

December 17, 2019

City of St. Charles  
2 E. Main Street  
St. Charles, Illinois 60174

625 Forest Edge Drive, Vernon Hills, IL 60061  
TEL 847.478.9700 ■ FAX 847.478.9701

[www.gha-engineers.com](http://www.gha-engineers.com)

Attn: Mr. Russel Colby  
Assistant Director of Community Development and Economic Development

Re: Zen Leaf Dispensary  
3714 Illinois Avenue – Unit C

Dear Mr. Colby:

We have received your correspondence dated December 17, 2019 from Hampton, Lenzini and Renwick, Inc. (HLR) containing review comments regarding the above referenced project. Listed below are the comments received pertaining to the Traffic and Parking Study followed by our responses to those comments.

**Traffic Assumption Comments (Continued from December 12<sup>th</sup> Memo)**

1. **Comment:** Include a note that states ITE cautions the use of the data from Land Use 882 as it is from a small sample size. Typically, it is not recommended to use data from the ITE Trip Generation Manual when there is a note about small sample size as the data extrapolated is not accurate.  
**Response:** The revised traffic study, accordingly, incorporates a cautionary statement per ITE, *professional judgement must be exercised in the use of the reported data and statistics.*
2. **Comment:** Existing Traffic Section – Per ITE the “AM” peak period for Land Use 882 is 11:45am-12:45pm. Was midday peak considered to show the traffic projection during this peak?
  - a. Were the signalized intersections of Kirk Road at Main Street and 38<sup>th</sup> Street considered for capacity analysis? These are the main signalized intersection within the study area.

**Response:** We concur, per documentation provided in the ITE Trip Generation Manual, the peak periods for this use occur as stated. However, per the hourly distribution of weekday traffic provided in the ITE Manual, the traffic generated during weekday midday peak hour is approximately 37 per less than the weekday evening peak hour of generator. The Saturday peak hour of generator is also much higher than the weekday midday peak hour.

The Traffic Impact & Parking Study included the critical hours that will have the greatest impact to the surrounding roadway network and highest volume of traffic to/from the development: the weekday morning, weekday evening and Saturday midday peak periods. This is consistent with guidelines published by the Institute of Transportation Engineers (ITE) and followed by IDOT and KDOT.

- a. Per published traffic data from the IDOT website [www.gettingaroundillinois.com](http://www.gettingaroundillinois.com):
  - North Avenue (IL Route 64) has an Annual Daily Traffic (AADT) volume of 33,500 vehicles per day (vpd) west of Kirk Road and an AADT of 32,900 vpd east of Kirk Road (year 2017).
  - Kirk Road has an AADT of 18,800 vpd north of North Avenue and an AADT of 24,800 vpd south of Kirk Road (year 2018).

Based on the trip generation and traffic assignment, as summarized in Tables 2 and 3 and illustrated on Exhibit 5, approximately 40% of the site traffic will travel through the Kirk Road and North Avenue intersection and 10% through the North Avenue and 38<sup>th</sup> Avenue intersection. Even without discounting for pass-by trips or existing medical cannabis dispensary trips, the proposed use represents only approximately 100 trips through the North Avenue and 38<sup>th</sup> Avenue intersection on a daily basis and between approximately 5 to 15 on a peak hour basis. Similarly, through the North Avenue and Kirk Road intersection approximately 400 trips on a daily basis and between approximately 15 to 55 trips during the peak hours. Accordingly, based on the IDOT volumes, these increases represent less than a 1% increase over existing conditions or less than 1 vehicle per minute. Furthermore, based on the existing signal cycle lengths of 130, 150 and 120 seconds during the weekday morning, weekday evening and midday peak periods, respectively, these increases represent approximately 1 to 2 vehicles per cycle length at North Avenue and Kirk Road and 1 vehicle per cycle length at North Avenue and 38<sup>th</sup> Avenue.

These increases will not materially impact the overall intersection operations and can be accommodated within the existing roadway geometrics. Therefore, the study area limits were focused on the intersections that would have the greatest impact from the proposed development traffic: Illinois Avenue at Kirk Road, the site access driveways and 38<sup>th</sup> Avenue.

- Comment:** Consider showing/using for total traffic the anticipated trips generated (70% new trips, 30% existing from the Land Use). 30% of those trips already exist so they won't be added to the existing traffic, reduce total trips generated by the dispensary by 30% to show a more accurate number. Projected trips may be overly conservative.

**Response:** Table 2 of the Traffic Study has been expanded to show the existing medical cannabis trips and the net new site traffic expected with the proposed development. ***However, again to provide a conservative analysis scenario, no reduction for the existing medical cannabis trips was applied to test the maximum site impacts.***

- Comment:** Were Pass-By trips considered? ITE has Pass-By percentages for comparative land uses that could be considered for this study.

**Response:** GHA concurs, not all vehicle trips expected to be generated by the proposed project represent new trips on the study area roadway system. Studies have shown that for similar retail developments (shopping center, pharmacy/drugstore without a drive-through, and convenience market developments), a substantial portion of the site-generated vehicle trips are already present in the adjacent passing stream of traffic or are diverted from another route to the proposed site. Based on data presented in the ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition*, the average pass-by trip percentage for these similar uses is between 26 and 53 percent. ***However, to provide a conservative analysis scenario, no reduction for pass-by traffic was applied.***

- Comment:** Site Traffic Comparison Section: Consider using different Land Uses for comparison to the dispensary such as Pharmacy without a Drive-Thru, Variety Store, Convenience Store or Apparel Store. These have more of a general retail/medical use and size.

**Response:** Accordingly, Table 4 on page 5 of the revised Traffic Study provides the recommended comparisons.

- Comment:** Comment 5 from memo submitted by HLR on December 12<sup>th</sup> was addressed with information provided in the traffic study. See comment 2 under "Traffic Assumption Comments (Continued from December 12<sup>th</sup> Memo) for additional considerations.

**Response:** Comment noted. Please see response to Comment #2.

### **Traffic Study Comments**

7. **Comment:** Provide more detail in Conclusion statements
- Reiterate trip generation and capacity results, similar to the level of detail given for Paragraph 2 regarding the parking analysis results.

**Response:** The Conclusion statements have been expanded, accordingly, to provide more detail.

8. **Comment:** Exhibit 7, Intersection Capacity and Queue Analysis –
- Column 2 – Total Traffic, should ‘Current’ be proposed conditions?
  - Why does the table just show one Approach Delay for each intersection?
  - More justification on the increase in delay/doubled queue length for the approaches?

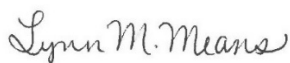
**Response:**

- The current in Column 2 represented the existing roadway conditions. No modifications to the existing roadway geometrics or traffic control are planned or proposed nor are necessary to accommodate the additional site traffic. This table, however, was revised, accordingly, to provide clarification.
- The table has been expanded to show the approach delay for additional approaches, as appropriate, that operate under Stop sign control.
- All movements and approaches maintain their existing level of service under future, total traffic conditions (assuming the full occupancy of the St. Charles Commons Building, as well as the proposed site traffic), with the exception of the following:
  - Eastbound through/left-turn movements on Lakeside Court at Kirk Road during the weekday morning and evening peak hours.
  - Westbound left-turn movement on Illinois Avenue at Kirk Road during the Saturday midday peak hour.
  - The Illinois Avenue westbound approach at Kirk Road during the weekday evening and Saturday midday peak hours.

The increase in delay represents less than a one vehicle increase in the 95<sup>th</sup> percentiles queues on the Lakeside Court eastbound approach to Kirk Road and less than a two vehicle increase in the 95<sup>th</sup> percentile queue on the Illinois Avenue westbound approach to Kirk Road. These increases do not impact operations on the adjacent roadway network and as noted within the traffic study are typical operations for a minor street intersecting with a major street with heavy through volumes, such as Kirk Road. All vehicle queues can be accommodated within the storage provided. Therefore, no intersection improvements are necessary to accommodate this increase in traffic.

If you have any questions, please feel free to contact GHA at (847) 478-9700.

Sincerely,  
Gewalt Hamilton Associates, Inc.



Lynn M. Means, P.E., PTOE  
Senior Transportation Engineer  
[lmeans@gha-engineers.com](mailto:lmeans@gha-engineers.com)