

October 21, 2022

City of Lee's Summit
220 SE Green
Lee's Summit, MO 64063

Re: Traffic Impact Study for HCA LSMC ASC

BHC has been asked to review the traffic impact of a proposed development at the northeast corner of SE Cumberland Drive and SE Blue Parkway in Lee's Summit, MO. The development includes a 1-story, approximately 20,000 square foot ambulatory surgery center.

EXISTING CONDITIONS

The existing site is part of an overall 28.5-acre campus for the HCA Lee's Summit Medical Center. The part of the property to be developed with this project is the approximately 4-acre southwest corner of the overall property. The property is currently vacant and used for agricultural purposes. SE Cumberland Drive is along the west side of the property and is classified as a local street with a 25-mph speed limit. SE Blue Parkway is along the south side of the property and SE Shenandoah Drive is to the north of the property. Both of those roads are classified as commercial collectors with speed limits of 35-mph. SE Cumberland Drive is stop controlled at its intersection with both SE Blue Parkway and SE Shenandoah Drive. See Figure 1 below for an aerial of the site and the adjacent road network.



Figure 1: Project Location



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PROPOSED CONDITIONS

The proposed site is a 1-story, approximately 20,000 square foot ambulatory surgery center with 104 parking spaces. The proposed site plan can be seen in Figure 4. The site would have two access points off SE Cumberland Drive. The first access point would be located 200' north of the intersection of SE Cumberland Drive and SE Blue Parkway. This is also just north of the end of the existing turn lanes on SE Cumberland Drive for said intersection. The second access point is approximately 185' north of the first access point. Both would be full access points into the site.

The property directly to the north and to the west of the site are still undeveloped and will stay that way for the foreseeable future. The City's Comprehensive Plan shows this location as retail, though there is a strong likelihood it could be further medical office use.



Figure 4: Proposed Site Layout



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ITE TRIP GENERATION

A trip generation analysis was performed using the ITE TripGen web-based app. The 10th edition of the ITE Trip Generation Manual was used. The land use code used for the proposed site was 720 – Medical-Dental Office Building. The independent variable used is gross floor area. The number of trips generated may be seen in Table 1 for the AM peak hour, PM peak hour, and weekday total.

Table 1 – Trip Generation						
ITE Code	Land Use	Area (sf)	Avg. Rate	Trips Generated		
				Total	Enter	Exit
AM Peak Hour (7-9 AM)						
720	Medical-Dental Office Bldg.	20,000	2.78	56	43	13
PM Peak Hour (4-6 PM)						
720	Medical-Dental Office Bldg.	20,000	3.46	69	19	50
Weekday Total						
720	Medical-Dental Office Bldg.	20,000	34.8	696	348	348

The site is expected to generate 56 AM, and 69 PM trips. Most of these trips are anticipated to come from SE Blue Parkway onto SE Cumberland Drive with minimal impact to the existing infrastructure.

ACCESS AND CONNECTIVITY REVIEW

All existing and proposed access points meet the City's access management policies. The two access points will come off SE Cumberland Drive, which is a local road per the City's classification. Per the City's Access Management criteria, there is no specified minimum distance from an intersection for access on this road. It defers to the driveway throat length table as a minimum spacing, which would not be more than 100 feet. The south proposed access point has been located so that it does not encroach on the existing southbound turn lanes on SE Cumberland Drive. The north access point is 185' north of the south access point, meeting the above discussed spacing requirements. It is possible this north drive could serve as a shared drive access point for potential development of the land to the north. The north drive is also fairly centered on the stretch of SE Cumberland Drive between SE Blue Parkway and SE Shenandoah Drive. There are no existing access points on the west side of SE Cumberland Drive to align with.

The two proposed entrance points will allow for good connectivity into the proposed site parking lot. The south entrance, which will likely be used the most, provides direct connection to the front of the building and a patient drop off area. It is intended the south parking area would also be utilized primarily as patient parking. The north entrance will serve primarily as access for the service area, which will be located on the northeast corner of the building. This will keep truck traffic from having to go through the site's parking lot.



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CONCLUSION

The peak traffic entering the site in the AM will be around 43 vehicles. In the PM, the peak traffic leaving the site would be 50 vehicles. These low volumes are not anticipated to impact the adjacent street network and would not necessitate any public street improvements.

If there are any questions regarding this traffic memo, please contact me at your convenience at 913-663-1900 or eric.byrd@ibhc.com.

Sincerely,



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Senior Project Engineer
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