



## SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

April 16, 2021

Add PCD Project #  
AL 21-015

Jennifer Shagin  
N.E.S. Inc.  
619 N Cascade Avenue  
Colorado Springs, CO 80903

-Provide LOS analysis at both access locations"  
-Discuss any accident reports or trends at Church access pt  
-Impacts and recommendations for combined weekend church and wedding venue traffic and offset mitigation  
-Detail marking and signage necessary at Farm access and need for S/B acceleration lane  
- See comments contained on following pages of TIS

RE: Venetucci Farm / Traffic Generation and Impact Analysis  
El Paso County, Colorado

Dear Jennifer,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled Venetucci Farm. This development is located on the west side of US 85 (Canam Highway) approximately one half-mile north of Main Street in El Paso County, Colorado.

The intent 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 is also provided to determine potential auxiliary lane requirements at site accesses along US 85.

The following is a summary of analysis results.

### Site Description and Access

Land for the development is currently occupied by existing agricultural land uses including a single-family residence, as well as a flower garden and retail center with surrounding agricultural fields and ancillary structures. An Xcel Energy solar panel installation is also present within the development area. The site is surrounded by a mix of institutional, residential, and open space land uses. The proposed development is understood to entail the use of the existing farm area as an event venue with a focus on weddings. No major new construction is anticipated with existing farm structures being utilized as part of the event venue and additional facilities including tents, pavilions, and other temporary structures being catered to the site on an as needed basis.

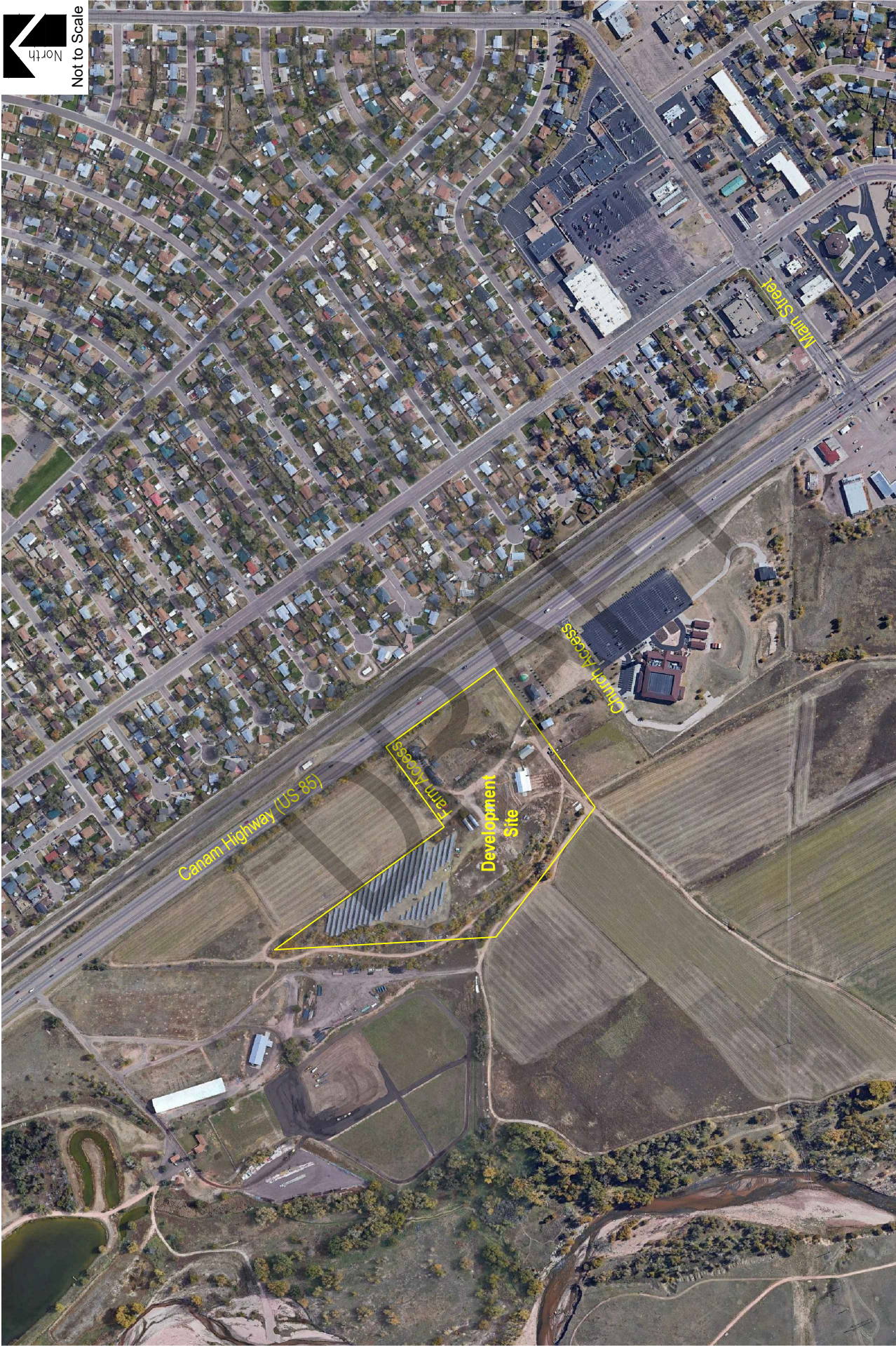
Existing access to the development area is provided at the following locations: one full-movement access onto US 85 shared with an adjacent church land use and located approximately 1,500 feet north of Main Street (referred to as Church Access), and one additional full-movement access located approximately 2,500 feet north of Main Street (referred to as Farm Access).

General site and access locations are shown on Figure 1. An existing and proposed land use concept plan, as prepared by N.E.S. Inc., is shown on Figure 2. This plan is provided for illustrative purposes.





Not to Scale







## Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 10<sup>th</sup> Edition, are generally applied to proposed land uses in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

It is however noted that ITE does not provide trip generation rates for event venues and is due to the intermittent use of event venues and depending on when an event is held and the type of event. The proposed development operations.

Update either the letter of intent or the TIS for consistency. The letter of intent indicated the wedding events are restricted to a maximum of 75 people. Additionally, the LOI was not clear if cap was for the combined guest and service staff.

The proposed event venue land use is understood to operate as a wedding destination with an anticipated event frequency of one wedding ceremony on a given day. Days of operation are anticipated to be limited to Friday, Saturday and Sunday. Wedding ceremonies may occur at various times throughout the day; however, it is expected that most will occur beginning at 5:00 PM and continue until late evening. The venue is proposed to host up to 150 people per event by Year 2022.

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. Prior to the arrival of guests, it is expected that catering services and personnel involved in the setup and preparation of venue facilities will arrive and depart the site resulting in additional trips. However, these trips are anticipated to be fewer than those generated by event guests. On average, it is assumed that most guests attending the proposed venue will carpool. As such an assumed ratio of one vehicle for every two guests is applied for trip generation analysis purposes. Additionally, it is expected that the majority of guests will all arrive within a 15-to-30-minute time frame and are expected to stay for the duration of the event. A 95 percent to 5 percent split in site generated 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 throughout the evening depending on their preference.

Pursuant to the indicated development operations, Table 1 summarizes the projected average daily traffic (ADT) and peak hour traffic volumes likely generated by the additional land use area proposed.

**Table 1 – Trip Generation Summary**

ITE CODE      LAND USE      SIZE			TOTAL TRIPS GENERATED		
			24 HOUR	PEAK HOUR OF GENERATION	
				ENTER	EXIT      TOTAL
-	Event Venue	150 ATTN	150	71	4      75
<b>Total:</b>			<b>150</b>	<b>71</b>	<b>4      75</b>

Key:      ATTN = Number of Attendees.

Note:      All data and calculations above are subject to being rounded to nearest value.

Identify the peak hour of the adjacent street and state how this was determined.

Staff's assuming this was based on traffic counts.

As Table 1 shows, the additional development are daily trips with 75 of those occurring during the peak traffic period. The peak traffic period may vary throughout a given day but is anticipated to occur between 4:00 and 5:00 PM and is considered to be off-peak compared to the peak hours of adjacent street traffic.

### Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Include the missing attachment.

### Existing and Background Traffic Volumes

Existing weekday morning (AM) and afternoon (PM) peak hour traffic counts as well as weekend peak traffic counts were collected at the US 85 and existing site access intersections. Average daily (24-hour) traffic volumes were also collected along US 85. Traffic count data is included for reference in Attachment A.

It should be noted that due to the effects of the COVID-19 pandemic, traffic volumes collected may not accurately represent peak hour and 24-hour traffic volumes under normal conditions. Therefore, in order to more accurately represent existing traffic volumes under normal conditions, average daily traffic volumes along US 85, provided from the CDOT Online Transportation Information System (OTIS), were referenced for Year 2021. Comparing the CDOT OTIS 24-hour volume to the collected count data concludes that the collected count data is comparable to normal traffic volumes. Therefore, collected count data is used to represent traffic volumes under normal conditions.

Add the referenced OTIS information in the appendix.

The proposed development is anticipated to achieve peak operation by Year 2022. To account for projected total traffic, including background traffic for Year 2022, a compounded annual growth rate was determined using traffic data provided by the Colorado Department of Transportation's (CDOT) Online Transportation Information System (OTIS), which anticipates a 20-year growth rate less than one percent. In order to provide for a conservative analysis, a conservative compounded annual growth rate of two percent was applied to existing traffic volumes. This annual growth rate is also consistent with regional growth projections and the level of in-fill development expected within the area. Background traffic is the traffic projected to be on area roadways without consideration of the proposed development addition. Background traffic includes traffic generated by development of vacant parcels in the area.

## Trip Generation Distribution and Assignment

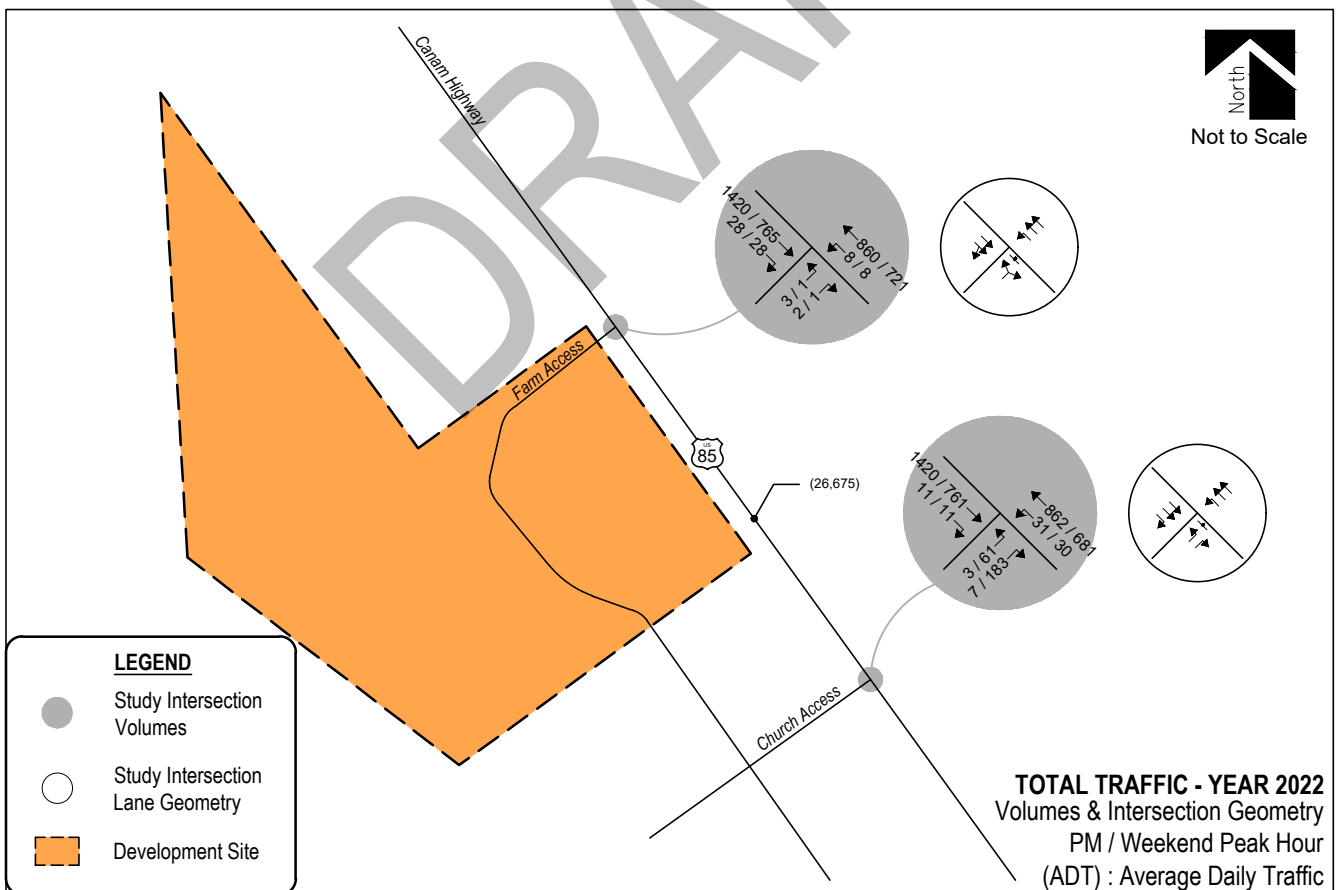
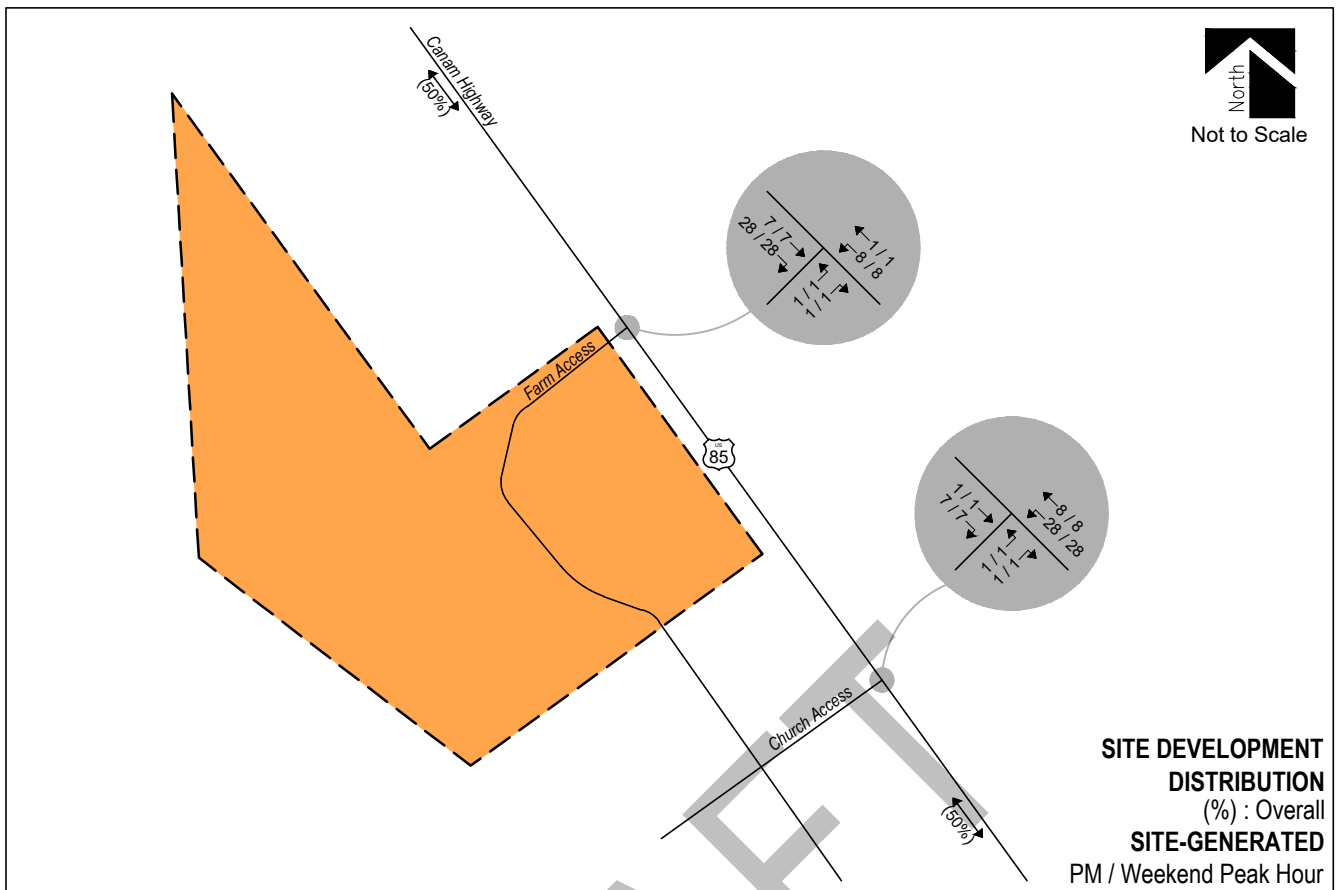
Overall directional distribution of site-generated traffic was determined based on existing area land uses, the site location within the County, and the available roadway network. General site-generated traffic is anticipated to be distributed along US 85 and assumed to be 50 percent to/from the north and 50 percent to/from the south.

Traffic assignment is how the site-generated and distributed trips are expected to be loaded on the roadway network. Applying assumed trip distribution patterns to site-generated traffic provides the peak hour trip volume assignments for the existing accesses.

Site-generated traffic was then added to background traffic projections for Year 2022 to develop total traffic projections. As previously noted, site peak hours of operation are anticipated to be off-peak compared to adjacent roadway peak traffic periods. Therefore, for analysis purposes, only peak hour traffic volumes collected from 4:00 to 5:00 PM during weekdays for adjacent street traffic were used to determine total traffic volumes. For weekends, the peak hour varies for the existing and adjacent land uses. In order to present a conservative analysis, the peak hour for each site access was used without respect to a specific time of day. It is noted that this presents a worse-case scenario for peak weekend operations and actual volumes are likely to be less than those indicated.

Overall site-generated trip distribution patterns and assignments are shown on Figure 3. Projected Year 2022 total traffic volumes and intersection geometries are also shown on Figure 3.

Discuss traffic impacts in the event the wedding venue occurs at the same time as church services on Sundays. It seems a worse-case scenario is having both church service and guest for the wedding venue arriving at the same time.





## Auxiliary Lane Analysis

Auxiliary lanes for site development accesses are to be based on the CDOT *State Highway Access Code* (SHAC).

The adjacent segment of Canam Highway (US 85) is categorized by CDOT as a Non-Rural Principal Highway (NR-A) and provides a posted speed limit of 50 MPH. Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 3.10(7), of the CDOT SHAC, reveals that a right turn deceleration lane at the development's projected peak hour right turn volume (VPH). A left turn deceleration lane is required if the peak hour left turn ingress volume exceeds 100 vehicles per hour.

As shown on Figure 3, projected development traffic volume at Farm Access is 100 vehicles per hour. A right turn deceleration lane is not required and it is noted that a left turn deceleration lane may be used by left-turning vehicles. Right-turn acceleration lane, are already in existence supporting the proposed development.

## Development Impacts

Analysis results show that there is an increase in traffic volume at the proposed development addition which are negatively impact operations of US 85 or Canam Highway.

## Conclusion

This analysis assessed traffic generation for the Venetucci Farm development addition and potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic resulting from the additional building area is expected to create no negative impact to traffic operations for the surrounding roadway network and existing site accesses. Analysis of site-generated traffic concludes that proposed development traffic volumes are minor.

An evaluation of auxiliary lane requirements reveals that a right-turn deceleration lane may be required at the Farm Access. Existing turn lanes at the Church Access are believed to provide adequate storage length and no additional improvements are recommended.

Contact CDOT Access Manager (Art Gonzales, 719-248-0905 or [arthur.gonzales@elpasoco.org](mailto:arthur.gonzales@elpasoco.org)) to determine CDOT's requirements such as an updated access permit and the right-turn decel lane. Provide a summary of CDOT's requirements.

Add a section titled "Road Impact Fees"

1. Identify the applicable transportation impact fee which will be "General Commercial"

2. State whether or not the applicant intends to enter into a public improvement district. See <https://publicworks.elpasoco.com/road-impact-fees/> for the unit cost for no PID, 5mil PID and 10mil PID.

3. Calculate the expected road impact fee by listing the square footage of the existing buildings being utilized for the wedding events and multiplying the the unit cost.

The obligation to pay Road Impact Fee is with the final Land Use Approval which in this case will be with the site plan application.



We trust that our findings will assist in the planning and approval of the Venetucci Farm development addition. Please contact us should further assistance be needed.

Sincerely,

**SM ROCHA, LLC**

*Traffic and Transportation Consultants*



Stephen Simon, EIT  
Traffic Engineer



Adam Maxwell, PE, PTOE  
Senior Traffic Engineer

**PER ECM APPDX B.8**

Include an engineer's certification page with the engineer's stamp, signature, and date. The statement must read as follows:

- "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."
- Include a developer's statement on the certification page. The statement must read as follows:

"I, the Developer, have read and will comply with all commitments made on my behalf within this report." Include a printed or typed developer name and address as well as a signature block.