



▷ 16020 Swingley Ridge Road | Suite 205 | Chesterfield, MO 63017
Main 636.519.0990 + Fax 636.519.0996

▷ HRGREEN.COM

May 9, 2017

Ms. Annie Baalman DeBoer
Des Peres Commons, LLC
11743 Manchester Road
Des Peres, Missouri 63131

Dear Ms. Baalman DeBoer,

HR Green, Inc. has reviewed the Traffic Engineering Study Peer Review of our Des Peres Commons Shopping Center Traffic Impact Study completed in May, 2017. The peer review, inadvertently dated February 7, 2017, was completed by the City's traffic engineering consultant, Lochmueller Group, and received by HR Green on May 5, 2017. The following responses are provided to address the peer review comments.

Comment #2: ... (The TIS) incorrectly states that the Master Plan only extends from Ballas Road to Bopp Road. We were only provided one page of the entire Conceptual Master Plan document. We acknowledge that this was misstated in the traffic impact study, as there are some minor access management recommendations between Bopp Road and Lockett Road, such as driveway relocations and removals. Of particular note is the recommendation to move the eastern entrance to the Des Peres Commons shopping center to the west about 100' to improve intersection sight distance, and to provide more separation between the entrance and Lockett Road.

Comment #3: ...it must be recognized that MoDOT does not recognize two-stage turns as a legal maneuver. Our field observations revealed numerous vehicles making two-stage turns at each of the driveways along Manchester Road, as well as at Harwood Road. Our analysis was completed based on existing characteristics and driver behavior to reflect actual conditions in order to make a fair comparison to the proposed conditions with future traffic volumes. Previous traffic studies completed for nearby developments included the effects of two-stage turns. In fact, in a Site Plan Review and Operational Assessment prepared by Lochmueller Group for the Reliance Bank/Starbucks redevelopment, the firm acknowledges that the use of two-way left turn lanes to make two stage turns is already a common maneuver. Our study does not address the City's enforcement of a two-stage left turn as a legal/illegal maneuver.

Comment #4: ...proposed restaurant is said to have a floor area of 5,100 square feet, but this appears to be in error when compared to the Parking Study, which cites a floor area of 3,851 s.f. Per City Code, the restaurant floor area used to calculate parking spaces, is based on building area for public use, and excludes kitchen area, restrooms, storage, etc. The building gross floor area (assumed to be about 5,100 s.f.) was used in calculating trip generation as a conservative approach, thus accounting for the floor area discrepancy.

Comment #5a: ...it would not be appropriate to depend on (U-turns or similar) practice. Although the directional distribution used from previously completed traffic studies suggest about a 50/50 split on Manchester Road, our actual field recorded turning movements into and out of the proposed site at the western driveway and at Harwood Road revealed higher percentage of traffic making southbound right turns than left turns (inherently due to the ability to make the left turn). Our traffic assignment reflects this condition in an effort to closely resemble the actual behavior of motorists for the baseline traffic operations. However, we do agree that until there are adequate access management strategies implemented, it is not desirable to depend on U-turn movements as a means of site ingress/egress.

Comment #5b: ... (the shopping center's easternmost driveway) would not be attractive to motorists leaving the restaurant. While we do agree that this driveway is not the most attractive to patrons of the proposed restaurant, it is not uncommon for motorists to use access points other than the one closest to their parked vehicle, especially during peak traffic conditions. It should be noted that currently, about 25 to 35 percent of the southbound left turns from the site use the easternmost driveway.

To satisfy the concerns identified in comments 5a and 5b, we have reassigned traffic to remove the 5 U-turn vehicles and include as southbound left turns at Harwood Road, and we have reassigned half of the southbound left turns at the easternmost driveway to the westernmost driveway along Manchester Road. As expected, the delay for the forecasted southbound left turn movements increased slightly, as shown below:

SB Left Movement	Noon Peak Hour			PM Peak Hour		
	Original Study - Baseline Delay (LOS)	Original Study - Forecasted Delay (LOS)	Reassigned Trips – Forecasted Delay (LOS)	Original Study - Baseline Delay (LOS)	Original Study - Forecasted Delay (LOS)	Reassigned Trips - Forecasted Delay (LOS)
Manchester Rd at Harwood Road	33.7 (D)	38.9 (E)	40.3 (E)	50.8 (F)	60.6 (F)	64.2 (F)
Manchester Rd at West Access	33.2 (D)	39.3 (E)	41.0 (E)	47.7 (E)	60.8 (F)	65.2 (F)
Manchester Rd at East Access	27.6 (D)	30.4 (D)	29.1 (D)	35.1 (E)	39.6 (E)	37.6 (E)

Comment #6: Given the relative “Fragility” of these outbound operations, it would be appropriate to provide additional analyses – actual delay measurements and/or gap studies... Although actual delay measurements and/or gap studies were not completed as part of this TIS, based on our field observations and review of previously completed traffic impacts studies for the area, we acknowledge that there may not be sufficient gaps in traffic, thus forcing southbound left turning vehicles to accept shorter gaps or make two-stage turns (see Comment #3 above).

According to the previously completed traffic study for the Reliance Bank/Starbucks, the proposed Des Peres Commons shopping center redevelopment is expected to generate similar (if not less) traffic during the peak periods. In Lochmueller Group’s peer review of that particular traffic study, they acknowledged that “relatively poor side-street operation conditions are common along major suburban arterials such as Manchester Road, where left turn delays are inherent, and these conditions may be considered acceptable (albeit undesirable)”. They further acknowledged that “there are not a sufficient number of gaps to safely accommodate the projected number of left turns out of the redevelopment site (Reliance/Starbucks) during the peak hours (this would likely be true of most commercial drives in this section of Manchester Road)”. Again, they indicated “(motorists) will make two-stage turns using the two-way left turn lane (already a common maneuver). Moreover, the prevailing conditions would likely act as a natural deterrent for some motorists...”.

We believe that the forecasted traffic flow characteristics for the Des Peres Commons redevelopment will be very similar to the redevelopment just to the west at Reliance Bank.



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Comment #7: ...the TIS scope presumably excluded an evaluation of deliveries associated with the proposed restaurant. The Des Peres Commons shopping center already consists of tenants that rely on delivery trucks, and it is expected the proposed restaurant will utilize similar size vehicles at similar frequencies for deliveries at the same access drives as what is currently being used.

We hope that the above responses to the traffic impact study address the concerns of the City of Des Peres. If you should have any questions regarding the above, please feel free to contact us at 636.812.4211.

Sincerely,

HR GREEN, INC.

Daniel T. Shane, PE, PTOE
Senior Project Manager

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