

MEMO

To: Mr. Seth Herkowitz
COO / Partner
Hunter Pasteur, Northville LLC

From: Julie M. Kroll, PE, PTOE
Jacob Swanson, EIT
Fleis & VandenBrink

Date: October 25, 2021

Re: Northville Downs PUD
Northville, Michigan
Trip Generation Analysis

INTRODUCTION

This memorandum presents the results of the trip generation analysis for the proposed Northville Downs Planned Unit Development (PUD) in Northville, Michigan. The project site is located generally in the northeast quadrant of the Center Road and Seven Mile Road intersection on the property that is currently occupied by Northville Downs, as shown in **Figure 1**. The proposed development includes the construction of retail and residential land uses. The purpose of this analysis is to provide an overall comparison of the trip generation for the Northville Downs site as previously evaluated in the study prepared by Fleis & VandenBrink (F&V) in 2018 and the trip generation associated with the revised Northville Downs PUD as currently proposed.

FIGURE 1: SITE LOCATION MAP



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TRIP GENERATION

The trip generation¹ summary from the 2018 study shown in **Table 1** was compared to the projected trip generation associated with the proposed Northville Downs PUD. The number of Weekday peak hour (AM and PM) and daily vehicle trips were calculated for the proposed site plan using the equations and rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 11th Edition*.

TABLE 1: TRIP GENERATION COMPARISON

Scenario	Land Use	ITE Code	Amount	Units	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
2018 Northville Downs PUD	Retail	820	18,700	SF	1,923	11	7	18	75	82	157
	Internal Capture					2	1	3	8	21	29
	Pass-By	34%			654	3	2	5	23	21	44
	New Trips				1,269	6	4	10	44	40	84
	Single-Family Detached Housing	210	53	D.U.	580	11	31	42	35	20	55
	Multi-Family Home (Mid-Rise)	221	493	D.U.	2,685	42	121	163	125	80	205
	Internal Capture					1	2	3	21	8	29
	Total Trips				5,188	64	159	223	235	182	417
	Total Internal Capture					3	3	6	29	29	58
	Total Pass-By				654	3	2	5	23	21	44
	Total New Trips				4,534	58	154	212	183	132	315
2021 Northville Downs PUD	Strip Retail Plaza (<40k SF)	822	17,000	SF	947	24	16	40	57	56	113
	Internal Capture					1	1	2	5	15	20
	Pass-By	34%			322	8	5	13	16	16	32
	New Trips				625	15	10	25	35	26	61
	Single-Family Detached Housing	210	53	D.U.	563	11	31	42	35	20	55
	Multi-Family Home (Mid-Rise)	221	253	D.U.	1,160	23	77	100	60	39	99
	Senior Adult Housing-Multifamily	252	159	DU	515	11	20	31	22	18	40
	Internal Capture					1	1	2	15	5	20
	Total Trips				3,185	69	144	213	174	133	307
	Total Internal Capture					2	2	4	20	20	40
	Total Pass-By				322	8	5	13	16	16	31
	Total New Trips				2,863	59	137	196	138	97	235
New Trips Difference					-1,671	1	-17	-16	-45	-35	-80
New Trips Percent Difference					-37%	2%	-11%	-8%	-25%	-27%	-25%

¹ The trip generation calculations performed for the 2018 Northville Downs PUD used the equations and rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition*. The latest edition of the ITE Trip Generation Manual, 11th Edition was published in October 2021 and was utilized for calculate the trips associated with the current PUD site plan.

SUMMARY

The overall findings of the analysis show that the impact of the proposed PUD is less than was previously considered for this site. Key findings of this analysis are summarized below:

Density

- The previously proposed PUD for this site included 546 dwelling units, the proposed PUD includes 465 dwelling units, of which 34% are active adult housing. This is a reduction in density of approximately **15%**.

Trip Generation

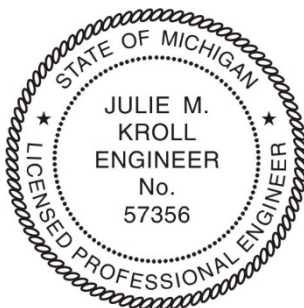
- The results of the trip generation comparison indicate that PUD, as currently proposed, will generate approximately **37%** less traffic throughout the day and **25%** less during the PM peak hour as compared to the 2018 PUD. This is due, in part, to the introduction of active adult homes into the residential options for this site. The residents of these homes may be one or two car households, with no children, and may also be retired. Therefore, the trip generation associated with active adults is less than a traditional multi-family home.

Traffic Impacts

- The Northville Downs currently operates on Friday, Saturday and Sunday for live racing, and during the weekdays for simulcast. Therefore, the site is currently having an impact on the adjacent roadway network. Particularly the live event peaking characteristics will be eliminated with the addition of the proposed PUD.
- Additionally, the 2018 TIS performed for this site concluded that mitigation measures were recommended to accommodate *existing* traffic volumes through the adjacent roadway network and the implementation of the recommended improvements would also adequately accommodate the projected site generated traffic volumes associated with the Downs site. Therefore, since the Downs site will now have less impact than previously evaluated, the mitigation measures previously considered would have more capacity to accommodate existing Northville traffic volumes.

As part of the PUD approval process, a traffic impact study (TIS) is currently being conducted and will provide more detailed information regarding the traffic impacts associated with the proposed PUD. However, based upon this comparison, the traffic impacts on the adjacent roadway network will be significantly less than was previously considered for this site.

Any questions related to this memorandum should be addressed to Fleis & VandenBrink Engineering.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Michigan.