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E-Mail:

Fax:

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Two-Way Two-Lane Highway Segment Analysis

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Analyst Steve Brinck  
 Agency/Co. Parsons Brinckerhoff  
 Date Performed 08/21/03  
 Analysis Time Period  
 Highway Cole Ln  
 From/To  
 Jurisdiction  
 Analysis Year 2030  
 Description Existing Roads with Future Traffic Volumes

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Input Data

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Highway class	Class 2					
Shoulder width	0.0	ft	Peak-hour factor, PHF	0.92		
Lane width	9.0	ft	% Trucks and buses	2	%	
Segment length	2.7	mi	% Recreational vehicles	4	%	
Terrain type	Rolling		% No-passing zones	100	%	
Grade: Length		mi	Access points/mi	29	/mi	
Up/down		%				
Two-way hourly volume, v	185	veh/h				
Directional split	66 / 34	%				

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Average Travel Speed

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Grade adjustment factor, fG	0.71	
PCE for trucks, ET	2.5	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.967	
Two-way flow rate, (note-1) vp	293	pc/h
Highest directional split proportion (note-2)	193	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	40	mi/h
Observed volume, Vf	0	veh/h
Estimated Free-Flow Speed:		
Base free-flow speed, BFFS	-	mi/h
Adj. for lane and shoulder width, fLS	-	mi/h
Adj. for access points, fA	-	mi/h
Free-flow speed, FFS	40.0	mi/h
Adjustment for no-passing zones, fnp	4.0	mi/h
Average travel speed, ATS	33.8	mi/h

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Percent Time-Spent-Following

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Cole Ln2.txt

Grade adjustment factor, fg	0.77	
PCE for trucks, ET	1.8	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fhv	0.984	
Two-way flow rate,(note-1) vp	265	pc/h
Highest directional split proportion (note-2)	175	
Base percent time-spent-following, BPTSF	20.8	%
Adj.for directional distribution and no-passing zones, fd/np	24.1	
Percent time-spent-following, PTSF	44.9	%

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Level of Service and Other Performance Measures

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Level of service, LOS	B	
Volume to capacity ratio, v/c	0.09	
Peak 15-min vehicle-miles of travel, VMT15	137	veh-mi
Peak-hour vehicle-miles of travel, VMT60	505	veh-mi
Peak 15-min total travel time, TT15	4.1	veh-h

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Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.