Integration of Bicycling and Walking Facilities into the Infrastructure of Urban Communities

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Many manuals, handbooks and web resources exist that provide guidance on planning for and designing bicycle and pedestrian facilities. However few of these resources emphasize program and infrastructure characteristics most desired by current (and potential) walkers and cyclists. This study highlights practices in the California communities of Davis, Palo Alto and San Luis Obispo, cities known for being bicycle- and pedestrian-friendly. The case studies illustrate how these urban communities have successfully integrated non-motorized transportation modes into their physical infrastructure and effectively educated residents and employees. More specifically, this study provides insight into the following questions:

- What features are most preferred by users?
- What features do users and program managers reveal as inappropriate?
- What program characteristics are associated with high alternative mode choice?

Bicyclists and pedestrians alike desire auto-separated facilities that link activity locations and are within an acceptable distance. . . This suggests that these kinds of projects along major and minor routes may merit priority over purely recreational paths.

Study Methods

The study utilized a multi-faceted approach to data collection and analysis. Data came from the following sources: field observations; a written and online survey of case study city residents; interviews of system operators and managers; and analysis of secondary data from previous study efforts in the case study cities. These findings were then combined to identify important factors and recurring themes associated with high rates of walking and bicycling. Finally, the factors and themes were used to develop a set of recommended planning activities that can be used by other communities to better integrate walking and bicycling facilities into the urban infrastructure.

Findings

The results of the user preference survey and review of the literature indicate that bicyclists and pedestrians alike strongly desire auto-separated facilities on streets. This suggests that these kinds of projects may merit priority over purely recreational paths.

Example of a three-way separated facility (Holland)

Based on an analysis of survey data from over 630 residents in the case

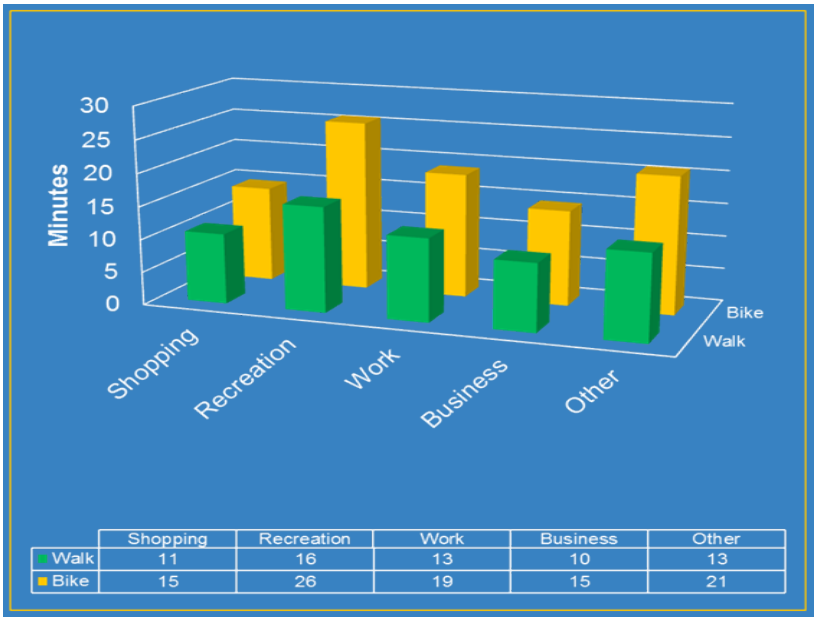
study communities, this study found several factors that mattered most to residents for creating bicycling- and walking-friendly places. These factors are the following: (a) acceptable bicycling and walking distances to desired activities; (b) direct routes; (c) good route connectivity; and (d) separation of motorized and non-motorized transportation modes.

Policy Recommendations

Based on the study's key findings, this research team recommends prioritizing the following planning activities. By promoting these types of projects in the future, managers will enhance their ability to create facilities and programs that will actually be used and appreciated by their target audience.

1. Place activity centers within the range for walking and bicycling
2. Establish links between activity centers
3. Establish links to main public transportation (bus and railway) service stations
4. Select the physical design of bicycling or walking infrastructure with degrees of separation that are most appropriate for conditions along links between activity and transit centers
5. Select appropriate crossing treatments along route
6. Provide storage at destinations
7. Provide sharing and rental facilities at transit centers
8. Educate, encourage and enforce
9. Monitor, evaluate and update system

Willingness to Walk or Bike by Trip Purpose (California)



	Shopping	Recreation	Work	Business	Other
Walk	11	16	13	10	13
Bike	15	26	19	15	21

About the Authors

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/project/2906.html

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