



Chapter 4: Transportation and Land Use

Transportation and land use work together to provide access to the wide range of destinations and opportunities in the region. The transportation system provides access and mobility to the traveling public, while land use imposes demands on the transportation system. Land use patterns and development mixes directly affect the levels of travel between origins and destinations by determining the feasibility of transportation options, which ultimately influence travel mode choice.

Transportation system investment also affects how the land use and development process will unfold. In an auto-oriented society the presence of high volume roads and/or highway interchanges directly affects accessibility to potentially developable land parcels. For the past 50 years this has been the key factor in determining whether and how a particular site is developed. Recently, the addition of high-quality transit corridors has once again become a factor influencing development and redevelopment of land parcels. These concepts underscore the need to coordinate transportation and land use planning decisions so they are complementary and to acknowledge and plan for these linkages as the region continues to grow.

Land development can best support transit service when sufficient density with a variety of uses is provided, including a balance of housing and jobs of compatible income levels. This would allow people to live and work in closer proximity, thereby indirectly limiting growth in congestion.

In addition, effective planning for a well-connected, local and collector roadway network may reduce local travel on highways by making walking and bicycling more attractive options for local trips. A supportive road network, in tandem with transit and non-motorized mode investments, will facilitate more travel-efficient land development leading to increased opportunities for using transit, biking and walking for everyday trips. An increase in the use of transit and non-motorized modes may slow the growth in SOV trips and total VMT, particularly in the morning and afternoon peak travel periods, potentially reducing transportation-related impacts on local communities and the global environment. These environmental benefits include reducing vehicle emissions, decreasing the rate of fossil fuel consumption, and curbing the release of greenhouse gases. The remainder of this chapter describes land use/transportation coordination mechanisms and how local comprehensive plans will be coordinated from the regional perspective and estab-

lishes policies and strategies that encourage higher-density development along designated transitways. Key land use strategies adopted in the Regional Development Framework and reiterated in this chapter make up one component of the region's federally-prescribed Congestion Management Process, detailed in Chapter 5: Regional Mobility.



Figure 4-1: Recent development has brought more housing and mixed use

Downtown Minneapolis - looking north from E 15th Street at the Grant Street / 11th Street exit



Mechanisms for Coordination

The coordination of planning for regional growth and planning for the region's transportation systems is accomplished through the Council's Regional *Development Framework* and this *Transportation Policy Plan*. The forecasts developed by the Council as part of the *Development Framework* provide the basis for forecasting regional infrastructure needs for roads and highways, transit service, wastewater infrastructure, and parks. The forecasts and *Development Framework* policies also serve as the springboard for planning by each community for its roads, wastewater and parks. The local comprehensive plans must coordinate among key elements: forecast growth, planned land use, residential and employment densities and infrastructure plans. The region's land use plans have attempted to guide development for many years through designation of a Metropolitan Urban Service Area; the current *Development Framework* also encourages more dense development within the MUSA through infill and redevelopment of the already developed area, especially at nodes along transit corridors

Decisions about how communities grow and the facilities to support them affect one another. Regional transportation and sewer investments help shape growth patterns. The types and locations of housing influence mobility options and travel patterns. Transportation investments, particularly transit, need to be integrated with land use and development patterns so the region's residents and businesses have a high level of accessibility.

Because it is not possible to build enough new highway capacity to eliminate congestion or to completely meet future mobility needs of the region, an integrated, multimodal transportation system is necessary to support balanced job and household growth. By the same token, increasing job concentrations and increasing integrated, mixed-use developments in the region can help maximize the effectiveness of the transportation network and transportation investments in highways, transit and other modes.

Land Use Approaches Supportive of Transportation Network

The *Framework* emphasizes the need for intensified development in centers with access to transportation corridors and in rural centers that want to grow and that lie along major highways. Regional investments can create a transportation system that includes transit solutions that support attractive, walkable neighborhoods with homes, green space, public places and other amenities.

Over the longer term, the region can improve accessibility by encouraging development and reinvestment in centers that combine transit, housing, offices, retail, services, open space and connected streets that support walking and bicycle use. Such development enables those who wish to reduce their automobile use to meet their daily needs and makes it possible for those who are unable to drive to live more independently.





Transportation Policies and Strategies Related to Land Use

Policy 4: Coordination of Transportation Investments and Land Use

Regional transportation investments will be coordinated with land use objectives to help implement the *Regional Development Framework's* growth strategy and support the region's economic vitality and quality of life.

Strategy 4a. Accessibility: The Council will promote land use planning and development practices that maximize accessibility to jobs, housing and services.

Strategy 4b. Alternative Modes: Transportation investments and land development will be coordinated to create an environment supportive of travel by modes other than the automobile including travel by transit, walking and bicycling.

Strategy 4c. Increased Jobs and Housing Concentrations: Transportation investments and land development along major transportation corridors will be coordinated to intensify job centers, increase transportation links between job centers and medium-to-high density residential developments and improve the jobs/housing connections.

Strategy 4d. Transit as Catalyst for Development: Transitways and the arterial bus system should be catalysts for the development and growth of major employment centers and residential nodes to form an interconnected network of higher density nodes along transit corridors. Local units of government are encouraged to develop and implement local comprehensive plans and zoning and community development strategies, including parking policies, that ensure more intensified development along transitways and arterial bus routes.

Strategy 4e. Local Comprehensive Plans: Local comprehensive plans must conform to the *Transportation Policy Plan* and should recognize the special transportation opportunities and problems that various *Development Framework* planning areas present with regard to transportation and land uses.

Strategy 4f. Local Transportation Planning: Local governments should plan for and implement a system of interconnected arterial and local streets, pathways and bikeways to meet local travel needs without using the Regional Highway System. These interconnections will reduce congestion, provide access to jobs, services and retail, and support transit.

Strategy 4g. Metropolitan Urban Service Area (MUSA): Local governments within the MUSA should plan for a prospective 20 years and stage their transportation infrastructure to meet the needs of forecast growth. Outside the Metropolitan Urban Service Area transportation plans and facilities and land use patterns must be compatible with the region's need for future sewered development and protection of agriculture.



Figure 4-2: Development density impacts the types of efficient transit service available to communities

Condo development along Lake Street in Minneapolis





Associated Transportation Policies and Strategies

Policy 2: Prioritizing for Regional Transportation Investments

Strategy 2d. Bicycle and Pedestrian Investments

Strategy 2e. Multimodal Investments

Policy 3: Investments in Regional Mobility

Strategy 3d. Travel Demand Management Initiatives

Strategy 3e. Parking Pricing and Availability

Policy 6: Public Participation in Transportation Planning and Investment Decisions

Strategy 6b. Interjurisdictional Coordination and Participation

Strategy 6e. Transit Customer Involvement

Policy 7: Investments in Preserving of Right-of-Way

Strategy 7a. Preservation of Railroad Rights-of-Way

Strategy 7b. Right-of-Way Acquisition Loan Fund (RALF)

Strategy 7c. Identification of Right-of-Way in Local Plans

Policy 8: Energy and Environmental Considerations in Transportation Investments

Strategy 8c. Preservation of Cultural and Natural Resources

Strategy 8d. Protection of Surface Water

Policy 9: Highway Planning

Strategy 9a. Planning in the Context of Congestion

Strategy 9b. Multimodal System

Strategy 9e. Interconnected Roadway Network

Strategy 9f. Roadway Jurisdiction

Strategy 9g. Corridor Studies

Strategy 9h. Context Sensitive Design

Policy 11: Highway System Management and Improvements

Strategy 11e. Access Management



Figure 4-3: Local improvements can enhance the regional transportation system

Martin Olav Sabo Bridge over Hiawatha Avenue





Policy 12: Transit System Planning

- Strategy 12b. Transit Service Options
- Strategy 12c. Transit Centers and Stations
- Strategy 12d. Park-and-Rides

Policy 13: A Cost-Effective and Attractive Regional Transit Network

- Strategy 13e. Transit Safety and Security

Policy 15: Transitway Development and Implementation

- Strategy 15c. Process for Transitway Selection
- Strategy 15d. Transitway Coordination
- Strategy 15f. Transitway Coordination with Other Units of Government
- Strategy 15g. Transitways and Development

Policy 16: Transit for People with Disabilities

- Strategy 16c. Access to Transit Stops and Stations

Policy 17: Providing for Regional Freight Transportation

- Strategy 17a. Freight Terminal Access

Policy 18: Providing Pedestrian and Bicycle Travel Systems

- Strategy 18b. Connectivity to Transit
- Strategy 18c. Local Planning for Bicycling and Walking
- Strategy 18d. Interjurisdictional Coordination
- Strategy 18e. Multimodal Roadway Design

Policy 24: Protecting Airspace and Operational Safety

- Strategy 24a. Notification to FAA
- Strategy 24b. Locating Tall Structures
- Strategy 24c. Airport/Community Zoning

Policy 25: Airports and Land Use Compatibility

- Strategy 25c. Providing Sanitary Sewer
- Strategy 25e. Aircraft Noise Abatement and Mitigation

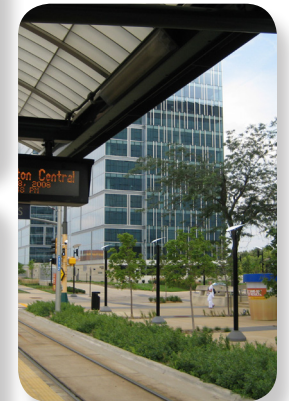
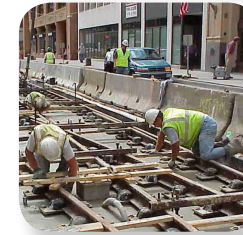


Figure 4-4: Transportation investments and planning decisions are integrated





Coordination of Local Comprehensive Plans

Under the Metropolitan Land Planning Act (MLPA), local communities are required to adopt comprehensive plans that are consistent with the Council's *Development Framework* and its four metropolitan system plans – for transportation, aviation, wastewater treatment and regional parks (Minn. Stat. 473.858-.859; 473.864).

Local communities are the key partner for the Council in implementing its plans and policies. The local comprehensive plan is not only a tool used by communities to guide their development; it is used by the region as a key element in local and regional local partnership to accommodate growth across the seven-county region. Local plans ensure that adequate regional systems are planned and developed to serve growth in an efficient and cost-effective manner.

Local comprehensive plans are reviewed by the Council for conformance with metropolitan system plans, consistency with Council policies and compatibility with adjacent and affected governmental units (see statutory provisions below). Forecasts play an important role in the regional/local partnership to accommodate growth and to see that adequate infrastructure is planned and provided.

Comprehensive Plan Review

Minn. Stat. sections 473.851 to 473.871

Conformance: A local comprehensive plan will conform with the metropolitan system plans if the local plan does not have a substantial impact on or contain a substantial departure from a system plan:

1. Accurately incorporates and integrates the components of the metropolitan system plans as required by Minn. Stat. sections 473.851 to 473.871:

- Transportation components for a multimodal system including accurate road functional classification, transitways and transit facilities and corridors, park-and-ride facilities, traffic forecasts, right-of-way preservation for future roads, transitways and bike/pedestrian facilities.
- Identification of traffic volumes (current Average Daily Traffic), number of lanes on roadways (principal and minor arterials), allocation of 2030 forecasts to Traffic Assignment Zones (TAZs) and 2030 traffic forecasts for principal and minor arterials.
- Airports, aviation facilities, noise and safety zones and appropriate land uses surrounding these features.

2. Integrates public facilities plan components described in Minn. Stat. sec. 473.859, subd 3.

Integrates development policies, compatible land uses, forecasted growth allocated to TAZs at appropriate densities specified in 2030 Regional Development Framework Allocation of 2030 forecasts to TAZs for transit system development and operation and to maximize the efficiency and effectiveness of the regional system.





Consistency: A local comprehensive plan will be consistent with Council policies and statutory requirements if the local plan:

- 1. Addresses community role strategies for Geographic Planning Areas contained in the Framework including the planning and development of an interconnected local transportation system that is integrated with the regional system.
- 2. Addresses the linkage of local land uses to local and regional transportation systems including increasing housing and employment numbers and densities in centers along transitways and the arterial bus network.
- 3. Incorporates Council approved highway or transitway corridor plans for transportation facilities and land use patterns.
- 4. Includes an implementation plan that describes public programs, fiscal devices and other specific actions for sequencing and staging to implement the comprehensive plan and ensure conformance with regional system plans, described in Minn. Stat. sec. 473.859, subd. 4).
- 5. Addresses official controls: Includes a Capital Improvement Program (sewers, parks, transportation, water supply and open space) that accommodates planned growth and development.

Compatibility: A local comprehensive plan is compatible with adjacent and affected governmental units including appropriate interconnection of the county and local transportation network, based on comments or concerns, or lack thereof, from these entities. A community should adequately document that it has acknowledged the concern(s) of all adjacent and affected governmental units.

Planning and Implementation to Enhance Transitway Corridor Potential

Local Land use and Related Factors

Transit, particularly transitways, can improve regional mobility. The benefits that transit offers can be enhanced if land use patterns and development decisions support transit investment. Local communities play several important roles. First, through their comprehensive planning they set groundwork for a transit-supportive land use pattern, including large, walkable concentrations of employment. Second, they approve and permit the projects that implement that pattern. Third, they can work with adjoining communities to coordinate the development of interconnected activity nodes along corridors that can be served by and become destinations for transit service. The following factors strongly influence how successful and effective transitway investments can be. They are an interrelated and interdependent.

Population numbers. High levels of transit ridership depend on a large number of people living within a corridor. Without a critical number of people, ridership will not be high enough to justify rail and bus transitway investments.





Population density. Population density is also related to transit success. If population is scattered, it's not possible to generate enough potential transit customers justify intensive investments.

Number of jobs. Most transit trips take people to or from work. If there are insufficient job concentrations along a corridor, transit ridership will not support transitway investment. Studies show that employment destination densities are a more important influence on transit mode choice than population densities at commute trip origins.

Clustering of jobs. In addition to providing a sufficient number of jobs, specific employment centers should be clustered and served by pedestrian/bicycle facilities so it is possible to walk or bike to a large number of jobs at each node along a transitway.

Employment center commuter sheds. Some corridors serve a single transit market, such as downtown Minneapolis or downtown St. Paul. But some corridors split their market share between two or more destinations. Despite the total number of potential transit users, the split market cannot be served as effectively by a single transit investment.

Economic incentives to use transit. Downtown Minneapolis, the University of Minnesota and downtown St. Paul are robust transit markets in part because people have to pay for parking in addition to the cost of operating their automobile. This provides an increased economic incentive to use transit. However, this incentive does not exist throughout the rest of the region.

Fine-grain land use patterns. In a downtown, large office towers are clustered within a small number of blocks. Walking between buildings and to transit is easy. Jobs locations are also convenient and walkable from housing, retail, personal services, and cultural and entertainment venues. In suburban locations, there are large office towers but they



Figure 4-5: Employment density is one of the seven indicators which strongly impact the effectiveness of transitways
Riverfront development in downtown Minneapolis





are often surrounded by large surface parking lots, low-density retail, landscaping and large open spaces. The result is that the buildings with high concentrations of employment are located long distances from one another, from bus stops and from potential transit stations. This makes serving suburban job concentrations with transit more of a challenge.

Strategies for Strengthening Transitway Corridor Potential

Considering the factors that influence the success of transit, communities can employ a variety of strategies to help strengthen the potential of transportation corridors for major transit investments. A few key strategies are summarized below. For a detailed discussion, refer to the Council's *Guide to Transit Oriented Development*, found on the Council's website www.metrocouncil.org

Intensify population density where it makes sense.

Communities have different opportunities, needs and aspirations. Population intensification makes sense in nodes along transportation corridors, especially along existing and potential transit corridors. Proven approaches in the Twin Cities include:

- Promoting housing choices with a range of prices. Cities can choose to promote and plan for land uses and building types with a variety of housing and transportation choices.
- Adopting land development policies that encourage more density. These can include density bonuses, lot-size reductions, setback reductions and allowing accessory units.
- Providing incentives for structured and underground parking, (e.g., setting maximum parking standards and/or lowering minimum parking standards), which support higher-density housing development.

Intensify employment clusters with transit and pedestrian

infrastructure. The success of transit, over the long term, depends on increasing the job intensity (numbers and concentration) in job centers throughout the region, and designing pedestrian-oriented transit connections. This region has eight major job centers but few have integrated, walkable environments clustered around transit. The following recommendations can shape infill and redevelopment to improve transit feasibility, and are generally most appropriate for local units of government. To improve transit corridor potential, cities may adopt land use policies that:

- Encourage clustering of large employment centers into nodal concentrations, rather than dispersing them several blocks apart.



Figure 4-6: Large clusters of employment are necessary for the long term success of transit
IDS Center - downtown
Minneapolis





- Create connected streets, sidewalks and bicycle paths both within employment nodes and from employment nodes to surrounding residential areas.
- Encourage structured parking to reduce walking distances between buildings and parking policies that limit the amount of surface land area devoted to parking. This structured parking needs to enhance, rather than distract from, the pedestrian experience.
- Provide a vertical or horizontal mix of uses within developments that can support transit by clustering a variety of uses within convenient walking distance for employees.

Cities can promote this kind of development through transit overlay zones, density bonuses, and policies and actions to design streets that are safe, accessible and convenient for all users. Cities can support transitway station area development with financial tools such as tax increment financing.

Study land use now to realize transit-supportive development through 2030. Historically, it takes at least seven to 10 years to plan and implement a major transit investment. During these intervening years, cities can implement land use policies to encourage development that supports future transit investments.

Land use corridor studies can inform land use policy actions. These studies should be corridor-wide and can include factors described above. As communities plan for these investments, community planning and involvement is critical. Mixed-use and redevelopment projects take time and are facilitated by partnerships and a shared vision. Public participation efforts can include a corridor-wide visioning effort, design charrettes, task forces, and neighborhood and individual meetings. The aim is to develop goals, objectives and a vision for the area, which guide corridor development and its evolution.



Figure 4-7: Walkable environments, such as this one in St. Paul, make transit a more desirable and effective alternative

