



COLORADO

Department of Transportation

To: 29 Road / I-70 Interchange Project Team
From: Zane Znamenacek, CDOT R3 Traffic Engineer
Mark Bunnell, CDOT R3 Traffic Safety Engineer
Date: 13 August 2024

Subject: CDOT R3 Traffic Comments on the 29 Road / I-70 SLS

CDOT Region 3 Traffic Unit reviewed the Revised 29 Road / I-70 Interchange System Level Study (SLS) and have the following comments:

Comments on the SLS:

- Figure 1-1, Page 4** - The 29 Road section from North Ave to Patterson Rd is dashed indicating future improvements, but the text box states, "Complete Opened 2002". Please clarify.
- Section 1.5, Page 10, First P (clarification on previous comment)** - CDOT issued a revised version of the Traffic Analysis and Forecasting Guidelines in 2023; were there any changes between the 2018 and 2023 versions that impact the analysis in this SLS?
This comment is not asking the project team to revise the SLS analysis per the updated Traffic Analysis and Forecasting Guidelines; this is asking for the project team to comment on whether there are any modifications to the guidelines that would have resulted in changes to the 29 Road SLS analyses techniques or results.
- Figure 3-3, Page 22** - R1: the eastbound right-turn to Horizon Dr is shown as a thru movement.
- Table 3-4, Page 25** - Add a footnote to this table that lists the total off-ramp length and required deceleration length so the reader knows how the "Available Storage" number was determined.
[Please add this footnote to Table 4-3 (2045 Background), 4-5 (2030 Background), 6-3 (2045 Preferred Alt), and 6-5 (2030 Preferred Alt) so the reader does not have to refer back to Table 3-4 to find the information.
- Table 3-11, Page 34** - Why did the crash summary change from the previous version of the SLS?
- Traffic Volume Figures (4-2, 4-6, 6-4, 6-8)** - The traffic volumes should balance along I-70 and between I-70 and ramp terminal intersections. The traffic volumes along I-70 are balanced, with one exception (Fig 4-6 EB AM). The traffic volumes are not balanced sufficiently between I-70 (top portion of figure) and the ramp terminal intersections

(lower portion of figure). Many of the discrepancies are minor (less than 10%), but those over 10% should be adjusted.

- Fig 4-2, PM, between Int #7 and I-70B on-ramps
- Fig 4-2, PM, between Horizon EB Off-ramp and R1
- Fig 4-6, AM, between Horizon EB Off-ramp and R1
- Fig 6-4, AM, SB between Int #7 and Int #6
- Fig 6-4, AM, between 29 Rd WB Off-ramp and R4
- Fig 6-4, AM, between 29 Rd EB Off-ramp and R3
- Fig 6-8, PM, between R4 and 29 Rd WB On-ramp

7. **Section 6.1.1, Page 91, Second P “new interchange would increase I-70 volumes” (addendum to previous comment)** - Show the volumes and percentages from the appendix (provided as a result of a previous CDOT comment) in a table and/or figure in the body. Clearly state what the volumes and percentages represent so the reader understands how the 29 Road interchange will facilitate I-70 being used as a local road.
8. **Table 6-1, Page 96** - Does the cost estimate include the ROW and construction cost for the park-n-ride? Please clarify that the cost estimate includes an auxiliary lane on I-70 in both directions.
9. **Table 6-3, Page 102** - Please explain what “critical” means for the WB off-ramp?
10. **Table 6-7, Page 118** - To clarify, the Preferred Alternative results presented in this table are based on the mitigations listed in Section 6.4.3?
11. **Section 6.4.3, Page 121, Braided Ramps and C-D Road** - The CDOT Traffic Unit and FHWA discussed the braided ramps and C-D options, and detailed analysis of these options is required. The conceptual layout, operational analysis, predictive crash analysis, cost estimates, and other relevant information for these options must be provided in the SLS.
12. **Table 7-1, Page 126, 2030 ADT** - provide the calculations on how the 7,660 ADT was derived.
13. **Section 7.5.2, Page 142, TMO/TMA Trip Reduction Potential, last bullet point** - Please clarify if all these trips are assumed to be to/from I-70, or if a portion of the trips were assumed not to use I-70.
14. **Section 7.5.3, Page 142** - The park-and-ride should be located on the south side of the interchange; otherwise, almost all of the carpool trips will have to drive thru the interchange two extra times.
15. **Section 7.5.3, Page 142** - Please clarify when the park-n-ride is anticipated to be constructed - before or after the opening of the interchange?
16. **Section 7.5.3, Page 143, shaded box** - Does the trip reduction take into account carpools that will originate from outside the 29 Rd area? For example, two folks arrange a carpool (one from the 29 Road area and one from the 24 Road area) to commute east of GJ and they meet at the 29 Road park-and-ride. This type of carpool will increase the trips on the 29 Rd ramps.
17. **Section 7.5.4, Page 144-145** - Provide an explanation as to where these folks are headed to/coming from that would have used the interchange in a car, but will now ride a bicycle because there are bicycle facilities along 29 Road. It seems that the

bicycle facilities should be provided to/from destinations (that would eliminate trips on I-70) and not just along 29 Road.

18. **Section 7.5.5, Page 146, 148** - From Figure 7-8 it appears that a much greater percentage of students would not use I-70 to travel to/from the school, such that a 50% reduction is not realistic.
19. **Section 9, Page 159, “South of I-70” (clarification of previous comment)** - The text states, “These existing parcels will retain access through a new 29 Road access between the A-line and the Highline Canal.” Is this statement correct?
20. **Appendix F** - It appears the HSS output was removed from this version; please include this.
21. **Appendix H, Level 1 Screening Results, Bullet points after Table 2 (addendum to previous comment)** - Per Angela Padalecki’s email (attached to TAC Mtg #4 Summary, the airport has “no concerns with the selection of 29 Rd”. This statement appears to be more in line with a Neutral vote, and not a Fully Support vote. Unless the Project Team has other communication from the airport that states otherwise, the airport should be listed as neutral.
22. **Appendix C of Appendix H, 29 and 30 Road Screening Matrix** - The GJ Airport (Angela Padalecki) stated in an email (dated, Nov 3, 2022) to the project team, “we do not believe the 30 Rd. option crossing the critical zone for Runway 11 is problematic, and suggest that documentation reflects neutral/yellow versus the red currently shown for that element.” This change should have been made to versions of the matrix presented after the date of the email. While this correction would not change the outcome of the 29 Rd vs 30 Rd evaluation, it does bring into question whether the project team is forthcoming with all information / results that are not favorable to their position.
23. **Appendix H, “I-70 Safety Concerns” (addendum to previous comment)** - The statement, “A 25% reduction in total crashes” appears to be incorrect based on the data listed in Table 28 in Appendix D. Please revise accordingly.