

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: Shelby Hwy On Ramp to I-85 NB
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.5	mph
Volume on freeway	1446	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	154	vph
Length of first accel/decel lane	560	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	184	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1675	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1446	154	184	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	385	41	49	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2231	164	196	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FM$$

$$v_{12} = v_F (P_{FM}) = 2231 \quad \text{pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	2395	4790	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 2231		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	2395	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 20.6 \quad \text{pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M _S = 0.325	
Space mean speed in ramp influence area,	S _R = 60.6	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 60.6	mph

Phone: Fax:
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_____Merge Analysis_____

Analyst:
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Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: Shelby Hwy On Ramp to I-85 NB
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

_____Freeway Data_____

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.5	mph
Volume on freeway	1446	vph

_____On Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	154	vph
Length of first accel/decel lane	560	ft
Length of second accel/decel lane		ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	8	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	5100	ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1446	154	8	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	385	41	2	v
Trucks and buses	30	0	100	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	0.667	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2231	164	13	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FM$$

$$v_{12} = v_F (P_{FM}) = 2231 \quad \text{pc/h}$$

Capacity Checks

		Actual	Maximum	LOS F?
v _{FO}		2395	4790	No
v ₃ or v _{av34}	0	pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?			No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2			No	
If yes, v _{12A} = 2231			(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	2395	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 20.6 \quad \text{pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M _S = 0.325	
Space mean speed in ramp influence area,	S _R = 60.6	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 60.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: Gaffney Ferry On Ramp to I-85
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.8	mph
Volume on freeway	1600	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	8	vph
Length of first accel/decel lane	780	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	154	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1600	8	154	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	426	2	41	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2468	9	164	pcph

Estimation of V12 Merge Areas

$L =$ (Equation 13-6 or 13-7)
 EQ
 $P = 1.000$ Using Equation 0
 FM
 $v_{12} = v_F (P_{FM}) = 2468$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2477	4796	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or $v_{av34} > 2700$ pc/h?		No	
Is v_3 or $v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 2468$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2477	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 19.9$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$M_S = 0.313$	
Space mean speed in ramp influence area,	$S_R = 61.1$	mph
Space mean speed in outer lanes,	$S_0 = N/A$	mph
Space mean speed for all vehicles,	$S = 61.1$	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: Gaffney Ferry On Ramp to I-85
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.8	mph
Volume on freeway	1600	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	8	vph
Length of first accel/decel lane	780	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	4730	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1600	8	1	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	426	2		v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%		%	%
Length	mi		mi	mi
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2468	9	1	pcph

Estimation of V12 Merge Areas

$L =$ (Equation 13-6 or 13-7)
 EQ
 $P = 1.000$ Using Equation 0
 FM
 $v_{12} = v_F (P_{FM}) = 2468$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2477	4796	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or $v_{av34} > 2700$ pc/h?		No	
Is v_3 or $v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 2468$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2477	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 19.9$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$M_S = 0.313$	
Space mean speed in ramp influence area,	$S_R = 61.1$	mph
Space mean speed in outer lanes,	$S_0 = N/A$	mph
Space mean speed for all vehicles,	$S = 61.1$	mph

Phone: Fax:
E-mail:

_____ Merge Analysis _____

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: Blacksburg On Ramp to I-85 NB
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

_____ Freeway Data _____

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.8	mph
Volume on freeway	1392	vph

_____ On Ramp Data _____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	55	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

_____ Adjacent Ramp Data (if one exists) _____

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	215	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1440	ft

_____ Conversion to pc/h Under Base Conditions _____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1392	55	215	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	370	15	57	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2147	59	229	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FM$$

$$v_{12} = v_F(P) = 2147 \quad \text{pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	2206	4796	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 2147		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	2206	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 17.0 \quad \text{pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M = 0.293	
Space mean speed in ramp influence area,	S _R = 61.6	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 61.6	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: SC 5 On Ramp to I-85 NB
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	70.7	mph
Volume on freeway	1178	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	146	vph
Length of first accel/decel lane	1375	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	269	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3940	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1178	146	269	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	313	39	72	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1817	155	286	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FM$$

$$v_{12} = v_F (P_{FM}) = 1817 \quad \text{pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	1972	4800	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 1817		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	1972	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 12.2 \quad \text{pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M _S = 0.253	
Space mean speed in ramp influence area,	S _R = 63.4	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 63.4	mph

Phone: _____ Fax: _____
 E-mail: _____

_____ Merge Analysis _____

Analyst: _____
 Agency/Co.: Stantec
 Date performed: 11/9/2016
 Analysis time period: 8:00AM-9:00AM
 Freeway/Dir of Travel: I-85 Northbound
 Junction: Tribal Rd On Ramp to I-85 NB
 Jurisdiction: SCDOT
 Analysis Year: 2015 Existing Conditions
 Description: _____

_____ Freeway Data _____

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	70.3	mph
Volume on freeway	1187	vph

_____ On Ramp Data _____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	97	vph
Length of first accel/decel lane	1064	ft
Length of second accel/decel lane		ft

_____ Adjacent Ramp Data (if one exists) _____

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	137	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1111	ft

_____ Conversion to pc/h Under Base Conditions _____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1187	97	137	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	316	26	36	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1831	103	146	pcph

Estimation of V12 Merge Areas

$L =$ (Equation 13-6 or 13-7)
 EQ
 $P = 1.000$ Using Equation 0
 FM
 $v_{12} = v_F (P_{FM}) = 1831$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	1934	4800	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or $v_{av34} > 2700$ pc/h?		No	
Is v_3 or $v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1831$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	1934	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 13.8$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$M_S = 0.273$	
Space mean speed in ramp influence area,	$S_R = 62.6$	mph
Space mean speed in outer lanes,	$S_0 = N/A$	mph
Space mean speed for all vehicles,	$S = 62.6$	mph

Phone: Fax:
E-mail:

Merge Analysis

Analyst:
Agency/Co.: Stantec
Date performed: 11/9/2016
Analysis time period: 8:00AM-9:00AM
Freeway/Dir of Travel: I-85 Northbound
Junction: US 29 On Ramp to I-85 NB
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	70.7	mph
Volume on freeway	1237	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	88	vph
Length of first accel/decel lane	580	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	47	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	745	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1237	88	47	vph
Peak-hour factor, PHF	0.94	0.94	0.94	
Peak 15-min volume, v15	329	23	13	v
Trucks and buses	30	0	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Rolling	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	2.5	1.5	1.5	
Recreational vehicle PCE, ER	2.0	1.2	1.2	

Heavy vehicle adjustment, fHV	0.690	1.000	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1908	94	50	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FM$$

$$v_{12} = v_F (P_{FM}) = 1908 \quad \text{pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	2002	4800	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 1908		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	2002	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 17.4 \quad \text{pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M _S = 0.309	
Space mean speed in ramp influence area,	S _R = 61.8	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 61.8	mph