

To: Steve Gomez  
Traffic Division  
City of Aurora, CO

From: Brian Horan, PE

Date: June 17, 2022

Re: **King Soopers on Quincy - Library Time (#1573396) – Aurora, CO  
Trip Generation Analysis**



The intent of this memorandum is to satisfy the Trip Generation Analysis requirement in support of a Conditional Use application. The proposed project would raze the existing 8 fueling position gas station and convenience store use and construct a 14 fueling position gas station use. In support of the Conditional Use a trip generation letter is provided to summarize the change in use.

The following memorandum will address the existing conditions, proposed trip generation change and potential traffic impacts to the surrounding network.

### BACKGROUND

The Applicant is seeking to redevelop 19001 E Quincy Avenue, Aurora CO 80015 from the existing use of a Shell 8 fueling position gas station with convenience store to the proposed King Soopers 14 fueling position gas station use. No significant change to location of access is being proposed. A full sized site plan is provided as Attachment A.

### EXISTING CONDITIONS

The site is located at 19001 E Quincy Avenue in Aurora, Colorado, on the northeast corner of the E Quincy Avenue and E Princeton Drive intersection. The site is zoned MU-C, Mixed Use Corridor District, and is currently occupied by a Shell gas station with eight (8) fueling positions and a convenience store.

The site is accessed via a commercial drive which connects to the local network via one right-in/right-out movement access on E Quincy Avenue, and one full movement access on E Princeton Drive.

### TRIP GENERATION COMPARISON

#### Overview

Trip generation estimates for the weekday AM and PM peak hours, as well as the weekday average daily traffic (ADT), were derived from the standard Institute of Transportation Engineers (ITE) Trip Generation Manual rates/equations, as published in the 11<sup>th</sup> edition for both the existing and proposed use.

#### Proposed Trip Generation

ITE provides multiple land use codes (LUCs) for gasoline station type uses. The proposed use provides a kiosk only which may provide payment opportunities and limited retail options. LUC 944 was selected as the most appropriate LUC for the proposed project. According to ITE the proposed use would generate, at build out and full occupancy:

- 144 AM weekday peak hour (72 in/72 out),
- 195 PM weekday peak hour (97 in/98 out), and
- 2,408 average daily trips.



### **Trip Generation Comparison**

As shown in Attachment A, the proposed redevelopment would raze the existing 8 fueling position Shell gas station with convenience store and replace it with a 14 fueling position Heslin Holdings gas station with kiosk. As such a comparison of the existing trips on the network to the proposed use's trips is required. A trip generation analysis comparison of the existing use to the proposed use is provided on Table 1.

Using the methodologies described above the existing use trips would be generated using LUC 945-Gasoline Station w/Convenience market. A comparison to the existing Shell gas station with convenience market shows that the new use would generate:

- 16 **additional** AM weekday peak hour (8 additional in/8 additional out),
- 48 **additional** PM weekday peak hour (24 additional in/24 additional out), and
- 292 **additional** average daily trips.

### **TRAFFIC CALMING**

Per City requirements of Aurora, a discussion of pedestrian crossings and pedestrian treatments connecting to public Right-of-Way (ROW) is provided. As shown on the site plan pedestrian connections are provided on site via a striped pedestrian path from ADA parking to the kiosk and sidewalks connecting to the existing sidewalk network with ADA ramps.

### **NETWORK IMPACTS**

The surrounding network infrastructure and control are established and no change to access is being proposed. The proposed use would generate similar trips to the existing use. Currently, the site is being accessed by limited right-in/right-out access locations and no change in access would be necessary to accommodate the existing or proposed uses. The proposed change in use would have no negative impact to the surrounding network operations.

### **CONCLUSION**

As detailed above the proposed change in use would generate similar trips to the existing use. The proposed change in use would have negligible impact to the surrounding network.

I trust that the information contained herein satisfies the Trip Generation Analysis as requested. If you have any questions or require more information, please do not hesitate to contact me at [brianhoran@gallowayus.com](mailto:brianhoran@gallowayus.com) or 303-770-8884.

Table 1  
 King Soopers on Quincy - Library Time  
 Site Trip Generation

Land Use	Land Use			AM Peak Hour				PM Peak Hour				Average Daily Trips	
	Code	Amount	Units	Rate	In	Out	Total	Rate	In	Out	Total	Rate	Total
<i>Existing</i> <sup>(1)</sup>													
Gas Station with Convenience Store	945	8	FP	16.06	64	64	128	18.42	74	73	147	*	2,116
<i>Proposed</i> <sup>(1)</sup>													
Gas Station	944	14	FP	10.28	72	72	144	13.91	98	97	195	172.01	2,408
<b>Difference (Proposed - Existing)</b>					<b>8</b>	<b>8</b>	<b>16</b>		<b>24</b>	<b>24</b>	<b>48</b>		<b>292</b>

Note(s):

(1) Trip generation based on the Institute of Transportation Engineers' Trip Generation Manual, 11th Edition

\* Equation utilized:  $T = 158.28(X) + 850.23$

**Attachment A**  
**Site Plan**

