



MEMORANDUM

TO: **El Paso County Planning and Community Development**
2880 International Circle, Suite 110
Colorado Springs, CO 80910

FROM: Derek Schuler, P.E., PTOE

DATE: August 5, 2022

RE: Traffic Memorandum for Falcon Marketplace, Lot 6
El Paso County, Colorado

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.

8/5/2022

[Derek Schuler, Colorado P.E. #40125]

Date



Developer's Statement

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

[Name, Title]

Date

[Business Name]

[Address]

This memorandum serves to verify trip generation compliance for lot #6 with the previous full traffic study for Falcon Marketplace, the overall multi-use site. The site is located in the northwest corner of Woodmen Rd and Meridian Rd and is divided into 11 lots. The previous study is "Falcon Marketplace Traffic Impact Analysis, SP-17-001/CDR-16-007, LSC Transportation Consultants, Inc., September 5, 2018." The study provided overall trip generation, access locations to the existing arterial streets, and trip distribution. Lot #6 will have a single shared access with lot #5 onto the internal street only and comply with the findings of the overall study. See the associated site plan for vicinity map and site layout. Lot #6 is 1.04 acres and is zoned as CR. The existing land is vacant, and the proposal is to add a 2,313 SF drive-in/fast food restaurant, drive-thru aisle, and a parking lot. There are 40 parking spaces proposed including 2 handicap accessible spaces and 2 pull-in spaces.

Trip Generation

Table 1 below shows the trip generation values for the single proposed use. The table shows the number of expected vehicular trips using rates from the Trip Generation Manual published by the Institute of Transportation Engineers. The proposed use is per ITE code: #934 Fast Food Restaurant with drive thru. Using the ITE rates, Lot #6 is expected to generate about 1,083 daily trips, 92 trips (55 in/37 out) in the morning peak hour and 77 trips (38 in/37 out) in the evening peak hour.

The proposed trip generation is compared with the estimated trips per the previous full study. The proposed use for Lot #6 of #934 FF Restaurant with drive thru does not match that designated in the full study. However, by tracking some reassignment of lot uses by previous submittals it can be shown that this use is available. There was a swap between lots 4 and 6 proposed by Kimley Horn in their traffic memo submittal for Lot #4 on 5/27/21. #848 Tire store was used and #934 was switched to lot 6.

Table 1 shows the original planned trips versus the proposed trips. The only difference in the two conditions is the proposed building is smaller. This resulted in 157 less daily trips. There are also 54 less trips adjusted for internal capture and pass-by reduction factors. The adjusted trips were calculated with the same procedure as in the full study.

Existing Roads & Distribution

The previous full traffic study presented the adjacent street classifications, the proposed local internal streets, access locations, and trip distribution. The proposed changes to Lot #6 are in general conformance with the previous study. The slight decrease in adjusted trips will help with balancing the other upcoming lot developments.

Roadway Improvements Share

The attached **Table 2** (Table 7b from the Falcon Marketplace full study) shows pro-rata share by lot for the offsite roadway improvements associated with the Falcon Marketplace development.

The proposed trip generation is slightly lower than that estimated by the previous study. This decrease in average weekday trips has been accounted for as a reduced 0.87 factor to the pro-rata share as listed below:

- The eastbound left turn lane improvement at Woodmen Road and Meridian Road was identified as 0.11% and \$329 for a fast-food restaurant with drive-thru, and decreased to 0.10% and \$299 for this proposed development.

- The eastbound left turn lane improvement at Woodmen Road and Golden Sage was decreased from 0.69% and \$1,377 to 0.60% and \$1,197 for this project.
 - The southbound right turn lane improvement at Woodmen Road and Golden Sage was decreased from 1.81% and \$1,814 to 1.58% and \$1,584 for this project.
 - The traffic signal installation at N Frontage Road and Golden Sage Road was decreased from 0.48% and \$1,670 to 0.42% and \$1,461 for this project.
- The total project cost participation for these four improvements equals \$4,541.00

Conclusion

Lot #6 is located within Falcon Marketplace, the overall multi-use site. The vehicular traffic will be accommodated by the proposed internal street network and access locations to existing arterial streets. If you have any questions or would like to discuss my analysis further, please don't hesitate to contact me.

Trip generation and cost share prorate cannot be compared with other 3 lots that were already developed as fast food restaurants. Comparison should be to the lots planned use under the original traffic study and their trip generation since we now have a 4th fast food restaurant.

Lots 5, 8, and 9 and have accounted for the three fast food restaurants. (Slim Chicken, Freddie's, Panda Express).

With the additional fast food restaurant added and additional traffic generated a cost reduction cannot be applied to the off site improvement contributions reimbursement.

Explain how off site traffic improvement cost share will be redistributed amongst the remaining lots/uses to be developed.

Provide complete circulation plan to ensure drive-through traffic will not back up into public right of way and shared driveway between lot #5. Entrance direction to drive through may need to be moved to east side of lot. See site plan

**Table 1 - Trip Generation Estimate for
Falcon Marketplace - Lot 6**

ITE Code / Land Use	Size	Trip Generation Rates			Trips Generated												External Trips			
					Average Weekday Trips	AM Peak-Hour (7 - 9)			PM Peak-Hour (4 - 6)			Internal Capture % Reduced	External Weekday Trips	Pass-By Trips % Reduced	Adjusted Weekday Trips					
		Avg. Weekday	AM PEAK	PM PEAK		Inbound		Total	Inbound		Total									
						% Trips	Trips		% Trips	Trips						% Trips	Trips			
TIS Estimate ¹ : #934 FF Restaurant w/ Drive Thru	2.5 KSF	496.12	40.19	32.67	1,240	60%	60	40%	40	100	50%	41	50%	41	82	30.65%	860	50.00%	430	
Proposed ² : #934 FF Restaurant w/ Drive Thru	2.3 KSF	470.95	40.19	32.67	1,083	60%	55	40%	37	92	50%	38	50%	38	75	30.65%	751	50.00%	376	
Proposed Trips					1,083		55		37	92		38		38	75				376	
Difference in Trips					157		5		3	8		3		3	7				54	

¹Source: "Falcon Marketplace Traffic Impact Analysis", SP-17-001/CDR-16-007, LSC Transportation Consultants, Inc., September 5, 2018

²Source: "Trip Generation" Institute of Transportation Engineers, 10th Edition, 2017

Table 2

**Table 2
Pro-Rata Share for Shared Improvements by Lot
Plus Calculation of Amount per Daily Trip
Falcon Marketplace**

Lot	Land Use Code	Land Use Description	Trip Generation Units	Total External Trips Generated					Calculated Fair Share of Woodmen Road Eastbound Left Turn Lane Improvement at Meridian/Woodmen: Fair Share at 2.5 percent ⁽⁸⁾			Calculated Fair Share of Woodmen Road Eastbound Left Turn Lane Improvement at Woodmen/Golden Sage: Fair Share at 13.1 percent ⁽⁸⁾			Calculated Fair Share of Golden Sage Southbound Right Turn Lane Improvement at Woodmen/Golden Sage: Fair Share at 15.5 percent ⁽⁸⁾			Calculated Fair Share of Golden Sage/Woodmen Frontage Traffic Signal: Fair Share at 15.5 percent ⁽⁸⁾		
				Average Weekday Trips	Morning Peak Hour In	Afternoon Peak Hour Out	In	Out	Amount by Lot	Lot Dollar/Trip Rate	Amount by Lot	Lot Dollar/Trip Rate	Amount by Lot	Lot Dollar/Trip Rate	Amount by Lot	Lot Dollar/Trip Rate				
Trip Generation Estimate Based on the Currently Proposed Plan																				
1	866	Pet Supply Superstore ⁽³⁾	15 KSF ⁽⁴⁾	519	9	4	24	25	0.08%	\$255	\$0.49	0.35%	\$706	\$1.36	0.17%	\$169	\$0.33	0.23%	\$802	\$1.55
2	850	Supermarket	123 KSF	9,054	270	160	419	412	1.46%	\$4,525	\$0.50	7.56%	\$15,120	\$1.67	7.04%	\$7,038	\$0.78	4.77%	\$16,691	\$1.84
3	944	Gasoline/Service Station	18 VFP ⁽⁵⁾	2,822	90	85	111	115	0.39%	\$1,202	\$0.43	2.21%	\$4,427	\$1.57	3.76%	\$3,757	\$1.33	1.52%	\$5,324	\$1.89
4	934	Fast-Food Restaurant with Drive-Through Window	2.5 KSF	797	32	41	30	22	0.11%	\$329	\$0.41	0.69%	\$1,377	\$1.73	1.81%	\$1,814	\$2.28	0.48%	\$1,670	\$2.09
5	820	Shopping Center	5 KSF	227	3	2	10	11	0.04%	\$110	\$0.49	0.15%	\$294	\$1.29	0.07%	\$68	\$0.30	0.10%	\$345	\$1.52
6	848	Tire Store	6.00 KSF	156	10	6	9	13	0.03%	\$100	\$0.64	0.22%	\$433	\$2.77	0.26%	\$259	\$1.66	0.14%	\$506	\$3.24
7	934	Fast-Food Restaurant with Drive-Through Window ⁽⁶⁾	3.5 KSF	1,116	0	1	42	32	0.15%	\$459	\$0.41	0.47%	\$943	\$0.84	0.06%	\$60	\$0.05	0.29%	\$1,008	\$0.90
8	934	Fast-Food Restaurant with Drive-Through Window ⁽⁶⁾	2.5 KSF	797	1	1	30	22	0.11%	\$329	\$0.41	0.35%	\$692	\$0.87	0.04%	\$43	\$0.05	0.21%	\$724	\$0.91
9	630	Clinic	7.8 KSF	247	18	1	3	14	0.01%	\$37	\$0.15	0.24%	\$480	\$1.95	0.06%	\$59	\$0.24	0.14%	\$495	\$2.01
10	820	Shopping Center	8 KSF	364	7	3	16	18	0.06%	\$172	\$0.47	0.25%	\$496	\$1.36	0.14%	\$136	\$0.37	0.17%	\$584	\$1.60
11	937	Coffee/Donut Shop With Drive-Through Window	1.3 KSF	722	37	48	19	17	0.07%	\$207	\$0.29	0.62%	\$1,234	\$1.71	2.10%	\$2,098	\$2.90	0.46%	\$1,603	\$2.22
				16,822	478	352	715	702	2.5%	\$7,727		13.1%	\$26,200		15.5%	\$15,500		8.5%	\$29,750	
Total Falcon Marketplace Fair Share Percentage									2.5%			13.1%			15.5%		8.5%			
Total Falcon Marketplace Development Amount										\$7,727			\$26,200			\$15,500			\$29,750	
Total Estimated Amount to Complete the Improvement										\$309,099			\$200,000			\$100,000			\$350,000	

Notes

- (1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)
- (2) Source: "Trip Generation Handbook - An ITE Proposed Recommended Practice" 3rd Edition, 2014
- (3) Daily and morning peak-hour trip generation rates for Pet Supply Superstore are estimates by LSC
- (4) KSF = 1,000 square feet of floor space
- (5) VFP = vehicle fueling position
- (6) The AM peak-hour trip generation rates have been reduced by LSC as the proposed fast-food restaurant does not serve breakfast
- (7) See attached NCHRP 684 Internal Trip Capture Estimate Tool Sheets
- (8) 2.5 percent calculation based on PM Peak Hour traffic volumes shown for the Meridian/Woodmen intersection in the October 23, 2017 TIS: Sum of eastbound left turn and U turn Volumes from Figure 14 divided by the sum of eastbound left turn and U turn Volumes from Figure 18a (x100).

Source: LSC Transportation Consultants, Inc. (rev. date: 4/16/2018)

Comparing to Lot 4 - equivalent use
 Decrease in daily trips from 860 to 751. A factor of 0.87 has been applied to the fair share percent and cost for each offsite improvement
 Lot 6 Total Share: \$4,541