



DREXEL BARRELL & Co.
Engineers - Surveyors

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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: November 23, 2021

RE: Traffic Memorandum for Falcon Marketplace, Lot 7
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.

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

11/23/2021

Date



Developer’s Statement

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

Christopher Aguon, Authorized Signatory
Falcon Covenant Group LLC
2044 California Ave, Corona, CA 92881

12/2/2021

Date

This memorandum serves to verify trip generation compliance for lot #7 with the previous 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 #7 will have a single access 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 #7 is 1.64 acres and is zoned as CR. The existing land is vacant, and the proposal is to add a 9,200 SF Multi-use building, drive-thru aisle for bank, and a parking lot. There are 49 parking spaces proposed including 4 handicap accessible spaces.

Trip Generation

The proposed building will have 4 separate facilities with varying uses per the floor plan drawings and letter of intent. **Table 1** below shows the trip generation values for each use. The table shows the number of expected vehicular trips using the latest ITE trip rates. This manual is currently in its 10th edition and is an industry accepted informational report published by the Institute of Transportation Engineers. All uses could be matched with the following ITE codes: #630 Clinic (Dental for this site), #912 Drive-in Bank, #918 Hair/Nail Salon, and #933 Fast Food Restaurant without drive thru (note two facilities have this use). Using the ITE rates, Lot #7 is expected to generate about 1,283 daily trips, 100 trips (61 in/38 out) in the morning peak hour and 134 trips (64 in/70 out) in the evening peak hour.

The proposed trip generation is compared with the estimated trips per the previous study. Additionally, the same procedure for external trips was followed. The original study proposed the following single use for Lot #7: #934 Fast Food Restaurant with drive thru in a 3,500 SF building. This use is a high trip generator but also has significant reduction factors applied for external trips. The currently proposed uses include a similar use #933 (but without drive-thru) among the other proposed uses. It should be noted that Lot #10 proposed a similar building size but had the general shopping center code #820. This code is typical used when there are unknown potential retail users at the time. This code yields similar rates to the nail salon and clinic but is much lower than the fast food and drive-in bank uses. Therefore, we chose not to compare with Lot #10 which resulted in only 263 external trips per original study.

Table 1 reveals the proposed trips are significantly less than the previous estimate, but the external trips are slightly more with 26 additional trips. The PM peak external trips were slightly higher with 20 additional trips. The AM peak external trips were still lower.

Existing Roads & Distribution

The previous study presented the adjacent street classifications, the proposed local internal streets, access locations, and trip distribution. The proposed changes to Lot #7 are in conformance with the previous study. The slight increase in overall and PM peak trips can be balanced with one of the other upcoming lot developments.

Roadway Improvements Share

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

The proposed trip generation is slightly higher than that estimated by the previous study. This increase in average weekday trips has been accounted for as an additional 1.15 factor to the pro-rata share as listed below:

- The eastbound left turn lane improvement at Woodmen Road and Meridian Road was identified as 0.15% and \$459 for a fast-food restaurant with drive-thru, and increased to 0.17% and \$528 for this proposed development.
- The eastbound left turn lane improvement at Woodmen Road and Golden Sage was increased from 0.47% and \$943 to 0.54% and 1,084 for this project.
- The southbound right turn lane improvement at Woodmen Road and Golden Sage was increased from 0.06% and \$60 to 0.07% and \$70 for this project.
- The traffic signal installation at N Frontage Road and Golden Sage Road was increased from 0.29% and \$1,008 to 0.33% and \$1,159 for this project.

The total project cost participation for these four improvements equals \$2,841.

Conclusion

Lot #7 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.

Table 1 - Trip Generation Estimate for Falcon Marketplace - Lot 7

ITE Code / Land Use	Size	Trip Generation Rates ¹		Trips Generated										External Trips				
		Avg. Weekday	AM PEAK	PM PEAK	Average Weekday Trips		AM Peak-Hour (7-9)		PM Peak-Hour (4-6)		Internal Capture % Reduced	Pass-By Trips % Reduced	External Weekday Trips					
					% Trips	Trips	Inbound % Trips	Outbound % Trips	Inbound % Trips	Outbound % Trips				Total Trips	Total Trips			
TIS Estimate ²																		
#934 FF Restaurant w/ Drive Thru	3.5 KSF	470.95	40.19	32.67	1,648	51%	72	49%	69	141	51%	58	49%	56	114	30.65%	50.00%	572
Proposed:																		
#630 Clinic (Dental)	3.2 KSF	38.16	3.69	3.28	122	78%	9	22%	3	12	29%	3	71%	7	10	16.32%	0.00%	102
#918 Hair/Nail Salon	1.0 KSF	45	1.21	1.45	45	50%	1	50%	1	1	17%	0	83%	1	1	0.00%	28.00%	32
#912 Drive-In Bank	2.5 KSF	100.03	9.5	20.45	250	58%	14	42%	10	24	50%	26	50%	26	51	0.00%	35.00%	163
#933 FF Restaurant w/o Drive Thru	2.5 KSF	346.23	25.1	28.34	866	60%	38	40%	25	63	50%	35	50%	35	71	30.65%	50.00%	300
			Proposed Trips		1,283		61		38	100		64		70	134			597
			Difference in Trips		366		10		31	41		(6)		(14)	(20)			(26)

¹Source: "Trip Generation" Institute of Transportation Engineers, 10th Edition, 2017

²Source: "Falcon Marketplace Traffic Impact Analysis", SP-17-001/CDR-16-007, LSC Transportation Consultants, Inc., September 5, 2018

TABLE 2
FALCON MARKETPLACE
LOT #7

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 ⁽¹⁾			Calculated Fair Share of Woodmen Road Eastbound Left Turn Lane Improvement at Woodmen/Golden Sage Fair Share at 13.1 percent ⁽¹⁾			Calculated Fair Share of Golden Sage Southbound Right Turn Lane Improvement at Woodmen/Golden Sage Fair Share at 15.5 percent ⁽¹⁾			Calculated Fair Share of Golden Sage/Woodmen Traffic Signal Fair Share at 15.5 percent ⁽¹⁾		
				Average Weekday Trips	Morning Peak Hour	Afternoon Peak Hour	Amount by Lot	Lot Dollar/Trip Rate	Fair Share %	Amount by Lot	Lot Dollar/Trip Rate	Fair Share %	Amount by Lot	Lot Dollar/Trip Rate	Fair Share %	Amount by Lot	Lot Dollar/Trip Rate	Fair Share %
1	866	Pet Supply/Supernore ⁽¹⁾	15 KSF ⁽⁴⁾	9	4	24	25	\$295	\$0.49	0.35%	\$706	\$1.38	0.17%	\$169	\$0.33	0.23%		
2	850	Supermarket	123 KSF	9,054	270	160	419	\$4,525	\$0.50	1.46%	\$15,120	\$1.67	7.04%	\$7,038	\$0.78	4.77%		
3	944	Gasoline/Service Station	18 VFP ⁽⁵⁾	2,822	90	85	111	\$1,202	\$0.43	0.39%	\$4,427	\$1.57	3.76%	\$3,757	\$1.33	1.52%		
4	804	Fast-Food Restaurant with Drive-Through Window	2.5 KSF	797	32	41	30	\$329	\$0.41	0.69%	\$1,377	\$1.73	1.81%	\$1,814	\$2.28	0.48%		
5	820	Shopping Center	5 KSF	227	3	2	10	\$110	\$0.49	0.04%	\$394	\$1.29	0.07%	\$68	\$0.30	0.10%		
6	848	Tire Store	6.00 KSF	156	0	6	9	\$100	\$0.64	0.22%	\$433	\$2.77	0.26%	\$259	\$1.66	0.14%		
7	804	Fast-Food Restaurant with Drive-Through Window ⁽⁶⁾	3.5 KSF	1,116	0	1	42	\$469	\$0.41	0.47%	\$843	\$0.84	0.09%	\$80	\$0.05	0.09%		
8	804	Fast-Food Restaurant with Drive-Through Window ⁽⁶⁾	2.5 KSF	797	1	1	30	\$329	\$0.41	0.35%	\$692	\$0.87	0.04%	\$43	\$0.05	0.21%		
9	800	Clinic	7.8 KSF	247	18	1	3	\$37	\$0.15	0.01%	\$60	\$1.95	0.03%	\$9	\$0.24	0.17%		
10	820	Shopping Center	8 KSF	364	7	3	16	\$172	\$0.47	0.28%	\$496	\$1.36	0.14%	\$76	\$0.37	0.17%		
11	807	Conter/Donut Shop With Drive-Through Window	1.3 KSF	722	37	48	19	\$246	\$0.47	0.44%	\$646	\$1.71	0.17%	\$100	\$0.30	0.21%		
				16,622	478	382	715	\$7,727	\$0.29	13.1%	\$26,200	\$1.71	15.5%	\$15,500	\$2.30	8.5%		

Total Falcon Marketplace Fair Share Percentage	2.5%
Total Falcon Marketplace Development Amount	\$7,727
Total Estimated Amount to Complete the Improvement	\$309,099
	\$26,200
	\$15,500
	\$100,000
	\$29,750
	\$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/Supernore 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 Estimation 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 18a (x100).
 Source: LSC Transportation Consultants, Inc. (rev. date: 4/19/2018)

Increase in daily trips from 1,116 to 1,283 A factor of 1.15 has been applied to the fair share percent and cost for each offsite improvement
 Lot 7 Total Share: \$2,841

