

Meggan Herington, AICP, Executive Director
El Paso County Planning & Community Development
O: 719-520-6300
MegganHerington@elpasoco.com
2880 International Circle, Suite 110
Colorado Springs, CO 80910

Board of County Commissioners
Holly Williams, District 1
Carrie Geitner, District 2
Stan VanderWerf, District 3
Longinos Gonzalez, Jr., District 4
Cami Bremer, District 5

April 24, 2023

County File: ANX234

Re: Karmen Line Addition

To: Daniel Sexton, Daniel.sexton@coloradosprings.gov

Planning Division

Annexation impact report required for annexation of property comprising greater than ten (10) acres. Please provide a complete annexation impact report packet at least 20 days prior to the City's annexation hearing. Annexation report shall include the following:

1. A map or maps of the municipality and adjacent territory to show the following information:
 - (a) The present and proposed boundaries of the municipality in the vicinity of the proposed annexation;
 - (b) The present streets, major trunk water mains, sewer interceptors and outfalls, other utility lines and ditches, and the proposed extension of such streets and utility lines in the vicinity of the proposed annexation; and
 - (c) The existing and proposed land use pattern in the areas to be annexed;
2. A copy of any draft or final pre-annexation agreement, if available;
3. A statement setting forth the plans of the municipality for extending to or otherwise providing for, within the area to be annexed, municipal services performed by or on behalf of the municipality at the time of annexation;
4. A statement setting forth the method under which the municipality plans to finance the extension of the municipal services into the area to be annexed;
5. A statement identifying existing districts within the area to be annexed; and
6. A statement on the effect of annexation upon local-public school district systems, including the estimated number of students generated and the capital construction required to educate such students.

Reviewed by: Kylie Bagley, Planner II
kyliebagley@elpasoco.com

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Engineering Division

Review 1 comments:

Development of the proposed annexation areas will result in impacts to County roads and drainage infrastructure.

Drainage:

1. As previously indicated in the Amarra annexation (PCD File ANX2126), please include requirements for a Drainage Basin Planning Study (DBPS) for Upper Williams Creek. The DBPS will involve multiple proposed developments, jurisdictions, and agencies as owners and stakeholders. A cross-jurisdictional drainage fee structure may be preferable if development within the drainage basin will be occurring in the City of Colorado Springs, El Paso County, and Fountain.
2. Development of the annexation areas will need to address any offsite drainage impacts in unincorporated areas and necessary improvements and/or fair share contributions towards necessary improvements.

Traffic/Transportation

1. The County roads that will be impacted by development of the Norris (Karman Line) Property annexation will need to be addressed in traffic impact studies with each respective development area.
2. The condition and adequacy of County roads serving the annexation areas will need to be addressed and improvements and/or fair share contributions may be required as part of the County access permitting process.
3. As future annexations/development occur north of this development, the City of Colorado Springs, should annex Curtis Rd from this development's boundary to Hwy 94.

Engineering has comments on the following documents:

Hydrologic Assessment: pages 4 & 6

Transportation Memorandum: pages 2, 5, Figure 4, Figure 5

Reviewed by:

Daniel Torres

danieltorres@elpasoco.com

County Engineer (Public Works)

Additional comments may be provided by the County Engineer.



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Kylie Bagley, Planner II
El Paso County Development Services
2880 International Circle, Colorado Springs, CO, 80910
(719) 520-6323

e. Site Characteristics

Per the NRCS web soil survey, the site is made up Type A, B and D soils. The site is divided into several major drainage basins that include the Jimmy Camp Creek, Upper East Chico, Upper Williams Creek, Upper Chico Creek, Upper Williams Tributary, and Middle East Chico. The portion of site that is within the Jimmy Camp Creek Drainage Basin, which is the northwestern corner of the site, is predominately Razor-Midway complex. This type of soil is Type D and has a very slow infiltration rate when wet. The remainder of the site is Type A and B soils that consist of sandy loams and have high infiltration rates when wet.

Current ground cover is predominantly short and tall grasses across the site. There are very few, if any, trees and a minimal number of shrubs due to the sandy soils. Please see the NRCS survey for the site in Appendix B.

f. Major Drainage Ways and Structures

Williams Creek?



One major drainageway exists on the site (Upper East Tributary of Chico Creek); however, small tertiary tributaries are within the site currently and function to convey flows to unnamed tributaries east and west of the site.

Culverts that cross beneath Bradley and Curtis Road accept drainage from the easterly portion of the site and convey flows to downstream areas offsite. The impact that the existing and proposed runoff volumes have on the downstream property is to be assessed following annexation of the property. It is anticipated that the future developed flow will be detained to historic rates and upstream areas will be stabilized to equalize sediment transport consistent with the natural state of the tributaries and creeks.

g. DBPS Investigations

Karman Line is within the Arkansas River Basin, spanning across six basins and is located near the upper watershed of each of these basins. Approximate areas are broken down as follows:

- Jimmy Camp Creek: 78 acres
- Upper East Chico: 397 acres
- Upper Williams Creek: 953 acres
- Upper Williams Tributary: 3 acres
- Upper Chico Creek: 88 acres
- Middle East Chico: 76 acres

Jimmy Camp Creek is the only basin of the six basins that has a DBPS. Please see Figure 3 on the next page for a map of these basins.

Upper Williams Tributary: No DBPS will be required. Miscellaneous drainage fees will be due at the time of platting. If there are any channels located within this major basin, then they would need to be improved. Improvements could be offset against drainage fees. No reimbursement will be available for costs exceeding the drainage fees.

Upper Williams Creek: No DBPS will be required. Miscellaneous drainage fees will be due at the time of platting. If there are any channels located within this major basin, then they would need to be improved. Improvements could be offset against drainage fees. No reimbursement will be available for costs exceeding the drainage fees.

III. Summary

Karman Line is proposed to include single family units to include single family units. Due to development increased runoff will occur. To mitigate downstream impacts, large full spectrum detention facilities will be built to reduce the runoff rate to near historic levels. These detention facilities will provide water quality enhancements to account for the increased urbanization of the upstream catchment areas. Natural drainage to tributaries will be stabilized as necessary to promote a naturalized stream environment.

Additional analysis will be required and completed to review the hydrology of the site and be included in future submittals. The proposed design, as described in this report, is not anticipated to cause any adverse impact to downstream properties however as noted previously **due to the increased volume of water, downstream tributaries will see increases in the volume of flow. Downstream planning efforts should allow for the natural migration and movement of the channel by continuing to provide large floodplain areas to allow movement of the channel.**

Impacts to downstream channels due to increased runoff volumes and durations will need to be addressed in all cases.

County staff wishes to discuss an IGA or other agreement that addresses cross jurisdictional drainage improvements and fees.

Green infrastructure/low impact development should be provided to mitigate impacts to downstream channels.

There are no imminent downstream planning efforts

Land Use

Figure 3 shows the proposed Norris Ranch Master Plan. The site planned to be developed with a mix of residential, commercial industrial, and office uses. The total number of residential dwelling units within the Master Plan area is 6,500. About 105.12 acres are planned for commercial/retail uses and about 45.58 acres are planned for light industrial/office uses. Table 1 shows the land use assumed for each planning area.

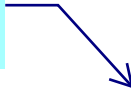
Access

Six full-movement access points are proposed to Bradley Road and Curtis Road. All of the proposed access points are spaced greater than the ¼-mile spacing (1,320') except for the north Road 1/Curtis Road intersection which is about 1,051 feet south of Book Drive and the proposed access to the light industrial parcel (P-21) which is located about 1,193 feet north of Book Drive.

STREET AND TRAFFIC CONDITIONS

Area Streets

The MTCP sheets
have not been
attached



The adjacent streets are shown in Figure 1 and are described below. Copies of the 2016 El Paso County *Major Transportation Corridors Plan (MTCP) 2040 Roadway Plan* and 2016 MTCP 2060 Corridor Preservation Plan with the site location identified on them have been attached to this report.

- **Powers Boulevard** (State Highway 21) is classified as a Freeway (FW). Powers Boulevard is one of the region's main north/south corridors. Powers Boulevard has a center median and a posted speed limit of 60 miles per hour (mph) north of Crestera Parkway. South of this point, the posted speed limit is 65 mph. Powers Boulevard is ultimately planned to be converted to a Freeway with grade-separated intersections.
- **State Highway (SH) 94** is a two-lane roadway that extends east from US Highway (US Hwy) 24 to US Hwy 40. SH 94 is classified as a Principal Arterial (NR-A) and has a speed limit of 55 mph. The El Paso County Major Transportation Corridors Plan (MTCP) shows SH 94 as a four-lane road in 2040 from the US Hwy 24 to Slocum Road. The intersection of Curtis Road/SH 94 is signalized with auxiliary lanes for all turning movements.
- **Curtis Road** is a two-lane roadway that extends from Bradley Road to Judge Orr Road. The roadway is classified as a Minor Arterial south of SH 94. The posted speed limit is 55 mph adjacent to the site.
- **Bradley Road** is shown with a Minor Arterial classification on the 2016 2040 El Paso County *Major Transportation Corridors Plan (MTCP)*. Adjacent to the site, Bradley Road is a two-lane roadway with a 55-mph posted speed limit and has an edge-of-asphalt median, left-turn lanes, and rural paved shoulders.
- **Marksheffel Road** extends north from the Link Road/C&S Road intersection in Fountain, Colorado to north of Woodmen Road. It has recently been upgraded north and south of

The long-term directional-distribution estimates were based on the anticipated regional development and future roadway networks, as shown on the attached map from the PlanCOS.

When the distribution percentages (from Figure 5) are applied to the trip-generation estimates (from Table 1), the resulting site-generated traffic volumes can be determined. Figures 6 and 7 show the projected daily site-generated traffic volumes on key links in the study area.

ROADWAY CLASSIFICATION

Figure 8 shows the recommended Roadway classification for the internal roadways.

* * * * *

Please discuss any changes in the roadway classification of Bradley Rd and Curtis Road due to the developments traffic.

Please contact me if you have any questions regarding this report.

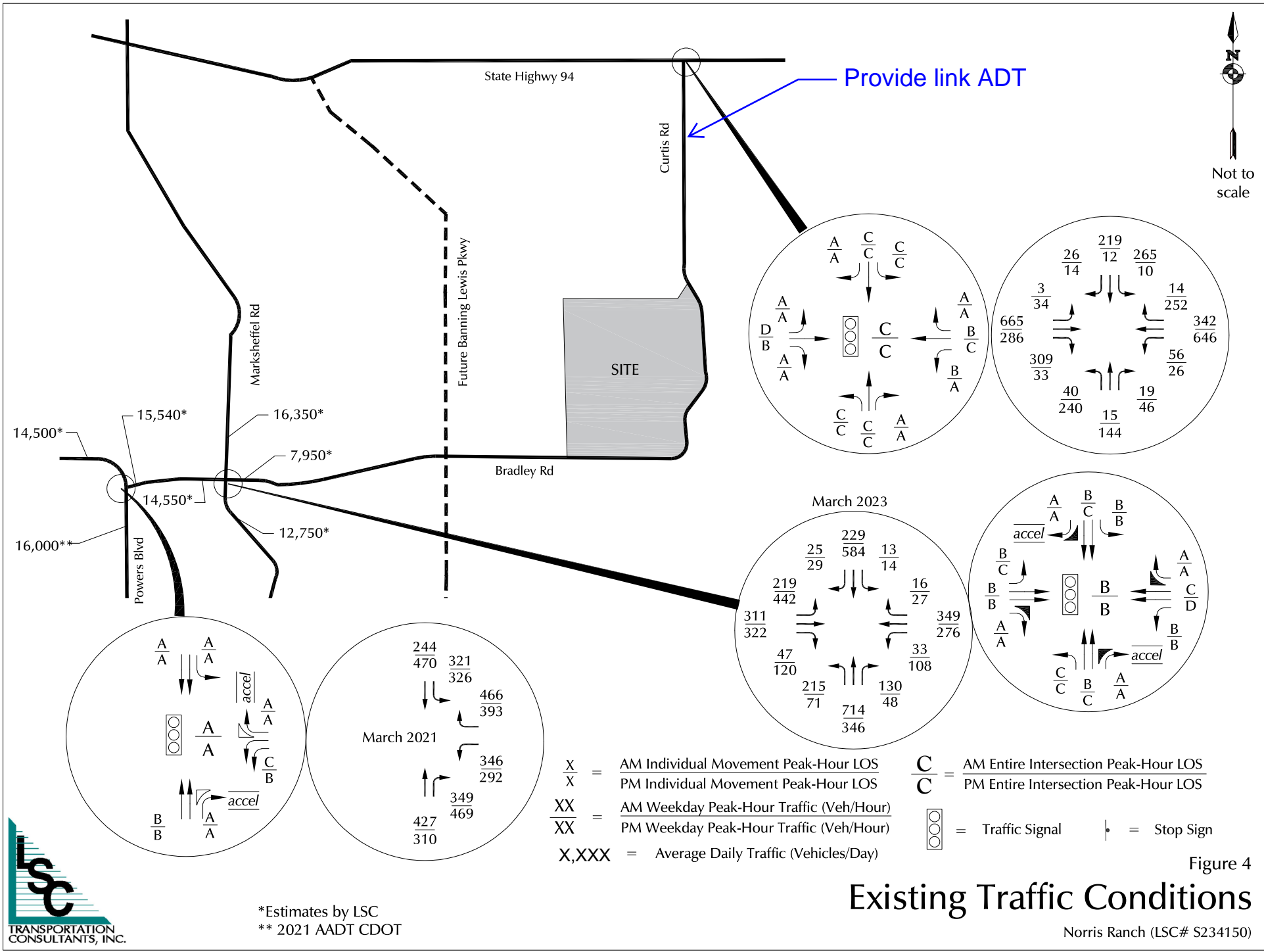
Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

By Jeffrey C. Hodsdon, P.E.
Principal

JCH/KDF:jas

Enclosures: Table 1
Figures 1-8
Traffic Count Reports
Level of Service Reports
Appendix Table 1
NCHRP 684 Internal Trip Capture Estimation Tool
Pages from PlanCOS_2020

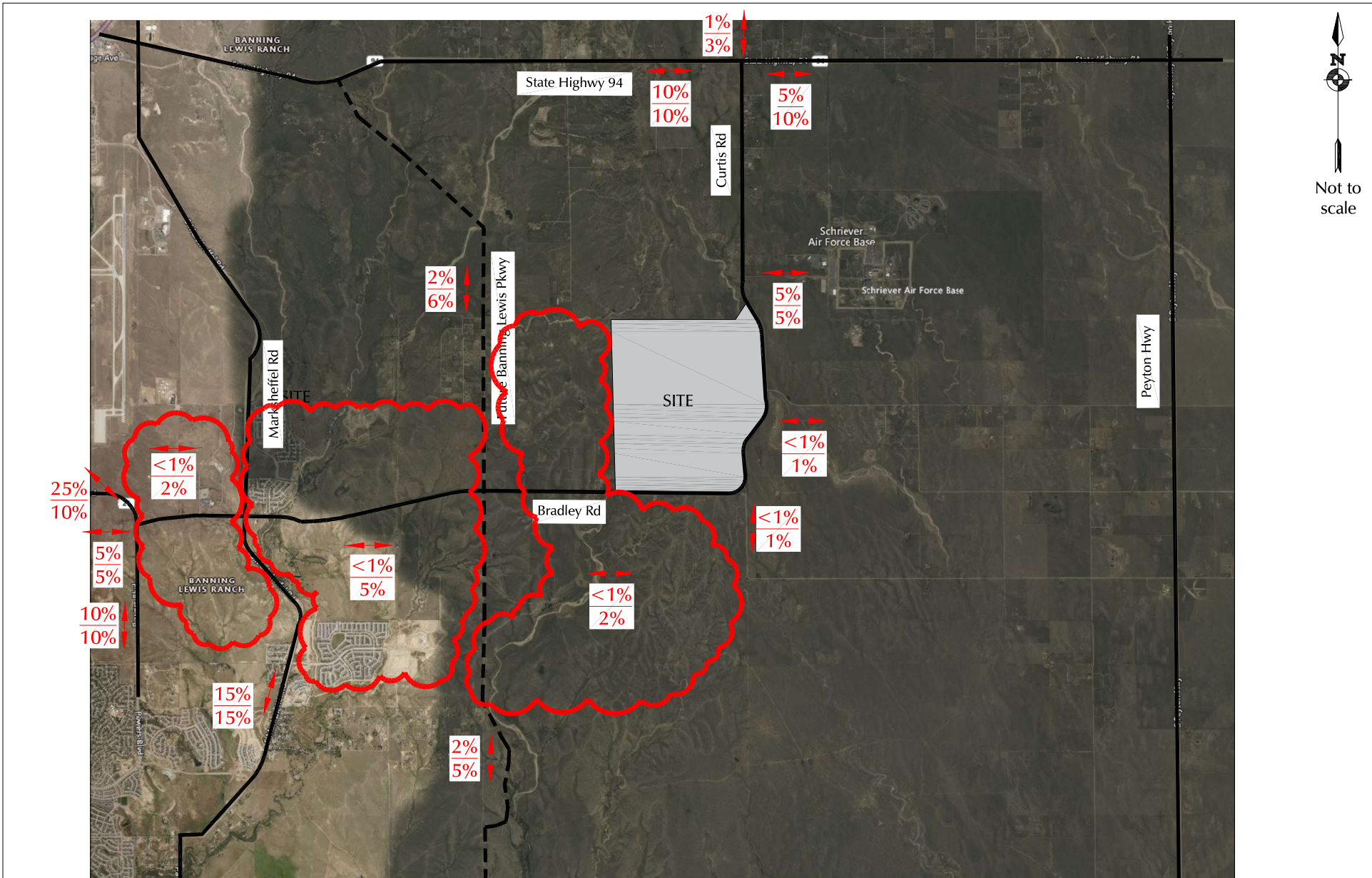


*Estimates by LSC
 ** 2021 AADT CDOT

Existing Traffic Conditions

Figure 4

Norris Ranch (LSC# S234150)



North Arrow
Not to scale



$\frac{XX\%}{XX\%}$ = Residential % Distribution
 $\frac{XX\%}{XX\%}$ = Non-Residential % Distribution

Verify that totals
← add up to 100%
(10-17% missing?)

Figure 5
Directional Distribution

Norris Ranch (LSC# S234150)