

Explain the proposed alternative and compare to the ECM standards (May provide applicable regional or national standards used as basis):

The ECM requires turn lanes to include deceleration distance plus stacking distance plus taper length. Based on a design speed of 60 mph and the turning volumes, the ECM criteria for turn lanes require a full-width-left-turn lane length of 290' plus a 240'-foot taper plus 50 feet (100' based on long-term projections) for left-turn stacking/queuing for a total turn-lane length of 580 feet. The existing lane meets the standard for full-width lane length but provides no storage length. The lane taper is short of the 240' standard.

Note: The standard redirect taper ratio is 55:1. The existing westbound ratio appears to be approximately 30:1. Although the redirect taper is short of the standard, the lane shift left is likely obvious to drivers. Continuation on a straight trajectory would direct a vehicle into the north-side roadside ditch. LSC recommends that as part of the future (with deviation) lengthening project, the lengthening of the redirect taper to a 55:1 ratio in the westbound direction should be incorporated into the design of the eastbound left-turn-lane improvement to lengthen the taper and add stacking length. Note: This is an existing deficiency associated with the existing westbound travel lane in the oppos

is there any CDOT criteria that may help your justification for keeping the lane as is in the interim?

LIMITS OF CONSIDERATION

(At least one of the conditions listed below must be met for this deviation)

- The ECM standard is inapplicable to the particular situation.
Topography, right-of-way, or other geographical conditions or impediments impose an undue hardship and an equivalent alternative that can accomplish the same design objective is available and does not compromise public safety or accessibility.
A change to a standard is required to address a specific design or construction problem, and if not modified, the standard will impose an undue hardship on the applicant with little or no material benefit to the public.

Provide justification.

There is a drainage structure just to the west that wo

Please provide further justification as this is not sufficient for approval of this deviation. Identify whether the existing lane can function safely and adequately as is. Recommend that you indicate that this is in line with the condition of approval indicated by staff with Saddlehorn filing 4.

CRITERIA FOR APPROVAL

Per ECM section 5.8.7 the request for a deviation may be approved if the applicant can provide supporting information demonstrating compliance with the following criteria:

The deviation will achieve the intended result with a comparable or superior design and quality of improvement.

The proposed escrow and triggers will provide assurances of applicant participation (or completion of the improvement) and a mechanism for timing of the improvement when necessary. The escrow would be a fair-share amount of the complete improvement to ECM.

The deviation will not adversely affect safety or operations.

- The TIS includes a preliminary analysis of AWSC warrants at this intersection. If AWSC is implemented in the short term, the added length for deceleration distance would not be necessary, as long as the AWSC remains in-place, because all eastbound traffic would slow and stop at the intersection.
The proposed trigger - a 95th-percentile queue length of 50 feet or longer - is reasonable as that queue length would translate to about two passenger vehicles/pickup trucks or one larger commercial vehicle. A 50'-queue comprises only 17 percent of the existing full-width lane length.
The queuing analysis in the TIS indicates a calculated short-term, 95th-percentile queue length of 37 feet.
The existing lane transition taper is a reasonable length at 110', despite being less than the 240' standard length.
For the existing deficiency of the westbound redirect taper, consideration for posting a warning sign MUTCD W5-1.

The deviation will not adversely affect maintenance and its associated cost.

As the proposed lanes are shorter than those required by the ECM, the associated maintenance costs would be lower.

LSC Responses to EPC Deviation Redline Comments - EBTL at Falcon Hwy&Curtis

Page: 3

Number: 1 Author: Daniel Torres Subject: Callout Date: 1/10/2025 3:03:54 PM

is there any CDOT criteria that may help your justification for keeping the lane as is in the interim?

Author: jchodsdon Subject: Sticky Note Date: 1/10/2025 3:01:08 PM

LSC Response: There is some CDOT criteria to support this deviation. The updated deviation contains applicable CDOT Access Code criteria and discussion on the relevance to this request. The CDOT Design Waiver elements are included in the Access Code. Note: A CDOT Design Waiver is somewhat similar to a County Deviation.

Number: 2 Author: Daniel Torres Subject: Callout Date: 12/6/2024 3:26:37 PM

Please provide further justification as this is not sufficient for approval of this deviation. Identify whether the existing lane can function safely and adequately as is. Recommend that you indicate that this is in line with the condition of approval indicated by staff with Saddlehorn filing 4.

Author: jchodsdon Subject: Sticky Note Date: 1/10/2025 3:06:36 PM

LSC Response: The deviation has been updated to address this comment.

A note has been added to clarify that while safety/operations are part of "LIMITS OF CONSIDERATION," the justification elements/details are located within the "CRITERIA FOR APPROVAL" SECTION. This can be further modified, if needed.