

## Mercer Corridor Project – Energy Efficiency & Greenhouse Gas Emissions Reductions

- 80,000 trips reduced daily X 250 = 20,000,000 trips reduced annually
- The average travel distance of citywide auto trips is 11.6 miles/trip.
- For 20,000,000 trips reduced annually, the total VMT reduction will be:

$$20,000,000 \times 11.6 = 232,000,000 \text{ vehicle miles traveled}$$

### Energy Reduction

- Given the average fuel efficiency of 23 miles/gallon in the Puget Sound region, the total gasoline savings for the reduced VMT will be:

$$232,000,000 \text{ miles} \div 23 \text{ miles/gallon} = 10,100,000 \text{ gallons}$$

### Greenhouse Gas Reduction

- Assume each gallon of gasoline consumed will produce 19 pounds of CO2, the total CO2 emission reduction from the VMT reduction will be:

$$10,100,000 \text{ gallons} \times 19 \text{ pounds/gallon} = 191,900,000 \text{ pounds} = 86440 \text{ tons}$$

### Conclusion:

20,000,000 trip reductions will result 10,100,000 gasoline savings and 86440 tons of CO2 emission reduction annually.

Annual Trip Reduction	Average Trip Length	Total VMT reduction	Average Fuel Efficiency	Reduced Fuel Consumption	CO2 Emission Rate from Fuel Consumption	Total CO2 Reduction
20,000,000 trips	11.6 mile/trip	232,000,000 VMT	23 miles/gallon	10,100,000 gallons	19 pounds CO2/gallon gas	191,900,000 lbs (86440 tons)