CHAPTER VII

Land Use Planning

INTRODUCTION

Land use planning is a critical element in the functioning of any transportation system, whether autos, buses, bicycles, or pedestrians. While land use planning is often associated with governmental entities, it should more appropriately be viewed as the process of setting goals and pursuing them in order to achieve certain ends from the land. Private developers often use such words as Aaccess@ and Aamenities@ to describe the way they want their parcels to relate to the rest of the transportation system.

The goal of land use planning as it relates to transportation is to make sure the supply of transportation (the number and size of roads, the frequency of transit service, etc.) is adequate to meet the demand (the number of people going from one point to another). Without having a Aplan,@ a knowledge of what to expect from any given parcel of land, it is very difficult to achieve the balance where supply meets demand. And since governments are being pushed by citizens to be more efficient and frugal with taxpayer money, there is seldom excess supply. Thus, unplanned development results in congestion and more accidents. These conditions compromise all modes of travel, creating a situation where people=s preferred mode of travel (auto) and many of the alternatives (transit, bicycling, and walking) all fail at the same time.

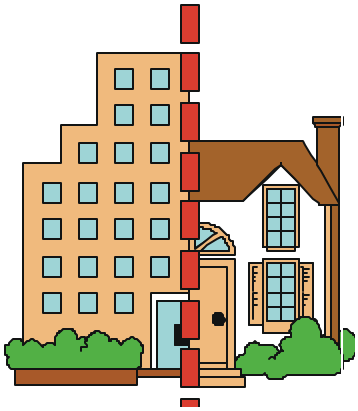
When combining land use planning and transit, many people remember only the *transit advocate=s* point of view which is more buses, fewer cars. In some cases, this point of view may be appropriate, but it is not the only point of view. The cost-conscious taxpayer should consider the argument that land use planning can help minimize the cost of providing essential public transit service. In addition, public transit can play a role in preserving the character of historic downtowns and reducing the need for costly parking structures.

In Grand and Jackson Counties, substantial changes in second-home residential development and commercial businesses have occurred. The second homes are located throughout the main travel corridors and within the towns. The commercial development has also thrived within the towns.

The growth of businesses and residential development will continue as the economy continues to boom.

DESIGN STRATEGIES

In recent years, there has been a strong interest in the planning profession regarding strategies by which rural and urban development can be shaped to maximize the efficiency of alternate transportation modes, particularly transit. This field of study has taken on differing names in various parts of the country. On the East Coast, this field of study is commonly referred to as the ANeo-Traditional Neighborhood Development@ (TND) movement, championed by academics such as Andreas Duany/Elizabeth Plater-Zyberk, and evidenced in such places as the new town of Seaside, Florida and the extensive Kentlands development near Washington, D.C.



In the West, this field of study has typically been labeled ATransit-Oriented Design@ (TOD). The leading figure in this field is Peter Calthorpe, who has been instrumental in the development of the extensive Laguna West project on the southern edge of the Sacramento metropolitan area. There are a number of similarly planned new towns in the San Diego, San Francisco, Portland, and Seattle metropolitan areas. The TOD concept will be the focus of this discussion as it is most common to the western United States.

By either name, there are a number of common design strategies that have been identified through this field of planning research. A key element in the design strategies presented below is an acceptance that automobile use will remain a key part of our transportation system. To that end, the strategies do not strive to eliminate all auto traffic; rather, the goal is to make transit and other alternative transportation modes as attractive as possible. Each strategy is discussed below.

Cluster Land Use Densities Close to Major Transit Stops

A vital rule of thumb in transit planning is that the potential for transit ridership drops off dramatically with distance from the nearest transit stop. Research consistently shows that the proportion of persons willing to use transit drops dramatically beyond a one-quarter mile walking distance to the bus stop (7.5-minute walk at two mph). It therefore follows that the

more trip origins and destinations that can be concentrated within approximately one-quarter mile of a major transit stop, the greater the potential for transit usage. Within the constraints of the real estate market and local housing preferences, therefore, there is a benefit in developing zoning classifications and transit services in tandem to ensure that the greatest concentration within approximately one-quarter mile of a major transit stop, the greater the potential for transit usage. Within the constraints of the real estate market and local housing preferences, therefore, there is a benefit in developing zoning classifications and transit services in tandem to ensure that the greatest number of dwelling units, employment opportunities, and institutional/commercial centers are located near major transit stops.

The Calthorpe school of planners has dubbed this land use cluster a Apedestrian pocket.@ The leading proponent defines this term to mean Aa simple cluster of housing, retail space, and offices within a quarter-mile walking radius of a transit system.@ (The Pedestrian Pocket Book: A New Suburban Design Strategy)

Other characteristics of a Apedestrian pocket@ include: a residential density of approximately 12 dwelling units per acre and commercial development at a floor-to-area ratio (FAR) of at least 0.25. Other studies have found that the recommended *minimum* densities of development to support public transportation are seven dwelling units per acre for residential developments and a floor-area-to-property-area ratio of 1.0 for commercial and office development (Guidelines for Transit-Sensitive Suburban Land Use Design, U.S. DOT, p. 42: 1991).

A Surrounding "Secondary Area" Should Be Developed

This area should include those land uses within a one-mile radius from the transit center. This area should contain more auto-oriented uses, such as lower-density residential (but still at least six dwelling units per acre), highway commercial uses, schools, and public facilities. Residents in these areas help to support the retail center in the Apedestrian pocket,@ and are also conveniently located with respect to drop-off or bicycle access to the transit center. Street networks should be designed to allow access to the transit center without travel on an arterial street.

The Street Network Should Be Developed to Allow Efficient Transit Service

In order to reduce traffic volumes near residences and avoid the potential for Acut-through@ traffic, traffic and land use planners in the period since

roughly World War II have commonly designed residential areas with a curvilinear, disconnected street system, so common today in suburban areas. While a bus can be routed along the curvilinear collector or arterial street close to the residences within a subdivision, the walking distance may be excessive because there is no direct access. Connected streets should be provided to permit bus routes into residential neighborhoods.

Convenient Pedestrian and Bicycle Connections to Transit Stops

A key strategy in TOD design is to ensure that transit passengers can quickly access a bus stop from their trip origin or destination. This strategy recognizes the fact that transit patrons are pedestrians as soon as they leave the bus. To this end, special emphasis is placed on providing direct and attractive pedestrian and bicycle ways between residential and employment areas and transit stops, often including pedestrian paths linking cul-de-sacs with nearby transit stops on collector and arterial streets.

Site Design That Serves Both Auto and Transit Users

A quick drive to the closest Wal-Mart shows the result of current commercial site design practices. Auto drivers are provided with a relatively short walk to the front door after parking. The transit passenger is typically dropped off at the street edge, enduring a long walk to and across the parking lot, unprotected from the weather. Current site design of this type rewards auto use and penalizes transit use. Redesigned to cluster the commercial uses near major intersections, however, both auto and transit users could be provided with convenient walking access to the site. In addition, the Aclusters@ formed by this site plan would encourage increased walking between buildings for meals, business errands, etc.

Convenient transit access may take the form of setback and parking standards. In addition to minimum setbacks, local ordinances should also specify allowable maximum setbacks adjacent to public transportation corridors. The location of parking facilities within the public transportation corridor should also be addressed. Local ordinances should require that parking be provided at the rear or possibly at the side of the building. The front of the building should be oriented to the street with a specific allowable maximum setback which is close to the street and oriented to public transportation and pedestrians.

Other site design issues relate to the geometry of streets, bus turnouts, shelters, and park-and-ride facilities. Streets which will be designated as

bus routes must have adequate turning radii at intersections. Bus turnouts should be designed with a pavement composition that resists damage by buses. In addition, bus turnouts should be sited in locations that minimize traffic flow interruptions, especially at intersections, and which maximize pedestrian access. Bus shelters should be placed approximately four to five feet from the curb edge and should be located where there is efficient pedestrian access and/or neighborhood commercial nodes. When possible, turnouts and shelters should not be sited on major arterials with high travel speeds; a nearby collector should be used instead. Park-and-ride facilities should provide an adequate number of bus berths, easy pedestrian access from the parking lots, and a separation of bus and automobile traffic flows.

Buildings, especially commercial and institutional ones, should be constructed to provide access for transit vehicles. Common examples of such buildings are hospitals and hotels. The access that is needed consists of overhead clearance and pull-through driveways. Without these, the transit vehicle must either stop further from the front door of such buildings or be at risk backing out of dead-end driveways. Poor vehicle access also contributes to a loss of efficiency.

Mixed Land Uses

Traditionally, zoning districts have been formed to keep differing land uses as far removed from each other as possible, in an effort to eliminate any potential for negative spillover impacts. The end result, however, has been communities where alternatives to the automobile, even for a quick trip to buy a loaf of bread, are very difficult to use. Carefully planned mixed uses, including neighborhood-serving commercial and restaurant space, reduces auto use while providing increased opportunities for transit and pedestrian activity.

Also under the rubric of mixed land uses is the concept of Ajoint development.@ In many cases, the wholesale mixing of land uses is difficult to achieve, either politically or because of existing development. Joint development is a concept which says that businesses and transit agencies can benefit by providing a combination of services and amenities that generate customers for both. These types of arrangements usually occur at bus stops or transit stations/centers. The level of activity at these locations Acan vary from small, with the provision of newspaper boxes, public telephones, and a cash machine, to extensive retail and service areas serving both transit, employees, and shoppers, with large multiple use projects directly tied into the transit systems.@

APPLYING THE CONCEPTS IN GRAND/JACKSON COUNTIES

Existing government policies may work for or against transit development and ridership. Existing zoning may disallow the mix of uses, building designs, and densities most suitable for generating transit ridership and for attracting developers' interests. In addition, public zoning and building provisions may impede design of convenient connections between development projects and access points. Standards for setbacks and buffering, restrictions on building heights, and density limits must be addressed to work in support of a transit-friendly and pedestrian design. Parking standards frequently fail to support transit ridership.

Actions To Be Addressed

Land use planning and design has a strong relationship with transportation demand and travel patterns. It plays an important role in determining the viability of public transportation and the feasibility of serving portions of the community. Recognizing this important relationship, below is a list of local actions that may be further addressed to support transit in the community.

1. Adopt transit-oriented development design guidelines. Each transit patron is a pedestrian as soon as the individual leaves the bus; the pedestrian facilities should be emphasized. There should be a relatively small setback from the transit corridor. City and county ordinances should specify a maximum setback within the public transportation corridor. City and county ordinances should require that parking be provided at the rear or side of buildings. The front of the buildings should be oriented to the street with maximum setbacks which are close to the street and oriented to public transportation and pedestrians. Incorporate pedestrian-friendly design guidelines in street design manuals for all new developments. Pedestrian access (paths, trails, or sidewalks) should be provided in the proximity of bus stops to residential developments. Bus stops and sidewalks should connect with other walkways or paths to provide easy access to residential and commercial development.

2. Promote mixed-use development in redevelopment areas.

3. Emphasize pedestrian orientation with minor or no building setbacks.

4. Focus new development into urban or town centers.

5. Provide comfortable transit facilities. Make bus stops attractive through high-quality design and construction and pedestrian amenities such as lighting, seating, and weather protection.

6. Promote a complete network of sidewalks throughout the towns.

7. Require all public and private development projects in the towns to include sidewalks on both sides of the roads, except freeways.

8. Encourage in-fill and redevelopment by designating underdeveloped or declining neighborhoods for public investment.

9. Provide incentives such as density bonuses or reduced parking requirements for developers who design pedestrian-friendly projects.

10. Recognize transit-friendly planning and design by sponsoring an annual awards program.

11. In the master plan, prioritize new road projects based on how well they serve in-filling, completing, and maintaining the existing road network in the developed areas.

Instruments Supporting Transit

Supporting transit instruments within Grand and Jackson Counties governmental systems:

- Grand County Master Plan, 1998
- Northwest Colorado 2020 Transportation Plan, 1999
- Grand County Lifestyles, December 1995
- Jackson County Comprehensive Master Plan Update, 1998
- 1997 Grand County Senior Citizens Survey, Summary Report
- Resort Towns and State Revenues, 1993
- Grand County Headwaters Trails Master Plan, 1995
- Fraser Valley Master Road Plan, 1999
- 1998 Jackson County Senior Citizens Survey
- Fox Run Apartments, A Market Analysis Report, 1999

The **1998 Grand County Master Plan**, prepared by John Humphreys Associates, is designed to be used by federal, state, and local governmental agencies to provide general guidelines for the development of the county. The plan elements include economic and demographic patterns, goals and objectives for the county and for the towns within the county, growth areas, amendments and updates to the Master Plan. Other important areas discussed within the Master Plan are community design, land use, transportation, housing, parks and recreation, natural resources, hazardous areas, public services, and private property rights. One of the objectives listed under the transportation goals within the Master Plan states, "*Encourage development of a county-wide mass transportation system.*"

The **Northwest Colorado 2020 Transportation Plan**, prepared by DMJM, was completed in November 1999. The goals for the future listed within the 2020 Plan include: a transportation system with a strong mass transit element; and a transportation system that addresses natural resources, geographical situations, and environmental factors. The 2020 Plan identifies strategies to *increase use of mass transit, develop private/public partnerships to address transit needs and multimodal centers, and to develop regional and local transportation systems that are based on multimodal centers throughout the region and that service both residents and visitors to the region with frequent, convenient, cost effective, and year-round service*.

Grand County Lifestyles, prepared by Grand Futures Community Partnership, provides a summary of the survey results, focus groups, and public records gathered between 1991 – 1995. The purpose of the project was to create and promote positive, healthy lifestyles as alternative choices to substance abuse. The summary report identified one economic issue, "*Residents said they want more businesses and year-round jobs, better wages, cheaper housing and food, and improved public transportation.*"

The **Jackson County Comprehensive Master Plan Update** was amended in 1998 from the previous 1978 version. The Master Plan does not specifically mention public transportation in the transportation section. However, the Plan does identify the need for increased economic activity—increased tourism, mining, jobs, housing challenges, etc. Public transit may or may not play a part in the development of these sectors and provide alternative solutions for the county. The LSC Team recommends that the next update to the Comprehensive Master Plan include public transportation in more detail to provide the county with alternative transportation goals.

The **1997 Grand County Senior Citizens Survey**, prepared by the Northwest Colorado Council of Governments, conducted a needs assessment survey of the elderly population in all six counties (Eagle, Grand, Jackson, Pitkin, Routt, and Summit) of Region XII. The survey included updated demographic information, questions on existing programs, and ideas for future housing alternatives and in-home services. The encouraging information supporting public transit is that 19 percent of the respondents use the senior van for transportation. Without the service, these persons would have to rely on other methods to live their regular life.

Resort Towns and State Revenues, prepared for The Colorado Association of Ski Towns & Colorado Ski Country, USA, provides the details of the

economic relationship between resort towns and Colorado's state revenues and expenses. One of the conclusions from the study was that the *State's revenue from tourism business depends upon the continued ability of local governments and ski area operators to meet visitor service needs and expectations. Resort ski towns must provide traditional municipal services such as water, sewage treatment, police protection, mass transportation, traffic control, and parking to overnight populations 10-20 times the size of permanent populations. This requires a continuing investment in infrastructure development and maintenance, which would overwhelm the traditional means of paying for those requirements (property tax) and is only possible by using a significant portion of municipal sales tax.*

The **Grand County Headwaters Trails Master Plan** was developed to help direct and promote the organization and preservation of the existing trail system within Grand County. The Plan is meant to serve as a guide in the development of an interconnected trail system which will enhance the recreational opportunities for Grand County residents and visitors alike. The Plan does not specifically mention public transportation. However, the Expanded Objectives state, *"Improve access to the Headwaters Trails System, including – the development and production of a usable county trail map, parking availability for trails, and other general improvement which produce a more usable trail system."* Public transportation may or may not provide an alternative method to access the trails.

The **Fraser Valley Master Road Plan** was completed in May 1999. The objective of the study was to create a set of recommendations to help the Fraser Valley maintain its rural character even when faced with a substantial growth in traffic. This Plan does not consider public transit as an alternative solution for the increased traffic. However, the Master Road Plan does recommend solutions that will increase traffic flow within the Fraser Valley area and will assist the existing public transportation system.

The **1998 Jackson County Senior Citizens Survey**, prepared by the Northwest Colorado Council of Governments, was a follow-up survey to see if a assisted living facility would be supported in Walden. The survey included updated demographic information, questions on existing senior programs and opinion questions for future housing alternatives. Approximately 15 percent of the respondents used the Grand County Council on Aging van for transportation. The survey results indicated that the seniors in Jackson County are "aging in place"—simply stated they are staying the

same place and getting older. To public transportation, this means that there will continue to be a need for the senior van services.

The **Fox Run Apartments, Market Analysis Report** was prepared for the Grand County Housing Authority. The purpose of the study was to determine sufficient market demand for the proposed affordable housing units. The important factor of this study is the location of the affordable housing units along the existing public transit routes. The persons residing in the Fox Run Apartments may or may not have a vehicle available. The existing transit routes near the site provide a transportation alternative other than the automobile.