

May 15, 2017

VIA EMAIL

Ms. Cynthia Redinger, PE, PTOE  
City of Ann Arbor  
301 E. Huron St., P.O. Box 8647  
Ann Arbor, MI 48107

RE: **Response to Comments**  
**1140 Broadway Traffic Impact Study**  
**Ann Arbor, Michigan**

Dear Ms. Redinger:

Fleis & VandenBrink (F&V) staff has completed this letter in response to the comments provided by HRC in their review dated May 3, 2017. F&V's responses to these comments pursuant to the conversations and correspondence with HRC and the City of Ann Arbor are summarized herein.

**A. Existing Synchro Models**

1. *Confirm existing operation of Broadway/Maiden Lane intersection and westbound Maiden Lane right turn overlap in the existing Synchro models.*

**There is an existing right-turn overlap. The Synchro models have been updated to reflect these operations.**

2. *Revise the EB Moore Street lane configuration at Pontiac Trail to one lane in the Synchro models to match with existing field conditions.*

**The Synchro models have been updated to reflect these operations.**

3. *Remove dedicated right turn lanes at dummy nodes.*

**The Synchro models have been updated to reflect these operations.**

**B. Trip Generation**

4. *Revise the total new trips in the trip generation Table 6 as they do not add up.*

**This has been corrected in the updated TIS report.**

5. *Describe why the truck mode split was not incorporated into the person-trip generation calculations.*

**The vehicle trips generated by the Morningside development will be primarily passenger vehicle trips. The truck mode split although shown from the ITE table were not applied since the volumes are exceptionally low. The truck mode split was removed from the updated TIS report.**

6. *Revise the calculated person-trips in Table 8 as rounding is off.*

**This has been corrected in the updated TIS report.**

7. *Describe why different occupancy rates were used in the modal split trip generation calculations. The ITE vehicle occupancy rates were used in Section 3.6.2 and the SEMCOG occupancy rates were used in Section 3.6.3.*

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The ITE rates were used to convert vehicle trips to person trips. The City of Ann Arbor modal splits were applied to the person trips to determine which mode the person-trips would use. However, one person does not mean one trip, so the SEMCOG vehicle occupancy rates were applied to person-trips by mode to calculate the total trips used in the analysis.

8. *Revise the new transit trips in the modal split trip generation Table 10 as they are incorrect.*

**This has been corrected in the updated TIS report.**

### **C. Trip Distribution and Assignment**

9. *Provide a more detailed description of how the site trip distribution percentages were developed.*

For the apartments, the the existing outbound network trips and inbound network trips were used to develop trip distribution percentages for the AM and PM peak hours, respectively. The retail trips used the converse, inbound network trips and outbound network trips for the AM and PM peak hour distributions, respectively. This is based on the assumption that the majority of AM trips are home to work/school and reversed for the PM. The retail trips will generally be home based therefore the ingress will be from the direction of where people are headed in the PM.

10. *Provide a description of how the trips were assigned to the driveways*

Paths were selected based the proposed site access, proposed development locations (retail apartments), where vehicles are headed within the network and the optimal route for all trips.

11. *Revise the site-generated traffic volumes in Figure 5 for the PM outbound trips at the driveway as they do not add up to those shown in Table 10.*

**This has been corrected in the updated TIS report.**

12. *Revise the site-generated traffic volumes in Figure 5 for the PM entering trips from the outside nodes as they do not match with the trip distribution percentages shown in Table 11.*

**This has been corrected in the updated TIS report.**

13. *Revise the locations for the pass-by trips in Figure 5 as they should be entering and exiting the site.*

The pass-by trips were applied for the first floor retail which are located on the west-facing side of Building C. Vehicles will park in the parking area south of the Broadway Ave. & W. Site Drive intersection.

### **D. Pedestrian and Cyclists**

14. *Describe how the pedestrian and cyclist generated trips were incorporated into analysis. Show how these trips were distributed, assigned and included in the Synchro analysis.*

**This has been added to the updated TIS report.**

15. *Provide LOS analysis for pedestrians and cyclists.*

**This has been added to the updated TIS report.**

16. *Show the proposed crosswalks near the site driveways on the Multi-Modal Circulation Plan, especially those at the new Broadway Avenue/site driveway intersection*

**This has been added to the updated TIS report.**

### **E. Future Synchro Models**

17. *HRC recommends optimizing cycle lengths, splits and offsets in the future Synchro models and not setting movements to maximum recall.*

**This has been updated in the Synchro models.**

### **F. Recommended Improvements**

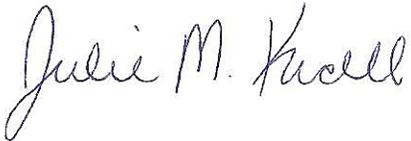
18. *Revise recommendations to accommodate changes in LOS based on comments provided above.*

**The TIS report has been updated to reflect the comments provided herein.**

If you have any questions or concerns, please contact our office.

Sincerely,

FLEIS & VANDENBRINK ENGINEERING, INC.

A handwritten signature in black ink that reads "Julie M. Kroll". The signature is written in a cursive style with a large initial 'J'.

Julie M. Kroll, PE, PTOE  
Sr. Project Manager

**Attached:**

BMH:jmk