SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

April 7, 2023

Jim Morely
MM Ranch LLC
20 Boulder Crescent Street
Colorado Springs, Colorado 80903

RE: 12285 Squirrel Creek Road / Special Use Application / Transportation Memorandum
El Paso County, Colorado
PCD File No. AL-23-003

Dear Mr. Morely,

SM ROCHA, LLC is pleased to provide traffic generation analysis information for the El Paso County Special Use Application entitled herein as 12285 Squirrel Creek Road Development. This development is located south of Squirrel Creek Road at 12285 Squirrel Creek Road in rural El Paso County, Colorado. The development site is further located approximately four miles east of the City of Fountain, CO.

The purpose of this analysis is to present traffic volumes likely generated by the proposed development and consider potential impacts to the adjacent roadway network.

This analysis has been revised to address County Engineering review comments dated 3/28/2023 regarding the provision of traffic engineer and developer statements, and access sight distance compliance.

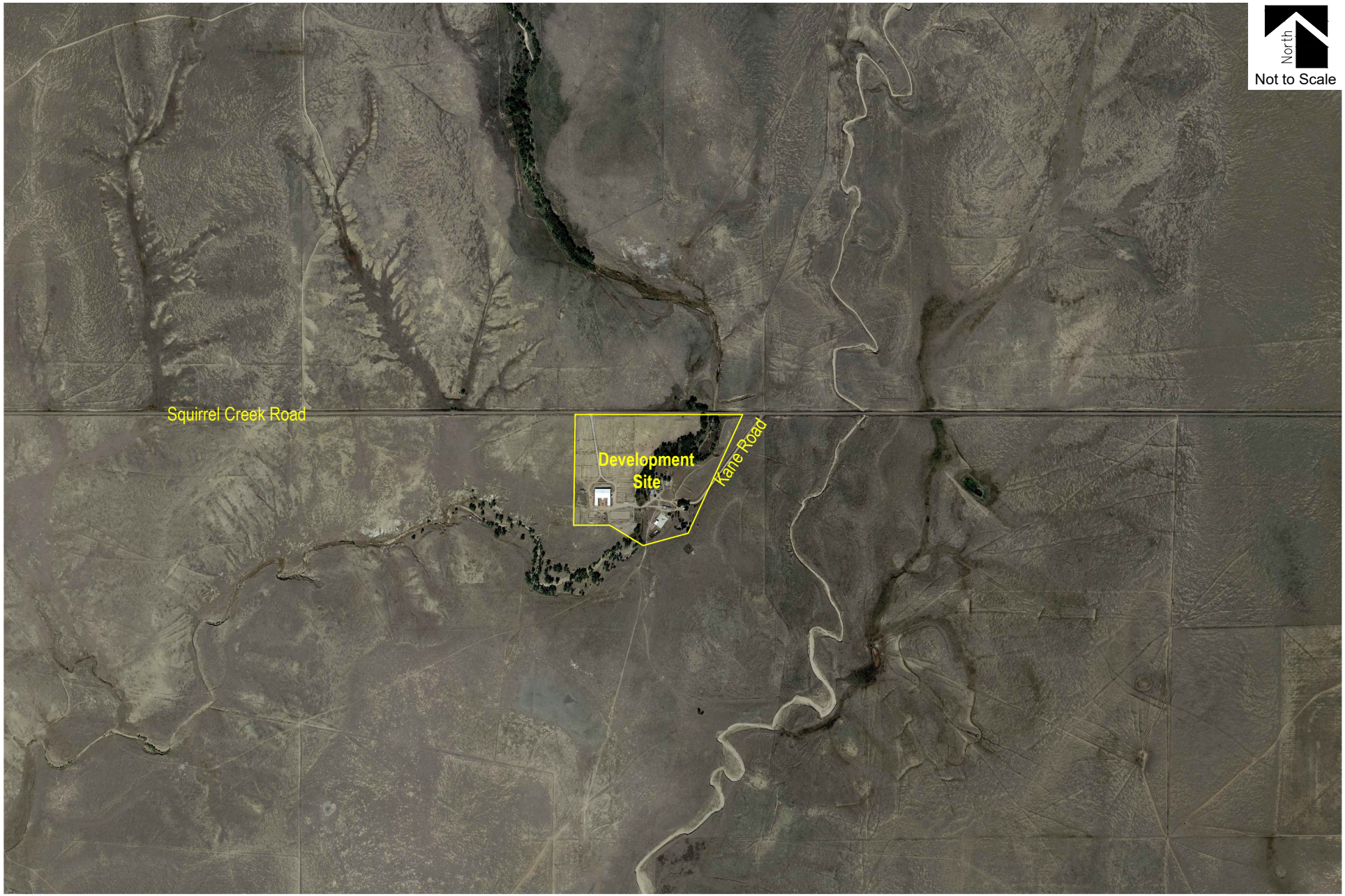
The following is a summary of analysis results.

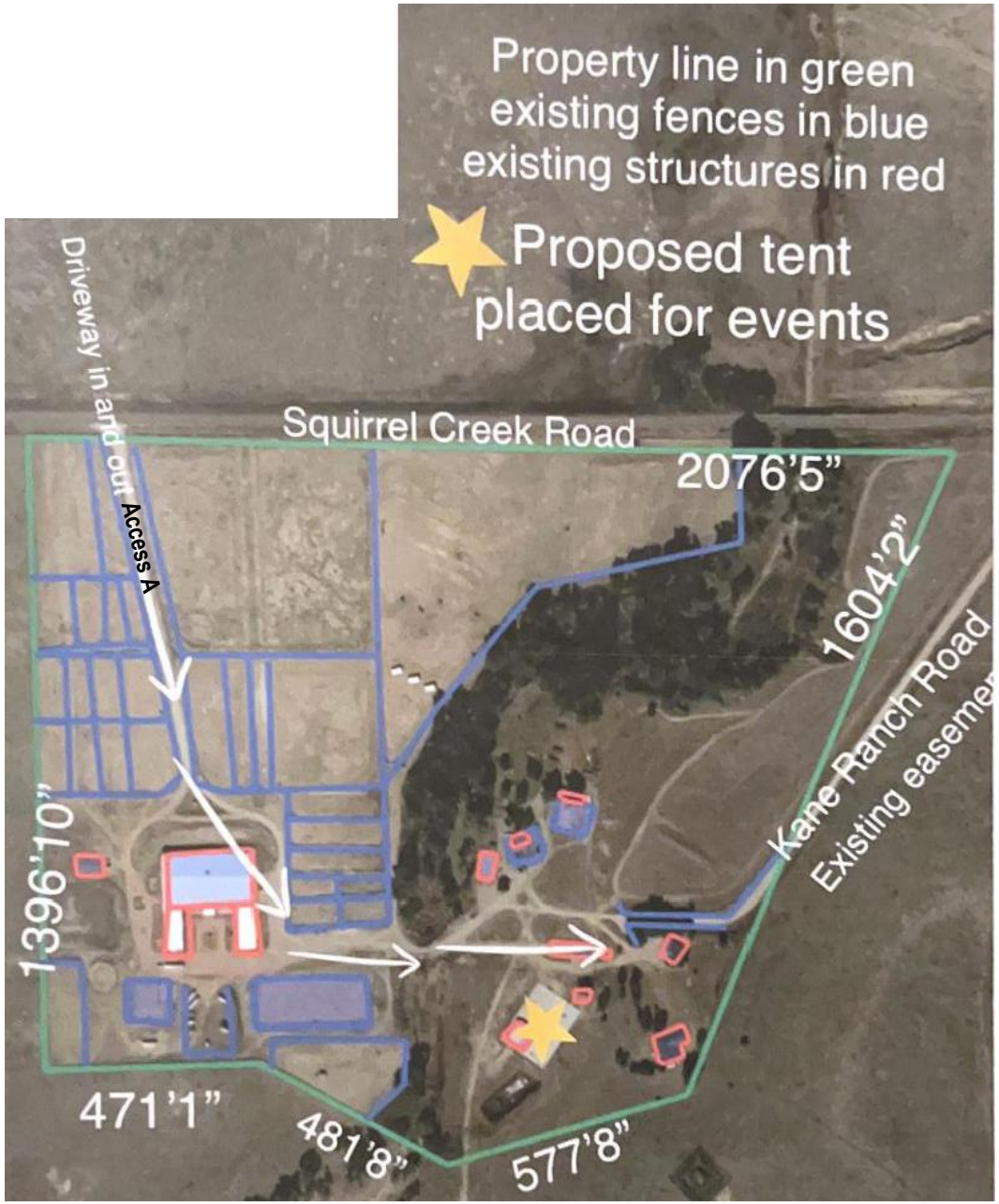
Site Description and Access

Land for the development is currently occupied by MM Equestrian Center which is surrounded by rural land uses and open space. Current property operations include equestrian center, animal boarding, educational lessons, and hosting of many collegiate or local high school equestrian events and competitions. The proposed Special Use Application (SUA) is understood for the allowance of business event center use within the existing equestrian facility. According to Applicant provided information, proposal specifics entail the addition of a large tent on to an existing 160' x 120' concrete pad, eventually a wooden western style picnic shelter, for people to gather. This tent/shelter may be used for ranch type weddings, business conferences, and as a place to congregate during the aforementioned events currently on the property while remaining consistent with an old west ranch character. Approximately 100 people attend the equestrian center events.

Existing access to the development is provided by one full-movement access onto Squirrel Creek Road (hereinafter referred to as Access A) and one access via existing Kane Ranch Road.

General site and access locations are shown on Figure 1. A conceptual site plan, as prepared by the Applicant, is shown on Figure 2. The conceptual site plan is provided for illustrative purposes only. Refer to the site plan and SUA for site specific details.


North
Not to Scale
Squirrel Creek Road
Development Site
Kane Road



North
Not to Scale

Vehicle Trip Generation

The proposed shelter is considered ancillary to current equestrian center operations with no additional site traffic generation expected. However, for analysis purposes, standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were considered for the proposed SUA in order to estimate the highly unlikely potential of average daily traffic (ADT) and peak hour vehicle trip generation for the tent/shelter structure allowance. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

It is noted that ITE does not provide traffic generation data for this particular SUA proposal or similar land use. This is due to the intermittent or seasonal use of event venues and the significant variability in the number of visitors depending on when an event is held and the type of event. Therefore, vehicle trip generation for the proposed SUA were estimated based on assumed venue operations.

The assumed highest traffic generation potential of proposed tent/shelter operation is mostly as a wedding event destination. It is anticipated that the greatest period of site generated traffic entering or exiting the site will occur prior to the start of a wedding ceremony during the arrival of guests. On average, it is assumed that most guests attending the proposed venue will carpool. Additionally, it is expected that the majority guests will all arrive within 1-hour prior to event start and are expected to stay for the duration of the event. A 90 percent to 10 percent split in site generated directional distribution trips is assumed for determining the number of entering versus exiting vehicles during the peak period of generation. The departure rate of guests is expected to be less than the arrival rate, as guests are considered likely to leave the venue at staggered times after the event depending on their preference. However, the inverse of arrival percent split is assumed in this analysis for exiting guests.

Assumed tent/shelter operation is as follows:

- Wedding events generally occur on Friday, Saturday, and Sunday,
- Peak time for wedding: Noon–2pm and 10-midnight,
- Only one event on-site at a time,
- Peak event season from May to end of October,
- Average 100 people per event (including guests, and a limited number of on-site staff),
- Ratio of one vehicle for every two guests,
- Average 50 guest vehicles during event,
- Nearly all guests originate from Fountain/Colorado Springs area, and
- Most events utilize carpools or private shuttle service to and from event.

Using the above information, the number of daily and peak hour trips likely generated by the assumed wedding event was then calculated.

In terms of guest trips and the earlier described definition of a vehicle trip, the number of daily trips per guest vehicle would be two per day (i.e., one round trip to attend event). Using the average number of guests (including limited number of on-site staff) and considering that guest share rides (two guests per vehicle) to and from the event, the average 100 guest event produces an average of 100 daily trips.

Table 1 summarizes the projected average daily traffic (ADT) and peak hour traffic volumes estimated for the assumed event, without consideration of trip reduction caused by larger carpools or private shuttle service use.

Table 1 – Site Generated Summary

TRIP GENERATION SUMMARY							
	TOTAL TRIPS GENERATED						
	24	AFTERNOON PEAK HOUR			EVENING PEAK HOUR		
ASSUMED LAND USE	HOUR	ENTER*	EXIT*	TOTAL	ENTER*	EXIT*	TOTAL
Tent/Shelter Facility - Wedding	100	45	5	50	5	45	50

* A 90%/10% entering/exiting directional distribution assumed for peak hour

Pursuant to peak drop off/pick up times described for the assumed event, no peak event time corresponds to typical peak commute hours of the adjacent roadway (Squirrel Creek Road). As such, the assumed event's peak and non-peak vehicle trips could be easily distributed through the existing site access to Squirrel Creek Road. Furthermore, the traffic volumes described in Table 1 could be further reduced if trip reductions associated with large carpool or private shuttle services is used. An exact trip reduction is not available due to the large degree of use variation, but it is estimated that the trip reduction could range between 20-50 percent.

Trip Generation Distribution and Assignment

Overall directional distribution of assumed site-generated traffic was determined based on existing area land uses, the site location within the County, the available roadway network, and in reference to historical traffic count data provided by CDOT's Traffic Count Database System (TCDS)[1]. Site-generated traffic is assumed to be equally distributed through each existing access. Distribution along Squirrel Creek Road is general and assumed to be 75 percent to/from the west and 25 percent to/from the east.

Traffic assignment is how the site-generated and distributed trips are expected to be loaded on the roadway network. Applying trip distribution patterns to site-generated traffic provides the peak hour trip volume assignments for each existing access. These volumes are then divided further upon travel through adjacent roadways serving the overall development area. Table 2 below uses the trip generation volumes from Table 1 and denotes projected traffic volumes at each existing access.

Table 2 – Site Generated Trip Assignment

DEVELOPMENT ACCESS	AFTERNOON PEAK HOUR		EVENING PEAK HOUR	
TURNING MOVEMENTS	Inbound Volume	Outbound Volume	Inbound Volume	Outbound Volume
Access A / Squirrel Creek Road				
Eastbound Right	17	-	3	-
Westbound Left	5	-	0	-
Northbound Right	-	0	-	17
Northbound Left	-	3	-	5
Kane Road / Squirrel Creek Road				
Eastbound Left	6	-	2	-
Westbound Right	17	-	0	-
Northbound Right	-	2	-	6
Northbound Left	-	0	-	17

[1] Transportation Data Management System, MS2, 2022.

Development Impacts

As Tables 1 and 2 show, daily and peak hour traffic volumes anticipated for an assumed wedding event are considered minor and conservative. These minimal volumes are not likely to negatively impact operations of the existing access intersections with Squirrel Creek Road, nor other sparsely adjacent roadways or intersections, during either peak or non-peak traffic conditions.

Access Deviation Request

The existing MM Equestrian Center has an existing driveway (Access A) which provides direct access onto Squirrel Creek Road. The access has been in operation since 2008 and serves as second entry for guests visiting the existing equestrian facility. County review comments, dated 2/28/2023, state current classification of Squirrel Creek Road as a major collector and future classification as minor arterial with no direct lot access permitted. County review comments further state allowed use of existing access with two conditions. These conditions are understood to be the Applicant's submittal of a driveway access permit application, and an access permit condition for future potential access closure at County discretion. As such, no request for existing access deviation appears needed for this proposed SUA.

Access Sight Distance Compliance

Clear sight distance availability for each existing access was evaluated in accordance with Section 2.4.1 D. of the Engineering Criteria Manual (ECM)[2] and determined to be in compliance with the ECM with no need for modification. The accessed segment of existing Squirrel Creek Road is a rural two-lane roadway that is relatively flat with some locations of minor rolling terrain (not exceeding 3% grade) and a posted speed limit of 55 mph. Upon inspection including application of ECM standards [Table 2-33 (minimum sight distance along roadway), Table 2-34 (sight distance adjustment factors), and 2-35 (driveway entering sight distance)] and assumption of most conservate design vehicle (single unit truck), all required sight distance appears provided in the existing access condition.

Conclusion

This analysis assessed assumed traffic generation and potential impacts to the adjacent roadway of Squirrel Creek Road for the proposed Special Use Application (SUA) for allowance of business event center use within the existing equestrian facility, allowance of a large tent then future wooden western style picnic shelter on an existing 160' x 120' concrete pad for people to gather, and allowance for hosting ranch type weddings or business conferences as well as congregation location for events currently occurring on the property while in character with an old west ranch.

It is our professional opinion that the assumed site-generated traffic resulting from the proposed SUA is expected to create no discernible impact to traffic operations to existing site access and surrounding Squirrel Creek Road during either peak or non-peak traffic conditions. Analysis of the assumed wedding event site-generated traffic condition conclude that proposed SUA development traffic volume is minimal.

[2] El Paso County Engineering Criteria Manual, El Paso County, October 2020.

The findings presented in this analysis indicate substantial justification for approval of the 12285 Squirrel Creek Road SUA. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants

Megan Bock, EIT
Traffic Engineer

COLORADO REGISTERED
FREDERICK C. LANTZ
23410
04/07/23
PROFESSIONAL ENGINEER

Fred Lantz, PE
Traffic Engineer

Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

Fred Lantz, P.E. #23410

04/07/2023
Date

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Jim Morely
MM Ranch, LLC
20 Boulder Crescent Street
Colorado Springs, Colorado 80903

04/07/2023
Date