

September 9, 2019

Mr. Greg Yawitz
Keat Properties, LLC
9200 Olive Boulevard, Suite 200
Olivette, Missouri 63132

RE: Traffic Impact Study – Trip Generation Update
Proposed Commercial Redevelopment
Olivette, Missouri
CBB Job #23-17

Dear Mr. Yawitz:

In accordance with your request, CBB has updated the trip generation and assignment for the proposed commercial redevelopment located on the south side of Missouri Route 340 (Olive Boulevard) between I-170 and Price Road in Olivette, Missouri. While the previous site plan proposed a mixture of restaurant and retail uses on the site along with a grocery store, the updated site plan proposes a mixture of restaurant and retail along with a grocery store, hotel, and office buildings. The current site plan maintains the access locations proposed in the previous studies and now includes two parking structures to support an increased parking demand. The new site plan, from others, is shown in **Figure 1**.

It is our understanding that the City of Olivette requested the trip update due to concerns of additional traffic along Price Road to the south of the proposed site.

The trip generation summary from the original study is shown in **Table 1**, and the trip generation reflecting the current site plan is shown in **Table 2**. As can be seen in comparing the two tables, the current site plan represents significant increases in net trips during the weekday Midday and PM peak hours and a decrease in Saturday Midday peak hour trips. The proposed site under the current site plan would generate 595, 885, and 980 *new* trips during the Midday, PM, and Saturday Midday peak hours, respectively, as compared to 435, 565, and 980 new trips under the previous site plan. The trip distribution in and out of the proposed site driveway intersections is shown according to the previous site plan in **Figure 2** and according to the current site plan in **Figure 3**.



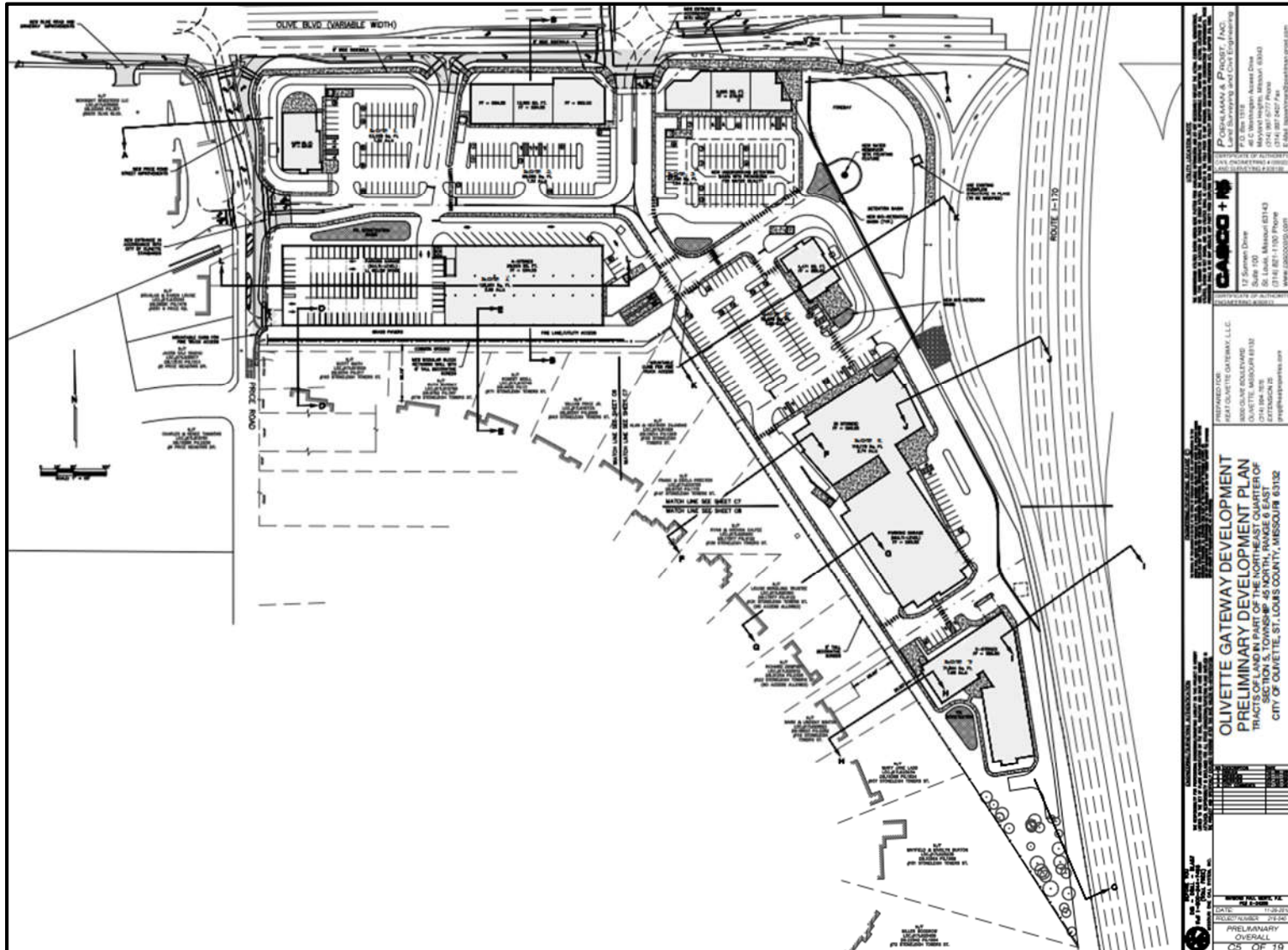


Figure 1: Current Site Plan (from others) 9/4/19



Table 1: ITE Trip Generation Estimate for Proposed Development – Original Study

Land Use Code	Land Use	Size (Sq. Ft.)	Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Midday Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
931	Restaurant (Quality)	3,800	15	10	25	20	10	30	25	15	40
820	Shopping Center	2,000	15	20	35	20	25	45	35	35	70
820	Shopping Center	2,000	15	20	35	20	25	45	35	35	70
934	Fast Food w/ Drive-Thru	4,400	55	55	110	75	70	145	130	125	255
936	Coffee Shop	2,000	30	30	60	40	40	80	65	70	135
931	Restaurant (HTSD)	2,800	10	10	20	15	10	25	20	20	40
820	Shopping Center	3,800	20	25	45	30	35	65	55	50	105
931	Restaurant (HTSD)	4,400	15	10	25	20	15	35	35	30	65
Ex. Volumes	Retail (OfficeMax)	15,300	35	30	65	35	25	60	30	25	55
820	Shopping Center	2,150	15	20	35	20	25	45	35	35	70
820	Shopping Center	2,780	20	25	45	25	30	55	45	40	85
820	Shopping Center	4,350	25	30	55	35	40	75	60	55	115
820	Shopping Center	3,850	20	25	45	30	35	65	55	50	105
850	Supermarket	32,000	125	125	250	170	165	335	240	230	470
Total		85,630	415	435	850	555	550	1,105	865	815	1,680
Common Trip Reduction (15%)			60	65	125	85	85	170	130	120	250
Net Trips			355	370	725	470	465	935	735	695	1,430
Pass-By	Shopping Center		105	105	210	135	135	270	150	150	300
	Fast Food		30	30	60	35	35	70	65	65	130
	HTSD		10	10	20	15	15	30	10	10	20
	Total		145	145	290	185	185	370	225	225	450
New Trips			210	225	435	285	280	565	510	470	980



Table 2: ITE Trip Generation Estimate for Proposed Development – Current Site Plan 9/6/19

Land Use Code	Land Use	Size (Sq. Ft.)*	Weekday Midday Peak Hour			Weekday PM Peak Hour			Saturday Midday Peak Hour		
			IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
934	Fast Food w/ Drive-Thru	4,400	55	55	110	75	70	145	120	120	240
930	Restaurant (Fast Casual)	2,300	35	40	75	45	55	100	45	35	80
630	Urgent Care Clinic	3,800	5	10	15	5	15	20	10	10	20
820	Shopping Center	2,000	10	10	20	15	15	30	15	15	30
930	Restaurant (Fast Casual)	2,400	35	40	75	50	55	105	45	35	80
820	Shopping Center	2,500	10	15	25	15	20	35	20	15	30
930	Restaurant (Fast Casual)	1,800	35	40	75	35	45	80	35	30	65
932	Restaurant (HTSD)	3,800	20	10	30	25	15	40	25	20	45
820	Shopping Center	2,000	10	10	20	15	15	30	15	15	30
820	Shopping Center	2,400	10	15	25	15	20	35	15	15	30
850	Supermarket	32,000	125	125	250	170	165	335	205	200	405
710	Office	90,000	25	30	55	15	90	105	25	25	50
932	Restaurant (HTSD)	5,000	20	15	35	30	20	50	30	30	60
820	Shopping Center	2,000	10	10	20	15	15	30	15	15	30
710	Office	180,000	50	55	105	35	175	210	50	45	95
820	Hotel	130 rooms	30	30	60	40	40	80	80	65	145
Total		333,800	500	535	1,035	630	865	1,495	825	760	1,585
Common Trip Reduction (15%)			55	55	110	70	90	160	80	75	155
Net Trips			445	480	925	560	775	1,335	745	685	1,430
Pass-By			165	165	330	225	225	450	225	225	450
New Trips			280	315	595	335	550	885	520	460	980

*unless noted otherwise

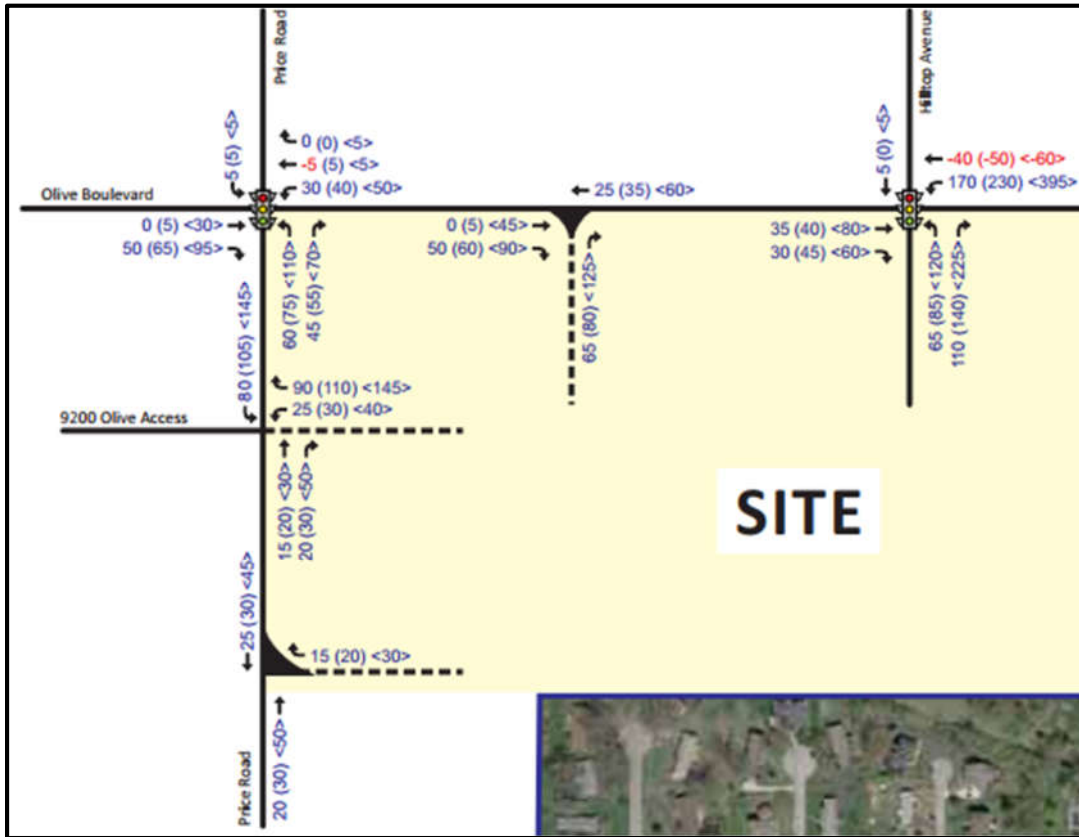


Figure 2: Site Generated Trips – Original Study

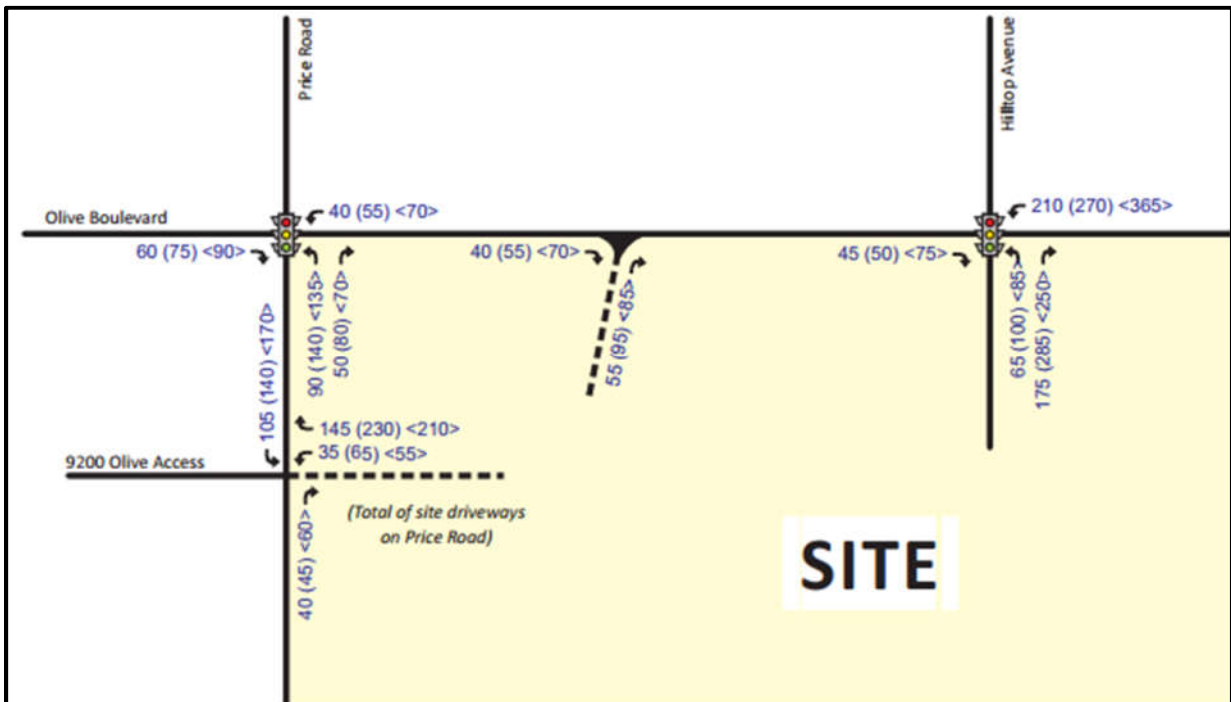


Figure 3: Site Generated Trips (In/Out at Site Driveways Only) – Current Site Plan 9/6/19



Since the primary focus of this analysis is Price Road, a simplified diagram of the net change in total trips at the Price Road driveways from the original site plan to the current site plan is shown in **Figure 4**. As can be seen, the current site plan would add a maximum of 50 total trips (PM peak hour) to Price Road south of the proposed site as compared to the original site plan.

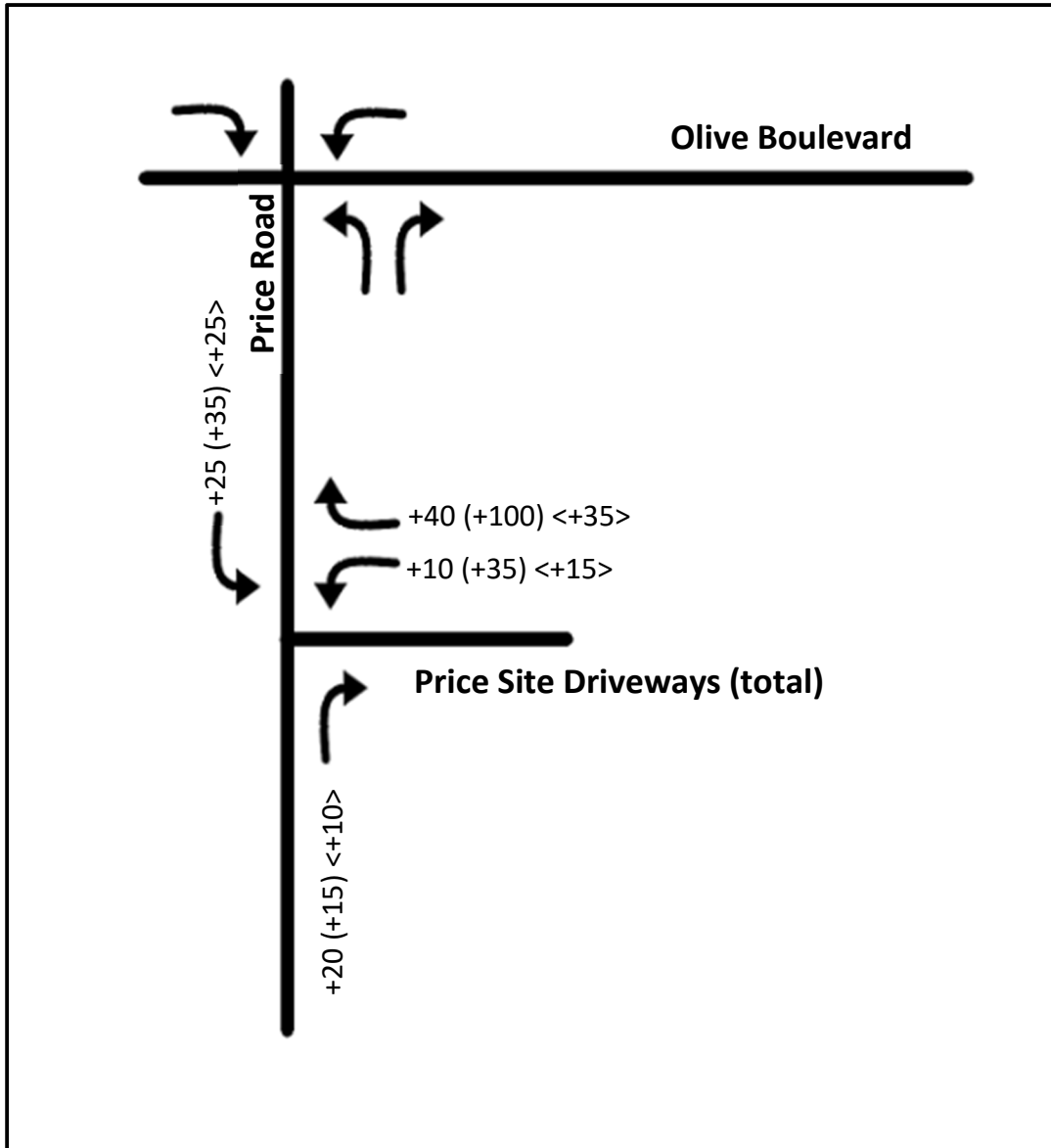


Figure 4: Net Change in Total Trips at Price Road Driveways – Original to Current Site Plan

Figure 5 summarizes the *new* trips that would be added to the existing Price Road driveways. As can be seen, the current site plan as proposed would add a total of 90 trips to Price Road south of the proposed site during the PM peak hour and 95 total trips during the Saturday Midday peak hour.

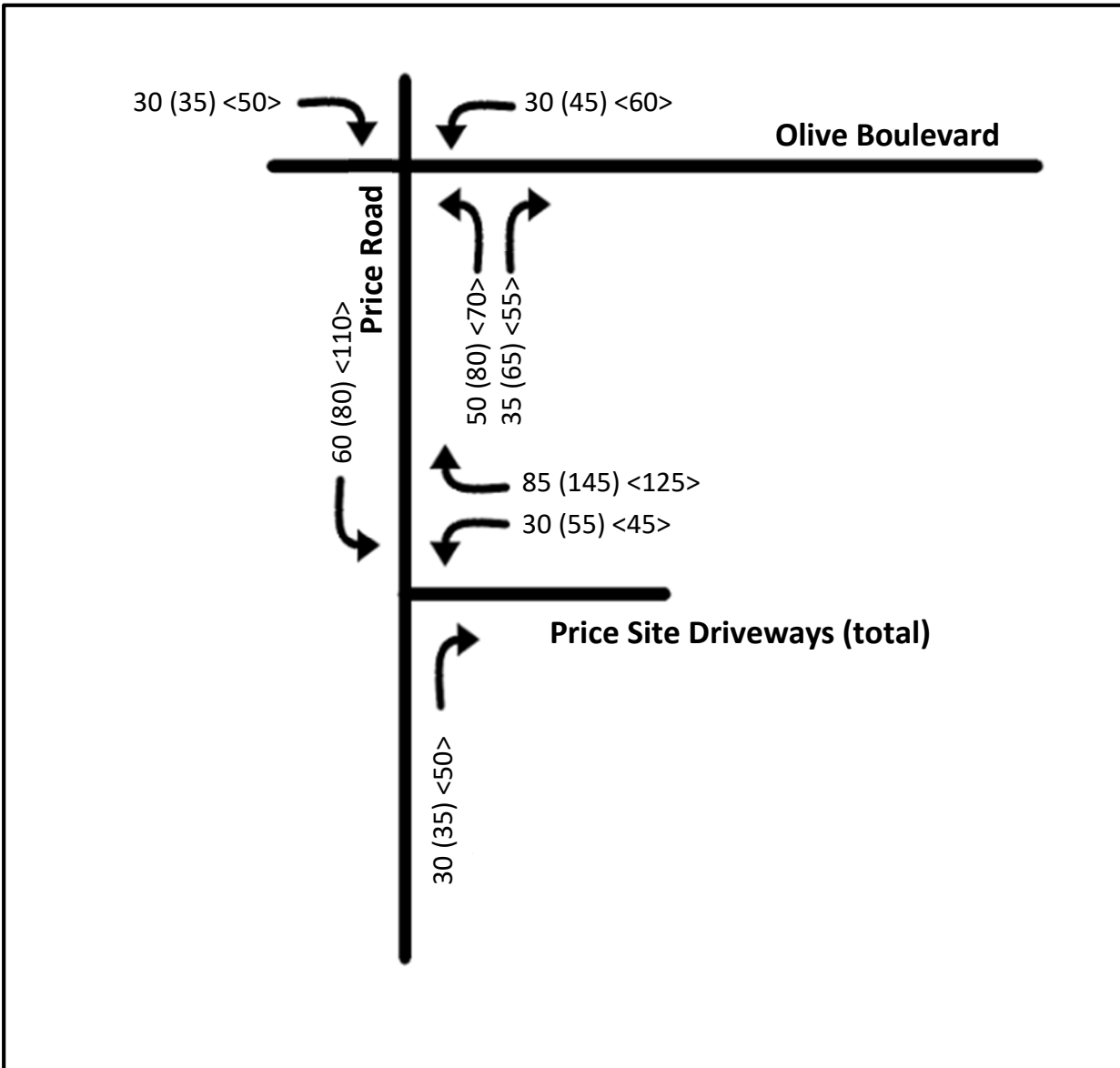


Figure 5: New Trips along Price Road – Current Site Plan

Evaluations

Price Road is currently shown as a major collector road on the East-West Gateway functional classification map. In short, this means the road is designed to carry traffic between neighborhoods and the major roadway system and is meant to carry more traffic than a local residential road. In general, a two-lane road can easily accommodate 8,000 to 10,000 vehicles per day at an acceptable to good level of service.



Under existing conditions, the total traffic in both directions along Price Road south of the proposed site is 450 vph during the PM peak hour, which has the heaviest traffic. Based on this number, the estimated daily traffic along Price Road is 4,000 to 5,000 vehicles per day. The added 95 new trips during the peak hour translates to an estimated 1,000 vehicles per day added to Price Road to the south of the proposed site. The estimated total of 5,000 to 6,000 vehicles per day along Price Road under proposed build conditions still falls well below the acceptable threshold of 8,000 to 10,000 vehicles for a two-lane roadway, meaning traffic conditions along Price Road to the south of the proposed site would remain more than acceptable.

It should also be noted that the commercial development is proposed, in part, to serve the neighborhood to the south on Price Road. Many of the neighborhood's residents would use this commercial center to shop, dine, etc. Therefore, much of the traffic that would be added to Price Road south of the proposed site would be neighborhood residents themselves as opposed to significant increases in external or cut-through traffic.

We trust that you will find this information useful in evaluating the traffic impacts associated with the proposed development's updated site plan. Please do not hesitate to contact me in our St. Louis office (314) 308-6547 or Lcannon@cbbtraffic.com should you have any questions or comments concerning this material.

Sincerely,

Lee Cannon, P.E., PTOE
Principal – Traffic Engineer