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on 12/1/22 seg

1. see comments
below



September 09, 2022,

Steve Gomez
Engineering Service Company
14190 East Evans Avenue
Aurora, CO 80014

**RE: 2252 Tower Road – CJG Transport
Outdoor Storage Impact Analysis**

Dear Mr. Steve Gomez,

Modern Engineering Solutions is pleased to provide traffic generation information for the development entitled CJG Transport Outdoor Storage. This development is located at 2252 Tower Road in Aurora, Adams 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.

The following is a summary of analysis results.

Site Description and Access

Land for the development is currently vacant, according to Adams County assessor information. The site is surrounded by a mix of industrial and residential land uses. The proposed development is understood to entail the new construction of an 18- wheeler parking and outdoor storage for equipment.

Proposed access to the development is provided at the following location: one proposed onto E 22nd PI, approximately 180 feet east of the intersection of Tower Rd. and E 22nd PI. (referred to as Site Access).

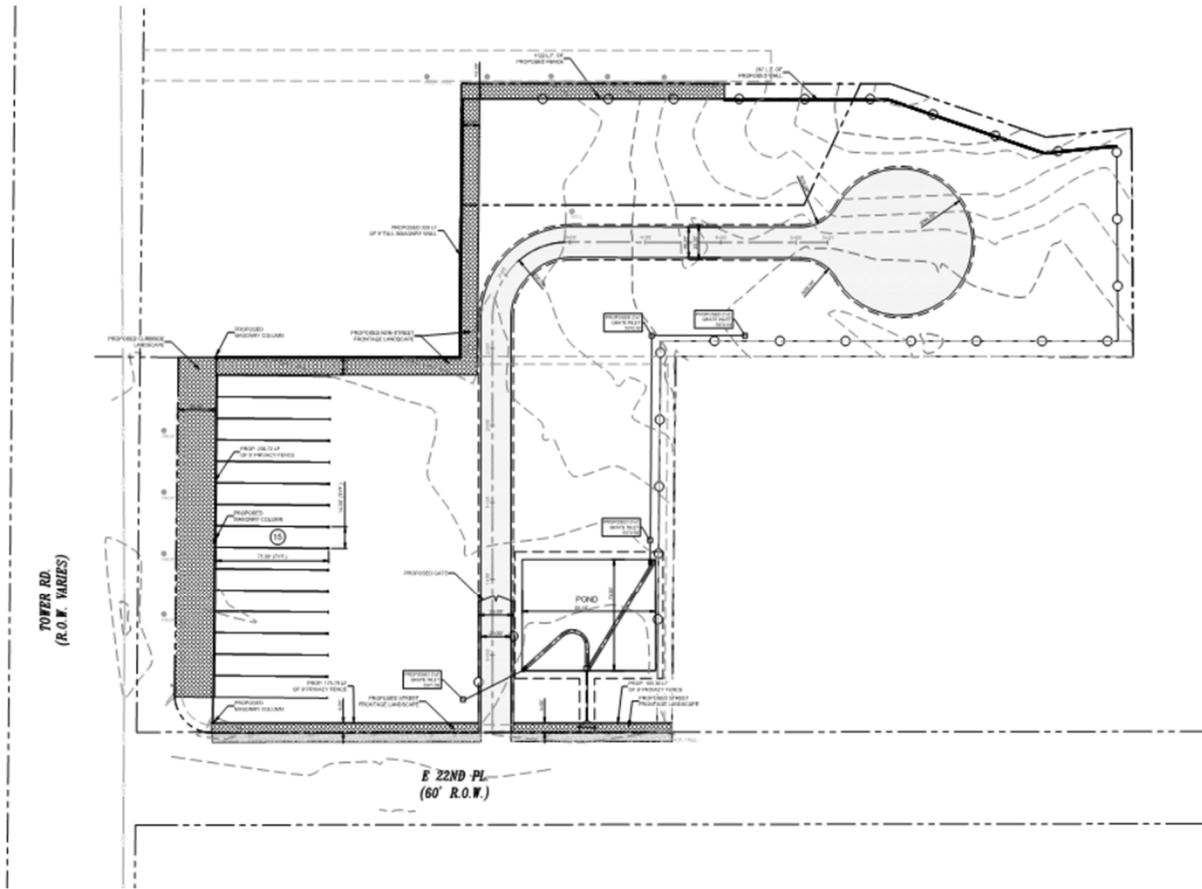
General site and access locations are shown on Figure 1.

A conceptual site plan, as prepared by Modern Engineering Solutions, is shown on Figure 2. This plan is provided for illustrative purposes.



Figure 1

Project Location



Vehicle Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled "Traffic Generation" were applied to the proposed land use to estimate the average number of peak hour vehicle trips. However, ITE's Trip Generation Manual does not provide information for the proposed outdoor storage facility or similar land use. The ITE Transport Outdoor Storage Facility Trip Generation Manual provides trip generation information for outdoor storage facilities. A vehicle trip is defined as the movement from point of origin to point of destination.

Yes. Trips by drivers are included in this trip generation

are trips by drivers included in the trip generation?

Summarized facility operation information is as follows:

- 52 operating weeks per year,
- Maximum of 8 trucks per day leaving the site from approximately 6:00 AM to 7:00 AM,
- Drivers will park their personal vehicles where concrete haul trucks were parked,
- The semi-trucks do not come back every day as they run regional and over-the-road routes, so about 4 trucks will be returning to the site from approximately 5:00 PM to 6:00 PM

•About four semi-trucks and medium-duty vehicles will intermittently be entering or exiting the parking lot throughout the day

Using the above information, the number of daily and peak hour trips likely generated by the outdoor storage lot was then calculated. Table 1 summarizes the projected average daily traffic (ADT) and peak hour traffic volumes likely generated by the land use area proposed upon full development.

Table 1 – Site Generated Traffic

ITE CODE LAND USE SIZE			TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
-	Drivers (Semi Truck)	8 -	24	8	8	16	4	4	8
-	Drivers (Medium Vehicles)	4 -	8	1	1	2	1	1	2
Total :			32	9	9	18	5	5	10

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 city, the available roadway network, and in reference to a recently submitted traffic impact study¹ prepared for an adjacent development area. Site-generated traffic is anticipated to be distributed through each existing access. Distribution along E 22nd PL is general and assumed to be 100 percent to/from Tower Road.

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 Site Access. The table below uses the trip generation volumes from Table 2 and denotes projected traffic volumes at Site Access.

Table 2 – Trip Generation Distribution

Development Site Access	Am Peak Hour Inbound Volume	Am Peak Hour Outbound Volume	Pm Peak Hour Inbound Volume	Pm Peak Hour Outbound Volume
<i>Site Access/ E 22nd Pl</i>				
<i>Westbound left</i>	N/A	N/A	N/A	N/A
<i>Westbound Right</i>	N/A	9	N/A	5
<i>Eastbound Right</i>	N/A	N/A	N/A	N/A
<i>Eastbound Left</i>	9	N/A	5	N/A

¹Adrian's Ready Mix – Library Time, SM ROCHA, LLC December 2020

Development Impacts

As Table 2 shows, the increase in peak hour traffic volumes anticipated for the proposed development and are considered minor. These minor volumes are not likely to negatively impact operations of East 22nd Place or other adjacent roadways or intersections.

Conclusion

This analysis assessed traffic generation for the CJG Transport Outdoor Storage 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 existing site access. Analysis of site-generated traffic concludes that proposed development traffic volume is minor.

We trust that our findings will assist in the planning and approval of the CJG Transport Outdoor Storage development. Please contact us should further assistance be needed.

If you have any questions or concerns about the above numbers, please feel free to contact me on my cell phone 214-734-2305 or my email address Mike@mod-eng.com

Michael Groselle, P.E.

Modern Engineering Solutions

Cell: 214-734-2305

