

**Summary - TOTAL Alignment
Estimate of Costs**

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Summary

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Capital Costs Break Down

	Hybrid - AMT		HS Maglev - Transrapid		HS Rail - Talgo	
Vehicles	\$240,000,000		\$260,990,000		\$180,000,000	
Propulsion System	\$171,600,000		\$823,130,000		included in enrg. supply	
Energy Supply	included in propulsion		\$258,500,000		\$308,510,000	
Operation Control Technology	\$198,000,000		\$126,720,000		\$241,020,000	
Communication/Control Technology	included in op. control		\$8,440,000		\$61,350,000	
Guideway/Track Infrastructure	\$5,247,590,000		\$12,203,760,000		\$16,788,770,000	
Guideway/Track		\$1,078,675,411		\$1,882,753,722		\$1,135,482,548
Bridges & Viaducts		\$229,594,007		\$130,162,098		\$717,740,043
Tunnels		\$3,706,475,148		\$9,547,444,688		\$14,566,942,090
Other		\$232,842,502		\$643,399,579		\$368,610,175
Stations	\$129,120,000		\$129,120,000		\$80,700,000	
Operations and Maintenance Facilities	\$15,320,000		\$54,180,000		\$54,180,000	
Construction Support	\$50,000,000		\$50,000,000		\$50,000,000	
Right of Way and Corridor	\$93,660,000		\$93,660,000		\$93,660,000	
Professional Services	\$1,597,780,000		\$3,642,210,000		\$4,643,130,000	
Utility Relocation	\$553,080,000		\$1,260,770,000		\$1,607,240,000	
Environmental Mitigation	\$153,630,000		\$350,210,000		\$446,450,000	
Overall Contingency	\$2,534,930,000		\$5,778,510,000		\$7,366,500,000	
Grand Total	\$10,984,710,000		\$25,040,200,000		\$31,921,510,000	

Cost per Mile	\$91,133,880	\$211,351,928	\$293,065,091
Support Cost	20.98%	20.98%	20.98%
	\$10,984,710,000	\$25,040,200,000	\$31,921,510,000

Percentages of Total Capital Cost

	Hybrid - AMT		HS Maglev - Transrapid		HS Rail - Talgo	
Vehicles	\$240,000,000	2%	\$260,990,000	1%	\$180,000,000	1%
Propulsion System	\$171,600,000	2%	\$823,130,000	3%	included in enrg. supply	0%
Energy Supply	included in propulsion	0%	\$258,500,000	1%	\$308,510,000	1%
Operation Control Technology	\$198,000,000	2%	\$126,720,000	1%	\$241,020,000	1%
Communication/Control Technology	included in op. control	0%	\$8,440,000	0%	\$61,350,000	0%
Guideway/Track	\$1,078,675,411	10%	\$1,882,753,722	8%	\$1,135,482,548	4%
Bridges & Viaducts	\$229,594,007	2%	\$130,162,098	1%	\$717,740,043	2%
Tunnels	\$3,706,475,148	34%	\$9,547,444,688	38%	\$14,566,942,090	46%
Other	\$232,842,502	2%	\$643,399,579	3%	\$368,610,175	1%
Stations	\$129,120,000	1%	\$129,120,000	1%	\$80,700,000	0%
Operations and Maintenance Facilities	\$15,320,000	0%	\$54,180,000	0%	\$54,180,000	0%
Construction Support	\$50,000,000	0%	\$50,000,000	0%	\$50,000,000	0%
Right of Way and Corridor	\$93,660,000	1%	\$93,660,000	0%	\$93,660,000	0%
Professional Services	\$1,597,780,000	15%	\$3,642,210,000	15%	\$4,643,130,000	15%
Utility Relocation	\$553,080,000	5%	\$1,260,770,000	5%	\$1,607,240,000	5%
Environmental Mitigation	\$153,630,000	1%	\$350,210,000	1%	\$446,450,000	1%
Overall Contingency	\$2,534,930,000	23%	\$5,778,510,000	23%	\$7,366,500,000	23%
		100%		100%		100%