



ALDRIDGE TRANSPORTATION CONSULTANTS, LLC

Advanced Transportation Planning and Traffic Engineering

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RE: Preliminary Traffic Impact Study
City Hotel, Castle Rock, CO

Dear Mr. Visciano:

With this letter I am providing a preliminary traffic impact study that describes the trip generation, distribution, assignment for review by the town staff. The purpose of this study is to decide if a complete set of new AM and PM peak hour traffic counts at five or six proximal intersections are necessary to analyze the impact, if any, of the proposed development.

The proposed project is construction of a four-story, 33-room boutique hotel at 415 Perry St. in downtown Castle Rock. The hotel will include a small bar, dining area, lounge, and 2,500 sf of retail space. While geared for hotel guests the food and beverage areas and the retail space are open to the public.

The ITE Trip Generation Manual, 11th Edition, does not have observations for a boutique hotel. In this case the town staff require the use of a standard hotel classification (LUC 310) and retail space of 2,500 square feet. The following table shows the rates and values from the ITE manual for a standard hotel and a retail space of less than 40,000 square feet (LUC 822). Shown are the Average Daily Traffic (ADT) and the AM and PM peak hour site-generated trips.

Trip Generation Table								
ITE Code	Land Use	Variable	Quantity	ADT	AM in	AM out	PM in	PM out
310	Hotel	Rooms	33	7.99	0.26	0.20	0.30	0.29
				264	9	7	10	10
822	Retail	KSF	2.5	54.45	1.42	0.94	3.30	3.30
				136	4	2	8	8
Total Trips				400	12	9	18	18



The trip generation of 400 Average Daily Trips (ADT) qualifies the project for a full traffic impact study. However, ADT does not determine the LOS in the Design Hour Volume (DHV). It is the AM and PM peak hour volumes that are used to evaluate the LOS during the DHV. In this case, though, the 21 AM peak hour trips, and 36 PM peak hour trips are too small to be evaluated meaningfully and have discernable impact on the adjacent streets and intersection. This determination is made based on my education, professional engineering license, and 50 years of traffic engineering and transportation planning experience.

To confirm my determination, I reviewed two recent traffic impact studies on Perry St., “A Little School on Perry Street” (December 2023) and “Perry Street Social” (September 2022) both prepared by SM Rocha, LLC. The trip generation tables for the “A Little School on Perry Street” TIS indicates 31 AM peak hour trips and 30 PM peak hour trips. The trip generation table for the “Perry Street Social” TIS shows 9 trips in the AM peak hour and 82 trips in the PM peak hour. In both studies the percent trip distribution to the adjacent streets and intersections was virtually the same. I’ve assumed a similar distribution.

The trip distribution and assignment for this project is shown in the following graphic. The assignment is the PM peak hour commonly considered the Design Hour Volume (DHV). The red box is the hotel.





The majority of the traffic was assigned to the signalized intersections at 5th/Wilcox and 5th/Perry. At each an assignment of 14 vph in and out movements was made. According to traffic counts in the two studies, the intersection at 5th/Wilcox in 2021 managed a total of 1,924 vph in the PM peak hour. The intersection of 5th/Perry managed 2,020 vph in the 2021 PM peak hour. Undoubtedly growth in the last 3 years has increased the total traffic volumes. Nevertheless, the percentage increase attributable to the City Hotel project and retail space at each intersection is less than 1 percent at approximately .7 percent. This is a minuscule increase and statistically insignificant. Consequently, a discernable impact cannot be determined.

The “Perry Street Social” and “A Little School on Perry Street” studies both came to the same conclusion. Both stated, “...the addition of the site-generated traffic is expected to create no negative impact...” and “...the study intersections are projected to operate at future levels of service comparable to Year 2041 background traffic conditions.”

It should also be recognized that the signalized intersections are fully actuated and as such the signal timing is adjusted based on the presence of vehicles in a queue. In the two studies, the difference between the with and without site generated traffic was measured in tenths of a second.

I trust that the analysis herein and my professional opinion is sufficient evidence for town staff to agree that new traffic counts and further impact analyses are not required for the City Hotel project.

Should you have any questions or need additional information please call me on 303-703-9112. Thank you for the opportunity to be of service.

Respectfully submitted,

Aldridge Transportation Consultants, LLC

John M.W. Aldridge, P.E.
Principal



ATC is a professional service firm specializing in traffic engineering and transportation planning. ATC's principal, John M.W. Aldridge is a Colorado licensed professional engineer. In the past 20 years, ATC has prepared over 1,000 traffic impact studies, designed over 100 traffic signals, and has provided expert witness testimony on engineering design and access issues on multi-million-dollar interchange and highway projects in Kansas and Colorado.