

APPENDIX K

TSM / TDM TRAVEL MODEL IMPLEMENTATION

The table below outlines the factors applied in the TSM/TDM family of travel model programs. These programs were designed to simulate the effects of transportation system management (TSM) and transportation demand management (TDM) strategies.

TSM_andy1_access.s
 TSM_andy1_flex_tg.s
 TSM_andy1_ped_bik.s, TSM_andy1_signals.s
 TSM_andy1_PNR.s, TSM_andy1_HOV.s

TABLE K-1 **TSM MODEL FACTORS**

STRATEGY	TRAVEL IMPACT	CONDITION	PREFERRED MODEL METHOD
Freeways			
Incident Management			Included in model capacity*
Intelligent Transportation Systems (ITS)			Included in model capacity*
Ramp Metering			Included in model capacity*
Arterials			
Signal Coordination	Increase PM speed 5% on PART & MART facilities	- if FT is principle arterial or minor arterial - and if LOS "D" or "E" based on PM congested speed - or if a New Facility	- Post process, increase PM congested speed by 5%, do not run assignment again
Access Management	Increase PM speed 10% on PART & MART facilities	- if FT is principle arterial or minor arterial - and if LOS "D" or "E" based on PM congested speed - and if FF<1.0	- Post process, increase PM congested speed by 10%, do not run assignment again



TABLE K-2

TDM Model Factors

STRATEGY	TRAVEL IMPACT	CONDITION	PREFERRED MODEL METHOD
Freeways			
Park & Ride	Reduce PM period volume by # stalls	- if OD distance > 25.0 miles	- Identify potential P&R strategy based on existing inventory by county - HBW vehicle trip table will be reduced by the corresponding number of P&R stalls identified above for OD pairs originating in the corresponding county in proportion to the number of trips in that OD pair (OD trips with distance greater than 25 will need to be summed first)
HOV / HOT Lanes	Reduce PM period volume by 60 veh / hour	- if FT is freeway - and if number of lanes is >2 (exclude I-84)	- change FT to HOV (managed lane)
Note: The HOV strategy required a new trip distribution to properly account for the changes in freeway capacity. Results from this modeling effort were contrary to expectations. {Large volumes of traffic were forced to the arterial streets}. This strategy was eliminated from the CMP model. Much of I-15, the best HOV candidate facility, will have HOV lanes anyway.			
Arterials			
Ped / Bicycle	Reduce PM volume on MART & COLL by 0.5% (mode share) of 25% (HBW percentage) of volume (multiply by 0.99875)	- if FT is minor arterial or collector, and trip length is less than 10 minutes.	- factor PM period volume by 0.99875 and calculate a new PM speed
Regional			
Transit (CR, LRT, & bus)			Included in mode choice
Rideshare			Included in mode choice
Flextime Telecommuting Growth Management	Reduce PM period volume by 1% for HBW trips (assumed to be 25% of the volume)		- factor PM period volume by 0.9975 and calculate a new PM speed

*These strategies do not improve capacity or speed beyond assumed model levels.

