



PLANNING FOR FAMILY-FRIENDLY COMMUNITIES: ISSUE BRIEF
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Transportation and Family-Friendly Communities

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WHY TRANSPORTATION?

Various modes of transportation such as automobiles, mass transit, bicycles, and walking are necessary to improve accessibility of families, especially children and the elderly who do not drive by themselves. However, transportation policies in the United States have been inclined to only favor one mode, automobiles. According to a 2008 APA/Cornell Survey (Israel and Warner, 2008), only 36% of the survey respondents say that their communities promote alternatives to privately owned cars. Even with a focus on cars there are things communities can do to promote family-friendly communities. This issue brief will discuss four major issues in family-friendly transportation including Complete Streets, the Safe Routes to School program, trip chaining, and transit-oriented development, and suggest toolkits for implementation.

Complete Streets

Transportation policies for family-friendly cities consider all family members ranging from children to the elderly. In fact, policies tend to be adult-friendly as children do not have voting power, and plans are likely to be driver-friendly overlooking those who do not own a car. The Complete Streets Movement aims to provide streets not only for drivers but also for pedestrians, bicyclists, wheelchair users, and mass transit users (Laplante and McCann, 2008; Seskin, 2009). The movement is a national effort to solve this inequality. The Complete Streets policy intends to serve little children and the elderly as well as young adults, by redesigning automobile focused roads into streets for a variety of uses. Exemplary design guidelines (US DOT, 2008) include

- a minimum of a four foot wide striped bicycle lane,
- a minimum of a five foot sidewalk,

- wider sidewalks at intersections to accommodate accessible curb ramps, and
- a minimum of a four foot paved shoulder.

Additional guidelines include improving the appearance of streets, reducing the potential for speeding by adding street parking or narrow car roads, introducing design elements like landscaped strips and detached sidewalks, and designing shorter blocks to slow traffic and shorten walking distances (Sacramento Transportation and Air Quality Collaborative, 2005).



[Figure 1] Complete Streets Case from Burlington, VT

- 1) Enhanced transit stops
- 2) Traffic calming by removing a lane of through traffic
- 3) Shorter width pedestrian crossings
- 4) Bike lanes
- 5) Updated utilities and lighting
- 6) Landscaped median islands and turn lanes
- 7) Storm water planters
- 8) Tree belts

Source: Burlington, VT Transportation Plan, 2007, p. 7
<http://www.dpw.ci.burlington.vt.us/transportation/TransportationPlan/BTP%20draft%208-31-07.pdf>

Redesigned streets provide safe routes for children and the elderly, who are a physically vulnerable group due to their slow reaction time to danger. This nationwide effort has led several municipalities and institutions to adopt policies for complete streets. In addition, there are state-level efforts made by California, Florida, Illinois, Massachusetts, Oregon, and South Carolina (Complete the Streets, <http://www.completestreets.org>).

Safe Routes to School

Since August 2005, the federal government has funded a nationwide Safe Routes to School program by reimbursing expenses for infrastructure improvement and educational activities that promote bicycling or walking to school more safely (National Center for Safe Routes to School). Many of the respondents to the APA/Cornell survey highlight that they are participating in such programs. The program aims to reduce traffic, fuel consumption, and air pollution, so that people can enjoy safe traffic, healthier life without obesity or asthma, and an environmentally friendly atmosphere. In addition to infrastructural improvement on bike lanes, pathways, and sidewalks, the program supports educational efforts to increase the awareness of the benefits of walking and bicycling. Funds are allocated to State DOTs once every five years, and any state, local, regional or non-profit agency may apply for the funds. As the program is fully funded by the federal government, allocation of funding is a highly competitive selection process. 70-90% of the state funds must be used for infrastructural improvement within two miles of a school, and the remaining funds are used for non-infrastructural programs like promotion campaigns or educational workshops. Combined with the Safe Routes to School program, shuttle services to after school program participants can provide safety and mobility to children.



[Figure 2] People participating in the Bike Routes to School
Source: National Center for Safe Routes to School
<http://www.saferoutesinfo.org/guide>

Trip Chaining

People may save time and costs by linking shopping, picking up children, and other errands on their way home from work. Based on the 1995 Nationwide

Personal Transportation Survey and the 2001 National Household Travel Survey, trip chaining behavior grew between 1995 and 2001 (McGuckin et al. 2005). McGuckin et al. found in two-parent, two-worker households that drop off children at school, women are more likely than men to incorporate that trip into their commute. Transportation planners need to acknowledge trip chaining as they plan bus routes and transportation systems.

Family-friendly transportation policies link child care and parents' employment. Many working parents experience lost work hours due to child care failures - arriving late for work, leaving early from work, and missing work. These problems affect female workers more severely than male workers. The lower the availability of child care, the higher the mothers' employment exit. Wachs and Taylor (2002) describe the relationship between transportation systems and workers and argue that a convenient transportation system helps people save commuting hours and the saved time benefits other realms such as flexibility in child care arrangements. Although auto ownership offers many benefits to low-income households, the financial burden – costs of car ownership, maintenance, fuel, and insurance – prevents many low-income households from owning a car. Carefully designed public transit systems provide an alternative.

Transit Oriented Development

Transit oriented development (TOD), the development of housing and other urban facilities near mass transit like subway and bus stations, provides a possible solution for creating family-friendly communities. Newman and Kenworthy (1999) and Barnett (2003) point out that many problems of urban sprawl are caused by auto-dependency and they argue that there is a need for transit oriented communities. As owning a car may not be realistic for low income families due to operating costs, TOD may be a good way to improve equity, however many TODs are priced outside the range of low income families and lack sufficient family sized housing. Bernick and Cervero (1996) show exemplary TOD cases which include Pleasant Hill in the San Francisco Bay area, Ballston in Washington D.C. and Mission Valley in San Diego. Local Investment in Child Care (2008) looks at the economic benefits associated with building child care centers near transit hubs. A desire to live within walking distance of mass transit leads people to pay more for housing and, as a result, property values increase up to 25 percent. In turn, increased property values make the area more attractive to retail tenants. Primary beneficiaries of child care centers at TODs are people who use the center, but transit agencies also benefit from TOD development because an in-demand service like child care increases ridership.



[Figure 3] Dense Housing near the Portland Streetcar
 Source: Oregon
 Live http://blog.oregonlive.com/pdxgreen/2007/12/planning_as_sociation_hails_met.html

Despite these benefits, poor accessibility to transit stations may cause problems, if the design features do not give attention to accessibility for the elderly, small children, or parents with a stroller (Hartell, 2009). In addition, the majority of housing types near transit hubs are studio or one-bed room, which is not suitable for families. The difference between the conceptual benefits of TOD and its practical application require more attention from planners.

TOOLKIT

Open-ended responses to the APA/Cornell survey explicitly show a pattern for the family-friendly community from the transportation side, which is to create an environment for mass transit, encourage bicycling, and increase walking. Based on case studies - Houston, TX; Marin County, CA; Kansas, MO; Dalton, GA; Burlington, VT; Toronto, Ontario - and interviews with a few planners, toolkits for family-friendly transportation strategies are developed as follows:

Cars

- Operate car pooling or car sharing for those who can not afford a car
- Operate emergency movement service like the Guaranteed Ride Home program to those who regularly carpool, bike, walk, or take public transit.
- Promote on-street parking both to accommodate drivers and to slow down traffic
- Operate shuttle services to after school program participants

Transit

- Link public transit to other destinations like schools, libraries, hospitals, and stores
- Promote the proximity of housing to other facilities through public transit

- Give a discount on transit fares for children and the elderly
- Give incentives for those who do not bring cars to work or to school
- Link transit stations to other modes of transportation such as bicycle lanes
- Equip buses with bike racks

Bicycle

- Extend bicycle lanes throughout municipalities
- Increase connectivity of each bicycle lane
- Develop necessary facilities such as bicycle parking lots
- Link bicycle lanes to schools
- Participate in the Safe Routes to Schools program

Pedestrian

- Link residential areas with commercial/employment areas through pedestrian routes
- Provide education and training for safe use of the bicycle and pedestrian system
- Repair broken or unclear traffic signs to improve safety and appearance of sidewalks
- Improve sidewalk conditions by paving roads and landscaping

Planning

- Prioritize family-friendly transportation projects and allocate funds for the projects
- Promote compact and mixed use development to reduce traffic
- Locate new developments near transit stations through incentives or zoning regulations

CASES

Houston, TX emphasizes trip chaining by promoting bicycle routes throughout the city, increasing accessibility to schools by bicycling, and equipping buses with two bike racks so that people can connect bicycling with transit. Houston offers an educational safety program, the METRO Solutions School Safety Program, for kindergarten through twelfth grade students. Students learn train awareness, construction and rail safety for three weeks.

Traffic and Transportation Strategic Plan (as part of the General Plan) http://www.publicworks.houstontx.gov/traffic/docs/strategic_plan.pdf
 City Mobility Planning <http://www.houstontx.gov/planning/cmp/index.html>
 Urban Corridor Planning http://www.houstontx.gov/planning/Urban/urban_cor.html

Marin County, CA was selected by the federal government to participate in a Non-motorized

Transportation Pilot Program and received \$25 million for improvements for walking and bicycling. Marin County participates in the Safe Routes to School.

Countywide
plan http://www.co.marin.ca.us/depts/CD/main/fm/cwpdocs/CWP_CD2.pdf
Transportation
division <http://egovwebprd.marinpublic.com/depts/pw/main/cma.cfm>

Kansas, MO participates in the Safe Routes to School and provides "Train the Trainer" workshops for employees that supervise school crossing guards. They provide consultation for newly constructed schools on street and parking lot traffic flow, bike and pedestrian facilities, and speed limits. The School Zone Program is a program provided by the State of Kansas that improves school zones through pavement striping, school zone signs, and reduced speeds. The City of Kansas is in the process of making an older corridor more walkable and transit friendly.

Department of Transportation, Kansas
City <http://www.ksdot.org/burTrafficsaf/default.asp>

Dalton, GA develops pedestrian and bicycle routes, links residential areas with commercial/ employment areas through the routes, and provides education and training for safe use of the bicycle and pedestrian system. Dalton has been relying on federal Transportation Enhancement grants for pedestrian and bicycle improvements, and expects to use this fund as a major financial source in the future. Public transit is promoted in Dalton and they participate in Safe Routes to School as well.

Regional Bike and Pedestrian Facilities Plan for the North Georgia Region <http://www.ngrdc.org/bikepedplan.html>
Bike Walk North
Georgia <http://www.bikewalknorthgeorgia.org>
Long Range Transportation Plan 2005-2030 <http://www.ngrdc.org/sectionVjune.pdf>

Burlington, VT creates a pedestrian friendly environment by prioritizing sidewalk projects and constructing continuous pedestrian routes. These efforts are part of developing complete streets. The city also addresses plans for improving transit and bicycle uses (See Burlington Case).

Sidewalk Strategic
Plan <http://www.dpw.ci.burlington.vt.us/streets/projects/SidewalkPlan/index.php>
Transportation
Plan <http://www.dpw.ci.burlington.vt.us/transportation/TransportationPlan/BTP%20draft%208-31-07.pdf>

Toronto, Ontario promotes TOD by operating convenient public transit system, improving the quality of transit services, proposing pedestrian friendly transportation systems, and promoting car dependence. Additionally, Toronto attempts to improve bicycle parking facilities to increase bicycle

use and participates in the Active and Safe Routes to School.

Transportation Planning, City of
Toronto http://www.toronto.ca/planning/tp_index.htm
Toronto Transit Commission <http://www3.ttc.ca>

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