



Environmental Assessment

Missoula Primary Sidewalk Network

39th Street / SW Higgins Ave/
S Higgins Ave

City of Missoula
City Project #95-062
State Project
CM 8199 (31)
Control No: 3140

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April 2000

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CM 8199(31)
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in
Missoula County

This document is prepared in conformance with MEPA requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2)(3) and 18.2.239. It is also prepared in conformance with NEPA requirements for an Environmental Assessment under 23 CFR 771.119.

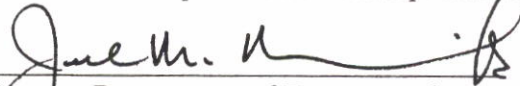
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by the

U.S. Department of Transportation
Federal Highway Administration
and the


Montana Department of Transportation

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Montana Department of Transportation
Environmental Services

Date: 3/17/00

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Executive Summary

The City of Missoula and the Montana Department of Transportation (MDT) propose to construct sidewalks, bike lanes, curb and gutter, and center left turn lanes along 39th Street/SW Higgins Avenue/South Higgins Avenue from Brooks Street (US 93) to South Avenue in Missoula, Montana. Two alternatives are evaluated in this Environmental Assessment including the No-Build Alternative and the Preferred Alternative.

The Preferred Alternative will include reconstruction of the existing 7.3 meter (24 foot) two lane roadway with unpaved shoulders, along the current alignment. The existing sidewalk system is not continuous and where there are sidewalks they are generally 1.5 meter (5 foot) wide. The reconstructed roadway will include two 3.3 meter (10.8 foot) travel lanes with a 4.2 meter (13.8 foot) center turn lane. A design exception will be required for the travel lane width and non standard curve between SW Higgins Avenue and Higgins Avenue.

In addition, the following improvements will be made: addition of a minimum 1.6 meter (5.3 foot) wide sidewalk, minimum 1.8 meter (5.9 foot) wide bike lane, curb and gutter, and 4.2 meter (13.8 foot) wide continuous two-way center left turn lane to improve roadway operations. The sidewalks and bike lanes will be continuous throughout the project on both sides of the roadway. The sidewalks will also include ramps at intersecting curb locations and will be in compliance with the Americans with Disabilities Act.

The purpose of this project is to improve:

- Pedestrian and bicycle facilities
- Pavement surface
- Drainage on the roadway
- Safety of the traveling public by improving operations
- Air quality by reducing dust

The existing land use along the project is mixed and consists predominantly of commercial and residential development. The project is consistent with the City's current and future land use plan and the 1996 Missoula Transportation Plan, which includes bicycle and pedestrian facilities.

The proposed project will generally be constructed within the existing right-of-way with the exception of a few isolated areas. A total of 0.0345 hectare (.09 acres) of additional right-of-way will be required for this project.

The City of Missoula is contemplating the installation of flood control pipes, sanitary sewer lines and storm water lines in the course of the construction of the road reconstruction project.

An assessment of environmental impacts of the Preferred Alternative and the No Build Alternative is provided in this document. Potential impacts that may result from the proposed action include:

- Construction related impacts for the roadway project
- Cumulative impacts related to the construction of other projects within the vicinity of the proposed action
- Beneficial impacts for bicycle and pedestrian travel
- Beneficial impact to air quality by reducing dust
- Beneficial impacts with regard to safety for the travelling public
- Beneficial impact to enhance multi-modal transportation

1.0 Purpose and Need for Action

The purpose and need for the project is to improve:

- Pedestrian and bicycle facilities
 - There are no continuous bicycle lanes or sidewalks
 - Lack of bicycle facilities
- Pavement surface
- Drainage on the roadway
- Air quality by reducing dust
- Safety of the traveling public by improving operations
 - Lack of turn lanes, lack of channelization
 - Isolated congestion problems
 - Delay at intersections
- Poorly defined access
- Lack of transit loading areas
- Lack of street lighting

1.1 Study Area Description

The project is located approximately 5 kilometers (3 miles) south of downtown in the City of Missoula, Montana. The proposed project is located along 39th Street/SW Higgins Avenue/S Higgins Avenue from Brooks Street (US 93) to South Avenue. The project length is approximately 4.6 kilometers (2.9 miles).

The land use in the project area is mixed commercial and residential development. University of Montana property is also adjacent to the project.

A regional map and an area map are provided on Figures 1-1 and 1-2 respectively. Figure 1-3 illustrates the project limits.

1.2 Existing Road Description

Throughout most of the project the existing facility is a 7.3 meter (24 foot), two-lane, two-way facility. On 39th Street and SW Higgins Avenue between Russell Street and Stephens Avenue the existing facility is a 5 lane roadway, with 4 travel lanes and one center turn lane.

Left-turn lanes exist at the following locations:

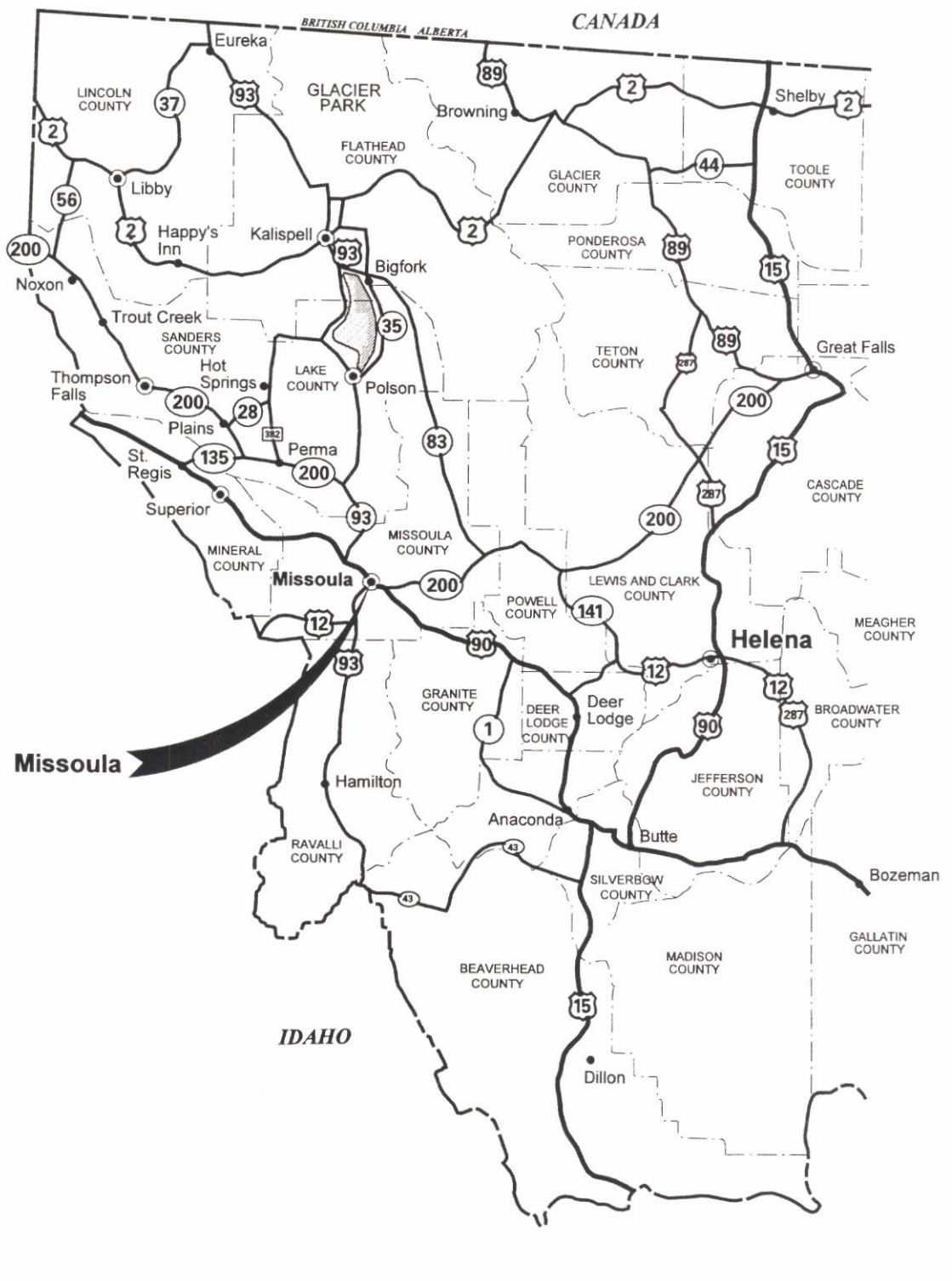
- Brooks Street (U.S. 93)
- Dore Lane/23rd Avenue
- Russell Street
- Stephens Avenue/High Park
- Stephens Avenue to Bancroft Street, continuous left-turn lane

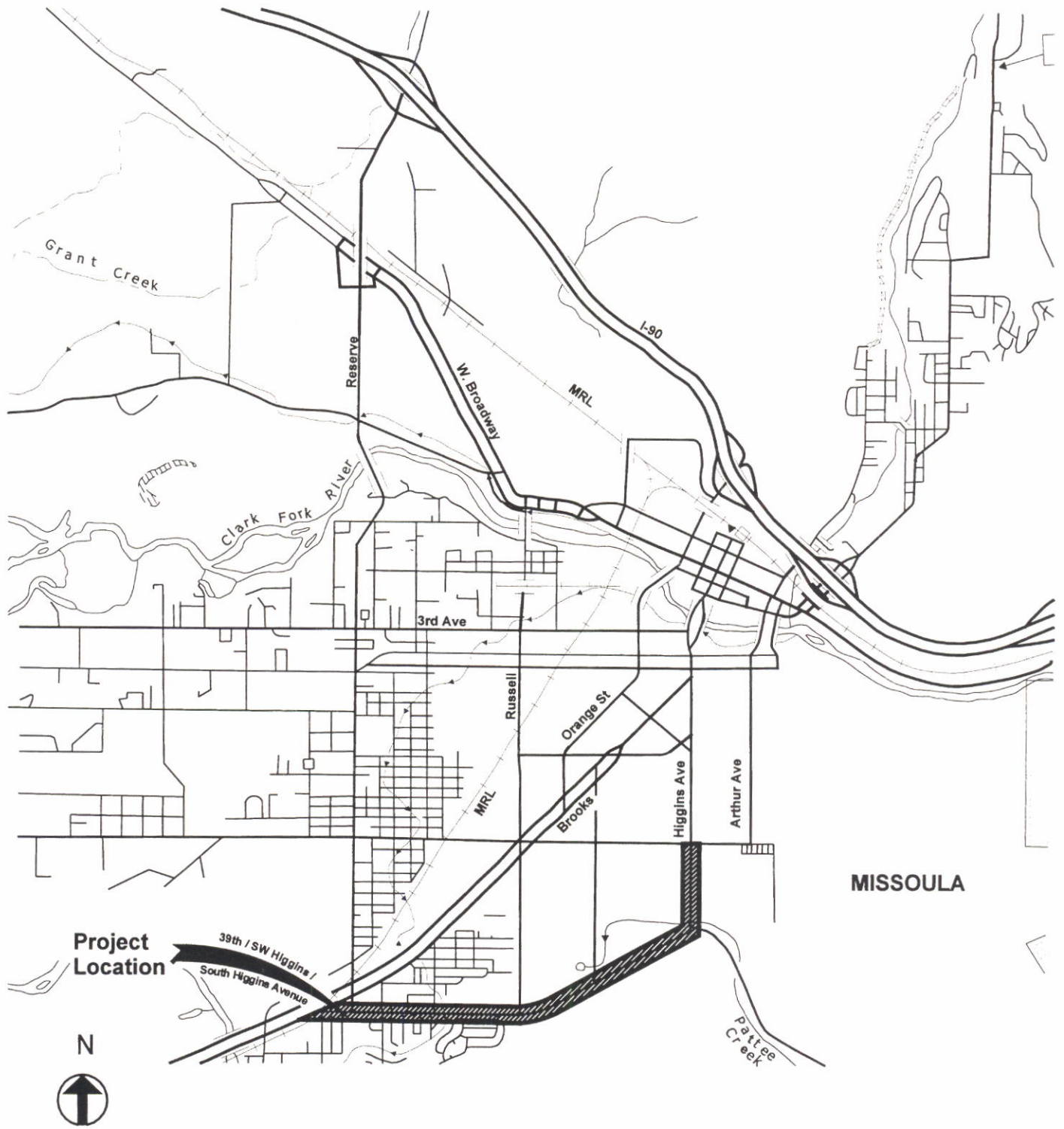
- South Avenue

Designated left turn lanes do not exist in the rest of the corridor. Through vehicles typically pull around stopped left turning vehicles by veering into the shoulder areas.

Continuous curb, gutter and sidewalks exist in the following areas:

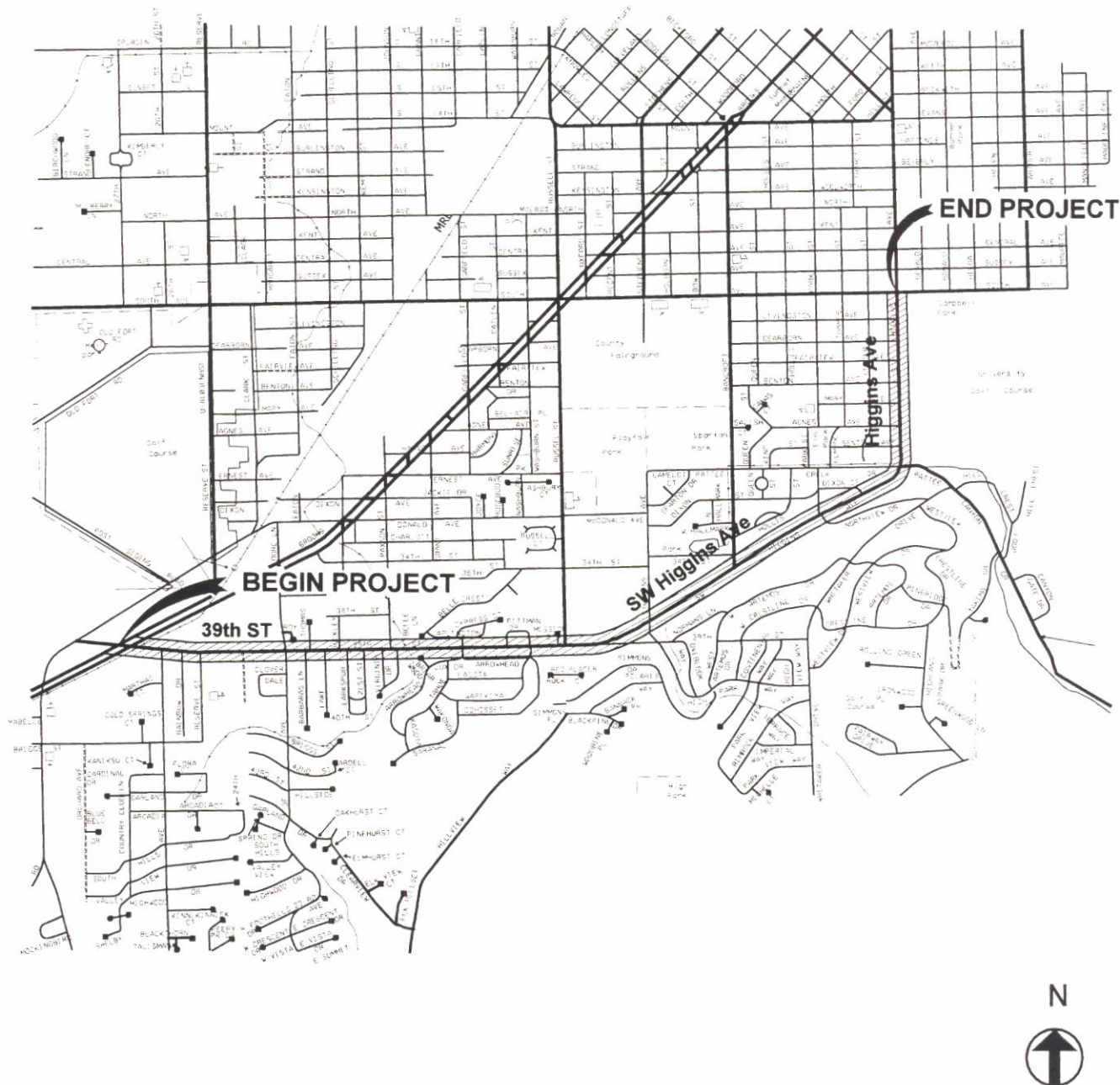
- Pattee Canyon Drive to South Avenue, west side of street
- Bancroft Street to Park Street, North side of street
- Russell Street to Stephens Avenue on both sides of the street
- North side of 39th Street, Stephens Avenue to the Bi-Lo parking lot
- Adjacent to specific properties within the corridor





**Missoula Primary Sidewalk and Bicycle Network
39th Street/SW Higgins Avenue/Higgins
Environmental Assessment**

Figure 1-2
Area Map



**Missoula Primary Sidewalk and Bicycle Network
39th Street/SW Higgins Avenue/Higgins
Environmental Assessment**

**Figure 1-3
39th/SW Higgins/S. Higgins
Project Limits**

There are no continuous bicycle lanes or continuous sidewalks in place. A two-way bike path exists on the south side of the roadway from Russell Street to Reserve Street. It is separated from the eastbound traffic lane by a 0.6-meter (2-foot) dirt strip. The corridor generally operates without considerable congestion. Due to the lack of turn-lanes, lack of channelization and poorly defined access, however, isolated congestion problems are experienced. The deficiencies have contributed to poor traffic operation and the safety of non-motorized users. The lack of turning lanes creates potential conflicts between vehicles and bicyclists as vehicles move around to pass left-turning vehicles.

Intersecting side streets are primarily controlled by stop signs. The intersections at 23rd Street/Dore Lane, Russell Street, Stephens Avenue, and South Avenue are the only signal controlled intersections within the project limits.

The following is a summary of the physical and operational deficiencies of the corridor:

- Delay at intersections. There is substantial delay at the following intersections: Reserve Street and 39th Street, Brooks Street and 39th Street, Pattee Canyon Drive and S. Higgins Avenue, and South Avenue and S. Higgins Avenue.
- Lack of turning lanes. Without auxiliary turn lanes, vehicles are required to turn from the through lanes. Through vehicles either queue behind turning vehicles or drive off of the pavement to go around the stopped vehicle waiting to turn. Vehicles driving off the pavement create dust.
- Poorly defined access. Numerous driveways and approaches are poorly defined. Vehicles turning into drives veer from the through lanes at random locations. Uncontrolled access is unsafe for bicyclists and pedestrians.
- The pavement is in poor condition. There is longitudinal and transverse cracking and rutting in the pavement. The poor pavement condition is a maintenance problem. It also results in unsafe conditions for bicyclists and pedestrians.
- Sidewalks exist in a few areas. Sidewalks are discontinuous and do not provide for consistent pedestrian use of the corridor.
- Lack of bicycle facilities. For the majority of the project length there are no facilities for bicycle travel. A two-way bike path exists on the south side of 39th Street, throughout the remainder of the project shoulders do not exist, so bicycles are forced to ride in the traffic lanes.
- Lack of street lighting. The existing lighting is sporadic and of poor quality. The lack of street lighting is a safety issue with regard to pedestrians.
- Transit (bus) facilities. The lack of sidewalks, bus loading areas and lighting is a safety issue and does not promote the use of buses. Improvement of sidewalks, bike lanes and lighting will better promote multi-modal travel.

1.3 Preferred Alternative Description

The Preferred Alternative involves the reconstruction of the existing roadway with the same alignment. The Preferred Alternative also includes the construction of sidewalks, bike lanes, curb and gutter parking pullouts, bus stops, and lighting.

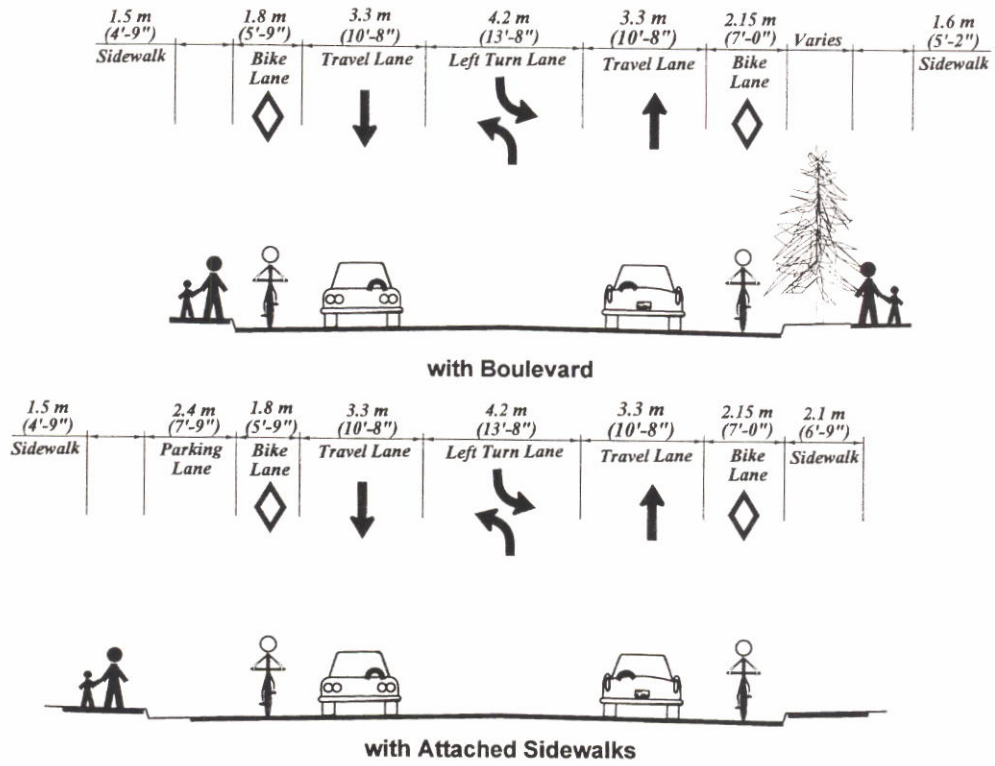
One purpose of the reconstruction is to provide non-motorized transportation facilities for the pedestrians and cyclists. The need for bicycle and pedestrian facilities along the project corridor is identified in the 1996 Missoula Transportation Plan Update. Further community support for bicycle and pedestrian facilities is discussed in the Guidelines For Creating a Non-Motorized Travel Network in the Greater Missoula Area – Amendment to the Missoula Urban Comprehensive Plan. The addition of bicycle lanes and the construction of continuous sidewalks in the project corridor is consistent with the community plans. Sidewalks will be constructed that meet the requirements of the Americans With Disabilities Act (ADA) and will be from .5 meter (4.9 foot) to 2.1 meter (6.9 foot) depending on the width of the roadway. Boulevard sidewalks which provide a vegetated area between the sidewalk and the roadway will be built in areas where there is enough existing right-of-way to accommodate this design. Bike lanes will be added to the roadway and delineated by pavement markings. They will range from 1.8 meter (5.9 foot) to 2.15 meter (9.1 foot) and will connect to the City's existing bicycle network.

To accomplish an improvement in operational deficiencies (discussed in Section 1.2), a continuous two-way center turn lane will be added to the existing roadway in areas where no center turn lanes currently exist on 39th Street between Russell Street and Bancroft Street. The new center turn lanes will be consistent with those that are currently in the project area and will be 4.2 meter (13.8 foot). The continuous left turn lanes will improve the operation by removing left turning vehicles from the through traffic lanes. Much of the project length is characterized by numerous residential and commercial approaches that lie mid-block which has resulted in the number and types of accidents that are occurring in these areas. This demonstrates the need for a center left turn lane to provide for storage of turning vehicles.

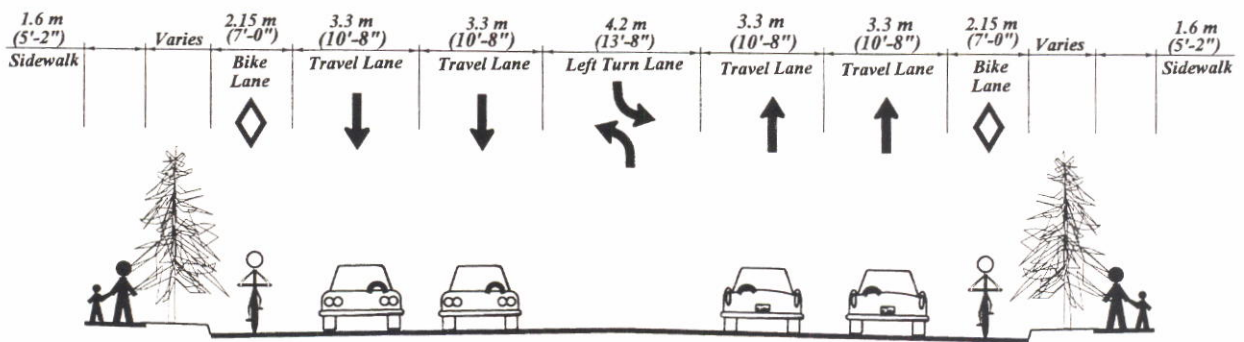
The Transportation Plan Update recommended a five lane section (four travel lanes with a center left turn lane) on 39th Street between Russell and Bancroft. This section was re-analyzed and based on the growth used in the Transportation Plan and the traffic projections it was determined that a five lane section is not needed.

Medians will be added in approximately ten sections to improve operations, visual character of the neighborhood, and provide a buffer for pedestrian crossings.

Figure 1-4 illustrates typical sections of the roadway design of the Preferred Alternative.



Typical Sections Depending on Roadway Widths



Typical Section Russell St. to Stephens Ave. N

Measures to provide control of access in the commercial areas are proposed to improve safety to the traveling public. This includes the installation of curb and gutter with driveway curb openings to better define the access points.

The pavement in the project area will be replaced and the storm drainage system will be improved to provide for drainage of the street. Parking areas will be paved and better defined, bus pullouts will be reconstructed in the same location as existing.

As discussed above, the City of Missoula is contemplating a flood control project. If the City undertakes the construction of the proposed flood control project, collection pipes will be installed in the roadway during the construction of this project.

The following discussion under Sections 1.3.1 and 1.3.2 was extracted from the 1996 Missoula Transportation Plan Update.

1.3.1 Pedestrian Facility Needs

The City of Missoula has policies to build sidewalks on one or both sides of the streets in residential and commercial areas. The construction of sidewalks is being completed in a staged approach as part of roadway rehabilitation projects and as funding becomes available.

The document titled Guidelines for Creating a Non-Motorized Travel Network in the Greater Missoula Area summarizes existing pedestrian facilities in the following statement: "One of the repeated themes heard throughout the planning process was that sidewalks and pedestrian facilities are lacking or in need of repair throughout Missoula. In many areas, one must walk on the street with traffic because sidewalks or paved shoulders do not exist. In other areas, a sidewalk or shoulder may exist in one block, and not in the next. This stop and start nature of sidewalk hinders pedestrian travel."

The elderly and the young (those under legal driving age) are the most dependent on a community's pedestrian facilities, and the sidewalk system should be designed to meet their needs. Neighborhood sidewalks provide safe travel ways for children to walk to school, as well as walkways for the elderly in Missoula. It seems reasonable to assume that a comprehensive sidewalk network would make pedestrian travel safer and encourage more people to choose walking as an alternative mode of transportation.

The Missoula Citizens Survey (Consultants Exit Poll Survey taken in November 1994) found that if substantial improvements were made to pedestrian facilities, 20 percent of respondents would start walking two or three days a week as an alternative to driving, 15 percent would walk four or more days a week, and ten percent would walk one day a week.

Walking for transportation purposes is more common in Missoula than bicycling, and various efforts have been made to accommodate this nearly universal activity. Motorists and bicyclists walk from their parked vehicles to a building; transit users generally walk to a bus stop; most children walk to school, and to the homes of friends or other play areas. It is estimated that in the City of Missoula, eight percent of workers and 25 percent of students commute on foot.

1.3.2 Bicycle Facility Needs

Missoula is known as Montana's bicycling town. Half the residents own bikes and, according to the 1980 Census, 6.8 percent of the work force commutes by bike. This figure is over 13 times the national average of 0.5 percent. There are some designated bicycle facilities in the Missoula area with cyclists riding in the outside travel lane of the road and sharing the road with a growing number of automobiles.

It is not unusual to see 50 to 100 bicycles parked in and around each of Missoula's grade schools. Many children are riding to school on sidewalks, road shoulders or in traffic lanes. This situation poses safety risks to these young bicyclists.

Most destinations within the City of Missoula can be reached on a bicycle in less than thirty minutes. The speed and flexibility of bicycle travel make it a viable alternative to the single-occupant vehicle. Public transit service in Missoula offers comparable travel times to major destinations, but has disadvantages such as thirty-minute headways and limited service schedules. Since the majority of trips in the Missoula area are less than five miles one-way, there is significant potential for increased bicycle travel.

The 1996 Missoula Transportation Plan Update recommends that a cohesive network of bicycle facilities be developed to accommodate the safe and efficient travel of bicyclists in Missoula. This project represents a substantial step in achieving that goal.

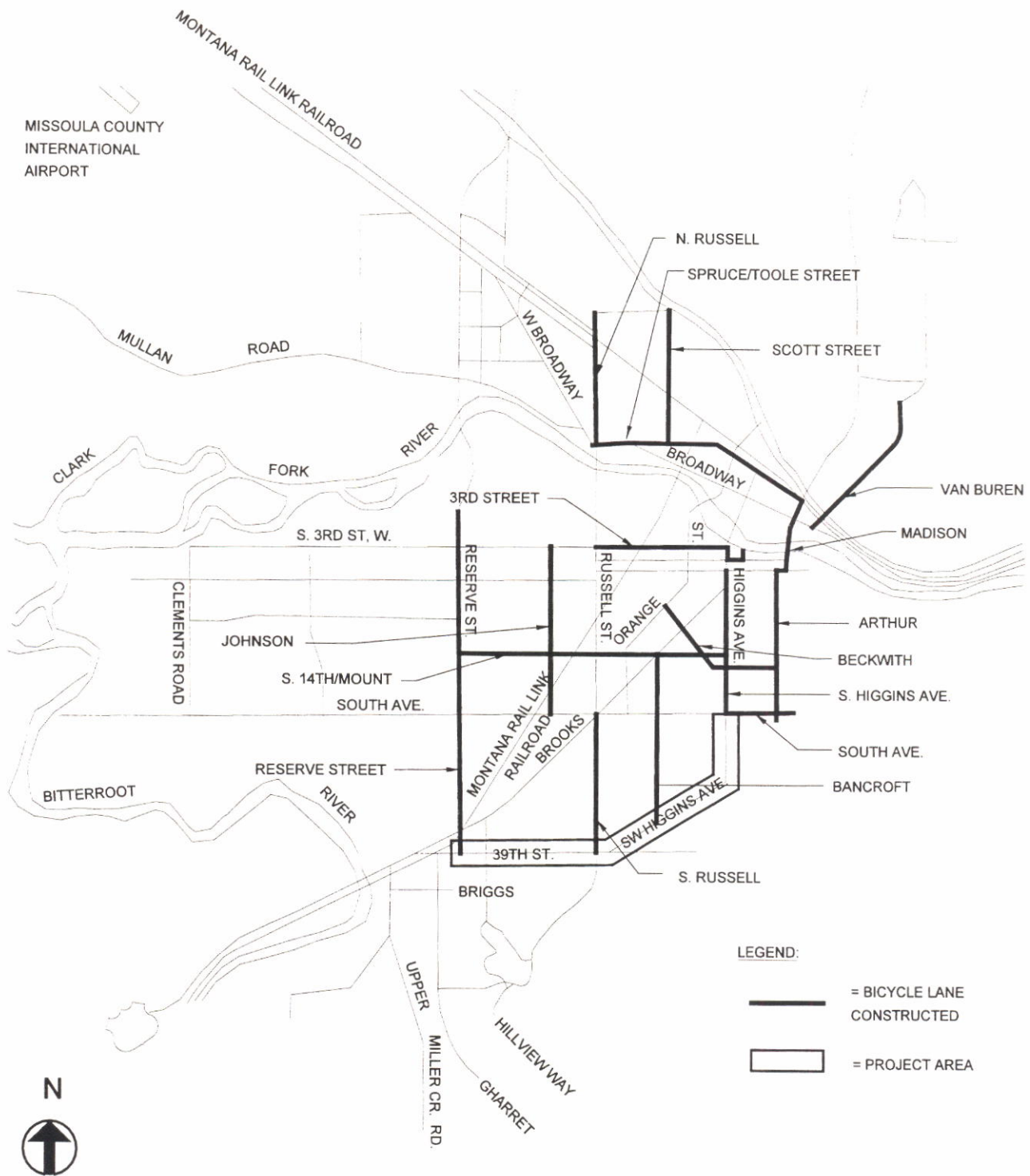
1.3.2 Design Exceptions

Two design exceptions from AASHTO standards are required for this project:

- 3.3 meter travel lanes are proposed. The standard for travel lane width is 3.6 meters. The 3.3 meter lane width is the City of Missoula's preferred lane width for a minor arterial.
- The curve from SW Higgins Avenue to Higgins Ave. is currently a 55 meter curve. The standard minimum curve radius for this facility would be 104 meters. If this curve were to be made 104 meters there would be significant right of way impact to adjacent properties including potential relocations.

1.4 Overview

The Preferred Alternative is consistent with the City of Missoula's plan to develop a citywide network of facilities for non-motorized transportation. This system includes a combination of off-street facilities or trails and on-street facilities. The *Missoula Primary Sidewalk and Bicycle Lane Network* project is a program to develop on-street facilities. These facilities include both sidewalks for pedestrians and bicycle lanes for bicycle traffic. At the outset of this project, the City of Missoula, together with the WGM group consultant team, conducted an evaluation of the street network to develop a program of on-street system improvements for non-motorized travel and establish priorities. During this process the project team solicited public input through a series of newsletters and public workshops. Figure 1-5 illustrates the Missoula Bicycle Lane Network Project where bicycle facilities have been constructed.



**Missoula Primary Sidewalk and Bicycle Network
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Figure 1-5
**Bike Lane Network Project
City of Missoula**

This project is part of the second set of projects that further improve the non-motorized transportation network. Three independent phases have been designated to reconstruct the streets and construct bicycle lanes and sidewalks. These phases are as follows:

- Phase I - Brooks Street, from Reserve Street to Mount Avenue and Stephens Avenue, from South Avenue to Mount Avenue
- Phase II - 39th Street/SW Higgins Avenue/South Avenue, from Brooks Street to South Avenue (this project)
- Phase III - South Avenue, from Clark Street to Grant Avenue (unfunded)

1.5 Traffic Volumes and Characteristics

One purpose of this project is to develop a facility for non-motorized traffic along 39th Street/SW Higgins Avenue/South Higgins Avenue from Brooks Street to South Avenue. It includes the development of bicycle lanes, sidewalks, and curb and gutter on 39th Street/SW Higgins Avenue/South Higgins Avenue.

An evaluation of the traffic operation was completed to address vehicular traffic issues. The purpose of this evaluation is to consider the following:

- 1) Existing traffic volumes,
- 2) Existing PM peak hour turning volumes at major intersections,
- 3) Accident history,
- 4) Projected traffic volumes for a 20 year design period (i.e. design year 2018),
- 5) Projected PM peak hour turning volumes at major intersections, and
- 6) Existing and projected traffic operations (Level of Service).

The analysis also includes a preliminary evaluation of signal warrants based on estimated Average Daily Traffic (ADT⁷) and peak hour turning volumes.

1.5.1 Existing Traffic Volumes

The 1998 daily traffic volumes were estimated based on the annual traffic control, previous projects, and physical traffic counts. The projected traffic growth trends and were adjusted based on current PM peak traffic counts and are consistent with City's Transportation Plan growth rates. The 1998 Average Daily Traffic (ADT) is illustrated on Figure 1-6.

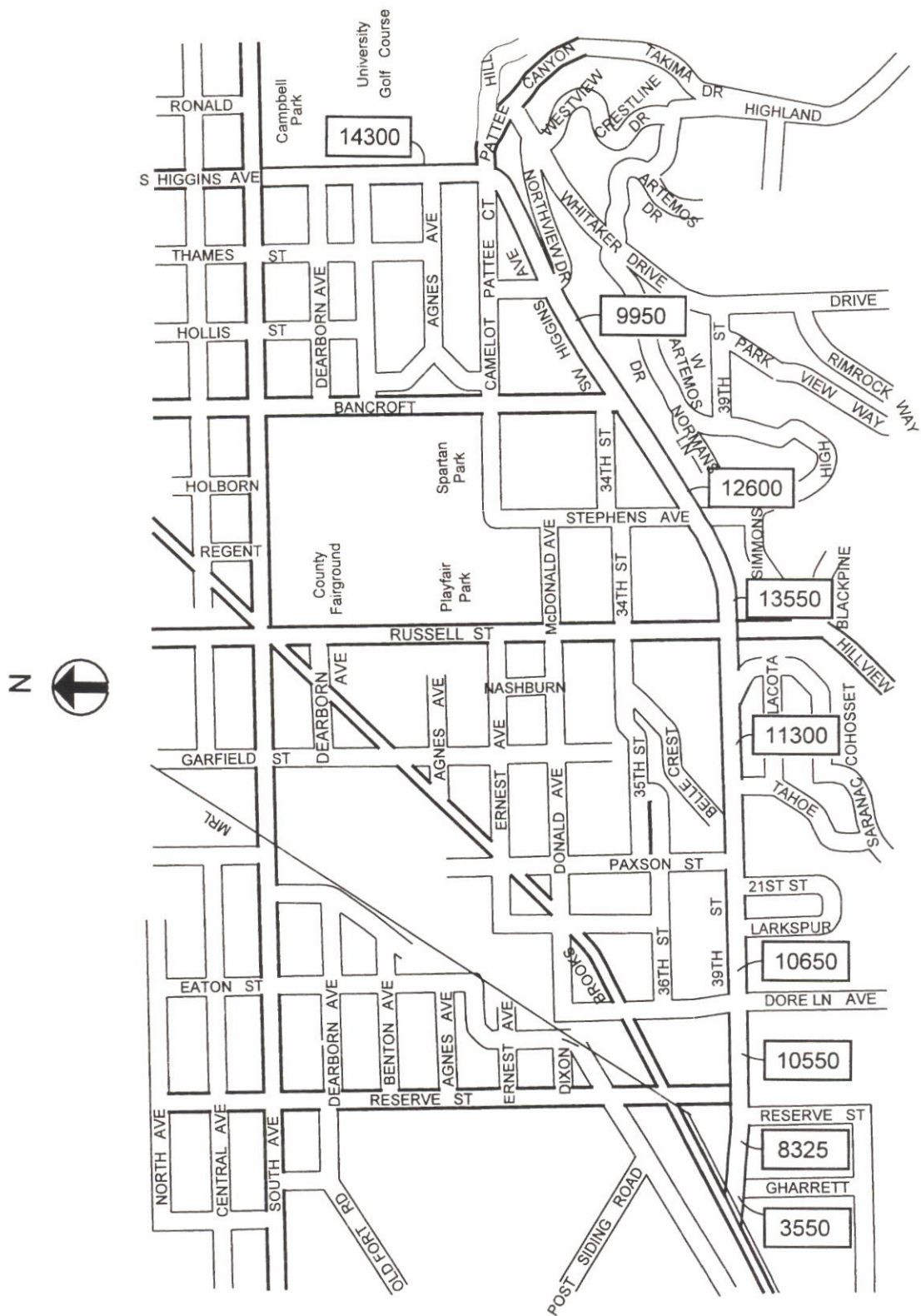
1.5.2 Existing Intersection LOS

Ten intersections were analyzed to determine their existing Level of Service (LOS) which determines how traffic now operates on the existing road network. LOS is a quantitative measure describing operational conditions within the traffic stream. LOS defines conditions in terms of speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience and safety. Levels-of-Service range from LOS-A, meaning little or no delay or congestion to LOS-F, meaning unacceptable delay and congestion.

Congestion is characterized by slower than desired travel speed, increased and unpredictable travel times, increased accident frequencies, erratic stop and go, increased vehicle operating costs and other undesirable conditions resulting in user dissatisfaction.

The analysis of existing traffic shows an unacceptable LOS-F at the Brooks Street and 39th Street intersection. Two intersections, South Avenue and Pattee Canyon Drive (southbound) both have a LOS of D. Two intersections, 23rd/Dore and Bancroft Street (westbound) both have a LOS of C, while the remaining intersections have an acceptable LOS of B.

Level-of-Service for the ten intersections are shown in Figure 1-7 and summarized in Table 1-1.



Missoula Primary Sidewalk and Bicycle Network
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Figure 1-6
 Existing (1998) ADT'S
 (Average Daily Traffic)

**Table 1-1
 39th Street/SW Higgins Avenue/South Higgins Avenue
 1998 Intersection Levels of Service**

Intersection	Intersection Control	PM Peak Hour* Level of Service(delay in sec/veh)
South Avenue	Signalized	D
Pattee Canyon Drive	Un-signalized	D (SB) C (NB)
Bancroft Street	Un-signalized	B (EB) C (WB)
Stevens Ave/High Park Street	Signalized	B
Russell Street	Signalized	B
Paxson Street	Un-signalized	B
23 rd /Dore	Signalized	C
Reserve Street	Un-Signalized	B
Gharrett Street	Un-signalized	B
Brooks Street	Un-signalized	F

* Unsignalized intersections: PM LOS and delay on worst approach
 Signalized Intersections: PM LOS and delay for overall intersection

1.5.3 Accident History

Accident data collected by the Montana Department of Transportation was examined for three years to identify accident trends along the corridor. Figure 1-8 illustrates the total number of accidents for 1995 through 1997 and a summary of the accidents by type and location.

The accident data shows a trend towards rear end, angle, and sideswipe types of collisions which are typically related to turning movements. Forty percent of the accidents in the project area are rear-end accidents. Rear-end accidents are typical on roadway facilities where there is inadequate space for vehicles to wait out of the traffic lane to make turns which results in the vehicles stopping in the through traffic lane. Angle and sideswipe accident types typically occur where motorists are rushing turning movements and not waiting for adequate gaps in traffic. The following is a description of the accident experience at several locations:

- 39th Street/Dore Lane/23rd Avenue. This intersection is a signalized intersection. The type of accidents are predominately angle accidents.

- 39th Street/Russell Street. During the three year period evaluated, 15 angle accidents and four rear end accidents occurred at this intersection.
- SW Higgins Avenue/South Avenue. All eight accidents were angle or sideswipe type most likely due to the high percentage of turning vehicles.
- 39th Street segments between intersections (Russell to Brooks). There are numerous access points throughout this section of 39th Street. The majority of the accidents are rear end accidents.
- SW Higgins Avenue segments. Accidents are occurring in segments of SW Higgins Avenue where commercial access is located in the middle of the block. The predominant type of accident is the rear end accident. Many of the approaches in this area are wide and poorly defined which may be contributing to the accident potential.
- South Higgins Avenue. Accidents are occurring on South Higgins Avenue between Agnes Avenue and South Avenue. Several street and a few private residences access South Higgins in this segment. Rear end accidents occur most frequently due to lack of a separate lane for left turning vehicles

1.5.4 Traffic Control / Parking

The existing speed limit for the majority of the corridor is signed at 35 mph (56 kph). Signalized Intersections exist at the following locations:

- Dore Lane/23rd Avenue & 39th Street
- Russell Street & 39th Street
- Stephens Avenue & SW Higgins Avenue
- South Avenue and S. Higgins Avenue

All other intersections are “STOP” sign controlled with the stop sign on the approaching road.

Street lighting exists sporadically throughout the length of the corridor. The existing street lighting facilities are old and provide illumination of low intensity and quality.

The existing roadway is striped with a double yellow line for most of the project. The following intersections have auxiliary lanes striped with directional arrows:

- Russell Street & 39th Street
- Stephens Avenue & SW Higgins Avenue

- South Avenue & S. Higgins Avenue

For much of the project length residences do not front to the street and do not use the street for parking. Residential properties that front the corridor use the street for parking. Businesses in the corridor have off-street parking and do not rely on on-street parking.

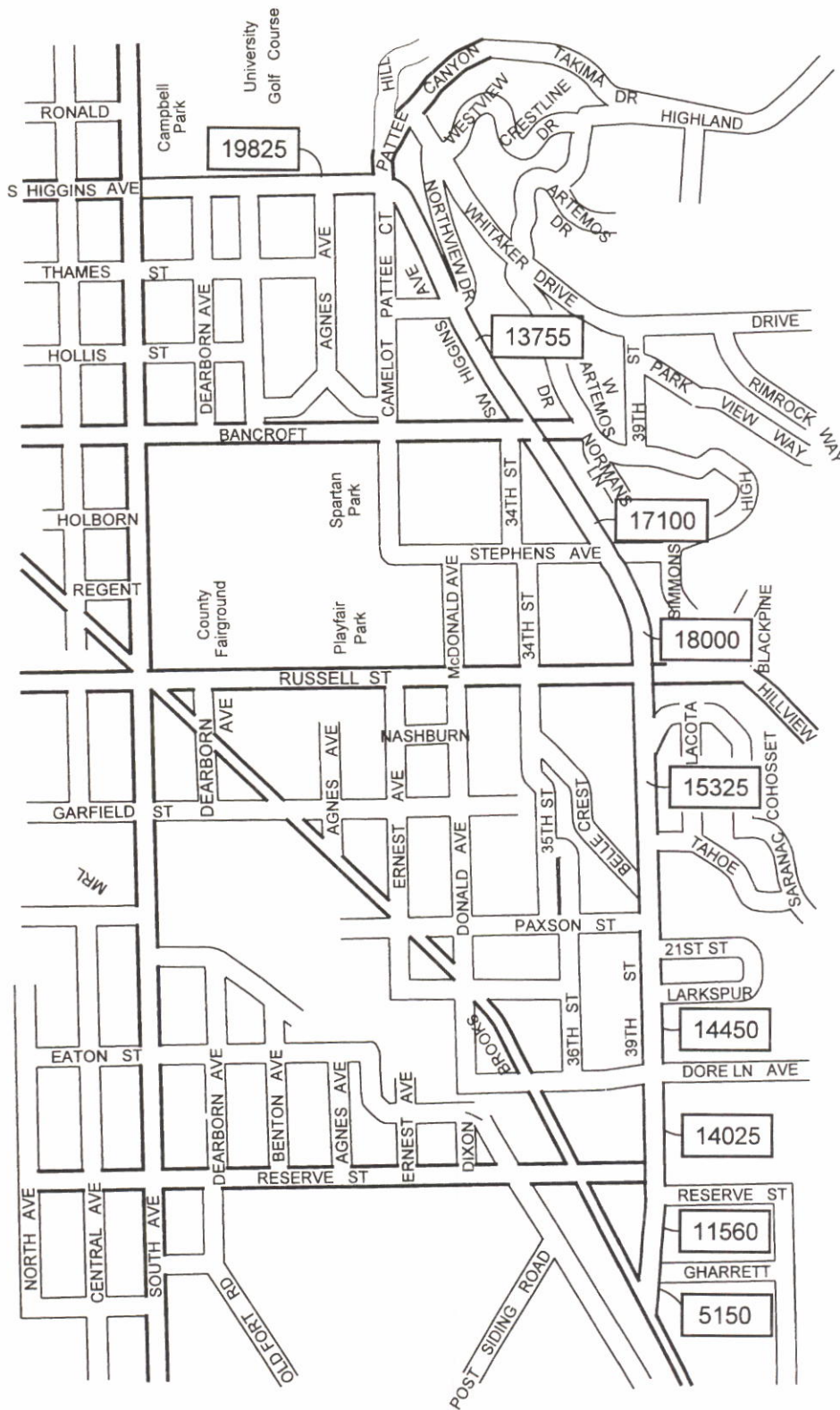
1.6 Projected Traffic and Operations

1.6.1 Projected Traffic Volumes

Traffic growth in the project area is estimated based on historic growth of traffic on the existing road network. Traffic volume forecasts for 39th Street/SW Higgins Avenue have been made for the year 2020. These projected traffic volumes were determined based on a varying annual growth rate and are consistent with the growth rates used for the Missoula traffic forecast model developed for the Missoula Transportation Plan Update, 1996. Projected traffic volumes for 39th Street/SW Higgins Avenue/South Higgins Avenue are shown on Figure 1-9. In general, projected volumes are about 40% higher than existing volumes.

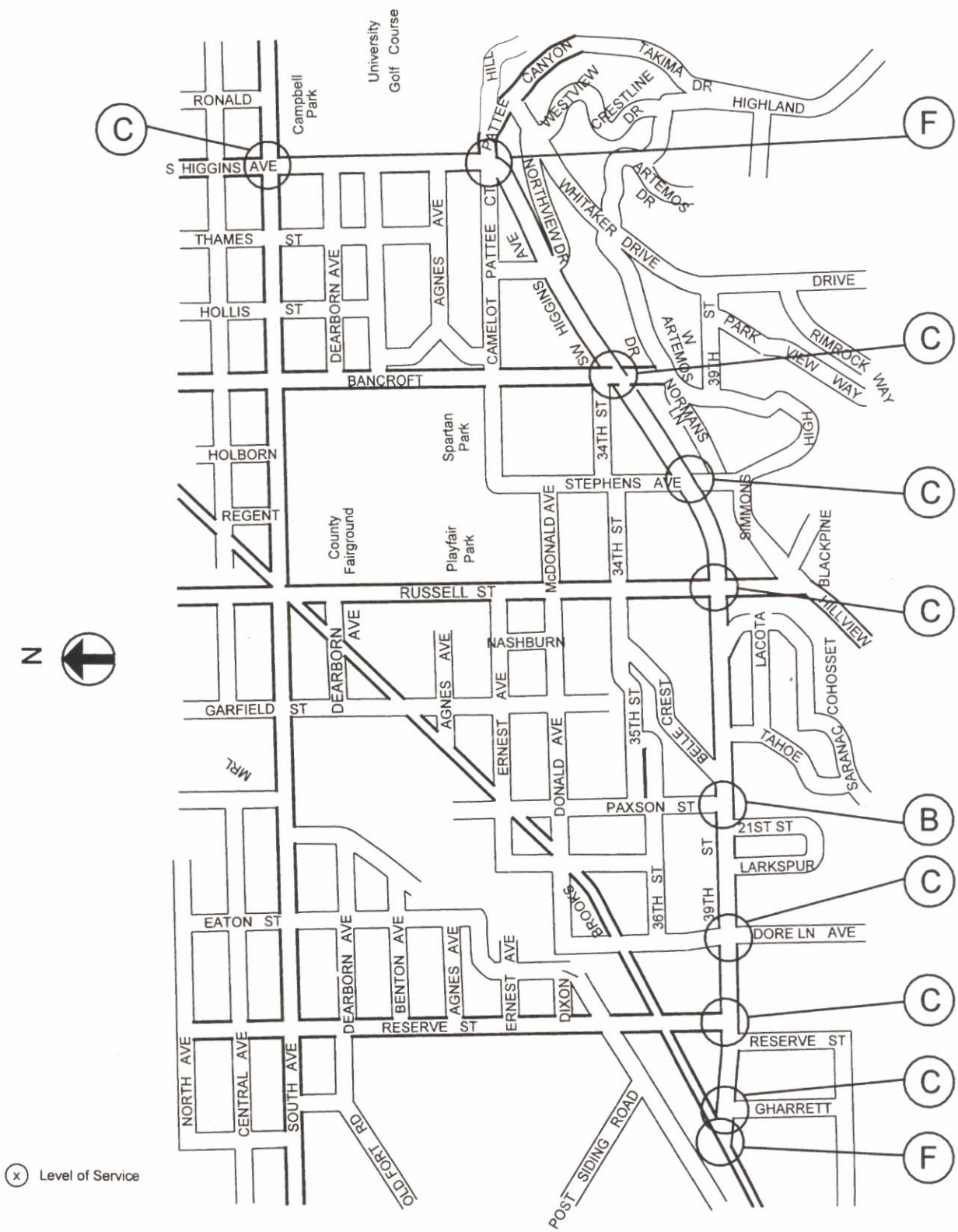
1.6.2 Projected Intersection Level of Service Analysis

Table 1-3 presents projected LOS for the Preferred Alternative at major intersections including the Level of Service. The anticipated Level of Service with construction of the Preferred Alternative is illustrated on Figure 1-10.



Missoula Primary Sidewalk and Bicycle Network
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Figure 1-9
Projected (2020) ADT'S
(Average Daily Traffic)



**Missoula Primary Sidewalk and Bicycle Network
39th Street/SW Higgins Avenue/Higgins
Environmental Assessment**

Figure 1-10
**Projected (2020) LOS
(Level of Service)**

**Table 1-2
 39th Street/SW Higgins Avenue/South Higgins Avenue
 Projected 2020 PM Peak Hour LOS**

INTERSECTION	Intersection Control	2020 PM PEAK HOUR LOS*
South Avenue	Signalized (existing geometry)	F
	Signalized (with dual WB left)	C
Pattee Canyon Drive	Stop on Pattee Canyon	F
	If signalized	C
Bancroft Street	Stop on Bancroft	C
Stephens Ave/High Park	Signalized	C
Russell Street	Signalized	C
Paxson Street	Stop on Paxson	B (SB) E (SB L. Turn)
Dore Street/23 Ave	Signalized	C
Reserve Street	Stop on Reserve	C (SB)
		E (SB)
Gharrett Street	Stop on Gharrett	C
Brooks Street	Stop on 39 th	F

* Unsignalized intersections: PM LOS and delay on worst approach
 Signalized Intersections: PM LOS and delay for overall intersection

2.0 Alternatives Considered

2.1 Alternatives Advanced

The following alternatives were advanced for further consideration in this document.

- No-Build.** The No-Build Alternative would involve no construction.
- Preferred Alternative.** This alternative is described in Section 1.3

2.2 Alternatives Considered But Not Advanced

This project is being funded as part of the Missoula Primary Sidewalk Network. Roadway reconstruction is required as part of the project to enable the construction of shoulders, sidewalks and bicycle lanes. There are no other reasonable and feasible alternatives for this project due to the funding and purpose of this project as a part of Missoula's Sidewalk Network projects.

Several design options were considered for the Preferred Alternative:

- Numerous design options were contemplated including, but not limited to lane width, sidewalk design, median location, parking, and separated bicycle paths. These options were variations on the Preferred Alternative that were resolved throughout the public involvement process.
- A five lane section from Stephens to Bancroft was recommended in Missoula's Transportation Plan Update. A traffic analysis of the capacity and growth projections indicated that a three lane section would adequately meet the design capacity for the twenty year design period. Based on the analysis, the five lane section was dropped from further consideration.

3.0 Existing Conditions, Impacts, and Mitigation Measures

This chapter provides a description of existing conditions and the impacts and mitigation measures associated with the No-Build Alternative and the Preferred Alternative described in Section 1.3.

3.1 Land Use, Zoning and Land Use Planning

The City of Missoula is located in western Montana along the Clark Fork and Bitterroot River Basins, with the Bitterroot Mountain Range to the west and the Garnet Mountain Range to the east. The project is located on the south side of Missoula.

3.1.1 Existing Land Use

Existing land use along 39th Street/SW Higgins Avenue/S Higgins Avenue includes single and multi-family residences, commercial properties, one church, a University of Montana stadium, and a few small scattered undeveloped areas. One of the vacant parcels is an undeveloped park owned by the City of Missoula. See Figure 3-1 for an illustration of the existing land use.

3.1.2 Zoning

Existing zoning along 39th Street/SW Higgins Avenue/South Higgins Avenue and along South Avenue is shown in Table 3-1 and Figures 3-2 and 3-3.

Table 3-1
City of Missoula Zoning Designations Within the Study Area

Zone	Zoning Designation and Permitted/Conditional Uses
A	Residential
RR-I	Restricted One-family Residential
R-I	Residential
R-II	Two-family Residential district
RLD-4	Residential Low Density
R-III	Multiple-Dwelling Residential
B	Residential
R-IV	Multiple-Dwelling Residential
BC	Restricted Commercial
C-I	Commercial
C	Commercial district
C-G	Commercial gasoline station district
SC	Shopping Center District
D	Industrial district.
P-1	Open Space
P-II	Public Lands and Institutions district
PUD	Planned Unit Development District

Source: Missoula County Zoning Resolution - Resolution No. 76-113, July 1976.

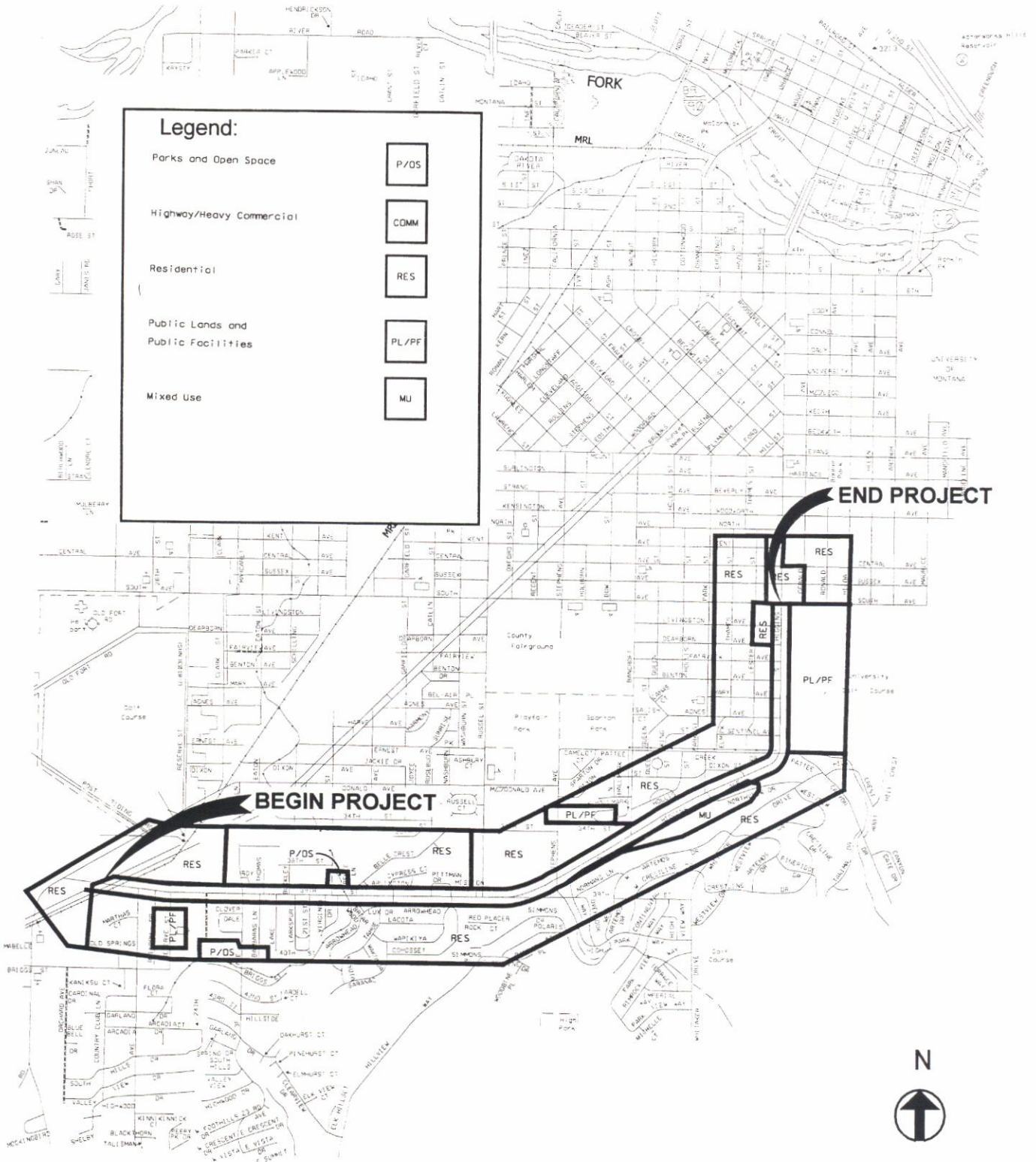
3.1.3 Land Use Plans

Figure 3-4 shows future land uses within the portion of the project area as recommended in the Missoula Urban Comprehensive Plan 1998 Update (The Plan).

The Plan provides the framework for long term development in the City of Missoula. The Plan was prepared by the Missoula Office of Planning and Grants, the joint City/County

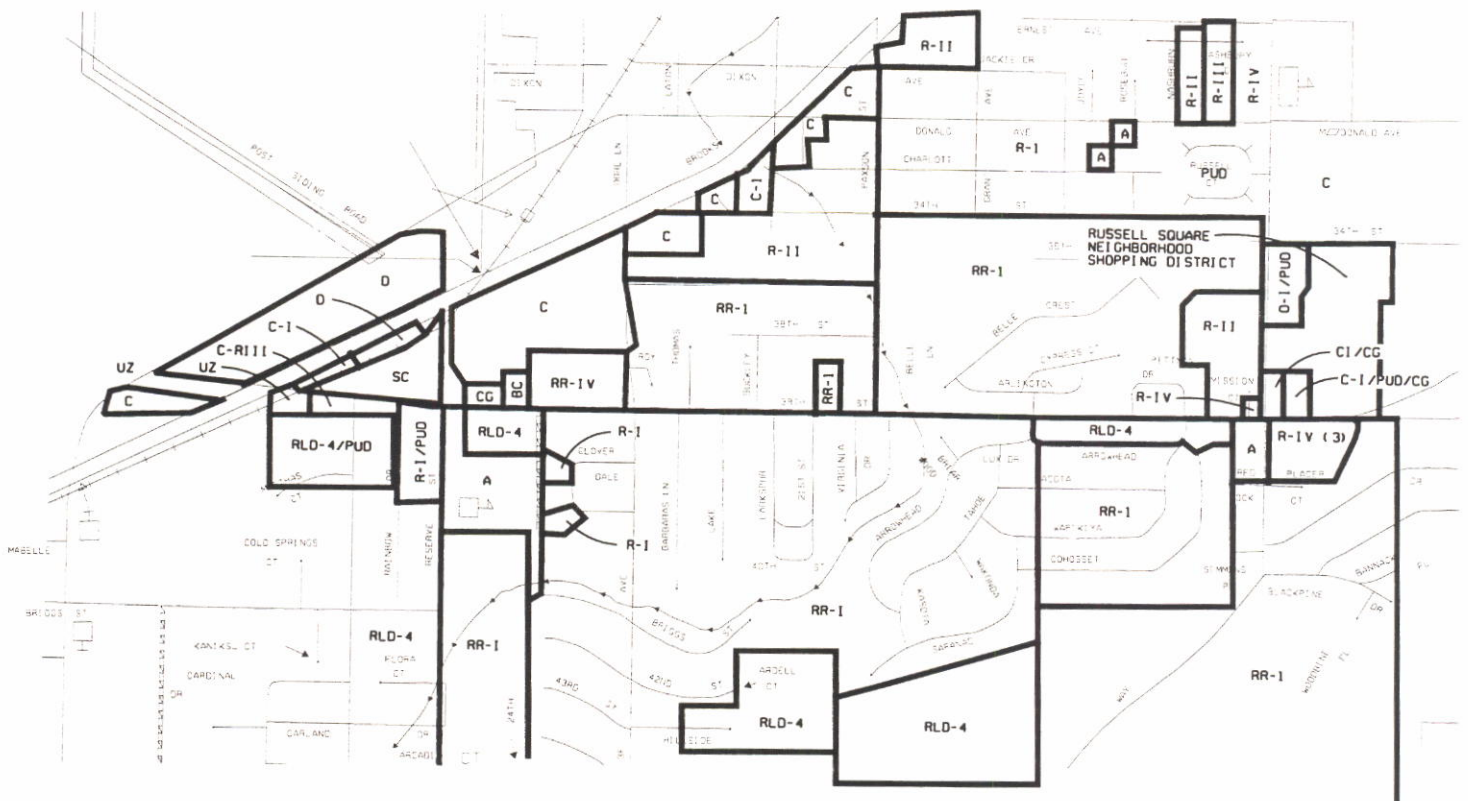
agency that is responsible for guiding short-range land development and long-range planning activities within the City of Missoula.

The project area is predominantly developed with a mix of residential, commercial, and public lands.



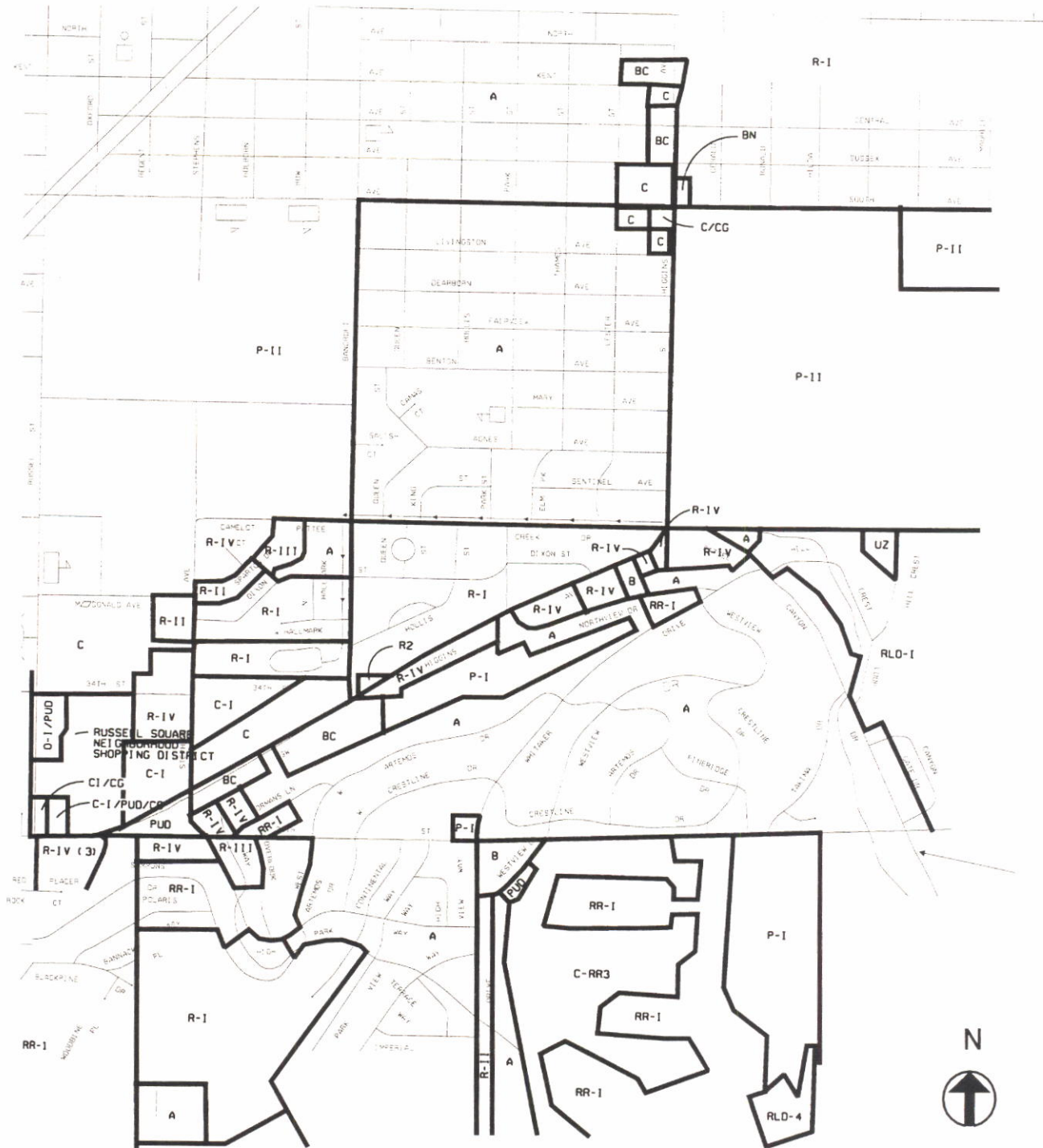
**Missoula Primary Sidewalk and Bicycle Network
39th Street/SW Higgins Avenue/Higgins
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**Figure 3-1
Existing Land Use**



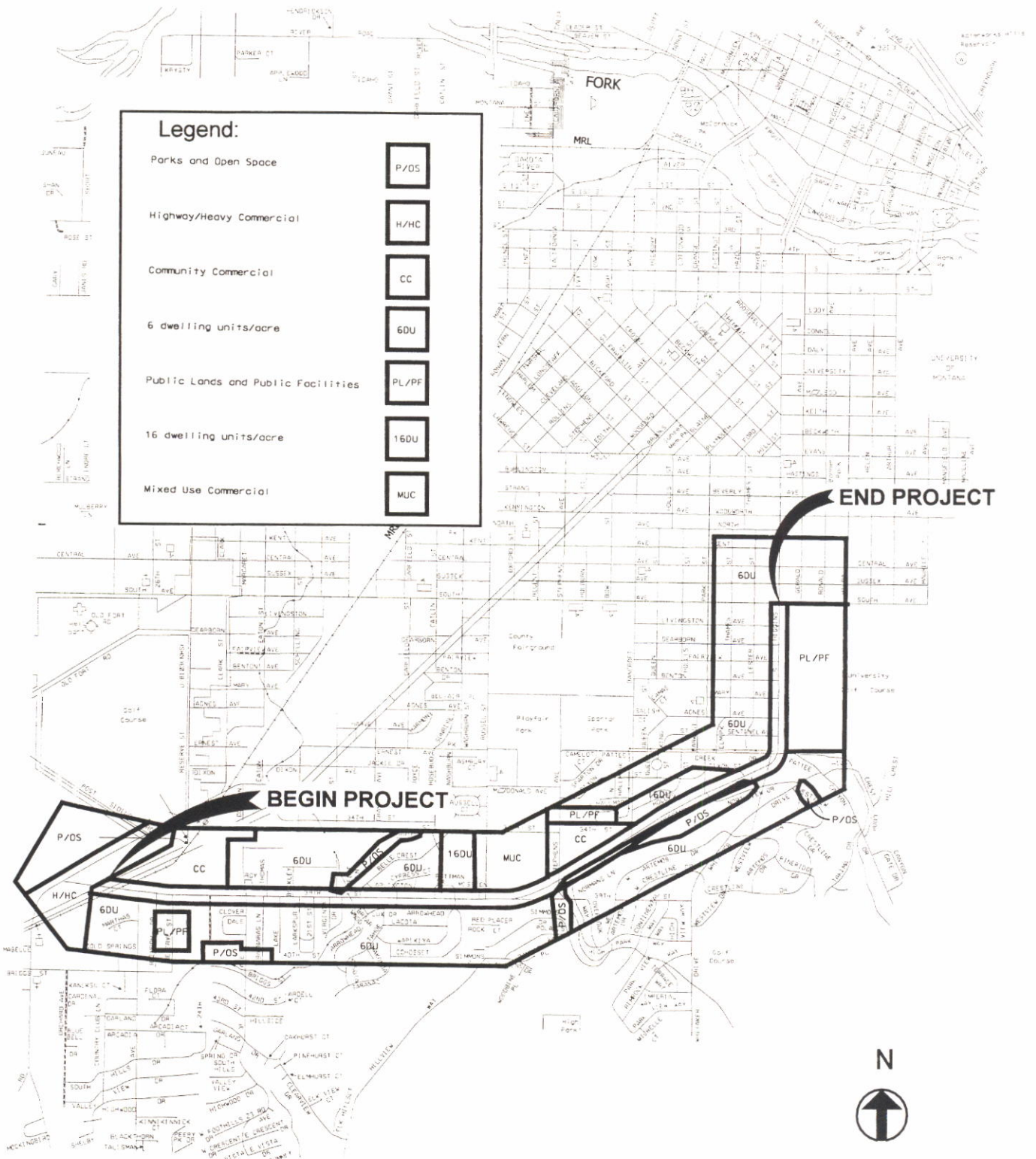
Missoula Primary Sidewalk and Bicycle Network
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Figure 3-2
 Zoning Ordinance



Missoula Primary Sidewalk and Bicycle Network
 39th Street/SW Higgins Avenue/Higgins
 Environmental Assessment

Figure 3-3
 Zoning Ordinance



**Missoula Primary Sidewalk and Bicycle Network
39th Street/SW Higgins Avenue/Higgins
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**Figure 3-4
Missoula Urban Comprehensive
Plan 1998 (Update)**

3.1.4 Impacts

The No-Build Alternative will not affect planned land use and development in the project area. However, the no-build alternative does not meet one of the three primary strategies for long term development, more specifically, the provision of infrastructure that is consistent with development objectives. The no-build alternative would not provide a roadway with the operational capacity and the non-motorized transportation components that are consistent with the long term planning objectives of the City of Missoula.

The Preferred Alternative is compatible with the existing and planned land uses within the project area. The Preferred Alternative is consistent with the City of Missoula's plans to develop a City-wide non-motorized transportation network and will enhance the operational characteristics of the roadway. The roadway infrastructure improvements are a beneficial impact in that they will improve the safety of the travelling public.

3.2 Social

3.2.1 Existing Conditions

An overview of the U.S. Census Bureau population figures and future estimates for the region is provided in Table 3-2.

**Table 3-2
 Study Area Demographics**

	1990 Population	1998 Population	2000 Population	2005 Population	2015 Population	% Increase from 1990 to 2015
Missoula City	42,918	52,239	Not Available	Not Available	Not Available	Not Available
Missoula County	78,687	89,670	92,040	98,350	110,980	41.0%
Montana	799,065	884,990	900,810	941,400	1,028,980	28.8%

Source: U.S. Census Bureau
 Figures dated after 1990 are estimated by the U.S. Census Bureau.

According to the Census Bureau, the project area falls within or adjacent to several block groups within Missoula County in Montana (See Figure 3-5). In 1990, these block groups contained 3,828 households, with an average household size of 2.6 persons per household, with a total population of 10,113. An overview of the 1990 population characteristics by census block group is provided in Table 3-3.

**Table 3-3
 1990 Population Characteristics**

Project Area Data by Block Group	Total Persons	Total Households	Persons per Household	% White	% American Indian	% Asian or Pacific Islander	% Other	% Hispanic
Tract 6, Blk Grp 5 (6.5)	215	89	2.4	89.3%	2.8%	6.5%	1.4%	1.4%
Tract 12, Blk Grp 4 (12.4)	1,446	634	2.3	98.0%	1.5%	0.3%	0.2%	1.9%
Tract 12, Blk Grp 5 (12.5)	986	408	2.4	97.4%	1.7%	0.7%	0.2%	1.0%
Tract 13.01, Blk Grp 2 (1301.2)	1,365	494	2.8	95.3%	2.8%	1.4%	0.5%	1.6%
Tract 13.01, Blk Grp 3 (1301.3)	1,852	581	3.2	96.9%	1.6%	1.2%	0.2%	0.9%
Tract 13.01, Blk Grp 4 (1301.4)	1,569	534	2.9	96.6%	2.0%	1.2%	0.1%	0.7%
Tract 13.02, Blk Grp 1 (1302.1)	1,792	765	2.3	98.1%	0.6%	1.2%	0.2%	0.3%
Tract 13.02, Blk Grp 2 (1302.2)	888	323	2.7	99.3%	0.6%	0.0%	0.1%	0.9%
Project Area Block Group Totals	10,113	3,828	2.6	97.1%	1.6%	1.1%	0.2%	1.0%

Source: 1990 U.S. Census

Notes: Missoula Urbanized Area includes Missoula and surrounding urban communities.

Hispanic totals are included in both the Hispanic column and any one of the other demographics, depending upon origin. Therefore, totals exceed 100%.

Missoula Census Data	Total Persons	Total Households	Persons per Household	% White	% American Indian	% Asian or Pacific Islander	% Other	% Hispanic
Missoula Urbanized Area	57,006	23,395	2.4	95.8%	2.3%	1.4%	0.6%	1.3%
Missoula County	78,687	30,782	2.6	96.1%	2.3%	1.1%	0.5%	1.2%

Source: 1990 U.S. Census

Notes: Missoula Urbanized Area includes Missoula and surrounding urban communities.

Hispanic totals are included in both the Hispanic column and any one of the other demographics, depending upon origin. Therefore, totals exceed 100%.

Census data for the City of Missoula for projected population in 2015 was not available, therefore, population estimates were determined by the City's planners for the 1996 Missoula Transportation Plan Update planning process. The Transportation Plan was based on population forecasts for the year 2015 of approximately 67,000 for the City of Missoula and 114,300 for Missoula County. For the purpose of determining the future transportation

needs of the City of Missoula, planners used an estimated 27% growth rate for the City of Missoula by 2015.

3.2.2 Impacts

The Preferred Alternative will have a beneficial impact with regard to population increase in the City of Missoula by enhancing the City's non-motorized transportation system and improving operation of the roadways. The traffic analysis completed for this project has considered the projected future population increase. Operational changes proposed for the Preferred Alternative have been incorporated into the design plans. The No-Build Alternative will have no impact with regard to population growth.

3.2.2 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898 requiring federal agencies to incorporate Environmental Justice considerations into the NEPA planning process. The purpose of this order is to ensure that low-income households, minority households, and minority business enterprises do not suffer a disproportionate share of adverse environmental impacts resulting from federal actions.

According to the Census Bureau, the project area falls within or adjacent to several block groups within Missoula County in Montana.

The 39th Street/SW Higgins Avenue/S Higgins Avenue project area does not include any residential areas that are dominated by low-income or minority residents. The 1990 Census data for the Tracts within the project area show that 89-99% of the population is white. Therefore, neither the No-Build nor the Preferred Alternative will have adverse impacts on low-income or minority residents.

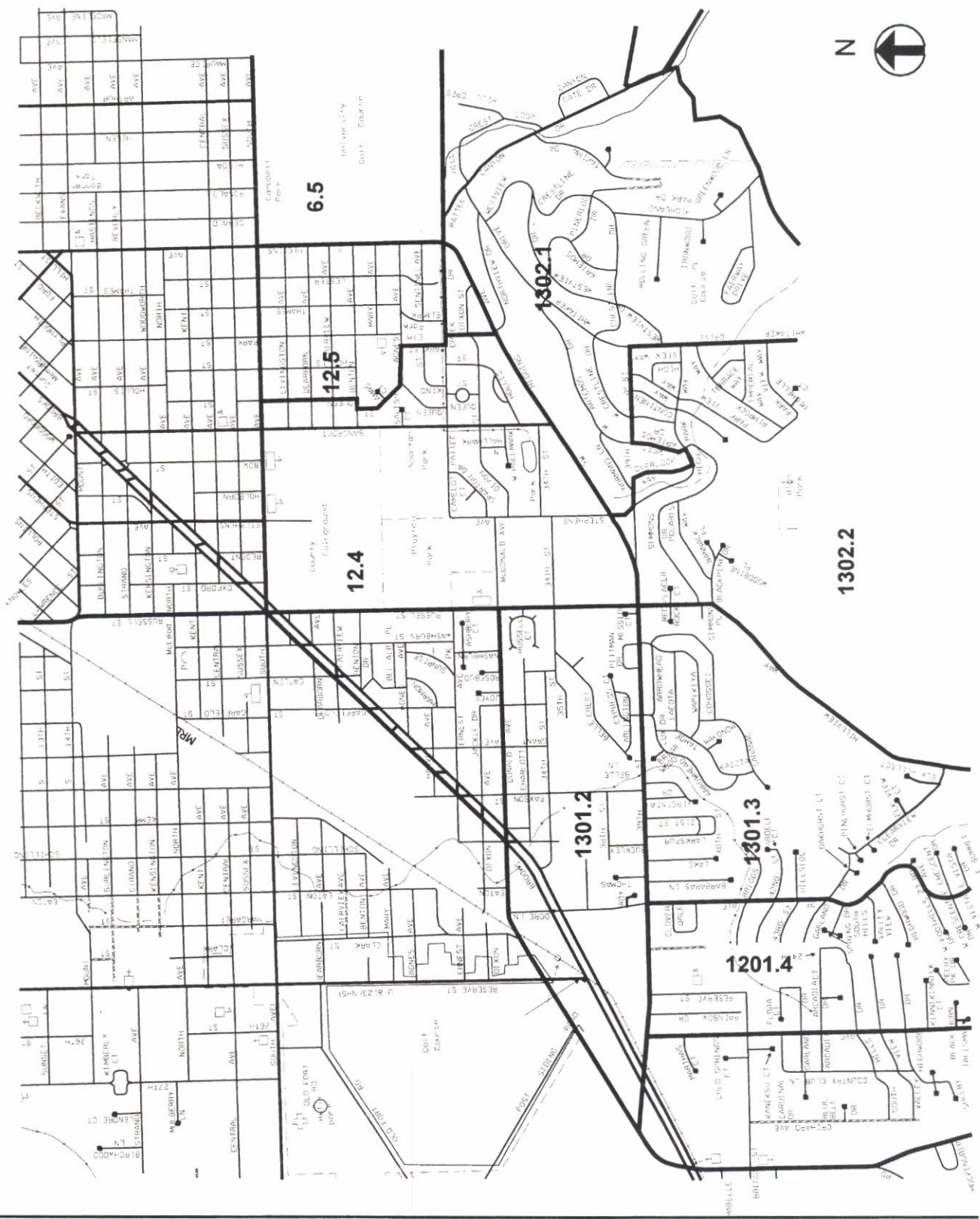
Neither the No-Build or Preferred Alternatives will create disproportionately high adverse human health or environmental effects in any distinct neighborhoods, low income groups, ethnic groups, minority groups, or other specific groups of people.

3.3 Economic

3.3.1 Existing Conditions

Missoula serves as a major regional trade center for western Montana and central Idaho. The wood product industry has traditionally been the area's principal industry. However, Missoula's economic base has shifted significantly in the past twenty years. In 1980, 36% of the economic base was from wood and paper products and only 11% from trade center activities (medical services, wholesale and retail financial, and insurance). In 1997, the

economy shifted with only 18% of the economic base coming from wood and paper products and 33% from trade center activities.



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Figure 3-5
 1990 Census Block

Major employers located in the Missoula area include the U.S. Forest Service, Stimson Lumber Company, Smurfit/Stone Container, Inc., Plum Creek Timber Company, Montana Rail Link, the University of Montana, and Community and St. Patrick's Hospitals. Tourism and Financial, Insurance, Retail, and Real Estate (FIRE) industries are the fastest-growing sectors of the local economy.

While most of Missoula's recent population growth has occurred in exurban areas surrounding the City (a trend that is expected to continue for the next few decades) the City of Missoula sustains the majority of the area's economic activity. The City supports over 90 percent of all jobs and sales in the Missoula Urban Planning Area and it is expected to remain the region's economic center over the next two decades.

The estimated 1996 total employment for Missoula County was approximately 57,500 and this number is expected to increase to 78,200 by the year 2015. 1994 total employment within the City was estimated at 44,000 with an increase to 61,000 projected by the year 2015.

According to the 1990 U.S. Census Bureau, the per capita income in 1989 for the block groups within the project area ranged from \$3,416 (Tract 6, Block Group 5) to \$21,230 (Tract 13.02, Block Group 1). The overall per capita income in 1989 for the block groups within the study area was \$14,041. The 1989 per capita income for the county of Missoula and state of Montana were \$11,944 and \$11,213, respectively.

According to the Missoula Area Economic Development Corporation (MAEDC), the average selling price of homes in Missoula was \$139,625 as of June 30, 1999. The cost of living in Missoula was measured by the American Chamber of Commerce Researchers Association (ACCRA). Missoula's First Quarter 1999 Composite Index measured 103.8, 3.8 % higher than the average cost of living nation wide.

There are numerous providers of utilities and services in the city of Missoula. The Montana Power Company supplies the region with gas and electric power. Water services are provided primarily by the Mountain Water Company. Other smaller providers include Missoula Water Works and Grant Creek Water Works. Browning-Ferris Industries (BFI) provides waste disposal, US West Communications Blackfoot Telephone Cooperative provides telephone services, and the City of Missoula provides sewer services.

Missoula has three newspapers, the Missoulian being the lone daily paper. There are four local television stations in Missoula, plus ten radio stations in the area.

Medical services are provided by two primary facilities, the Missoula Community Medical Center and St. Patrick Hospital. Missoula Emergency Services provides 911 emergency response services. Law enforcement services are provided by the Missoula Police Department within city boundaries and by the Missoula County Sheriffs Department within

county boundaries. Fire protection and emergency response services are provided by the Missoula Fire Department.

The predominant public school district within the City of Missoula is the Missoula Public School District No. 1. There are 28 public elementary schools and 5 public high schools within the Missoula Urbanized Area. Public school bus services are provided by Beach Transportation. Missoula is also home to the University of Montana and the University of Montana College of Technology.

3.3.2 Impacts

The No-Build Alternative will not provide improvements in congestion and operational problems within the project area. Continued increases in traffic congestion along the existing facility may impact local and regional access to residential areas, community facilities and commercial areas. In addition, as congestion increases within the project area, it may delay response times for emergency service providers. The No-Build Alternative is not consistent with the City of Missoula's long term plan to provide a non-motorized transportation network for its residents.

The Preferred Alternative will improve traffic flow, turning movements, and conditions for pedestrians and bicyclists traveling along the roadway. This alternative will improve the roadways for local and regional access to residential areas, community facilities, and businesses that require travel along the project area. The Preferred Alternative will facilitate provision of expedient and safe emergency services due to the increased capacity that will allow adequate passageways for emergency vehicles, even during congested periods.

Neither the No-Build Alternative nor the Preferred Alternative will substantially affect the long term overall trends for growth and development in the project area, nor have an affect on the overall Missoula area economy.

Access to businesses along 39th Street/SW Higgins Avenue/S Higgins Avenue will be provided during construction of the Preferred Alternative. It is expected, however, that there will be delays and interruptions associated with using the access during construction. These specific access provisions will be addressed in the design phase of the project. A detailed plan that identifies the locations of detours and the provision of temporary access will be prepared, reviewed by the City of Missoula and presented to the public at weekly construction update meetings.

3.4 Pedestrians and Bicyclists

3.4.1 Existing Conditions

There are no continuous bicycle lanes or sidewalks in the project area. The bicycle and pedestrian facilities are limited within the project area. Sections of the existing sidewalks are in poor condition, need to be replaced, and brought up to meet the standards of the American With Disabilities Act. The roadway is shared by cyclists and does not have a system of designated bicycle lanes. A two-way bike path exists on the south side of the roadway from Russell Street to Reserve Street. It is separated from the eastbound traffic lane by a 0.6 meter (2 foot) dirt strip. This two way bikeway is unconventional and is not recommended for safe cycling. The pavement is aging and is in poor condition.

Many Missoulians walk or bicycle for transportation or recreational purposes by using the street network for direct links between places of origin and destination. The lack of adequate pedestrian and bicycle facilities along the existing street network hinders safe and efficient pedestrian and bicycle travel. The lack of adequate pedestrian and bicycle facilities along both project roadways discourages walking and bicycling as a means of transportation. In addition, the lack of adequate bicycle and pedestrian facilities does not support transit usage and a multi-modal transportation system.

3.4.2 Impacts

With the No Build Alternative, there will continue to be inadequate pedestrian and bicycle facilities along the project roadway. In addition, the No-Build Alternative is not consistent with the long term plan for the City of Missoula's continuous non-motorized transportation network.

The Preferred Alternative will provide a continuous network of pedestrian and bicycle facilities both within the project area and as part of the overall bicycle and pedestrian network. This alternative is consistent with the City's long term plans and will improve safety for the non-motorized travelling public and will support a multi-modal transportation system.

3.5 Transit

3.5.1 Existing Conditions

The Missoula Urban Transportation District (MUTD) operates "Mountain Line" buses that provide regularly-scheduled public bus transportation (transit) service along 12 fixed routes within the Missoula urban area. Each route originates and terminates at the Missoula County Courthouse, located in downtown Missoula.

Route 12 serves the project area on 39th Street and Higgins Avenue. This bus route provides bus service between the project area, downtown Missoula and the University of Montana and is one of the highest ridership routes in the City.

The bus route in the project area has little passenger amenities. Some of the bus stops are in unpaved areas, some are in areas where there are no shoulders, and some have no designated pull out area. The buses are outfitted with bicycle racks.

In the City of Missoula approximately 40% of the bus riders do not own cars, of that, 35% are estimated to be students.

A new Social Security Office for Missoula County is being constructed on SW Higgins Avenue. It is anticipated that bus service in this area will increase in the future.

3.5.2 Impacts

The No-Build Alternative will have no effect upon existing bus routes within the project area. Transit riders may experience some delay with the No-Build Alternative associated with increased congestion. Transit riders are currently affected by the lack of passenger amenities in the area.

The Preferred Alternative will have no long term effect on existing bus routes. There will be a short term effect during construction. Road closures during the construction period will require re-routing. According to MUTD, bus service to the south of the project area may be impacted by having reduced service during off peak hours. Additionally, the re-routing of bus routes may increase the costs to provide service. Bus service will continue to be provided and the public will be adequately notified of the temporary route changes.

The Preferred Alternative includes the construction of new bus pullouts, shelters, and improved lighting. The bus pullouts will provide for more effective operation of buses in traffic and the shelters will provide additional user comfort. Improved pedestrian and bicycle facilities is expected to increase ridership and promote multi-modal transportation and is considered to have a beneficial impact on transit.

3.6 Right-of-Way

3.6.1 Existing Conditions

The existing right-of-way width along 39th Street/SW Higgins Avenue/S Higgins Avenue varies, but is approximately 24.4 meters (80 feet) throughout the corridor.

3.6.1 Impacts

The No-Build Alternative will not require additional right-of-way.

The Preferred Alternative will be constructed within the existing right-of-way with the exception of a few isolated areas. Minimal right-of-way is required at intersections to

accommodate increased turning radii. A total of 0.0345 hectare (.09 acres) of additional right-of-way will be required. No relocations are required for this project.

3.7 Parks and Recreation

3.7.1 Existing Conditions

There is an undeveloped City of Missoula Park at the northeast corner of 39th Street and Paxson Street.

3.7.2 Impacts

The No-Build Alternative will not impact parks or recreation facilities.

The Preferred Alternative will not result in any direct adverse impacts to the City of Missoula undeveloped parkland. It will not have an effect on the City's ability to develop the park in the future. The amount of useable parkland will actually slightly increase with the construction of the Preferred Alternative since the irrigation ditch adjacent to 39th Street will be placed in pipe.

A Montana Division "Nationwide" Section 4(f) Evaluation for Minor Usage of Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges has been completed for this project and is included in Appendix B. This evaluation is required for transportation projects that are funded with federal dollars. The 4(f) evaluation demonstrates that there are minor impacts to the park, alternatives to avoid the park are not feasible and prudent, the project includes measures to minimize impacts, and there has been coordination with the City of Missoula Parks Department. Also included in Appendix B is a letter from the City of Missoula stating that they have reviewed the project and that they agree with the assessment of impacts and proposed mitigation.

3.8 Air Quality

3.8.1 Existing Conditions

The geographical and meteorological characteristics of Missoula are a major cause of the air quality conditions that exist within the study area. Missoula is located within a valley at the confluence of the Bitterroot River and Clark Fork Rivers. Given this valley setting, the area is highly susceptible to temperature inversions during the fall and winter months. In addition, wind speeds in the valley are low year-round, thus allowing build-up of pollutant concentrations. Temperature inversions coupled with limited wind activity cause the Missoula area to be susceptible to air pollution.

The two pollutants of primary concern in Missoula are carbon monoxide (CO) and particulate matter of less than ten microns in diameter (PM₁₀). Generally speaking, CO concentrations increase as vehicular congestion rises, and PM₁₀ emissions increase with growth in vehicle-miles-of-travel (VMT).

Due to a history of exceedances of federal air quality standards, the City of Missoula is currently designated as a non-attainment area for CO and PM₁₀. These official air quality designations for Missoula have been made by the United States Environmental Protection Agency (EPA) in accordance with 40 CFR 81.327, as amended.

The highest CO concentrations in Missoula have been recorded at the intersection of Brooks (US 93), Russell, and South. In the early 1990s, Missoula was designated as a “moderate” non-attainment area for CO by the EPA based on various provisions of the Clean Air Act Amendments of 1990.

Missoula County was originally designated as a non-attainment area for PM₁₀ by EPA in 1977. During this time, the highest PM₁₀ concentrations were recorded in the downtown area near the Courthouse. A later study conducted in 1987 determined that the major sources contributing to Missoula’s PM₁₀ problem were re-entrained road dust followed by residential wood burning during winter months.

Within the project area there are unpaved shoulders that are used by vehicles for parking and as shoulders to pass vehicles making left turns.

3.8.2 Impacts

The No-Build Alternative will not reduce dust in the air from vehicle use of the unpaved shoulders.

The Preferred Alternative will improve traffic operations and opportunities for non-motorized travel, but will not increase capacity. This alternative will contribute to the City's overall plan to improve air quality by reducing vehicle trips and developing a city wide network of bicycle and pedestrian facilities.

The Clean Air Act of 1990 requires that federally funded transportation plans, programs and projects in non-attainment areas conform to the SIP for air quality. An air quality conformity analysis of the 1996 Missoula Transportation Plan (MTPU) was prepared. The MTPU is the current regional transportation plan (RTP) and includes the transportation improvement plan (TIP). The conformity analysis is consistent with EPA guidance.

The project as described in Section 1.3 of this document and the design options considered is in the current MTPU and TIP which is conforming.

The Preferred Alternative will reduce dust in the air by paving unpaved areas currently used for parking and as shoulders to pass vehicles making left turn lanes. The reduction of dust will have a beneficial impact on air quality.

3.9 Noise

Both project alternatives, the No-Build and Preferred, are not on a new location, do not significantly change either the horizontal or vertical alignment, and do not increase the number of through traffic lanes; therefore, a traffic noise analysis is not required by Federal Highway Administration Regulation 23 CFR 772 or MDT's 1996 Traffic Noise Analysis and Abatement: Policy and Guidance.

Construction activities will be in accordance with the City of Missoula's Noise Control Ordinance.

3.10 Water Resources/Quality

3.10.1 Existing Conditions

The study area falls within the Middle Clark Fork Watershed in western Montana. This watershed is located within the Lower Clark Fork Submajor Basin, a portion of the Columbia River Basin. Major water features within the Columbia River Basin include the Flathead River, Clark Fork River, and Kootenai River.

The Clark Fork River is the major waterway within the Middle Clark Fork Watershed. The major waterways found near the project area include the Clark Fork River and its tributary, the Bitterroot River. Pattee Creek, also a tributary of the Clark Fork River, is a small waterway found within the project area. The Montana Department of Environmental Quality (MDEQ) has designated all of these waterways as class B-1 waterbodies (the Clark Fork

River is classified as C-1 above the Blackfoot River to the east of Missoula). Waters classified as B-1 are suitable for drinking, culinary and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

The Clark Fork River, Bitterroot River, and Pattee Creek are not protected as wild and scenic rivers as designated in the National Wild and Scenic Rivers System. The 1998 Montana 303(d) list designates the Clark Fork River as a high priority for Total Maximum Daily Load (TMDL) above the Rattlesnake Creek to the east of Missoula. The Clark Fork River below the Rattlesnake Creek, Bitterroot River, and Pattee Creek are not designated as high or moderate priority for Total Maximum Daily Load (TMDL) development.

The study area is underlain by the Missoula Valley Aquifer, which has been designated the Sole Source of drinking water for the Missoula Valley. This aquifer covers about 518 square kilometers (200 square miles) and ranges from a depth to the water table from 27.4 meters (90 feet) to less than 3.0 meters (9.8 feet) below the ground surface. The Missoula valley aquifer is an unconfined aquifer with highly permeable soils predominantly consisting of coarse sand and gravel.

The Missoula County Health Department had established a local aquifer protection program. The program has been implemented by the adoption of local regulations providing protection for the aquifer and educational programs to prevent contamination.

3.10.2 Impacts

The No-Build Alternative will result in no adverse impacts to the existing water resources within the study area.

Surface water quality impacts relating to transportation projects generally fall under the following two categories:

- Increased impurities in stormwater runoff from increased traffic, increased impervious surface and/or increased maintenance activities.
- Increased sediment loading and erosion during and/or after construction activities due to the exposure of bare substrate.

Surface water quality can be affected and degraded by contaminated roadway runoff. Roadway surface runoff contains organic and inorganic chemicals and compounds, as well as substantial quantities of suspended solids. These components are usually a product of petroleum/combustion products, vehicle and pavement wear and roadway maintenance procedures. The Preferred Alternative will create an additional impervious area of 1.9 hectares (4.7 acres).

The Preferred Alternative includes extending an existing box culvert at Pattee Creek and South Higgins Avenue. The water that is currently carried by this culvert has been re-channelized from what naturally existed. This action will result in temporary disturbance of the waterway during construction. The extension of the culvert will also impact a small wetland 3-5 square meters (32-54 square feet). This wetland area has low functional value and is classified as Category IV.

Best practices for sediment and erosion control will be employed during construction of the Preferred Alternative. Mitigation measures are outlined below to ensure protection of surface waterbodies during construction. There will be no significant impact on waterbodies within the project area during construction.

The Preferred Alternative includes the construction of curb, gutter, and storm water collection system which will contain stormwater runoff within the roadway cross-section. Stormwater will be collected in inlet drains and carried to the existing outfall to the Bitterroot River by a storm sewer system. Mitigation measures are outlined below to ensure protection of surface waterbodies during operation. The operation of the Preferred Alternative will have no direct impacts to surface water quality.

Irrigation facilities within the project area will be placed in 600 mm (24 inch) pipe. The ditches will be closed for safety and to provide room for sidewalks. There is an agreement between the City of Missoula and the Irrigation District to maintain the pipes. Sediment and erosion measures will be employed in the area of the irrigation ditches during construction.

The potential impacts to surface water quality within and adjacent to the project area will be during construction. Best management practices during construction will be employed to reduce impacts.

The proposed project will not change drainage patterns such that they will impact the Missoula sole source aquifer.

3.10.3 Mitigation

Throughout the construction phase procedures described in the MDT Highway Construction Standard Erosion Control Work Plan will be used. Some of these acceptable mitigation measures include:

Short-Term / Construction Mitigation

During final design best management practices with regard to sediment and erosion control during construction will be incorporated in the final design plans and bid documents.

A Sediment and Erosion Control Plan will be submitted to MDT Environmental Quality and Permitting Compliance Division in accordance with the Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314) for this project.

The mitigation measures that will be employed during construction may include:

- Implement erosion control measures, such as temporary and permanent seeding and mulching, within a reasonable time following disruption of the soil.
- Implement sedimentation control methods, such as check dams, silt fences, and sedimentation basins along drainage routes and adjacent to water features.
- Use temporary and permanent retention ponds to optimize settling time for sediment-laden runoff before entering a water feature.
- Use settling ponds for the effluent of dewatering operations.
- Minimize vegetation disturbance and rapidly revegetate areas of disturbance.
- Restrict movements of construction vehicles on unpaved areas where possible.

Long-Term Mitigation

The Preferred Alternative includes improvements to the roadway drainage system. Stormwater that generally flows over the roadway surface will be collected in pipes. This will be a beneficial impact as the stormwater will not collect sediment and pollutants from the roadway.

3.11 Wetlands

3.11.1 Existing Conditions

A Biological Memorandum dated July, 1998 was prepared for this project to assess potential wildlife, fisheries, wetlands and associated resources of the area. The wetland delineation survey, which was conducted as part of the Biological Memorandum, identified two small wetlands within the project area, one of which is located within Pattee Creek and the other is located outside of the existing right-of-way beyond the project's area of impact.

The No-Build Alternative will not impact wetlands.

The Preferred Alternative will affect a small wetland in the project area. The wetland area is located where Pattee Creek crosses Higgins Avenue. Approximately 3-5 square meters (32-

54 feet) of wetland area will be disturbed by the Preferred Alternative. The wetland has low functional value and is classified as Category IV

3.12 Wildlife/Threatened and Endangered Species

3.12.1 Existing Conditions

The Biological Memorandum, July 1998 prepared for this project revealed that most suitable native flora and fauna habitats have long since been replaced by commercial and residential development in the project area. Communications with the U.S. Fish and Wildlife Service (USFWS), Montana Natural Heritage Program (MNHP), and Montana Department of Fish, Wildlife and Parks personnel presently indicate no resident populations of either threatened or endangered species that could possibly conflict with the proposed project.

A recent 8 km (5 mile) radius search by MNHP reveals that although several sensitive species are found upon Missoula valley foothills (bald eagle, peregrine falcon, gray wolf, grizzly bear, and water howellia plant), they would not be an issue with the proposed project. Only one species, the fringed myotis, is known to have occurred within 1.6 km (1 mile) of the project area when a single specimen was collected in 1964. Furthermore, no critical habitat for, or even regular presence of, this small buffy-brown bat is expected today within the project area due to the continuing level of development. Habitat for wildlife and native plants has also largely been supplanted throughout the project area by both commercial and residential growth, except for some limited use of the area's intermittent landscaping by neo-tropical (song) birds, various corvids and fox squirrels.

3.12.2 Impacts

The No-Build Alternative will have no impact to wildlife/threatened and endangered species.

Implementation of the Preferred Alternative will have no effect upon any threatened and/or endangered species reported to occur in Missoula County. Implementation of the Preferred Alternative is also expected to have no effect upon any Sensitive Species of Concern or the few remaining biological resources of the general area.

3.13 Floodplains

3.13.1 Existing Conditions

Figure 3-6 illustrates the locations within the project area that are within the 100-year floodplain. This information is based upon flood hazard area maps prepared by the Federal Emergency Management Agency (FEMA) for the City of Missoula and for Missoula County.

The roadway in the project area periodically floods.

3.13.2 Impacts

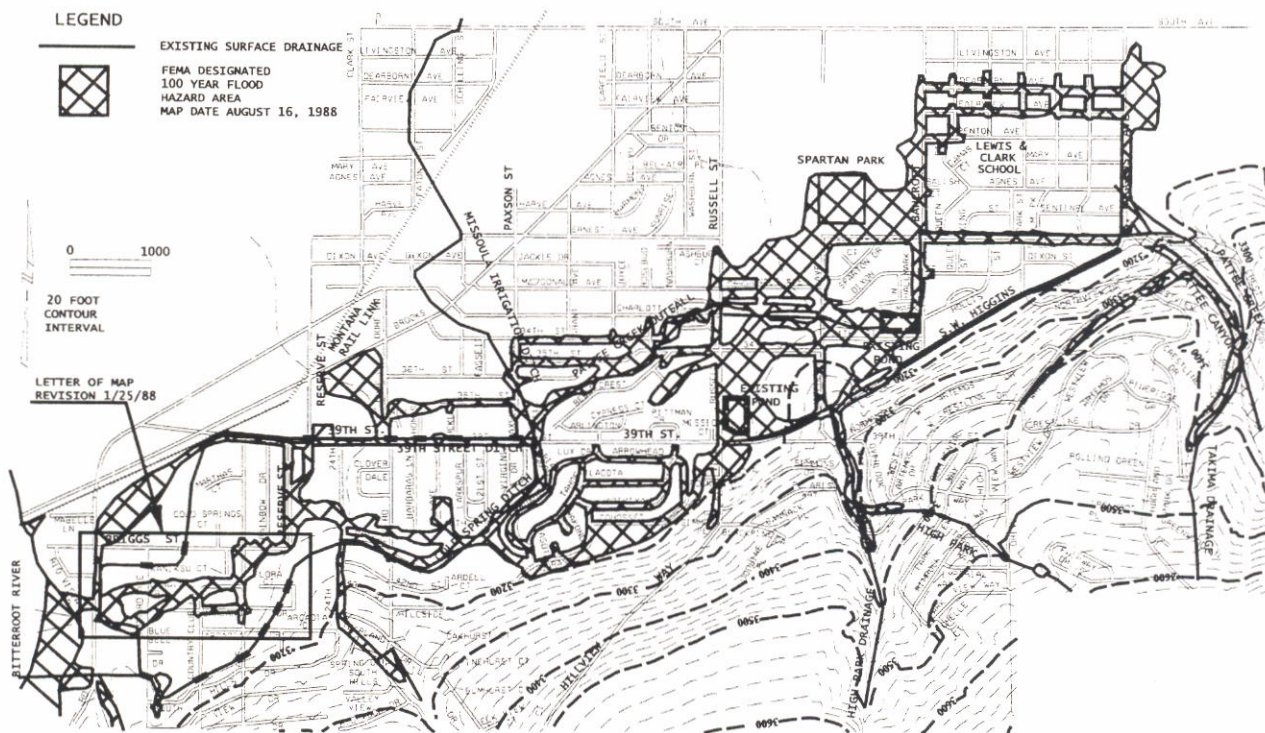
The No-Build Alternative will generally have no impact to the floodplain. Since drainage improvements are being contemplated as part of the Preferred Alternative, the existing conditions associated with periodic flooding will continue.

The 100-year floodplains delineated by FEMA are encroached upon by the Preferred Alternative. Missoula County administers these floodplains for FEMA and a Floodplain Development Permit will be required for this encroachment. To evaluate the permit application, the Floodplain Administrator will review the construction plans, floodproofing measures, and hydraulic calculations certified by a Professional Engineer.

The Preferred Alternative will conform to the Missoula County Floodplain Regulations and meets the criteria to be within an allowable increase in the 100-year water surface of less than 0.15 meters (0.5 feet). The Preferred Alternative will not promote or encourage development within this delineated floodplain, nor increase flood liability hazards from its construction. This proposed project is in compliance with Executive Order 11988.

The City of Missoula may undertake a flood control project in the project area during construction of this project. The City will apply for any floodplain permits required by their project.

The roadway drainage improvements that will be constructed as part of the Preferred Alternative will have a beneficial impact on runoff and flooding of roadways during storm events.



3.14 Cultural Resources

3.14.1 Existing Conditions

Jon Axline, Historian from MDT Environmental Services conducted a windshield study of the project area on September 13, 1999 to determine if a cultural resource survey was necessary. He determined that none of the residences, businesses, and commercial properties are old enough to qualify for the National Register of Historic Places. Therefore, no cultural resource survey is required. (See correspondence in Appendix A)

3.14.2 Impacts

Since there are no cultural resources within the project area there will be no impact as a result of either the No-Build or Preferred Alternatives.

3.15 Hazardous Materials

3.15.1 Existing Conditions

The following State and local agencies were contacted to research the current or historic presence of hazardous material storage or accidental spills within the study area:

- Montana Department of Environmental Quality, Hazardous Waste Division
- Montana Department of Environmental Quality, Remediation Division
- Montana Department of Environmental Quality, Permitting and Compliance Division

According to contacts at these agencies, there are no current or historic hazardous material storage along either of the two project roadways. Furthermore, there is no record, or recollection of any kind of hazardous material accidents. Therefore, the Preferred Alternative will not likely encounter any hazardous materials during construction or use. (See correspondence in Appendix A)

3.15.2 Impacts

Neither the No-Build Alternative nor the Preferred Alternative are expected to encounter hazardous materials.

3.16 Visual

3.16.1 Existing Conditions

The City of Missoula is entirely contained within a broad glacial valley. Views in all directions have glacial moraine or mountain views in the mid and distant background. The valley is bordered by the Bitterroot Range to the southwest and Mount Dean Stone to the southeast. Background views to the north side of Missoula from the study area vicinity include the Rattlesnake Mountains and the North Hills. Background views to the east include the broad sloping faces of Mount Jumbo and Mount Sentinel that are divided by the Hell Gate Canyon mouth.

Due to the broad, flat glacial nature of the valley itself, the study area, as well as the entire City of Missoula, is relatively flat. There are minor relief changes and some gently rolling hills, but by and large the surface creates a wide, level ground plane from which both human-made and natural features arise.

The study area is located in the south – southeast portion of the Missoula urban area. The traveling public views natural pastoral background in the distance.

The dominant visual character to the public traveling the project corridor is the commercial and residential development which currently exists along the project corridor.

- Residential. There are views of residential neighborhoods along portions of the corridor. Some of these residential properties have been fenced off with privacy fencing, particularly along 39th Street. Most of the residential properties face the corridor and have established landscaping. In some of the areas where there are irrigation ditches in front of the houses, some property owners have incorporated these ditches into their overall landscaping design.
- Commercial. The remainder of the corridor is commercial businesses, except for the University of Montana. The views are typical of urban commercial districts and most areas have little landscape features adjacent to their properties. The view of the University of Montana soccer field, track, and golf course.

The corridor itself generally presents a non-homogeneous visual character. Some areas have sections of unpaved parking, minimal landscaping and no sidewalk.

There are no unique visual characteristics within the corridor.

3.16.2 Impacts

The No-Build Alternative will result in the continuation of the existing general trends of change to the visual character in the study area vicinity.

The Preferred Alternative will have the following short -term visual impacts during the period of construction:

- Stock-piling of excavated material.
- On-site construction equipment and materials.
- Debris from construction.

The following will become permanent changes in the visual landscape that will occur with the Preferred Alternative:

- Incorporation of boulevard sidewalks and medians in portions of the project area which will include landscaping.
- There will be a beneficial impact in the project corridor by creating a more homogeneous system of roadways and sidewalk.
- Gravel areas used for parking will be replaced with paved parking area and curbs which will benefit the overall appearance of the corridor.
- Access points in the commercial area will be better defined with the addition of curbs and sidewalks.
- Irrigation ditches will be removed which will have a minimal change on the overall visual character of the corridor.
- Low broadcast light fixtures are being installed as part of this project and will have a beneficial impact on visual character the overall project area.

The visual change that will occur from the Preferred Alternative is not considered substantial. The Preferred Alternative will have an overall beneficial long term impact on the corridor.

3.16.3 Mitigation

Proposed visual mitigation for this project include the following:

- Landscape enhancements at key locations will include the use of native plant materials that will blend with the existing conditions.

3.17 Farmland

According to the Natural Resources Conservation Service (NRCS), formerly called the Soil Conservation Service (SCS), the project area does not include any area designated as prime, unique, or of statewide or local importance. The areas on both sides of each project roadway within the study area are committed to urban uses.

Based on the findings described above, neither the No-Build Alternative nor the Preferred Alternative will have any adverse impacts to prime or unique farmlands or to farmlands of local or state-wide importance. The completion of a USDA, NRCS Conversion Impact Rating Form (Form AD-1006) and/or additional mitigation measures are not necessary for this project.

3.18 Construction

3.18.1 Impacts

The No-Build Alternative will have no construction related impacts.

There are several impacts associated with the construction of improvements for the Preferred Alternative. The construction-related impacts include:

- **Noise and Vibration.** The operation of various types of machinery, such as heavy earth moving equipment, paving equipment, power tools, pile drivers, and trucks, in close proximity to residences will create more noise during construction. Impacts from vibration are also possible during the construction period.
- **Fugitive Dust.** The operation of heavy equipment on exposed soils may result in the release of fugitive dust into the air.
- **Erosion and Sedimentation.** Runoff from areas of exposed soils may affect surface water quality if sediment and erosion control measures are not employed during construction.
- **Visual.** Stockpiles of earth materials, stored construction materials, and parked equipment may cause a temporary visual impact to the residents near the locations of construction activities.
- **Traffic.** During construction traffic patterns will be disrupted for travelers who use 39th Street/ SW Higgins Avenue/S Higgins Avenue and traffic patterns will be altered due to temporary road closures.

- Access. Local access to intersecting roads and to businesses and residences within the project area will be maintained during construction. However, limited access and minor detours will be necessary at certain locations during this period. Pedestrians and bicyclists will also experience detours and limited access during construction.

3.18.2 Mitigation

Construction impacts will be mitigated through implementation of control measures during construction. Mitigation measures will be included in the final plans and specifications. These measures include:

- Limit noise-generating construction activities to occur during daytime near residential areas to minimize noise impacts. Activities will be in accordance with the City of Missoula Noise Ordinance.
- Require the use of mufflers on construction equipment such that noise emitted is no louder than it would be if the equipment were purchased new.
- Require the use of appropriate dust suppression measures to minimize dust impact associated with the construction activities. This can include the use of dust palliatives, such as water or magnesium chloride.
- Sediment and erosion control methods, such as check dam, silt fences, sedimentation basins, temporary and permanent seeding along drainage routes and exposed areas will be employed with best management practices. Specific plans will be developed during final design and submitted as part of the MPDES permit.
- The contractor will prepare and implement an approved water quality control that identifies measures to be undertaken in the event of an accidental spill.
- The contractor and Contract Administrator will have weekly meetings with landowners to inform them about construction schedules, progress, driveway closures, detours, etc.
- Access will be provided to all residents and businesses during construction. When necessary temporary driveways will be constructed.
- Detour routes will be clearly identified and signing will be installed for businesses to enable the traveling public to have a convenient way to access the businesses along roads that are under construction.
- Weekly press releases will be prepared and distributed that identify weekly road closures.

- A suitable construction staging area will be used by the contractor to store materials and equipment within that area to minimize the visual impact.
- A Traffic Control Plan will be developed that minimize the disruption to traffic and access.
- Adequate public notice will be provided and coordination will be maintained with area residents to keep the public apprised of the construction progress and to warn of closures and detours.

3.19 Cumulative Impacts

Cumulative impacts are defined as impacts that result from the incremental impact of the action when added to other past, present and reasonable foreseeable future actions regardless of what agency (federal or non-federal) undertakes such other actions.

The following projects are within the vicinity of the Preferred Action:

- Reserve Street Striping
- South Missoula Storm Drain Project Phase II
- Brooks/Stephens Sidewalk Project
- Orange Street Bridge Project

The cumulative impacts of these projects are summarized as follows:

- The Reserve Street Striping Project is a four week project. There will be minimal disturbance of traffic patterns and this project will not have a cumulative impact.
- The South Missoula Storm Drain Project is being undertaken by the City of Missoula. The 39th Street/SW Higgins Avenue/S Higgins Avenue project discussed in this EA is located within the area of the Storm Drain Project. The Storm Drain Project will require the installation of pipes to collect storm water under the roadway. The City will fund the installation of the pipes which will be put in while the 39th Street/SW Higgins Avenue/S Higgins Avenue project is under construction. The construction schedule of the Storm Drain project is unknown. However, should the construction of the Storm Drain project occur during the construction period of the Preferred Alternative there may be a cumulative impact on the flow of traffic and may cause some delays to the traveling public beyond that of just the construction of the roadway itself. The roadway project is not dependent on the Storm Drain Project and therefore, there will be no cumulative impact should the construction of the Storm Drain project not coincide with the construction of the roadway. The cumulative impacts are short term during construction.

- The Brooks/Stephens Sidewalk Project will be under construction at the same time as the Preferred Alternative. Road closures will be required for the Preferred Action and will require detours through the Brooks/Stephens Sidewalk Project. Construction activities on both projects may have a cumulative impact on the flow of traffic and may cause some additional delays beyond each project individually to the travelling project. The cumulative impacts are short term during the construction period.
- Orange Street Bridge Project is currently under construction. This project involves the widening of Orange Street and the Orange Street Bridge over the Clark Fork River. This project is approximately 2 miles from the Preferred Alternative. Due to the distance there are no cumulative impacts associated with this project.

Cumulative impacts during construction will be minimized to the best extent possible. Specific measures that mitigate construction impacts and minimize cumulative effects are discussed in Section 3.18.2 of this document.

There are three additional projects scheduled in the City of Missoula: Brooks/South/Russell Intersection (construction 2003), Third Street – Russell to Reserve (construction 2004), and Russell Street from Mount to Broadway (construction 2006). The construction of these projects will be after the completion of the Preferred Alternative and, therefore there are no cumulative impacts associated with these projects.

4.0 Comments and Coordination

Several methods of communicating with the public were utilized during the course of this project. The goals of the project communication were to:

- Provide information regarding the project.
- Develop concepts and alternatives.
- Identify issues.
- Communicate ideas and concepts that are considered.
- Receive comments on the project and alternatives.
- Incorporate public comments into the project design.

4.1 Public Involvement Activities

The following is a description of the public involvement activities:

- Meetings with individual landowners were held throughout the project planning and design phases to discuss their concerns regarding right-of-way and project design. Neighborhood meetings and Neighborhood Council Meetings were held as requested by the community throughout project design.

- A public information meeting was held in September 1999 to introduce the project and obtain community input.
- An open house was conducted with the South Hills Neighborhood Association on March 17, 1999.
- An open house was held at the Meadow Hill School on January 19, 1999.
- An open house was held on December 8, 1999.

All of the open houses were advertised and well attended. The purpose was to discuss the various design options with the public and gain input. Issues raised and discussed at the open houses included: funding, on street parking, provision of bus shelters, project schedule, options associated with the irrigation ditches, construction schedule, delays to the traveling public while the roadway is under construction, location of bicycle lanes and paths, incorporation of signals into the project, need for lighting, drainage improvements, truck traffic, maintenance responsibility of sidewalks and boulevards, and provisions for safe pedestrian crossing.

The comments received at the open house meetings were considered and where feasible incorporated into the design.

The following public involvement activities are planned for the project:

- A Public Hearing will be held in April 2000.
- During construction of the Preferred Alternative the contractor and project engineer will hold weekly project status meetings. The purpose of the meetings will be to provide community members with a weekly schedule and jointly develop alternative access plans to all properties.

5.0 List of Agencies with Jurisdiction and/or Permits Required

The following permits will be required for the Preferred Alternative and will be obtained prior to any relevant disturbance.

- Montana Department of Environmental Quality, Water Quality Division - Section 402 NPDES/MPDES Permit
- Montana Habitat Protection Bureau Fisheries Division - Montana Stream Protection Act (SPA) permit – FG-124
- Missoula County Office of Planning and Grants – Floodplain Development Permit

6.0 List of Preparers

The following individuals had responsibility for preparing this document:

Name	Project Responsibility	Education/Experience
<i>Amy Zaref</i>	<i>Environmental Planner</i>	<i>B.A. Environmental Studies. Eighteen years of experience in planning and environmental impact assessment.</i>
<i>Mike F. Worrall, P.E.</i>	<i>Civil Engineer</i>	<i>BS, Civil Engineering. Fifteen years of experience in planning, design and construction of transportation facilities.</i>
<i>Jeremy Keene, E.I.T.</i>	<i>Civil Engineer</i>	<i>BS, Civil Engineering. Five years of experience in planning, design and construction of transportation facilities.</i>
<i>Jeff Anderson</i>	<i>Environmental Analysis</i>	<i>Forestry. Fifteen years of experience in environmental analysis.</i>
<i>Jeanette Lostracco, AICP</i>	<i>Environmental Review</i>	<i>BA, Geography; Masters of Business Administration. Twenty years of experience in environmental analysis.</i>
<i>Kathy McKay</i>	<i>Cultural Resource Evaluation</i>	<i>MA, American History. Nine years of experience in cultural resource inventories and assessments.</i>
<i>Robert Harris</i>	<i>Biological Memorandum</i>	<i>BS, Wildlife; BS, Fisheries. 22 years of experience in biological analysis.</i>

6.1 List of Other Agencies, Persons, or Groups Contacted or Have Contributed Information

Contacts were made with the following agencies or groups regarding this project:

- City of Missoula Police Department
- City of Missoula Engineering and Public Works
- City of Missoula Fire Department
- Members of the Missoula City Council
- Missoula Board of County Commissioners
- Missoula Transportation Policy Coordinating Committee (TPCC)
- City of Missoula Parks and Recreation Department
- Missoula Urban Transportation District (Mountain Line)
- City of Missoula Bicycle / Pedestrian Advisory Board
- City of Missoula Non-Motorized Transportation Committee
- Missoula Sheriff's Department
- Missoula Transportation Technical Advisory Committee (TTCC)
- Montana Department of Fish, Wildlife & Parks
- Missoula Chamber of Commerce
- Natural Resource Conservation Service (NRCS)

- US Fish and Wildlife Service
- US Army Corps of Engineers
- Montana Department of Transportation
- Montana Department of Environmental Quality
 - Solid and Hazardous Waste Bureau
 - Air Quality Bureau
 - Water Quality Bureau
- Missoula City/County Health Department
- Environmental Protection Agency
- Missoula Office of Planning and Grants
 - Floodplain Administration
 - Transportation Planning
- Montana State Historic Preservation Office
- Montana Natural Resource Information System and Natural Heritage Program
- University of Montana Facility Services
- Mountain Water Company
- Montana Power Company
- Missoula Public School District No. 1
- South Missoula Neighborhood Council
- Missoula Irrigation District

Appendix A
Agency Coordination Letters



CARTER & BURGESS

MAR 11 1999

RECEIVED

United States
Department of
Agriculture

Subject: Missoula City Project #95-062

Natural
Resources
Conservation
Service

Date: March 8, 1999

5115 Hwy 93 South
Missoula, MT 59804

To: Jeff Anderson
Carter-Burgess
PO Box 131487
Houston, TX 77219-1487

Dear Mr. Anderson,

I have reviewed the proposed reconstruction project with my office staff. We do not feel there are any significant environmental concerns relative to the project. There was a comment regarding impacts to the diverted stream and wetland on the north side of 39th Street between Stephens and Russell. However, if the reconstruction is within the existing roadway impacts to the wetland should be minimal.

Sincerely,

Neal Svendsen
Resource Soil Scientist

DEPARTMENT OF ENVIRONMENTAL QUALITY
CARTER & BURGESS

MAR 16 1999

RECEIVED

LEE METCALF BUILDING
1520 EAST SIXTH AVENUE

MARC RACICOT, GOVERNOR



STATE OF MONTANA

(406) 444-6697
fax (406) 444-6836

PO BOX 200901
HELENA, MONTANA 59620-0901

March 9, 1999

Jeff Anderson
Carter and Burgess, Inc.
PO Box 131487
Houston, TX 77219-1487

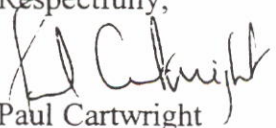
RE: Missoula Primary Sidewalk Network
39th Street/SW Higgins Avenue/South Higgins Avenue and South Avenue
City Project #95-062

Dear Mr. Anderson:

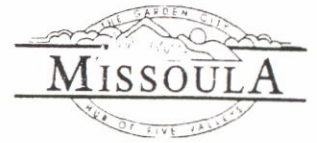
Thank you for the opportunity to offer comments for the preparation of the Draft Environmental Assessment. The project is from a conforming transportation plan, and therefore has undergone review for air quality impacts.

The EA should emphasize that designing sidewalks that attract use will maximize the air quality benefits of the project. Such design features would include boulevards to separate pedestrians from traffic and to provide room for snow storage. Boulevard trees should be planted wherever they would be appropriate, to stabilize traffic flow and to provide some security for pedestrians. Even the most narrow interpretation of AASHTO recommendations allows certain trees to be planted in the clear zone. Intersections require special attention since over 1/3 of urban pedestrian accidents in Montana happen at intersections (see attached table). Bulb-outs on side streets that have on-street parking provide safety for pedestrians and preserve the drivers' view of the intersecting street. Intersection treatments on the project streets are more difficult since the bike lane must be accommodated. Surface treatments are an easy solution. Raised intersections might be appropriate at some locations. If right turn lanes or slip lanes are necessary, they should be designed to minimize conflicts with pedestrians. Oregon Department of Transportation has done some design work in this area.

Respectfully,


Paul Cartwright
Senior Energy Analyst

enc.



CARTER & BURGESS

MAR 18 1999

RECEIVED

March 15, 1999

Jeff Anderson
Senior Environmental Planner
Carter & Burgess, Inc.
P.O. Box 131487
Houston, TX 77219-1487

Dear Mr. Anderson:

As we discussed on the phone, the City of Missoula project to reconstruct 39th St./SW Higgins Ave./South Higgins Ave. will require a Floodplain Development Permit. Most of this area is in an "AO Zone", which has flooding of depths from 1 to 2 feet. Currently, the grassy swales beside many stretches of the road provide flood storage and conveyance. Simply widening and curbing the road would likely contain much more of the water in the street itself, causing a greater disruption in transportation.

I understand that a storm drain system to convey floodwaters is proposed as part of this project. The permit application will need to show that this system adequately conveys the floodwaters and meets the requirements of the Federal Emergency Management Agency (FEMA) for such systems. I would be happy to work with you in the early stages of design to ensure that the project meets all permitting requirements.

If you have further questions, please call me at 523-4841.

Sincerely,

Brian Maiorano, Floodplain Administrator

MAR 22

RECEI



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 301 S. PARK, DRAWER 10096
HELENA, MONTANA 59626-0096

Ref:8MO

March 17, 1999

Mr. Jeff Anderson
Carter and Burgess, Inc.
P.O. Box 131487
Houston, TX 77219-1487

Dear Mr. Anderson:

We are in receipt of your letter regarding the Missoula Primary Sidewalk Network, City Project #95-062. This is to inform you that the Environmental Protection Agency does not have any comments regarding this project. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "John F. Wardell".

John F. Wardell
Director
Montana Office



DEPARTMENT OF ENVIRONMENTAL QUALITY & BURGESS
PERMITTING & COMPLIANCE DIVISION
WATER PROTECTION BUREAU

MAR 24 1999

Metcalf Building
1520 East Sixth Avenue
RECEIVED

MARC RACICOT, GOVERNOR



STATE OF MONTANA

Phone: (406)444-3080
Fax: (406)444-1374

PO Box 200901
Helena, MT 59620-0901

March 18, 1999

Jeff Anderson
Carter & Burgess, Inc.
Suite 300
Houston, Texas 77007-5833

RE: Request for DEQ Review and Determination of the Need for a Montana Pollution Discharge Elimination System Permit for Storm Water Discharge Associated with the Proposed City Of Missoula Primary Sidewalk Network Construction Project.

Dear Mr. Anderson:

The Department has reviewed the information provided on the 39th Street/Higgins Avenue/South Avenue roadway widening and walkway improvement project proposed for the City of Missoula, Montana. Based on the information provided-- addition of 14' wide turning lanes, 7' wide sidewalk, and 6' wide bike lanes over a linear distance of over 15,000' -- this construction project could require a Montana Storm Water Discharge Permit for Construction.

The following regulatory criteria are used to determine if a temporary construction project should apply for a Discharge permit under the State of Montana's General Storm Water Discharge Permit is:

- 1) the total area of soil and/or subsoil exposed by a project exceeds 5 acres, or
- 2) the total area of soil and/or subsoil exposed by a project exceeds 1 acre and any part of which is within 100 feet of state waters, or
- 3) the construction project has the real potential to degrade state water quality from storm water runoff if measures are not implemented.

Please be advised that should the project proceed without a permit and water quality standard violation occur, the project could be halted and monetary penalties assessed for negligent water quality violations.

Jeff Anderson
Page 2
March 18, 1999

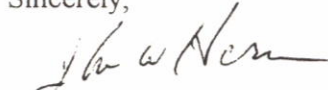
Other state of Montana Permits that could be required for the Missoula Primary Sidewalk Network project include:

Air Quality Permit -- DEQ Air and Waste Management Bureau (406-444-3490),
Solid Waste Permit -- DEQ Community Services Bureau (406-444-4400),
3A, 404, 310 Permits -- DEQ Water Permit Bureau (406-444-3080).

I will enclose a copy of the following storm water regulations and supporting information which should assist project managers in determining if the Missoula Primary Sidewalk Network project needs a storm water permit.

The Department will keep the supplied information on file.

Sincerely,



John W. Herrin
Water Quality Specialist
Water Protection Bureau

DEPARTMENT OF ENVIRONMENTAL QUALITY



MARC RACICOT, GOVERNOR

STATE OF MONTANA

(406) 444-2544

CARTER & BURGESS

PO BOX 200901
HELENA, MONTANA 59620-0901

March 30, 1999

APR - 5 1999

RECEIVED

Jeff Anderson
Carter & Burgess, Inc.
P.O. Box 131487
Houston, TX 77219-1487

Re: Missoula Primary Sidewalk Network

Dear Mr. Anderson:

I have reviewed the information you sent me concerning the above referenced site. I cross-referenced the property description you sent me against the known State Superfund, Water Quality Act (WQA), and Underground Storage Tank (UST) release sites in Missoula.

Our records do not indicate any State Superfund sites in the vicinity of the location you provided us. All of the UST and leaking UST (LUST) sites on Higgins Street are enclosed on two lists. Also enclosed is a list of all the WQA sites in Missoula; none appear to be near your project.

Please be aware that our information may not be complete and new sites are discovered every day. It is possible that contamination may be present at a location that we are not yet aware of. If you encounter soil or groundwater contamination during construction of your project, please call our office at (406) 444-5970 to report it.

If you would like additional information about any specific site, feel free to call me at (406) 444-5977.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Trombetta", written over a horizontal line.

Michael J. Trombetta
Chief, Hazardous Waste Site Cleanup Bureau

Environmental Services
Montana Department of Transportation
Helena, MT 59620-1001

MASTER FILE
COPY

Memorandum

To: File

From: Jon Axline, historian *JA*
Cultural Resources Section

Date: September 13, 1999

Subject: CM 8199(31)
39th Street & SW Higgins Ave. - Missoula
Control No. 3140

At the request of Carter-Burgess, I conducted a windshield survey today to determine if a cultural resource survey is necessary for the above CMAQ project. The project includes the expansion of 39th and SW Higgins to a three lane roadway with bike lanes, curbs, sidewalks, and a center turn lane. New right-of-way would be required for the project.

The windshield survey of the proposed project area consisted of primarily new residences and commercial buildings (built since after 1960). The residences near the intersection of SW Higgins and South Avenue were a little older (circa post-1955). None of the residences, business, and commercial properties within the project area are old enough to qualify for National Register of Historic Places consideration. **No cultural resource survey for the above project is required.**

If there are any questions, please contact me at 6258.

JAA:env

cc: Carl Peil, P.E., Preconstruction Bureau
Karl Helvik, P.E., Engineering Bureau
Gordon Stockstad, Resources Bureau

Appendix B

Montana Division “Nationwide” Section 4(f) Evaluation

Appendix B

Montana Division “Nationwide” Section 4(f) Evaluation

MONTANA DIVISION
 "NATIONWIDE" SECTION 4(f) EVALUATION
 FOR MINOR USAGE OF
 PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
 WATERFOWL REFUGES

Project #95-062 _____, (P.M.S. CM# 8199(31) Contol #3140) Date: 12/22/99

Project Name: 39th Street/SW Higgins Avenue/S Higgins Avenue Location: Missoula

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

	<u>YES</u>	<u>NO</u>
1. Is the 4(f) site adjacent to the existing highway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Does the amount and location of the proposed impact area impair the use of the remaining Section 4(f) land for its intended purpose?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Does the proposed project require more than a <u>minor</u> amount* of the Section 4(f) site for Right-of-Way?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Are there any proximity impacts which would impair the use of the 4(f) lands for their intended purpose (defined as "constructive use")?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Have the officials with jurisdiction over the property agreed <u>in writing</u> with the assessment of impacts and the proposed mitigation? (Correspondence attached)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Have Federal funds — such as the <i>National Land & Water Conservation Fund - Section 6(f)</i> — been used for the acquisition of, or improvements to the 4(f) site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If <u>yes</u> — has the land conversion/transfer been coordinated with the appropriate Federal agency, (12) (name) — and are they in agreement?	—	<input type="checkbox"/>
7. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Is the proposed project on a new location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. The Scope-of-Work for the proposed project is one of the following:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) Improved traffic operation;		
b) Safety improvements;		
c) 3R;		
d) Bridge replacement on essentially the same alignment; or		
e) Addition of lanes.		

*NOTE: MDT's guidelines for "minor amounts" of Right-of-Way (including Construction Permits) are limited to either 10% of a parcel under 10 hectares (25 acres), or 1% of a parcel equal to or greater than 10 hectares (25 acres) in size.

NOTE: Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.

ALTERNATIVES CONSIDERED

YES NO

- 1. The "do-nothing" **ALTERNATIVE** has been evaluated, and is not considered to be feasible and prudent. X
- 2. An **ALTERNATIVE** has been evaluated which improves the highway without any 4(f) impacts, and is also not considered to be feasible and prudent. X
- 3. An **ALTERNATIVE** on a new location avoiding the 4(f) site has been evaluated, and is not considered to be feasible and prudent. **(Not applicable for this project due to project purpose and funding as discussed in the EA)** —

MINIMIZATION OF HARM

- 1. The proposed project includes all possible planning to minimize harm. X
- 2. Measures to minimize harm include the following:
 - a) Replacement of the lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value. ___ X___
 - b) Replacement of facilities impacted including sidewalks, paths, benches, lights, trees, and other facilities. ___ X___
 - c) Restoration/landscaping of disturbed areas. ___ X___
 - d) Special design features. X___
 - e) Payment of, or improvements to the remaining 4(f) lands equal in cost to fair market value. ___ X___
 - f) Other measures. ___ X___

COORDINATION

- 1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the 4(f) lands. X
List:

City of Missoula Parks Department 12/22/99

- 2) In the case of non-federal 4(f) lands, the official with jurisdiction has been asked to identify any Federal encumbrances — and none exist. X
- 3) Coordination with the U.S. ARMY - Corps of Engineers has been completed, or a *Section 404* Permit (if applicable) is pending. X

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" Section 4(f) Evaluation approved on December 23, 1986, and is submitted pursuant to 49 U.S.C. 303.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.



Terry Yager
Engineering Bureau Chief
Environmental Services

Date: 3/17/00

Approved:



Federal Highway Administration

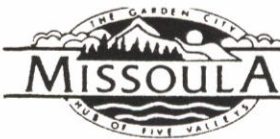
Date: 4-7-2000

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

JMM

Attachments

cc: J.Weaver, P.E. - Missoula District Administrator
Carl S. Peil, P.E. - Preconstruction Engineer
Joseph P. Kolman, P.E. - Bridge Engineer
Thomas E. Martin, P.E., Right-of-Way Bureau Chief
David W. Jensen, Supervisor - Fiscal Programming Section
Mark A. Wissinger, P.E., Supervisor - Contract Plans Section
Joel M. Marshik, P.E., Manager - Environmental Services



PARKS AND RECREATION DEPARTMENT

100 HICKORY • MISSOULA, MT 59801-1859 • (406) 721-7275

RECEIVED

JAN 17 2000

MISSOULA, MT 59801

January 6, 2000

Jim Weaver
District Engineer
P.O. Box 7039
Missoula, MT 59807-7039

Dear Mr. Weaver,

The City of Missoula Parks and Recreation Department reviewed the 39th Street and Southwest Higgins Ave Restoration Project with Brent Campbell, WGM group and Steve King, City Engineer on December 23, 1999. We toured the site of the proposed project adjacent to the existing undeveloped City parkland at the corner of Paxson Street and 39th Street. The Missoula Parks and Recreation Department agrees with the assessment of impacts to the City parkland at this location and to the proposed mitigation for those impacts which include stripping and stockpiling the topsoil, raising the elevation of the parkland west of the diagonal irrigation ditch to no higher than the adjacent sidewalk level, grading to provide adequate drainage, filling low areas east of the diagonal irrigation ditch, preserving the existing stand of trees, and generally making the area usable for informal active sports such as soccer. The placement of the existing irrigation ditch adjacent to 39th Street in an underground pipe and the above mentioned proposed filling and grading of the park will result in a beneficial enhancement to the park property.

Thank you for the opportunity to provide input into this project. Please contact me prior to work within the parkland so the Parks and Recreation Department's urban forestry staff can take measures to protect the existing stand of trees.

Sincerely,

Jim Van Fossen
City Parks and Recreation Director

Cc: Steve King, City of Missoula
Brentt Campbell, WGM group
Amy Zaref, Environmental Planner, Carter & Burgess
Dan Rogers, Urban Forester



Appendix C

Recipients of the Environmental Assessment

APPENDIX C

Recipients of the Environmental Assessment

The following agencies, groups and individuals are receiving a copy of the Environmental Assessment:

- City of Missoula Bicycle/Pedestrian Coordinator
Attn: Phil Smith
534 Ryman Street
Missoula, Montana 59802
- City of Missoula Fire Department
200 West Pine
Missoula, Montana 59802
- City of Missoula Non-Motorized Transportation Committee
c/o Feet First
123 West Spruce
Missoula, Montana 59802
- City of Missoula Parks and Recreation Department
100 Hickory
Missoula, Montana 59801
- City of Missoula Police Department
435 Ryman
Missoula, Montana 59802
- Missoula Irrigation District
Attn: Raymond P. Tipp
2200 Brooks
Missoula, Montana 59801
- City of Missoula City Council
435 Ryman
Missoula, Montana 59802

- City of Missoula Public Works Department
435 Ryman
Missoula, Montana 59802
- Missoula Urban Transportation District
1221 Shakespeare
Missoula, Montana 59802-2307
- Missoula Board of County Commissioners
200 West Broadway
Missoula, Montana 59802
- Missoula Chamber of Commerce
825 East Front
Missoula, Montana 59802
- Missoula City/County Health Department
301 West Alder
Missoula, Montana 59802
- Missoula County School District
438 W. Spruce
Missoula, Montana 59802
- Missoula Office of Planning and Grants
435 Ryman
Missoula, Montana 59802
- Missoula Sheriff's Department
200 West Broadway Street
Missoula, Montana 59802
- Montana Department of Environmental Quality
Air Quality Bureau
Cogswell Building
1400 Broadway
Post Office Box 200901
Helena, Montana 59620-0901

- Montana Department of Environmental Quality
Solid and Hazardous Waste Bureau
Cogswell Building
1400 Broadway
Post Office Box 200901
Helena, Montana 59620-0901
- Montana Department of Environmental Quality
Water Quality Bureau
Cogswell Building
1400 Broadway
Post Office Box 200901
Helena, Montana 59620-0901
- Montana Department of Natural Resources and Conservation
2705 Spurgin Road
Missoula, Montana 59803
- Montana Department of Fish, Wildlife and Parks
3201 Spurgin Road
Missoula, Montana 59801
- Montana Natural Heritage Program
1515 East Sixth Avenue
Post Office Box 201800
Helena, Montana 59620-1800
- National Resource Conservation Service
5115 Highway 93 South
Missoula, Montana 59801

- State Historic Preservation Office
Montana Historic Society
1410 8th Avenue
Post Office Box 201202
Helena, Montana 59620-1202
- U.S. Department of the Army Corps of Engineers
Omaha District
1520 East 6th Avenue
Helena, Montana 59620-2301
- U.S. Department of the Interior
Fish and Wildlife Service
Ecological Services
100 North Park, Suite 320
Helena, Montana 59601
- U.S. Environmental Protection Agency
Region VIII
999 18th Street, Suite 500
Denver, Colorado 80202-2466
- Lewis & Clark Elementary School
2901 Park Street
Missoula, Montana 59801
- Meadow Hills Elementary School
4210 Reserve Street
Missoula Montana 59803
- University of Montana
Attn: Hugh Jesse, Director, Facility Services
Building 32 (Physical Plant)
Missoula, Montana 59812-1371