

5. Conclusions: How Capacity Affects Demand

5.1 Introduction

The literature search, the additional case studies, and the home interview survey all point to the following effects of increased highway capacity on travel behavior:

- Increased trip frequency
- Increases in trip length (in terms of distance, not time)
- Changes in trip scheduling to avoid peak periods
- Increases in auto driving mode split
- Changes in route choice to less congested routes
- Changes in residential location to locations farther from work

Highway capacity increases can also indirectly affect travel behavior by affecting land development patterns. The remainder of this chapter explains these effects in more detail.

5.2 Why People Travel

Travel is a "derived demand". Travel is just one of many daily activities engaged in by a rational individual. This individual must allocate his or her limited time and monetary resources among these activities. Travel is just one of the many activities a person may (or may not) undertake [20]. Figure 5-1 shows a simple diagram of the interplay of various factors that determine travel [21]. The types and amounts of each kind of activity will vary according to travel needs (which are affected by household size and composition), the stage of life (old, young, parent, single), income (the ability to purchase travel services and activities), location, and individual tastes.

Each person has a fixed daily time budget of 24 hours and a more flexible daily dollar budget to spend on daily activities (see Figure 5-2). While there are always 24 hours in a day, a person can elect to spend more money on one day than on another.