

I-290 Phase I Study
Round 2 - Combination Mode Alternatives
Purpose and Need Evaluation Measures
 March 15, 2012
DRAFT
 This is a draft document, and may be updated.

Higher or Lower value of measure desired

P&N		Measure	2040 No Build + EXP	GP Lane				HOV 2+				HOT 3+				Toll				HOT 3+ & Toll									
				GP & EXP	GP & EXP & HCT	HOV 2+ & EXP	HOV 2+ & EXP & HCT	HOT 3+ & EXP	HOT 3+ & EXP & HCT	TOLL & EXP	TOLL & EXP & HCT	HOT 3+ & TOLL & EXP	HOT 3+ & TOLL & EXP & HCT																
		Total Score by Sum of Need Point Rank->		18	3	27	9	18	3	31	10	17	2	27	8	14	1	20	5	25	7	23	6						
Regional Travel	All Vehicles	1.3	I-290 Average Travel Time Changes (Peak Periods)	All Lanes	%	↓	17.2 min	-5.4%	1	-7.9%	2	-11.8%	6	-10.8%	4	-12.4%	8	-11.8%	5	-12.0%	7	-8.9%	3	-34.6%	10	-34.5%	9		
				HOV/HOT	%	↓	-	-	**	-	**	-40.6%	**	-40.2%	**	-25.3%	**	-17.1%	**	-40.1%	**	-39.9%	**	-16.7%	**	-22.1%	**		
				GP Lanes	hrs	↓	18.0	-1.00	8	-0.50	5	-0.75	7	-0.75	7	-0.50	5	-0.50	5	-0.25	2	-0.25	2	-8.50	10	-8.25	9		
				HOV/HOT *	hrs		-	0.0	**	0.0	**	-14.5	**	-14.0	**	-13.5	**	-13.0	**	-12.0	**	-11.5	**	-10.5	**	-11.5	**		
				1.5	Daily Person Throughput (Study Area)	(Daily thru	#	↑	364,448	17,064	1	22,438	2	27,747	4	31,511	6	34,220	7	35,065	8	35,232	9	37,149	10	27,358	3	30,498	5
				1.6	Vehicle Miles of Travel (Daily VMT)	miles	↓	233,263,703	31,249	9	68,884	7	42,619	8	24,144	10	105,057	5	113,918	3	117,235	2	155,759	1	81,709	6	107,482	4	
				1.7	Vehicle Hours of Travel (Daily VHT)	hours	↓	10,319,255	-19,415	7	-28,554	10	-20,250	8	-23,232	9	-8,970	2	-12,886	4	-18,031	6	-1,225	1	-17,613	5	-11,715	3	
				1.8	Congested VMT (Daily)	miles	↓	17,937,393	-56,395	2	-76,738	7	-67,995	6	-59,370	3	-62,872	5	-59,812	4	-80,266	8	-41,955	1	-95,328	10	-88,684	9	
				1.9	Hours of Delay (Daily)	hours	↓	5,237,381	-17,454	6	-26,852	10	-19,713	7	-22,163	9	-8,916	2	-12,816	4	-12,454	3	-2,346	1	-21,298	8	-16,115	5	
	Local Travel	Arterials	1.10	Truck Miles of Travel (TMT)	miles	↓	44,488,408	2,528	2	6,303	1	-3,358	7	-2,209	3	-2,739	4	-2,980	5	-5,160	8	-3,256	6	-11,082	10	-10,314	9		
1.11			Truck Hours of Travel (THT)	hours	↓	1,746,489	-3,636	8	-4,483	9	-1,942	5	-2,395	6	-893	3	-1,726	4	-219	2	934	1	-4,582	10	-2,986	7			
1.12			Congested TMT	miles	↓	2,353,496	-9,612	6	-12,389	8	-7,894	4	-7,662	3	-9,335	5	-11,809	7	-6,884	2	-4,936	1	-21,456	10	-18,410	9			
1.13			Truck Hours of Delay	hours	↓	856,318	-3,312	7	-4,220	9	-1,851	5	-2,368	6	-812	3	-1,693	4	-165	2	922	1	-5,236	10	-3,646	8			
				1.16	Peak Period Speed	East-West Arterials	mph	↑	18.49	0.47	9	0.47	10	0.37	8	0.36	7	0.21	6	0.20	5	0.10	4	0.09	3	-0.33	1	-0.32	2
		1.17	Peak Period Speed	North-South Arterials	mph	↑	17.20	0.01	4	0.05	7	-0.01	2	0.14	10	0.01	3	0.11	9	0.06	8	0.01	5	-0.06	1	0.03	6		
		1.18	Vehicle Miles of Travel (VMT)	miles	↓	3,381,655	-67,378	9	-77,451	10	-36,511	5	-43,604	8	-40,146	6	-43,110	7	-24,872	3	-25,257	4	73,639	2	74,412	1			
		1.19	Vehicle Hours of Travel (VHT)	hours	↓	211,807	-6,267	9	-7,650	10	-5,271	6	-6,061	8	-5,191	5	-5,548	7	-3,543	3	-3,819	4	2,080	2	2,256	1			
		1.20	Congested VMT	miles	↓	239,165	-15,193	5	-19,481	10	-15,354	6	-17,393	9	-15,935	7	-16,437	8	-11,677	3	-12,346	4	-3,468	1	-3,659	2			
		1.21	Hours of Delay	hours	↓	101,880	-4,014	6	-5,093	10	-4,018	7	-4,581	9	-3,865	5	-4,126	8	-2,719	3	-2,996	4	-196	2	-50	1			
Improve Regional And Local Travel		Need Point Average Score & Rank				5.8	6	7.5	10	5.9	7	6.9	9	4.8	3	5.7	5	4.4	2	3.1	1	5.9	8	5.3	4				
Access to Employment	# of Jobs Accessible within 60 min.:																												
	2.1	Auto	#	↑	2,948,560	66,569	2	112,028	4	53,994	1	82,152	3	420,550	6	268,668	5	898,350	10	839,751	9	809,205	8	789,544	7				
	2.2	Transit	#	↑	2,158,899	0	1	5,141	6	0	1	5,141	6	0	1	5,141	6	0	1	5,141	6	0	1	5,141	6				
	2.3	Transit & Auto	#	↑	5,107,459	66,569	2	117,169	4	53,994	1	87,293	3	420,550	6	273,809	5	898,350	10	844,892	9	809,205	8	794,685	7				
Improve Access to Employment		Need Point Average Score & Rank				1.7	2	4.7	5	1.0	1	4.0	3	4.3	4	5.3	6	7.0	9	8.0	10	5.7	7	6.7	8				
Safety	Injuries and Fatality Rates % Change:																												
	3.1	Arterial	million vehicle miles/year	↓	0.519	0.00%	8	-0.08%	10	0.04%	6	-0.08%	9	0.06%	4	0.01%	7	0.10%	3	0.06%	5	0.21%	1	0.14%	2				
	3.2	Expressway	million vehicle miles/year	↓	0.219	-9.19%	6	-8.60%	1	-10.72%	8	-10.55%	7	-9.00%	5	-8.83%	3	-8.94%	4	-8.72%	2	-13.88%	10	-13.70%	9				
	3.3	Overall (Arterial, Highway, Transit)	million person miles/year	↓	0.385	-6.40%	1	-6.47%	2	-9.58%	9	-9.92%	10	-8.44%	7	-8.67%	8	-8.05%	5	-8.28%	6	-7.57%	4	-7.48%	3				
Improve Safety for All Users		Need Point Average Score & Rank				5.0	5	4.3	2	7.7	9	8.7	10	5.3	7	6.0	8	4.0	1	4.3	3	5.0	6	4.7	4				
Modal Connections & Opportunities	4.1	New Transit Trips (Regional)	#	↑	2,009,178	-178	9	1,302	10	-6,080	1	-2,390	8	-3,706	4	-2,400	7	-5,221	2	-3,765	3	-3,125	5	-2,580	6				
	4.2.1	0.5 Mile Transit Access	Households	#	↑	-	0	1	4,585	6	0	1	4,585	6	0	1	4,585	6	0	1	4,585	6	0	1	4,585	6			
	4.2.2		Employment	#	↑	-	0	1	19,397	6	0	1	19,397	6	0	1	19,397	6	0	1	19,397	6	0	1	19,397	6			
	4.3	Non-motorized Connections	(qualitative)	↑	-	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**				
	4.4	Multimodal Opportunities	(qualitative)	↑	-	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**	✓	**				
Improve Modal Connections & Opportunities		Need Point Average Score & Rank				3.7	5	7.3	10	1.0	1	6.7	9	2.0	3	6.3	8	1.3	2	5.0	6	2.3	4	6.0	7				
Facility Condition & Design	5.1	Address Pavement Age	(qualitative)	↑	-	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
	5.2	Address Structure Deficiencies	(qualitative)	↑	-	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
	5.3	Address Geometric Deficiencies	(qualitative)	↑	-	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
	5.4	Address ADA Deficiencies	(qualitative)	↑	-	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
	5.5	Address Drainage Deficiencies	(qualitative)	↑	-	✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
Improve Facility Condition and Design		Need Point Average Score & Rank				✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					

Color Legend:

< Higher Performing	-----	Lower Performing >	
Rank 10	Rank 9	Rank 8	Rank 7

Worsened

** Provided for information only, not included in scoring.