CHAPTER 3
MULTI-MODAL TRANSPORTATION PLAN

IN THIS CHAPTER:
This chapter reflects Arvada’s vision of an integrated approach to transportation planning. Future economic growth will follow new regional transportation corridors, particularly the Gold Line and Jefferson Parkway. The Gold Line will spur transit oriented development opportunities at the four stations in or adjacent to Arvada. The Jefferson Parkway will greatly improve the accessibility of the developing western part of the City to regional destinations. At a more local level, a well developed street grid will provide automobile, bicycle, and walk connectivity within and between Arvada’s neighborhoods and activity centers. Concurrent with development of the Land Use Plan in Chapter 2, this chapter includes an updated Transportation Plan and the following:

• Goals and Policies for Multi-Modal Transportation
• Transportation Plan
  – Streets Plan
  – Transit System Plan
  – Bicycle Plan
  – Pedestrian Plan
• Principles for Complete Corridors
VALUES AND NEEDS

Arvada’s key transportation goals are the following:

1. Develop a balanced, multi-modal transportation system to provide a variety of opportunities for residents and visitors;
2. Strengthen the linkage between land use and transportation in Arvada;
3. Identify and implement traffic solutions to reduce and manage traffic congestion on arterial streets;
4. Develop the transportation system in a manner that maintains quality of life for residents and visitors; and
5. Develop safe and comprehensive multi-purpose bicycle, trail and pedestrian systems.

These goals and the policies and strategies that support them are described in detail in this chapter. The following are discussions of two key elements of the overarching transportation values that underlie Arvada’s transportation plan.

INTEGRATION OF LAND USE AND TRANSPORTATION

This chapter reflects Arvada’s vision of an integrated approach to land use and transportation planning. The transportation goals, policies and plan elements in this Comprehensive Plan chapter address the cyclical nature of the land use and transportation interactions: land use generates travel demand and the need for improved transportation facilities. At the same time, Arvada’s evolving transportation system offers great potential to shape land development.

The City needs a well-maintained, balanced, and connected transportation system to serve the travel needs of existing and future development. The transportation network should be built upon a system of well-maintained streets, sidewalks, and trails providing safe and convenient options for all modes of travel.

Arvada’s evolving transportation system brings great potential to shape sustainable land development and create active lifestyles as well. Future economic centers will follow new regional transportation corridors, particularly the Gold Line and Jefferson Parkway. The Gold Line will spur transit oriented development opportunities at the four stations in or adjacent to Arvada. The Jefferson Parkway will greatly improve the accessibility of the developing western part of the City to regional destinations. At a more local level, a complete street grid will provide automobile, bicycle, and pedestrian connectivity within and between Arvada’s neighborhoods and activity centers.
A Balanced Multi-Modal Transportation System

Arvada provides transportation facilities and services for different modes of travel to, from, and within Arvada, and in coordination with other entities such as Jefferson County, Adams County, Colorado Department of Transportation (CDOT), Regional Transportation District (RTD), and the neighboring cities of Wheat Ridge and Westminster. The transportation network consists of a system of multi-modal and inter-modal facilities and services, as described below.

**Multi-modal** refers to travel options, including automobile, public transit, bicycle, and walking. As is the case with most cities and suburbs in the western U.S., automobile travel has historically had a primary influence on Arvada’s transportation system, and roadway improvements will continue to be needed. However, Arvada and its partners have placed an increasing focus on alternative transportation modes. The City transportation plan aims to provide a multi-modal system that balances the needs of all travel nodes. The regional FasTracks program will bring commuter rail transit service into the heart of Arvada via the Gold Line in 2016. The City has renewed its focus on the bicycle and trail system by identifying a comprehensive system of off- and on-street bike routes; many segments have been accomplished and completion of the system is proceeding. Pedestrians have and will continue to benefit from improved sidewalks, street crossings and off-street trails that accommodate pedestrians along with bicyclists. These multi-modal transportation alternatives provide children and adults with safe and convenient opportunities for walking and bicycling to school, work, shopping, and activity centers to encourage exercise and health living habits, reduce the risk of injury from traffic collisions near these locations, and decrease morning commute traffic, air pollution, and fossil fuel consumption.

**Inter-modal** refers to the connections between the different modes of transportation identified above. The basic concept is to provide a seamless transportation system that facilitates easy and efficient movements between modes, for example, from the automobile to a rail transit system. Connections will be critical to the system’s efficiency and effectiveness of new alternative modes and will become more important with additional transit options. Connections occur at the nodes where the travel modes intersect, such as automobile access to rail stations and park-n-rides, bicycle parking and storage as bicyclists become pedestrians, or at bus stops where the transit rider becomes a pedestrian. Connections for bicyclists and pedestrians between transit stations and final destinations are often referred to as “the last mile” connections and are a key to optimizing the service provided to transit riders.
GOALS AND POLICIES

**GOAL T-1:** Develop a balanced, multi-modal transportation system to provide a variety of transportation opportunities for residents and visitors.

**POLICY T-1.1: Multi-modal Level of Service**
The City will establish automobile, bicycle and pedestrian level of service standards for all street types and incorporate in street system development, improvement, and maintenance programs.

**POLICY T-1.2: Pedestrian-Friendly City**
The City will provide a pedestrian-friendly environment throughout the City and especially in neighborhoods, shopping areas, mixed-use centers around transit stations, and other activity centers. To provide a pedestrian-friendly environment, the City will complete a continuous network of pedestrian facilities that are safe and give equal consideration to pedestrians and vehicles in designing new projects. The City will examine the need to widen existing sidewalks in strategic locations and as feasible, resources will be allocated to these strategic locations.

**POLICY T-1.3: Accommodate Bicyclists**
The City transportation system will incorporate a complete street and trail system that accommodates bicyclists of all types throughout the City.

**POLICY T-1.4: Gold Line and Other FasTracks Integration**
The City will actively participate in the planning of the RTD Gold Line and its integration with the surrounding transportation system. Opportunities will be identified for new circulator bus service and new or rerouted local bus service to connect users with Gold Line stations at Olde Town, Arvada Ridge, 60th and Sheridan/Arvada Gold Strike and Ward Road stations, and with US 36 Bus Rapid Transit (BRT) and any future Northwest Rail Corridor transit stations.

**POLICY T-1.5: Transit Enhancements**
The City will continue to evaluate enhancements to existing transit routes and new bus routes to provide transit service to all parts of Arvada, linking existing neighborhoods and new development and activity centers with the regional transit system. In particular, the need for additional east-west connections will be evaluated.

**POLICY T-1.6: Arterial and Collector Street Connections**
The City will continue to identify and to construct missing arterial and collector street connections and provide better east-west and north-south traffic flow throughout the City.

**POLICY T-1.7: Alternative Transportation Programs**
The City will raise residents' awareness of sustainable transportation options including public transportation, carpools, cycling trails, telecommuting, and trip planning.

**POLICY T-1.8: Accommodate Transportation Disadvantaged**
The City will maintain a transportation system that serves the needs of residents and visitors with mobility challenges, including senior citizens, people with disabilities and those with workforce transportation challenges. The City will coordinate with RTD and human service transportation providers on transit accessibility and adhere to Americans with Disabilities Act requirements on all bicycle, pedestrian and roadway projects.
GOAL T-2: Strengthen the linkage between land use and transportation in Arvada.

POLICY T-2.1: Jointly Consider Land Use and Transportation Implications
The City will consider transportation implications when making land use decisions, and will evaluate how land use supports transit and affects travel demand and the levels of traffic and congestion on the major street system.

Develop the vehicular, transit, bicycle, and pedestrian networks to fully connect the developing western parts of Arvada with established parts of the City. All City neighborhoods should have effective connections to the regional transit system, including the Gold Line and US 36 Corridor.

POLICY T-2.2: Land Use Patterns to Support Transit
The City will plan future developments that support rail and bus transit along designated transit-supportive corridors. Development surrounding transit stations and corridors should have greater residential and employment density and a mix of uses.

POLICY T-2.3: The Last Mile
The City's pedestrian and bicycle systems will address the “last mile” with safe, convenient, and inviting bicycle and pedestrian connections between the station and final destinations.

POLICY T-2.4: Street Connectivity
The City will require enhanced street connectivity in new developments and redevelopment areas. Shorter, pedestrian-scale blocks and narrower streets will improve walkability and connectivity between new developments and the surrounding community.

POLICY T-2.5: Travel Demand Management
The City will work to increase the use of alternative travel modes for commuting trips through travel demand management strategies including:

- Bicycle/Pedestrian - System development, bike parking, and bike/transit integration
- Infrastructure - Integration with FasTracks corridors, shuttles, and on-call transit services
- Planning - Mixed use, clustered, and transit oriented development and parking management
- Policies - Alternative mode encouragement, transit vehicle prioritization, and reallocation of rights-of-way to sidewalks and bikeways

POLICY T-2.6: Station Parking Management
The City will partner with RTD to provide parking spaces at all Gold Line Stations in an efficient and sustainable manner.
GOAL T-3: Identify and implement traffic solutions to reduce and manage traffic congestion on arterial streets.

POLICY T-3.1: Multi-modal Evolution
The City will evolve strategic major arterials into multi-modal corridors to address forecasted long-term congestion. Rights-of-way should be preserved and plans conducted to integrate enhanced transit, bicyclists, and pedestrians systems.

POLICY T-3.2: Traffic Solutions to Reduce Congestion
The City will consider arterial street widenings and construction of missing segments, traffic signal timing and progression projects, intersection improvements, grade separations, and other measures to help reduce traffic congestion.

POLICY T-3.3: Consider Regional Traffic
The City will recognize the impact of traffic generated by growth outside as well as within Arvada and identify capital projects, such as the completion of the Jefferson Parkway, to mitigate its effect on the City’s arterial street system. The City will also pursue opportunities to connect Arvada’s arterial street system with the regional arterial and highway system.

POLICY T-3.4: Coordinated Regional Transportation Efforts
The City will work to coordinate regional transportation efforts of the City, RTD, surrounding cities, DRCOG, and CDOT to reduce traffic congestion in Arvada.

POLICY T-3.5: Jefferson Parkway
The City will work with the Jefferson Parkway Public Highway Authority to construct the Jefferson Parkway and to encourage commercial and industrial employment at major interchanges.

POLICY T-3.6: Freight
The City will ensure that the highway and arterial street system efficiently accommodates freight movements within, to, and from Arvada.
GOAL T-4: Develop the transportation system in a manner that maintains the quality of life for residents and visitors.

POLICY T-4.1: Neighborhood Safety and Traffic Mitigation
The City will consider the impacts of cut-through traffic and traffic speed in neighborhoods and identify measures to mitigate problem locations.

POLICY T-4.2: Arterial and Collector Street System
The City will work to provide a network of arterial and collector streets so that “through” traffic is not funneled into local neighborhood streets. The Future Roadway Improvement Needs Map depicts the City's desired street system.

Policy T-4.3: Bicycle and Pedestrian Functionality
Arvada will maintain and enhance bicycle and pedestrian functionality as the Arvada street system expands in order to provide safe, convenient, and comfortable routes for walking and bicycling to enable active travel as part of daily activities for all users and, in particular, for students, families, and staff en route to school.

Policy T-4.4: Work with Neighborhoods
In constructing new roads or widening existing roads, the City will work with adjacent neighborhoods to balance transportation needs and neighborhood character and to mitigate the impact of transportation system expansion as much as possible.

POLICY T-4.5: Air Quality
The City will consider the impacts that transportation decisions have on ozone-forming emissions and other pollutants in making transportation investments.

POLICY T-4.6: Address Barriers to Transportation
Railroads, freeways and waterways can all create barriers to multi-modal connectivity between different parts of Arvada and between the City and neighboring jurisdictions. The City transportation plan will address these challenges through measures such as grade-separations, enhanced at-grade railroad crossings, and improved automobile, bicycle and pedestrian accommodation at existing street and trail crossings.

POLICY T-4.7: Improve Street Pavement Conditions
The City will increase the percentage of street pavement conditions that are rated “Fair” or better.

Electric Vehicle Charging Station at City Hall
GOAL T-5: Develop safe and comprehensive multi-purpose bicycle, trail, and pedestrian systems.

POLICY T-5.1: Bike System
Arvada will have a network of facilities to accommodate different levels of bicyclists, ranging from expert bicycle commuters to occasional bikers and children. The system will provide convenient accessibility to schools, parks, shopping areas, and employment centers in all directions, as shown in the Bicycle and Trail Master Plan.

POLICY T-5.2: Safe and Connected Bicycle and Pedestrian System
Arvada will improve the safety and connectedness of its bicycle and pedestrian system. The City will identify needed connections between the on-street bicycle network and the off-street trails system, as well as gaps within individual sidewalk systems. Improve connectivity in vicinity of new and existing schools to make walking and biking convenient and direct. As feasible, resources will be allocated to fill in missing links.

POLICY T-5.3: Traffic Interface
The City will provide safe and convenient interfaces between the bicycle and pedestrian systems and motor vehicles using appropriate signalization, signing, striping, and other street crossing measures.

POLICY T-5.4: Bike System Information
The City will provide information in multiple forms to assist bicyclist in wayfinding and to communicate the availability of different types of bike facilities.

POLICY T-5.5: Coordinated Regional Efforts
The City will work to coordinate regional pedestrian and bicycling efforts of the City, surrounding cities, RTD, and CDOT to ensure regional on street bike route, sidewalk, and trail connectivity in and around Arvada.

POLICY T-5.6: Preserve Access to Water Bodies
The City will encourage new developments to preserve public access to major water bodies.
Several street system improvements will be needed to maintain mobility and minimize traffic congestion as the City grows, since both existing and new streets are forecasted to experience significant traffic congestion if improvements are not made. Since funding is limited, what are the community’s highest priority major transportation improvements?

- New Street Connections
- Additional Travel Lanes
- Bike Lanes
- Better Sidewalks
- New Sidewalk Connections
- Better Signal Timing

The Gold Line’s convenience and utility is based in part on how residents can connect to it and to the transit system throughout our community. The planning team asked the community: What areas of Arvada are under-served by public transit? What changes should be made to the RTD bus system once the Gold Line is operating? How can connections be improved to the US 36 Bus Rapid Transit corridor?
TRANSPORTATION PLAN

The Roadway System (Street Network)

Road Functional Classification and Design Standards

Roads generally provide two important functions: mobility and land access. These functions conflict with each other—more land access generally leads to reduced traffic carrying capacity and mobility, and vice versa. Each roadway type is specifically designed to operate with certain characteristics based on the adjoining land uses, proximity to other facilities, and other factors.

The road’s functional classification describes these characteristics, and the street design standard identifies specific design parameters, right-of-way needs, and other measures. Arvada contains the following roadway functional classifications, described below:

- Freeways
- Principal Arterials
- Arterials - Parkways and Standard
- Collectors - Major, Standard and Minor
- Local Streets

The functional classification of a roadway reflects its role in the street and highway system and forms the basis for access management, corridor preservation, and street design guidelines and standards. Functional classification is a function of several elements including surrounding and adjacent land uses, continuity/connectivity with other roads, and access management. Existing roadways may not meet all of the desired characteristics described by their defined functions but can be upgraded as improvements to the roadway are made. Functional classifications for different roadway types are summarized in Table 3-1.

Table 3-1. Roadway Characteristics by Functional Classification

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Freeways and Tollways</th>
<th>Principal Arterials</th>
<th>Arterials</th>
<th>Collectors</th>
<th>Locals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functional Priority</strong></td>
<td>Mobility Only</td>
<td>Mobility Primary</td>
<td>Mobility Primary Access</td>
<td>Access Primary Mobility</td>
<td>Access Only</td>
</tr>
<tr>
<td><strong>Service Performed</strong></td>
<td>Highest level of traffic movement, unimpeded high speed and high volume</td>
<td>Relatively high speed, unimpeded connections</td>
<td>Traffic movement, relatively high speed hourly traffic</td>
<td>More frequent land access, relatively low speeds</td>
<td>Direct land access, lowest speeds</td>
</tr>
<tr>
<td><strong>Typical Trip Lengths</strong></td>
<td>Interstates and between major regions</td>
<td>Between communities and areas in the urban and suburban parts of the county</td>
<td>Between and within major communities</td>
<td>Within communities</td>
<td>Within neighborhoods and business centers</td>
</tr>
<tr>
<td><strong>Continuity</strong></td>
<td>Interconnected and continuous between and within regions and metro areas</td>
<td>Interconnected and continuous within major regions and metro area</td>
<td>Interconnected and continuous within metro area</td>
<td>Interconnected and continuous within communities</td>
<td>No continuity required</td>
</tr>
<tr>
<td><strong>Access Type and Spacing</strong></td>
<td>Interchanges at 1-to-1½ mile spacing. No direct land/private access</td>
<td>½-to-1 mile spacing. Direct access may be considered provided if no other reasonable form of access exists. Shared access encouraged</td>
<td>½-mile spacing. Direct access provided if no other reasonable form of access exists. Shared access encouraged</td>
<td>½-mile spacing. Some restrictions on private access</td>
<td>Unrestricted private access</td>
</tr>
<tr>
<td><strong>Facility Spacing</strong></td>
<td>Varies</td>
<td>1-3 miles</td>
<td>½ - 1 mile</td>
<td>½ +/- miles</td>
<td>As needed</td>
</tr>
<tr>
<td><strong>Traffic Controls</strong></td>
<td>Free Flow Merge/diverge</td>
<td>Signals</td>
<td>Signal typical, stop signs in special circumstances</td>
<td>Signalized and stop controlled intersections</td>
<td>Stop signed controlled</td>
</tr>
</tbody>
</table>

Table 3-1: Roadway Characteristics by Functional Classification.
**Barriers to Transportation**

One of the challenges facing transportation planning for Arvada is the presence of several barriers to street connections and trails in and around the City. Figure 3-1 shows some of these major barriers, which include freeways, railroad, major waterways, and dedicated open space. Creating connections across these barriers can be challenging, often requiring expensive bridges or underpasses. The barriers, including I-70, I-76, and the BNSF Railroad, between southern Arvada and Wheat Ridge, present a major challenge to transportation connectivity and have been the subject of much attention in Arvada’s past and current transportation planning.
Future Roadway Improvement Needs

Traffic forecasts were prepared for the year 2035 using the regional travel demand model. Appendix D provides a detailed description of the traffic forecasting process and results. The Appendix also documents the results of the analysis of existing and forecasted traffic congestion on Arvada’s road system.

Roadway system improvement needs were identified based on several inputs, including previous transportation plans and studies, evaluation of 2035 traffic forecasts, and input gathered from a wide range of stakeholders through the comprehensive and transportation planning process. Figure 3-2 presents these roadway improvement needs in three broad categories:

New Connections: Four potential new connections are shown, including:

- Jefferson Parkway - The Jefferson Parkway is a future four-lane toll road that is being planned by the Jefferson Parkway Public Highway Authority formed by Arvada along with Jefferson County and the City and County of Broomfield. This authority is working to assemble a financing package for the design and construction of the tollway. Implementation of the Jefferson Parkway is a policy goal of Arvada and is included in the Denver MetroVision Regional Transportation Plan. The traffic forecasts and roadway needs assessment contained in this transportation plan assumes that it will be completed within the 20-year planning horizon.

- Ward Road/Alkire Connection - This would be a new four-lane arterial street through the Moore Ranch property connecting Ward Road with Alkire Street.

- Alkire Street Railroad Crossing - This connection would consist of a grade-separated crossing of the Union Pacific Railroad. The crossing may initially be constructed as a pedestrian/bicycle crossing.

- Kendrick Extension - This connection would extend from the McIntyre Street/64th Avenue intersection to intersect Indiana Street north of 64th Avenue.

For the Ward Road/Alkire Connection, Alkire Street Railroad Crossing, and Kendrick Extension projects, the recommendation of this Plan is to proceed with a detailed study of the benefits, feasibility and costs of each connection to identify the specific course of action for each potential connection.

Additional Lanes: Several two-lane roadways in Arvada have been planned for expansion to four through-lanes and are recommended for design and funding of widening projects. In addition to needed through lanes, the design for these roadway widening projects will incorporate appropriate turn lanes, traffic and access control measures, bicycle and pedestrian accommodations, and bus stops.

- 80th Avenue, Simms Street to Kipling Street
- 72nd Avenue, Indiana Street to Kipling Street
- 64th Avenue, Quaker Street to McIntyre Street
- Indiana Street, 64th Avenue to northern City limit at 96th Avenue
- Ward Road, 64th Avenue to 72nd Avenue
- Simms Street, 64th Avenue to 80th Avenue

Traffic Operational or Other Multi-Modal Improvements Needed: There are several street sections that have been identified as having potential capacity deficiencies in the future, but for which additional through lanes may not be practical or desirable. For these, more detailed analysis of improvements is needed. The City will identify the type and level of analysis appropriate for each one.

- Wadsworth Boulevard - Comprehensive multi-modal corridor study needed, in coordination with CDOT
- Sheridan Boulevard - Comprehensive multi-modal corridor study needed, in coordination with CDOT and Adams County
- Ralston Road - Continue the ongoing corridor planning and design process
- 64th Avenue/Indiana Street/McIntyre Street Area - Complete an evaluation of the Kendrick Extension and improvements to 64th Avenue intersections
- Ward Road - Identify the appropriate traffic operational study level
- Kipling Street - Identify the appropriate traffic operational study level
- Independence Street - Identify the appropriate traffic operational study level
- Olde Wadsworth - Identify the appropriate traffic operational study level
- SH 93 - Evaluate improvement needs on parts of SH 93 both north of the future Jefferson Parkway connection and parallel to the future Jefferson Parkway
**Transit System Plan**

Transit service in Arvada stands to be significantly enhanced by the Regional Transportation District’s (RTD) FasTracks program that voters approved in November 2004. In 2016, Arvada residents will be able to get on the Gold Line and quickly connect by rail to downtown Denver, the Denver International Airport, and other employment, service, cultural, and recreational destinations throughout the metro area via the 140 miles of FasTracks rail lines.

In addition to the regional transit connectivity afforded by the commuter rail service, the Gold Line will bring tremendous opportunities for transit oriented development surrounding its stations. The Gold Line will include three stations in southern Arvada, including the Sheridan, Olde Town Arvada, and Arvada Ridge stations, along with the end-of-line Ward Road station in adjacent Wheat Ridge.

The existing and planned transit system is depicted on Figure 3-3. The map shows the 11 RTD bus routes that currently serve Arvada along with the planned Gold Line, US 36 Bus Rapid Transit corridor, and the Northwest Rail Corridor. The map depicts parts of the City that are served by a bus route or the planned Gold Line or US 36 transit corridors, with shading indicating areas within a half mile of transit service. Additionally, the map shows the areas of Arvada that currently have or are anticipated to have residential or employment density or activity centers that are most supportive of transit.

The transit system plan for Arvada focuses on two central planning goals that will be achieved through close coordination between the City, RTD, and neighboring jurisdictions:

- Optimize feeder bus connections to Gold Line stations
- Expand the bus route system to serve the developing western parts of Arvada and connect those areas to established central and eastern parts of the City, the Gold Line, US 36, and the future Northwest Rail Corridor

The Transit Enhancement Plan for Arvada is depicted on Figure 3-4. A comparison of existing and planned transit service with the anticipated transit supportive land uses and activity centers led to the identification of Transit Enhancement Needs including:

- Extending bus service between the planned Candelas town center and the Gold Line and Ralston Road corridor
- Extending bus service between the planned Candelas town center and the State Highway 93 (SH 93) park-n-Ride and bus route
- Call-n-Ride circulator bus service connecting the Olde Town transit station with destinations in Olde Town and the Wadsworth and Ralston Road corridors via high frequency, flexible circulator bus
- Bus prioritization and other enhancements to improve bus operations and passenger amenities on the Wadsworth and Sheridan Boulevard corridors

**GOLD LINE QUICK FACTS**

The Gold Line will operate from 4:00 AM to 12:30 AM. During peak periods there will be eight trains each hour, or one every seven and a half minutes.

It will take about 20 minutes to ride the Gold Line from Arvada to Union Station. By 2030, the trip on the Gold Line is forecasted to take 30 percent less time than driving.

By 2030, the Sheridan, Olde Town and Arvada Ridge stations are forecasted to have a total of nearly 6,000 boardings each day.

The Gold Line is forecasted by 2030 to save 18,231 vehicle miles traveled and 1,145 hours of driving each weekday.
Bicycle Plan
Safe and convenient bicycle connections are ever more important to Arvada citizens. A key component in fulfilling the City's multi-modal transportation goal is to provide a complete street and trail system that accommodates all types of bicyclists throughout the City.

Types of Bicyclists
Individual bicyclists ride for different reasons, to varying destinations, preferring a variety of route options, and possessing widely divergent levels of comfort riding in traffic. It is generally recognized that there are two types of cyclists - Group A: Advanced Bicyclists and Group B: Basic Bicyclists. There is also a Group C: Children, whose needs are similar to the basic bicyclists and thus the two are often classified together as Group B/C.

• Group A - Composed of experienced riders who can operate a bicycle under most traffic conditions. This includes bicycle commuters, bike club riders and other cyclists currently following the rules of the road and riding on area streets.

• Group B - Casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Some will develop greater skills and progress to the advanced level, but nationally there will always be millions of basic bicyclists who prefer comfortable access to destinations and well-defined separation of bicycles and motor vehicles.

• Group C - Pre-teen cyclists who typically ride close to home under close parental supervision.

Bicycle planning generally promotes a "design cyclist" concept that recognizes and accommodates the needs of both Group A and Group B/C bicyclists. Group A cyclists will be best served by making every street bicycle friendly by removing hazards and maintaining smooth pavement surfaces. Group B/C riders will be best served in key travel corridors where designated bicycle facilities are provided in the form of signed and striped bicycle lanes on selected streets and on off-street trails following waterways and other linear open space corridors.

The Arvada bicycle planning approach is to assess bicycle system functionality and prioritize improvements that work for both types of bicyclists. Providing complete bicycling corridors with seamless transitions between facility types is critical to create connections between Arvada's neighborhoods, activity centers and to link with the regional system including the Ralston Creek Trail, Clear Creek Trail, Van Bibber Creek Trail and existing or proposed facilities in adjacent jurisdictions.

Arvada cyclists ready for a ride

Bicycle System Master Plan
A system of bicycle routes has been developed to provide connections between Arvada neighborhoods and activity centers, as well as connections to major bike routes and activity centers in surrounding communities. Figure 3-5 shows these key bicycle corridors, including Community Bike Corridors that generally accommodate bikes on the City's street system and Multi-Use Paths that accommodate bikes on trails or on paths in street rights-of-way but detached from traffic lanes.

Arvada has made great strides in providing both on- and off-street bike facilities. Figure 3-5 shows the existing bike facilities along the targeted bike corridors, including paved and soft surface off-street path and on-street striped bike lanes and shared (bike and automobile) lanes. The map shows that more than half of the designated bike corridors have already had bike facilities implemented. The City's goal is to identify and implement the most appropriate bicycle facilities in all of the designated bike corridors as quickly as funding will allow.
Pedestrian Plan

The Pedestrian Plan for Arvada is aimed at providing sidewalks and paths to accommodate pedestrians throughout the City, while focusing on development of high quality pedestrian accommodation in key areas of the City where pedestrian activity is currently high or is expected to be high in the future.

Appropriate sidewalks are incorporated in the City’s street standards for all arterial, collector and local streets, and sidewalks are currently provided on a large majority of streets throughout Arvada. The Pedestrian Plan map (see Figure 3-6) identifies street segments that are currently missing sidewalks. The City’s goal is to fill these gaps with sidewalks that best fit the street context as quickly as funding will allow.

Figure 3-6 also shows Pedestrian Activity Centers throughout the City. These include the planned Gold Line transit stations and potential future Northwest Rail Corridor stations. Half-mile areas are shown around each station indicating the typical walking distances for rail transit. The streets within the half-mile buffer of the transit stations should include provision of high quality pedestrian facilities including sidewalks and crossing treatments at intersections. The maps also identify schools and commercial, recreational, and government centers. High quality sidewalks and intersection crossing treatments should be provided along routes that provide access to and within these activity centers. Providing safe routes to the City’s elementary, middle and high schools should be a particular focus.

New sidewalks will be designed to adhere to Americans with Disabilities Act requirements. In addition the City should continue to incorporate the highest priority needs for upgrades to accommodation of mobility-disadvantaged individuals on sidewalks and pedestrian crossings through annual budgeting processes.
ACTIVITY CENTERS AND SIDEWALK GAPS

Figure 3-6

OLDE TOWN ARVADA

Future Commuter Rail Station Areas
Future Commuter Rail
Missing Sidewalk Gaps
Planning Boundary

Mixed-Use
Neighborhood and Community Commercial

Preschool
Elementary
Middle
High
College
Library
Cultural Facility
Apex Center

Sources: City of Arvada, DRCOG, CDOT, USGS
Land use descriptions can be found in
Chapter 2 of the Arvada Comprehensive Plan
PRINCIPLES FOR COMPLETE CORRIDORS

The first transportation goal is to develop a balanced, multi-modal transportation system that provides a variety of opportunities for residents and visitors. Translating this goal into reality throughout Arvada requires an evolving approach to transportation corridor planning. Travel by all modes needs to be accommodated along each major travel corridor through the City. However, accommodating all modes along a travel corridor does not always mean equal accommodation of each mode on each individual street or facility.

The matrix below provides an illustration of prioritization of modes on typical roads of different types. On interstate freeways like I-70, for example, automobiles and trucks are the prioritized modes, buses are accommodated but typically not prioritized, and bicycles and pedestrians are not allowed. Arterial streets are generally designed to prioritize automobile and bus transit movements, but they vary in the priority given to bicycles and pedestrians depending on such variables as adjacent land uses, traffic speeds, and available right-of-way. On collector and local streets, bicycle and pedestrians should be prioritized modes, while the priority given to transit and automobiles may vary; for example on a collector level street in an activity center environment such as Olde Wadsworth through Olde Town Arvada, the street may be designed to calm traffic and to enhance the pedestrian and bicycle environments.

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Transit</th>
<th>Automobiles</th>
<th>Bicycles</th>
<th>Pedestrians</th>
<th>Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate</td>
<td>X*</td>
<td>X</td>
<td></td>
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<td>Principal Arterial</td>
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<td>Arterial Parkway</td>
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<td>Major Collector</td>
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<td>Activity Center Collector</td>
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<td>Minor Collector/Local</td>
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Legend
- Prioritized
- Non-Prioritized
- Prohibited

Figure 3-7. Prioritization Matrix

* Jefferson Parkway, which is classified as an Interstate, will be designed to accommodate a bike facility.
**Completing Arvada by Revitalizing Existing Corridors**

A challenge for transportation planning for a mature city like Arvada is how best to accommodate growing travel demand along key travel corridors given existing constraints. Following are descriptions of how these challenges can be met in four of Arvada's key transportation corridors.

### Colorado State Highway 121 (SH 121) (Wadsworth Boulevard)

With current traffic volumes between 40,000 and 70,000 vehicles per day, SH 121 (Wadsworth Boulevard) is Arvada's busiest surface street and one of the busiest in the Denver metropolitan area. Both traffic counts and retail demand are expected to rise along Wadsworth Boulevard, and with it an even larger share of city sales tax. The increased traffic will also increase the value of land for retail prospects and potential redevelopment opportunities for underperforming areas. Throughout the City, Wadsworth Boulevard (including the Wadsworth Bypass section between 52nd and 64th Avenues) has six through-lanes, which is the maximum laneage that is practical due to traffic operational considerations and available right-of-way. RTD bus route #76 serves the entire Wadsworth corridor through Arvada and other local bus routes use part of the corridor. The existing traffic level puts SH 121 (Wadsworth Boulevard) near its current capacity and travel demand growth of 10 to 20 percent is forecasted over the next 20 years, which will further increase congestion.

Threats to the continued success of Wadsworth retailers include the rise of internet sales, which has caused shrinking retail store footprints and the appearance of non-retail uses in traditional retail areas. Large-scale redevelopment of similar underperforming retail sites along the Front Range is currently only occurring with the financial assistance of the public sector (i.e., 38th Avenue in Wheat Ridge, major shopping malls in Longmont and Fort Collins) and would likely require the involvement of AURA if redevelopment on that scale is desired for specific centers on Wadsworth.

### Summary of Important Actions

Following is a summary of important actions that have been taken or are planned to improve the multi-modal functionality and enhance the economic vitality of the Wadsworth Corridor:

- **Corridor Study:** A comprehensive multi-modal corridor study is planned and has been budgeted in Arvada’s 2013-2022 Capital Improvements Plan. The study will be conducted by Arvada in coordination with CDOT.

- **Accel/ Decel Lanes:** The City has obtained funding through DRCOG to implement acceleration/deceleration lane improvements.

- **Bicycles and Pedestrians:** Due to high traffic speeds and volumes, bicycle lanes are not provided on SH 121 (Wadsworth Boulevard). However, wide multi-use (bicycle and pedestrian) paths are provided on both sides of the street through most of its length and the bicycle element of this transportation plan includes completion of these paths. In addition, on-street bike lanes are provided on parallel routes such as Olde Wadsworth north of Ralston Road and the traffic calming design of Olde Wadsworth provides a complementary bike route south of Ralston Road.

- **Bus Prioritization:** Measures are recommended to facilitate existing bus movements on SH 121 (Wadsworth Boulevard). The multi-modal corridor study will evaluate and recommend bus enhancement measures such as bus prioritization at traffic signals, optimizing bus stop locations, improved bus stop shelters and benches, and improved pedestrian crossing accommodation.

- **Circulator Bus:** The City will coordinate with RTD to evaluate options, identify funding, and implement a high frequency circulator bus service to connect the Olde Town Gold Line Station with nearby destinations in the Olde Town area and along Wadsworth and Ralston Road corridors.
Qualities desired for the Ralston Corridor: buildings close to the street; on-street parking; mixed land uses; comfortable pedestrian furnishings, and wide sidewalks that buffer street traffic. Design details to be determined through subsequent studies and public outreach.

**Ralston Road**

Ralston Road serves a dual transportation role because of its unique context in Arvada’s roadway network. As the only continuous east-west arterial roadway through the City in the three-mile band between I-70 and 72nd Avenue, it serves an important inter- and intra-city traffic carrying function. At the same time, the segment of Ralston Road between Wadsworth Boulevard and Kipling Street is one of Arvada’s historic main streets, providing vehicular and pedestrian access to corridor businesses, government buildings, and other retail properties at Ralston Creek and Olde Town which have been the focus of ongoing efforts by AURA. For these reasons, the Land Use Plan designates Ralston Road Corridor between Olde Town and Ralston Creek as Mixed-Use. Investing in the Ralston Road corridor to invigorate redevelopment – mixing retail, restaurant, office space and residential uses both horizontally and vertically – will enliven the area and encourage walkability and economic growth.

This dual function, coupled with the constrained right-of-way that is found along this 1.5 mile segment, presents a unique challenge. The street currently has significant deficiencies in its ability to accommodate all travel modes, with narrow lanes that lead to traffic safety concerns for automobiles and particularly for buses and other large vehicles. Bicycles are currently prohibited from using Ralston Road due to safety concerns associated with narrow lanes. The most immediate need is to improve sidewalks which are very narrow and attached to the road in many sections or even completely absent in some sections. Current traffic counts along the Ralston Corridor range from 21,000 to 23,000 trips per day on different parts of the corridor, which is attractive to retail development. Those counts are expected to rise 10 to 30 percent (between 26,000 and 28,000 trips per day) by 2035, according to the traffic projections in Appendix D.

The City completed the Ralston Road Corridor Plan in 2011, followed by the Ralston Road Conceptual Engineering Study in 2014. The recommended approach to revitalize Ralston Road as a multi-modal “main street” corridor includes the following key features:

- Retain existing laneage, including two lanes in each direction and a center left-turn lane
- Improve lanes to standard 11 to 12 foot width
- Separate sidewalks from the street where possible
- Improve sidewalks for 8 foot width where detached from street and 10 foot width where attached
- Consider raised medians only where existing access would not be affected
- Do not include on-street parking or bicycle lanes in typical cross-sections

While bike lanes are not included in this street cross-section, bike routes are available on parallel routes on the Ralston Creek Trail to the north and on Grandview Avenue to the south. In addition, expanded outside lane widths will better accommodate bicyclists on Ralston Road and allow bicycle restrictions to be removed.

Through the conceptual design process conducted in 2013 and 2014, one-on-one meetings were held with each property owner along the corridor, resulting in a conceptual corridor design that reflects a best fit of the general street cross-section described above for each individual block and property frontage. In addition, the conceptual design task included consideration of the corridor issues including access control measures, intersection improvements, bus stop enhancements and pedestrian crossing treatments.
Finally, the highest priority short-range needs were identified, primarily focusing on developing functional sidewalks throughout the corridor. The next steps planned for Ralston Road are two-fold:

1. Detailed design of the Conceptual Improvement Study: this step will provide an opportunity to refine specific street improvement elements including traffic control, intersection geometrics, landscaping, signage, street lighting and other specific elements.

2. Ralston Road Subarea Plan: As the Land Use Plan designates Ralston Corridor between Ralston Creek and Olde Town as Mixed Use, this step will further detail the urban form, building heights, and design qualities.

Both planning processes will include several outreach opportunities for land owners, tenants and the broader community.

**Colorado State Highway 95 (SH 95) (Sheridan Boulevard)**

With current traffic volumes between 30,000 and 40,000 vehicles per day, SH 95 (Sheridan Boulevard) is near its current capacity as a four-lane arterial roadway and traffic growth of 10 to 20 percent is forecast over the next 20 years. RTD bus route #52 serves the entire SH 95 (Sheridan Boulevard) corridor through Arvada. Following is a summary of important actions that have been taken or are planned to enhance the multi-modal functionality of the Sheridan Corridor:

- **Corridor Study:** A comprehensive multi-modal corridor study is recommended for SH 95 (Sheridan Boulevard). The study should be conducted in coordination with Adams County, which lies on the east side of the road, and CDOT. The Adams County Transportation Plan contains a similar recommendation.

- **Bicycles and Pedestrians:** Similar to Wadsworth, SH 95 (Sheridan Boulevard) high traffic speeds and volumes are not conducive to on-street bicycle lanes. Wide multi-use paths are provided on both sides of the street through some sections of SH 95 (Sheridan Boulevard) and the bike element of this transportation plan recommends completion of these paths. In addition, on-street bike lanes are recommended on Tennyson Street, which parallels SH 95 (Sheridan Boulevard) approximately a half mile to the east, to provide good bicycle connections between the Sheridan/Arvada Gold Strike TOD Station and the Ralston Creek Trail to the south.

- **Bus Prioritization:** Again similar to Wadsworth Boulevard, the multi-modal corridor study will evaluate and recommend bus enhancement measures such as bus prioritization at traffic signals, optimizing bus stop locations, improved bus stop shelters and benches, and improved pedestrian crossing accommodation.

**Colorado State Highway 72 (SH 72) (Indiana Street)**

SH 72 (Indiana Street) between 64th Avenue and 96th Avenue is becoming a key commercial corridor in western Arvada and holds a number of development opportunities as the area experiences significant residential and income growth in the coming years. Western Arvada is as desirable of a suburban location as can be found in Denver metro area, thanks to its strong community, quality schools, new housing stock and proximity to both the mountains and Denver’s urban core. The Indiana Street corridor will see retail sales climb and industrial absorption continue, as household growth and income growth will exceed regional and national averages in the foreseeable future. The construction of the Jefferson Parkway will be a positive influence for commercial activity along the corridor, bringing greater connectivity from the area’s neighborhoods to points throughout the metro area and pulling in more outside traffic to bolster retail sales. Development opportunities are largely limited to the two northern and southern extremes of Arvada’s Indiana Street corridor – 64th Avenue and the Candelas vicinity between 86th Parkway and 96th Avenue.
Today, SH 72 (Indiana Street) is a busy two-lane arterial carrying 15,000 to 20,000 vehicles per day, including many Arvada weekday commuters passing to and from the US 36 Corridor and shoppers traveling to and from Flatiron Crossing. The two-lane roadway is currently near its traffic carrying capacity in its busiest section between 64th and 80th Avenues. As Candelas and Leyden Rock are developed and after the Jefferson Parkway is constructed, traffic counts should rise moderately. Street widening and bicycle and pedestrian improvements will bring about greater mobility as well as economic activity. Together with the Jefferson Parkway, the Indiana Corridor is integral to the City of Arvada’s transportation plan, as well as to Arvada’s economic success. Arvada will work with CDOT to identify design and identify funding to implement improvements to Indiana Street, incorporating:

- Phased implementation of additional through lanes
- Multi-modal facilities to safely and conveniently accommodate automobiles, RTD bus service, bicyclists and pedestrians
- Compatible design with the land uses along the corridor

**Jefferson Parkway Corridor**

Planning for a circumferential beltway around the Denver metropolitan area began in the 1960s. With the construction of C-470, E-470 and the Northwest Parkway, most of the beltway is now in place. The Jefferson Parkway is the latest piece to be initiated. The corridor was included in the first DRCOG regional transportation plan adopted in 1987, and the specific Jefferson Parkway alignment was approved by DRCOG in January, 2010. The Jefferson Parkway Public Highway Authority, formed as a partnership between Arvada, Jefferson County and the City and County of Broomfield, is currently seeking a private partner to design, build, finance, maintain and operate the road.

Implementation of the Jefferson Parkway is integral to the City of Arvada’s transportation plan for several reasons:

- By completing the beltway system, it will enhance regional roadway system connectivity
- It will improve mobility and reduce travel times for Arvada residents and visitors
- By providing for regional travel movements, it will preserve the functionality of Arvada’s surface street system for local trips and access
- It will provide accessibility for developing western parts of Arvada

The implementation of the Jefferson Parkway is assumed in the baseline analysis that formed the foundation of the transportation and land use analyses in this plan. If the Jefferson Parkway were significantly delayed, travel demands and improvement needs would increase on other Arvada streets such as Indiana Street, State Highways 72 and 93, and 82nd Avenue.

**JEFFERSON PARKWAY QUICK FACTS**

The Jefferson Parkway will help complete the 470 Beltway originally proposed in the 1960s. It will provide convenient roadway connections from western Arvada to Golden and I-70 westbound; the US 36 corridor, I-25 northbound, I-76 eastbound, and Denver International Airport.

The Jefferson Parkway will have two interchanges in Arvada at Candelas Parkway and Coal Creek Canyon Road (State Highway 72).

The Jefferson Parkway is forecasted to carry between 23,000 to 39,000 daily trips by 2035.