

From: Laurent Fournier <poecile.cinctus@gmail.com>

Sent: Wednesday, April 18, 2018 4:08 PM

To: Planning <Planning@a2gov.org>

Subject: Cottages at Barton Green / documentation regarding the 85 percentile speed on Pontiac Trail.

Dear Commissioners,

My name is Laurent Fournier, currently living at 1610 willow lane in Ann Arbor, and I was one of the persons who talked last evening for the Cottages at Barton Green. Thank you for this opportunity.

Last night, I disagreed with the developer's statement that the proposed driveway location meets all safety requirements regarding the sight distance. I thought you might be interested with my analysis (I am a Traffic and Safety Engineer) and the source of my data, which I did not have a chance or the time to effectively communicate last night.

The critical paragraph I am in disagreement with is located on page 69 of the TIS :

*"The site driveway is in a location that provides adequate site distance in either direction. **The site distance to the south is the most constrained at ~368'**, while the sight distance to the north is greater than 500'. The posted speed limit for southbound Pontiac Trail is 35 miles per hour that transitions to 30 miles per hour at Skydale Drive. Conversely the northbound speed limit is 30 miles per hour with a 35 mile per hour sign approximately 215' north of the site driveway. **The AASHTO recommended minimum sight distance for northbound vehicles traveling at the 30 mile per hour speed limit is 335'** (driveway's view of northbound vehicles). And the recommended sight distance for 35 miles per hour southbound traffic is 390'. Both sight distance minimums are satisfied at the proposed site driveway."*

Note that at the posted speed of 30 mph, the sight distance to the south of the proposed driveway (368') is only 33 feet more than the recommended sight distance (335 feet).

Although the use of the posted speed limit as a design speed is certainly quick and convenient, the use of the 85-percentile speed (85% of the vehicle drive below that speed, 15% drive above) for the minimum required sight distance is the recommended way to design streets and highways.

Speed data are now more readily available by local agencies using the Per Vehicle Format (PVF) for their classification counts (pneumatic tube counts). One was taken on June 16 and 17th, 2015 by SEMCOG (before the resurfacing of Pontiac Trail, so the 85 percentile speed is presumably now even higher). From my email correspondence with Chade Saghir (Transportation Data, SEMCOG), that study was located between 400 feet south of Dhu Varren and 1500 feet south of Dhu Varren.

The proposed driveway would be located at approximately 2,400 feet south of Dhu Varren, so the count was approximately taken a quarter mile north of the proposed driveway. Not completely ideal, but close enough that we can make useful inferences, especially when you consider that the northbound and southbound speed distributions are almost identical. I am confident that a speed study done at the proposed driveway location would have very similar results.

The link to the speed study is below (you need to scroll down the page a bit to see the speed data). Click on the eye symbol to see the results :

http://semcoq-all.ms2soft.com/tcds/tsearch.asp?loc=semcoq-all&mod=tcds&mpo_id=72196

The website allows the export of the speed data in a bar chart format (raw data is available if you dig a little bit through the menu). I attached a copy of the speed distribution bar chart to this email. **The 85-percentile speed at that location is 48 mph.**

As you can see on the bar chart, very few cars are actually driving at the speed limit at this location, with the majority of the vehicles traveling at 40 mph and above, and more than 400 cars a day traveling at 50 mph and above, from both directions.

The inference of this speed study is important since **it shows that the sight distance at that driveway is well below the minimum required sight distance, based on actual, measured conditions.**

As it has been rightfully mentioned last night by one of the commissioners, it is well known that enforcing unrealistic speed limits is almost impossible, so this an actual design issue.

My conclusion is that building a driveway at that proposed location would create a **very unsafe condition that would result in frequent crashes** between vehicles pulling out of the driveway and vehicles traveling on the Pontiac trail corridor.

Feel free to ask me any question regarding this analysis. My email is poecile.cinctus@gmail.com.

Respectfully,

Laurent Fournier

Speed Counts : 24 Hour Period

Location: 0091620009_SB Date: Tue 6/16/2015 - Wed 6/17/2015 Time: 9:00:00 AM - 9:00:00 AM

