

# HOn3 Scale

## Curved Switch Turnout

# TURNOUT DIMENSIONS

Revised: February 2015

RP-12.54

Design by Clarence H. Hill

(1)	FROG NUMBERS	4	5	6	7	8	9	10	11	12
<b>PROPERTIES OF CURVED SWITCHES</b>										
(2)	Switch Rail Length	1.500	1.500	1.500	2.375	2.375	2.375	2.375		
(3)	Switch Point Angle (deg.)	2.017	2.017	2.017	1.333	1.333	1.333	1.333		
(4)	Switch Heel Spread	0.094	0.094	0.094	0.094	0.094	0.094	0.094		
(5)	Switch Heel Angle (deg.)	5.200	5.200	5.200	3.150	3.150	3.150	3.150		
(6)	Switch Rail Radius	27.000	27.000	27.000	75.000	75.000	75.000	75.000		
(7)	Switch Mid-Ordinate	0.011	0.011	0.011	0.010	0.010	0.010	0.010		
<b>LEAD TO THEORETICAL POINT OF FROG</b>										
(8)	Lead	3.313	3.625	4.000	5.500	5.875	6.188	6.500		
<b>CLOSURE DISTANCE</b>										
(9)	Straight Rail Length	1.438	1.688	2.000	2.563	2.875	3.063	3.313		
(10)	Curved Rail Length	1.938	1.719	2.031	2.594	2.906	3.094	11.344		
(11)	Curved Rail Radius	9.000	16.000	27.000	30.000	42.000	55.000	75.000		
<b>GAGE LINE OFFSETS ON CURVED CLOSURE RAIL</b>										
(12)	1st Point Y1									
(13)	1st Point X1									
(14)	Mid-Point Y2	0.203	0.203	0.203	0.203	0.203	0.203	0.203		
(15)	Mid-Point X2	2.313	2.438	2.500	3.813	3.875	3.938	4.000		
(16)	3rd Point Y3									
(17)	3rd Point X3									
<b>PROPERTIES OF FROGS</b>										
(18)	Frog Angle (deg.)	14.250	11.417	9.533	8.167	7.150	6.367	5.717		
(19)	Overall Length	1.063	1.250	1.375	1.500	1.688	2.000	2.188		
(20)	Toe Length	0.375	0.438	0.500	0.563	0.625	0.750	0.813		
(21)	Heel Length	0.688	0.813	0.875	0.938	1.063	1.250	1.375		
(22)	Toe Spread	0.094	0.094	0.078	0.078	0.078	0.078	0.078		
(23)	Heel Spread	0.172	0.156	0.141	0.141	0.141	0.141	0.141		
(35)	Wing Rail Extension									
(36)	Wing Rail Flare Length									
(37)	Wing Rail Flare Width									
(38)	Wing Rail Bend Width									
(39)	Wing Rail End Chamfer									
<b>POINT OF FROG TO INTERSECTION OF CENTERLINES</b>										
(24)	PF to ICL	1.656	2.063	2.469	2.906	3.313	3.719	4.125		
<b>DATA FOR CROSSOVERS: PF TO PF ON PARALLEL TRACKS</b>										
<b>For Track Centers of:</b>		1.750								
(25)	Straight Track Dist.	3.563	4.563	5.500	6.375	7.313	8.250	9.188		
(26)	Crossover Track Dist.	3.813	4.688	5.625	6.500	7.438	8.375	9.313		
<b>For Track Center Increment of:</b>		0.125								
(28)	Straight Track Incr.	0.500	0.625	0.750	0.875	1.000	1.125	1.250		
(29)	Crossover Track Incr.	0.500	0.625	0.750	0.875	1.000	1.125	1.250		
<b>GUARD RAILS</b>										
(30)	Parallel End Setback									
(31)	Bevel Length									
(32)	Flare Length									
(33)	Overall Length									
(34)	Parallel Length									
(37)	Flare Width									
(38)	Plane Width									
(39)	End Chamfer									

Use RP-13.7 and RP-13.8 for wing rail dimensions

Use RP-13.5, RP-13.6 and RP-13.8 for guard rail dimensions