Comprehensive Safety Action Plan

Transportation Advisory Board
February 18th, 2025

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Y2K ENGINEERING, LLC.

City of Mesa
ROAD SAFETY

AGENDA

- CSAP Report Update
- CSAP Strategies and Actions
- Tracking and Monitoring
- Next Steps

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01

CSAP Report Update

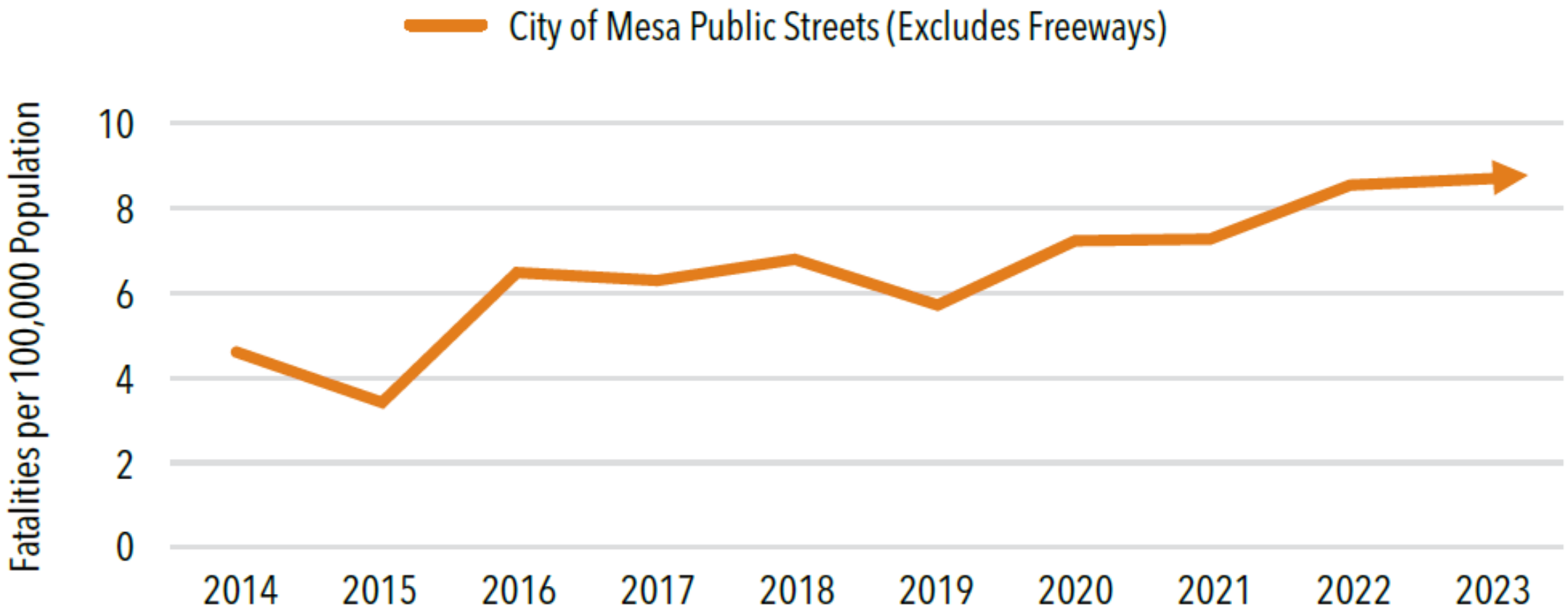
Why is the plan important?

1,359

This number represents the total number of people seriously injured or killed on Mesa Streets between 2017 – 2022.

That's enough to fill up three whole sections behind the dugout at Sloan Park.

Why is the plan important?



Why is the plan important?

Annually, crashes are costing the City of Mesa $627,498,828

CSAP Development Timeline

01

Initial Draft

11.27.24

02

City Review and Updates

Dec – Mid February

03

Draft Final Report

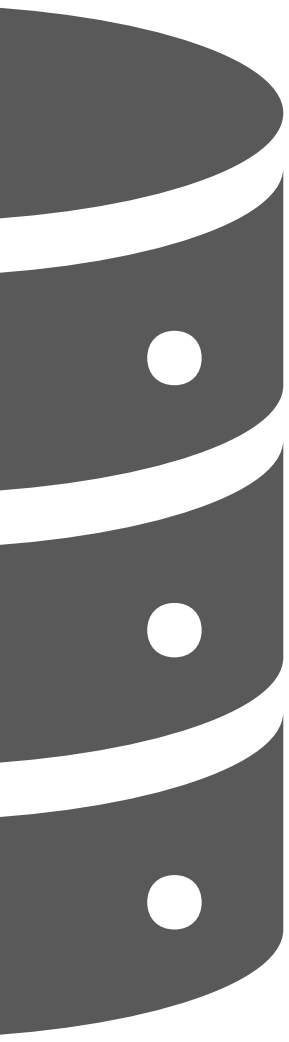
Mid February

04

Final Updates

Mid February – End of March

CSAP Building Blocks



Task 1: Project Management

- Continuous Project Management Team Meetings

Task 2: Discovery and Data Analysis

- Review Background Documents
- Systemic Safety Analysis
- High Risk Network
- Top Collision Profiles
- Equity Analysis

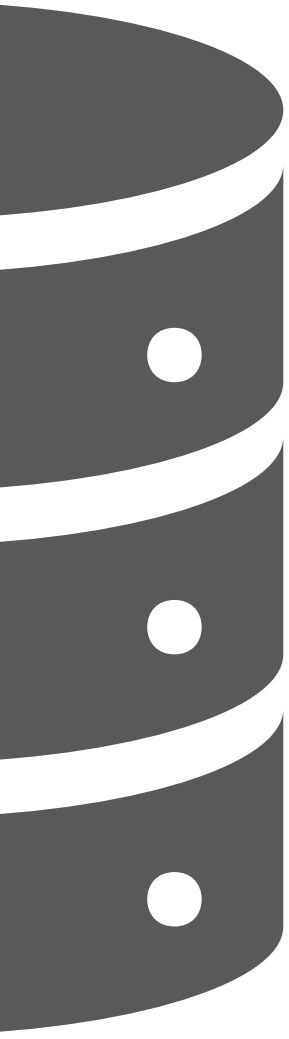
Task 3: Engagement and Collaboration

- Five Transportation Advisory Board Meetings
- Two Sustainability and Transportation Committee Meetings
- Two Phases of Community Touchpoints

Task 4: Benchmarking Policies and Processes

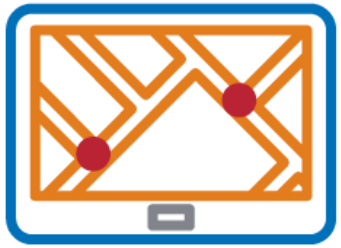
- Highlighting Existing Work Efforts
- Safe Systems Benchmarking
- Alignment with Federal Safety Goals and Guidance
- Alignment with Best Practice Design Standards and Guidance

CSAP Building Blocks



Task 5: Strategy And Project Selections

- Establishing Infrastructure Strategies and Developing Actions
- Establishing Non-Infrastructure Strategies and Developing Actions
- Developing Prioritization Methodologies



Task 6: Project Identification

- HRN Project Development
- Systemic Left Turn Phasing Evaluation
- Countermeasure Effectiveness and Benefit/ Cost Ratio
- Developing Performance Review Cycle

Task 7: Prepare Draft and Final Plan

- Identifying Funding Opportunities
- Final Report

Task 8: Post Plan Support and Outreach Services

- Community Outreach
- Safety Pledge

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02 CSAP Strategies and Actions

Strategies and Actions Update

Draft November 2024 Plan

- 6 Infrastructure Strategies
  - 15 Actions
- 5 Non-Infrastructure Strategies
  - 29 Actions

February 2025

- 5 Infrastructure Strategies
  - 13 Actions
- 4 Non-Infrastructure Strategies
  - 15 Actions

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Infrastructure Strategies

1. Enhance Crossings

2 Actions

2. Reduce Risky Movements

8 Actions

3. Separate Peds & Bikes from Vehicles

2 Actions

4. Design for Safer Speeds

3 Actions

5. Support Safer Vehicles

1 Action

Non-Infrastructure Strategies

1. Promote Safer Speeds

2 Actions

2. Increase Road Safety Awareness

8 Actions

3. Prevent DUIs

2 Actions

4. Optimize Data Analytics

3 Actions

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Sample Strategy & Action - Infrastructure

Separate Pedestrians & Bikes From Vehicles

Mesa would install buffered and separated bicycle lanes, including pavement markings, green paint, and physical barriers, where there is right of way or pavement space to accommodate a buffer or separation.

Sample Strategy & Action - Infrastructure

Reduce Risky Movements

Mesa would install raised medians to reduce conflict points on arterial roads.

Sample Strategy & Action - Non-Infrastructure

Increase Road Safety Awareness

Mesa would continue and enhance the Road Safety Task Force to be responsible for the CSAP annual report; coordination on implementing non-infrastructure actions (education, enforcement, outreach) that are cross-departmental; engage City of Mesa boards, council, and executive teams; and engage with the public.

Strategy and Action Effectiveness

Action #	Action Name	Source	Description	Estimated Crash Reduction	Applicable Crashes
Reduce Risky Movements					
1	**Raised Medians for Access Control**	CMF ID 2220	Install Raised Medians	55%	Angle/LT crashes, Principal Arterials
	Left-in Left-out Operations	CMF ID 11064	Install left-in left-out treatment	33%	Angle/LT crashes
2	**Implement Roundabouts**	CMF ID 4868	Conversion of intersection to roundabout	42%	All crashes
6	**Protect Left Turn Movements**				
	Permissive to Protected-Permitted	CMF ID 4270	Change permissive left-turn phasing to protected/permissive	14%	LT Crashes
	Permissive to Protected	CMF ID 333	Change from permissive to protected	99%	Angle/LT Crashes
	Change 5 - section "doghouse" signal head	CMF ID 7697	Change from 5-section "doghouse" protected/permissive left turn to flashing yellow arrow protected/permissive left turn	25%	LT Crashes
11	**Straight Arrows at Freeways**	CMF ID 11507	Install/modify wrong way signage	49%	Other (assumed related to on-ramp turning activity)

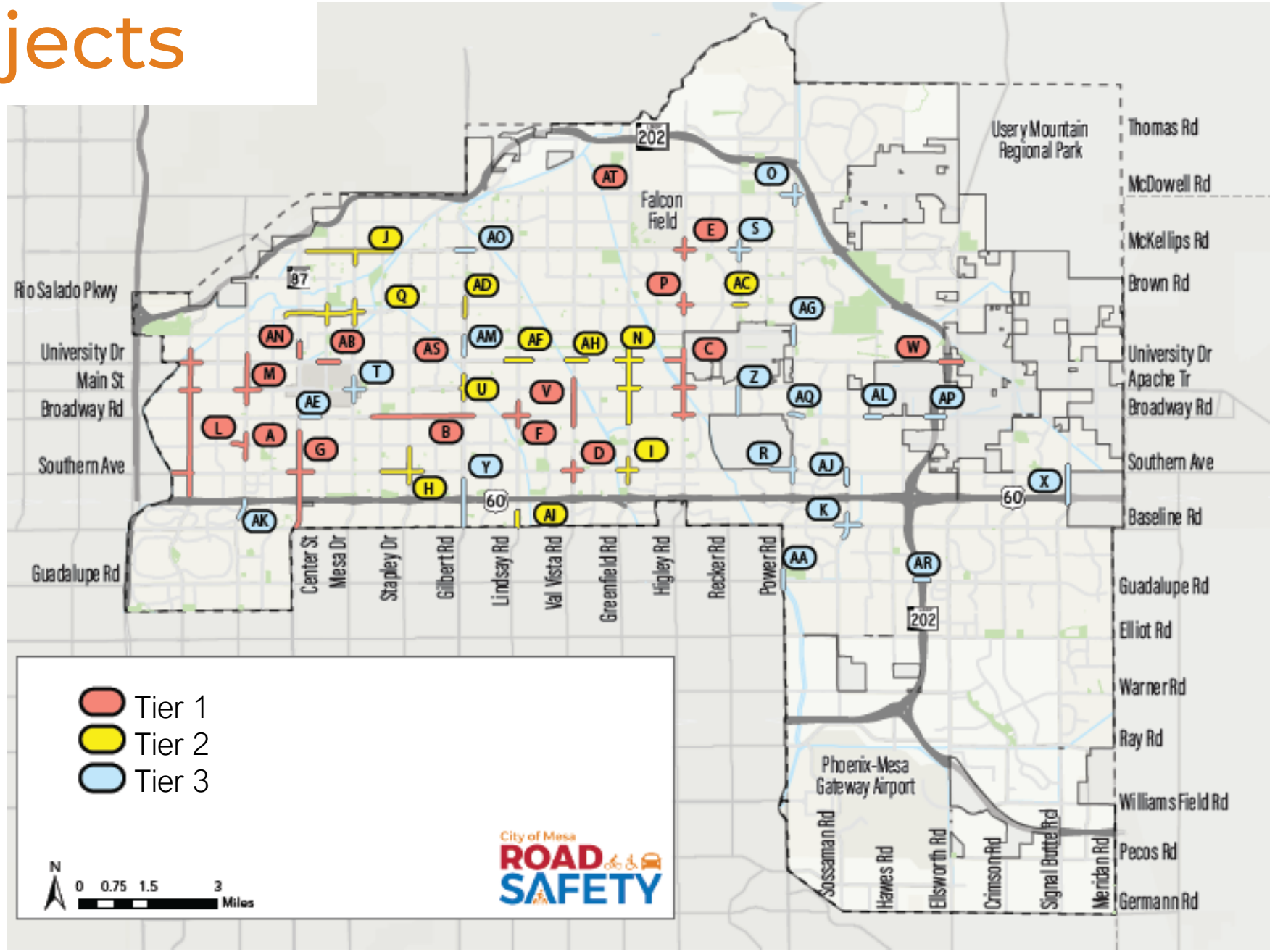
CSAP Projects

Projects were identified, considering:

- HRN Score
- KSI/Mile
- Pedestrian, Bicycle, Motorcycle Crashes
- Predictive Safety Analysis

Project Totals:

- Tier 1 - 16
- Tier 2 - 11
- Tier 3 - 19



Tier 1 Project

- Applied identified strategies to respond to the collision profiles in Mesa and identify improvements specific to each of the project locations.
- 16 Projects address 4.83 fatals and 25.83 serious injury crashes per year.
- Total cost is $76.5M
- Benefit over a 10-year lifespan is $241M
- Benefit cost ratio is 3.16 for all projects

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Tier 1 Project

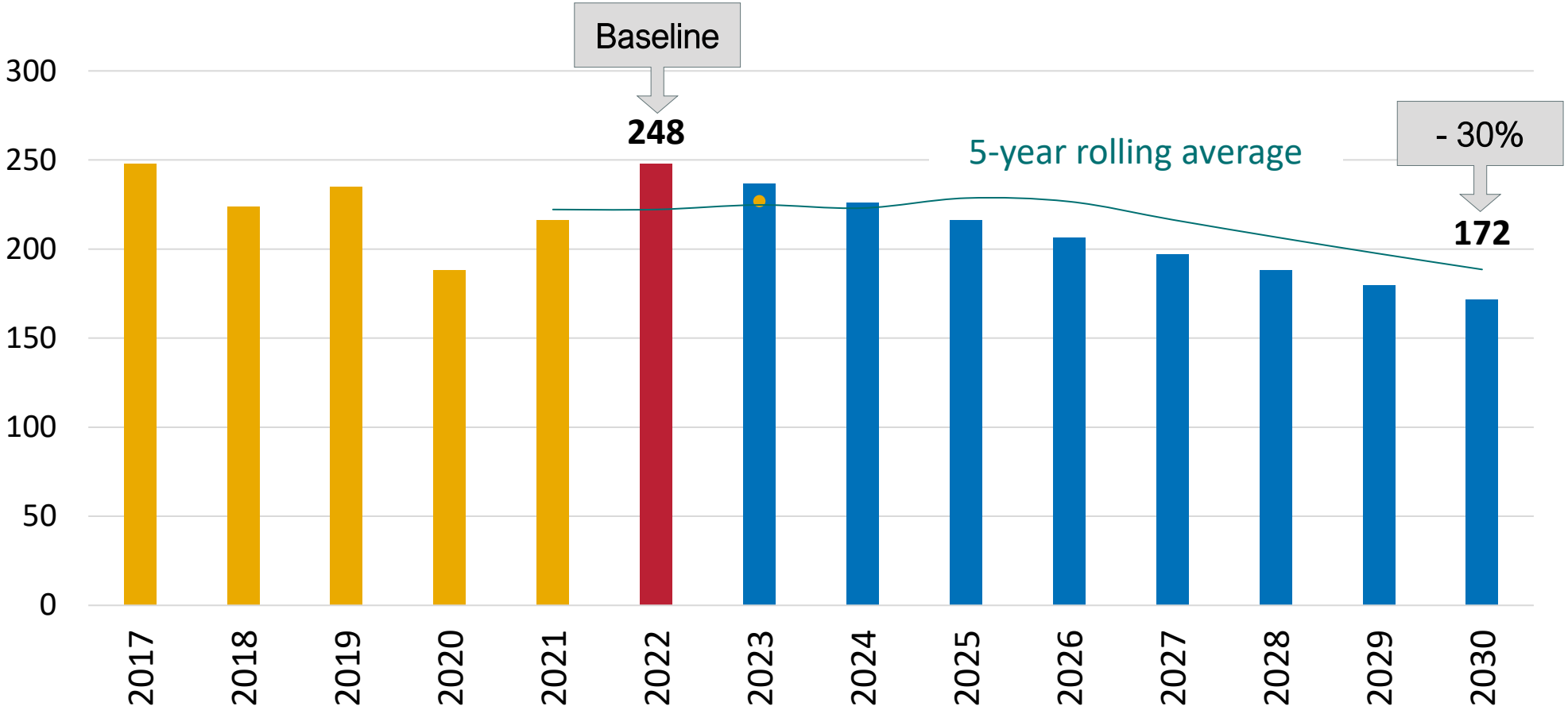
Project Names	Annual Fatals	Annual SI	CRF (%)	Annual Benefit	Project Cost	Assumed Lifecycle	B/C
Project A	0.33	1.83	61%	$ 2,542,071	$ 4,523,000	10	3.7
Project B	0.50	3.17	41%	$ 2,652,380	$ 8,989,000	10	1.9
Project C	0.67	3.83	52%	$ 4,379,082	$ 12,619,000	10	2.3
Project D	0.17	1.00	67%	$ 1,435,657	$ 4,475,000	10	2.1
Project E	0.17	1.67	47%	$ 1,164,078	$ 3,336,000	10	2.3
Project F	0.33	1.00	46%	$ 1,727,142	$ 4,269,000	10	2.7
Project G	0.17	3.33	24%	$ 821,014	$ 9,720,000	10	0.5
Project L	1.33	2.67	23%	$ 3,312,307	$ 14,758,000	10	1.5
Project M	0.33	1.00	31%	$ 1,168,799	$ 4,317,000	10	1.8
Project P	0.00	1.33	57%	$ 419,847	$ 2,519,000	10	1.1
Project V	0.00	2.83	44%	$ 681,610	$ 2,033,000	10	2.2
Project W	0.17	0.17	22%	$ 369,082	$ 597,000	10	4.1
Project AB	0.33	0.17	48%	$ 1,566,499	$ 1,944,000	10	5.4
Project AN	0.33	0.67	49%	$ 1,734,007	$ 1,782,000	10	6.5
Project AS	0.00	0.83	34%	$ 154,140	$ 534,000	10	1.9
Project AT	0.00	0.33	16%	$ 28,809	$ 150,000	10	1.2
Total	4.83	25.83	-	$ 24,156,525	$ 76,565,000	-	3.16

Systemic Left Turn Evaluation

- Additionally, 8 intersections were identified for protected left turns. These intersections are 1 fatal per year and 5.33 serious injuries per year.
- Improving these intersections is expected to cost $3,146,000.
- The benefit over a 10-year lifecycle is $123,268,520.
- The benefit cost ratio is 26.2.

A Path Forward

Fatalities and Serious Injuries



Estimated annual reduction of 10 fatalities & serious injuries per year

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03 Tracking and Monitoring

Tracking Towards The Goal

When Will We Get There?

Initial Years- Gather Information:

How/if strategies are being implemented?

How often/to what extent?

Set Targets Per Strategy:

Example

- 1 location/year
- 1 education campaign effort/quarter

Outcomes

Based targets, each strategy can be measures for effectiveness

30% reduction by 2030

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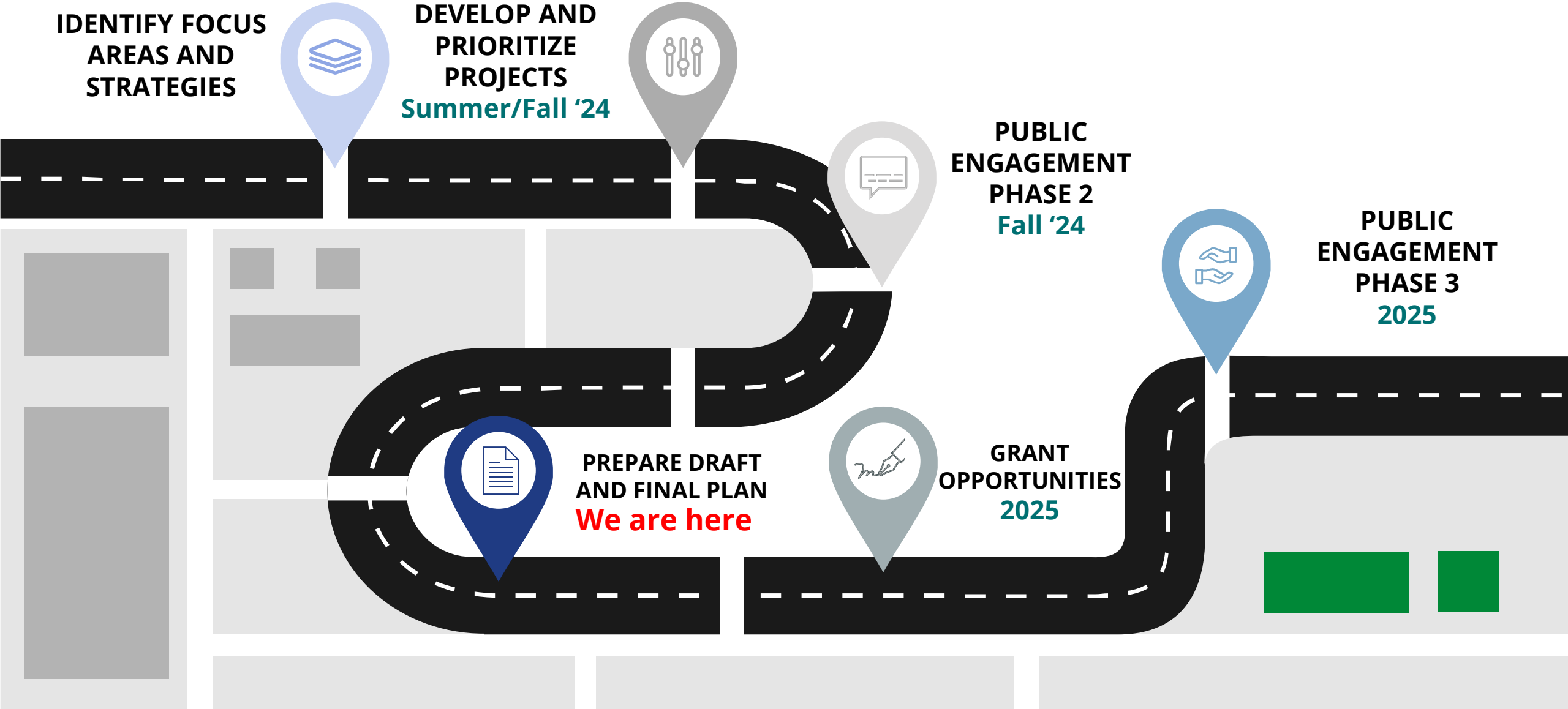
04 Next Steps

NEXT STEPS


IDENTIFY FOCUS AREAS AND STRATEGIES
DEVELOP AND PRIORITIZE PROJECTS
Summer/Fall ‘24
PUBLIC ENGAGEMENT PHASE 2
Fall ‘24
PUBLIC ENGAGEMENT PHASE 3
2025
PREPARE DRAFT AND FINAL PLAN
We are here
GRANT OPPORTUNITIES
2025

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05 Q&A


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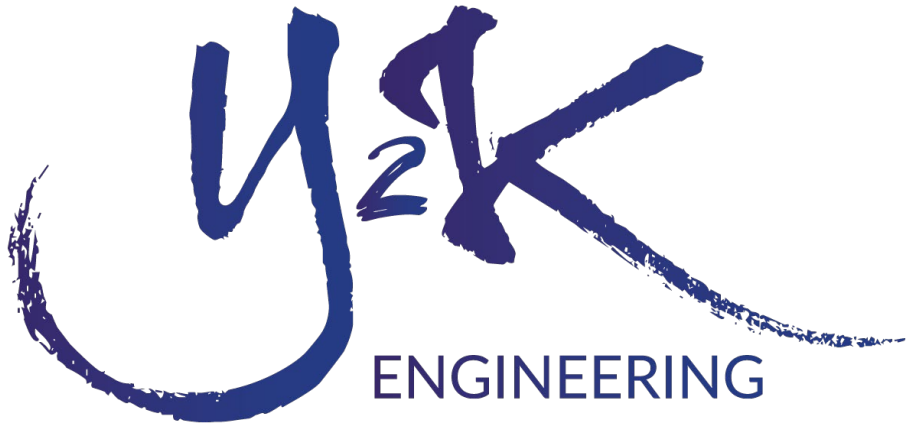
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