

Cut-Through Traffic



Matt Starr, Leslie Bell, Megan Campbell
City of Mount Vernon, Ohio
February, 2019

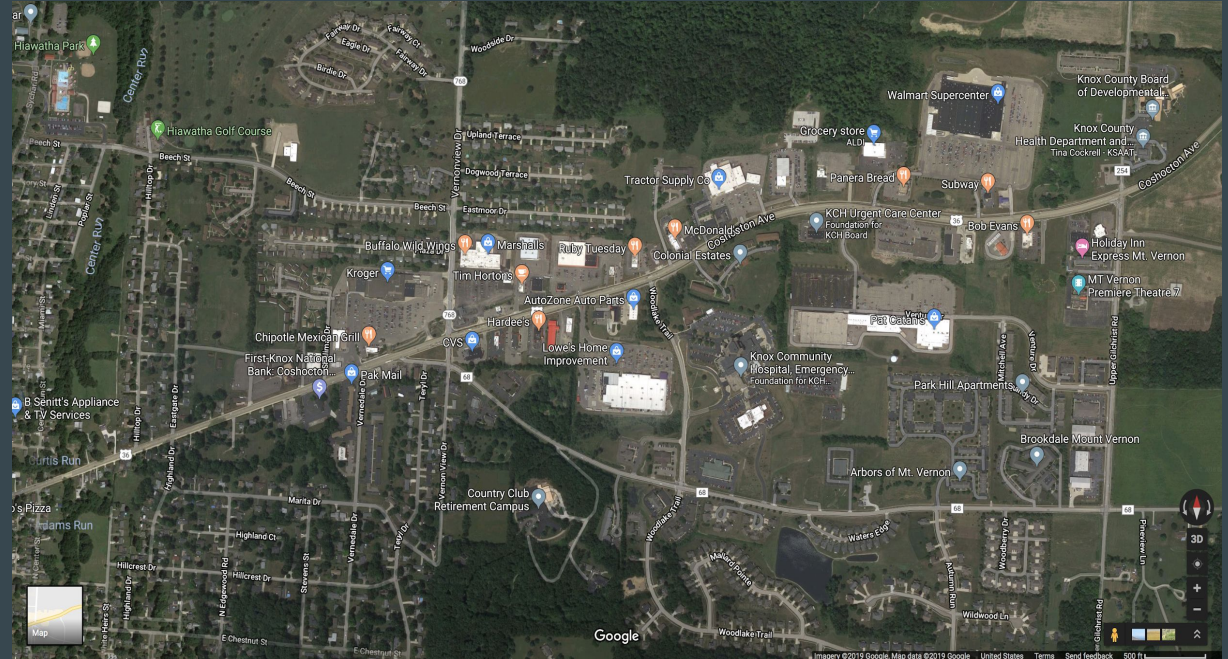
Purpose

1. To continue to analyze data provided by the Carpenter Marty study for the City of Mount Vernon (2018)
2. To further investigate the perception of time saved that motorists may have by cutting-through neighborhoods from the south end of Mount Vernon to the retail area (& vice versa)
3. Educate the public on the safest and most convenient way to travel between these two particular points of interest in Mount Vernon

Problem Statement

How long does it take to travel from the south to the east side (Retail Area), and the east side to south side?

Retail Area = 1.3 miles



Background

1. 2018, Carpenter Marty origin-destination study - 30% of motorists from South end followed 36 East (Truck Route) to/from the Retail Area; 70% used cut-through routes
2. Edgewood Road and vicinity - increased traffic volume of motorist cutting through neighborhood rather than following S.R. 36
3. Researchers investigated which was the fastest route.

Methodology

1. Identified 4 routes from Carpenter Marty Study
2. Data collection = 6 weeks (Varied days and times of day)
3. Started after major road construction was completed
4. Origin destination points: intersections at 586 and S.R. 13 (Millers), to the retail area (1.3 miles along Coshocton Avenue)
5. All traffic laws were followed
6. Research team included a driver and a timer. Average times were compared in a one-way ANOVA

Figure 1. Route 1

S.R. 586 / 13 to
intersection of
Verndale Avenue
and Coshocton
Avenue

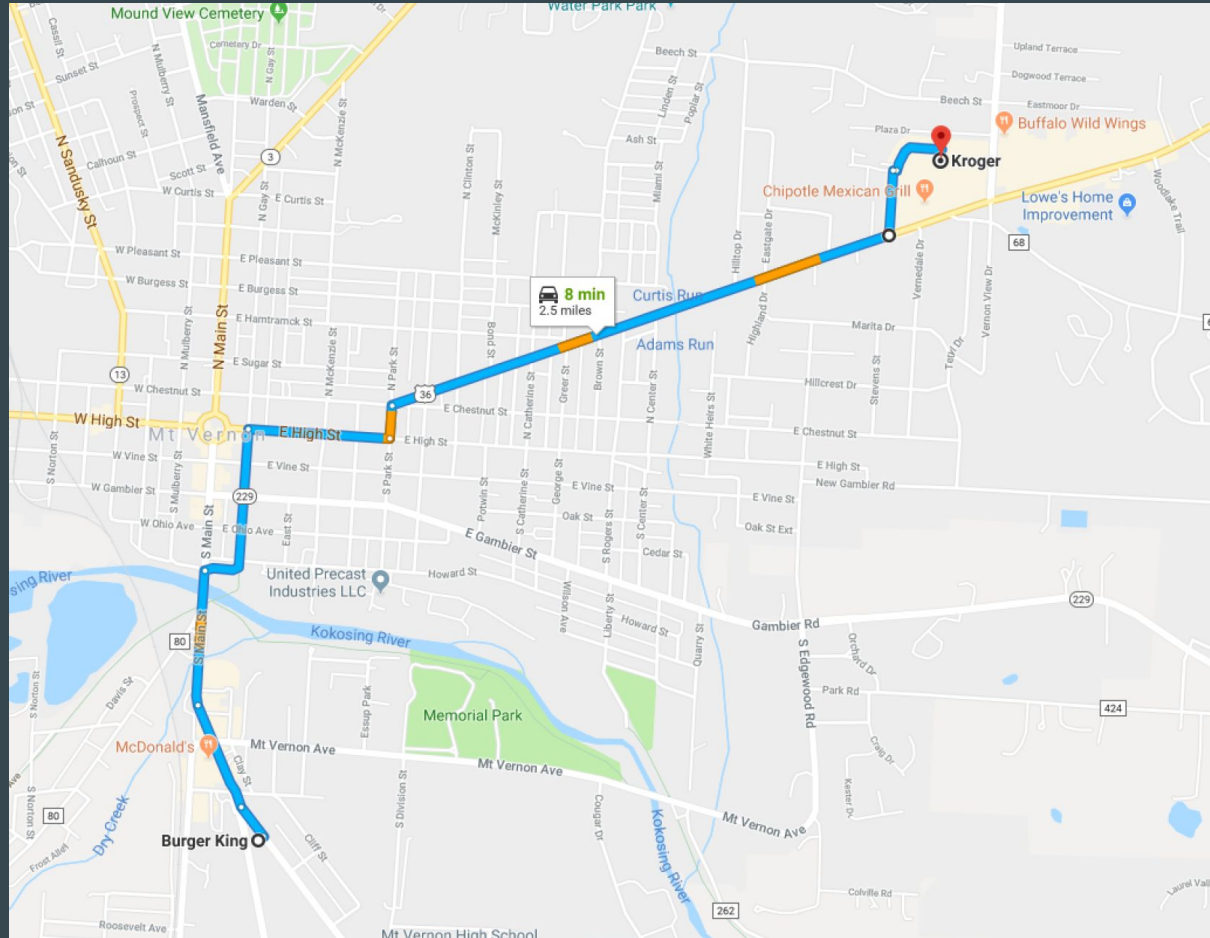


Figure 2. Route 2

Uses East High Street at cut-through route

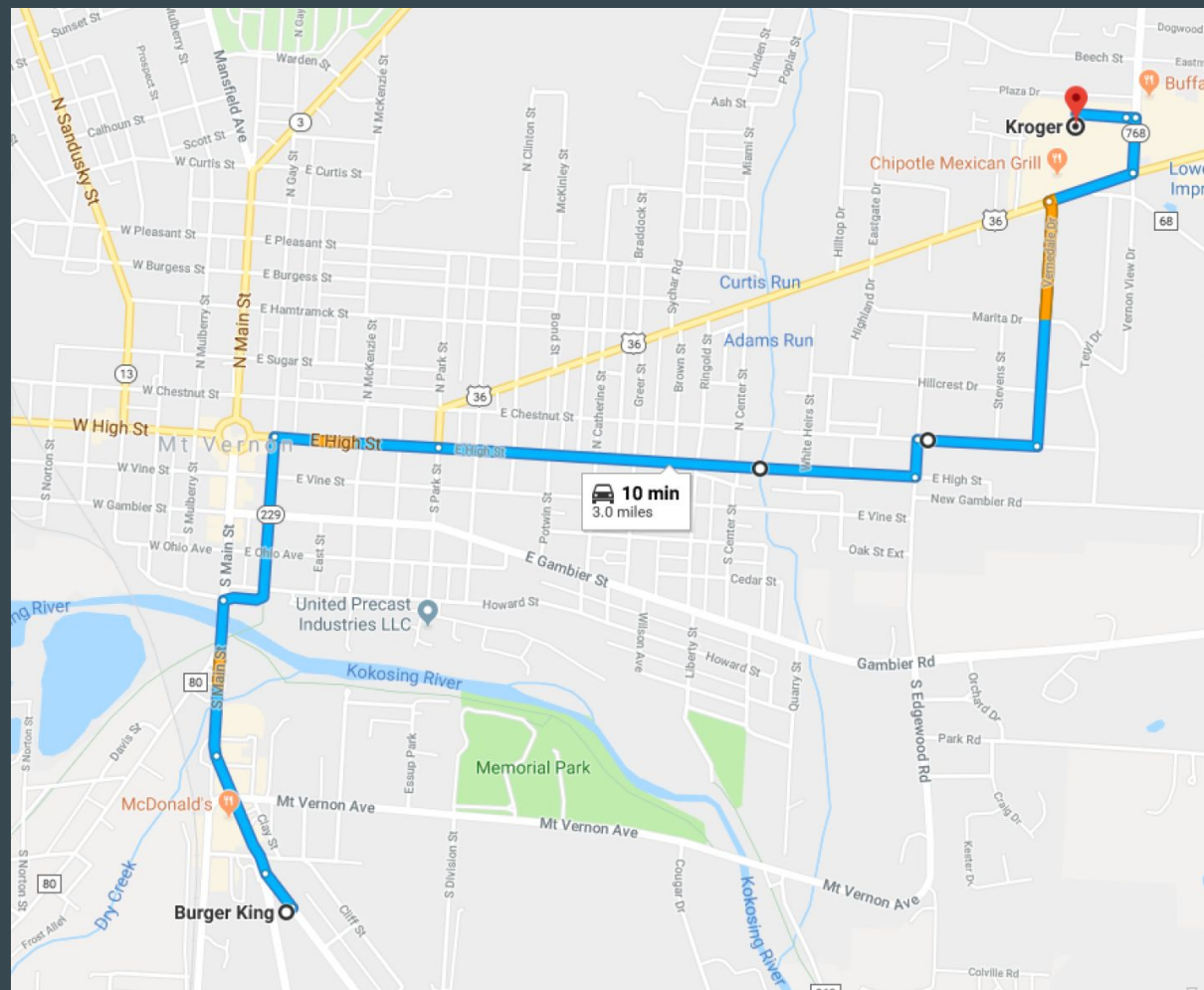


Figure 3: Route 3

Use of Mount Vernon Avenue and Edgewood Road as cut-through route

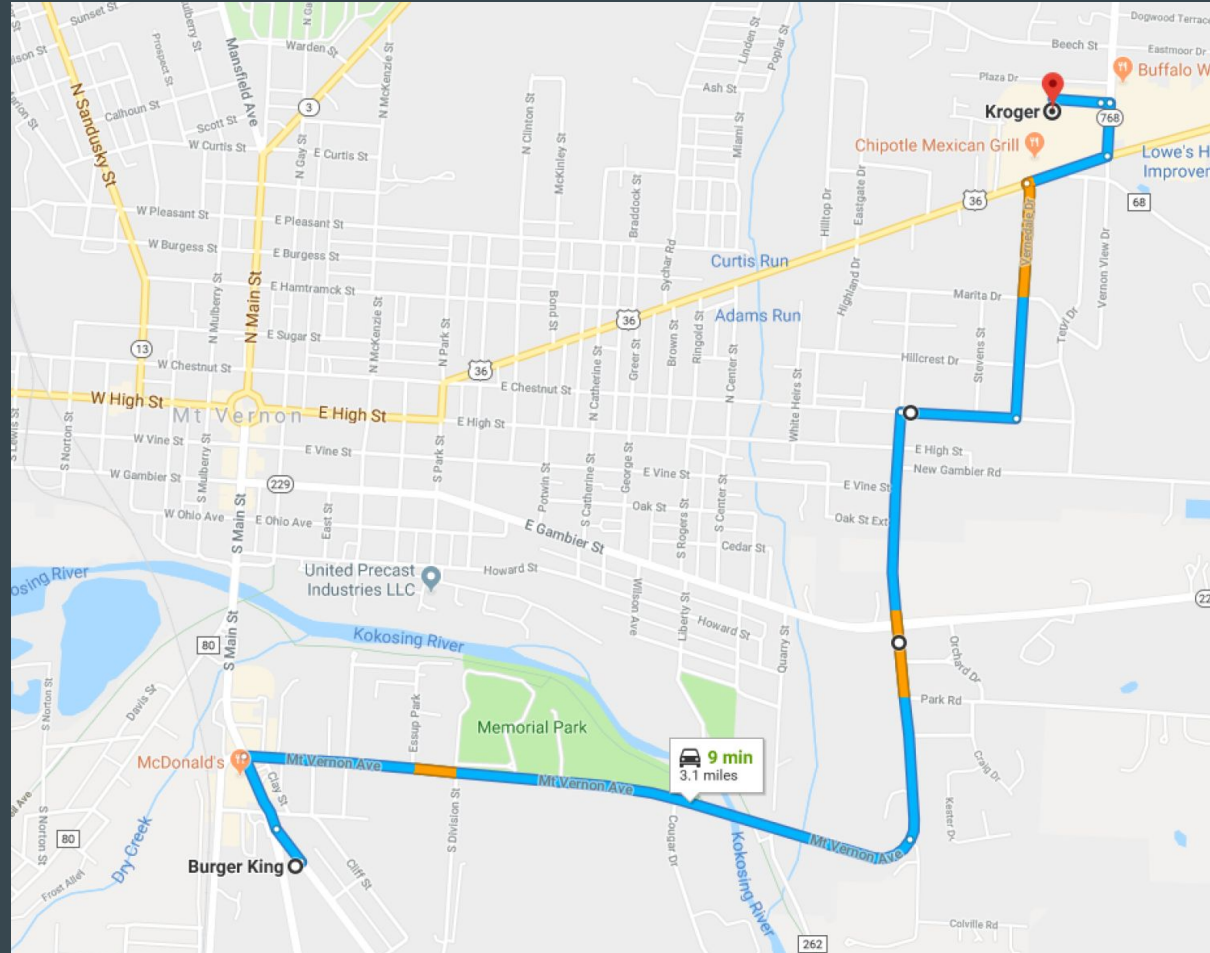


Figure 4. Route 4

586/13 - S.R. 229,
Eastern Star & Upper
Gilchrist Road

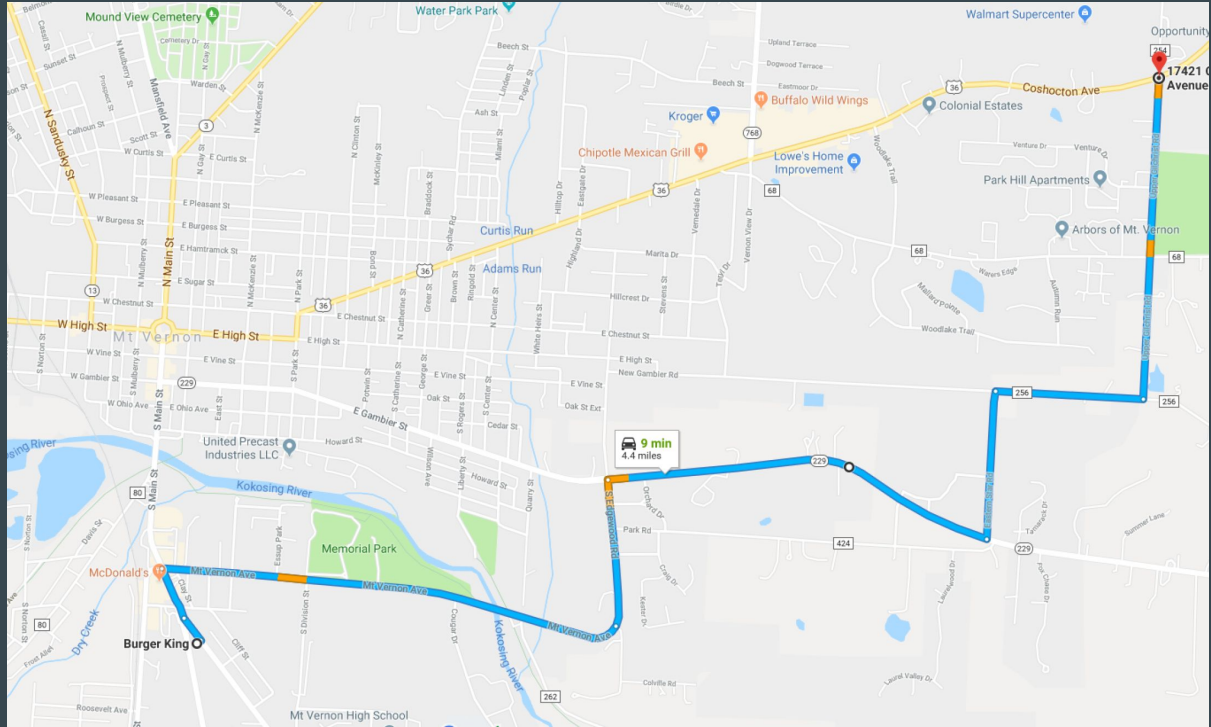


Table 1. Sample data of cut-through routes

	Cosh Ave	High Street	MV Avenue	Upper Gilchrist
n	10	10	10	10
Range	5.8 - 8.3	7.3 - 9.1	6.4 - 8.0	8.5 - 10.9
Avg	7.3	8.0	7.0	9.3
SD	± 0.86	± 0.64	± 0.61	± 0.73

East Avg, South Avg and TOTAL AVG

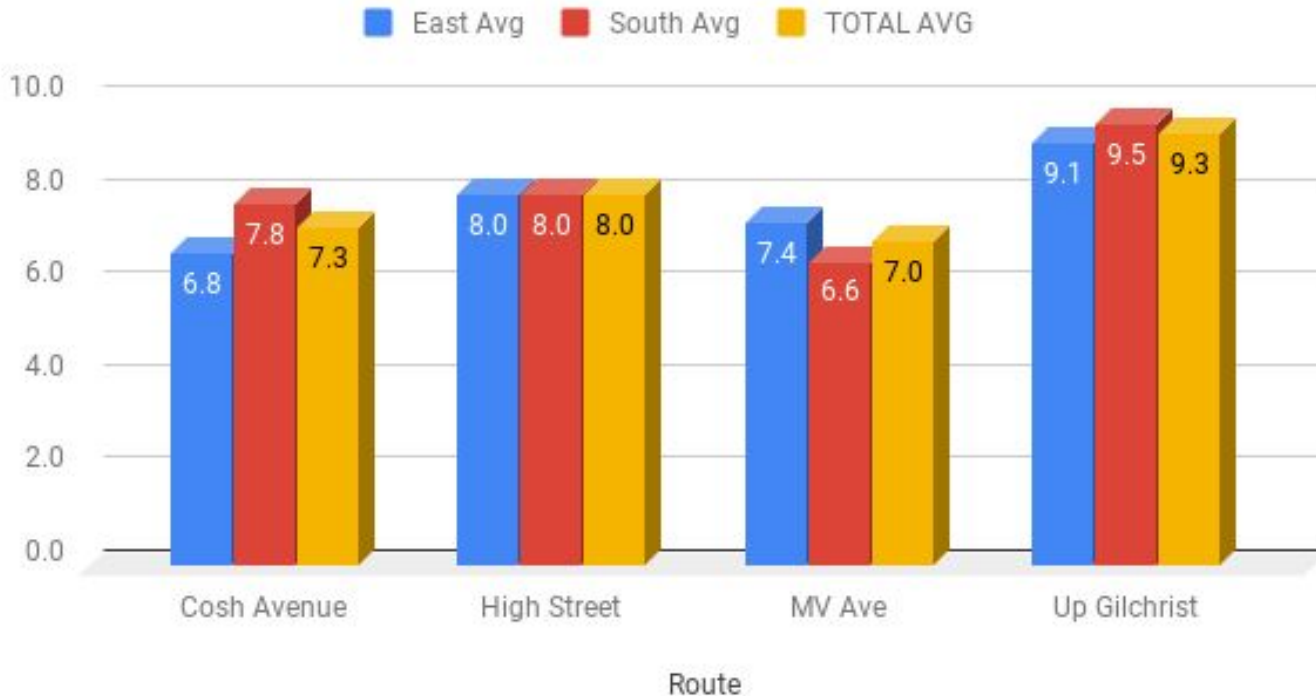
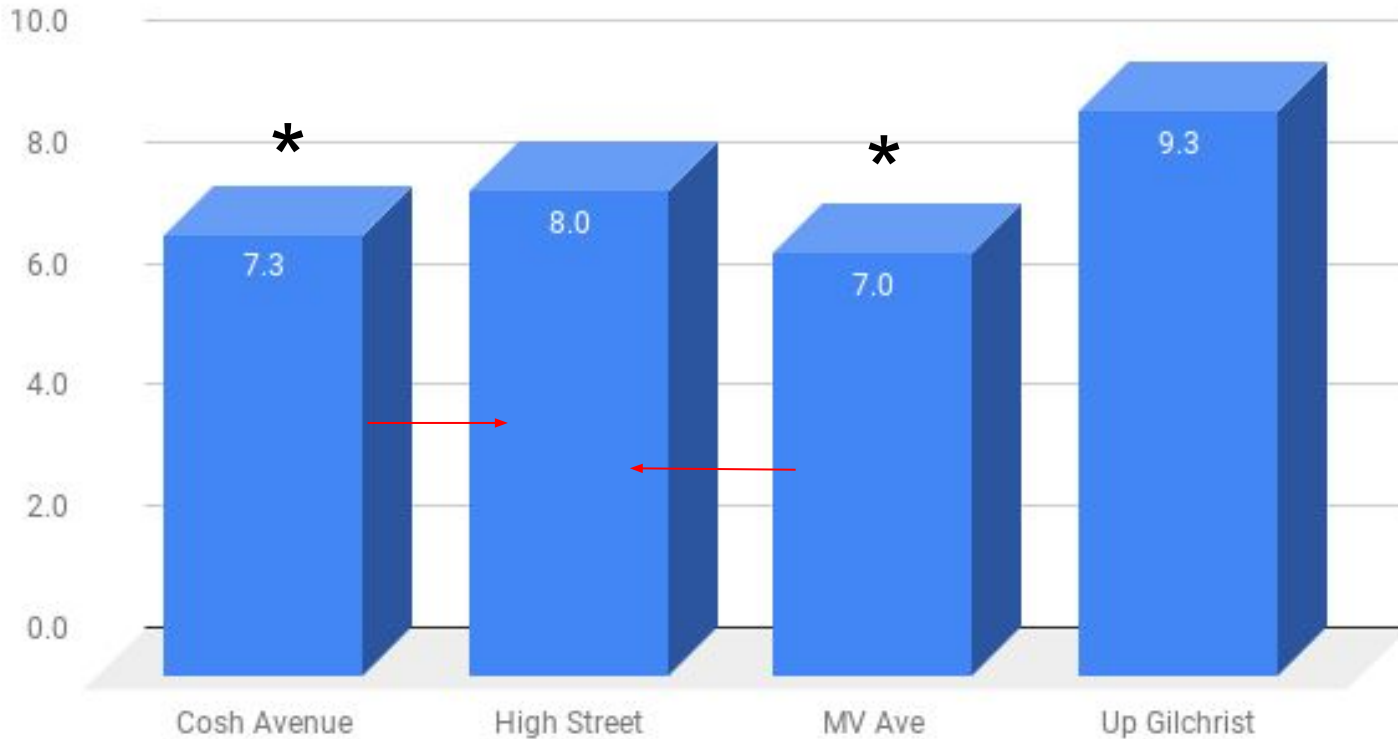


Figure 4. Average time (minutes) of cut-through routes to/from Retail Area

Avg Comparisons - alpha = .05



Results

- Coshocton Avenue was a faster route than East High Street
- Mount Vernon Avenue was a faster route than East High Street
- No predictable difference between Coshocton Avenue and Mount Vernon Avenue

Limitations:

- Upper Gilchrist Road - could compare in future with same origin/destination
- Other cut-through routes could be tested
- Did not compare same direction averages (i.e., Eastbound, Southbound traffic)
- Did not account for traffic violations

Conclusions

- Perception of cut-through routes may not save any time and could be slower than using Coshocton Avenue Route
- Not necessarily saving time by cutting through residential areas when going to/from the Retail Area
- Continue synchronization of traffic lights to keep traffic flow
- Consider East Chestnut Street (at Park Street) for S.R. 36 West (connect to 13 N/S)
- If Coshocton Avenue continues to develop east, consider more analysis for more suitable access

Observations

Questions?