



Staff Analysis

Comprehensive Plan – Transportation Issues / Road Safety / Complete Street Policies

Presented by:

Teresa Scott
Public Works Department

Debbie Leistner
Public Works Department

February 23, 2017

CITY OF GAINESVILLE STAFF ANALYSIS

Legistar No: 140699

Title: Comprehensive Plan - Transportation Issues/Road Safety/Complete Streets

Sponsor (i.e., Name of Commissioner or Department): Public Works Department

City Staff Contact: Teresa Scott, Director of Public Works

Summary of Issue

During the January 15, 2015 City Commission meeting regarding the item “What Now for Transportation” the City Commission discussed the implications of existing city policies regarding multi-modal, lane capacity and complete streets concepts and whether the current policies reflect the vision of the City Commission. This matter was referred to the General Policy Committee for further discussion. In addition, the City Commission requested information about the transportation system safety.

History/Background Information

COMPLETE STREETS

Staff reviewed the Comprehensive Plan to identify pertinent policies related to the concepts of multi-modal, lane capacity, Complete Streets and Context Sensitive Design. The following policy language was identified:

TRANSPORTATION MOBILITY ELEMENT

Objective 1.1 The City shall adopt the following transportation mobility levels of service (LOS). These levels of service are solely for planning purposes and are not used to apply transportation concurrency.

Policy 1.1.1 Roadway LOS:

- a. The LOS for all roadways in city limits shall be LOS E, except for I75 and roadways operating as backlogged or constrained.
- b. The LOS for I-75 segments that fall within city limits shall be maintained at LOS D to the extent feasible, recognizing that I-75 serves land areas and traffic outside city limits.
- c. The City shall attempt to maintain the 2012 operating LOS on all backlogged and constrained roadways in city limits.

Policy 1.1.2 Transit LOS:

- a. The City shall strive to provide fixed-route transit service within ¼ mile of 80% of all medium and high density residential areas identified on the Future Land Use Map, and within the RTS service area.
- b. The City shall strive to provide peak hour frequencies of 20 minutes or less within ¼ mile of all high density residential and UMU-1 and UMU-2 land use areas in city limits.
- c. The City shall strive to provide and maintain fixed-route transit service to all Existing Transit Hubs & Transit-Supportive Areas (as mapped in the Transportation Mobility Map Series) with peak hour frequencies of 30 minutes or less.
- d. The City shall strive to operate 80% of fixed-route transit routes for at least 14 hours per day.

Policy 1.1.3 Pedestrian LOS:

- a. The City shall install at least one linear mile of sidewalk annually to retrofit existing areas without sidewalks.
- b. The City’s Land Development Code shall require sidewalk construction for all new development, except in areas designated with the Industrial land use category.
- c. New streets shall be designed and constructed to include sidewalks.

Policy 1.1.4 Bicycle and Trail LOS:

- a. The City shall add an average of at least one mile of bicycle facilities annually, including multi-modal trails.
- b. New streets shall be designed and constructed to include bicycle facilities.

Policy 2.1.6 The City shall use “Complete Streets” principles to ensure that roadways are planned, designed, and maintained for safe use by users of all ages and abilities, including pedestrians, bicyclists, transit users, motorists, and freight vehicles.

Policy 2.1.10 The City shall use “Context Sensitive Street Design” principles to design transportation facilities that consider the total context within which a transportation project will exist and develop transportation projects that fit the physical setting and preserve scenic, aesthetic, historic and environmental resources while maintaining safety and mobility for all users.

Policy 2.3.6 The City shall strive to implement transportation-related aspects of Plan East Gainesville, including, but not limited to:

- c. As road reconstruction occurs, including in the transportation network provisions for bicyclists, transit users, and pedestrians on NE 15th Street, East University Avenue, Main Street, and NE 8th Avenue, where applicable.

Policy 3.1.3 The City shall use the “Complete Streets” principles in the design of all new streets.

Policy 4.1.7 New construction, reconstruction, and resurfacing of arterials and collectors shall be designed using “Complete Streets” and “Context Sensitive Street Design” principles.

GOAL 6 - PROMOTE A MIX OF USES SUCH AS CAR TRAVEL, TRANSIT, AND BICYCLING BY DESIGNING STREETS USING “COMPLETE STREETS” AND “CONTEXT SENSITIVE STREETS” DESIGN PRINCIPLES.

Objective 6.1 Apply “Complete Streets” and “Context Sensitive Streets” design principles to create a safe, balanced, livable transportation system that can be used for all forms of travel to the benefit of neighborhoods, local businesses, and the overall community.

Policy 6.1.1 The City shall use context-appropriate design features to create a more livable transportation system throughout the City that is rich in transportation choice.

Policy 6.1.2 Use traffic calming, where appropriate, to promote transportation choice, reduce the negative impacts of car travel, alter driver behavior, and improve conditions for non-motorized street users.

Policy 6.1.3 The City shall use the “City of Gainesville Engineering Design & Construction Manual” for street design and geometrics on City-maintained streets.

Policy 7.1.1 The maximum number of travel lanes for a new or widened street within city limits shall not exceed 4 travel lanes, except for I-75.

Policy 7.1.2 The City shall review turn lanes on a case-by-case basis to ensure that intersections are safe for all modes of travel.

FUTURE LAND USE ELEMENT

Policy 3.4.2 A concurrency analysis shall be conducted prior to the approval of any application for a development order or permit, and no final development order or permit shall be issued unless: 1) existing facilities and services meet the City’s adopted LOS standards as included in the Concurrency Management System, or 2) the final development order or permit is conditioned on such facilities and services being available at the time the impact of the development will occur. Concurrency requirements shall be met consistent with Objective 1.2 and associated policies in the Capital Improvements Element.

Policy 3.4.3 The City shall use the 5-Year Schedule of Capital Improvements to ensure the availability of adequate public facilities and services.

Basis behind the comprehensive plan language regarding Complete Streets:

“Complete Streets” refer to the design and implementation of transportation projects that address the needs of all roadway users, including motorists, pedestrians, bicyclists and transit riders. It intends for the provision of adequate infrastructure to facilitate access, mobility and promote safety of users of all ages and ability levels. Complete streets enhance equity in transportation, promote transportation choice, enhance safety of all users, and support economic development strategies. According to a study by Anderson et.al, a sampling of complete streets projects

revealed higher employment, property values, and private investments in the surrounding area when compared to similar unimproved corridors¹. The implementation of complete streets is prevalent nationwide; according to a survey by Carlson et.al, based on 2014 data from the National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living (CBS HEAL) and the National Complete Streets Coalition database, over 49% of communities with population over 50,000 have adopted complete streets policies².

The implementation of complete streets is intended to help address the challenges associated with the growth of urban areas, population aging, changes in commuting patterns, and the need to increase physical activity levels to reduce the incidence of chronic diseases. In short:

- Complete streets need to be sensitive to the surrounding context and land uses. The implementation of the various design elements are intended to be flexible depending on area needs. While urban land uses that are more dense and intense may require the implementation of a wider range of options such as sidewalks, bike lanes, bulb-outs to shorten pedestrian crossing distances, and transit stop amenities, these design elements may not be appropriate or needed in a rural and/or suburban setting with little or no pedestrian and transit activity;
- Complete streets add amenities to enhance usability of the transportation system for users of all ages. As the population ages and the ability of older adults to drive ceases or decreases the presence of alternate facilities that enable safe walking and use of transit become more critical to support independence and quality of life;
- Complete streets encourage multimodal transportation. Where transit service exists, complete streets facilitate the integration of modes, and extend the range of transit trips by walking or cycling;
- Complete streets are linked to increased levels of activity which in turn tend to reduce the incidence of chronic diseases. According to the Center for Disease Control and Prevention, “*regular physical activity helps prevent risk factors for disease (such as high blood pressure and weight gain) and protects against multiple chronic diseases (such as heart disease, stroke, some cancers, type 2 diabetes, and depression)... physical activity is associated with improved quality of life, emotional well-being, and positive mental health.*”³ The presence of safe and convenient multimodal facilities encourages walking.

STATE & FEDERAL POLICIES:

The US Surgeon General issued a call to action in 2015 to promote walking and walkable communities in recognition of the health benefits associated with increased levels of physical

¹ Anderson, G., Searfoss, L., Cox, A., Schilling, E., Seskin, S., & Zimmerman, C. (2015). Safer streets, stronger economies: Complete streets project outcomes from across the united states. *Institute of Transportation Engineers. ITE Journal*, 85(6), 29-36.

² Carlson, S., Prbasaj, P., Gayathri, K., Watson, K., Atherton, E., & Fulton, J. (2016). Prevalence of Complete Streets policies in U.S. municipalities, *Journal of Transport & Health*, Available online 17 November 2016, ISSN 2214-1405, <http://dx.doi.org/10.1016/j.jth.2016.11.003>.

³ Center for Disease Control & Prevention (2015). <https://www.cdc.gov/physicalactivity/walking/call-to-action/>

activity. The initiative specifically highlights the role of the transportation, land use and community design sector in promoting walkability by designing and implementing infrastructure that is safe and accessible, and by carefully considering the placement of land uses that interconnect and support walking.⁴

The US Department of Transportation issued a policy statement in 2010 that recognizes the health, safety, environmental, transportation, and quality of life benefits associated with walking and cycling, and the need to incorporate safe and convenient walking and biking facilities as equal with other transportation modes. The statement indicates that transportation agencies have the responsibility to improve conditions and opportunities for walking and cycling, and encourages transportation agencies to go beyond minimum standards to provide safe and convenient multimodal facilities.⁵

The Fixing America's Surface Transportation Act (FAST ACT) adopted in 2015 states that the design of transportation facilities “*shall consider access for other modes of transportation*”; encourages provision of safe and adequate accommodation of all users of the transportation network; and recognizes the need for design flexibility to meet environmental needs.⁶

At the state level, the Florida Department of Transportation is developing a complete streets policy and a complete streets implementation plan *that will allow for the implementation of safer, context-sensitive roadways by “putting the right road in the right place”*. The plan and policy are expected to be completed by the end of 2017.⁷

CASE STUDY:

A review of historic traffic volume data citywide between 2010 and 2015 indicates that overall the level of vehicular trips along the major corridors within City limits has increased by approximately 4%. At the same time, the number of transit trips on city routes has increased by approximately 13%. Figure 1 (attached) provides a comparison of 2010-2015 congestion data based on the Metropolitan Transportation Planning Organization (MTPO) Multimodal Level of Service Report. It indicates a change in the list of roadways operating at unacceptable levels of service. A few segments within city limits have improved based on a mix of strategies including congestion and incident management through the traffic management system (TMS), improvement of connectivity, and enhancements in transit service. Congested conditions have increased primarily on the west side around I-75; most of the corridors are constrained and addition of lanes may not be cost feasible.

⁴ Center for Disease Control and Prevention: [Calling on Transportation, Land Use & Community Planners](#).

⁵ [Federal Highway Administration, Bicycle and Pedestrian Program](#)

⁶ Federal Highway Administration, [FAST ACT](#)

⁷ [FDOT Complete Streets](#) policy and implementation plan

In order to illustrate the holistic application of city policies and their effects on the transportation system capacity staff evaluated the area between the University of Florida campus and downtown, primarily along SW 2nd Ave, where data is available for vehicular, transit and bicycle trips. The corridor runs parallel to W University Ave, a corridor that is constrained, operates at capacity, and does not have facilities for cycling. The SW 2nd Ave corridor was envisioned to function as the main multimodal corridor connecting campus to downtown; design elements added at time of reconstruction included bike lanes, parking lanes, bus stop amenities, midblock pedestrian crossings, medians, and roundabouts at main intersections.

There has been a significant investment in redevelopment along the corridor and surrounding area over the past 5 to 10 years. Although the intensity of development has increased, the average daily traffic volumes along SW 2nd Ave between Main St and SW 13th St decreased by approximately 5% between 2010-2015. On-street bicycle volumes along the corridor increased by approximately 15% between 2014 and 2016 (counters were installed in July of 2014). The corridor is served by three transit routes during daytime, and while specific corridor information is not available, the overall ridership for the 3 routes doubled between 2010- 2015. Other contributing strategies to facilitate the interconnectivity of modes in the area include parking, where travelers can park once at or near downtown parking garage(s) and commute to/from campus via cycling or transit.

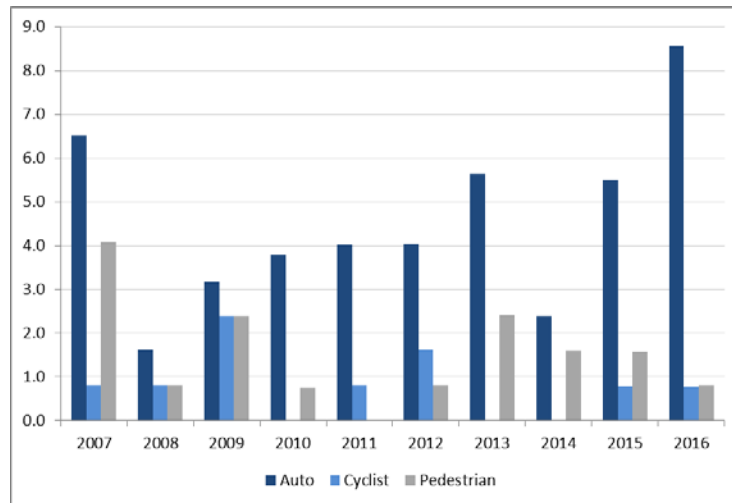
SAFETY SNAPSHOT

Based on the available crash data from Signal4 Analytics, over the last ten years (2007 to 2016) there were 36,414 total crashes recorded along public roads within the City of Gainesville. A preliminary snapshot of the trends is provided below; Figures 1 and 2 depict the trends normalized by population.

- 1,458 crashes involving cyclists (890 crashes) and pedestrians (568 crashes);
- 10 cyclist fatalities and 19 pedestrian fatalities;
- 57 fatalities associated with all other vehicular crashes;
- 35% of vehicular fatalities involved alcohol consumption;
- approximately 70% of all fatalities involving a cyclist or pedestrian occurred during nighttime;
- 50% of fatalities involving a cyclist or a pedestrian occurred at intersections;
- 58% of crashes involving pedestrians and 70% of crashes involving cyclists occurred at intersections;
- 60% of crashes involving pedestrians and 52% of crashes involving cyclists occurred along major corridors (state-owned system);
- 3% of pedestrian crashes resulted in fatalities and 89% resulted in injuries;
- 1% of bicycle crashes resulted in fatalities and 83% resulted in injuries;
- 4% of bike crashes involved alcohol consumption;

- 13% of pedestrian crashes involved alcohol consumption.

Figure 1: Fatal crash rate trends (2007-2016)



Note: Crash rate per 100,000 population.

The number of traffic fatalities increased over the past three years. A closer examination of the fatal crashes between 2014 and 2016 indicates that 81% of fatal crashes involved reckless driving, high speeds, red light running and other behaviors (i.e., failure to yield the right-of-way) not correctable by engineering measures. Cyclist and pedestrian fatalities over the same period amounted to 26% of the total (7 out of 27). Motorcycle fatalities related to reckless driving at high speeds amounted to 33% (9 out of 27) of the total with a noticeable spike in 2016 (58%; 7 out of 12).

Summary

Local policies contained in the City’s Comprehensive Plan (last updated in 2013) are consistent with state and federal level policies that support the implementation of complete streets. The policies aim at connectivity of uses and neighborhoods, enhanced transit use with the provision of adequate amenities, increase levels of walking and cycling, reduced congestion by implementation of alternate solutions to road widening, and the provision of mixed land uses that enable multimodal transportation. The polices envision the implementation of complete streets design elements sensitive to the context in which the project occurs, in order to promote increased quality of life, provide transportation choices, and support a healthy economy. In addition, language in the City’s Engineering Design and Construction Manual (last updated in 2015), consistent with the City’s comprehensive plan, promotes implementation of complete streets design elements as adequate and feasible. Between years 2010 - 2015 the traffic volumes along major corridors within City limits have increased by approximately 4% while transit trips on city routes have increased by 13%. It appears that the goals to implement transportation strategies to offer a balance of mobility options are achieving the desired outcomes. One unintended consequence with the increase in travel volumes by other modes of transportation

may be an observed increase in the number of crashes involving pedestrians and cyclists as the exposure and opportunity for conflict tends to increase as more user types share the road. This issue was discussed at a recent local transportation workshop presented by the Federal Highway Administration (FHWA); the presented data indicated that there is a need to normalize the exposure rates based on volumes of cyclists and pedestrian to accurately compare the impacts of complete streets initiatives.

A sample of projects is included in the attached presentation.

Additional evaluation is needed to determine the corrective measures to address severe crashes consistent with road safety strategies. City staff should continue to coordinate with the Alachua County Traffic Safety Team to develop strategies and implement solutions.

Figure 2: Bike & Pedestrian Crash Trends (2007-1016)



SOURCE: Population data provided by the City of Gainesville Department of Doing based on Bureau of Economic and Business Research (BEBR) data; Crash data based on Signal4 database.

Options

- A.** Maintain existing policies in the comprehensive plan and City’s design manual, and continue implementation of projects as feasible.
- Pros** No action needed. System connectivity will continue to increase over time.
- Cons** Perception that Complete Streets policies are intended to reduce individual’s ability to choose the automobile as the primary travel option.
- B.** Strengthen and clarify intent of complete streets policies by amending the comprehensive plan language.
- Pros** Intent of language is clarified.
- Cons** Time consuming effort expected to take between 6 to 8 months to complete. Process requires review and approval of the Plan Board and the State reviewing agency; also requires a public hearing and the preparation and readings of an ordinance.
- C.** Strengthen and clarify intent of complete streets policies by amending the land development code language.
- Pros** Intent of language is clarified.
- Cons** Same as Item B above, but length of process is decreased to 3 to 4 months as it does not require State review.
- D.** Repeal the complete streets language.
- Pros** None.
- Cons** Lack of consistency with state and federal policies and guidance. Decrease in system connectivity; lack of alternatives to driving.
- E.** Discuss safety trends and strategies, and refer the issue to the Alachua County Traffic Safety Committee for input.
- Pros** Targeted efforts to increase transportation system safety.
- Cons** None; funding source is needed to expedite the evaluation and for implementation of recommended actions.

Staff Recommended Option

Discuss existing policies and provide guidance to staff on preferred alternatives regarding complete streets and authorize staff to continue with the development of Road Safety strategies.

Attachments/References

FDOT Complete Streets tenets

Figure 1: Level of Service Comparison for Roadways Operating at Unacceptable LOS

Presentation

Safety map series