



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

July 14, 2023

Chuck Runge
Runge Architecture
5315 Germaine Ct.
Colorado Springs, CO 80919

Accepted for File

By: Gilbert LaForce, P.E.

Engineering Manager

Date: 10/12/2023 9:25:48 AM

El Paso County Department of Public Works



**RE: 7530 Mohawk St. John's / Transportation Memorandum
El Paso County, Colorado
PCD File No. PPR2255**

Dear Chuck,

SM ROCHA, LLC is pleased to provide traffic generation information for the development entitled 7530 Mohawk St. John's. This development is located at the northwest corner of the intersection of Mohawk Road with Woodmen Frontage Road 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 has been revised to address County Engineering review comments dated 6/6/2023 regarding provision of traffic engineer and developer statements, as well as additional discussion of potential transportation impacts including compliance with County access spacing criteria and pedestrian/bicycle connectivity.

The following is a summary of analysis results.

Site Description and Access

Land for the development is currently vacant and surrounded by a mix of residential, recreational, institutional, and open space land uses. The proposed development is understood to entail the new construction of an approximate 3,440 square foot church supporting as many as 135 attendees.

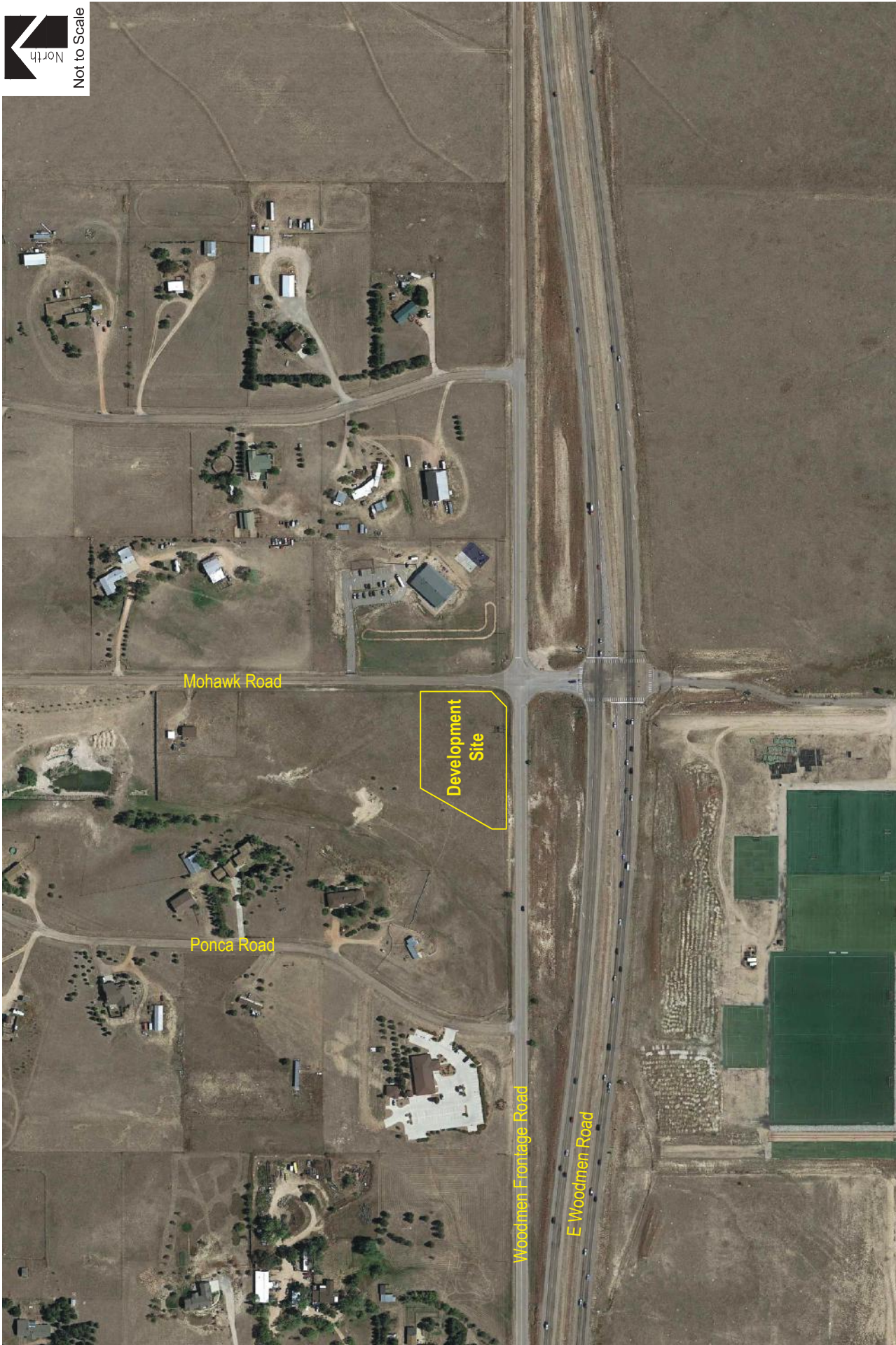
Proposed access to the development is provided at the following locations: one full-movement access onto Mohawk Road (referred to as Site Access).

Additionally, it is noted that the proposed development does not currently include any new sidewalk or other pedestrian/bicycle connections along the adjacent roadways. Sidewalk is expected to be limited to internal routes only serving the provided parking area. It is however noted that the lack of new sidewalk connectivity is in conformance with the rural nature of the site location and surrounding area which does not currently provide any pedestrian or bicycle infrastructure.

General site and access locations are shown on Figure 1. A site plan, as prepared by Runge Architecture, is shown on Figure 2. This plan is provided for illustrative purposes only.



Not to Scale



7530 MOHAWK ST JOHN'S
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Figure 1
SITE LOCATION

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Not to Scale

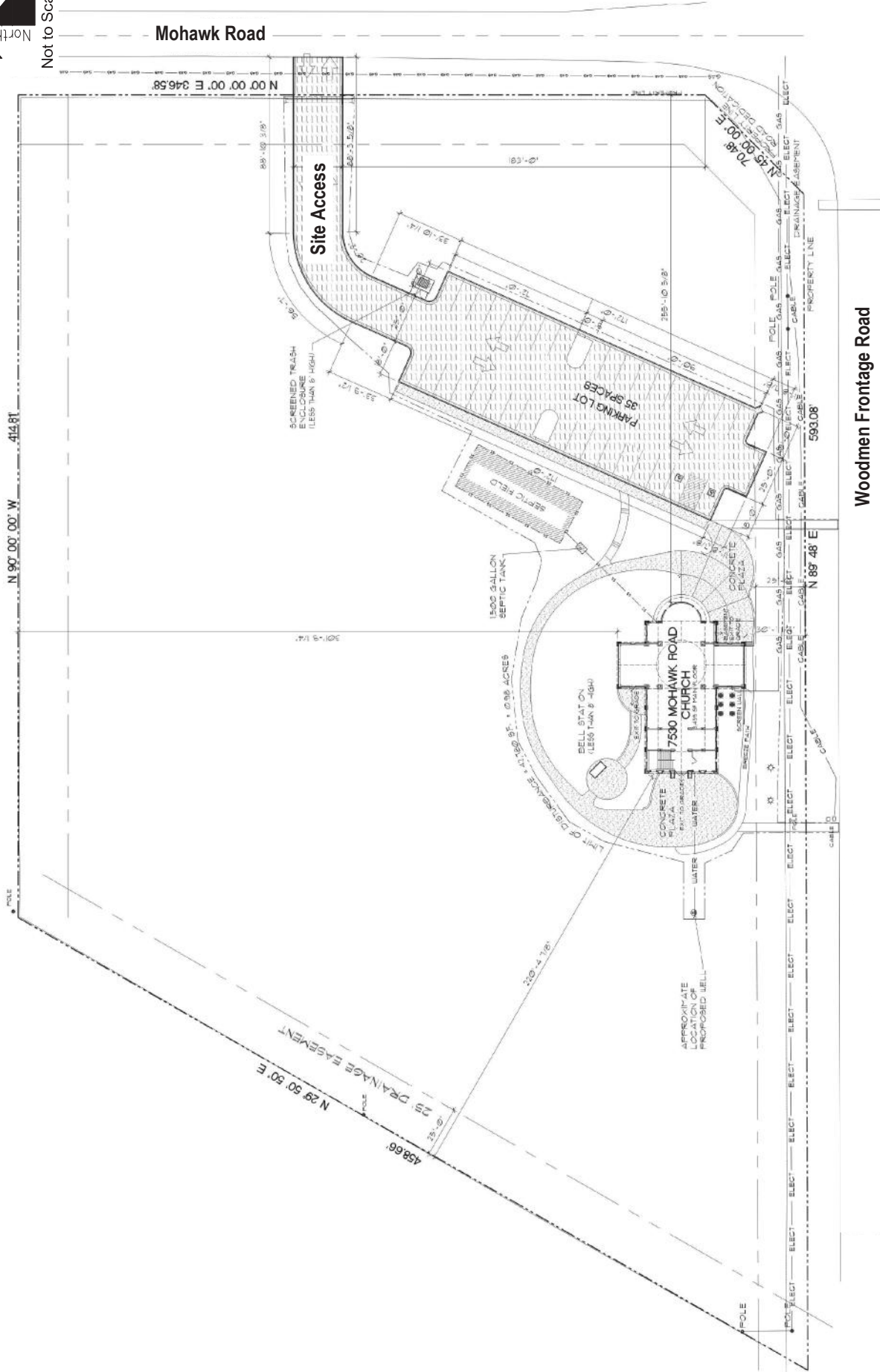


Figure 2
SITE PLAN

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Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use 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.

Table 1 presents average trip generation rates for the development area proposed. Use of average trip generation rates presents a conservative analysis. ITE land use code 560 (Church) was used for analysis because of its best fit to the proposed land use.

It is noted that site operations may also include services on Saturdays as well as evening services during the week. However, it is expected that trips generated during these additional periods of operation will be less than those occurring during the Sunday peak. Furthermore, evening weekday services are expected to occur outside of the typical peak hours for adjacent street traffic.

Table 1 – Trip Generation Rates

ITE CODE	LAND USE	UNIT	TRIP GENERATION RATES			
			24 HOUR	SUNDAY PEAK HOUR		
				ENTER	EXIT	TOTAL
560	Church	KSF	31.46	4.97	5.39	10.36

Key: KSF = Thousand Square Feet Gross Floor Area.

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed.

Table 2 – Trip Generation Summary

ITE CODE	LAND USE	SIZE	TOTAL TRIPS GENERATED			
			24 HOUR	SUNDAY PEAK HOUR		
				ENTER	EXIT	TOTAL
560	Church	3.4 KSF	108	17	19	36
<i>Total:</i>			<i>108</i>	<i>17</i>	<i>19</i>	<i>36</i>

Key: KSF = Thousand Square Feet Gross Floor Area.

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

As Table 2 shows, the development area has the potential to generate approximately 108 daily trips with 36 of those occurring during the Sunday peak hour.

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.

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. Site-generated traffic is anticipated to be distributed through the proposed Site Access. Distribution along Mohawk Road is general and assumed to be 5 percent to/from the north and 80 percent to/from the south. Distribution along Woodmen Frontage Road is assumed to be 10 percent to/from the east and 5 percent to/from the west.

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 proposed Site Access. These volumes are then divided further upon travel through adjacent roadways serving the overall development area. Table 3 below uses the trip generation volumes from Table 2 and denotes projected traffic volumes at Site Access and the adjacent intersection.

Table 3 – Site Generated Trip Assignment

DEVELOPMENT ACCESS TURNING MOVEMENTS	SUNDAY PEAK HOUR	
	Inbound Volume	Outbound Volume
Woodmen Frontage Road / Mohawk Road		
Eastbound Left	2	-
Westbound Right	1	-
Northbound Through	14	-
Southbound Left	-	1
Southbound Through	-	14
Southbound Right	-	2
Site Access / Mohawk Road		
Eastbound Left	-	2
Eastbound Right	-	17
Northbound Left	17	-
Southbound Right	0	-

Development Impacts

As Tables 2 and 3 show, there is an increase in peak hour traffic volumes anticipated for the proposed development. However, these additional volumes are considered to be minor and are not likely to negatively impact operations of Mohawk Road, Woodmen Frontage Road, nor other adjacent roadways or intersections. Given the rural nature of the site location, and that site operations are primarily expected to be limited to Sundays during non-peak hours for adjacent street traffic, intersection levels of service (LOS) are anticipated to be acceptable, being equivalent to or better than a typical design goal of LOS D.

Auxiliary Lane Analysis

Auxiliary lanes for site development intersections are to be based on County's Engineering Criteria Manual (ECM)¹.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7.D, of the County's ECM, reveals that exclusive left-turn and right-turn deceleration lanes are not considered to be required at the site access intersection along Mohawk Road due to its roadway classification and corresponding CDOT State Highway Access Code (SHAC) designation. Due to its rural nature, Mohawk Road is considered to be classified as a Frontage Road (F-R) which provides thresholds of 25 vehicles per hour (VPH) for requiring a left turn deceleration lane, and 50 VPH for requiring a right turn deceleration lane. Pursuant to projected volumes shown on Table 3, these thresholds are not expected to be exceeded.

Access Sight Distance Compliance

Clear sight distance availability for proposed site access was evaluated in accordance with Section 2.4.1.D. of the ECM and determined to be in compliance with the ECM with no need for modification. The accessed segment of existing Mohawk 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 30 MPH. Upon consideration of applicable ECM standards, including Table 2-33 (minimum sight distance along roadway), Table 2-34 (sight distance adjustment factors), and Table 2-35 (driveway entering sight distance), as well as consideration for the most conservative design vehicle (single unit truck), all required sight distance appears achievable for the proposed access condition. Minimum sight distance is identified as being at least 200 feet with entering sight distance of at least 325 feet. Current access spacing is estimated to provide a 350-foot separation from the closest intersection of Mohawk Road with Woodmen Frontage Road measured from centerline to centerline.

¹ El Paso County Engineering Criteria Manual, El Paso County, October 2020.

Pedestrian & Bicycle Connectivity

In accordance with Section B.2.4.D of the County's ECM, an assessment of pedestrian continuity and adequacy was considered. As previously noted in the site description, the proposed development does not currently include any new pedestrian connectivity to the surrounding area. This is due to the rural nature of the development location, and the lack of any existing sidewalk, trails, or other infrastructure than may accommodate pedestrian or bicycle traffic consistent with rural cross-sections as defined within Section 2.2.4 of the ECM. Given that the proposed use is not expected to result in any new pedestrian or bicycle trips due to the expected site operations, it is concluded that the site is in general conformance with the surrounding transportation network and no new sidewalk connections are necessary.

Road Impact Fees

This site is subject to the El Paso County Road Impact Fee Program (Resolution 19-471), as amended and falls within the category of Public/Institutional land uses. Based upon the proposed building size of 3,475 square feet, it is estimated that an impact fee of \$11,718 may be applicable pursuant to the County's latest Fee Schedule. Obligation for payment will be selected at the final land use approval stage.

Conclusion

This analysis assessed traffic generation for the 7530 Mohawk St. John's development and potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic is expected to create no negative impact to traffic operations for the surrounding roadway network and proposed site access, nor at the Mohawk Road intersection with Woodmen Frontage Road. Analysis of site-generated traffic concludes that proposed development traffic volumes are minor.

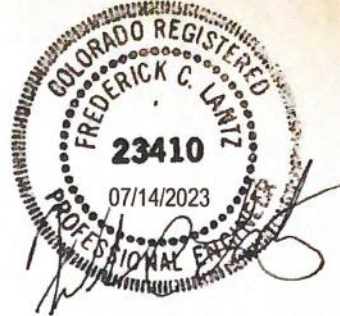
We trust that our findings will assist in the planning and approval of the 7530 Mohawk St. John's development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants



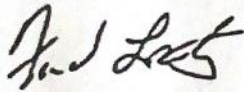
Stephen Simon, EIT
Traffic Engineer



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.

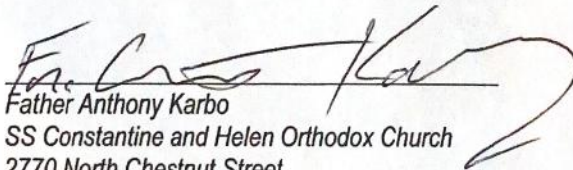


Fred Lantz, P.E. #23410

07/14/2023
Date

Developer's Statement

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



Father Anthony Karbo
SS Constantine and Helen Orthodox Church
2770 North Chestnut Street
Colorado Springs, CO 80907

07/14/2023
Date