

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: Hampshire Dr to SC 18
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1630	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	434	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1257	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.30	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	4.0	mi/h
Free-flow speed, FFS	69.5	mi/h

LOS and Performance Measures

Flow rate, vp	1257	pc/h/ln
Free-flow speed, FFS	69.5	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	18.0-	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: SC 18 To Gaffney Ferry Rd
Jurisdiction: SCDOT
Analysis Year: 2040 No Build Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1600	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	426	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1234	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.17	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	3.7	mi/h
Free-flow speed, FFS	69.8	mi/h

LOS and Performance Measures

Flow rate, vp	1234	pc/h/ln
Free-flow speed, FFS	69.8	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.6	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: Gaffney Ferry To Frontage Rd
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1608	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	428	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1240	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	3.2	mi/h
Free-flow speed, FFS	70.3	mi/h

LOS and Performance Measures

Flow rate, vp	1240	pc/h/ln
Free-flow speed, FFS	70.3	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.7	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: Frontage Rd to Blacksburg Hwy
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1607	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	427	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1239	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.3	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.17	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	3.7	mi/h
Free-flow speed, FFS	69.8	mi/h

LOS and Performance Measures

Flow rate, vp	1239	pc/h/ln
Free-flow speed, FFS	69.8	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.7	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: Blacksburg Hwy To SC 5
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1447	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	385	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1116	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.3	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.83	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.8	mi/h
Free-flow speed, FFS	70.7	mi/h

LOS and Performance Measures

Flow rate, vp	1116	pc/h/ln
Free-flow speed, FFS	70.7	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	15.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: SC 5 To Tribal Rd
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1324	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	352	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1021	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.2	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	3.2	mi/h
Free-flow speed, FFS	70.3	mi/h

LOS and Performance Measures

Flow rate, vp	1021	pc/h/ln
Free-flow speed, FFS	70.3	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.6	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: Tribal Rd To US 29
Jurisdiction: SCDOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1284	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	341	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	990	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.2	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	0.83	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	2.8	mi/h
Free-flow speed, FFS	70.7	mi/h

LOS and Performance Measures

Flow rate, vp	990	pc/h/ln
Free-flow speed, FFS	70.7	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.1	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

Phone: Fax:
E-mail:

Operational Analysis

Analyst:
Agency or Company: Stantec
Date Performed: 11/8/2016
Analysis Time Period: 8:00AM-9:00AM
Freeway/Direction: I-85 Northbound
From/To: US 29 To NC 216
Jurisdiction: SCDOT/NC DOT
Analysis Year: 2015 Existing Conditions
Description:

Flow Inputs and Adjustments

Volume, V	1325	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	352	v
Trucks and buses	30	%
Recreational vehicles	0	%
Terrain type:	Rolling	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	2.5	
Recreational vehicle PCE, ER	2.0	
Heavy vehicle adjustment, fHV	0.690	
Driver population factor, fp	1.00	
Flow rate, vp	1022	pc/h/ln

Speed Inputs and Adjustments

Lane width	11.3	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	1.50	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	1.9	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	4.5	mi/h
Free-flow speed, FFS	69.0	mi/h

LOS and Performance Measures

Flow rate, vp	1022	pc/h/ln
Free-flow speed, FFS	69.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.6	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.