

Meeting Summary

Date: May 13, 2025; **Revised May 30, 2025**

29 Road Interchange at I-70, NEPA/1601 Project

Meeting Name: TAC Meeting #14

Meeting Date: April 7, 2025

Invitees:

Invitee	Organization	Attended?	Invitee	Organization	Attended?
Kevin King	Mesa County	X	Melanie Bishop	FHU	X (virtual)
Scott Mai	Mesa County	X	Paul Brown	FHU	X
Laura Page	Mesa County	X (virtual)	John Dibble	FHU	X (virtual)
Daniel Larkin	Mesa County	X	Cady Dawson	FHU	X (virtual)
Trent Prall	Grand Junction	X	Alex Pulley	FHU	X
Eric Mocko	Grand Junction	X	Amanda Cushing	FHU	X
Dana Brosig	RTPO	X	Mark Bunnell	CDOT	X
Dean Bressler	RTPO	X (virtual)	Nathan Lindquist	CDOT	X (virtual)
Rachel Peterson	RTPO	X	Rob Beck	CDOT	X (virtual)
Konrad LaDow	FHWA	X (virtual)	Zane Znamenacek	CDOT	X

Meeting Summary

Invitee	Organization	Attended?	Invitee	Organization	Attended?
Andy Gingrich	RTPO	X	Dave Cesark	CDOT	X

Note: Not all details that were included in the presentation are shown in this summary, but comments and discussion brought up during the presentation are included; discussion is denoted as **blue** text. Data that was received following the meeting is denoted in **pink** text.

Meeting materials can be found at the end of this meeting summary.

Meeting Goal:

Reach consensus on Interchange elements to move forward.

Agenda:

- ▶ Welcome and Introductions
- ▶ TAC #13a (February 2025) follow-up
 - ▶ Operations
 - ▶ Crash Analysis
 - ▶ Alignments
- ▶ Capacity Issues in 2045
- ▶ Next Steps
- ▶ Schedule

Discussion

CDOT and FHU have met several times and discussed four key project topics (listed below). This meeting continued discussion of those topics and several key takeaways were developed.

- ▶ I-70 as a “Local Road.”
 - ▶ This was discussed during TAC meeting #13a.



- ▶ I-70 Future Congestion and Proposed Mitigation
- ▶ Safety: I-70 Curve
- ▶ Safety: Overall Network

I-70 Future Congestion and Proposed Mitigation

Four measures have been discussed to address I-70 future congestion:

- ▶ Auxiliary Lane (included in the draft SLS as the preferred mitigation option)
- ▶ Collector-Distributor (C-D) Road
- ▶ Braided Ramps
- ▶ 6-lane I-70 freeway

Several takeaways have been shared previously and were reiterated in this meeting:

- ▶ All options provide acceptable freeway operations.
- ▶ The C-D road and braided ramp scenarios reduce volumes through the I-70 curve.
- ▶ The 6-lane I-70 freeway scenario adds capacity through the Grand Valley.

The concept of a 6-lane I-70 freeway from 22 Road (Exit 26) to Palisade (Exit 42) – 16 miles on I-70 was revisited.

- ▶ Is this full segment really needed?
- ▶ Is this need directly related to 29 Road?

Travel Demand Model Outputs – AM Peak Period

2045: No Action (AM): The volume to capacity (v/c) ratio¹ between **Horizon Drive and I-70B/Clifton** on westbound I-70 is greater than 1.0.

2045: With 29 Road Interchange (AM): The v/c ratio between **Horizon Drive and the proposed 29 Road Interchange** on westbound I-70 is greater than 1.0.

¹ The volume to capacity ratio (v/c ratio) is the ratio between traffic volume along a roadway segment and the capacity of that segment. A v/c ratio over 1.0 is a planning-level indication that a roadway that is operating over capacity and improvements may be warranted.

Meeting Summary

2045: With 29 Road Interchange and a 6-lane I-70 freeway (AM): No mainline I-70 v/c ratios exceed 1.0, but the v/c ratio at the I-70 and Horizon Drive off-ramp is greater than 1.0.

Travel Demand Model Outputs – PM Peak Period

2045: No Action (PM): No mainline I-70 v/c ratios exceed 1.0.

2045: With 29 Road Interchange (PM): The v/c ratio between **Horizon Drive and the proposed 29 Road Interchange** on eastbound I-70 is greater than 1.0.

2045: With 29 Road Interchange and a 6-lane I-70 facility (PM): No mainline I-70 v/c ratios exceed 1.0.

6-lane I-70 Freeway: Discussion

- ▶ The need is primarily between Horizon Drive and Clifton
- ▶ The need exists with or without the 29 Road project

Question: How does the auxiliary lane affect traffic congestion?

Response: The auxiliary lane mitigates the forecasted poor LOS in the westbound AM peak hour scenario.

Question: Should we deal with the congestion during a small amount of time by widening the entire freeway? In other words, is 6-laning necessary for this project?

Response: This is FHWA's decision.

Statement: MPO staff noted that the v/c ratio between 29 Road and Horizon Drive is 0.85 according to preliminary 2050 model runs. Although these runs are subject to change, the MPO has seen that preliminary 2050 forecasts are lower than the current year 2045 forecasts.

Statement: Changing I-70 into a 6-lane freeway seems to be too big, especially with unknowns.

Statement: Be sure to mention all the “connected actions” in the documentation.

I-70 Future Congestion and Proposed Mitigation: Conclusion

The TAC concluded that a 6-lane I-70 is not forecasted to be needed before year 2050, and that this mitigation would be unnecessary to address one hour of forecasted 2045 congestion. Hence, construction of a 6-lane I-70 should not be a 29 Road project commitment.

Safety: I-70 Curve

The team reviewed the proposed changes to the I-70 curve mitigations from the CDOT workshop:

- ▶ **Widen the I-70 inside shoulder:** Using the highway safety software (HSS), predicted crashes were reduced.
- ▶ **Lower the I-70 speed limit:** HSS was not used; no crash modification factor (CMF) was available.
- ▶ **Add enhanced warning signs at the I-70 curve:** HSS was not used; however, a CMF was used.
- ▶ **Move the proposed 29 Road interchange to the east:** Using HSS, predicted crashes increased.

These changes produced the following updated safety results:

Freeway Predicted Crashes (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
Westernmost	63.1	33.5	96.6
West	63.6	33.7	97.3
East	63.9	33.8	97.7
Easternmost	64.2	33.9	98.1

Freeway Predicted Crash Rates (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
No Action	1.14	0.80	1.94
Build (Base)	1.00	0.64	1.64
Auxiliary Lane	1.00	0.65	1.65
C-D Road	1.32	0.90	2.22
Braided Ramps	0.77	0.40	1.17
6-lane I-70 freeway	0.88	0.5	1.38

Safety: I-70 Curve Conclusion

Moving the interchange to the east increases predicted crashes as the segment has a greater distance between the Horizon Drive interchange and the proposed 29 Road easternmost interchange scenario compared to the westernmost interchange scenario.

Safety: Overall Network

Despite adding an interchange which inherently creates more conflict points, project goals must address the following:

- ▶ No increase in severe crashes (fatal and injury)
- ▶ Decrease in freeway crash rate

Project Goal (Fatal and Injury Crashes)

Scenario	Fatal and Injury Goal Met?	
	Freeway	Overall Network
Auxiliary Lane	No	No
C-D Road	Yes	No
Braided Ramps	Yes	Yes*

Meeting Summary

Scenario	Fatal and Injury Goal Met?	
	Freeway	Overall Network
6-lane I-70 freeway	Yes	Yes

*** Increases severe crashes in the arterial network**

Project Goal (Decreased Crash Rate)

Scenario	Freeway
Auxiliary Lane	Yes
C-D Road	No
Braided Ramps	Yes
6-lane I-70 freeway	Yes

Question: Does the auxiliary lane not have a safety benefit?

Response: There is a limitation in the HSS that does not allow for robust modeling of auxiliary lanes.

Question: Please explain the asterisk in the table.

Response: Because the braided ramp scenario forces some traffic to remain in the arterial network instead of using I-70, the higher arterial volumes result in an increase in predicted crashes outside of the I-70 corridor. The potential to create an additional connection to allow this traffic movement was discussed and will be further evaluated.

Safety: Overall Network Conclusion

Given the potential to refine the braided ramp option to allow for the movement between 29 Road and Horizon Drive using a ramp connection, no conclusion was reached. FHU to evaluate using the BCA to determine if the reduced crashes with the braided ramp outweighs the additional costs.

Meeting Summary

General Questions and Statements:

Question: Regarding moving the interchange to the east, does the option retain the existing 29 Road bridge?

Response: The option shown does not maintain the existing 29 Road bridge. However, it maintains access to the substation and other private property.

Statement: The benefit cost analysis (BCA) is underway which will include volume, emissions, traffic, and maintenance.

Statement: There is a trade-off with congestion and safety.

Statement: The FHWA requirement states that there can be “no adverse impact to the freeway.”

Question: Does CDOT approve of the eastern location of the interchange and should the project include the auxiliary lane?

Response: Safety outweighs congestion. With the braided ramp, safety can be achieved, and congestion can be reduced. However, if the braided ramp is advanced, the “westernmost” interchange would be an appropriate location as it would reduce construction costs.

Action Items Reviewed/Completed (from previous TAC and other meetings)

- ▶ FHU to calculate crash rates and review at the next TAC meeting. **Completed, see page 5.**
- ▶ FHU to re-review the G Road skew due to question brought up during TAC meeting #13a. **This will be reviewed during conceptual design.**

Action Items

- ▶ FHU to review the LOS in terms of densities as it may be just enough change in density of a few tenths that it pushes it over the LOS threshold.
 - ▶ **Post Meeting Response:** FHU reviewed the freeway operational analyses to determine if the LOS F results shown in various TAC meetings were near the level of service density threshold and might reflect an LOS E condition under slightly different circumstances. The LOS F results are based on a capacity check in the analysis methodology. Since this capacity check failed, densities were not considered in determining the level of service. The inputs for the capacity check were four percent to eight percent over the capacity threshold, and we would not consider these values close to the LOS E/F threshold.
- ▶ FHU to prepare a BCA to evaluate if the reduced crashes with the braided ramp out-weighs the additional costs.

Decisions Made

- ▶ The 6-lane I-70 option is not necessary to be included in the 29 Road Interchange Project and will not be advanced further.
- ▶ The TAC reached agreement that the Auxiliary Lane is not warranted, especially when considering safety and will not be evaluated further.
- ▶ The TAC felt that some congestion in 2045 modelling was acceptable because the overall 2050 volumes are decreasing and safety was a higher priority.

Next Steps

- ▶ Complete the BCA and include the No Action alternative, the Preferred Alternative (the proposed 29 Road interchange with no aux lane) and the braided ramp scenario.
- ▶ Hold TAC meeting #15 meeting to review the BCA.

Meeting Summary

- ▶ Submit the SLS revised draft.

Schedule

- ▶ Due to Executive Director Lew's leave of absence, the goal is to present at the Transportation Commission Workshop in July 2025.
- ▶ Complete NEPA analysis and conceptual design.
- ▶ RS/TC Determination (air quality) anticipated for Summer 2025.
- ▶ Initiate Interstate Access Justification Request.

I-70 Interchange in Grand Junction – TAC Meeting #14

April 7, 2025

Agenda

- ▶ Welcome and Introductions
- ▶ TAC 13 (February 2025) Follow-up
 - ▶ Operations
 - ▶ Crash Analysis
 - ▶ Alignments
- ▶ Capacity Issues in 2045
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Meeting Goal:

Reach Consensus on Interchange Elements to Move Forward

CDOT Workshop Follow-Up

- ▶ I-70 as a Local Road
 - ▶ *Future Congestion*
 - ▶ Safety: I-70 Curve
 - ▶ Safety: Overall Network
- 

Future Congestion

- ▶ Options discussed:
 - ▶ Auxiliary Lane (preferred option in Draft SLS)
 - ▶ C-D Road
 - ▶ Braided Ramps
 - ▶ 6-lane I-70
- ▶ Traffic operations have been evaluated
 - ▶ HCS, consistent with previous analyses
 - ▶ Volumes for new options updated with recent model runs

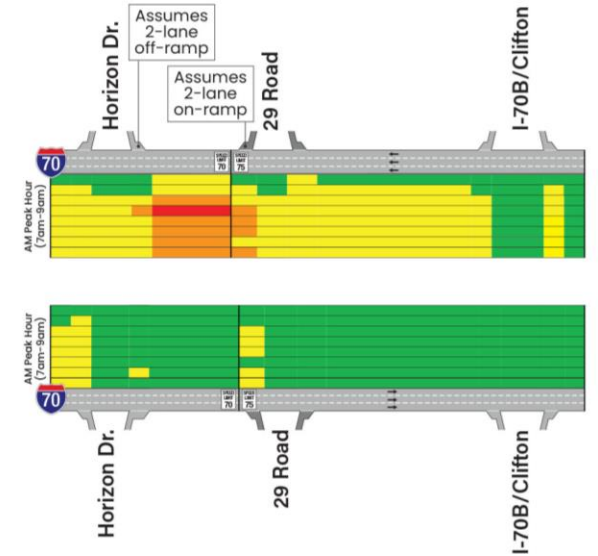
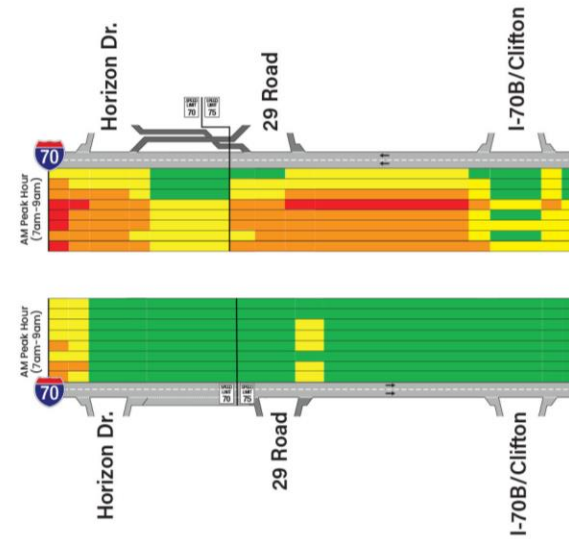
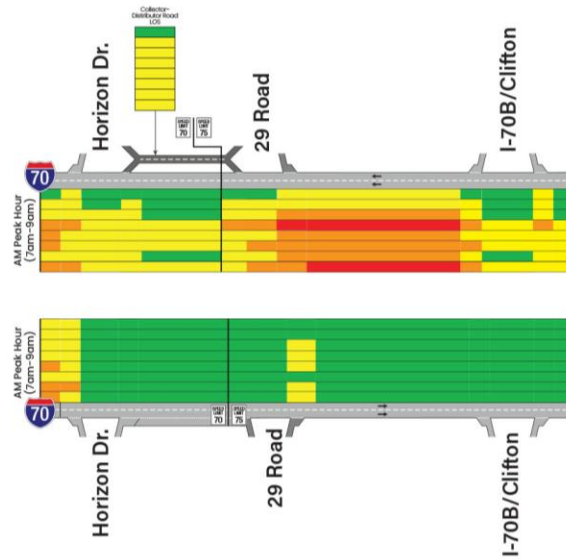
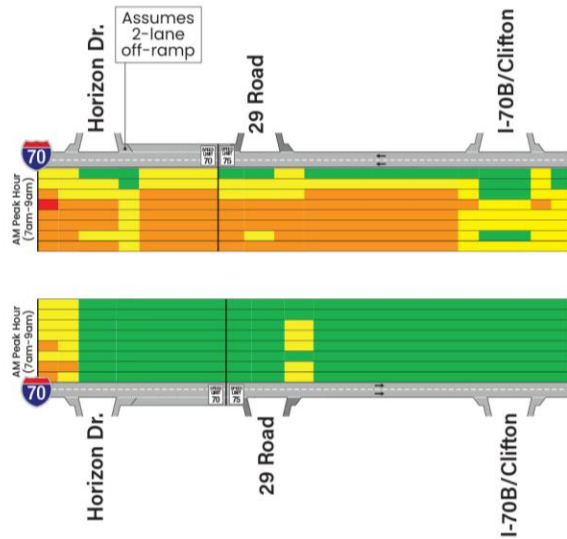
2045 with 29 Road and Aux Lane

2045 with 29 Road and C-D Road

2045 with 29 Road and Braided Ramps

2045 with 29 Road and 6 Lane

WESTBOUND AM



EASTBOUND AM

LEGEND



I-70 Option Operations (2045 AM Peak Period)

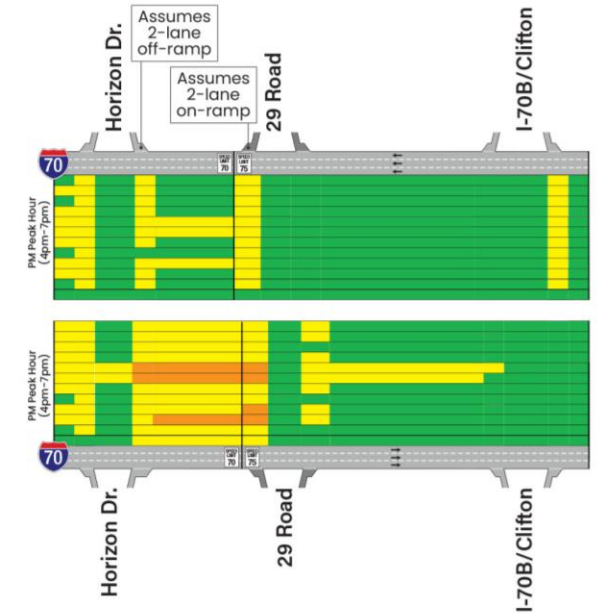
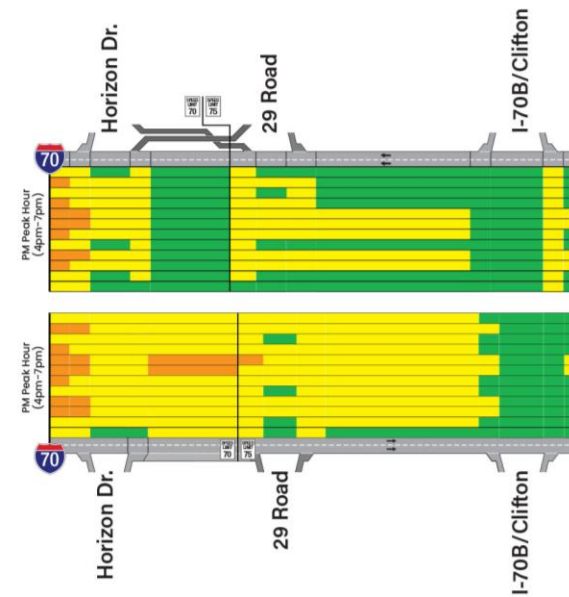
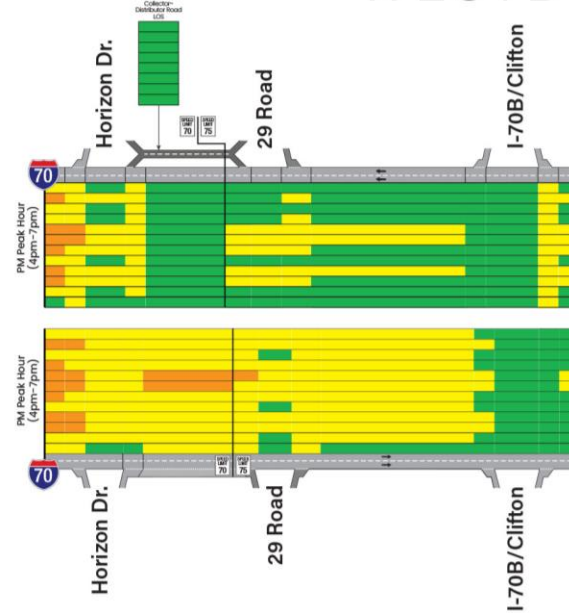
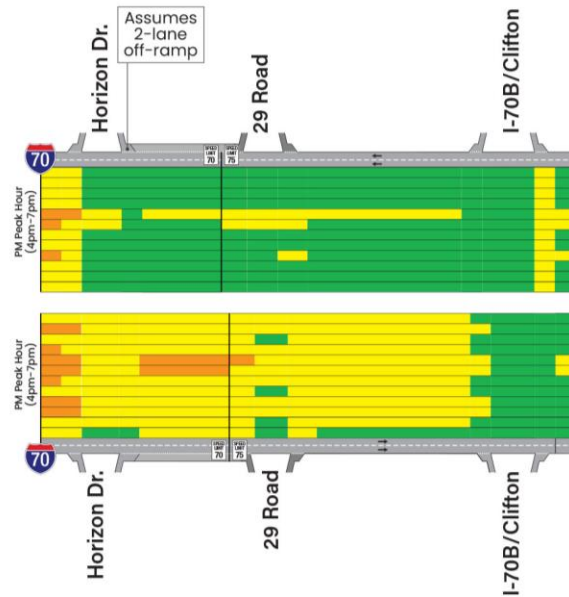
2045 with 29 Road and Aux Lane

2045 with 29 Road and C-D Road

2045 with 29 Road and Braided Ramps

2045 with 29 Road and 6 Lane

WESTBOUND PM



EASTBOUND PM

LEGEND



I-70 Option Operations (2045 PM Peak Period)

Future Congestion: *Conclusion*

- ▶ All options provide acceptable freeway operations
- ▶ The C-D road and braided ramp scenarios reduce volumes through the curve
- ▶ The 6-lane scenario adds capacity through the Grand Valley

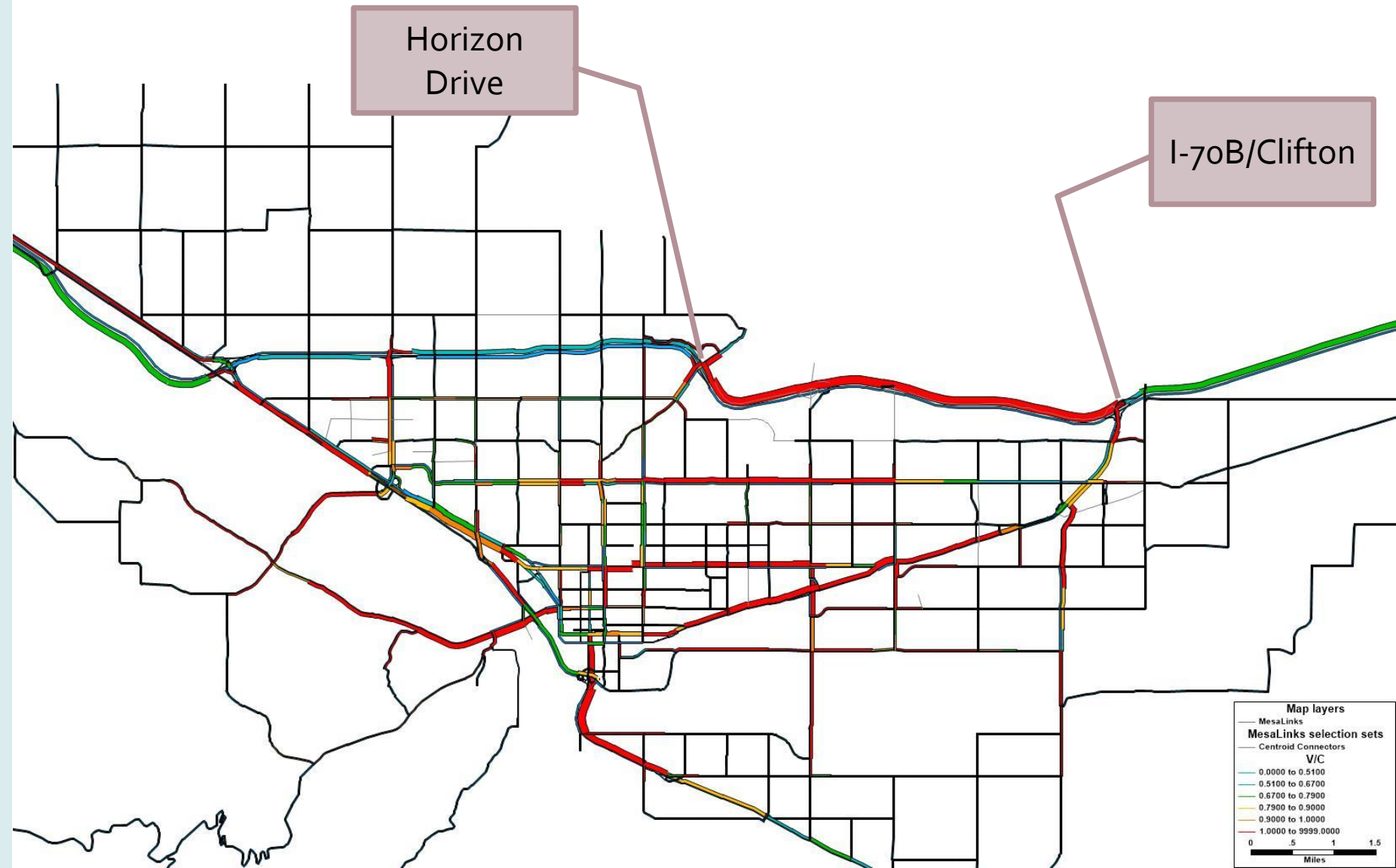
Scenario	15-minute periods at LOS D or worse	Location(s)
Auxiliary Lane	1	West of Horizon Drive
C-D Road	2	Between Clifton and 29 Road
Braided Ramps	1	Between Clifton and 29 Road
	5	West of Horizon Drive
6-lane I-70	1	Between 29 Road and Horizon Drive

Extents of 6-Lane I-70 Concept: Background

- ▶ Initial concept included sixteen miles of I-70
 - ▶ 22 Road (Exit 26)
 - ▶ Palisade (Exit 42)
- ▶ Questions:
 - ▶ Is this full segment really needed?
 - ▶ Is this need directly related to 29 Road?
- ▶ Travel Demand Model Outputs

2045: No Action AM

Red = v/c
greater
than 1.0

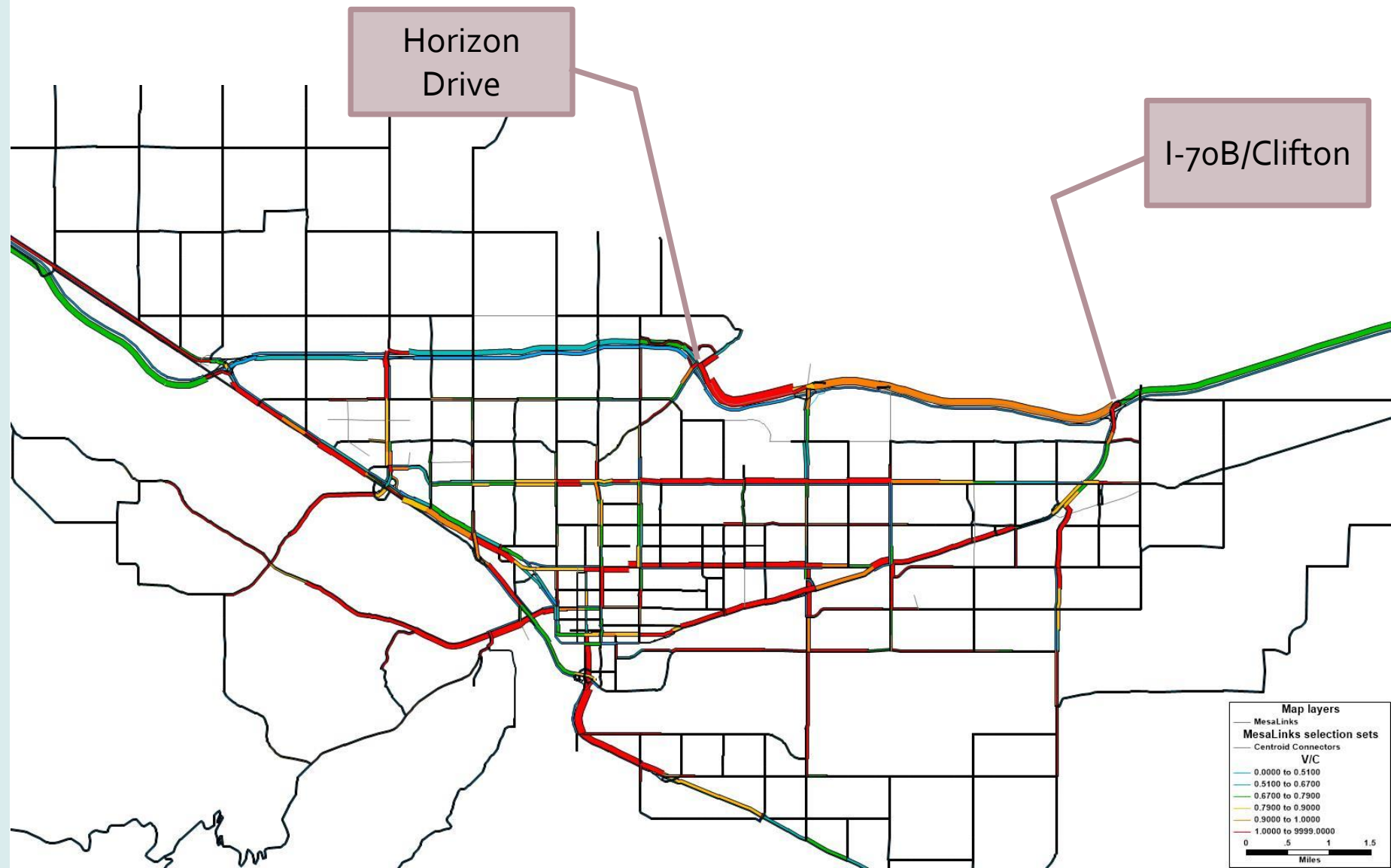


2045:

**With 29 Rd
Interchange**

AM

Red = v/c
greater than
1.0

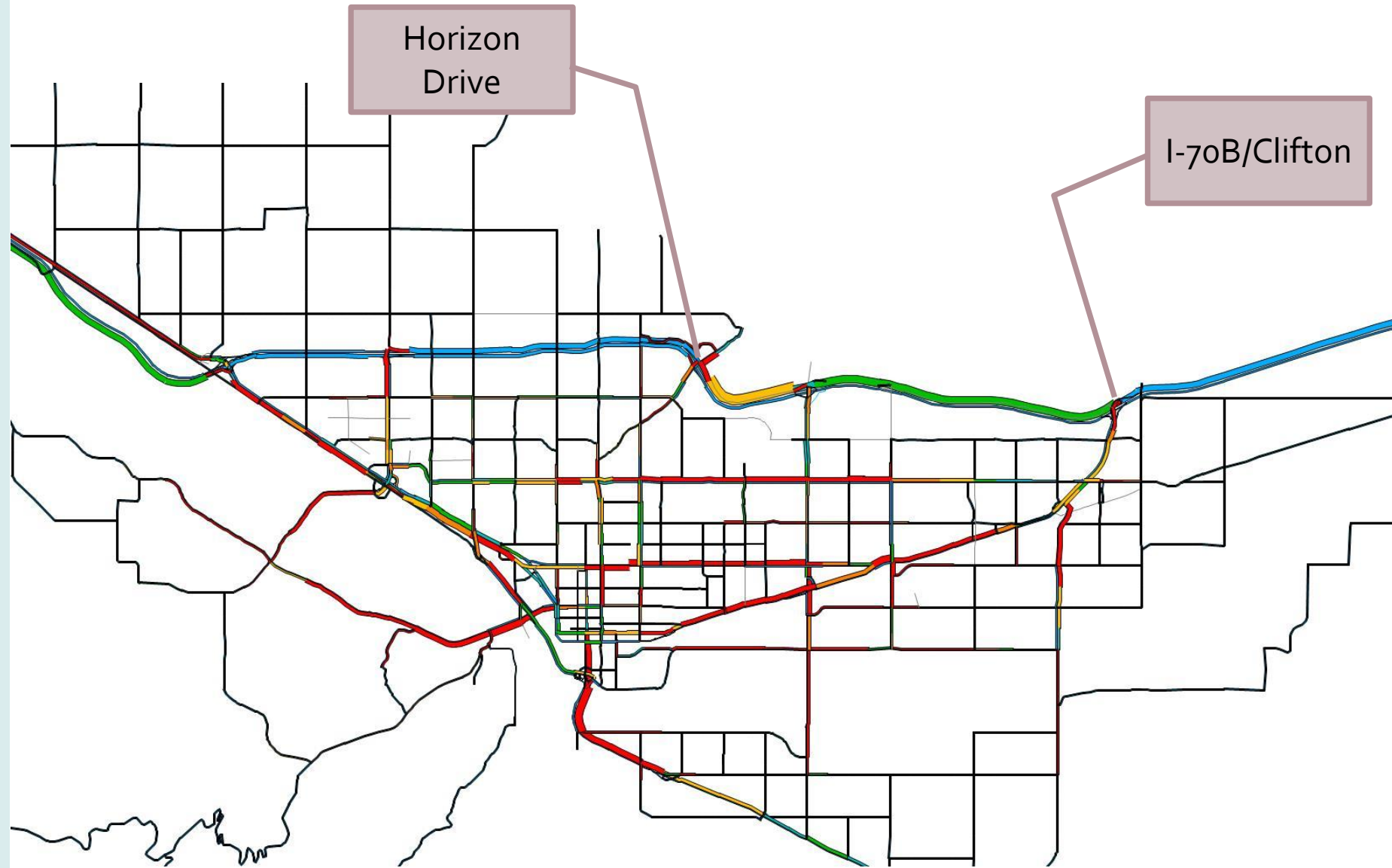


2045:

**With 29 Rd
Interchange
&
I-70 6-Lane**

AM

Red = v/c
greater than
1.0

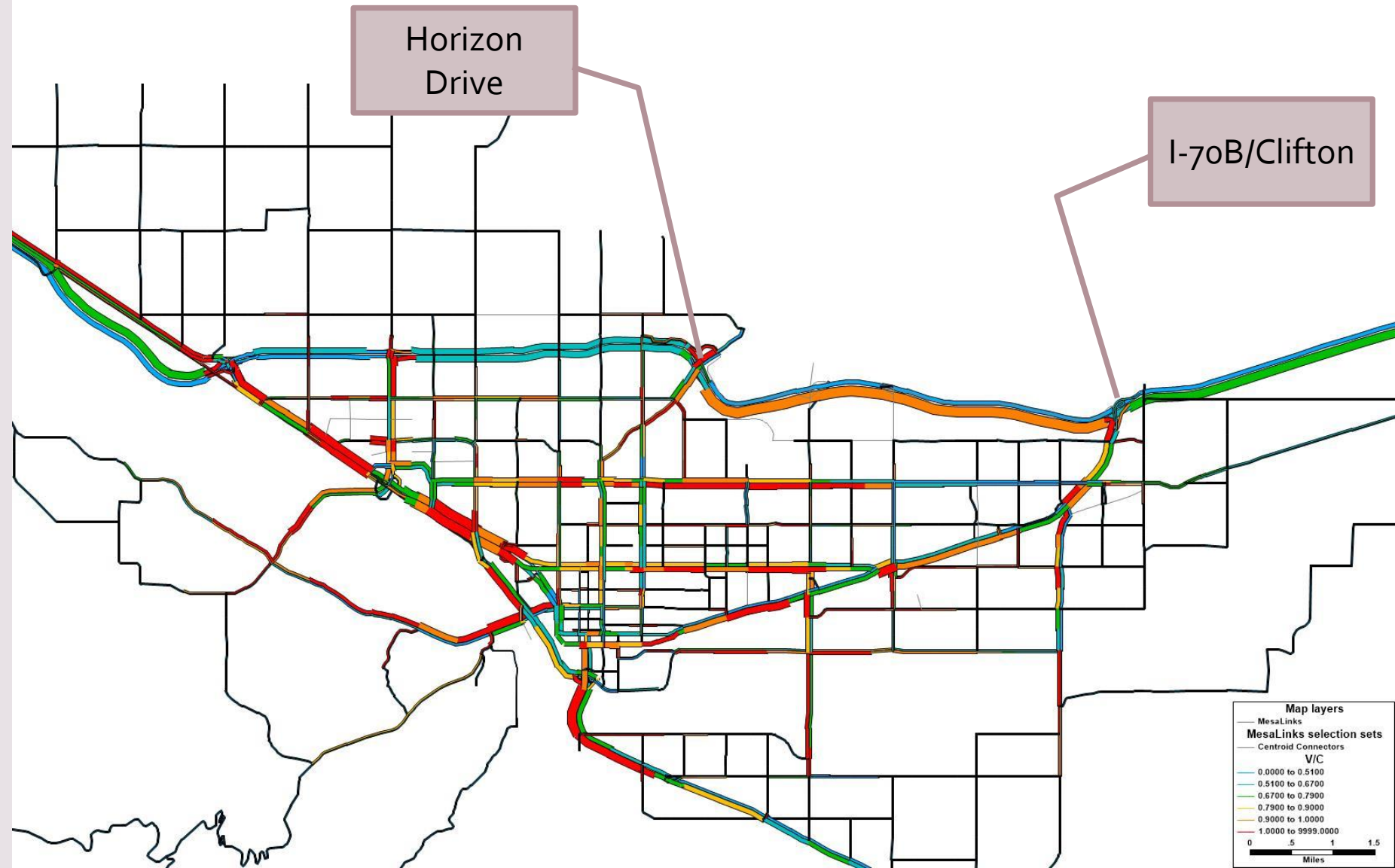


2045:

No Action

PM

Red = v/c
greater than
1.0

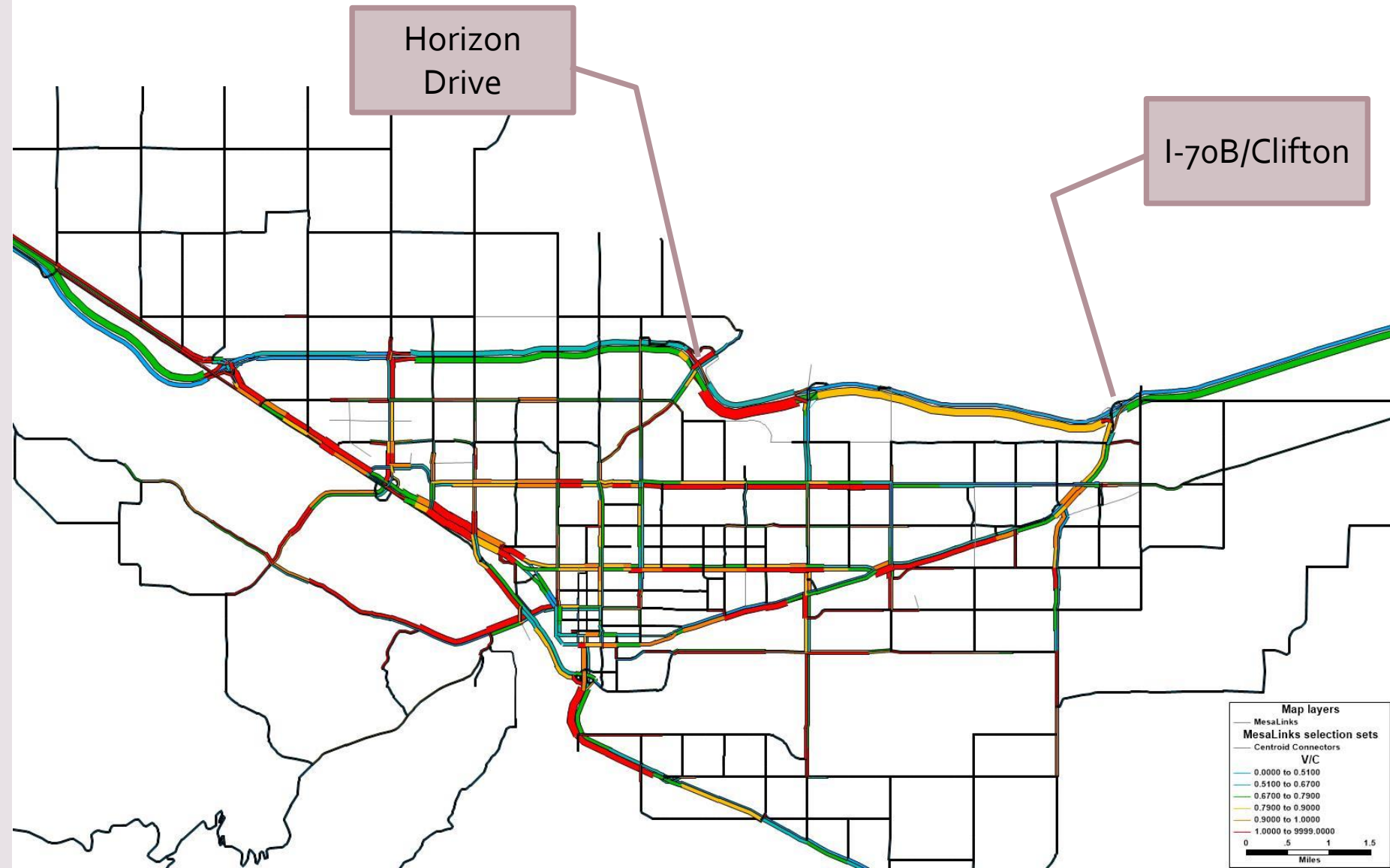


2045:

**With 29 Rd
Interchange**

PM

Red = v/c
greater than
1.0

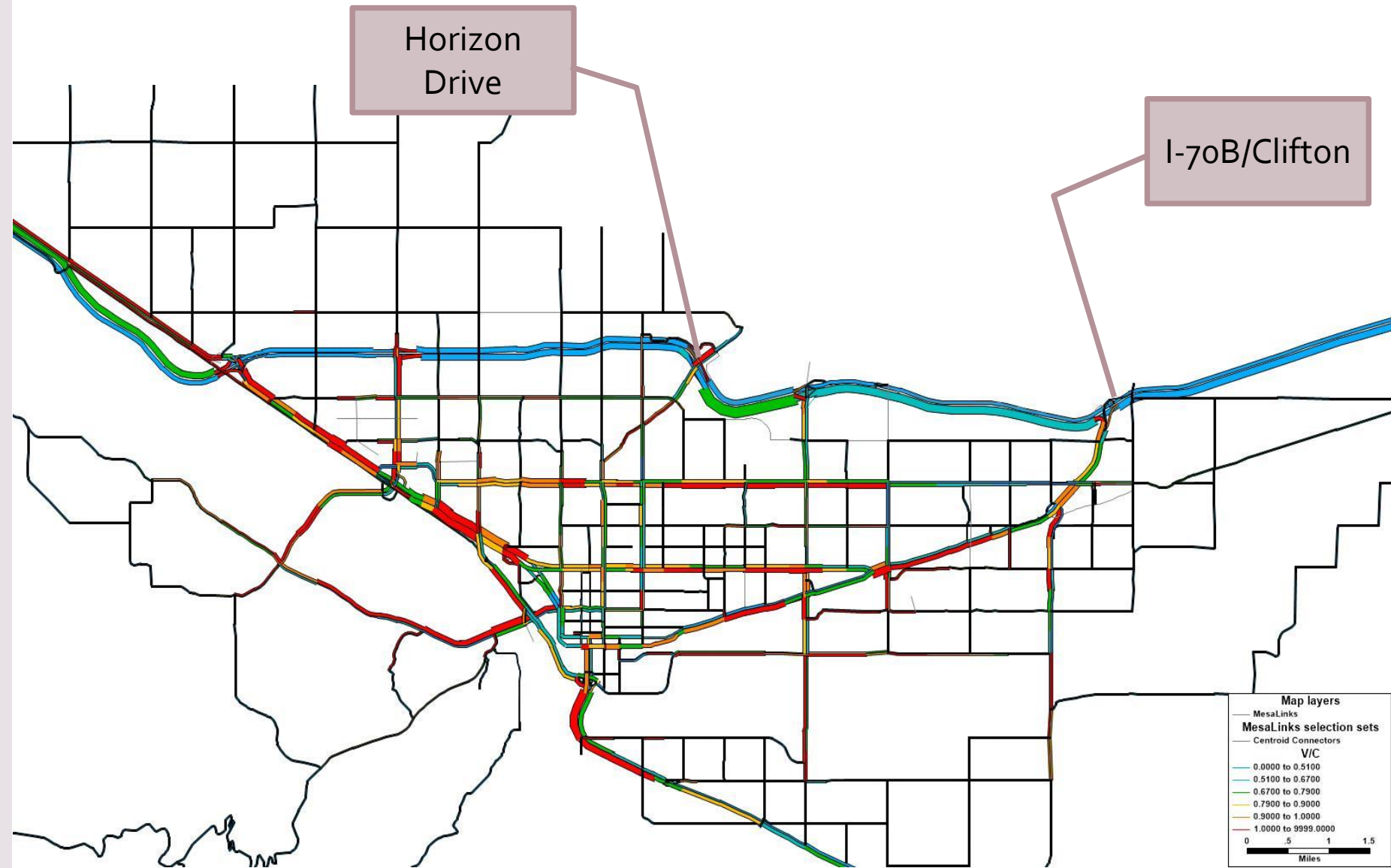


2045:

**With 29 Rd
Interchange
&
I-70 6-Lane**

PM

Red = v/c
greater than
1.0



Extents of 6-Lane I-70 Concept: Conclusion

- ▶ The need is primarily between Horizon Drive and Clifton
 - ▶ The need exists with or without the 29 Road project
- 

CDOT Workshop Follow-Up

- ▶ I-70 as a Local Road
 - ▶ Future Congestion
 - ▶ ***Safety: I-70 Curve***
 - ▶ Safety: Overall Network
- 

Safety: I-70 Curve

- ▶ Changes from the CDOT workshop:
 - ▶ Widened inside shoulder: Reduced predicted crashes in HSS
 - ▶ Lowered speed limit: No HSS change, no CMF
 - ▶ Enhanced curve warning signage: No HSS change, used CMF
 - ▶ Moved interchange east: Increased crashes in HSS
- ▶ Overall Result
 - ▶ Moving the interchange east increases predicted crashes

Safety: I-70 Predicted Crashes

Freeway Predicted Crashes (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
Westernmost	63.1	33.5	96.6
West	63.6	33.7	97.3
East	63.9	33.8	97.7
Easternmost	64.2	33.9	98.1

Safety: I-70 Predicted Crash Rates

Freeway Predicted Crash Rates (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
No Action	1.14	0.80	1.94
Build (Base)	1.00	0.64	1.64
Auxiliary Lane	1.00	0.65	1.65
C-D Road	1.32	0.90	2.22
Braided Ramps	0.77	0.40	1.17
6-Lane I-70	0.88	0.50	1.38

CDOT Workshop Follow-Up

- ▶ I-70 as a Local Road
 - ▶ Future Congestion
 - ▶ Safety: I-70 Curve
 - ▶ *Safety: Overall Network*
- 

Safety: Overall Network

- ▶ Adding interchange increases predicted crashes
 - ▶ More conflict points
 - ▶ Longer / wider 29 Road
- ▶ Project Goals:
 - ▶ No increase in severe crashes (fatal and injury)
 - ▶ Decrease freeway crash rate

Scenario	No F&I Increase Goal Met?	
	Freeway	Overall Network
Auxiliary Lanes	No	No
C-D Road	Yes	No
Braided Ramps	Yes	Yes*
6-Lane I-70	Yes	Yes

Scenario	Decreased Rate Goal Met?
	Freeway
Auxiliary Lanes	Yes
C-D Road	No
Braided Ramps	Yes
6-Lane I-70	Yes

* - Increases severe crashes in the arterial network

Safety: Overall Network

Freeway Predicted Crashes (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
No Action	85	38	123
Build (Base)	95	38	133
Auxiliary Lanes	95	39	134
C-D Road	87	36	124
Braided Ramps	76	31	107
6-Lane I-70	90	34	125

Study Area Predicted Crashes (2045)

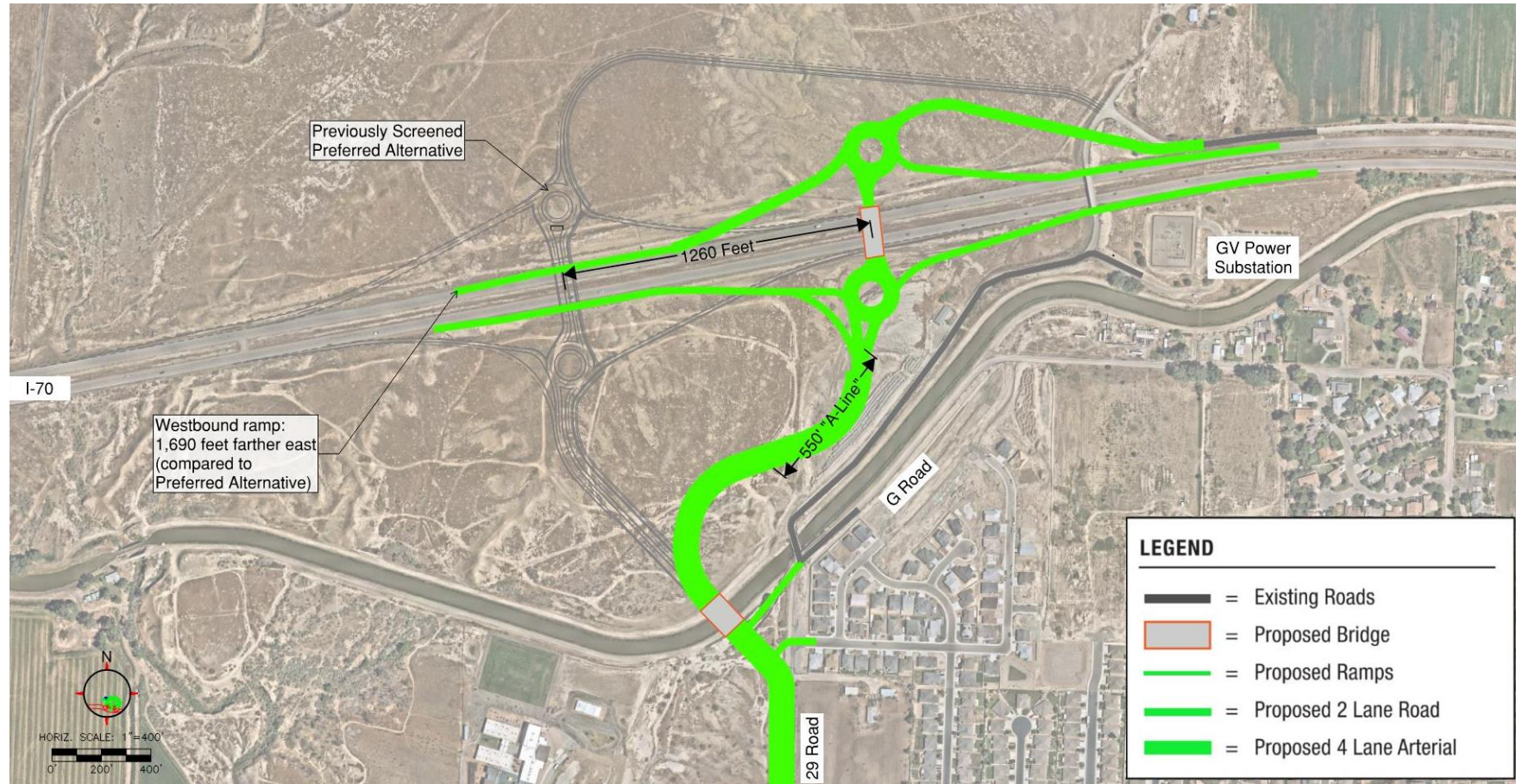
Scenario	Property Damage Only	Fatal and Serious Injury	Total
No Action	147	68	215
Build (Base)	166	70	236
Auxiliary Lanes	166	71	237
C-D Road	159	68	227
Braided Ramps	149	65	214
6-Lane I-70	162	66	228

Preferred
Alternative

Move Interchange to the East

- ▶ Re-evaluated one option previously not carried forward during Level 2 Screening
- ▶ Developed additional options
 - ▶ Four options & one sub-option
 - ▶ Used substation as eastern boundary
 - ▶ Included 550-foot Access Control Line to constrain options

- ▶ FHWA Highway Capacity Manual Area of Influence = 1,500 feet (Regardless of Volume)
- ▶ Westbound 29 Road On-Ramp =
~3,900 feet from Curve
- ▶ Eastbound 29 Road Off-Ramp =
~3,700 feet from Curve



Shifted Interchange East

- Focused on Fatal and Injury Crashes (no increases over No Action)
 - Decrease in Fatal and Injury Crash Rates overall; but total crashes increased

Freeway Predicted Crash Rates (2045)

Scenario	Property Damage Only	Fatal and Serious Injury	Total
No Action	1.14	0.80	1.94
Build (Base)	1.00	0.64	1.64
Auxiliary Lane	1.00	0.65	1.65
C-D Road	1.32	0.90	2.22
Braided Ramps	0.77	0.40	1.17
6-Lane I-70	0.88	0.50	1.38

Crash Rates

Overall Project Next Steps

- ▶ Submit System Level Study to CDOT Transportation Commission
 - ▶ Including TDM strategies
- ▶ CDOT Transportation Commission Presentation/Vote
 - ▶ May/June
- ▶ Initiate Interstate Access Justification Report
- ▶ Complete NEPA Analysis/Design
 - ▶ RS/TC Determination (Air Quality)
 - ▶ Summer 2025

Thanks!