Shoulder
Shoulder
Shoulder
Shoulder

TRANSITION DETAILS - TANGENT TO CURVE

TRANSITION DETAILS - SPIRAL CURVE

Refer to specific curve data contained in project plans for tangent runout length (x), runoff length (L) and full superelevation (e).

When spiral curve transitions are not required:
Place 70% of full superelevation at the PC and PT
Place 30% of the runoff length within the curve.

Unless otherwise specified, all lengths are measured along the centerline of construction.

Superelevations on this standard are shown for curves to the right. Curves to the left are a mirror image of what is shown.

Smooth curves should be established at the time of construction at sections A-D along the profile edges of lines A-C.

Axes of rotation coincides with profile grade location.

\[ m = 30\% \text{ of Runoff Length (L)} \]
\[ g = 24\% \text{ Regardless of Pavement Width} \]
\[ L = \text{Distance to Change Cross Slope from 0\% to e} \]
\[ e = \text{Superelevation Rate} \]
\[ x = \text{Distance to Change Cross Slope from 0\% to 2\%} \]
\[ s = \text{Normal Shoulder Slope} \]

Spiral curve length coincides with runoff length (L)

Possible Tabulation:

101-18
High Side Shoulder: Maintain normal shoulder cross slope (s) until the cross slope break with the adjacent pavement reaches 8.0%. Maintain 6% breakover until superelevation rate reaches 7%. If superelevation rate exceeds 7.0%, maintain a 1% shoulder cross slope away from the adjacent pavement.

Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.

Subgrade Surface
2 High Side Shoulder: Maintain normal shoulder cross slope (s) until the cross slope break with the adjacent pavement reaches 8.0%. Maintain 8% breakover until superelevation rate reaches 7%. If superelevation rate exceeds 7.0%, maintain a 1% shoulder cross slope away from the adjacent pavement.

3 Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.

4 Subgrade Surface

---

**DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES**

### CASE U
(Section where $\alpha \geq 7.0\%$)

### CASE T
(Section where high side shoulder crown break rule occurs)

### CASE S
(Section where low side shoulder crown break rule occurs)

**LEFT ROADWAY**

**SECTION WHERE SHOULD SLOPE TRANSITION BEGINS**

**RIGHT ROADWAY**