

January 20, 2022

VIA EMAIL seth@hunterpasteurhomes.com

Mr. Seth Herkowitz
COO / Partner
Hunter Pasteur, Northville LLC
32300 Northwestern Hwy., Suite 230
Farmington Hills, MI 48334

**RE: Response to City of Northville – TIS Comments
Northville Downs PUD
City of Northville, Michigan**

Dear Mr. Herkowitz:

Fleis & VandenBrink (F&V) staff has completed this letter in response to comments provided by the City of Northville and their traffic engineering consultant (OHM). OHM provided a review letter dated January 13, 2022. The comments that correspond to the traffic impact study performed by F&V in the report dated December 14, 2021 are summarized herein.

1a. OHM Comment: *Page 4 & Figure 2: There are several issues that need to be addressed. At intersection (#7) of Center and Main, under Scenario 2 with the closure of a block of each street, technically this is no longer an intersection for the purposes of right-of-way controls. So, this location cannot be an all-way STOP. As just a bend in the road, there would be no regulatory signs assigning right-of-way.*

F&V Response: Figure 2 was revised accordingly.

1b. OHM Comment: *Page 4 & Figure 2: There are several issues that need to be addressed. At intersection (#16) of Beal and Griswold, the existing right-of-way control is a two-way STOP. However, this is not a rational configuration for the tee intersection. Once Beal is extended into the development, it should be reconfigured as a standard one-way Griswold stopping for Beal unless criteria for an all-way STOP are met.*

F&V Response: Figure 2 was revised accordingly.

2. OHM Comment: *Page 5: The description for Northville Rd fails to mention that Northville Rd south of the south intersection of 7 Mile Rd is only 2-lanes, not the 4-lanes implied.*

F&V Response: The report was revised accordingly.

3. OHM Comment: *Page 5: The description of Main St states that south of 7 Mile Rd the regional name is Sheldon Rd. This is incorrect; it is Northville Rd.*

F&V Response: The report was revised accordingly.

4. OHM Comment: Page 6 The description of the road cross section for 7 Mile Rd is not accurate. We recommend saying it is a 2-lane road with intermittent auxiliary lanes, sometimes for left turns, otherwise for right turns.

F&V Response: The report was revised accordingly.

5. OHM Comment: Pages 1 to 15: Existing conditions for the scenarios. This is a point of major concern. The three scenarios are based on different volume counting and adjustment regimes, and as such do not facilitate direct comparisons. For Scenario 1, 2019 counts (pre-covid pandemic) were used and expanded to a 2021 horizon year. These volumes result in intersections and road segments have significantly more traffic loadings than Scenario 2 or 3, which are based on the 2021 turning movement counts where no COVID adjustment factors were applied. This is even accounting for the travel pattern changes associated with closing portions of Center St, Main St, or both. The following points attempt to illustrate why we have profound misgivings about the volumes that underpin the scenario assessments.

- a) Consider intersection numbers 1, 2, 3, 5, 6, 9, 11, 19, 23, 24 and 28 forming a cordon line around the study area. While we would not expect that there would be exactly equal volumes entering and departing the cordon line for the different scenarios, we would expect these volumes to be roughly the same between the various scenarios. But there are very large differences between the entering and exiting volumes for the cordon line for both a.m. and p.m. periods, especially between Scenarios 1 and 2. In all cases, Scenario 1 has larger volumes in and out. The differences range from 'only' 9.6% for exiting in the a.m. period to 17.1% entering in the p.m. period. This is far larger than expected and leads us to believe that the 2021 counts still have a lingering impact from the COVID pandemic that needs to be accounted for.
- b) Another way to consider this issue is to sum the approach volumes of all the movements for all intersections 1 through 28. Then by comparing the a.m. and p.m. sums, we see that Scenario 2 has about 5.5% less activity than Scenario 1 in the a.m. and 11.4% less in the p.m.
- c) Yet another way to look at the issue is just focusing on traffic volumes along Center St. Even accounting for the likely need for traffic to detour due to the closure of a block of Center St, it appears that hundreds of vehicles per hour go missing in Scenario 2 compared to 1 and are not accounted for on alternative routes like Wing St or Hutton St/ Main St/ Northville Rd.
- d) These imbalances, however they are considered, leads one to question if the Scenarios are fair comparisons of travel patterns. If not, then all of the capacity calculation are called into question. Due to this issue, we can offer no constructive criticism for the background discussion and calculation of Section 4 of the TIS.

F&V Response: The scope of work included in this study was verified with the City and OHM in a meeting on October 1, 2020. The analysis was separated into three scenarios which are summarized below and include how the traffic volumes were considered. The scenarios are presented to show a range of traffic impacts associated with High (Scenario 1), Low (Scenario 2) and Hybrid (Scenario 3) traffic volumes, thus showing a range of potential traffic impacts on the adjacent roadway network.

| Scenario 1 Baseline Operations (Pre-COVID) | Scenario 2 Main St. & Center St. Closed | Scenario 3 Main St. Closed Only |
|--|--|--|
| Pre-COVID 2018 traffic volumes grown to 2021 <ul style="list-style-type: none"> Evaluation of "what if" COVID did not happen. Baseline conditions | 2021 Existing Traffic Volumes <ul style="list-style-type: none"> Requested by the City/Planning Commission to determine actual current traffic volumes with existing COVID impacts and road closures | 2021 Existing Traffic Volumes, adjusted <ul style="list-style-type: none"> Hybrid version. West of and including Center Street used Pre-COVID 2018 traffic volumes adjusted to 2021. East of Center St. used existing traffic volumes collected (including road closure detours) |

6. OHM Comment: Pages 16 to 21: *The developer and their traffic engineers were told that unless improvements are already planned and funded by Wayne County or the City of Northville, the only changes that should be proposed for existing or background conditions would be minor operational ones, such as signal timing optimization.*

F&V Response: F&V did not consider mitigation for existing or background (no build) conditions as a presumption for completion by others. We did however, identify existing capacity limitations and provide recommendations for mitigating existing and background (no build) operations at the study intersections in an effort to determine what *additional* mitigation measures, if any, would be recommended to accommodate the projected site generated traffic. The purpose of the traffic impact analysis is not to assign responsibility, but to understand the totality of the traffic impact.

6 a. OHM Comment: *If new signals are being suggested, then a full signal warrant study of ALL warranting criteria will need to be presented. Reliance on just one criterion, such as Warrant 2 or 3, is not sufficient.*

F&V Response: The report is revised accordingly to include an evaluation of all signal warrant criteria. The Warrant analysis are provided in Appendix E.

6 b. OHM Comment: *Even though the TIS documents indicate on Page 18 that the signal warrant analysis has been presented (for only one location) in Appendix E of the report, there was no Appendix E in the TIS document provided to us for review.*

F&V Response: The revised report includes the documentation presented in Appendix E.

6c. OHM Comment *For all claims regarding signal optimization, there should be a table or other exhibit that summarizes the recommended changes, e.g., cycle lengths, green splits, offsets, added phases, etc. For any recommendations to add left turn signal phasing, provide left turn warrant analysis (based on MDOT procedure) including crash and volume analysis.*

F&V Response: The signal timing optimization recommendations have been included in the revised report Appendix F. The additional signal warrant analysis criteria are provided in Appendix E.

7a. OHM Comment: Pages 19: *Regarding the discussion of 7 Mile Rd at Center St & Sheldon Rd intersection. Option 1 is only upgrading the signal to fully actuated and striping for N-S left turn lanes. There is only sufficient pavement on the NB approach for an approximately 25-ft long left turn lane. See the adjacent sketch. Without adequate lane storage, actuating this phase is pointless. The study does not adequately discuss the ramifications of not providing the needed left turn lane storage for NB Sheldon. Further, what are the implications for the bike lanes on Center in providing the SB left turn lane? How much of these bike lanes will have to be removed?*



F&V Response: This option was further evaluated in the revised study and is not recommended without the addition of Option 2 (widened/ new bridge). If this option is considered, the bike lanes on the north side of the intersection would need to be accommodated through sharrows or other means (shared use path, intersection widening etc.) as preferred by the City.

7b. OHM Comment: *Regarding the discussion of 7 Mile Rd at Center St & Sheldon Rd intersection. Option 2 is recommending the widening of the bridge carrying Sheldon Rd over Johnson Creek. Please note that it may not be practical to widen this structure, which will then require a complete replacement with a wider structure.*

F&V Response: This mitigation measure was presented as the best solution for providing additional intersection capacity and improving the vertical sight distance on the west side of the intersection approach.

7c. OHM Comment: *Regarding the discussion of 7 Mile Rd at Center St & Sheldon Rd intersection. Option 3 alludes to sight distance issues for the roundabout alternative. What are these issues? Otherwise, why is this option being discarded?*

F&V Response: The revised report identifies the roundabout as an alternative option for consideration to improve the intersection operations.

8. OHM Comment: *The study makes recommendations for a variety of expensive improvements that are not currently funded.*

F&V Response: The recommendations presented identify the best solutions for mitigating the existing operational delays and the accommodating the projected future traffic volumes. Alternative mitigation measures of varying degrees of cost are also presented for consideration.

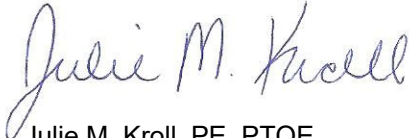
9. OHM Comment: *The TIS presumes to take it upon itself to make recommendations regarding the closures of blocks of Main and Center Streets. This is in spite of there being little in the way of objective traffic operational characteristics that point to one scenario being more favorable than the others. This is a high-level policy decision divorced from the issues related to the development of The Downs site. As such, it is our opinion that their recommendation should be removed from the updated TIS report.*

F&V Response: The report has been revised accordingly to present mitigation recommendations and alternatives for each scenario and does not recommend a scenario, but presents mitigation recommendations associated with each option to show a range of mitigation measures that may be considered for the roadway network.

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

Sincerely,

FLEIS & VANDENBRINK ENGINEERING, INC.



Julie M. Kroll, PE, PTOE
Traffic Engineering Services Manager