



DAER - Departamento Autônomo de Estradas de Rodagem  
DPR - Departamento de Programação Rodoviária  
EER - Equipe de Economia Rodoviária

**FATORES DE CONVERSÃO DOS CUSTOS UNITÁRIOS DE PROJETOS RODOVIÁRIOS  
EM FUNÇÃO DA EXTENSÃO DO TRECHO EM KM**

Ext. (km)	K	Ext. (km)	K	Ext. (km)	K	Ext. (km)	K	Ext. (km)	K
1,000	<b>1,3000</b>	21,000	<b>0,9975</b>	41,000	<b>0,9475</b>	61,000	<b>0,8975</b>	81,000	<b>0,8475</b>
2,000	<b>1,3000</b>	22,000	<b>0,9950</b>	42,000	<b>0,9450</b>	62,000	<b>0,8950</b>	82,000	<b>0,8450</b>
3,000	<b>1,3000</b>	23,000	<b>0,9925</b>	43,000	<b>0,9425</b>	63,000	<b>0,8925</b>	83,000	<b>0,8425</b>
4,000	<b>1,3000</b>	24,000	<b>0,9900</b>	44,000	<b>0,9400</b>	64,000	<b>0,8900</b>	84,000	<b>0,8400</b>
5,000	<b>1,3000</b>	25,000	<b>0,9875</b>	45,000	<b>0,9375</b>	65,000	<b>0,8875</b>	85,000	<b>0,8375</b>
6,000	<b>1,2800</b>	26,000	<b>0,9850</b>	46,000	<b>0,9350</b>	66,000	<b>0,8850</b>	86,000	<b>0,8350</b>
7,000	<b>1,2600</b>	27,000	<b>0,9825</b>	47,000	<b>0,9325</b>	67,000	<b>0,8825</b>	87,000	<b>0,8325</b>
8,000	<b>1,2400</b>	28,000	<b>0,9800</b>	48,000	<b>0,9300</b>	68,000	<b>0,8800</b>	88,000	<b>0,8300</b>
9,000	<b>1,2200</b>	29,000	<b>0,9775</b>	49,000	<b>0,9275</b>	69,000	<b>0,8775</b>	89,000	<b>0,8275</b>
10,000	<b>1,2000</b>	30,000	<b>0,9750</b>	50,000	<b>0,9250</b>	70,000	<b>0,8750</b>	90,000	<b>0,8250</b>
11,000	<b>1,1800</b>	31,000	<b>0,9725</b>	51,000	<b>0,9225</b>	71,000	<b>0,8725</b>	91,000	<b>0,8225</b>
12,000	<b>1,1600</b>	32,000	<b>0,9700</b>	52,000	<b>0,9200</b>	72,000	<b>0,8700</b>	92,000	<b>0,8200</b>
13,000	<b>1,1400</b>	33,000	<b>0,9675</b>	53,000	<b>0,9175</b>	73,000	<b>0,8675</b>	93,000	<b>0,8175</b>
14,000	<b>1,1200</b>	34,000	<b>0,9650</b>	54,000	<b>0,9150</b>	74,000	<b>0,8650</b>	94,000	<b>0,8150</b>
15,000	<b>1,1000</b>	35,000	<b>0,9625</b>	55,000	<b>0,9125</b>	75,000	<b>0,8625</b>	95,000	<b>0,8125</b>
16,000	<b>1,0800</b>	36,000	<b>0,9600</b>	56,000	<b>0,9100</b>	76,000	<b>0,8600</b>	96,000	<b>0,8100</b>
17,000	<b>1,0600</b>	37,000	<b>0,9575</b>	57,000	<b>0,9075</b>	77,000	<b>0,8575</b>	97,000	<b>0,8075</b>
18,000	<b>1,0400</b>	38,000	<b>0,9550</b>	58,000	<b>0,9050</b>	78,000	<b>0,8550</b>	98,000	<b>0,8050</b>
19,000	<b>1,0200</b>	39,000	<b>0,9525</b>	59,000	<b>0,9025</b>	79,000	<b>0,8525</b>	99,000	<b>0,8025</b>
20,000	<b>1,0000</b>	40,000	<b>0,9500</b>	60,000	<b>0,9000</b>	80,000	<b>0,8500</b>	100,000	<b>0,8000</b>

**KAPA DE ZONA**

Zona Plana.....	<b>KZ= 1,0000</b>
Zona Ondulada.....	<b>KZ= 1,0000</b>
Zona Montanhosa.....	<b>KZ= 1,2860</b>
Zona Escarpada.....	<b>KZ= 1,6700</b>

**KAPA DE EXTENSAO (exemplo):**

Extensão do trecho=5,500km  
 $5,000+6,000 \Rightarrow (1,3000+1,2800)/2 \Rightarrow K_{ext} = 1,2900$