

PLANE METHOD CURB RETURN DESIGN

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ONLY APPLICABLE FOR STREET GRADES LESS THAN 5%

COUNTY OF RIVERSIDE
TRANSPORTATION DEPARTMENT
ENGINEERING DIVISION

Plan Method Curb	IP Number:		Project No:	
Return Design	Checked By:		Date:	
	Approved By:		Sheet No:	

CURB RETURN ELEVATION DATA

PI 1
A
B
G1
G2

CURB RETURN CURVE DATA

Δ in degrees
RADIUS
L
T

ELEVATION AT M.O.C

$C1 = 1/2 (A+B)$
 $a1 = (PI\ 1) - C1$
 $R1 = \frac{COS\ 1/2\ \Delta}{1 + COS\ 1/2\ \Delta}$
 $M1 = C1 + (R1 * A1)$

ELEVATION AT 1/4 POINT

$T2 = (\text{RADIUS}) * (\tan\ 1/4\ \Delta)$
 $PI\ 2 = A + (T2 * G1)$
 $C2 = 1/2 (A + M1)$
 $a2 = PI2 - C2$
 $R2 = \frac{COS\ 1/4\ \Delta}{1 + COS\ 1/4\ \Delta}$
 $M2 = C2 + (R2 * a2)$

ELEVATION AT 1/4 POINT

$PI\ 3 = B + [T2 * (-G2)]$
 $C3 = 1/2 (B + M1)$
 $a3 = (PI\ 3) - C3$
 $M3 = C3 + (R2 * a3)$

