SECTION 3

Existing Conditions

The purpose of this section is to provide a general inventory of the regional transportation system, identify current deficiencies and describe the measurements used to determine system performance.

Roadways

Federal Functional Classification

Existing roadways are classified by how they function within an integrated network. The KMPO Board, Idaho Transportation Department (ITD), and ultimately the Federal Highway Administration (FHWA) formally approve an official functional classification map, which is updated approximately every 10 years. The 2015 FFC maps were last updated in 2008. Figure 3.1a shows the functional classifications of rural roadways. Figures 3.1b through 3.1e show the functional classifications within the urban area.

The functional class map defines which roadways are eligible for federal funding through the Federal-aid Highway program. In Idaho, Federal-aid funding in rural areas is limited to roadways classified as rural major collectors and higher. In urban areas, a roadway must be classified as an urban collector or higher to receive Federal-aid funding. Other local streets and private roads are not eligible for Federal-aid Highway funding.

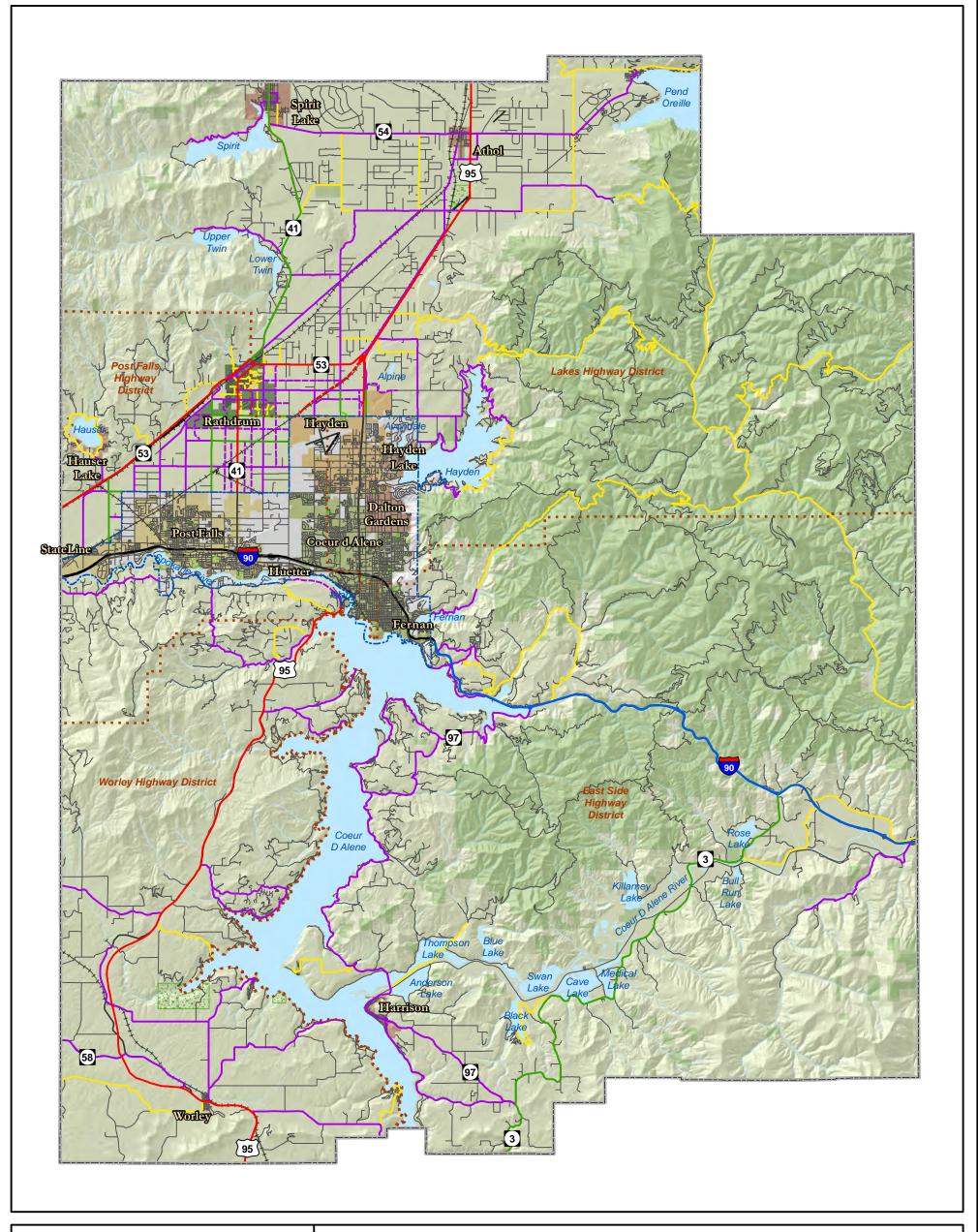
The Federal Functional Classifications are generally defined as follows:

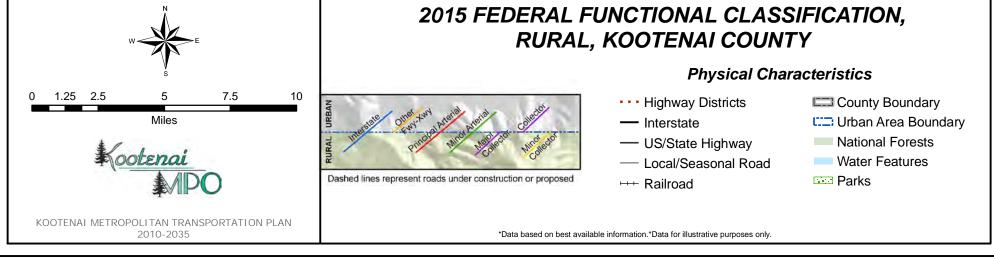
- Freeways and Interstates
- Principal Arterials
- Minor Arterials
- Urban Collectors
- Rural Major Collectors
- Rural Minor Collectors
- Local Roads

Freeways and Interstates

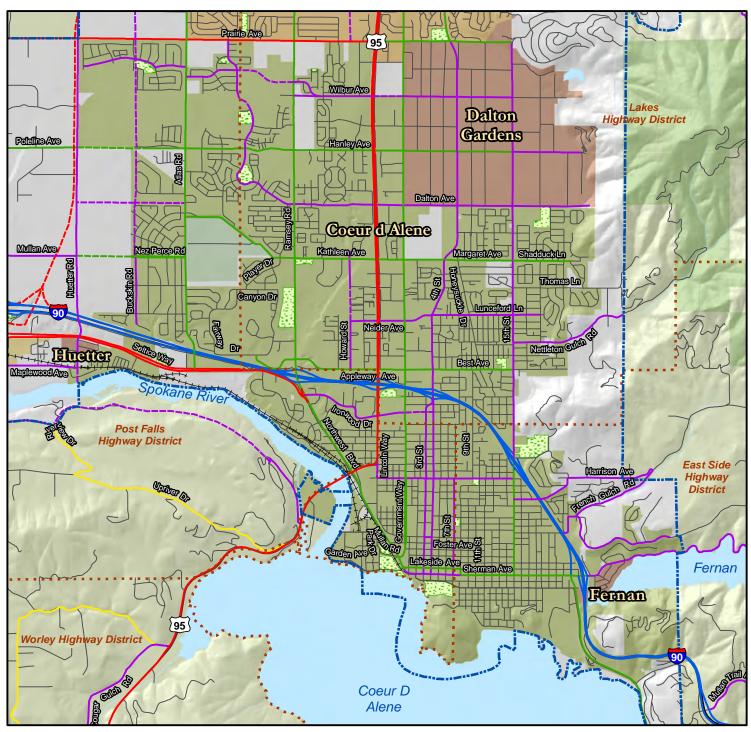
Interstates are designed to allow for the most efficient movement of people and goods of any roadway, with traffic operating at high speeds and with limited access.

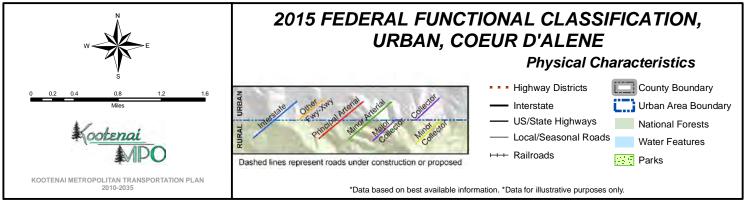
Interstate 90 is the only federally classified freeway/interstate in Kootenai County. Owned and maintained by Idaho Department of Transportation, I90 totals 36 miles (179 lane miles) of urban and rural interstates and ramps, and 15 interchanges. Speed limits along I90 range from 65 to 75 mph.

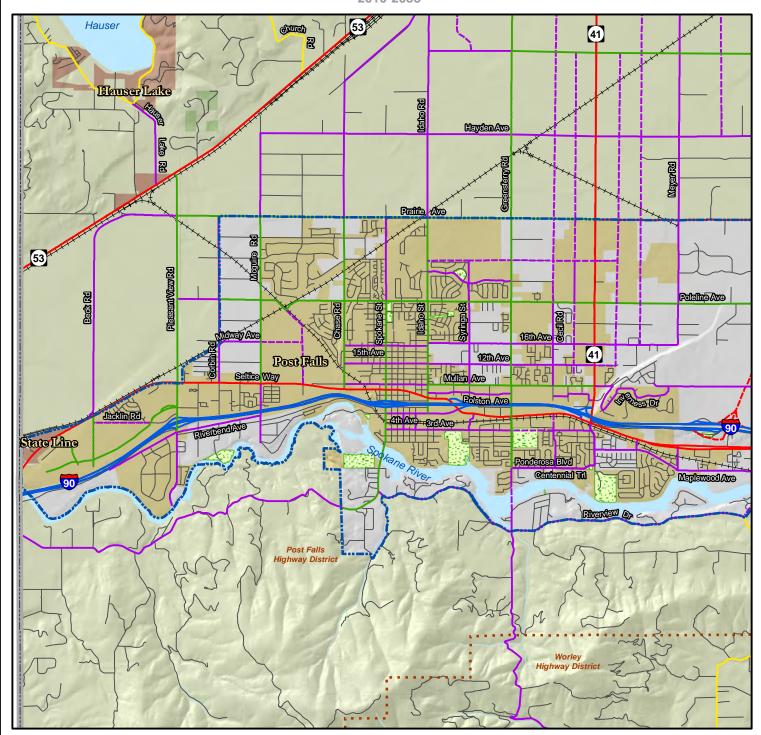


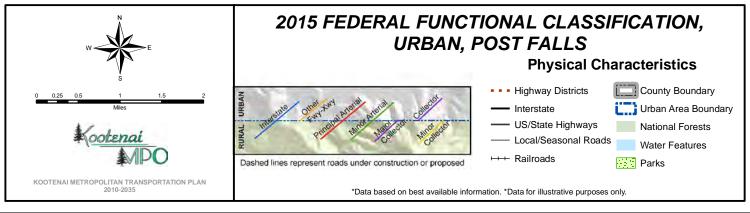


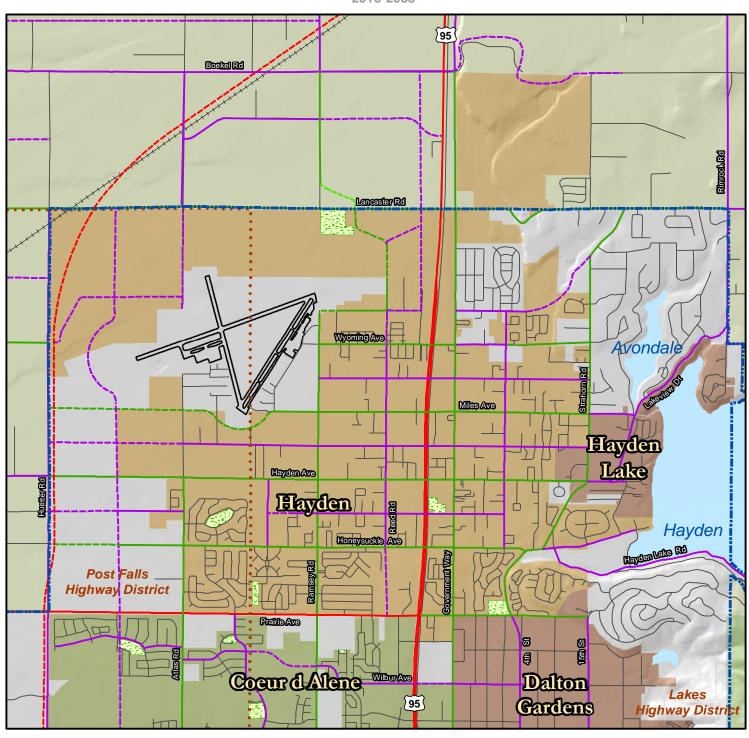
3 - 2

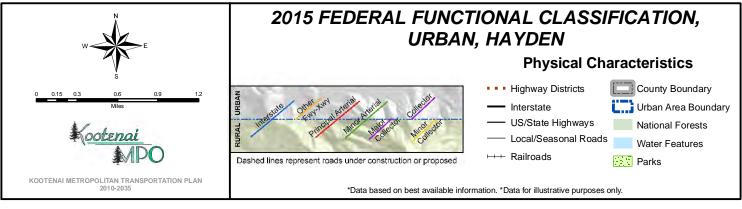


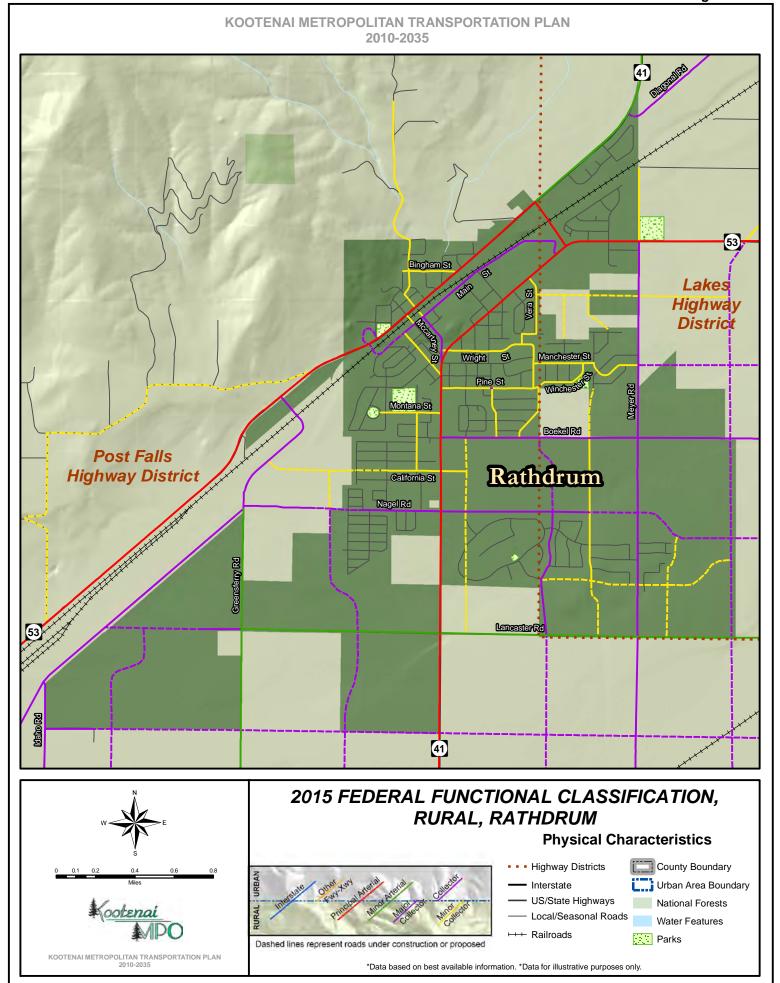












Principal Arterials

Principal Arterials are designed to carry high traffic volumes and serve a high proportion of through trips and long-distance travel. Similar to the design of interstates, principal arterials function most effectively when access is limited. Typically, a principal arterial will have at least two lanes in each direction with curbs and sidewalks. In dense urban areas it is also possible for on-street parking to be located along a principal arterial. Major intersections on urban principal arterials are typically signalized, and the uniformity of signal placement and coordination are critical to the successful operation of the arterial. Signals are discouraged on rural principal arterials, where high speeds make interchanges and grade separations much safer alternatives.

Seltice Way, Prairie Avenue, US95 through Coeur d'Alene, and SH41 through Post Falls are classified as urban principal arterials. The County's rural principal arterials are SH53, US95 north of Hayden, US95 from Coeur d'Alene to Benewah County line, and SH41 north of Prairie Avenue. Speed limits for principal arterials in Kootenai County are generally 35 to 45 mph in urban areas and 55 mph in rural areas. There are approximately 251 lane miles of principal arterials in Kootenai County.

Minor Arterials

Minor arterials connect private and commercial traffic from lower roadway classifications to the larger transportation system. Minor arterials can have a variety of design characteristics based on the activity level and context of the area they are located in.

Government Way, Lancaster Ave, and Greensferry Road are examples of minor arterials. There are approximately 303 lane miles of minor arterials in the County, with speed limits generally in the 35-45 mph range.

Collector

Collector streets collect residential and rural traffic and direct it to minor or principal arterials. Collectors are typically one lane in each direction and operate at slower speeds. Direct access to adjoining property is common. Collector streets are subcategorized into Urban Collectors, Rural Major Collectors and Rural Minor Collectors. On-street parking is generally acceptable on an Urban Collector, but may be limited. Rural Major collectors often connect important rural regional facilities directly to state highways or the Interstate system.

15th Street in Coeur d'Alene, Hayden Avenue, Diagonal Road, and Fernan Lake Road are examples of collectors. There are over 1120 lane miles of collectors in Kootenai County. Speed limits of collectors are generally between 25 and 30 mph.

Local Streets

Local streets provide direct access to individual properties. They operate at low speeds and have low traffic volumes. Although local streets are not part of the federal functional classification system, they make up the highest number of road miles in all of Kootenai County.

Regional Demand Model Street Typology

The KMPO Regional Demand Model expands upon the five broad classifications provided by the Federal Functional Classification System. To reflect the operational conditions unique to each roadway, the model employs 27 categories of street typology (Table 3.1).

Table 3.1 KMPO Regional Demand Model Street Typology

Street Type	Type Number	Capacity (vphpl)	Speed Limit
Rural Freeway	1	1800	70
Rural Principal Arterial	2	1200	60
Rural Minor Arterial	6	1000	50
Rural Major Collector	7	800	45
Rural Minor Collector	8	600	35
Rural Local Street	9	400	25
Urban Interstate	11	2000	60
Urban Principal Arterial	14	1500	40
Urban Minor Arterial	16	1200	40
Urban Collector Arterials	17	1000	35
Local Street	19	600	25
Proposed Rural Interstate	21	1800	70
Proposed Rural Principal Arterial	22	1200	60
Proposed Rural Minor Arterial	26	1000	50
Proposed Rural Major Collector	27	800	45
Proposed Rural Minor Collector	28	600	35
Proposed Rural Local Street	29	400	25
Proposed Urban Interstate	31	2000	60
Proposed Urban Principal Arterial	34	1500	45
Proposed Urban Minor Arterial	36	1200	40
Proposed Urban Collector	37	1000	35
Proposed Urban Local Street	39	600	25
Ramps	50	1500	40
Rural Ramps	51	1000	40
Rural Highways	52	1800	60
Urban Arterial Ramp	53	1500	50
Urban Local Street	59	600	25

Number of Lanes, Speed Limits and Intersection Controls

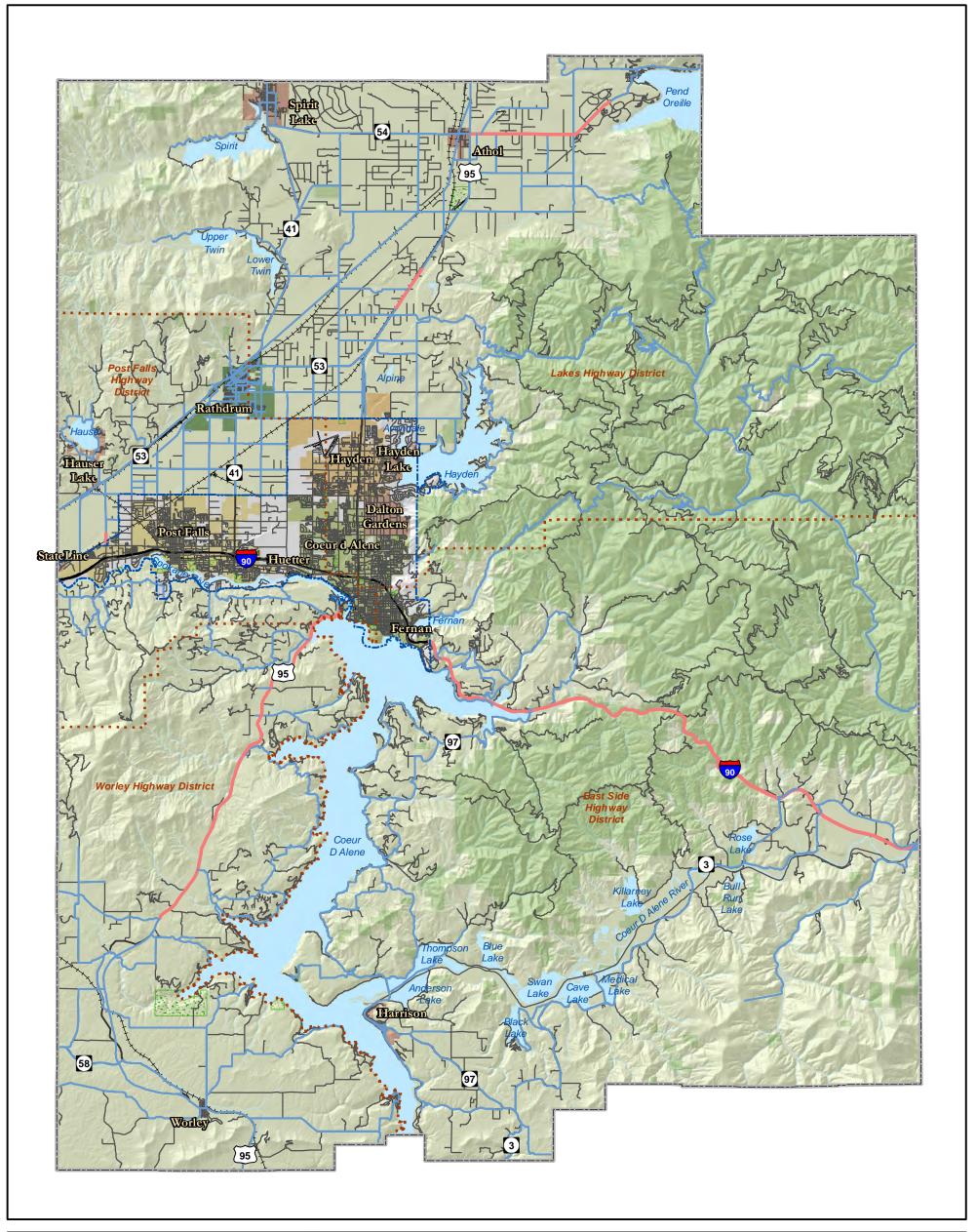
Figures 3.2a through 3.2e illustrate the number of lanes on existing roadways. Figures 3.3a through 3.3e show existing speed limits.

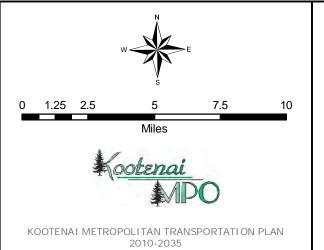
Traffic signals, stop signs, and yield signs are all forms of intersection control, and each one creates some level of delay on the street system. Figures 3.4a through 3.4e show the locations of existing traffic signals on the regional network.

Traffic Volumes

Accurate collection of system-wide traffic volumes is fundamental to regional transportation planning. KMPO undertakes an annual traffic count program to validate the regional transportation demand model (discussed in Section 2) and to monitor roads that are close to exceeding their design capacity. Count data are also used to assist jurisdictions in anticipating when traffic signals or turning lanes may be needed.

Figures 3.5a through 3.5e provide locations of traffic counts that were observed in 2007 and 2008. Only routes on the federal functional classification system are included in KMPO's count program. KMPO's traffic counts are taken in the spring or fall, when traffic volumes and patterns most closely reflect the annual average. Roadways affected by construction and dates of major events and holidays that can cause shifts in typical travel patterns are avoided during the count process. Most major routes in the urban area are counted approximately every two years. The time period between counts on rural routes may be longer.





3 - 10

NUMBER OF EXISTING LANES, RURAL, KOOTENAI COUNTY

Number of Lanes

- 2 - 3 LANES

- 4 - 5 LANES

6 OR MORE LANES

Physical Characteristics

· · · Highway Districts

Interstate

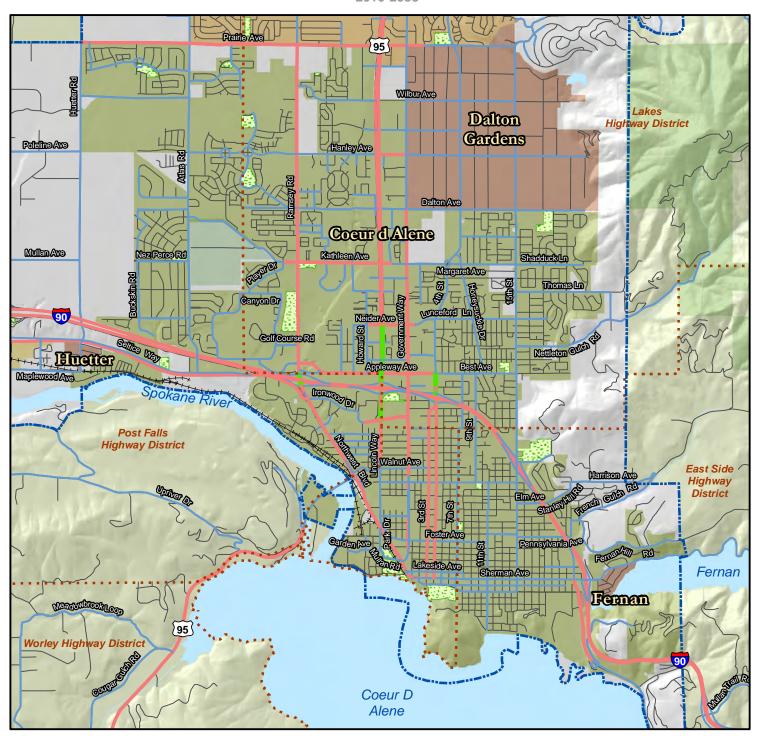
— US/State Highways

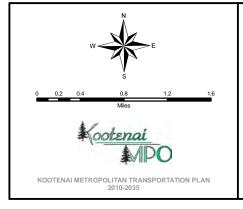
— Local/Seasonal Roads +-- Railroad

County Boundary Urban Area Boundary

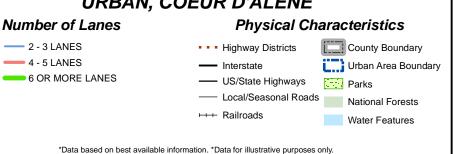
National Forests Water Features

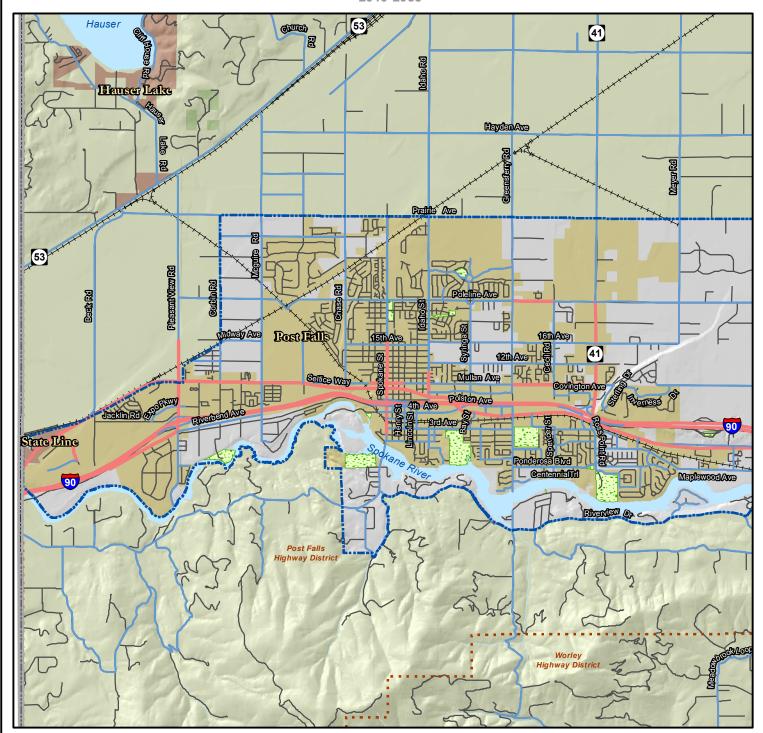
Parks

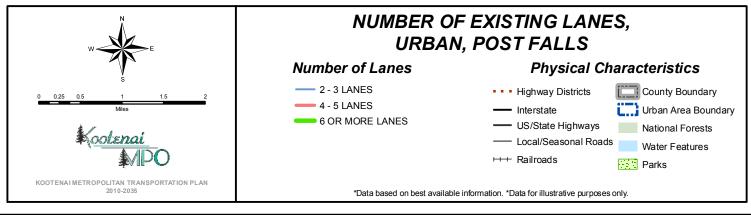


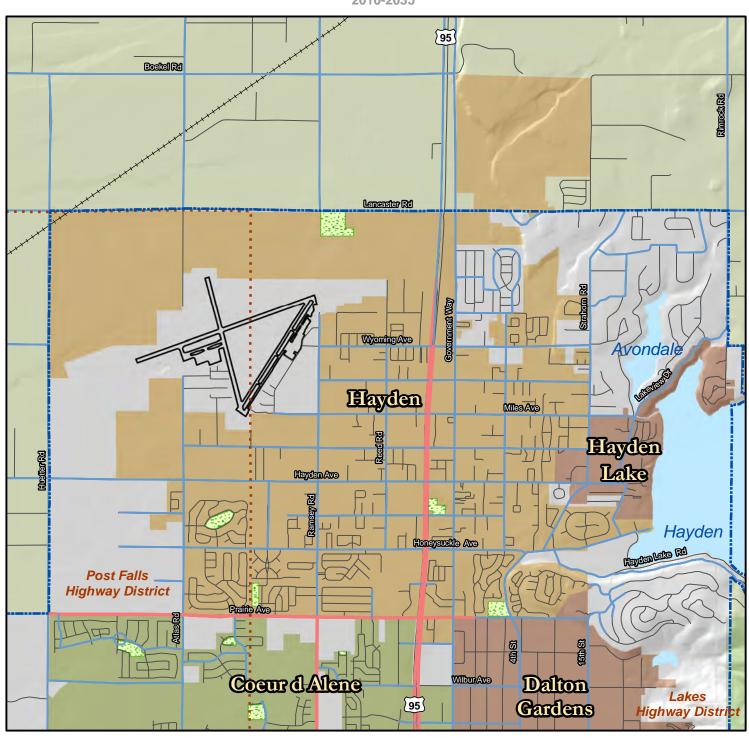


NUMBER OF EXISTING LANES, URBAN, COEUR D'ALENE







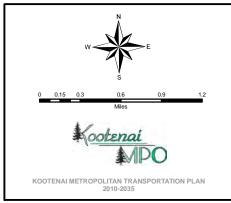


Number of Lanes

6 OR MORE LANES

2 - 3 LANES

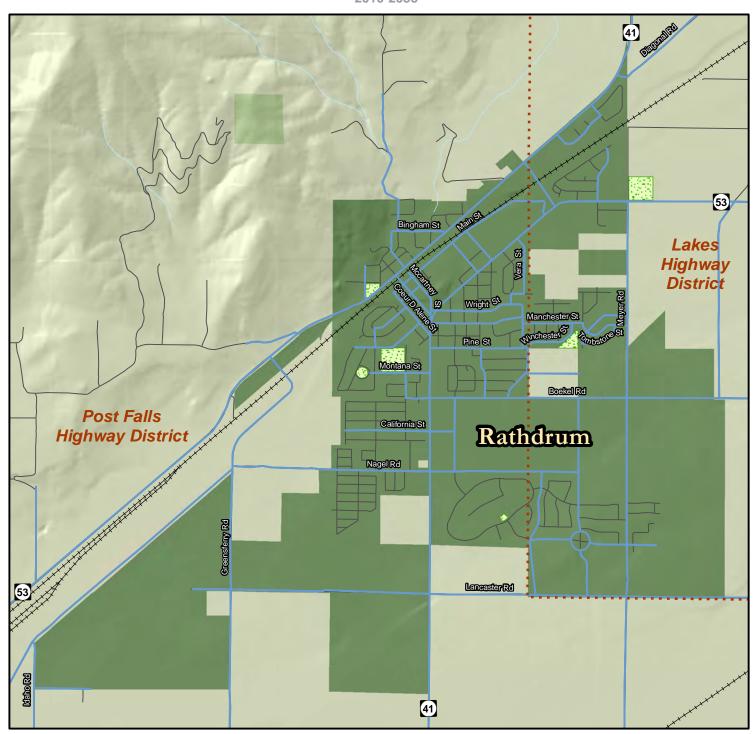
4 - 5 LANES



NUMBER OF EXISTING LANES, URBAN, HAYDEN





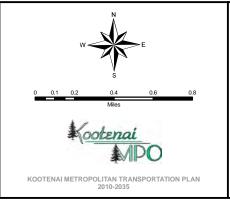


Number of Lanes

6 OR MORE LANES

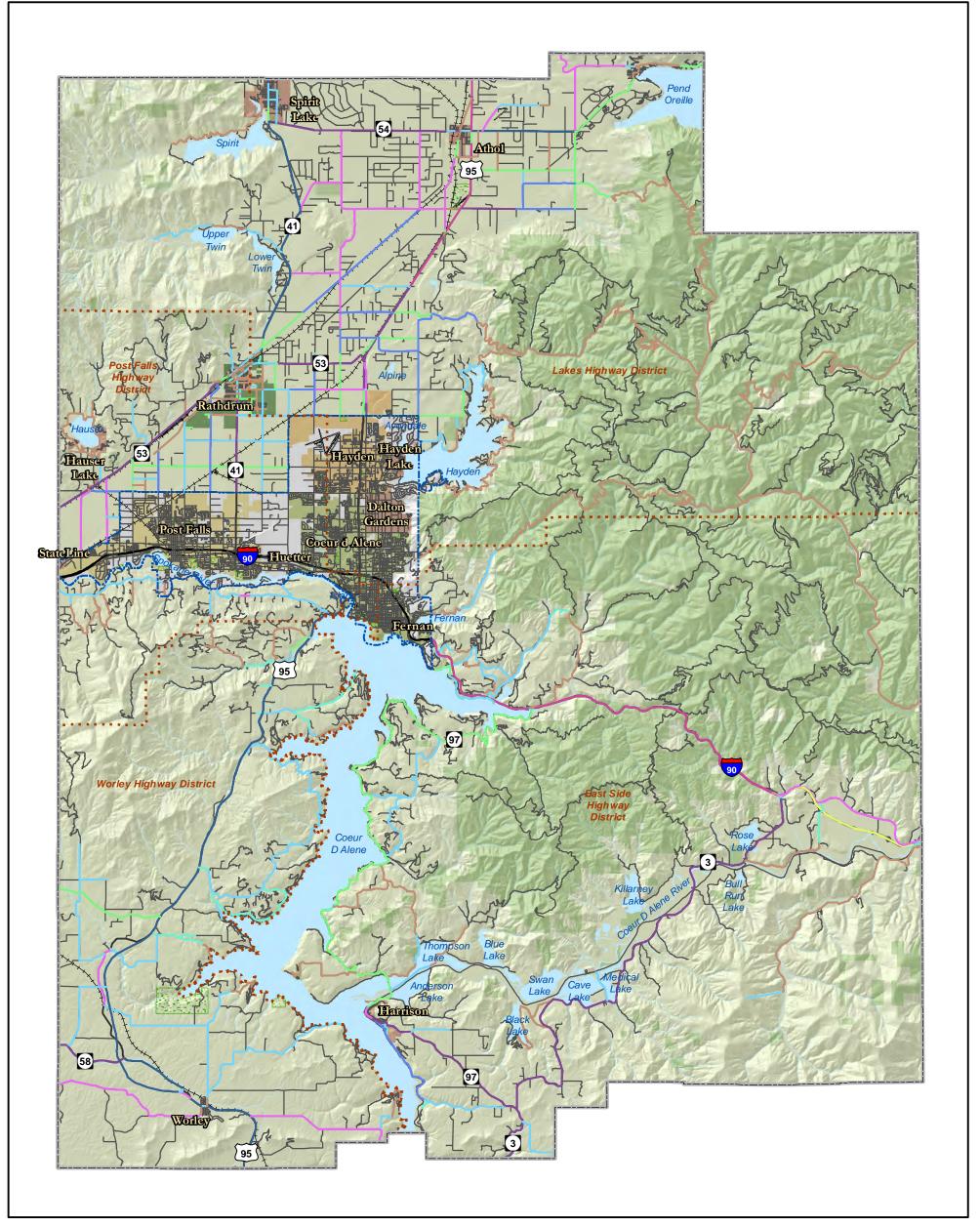
- 2 - 3 LANES

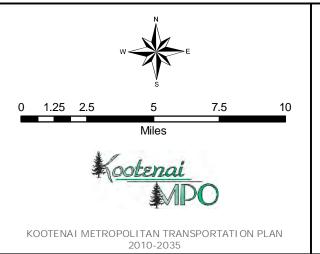
- 4 - 5 LANES



NUMBER OF EXISTING LANES, RURAL, RATHDRUM



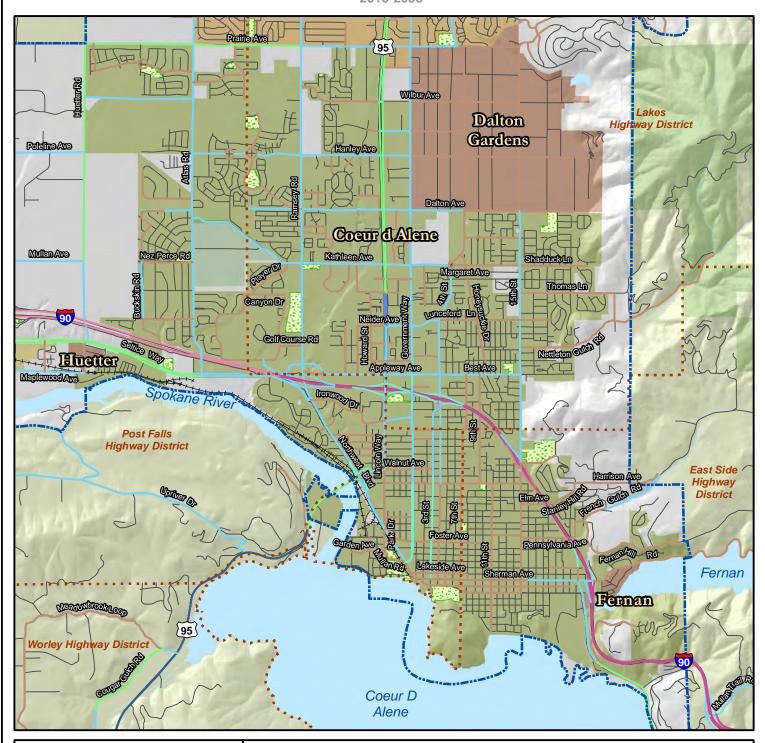


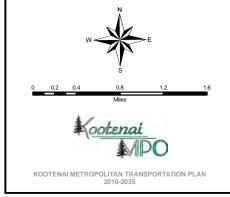


EXISTING SPEED LIMITS, RURAL, KOOTENAI COUNTY

Speed Limits Physical Characteristics County Boundary — <= 25 MPH — 55 MPH · · · Highway Districts Urban Area Boundary 30 MPH --- 60 MPH Interstate — US/State Highways National Forests 35 MPH - 65 MPH Water Features 40 MPH 70 MPH — Local/Seasonal Roads Parks 45 MPH 75 MPH 50 MPH *Data based on best available information.*Data for illustrative purposes only.

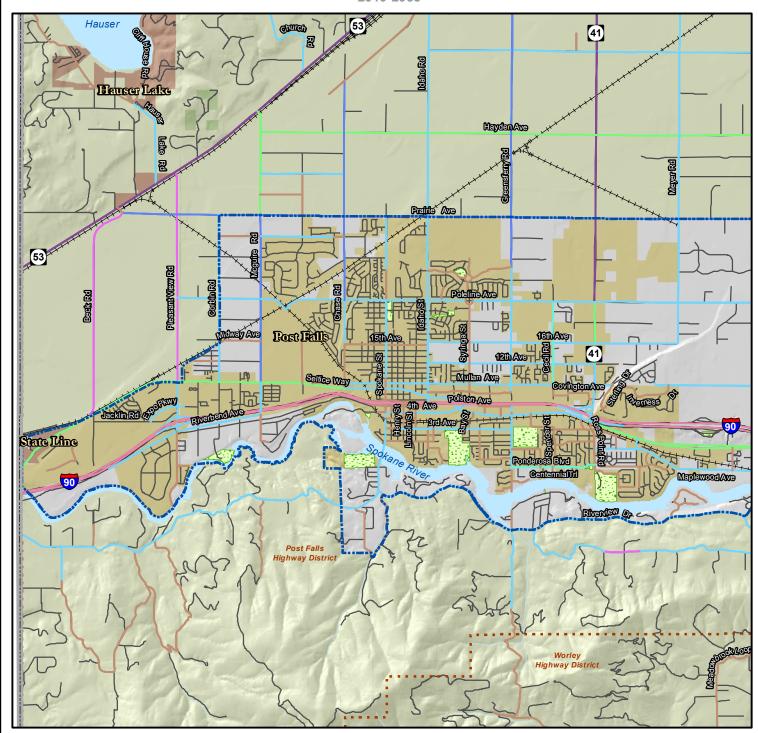
Figure 3.3a

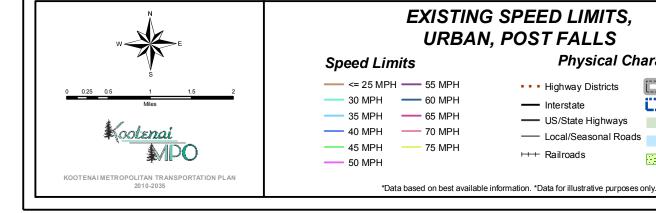


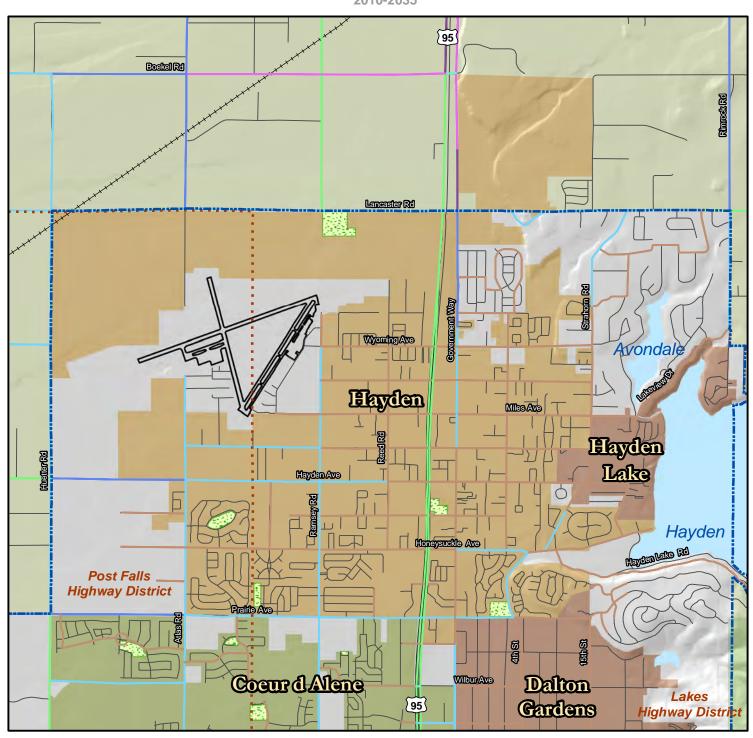


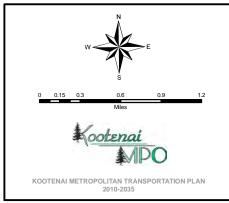
EXISTING SPEED LIMITS, URBAN, COEUR D'ALENE

Physical Characteristics Speed Limits <= 25 MPH = — 55 MPH County Boundary - - Highway Districts 30 MPH - 60 MPH Urban Area Boundary Interstate 35 MPH - 65 MPH US/State Highways Parks 40 MPH - 70 MPH - Local/Seasonal Roads National Forests 45 MPH 75 MPH → Railroads Water Features 50 MPH *Data based on best available information. *Data for illustrative purposes only.



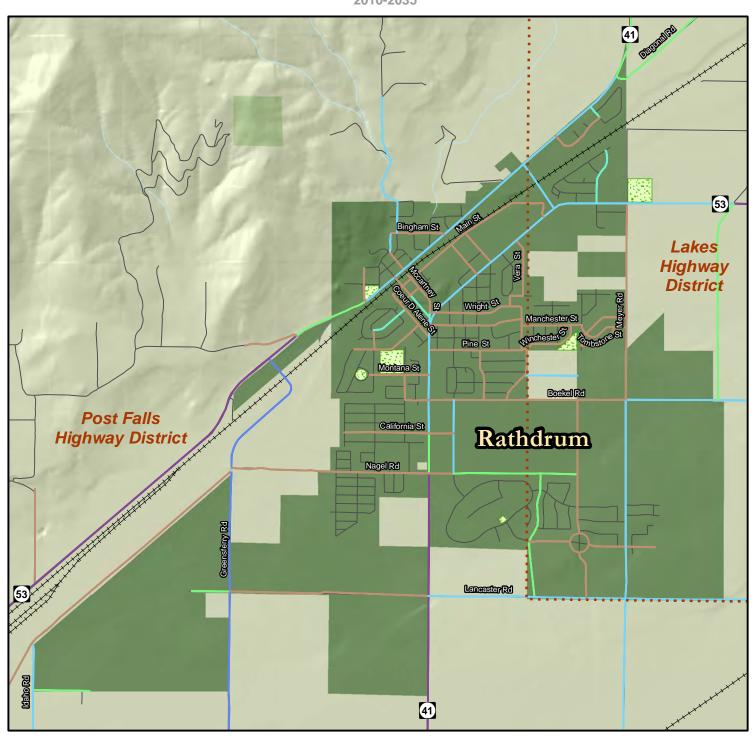


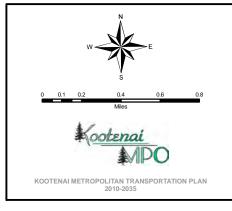




EXISTING SPEED LIMITS, URBAN, HAYDEN

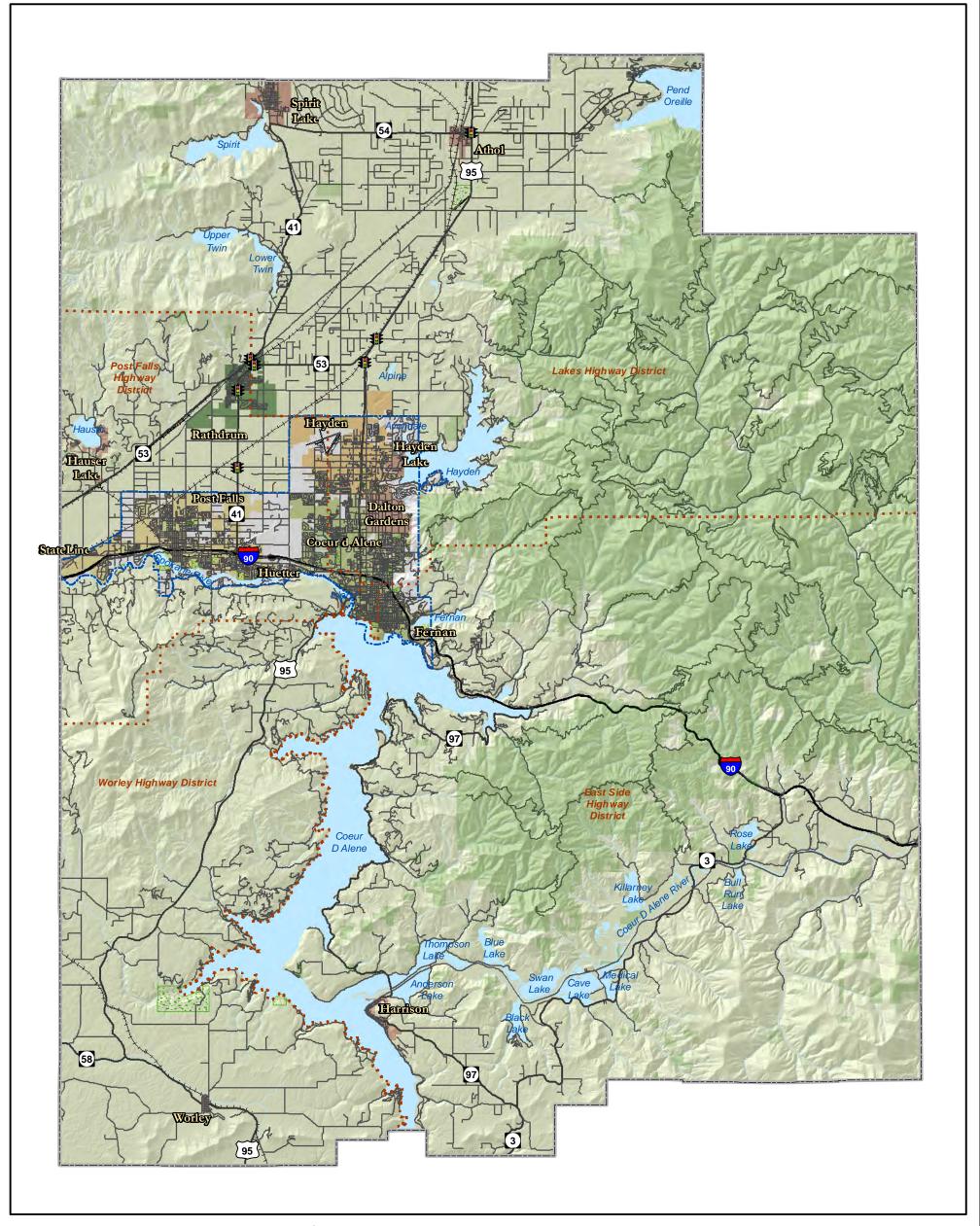
Physical Characteristics Speed Limits <= 25 MPH = - 55 MPH - - Highway Districts County Boundary - 60 MPH 30 MPH Urban Area Boundary Interstate 35 MPH 65 MPH US/State Highways National Forests 40 MPH 70 MPH Local/Seasonal Roads Water Features 45 MPH 75 MPH → Railroads Parks - 50 MPH *Data based on best available information. *Data for illustrative purposes only.

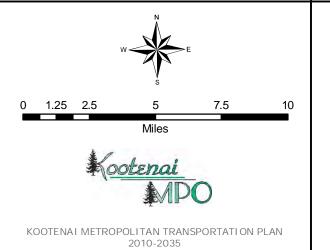




EXISTING SPEED LIMITS, RURAL, RATHDRUM

Physical Characteristics Speed Limits <= 25 MPH —— 55 MPH County Boundary - - Highway Districts 30 MPH - 60 MPH Interstate Urban Area Boundary 35 MPH — 65 MPH US/State Highways National Forests 40 MPH - 70 MPH Local/Seasonal Roads Water Features 45 MPH 75 MPH +++ Railroads Parks 50 MPH *Data based on best available information. *Data for illustrative purposes only.





EXISTING SIGNAL LOCATIONS, RURAL KOOTENAI COUNTY

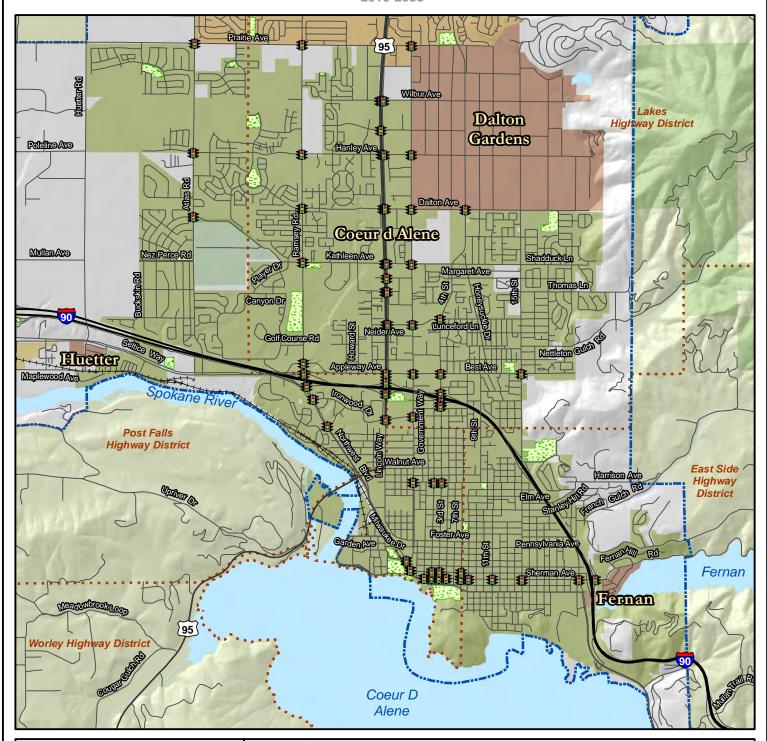
Signal Locations

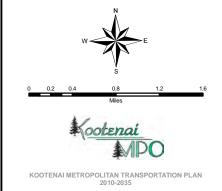
\$ Traffic Signals

Physical Characteristics

- · · · Highway Districts
- Interstate
- US/State Highway
- Local/Seasonal Road
- +-- Railroad
- County Boundary
- Urban Area Boundary
- National Forests
- Water Features
- Parks

Figure 3.4a





EXISTING SIGNAL LOCATIONS - URBAN COEUR D' ALENE AREA

 Signal Locations

 • Traffic Signals

 • Highway Districts

 County Boundary

 • Interstate

 • US/State Highways

 • National Forests

 • Local/Seasonal Roads

 • Water Features

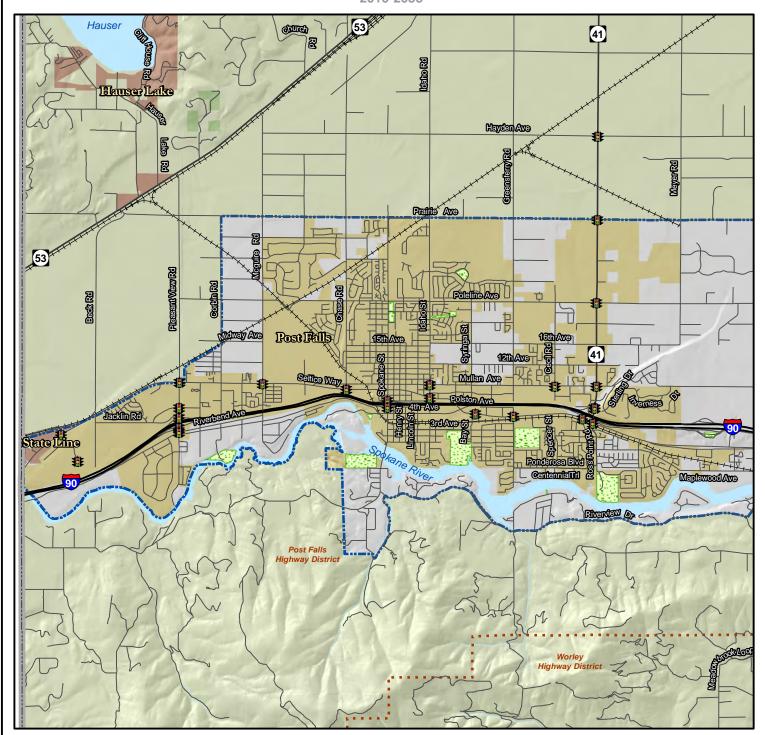
 • Highway Districts

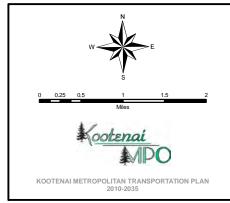
 • Us/State Highways

 • National Forests

 • Railroads

 • Water Features





EXISTING SIGNAL LOCATIONS - URBAN POST FALLS

Signal Locations Traffic Signals

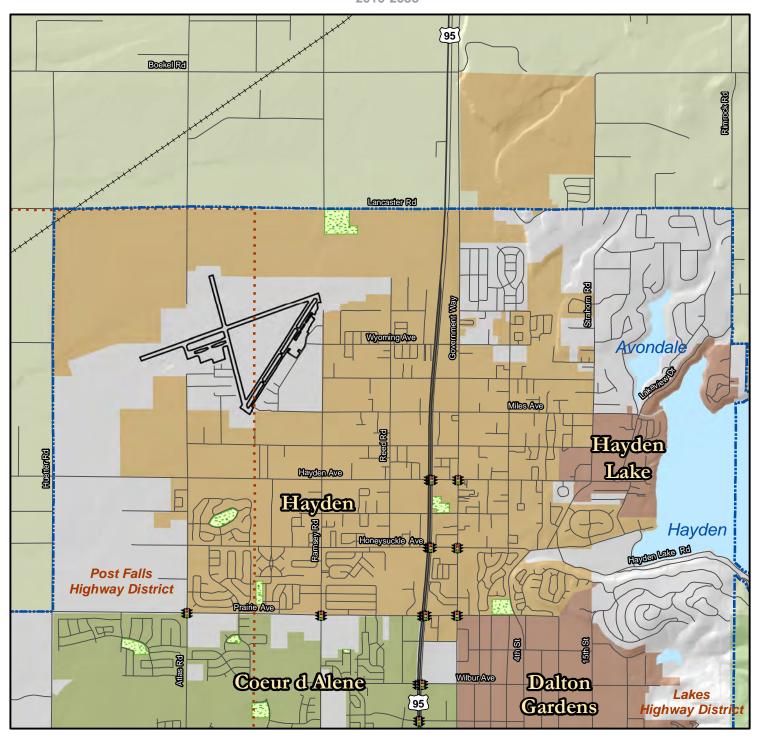
Physical Characteristics

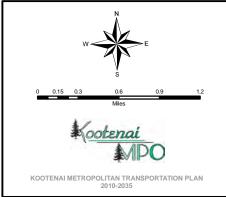
Highway DistrictsInterstateUS/State Highways

County Boundary
Urban Area Boundary

--- Local/Seasonal Roads
---- Railroads

National Forests
Water Features
Parks





EXISTING SIGNAL LOCATIONS - URBAN HAYDEN

Physical Characteristics

Physical Characteristics

Physical Characteristics

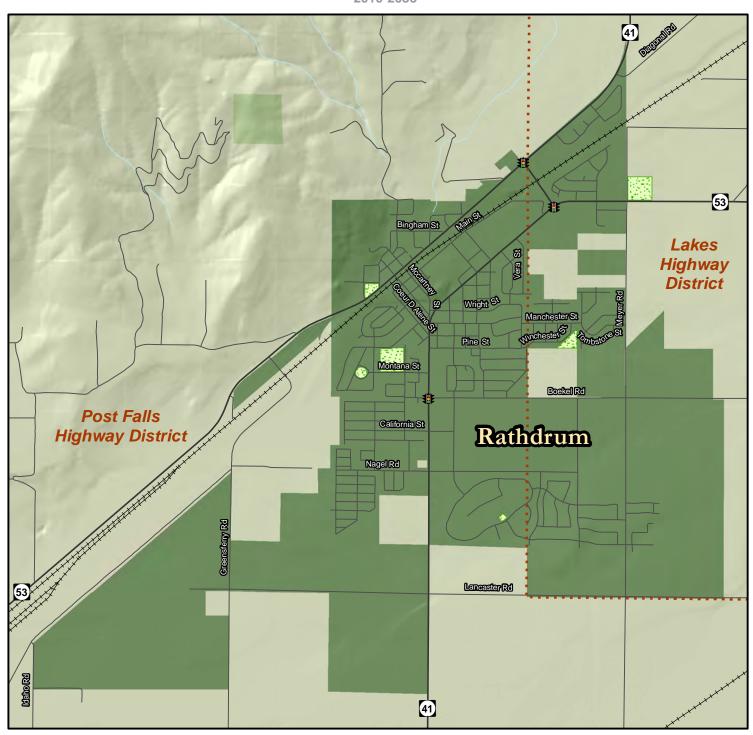
County Boundary

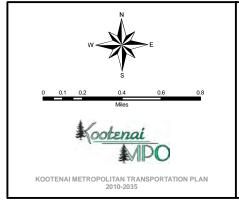
Interstate
Urban Area Boundary

Us/State Highways
National Forests
Local/Seasonal Roads
Water Features

Railroads
Parks

 $^{\star}\text{Data}$ based on best available information. $^{\star}\text{Data}$ for illustrative purposes only.





EXISTING SIGNAL LOCATIONS - RURAL RATHDRUM

Signal Locations

Traffic Signals

- - Highway Districts

_	Interstate
_	US/State Highways



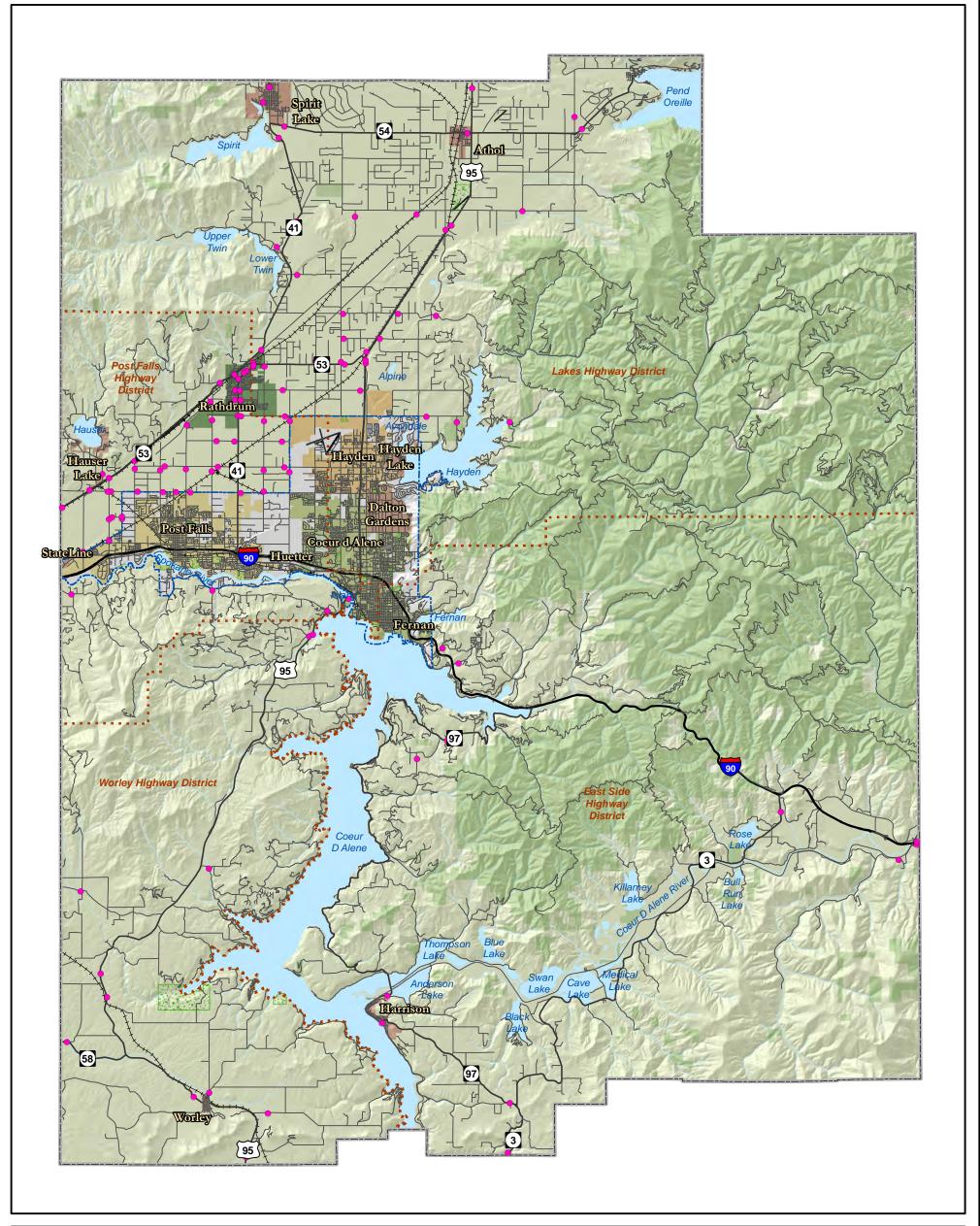
Physical Characteristics

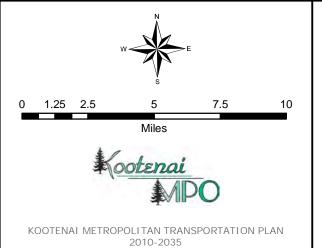
Urban Area Boundary National Forests

County Boundary

→ Railroads

Parks





3 - 25

EXISTING TRAFFIC COUNT LOCATIONS, RURAL, KOOTENAI COUNTY

Physical Characteristics

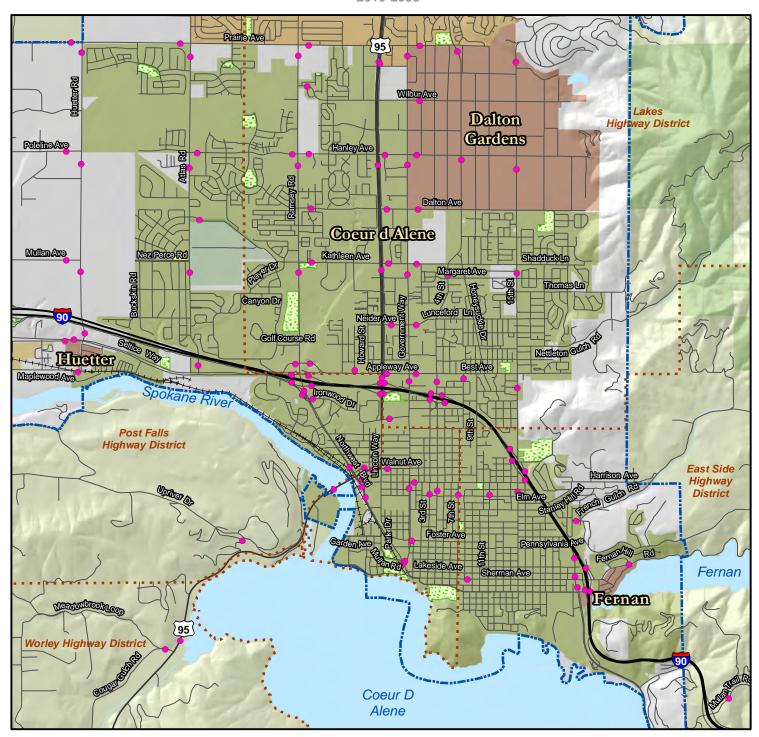
Traffic Count Locations

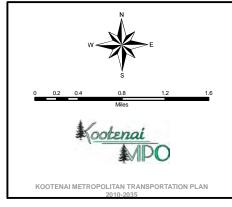
Interstate — US/State Highways

· · · Highway Districts

- Local/Seasonal Roads +-- Railroad
- Urban Area Boundary National Forests Water Features Parks

County Boundary





EXISTING TRAFFIC COUNT LOCATIONS, URBAN, COEUR D'ALENE

Physical Characteristics

Traffic Count Locations

Interstate

Us/State Highways

Local/Seasonal Roads

Water Features

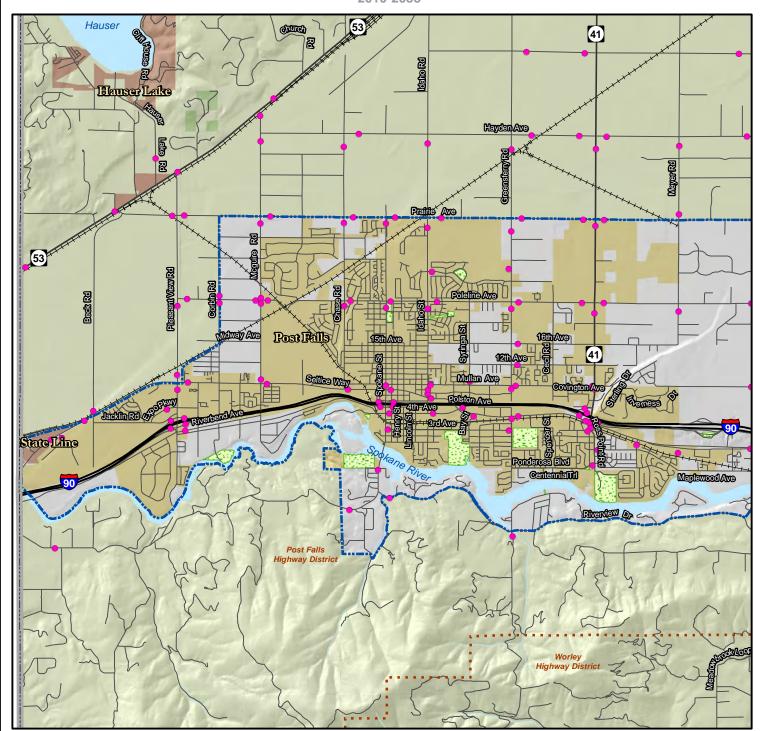
County Boundary

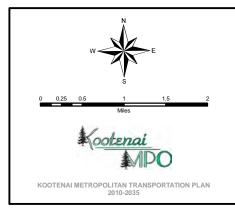
Urban Area Boundary

Parks

National Forests

Water Features





EXISTING TRAFFIC COUNT LOCATIONS, URBAN, POST FALLS

Physical Characteristics

Traffic Count Locations

Highway DistrictsInterstate

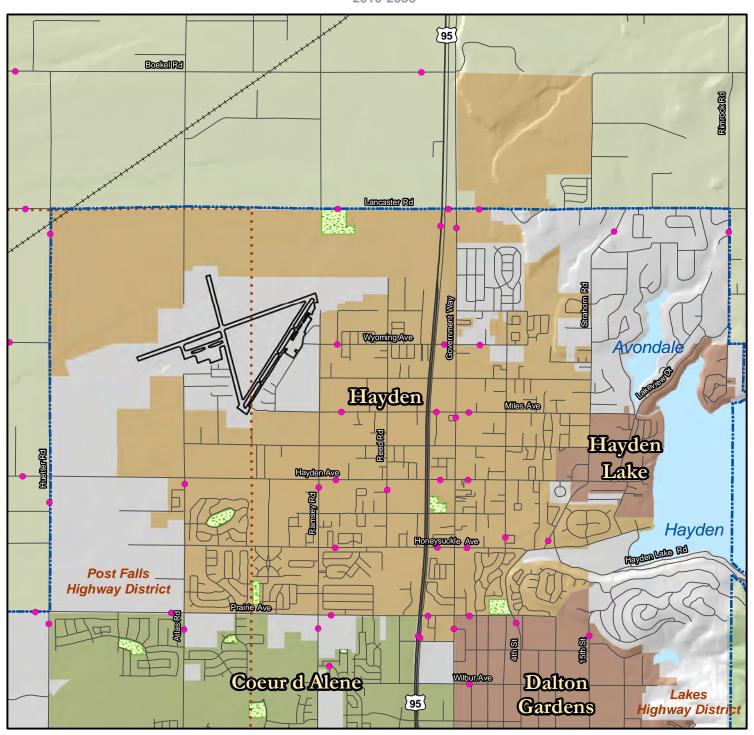
County Boundary
Urban Area Boundary

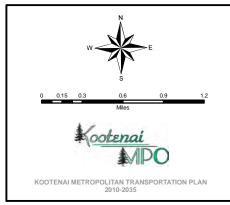
US/State Highways
Local/Seasonal Roads

National Forests
Water Features

→ Railroads

Parks





EXISTING TRAFFIC COUNT LOCATIONS, URBAN, HAYDEN

Physical Characteristics

Traffic Count Locations

Highway DistrictsInterstate

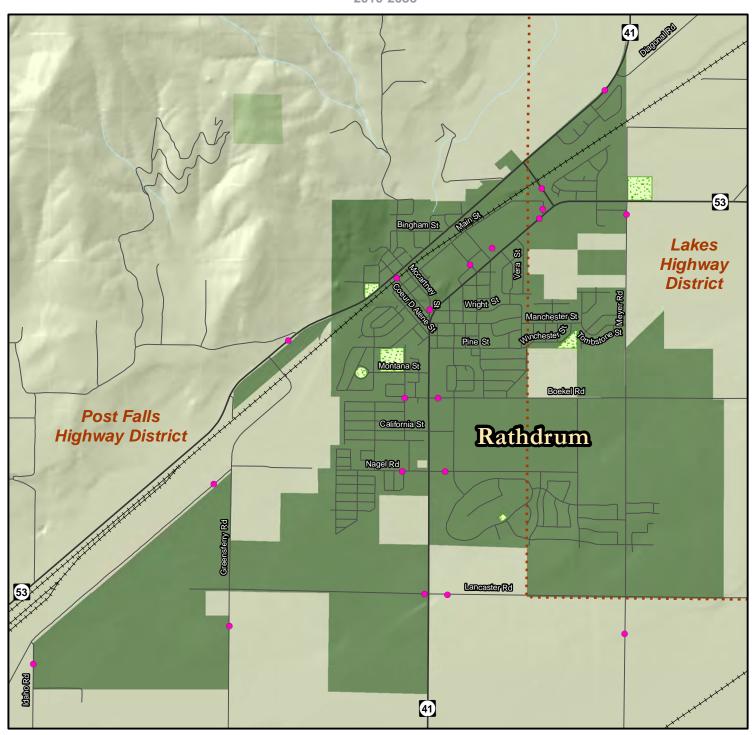
County Boundary
Urban Area Boundary

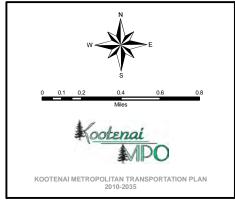
InterstateUS/State HighwaysLocal/Seasonal Roads

National Forests
Water Features

→
→
Railroads

Parks





EXISTING TRAFFIC COUNT LOCATIONS, RURAL, RATHDRUM

Physical Characteristics

Traffic Count Locations

County Boundary - - Highway Districts Interstate US/State Highways Local/Seasonal Roads

Urban Area Boundary National Forests Water Features

→ Railroads

Parks

Performance Measures

In assessing system performance, KMPO examines several factors:

- Corridor travel times
- Roadway segment levels of service (daily and peak hour)
- General intersection performance

Existing Corridor Travel Times

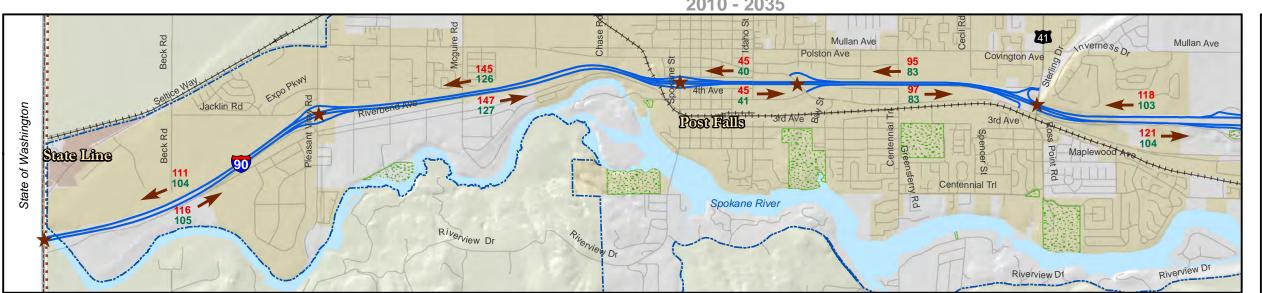
Major corridor travel times are measured annually for state highway facilities that experience congestion. Highways measured include I 90, US 95, SH 41, and SH 53 in the areas around Post Falls, Rathdrum, Hayden and Coeur d'Alene. Major corridor average travel times are shown in Table 3.2.

Table 3.2 Major Corridor Average Travel Times

Roadway and Direction of Travel	Congested* Travel Time (min)	Freeflow* Travel Time (min)	Difference (min)	Segment Length (miles)	Average corridor delay per mile (sec)
I 90 Eastbound State Line to Sherman	16.6	14.5	2.0	16.6	7
I 90 Westbound Sherman to State Line	16.0	14.4	1.6	16.6	6
US 95 Northbound NW Blvd to Wyoming	13.7	9.0	4.7	6.2	46
US 95 Southbound Wyoming to NW Blvd	14.5	8.6	5.9	6.2	57
SH 41 Northbound Seltice Way to SH53	12.7	9.4	3.3	8.0	24
SH 41 Southbound SH53 to Seltice Way	14.8	10.5	4.3	8.0	32
SH 53 Eastbound State Line to US95	18.1	16.1	1.9	14.0	9
SH 53 Westbound US95 to State Line	17.9	16.1	1.8	14.0	8

^{*}Congested and Freeflow travel times were obtained from actual driving time measurements in the fall of 2009. To obtain "congested" travel times, the corridor was driven five times in the morning peak period (6:30 to 8:30 am), and five times during the evening peak period (4:00 to 6:00 pm). The times shown represent the highest five-run average, which may be either am or pm. Note that these times represent autumn conditions. Congestion may be much worse during the heavy summer travel season.

Figures 3.6a through 3.6e depict state highway corridor average travel times, as measured in 2009.





INTERSTATE 90 EXISTING AVERAGE TRAVEL **TIMES**

SEGMENT TRAVEL TIMES TIME IN SECONDS



"Congested" travel times were determined by measuring actual driving times. The route was driven five times in the morning (6:30 - 8:30 am) and five times in the evening (4:00 - 6:00 pm). "Congested" times shown are the highest five-run average, and may be either am or pm.



Direction of Travel



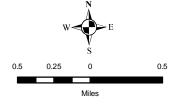
Beginning & Ending Points Segment

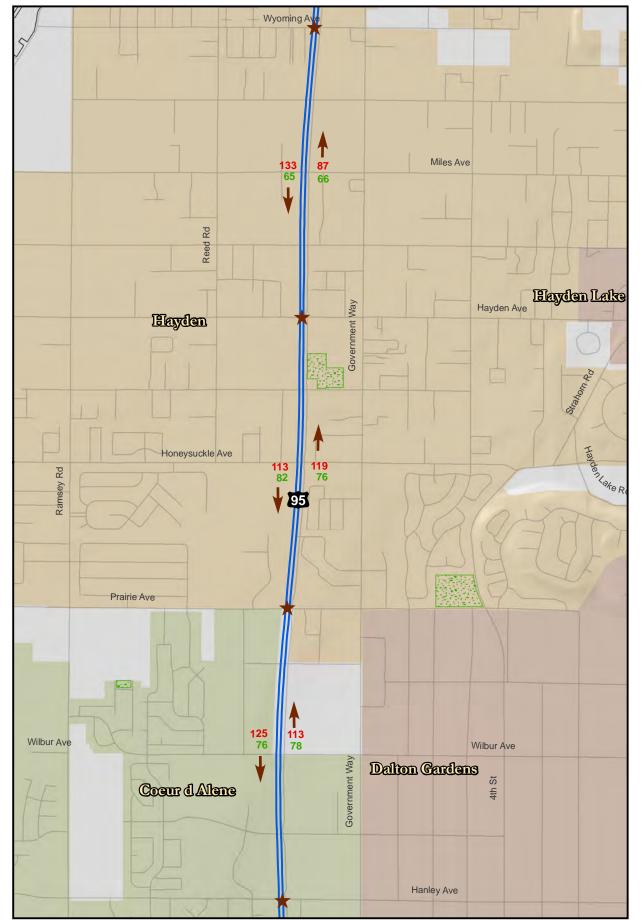
Physical Characteristics

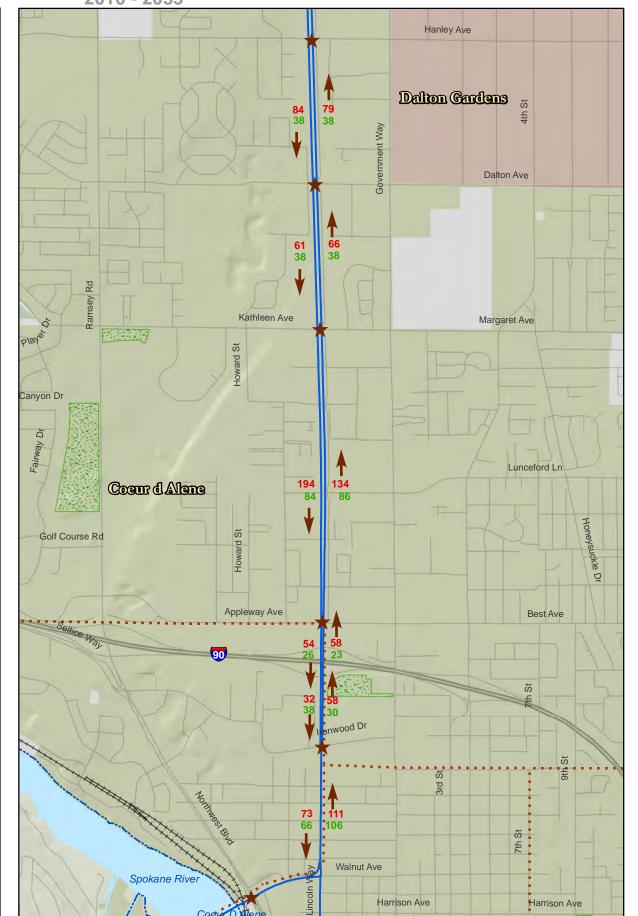
- County Boundary - - Highway Districts Interstate Urban Area --- US/State Highway National Forests Local/Seasonal Road Water Features Parks → Hailroad



Source: Idaho Transportation Department 2009 Data







US 95 **EXISTING AVERAGE TRAVEL TIMES**

SEGMENT TRAVEL TIMES TIME IN SECONDS

Time Congested

Time Freeflow

"Congested" travel times were determined by measuring actual driving times. The route was driven five times in the morning (6:30 - 8:30 am) and five times in the evening (4:00 - 6:00 pm). "Congested" times shown are the highest five-run average, and may be either am or pm.



Direction of Travel



Beginning & Ending Points

Physical Characteristics

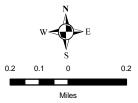
- - Highway Districts --- Interstate
- County Boundary Urban Area

National Forests

- --- US/State Highway — Local/Seasonal Road Water Features
- ---- Railroad Parks

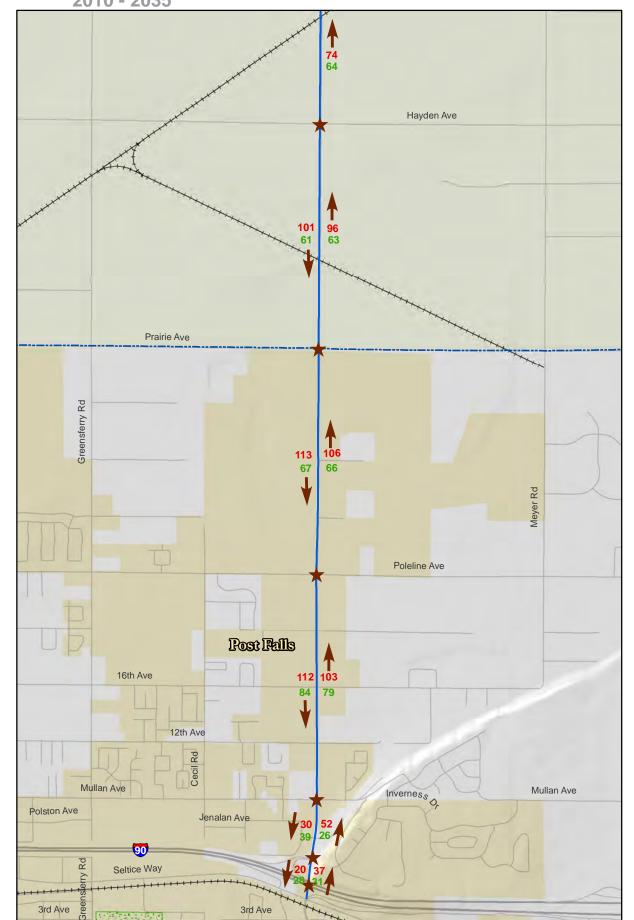


Source: Idaho Transportation Department 2009 Data



* Data based on best available information





SH 41 **EXISTING AVERAGE TRAVEL TIMES**

SEGMENT TRAVEL TIMES **TIME IN SECONDS**

Time Congested ## Time Freeflow

"Congested" travel times were determined by measuring actual driving times. The route was driven five times in the morning (6:30 - 8:30 am) and five times in the evening (4:00 - 6:00 pm). "Congested" times shown are the highest five-run average, and may be either am or pm.



Direction of Travel



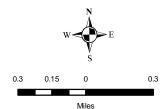
★ Beginning & Ending Points

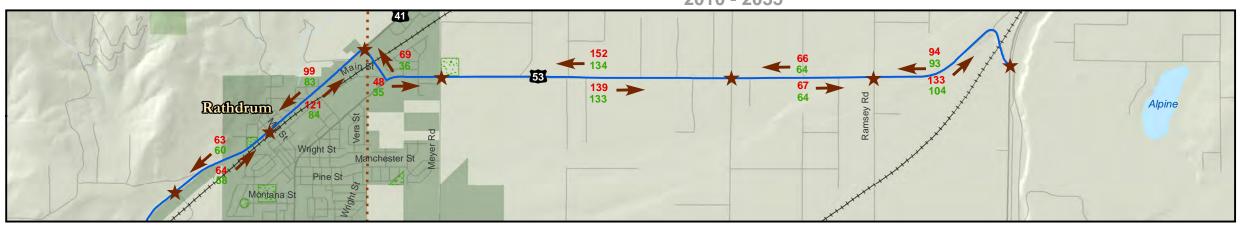
Physical Characteristics

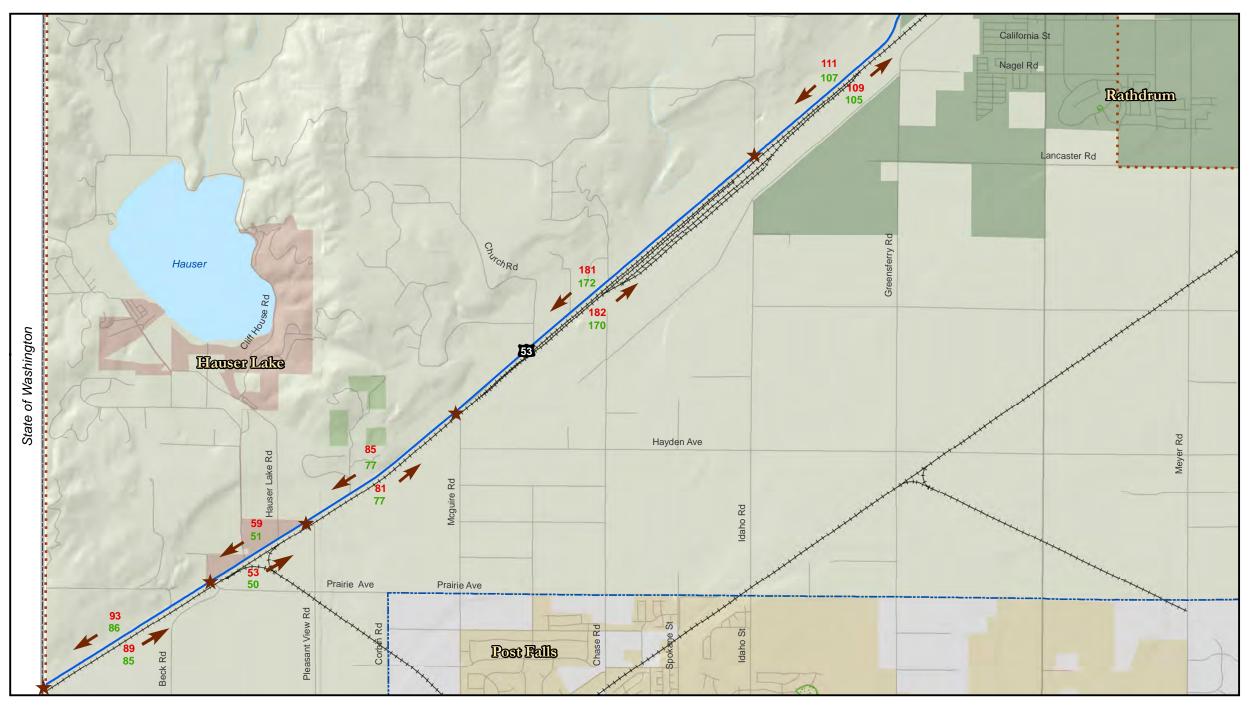
- • Highway Districts
- County Boundary --- Interstate Urban Area
- US/State Highway
 - National Forests Local/Seasonal Road Water Features
- **⊢** Railroad
- Parks



Source: Idaho Transportation Department 2009 Data







SH 53 EXISTING AVERAGE TRAVEL TIMES

SEGMENT TRAVEL TIMES TIME IN SECONDS

Time Congested ## Time Freeflow

"Congested" travel times were determined by measuring actual driving times. The route was driven five times in the morning (6:30 - 8:30 am) and five times in the evening (4:00 - 6:00 pm). "Congested" times shown are the highest five-run average, and may be either am or pm.



Direction of Travel



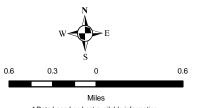
Beginning & Ending Points Segment

Physical Characteristics

Highway Districts
Interstate
US/State Highway
Local/Seasonal Road
Highway
Railroad
County Boundary
Urban Area
Wational Forests
Water Features
Parks



Source: Idaho Transportation Department 2009 Data



* Data based on best available information * Data for illustrative purposes only

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