



MEMORANDUM

TO: Ken Murphy, Public Works Plan Review Engineer

FROM: Elliot Sulsky, PE, AICP
Rachel S. Ackermann, PE

DATE: November 30, 2018

SUBJECT: Castle Rock Ridge Estates Review Memo - Addendum

Ridge Estates is a proposed development in southeast Castle Rock, Colorado. In 2017, Felsburg Holt & Ullevig (FHU) provided an evaluation of the impacts of the site generated traffic from the Ridge Estates development to local streets in adjacent neighborhoods.

The Ridge Estates development is located south of a development called Crystal Valley Ranch Filing 12 (CVR 12). CVR 12 is part of a larger Crystal Valley Ranch development that is split between multiple filings: CVR 12, Crystal Valley Ranch Filing 13 (CVR 13) and a future Crystal Valley Ranch (Future CVR). West of the CVR developments and Ridge Estates is an additional development, the Lanterns Active Adult Community (Lanterns Community). **Figure 1** identifies nearby developments and roadway segments where there may be the potential for combined site generated traffic volumes from all the development to exceed the allowable volumes.

The 2017 analyses contemplated 3 different scenarios for roadway connectivity and the buildout of adjacent neighborhoods and developments:

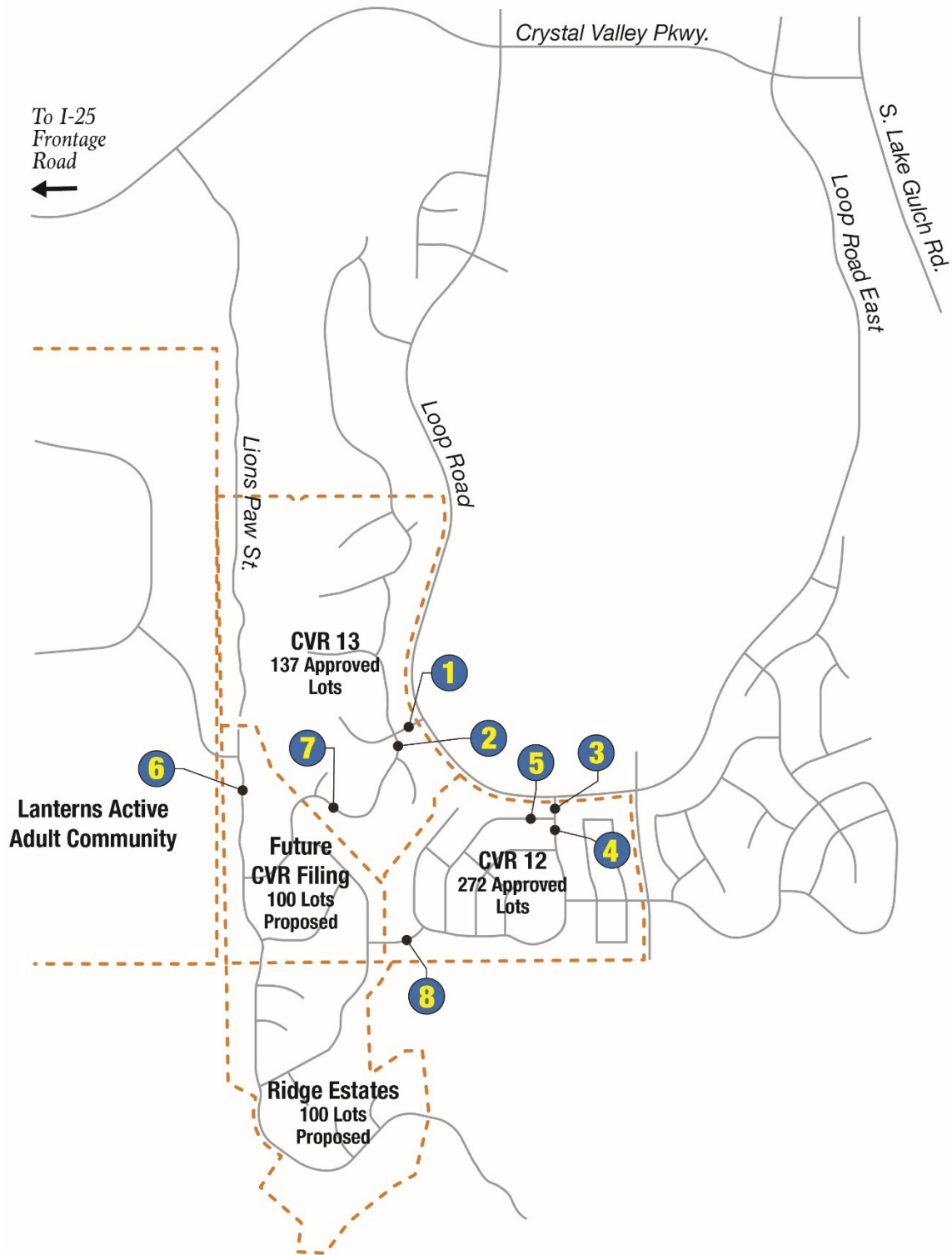
- Buildout of CVR 12, CVR 13, Future CVR and the Lanterns Community with all potential roadway connections for the Ridge Estates Development
- Development of CVR 12 with a connection for Ridge Estates through CVR 12
- CVR 12, CVR 13 and Future CVR Filing develop and provide connections through all surrounding CVR filings but with no connection through the Lanterns Community Development.

The analyses provided an estimate of the number of units that could be supported in the Ridge Estates development without exceeding the local road volume thresholds based on the various roadway connection scenarios.

Per your request, this addendum includes the analysis of a fourth scenario under which roadway connections to the Ridge Estates development are limited to roadways through CVR 12 and the Lanterns Community; eliminating the connection through CVR 13. Connections to Ridge Estates would be limited to Locations 3, 4, 5 and 6 (as shown on **Figure 1**).

This roadway configuration has been evaluated to understand the maximum number of residential units that could be included in the Ridge Estates development without exceeding local road volume thresholds.

Figure I. Ridge Estates and Adjacent Approved Developments



The fourth scenario was evaluated using the following assumptions:

- No changes were made to the lot assumptions for the CVR 12, CVR 13 and Future CVR Filing land uses as reflected in **Figure 1**
- Original distribution assumptions were retained; for routing through Locations 1, 2, and 7, trips were proportionally redistributed to Locations 3, 4 and 6.

The Town of Castle Rock Transportation Design Criteria Manual specifies that the average daily traffic volume on residential local roads is not to exceed 1,500 vehicles per day (vpd). On **Figure 1**, Location 1 and Location 3 are not projected to have residential lot frontages and were therefore approved to exceed 1,500 vpd. However, Location 2, Location 4, Location 5, Location 6, Location 7 and Location 8 all must comply with the 1,500 vpd threshold requirements for allowable local road daily traffic volumes.

Consistent with the original analysis, **Table 1** identifies locations where traffic volumes are expected to exceed the:

- 1,500 vpd threshold but are considered entry streets (shown in green)
- 1,500 vpd threshold for local streets (shown in red)
- 500 vpd, therefore potentially qualifying the street for the NTCP (shown in orange), should the traffic conditions meet both criteria of the Program.

Table 1. Scenario 4 – Traffic Volumes Associated with Percent Build-out of Ridge Estates

# of DUs (% Buildout)	Location 3	Location 4	Location 5	Location 6	Location 8
100 DUs (100%)	2410	1635	775	1545	605
90 DUs (90%)	2375	1600	775	1490	570
80 DUs (80%)	2345	1570	775	1425	540
70 DUs (70%)	2315	1540	775	1365	510
60 DUs (60%)	2280	1505	775	1305	475
57 DUs (57%)	2275	1500	775	1285	470
50 DUs (50%)	2250	1475	775	1245	445
40 DUs (40%)	2220	1445	775	1185	415
30 DUs (30%)	2190	1415	775	1120	385
20 DUs (20%)	2160	1385	775	1060	355
10 DUs (10%)	2125	1350	775	1000	320
No Ridge Estates	2095	1320	775	940	290

To comply with the design criteria traffic volume thresholds for local roads, it has been calculated that Location 4 is projected to hit the 1500 vpd local road volume threshold with 57 DUs in the Ridge Estates Development.

Please feel free to contact us with any questions.