



3.0 AFFECTED ENVIRONMENT

This chapter describes the existing social, economic, and environmental conditions in the Russell Street and South 3rd Street corridors. The information in this chapter serves as the baseline for assessing impacts associated with the proposed reconstruction and widening of Russell Street from Mount Avenue to West Broadway Street, and South 3rd Street from Russell Street to Reserve Street. Chapter 4 – Environmental Consequences and Mitigation – documents the analysis of social, economic, and environmental consequences of the proposed action in relation to the existing baseline.

Guidance provided by the National Environmental Policy Act (42 United States Code 4332(2)(c)), Montana Environmental Policy Act (§ 2-2-104 and § 75-1-201 Montana Code Annotated), the Federal Highway Administration (Technical Advisory 6640-8A), and the Montana Department of Transportation identified issues of concern that require analysis. The following issue areas are traditionally reviewed in an Environmental Impact Statement and are documented in this chapter:

- Land Use
- Farmlands
- Social Conditions
- Economic Conditions
- Parks and Recreation
- Pedestrian and Bicycle Facilities
- Air Quality
- Noise
- Water Quality
- Wetlands
- Water Bodies and Wildlife Resources
- Floodplains
- Threatened and Endangered Species
- Historic and Cultural Resources
- Hazardous Materials
- Visual Resources

3.1 Land Use

This section describes existing land use and zoning patterns in the project area. Applicable City land use policies and comprehensive plans are also discussed. City land use policies, comprehensive plans, and zoning information were reviewed to determine existing land uses in the project area.

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Existing Land Uses

The Russell Street corridor can be characterized as commercial/light industrial in the southern portion from Mount Avenue to the railroad crossing at Ronan Street, primarily residential from the railroad north to South 3rd Street, and commercial/retail from South 3rd Street north to West Broadway Street. South 3rd Street is primarily commercial with pockets of high-density residential from Reserve Street to Russell Street.

Two large infill sites are also located in or near the study area. The old Intermountain Lumber site (Market Square) is a large parcel that fronts Russell Street on the west side, south of Dakota Street. This site is currently planned for major redevelopment as a mixed use retail/office/residential development. The Champion Mill site is also located near the project area and also has plans for a mixed use development and would have roadway network and trail connectivity to the Russell Street and South 3rd Street corridors.

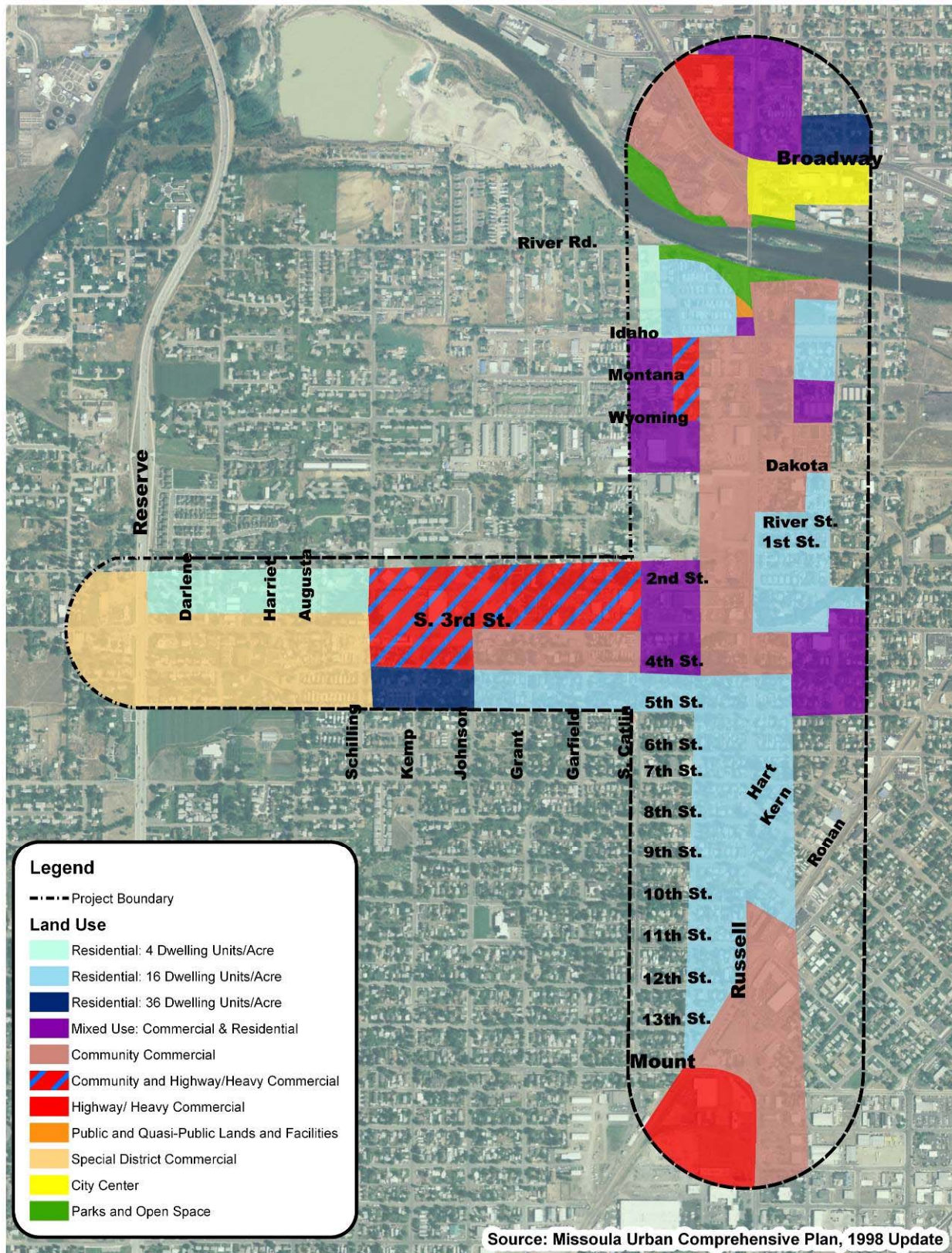
The following provides a general description of the types of uses in these corridors. Figure 3-1 illustrates the existing zoning in the study area.

- **Residential Use** - Most residences in the project area are single-family structures, but there are multi-family structures including duplexes, triplexes, and four- to eight- unit structures along both corridors. Three mobile home courts are located within the study area along South 3rd Street.
- **Commercial and Retail Use** - Commercial and retail activity in the study area provide retail goods and services to the surrounding residential area. The project area supports a variety of businesses that are primarily small and locally owned. Businesses located within the project area include a beverage distribution warehouse, car dealerships, construction and home improvement businesses, gas stations, small markets and grocery stores, professional offices, an auto body service and supply, restaurants, and hotels.
- **Public Lands and Facilities** - Land ownership within the project area is primarily private; however, the City has designated two small public parks in the project corridor, Hart Park and Kern Park. The proposed project also intersects three trail systems: the Shady Grove Trail, the Milwaukee Corridor Trail, and the Bitterroot Branch Trail. (These resources are discussed in more detail in the *Parks and Recreation* section).

The City of Missoula has designated a small area of land south of the Russell Street Bridge and on the west side of Russell Street as public land. This property is zoned P-II: Public Lands and Institutions District. The City of Missoula has also preserved a narrow strip of land on each side of the Clark Fork River, which includes the Shady Grove Trail, as an “area of riparian resource” for the benefit of the public.



**Figure 3-1
Land Use**



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Local Land Use Policies and Regulations

The *Missoula Urban Comprehensive Plan–1998 Update* is a policy document intended to provide the City, County, and other agencies and districts with a coordinated guide for long-term change. The Plan provides planning and regulatory tools to achieve a countywide pattern of community building, land use, and conservation that reflects the environmental, economic, aesthetic, health and social values of the Missoula County residents. The neighborhood between Russell Street, South 3rd Street, Reserve Street and the Clark Fork River completed an *Infrastructure Plan* in 2004 as an amendment to the *Missoula Urban Comprehensive Plan–1998 Update*. The *Infrastructure Plan* is primarily an inventory of existing infrastructure and a review of potential linkages between trails, parks, and roads.

Land uses identified in the *Missoula Urban Comprehensive Plan–1998 Update* for the study area are visually represented in Figure 3-1 and include (in order from most to least prevalent) residential, community commercial, community and highway/heavy commercial, mixed use: commercial and residential, special district commercial, public and quasi-public lands and facilities, and parks and open space.

A portion of the proposed project is located within Urban Renewal District 2, which is one of six sub-districts of the proposed City Center District as defined in the *Missoula Urban Comprehensive Plan–1998 Update*. The City Center District concept, presented in the plan, is intended to encourage continued commitment to renovation of Missoula's urban core.

Zoning in the Study Area

Zoning within the study area is regulated primarily by the Missoula City Zoning Ordinance (Title 19). However, the parcel containing the Pink Grizzly Nursery, located on the east side of Russell Street between Wyoming Street and Montana Avenue, is governed by County zoning. Residential, commercial, and mixed-use zones predominate, and these zones are moderately fragmented throughout the study area, as opposed to consisting of large contiguous areas of uniform zoning.

As described in the *Reserve Street Area Plan 1995 Update*, a Special District #2 zoning district was created along Reserve Street, generally between South 3rd Street and South Avenue West. This special zoning ordinance was created to “discourage the aesthetic and functional pitfalls of strip commercial development and, instead, foster a healthy mix of residential and light commercial activities along the heavily traveled roadway.” The City Special District #2 Ordinance affects several properties along South 3rd Street, and is intended to promote a wide range of land uses including residential, business offices, and other commercial activities.



3.2 Farmlands

Based on consultation with the Missoula office of the Natural Resource Conservation Service, the study area does not contain lands designated as “prime, unique or statewide important farmland” that would be eligible for protection under the Federal Farmland Protection Act. The Russell Street and South 3rd Street study area is designated urban land by the Natural Resource and Conservation Service, and therefore the provisions of the Federal Farmland Protection Act do not apply. No further analysis of farmland conditions or impacts will be conducted for this proposed project.

3.3 Social Conditions

This section provides an overview of the general social conditions in the study area including population, demographics, community facilities, and parks and recreational facilities.

Population

As shown below in Table 3.1, the U.S. Census Bureau reported Missoula County’s population in 2010 as 109,299, up from 95,802 in 2000 and 78,687 in 1990. Annual population growth in Missoula County averaged 1.99 percent from 1990 to 2000 and 1.41 percent from 2000 to 2010. The population of the City of Missoula was 66,788 in 2010, up from 57,053 in 2000 and 42,918 in 1990. The average annual growth rate for the City of Missoula was much greater than that for Missoula County during the period 1980 to 1990. Between 1990 and 2000, however, the average annual growth rate for the County (1.99 percent) was much closer to that for the City (2.89 percent); the same trend being true between 2000 and 2010 with the County having an average growth rate of 1.41 percent and the City with a growth rate of 1.71 percent.

Table 3.1
Missoula County and City of Missoula Population Growth, 1980-2010

Area	Total Population 1980	Total Population 1990	Total Population 2000	Total Population 2010	Average	Average	Average
					Annual Growth Rate (%) 1980- 1990	Annual Growth Rate (%) 1990- 2000	Annual Growth Rate (%) 2000- 2010
Missoula County	76,016	78,687	95,802	109,299	0.35	1.99	1.41
City of Missoula	33,388	42,918	57,053	66,788	2.54	2.89	1.71
Project Area ^a	N/A	18,896	21,313	24,622	N/A	1.21	1.55

Source: U.S. Census Bureau, 1990, 2001a., 2010

^a Includes Census tracts 2.01, 7, 8, 10, and 11.

Minority and Low-Income Populations

Data related to the racial composition of the State of Montana, Missoula County, the City of Missoula, and the project area were obtained on-line from the U.S. Census Bureau and are based

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on the 2010 Census. Table 3.2 below illustrates that the population of the project area (Census Tracts 2.01, 7, 8, 10, and 11) has slightly greater racial diversity than the City of Missoula as a whole. Larger populations of Native Americans and people of Hispanic or Latino descent account for this difference in racial composition. As shown in Table 3.2 below, the population of the project area has slightly less racial diversity than the state of Montana because the Native American population is higher for the state as a whole.

Table 3.2
Racial Composition

	State of Montana ^a	Missoula County	City of Missoula ^a	Project Area ^a
White	884,961 89.4%	101,320 92.7%	61,534 92.1%	22,361 90.8%
Black	4,027 0.4%	445 0.4%	352 0.5%	144 0.6%
Native American	62,555 6.3%	2,872 2.6%	1,838 2.8%	976 4.0%
Asian	6,253 0.6%	1236 1.1%	809 1.2%	197 0.8%
Native Hawaiian	668 0.1%	105 0.1%	69 0.1%	32 0.1%
Hispanic or Latino	28,565 2.9%	2,861 2.6%	1,943 2.9%	864 3.5%
Other	5,975 0.6%	478 0.4%	334 0.5%	126 0.5%
Total	989,415	109,299	66,788	24,622

Source: U.S. Census Bureau, 2010

^a Percentages add to more than 100 percent due to rounding.

As documented in Table 3.3, the estimated percentage of the study area population living below the poverty level in 2009 was 27.0 percent compared with 23.7 percent for the City of Missoula. The poverty rate in Missoula County was 18.2 percent, while the percentage for the state was slightly lower at 14.7percent.

Table 3.3
Estimated Percent of Population Below the Poverty Level

Poverty Level	Montana Percent of Total	Missoula County Percent of Total	City of Missoula Percent of Total	Project Area Percent of Total
Above	85.3	81.8	76.3	73.0
Below	14.7	18.2	23.7	27.0
Total	100.0	100.0	100.0	100.0

Source: U.S. Census Bureau, 2005-2009 American Community Survey 5-Year Estimates

Note: Due to the progressive release of 2010 Census Information, 2010 decennial census poverty data was not available during the drafting of the EIS.

Executive Order 12898, issued in February 1994, directs all Federal agencies to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate,



disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations in the United States . . .” It is not uncommon for low-income residential areas to be located closer, or adjacent to, highway and major arterial corridors. There are two Section 8 housing units and a mobile home park within the study area that represent likely clusters of lower income residences than the remainder of the corridor, and likely affect the poverty level data presented above. In the interest of privacy, potentially impacted residences were not surveyed to identify their individual status within any disadvantaged group; however an assessment of disproportionate impacts on low income and minority populations is made in Chapter 4 of this document based on this Executive Order.

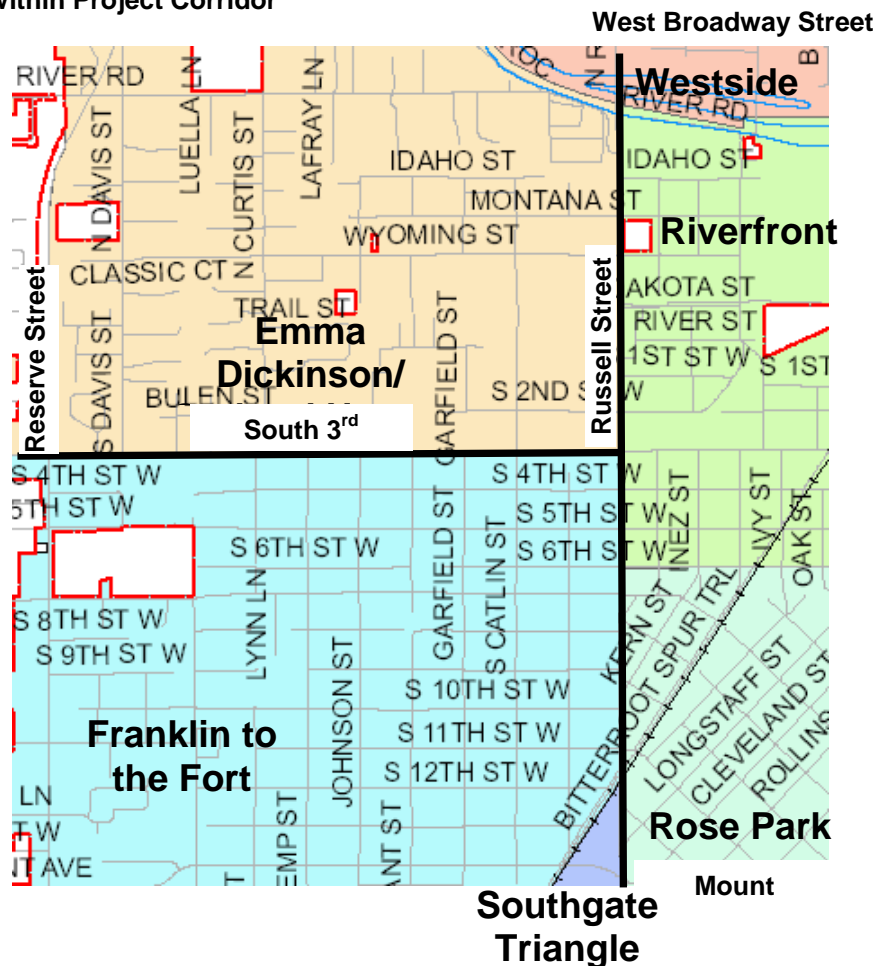
Community and Public Facilities

The project study area lies within six neighborhoods in the City of Missoula as shown in Figure 3-2. Russell Street has historically identified the western edge of the River Front and Rose Park neighborhoods, and the eastern edge of the Emma Dickinson/Orchard Homes, Franklin to the Fort, and the Southgate Triangle neighborhoods. Additionally, South 3rd Street forms the southern edge of the Emma Dickinson/Orchard Homes neighborhood, and northern edge of the Franklin to the Fort neighborhood.

In addition to the six neighborhoods identified above, the study area also forms the edge of three elementary school districts (Franklin, Hawthorne, and Paxson), two middle school districts (C.S. Porter and Washington), and two high school districts (Big Sky and Hellgate). Russell Street and South 3rd Street serve as the jurisdictional boundaries between each of these districts. The Hellgate District is the only school district that crosses Russell Street within the project area, and only does so for a small segment between Mount Avenue and South 7th Street.

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Figure 3-2
Neighborhoods within Project Corridor



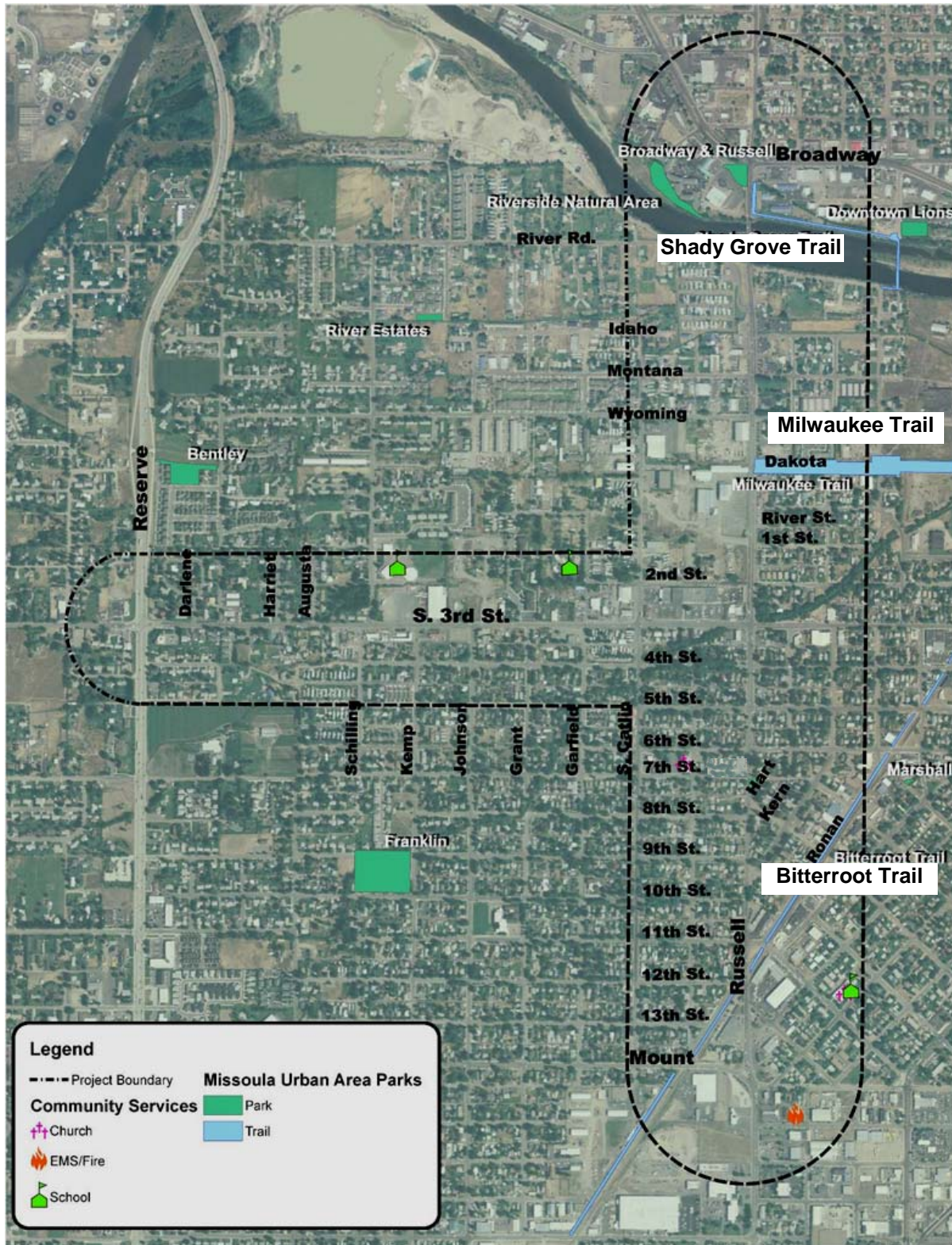
The study area contains several facilities providing public services including schools, churches, emergency services, and medical care. The project area is also served by the Missoula Fire Department, who provides fire suppression and emergency medical response, technical and rope rescue, river rescue, fire investigations, non-emergency public service calls, public education, and code enforcement within the city limits.

The Missoula Fire Department operates five stations within the City of Missoula and crews respond to emergencies depending on the proximity of station location to the location of the emergency and the availability of crews. Fire station 2 (located at 247 Mount Avenue) typically responds to emergencies on Russell Street from Mount Avenue to South 3rd Street. Fire station 4 (located at 3011 Latimer Street) typically responds to emergencies on Russell Street from South 3rd Street to West Broadway Street, and on South 3rd Street from Russell Street to Reserve Street.

Figure 3-3 illustrates the location of these facilities within the study area. While none of these facilities are located immediately on either Russell Street or South 3rd Street, the route provides primary access to and from these community and public facilities within this part of the city.



**Figure 3-3
Community and Public Facilities, and Parks and Recreation Areas**



3.4 Economic Conditions

In general, Missoula County's economy grew faster than that of the state as a whole. In addition, the United States Department of Labor, Bureau of Labor Statistics reported the annual average unemployment rate for Missoula County decreased from 6.0 percent in 1990 to 4.0 percent in 2000 and increased to 7.3 percent in 2010. The average unemployment rate in Missoula County for January through May of 2011 was approximately 7.9 percent.

Employment

For the past two decades employment in Missoula County has grown more quickly than that for the nearby counties. According to the United States Department of Labor, Bureau of Labor Statistics, as of May 2011, the unemployment rate in Missoula County was 6.9 percent, up from 3.6 percent in May 2000. Annual unemployment rates in 2010 for three nearby counties, Mineral, Sanders and Ravalli counties, were 11.5 percent, 14.6, and 9.7 percent, respectively.

Housing

According to data gathered by the Missoula Organization of REALTORS® between May 2006 and May 2011, the median price of homes sold in Missoula and the immediate suburban areas in the month of May remained nearly the same at \$197,500 to \$197,777. The total annual number of home sales decreased to 830 in 2010, compared to 1443 in 2006.

Information on rents was obtained from the U.S. Census Bureau 2005-2009 American Community Survey Estimates. The estimated median gross rent for the project area is \$677, which is slightly higher than the median gross rent for the City of Missoula (\$659), but slightly lower than that of Missoula County (\$683). Median rents for the state of Montana are lower (\$613) than those found in the Missoula area.

3.5 Parks and Recreation

Three publicly owned trail facilities and two passive parks are located within the project area and are discussed below. Figures 3-3 illustrates the location of area parks and trails in the project corridor.

Bitterroot Branch Trail - Within the project corridor, the Bitterroot Branch Trail is located within a portion of the railroad right-of-way adjacent to the active rail route operated by Montana Rail Link. The two mile trail extends from Hickory Street near McCormick Park, across Russell Street to McDonald Street. The Bitterroot Trail Committee, a group of citizens and staff from local and state agencies, formed in 2008 to work on extending the trail from its current terminus at McDonald Street to an existing trail south of Lolo via an undetermined route. The trail is maintained by the City of Missoula Parks Department. Portions of the trail outside of the railroad right-of-way are owned by the City of Missoula. There is an existing at-grade crossing at the intersection of the Bitterroot Branch Trail at Russell Street. Striping is painted on Russell Street, and warnings signs have been placed at the crossing to alert motorists that bicycles and pedestrians cross at the intersection.



Milwaukee Corridor Trail - The Milwaukee Corridor Trail lies within the abandoned corridor of the Milwaukee Railroad between Russell Street, near the Dakota Street intersection, and Hickory Street. A commuter trail paralleling the old Milwaukee line is the major east/west non-motorized transportation connection as listed in the Non-Motorized Transportation Plan, the Missoula Urban Area Open Space Plan, and the Master Parks & Recreation Plan for the Greater Missoula Area. On a larger scale, the old railroad presents an opportunity to create a rail-trail that could cross the entire State of Montana connecting to Milwaukee rail-trails in Idaho and Washington. The existing trail begins at Russell Street and extends approximately 4.5 miles east on the south side of the Clark Fork River ending south of East Missoula. The Parks Department is currently working to extend the trail east to Bonner and west into the Mullan area. The trail, is an important component of the Missoula Bicycle Commuter Network, and intersects the Bitterroot Branch Trail near McCormick Park, which serves as a hub of Missoula's trail system. The City of Missoula owns the trail and plans to extend the Milwaukee Corridor Trail west of Russell Street, to Reserve Street and the Clark Fork River, but plans are contingent on agreements with landowners in the area. The existing trail ends approximately 200 feet east of Russell Street and connects to Wyoming Street. Milwaukee Corridor Trail users who continue west cross Russell Street at the intersection of Russell Street and Wyoming Street.

Shady Grove Trail - The Shady Grove Trail is located parallel to the east side of Russell Street north of the Clark Fork Bridge. The trail turns east and extends approximately one-half mile along the riverfront to Burton Street. The City of Missoula owns the Shady Grove Trail and plans to formally extend the trail under the Russell Street Bridge. Current under-crossings are shown in the photos below.



Passive Green Spaces - The City of Missoula owns and maintains Kern and Hart Parks as passive green space. Kern Park is adjacent to the Bitterroot Branch Trail between Knowles and Russell Streets and is approximately 3,600 square feet in size. Hart Park is located adjacent to Russell Street at its intersection with Hart Street and is approximately 5,663 square feet. As these parks serve limited recreational purpose and are not significant to the City's recreational program due to their small size and location next to Russell Street, they are not protected by Section 4(f) of the U.S. Transportation Act (See Appendix E for Parks Department Concurrence).

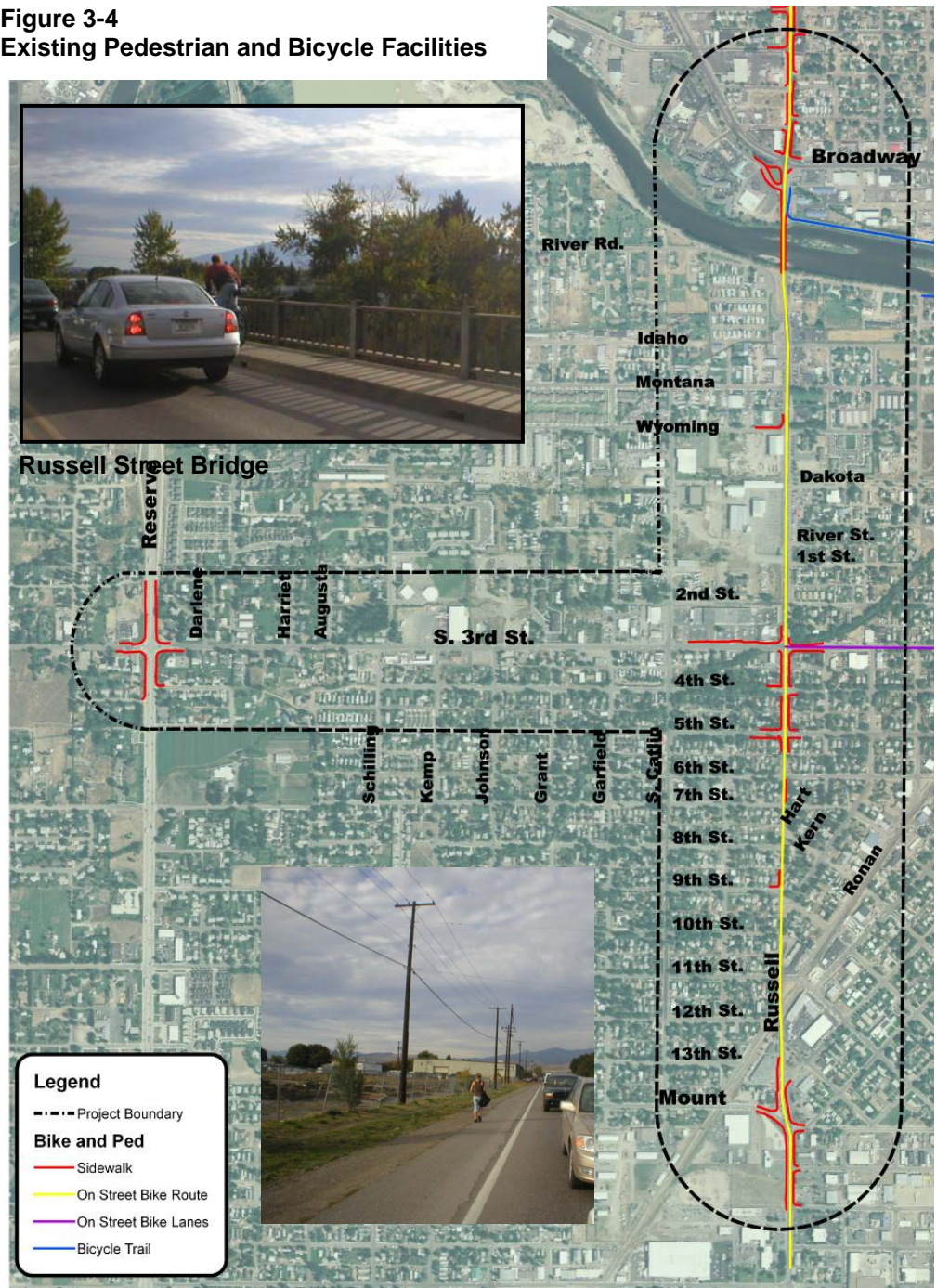
3.6 Pedestrian and Bicycle Conditions

This section describes the existing bicycle and pedestrian conditions in the study corridor. The condition of the existing bicycle and pedestrian facilities are based on observations, the 2004 *Missoula Transportation Plan Update*, and comments received during public involvement activities for this project.

Russell Street

Sidewalks are intermittent throughout the Russell Street corridor as illustrated in Figure 3-4. Pedestrian crossing facilities, including pedestrian signals, and handicapped accessible curb ramps, are located at the signalized intersections at Mount Avenue/South 14th Street, South 5th Street, South 3rd Street, and West Broadway Street. Russell Street is designated as an on-street bicycle route, and does not have bicycle lanes. Russell Street does have a paved shoulder from Mount Avenue/South 14th Street to South 5th Street on both sides of the street. There are also shoulders from South 3rd Street to the Clark Fork Bridge. The bridge has sidewalks on both sides. There are no paved shoulders on the north side of the bridge.

Figure 3-4
Existing Pedestrian and Bicycle Facilities





South 3rd Street

South 3rd Street has no designated bicycle or pedestrian facilities, except for crosswalks at two signalized intersections and at the intersections with Curtis and Catlin Streets. The signalized intersections are handicapped accessible, including curb ramps at all crossings. South 3rd Street has paved shoulders along both sides of the street from Curtis Street/ Schilling Street to Russell Street. There are no paved shoulders from Curtis Street to Reserve Street and there is a narrow paved shoulder on the south side of the street from Reserve Street to Schilling Street.

3.7 Air Quality

Air quality non-attainment and maintenance areas, such as the Missoula Metropolitan planning area, are subject to an air quality conformity determination by the Metropolitan Planning Organization, Federal Highway Administration and Federal Transit Administration in accordance with Federal Clean Air Act requirements, Environmental Protection Agency conformity regulations, Federal transportation planning requirements and State of Montana air quality rules, as pertain to conformity. The Clean Air Act was passed by Congress in 1970, amended in 1977 and again in 1990. The Clean Air Act of 1970 established six criteria pollutants for which the US Environmental Protection Agency was required to set National Ambient Air Quality Standards. These national air quality standards are federal health-based standards that set allowable concentrations and exposure limits for each of these six pollutants. Among these six are carbon monoxide and particulate matter.

The Environmental Protection Agency, Department of Environmental Quality, and the Missoula City-County Health Department regulate concentration of pollutants in the outdoor air and contaminant emissions from air pollution sources. Environmental Protection Agency standards are generally used to determine limits for pollutant concentration levels unless local standards are more stringent. The Missoula City-County Health Department maintains several monitoring stations in the City of Missoula that are located where air quality problems have the highest potential to occur. Data are collected at monitoring stations for a number of years and are used as a basis to determine whether air quality standards are met. The Department of Environmental Quality and the Environmental Protection Agency designate regions as being either attainment or non-attainment areas for each individual air pollutant. Attainment status is a measure of whether air quality in an area complies with the National Ambient Air Quality Standards.

The 1977 amendments defined “non-attainment” areas as localities where air pollution levels persistently exceed the National Ambient Air Quality Standards and require the development of State Implementation Plans that contain procedures to monitor, control, maintain, and enforce compliance with the National Ambient Air Quality Standards. Once the area can demonstrate consistent and projected compliance with the National Ambient Air Quality Standards, a petition may be submitted to the Environmental Protection Agency for redesignation as an attainment area under a maintenance plan. The Environmental Protection Agency may grant the petition dependent upon the submittal of a maintenance plan which will ensure that there are no future exceedances of the National Ambient Air Quality Standards. Upon approval, the area is then considered a maintenance area.

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The Transportation Conformity Rule of 1993 was developed as required by the Clean Air Act Amendments of 1990. This rule established the criteria and procedures by which the Federal Highway Administration, the Federal Transit Administration, and metropolitan planning organizations determine the conformity of federally funded or approved highway and transit plans, programs, and projects to existing State Implementation Plans. According to the Clean Air Act Amendments, federally supported activities must conform to the implementation plan purpose of attaining and maintaining the National Ambient Air Quality Standards.

Carbon Monoxide

Missoula was designated as a non-attainment area for carbon monoxide in 1978 because of repeated violations of the 8-hour average National Ambient Air Quality Standards in 1977 and early 1978. Most of the problem centered on a congested intersection, known as “Malfunction Junction,” where three major streets (Brooks Street, South Street and Russell Street) come together. Residential wood burning is also another major contributor to violations. The community took several steps to reduce the ambient levels of carbon monoxide, including intersection changes, woodstove regulations, and outdoor burning regulations. Missoula also relied on the federal motor vehicle emission reduction program to reduce carbon monoxide emissions. However, Missoula continued to violate the National Ambient Air Quality Standards until 1992, when it was required to implement an oxygenated fuels program during November, December, January, and February. Since the fuels program began in November 1992, Missoula has not recorded a violation of the National Ambient Air Quality Standards.

Between 1990 and 2000, carbon monoxide emissions in the Missoula area decreased by 40 percent. The biggest reductions were from on-road motor vehicles and woodstoves. However, in 2000, these two sources still represented over 95 percent of the carbon monoxide emissions in the non-attainment area. The remaining sources, industry, natural gas combustion, off-road vehicles and railroads, were responsible for less than five percent of the carbon monoxide emissions on a typical winter weekday.

On May 27, 2005, the Governor of Montana submitted to the Environmental Protection Agency the request from the Missoula City-County Air Pollution Control Board for the redesignation of Missoula County as a carbon monoxide attainment area. A comprehensive maintenance plan that met the requirements of the Clean Air Act was included in the submittal. On August 17, 2007, the Environmental Protection Agency published a final rule in the *Federal Register* (72 FR 46158) stating their approval of the State Implementation Plan revisions submitted by the State of Montana and the redesignation request submitted by the Governor. The Missoula carbon monoxide non-attainment area was redesignated to attainment effective September 17, 2007. In the same rulemaking, EPA also approved the carbon monoxide maintenance plan, which includes transportation conformity motor vehicle emission budgets for 2000, 2010, and 2020. The maintenance plan demonstrates that Missoula will continue to meet the National Ambient Air Quality Standards through the year 2020.

The maintenance plan provided for Missoula to continue to maintain the National Ambient Air Quality Standards and prevent backsliding by keeping essential programs in place, including stationary source permitting, outdoor burning permitting, solid fuel burning device restrictions,



and the oxygenated fuels program. These programs are contained within the Missoula City-County Air Pollution Control Program, are already a part of the State Implementation Plan, and were not revised.

Particulate Matter

The Missoula urban area has a history of exceeding the Montana and National Ambient Air Quality particulate standards. The first recorded exceedances for particulate were in 1969. Missoula was able to meet the federal annual average ambient air quality standard for particulate matter in terms of total suspended particulate in 1973 and again in 1975. However, violations of the daily total suspended particulate standard continued during the winter months, likely due to residential wood burning.

In July of 1987, the Environmental Protection Agency passed a standard for particulate matter with an aerodynamic diameter less than or equal to 10 microns, this new standard replaced the total suspended particulate standard. During the winter of 1986-1987, the Missoula City-County Health Department conducted a chemical mass balance study to apportion the sources of particulate matter in the valley. Residential wood smoke was 47 percent of the particulate matter during the study followed by road dust at 22.6 percent, motor vehicle exhaust at 10.2 percent and industry at 7.6 percent.

Missoula exceeded the annual average particulate matter standard in 1986 and exceeded the 24-hour particulate matter standard several times between 1987 and 1989. Because of these exceedances, Missoula was designated a non-attainment area for particulate matter and Montana was required to submit a State Implementation Plan to the Environmental Protection Agency to reduce particulate matter emissions in the valley. The State Implementation Plan specified that both the city and the county had adopted regulations on residential wood stoves, outdoor burning, industry, fugitive emissions, street sanding, and street maintenance. Missoula has not violated a federal particulate standard since 1989.

In January of 1999, Missoula began monitoring for fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns. National ambient air quality standards for fine particulate matter standard were promulgated by the Environmental Protection Agency on July 18, 1997, to address concerns that the previous particulate matter (PM₁₀) standards did not adequately protect human health. Because recent studies indicate that particulate matter in ambient air has health effects at lower concentrations than previously thought, on September 21, 2006, the Environmental Protection Agency revised the particulate matter standards.

The Missoula area is currently a non-attainment area for particulate matter (PM₁₀) due to past violations of the standards. Missoula is currently meeting the standards for particulate matter and has not exceeded these air quality standards since 1989. The Missoula City and County Health Department may seek re-designation from the Environmental Protection Agency in the future. As of October 2009, the Environmental Protection Agency has designated all of Montana (with the exception of the Libby area) as in attainment for fine particulate matter (PM_{2.5}).

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Fine particle pollution comes primarily from combustion sources such as woodstoves, outdoor burning, vehicle engines and industrial processes. Road dust and other types of dust also contribute to fine particulate in the air. In the winter months - when Missoula has the highest levels of pollution - dust is not as much of an issue because the ground is often wet or frozen. According to the *Missoula Montana PM_{2.5} Source Apportionment Research* report of November 2007, residential wood combustion was the largest source of fine particulate matter.

Mobil Source Air Toxics

The Environmental Protection Agency has identified a group of 21 mobile source air toxics (set forth in Environmental Protection Agency's final rule, *Control of Emissions of Hazardous Air Pollutants from Mobile Sources*) and extracted six priority Mobile Source Air Toxics considered to be priority transportation toxics. The Environmental Protection Agency has issued a number of regulations that will dramatically decrease Mobile Source Air Toxics through cleaner fuels and cleaner engines. According to a Federal Highways Administration analysis, even if vehicle miles of travel (VMT) increase by 64 percent, reductions of 57 percent to 87 percent in Mobile Source Air Toxics are projected from 2000 to 2020.

Under the Federal Highways Administration interim guidance issued for air toxic analysis in Environmental documents, the Preferred Alternative would be classified as a minor project for which the ultimate traffic level is predicted to be less than 150,000 average vehicles per day. The Environmental Protection Agency and Federal Highways Administration have acknowledged technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects and how this may prevent meaningful or reliable estimates of Mobile Source Air Toxic emissions and effects of specific projects. However, even though reliable methods do not exist to accurately estimate the health impacts of Mobile Source Air Toxics at the project level, it is possible to qualitatively assess the levels of future Mobile Source Air Toxic emissions.

Because the anticipated vehicle miles of travel under both the No Build and Preferred Alternative are nearly the same, it is expected that there would be no appreciable difference in overall Mobile Source Air Toxics emissions between the alternatives. The roadway widening proposed as part of the Preferred Alternative would have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, there may be localized areas where ambient concentrations of Mobile Source Air Toxics could be higher than the No Build Alternative. This localized impact could be offset due to increases in speeds and reductions in congestion (which are associated with lower Mobile Source Air Toxic emissions).

Overall, Environmental Protection Agency's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide Mobile Source Air Toxic levels to be substantially lower than today. Local conditions may differ from the national projections in terms of fleet mix and turnover, vehicle miles of travel growth rates, and local control measures; however, the magnitude of the Environmental Protection Agency-projected reductions is so great (even after accounting for vehicle miles of travel growth) that Mobile Source Air Toxic emissions in the study area are likely to be lower in the future in nearly all cases.



3.8 Noise

According to the Federal Aid Policy Guide, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (23 CFR 772), this project is defined as a Type I project as a “proposed Federal or Federal-aid highway project... which increases the number of through-traffic lanes and therefore a noise analysis is required.”

The noise analysis was conducted in accordance with the U.S. Code of Federal Regulations Part 772 (23 CFR 772) *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and the Montana Department of Transportation’s *Traffic Noise Analysis and Abatement: Policy and Procedure Manual*. According to the noise study report, 56 noise-sensitive receptors on Russell Street were identified within approximately 490 feet of the existing roadway centerline, including single-family residences, mobile homes, apartments, townhomes, senior living apartments, and duplexes. The noise receptors for Russell Street are illustrated in Figure 3-5. An additional 44 noise receptors were identified for South 3rd Street and are depicted in Figure 3-6.

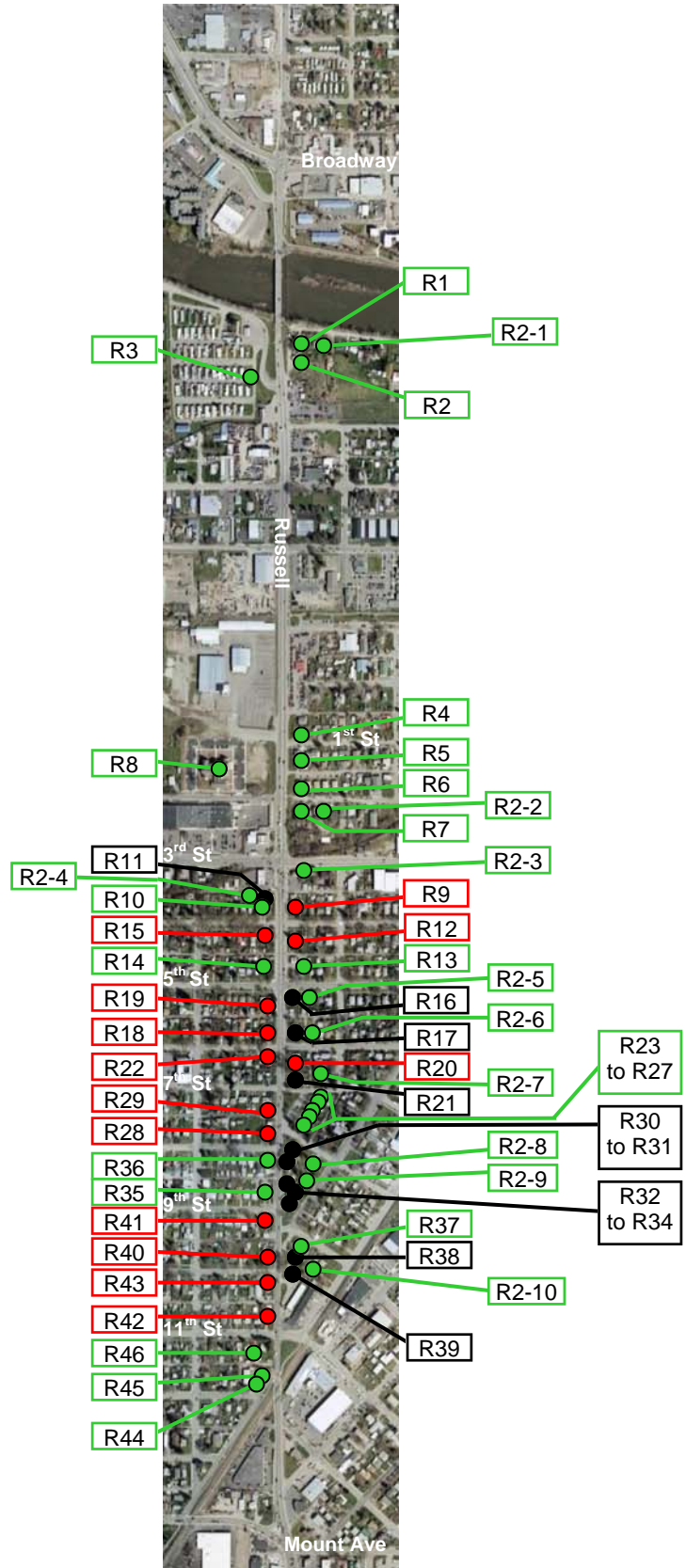
According to the Montana Department of Transportation, traffic noise impacts occur at residences if predicted traffic noise levels are 66 A-weighted decibels or greater in the project design year for the Preferred Alternative, or if the predicted noise levels in the design year for the Preferred Alternative are 13 A-weighted decibels higher than the noise levels in the current year for the No-Build Alternative. If either criterion is met, then an impact occurs, and traffic noise abatement measures need to be considered and determined if they are reasonable and feasible.

The City of Missoula Noise Control Ordinance (Missoula City Code Section 9.30) establishes maximum permissible noise levels for receivers 25 feet or greater from a noise source within a public right-of-way or the property line of a private property. For the purpose of this analysis, a receiver is a single-family residence or a multi-unit complex with four units or less. Noise limits are based on the zoning of the receiving property, and vary by the time of day. Noise levels in the ordinance may be exceeded by up to 10 decibels for up to 15 minutes of any one-hour period. There is no exemption in the City of Missoula Noise Control Ordinance for traffic traveling within rights-of-way, and it is subject to the same limits.

The Federal Highway Administration’s Traffic Noise Model Version 2.5 computer program was used to predict future traffic noise levels under a No-Build scenario to provide a baseline for future comparison. Table 3.4 lists existing and predicted noise levels for the Russell Street No-Build Alternative as compared to existing conditions.

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**Figure 3-5
Russell Street Noise Receptor Locations**

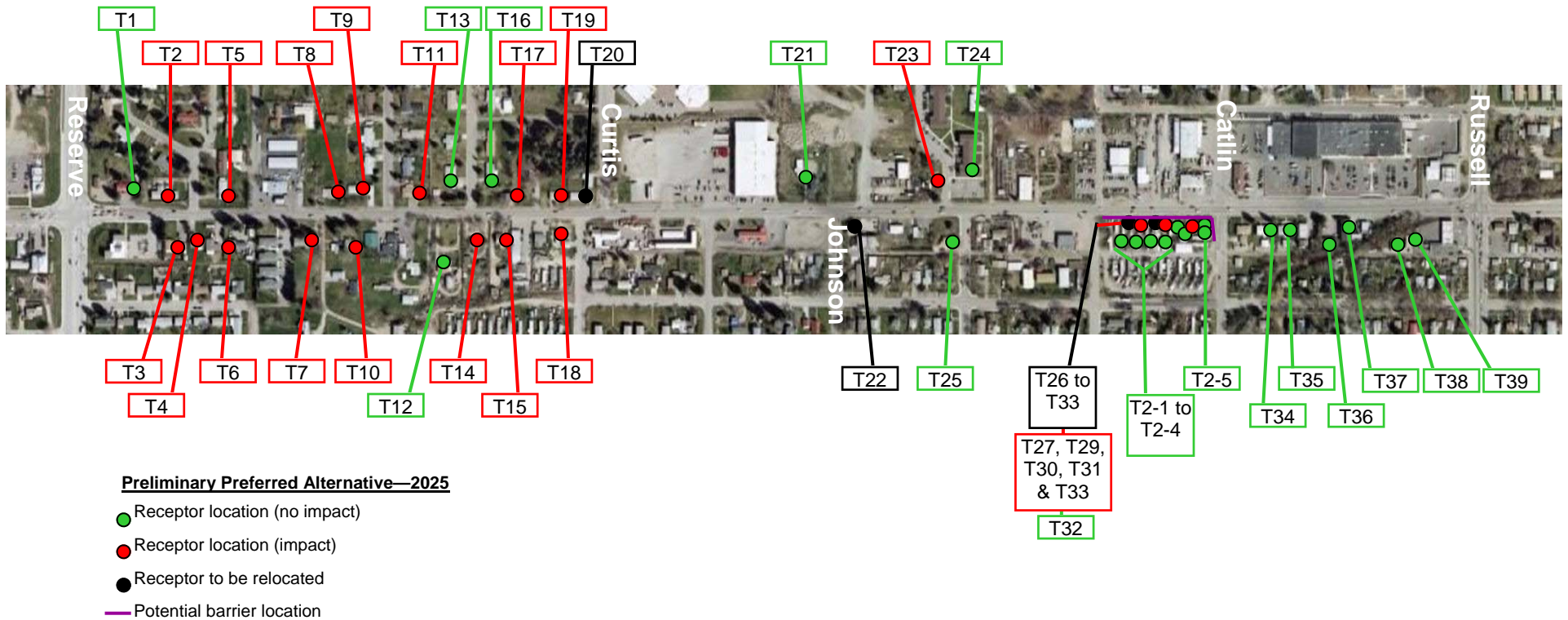


Preliminary Preferred Alternative—2025

- Receptor location (no impact)
- Receptor location (impact)
- Receptor to be relocated



Figure 3-6
South 3rd Street Noise Receptor Locations



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56 receptor locations were evaluated along Russell Street for traffic noise impacts. As outlined in Table 3.4, the Montana Department of Transportation noise impact criteria is expected to be met or exceeded at 12 out of 56 receptor locations in the present year and at 22 receptor locations in the design year for the No Build Alternative along Russell Street.

Table 3.4
Russell Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	Current Year Noise Levels	20-Year Forecast Noise Levels (No-Build)
West Broadway Street to South 1st Street			
R1	Single-family residence	62	63
R2	Single-family residence	62	64
R3	4 mobile homes	60	62
R2-1	Single-family residence, 2 nd row	60	62
R4	Single-family residence	63	65
South 1st Street to South 2nd Street			
R5	4 townhomes	58	60
R6	4 apartments (2 up/2 down)	63	65
South 2nd Street to South 3rd Street			
R7	4 apartments (2 up/2 down)	64	65
R8	Senior living apartments	58	60
R2-2	Single-family residence, 2 nd row	61	63
South 3rd Street to South 4th Street			
R9	Single-family residence	64	66
R10	Single-family residence	64	66
R11	Single-family residence	66	68
R2-3	Single-family residence, 2 nd row	62	63
R2-4	Single-family residence, 2 nd row	62	64
South 4th Street to South 5th Street			
R12	Single-family residence	64	65
R13	Single-family residence	62	63
R14	Single-family residence	63	65
R15	Single-family residence	65	67
South 5th Street to South 6th Street			
R16	Single-family residence	64	66
R17	Single-family residence	63	65
R18	Single-family residence	65	67
R19	2 Single-family residences	66	68
R2-5	Single-family residence, 2 nd row	60	62
R2-6	Single-family residence, 2 nd row	60	62
South 6th Street to South 7th Street			
R20	2 Single-family residences	63	65
R21	2 Single-family residences	64	65
R22	2 Single-family residences	65	67
R2-7	2 Single-family residences, 2 nd row	68	60
South 7th Street to South 8th Street			
R23	Single-family residence	58	60



**Table 3.4
Russell Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions**

Receptor	Description	Current Year Noise Levels	20-Year Forecast Noise Levels (No-Build)
R24	Single-family residence	59	60
R25	Single-family residence	69	61
R26	Single-family residence	60	62
R27	Single-family residence	61	63
R28	Single-family residence	66	67
R29	2 Single-family residences	66	67
South 8th Street to South 9th Street			
R30	Single-family residence	65	67
R31	Single-family residence	66	67
R32	Single-family residence	67	69
R33	Single-family residence	64	65
R34	Single-family residence	66	67
R35	Townhome (1 residence)	65	67
R36	Single-family residence	65	67
R2-8	Single-family residence, 2 nd row	58	60
R2-9	Single-family residence, 2 nd row	60	62
South 9th Street to South 10th Street			
R37	Single-family residence	62	64
R38	Single-family residence	63	65
R39	Single-family residence	65	66
R40	Single-family residence	66	68
R41	Single-family residence	66	68
R2-10	Single-family residence, 2 nd row	58	60
South 10th Street to South 11th Street			
R42	2 Single-family residences	67	68
R43	4 apartments (2 up/2 down)	66	68
South 11th Street to Mount Avenue/South 14th Street			
R44	Single-family residence	61	63
R45	Single-family residence	66	68
R46	Single-family residence	64	65
Total Impacts:		12	22

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44 receptor locations were evaluated along South 3rd Street for traffic noise impacts. As outlined in Table 3.5, the Montana Department of Transportation noise impact criteria is expected to be met or exceeded at 10 out of 44 receptor locations in the present year and at 22 receptor locations in the design year for the No Build Alternative along South 3rd Street.

Table 3.5
South 3rd Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	No Build Alternative L _{eq} (h), Present Year 2000 (dBA)	No Build Alternative L _{eq} (h), Design Year 2025 (dBA)
Reserve Street to Schilling/Curtis Streets			
T1	Single-family residence	63	65
T2	Duplex (2 residences)	65	67
T3	Single-family residence	63	65
T4	Single-family residence	64	66
T5	Single-family residence	65	67
T6	2 Single-family residences	63	66
T7	4 apartments (2 up/2 down)	63	66
T8	Single-family residence	65	67
T9	Duplex (2 residences)	64	66
T10	Single-family residence	63	65
T11	Duplex (2 residences)	65	67
T12	3 Single-family residences	60	62
T13	Single-family residence	63	65
T14	Single-family residence	63	65
T15	Single-family residence	64	66
T16	Single-family residence	62	65
T17	Single-family residence	66	68
T18	Mobile home	65	67
T19	Single-family residence	66	68
T20	Single-family residence	66	68
Schilling/Curtis Streets to Johnson Street			
T21	Single-family residence	62	64
T22	2 apartments (1 up/1 down)	67	68
Johnson Street to Catlin Street			
T23	Single-family residence	64	65
T24	6 apartments (2-3 rd floor, 2-2 nd floor, 1-1 st floor)	63	64
T25	Single-family residence	64	65
T26	2 Mobile homes	67	69
T27	Mobile home	66	68
T28	Mobile home	68	69
T29	Mobile home	67	68
T30	Single-family residence	65	66
T31	Mobile home	66	68
T32	Single-family residence	65	66
T33	Mobile home	66	68
T2-1	Mobile home, 2 nd row	63	64
T2-2	2 Mobile homes, 2 nd row	63	64



Table 3.5
South 3rd Street
Receptors and Predicted Noise Levels for Existing and Future No-Build Conditions

Receptor	Description	No Build Alternative L_{eq}(h), Present Year 2000 (dBA)	No Build Alternative L_{eq}(h), Design Year 2025 (dBA)
T2-3	2 Mobile homes, 2 nd row	63	64
T2-4	3 Mobile homes, 2 nd row	63	64
T2-5	Mobile home, 2 nd row	63	64
Catlin Street to Russell Street			
T34	Duplex (2 residences)	63	65
T35	Duplex (2 residences)	63	65
T36	4 apartments (2 up/2 down)	61	62
T37	4 apartments (2 up/2 down)	63	65
T38	4 apartments (2 up/2 down)	60	61
T39	4 apartments (2 up/2 down)	60	62
Total Impacts:		10	22

3.9 Water Quality

This section provides an overview of the existing water quality conditions of water resources in the study area. Much of the following information on the Middle Clark Fork watershed was obtained from the Montana Department of Environmental Quality internet site.

Surface Water

The major surface water feature in the project area is the Clark Fork River, which intersects the project corridor at the Russell Street Bridge. Under authority of Section 303(d) of the Clean Water Act, several sections of the Clark Fork River are included on the Montana Department of Environmental Quality 2002 list of impaired and threatened water bodies, including a section within the project area. The Clark Fork River is considered water quality-limited. Water quality-limited waters are lakes and stream segments that do not meet, or are not expected to meet, state water quality standards. Under the terms of the Clean Water Act, states were directed to develop total maximum daily loads that set limits on point and non-point source pollution loading to water quality-limited bodies. Total maximum daily loads have not yet been developed for the Clark Fork River. According to the Montana Department of Environmental Quality, the Clark Fork River from Warm Springs Creek to the Flathead River, which includes the study area, is on the high priority list for development of total maximum daily loads in Montana.

According to the Environmental Protection Agency website, immediate risks to public health from a contaminated drinking water supply have been temporarily addressed. With the implementation of the Milltown Reservoir Sediments Record of Decision, the Environmental Protection Agency expects the Milltown drinking water supply to be cleaned up permanently.

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Stormwater

Stormwater drainage systems in the area are somewhat limited under existing conditions. Most stormwater leaves the roadways as sheet flow. Some stormwater leaves the roadway and flows into small infiltration systems (drywells). A small amount of runoff from the project area is conveyed directly to the main Missoula Irrigation District channel that intersects the study area at the Russell Street/South 3rd Street intersection. In addition, runoff from the Russell Street Bridge drains directly to the Clark Fork River.

Ground Water

The Missoula Valley Aquifer is the primary groundwater resource of the Missoula Valley and project area. Drinking water for 80 percent of Missoula County residents is supplied from groundwater from the Missoula Valley Aquifer. This Missoula Valley Aquifer is designated as a “sole source aquifer” under Section 1424(e) of the Safe Drinking Water Act. This designation made at the request of the Missoula City-County Health Department in 1988, provides for Environmental Protection Agency review of federal financially assisted projects to assure that such federally assisted projects do not contaminate an aquifer that is the sole or principle source of drinking water for an area.

Within the Missoula Valley Water Quality District, the City of Missoula adopted the *Missoula Valley Water Quality Ordinance* in June 2001. This ordinance is intended to protect the public health, safety, and general welfare of those utilizing the Missoula Valley Aquifer and surface water in the Missoula Valley for drinking water, recreation, and other beneficial uses. As such, it establishes prohibitions and restrictions to prevent surface water and groundwater contamination.

The Missoula Valley Aquifer is a shallow, highly transmissive, unconfined alluvial aquifer which extends along the Clark Fork River Valley. Recharge of the aquifer is provided from stream water seepage from the Clark Fork River and from precipitation which falls on the ground surface and eventually percolates through the alluvial deposits of the Clark Fork River Valley. These alluvial materials filter contaminants from the percolating water. Other recharge sources include:

- Direct precipitation on the aquifer.
- Discharge from the adjacent hydrostratigraphic units
- Stormwater runoff.
- Septic Systems.
- Leakage from irrigation ditches.

Much of the precipitation within the Missoula area is intercepted by impervious surfaces, such as rooftops and road and parking lot pavement. To minimize direct discharge to surface waters, such as the Clark Fork River, the runoff from the impervious surfaces is conveyed to “dry wells” or sumps that have been established by the City of Missoula within the city limits. The dry wells or sumps collect and direct the surface runoff in to the alluvial materials and, after percolating through the alluvial materials, the runoff eventually reaches the Missoula Valley Aquifer.



3.10 Wetlands

Wetland determinations for the project area were performed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual. No wetlands were identified within the Russell Street and South 3rd Street corridors, including the riparian area adjacent to the Clark Fork River where bridge replacement activities are proposed.

3.11 Water Bodies and Wildlife Habitat

Aside from the Clark Fork River (described in the previous Water Quality section), there are no other natural streams or channels in the study area; therefore, this section focuses primarily on existing irrigation ditches and wildlife habitat in the study area.

Based on the recent Talent Water Decision (2001), the U.S. Army Corps of Engineers considers irrigation ditches as jurisdictional “Waters of the United States” under Section 404 of the Clean Water Act if they have a downstream surface connection to other waters of the United States and/or jurisdictional wetlands. Three irrigation districts lie within or coincide with the study area: the Missoula Irrigation District, Orchard Homes Ditch Company, and Hellgate Valley Irrigation Company (Flynn-Lowney Ditch). The Hellgate Valley Irrigation Company and the Missoula Irrigation District have downstream surface connections to other waters of the U.S. and would be considered jurisdictional by the Corps of Engineers. Figure 3-7 illustrates the location of these ditches in the proximity of the study area.

Each of these three irrigation districts currently gains access to the ditches for maintenance through prescriptive easements. No permanent access points or roadways exist for maintenance personnel from Russell Street or South 3rd Street. There are no plans by the irrigation district to expand or improve the existing facilities in or near the project corridor.

Wildlife

According to the *Biological Resources Report* prepared for this proposed project, wildlife habitat within the project area consists primarily of disturbed (human-altered), urban, and riparian habitat associated with the Clark Fork River offering little natural wildlife habitat. Landscaping along the roadways provides habitat for some wildlife species adapted to the urban environment. Riparian habitat exists along the Clark Fork River, which bisects Russell Street between River Road and West Broadway Street at the northern terminus of the proposed project.

Wildlife use of the project area is greatly influenced by the high level of development in and around the project area. The Clark Fork River intersects the study area and provides habitat for a number of wildlife species. Some species may use the river corridor to travel from one part of the Missoula Valley to another. Other species are adapted to living in an urban environment and use habitat in the project area on a year-round basis.

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According to the *Biological Resources Report*, several species of waterfowl frequent the Clark Fork River corridor and great blue herons often set up rookeries in the area; however, there are currently no heron rookeries in the project area.

A variety of small to medium mammals, several bat species, and amphibian and reptile species are expected to reside within the project area. Large herbivores also pass through the project vicinity and occasionally reside in the project area.

Species of Concern

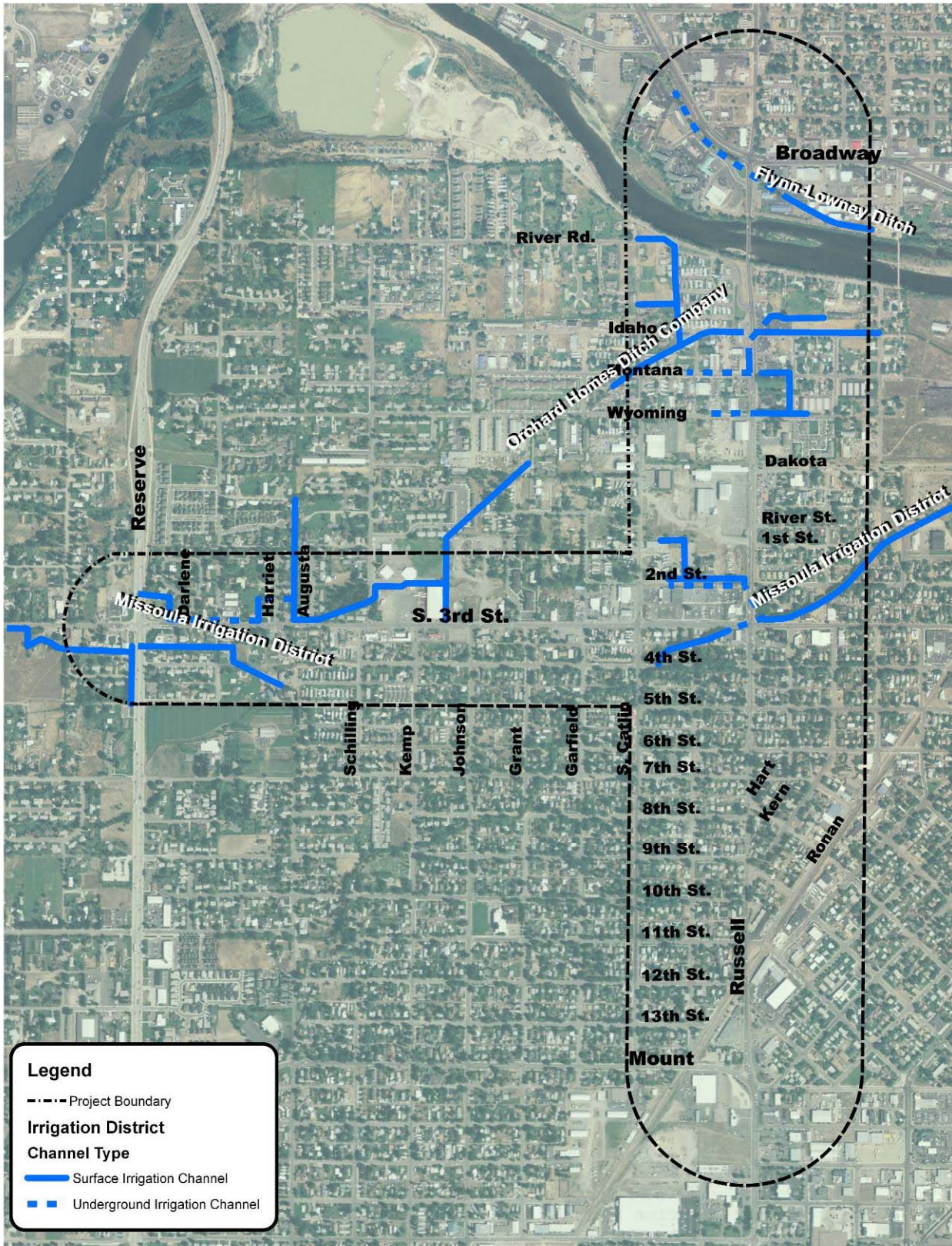
According to the *Biological Resources Report*, there are no recorded plant species of concern within the project area, but seven records of rare or sensitive wildlife species in the Missoula area; however, the proposed project area lacks suitable habitat and the Montana Natural Heritage Program database lists the occurrence of these species as unlikely.

Noxious Weeds

Invasive species typical of disturbed areas, such as spotted knapweed, are present in the study area. Herbaceous species, such as sedges and rushes, also exist in the riparian area but are not dominant.



Figure 3-7
Irrigation Ditches Intersecting Study Area



3.12 Floodplains

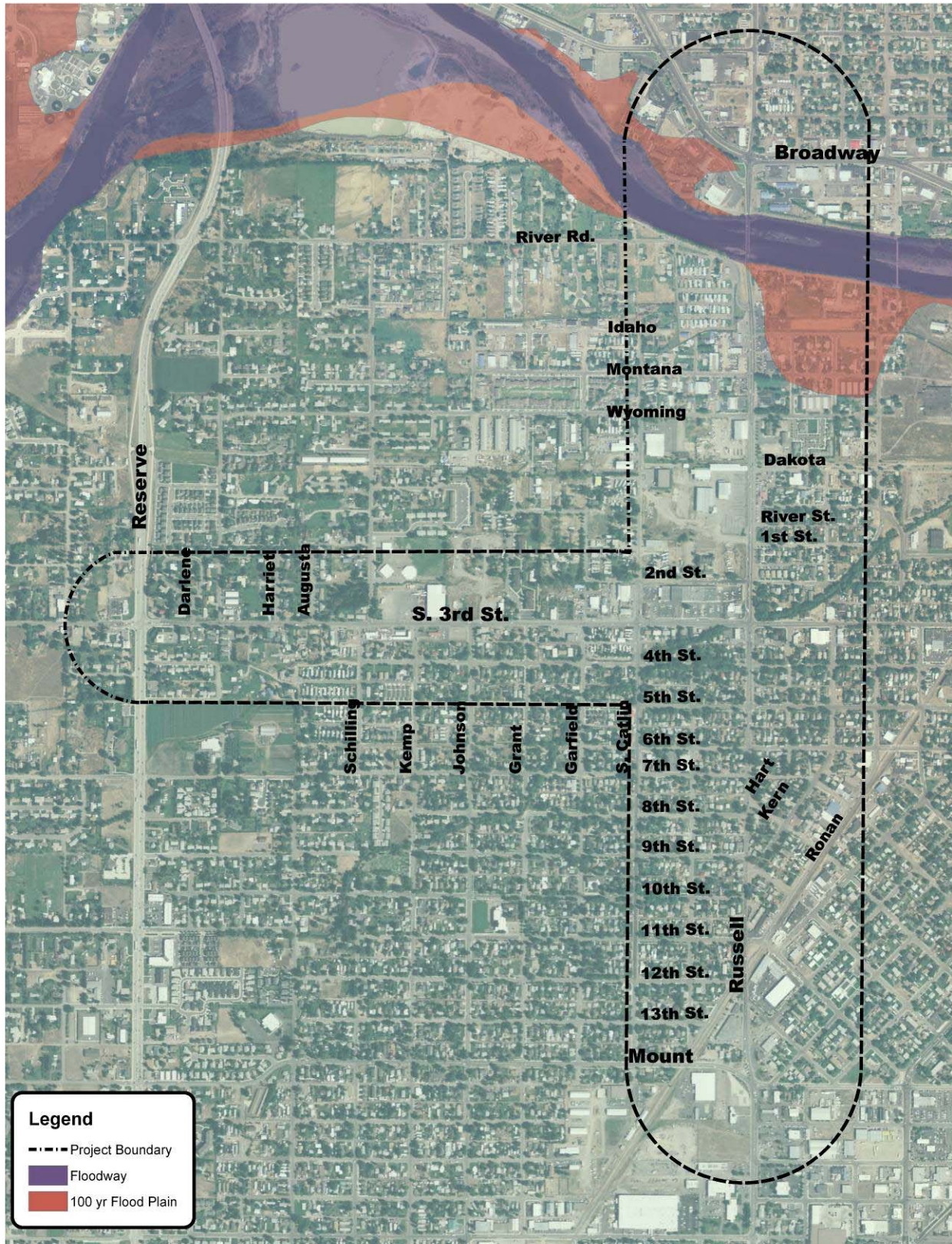
The Clark Fork River bisects Russell Street between River Road and West Broadway Street in the northern portion of the study area. Flood control measures that have been implemented along this river reach include filling and rip-rapping of banks and removing riparian vegetation. Approximately 60 percent of the Clark Fork River reach between East Missoula and the Reserve Street Bridge has been confined by bank stabilization projects. This reach is approximately 4.5 miles in length and incorporates the urban portion of the river, including the Russell Street Bridge area.

As shown in Figure 3-8, Russell Street is in close proximity to the Clark Fork River floodplain from approximately Montana Street north to West Broadway Street, including the crossing of the floodway with the Russell Street Bridge. The floodplain boundary is in closest proximity to the existing roadway near the southern end of the bridge and in the southwest quadrant of the Russell Street / West Broadway Street intersection.

The width of the floodplain and floodway, which are concurrent at the bridge, is approximately 400 feet at that location.



Figure 3-8
Clark Fork River 100-year Floodplain



3.13 Threatened and Endangered Species

According to the Biological Resources Report prepared for this proposed project, there are five federally-listed threatened and endangered species that have the potential to occur in the project area. Only the bull trout and the bald eagle are anticipated to occur within the study area and are discussed below.

Bull Trout – (*Threatened*)

The bull trout was listed by the U.S. Fish and Wildlife Service as a threatened species in 1998. Bull trout in the middle Clark Fork River drainage presently are uncommon to rare. Numbers of bull trout in this section of the Clark Fork River are too low to estimate.

The Clark Fork River has been identified as nodal habitat for bull trout. Nodal habitats are defined as waters that provide migratory corridors, over wintering areas, or are otherwise critical to the population at some point in its life history. The primary risks to bull trout in the Middle Clark Fork River system are the main stem river dams, which limit bull trout migration, and water quality degradation related to agricultural practices, and past and potential timber harvest. The Milltown Dam was located approximately nine miles upstream of the Russell Street Bridge. Until its demolition and removal, this dam was a barrier to upstream fish passage, limiting bull trout access to spawning areas. A dam on Rattlesnake Creek, upstream of the project area, was also a barrier to fish passage until recently when a ladder was installed. The Clark Fork River is not included in the listing of critical habitat for bull trout.

Bald Eagle – (*De-listed*)

The Bald eagle was originally listed as endangered in 1967, but recovery efforts led to increased numbers and an expanded range for the eagles. In 1995, the bald eagle was down-listed to threatened status, and was de-listed as of the summer of 2007.

According to the Biological Resources Report prepared for this proposed project, bald eagles are known to use habitat along the Clark Fork River near Missoula as spring or fall migrants. Bald eagles may be present along the Clark Fork River at any time of year; however, heaviest use within the project corridor is during winter months. Bald eagles use habitat along the Clark Fork River near Reserve Street (approximately one mile west of Russell Street), primarily during the winter months for perching, foraging, and roosting. Bald eagles have been observed fishing in the river and resting in the cottonwood trees on the island complex near the Orange Street Bridge, approximately one mile east of the Russell Street Bridge.

According to the Biological Resources Report, there are currently no bald eagles nesting within the project area.



3.14 Historic and Cultural Resources

Three historic and cultural resource inventories were completed to determine whether properties in the study area were eligible for listing on the National Register of Historic Places (NRHP). The cultural resource reports referenced in this historic and cultural resources section are available from the Montana Department of Transportation and the City of Missoula.

According to the Montana State Historic Preservation Officer, a total of 33 properties are eligible for listing on the National Register of Historic Places in the Russell Street and South 3rd Street project corridors and are listed in Table 3.6. (See also, concurrence letter in Appendix C). Additionally, two potential historic districts were identified within the study area. The Orchard Homes subdivision on South 3rd Street west of Reserve Street was identified as eligible for listing on the NRHP as a potential historic district. Three properties within the potential Orchard Homes Historic District were identified as individually eligible for listing on the National Register of Historic Places. Fourteen properties on South 3rd Street east of Russell Street were identified as eligible for listing on the National Register of Historic Places as contributing components of a potential historic district.

There are three historic irrigation ditches located within the project area. The ditches were evaluated by the Montana Department of Transportation for eligibility for listing on the National Register of Historic Places and were determined to be ineligible. The Montana State Historic Preservation Officer has concurred with this determination.

Figures 3-9 and 3-10 illustrate the locations of properties eligible for listing on the National Register of Historic Places. The majority of the sites identified are located in the southern portion of the Russell Street corridor, and at the ends of the South 3rd Street corridor.

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Table 3.6
Sites Eligible or Listed on the National Register of Historic Places

Site Number	Street Address/Location
24MO718	Bitterroot Branch of the Northern Pacific Railroad
24MO796	1436 South 4 th Street
24MO798	1501 South 4 th Street
24MO800	1508 South 5 th Street
24MO801	1501 South 5 th Street and 715 Russell Street
24MO805	1502 South 6 th Street
24MO811	824 Russell Street
24MO812	1501 South 7 th Street
24MO814	1500 South 8 th Street
24MO819	941 Kern Street
24MO820	1135 Russell Street
24MO822	1500 ½ South 11 th Street
24MO823	1501 South 11 th Street
24MO842	1038 South 3 rd Street
24MO843	1046 South 3 rd Street
24MO845	1102 South 3 rd Street
24MO849	1133 South 3 rd Street
24MO850	1135 South 3 rd Street
24MO852	1202 South 3 rd Street
24MO853	1203 South 3 rd Street
24MO855	1221 South 3 rd Street
24MO856	1225 South 3 rd Street
24MO858	1229 South 3 rd Street
24MO859	1230 South 3 rd Street
24MO860	1250 South 3 rd Street
24MO861	1256 South 3 rd Street
24MO862	1262 South 3 rd Street
24MO881	2537 South 3 rd Street
24MO882	2540 South 3 rd Street
24MO884	2601 South 3 rd Street
24MO885	2608 South 3 rd Street
24MO891	Potential South 3 rd Street Historic District
24MO892	Potential Orchard Homes Historic District



Figure 3-9
Sites Listed or Eligible for Listing on the National Register of Historic Places
(Russell Street – Mount Avenue to South 3rd Street)



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Figure 3-10
Sites Listed or Eligible for Listing on the National Register of Historic Places
(South 3rd Street – Reserve Street to Russell Street)

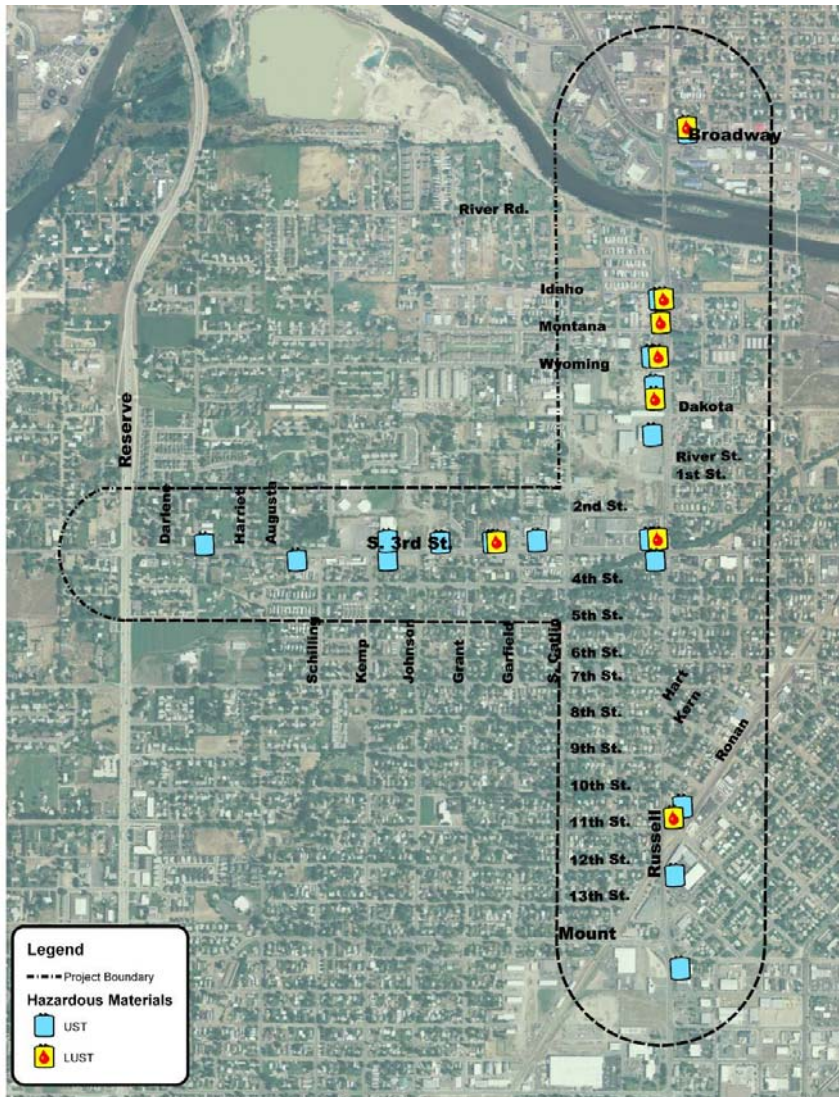




3.15 Hazardous Materials

According to the Hazardous Materials Technical Memorandum prepared for this proposed project, the area contains over 150 sites that could contain hazardous materials. Montana leaking underground storage tank files were the only regulatory files reviewed, since they were the only release sites identified by the database search. Upon further review, there are 17 sites that contain Underground Storage Tanks, and only eight sites that have records of Leaking Underground Storage Tanks within the study area. Figure 3-11 illustrates the general location of both existing Underground Storage Tanks and Leaking Underground Storage Tanks in the immediate vicinity of Russell and South 3rd Streets. Additionally, petroleum hydrocarbon release has been documented at several sites within the project corridor. Specific contamination at each of these sites is unknown without further investigation, but there is a potential for construction and long-term impacts.

Figure 3-11
Underground Storage Tank Sites



Other hazardous materials may be encountered, including asbestos and lead contamination in structures that would be acquired by the proposed project. Furthermore, The Russell Street Bridge was built during a time period when all steel structures of its type were painted with a lead based paint. It is likely that remediation measures will have to be performed in order to minimize environmental impacts.

3.16 Visual Resources

Missoula is situated in a valley surrounded by the Rattlesnake Wilderness area to the north, the Bitterroot Mountain Range to the south and west, and Mount Jumbo and Mount Sentinel to the east. The contours of Russell Street and South 3rd Street are mostly straight and flat, with slight deviations in a few areas. The area has a commercial character with residential areas interspersed and generally lacks substantial focal points such as medians or landscaped areas along the roadways. Curbs and landscaping occur occasionally within the project corridor, which contribute to an undefined appearance along the roadway. Vegetation is mostly limited to residential lots. The visual character of Russell and South 3rd Streets includes traffic signals, street lights, roadway and commercial signage, and utility lines and poles. The absence of sidewalks along South 3rd Street and the incomplete segments of sidewalks along Russell Street decrease visual unity and definition within the corridor.

The following sections describe the visual resources associated with each portion of the project.

Russell Street (Mount Avenue to South 3rd Street)

Views on the road include a multilane intersection, adjacent commercial structures, overhead power lines, and signage at Russell Street and Mount Avenue/South 14th Street. A few businesses have landscaped areas adjacent to Russell Street, but vegetation is mostly limited to residential lots. The road narrows to two lanes as it enters the primarily residential neighborhood between Lawrence and South 6th Streets. Overhead power lines continue through the residential neighborhood, but the absence of commercial structures and signage offers unified views in this area.

Viewers away from the road are exposed to foreground and midground views similar to those experienced by viewers on the road, but background views of the corridor include mostly unobstructed views of the mountains to the north, south, east, and west. Large deciduous trees, which are abundant within residential areas along this segment, are visible away from the road.





Russell Street (South 3rd Street to West Broadway Street)

Views from this portion of the road include a three-lane road with a predominantly commercial setting. Views in this segment are not unified and are characterized by extensive signage and commercial structures. Away from the road, foreground and midground views of commercial areas are interspersed with a few residential structures. There are background mountain views to the north, south, east, and west. Near the Russell Street Bridge, there are relatively unobstructed views of the Clark Fork River and the surrounding mountains.



South 3rd Street

This portion is generally characterized by commercial and residential sites. Views from the road include commercial and residential structures, parking lots, signage, utility lines, and poles. Away from the road, there are background views of the mountains surrounding the Missoula Valley, which are partially obscured by commercial and residential buildings and urban infrastructure.



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4.0 ENVIRONMENTAL CONSEQUENCES & MITIGATION

This chapter provides an analysis of the potential beneficial and adverse social, economic, and environmental effects of the alternatives under consideration, and describes the measures proposed to mitigate adverse impacts. Each section provides the scientific and analytical basis for evaluating the comparative merits of providing no transportation improvements in the study area to providing safety and mobility improvements in both the Russell Street and South 3rd Street corridors.

Based on the summary comparison of alternatives provided in Chapter 2, the No Build Alternative, Alternatives 4, 5, and a refined Alternative 5 on Russell Street, and Alternatives B, C, D, and E on South 3rd Street have been forwarded for more detailed analysis. Because the general footprint of the Build alternatives is very similar, differences in impacts between them are minor, and are generally isolated to differences around the intersections. Where possible, the impacts are described in general terms in the following sections. Specific distinctions are made between alternatives where there are important differences between impacts.

4.1 Land Use Impacts

No Build Alternative

Aside from the opportunity for some infill development and large lot redevelopment at the old Intermountain Lumber site, land use along the proposed project corridor is not expected to change if the No Build Alternative is selected. Under the No Build Alternative, no improvements to infrastructure would be made and the lack of sidewalks, curbs, and bicycle lanes would remain.

All Build Alternatives

The project is not intended to induce new traffic or population growth, but merely to meet current and foreseeable demands for new multi-modal travel capacity. Existing land uses are not expected to change in the project area as a result of this proposed project; however, the addition of travel lanes would require the acquisition of new right-of-way from existing residential and business property owners. The right-of-way necessary at some locations would require the acquisition of the complete parcel, resulting in the permanent displacement of existing homes or commercial buildings. Displacements are discussed in Section 4.3 – Social Impacts, below.

Based on the concern expressed by the public that Russell Street not evolve into another Reserve Street, it is important to note that the roadway improvements alone would not change the land use within this corridor. While improved access and mobility may make adjacent properties more desirable, ultimately, the growth and land use changes adjacent to the project corridor are dictated by the City zoning and land use plans which restrict the density and types of development that may occur. The interconnected nature of transportation investment and land use is discussed further in Section 4.17 – Indirect and Cumulative Impacts.

Chapter 4.0 - Environmental Consequences and Mitigation

Consistency with Plans, Policies, and Regulations

The proposed project is consistent with the urban centers developed in the *Missoula Urban Comprehensive Plan–1998 Update*. While the urban centers concept was developed primarily to reduce traffic congestion, it also has potentially beneficial social impacts in promoting pedestrian-oriented neighborhoods.

Preferred Alternatives

There are minimal differences in land use impacts between the Preferred Alternatives and any of the other Build alternatives.

Mitigation

No impacts on land use are expected as a result of this project. No land use mitigation is proposed or required under the Preferred Alternatives.

4.2 Farmland Impacts

There are no farmlands in the Russell Street and South 3rd Street project corridors. No mitigation is proposed or required.

4.3 Social Impacts

No Build Alternative

Under the No Build Alternative, Russell and South 3rd Streets would remain unchanged. The No Build Alternative would result in worsening congestion and increasing difficulty of residential and business access, as well as a hindrance on the operation of emergency response vehicles, including fire, police, and medical aid.

All Build Alternatives

Right-of-way Acquisitions and Relocations

Right-of-way would be required throughout much of the corridor to accommodate the proposed improvements under any of the Build alternatives. Table 4.1 provides a comparative summary of the proposed right-of-way impacts on residential properties and community facilities within the Russell Street corridor. Details on South 3rd Street follow the table.

The proposed improvements to River Road discussed in Section 2.2 will be a minimum of six feet from the nearest mobile home. This calculation is based on an aerial layout rather than surveyed data.



Since circulation of the Draft Environmental Impact Statement and completion of the *Traffic Analysis Update*, additional turn lanes have been proposed at the Russell Street / West Broadway Street intersection. These additional features do not result in additional acquisitions or right-of-way requirements.

**Table 4.1
Summary Comparison of Impacts to Residences and Community Facilities on Russell Street**

Section	Alternative 4	Alternative 5	Alternative 5 (Refined)
Mount Avenue to South 11th Street	<ul style="list-style-type: none"> • 2 4(f) Properties • 0.73 acres new right-of-way 	<ul style="list-style-type: none"> • 1 Home • 3 4(f) Properties • 1.02 acres new right-of-way 	<ul style="list-style-type: none"> • 2 4(f) Properties • 0.71 acres new right-of-way
South 11th Street to South 3rd Street	<ul style="list-style-type: none"> • 11 Homes • 2 4(f) Properties • 1.65 acres new right-of-way 	<ul style="list-style-type: none"> • 17 Homes • 5 4(f) Properties • 2.01 acres new right-of-way 	<ul style="list-style-type: none"> • 10 Homes • 4 4(f) Properties • 1.71 acres new right-of-way
South 3rd Street to Wyoming Street	<ul style="list-style-type: none"> • 1 4(f) Property • 0.93 acres new right-of-way 	<ul style="list-style-type: none"> • 1 4(f) Property • 0.84 acres new right-of-way 	<ul style="list-style-type: none"> • 1 4(f) Property • 0.63 acres new right-of-way
Wyoming Street to Russell Street Bridge	<ul style="list-style-type: none"> • 0.64 acres new right-of-way 	<ul style="list-style-type: none"> • 0.98 acres new right-of-way 	<ul style="list-style-type: none"> • 0.67 acres new right-of-way
Russell Street Bridge to West Broadway	<ul style="list-style-type: none"> • 1 4(f) Property • 0.64 acres new right-of-way 	<ul style="list-style-type: none"> • 1 4(f) Property • 0.79 acres new right-of-way 	<ul style="list-style-type: none"> • 1 4(f) Property • 0.66 acres new right-of-way
Totals	<ul style="list-style-type: none"> • 11 Homes • 6 4(f) Properties • 4.59 acres new right-of-way 	<ul style="list-style-type: none"> • 18 Homes • 10 4(f) Properties • 5.65 acres new right-of-way 	<ul style="list-style-type: none"> • 10 Homes • 8 4(f) Properties • 4.38 acres new right-of-way

Note: Section 4(f) properties include historic as well as park and recreational resources, and are included if there is any “use” of the property as defined in Section 4.14 of this FEIS.

Summary Comparison of Impacts to Residences and Community Facilities on South 3rd Street

Section	Alternative B	Alternative C	Alternative D	Alternative E
Reserve Street to Russell Street	<ul style="list-style-type: none"> • 1 Home • 2.38 acres of new right-of-way 	<ul style="list-style-type: none"> • 1 Home • 2.77 acres of new right-of-way 	<ul style="list-style-type: none"> • 0 Homes • 3.62 acres of new right-of-way 	<ul style="list-style-type: none"> • 0 Homes • 2.63 acres of new right-of-way

Although the housing vacancy rate in Missoula was less than two percent, at the outset of this study there were 340 active residential listings in Missoula. Approximately 420 units have been built in the County each year since 1995. It is likely that the displaced residents would be able to find alternative housing. For any acquired properties, the terms of Title VI of the Civil Rights Act of 1964 that ensure equal rights and equal protection under the law would apply. In the

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event that residential property is acquired for the project, it would be purchased for fair market value and in compliance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* and appropriate Sections of Montana Code.

Environmental Justice

Displacement of residents may be necessary due to the general widening of both Russell Street and South 3rd Street. Measures to minimize harm were taken into consideration. All displaced residents will be provided with relocation assistance as provided by the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*.

Beyond assistance afforded to any dislocated person, no special mitigation would be required from an Environmental Justice standpoint. From guidance provided in the Department of Transportation's Final Environmental Justice Strategy, it can be determined that there are no "disproportionately high and adverse effects on minority or low-income populations." This determination was made based on the fact that neither the Section 8 housing nor the mobile home park identified in Chapter 3 are directly impacted by the project, and that the impacted residences are dispersed throughout the two linear corridors. A shift in alignment or intersection design would result in impacts to properties with similar socioeconomic characteristics on neighboring parcels. This finding is consistent with the following criteria as outlined in the Executive Order on Environmental Justice:

- The adverse impact from the project is **not** predominantly born by a minority population and/or low-income population; and,
- The adverse impact suffered by the minority or low-income population is **not** more severe or greater in magnitude than the adverse impact that will be suffered by the non-minority population and/or non-low-income population.

Community and Public Facilities

Under all of the Build alternatives, traffic flow and emergency vehicle response time would improve. Increased road width and additional travel lanes would minimize conflicts with emergency vehicles in comparison to the No Build Alternative. Fire and emergency response vehicles would have the option to use Opticom at signalized intersections which could allow emergency response vehicles to move through an intersection a few seconds faster than at a signalized intersection without Opticom.

When considering the social impacts of the proposed roadway project, the Federal Highway Administration is generally concerned about community cohesion, splitting neighborhoods, and separating residents from community facilities. Impacts to school districts, recreational areas, services, and community amenities are also of concern.

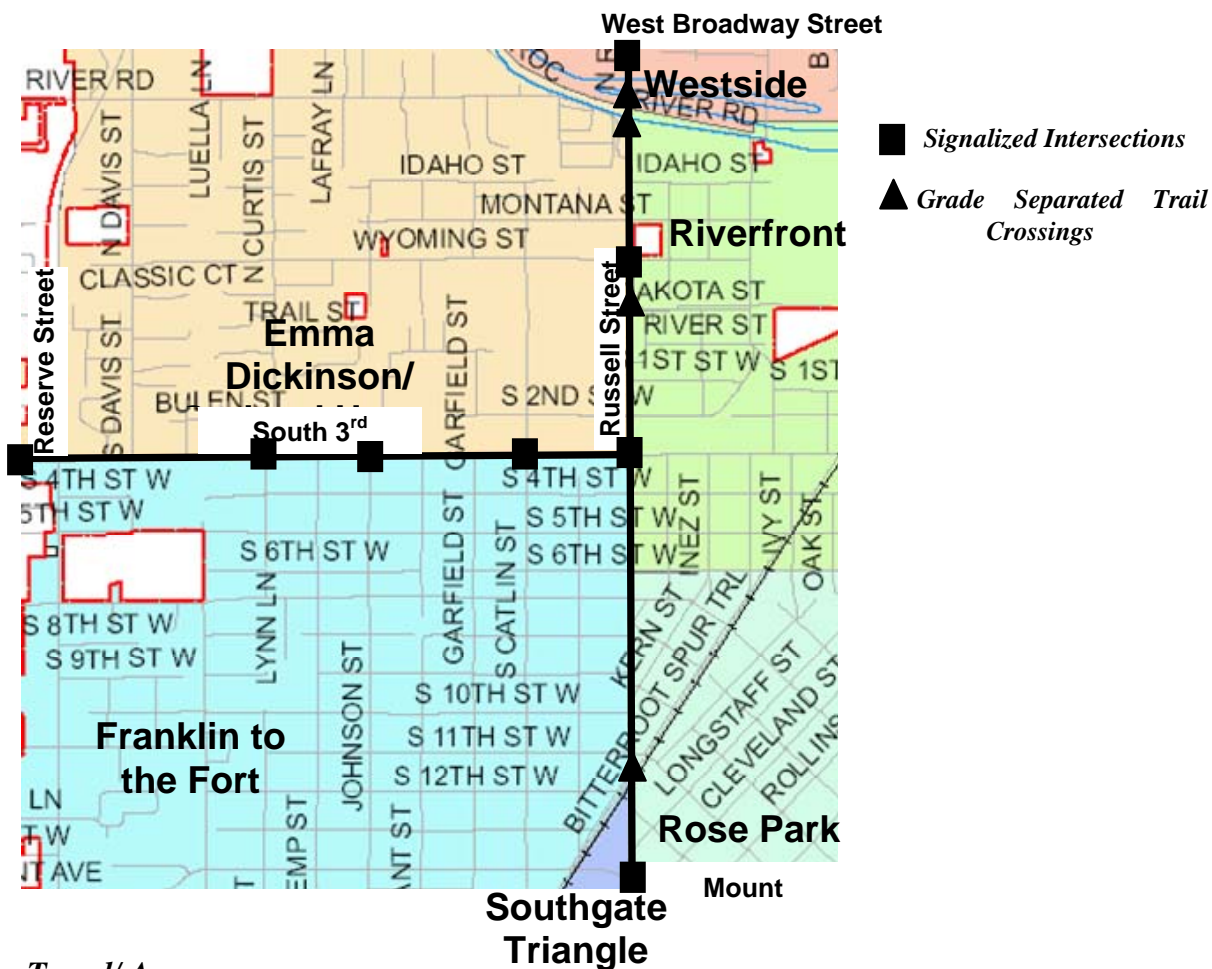
As discussed in Chapter 3, both Russell Street and South 3rd Street have historically established the edges of several neighborhoods and school districts, and only one such jurisdictional boundary crosses Russell Street. Given that Russell Street is an urban arterial, and is intended to serve both local and regional traffic, and currently marks the edge of these neighborhoods and



districts, the proposed improvements would not split neighborhoods, isolate any portion of an existing neighborhood, or separate residents from community facilities within their neighborhoods.

It is anticipated that the proposed project would have an overall positive effect on neighborhood connectivity through the installation of sidewalks, bike lanes, and grade-separated pedestrian crossings at three locations within the Russell Street corridor. These proposed amenities are intended to knit these separate neighborhoods into a more cohesive community by providing safer and more aesthetic opportunities to cross existing real and perceived boundary lines. These connections are depicted in Figure 4-1.

Figure 4-1
Neighborhood Connectivity within Project Corridor



Travel/ Access

There will be an overall improvement in multi-modal access through the addition of travel lanes, bike lanes, and sidewalks throughout the Russell Street and South 3rd Street corridors. Access will be limited to entering right-turns and exiting right-turns at driveways and cross streets affected by raised medians. Motorists desiring to turn left would be accommodated through u-turns at roundabouts or at open intersections, or by turning in advance of the access point. Additional breaks in the median would be considered during the final design of the proposed project. While these medians are intended to improve the overall operation of Russell Street and

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South 3rd Street, they will result in a change from current driving patterns and behaviors. The ultimate impact is considered to be positive, thus no mitigation would be proposed.

Please refer to Chapter 2 for figures and tables illustrating properties which will be directly impacted as a result of the Build Alternatives.

Mitigation

Property to be acquired for the proposed project would be purchased for fair market value, and displaced residents and commercial property owners would be provided with relocation advisory services and may be eligible for relocation benefits in compliance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended in 1987 and Sections 70-31-101 and 70-31-311 of the Montana Code Annotated (MCA).

4.4 Economic Impacts

No Build Alternative

Congestion translates into higher opportunity costs (lower productivity due to lost time) in the movement of goods, services, and labor force. Increasing levels of congestion could, over time, affect the ability of the businesses within the study area to attract new business, but it is not anticipated that overall growth in the Missoula area would be affected.

All Build Alternatives

Purchase of property would remove those parcels from the tax rolls; however, because the property to be acquired would represent less than one-half of one percent of the property in the City of Missoula, their removal from the rolls would not have a major effect on tax revenues.

Table 4.2 below provides a summary comparison of the various Build alternative impacts to commercial properties within the corridor.



**Table 4.2
Summary Comparison of Impacts to Commercial Properties on Russell Street**

Section	Alternative 4 (Preferred)	Alternative 5	Alternative 5 (Refined)
Mount Avenue to South 11 th Street	2 Commercial Buildings	3 Commercial Buildings	2 Commercial Buildings
South 11 th Street to South 3 rd Street	5 Commercial Buildings	5 Commercial Buildings	5 Commercial Buildings
South 3 rd Street to Wyoming Street		2 Commercial Buildings	
Wyoming Street to Russell Street Bridge	1 Commercial Building	1 Commercial Building	2 Commercial Building
Russell Street Bridge to West Broadway Street	2 Commercial Buildings	2 Commercial Buildings	2 Commercial Buildings
Totals	10 Commercial Buildings	13 Commercial Buildings	11 Commercial Buildings

Summary Comparison of Impacts to Commercial Buildings on South 3rd Street

	Alternative B	Alternative C	Alternative D	Alternative E (Preferred)
Reserve Street to Russell Street	4 Commercial Buildings	4 Commercial Buildings	3 Commercial Buildings	3 Commercial Buildings

Those alternatives reducing congestion or making travel easier will tend to improve commercial activity. Travel along the corridor will be reduced in cost, time, and risk of accidents. These are considered positive impacts.

As indicated in Table 4.2, up to 17 commercial buildings (13 with the Preferred Alternatives) on both Russell Street and South 3rd Street could require acquisition under the various Build Alternatives, while property would be acquired from several more. This does not necessarily mean that further avoidance measures cannot be explored or that the entire parcel would need to be acquired. These impacted properties are shown in Chapter 2 in Figures 2-16 to 2-25. Displaced commercial building owners would receive relocation assistance as required by law. Given the number of business enterprises affected compared to the availability of alternative commercial space in the Missoula area, acquisition of commercial space is not anticipated to affect the local economy.

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Mitigation

Any of the Build Alternatives may result in a number of commercial buildings being acquired. The Montana Department of Transportation will purchase properties and provide relocation assistance, as prescribed by the *Uniform Relocation Act of 1970* and Sections 70-31-101 and 70-31-311 of the Montana Code Annotated.

The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both the landowners and taxpaying public. Landowners affected are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. This action will be in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Public Law 91-646 as amended), (42 United States Code Section 4651 and 4652, et. seq.) and the *Uniform Relocations Act Amendments of 1987* (Public Law 100-17). Relocation resources are available to all residential and business owners without discrimination.

4.5 Parks and Recreation Impacts

No Build Alternative

No changes would be made to parks or recreational facilities within the corridor.

All Build Alternatives

Parks and Recreational Facilities

The Build alternatives would impact passive green space (Kern Park and Hart Park) owned by the City of Missoula. These passive parks are small and serve limited recreational purpose, and thus have no protection under Section 4(f) of the Transportation Act (see correspondence with the City of Missoula Parks Department in Appendix E). These parks would be eliminated, the Thomas Neely commemorative sign relocated, and opportunities for park and recreational enhancements identified elsewhere.

All Build alternatives would provide opportunities for the following recreational design improvements:

- Bike facilities
- Sidewalks
- River trail under the bridge and trail system access to Russell Street at the north and south ends of the Russell Street Bridge
- Grade Separated Trail crossings for Bitterroot Branch Trail and Milwaukee Corridor Trail facilities
- Landscaping
- Pedestrian crossing facilities

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The Russell Street Bridge design would include sidewalks and bicycle lanes on both the east and west sides of the structure, and would include access to the river trail system from the roadway from the north and south ends of the bridge.

Recreation opportunities within the project area would be mostly beneficial, though short-term impacts under the Build alternatives would include:

- Access restrictions to parks, trails, and the Clark Fork River during construction
- Traffic congestion in areas of active construction
- Dust, exhaust, and airborne debris in areas of active construction

Trail Connectivity

The grade-separated connections of trails crossing the Russell Street corridor are an integral part of the Build alternatives. This grade separation provides system continuity for safe and efficient travel for bicyclists and pedestrians in and through the corridor. Following is a description of each trail crossing along Russell Street.

As noted in Chapter 2, during early scoping and project development, it was determined that pedestrian/bicycle tunnels would be preferable to an overpass structure, or to an at-grade crossing. If during final design, it appears that geotechnical conditions, or underground utilities would prohibit construction of the intended under-crossings, these crossings could be redesigned as an overpass. Figure 4-2 provides an example of both an overpass and underpass treatment for pedestrian crossings. It would not be desirable, and it is not intended that these trail crossings would be left as at-grade crossings if the corridor is reconstructed.

Figure 4-2
Samples of Grade-Separated Structures



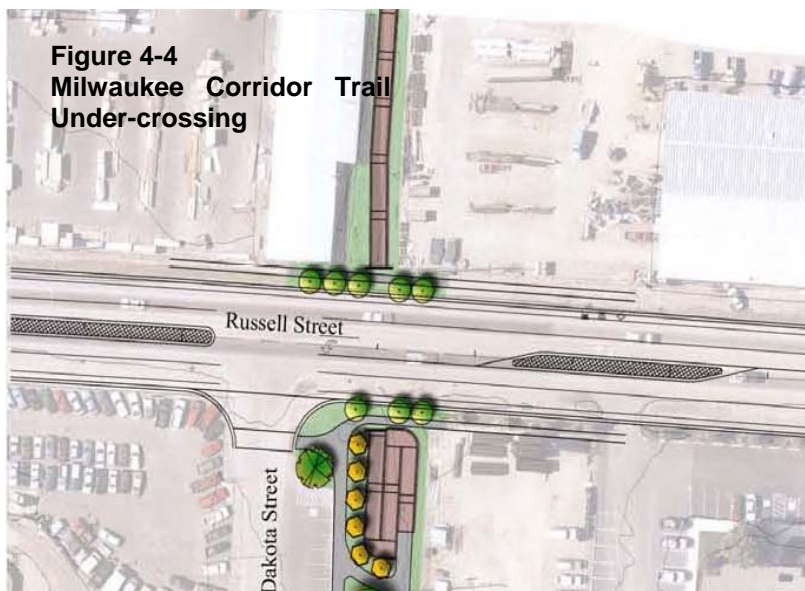
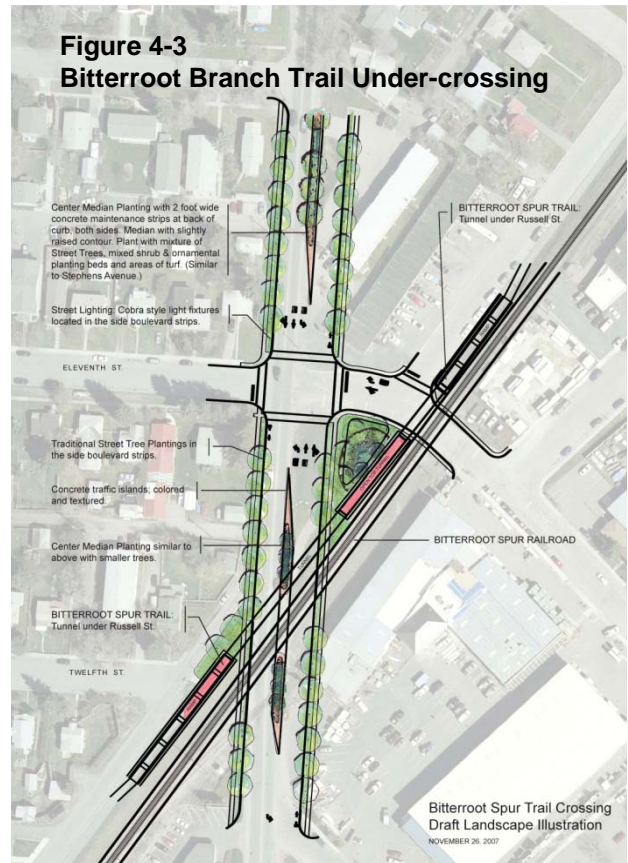
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Bitterroot Branch Trail Connection

The Bitterroot Branch Trail connection is located at the intersection of the Bitterroot Branch Trail and Russell Street south of the intersection of Russell Street and South 11th Street/Knowles Street. Under any of the Build alternatives, the Bitterroot Branch Trail Crossing would be constructed as a tunnel under Russell Street. The tunnel crossing would be constructed in approximately the same location as the existing trail crossing. The existing trail alignment would be modified to connect to the tunnel structure crossing.

Milwaukee Corridor Trail Connection

The Milwaukee Corridor Trail connection is located where Dakota Street intersects with Russell Street. The trail ends a short distance from the east side of Russell Street and currently trail users cross Russell Street at the Wyoming Street intersection. Under any of the Build alternatives, the Milwaukee Corridor Trail Crossing would be constructed as a tunnel under Russell Street. The tunnel crossing would be constructed in approximately the same location as where the existing trail terminates on the east side of Russell Street. The existing trail alignment would be modified to connect to the tunnel structure crossing.

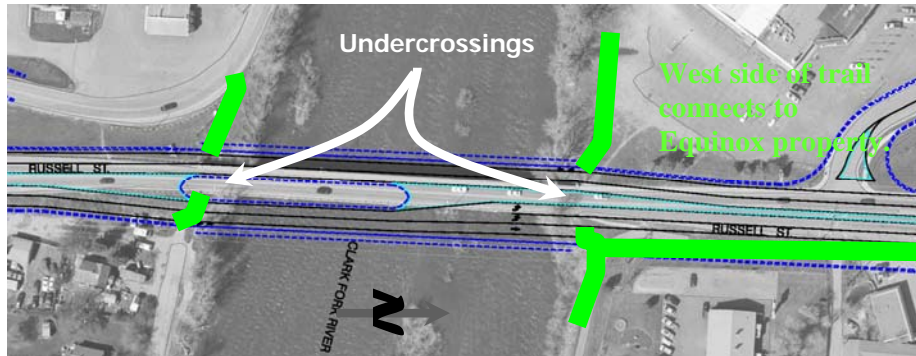




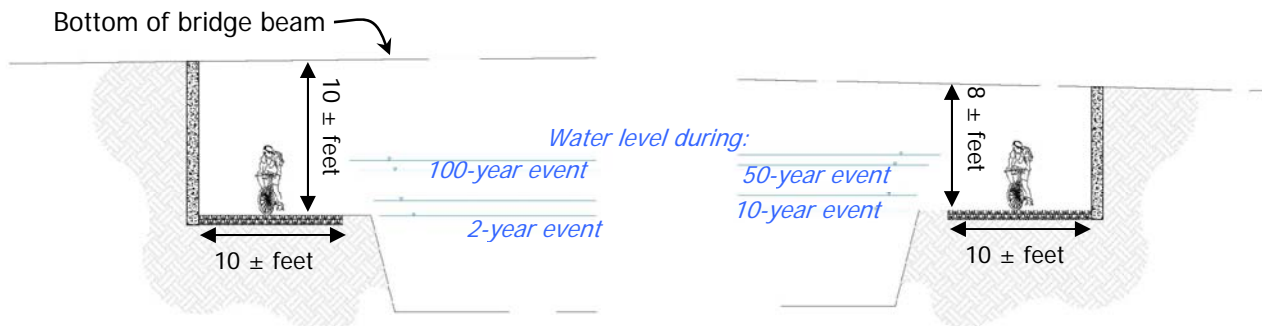
Shady Grove Trail Connection

The Shady Grove Trail connection is located parallel to the east side of Russell Street north of the bridge. The trail turns east and extends approximately 0.5 miles along the riverfront to Burton Street. Reconstruction of the Russell Street Bridge under any of the Build alternatives would include extension of the Shady Grove Trail westward under the bridge and construction of connections to the sidewalks on both sides of Russell Street. A connection to local streets on the south side of the river would also be made between the east and west sides of River Road.

**Figure 4-5
Shady Grove Trail Connections**



The underpasses would provide enough clearance for recreational use beneath the new Russell Street Bridge, but could be inundated during high-water events, as depicted below.



Mitigation

Mitigation of the loss of green space will include additional landscaping and green space along Russell Street between Mount Avenue/South 14th Street and South 3rd Street. The amount of green space that will be added as a result of the proposed project will be the same or greater than the amount that would be adversely affected. The right-of-way negotiation process will allow for the monetary value of Hart and Kern Parks to be directed to the City's Parks Department to be used in conformance with the City's Master Parks and Recreation Plan for the Greater Missoula Area (May 2004).

Trail impacts will be mitigated by the construction of trails directly under the bridge, connecting back up to the Shady Grove Trail on the north river bank, and connecting up to the sidewalk on Russell Street from the south river bank. Trail impacts will also be mitigated by providing grade separated crossing facilities at Bitterroot Branch Trail crossing and the Milwaukee Corridor Trail crossing at Russell Street.

4.6 Pedestrian and Bicycle Impacts

No Build Alternative

Under the No Build Alternative, bicycle and pedestrian facilities would remain unchanged. Signalized crossings provide isolated pockets of service to pedestrians. However, the lack of continuous sidewalks, the lack of separation from vehicular traffic along these two corridors, and the difficulty faced by pedestrians crossing either corridor at locations other than signals creates a substandard quality of service for pedestrians and bicyclists on Russell Street and South 3rd Street.

All Build Alternatives

The American Association of State Highway and Transportation Officials (AASHTO) standards recommend a bike lane width of five feet measured from the face of a curb or guardrail to the bike lane stripe. Under any of the Build alternatives, 5.5 foot bicycle lanes (measured from face of curb) would be provided on both sides of Russell Street and South 3rd Street. The four-foot asphalt bike lanes would be separated from motorized traffic by a solid white painted line, and would be clearly marked as bicycle lanes. The curb and gutter on both roadways would be two feet wide with the gutters located immediately inside of the curb and would provide an additional 1.5 feet of width to the bicycle lane. This provides an effective 5.5 foot bike lane (measured from face of curb) that exceeds American Association of State Highway and Transportation Officials standards.

Sidewalks measuring five feet in width would also be constructed, and would include a grass strip along the outside edge. This strip would vary in width depending upon adjacent development and could be eliminated in the commercial areas on the north end of the project depending on right-of-way constraints and public preference. Sidewalks would generally be separated from traffic by a bicycle lane and landscaped boulevard, except on the bridge structure and in locations where bus pullouts would be located immediately adjacent to the sidewalk.

As discussed below, any of the Build alternatives would provide the long-term benefit of higher bicycle and pedestrian quality of service and safety as compared to the No Build Alternative.

Bicycle Quality of Service

Traffic conditions on transportation facilities are commonly defined using the “Level of Service” concept. The *Highway Capacity Manual* defines vehicle Level of Service based on average travel speed, percent time delay, intersection delay, and capacity utilization to provide a qualitative assessment of the driver’s experience. The Federal Highway Administration has developed a similar ranking Level of Service system to assess bicyclists’ experience through the use of a Bicycle Compatibility Index (Index). The Index concept is based on the comfort level riders feel when using roadway facilities and is derived from such factors as the presence and width of bicycle lanes or paved shoulders, curb lane width and volumes, presence and occupancy level of parking lanes, and type of roadside development. Adjustment factors for truck volumes, parking turnover and right-turn volumes were also incorporated.



Six Level of Service/Index categories are used to describe bicycle compatibility. As shown in Table 4.3, Level of Service A (Index ≤ 1.50) represents the best conditions, and Level of Service F (Index ≥ 5.31) represents the worst.

Table 4.3
Bicycle Compatibility Index

Level of Service	Bicycle Compatibility Index Range	Compatibility Level
A	≤ 1.50	Extremely High
B	1.51 – 2.30	Very High
C	2.31 – 3.40	Moderately High
D	3.41 – 4.40	Moderately Low
E	4.41 – 5.30	Very Low
F	≥ 5.31	Extremely Low

Note: Qualifiers for compatibility level pertain to the average adult bicyclist.
Source: U.S. Department of Transportation, National Transportation Library

It is important to note that the Index is intended for mid-block bicycle use; it does not account for major intersection evaluations.

Based on existing conditions, the Bicycle Compatibility Index for Russell Street and South 3rd Street is 4.70, and thus currently provides a “Very Low” compatibility level. Without improvements, the corresponding bicycle Level of Service will be at F (calculated at 5.35 or Extremely Low) in the corridor within the next 20 years. With the improvements included in the Build alternatives, the bicycle Level of Service would attain a C designation or better by providing an Index of 2.80 (Moderately High).

An additional analysis tool was used to assess bicycle Level of Service as part of the Traffic Analysis Update in 2009. As summarized in Appendix G, the Preferred Alternative on Russell Street ranks the highest of the Build Alternatives. The high ranking was attributed mainly to lower traffic volumes in the outermost lane next to the bike lane, as well as the inclusion of signalized intersections. (Additional analysis on South 3rd Street is also included in Appendix G.)

Pedestrian Quality of Service

Each of the Build alternatives would provide a five foot sidewalk separated from traffic by a bicycle lane and landscaped boulevard.

In addition, the existing Russell Street Bridge would be replaced with a structure that would include sidewalks on the outside, street lighting, and bicycle lanes adjacent to both the east-side and west-side outside travel lanes on the new structure.

As with the bicycle analysis, an additional tool was used to assess pedestrian Level of Service on Russell Street as part of the Traffic Analysis Update in 2009. As summarized in Appendix G, each of the Build Alternatives are projected to perform at an overall Level of Service of C or better. This improvement over the No Build Alternative is directly related to the inclusion of continuous sidewalk and buffer (bike lane and landscape area with trees) from the travel lanes.

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Signalized intersections were also shown to operate better for pedestrians than roundabout intersections because pedestrians are able to cross the intersection under a controlled crossing (i.e., pedestrian signal with 'walk'/'don't walk' symbols) versus at roundabouts where pedestrians must negotiate a gap in the traffic stream or wait for a vehicle to yield and allow the pedestrian to cross.

Mitigation

Construction methods would allow for pedestrian and bicycle travel through the project vicinity, either through temporary facilities or through signs redirecting bicyclists and pedestrians to nearby alternate routes.

Bicycle and pedestrian access will be upgraded throughout the project corridor. Upgraded pedestrian facilities at intersections will comply with Americans with Disabilities Act requirements.

4.7 Air Quality Impacts

Air quality non-attainment and maintenance areas, such as the Missoula Metropolitan planning area, are subject to an air quality conformity determination by the Metropolitan Planning Organization, Federal Highway Administration, and Federal Transit Administration in accordance with Federal Clean Air Act requirements, Environmental Protection Agency conformity regulations, and State of Montana air quality rules, as pertain to conformity. Air Quality Conformity is a determination made by the funding agencies that transportation plans, programs, and projects in non-attainment and maintenance areas meet the purpose of the State Implementation Plan. The purpose of conformity is to ensure that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay timely attainment of such standards for which an area is designated non-attainment, to ensure compliance with an air quality maintenance plan, and to support the intent of the various transportation funding acts and of the 1990 Clean Air Act Amendments to integrate transportation, land use, and air quality planning. Conformity procedures are also used in the National Environmental Policy Act process to ensure that proposed projects will not violate air quality standards.

No Build Alternative

Motor vehicle exhaust is one of the primary concerns for air quality, thus impacts are anticipated under the No Build alternative since traffic is anticipated to increase regardless of whether improvements are made within these corridors. Localized air quality conditions could worsen as traffic levels rise, and congestion increases at several intersections along Russell Street and South 3rd Street.

All Build Alternatives

The proposed improvements along Russell Street and South 3rd Street have been included in the 1996, 1999, 2004, and 2008 Missoula Transportation Plan Updates as regionally significant



projects. As part of the regional transportation planning process, both the Russell Street and South 3rd Street improvements were modeled for the regional emissions analysis for air quality conformity. The regional analysis demonstrates that the proposed projects would not increase regional emissions and would not increase the frequency or severity of violations. The regional analysis further shows that emissions are below the Environmental Protection Agency-established emissions budget for the region. The current design of these projects does not differ substantially from that proposed and modeled for these Long Range Transportation Plan Updates. The Missoula Transportation Improvement Program for federal fiscal years 2007-2011 includes these two regionally significant projects and was found to conform based on analysis provided in Missoula's 2008 Transportation Plan Update. The latest Long Range Transportation Plan (2008 update) was found to conform on March 11, 2009. The 2010-2014 Transportation Improvement Program received approval on November 20, 2009.

Project Conformity for Particulate Matter (PM₁₀)

The 2008 Long Range Transportation Plan Update was found to be in conformity with air quality standards with respect to all pollutants with the exception of PM₁₀. Conformity can be achieved through the use of "washed sand" in all areas currently receiving unwashed sand treatments during winter driving conditions.

Based on coordination between the Montana Department of Transportation, City of Missoula, Missoula City-County Air Pollution Control Board, Montana Department of Environmental Quality, Environmental Protection Agency, Federal Highway Administration, and Federal Transit Administration, the proposed project on Russell Street and South 3rd Street does not require a PM₁₀ hot spot analysis. This determination is based on the following factors:

- Missoula has not exceeded the PM₁₀ standard since 1989. A PM₁₀ monitoring station is located approximately ¾ mile from the south end of the project.
- Curb-and-gutter will be provided throughout the project and unpaved approaches and undesignated on-street parking areas will be paved, aiding in the recovery of road sand material.
- Speed limits in the project corridors are, and will remain 35 miles per hour. Reduced speeds have a tendency to reduce the amount of particulate matter that gets suspended in the air.
- Recent changes to Transportation Conformity Regulations reduce the number of projects where a PM₁₀ hot-spot analysis is required, limiting those analyses to projects of air quality concern.

The Environmental Protection Agency concurred with this determination on February 1, 2010 (refer to correspondence in Appendix D).

Project Conformity for Carbon Monoxide (CO)

As noted above, the Long Range Transportation Plan was found to be in conformity with all air quality standards, including carbon monoxide. The Environmental Protection Agency requires a carbon monoxide (CO) concentration (or "hot-spot") analysis for areas where transportation improvements cannot demonstrate a Level of Service C or better at major intersections in the

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project area. Since several intersections will fail to achieve this goal by 2035 on Russell Street, a “hot spot” analysis was conducted for the worst intersection: Russell Street / South 3rd Street.

Conformity regulations require that the hot-spot analysis be conducted for the year of peak emissions during the lifetime of the project. This is to ensure that any potential violations of the carbon monoxide standards are captured by the modeling, and to ensure that the standards will be met over the lifetime of the project. Total carbon monoxide emission from a fleet of vehicles depends on two factors: how clean the vehicles are, and how much they drive. All else being equal, increased traffic volumes would translate into higher emissions; however, at the same time that traffic volumes are increasing, the vehicle fleet is also getting cleaner due to turnover (older cars meeting less stringent emission standards are being scrapped at the end of their life, and replaced by newer cars meeting tighter emissions standards). According to the 2008 Transportation Plan Update, 2010 is the year with the highest emissions rate on a regional basis, even though 2035 is the year with the highest traffic levels.

Two air quality modeling scenarios were analyzed: a baseline with 2009 traffic volumes and the existing roadway configuration, and a future case with projected 2015 traffic volumes and the Preferred Alternative configuration. Following analysis protocol, the estimated year of project completion (2015) was selected for hot-spot analysis since the regional analysis shows declining carbon monoxide emissions for the entire period between 2010 and 2035.

Running the air quality dispersion model yields carbon monoxide ambient air quality impacts for comparison to the 1-hour and 8-hour Montana and National Ambient Air Quality Standards. The screening analysis results shown in Table 4.4 demonstrate that current and projected traffic conditions at the Russell Street / South 3rd Street intersection do not cause or contribute to a violation of either the Montana or National Ambient Air Quality Standards for carbon monoxide. Further, the proposed improvements are not anticipated to degrade ambient carbon monoxide concentrations. Because this intersection is expected to experience the highest overall traffic volumes of any within the project, this analysis demonstrates air quality compliance for the Preferred Alternative.

Table 4.4
Carbon Monoxide Screen Model Results

Analysis Year	Averaging Period	Model Results	Montana/National Ambient Air Quality Standards	In Compliance?
2010	1 hour	4.3 ppm	23/35 ppm	Yes
2010	8 hour	3.0 ppm	9/9 ppm	Yes
2015	1 hour	3.8 ppm	23/35 ppm	Yes
2015	8 hour	2.7 ppm	9/9 ppm	Yes

Source: Bison Engineering, 2010

Note: Measures are provided in parts per million (ppm).

Based on the discussions above, the proposed improvements on Russell Street and South 3rd Street are demonstrated to meet the conformity criteria for federally funded transportation projects under the Code of Federal Regulations, Title 40, Section 93, and conform to the requirements of the Clean Air Act Amendments of 1990.



Transportation plan updates are required at least every four years in air quality non-attainment and maintenance areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends. (23 CFR Section 450.32(c))

Mitigation

To meet air quality standards for particulate matter (PM₁₀) as part of the Long Range Transportation Plan process, the City of Missoula has committed to the use of washed sand in 2025 in those areas where unwashed sand is currently in use. The air quality conformity analysis will be updated every four years as part of the Long Range Transportation Plan update. No air quality mitigation is required at the project level.

4.8 Noise Impacts

For Russell Street, the Montana Department of Transportation noise impact criteria (66 decibels) is predicted to be met or exceeded at 12 out of 56 receptor locations (representing 14 single-family residences and four apartment units) under current conditions and 22 receptor locations (representing 24 single-family residences, four apartment units and one townhome) in the forecast year for the No Build Alternative. The noise impact criterion is also predicted to be exceeded at 13 out of 56 receptor locations in the forecast year for the Preferred Alternatives. The impacted receptors represent 17 single-family homes and four apartment units. Of the 13 impacted receptor locations, 11 are the same receptors that will also be impacted by the No Build Alternative in the forecast year and seven are being impacted by the No Build Alternative under current conditions. An additional 12 receptor locations (representing 13 single-family residences) may also be removed due to right-of-way acquisition for the proposed project.

For South 3rd Street, the Montana Department of Transportation noise impact criteria (66 decibels) is predicted to be met or exceeded at 10 out of 44 receptor locations (representing three single-family residences, seven mobile homes, and two apartment units) under current conditions and 22 receptor locations (representing 11 single-family residences, eight mobile homes, six duplex units, and six apartment units) in the forecast year for the No Build Alternative. The noise impact criterion is also predicted to be exceeded at 21 out of 44 receptor locations in the forecast year for the Build Alternatives. The impacted receptors represent 13 single-family homes, five mobile homes, six duplex units, and four apartment units. Of the 21 impacted receptor locations, 17 are the same receptors that will also be impacted by the No Build Alternative in the forecast year and six are being impacted by the No Build Alternative under current conditions. An additional four receptors (representing one single-family residence, two apartment units and three mobile homes) may also be removed due to right-of-way acquisition for the project.

The Federal Highway Administration Traffic Noise Model Version 2.5 computer program was used to predict the traffic noise levels under the future No Build conditions and the future Build conditions on both Russell Street and South 3rd Street. Table 4.5 lists existing and predicted noise levels for the Russell Street alternatives, and Table 4.6 lists the same data for South 3rd Street.

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Table 4.5
Russell Street
Receptors and Predicted Noise Levels for the No Build and Build Alternatives

Receptor	Description	No Build Alternative $L_{eq}(h)$, Present Year 2000 (dBA)	No Build Alternative $L_{eq}(h)$, Design Year 2025 (dBA)	Build Alternatives $L_{eq}(h)$, Design Year 2025 (dBA)
South 3rd Street to South 4th Street				
R9	Single-family residence	64	66	66
R10	Single-family residence	64	66	65
R11	Single-family residence	66	68	Acquire
South 4th Street to South 5th Street				
R12	Single-family residence	64	65	66
R15	Single-family residence	65	67	66
South 5th Street to South 6th Street				
R16	Single-family residence	64	66	Acquire
R17	Single-family residence	63	65	Acquire
R18	Single-family residence	65	67	67
R19	2 Single-family residences	66	68	67
South 6th Street to South 7th Street				
R20	2 Single-family residences	63	65	67
R21	2 Single-family residences	64	65	Acquire
R22	2 Single-family residences	65	67	66
South 7th Street to South 8th Street				
R28	Single-family residence	66	67	66
R29	2 Single-family residences	66	67	66
South 8th Street to South 9th Street				
R30	Single-family residence	65	67	Acquire
R31	Single-family residence	66	67	Acquire
R32	Single-family residence	67	69	Acquire
R33	Single-family residence	64	65	Acquire
R34	Single-family residence	66	67	Acquire
R35	Townhome (1 residence)	65	67	65
R36	Single-family residence	65	67	65
South 9th Street to South 10th Street				
R38	Single-family residence	63	65	Acquire
R39	Single-family residence	65	66	Acquire
R40	Single-family residence	66	68	66
R41	Single-family residence	66	68	66
South 10th Street to South 11th Street				
R42	2 Single-family residences	67	68	67
R43	4 apartments (2 up/2 down)	66	68	66
South 11th Street to Mount Avenue/South 14th Street				
R45	Single-family residence	66	68	Acquire
Total Impacts:		12	22	13

Source: Big Sky Acoustics, 2008.

Note: The table results are representative of all 4-lane Build Alternatives, however the number of acquisitions vary.



Table 4.6
South 3rd Street
Receptors and Predicted Noise Levels for the No Build and Build Alternatives

Receptor	Description	No Build Alternative L _{eq} (h), Present Year 2000 (dBA)	No Build Alternative L _{eq} (h), Design Year 2025 (dBA)	Build Alternatives L _{eq} (h), Design Year 2025 (dBA)
Reserve Street to Schilling/Curtis Streets				
T2	Duplex (2 residences)	65	67	66
T3	Single-family residence	63	65	66
T4	Single-family residence	64	66	67
T5	Single-family residence	65	67	67
T6	2 Single-family residences	63	66	66
T8	Single-family residence	65	67	67
T7	4 apartments (2 up/2 down)	63	66	66
T9	Duplex (2 residences)	64	66	66
T10	Single-family residence	63	65	66
T11	Duplex (2 residences)	65	67	67
T14	Single-family residence	63	65	66
T15	Single-family residence	64	66	66
T17	Single-family residence	66	68	68
T18	Mobile home	65	67	67
T19	Single-family residence	66	68	67
T20	Single-family residence	66	68	Acquire
Schilling/Curtis Streets to Johnson Street				
T22	2 apartments (1 up/1 down)	67	68	Acquire
Johnson Street to Catlin Street				
T23	Single-family residence	64	65	66
T26	2 Mobile homes	67	69	Acquire
T27	Mobile home	66	68	67
T28	Mobile home	68	69	Acquire
T29	Mobile home	67	68	67
T30	Single-family residence	65	66	66
T31	Mobile home	66	68	67
T32	Single-family residence	65	66	65
T33	Mobile home	66	68	66
Total Impacts:		10	22	21

Source: Big Sky Acoustics, 2008.

Note: The table results are representative of all 4-lane Build Alternatives, however the number of acquisitions vary.

When traffic noise impacts are predicted, practicable abatement measures for the mitigation of highway traffic noise need to be considered, and the measures need to be assessed to determine if they are reasonable and feasible. Potential abatement measures include modifying the proposed Preferred Alternative designs, the construction of noise barriers or berms, and traffic management measures, such as reducing the speed limit, restricting the access of certain vehicle types, and using quieter pavements. Barriers typically provide the highest level of noise reduction of these mitigation measures.

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According to the Montana Department of Transportation Noise Policy, to determine if a mitigation measure is feasible, the measure must provide a minimum 6-decibel reduction in noise levels at residences located closest to the roadway, and must not represent a safety hazard to vehicles traveling on the roadway or to the residents of the homes. To determine if a mitigation measure is reasonable involves more subjective factors, including the comparison of the noise levels associated with the No Build Alternative to those associated with the Preferred Alternative, the cost of the abatement, the timing of development, and the opinion and acceptance of impacted residents regarding the noise abatement measure. Another factor in determining if an abatement measure is reasonable is the comparison of forecast year noise levels. The Montana Department of Transportation has determined that if the predicted noise levels for a Preferred Alternative in the forecast year of a project exceed the noise levels in the forecast year for the No Build Alternative by three decibels or more at an impacted receptor, the abatement may be considered reasonable.

Shifting the horizontal or vertical alignments to reduce traffic noise impacts could provide more distance between a roadway and a receptor, resulting in lower noise levels at a receptor. However, additional horizontal alignment shifts for Russell Street or South 3rd Street are not reasonable or feasible for this project, due to the dense urban development and potential impacts/relocations to additional buildings along the roadways. For a vertical alignment shift to be effective the elevation of the roadway would have to be lowered enough to block the direct line of sight of the entire roadway at the noise-sensitive receptor locations. Therefore, shifting the vertical alignment of the Preferred Alternatives is not feasible due to the number of cross streets and direct access to adjacent properties.

A barrier is most effective when it is continuous and solid, and it blocks the direct line-of-sight between the roadway and a receptor. Barrier design guidelines are presented in the Federal Highway Administration *Highway Noise Barrier Design Handbook*, February 2000, and can be viewed at (<http://www.fhwa.dot.gov/environment/noise/design/index.htm>). The Handbook includes information concerning various types of barriers and materials, aesthetics, and structural, drainage and safety considerations.

Mitigation

The noise study identified one location along South 3rd Street where the construction of a barrier may be a reasonable and feasible noise mitigation measure. A mobile home park is located south of South 3rd Street between Garfield and Catlin Streets, and an eight-foot barrier wall could be constructed on the right-of-way line between Garfield and Catlin Streets. One of the methods used to determine if a barrier is reasonable is the Cost-Effectiveness Index. The Index incorporates the number of receptors that would be benefited by the barrier, the total noise reduction provided by the barrier, and the total cost of barrier materials and construction. The calculated Cost Effective Index associated with the barrier configuration for the mobile home park, which includes six first row and eight second row benefited mobile homes, meets the Cost Effective Index requirement. However, many of the first row mobile home residents currently access their homes and park along the south side of South 3rd Street, and this access would be eliminated by a barrier wall. A final decision of the installation of the abatement measure will be made during the final design process.



4.9 Water Quality Impacts

No Build Alternative

Under the No Build Alternative, there would be no replacement or modification of the existing roadway and therefore no construction activities and no associated impacts on water resources.

Operational impacts on water resources in the area would remain the same as under existing conditions. At present (and under the No Build Alternative), runoff from most of the existing roadway drains to drywells and infiltrates into the underlying aquifer, potentially affecting ground water.

All Build Alternatives

Surface Water

The Montana Department of Environmental Quality is required by Section 303(d) of the Clean Water Act to identify and prioritize those waters for which Total Maximum Daily Loads need to be identified. These loads are an assessment of the amount of pollutant a water body can receive and not violate water quality standards. The Total Maximum Daily Loads determine how much “pollutant load” a lake or stream can assimilate. The Clark Fork River is on the Total Maximum Daily Load list for the presence of Arsenic, Cadmium, Chlorophyll-a, Copper, Nitrogen, Sewage, and Phosphorus from Mill Tailings and Municipal and Industrial Point Sources.

In general, there would be an increase in the total surface area of paved road related to widening and reconstruction under the Build alternatives. The increase in total road surface area decreases the overall permeability of substrate and increases the rate and quantity of surface water runoff from the roadway. The increased surface water runoff has increased potential for erosion, transport of dissolved and particulate contaminants, and for sedimentation.

The quality of runoff from roadways is impacted by vehicle-related contaminants, such as motor oil, grease, and tire rubber. In addition, surface water runoff is impacted by herbicides and pesticides that may be used in landscaped or maintained areas along the streets.

More rigorous standards would be met (with respect to grade, surface water runoff controls, sedimentation, and erosion control), and impacts to surface water quality due to erosion and siltation would be reduced. Through the use of Best Management Practices, the Build alternatives would have no adverse effect on water quality, and in fact would likely improve the quality of stormwater runoff relative to existing conditions.

Stormwater

Stormwater runoff from roadway areas within the project limits that currently drain to the Clark Fork River would be treated using Best Management Practices before being directed to the River. As a result of this modification, no impacts on the Clark Fork River from roadway pollutants in runoff would occur, resulting in an improvement over existing conditions.

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Past projects and activities that have impacted and continue to impact the quality of surface water resources in the project area, particularly water quality in the Clark Fork River, include urbanization in the Missoula Valley; bank stabilization, channelization, and construction of levees; diversions for irrigation and municipal uses; removal of riparian vegetation along the river; mining; agricultural practices; and construction and recent removal of the Milltown Dam approximately six miles east (upstream) of the project area.

The proposed construction of the roadway improvements along Russell Street and South 3rd Street could result in an increase in pollutant loads to surface water, and this increase in pollutant loads would temporarily increase cumulative impacts, principally to the Clark Fork River. However, any project in the vicinity of surface waters is required to obtain permits which require the implementation of practices to control and reduce sediment and pollutant runoff to surface waters.

All roadway and bridge runoff within the project limits would be captured and treated using Best Management Practices. Treated water would be returned to the Clark Fork River or to drywells in accordance with the City's current practice and in coordination with the Environmental Protection Agency. Implementation of these measures and enforcement of the permitting requirements would minimize the potential for this project to contribute to cumulative impacts on surface waters during construction.

Groundwater

The groundwater impacts considered include groundwater availability and supply, as well as quality. No direct impacts to groundwater availability and supply are anticipated to occur with any of the Build alternatives. Direct impacts on groundwater quality from any of the alternatives would be related to stormwater discharge from both the construction and the operation of the proposed improvements.

Under the Build alternatives, precipitation normally falling on the ground surface and eventually percolating downward to the Missoula Valley Aquifer would be intercepted by the impervious surfaces; this precipitation could contain roadway materials such as oil, grease, salts, heavy metals and other materials associated with the operation of vehicles and maintenance of roadways. A majority, if not all, of these materials would be filtered out as the runoff percolates through the alluvial materials before reaching the Missoula Valley Aquifer, which is designated as a Sole Source Aquifer. A Sole Source Aquifer designation is intended to protect drinking water supplies in areas with few or no alternative sources to groundwater resource, and where if contamination occurred, using an alternative source would be extremely expensive. The designation protects an area's groundwater resource by requiring Environmental Protection Agency review of any proposed projects within the designated area that are receiving federal financial assistance. All proposed projects receiving federal funds are subject to review to ensure they do not endanger the water sources.

If the City of Missoula establishes a "dry well" or other equivalent system for treatment of contaminated runoff in the vicinity of the project corridor, runoff from the impervious surfaces would be collected and filtered before reaching the aquifer. Because the groundwater elevation at times may be 10 feet or less below the ground surfaces (depending on the time of year and



recharge intensity), surface water entering the dry wells could come into direct contact with Missoula Valley Aquifer groundwater.

Mitigation

Direct impacts and indirect effects to water resources and water quality of the area resulting from any of the alternatives will be avoided or minimized by design and incorporation of water quality facilities using Best Management Practices, as developed in coordination with the Environmental Protection Agency during final design. Best Management Practices can also reduce construction and operation impacts when properly deployed. Construction during low flow can minimize impacts related to scouring and the transport of sediment downstream.

Should the Best Management Practice selected to manage stormwater runoff for the Preferred Alternative include the use of a “dry well” system, additional Environmental Protection Agency and Missoula Valley Water Quality District requirements may be necessary to ensure protection of the Missoula Valley Aquifer. Requirements may include submittal of construction plans, design capacities, inspection and maintenance requirements, and groundwater monitoring, if necessary.

Regardless of which specific Best Management Practice is chosen to address runoff water quality, the final designs will comply with provisions of the Montana Department of Environmental Quality’s impaired water body designation and total maximum daily loads for the Clark Fork River and the Missoula Valley Water Quality Ordinance for protection of the Missoula Valley Aquifer.

Mitigation measures that will be implemented during construction include:

- All work in and adjacent to water resources will follow state, federal, and local permit requirements.
- Development of a revegetation plan, erosion control plan, and stormwater pollution prevention plan will be coordinated with appropriate permitting and resource agencies.

4.10 Wetlands Impacts

No wetlands were identified within the Russell Street and South 3rd Street project corridors, including the riparian area adjacent to the Clark Fork River where bridge replacement activities are proposed. The proposed project will not result in wetland impacts and therefore mitigation measures are not necessary.

4.11 Water Body and Wildlife Habitat Impacts

No Build Alternative

Under the No Build Alternative, no additional water body or wildlife habitat would be disturbed or lost. Increased traffic noise may discourage birds from using trees near the roadways for perching and resting; however, habitat in the project area is currently fragmented from decades of commercial and residential development. No new impacts on fisheries would occur under the No Build Alternative. The habitat and fish species diversity in the Clark Fork River would remain the same.

Urban development along the Clark Fork River would continue to deter species that normally inhabit riparian areas. Under the No Build Alternative, no existing vegetation would be removed and no new landscaping would occur. Vegetation along the road corridor would remain primarily ornamental and the riparian vegetation along the Clark Fork River would remain intact.

All Build Alternatives

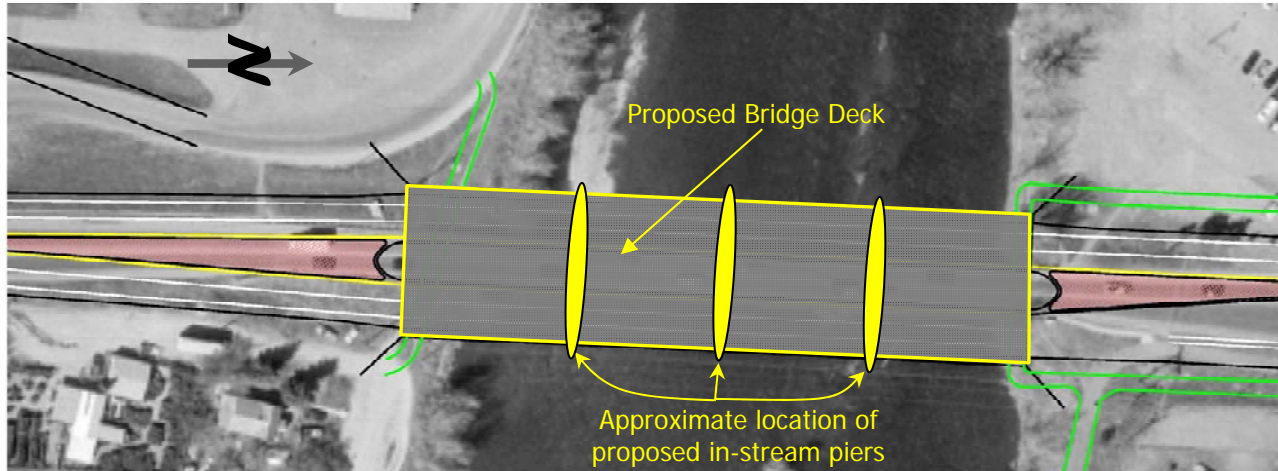
The existing Russell Street Bridge would be removed and replaced with four lanes over the Clark Fork River to provide adequate capacity for projected traffic volumes under any of the Build alternatives. The new bridge would be positioned in the same general location and piers along the same alignment as the existing bridge piers. The proposed bridge is a four-span approximately 450 foot long structure. The proposed in-stream bridge supports would be in the same location longitudinally in the river as the existing piers. The new bridge profile and low chord would be higher than the existing bridge resulting in a larger hydraulic opening. Scour predictions for the 50-year and 500-year frequency storm events were determined to be reasonable. The minimal constriction scour depths results from the fact that the proposed bridge spans the floodplain and no constriction in the cross section was created due to the new bridge. The bridge would be supported on in-stream support structures as well as by abutments on the north and south banks of the Clark Fork River. The overall impacted area from the bridge is calculated at less than 0.5 acres using a 10 foot offset from the piers and a two year storm at the bridge abutments. However, some temporary impacts would be anticipated during bridge demolition and construction activities. Bridge replacement activities would include construction of a temporary work bridge; demolition of the existing bridge; excavation and grading of bridge abutments; construction of new bridge foundations; and erection of new bridge decks. The extent of earthwork to be conducted at the bridge abutments, and specific demolition and construction methods to be used are yet to be determined. Figure 4-6 illustrates the preliminary design for the Russell Street Bridge.

Under any of the Build Alternatives, the following long-term impacts on terrestrial biological resources would occur:

- Widening of the Russell Street Bridge would result in the loss of some riparian vegetation used as habitat and movement corridors by small mammals, and several species of amphibians, fish, and birds.

- Soils exposed during construction would be susceptible to long-term colonization by noxious weeds.

Figure 4-6
Preliminary Design of the Proposed Russell Street Bridge



All roadway and bridge runoff within the project limits would be captured and treated using Best Management Practices. Treated water would be returned to the Clark Fork River or to drywells, in accordance with the City's current practice and in coordination with the Environmental Protection Agency, resulting in a net reduction in the amount of pollutants entering the Clark Fork River.

Road widening would require extension of the existing culverts underneath the roadway where irrigation ditches are crossed. Because these systems do not support fish within the project area, no loss of habitat is expected. The irrigation ditch on the west side of the mobile home park off of River Road will need to be piped as a result of the proposed improvements and additional connections on River Road. The ditch is owned by Orchard Homes Ditch Company as described in Section 3.11

There would be minimal additional adverse impacts on wildlife habitat compared to the No Build Alternative because habitat is already fragmented.

Mitigation

The following mitigation will be implemented in order to avoid and minimize impacts on wildlife and vegetation from the Build Alternatives:

- While the Bald Eagle has been de-listed, power lines, that are modified or reconstructed as a result of the proposed project will be raptor-proofed in accordance with Montana Department of Transportation standard practices.
- Unique requirements for bridge removal and construction will be addressed in Special Provisions as appropriate.
- Preservation and restoration of riparian vegetation along the banks of the Clark Fork River within the project area during and/or after construction will

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be a priority. If vegetation is removed, the disturbed ground will be revegetated with appropriate riparian species.

- Federal, state and local regulations for erosion and sediment control will be followed.
- Areas disturbed during and/or after construction will be revegetated as soon as practicable to mitigate erosion.
- Tree planting will occur in accordance with the City of Missoula's Urban Forestry policy.

Efforts will be made to reduce both the amount of sediment produced and the duration of sediment production. The mitigation proposed includes methods to reduce the amount of sediment that reaches the Clark Fork River during construction. Potential timing restrictions with regard to in-stream construction will be outlined in state and federal permits, which will be secured by the Montana Department of Transportation and the contractors. Impacts on water quality at the irrigation ditches may be avoided by constructing outside the irrigation season when the ditches are dry.

Best Management Practices for erosion control would be applied to reduce the amount of sediment entering the river. Riparian vegetation would be protected by minimizing disturbance of riparian vegetation during construction.

4.12 Floodplain Impacts

No Build Alternative

Under the No Build Alternative, there would be no replacement or modification of the existing roadway or bridge, and therefore no associated impacts on floodplains.

All Build Alternatives

There are two locations in the project area where project work may infringe on the 100-year floodplain. The first is the Russell Street Bridge and its abutments, particularly the east side of Russell Street near the south abutment. The second is the south edge of West Broadway Street west of the intersection with Russell Street. These impacts are discussed qualitatively as potential impacts. The Build Alternatives follow the existing longitudinal embankment and would require an embankment expansion for the proposed improvements. This embankment widening would result in a minor longitudinal encroachment into the floodplain. The current width of the 100-year floodplain at the bridge is approximately 400 feet, under any of the Build Alternatives; the floodplain width would increase to approximately 420 feet. No fill within the floodplain is proposed other than that necessary to reconstruct the bridge piers. The quantity of fill in the floodplain would be determined during final design.

In accordance with 23 CFR Part 650 requirements, reconstruction of the Russell Street Bridge is not expected to impact flooding conditions in the Clark Fork River under any of the Build Alternatives, based on the *Bridge Opening Recommendations Memo* prepared by the consultant HNTB. The existing bridge opening would be maintained to avoid adding embankment fill



within the river channel. In addition, existing embankment material will be excavated to provide clearance for a pedestrian/bicycle trail.

The Missoula County floodplain regulations require a minimum of two feet of vertical clearance. Several discussions with the Missoula County Floodplain manager, the Fire Department, and the Montana Department of Transportation Bridge Bureau led to the agreement that the vertical clearance between the lowest point of the proposed bridge (south end of the bridge) and the 100-year flood elevation would match the vertical clearance of the existing bridge as closely as possible under the Build alternatives. The Fire Department also agreed that in the case of an emergency, rescue watercraft would enter the river either above or below the bridge during a flood depending on the location of the emergency. Results of a hydraulic modeling study of the existing and proposed bridge openings indicate that there would be no increase in backwater from the proposed bridge compared to existing conditions.

Floodplain boundaries are based on expected flood water elevation. Because much of the project area exhibits low relief, a small change in elevation in the project area typically represents a substantial change in horizontal distance of the floodplain. The bridge and roadway would be expanded to the east toward the 100-year floodplain boundary on the south side of the river, therefore, it is anticipated that some fill material could be placed in the 100-year floodplain for the construction of the bridge. However, fill placed in the 100-year floodplain for the bridge could be mitigated by the removal of existing fill for the proposed development of the recreational trails underneath the bridge. It should be noted that the existing levee in the vicinity of the bridge will be maintained.

The proposed project would not promote or encourage development within the delineated floodplain, nor increase the flood liability hazards from its construction. This proposed project would therefore be considered to be in compliance with Presidential Executive Order #11988, regarding Floodplain Management.

Mitigation

Construction of the new bridge over the Clark Fork River may infringe on the 100-year floodplain. Any fill into the 100-year floodplain will be in compliance with Executive Order #11988 and State and City floodplain regulations which require that any fill into the floodplain not increase the base flood elevation by more than 0.5 feet. Therefore, mitigation will not be required.

The proposed Russell Street Bridge would increase the hydraulic opening associated with the structure. A wider bridge opening would not improve the hydraulic capacity of the river because there are constrictions downstream of the bridge which affect upstream water surface elevations. The proposed project is not expected to result in any additional changes in stream channel morphology. Additionally, the Shady Grove Trail underpass of the bridge would be designed above the two-year flood elevation. The final design process will include hydraulic and floodplain analysis in order to ensure compliance with Federal Emergency Management Agency regulations.

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A hydraulic analysis, prepared in accordance with the rules and regulations of the Federal Emergency Management Agency and the Montana Department of Transportation, will be required for final design to determine if the resulting water surface elevations are acceptable and to demonstrate that the flood waters within the project area will not provide any additional impacts to the adjacent land owners and structures. The analysis will specify bridge size, scour and erosion protection, and applicable flood proofing measures.

A floodplain development permit will be required from the Missoula Floodplain Administrator.

4.13 Threatened and Endangered Species Impacts

No Build Alternative

Under the No Build Alternative, no habitat for threatened, endangered, or candidate species would be disturbed or lost. Urban development along the Clark Fork River would continue to deter species normally inhabiting riparian areas. Under the No Build Alternative, no existing vegetation would be removed and no new landscaping would be installed. Vegetation along the road corridor would remain primarily ornamental and the riparian vegetation along the Clark Fork River would remain intact.

All Build Alternatives

A determination of effect for the proposed Russell Street and South 3rd Street reconstruction project for bull trout was completed in coordination with the US Fish & Wildlife Service. Based on the coordination documented in this proposed project's Biological Resources Report, the proposed project is **likely to adversely affect** bull trout and designated critical habitat.

With the release of the Draft Environmental Impact Statement, the US Fish & Wildlife Service was engaged in formal consultation under Section 7 of the Endangered Species Act. In March 2010, the US Fish & Wildlife Service issued a formal Biological Opinion in accordance with the Act. That Biological Opinion (contained in Appendix F) provides a detailed account of the US Fish & Wildlife Service determination that the direct and cumulative effects of the proposed project **would not be likely to jeopardize the continued existence of bull trout, and not likely to destroy or adversely modify designated bull trout critical habitat**. These conclusions are based on the magnitude of the project's effects (to reproduction, distribution and abundance) in relation to the listed population and that even though some short-term construction-related impacts are anticipated, the proposed action would maintain the long-term condition of bull trout critical habitat in the Clark Fork River within the project area in the Clark Fork River basin bull trout critical habitat unit.

Section 9 of the Endangered Species Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. The Biological Opinion for this project describes actions anticipated to occur during implementation of the project and proposes actions that, when implemented, are likely to adversely affect bull trout. The US Fish & Wildlife Service anticipates that implementation of this project as described in the Biological Opinion would



likely impart a level of adverse effect to individual bull trout to the extent that incidental take would occur.

Mitigation

Biological Opinions typically provide reasonable and prudent measures which are expected to reduce the amount of incidental take. Reasonable and prudent measures are those measures necessary and appropriate to minimize the incidental take resulting from the proposed action. Reasonable and prudent measures are non-discretionary and must be implemented by the Administration in order for the exemption in the Biological Opinion to apply. The US Fish & Wildlife Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of bull trout:

The Administration and the Department shall identify and implement means to reduce the potential for incidental take of bull trout from direct mortality and from increases in the amount of sediment and other pollutants entering the Clark Fork River as a result of construction related activities associated with this project.

In order to be exempt from the prohibitions of Section 9 of the Endangered Species Act, Biological Opinions typically provide terms and conditions which implement the reasonable and prudent measures and outline reporting and monitoring requirements. Terms and conditions are non-discretionary. To fulfill the reasonable and prudent measure above, the following terms and conditions shall be implemented:

- a) Materials excavated from inside any coffer dams shall not enter any stream. All water from inside the coffer dams should be pumped to contained settling ponds on the stream bank. Equipment access to the coffer dams shall be made without entering the stream channel.
- b) To the maximum extent feasible, the existing bridge will be disassembled and removed without pieces being allowed to fall into the river. If portions of the old bridge do fall into the river during demolition, they will be removed from the stream as quickly as possible and with as little disturbance to the stream bed and banks as possible. Any blasting required for pier or footing removal will be contained to the maximum extent feasible using some type of containment or shielding device to attenuate the blast's pressure wave in the water and to prevent debris from entering the stream.
- c) If work bridges are required and it becomes necessary to leave them in place during winter, such structures shall be constructed to withstand winter icing and spring runoff conditions to prevent collapse.
- d) The Administration and the Department shall monitor bridge replacement activities (including bridge demolition and removal) to ensure that these activities comply with the biological assessment, supporting documentation, and Biological Opinion for this project.

In addition to these terms and conditions, the Service believes that implementation of the measures listed above in the "Description of proposed action" section of the Biological Opinion

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(pages 5-8), and referenced in the “Effects of the action,” “Conclusion,” and “Effect of the take” sections of the Biological Opinion and incidental take statement, will minimize impacts to bull trout and incidental take. Those measures include adequate monitoring and reporting requirements, so no additional reasonable and prudent measures or additional terms and conditions are necessary.

4.14 Historic and Cultural Resource Impacts

This section describes potential impacts on historic properties that may be caused by the proposed Russell Street and South 3rd Street reconstruction project.

Two distinct regulatory processes are required for historic resources: Section 106 consultation with the State Historic Preservation Office, and Section 4(f) of the Transportation Act which requires additional consultation by the Federal Highway Administration. Both processes are described below, and an additional discussion of the Section 4(f) process is provided in Chapter 5 of this Final Environmental Impact Statement.

Section 106

Section 106 of the National Historic Preservation Act and its implementing regulations found in the Code of Federal Regulations (Title 36 Part 800) sets out a process designed to assure that historic properties such as structures, buildings, objects, districts, or archaeological sites that meet the National Register of Historic Places criteria for eligibility are considered during project development and implementation. The State Historic Preservation Officer and the Federal Highway Administration considered eligible or listed properties that may be affected by the proposed project. The two agencies will come to an agreement on how to avoid or reduce the adverse effects of the proposed project on historic resources. Letters documenting their concurrence are included in Appendix C.

Through this process, the State Historic Preservation Officer makes a determination of effect on each property eligible for listing on the National Register of Historic Places. For the purposes of this proposed project, these determinations include:

- **No Effect** – No right-of-way would be acquired, and the site would not be affected by the proposed project.
- **No Adverse Effect** – Some right-of-way would be acquired, but the proposed project’s effects do not meet the criteria of Adverse Effect, or the proposed project has been modified or conditions imposed to avoid adverse effects.
- **Adverse Effect** – The proposed right-of-way would require full acquisition of the property, or the project would alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association.



Section 4(f)

Section 4(f) of Title 23 of the Code of Federal Regulations (23 CFR 774) states that the Federal Highway Administration may not approve the use of land from a significant publicly owned public park, recreation area, wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

- 1) there is no feasible and prudent alternative to the use of land from the property; and
- 2) the action includes all necessary planning to minimize harm to the property resulting from such use.

The Final Section 4(f) Evaluation, presented in Chapter 5, will be used by the Federal Highway Administration to establish whether the project would result in the “use” of such property. Regulations governing this process can be found in Title 23 of the Code of Federal Regulations. A “use” occurs when (1) land from a Section 4(f) site is acquired for a transportation project; (2) there is an occupancy of land that is adverse in terms of the statute’s preservationist purposes; or (3) the proximity impacts of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired (this is also known as a constructive use).

No Build Alternative

There would be no impacts on historic or cultural properties, and therefore **No Effect** under the provisions of Section 106 for the No Build Alternative. As this alternative would not involve any construction, there would be no “use” of a historic site, thus no Section 4(f) impacts.

All Build Alternatives

Of the 33 properties identified as eligible for listing on the National Register of Historic Places, the Montana State Historic Preservation Office has determined that the various Build alternatives would have **No Effect** on 26 of those sites, as outlined in Table 4.7.

Impacts to the seven remaining historic properties vary by alternative as described below, and summarized in Table 4.8.

- The Bitterroot Branch of the Northern Pacific Railroad (**24MO718**) is a linear site that currently crosses Russell Street in the southerly portion of the corridor. This site would be impacted by any Build alternative. Based on the fact that the site would remain largely intact, and impacts would be limited to a wider at-grade railroad crossing at the same existing location, these impacts have been determined to have **No Adverse Effect** on the historic railroad.
- Two historic residences (**24MO811 and 24MO819**) lie in very close proximity to the existing alignment and selection of any build alternative would require removal of the structures, resulting in an **Adverse Effect** to these sites.
- The residence in the northwest quadrant of the South 5th Street intersection with Russell Street (**24MO800**) would be directly impacted by Alternative 5, resulting in an **Adverse**

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Effect determination. The remaining build alternatives avoid impacts to the structure but would require encroachments on the property resulting in a Section 4(f) “use.” The Preferred Alternative requires a very minor encroachment and results in a **No Effect** determination. The roundabout intersection in Alternative 5-Refined encroaches deeper into the property resulting in a **No Adverse Effect** determination.

- The residence in the southwest quadrant of South 5th Street (**24MO801**) would be avoided by the Preferred Alternative, resulting in a **No Effect** determination. Alternative 5, with a roundabout at this intersection, would require removal of the structure and result in an **Adverse Effect** determination. Alternative 5-Refined attempted to shift the roundabout at this intersection to the east. This shift results in the acquisition of additional properties on the east side of Russell Street, while the roundabout would still lie within approximately ten feet of the historic structure on the west. Alternative 5-Refined, while avoiding the structure still encroaches on the property to the point of having a **No Adverse Effect** determination.
- The small residential structure to the rear of the lot in the northwest quadrant of the South 11th Street intersection with Russell Street (**24MO822**) would be removed by construction of the roundabout in Alternative 5, resulting in an **Adverse Effect**. Both Alternative 5-Refined and the Preferred Alternative have a stop-controlled intersection at this location which will avoid impacts to this structure, resulting in a **No Effect** determination.
- The residence in the southwest quadrant of the South 11th Street intersection with Russell Street (**24MO823**) would be removed by construction of the roundabout in Alternative 5, resulting in an **Adverse Effect**. Both Alternative 5-Refined and the Preferred Alternative have a stop-controlled intersection at this location, and with the use of a small retaining wall can avoid impacts, resulting in a **No Effect** determination.

Appendix C provides documentation of the coordination with the State Historic Preservation Officer according to Section 106 of the National Historic Preservation Act.

For those historic sites that have a No Adverse Effect determination, the Federal Highway Administration has determined, through consultation with the State Historic Preservation Office, that no further Section 4(f) evaluation would be required. This determination has been made in accordance with new regulations contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) regarding De Minimis findings on impacts to historic resources. Correspondence regarding this determination is included in Appendix C, and is discussed in more detail in Chapter 5 of this Environmental Impact Statement.

Further information on the properties to be acquired, and having an **Adverse Effect**, is included in the Final Section 4(f) Evaluation contained in Chapter 5 of this Final Environmental Impact Statement.



**Table 4.7
Historic Properties Avoided by All Build Alternatives**

Site #	Location	Type of Site	Type of Impact	Determination of Effect
24MO796	1436 South 4 th Street	Residence	None	No Effect
24MO798	1501 South 4 th Street	Residence	None	No Effect
24MO805	1502 South 6 th Street	Residence	None	No Effect
24MO812	1501 South 7 th Street	Residence	None	No Effect
24MO814	1500 South 8 th Street	Residence	None	No Effect
24MO820	1135 Russell Street	Residence	None	No Effect
24MO842	1038 South 3 rd Street	Residence	None	No Effect
24MO843	1046 South 3 rd Street	Residence	None	No Effect
24MO845	1102 South 3 rd Street	Residence	None	No Effect
24MO849	1133 South 3 rd Street	Residence	None	No Effect
24MO850	1135 South 3 rd Street	Residence	None	No Effect
24MO852	1202 South 3 rd Street	Residence	None	No Effect
24MO853	1203 South 3 rd Street	Residence	None	No Effect
24MO855	1221 South 3 rd Street	Residence	None	No Effect
24MO856	1225 South 3 rd Street	Residence	None	No Effect
24MO858	1229 South 3 rd Street	Residence	None	No Effect
24MO859	1230 South 3 rd Street	Residence	None	No Effect
24MO860	1250 South 3 rd Street	Residence	None	No Effect
24MO861	1256 South 3 rd Street	Residence	None	No Effect
24MO862	1262 South 3 rd Street	Residence	None	No Effect
24MO881	2537 South 3 rd Street	Residence	None	No Effect
24MO882	2540 South 3 rd Street	Residence	None	No Effect
24MO884	2601 South 3 rd Street	Residence	None	No Effect
24MO885	2608 South 3 rd Street	Residence	None	No Effect
24MO891*	Proposed South 3 rd Street Historic District	District	None	No Effect
24MO892**	Proposed Orchard Homes Historic District	District	None	No Effect

Notes: * Includes: 24MO842, 24MO843, 24MO845, 24MO849, 24MO850, 24MO852, 24MO853, 24MO855, 24MO856, 24MO858, 24MO859, 24MO860, 24MO861, and 24MO862.

** Includes: 24MO881, 24MO882, and 24MO884.

**Table 4.8
Historic Resource Impacts**

Site #	Location	Alternative 4 (Preferred)	Alternative 5	Alternative 5 (Refined)
24MO718	Bitterroot Branch of the Northern Pacific Railroad	No Adverse Effect	No Adverse Effect	No Adverse Effect
24MO800	1508 South 5 th Street	No Effect	Adverse Effect	No Adverse Effect
24MO801	1501 South 5 th Street and 715 Russell Street	No Effect	Adverse Effect	No Adverse Effect
24MO811	824 Russell Street	Adverse Effect	Adverse Effect	Adverse Effect
24MO819	941 Kern Street	Adverse Effect	Adverse Effect	Adverse Effect
24MO822	1500 ½ South 11 th Street	No Effect	Adverse Effect	No Effect
24MO823	1501 South 11 th Street	No Effect	Adverse Effect	No Effect

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Mitigation

The following mitigations are proposed for impacts on historic properties caused by the Russell Street and South 3rd Street proposed project:

- A Historic American Building Survey documentation of the sites identified as adversely affected in the Final Environmental Impact Statement would be conducted prior to the initiation of construction activities on Russell Street.
- The Montana Department of Transportation would undertake an oral history project of the Russell Street neighborhood affected by the proposed project. The Montana Department of Transportation will conduct the oral history according to the standards developed by the Montana Historical Society. The tapes would be transcribed and housed at the Montana Historical Society with copies provided to the Mansfield Library at the University of Montana.
- Large format photographs would be taken of the Russell Street and South 3rd Street project corridor before, during and after construction to document the impact of the project on the corridor and the historic properties located there. Copies of the photographs would be provided to the Montana State Historic Preservation Office and the Missoula County Historic Preservation Office.

The above mitigation measures have been documented in a Memorandum of Agreement between the Federal Highway Administration and the State Historic Preservation Officer, with the Montana Department of Transportation acting as a concurring party (see Appendix C).



4.15 Hazardous Materials Impacts

The following section discusses the hazardous materials sites that may be affected by construction activities and/or pose potential long-term clean-up/control requirements.

No Build Alternative

No long-term or short-term construction impacts are anticipated under the No Build Alternative. Potential and existing hazardous material sites along the project corridor may not be mitigated as a result of the No Build Alternative.

All Build Alternatives

Table 4.9 summarizes all hazardous material sites within the proposed project area which could potentially be affected by any of the Build alternatives. Figure 4-7 illustrates their location relative to the project corridor. An additional six sites are also identified due to the potential to encounter contaminated soils resulting from spills at these locations.

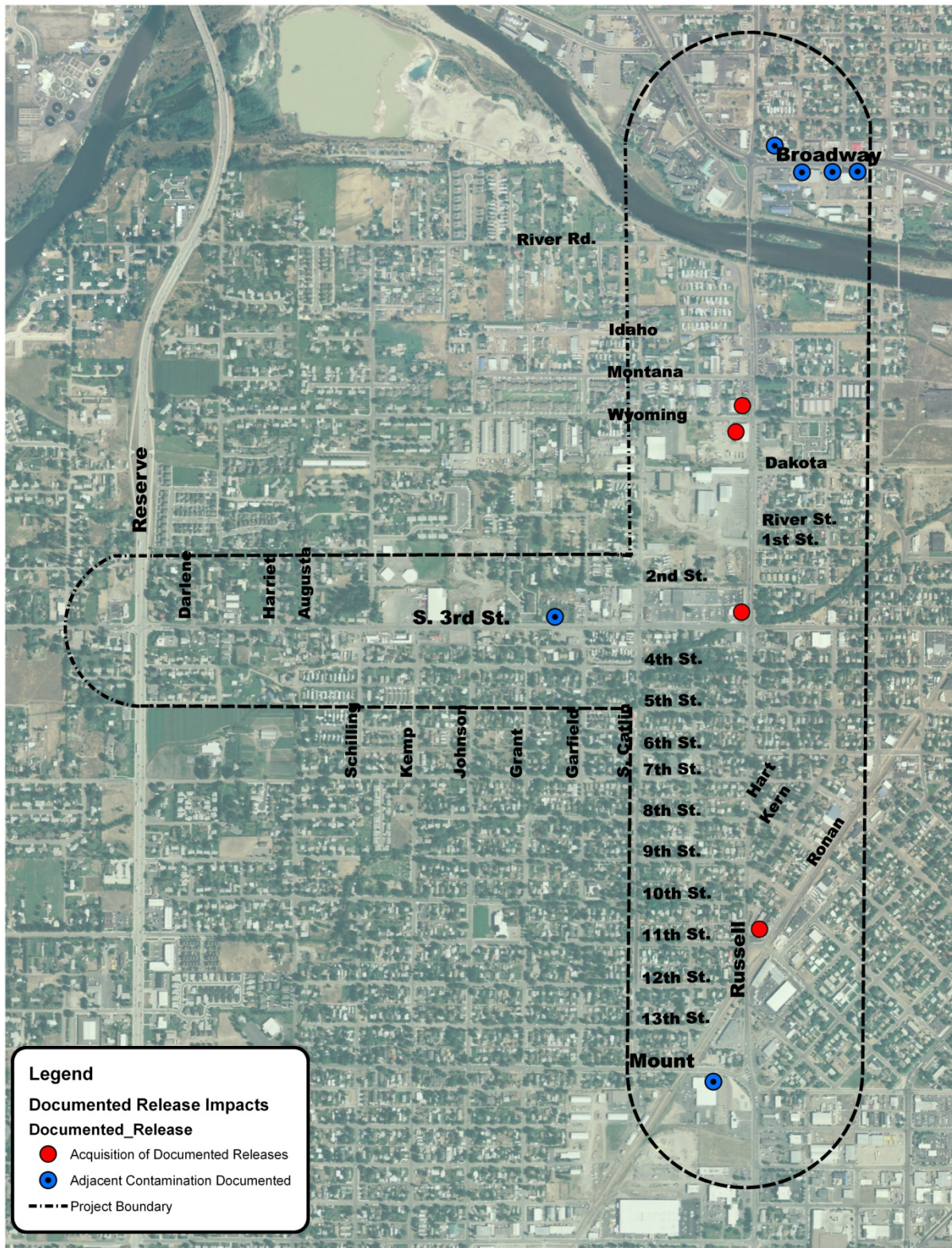
Table 4.9
Summary of Potential Hazardous Materials Impacts

Site ID	Site Name	Address	Type of Site	Location on Alignment	Impact on Alignment	Type of Acquisition	PSI Priority
28	Buffingtons Auto Repair	1027 Ronan	UST, LUST	On Alignment/ Adjacent	Documented petroleum release. Potential impacts to construction activities. Potential long-term impacts.	Full/Partial	High
10.02	Holiday Station Store #278	403 S. Russell	UST, LUST	On Alignment/ Adjacent	Documented release to the soil. Soil has been excavated. Potential impacts to construction activities.	Full	High
13.01	Plum Creek Timber Co. LP	140 N. Russell (700 Gregg Lane)	UST, LUST	On Alignment/ Adjacent	Documented release to soil and groundwater. All UST have been removed. Ground water flow varies, last reported to the NE in May 2000. Potential impacts to construction activities.	Partial	High
13.03	4G Plumbing and Heating, Inc.	1515 Wyoming	UST, LUST	On Alignment/ Adjacent	Documented petroleum release to the soil. Soil has been excavated. Potential impacts to construction activities. Potential long-term impacts.	Partial	High

Source: Herrera Environmental Consultants. *Hazardous Materials Technical Report - Russell and South Third Street Reconstruction Project*. December 2002

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Figure 4-7
Locations of Potential Hazardous Materials Impacts





The likelihood of impacts from encountering existing contaminated sites depends upon the extent and character of contamination and would be minimized by identifying the sites and potential sites prior to construction and employing appropriate control, clean-up, and disposal measures. A variety of impacts, beneficial and/or adverse, could result from encounters with existing hazardous materials sites, including:

- Contamination, that otherwise would remain in place and potentially migrate, may be discovered and addressed by the proposed project.
- Contamination may be cleaned up faster to accommodate project construction.
- Contamination may be prevented by removing potential existing sources, such as underground storage tanks, before they release contaminants.
- Contaminated materials may be uncovered, allowing more direct exposure to the public.
- Contamination may be spread as a result of construction.

Project impacts on the environment at each hazardous materials site cannot be assessed without detailed evaluations of site-specific conditions. However, with proper control techniques, contaminated soil can be removed and disposed of or treated at locations designed for hazardous materials management; contaminated ground water would be treated either onsite or at a licensed offsite facility. By using licensed carriers and vehicles equipped for the task, limited risk of public exposure would occur during removal and transport offsite. If encountered, onsite treatment of ground water would employ techniques engineered for the specific contaminants encountered.

Long-term impacts would occur where properties are acquired that have ongoing clean-up responsibility (after construction) and would include long-term monitoring and documenting site closure. Such sites are typically associated with ground water contamination or multiple contaminant sources.

Mitigation

Many sites along the project have the potential for hazardous materials concerns at deep soil levels, specifically, petroleum hydrocarbon contamination to soil and ground water. During the design and right-of-way phases of project development, these sites would be investigated in detail for soil and ground water impacts that may affect construction.

If hazardous materials remediation is necessary during construction, the contractor would be required to submit a health and safety plan to the Montana Department of Transportation prior to beginning work. There will be special provisions included in the contract documents to address contaminated soil and ground water as needed.

Prior to construction, the Montana Department of Transportation will inspect for asbestos and possibly for lead contamination in all buildings that have been or would be acquired for right-of-way purposes and that are slated for demolition. A lead paint abatement plan would be prepared for lead-based paint on the Russell Street Bridge. Portions of the Russell Street Bridge would be encapsulated during demolition to collect concrete debris and loosened lead paint. Established methods and controls would be implemented to prevent worker and public exposure to lead paint

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and asbestos in accordance with the Occupational Safety and Health Administration (OSHA), Montana Department of Labor and Industry occupational safety and health requirements, and Montana Department of Environmental Quality permit requirements for demolitions.

Throughout the construction process, encounters with hazardous materials would be documented and reported appropriately. Project planning would accommodate regulatory agency requirements as well as disposal or treatment facility requirements.

Properties left with residual contamination would be clearly identified in documentation provided to the Montana Department of Environmental Quality.

4.16 Visual Resource Impacts

A discussion of the visual characteristics and aesthetic qualities of the existing corridor was given in Section 3.16. The following are general observations of visual resources and possible impacts from a qualitative point of view. The photographs given in Section 3.16 should be taken as a general representation of the appearance of the alternatives. More specific details will be more fully developed during the design stages of the chosen Build Alternatives for Russell and South 3rd Streets.

No Build Alternative

The aesthetic conditions within the project corridor would remain unchanged under the No Build Alternative. The area would continue to lack focal points, such as medians or landscaped areas along the roadways, and vegetation would continue to be limited to residential lots. Foreground, midground, and background views from the road would remain unchanged under the No Build Alternative.

All Build Alternatives

Existing vegetation within proposed rights-of-way of the project corridor would be removed. The greatest impacts on aesthetic quality would occur when large diameter trees, which provide unity, vividness, and visual buffers to the built environment, are removed in residential areas.

Signalized intersections on Russell Street provides less opportunity for additional landscaping than would otherwise be provided by roundabouts; however a signal controlled intersection also has a smaller footprint at the intersections, thus less overall visual impact at those locations. The overall impacts and potential benefits are very similar between all of the Build alternatives.

The visual quality of the project corridor would improve under any of the Build Alternatives. Although the project would result in a wider roadway and an increase in paved surfaces, landscaping would be incorporated into the road design to soften the foreground and mid-ground views from the road and to help break up the space that is currently dominated by the built environment. Trees will be planted in accordance with the City of Missoula's Urban Forestry tree planting specifications. Raised medians would be landscaped where appropriate. Vividness,



intactness, and unity would improve with the implementation of landscaping features under all action alternatives.



Design features proposed for the new bridge would improve the visual quality of the project corridor by creating focal points along the roadway that unify visual elements of the landscape. Foreground and mid-ground viewers of Russell Street from River Road to West Broadway Street would experience improved views of the bridge and the associated built environment. In addition, background views from the bridge would improve due to the slightly higher elevation of the bridge.

Foreground and mid-ground views from the roadway (driver's perspective) would include increased views of the built environment. Background views would improve in the southern portion of Russell Street because several residences on the east side of Russell Street would be removed; therefore, background views to the east would increase unless and until redevelopment occurs on these parcels. Background views would remain as they are in the northern portion of Russell Street and on South 3rd Street. Placement of landscaping features within raised medians and landscaped boulevards would soften views of and from the road.

Sidewalks and bicycle lanes proposed under the action alternatives would improve the unity of the project area. Proposed landscaping, lighting, and additional green space in the right-of-way would create focal points along the roadway. Together, these design features would enhance the visual connection between the project corridor and the surrounding community. The image and intactness of the neighborhoods located adjacent to the roadway would improve.

Adverse light and glare impacts would be minimized as appropriate through use of directional lighting and careful placement of lights and signage. Lighting would meet Montana Department of Transportation standards and City "Dark Skies Ordinance" through such measures as cut-offs to minimize glare. Table 4.10 describes visual benefits from the various Build Alternatives.

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**Table 4.10
Visual Benefits of Build Alternatives**

Design Feature	Visual Impacts and Benefits
Bicycle facilities	<ul style="list-style-type: none"> ▪ Increased roadway width ▪ Opportunities for improved non-motorized transportation could decrease the visual impacts of traffic congestion
Sidewalks	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Provide visual focal points along the roadway
Bus turnouts	<ul style="list-style-type: none"> ▪ Increased roadway width ▪ Opportunities for community transportation could decrease the visual impacts of traffic congestion
River trail system access to roadway	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Improve non-motorized transportation, therefore reducing visual impacts of traffic congestion and providing visual relief from the built environment
Trail crossings for existing trail facilities	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Improve non-motorized transportation, therefore reducing visual impacts of traffic congestion and providing visual relief from the built environment
Landscaping	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Create focal points along roadway (boulevards, medians, and roundabouts) and provide visual relief from the built environment
Illumination	<ul style="list-style-type: none"> ▪ Increased visibility and possibly glare along roadway
Americans with Disabilities Act compliance	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Improved access for persons with disabilities ▪ Wider sidewalks would allow utility poles and signs to be moved off sidewalks, which would be an improvement under the Americans with Disabilities Act
Crossing facilities	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Provide visual focal points along the roadway ▪ An above-grade crossing would decrease the vividness, intactness, and unity of the surrounding area
Roundabouts	<ul style="list-style-type: none"> ▪ Increased right-of-way width ▪ Landscaping opportunities ▪ Create focal points within roadway and provide visual relief from built environment

Mitigation

Due to the overall positive impact on visual resources, no mitigation is required.



4.17 Indirect and Cumulative Effects

Indirect Effects

The Council on Environmental Quality's regulations for implementing the National Environmental Policy Act defines indirect effects as "...caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."

Indirect effects usually include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Although direct and indirect effects can cause cumulative impacts; cumulative impacts are not necessarily indirect effects.

Over the past two decades, there has been a substantial amount of research conducted on the indirect effects of transportation improvements on land use. There are basically two schools of thought on the subject: 1) that the addition of roadway capacity induces new growth and results in increased congestion, or 2) that construction of additional roadway capacity is merely a response to the historical land consumption trends and patterns which have favored suburban decentralization and dispersion. In practice, neither is wholly accurate. Land use and transportation are inextricably intertwined and frequently cyclical in nature with improved accessibility increasing land values, land values affecting their use, changing uses affecting the need for transportation investments, roadway improvements further changing access and so on.

It is also important to recognize that the effects of transportation in facilitating physical development are not necessarily the same as its effects on economic growth. If a region is growing economically, development will occur somewhere within or near it. Combined with the effects of land use and zoning policies which are controlled by each local jurisdiction, transportation investments may influence the *location* of growth, but they alone do not *cause* the growth.

Induced travel is a term used by economists to describe the additional demand for travel that occurs as the generalized cost of travel decreases.¹ The theory of induced vehicle travel suggests that increases in carrying capacity of a specific roadway corridor would result in an increased level of vehicle traffic due to a decrease in the cost of travel, especially the time-costs of travel. Generally, induced travel applies to new roadway carrying capacity; for example, the widening of a roadway to improve Level of Service. Traffic on Russell Street and South 3rd Street has been growing at a steady rate over the past 30 years. This growth trend is anticipated to continue regardless of any improvements on these routes themselves. Improving capacity in these corridors is not anticipated to induce growth; rather, it would maintain and improve access for residents, commercial traffic, and regional users and may result in a shift in some drivers' travel patterns.

Research compiled by the Transportation Research Board indicates that transportation variables are no more critical to location decisions than such factors as housing type, size, and cost, as well as real or perceived differences in neighborhood characteristics such as crime rates and the

¹ FHWA. 2005. Induced Travel: Frequently Asked Questions. <http://www.fhwa.dot.gov/planning/itfaq.htm>

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quality of schools. Moreover, lifestyle and life-cycle variations (such as price of gas, scenery, property taxes, federal monetary policies which affect mortgage rates, general state of the economy, availability of jobs, etc.) have been found to be equally important as (and in some cases much more important than) transportation determinants of location and land use choices. Given the dynamic relationship between all of these variables, a direct connection between new capacity and residential or business development is tenuous at best. Based on the planned redevelopment and growth constraints within the study area as discussed under Land Use, it is anticipated that the project is unlikely to induce any substantial changes in travel or land use patterns, due to the nature of the proposed project and location.

There are no other indirect effects to aspects of the natural (such as, air, water and ecosystems) or the built environments, due to the nature of the proposed project, location, and developed nature of the project area. The purpose of the proposed project is to provide substantive safety and mobility improvements for all modes of travel in the Russell Street and South 3rd Street corridors. Direct impacts as a result of the proposed project are primarily related to the expansion of the facilities. The proposed project is located in a fairly developed and established area of Missoula, consisting primarily of residential neighborhoods and commercial retail areas.

Cumulative Effects

This section addresses the potential cumulative effects in the study area. The Council on Environmental Quality's regulations for implementing the National Environmental Policy Act defines cumulative effects as:

“Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions.” (40 CFR 1508.7)

Russell Street and South 3rd Street are existing roadway facilities, therefore, cumulative impacts include any additive impacts associated with the historic construction, reconstruction, and use of the existing facility, as well as additive impacts created by other projects in the general area. The analyses presented in this document indicate that adverse impacts from the reconstruction of Russell Street and South 3rd Street are limited to specific resources. As such, the incremental impacts when added to other past, present, and reasonably foreseeable future actions are limited to those same resource areas.

The following sections summarize the past, present and reasonably foreseeable actions within the study area; a summary of those resources not affected by this project, thus having no cumulative impact; and a discussion of those resources impacted by this project, thus experiencing a cumulative impact.

Past, Present, and Reasonably Foreseeable Actions

The first inhabitants of the Missoula area were American Indians from the Salish tribe. They called the area "Nemissoolatakoo," from which "Missoula" is derived. The word translates roughly to "river of ambush/surprise," a reflection of the inter-tribal fighting common to the area.

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The Indians' first encounter with whites came in 1805 when the Lewis and Clark expedition passed through the Missoula Valley.

There were no permanent white settlements in the Missoula Valley until 1860 when C. P. Higgins and Francis Worden opened a trading post called the Hellgate Village on the Blackfoot River near the eastern edge of the valley. It was followed by a sawmill and a flour mill, which the settlers called "Missoula Mills". The completion of the Mullan Road connecting Fort Benton, Montana with Walla Walla, Washington and passing through the Missoula Valley meant fast growth for the burgeoning city, buoyed by the U.S. Army's establishment of Fort Missoula in 1877, and the arrival of the Northern Pacific Railroad in 1883. With this Missoula became a trading center in earnest, distributing produce and grain grown in the agriculturally prosperous Bitterroot Valley. Businessmen A. B. Hammond, E. L. Bonner, and R. A. Eddy established the Missoula Mercantile Company in the early 1880s.

The city's success was aided by two other factors. First was the opening of the University of Montana in September 1895, serving as the center of public higher education for Western Montana. Then, in 1908, Missoula became a regional headquarters for the Forest Service, which began training smokejumpers in 1942. The Aerial Fire Depot was built in 1954, and big industry came to Missoula in 1956, with the groundbreaking for the first pulp mill.

Until the mid 1970s, logging was a mainstay industry with log yards throughout the city. Many ran teepee burners to dispose of waste material, contributing to the smoky haze that sometimes covered the town. The current site of Southgate Mall was once the location of the largest log-processing yard within several hundred miles. The saws could be heard over two miles away on a clear summer night. However, by the early 1990s, changes in the economic fortunes in the city had shut down all the Missoula log yards.

Missoula is located within the fly fishing Golden Triangle and the surrounding area is a popular area for hunting deer, elk, bear, moose, and other game animals. This provides Missoula with an ample tourism industry based on hunting and fishing.

The most relevant past actions include the construction of both Russell Street and South 3rd Street. A description of these corridors is provided as historical context for the other discussions.

Russell Street between South 10th Street and South 3rd Street was historically developed as a local-access road through a primarily residential, working class-neighborhood (Daly and Low's residential subdivisions are located to the west of Russell Street and the South Missoula and Knowles #2 subdivisions are located to the east). The roadway use changed with the construction of the Russell Street Bridge in 1957. After the Russell Street Bridge was constructed, Russell Street served as a primary connecting route between West Broadway Street and Brooks Street. Agricultural property at the southern end of the historic Orchard Homes subdivision was sold in the late 1950s and Russell Street north of South 3rd Street began developing commercially.

South 3rd Street was initially constructed as a primary thoroughfare, connecting the growing Orchard Homes community with the City of Missoula center. South 3rd Street also provided access to the loading docks and other industrial facilities associated with the Bitterroot Branch of the Northern Pacific Railroad.

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Current and reasonably foreseeable future projects which affect resources within the study area include public and private actions such as the Intermountain Lumber site redevelopment, Liberty Lanes redevelopment, Milltown Dam Removal, Reclamation of the Stimson Lumber Site, and the redevelopment at the Champion Mill site.

Redevelopment of the former **Liberty Lanes** site, which is just over three acres in size, includes a two-phase low-income housing project. The 34-unit Equinox phase was completed in 2009, and the Solstice phase including an additional 34 units, is currently under construction.

Redevelopment of the **Intermountain Lumber** site has been included in an Urban Renewal District since 1991. Intermountain closed its doors on the 12 acre site on Russell Street in 2002. In 2003, the Missoula Housing Authority purchased the property. In 2010, the Garden District, a low-income rental housing facility, was opened by the Montana Housing Authority on just under two acres of the site. Efforts are currently ongoing to develop a mixed commercial and residential facility on the portion of the property fronting along Russell Street.

Removal of the Milltown Dam is being conducted by the Environmental Protection Agency. In 1981, arsenic contamination was discovered in drinking water wells near the Milltown Dam and Reservoir. The site was added to the National Priorities List for cleanup under Superfund in 1983. The Superfund Site includes 120 miles of the Clark Fork River and is developed into three Operable Units: (1) Milltown Drinking Water Supply; (2) Milltown Reservoir Sediments; and, (3) Clark Fork River.

There were approximately 6.6 million cubic yards of contaminated sediments behind the Milltown Dam which were contaminating the drinking water supply and releasing copper downstream of the dam, threatening fish and aquatic life. The sediments were deposited during the 1900s as a result of mining activities in Butte. A Record of Decision was issued in 2004 calling for the removal of the dam and highly contaminated sediments.

The cleanup process includes the removal of the Milltown Dam and Powerhouse, the excavation of 2.2 million yards of highly contaminated sediments and transport to the Anaconda Smelter Superfund Site, the restoration of the Milltown drinking water supply, unrestricted fish passage, and the return of the Clark Fork and Blackfoot Rivers to a more natural and free-flowing state.

The remediation and removal of sediments is projected to be done in 2010 and the restoration should be completed by 2012.

Reclamation of the Stimson Lumber Site is anticipated to be complete by the summer of 2011. The Montana Department of Environmental Quality, Department of Justice, and Stimson Lumber Company reached a settlement in *Montana v. Stimson* in which Stimson Lumber Company will remove the Cooling Pond and Berm area which encroaches into the Blackfoot River at Stimson's Bonner Mill. The project will include the removal of an estimated 146,354 cubic yards of material from the Blackfoot River. The most dangerous of the material will be shipped to an out-of-state facility, some will be shipped to the Missoula landfill, and some may be placed at an on-site repository. The removal of waste started in September of 2010, initially anticipated to require 1,500 truckloads. During the excavation of material, however, the contractor discovered an unanticipated amount of logs, timbers, and concrete that needed to be



removed along with the contaminated soils. The identification of the extra materials resulted in an additional four months of removal activity to the original schedule. Excavation of materials was originally slated to be completed in November 2010, but, as a result of the delay, was not completed until March 2011. Revegetation and planting efforts will begin in the spring of 2011 and be completed by May 30, 2011.

The **Champion Lumber Mill** was located between California and Hickory Streets on the south side of the Clark Fork River. In 2007, the Missoula City Council zoned the 46-acre site for a high-density urban infill project. The project will have 285 lots and 520 residential units. The commercial and residential property development could create jobs, provide future housing, and will include parks and trails. Petroleum had polluted portions of the land, and the Montana Department of Environmental Quality oversaw the removal of trichloroethylene from the soil. The task was completed in 2009. The site must be remediated before it can be purchased; the potential developer is following a voluntary cleanup plan which gives them until 2012 to fully clean up the property. When the Department of Environmental Quality signs off on the cleanup, it can be sold to the developer. The Missoula Office of Planning and Grants as well as the Missoula Area Economic Development Corporation were able to provide money from the city's Brownfields Revolving Loan Fund to help finance the site cleanup. The loan will be repaid once the property is sold to the developer.

Five other transportation-related projects are planned or ongoing in the general area. These include:

- Missoula Urban Renewal District, Capital Improvement Program – The lack of curb and sidewalk has been identified in the Urban Renewal District II Study and Plan as a condition contributing to blight in the District. A previous phase constructed curb and sidewalk along Catlin Street between South 3rd Street and Wyoming Street, and Wyoming Street between Catlin Street and Russell Street, and 2nd Street and Garfield Street. Improvements under this Capital Improvement Program item will continue to reduce blight and facilitate the implementation of the Urban Renewal District II Plan by constructing sidewalks where there continue to be gaps in the sidewalk network within the urban renewal district.
- Mullan & Reserve – The purpose of this project is to add an additional left turn lane at the intersection of Reserve Street and Mullan Road to accommodate the northbound Reserve traffic. On Reserve Street, the project begins at the end of the Clark Fork River Bridge. The project then extends north to the beginning of the raised median on Reserve Street. On Mullan Road, the project begins just west of the side entrance into the Northgate Shopping Center. The project then extends west to the signalized intersection of Mullan Road and Clark Fork Lane. A 14-foot right turn lane and a five-foot bike lane will also be included on Reserve Street, south of the Mullan/Reserve intersection. A 12-foot right turn lane and a five-foot bike lane will also be included on Mullan Road, west of the Mullan/Reserve intersection. Existing signals at the northwest corner of the Mullan/Reserve intersection will be removed and new ones added.
- Missoula Signal Optimization – The purpose of the Missoula Signal Optimization project is to review and update traffic signal timings at 51 signalized intersections in Missoula.

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The project will collect traffic count data and optimize traffic signal timings along corridors to improve safety and efficiency of the network. The project will also make recommendations regarding potential future traffic signal equipment upgrades.

- Missoula East & West – The proposed scope of work is to reconstruct and reconfigure the ramps and intersections of both Orange Street and Van Buren Street with I-90.
- Milwaukee Railroad Path – This Community Transportation Enhancement Program project is to construct a 10-foot wide path between Russell Street and Davis Street but does nothing at Russell Street. It is out for bid and will be constructed in the summer of 2011.

Resources not subject to Cumulative Impact Analysis

The 1997 Council on Environmental Quality Cumulative Effects Guidance states that not all potential cumulative effects issues need to be included in the analysis. Cumulative effects analysis should “count what counts” and not include issues that have little relevance or consequence to the effects of the proposed action. Pursuant to this guidance, the following are not subject to cumulative impact analysis as they relate to this project.

Farmlands

There are no lands within the project corridors designated as “prime, unique or statewide important farmlands” that would be eligible for protection under the Federal Farmland Protection Act.

Wetlands

No wetlands were identified within the Russell Street and South 3rd Street project corridors, including the riparian area adjacent to the Clark Fork River where bridge replacement activities are proposed.

Floodplains

The removal of the Milltown dam and the Liberty Lanes site re-development into low-income housing are two known projects that will impact floodplains associated with the Clark Fork River. The removal of the dam will allow the river to return to more free flowing conditions. The site re-development included the removal of a number of large pieces of concrete rubble and included some bank restoration and re-vegetation efforts.

Because of the highly urbanized nature of the downtown Missoula area; however, the floodplain associated with the Clark Fork River has already been subjected to constraints. It is not anticipated that this project will increase the base flood elevation. However, if an increase is necessary, as noted in Section 4.12, the project will not increase the base flood elevation by more than 0.5 feet, which will ensure compliance with Executive Order #11988 and State and City floodplain regulations.



Visual Resources

Due to the highly urbanized setting of Russell Street over the past 50-plus years, both in terms of roadway usage and surrounding land uses, inclusion of landscaped elements in the proposed project would provide an overall enhancement to the visual character from both an adjacent perspective as well as the perspective of the traveler moving along the corridor(s).

Air Quality

By its nature, air quality impacts are analyzed on a regional basis and a broad range of existing, planned and programmed projects are included in the analysis. The regional analysis demonstrates that the proposed projects would not increase regional emissions and would not increase the frequency or severity of violations. The regional analysis further shows that emissions are below the Environmental Protection Agency-established emissions budget for the region.

Resources of Concern

The following resources are included for analysis due to the potential for additive impacts from the proposed improvements on Russell Street and South 3rd Street.

Land Use

The geographic boundaries to land use were considered within the immediate and immediate surrounding areas of the Russell Street and South 3rd Street corridors. For the purposes of this analysis, the “immediate surrounding areas” is defined as an approximate three-block radius around the South 3rd Street and Russell Street corridors (as illustrated in Figure 3-1). These are appropriate boundaries for the study area, as the proposed project improvements are not anticipated to have a regional effect on traffic or development patterns and the proposed study area provides a good representation of the mix of land use currently and planned for the area.

The South 3rd Street and Russell Street project is situated within six Missoula neighborhoods. The Northside/Westside, River Front, River Road, Rose Park, Southgate Triangle, and Franklin to the Fort neighborhoods contain residential and commercial developments with numerous parks and open spaces that serve the entire Missoula community.

The River Front and River Road neighborhoods generally fit within the Southside River Front planning area. The *2000 Southside Riverfront Area Comprehensive Plan* identified the center of this district as the vacant former lumber mill.

Residential development within the neighborhoods is a mixture of single family homes, apartment complexes, duplexes, and mobile home parks. As earlier as 1900, residential development has taken place within the project proposal area. The earliest residential developments were part of the Cobban and Dinsmore subdivisions within western section of the Riverfront neighborhood between present day Reserve and Russell Streets.

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Within the Russell Street corridor from River Road to South 3rd Street, residential development took place mainly from 1910 to 1929.² From South 3rd Street to Mount Avenue, development was happened 1930 to 1956.³ By 1956, most of the present day Russell Street corridor had been built in with single family homes.⁴ Since then, most of the residential development is limited to south of South 3rd Street to Mount Avenue.

Since 1972, commercial development has been concentrated on the northern end of Russell Street from the river to South 3rd Street West. The most significant development within the corridor and surrounding area was the Intermountain Lumber site. This industrial site was built in 1946. By 1972, the lumber operations were closed and the site operated as a lumber yard. The most familiar businesses within the corridor are the Pink Grizzly, Reds Towing, Holiday Gas Station, the Good Food Store, and several used car lots.

On South 3rd Street from Russell Street to Reserve Street, the corridor is dominated by mixed uses of residential homes, a garden nursery, a gas station, and other small businesses. Since 2003, two high-density residential facilities, the Good Food Store, and Home Resources have been built within the River Front area. Commercial development is concentrated within the Russell Street to South 3rd Street corridor and South 3rd Street to Reserve Street travelway. The city was able to secure the remaining easements to construct additional paths to extend the Milwaukee Pedestrian Trail and construction will start soon.

Other than some minor infill developments, the only major planned land use changes within the corridor are the redevelopment of the Intermountain Lumber and Liberty Lanes sites. The plan put forward by the Missoula Housing Authority for the Intermountain site has been partially completed as the Garden District, a low-income rental facility. Further development at the site envisions both a commercial and residential complex which would include affordable housing units and green space along Russell Street. The Liberty Lane site has been redeveloped as affordable housing.

The former Champion Mill site is located between California and Hickory Streets on the south side of the Clark Fork River. In 2007, the Missoula City Council zoned the 46-acre site for a high-density urban infill project. The project will have 285 lots and 520 residential units. The commercial and residential property development could create jobs, provide future housing, and will include parks and trails.

Both Russell Street and South 3rd Street are fairly well developed, but some opportunities for infill or redevelopment do exist, particularly at the former Intermountain Lumber site. Transportation improvements in this area would tend to promote infill development as opposed to roadway extensions to outlying areas which may promote more dispersed-type development (see Indirect Impacts discussion at the beginning of this section). Since the proposed project lies entirely within the city limits, the direction of future growth will be determined more by zoning

² *Results of a Cultural Resources Inventory of the Russell Street Expansion Corridor*, Missoula County, Montana: Inventory Forms. Historical Research Associates, Inc. Missoula, Montana. January 2001.

³ *Results of a Cultural Resources Inventory of the Russell Street Expansion Corridor*, Missoula County, Montana: Inventory Forms. Historical Research Associates, Inc. Missoula, Montana. January 2001.

⁴ *Results of a Cultural Resources Inventory of the Russell Street Expansion Corridor*, Missoula County, Montana: Inventory Forms. Historical Research Associates, Inc. Missoula, Montana. January 2001.



and permitting by the City of Missoula than by the widening of either of these routes. The zoning in this area is currently under review by the Missoula Office of Planning and Grants. The city solicited comments on zoning within the general study from city agencies in late March 2011. The request noted that “the vision itself – one of pedestrian-friendly, mixed-use area according to the Southside Riverfront Comprehensive Plan Amendment – requires zoning that promotes community and neighborhood-scale commercial and residential uses, as opposed to heavy commercial or industrial uses.” Early committee meetings concluded that much of the zoning in place along Russell Street and South 3rd Streets in this area is sufficient to accomplish the community vision, but participants want to take a closer look at the large areas poised for redevelopment. The focus of the zoning changes will be on creating uniformity in height, use, and setback.

Based on this information, the cumulative impacts on land use, development trends and growth are consistent with local plans and policies.

Parks and Recreation/Pedestrian and Bicycle Facilities

The City of Missoula is a very bicycle-friendly community where one has many opportunities to travel by bicycle and get around town. Since 2003, the city of Missoula has been awarded silver status by the League of American Bicyclists. The League’s Bicycle Friendly Community Campaign recognizes communities that actively support bicycling by providing safe accommodations for cycling and encourage residents to bike for transportation and recreation. Missoula is also the home of Adventure Cycling Association; North America’s largest cycling membership organization, which makes the city a focal point for bicycle travel.

For the purposes of this analysis, the geographic boundaries for pedestrian and bicycle facilities were considered within the the city of Missoula, as a whole. These are appropriate boundaries for the study area, as the city has developed an infrastructure for bicycle and pedestrian facilities within the city and surrounding area of the project corridors. The proposed construction of bicycle and pedestrian facilities, as a part of the proposed project, will address missing links in the city’s network. The new bicycle and pedestrian facilities will complete connections with existing facilities in the surrounding area of the Russell Street and South 3rd Street corridors.

Improvements to the pedestrian and bicycle facilities that currently cross Russell Street, and the inclusion of bike lanes and sidewalks where none currently exist on either Russell Street or South 3rd Street would provide improved access to grade-separated trail crossings and better trail connectivity to existing parks and recreational facilities. An increase in the pedestrian and bicycle level of service through traffic control measures, addition of bike lanes, and four grade separated trail crossings will provide a positive impact to the corridor. Those improvements include:

- Riverfront Trail – some portions of which are already in place through the Liberty Lanes/Equinox property,
- Milwaukee Trail – the extension from Russell Street to Reserve Street was recently contracted and will be constructed in the near term, and
- Bitterroot Trail – will be extended in the near term.

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Based on the above, it is anticipated that the cumulative impacts on parks, trails and bike/ped facilities will continue to improve their viability as a resource in the future.

Water Quality

The lateral extent of the Missoula Aquifer varies from about 0.25 miles wide at the mouth of Hellgate Canyon, to 6.25 miles wide between Maclay Flats and the mouth of Grant Creek; the overall length is approximately 20 miles. Groundwater flows generally west southwestward through the Catlin Street Mobile Court area. The aquifer in this area is classified as having moderate source water sensitivity, because it is semi-confined and comprised of unconsolidated alluvium. The Missoula Valley Aquifer has been designated a “Sole Source Aquifer” by the U.S. Environmental Protection Agency. Recharge is derived mainly from the Clark Fork River, underflow from the Clark Fork Valley, tributary drainages and Tertiary units flanking the valley. The Clark Fork River loses water to the aquifer along some stretches and gains water from the aquifer along other stretches of its path through the Missoula Valley (Smith, 1992; Woessner, 1988). Ground water generally flows slightly south of west through this area.

The single largest project in the aquifer related to water quality is the removal of the Milltown Dam, being conducted by the Environmental Protection Agency. In 1981, arsenic contamination was discovered in drinking water wells near the Milltown Dam and Reservoir. The site was added to the National Priorities List for cleanup under Superfund in 1983. The Superfund Site includes 120 miles of the Clark Fork River and is developed into three Operable Units: (1) Milltown Drinking Water Supply; (2) Milltown Reservoir Sediments; and, (3) Clark Fork River.

There were approximately 6.6 million cubic yards of contaminated sediments behind the Milltown Dam which were contaminating the drinking water supply and releasing copper downstream of the dam, threatening fish and aquatic life. The sediments were deposited during the 1900s as a result of mining activities in Butte. A Record of Decision was issued in 2004 calling for the removal of the dam and highly contaminated sediments.

The cleanup process includes the removal of the Milltown Dam and Powerhouse, the excavation of 2.2 million yards of highly contaminated sediments and transport to the Anaconda Smelter Superfund Site, the restoration of the Milltown drinking water supply, unrestricted fish passage, and the return of the Clark Fork and Blackfoot Rivers to a more natural and free-flowing state.

The remediation and removal of sediments and restoration of the area is projected to be completed by 2012.

Apart from the Milltown Dam project, the City of Missoula is undergoing continual redevelopment in commercial areas, new housing construction, and construction and repair of existing infrastructure. The primary effect of these activities along with other, more recent projects in the vicinity of the Russell Street and South 3rd Street corridor is limited to the construction period when exposed soils and demolition activities may cause sedimentation and pollutant runoff to surface waters. All current and future construction activities associated with a water of the U.S. require adherence to permits aimed at protecting surface waters such as the Montana pollutant and discharge elimination system permit administered by Montana Department of Environmental Quality, Section 404 permit administered by the US Army Corps

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of Engineers and the associated Water Quality Certification administered by the Department of Environmental Quality.

Cumulative water quality issues are examined based on both surface water and groundwater considerations in the regional watershed. There are ongoing water quality studies for the Missoula aquifer, and the regulatory agencies are continually updating and modifying best management practices to improve water quality in the region. These permits require implementation of Best Management Practices to reduce pollutants and sediment in runoff draining to surface waters. With remediation of past water pollution and with best management practices and permitting requirements, there will be limited adverse impacts to water quality.

Water Bodies and Wildlife Habitat

Due to the highly localized impacts of the project at the Clark Fork River, the geographic boundaries for water bodies and wildlife habitat considerations were generally limited to the urbanized portion of the Clark Fork River, where Russell Street crosses the river. This is an appropriate analysis area, as the project area consists primarily of disturbed areas along the river, offering little natural wildlife habitat. Wildlife use of the habitat is greatly influenced by the extent of development that has occurred within the project area.

Having said that, given the dynamic nature of a river system, it is appropriate to consider past, present, and reasonably foreseeable future actions that have influenced fisheries resources in the analysis area and coming in to the analysis area. These actions include channelization, construction of impassable dams, bank stabilization and encroachment on the floodplain, urbanization, mining, and irrigation diversions. These actions have contributed to the current condition of the Clark Fork River and its ability to support fisheries. The cleanup process associated with the removal of the Milltown Dam and Powerhouse is anticipated to provide improvements to the health of the aquatic habitat. That project includes the excavation of 2.2 million yards of highly contaminated sediments and transport to the Anaconda Smelter Superfund Site, the restoration of the Milltown drinking water supply, unrestricted fish passage, and the return of the Clark Fork and Blackfoot Rivers to a more natural and free-flowing state.

Efforts to clean up pollution from past projects are planned. Runoff from impervious areas along Russell Street and South 3rd Street will be treated with Best Management Practices and potential impacts from future projects will be subject to review by the permitting authorities. Therefore, minimal cumulative effects on surface waters supporting fish are expected.

The project would contribute a minor loss to the cumulative effect on vegetation in the riparian corridor and the habitat it provides. Because this area is already highly developed with recreational facilities (parks and trails) its use by wildlife is limited. However, those species that are adapted to human presence are observed in these areas (bald eagle, deer, songbirds, raccoons) and their presence within the riparian area is expected to continue even after the project is completed.

Extensive trail development along the river is ongoing. Combining future recreational opportunities with existing development along a fragmented river corridor, while preserving trees and providing additional plantings, provides a balance for the shared use of this resource by both humans and wildlife. Because the future overall use and habitat conditions in the area

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would be subject to coordination and regulatory oversight by Federal, State and local wildlife agencies, cumulative effects on wildlife are expected to be minimal. By committing resources to the preservation of open spaces, the future projects will ultimately provide a greater benefit to wildlife, reducing the overall cumulative impact on biological resources.

Hazardous Materials

The geographic boundary for hazardous materials is limited to Missoula's urbanized area due to the fact that the bulk of any potential and known contaminated sites are within developed portions of the city. The location of leaking underground storage tanks, spills, and past contamination is well documented. It is anticipated that this project would result in a net benefit with regard to hazardous materials in that if any contaminated soils or hazardous materials are encountered, they will be remediated.

While not directly affected by the Russell Street or South 3rd Street improvements, the cleanup of the Champion Mill site should be noted as a beneficial cumulative impact with regard to the cleanup of hazardous materials in the study area. Petroleum had polluted portions of the land, and the Montana Department of Environmental Quality oversaw the removal of trichloroethylene from the soil. The task was completed in 2009. The site must be remediated before it can be purchased; the potential developer is following a voluntary cleanup plan which gives them until 2012 to fully clean up the property. When the Department of Environmental Quality signs off on the cleanup, it can be sold to the developer. The Missoula Office of Planning and Grants as well as the Missoula Area Economic Development Corporation were able to provide money from the city's Brownfields Revolving Loan Fund to help finance the site cleanup. The loan will be repaid once the property is sold to the developer.

Reclamation of the Stimson Lumber Site is also ongoing, and anticipated to be complete by the summer of 2011. The Montana Department of Environmental Quality, Department of Justice, and Stimson Lumber Company reached a settlement in *Montana v. Stimson* in which Stimson Lumber Company will remove the Cooling Pond and Berm area which encroaches into the Blackfoot River at Stimson's Bonner Mill. The project will include the removal of an estimated 146,354 cubic yards of material from the Blackfoot River. The most dangerous of the material will be shipped to an out-of-state facility, some will be shipped to the Missoula landfill, and some may be placed at an on-site repository. Removal of waste material began in September of 2010, initially anticipated to require 1,500 truckloads. Excavation of materials was completed in March 2011. Re-vegetation and planting efforts will begin in the spring of 2011 and be completed by May 30, 2011.

There is some potential to encounter hazardous materials at approximately 10 sites within the Russell Street and South 3rd Street corridors. While no substantive issues are anticipated, the discovery and treatment and/or removal of contaminated soils would contribute to lessen the overall hazardous materials in the area. The cumulative impacts from all these projects would lessen the presence of hazardous materials.

Social Conditions/Community Cohesion

The geographic boundaries for social conditions/community cohesion characteristics were considered within the immediate and immediate surrounding areas of the Russell Street and

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South 3rd Street corridors. For the purposes of this analysis, the “immediate surrounding areas” is defined as an approximate three-block radius around the South 3rd Street and Russell Street corridors (as illustrated in Figure 3-1). These are appropriate boundaries for the study area, as the project is not anticipated to have an appreciable effect on development patterns, and the proposed area provides a good representation of the existing and proposed mix of land use and development within the project area. As noted in Section 4.3, the proposed project will result in the acquisition of residences within the project corridor and will require 4.32 acres of new right-of-way. Any acquisition of new right-of-way has the potential to split neighborhoods, disrupt community cohesion, and separate residents from community facilities.

Russell Street and South 3rd Street currently serve as boundaries in defining the edges of seven adjacent neighborhoods. While the proposed project will shift those edges, with the proposed acquisition of a number of properties, the extent of right-of-way acquisition has been minimized and the proposal will not result in a split of any existing neighborhoods.

Impacts from this proposed action are anticipated to be largely positive from a mobility and emergency response perspective, positive from a business access perspective, and positive in reducing opportunity costs associated with congestion delay.

Intermountain Lumber has been included in an Urban Renewal District since 1991. Intermountain Lumber closed its doors on the 12 acre site on Russell Street in 2002. In 2003, the Missoula Housing Authority purchased the property. In 2010, the Garden District, a low-income rental housing facility was opened by the Montana Housing Authority. Efforts are currently ongoing to develop a mixed commercial and residential facility on the portion of the property fronting along Russell Street.

The reconstruction and widening along Russell Street will require the removal of several homes to accommodate the widening of the roadway and the installation of bicycle and pedestrian facilities. Given the amount of ongoing housing development in the area (Equinox, Solstice, and Garden District), the loss of homes along Russell Street is not anticipated to affect overall housing stock availability or affordability.

With plans for redevelopment projects and improved accessibility in the geographic area, it is likely the overall community cohesion will become more “livable” in the future.

Noise

Geographic boundaries for noise are typically isolated to a limited area surrounding the subject roadway, particularly in an urban, built-up area; thus, the cumulative impact analysis is limited to the Russell Street and South 3rd Street corridors. The Russell Street and South 3rd Street project is projected to cause noise impacts on 34 receptors within the project area. Under the No Build Alternative 44 receptors would be impacted. No feasible or reasonable noise mitigation was identified for existing receptors, thus there is a cumulative noise impact within the Russell Street and South 3rd Street corridors resulting from the existing and projected roadway usage which accounts for reasonably foreseeable growth in traffic volumes from population growth and infill development in the project area. With future development, it is anticipated that the amount of noise sensitive receptors may increase in the area. To minimize noise impacts at planned or proposed developments within the project area, City could identify noise-compatible land uses

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and /or noise mitigation measures that could be incorporated into future development. Therefore, cumulative impacts on the noise sensitive receptors are anticipated to be minor.

Threatened and Endangered Species

The geographic boundary is generally along the Clark Fork River and its associated riparian areas which support a greater diversity of wildlife than other developed portions of the project area. Although there are four threatened and endangered species in Missoula County, the only Threatened and Endangered Species occurring in the area is the bull trout. While the Biological Resources Report prepared for this project indicated that the project is “likely to adversely affect bull trout,” the Biological Opinion issued by the US Fish and Wildlife Service determined that the “direct and cumulative effects of the proposed project would not be likely to jeopardize the continued existence of bull trout, and not likely to destroy or adversely modify designated bull trout critical habitat. These conclusions are based on the magnitude of the project’s effects in relation to the listed population and that even though some short-term construction-related impacts are anticipated; the proposed action would maintain the long-term condition of bull trout critical habitat in the Clark Fork River within the project area in the Clark Fork River basin bull trout critical habitat unit.”

Historic and Cultural Resources

The geographic boundaries for the study area associated with historic and cultural resources considerations was the city of Missoula, as a whole. It is appropriate to consider the city for the purposes of analysis, as historic preservation efforts are typically driven by local jurisdiction efforts, in conjunction with the State Historic Preservation Office, on a city wide basis. The impacts associated with the removal of a historic resource are considered primarily from the loss of the particular resource, but also in conjunction with how many other similar resources are available within the jurisdiction.

Missoula has nine historic districts listed on the National Register of Historic Places, none of which are adjacent to or nearby the Russell Street/South 3rd Street project. The Missoula Office of Planning and Grants has no plans to work on a historic district designation in the Russell Street/South 3rd Street project area. Missoula County has seventy sites on the National Register of Historic Places. Because of the city’s long history, the inventory of historic properties will continue to grow.

Amongst the past, present, and reasonably foreseeable actions previously identified, the following impacts to cultural and historic resources were identified:

Removal of the Milltown Dam. This project is an undertaking of the Environmental Protection Agency. It involved the removal of the old Western Lumber Company Dam and powerhouse at the confluence of the Clark Fork and Blackfoot rivers. The dam was removed as part of a cleanup effort to remove over a century’s worth of contaminated soils that had washed down the river from Butte and Anaconda. Although the dam and powerhouse were removed (the powerhouse was National Register-eligible and mitigated by the Environmental Protection Agency), the project has benefits to cultural resources. The restoration of the confluence of the two rivers has benefits to both Native American and Euro-American history. The confluence was important to Native Americans as a



terminus of Cokahlarshkit (the Road to the Buffalo) and to Euro-Americans for its association with the Mullan Military Road and the settlement of Hellgate in the 1860s. The project also included the restoration of a historic bridge into a pedestrian structure. So, while the removal of the National Register-eligible dam and powerhouse represents a loss of historic resources, the restoration provided positive benefits to cultural resources in the Missoula area. No other National Register-eligible buildings were removed as a result of the Environmental Protection Agency project.

Reclamation of the Stimson Lumber Site. The work does not have a federal nexus and, thus, did not require Section 106 consultation. The work is occurring under the oversight of the Montana Department of Environmental Quality. It is not believed that any National Register-eligible buildings were removed as a result of the project. But, the residential area associated with the old Bonner Mill and some industrial buildings are currently under consideration for listing as an historic district by the Montana State Historic Preservation Office and will not be impacted.

Liberty Lanes. Based on discussion with the city of Missoula/Missoula County Historic Preservation Office, it doesn't appear that any cultural and historic resources were impacted by the action.

Intermountain Lumber. Based on discussion with the city of Missoula/Missoula County Historic Preservation Office, it doesn't appear that any cultural and historic resources were impacted by the action.

Champion Lumber Mill. Based on discussion with the city of Missoula/Missoula County Historic Preservation Office, it doesn't appear that any cultural and historic resources were impacted by the action.

In general, the cumulative effects of redevelopment and modernization projects within the city and project area (particularly those that do not have a federal nexus) have the potential to decrease the numbers of historic properties within Missoula.

4.18 Construction Impacts

Land Use

Short-term construction impacts may include disruptions of access to residential, commercial, and recreational properties adjacent to the project corridor.

Social and Economic Conditions

Short-term construction impacts such as minor traffic delays and temporary lane closures would occur with the Preferred Alternative. Modified school bus and Mountain Line routes would also likely be adopted during construction.

Construction within the project corridor would result in temporary restricted vehicle access on some streets, which could affect fire and emergency response traffic, and law enforcement

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traffic. Restricted access would be limited to as little time as necessary. Construction would also result in temporary restricted access to fire hydrants. Fire and emergency response, law enforcement, and solid waste collection services would be contacted during the final design phase and during the construction phase so that alternate routes and schedules could be planned.

Utilities would be relocated as needed and there would be no long-term impacts. Relocation or realignment of utilities in the project corridor would be completed according to City of Missoula standard practices. Construction may require relocation of several overhead electric distribution lines, telecommunication lines, light posts, underground utility boxes, and a low pressure gas line depending on the roadway design. Coordination with the utility owners would occur during the design phase of the project.

The City of Missoula, Montana Department of Transportation, and Federal Highway Administration will coordinate with Montana Rail Link regarding possible disruptions to the rail line crossing of Russell Street during the final design and construction stages of the project.

The City of Missoula and/or Montana Department of Transportation will meet with the fire and police departments during design and construction to ensure that impacts created by lines of traffic and medians are minimized. The City and/or Montana Department of Transportation will work with emergency service providers to ensure that adequate access is maintained near the project during construction.

Pedestrian and Bicycle Conditions

Short-term construction impacts including traffic delays and temporary lane and sidewalk closures would occur. These are expected to vary depending on the extent and nature of the construction disturbance, and on the time necessary to complete construction.

Disturbances related to project construction may require bicyclists and pedestrians to travel closer to vehicle traffic as well as to construction machinery. Sidewalk and shoulder closures may require pedestrians and bicyclists to be directed to alternate routes.

Air Quality

To minimize dust from construction activities that would contribute to ambient concentrations of suspended particulate matter, the construction contractor(s) will comply with the Montana Department of Transportation Best Management Practices, and in accordance with Montana Pollutant Discharge Elimination System, Construction General Permit.

The construction contractor(s) would be required to comply with current Missoula Air Quality Regulations.

Noise

Construction activities associated with the Build Alternatives are likely to produce sound levels exceeding allowable limits as established by the Missoula Municipal Code 9.30.040 (Table 3-3). There would be temporary increases in sound levels at locations near active construction areas



and along routes to these areas. There are many homes within 50 to 100 feet of areas where active construction would occur and these would likely be affected by noise from construction activities involving heavy equipment and hauling of construction materials. The increase in noise would depend on the type of equipment being used and the amount of time it is in use.

Contractors will comply with current rules and regulations set forth in the Missoula Municipal Noise Ordinance. Construction zones will be subject to the maximum permissible noise levels specified for industrial zones for the period within which construction is to be completed pursuant to an applicable construction permit issued by the City of Missoula.

Water Quality

The most substantial potential impacts to surface water quality are related to replacement of the Russell Street Bridge. Soil erosion, debris and dust from bridge demolition, and heavy equipment use all could result in impacts on water quality in the Clark Fork River.

Operation of heavy equipment at the site would require fueling and engine maintenance activities that involve oil, grease, solvents, and other engine fluids. Best Management Practices will be utilized to minimize the potential for these materials to impact stormwater runoff.

Water resource impacts typically associated with demolition activities include increased debris loading to stormwater conveyance systems and increased particulate loading in runoff. Best Management Practices will be utilized to minimize the potential for water resources impacts. Given the distance from the river and the high volume of flow in the river, any associated impacts are expected to be very minor.

Water Bodies and Wildlife Habitat

Short-term construction impacts on fish may occur during several stages of construction, including in-stream construction, dewatering of the construction zone, construction of a work bridge, removal of the bridge, and during trail construction. Erosion caused by reconstruction of the project could cause short-term increases in turbidity resulting in minor effects to aquatic species of the Clark Fork River.

Construction activities would result in temporary increased erosion potential, reduced slope stability, and could temporarily increase turbidity in the river downstream of the project; particularly during precipitation events. Increased exposure of soils in the project area would provide a continuing source of sediment into the local system during precipitation events until stabilized.

In-stream construction activities may also increase sediment levels in the river. In-stream construction includes construction of new bridge piers, removal of piers from the old bridge after the new bridge is completed, and construction and removal of work bridges if necessary.

The existing Russell Street Bridge would require removal under the Preferred Alternative. The concrete deck and the existing piers would be removed according to the conditions of the required stream permits. Construction activities near the bridge resulting in increased activity

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and noise in the area could temporarily disrupt or displace wildlife living in or traveling through the riparian habitat near the bridge.

Unique requirements for bridge removal and construction will be addressed in Special Provisions as appropriate. These requirements will be coordinated with the appropriate resource agencies during final design.

In-stream activities associated with the project may result in temporary adverse impacts to important bull trout habitat downstream of the project. Exposure of cut-slopes and other areas adjacent to the river, and other disturbances described above will increase the potential for sediments to reach the Clark Fork until stabilized, possibly impairing habitat suitability. These effects would, however, be substantially reduced through application and monitoring of Best Management Practices for pollutant/sediment/erosion control during and following construction as required by the Montana Department of Transportation standard specifications, and Montana Fish, Wildlife, & Parks Stream Protection Act and federal Section 404 Clean Water Act permits required for the project. The contractor will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the Montana Pollutant Discharge Elimination Permit from the Montana Department of Environmental Quality.

Floodplains

Potential construction-related impacts on floodplains are primarily related to construction of a work bridge, if necessary, as a part of Russell Street Bridge replacement activities. Pending final design, the project impacts within the 100-year floodplain could increase the potential for flooding, however, floodplain permits would be secured if necessary prior to construction.

If a work bridge is necessary, it will be removed in its entirety from the Clark Fork River floodplain/floodway when construction activities have completed.

Threatened and Endangered Species

Increases in turbidity, suspended sediment, and other pollutants can reduce stream productivity, reduce feeding opportunities for fish, and result in fish avoidance of important habitat. Deposited sediments reduce habitat volume by filling pools and intergravel spaces which are critical to young fish.

Best Management Practices will be utilized to minimize the potential for sediment discharge to the Clark Fork River during construction. The potential implementation of in-stream timing restrictions will further reduce potential impacts to the Clark Fork River. The “likely to adversely affect” determination for Bull Trout required formal consultation with the U.S. Fish and Wildlife Service, which has been completed. Appendix F contains the Biological Opinion issued for this project and contains mitigation measures to be employed during construction.

Historic and Cultural Resources

There would be no construction impacts to historic and cultural resources.



Hazardous Materials

Impacts associated with existing contamination present on any of the alternative sites would be largely short-term (during construction).

Visual Resources

Short-term construction related impacts would include:

- Traffic congestion in areas of active construction
- Construction vehicles and equipment
- Clearing and grading activities resulting in exposed soils until surfacing or replanting occurs
- Erosion control devices such as silt fences, plastic ground cover, and straw bales
- Dust, exhaust, and airborne debris in areas of active construction
- Staging areas used for equipment storage and construction materials
- Lighting and signage resulting in increased glare.

4.19 Energy Implications

The dominant energy source for the transportation sector is petroleum, and nearly two thirds of the petroleum consumed in the United States is in this sector. The highway mode accounts for nearly three-fourths of total transportation energy use with about 80 percent from automobiles, light trucks, and motorcycles, and about 20 percent from heavy trucks and buses.

Fuel consumption is a function of traffic characteristics similar to those affecting emissions. Primary characteristics include traffic flow, driver behavior, highway geometrics, vehicle fleet, and climate. Modeling by the Oak Ridge National Laboratory suggests that of all the travel-related factors affecting fuel economy, average vehicle speed explains most of the variability in fuel consumption and is a good predictor of fuel economy for most urban trips. Fuel efficiency under steady flow, cruise-type driving conditions peaks at speeds of 35 to 45 miles per hour and then rapidly declines at higher speeds. At lower speeds, however, engine friction, tires, and accessories (power steering and air conditioning, for example), as well as repeated braking and acceleration, also reduce fuel efficiency.

No Build Alternative

While the fuel efficiency of the vehicle fleet is expected to improve over the next 20 years, increased congestion resulting in stop-and-go traffic under the No Build Alternative would increase the overall energy requirements in these corridors.

Preferred Alternatives

By adding capacity, and thus increasing average vehicle speeds and smoothing traffic flows as compared to the No Build Alternative, the Preferred Alternatives would have the greatest positive effect on those fuel economy factors related to travel conditions and driver behavior.

Chapter 4.0 - Environmental Consequences and Mitigation

While the overall effect on energy requirements is not anticipated to entail an appreciable benefit, similar to air quality, it does not cause or contribute to additional problems.

Mitigation

No mitigation is required.

4.20 Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Short-term impacts are anticipated during the construction of the proposed improvements to Russell Street and South 3rd Street. These impacts include traffic disruptions during reconstruction of the travel lanes, bridge replacement, and disruption to the trail systems. These disruptions may result in short-term impacts to residential and business access, and local traffic flow.

As described in Section 4.18 (Construction Impacts) of this chapter, short-term impacts related to noise, air quality, and water quality can also be expected. Mitigation measures would be employed to offset these impacts.

The proposed improvements in these corridors are consistent with local and regional planning for land use and the transportation corridors; thus the contribution to the maintenance and enhancement of long-term productivity of the uses within the study area, as well as the surrounding area, outweighs the more localized, short-term impacts anticipated by the proposed project.

4.21 Irreversible and Irretrievable Commitment of Resources

Construction of the proposed improvements to Russell Street and South 3rd Street would involve the commitment of a wide range of resources including:

- Natural resources in the form of land converted for roadway use;
- Physical resources in the form of construction materials for the improved facilities;
- Human resources in the form of labor employed during construction; and
- Fiscal resources in the form of public funding for construction.

Land used for the Preferred Alternatives is considered an irreversible commitment during the time period that the land is used for a roadway facility. However, if a greater need arises for use of the land or if the roadway facilities are no longer needed, the land can be converted to another use. At present, there is no reason to believe that such a conversion would ever be necessary or desirable.



Considerable amounts of fossil fuels, labor, and roadway construction materials such as gravel, steel, concrete, and bituminous pavement would be required to implement the Preferred Alternatives. These materials are generally considered irretrievable; however, they are not in short supply and their use would not have an adverse or cumulative impact on the continued availability of these resources. Some materials, such as gravel, pavement products, and steel may be recycled for future use.

Human resources would be used for the design, construction, and maintenance of the project.

Construction would also require a substantial one-time expenditure of local, state, and federal funds, which are not retrievable. Funds have already been committed and spent for planning, preliminary design, environmental studies, and developing the Draft and Final Environmental Impact Statements.

The commitment of these resources is based on the belief that the users of the transportation system (local, region, state, national, and international) would benefit by the improved quality of the transportation system. The primary benefits are increased accessibility, safety, time savings, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

4.22 Permits and Coordination Required

Prior to construction of the Russell Street and South 3rd Street reconstruction project the following permits and coordination would be required:

- Section 401 Certification of the Clean Water Act – Water Quality Certification from the Montana Department of Environmental Quality
- Section 404 Permit of the Clean Water Act from the U.S. Army Corps of Engineers.
- Montana Pollutant Discharge Elimination Permit from the Montana Department of Environmental Quality
- Montana Land-Use License or Easement on Navigable Water from the Montana Department of Natural Resources
- Floodplain encroachments must be approved by the Missoula County Floodplain Administrator.
- Montana Stream Preservation Act (SPA 124 coordination) with Montana Fish, Wildlife & Parks.
- City of Missoula MS4 Permit
- Any necessary drywell permitting would be coordinated with the Environmental Protection Agency.

Chapter 4.0 - Environmental Consequences and Mitigation

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5.0 FINAL SECTION 4(f) EVALUATION

This chapter provides a description of properties located within the Russell Street and South 3rd Street corridors that are protected by Section 4(f) of the Transportation Act of 1966 (49 USC 303). Section 4(f) declares that “[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that “[t]he Secretary [of Transportation] shall not approve any program or project (other than any project for a park road or parkway under Section 204 of this title) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless:

- 1) there is no feasible and prudent alternative to the use of such land; and
- 2) such program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

This Section 4(f) Evaluation documents the considerations, consultations, and alternative studies supporting the conclusion that there are no feasible and prudent alternatives to the use of the Section 4(f) resources located in the Russell Street and South 3rd Street corridors and that the Preferred Alternative includes all possible planning to minimize harm to the affected resource(s).

The United States Supreme Court clarified the definitions of the words “feasible” and “prudent” as they are used in Section 4(f) to mean:

“Feasible” - Capable of being done “only if it comports to sound engineering practice and judgment.”

“Prudent” - For an alternative to be considered *not prudent*, “it must be shown that unique problems or unusual factors, or, that cost, environmental impacts, or community disruptions of such extraordinary magnitude, are associated with such alternative.”

In 2005, Congress amended Section 4(f) as part of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users*. This amendment authorizes the Federal Highway Administration to approve a project that results in a *de minimis* impact to a Section 4(f) resource without the evaluation of avoidance alternatives typically required in a Section 4(f) Evaluation.

Chapter 5.0 - Final Section 4(f) Evaluation

The amendment regarding *de minimis* impacts states in part:

The requirements of this section shall be considered to be satisfied and an alternatives analysis not required if the Secretary [of Transportation] determines that a transportation program or project will have a *de minimis* impact on the historic site, parks, recreation areas, and wildlife or waterfowl refuges. In making any determination, the Secretary shall consider to be part of a transportation program or project any avoidance, minimization, mitigation, or enhancement measures that are required to be implemented as a condition of approval of the transportation program or project. With respect to historic sites, the Secretary may make a finding of *de minimis* impact only if the Secretary has determined in accordance with the consultation process required under Section 106 of the National Historic Preservation Act that the transportation program or project will have no adverse effect on the historic site or there will be no historic properties affected by the transportation program or project; the finding has received written concurrence from the State Historic Preservation Officer; and the finding was developed in consultation with the parties consulted under the Section 106 process.

5.1 Proposed Action

The City of Missoula, in cooperation with the Montana Department of Transportation and the Federal Highway Administration, initiated a study to evaluate alternatives to address the current and projected safety mobility concerns on Russell Street and South 3rd Street. The 1996 Missoula Transportation Plan Update recommended widening Russell Street to 4+ lanes and South 3rd Street to 2+ lanes to correct roadway deficiencies. The general proposed action under consideration includes vehicular capacity improvements, accommodation of alternative transportation modes, grade separated trail crossings, transit pullouts, sidewalks, curb & gutter, boulevards, and bicycle lanes. Signalization of key intersections, as well as the potential for construction of roundabout traffic control is also under consideration with this proposed action.

5.2 Section 4(f) Properties

As outlined in Chapters 3 and 4 of this Environmental Impact Statement, there are 36 properties within proximity of the proposed project that are protected by Section 4(f) including historic buildings, a historic rail line, and three recreational trails (See Section 3.5 for trail and Section 3.14 for historic property information). Figure 5-1 illustrates the location of each protected property and the Section 106 determination under the various build alternatives.

Of the 33 properties identified as eligible for listing on the National Register of Historic Places, the Montana State Historic Preservation Office has determined through Section 106 consultation that the various Build alternatives would have **No Effect** on 26 of those sites, as outlined in Chapter 4. The No Effect determination was based on the ability to avoid the need for right-of-way from these 26 sites. Based on the preliminary design, there is **no “use”** and no further analysis of these 26 properties under Section 4(f).



Figure 5-1
Section 4(f) Property Impacts – Mount Avenue to South 3rd Street

**Alt
2**



**Alt
3**



**Alt
4**



**Alt
5**



**Alt
5R**



Key:

24MO###

Historic Site
Recording Number

No Effect

No Adverse Effect

Adverse Effect

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Figure 5-1
Section 4(f) Property Impacts – South 3rd Street to West Broadway Street

**Alt
2**



**Alt
3**



**Alt
4**



**Alt
5**



**Alt
5R**



Key:

24M0###
Historic Site
Recording Number

No Effect
No Adverse Effect

Adverse Effect



5.3 Impacts on the Section 4(f) Properties

Each of the build alternatives on Russell Street involves a Section 4(f) “use” of seven of the 33 historic properties, as well as the three trails. The specific level of impact on the historic properties varies by alternative as described below, and summarized in Table 5.1.

- The Bitterroot Branch of the Northern Pacific Railroad (**24MO718**) is a linear site that currently crosses Russell Street in the southerly portion of the corridor. This site would be impacted by any Build alternative. Based on the fact that the site would remain largely intact, and impacts would be limited to a wider at-grade railroad crossing at the same existing location, these impacts have been determined to have **No Adverse Effect** on the historic railroad but still constitute a Section 4(f) “use” of the resource.
- Two historic residences (**24MO811 and 24MO819**) lie in very close proximity to the existing alignment and selection of any build alternative would require removal of the structures. This permanent incorporation of the site into the transportation facility results in an **Adverse Effect** to these sites, and a Section 4(f) “use” of the resource.
- The residence in the northwest quadrant of the South 5th Street intersection with Russell Street (**24MO800**) would be directly impacted by Alternative 5, resulting in an **Adverse Effect** determination. The remaining build alternatives avoid impacts to the structure but would require encroachments on the property resulting in a Section 4(f) “use.” The Preferred Alternative requires a very minor encroachment and results in a **No Effect** determination. The roundabout intersection in Alternative 5-Refined encroaches deeper into the property resulting in a **No Adverse Effect** determination.
- The residence in the southwest quadrant of South 5th Street (**24MO801**) would be avoided by the Preferred Alternative, resulting in a **No Effect** determination. Alternative 5, with a roundabout at this intersection, would require removal of the structure and result in an **Adverse Effect** determination. Alternative 5-Refined attempted to shift the roundabout at this intersection to the east. This shift results in the acquisition of additional properties on the east side of Russell Street, while the roundabout would still lie within approximately ten feet of the historic structure on the west. Alternative 5-Refined, while avoiding the structure still encroaches on the property to the point of having a **No Adverse Effect** determination.
- The small residential structure to the rear of the lot in the northwest quadrant of the South 11th Street intersection with Russell Street (**24MO822**) would be removed by construction of the roundabout in Alternative 5, resulting in an **Adverse Effect**. Both Alternative 5-Refined and the Preferred Alternative have a stop-controlled intersection at this location which will avoid impacts to this structure, resulting in a **No Effect** determination.
- The residence in the southwest quadrant of the South 11th Street intersection with Russell Street (**24MO823**) would be removed by construction of the roundabout in Alternative 5,

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resulting in an **Adverse Effect**. Both Alternative 5-Refined and the Preferred Alternative have a stop-controlled intersection at this location, and with the use of a small retaining wall can avoid impacts, resulting in a **No Effect** determination.

Appendix C provides documentation of the coordination with the State Historic Preservation Officer according to Section 106 of the National Historic Preservation Act.

Table 5.1
Section 106 Determination on Properties Protected by Section 4(f)

Site #	Location	Alternative 2	Alternative 3	Alternative 4 (Preferred)	Alternative 5	Alternative 5 (Refined)
24MO718	Bitterroot Branch of the Northern Pacific Railroad	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect
24MO800	1508 South 5 th Street	Adverse Effect	Adverse Effect	No Effect	Adverse Effect	No Adverse Effect
24MO801	1501 South 5 th Street and 715 Russell Street	Adverse Effect	Adverse Effect	No Effect	Adverse Effect	No Adverse Effect
24MO811	824 Russell Street	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
24MO819	941 Kern Street	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
24MO822	1500 ½ South 11 th Street	No Effect	No Effect	No Effect	Adverse Effect	No Effect
24MO823	1501 South 11 th Street	No Adverse Effect	No Adverse Effect	No Effect	Adverse Effect	No Effect

As summarized in Table 5.1, Alternatives 2 and 3 have an Adverse Effect on four historic properties, Alternative 4 has an Adverse Effect on two historic properties, Alternative 5 has an Adverse Effect on six historic properties, and 5-Refined has an Adverse Effect on two historic properties. The Adverse Effect determinations were based on whether the new facility would be in direct conflict with an existing historic structure or whether there would be substantial right-of-way encroachments on the historic property. Alternative 4 requires the least physical impact on historic structures and right-of-way encroachments as compared to the other Build alternatives.

Two residential properties (24MO811 and 24MO819) protected by Section 4(f) would be fully acquired under the any of the Build alternatives because the new right-of-way bisects the historic structures themselves. These impacts are discussed later in this section.

In addition to the historic sites noted above, three trails located in the Russell Street corridor are also protected by Section 4(f). Each of these trails is oriented perpendicular to, and are currently crossed by Russell Street. Each of the build alternatives would continue to cross these trails and result in a “use” of the Section 4(f) property. See the de minimis discussion below for details on the impacts to these resources. Based on the analysis summarized above, Alternative 4 has the least impact on properties protected by Section 4(f), and has been forwarded as the Preferred Alternative.



***De Minimis* Coordination**

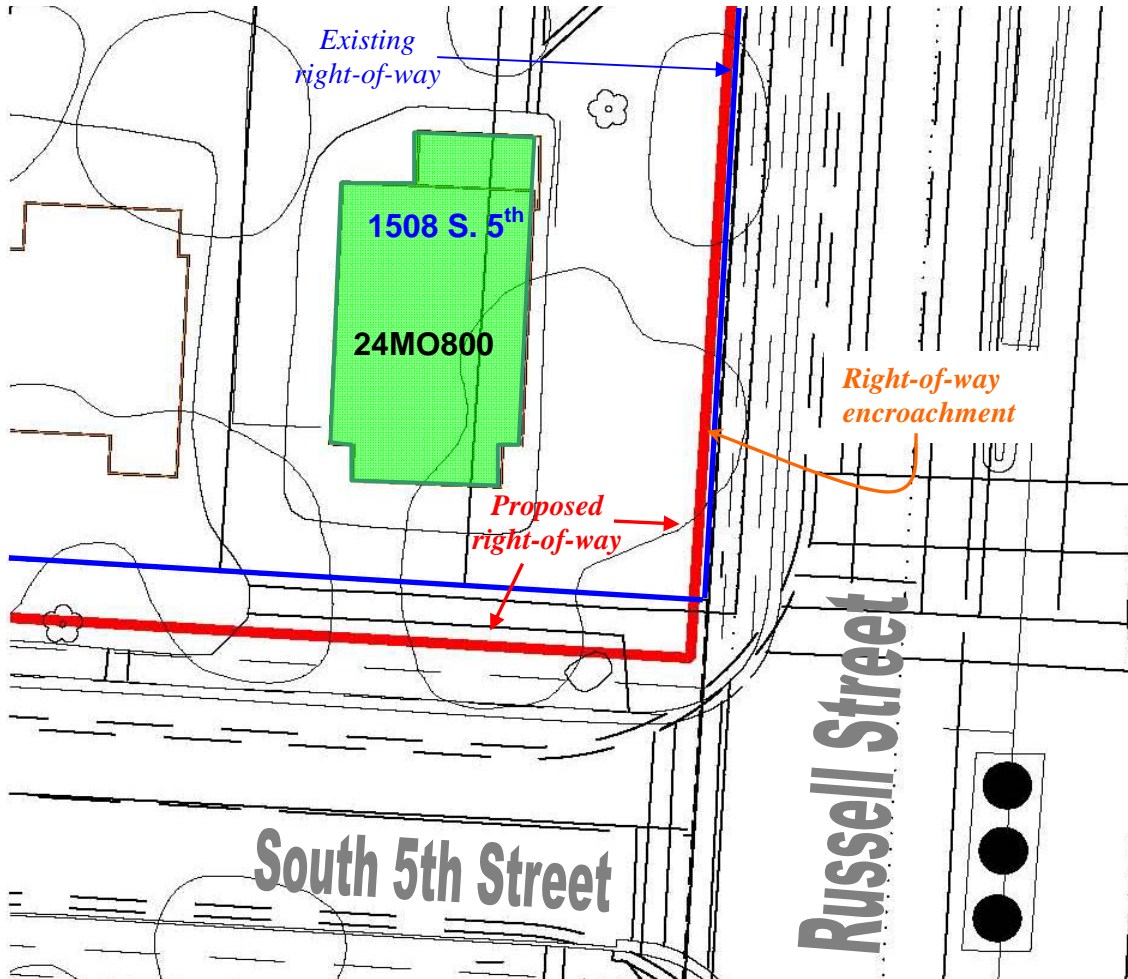
All impacts to 28 historic properties are completely avoided by the Preferred Alternative. Minimal right-of-way would be required from one property (24MO800) at the intersection of Russell Street and South 5th Street as depicted in Figure 5-2. Approximately 325 square feet of new right-of-way would be required along the eastern edge of this property adjacent to Russell Street. This is a narrow sliver of right-of-way necessary for the roadway expansion and inclusion of bicycle lanes, boulevard, and sidewalk.

The Federal Highway Administration has made a *de minimis* finding on the impacts to 24MO800, as well as three recreational trails, and the railroad currently intersected by Russell Street.

The Montana State Historic Preservation Officer has concurred with the finding of **No Effect** on site 24MO800 at 1508 South 5th Street although there is a minimal use of the property, and the Federal Highway Administration has notified the Officer that they have made a *de minimis* finding based on this Section 106 determination of effect. The acquisition is minor in nature and does not significantly change the setting or characteristics of the property that make it eligible for the National Register of Historic Places. The Public Hearing and comment period conducted for the Draft Environmental Impact Statement served as the opportunity for public review and comment on these impacts. The Federal Highway Administration's *de minimis* letter is included in Appendix E, and the Montana Department of Transportation's determination of effect and the State Historic Preservation Officer's letter of concurrence are included in Appendix C.

The Bitterroot Branch of the Northern Pacific railroad main line would continue to be intersected by Russell Street, and would not experience any further physical disruption. The Bitterroot Branch Trail, Milwaukee Trail, and Shady Grove Trail would each also continue to be intersected by Russell Street as depicted in Figure 5-3, but the proposed project would provide for grade-separated crossings and provide an overall improvement to the recreational use of these trail facilities. Thus, the impact to these Section 4(f) recreational facilities would be short-term and temporary. Additionally, this transportation enhancement project and mitigation activities associated with any of the Build Alternatives use the protected Section 4(f) properties for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection. The addition of grade-separated crossings, included in the Build Alternatives, would promote the future use of the three trails.

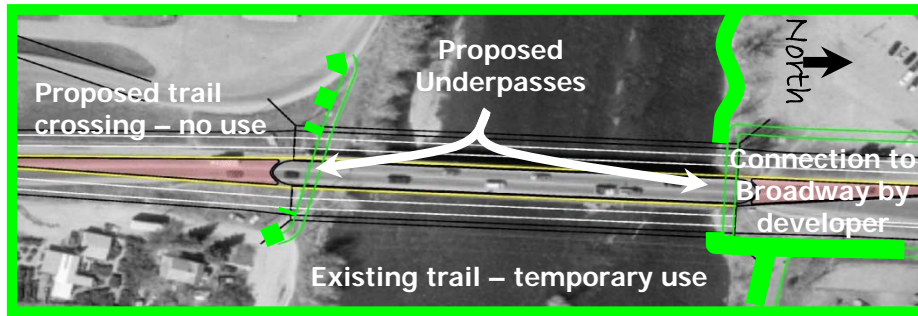
Figure 5-2
De Minimis Impacts on Site 24MO800



Final Environmental Impact Statement

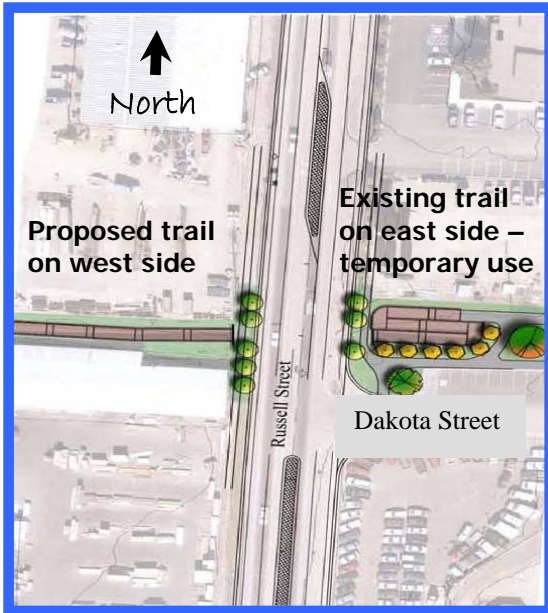


Figure 5-3
De Minimis Impacts to Trail Crossings
as Elements of the Proposed Russell Street reconstruction project

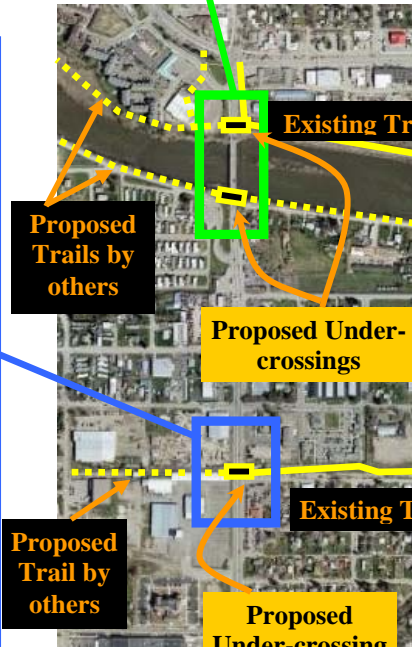


Shady Grove Trail

Milwaukee Corridor Trail



West Broadway Street



Clark Fork River

River Road

Idaho Street

Montana Street

Wyoming

Dakota Street

River Street

South 1st Street

South 2nd Street

South 3rd

South 4th Street

South 5th

South 6th Street

South 7th

South 8th

South 9th Street

South 10th

South 11th Street

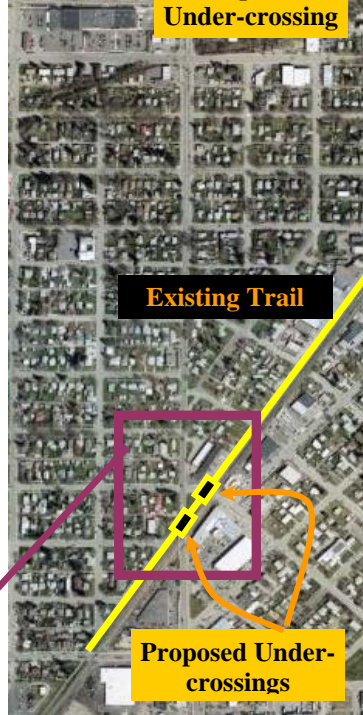
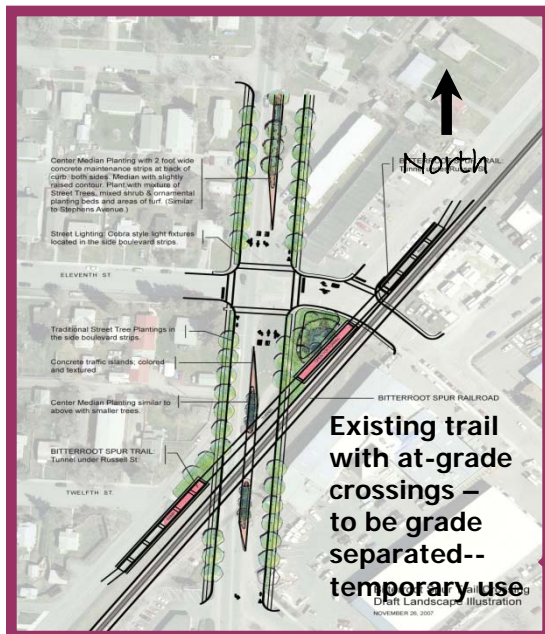
South 12th Street

South 13th

Mount Avenue /

South 14th

Bitterroot Branch Trail



Chapter 5.0 - Final Section 4(f) Evaluation

The proposed construction limits of the Build Alternatives are in direct conflict with two residential properties (24MO811 and 24MO819) protected by Section 4(f).

As illustrated in Figures 5-4 and 5-5, the proposed new right-of-way completely bisects these two residential structures along Russell Street. These structures could not remain in their current location with the proposed roadway improvements, resulting in a “use” under Section 4(f).

Figure 5-4
Impacts on 824 Russell Street
(24MO811)

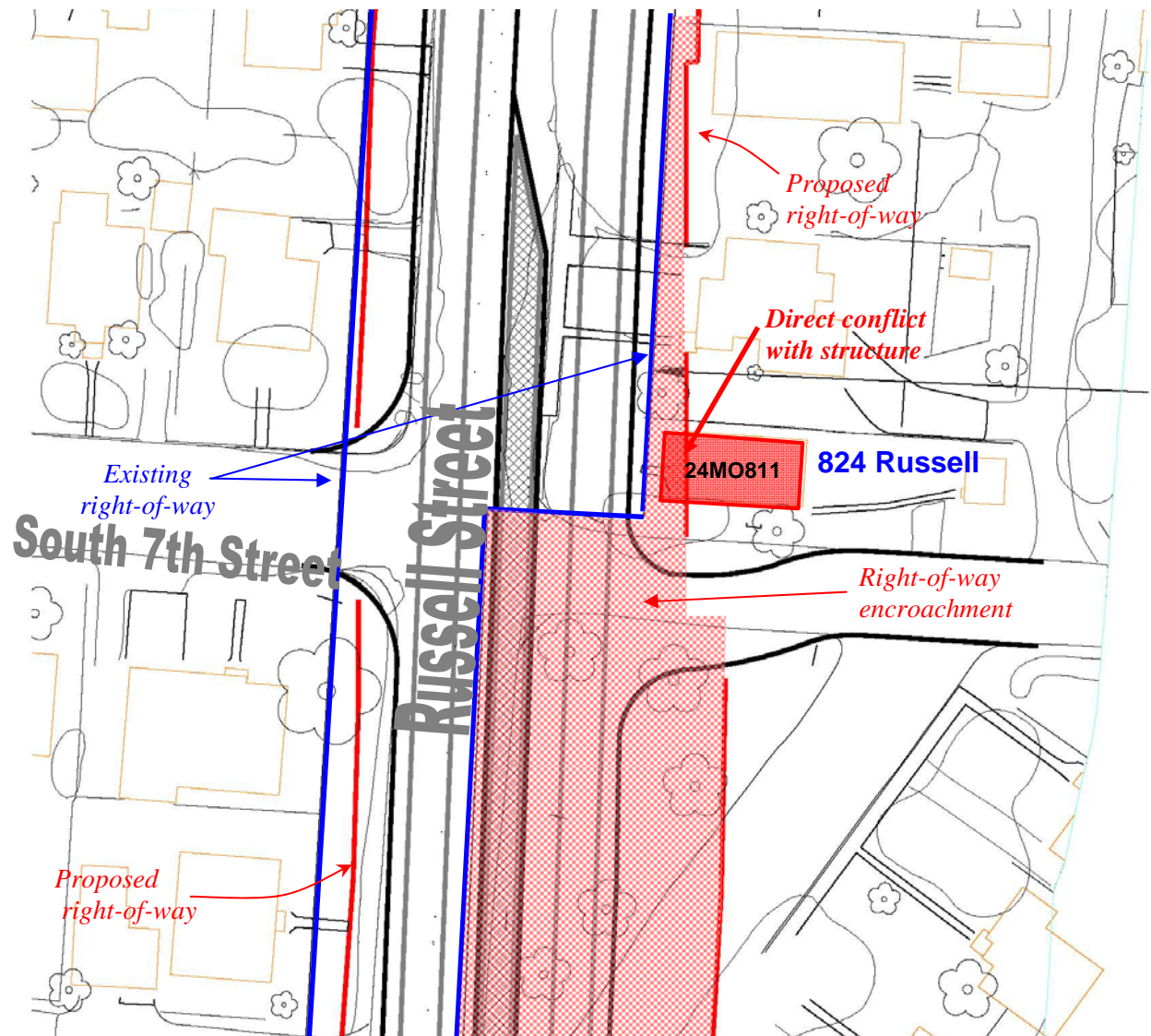
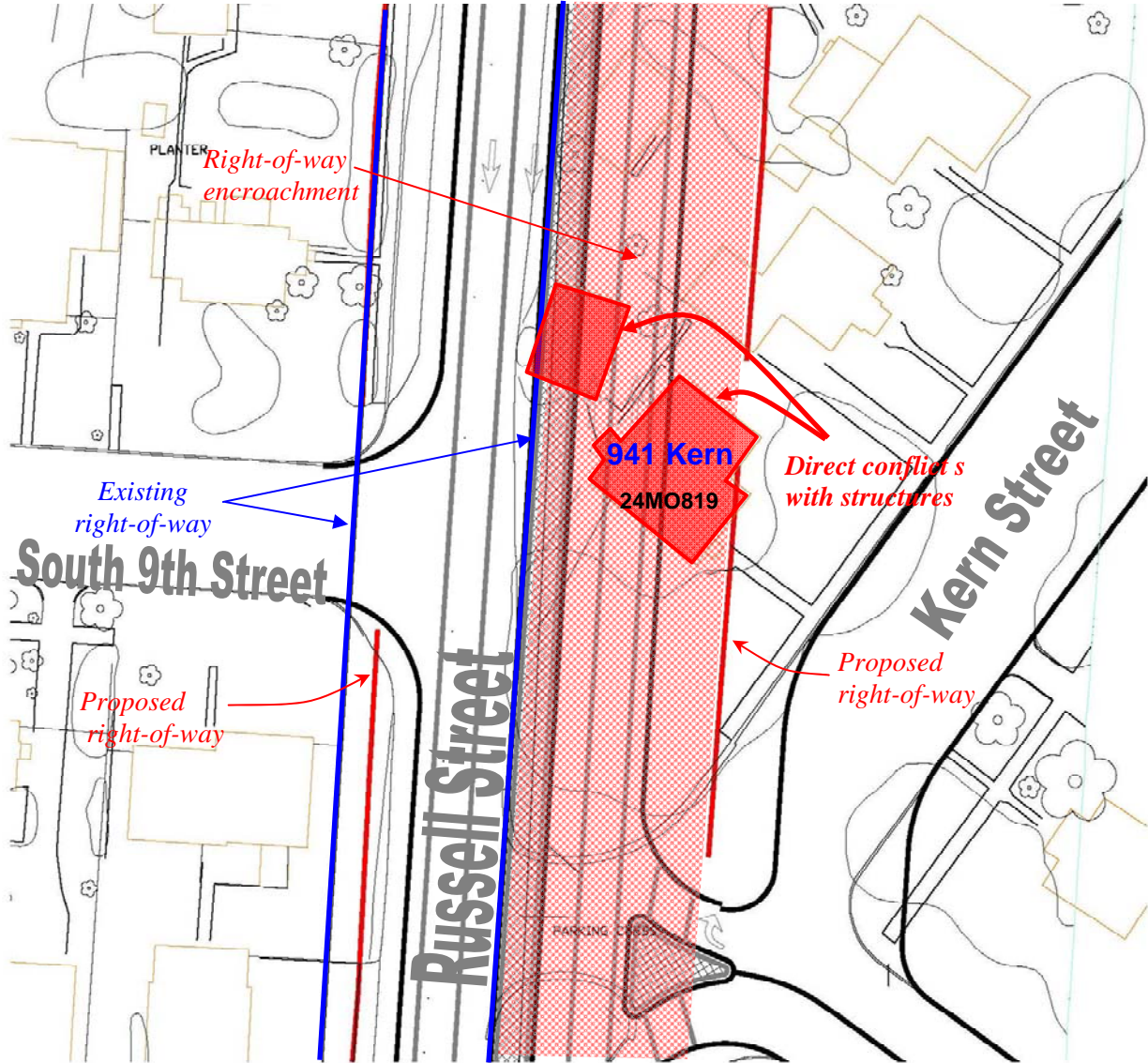




Figure 5-5
Impacts on 941 Kern Street
(24MO819)



5.4 Avoidance Alternatives

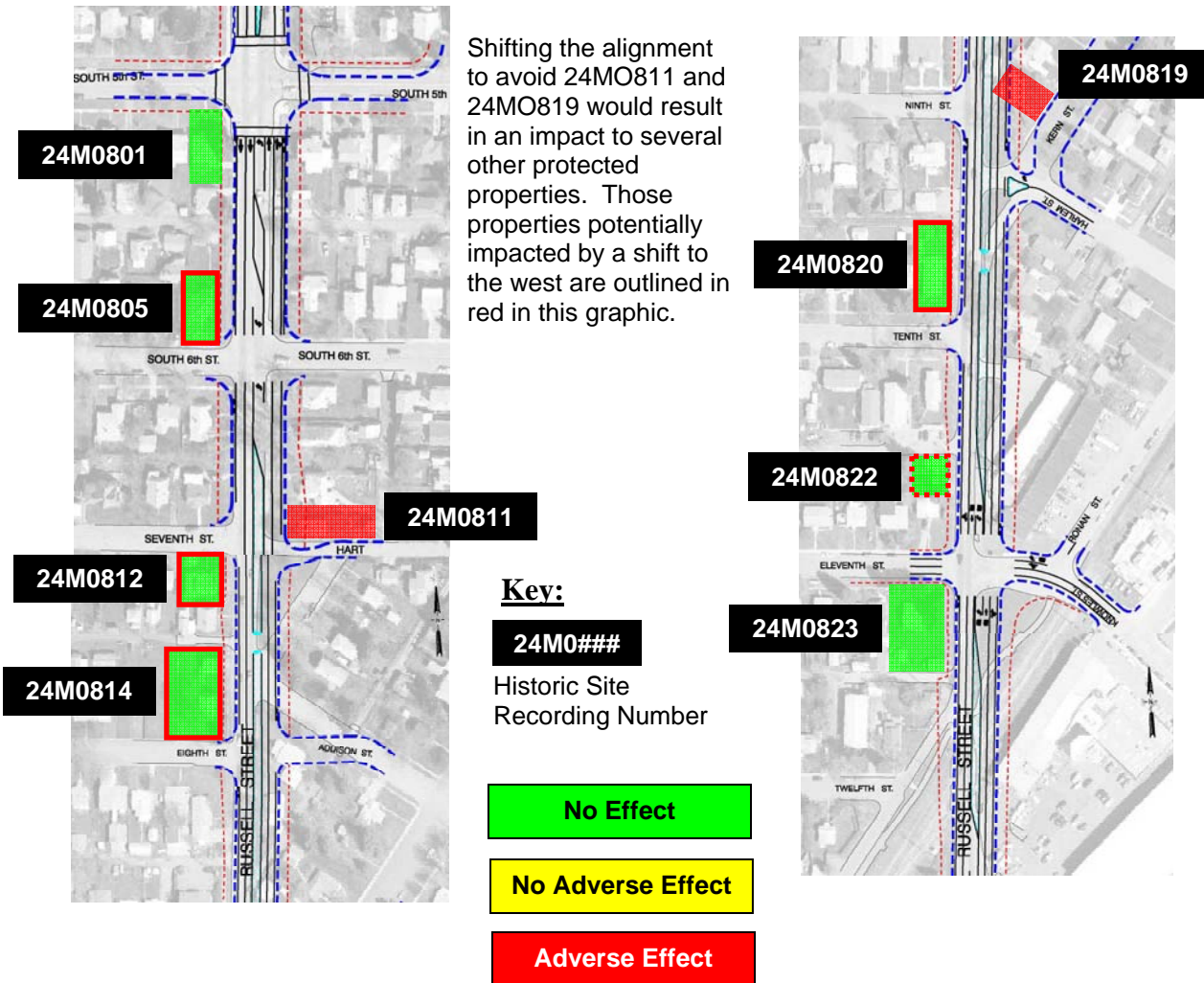
The only complete avoidance alternative available is the No-Build Alternative. This option was determined to be unreasonable because it does not satisfy the basic Purpose and Need for the proposed project. Any basic widening of Russell Street will impact 24MO819. The realignment of Hart and South 7th Streets along with the basic widening of Russell Street will impact 24MO811. The implementation of a single element included in the Build Alternatives such as a sidewalk, would impact these properties. Thus, any refinement of the Build Alternatives to avoid impacts is not feasible or prudent because the resulting alternatives would fail to meet Purpose and Need.

Traditional means of avoiding protected resources might include narrowing the cross-section of the roadway through steepened side slopes, or narrowing or eliminating entire elements of the improvements, or shifting the alignment away from those resources. In this case, even minimal improvements in the corridor would impact Section 4(f) resources, and an alignment shift would simply impact different and more numerous resources protect by Section 4(f).

Any capacity improvements on Russell Street would result in impacts to Section 4(f) resources. As illustrated in Figure 5-6 below, shifting the alignment to the west to avoid impacts to site 24MO811 would result in an impact to sites 24MO805, 24MO812, and 24MO814. Similarly, shifting to the west to avoid impacts to site 24MO819 would result in impacts to sites 24MO820 and possibly 24MO822. The proposed alignment avoids impacts to the remaining Section 4(f) properties, and was determined to be the least damaging alternative overall.



**Figure 5-6
Avoidance Alternative Constraints**



Due to the location of several 4(f) properties in immediate proximity and on both sides of the existing alignment, avoidance of all impacts to all Section 4(f) properties is not feasible with any safety or mobility improvements in the Russell Street corridor. A shift to the west to avoid the structure at site 24M0811 and 24M0819 would result in an undesirable “kink” in the Russell Street alignment, and would result in additional impacts to the Section 4(f) properties on the west side of the existing alignment. The proposed alignment also minimizes impacts to other non-protected properties in proximity to these two sites.

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Because there is no feasible and prudent avoidance alternative the Preferred Alternative on Russell Street is the only design option which causes the least overall harm in light of the Section 4(f)'s commitment to preservation of Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites within the corridor. In accordance with 23 CFR 774.3(c)(1), the following criteria were considered when making this determination:

- Ability to mitigate adverse impacts to Section 4(f) property
 - Because the Build Alternatives all require complete acquisition of the properties, mitigation would come in the form of a Historic American Building Survey document, an oral history to Montana Historical Society Standards, and large format photographs provided to the Montana State Historic Preservation Office and the Missoula County Historic Preservation Office in accordance with the Memorandum of Agreement contained in Appendix C.
- The relative severity of the remaining harm to the Section 4(f) property after mitigation
 - All Build Alternatives result in a full acquisition and removal of these two historic resources.
- The relative significance of the Section 4(f) property
 - These two structures are representative of those typical to the historic south-side development and Missoula's 1950s working class neighborhood. A number of similar structures would remain in the immediate vicinity.
- The views of the officials with jurisdiction over each Section 4(f) property
 - According to coordination with the State Historic Preservation Office, these resources are very similar to others within the project corridor.
- The degree to which each alternative meets the purpose and need of the project
 - All four-lane alternatives satisfy the Purpose and Need, but the Preferred Alternative is able to eliminate impacts to up to three other Section 4(f) properties within the corridor.
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f)
 - The order of magnitude difference in impacts to other resources within the corridor from the Build Alternatives is relatively minor, however, the Preferred Alternative results in fewer residential and commercial displacements.
- Substantial differences in costs among the alternatives
 - There is approximately a 12 percent difference in the high and low cost estimates for the forwarded Build Alternatives, with the Preferred Alternative being less than one percent more than the least cost alternative.

For the above reasons, the proposed alignment is the most prudent in light of the statute's preservation purpose.



5.5 Measures to Minimize Harm

Throughout the corridor, efforts were made to minimize impacts to surrounding residential and business locations in response to the expressed concern to maintain the sense of community. Special attention was paid to protected Section 4(f) properties, however the minimum space needed for the safety and operational improvements did not allow for complete avoidance. Minimization efforts were described previously as part of the avoidance measures.

5.6 Coordination

The Montana Department of Transportation and Federal Highway Administration have coordinated the proposed impacts to historic properties with the Montana State Historic Preservation Officer (see correspondence in Appendix C).

Summary and Approval

All required alternatives have been evaluated and the Preferred Alternative includes all possible planning to minimize harm which will be incorporated in this proposed project. This document is submitted pursuant to 49 U.S.C. 303 and in accordance with the provisions of 16 U.S.C. 470f.

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6.0 LIST OF PREPARERS AND REVIEWERS

Reviewer/Affiliation	Role	Education and Experience
Lloyd H. Rue, P.E., P.T.O.E. Program Development Engineer FHWA	Lead Agency	B.S. Civil Engineering, M.S. Civil Engineering. 21 years experience in geometric design, traffic engineering, and safety.
Brian Hasselbach Right-of-Way and Environmental Programs Manager FHWA	Lead Agency	B.S. Civil Engineering, B.S. Biology, Masters of Environmental Studies. 12 years experience in design, construction, environment, and right-of-way.
Gene R. Kaufman, P.E. Operations Engineer FHWA	Lead Agency	B.S. Civil Engineering. Over 16 years of professional experience in highway engineering, construction and program/project management.
Doug Moeller, P.E. Missoula District Administrator MDT	Lead Agency	B.S. Civil Engineering. District Administrator. 35 years of professional experience.
Shane Stack, P.E. Missoula District Engineering Services Engineer MDT	Lead Agency	B.S. Civil Engineering. 14 years of transportation related experience.
Miki Lloyd, P.E. Consultant Project Engineer MDT	Lead Agency, Interagency Coordination	B.S. Civil Engineering. 15 years of professional experience.
Tom Martin, P.E. Bureau Chief - Environmental Services MDT	Lead Agency, Environmental Compliance	B.S., Civil Engineering. Over 16 years in transportation engineering, environmental review and program/project management.
Heidy Bruner, P.E. Engineering Section Supervisor Environmental Services MDT	Lead Agency, Environmental Compliance	B.S., Environmental Engineering. Approximately 12 years environmental engineering review, design and management.
Susan Kilcrease Environmental Services Missoula District MDT	Lead Agency, Environmental Compliance	B.S., Civil Engineering. B.S. Business Administration. 8 years in project management and 15 years in environmental project development and compliance.

Chapter 6.0 - List of Preparers and Reviewers

Table Continued:

Reviewer/Affiliation	Role	Education and Experience
Steve King, P.E. Public Works Director City of Missoula	Lead Agency	B.S., Civil Engineering. Over 21 years of Civil and Municipal Engineering and administrative experience.
Kevin Slovarp, P.E. City Engineer City of Missoula	Lead Agency	M.S., Civil Engineering. B.S. Business Administration. 12 years of professional experience.
Gregg Wood Project Dvpmt. Coordinator City of Missoula	Lead Agency	B.S., Building Construction. Over 18 years of construction management and contract administration experience.

Preparer/Affiliation	Role	Education and Experience
Darryl L. James Gallatin Public Affairs	Project Management, Public Involvement, Environmental Compliance	M.P.A., Environmental Law and Natural Resource Policy; B.A., Public Affairs and Political Science. Senior consultant with over 20 years of professional experience in transportation planning, NEPA/MEPA process management and analysis, public engagement, and technical report writing.
Tyler J. Schott Gallatin Public Affairs	Document Preparation	B.A., Civil Engineering (ongoing). Four years of environmental analysis and documentation experience. Professional focus on transportation planning and environmental documentation.
Jennifer James	Deputy Project Manager, Public Involvement	B.S., Civil Engineering. Over 10 years experience in environmental technical documentation, public involvement, and traffic engineering.
Phil Odegard, P.E. DOWL HKM	Preliminary Design	B.S., Civil Engineering. Over 20 years experience in alternatives analysis, feasibility studies, and comprehensive roadway design.



7.0 COMMENTS AND COORDINATION

The proposed Russell Street and South 3rd Street reconstruction project is a cooperative project of the City of Missoula, Montana Department of Transportation, and the Federal Highway Administration. The project planning process included extensive public outreach through various committees, public meetings, a door to door neighborhood canvass, mailings, and website.

7.1 Advisory Committees

Project Advisory Committee

The Advisory Committee was made up of federal, state, regional, and local agency representatives and environmental, business, and local citizen representation. This group was established to provide recommendations and input to the project team. Group members were charged with the responsibility to act as a liaison between their constituents and the project team. They were also active in the outreach, preparation, and attendance of the public meetings. Committee members' participation was integral in keeping the project team informed about specific and broader public concerns.

Committee members spent considerable time discussing critical project issues and participated in twelve meetings over the course of two years, during which they developed an alternative ranking matrix. The Advisory Committee also recommended nine design features that would be common to all alternatives. These nine design features, discussed in Chapter 2, helped guide the development of the Build alternatives based on the Purpose and Need outlined in Chapter 1.

Having fulfilled their intended responsibilities to the proposed project, the committee was disbanded in 2006. A list of all Advisory Committee Members is listed in Table 7.1 below.

**Table 7.1
Advisory Committee Members**

Organization	Representative
Bicycle/Pedestrian Advisory Board	Mike Beltz
Bicycle/Pedestrian Advisory Board	Eric Edlund
Corridor Resident (Shared)	Mike Hanson
Corridor Resident (Shared)	Kate Sutherland
Freight Haulers	Jim McKinny
Local Business Representatives	Kevin Gordon
Local Business Representatives	Nate English; John Dayries
Local Business Representatives	Don Sokoloski
Local Business Representatives	Mark Denton
Local Business Representatives	Norman Carey
Low Income Housing	Kathy Dutton
Missoula Chamber of Commerce	Katie Ward
Missoula in Motion	Nora Knell
Missoula Indian Center	(Karla Harris) - Peggy Cochran

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Missoula Trails	Bob Giordano
Missoula Urban Transit District Board	Nancy McKiddy
Office of Transportation, The Associated Students of The University of Montana	Nancy McKiddy
Montana Rail Link	Steve Werner
MT Public Health & Human Services	(John Collins) – Trusty, Marilyn
MT Public Health & Human Services, Disabled Services	Paul Peterson
Neighborhood Council, Emma Dickenson/Orchard Homes	Don Stinger
Neighborhood Council, Franklin to the Fort	Jerry Tahija
Neighborhood Council, Northside/Westside	Bob Jaffe
Neighborhood Council, Riverfront	Ken Thompson
Neighborhood Council, Rose Park	Linda Smith
Neighborhood Council, Southgate Triangle	Hans Christiansen
Smart Growth Transportation Committee	John Couch
City of Missoula Public Works	Bruce Bender
City of Missoula Public Works	Joe Oliphant
City of Missoula Public Works	Steve King
Missoula County Road Dept.	Gregory H. Robertson
Federal Highways Administration (FHWA)	Craig Genzlinger
Missoula City Council Ward 2	Anne Kazmierczak
Missoula City Council Ward 2	Jim McGrath
Missoula City Council Ward 3	John Torma
Missoula City Council Ward 3	Lou Ann Crowley
Missoula City Council Ward 6	Ed Childers
Missoula City Council Ward 6	Clayton Floyd
Missoula Office of Planning and Grants	Dave Prescott
Missoula Redevelopment Agency (MRA)	Geoff Badenoch
Montana Department of Transportation (MDT) House of Representatives	Fred Bente Tom Facey
Montana Department of Transportation (MDT)	Loran Frazier
Herrera Environmental Consultants, Inc.	Kris Lee
Skillings-Connolly, Inc.	Kelly Harris
Skillings-Connolly, Inc.	Richard Weaver
Skillings-Connolly, Inc.	Thaddeus Dickson

Transportation Technical Advisory Committee

The Transportation Technical Advisory Committee is a standing committee composed of technical specialists from federal, state, county, and city agencies. The committee was responsible for providing technical guidance on compliance with federal, state, county, and city regulations and standards, and issues such as threatened and endangered species, and social and economic concerns.



7.2 Public Meetings

The Notice of Intent to prepare an Environmental Impact Statement was published in the Federal Register/Vol. 65, No. 201/Tuesday, October 17, 2000.

The initial Public Scoping Meeting was held November 16, 2000. Six additional public meetings were held prior to the publication of the Draft Environmental Impact Statement. A formal Public Hearing was also held on the Draft Environmental Impact Statement on September 24, 2008. The public meetings conducted to date are summarized in Table 7.2.

**Table 7.2
Summary of Public Meetings**

Date and Place	Attendance
November 16, 2000 Franklin Elementary School	49 people signed in for an estimated attendance of 60 people.
February 8 – 12, 2001 Missoula City Hall Franklin Elementary School Missoula Public Library	91 people signed in over the course of the 4-day workshop plus an additional 41 elementary students for an estimated attendance of 150.
May 7, 2001 Missoula Public Library	89 people signed in for an estimated attendance of 100.
February 21, 2002 Missoula Public Library	141 people signed in for an estimated attendance of 150.
March 15, 2002 Missoula City Hall	45 people signed in Follow up meeting with Dan Burden of Walkable Communities
October 26, 2006 Franklin Elementary School	115 people signed into the project status meeting.
April 16, 2008 Franklin Elementary School	97 people signed in for an estimated attendance of 110
September 24, 2008 Franklin Elementary School	175 people signed in for an estimated attendance of 190 people.

The public meetings covered a range of topics and issues over the course of the project. All meeting locations were accessible under the Americans with Disabilities Act (ADA), and held at locations easily reached by transit. At every meeting, name and address information was obtained from all attendees by placing a dedicated greeter at the door to welcome citizens to the event, ensure sign-in, distribute a project newsletter, and provide a brief overview. All public meetings encouraged participants to provide written comments by placing comment cards or notes directly on displays and maps. All comments received have been retained as part of this proposed project’s Administrative Record.

November 16, 2000 (Public Scoping Meeting) - The first public scoping meeting was held after publication of the Notice of Intent. The goal of this meeting was to provide the public with an initial overview of the project and to collect feedback and comments to help guide the public involvement process and understand the issues.

February 8-12, 2001 (Community Workshop) - The second meeting was a community workshop hosted by Dan Burden of *Walkable Communities*. The goal of the community workshop was to bring the community together over the course of several days in a

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brainstorming session to identify community values, identify issues and concerns, and develop conceptual ideas to guide the development of alternatives. The *Russell Street and South Third Street Reconstruction Workshop Report* documented the process and outcomes of the community workshop and was distributed on the City's website, at subsequent open houses, City Hall, and made available at the Missoula Public Library. Copies of the report are available upon request.

Workshop participants showed a preference for investigating roundabouts as an alternative to signalized intersections to help improve the visual quality, safety, and landscaping opportunities throughout the corridor. Roundabouts were subsequently investigated and remain as prominent intersection control features on two out of four current alternatives.

May 7, 2001 (Public Meeting) - The third public meeting focused in on the preliminary project alternatives. Large strip maps were placed on the walls of the Missoula Public Library meeting room so that citizens could compare alternatives and view potential impacts. In addition, the report produced from the community workshop was provided for citizens to view. Other displays at this meeting included a project schedule, a display providing an overview of the NEPA process, and an educational video about roundabouts.

February 21, 2002 (Public Meeting) - The fourth public meeting further refined community feedback and advisory committee input and provided corridor strip maps and other displays for comment. The strip maps illustrated action alternatives, which were overlaid on aerial photos of the No-Build alternative and citizens were encouraged to write comments on the maps. In addition to the alternative displays, a station depicting bike and pedestrian crossings, a display providing an overview and definition of historical properties, and a graphic providing information regarding roundabouts were all available for comment.

March 15, 2002 (Follow-up Meeting) – This meeting was held to discuss the *Russell Street and South 3rd Street Reconstruction Workshop Report*. During this informal meeting, jointly organized by community and project team members, Dan Burden of Walkable Communities described in greater detail several aspects of the report, expanded on the principles of bike and pedestrian accessibility, and discussed roundabouts. This meeting provided community and project team members the opportunity to actively engage in a question and answer session with Dan Burden and hear additional community issues and concerns.

October, 26 2006 (Public Information Meeting) – This meeting was held to provide an update to the public on the project, project delays, and a subsequent change in the consultant team. The meeting summarized the project development process, where the project stood in the overall process, identification of the Preliminary Preferred Alternatives, and the Section 4(f) issues that had stalled the proposed project.

April 16, 2008 (Public Information Meeting) – This meeting was held to provide an update to the public on the project, and the change in the Preliminary Preferred Alternative on Russell Street. The meeting summarized the project development process, the progress on the project since the last public meeting, identification of the new Preliminary Preferred Alternative on Russell Street, and the Section 4(f) issues which mandated the change in the Preliminary Preferred Alternative on Russell Street.



September 24, 2008 (Formal Public Hearing) – A formal Public Hearing was held during the public review period on the Draft Environmental Impact Statement to take public comments on the document. Public comments were taken in writing, through a court reporter, and through verbal testimony at the Hearing. These comments are reproduced in Appendices H, I, and J of this FEIS.

7.3 Agency Coordination

Additional resource agencies and government entities have been consulted when specific issues necessitated involvement. Copies of correspondence received from these agencies is contained in Appendix D.

Given the location of the proposed project approximately 32 kilometers (20 miles) south of the Flathead Indian Reservation, the Confederated Salish Kootenai Tribe was notified of the project.

7.4 Summary of Public Comments

Comments on the Russell Street / South 3rd Street project have been received since the initiation of the project in 2000, and those comments have been retained in the Administrative Record. Comments and concerns covered a wide range of issues that affected all travel modes. Suggestions ranged from small improvements within the study area, while others were broad, far-reaching recommendations that went well beyond the scope of the proposed project. Issues identified through public scoping frequently involved the following:

- System capacity
- Roundabouts
- Bicycle and pedestrian compatibility and safety
- Traffic safety and crash reduction
- Emergency medical services compatibility
- Local bus transit service
- Environmental issues, including air quality, noise, fish, pedestrian-oriented development and land use planning, cut-through traffic in neighborhoods, potential for displacements, and construction impacts.
- Access and ADA considerations
- Cost of construction

Most of the traffic comments deal with the subject of congestion, capacity, cut-through traffic, flow, and general vehicular usability. Some comments were found to indicate some level of preference for improving the capacity of the Russell Street and South 3rd Street corridors. Most comments frequently focused on more comprehensive issues of creating multi-modal transportation systems that do not “turn Missoula into Los Angeles.” In other instances, comments that did not voice support for increasing capacity did so by discouraging a five-lane freeway that would “divide neighborhoods.”

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The support for the capacity improvement was often directly stated, for example, “Russell is a mess and needs expansion” or “As fast as Missoula is growing, we do NOT need another leisurely route; we need to get traffic across the river in a very efficient manner.” Along the same line of direct support, another commenter stated that, “There is no question that Russell Street between South Avenue and Broadway needs to be widened and upgraded. In doing so, I suggest that it be designed as a major thoroughfare much like Reserve Street.”

Others expressed support for capacity improvements less directly by suggesting roundabouts be used to “keep the traffic moving, end the stop and go, help air quality.” Some expressed concerns about excessive cut-through traffic and encouraged the project team to alleviate the neighborhood overflow. On several occasions public comments simultaneously supported both “slow-moving, and continuously flowing traffic” or noted “four lanes takes the pressure off Orange.”

Overall, there appears to be strong support for capacity improvements and an acknowledgement that congestion is an issue. Caveats include concerns that the neighborhood will be divided, excessive relocations required, or high speeds encouraged. In addition, many stressed the need to ensure that cyclists and pedestrians can coexist safely with vehicles in a manner that encourages multi-modal use.

A higher percentage of comments relate to bicycles than to environmental impacts, aesthetics, or pedestrian issues. These numbers do not imply support for or against any given topic, but are indicative of the amount of community dialogue around these issues.

Reserve Street as a Negative Model

An issue that was made many times but is difficult to categorize is the sentiment that Russell Street not become another Reserve Street. Reserve Street is a four-lane road with a center turn lane. Raised medians and landscaping are generally not abundant along Reserve Street. Many have written in and challenged the project team to “...consider alternatives to what was done on Reserve Street.” The features of Reserve Street that received negative comments include excessive pavement width, lack of landscaping, high speed, and the perception of inadequate bicycle and pedestrian facilities.

However, some individuals would approve of reconstructing Russell Street similar to Reserve Street. A few written statements have been received stating that Russell be “designed as a major thoroughfare such as Reserve Street. Please reconstruct it as wide as possible to move vehicles as fast, as safe and as economically as possible.” There have been few comments encouraging Russell Street to be constructed like Reserve Street.

Stephens Avenue as a Positive Model

Stephens Street has been repeatedly offered as a positive example of how to approach the proposed reconstruction project. Stephens Street is a four-lane road with raised medians and substantial use of landscaping. At the February 21, 2002, over 140 people attended to view the current project alternatives. Many offered comments, both verbal and written, that cited Stephens Avenue as a benchmark of excellence in road design and stated they would like to see Russell Street and South 3rd Street look similar. One person wrote, “Lately I’ve been pleased to



travel the Stephens Avenue route to my home off of North Orange because it feels safer and more comfortable than any other main artery.” Many others complimented the City on the use of landscaping and observed that cars tend to drive more slowly and more considerately on Stephens Avenue. Many others appreciated that the newly reconstructed Stephens Avenue maintains the character and quality of the neighborhood.

All of the action alternatives and the Preferred Alternative include features incorporated into the Stephens Avenue design, including curbs, gutters, sidewalks, boulevards, bicycle lanes, raised medians, landscaping, and lighting. The City has been able to offer Stephens Street as an example of a completed project that looks similar to how Russell Street and South Third Street would look after reconstruction.

Multimodal Design

Although some comments supported only bicycle improvements, with others advocating for only vehicular improvements, many people observed a need to design Russell Street and South Third Street in a way that accommodates all users. Some stated that, “Rebuilding our streets to accommodate the needs of bicyclists and pedestrians as well as cars is extremely important to me.” Others commented, “As a car owner and bicyclist, I believe that we need to make sure our streets are accessible to all transportation choices so that cars, bicyclists, and pedestrians can coexist safely and keep Missoula livable.” A multimodal system is identified in the project’s purpose and need. People continue to write comments supporting this approach, further emphasizing the community’s preference for a multimodal system.

Roundabouts or Signals

The emergence of roundabouts as an alternative to signalized intersections is a direct example of how the public involvement process has affected this project. The community workshop facilitated by Dan Burden and attended by over 150 people in February of 2001, encouraged citizens to offer their ideas for the Russell Street and South 3rd Street project. Of the many ideas offered at this meeting by members of the public, the idea of replacing some signalized intersections with roundabouts, in conjunction with other improvements, was common.

The community in attendance at the workshop perceived that roundabouts offered opportunities for landscaping, reduced the number of travel lanes, and offered safety improvements at intersections, and suggested that the project team do a more thorough evaluation of feasibility. After considerable study and scrutiny, roundabouts have been included in three out of the four action alternatives.

7.5 Other Public Involvement and Information Techniques

In an effort to gather information and inform as many citizens and interest groups as possible, a variety of public involvement techniques were used during the course of the study. These included maintaining an extensive mailing list, newsletters, an Internet website, press releases, student senate presentation, and a door to door canvass.

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Door to Door Neighborhood Canvass

On September 26th and 27th of 2006, the project consultant conducted an informal door-to-door canvass of the neighborhood. A memo outlining the comments and concerns received is included in the Administrative Record. The intent was to inform those in the corridor that there was a new project team and to provide a personal invitation to the public information meeting in October. The consultants spoke with over 90 business owners, property owners, and residents and left post card invitations to the public meeting for those who were not available.

Many of the residents spoken with were concerned about impacts to their specific properties and how access would be impacted. Most were very anxious for the project to move forward because they feel the corridor is unsafe and the uncertainty has been difficult. A number of the residents and business owners expressed concerns regarding the roundabouts. There were questions about how they would operate, the amount of right of way needed, and whether or not they make sense in the locations proposed.

Student Senate Presentation

A presentation was made to the Associated Students of the University of Montana on February 2, 2007 at 6:00 pm. The Student Senate had passed a resolution opposing the Preliminary Preferred Alternative that was presented to the public in 2006. During discussions between the Student Senate and the consultant team, it became apparent that the Senate had previously been given inaccurate information regarding the Alternative. The presentation included a summary of the process, the alternatives that have been considered to date, and a detailed description of the Preliminary Preferred Alternative. The Senate agreed to reconsider their resolution once the Preliminary Preferred Alternative had been verified by the new consultant team.

Media

News releases were sent out prior to each series of public meetings. The news releases went to the local newspapers, televisions, and radio. Prior to public meetings, notices were also sent via postcards to all of those businesses and community residents that were on the self-designated distribution list. Approximately 500 postcards were sent out. These post cards and press releases notified the public of the topics, and time and place for each meeting, as well as information on accommodations for any known disability.

Internet Website

Throughout the study, Russell Street / South 3rd Street project information has been available on the Internet. Updates, meeting notices, public comments, screening, alternative information, and project contacts have been posted on the Russell Street webpage. The project web page is contained within the Montana Department of Transportation website where the public can view other projects and link back to the project page. The internet address was included in every newsletter published during the project.

Newsletters

Electronic newsletters were sent during the final phases of the Environmental Impact Statement process. To date, 10 newsletters were distributed to an e-mailing list of over 125 people.



8.0 DISTRIBUTION LIST

Federal Agencies

U.S. Fish and Wildlife Service
585 Shepard Way
Helena, MT 59601
Attn: Mark Wilson, Field Supervisor

U.S. Army Corps of Engineers
Regulatory Office
10 West 15th Street, Suite 2200
Helena, MT 59626
Attn: Todd Tillinger, Montana Program
Manager

EPA Region 8 Montana Office
Air Quality Program
10 West 15th St., Suite 3200
Helena, MT 59626
Attn: Betsy Wahl

EPA Region 8 Montana Office
10 West 15th St., Suite 3200
Helena, MT 59626
Attn: Julie DalSoglio, Director

State Agencies

Montana State Historic Preservation Office
1410 Eighth Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Dr. Mark Baumler, Historian

Montana State Historic Preservation Office
1410 Eighth Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Josef Warhank, Historian/Compliance
Officer

Montana Fish Wildlife & Parks
1420 East Sixth Ave
Helena, MT 59620-0701
Attn: Glenn Phillips

Montana Fish Wildlife & Parks
3201 Spurgin Road
Missoula, MT 59804
Attn: Mack Long

Montana Department of Environmental
Quality
1520 East Sixth Ave
Helena, MT 59620-0901
Attn: Thomas Ellerhoff
Greg Hallsten

Montana Department of Natural Resources
and Conservation
1625 11th Avenue
Helena, MT 59104-0437
Attn: Mary Sexton, Director

Montana Environmental Quality Council
Office of the Director
Capital Post Office
P.O. Box 215
Helena, MT 59620

Montana State Library
1515 East 6th Avenue
P.O. Box 201800
Helena, MT 59620-1800
Attn: Roberta Gebhardt, Collections
Management Librarian

Chapter 8.0 - Distribution List

Local Government Agencies

Missoula Public Works Department
435 Ryman Street
Missoula, MT 59802

Mayor's Office
435 Ryman Street
Missoula, MT 59802

Missoula Parks and Recreation Department
100 Hickory Street
Missoula, MT 59802
Attn: Donna Gaukler, Director

Orchard Homes Irrigation District
2641 Gleason
Missoula, MT 59804
Attn: Marvin Ross, District President

Mountain Line Transit
1221 Shakespear
Missoula, MT 59802
Attn: Steve Earle, Director

Missoula Ravalli Transportation
Management Association
127 West Spruce Street
Missoula, MT 59802

Missoula City Fire Department
625 East Pine Street
Missoula, MT 59802

Missoula Rural Fire District
2521 South Avenue West
Missoula, MT 59804

Missoula Parking Commission
128 West Main Street
Missoula, MT 59802

Missoula Redevelopment Agency
123 Spruce Street
Missoula, MT 59802

Missoula Street Maintenance Division
800 West Broadway
Missoula, MT 59802

Missoula Traffic Services Division
100 Hickory Street
Missoula, MT 59802

Missoula Wastewater Division
1100 Clark Fork Drive
Missoula, MT 59802

Missoula Environmental Health Services
301 West Alder
Missoula, MT 59802

Missoula County Commissioners
Missoula County Courthouse
200 West Broadway
Missoula, MT 59802

Missoula Conservation District
3550 Mullan Road
Missoula, MT 59808

Missoula Development Authority
200 West Broadway
Missoula, MT 59802

Missoula Co. Floodplain Administrator
435 Ryman Street
Missoula, MT 59802
Attn: Todd Kliez