



Draft 2008 LRTP TIER 1 Project Lists

Performance Measures and Analyses



Transit Performance Measures

Transit Projects	Distance	Cost (in 2015 million \$)	Annual Boardings	Annual Boardings /Mile	Annual Boardings /Million \$
Burbank/Glendale Light Rail from LA Union Station to Burbank Metrolink Station	10.79	1,277.0	6,355,348	589,004	4,977
Harbor Subdivision DMU between LA Union Station and Metro Green Line Aviation Station	11.52	666.0	4,502,782	390,731	6,761
I-405 Corridor Busway between Metro Orange Line Sepulveda Station and Metro Green Line Aviation Station	20.28	772.8	6,310,451	311,166	8,166
Metro Gold Line Eastside Extension from Atlantic/Pomona Station to City of Whittier (At-grade light rail)	9.07	1,088.8	4,157,010	458,325	3,818
Metro Gold Line Eastside Extension to City of Whittier (Aerial light rail)	9.07	1,616.1	5,074,007	559,427	3,140
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Azusa (JPA cost)	10.50	485.2	3,310,750	315,310	6,827
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Azusa (Metro cost)	10.50	773.4	3,310,750	315,310	4,281
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Montclair (JPA cost)	23.57	1,237.2	6,334,353	268,781	5,120
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Montclair (MTA cost)	23.57	1,771.8	6,334,353	268,781	3,575
Metro Green Line Extension between LAX/Aviation Station to Expo Santa Monica Station	12.49	1,828.5	7,184,974	575,258	3,929
Metro Green Line Extension between Norwalk Station and Norwalk Metrolink Station (Elevated)	2.27	480.2	1,495,006	658,593	3,113
Metro Green Line Extension between Norwalk Station and Norwalk Metrolink Station (Underground)	2.27	1,069.6	1,495,006	658,593	1,398
Metro Green Line Extension between South Bay Galleria and Pacific Coast Hwy Harbor Transitway Station	7.55	877.6	2,635,680	349,328	3,003
Metro Green Line Extension from Redondo Beach Station to South Bay Galleria	2.72	266.5	1,268,906	466,509	4,761
Metro Red Line Extension from North Hollywood Station to Burbank Airport Metrolink Station	2.39	933.3	5,350,818	2,236,029	5,733
Metro Red Line Westside Extension from Century City to City of Santa Monica	6.78	2,326.5	11,074,701	1,634,160	4,760
Metro Red Line Westside Extension from Wilshire/Western Station to Century City	6.44	2,512.8	14,721,048	2,286,587	5,858
Regional Connector Light Rail in tunnel from LA Union Station to 7th St/Metro Center	1.65	722.6	6,898,472	4,180,892	9,547
Silver Line Light Rail between Metro Red Line Vermont/Santa Monica Station and City of La Puente	24.25	2,975.7	9,077,269	374,320	3,050
SR 134 Transit Corridor BRT between Metro Red Line North Hollywood Station and Metro Gold Line Del Mar Station	15.74	901.6	5,102,593	324,180	5,659
Vermont Corridor Subway	9.24	3,627.9	12,991,868	1,406,198	3,581
West Santa Ana Branch ROW Corridor Mag Lev between LA Union Station and Santa Ana Metrolink Station	20.15	4,764.8	9,056,274	449,443	1,901
Yellow Line Light Rail between Metro Red Line North Hollywood Station and Regional Connector 3rd/Flower St Station	17.23	1,957.8	7,418,664	430,567	3,789

(1) Several projects were evaluated with differing technologies and alignments

Highway Performance Measures

Highway Performance Measures (from Metro Draft LRTP)

Highway Projects	Distance	Cost (in 2015 million \$)		Annual Hrs Saved	Annual Hrs Saved /Mile	Annual Hrs Saved /Million \$
		low	high			
HDC E-W: SR 14 to LA/SB Co Line- (add 3 MF+1 HOV freeway/expressway)	28.12	1,343		1,034,530	36,793	770
HDC N-S: SR14 to SR138 - add 2 MF expressway**					4,981	209
I-10: Add one HOV lane in each direction on Santa Monica Freeway between Lincoln Blvd. (in Santa Monica) and the I-5 Frwy interchange. *	16.09	2,530	3,163	6,439,300	400,134	2,291
I-405: Add N/B lane from Hawthorne to I-105	3.62	373		941,372	259,909	2,524
I-405: Add S/B lane from Rosecrans to Inglewood	3.62	373		941,372	259,909	2,524
I-5 Carpool & Mixed Flow Lanes: I-605 to I-710 *	6.93	2,530	3,163	2,693,619	388,537	959
I-5: SR-14 to Kern Co Line (HOV and Truck Lane Improvements)	47.53	1,255		13,920,288	292,844	11,092
I-605 HOV lanes: I-210 to I-10	5.56	161		1,717,785	309,140	10,669
I-710 Corridor Study Recommendations: (Add Mixed Flow lanes to make uniform 10 lanes from Ports to SR-60; Add 2 Truck lanes in each direction from Ports to Hobart/ICTF Railyards- Cities of Vernon, Commerce)	19.61	6,958		8,229,819	419,620	1,183
SR57 HOV lanes: Rt. 60 to I-210	3.38	161		1,173,275	347,406	7,287
SR-60 HOV lanes: Rt. 101 to I-605	11.14	461		2,260,661	203,009	4,904
SR-138: I-5 to SR-14 - Add 2 MF lanes in each direction	37.13	1,064		206,305	5,557	194
SR-138: Pearblossom Hwy to SB Co Line - Widen existing SR-138 to 4 lanes.	27.06	390		381,040	14,079	977
SR-14: I-5 to Kern County Line (HOV & Mixed Flow Improvements)	52.16	1,592		8,127,265	155,810	5,105
SR-710 North Extension: Add 3 Mixed Flow + 1 HOV lane in each direction *	4.55	2,151	2,783	3,408,808	749,853	1,405
US-101 Corridor: Add HOV lane in each direction between Rt. 27 (Topanga Canyon) and Rt 2 in Downtown LA and restripe for mixed flow lane in each direction between Rt 27 and the Ventura Co Line. *	22.70	1,834	2,530	10,125,149	446,126	4,762
US-101: Add HOV lane in each direction between Rt 27 and the Ventura Co Line (This HOV lane would be in addition to the mixed flow lane proposed on the 2001 LRTP Strategic list.) *	12.83	760	1,013	6,972,171	543,389	8,029

* For each project in which estimated cost was provided in the form of a range rather than a single estimate, the midpoint of the range was used for evaluation purposes.

** The Hours of Delay Savings for the HDC N-S project were provided through off-model analysis. The delay savings for this segment was calculated from the HDC E-W project through a comparison of projected daily trip volumes. The HDC N-S carries approximately 44% of the volumes of the HDC E-W, therefore the delay savings were calculated to be 44% that of the HDC E-W segment.

Performance Analysis - Transit

Transit Projects* (Alphabetical Order by Score)	Project Performance - 50%			Corridor Need - 50%					Total Combined Score	Current Status						
	Annual Boardings per Mile	Annual Boardings per Million \$	Total Score	Pop & Employment Density	% of Transit Dependent Census Tracts	Major Activity Centers/ Mile	Boardings/ mile (2004)	Total Score								
Regional Connector Light Rail in tunnel from LA Union Station to 7th St/Metro Center**	4,180,892	3	9,547	3	12	41.16	3	100.0%	3	36.97	3	77,907	3	12	24	Undergoing Alternatives Analysis. Report to Board in Fall 2008
Metro Red Line Westside Extension from Wishire/Western Station to Century City	2,286,587	3	5,858	2	10	17.56	3	70.4%	3	8.39	3	9,363	3	12	22	Various Environmental documents 1983-1989, EIS (supplemental). Undergoing Alternatives Analysis for extensions of Purple and Red Lines. Report to Board in Fall 2008
Harbor Subdivision DMU between LA Union Station and Metro Green Line Aviation Station	390,731	1	6,761	3	8	12.53	2	85.9%	3	8.50	3	8,150	3	11	19	Alternatives Analysis to start 5-2008
Metro Red Line Westside Extension from Century City to City of Santa Monica	1,834,160	3	4,760	2	10	15.70	2	45.3%	2	9.15	3	4,127	2	9	19	See Red Line above
Metro Red Line Extension from North Hollywood Station to Burbank Airport Metrolink Station	2,236,029	3	5,733	2	10	11.91	2	64.7%	2	4.60	1	7,636	3	8	18	Feasibility study in 1992-1993
Vermont Corridor Subway	1,406,198	2	3,581	1	6	22.27	3	97.5%	3	6.93	2	8,845	3	11	17	N/A
Burbank/Glendale Light Rail from LA Union Station to Burbank Metrolink Station	589,004	1	4,977	2	6	11.43	2	66.4%	2	6.77	2	8,496	3	9	16	EIR 1994
Metro Gold Line Eastside Extension from Atlantic/Pomona Station to Eastern LA County	458,325	1	3,818	2	6	10.74	2	56.2%	2	5.62	2	681	1	7	13	Conducting Alternative Analysis. Report to Board in September 2008
Yellow Line Light Rail between Metro Red Line North Hollywood Station and Regional Connector 3rd/Flower St Station	430,567	1	3,789	2	6	14.49	2	64.0%	2	5.22	1	3,984	2	7	13	No Metro work done.
I-405 Corridor Busway between Metro Orange Line Sepulveda Station and Metro Green Line Aviation Station	311,166	1	8,166	3	8	8.36	1	37.3%	1	4.04	1	1,308	1	4	12	I-405 N/E HOV environmentally cleared by Caltrans. To be D/B contract with Metro. Busway components studied as Transit Enhancements in 2003 environmental studies.
Silver Line Light Rail between Metro Red Line Vermont/Santa Monica Station and City of La Puente	374,320	1	3,050	1	4	13.98	2	67.3%	2	5.77	2	4,167	2	8	12	No Metro work done.
Metro Gold Line Eastside Extension Eastern LA County	559,427	1	3,140	1	4	10.74	2	56.2%	2	5.62	2	681	1	7	11	Undergoing Alternatives Analysis. Report to Board in Fall 2008
Metro Green Line Extension from Redondo Beach Station to South Bay Galleria	466,509	1	4,761	2	6	9.50	1	23.9%	1	6.99	2	3,062	1	5	11	Route Refinement study in May 1990
Metro Green Line Extension between LAV/Aviation Station to Expo Santa Monica Station	575,258	1	3,929	2	6	9.32	1	14.1%	1	4.48	1	1,299	1	4	10	EIR August 1989 (only Playa Vista portion)
SR 134 Transit Corridor BRT between Metro Red Line North Hollywood Station and Metro Gold Line Del Mar Station	324,180	1	5,859	2	6	7.61	1	41.2%	1	4.89	1	2,147	1	4	10	
Metro Green Line Extension between Norwalk Station and Norwalk Metrolink Station (Elevated)	658,593	1	3,113	1	4	11.00	2	20.9%	1	4.85	1	2,136	1	5	9	Some environmental work done in 1990s
Metro Green Line Extension between Norwalk Station and Norwalk Metrolink Station (Underground)	658,593	1	1,398	1	4	11.00	2	20.9%	1	4.85	1	2,136	1	5	9	Some environmental work done in 1990s
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Montclair (MTA cost)	268,781	1	3,575	1	4	4.85	1	14.7%	1	4.58	1	238	1	4	8	EIR Finalized
Metro Green Line Extension between South Bay Galleria and Pacific Coast Hwy Harbor Transitway Station	349,328	1	3,003	1	4	9.58	1	28.1%	1	3.71	1	355	1	4	8	No Metro work done.
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Azusa (JPA cost)	315,310	1	6,827	3	8	5.50	1	19.0%	1	5.05	1	345	1	4	12	See Sierra Madre to Montclair
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Azusa (Metro cost)	315,310	1	4,261	2	6	5.50	1	19.0%	1	5.05	1	345	1	4	10	See Sierra Madre to Montclair
Metro Gold Line Foothill Extension from Sierra Madre Villa Station to Montclair (JPA cost)	268,781	1	5,120	2	6	4.85	1	14.7%	1	4.83	1	249	1	4	10	See Sierra Madre to Montclair
West Santa Ana Branch ROW Corridor HSR between LA Union Station and Santa Ana Metrolink Station	449,443	1	1,901	1	4	11.96	2	58.8%	2	4.67	1	3,321	2	7	11	Part of OC/LA Intercounty Transportation Study

* Shared with Board previously. Metro costs revised for Gold Line Foothill Extension. Slight changes to some total scores reflect minor technical corrections.

* Light rail projects using heavy rail lines may be required to negotiate exclusive use agreements to share tracks. If at-grade or aerial alignments require right-of-way purchases, cost estimates could increase substantially.

** The Regional Connector Light rail project received the highest score in each category. Because the scores for this project were significantly higher than the field in most categories they were not considered in the range of scores when assigning points to the other projects, in order to achieve a more balanced distribution.

Performance Analysis - Highway

Highway Projects (Alphabetical by Score)	Project Performance - 50%						Corridor Need - 50%						Total Combined Score	Current Status		
	Annual Hrs of Delay Savings /Mile	Annual Hrs Saved Per Million \$			Total Score	Pop & Emp Density	Major Activity Centers/ Mile	Highway Congestion Score		Total Score						
			low	high												
SR-710 North Extension: Tunnel	749,853	3	1405*	1,225	1,585	1	12	9.70	2	39.16	3	5	3	16	28	Caltrans awarded technical studies contract
I-605 HOV lanes: I-210 to I-10	309,140	2	10,669			3	15	7.17	2	24.30	2	4	2	12	27	Project not initiated by Caltrans
I-405: Add N/B lane from Hawthorne to I-105 (Approximate length = 3.5 miles)	259,909	2	2,524			1	9	11.33	2	54.67	3	6	3	16	25	
I-405: Add S/B lane from Rosecrans to Inglewood (Approximate length = 1.0 mile)	259,909	2	2,524			1	9	11.33	2	54.67	3	6	3	16	25	
US-101 Corridor: Add HOV lane in each direction between Rt. 27 (Topanga Canyon) and Rt 2 in Downtown LA and restripe for mixed flow lane in each direction between Rt 27 and the Ventura Co Line.	446,126	2	4762*	4,002	5,521	2	12	12.54	2	22.82	2	4	2	12	24	Major Investment Study completed 2003
US-101: Add HOV lane in each direction between Rt 27 and the Ventura Co Line (This HOV lane would be in addition to the mixed flow lane proposed on the 2001 LRTP Strategic list.)	543,389	3	8029*	6,883	9,174	3	18	2.92	1	7.79	1	3	1	6	24	Major Investment Study completed 2003
I-10: Add one HOV lane in each direction on Santa Monica Freeway between Lincoln Blvd. (in Santa Monica) and the I-5 Fwy interchange.	400,134	2	2291*	2,036	2,545	1	9	19.48	3	33.56	2	4	2	14	23	
I-5 Carpool & Mixed Flow Lanes: I-605 to I-710	388,537	2	959*	852	1,065	1	9	10.66	2	30.72	2	5	3	14	23	Caltrans to start environmental study
SR 57 HOV lanes: Rt. 60 to I-210	347,406	2	7,287			2	12	3.71	1	17.77	1	5	3	10	22	Project not initiated by Caltrans
I-5: SR 14 to Kern Co Line (HOV and Truck Lane Improvements)	292,844	2	11,092			3	15	0.27	1	1.07	1	2	1	6	21	The Golden State Gateway Coalition working on draft EIR/EIS. Report to be completed by summer 2008. Caltrans is providing oversight for this joint public- private funded work.
I-710 Corridor Study Recommendations: (Add Mixed Flow lanes to make uniform 10 lanes from Ports to SR- 60; Add 2 Truck lanes in each direction from Ports to Hobart/ ICTF Railyards- Cities of Vernon, Commerce)	419,620	2	1,183			1	9	11.08	2	21.87	2	4	2	12	21	Undergoing EIS/EIR. Report to be completed by Summer/Fall 2010
SR 60 HOV lanes: Rt. 101 to I-605	203,009	1	4,904			2	9	11.10	2	26.04	2	4	2	12	21	Caltrans has started EIS/EIR study.
SR-14: I-5 to Kern County Line (HOV & Mixed Flow Improvements)	155,810	1	5,105			2	9	0.89	1	2.89	1	2	1	6	15	
HDC E-W: SR 14 to LA/ SB Co Line- (add 3 MF+1 HOV freeway/expressway)	36,793	1	770			1	6	0.03	1	2.38	1	2	1	6	12	Bi-County JPA evaluating proposals for EIS/EIR report
HDC N-S: SR14 to SR138 - add 2 MF expressway**	4,981	1	209			1	6	0.07	1	0.18	1	2	1	6	12	
SR-138: I-5 to SR-14 - Add 2 MF lanes in each direction	5,557	1	194			1	6	0.54	1	0.03	1	2	1	6	12	Part of North County Corridor Plan adopted 2004. Project recommended in Plan
SR-138: Pearblossom Hwy to SB Co Line - Widen existing SR-138 to 4 lanes.	14,079	1	977			1	6	0.30	1	1.15	1	2	1	6	12	Part of North County Corridor Plan adopted 2004. Project recommended in Plan

¹ Slight change to total score for US-101 project (from Rt. 2 to Ventura County Line) reflects minor technical correction.

Hours of Delay Savings is calculated by modeling delay savings throughout a defined corridor. Where there are multiple freeway projects located in a corridor they share the same delay savings results.

* For each project in which estimated cost was provided in the form of a range rather than a single estimate, the midpoint of the range was used for evaluation purposes.

** The Hours of Delay Savings for the HDC N-S project were provided through off-model analysis. The delay savings for this segment was calculated from the HDC E-W project through a comparison of projected daily trip volumes. The HDC N-S carries approximately 44% of the volumes of the HDC E-W, therefore the delay savings were calculated to be 44% that of the HDC E-W segment.