Given:

    Curve Left
    Δ = 27°54'27"
    R   = 1384.96'
    ROW = 600'   (300' | 300')
    PC   = 5+87.89
    PC to PI   = N12°59'46"E

Find:

1) The central angle (alpha) between stations 8+50 and 9+50 on the outside the ROW.

$$D_A = 4\text{-}08\text{-}13$$

2) Calculate the outside ROW actual arc distance between 8+79.40 and 10+69.91.

$$Arc_{CL} = 190.51$$
$$Arc_{outer} = 231.78$$

3) Calculate for the inside ROW the sub-chord (SC) between stations 6+11.42 and 11+02.47.

$$Arc_{CL} = 491.05$$
$$C_{CL} = 488.48$$
$$C_{inner} = 382.67$$

4) Calculate the sub-chord bearing between 7+50 and 10+50 on the outside ROW.

$$Defl \text{ @ } 7\text{+}50 = 3\text{-}21\text{-}12$$
$$Defl \text{ @ } 10\text{+}50 = 9\text{-}33\text{-}31$$
$$Bearing = N00\text{-}05\text{-}03E$$

5) Calculate the station of the POC for which the sub-chord bearing is North from the PC on the inside ROW.

Defl = 12-59-46
Delta = 25-59-32
L = 628.29
Station = 12+16.18

6) For the outside ROW, TO = 170.43'. What is the POC station?

TO_{CL} = 140.09
Alpha = 25-59-33
Arc_{CL} = 628.29
Station = 12+16.18

7) Calculate for the inside ROW:

	STA	H angle RT		HD
Instr.	9+25			
BS	8+00	*355-36-45*	*R*	
FS	10+75	*349-55-27*	*D*	*117.45*

	Station	Arc	$\alpha/2$ Deflection	Angle.Rt.	SC Chord	
PC	*5+87.89*	*-0-*	*-0-*	*360-00-00*	*-0-*	
BS	*8+00*	*212.11*	*4-23-15*	*355-36-45*	*211.90*	
Inst.	*9+25*	*337.11*	*6-58-23*	*353-01-37*	*336.28*	
FS	*10+75*	*487.11*	*10-04-33*	*349-55-27*	*484.60*	
		150.00	*3-06-10*		*149.93 cl*	*117.45 inside*