I-285 STRATEGIC IMPLEMENTATION PLAN

INTERSTATE

GEORGIA

285

Project Objectives

I-285 STRATEGIC IMPLEMENTATION PLAN

The Objectives of the I-285 Strategic Implementation Plan Were:

- ✓ Objective, detailed evaluation of planned projects and programs in the I-285 corridor;
- ✓ Development and evaluation of alternate improvement projects, programs and/or strategies;
- ✓ Development of an comprehensive, implementable improvement program for the entire I-285 corridor through the horizon year 2030; and
- ✓ Development of implementation program for 2015, 2020, 2030, and beyond 2030.

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Scenario Development and Evaluation

I-285 STRATEGIC IMPLEMENTATION PLAN

Initial Scenario Development and Regional Evaluation (7 Scenarios)

Scenarios 1 - 7

Scenario Refinement Regional and Operational Evaluation (4 Scenarios)

Scenarios 7 - 10

Scenario Refinement Regional and Operational Evaluation (1 Scenario)

Scenario 11

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Initial Scenarios

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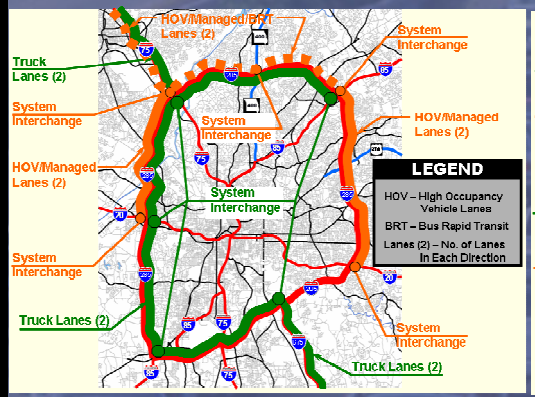
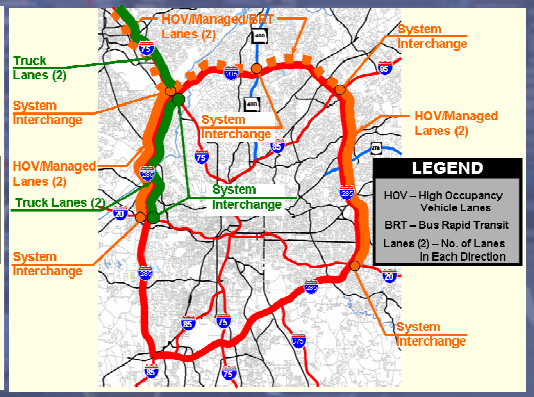
Scenario 1



Scenario 2



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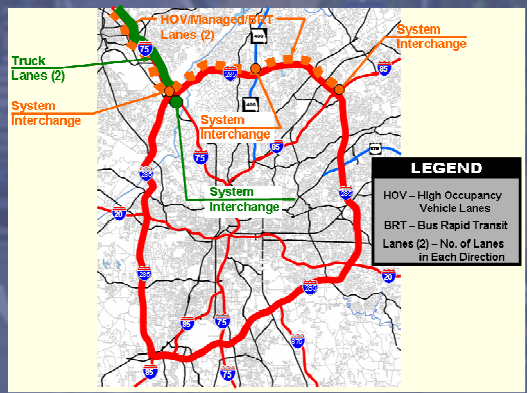

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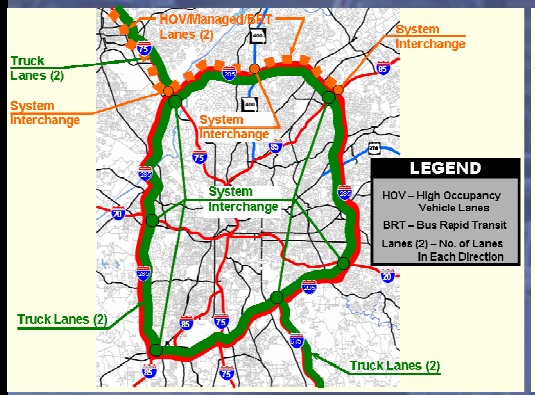
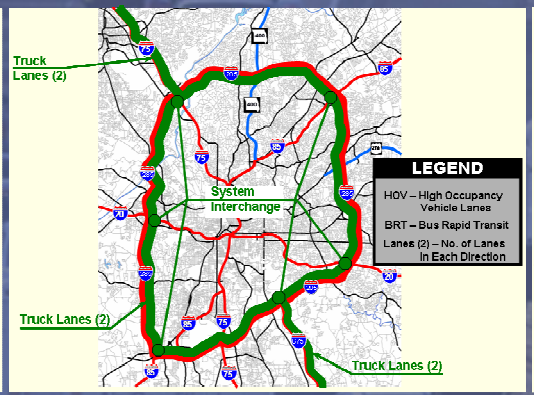


Scenario 5



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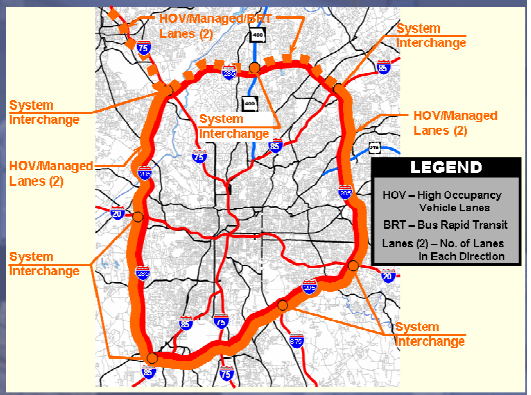
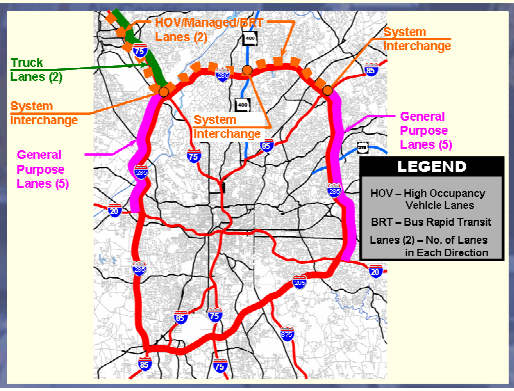


Scenario 7



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I-285 STRATEGIC IMPLEMENTATION PLAN

Regional Evaluation Measures

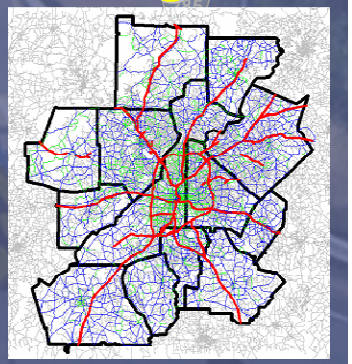
Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Average Speed	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Delay Cost	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

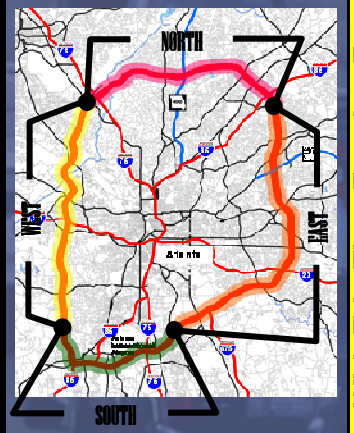
Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
% Lane-Miles Greater Than Capacity	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Delay (Vehicle Hours)	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

Region



Sections



Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
% Trips With Trip Time Equal to Free Flow Travel Time	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Vehlice Hours of Delay Per 1,000 Vehicle Miles of Travel	Region	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Northern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Eastern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Southern Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Western Section	Freeway	2
		GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Arterials	2
		Subtotal	10
	Total		*50*

Evaluation Measure	Analysis Level	Daily	Highest Possible Score
Air Quality (NOX and VOC)	Region	NOX	1
		VOC	1
		Subtotal	2
	Total		*2*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score	Total
Benefit/Cost Ratio Based Upon Reduction in Peak Hour Dely Cost vs. 2030 RTP	Region		1	14
				12
				12
				13
				12
		Subtotal	1	63
				12
				12
				12
				12
				12
				60
				12
				12
				12
				12
				12
				60
				12
				12
				12
				12
				12
				60
				12
				12
				12
				12
				12
				60
	Total		*1*	*303*

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Regional Evaluation
Scenarios 1 - 7

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Category	Section	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
Regional Speeds	Region	1	0	0	1	0	2	6
	Northern	1	2	0	2	0	0	5
	Eastern	2	0	0	0	0	1	7
	Southern	3	0	0	2	0	0	5
	Western	0	3	0	0	1	0	6
	Subtotal	***7***	***5***	***0***	***5***	***1***	***3***	**29**
Delay Costs	Region	0	0	0	1	1	0	6
	Northern	4	0	0	2	0	0	2
	Eastern	0	0	0	1	1	2	4
	Southern	5	0	0	1	0	1	2
	Western	6	0	0	0	0	1	2
	Subtotal	***15***	***0***	***0***	***5***	***2***	***4***	**16**
% Lane-Miles Greater Than Capacity	Region	2	2	2	2	2	2	6
	Northern	2	2	1	0	2	0	3
	Eastern	1	1	1	3	2	1	2
	Southern	3	0	0	1	3	2	0
	Western	3	1	2	4	5	0	2
	Subtotal	***11***	***6***	***6***	***10***	**14**	***5***	***13***
Delay	Region	2	2	2	2	2	0	11
% Trips With Trip Time Equal to Free Flow Travel Time	Region	0	0	0	0	0	0	8
Air Quality	Region	0	0	0	0	0	0	1
Grand Total		***35***	***13***	***8***	***22***	***19***	***12***	**78**
Regional Total		***5***	***4***	***4***	***6***	***5***	***4***	**38**

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Scenarios For Regional & Operational Evaluation

Scenario 7 – Best of Initial 7

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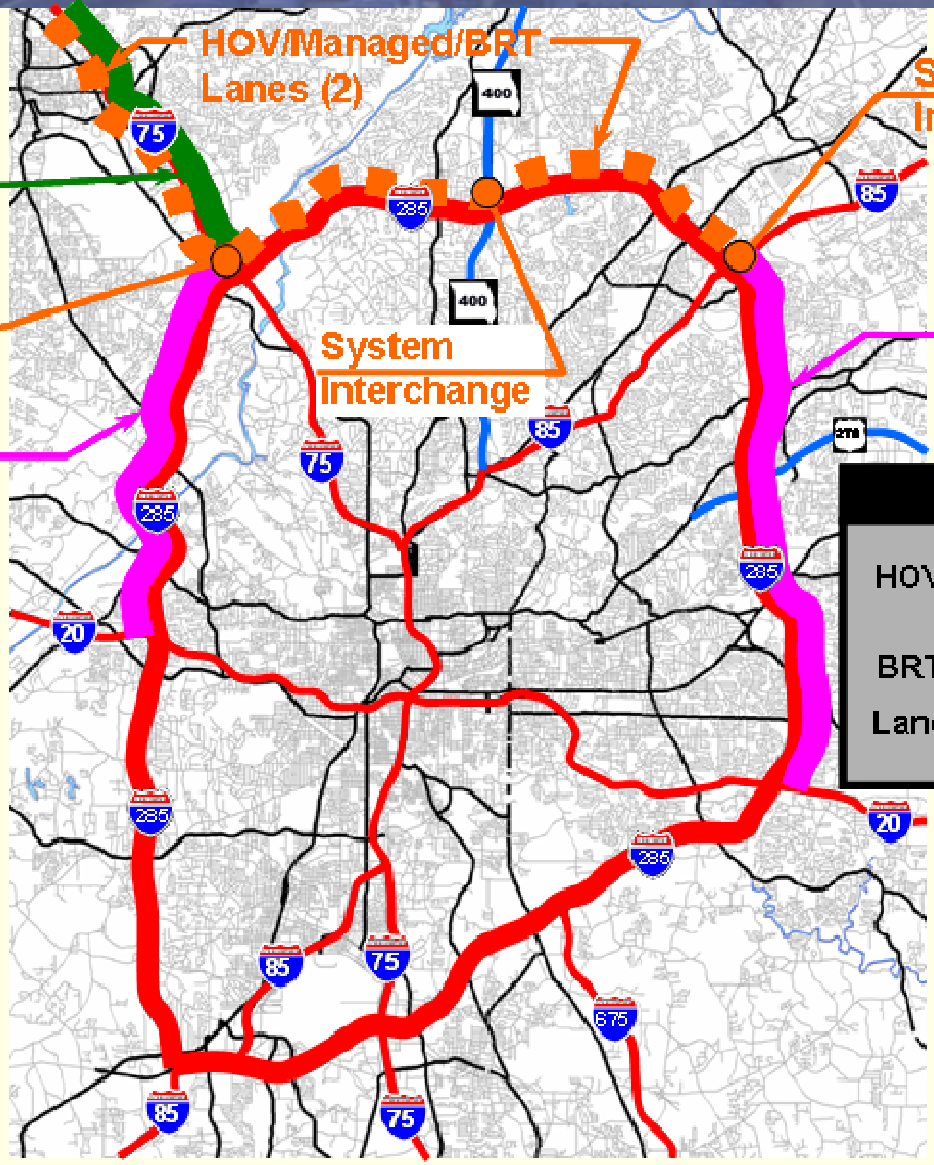

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Scenarios For Regional & Operational Evaluation

Scenario 8

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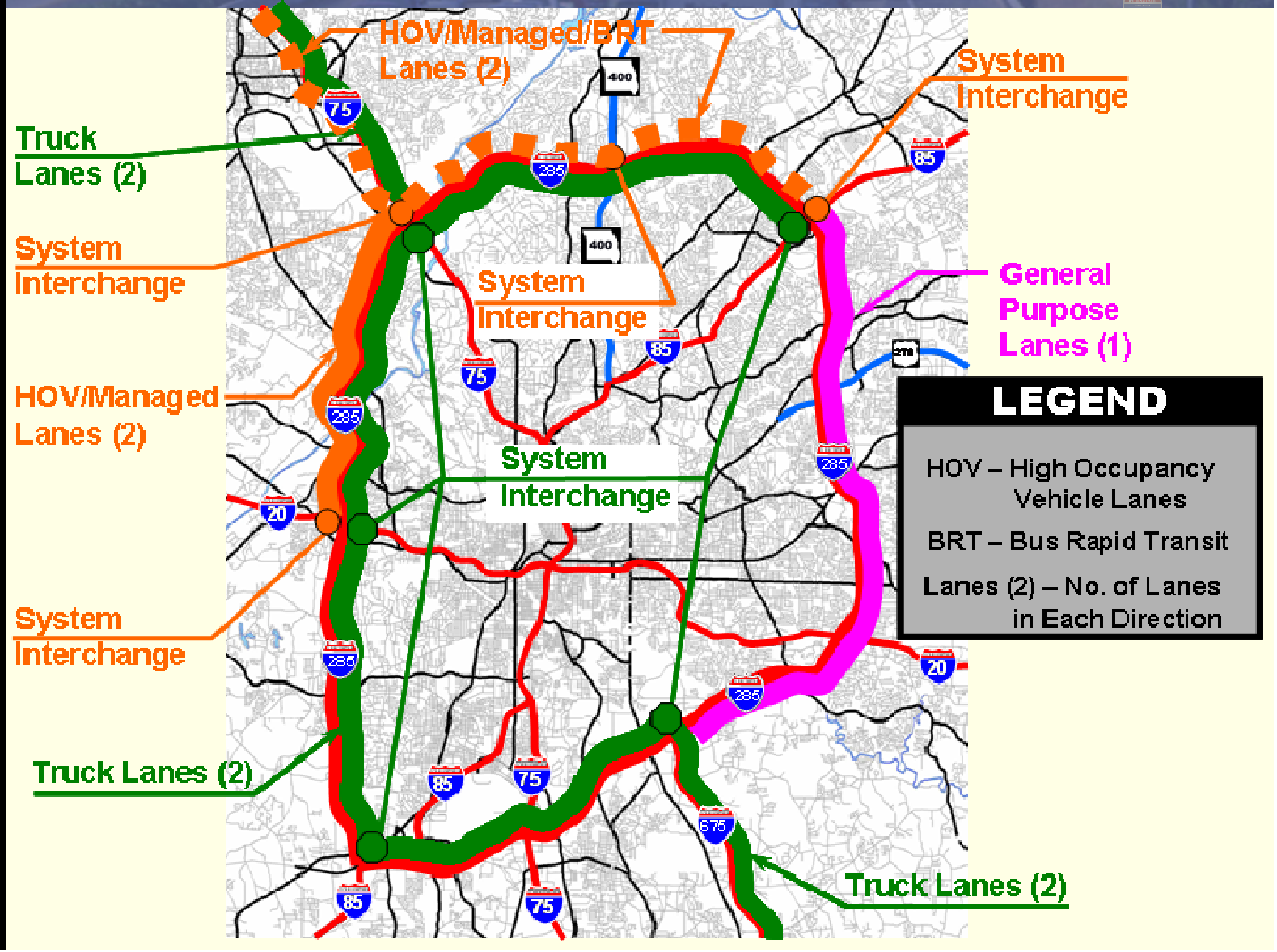

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Scenarios For Regional & Operational Evaluation

Scenario 9

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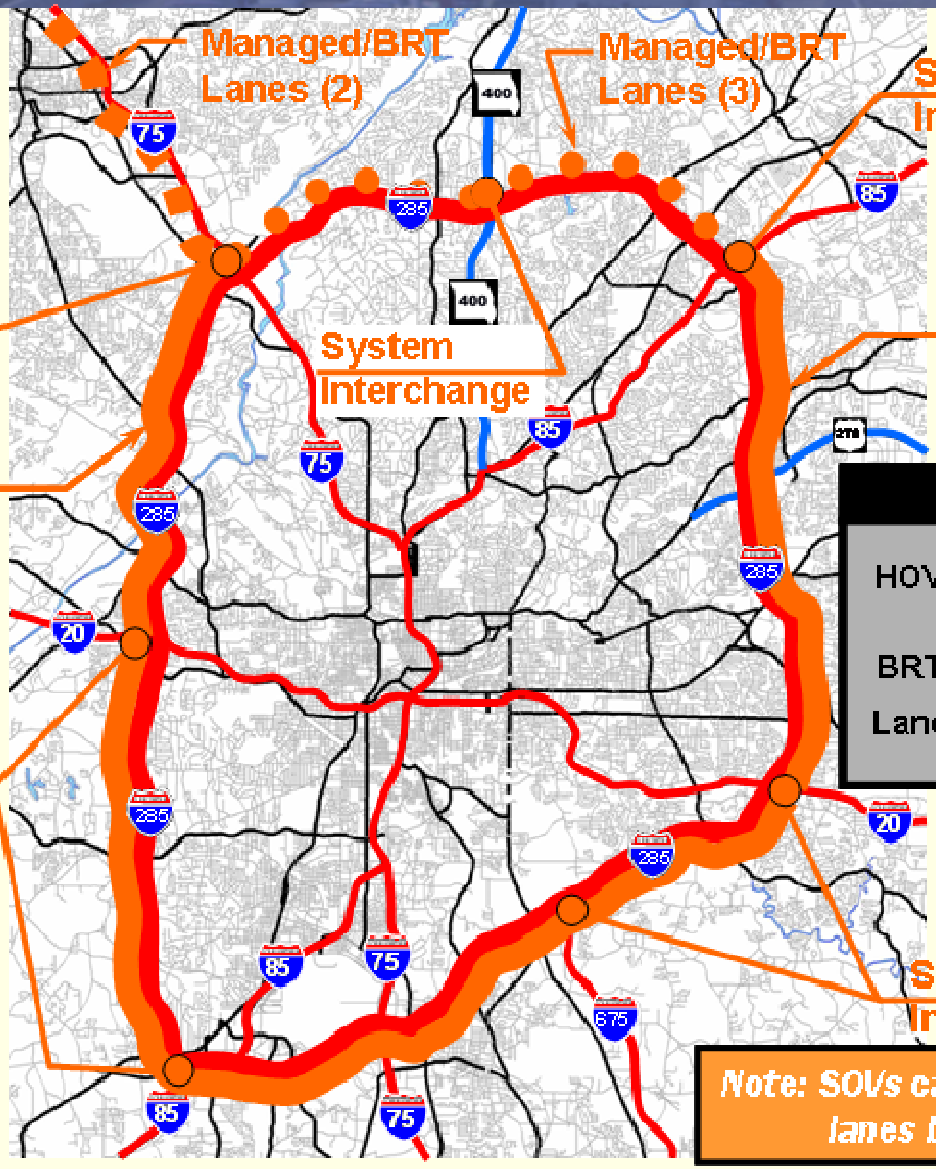

LEGEND

HOV – High Occupancy Vehicle Lanes

BRT – Bus Rapid Transit

Lanes (2) – No. of Lanes in Each Direction

Note: SOVs can use managed lanes by paying toll

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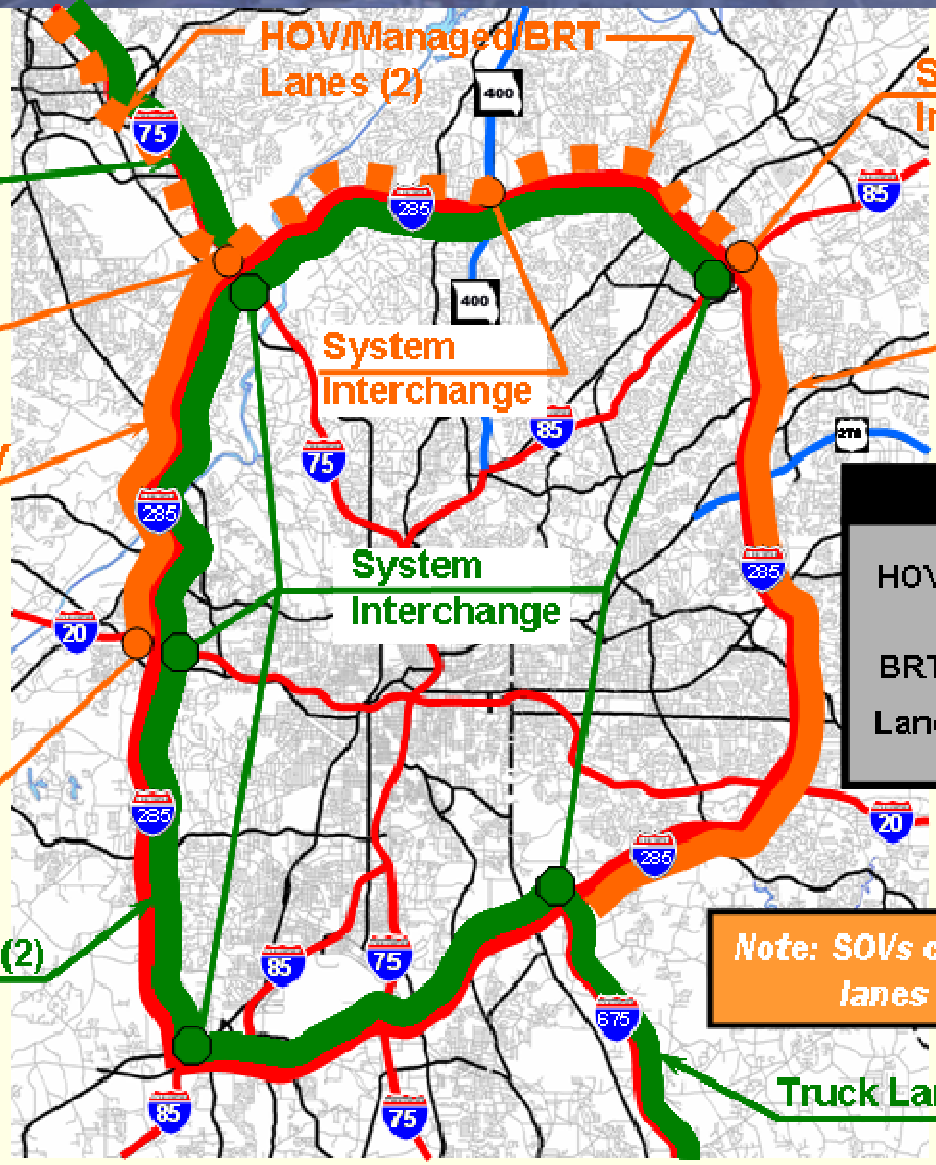
I-285 STRATEGIC IMPLEMENTATION PLAN

Scenarios For Regional & Operational Evaluation

Scenario 10



LEGEND

HOV – High Occupancy Vehicle Lanes

BRT – Bus Rapid Transit

Lanes (2) – No. of Lanes in Each Direction

Note: SOVs can use managed lanes by paying toll

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Scenarios For Regional & Operational Evaluation

Scenario 11

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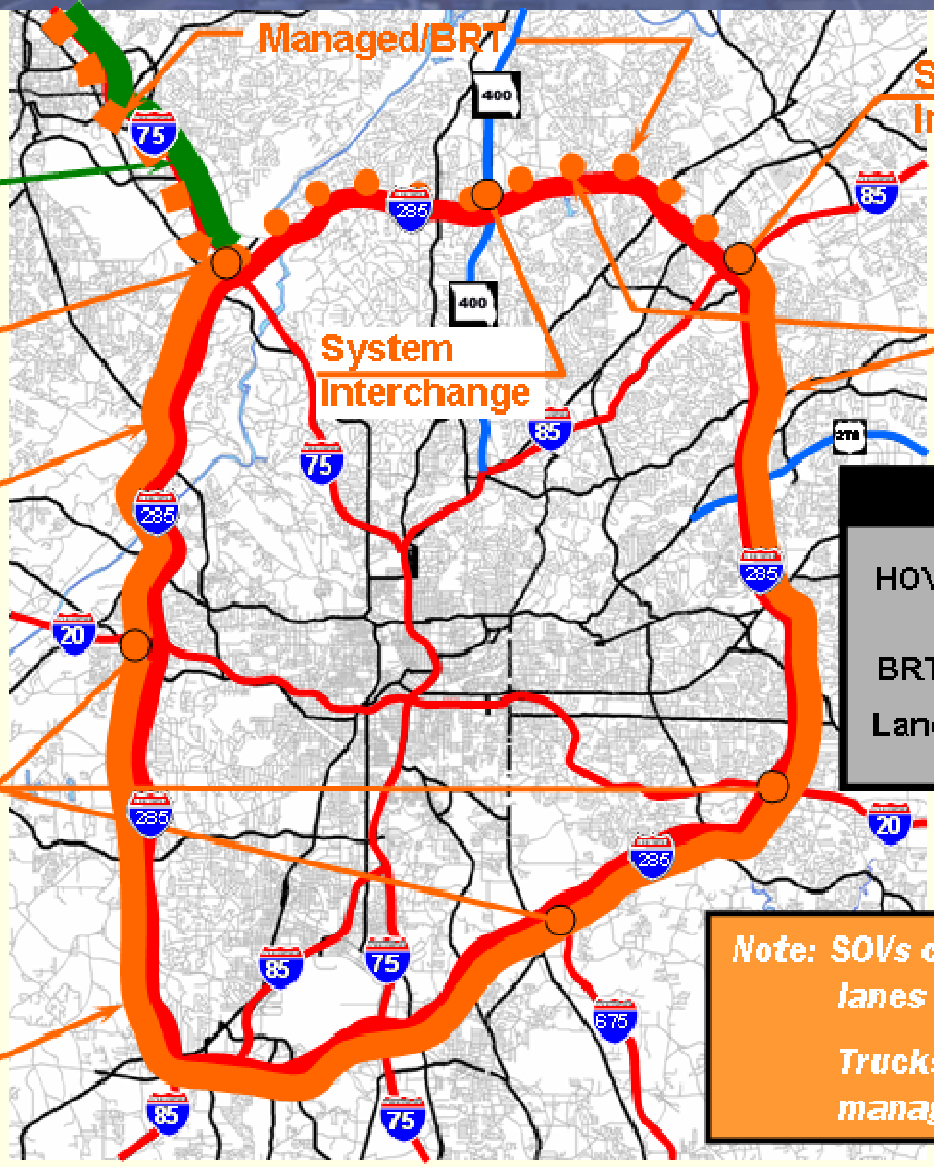

LEGEND

HOV – High Occupancy Vehicle Lanes

BRT – Bus Rapid Transit

Lanes (2) – No. of Lanes in Each Direction

Note: SOVs can use managed lanes by paying toll

Trucks are mandatory in managed lanes and tolled

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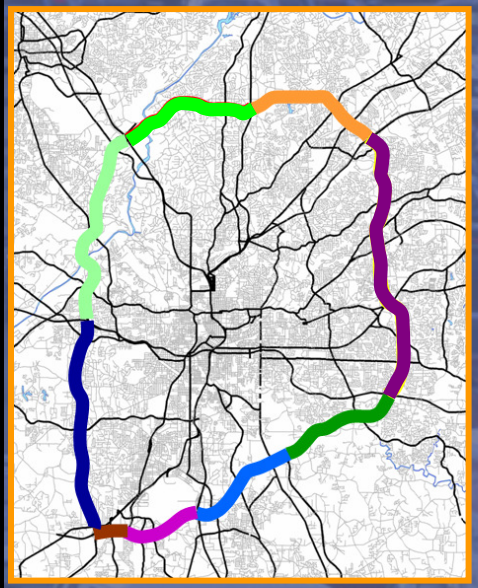
Regional & Operational Evaluation

Toll Levels For Managed Lanes To Maintain LOS C

I-285 STRATEGIC IMPLEMENTATION PLAN

Sections



Section			AM		PM	
			Inner Loop	Outer Loop	Inner Loop	Outer Loop
From	To	Length (Mi.)	Toll	Toll	Toll	Toll
I-75	GA 400	6.65	High Toll	Medium Toll	High Toll	High Toll
GA 400	I-85	6.51	High Toll	High Toll	High Toll	Medium Toll
Northern Section		*13.16*				
I-85	I-20	12.94	Low Toll	High Toll	High Toll	Medium Toll
I-20	I-675	6.08	Low Toll	Low Toll	Low Toll	Low Toll
Eastern Section		*19.02*				
I-675	I-75	5.35	Low Toll	Low Toll	Low Toll	Low Toll
I-75	I-85	3.93	Low Toll	Low Toll	Low Toll	Low Toll
I-85	I-85	1.17	Medium Toll	Low Toll	Low Toll	Medium Toll
Southern Section		*10.45*				
I-85	I-20	10.46	Medium Toll	Low Toll	Low Toll	Medium Toll
I-20	I-75	9.61	High Toll	Low Toll	Medium Toll	High Toll
Western Section		*20.07*				
Total		*62.70*				

High Toll

Medium Toll

Low Toll

Note: Tolls based upon travel demand model impedance values to achieve LOS C. Trucks tolls are three times auto tolls.

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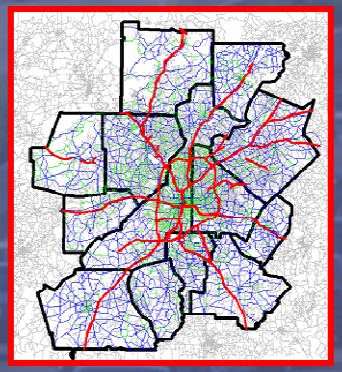
I-285 STRATEGIC IMPLEMENTATION PLAN

Regional Analysis



Distribution of Person Trips by Mode

Mode	2030 RTP				Scenario 7				Scenario 8			
	Total Person Trips		Person Work Trips		Total Person Trips		Person Work Trips		Total Person Trips		Person Work Trips	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
SOV	11,249,478	61.0%	3,256,484	80.6%	11,339,646	61.0%	3,256,155	80.6%	11,331,092	61.0%	3,253,142	80.5%
HOV	6,685,720	36.3%	528,278	13.1%	6,734,587	36.2%	523,313	13.0%	6,751,541	36.3%	527,924	13.1%
Transit	500,171	2.7%	254,409	6.3%	514,162	2.8%	260,413	6.4%	506,462	2.7%	258,940	6.4%
Total	18,435,369	100.0%	4,040,171	100.0%	18,588,395	100.0%	4,040,171	100.0%	18,589,095	100.0%	4,040,006	100.0%

Mode	Scenario 9				Scenario 10				Scenario 11			
	Total Person Trips		Person Work Trips		Total Person Trips		Person Work Trips		Total Person Trips		Person Work Trips	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
SOV	11,390,501	61.3%	3,261,343	80.7%	11,363,140	61.1%	3,260,494	80.7%	11,461,186	61.6%	3,283,091	81.3%
HOV	6,720,415	36.1%	529,720	13.1%	6,744,704	36.3%	530,912	13.1%	6,645,876	35.7%	505,509	12.5%
Transit	484,875	2.6%	249,117	6.2%	487,646	2.6%	248,841	6.2%	487,646	2.6%	251,053	6.2%
Total	18,595,791	100.0%	4,040,180	100.0%	18,595,490	100.0%	4,040,247	100.0%	18,594,708	100.0%	4,039,653	100.0%

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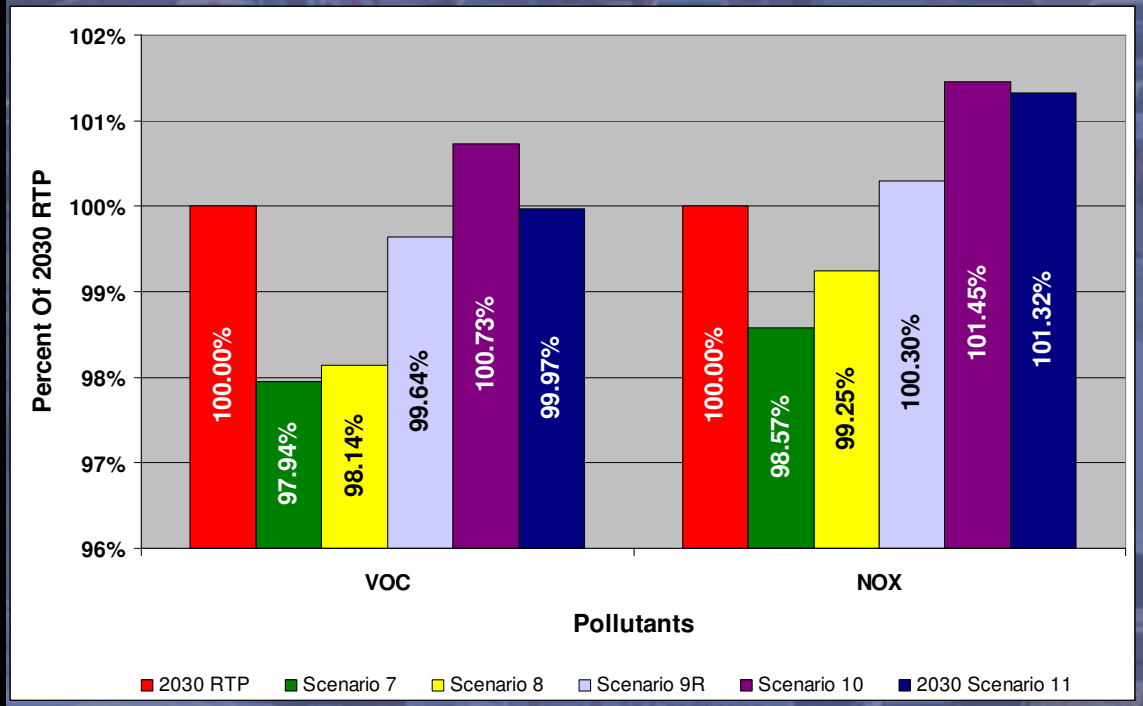
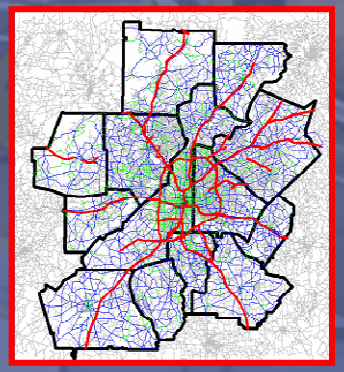
Regional Analysis

I-285 STRATEGIC IMPLEMENTATION PLAN

Percent of 2030 RTP Total Daily Regional Emissions





Type Emission	2030 RTP	Scenario 7	Scenario 8	Scenario 9R	Scenario 10	Scenario 11
VOC	**100.00%**	**97.94%**	98.14%	99.64%	100.73%	99.97%
NOX	**100.00%**	**98.57%**	99.25%	100.30%	101.45%	101.32%
Best		***2***	***0***	***0***	***0***	***0***

<u>NOTE:</u> Emissions calculations do not include the HMPS adjustments performed by ARC as part of their conformity analysis as recommended by the Transportation Conformity Rule.

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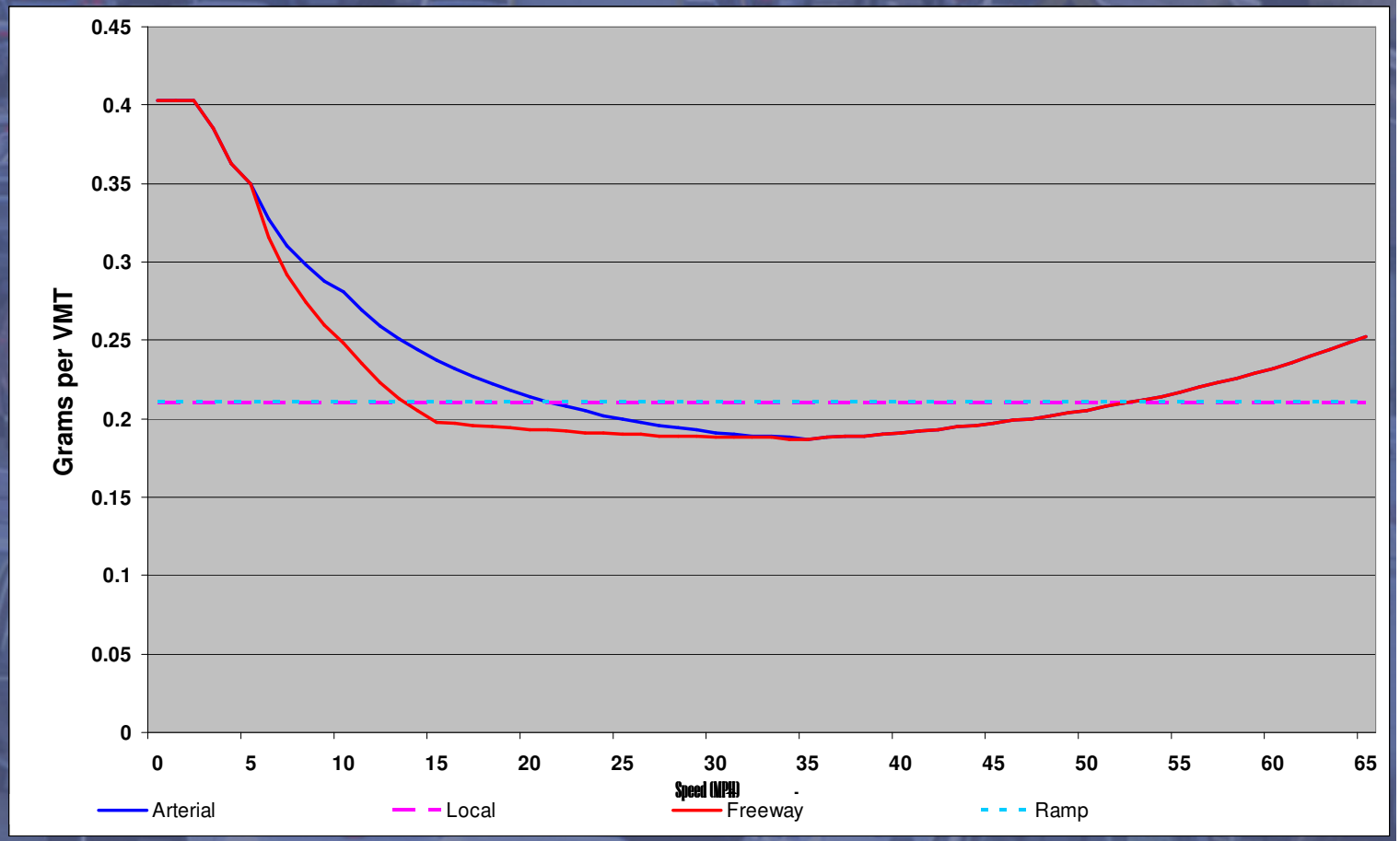
Regional Analysis

2030 NOX Atlanta Emissions Rates



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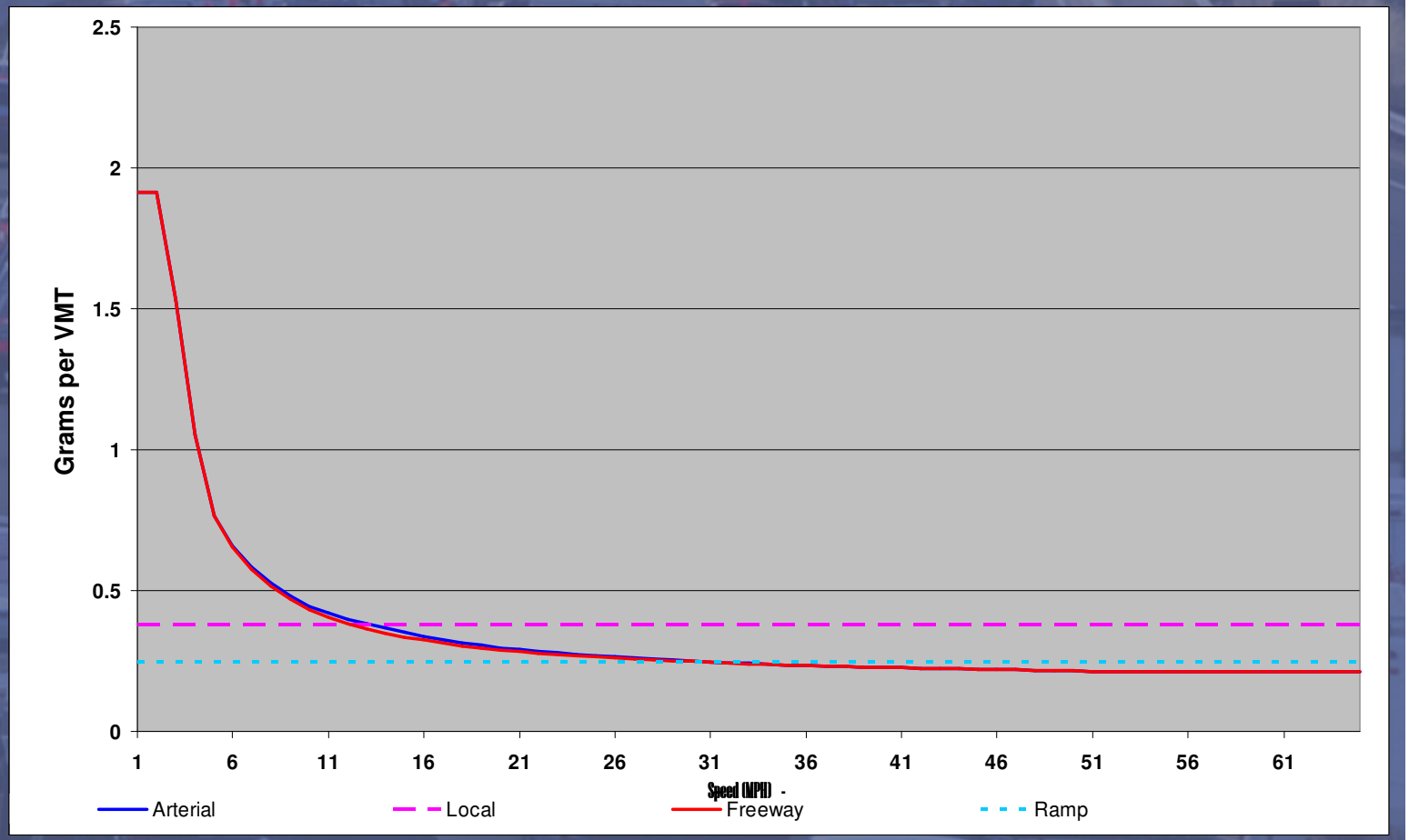
Keeping Georgia on the Move

Regional Analysis

2030 VOX Atlanta Emissions Rates



I-285 STRATEGIC IMPLEMENTATION PLAN

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Corridor Throughput Analysis

I-85 to I-20 (East Wall)

AM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
VMT	95,357	85,115	88,283	83,380	97,620	92,899	91,276	87,703	94,546	87,046	98,699	92,955
SOV	*68,627*	*68,343*	*69,543*	*70,274*	*80,381*	*78,918*	*66,179*	*72,918*	*68,174*	*71,872*	*75,668*	*77,723*
HOV	*19,899*	*12,014*	*11,351*	*8,831*	*10,823*	*9,176*	*18,721*	*10,532*	*20,482*	*11,240*	*12,542*	*8,420*
TRK	*6,831*	*4,758*	*7,388*	*4,276*	*6,417*	*4,805*	*6,376*	*4,253*	*5,890*	*3,934*	*10,489*	*6,813*
VHT (congested)	1,866	1,643	1,722	1,641	1,931	1,785	1,715	1,911	1,831	2,029	2,474	1,876
Avg. Speed (congested)	51.1	51.8	51.3	50.8	50.6	52.0	53.2	45.9	51.6	42.9	39.9	49.5
Delay (min)	4.2	3.8	2.0	2.2	2.2	1.9	3.0	7.6	4.0	10.2	12.2	5.2
Equiv. Full Corridor Trips	3,892	3,420	**7,296**	**6,597**	**7,995**	**7,338**	3,772	3,525	3,755	3,375	4,030	3,738
SOV	*2,801*	*2,746*	*5,747*	*5,560*	*6,583*	*6,234*	*2,735*	*2,931*	*2,707*	*2,787*	*3,090*	*3,125*
HOV	*812*	*483*	*938*	*699*	*886*	*725*	*774*	*423*	*813*	*436*	*512*	*339*
TRK	*279*	*191*	*611*	*338*	*526*	*380*	*263*	*171*	*234*	*153*	*428*	*274*
Veh/Hr/Lane	1565	1339	1488	1355	1598	1454	1256	1158	1254	1116	1161	1058
SOV	*1,126*	*1,075*	*1,172*	*1,142*	*1,316*	*1,235*	*910*	*963*	*905*	*921*	*890*	*884*
HOV	*327*	*189*	*191*	*144*	*177*	*144*	*258*	*139*	*272*	*144*	*148*	*96*
TRK	*112*	*75*	*125*	*69*	*105*	*75*	*88*	*56*	*78*	*50*	*123*	*78*

PM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
VMT	85,913	99,857	86,796	95,049	91,929	99,945	82,430	93,854	92,543	107,053	101,164	112,084
SOV	*66,744*	*76,193*	*72,155*	*79,730*	*77,921*	*86,453*	*66,032*	*73,489*	*75,015*	*83,487*	*83,743*	*93,654*
HOV	*14,758*	*19,593*	*10,244*	*10,740*	*10,040*	*9,447*	*11,946*	*16,397*	*13,565*	*19,580*	*10,559*	*10,882*
TRK	*4,410*	*4,071*	*4,397*	*4,579*	*3,968*	*4,046*	*4,451*	*3,968*	*3,963*	*3,986*	*6,861*	*7,548*
VHT (congested)	1,740	4,142	1,615	2,556	1,836	2,492	1,851	2,331	2,152	3,148	1,907	2,494
Avg. Speed (congested)	49.4	24.1	53.7	37.2	50.1	40.1	44.5	40.3	43.0	34.0	53.0	44.9
Delay (min)	5.2	37.0	1.3	7.7	2.4	6.2	8.3	12.1	9.9	19.6	3.1	8.3
Equiv. Full Corridor Trips	3,507	4,012	**7,173**	**7,520**	**7,529**	**7,895**	3,406	3,772	3,675	4,151	4,131	4,507
SOV	*2,724*	*3,061*	*5,963*	*6,308*	*6,382*	*6,829*	*2,729*	*2,954*	*2,979*	*3,237*	*3,419*	*3,766*
HOV	*602*	*787*	*847*	*850*	*822*	*746*	*494*	*659*	*539*	*759*	*431*	*438*
TRK	*180*	*164*	*363*	*362*	*325*	*320*	*184*	*159*	*157*	*155*	*280*	*303*
Veh/Hr/Lane	1410	1571	1463	1545	1505	1565	1134	1239	1228	1372	1190	1275
SOV	*1,095*	*1,199*	*1,216*	*1,296*	*1,275*	*1,353*	*908*	*970*	*995*	*1,070*	*985*	*1,066*
HOV	*242*	*308*	*173*	*175*	*164*	*148*	*164*	*217*	*180*	*251*	*124*	*124*
TRK	*72*	*64*	*74*	*74*	*65*	*63*	*61*	*52*	*53*	*51*	*81*	*86*

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Corridor Throughput Analysis

I-75 to I-20 (West Wall)

AM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
VMT	65,599	58,889	64,905	58,376	68,479	60,479	66,620	61,474	69,155	65,333	75,743	68,019
SOV	*48,873*	*46,268*	*52,227*	*47,626*	*47,720*	*45,615*	*48,756*	*49,665*	*51,295*	*51,383*	*59,067*	*55,134*
HOV	*12,538*	*8,203*	*8,631*	*5,665*	*14,655*	*8,818*	*13,914*	*7,325*	*13,337*	*7,392*	*8,943*	*5,148*
TRK	*4,188*	*4,418*	*4,047*	*5,085*	*6,104*	*6,045*	*3,950*	*4,484*	*4,523*	*6,558*	*7,733*	*7,737*
VHT (congested)	1,750	1,524	2,463	1,363	1,575	1,592	2,290	1,523	2,926	1,722	1,987	1,538
Avg. Speed (congested)	37.5	38.6	26.4	42.8	43.5	38.0	29.1	40.4	23.6	37.9	38.1	44.2
Delay (min)	10.1	9.3	11.1	3.5	9.6	14.8	18.2	8.1	40.2	14.9	9.7	5.9
Equiv. Full Corridor Trips	3,809	3,410	**7,401**	**6,508**	2,594	2,304	3,829	3,560	2,620	2,489	4,356	3,941
SOV	*2,838*	*2,679*	*5,955*	*5,309*	*1,808*	*1,738*	*2,802*	*2,876*	*1,943*	*1,957*	*3,397*	*3,194*
HOV	*728*	*475*	*984*	*632*	*555*	*336*	*800*	*424*	*505*	*282*	*514*	*298*
TRK	*243*	*256*	*461*	*567*	*231*	*230*	*227*	*260*	*171*	*250*	*445*	*448*
Veh/Hr/Lane	1524	1364	1495	1332	976	867	1252	1163	986	937	1246	1126
SOV	*1,136*	*1,072*	*1,203*	*1,087*	*680*	*654*	*916*	*939*	*731*	*737*	*972*	*913*
HOV	*291*	*190*	*199*	*129*	*209*	*126*	*261*	*139*	*190*	*106*	*147*	*85*
TRK	*97*	*102*	*93*	*116*	*87*	*87*	*74*	*85*	*64*	*94*	*127*	*128*

PM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB										
VMT	51,586	64,440	54,491	64,970	56,511	71,474	65,802	73,289	56,898	74,916	64,437	75,560
SOV	*39,762*	*48,333*	*43,176*	*52,357*	*41,387*	*50,702*	*53,799*	*54,866*	*43,082*	*55,290*	*51,629*	*61,364*
HOV	*7,262*	*12,238*	*5,986*	*8,399*	*8,401*	*15,279*	*7,810*	*14,564*	*7,138*	*13,776*	*5,709*	*8,558*
TRK	*4,562*	*3,869*	*5,330*	*4,214*	*6,722*	*5,493*	*4,193*	*3,859*	*6,678*	*5,850*	*7,099*	*5,638*
VHT (congested)	1,146	3,544	993	2,546	1,195	2,855	2,451	2,761	1,969	2,532	1,307	2,701
Avg. Speed (congested)	45.0	18.2	54.9	25.5	47.3	25.0	26.8	26.5	28.9	29.6	49.3	28.0
Delay (min)	5.4	39.5	0.7	12.0	6.7	36.3	21.2	21.5	28.0	26.6	3.5	19.5
Equiv. Full Corridor Trips	2,996	3,731	**6,213**	**7,243**	2,141	2,723	3,782	4,244	2,155	2,854	3,705	4,378
SOV	*2,309*	*2,799*	*4,923*	*5,837*	*1,568*	*1,932*	*3,092*	*3,177*	*1,632*	*2,106*	*2,969*	*3,555*
HOV	*422*	*709*	*683*	*936*	*318*	*582*	*449*	*843*	*270*	*525*	*328*	*496*
TRK	*265*	*224*	*608*	*470*	*255*	*209*	*241*	*223*	*253*	*223*	*408*	*327*
Veh/Hr/Lane	1199	1493	1255	1482	805	1025	1236	1386	811	1074	1060	1251
SOV	*924*	*1,120*	*995*	*1,195*	*590*	*727*	*1,011*	*1,038*	*614*	*793*	*849*	*1,016*
HOV	*169*	*284*	*138*	*192*	*120*	*219*	*147*	*275*	*102*	*198*	*94*	*142*
TRK	*106*	*90*	*123*	*96*	*96*	*79*	*79*	*73*	*95*	*84*	*117*	*93*

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Corridor Throughput Analysis

I-75 to I-85 (Top End)

AM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
VMT	117,111	114,718	109,710	105,156	121,490	117,609	115,331	112,184	119,825	118,426	122,865	129,383
SOV	*91,074*	*84,433*	*84,512*	*76,641*	*89,284*	*84,417*	*90,231*	*84,103*	*92,214*	*86,791*	*98,215*	*99,130*
HOV	*19,911*	*19,949*	*18,765*	*17,904*	*22,741*	*20,730*	*19,443*	*18,101*	*20,890*	*19,992*	*14,766*	*13,986*
TRK	*6,126*	*10,335*	*6,433*	*10,611*	*9,465*	*12,461*	*5,658*	*9,979*	*6,722*	*11,643*	*9,885*	*16,267*
VHT (congested)	2,480	2,282	2,570	2,019	2,449	2,280	2,614	2,160	2,952	2,246	2,353	2,516
Avg. Speed (congested)	47.2	50.3	42.7	52.1	49.6	51.6	44.1	51.9	40.6	52.7	52.2	51.4
Delay (min)	6.0	4.4	9.2	3.4	7.0	5.4	8.2	3.4	16.6	4.5	3.2	3.7
Equiv. Full Corridor Trips	4,939	4,663	4,627	4,275	3,382	3,216	4,864	4,560	3,336	3,238	**5,167**	**5,245**
SOV	*3,841*	*3,432*	*3,564*	*3,115*	*2,486*	*2,308*	*3,806*	*3,419*	*2,567*	*2,373*	*4,130*	*4,018*
HOV	*840*	*811*	*791*	*728*	*633*	*567*	*820*	*736*	*582*	*547*	*621*	*567*
TRK	*258*	*420*	*271*	*431*	*264*	*341*	*239*	*406*	*187*	*318*	*416*	*659*
Veh/Hr/Lane	1530	1480	1245	1180	1079	1040	1156	1113	1064	1047	1231	1283
SOV	*1,190*	*1,089*	*959*	*860*	*793*	*747*	*905*	*834*	*819*	*768*	*984*	*983*
HOV	*260*	*257*	*213*	*201*	*202*	*183*	*195*	*180*	*186*	*177*	*148*	*139*
TRK	*80*	*133*	*73*	*119*	*84*	*110*	*57*	*99*	*60*	*103*	*99*	*161*

PM Peak	RTP		Scenario 7		Scenario 8		Scenario 9		Scenario 10		Scenario 11	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
VMT	113,922	118,132	110,943	117,079	115,333	125,254	115,407	122,629	120,198	132,129	127,761	130,715
SOV	*90,730*	*92,829*	*88,295*	*91,052*	*89,973*	*95,016*	*93,118*	*97,081*	*94,529*	*102,773*	*106,402*	*108,832*
HOV	*19,035*	*21,281*	*18,278*	*21,964*	*19,568*	*24,907*	*18,342*	*21,338*	*19,954*	*23,684*	*13,914*	*15,546*
TRK	*4,156*	*4,021*	*4,370*	*4,064*	*5,792*	*5,332*	*3,946*	*4,211*	*5,715*	*5,671*	*7,445*	*6,338*
VHT (congested)	3,182	3,363	2,464	3,086	2,618	3,171	3,083	2,866	3,416	2,979	2,595	2,845
Avg. Speed (congested)	35.8	35.1	45.0	37.9	44.1	39.5	37.4	42.8	35.2	44.4	49.2	45.9
Delay (min)	15.6	17.0	7.5	13.9	12.4	18.4	13.9	9.5	24.7	12.3	4.8	7.2
Equiv. Full Corridor Trips	4,805	4,802	4,679	4,759	3,211	3,425	4,867	4,985	3,346	3,613	**5,373**	**5,299**
SOV	*3,827*	*3,774*	*3,724*	*3,701*	*2,505*	*2,598*	*3,927*	*3,946*	*2,632*	*2,810*	*4,474*	*4,412*
HOV	*803*	*865*	*771*	*893*	*545*	*681*	*774*	*867*	*556*	*648*	*585*	*630*
TRK	*175*	*163*	*184*	*165*	*161*	*146*	*166*	*171*	*159*	*155*	*313*	*257*
Veh/Hr/Lane	1489	1524	1259	1313	1025	1108	1157	1217	1068	1169	1280	1296
SOV	*1,186*	*1,198*	*1,002*	*1,021*	*799*	*840*	*934*	*963*	*840*	*909*	*1,066*	*1,079*
HOV	*249*	*275*	*207*	*246*	*174*	*220*	*184*	*212*	*177*	*209*	*139*	*154*
TRK	*54*	*52*	*50*	*46*	*51*	*47*	*40*	*42*	*51*	*50*	*75*	*63*

Keeping Georgia on the Move

Regional Analysis
Cost Effectiveness

Reduction In Delay Cost Over 2030 RTP And Benefit Cost Ratio

Item	2030 RTP	Scenario 7	Scenario 8	Scenario 9R	Scenario 10	Scenario 11
2030 Daily AM & PM Peak Period Delay Costs	$ 4,488,897	$ 4,099,021	$ 4,221,211	$ 4,869,467	$ 4,733,721	$ 4,732,432
Daily Difference From 2030 RTP	**N/A**	$ 389,876	$ 267,686	$ (380,570)	$ (244,824)	$ (243,535)
Annual Difference From 2030 RTP	**N/A**	$ 116,962,925	$ 80,305,763	$ (114,171,143)	$ (73,447,059)	$ (73,060,627)
20-Year Savings in Delay Costs Over 2030 RTP	**N/A**	$ 1,228,110,707	$ 843,210,506	$ (1,198,796,996)	$ (771,194,120)	$ (767,136,589)
Improvement Cost	$ 4,101,000,000	$ 4,229,000,000	$ 10,855,000,000	$ 9,513,000,000	$ 11,884,000,000	$ 16,000,000,000
Difference in Improvement Cost Over 2030 RTP	**N/A**	$ 128,000,000	$ 6,754,000,000	$ 5,412,000,000	$ 7,783,000,000	$ 11,899,000,000
Incremental Benefit-to-Cost Ratio Over 2030 RTP	***N/A***	***9.59***	***0.12***	***-0.22***	***-0.10***	***-0.06***

I-285 STRATEGIC IMPLEMENTATION PLAN

Keeping Georgia on the Move

Regional Evaluation of Final Five Scenarios

I-285 STRATEGIC IMPLEMENTATION PLAN

Category	Section	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Regional Speeds	Region	4	4	0	1	1
	Northern	4	1	0	1	4
	Eastern	2	1	0	1	6
	Southern	2	1	2	1	4
	Western	2	3	0	0	5
	Subtotal	***14***	***10***	***2***	***4***	**20**
Delay Costs	Region	4	2	0	0	2
	Northern	0	2	0	0	6
	Eastern	0	2	0	0	6
	Southern	0	2	0	0	6
	Western	0	2	1	0	5
	Subtotal	***4***	***10***	***1***	***0***	**25**
% Lane-Miles Greater Than Capacity	Region	5	0	5	4	4
	Northern	0	0	0	2	2
	Eastern	0	0	0	2	2
	Southern	0	0	0	2	2
	Western	2	0	2	1	1
	Subtotal	***7***	***0***	***7***	**11**	**11**
Delay	Region	8	1	1	2	3
	Northern	1	2	0	4	5
	Eastern	2	2	0	1	7
	Southern	1	1	3	1	6
	Western	2	1	0	1	8
	Subtotal	***14***	***7***	***4***	***9***	**29**
% Trips With Trip Time Equal to Free Flow Travel Time	Region	5	0	0	0	3
Air Quality	Region	2	0	0	0	0
Vehilce Hours of Delay Per 1,000 Vehicle Miles of Travel	Region	6	3	0	2	1
	Northern	2	0	0	2	8
	Eastern	2	2	0	0	8
	Southern	3	1	2	2	4
	Western	4	3	0	1	4
	Subtotal	***17***	***9***	***2***	***7***	**25**
Benefit-to-Cost Ratio	***Region***	***1***	***0***	***0***	***0***	***0***
Grand Total		***64***	***36***	***16***	***31***	**113**
Regional Total		***35***	***10***	***6***	***9***	***14***

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Operational Analysis

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Operational Evaluation Measures

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Average Speed	Northern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Eastern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Southern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Western Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Total		*40*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Densities	Northern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Subtotal	8
	Eastern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Subtotal	8
	Southern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Subtotal	8
	Western Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Subtotal	8
	Total		*32*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Lost Time (Delay)	Northern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Eastern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Southern Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Western Section	GP Lanes	2
		HOV Lanes	2
		Managed Lanes	2
		Ramps	2
		Arterials	2
		Subtotal	10
	Total		*40*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score
Intersection Queue Length and Delay	Northern Section	Queue Length	2
		Delay	2
		Subtotal	4
	Eastern Section	Queue Length	2
		Delay	2
		Subtotal	4
	Southern Section	Queue Length	2
		Delay	2
		Subtotal	4
	Western Section	Queue Length	2
		Delay	2
		Subtotal	4
	Total		*16*

Evaluation Measure	Analysis Level	AM and PM Peak Periods	Highest Possible Score	*Total*
Viscosity Index (LOS)	Northern Section	Basic VI>35.0	2	*10*
		Merge/Diverge VI>35.0	2	*8*
				8
		Weave VI>35.0	2	*8*
				4
		Subtotal	6	*38*
	Eastern Section	Basic VI>35.0	2	*10*
		Merge/Diverge VI>35.0	2	*8*
				8
		Weave VI>35.0	2	*8*
				4
		Subtotal	6	*38*
	Southern Section	Basic VI>35.0	2	*10*
		Merge/Diverge VI>35.0	2	*8*
				8
		Weave VI>35.0	2	*8*
				4
		Subtotal	6	*38*
	Western Section	Basic VI>35.0	2	*10*
		Merge/Diverge VI>35.0	2	*8*
				8
		Weave VI>35.0	2	*8*
				4
		Subtotal	6	*38*
	Total		*24*	*152*

Keeping Georgia on the Move

Operational Analysis Summary Of Final Five Scenarios

I-285 STRATEGIC IMPLEMENTATION PLAN

Category	Section	Scenario 7	Scenario 8	Scenario 9	Scenario 10	Scenario 11
Speeds	Northern	6	6	3	7	2
	Eastern	2	5	3	1	2
	Southern	3	3	0	3	3
	Western	2	7	3	1	4
	Subtotal	13	21	9	12	11
Densities	Northern	3	1	0	3	1
	Eastern	0	5	2	1	1
	Southern	1	2	3	2	1
	Western	1	4	3	1	1
	Subtotal	5	12	8	7	4
Lost Time	Northern	6	2	0	5	1
	Eastern	0	6	3	0	1
	Southern	5	5	2	2	1
	Western	2	7	3	2	4
	Subtotal	13	20	8	9	7
Queue Length	Northern	4	2	0	0	0
	Eastern	3	0	1	0	0
	Southern	4	0	0	0	0
	Western	0	1	0	0	3
	Subtotal	11	3	1	0	3
Viscosity Index	Northern	3	0	0	0	0
	Eastern	0	4	1	0	0
	Southern	2	0	1	0	0
	Western	3	3	1	0	0
	Subtotal	8	7	3	0	0
Grand Total		***50***	***63***	***29***	***28***	***25***

Keeping Georgia on the Move

Combined Regional & Operational Analysis
Final Five Scenarios Summary

I-285 STRATEGIC IMPLEMENTATION PLAN

Un-Weighted Evaluation Summary

Category	Area	Scenario 7	Scenario 8	Scenario 9R	Scenario 10	Scenario 11
Regional Analysis	Regional	35	10	6	9	14
	Sections	29	26	10	23	100
	Subtotal	64	36	16	32	114
Operational Analysis	Sections	50	63	29	28	25
Grand Total		*114*	*99*	*45*	*60*	*139*

Category	Area	Maximum Score
Regional Analysis	Regional	63
	Sections	240
	Subtotal	*303*
Operational Analysis	Sections	*152*
Grand Total		*455*

Weighted Evaluation Summary (Regional & Operational Equal)

Category	Area	Scenario 7	Scenario 8	Scenario 9R	Scenario 10	Scenario 11
Regional Analysis	Regional	35	10	6	9	14
	Sections	29	26	10	23	100
	Subtotal	64	36	16	32	114
Operational Analysis	Sections	100	126	58	56	50
Grand Total		164	*162*	*74*	*88*	*164*

GDOT Keeping Georgia on the Move

Other Factors That Need To Be Considered

I-285 STRATEGIC IMPLEMENTATION PLAN

Need for Managed Lane System

- ✓ Cannot have isolated segments
- ✓ System must connect major origins and destinations
- ✓ Provides flexibility
- ✓ Provides a high level of travel time certainty

Funding

- ✓ Current funding constraints would not permit massive system improvements
- ✓ Tolls associated with managed lanes provide a potential source of revenue to assist in making system improvements

Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN

Phase 1a

1) Riverside Drive Interchange Improvements
2) Roswell Road/Glenridge Drive/GA 400 Interchange Improvements
3) Peachtree-Dunwoody Road/Ashford-Dunwoody Road Interchange Improvements
4) North Shallowford Road/Peachtree Industrial Boulevard Interchange Improvements *
5) Stone Mountain Freeway Interchange Improvements *
6) I-20 West Interchange Improvements
7) South Atlanta Road Interchange Improvements
8) South Cobb Drive Interchange Improvements
9) I-75 South Interchange Improvements
10) Joneboro Road Interchange Improvements
11) I-20 East Interchnage Improvements

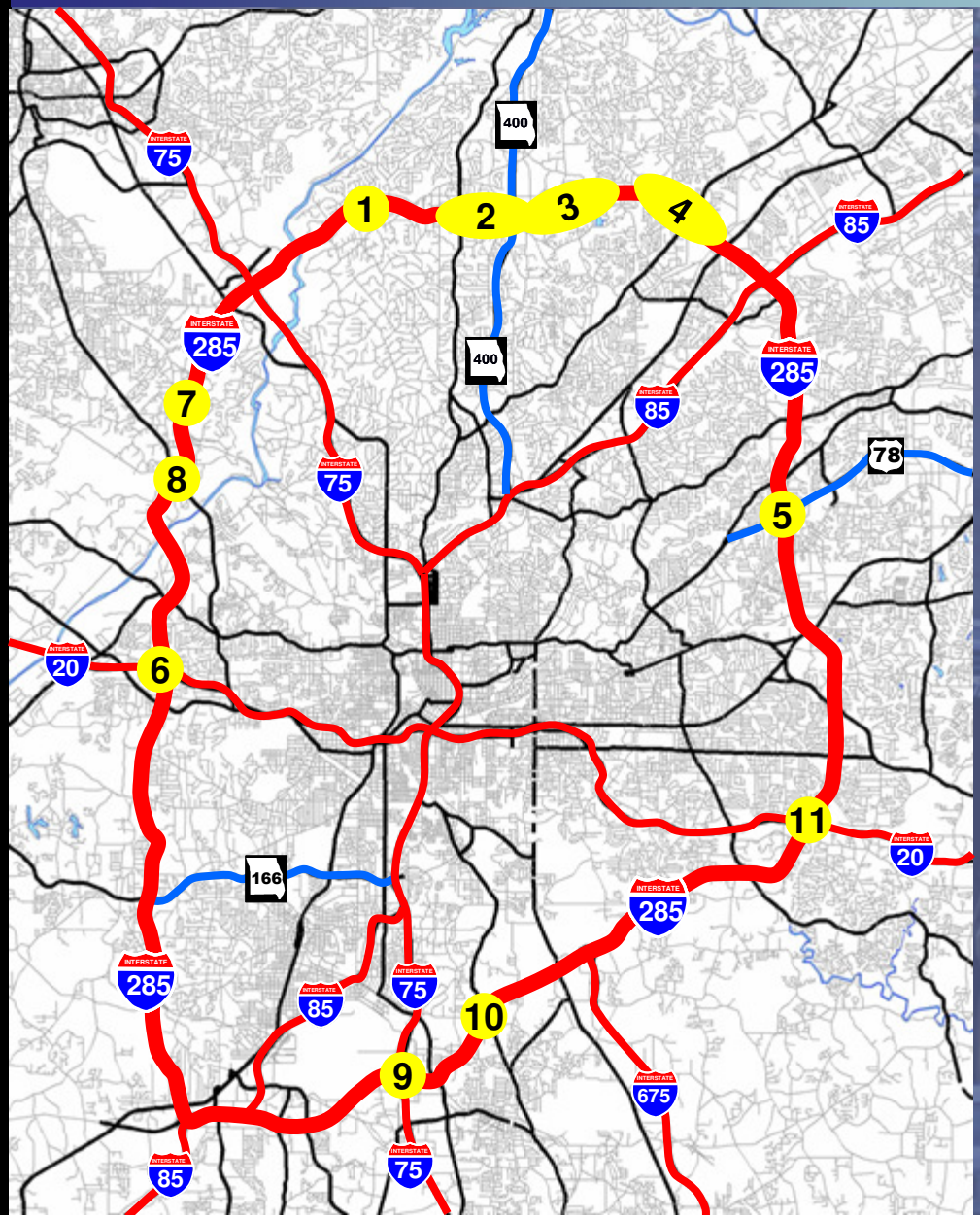
Note:

* Improvements Not In Regional Transportation Plan (RTP)

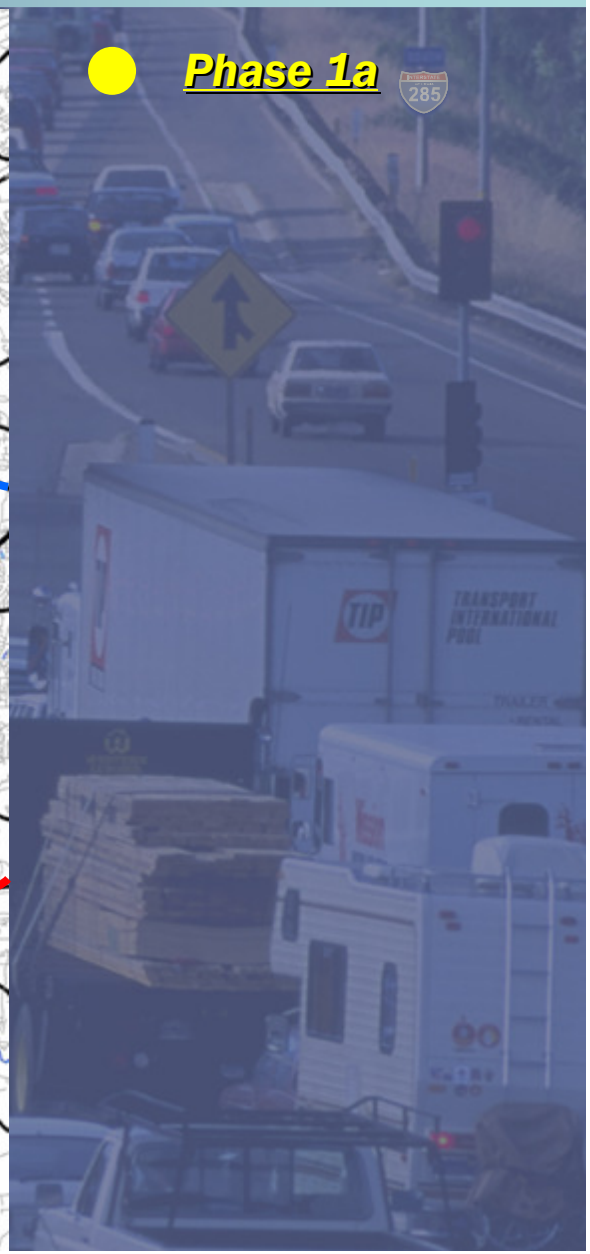
Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN



Phase 1a



Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN

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Note:
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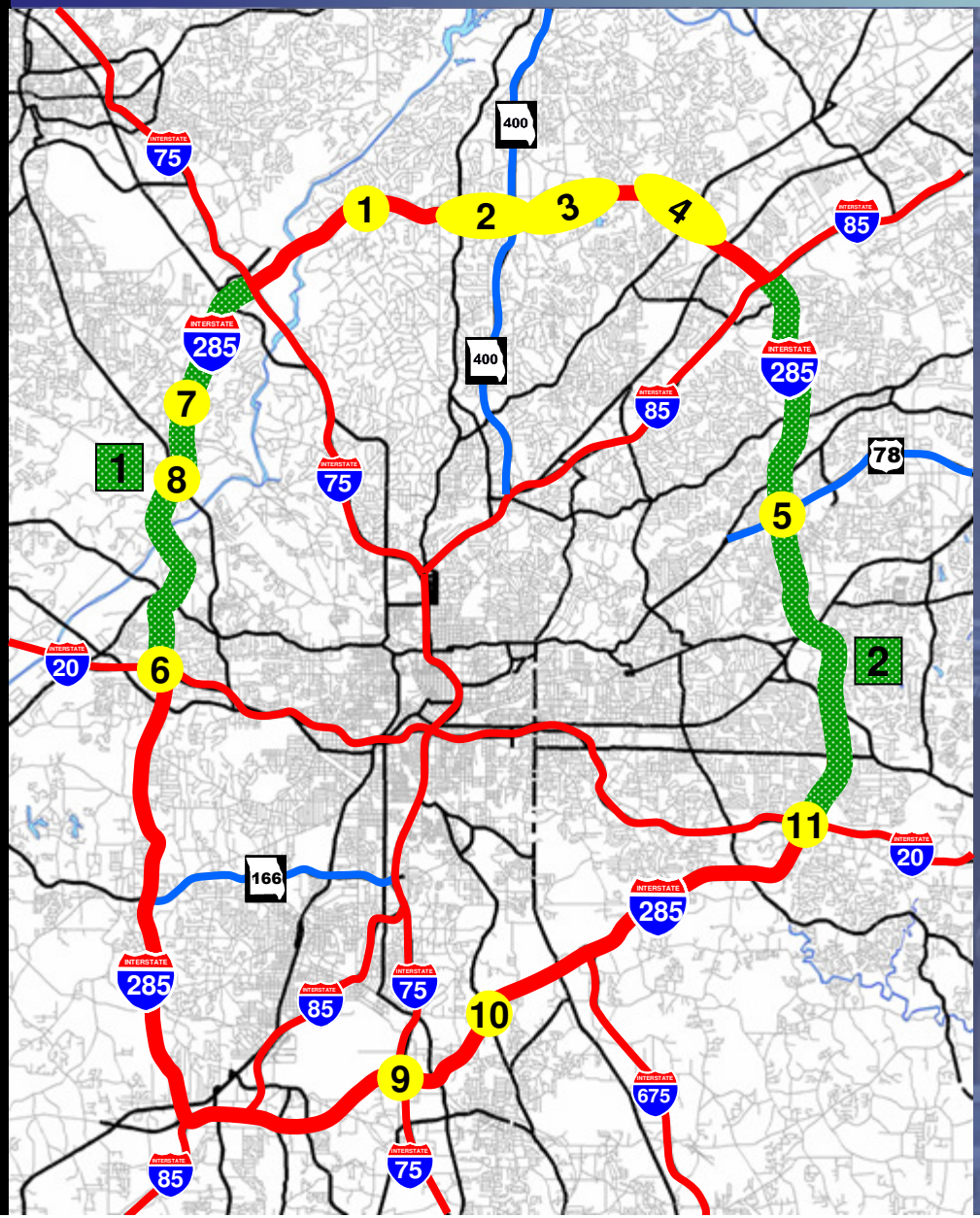
Phase 1b

1) Managed Lanes on I-285 from I-75 north to I-20 west
2) Managed Lanes on I-285 from I-85 north to I-20 east

Keeping Georgia on the Move

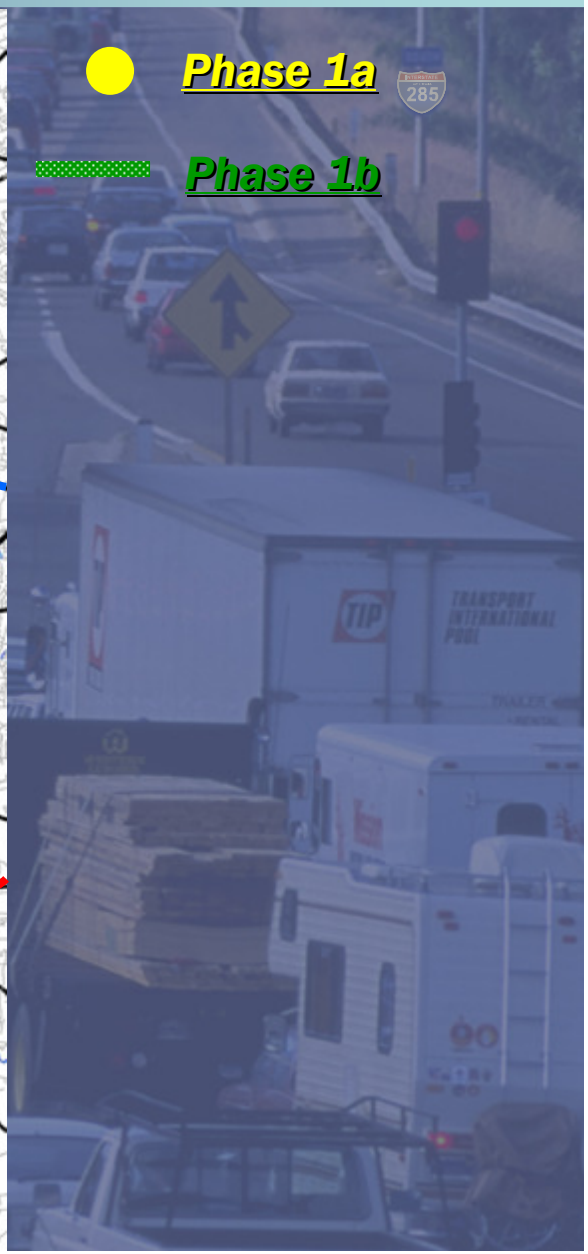
I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN



Phase 1a

Phase 1b



Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN

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Note:
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Phase 1b

1) Managed Lanes on I-285 from I-75 north to I-20 west
2) Managed Lanes on I-285 from I-85 north to I-20 east

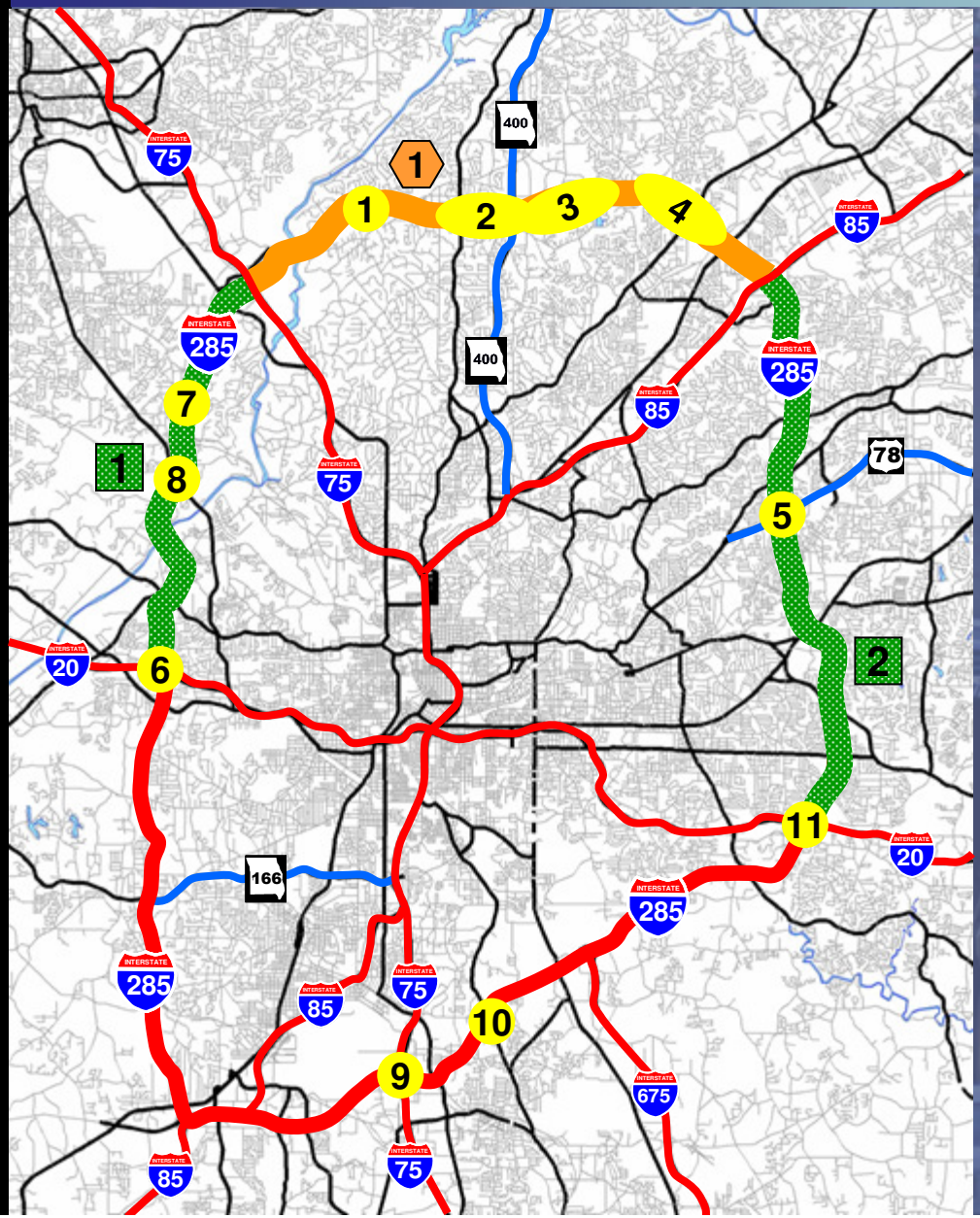
Phase 2

1) Managed Lanes on I-285 from I-75 north to I-85 north

Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN



Phase 1a

Phase 1b

Phase 2

Keeping Georgia on the Move

I-285 Implementation Plan Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN

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11) I-20 East Interchange Improvements

Note:
* Improvements Not In Regional Transportation Plan (RTP)

Phase 1b

1) Managed Lanes on I-285 from I-75 north to I-20 west
2) Managed Lanes on I-285 from I-85 north to I-20 east

Phase 2

1) Managed Lanes on I-285 from I-75 north to I-85 north

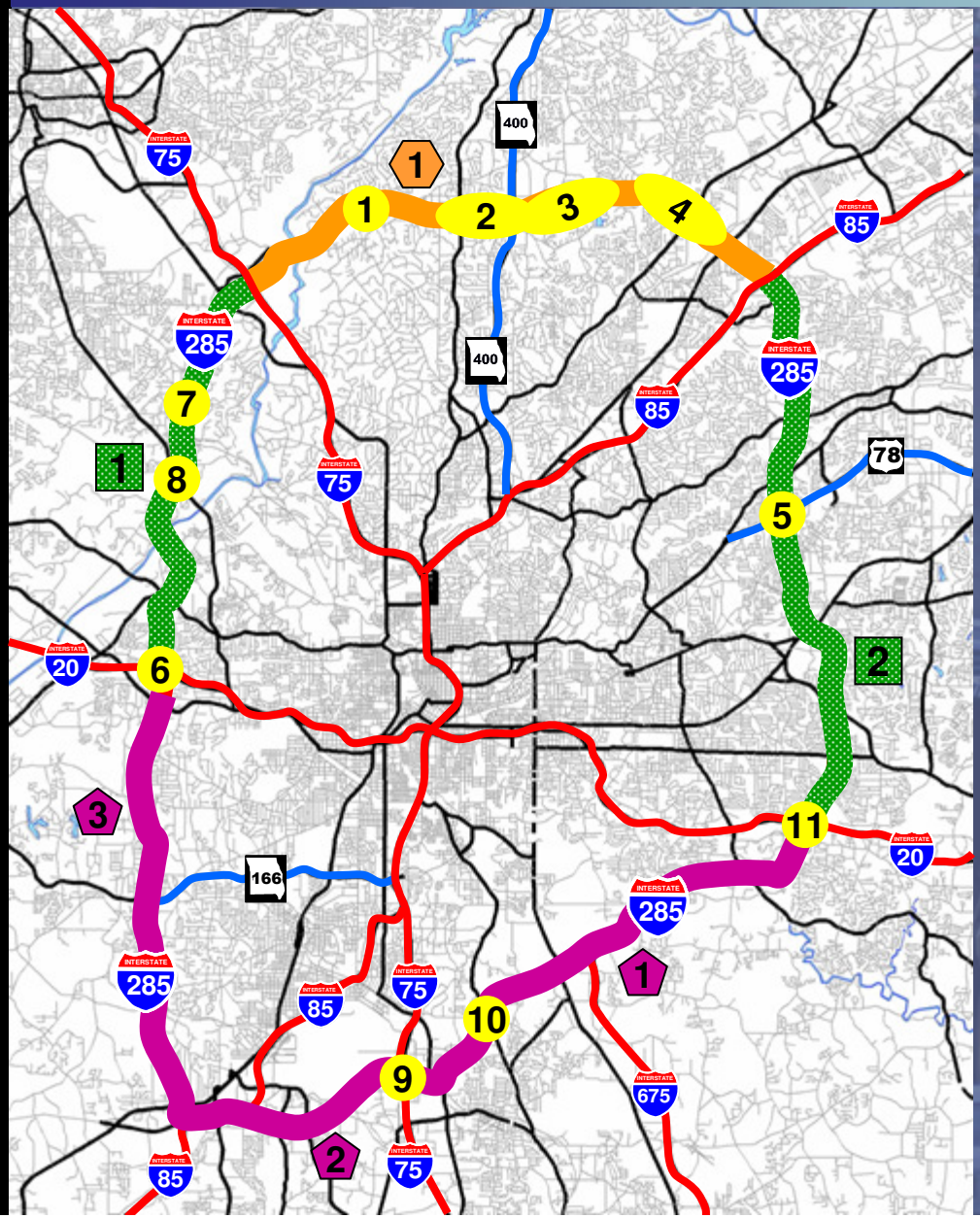
Phase 3

1) Managed Lanes on I-285 from I-20 east to I-75 south
2) Managed Lanes on I-285 from I-75 south to I-85 south
3) Managed Lanes on I-285 from I-20 west to I-85 south

Keeping Georgia on the Move

I-285 Implementation Plan Phasing

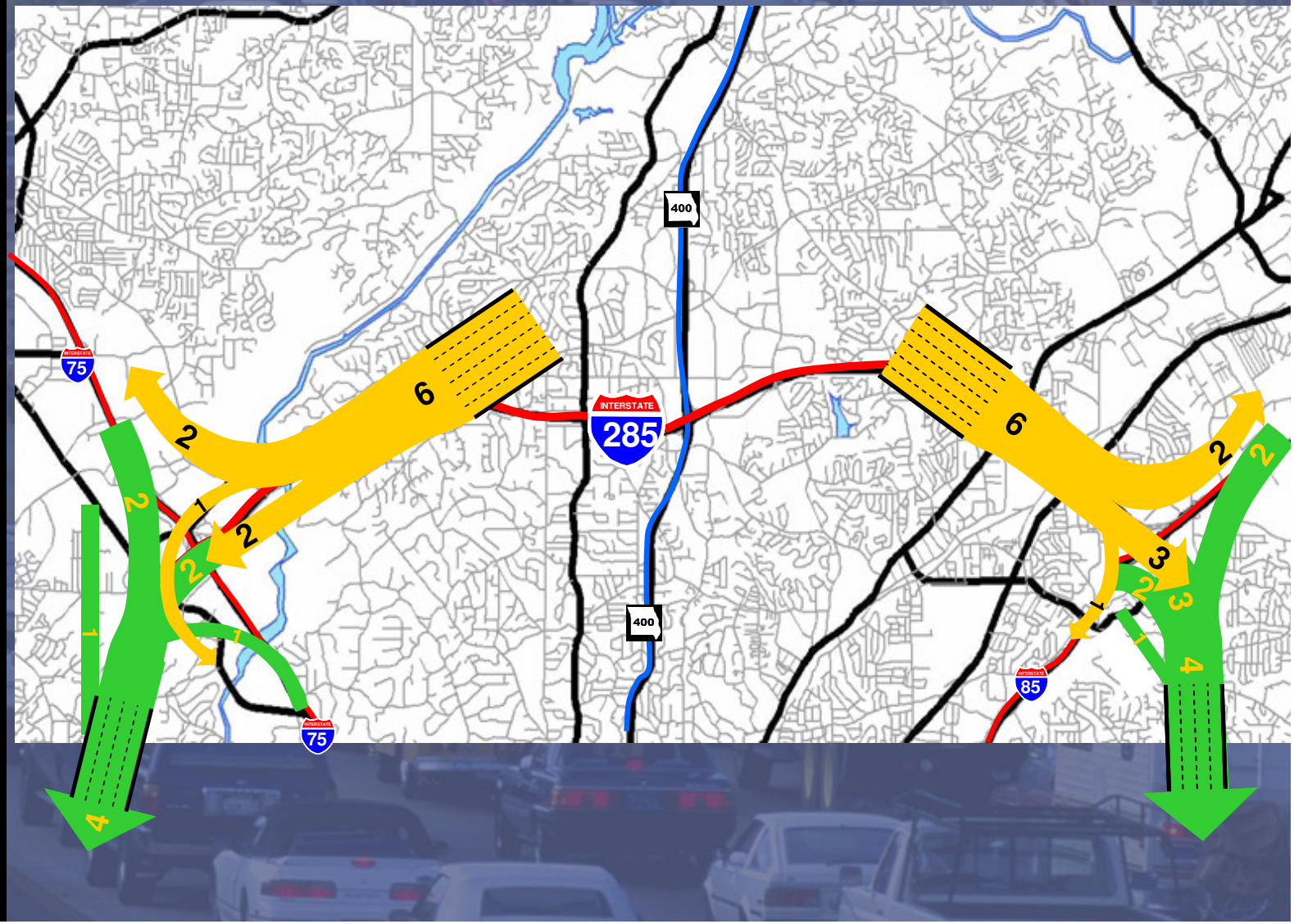
I-285 STRATEGIC IMPLEMENTATION PLAN



Keeping Georgia on the Move

I-285 Implementation Plan
Background of Phasing

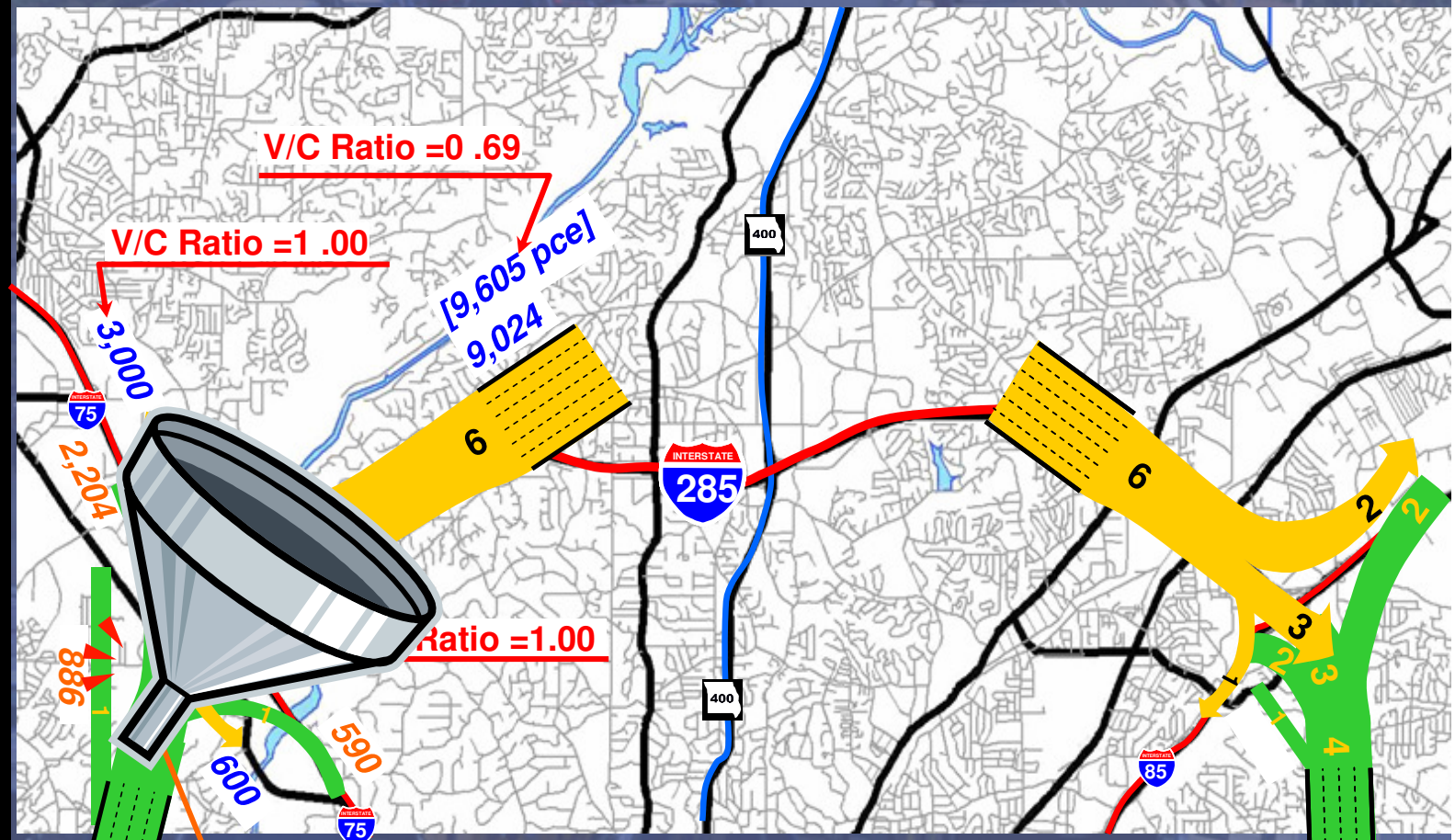
I-285 STRATEGIC IMPLEMENTATION PLAN



Keeping Georgia on the Move

I-285 Implementation Plan
Background of Phasing

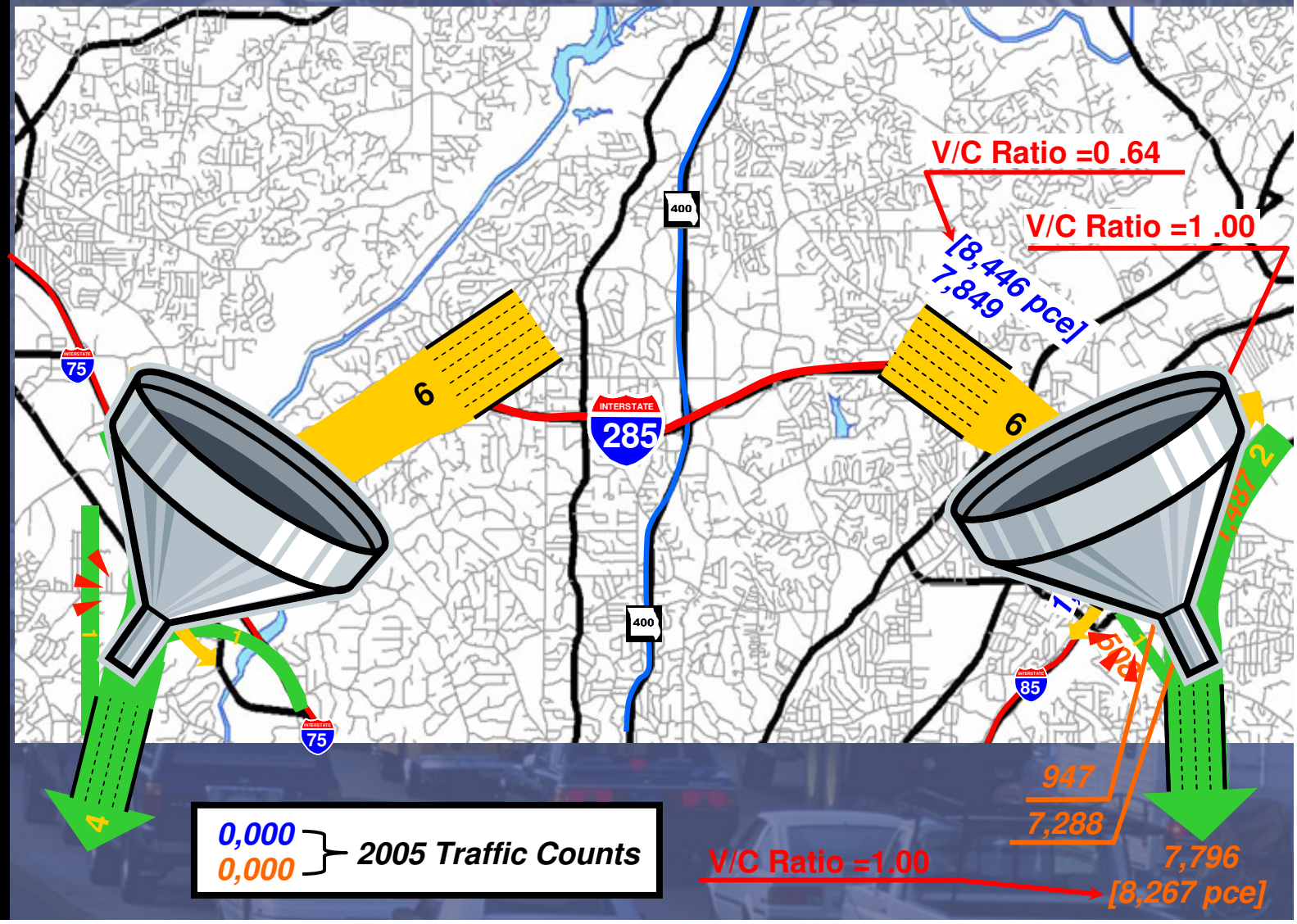
I-285 STRATEGIC IMPLEMENTATION PLAN



Keeping Georgia on the Move

I-285 Implementation Plan
Background of Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN



Keeping Georgia on the Move

I-285 Implementation Plan
Background of Phasing

I-285 STRATEGIC IMPLEMENTATION PLAN

Phase 1a

1) Develop overall framework for improvements to northern section (revive 285 Top End)
2) Initiate detailed planning for ultimate improvements on eastern and western sections north of I-20
3) Implement operational improvements to improve operations and safety within the overall framework of northern section (revive 285 Top End project), eastern section, western section and southern section
4) Implement managed lanes on I-75 north and I-85 north to add capacity required to accept additional traffic from I-285 northern section

Phase 1b

1) Implement managed lanes on eastern and western sections north of I-20 to accept additional traffic from northern section

Phase 2

1) Implement managed lanes on northern section

Phase 3

1) Implement managed lanes on remainder of eastern and western sections, and southern sections I-285 south of I-20

Keeping Georgia on the Move

I-285 STRATEGIC IMPLEMENTATION PLAN

Discussion

Keeping Georgia on the Move