning Oversight Committee for this project (or comparable designees) will be responsible for reviewing this SAP on an annual basis. The following list of metrics should be used as a guide, but these metrics could be added to or modified based on available data in the first year after completion of this plan. The plan should be evaluated annually, and consistency between metrics after the following year will be critical to measuring the effectiveness of this SAP over time.

Table 20. Performance Metrics

Performance Measure	Description
Fatal Crashes	Total number of traffic fatalities in Commerce City.
Fatality Rate	Number of fatal crashes divided by the total population, multiplied by 100,000, to calculate the fatality rate per 100,000 people.
Serious Injury Crashes	Total number of traffic related serious injuries in Commerce City.
Serious Injury Rate	Number of serious injury crashes divided by the annual Vehicle Miles Traveled (VMT) for a rate of crashes.
Pedestrian Fatalities and Serious Injuries	Total number of pedestrian fatalities and serious injuries.
Bicycle Fatalities and Serious Injuries	Total number of bicyclist fatalities and serious injuries.
Constructed Traffic Safety Projects	Number of traffic safety projects constructed Citywide.
On-going Traffic Safety Projects	Number of traffic safety projects in continued development from previous years.

8.2.1 Evaluation

Annual SAP progress reports will be a valuable resource for evaluating the City's progress in meeting overall transportation safety goals. The data collection required for tracking progress will ensure that the City has consistent and up to date transportation-related data for future project prioritization, program development and grant applications. The performance measures data recorded in the progress reports will also be useful resources for SAP updates. The report will also include descriptions of the completed safety improvements throughout the City, with emphasis on the traffic safety projects constructed on any of the eight priority corridors.