





THE CITY OF KEY WEST

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Memorandum – Roadway Width Evaluation

Date: April 3, 2023
To: Albert Childress, City Manager
Cc: Gary Volenec, P.E., Interim Engineering Director 
Patti McLauchlin, City Manager
From: Ian McDowell, E.I., Associate Engineer 

Subject: Ashe Street Roadway Width – Olivia Street to Southard Street

Engineering staff have evaluated the need for reconfiguring Ashe Street between Southard Street and Olivia Street due to apparent lack of adequate lane width for two-way traffic to operate safely and efficiently. Currently, the aforementioned section of Ashe Street consists of two different configurations which vary in right-of-way width and lane-width.

Review Criteria & Literature

Engineering staff assessed the need for reconfiguration of Ashe to a one-way street based on the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy of Geometric Design of Highways and Streets (2018)*, AASHTO's *Guidelines for Geometric Design of Low-Volume Roads (2019)*, and the National Cooperative Highway Research Program (NCHRP) Report 362, *Roadway Widths for Low-Traffic-Volume Roads (1994)*.

In *A Policy of Geometric Design of Highways and Streets (2018)*, chapter 4, section 4.3, *Lane Width*, specifies that, in urban areas where pedestrian crossings, right-of-way, or existing development become stringent controls on lane widths, the use of 11-foot lanes may be appropriate. Lanes 10 feet wide are acceptable on low-speed facilities, and lanes 9 feet wide may be appropriate on low-volume roads in rural and residential areas. Figure 2-1 of chapter 2 also details the dimensions and turning path for a standard passenger car, which is considered 7 feet in width.

Guidelines for Geometric Design of Low-Volume Roads (2019) considers roadway design for areas with average daily traffic counts below 400 vehicles. Exhibit 2 of *Guidelines for Geometric Design of Low-Volume Roads (2019)* provides guidance on total roadway width for low and medium development densities, with an upper end which is intended for two-way traffic and recurrent parking on one side of the street. For medium development densities, 34 feet of total roadway width is specified.

Roadway Widths for Low-Traffic-Volume Roads (1994) reviews AASHTO roadway width recommendations and impact on safety and effect on accidents, as well as the interaction among several other roadway elements. Examination of approximately 4,100 miles of roadway data across seven states found that lane widths of 11 or 12 feet have significantly lower accident rates than roadways with 10-foot lane widths and that 8-foot lane widths are associated with considerably higher accident rates than lane widths of 9 feet or 10 feet. The continued use of 9-foot lane widths is supported where roadways have acceptable accident rates. This is generally presumed to occur where narrow lanes may be more local in character, carrying lower speed and local traffic.

Findings

Staff conducted field measurements and determined that Ashe Street from Olivia Street to Angela Street has a total roadway width of 18 feet, featuring a seven-foot parking area with the remaining 11 feet currently used for two-way traffic. From Angela Street to Southard, Ashe Street measures 24 feet in width, with 14 feet used for parking and 10 feet available for two-way traffic. Currently, Ashe Street features 5.5-foot and 5-foot lane widths, respectively.

None of the reviewed literature recommends lane widths less than 9 feet and the standard presumed width of a passenger car is 7 feet. As such, the existing lane widths on Ashe Street should be considered inadequate.

Recommendation

Following field review and measurement of this three-block segment of roadway, as well as referring to the American Association of State Highway and Transportation Officials' (AASHTO) policies and guidelines, Engineering recommends reconfiguring Ashe Street between Southard Street and Olivia Street to meet the minimum lane width requirement of 9 feet. This would result in re-striping and changes in signage to the street.