

Table 3
Recommended Improvements Along Plum Creek Parkway Site Frontage and to the I-25 Interchange
Miller's Landing
Castle Rock, CO
(LSC #160870; November, 2016)

Plum Creek Parkway/West Site Access

- 1) Widen Plum Creek Parkway from two through lanes to four through lanes (for both the site and the property to the south).
- 2) Roundabout Option: Construct a two-lane roundabout (north leg only - the property to the south would construct the south leg) unless it is determined by the Town to be constructed as a signalized intersection in which case Items 3-7 would be completed in place of Item 2.
Traffic Signal Option:
- 3) Construct EB left-turn lane on Plum Creek Parkway (for the site). Based on the 2040 Total Traffic scenario, the lane should be about 345 feet long (275 feet for deceleration from 45 mph plus 70 feet for vehicle storage based on the 95th percentile queue length) plus a 13.5:1 transition taper.
- 4) Construct WB left-turn lane on Plum Creek Parkway (for property to the south). The lane should be sized based on the actual development that is eventually proposed.
- 5) Construct NB approach to Plum Creek Parkway with NB left-turn lane and NB shared through/right-turn lane (for property to the south). Detailed lengths to be determined based on the actual development that is eventually proposed.
- 6) Construct SB approach to Plum Creek Parkway (for the site) with SB left-turn lane and shared through/right-turn lane. Based on the 2040 Total Traffic scenario, the SB left-turn lane should have about 250 feet of storage length. This length could be reduced if a dual left-turn lane is provided.
- 7) Implementation of traffic signal control when warranted (for both the site and the property to the south).

Plum Creek Parkway/East Site Access

- 1) Widen Plum Creek Parkway from two through lanes to four through lanes (for both the site and the property to the south).
- 2) Construct EB left-turn lane on Plum Creek Parkway (for the site). Based on the 2040 Total Traffic Scenario, the lane should be about 475 feet long (275 feet for deceleration from 45 mph plus 200 feet for vehicle storage (based on the 95th percentile queue length) plus a 13.5:1 transition taper.
- 3) Construct WB dual left-turn lanes on Plum Creek Parkway (for property to the south). The lane should be sized based on the actual development that is eventually proposed.
- 4) Construct NB approach to Plum Creek Parkway with NB left-turn lane, NB through lane, and NB right-turn lane (for property to the south). Detailed lengths should be determined based on the actual development that is eventually proposed.
- 5) Construct SB approach to Plum Creek Parkway (for the site) with SB dual left-turn lane, SB through lane, and SB right-turn lane. Based on the 2040 Total Traffic scenario, the dual SB left-turn lanes should have about 250 feet of storage length each and the SB right-turn lane should have about 250 feet of storage length.
- 6) Implementation of traffic signal control when warranted (for both the site and the property to the south).

Prairie Hawk Drive/Atchison Way Intersection

- 1) The Town of Castle Rock proposes to realign this intersection to have the through movement be the north leg on Prairie Hawk Drive and Atchison Way with the southern leg of Prairie Hawk Drive becoming the side street. The capacity analysis worksheets show minimal queuing for the future SB left-turn movements so an appropriate turn lane length would be the deceleration length for the anticipated posted speed limit. A NB right-turn lane is not recommended.

I-25 Interchange

- 1) The only improvement recommended by 2025 other than those currently planned by CDOT/Town as part of the MIMR is to provide a dedicated southbound right-turn lane on the southbound off-ramp to replace the existing lane that is planned to be converted to a shared left/through/right lane by the MIMR.
- 2) The 2040 total traffic will likely require the addition of side-by-side dual left-turn lanes.