

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.:
Date performed: 30/11/2016
Analysis time period:
Freeway/dir or travel:
Junction: C 1 CIERRE
Jurisdiction:
Analysis Year:
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	90.0	km/h
Volume on freeway	357	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	60.0	km/h
Volume on ramp	3005	vph
Length of first accel/decel lane	450	m
Length of second accel/decel lane	450	m

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		m

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent
Volume, V (vph)	357	3005	vph
Peak-hour factor, PHF	0.80	0.80	
Peak 15-min volume, v15	112	939	v
Trucks and buses	5	5	%

Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	%	%	%
Length	km	km	km
Trucks and buses PCE, ET		1.5	1.5
Recreational vehicle PCE, ER		1.2	1.2
Heavy vehicle adjustment, fHV		0.976	0.976
Driver population factor, fP	1.00	1.00	
Flow rate, vp	457	3850	pcph

Estimation of V12 Merge Areas

L = 0.00 (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
 $v = v (P) = 457$ pcph
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4307	4500	No
v R12	4307	4600	No

Level of Service Determination (if not F)

Density, $D = 3.402 + 0.00456 v + 0.0048 v - 0.01278 L = 5.9$ pc/km/ln
R R 12 A
Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, M = 0.286
S
Space mean speed in ramp influence area, S = 83.4 km/h
R
Space mean speed in outer lanes, S = N/A km/h
0
Space mean speed for all vehicles, S = 83.4 km/h
