

Memorandum

To: Jeffrey Otto, Esquire

From: Tim Roberts, Senior Transportation Planner
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CC: Matt Larson, Project Manager

Date: 5/23/2024

Re: South Academy Highlands Proposed Furniture Row Trip Generation Memo

Introduction: This traffic memo addresses a proposed revision to approved development land use for the Phase 2 “Big Box” development pad/lot within the as approved by and annexed into the City of Fountain. The proposed revision to land use in the area shown as the Phase 2 Development Area, as shown in **Figure 1**, will replace a planned 94,000 square foot Electronics Superstore with a 64,600 square foot Furniture Row. As part of the submittal package, the City of Fountain has requested a Traffic Memo to evaluate the impacts of trip generation for the proposed revised land use, determine whether an update to the B Street Access Permit is needed, and to prepare an undated Access Permit application if required.



Figure 1. South Academy Highlands Development Plan

Approved Land Uses and Trip Generation: A CDOT Access Permit and supporting Traffic Impact Study for access to B Street from the now completed Venetucci Boulevard extension, a City of Fountain sponsored project, was completed, and approved in 2019. The Venetucci Boulevard Extension B Street Access Traffic Study considered full buildout of approved development entitlements for the South Academy Highland Urban Renewal Area. This includes approved land use and densities for nine outlying development pads (“outlots”) and a core Phase 2 Big Box development pad. The traffic study additionally considered trip generation for an adjacent planned 480-unit apartment site. Total trip generation for these development entitlements is summarized in **Table 1**.

Table 1. South Academy Highlands Development Entitlements Summary				
Phase 1 South Academy Highlands Development				
Location	Land Use Description	ITE Land Use Assumptions	Quantity	Unit
Outlot #1	Hotel 1	#310 Hotel	80	Rooms
Outlot #1	Hotel 2	#310 Hotel	80	Rooms
Outlot #2	Retail/Mixed Use	Developed – no additional traffic		
Outlot #3	Freddy’s Frozen Custard	See note 1.	3.2	KSF
Outlot #4	Car wash	See note 2.		
Outlot #5	Unknown commercial	#820 Shopping Center	107.6	KSF
Outlot #6	Unknown commercial	#820 Shopping Center	66.8	KSF
Outlot #7	Unknown commercial	#820 Shopping Center	45.7	KSF
Outlot #8	Unknown commercial	#820 Shopping Center	30.1	KSF
Outlot #9	Unknown commercial	#820 Shopping Center	116.3	KSF
Phase 2 South Academy Highlands Development				
Area	Land Use	Land Use Assumptions	Quantity	Unit
Big Box	Big Box ³		94	KSF
Property Not Included				
Area	Land Use	Land Use Assumptions	Quantity	Unit
Property Not Included	Apartments		480	DU

Notes:

- 1) Trips for Freddy’s custard taken from an online newspaper article.
- 2) Afternoon trip generation is from a TIA for a car wash in Parker, CO.
- 3) 94,000 square foot Electronics Superstore assumed.

Trip generation associated with buildout of these approved development entitlements is summarized in **Table 2** on the following page. As shown, unadjusted buildout trip generation for the approved land use for the Phase 2 Big Box pad/outlot is 30 trips per hour, 216 trips per hour and 400 trips per hour during the am peak hour, midday peak hour and pm peak hour, respectively.

The Venetucci Boulevard B-Street Access Traffic Study Report took a comprehensive look at the site and local transportation system and identified improvements needed to mitigate the additional traffic being generated by the site. A Colorado Department of Transportation (CDOT) Access Permit was required by CDOT to assess the impact that trips generated from the South Academy Highlands Urban Renewal Area and nearby apartment complex would have on their facilities.

Table 2. Combined Study Area Buildout Trip Rates and Trip Generation Summary

Land Use	Size	Units	ITE Code	Trip Generation Rates [a]									Estimated Trip Generation								
				AM Peak Hour			Lunch-Time Peak Hour			PM Peak Hour			AM Peak Hour			Lunch-Time Peak Hour			PM Peak Hour		
				Rate	In	Out	Rate	In	Out	Rate	In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Hotel 1 [b]	80	Rooms	310	0.47	59%	41%	0.47	59%	41%	0.60	50%	50%	22	15	38	22	15	38	24	24	48
Hotel 2 [b]	80	Rooms	310	0.47	59%	41%	0.47	59%	41%	0.60	50%	50%	22	15	38	22	15	38	24	24	48
Freddy's Frozen Custard [c]	3.2	KSF	[c]				30.63	50%	50%	23.75	50%	50%	0	0	0	49	49	98	38	38	76
Car Wash [d]			[d]										0	0	0	30	30	60	51	51	102
Shopping Center [e]	107.6	KSF	820	0.94	62%	38%	2.4	50%	50%	3.81	48%	52%	63	38	101	128	128	256	197	213	410
Shopping Center [e]	65.8	KSF	820	0.94	62%	38%	2.4	50%	50%	3.81	48%	52%	38	24	62	78	78	156	120	130	251
Shopping Center [e]	45.7	KSF	820	0.94	62%	38%	2.4	50%	50%	3.81	48%	52%	27	16	43	54	54	108	84	91	174
Shopping Center [e]	30.1	KSF	820	0.94	62%	38%	2.4	50%	50%	3.81	48%	52%	18	11	28	36	36	72	55	60	115
Shopping Center [e]	116.3	KSF	820	0.94	62%	38%	2.4	50%	50%	3.81	48%	52%	68	42	110	138	138	276	213	230	443
Electronics Superstore [e]	94	KSF	863	0.32	64%	36%	2.3	50%	50%	4.26	49%	51%	19	11	30	108	108	216	196	204	400
Multifamily Housing [e]	480	DU	220	0.46	23%	77%	0.51	50%	50%	0.56	63%	37%	51	170	221	122	122	244	169	99	269
												328	342	669	787	774	1561	1171	1163	2334	
Less Internal Trips [f]												0	0	0	-262	-258	-520	-390	-388	-778	
Total Vehicle Trips – Adjusted Buildout Development Traffic												328	342	669	525	516	1041	781	775	1556	

Notes: [a] Source: Trip Generation, 9th Edition, Institute of Transportation Engineers (ITE) unless otherwise noted; [b] Noon trips assumed to be the same as AM peak hour trips; [c] Trips for Freddy's custard taken from online newspaper article. Not open in the morning peak; [d] Afternoon trip generation is from a TIA for a car wash in Parker, CO. Morning and lunch-time trips assumed; [e] Lunch-time trips assumed to be an average of morning and afternoon peak hour trips; [f] During the lunchtime and afternoon peak hours assumed that 1/3 of trips are internal to the site.

Land Uses and Trip Generation Comparison: The industry standard is to compare weekday traffic conditions since weekday peak traffic patterns tend to be isolated to several hours a day rather than spread throughout the day like what occurs on weekends. Trip generation for buildout of the Phase 2 approved development entitlement land uses and the revised land uses were estimated using the updated rates included in the Trip Generation Manual, 11th Edition published by the Institute of Transportation Engineers (ITE). The analysis included comparisons of AM peak and PM peak trip generation, the daily traffic produced and the difference in trips produced between the two uses.

The results of this comparative analysis are summarized in **Table 3** for traffic that would be generated by Electronic Superstore and traffic that would be generated with the proposed Furniture Row store.

Using the current ITE trip generation rates, it was determined the Electronics Superstore would have created 32 trips during the morning peak traffic period, 400 trips during the afternoon peak traffic period, and about 3,859 new trips every weekday for the South Academy Shopping Center.

Furniture Row will not create any new trips during the morning peak period because they do not open until 10:00 am. During the afternoon peak period it would generate about 45 trips and about 407 trips for the weekday.

Conclusions and Recommendations: The trip generation analysis determined that the Furniture Row retail complex will generate significantly less traffic than the previously planned Electronic Superstore, 32 fewer am peak hour trips, 354 fewer pm peak hour trips, and 3,452 fewer overall trips than the approved Electronics Superstore included in the approved land use entitlements and evaluated for the B Street Access Permit.

Based on these findings, there would be no adverse impact to CDOT facilities and therefore no need to amend the previous Traffic Analysis Report or Access Permit.

Table 3. South Academy Highland Trip Generation Comparison Summary

Phase 2 Development Area	Land Use	Land Use Code	Size	Units	Morning Peak Trip Generation Summary						Afternoon Peak Trip Generation Summary						Weekday Trip Generation Summary					
					AM Peak Hour			AM Peak Hour			PM Peak Hour			PM Peak Hour			Weekday Total Trips					
					Rate	% In	% Out	In	Out	Total	Rate	% In	% Out	In	Out	Total	Rate	% In	% Out	In	Out	Total
Original Land Use Assumption	Electronics Superstore	863	94	ksf	0.34	73%	27%	23	9	32	4.25	50%	50%	200	200	400	41.05	50%	50%	1,929	1,929	3,859
Proposed Land Use Assumption	Furniture Row	890	64.6	ksf	0 [a]			0	0	0	0.70	51%	49%	23	22	45	6.30	50%	50%	203	203	407
								AM Peak Trips Decreased			32			PM Peak Trips Decreased			354	Total Trip Reduction			3,452	
Notes:																						
[a] Furniture Row does not open until 10:00 (after the morning Peak Hour).																						