

HSR in the US and California:

Risk, Network, and Data Driven Approaches to Assess Vulnerability of Transportation Systems

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Hon. Rod Diridon Sr.

*Past Chair Intercity High Speed Rail Committee
American Public Transit Association*

*Chair Emeritus
California High Speed Rail Authority Board*

*Executive Director
Mineta Transportation Institute*

International High-Speed Train Technology Examples



Germany



Japan



France



China

U.S. High Speed Systems



United States: Steel Wheel/Steel Rail Systems

- Amtrak Northeast Corridor
- California High Speed Rail
- Florida High Speed Rail
- Gulf Coast
- Midwest Regional Rail
- New England Rail
- New York (Empire)
- Ohio-Cleveland Hub
- Pacific Northwest
- Pennsylvania (Keystone)
- Southeast High Speed Rail
- South Central Corridor
- Texas T-Bone

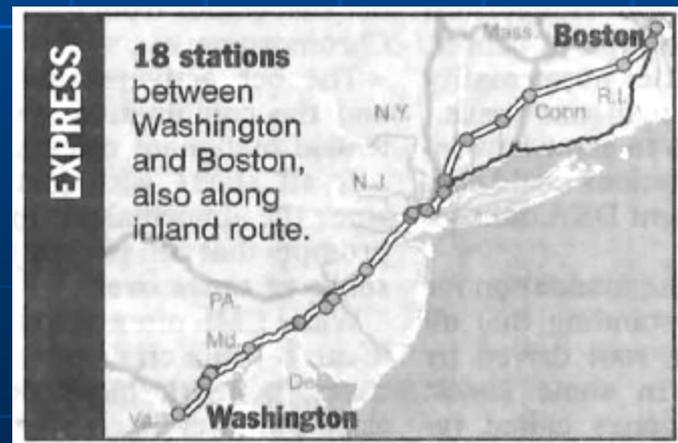
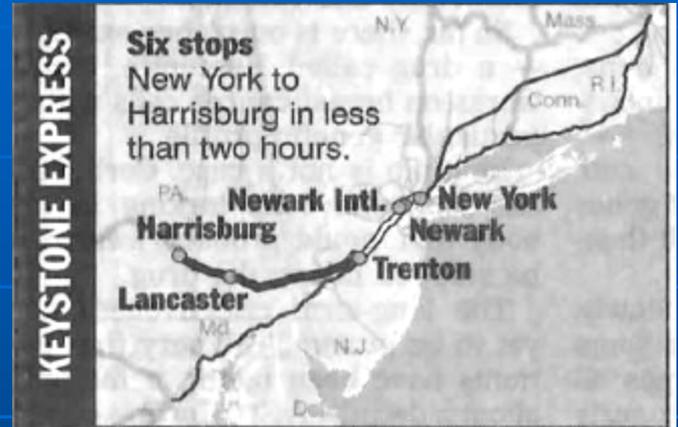
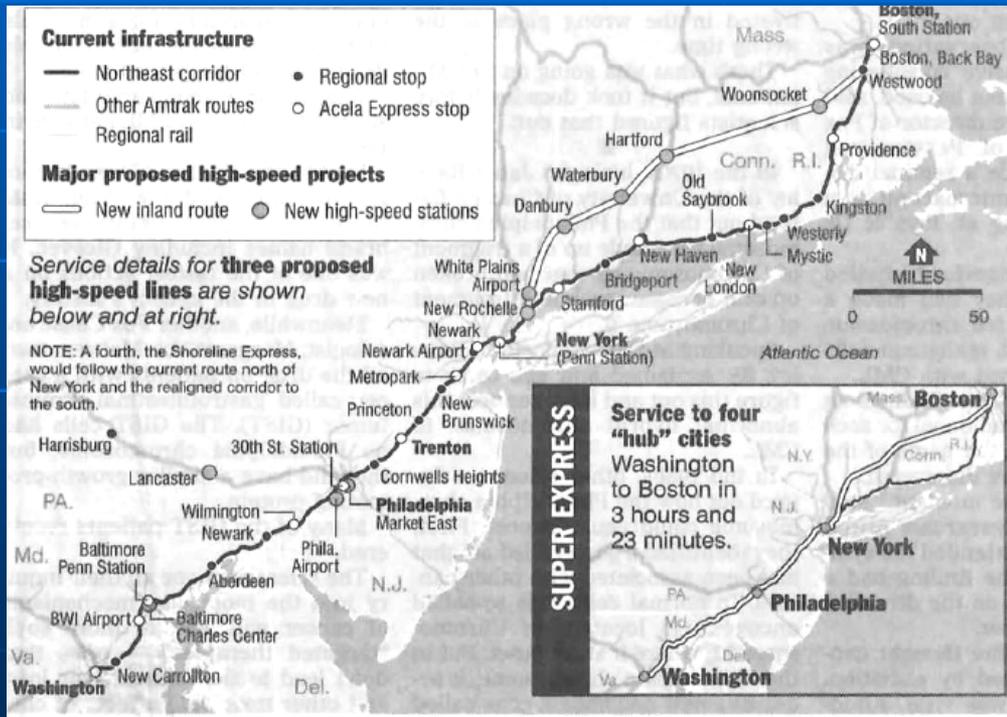
US HSR Overview

Project	States	Total Investment	New Miles	Upgrades Miles	Top Speed (mph)
California	CA	\$2.3 billion	800	880	220; 110
Chicago - St Louis	IL, MO, KS	\$1.3 billion	--	570	110
Orlando-Tampa	FL	\$1.25 billion	84	--	186
Hiawatha	WI, MN	\$823 million	32	144	110
Northeast Corridor	9 States	\$706 million	0	363	150
Southeast	VA, NC	\$620 million	--	480	110
Pacific Northwest	OR, WA, BC	\$598 million	--	437	79
3-C Corridor	OH	\$400 million	250	--	79
Michiana	IL, IN, MI	\$244 million	--	300	90
Empire Corridor	NY	\$144 million	--	462	110
Albany-Burlington	NY, VT	\$50 million	67	--	79
Vermontier	NY, CT, MA, VT	\$40 million	11	261	90
Downeaster	ME	\$35 million	30	--	79
Keystone Corridor	PA	\$26 million	--	111	110
Iowa	IA	\$17 million	--	--	79
Albany - Montreal	NY, Quebec	\$7 million	--	3	79
Fort Worth	TX	\$4 million	--	--	79
Total		\$8 billion	1274	4011	

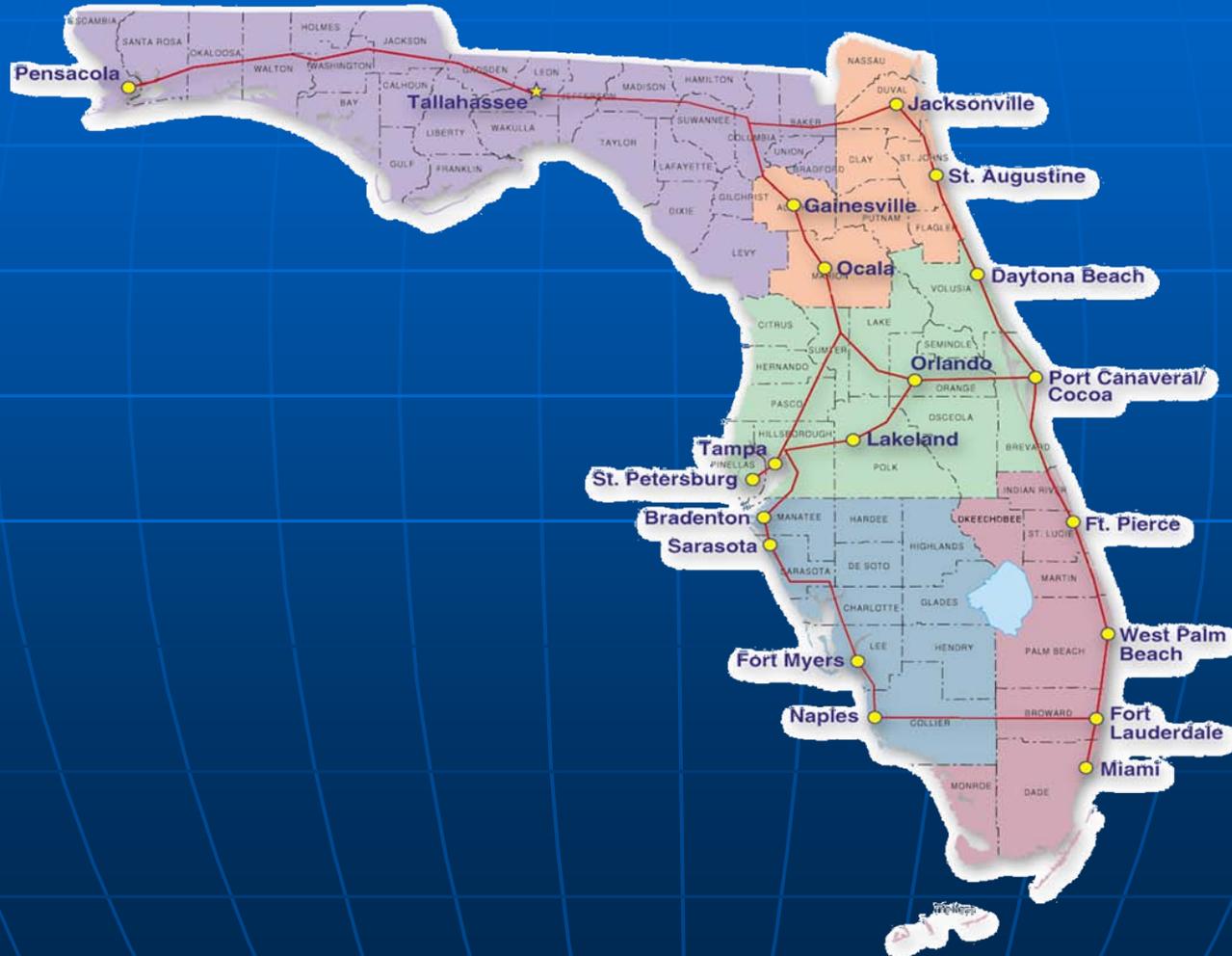
Northeast Corridor



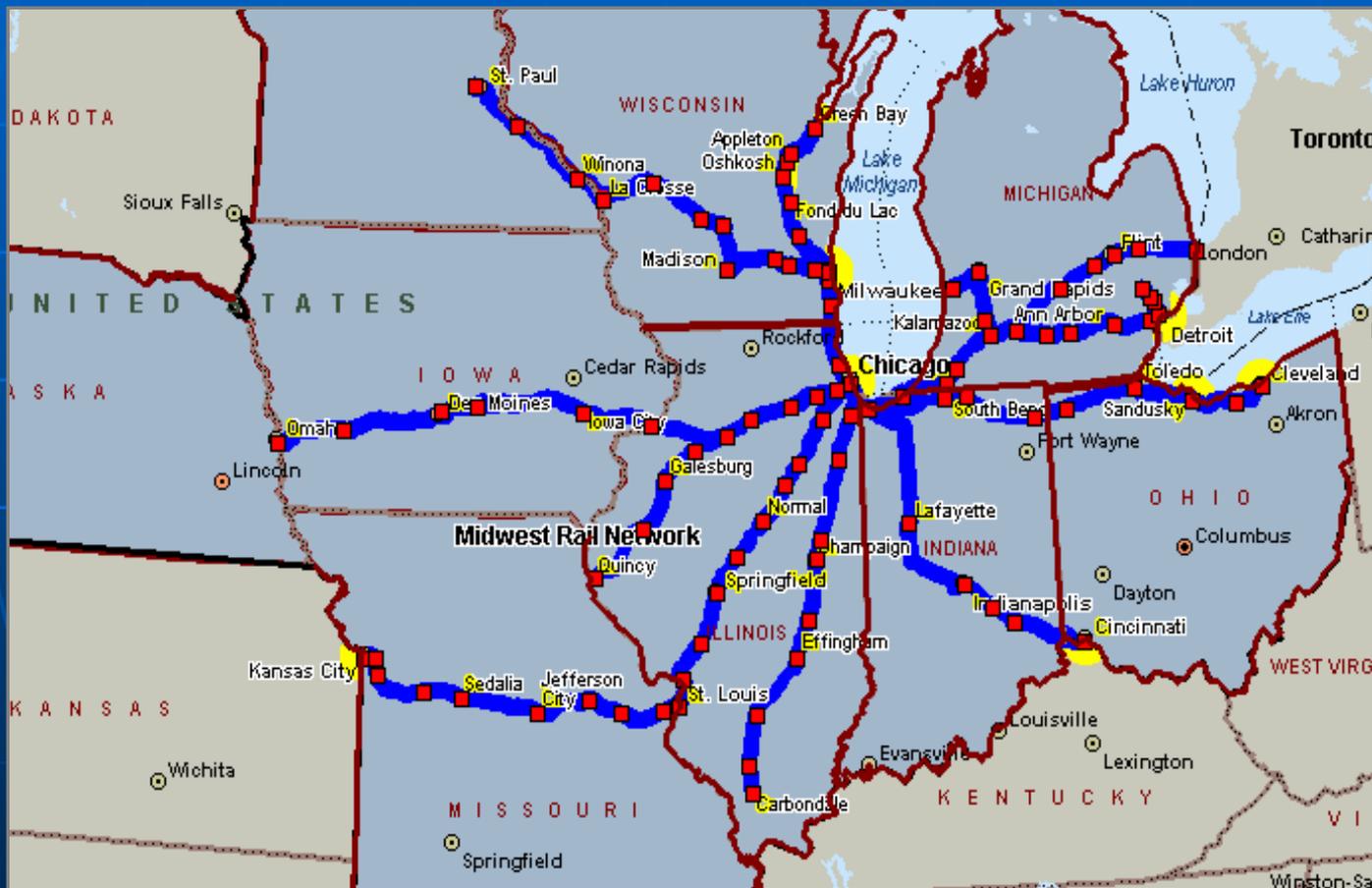
Northeast Corridor



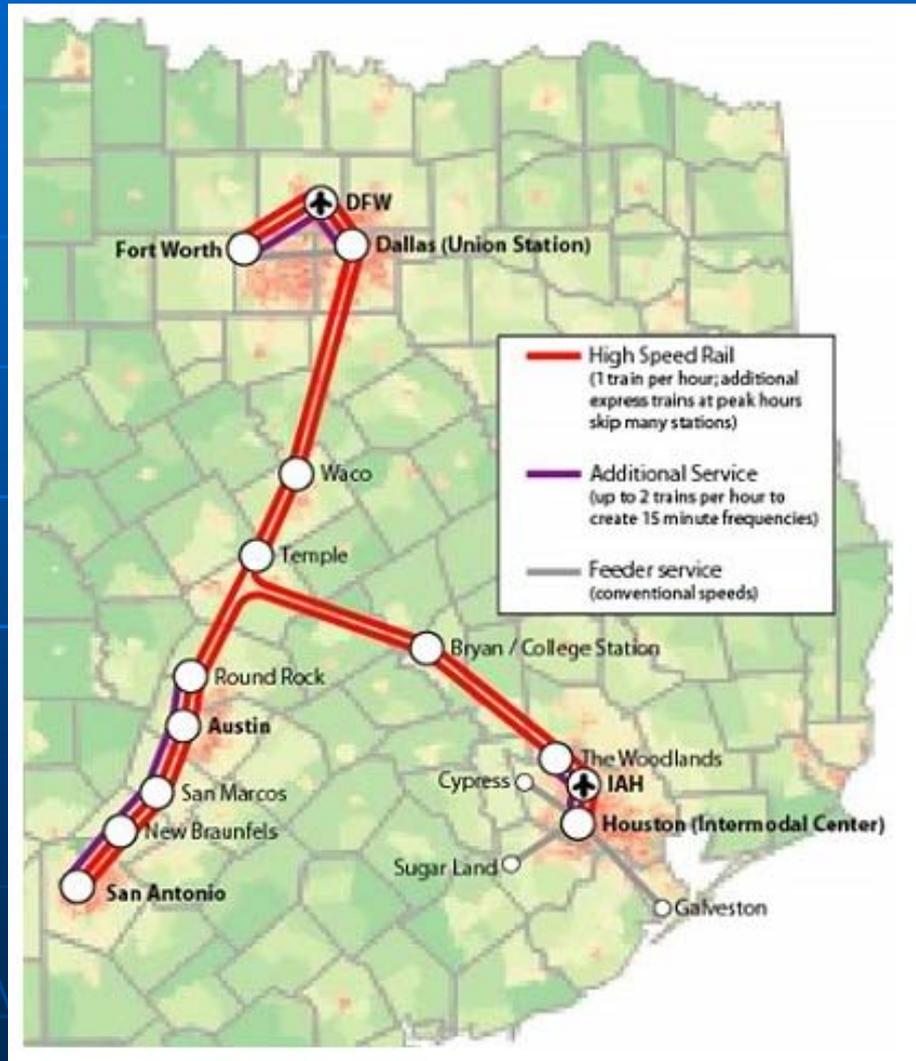
Florida HSR



Midwest Regional Rail: 100 Rail Stations



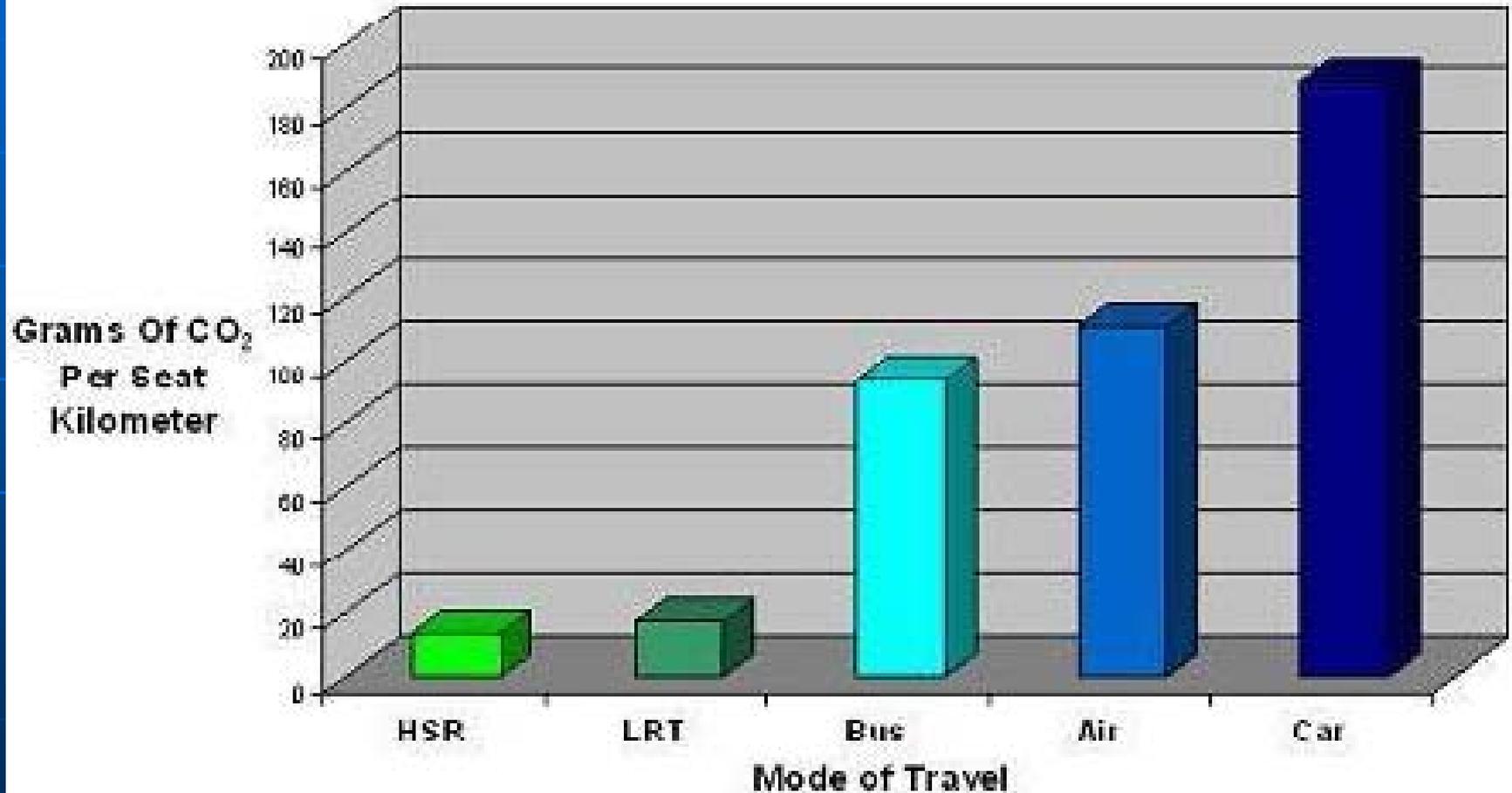
Texas T-Bone



California HSR



Reduced Carbon Footprint



Environmental Milestones Schedule - February 2011

Section/Activity	Assigned Weight		5%		15%		5%		12%		13%		33%		5%		10%		2%		100%	
	Plan Feb 11	Actual/PMT plan % complete	Scoping Report	Board Briefing to Approve Release of the AA Report	Release Preliminary Report AA	Board Briefing to Approve Supplemental AA Report	Release Supplemental AA Report	Checkpoint A	Technical Reports	Checkpoint B	Admin Draft EIR/EIS	15% Design	Draft EIR/EIS	Checkpoint C	Final EIR/EIS	NOD/ROD	Percent Complete Toward NOD/ROD	30% Design				
San Francisco - San Jose	Plan Actual / PMT plan Feb 11 % Complete	May '09 Mar. 10 A 100%	Apr. 8, 2010 Apr. 8, 10 A	Apr. '10 Apr. '10 A 100%	Jul. 1, 2010 Aug. 5, '10 A	Jul. '10 Aug. '10 A 100%	May-11	Sept. '10 Jun-12 90%	Sep-11	Sept. '10 Aug-12 98%	Dec. '10 Mar-12 93%	Dec. '10 Oct-12 0%	Dec-12	July '11 Mar-13 0%	Sept. '11 Jun-13 0%	79%	Sept. '11 Feb-14 0%					
San Jose - Merced	Plan Actual / PMT plan Feb 11 % Complete	Oct. '09 Mar. '10 A 100%	May 6, 2010 Jun. 3, 2010	May '10 June '10 A 100%	Aug. 5, 2010	Aug. '10 Jun-11 70%	May-11	Apr. '11 Jul-11 70%	Oct-11	Apr. '11 Sep-11 40%	Dec. '10 Jun-11 62%	Jul '11 Jan-12 0%	May-12	Feb. '12 Sep-12 0%	Apr. '12 Nov-12 0%	58%	Mar. '12 Jul-13 0%					
Merced - Fresno	Plan Actual / PMT plan Feb 11 % Complete	Mar. '10 Mar. 10 A 100%	Apr. 8, 2010 Apr. 8, 2010	Apr. '10 Apr. '10 A 100%	Jun. 3, 2010 Aug. 5, '10 A	June '10 Aug. '10 A 100%	Feb. 3 '11 A	Aug. '10 Sept '10 A 100%	May-11	Aug. '10 Sept. '10 A 100%	Sept. '10 Jan-11 87%	Nov. '10 Jun-11 75%	Oct-11	June '11 Dec-11 0%	Aug. '11 Feb-12 0%	82%	Aug. '11 Dec-11 0%					
Fresno - Bakersfield	Plan Actual / PMT plan Feb 11 % Complete	Mar. '10 Mar. 10 A 100%	Dec. 3, 2009 Jun. 3, 2010	Mar. '10 June '10 A 100%	Jun. 3, 2010 Sept. 10 A	June '10 Sept. '10 A 100%	Feb. 3 '11 A	Sept. '10 Sept. '10 A 93%	May-11	Sept. '10 Sept. '10 A 100%	Aug. '10 Feb-11 99%	Jan. '11 Jun-11 66%	Oct-11	July '11 Dec-11 0%	Sept. '11 Feb-12 0%	85%	Aug. '11 Dec-11 2%					
Bakersfield - Palmdale	Plan Actual / PMT plan Feb 11 % Complete	Mar. '10 Mar. '10 A 100%	Aug. 5, 2010 Sep '10 A	Aug. '10 Aug. '10 A 100%	Oct. 7, 2010 Sept '10 A	Nov. '10 Jun-11 16%	May-11	Sept. '11 Jan-12 6%	Sep-11	Sept. '11 Mar-12 1%	Nov. '11 Dec-11 30%	Dec. '11 Jun-12 0%	Oct-12	June '12 Feb-13 0%	Sept. '12 Apr-13 0%	33%	Sept. '12 Dec-13 0%					
Palmdale - Los Angeles	Plan Actual / PMT plan Feb 11 % Complete	June '09 Mar. 10 A 100%	May 6, 2010 Jul. 8 '10 A	May '10 Jul. '10 A 100%	Aug. 5, 2010	Aug. '10 Mar-11 90%	May-11	Oct. '10 Nov-11 63%	Sep-11	Oct. '10 Dec-11 60%	Oct. '10 Oct-11 81%	Jan. '11 Mar-12 0%	Jul-12	Aug. '11 Oct-12 0%	Oct. '11 Jan-13 0%	67%	June '12 Sep-13 0%					
Los Angeles - Anaheim	Plan Actual / PMT plan Feb 11 % Complete	Aug. '09 Mar. 10 A 100%	Not Applicable	Apr. 24, 2009 Apr. 24, 09 A 100%	Jun. 3, 2010 Jul. 8, '10 A	June '10 July '10 A 100%	May-11	Sept. '10 Jul-12 85%	Sep-11	Sept. '10 Sep-12 90%	Aug. '10 Jun-12 93%	Jan. '11 Nov-12 0%	Mar-13	July '11 Jun-13 0%	Sept. '11 Sep-13 0%	78%	July '11 May-14 0%					
Los Angeles - San Diego	Plan Actual / PMT plan Feb 11 % Complete	June '10 June '10 A 100%	Jul '10	Jul. '10 90%	Jan. 6, 2011	Jan. '11 0%		Aug. '12 0%		Aug. '12 0%	Aug. '12 0%	Feb. '13 0%		Sept. '14 0%	Dec. '14 0%	19%	Sept. '14 0%					
Merced - Sacramento	Plan Actual / PMT plan Feb 11 % Complete	Feb. '10 Apr. '10 A 100%	Feb. 3, 2011	Feb. '11 20%	May 5, 2011	May '11 19%		Sept. '11 0%		Sept. '11 0%	Oct. '11 0%	Jan. '12 0%		Nov. '12 0%	Mar. '13 0%	9%	Nov. '12 0%					
Allamont Corridor	Plan Actual / PMT plan Feb 11 % Complete	Feb. '10 Mar. 10 A 100%	Nov. 4, 2010	Dec. '10 95%	Mar. 3, 2011	Mar. '11 0%		Nov. '11 0%		Nov. '11 0%	Dec. '11 2%	Mar. '12 0%		Sept. '12 0%	Dec. '12 0%	20%	Nov. '12 0%					

Blue text = Actual dates

Red text indicates a date change from last month's MPR

"PMT Plan Feb 11 dates" reflect target dates agreed between the Authority and PMT based on working agreements with environmental review and approval agencies

Phase 2 Sections will be rescheduled over the next few months

Contact Information

Mineta Transportation Institute's

National HSR Policy Center

210 North Fourth Street

Fourth Floor

San Jose CA 95112

408-924-7560

www.transweb.sjsu.edu