



KOOTENAI COUNTY

METROPOLITAN TRANSPORTATION PLAN

2010-2035

Adopted December 2, 2010



Kootenai Metropolitan Planning Organization
221 W. First Avenue, Suite 310
Spokane, Washington 99201

Disclaimer:

This Metropolitan Transportation Plan (MTP) has been financed in part through grants from the Federal Highway Administration, Federal Transit Administration, and the Idaho Department of Transportation. The policies, findings, and recommendations contained in this plan do not necessarily represent the views of the agencies identified above and do not obligate those agencies to providing funding to implement the contents of the MTP as adopted.

Table of Contents

Executive Summary

Executive Summary	vii
-------------------------	-----

Section 1 – Overview and Key Policy Issues

The Regional Transportation Planning Process	1-1
KMPO Planning Area and Funding Complexities	1-2
Major Policy and Planning Issues	1-4
Public Involvement in the MTP Process	1-21

Section 2 – Travel Demand Modeling Data and Analysis

KMPO Travel Demand Model	2-1
Modeling Analysis Years	2-4
Land Use Assumptions	2-4
Anticipating Growth Patterns	2-14

Section 3 – Existing Conditions

Roadways	3-1
Freight Mobility	3-60
Air Transportation	3-73
Passenger Rail	3-73
Public Transportation	3-74
Non-Motorized Transportation	3-78

Section 4 – Future Conditions

Projected Future Conditions Analysis	4-1
2030 No-Build Model	4-1
2030 Build Model	4-24

Section 5 – Financial Analysis

Regional Funding Opportunities	5-1
Federal and State Financial Assistance	5-3
Financial Capacity Analysis	5-5
Conclusion	5-11

Section 6 – Planned Projects

Economic Stimulus Funding	6-1
Project Prioritization Process	6-3
Short-Term Projects (Through 2015)	6-4
Long-Term Projects (Through 2030)	6-13
Development-Driven Projects	6-25
Visualizations	6-29
Conclusion	6-35

List of Figures

Section 1

Figure 1.1 KMPO Planning Area	1-3
Figure 1.2 Priority Corridors	1-6
Figure 1.3 Proposed Huetter Bypass Alignment	1-8
Figure 1.4 Bridging the Valley	1-10
Figure 1.5a Environmental Mitigation, Rural, Kootenai County	1-15
Figure 1.5b Environmental Mitigation, Urban, Coeur d'Alene.....	1-16
Figure 1.5c Environmental Mitigation, Urban, Post Falls.....	1-17
Figure 1.5d Environmental Mitigation, Urban, Hayden	1-18
Figure 1.5e Environmental Mitigation, Rural, Rathdrum.....	1-19

Section 2

Figure 2.1 Where People Live by Transportation Analysis Zone, 2007	2-7
Figure 2.2 Where People Work by Transportation Analysis Zone, 2007	2-8
Figure 2.3 Where People Shop by Transportation Analysis Zone, 2007	2-9
Figure 2.4 Kootenai County Existing and Projected Housing Density by TAZ.....	2-12
Figure 2.5 Kootenai County Existing and Projected Commercial and Industrial Density by TAZ	2-13

Section 3

Figure 3.1a 2015 Federal Functional Classification, Rural, Kootenai County.....	3-2
Figure 3.1b 2015 Federal Functional Classification, Urban, Coeur d'Alene	3-3
Figure 3.1c 2015 Federal Functional Classification, Urban, Post Falls	3-4
Figure 3.1d 2015 Federal Functional Classification, Urban, Hayden	3-5
Figure 3.1e 2015 Federal Functional Classification, Rural, Rathdrum	3-6
Figure 3.2a Number of Existing Lanes, Rural, Kootenai County	3-10
Figure 3.2b Number of Existing Lanes, Urban, Coeur d'Alene.....	3-11
Figure 3.2c Number of Existing Lanes, Urban, Post Falls.....	3-12
Figure 3.2d Number of Existing Lanes, Urban, Hayden	3-13
Figure 3.2e Number of Existing Lanes, Rural, Rathdrum.....	3-14
Figure 3.3a Existing Speed Limits, Rural, Kootenai County	3-15
Figure 3.3b Existing Speed Limits, Urban, Coeur d'Alene.....	3-16
Figure 3.3c Existing Speed Limits, Urban, Post Falls.....	3-17
Figure 3.3d Existing Speed Limits, Urban, Hayden.....	3-18
Figure 3.3e Existing Speed Limits, Rural, Rathdrum.....	3-19
Figure 3.4a Existing Signal Locations, Rural, Kootenai County	3-20
Figure 3.4b Existing Signal Locations, Urban, Coeur d'Alene	3-21
Figure 3.4c Existing Signal Locations, Urban, Post Falls	3-22
Figure 3.4d Existing Signal Locations, Urban, Hayden	3-23
Figure 3.4e Existing Signal Locations, Rural, Rathdrum	3-24
Figure 3.5a Traffic Count Locations, Rural, Kootenai County	3-25
Figure 3.5b Traffic Count Locations, Urban, Coeur d'Alene	3-26
Figure 3.5c Traffic Count Locations, Urban, Post Falls	3-27
Figure 3.5d Traffic Count Locations, Urban, Hayden	3-28

Figure 3.5e Traffic Count Locations, Rural, Rathdrum	3-29
Figure 3.6a Existing State Highway Travel Times, I 90	3-31
Figure 3.6b Existing State Highway Travel Times, US 95	3-32
Figure 3.6c Existing State Highway Travel Times, SH 41	3-33
Figure 3.6d Existing State Highway Travel Times, SH 53	3-34
Figure 3.7a Existing Conditions 2007 Base, AM Pk LOS, Rural, Kootenai County ...	3-41
Figure 3.7b Existing Conditions 2007 Base, PM Pk LOS, Rural, Kootenai County ...	3-42
Figure 3.8a Existing Conditions 2007 Base, AM Pk LOS, Urban, Coeur d'Alene.....	3-43
Figure 3.8b Existing Conditions 2007 Base, PM Pk LOS, Urban, Coeur d'Alene.....	3-44
Figure 3.9a Existing Conditions 2007 Base, AM Pk LOS, Urban, Post Falls.....	3-45
Figure 3.9b Existing Conditions 2007 Base, PM Pk LOS, Urban, Post Falls.....	3-46
Figure 3.10a Existing Conditions 2007 Base, AM Pk LOS, Urban, Hayden	3-47
Figure 3.10b Existing Conditions 2007 Base, PM Pk LOS, Urban, Hayden	3-48
Figure 3.11a Existing Conditions 2007 Base, AM Pk LOS, Rural, Rathdrum.....	3-49
Figure 3.11b Existing Conditions 2007 Base, PM Pk LOS, Rural, Rathdrum.....	3-50
Figure 3.12a Accident Data 1998-2008, Rural, Kootenai County	3-52
Figure 3.12b Accident Data 1998-2008, Urban, Coeur d'Alene	3-53
Figure 3.12c Accident Data 1998-2008, Urban, Post Falls.....	3-54
Figure 3.12d Accident Data 1998-2008, Urban, Hayden.....	3-55
Figure 3.12e Accident Data 1998-2008, Rural, Rathdrum.....	3-56
Figure 3.13 Existing At-Grade Rail Crossings, Kootenai County.....	3-59
Figure 3.14 Central Counties Top Ten Inbound Commodities, 2007 and 2027.....	3-62
Figure 3.15 Central Counties Top Ten Outbound Commodities, 2007 and 2027	3-62
Figure 3.16 Congressionally Designated NHS High Priority Corridors	3-66
Figure 3.17a Existing Truck Routes, Rural, Kootenai County	3-67
Figure 3.17b Existing Truck Routes, Urban, Coeur d'Alene	3-68
Figure 3.17c Existing Truck Routes, Urban, Post Falls	3-69
Figure 3.17d Existing Truck Routes, Urban, Hayden	3-70
Figure 3.17e Existing Truck Routes, Rural, Rathdrum	3-71
Figure 3.18 Existing Transit Service, Kootenai County	3-76
Figure 3.19a Non-Motorized Pathways, Rural, Kootenai County	3-80
Figure 3.19b Non-Motorized Pathways, Urban, Coeur d'Alene.....	3-81
Figure 3.19c Non-Motorized Pathways, Urban, Post Falls	3-82
Figure 3.19d Non-Motorized Pathways, Urban, Hayden	3-83
Figure 3.19e Non-Motorized Pathways, Rural, Rathdrum.....	3-84
Table 3.17 Non-Motorized Transportation FUTURE Priority Network	3-85

Section 4

Figure 4.1a Future Conditions 2030 No-Build, AM Peak, LOS, Rural, Kootenai County	4-2
Figure 4.1b Future Conditions 2030 No-Build, PM Peak, LOS, Rural, Kootenai County	4-3
Figure 4.2a Future Conditions 2030 No-Build, AM Peak, LOS, Urban, Coeur d'Alene	4-4
Figure 4.2b Future Conditions 2030 No-Build, PM Peak, LOS, Urban, Coeur d'Alene	4-5

Figure 4.3a Future Conditions 2030 No-Build, AM Peak, LOS, Urban, Post Falls	4-6
Figure 4.3b Future Conditions 2030 No-Build, PM Peak, LOS, Urban, Post Falls	4-7
Figure 4.4a Future Conditions 2030 No-Build, AM Peak, LOS, Urban, Hayden.....	4-8
Figure 4.4b Future Conditions 2030 No-Build, PM Peak, LOS, Urban, Hayden.....	4-9
Figure 4.5a Future Conditions 2030 No-Build, AM Peak, LOS, Rural, Rathdrum	4-10
Figure 4.5b Future Conditions 2030 No-Build, PM Peak, LOS, Rural, Rathdrum	4-11
Figure 4.6a Future Conditions 2030 Build, AM Peak, LOS, Rural, Kootenai County	4-25
Figure 4.6b Future Conditions 2030 Build, PM Peak, LOS, Rural, Kootenai County	4-26
Figure 4.7a Future Conditions 2030 Build, AM Peak, LOS, Urban, Coeur d'Alene ...	4-27
Figure 4.7b Future Conditions 2030 Build, PM Peak, LOS, Urban, Coeur d'Alene ...	4-28
Figure 4.8a Future Conditions 2030 Build, AM Peak, LOS, Urban, Post Falls	4-29
Figure 4.8b Future Conditions 2030 Build, PM Peak, LOS, Urban, Post Falls	4-30
Figure 4.9a Future Conditions 2030 Build, AM Peak, LOS, Urban, Hayden	4-31
Figure 4.9b Future Conditions 2030 Build, PM Peak, LOS, Urban, Hayden	4-32
Figure 4.10a Future Conditions 2030 Build, AM Peak, LOS, Rural, Rathdrum	4-33
Figure 4.10b Future Conditions 2030 Build, PM Peak, LOS, Rural, Rathdrum	4-34

Section 6

Figure 6.1a Short Range 2015 Transportation Plan, Rural, Kootenai County	6-5
Figure 6.1b Short Range 2015 Transportation Plan, Coeur d'Alene Area.....	6-6
Figure 6.1c Short Range 2015 Transportation Plan, Post Falls Area	6-7
Figure 6.1d Short Range 2015 Transportation Plan, Hayden Area	6-8
Figure 6.1e Short Range 2015 Transportation Plan, Rathdrum Area	6-9
Figure 6.2a Long Range 2030 Transportation Plan, Rural, Kootenai County.....	6-15
Figure 6.2b Long Range 2030 Transportation Plan, Coeur d'Alene Area	6-16
Figure 6.2c Long Range 2030 Transportation Plan, Post Falls Area	6-17
Figure 6.2d Long Range 2030 Transportation Plan, Hayden Area.....	6-18
Figure 6.2e Long Range 2030 Transportation Plan, Rathdrum Area	6-19
Figure 6.3 Development-Driven Transportation Plan	6-27

List of Tables

Section 2

Table 2.1 Land Use Categories.....	2-5
Table 2.2 Population Estimates, 2007-2030.....	2-11

Section 3

Table 3.1 KMPO Regional Demand Model Street Typology	3-8
Table 3.2 Major Corridor Travel Times.....	3-30
Table 3.3 General Roadway Capacities	3-36
Table 3.4 Roadway Segment and Intersection Hourly Level of Service Criteria	3-36
Table 3.5 2007 Roadway Segments > 70% Capacity, AM Pk Hr	3-37
Table 3.6 2007 Roadway Segments > 70% Capacity, PM Pk Hr	3-38
Table 3.7 2007 Intersections > 80% Capacity, AM Pk Hr.....	3-39
Table 3.8 2007 Intersections > 80% Capacity, PM Pk Hr.....	3-40
Table 3.9 Fatality and Injury Rates in 2009	3-51

Table 3.10 Collision History, 2007-2009.....	3-51
Table 3.11 Kootenai County High Accident Locations, 1998-2008	3-57
Table 3.12 Grade Crossing Collision Summary, 2000-2010	3-58
Table 3.13 Kootenai County Inbound Distribution, 2007 and 2027	3-61
Table 3.14 Kootenai County Outbound Distribution, 2007 and 2027	3-61
Table 3.15 Central Counties Inbound Commodities, 2007 and 2027	3-63
Table 3.16 Central Counties Outbound Commodities, 2007 and 2027	3-64
Table 3.17 Non-Motorized Transportation Future Priority Network	3-85

Section 4

Table 4.1 2030 No-Build Intersections > 80% Capacity, AM Pk Hr	4-12
Table 4.2 2030 No-Build Intersections > 80% Capacity, PM Pk Hr	4-14
Table 4.3 2030 No-Build Roadway Segments > 70% Capacity, AM Pk Hr	4-17
Table 4.4 2030 No-Build Roadway Segments > 70% Capacity, PM Pk Hr	4-19
Table 4.5 2030 Build Intersections > 80% Capacity, AM Pk Hr.....	4-35
Table 4.6 2030 Build Intersections > 80% Capacity, PM Pk Hr.....	4-36
Table 4.7 2030 Build Roadway Segments > 70% Capacity, AM Pk Hr	4-38
Table 4.8 2030 Build Roadway Segments > 70% Capacity, PM Pk Hr	4-39

Section 5

Table 5.1 City/County/Highway District Funding Options	5-2
Table 5.2 Funding Categories for Federal-Aid Work	5-4
Table 5.3 Percentage of Local Revenue by Category Through 2030.....	5-6
Table 5.4 Anticipated Revenue for Cities as a Group 2005-2030	5-7
Table 5.5 Historical Breakdown of Revenues and Expenditures for Highway Distribution Account	5-8
Table 5.6 Anticipated Highway District Revenue, 2005-2030.....	5-8
Table 5.7 Anticipated Financial Resources for Public Transportation, 2007-2030	5-9

Section 6

Table 6.1 ARRA Economic Stimulus Funding	6-1
Table 6.2 Priority Array Scoring Criteria	6-3
Table 6.3 Short-Term Road Improvement Projects 2015.....	6-10
Table 6.4 Long-Term Road Improvement Projects 2030.....	6-20
Table 6.5 Development-Driven Roadway Projects Through 2030.....	6-28

Visualizations

Huetter Road from Seltice Way to Lancaster (Post Falls Highway District).....	6-31
Meyer Road from Lancaster to Boekel (Lakes Highway District)	6-32
Kidd Island Bay Road (Worley Highway District).....	6-33
Meyer Road (City of Rathdrum)	6-34
Fernan Hill Rd (East Side Highway District)	6-35

Appendices

- Appendix A** Bridging the Valley
- Appendix B** KMPO Public Involvement Policies
- Appendix C** MTP Mail/Email Distribution List
- Appendix D** KMPO VISUM Travel Demand Model Documentation
- Appendix E** KMPO Model Policy
- Appendix F** KMPO Population Growth Forecasting 2030
- Appendix G** KMPO Review Checklist for Large Developments and Comprehensive Plan Amendments
- Appendix H** Kootenai County Coordinated Public Transit Human Services Transportation Plan
- Appendix I** KMPO Regional Non-Motorized Transportation Plan
- Appendix J** Detailed Project Expenditures
- Appendix K** Public Comments
- Appendix L** All Agency Comments

Executive Summary

Executive Summary

Transportation planning is a critical component of anticipating and accommodating continued growth and development. The transportation network is the circulation system of a region, providing access and mobility to a hugely diverse group of users. As the population in Kootenai County continues to grow, effective measures will need to be taken to accommodate traffic and move people and goods. The goal of the Metropolitan Transportation Plan (MTP) is to ensure that future transportation improvements are planned in a deliberate and careful way.

The MTP is a document designed to be a regional blueprint for addressing transportation needs and issues in the long-term. Developed by Kootenai Metropolitan Planning Organization (KMPO), the MTP is a 20-year plan that is federally required to be updated every four years. Local transportation improvements must be included in the MTP in order to receive state and federal funding.

2010 MTP Update

The 2010 MTP update has been extensive, with the entire plan being reviewed and the majority of it revised to include projects, ideas, and issues that may not have been on the forefront four years ago.

Despite several years of a nationally-depressed economy, there have been many improvements to Kootenai County's transportation infrastructure in recent years. Those include improvements to the Citylink transit system, the creation of new bicycling and walking trails and trailheads, and the transformation of Coeur d'Alene's Midtown area through reconstructed streets, widened sidewalks, public art and bike racks.

There are many more improvements needed, and addressing the region's transportation needs will require future investments in streets, roads, highways, public transportation, and bicycle and pedestrian facilities. In a time of financial hardship, these kinds of investments may not seem feasible. However, some level of investment is necessary, as projected growth in Kootenai County over the coming decades will mean more travel into and through the region, greater demands placed on the existing transportation system, and additional wear and tear on area roadways.

The identification of transportation projects needed to address growth and development was completed by evaluating the current growth patterns and forecasting growth and development across the metropolitan area. Population in Kootenai County is forecast to increase from 148,955 in 2007 (the most recent numbers available) to 241,845 in 2030. The highest increases in urban population and dwelling units are expected to occur over the Rathdrum Prairie and within the Lakes Highway District. This translates to a significant increase in trips to and from areas that have been previously rural agricultural environments. Existing roads in these areas will experience traffic volumes that exceed their current capacity within the next 20 years, requiring the need to plan for their reconstruction concurrent with growth.

Funding the MTP

The planned projects contained in the MTP do not address *all* of the transportation needs of the area. This is because, by federal law, the MTP must be financially constrained. That means the MTP must forecast future revenues and expenditures that can reasonably be anticipated over the life of the plan.

Some possible *future revenues* include gas taxes, weight fees, registration fees, developer fees, and State or Federal formula distribution funds and grants. Future revenues are considered to be acceptable funding sources if they are legally available and/or there has been some historical trend developed for existing revenue sources.

For the purpose of the MTP, KMPO used a rolling 18 year average of historical funding sources to forecast potential revenues through 2030. This approach takes into account past increases as well as actual historical changes in the county's economy to predict the future. The net affect is a reasonable forecast, or estimate, of future revenues.

To address revenue sources that do *not* have a history of use in Kootenai County, an estimate has been developed using a mid-range value tied to an historical growth projection. The revenue source with the most predictability where this would apply would be the local option vehicle registration fee. A registration fee level is set per vehicle, and then tied to the historical rate of growth for vehicles registered in Kootenai County. Again, the net effect is a reasonable forecast of future revenues, should the local option be used in the future.

Expenditures can also be reasonably anticipated using historical inflation rates. KMPO again used a rolling average over the past 18 years to predict future costs of transportation investments to accommodate the cyclical nature of the economy.

Transportation expenditures by major cost category were independently forecast using the historical figures. Operations, maintenance, reconstruction, and new construction all have differing factors influencing the inflation of expenditures in their category. As an example, operations are influenced by personnel cost of living, medical benefits coverage, fuel, and equipment replacement costs. New construction can be impacted by new design and engineering standards, escalating right-of-way costs, the cost of obtaining financing, material costs and availability of contractors to do the work.

For each of those conditions, the MTP must estimate the potential revenues and expenditures and indicate the cost of projects in Year of Expenditure dollars. That means an estimated project cost for the year 2010 must be inflated to take into account the year in which it is expected to be constructed. An estimated inflation rate of 3% (compounded annually) was used to calculate the project cost for future years.

Conclusion

Unfortunately, there are no cheap or simple solutions to providing a safe and efficient transportation system for the Kootenai Metropolitan Area. Given the limited funding

resources available to address the regional and local transportation needs, transportation system investments will need to be strategic, long-lasting, and operationally sustainable. This is most likely to be achieved through a continuous, coordinated, and comprehensive transportation planning process that incorporates ideas from local jurisdictions, elected officials and the public.