

# MEMORANDUM

**DATE:** May 1, 2023

**SUBJECT:** Traffic Study- Happiness Way & Frolic Drive

**PREPARED BY:** TEC Engineering, Inc.

**PREPARED FOR:** Sycamore Township

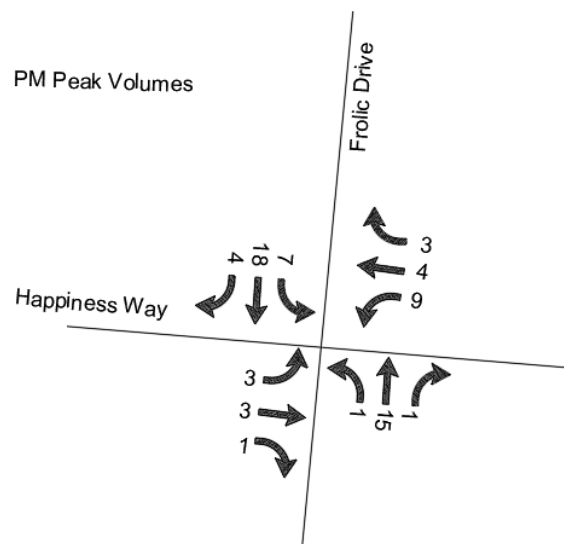
TEC Engineering, Inc. was retained by Sycamore Township to perform traffic study at Happiness Way in Sycamore Township, Ohio. The purpose of the study was to determine if there is a significant number of vehicles using Happiness Way in order to by-pass the Kenwood Road & Galbraith Road intersection.

*Figure 1: General Location Map*



TEC also performed Mechanical and Turning Movement Traffic Counts in the area to determine the ADT (Average Daily Traffic) on Happiness Way and Frolic Drive. The following diagram shows the results of the traffic count locations.

*Figure 2 Traffic Count Data*





**The 24 hour counts show Average Daily Traffic numbers consistent with the number of houses in the neighborhoods.** The PM Peak turning movement count also shows only 3 vehicles turning right from Happiness onto Frolic and only 7 cars turning left from Frolic to Happiness.

Speed data was also reviewed using pneumatic tube counters along Happiness and Frolic. The 85<sup>th</sup> percentile speeds were as follows:

Happiness Way east of Frolic- 28.6 MPH  
Frolic north of Happiness Way-29.8 MPH  
Frolic south of Happiness Way-30.0 MPH

In addition to collecting data on Frolic and Happiness in the field, TEC utilized trip information from Streetlight Data. This company uses “big data” such as mobile phone and car GPS logs to determine route information. TEC used the October 2022 timeframe when data was manually collected to analyze top routes to and from Frolic and Happiness. Data is for Tuesdays, Wednesdays, and Thursdays in October 2022, including all hours of the day. The image below shows the two zone for which top routes were generated: Frolic south of Galbraith and Happiness East of Frolic.



The limit of this study is tied to geographic data and geo fences. Due to the close proximity of parking for the Jewish Hospital, it is likely that many data points in this analysis utilized Jewish Hospital parking.

The tables below show the daily trip distribution during the time period listed above for each of the zones.

***Daily Trips to Frolic North of Happiness***

Destination:	To Frolic
Origin	% Distribution
<b>From Galbraith West of Frolic</b>	<b>22%</b>
<b>From Galbraith East of Frolic</b>	<b>55%</b>
From Kenwood North of Galbraith	28%
From Galbraith East of Kenwood	27%
<b>From South Frolic</b>	<b>12%</b>
<b>From West Happiness</b>	<b>4%</b>
<b>From East Happiness</b>	<b>7%</b>

***Daily Trips from Frolic North of Happiness***

Origin	From Frolic
Destination	% Distribution
<b>To Galbraith West of Frolic</b>	<b>18%</b>
<b>To Galbraith East of Frolic</b>	<b>59%</b>
To Kenwood North of Galbraith	37%
To Galbraith East of Kenwood	22%
<b>To South Frolic</b>	<b>6%</b>
<b>To West Happiness</b>	<b>4%</b>
<b>To East Happiness</b>	<b>13%</b>

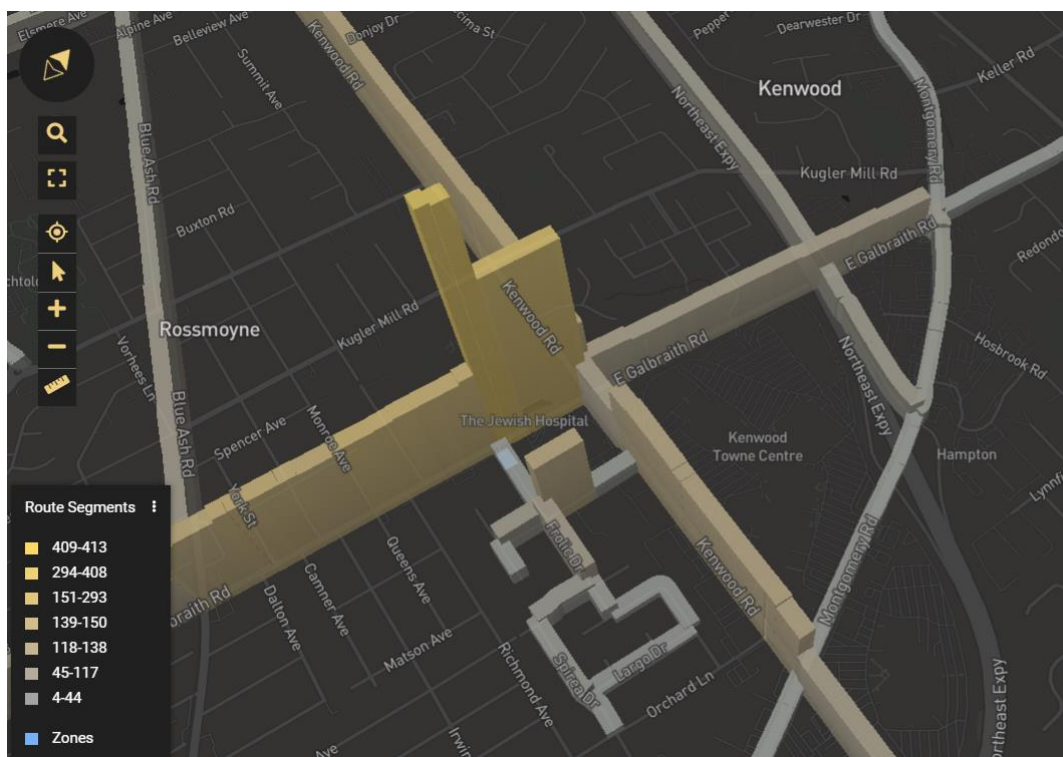
***Daily Trips to Happiness East of Frolic***

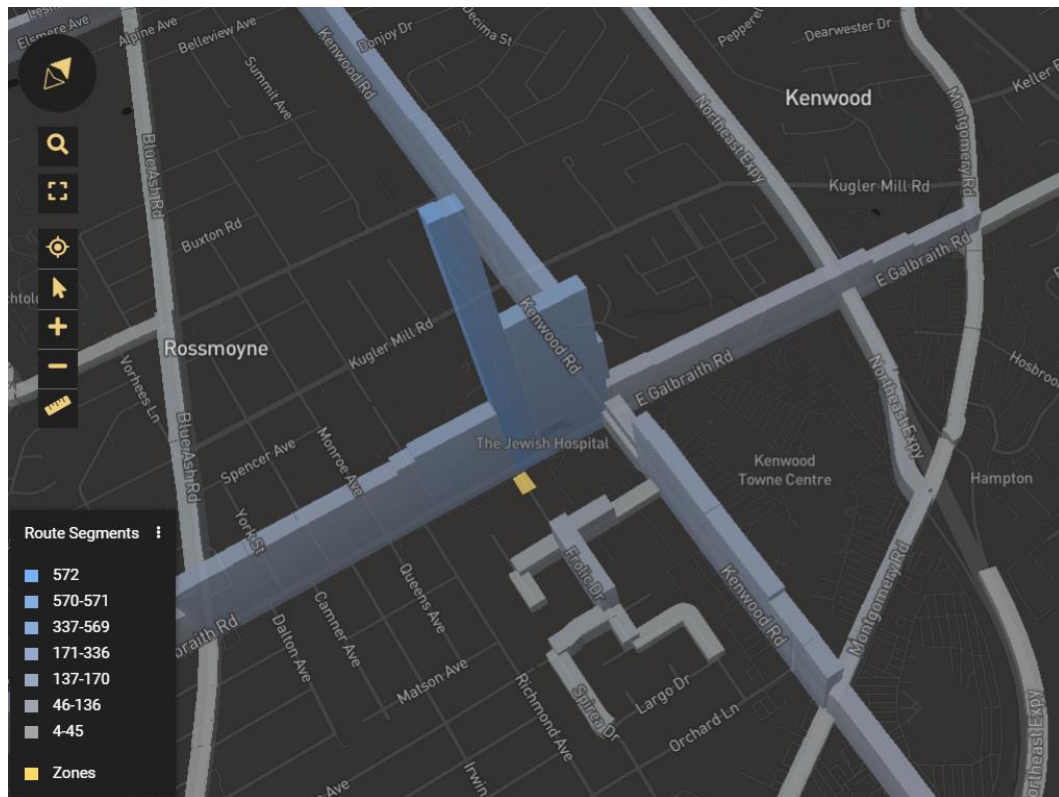
Destination:	To Happiness
Origin	% Distribution
<b>From North Frolic</b>	<b>37%</b>
From Galbraith west of Frolic	17%
From Galbraith East of Frolic	20%
<b>From South Frolic</b>	<b>4%</b>
<b>From East Happiness</b>	<b>44%</b>
From Kenwood North of Happiness	19%
From Kenwood South of Happiness	25%
<b>From West Happiness</b>	<b>15%</b>

***Daily Trips from Happiness East of Frolic***

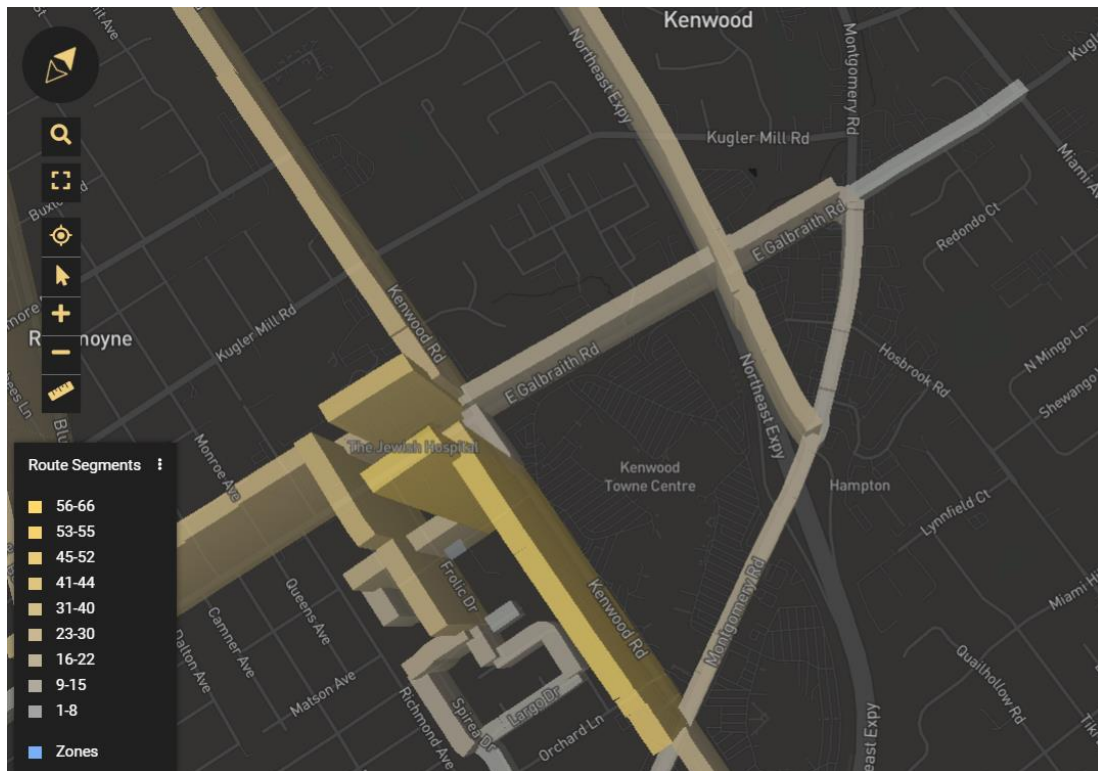
Origin:	From Happiness
Origin	% Distribution
<b>To North Frolic</b>	<b>25%</b>
To Galbraith west of Frolic	14%
To Galbraith East of Frolic	11%
<b>To South Frolic</b>	<b>20%</b>
<b>To East Happiness</b>	<b>40%</b>
To Kenwood North of Happiness	6%
To Kenwood South of Happiness	34%
<b>To West Happiness</b>	<b>15%</b>

Below are visual representations of these same distributions from the study zones.

***Top Routes from Frolic******Top Routes to Frolic***

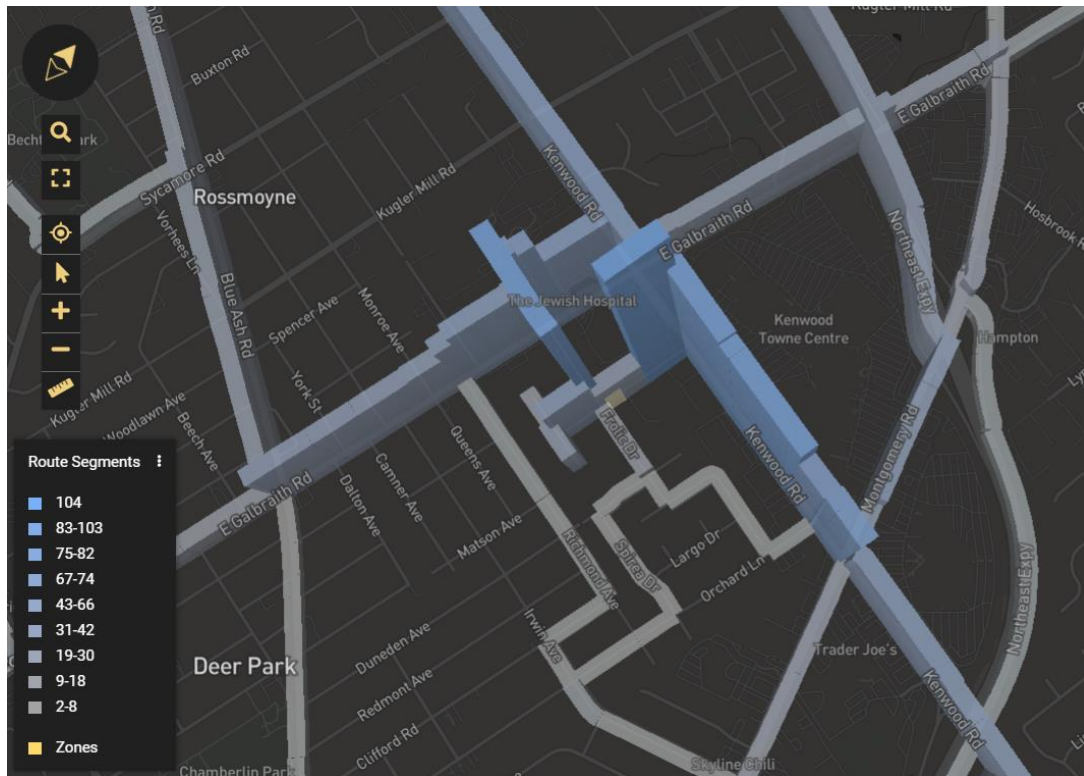


***Top Routes from Happiness***



***Top Routes to Happiness***





Based on the review of all data, traffic utilizing both Happiness Way and Frolic Drive between Kenwood Road and Galbraith Road is **either utilizing nearby parking or is residential traffic from residents north of Orchard Lane. Again, the volumes at this intersection are extremely low and the volumes are below 30 mph.**