Lakes Highway District

Transportation Plan

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Prepared by

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Executive Summary

This Transportation Plan was developed in accordance with the guidelines developed in the Local Highway Technical Assistance Center's Manual on Transportation Plans. The major tasks that were completed to develop a thorough Transportation Plan included:

1. A public involvement process, which included a technical advisory committee, stake holder meetings, and two public open houses
2. A review of demographics, employment, and land use
3. A review of existing plans from regional jurisdictions
4. An inventory of the existing transportation network and facilities, including transit, bike, pedestrian, all weather routes, rail, pavement condition, bridge inventory, and sign inventory
5. A traffic and safety analysis, including three segments with high capacity, three intersections with high capacity, and six locations with a significant amount of crashes
6. A Capital Improvement Plan and an Implementation Plan

Table 1 summarizes the recommended capital improvement projects that resulted from the public involvement, reviews, inventories, and analysis performed for this Transportation Plan. **Table 1** lists projects in order of priority sorted by type (i.e., crash safety, segment capacity, intersection capacity, inter-modal, and other).

Table 1 – Recommended Capital Improvement Projects

Priority Ranking	Project Type	Location	Recommendations
			Crash Hot Spot
1	Crash Safety Improvement	Ramsey & Diagonal Vicinity	Consider increased roadside clear zone by removing trees, install guard rail, improve sight distance, realign intersection, perform detailed inter-geometric analysis, protect and acquire R/W for future improvements.
2	Crash Safety Improvement	Ramsey - Boekel to Railroad Crossing	Consider increased stop sign size, reduce speed, provide flashing lights at stop sign, improve site distance for northbound traffic by removing trees from southwest corner, consider changing intersection treatment (roundabout, 4-way stop, signal), add railroad crossing gates and flashers, traffic circle/roundabout.
3	Crash Safety Improvement	Brunner & Old US-95 Vicinity	Consider improved intersection control, reduce speed limit, improve lighting, add flashing beacons, install traffic/speed calming measures prior to intersection, tree clearing and removal for improved sight distance and clear zone.
4	Crash Safety Improvement	Garwood Near Rimrock	Consider improved striping, increase clear zone on approaches, speed calming measures, road safety audit.
5	Crash Safety Improvement	Hayden Lake Rd & Rhapsody Vicinity	Consider reduced speed limit, install guard rail, improve corner signs (chevrons), install delineators around corner, increase clear zone, widen shoulder. Consider improving Rhapsody at the intersection to reduce skew and improve grade.
6	Crash Safety Improvement	Rimrock & Ohio Match Vicinity	Consider increased lane width, install guardrail at curves within one half mile from the intersection, increase shoulder width, install center rumble strips, consider road safety audit.
			Segment Capacity
1	Segment Capacity Improvement	Bunco Rd from US-95 to Hatch Rd	1. Consider adding 2-way left turn lane east of Pope on 2-lane road. 2. Consider adding turn lanes/turn bays near intersections. 3. Add through lanes depending on volume. 4. Perform in-depth study/verify need and accuracy.
2	Segment Capacity Improvement	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider grade separation at railroad crossing. 3. Consider improved lighting at intersections and driveways. 4. Consider turn lanes/turn bays at intersections. 5. Consider widening to 4 lanes for future Ramsey extension project.
3	Segment Capacity Improvement	Boekel Rd from US-95 to Ramsey	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider signal or intersection improvements at US-95 and Boekel or consider alternate route to Lancaster and signal at US-95. 3. Consider adding lanes to Boekel to become a 3- to 5-lane road or adding turn lanes near intersection of Boekel and Ramsey. 4. Improve lighting at intersections, driveways, or along segment. 5. Consider reduced speed limits on segment and/or add traffic calming measures.
			Intersection Capacity
1	Intersection Capacity Improvement	SH-41 at Diagonal Rd	High Volume/Capacity Ratio in 2035: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left turn movements and provide a 2-stage maneuver for the Westbound left-turn movements.

Priority Ranking	Project Type	Location	Recommendations
2	Intersection Capacity Improvement	SH-41 at Scarcello Rd /Village Blvd	High Volume/Capacity Ratio in 2035: 1. Consider turn lane improvements, including westbound left, westbound right, eastbound left, and eastbound right turn lanes on Scarcello Road and southbound right turn lanes on SH-41. This will result in LOS E for the eastbound approach, with other approaches to the intersection operating at LOS C or better. 2. If LOS D or better is desired for all approaches, signalization of the intersection with existing lane configuration should be considered, if and when signal warrants are met. 3. Align east/west approaches across the intersection. 4. Perform an in-depth intersection study.
3*	Intersection Capacity Improvement	SH-41 and Seasons	Consider future study to determine needs at intersection.
		Inter-Modal	
1	Inter-Modal	Rathdrum-Spirit Lake-Athol-Hayden Non-Motorized Routes and Connections	Class I, II or III non-motorized facilities on Rimrock Rd. from Lancaster Rd. to Ohio Match Rd.; on Garwood from Rimrock Rd. to Ramsey Rd.; on Ramsey Rd. from Garwood to Brunner Rd.; on Brunner Rd./Bunco Rd. from Ramsey Rd. to Good Hope Rd.; on Good Hope Rd. from Bunco Rd. to SH-54; on SH-54 from Good Hope Rd. to SH-41 (ITD led portion of this project); on SH-41 from SH-53 to SH-54 (ITD led portion of this project); on Scarcello Rd. from SH-41 to Ramsey Rd.
2*	Inter-Modal	Address ADA accessibility throughout LHD	Improve ADA accessibility throughout the jurisdiction: - Inventory need for curb cuts/ped ramps. - Inventory locations of high pedestrian activity and need for sidewalk and curb cuts.
3*	Inter-Modal	Rathdrum-Post Falls Connection – Meyer Rd	Class I, II, or III non-motorized facilities from Prairie Ave. to SH-53: - LHD can support this project with other agencies.
4*	Inter-Modal	East Hayden Lake Rd	Consider studying the feasibility of a Hayden Lake Trail/Bike pull out(s).
		Other	
1*	Freight	Chilco to Ramsey Brunner to SH 53 All Weather Route Connection	Consider developing standards and specified route for all-weather vehicles to promote industrial and commercial development in specific areas.
2	Bridge	Old US-95 over UPRR (Athol)	Bridge Rehabilitation: - Consider replacing railings, guardrail, guardrail ends, deck, and bridge approach.
3*	Sign Improvements	District Wide	Consider replacing signs with the following conditions: Fair, Missing, Poor, Replace
4	Bridge	Hayden Lake Rd over Yellowbanks Creek	Bridge Rehabilitation: - Consider replacing railings, guardrail ends, and improving transitions.

* *Not shown on map*

Introduction

Purpose

The purpose of this Transportation Plan is to guide the Lakes Highway District (LHD) on current and future roadway improvements, incorporate regional transportation planning efforts, develop transportation goals, evaluate existing conditions using a Geographic Information System (GIS) mapping format, and develop a list of recommendations for future improvements. The primary components of this Transportation Plan are:

- **Public Involvement Process** – Input was sought on this planning effort through various public input processes, including Commissioner's meetings, stakeholder interviews, technical advisory committee meetings, and public open houses.
- **Existing and Future Land Use, Zoning, Population Demographics, and Employment** – Land use, population demographics, and employment were studied to understand and identify major existing trends and future changes to land use, population, and employment that may affect the transportation network such as large employers, shifts in population demographics, and changing land use trends.
- **Existing Plans Coordination and Transportation System** – Published Transportation Plans within the immediate area were summarized, and opportunities for improved access, mobility, and safety within the Highway District were evaluated.
- **Network Conditions Inventory** – Various network conditions, including average daily traffic (ADT), crash locations, bridges, etc., were mapped with other existing conditions to help prioritize future projects and to help visually understand and identify areas with deficiencies. Areas with pavement deficiencies, apparent congestion, safety, or future growth potential were identified and prioritized highest because of potential impacts and mitigation related to safety and capacity. Other existing conditions that were mapped and analyzed to prioritize project improvements are listed below:
    - Adjacent land use
    - Bridge structures
    - Pavement condition
    - Functional classification
    - Crash locations
    - Pedestrian and bicycle facilities and trails
- **Traffic and Safety Analysis** – Hot spot locations were identified through the public involvement process, validated by data, and analyzed to identify specific capacity issues or safety concerns. Specific traffic capacity and safety issues that were analyzed include:
    - Connectivity
    - Intersection and segment capacity
    - Traffic safety at intersections
    - Roadway geometry and sight distance
    - Bus stops/routes

- **Capital Improvement Plan (CIP)** – Each element listed above was used to develop projects within specific categories, and recommendations were prioritized based on the evaluation criteria. These recommendations were added to the existing CIP that acts as a guide to help LHD seek funding to complete future projects.
- **Implementation** – An Implementation Plan was developed to help LHD plan, design, and construct CIP projects as funding becomes available.

Funding

LHD received funding for this Transportation Plan from the Local Highway Technical Assistance Council (LHTAC) through the Local Rural Highway Investment Program (LRHIP). Transportation planning is a high priority for LHTAC because it allows jurisdictions to effectively work together and improve the investment in their highway and street infrastructure. Having a thorough, effective Transportation Plan that is managed and updated provides more opportunities for LHD to apply for funding to complete projects identified in this Transportation Plan.

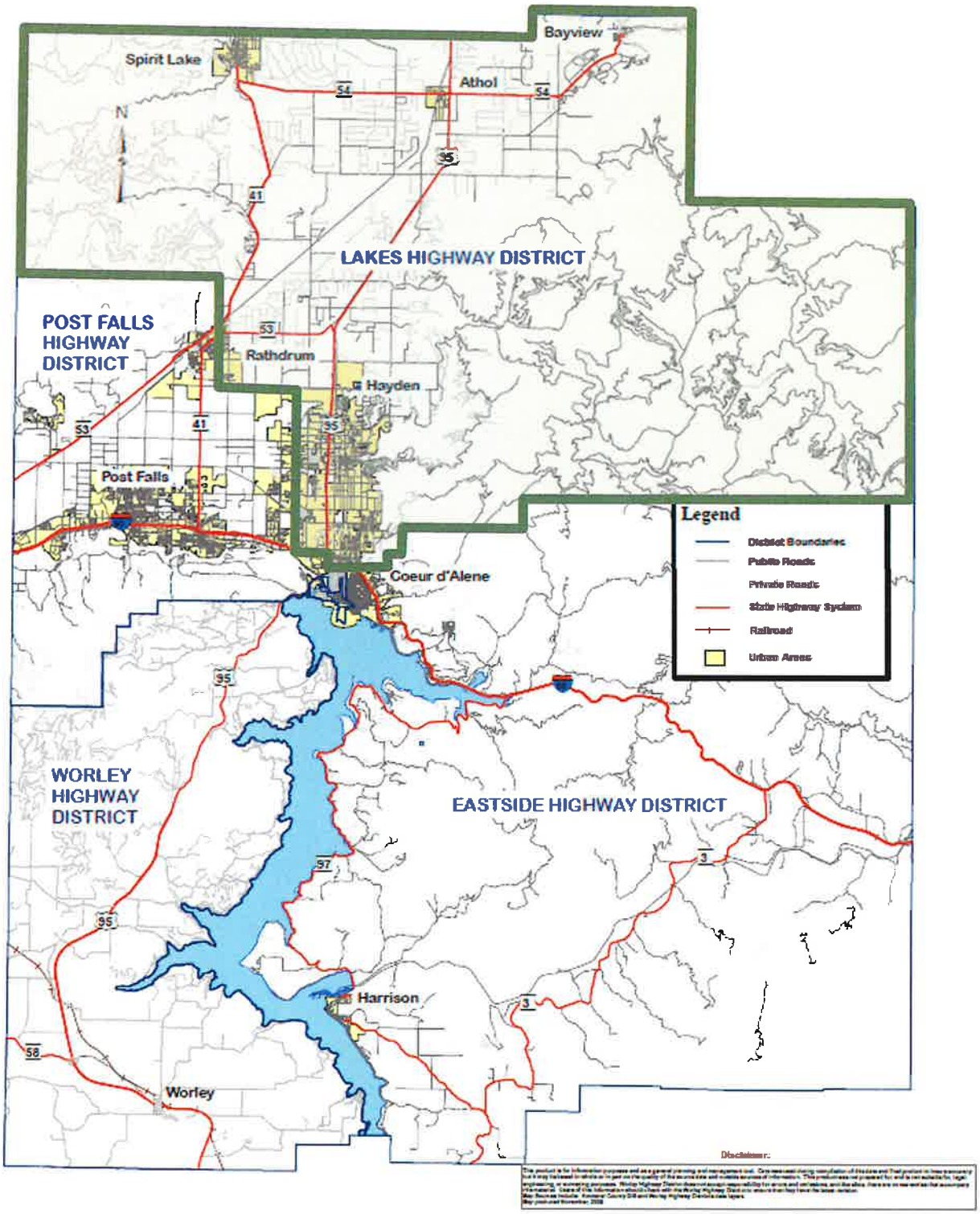
Background

LHD was formed in May 1971 as a result of the consolidation of multiple Highway Districts and the Kootenai County Road Department into four Highway Districts in Kootenai County. LHD is one of four members of the Associated Highway Districts (AHD) of Kootenai County, Idaho. The purpose of this organization is for the betterment of the secondary highway system in Kootenai County through cooperation of all of the Highway Districts, dissemination and sharing of knowledge, and ideas for the benefit of all the Highway Districts in Kootenai County. **Figure 1** shows the LHD jurisdiction within the AHD boundaries.

LHD maintains various public roads in the northern portion of Kootenai County, as shown in **Figure 1**. The District boundaries generally lay north of Best Avenue in Coeur d'Alene, up to the Bonner county line, east of State Highway 41 and north of the Rathdrum city limits. The District maintains a total of 280 miles with approximately 255 paved roadway miles and approximately 25 miles of gravel roads.

This Transportation Plan is intended to guide the Highway District on future roadway improvements. The study area overlaps City boundaries for continuity; however, projects wholly located within a city boundary were not analyzed as part of this study. While this Transportation Plan identifies specific projects, LHD still has the flexibility to initiate projects based on needs and funding availability. The order in which projects are completed may be altered as project-specific funding opportunities become available. The CIP developed as part of this Transportation Plan should be incorporated into the District's existing CIP and updated regularly (typically every three to five years) as demographics, employment, development, land use, and traffic patterns change to meet the evolving transportation needs of the District.

Figure 1 – Associated Highway Districts of Kootenai County Boundary Map



Base Map

A GIS base map was developed to analyze existing conditions within the LHD. The GIS base map includes several layers of data that can be used jointly to assist LHD in their evaluation of existing conditions and future improvements. Layers that were developed and can be used include:

- Existing functional classification
- Future projects
- 2012 Average Annual Daily Traffic (AADT)
- Bridge locations
- Peak hour traffic volumes
- Capacity at hot spots
- Crash data (2008-2012)
- Sidewalk, trail, bike lane inventory
- Railroad crossing locations
- Truck routes
- Airport facilities
- Transit and public transportation routes/stop

Layers can be used concurrently to interactively display roadway features. This tool was used throughout the analysis performed for this Transportation Plan and should be updated periodically and used for future planning and project development.

Public Involvement

Overview

Public involvement was a critical part of developing this Transportation Plan. Extensive efforts were made to reach out to as many individuals as possible. The purpose of this process was to inform participants of the issues and needs and to strengthen the support of the recommendations produced in this plan. The following subsections outline the public input gathered throughout the public involvement process.

Several public engagement techniques were used to gather public input on this Transportation Plan, including:

- Elected Officials Participation
- Stakeholder Interviews
- Two Technical Advisory Committee (TAC) Meetings
- Two Public Open Houses

Details about the various public involvement methods and outcomes are summarized below.

Elected Official Participation

The Commissioners for the LHD were involved throughout the entire planning process. They participated in a kickoff meeting, TAC meetings, and public open houses, and provided additional input through the plan adoption process. Through these extensive efforts, the Commissioners were able to communicate with the public and stakeholders, and provide input on this Transportation Plan.

Stakeholder Interviews

Interviews were conducted with key stakeholders identified by LHD staff and Commissioners. The stakeholder interview list was developed with careful consideration to include those with knowledge about the Highway District and those with an interest in the outcome. Stakeholders included major employers, developers, school district staff, emergency services staff, and other groups. Each interview provided an opportunity to identify and incorporate stakeholder concerns early in the process.

Through the stakeholder interview process, several transportation-related strengths and opportunities for improvement were discussed. These issues were taken into consideration as recommendations were developed for this Transportation Plan. Stakeholders indicated that the District generally does a good job with maintenance. Additionally, they felt that LHD coordinates well with the Kootenai County Area Transportation Team (KCATT) and Kootenai Metropolitan Planning Organization (KMPO), which is beneficial to the local and regional transportation system. Stakeholders also expressed an interest in improving bicycle, pedestrian, and roadway connectivity throughout the District. Specific projects were identified by stakeholders to be considered as part of this Transportation Plan. See Stakeholder Interview Summary in **Appendix A** for more details.

Technical Advisory Committee (TAC) Meetings

LHD hosted two TAC meetings as part of the public involvement process. The TAC consisted of a diverse representation of people chosen by LHD Commissioners who bring local knowledge and interest in the transportation arena. The TAC provided input on recommended improvements in an advisory role.

TAC Meeting No. 1

TAC Meeting No. 1 was held early in the process to gather input on the LHD Transportation Plan. TAC Meeting No. 1 was structured in two segments. The first segment included a brief discussion and overview of the Transportation Plan process, and the second portion of the meeting involved a round table discussion where the TAC members were separated into two groups. These roundtable discussions resulted in lists of hot spot/safety concerns; areas of potential significant change, strengths, weaknesses, and opportunities; and potential projects to be considered for inclusion in this Transportation Plan. Some key items discussed include:

- Specific crash locations
- Capacity at SH-41 and Diagonal
- Capacity on Boekel from Meyer to Ramsey
- Developing truck routes
- Partnering with other agencies

This input from the TAC was used to help develop and refine the final list of hot spots (six crash locations, three intersection capacity locations, and three segment capacity locations) to be analyzed as part of this Transportation Plan. Input received relative to each of these categories is summarized in **Appendix A**.

Hot spot locations and potential CIP projects identified by the TAC were compared against crash data and capacity information to examine the consistency between locations perceived to have safety issues or congestion issues and those with data to support safety or congestion issues. Potential projects, safety hazards, and congestion issues identified by the TAC that are supported with data are further discussed in the **Traffic Safety and Analysis** section of this Transportation Plan.

TAC Meeting No. 2

TAC meeting No. 2 was held after a significant portion of the research and analysis for the Transportation Plan had been completed and recommended projects had been developed. Draft prioritization criteria (i.e., safety, environmental, funding, economic benefits, etc.) and a list of recommended projects (i.e., safety, segment capacity, intersection capacity, inter-modal, and others) were presented to the TAC. The group was then asked to rank the prioritization criteria based on importance, and the TAC gave input on which prioritization criteria was relevant to each recommended project. This exercise resulted in a quantitative ranking of each recommended project based on priorities. Details of the resulting recommended projects are available in **Appendix A.** These results were presented at the second public open house to seek input on the prioritized recommended solutions.

Public Open Houses

LHD hosted two Public Open Houses. Open House No. 1 was held to hear concerns from the public and provide the public with an opportunity to give input on specific areas of concern. Open House No. 2 was held to present the draft prioritization criteria and recommended transportation projects to the public.

Public Open House No. 1

The purpose of Open House No. 1 was to gather information from the public and learn about concerns in relation to the transportation network. Attendees were given the opportunity to:

- Review the work that had been completed to date (display boards)
- Discuss the transportation network with the project team
- Provide feedback on comment forms and display boards

Top priorities identified by the public include regional connectivity and access, safety at intersections, continuity for future developments, railroad crossing safety, bicycle infrastructure, and monitoring speed limits. These priorities were considered when developing recommendations for this Transportation Plan. A complete transcription of the comments received at the open house is available in **Appendix A.**

Public Open House No. 2

The purpose of Open House No. 2 was to present and gather feedback on the draft prioritization criteria and ranked recommended transportation projects. The results from the TAC were presented at this public open house. The recommended solutions were shown in three different forms:

1. All recommendations shown on a map
2. All recommendations shown on a table (as ranked by the TAC)
3. Recommendations shown in tables by project type (intersection capacity, segment capacity, safety, inter-modal, and other)

Citizens wishing to provide input at the open house were given the opportunity to place markers by projects they were in favor of or fill out a comment form. No comment forms were received at Open House No. 2, and markers were placed by the top ranking project in each category.

Public Input Analysis

Through the public input portion of this project, several transportation topics were mentioned for analysis. It is important to discover the needs of the community to develop a comprehensive transportation network that works for all users. The main themes repeatedly mentioned throughout the public involvement process include:

- Improve safety
- Develop an "all-weather road" route (no load restrictions during spring thaw)
- Connectivity improvements
- Add turn lanes
- Improve signing
- Improve inter-modal transportation, especially for bicycle users

This list of input from the public was compared to the existing conditions in terms of AADT, crash data, and other previously-mentioned data available within LHD. Where public input correlated to high AADT, a significant amount of crash data, land use changes, etc., those areas were prioritized for analysis.

Land Use and Zoning, Future Land Use, Population Demographics, and Employment

Land Use and Zoning

Kootenai County manages land use, zoning, and the Comprehensive Plan within the rural areas of the LHD boundary. Changes in land use and zoning have a significant impact on the LHD transportation network; therefore, it is important to consider existing land use and zoning information in the development and implementation of this Transportation Plan. The current zoning map for Kootenai County, updated in 2014, is shown in **Figure 2**. There is a significant amount of rural and undeveloped land within LHD. Most of the existing zoning within LHD is classified as rural, agriculture, or restricted residential. The majority of commercially zoned land is located on or near the highways that bisect the District, including US-95, SH-41, SH-53, and SH-54.

Evaluating existing land use patterns and zoning provides an understanding of the current relationship between where people live, work, and shop. A transportation network in predominately rural neighborhoods and public lands does not typically have the same needs as those within city centers. Therefore, this Transportation Plan focuses mainly on connectivity of rural road networks to major highways in relation to zoning, but it should be noted that planned development work completed within an Area of City Impact (ACI) is completed to that city's standards.

Future zoning and growth patterns within Kootenai County are expected to change due to a new unified land use code that is currently being developed by the County. LHD should stay apprised of the new code and review the potential of impacts it could have on the transportation system.

Future Land Use

The zoning map depicted in **Figure 2** is anticipated to evolve over time to align with the Kootenai County future land use map shown in **Figure 3** as development occurs within the County. The future land use map for the County shows a significant portion of transition or suburban land in LHD, which is currently zoned rural. The transition areas in the future land use map typically surround city boundaries and transition into suburban land further from city boundaries. There are five major suburban areas identified in the future land use map within LHD's boundary. These future suburban areas are generally located north of SH-53, west of US-95, and south of SH-54.

Development Activity

There are four known developments that are expected to occur in the near future in and around LHD. These developments include:

1. Hayden Canyon – 500-home, mixed-density development located northeast of the Government Way and Lancaster intersection. The City of Hayden has annexed this property.
2. Double T – Low-density, 5-acre-parcel home sites located in Rathdrum. This development is anticipated to include approximately 40 to 50 parcels.

Figure 2 – 2014 Zoning Map

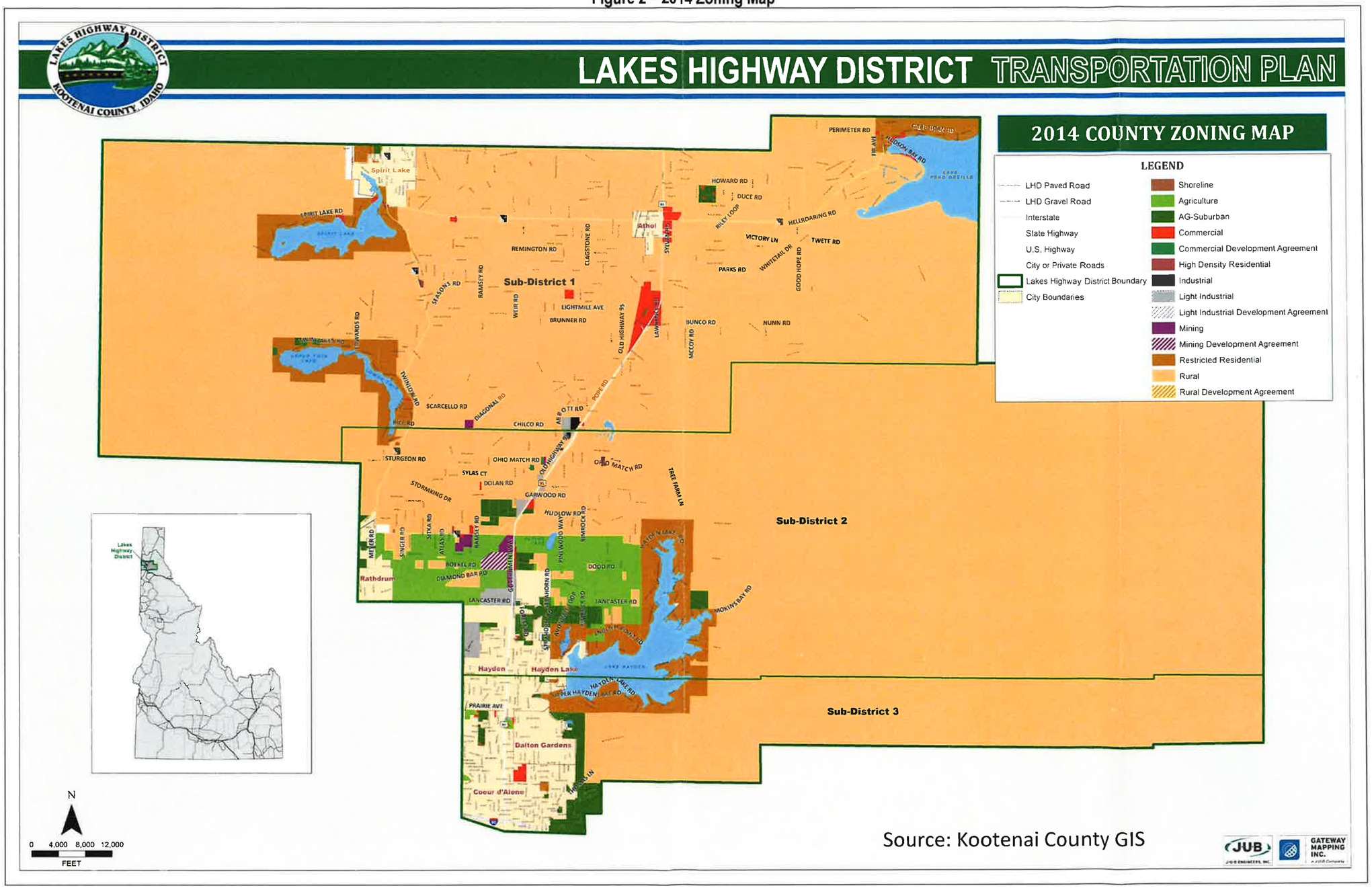
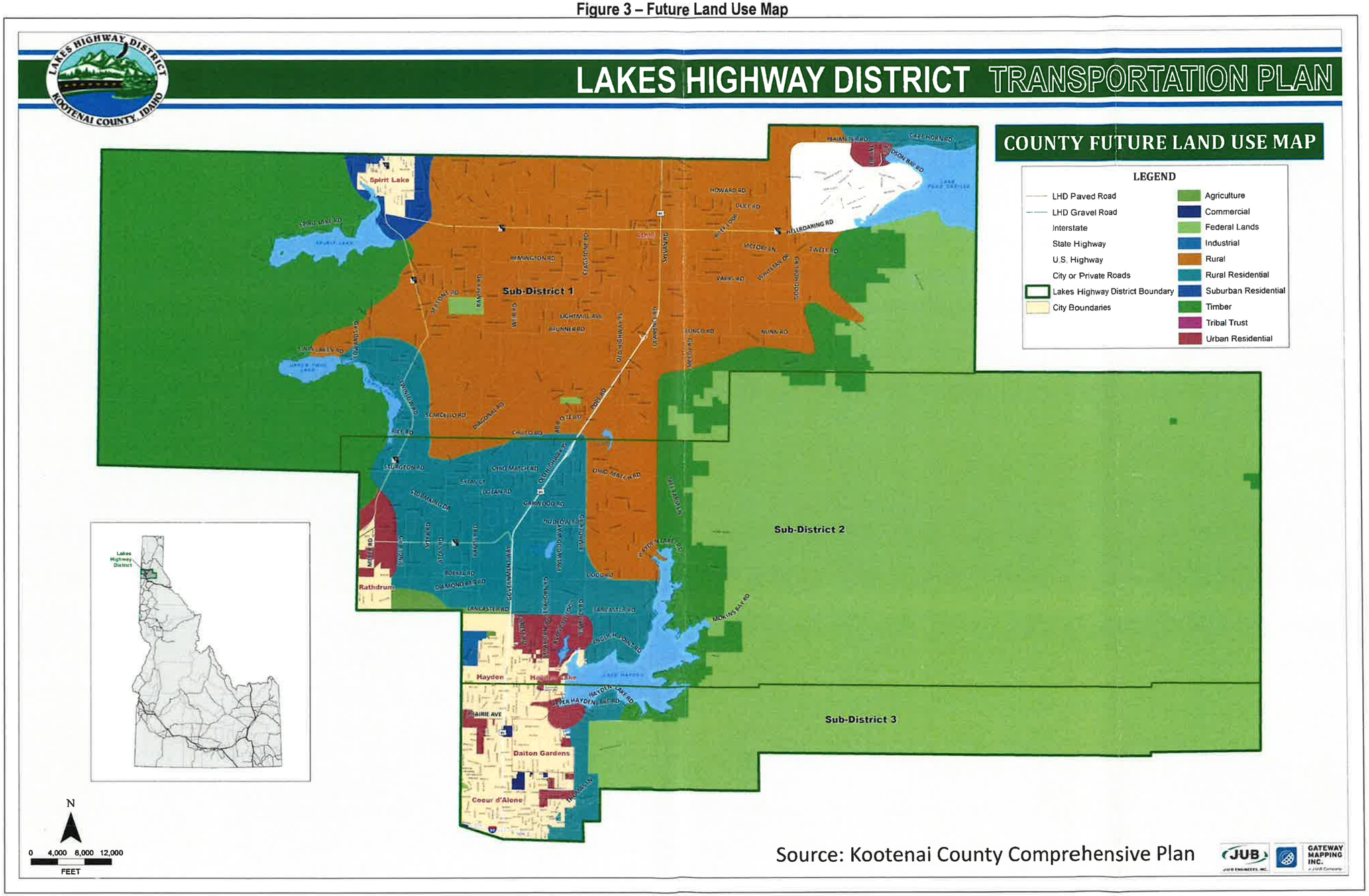


Figure 3 – Future Land Use Map



3. Pine Tree Ranch – Residential development located south of Brunner Road between Diagonal Road and US-95 with 86 lots on 35 acres.
4. Corbin Hill Estates – Residential development near Pope Road with approximately 20 new home sites situated on 42 acres.
5. Clagstone Meadows – Mixed density development located directly north of the LHD boundary in Bonner County.

These developments affect the LHD road network because residents travel to the cities and surrounding jurisdictions using LHD roads for work and other functions.

Other recent residential developments have altered school bus pickup locations near SH-41 and Lancaster Road, along Diagonal Road, on Rimrock Road, and on Lancaster Road east of US-95. Busses need room to pick up children for school, and adapting the transportation network to accommodate busses in or near newer housing areas will provide a safer, more useable transportation network throughout the District. The District faces similar challenges in new home developments when accommodating waste management vehicles.

Population Demographics

Historic and Current Population

Census population data was reviewed to evaluate historic and current population within the County. **Table 2** summarizes the historic population growth trends by urban (cities) and unincorporated (county) areas within the County. The census data indicates that the overall average annual population growth rate in urban and unincorporated areas between 1990 and 2010 was approximately 3.5 percent.

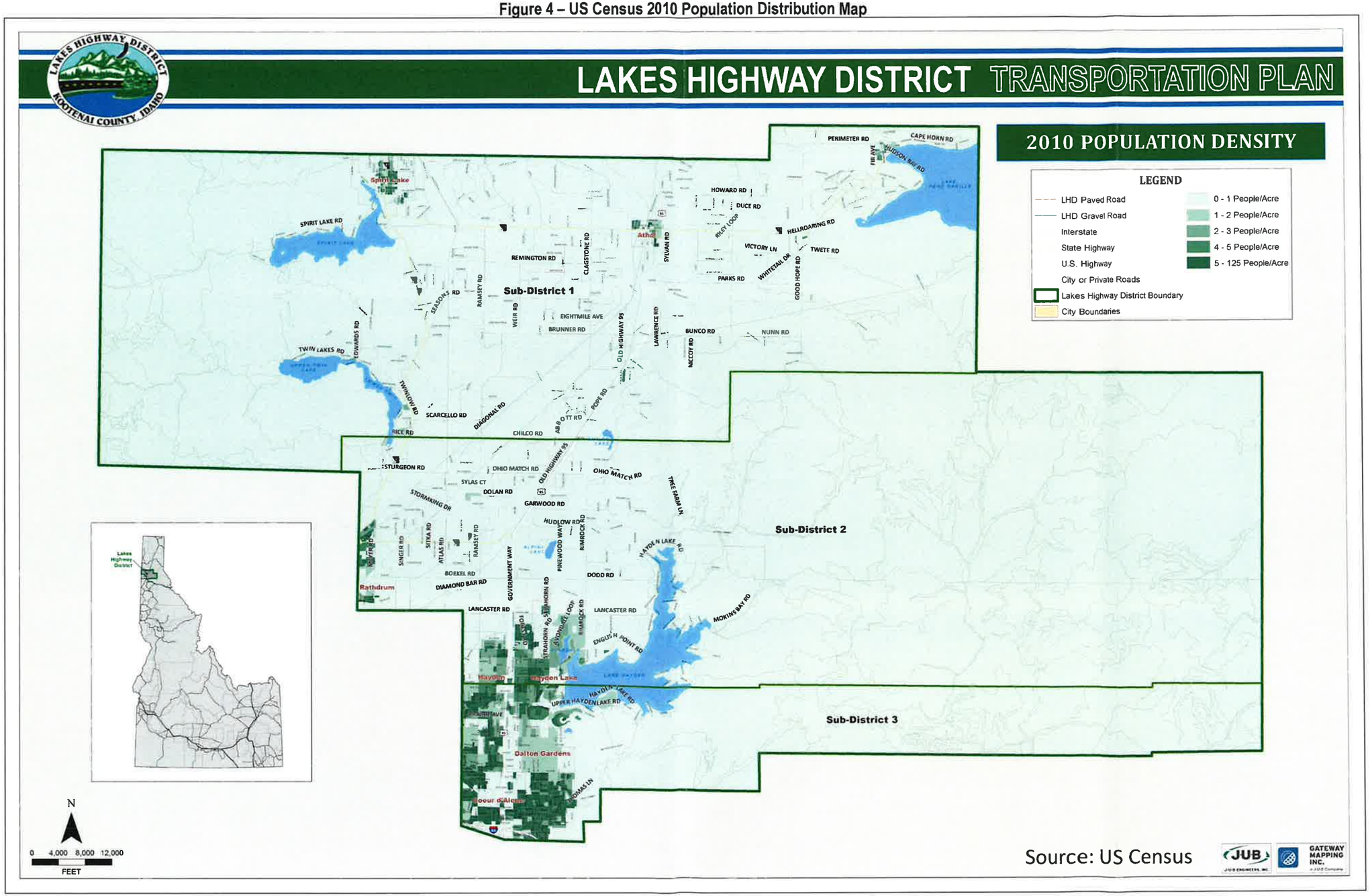
Table 2 – Historic Population Trends in Kootenai County

	1990 Census Population	2000 Census Population	1990-2000 Annual Growth Rate	2010 Census Population	2000-2010 Annual Growth Rate	1990-2010 Annual Growth Rate
Urban Areas	42,047	72,028	5.53%	98,822	3.21%	4.4%
Unincorporated Areas	27,748	36,657	2.82%	39,672	0.79%	1.8%
Total	69,795	108,685	4.53%	138,494	2.45%	3.5%

Source: US Census Bureau

County-wide population distribution/density is shown in **Figure 4**. In 2010, the KMPO estimated the population of LHD to be approximately 18,700 people. This is important to note because it shows that the majority of people living within the LHD area live in the core near US-95, SH-54, and SH-41. Several incorporated cities with higher population densities, including Spirit Lake, Bayview, Dalton Gardens, Athol, Rathdrum, Coeur d'Alene, Hayden, and Hayden Lake, are fully or partially located within the LHD boundary. These communities and their populations and travel demands, while not maintained through the LHD budget, factor into the use of the LHD road system. These communities are spread throughout the District, and often residents travel through LHD, causing a higher demand on the overall roadway network.

Figure 4 – US Census 2010 Population Distribution Map



Future Population Projections

Future population growth projections from KMPO and the County were reviewed to estimate the appropriate 20-year population forecast within LHD. KMPO estimates a 2.4 percent average annual growth rate for the entire County for a 25-year period from 2010 to 2035. KMPO estimated population growth for unincorporated areas within the County at approximately 0.794 percent over the same 25-year period. KMPO's future growth projections within the LHD boundary reflect a population growth from 18,700 people in 2010 to 20,478 people in 2035, which is a 0.363 percent average annual growth rate.

Employment Characteristics

Existing Employment Characteristics

Employment characteristics are an important consideration in transportation planning because industrial and manufacturing businesses have different transportation needs than recreational, destination, or retail businesses. Within LHD, major employers include Silverwood Theme Park (near US-95 and Bunco), Idaho Forest Group – Chilco Mill (US-95 and Chilco), School Districts (district-wide), the Kootenai Technical Education Campus (KTEC) on Lancaster Road, and the airport. Each of these major employers, along with other employers, has different transportation needs and demands. Timber mill and manufacturing companies typically need all-weather routes for hauling goods, Silverwood has high passenger car and bus traffic, and the school districts have a need for school bus turn outs and vehicle waiting areas. These specific demands were considered in the development of this Transportation Plan.

Future Employment and Economic Growth Characteristics

Future employment projections play a role in planning the future transportation network. Based on information collected from stakeholders and large employers throughout the planning process, the following expansions are anticipated in the near future:

- **Coeur d'Alene Airport** - The airport has a runway extension project planned in the near future. This expansion will allow larger airplanes to land at the airport and is expected to increase the number of planes and amount of products delivered at the Coeur d'Alene Airport. While it is not anticipated that these improvements will increase the number of airport staff significantly, the airport expansion will facilitate growth for local businesses. According to the 2008 Idaho Airport System Plan, over 1,000 jobs in the community depend on the Coeur d'Alene Airport, which is responsible for $130 million in annual economic impact. Jobs and the economic impact are expected to increase as a result of the proposed airport expansion project.
- **Silverwood** - Silverwood is a major employer in LHD and continues to expand. With expansion comes more jobs and demand on roadways. Silverwood expansion plans should be considered when designing or rehabilitating roads to meet user demands. Silverwood staff expressed interest in the installation a multi-modal path along US-95 to allow their employees to bike to work. This is an effort that would likely be completed by the Idaho Transportation Department, but would provide a significant benefit to commuters and employees at Silverwood.

- **Kootenai Technical Education Campus (KTEC)** - KTEC plans on expanding to accommodate more students and course work. Other educational institutions may locate facilities near the existing KTEC campus. Most of these facilities would be located along Lancaster Road, west of Meyer Road near Rathdrum. With more students come more employees and a higher demand on the transportation network.

Historic and Current Demographics

Population and Age

Historic and current age and population demographics were reviewed using census data for Kootenai County and the State of Idaho. **Table 3** shows the overall population and median age from 1990 to 2010. The median age in Kootenai County has been higher than the median age for Idaho for the past 20 years and is continuing to rise. According to the 2010 Census Data, the median age of those living in Kootenai County is just under 39 years old; whereas, the median age for the state is around 34.6 years.

Table 3 – State of Idaho and Kootenai County Population and Median Age

	Kootenai County			State of Idaho		
Year	1990	2000	2010	1990	2000	2010
County Population	69,795	108,685	138,494	1,006,749	1,293,953	1,567,582
Median Age	35	36.1	38.5	31.5	33.2	34.6

Source: US Census Bureau

Income and Poverty

US Census Bureau and US Department of Health and Human Services data was used to determine median household income, poverty levels, and per capita personal income within Kootenai County and the State of Idaho. As shown in **Table 4**, median income per household in Kootenai County was estimated to be $49,151 in 2010, which is higher than the State's median household income of $47,015. The percentage of persons below the poverty level in 2010 was 12.8 percent compared to the State's average of 15.1 percent. Per capita income is very comparable in the County and State.

Table 4 – Historic State and County Demographic Trends

	Kootenai County			State of Idaho		
	1990	2000	2010	1990	2000	2010
Median Household Income	-	$37,754	$49,151	-	$37,572	$47,015
% persons below poverty	-	10.5%	12.8%	-	11.8%	15.1%
Per capita personal income	$15,776	$23,011	$31,761	$15,724	$24,685	$31,558

Sources: US Census Bureau; US Department of Health and Human Services

Existing Plans Coordination

Existing Plans

Several existing regional plans were collected and reviewed as part of this planning process. These regional plans were used to understand what future improvements are planned in the area and to align proposed LHD future projects with existing projects whenever possible. Regional plans collected and analyzed as part of this Transportation Plan include:

- City of Coeur d'Alene
  - Comprehensive Plan
  - Bike Plan
- City of Hayden
  - Transportation Plan
- City of Dalton Gardens
  - Transportation Plan
- City of Rathdrum
  - Transportation Plan
- City of Spirit Lake
  - Comprehensive Plan
- Coeur d'Alene Airport
  - Master Plan
- Kootenai County
  - Comprehensive Plan
- Kootenai Metropolitan Planning Organization
  - Transportation Plan
  - Regional Non-Motorized Transportation Plan Bridging the Valley Study
  - Huetter Corridor Study
  - Transportation Improvement Plan
- Idaho Transportation Department
  - US-95 Corridor Study
  - SH-53 Access Study
  - SH-41 Master Plan

Coordination of Existing Plans

This plan has been developed in coordination with current planning efforts completed by adjoining and surrounding jurisdictions and associations, including the cities of Rathdrum, Spirit Lake, Hayden, and Hayden Lake, the Idaho Transportation Department, Post Falls Highway District, Kootenai Metropolitan Planning Organization, Coeur d'Alene, and Kootenai County. Through the planning process, potential improvements were prioritized if they were located on or near future projects specified in other regional plans or if their development would potentially impact the road network within LHD. This effort was completed to reduce project redundancy and coordinate the timing of projects located near each other. Planned projects located within the LHD boundary and those adjoining the boundary are shown in **Figure 5** and listed in **Table 5**.

Figure 5 – Future Transportation Projects in LHD and Other Jurisdictions

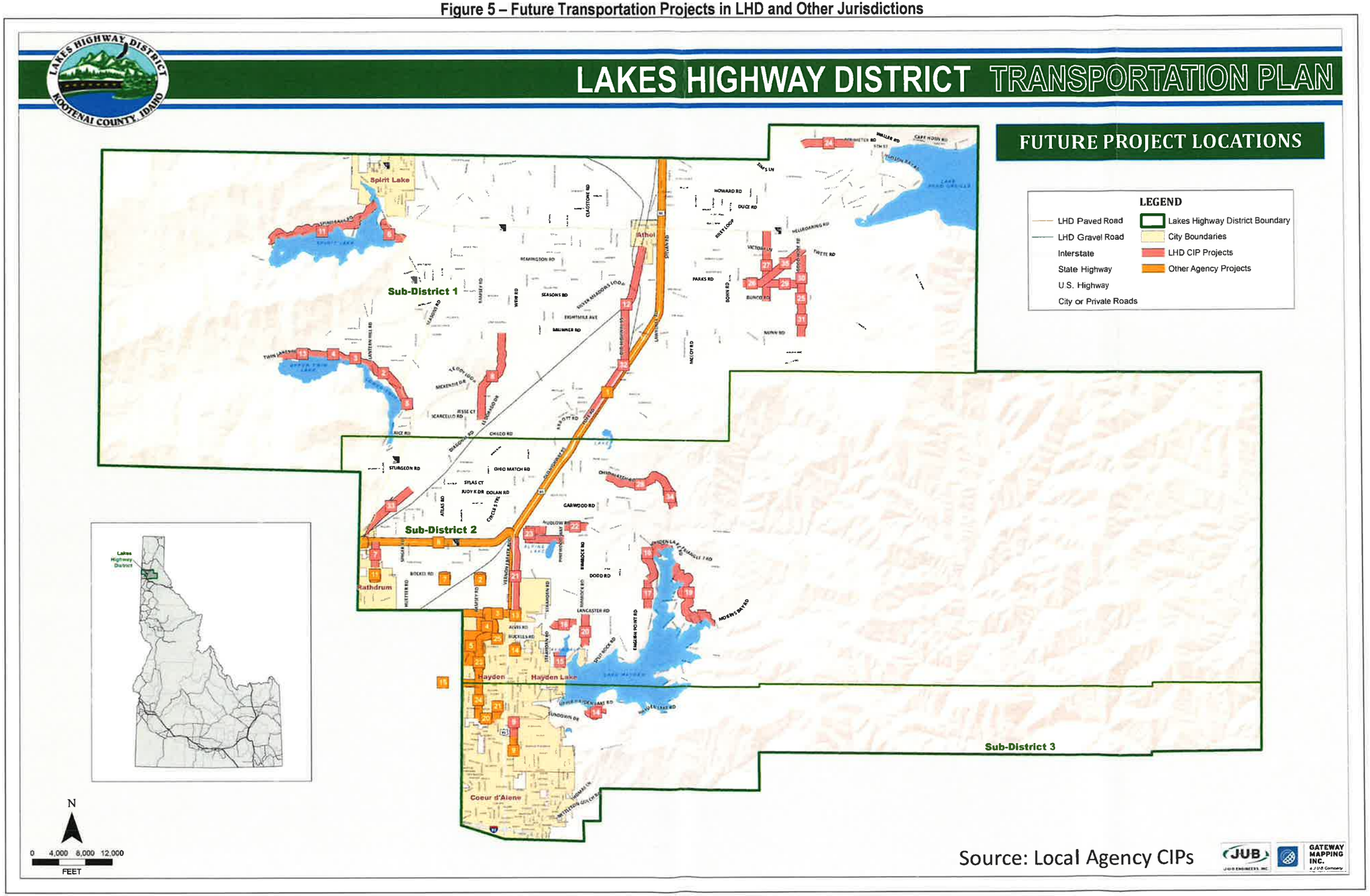


Table 5 – Future Planned Projects in LHD and Other Jurisdictions

	Planned Projects at LHD			
#	Project	Description	Year	Value
1	Twin Lakes Road, Highway 41 to Cone Crest	2" Overlay	2014	$ 40,000
2	Twin Lakes Road, Cone Crest to Water Line Crossing at N. Lakeview Blvd.	FDR w/3" Overlay	2014	$ 352,000
3	Twin Lakes Road, N. Lakeview Blvd. to Sand Pit	2" Overlay	2014	$ 186,000
4	Twin Lakes Road, Sand Pit to Fjord	FDR w/3" Overlay	2014	$ 224,000
5	Twin Low, Par 3 to Twin Echo, Par 3 to Twin Low	Patching w/2" Overlay	2014	$ 150,000
6	Nautical Loop	2" Overlay	2014	$ 162,000
7	Meyer Road	FDR w/3" Overlay	2014	$ 314,000
8	Ramsey Road, Scarcello to Brunner	2" Overlay, Overlay Existing 2" Mat	2015	$ 440,000
9	Government Way, Aqua to Wilbur (unfunded Federal Match at 7.34% match)	Unfunded portion of Federal Aid Match	2015	$ 27,300
10	Spirit Lake Road, Boat Launch to Bridge	FDR w/3" Overlay	2015	$ 36,000
11	Spirit Lake Road, Bridge to Limits	3" Overlay	2015	$ 582,000
12	Old Highway 95, Corbin to Athol	FDR w/3" Overlay	2015	$ 838,000
13	Twin Lakes Road, Fjord to End of AC Mat	FDR w/3" Overlay	2014	$ 411,000
14	Upper E. Hayden Lake Road, Doe Run to Half Mile	1.5" Overlay	2016	$ 130,000
15	Avondale Loop, Miles to Avondale Lane	Grind w/2" Overlay	2016	$ 112,000
16	St. James, Strathorn to Sherwood Court	FDR w/2" Overlay	2016	$ 164,000
17	E. Hayden Lake Road, Dodd to Rockaway	FDR w/3" Overlay	2016	$ 252,000
18	E. Hayden Lake Road, Hayden Creek to Dodd	Overlay existing BST and Ditch Road	2016	$ 591,000
19	E. Hayden Lake Road, Mokins to MP 13	Overlay existing BST and Ditch Road	2016	$ 300,000
20	Rimrock, Cambridge to Lancaster	FDR w/2" Overlay	2016	$ 328,000
21	Government Way, Highway 95 to Lancaster	FDR w/3" Overlay	2017	$ 591,000
22	Hudlow, Pinewood to Rimrock	1.5" Overlay	2017	$ 300,000
23	Grand Tour, Loop	1.5" Overlay	2017	$ 260,000
24	Perimeter, Carywood to Salee Creek	FDR w/3" Overlay	2017	$ 739,000
25	Good Hope Vertical Curve Improvements, Bunco to Parks	Contract Road Work	2014	$ 350,000
26	Parks Road, End of AC Mat to Lewellen	Widen and BST w/District Forces	2014	$ 15,000
27	Lewellen, Bunco to Highway 54	Widen and BST w/District Forces	2014	$ 45,000
28	Ohio Match, End of AC Limits	Widen and BST w/ District Forces	2014	$ 75,000
29	Parks Road, Lewellen to Good Hope	Widen and BST w/District Forces	2015	$ 30,000

	Planned Projects at LHD			
#	Project	Description	Year	Value
30	Good Hope, Bunco to Twete	Widen and BST w/District Forces	2015	$ 60,000
31	Good Hope, Nunn to Bunco	Widen and BST w/ District Forces	2016	$ 30,000
32	Old Highway 95, Estates to Corbin	7.34% Match STP Rural Federal Aid Paving Project	2015	$ 191,000
33	Diagonal Road, Highway 41 to W. Camrose	2" Overlay	2014	$ 218,000
34	Tree Farm Subdivision	2" Overlay	2014	$ 235,000
35	Whitetail, Parks to Good Hope	Widen and BST w/District Forces	2018	$ 45,000
36	Rimrock Road Corner Improvements	Widen and BST w/District Forces	2019	$ 100,000

	Planned Projects in Other Agencies			
#	Agency	Description	Year	Cost
1	ITD	US-95 Improvements, including interchanges, signals, turn restrictions, closing access	N/A	
2	Hayden	Signal at Boekel and Ramsey	N/A	
3	Hayden	Lancaster Widening - Huetter to Government Way	N/A	
4	Hayden	Airport Expansion	N/A	
5	Airport	Ramsey Extension	N/A	
6	Hayden	Lancaster US-95 Interchange	N/A	
7	Hayden	Intersection improvement at Atlas and Boekel	N/A	
8	ITD	Highway 54 improvements align intersections, combine accesses, turn bay evaluation, add signals, and add center turn lanes	N/A	
9	City of CDA	Government Way - Hanley to Prairie - Urban reconstruction	2017	$3,200,000
10	ITD	SH-41 Rathdrum-SH-54 Pavement Preservation	2016	$4,200,000
11	Rathdrum	Meyer Rd and Boekel Rd intersection safety Improvements		
12	Rathdrum	SH-41 and SH-53 School Zone Crossing infrastructure	2015	$67,000
13	Hayden	Install new traffic signal and turn lanes (4 legs)	2020	
14	Hayden	Install new traffic signal and turn lanes (4 legs)	2020	
15	Hayden	Widen Hayden Avenue to 5 lanes from Huetter to Ramsey	2020	
16	Hayden	Install new traffic signal and turn lanes (4 legs)	2020	
17	Hayden	A1 (3-lane from Wyoming to Lancaster)	2020	
18	Hayden	Install new traffic signal and add turn lanes at all legs	2020	
19	Hayden	Install new traffic signal and add turn lanes at all legs	2020	
20	Hayden	Construct S/W on N-side of Prairie, from Ramsey to Marabou	2020	
21	Hayden	C1	2020	
22	Hayden	Signalize Intersection and add turn bays at all legs	2020	
23	Hayden	A1	2020	
24	Hayden	A1	2020	
25	Hayden	C1	2020	

Roadway Network

Functional Classification

In partnership with KMPO and KCATT, LHD participates in collective efforts to update and adopt a county-wide functional classification map. In late 2013, KCATT updated the Federal Functional Classification of roadways within Kootenai County. All recommended changes were submitted to the KMPO Board and approved on December 12, 2013. The proposed updated Federal Functional Classification map will be forwarded to the Idaho Transportation Department for final approval.

LHD maintains a paved road network that contains 13.5 miles of rural minor arterials, 75.2 miles of rural major collectors, 55.4 miles of rural minor collectors, and 118.4 miles of residential/local streets. Each functional classification, as defined by the Federal Highway Administration (FHWA), is described in **Table 6.**

Table 6 – Federal Highway Administration Functional Classification Definitions

Federal Functional Classification	Definition
Rural minor arterial	Link cities and larger towns (and other major destinations such as resorts capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service. Be spaced at intervals, consistent with population density, so that all developed areas within the State are within a reasonable distance of an Arterial roadway. Provide service to corridors with trip lengths and travel density greater than those served by Rural Collectors and Local Roads and with relatively high travel speeds and minimum interference to through movement.
Rural major collector	Provide service to any county seat not on an Arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance such as consolidated schools, shipping points, county parks, and important mining and agricultural areas. Link these places with nearby larger towns and cities or with Arterial routes. Serve the most important intra-county travel corridors.
Rural minor collector	Be spaced at intervals, consistent with population density, to collect traffic from Local Roads and bring all developed areas within reasonable distance of a Collector. Provide service to smaller communities not served by a higher-class facility. Link locally important traffic generators with their rural hinterlands.
Residential/Local streets - Rural	Serve primarily to provide access to adjacent land. Provide service to travel over short distances as compared to higher classification categories. Constitute the mileage not classified as part of the Arterial and Collector systems.

A map showing the current Federal Functional Classifications of roadways within LHD is shown in **Figure 6.**

The Associated Highway Districts of Kootenai County (AHDKC) Road Standards Manual has guidelines for required right-of-way width, access management standards, and roadway standards for each functionally classified roadway. The standard section of each roadway within the LHD should conform to AHDKC standards when feasible. It is recommended that the AKDKC consider developing typical sections for each type of federally functional classified roadway.

Transportation Facilities Inventory

Inter-Modal

Inter-modal transportation includes bus/transit routes, pedestrian and bicycle facilities, van pools, airport facilities, freight and truck traffic (all-weather) routes, and rail facilities, all of which exist within LHD. Various resources used to collect and inventory inter-modal transportation options include:

- The CityLink bus service operated by Kootenai County and the Coeur d'Alene Tribe
- The Coeur d'Alene Airport Manager and Airport Master Plan
- Regional truck and heavy vehicle generating entities, including private enterprises, school districts, and the County Waste Management Department
- The KMPO Non-Motorized Transportation Plan (2009)
- Bridging the Valley Study (2005)

Information, including service areas and routes, was collected from each of these entities to better understand the inter-modal transportation network.

Transit

Public transit in Kootenai County is operated by the Coeur d'Alene Tribe and Kootenai County, and is a complex system due to multiple funding, operations, administration, and planning agencies. Numerous agencies have different demands and goals. Because Kootenai County includes several urban areas and a large rural area, transit demands far exceed transit availability. Currently, there are no fixed transit operation routes within LHD (outside of City boundaries). Paratransit service is the only transit service available to residents in LHD. Kootenai Health provides paratransit service to elderly patients and low income residents on an as-needed basis.

Existing fixed transit routes within urbanized areas are anticipated to extend into LHD in the future due to growing demands at KTEC. The KTEC facility is a large employer that offers classes to high school students and work force training students, thus has a high demand for public transit. Future service to KTEC was identified in the KMPO Non-Motorized Transportation plan through the public outreach process.

Bike and Pedestrian Facilities

Bike and pedestrian facilities were inventoried using the 2009 KMPO Non-Motorized Regional Transportation Plan (KNMRTP). The plan identifies existing and future priority bike and pedestrian facilities throughout Kootenai County. Because of the extensive public involvement process for the KNMRTP, the priority network projects identified in the KNMRTP were compared to those non-motorized projects identified within the public involvement process for this Transportation Plan. **Table 7** summarizes this comparison. **Figure 7** shows the locations of existing bike and pedestrian facilities and future bike and pedestrian facilities planned by the KMPO that also received public support during the LHD public involvement process. Additional priorities identified in **Table 7** should be considered during

future reviews and updates of this plan. The KMPO plan can be viewed by visiting their website at www.kmpo.net, and the Non-Motorized Priority Network map is available in **Appendix B**.

Due to the large number of future bicycle and pedestrian projects identified in the KNMRTP and LHD Transportation planning process, projects that overlap between the two efforts are listed as a higher priority. Future bike and pedestrian projects should be designed to meet Americans with Disabilities Act (ADA) accessibility standards and American Association of State Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* (Green Book) guidelines whenever possible.

Airport Facilities

The Coeur d'Alene Airport is currently designed as a public use general aviation airport operated by an Airport Board appointed by the Kootenai County Commissioners. The airport has a significant impact on other modes of transportation in the area; therefore, the airport and regional jurisdictions affected by any airport expansions should work together to develop transportation improvements that meet the needs of all users. In 2012, the Coeur d'Alene Airport released its new Master Plan. According to the Airport Master Plan, the airport is expected to extend the runway within the next ten years, which could potentially affect the future Ramsey Road Extension Project (multi-jurisdictional project[1]) and Huetter Road Bypass Project (ITD project). Both of these projects are located on major north/south connectors that affect the LHD transportation network.

The nearest commercial airport to Lakes Highway District is the Spokane International Airport located in Spokane, Washington.

All-Weather Truck Routes

LHD is a unique jurisdiction because of multiple State routes that provide connectivity for heavy vehicles throughout the District. Standard roads in LHD have weight limits during the spring thaw, restricting trucks with heavy loads from using those routes. All-weather truck routes provide year-round hauling routes for businesses. These routes provide access to and from industrial sites, mills, retail sites, and waste management pickup locations year-round. Major stakeholders with interest in truck routes include the Idaho Forest Group, Kootenai County Waste Management, the Coeur d'Alene Airport, and local farmers. Through public outreach efforts, these stakeholders indicated that existing all-weather facilities are used but indicated load limits constrain their hauling, especially in the area of Chilco, Ramsey, and Diagonal. Existing and future developments may trigger the need for additional all-weather truck routes around the District. Existing all-weather truck routes are shown in **Figure 8**.

[1] *Ramsey Road Extension is a multi-jurisdictional project that includes Lakes Highway District, City of Hayden and the Coeur d'Alene Airport and the Kootenai Metropolitan Planning Organization.*

Table 7 – Future Bicycle and Pedestrian Priorities

Priorities	Description	Identified in KMPO Plan	Identified in LHD Outreach
Rathdrum-Spirit Lake-Athol-Hayden Connection	Dedicated non-motorized facilities on Rimrock Rd. from Lancaster Rd. to Ohio Match Rd.; on Ohio Match Rd. from Rimrock Rd. to Ramsey Rd.; on Ramsey Rd. from Ohio Match Rd. to Brunner Rd.; on Brunner Rd./Bunco Rd. from Ramsey Rd. to Good Hope Rd.; on Good Hope Rd. from Bunco Rd. to SH-54; on SH- 54 from Good Hope Rd. to SH-41; On SH-41 from SH-53 to SH-54; on Scarcello Rd. from SH-41 to Ramsey Rd.	✓	✓
Post Falls-Coeur d'Alene Connection – Burlington Northern Santa Fe (BNSF) Rail-to-Trail Conversion	Dedicated non-motorized facilities from Greensferry Rd. to the Prairie Trail.	✓	✓
Rathdrum-Post Falls Connection – Meyer Rd.	Dedicated non-motorized facilities from Prairie Ave. to SH-53.	✓	✓
Rathdrum-Post Falls Connection - SH-41	Dedicated non-motorized facilities from Hwy. 53 to Maplewood Ave.	✓	
Rathdrum-Hayden Connection – Lancaster Rd.	Dedicated non-motorized facilities from SH-41 to US-95	✓	
Post Falls-Coeur d'Alene Connection – Maplewood Ave.	Dedicated bike facilities from Ross Point to Huetter Rd.	✓	
Atlas Trail	Dedicated non-motorized facilities from Masters Dr. to the BNSF railroad.	✓	
Regional Trail	Development of a trail between Mount Spokane and Spirit Lake.	✓	
Bicycle Lane Projects	Add on to one-way bike lanes so that a lane is offered on both sides of the street thus reducing bicycle conflicts.	✓	
Spirit Lake Bike Lanes	Consider bike lanes around Spirit Lake.		✓
Address ADA accessibility		✓	✓
Consider bike lanes on Hayden Lake Rd.			✓
Build more bike paths on busier roads			✓
Add pedestrian-separated bike facilities or pathway system on arterials and collectors	Include bike paths on Ramsey, Atlas, and Diagonal – paving these roads increased speeds and reduced safety.		✓
Add Centennial Trail along US-95	Consider improving bike/ped trail on US-95 through entire district.		✓
Pave wider sections for bikes			✓
Consider complete street requirements in plans			✓
Plan for trails			✓
Consider flexible design standards for trails			✓
Require pathways on new developments and bus pull out locations			✓

Source: KMPO Non-Motorized Regional Transportation Plan and Lakes Highway District Transportation Plan Public Involvement Process

Figure 6 – LHD Functional Classification Map

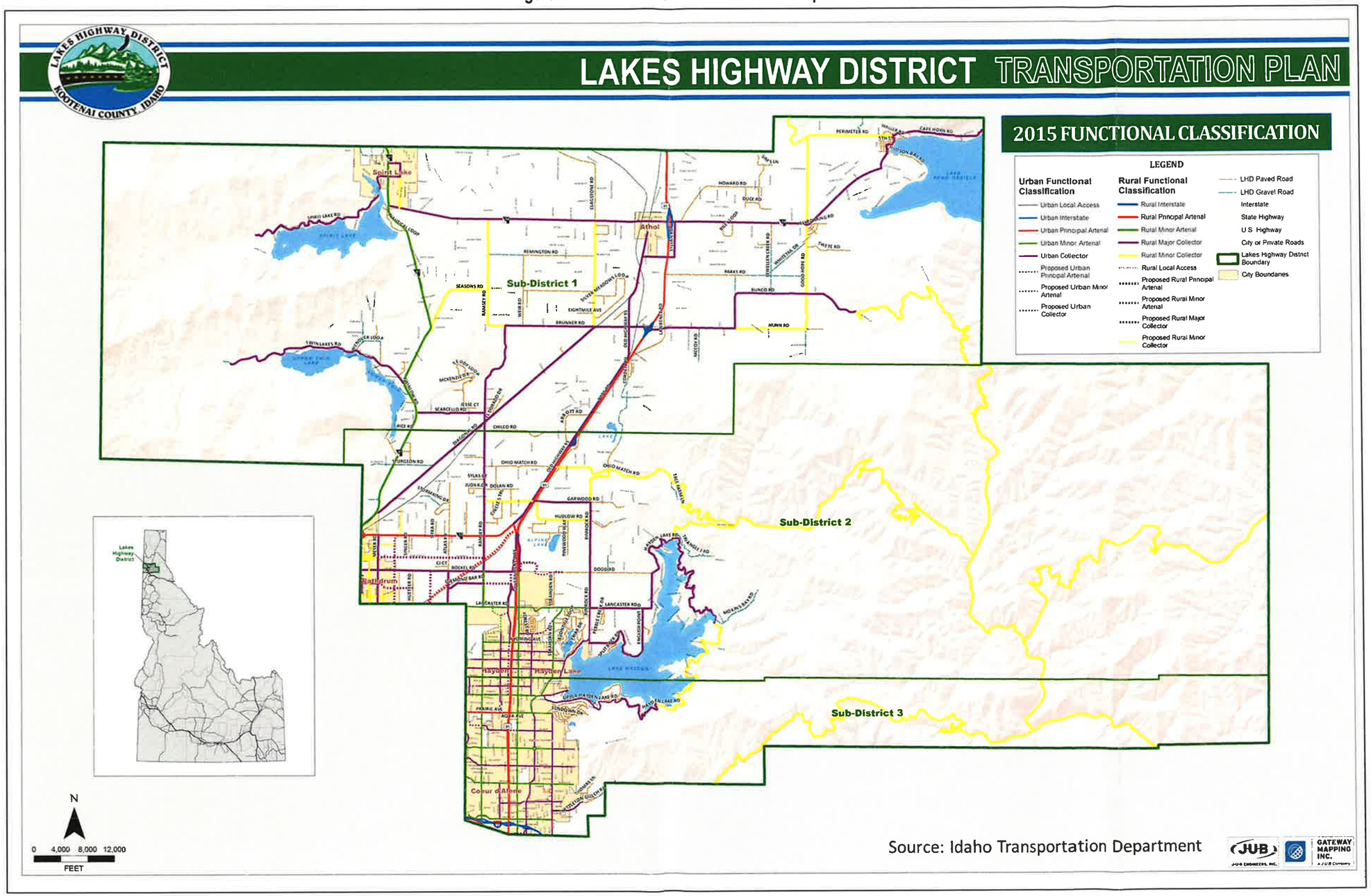


Figure 7 – KMPO Existing Bike and Pedestrian Facilities

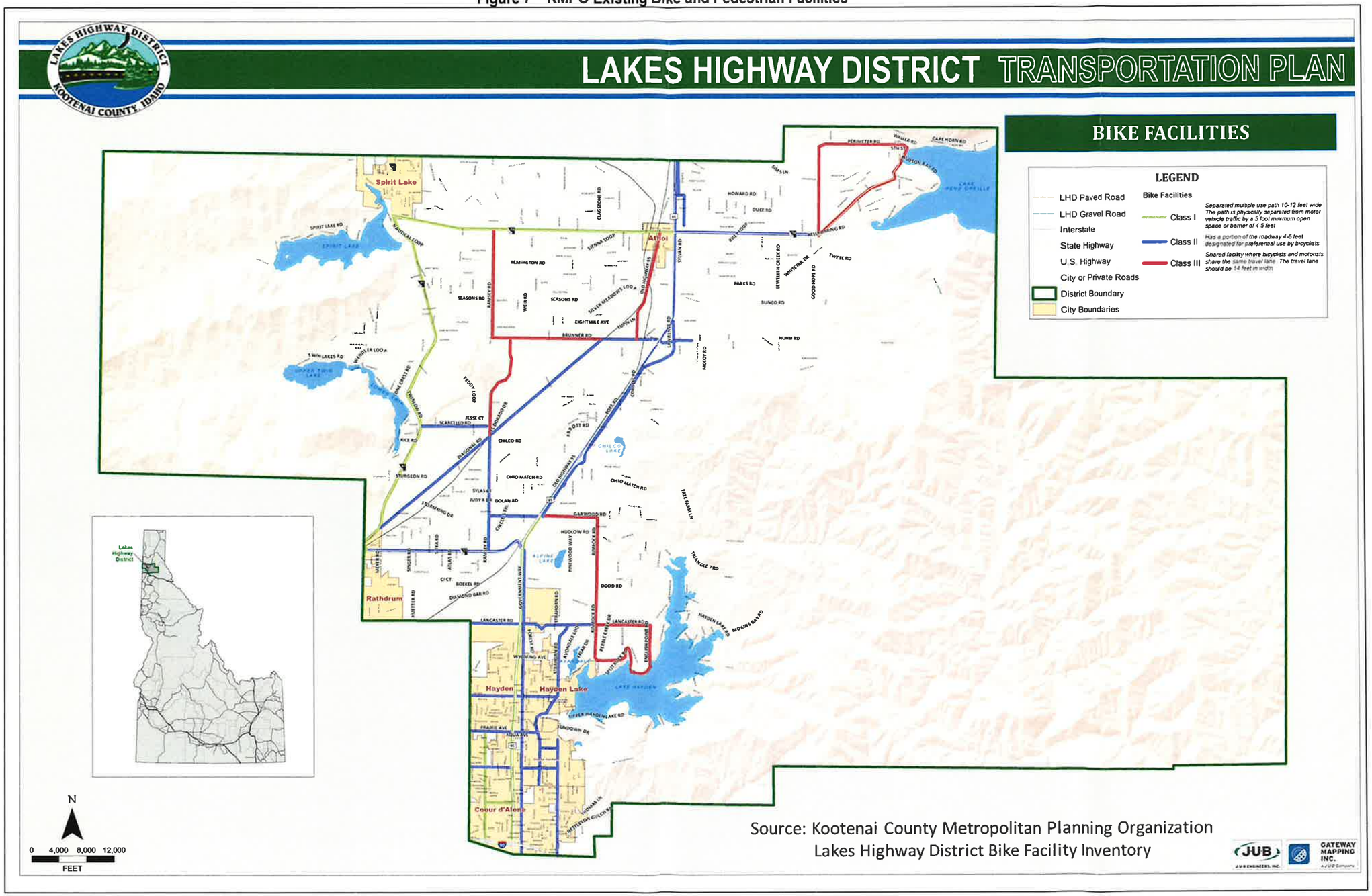
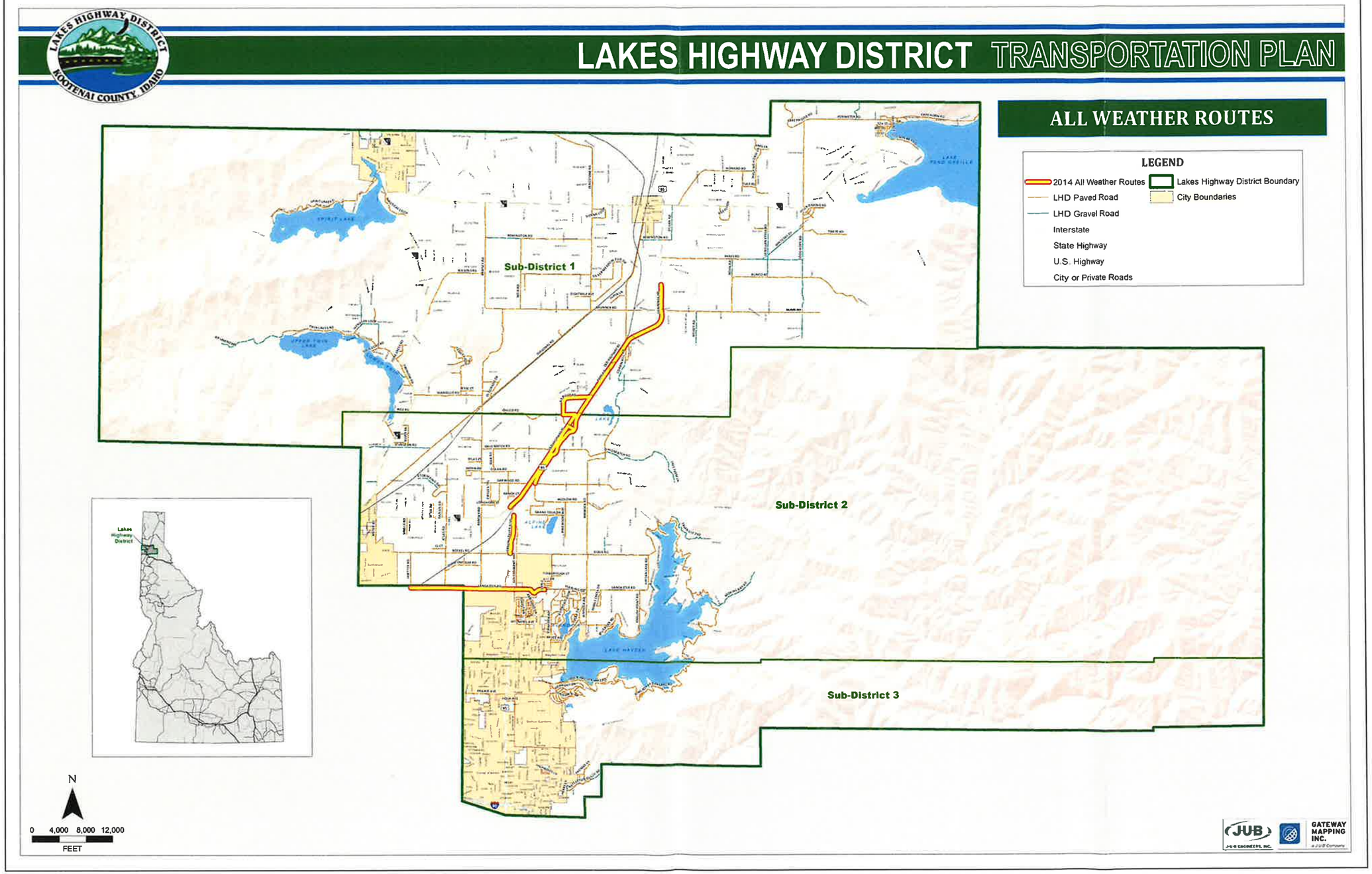


Figure 8 – Lakes Highway District Existing All-Weather Routes



Rail

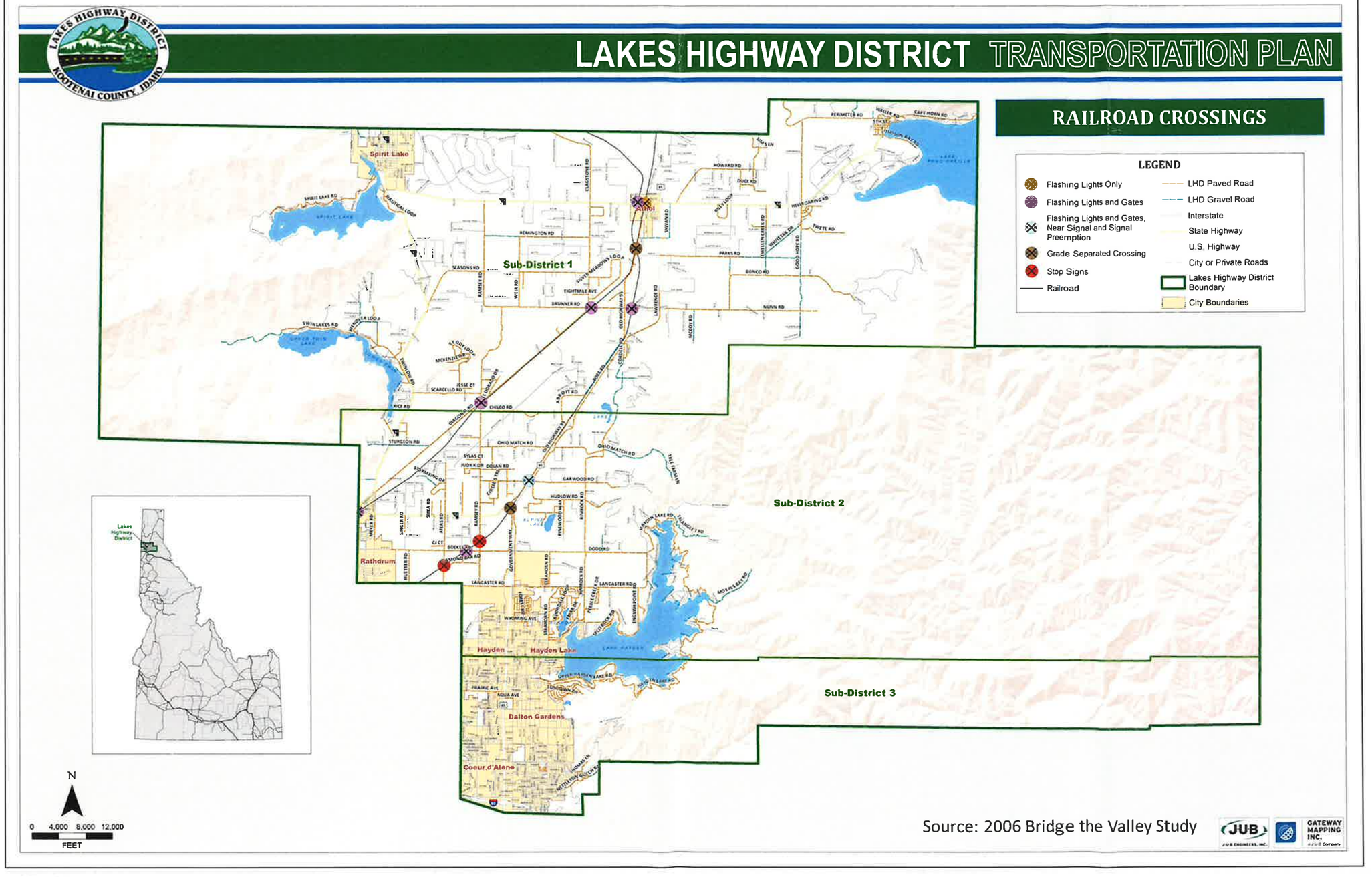
Several active and non-operational rail lines transect the LHD roadway network. These rail lines are operated by Burlington Northern Santa Fe (BNSF) and Union Pacific Railroad (UPRR), and are typically used for the movement of goods. Trains often impact vehicle traffic flow and safety within the District. The train tracks generally run from the southwest in a northeasterly direction, parallel to Diagonal Road and US-95. There are 11 at-grade crossings and three grade-separated crossings within LHD's boundary. In 2004-2005, the Bridging the Valley Transportation Study[2] was developed to identify railroad crossings needing improvements, but no funding sources have been identified to implement these improvements. The crossing treatments planned at each of the crossings within LHD (as stated in the Bridge the Valley Study) are summarized in **Table 8**. Railroad crossing locations within LHD are shown in **Figure 9**.

Table 8 – Railroad Crossings Treatment Summary

Intersecting Road	Rail Operator	Existing Infrastructure	Planned Improvement	Identified in Bridging the Valley	Identified in LHD Planning
Ramsey Rd	BNSF	Flashing Lights and Gates	Grade Separations to be Constructed	✓	
Brunner Rd	BNSF	Flashing Lights and Gates	Grade Separations to be Constructed	✓	
SH-54	BNSF	Flashing Lights and Gates	No Planned Improvements		
SH-54	UPRR	Flashing Lights Only	Grade Separations to be Constructed	✓	
Atlas Rd	UPRR	Stop Signs	No Planned Improvements		
Boekel Rd	UPRR	Flashing Lights and Gates	No Planned Improvements		
Ramsey Rd	UPRR	Stop Signs	Flashing Lights and Gates		✓
SH-53	UPRR	Grade Separated Crossing	No Planned Improvements		
Garwood Rd	UPRR	Flashing Lights and Gates	No Planned Improvements		
Chilco Mill	UPRR	Grade Separated Crossing Installed as part of US-95 Widening	No Planned Improvements		
Chilco Rd	UPRR	Crossing removed during US-95 improvements	Crossing removed during US-95 improvements		
Brunner Rd	UPRR	Flashing Lights and Gates	No Planned Improvements		
Ohio Match Rd	UPPR	Crossing Removed	No Planned Improvements		

[2] *Bridging the Valley Presentation* - http://www.wsdot.wa.gov/NR/rdonlyres/DB8A3442-C64B-4408-9C5F-2A0653A3D905/0/Q2BTVPresentationPlanningsymposium.pdf *(Page 14)*

Figure 9 – Lakes Highway District Railroad Crossings



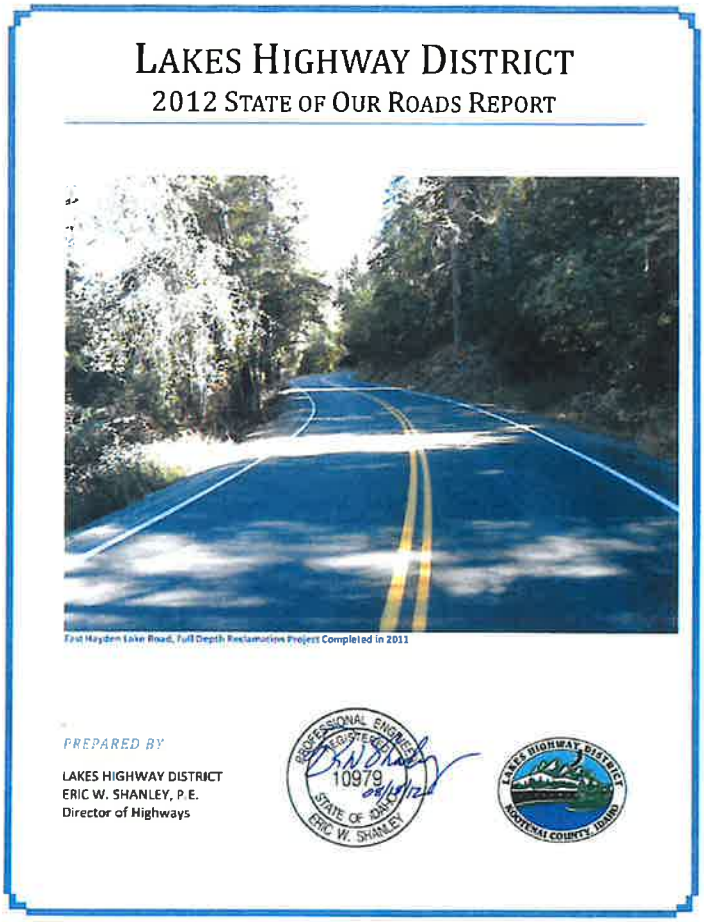
Source: 2006 Bridge the Valley Study

Pavement Management, Bridge, and Sign Inventory

Pavement Management

In 2012, LHD completed a *State of Our Roads Report*[3] (**Figure 10**), which was an update to the 2011 Pavement Management Plan. This report, with regular updates approximately every three years, is considered the pavement management portion of this Transportation Plan. From this study, the average remaining service life (ARSL) for the entire road network was estimated to be 17 years, up from the 2010 estimate of 14 years.

Figure 10 – 2012 LHD Road Report

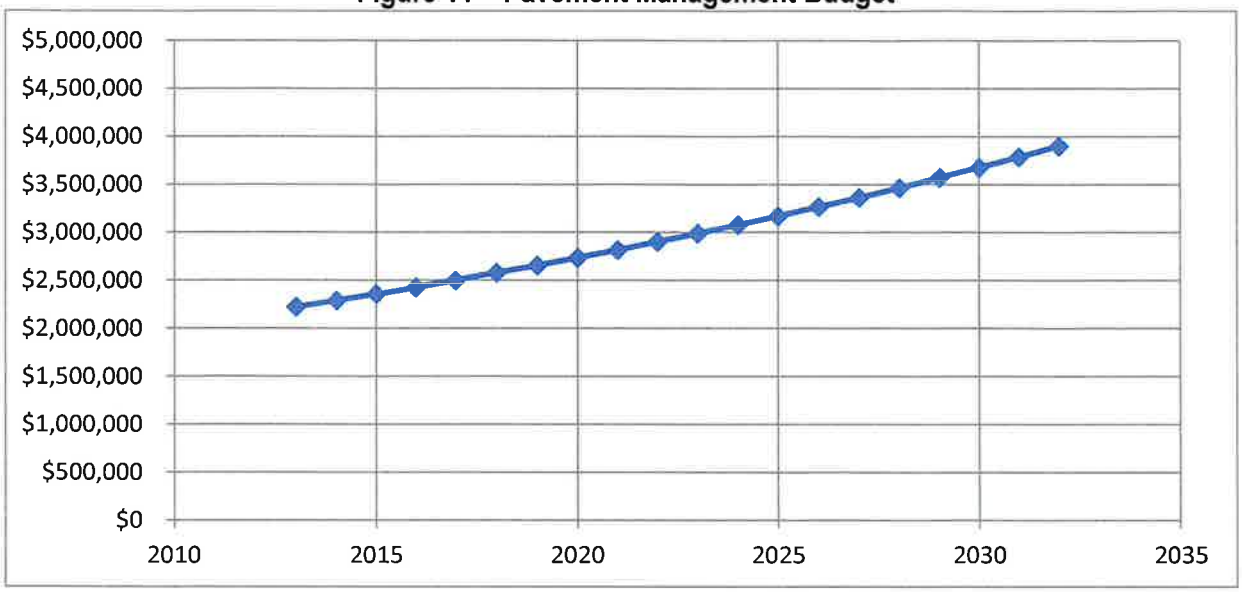


Roadway conditions were analyzed using visual inspection and distress ratings. The District has 255 centerline miles of roads that were analyzed in accordance with the Metropolitan Transportation Commission (MTC) guidelines. Results of the comprehensive analysis were then imported into the District's *Streetsaver* program.

It is important to not only analyze pavement condition but also cost of materials and treatments to allow LHD to develop a realistic budget and plan for improvements. LHD reviews and updates these elements within the *Streetsaver* program. A budgetary needs analysis was conducted based on the updated inspections and revised material and project costs. For a comprehensive analysis, six budget scenarios were evaluated to compare the effects of various funding levels. To continue optimizing the quality of roads throughout the road network, it is anticipated the District needs to allocate $2,225,000 annually towards maintaining existing roads. The LHD annual maintenance budget may need to be increased to keep up with rising material costs and inflation. **Figure 11**, derived from data in the *State of our Roads Report,* shows LHD's long-term budget goals to keep up with rising costs, maintaining roads, and maintaining an acceptable remaining service life. Inflation over this time period was estimated at 3.0 percent.

[3] *Lakes Highway District - State of Our Roads Report*

Figure 11 – Pavement Management Budget



The District's overall remaining service life of roads is based on the condition of existing roads and a series of analysis to consider appropriate to maintain or upgrade their roads with the software and engineering judgment.

Bridge Inventory

All bridges in Idaho greater than 20 feet in length are inspected on a regular basis under Idaho's Bridge Inspection Program. The National Bridge Inventory (NBI) includes a complete list of each bridge and its condition. Each bridge structure is given a sufficiency rating based on the findings on the last inspection. Bridge structures within LHD were reviewed to determine potential bridge repair and/or replacement projects based on sufficiency rating and AADT.

The NBI database describes a bridge sufficiency rating as, "... an overall rating of a bridge's fitness for the duty that it performs based on factors derived from over 20 data fields, including fields that describe the structural evaluation, functional obsolescence, and its essentiality to the public. A low sufficiency rating may be due to structural defects, narrow lanes, low vertical clearance, or any of many possible issues."[4] When a bridge's sufficiency rating falls below 50 percent, it qualifies for Federal Aid bridge funding for replacement, and when a bride falls below 75 percent it qualifies for rehabilitation funding.

LHD is responsible for the maintenance of four bridge structures. The four bridges maintained by LHD have sufficiency ratings ranging from 61.5 to 86.7 percent, with two listed as structurally deficient—UPRR/Old 95 near Athol and Hayden Lake Road/Yellowbanks Creek. The UPRR/Old 95 bridge has the highest AADT and the lowest sufficiency rating within the District. An Inventory of LHD bridges, sufficiency rating, AADT, and year built are shown in **Table 9.** Bridge locations are shown on **Figure 12**. Each Bridge Inventory Sheet, which includes material design, length, design, and status, is available in **Appendix C.**

[4] *National Bridge Inventory*

Table 9 – Bridge Inventory Summary

Location	Sufficiency Rating	2012 AADT	Year Built
Old US-95 and UPRR (Athol)	61.5%	1,700	1929
Hayden Lake Road/Yellowbanks Creek	74.5%	220	2003
Hayden Lake Rd/Hayden Creek	80.5%	220	1987
Spirit Lake Road/ Spirit Lake Causeway	86.7%	260	1983

Source: National Bridge Inventory database

Sign Management

Sign Management Introduction

Public agencies or officials having jurisdiction shall use an assessment or management method that is designed to maintain sign retro-reflectivity at or above the minimum levels as listed in the Manual on Uniform Traffic Control Devices (MUTCD) standards Section 2A.22. In addition to bringing signs up to MUTCD standards to improve nighttime sign visibility, warning and regulatory signs and posts should be evaluated for overall condition to determine if replacement is necessary.

Sign Inventory and Condition Assessment

The District manages the sign inventory using iWorQ software. LHD maintains signs on a 3-year rotation, inventorying and assessing the condition of one third of the signs annually. As shown in **Table 10**, LHD is responsible for maintaining approximately 2,698 signs. The sign inventory indicates that approximately 5.0 percent of the District's signs have a condition of fair or worse. It is recommended that these signs be replaced to meet the MUTCD retro-reflectivity standards as funding allows.

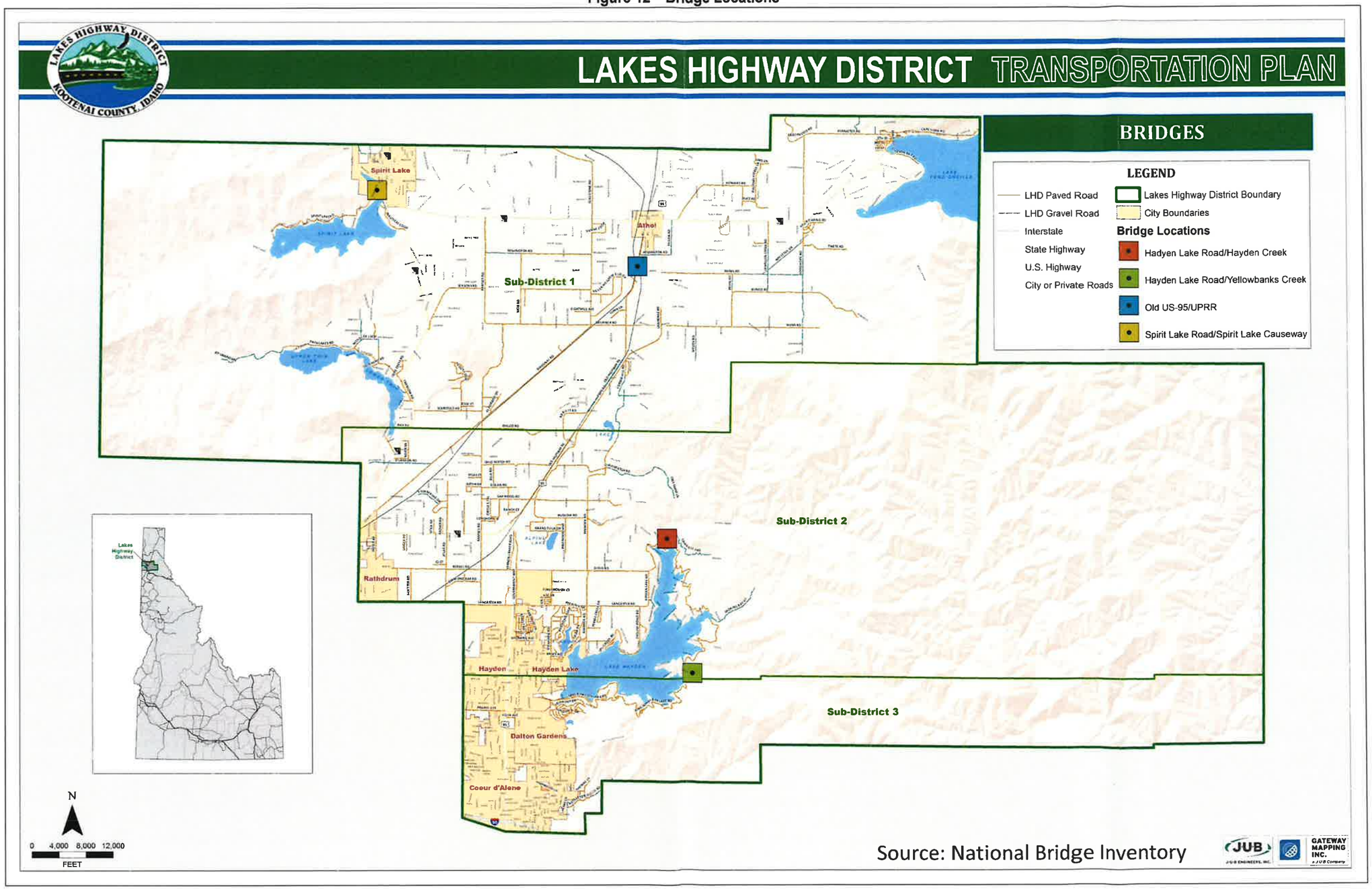
Table 10 – Sign Inventory Summary

Type of Sign	Condition							Total Number of Signs
	Excellent	New	Good	Fair	Missing	Poor	Replace	
Milepost/Street Name	1	31	610	15	5	5	10	677
Miscellaneous/Other		44	164	5	5	2		220
Object Marker		3	42	2				47
Regulatory	1	51	748	25	8	2		835
Warning		43	823	45	7	3		921
Total Number of Signs	2	172	2,387	92	25	12	10	2,700

Source: iWorQ; LHD

It is recommended that LHD apply for a grant through the Local Highway Assistance Council (LHTAC) through the Local Rural Highway Investment Program (LRHIP) to bring signs up to MUTCD standards.

Figure 12 – Bridge Locations



Roadway Capacity Analysis

Introduction

There are several methods to evaluate capacity within the roadway network system. These methods include looking at service levels at various points or intersection configurations (traffic signal, 2-way stop-controlled, roundabout, etc.), road segments, facilities, areas, corridors, etc. The Highway Capacity Manual (HCM) defines capacity as, "...the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions."[5] It is important to evaluate capacity issues to discover which intersections and segments within the District are currently operating below reasonable expectations and/or are expected to decline in the future.

The current and future LHD traffic network model (developed by the KMPO) was studied and analyzed to select three hot spot intersections and three hot spot segments that are expected to operate below a reasonable level of service (LOS) now or in the future. These hot spots were studied to develop potential solution sets to increase capacity.

Intersection Capacity Analysis

Intersection Level of Service Overview

LOS is a traffic engineering term used to describe the quality of traffic flow. It ranges from the most optimum level, LOS A, which represents little or no delay, to the lowest or worst level, LOS F, consisting of extreme delay and congestion. **Figure 13** shows typical LOS scenarios at intersections and **Table 11** defines LOS A-F.

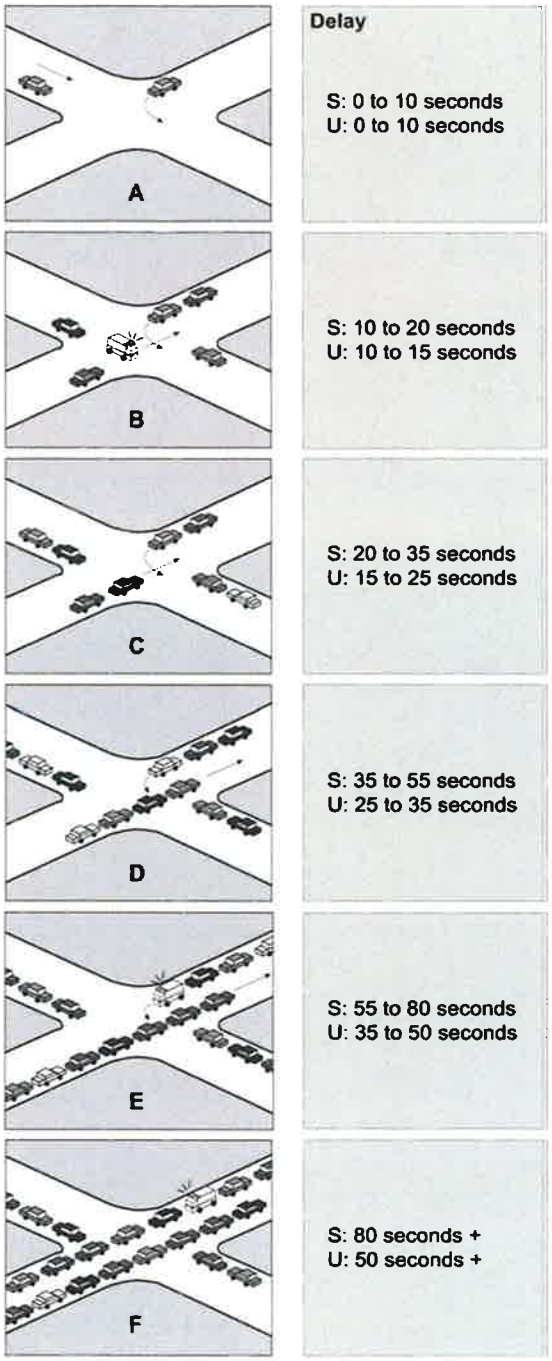
Table 11 – Level-of-Service Descriptions [6]

Level of Service	Description
A	Free-flow operations at posted speed limit, vehicles are unimpeded by maneuvering within traffic stream.
B	Relatively unimpeded at posted speed limit, only slightly restricted maneuvering within traffic stream.
C	Relatively stable traffic operations, more restricted maneuvering at mid-block locations than LOS B, individual cycle failures at traffic signals may begin to appear.
D	Small increases in traffic flow may cause substantial delay and decrease in travel speed.
E	Poor travel speeds with slow progression and high delay.
F	Extremely slow travel speeds with queues forming behind breakdowns; brief periods of movement are followed by stoppages, considered unacceptable by most drivers.

[5] *Highway Capacity Manual (2010)*

[6] *Source: Highway Capacity Manual (HCM) 2010, Transportation Research Board (TRB) National Research of the National Academies, Washington, DC*

Figure 13 – Intersection LOS



S: Signalized U: Unsignalized

Intersection Level of Service

The KMPO Metropolitan Transportation Plan[7] (2010-2035) was reviewed to identify intersections with high volume-to-capacity (v/c) ratios. After identifying intersections with high v/c ratios, LHD staff selected two intersections with high v/c ratios and one intersection identified through public input for further evaluation. PM peak-hour turning movement volumes were collected in 2014 at these hot spot locations shown in **Figure 14** and listed below:

- SH-41 and Diagonal Road
- SH-41 and Scarcello Road
- SH-41 and Twin Lakes Road

Linear growth rates were calculated using the 2014 and 2035 KMPO travel model outputs for each intersection.

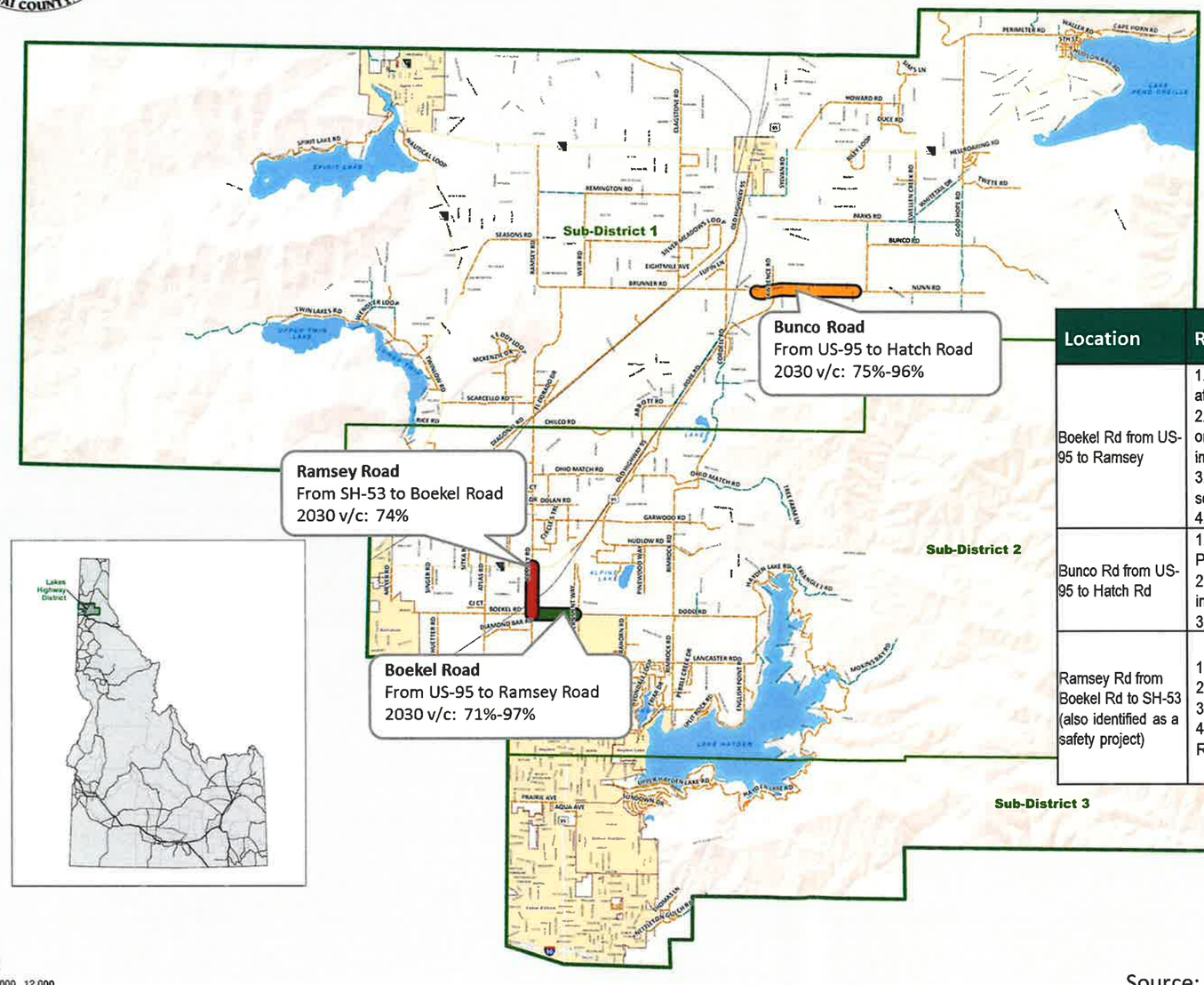
Table 12 summarizes the v/c ratio, annual growth rate, and the LOS analysis results for the selected intersections. Growth rates for the intersection analysis were calculated using the KMPO 2014 and 2035 travel model outputs for each intersection.

Other intersections identified in the KMPO plan with high v/c ratios are summarized in **Appendix B**.

[7] KMPO - http://www.kmpo.net/MTP.html (Sections 3 and 4)

Figure 14 – Intersection Hot Spot Locations

LAKES HIGHWAY DISTRICT TRANSPORTATION PLAN



SEGMENT HOT SPOTS

LEGEND

- LHD Paved Road
- LHD Gravel Road
- Interstate
- State Highway
- U.S. Highway
- City or Private Roads
- Lakes Highway District Boundary
- City Boundaries

Segment Hot Spots

- Boekel - US-95 to Ramsey
- Bunco - US-95 to Hatch
- Ramsey - SH-53- Boekel

Location	Recommended Improvements	Justification
Boekel Rd from US-95 to Ramsey	1. Consider signal or intersection improvements at US-95 and Boekel 2. Consider adding lanes to Boekel to become 3 or 4 lane road or adding turn lanes near intersection of Boekel and Ramsey. 3. Improve lighting at intersections or along segment 4. Consider reduced speed limits on segment	Crash Characteristics (rear end, left turning movement conflicts) High v/c Functionality does not align with use Multiple Accesses High Speed
Bunco Rd from US-95 to Hatch Rd	1. Consider adding two-way left turn lane east of Pope on 2-lane road 2. Consider adding turn lanes/turn bays near intersections 3. Add thru lanes depending on volume.	Multiple Accesses Narrow Roadway, Near Silverwood
Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	1. Consider grade separation at railroad crossing 2. Consider improved lighting at intersections 3. Consider turn lanes/turn bays at intersections 4. Consider widening to 4 lanes for future Ramsey extension project	Traffic Flow Interruptions Multiple Accesses High Severity Crashes 3 Fatalities

Source: KMPO

JUB ENGINEERS, INC. GATEWAY MAPPING INC.

Table 12 – Intersection Hot Spot LOS Analysis (PM Peak Hour)

Intersection	Approach	v/c Ratio From KMPO Model	Average Annual Growth Rate	Movement	LOS 2014	LOS 2035 *No-Build*	LOS 2035 *Build*	LOS 2035 *Signalized*
SH-41 Diagonal Road	NB[A]	N/A	1.35%	Through, Right	A	A	A	N/A
	SB[B]			Left	A	B	B	
	WB[C]			Left	D	F	C	
SH-41 Scarcello Road	NBA	83.8%	1.33%	Left	A	A	A	Overall LOS B
	SB[B]			Left	A	A	A	
	EB[D]			Left, Through, Right	D	F	F	
	WB[C]			Left, Through, Right	C	F	C	
SH-41 Twin Lakes Road	NB[A]	84.5%	1.34%	Left	A	A	A	N/A
	SB[B]			Through, Right	A	A	A	
	EB[D]			Left	B	B	B	

[a] *NB – Northbound; [B]SB – Southbound; [C]WB – Westbound; [D]EB – Eastbound*
Source: J-U-B ENGINEERS, Inc.; KMPO Metropolitan Transportation Plan

The results of this LOS analysis are summarized as follow:

- **SH-41 and Diagonal Road** - The movement with the lowest LOS (westbound approach) at SH-41 and Diagonal Road is currently operating at a LOS D and is forecasted to operate at a LOS F in 2035 with no changes to the existing intersection. Due to this negative result, a scenario was developed with a 2-way left turn lane (TWLTL) on SH-41 through the intersection. This improvement would result in a LOS C at this intersection in 2035.
- **SH-41 and Scarcello** - The movement with the lowest LOS (eastbound approach) at SH-41 and Scarcello Road is currently operating a LOS D and is forecasted to operate at a LOS F in 2035 with no changes to the existing intersection. Due to this negative result, two scenarios were developed and analyzed, including:
    - Turn lane improvements for westbound left, westbound right, eastbound left, and eastbound right movements on Scarcello Road and Village Boulevard.
    - A signal at the intersection to improve the LOS for each movement to LOS D or better. This improvement would result in an overall LOS of B.

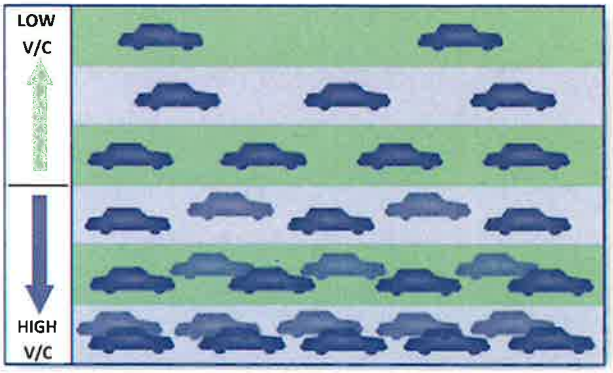
  The District may consider aligning Scarcello Road and Village Boulevard as part of implementing either of these future improvements.
- **SH-41 and Twin Lakes Road** - The movement with the lowest LOS (eastbound approach) at SH-41 and Twin Lakes Road is currently operating a LOS B and is forecasted to operate at a LOS B in 2035 with no changes to the existing intersection. This is considered acceptable; therefore, no improvement scenarios were developed.

Segment Capacity Analysis

Segment V/C Overview

For segment analysis, v/c ratios were evaluated for capacity. **Figure 15** shows a typical representation of low v/c roads ranging to high v/c roads. On a road with a low v/c ratio, vehicles can travel at free flow speeds with little to no interruptions or delays. A road with a high v/c ratio typically experiences reduced speeds and significant delays.

Figure 15 – Segment V/C Ratio Diagram [8]



Segment Level of Service

The KMPO Metropolitan Transportation Plan[9] (2010-2035) was reviewed to identify segments in LHD that are expected to operate with a high v/c by 2030. Once these segments were identified, LHD selected three segments to be further analyzed. For this analysis, it was assumed that any location expected to operate with a high v/c in 2030 would operate at a higher v/c by 2035; therefore, recommended improvements would lower the v/c ratio. The selected hot spot segments and the AM and PM Peak Hour v/c ratios are shown in **Table 13** and **Figure 16**.

Table 13 – Segment Hot Spot Locations and V/C Ratios

Location	AM Peak Hour V/C Ratio (%)	PM Peak Hour V/C Ratio (%)
Boekel Rd from US-95 Ramsey Rd	71-77	71-97
Bunco Rd from Hatch to US-95	96	75-94
Ramsey Rd from Boekel Rd to SH-53	N/A	74

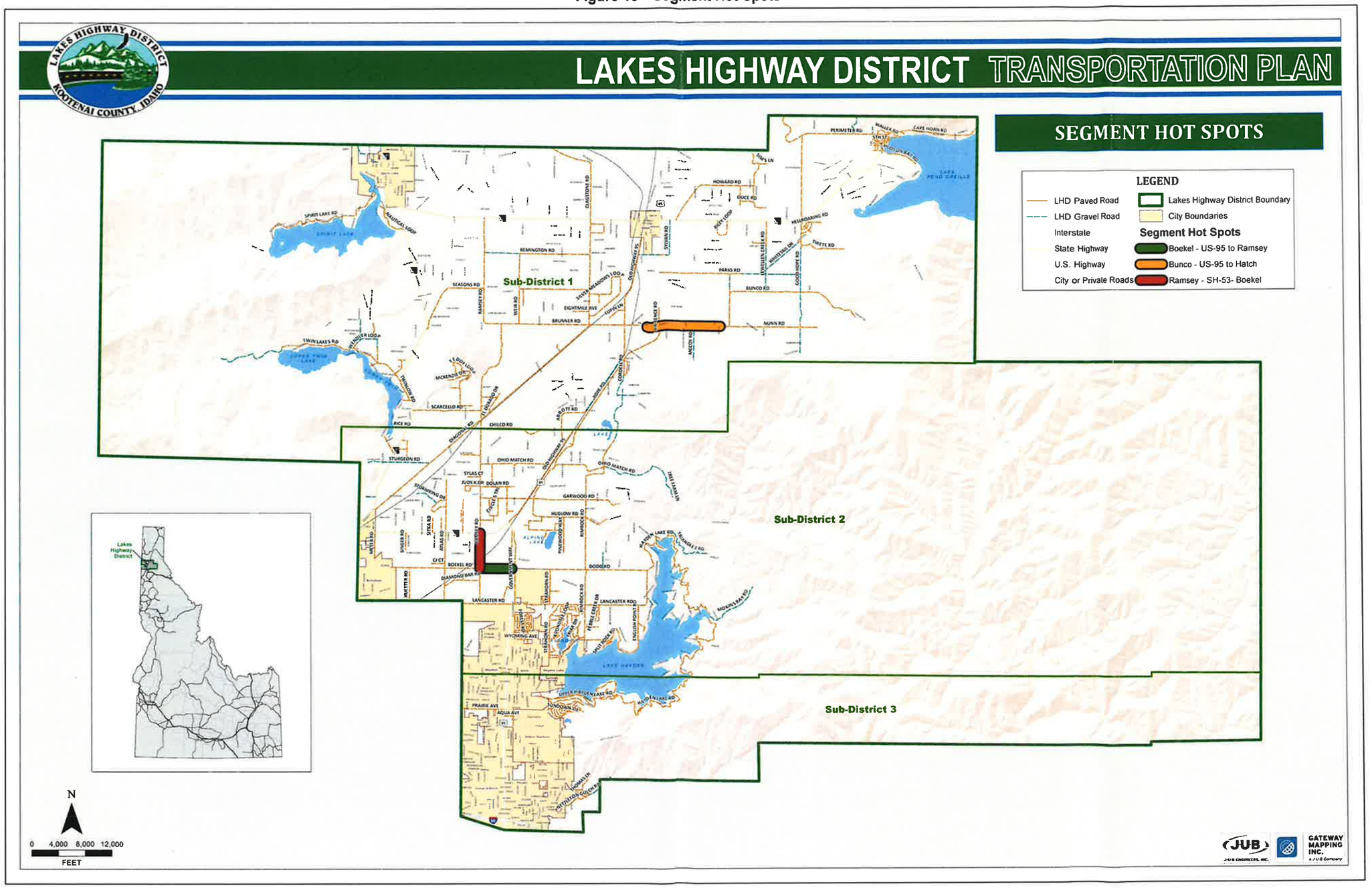
Source: KMPO Metropolitan Transportation Plan

Recommendations to improve the v/c ratio for these segments are discussed in the Capital Improvement Program section of this Transportation Plan.

[8] *Clarksville Smart Growth - http://www.clarksvillesmartgrowth.com/Sec3-TransportationAnalysis.htm*

[9] *KMPO - http://www.kmpo.net/MTP.html (Sections 3 and 4)*

Figure 16 – Segment Hot Spots



Safety Analysis

Crash Analysis Methodology

The methodology recommended in the Transportation Investment Generating Economic Recovery (TIGER) Resource Guide was used to analyze the crash data within LHD. The value of crashes was monetized according to the maximum Abbreviated Injury Scale (AIS). In order to monetize the data, it was converted from the typical law enforcement scale referred to as KABCO (**K**, Kill (Fatal[10]); **A**, Injury A[11]; **B**, Injury B[12]; **C**, Injury C[13]; **O**, Property Damage Only[14]) to the AIS scale. A comparison of the AIS scale to the KACBO scale is show in **Table 14.**

Table 14 – KABCO and AIS Scale Comparison

Reported Accidents (KABCO)		Reported Accidents (AIS)	
O	No Injury (Property Damage Only)	0	No Injury
C	Possible Injury	1	Minor
B	Non-Incapacitating	2	Moderate
A	Incapacitating	3	Serious
K	Killed (Fatal)	4	Severe
U	Injured (Severity Unknown)	5	Critical
		6	Survivable

The National Highway Traffic Safety Administration (NHTSA) developed the conversion matrix shown in **Table 15** that allows crashes reported in KABCO to be converted to the AIS scale. Each column of the conversion matrix represents a probability distribution of the different AIS-level injuries that are statistically associated with a corresponding KABCO-scale injury.

[10] *Fatal Injury (Death) – Any injury that results in the death of a person within 30 days of the crash in which the injury was sustained.*

[11] *Injury A - Serious Injury (Incapacitating Injury) – Any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred.*

[12] *Injury B - Visible Injury (Non-incapacitating, Evident Injury) – Any injury, other than a fatal injury or incapacitating injury, which is evident to observers at the scene of the crash in which the injury occurred.*

[13] *Injury C - Possible Injury – Any injury reported or claimed which is not a fatal injury, incapacitating injury, or non-incapacitating, evident injury.*

[14] *Property Damage Only – All reportable crashes that do not meet the criteria above.*

Table 15 – Statistical Conversion Factors for KABCO to AIS Conversion

AIS Scale	Crash Cost	Fatal (Killed)	A (Incapacitating)	B (Non-Incapacitating)	C (Possible Injury)	O (No Injury)
		Statistical Factors	Statistical Factors	Statistical Factors	Statistical Factors	Statistical Factors
AIS-0	$ -	0.00000	0.03437	0.08347	0.23437	0.92534
AIS-1	$ 27,600.00	0.00000	0.55449	0.76843	0.68946	0.07257
AIS-2	$ 432,400.00	0.00000	0.20908	0.10898	0.06391	0.00198
AIS-3	$ 966,000.00	0.00000	0.14437	0.03191	0.01071	0.00008
AIS-4	$ 2,447,200.00	0.00000	0.03986	0.00620	0.00142	0.00000
AIS-5	$ 5,455,600.00	0.00000	0.01783	0.00101	0.00013	0.00003
Fatality	$ 9,200,000.00	1.00000	0.00000	0.00000	0.00000	0.00000

To summarize the conversion table, if a crash was reported on the KABCO scale to be an Injury A (Incapacitating Injury), there is a 3.986 percent probability that the crash was severe (AIS-4), but there is a 55.449 percent probability that the crash resulted in a minor injury (AIS-1) and a 20.908 percent probability that the crash resulted in a moderate injury (AIS-2), and so on. The Guidance on Treatment of Economic Value of a Statistical Life in US Department of Transportation Analyses developed a table with the Value of a Statistical Life in relation to the AIS scale. A summary of the guidance is shown in **Table 16.**

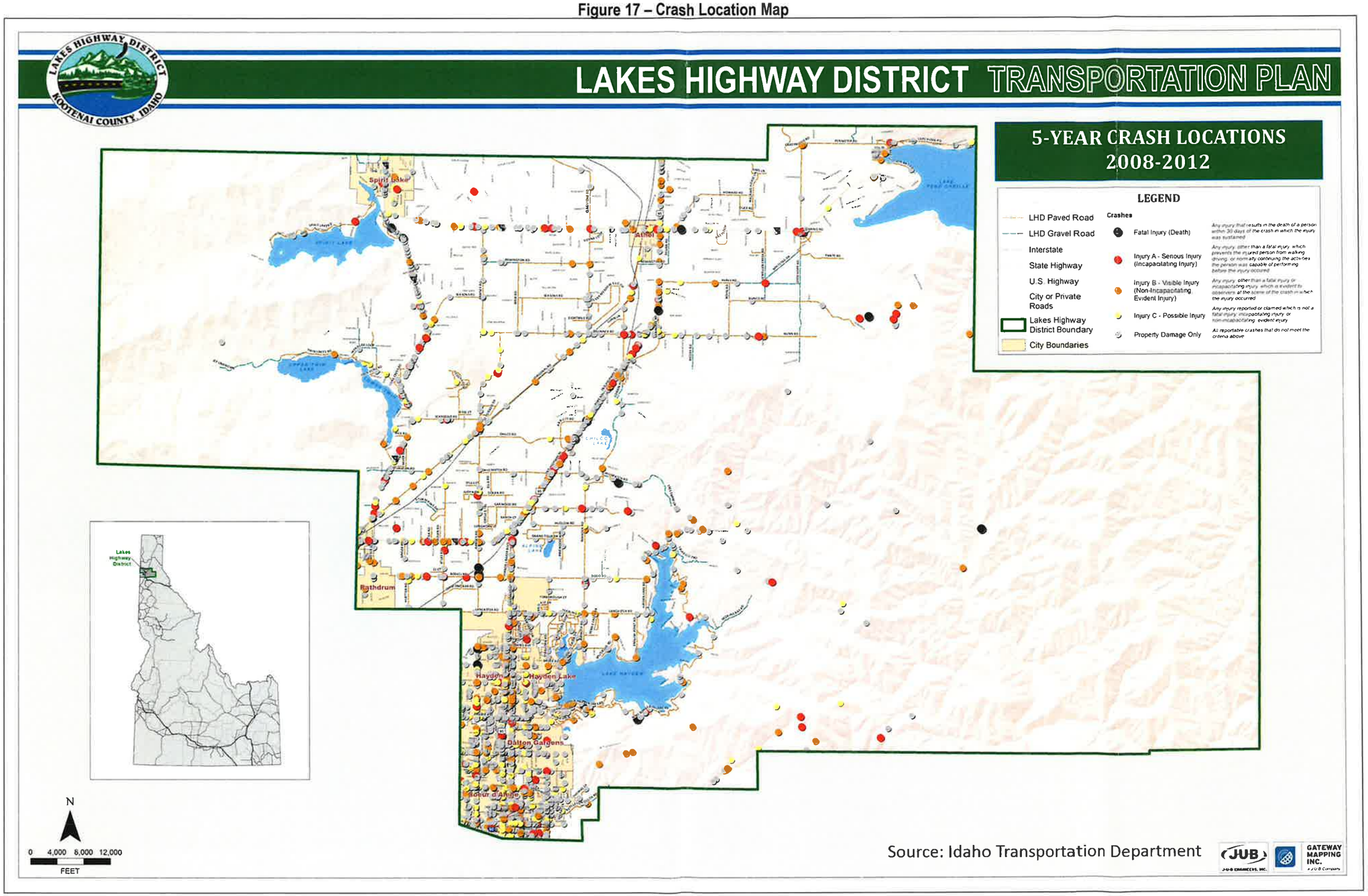
Table 16 – Summary of Values of a Statistical Life

AIS Level	Severity	Fraction of Value of a Statistical Life	Unit Value ($2013)
1	Minor	0.003	$27,600
2	Moderate	0.047	$432,400
3	Serious	0.105	$966,000
4	Severe	0.266	$2,447,200
5	Critical	0.593	$5,455,600
6	Survivable	1.000	$9,200,000

Crash Data

Crash data was obtained from the ITD for crashes occurring over a 5-year period (2008-2012). At the beginning of this study, 2012 was the most recent full calendar year of published data. Using five years of historic data is an acceptable industry standard for performing crash analyses on roadways. The crash data was included on a map and color coded by severity shown in **Figure 17**.

Figure 17 – Crash Location Map



Crash Analysis

Crash data for the 13 intersections or areas with the highest number of crashes is summarized in **Table 17.**

Table 17 – Summary of Crash by Severity (2008-2012)

Street 1	Street 2	Total Number of Crashes	Number of Fatal Crashes	Number of Injury A Crashes	Number of Injury B Crashes	Number of Injury C Crashes	Number of Property Damage Crashes
Lancaster	Government Way	21			4	4	13
Ramsey	Diagonal	20		1	4	3	12
Brunner	Old US-95	18		2	2	3	11
Ramsey	Prairie	12		1	3	2	6
Ramsey	Boekel	11	3		3		5
Boekel	Huetter	8			1	3	4
Boekel	Atlas	7		2			5
Garwood	Near Rimrock	9		2		2	5
Hayden Lake Rd	Hayden Creek Rd	8			1	1	6
Hayden Lake Rd	Rhapsody	6	1	1	1		3
Ramsey	Brunner	7			1	4	2
Ramsey	Garwood	6				1	5
Rimrock	Ohio Match	7	1		2		4

Using the described methodology, crash locations were ranked according to the total monetized crash value as shown in **Table 18** (also shown in **Figure 18**).

Table 18 – Priority Crashes Locations Prioritized Based on Crash Analysis

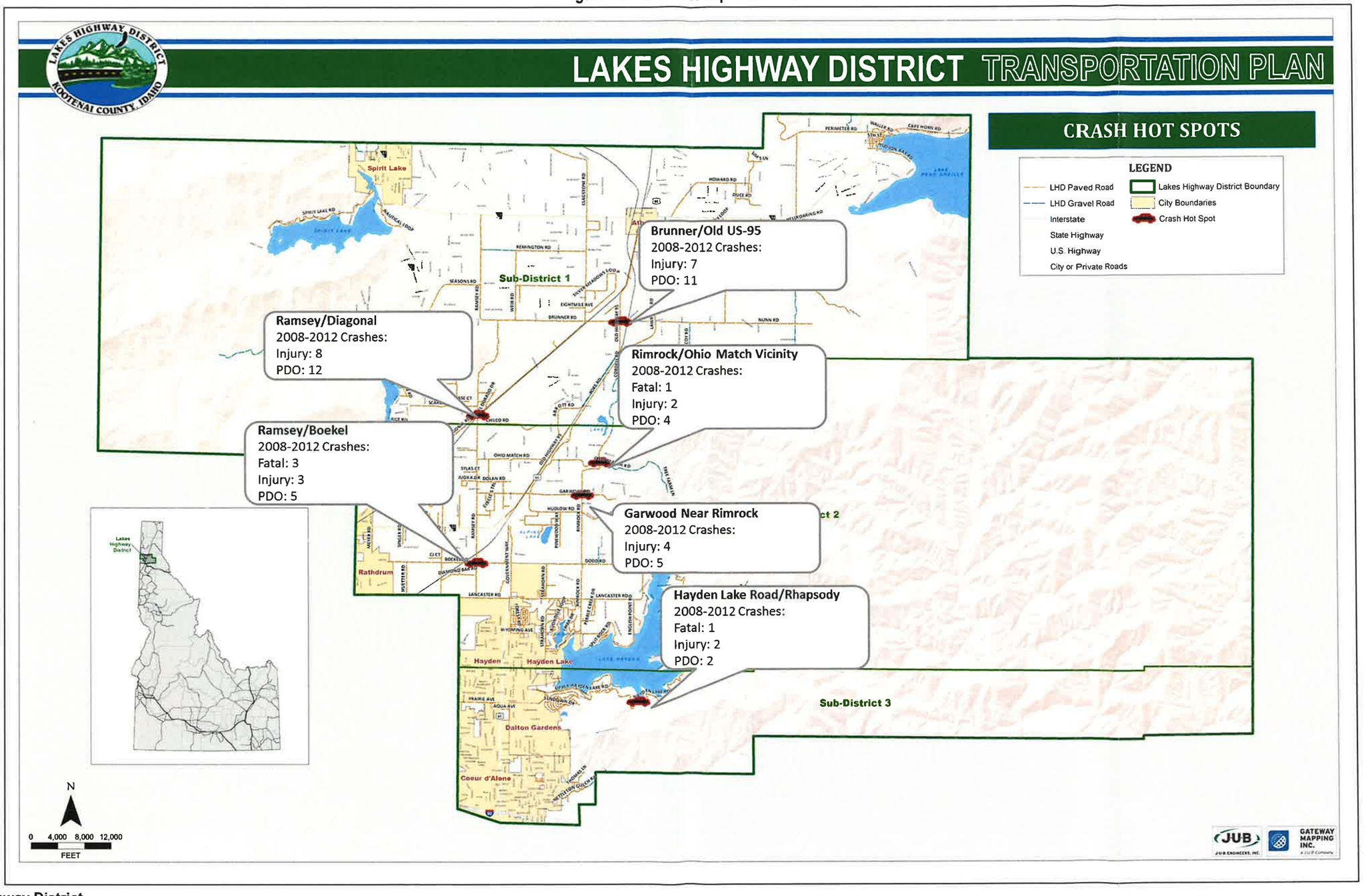
Ranking	Street 1	Street 2	2008-2012 Monetized Crash Value (rounded to nearest dollar)
1	Ramsey	Boekel	$ 27,975,019
2	Hayden Lake Rd	Rhapsody	$ 9,769,130
3	Rimrock	Ohio Match	$ 9,452,079
4	Brunner	Old US-95	$ 1,337,342
5	Ramsey	Diagonal	$ 1,140,130
6	Garwood	Near Rimrock	$ 1,017,869
	Ramsey	Prairie	$ 940,497
	Boekel	Atlas	$ 895,481
	Lancaster	Government Way	$ 764,434
	Rimrock	Dodd	$ 455,490
	Ramsey	Brunner	$ 370,815
	Boekel	Huetter	$ 315,821
	Hayden Lake Rd	Hayden Creek Rd	$ 199,634
	Ramsey	Garwood	$ 76,694

Six locations with the highest monetized crash value/cost were identified as hot spots. **Figure 18** shows the six crash hot spot locations selected for further analysis. The intersection with the highest monetized crash value was Ramsey Road and Boekel Road with three fatalities, followed by the intersections of Hayden Lake Road and Rhapsody Road and Rimrock Road and Ohio Match, each with a fatality. The remaining three intersections with the highest monetized crash value include Brunner and Old US-95, Ramsey and Diagonal, and Garwood and Rimrock.

During future updates of this plan, crashes at the locations that were not in the top six should be monitored to evaluate if any changes have occurred, reducing or increasing crashes. At future reviews, intersections with higher monetized values should be analyzed, and projects should be added to the Transportation Plan accordingly.

Recommended improvements for the top six hot spots are detailed in the Capital Improvement Program section of this plan.

Figure 18 – Crash Hot Spot Locations



Capital Improvement Program (CIP)

CIP Overview

LHD has an existing CIP that is focused on general maintenance and pavement management. The CIP improvements recommended in this plan focus on:

- Inter-Modal (Bike and Pedestrian) Improvements
- Bridge Improvements
- Intersection Capacity Improvements
- Segment Capacity Improvements
- Safety Improvements

CIP Funding Options

The capital improvement projects identified through this Transportation Plan should be implemented when funding is available either through the annual LHD budget or through funding mechanisms, including, but not limited to, LHTAC Grants, Federal Grants, Idaho Transportation Department (ITD) Grants, and other funding opportunities. Capital improvement projects may be re-prioritized based on available funding resources. In the event that a specific project aligns better with a funding source than a higher prioritized project, LHD should seek funding for the project that is most likely to receive funding.

Specific funding resources that may be used to help implement this Transportation Plan are identified in **Table 19**. It should be noted that funding opportunities may vary annually based on legislation. This is not an exhaustive list and should be updated periodically to include new or modified funding sources.

Table 19 – Potential Funding Sources

Agency	Funding Source	Type of Project	Funding Amount	Local Match	Application Date
County/Highway District	Property Tax Levy	No Restrictions	N/A	N/A	N/A
LHTAC	STP[15] Rural Funding	Planning, Design, and Construction	$10 million Available Statewide	7.34%	January
LHTAC	Federal Aid (Bridge)	Rehabilitation and Reconstruction	$3.8 million Available Statewide	7.34%	January
LHTAC	LHSIP[16]	Safety Improvements	$3.7 million Available Statewide	7.34%	January
LHTAC	LRHIP[17]	Sign Replacement, Federal Aid Match, Construction	$30,000, $100,000, $100,000	None Required but is Recommended	December
ITD	Community Choices for Idaho	Pedestrian, Bike, Mobility, Public Transit Improvements	$500,000	7.34%	Varies
FHWA	TIGER	Planning Grant – Projects to promote economic growth	$35 million Available Nationwide	20%	April
FHWA	TIGER	Construction – Projects to promote economic growth	$565 million Available Nationwide	Varies	April
WFL[18]/LHTAC	FLAP[19]	Surface Transportation (Roads, Trails, Pathways) Improving Access to Public Lands	$17 million Available Statewide	7.34%	Varies
IDPR[20]	Recreational Trails Program (RTP)	Walking and Biking Pathways, Bike/Pedestrian Bridges	$1.5 million Available Statewide	20%	January
ITD	Idaho American with Disability Pedestrian Curb Ramp Program	ADA Improvements along State Highways	$60,000	None Required but is Recommended	May (Varies)
IDPR	Recreational Road and Bridge Fund	Repair Roads, Bridges, and Parking Areas within and Leading to Parks and Recreation Areas	$300,000 Available Statewide	None Required but it Recommended	December

[15] *Surface Transportation Plan*

[16] *Local Highway Safety Improvement Program*

[17] *Local Rural Highway Investment Program*

[18] *Western Federal Lands*

[19] *Federal Lands Access Program*

[20] *Idaho Department of Parks and Recreation*

CIP Goals and Objectives

Goals were developed at the beginning of this planning effort and modified based on input received from stakeholders, TAC, and public open houses. The goals were used as evaluation criteria to rank the recommended projects. The goals identified through this effort that recommended projects should aim to achieve include:

- **Capacity** – increase the capacity of the road in areas with congestion.
- **Compatible with other Project Plans** – compatibility with other projects or planning efforts in the region.
- **Cost/Availability of Funding** – funding is available for the recommended project through grants, partnering with agencies, or other available sources.
- **Environmental Impacts** – minimal environmental impacts.
- **Freight and Movement of Goods** – enhance or improve the movement of goods.
- **Improve Connectivity (future road or transit connection)** – create new or improved connectivity within the existing transportation network.
- **Improve Safety/Emergency Access (Crash Severity Reduction)** - improve or enhance safety or emergency access within the District.
- **Non-Motorized** – create or improves non-motorized facilities.
- **Promote Economic Development** – promote economic development.
- **Public Support** – projects that are supported by the public.
- **Right-of-Way Requirements** – right-of-way impacts and costs would not be prohibitive for the recommended project.

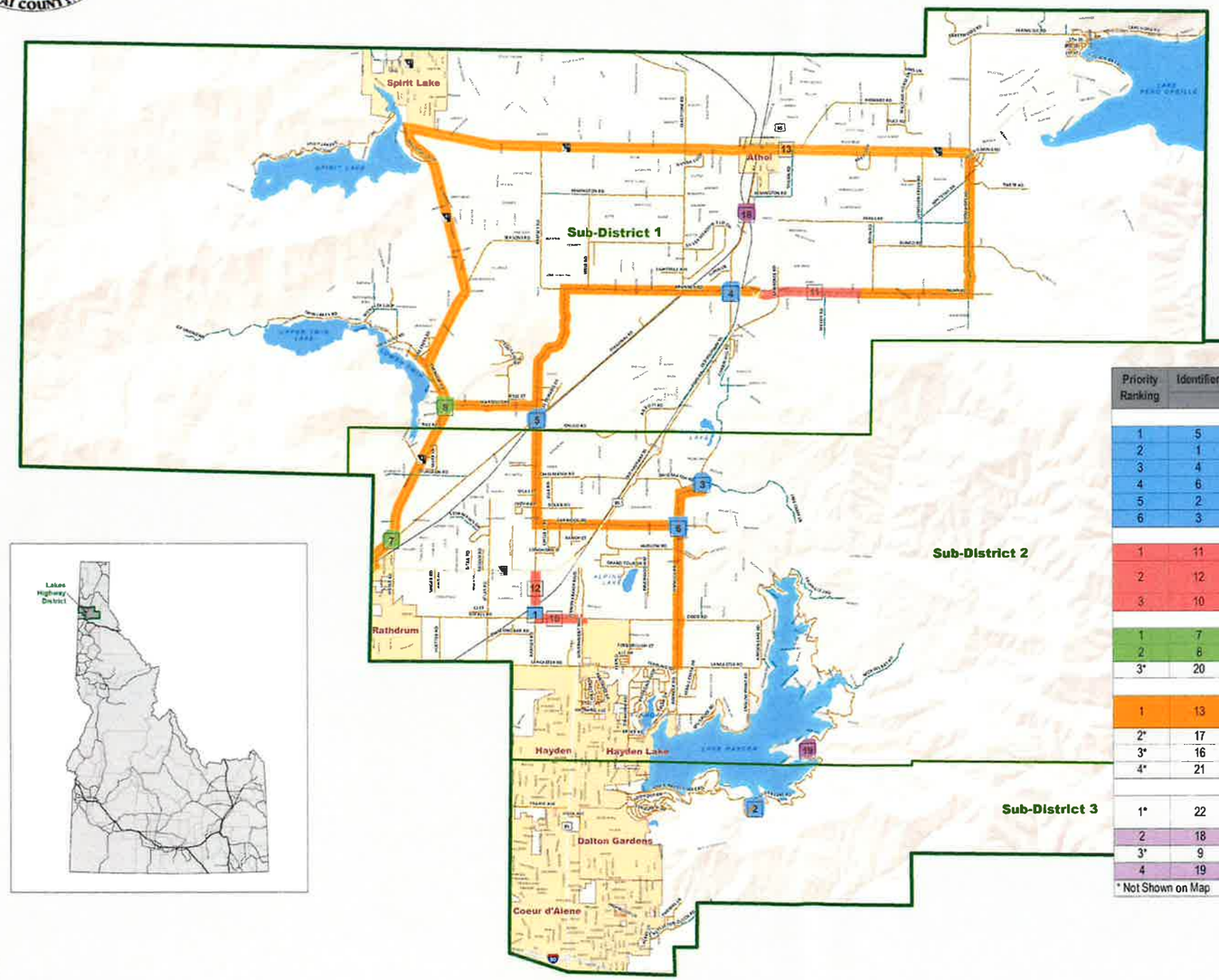
The goals listed above were used to prioritize recommended projects within the District. **Table 20** shows all recommended improvements as ranked using the prioritization criteria. **Figure 19** shows each of the recommended project locations. The following sections break down the prioritized list of projects by categories—Inter-Modal Improvements, Other Improvements (bridge, sign, and freight), Intersection Capacity Improvements, Segment Capacity Improvements, and Safety Improvements. A table with each project, ranking, recommended improvement, participating agency, justification for improvement, and potential funding sources is available in **Appendix D**. A one-page summary:vicinity map/supporting documentation for each of the top-five-ranked projects is available in **Appendix D**.

Table 20 – Comprehensive List of Recommended Projects

Ranking	Identifier	Project Type	Project	Prioritization Criteria											
				Capacity	Compatible with other Project Plans	Cost / Availability of Funding	Environmental Impacts	Freight and Movement of Goods	Improve Connectivity (future road or transit connection)	Improve Safety / Emergency Access (Crash Severity Reduction)	Non-motorized	Promote Economic Development	Public Support	Right-of-Way Requirements	Point Total
			Point Value	41	61	72	38	62	47	96	31	58	68	25	
1	11	Segment Capacity Improvement	Bunco Rd from US-95 to Hatch Rd	41	30.5	72	38	62	47	96	31	58	68	12.5	556
2	5	Crash Safety Improvement	Ramsey & Diagonal Vicinity	0	61	72	38	62	47	96	31	58	68	12.5	545.5
3	7	Intersection Capacity Improvement	SH-41 at Diagonal Rd	41	61	36	38	62	47	96	0	58	68	12.5	519.5
4	12	Segment Capacity Improvement	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	41	61	36	38	62	0	96	15.5	58	68	12.5	488
5	8	Intersection Capacity Improvement	SH-41 at Scarcello Rd /Village Blvd	41	61	36	38	0	0	96	31	58	68	12.5	441.5
6	22	Freight	Chilco to Ramsey Brunner to SH 53 All Weather Route Connection	41	61	36	38	62	47	48	0	58	34	12.5	437.5
7	18	Bridge	Old US-95 over UPRR (Athol)	41	61	72	38	62	0	96	0	29	34	0	433
8	13	Inter-Modal	Rathdrum-Spirit Lake-Athol-Hayden Non Motorized Routes and Connections	20.5	61	0	38	0	47	96	31	29	68	12.5	403
9	1	Crash Safety Improvement	Ramsey - Boekel to Railroad Crossing	41	61	36	38	62	0	96	0	0	68	0	402
10	4	Crash Safety Improvement	Brunner & Old US-95 Vicinity	0	0	72	38	62	0	96	0	58	68	0	394
11	10	Segment Capacity Improvement	Boekel Rd from US-95 to Ramsey	41	61	0	38	62	23.5	96	0	29	34	6.25	390.75
12	9	Sign Improvements	District Wide	0	61	72	38	0	0	96	15.5	0	68	25	375.5
13	17	Inter-Modal	Address ADA accessibility throughout LHD	0	61	36	38	0	0	96	31	29	68	12.5	371.5
14	19	Bridge	Hayden Lake Road over Yellowbanks Creek	0	61	72	38	0	0	96	0	0	68	25	360
15	16	Inter-Modal	Rathdrum-Post Falls Connection – Meyer Rd.	20.5	61	0	38	0	0	96	31	29	68	12.5	356
16	6	Crash Safety Improvement	Garwood Near Rimrock	0	0	72	19	0	0	96	15.5	58	68	25	353.5
17	20	Intersection Improvement	SH-41 and Seasons	41	61	36	38	0	0	96	0	0	68	12.5	352.5
18	2	Crash Safety Improvement	Hayden Lake Road & Rhapsody Vicinity	0	0	72	38	0	0	96	15.5	0	68	0	289.5
19	3	Crash Safety Improvement	Rimrock & Ohio Match Vicinity	0	0	72	38	0	0	96	15.5	0	68	0	289.5
20	21	Inter-Modal	East Hayden Lake Road Trail/Bike Pull Outs	20.5	0	0	0	0	0	48	31	0	34	0	133.5

Figure 19 – Recommended Improvement Projects

LAKES HIGHWAY DISTRICT TRANSPORTATION PLAN



RECOMMENDED CIP PROJECTS

LEGEND

LHD Paved Road	Crash
LHD Gravel Road	Intersection
Interstate	Segment
State Highway	Inter-Modal
U.S. Highway	Bridge
City or Private Roads	Lakes Highway District Boundary
	City Boundaries

Priority Ranking	Identifier	Type	Location
Crash Hot Spot			
1	5	Crash Safety Improvement	Ramsey & Diagonal Vicinity
2	1	Crash Safety Improvement	Ramsey - Boekel to Railroad Crossing
3	4	Crash Safety Improvement	Brunner & Old US-95 Vicinity
4	6	Crash Safety Improvement	Garwood Near Rimrock
5	2	Crash Safety Improvement	Hayden Lake Road & Rhapsody Vicinity
6	3	Crash Safety Improvement	Rimrock & Ohio Match Vicinity
Segment Capacity			
1	11	Segment Capacity Improvement	Bunco Rd from US-95 to Hatch Rd
2	12	Segment Capacity Improvement	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)
3	10	Segment Capacity Improvement	Boekel Rd from US-95 to Ramsey
Intersection Capacity			
1	7	Intersection Capacity Improvement	SH-41 at Diagonal Rd
2	8	Intersection Capacity Improvement	SH-41 at Scarcello Rd /Village Blvd
3*	20	Intersection Capacity Improvement	SH-41 and Seasons
Inter-Modal			
1	13	Inter-Modal	Rathdrum-Spirit Lake-Athol-Hayden Non Motorized Routes and Connections
2*	17	Inter-Modal	Address ADA accessibility throughout LHD
3*	16	Inter-Modal	Rathdrum-Post Falls Connection – Meyer Rd.
4*	21	Inter-Modal	Hayden Lake Trail/Bike Pull Outs
Other			
1*	22	Freight	Chilco to Ramsey Brunner to SH 53 All Weather Route Connection
2	18	Bridge	Old US-95 over UPRR (Athol)
3*	9	Sign Improvements	District Wide
4	19	Bridge	Hayden Lake Road over Yellowbanks Creek

* Not Shown on Map

JUB ENGINEERS, INC. GATEWAY MAPPING INC. a JUB Company

Recommended CIP Projects

Inter-Modal Improvements

Bike and pedestrian improvements were identified as a high priority based on public input support from both the KMPO planning process and the LHD public involvement process. Potential funding sources to implement these projects include Community Choices for Idaho, FLAP, RTP, and Idaho ADA Pedestrian Curb Ramp Program.

Bike and pedestrian improvements can also be incorporated with LHD maintenance projects whenever the existing pavement is wide enough so that it can be restriped to accommodate bike lanes. Additional low-cost strategies such as sweeping the gravel off high-use bike and pedestrian areas, bike awareness signage, and bike and pedestrian education can greatly improve bike and pedestrian mobility throughout the District. A specific opportunity mentioned through public input that the District may consider includes installing a public education kiosk for vehicles/bicyclists on Hayden Lake Road. This project may be a coordinated effort between the Lakes Highway District and the City of Hayden.

Table 21 summarizes recommended bike and pedestrian improvements within LHD. It should be noted that these recommendations are based on a high level planning study, and specific facilities to be installed should be determined through an in-depth study that determines the specific needs of inter-modal users. Facility classes to be considered for each designated route should be consistent with the facility descriptions currently used by LHD. The facility descriptions include:

- Class I: A Class I bicycle facility is a separated multiple use path 10 to 12 feet wide. The path is physically separated from motor vehicle traffic by a 5-foot minimum open space or barrier of 4.5 feet.
- Class II: A Class II bicycle facility has a 4- to 6-foot portion of the roadway designated for preferential use by bicyclists.
- Class III: A Class III bicycle facility is a shard facility where bicyclists and motorists share the same travel lane. The travel lane should be 14 feet in width.

Table 21 – Inter-Modal Improvement Priorities

Priority Ranking	Location	Project/Recommendation	Justification
1	Rathdrum-Spirit Lake-Athol-Hayden Non-Motorized Routes and Connections	Class I, II, or III non-motorized facilities on Rimrock Rd. from Lancaster Rd. to Ohio Match Rd.; Garwood from Rimrock Rd. to Ramsey Rd.; Ramsey Rd. from Garwood to Brunner Rd.; Brunner Rd./Bunco Rd. from Ramsey Rd. to Good Hope Rd.; Good Hope Rd. from Bunco Rd. to SH-54; SH-54 from Good Hope Rd. to SH-41 (ITD led portion of this project); SH-41 from SH-53 to SH-54 (ITD led portion of this project); Scarcello Rd. from SH-41 to Ramsey Rd.	Identified in KMPO Plan and LHD public involvement
2	Address ADA accessibility throughout LHD	Improve ADA accessibility throughout the jurisdiction - Inventory need for curb cuts/ped ramps - Inventory locations of high pedestrian activity and need for sidewalk and curb cuts	Identified in KMPO Plan and LHD public involvement
3	Rathdrum-Post Falls Connection – Meyer Rd.	Class I, II, or III non-motorized facilities from Prairie Ave. to SH-53 - LHD can support this project with other agencies	Identified in KMPO Plan and LHD public involvement
4	E. Hayden Lake Rd Trail/Bike Pull Outs	Consider studying the feasibility of a Hayden Lake Trail/Bike pull out(s)	Identified in KMPO Plan and LHD public involvement

Bridge Improvements

Two bridges recommended for rehabilitation based on low sufficiency ratings are shown in **Table 22.** These projects qualify for funding under the Federal Bridge program administered by LHTAC. The Yellowbanks Creek Bridge may qualify for funding through the Recreational Road and Bridge Fund administered by the IDPR due to its close proximity to recreation opportunities.

Table 22 – Bridge Improvements

Priority Ranking	Location	Sufficiency Rating	2012 AADT	Year Built	Recommendation
1	Old US-95 over UPRR (Athol)	61.5%	1700	1929	Bridge Rehabilitation - Consider replacing railings, guardrail, guardrail ends, and deck.
2	Hayden Lake Road over Yellowbanks Creek	74.5%	220	2003	Bridge Rehabilitation - Consider replacing railings, guardrail ends, and improving transitions.

Sign Improvements

The current sign inventory indicates that 5 percent of the District's signs have a condition of fair or worse. It is recommended that these signs be replaced to meet MUTCD standards. The District should continue to update the sign inventory annually on a 3-year rotation. This project qualifies for funding through the LRHIP Sign Grant program administered by LHTAC.

Freight Improvements

During the public outreach process for this Transportation Plan, the need for developing standards and specified routes for all-weather vehicles was identified to promote industrial and commercial development in specific locations within the District. Through future efforts, it is recommended that the Highway District develop standards and routes that coincide with KMPO and Kootenai County planning efforts for all-weather routes to accommodate future development.

Intersection Capacity Improvements

As shown in **Table 23**, two intersection improvements are recommended based on the intersection LOS analysis completed as part of this Transportation Plan. These projects qualify for funding through the STP program administered through LHTAC. It is recommended that the District consider presenting the findings from this Transportation Plan to ITD and KMPO and complete these improvements through a partnership effort.

Table 23 – Intersection Capacity Improvement Locations and Recommendations

Priority Ranking	Location	Project/Recommendation	Justification
1	SH-41 at Diagonal Rd	High Volume/Capacity Ratio in 2035: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left-turn movements and provide a 2-stage maneuver for the westbound left-turn movements.	High crashes High ADT Identified in KMPO 2014 Model
2	SH-41 at Scarcello Rd / Village Blvd	High Volume/Capacity Ratio in 2035: 1. Consider turn lane improvements, including westbound left, westbound right, eastbound left, and eastbound right-turn lanes on Scarcello Road, and southbound right-turn lanes on SH-41. This will result in LOS E for the eastbound approach, with other approaches to the intersection operating at LOS C or better. 2. If LOS D or better is desired for all approaches, signalization of the intersection with existing lane configuration should be considered, if and when signal warrants are met. 3. Align east/west approaches across the intersection. 4. Perform an in-depth intersection study.	Offset intersection High ADT Identified in KMPO 2030 Model
3	SH-41 / Seasons Rd	Consider future study to determine needs at intersection.	Identified by the TAC

Segment Capacity Improvements

Recommended improvements were developed for three segments within the LHD based on forecasted v/c ratios. Due to the unique nature of these projects, funding opportunities are identified in **Table 24** for each project.

Table 24 – Segment Capacity Improvement Locations and Recommendations

Priority Ranking	Location	Project/Recommendation	Justification
1	Bunco Rd from US-95 to Hatch Rd	1. Consider adding 2-way left-turn lane east of Pope on 2-lane road. 2. Consider adding turn lanes/turn bays near intersections. 3. Add through lanes depending on volume. 4. Perform in-depth study/verify need and accuracy.	Multiple Accesses Narrow Roadway, Near Silverwood
2	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider grade separation at railroad crossing. 3. Consider improved lighting at intersections and driveways. 4. Consider turn lanes/turn bays at intersections. 5. Consider widening to 4 lanes for future Ramsey extension project.	Traffic Flow Interruptions Multiple Accesses High Severity Crashes 3 Fatalities
3	Boekel Rd from US-95 to Ramsey	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider signal or intersection improvements at US-95 and Boekel, or consider alternate route to Lancaster and signal at US-95. 3. Consider adding lanes to Boekel to become a 3- to 5-lane road or adding turn lanes near intersection of Boekel and Ramsey. 4. Improve lighting at intersections, driveways, or along segment. 5. Consider reduced speed limits on segment and/or add traffic-calming measures.	Severe Crashes Crash Characteristics (rear end, left turning movement conflicts) High v/c, Functionality does not align with use Multiple Accesses High Speed

Safety Improvements

Recommended safety improvements were developed for the identified safety hot spots listed in **Table 25**. These projects qualify for LHTAC safety funding. LHD may consider applying for TIGER funding for the Ramsey and Boekel project. This project meets several criteria of the TIGER funding, including public support, safety, capacity, and economic impact.

Table 25 – Safety Improvements - Summary of Crash by Severity

Priority Ranking	Location	Project/Recommendation	Justification
1	Ramsey & Diagonal vicinity	Consider increased roadside clear zone by removing trees, install guard rail, improve sight distance, realign intersection, perform detailed inter-geometric analysis, protect and acquire R/W for future improvements.	$1,140,130.24 in crash cost over 5 years
2	Ramsey - Boekel to Railroad Crossing	Consider increased stop sign size, reduce speed, provide flashing lights at stop sign, improve sight distance for northbound traffic by removing trees from southwest corner, consider changing intersection treatment (roundabout, 4-way stop, signal), add railroad crossing gates and flashers, traffic circle/roundabout.	Loss of control, ran off road, hit embankment, hit tree
3	Brunner & Old US-95 vicinity	Consider improved intersection control, reduce speed limit, improve lighting, add flashing beacons, install traffic/speed-calming measures prior to intersection, tree clearing and removal for improved sight distance and clear zone.	$27,975,018.59 in crash cost over 5 years
4	Garwood Near Rimrock	Consider improved striping, increase clear zone on approaches, speed-calming measures, road safety audit.	Failing to stop at stop sign or yield to traffic on Boekel, speeds too fast for road geometry or scenario, angle crashes
5	Hayden Lake Road & Rhapsody vicinity	Consider reduced speed limit, install guard rail, improve corner signs (chevrons), install delineators around corner, increase clear zone, widen shoulder.	$1,337,341.53 in crash cost over 5 years
6	Rimrock & Ohio Match vicinity	Consider improving Rhapsody at the intersection to reduce skew and improve grade.	Turning, ran off road, and animal crashes

Implementation

Implementation Overview

In order to successfully implement this Transportation Plan, LHD staff and Commissioners should update the CIP project list and discuss available funding opportunities on an annual basis. Projects should be re-prioritized regularly based on project needs and available funding sources. LHD should make efforts to seek outside funding through grants and funding programs that align with projects identified in this Transportation Plan. As discussed in this section, there are specific strategies the District may initiate to increase the likelihood of successful implementation.

Implementation Strategies – Keys to Success

Attend Annual Grant and Funding Workshops and Federal Funding Webinars

Funding agencies such as LHTAC, ITD, WFL, IDPR, etc. typically hold funding workshops annually or periodically to educate eligible applicants on upcoming funding opportunities, scoring criteria, and program changes. This will help District staff establish and maintain a solid knowledge based on the status of various state and federal grant and funding programs.

Continuing Education on Roadway Maintenance

Funding agencies typically encourage roadway agency staff to be educated on roadway maintenance and roadway safety. Through LHTAC's Training and Technical Assistance (T2) program, Road Department personnel can attend courses and earn certifications. If LHD can demonstrate to LHTAC that their personnel have attended and/or earned certifications through this program, LHD's proposed project and grant application would rank higher.

Contact Funding Agencies Early and Often, Well Before the Deadline

It is good practice to inform funding agencies of a potential upcoming project well in advance of a grant application deadline. If LHD desires to submit a grant application that is due in the fall or winter, it is recommended that LHD staff contact funding agencies as early as possible, ideally in the spring or early summer. Grant agency staff can offer invaluable advice on how to put a successful application together as well as specific ideas about the project.

Project Development

For CIP projects that LHD wants to implement in the near future, it is recommended that LHD identify the next steps that are needed. A typical next step towards implementation would involve taking a CIP project from planning to project development. Depending on the type and location of the project, project development may involve site investigation, survey, specific study, etc. For projects that overlap with other jurisdictions such as ITD, it is recommended that LHD work closely with those partner agencies to determine the next step to move to project development. It could be a matter of working with another agency that may ultimately want to sponsor and program the project.

CIP Project Summary Sheets, Cost Estimates, and Project Maps

CIP project summary sheets and planning-level cost estimates were developed as part of this Transportation Plan for five top-priority projects as identified through data analysis and public outreach **(Appendix D).** The goal of the summary sheets is to provide the District with specific information to help with the implementation of this plan. These summary sheets will be especially useful when applying for grants and beginning the project development process.

Appendices

Appendix A – Stakeholder, Technical Advisory Committee, and Public Input Information

Appendix B – KMPO Reference Maps and Data

Appendix C – Bridge Inventory Sheets

Appendix D – Recommendations Table and Top Five Projects Summary Sheets

Appendix A

Stakeholder, Technical Advisory Committee, and Public Input Information

List of Stakeholders Interviewed

Name	Affiliation
Deputy Jack McAvoy	Kootenai County Sherriff – Traffic Department
Charlie Miller John Bruning Monte McCully	North Idaho Centennial Trail Foundation/City of Coeur d'Alene Parks Department
Nancy DiGiammarco Paul Norton	Silverwood Theme Park
Greg Delevan	Kootenai County Airport Manager
Ryan Fobes	Idaho Forest Group – Chilco Mill
Bob Turnipseed	Avondale Construction (Land Developer)
Darrell Richard	Lakeland School District Transportation Director
David Callahan (Mel Palmer, and Vlad)	Kootenai County Community Development Department
Dick Epstein	Dalton Gardens City Councilman
Glenn Miles	Kootenai Metropolitan Planning Organization
Roger Saterfiel	Kootenai Solid Waste Director and City of Hayden Councilman

Stakeholder Interview Summary

Existing Strengths

- Snow Removal is excellent
- Response time is excellent
- Development process is fair
- New US-95 improvements are extremely helpful
- Coordinate with KCATT and KMPO
- Maintain drivable roads
- Adhere to County bike/pedestrian plan
- Corbin Hill – adding access road has improved safety perception
- Very fiscally responsible
- Manage equipment well
- Management is good to work with
- Stay out of park business
- US-95 improvements have contributed to School Bus safety due to new frontage roads
- Prompt sign installation is appreciated
- District does a good job on paved road projects

Opportunity for Improvements

Specific Roadway Reconstruction Improvements

- Further improve US-95/Prairie
- Improve Lancaster in Front of KTEC & Lancaster to Highway 41 (PFHD)
- Improve Rim Rock Road
- Complete Huetter Bypass (PFHD/ITD)
- Reconstruct Ramsey all the way to Highway 54 to alleviate traffic on US-95
- Chilco Road intersection Alignment could be improved
- Complete Ramsey Road Extension (Hayden)
- Add turn lanes at Chilco Road
- Continue improvements on Hayden Lake Road
- Move traffic from 4th and 15th to Government Way and US-95
- Improve Highway 54 to accommodate Spirit Lake-Bayview cross traffic (ITD)
- Improve Garwood Road and Ohio Match

Development Related Improvements

- Protect Airport from residential development
- Adopt development triggers as part of review process
- Facilitate project development
- Include stormwater improvements in right-of-way
- Improve future roads based on future land use
- Address development on Cape Horn Road
- Consider reduced standards for residential subdivisions
- Plan to accommodate future growth
- Make clearer public vs private road standards and requirements

Bike, Trail, and Pedestrian Related Improvements

- Consider bike lanes around Spirit Lake Rd
- Address Ada accessibility
- Consider bike lanes on Hayden Lake Road
- Connect to Lancaster trail plans
- Build more bike paths on busier roads
- Include bike paths on Ramsey, Atlas and Diagonal – paving these roads increased speeds and reduced safety
- Require pathways on new developments and bus pull out locations
- Add Centennial Trail along US-95
- Pave wider sections for bikes
- Consider complete street requirements in plans
- Consider improving bike/ped trail on US-95 through entire district
- Plan for trails
- Consider flexible design standards for trails
- Add pedestrian separated bike facilities or pathway system on arterials and collectors
- Add trails to major streets

General Improvements

- Pave more dirt roads
- Improve access to Airport
- Consider an all-weather route
- Improve how cash in lieu goes to specific projects from minor subdivisions
- Consider all-weather road plan in transportation plan
- Develop better commercial/industrial roadway standards
- Require dedication right-of-way for future projects
- Plan to buy right-of-way before project starts
- Rely on existing data when possible from regional jurisdictions including Idaho Code
- Make plan consistent with KMPO transportation plan

Railroad Improvements

- Look to Bridge the Valley Study for Railroad improvements
- Railroad crossing at Highway 54 could be improved for site distance
- Address railroad crossing safety

Safety Improvements

- Include safety features to get students to school who walk and bike (cross walks on highways)
- Consider stop sign at Bunko and Lawrence
- Consider improving site distance at stop sign on Diagonal and Ramsey
- Increase storage length for entrance to Silverwood employee lot
- Consider changing signage on Hayden Lake Road
- Rim Rock and Ohio Match could be widened to improve bus turn around safety

Stakeholder Interview	PRE-INTERVIEW INFORMATION	
Name of Stakeholder	Jack McAvoy, Deputy	
Position/organization	Kootenai County Sherriff – Traffic Dept	
Contact details (WORK / HOME)	Phone: 446-1300	Fax:
Circle one	E-mail: jmcavoy@kcgov.us	
Name of Interviewer(s)	Brad Marshall	
Date	3/5/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)

Employed by County Sherriff

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Snow removal is one of the best in the County
   - Response time is excellent on emergency plowing and sanding calls
3. How could the transportation system be changed?
   - Further intersection improvements near Del Taco on Prairie – approximately 49 crashes prior to improvement, 7-8 a year now
   - Pave as many dirt roads as possible (i.e. Weir Rd off Brunner)
   - Continue to improve E Hayden Lake Road
     - Consider additional signage on this road
     - The "public" wants more signs in the area of E Hayden Lake
4. What are the three most important transportation issues that need to be addressed by this plan?
   - More enforcement on Lancaster and Boekel
5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Consider bike lanes in and around the Spirit Lake area. A lot of recreational/camper users in that area
   - Consider bike lanes around Hayden Lake
6. Who are the opinion leaders or active groups in the community?
   - Silver Meadows Subdivision (HOA)
   - Twin Lakes Village (HOA)
   - Spirit Lake East (HOA)
   - Unincorporated Bayview
7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Contact Sherriff Ben Wolfinger, Stu Miller
   - Consider presentations to City Council at Hayden, Dalton, Athol, and Spirit Lake
8. Who else should we talk to?
   - CDA school district transportation director (i.e. Dalton, Hayden Meadows, Atlas)
   - ISP – Idaho Transportation Department – Chris Shrink or Janel Grear
   - Ranger at Farragut State Park
9. Is there anything else you want to tell us?

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Charlie Miller, John Bruning, Monte McCully	
Position/organization	North Idaho Centennial Trail Foundation (NICTF)/City of Coeur d'Alene Parks Depart	
Contact details (WORK / HOME)	Phone: 292-1634	Fax:
Circle one	E-mail:	
Name of Interviewer(s)	Brad Marshall	
Date	2/27/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
NICTF has not worked directly with the Lakes Highway District – but have worked with KMPO on the Highway 95 Trail to Sandpoint. TIP programmed for 2019

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - LHD does a good job maintaining roads.

3. How could the transportation system be changed?
   - Continue to develop east Lancaster bike lanes
   - Consider complete street requirements – include bike/ped facilities in design – only remove if necessary
   - Improve Rim Rock Road
   - Pave wider lanes and improve pavement markings

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Refer to KMPO bike plan for future bike lanes
   - Improve connectivity to other Cities – look at KMPO plan
   - Connect Lancaster trail plans
   - Work on ped/bike education through signage.

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Use 2030 plan and trails for connectivity plan
   - Park and ride facilities. People drive to a parking lot then ride.
   - Large network of trails exist – utilize this network, embrace it, and further develop the trail system
   - Try to develop US-95 Trail
   - Open up railroad right-of-way along SH-41 and SH-54 around Rathdrum, Athol, Spirit Lake, Bayview.
   - Consider changing the number of lanes and adding a bike lane in the road from Athol to Bayview.

6. Who are the opinion leaders or active groups in the community?
   - Nick Snyder – County Parks Department
   - Lance Bridges – Rathdrum parks and rec
   - City Planning Directors
   - Randall Batt
   - Warren Wilson – City Interim Planning Director

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Facebook – social media, website, ad in paper, text message updates,

8. Who else should we talk to

9. Is there anything else you want to tell us?
   - Connectivity is most important – connect 4 lakes via trails
   - Add shoulders/bike lanes on twin lakes road
   - Encourage agencies to work together
   - Educate youth on bike/pedestrians
   - Corbin Hill Rim Rock Trail connectivity
   - Trails are not just for recreation but connectivity. Connect communities.

Interviewer's comments:

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Nancy DiGiammarco, Paul Norton	
Position/organization	Silverwood Theme Park	
Contact details (WORK / HOME)	Phone: 683-3400	Fax:
Circle one	E-mail:	
Name of Interviewer(s)	Brad Marshall	
Date	2/27/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
. Run the Theme Park located within Lakes Highway District. Approximately 100 year round employees and 1400 seasonal employees.

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - The new highway and Lakes Highway District access road are 100% better
   - Working with the highway district has been great

3. How could the transportation system be changed?
   - Look at stop sign at the intersection of Bunko and Lawrence Road – Traffic tends to back up there
   - Better directional signs for left and right coming off the new ramps would be helpful
   - Stop sign at Diagonal and Ramsey has poor site distance

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Generally, improve access to the park from the South, West and North.
   - Plowing could be wider (to ditch) on Diagonal Road
   - Increase size (i.e. reduce stacking) of employee entrance to Silverwood.

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - In favor of a trail system all the way to Silverwood and beyond along US-95

6. Who are the opinion leaders or active groups in the community?
   - Hayden Canyon Developer

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Newspaper add, website, reader board.

8. Who else should we talk to?

9. Is there anything else you want to tell us?

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Greg Delavan	
Position/organization	Kootenai County Airport Manager	
Contact details (WORK / HOME)	Phone: 446-1860	Fax:
Circle one	E-mail: GDelavan@kcgov.us	
Name of Interviewer(s)	Brad Marshall	
Date	2/26/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Manages the Airport which neighbors the Lakes Highway District offices. The airport owns the land the highway district office and shop are located on and rent payment is in kind services.

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Management is very good
   - Very fiscally responsible
   - Manage equipment very well

3. How could the transportation system be changed?
   - Need better roads to the Airport –(i.e. north side)
   - Need to protect airport from residential development

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Need more all-weather roads to the airport
   - Plans should accommodate future growth in the County
   - Play a role in growth of the County – as seen south and west of the airport
   - Help facilitate project development

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Plan for trails
   - Lakes should not be in the parks business

6. Who are the opinion leaders or active groups in the community?
   - KCATT – KMPO.

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Coordinate with KCATT and KMPO.

8. Who else should we talk to?
   - Ken Ela – Warren K Industrial Project.

). Is there anything else you want to tell us?
   - Focus on jobs and development of roads to industrial areas to create jobs.
   - Protect the airport from residential development.

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION

Name of Stakeholder	Ryan Fobes	
Position/organization	Engineer with Idaho Forest Group – Chilco Mill	
Contact details (WORK / HOME)	Phone: 762-2939/755-0630	Fax:
Circle one	E-mail:	
Name of Interviewer(s)	Brad Marshall	
Date	2/25/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Manufacturing industry (Timber Mill) at Chilco – Average 120 logging/chip trucks a day; 12-20 residual trucks a day and approximately 150 employees at the mill

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Roads are drivable, plowed and maintained well

3. How could the transportation system be changed?
   - Complete Huetter Bypass
   - Complete Ramsey Road extension
   - Create all season roads (i.e. chilco road) to east. When road weight limits are placed – company faces constraints
   - Better commercial/industrial standards – larger radius or variance options
   - Recognize different cases/scenarios call for different designs
   - Storm water improvements should be included in the right-of-way
4. What are the three most important transportation issues that need to be addressed by this plan?
   - See above
5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Adhere to the County bike/pedestrian plan
   - Adopt triggers as part of the review process
   - Consider flexible design standards for trails – i.e. not every trail needs to be paved.
6. Who are the opinion leaders or active groups in the community?
   - 129,000 lbs load limit legislation advocates
7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Facebook – social media, website, ad in paper
8. Who else should we talk to?
   - Legislatures
   - Stem Charter Academy – no buses to school
   - Gravel pit, rock crushing operators in the area: Excel, Buhl, Western Trucking, chip haulers
9. Is there anything else you want to tell us?

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION

Name of Stakeholder	Bob Turnipseed	
Position/organization	Avondale Construction (Land Developer)	
Contact details (WORK / HOME)	Phone: 208-930-9200	Fax:
Circle one	E-mail: N/A	
Name of Interviewer(s)	Brad Marshall	
Date	2/21/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Has developed land in LHD including Bar Circle S for 45 years
2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Good/Superb job maintaining roads.
   - Fair to deal with on development projects in the District
3. How could the transportation system be changed?
   - Have a reduced standard for residential subdivisions
4. What are the three most important transportation issues that need to be addressed by this plan?
   - Build more bike paths on busier roads (i.e. Ramsey and Garwood)
   - Build Ramsey Road extension by the airport
   - Reconstruct Ramsey all the way to HWY 54 to alleviate traffic on 95
5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Install bike paths to protect kids. In the future kids may have to walk from 2 miles instead on 1.5 miles due to budget cuts

6. Who are the opinion leaders or active groups in the community?
   - Railroads.
     - Is there a consideration to combine the two lines?
     - Any word on current status of project?
   - Hayden Canyon Developer – Glenn Lanker office (667-5557) Cell (819-4705)
7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Include large color maps at open house showing zoning, density, and roads.
8. Who else should we talk to?
   - Del Kerr
   - Wayne Meyer (Meyer Family)
9. Is there anything else you want to tell us?
   - Best of luck to the District
   - Improve Lancaster in front of K-TEC and Lancaster to HWY 41.

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION

Name of Stakeholder	Darrell Rickard	
Position/organization	Transportation Director – Lakeland School District	
Contact details (WORK / HOME)	Phone: 208-487-0221	Fax:
Circle one	E-mail: DRickard@lakeloand272.org	
Name of Interviewer(s)	Brad Marshall and Rikki Sonnen	
Date	2/20/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Transportation Director- Lakeland School District 272 – Rathdrum Idaho. Has been with District for approx. 12 years. Started as a driver.
2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - LHD does a good job of clearing the roads and sanding when requested. If they say they will do it- they will do it.
   - Honest about when they can't get to a certain area right away
3. How could the transportation system be changed?
   - US-95 improvement was a huge help and created some frontage roads to get busses off of highway stops. Some needs still exist.
   - RR crossing on HWY 54 in Athol could be improved for site distance and safety
   - Rim Rock north of Ohio Match and Ohio Match east of Rim Rock can be hard for busses to get around on
4. What are the three most important transportation issues that need to be addressed by this plan?
   - Bike paths on Ramsey, Atlas, and Diagonal – paving those roads has increased speeds and reduces safety
   - Require pathways on new developments and bus safety requirements. A place for busses to stop or pull in and not be stopped on high speed roads.
   - Bus picks up students outside a 1.5 mile radius, and those inside a 1.5 mile radius that have to cross a highway or railroad in general. Adding safety features to get these children to school/the bus safer would be helpful
5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Cross walks on highways might be nice if done right where pedestrians and vehicles are aware of each other
   - Bus pullouts outside of developments would be helpful
6. Who are the opinion leaders or active groups in the community?
   - Railroad
7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?

- Newspaper, website, Reader boards

8. Who else should we talk to?

9. Is there anything else you want to tell us?
   - The LHD is more willing than others to put up signs when requested
   - Easiest Highway District of all to work with
   - Bunco Road is an issue for the drivers sometimes
   - Corbin Hill – adding access road has improved safety perception

Interviewer's comments
District is planning to add another loop. They plan to notify the Highway District.

Stakeholder Interview | PRE-INTERVIEW INFORMATION

Name of Stakeholder	David Callahan (Mel Palmer, Vlad)	
Position/organization	Director of Kootenai County Community Development	
Contact details (WORK / HOME)	Phone: 208-446-1070	Fax:
Circle one	E-mail:	
Name of Interviewer(s)	Brad Marshall	
Date	2/21/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Lakes Highway District is the referral agency for projects located within the Highway District jurisdiction

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - General maintenance
   - Good job on referrals and reviews from District Engineer

3. How could the transportation system be changed?
   - Address development on Capehorn Road
     - Is that currently in moratorium?
   - Improve access to Highway 95 – (post construction of the Highway)
   - Improve how cash in lieu goes to specific projects for minor subdivisions

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Require dedicated right-of-way for future projects
   - Make right-of-way dedication and easement requirements clear as they impact lot size.
   - Clearer public vs. private road standards and requirements.

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Pedestrian/separated bicycle facilities or pathway system on arterials and collectors

6. Who are the opinion leaders or active groups in the community?
   - North Lakes Fire District
   - Post Office
   - Utilities – Avista, KEC, City of Hayden, Athol, Rathdrum, Spirit Lake, Bayview Chamber

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Facebook and social media, nickels worth
   - Think about the value to an everyday person – trails to schools?

8. Who else should we talk to?

9. Is there anything else you want to tell us?
   - Look at the comprehensive plan for data
   - Cleaner development review process.

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Dick Epstein	
Position/organization	Dalton Gardens City Councilman	
Contact details (WORK / HOME)	Phone: 208-772-3698	Fax:
Circle one	E-mail: dick.epstein@daltongardens.com	
Name of Interviewer(s)	Brad Marshall	
Date	2/24/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
City of Dalton Gardens has a long history with the Highway District – The Highway District performs chip seals, pot hole repair and other maintenance duties right now. This may change and the City may take on plowing and maintenance or work with the City of Hayden.
2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Historically, the City is happy with LHD plowing. Last year was difficult because of budget challenges
3. How could the transportation system be changed?
   - Move traffic from 4th and 15th Street to Government Way and US-95
   - Improve Highway 54 – Spirit Lake and Bayview cross traffic
   - Improve Garwood Road and Ohio Match Road
4. What are the three most important transportation issues that need to be addressed by this plan?
   - Traffic flow going north/south and east/west (i.e. Garwood, Rathdrum, Chilco
   - Ease to travel from area to area
5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Add trails to major streets
   - Always see the need for parks
6. Who are the opinion leaders or active groups in the community?
   - CdA School District
   - Horseman Club
7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Facebook, ad in the newspaper
8. Who else should we talk to?
9. Is there anything else you want to tell us?
   - Want to keep relationship between smaller Cities and Lakes Highway District on course. Small Cities need help from LHD.

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Glenn Miles	
Position/organization	Executive Director of the KMPO	
Contact details (WORK / HOME)	Phone: 208-930-4164	Fax:
Circle one	E-mail:gmiles@KMPO.net	
Name of Interviewer(s)	Brad Marshall and Rikki Sonnen	
Date	2/20/2014	

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)

Executive Director of the Kootenai Metropolitan Planning Organization (KMPO) – Lakes Highway District (LHD) is a member of KMPO.

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - Lakes Highway District does a good job of taking on one project at a time.
   - Does a good job on general maintenance and performing proactive maintenance
   - Has a good working relationship with the City of Hayden but trans-jurisdictional projects can be difficult because LHD funding is based on lane miles and City funding is based on population.

3. How could the transportation system be changed?
   - There is a possibility to work on a prorate program on multi-jurisdictional projects so they work together better.
   - Plan must be consistent with Title 23 – can not go rogue and complete own plan – consistently and continually
   - Everything included in the LHD transportation plan shall be consistent with the KMPO transportation plan. This study can produce potential solution sets based on data or public input that can be proposed for inclusion in the KMPO transportation plan.

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Population and employment forecasts used for the study shall be those developed and used by KMPO – TAZ data.
   - Do not try and complete an ultimate build out plan because there is no such thing- focus on a 20-30 year long range plan.
   - All plans (per US Code) must be financially reasonable to complete within the given time frame.
     - Vehicle registration fee can be a financial reasonable funding source along with grant opportunities.
   - Cannot rely on local option code
   - There is an adopted bike/ped plan that should be referred to in the final LHD plan - This plan envisions Public Transit to Lancaster and KTEC.
   - Commuter Cyclist is not an Idaho Code term therefore there is no one to pay for those type of improvements. – Be careful that all plan items are consistent with Idaho Code.

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Bridgethevalley.org
   - There is an adopted bike/ped plan that should be referred to in the final LHD plan - This plan envisions Public Transit to Lancaster and KTEC.
   - Commuter Cyclist is not an Idaho Code term therefore there is no one to pay for those type of improvements. – Be careful that all plan items are consistent with Idaho Code.

6. Who are the opinion leaders or active groups in the community?
   - Bridgethevalley.org
   - Railroad (1864 Railroad Act)
     - BNSF, UP, CP
   - Union Pacific paid for tracks across the prairie – Services are more strategically located

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Potentially a newspaper article by B. Walker

8. Who else should we talk to?

9. Is there anything else you want to tell us?
   - Keep it simple and aligned with other plans (KMPO)
   - On order to get funding, LHTAC gives 5 extra points for a transportation plan

Interviewer's comments

Stakeholder Interview | PRE-INTERVIEW INFORMATION		
Name of Stakeholder	Roger Saterfiel	
Position/organization	Kootenai Solid Waste Director &City of Hayden Councilman	
Contact details (WORK / HOME)	Phone: 208-446-1430	Fax:
Circle one	E-mail: rsaterfiel@kcgov.us	

Name of Interviewer(s)	Brad Marshall
Date	2/20/2014

PROJECT/ISSUE-RELATED QUESTIONS

1. What is your connection or history to the Lakes Highway District ? (ex: Commissioner, Agency, business owner, resident, etc.)
Director of Solid Waste for Kootenai County – trucks use Lakes Highway District Roads for service. Roger is also a City of Hayden City Council Member

2. Thinking about how you get to [work / church / school / _____], what are the ways Lakes Highway District's transportation system works?
   - LHD does a good job of road maintenance

3. How could the transportation system be changed?
   - Service can be impacted by road limits – would be nice to be included in new transportation plan
   - Important to access areas with dump sites
   - LHD is often more flexible then other agencies – Does not require all weather roads

4. What are the three most important transportation issues that need to be addressed by this plan?
   - Look at future road uses based on future land use plans
   - Priority location - Chilco intersection alignment
   - Turn Lanes on Chilco

5. What are additional features that J-U-B or Lakes Highway District should address in the transportation plan (e.g. parks, trails, etc.)?
   - Look for other funding mechanisms beyond state funding – (Who will own Huetter Bypass?-State)
   - C-trail up US-95 – change in funding source- include in plan
   - Ways to work with other agencies to save money, i.e. State, cities, highway districts work together
   - Plan to buy and fund right-of-way for future projects early
   - Trails, paths, set backs r/w obtaining, signage

6. Who are the opinion leaders or active groups in the community?
   - Industrial and Commercial developers
   - Jobs Plus
   - Rotary
   - Kootenai Perspectives
   - Various Senior Groups
   - Experienced people (other jurisdictions

7. Thinking about earlier efforts to involve this community, (public meetings, mailings, gathering comments) – what can we learn from this? Is there anything we can do to improve the process?
   - Interviews, ads, reader boards, Public meet and greets get people to show up

8. Who else should we talk to?

9. Is there anything else you want to tell us?
   - Surprised the LHD does not have its own plan already. Should help them define projects and plan for r/w needs.
   - The district does a good job on pave projects.

Interviewer's comments

Technical Advisory Committee Members

Name	Affiliation
Monty Montgomery	Lakes Highway District
Donna Montgomery	Local Resident
Eric Shanley	Lakes Highway District
Glenn Miles	Kootenai Metropolitan Planning Organization
Greg Delavan	Kootenai County Airport
Don Davis	Idaho Transportation Department
Sean Hoisington	City of Hayden, Idaho
Kevin Jump	City of Rathdrum, Idaho
Kelly Brownsberger	Post Falls Highway District
Rod Twete	Lakes Highway District
Dan Malcom	Lakes Highway District

Summaries from TAC No. 1

Existing Strengths

- Pavement management plan is science based, industry advanced
- Partnerships with local agencies
- Public outreach, CIP/Education

Weakness to Address

Lancaster is owned by multiple (5) jurisdictions over a short distance – very important to work together to improve that road – lots of industrial/educational opportunities there

Opportunity for Improvements

General Improvements

- Prairie Rd System and Land Development – Look at big picture
- Shoulder widths on part of Diagonal
- Create project fact sheets to lay out known information when adding projects to the list – easier to get funding opportunities (Average Daily Traffic (ADT), Crashes, Right-of-Way, etc.)
- Education/information kiosk at beginning/end of Hayden Lake Rd for share the road. Team with City of Hayden for the Honeysuckle recreation area – Way finding system
- Chilco mill area/Silverwood
- How to address bike/ped education – Education grant through ITD is a possibility
- Deceleration Lane on 41 at Diagonal and on Scarcello at Elk Ridge
- Keeping up on edge striping on rural roads
- All season road network "truck route" - create long range (20-30 yrs) – will help companies choose business locations along trucking routes and future developments can help fund the all-weather improvements
- Develop a process to help inform the public of achievements – Facebook announcements are an inexpensive option
- Potential signal at HWY 53
- Potential commercial development north of Lancaster

TAC Input Crash/Safety Hotspot Locations

Location	Begin	End
Prairie	US-95	Ramsey
Boekel	Huetter	Intersection only
Boekel	Ramsey	RR Crossing
Hayden Lake Road	Half Mile Road	0.5 mi west
Hayden Lake Road	Hart Ln	0.3 mi east
Hayden Lake Road	Sportsman Prkg Rd	Hayden Creek Rd
Scarcello	Ranch View	Hwy 41
Diagonal	Ramsey	Intersection only
Garwood	US-95	Intersection only
Brunner	US-95	Intersection only
Hayloft	Old US-95	RR Crossing

TAC Input Capacity Hotspot Intersections

Location	Cross Street
Brunner	Clagstone/RR
Bunco	Frontage Road (old US-95)
Diagonal	Hwy 41/Truck Congestion

TAC Input Capacity Hotspot Corridors

Location	Begin	End
Lancaster	US-95	Hwy 41
Diagonal	Meyer	Brunner
Boekel	Meyer	Ramsey
Ramsey	Diagonal	Lancaster

Potential CIP Projects Identified by TAC

Location	Cross Street	Description
Brunner	Clagstone/RR	Intersection close to a RR/potential safety improvements
Ramsey	Diagonal/RR	Site distance/safety improvements potential
Twin Lakes Rd	Lake Forest Lp/Dockside Ln	Pedestrian area - consider pedestrian improvements
Twin Lakes Rd	Hwy 41	Consider extending turn lane for southbound traffic
Scarcello	Elk Ranch Rd	Consider deceleration lane to access side road
Brunner	US-95	Consider path connectivity in this area
Lancaster	US-95 to Lake	Consider path connectivity
Truck Route	Entire District	Create a long term truck route and include development fees to improve that route
Hayden Lake Rd	Beginning and End	Bike/Ped educational kiosk for Hayden Lake Rd

Summary from TAC No. 2

Ranking	Type	Location	Project/ Recommendation	Jurisdiction					Identified in KMPO Plan(s)	Identified in Public Involvement	Justification	Potential Funding Sources Outside of LHD Budget
				LHD	ITD	KMPO	Hayden	Other				
1	Segment Capacity Improvement	Bunco Rd from US-95 to Hatch Rd	1. Consider adding two-way left turn lane east of Pope on 2-lane road 2. Consider adding turn lanes/turn bays near intersections 3. Add thru lanes depending on volume 4. Perform in-depth study/verify need and accuracy	✓	✓						Multiple Accesses Narrow Roadway, Near Silverwood	Partner with ITD/KMPO LHTAC STP funding LHTAC LRHIP LHTAC LHSIP
2	Crash Safety Improvement	Ramsey & Diagonal Vicinity	Consider increased roadside clear zone by removing trees, install guard rail, improve sight distance, realign intersection, perform detailed inter-geometric analysis, protect and acquire R/W for future improvements	✓						✓	$ 1,140,130.24 in crash cost over 5 years. Loss of control, ran off road, hit embankment, hit tree	
3	Intersection Capacity Improvement	SH-41 at Diagonal Rd	High Volume/Capacity Ratio in 2035: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left turn movements and provide a two stage maneuver for the Westbound left-turn movements.	✓	✓					✓	High crashes High ADT Identified in KMPO 2014 Model	LHTAC - STP ITD/KMPO Partnership
4	Segment Capacity Improvement	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider grade separation at railroad crossing 3. Consider improved lighting at intersections and driveways 4. Consider turn lanes/turn bays at intersections 5. Consider widening to 4 lanes for future Ramsey extension project	✓				✓	✓	✓	Traffic Flow Interruptions Multiple Accesses High Severity Crashes 3 Fatalities	TIGER Planning TIGER Construction LHTAC STP funding LHTAC LRHIP Railroad Partnership ITD/KMPO Partnership
5	Intersection Capacity Improvement	SH-41 at Scarcello Rd /Village Blvd	High Volume/Capacity Ratio in 2035: 1. Consider turn lane improvements including westbound left, westbound right, eastbound left, and eastbound right turn lanes on Scarcello Road; and southbound right turn lanes on SH-41. This will result in LOS E for the Eastbound approach, with other approaches to the intersection operating at LOS C or better. 2. If LOS D or better is desired for all approaches, signalization of the intersection with existing lane configuration should be considered, if and when signal warrants are met. 3. Align east-west approaches across the intersection 4. Perform an in-depth intersection study	✓	✓				✓	✓	Offset intersection High ADT Identified in KMPO 2030 Model	LHTAC - STP ITD/KMPO Partnership
6	Freight	Chilco to Ramsey Brunner to SH 53 All Weather Route Connection	Consider developing standards and specified route for all weather vehicles to promote industrial and commercial development in specific areas	✓	✓	✓	✓	✓		✓		Map-21
7	Bridge	Old US-95 over UPRR (Athol)	Bridge Rehabilitation - Consider replacing railings, guardrail, guardrail ends, deck, and bridge approach								Sufficiency Rating below 75% (61.5%)	IDPB - Recreational Road and Bridge Fund LHTAC - Bridge Federal Aid
8	Inter-Modal	Rathdrum-Spirit Lake-Athol-Hayden Non Motorized Routes and Connections	Class 1, 2, or 3 non-motorized facilities on Rimrock Rd. from Lancaster Rd. to Ohio Match Rd.;	✓		✓		✓	✓	✓		ITD - Community Choices WFL/LHTAC - Federal Lands Access Program ITD - Idaho American with Disability Pedestrian Curb Ramp Program IDPR - Recreational Trails Program
			on Garwood from Rimrock Rd. to Ramsey Rd.;	✓	✓	✓		✓				
			on Ramsey Rd. from Garwood to Brunner Rd.;	✓		✓		✓				
			on Brunner Rd./Bunco Rd. from Ramsey Rd. to Good Hope Rd.;	✓	✓	✓		✓				
			on Good Hope Rd. from Bunco Rd. to SH-54;	✓	✓	✓		✓				
			on SH-54 from Good Hope Rd. to SH-41 (ITD led portion of this project);	✓	✓	✓		✓				
			on SH-41 from SH-53 to SH-54 (ITD led portion of this project);	✓	✓	✓		✓				

			on Scarcello Rd. from SH-41 to Ramsey Rd.	✓	✓	✓		✓				
9	Crash Safety Improvement	Ramsey - Boekel to Railroad Crossing	Consider increased stop sign size, reduce speed, provide flashing lights at stop sign, improve site distance for northbound traffic by removing trees from southwest corner, consider changing intersection treatment (roundabout, 4-way stop, signal), add railroad crossing gates and flashers, traffic circle/roundabout	✓						✓	$27,975,018.59 in crash cost over 5 years. Failing to stop at stop sign or yield to traffic on Boekel, speeds too fast for road geometry or scenario, angle crashes	LHTAC LHSIP TIGER Planning TIGER Construction
10	Crash Safety Improvement	Brunner & Old US-95 Vicinity	Consider improved intersection control, reduce speed limit, improve lighting, add flashing beacons, install traffic/speed calming measures prior to intersection, tree clearing and removal for improved sight distance and clear zone	✓						✓	$ 1,337,341.53 in crash cost over 5 years. Turning, ran off road, animal	
11	Segment Capacity Improvement	Boekel Rd from US-95 to Ramsey	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider signal or intersection improvements at US-95 and Boekel or consider alternate route to Lancaster and signal at US-95. 3. Consider adding lanes to Boekel to become a 3 to 5 lane road or adding turn lanes near intersection of Boekel and Ramsey. 4. Improve lighting at intersections, driveways, or along segment 5. Consider reduced speed limits on segment and/or add traffic calming measures	✓	✓						Severe Crashes Crash Characteristics (rear end, left turning movement conflicts) High v/c Functionality does not align with use Multiple Accesses High Speed	Partner with ITD/KMPO LHTAC STP funding Power Company Partnership LHTAC LRHIP
12	Sign Improvements	District Wide	Consider replacing signs with the following conditions: Fair, Missing, Poor, or Replace	✓							Signs do not meet MUTCD standards	LHTAC - LRHIP Sign Grant
13	Inter-Modal	Address ADA accessibility throughout LHD	Improve ADA accessibility throughout the jurisdiction - Inventory need for curb cuts/ped ramps - Inventory locations of high pedestrian activity and need for sidewalk and curb cuts	✓	✓	✓			✓	✓		ITD - Idaho American with Disability Pedestrian Curb Ramp Program
14	Bridge	Hayden Lake Road over Yellowbanks Creek	Bridge Rehabilitation - Consider replacing railings, guardrail ends, and improving transitions	✓							Sufficiency Rating below 75% (74.5%)	IDPB - Recreational Road and Bridge Fund LHTAC - Bridge Federal Aid
15	Inter-Modal	Rathdrum-Post Falls Connection – Meyer Rd.	Class 1, 2, or 3 non-motorized facilities from Prairie Ave. to SH-53 - LHD can support this project with other agencies	✓		✓		✓	✓	✓		
16	Crash Safety Improvement	Garwood Near Rimrock	Consider improved striping, increase clear zone on approaches, speed calming measures, road safety audit	✓						✓	$ 1,017,868.50 in crash cost over 5 years. Ran off road, roadside hazard	
17	Intersection Improvement	SH-41 and Seasons	Consider future study to determine needs at intersection	✓	✓	✓				✓		
18	Crash Safety Improvement	Hayden Lake Road & Rhapsody Vicinity	Consider reduced speed limit, install guard rail, improve corner signs (chevrons), install delineators around corner, increase clear zone, widen shoulder Consider improving Rhapsody at the intersection to reduce skew and improve grade.	✓						✓	$9,769,129.85 in crash cost over 5 years. Run off road crashes (tree), negotiating curves, speed too fast for conditions	
19	Crash Safety Improvement	Rimrock & Ohio Match vicinity	Consider increased lane width, install guardrail at curves within a half a mile from the intersection, increase shoulder width, install center rumble strips, consider road safety audit	✓						✓	$9,452,079.08in crash cost over 5 years. Head on crashes, negotiating curves, run off road,	
20	Inter-Modal	Hayden Lake Trail/Bike Pull Outs	Consider studying the feasibility of a Hayden Lake Trail/Bike pull out(s)	✓			✓	✓		✓		

Open House No. 1 Display Board Transcription

Potential Goals	Number of Agreements	Specific Location or Issue
Improve Safety at Intersections	2	• Consider changing intersection of Ramsey and Wyoming to a 4-way stop • Intersection design should represent the safety of the bicyclist as much/equal to a motor vehicle
Improve Bike and Pedestrian Connectivity		• A systematic plan with measurable growth of bicycle infrastructure should be established with an emphasis on connectivity to bus stops, bike trails, and destinations such as stores, restaurants, businesses, etc.
Improve Public Transportation		• Mass transit routes should connect with your bicycle lanes (in street). • Law enforcement needs to be used in the creation and design of your mass transit plan. If not, you risk creating a system that is not used by your target users, students, businesses, tourists, etc.
Improve Regional Connectivity and Access	4	• Connect Huetter South • Connect Ramsey Road • Extend Ramsey by the Airport • Connectivity in bicycle infrastructure is essential. Ending a bike lane is like ending a road. You take away the projected lane, you take away the protection of that mode of transportation.
Reduce Traffic Congestion		• Increased bicycle lanes increase the users of your street system while reducing the motor vehicle congestion.
Prepare for Future Development	2	• Chilco Road should be an all season road east of the Highway due to future development of 600 acres • Ramsey should be an all season road • We should design a transportation plan that places an emphasis on a mass transit, bicycling, walking, with less emphasis on the single occupant motor vehicle
Railroad Crossing Safety	2	
Improve Pavement Conditions		
Pave Existing Gravel Roads	1	
Improve Signal Operation	1	Install an advanced warning sign on US-95 at Wyoming
Improve Striping		
Improve Lighting		
Improve Signing	1	• Signing brings awareness to bicyclists on the roadway and conveys to the cyclist that you recognize them as a viable mode of transportation and you're taking legitimate steps to protect them in the street system
Improve Roadside Safety		

Potential Goals	Number of Agreements	Specific Location or Issue
Monitor Speed Limits	2	• From Prairie to I-90, Make 4th and 15th 35 mph roads. • Keep 4th and 15th as 25 mph roads. • Extend 25 mph zone on 15th to Margaret because of the school zone.
Bike Lanes (In Street)	1	• 5 ft minimum, 6 ft preferred especially when the speed limit is more than 35 mph. Ideally, we should make the standard 6 ft. • Create a systematic plan to create "x" amount of bike lanes by a specific time period; of course this doesn't apply to all roads, but it should apply to minor arterials. • Recognize the bicycle as a viable mode of transportation. • A smooth surface should be left on shoulders and bike lanes during the chip seal process. • Maintenance of bike [lanes] should be something that was in the pre-plan. Who is responsible for keeping lanes in a usable condition, free of snow, gravel, debris, just like the motor vehicle lane? If not, this reduces the number of users of the bike lanes and jeopardizes the cyclist that uses it and creates a liability issue for the Highway District. • Research and implement the most innovative bicycle infrastructure and not use the minimum standard just to get federal dollars.

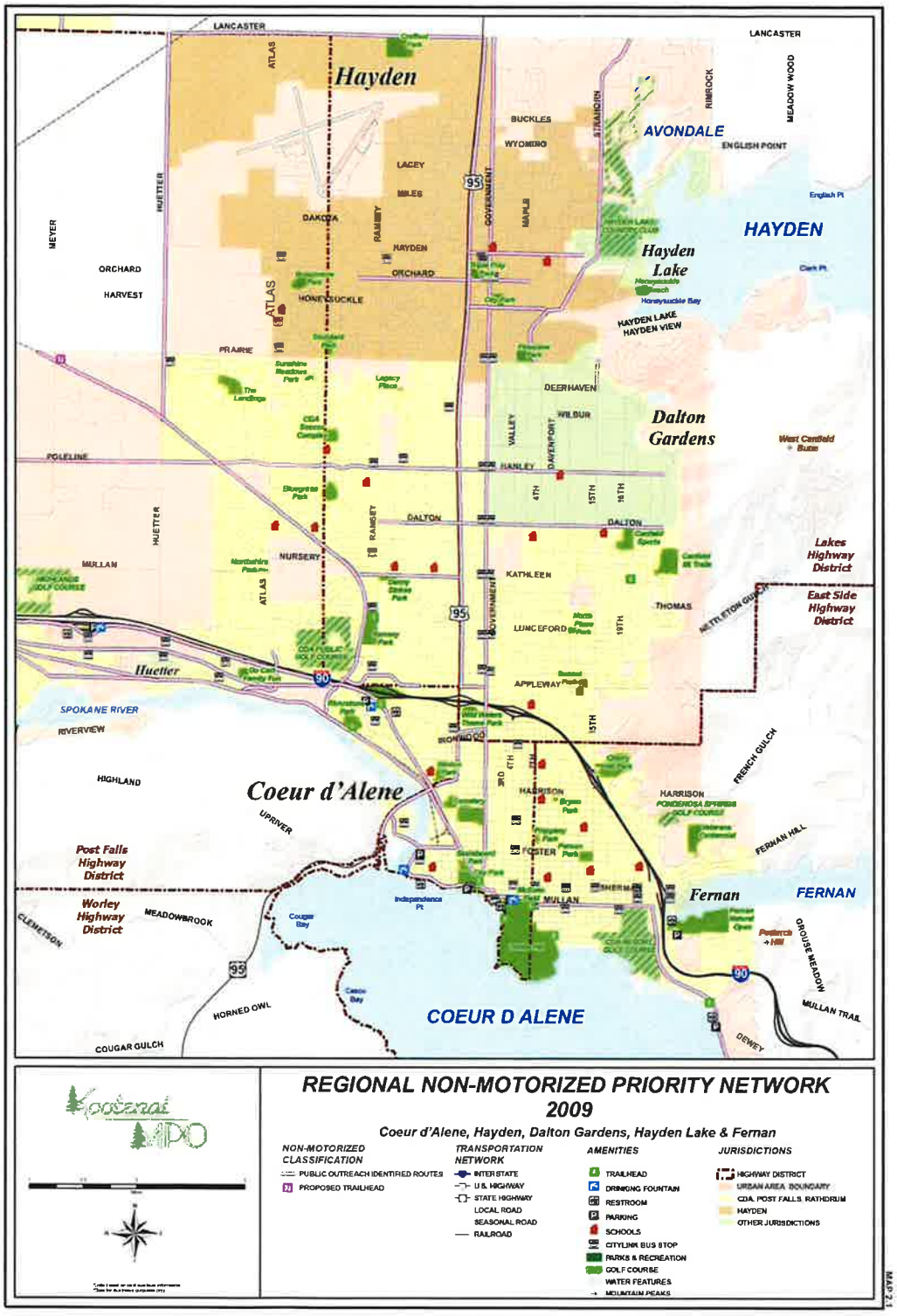
Open House No. 1 Comment Form Transcriptions

#	Name	Address, Phone, and/or Email	Comment
1	Jose Almada	1220 N 14th Street Coeur d'Alene, ID 83814 (208) 215-0468	• When resurfacing or repaving and restriping, include bike lanes when possible even if none currently exist. Even if they are smaller lanes, it will help increase bike awareness • Continued maintenance plans for sweeping the winter's gravel to make cycling safer
2	Michele Almada	1220 N 14th Street Coeur d'Alene, ID 83814 (208) 660-5233	• When repaving, add bike/ped lanes where possible. Ie. City of CdA "Complete Streets Policy" • Add signs where appropriate to share the road with cyclists • Educate the public about the rules of the road both directly to cyclists and motorists • Keep roads swept so cyclists can stay in the bike lanes instead of in the road.

Appendix B

KMPO Reference Maps and Data

KMPO Non-Motorized Priority Network Map



REGIONAL NON-MOTORIZED PRIORITY NETWORK 2009

Coeur d'Alene, Hayden, Dalton Gardens, Hayden Lake & Fernan

NON-MOTORIZED CLASSIFICATION
- PUBLIC OUTREACH IDENTIFIED ROUTES
- PROPOSED TRAILHEAD

TRANSPORTATION NETWORK
- INTERSTATE
- U.S. HIGHWAY
- STATE HIGHWAY
- LOCAL ROAD
- SEASONAL ROAD
- RAILROAD

AMENITIES
- TRAILHEAD
- DRINKING FOUNTAIN
- RESTROOM
- PARKING
- SCHOOLS
- CITYLINK BUS STOP
- PARKS & RECREATION
- GOLF COURSE
- WATER FEATURES
- MOUNTAIN PEAKS

JURISDICTIONS
- HIGHWAY DISTRICT
- URBAN AREA BOUNDARY
- CDA, POST FALLS, RATHDRUM
- HAYDEN
- OTHER JURISDICTIONS

MAP 2.1

2030 No-Build Intersections > 80% Capacity, AM and PM Peak Hour

Priority	Location	AM Peak Hour Capacity	PM Peak Hour Capacity	Responsible Jurisdiction(s)			
				LHD	ITD	CDA	HAYDEN
1	SH-41 and Twin Lakes Rd	N/A	84.5	X	X		
2	SH-41 and Scarcello Rd	N/A	83.8	X	X		
3	Ramsey Rd and Boekel Rd	N/A	84.2	X			
4	SH-41 and Diagonal	Included on 2014 model					
5	US-95 and Boekel Rd	100.3	112.9	X	X		
6	US-95/Government Way and SH-53	N/A	82.2	X	X		
7	Ramsey Rd and SH-53	82.2	100.6	X	X		
8	Ramsey Rd and Hanley Ave	N/A	127.7			X	
9	Ramsey Rd and Kathleen Ave	N/A	113.9			X	
10	Government Way and Dalton Ave	N/A	111.3			X	
11	US-95 and Ohio Match Rd	102.2	122.1	X	X		
12	US-95 and Honeysuckle Ave -	81.1	N/A		X		X
13	US-95 and Dakota Ave -	87.3	N/A		X		X
14	US-95 and Chilco Rd	113.9	136.3	X	X		
15	US-95 and Bunco Rd	100.2	128.4	X	X		
16	US-95 and Garwood Rd	108	128.6	X	X		
17	US-95 and Lancaster Ave	93.1	121.4	X	X		
18	Government Way and Boekel Rd	N/A	85.5	X			

2030 No-Build Roadway Segments > 70% Capacity, AM and PM Peak Hour

Priority	Location	AM Peak Hour Capacity (%)	PM Peak Hour Capacity (%)	Responsible Jurisdiction(s)			
				LHD	ITD	CDA	HAYDEN
1	Boekel Rd from US-95 to West of US-95	N/A	97	X			
1	Boekel Rd from mid-block from US-95 to Ramsey Rd	N/A	90	X			
1	Boekel Rd from US-95 and Ramsey Rd to US-95	71	75	X			
1	Boekel Rd from Ramsey Rd to mid block to US-95	77	71	X			
2	Bunco Rd from Hatch to US-95	N/A	94	X			
2	Bunco Rd from US-95 to Hatch Rd	96	75	X			
3	Ramsey Rd from Boekel Rd to SH-53	N/A	74	X			
4	Ramsey Rd from Appleway to I 90 WB on/off ramps-	73	N/A	X		X	
5	Garwood Rd from ~~SH-53~~ Ramsey to US-95	N/A	101	X			
6	Garwood Rd from US-95 to SH-53	N/A	92	X			
7	Garwood Rd from Old US-95 to US-95 -	84	N/A	X			
8	Garwood Rd from US-95 to Old US-95 -	81	N/A	X			
9	US-95 from Ohio Match Rd to Garwood Rd	75	112	X	X		
10	US-95 Wishful Rd to Chilco Rd	74	112	X	X		
11	US-95 from Corbin Hill Rd to Wishful Rd	111	111	X	X		
12	US-95 from Chilco Rd to Ohio Match Rd	N/A	111	X	X		
13	US-95 from Garwood Rd to Ohio Match Rd	112	111	X	X		
14	US-95 Chilco Rd to Wishful Rd	112	111	X	X		
15	US-95 from Wishful Rd to Corbin Hill Rd	N/A	110	X	X		
16	US-95 from Ohio Match Rd to Chilco Rd	111	110	X	X		
17	US-95 from Corbin Hill Rd to Bunco Rd	104	105	X	X		
18	US-95 from Bunco Rd to Corbin Hill Rd	N/A	104	X	X		
19	US-95 from Boekel Rd to Lancaster Ave	82	93	X	X		
20	US-95 from Lancaster Ave to Boekel Rd	84	89	X	X		

Appendix C

Bridge Inventory Sheets

Old US-95 and UPRR (Athol)	
State:	ID
NBI Structure Number:	30520
Route Sign Prefix:	County Highway
Facility Carried:	OLD HWY 95
Feature Intersected:	SIRR & UPRR;S.ATHOL OP
Location:	1.5 S. ATHOL
Year Built:	1929
Status:	Structurally Deficient
RecordType:	Roadway is carried ON the structure
Owner:	Other Local Agencies
Highway Agency District:	1
Maintenance Responsibility:	Other Local Agencies
Functional Class:	Major Collector, Rural
Service On Bridge:	Highway
Service Under Bridge:	Railroad
Latitude:	47 55 43.00 N
Longitude:	116 42 51.00 W
Material Design:	Concrete continuous
Design Construction:	Tee Beam
Approach Material Design:	Other
Approach Design Construction:	Other
Structure Length (m):	55.2
Approach Roadway Width (m):	7.3
Lanes on Structure:	2
Average Daily Traffic:	500
Year of Average Daily Traffic:	2010
Design Load:	M 13.5
Bridge Railings:	Do not meet currently acceptable standards.
Historical Significance:	Bridge is possibly eligible for the National Register of Historic Places (requires further investigation before determination can be made) or bridge is on a State or local historic register.
# of Spans in Main Structure:	6
Bridge Median:	No Median
StructureFlared:	No flare
Transitions:	Does not meet currently acceptable standards.
Approach Guardrail:	Does not meet currently acceptable standards.
Approach Guardrail Ends:	Does not meet currently acceptable standards.
Navigation Control:	Not Applicable
Structure Open?:	Open, no restrictions
Deck:	Poor Condition
Superstructure:	Good Condition
Substructure:	Satisfactory Condition
Structural Evaluation:	Somewhat better than minimum adequacy to tolerate being left in place as is
Sufficiency Rating (%):	61.5

Hayden Lake Rd/Hayden Creek	
State:	ID
NBI Structure Number:	30580
Route Sign Prefix:	County Highway
Route Number:	5736
Facility Carried:	STC 5736;HAYDEN LK
Feature Intersected:	HAYDEN CREEK
Location:	3.5 N. 2.9 E. HAYDEN LAKE
Year Built:	1987
RecordType:	Roadway is carried ON the structure
Owner:	Other Local Agencies
Highway Agency District:	1
Maintenance Responsibility:	Other Local Agencies
Functional Class:	Major Collector, Rural
Service On Bridge:	Highway
Service Under Bridge:	Waterway
Latitude:	47 48 58.00 N
Longitude:	116 41 40.00 W
Material Design:	Steel
Design Construction:	Culvert (includes frame culverts)
Approach Material Design:	Other
Approach Design Construction:	Other
Structure Length (m):	11
Approach Roadway Width (m):	9.8
Lanes on Structure:	2
Average Daily Traffic:	2700
Year of Average Daily Traffic:	2010
Design Load:	MS 18
Scour:	Bridge foundations determined to be stable for the assessed or calculated scour condition.
Bridge Railings:	Meet currently acceptable standards.
Historical Significance:	Historical significance is not determinable at this time.
# of Spans in Main Structure:	1
Bridge Median:	No Median
StructureFlared:	No flare
Transitions:	Meets currently acceptable standards.
Approach Guardrail:	Meets currently acceptable standards.
Approach Guardrail Ends:	Meets currently acceptable standards.
Navigation Control:	No Navigation Control on waterway (bridge permit not required).
Structure Open?:	Open, no restrictions
Deck:	Not Applicable
Superstructure:	Not Applicable
Substructure:	Not Applicable
Structural Evaluation:	Somewhat better than minimum adequacy to tolerate being left in place as is
Sufficiency Rating (%):	80.5

Hayden Lake Road/Yellowbanks Creek	
State:	ID
Place Name:	Hayden Lake
County:	Kootenai
NBI Structure Number:	30648
Route Sign Prefix:	County Highway
Facility Carried:	HAYDEN LAKE ROAD
Feature Intersected:	YELLOWBANKS CREEK
Location:	2.0S 3.0E HAYDEN LAKE
Year Built:	2003
RecordType:	Roadway is carried ON the structure
Owner:	Other Local Agencies
Highway Agency District:	1
Maintenance Responsibility:	Other Local Agencies
Functional Class:	Minor Collector, Rural
Service On Bridge:	Highway
Service Under Bridge:	Waterway
Latitude:	47 45 38.00 N
Longitude:	116 40 42.00 W
Material Design:	Concrete
Design Construction:	Stringer/Multi-beam or Girder
Approach Material Design:	Other
Approach Design Construction:	Other
Structure Length (m):	11.9
Approach Roadway Width (m):	8.5
Lanes on Structure:	2
Average Daily Traffic:	1800
Year of Average Daily Traffic:	2010
Design Load:	M 18
Scour:	Bridge foundations determined to be stable for the assessed or calculated scour condition.
Bridge Railings:	Do not meet currently acceptable standards.
Historical Significance:	Historical significance is not determinable at this time.
# of Spans in Main Structure:	1
Bridge Median:	No Median
StructureFlared:	No flare
Transitions:	Does not meet currently acceptable standards.
Approach Guardrail:	Meets currently acceptable standards.
Approach Guardrail Ends:	Does not meet currently acceptable standards.
Navigation Control:	No Navigation Control on waterway (bridge permit not required).
Structure Open?:	Open, no restrictions
Deck:	Very Good Condition
Superstructure:	Very Good Condition
Substructure:	Good Condition
Structural Evaluation:	Equal to present minimum criteria
Sufficiency Rating (%):	74.5

Spirit Lake Road/ Spirit Lake Causeway	
State:	ID
NBI Structure Number:	30485
Route Sign Prefix:	County Highway
Facility Carried:	SPIRIT LK CAUSEWAY
Feature Intersected:	SPIRIT LAKE;CAUSEWAY BR
Location:	0.4 S. 0.4 W. SPIRIT LAKE
Year Built:	1983
RecordType:	Roadway is carried ON the structure
Owner:	Other Local Agencies
Highway Agency District:	1
Maintenance Responsibility:	Other Local Agencies
Functional Class:	Major Collector, Rural
Service On Bridge:	Highway
Service Under Bridge:	Waterway
Latitude:	47 57 31.00 N
Longitude:	116 52 27.00 W
Material Design:	Prestressed concrete *
Design Construction:	Tee Beam
Approach Material Design:	Other
Approach Design Construction:	Other
Structure Length (m):	16.5
Approach Roadway Width (m):	8.5
Lanes on Structure:	2
Average Daily Traffic:	260
Year of Average Daily Traffic:	2010
Design Load:	MS 18
Scour:	Bridge foundations determined to be stable for the assessed or calculated scour condition.
Bridge Railings:	Do not meet currently acceptable standards.
Historical Significance:	Historical significance is not determinable at this time.
# of Spans in Main Structure:	1
Bridge Median:	No Median
StructureFlared:	No flare
Transitions:	Does not meet currently acceptable standards.
Approach Guardrail:	Meets currently acceptable standards.
Approach Guardrail Ends:	Meets currently acceptable standards.
Navigation Control:	No Navigation Control on waterway (bridge permit not required).
Structure Open?:	Open, no restrictions
Deck:	Fair Condition
Superstructure:	Fair Condition
Substructure:	Satisfactory Condition
Structural Evaluation:	Somewhat better than minimum adequacy to tolerate being left in place as is
Sufficiency Rating (%):	86.7

Appendix D

Recommendations Table
and
Top Five Projects
Summary Sheets

Recommendations Table

Ranking	Type	Location	Project/ Recommendation	Jurisdiction					Identified in KMPO Plan(s)	Identified in Public Involvement	Justification	Potential Funding Sources Outside of LHD Budget
				LHD	ITD	KMPO	Hayden	Other				
1	Segment Capacity Improvement	Bunco Rd from US-95 to Hatch Rd	1. Consider adding two-way left turn lane east of Pope on 2-lane road 2. Consider adding turn lanes/turn bays near intersections 3. Add thru lanes depending on volume 4. Perform in-depth study/verify need and accuracy	✓	✓						Multiple Accesses Narrow Roadway, Near Silverwood	Partner with ITD/KMPO LHTAC STP funding LHTAC LRHIP LHTAC LHSIP
2	Crash Safety Improvement	Ramsey & Diagonal Vicinity	Consider increased roadside clear zone by removing trees, install guard rail, improve sight distance, realign intersection, perform detailed inter-geometric analysis, protect and acquire R/W for future improvements	✓						✓	$ 1,140,130.24 in crash cost over 5 years. Loss of control, ran off road, hit embankment, hit tree	
3	Intersection Capacity Improvement	SH-41 at Diagonal Rd	High Volume/Capacity Ratio in 2035: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left turn movements and provide a two stage maneuver for the Westbound left-turn movements.	✓	✓					✓	High crashes High ADT Identified in KMPO 2014 Model	LHTAC - STP ITD/KMPO Partnership
4	Segment Capacity Improvement	Ramsey Rd from Boekel Rd to SH-53 (also identified as a safety project)	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider grade separation at railroad crossing 3. Consider improved lighting at intersections and driveways 4. Consider turn lanes/turn bays at intersections 5. Consider widening to 4 lanes for future Ramsey extension project	✓				✓	✓	✓	Traffic Flow Interruptions Multiple Accesses High Severity Crashes 3 Fatalities	TIGER Planning TIGER Construction LHTAC STP funding LHTAC LRHIP Railroad Partnership ITD/KMPO Partnership
5	Intersection Capacity Improvement	SH-41 at Scarcello Rd/Village Blvd	High Volume/Capacity Ratio in 2035: 1. Consider turn lane improvements including westbound left, westbound right, eastbound left, and eastbound right turn lanes on Scarcello Road; and southbound right turn lanes on SH-41. This will result in LOS E for the Eastbound approach, with other approaches to the intersection operating at LOS C or better. 2. If LOS D or better is desired for all approaches, signalization of the intersection with existing lane configuration should be considered, if and when signal warrants are met. 3. Align east-west approaches across the intersection 4. Perform an in-depth intersection study	✓	✓				✓	✓	Offset intersection High ADT Identified in KMPO 2030 Model	LHTAC - STP ITD/KMPO Partnership
6	Freight	Chilco to Ramsey Brunner to SH 53 All-Weather Route Connection	Consider developing standards and specified route for all weather vehicles to promote industrial and commercial development in specific areas	✓	✓	✓	✓	✓		✓		Map-21
7	Bridge	Old US-95 over UPRR (Athol)	Bridge Rehabilitation - Consider replacing railings, guardrail, guardrail ends, deck, and bridge approach	✓							Sufficiency Rating below 75% (61.5%)	IDPB - Recreational Road and Bridge Fund LHTAC - Bridge Federal Aid
8	Inter-Modal	Rathdrum-Spirit Lake-Athol-Hayden Non-Motorized Routes and Connections	Class 1, 2, or 3 non-motorized facilities on Rimrock Rd. from Lancaster Rd. to Ohio Match Rd.;	✓		✓		✓	✓	✓		ITD - Community Choices WFL/LHTAC - Federal Lands Access Program ITD - Idaho American with Disability Pedestrian Curb Ramp Program IDPR - Recreational Trails Program
			on Garwood from Rimrock Rd. to Ramsey Rd.;	✓	✓	✓		✓				
			on Ramsey Rd. from Garwood to Brunner Rd.;	✓		✓		✓				
			on Brunner Rd./Bunco Rd. from Ramsey Rd. to Good Hope Rd.;	✓	✓	✓		✓				
			on Good Hope Rd. from Bunco Rd. to SH-54;	✓	✓	✓		✓				
			on SH-54 from Good Hope Rd. to SH-41 (ITD led portion of this project);	✓	✓	✓		✓				
			on SH-41 from SH-53 to SH-54 (ITD led portion of this project);	✓	✓	✓		✓				
			on Scarcello Rd. from SH-41 to Ramsey Rd.	✓	✓	✓		✓				

Ranking	Type	Location	Project/ Recommendation	Jurisdiction					Identified in KMPO Plan(s)	Identified in Public Involvement	Justification	Potential Funding Sources Outside of LHD Budget
				LHD	ITD	KMPO	Hayden	Other				
9	Crash Safety Improvement	Ramsey - Boekel to Railroad Crossing	Consider increased stop sign size, reduce speed, provide flashing lights at stop sign, improve site distance for northbound traffic by removing trees from southwest corner, consider changing intersection treatment (roundabout, 4-way stop, signal), add railroad crossing gates and flashers, traffic circle/roundabout	✓						✓	$27,975,018.59 in crash cost over 5 years. Failing to stop at stop sign or yield to traffic on Boekel, speeds too fast for road geometry or scenario, angle crashes	LHTAC LHSIP TIGER Planning TIGER Construction
10	Crash Safety Improvement	Brunner & Old US-95 Vicinity	Consider improved intersection control, reduce speed limit, improve lighting, add flashing beacons, install traffic/speed calming measures prior to intersection, tree clearing and removal for improved sight distance and clear zone	✓						✓	$ 1,337,341.53 in crash cost over 5 years. Turning, ran off road, animal	
11	Segment Capacity Improvement	Boekel Rd from US-95 to Ramsey	1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider signal or intersection improvements at US-95 and Boekel or consider alternate route to Lancaster and signal at US-95. 3. Consider adding lanes to Boekel to become a 3 to 5 lane road or adding turn lanes near intersection of Boekel and Ramsey. 4. Improve lighting at intersections, driveways, or along segment 5. Consider reduced speed limits on segment and/or add traffic calming measures	✓	✓						Severe Crashes Crash Characteristics (rear end, left turning movement conflicts) High v/c Functionality does not align with use Multiple Accesses High Speed	Partner with ITD/KMPO LHTAC STP funding Power Company Partnership LHTAC LRHIP
12	Sign Improvements	District Wide	Consider replacing signs with the following conditions: Fair, Missing, Poor, or Replace	✓							Signs do not meet MUTCD standards	LHTAC - LRHIP Sign Grant
13	Inter-Modal	Address ADA accessibility throughout LHD	Improve ADA accessibility throughout the jurisdiction - Inventory need for curb cuts/ped ramps - Inventory locations of high pedestrian activity and need for sidewalk and curb cuts	✓	✓	✓			✓	✓		ITD - Idaho American with Disability Pedestrian Curb Ramp Program
14	Bridge	Hayden Lake Rd over Yellowbanks Creek	Bridge Rehabilitation - Consider replacing railings, guardrail ends, and improving transitions	✓							Sufficiency Rating below 75% (74.5%)	IDPB - Recreational Road and Bridge Fund LHTAC - Bridge Federal Aid
15	Inter-Modal	Rathdrum-Post Falls Connection – Meyer Rd	Class 1, 2, or 3 non-motorized facilities from Prairie Ave. to SH-53 - LHD can support this project with other agencies	✓		✓		✓	✓	✓		
16	Crash Safety Improvement	Garwood Near Rimrock	Consider improved striping, increase clear zone on approaches, speed calming measures, road safety audit	✓						✓	$ 1,017,868.50 in crash cost over 5 years. Ran off road, roadside hazard	
17	Intersection Improvement	SH-41 and Seasons	Consider future study to determine needs at intersection	✓	✓	✓				✓		
18	Crash Safety Improvement	Hayden Lake Rd & Rhapsody Vicinity	Consider reduced speed limit, install guard rail, improve corner signs (chevrons), install delineators around corner, increase clear zone, widen shoulder Consider improving Rhapsody at the intersection to reduce skew and improve grade.	✓						✓	$9,769,129.85 in crash cost over 5 years. Run off road crashes (tree), negotiating curves, speed too fast for conditions	
19	Crash Safety Improvement	Rimrock & Ohio Match Vicinity	Consider increased lane width, install guardrail at curves within a half a mile from the intersection, increase shoulder width, install center rumble strips, consider road safety audit	✓						✓	$9,452,079.08in crash cost over 5 years. Head on crashes, negotiating curves, run off road,	
20	Inter-Modal	E. Hayden Lake Rd Trail/Bike Pull Outs	Consider studying the feasibility of a Hayden Lake Trail/Bike pull out(s)	✓			✓	✓		✓		

CIP Project Summary

Project Name	Lakes Highway District Transportation Plan, Bunco Road From US-95 to Hatch Road						
Project Purpose	*Improve capacity on this segment of roadway*						
Project Need/ Existing Conditions	This segment was identified in the KMPO travel demand model as a segment that is expected to operate below acceptable levels by 2035.						
Benefits	REC	ADA	Safety	Seniors	Mobility	Connectivity	Other
			x		x	x	
Community Priority	No. 1 Priority: Maintain this as a long term priority and continue to monitor growth around Bunco Road and traffic operations on this segment.						
Stakeholders	ITD, Lakes Highway District, Citizens						
Implementing/ Affected Agencies	ITD, Lakes Highway District						

Project Funding		Technical Information	
Funding Sources	• Partner with developer/ITD/KMPO (variable) • LHTAC STP funding (7.34%) • LHTAC LRHIP (0%) • LHTAC LHSIP (7.34%)	ADT	500: Bunco
		Crash Info (2008-2012)	Fatal Crashes: 0 Injury Crashes: 2 Property Damage Only: 3
		Environmental Aspects	
		Safety Issues	Narrow, passing lanes, multiple accesses

Cost Estimate			
Project Development/Design	$195,000	Length	1.75 miles
Construction Estimate	$1,295,000	Plan Implementation	
ROW	$140,000	ROW Assumptions	50' existing – need approx. 70'
Utilities	$50,000	Drainage Assumptions	Drainage features included in ROW
Project Total	**$1,680,000**	Jurisdiction	LHD

Project Scope of Work	Action Plan and Timing
In response to the KMPO travel demand model, the segment geometry, crash characteristics, surrounding land use, future land use, access spacing, and lane configuration were used to develop the following potential solutions: 1. Consider adding two-way left turn lane east of Pope on 2-lane road 2. Consider adding turn lanes/turn bays near intersections 3. Add thru lanes depending on volume 4. Perform in-depth study/verify need and accuracy	Growth, development and traffic volumes in the project vicinity should be monitored. If the volume to capacity ratio continues to deteriorate, the District may consider implementing the scope of work, which includes performing an in-depth study. Plan to prepare BPA permits prior to construction.


Silverwood
Project Limits
N
N Silverwood Rd
95
E Bunco Rd
N Pope Rd
N Sonshine Way
E Jamie Ln
N Mountain Rd
McCoy Rd
N Hatch Rd


N

Project Name	Lakes Highway District Transportation Plan, Ramsey and Diagonal Vicinity
Project Purpose	*Improve safety at this intersection*
Project Need/ Existing Conditions	From 2008 to 2012, a total of 20 crashes occurred including 8 injury crashes in the vicinity of Ramsey and Diagonal. Contributing factors to the crashes include: speed too fast for conditions, loss of control, vehicles running off the road, hitting an embankment or hitting a tree.

Benefits	REC	ADA	Safety	Seniors	Mobility	Connectivity	Other
			x	x			

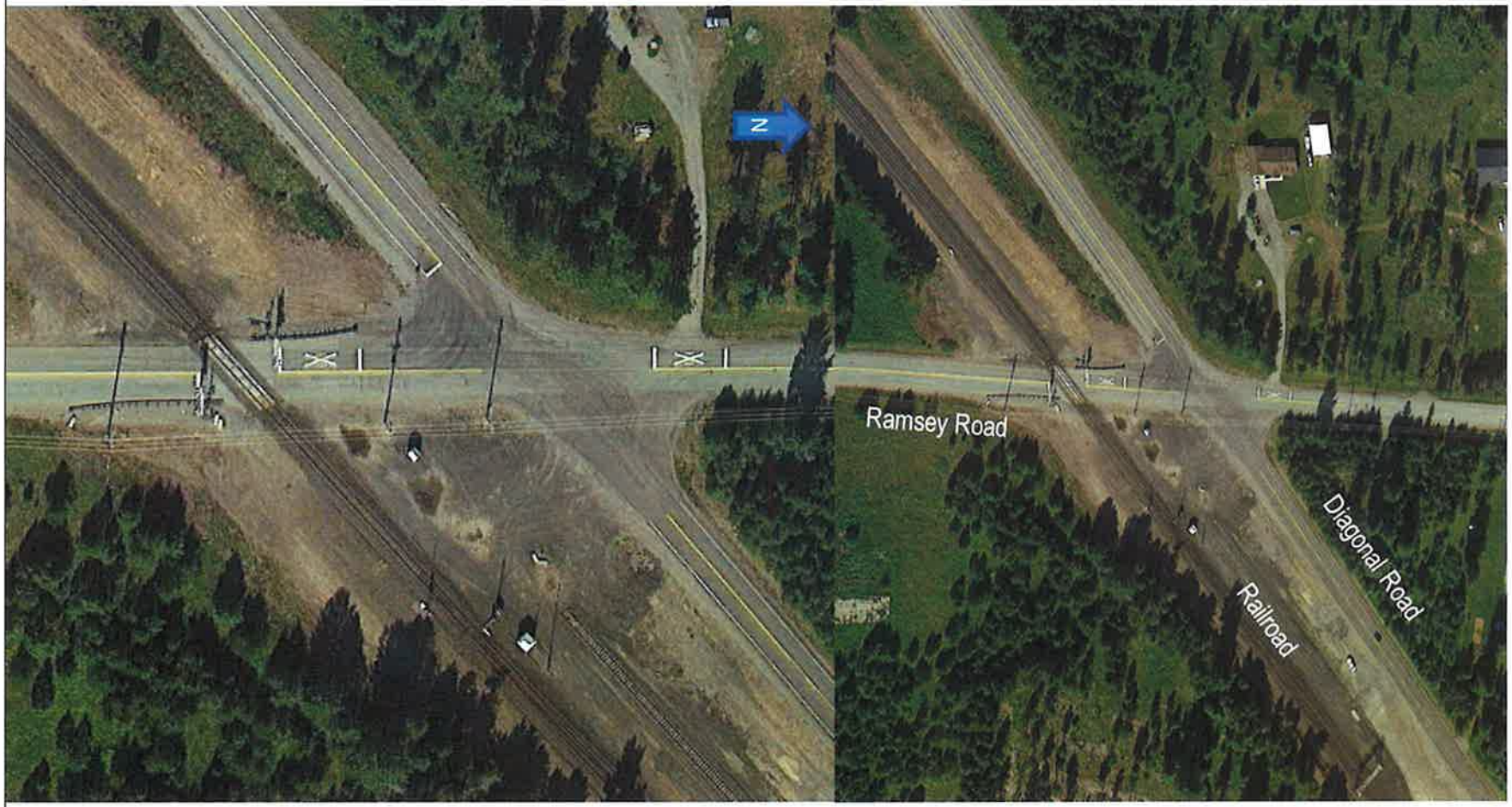
Community Priority	No. 2 Priority: Maintain this as a near term priority and seek funding opportunities related to safety improvements.
Stakeholders	Lakes Highway District
Implementing/ Affected Agencies	Lakes Highway District

Project Funding	
Funding Sources	LHTAC LHSIP (7.34%) BNSF Partnership (0-100%) LHTAC STP (7.34%)

Cost Estimate	No grade separated crossing	Include Grade Separated Crossing
Project Development/ Design	$125,000	$1,760,000
Construction Estimate	$300,000	$11,732,000
ROW	$50,000	$475,000
Utilities	$30,000	$100,000
Project Total	**$505,000**	**$14,067,000**

Technical Information	
ADT	2,400: Ramsey – South of Diagonal 1,200: Ramsey – North of Diagonal 550: Diagonal – Both sides of Ramsey
Crash Info (2008-2012)	Fatal Crashes: 0 Injury Crashes: 8 Property Damage Only: 12
Environmental Aspects	
Safety Issues	Near a railroad crossing, skewed intersection (site distance)
Facility Info	
Length	Intersection only
Plan Implementation	
ROW Assumptions	
Drainage Assumptions	See Bridge the Valley Concept
Jurisdiction	LHD

Project Scope of Work	Action Plan and Timing
In response to the crash characteristics and the existing roadway geometry, LHD should consider increased roadside clear zone by removing trees, install guard rail, improve sight distance, realign intersection, perform detailed inter-geometric analysis, and protect and acquire R/W for future improvements.	Accesses and wells may require additional design work to replace/relocate items

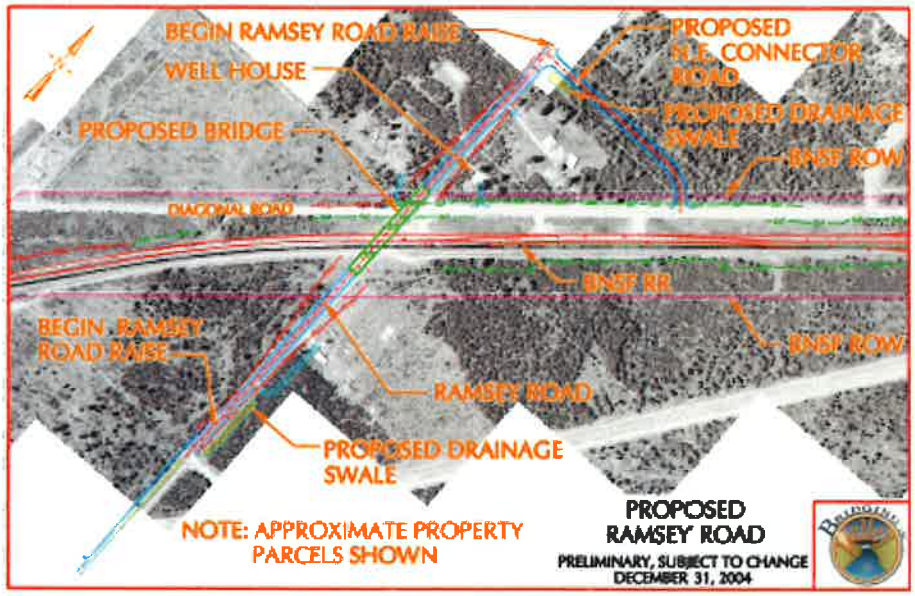

N
Ramsey Road
Railroad
Diagonal Road

Ramsey Road / BNSF Grade Separation

Kootenai County, ID

Project Location

Ramsey Road is a two lane, north-south rural major-collector road in Kootenai County, within the Lakes Highway District. It crosses the Burlington Northern Santa Fe (BNSF) mainline near Diagonal Road, 3 miles north of Highway 53. Ramsey Road currently carries approximately 2,820 vehicles per day. The BNSF line carries between 30 and 50 trains per day. The Ramsey Road crossing is currently protected by standard railroad gates and signals.



Project Description

This project will reconstruct Ramsey Road to pass **over** three BNSF tracks and Diagonal Road. The intersection of Ramsey Road and Diagonal Road will be moved 800 feet north along Ramsey Road, thus eliminating the stop sign for through movements along Diagonal Road.

- In addition to the projected 70 percent increase in vehicular traffic in this area over the next 30 years, the location — approximately half way between the two nearest crossings of the BNSF track—make this a critical project. In addition to the benefits listed below, the separation of Ramsey Road and the BNSF tracks will provide a vital transportation link to the business and residences north of the BNSF tracks and I-90.

Proposed Schedule

The Design Report, completed in December 2004, is based on guidance generated from a preliminary study done in 2001. The Design Report incorporates comments from the railroads, Idaho Transportation Department, Lakes Highway District, and the public. Environmental approval for the entire Bridging the Valley project was received in August 2006. Final design and construction will begin when funds are available.

Summary of Benefits

When completed, the Bridging the Valley (BTV) project will separate vehicle traffic from train traffic in the 42 mile corridor between Spokane, Washington and Athol, Idaho. By removing all at-grade rail crossings, Bridging the Valley will:

- Improve public safety by reducing rail / vehicle collisions;
- Improve emergency access to residents and businesses along the corridor;
- Eliminate waiting time for vehicles at rail crossings;
- Reduce noise levels–no more train whistles near crossings;
- Improve traffic flow due to separated grade crossings; and
- Enhance development opportunities with a single rail corridor served by the region's largest railroads.

October 2006

Project Name	Lakes Highway District Transportation Plan, SH-41 and Diagonal Road
Project Purpose	*Improve capacity at this intersection*
Project Need/ Existing Conditions	This intersection was identified in the KMPO travel demand model as an intersection that is expected to operate below acceptable levels by 2035. Traffic counts were collected at this intersection to estimate the 2035 LOS at this intersection. The LOS analysis resulted in the following recommendations: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left turn movements and provide a two stage maneuver for the Westbound left-turn movements.

Benefits	REC	ADA	Safety	Seniors	Mobility	Connectivity	Other
			x	x	x		

Community Priority	No. 3 Priority: Maintain this as a long term priority and continue to monitor growth around this intersection and traffic operations at this intersection
Stakeholders	ITD, Lakes Highway District, Citizens
Implementing/ Affected Agencies	ITD, Lakes Highway District

Project Funding		Technical Information	
Funding Sources	LHTAC – STP (7.34%) ITD/KMPO Partnership (0-100%)	**ADT**	10,000: SH-41 - South of Diagonal 8,600: SH-41 - North of Diagonal 550: Diagonal
		Crash Info (2008-2012)	Fatal Crashes: 0 Injury Crashes: 3 Property Damage Only: 1
		Environmental Aspects	
		Safety Issues	Site distance, vehicle speed, no turn lanes
Cost Estimate		Facility Info	
Project Development/ Design	$125,000	**Length**	Intersection only
Construction Estimate	$748,000	**ROW Assumptions**	Assume no ROW is needed
ROW	$0	**Drainage Assumptions**	Within existing ROW
Utilities	$10,000	**Jurisdiction**	LHD
Project Total	**$883,000**		

Project Scope of Work	Action Plan and Timing
The LOS analysis resulted in the following recommendations: Consider a Two Way Left-Turn Lane (TWLTL) lane on SH-41 through the intersection. This improvement will facilitate the southbound left turn movements and provide a two stage maneuver for the Westbound left-turn movements	


N
State Highway 41
Diagonal Road
Google ear

Project Name	Lakes Highway District Transportation Plan, Ramsey Road from Boekel Road to SH-53
Project Purpose	*Improve capacity on this segment of roadway*
Project Need/ Existing Conditions	This segment was identified in the KMPO travel demand model as a segment that is expected to operate below acceptable levels by 2035.

Benefits	REC	ADA	Safety	Seniors	Mobility	Connectivity	Other
			x		x	x	

Community Priority	No. 4 Priority: Maintain this as a long term priority and continue to monitor growth around Ramsey Road and traffic operations on this segment. Plan with consistency to the Ramsey Road Extension Plan
Stakeholders	Lakes Highway District, Citizens, Airport, City of Hayden
Implementing/ Affected Agencies	Lakes Highway District, Airport, City of Hayden

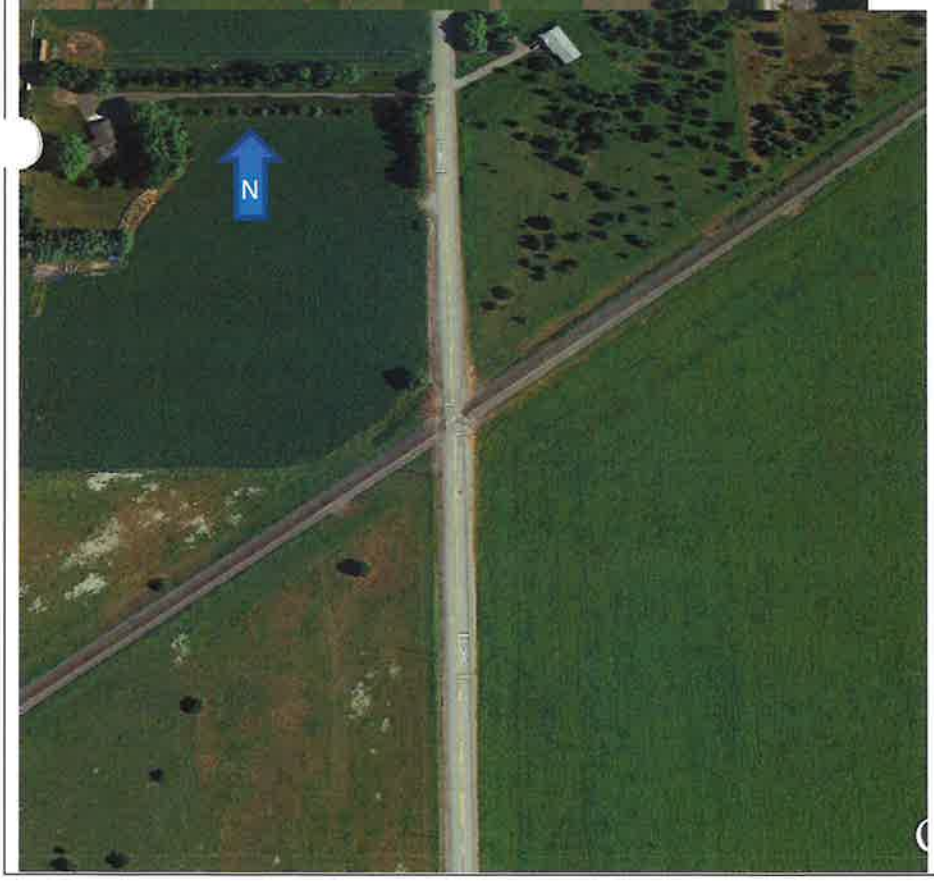
Project Funding	
Funding Sources	• TIGER Planning (20%) • TIGER Construction (20%) • LHTAC STP funding (7.34%) • LHTAC LRHIP (0%) • Railroad Partnership (0-100%) • ITD/KMPO Partnership (0-100%)

Cost Estimate	4 Lanes Only	Grade Separated Crossing
Project Development/ Design	$275,000	$1,215,000
Construction Estimate	$1,828,000	$8,100,000
ROW	$250,000	$290,000
Utilities	$100,000	$100,000
Project Total	**$2,503,000**	**$9,705,000**

Technical Information	
ADT	1,000: Ramsey
Crash Info (2008-2012)	Fatal Crashes: 3 Injury Crashes: 3 Property Damage Only: 5
Environmental Aspects	
Safety Issues	Railroad crossing, narrow road, high speed, multiple accesses
Facility Info	
Length	1 mile
ROW Assumptions	Existing ROW is approx. 60'. Assume 105' is needed split on either side of existing road.
Drainage Assumptions	Drainage features within existing/purchased ROW
Jurisdiction	LHD

Project Scope of Work	Action Plan and Timing
In response to the KMPO travel demand model, the segment geometry, crash characteristics, surrounding land use, future land use, access spacing, and lane configuration were used to develop the following potential solutions: 1. Verify need/accuracy of volumes that predicts a capacity problem. 2. Consider grade separation at railroad crossing 3. Consider improved lighting at intersections and driveways 4. Consider turn lanes/turn bays at intersections 5. Consider widening to 4 lanes for future Ramsey extension project	


SH-53
Project Limits
Ramsey Road
US-95
Boekel Road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Project Name	Lakes Highway District Transportation Plan, SH-41 and Scarcello Road/Village Boulevard
Project Purpose	*Improve capacity at this intersection*
Project Need/ Existing Conditions	This intersection was identified in the KMPO travel demand model as an intersection that is expected to operate below acceptable levels by 2035. Traffic counts were collected at this intersection to estimate the 2035 LOS at this intersection.

Benefits	REC	ADA	Safety	Seniors	Mobility	Connectivity	Other
			x	x	x	x	

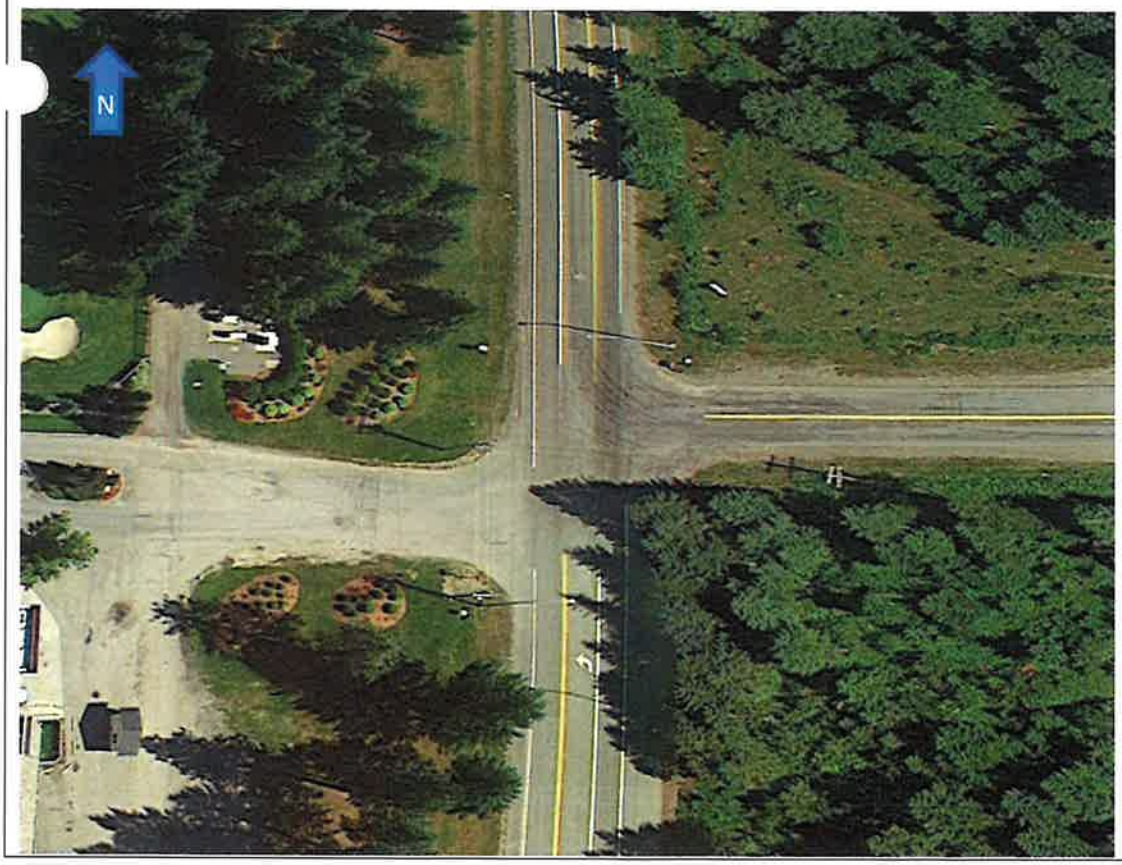
Community Priority	No. 5 Priority: Maintain this as a long term priority and continue to monitor growth around SH-41 and Scarcello Road and traffic operations at this intersection
Stakeholders	ITD, Lakes Highway District, Citizens
Implementing/ Affected Agencies	ITD, Lakes Highway District

Project Funding		Technical Information	
Funding Sources	• LHTAC – STP (7.34%) • ITD/KMPO Partnership (0-100%)	ADT	8,700: SH-41 - South of Scarcello 7,600: SH-41 - North of Scarcello N/A - Scarcello
		Crash Info (2008-2012)	Fatal Crashes: 0 Injury Crashes: 5 Property Damage Only: 0
		Environmental Aspects	
		Safety Issues	High speed, offset approaches (E/W), site distance, volume of vehicles

Cost Estimate			
Project Development/ Design	$196,000	Length	Intersection Only
Construction Estimate	$1,295,000	Plan Implementation	
ROW	$62,000	ROW Assumptions	80' -0' taper from SH-41 back to existing alignment
Utilities	$30,000	Drainage Assumptions	Drainage features within existing/purchased ROW
Project Total	**$1,583,000**	Jurisdiction	LHD

The LOS analysis resulted in the following recommendations: 1. Consider turn lane improvements including westbound left, westbound right, eastbound left, and eastbound right turn lanes on Scarcello Road; and southbound right turn lanes on SH-41. This will result in LOS E for the Eastbound approach, with other approaches to the intersection operating at LOS C or better. 2. If LOS D or better is desired for all approaches, signalization of the intersection with existing lane configuration should be considered, if and when signal warrants are met. 3. Align east-west approaches across the intersection. 4. Perform an in-depth intersection study.	Shifting Twin Lakes Road is difficult because of extensive utility infrastructure near roadway.


Village Blvd
Scarcello Road
SH-41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