



TO: Whitney Baxter, 9th District Council Member

FROM: Roger T. Mulvaney, PE, PTOE Traffic Engineer Manager

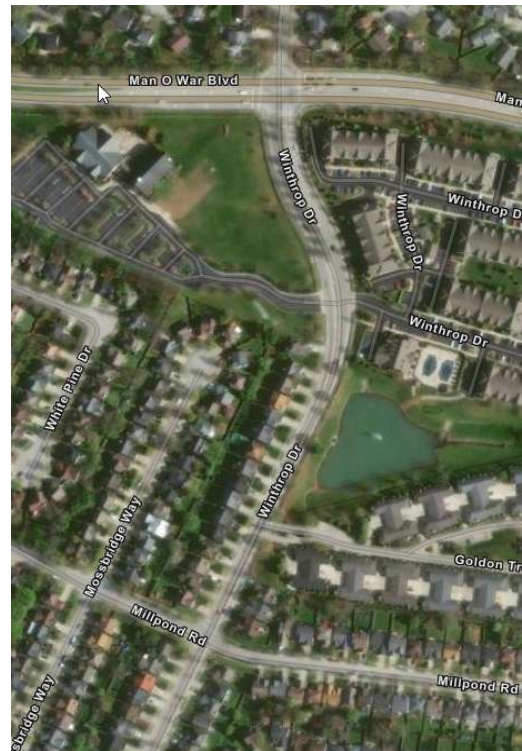
DATE: March 27, 2026

SUBJECT: **Traffic Calming and Speed Limit Study on Winthrop Drive**

Per a submitted petition from the neighbors along Winthrop Drive, the Division of Traffic Engineering conducted a traffic study on Winthrop Drive between Man O War Boulevard and Millpond Road to determine if traffic calming and/or a speed reduction is warranted on this street

Summary

In Summary, due to the traffic operations and the recorded 85th percentile speeds, Traffic Engineering recommends lowering the speed limit to 30 mph on Winthrop Drive between Man O War Blvd and the end of the street at the Jessamine County Line. We will also install radar speed feedback signs on this road between Man O War Boulevard and Millpond Road. Traffic Engineering has already added additional school zone signs to increase awareness of the existing school zone in this study area.



Aerial of Winthrop Drive, study areas and surrounding areas

The supporting analysis for this recommendation is detailed in the following pages.

The study looked at the volume and speed of vehicles utilizing the street for a 72-hour period. Volume and speed data were collected at four locations on Winthrop Drive between Man O War Boulevard and Millpond Road.



The Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) Section 2B.21 addresses speed limits by stating"

Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. The engineering study shall consider the roadway context.

Among the factors that should be considered when conducting an engineering study for establishing or reevaluating speed limits within speed zones are the following:

- A. Roadway environment (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;
- B. Roadway characteristics (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);
- C. Geographic context (such as an urban district, rural town center, non-urbanized rural area, or suburban area), and multi-modal trip generation;
- D. Reported crash experience for at least a 12-month period;
- E. Speed distribution of free-flowing vehicles including the pace, median (50th-percentile), and 85th-percentile speeds; and
- F. A review of past speed studies to identify any trends in operating speeds.

Traffic Study

The findings of the speed analysis on Winthrop Drive are as follows:

- A. Winthrop Drive is classified as a residential collector street. On street parking is permitted but most parcels that are adjacent to Winthrop Drive include driveways. While the street consists of single-family residential homes and multifamily apartments, the lot sizes are moderately sized. There is low to moderate pedestrian and bicycle use on this road typical for a suburban application.
- B. The posted speed limit on Winthrop Drive is 35 mph. Winthrop Drive is bifurcated and has two 30 foot wide lanes with a 10 foot median on the first section of Winthrop Drive. Thereafter the road gradually narrows down to 40 foot wide road without a median. Utility strips, sidewalks and streetlights are present on the entire length of Winthrop Drive.
- C. Winthrop Drive is collector in a suburban section of Lexington in the 9th Council District.



- D. A review of the collision history of this roadway per crashinformationky.org registered five (5) recorded collision in the study area during the three (3) years prior to this analysis. Of the five total crashes, at least three (3) involved parked vehicles.

Collision Type	No of Collisions	No of Injury
Rear End	5	0

- E. The following table is a summary of the data collected along Winthrop Drive.

Segments of Winthrop Dr between Man O' War Blvd & Millpond Rd	Avg. Speed (mph)	Speed Limit (mph)	% over Speed Limit	85 th PCTL Speed (mph)	Peak Hour Vol. (veh)		Avg. Daily Traffic Vol. (veh)	
3601 SB Winthrop Drive	28.93	35	2.30%	32	412	622	3,441	4,942
3601 NB Winthrop Drive	24.93	35	1.10%	29	210		1,501	
3637 SB Winthrop Drive	31.02	35	9.50%	35	379	804	2,933	5,607
3637 NB Winthrop Drive	30.40	35	6.90%	34	425		2,674	
3661 SB Winthrop Drive	32.18	35	18.70%	36	393	986	3,049	6,564
3661 NB Winthrop Drive	33.53	35	31.30%	38	593		3,515	
3689 SB Winthrop Drive	29.06	35	8.30%	34	324	908	2,939	6,404
3689 NB Winthrop Drive	31.06	35	1.13%	35	584		3,465	

The 85th percentile speed along Winthrop Drive was found to be in the range of 38 mph in the northbound direction at 3661 Winthrop Drive to 29 mph in the northbound direction at 3601 Winthrop Drive. The 85th percentile speed, or the speed at which 85% of the vehicles are traveling at or below, is based on the theory that a large majority of drivers are reasonable and prudent, do not want to have a crash, and want to reach their destination in the shortest amount of time possible. The average speeds were 25 to 34 mph range.

Traffic Engineering used this data to determine the recommended speed limit for this roadway using the Federal Highway Administrations USLIMITS2 tool. Using site characteristics, including roadway geometric conditions, traffic volumes and speeds, and recorded crash information, the recommended speed limit for this street is 30 mph.

- F. The following data is from a past speed limit review on Winthrop Drive from October 2014. That review analyzed the length of Winthrop between Man O War Boulevard and the end of the street at the Fayette County – Jessamine County line. This data is excerpted from the section between Man O War Boulevard and Millpond Road from that previous review.



Segments of Winthrop Dr between Man O' War Blvd & Millpond Rd	Avg. Speed (mph)	Speed Limit (mph)	% over Speed Limit	85 th PCTL Speed (mph)	Peak Hour Vol. (veh)		Avg. Daily Traffic Vol. (veh)	
3661 SB Winthrop Drive	33	35	8.00%	38.63	417	738	3,266	6,677
3661 NB Winthrop Drive	36	35	21.35%	42.16	321		3,411	

The 85th percentile speeds measured in 2025 were slightly lower than those collected in 2014 by 2 to 4 miles per hour in the area of 3661 Winthrop Drive. At this same location, the overall daily traffic collected in 2014 and 2025 is roughly the same (6,677 vehicles per day in 2014 to 6,564 vehicles per day in 2025). In comparison, however, the peak hour traffic has increased by about 25% from 2014 to 2025 (738 vehicles per hour in 2014 to 986 vehicles per hour in 2025).

NTMP Analysis

Winthrop drive is classified as a collector street, so in order to qualify for traffic calming mitigation per the Neighborhood Traffic Management Program guidelines, the street must have 3,000 vehicles per day or 300 per peak hour. Winthrop Drive meets those requirements. As a result of this data and tied to the recommended speed limit reduction, Traffic Engineering will install Radar Speed Feedback signs on Winthrop Drive between Man O War Boulevard and Millpond Road.

Emergency Services Review

The Division of Traffic Engineering coordinated with representatives from the Division of Police and Division of Fire and Emergency Services to obtain input regarding traffic and safety operations of Winthrop Drive.

- The Division of Police has reviewed this document and has no objections to the recommendations in this report.
- This office has no objection to the recommendation of decreasing the speed limit to 30mph.



Recommendation

In Summary, due to the traffic operations and the recorded 85th percentile speeds, Traffic Engineering recommends lowering the speed limit to 30 mph on Winthrop Drive between Man O War Blvd and the end of the street at the Jessamine County Line. We will also install radar speed feedback signs on this road between Man O War Boulevard and Millpond Road. Traffic Engineering has already added additional school zone signs to increase awareness of the existing school zone in this study area.

Should you have any questions about the information included in this report, please contact Roger Mulvaney in the Division of Traffic Engineering at (859) 258-3830 or rmulvaney@lexingtonky.gov.

RTM/de

cc: Kevin Tuttle, Citizen
Charlie Martin, PE, Acting Commissioner of Environmental Quality & Public Works
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Roger Mulvaney, PE, PTOE, Traffic Engineer Manager
Christopher Van Brackel, Lieutenant, Division of Police
Embry Beatty, Fire Inspector of Fire & Emergency Services
Elizabeth Withers, Legislative Aide to CM Whitney Baxter



USLIMITS2 Speed Zoning Report

Project Overview

Project Name: Winthrop Drive

Analyst: RTM

Date: 2026-02-05

Basic Project Information

Route Name: Winthrop Dr
State: Kentucky
County: Fayette County
City: Lexington-Fayette
Route Type: Road Section in Developed Area
Route Status: Existing

Roadway Information

Section Length: .27 mile(s)
Statutory Speed Limit: 35 mph
Existing Speed Limit: 35 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: Undivided
Number of Through Lanes: 2
Area Type: Residential-Collector/Arterial
Number of Driveways: 22
Number of Signals: 0

Crash Data Information

Crash Data Years: 3.00
Crash AADT: 5880 veh/day
Total Number of Crashes: 5
Total Number of Injury Crashes: 0
Section Crash Rate: 288 per 100 MVM
Section Injury Crash Rate: 0 per 100 MVM
Crash Rate Average for Similar Roads: 235
Injury Rate Average for Similar Roads: 68

Traffic Information

85th Percentile Speed: 35 mph
50th Percentile Speed: 30 mph
AADT: 5880 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: Not High

Recommended Speed Limit:



Note: A speed zone of .27 miles is generally too short for the recommended speed limit. Consider lengthening the speed zone (if that is possible) or using the speed limits from adjacent sections (if they are appropriate for this section). If the speed and other data you provided are representative of conditions for this short section, then the speed limit noted above may be considered.

Disclaimer: The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

Equations Used in the Crash Data Calculations

Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$
$$M = (5880 * 365 * .27 * 3.00) / (100000000)$$
$$M = 0.0174$$

Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Rc = (1.67 * 100000000) / (5880 * 365 * .27)$$
$$Rc = 287.62 \text{ crashes per 100 MVM}$$

Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$
$$Ri = (0.00 * 100000000) / (5880 * 365 * .27)$$
$$Ri = 0.00 \text{ injuries per 100 MVM}$$

Critical Crash Rate (Cc)

$$Cc = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 / (2 * \text{Exposure}))$$
$$Cc = 235.03 + 1.645 * (235.03 / 0.0174) ^ (1/2) + (1 / (2 * 0.0174))$$

Cc = 455.07 crashes per 100 MVM

Critical Injury Rate (Ic)

Ic = Injury Crash Average of Similar Sections + 1.645 * (Injury Crash Average of Similar Sections / Exposure) ^ (1/2) + (1 / (2 * Exposure))

Ic = 67.63 + 1.645 * (67.63 / 0.0174) ^ (1/2) + (1 / (2 * 0.0174))

Ic = 198.99 injuries per 100 MVM