NATIONAL TRANSPORTATION SAFETY ORGANIZATION

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August 14, 2025

Ashley Jankowski, AICP
Associate Planner
McKenna
235 East Main Street, suite 105
Northville, MI 48167

RE: Review of Fleis & VandenBrink Trip Generation Analysis
20160 Mack Avenue, Retail Development, Grosse Pointe Woods

Dear Ms. Jankowski,

As requested, the National Transportation Safety Organization (NTSO) has completed a review of the Trip Generation Analysis memorandum prepared by Fleis & VandenBrink (F&V) for the proposed strip retail development in Grosse Pointe Woods, Michigan. The project site is located at 20160 Mack Avenue, between Oxford Road and S. Renaud Road.

Traffic concerns raised by residents over the proposed development were forwarded to the NTSO by the Grosse Pointe Woods, Director of Public Safety, listed below:

- Residential cut-through traffic and/or turns out of the parking lot onto Oxford Road and S. Renaud Road from proposed commercial uses at 20160 Mack Avenue.
- Speeding down residential streets due to proposed commercial uses at 20160 Mack Avenue
- Pedestrian safety and visibility of pedestrians by traffic traveling on and off Mack Avenue onto Oxford Road and S. Renaud Road.

Proposed Development

The plans show a retail development floor plan of 9,152 square feet with space for three separate tenants, approximately 3,000 square feet each. No specific tenants have been identified; however, the proposed zoning change would allow many types of retail business, including food service restaurants.

Site Trip Generation

When analyzing the impact of new development on the adjacent roadway network, the number of weekday peak hour (AM and PM) trips that would be generated by the proposed development are calculated based upon information published by the Institute of Transportation Engineers (ITE) in their Trip Generation Manual. The vehicle trips generated by this proposed development were calculated by F&V using the information contained in the manual for a Strip Retail Center. Without specifics on the actual tenants this is the best fit for analyzing the impact.

Trip generation for other types of tenant occupants that could be used for comparison would be:

- Coffee/Donut Shop without Drive-Through Window
- Fast-Food Restaurant without Drive-Through Window
- High-Turnover (Sit-Down) Restaurant

If using these other vehicle trip generation factors, the overall results would be similar.

Trip Generation Comparison

F&V compared the peak hour (AM & PM) daily vehicle trips of the existing development to those of the proposed development using information published in the ITE Trip Generation Manual for a Medical Building. The results of this trip generation comparison indicates that the proposed development is comparable to the existing use of the project site. While the AM Peak Hour trip generation of the proposed development is less than the existing development, the PM Peak Hour is more. The difference in the number of trips is not significant and should have no discernable impact on the current roadway network.

Safety Review

A review of 5-Year (2019 -2023) crash history was conducted by F&V at the intersections of Mack Avenue & Oxford Road and Mack Avenue & S. Renaud Road, using the Michigan Traffic Crash Facts (MTCF) website. It is assumed that this data includes both the northbound (NB) and southbound (SB) Mack Avenue intersections with Oxford Road and S. Renaud Road. F&V summarizes, there was a total of 12 crashes reported in the study area with 9 occurring at Mack Avenue & Oxford Road, and 3 at Mack Avenue & S. Renaud Road. Two of these crashes resulted in “Type-B” injuries and three with “Type-C” injuries.

NTSO conducted this same crash history review using our Traffic Crash Location System (TCLS), Traffic Crash Analysis Tool (TCAT). This review found a total of 16 crashes reported in the study area with 12 occurring at Mack Avenue & Oxford Road, and 4 at Mack Avenue & S. Renaud Road. Two of these crashes resulted in “Type-B” injuries and five with “Type-C” injuries.

The difference between these crash history reviews could be attributed to the buffer zone that is established from the center point of the intersection for including of crashes. The NTSO, TCAT system, uses 200 feet.

NTSO also conducted a crash history review at these intersections for the 5-year period (2020-2024), eliminating the year 2019 crash data and adding the most recent year 2024 crash data. This review found a total of 23 crashes reported in the study area with 18 occurring at Mack Avenue & Oxford Road, and 5 at Mack Avenue & S. Renaud Road. Three of these crashes resulted in “Type-B” injuries and five with “Type-C” injuries.

Below is a chart with a summary of the data from these crash history reviews.

INTERSECTION	F&V 2019-2023	NTSO 2019-2023	NTSO 2020-2024
Mack Ave (NB) & Oxford Rd	9	4 No Injuries	6 No Injuries
Mack Ave (SB) & Oxford Rd	Assumed to be Included Above	8 2-B, 4-C	12 2-B, 4-C
Mack Ave (NB) & S Renaud Rd	3	3 1-C	2 1-C
Mack Ave (SB) & S Renaud Rd	Assumed to be Included Above	1 No Injuries	3 1-B
Totals	**12 2-B, 3-C**	**16 2-B, 5-C**	**23 3-B 5-C**

When analyzing crash data from the 2019 and 2020 years the statistics are not considered to be representative of normal traffic conditions as traffic volumes were considerably less than normal due to the Covid pandemic.

The overwhelming majority of the crashes reported above involved vehicles within the bi-directional crossovers failing to yield to traffic on Mack Avenue.

Conclusions

The conclusions of the F&V Trip Generation Analysis for the proposed development states trips generated will access the property via the driveways on Oxford Road and S. Renaud Road. Furthermore, the majority of this traffic is expected to travel to or from Mack Avenue. Considering Mack Avenue as the commercial corridor, and other than the residents from the neighborhoods west and east of Mack Avenue wanting to patronize this new development, a significant increase in traffic volume on the residential streets is not expected.

The trip generation comparison performed by F&V indicates the proposed strip retail center development is comparable to the previous use as a medical office building. Other types of occupants for this development as mentioned in the Site Trip Generation section of this review above would have a similar comparison.

The crash history review conducted by F&V found that all crashes at the study intersections involved vehicles within the bi-directional crossovers. A review of crash history by NTSO also found that a majority of the crashes involved the bi-directional crossovers. With the proposed development, future crash history is expected to be similar as existing road geometry will not change.

F&V states that the proposed development plan includes removal of one existing driveway on Oxford Road, which reduces the number of conflict points between motorized vehicles and pedestrians/bicycle traffic, thereby improving non-motorized safety. While this is true for reducing conflict points, it does not reduce the number of possible conflict occurrences, as the vehicles must use one of the other driveways.

Traffic Concerns Raised by Residents

Residential cut-through traffic from the proposed development onto Oxford Road and S. Renaud Road is not expected as the majority of traffic is expected to utilize Mack Avenue for access. Using Oxford Road or S. Renaud Road does not provide convenient access to other major roads.

Speeding on the residential streets due to the proposed development is not expected. The speed at which a motorist travels is directly related to the road conditions and roadside environment. The majority of motorists travel at a speed they feel is reasonable and safe for conditions to maintain control of their vehicle. This proposed development is not making any changes to the road conditions or roadside environment of the residential streets in the area.

Pedestrian safety and the visibility of pedestrians by traffic traveling on and off Mack Avenue onto Oxford Road and S. Renaud Road is not being altered by the proposed development. Visual line of sight at the intersections of Mack Avenue at Oxford Road and S. Renaud Road are not being affected by the proposed development. Pedestrians have the right-of-way in the crosswalk at these Stop controlled intersections.

Sincerely,

Chuck Keller, P.E.
Director of Engineering
Chief Traffic Engineer