

**This document consists of the PowerPoint presentation given by the consultant team on July 11, 2017 along with commentary (in blue font) where necessary for context or to explain slide content**



# Williamson County Traffic Strategy

Williamson County and the region are experiencing rapid population and employment growth. While this growth is primarily occurring in the cities, and while traffic issues are most pronounced in the cities, many roadways in the unincorporated County are also experiencing increased traffic volumes and congestion as a result of the growth that is taking place, both regionally as well as in the unincorporated areas of the County.

Citizens and County officials are becoming increasingly concerned about the impact that increased traffic is having, or will have in the future, on the quality of life of area residents. Citizens and County officials are also expressing frustration over the lack of available funding for roadway improvement projects and the limitations associated with bringing about meaningful roadway improvements through regulatory approaches alone.

To address these issues, the County has hired a consultant team, consisting of McBride Dale Clarion, RPM Transportation Consultants, and TischlerBise, to lead an effort that is focusing on three key objectives.

1. Evaluate current traffic conditions in the unincorporated County;
2. Project future traffic conditions in the unincorporated County; and
3. Develop a set of recommended strategies that the County should pursue in order to help manage traffic issues in the best way possible.

## Agenda

- Summary of Findings
- Setting the Stage
- What We're Doing About It
- Funding Strategies
- Conclusions

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## Summary of Findings

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## Findings

- Congestion is increasing and impacting quality of life
- Byproduct of success
- Regional traffic is the dominant influence now
- But local growth is just scratching the surface
- Problem will only get worse

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## Findings

- Structural problems
- Funding gap
- No going back - a broad based strategy is needed

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## Strategies

- Strategic investment priorities
- Funding tool options
- Land use policies coordinated with capital improvements
- Traffic impact tools
- Other approaches

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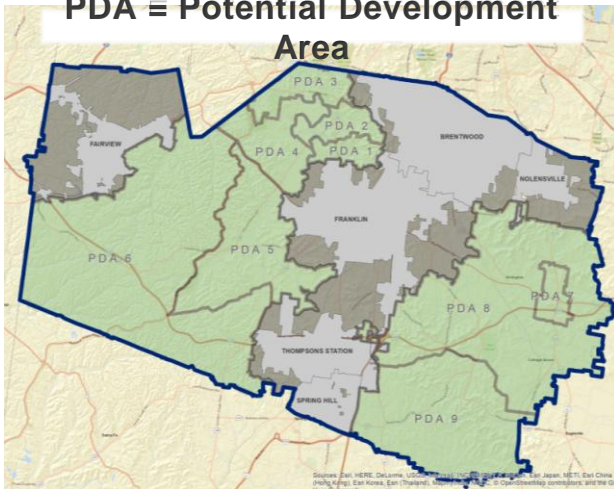
## Setting the Stage

The Byproducts of Success

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## Study Area

### PDA = Potential Development Area



#### Corridors of Consideration:

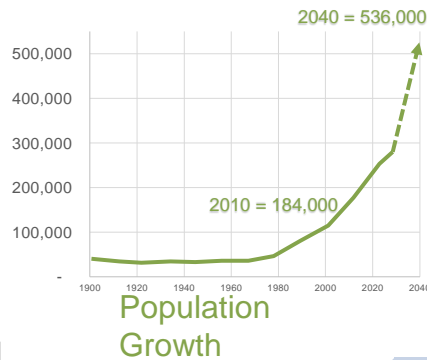
- ARNO RD. \*
- CARTERS CREEK PK.
- CLOVERCROFT RD. \*
- HILLSBORO RD.
- HORTON HWY.
- LEWISBURG PK.
- LYNNWOOD WAY\*
- MURFREESBORO RD./SR-96
- NOLENSVILLE RD
- OLD HILLSBORO
- PINWOOD RD.
- S BERRYS CHAPE
- SHELBYVILLE HV
- SNEED RD. \*
- SR-840 (now I-840
- WILSON PK.

\*Major Corridors

The map on the left depicts the nine (9) “Potential Development Areas” (PDAs), which were established in the mid 2000s, during the Comprehensive Land Use Plan update process, for population demand analysis and evaluation purposes.

The list of roadways on the right identifies the significant corridors, as outlined in the County’s Major Thoroughfare Plan and/or Major Corridors Study, that were considered during the consultant team’s evaluation of roadway capacities and improvement needs.

## Historic Growth in Williamson County



This slide highlights the obvious fact that Williamson County is growing at a very rapid pace due to our numerous high-paying jobs, outstanding schools and excellent quality of life. In fact, some projections indicate that by 2040, Williamson County will add approximately 350,000 new residents, which would bring the population of our County beyond the 500,000 mark. This projection is based on the Nashville Metropolitan Planning Organization's (MPO's) population forecasts, which are used for long-range transportation planning in the Middle Tennessee region.

## Williamson County Growth

Over the next 25 years, Williamson County is expected to see approximately...

353,000 more people

161,000 more jobs

In general, approximately 35% of the population growth is coming to the unincorporated areas and 65% will go to the Cities and their Urban Growth Boundaries.

## Future Population Growth in Unincorporated Areas

PDA	Population Growth
1	3,827 (3%)
2	3,459 (2%)
3	4,841 (4%)
4	5,098 (4%)
5	10,471 (8%)
6	15,852 (13%)
7	2,311 (1%)
8	53,216 (43%)
9	25,570 (21%)
<b>Total</b>	<b>124,646</b>

*Unincorporated areas east of I-65 are expected to see approximately 65% of the population growth over the next 25 years.*

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This growth projection indicates that an additional 124,646 people will reside in the unincorporated portion of Williamson County in 25 years. The majority of this growth (65%) in the unincorporated County will take place in the eastern portion of the County, which is predominantly zoned to allow a maximum residential density of 1 unit per acre.

## Increasing Congestion

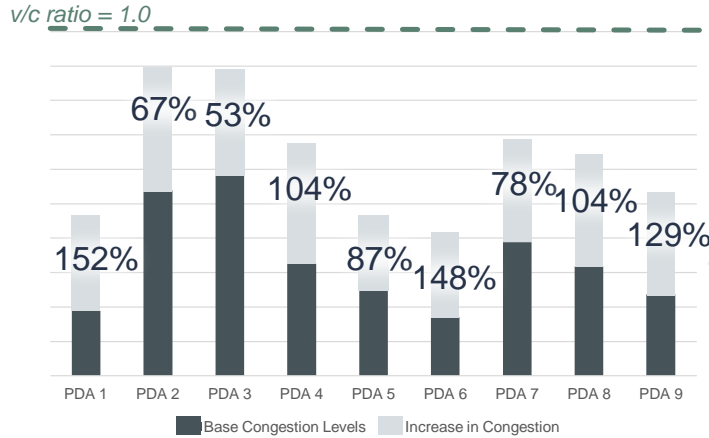
Daily Traffic by PDA



*Historic traffic growth also trends towards the east.*

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## Daily Traffic Conditions Today and In the Future

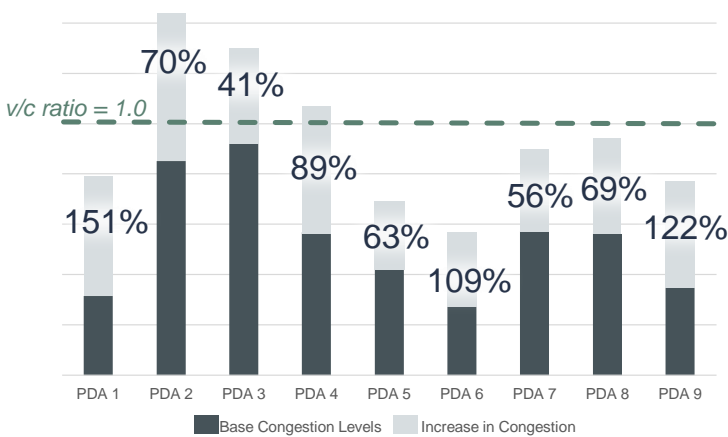


Existing congestion levels are highest in PDAs 2 and 3 in areas such as Hillsboro Road and Sneed Road.

The relative increase in congestion levels in these areas, however, is lower than many other areas in the county.

V/C ratio refers to the traffic volume (number of vehicles) in relation to the capacity of the roadway. The percentages shown reflect the percent increase in traffic congestion projected from today's current levels.

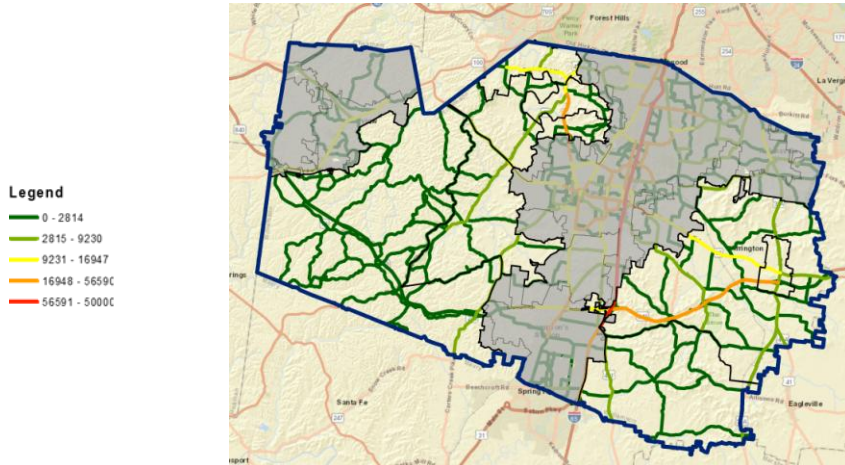
## PM Peak Hour Traffic Conditions Today and In the Future



By 2040, congestion levels on roadways such as Arno Road, Nolensville Road, Horton Highway, Clovercroft Road, and others will see the same peak hour congestion currently experienced on Sneed Road and Hillsboro Road.

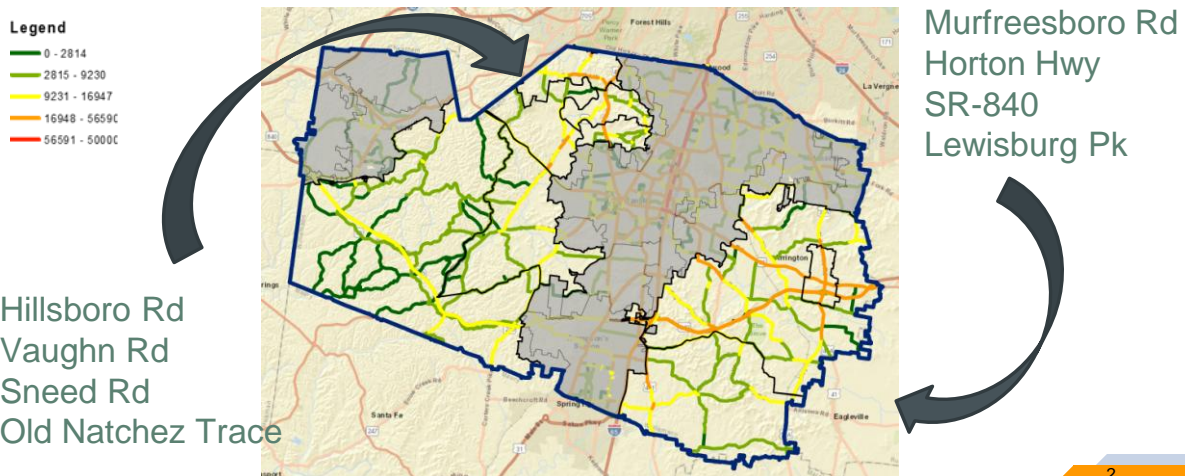


## Increasing Traffic Volumes



This map shows daily traffic volumes for the base year of the travel demand model, which was 2010. The colors represent various thresholds for traffic volumes.

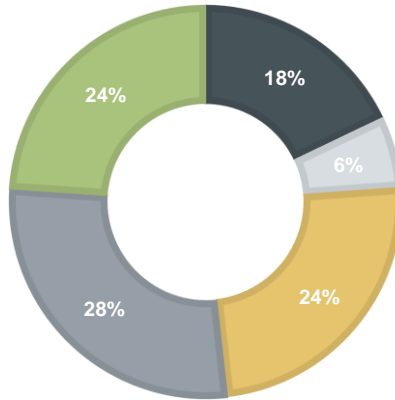
## Increasing Traffic Volumes



This map shows the projected daily traffic volumes for 2040, assuming no improvements beyond those projects for which funding has already been committed. This slide illustrates that many County roadways will experience high traffic volumes (similar to those currently found on SR96, Sneed Road and Hillsboro Road) as a result of projected growth.

## Regional Traffic – Users on Major Corridors

Approximately 52% of the people traveling on the major corridors are not county residents.



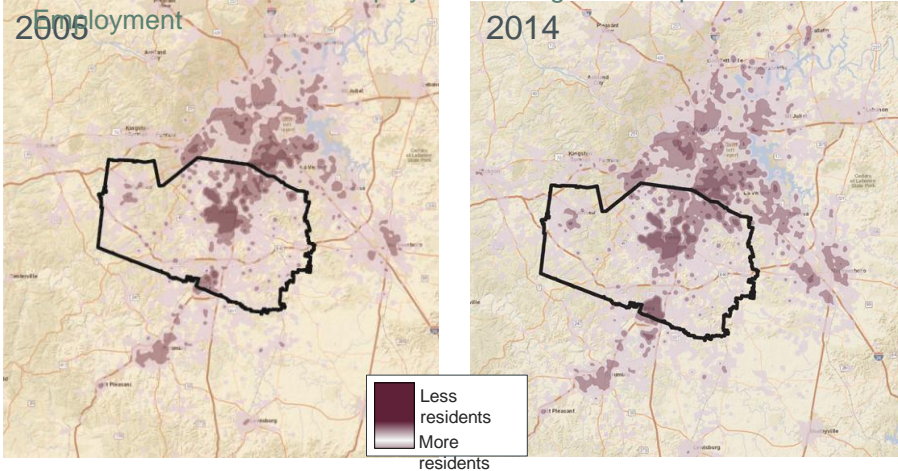
Approximately 24% of roadway users live in the City or UGBs.

Approximately 24% of roadway users on these routes live in the unincorporated county.

■ City ■ UGB ■ County ■ Outside ■ External

## Regional Traffic – The Current Cause

Residential Locations for Employees Coming to Municipalities for Employment



More commuters coming to Williamson County from the east, north, and south.

## Local Traffic – The Next Big Contributor

- Full build out of the rural areas of the County could potentially include up to 58,000 additional dwelling units.
- In the past 15 years, approximately 6,100 new residential lots have been approved (~400 lots/year).
- Model predicts growth rate of ~1,500 lots/year.

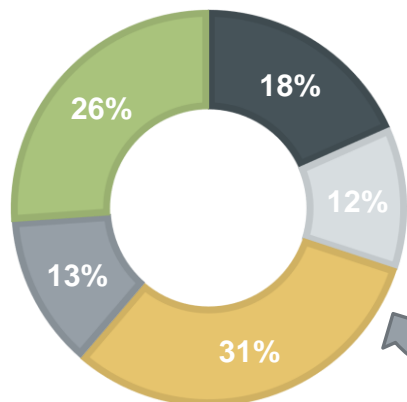


*Rural areas are expected to develop at nearly 4x the rate seen in the past*

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The full build out figure listed above is based upon the County's current land use policies.

## Local Traffic – Users on Major Corridors



Even with planned roadway improvements, this growth in the rural areas will make county residents the dominant user type on the major corridors.

■ City ■ UGB ■ County ■ Outside ■ External

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## What We're Doing About It

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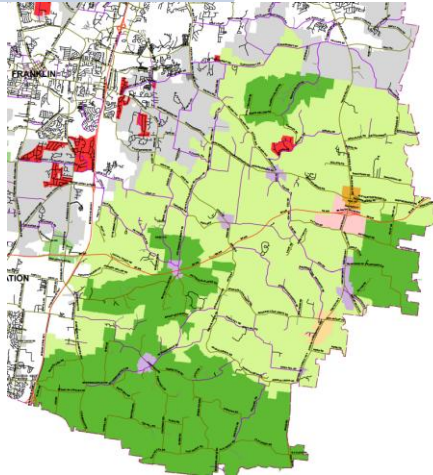
### Current System

- Comprehensive plan and zoning code
- Traffic shed regulations
- Thoroughfare plan and key corridor plan
- Maintenance program for county roads and bridges
- State funding for state roads
- No systematic county funding mechanism to fund capital facilities

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## Current System - Land Use Policies

- One dwelling unit per acre in RD-1
- Addressed in comprehensive plan
- Game changing technologies
- 23,000 unit remaining capacity in that area alone



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Growth patterns are shaped by the land use policies and regulations that are in place. This map shows the Zoning Districts in the eastern portion of the County. The light green represents Rural Development-1 (RD-1) zoning, which allows a density of up to one unit per acre. The dark green represents Rural Development-5 (RD-5) zoning, which limits density to a maximum of one unit per five acres. These basic allowable densities have been in place since at least the late 1980's.

In the mid-to-late 2000's, the County underwent a very extensive update to its Comprehensive Land Use Plan. That update was the product of significant public participation and discussion by appointed and elected officials. During that process, a number of ideas were explored, including the option of reducing allowable densities in certain areas in order to concentrate growth in and around the cities, thereby helping to preserve rural character in outlying areas. However, after a great deal of discussion, it was decided at that time not to alter those basic densities.

One of the factors that has helped fuel new development in recent years is the use of alternative wastewater technologies, which enable wastewater from a subdivision to be treated in a central location and disposed of by dispersing the treated effluent through the soil. These technologies generally allow land to be developed at a higher density than if traditional septic systems are used.

Based on current land use policies, there is enough land zoned RD-1 to support an additional 23,000 dwelling units in that area alone. While application of the County's traffic shed requirements may reduce this figure somewhat, the fact remains that significant capacity for additional development remains in this area of the County.

## Current System - Traffic Shed Regulations

- Applied outside cities and UGB's
- Adjusts densities based on road capacities
- Has reduced zoning densities by 40-50%
- Applies to collectors and arterials

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## Current System - Traffic Shed Regulations

- Works best for rural areas
- Works best for one-way rural to jobs centers patterns
- Works best for local roads – can address micro level but not system level
- Not account for regional influences
- Complicated
- Has a place in the tool box, but should not be relied on as the primary tool

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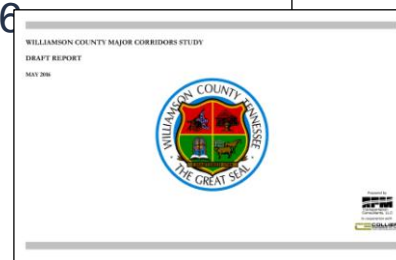
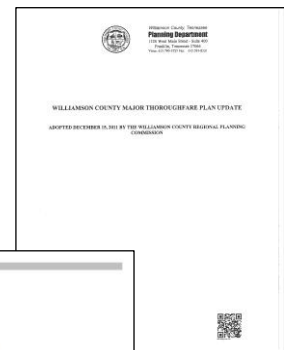
## Current System

- Current system worked well when county was a series of towns surrounded by rural areas without extensive growth
- Not adequate to meet the needs of a complex high growth area

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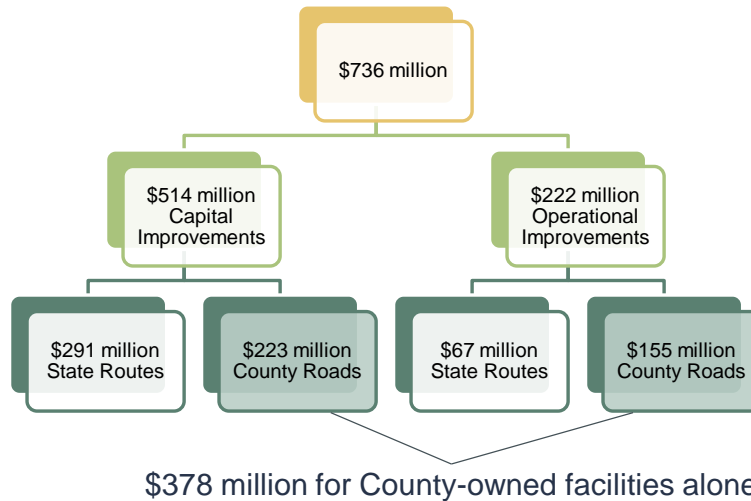
## Existing Planning Efforts

- Major Thoroughfare Plan - 2011
- Major Corridors Study - 2016



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## Project Needs/Costs



Total budget for County Highway Department is \$11.5 million with \$5.7 going towards highway and bridge maintenance alone.

This slide depicts the estimated costs for the roadway projects that are called for in the County's Major Thoroughfare Plan and the recently prepared Major Corridors Study, along with various needed operational and safety improvements to County roads.

When just the County-owned roadways are considered (i.e. state routes within the unincorporated County are excluded), these necessary improvements are estimated to cost approximately \$378 million.



## Funding Strategies

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Based on the preceding analysis of roadway improvement needs, TischlerBise was asked to identify potential revenue sources that the County could pursue in order to generate the estimated \$378 million that will be needed to make those improvements. The next series of slides highlights a number of potential funding scenarios, and the pros and cons associated with each. It is important to note that there are a number of possible permutations of combining various funding sources. Based on the feedback received during the July 11 meetings, TischlerBise is in the process of examining additional funding opportunities and refining these potential funding strategies for presentation and feedback at the September meetings.

## Sources Evaluated

- General Taxes
  - ▷ Property tax
  - ▷ Sales tax
  - ▷ Wheel tax
  - ▷ Gas tax
- Impact Fees
- Transportation Utility
- Jurisdictional Revenue Sharing

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## Evaluation Criteria

- Legally Feasible
- Revenue Potential
- Proportionality
- Technical Ease of Administration

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## Potential Funding Scenarios

Gross Funding Needs					
Operational & Safety = \$155,213,000					
Capital = \$223,200,000					
<b>Total = \$378,413,000</b>					
Potential Funding Options					
	Scenario #1:	Scenario #2:	Scenario #3:	Scenario #4:	Scenario #5:
	Countywide Property Tax Increase	Countywide Property Tax and Wheel Tax Increase	Countywide Property Tax Increase, Unincorporated Area Road	Countywide Transportation Utility Fee	Unincorporated Area Transportation Utility Fee
Property Tax	\$378,413,000 (+\$0.10/\$100)	\$195,275,000 (+\$0.05/\$100)	\$195,275,000 (+\$0.05/\$100)		
Wheel Tax		\$183,138,000 (+\$30/vehicle)			
Impact Fees			\$223,200,000 (+\$3,330/DU)		
Road Utility				\$378,413,000 (+\$90/DU)	\$378,413,000 (+\$760/DU)

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## Evaluation Matrix

	Revenue Potential	Technical Ease	Proportionate to Demand	Legal
<b>Property Tax</b>	Positive	Positive	Negative	Positive
<b>Transportation Utility - Countywide</b>	Positive	Neutral	Neutral	Negative
<b>Transportation Utility - Unincorporated</b>	Positive	Neutral	Neutral	Negative
<b>Wheel Tax</b>	Positive	Positive	Negative	Positive
<b>Gas Tax</b>	Negative	Positive	Neutral	Positive
<b>Sales Tax</b>	Negative	Positive	Negative	Positive
<b>Impact Fees</b>	Positive	Negative	Positive	Positive

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## Other Strategies

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## Other Strategies

- Revisit land use policies through a comprehensive plan update
- Updated and improved traffic shed regulations and other mitigation tools
- Capacity efficiency improvements, i.e. intelligent signalization, staggered work and school hours, improved access management

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## Other Strategies – Improved CIP

- Improved transportation capital improvement planning (assuming a funding source):
  - Long term capital needs
  - Coordinated with land use plan
  - Prioritized with rolling time increments (i.e. 20 years, 10 years, 5 years)
  - Tied to annual budgeting process

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## Other Strategies

- Interlocal / regional approaches to targeted problem areas
- Lobbying and advocacy for funding
- Position the county for funding, i.e. reserving right of ways along state routes
- Public education

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# Conclusion

Manage and Mitigate

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## Strategies

### Land Use and Regulatory Tools

- Land Use. Revisit land use policies through a comprehensive plan update.
- Prioritization. Target strategic investment priorities to support land use policies.
- Mitigation. Improve traffic mitigation tools.

### Transportation Implementation Strategies

- Funding. Pursue funding tools to achieve the strategic investment priorities.
- Capital Improvement Plan. Strategic investment priorities tied to CIP and budget process.

### Coordination and Education Strategies

- Cooperation. Explore interlocal approaches and positioning for funding.
- Lobbying and education.

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## **NEXT STEPS**

On July 11, 2017, this information was presented to the Advisory Committee and to interested members of the County Commission and Planning Commission. Included among the Advisory Committee members are three representatives of the County Commission and three representatives of the Planning Commission.

Both meetings on July 11 generated good discussion, and while the consultant team was asked to refine certain aspects of their analysis and recommendations, the overall findings and recommended strategies were well received.

Based on feedback received at those meetings, and any additional feedback received as a result of the review of this document, the consultant team will refine this information and present a draft strategy to the Advisory Committee, County Commission members, Planning Commission members and the general public on **September 6, 2017**. Specific notice of those meetings will be sent well in advance of the meetings.

In the meantime, please contact Planning Director Mike Matteson ([mmatteson@williamson-tn.org](mailto:mmatteson@williamson-tn.org) or 615-790-5725) if you have questions or comments regarding this material.