

TASK 2.2 Assessment of Current Conditions

Existing Facilities Report

For the County and its residents to understand the progress of this plan as it is implemented, it is important to have a clear understanding of the conditions for biking and walking as they existed at the time the plan was developed. Any attempt to describe such conditions needs to be done in a manner that allows for continual monitoring, so that improvements recommended by the plan can be observed as they take effect and that measurable progress towards the plan's objectives can be reported to Commissioners and taxpayers alike. This section of the plan reports on conditions for walking and bicycling observed on the County's major thoroughfares between November 2008 and February 2009. The methods of evaluation are two statistical tools that assign "grades" to roadway segments, using a pseudo-academic scale (A-F), based on how well each of those roadway segments accommodate the needs of pedestrians and bicyclists. These methods, the Pedestrian Level of Service model and the Bicycle Level of Service model, have been used by counties and cities across the nation as well as regional, state and federal agencies, to evaluate in excess of 200,000 miles of roadway. These methods were adopted by the national Highway Capacity Committee as its official measures of pedestrian and bicycle accommodation. These methods were the same methods used by the Atlanta Regional Commission in its 2007 *Bicycle Transportation and Pedestrian Walkways Plan*, which includes results of these methods in its prioritization of member agency requests for funding assistance.

The Pedestrian Level of Service and Bicycle Level of Service models are described in detail in [Appendix X](#) of this plan. This section of the plan will discuss their results for Cobb County's Major Thoroughfares as well as the general conditions that contributed to those results. The findings of the section of the plan are descriptive; they make no attempt to determine an appropriate level of accommodation or facility treatments on a given roadway. These issues will be addressed in later sections of the plan.

In order to apply these models, various types of data were gathered for input to the models. These data were field-gathered by the consultant team, culled from existing records, or, in limited cases, estimated based on analogous observations. Field gathered data included geometric data, such as widths of lanes, roadways, gutters, buffers and sidewalks, as well as observed roadway characteristics including lane counts, configuration (undivided, divided, or use of a two-way left turn lane) posted speed limit,

roadside profile, pavement condition, and cross-section type (curbed or open shoulder). Traffic conditions were applied from outside sources: traffic counts were provided by the County, and heavy vehicle percentages were estimated using a lookup table. In certain cases, where traffic counts were unavailable, volumes were estimated by applying the average count of other roadways in the study network of the same functional class (arterial, major collector, minor collector) having the same configuration and number of lanes.

The relevant data were collected for the County's network of Major Thoroughfares (as of October 2008), which includes roadways classified as arterials, major collectors, and minor collectors. This network totaled approximately 790 centerline miles, but each segment was evaluated directionally, so that results are reported for each direction of travel in the roadway (for bicycling) and alongside both sides of the road (for walking), yielding a total of over 1550 directional miles evaluated with the models. The distance-weighted average results for the study network are a similar for bicycling and walking. The average mile of Cobb County roadway has a Bicycle Level of Service score of 4.13, equal to a grade of "D", and a Pedestrian Level of Service Score of 4.20, also equal to a grade of "D".

Level of Service	LOS Score
A	≤ 1.50
B	1.51—2.50
C	2.51—3.50
D	3.51—4.50
E	4.51—5.50
F	> 5.50

Table 1: Bicycle Level of Service and Pedestrian Level of Service strata and corresponding scores.

While every community has different expectations regarding accommodations for biking and walking, as a general observation these results describe a challenging situation for biking or walking along a typical Cobb County road. This is not an unusual result for urbanized areas in the United States, however. Similar evaluations of roadway networks have been performed in metropolitan areas around the country. A sample of these results for bicycling conditions, including the result for Cobb County is shown

in Figure 1. Communities whose networks earned a Bicycle Level of Service grade of “C” include Lexington, KY (1999), Philadelphia PA (1996), Gainesville FL (2000), and San Antonio, TX (2000). Communities whose networks scored a grade of “D,” like Cobb County, include Baltimore, MD (1998), Jacksonville, FL (2004), Chicago, IL (2001), and Orlando FL, (2001). The study network for the entire Atlanta region (comprised of roadways from the Atlanta Regional Commission’s Regionally Strategic Transportation System) scored a grade of “E” in 2006, as did the roadways of Collier County, FL (Naples metropolitan area) in 2004.

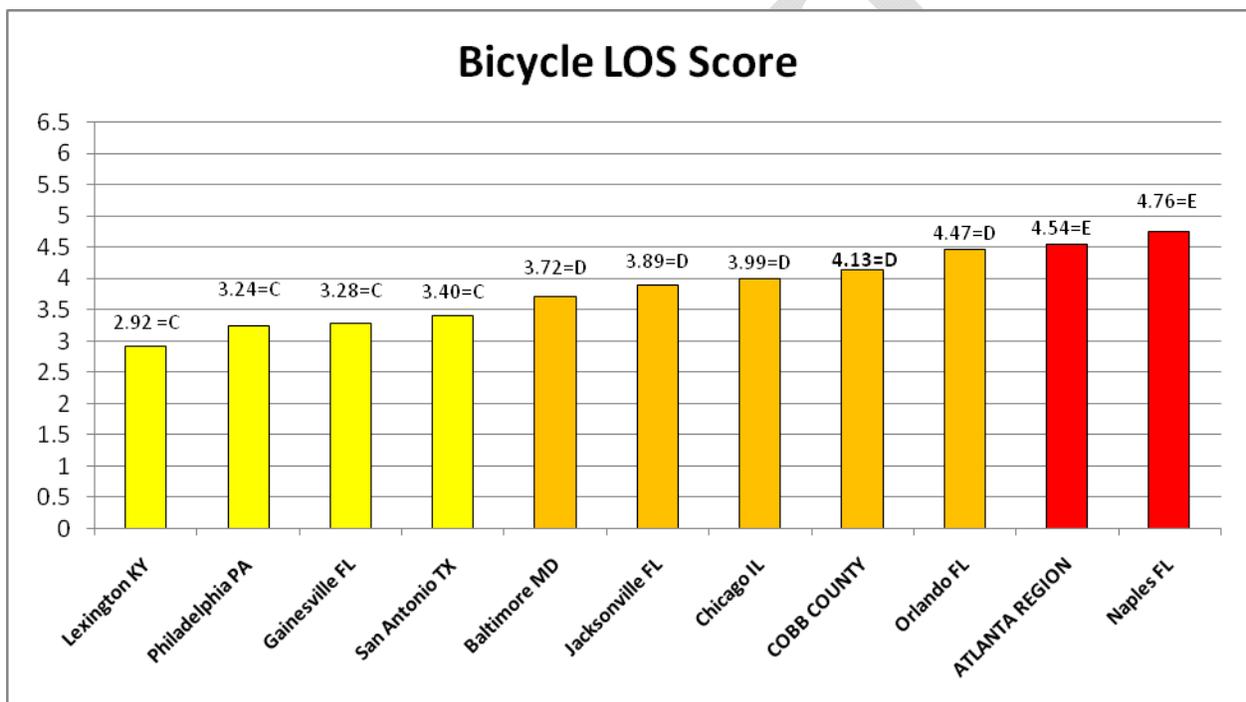


Figure 1: Distance Weighted Averages for Area-wide Evaluations of Bicycling Conditions with Bicycle Level of Service Model.
Source: Sprinkle Consulting Archives

A similar comparison of Cobb County’s Pedestrian Level of Service results with other study areas is shown in Figure 2.

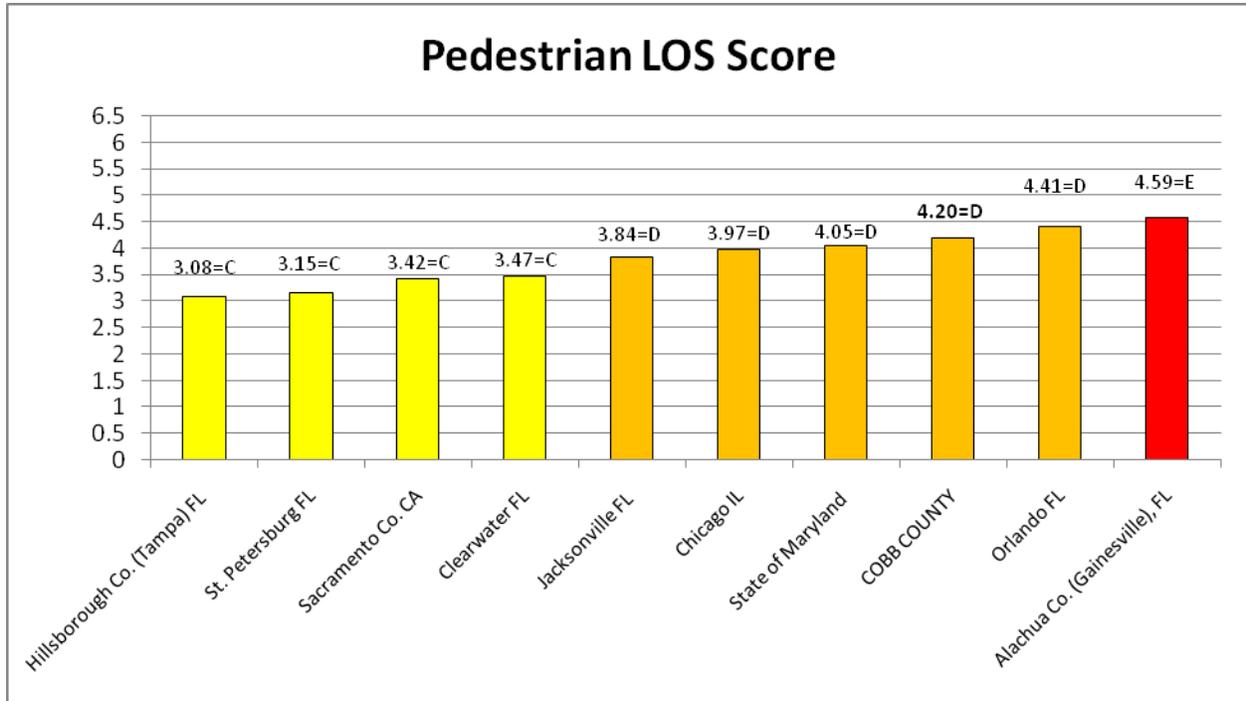


Figure 2: Distance Weighted Averages for Area-wide Evaluations of Walking Conditions with Pedestrian Level of Service Model.
 Source: Sprinkle Consulting Archives

As might be inferred from the distance weighted averages reported above, the distribution of mileage also reflects very challenging conditions for both bicycling and walking, with “E” being the grade for the greatest number of bicycle miles and “D” being the grade for the greatest number of pedestrian miles. The distribution of mileage for bicycling are shown in Figure 3, while the distribution of mileage for walking is shown in Figure 4.¹

Some general observations may be made about factors that contribute to the challenging character of bicycling and walking conditions along Cobb County’s Major thoroughfares. It is important to note, however, that the Bicycle Level of Service and Pedestrian Level of Service models each consider a complicated interplay of contributing factors as they model a bicyclist’s or pedestrian’s perception of comfort and safety on a given roadway. No one factor is likely responsible for a segment’s result, and later sections of this plan will make recommendations about how to counteract the existing conditions

¹ The results depicted in Figures 3 and 4 represent the worse directional result for all segments. There were segments which scored a grade of “A” on the Pedestrian Level of Service, for example, but this result was achieved on only one side of the road, so the worse side is what is represented in this summary distribution.

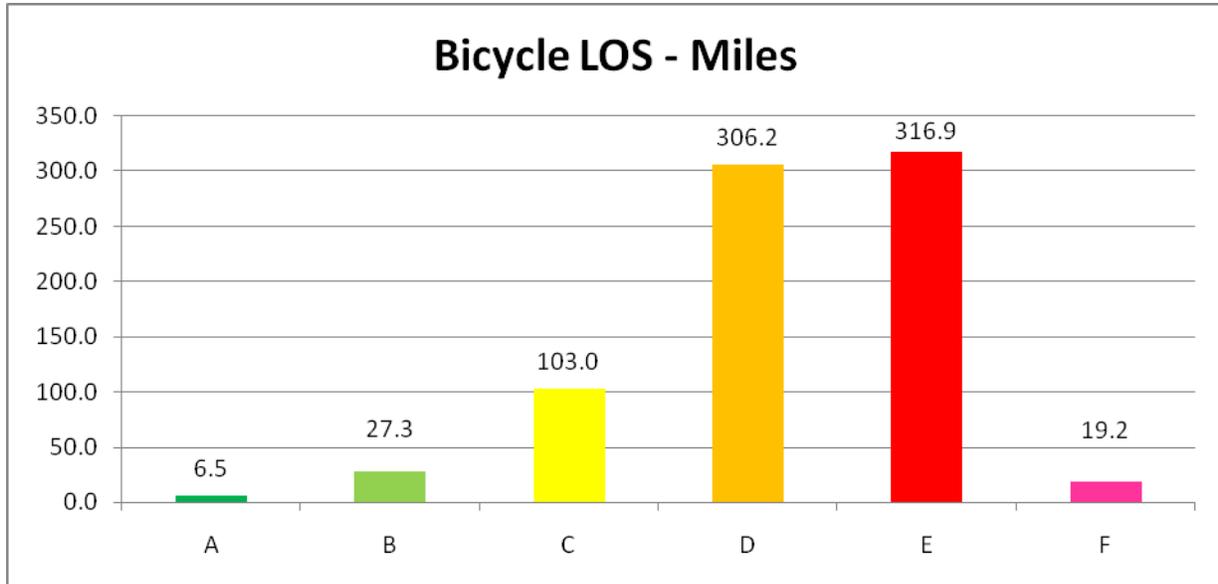


Figure 3: Distribution of Study Network Miles by Bicycle Level of Service Grade

to improve accommodation where needed. But certain factors can be identified as contributing to the overall environment to provide some context beyond the numbers. First, traffic volumes on county roadways can be very high. Of the 787 centerline miles surveyed, over half reported volumes in excess of 10,000 vehicles per day, a volume that can be translated into an experience for a bicyclist or pedestrian of being passed by a car approximately every six and one-half seconds. The County's roadways do not typically feature shoulders or bike lanes which represent separate space in the roadway cross section which bicyclists can claim as their own operating space; only 50 miles of the study network feature shoulders three feet wide or greater on both sides of the road. On the remaining 730+ miles of network, the average width of between the edge of pavement and the stripe demarcating the outside lane is 11.7 feet, leaving a tight squeeze for bicyclists who try to share the road with cars.

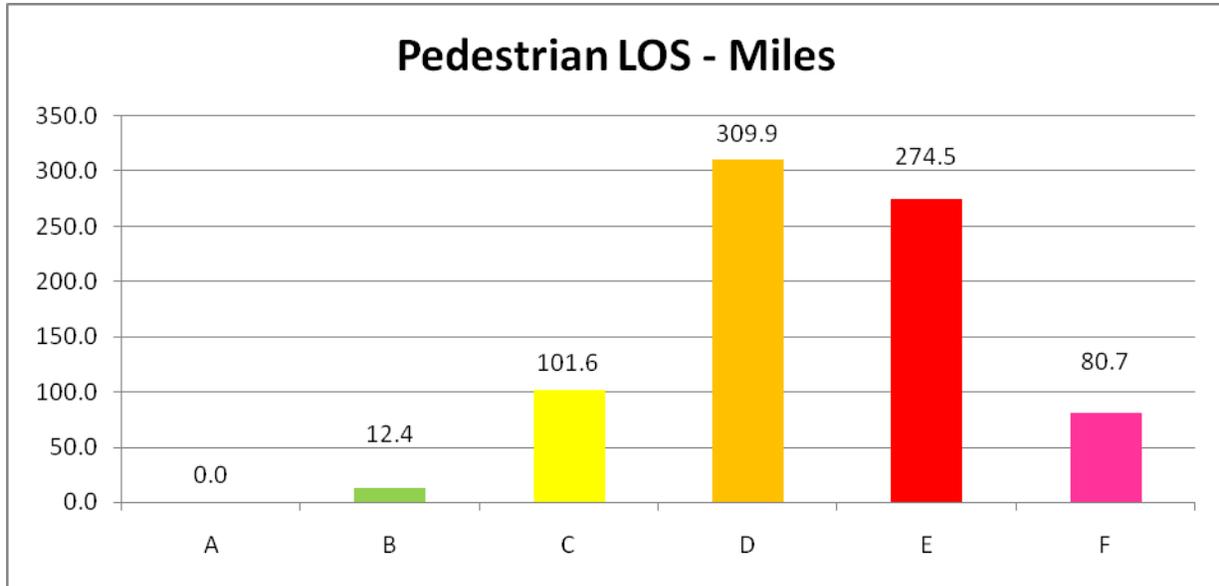


Figure 4: Distribution of Study Network Miles by Pedestrian Level of Service Grade

Only 43% of the network miles surveyed have full sidewalk coverage along at least one side of the roadway, and of all the sidewalks surveyed the average buffer separating that sidewalk from the roadway is just under two feet. Alongside those roadways without sidewalks or shoulders, it is not uncommon for the roadsides to fall quickly into ditches, leaving little room for those who might choose to walk alongside them anyway, or little room to escape for those who choose to walk or ride a bike in the narrow roadway. Taken all together, these characteristics describe an environment which can be very stressful for those who attempt to walk or ride a bicycle along Cobb County’s roadways, limiting the viability of these modes to be experienced as real transportation options in the County.

ⁱ Previously submitted as “Evaluation Methodology,” ultimately to be included as an appendix in the final plan.