

contained in Table 2-21 of the *Engineering Criteria Manual (ECM)*, the required intersection sight distance at the future intersection is 55 feet. As shown in Figures 4b, the proposed intersection will meet the criteria.

Unresolved: Address internal sight distances. Some do not meet the 280' minimum (previous PUDSP redline)

## **Pedestrian and Bicycle Analysis**

Figure 2 also shows the location of all planned trails and sidewalks in the vicinity of the site. Connections are also proposed to the planned future Sand Creek Regional Trail (west of Dines Boulevard), as shown in the attached map.

A detached sidewalk will be provided along the west side of Sterling Ranch Road. The multi-use paved shoulder on Sterling Ranch Road will accommodate bicycles.

There are no existing schools within two miles of the site, however, a K-8 school is planned southwest of the future intersection of Briargate/Sterling Ranch Road and two elementary schools are planned east of Sterling Ranch Road. A school crossing will likely be needed at the intersection of Sterling Ranch Road/Briargate Parkway. This intersection is planned to be signal controlled in the future. Although not proposed as part of this project, at the development of the school, there is the potential for consideration of a mid-block pedestrian signal or other treatment for crossing Briargate Parkway west of the Sterling Ranch Road intersection."

## **Safety Analysis**

Unresolved: Address recommendations for pedestrian refuge islands where applicable per ECM 2.5.6.G-J. (see redlines on Figure 2)

Most of the roadways in the vicinity of the site have not yet been constructed. The Colorado State Patrol (CSP) provided LSC with crash history data for Vollmer Road between Tahiti Drive and Burgess Road from September 2019 through September 2022. During the reported time period, there were twelve reported crashes. Of the twelve reports, ten were single-vehicle non-intersection-related crashes on Vollmer Road. One crash involved a southbound vehicle that turned right onto Poco Road and crashed into several cars parked on Poco Road partially in the lane. The only intersection related crash occurred in June 2022. A vehicle heading northbound on Vollmer Road was slowing to turn left at Lochwinnoch Road and the vehicle behind them attempted to pass on the left side. The crash history data has been attached.

## **TRIP GENERATION**

Foursquare at Sterling Ranch East site-generated vehicle trips have been estimated using the nationally-published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). Table 1 shows the trip-generation estimate. The trip-generation estimate is consistent with the estimate assumed in the Sterling Ranch Master TIS and the Sterling Ranch East Rezoning and Preliminary Plan TIS for the same parcels.

The Villages at Sterling Ranch East is expected to generate 1,490 vehicle trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the

# LSC Responses to FourSquare PUDSP CO TIS Report Redline Comments

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Page: 7

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 Number: 1      Author: CDurham      Subject: Text Box      Date: 4/3/2023 4:57:30 PM

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Unresolved: Address internal sight distances. Some do not meet the 280' minimum (previous PUDSP redline)

 Author: kdferrin      Subject: Sticky Note      Date: 4/21/2023 8:38:22 AM

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LSC Response: It is our understanding that the internal sight-distance issues have been resolved on the PUDSP. Please refer to that document.

Traffic studies typically do not present evaluation of all the internal local/local intersections for sight distance, rather they are focused on the more major intersections and street connections to Collectors and Arterial streets.

 Number: 2      Author: CDurham      Subject: Callout      Date: 4/4/2023 1:55:57 PM

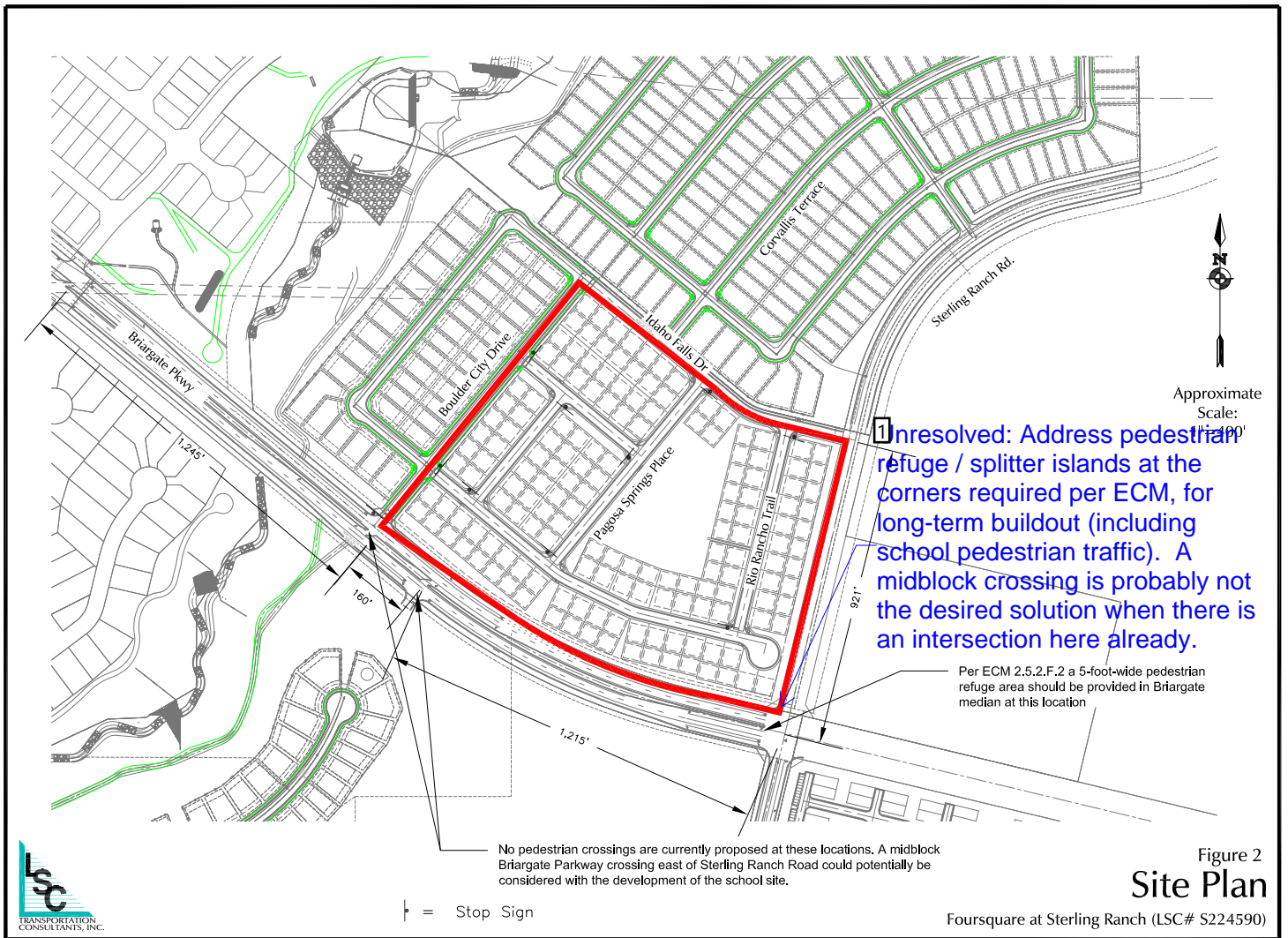
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Unresolved: Address recommendations for pedestrian refuge islands where applicable per ECM 2.5.6.G-J. (see redlines on Figure 2)


 Author: kdferrin      Subject: Sticky Note      Date: 4/20/2023 2:55:54 PM

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LSC Response: A note has been added to the text and Figure 2 stating that "The final intersection design will need to meet the criteria for pedestrian safety contained in ECM 2.5.2.F.2 and ECM 2.5.6.G-J. It is our understanding that the specific elements of this design are currently under discussion by the applicant and County staff. Once a decision has been reached regarding the planning/design elements, the applicable documents will be revised as necessary (which may include this TIS report)."




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 Number: 1      Author: dsdrice      Subject: Callout      Date: 4/20/2023 2:51:06 PM

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Unresolved: Address pedestrian refuge / splitter islands at the corners required per ECM, for long-term buildout (including school pedestrian traffic). A midblock crossing is probably not the desired solution when there is an intersection here already.

 Author: kdferrin      Subject: Sticky Note      Date: 4/20/2023 2:58:19 PM

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LSC Response: A note has been added to the text and Figure 2 stating that "The final intersection design will need to meet the criteria for pedestrian safety contained in ECM 2.5.2.F.2 and ECM 2.5.6.G-J. It is our understanding that the specific elements of this design are currently under discussion by the applicant and County staff. Once a decision has been reached regarding the planning/design elements, the applicable documents will be revised as necessary (which may include this TIS report)."

The note regarding the midblock crossing has been removed.

Table 5 Sterling Ranch East Phase 1 Preliminary Plan Intersection Improvements				
Item #	Improvement	Trigger	Timing	Responsibility
1) Burgess Road/Vollmer Road				
1	Reconstruct as a modern one-lane roundabout	When the LOS degrades below LOS F	Existing deficiency	This intersection may be eligible intersection under the fee impact program
12) Marksheffel Road/Vollmer Road				
2	Signalization of the intersection	Once warrants are met. The decision on timing of traffic signal installation rests with El Paso County Public Works.	Anticipated by buildout of Sterling Ranch East Phase 1 Preliminary Plan	This intersection may be eligible intersection under the fee impact program
14) Marksheffel Road/Sterling Ranch Road				
3	Signalization of the intersection	Once warrants are met. The decision on timing of traffic signal installation rests with El Paso County Public Works.	Anticipated by buildout of Sterling Ranch East Phase 1 Preliminary Plan	SRMD#3
102) Briargate Parkway/Boulder City Drive				
4	Construct an eastbound left-turn lane on Briargate Parkway approaching Boulder City Drive. The lane should be 285' long plus a 200' taper.	eastbound left-turn volume > 10 vph	With Sterling Ranch East Phase 1 Preliminary Plan Foursquare 4 Sterling Ranch	Sterling Ranch
5	Construct a westbound right-turn deceleration lane on Briargate Parkway approaching Boulder City Drive. The lane should be 235' long plus a 200' taper.	westbound right-turn volume > 25 vph	Long Term	Sterling Ranch
103) Briargate Parkway/Future School 3/4 Movement Access				
6	Construct a westbound left-turn lane on Briargate Parkway approaching the school access. The lane should be 285' long plus a 200' taper.	westbound left-turn volume > 10 vph	Long Term With development of the K-8 School Parcel (Tract M)	Sterling Ranch
7	Construct an eastbound right-turn deceleration lane on Briargate Parkway approaching the school access. The lane should be 235' long plus a 200' taper.	eastbound right-turn volume > 25 vph	Long Term With development of the K-8 School Parcel (Tract M)	Sterling Ranch
5) Briargate Parkway/Sterling Ranch Road				
8	Construct an eastbound left-turn lane on Briargate Parkway approaching Sterling Ranch Road. The lane should be 435' long plus a 200' taper.	eastbound left-turn volume > 10 vph	With Sterling Ranch East Phase 1 Preliminary Plan Foursquare 6 Sterling Ranch	Sterling Ranch
9	Construct an eastbound right-turn deceleration lane on Briargate Parkway approaching Sterling Ranch Road. The lane should be 235' long plus a 200' taper.	eastbound right-turn volume > 25 vph	Long Term With development of the K-8 School Parcel (Tract M)	Sterling Ranch
10	Construct a northbound to eastbound right-turn acceleration lane on Briargate Parkway at Sterling Ranch Road. The lane should be 580' long plus a 180' taper.	northbound right-turn volume > 50 vph	Long Term With development of the K-8 School Parcel (Tract M)	Sterling Ranch
11	Construct a westbound left-turn lane on Briargate Parkway approaching Sterling Ranch Road. The lane should be 285' long plus a 200' taper.	westbound left-turn volume > 10 vph	Long Term	Sterling Ranch
12	Construct an eastbound right-turn deceleration lane on Briargate Parkway approaching Sterling Ranch Road. The lane should be 235' long plus a 200' taper.	eastbound right-turn volume > 25 vph	Long Term	Sterling Ranch
13	Construct a southbound to westbound right-turn acceleration lane on Briargate Parkway at Sterling Ranch Road. The lane should be 580' long plus a 180' taper.	southbound right-turn volume > 50 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
303) Sterling Ranch Road/Lubbock Trail				
14	Construct an northeastbound right-turn deceleration lane on Sterling Ranch Road approaching Lubbock Trail. The lane should be 155' long plus a 160' taper	northeastbound right-turn volume > 50 vph	Long Term With development of the Elementary School Parcel (Tract F)	Sterling Ranch
15	Construct a southwestbound left-turn lane on Sterling Ranch Road approaching Lubbock Trail. The lane should be 305' long plus a 200' taper.	southwestbound-turn volume > 25 vph	Long Term With development of the Elementary School Parcel (Tract F)	Sterling Ranch
304) Sterling Ranch Road/Westmont Drive				
16	Construct an northeastbound left-turn deceleration lane on Sterling Ranch Road approaching Westmont Drive. The lane should be 205' long plus a 160' taper	northeastbound left-turn volume > 25 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
17	Construct a southwestbound left-turn lane on Sterling Ranch Road approaching Westmont Drive. The lane should be 205' long plus a 200' taper.	southwestbound-turn volume > 25 vph	Long Term (Needed with construction of a northeastbound left-turn lane)	Sterling Ranch
305) Sterling Ranch Road/Lake Tahoe Drive				
18	Construct an northeastbound left-turn deceleration lane on Sterling Ranch Road approaching Lake Tahoe Drive. The lane should be 225' long plus a 160' taper	northeastbound left-turn volume > 25 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
19	Construct a southwestbound left-turn lane on Sterling Ranch Road approaching Lake Tahoe Drive. The lane should be 205' long plus a 200' taper.	southwestbound-turn volume > 25 vph	Not Required (Needed with construction of a northeastbound left-turn lane)	Sterling Ranch
20	Construct an northeastbound right-turn deceleration lane on Sterling Ranch Road approaching Lake Tahoe Drive. The lane should be 155' long plus a 160' taper	northeastbound right-turn volume > 50 vph	Long Term	Sterling Ranch
306) Sterling Ranch Road/Newport Beach Drive				
21	Construct a northeastbound left-turn lane on Sterling Ranch Road approaching Newport Beach Drive. The lane should be 205' long plus a 200' taper.	northeastbound left-turn volume > 25 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
308) Sterling Ranch Road/Idaho Falls Drive				
22	Construct a northeastbound left-turn lane on Sterling Ranch Road approaching Idaho Falls Drive. The lane should be 240' long plus a 200' taper.	northeastbound left-turn volume > 25 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
309) Sterling Ranch Road/Vancouver Street				
23	Construct a northeastbound left-turn lane on Sterling Ranch Road approaching Vancouver Street. The lane should be 265' long plus a 200' taper.	northeastbound left-turn volume > 25 vph	With Sterling Ranch East Phase 1 Preliminary Plan	Sterling Ranch
Notes: Source: LSC Transportation Consultants, Inc. (February 2023)				

Future SRE Filings

SRE Fil 2

SRE Fil 2

Future SRE Filings

SRE Fil 1

SRE Fil 1

SRE Fil 1

SRE Fil 2 or Foursquare

Future SRE Filings

LSC recommends at least eight hours of traffic count volume data be collected at the intersection of Marksheffel/Sterling Ranch following completion of Marksheffel Road between Vollmer Road and Woodmen Road, which is planned to be done in 2023. Once the traffic data is completed traffic-signal warrant analysis can be reanalyzed based on the existing conditions at that time.  
The decision to require a signal to be installed rests with the County.

☰	Number: 1	Author: kdferrin	Subject: Text Box	Date: 2/22/2023 1:31:36 PM -07'00'
	<a href="#">Source: <i>Sterling Ranch East Rezoning and Preliminary Plan TIS, February 10, 2023</i> With notes for Foursquare at Sterling Ranch East by LSC 2/22/2023</a>			
☰	Number: 2	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:15:15 PM -07'00'
	<a href="#">Future SRE Filings</a>			
☰	Number: 3	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:24:08 PM -07'00'
	<a href="#">SRE Fil 2</a>			
T	Number: 4	Author: kdferrin	Subject: Highlight	Date: 2/22/2023 1:34:34 PM -07'00'
☰	Number: 5	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:22:41 PM -07'00'
	<a href="#">SRE Fil 2</a>			
T	Number: 6	Author: kdferrin	Subject: Highlight	Date: 2/22/2023 1:34:38 PM -07'00'
☰	Number: 7	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:20:41 PM -07'00'
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☰	Number: 9	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:21:22 PM -07'00'
	<a href="#">SRE Fil 1</a>			
☰	Number: 10	Author: kdferrin	Subject: Callout	Date: 2/10/2023 3:21:50 PM -07'00'
	<a href="#">SRE Fil 1</a>			
☰	Number: 11	Author: kdferrin	Subject: Callout	Date: 2/22/2023 1:58:27 PM -07'00'
	<a href="#">SRE Fil 2 or Foursquare</a>			
☰	Number: 12	Author: kdferrin	Subject: Callout	Date: 2/22/2023 1:58:32 PM -07'00'
	<a href="#">Future SRE Filings</a>			
☰	Number: 13	Author: kdferrin	Subject: Callout	Date: 2/24/2023 10:19:03 AM -07'00'
	<a href="#">LSC recommends at least eight hours of traffic count volume data be collected at the intersection of Marksheffel/Sterling Ranch following completion of Marksheffel Road between Vollmer Road and Woodmen Road, which is planned to be done in 2023. Once the traffic data is completed traffic-signal warrant analysis can be reanalyzed based on the existing conditions at that time. The decision to require a signal to be installed rests with the County.</a>			

Source: Sterling Ranch East Phase 1 Rezoning and Preliminary Plan TIS, February 10, 2023. Improvements needed prior to Sterling Ranch East Filings 1 and 2 and/or Foursquare at Sterling Ranch East have been highlighted in green. Improvements needed with Sterling Ranch East Filings 1 and 2 and/or Foursquare at Sterling Ranch East have highlighted in yellow and noted.


Table 6					
(Page 1 of 2)					
Sterling Ranch East Rezoning and Preliminary Plan					
Roadway Segment Improvements					
Segment ID <sup>(1)</sup> (See Figure 12 for map)	Improvement Description	Timing	Design ADT (vpd)	Projected 2042 ADT (vpd)	Responsibility
V1 northbound	Per the City of Colorado Springs, an outside paved shoulder will need to be added along the east side of Vollmer Road from Dry Needle Place up to the south end of segment V2 improvements.	With Sterling Ranch Filing No. 4 but potentially complete concurrently with the construction of the right-turn lane at Pioneer Landscape Center access for the Sterling Ranch Recycling Facility (PCD No. PPR2241)	20,000 (Directional northbound)	16,275	Sterling Ranch
V1 southbound			10,000 (Directional southbound)		
V1	Improve Vollmer Road between Dry Needle Place and the Sterling Ranch south boundary to a standard 4-Lane Urban Minor Arterial Cross Section (add a second northbound through lane and painted center median). <sup>(2)</sup>	The need driven by anticipated traffic from each development impacting this section of Vollmer Road.	20,000		Sterling Ranch, if necessary, prior to construction by others.
V2	Improve Vollmer Road between the Sterling Ranch south boundary to Lochwinnoch Lane/Sterling property boundary to a standard 4-Lane Urban Minor Arterial Cross Section. <sup>(2)</sup>	3 Short-Term Future (With Sterling Ranch Fil No. 2 Or Sterling Ranch Phase 2)	20,000 (Note: Existing Capacity 8,000 <sup>(3)</sup> )	17,475	Sterling Ranch
V3	4 Short Term: Improve Vollmer Road from Lochwinnoch Lane to Sterling Ranch boundary (northeast of Glider Loop) to provide 36' of pavement (existing pavement 1 approx. 23.38') and stripe for one through lane plus a 6' paved, striped outside shoulder in each direction. <sup>(2)</sup>	Short-Term Future (With Homestead North)	11,000 (Note: Existing Capacity 8,000)	17,380	Sterling Ranch
	Long Term: Improve Vollmer Road from Lochwinnoch Lane to Sterling Ranch boundary (northeast of Glider Loop) to a standard 4-Lane Urban Minor Arterial Cross Section. <sup>(2)</sup>	Long-Term Future	20,000		Sterling Ranch with potential County assistance with ROW acquisition - pursuant to the recent development agreement between Sterling Ranch and EPC.
V4	Improve Vollmer Road from Sterling Ranch boundary (northeast of Glider Loop) to Briargate Parkway to a standard 4-Lane Urban Minor Arterial Cross Section. <sup>(2)</sup>	5 Short-Term Future – May 2024 Updated 10/15/2022 - Sections V4, V5, V6 to be constructed by May 2024 (prior note: With Homestead North Filing 1)	20,000	16,445	Sterling Ranch
V5	Improve Vollmer Road from Briargate Parkway to Jane Kirkham Drive to a standard 4-Lane Urban Minor Arterial Cross Section. <sup>(2)</sup>	6 Short-Term Future – May 2024 Updated 10/15/2022 - Sections V4, V5, V6 to be constructed by May 2024 (prior note: prior note: With Homestead North Filing 1)	20,000	11,690	Sterling Ranch
V6	Improve Vollmer Road from Jane Kirkham Drive to Sam Bass Drive to a standard 4-Lane Urban Minor Arterial Cross Section. <sup>(2)</sup>	7 Short-Term Future – May 2024 Updated 10/15/2022 - Sections V4, V5, V6 to be constructed by May 2024 (prior note: prior note: With Homestead North Filing 2)	20,000	11,425	Sterling Ranch
V7	8 Improve Vollmer Road between Sam Bass Drive and Poco Road to a 4-lane Urban Minor Arterial but with necessary lane transitions, redirect tapers, etc. south of Poco to adequately transition between the 4-Lane Urban Minor Arterial Cross Section and the 2-Lane Rural Arterial Cross Section north of Poco Road.	Short-Term Future – May 2024 Updated 10/15/2022 - Sections V4, V5, V6 to be constructed by May 2024 (prior note: With Homestead North Filing 3)	20,000	10,030	Sterling Ranch
V8	Improve Vollmer Road from Poco Road to Shoup Road to a Rural 2-Lane Arterial Cross Section. <sup>(2)</sup>	Long-Term Future	10,000	11,790	El Paso County Project ID U-12
Part 1/2 of this table (see Part 2 on next page)					
Notes:					
(1) See Figure 10					
(2) Adequate transition/redirect tapers would be needed between the various cross sections on Vollmer Road. Based on the criteria contained in Table 2-29 of the <i>El Paso Engineering Criteria Manual</i> , an appropriate taper ratio for a roadway with a design speed of 40 miles per hour is 20:1					
(3) Source: Table 20 Road Impact Fee Study Updated November 16, 2016					
Source: LSC Transportation Consultants, Inc. (February 10, 2023)					

	Number: 1	Author: kdferrin	Subject: Text Box	Date: 2/22/2023 2:03:12 PM -07'00'
Source: Sterling Ranch East Phase 1 Rezoning and Preliminary Plan TIS, February 10, 2023. Improvements needed prior to Sterling Ranch East Filings 1 and 2 and/or Foursquare at Sterling Ranch East have been highlighted in green. Improvements needed with Sterling Ranch East Filings 1 and 2 and/or Foursquare at Sterling Ranch East hare highlighted in yellow and noted.				
	Number: 2	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:30:44 PM -07'00'
	Number: 3	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:30:47 PM -07'00'
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	Number: 5	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:30:56 PM -07'00'
	Number: 6	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:31:00 PM -07'00'
	Number: 7	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:31:05 PM -07'00'
	Number: 8	Author: kdferrin	Subject: Highlight	Date: 2/10/2023 3:31:09 PM -07'00'



Table 6 (Page 2 of 2)					
Sterling Ranch East Phase 1 Preliminary Plan Roadway Segment Improvements					
Segment ID <sup>(1)</sup> (See Figure 12 for map)	Improvement Description	Timing	Design ADT (vpd)	Projected 2042 ADT (vpd)	Responsibility
2	Construct Sterling Ranch Road as an Urban Non-Residential Collector from Marksheffel Road to Dines Boulevard.	Short Term - with Sterling Ranch Fil No. 2	20,000	14,840	Sterling Ranch
3	Construct Sterling Ranch Road as an Urban Non-Residential Collector from Dines Boulevard to Briargate Parkway.	Short-Term	20,000	10,275	Sterling Ranch
SR3	Construct Sterling Ranch Road as an Urban Collector from Briargate Parkway to Vancouver Street.	Short Term	10,000	9,300	Sterling Ranch
SR4	Construct Sterling Ranch Road from Vancouver Street north to Arroya (or ultimate north terminus).	Long-Term Future	10,000	4,260	Sterling Ranch
M1	Construct Marksheffel Road as an Urban Principal Arterial to City of Colorado Springs standards in 107' of right-of-way between Vollmer Road and Sterling Ranch Road.	Updated 10/15/2022: to be completed <b>by the end of 2022</b> (prior note: With Sterling Ranch Fil No. 2)	40,000	23,370	Sterling Ranch
M2	Construct Marksheffel Road as an Urban Principal Arterial to City of Colorado Springs standards in 107' of right-of-way between Sterling Ranch Road and the south boundary of the Sterling Ranch Master Plan Area. 10/16/2022 NOTE: With the completion of M2 in 2023, the connection between Vollmer and Woodmen Road (via M3) will be completed.	Short Term Updated 10/15/2022: to be completed in <b>2023</b> (prior note: With Sterling Ranch Phase 2)	40,000	29,600	Sterling Ranch
M3	Construct Marksheffel Road between the south boundary of the Sterling Ranch Master Plan Area and Woodmen Road. (Note this segment is located within the City of Colorado Springs). 10/16/2022 NOTE: With the completion of M2 in 2023, the connection between Vollmer and Woodmen Road (via M3) will be completed.	Updated 10/15/2022: <b>Completed</b> (by Others)	40,000	24,525	Others (Completed)
M4	Construct Marksheffel Road between Black Forest Road and Vollmer Road.	Long-Term Future	40,000	27,910	Others
B1	Construct the south half section of Briargate Pkwy (4-Lane Principal Arterial) between Vollmer Road and Wheatland Drive [now full section by 2023].	Updated 10/15/2022: <b>Full section</b> to be completed in <b>2023</b> with Homestead at Sterling Ranch Filing No. 1 (prior note: With Homestead at Sterling Ranch Fil 2)	20,000	24,745	Sterling Ranch
	Construct the north half section of Briargate Pkwy (4-Lane Principal Arterial) between Vollmer Road and Wheatland Drive [now full section by 2023].	Short-Term Future Updated 10/15/2022: <b>Full section</b> to be completed in <b>2023</b> with Homestead at Sterling Ranch Filing No. 1 (prior note: Long-Term Future)	40,000		Sterling Ranch
B2	Construct Briargate Pkwy (full section) as a 4-Lane Principal Arterial between Wheatland Dr and Sterling Ranch Road.	Short-Term Future Updated 10/15/2022: <b>Full section</b> to be completed in <b>2023</b> or <b>Spring 2024</b> (prior note: Long-Term Future)	40,000	26,375	Sterling Ranch
B3	Construct Briargate Pkwy as a 4-Lane Principal Arterial between Sterling Ranch Road and Banning Lewis Parkway.	Intermediate Term	40,000	22,365	Sterling Ranch
B4	Construct Stapleton Road as a 4-Lane Principal Arterial between Banning Lewis Parkway and Meridian Road (including upgrade of existing rural two-lane segment between Townner and Meridian).	Long-Term Future	40,000	17,945	Others
B5	Construct Briargate Pkwy as a 4-Lane Principal Arterial between Black Forest Road and Vollmer Road.	Long-Term Future	40,000	24,340	Others; PPRTA A List Project
BL1	Construct Banning Lewis Parkway as a 4-Lane Principal Arterial between the south Sterling Ranch boundary and Briargate Pkwy.	Long-Term Future	40,000	20,320	Financial assurances for half-section, Sterling Ranch half-section or full-section w/ cost recovery
BL2	Construct Banning Lewis Parkway as a 4-Lane Principal Arterial between Woodmen Road and the south Sterling Ranch boundary. (Note this segment will be located within the City of Colorado Springs)	Long-Term Future	40,000	28,480	Others
W1	Widen Woodmen Road from 4-lane to 6-lane section from Powers Boulevard to US 24.	Long-Term Future	72,000	66,690	PPRTA A-List Project; City of Colorado Springs ConnectCOS Index No.476
B1	Widen Black Forest Road between Woodmen Road to just north of Research Road to two northbound and southbound through lanes.	Black Forest Widening Project	40,000	28,420	City of Colorado Springs
B2	Widen Black Forest Road from just north of Research Road to Briargate Parkway.	Long-Term Future	40,000	25,145	Others/City of Colorado Springs
B3	Widen Black Forest Rd from Briargate Pkwy to Old Ranch Rd as a 4-lane Principal Arterial with bike and pedestrian facilities.	Long-Term Future	40,000	19,135	PPRTA B List Project ConnectCOS Index No. 479
Part 2/2 of this table					
Notes:					
(1) See Figure 10					
(2) Adequate transition/redirect tapers would be needed between the various cross sections on Vollmer Road. Based on the criteria contained in Table 2-29 of the <i>El Paso Engineering Criteria Manual</i> , an appropriate taper ratio for a roadway with a design speed of 40 miles per hour is 20:1					
(3) Source: Table 20 Road Impact Fee Study Updated November 16, 2016					
Source: LSC Transportation Consultants, Inc. (February 10, 2023)					
From Briargate Parkway to Idaho Falls Drive with SRE Fil 2 or Foursquare From Idaho Falls Drive to Vancouver Street with future filings					


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 Number: 1      Author: kdferrin      Subject: Callout      Date: 2/22/2023 2:02:08 PM -07'00'  
[With either SRE Fil 1, SRE Fil 2 or Foursquare](#)

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 Number: 2      Author: kdferrin      Subject: Highlight      Date: 2/10/2023 3:31:33 PM -07'00'

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 Number: 3      Author: kdferrin      Subject: Highlight      Date: 2/10/2023 3:32:16 PM -07'00'

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 Number: 4      Author: kdferrin      Subject: Highlight      Date: 2/10/2023 3:31:38 PM -07'00'


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 Number: 5      Author: kdferrin      Subject: Highlight      Date: 2/10/2023 3:31:52 PM -07'00'

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 Number: 6      Author: kdferrin      Subject: Highlight      Date: 2/10/2023 3:31:58 PM -07'00'

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 Number: 7      Author: kdferrin      Subject: Callout      Date: 2/22/2023 2:01:52 PM -07'00'  
[From Briargate Parkway to Idaho Falls Drive with SRE Fil 2 or Foursquare](#)  
[From Idaho Falls Drive to Vancouver Street with future filings](#)


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# Deviation Request

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 Number: 1      Author: jchodsdon   Subject: Sticky Note      Date: 4/20/2023 5:49:25 PM  
LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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**DEVIATION REQUEST** (Attach diagrams, figures, and other documentation to clarify request)

A deviation from the standards of or in Section **ECM section 2.3.2 Design Standards** of the Engineering Criteria Manual (ECM) is requested for the Poco Rd and Aspen Valley Intersection K value.

Identify the specific ECM standard which a deviation is requested:

Per ECM Section 2.3.2, Table 2.6, urban 4 lane principal arterials are to have intersection spacing of ½ mile and intermediate access points are not allowed.

Address 2.2.5.B and 2.3.7.B and mention (Right-in/right-out and three quarter movement accesses may be permitted as a deviation if they meet the criteria for sight distances, turn lane requirements, grades and do not negatively impact traffic operations or safety.)

State the reason for the requested deviation:

Current roadway plans for Briargate parkway submitted under CDR 221, show a ¾ access point at Boulder City Drive and a ¾ access point for the future K-8 school site.

State why the access points are needed and the proposed spacings from the next intersections (Wheatland and Sterling Ranch Road).

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


See Exhibit A for a representation of the two ¾ access points from the Sterling Ranch East Phase 1 Preliminary Plan and details from Briargate Parkway roadway plans.

Each ¾ access is a right in-out / left in design and has been analyzed with the traffic study presented for the Sterling Ranch East Preliminary Plan reviews.

As a ¾ access, Boulder City Drive provides an opportunity for east bound traffic on Briargate Parkway to turn left (north) into future Sterling Ranch East Filing No. 2 and the westernmost units at the future Four Square at Sterling Ranch East without having to continue on Briargate Parkway to the Sterling Ranch Road intersection and then continue north to the eastern access points for these two developments. The right in, right out component of this intersection provides a similar opportunity westbound Briargate Parkway travelers.


As a ¾ access, the future K-8 school site ¾ access provides an opportunity for west bound traffic on Briargate Parkway to turn left (south) into the future school site as an alternative to turning south at the Sterling Ranch Road intersection and then continue south to the main school site entrance. The right in, right out component of this intersection provides a similar opportunity for east bound Briargate Parkway travelers.

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 Number: 1      Author: dsdrice      Subject: Callout      Date: 4/4/2023 1:37:31 PM


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### 2.2.5.B Roadway Access Criteria and

 Author: jchodsdon      Subject: Sticky Note      Date: 4/20/2023 5:49:56 PM


LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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 Number: 2      Author: dsdrice      Subject: Callout      Date: 4/4/2023 1:37:31 PM

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### and 2.3.7.B Intersection Spacing and General Access Standards

 Author: jchodsdon      Subject: Sticky Note      Date: 4/20/2023 5:50:08 PM


LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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 Number: 3      Author: dsdrice      Subject: Callout      Date: 4/4/2023 1:37:31 PM


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Address 2.2.5.B and 2.3.7.B and mention (Right-in/right-out and three quarter movement accesses may be permitted as a deviation if they meet the criteria for sight distances, turn lane requirements, grades and do not negatively impact traffic operations or safety.)

 Author: jchodsdon      Subject: Sticky Note      Date: 4/20/2023 5:50:16 PM


LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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 Number: 4      Author: dsdrice      Subject: Text Box      Date: 4/4/2023 1:37:31 PM

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State why the access points are needed and the proposed spacings from the next intersections (Wheatland and Sterling Ranch Road).

 Author: jchodsdon      Subject: Sticky Note      Date: 4/20/2023 5:50:25 PM

LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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## LIMITS OF CONSIDERATION

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

- ☐ 2 The ECM standard is inapplicable to the particular situation.
- ☒ 1 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.
- ☒ 3 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:

The Boulder City Drive ¾ access point can shorten the eastbound route into Sterling Ranch East Filing 2 and the westernmost Foursquare at Sterling Ranch lots by up to ¾ of a mile. This ¾ access also provides a secondary means of access/egress to these lots in the event of an emergency.

The future K-8 school site ¾ access point will allow for more efficient school campus operations and also provides a secondary means of access/egress to these lots in the event of an emergency.

The school site or that and lots?

## CRITERIA FOR APPROVAL

Per ECM section 5.8.7 the request for a deviation may be considered if the request is **not based exclusively on financial considerations**. The deviation must not be detrimental to public safety or surrounding property. The applicant must include supporting information demonstrating compliance with **all of the following criteria**:

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

This request is not based on financial considerations. The proposed ¾ access points on Briargate Parkway allow for alternative means of access/egress to better serve the traffic needs of the Sterling Ranch East residents and students.

Recommend stating if this will result in better LOS at SRR/Briargate.

The deviation will not adversely affect safety or operations.

The deviation will not adversely affect safety or operations.

Address the additional conflicting movements added with this access and how that could cause accidents and why that's not likely, etc.

State whether all auxiliary lane requirements will be met for the proposed intersections.

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Number: 1 Author: dsdrice Subject: Callout Date: 4/4/2023 1:37:52 PM

Add "x" if Sand Creek is a constraint for additional access from the west and mention below

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Author: jchodsdon Subject: Sticky Note Date: 4/20/2023 5:50:29 PM

LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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Number: 2 Author: dsdrice Subject: Text Box Date: 4/4/2023 1:37:52 PM

X

---

Number: 3 Author: dsdrice Subject: Callout Date: 4/4/2023 1:37:52 PM

The school site or that and lots?

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Author: jchodsdon Subject: Sticky Note Date: 4/20/2023 5:50:35 PM

LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

---

Number: 4 Author: dsdrice Subject: Text Box Date: 4/4/2023 1:37:52 PM

Recommend stating if this will result in better LOS at SRR/Briargate.

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Author: jchodsdon Subject: Sticky Note Date: 4/20/2023 5:52:10 PM

LSC Note: LSC provided the LOS analysis for inclusion in this deviation. Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

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Number: 5 Author: dsdrice Subject: Text Box Date: 4/4/2023 1:37:52 PM

Address the additional conflicting movements added with this access and how that could cause accidents and why that's not likely, etc.

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Author: jchodsdon Subject: Sticky Note Date: 4/20/2023 5:52:23 PM

LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.

---

Number: 6 Author: dsdrice Subject: Text Box Date: 4/4/2023 1:37:52 PM

State whether all auxiliary lane requirements will be met for the proposed intersections.

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Author: jchodsdon Subject: Sticky Note Date: 4/20/2023 5:52:29 PM

LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.



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

Maintenance of the El Paso County roadways will not be impacted.

There will be a slight increase in the infrastructure costs for signage, curb and gutter, etc.

1

The deviation will not adversely affect aesthetic appearance.

The deviation does not affect aesthetic appearance.


The deviation meets the design intent and purpose of the ECM standards.

Yes, the deviation meets the design intent and purpose of the ECM standards and is a balance of the various ECM standards for transportation planning and design.

The deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, as applicable.


Yes, the deviation meets the control measure requirements of Part I.E.3 and Part I.E.4 of the County's MS4 permit, this project is proposing Water Quality facilities for Briargate Parkway stormwater runoff as required by the criteria.

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 Number: 1      Author: dsdrice      Subject: Text Box      Date: 4/4/2023 1:38:42 PM

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There will be a slight increase in the infrastructure costs for signage, curb and gutter, etc.

 Author: jchodsdon      Subject: Sticky Note      Date: 4/20/2023 5:52:35 PM

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LSC Note: Please refer to the updated deviation request prepared by JR Engineering - included with the resubmittal.