

SR 291 US 2 TO SCOTT'S VALLEY RD.

CHARACTERISTICS

Segment Description:

This route segment begins in the City of Spokane, at the intersection of US 2/395 (Division St.) and SR 291 MP 0.00 (Francis Ave.) The route segment ends in Stevens County, just north of the Suncrest Community, at Scott's Valley Rd., MP 22.31.

County/Counties: Spokane, Stevens

Cities/Towns Included: The route segment passes through the northwest section of the City of Spokane in a westerly to a northwesterly direction. After leaving the city limits it proceeds through the Nine Mile Falls community on its way to Stevens County. After crossing the county line, it travels through the Suncrest community, before terminating at Scott's Valley Rd.

Number of lanes in the corridor: 2 to 4

Lane width: 10 to 15 feet.

Speed limit: 35 to 50 mph.

Median width: 0 to 0 feet.

Shoulder width: 0 to 10 feet.

Highway Characteristics:

SR 291 is classified as a Urban-Principal, Urban-Minor and a Rural-Collector arterial. It is a Non-HSS facility.

Special Use Lane Information (HOV, Bicycle, Climbing):

Two-way turn lanes are located predominantly in the portion of the route segment located in the urban area.

Access Control Type(s):

Class 2 through Class 5 managed access control is found within this route segment.

Terrain Characteristics:

This route segment traverses a combination of level and rolling terrain.

Natural Features:

This route provides access from the City of Spokane to the Little Spokane River Natural Area, the Spokane River, and Riverside State Park, as well as other recreational opportunities, such as golf courses, hiking trails and a major off-road vehicle park.

Adjacent Land Description:

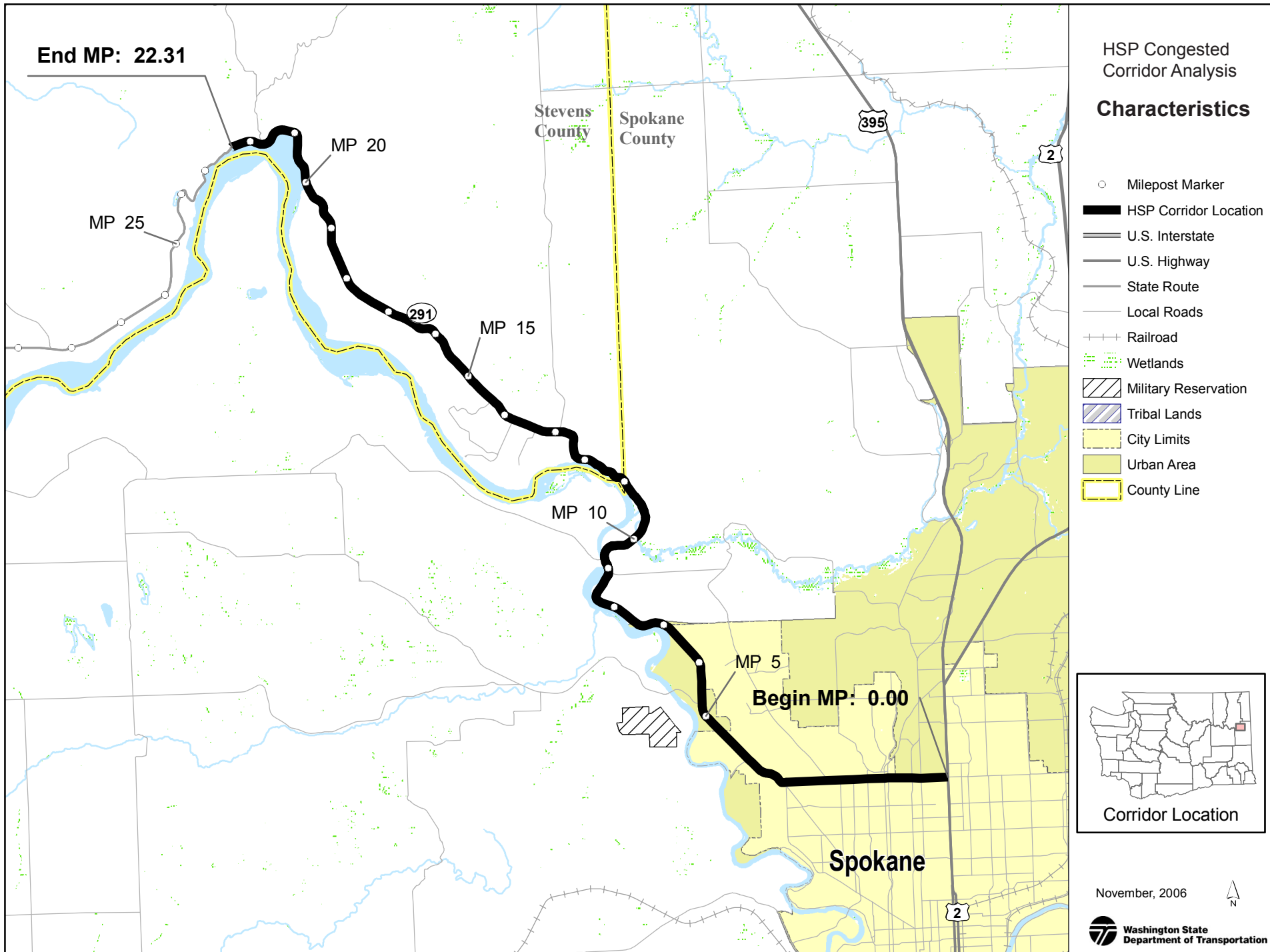
The route is adjacent to a variety of land uses, both urban and rural in character. The following are comprehensive plan land use designations for adjacent lands; regional commercial, incorporated urban growth area, high density residential, low density residential, urban reserve, and rural conservation.

Environmental Issues:

Some sections of this segment of SR 291 are located in close proximity to the Spokane River, presenting potential mitigation challenges relative to shorelines and critical areas for improvements in those areas. New alignment proposals impact identified wetlands, and may effect historical resources, but more investigation is needed. Wildlife travel corridors, threatened and endangered species, and rare plant presence would also need additional investigation.

Major Economic Issues:

SR 291 serves primarily commuter and recreational trips. Residential and retail growth in southern Stevens County (the Suncrest community in particular) is affected, to some extent, by SR 291 traffic issues and concerns. The vast majority of Suncrest residents commute to Spokane for employment, shopping and recreation needs.



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ASSETS

Pavement:

There are 38.1 lane miles of Hot Mix Asphalt, 16 miles of Bituminous Surface Treatment and .48 mile of concrete, on this segment of SR 291.

Signal:

There are seven signalized intersections. All signalized intersections on this route segment are located in the City of Spokane urban area.

Structures:

There is one structure in this corridor that consists of a Pre-Tensioned Concrete Beam.

(Ramps, and locally owned structures (if any exist) are not identified in this section and may not be reflected on maps.)

Features Crossed:

The route segment crosses the Little Spokane River at MP 10.04 (ARM 10.04).

ITS Facilities:

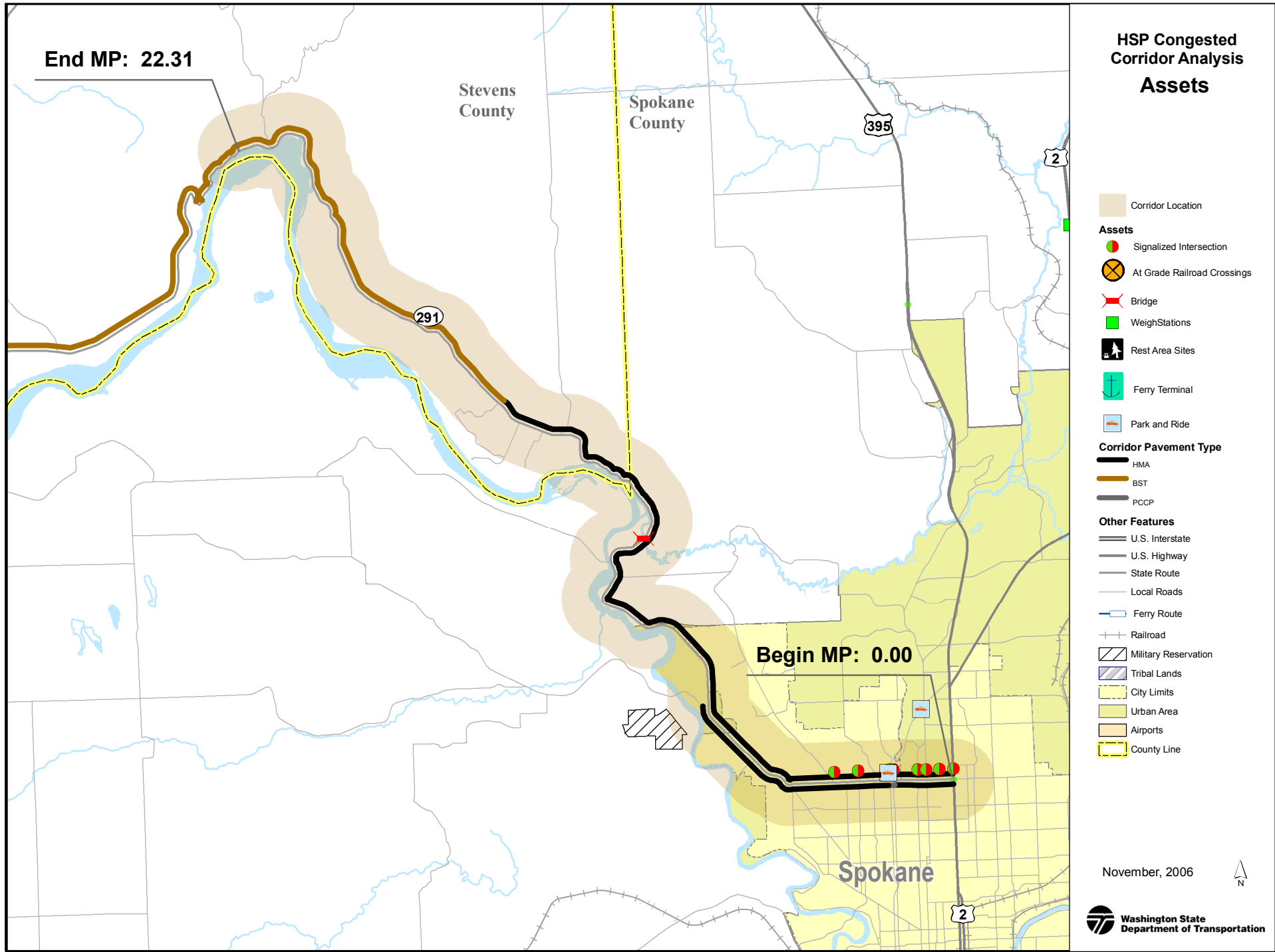
There are no intelligent Transportation systems on this corridor.

Railroad Crossings:

There are no at-grade rail crossings within this route segment.

Asset Other:

None Identified.



HSP Congested Corridor Analysis Assets

- Corridor Location
- Assets**
- Signalized Intersection
- At Grade Railroad Crossings
- Bridge
- Weigh Stations
- Rest Area Sites
- Ferry Terminal
- Park and Ride
- Corridor Pavement Type**
- HMA
- BST
- PCCP
- Other Features**
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads
- Ferry Route
- Railroad
- Military Reservation
- Tribal Lands
- City Limits
- Urban Area
- Airports
- County Line

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USAGE

General Origin and Destination Travel Characteristics:

SR 291 is a major commuter link between downtown Spokane and many residential areas that are located within the city limits as well as outside the urban area and into southern Stevens County. The majority of trips are commuter trips for either work or shopping purposes. However, there is a significant number of recreational trips that use the facility traveling to Riverside State Park, the Spokane River and Long Lake. The route is also a favorite among bicyclists and bicycle groups, who often stage events on SR 291, between Spokane and Stevens County.

Snow/ice Issues:

There are no sections within this corridor which present a problem for normal snow/ice control.

Annual Average Daily Traffic:

Ranges from 3,100 to 29,000.

Significant Seasonal Average Annual Daily Traffic Changes:

Recreational traffic increases significantly during the late spring and summer months. Also, bicycling activity on the route segment also increases during the spring and summer, adding to congestion, delay, and safety concerns.

General Description of Major Average Annual Daily Traffic Locations:

Annual average daily traffic (AADT) is heaviest (26,000 to 29,000) between MP 0.00 (Division St.) and MP 2.21 (Indian Trail Road). Proceeding east to west, approximately one half of the AADT drops off at Indian Trail Rd. However, at the Assembly/Driscoll intersection, ADT increases to 18,000 and then gradually drops off to 8,000 just before entering the Suncrest community. Just beyond Suncrest it reaches its lowest value of about 3,100.

Freight:

Freight Classification: T3

Yearly Tonnage: 3.8M

Truck Percentage of Annual Average Daily Traffic: 4.1% to 5.75%

Additional Usage Comments:

There are no additional comments.

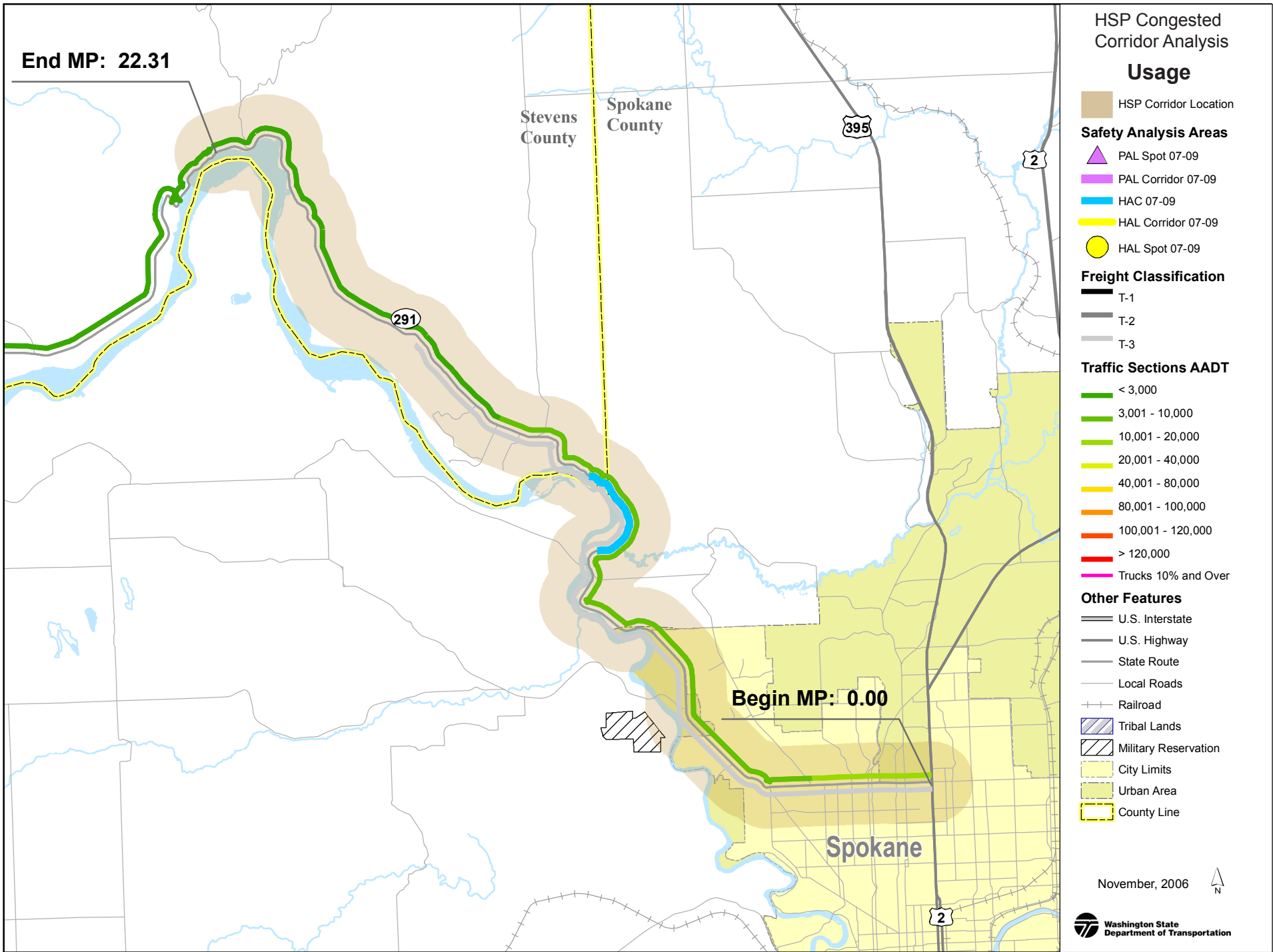
Average Annual Societal Cost of All Collisions: Approximately \$7.49M

Collisions:

Severe No of Collisions: 10

Less Severe No of Collisions: 525

List Data Years: 2002 to 2004



NEEDS AND STRATEGIES

Preservation

Pavement Condition and Needs:

The majority of the route segment has received a full rehabilitation within the last 10 years, with the most recent full rehab occurring in 2004.

Pavement Management Strategies:

Future rehab is due beginning in 2007 for rutting failure, with much of the route segment due for rehab between years 2007 and 2013 for both rutting and structural failure. The PCCP section is not due for rehabilitation until 2028.

Structures Condition and Needs:

There are none described. (This may include ramps and locally owned structures if any exist.)

Structures Management Strategies:

There are none identified.

Additional Condition and Needs:

There are none identified.

Additional Management Strategies:

There are none identified.

Improvement

Mobility Condition and Needs:

Traffic on this route segment is expected to increase significantly as residential growth within the urban growth area boundary and southern Stevens County continues. LOS on the portion of the route in the urban area is already failing during the PM peak period. Traffic demand on SR 291 also contributes to failing LOS for northbound and southbound movements on intersecting city arterials. As the route moves towards Suncrest it becomes a two lane facility with very limited passing opportunities due to curves and grades. As SR 291 is a popular bicycle route, limited shoulders and bicycle activity exacerbate safety, delay and congestion concerns.

Mobility Management Strategies:

A wide variety of improvement strategies have been proposed as part of the Route Development Plan being prepared for this route segment. Those improvements include; signal timing enhancements, channelization, intersection improvements, turn lanes, additional lanes, lane extensions, realignments, bus pullouts, shoulder widening, ITS, bike routes, and the construction of a new facility that would potentially divert a significant amount of regional trips away from the facility, especially the most congested segment in the urban area.

Safety Condition and Needs:

There is a City Accident Corridor (CAC) and a High Accident Corridor (HAC) located within the route segment. Safety has emerged as a major concern among numerous facility stakeholders. There is a great deal of conflict between free-flow traffic and slow moving vehicles or bicyclists on the route, especially in the narrow two lane sections where there are very limited or no shoulders to provide a refuge. The lack of shoulders also presents a risk with respect to disabled vehicles.

Safety Management Strategies:

Various measures have been proposed to improve safety. They include the following; driveway consolidation, channelization, extension of two-way left turn and right turn only lanes, additional lanes and realignment, and the widening of shoulders to provide additional room for bicyclists and disabled motorists to be clear of vehicle traffic.

Environmental Condition and Needs:

There are none identified.

Environmental Management Strategies:

There are none identified.

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Restrictions:

The route segment is located adjacent to the Spokane River at this location, posing constraints to adding lanes or shoulder widening. There is a significant out slope on the east side of the road that would require substantial earthwork.

50-Year Configuration:

SR 291 serves an important role as a facility that serves regional and local commuter, recreational and shopping trips. It is an important link between the City of Spokane and numerous residential and recreational destinations. The long-range vision is for the route to be a four-lane modified access controlled facility (where appropriate) between the City of Spokane and the Suncrest community in Stevens County.

End MP: 22.31

Stevens County
Spokane County

395

2

291

2

Begin MP: 0.00

Spokane

2

HSP Congested Corridor Analysis Needs

- HSP Corridor Location
- Bridge Replacement Priority**
 - Replacement
 - Seismic
 - Special
 - Scour
 - Painting
 - Miscellaneous
 - Bridge Deck
- Other Bridge Issues**
 - 2 Lane BW Narrow Bridge
 - Restricted Bridge
 - Posted Bridge
 - Vert. Clearance 15.5' Or Less
- Fish Barriers**
 - Require Repair
 - Little Gain
 - Undetermined
- Unstable Slope**
 - Debris Flow
 - Erosion
 - Landslide
 - Rockfall
 - Settlement
- Paving Due**
 - Past Due
 - 2005 - 2007
 - 2008 - 2009
 - 2010 - 2011
 - 2012 - 2026
- U.S. Interstate
- U.S. Highway
- State Route
- Local Roads
- Railroad
- Military Reservation
- Tribal Lands
- City Limits
- Urban Area
- County Line

November, 2006



TIERED PROPOSED SOLUTIONS

Minimum Fix

Description:

Minimum fixes that will generate significant mobility benefits, and can be accomplished in the near-term, as identified in the Route Development Plan, include signal timing coordination and improvements, various channelization improvements at intersections, retail driveway consolidation, lane extension to provide queuing space, signal and/or roundabout construction and the construction of a two-way left turn lane to reduce mainline conflict. These are all improvements that address both mobility and safety issues in the corridor, especially the portion of SR 291 located in the urban area.

Delay Reduction: 5.4%

Collision Reduction: None identified.

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$4.9 M

Cost Estimate Explanation:

Cost estimates were prepared by the Route Development Plan Engineer as part of the RDP document.

Minimum Fix Benefits:

Congestion reduction, reducing delay at signalized intersections and safety benefits through removal and minimization of conflict points.

Moderate Fix

Description:

The construction of additional lanes in selected portions of the route segment constitute the bulk of the moderate fix. Additional lanes, such as acceleration/deceleration lanes, right turn/left turn only, and two-way left turn lanes would be constructed in both the urban and non-urban portions of the route segment where mobility and/or safety issues can be effectively resolved by removing vehicles from the mainline flow. The cost provided is for the majority of the lanes that are proposed in the RDP. However, for specific locations, the cost ranges from 1.2 million to 12.5 million.

Delay Reduction: None identified.

Collisions Reduction: None identified.

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$23.2 M

Cost Estimate Explanation:

Cost estimates were prepared by the Route Development Plan Engineer as part of the RDP document.

Moderate Fix Benefits:

The construction of two-way left turn lanes and dedicated turn lanes in congested areas will improve operating speeds on the facility as well as reduce the potential for accidents.

Maximum Fix

Description:

The maximum fix for this facility is the construction of additional lanes in the urban section as well as the construction of a new 4-lane alignment in the suburban/semi-rural area of the route segment.

Right-of-way acquisition is the most significant cost factor in the urban section, which involves adding 2 lanes to the existing 5 lane section, between Wall St. and Belt St., the most heavily congested portion of the route segment.

For the semi-rural area, a new 4 lane section would be constructed on a new alignment between the vicinity of Charles Rd. and Swenson Rd. (Suncrest). Previous studies have been conducted regarding this proposal.

Delays Reduction: None identified.

Collisions Reduction: None identified.

Deficient Concrete Lane Miles: None identified.

Total Estimate Cost: \$68.8 M

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Cost Estimate Explanation:

Cost estimates were prepared by the Route Development Plan Engineer as part of the RDP document.

Maximum Fix Benefits:

Construction of additional general purpose lanes in the urban area and the construction of a new alignment in the rural area will improve travel times significantly while also creating a much safer facility for motorists as well as other highway users. Relocating a portion of the facility further away from the Spokane River should enhance the natural beauty of that area.

Off-System Solutions:

Spokane County has proposed the construction of the Northwest Urban Area Connector (NWUAC). This facility would provide a direct connection between north/northwest Spokane and west Spokane. Currently, there is no convenient route between the two sub-areas. The vast majority of traffic traveling between the two areas uses congested City of Spokane facilities, of which SR 291 is a major route, to make the trip. Preliminary studies have indicated that the NWUAC may be able to provide some traffic relief to SR 291, but much further study is needed.

Special Studies/Reports:

SR 291 Route Development Plan (In progress).

Alternative Route Study, SR 291; Nine Mile Falls to Stevens County Line.

Required Studies

Although the Route Development Plan did identify the "Maximum Fix" improvements for this route segment, additional study and alternatives analysis is needed to determine if the solution is the most appropriate or cost-effective way to address congestion and safety deficiencies. Also, Spokane County has proposed the construction of a urban area connector to provide a more direct, higher speed route between areas of north, northwest and west Spokane County. Preliminary analysis suggests that this facility may be beneficial to traffic issues on SR 291, but much further study is needed.

Start/Completion Date of Study:

None identified.

Expected Results

None identified.

Funded Projects within Corridor Limits

Project No	Title
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None identified.

Additional Comments:

None identified.

Data Sources and Contacts used:

SR 291 Route Development Plan (In progress)

Alternative Route Study, SR 291; Nine Mile Falls to Stevens County Line

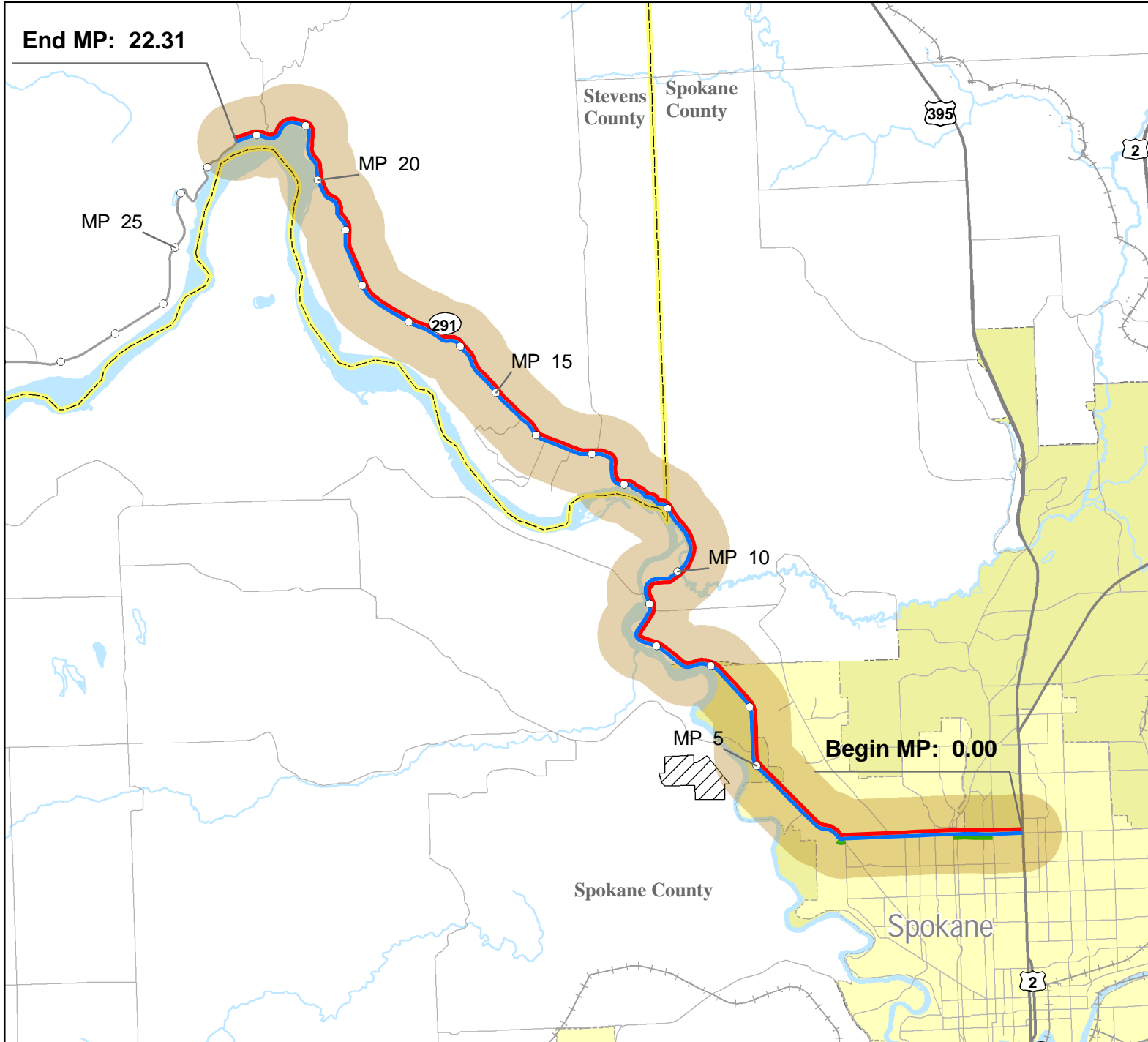
Environmental Workbench, LeeAnn Hancock, Eastern Region Environmental Office

ITS Data, Larry Frostad, Eastern Region Traffic Engineering

Preservation Data; Mike Melvin, Eastern Region Program Management

Freight Data; Ruth Decker, Transportation Data Office

End MP: 22.31



HSP Congested Corridor Analysis Solutions

HSP Corridor Location

Solutions

Tier 1

Tier 2

Tier 3

Other Features

U.S. Interstate

U.S. Highway

State Route

Milepost Marker

Local Roads

Railroad

Tribal Lands

Military Reservation

City Limits

Urban Area

COUNTY

November, 2006

