

4. Design Controls and Standards

4.1 Design Criteria

Table 4-1 lists the conceptual design criteria that will be used in the development of CR 16A alternatives.

TABLE 4-1
Design Criteria

Design Element	CR 16A
Roadway Classification	Rural Major Collector (Existing Roadway) Urban Major Collector (Proposed Roadway)
Design Speed	45 mph
Posted Speed	45 mph
<i>Horizontal Alignment</i>	
a. Max Curve, Degrees	8° 15' 00"—curve posted 45 mph
b. Maximum Super Elevation	0.05 (5%)
c. Minimum Length of Curve	15V–400-foot minimum
d. Roadway Transitions	FDOT Index 526
e. Max Deflection through intersection	3°00'00"
f. Max Deflection without horizontal curve	1°00'00"
<i>Cross Section</i>	
a. Lane Widths	12 feet
b. Shoulder Width (without Shoulder Gutter)	5 feet
Outside	Curb and Gutter
Median or Left	Curb and Gutter
c. Cross Slopes -Travel Lane	3 percent
d. Cross Slopes – Shoulders	
Outside	N/A
Median of Left	N/A
e. Median Width	20 feet
f. Border Width	N/A
Flush Shoulders	4 feet
Curb and Gutter	
g. Horizontal Clear (Clear Zone)	24 feet
K	design factors
mph	miles per hour
N/A	not applicable
ROW	right-of-way
V	design speed

The standards include the following:

- St. Johns County Land Development Code, Chapter 6.04.00, Sections 6.04.06 and 6.04.07, February 2002
- St. Johns County Roadway and Drainage Standards, October 2002
- Florida Department of Transportation (FDOT), *Design Standards*, English, 2006
- FDOT, *Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways*, May 2002
- FDOT, *Plans Preparation Manual*, Revised January 1, 2005
- American Association of State Highway and Transportation Officials (AASHTO), 2004
- Manual of Uniform Traffic Control Devices (MUTCD), 2003 Edition