

Attached please find copies of our Train Performance Calculator (TPC) runs for trip time. The trip time for LA to San Francisco with elevated ROW from Gilroy to San Jose has a trip time of 2:32:43. And the trip time with at-grade shared ROW between Gilroy to San Jose has a trip time of 2:36:56.

Superelevation discussions

1.) Commission Regulation (EU) No 1299/2014 applies to all of the European Community countries.

4.2.4.2 Cant

(1) The design cant for lines shall be limited as defined in Table 7 (TSI 1299 covers both conventional and high-speed lines)

Table 7
Design Cant

	Freight and Mixed Traffic	Passenger Traffic
Ballasted Track	160 mm (6.30 in)	180 mm (7.08 in)
Non Ballasted Track	170 mm (6.69 in)	180 mm (7.08 in)

Note: The German high-speed trains operate in a mixed mode with freight and thus have a lower design cant (superelevation) than the French which operate high-speed trains on dedicated high-speed passenger tracks.

2.) The French Technical standard for Building High Speed line name IN3278 in Volume 1 “Passenger High speed rail linksd – General characteristics” in section 4.1.1 “Design Parameter” indicate to use the formula $R_{min} = 11.8 V^2 / (l+d)$ with maximum value of d limited to 180 mm (7.08 inches) as described in the following table:

Speed (km/h)	V	230 (143 mph)	270 (168 mph)	300 (186 mph)	320 (200 mph)	350 (218 mph)
• Line Factor	K	390,000	576,000	720,000	850,000	1,100,000
Cant (mm) Maximum Limit (1)	d	180	180	180	180	180

<ul style="list-style-type: none"> • Cant Deficiency (mm) 	I					
Standard Limit		110	100	80	75	65
Extraordinary Limit (2)		140	130	100	90	80
<ul style="list-style-type: none"> • Change of Cant Deficiency (mm/s) 	ΔI Δt					
Standard Limit		30	30	30	30	30
Extraordinary Limit		50	50	50	50	50
<ul style="list-style-type: none"> • Change of Cant (mm/m) 	Δd Δl					
Standard Limit		180/V	180/V	180/V	180/V	180/V
Extraordinary Limit		216/V	216/V	216/V	216/V	216/V