

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 Build Conditions  
Description:

### Flow Inputs and Adjustments

|                               |         |         |
|-------------------------------|---------|---------|
| Volume, V                     | 2323    | veh/h   |
| Peak-hour factor, PHF         | 0.94    |         |
| Peak 15-min volume, v15       | 618     | 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                 | 1194    | 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                | 3    |          |
| 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                  | 1194 | pc/h/ln  |
| Free-flow speed, FFS           | 69.8 | mi/h     |
| Average passenger-car speed, S | 70.0 | mi/h     |
| Number of lanes, N             | 3    |          |
| Density, D                     | 17.1 | pc/mi/ln |
| Level of service, LOS          | B    |          |

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