

CE 34500: Transportation Engineering  
Homework 3

1. Determine Level of Service an urban freeway section, if the BFFS = 70 mph. The data are as follows:

Number of lanes: 4 (one direction)  
Lane width = 12 ft.  
Lateral clearance = 5 ft. (right side)  
Interchange density = 1 per mile  
Percent trucks = 14  
Percent RVs = 4  
PHF = 0.95  
Commuter traffic

2. Determine Level of Service a two-lane two-way highway for a 2 mile segment if the BFFS = 60 mph. The data are as follows:

Volume = 1600 veh/h (two-way)  
Percent trucks = 5  
Percent RVs = 1  
Peak hour factor = 0.95  
Percent directional split = 50-50  
Percent no-passing zones = 50  
Lane width = 12 ft.  
Shoulder width = 4 ft.  
Access points per mile = 20  
Highway: Class I  
Terrain: Rolling