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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                    Jamison Rd  
 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 1					
Shoulder width	0.5	ft	Peak-hour factor, PHF	0.95		
Lane width	10.0	ft	% Trucks and buses	2	%	
Segment length	3.2	mi	% Recreational vehicles	4	%	
Terrain type	Rolling		% No-passing zones	100	%	
Grade: Length		mi	Access points/mi	17	/mi	
Up/down		%				
Two-way hourly volume, v	471	veh/h				
Directional split	70 / 30	%				

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Average Travel Speed

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Grade adjustment factor, fG	0.93	
PCE for trucks, ET	1.9	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.978	
Two-way flow rate, (note-1) vp	545	pc/h
Highest directional split proportion (note-2)	382	pc/h
Free-Flow Speed from Field Measurement:		
Field measured speed, SFM	35	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	35.0	mi/h
Adjustment for no-passing zones, fnp	4.1	mi/h
Average travel speed, ATS	26.7	mi/h

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Percent Time-Spent-Following

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Jamison2.txt

Grade adjustment factor, fg	0.94	
PCE for trucks, ET	1.5	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fhv	0.990	
Two-way flow rate,(note-1) vp	533	pc/h
Highest directional split proportion (note-2)	373	
Base percent time-spent-following, BPTSF	37.4	%
Adj.for directional distribution and no-passing zones, fd/np	21.7	
Percent time-spent-following, PTSF	59.1	%

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Level of Service and Other Performance Measures

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Level of service, LOS	E	
Volume to capacity ratio, v/c	0.17	
Peak 15-min vehicle-miles of travel, VMT15	399	veh-mi
Peak-hour vehicle-miles of travel, VMT60	1517	veh-mi
Peak 15-min total travel time, TT15	14.9	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.