

Medians Provide Safety Benefits to All in Florida

Florida Department of Transportation

KEY ELEMENTS:



Integrated into other design guidance



Institutionalized medians

The Florida Department of Transportation's (FDOT) requirement for restrictive medians on most multilane roads provides a foundation for installing pedestrian refuge islands at uncontrolled crossing locations.

Since 1993, FDOT has promoted incorporating restrictive median treatments in multilane projects with operating speeds over 40 mph. A restrictive median is a raised median that separates oncoming midblock travel lanes and permits left turns only at openings. FDOT expanded the policy in 2013 to include multilane facilities with speeds under 40 mph to enhance vehicular and pedestrian safety.

ROLE OF MEDIANS IN PROMOTING SAFER PEDESTRIAN CROSSINGS

The 2014 Median Handbook—an important document for FDOT's median policy—firmly endorses the safety benefits of medians to all roadway users. The Handbook notes that restrictive medians make pedestrian crossings easier by breaking up a multilane crossing into two stages and reduce the risk of collisions. Moreover, providing raised

medians or pedestrian refuge areas at marked crosswalks has demonstrated a 46-percent reduction in pedestrian crashes and a 39-percent reduction at unmarked crossing locations.¹

FDOT's Multi Lane Facility Policy supports the State's endorsement of restrictive lanes and medians and directs projects to incorporate restrictive medians in most multilane projects (there are exceptions for four-lane sections with design speeds of 45 mph or less). This policy and the Median Handbook combine to support the installation of medians on FDOT roadways.



Figure 1. Pedestrian refuge island on four-lane road in south Florida.¹

DESIGN CRITERIA AND APPLICATIONS

FDOT's guidance for pedestrian-friendly median design focuses on spacing and land use context. The Median Handbook permits longer spaces between median openings.



U.S. Department of Transportation
Federal Highway Administration



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EDC-4 STEP: https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/step.cfm

Longer spacing between median openings (i.e. left turns) reduces the number of vehicle-pedestrian conflict points and creates more opportunities for pedestrian refuge islands and informal crossing locations.

The Median Handbook refers to both FHWA's implementation guidance and FDOT's Traffic Engineering Manual on when to install a pedestrian refuge island. The Median Handbook restates FHWA's criteria for implementing a refuge island: curbed multilane road, urban or suburban context, significant pedestrian demand, over 12,000 vehicles per day, and elevated travel speeds.²

The State's support for pedestrian-friendly medians makes it easier for roadway designers to implement refuge islands. FDOT's Traffic Engineering Manual recommends considering refuge islands at all proposed midblock crossings. Criteria for midblock crosswalk installation include proximity to activity generators, a minimum pedestrian crossing threshold, greater than 2,000 Annual Daily Traffic (ADT), and distance to other crossing locations, among other factors.

In situations where vehicle volumes exceed 12,000 ADT or crossing distances surpass 60 feet, refuge islands are required (unless a pedestrian signal or Pedestrian Hybrid Beacon is present).³ A proposed crosswalk at an uncontrolled location must be reviewed by the respective district's Traffic Operations Engineer for approval.



Figure 2. Illustration. FDOT context classifications for built environments (used in planning and design phase to create roadways that balance the needs of vehicular traffic, transit, pedestrians, and bicyclists).⁴

RETROFITTING EXISTING MEDIANS

FDOT's Median Handbook also outlines how an existing roadway may be upgraded to one with a pedestrian refuge island. The guidance recommends assessing all roadways undergoing altering or resurfacing of their existing median characteristics to determine appropriate retrofitting. Practitioners should evaluate the roadway for presence and proximity of pedestrian generators and bicycle facilities, among others. For example, if local conditions have changed to include a school nearby, the median's original design may need to be modified to accommodate new pedestrian safety concerns.

"As early as 1988, the safety benefits of restrictive medians were made clear by Florida and national research. The positive benefits were clearly shown, both for both pedestrians and motorists."

—Gary Sokolow, Senior Transportation Planner, FDOT

References

1. Florida Department of Transportation, "2014 Median Handbook," (2014). <http://www.fdot.gov/planning/systems/programs/sm/accomman/pdfs/fdotmedianhandbook.pdf>
2. Federal Highway Administration, "Guidance Memorandum on Consideration and Implementation of Proven Safety Countermeasures" <https://safety.fhwa.dot.gov/legislationandpolicy/policy/memo071008/>
3. Florida Department of Transportation, "Traffic Engineering Manual," (2016). http://www.fdot.gov/traffic/TrafficServices/Studies/TEM/FDOT_Traffic_Engineering_Manual_November2016.pdf
4. Florida Department of Transportation, "Context Classifications," (2017). <http://www.flcompletestreets.com/files/FDOT-context-classification.pdf>