

## Testing the accuracy of TrafficZoom™ against values sourced by a leading industry provider

TrafficZoom™ is a new, cutting-edge SaaS platform by Ticon, that provides instant traffic volume data for any road or street across the country. Designed primarily for location intelligence, TrafficZoom™ can also be successfully applied for many other tasks, including real estate development, urban planning and geospatial analysis.

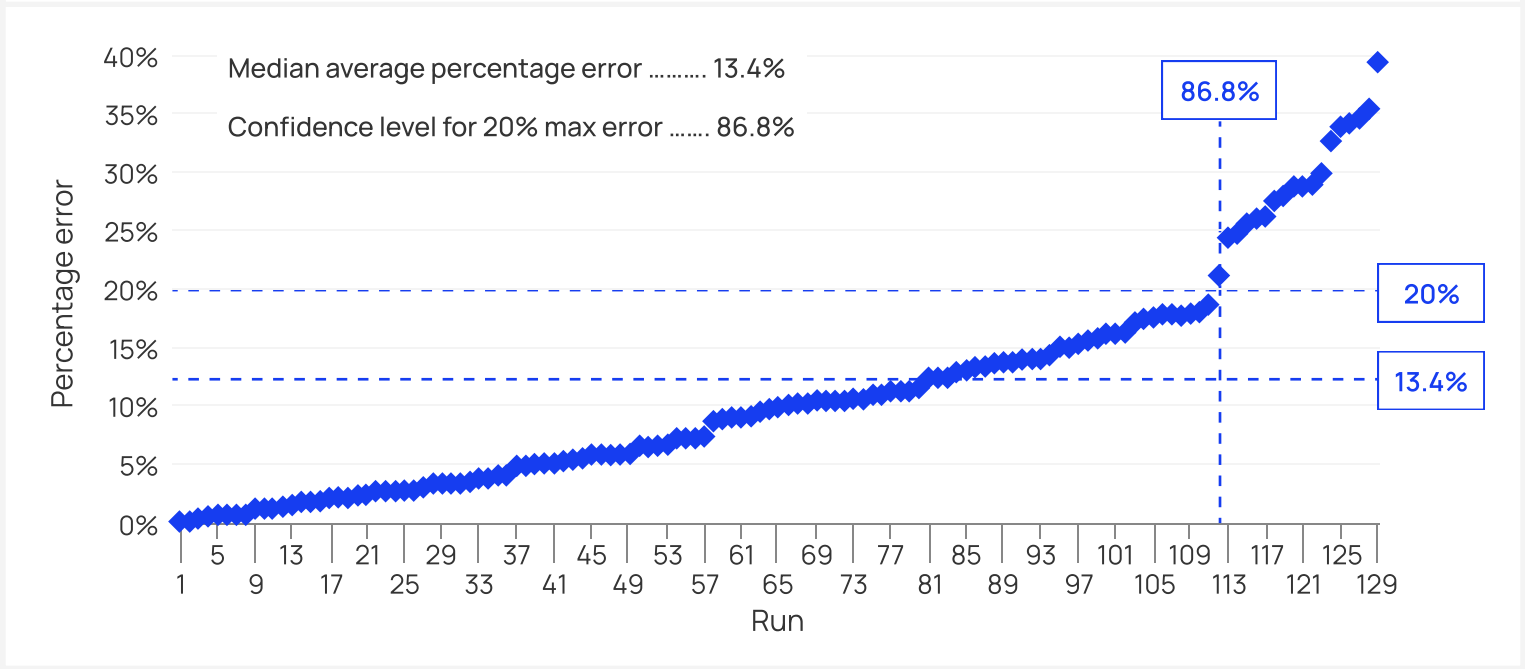
TrafficZoom™ platform had been developed based on decades of experience in traffic data collection, system, transportation and civil engineering, as well as in business site analysis, with the use of multi-sourced data, deeply processed by proprietary AI/ML algorithms.

As with any new product, Ticon makes sure that a blind test is conducted against known data to verify the accuracy of AI-produced results.

Our internal verification of AADT for 129 locations on the East Coast revealed that our level of accuracy is sufficiently high for any roads with at least 1,000 vpd, for us to consider these results the best in the industry.

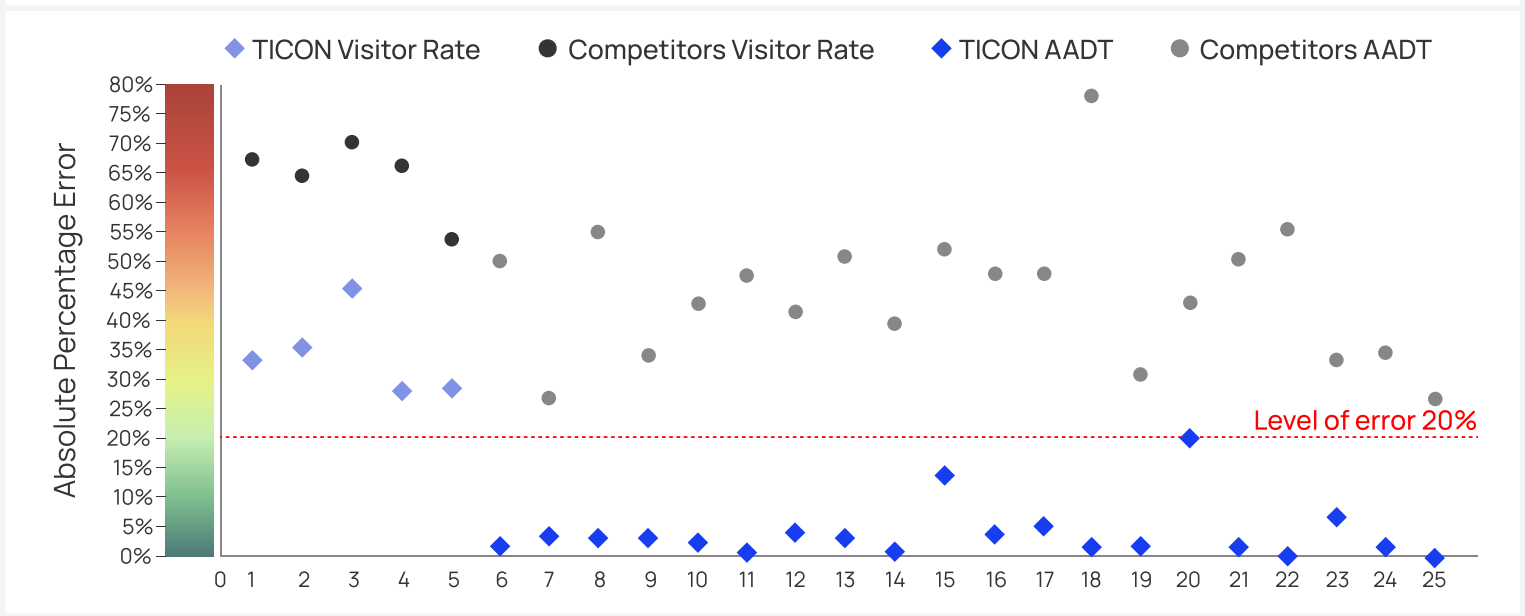
Indeed, median average percentage error (MAPE) for AADT estimation had been registered as low as 13.4%, and maximal error is 20% with 86.7% confidence (Fig. 1).

Figure 1. Verification statistics for TrafficZoom AADT estimation



This is almost as good as achieved by our C-Site Insight reporting system (Fig. 2). But of course, beside Ticon internal testing, it is necessary to conduct a blind test against 3<sup>rd</sup> party-known data to verify the accuracy of a new product.

Figure 2. Verification statistics for C-Site Insight AADT and number of visitors estimation



Since the specification for TrafficZoom™ was developed with the participation of specialists of the major international C-store operator 7-Eleven, who see a critical need to improve the quality of the traffic data they use, but were unable to find acceptable source for quite some time, we asked them to provide us the sites for the blind testing. They supplied us with the coordinates of three locations, for which they had traffic counts from the well-known data supplier source available to 7-Eleven.



For verification purposes we used the data available from nearest DOT counters [1] and a methodology of the balancing of traffic flow volumes at the intersections in the network comprised said counters and location of interest, as illustrated on Fig. 3.

Also, the traffic counts for the locations of interest were calculated with Ticon’s legacy analytical system, C-Site Insight™ [2], for additional prove of the results by saturation and speed density analysis.

Figure 3. AADT verification process for test intersection Hwy 331 & SW46 St



Coordinates										
Intersection	TrafficZoom		Ticon		Blind test estimation		DOT		TrafficZoom error	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
L1		3831					4200		8.79%	
L3	11191	4676	9900	3817	20232	4373	9800		13.04%	
L2	15945		13010				16900		-5.65%	
L4	17664									
L5	22123						21500		2.90%	



As visible from Table 1, the error of TrafficZoom™ estimation for AADT was below 14%.

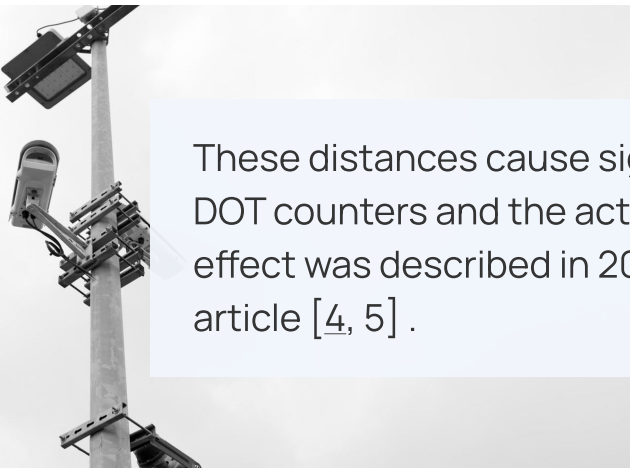
At the same time, the discrepancy between estimations derived from current 7-Eleven system for the blind test (hereinafter referred to as “blind test estimations”, or “BT estimations”) and TrafficZoom™ AADT estimations exceeded 50% even for very busy roads (AADT more than 7000 vpd).

Table 1. Comparative testing results

No	Ticon area ID	Intersection & direction	TrafficZoom	Blint test estimation	DOT counter	Discrepancy		Expected maximal TrafficZoom error
						vpd	%	
1	7428	Test Location #1 – Primary	11191 15945	20232	21500	9041 4287	81% 26.8%	13.04%
2		Test Location #1 – Secondary	4676	4373	4200	303	6%	8.79%
3	7429	Test Location #2 – Primary	14269	24000	25000	9731	68%	11.26%
4		Test Location #2 – Secondary	834	2419	N/A	1585	190%	33.91%
5	7430	Test Location #3 – Primary	12976	20000	16300	7024	54%	1.84%

Such large discrepancies are explained by the fact that, apparently, conventional methods of AADT estimation, unlike the Ticon algorithm, use DOT counters as the main source of information.

In fact, BT estimations differ very slightly from the DOT counters located on these roads (Table 2). However, the test locations are situated at a considerable distance from the actual locations of the DOT counters and are separated from them by several intersections.



These distances cause significant discrepancies between the readings of DOT counters and the actual AADT values at the locations of interest. This effect was described in 2007 in the article [3], and also studied by us in the article [4, 5] .

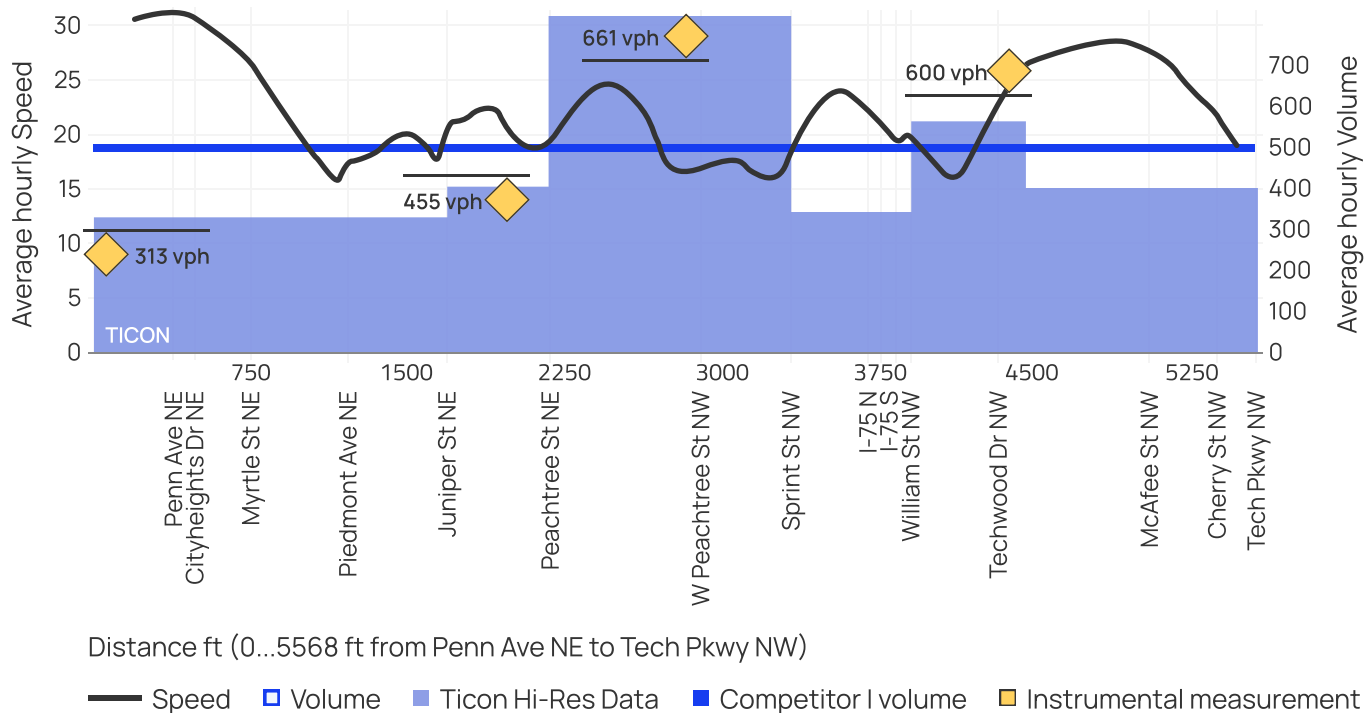


It should be noted here that DOT counter system is accurate and trustworthy, but it's designed to assess the general road load, and therefore the counters can be placed anywhere in very long segments of these roads.



Accordingly, the use of DOT counters and other technologies that operate with long segments, is unacceptable for business site analysis, and leads to significant errors, as we have seen by conducting numerous tests (illustrated by Fig. 4 and Table 2).

**Figure 4. Problems of the use of long-segment based AADT estimations for site selection in towns**



Of course, if site selection is conducted on a basis of such imprecise data, one should be prepared for having sales projections that will differ from the actually achievable results by a factor of two or even more.

Based on the above, we may conclude that the blind test confirmed the high accuracy of Ticon new platform, TrafficZoom™, and supports our decision to offer it as a more accurate alternative to the conventional traffic data providers.

Table 2. Problems of the use of long-segment based AADT estimations for site selection in rural areas

Probe #	State	Road ID	Street name	AADT			Relative percentage error	
				Ticon	Competitor I	Instrumental measurement	Ticon	Competitor I
1	PA	622 NS	PA-145 MacArthur Rd	37615	18003	36876	2%	-50%
2	PA	615 EW	Allentown Blvd	14633	7159	14346	4%	-27%
3	PA	614 EW	Linglestown Rd	5506	3860	5302	3%	-56%
4	PA	616 EW	PA 230	14994	6492	14610	3%	-34%
5	PA	617 NS	US15	29635	18981	28777	-2%	-43%
6	PA	618 EW	Arsenal Rd	43637	25262	44573	-1%	-48%
7	PA	618 NS	N Sherman St	7643	4034	7737	-4%	-42%
8	PA	619 EW	Mt Rose Ave	12978	7894	13519	3%	-51%
9	PA	620 NS	Baltimore St	16215	7685	15818	1%	-40%
10	PA	620 EW	Clover Ln	2756	1642	2726	14%	-52%
1-C	VA	605 NS	Prince William Pkwy	52349	21996	46000	14%	-53%
2-C	MD	598 EW	Liberty Rd	23994	12081	23060	4%	-48%
3-C	FL	612 NS	Avalon Blvd	19164	10429	20200	-5%	-48%

## REFERENCES

1. Florida traffic online. <https://tdaappsprod.dot.state.fl.us/fto/>
2. C-Site Insight Advanced. <https://csite.ticon.co/products/c-site-advanced>
3. Application of cross-verified multisource data to remediation of inaccurate detector measurements. Ticon, 2023. [https://www.researchgate.net/publication/382706591\\_Application\\_of\\_Cross-Verified\\_Multisource\\_Data\\_to\\_Remediation\\_of\\_Inaccurate\\_Detector\\_Readings](https://www.researchgate.net/publication/382706591_Application_of_Cross-Verified_Multisource_Data_to_Remediation_of_Inaccurate_Detector_Readings)
4. Estimates of AADT. Qualifying the uncertainty. The University of Texas at Austin, 2007. [https://www.caee.utexas.edu/prof/kockelman/public\\_html/trb07aaduncertainty.pdf](https://www.caee.utexas.edu/prof/kockelman/public_html/trb07aaduncertainty.pdf)
5. AADT estimation by various methods. Accuracy and reliability. Ticon, 2018. [TICON I Research](#)

## CONTACT US



[info@ticon.co](mailto:info@ticon.co)



+1 (800) 930-0207

CONTACT US

