

## ELKO MASTER PLAN - TRANSPORTATION

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### GOALS AND OBJECTIVES

**Goal:** *Provide a comprehensive transportation system that facilitates the safe, efficient movement of people, goods, and services and contributes to the City's quality of life.*

**Objective 1:** Provide a balanced transportation system that accommodates vehicles, bicycles, and pedestrians, while being sensitive to, and supporting the adjacent land uses.

**Objective 2:** Provide a backbone of arterial roadways to emphasize regional vehicle travel and provide adequate capacity to move large traffic volumes, including truck traffic, safely and efficiently.

**Objective 3:** Explore transit options consistent with demand and available resources.

**Objective 4:** Promote opportunities to use major transportation corridors to beautify the City, particularly at major entry points.

**Objective 5:** Implement and maintain a pavement management system and curb, gutter, and sidewalk construction/maintenance program to protect the investment in existing roads.

**Objective 6:** Coordinate with other local and regional jurisdictions to enhance transportation services/facilities for the region.

### EXISTING CONDITIONS

The City of Elko depends heavily on the motor vehicle to satisfy transportation needs. Consequently, the City's system of streets and highways is of paramount importance in terms of moving goods, services, visitors, and residents throughout the City safely, efficiently, and economically.

Elko is also strongly influenced by a network of local streets and roadways. Presently, approximately 90% of the total transportation system is comprised of local streets and roadways. As a result of recent growth and expansion, more emphasis has been placed on the local street system to meet increased demands for local transportation services and needs.

Elko's streets are also influenced by the federal and state highway system. Elko is located on the Interstate 80 (I-80) corridor, which provides linkages to major urban centers to the west and east, including



Idaho Street Alive at Night



Fifth Street, Elko

Reno and Salt Lake City. Elko is located approximately 50 miles west of U.S. Highway 93, a north-south route that provides connections to Twin Falls, Idaho and Interstate 84 to the north, and Las Vegas to the south.

A number of state routes provide access to outlying rural and recreational areas and suburban growth nodes such as Spring Creek. State Route 225 follows a northerly route through private and public BLM lands and provides connection to the Boise, Idaho area and Interstate 84.

As the City of Elko continues to experience growth, and as population and the number of motor vehicles in use expands within the region, increased burdens will be placed on the transportation network. With increased use and demand, additions and modifications to the system will be necessary to create a modern and more efficient transportation network that will effectively serve the residents of the City, the business community, and the traveling public. Transportation planning can help fulfill such an objective by identifying key issues and needs, and by advancing and programming those needs from concept to implementation and construction.

#### Partner Entities

*NDOT and FHWA:* The Nevada Department of Transportation (NDOT) and Federal Highway Administration (FHWA) are responsible for the maintenance and improvement of I-80. NDOT has jurisdiction over the state highway system including State Routes (SR) 225 and 227. NDOT is also responsible for the coordination of federal and state funding for roadway improvements throughout the Elko planning area.

*Elko County RTC: The Elko County Regional Transportation Commission (RTC),* prepares and approves budgets for the regional street and highway fund, plans short-range and regional plans for transportation, and may dispense federal highway funds. The Commission consists of three members: two from the County at large and one from the City of Elko. The RTC meetings are held quarterly and open to the public.

*Elko County School District:* The Elko County School District provides bus service for students who live more than two miles (measured by air distance, not driving distance) from their school.

#### Metropolitan Planning Organization Status

The Federal-Aid Highway Act of 1962 created the federal requirement for urban transportation planning largely in response to the construction of the Interstate Highway System and the planning of routes through and around urban areas. This Act required states to use a portion of federal construction funds for the planning of transportation projects in urbanized areas of 50,000 or more in population. The U.S. Census Bureau defines an urban area as: "Core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile."

The formation of Metropolitan Planning Organizations (MPOs) came with the Federal Highway Act of 1973. This Act was, in part, a response to concerns over environmental and social issues in transportation planning, and established MPOs as the policy bodies for metropolitan transportation planning. The Federal Highway Act of 1973 was followed by three other acts of Congress that shaped the role of MPOs today: the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The outcome of each successive Act set forth the national policy that MPOs are responsible for:

- Development of a metropolitan transportation plan and a transportation improvement program (TIP)
- Encourage and promote the safe and efficient development, management, and operation of surface transportation systems to serve the mobility needs of people and freight; including accessible pedestrian walkways and bicycle transportation facilities.
- Foster economic growth and development, while minimizing transportation-related fuel consumption and air pollution.
- Strive to continually develop and improve the overall metropolitan transportation planning process.

According to the Nevada State Demographer's Office, the City of Elko had a population of approximately 18,428 in 2009 while Elko County had a population of 51,325. The population density within Elko County does not meet the definition of an *urbanized area*. The average population density for the City of Elko is approximately 1,250 people per square mile, while the average population density for the remainder of Elko County is 2 people per square mile. Spring Creek, which is the area with largest population in close proximity to the City of Elko, has a population density of approximately 200 people per square mile.

### **Roadway Network**

The City of Elko's existing roadway network consists of approximately 100 miles of mostly improved streets and highways. Jurisdictional authority and responsibility of the transportation network lie with federal, state, and local agencies including the Federal Highway Administration (FHWA), Nevada Department of Transportation (NDOT), the County of Elko, and the City of Elko.

The County of Elko and the City of Elko are responsible for the maintenance and improvement of local roadways within the Elko planning area, with the County having authority of areas outside of the City of Elko boundaries, and the City having authority of areas within the City of Elko boundaries.

Roadway Classifications

Roadways within a transportation network are classified based on the characteristics and function of the facility. Roadways are generally classified as primary and secondary facilities. Primary facilities commonly include freeways and roadways that are part of the federal or state highway system. Secondary facilities include roadways that are managed by local jurisdictions, and typically include arterials, collectors and local or residential streets.

The ATLAS Map 11. Roadway Classification Map shows the classifications of the roadways included in the Elko circulation system. The definition of each roadway classification category is described as follows:

*Interstate*

Interstate highways are high capacity facilities that are intended to accommodate regional traffic, traffic across un-urbanized areas, and traffic with origins and destinations in widely separated communities, areas, and regions.

Interstates include all components of interstate highways including divided roadway sections and interchanges. Full control of access is required, and interchanges with local arterials must be spaced at appropriate intervals to safely serve the community and outlying areas.

Right-of-Way Width: 100 feet or more  
Typical Travel Lanes: 4 lanes or more

*NDOT Facilities*

NDOT’s classification system includes Interstate Highways, Principal Arterials, Minor Arterials, Rural Major Collectors, and Urban or Rural Minor Collectors.

NDOT facilities in the City of Elko are classified as follows:

- SR 225 (Mountain City Highway): North of I-80 – NDOT Minor Arterial
- SR 225 (Mountain City Highway/Idaho Street): I-80 to 5th Street: NDOT Principal Arterial
- SR 227 (5th Street/Lamoille Highway): South of Idaho Street: NDOT Minor Arterial



Major Arterial

*Major Arterial*

Major Arterials are similar to Principal Arterials, but are maintained and operated by the City of Elko or the County of Elko – not by NDOT. Major Arterials serve the major centers of activity within a community, and typically carry the highest traffic volumes in a community’s transportation system. Major Arterials may provide direct access to adjacent properties; however, traffic flow and major traffic movements should be given priority. Development of new driveways on Major Arterials should be limited.

Right-of-Way Width: 100 feet  
Typical Travel Lanes: 4 lanes or more

*Minor Arterial Route*

Minor Arterials connect with and augment the Principal/Major Arterial system. Minor Arterials are intended to gather and distribute traffic from Major Arterials to Collectors, and provide linkages between distinct land use districts and neighborhoods within the community. Areas served by Minor Arterials include community traffic generators, such as hospitals and high schools, and also neighborhood and local traffic destinations, such as retail/commercial centers, elementary schools, churches, or concentrations of high density residential development. Partial control of access is desired, however providing direct service and access to destination oriented property is important. Direct access to individual residential lots should not be permitted.

Right-of-Way Width: 80 feet  
Typical Travel Lanes: 2 lanes

*Commercial/Industrial Collector Street*

Commercial/industrial collector streets provide a connection for traffic between arterial roadways and local streets. Collectors primarily serve local destinations such as small retail or service centers, elementary schools, parks, industrial uses, and medical offices. Collector street traffic volumes are generally low to moderate.

Right-of-Way Width: 70 feet  
Typical Travel Lanes: 2 lanes

*Residential Collector Street*

Residential collector streets provide a connection for traffic between neighborhoods and commercial/industrial collector and arterial roads. Direct access to residential properties is discouraged, however when necessary, reverse frontage residential lots are preferred. Controlled access is important, particularly for a residential type collector. Collector street traffic volumes are generally low to moderate.

Right-of-Way Width: 60 feet  
Typical Travel Lanes: 2 lanes

*Local Street*

Local streets provide direct access to residential, commercial, industrial, and other properties, and provide connection to Collector streets. Local streets generally serve lower traffic volumes, and should be designed to minimize vehicle speeds, particularly through a residential neighborhood. In certain circumstances design features and traffic control devices such as cul-de-sacs, curvilinear street alignments, stop signs, traffic calming devices, and reduced speed limits can be utilized to help reduce speeds on local streets.

Right-of-Way Width: 50 feet  
Typical Travel Lanes: 2 lanes



Idaho Street is a Major Arterial and serves as a business loop for I-80



Local streets, especially the 'Tree Streets' in the older neighborhoods, create a unique character for the City

### Elko Roadway Classification

The following provides the functional classifications for roadways within the City of Elko based on existing street character and function:

#### *Interstates and Interstate Interchanges*

- Interstate 80 (I-80)
- Exit 298 (Idaho Street Interchange)
- Exit 301 (Mountain City Highway Interchange)
- Exit 303 (Jennings Way Interchange)

#### *Principal Arterials/Other NDOT Roadways*

- Lamoille Highway (State Route-SR 227)
- Mountain City Highway (SR 225)

#### *Major Arterials*

- 5<sup>th</sup> Street, between Idaho Street and Lamoille Highway (SR 227)
- 12<sup>th</sup> Street, between Idaho Street and Lamoille Highway (SR 227)
- Idaho Street

#### *Minor Arterials*

- 5<sup>th</sup> Street, north of Idaho Street
- College Avenue
- Errecart Boulevard, between Silver Street and Bullion Road  
(classification is Major Arterial once roadway is connected)
- Errecart Boulevard, west of Lamoille Highway (SR 227)  
(classification is Major Arterial once roadway is connected)
- Jennings Way, northeast of Mountain City Highway (SR 225)  
(classification is Major Arterial once roadway is connected)
- Jennings Way, northwest of Idaho Street (classification is Major Arterial once roadway is connected)
- Ruby Vista Drive
- Silver Street, between 5<sup>th</sup> Street and 12<sup>th</sup> Street
- Spruce Road

#### *Commercial/Industrial Collectors*

- 8<sup>th</sup> Street, between Elm Street and Silver Street
- 9<sup>th</sup> Street
- 12<sup>th</sup> Street, between College Avenue and Idaho Street
- 13<sup>th</sup> Street
- 14<sup>th</sup> Street
- 30<sup>th</sup> Street
- Aspen Way, between Mountain City Highway (SR 225) and Westwood Drive
- Chris Avenue
- Colt Drive
- College Parkway
- Commercial Street
- D Street
- Elm Street
- Fairground Road

- Front Street
- Golf Course Drive
- Last Chance Road
- Manzanita Lane
- Kittridge Canyon Road, between Paradise Drive and Idaho Street
- Pinion Road
- Railroad Street
- Silver Street, east of 12<sup>th</sup> Street
- Stitzel Road, between Colt Way and Last Chance
- Water Street
- West Sage Street
- Wildwood Way, between Lamoille Highway (SR 227) and Stitzel Road

#### *Residential Collectors*

- 1<sup>st</sup> Street, south of Silver Street
- 2<sup>nd</sup> Street
- 3<sup>rd</sup> Street
- Argent Avenue
- Bluffs Avenue
- Bullion Road – Wilson Avenue
- Cedar Street, between Fir Street and 6<sup>th</sup> Street
- Cedar Street, Mountain City Highway to Fir Street and 6<sup>th</sup> Street to Idaho Street
- Clarkson Drive
- Connolly Drive
- Copper Street
- Cottonwood Drive
- Country Club Drive
- Court Street, Oak Street to 5<sup>th</sup> Street and 9<sup>th</sup> Street to 14<sup>th</sup> Street
- Delaware Street, between Statice Street and Paradise Drive
- El Armuth Drive
- Enfield Avenue
- Fairway Drive, between Skyline Drive and Keppler Drive
- Forest Lane, between Montrose Lane and Enfield Avenue
- Garcia Lane – South 11<sup>th</sup> Street
- Highland Drive
- Indian View Heights Drive
- Jennings Way, south of Mountain City Highway
- Keppler Drive
- La Nae Drive, between Bluffs Avenue and Cottonwood Drive
- Mittry Avenue
- Montrose Lane
- Opal Drive
- Ruby View Drive
- Sagecrest Drive
- Sewell Drive
- Spruce Road, between 5<sup>th</sup> Street and Mittry Avenue
- Stitzel Road, between Pinion Road and Liberty Drive
- Sundance Drive

*Regional Roadways*

Regional Roadways are those collector or arterial streets characterized by moderate to high traffic volumes with significant traffic origins or traffic destinations outside of the corporate boundaries of the City of Elko. The following are considered Regional Roadways:

- Jennings Way Loop
- 5th Street
- Ruby Vista Drive, east of Jennings Way
- Delaware Street
- Idaho Street
- Silver Street
- Manzanita Lane
- 12th Street, south of Idaho Street
- Last Chance Road
- Bullion Road, west of Errecart Boulevard
- Errecart Boulevard

\* Note that the Elko City Council approved the above list of Regional Roads; however, at this time Manzanita Lane and Last Chance Road are not recognized by the RTC as regional roads.

Roadway Capacity

Level of service (LOS) is a term used to measure and describe the operational conditions of a roadway network. Letters A through F are used to measure the LOS of a roadway segment or intersection. The following definitions are given for each level of service letter.

Table 1	
Level of Service	Definition
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
D	Represents high-density, but stable flow.
E	Represents operating conditions at or near the capacity level.
F	Represents forced or breakdown flow.

The level of service thresholds for roadway segments in the City of Elko, based on the Average Daily Traffic (ADT) carried by the roadway segment, are identified in Table 2.

Table 2 Average Daily Traffic Level of Service Thresholds						
Facility	Number of Lanes	Level of Service (LOS)				
		A	B	C	D	E
Interstate		46,000	84,000	120,000	145,000	163,000
NDOT Facilities/ Major Arterial	2	2,500	5,000	9,700	15,000	18,700
	4	5,000	10,000	17,500	27,400	28,900
Minor Arterial	2	2,000	4,000	7,700	12,000	15,000
	4	4,000	8,000	14,000	22,000	23,100
Collector	2	1,500	3,000	7,300	8,500	9,100

Source: Fehr & Peers, 2010

**Historical Traffic Volumes and Roadway Level of Service**

Historical traffic volumes for the major roadways serving the City of Elko are shown in Table 3. The historical traffic volume data was obtained from NDOT’s 2008 Annual Traffic Report. Traffic volumes in the City of Elko have remained relatively steady over the last nine years, with some segments showing an increase in traffic volumes, and other segments showing a decrease in traffic volumes. College Parkway, in particular, has shown a substantial increase (15% to 20% per year) since 2000.

TABLE 3 HISTORICAL TRAFFIC VOLUMES							
Roadway	Location	Annual ADT					2000 to 2008 Annual Growth (% growth per year)
		2000	2002	2004	2006	2008	
I-80	Exit 301 to Exit 303	9,350	8,900	8,900	10,100	9,700	0.5%
Lamoille Highway (SR 227)	South of 5 <sup>th</sup> Street	20,200	20,200	18,800	20,300	20,000	-0.1%
Mountain City Highway (SR 225)	North of I-80	2,900	2,750	3,000	3,250	3,200	1.3%
Mountain City Highway (SR 225)	I-80 to Idaho Street	18,100	16,500	17,500	19,100	20,000	1.3%

TABLE 3 HISTORICAL TRAFFIC VOLUMES							
Silver Street	South of Idaho Street	11,700	11,000	11,900	12,300	14,000	2.5%
5 <sup>th</sup> Street (SR 227)	Idaho Street to Lamoille Highway (SR 227)	11,900	12,500	12,600	11,300	13,000	1.6%
12 <sup>th</sup> Street	Idaho Street to Lamoille Highway (SR 227)	12,500	12,700	13,000	13,400	14,000	1.5%
Idaho Street	West of Mountain City Highway (SR 225)	3,400	3,500	3,200	4,350	3,700	1.1%
Idaho Street	Mountain City Highway (SR 225) to 5 <sup>th</sup> Street	9,450	9,450	8,500	9,750	9,600	0.2%
Idaho Street	5 <sup>th</sup> Street to 12 <sup>th</sup> Street	14,300	13,900	13,200	14,500	13,000	-1.1%
Idaho Street	12 <sup>th</sup> Street to Jennings Way	19,505	17,495	17,962	18,900	18,000	-1.0%
5 <sup>th</sup> Street	Idaho Street to I-80	8,700	9,400	9,950	10,000	9,300	0.9%
5 <sup>th</sup> Street	North of I-80	4,800	4,750	5,150	5,200	4,600	-0.5%
College Avenue	12 <sup>th</sup> Street to Idaho Street	3,050	2,350	2,800	2,900	2,700	-1.4%
College Parkway	North of I-80	3,200	4,300	4,400	4,450	8,700	21.5%
College Parkway	South of I-80	2,600	2,650	2,450	2,650	5,800	15.4%
Errecart Boulevard	Silver Street to Bullion Road	4,150	3,600	3,800	3,950	4,000	-0.5%
Golf Course Drive	North of College Avenue	2,850	3,500	3,550	3,800	4,200	5.9%

TABLE 3 HISTORICAL TRAFFIC VOLUMES							
Silver Street	5 <sup>th</sup> Street to 12 <sup>th</sup> Street	7,050	6,850	7,100	7,400	7,800	1.3%
12 <sup>th</sup> Street	College Avenue to Idaho Street	4,000	4,100	4,100	4,200	3,800	-0.6%
13 <sup>th</sup> Street	Elm Street to College Avenue	3,050	2,700	2,700	2,550	3,000	-0.2%
Argent Avenue	East of Mountain City Highway (SR 225)	7,400	7,800	8,300	5,600	5,500	-3.2%
Bullion Road – Wilson Avenue	Errecart Boulevard to 9 <sup>th</sup> Street	4,150	4,000	4,200	4,200	4,000	-0.5%
Cedar Street – Country Club Drive	Mountain City Highway (SR 225) to Idaho Street	2,900	3,100	3,000	3,300	2,900	0%
Elm Street	Sage Street to 13 <sup>th</sup> Street	2,150	2,150	1,950	2,050	3,800	9.6%
Sage Street	Mountain City Highway (SR 225) to College Parkway	3,000	3,100	3,150	3,100	3,200	0.8%

Source: 2009 Annual Traffic Report, Nevada Department of Transportation; Fehr & Peers, 2010

The existing levels of service on regional roadways, based on the Average Daily Traffic Level of Service Thresholds, are shown in Table 4.

TABLE 4 EXISTING ROADWAY SEGMENT LEVEL OF SERVICE					
Roadway	Location	Classification	Number of Lanes	Daily Volume	Level of Service
I-80	Exit 298 to Exit 301	Interstate	4	9,700	A

<b>TABLE 4 EXISTING ROADWAY SEGMENT LEVEL OF SERVICE</b>					
Lamoille Highway (SR 227)	South of 5 <sup>th</sup> Street	Principal Arterial	4	20,000	D
Mountain City Highway (SR 225)	North of I-80	Principal Arterial	4	3,200	A
Mountain City Highway (SR 225)	I-80 to Idaho Street	Principal Arterial	4	20,000	D
Silver Street	South of Idaho Street	Principal Arterial	2	14,000	D
5 <sup>th</sup> Street (SR 227)	Idaho Street to Lamoille Highway (SR 227)	Major Arterial	4	13,000	C
12 <sup>th</sup> Street	Idaho Street to Lamoille Highway (SR 227)	Major Arterial	3	14,000	D
Idaho Street	West of Mountain City Highway (SR 225)	Major Arterial	2	3,700	B
Idaho Street	Mountain City Highway (SR 225) to 5 <sup>th</sup> Street	Major Arterial	4	9,600	B
Idaho Street	5 <sup>th</sup> Street to 12 <sup>th</sup> Street	Major Arterial	4	13,000	C
Idaho Street	12 <sup>th</sup> Street to Jennings Way	Major Arterial	4	18,000	D
5 <sup>th</sup> Street	Idaho Street to I-80	Minor Arterial	2	9,300	C
5 <sup>th</sup> Street	North of I-80	Minor Arterial	2	4,600	C
College Avenue	12 <sup>th</sup> Street to Idaho Street	Minor Arterial	2	2,700	B
College Parkway	North of I-80	Minor Arterial	2	8,700	D
College Parkway	South of I-80	Minor Arterial	2	5,800	C
Errecart Boulevard	Silver Street to Bullion Road	Minor Arterial	4	4,000	A
Golf Course Drive	North of College Avenue	Minor Arterial	2	4,200	C
Silver Street	5 <sup>th</sup> Street to 12 <sup>th</sup> Street	Minor Arterial	2	7,800	D
12 <sup>th</sup> Street	College Avenue to Idaho Street	Collector	2	3,800	C
13 <sup>th</sup> Street	Elm Street to College Avenue	Collector	2	3,000	B
Argent Avenue	East of Mountain City Highway (SR 225)	Collector	2	5,500	C

TABLE 4 EXISTING ROADWAY SEGMENT LEVEL OF SERVICE					
Bullion Road – Wilson Avenue	Errecart Boulevard to 9 <sup>th</sup> Street	Collector	2	4,000	C
Cedar Street – Country Club Drive	Mountain City Highway (SR 225) to Idaho Street	Collector	2	2,900	B
Elm Street	Sage Street to 13 <sup>th</sup> Street	Collector	2	3,800	C
Sage Street	Mountain City Highway (SR 225) to College Parkway	Collector	2	3,200	C
Source: Fehr & Peers, 2010					

**Bicycle and Pedestrian Facilities**

Currently, there is no functional non-motorized transportation system in Elko, however the *City of Elko Bicycle and Pathway Plan* provides goals and objectives to develop an on- and off-street, non-motorized transportation system for bicyclists, pedestrians, and similar users. Because of the nature and age of the street system in Elko, particularly in the core area of the City, planning and implementation of facilities for bicycles, pedestrians and other forms of non-motorized transportation has been difficult and has not been given a high priority relative to other community needs. As peripheral areas grow and develop, and as existing arterial roadways and collectors are upgraded, there will be opportunities for bicycle and pathway facilities to evolve systematically and augment the City’s transportation system. It is probable that such a system will primarily serve a recreational function, but also provide alternative routes and connections between parks, schools, residential neighborhoods, and the downtown commercial area.



Downtown Elko does not currently have adequate infrastructure to support active pedestrian and bicycling activity. Downtown is primarily auto-oriented

The bicycle and pathway system will include the following facility types:

Exclusive Shared Use Path

Exclusive Shared Use Path facilities are two-way pathways, eight to twelve feet in width, that are separated from the vehicle travel lanes of the roadway and the pedestrian sidewalk. Shared use pathways are intended to serve multiple functions and accommodate a variety of non-motorized users, including but not limited to, bicyclists, walkers, hikers, joggers, in-line skaters and roller skaters.

Delineated Bike Lane

Bike Lane facilities are one-way bike paths within and on both sides of the improved roadway section that are four to six feet in width. Bike Lanes are separated from the vehicle travel lanes of the roadway by a painted stripe, raised curb or other physical marking.

Bike Route, Shared Roadway

Shared Roadway facilities share use of the roadway in the vehicle travel lane or parking lane.

Sidewalks

Sidewalks are an important component of the street. By accommodating pedestrian traffic, sidewalks provide an alternative form of transportation and can effectively contribute to lower vehicle volumes and a reduction in traffic congestion. Sidewalks are also a necessary safety feature, particularly in residential neighborhoods where children walk to and from local schools and parks.

**Transit**

Elko County and the *Regional Transportation Commission (RTC)* manage the North Eastern Area Transit (N.E.A.T.) Bus in the City of Elko. The N.E.A.T. Bus is a fixed route, public transportation service that operates Monday through Friday (excluding legal holidays) from 7:00 AM to 3:00 PM. The N.E.A.T. Bus charges a fare to ride. Discounted ticket books and monthly passes are available. The N.E.A.T. Bus provides over 18,000 rides per month to seniors, people with disabilities, children, commuters, and the general public.

The County and RTC also manage the following services:

- Dial-a-ride service that provides transit service to a location of the rider’s choice. Dial-a-ride trips require 24 hour advanced reservations. A fare must be paid for dial-a-ride trips.
- Half-price taxi vouchers to seniors (in collaboration with the Nevada Division for Aging Services).
- Trips to Reno, Las Vegas, Salt Lake City, and Twin Falls offered several times per year.
- Free medical rides for non-emergency medical clients with Nevada Medicaid.
- Trolley for special events.

The Elko County School District provides bus service for students that live further than two-miles (measured based on air distance, not driving distance) from their school. The N.E.A.T. Bus is available to students that live on the bus route within two-miles of their school.

**Airport**

The Elko Regional Airport is located at 975 Terminal Way, off of Mountain City Highway approximately 1 mile west of Downtown Elko. The airport has two runways: a commercial runway that is 150 feet by 7,211 feet and a general aviation runway that is 60 feet by 2,879 feet. The Air Carrier Passenger Terminal is 20,000 square-feet and provides several amenities including dining, business center, vending/game area, rental car agencies, and access to the jet bridge. Commercial service is

provided by SkyWest Airlines (Delta Connection) with five daily flights to Salt Lake City, UT. The Airport Master Plan provides additional information about the Elko Regional Airport and planned airport improvements.

**Existing Transportation Deficiencies**

The City of Elko is responsible for maintenance and improvement to other local streets and roadways within the corporate boundaries of the City. While 99% of these local roads are paved, a portion of the street system's infrastructure is in a serious to moderate state of disrepair and in need of improvement. A brief overview of the conditions of the City's local streets system, particularly in the older, core area of the community, is as follows:

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- The paved sections of some local streets and roadways are in need of resurfacing and/or reconstruction.
- Sidewalk sections are either missing or in a state of disrepair, resulting in gaps in the pedestrian transportation system.
- Some intersections may not meet current Americans with Disabilities Act (ADA) standards but are improved to meet standards at the time of construction/improvement.
- *Alleys and City-owned parking lots are in disrepair, they compete for the limited resources and are therefore not a priority to receive regular maintenance or rehabilitation.*

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**BEST PRACTICES**

This Best Practices section includes a detailed explanation of each of the Elko Master Plan objectives, and provides recommendations, identifies funding sources, and suggests regulatory tools available to help implement the Master Plan's stated objectives. The purpose of this section is to ensure City leaders and decision makers have the information necessary to make sound, educated decisions for the future of Elko. The Elko Master Plan Best Practices should be referred to as staff reports are developed and as transportation network, subdivision, site plan, and zoning decisions for the City are made.

**Objective 1: Provide a balanced transportation system that accommodates vehicles, bicycles, and pedestrians, while being sensitive to, and supporting the adjacent land uses.**

Elko's transportation system should provide opportunities for residents to choose a variety of transportation modes including driving, bicycling, and walking. The complete street concept recognizes that transportation corridors have multiple users with different abilities and mode preferences. Approximately one third of Americans do not drive; providing for all modes creates access for children, seniors who do not drive, individuals who have a disability that limits their ability to drive, and those who do not have access to a vehicle. In addition to providing



A balanced transportation system creates opportunities for residents to choose different modes of transport

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access, providing safe and comfortable facilities for all modes creates active, livable streets and contributes to a high quality of life.

Adjacent land uses influence the functionality and character of the street environment. A well-integrated street system considers the complementary relationship between land use, local and regional travel needs, and the context that it serves. Complete streets apply equally to downtown main streets and high-capacity commercial corridors, and they consider the range of users, including children, the disabled, and seniors. For example, the roadways near a school should provide upgraded pedestrian facilities to enhance pedestrian visibility and comfort and encourage walking to school. Roadways near an industrial area need to meet different needs including accommodating tractor trailers. A balanced transportation system can revitalize areas and spur economic development/redevelopment.



Complete streets balance uses and accommodate multiple modes of transportation. Streets cease to be only vehicular conduits but rather become beautiful, comfortable and vibrant destinations



Before



After

Wells Avenue Road Diet Rehabilitation Project  
Reno, NV

**Best Practice 1.1: Incorporate “Complete Streets” principles into existing and future roadways.**

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Complete Streets Components: Complete Streets include facilities and designs that enable safe access for all users of all ages and abilities. Characteristics of Complete Streets include:

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principals

- Comprehensive, integrated, and connected network.
- Balanced design to accommodate driving, walking, cycling, transit, parking, and deliveries.
  - Variety of uses and activities that create a varied streetscape.
  - Design that relates well to the street’s bordering uses and allows for continuous activity.
  - Pedestrian and biking facilities that promote safety and maximize access to bordering uses.
  - Are ADA accessible.
  - Aesthetically designed street lights that provide sufficient illumination of sidewalks.
  - Consistent landscaping that includes street trees and landscaped medians and sidewalks.
  - Sustainable design that minimizes runoff, minimizes heat island effects, and responds to climatic demands and conserves scarce resources.
  - Well-maintained facilities.

Street Rehabilitation Projects: Explore opportunities to provide complete street features such as bicycle lanes, reduced vehicle travel lanes (i.e. road diets), and modified on-street parking (removing or adding based on street type and user demands) during re-striping as part of street rehabilitation projects.

Bicycle & Pedestrian Master Planning: The *City of Elko Bicycle and Pathway Plan* is intended to provide the basic framework for the development of a functional bicycle and pathway system for the community *by providing* connections to outlying areas. *The Bicycle and Pathway Plan* is incorporated into this Master Plan by reference. The *City of Elko Bicycle and Pathway Plan* should be updated every five

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years to identify the City's existing bicycle and pedestrian network, gaps, and plans for future bicycle and pedestrian facilities.

Consider innovative bicycle and pedestrian treatments as they are approved for use in the Manual for Uniform Traffic Control Devices. Two new treatments that could be considered include the "Hawk" (High Intensity Activated Crosswalk) pedestrian signal and the "Sharrow" shared lane pavement marking, as shown in the photos.

**Hawk Pedestrian Signal:** The HAWK uses traditional traffic and pedestrian signal heads but in a different configuration. It includes a sign instructing motorists to "stop on red" and a "pedestrians" overhead sign. There is also a sign informing pedestrians on how to cross the street safely.

Hawk Pedestrian Signal

When not activated, the signal is blanked out. The HAWK signal is activated by a pedestrian push button. The overhead signal begins flashing yellow and then solid yellow, advising drivers to prepare to stop. The signal then displays a solid red and shows the pedestrian a "Walk" indication. Finally, an alternating flashing red signal ["wig-wag"] indicates that motorists may proceed when safe, after coming to a full stop. The pedestrian is shown a flashing "Don't Walk" with a countdown indicating the time left to cross.

**Sharrow:** This pavement marking, used on shared use routes, indicates the legal and appropriate bicyclist line of travel, and cues motorists to pass with sufficient clearance. The purpose of this new marking is to reduce the number and severity of bicycle-vehicular crashes, particularly crashes involving bicycles colliding with suddenly opened doors of parked vehicles.

**Best Practice 1.2: Promote context sensitive street design.**

Roadway Functional Classification and Typology: Street typologies expand upon the roadway functional classification (found in the Elko Community ATLAS) to include street context and non-auto travel modes. Identifying a street's typology ensures that street standards are not uniformly applied based on functional classification, but also consider a street's relation to surrounding land uses, appropriate travel speeds, and need to accommodate multiple travel modes.

Most street "types" can be found in more than one functional class, and vice versa. Street design should consider both street function and street type. For example, a street that has an arterial function and a residential type will have different characteristics and design features than a residential street with a collector or local street function. Residential arterial streets serve longer distance trips than residential collector or local streets. As such, maintaining the through capacity should be a higher priority on a residential arterial than on a residential collector or local street. Similarly, a mixed-use/main collector and an industrial collector have different characteristics. A mixed-use collector should accommodate several transportation modes, while an industrial collector primarily serves heavy trucks and automobiles. Definitions of the street typologies are:



Sharrow Pavement Marking

- *Residential Streets:* Residential streets serve two major purposes. As arterials, Residential streets balance multimodal mobility with land access. As collector or local streets, Residential streets are designed to emphasize walking, bicycling, and property access. In both cases, Residential streets tend to be more pedestrian-oriented than Commercial Streets.
- *Mixed-Use/Main Streets:* Mixed-Use/Main Streets serve retail centers and mixed land-use areas such as downtown areas and neighborhood centers. Unlike Commercial Streets, Mixed-Use/Main Streets are designed to promote walking, bicycling, and transit with attractive streetscape and pedestrian-oriented design elements. Generally, activities are concentrated along a two- to eight-block area, but may extend further depending on the type of adjacent land uses and the area served. Narrower street widths can be used to reduce travel speeds on main street segments. An arterial main street segment will likely include additional travel lanes and turn pockets, wider sidewalks, and curb extensions to reduce crosswalk widths.
- *Commercial Streets:* The most common Commercial streets are the strip commercial arterials. Strip commercial arterials typically serve commercial areas containing numerous small retail strip centers with buildings set back behind fronting parking lots.
- *Industrial Streets:* Industrial streets are designed to accommodate significant volumes of large vehicles such as trucks, trailers, and other delivery vehicles. Because these areas are relatively low-density, bicycle and pedestrian travel is more infrequent than in other areas, but still should be accommodated.
- *Regional Roadways:* Regional Roadways are arterial or collector streets characterized by moderate or high traffic volumes with significant origins or destinations outside the corporate boundaries of the City of Elko. They provide regional access and sometimes serve commercial or industrial land uses. Therefore, a roadway could be functionally classified as a Major Arterial, with both Commercial and Regional typologies. These streets promote movement of through traffic and include well spaced signalized intersections and minimal access points. Since traffic volumes are generally higher, a buffer should be provided between the travel lane and sidewalk. Regional Roadways should include a parallel Class I or Class II bicycle facility.

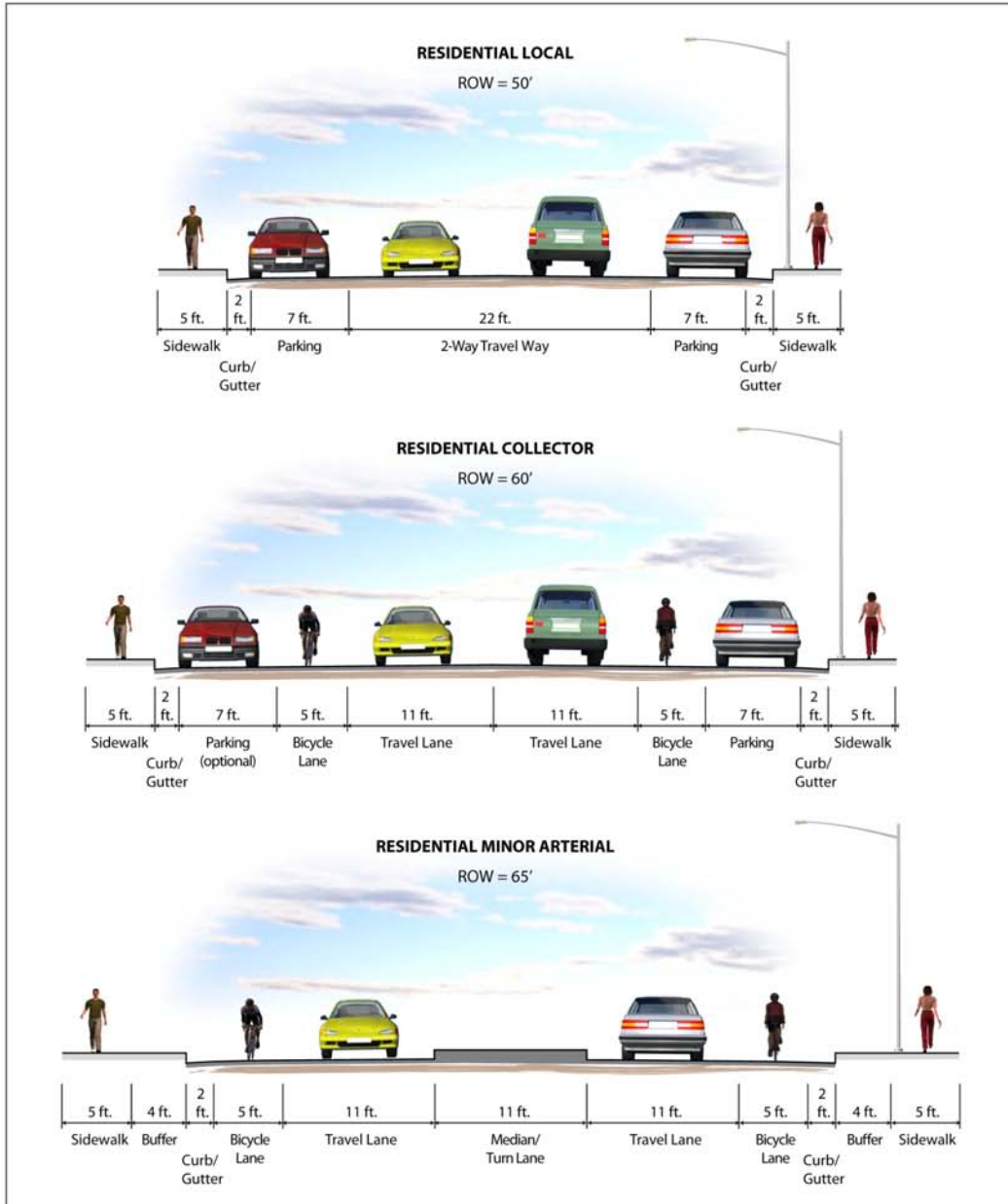
Table 5 provides a matrix of street typologies appropriate for each functional classification.

**Table 5**  
**Street Typology System Integrating Street Function and Type**

Functional Classification	Street Type				
	Residential Street	Mixed-Use/Main Street	Commercial Street	Industrial Street	Regional Roadway
Interstate (NDOT)					◆
NDOT Roadways			◆	◆	◆
Major Arterial		◆	◆	◆	◆
Minor Arterial	◆	◆	◆	◆	◆
Collector	◆	◆	◆	◆	◆
Local	◆	◆			

Source: Fehr & Peers, 2010

The following street cross-sections provide appropriate right-of-way, bicycle/pedestrian facilities, lane width, and turn lanes associated with each roadway typology and functional classification. The City should periodically review and update street profile and cross-section designs.

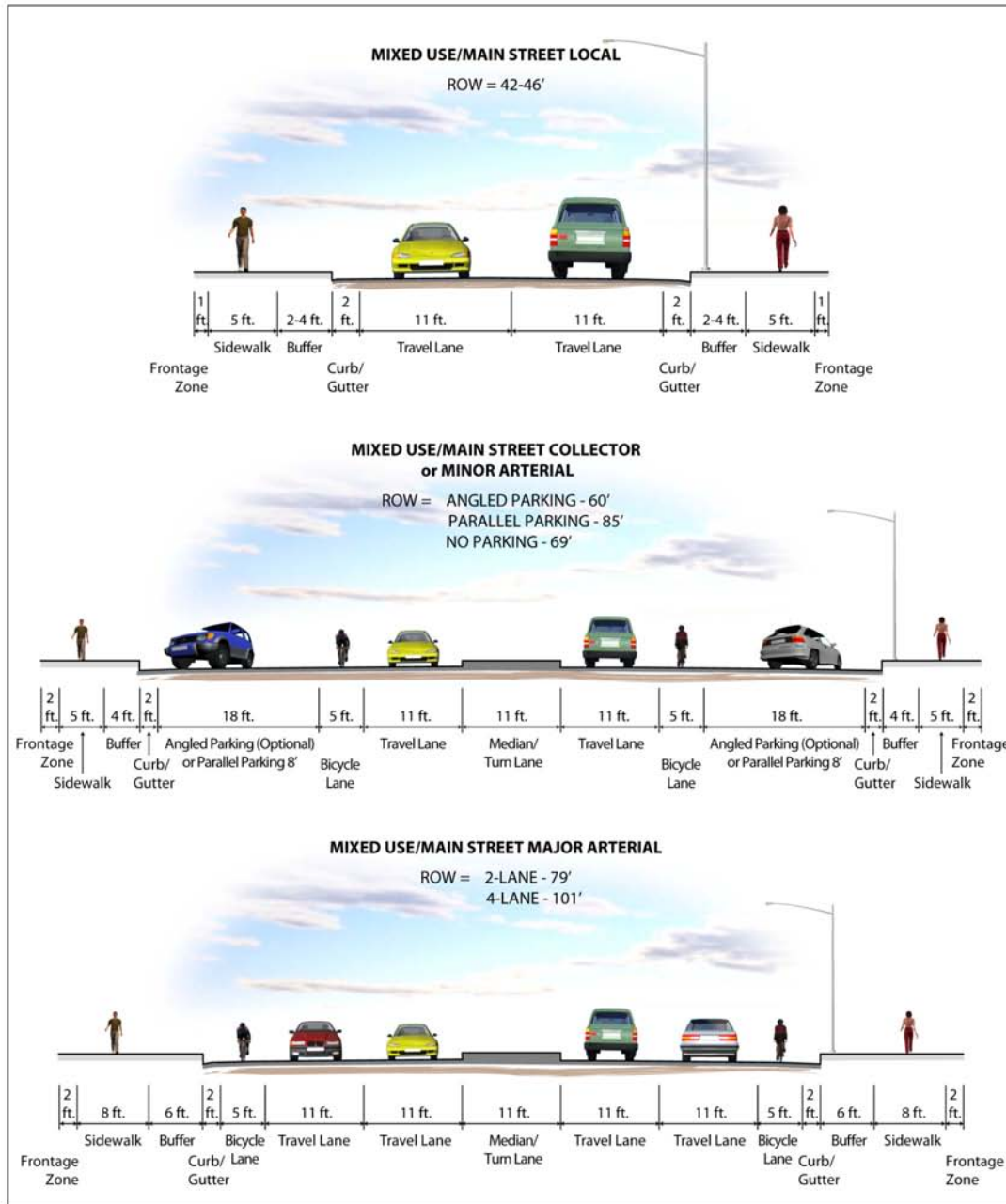


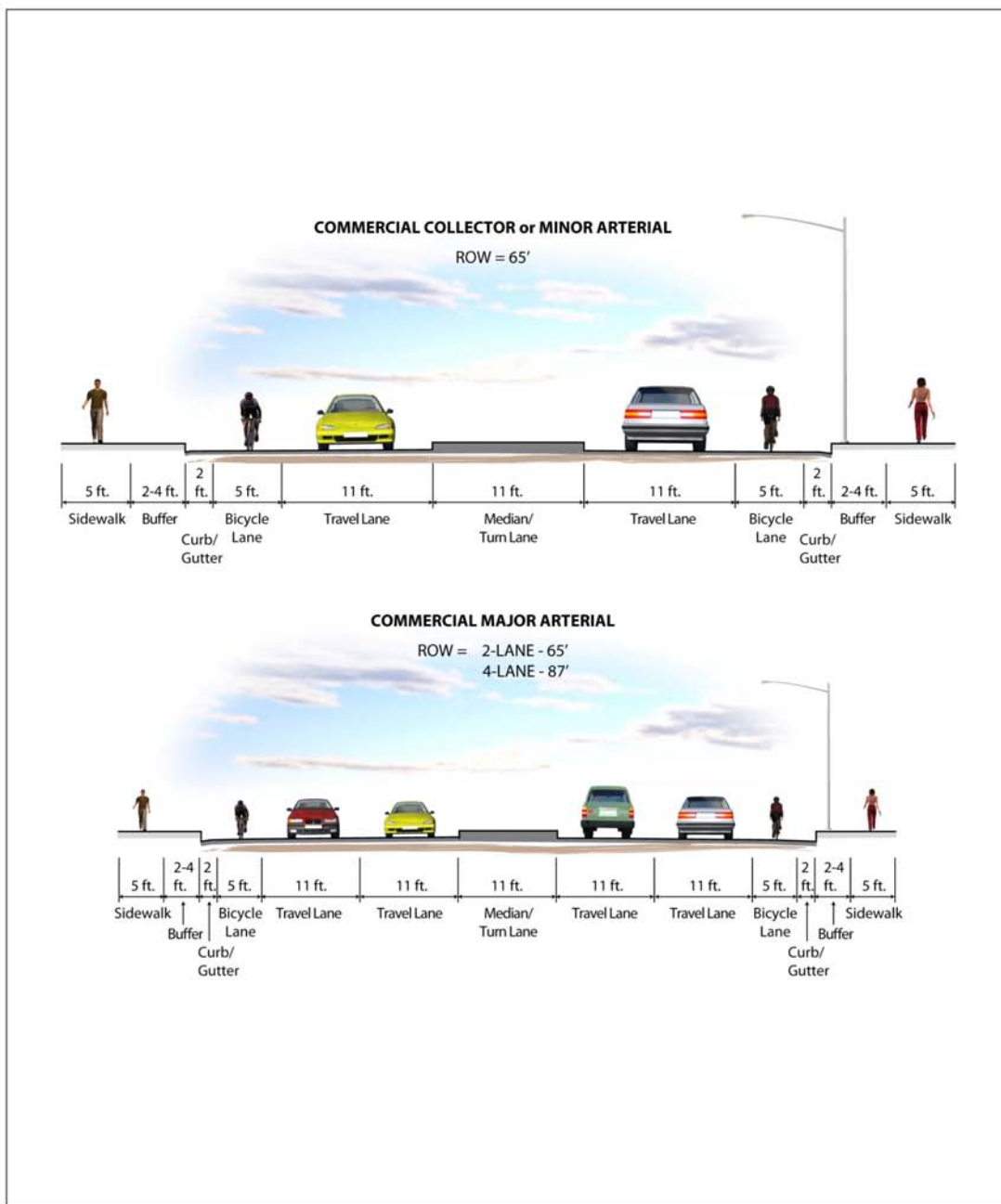
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RESIDENTIAL CROSS SECTIONS

FIGURE 1

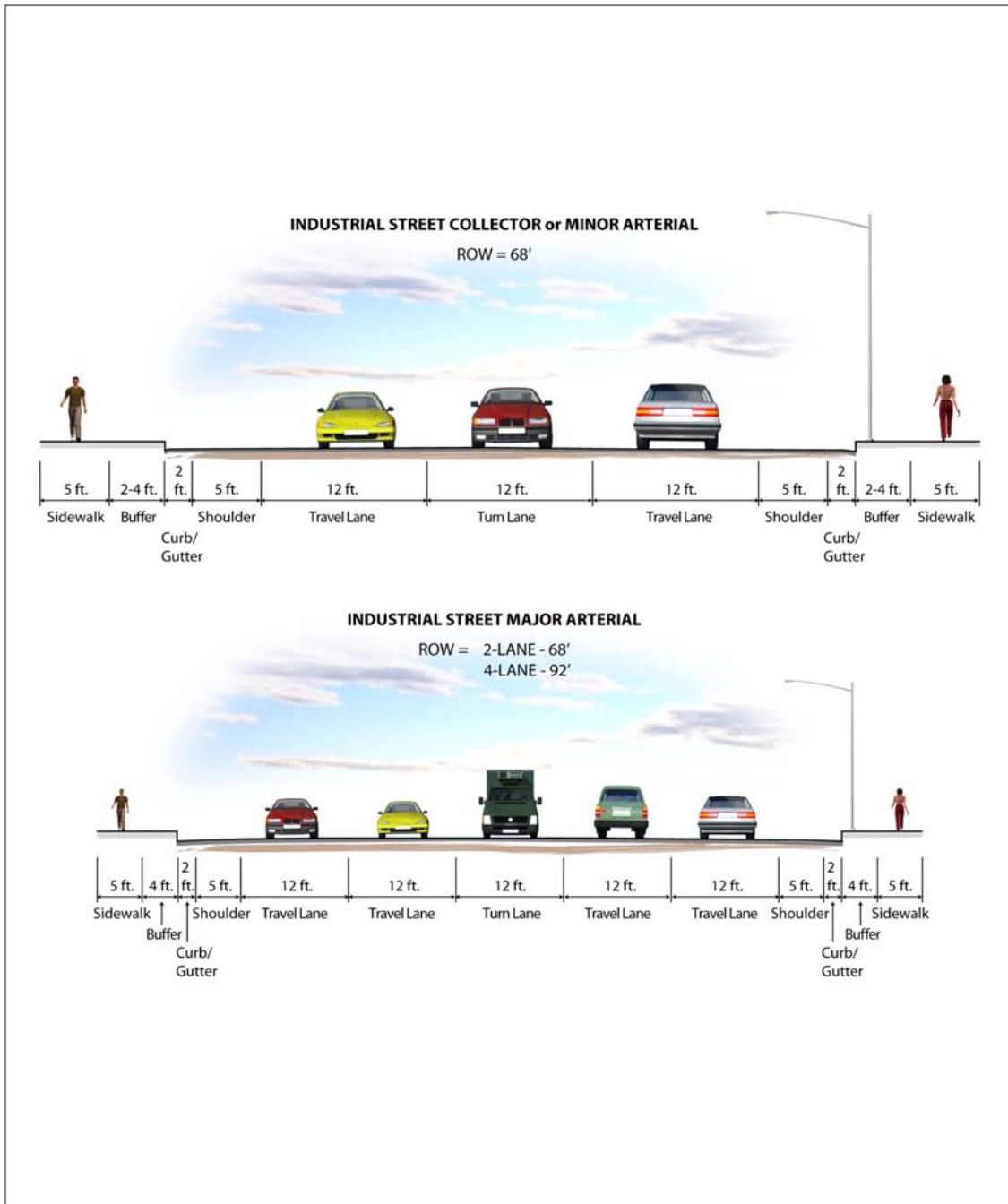




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**COMMERCIAL CROSS SECTIONS**

**FIGURE 3**



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INDUSTRIAL CROSS SECTIONS

FIGURE 4



Elko Zoning Ordinance should establish appropriate standards for structural and building setbacks consistent with each land use and roadway typology/functional classification. For example, the building setback on a Mixed Use/Main Street may be zero (i.e. the building face is immediately adjacent to the sidewalk); whereas the setback for an industrial land use on an Industrial Street may be 20-30 feet.

In addition, excess right-of-way on existing streets should be evaluated and vacated as appropriate.

**Best Practice 1.3: Early Acquisition of Right-of-Way**

When feasible, right-of-way should be acquired strategically and early in the process. A component of the initial project development process should determine if right-of-way needs to be acquired for the project. Identifying right-of-way needs and acquiring it early reduces the cost and time associated with roadway improvements.

**Best Practice 1.4: Employ General Parking Strategies**

Parking is not an actual land use; it is a critical utility that supports many forms of land use. Well utilized and managed parking is important to commercial businesses. Parking can also serve as a travel demand management (TDM) technique. TDM is the application of strategies and policies to reduce traffic congestion, increase utilization of facilities, improve air quality, and improve transportation system performance. Balanced parking can save developers/employers money and can help reduce traffic congestion.

Shared parking is an effective method of reducing the number of required parking spaces for multiple land uses. Some combinations of land uses can effectively share the same parking, thereby reducing the amount of parking that has to be built (e.g., office and retail/restaurant). Shared parking is most effective if the following conditions are met:

- There are convenient pedestrian connections between land uses.
- The peak hours of the uses are not in substantial conflict with one another.
- Directional signs indicate the availability/location of parking.

The Urban Land Institute (ULI) shared parking process, or a modified ULI shared parking process, should be used to evaluate parking needs (particularly in Downtown or other mixed use developments).

Centralized parking facilities are an easy opportunity to share parking among land uses. A consolidation of parking makes it easier to provide identifiable, logical visitor/customer parking. When comparing centralized parking supplies versus dispersed parking supplies – large, centralized public parking serve visitor destinations within walking distance, while



Back-in angled parking has many benefits including: improved visibility for motorist existing space, increased parking capacity, better maneuverability, and ease of loading cargo.

dispersed parking serves more geography, but is sometimes harder to identify for visitors.

The following strategies have been used to add parking supply:

Off-street

- New surface lots
- Consolidate parcels
- Tandem parking (particularly for residential units)

On-street

- Angle parking (versus parallel)
- Time limits (to encourage parking turnover)
- Metered Parking (to encourage parking turnover)
- Back-In Angled Parking

City of Elko Zoning Ordinance should establish appropriate standards for off-street parking minimums and/or maximums for development, allow for shared parking (determined using the current edition of Shared Parking published by the Urban Land Institute, and consider a variance to the standard if on-street parking is available adjacent to the land use. To qualify for a variance, the project developer should submit a parking study that identifies the project's parking needs and locates the parking supply (off or on-street). Off-street parking standards ensure that the operational efficiency of the City's streets and roadway system is not impaired or that public safety is not jeopardized by inappropriate use of the public right-of-way for parking. In addition, it ensures that vehicles do not spill-over into adjacent properties or neighborhoods seeking parking.

**Objective 2: Provide a backbone of arterial roadways to emphasize regional vehicle travel and provide adequate capacity to move large traffic volumes, including truck traffic, safely and efficiently.**

Elko's transportation system should protect and enhance neighborhoods by reducing regional traffic traveling on local streets, and provide an interconnected local street network to allow direct connections to local destinations, reduce local traffic on regional streets, and provide more regional street capacity of longer distance and through traffic. The functional classification map (in Elko Master Plan ATLAS) provides a hierarchy of streets, with arterials emphasizing regional travel, moving large traffic volumes to local streets, which provide direct and frequent access to surrounding land uses. The roadway functional classification map should be updated systematically.

Strategies to provide greater street connectivity and efficient movement by all modes include:

- Consideration of roundabouts as an alternative intersection control.
- Requiring bicycle and pedestrian connections from cul-de-sacs to adjacent streets.

- Requiring new residential communities on undeveloped land to provide stubs for future connections to the edge of the property line. Where stubs exist on adjacent properties, new streets in the development shall connect to these stubs.
- Encouraging a grid-based system with maximum residential street spacing of a quarter mile.
- Requiring development to evaluate and mitigate impacts to the roadway network.

**Best Practice 2.1: Level of Service**

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (least congested) to F (over capacity), is assigned. These grades represent the perspective of drivers, and are an indication of the comfort and convenience associated with driving. Additional indicators include speed, travel time, traffic interruptions, and freedom to maneuver. LOS does not represent the perspective of other roadway users (bicyclists, pedestrians, transit, etc.) and; therefore, is not the only measure of roadway performance used in this element. The LOS grades are generally defined as follows:

- LOS A represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver.
- LOS B has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
- LOS C has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.
- LOS D represents high-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.
- LOS E represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
- LOS F is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

These definitions are contained in the in *Highway Capacity Manual* (HCM) (Transportation Research Board, 2000). The HCM methodology is the prevailing measurement standard used throughout the United States.

Table 6 provides the Highway Capacity Manual definitions of level of service at intersections. At signalized and all-way stop controlled

intersections, LOS is measured in terms of the average vehicle delay for the overall intersection. At side-street stop controlled intersections, LOS is measured in terms of the average vehicle delay for worst case stop controlled approach.

Level of Service	Signalized Intersections (Average Control Delay) <sup>1</sup>	Unsignalized Intersections - (Average Control Delay) <sup>2</sup>
A	0 to □ 10.0 sec/veh	0 to □ 10.0 sec/veh
B	>10.0 to □ 20.0 sec/veh	>10.0 to □ 15.0 sec/veh
C	>20.0 to □ 35.0 sec/veh	>15.0 to □ 25.0 sec/veh
D	>35.0 to □ 55.0 sec/veh	>25.0 to □ 35.0 sec/veh
E	>55.0 to □ 80.0 sec/veh	>35.0 to □ 50.0 sec/veh
F	> 80.0 sec/veh	> 50.0 sec/veh

Sources:  
<sup>1</sup> HCM 2000, Chapter 16, Signalized Intersections.  
<sup>2</sup> HCM 2000, Chapter 17, Unsignalized Intersections.

Table 7 provides daily roadway segment level of service by functional classification based on the Highway Capacity Manual.

Facility	Number of Lanes	Level of Service (LOS)				
		A	B	C	D	E
Interstate		46,000	84,000	120,000	145,000	163,000
NDOT Facilities/ Major Arterial	2	2,500	5,000	9,700	15,000	18,700
	4	5,000	10,000	17,500	27,400	28,900
Minor Arterial	2	2,000	4,000	7,700	12,000	15,000
	4	4,000	8,000	14,000	22,000	23,100
Collector	2	1,500	3,000	7,300	8,500	9,100

Source: Fehr & Peers, 2010; based on Highway Capacity Manual methodology.

Typical level of service policies set LOS D as the threshold for acceptable traffic operations. As such, LOS A, B, C, and D are acceptable and LOS E and F are unacceptable and require capacity enhancements to improve the level of service to acceptable conditions. It is also common for vehicle level of service policies to not be applied to downtown/main street environments because there is greater emphasis on other travel modes, and increasing vehicle capacity can oftentimes have a negative effect on accessibility and comfort of other travel modes. For example, if the vehicle level of service on a downtown roadway is LOS E, and the road is widened to provide more travel lanes, pedestrians now have to cross a greater distance to reach the other side of the road.

The best practice level of service policy for Elko is: Develop and manage the roadway system to obtain Level of Service (LOS) D or better for all roadways (based on daily traffic volumes) and intersections (based on AM and PM peak hour volumes). Exceptions to the LOS D policy may be allowed by the Planning Commission in cases where allowing a lower LOS would result in clear public benefit, such as the following.

- Preserving downtown community environments
- Accommodating alternative modes of transportation
- Preserving the rural character of the City
- Preserving scenic or aesthetic roadways
- Preserving open space land
- Exempting infeasible improvements due to lack of right-of-way or financing

**Best Practice 2.2: Access Management**

Access management involves managing the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway in a manner that preserves the safety and efficiency of the transportation system. The functional classification of the roadway network determines the access management on that roadway. Typically, arterial roadways have the highest access management standards, with the most driveway restrictions, while local streets have very limited access management and no driveway restrictions.

Access management can increase the capacity of a roadway, as well as provide additional safety benefits for vehicles, pedestrians, and bicyclists. The majority of collisions involving pedestrians and bicyclists happen at crossing locations. By managing vehicle access along a roadway and spacing intersections and driveways at appropriate intervals and frequencies, it reduces the number of crossing locations that a bicycle or pedestrian encounters on a roadway.

Individual residential lots should be designed in such a manner to preclude direct access onto an arterial roadway and to discourage direct access onto a collector roadway in order that arterials and collectors can efficiently perform their function of moving vehicular, bicycle, and pedestrian traffic without jeopardizing the safety of the residential neighborhood.

Table 8 provides Best Practices access management standards by functional classification.

**Best Practice 2.3: Roadway Improvements and New Development**

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ACCESS MANAGEMENT STANDARDS ... [1]

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**TABLE 8  
ACCESS MANAGEMENT STANDARDS**

Roadway Functional Classification	Signal Spacing	Driveway Spacing	Left-Turns from Roadways and Driveways	Median Treatment	Other
Arterial	1/2 Mile desired 1/3 Mile minimum	250 - 350 ft. (right in/out only with deceleration lane)	Only at Signal or Major Unsignalized Intersection/Driveway	Raised Median, TWLTL	- No more than one driveway per property on the arterial, joint driveways are recommended - Left turn in at major driveways/unsignalized roadways o.k.
Collector	1/4 Mile desired 1/5 Mile minimum	150 - 250 ft. minimum	Yes	Raised Median TWLTL	- Do not offset driveways - A maximum of one full access driveway per property

Notes: TWLTL – Two way left turn lane  
Sources: Fehr & Peers, 2010

New development shall be required to extend, construct, and improve streets and roadways in accordance with standards and policies contained in the City of Elko Master Plan, Engineering Standard Details, and other applicable provisions of the Elko Municipal Code or the Community Development Department.

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Developments shall prepare a traffic impact study if:

- The development is large. A large development is defined as a project that generates more than 1,000 daily trips, calculated using the current version of the Institute of Transportation Engineers (ITE) Trip Generation manual.
- The development is located on a roadway segment that is operating below level of service standards or is at level of service (LOS D) but within 15% of LOS E standards based on daily traffic volumes.
- The development is deemed to have impacts related to intersection capacity, safety, neighborhood, or other concerns as identified by the City of Elko or NDOT.

A traffic impact study identifies the extent of any impact on the City's network of streets and roadways, as well as identifies improvements

necessary to maintain smooth flow of traffic and public safety. Table 9 displays common land uses, their daily trip generation rates (per ITE Trip Generation 8<sup>th</sup> Edition), and the approximate size of the land use to reach 1,000 daily trips.

TABLE 9 DAILY TRIP GENERATION OF COMMON LAND USES		
Land Use	Daily Trip Generation Rate	Approximate Size to Reach 1,000 daily trips (Traffic Impact Study Threshold)
Single Family Home	9.57 trips/unit	105 units
Apartment	6.65 trips/unit	150 units
Condominium	5.81 trips/unit	170 units
Shopping Center	42.94 trips/ksf	23,300 square feet
Big Box Retail	57.24 trips/ksf	17,500 square feet
Fast Food Restaurant	496.12 trips/ksf	2,000 square feet
Sit-Down Restaurant	127.15 trips/ksf	7,860 square feet
Gas Station	162.78 trips/pump	6 pumps
Office	11.01 trips/ksf	90,800 square feet
Notes: ksf= 1,000 square feet Sources: ITE Trip Generation, 8 <sup>th</sup> Edition, Fehr & Peers, 2010		

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A traffic impact study should be prepared and sealed by a Nevada Registered Professional Engineer with experience in transportation engineering and planning. At a minimum, the traffic impact study should include the following:

- Existing transportation setting and existing roadway and peak hour intersection level of service in the project vicinity (to be determined through coordination with City of Elko staff). The existing setting should describe bicycle/pedestrian facilities and transit service.
- Project conditions including estimated trip generation (for each project phase and project build-out), potential for truck traffic, project access and circulation (passenger car and trucks), and parking.
- Existing plus project conditions including projected roadway and intersection peak hour level of service in the project vicinity, identification of significant project impacts to level of service (i.e. project causes level of service to drop to LOS E or F, or increases delay at an intersection that is already at LOS E or F by more than 5 seconds), mitigation measures at locations where the project significantly impacts the roadway network, and qualitative discussion on the project's impact to bicycle and pedestrian facilities.

Additional elements may be required at the discretion of City of Elko Staff.

**Best Practice 2.4: Designate Truck Routes**

Designating truck routes ensures that heavy truck traffic travels on roadways that are designed to accommodate heavy loads. In addition, it reduces conflicts between heavy vehicles and other travel modes. Truck routes should be designed with large turning radii at intersections (40' minimum), adequate pavement to accommodate heavy loads, and appropriate buffers between the roadway and sidewalk to minimize conflicts with pedestrians. Truck routes should be limited to NDOT facilities or arterial roadways, and not travel through the Downtown Core or residential areas.



Landscaped Parkway Strip

**Best Practice: 2.5: Locate Utilities where they will not hinder maintenance or improvements**

Above grade utilities should not be placed within the road right of way. Utilities within the road right of way hinder maintenance and other roadway improvement efforts.



Euclid Street, Cleveland, OH.  
www.clevelandpublicart.org

**Objective 3: Explore transit options consistent with demand and available resources.**

Transit is an important part of an overall transportation system. At a basic level, transit must provide service to users that do not have access to a private vehicle or are unable to operate a motor vehicle. At a minimum, service should be demand responsive to provide seniors and individuals with disabilities transportation to fulfill basic needs such as grocery shopping and medical appointments. If funding is available beyond this basic level, fixed route service should be considered. Fixed route service provides transit access to the general public via a published fixed transit route with transit stops at regular intervals. A hybrid of demand responsive service and a fixed route service is deviated fixed route service, which allows riders to request a stop that is a small distance off of the published transit route.

**Best Practice 3.1: Plan for Transit**

Oftentimes agencies prepare a short range (zero to five years) or long range (five or more years) transit plan that identifies current services and identifies future needs and services. Typically, the planning process includes public outreach to help identify community needs. In addition, the plan evaluates land use and transportation conditions to determine locations where transit service has the highest demand. For example, higher density neighborhoods, major employment centers, and shopping centers tend to have the most demand for transit service. The City of Elko should coordinate with the [Local Transit Authority](#) to develop a plan for the City and surrounding communities. In addition, the City should work with [the Local Transit Authority](#) to establish design and location standards for bus stops on public streets in Elko.



Street Light Banner on Idaho Street in Elko



Sculpture in Wells Avenue Roundabout, Reno, NV

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**Best Practice 3.2: Identify a Location for a Transit Center**

Transit centers can become a hub location for transit connections. A major transit center can serve as a common stop for several transit routes, with timed connections. In addition, it can provide access to other transportation modes/services such as Amtrak, regional bus service (i.e. Greyhound), and bicycle rental. Typically transit centers are located in densely populated areas that are characterized as being a major destination area (such as a downtown, major shopping area, or major employment center). The City of Elko should coordinate with the Northern Nevada Transit Coalition (NNTC) to identify an appropriate location for a transit center.

**Best Practice 3.3: Access to Schools**

School buses are typically provided by school districts to transport students to schools if they live more than a specified distance from their school (i.e. greater than two miles). Within the specified distance students are encouraged to walk or ride their bicycles to school. Safe Routes to School programs and federal funding are available to improve walking conditions from neighborhoods to schools. Safe Routes to Schools programs include elements such as route mapping, improving sidewalks/crossing locations and other roadway features, escort programs that recruit parent volunteers to walk/cycle with students (walking school bus), and walking/cycling education in the classroom. By providing safe routes for students to walk and bicycle to school, it reduces the need to provide bus service within these closer proximities to schools.

**Objective 4: Promote opportunities to use major transportation corridors to beautify the City, particularly at major entry points.**

Transportation corridors offer a great opportunity to enhance and beautify a City through public art, way-finding signage, and landscaping.

**Best Practice 4.1: Use transportation corridors to enhance and beautify**

Transportation corridors provide many opportunities to incorporate public art, banners, entry/welcome features, and landscaping. The following transportation facilities/elements provide beautification opportunities:

- Roundabouts: The center island of a roundabout provides a great space for landscaping or other art pieces. Many communities use roundabouts at entry locations and incorporate welcome features in the center island. An important consideration when using the center island for art or landscaping is to make sure the vehicle sight distance is maintained and that vehicles can see the entire circulating roadway.
- Center Medians: Center medians provide a good space for landscaping.

- Parkway Strip: A parkway strip is the area of land that is placed as a buffer between a sidewalk and roadway. Typically, parkway strips are between 2-6 feet wide and are a good space to place landscaping (specifically trees for shade), pedestrian furniture, newspaper racks, and street lights.
- Street Lights: Street lights can provide a place to display seasonal banners or other art elements.
- Sidewalks: Sidewalks can provide a space for art elements that are incorporated into the pavement such as the photo of the Euclid Corridor in Cleveland, OH.
- Pedestrian Furniture: Even the pedestrian furniture and fixtures (for example bicycle racks) can be public art and fit the feel or theme of the area.

**Best Practice 4.2: Develop a Way-finding Signage Program**

Way-finding signage directs visitors to various destinations including, but not limited to, parking, government buildings, and tourist destinations. The key to a successful way-finding signage program is to use consistent labeling on signs throughout the area, make labels clear and concise, and locate signs appropriately depending on the intended user.

Two types of way-finding signage should be provided as part of a way-finding signage program: signage for use by motorists and signage for use by pedestrians. Signage for motorists should be located at the gateways to the community and at major intersections. These signs should provide basic information directing motorists to parking and major destinations. Signage for pedestrians can provide more detailed information about various uses and is often provided on kiosks. In addition, the kiosk can also provide hard copies of maps and other information for pedestrians to take with them. Pedestrian level way-finding signage should be located throughout the downtown area and at entrances/exits to major destinations.

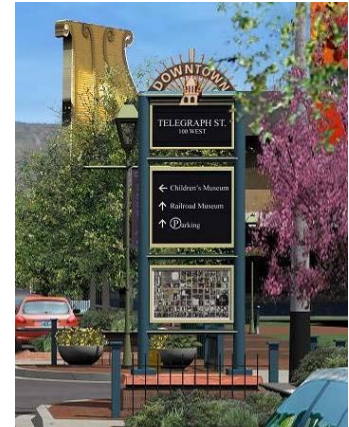
**Objective 5: Implement and maintain a pavement management system and curb, gutter, and sidewalk construction/maintenance program to protect the investment in existing roads.**

A pavement management system (PMS) is a tool used to estimate local roadway maintenance needs. Roadway rehabilitation projects are prioritized on a case-by-case basis utilizing factors such as pavement condition, traffic volumes, truck traffic volumes, and budget constraints. Pavement management systems often include both preventative maintenance and pavement reconstruction. Typically a pavement management system involves rating roadways on pavement condition every 3-5 years and determining whether preventive maintenance or reconstruction is necessary.

Preventative maintenance targets streets in good condition and involves applying a slurry seal to seal small cracks, sealing wide cracks, and



Example of Pedestrian Way-finding Signage.



Example of Vehicle Way-finding Signage

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filling small pot holes. Roadways in good condition should receive preventative maintenance on a regular schedule (every 5-7 years) to maintain the pavement surface. This preventative maintenance keeps the pavement smooth and free of pot holes.

Pavement reconstruction is necessary when a roadway is severely damaged and can no longer hold the expected traffic loads. Rebuilding the roadway involves reconstructing both the pavement and soils beneath the pavement.

Sidewalk, curb, and gutter sections should also be maintained and replaced. Sidewalk sections that are displaced (heaved or depressed) more than 1 inch, have cracks in excess of 1 inch wide, have severely deteriorated concrete, or otherwise present a tripping hazard should be replaced. Sidewalk maintenance needs should be identified by Elko staff as well as citizen feedback.

**Objective 6: Coordinate with other local and regional jurisdictions to enhance transportation services/facilities for the region.**

Meet regularly (at least quarterly) with partner entities such as NDOT, Elko County, [the Local Transit Authority](#), the Elko County School District, and public utility companies to discuss transportation, funding sources, and transportation priorities.

In addition, coordinate with other similar communities to gain knowledge on their transportation policies, funding sources, and overall system. Other communities to coordinate with could include the Cities of Fallon, Fernley, Winnemucca, Carson City, Ely, and other Nevada or Utah communities.

Specific coordination items include coordinating with NDOT to update the NDOT Functional Classification Map to reflect ATLAS Map 12. Roadway Classification and the ATLAS Map 13. Future Roadway Network

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