DRAFT (08-24-11)

NOTES:

Horizontal Alignment

Design speed of the highway shall be controlled by the horizontal alignment whenever feasible.

Whenever possible, reversing curves shall be connected by a tangent with a minimum length of 100'. In no case shall tangents between reversing curves be less than required for superelevation runout or runoff.

Maximum angle point without a horizontal curve is 30 minutes.

The minimum radii of horizontal curves is determined by the formula

$R_{min} = \frac{V^2}{15(e+f)}$ where:

R_{min} = minimum design curve radius in feet
V = design speed in miles per hour
e = superelevation rate in feet per foot
f = design friction factor.

Design friction factors (f) are presented in the following table:

DESIGN SPEED (MPH)	FRICTION FACTOR (f)
20	0.27
25	0.23
30	0.20
35	0.18
40	0.16
45	0.15
50	0.14

In a normal crown section, superelevation (e) value is −0.02.

Where practical and feasible, curve radii in excess of the minimum required values should be used.

Superelevation

Superelevation for Local Streets is discouraged.

Superelevation for collector streets and highways with ADTs below 2500 may be designed in accordance with Method 2 of Reference Document 3 (Page 148, Design for Low−Speed Urban Streets)

For new construction, a standard superelevation rate of Normal Crown, 2%, 4% or 6% should be selected.

At intersections on local streets within Community Regions, or intersections where high truck volumes are anticipated, the maximum superelevation rate is 4%.

STD. PLAN RD−02

HORIZONTAL ALIGNMENT AND SUPERELEVATION REQUIREMENTS

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

APPROVED BY:

JAMES W. WARE, P.E. NO. C61036
DIRECTOR, EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION

DATE:

BOARD OF SUPERVISOR'S RESOLUTION NO.