

FLOW = SPEED x DENSITY

$$q = S \times D$$

① $S_1 = 70 \text{ MPH}$

$D_1 = 3 \text{ VEH/1000 FEET}$

$$q = (70 \text{ MILES/HOUR})(3 \text{ VEH/1000 FEET})(5280 \text{ FEET/MILE}) = \underline{\underline{1109}} \text{ VEH/HOUR}$$

② $S_2 = 50 \text{ MPH}$

$D_2 = 7 \text{ VEH/1000 FEET}$

$$q = (50 \text{ MILES/HOUR})(7 \text{ VEH/1000 FEET})(5280 \text{ FEET/MILE}) = \underline{\underline{1848}} \text{ VEH/HOUR}$$

③ $S_3 = 20 \text{ MPH}$

$D_3 = 14 \text{ VEH/1000 FEET}$

$$q = (20 \text{ MILES/HOUR})(14 \text{ VEH/1000 FEET})(5280 \text{ FEET/MILE}) = \underline{\underline{1478}} \text{ VEH/HOUR}$$