

SOUTH LATAH HIGHWAY DISTRICT

TRANSPORTATION SYSTEM PLAN



Prepared For:

The South Latah Highway District

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Geographic Mapping Consultants, Inc.

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Section 1

Introduction

Introduction

South Latah Highway District (SLHD) submitted a project application for transportation planning funds through the Local Federal-Aid Incentive Program in the year 2000. The project application stated that completion of this transportation plan is a crucial goal for the District and cited the following justifications for the plan:

- Increasing costs of petroleum products
- Dust abatement required under the Clean Air Act
- Mitigation and reduction of adverse impact to the surface waters
- Impacts caused by the proposed widening of Highway 95 from two lanes to four lanes
- Changing land use within Latah County resulting in need for intersection improvements on adjoining state highways

Historically, Highway Districts in Idaho could elect to receive a portion of their annual funding from the State through the “Exchange Program” by foregoing federal-aid projects. Exchange program funds were still subject to federal funding and awarded on a non-competitive basis. Exchange funds made up approximately three percent of SLHD’s annual budget. Beginning in the year 2003, the exchange program was eliminated and replaced with the Local Rural Highway Investment Program (LRHIP). LRHIP funds are not guaranteed and instead will be awarded through a competitive application process. This transportation plan will provide the Highway District guidance in project selection for making applications. The Plan will make the District’s project applications stronger as they will conform to the Five-year Plan contained within this document. This planning effort will ensure LRHIP funds will be used effectively and efficiently. The SLHD anticipates the public will support the District’s future federally funded projects because public input was actively sought throughout the formulation of this transportation plan. The public’s involvement in the planning process is described in the subsection below titled “Agency and Public Involvement”.

STUDY AREA

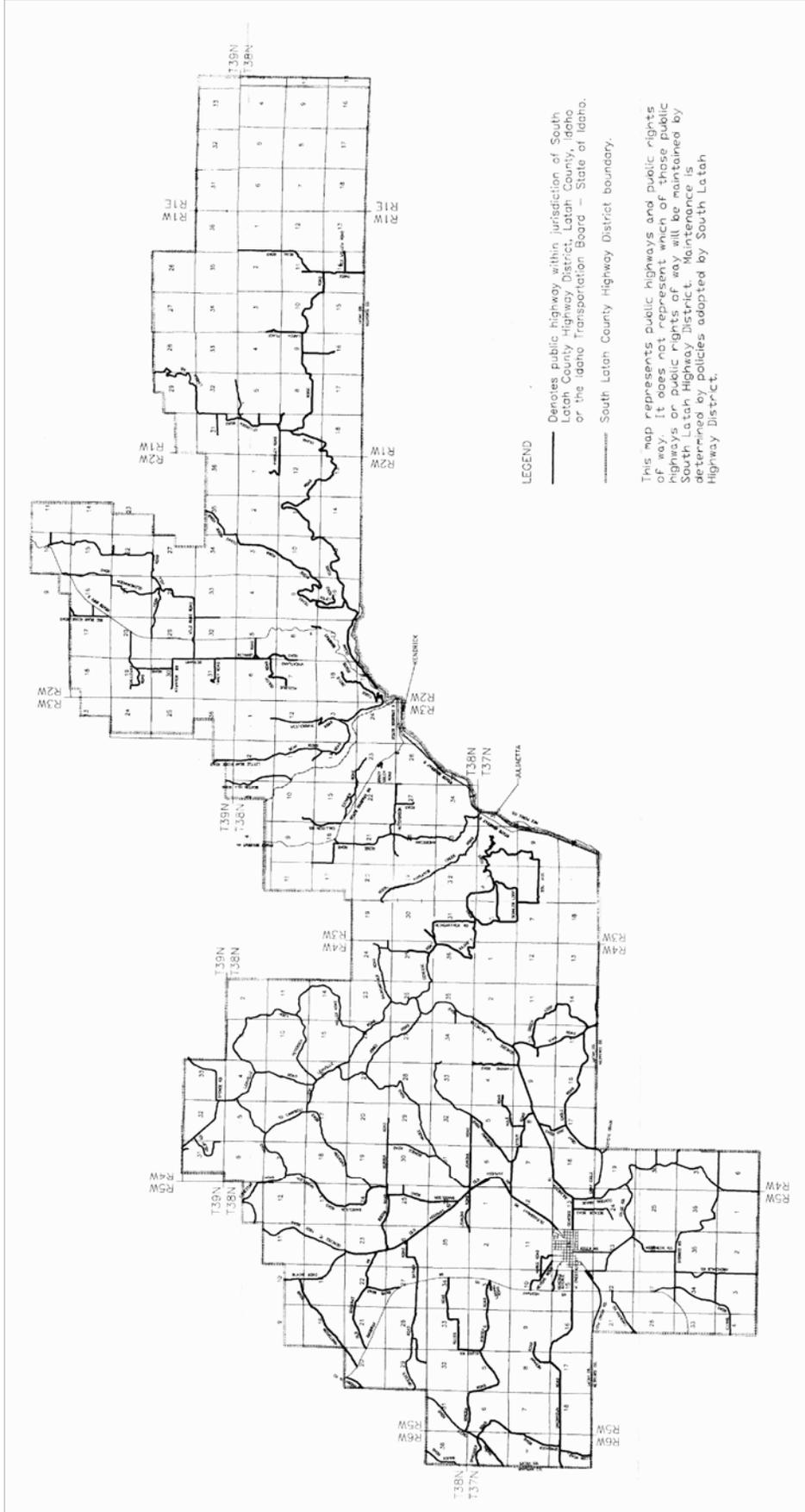
The study area focused on transportation systems inside the boundaries of the South Latah Highway District. SLHD is located in north central Idaho and is bounded by the Idaho/Washington state-line to the west, Clearwater County, Idaho on the east and North Latah County Highway District to the north. The District’s southern boundary follows the southern portion of Latah County for the most part, but also includes a small portion of Nez Perce County. A small portion of Nez Perce County is included in the SLHD boundary because topography, rather than the County line, makes a practical boundary for maintenance operations between SLHD and Nez Perce County Road and Bridge Department (NPCRBD) in the area south of Genesee. SLHD maintains the flat area at the top of the Lewiston grade just south of Genesee. The Highway District’s Official map adopted in 1999 is illustrated in Figure 1-1.

SLHD maintains a few road segments outside their boundaries in the jurisdictions of North Latah Highway County District (NLCHD) and NPCRBD. Likewise, NLCHD and NPCRBD maintain a few roadway segments inside SLHD boundaries. Maintenance trade agreements are in place between SLHD and the other two highway districts.

The District maintains approximately 244 miles of roadway. The roadways within the District include paved, gravel and dirt roads. U.S. Highway 95, State Highway 99 and State Highway 3 pass through the District and are maintained by Idaho Transportation Department (ITD). The SLHD boundary surrounds approximately 235 square miles located in the Palouse region; a highly productive agricultural area for wheat, dry pea and lentil crops. Genesee, located in the western portion of the District, is a major center for these agricultural activities. Kendrick and Juliaetta are located along the Potlatch River in the central portion of the southern boundary of the District. Kendrick and Juliaetta were initially established as trade centers for mines and production of fruits and vegetables. These industries have largely disappeared. Logging is now a main economic activity to the north east of these two towns. Kendrick and Juliaetta also provide limited agricultural services. The population of Latah County (which includes the North Latah County Highway District as well) was 35,000 according to the 2000 census. The population of cities within the South Latah Highway District's boundary in 2000 was 950 in Genesee, 400 in Kendrick, and 600 in Juliaetta. Homes and farmsteads in the outlying rural areas are widely spaced.

The Highway District does not have jurisdiction over transportation systems within the city limits of Genesee, Kendrick and Juliaetta. These individual cities plan and maintain the transportation systems within their respective city limits. Comprehensive plans for all three cities, traffic data, and pedestrian and bicycle facilities within the city limits were studied and considered in the formulation of this plan. However, this plan does not make recommendations for projects within these city limits.

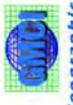
Areas outside of the District's boundary were considered during this planning process because much of the transportation activity in the District is thru-traffic to larger populated areas such as Moscow, Lewiston, Orofino, University of Idaho, Washington State University and Spokane. A large portion of the traffic between the cities within the District boundaries and to the smaller cities surrounding the District are school-activity related.



NTS

FIGURE
1-1

Official Map of South Latah Highway District
SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



Geographic Mapping Consultants, Inc.

PLAN STRUCTURE AND ELEMENTS

The development of South Latah Highway District's Transportation Plan began with an inventory of the District's existing transportation system. The inventory is documented in **Section 2** of this report. In general, the Consultant conducted an inventory of the existing roadways maintained by the SLHD and their corresponding traffic volumes. SLHD staff inventoried existing culverts, bridges and traffic signs. The information collected by both the Consultant and SLHD staff was incorporated into a GIS database currently utilized by SLHD staff, and will be part of an on-going inventory process. In addition to the inventory of the physical conditions of the SLHD transportation system, existing planning documents and procedures related to SLHD were identified, researched and reviewed as part of this initial assessment. Concurrent with the inventory of existing conditions and review of relevant plans and policies, public input was collected and summarized to apply towards priority planning. A more detailed description of the process used to solicit public input is found in the next subsection of this report titled "Agency and Public Involvement".

Upon completion of the existing conditions analysis, the focus of the project shifted to forecasting future population growth, subsequent travel demands and corresponding long-term future transportation system needs in SLHD's jurisdiction. **Section 3** of this plan documents the future conditions and travel demand forecasting portion of this project.

The alternatives analysis in **Section 4** documents the development and prioritizations of alternative measures to mitigate deficiencies identified in Section 2 and Section 3. Proposed improvement projects, standards, and policies were presented and verified to meet the goals identified by the Advisory Committee and SLHD Commissioners. Each alternative was considered based on safety, public needs, capacity, functionality, and feasibility. These alternatives were then compared to a criteria established for evaluating proposed roadway upgrades in the SLHD. The proposed improvement alternatives reflect a consensus by the SLHD Commissioners, the Consultant, and the Advisory Committee of the elements that should be considered for incorporation into the SLHD's long-term transportation system.

The Transportation Plan, **Section 5**, is the summation of all the proposed improvements aimed at addressing both the identified deficiencies and forecasted concerns of the SLHD. In addition to the proposed improvement projects, this Transportation Plan includes changes to roadway Functional Classifications, recreational bicycle and pedestrian connections, consideration of maintenance practices, and Highway District policies and standards. The Advisory Committee reviewed this plan, and the Consultant refined the plan into the element of this document presented.

The Capital Improvement Plan (CIP) presented in **Section 6** provides a summary of the proposed prioritization, available funding sources, and schedule of identified transportation system improvements and capital investments. Because the emphasis of the SLHD is maintaining existing roads rather than building new roads, capital projects intended to improve maintenance operations and asset management have been incorporated into the CIP.

AGENCY AND PUBLIC INVOLVEMENT

Agency and public input was accomplished in several ways. First, an Advisory Committee was established. Second, surveys were utilized to gather additional input. Surveys were given to the SLHD commissioners and staff, Advisory Committee members and Latah County emergency service personnel. Some of the committee members distributed surveys to their associates as well. A third technique was the attendance at community events to gather additional general public input. Attendees at the events were informed about the SLHD transportation plan process and encouraged to offer their comments, concerns, and suggestions.

ADVISORY COMMITTEE

The Advisory Committee's purpose is to provide critical review the Consultant's findings and recommendations and provide input throughout the development of document. The Highway District Commissioners assisted the Consultant in formulating the Committee. In turn, the SLHD Commissioners solicited the active involvement of 15 community members on the Advisory Committee. The Committee members were personally recruited by the Highway District Commissioners and consisted of representatives from Genesee, Kendrick, Juliaetta, ITD, other public agencies, and representatives from the farming community and public services. The Commissioners were very conscientious in recruiting members that represented a thorough cross-section of people who use District roads. Committee members were encouraged to solicit input from their friends and associates and share the input with the rest of the Committee.

Four Advisory Committee meetings were held during the development of this plan. The first meeting provided an orientation to the project and proposed schedule. Committee members made comments about the existing transportation system at the first meeting to begin identification of public issues and concerns. The inventory of existing conditions was presented at the second Advisory Committee meeting. In addition, all public comments received from presentations made at community events were presented and the Advisory Committee prioritized the public comments. At the third meeting a presentation of the analysis of existing conditions, a summary of the ranked public comments, growth projections and proposed alternatives were presented. Comments from the Advisory Committee were incorporated into the draft Transportation Plan document. The Transportation Plan document was presented and distributed to Advisory Committee members at the fourth meeting on December 11, 2003. Comments by the Advisory Committee about the draft document were received until January 5 and incorporated into the final published version of the Transportation Plan document.

The Committee consisted of the participants listed on the following page. SLHD Commissioners are not included in this table, although they participated in the Advisory Committee meetings.

Table 1-1
Advisory Committee Participants

Orland Arneberg
District Commissioner
North Latah County Highway District
1132 White Avenue
Moscow, Idaho 83843

Gordon Bunch
Juliaetta Mail Carrier
16276 Cook Grade
Lenore, Idaho 83541

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Latah County Sheriff's Office
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Todd Dahmen
Genesee School District Bus Coordinator
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Genesee, Idaho 83832

Gerald Flatz
LHTAC
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Boise, Idaho 83703

Barbara Foster
Kendrick Mail Carrier
Kendrick, Idaho 83537

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Lewiston, Idaho 83501

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Mayor, City of Juliaetta
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Dana Magnuson
Mayor, City of Kendrick
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Karl Otterstrom
Assistant County Planner
Latah County Planning & Building Dept.
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Alvin Schmidt
Kendrick School District Bus Coordinator
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Kendrick, Idaho 83537

Tim Sperber
Mayor, City of Genesee
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Genesee, Idaho 83832

Leslie Wilson
Genesee Postmaster
P.O. Box 1315
Genesee, Idaho 83832

SURVEYS

Additional comments were solicited through a survey distributed to Advisory Committee members and their constituents as well as area emergency response personnel. The survey results are presented in Appendix A.

GENERAL PUBLIC INPUT

The Consultant solicited general public input by presenting the transportation planning process at three community events. Two events were high school basketball games, one in Genesee, and one in Kendrick. The third was the Kendrick Sausage Feed, a large community fundraiser for emergency response services. These are well-attended events that represent a good cross-section of community members. A large-scale map of the highway district was placed near the main entry of each of these events. The Consultant solicited comment from event attendees about concerns, deficiencies, and suggestions for transportation improvements within the District. The comments received were documented directly onto the large-scale map presented at the event. These comments are presented in Appendix B.

OTHER AGENCY INVOLVEMENT

Several agencies other than SLHD participated in the development of this plan by having a representative from their organization serve as an Advisory Committee member. Agencies other than the South Latah Highway District represented on the Advisory Committee were Latah County Planning and Building, North Latah County Highway District, Latah County Sheriff's Office, Genesee School District Transportation Services, Kendrick School District Transportation Services, the Local Highway Technical Assistance Council and the United States Postal Service. The mayor or a city council member represented each of the three cities within the boundaries. Ken Helm, Senior Transportation Planner for District 2 Idaho Transportation Department, participated as a resource during the planning process. Kevin Lilly, Local Roads Engineer for District 2 Idaho Transportation Department, and Tom LaPointe, Executive Director of Valley Transit Regional Public Transportation, Inc. and Tom Lamar, Palouse-Clearwater Environmental Institute, were not on the Advisory Committee but provided review and comment on the draft Transportation Plan document.

Section 2

Existing Conditions

Existing Conditions

INTRODUCTION

The development of this transportation system plan began with an assessment of the existing land use and transportation system conditions. This section provides a description of existing transportation facilities, planning efforts, and public concerns within the SLHD jurisdiction, and the methodologies utilized to develop this inventory. This existing conditions assessment establishes a baseline for evaluating future conditions of the transportation system in the SLHD. This baseline describes the existing land uses, land use planning, public input, and conditions of all transportation modes this plan will address including trucks, cars, pedestrians, bikes, and transit facilities.

EXISTING LAND USE AND PLANNING

LAND USE HISTORY

Settled in the late 1800's, South Latah County has been a significant hub for agriculture in the Palouse for over a hundred years. Within the South Latah Highway District (SLHD), three towns developed Genesee, Juliaetta, and Kendrick. Genesee was incorporated in 1889 and is the largest town with a population of approximately 950 people. Juliaetta was incorporated in 1892 and is the second largest town with a population of approximately 600 people. Kendrick was platted in 1890 and has a current population of approximately 370 people.

While the population in the cities has grown substantially since their incorporation, most of the growth occurred in the late 1800's and early 1900's. Since the 1950's the total population in the three cities have shown relatively slow growth in the past fifty years.

The transportation system within this region developed as a result of the necessity for commerce between Genesee, Juliaetta, and Kendrick, and to move agricultural goods to railroad stations for transport to cities and ports. Much of the early growth in the area revolved around the railroad, which ran along the Potlatch River through Juliaetta and Kendrick and also to a station in Genesee. Today agricultural goods are moved primarily by truck to the larger city centers. Barges moving goods west on the Snake River from Lewiston, Idaho have taken the place of some railroad transport. Today, many people residing in the SLHD commute to the larger City centers of Moscow, Pullman, Lewiston and Clarkston for employment and services.

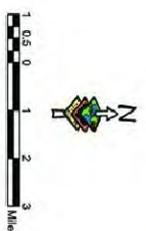
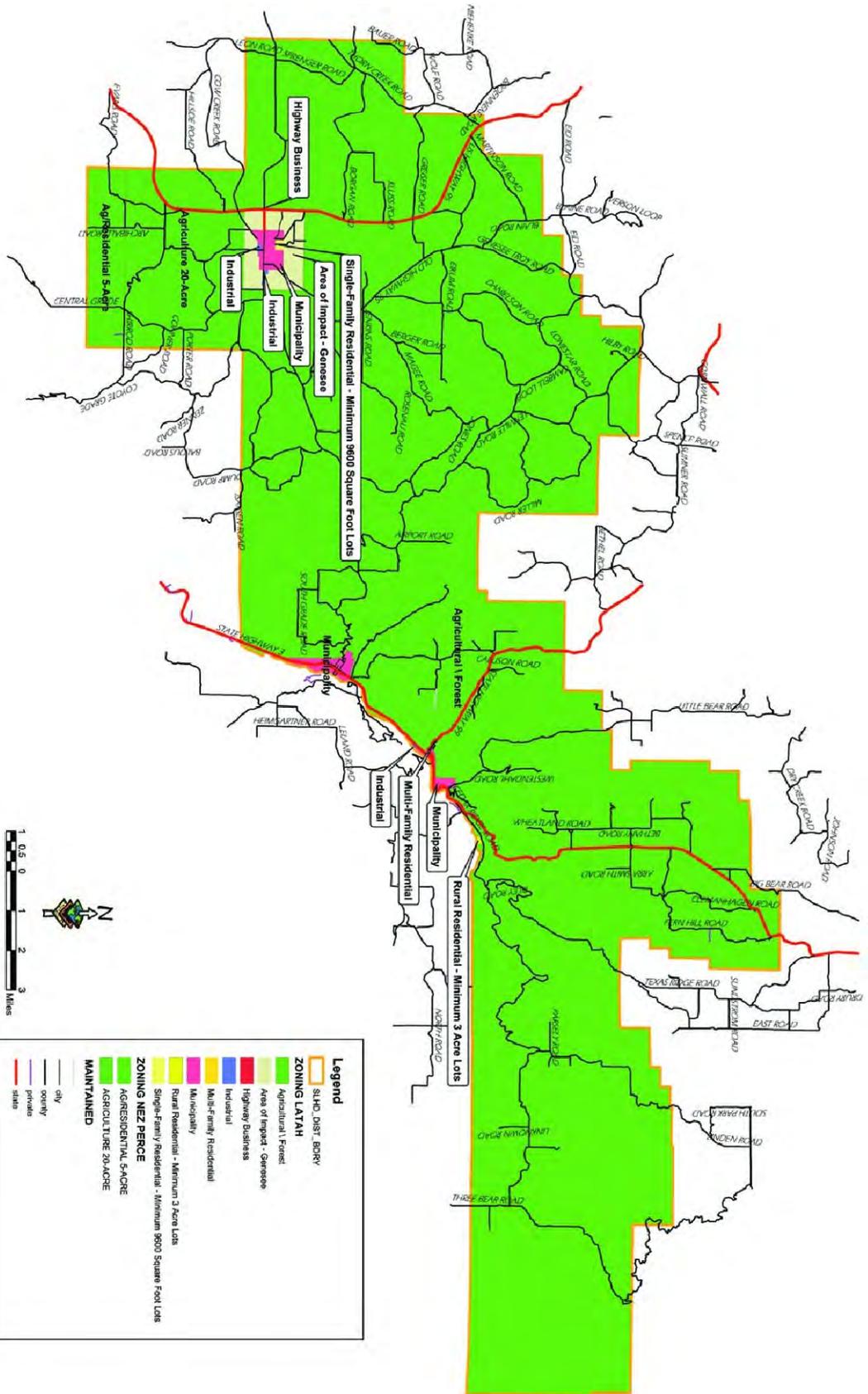
The Genesee Highway District was formed in 1919. In the early 1970's, Genesee Highway District was consolidated with two other highway districts to form the SLHD. SLHD maintains the majority of the public roadway system within its boundaries totaling approximately 244 miles of roadways. Roadways inside the boundary but not under SLHD jurisdiction include US Highway 95, State Highway 3, and State Highway 99 and the city streets within Genesee, Juliaetta, and Kendrick.

LATAH COUNTY COMPREHENSIVE PLAN

Latah County initiated a comprehensive plan in the early 1970's. Since then, it has been substantially revised. The current Latah County Comprehensive Plan was adopted by resolution on December 20, 1994 and amended on November 20, 1995. The Comprehensive Plan and Land Use Map was adopted by the Board of County Commissioners of Latah County to promote the health, safety and general welfare of the people of Latah County in order to achieve the purposes set forth in Idaho Code 67-6502. The transportation element and the Land Use Map were of primary interest in the formulation of this plan. The stated goal in the transportation element is "To promote an efficient and safe transportation system in Latah County." The stated policies to accomplish this goal are as follows:

- Ensure that access onto public roads will not disrupt traffic flow and that access is adequate for emergency response vehicles.
- Limit the number of access points to state and federal highways.
- Encourage bike and pedestrian routes and mass-transit as transportation options.
- Ensure compatibility of airstrips with surrounding land uses and protect existing airstrips from encroachment by development.
- Ensure that buildings are set back a safe distance from public roads.
- Encourage the preservation and growth of rail service within Latah County.

The Latah County Land Use Map, figure 2-1, proposes that increased densities will occur in the areas immediately surrounding the existing cities of Genesee, Juliaetta and Kendrick. This understanding allows the consultant to anticipate future traffic patterns to coincide with existing patterns. This anticipated growth pattern validates the concept of improving transportation between existing activity centers in the District and through the District to larger municipal areas outside the District, such as Lewiston, Moscow and Orofino.



Legend	
[Orange Box]	SAND DIST. BDRY
ZONING LATAH	
[Light Green Box]	Single-Family Residential - Minimum 9600 Square Foot Lots
[Yellow Box]	Highway Business
[Pink Box]	Area of Impact - Genesee
[Blue Box]	Industrial
[Light Green Box]	Multi-Family Residential
[Light Green Box]	Rural Residential - Minimum 3 Acre Lots
[Light Green Box]	Single-Family Residential - Minimum 9600 Square Foot Lots
[Light Green Box]	AGRICULTURE 20-ACRE
[Light Green Box]	AGRICULTURE 5-ACRE
[Light Green Box]	MAINTAINED
[Black Line]	city
[Grey Line]	county
[Red Line]	precinct
[Blue Line]	state

Latah County Land Use

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan

FIGURE
2-1



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Geographic Mapping Consultants, Inc.

GENESEE COMPREHENSIVE PLAN

The Genesee Comprehensive Plan was adopted in 1975 and revised in 1978. An official amendment has not been adopted by the City Council since 1978 although the Planning and Zoning Commission prepared some revisions in the mid-1990's and is expecting to have an update formally adopted in the second half of 2004. The unofficial updated version was not released to the Consultant for consideration in this planning document. This summary addresses the 1978 version. Refer to the Genesee Land Use Map presented in Figure 2-2.

Genesee is located near the southern border of Latah County about one mile east of Highway 95. The town was established in response to the exceptional wheat production found in the surrounding Palouse region. Settlement of the Genesee area began around 1870. The town was incorporated on October 23, 1889. Growth of the town has coincided with the development of the agricultural natural resources. Genesee was self-sufficient up until about 1940. Highway 95 was upgraded from gravel to pavement. People and businesses moved to the surrounding larger cities such as Lewiston and Moscow and Genesee became more like a bedroom community. However, there are still several strong agriculturally related businesses in Genesee.

Transportation Element

Genesee's Comprehensive Plan includes a well-developed transportation element. Several portions of the transportation element contribute to the development of this plan. Among the portions most directly related are the classification of streets, street design standards and objectives for achieving the stated goal for a transportation system. Special attention was directed at the locations where SLHD roadways abut Genesee's city limits.

Streets in Genesee are classified by three design standards in conformance to the designations of Idaho Transportation Department. Figure 2-3 illustrates the streets designated as "Major Collector" and "Minor Collector". All others are designated "local access". Street design standards for each of the three designations include a ten-foot wide paved shoulder on both sides to encourage use by pedestrians, bicycles and possibly horses (as listed in the objectives below). Genesee Avenue to Highway 95 is designated as a minor collector in the Genesee Comprehensive Plan and should be reconsidered. The anticipated closing of Genesee Avenue access to Highway 95 will most likely require that Jackson Street and its extension into the county (Neyens Road) be reclassified to minor collector to accommodate the Genesee Avenue traffic. Cedar Street in Genesee turns into Old Highway 95 in the County to the north west of the city limits. Cedar Street is currently shown as a Minor Collector in the Genesee Comprehensive Plan.

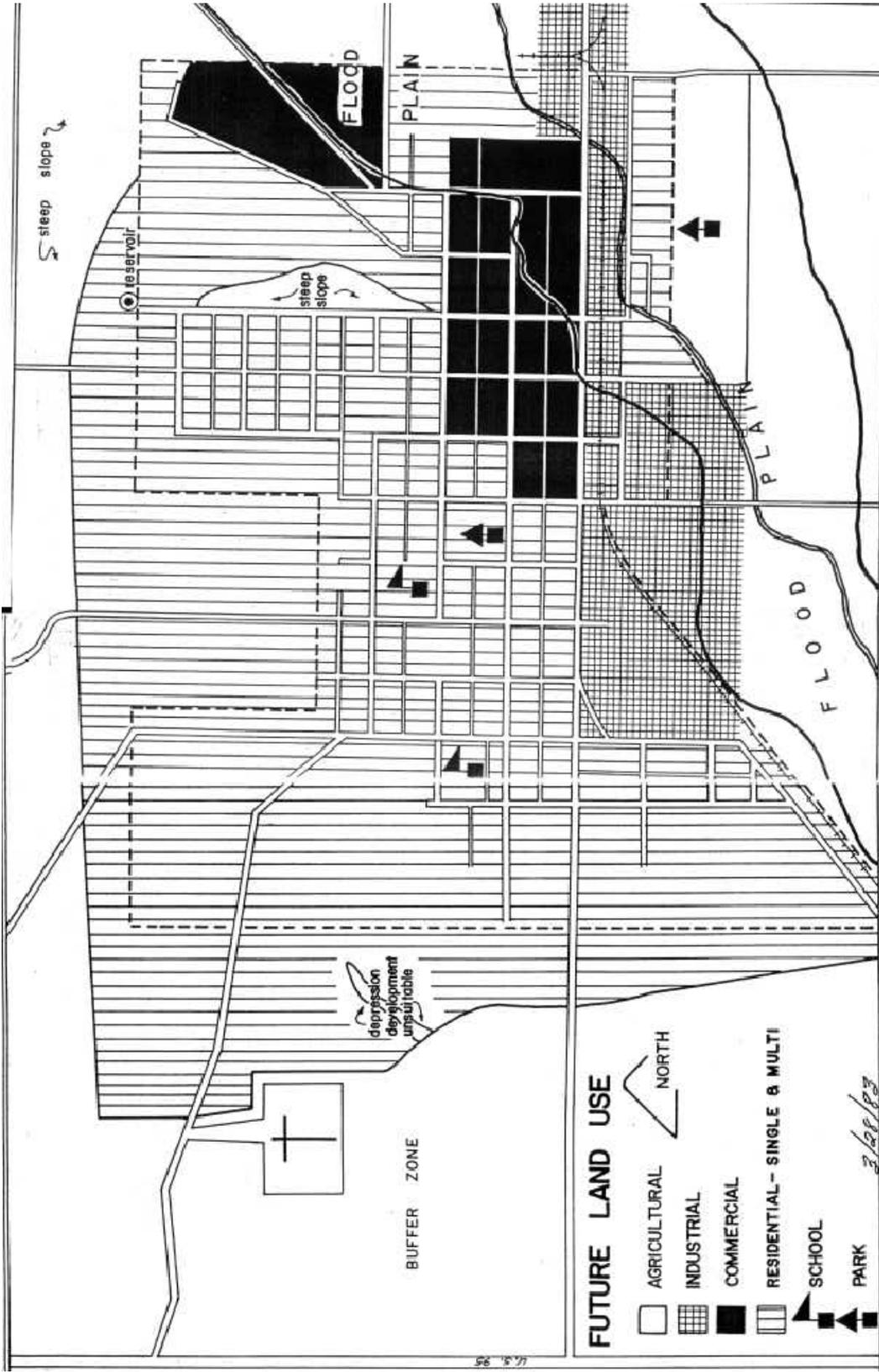


FIGURE
2-2

Genesee Land Use

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan



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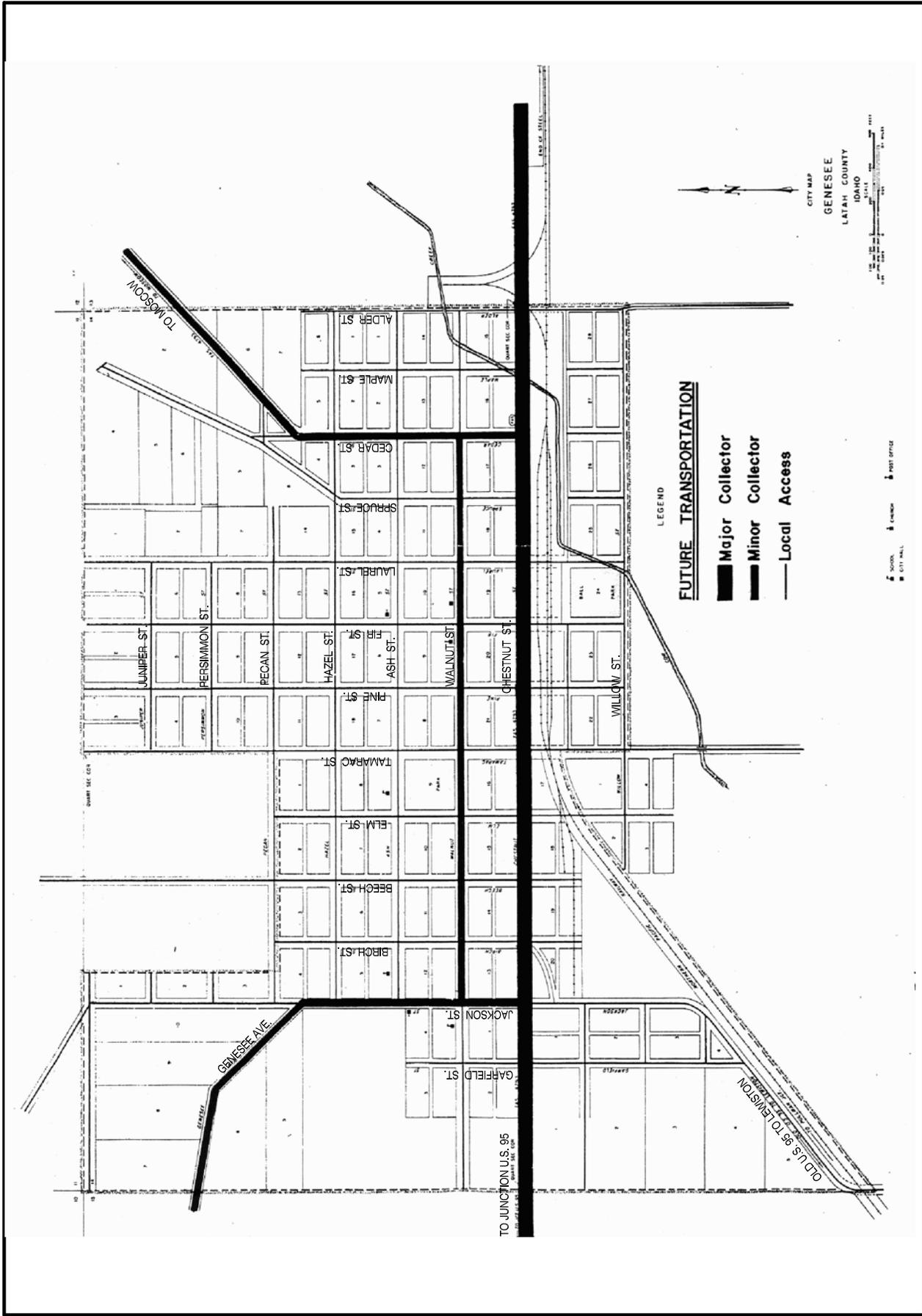
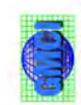


FIGURE
2-3

Genesee Street Classification

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan

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Hodge & Associates, Inc.
Engineers • Planners • Landscape Architects

Genesee identified objectives for achieving the goal of an adequate, safe and effective transportation system. A list of the stated objectives most relevant to the SLHD Transportation Plan follows:

- In projects of significant size, as determined by the Planning and Zoning Commission, the developer will be required to prepare an Impact Statement prior to approval by the Commission.
- The community will move ahead as fast as funds are available to complete the minimum paving on all streets.
- Future construction, reconstruction, and paving of all local access streets will be paved with sufficient width to provide a minimum of 20-ft. travel way and 10-ft. extra width to provide pedestrian, bike, and horse paths, except in areas where there are already sidewalks.
- Encourage transportation systems for bicycles, horses, and pedestrians as well as for automobiles.
- Design the transportation system to meet the demands of existing and proposed land uses, local, regional, and statewide transportation and evaluate them to assure that the adjacent land uses and natural systems can handle the increase in traffic.
- All city roads will be sized according to density, total population, and land-use requirements.
- Coordinate with State Highway Department and South Latah Highway District.

Other Related Comprehensive Plan Elements

Other sections of the Comprehensive Plan are relevant to the SLHD Transportation System and are found in: Population, Community Design, Hazardous Areas, and Implementation. Summaries of the relevant portions of these sections follow.

Population:

Population growth seems inevitable due to Genesee's central location between the population centers of Lewiston and Moscow and it's pleasant rural atmosphere. Moscow is approximately 15 minutes away and Lewiston is 20 minutes away. Other factors of potential growth include:

- Port of Lewiston is estimated to provide over 1,500 permanent jobs (the Port has been developed since the Comp Plan was written therefore Genesee has already been affected by this development).
- The growth of the University of Idaho, Moscow and Lewis-Clark State College, Lewiston. Increased enrollment will provide more students, faculty and service related occupations in the area.
- The possibility of a Quad-Cities Regional Airport in the surrounding area.

Community Design:

The goal is to promote a community appearance and design which has safety, functional, and aesthetic qualities. An interesting stated objective is to encourage transportation systems for bicycles, horses and pedestrians as well as for automobiles.

Analysis

Genesee is likely to continue to grow as a bedroom community for the larger populated areas of Moscow/Pullman and Lewiston/Clarkston. Genesee is centrally located between Lewiston and Moscow. The attractiveness of Genesee and the central location between larger cities will eventually produce increased pressure to develop commercial businesses (gas stations, convenience stores, etc.) and service related businesses. As mentioned in the Genesee Comprehensive Plan, there has been discussion in the past of a regional airport near Genesee that would combine air service, which is currently provided by Moscow and Lewiston airports. Discussions about the development of a regional airport have been shelved for now, however the potential still exists should a favorable economic climate develop. The area between Genesee and Highway 95 and possible to the west of Highway 95 will eventually be more intensely developed and incorporated into the City of Genesee. The Development of an airport would have a huge impact on the land use pattern in the area and the interface of Genesee with Highway 95.

Encouraging bicycle, pedestrian and horse transportation is mentioned in several places in Genesee's Comprehensive Plan. Genesee's street standards include a wide paved shoulder on each side to make these other transportation modes feasible. Pressure to extend these alternate modes of transportation out into the county, whether they are for transportation or recreation, should be anticipated.

CITIES OF JULIAETTA AND KENDRICK JOINT COMPREHENSIVE PLAN

Juliaetta and Kendrick describe themselves in their Comprehensive Plan as a "community composed of Cities". Juliaetta and Kendrick are about three miles apart and cooperated in the development of a Joint Comprehensive Plan and Land Use Map. The Land Use Map was then adopted by each City as the Zoning Map for the areas within the respective city limits. See Figure 2-4 for Juliaetta's Land Use Map and Figure 2-5 for Kendrick's Land Use Map.

The Comprehensive Plan describes Juliaetta as primarily industrial and residential in nature and Kendrick as having the primary business district in addition to residential areas. According to the Plan, the two cities complement each other to provide all desired elements needed by their residents. Juliaetta and Kendrick are limited in their ability to grow because of the steep surrounding topography. Both are located in a narrow, confined river valley with steep canyon walls. Flooding has had a direct impact on the lower elevations where the business and minor residential districts are located. There is a lack of sites large enough to accommodate sizable industrial activities and the lack of an adequate water supply for water intensive industries. The single most important factor affecting growth in these communities on a long-term basis may be the residential appeal for individuals employed in the Lewiston and Moscow metropolitan areas. The availability of employment opportunities in adjacent urban areas will also influence the community's growth rate.

Related Comprehensive Plan Elements

The Joint Comprehensive Plan does not contain a section dedicated strictly to transportation; however, several of the policies and goals are related to transportation. Two goals related to transportation follow: 4) the Community adopt a subdivision regulation ordinance to guide and control the platting of lands within the community and to develop a policy regarding development

of land adjacent to the corporate limits and 5) That the adopted planning and zoning ordinances be managed in such a manner so as to maintain the Community's character and quality of life.

In the Commercial Development section there are two goals related to transportation:

- Encourage commercial development in specific areas along State Highway 3
- Encourage new commercial establishments to provide off-street parking.

Analysis

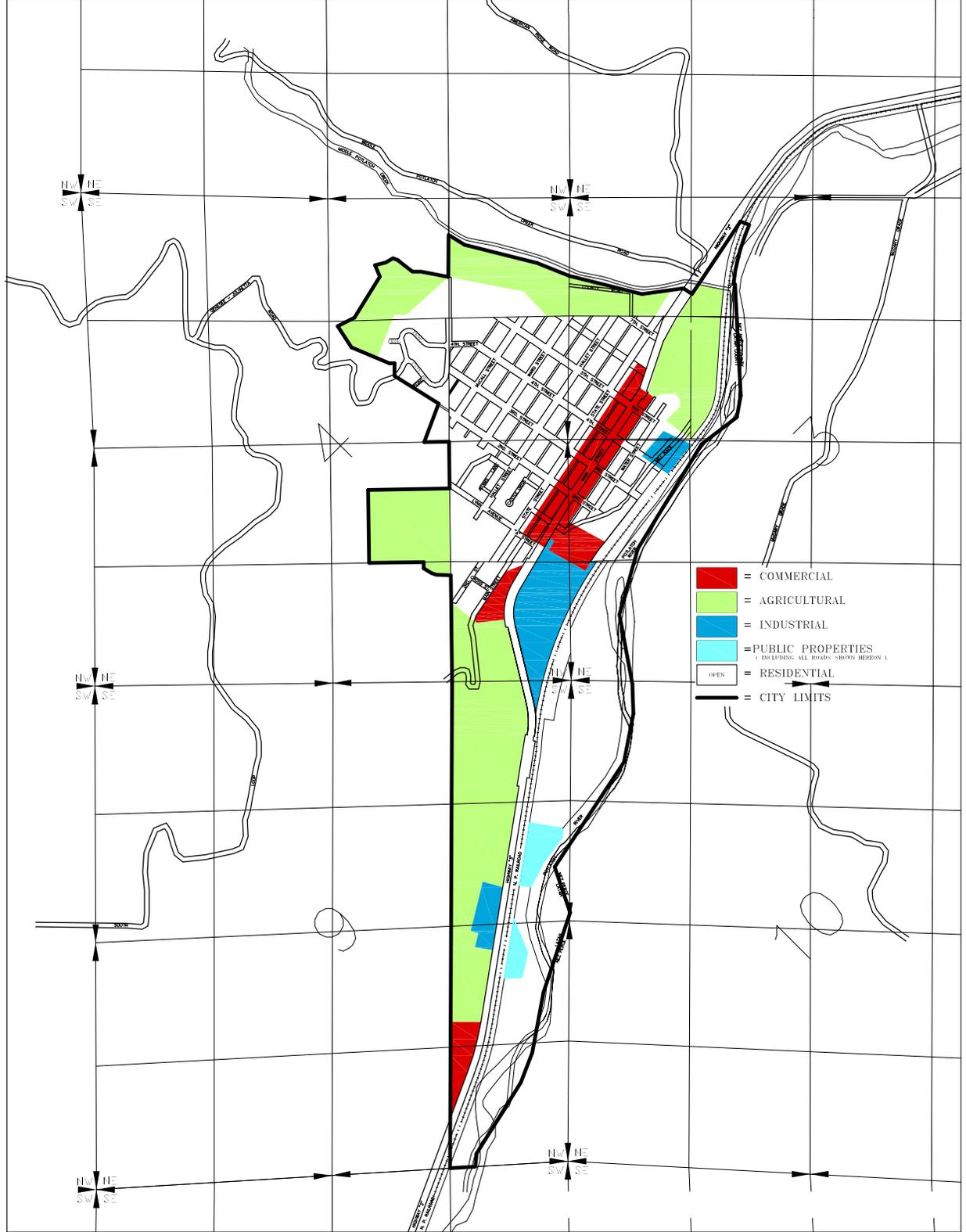
Analysis of the Kendrick and Juliaetta Comprehensive Plan indicates that future growth will occur in the limited flat areas located primarily adjacent to State Highway 3. Access management onto State Highway 3 will become increasingly important as development occurs. Development will likely occur within City limits (or in areas that will be annexed into the City) and therefore will be regulated primarily by the individual Cities; however, Idaho Transportation Department (ITD) has the authority to regulate access points along State Highway 3 within the city limits. An access policy must conform to ITD standards and access locations on roadway sections need to be properly located to limit potential conflicting turning movements, weaving maneuvers over short distances and congestion along facilities.

As stated in the Comprehensive Plan, Juliaetta and Kendrick's future growth will likely be attributed to residential expansion for people who commute to the Lewiston or Moscow area. The majority of increased traffic generated by this type of growth will have a greater impact on State Hwy. 3 and State Hwy. 99 than roads managed by South Latah Highway District.

FIGURE
2-4

Juliaetta Land Use

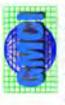
SOUTH LATAH HIGHWAY DISTRICT - Transportation Plan



- = COMMERCIAL
- = AGRICULTURAL
- = INDUSTRIAL
- = PUBLIC PROPERTIES
(EXCLUDING ALL ROADS SHOWN HEREON.)
- = RESIDENTIAL
- = CITY LIMITS



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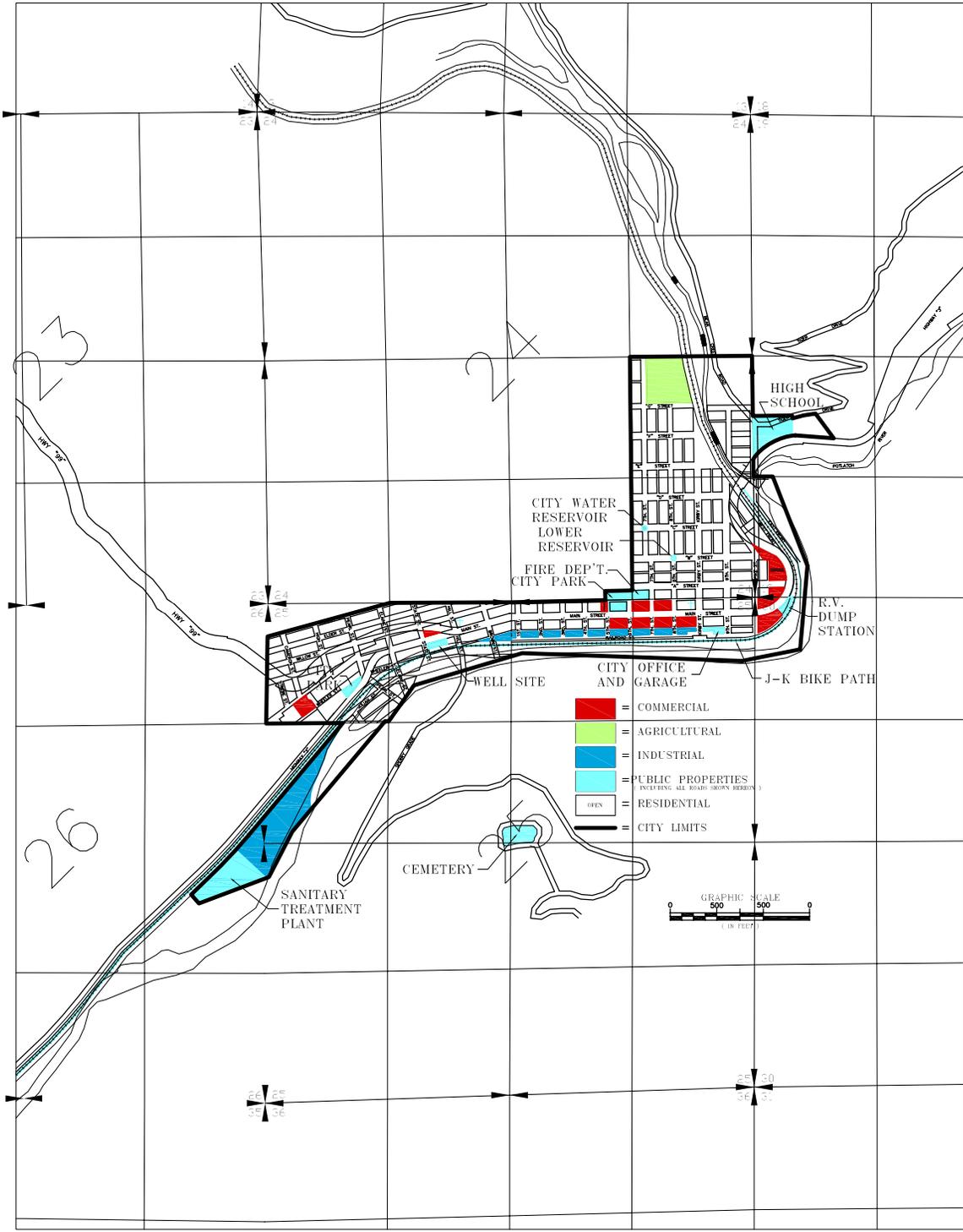


Geographic Mapping Consultants, Inc.

FIGURE
2-5

Kendrick Land Use

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



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AGENCY AND PUBLIC INPUT

Input from the SLHD, other agencies, and the general public was gathered using three methods; Advisory Committee comments, surveys, and attendance at community events to discuss the project with the general public. Input from other agencies came from their representation at Advisory Committee meetings. Ten of the Advisory Committee members represented agencies other than SLHD. A detailed list of the agencies represented can be found in Section 1. The Consultant relied on the members of the Advisory Committee to provide information about agency and public needs and desires. Committee members were asked to solicit comment from their neighbors, friends, associates, etc. thereby increasing public and agency representation. Surveys were distributed to the Advisory Committee and the members were encouraged to distribute the survey to others as well. Several members requested additional surveys for this purpose. Finally, the Consultant attended community events recommended by the Advisory Committee to actively solicit input from the public.

SOUTH LATAH HIGHWAY DISTRICT

The South Latah Highway District set forth accomplishment goals for the transportation plan. The accomplishment goals were identified during meetings between the Consultant and the Highway District and by a survey distributed to the Highway District Commissioners and staff. The Highway District indicated the Transportation Plan should provide:

- awareness of public concerns and needs
- coordination with Cities where District roads approach Cities
- an inventory of existing facilities
- a long-range plan
- a plan for improvements to the most heavily-used roads
- increased safety
- efficient management of assets
- the ability for the District to qualify for and successfully compete for funding and grants

Top priority issues for the District were identified through meetings between the Consultant and District Commissioners and staff and by a survey distributed to the Commissioners and staff. Prior to the start of the planning process, the District listed three projects they felt were necessary to improve safety and five capital projects they felt were a high priority. They also identified maintenance projects requiring additional funding to accomplish.

Safety Issues:

- single-lane bridges
- sign replacement
- work place safety for employees

Desired Capital Improvement Projects:

- widen single-lane bridges
- pave Genesee-Juliaetta Road
- pave Uniontown Road (all the way to Uniontown)
- pave high-traffic gravel roads
- install speed limit signs

Maintenance funds are needed to:

- protect existing oiled roads
- spray magnesium chloride on existing gravel roads
- upgrade all roads to a Highway District approved standard
- provide dust control for air quality

PUBLIC ISSUES IDENTIFIED WITH SURVEYS

Surveys were distributed to the Advisory Committee, their constituents and all the Deputies within the Latah County Sheriff's Department. Detailed survey responses are summarized in A. A map was included with each survey so area specific comments were documented. Many general comments were made as well. A summary of the general comments are listed below:

- Some county roads are snow plowed later in the day
- Some county roads are not plowed for snow enough
- Lack of pavement and dust are the most significant problem on SLHD roads
- Extra dust is caused by ditch maintenance in the summer
- Slow farm equipment on narrow roads creates conflicts
- Roads need more gravel
- Widen roads
- Widen shoulders to make room to pull over
- Loose gravel on shoulders creates problems
- Blade more often to reduce washboards
- Apply more sand to the roads in the winter
- Pavement is chipped at the edges
- Paint centerline in places
- Snowplow knocks down address markers
- Pave secondary county roads
- Grain trucks need designated routes during harvest to reduce congestion
- Add passing lanes

Figure 2-6 summarizes area specific comments from the survey.

PUBLIC ISSUES IDENTIFIED THROUGH COMMUNITY EVENTS

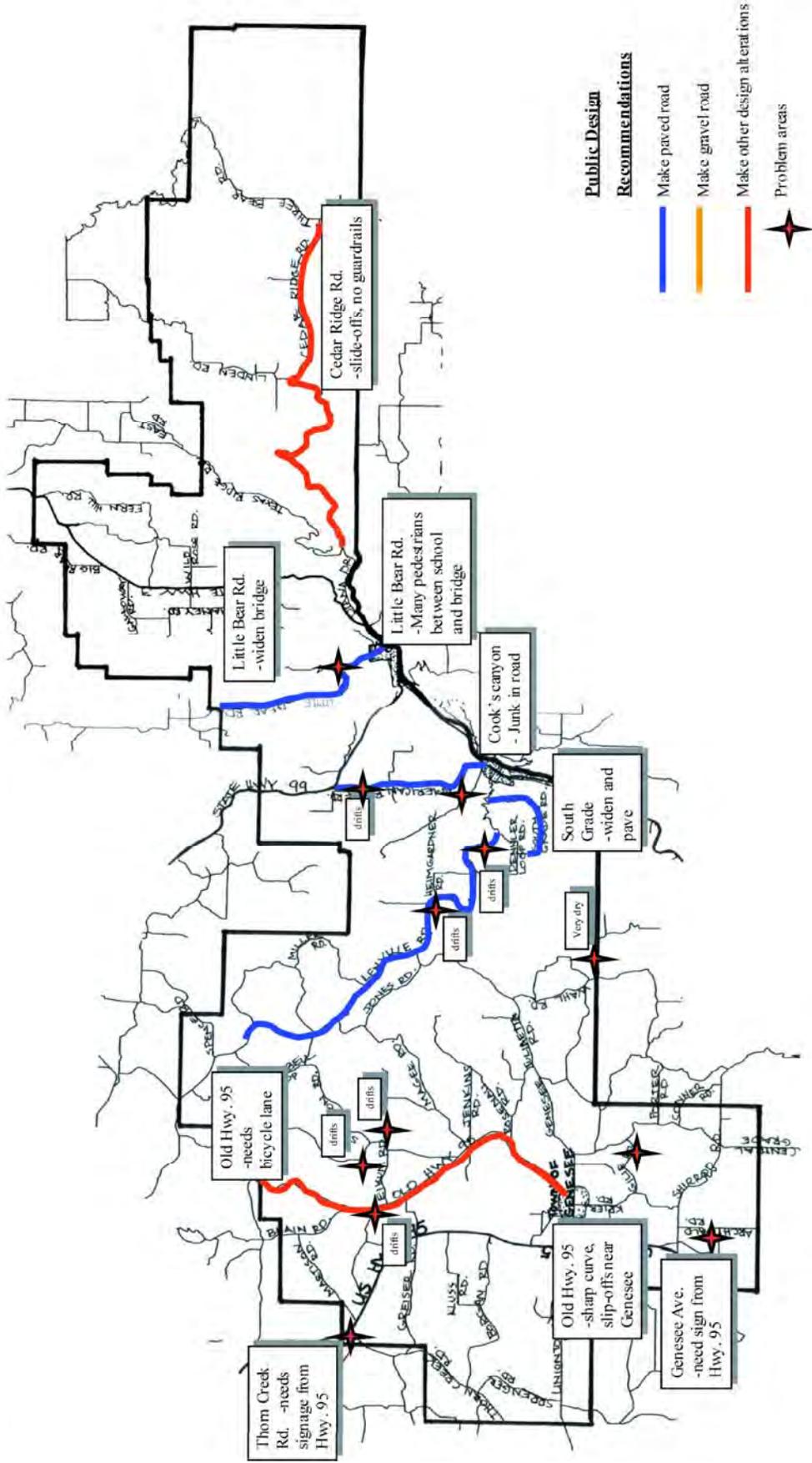
The project was presented at three community events; a boys' junior varsity and varsity basketball game at Genesee High School between Genesee and Deary on January 27, 2003, a boys' junior varsity and varsity basketball game at Kendrick High School between Kendrick and Genesee on February 18, 2003 and the Juliaetta-Kendrick EMT Sausage Feed held at Kendrick High School on March 15, 2003. Details about the presentations and comments received are found in Appendix B. A few of the comments were general. Most of the comments were area specific. Some comments were made about the state highways that run through the SLHD boundary and are not included in the summary below; however, comments related to the state highways can be found in Appendix B. A summary of general comments follows:

- Many people said SLHD is doing a good job maintaining the roads and they had no complaints.
- Gravel sections of road between paved sections should be paved.
- A few said they would like to see a better connection between Genesee and Deary.

The area specific comments are summarized and illustrated in Figure 2-7.

PRIORITIZATION OF PUBLIC ISSUES

The Advisory Committee members prioritized the public issues. Committee members identified their top three issues. Issues identified by committee members were then ranked by the number of times they were identified by committee members. General comments and area specific comments were ranked separately and then together. Tables 2-1, 2-2, and 2-3 show the rankings of general comments and of specific projects.



Public Design Recommendations

- Make paved road
- Make gravel road
- Make other design alterations
- Problem areas

FIGURE
2-6

**Survey Results
Summary Diagram**

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



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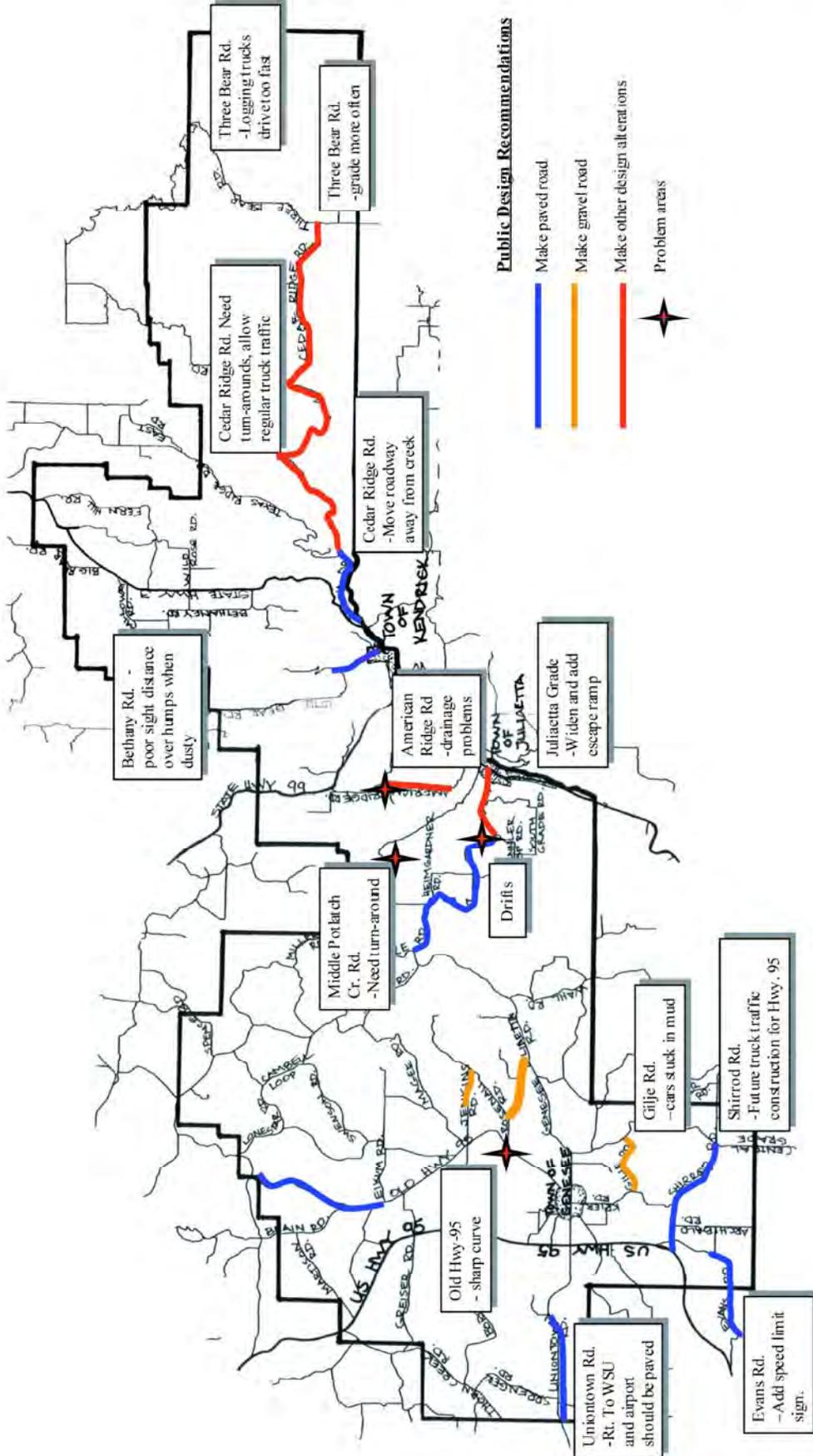


FIGURE
2-7

Public Comments Summary Diagram

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



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Geographic Mapping Consultants, Inc.

Table 2-1
Ranking of Advisory Committee General Issues

ADVISORY COMMITTEE RANKING	GENERAL ISSUES (NOT AREA SPECIFIC)	NUMBER OF PRIORITIES RECEIVED BY ADVISORY COMMITTEE MEMBERS
1	Pave secondary county roads	8
2	Reduce dust on gravel/dirt roads	6
3	Widen roads	5
4	Pave gravel sections of road between paved sections	4
5	Blade gravel and dirt roads more often to reduce washboarding	2
5	Paint centerline in places	2
6	Add passing lanes	1
6	Apply more gravel to gravel roads	1
6	Better connection between Genesee and Deary	1
6	Prevent snow plow from knocking down address markers	1
6	Widen shoulders to make room to pull over	1

Table 2-2
Ranking of Advisory Committee Specific Projects

ADVISORY COMMITTEE RANKING	SPECIFIC PROJECTS (AREA SPECIFIC)	NUMBER OF PRIORITIES RECEIVED BY ADVISORY COMMITTEE MEMBERS
1	Genesee-Juliaetta Rd. - pave	4
2	Giljie Rd. - upgrade to maintained gravel	3
2	Jenkins Rd. - upgrade to maintained gravel	3
2	Stout Rd. - upgrade to maintained gravel	3
3	Cedar Ridge Rd. -widen, move away from creek, install turn-arounds, upgrade to allow regular truck traffic	2
3	Little Bear Rd. - pave	2
3	Little Bear Rd. bridge - widen bridge	2
3	Uniontown Rd. - pave	2
4	American Ridge Rd. - pave	1
4	Lenville Rd. - pave	1
4	Little Bear Rd. - alleviate conflicts between cars and pedestrians	1
4	Old Hwy. 95 - make curve northeast of Genesee more safe	1
4	South Grade Rd. - widen and pave	1

Table 2-3
Overall Highest Ranking Issues

ADVISORY COMMITTEE RANKING	HIGHEST RANKING ISSUES FROM TOTAL LIST (RANKED BY 3 OR MORE ADVISORY COMMITTEE MEMBERS)	NUMBER OF PRIORITIES RECEIVED BY ADVISORY COMMITTEE MEMBERS
1	Pave secondary county roads	8
2	Reduce dust on gravel/dirt roads	6
3	Widen roads	5
4	Pave gravel sections of road between paved sections	4
4	Genesee-Juliaetta Rd. - Pave	4
5	Upgrade to maintained gravel - Giljle Rd., Jenkins Rd., and Stout Rd.	3

ANALYSIS

Analysis of input from the public and other agencies indicates the SLHD is already very knowledgeable of the needs and desires of its constituents. Issues initially raised by SLHD were later identified and confirmed by the Advisory Committee, the public and other agencies. Public comments related mostly to increasing the safety and convenience of the existing gravel roads by widening and paving well-traveled gravel segments and providing dust control on remaining gravel roads. The public cited the need for dust control, primarily to improve visibility and safety. These were the same issues identified as high priority by the Highway District. The Highway District also anticipated the same roadway segments identified by the public as high priorities for improvements. Public perspective about these segments was developed through the desire for safety and comfort on frequently traveled roads. The Highway District's perspective was developed through the high maintenance requirements resulting from higher traffic volumes. Limited funding has prevented the Highway District from addressing and meeting all of the public needs and desires. Development of this plan is the first step to being able to meet the stated needs and desires.

TRANSPORTATION FACILITIES

ROADWAY CLASSIFICATION SYSTEM

All public roadways within the SLHD boundary are operated and maintained under the auspices of one of five jurisdictions – the Idaho Transportation Department (ITD), the cities of Genesee, Juliaetta and Kendrick, and the SLHD. The existing functional classifications correspond to ITD's definition for each roadway type. ITD's functional classification of roadways under SLHD's jurisdiction is shown in Figure 2-8. Classification definitions are described below:

- *Principal Arterials* serve corridor movements, statewide and interstate travel, and connect major urban areas. Principal Arterials would typically include the interstate system and major high traffic volume corridors connecting major activity centers.
- *Minor Arterials* link cities and larger towns and provide service to higher density corridors that are served by the rural collector and local systems. Minor Arterials typically include roadways that connect to the Principal Arterial Roadways System and provide for moderate length trips.
- *Major Collectors* provide access to smaller towns and County seats not on the arterial system. Major Collectors serve more important inter-county travel and typically include roadways connecting towns within the county.
- *Minor Collectors* link locally important traffic generators and smaller communities with the rural and residential areas. Minor Collectors typically include connections between the local street system and Major Collectors.
- *Local Roads* provide access to adjacent land and service to travel relatively short distances.

ITD Facilities

US Highway 95 is the major north-south highway through the state of Idaho. Within the Study area, Highway 95 connects to Lewiston to the south and Moscow to the north. US 95 is the only roadway within the SLHD that is classified by ITD as a Principal Arterial.

State Highway 3 serves as the primary connection between US Highway 12, which goes to Lewiston and the towns of Juliaetta, Kendrick, and Deary. State Highway 3 is classified as a Minor Arterial. Minor Arterials serve as links to cities and larger towns and provide service corridors for trips greater than those served by the rural collector and local systems.

State Highway 99 serves as the connection from Highway 3 in Kendrick to Highway 8 in Troy. State Highway 99 is classified as a Major Collector. A Major Collector links towns and cities with routes of higher classification and serve inter-county travel.

SLHD Facilities

The SLHD roadway system is comprised of a number of meandering north-south and east-west roadways that provide connections to Highway 95, Highway 3, Highway 99, and between Genesee, Juliaetta, and Kendrick. In total, SLHD maintains 244 miles roadway. Of this total roadway mileage, approximately 44 miles is asphalt paved, leaving 200 miles of roadway unpaved. A significant number of the roadways maintained by the SLHD have been classified by ITD. These classified roadways are identified as follows:

Major Collectors:

- Old Highway 95,
- Genesee-Juliaetta Road,
- Cedar Ridge Road
- Thorn Creek Road

Minor Collectors:

- Genesee-Troy Road
- Lenville Road
- Central Grade Road (South of Shirrod Road)

Local Roads:

All other roadways in SLHD are classified as “Local Roads.”

Access Management

The SLHD has an established policy regarding granting access to the District’s roads. In general, this policy states that any new access, or a change in access, will be by a permit process. That permit process is essentially an application submitted to the SLHD Commissioners and reviewed per an established set of acceptance criteria. Existing District policy establishes the following road classifications utilized in reviewing access permit applications:

- a) All-weather road conforming to current standards
- b) All-weather road deviating from current standards
- c) All-weather road, with seasonal restrictions in place
- d) Seasonally maintained road
- e) Minimal maintenance road
- f) Non-maintained road, recognized as public right-of-way.

In addition, the SLHD Policy on Road Standards, Maintenance, and Access also identifies a standard for driveway approaches. The SLHD Commissioners have established the following criteria, based on roadway classification, for evaluating access permit applications.

- No new access permits of any type will be considered for non-maintained roads, f).
- Only farm access permits will be considered for seasonally maintained roads, e).

- Access permits for residences are considered only for residences accessing all-weather roads as defined by a), b), and c).
- Access permits are considered only for existing parcels on all-weather seasonably restricted roads, c).
- Access permits for development of one or two new parcels are considered for all-weather roads not seasonable restricted.
- Access permits for any development of three or more parcels will be considered only if the parcels are located on an all-weather road conforming to current standards.

Developers are required to improve roadways to current standards, at their own expenses, from the farthest point adjacent to their developments to the nearest District roadway meeting acceptance criteria if access is requested on a roadway not meeting the criteria.

City Facilities

Genesee is the only city that has classified roadways under it's jurisdiction. The classified roadways extend into the county and are detailed previously in the summary about the Genesee Comprehensive Plan. Juliaetta and Kendrick have classified roads through them that are under the jurisdiction of Idaho Transportation Department, State Highway 3 and State Highway 99. The remaining City streets are classified as local roads.

EXISTING PEDESTRIAN AND BICYCLE SYSTEM

There are currently no pedestrian facilities provided on roadways maintained by the SLHD. Sidewalks are provided on most city streets within the core areas of Genesee, Juliaetta, and Kendrick. A review of the sidewalk system in these cities found that sidewalks did not extend to the city limits. The most significant pedestrian and bicycle facility is located on the old railroad right-of-way along the Potlatch River between Juliaetta and Kendrick. This pathway was constructed in 2002 utilizing an old 5.3 mile section of railway ITD had acquired in the mid-eighties and serves both pedestrians and bicycles. The pathway is maintained by Latah County Parks & Recreation.

Outside of the SLHD boundaries, a multi-use trail is also being developed between Moscow and Troy along Highway 8, which will serve both bicycles and pedestrians. This trail is within the North Latah County Highway District boundary but is relevant to SLHD's inventory for consideration of connectivity throughout the region. The first section of the trail is scheduled for completion in 2003. The locations of existing and planned multi-use paths are shown in Figure 2-9. Two other abandoned railroad lines exist within the SLHD boundaries that could potentially be converted to pedestrian and bicycle use. Existing railroad right-of-ways are shown in Figure 2-10. Some of the railroad lines have been abandoned and segments of the right-of-ways may have been sold to adjacent property owners.

The public and other agencies identified three locations where improvements for pedestrian and bicycles are desired. Key factors preventing the public from utilizing or considering pedestrian and bicycle modes of transportation in this District are distances between activity centers, steep terrain, and unpaved roadways with minimal shoulders. The low-density rural development pattern is not conducive to pedestrians walking between destinations along SLHD roadways. Lack of unpaved surfaces and terrain make most roadways unappealing to recreational and commuter bicyclists.

The three locations identified for desired improvements were Old Highway 95 north of Genesee, Little Bear Ridge Road from Highway 3 to the Little Bear Ridge Road bridge, and Lenville Road.

Old Highway 95 was the only location identified by the public as a route bicycles utilize. While no bicycles were observed during the data collection for this project, public input comments indicate the section of Old Highway 95 between the town of Genesee and US Highway 95 is used by recreational bicyclists and pedestrians residing in or near Genesee. The narrow width, no shoulder and curve north of Genesee on Old Highway 95 are problems for pedestrians and bicycles.

Tom Lamar, Executive Director of Palouse-Clearwater Environmental Institute and a member of the Moscow Transportation Commission, identified Lenville Road as a popular recreational bicycle route. Lamar states that the bicyclists go to "the end of the pavement" on Lenville Road from the Moscow area then turn around. He also states that if Lenville Road became paved further to the south, many bicyclists would probably continue their trips further south. Lenville Road is paved for approximately 2.2 miles into the north portion of the SLHD. A paved circular route from the Highway 8 Latah Trail to Lenville Road to Genesee via Genesee-Juliaetta Road to Old Highway 95 to Genesee-Troy Road back to the Highway 8 Latah Trail could be popular with recreational bicyclists. This route is illustrated in Figure 4-1.

Little Bear Ridge Road was identified as a problem for pedestrians. This road starts at Highway 3 and goes through the Kendrick High School parking lot to the north. There is only one striped crosswalk for pedestrians and a single sidewalk as raised channelization in the section that goes through the school parking lot. A greater amount of channelization and signing would likely reduce the potential for conflicts before and after school and during activities. Students and community members like to walk on the 1.2-mile segment of Little Bear Ridge Road between the school and the bridge to the north. A number of public comments indicated that students walk up Little Bear Ridge Road to the bridge north of the school. A picnic table is located about one mile north of the school on a widened portion of the roadway between the road and the creek. The Consultant observed the table in use by several people during field surveys. This section of Little Bear Ridge is gravel with curves and therefore is not good for pedestrians. Widening the road would likely not improve pedestrian safety because it could result in faster vehicle speeds. One option might be to develop a separated pedestrian path next to the roadway.

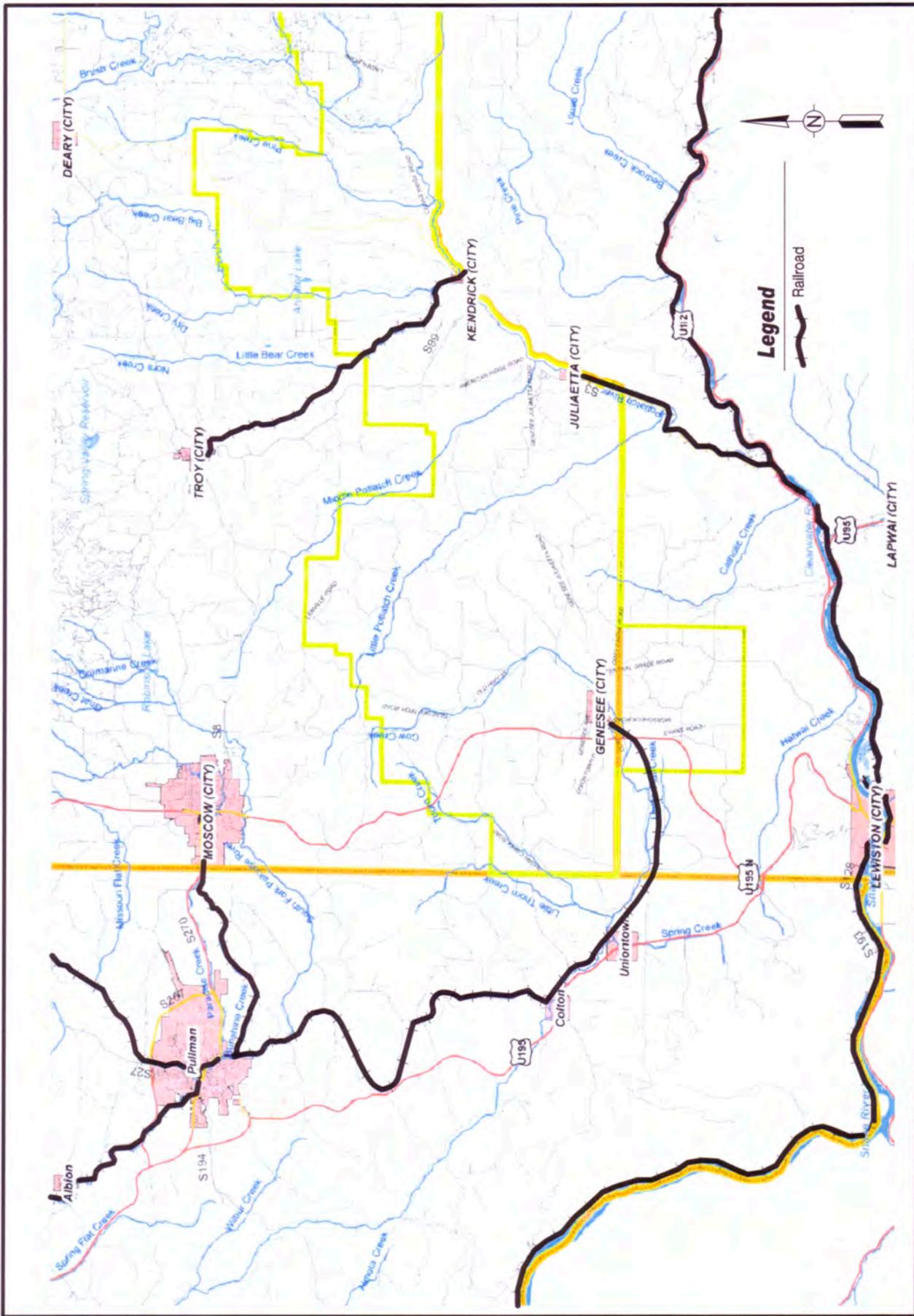


FIGURE
2-10

**Regional Railroad
Right-of-Way**
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KITTELSON & ASSOCIATES, INC.


Hodge & Associates, Inc.
Engineers • Planners • Landscape Architects

PUBLIC TRANSPORTATION SYSTEM

The Public Transportation Advisory Committee (PTAC) is responsible for assisting ITD's Division of Public Transportation with statewide public transportation planning. The current primary goal of PTAC is to determine potential funding sources to provide operating funds for rural public transportation in Idaho. Federal funds are readily available for capital equipment purchases, however funds are not available to operate the public transportation systems.

In 1997, a study of Idaho Transportation Needs and Benefits was commissioned by ITD and conducted by HDR Engineering, Inc. The publication has served as a guide to PTAC and RPTAC to improve the public transportation system. A list of key findings for District 2 follows:

- As of 1996, the region's population was 97,600. It is predicted to increase 1.8 percent per year by 2015. Over half of the population resides within five miles of the Washington state line.
- Ten organizations provide public transportation in this region ranging from private non-profit to private for-profit organizations. These providers include Interlink, Link Transportation Systems, Inc. (now out of business), COAST (Whitman County Council on Aging and Human Services, d.b.a. Moscow/Latah Public Transportation), Nez Perce Tribe, Northwest Trailways, Opportunities Unlimited, Inc., Palouse-Clearwater Environmental Institute (PCEI), Regional Public Transportation (d.b.a. Valley Transit) and Wheatland Express. Their services are explained in the main report.
- Services were evaluated on a location-specific basis. Essentially the region needs a new fixed route service, enhance demand-response services, a regional carpool program, and enhanced intercity service. A more detailed description of the region's transportation route needs is listed in the main report.

Some progress has been made in implementing improvements suggested in the study. There is no fixed route in the South Latah Highway District area. Valley Transit will be piloting two fixed-routes in the City of Moscow in January 2004. Valley Transit hopes to have a fixed route between Lewiston and Moscow in the near future (one or more years). Valley Transit currently provides demand-response service in the City of Moscow, but not to the outlying rural areas. Very limited demand response is provided to the outlying rural areas by COAST to a specifically qualified clientele. There is a need for additional demand-response evidenced by the fact that Valley Transit receives many requests that cannot be serviced. A vanpool has been implemented by PCEI. Two vans are provided for a vanpool between Lewiston and Moscow. The participants provide operating funds for the vanpool. PCEI plans to provide a website whereby people interested in carpooling can link up with other interested carpoolers. It will be a website accessed through the PCEI website. PCEI plans to actively advertise the website and hopes to use signage along rural roadways of South Latah Highway District as one method for advertising. Implementation of the carpool website is expected in spring of 2004.

AIR AND RAILROAD TRANSPORTATION SYSTEM

AIR TRANSPORTATION SYSTEM

No commercial aviation facilities are located within the SLHD. Commercial Regional Airports are the Lewiston Regional Airport and the Moscow-Pullman Regional Airport located in Lewiston and Pullman, respectively. Both of these airports provide direct commercial service to Seattle. The Lewiston Airport also provides direct commercial service to Boise.

There has been discussion that the region would be well served by an airport located near Genesee which would serve the quad cities of Lewiston, Clarkston, Moscow and Pullman. ITD mentioned the potential for a regional airport while discussing long-term planning of an interchange at the intersection of Genesee-Juliaetta Road and Highway 95. ITD has purchased right-of-way to accommodate a larger interchange in the future. The potential airport was also discussed in the Genesee Comprehensive Plan.

Two private landing strips are found within the SLHD boundaries. They are used primarily for agricultural aerial spray services. One of these airstrips is located off Airport Road located centrally in the District. The other is located southeast of Genesee off Central Grade Road.

RAILROAD TRANSPORTATION SYSTEM

There are no active railroad lines in the SLHD boundary, however there are two separate railroad right-of-ways at opposite ends of the District. The rails and ties have been removed in both sections. The most significant length of right-of-way runs from Troy to Kendrick in Little Bear Creek canyon. The Consultant conducted preliminary research and found that the majority of this right-of-way is now owned by K&M Properties One, LLC, a salvage company. Another short segment of railroad right-of-way owned by Burlington Northern extends from Genesee to Uniontown. Railroad right-of-ways are shown in Figure 2-10. Some of the right-of-way inside the Genesee city limits has been sold to adjacent property owners. Actual ownership of the right-of-ways shown in Figure 2-10 has not been verified and should be researched prior to any discussions about acquisition.

TRAFFIC OPERATIONS ANALYSIS

The traffic operations analysis identifies how a facility is operating based on the traffic demand compared to the capacity of the facility based on its geometric characteristics. Within the SLHD, most of the roadways are classified as local streets and have very low traffic volumes as compared with the maximum capacity of the roadway. Therefore, most of the local road system was not evaluated with respect to traffic operations. Based on a review of the transportation system and input from the advisory committee, key roadways within the SLHD were chosen for operational evaluation. These roadways are listed below:

- Thorn Creek Road
- Genesee-Juliaetta Road
- Chestnut Street
- Old Highway 95
- Genesee-Troy Road
- Uniontown Road
- Cow Creek
- Central Grade Road
- Shirrod Road
- Lenville Road
- Cedar Ridge Road
- American Ridge Road

ROADWAYS CONFIGURATION AND TRAFFIC CONTROL

As part of the data collection effort, all SLHD roadways were inventoried. The inventory included the roadways width as well as the travel surfaces. The roadway surfaces are shown in Figure 2-11 and the widths are shown in Figure 2-12.

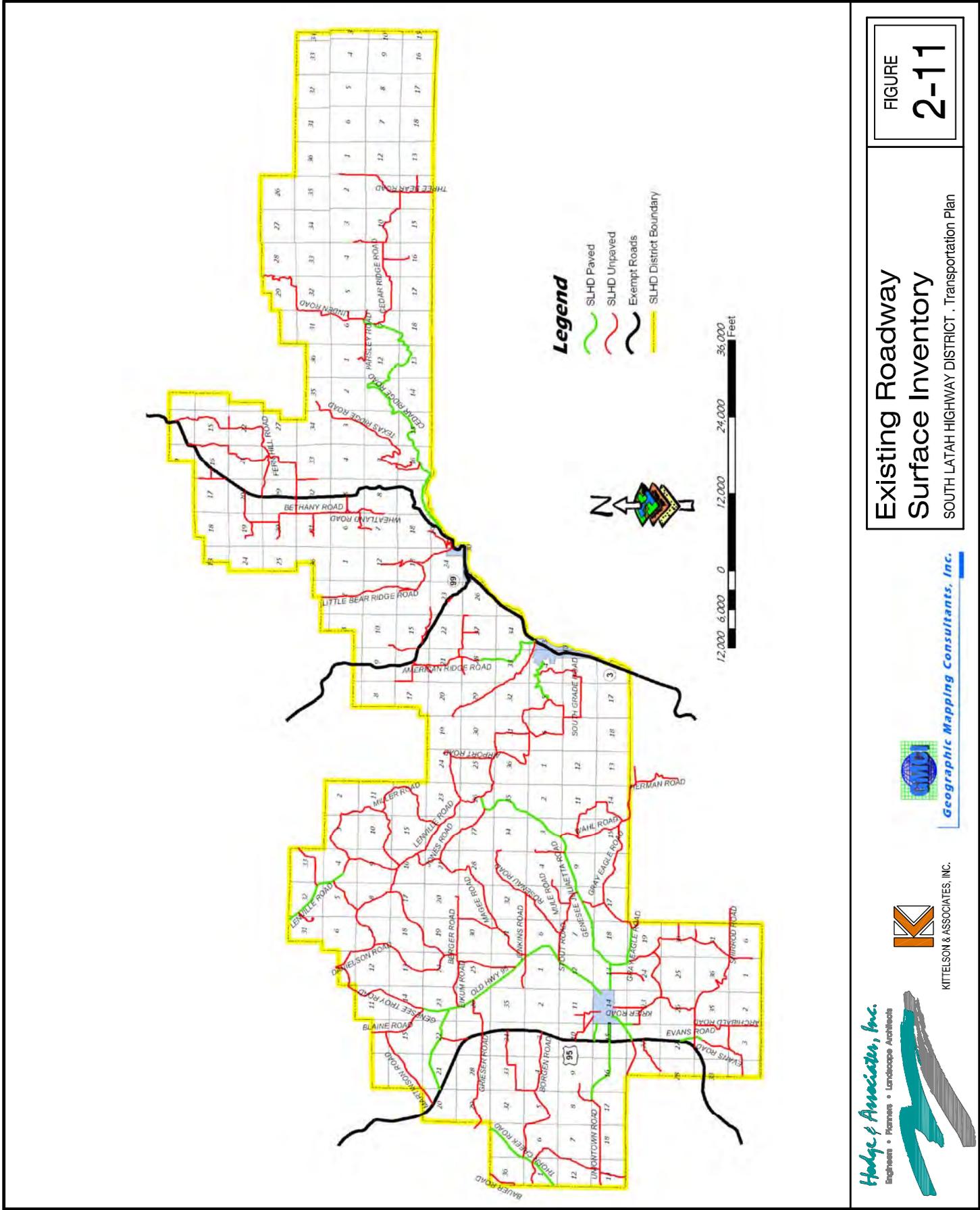


FIGURE
2-11

**Existing Roadway
Surface Inventory**

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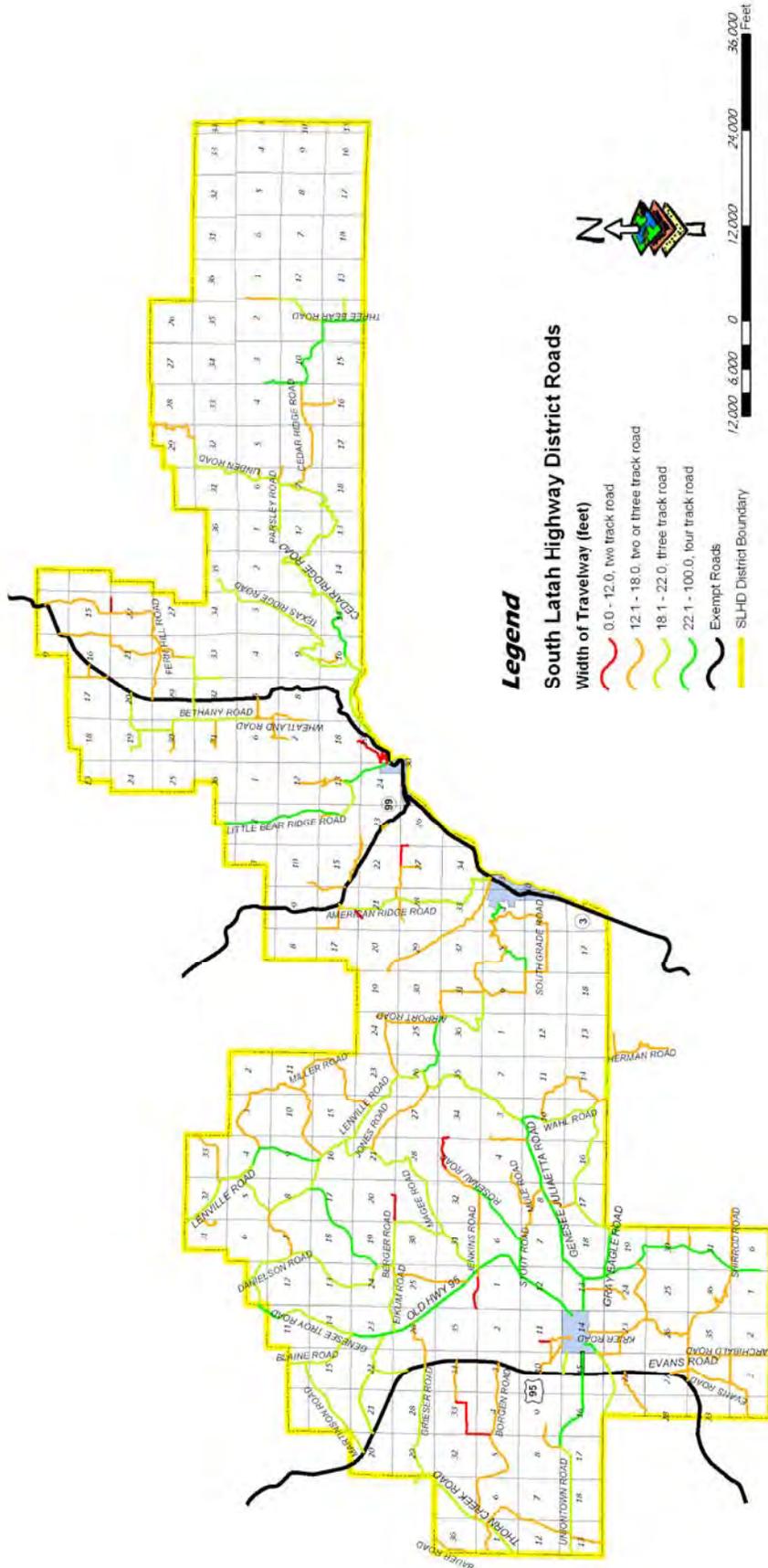


FIGURE
2-12

Existing Roadway Width
SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



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Table 2-4 shows a summary of the characteristics of the existing key roadways that were evaluated as part of the operational analysis.

**Table 2-4
 Existing Transportation Facilities and Roadway Designations**

<i>Roadway</i>	<i>Functional Classification¹</i>	<i>Cross Section</i>	<i>Surface Type</i>	<i>Roadway Width</i>	<i>Speed Limit</i>
Thorn Creek Road	Major Collector	2 lanes	Paved	20-22 ft	NP
Genesee-Juliaetta Road	Major Collector	2 lanes	Paved/Gravel	22-28 ft	NP*
Chestnut Street	Major Collector	2 lanes	Paved	22-24 ft	NP
Old Highway 95	Major Collector	2 lanes	Paved	20-24 ft	NP
Genesee-Troy Road	Minor Collector	2 lanes	Gravel	22-24 ft	NP
Uniontown Road	Local Road	2 lanes	Paved/Gravel	24 ft	NP
Cow Creek	Local Road	2 lanes	Paved	24 ft	NP
Central Grade Road	Local Road/Minor Collector	2 lanes	Gravel	28 ft	NP
Shirrod Road	Local Road	2 lanes	Gravel	20-24 ft	NP
Lenville Road	Minor Collector	2 lanes	Gravel	26-30 ft	NP
Cedar Ridge Road	Major Collector/Local Road	2 lanes	Paved/Gravel	22-24 ft	NP
American Ridge Road	Local Road	2 lanes	Paved/Gravel	20 ft	NP

NP* = Not posted.

As shown in Table 2-2, many of the study roadways include both paved and gravel sections with varying roadway widths. In addition, none of the key roadways surveyed have posted speeds.

TRAFFIC VOLUMES

Daily traffic volumes were used for the operational analysis. Daily traffic volume counts were conducted in April 2003 and data for each location was collected for approximately 3 days. The counts were taken after planting and while school was in session and the weather was fair to partly cloudy to ensure an average condition. In addition, historical daily traffic counts were provided by ITD. The existing daily traffic volumes are shown in Figure 2-13.

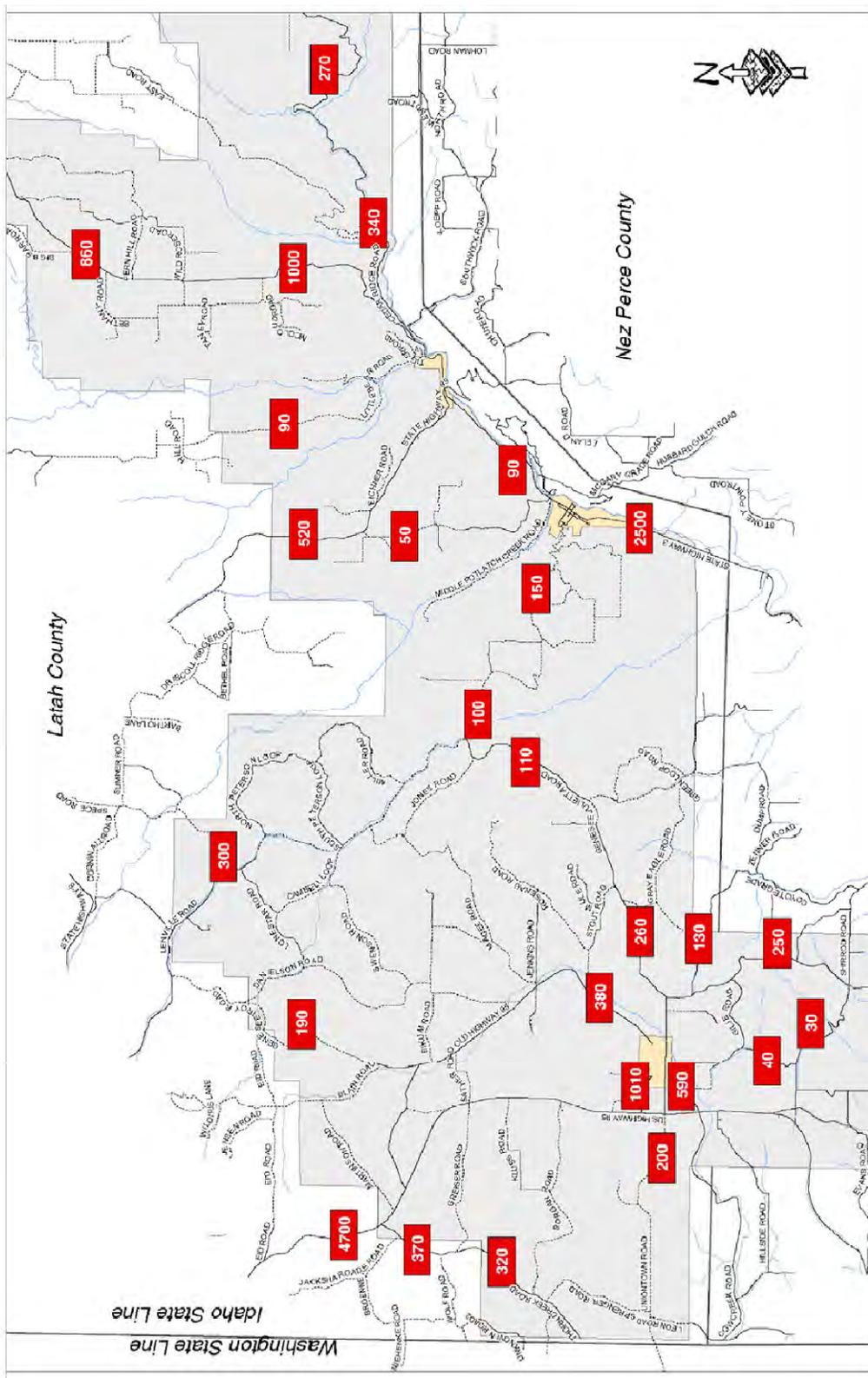


FIGURE
2-13

Existing Daily
Traffic Volumes



Geographic Mapping Consultants, Inc.



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OPERATIONAL ANALYSIS

Using the daily traffic volumes shown in Figure 2-13, an operational analysis was conducted at each of the study area intersections to determine existing levels of service. For the two-lane paved sections the ITD Rural, Two-Lane Highway Service Traffic Flows based on Level of Service C were used to evaluate the traffic operations. Because many of the study roadways are unpaved, low volume and vary significantly in design and roadway surface, a standard level of service analyses as described in the ITD Design Manual or in the 2000 Highway Capacity Manual is not applicable. Therefore, instead of the traditional approach to capacity analysis conducted within urban areas an alternative method was utilized. The alternative capacity analysis method, determined a maximum capacity for each type of roadway based on the roadway classification and roadway type.

Roadway Classification

Roadway classification is an important aspect of evaluating whether a road is designed appropriately for the function it serves and the traffic it is expected to carry. Major Collectors are the highest level of roadway within the SLHD and should meet the adopted SLHD road standards. Minor Collectors and Local Roads within the district typically serve intra-district travel and access to properties. Many of these lower level roadways are unpaved and typically do not carry sufficient traffic to require it to be paved and meet the SLHD road standards.

Roadway Type

The type of roadway is very important because it dictates the amount and type of traffic that can be accommodated safely by the roadways. Since all the paved roadways within the SLHD are intended to accommodate two-way traffic and the design of the roadway does not vary significantly, all paved roadways are considered as one type. These roadways are typically between 22 feet and 28 feet wide with very high capacities of over 5,000 average daily traffic (ADT). Some of the paved roadways within the SLHD have lower volumes with widths between 18 feet and 22 feet. For low volume roadways (paved and unpaved), the design parameters and maximum recommended traffic capacity are based on method of risk assessment which evaluates the tradeoffs between construction and maintenance costs and the estimated impacts of traffic crash frequency and severity. This method is described in Guidelines for Geometric Design of Very Low Volume Local Road (ADT<400) published by the American Association of State Highway and Transportation Officials (Reference 1).

Unpaved roadways maintained by the SLHD are much different since they range from narrow single-lane dirt roads to wide well maintained gravel roads that are classified as Major Collectors. The key roadways in SLHD fall into three predominant types of gravel roadways, which are described below and illustrated in Figure 2-14 through 2-15.

Figure 2-14. Two-Track (1-Lane) Road



Much of the local road system within the SLHD is single-lane roads with gravel surfaces. These roads are typically between 12 feet and 16 feet wide with wide areas scattered along the roadways to allow for vehicles in opposite directions to pass if needed. These roadways have very low capacity because they cannot accommodate significant number of vehicles utilizing the roadways in opposite directions at the same time. AASHTO (Reference 1) provides recommended traffic volume criteria for these types of roadway. These roadways normally are designed for 50 ADT or less and may be used for traffic volumes up to 100 ADT. Figure 2-14 (left) shows a typical gravel single-track road.

Figure 2-15. Three-Track (1-Lane) Road



Some of the roadways within the SLHD are wider than a single lane, but not wide enough to provide for two vehicles in opposite directions to pass at full speed. These roads are typically between 14 feet and 18 feet wide. This type of roadway is not defined in standard design and operational criteria but essentially operates as a single lane roadway with continuous turnouts. Based on the information presented by AASHTO (Reference 1) the design volume for these types of roads was estimated to be approximately 100 ADT and may be used for traffic volumes up to 250 ADT. Figure 2-15 (left) shows a typical gravel three-track road.

Figure 2-16. Four-Track (2-Lane) Road



Many of the key roadways in SLHD are gravel two lane roadways. These roadways are typically major local roads or collectors. These roads typically have widths that range between 18 feet and 26 feet. AASHTO recommends the maximum design volume for these types of roads be between 250 ADT and 350 ADT. Figure 2-16 (left) shows a typical gravel two-lane road.

Table 2-5 shows the capacity and minimum width criteria used to evaluate each of the types of roadways within the study area.

**Table 2-5
 Roadway Operational Evaluation Criteria**

	Maximum Recommended Volume	Estimated Capacity	Operating Speed	Minimum Width
One Lane (2 Track) Unpaved	<50 ADT	100 ADT	<30 mph	12 ft
One Lane (3-Track) Unpaved	<100 ADT	250 ADT	<40 mph	18 ft
Two Lane (4-Track) Unpaved	<250 ADT	350 ADT	<45 mph	18 ft
Two Lane Paved – Minor Road	<250-5,000 ADT ²	400 ADT ²	>35 mph	18 ft
Two Lane Paved – Major Road (Used for Major Collectors)	5,200 ADT (Rolling) ²	8,000-10,000 ADT	<45 mph	26 ft (1)
	3,000 ADT (Mountainous) ²	6,000-8,000 ADT	> 45 mph	26 ft (1)

1. SLHD Road Standard
2. Volume varies significantly based on width and operational characteristics. Proposed volumes are 250 ADT for a minor 18 ft. road up to 5,000 ADT and 10,000 ADT for roadways over 24 ft.
3. Source: ITD Design Manual volumes rounded to nearest 100 ADT.

Existing Conditions Operational Analysis Results

Based on the criteria shown above, each of the study roadways was evaluated. Two categories were used for the evaluation, which included traffic volume and the minimum roadway width. Table 2-6 shows the results of the evaluation. As shown in Table 2-6, Thorn Creek Road, Genesee-Juliaetta Road, Old Highway 95, Walnut Street, and the paved section of Cedar Ridge Road did not have sufficient paved width to meet the SLHD standard based on their classifications and traffic volumes. While these roadways may function adequately, all Major Collectors should meet an approved SLHD standard, which is currently 26 feet of width, with possible exception of Thorn Creek Road. Since Thorn Creek Road only has a short section within the SLHD, the design standard for Thorn Creek Road should be consistent with other sections of the roadway.

**Table 2-6
 Operational Evaluation of Study Roadways**

<i>Roadway</i>	<i>Functional Classification¹</i>	<i>Average Daily Traffic</i>	<i>Meets Volume Criteria?</i>	<i>Meets Roadway Width Criteria?</i>
Thorn Creek Road	Major Collector	370	Yes	No
Genesee-Juliaetta Road				
Paved (W. of Wahl Rd)	Major Collector	260	Yes	Yes
Paved (E. of Wahl Rd)	Major Collector	110	Yes	No
Unpaved Section	Major Collector	150	Yes	No
Chestnut Street	Major Collector	1010	Yes	No
Old Highway 95	Major Collector	380	Yes	No
Genesee-Troy Road	Minor Collector	150	Yes	Yes
Uniontown Road				
Paved	Local Road	200	Yes	Yes
Unpaved	Local Road	200	Yes	Yes
Cow Creek Road	Local Road	590	Yes	No
Central Grade Road	Local Road	250	Yes	Yes
	Minor Collector	250	Yes	Yes
Shirrod Road	Local Road	30	Yes	Yes
Lenville Road				
Paved (N. of Miller)	Minor Collector	230	Yes	Yes
Unpaved (N. of Campbell Lp)	Minor Collector	230	Yes	Yes
Unpaved (N. of Gen-Jul Rd)	Minor Collector	<200	Yes	Yes
Cedar Ridge Road				
Paved (W. of Linden)	Major Collector	340	Yes	No
Unpaved (E. of Linden)	Local Road	70	Yes	Yes
American Ridge Road	Local Road	90	Yes	Yes

TRAFFIC SAFETY

The most important aspect of a transportation system is public safety. The safety analysis described in this section focuses on two key indicators of safety. The first aspect is the crash history for the key study roadways within the SLHD. The crash history helps to identify locations or segments of roadways that may have safety deficiencies. The second indicator is the proper design of key intersections to provide adequate sight distance for vehicles entering the major roadways. Without adequate intersection sight distance, a vehicle from a minor street entering a key study roadway may not be able to perform the maneuver safely.

INTERSECTION CRASH ANALYSIS

The crash history of the study intersections was examined for potential and existing safety problems. ITD crash data for the period January 1998 through December 2002 were used for this analysis. The ITD crash data only includes reported crashes. There were likely more minor crashes that occurred than were evaluated in this analysis.

Table 2-7 shows the crash rates for each key study roadway. The crash rates are expressed in crashes per million vehicle miles traveled. For comparison purposes, the statewide average crash rate in 2002 for all roadways combined in the state of Idaho is 1.85 crashes per million vehicle miles (MVM) and the statewide average in 2002 for the local (non-state) roadway system was 2.43 crashes/MVM. Figure 2-17 shows the reported crashes in the study area. Each accident during the five-year period is represented by a red dot.

**Table 2-7
 Crash Rates for Study Roadways**

<i>Roadway</i>	<i>From</i>	<i>To</i>	<i>Crash Rate (Crash/MVM)</i>
Thorn Creek Road	E. Boundary	U.S. 95	0.66
Genesee-Juliaetta Road			
Paved (W. of Wahl Rd)	Genesee	Wahl Road	1.52
Paved (E. of Wahl Rd)	Wahl Road	Lenville Road	7.78
Unpaved	Lenville	Heimgartner	5.48
Unpaved	Heimgartner	Juliaetta	None
Chestnut Street	US 95	Genesee	None
Old Highway 95	Genesee	U.S. 95	0.77
Genesee-Troy Road	Old Highway 95	Boundary	None
Uniontown Road	U.S. 95	Boundary	0.66
Cow Creek Road	SLHD Boundary	Genesee	None
Central Grade Road	Genesee	Boundary	None
Shirrod Road	U.S. 95	Central Grade	6.58
Lenville Road	Genesee-Juliaetta Rd	Spence Road	1.19
Cedar Ridge Road			
Paved (W. of Linden)	Southwick Road	Linden Road	1.48
Unpaved (E. of Linden)	Linden Road	Three Bear Road	None
American Ridge Road	Highway 3	Highway 99	4.87

Since crash rates are determined based on the number of crashes and traffic volumes, they are significantly impacted by very low traffic volumes, which are common on many of the study roadways. Therefore, it is important to assess the cause of high crash rates. As shown in Table 2-7, the crash rates vary significantly. The highest crash rates are at the following locations:

- Genesee-Juliaetta Road between Wahl Road and Heimgartner
- Shirrod Road east of U.S. 95
- American Ridge Road

A review of the crashes on Genesee-Juliaetta Road revealed a heavy concentration of accidents near the Lenville Road intersection and the Jones Road intersection. A closer examination of the crash data revealed that out of nine crashes in the vicinity of these intersections five crashes had reference to running off the road, going over the centerline or sideswipes and one had referenced sight obstruction. While it is difficult to ascertain how much the roadway contributes to the crashes, a review of this section of Road found the following:

- Genesee-Juliaetta Road between Jones Road and Lenville Road is narrow with curves and does not meet the SLHD standards.
- The southbound approach from Lenville Road has insufficient sight distance to the stop sign due to an embankment.
- The westbound approach to the bridge on Genesee-Juliaetta Road is on a grade with a curve before the bridge which given the gravel surface is likely easy to go too fast and run off the road.

The key factor creating the high accident rate on Shirrod Road is the low traffic volume. Only two crashes were reported in different locations. Because this roadway has such a low volume and no connection between the crashes, further investigation was determined not be needed.

There were three crashes on American Ridge Road. Two were located on the south end and were single cars running off the road. The third was near the northern end of the road and was a rear-end crash due to following too closely. No specific possible contributors to the crashes were identified.

INTERSECTION SIGHT DISTANCE

Based on the crash evaluation, intersection sight distance was reviewed at key locations where crashes had occurred. Three locations on the key roadways were identified with sight distance deficiencies, which include:

- Genesee-Juliaetta Road/Lenville Road
- Genesee-Juliaetta Road/Jain Road
- Cedar Ridge Road/Texas Ridge Road

Figure 2-18. Genesee-Juliaetta Road/Lenville Road



At the Genesee-Juliaetta Road/Lenville Road intersection the southbound approach has poor sight distance to the stop sign and the intersection. The intersection is on a curve and an embankment obscures the stop sign. Figure 2-18 shows the intersection.

Figure 2-19. Genesee-Juliaetta Road/Jain Road



At the Genesee-Juliaetta Road/Jain Road intersection, Jain Road intersects Genesee Juliaetta road on two sides of a vertical curve. Since Jain Road is an extremely low volume roadway, the likelihood of significant crashes is not significant, but since Genesee-Juliaetta Road is one of the highest volumes roadways in the SLHD the current intersection configuration should be modified to provide adequate sight distance. The intersection is shown in Figure 2-19.

Figure 2-20. Cedar Ridge Road/Texas Ridge Road



At the Cedar Ridge/Texas Ridge intersection, Texas Ridge Road intersects Cedar Ridge Road at a skew on a horizontal curve. As traffic enters the intersection from Texas Ridge Road a vehicle can get a minimum amount of sight distance once it starts to enter the lane, but cannot see well without entering the travel lane on Cedar Ridge Road. Trimming foliage and cutting back the bank would improve sight distance. In addition, this section of Cedar Ridge Road is relatively narrow and some widening at the intersection might improve traffic operations as well as sight distance. This intersection is illustrated in Figure 2-20.

There were also some comments from the public regarding the sight distance to the stop sign and a need for a “Stop Ahead” warning sign at the T-Intersection of Genesee-Juliaetta Road and Gray Eagle Road. SLHD staff report that many people have driven off the road in this location, but this location was not identified by accident reports. Sight distance at this intersection was not identified as a significant problem during the existing conditions review and the intersection was not identified in the crash analysis. Therefore, maintenance staff should review the Genesee-Juliaetta Road/Gray Eagle Road intersection to determine if additional signage should be installed.

OTHER IDENTIFIED EXISTING TRANSPORTATION ISSUES

As an extension of the existing conditions analysis, other aspects of the transportation system with existing deficiencies or concerns were identified. A description of the additional deficiencies and concerns identified follows.

DUST

Many of the high-volume gravel roads generate significant dust during dry weather. Excessive dust on gravel roads not only creates safety concerns, but also indicates a significant loss of roadway material. Implementing maintenance procedures intended to alleviate dust concerns addresses not only increasing the roadway patrons' safety, but also reduces some of the costs associated with maintaining gravel roads. That is, if dust is a measure of significant roadway material loss, then reducing dust also reduces costs associated with replacing material on gravel roads. Implementation of dust control procedures will be discussed in more detail in Section 4 of this plan, "Improvements and Projects Analysis".

One location where dust is a major concern in SLHD is the section of Genesee-Juliaetta Road east of Lenville Road. This section of road has some horizontal and vertical alignments that are problematic when dust is present. Another location in the SLHD where dust is identified as a concern is the Genesee-Juliaetta Road/Lenville Road intersection. At this intersection, dust not only makes navigation through the intersection difficult at times, but in addition, the dust goes into the creek possibly creating water quality problems. Other higher volume locations where dust was identified as a potential problem based on existing are:

- Lenville Road
- Genesee-Troy Road

EXISTING MAINTENANCE PROCEDURES

INVENTORY

A complete inventory of SLHD's roadway system was recorded as part of this plan. The inventory was conducted utilizing Global Positioning Satellite (GPS) mapping and windshield evaluations incorporated together in a Geographical Information System (GIS) database. The entire roadway system in the SLHD jurisdiction was driven, and existing roadway condition data was observed for each road segment. This information was compiled in a database and correlated spatially with the GPS information collected during the inspections. All of this data can be accessed and analyzed via the T2_RMP Software provided by the Idaho Technology Transfer Center. In addition, SLHD has implemented the use of a hand-held GIS/GPS device as part of this inventory process. With the use of this device, the SLHD is now capable of maintaining this inventory in real-time. That is, when improvements are made or problems are identified on the SLHD roadway system, SLHD personnel can now input this information directly into the GIS database established in conjunction with the development of this transportation plan, with GPS location associated with the item identified.

The inventory and GIS database developed in conjunction with this plan provides a 'baseline' of the conditions of the SLHD roadway system. This baseline is the start of implementing improved decision-making tools for the allocation of funds and labor.

During the windshield evaluations, most of the 244 miles of SLHD maintained roadway were inspected. This is 20 miles more than the total SLHD Jurisdiction mileage given by ITD's Rural County and Highway District Road Mileage chart for the calendar year of 2001. Of this, approximately 44 miles were asphalt, leaving 200 miles of roadway unpaved. Each roadway was divided in segments easily recognized by the conditions in the field. That is, a roadway segment was typically defined from intersection to intersection along any given roadway, or where significant features, such as pavement-to-gravel transitions, or bridges, or roadway ends, were encountered.

Each roadway segment was evaluated in terms of segment width, surface type, drainage type, and the current roadway conditions. The GPS instrument determined segment lengths. The existing road conditions were evaluated based on the severity and extent of various distresses. The severity of the distress is a measure of its magnitude, while the extent quantifies how frequently it occurs in a given segment. The T2_RMS software uses the observed extent and severity of each distress to estimate a Remaining Service Life (RSL) value (in years) for each road segment. RSL identifies the amount of time a roadway segment has left before major reconstruction of that segment is necessary to keep the segment in use. Normal maintenance procedures, such as yearly crack sealing on paved surfaces and reshaping on gravel surfaces, are critical to realizing, or even extending the RSL for any given roadway segment. In fact, on gravel roads, lack of such regular maintenance procedures would render RSL values useless, since most of these roads would be almost unusable to most motorists even after only one year of no maintenance.

The asphalt roads were evaluated based on alligator (block) cracking, longitudinal cracking, transverse cracking, edge cracking, patching/potholes, roughness, rutting, and drainage. Of all the SLHD asphalt segments, longitudinal and/or transverse cracking was found to be the governing stress in 37% of the system. In general, the asphalt roads are smooth driving

surfaces with good drainage. Approximately 73% of the asphalt roads had good smoothness, while 85% had good drainage. The asphalt segments have an average width of approximately 22 feet and natural drainage is typical. The average Remaining Service Life (RSL) of the asphalt roads was approximately 12 years

Unpaved roads were evaluated based on rutting, loose aggregate, corrugations, potholes, cross section, drainage, and dust. The majority of the unpaved roadway is gravel 3-track roadway with natural shoulders. The average RSL for the unpaved road segments was approximately six years.

ROADWAY SURFACE CONDITIONS

Paved Roadways

The District appears to have successful pavement maintenance practices in place. In general, the existing asphalt roads have a good base and cross section. The ditches and culverts are in good working condition resulting in adequate drainage. Existing annual crack sealing and patching, as necessary, and an approximately 5-year chip seal rotation are successful maintenance practices aimed at extending the asphalt's typical remaining service life already implemented by the District. A road condition survey is found in Appendix C.

Unpaved Roadways

Unpaved road conditions are dynamic, and perhaps most readily influenced by seasonal factors. For example, a given road segment could be governed by rutting in the spring due to snow runoff, and that same road segment could have excessive corrugations in the fall from all of the heavy agricultural traffic. However, particular unpaved segments will tend to have recurring maintenance issues. These problems will not likely be evident from a single windshield evaluation, but will become obvious throughout years of maintenance records. In general, the more heavily traveled roads will likely have the most frequent maintenance issues, especially when referring to the unpaved roads. Therefore, the ADT values are especially useful in allocating resources on unpaved roadway segments. Dust is also an inherent problem of unpaved roads, particularly those with a high ADT. Dust not only provides a safety issue, but also indicates aggregate loss. This dust and loss of aggregate are often linked with extensive corrugations and other road distresses.

Recognizing the limitations of the evaluating the existing conditions giving the dynamic nature of unpaved roads, but also recognizing the need for establishing a baseline condition of the roadway system, the following represents a summary of our findings.

At the time of the survey, segments on Genesee-Troy Road and Genesee-Juliaetta Road had significant potholing, while sections of Lenville were prone to corrugations. These segments are some of the more highly traveled unpaved roads in the district, each receiving 100 ADT or more. Of course, other factors influence these conditions, but it is no coincidence that these higher traffic segments had noticeable distress. In general, the unpaved segments of roadway have an average width of approximately 18 feet with a natural or gravel shoulder. The cross section was the governing distress in 73% of the segments at the time of the survey. 87% of the unpaved roads have a good cross section, and only 4% had a cross section that was considered poor. At the time of the survey, 9% of the unpaved sections were governed by rutting, and 1% by

corrugations. 85% of the roads appeared to have good drainage. A road condition survey is found in Appendix C.

TRAFFIC CONTROL (SIGNS)

The use of traffic control devices within the SLHD was questioned during the public involvement. Based on field observations by the project team most of the key intersections have the necessary stop signs but on the minor intersections stop and yield signs are not consistently installed. In addition, other advance warning signs, such as warning of a stop ahead around a curve were not present at some intersections with sight distance problems. Some of the specific signage deficiencies are listed below:

- Lack of stop signs and street name signs at Minor Collector/Minor Collector or above intersections.
- Lack of speed limit signage. Although input from the Highway District indicates they would like to install speed limit signs to improve roadway safety and help reduce aggregate loss, an engineering study is required for installation of speed zones. Without such a study, tickets issued for excessive speed do not hold up in court.
- Most regulatory and warning signs do not meet the current standards for reflectivity. The SLHD is currently developing a plan for replacement of the signs. This is especially critical since most roadway and intersection are not illuminated.

An inventory of existing signs is illustrated in Figure 2-21.

APPROACH PIPES AND CULVERTS

Highway District personnel completed a location inventory of each approach pipe and culvert in the District's jurisdiction as part of the development of this document. An illustration of these existing approach pipes and culverts is shown in Figure 2-22. Culverts over twenty feet in length are considered bridges in this document in conjunction with ITD's definition of bridges.

In general, the Highway District employs good installation and maintenance practices of approach pipes and culverts. Also, they are currently in the process of repairing or replacing pipes with notable installation problems, such as large elevation differences between ditch grade and pipe inverts and obstructed pipes.

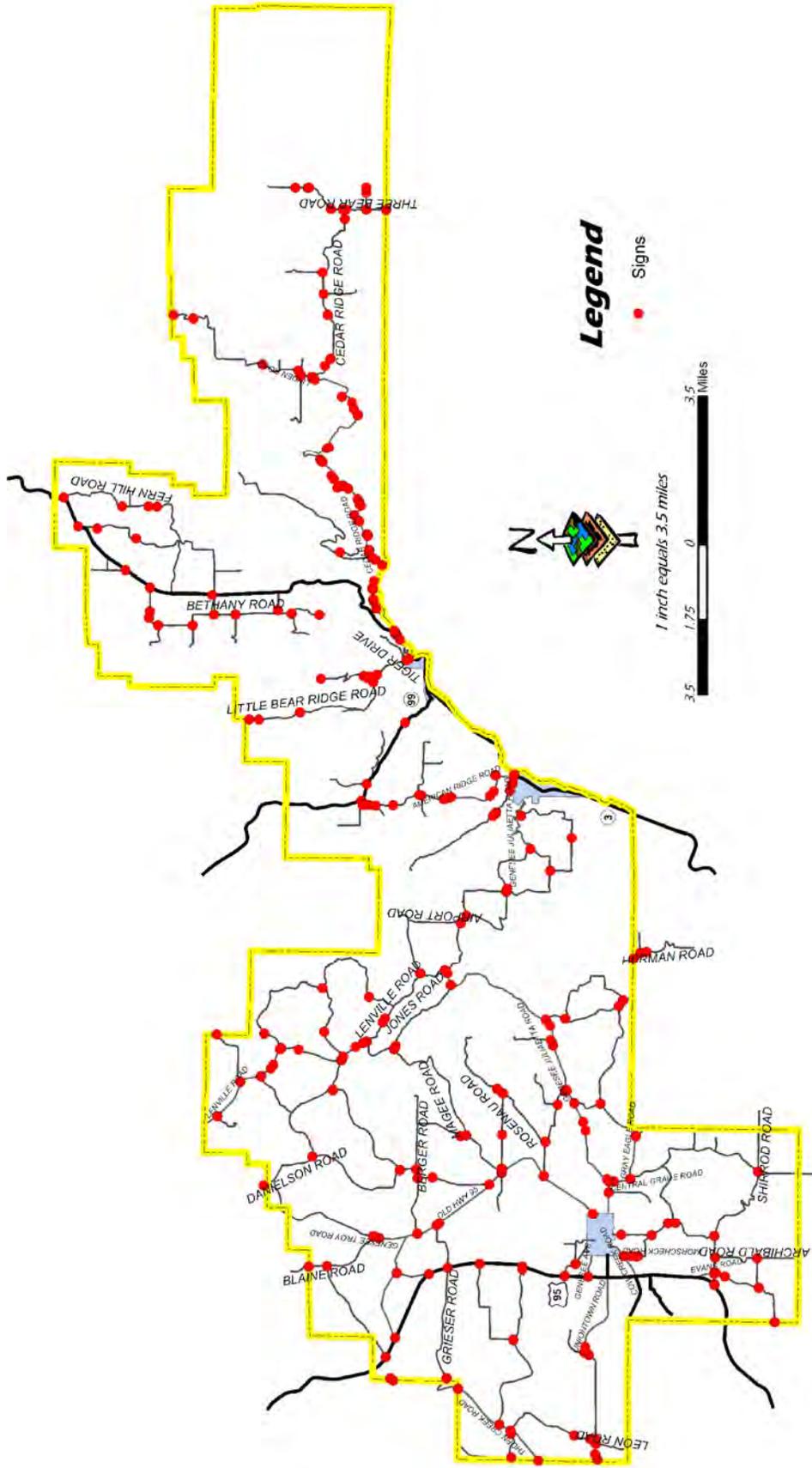


FIGURE
2-21

Signs

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



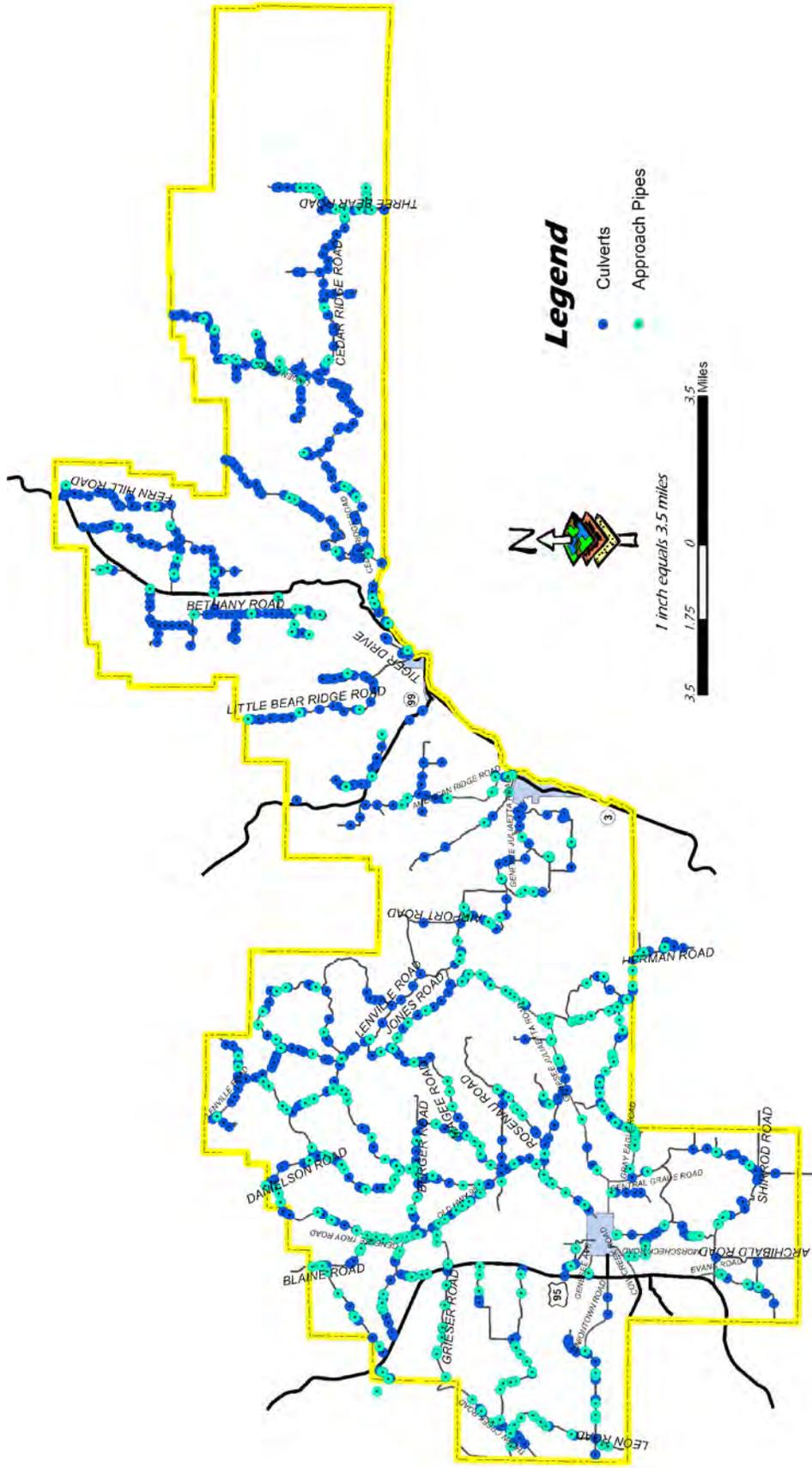
KITTELSON & ASSOCIATES, INC.



Geographic Mapping Consultants, Inc.

FIGURE
2-22

Approach Pipes
and Culverts
SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



KITTELSON & ASSOCIATES, INC.



Geographic Mapping Consultants, Inc.

BRIDGES

Highway District personnel completed a location inventory of each bridge in the District's jurisdiction. The Consultant completed a review of ITD bridge inspection reports for bridges in the District's boundaries from 1999 to present. This inventory and review identified 33 bridges in SLHD's jurisdiction, excluding bridges located within city boundaries and on state highways. ITD Inspection reports were found for 19 of these 33 bridges (see Figure 2-23). The 14 bridges located that do not have inspection reports available do not appear to have regular inspection and repair procedures in place.

Included in the available bridge reports are Bridge Sufficiency Ratings. Bridge Sufficiency Ratings, ranging from 0 to 100, result from data generated by the National Bridge Inspection Standards (NBIS) program authorized by the 1968 Federal Aid Highway Act. According to the Idaho State Highway Plan, "sufficiency ratings measure a bridge's structural adequacy, compliance with current design standards, importance for public use, and eligibility for federal bridge replacement funds. A sufficiency rating below 50 implies the bridge is in poor condition and needs to be replaced. Sufficiency ratings between 50 and 80 suggest the bridge is in fair condition, and that rehabilitation, if cost-effective, will bring the bridge up to current standards. Bridges with sufficiency ratings above 80 are considered to be in good or adequate condition in all areas and are not eligible for federal funding."

The sufficiency ratings are calculated by ITD, using FHWA software, after the bridge inspection reports are reviewed and approved. This review identified no bridges with sufficiency ratings below 50. Three bridges were identified with sufficiency ratings between 50 and 80. The remaining bridges have sufficiency ratings above 80. The three bridges identified with sufficiency ratings between 50 and 80 are:

- Key No. 20305 Culvert on Thorn Creek Road (rating = 72.5)
- Key No. 29510 Bridge on Middle Fork Road (rating = 71.0)
- Key No. 29880 Lagoon Bridge, Morschek Road (rating = (70.7)

The bridge sufficiency ratings and the associated summary reports provide SLHD officials with a quick overall assessment of their bridge needs. SLHD officials are urged to review the bridge inventory and sufficiency ratings for completeness and accuracy, and also to refine and upgrade their bridge condition ratings via an aggressive maintenance, rehabilitation, and replacement program.

In addition to the sufficiency ratings and the associated summary reports, SLHD commissioners identified four bridges they believe need widening. These four bridges are:

- Key No. 29570 Sprenger Road Bridge (rating = 80.3)
- Key No. 29595 Little Bear Road Bridge (rating = 85.6)
- Key No. 29625 Harmon Bridge, Lenville Road (rating = 88.5)
- Key No. 29665 Upper Lenville Road Bridge (rating = 93.6)

The four bridges identified by the Commissioners are not eligible for federal funding because of sufficiency ratings above 80.

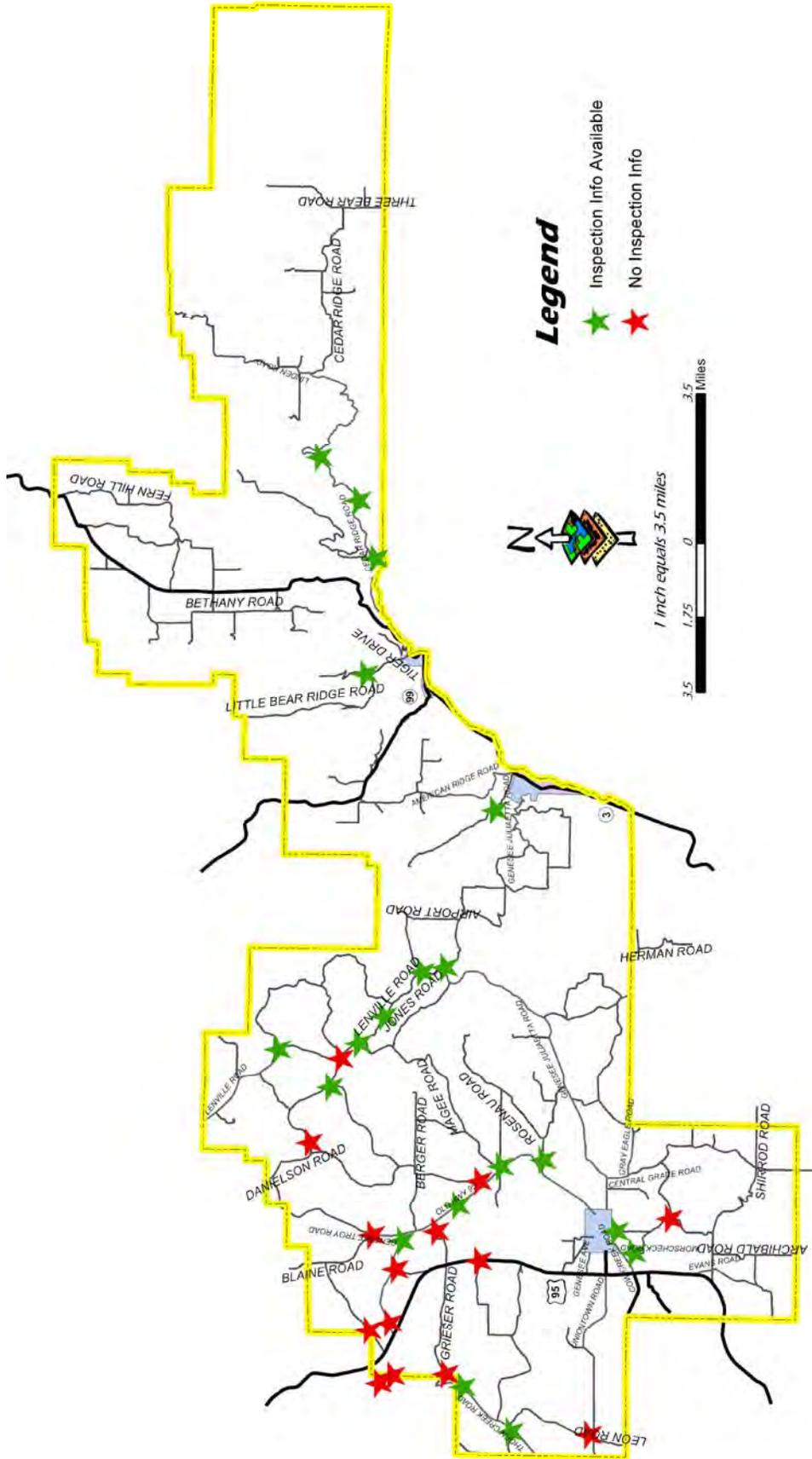


FIGURE
2-23

Bridges

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



KITTELSON & ASSOCIATES, INC.



Geographic Mapping Consultants, Inc.

EXISTING CONDITIONS SUMMARY

Through an inventory of existing conditions, several key findings were identified. Those findings include:

LAND USE AND PLANNING

- Latah County Comprehensive Plan indicates that growth will occur immediately adjacent to the three Cities of Genesee, Juliaetta and Kendrick.
- Genesee has the most potential for growth whereas Juliaetta and Kendrick are limited in their ability to due to surrounding terrain and proximity to employment opportunities.
- Genesee has classified roads that extend into the County and become roads that are under the jurisdiction of SLHD.
- Comprehensive Plans for Latah County, Genesee and Juliaetta and Kendrick all promote encouragement of bike and pedestrian modes of transportation.
- Latah County Comprehensive Plan encourages the preservation and growth of rail service within Latah County.

ACCESS MANAGEMENT

Given the rural nature of SLHD roadways and typical adjacent large parcel size, the established access permit process and review criteria serves the Highway District well for managing access onto SLHD roadways. Proper consideration should be given to the location of accesses in regards to adjacent accesses, intersections, and sight distances.

PEDESTRIAN/BICYCLE FACILITIES

- Sidewalks and shoulders for use by bicycles are present in the three Cities of Genesee, Juliaetta, and Kendrick, but not throughout the SLHD system.
- The terrain, gravel roads, and distance between destinations limit the effectiveness of providing pedestrian and bicycle facilities on most roadways.
- The narrow width and curve north of Genesee on Old Highway 95 was identified as a problem for bicycles through the public input process.
- Little Bear Ridge Road is used for recreational walking between the Kendrick High School and the bridge 1.2 miles north. Where Little Bear Ridge Road passes through the high school parking lot, there is a lack adequate channelization, striping, and signing.
- Recreational walking and biking is occurring on some SLHD roadways immediately adjacent to the City limits of Genesee and Kendrick and on the northern portion of Lenville Road.
- Multi-use paths have been developed and are planned in jurisdictions surrounding SLHD.
- Lenville Road and Genesee-Juliaetta Road were identified as possible locations that if improved to provide bicycle facilities could create a large recreational bicycle loop.

PUBLIC TRANSPORTATION

- There is very limited public transportation serving the SLHD area.
- Studies by ITD and the transit providers recommended more demand response service is needed to service the SLHD area.
- Carpooling and vanpool options are being expanded through programs of the Palouse-Clearwater Environmental Institute to meet the need.
- Supplemental funding is needed to provide operating costs for public transit systems. The Public Transportation Advisory Committee is currently working to identify funding sources for operations of public transportation systems.

AIR TRANSPORTATION/RAIL TRANSPORTATION

- No needs for additional air transportation facilities to serve the SLHD jurisdiction were identified; there have been discussions regarding the development of a regional commercial airport located in the western portion of the SLHD boundary in the long-term. However, these discussions have only been conceptual in nature, and this document did not expand on these discussions, other than to mention them here.
- No active rail lines are found in SLHD (contrary to a goal stated Latah County Comprehensive Plan to encourage rail transportation).
- Significant lengths of railroad right-of-way exist inside the SLHD boundary.

TRAFFIC OPERATIONS AND SAFETY

- Genesee-Juliaetta Road, Old Highway 95, Cow Creek Road, Walnut Street, and the paved section of Cedar Ridge Road did not have sufficient paved width to meet the SLHD standard based on their classifications and traffic volumes. In addition, the width is Thorn Creek Road is slightly below the approved standard but since only a short section of this roadway is in the SLHD widening is not recommended without widening outside the SLHD.
- Genesee-Juliaetta Road is classified as Major Collector but is not paved east of Lenville Road.
- Genesee-Juliaetta Road between Jones Road and Heimgartner had a high rate of accidents.
- Three locations on the key roadways were identified with sight distance deficiencies which include:
 - Genesee-Juliaetta Road/Lenville Road
 - Genesee-Juliaetta Road/Jain Road
 - Cedar Ridge Road/Texas Ridge Road
- The following roads and intersections have relatively high volumes and were observed to have significant dust which can cause safety and environmental problems:
 - Genesee-Juliaetta Road/Lenville Road intersection

- Genesee-Juliaetta Road
- Lenville Road
- Genesee-Troy Road

TRAFFIC CONTROL (SIGNS)

Signage deficiencies included the following:

- Lack of stop signs and street name signs at Minor Collector/Minor Collector or above intersections.
- Lack of speed limit signing.
- Most regulatory and warning signs do not meet the current standards for reflectivity. This is especially critical since most roadway and intersections are not illuminated.

ROADWAY MAINTENANCE

The SLHD is making acceptable efforts to properly maintain their roads. In general all the roads have good cross-sections, including culverts and ditches working properly. Regular crack sealing, patching, and chip sealing are good maintenance practices already implemented by the District on their asphalt roads. On the more highly traveled gravel roads however, additional maintenance measures may be beneficial. Dust suppressants and base stabilizers may reduce the amount of aggregate loss and increase the road life between necessary maintenance procedures. In turn, this may reduce the amount of personnel-hours required for the maintenance of these roads. Such additional maintenance measures are discussed in more detail in Section 4 of this plan, "Improvements and Projects Analysis".

APPROACH PIPES AND CULVERTS

The Highway District has numerous approach pipes and culverts throughout their jurisdiction which are in a variety of conditions. The majority of these pipes are in satisfactory or excellent condition, and Highway District personnel are actively trying to repair or replace any existing pipes in either poor condition or with operation concerns. The District has good installation and maintenance procedures in place for these pipes.

BRIDGES

The information provided in this document, as result of an inventory of existing bridge locations and a review of existing bridge inspection reports of bridges in this SLHD's jurisdiction, gives SLHD officials a convenient starting point for formulating a long-range plan regarding bridge maintenance. The sufficiency ratings and the listing of structurally deficient and functionally obsolete bridges are objective data that can be used in establishing a priority based bridge rehabilitation and reconstruction program.

Section 3

Future Conditions

Future Conditions

INTRODUCTION

This section presents estimates of long-term future travel conditions within the transportation plan study area. The long-term future transportation needs for the SLHD were examined based on available employment and population forecasts, identified development activities, review of the proposed roadway network, results from the operational analysis of the existing street system, and extensive discussions with regional transportation personnel and local citizens.

TRANSPORTATION IMPROVEMENTS BY OTHER AGENCIES

IDAHO TRANSPORTATION DEPARTMENT HIGHWAY 95 IMPROVEMENTS

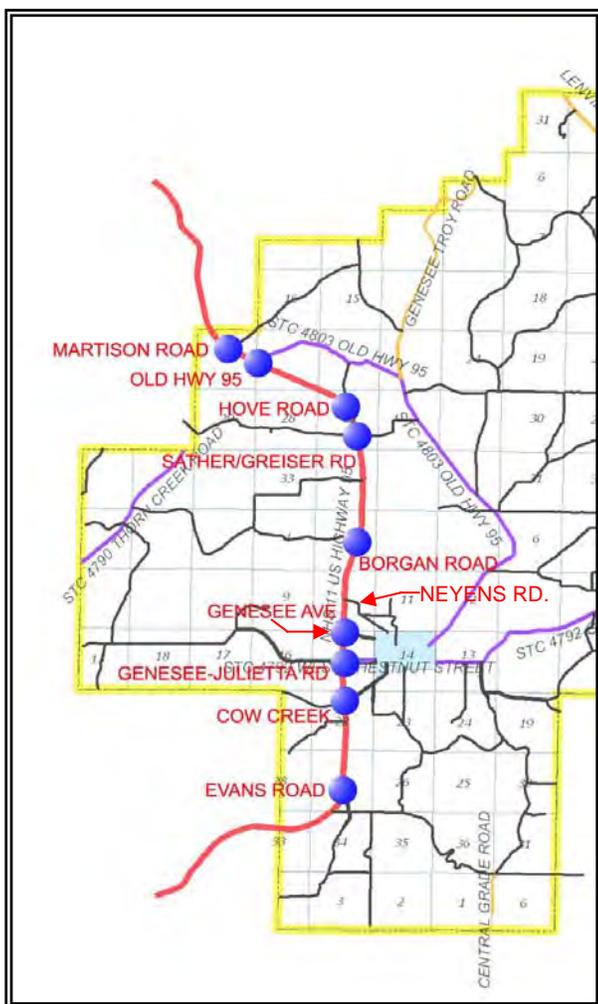


Figure 3-1. U.S. 95 Access Changes

Plans to make improvements to Highway 95 between Lewiston and Moscow are currently underway. The two-lane highway will be expanded to a four-lane separated highway. Plans have been developed and right-of-way has been purchased. The Consultant met with representatives of Idaho Transportation Department (ITD) early in the planning process to ascertain the impact of the proposed modifications on SLHD roadways. The horizontal alignment of the Highway will not be altered as it passes through the District's boundaries. The existing two lanes will become southbound and two northbound lanes will be added to the east of the existing lanes.

ITD has attempted to improve the safety of accesses onto the highway with the development of the construction plans. The most common modification was to make existing skewed accesses approach the highway at a 90-degree angle instead to improve visibility for the vehicle entering the highway. A dangerous access north of Genesee (Genesee Avenue) will be removed. We anticipate the traffic from that access will be diverted to the next access immediately north at Neyens Road. Figure 3-1 illustrates where access modifications are planned.

MOSCOW-TO-TROY MULTI-USE PATH

Outside of the SLHD boundaries, a multi-use trail is also being developed between Moscow and Troy along Highway 8, which will serve both bicycles and pedestrians. This trail is within the North Latah County Highway District boundary but is relevant to SLHD's inventory for consideration of connectivity throughout the region. The first section of the trail is scheduled for completion in 2004. The location is shown in Figure 2-9.

FUTURE GROWTH

In order to estimate future travel demand on the transportation system within the SLHD, the growth in population and employment was estimated. The population and employment growth factors developed is then used to update develop 2025 traffic forecasts for the future conditions analyses.

HISTORICAL POPULATION GROWTH

Existing and historic population data for the Latah County were obtained from the 2000 US Census and the Idaho Department of Commerce. Figure 3-2 shows the historical population for SLHD between the years 1920 and 2001.

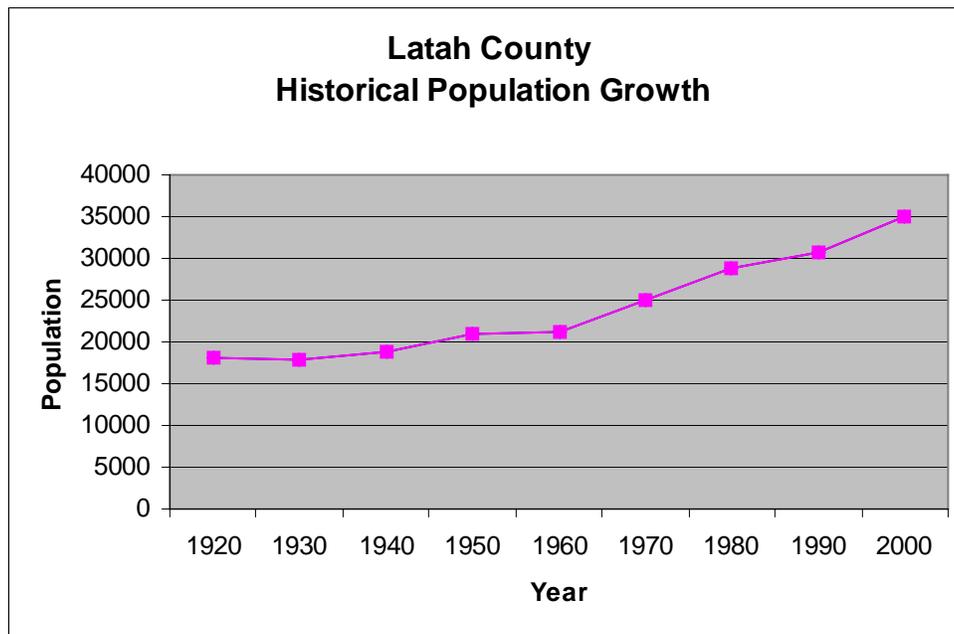


Figure 3-2. Latah County Historical Population

As shown in Figure 3-2, the population of the Latah County has grown steadily since 1920 with the exception of a few time periods. Between 1960 and 2000, the population has increased by approximately 65%, from approximately 21,000 to approximately 35,000. This results in an average annual growth rate of 1.26% per year. Since 1990, the growth has been consistent with an annual growth rate of 1.33%.

Although over the past forty years the population in Latah County has experienced a 1.26% average annual growth rate, the cities within SLHD have not experienced the same level of consistent growth. Figure 3-3 shows the historical growth in Juliaetta, Kendrick and Genesee.

1 Graph represents data compiled from the Idaho Department of Commerce and the U.S. Census Bureau.

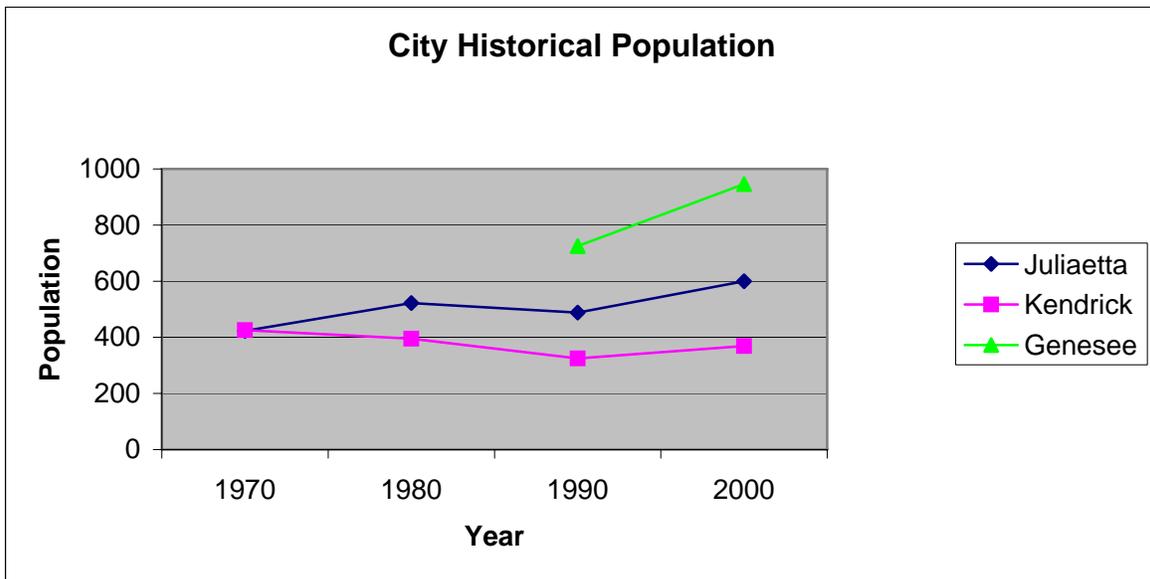


Figure 3-3: Historical City Populations in SLHD

As shown in Figure 3-3, the growth trends for the cities have varied. Table 3-1 summarizes average annual growth rates, for the SLHD for ten-year increments based on existing and historical Census data.

**Table 3-1
 Annual Growth Rates for Cities**

Year	Genesee	Kendrick	Juliaetta
1970 – 1980	NA	-0.75%	2.13%
1980 – 1990	NA	-1.93%	-0.67%
1990 – 2000	3.05%	1.28%	2.09%
Total Time	NA	-0.48%	1.17%

As shown in Table 3-1, the population growth in the Cities in SLHD has varied significantly in the past three decades. While Genesee and Juliaetta have experienced overall increases in population, Kendrick has seen a net decrease in population. Shown in Figure 3-4 are the growth rates for cities compared to the County, which includes Moscow, for the decade between 1990 and 2000.

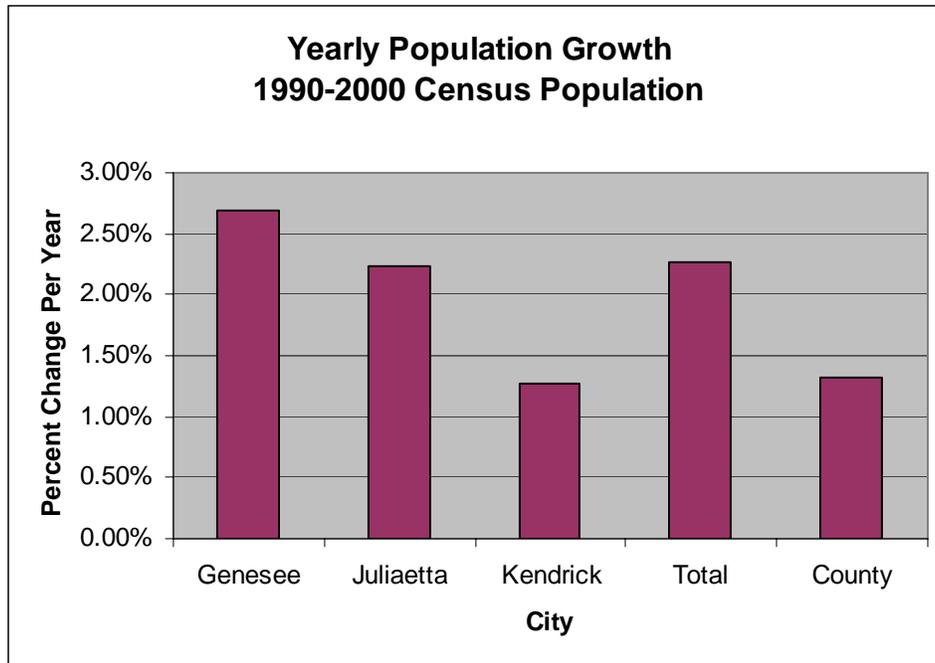


Figure 3-4: Annual Population Growth Comparison

As shown in Figure 3-4, the growth in Genesee and Juliaetta was over 2% per year, which is significantly higher than the growth in Latah County for the same period and the combined growth for all three cities was 2.26%. While the growth between 1990 and 2000 may have outpaced the annual growth for Latah County, the historical trends have shown that the growth in the cities has not been consistent over the long term and since 1960 has been lower than the average for Latah County.

Both Juliaetta and Kendrick have a comprehensive plan that was completed in the early 1990's, which included projections for years 2000 and 2010. Figure 3-5 shows the comprehensive plan projections as well as the actual total growth experienced by both cities.

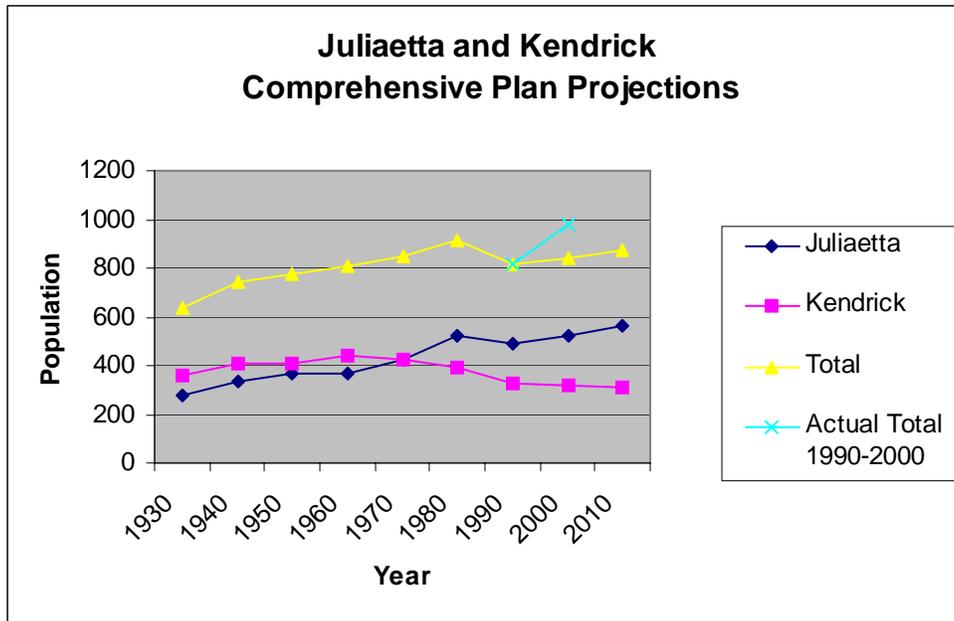


Figure 3-5. Juliaetta and Kendrick Comprehensive Plan Projections

As shown in Figure 3-5, the comprehensive plan for Juliaetta and Kendrick projected an increase of approximately 0.7% per year for Juliaetta and decrease of approximately 0.2% per year for Kendrick between 2000 and 2010. Also shown is a comparison of the projections between 1990 and 2000 to the actual population growth. As shown, the total population between 1990 and 2000 grew substantially faster than the projections for that time period.

PROJECTED POPULATION GROWTH

While economic growth was significant for many areas in the 1990's, it is likely that the growth estimates in the comprehensive plan for Juliaetta and Kendrick are lower than the potential growth that could occur. Therefore it is reasonable to assume the growth rate will be less than the 2.26% experienced between 1990 and 2000 by the three cities combined but greater than what was projected in previous planning efforts. Based on this evaluation, the following growth assumptions shown in Table 3-2 were used to develop the 2025 traffic forecasts and the evaluation of future conditions:

**Table 3-2
 Total Growth by 2025**

City	Yearly Growth	Total Growth 2000-2025	Total Growth 2003-2025
Genesee	1.40%	42%	36%
Juliaetta	1.05%	30%	26%
Kendrick	0.65%	18%	15%
Area Average	1.15%	33%	29%

As shown in Table 3-2, the average growth rates are approximately half of the rates experienced during the 1990's, but very similar to the Countywide growth rate experienced during that same time period.

In summary, assuming a regional average growth rate of approximately 1.15% per year should provide for reasonable yet conservative projection of future traffic growth. This would equal a population growth of approximately 33 percent between the population recorded in 2000 and the projected population in 2025. Using this growth rate over the next 22 years (2003-2025) would yield a total growth of approximately 29%, which was applied to the existing 2003 traffic volumes to obtain projected 2025 traffic volumes.

FUTURE TRANSIT NEEDS

The need for improved demand-response service will continue to increase as the population grows within the SLHD. In addition, some type of commuter transit connection should be considered. With future growth expected to be the greatest in the vicinity surrounding Genesee, and the probability that most of the growth will be from people who will commute to the cities of Moscow and Lewiston, provision of a bus route that connects Genesee to Moscow and Lewiston would be beneficial in the long term.

FUTURE BICYCLE AND PEDESTRIAN CONNECTIVITY

As shown in Figure 2-9 and described in the planned transportation improvements, the multi-use path that goes from Pullman to Moscow is being extended to Troy. With the addition of this path, there will be a gap between Troy and Kendrick. In addition there will still not be any facilities within the SLHD to accommodate bicycles or pedestrians. With the increase in population in SLHD and increases in population in Moscow and Lewiston, it is reasonable to assume that the demand for recreational bicycle routes in SLHD will increase. Such routes should be developed to connect the Cities of Genesee, Juliaetta, and Kendrick to the planned facilities on the Troy Highway and to the existing multi-use pathway between Juliaetta and Kendrick. There are three methods of providing such connections, which are listed below:

- Provision of wide shoulders on key roadways.
- Construction of separated pathways along key roadways.
- Use of abandoned railway facilities.

Each of these options are discussed in the Evaluation of Alternatives section of this study.

PROJECTED 2025 TRAFFIC VOLUMES AND TRAFFIC OPERATIONS

Based on the growth described above, the existing traffic volumes were factored to represent projected 2025 traffic condition. The 2025 traffic volumes were determined by growing the 2003 traffic volumes by 29 percent, which is based on the projected growth described previously. Figure 3-6 shows the resulting 2025 traffic projections. Table 3-3 shows the operational evaluation for the future conditions of key roadways within the study area. This evaluation assumes no improvements of the existing transportation system. As shown in Table 3-3, most of the study roadways had acceptable traffic volumes for their classifications and type of roadway and adequate width in their existing configurations. Each of the roadways that did not meet either the traffic volume or roadways width criteria are discussed below:

THORN CREEK ROAD

Thorn Creek Road is classified as a Major Collector and one of the highest volume roadways within the SLHD. Thorn Creek Road is paved within the SLHD. The roadway width varies between approximately 20 feet and 22 feet, which is below the 26-foot standard currently adopted by the SLHD. Widening would be required to meet the standard. Because this section was not identified as a safety problem and only a short section of the roadways is within the SLHD, widening should only be considered if the remainder of the roadway outside the SLHD is also improved to the same standard.

GENESEEE-JULIAETTA ROAD (WAHL ROAD TO JULIAETTA)

Genesee-Juliaetta Road east of Wahl Road is classified as a Major Collector and the primary roadway that connects Genesee, Juliaetta, and Kendrick. The section between Wahl Road and Lenville road is narrow and does not meet the current SLHD standards for a paved road. The current width is approximately 20-22 feet, well below the existing 26-foot standard. In addition, the section has numerous curves and has the highest accident rate in the district. Because of the high accident rate, the roadway classification, and the regional importance of Genesee-Juliaetta Road, widening of the road is recommended.

Genesee-Juliaetta Road east of Lenville Road is classified as a Major Collector and is the current width is approximately 18-24 feet, which is less than the existing 26-foot standard. In addition, only the eastern section going down into Juliaetta is paved. The west end of the section also has a high accident rate. Because of the high accident rate, the roadway classification, and the regional importance of Genesee-Juliaetta Road, paving the gravel section east of Lenville Road is recommended as a priority with a long term goal of bringing the entire roadway up to standard.

CHESTNUT STREET

With the widening of U.S. 95 and the reconstruction of the U.S. 95/Chestnut Street intersection, Chestnut Street will continue to be the primary connection to U.S. 95 from Genesee. Chestnut Street is currently paved with a width of approximately 24 feet including shoulders. With the future increase in traffic and the classification as a Major Collector, it is recommended that the section be widened to provide the standard 26-foot paved section. It is likely that improvements to the most significant portion of Chestnut will be incorporated into the U.S. 95 improvement project and therefore most of the widening will likely be done by ITD.

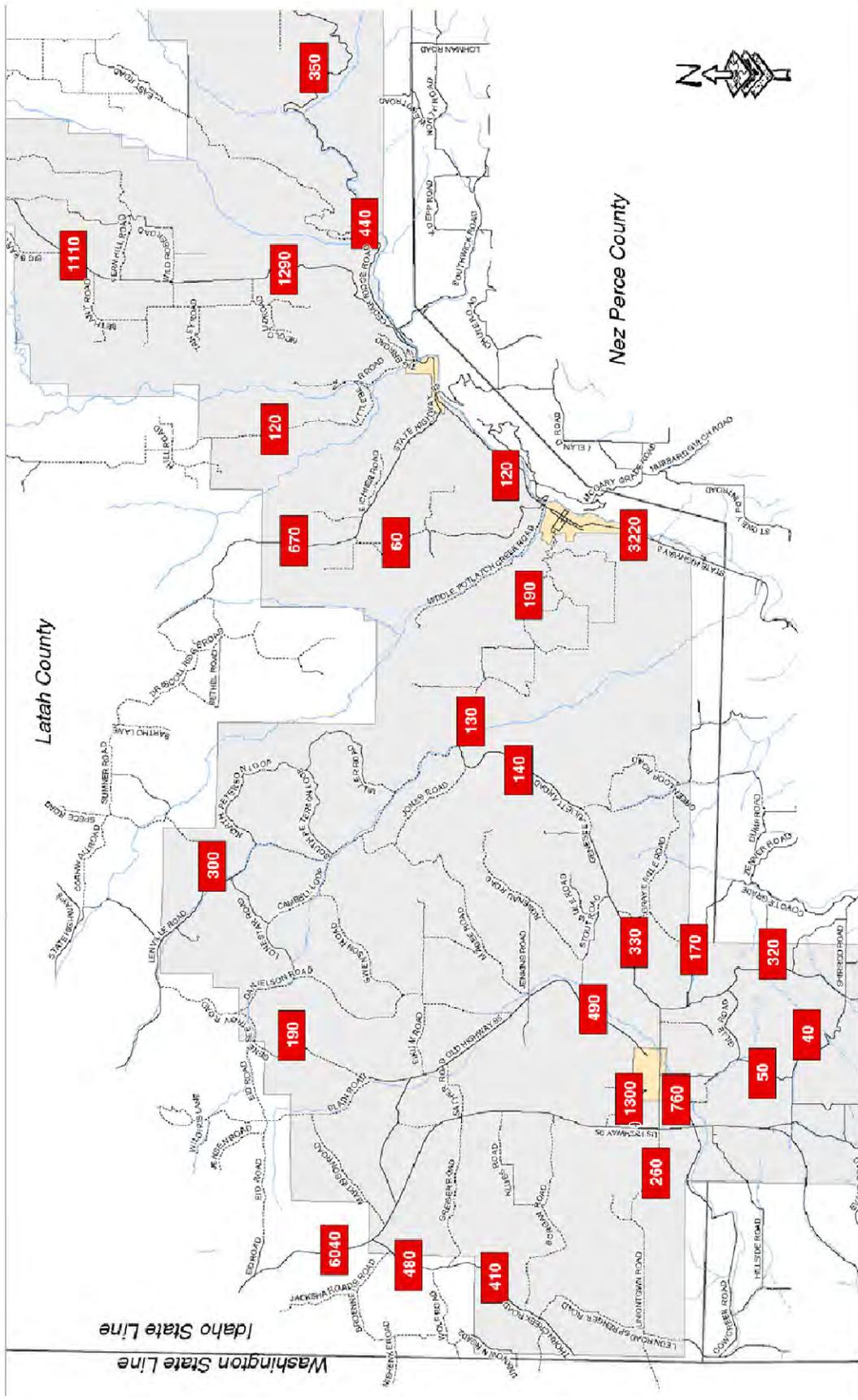


FIGURE
3-6

**2025 Daily
Traffic Volumes**

Table 3-3
2025 Operational Evaluation of Study Roadways

<i>Roadway</i>	<i>Functional Classification¹</i>	<i>Average Daily Traffic</i>	<i>Meets Max Recommended Volume Criteria?</i>	<i>Meets Roadway Width Criteria?</i>
Thorn Creek Road	Major Collector	480	Yes	No
Genesee-Juliaetta Road				
Paved (W. of Wahl Rd)	Major Collector	330	Yes	Yes
Paved (E. of Wahl Rd)	Major Collector	140	Yes	No
Unpaved Section	Major Collector	190	Yes	No
Chestnut Street	Major Collector	1,300	Yes	No
Old Highway 95	Major Collector	490	Yes	No
Genesee-Troy Road	Minor Collector	190	Yes	Yes
Uniontown Road				
Paved	Local Road	260	Yes	Yes
Unpaved	Local Road	260	No	Yes
Cow Creek Road	Local Road	760	Yes	No
Central Grade Road	Local Road	320	Yes	Yes
	Minor Collector	320	Yes	Yes
Shirrod Road	Local Road	50	Yes	Yes
Lenville Road				
Paved (N. of Miller)	Minor Collector	300	Yes	Yes
Unpaved (N. of Campbell Lp)	Minor Collector	300	No	Yes
Unpaved (N. of Gen-Jul Rd)	Minor Collector	<250	Yes	Yes
Cedar Ridge Road				
Paved (W. of Linden)	Major Collector	440	Yes	No
Unpaved (E. of Linden)	Local Road	70	Yes	Yes
American Ridge Road	Local Road	120	Yes	Yes

OLD HIGHWAY 95

Old Highway 95 is classified as a Major Collector and one of the highest volume roadways within the SLHD. Old Highway 95 does not have a posted speed and is paved within the SLHD. The roadway width varies between approximately 22 feet and 26 feet, and therefore, is below the 26 foot standard currently adopted by the SLHD at a few locations. The west end connecting to U.S. 95 is even narrower. Widening would be required to meet the standard. In addition this section was identified as a potential location for widening to accommodate bicycles and improvements to the sharp curve north of Genesee. Because this section was not identified as a safety problem, widening should not be considered a priority, but widening should be planned that includes a minimum four-foot shoulder width to accommodate bicycles. Bicycles will most likely travel away from and back to Genesee city limits for recreational purposes. Genesee-Troy Road connects Old Highway 95 with paved road to Moscow and Troy. When

Genesee-Troy Road is paved in the future, bicycles may travel between Genesee and Moscow or Troy.

UNIONTOWN ROAD (HERMAN TO SLHD BOUNDARY)

Uniontown Road is a local road and one of the higher volume roadways within the SLHD. Uniontown is currently paved between Herman Road and U.S. 95 and unpaved west of Herman Road. The roadway width is adequate in the paved section, but the growth in traffic will cause the traffic to exceed the volume recommended for unpaved roads. While Uniontown Road is not classified as a Collector, it is a popular connection to the west to Uniontown. Since it is unlikely it will be paved west of the SLHD boundary, paving the unpaved portion will only improve the roadway within the District. It is recommended that Uniontown be paved in the long term, but it is not as high of a priority as many other improvements since it is not a safety improvement and will not provide additional connectivity within the SLHD.

COW CREEK ROAD

Cow Creek Road provides the most efficient connection between the town of Genesee and U.S. 95 for people with origins or destinations to the south such as Lewiston. With widening and proposed access consolidation on U.S. 95, traffic using Cow Creek Road is expected to increase. Cow Creek Road is currently paved and in good condition to accommodate the projected traffic increase but is also currently classified as a Local Road. With future growth and the U.S. 95 improvement project, the Cow Creek Road should be widened to provide adequate in the sections between U.S. 95 and Genesee. In addition, consideration should be given to changing the classification of Cow Creek Road between U.S. 95 and Genesee to a Minor Collector.

LENVILLE ROAD

Currently Lenville Road is paved from the Troy Highway to a point south of Spence Road. In the future traffic volumes are expected to increase to the point that paving should be considered. The most critical portion for paving is the short section between Campbell Road and the existing paved section but with the paving of Genesee-Juliaetta Road and the Genesee-Juliaetta Road/Lenville Road intersection, only paving this section would leave a gap in pavement between Campbell Road and the Genesee-Juliaetta Road. Therefore future paving of Lenville Road south to Genesee-Juliaetta Road should be considered in the long term.

CEDAR RIDGE ROAD

Cedar Ridge Road varies significantly in daily traffic volume and roadway width, curvature, and grades throughout its length. The paved section of Cedar Ridge Road west of Linden is classified as a Major Collector and is comprised of a number of narrow mountainous sections west of Texas Ridge Road and then runs along a steep hillside to Linden Road. Cedar Ridge Road currently does not meet the SLHD standard for a paved roadway. With the increase in traffic in the future, widening in the narrow sections should be planned.

GENESEE-TROY ROAD

In addition to the roadways described above, the Genesee-Troy Road should be considered for future paving since it currently is a key north south connection, has a relatively high traffic volume projection, and is classified as a Minor Collector. The Genesee-Troy Road was also identified by SLHD as an important north-south route to Troy.

Section 4

Improvements and Project Alternatives

Improvements and Project Alternatives

INTRODUCTION

This section presents future transportation improvement and project alternatives that could be implemented to mitigate existing and projected future transportation system deficiencies identified in Section 2 and Section 3 of this plan. Projects were identified from several categories that include: safety improvement projects, capacity improvement projects, maintenance procedures, addressing SLHD priorities, addressing identified public concerns, roadway improvements, and addressing regulatory agencies' requirements. Some proposed improvements and projects might fall into more than one of these categories. However, each proposed improvement or project came about as a result of addressing a specific category. Such proposed improvements and projects addressing more than one category are identified under the category they were initially discussed.

PROJECTS AND ALTERNATIVES

GENERAL SOUTH LATAH HIGHWAY DISTRICT IDENTIFIED PRIORITIES

The District Commissioners and Roads Supervisor are the most knowledgeable of the roadway system they are responsible for. Prior to starting this Transportation Plan, the Highway District recognized the need for specific capital improvement projects, a change in some maintenance practices, safety improvements and the ability to comply with regulatory requirements. The District lacked funds to address these needs. This plan is a step towards obtaining the needed funds. The Highway District's general concerns are listed below. Most of these concerns are self-explanatory; however, an explanation is provided for those that are not.

- Pave high-traffic gravel roads
- Upgrade all roads to an accepted SLHD standard
- Apply stabilization/dust suppressant to gravel roads to help keep aggregate in place and to reduce dust
- Single-lane bridges should be replaced with two-lane bridges

The specific projects contained in the following sections identify the highest priority locations to focus SLHD resources.

SAFETY PROJECTS

Safety projects are those projects recommended to improve safety deficiencies or roadways with high crash rates as identified in the evaluation of both existing conditions and projected future conditions. The following is a description of the projects associated with improving safety.

Genesee-Juliaetta Road/Lenville Road:

The Genesee-Juliaetta Road/Lenville Road intersection is located on a curve east of a paved section of Genesee-Juliaetta Road. The problems identified at this intersection included lack of sight distance to the stop sign for southbound traffic on Lenville Road, the transition from a

paved surface on Genesee-Juliaetta Road to gravel at the intersection, and dust. The following improvements are recommended:

- Trim the embankment on the northeast corner to improved sight distance.
- Install a “stop ahead” sign on the southbound approach.
- Pave the intersection.

Genesee-Juliaetta Road/Jain Road:

Jain Road is a low volume local road with poor intersection sight distance at Genesee-Juliaetta Road. To improve the sight distance two options were identified. The first is to combine the two entrances to Jain Road into a single entrance located at the crest of the vertical curve on Genesee-Juliaetta Road. The second is to re-grade the vertical curve on Genesee-Juliaetta road to improve the sight distance.

Cedar Ridge Road /Texas Ridge Road:

Cedar Ridge Road should be widened at Texas Ridge to provide better sight distance for vehicles turning from Texas Ridge and to reduce the potential for vehicles on Cedar Ridge Road for crowding the centerline. Widening the road to the standard 26 feet of pavement for a distance of about 500 feet on each side of Texas Ridge and minor removal of vegetation would likely improve the operation and safety of the intersection.

Genesee-Juliaetta Road (Wahl Road to Heimgartner):

The westerly section of this segment is a narrow paved roadway with curves. The narrow width and the curves create crowding of the centerline. Therefore, this section should be widened to meet the current SLHD standard. The east section from Lenville Road to Heimgartner is gravel and has both vertical and horizontal curves that cause centerline crowding at high speeds. Paving this section is also recommended. Paving this segment will reduce centerline crowding on curves and reduce the potential for vehicles to run off the road.

Traffic Control (Signs):

There is a general lack of signage and many signs do not meet the current reflectivity standards. The following actions are recommended:

- Install stop signs and street name signs at all intersections of local road intersections with Minor Collectors, or above.
- Perform speed studies, as required by the State of Idaho for installation of speed limit signing on all Major Collectors and Minor Collectors.
- Upgrade all regulatory and warning signs to meet the current *Manual of Uniform Traffic Control Devices* (MUTCD) standards for retro-reflectivity. This is especially critical since most roadway and intersection are not illuminated.
- Review the need for “Stop Ahead” signs at key intersections throughout the SLHD. For example, the Genesee-Juliaetta Road/Lenville Road and Genesee-Juliaetta Road/Gray Eagle intersections were identified in the Existing Conditions section of this plan as locations where motorist safety would benefit from the installation of such signs.

Approach Pipes and Culverts:

The District should continue the already established installation and maintenance standards and procedures for approach pipe and culvert maintenance.

Bridges:

This plan strongly urges the Highway District to initiate regular inspections and inspection record documentation of the 14 bridges located in the District's jurisdiction that do not appear to have regular inspection and repair procedures in place. Inspections should comply with the National Bridge Inspection Standards program and be completed by a licensed engineer with expertise in bridge inspections.

The information provided, as result of an inventory of existing bridge locations and a review of existing bridge inspection reports of bridges in this SLHD's jurisdiction, gives SLHD officials a convenient starting point for formulating a long-range plan regarding bridge maintenance. The sufficiency ratings and the listing of structurally deficient and functionally obsolete bridges are objective data that can be used in establishing a priority based bridge rehabilitation and reconstruction program.

CAPACITY PROJECTS

Capacity projects typically are improvements to roadways to accommodate either existing or proposed SLHD standards and accommodate increased traffic volumes. Roadway segments where either existing or proposed traffic volumes exposed capacity concerns were identified in Section 2 and Section 3 of this plan. The following is a description of projects associated with improving capacity.

Genesee-Juliaetta Road (Lenville Road to Juliaetta):

Widen and Pave to the SLHD standard for a Major Collector. This is one of the most critical links in the transportation system and should be brought up to standard. As described in the Safety Projects, paving between Lenville Road and Heimgartner Road is recommended to reduce possible centerline crowding. Therefore, paving the section between Heimgartner and the location where the paving ends at the top of the grade above Juliaetta would complete the paving of Genesee-Juliaetta Road.

Old Highway 95 (Genesee to U.S. 95):

Widen to meet the standard for Major Collector and provide a suitable shoulder for bicycles. In addition, modify the curve at Tidemann's Corner northeast of Genesee to make it safer. The section of Old Hwy. 95 immediately adjacent to Genesee is used by residents of Genesee for pedestrian and bicycle recreation. This section has a high traffic volume, is a scenic area, and is fairly level in grade making it a desirable area for walking and biking. The walking and biking route on this road appears to be away from and back to the Genesee city limits for recreational purposes and not a connection to another activity center.

Cedar Ridge Road (west of Linden):

Widen to meet SLHD standards for a Major Collector. Cedar Ridge, classified as a Major Collector, is one of the highest volume roadways and does not meet minimum SLHD standards.

Lenville Road (Genesee-Juliaetta Road to Paved Section):

Widen and pave to the SLHD standard for a Major Collector. This section of Lenville Road is a critical link in the roadway network and with the paving of Genesee-Juliaetta Road will be an unpaved link between other paved links. In addition, Lenville Road could be a good route for serious bicyclist since it could create a loop from Moscow through Juliaetta and Kendrick. With this improvement, re-classifying this Lenville Road from a Minor Collector to a Major Collector should be considered.

Uniontown Road (U.S. 95 to SLHD line):

Pave to the SLHD standard for Minor Collector. Uniontown Road is used as a connector from Genesee to destinations in Washington State. Some traffic is destined for Uniontown and Colton, Washington. However, the majority of the traffic is to Pullman and Spokane, Washington. Washington State University, a major regional employer, is located in Pullman, Washington. Many local residents feel the quickest route from Genesee to the Spokane International Airport is via Uniontown Road to U.S. Route 195.

Thorn Creek Road:

Widen to meet SLHD standards. Thorn Creek Road is classified as a Major Collector and one of the highest volume roadways within the SLHD.

Genesee-Troy Road:

Widen and pave to meet SLHD standards for a Minor Collector. Genesee-Troy Road is a key link between Genesee and Troy. In addition, SLHD staff have indicated much aggregate is lost annually due to high speeds which increases maintenance costs.

Cow Creek Road:

In conjunction with the ITD improvements on U.S. 95, the classification of Cow Creek Road between U.S. 95 and Genesee should be reclassified to a Minor Collector.

BICYCLE AND PEDESTRIAN PROJECTS

Improving the bicycle or pedestrian network was not a priority identified by the public or SLHD; however, low-priority projects have been identified because of the comments received. Desired improvements for walking and biking safety were noted in two areas; Little Bear Ridge Road and Old Highway 95 north of Genesee. Improvements to increase recreational biking opportunities on Lenville Road were also noted. Figure 4-1 shows potential bicycle connections. Four projects address bicycle and pedestrian concerns:

Little Bear Ridge Road:

This road begins on the south end at the Kendrick High School. The road is adjacent to Little Bear Creek. There are some turnouts existing on the roadway and there is even one place where a picnic table has been placed approximately one half mile north of the High School, apparently for use by people using the roadway recreationally. This road receives a lot of pedestrian traffic from high school students and some from the local residents of Kendrick as a continuation of a recreational walking path from the east end of the Juliaetta/Kendrick multi-use path. A separated multi-use path is recommended at Little Bear Ridge Road between the high school and the bridge approximately 1.2 miles to the north. The multi-use path could be made an extension of the recently installed path between Kendrick and Juliaetta.

Little Bear Creek Canyon:

Abandoned railroad right-of-way exists in Little Bear Creek canyon (next to a portion of Little Bear Ridge Road) between Kendrick and Troy. Acquisition of the abandoned right-of-way should be considered to protect it for future multi-modal transportation opportunities. Latah County Parks and Recreation may be the most appropriate jurisdiction to pursue the acquisition as a connection of the existing Kendrick-Juliaetta path and the planned Moscow-Troy path.

Old Highway 95:

Improve the curvature on Old Highway 95 at Tidemann's Corner northeast of Genesee. This section of Old Hwy. 95 immediately adjacent to Genesee is used by the city residents for pedestrian and bicycle recreation. This section has a high traffic volume, is a scenic area, and has a level in grade. It is a desirable area for walking and biking. This improvement is included in the overall widening of Old Highway 95 described in the Capacity Improvements section.

Lenville Rd./Genesee-Juliaetta Rd./Old Highway 95/Genesee-Troy Rd.:

Recreational biking opportunities will increase as the roadway paving recommendations are implemented. A recreational connection has been identified on the following loop beginning and ending outside the District to the north; Lenville Road to Genesee-Juliaetta Road to Old Highway 95 to Genesee-Troy Road to Lenville Road. The recommended paving of these roadways to the standard section will provide sufficient connectivity for bicycles since traffic volumes on these roadways do not warrant an exclusive bicycle lane or separated multi-use path.

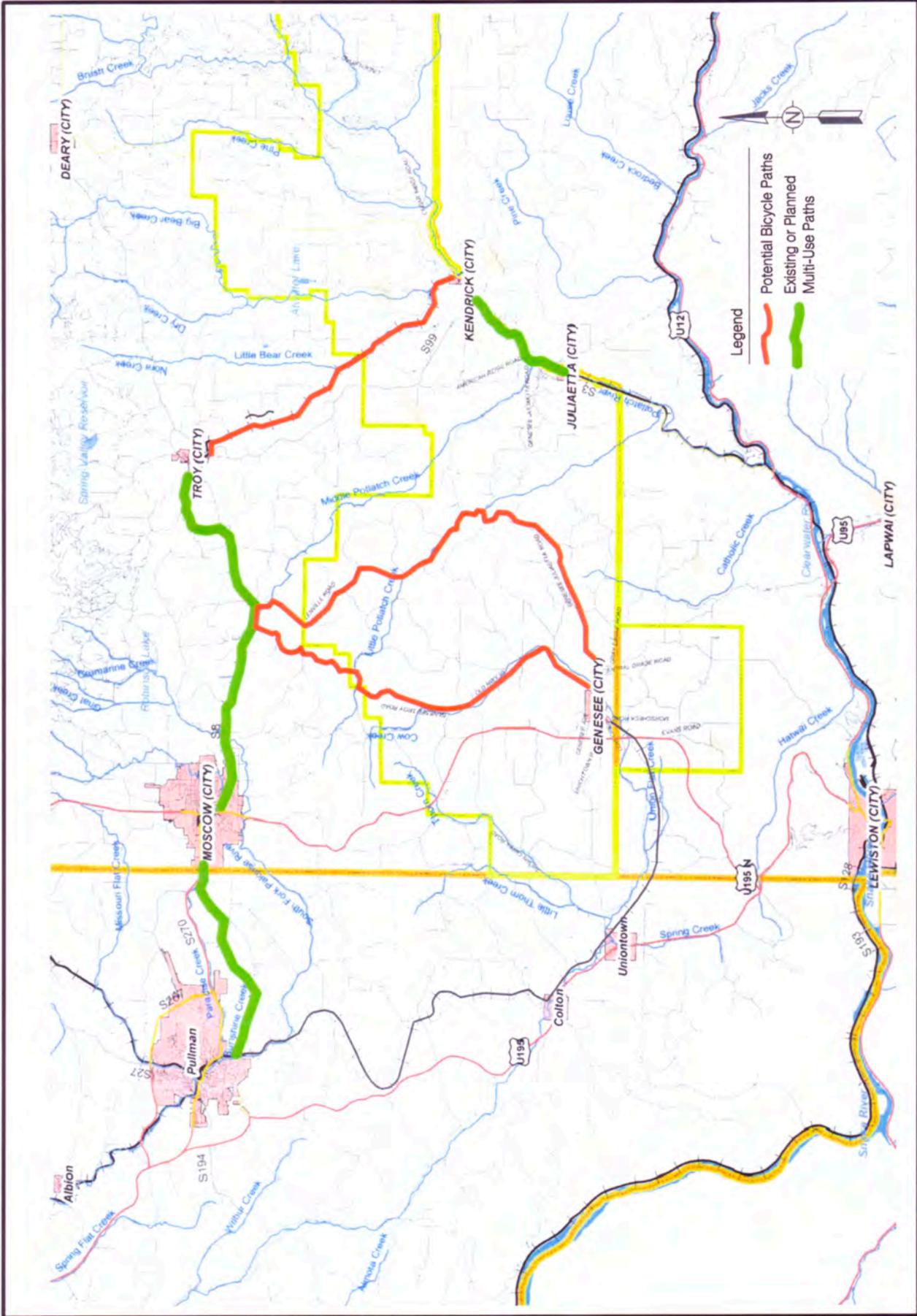


FIGURE
4-1

Potential Bicycle
Connections
SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan



KITTELSON & ASSOCIATES, INC.



Geographic Mapping Consultants, Inc.

PROJECTS IDENTIFIED BY PUBLIC CONCERNS

These projects were identified, ranked, and described in Section 2 under “Public Issues”. Only the public issues ranked by the Advisory Committee were illustrated on the matrix map. Shown below are the recommended projects based on public concerns that are not already included in the safety, capacity, road improvement, or maintenance projects. A complete list of issues raised by the public can be found in Figure 2-7. The description of the public issues identified and ranked by the public follows.

Giljie, Jenkins and Stout Roads:

Upgrade to a new gravel standard adopted by SLHD. These are described as one project but could be upgraded as three separate projects. The public school transportation officials indicated that these roads are currently not maintained to a standard that allows use by school buses. In each case these roads provide a connection between two other roadways and would allow for shorter school bus routes. The Advisory Committee agreed these roads should be upgraded.

Central Grade Road:

Widen and pave. Central Grade Road is used as an alternate route by locals between the southwestern portion of South Latah Highway District (east of Highway 95) and Lewiston. This road carries commercial truck traffic from the rock pit on Shirrod Road and some farm truck traffic.

ROADWAY CONDITION IMPROVEMENTS

In conjunction with Public Concerns and SLHD Identified Priorities, when and how to improve existing roadways is a critical element of the SLHD’s regular determination of allocating equipment, personnel, monies, and other resources on the existing roads. For example, the road surface inventory completed as part of the development of this plan identified several existing road segments that had either poor cross-sections or drainage problems. Such deficiencies in either of these elements indicate areas of roadway that typically require either reconstruction or extraordinary maintenance procedures. These roadway segments identified as “poor” are as follows.

- Bauer Road (in the NW corner of the District)
- Kluss Road (in the west center of the District)
- Andrews Road (between Evans Road and Archibald Road)
- Conner Road and Porter Road (off Central Grade Road to the east)
- Mule Road (on north side of Stout Road)
- Petersen Loop (east of Lenville Road to Miller Road)
- Airport Road (off Genesee-Juliaetta Road)
- Heimgartner Road (north of Genesee-Juliaetta Road)

At first glance, these roadway segments might appear as high priorities for immediate repair by the SLHD. However, this list is not inclusive of roads that need to be upgraded to a width standard. That is, this list only identifies a poor condition at the existing width. In addition, this list does not identify the amount and type of traffic using these roadway segments. And, in relation to that traffic, this list does not identify the connectivity of key locations in the SLHD provided by these segments. The fact is, this list is simply the existing dirt road segments that

were in poor condition (i.e. heavy rutting and poor cross-slope) at the time the survey was completed. Further evaluation shows that the survey was completed at a time of the year when evidence of what little winter traffic could make their way on these segments left significant damage to the roadway section, but the segments were not accessible for SLHD maintenance yet. In short, this example illustrates that without considering many factors in determining the allocation of SLHD resources, even good data could lead to poor allocation of resources. In implementation plan will help the District utilize collected data to make the appropriate decision. One of the most difficult decisions to make is which roads should be upgraded given limited resources. In an effort to make this determination, developing and applying a specific process is recommended. Following is a recommended framework for developing improvement criteria. These roadway standards and implementation procedures should be considered for adoption into SLHD policies.

Improvement Criteria

Development of criteria for upgrading roadways must include a number of factors including roadway classification, traffic safety, traffic volume, and maintenance costs. The following are recommended criteria for upgrading roadways within SLHD.

Criteria 1: Roadway connectivity and classification

Connectivity and classification play an important role in determining priorities. Roadways that provide system-wide connectivity or are classified as Major Collectors or Minor Collectors should be considered priorities for improvements when compared to Local Roads. Proposed changes to the Functional Classification are shown in Figure 4-9. Within the Local Road classification, the following should be considered:

- Single Lane Local Roads: Should provide the lowest level of connectivity such as access to one or more residential properties. Single lane roads should not typically be used for critical links from a sub-area of the Highway District to the Collector Street system or between activity centers.
- Two/Three Lane Gravel Roads: Should be used to access many properties or a sub-area of the Highway District and connect to the Collector System.
- Two Lane Paved: Should be used for major roadways connecting the activity centers within the Highway District. In the long term, all Major Collectors and Minor Collectors should be paved with at least two lanes.

Criteria 2: Traffic Safety

If a pattern of crashes or an unsafe design indicates a safety problem, priority should be given to that location or roadway.

Criteria 3: Daily Traffic Volume

The criteria in Table 4-1 should be used as a guideline for determining when traffic volumes may determine the need to upgrade a roadway.

**Table 4-1
 Roadway Upgrade Volume Criteria**

	Maximum Recommended Volume
Single Lane (2 Track) Unpaved	<50-100 ADT
Three-Track Unpaved	<100-250 ADT
Two Lane Gravel	<250-350 ADT
Two Lane Paved – Minor Road	<250-400 ADT
Two Lane Paved – Major Road (Used for Major Collectors)	5,200-8,000 ADT (Rolling) ¹
	3,000 –6,000ADT (Mountainous) ¹

1. Source: ITD Design Manual volumes rounded to nearest 100 ADT.

Criteria 4: Maintenance Cost:

Annual maintenance costs should be reviewed to determine if improvement of the roadway will result in less maintenance costs in the long term. Long-term analysis should be based on a five-year minimum.

Roadway Standards

Proposed roadway typical section standards for each stage of roadway improvements have been developed as part of this plan. These proposed standards attempt to accommodate the American Association of State Highway and Transportation Officials (AASHTO) recommended design methods for gravel roads, ITD standards based on functional classification, actual construction practices already utilized by SLHD personnel, and the proposed roadway improvement criteria as previously described. The proposed roadway typical section standards are:

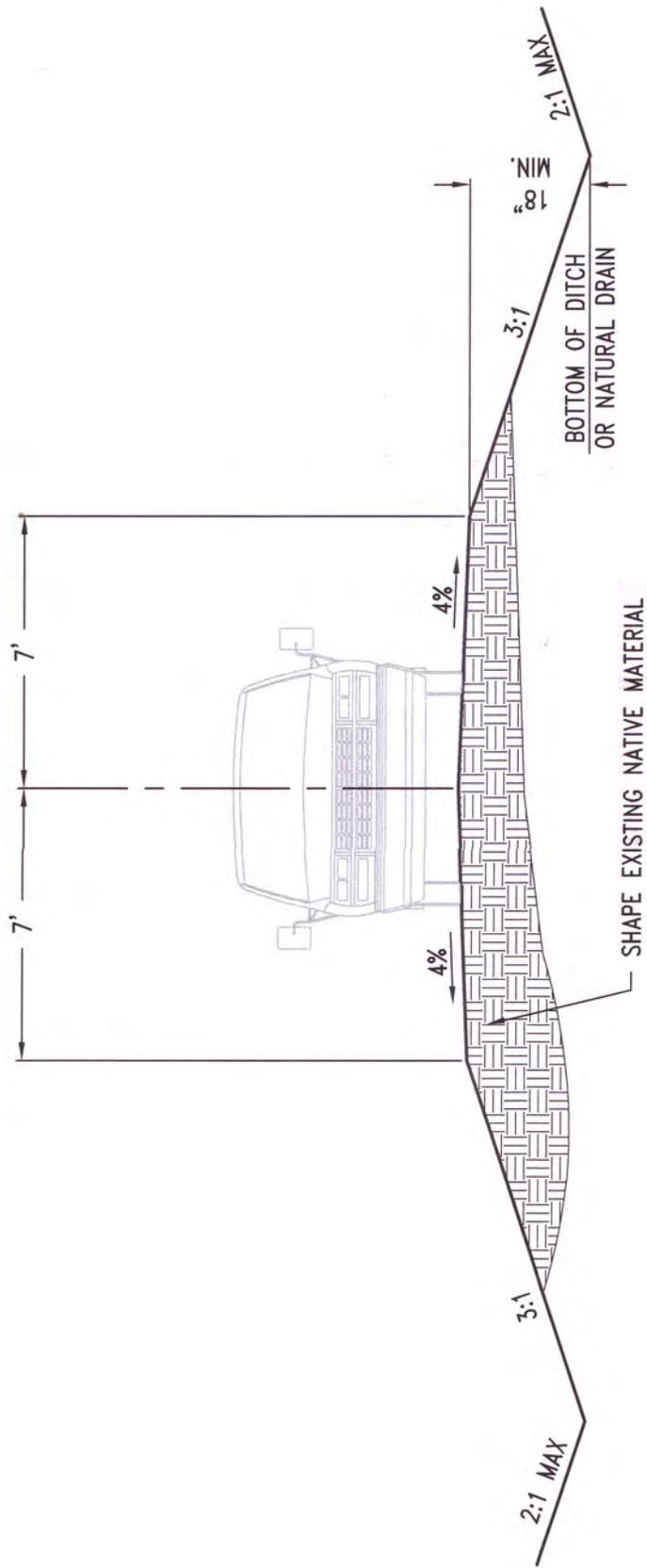
1. 14' Dirt Road Two Tracks (see Figure 4-2)
2. 14' Gravel Road Two Tracks (see Figure 4-3)
3. 20' Gravel Road Three Tracks (see Figure 4-4)
4. 28' Gravel Road Four Tracks (see Figure 4-5)
5. 28' Asphalt Paved Road (see Figure 4-6)
6. One Side Widening (see Figure 4-7)
7. Two Side Widening (see Figure 4-8)

The proposed typical sections attempt to allow for a feasible progression of a roadway from a dirt road to a paved road accommodating increasing capacity and service requirements of that roadway. That is, developing the road segment from one typical section to the next should be a logical step. In addition, the costs of improving a road segment to the next proposed typical section should be “recoverable” in the reduced maintenance benefit associated with the next typical section. These proposed typical sections also are based on functionality of a particular roadway segment.

Specifically, the two-track sections (dirt and gravel) are intended to provide for a comfortable travel way for one-vehicle, but also are wide enough to allow two-vehicles to pass each other at low speeds without having to maneuver off the travel-way. The three-track section essentially establishes a single-lane roadway with continuous pullouts along the segment. This section

provides the ability for two vehicles to pass each other at speed and will allow single-lane passage of vehicles past vehicles stopped on both sides of the roadway. The four-track sections are essentially the ultimate build-out for the SLHD. That is, these sections provide for two-lane traffic, even with a vehicle on the side of the roadway. The 28-ft. asphalt paved road section would apply to Minor Collectors and Major Collectors.

Such a progression, in reality, may not be feasible at least for particular segments of any roadway. For example, physical features such as creeks, large rock outcrops, steep side slopes, or existing utilities may make a progression step that involves widening very difficult. However, the implementation of the proposed improvement criteria, in conjunction with a clearly defined progression of improvements, will help the SLHD identify, plan for, and explain future roadway improvements.



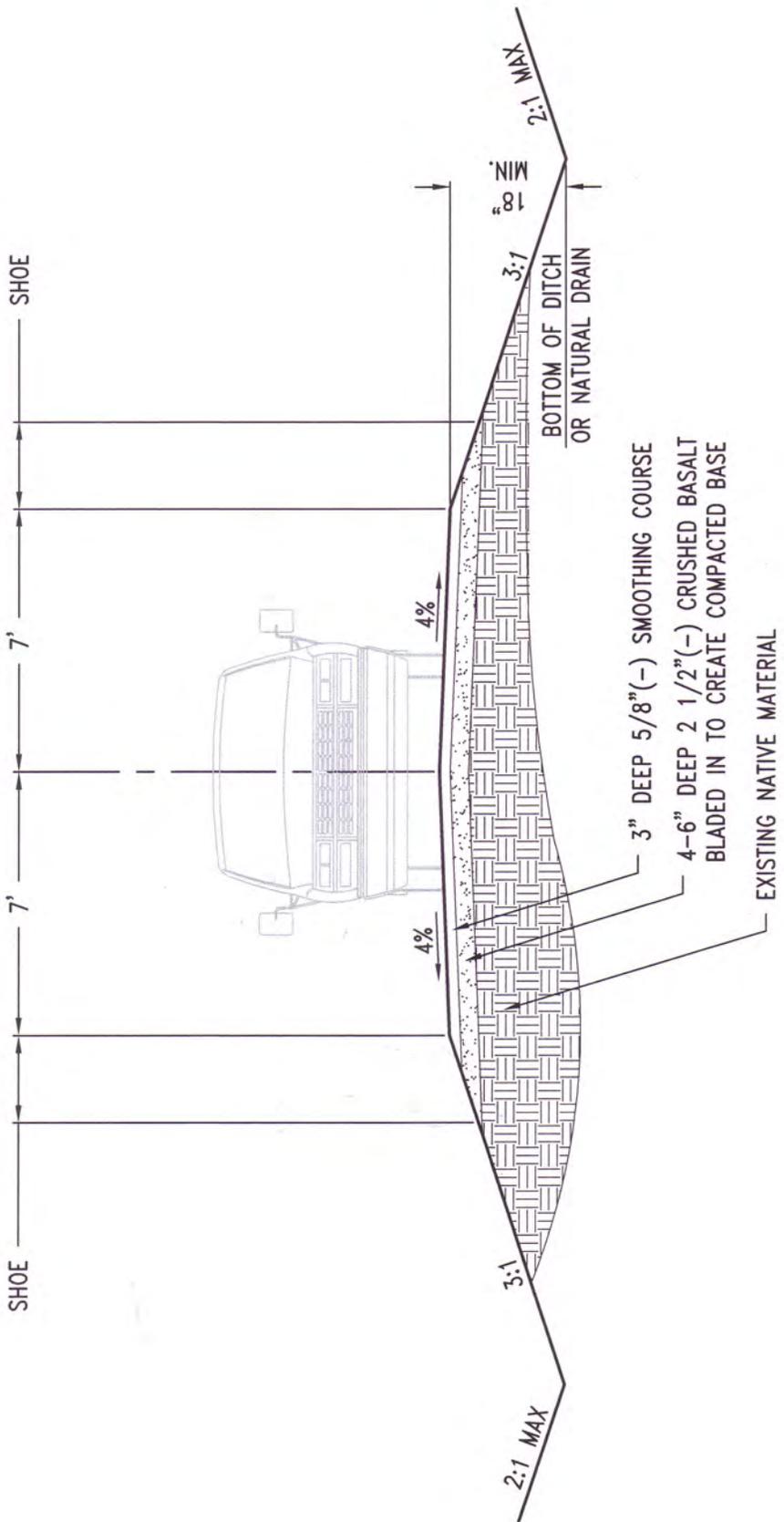
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FIGURE
4-2

14' DIRT ROAD -
2 TRACK

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan





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FIGURE
4-3

14' GRAVEL ROAD -
2 TRACK

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan

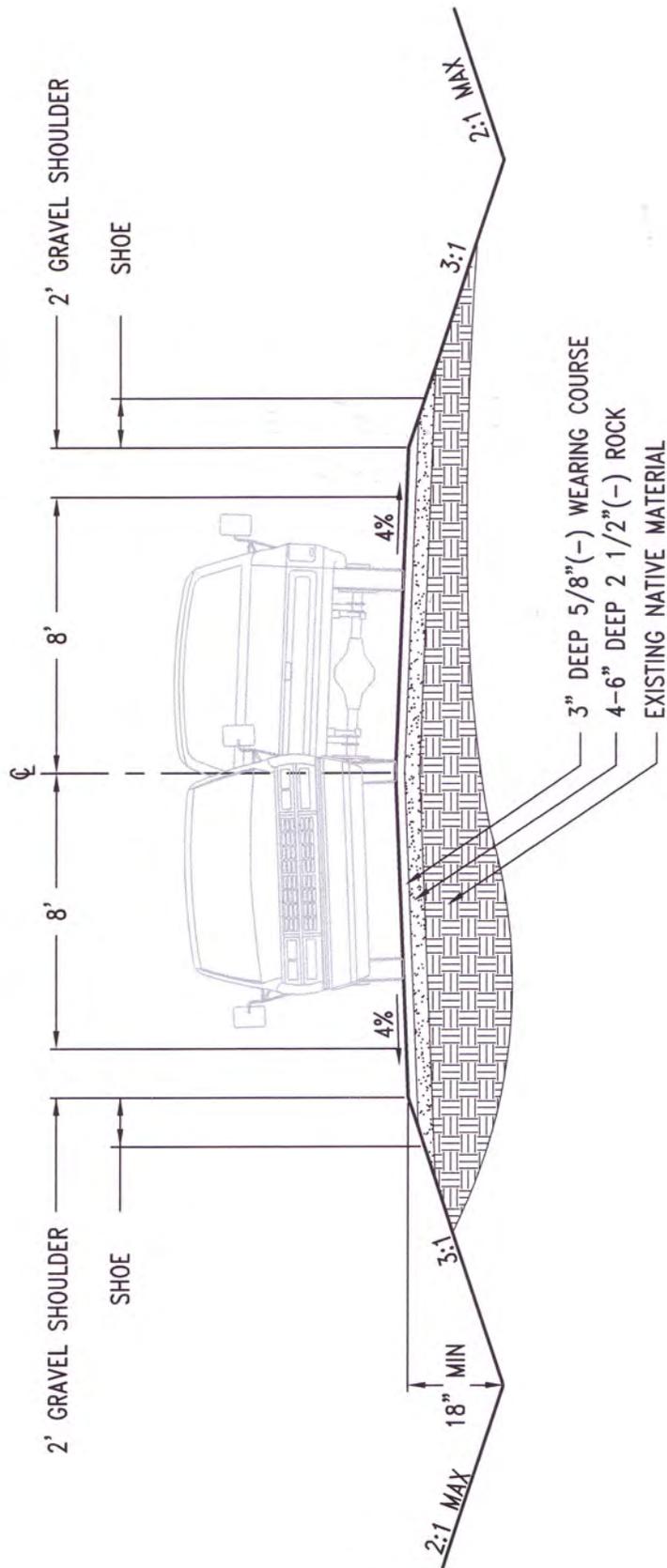
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FIGURE
4-4

20' GRAVEL ROAD -
3 TRACK

SOUTH LATAH HIGHWAY DISTRICT . Transportation Plan



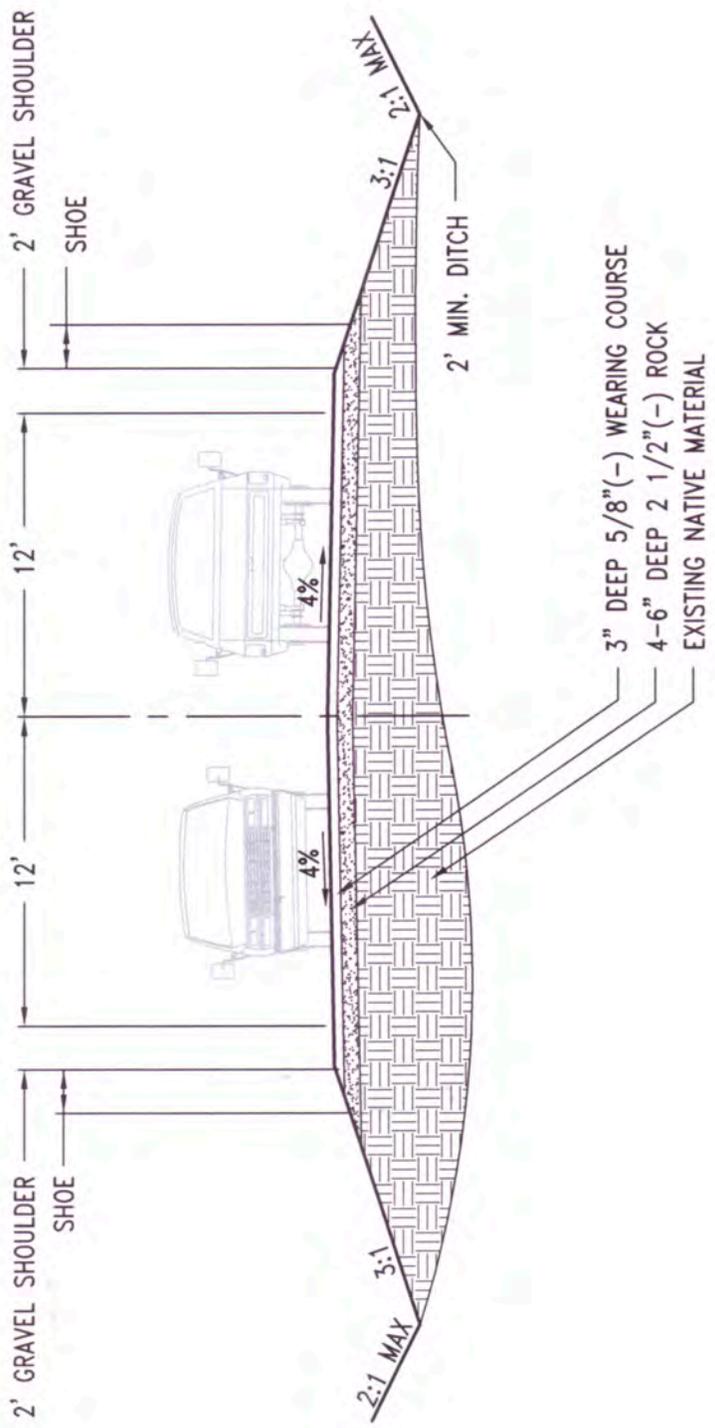
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FIGURE
4-5

28' GRAVEL ROAD -
4 TRACK

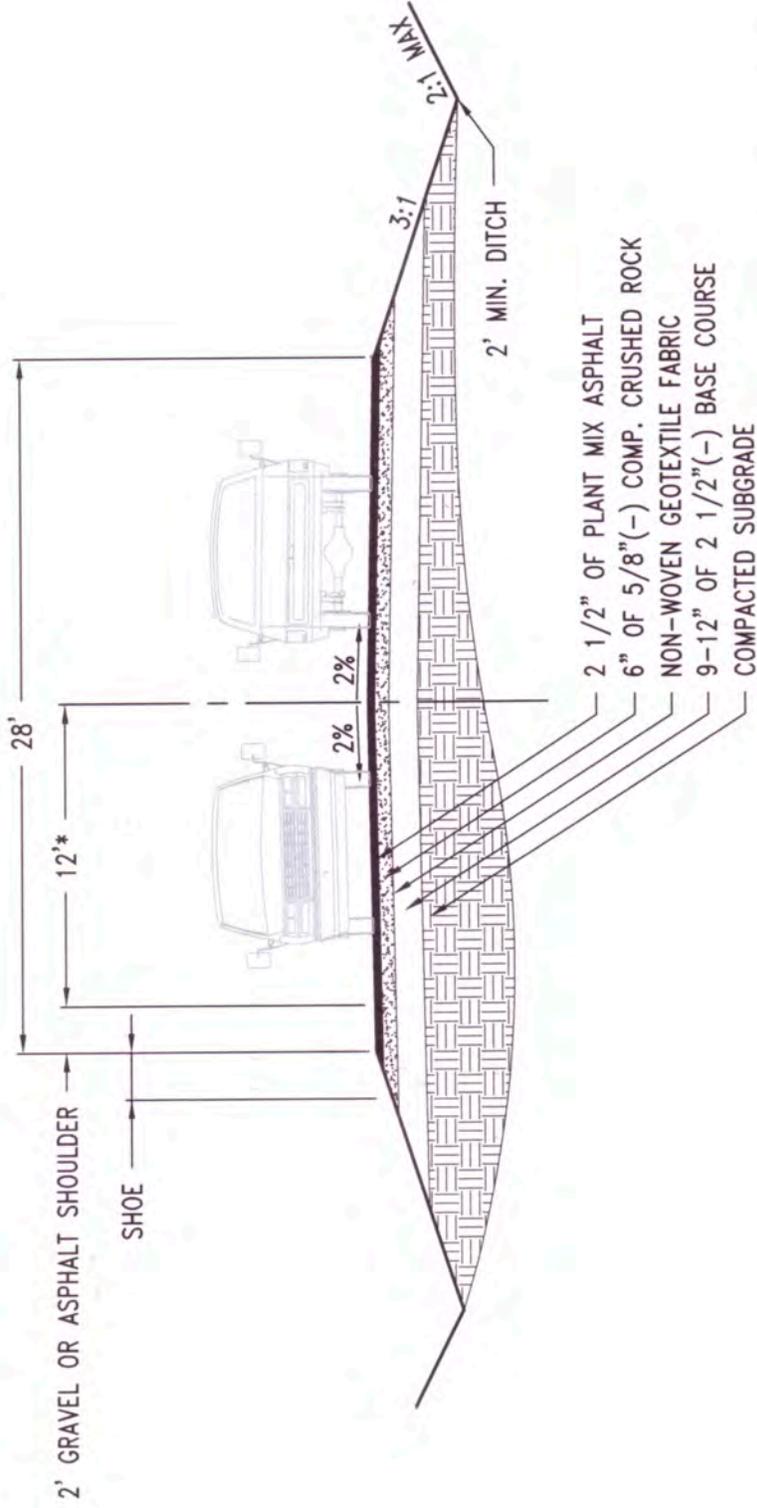
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* 10' MINIMUM ALLOWED IN DIFFICULT TERRAIN WHERE FULL WIDTH IS NOT FEASIBLE

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28' ASPHALT ROAD STANDARD

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan

FIGURE
4-6

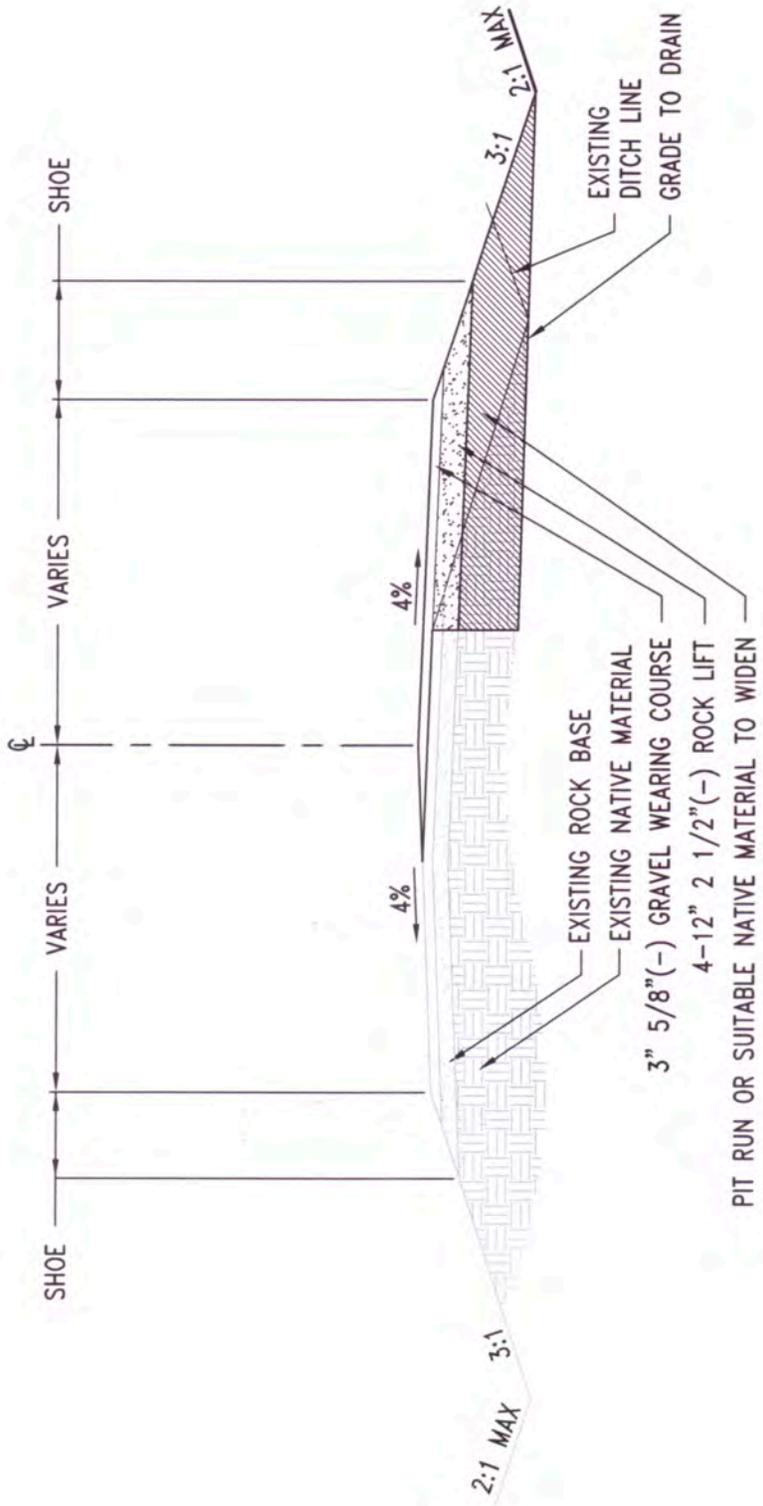
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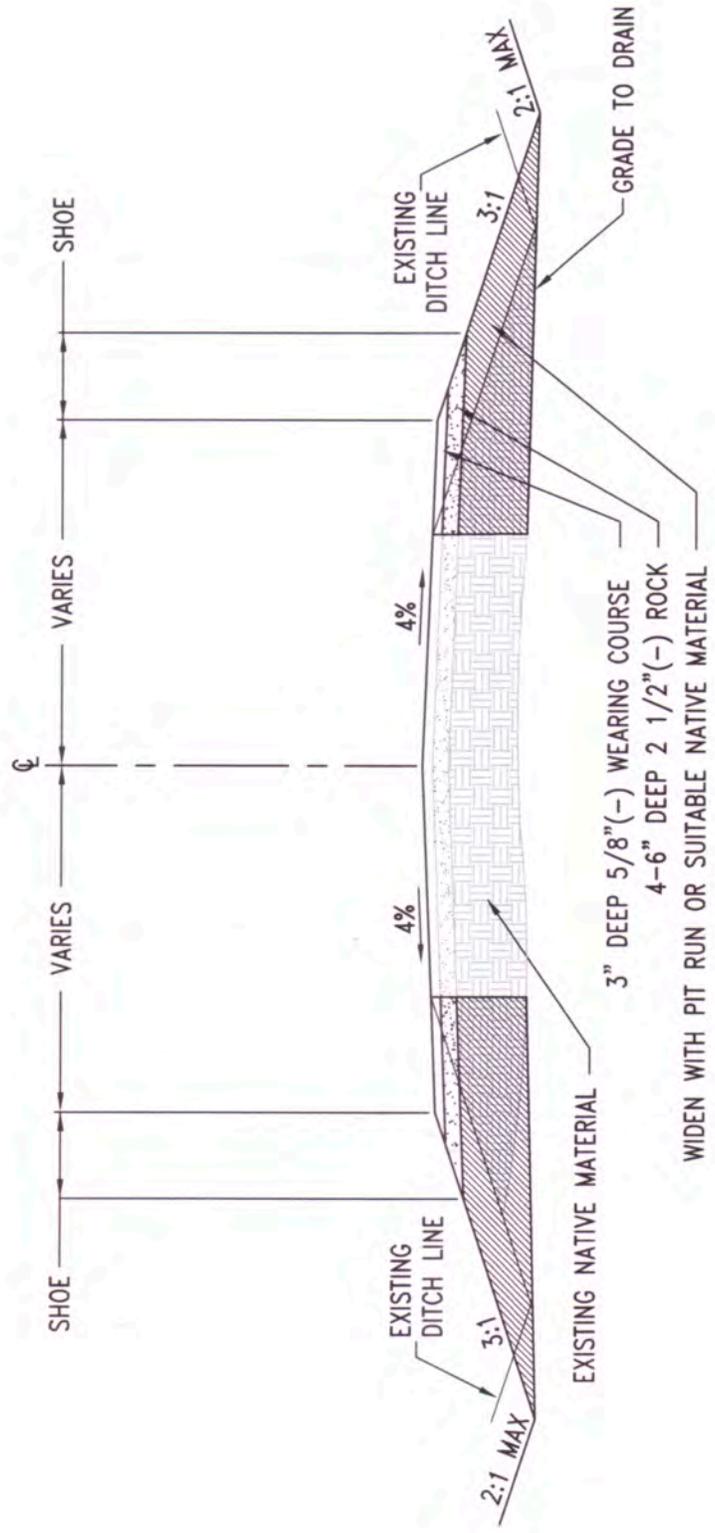
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FIGURE
4-7

ONE SIDE WIDENING

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan





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FIGURE
4-8

TWO SIDE WIDENING

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan



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Implementation Procedures

Implementation of the proposed road improvements procedures described previously requires the several actions of the SLHD Commissioners and Road Supervisor.

First, the Commissioners must accept both the improvement criteria and the roadway typical sections, or something similar, as standards for the SLHD.

Second, the Commissioners and Road Supervisor must evaluate the existing road segments of the SLHD in accordance with accepted improvement criteria. This evaluation will identify which typical section each roadway segment in the SLHD should meet. From this evaluation, the SLHD should be able to identify roadway segments that do not meet the typical section standard associated with that particular segment's classification.

Third, the SLHD needs to continue to be aware of public concerns. That is, the SLHD should implement some type of procedures to continue to gather public input on a regular basis (suggest at least every five years). For example, the SLHD should maintain periodic contact with Advisory Committee members and gather input on public concerns related to the District's activities.

Fourth, evaluate this information to determine appropriate SLHD activities for both the immediate fiscal year and longer-term improvements. For example, this evaluation should identify roadway segments that can be tabbed for improvement to the next step in the roadway improvement progression. The SLHD, as a result of the implementation of such evaluation and improvement procedures, should be able to communicate and justify maintenance and improvement plans with the patrons of the SLHD in an efficient manner, in addition to utilizing better methods of allocating SLHD resources.

MAINTENANCE PROCEDURES

Maintaining existing roadways is the SLHD's primary function. Discussion of maintenance procedures, both in-place or proposed, were prevalent in discussions regarding safety issues, capacity issues, public concerns, capital improvements, available funding, and historic SLHD expenditures, just to name a few. A detailed evaluation of existing SLHD maintenance procedures and equipment was not in the scope of this plan. However, a preliminary review of existing maintenance procedures was completed based on discussions with SLHD personnel, observations of existing roadway conditions, and public opinions.

This review found that the SLHD is already practicing good maintenance procedures and in general, satisfies its patrons. With that in mind, the intent of examining how to improve upon roadway maintenance became directed at some specific issues identified by SLHD personnel and on the general concept of extending the capabilities of SLHD roadways within the context of existing expenditures. The following is a summary of those issues.

Paved Roads

The SLHD's current paved road maintenance procedures, including patching and crack sealing existing pavement as early as weather permits in the spring of each year and then seal-coating on an approximate 5-year rotation, are excellent. Current expenditures allow for approximately 10,000 linear feet of crack sealing and approximately 10 miles of seal coating per year. Proposed improvements to these procedures may only revolve around trying to allow current expenditures, or the reallocation of current assets, not to limit the amount of repair and maintenance activities.

Dirt Roads

One maintenance issue identified of interest to SLHD personnel pertained to the minimum maintenance requirements associated with improved roads. More specifically, they wanted to assess their allocation of resources associated with maintenance of dirt roads. Improved roads by definition are simply roads that are "graded and drained." "Graded and drained" indicates only a general reference to a definitive cross-slope, drainage ditches, and cut or fill slopes beyond the ditches; Specific definitions of actual cross-slope grade, ditch construction, and cut or fill slope construction is left to what is acceptable to both the SLHD and its patrons. Arguments can be made for allocating minimal maintenance procedures on the dirt roads of SLHD. Physical roadway features of the dirt roads of SLHD lend credence to reducing maintenance activities on these roads; such as very low and seasonal traffic volumes, relatively mild horizontal and vertical alignments, and the soil types creating very unstable surfaces in wet conditions. One possible approach might be to clear and grade dirt roads only once a year, as close to identified heavy use of these roads, as possible. That is, most of these dirt roads serve farming activities that are at their peak in the spring as soon as these roads become accessible. SLHD might also consider minor clearing and grading of the dirt roads as early as possible, and then leaving these roads without maintenance for the rest of the year. The intention being that these roads may become more stable with grasses growing in the travel way, and the "minor clearing and grading" might consist of repair only to major damage in the roadway section and mowing grasses in the travel way. Clearly, well established roadway cross-slopes and ditch sections is imperative for such suggestions to be successful. The Highway District should also consider winter closures of these dirt roads, with or without the implementation of reduced

maintenance activities, if the roads are eligible for such closures. The Highway District will have to implement adequate public notice procedures to implement such closures.

As previously mentioned, acceptance of such revised dirt road maintenance procedures has to come from both SLHD personnel and the patrons of the SLHD utilizing these dirt roads.

Roadside Vegetation

Another maintenance item of interest to the SLHD personnel regarded vegetation encroaching onto the travel way and in the ditches of gravel roads. Specifically, the concern is centered on the loss of aggregate material associated with removing this vegetation from the roadway and the additional problems this vegetation can encourage; namely driver roadside intimidation and dust. Driver roadside intimidation has a compounding affect on several issues including safety, traffic capacity, aggregate loss, and maintenance procedures requirements. Dust, as discussed specifically in Section 2, is one of the single most important issues to address from both the SLHD's perspective (i.e. material costs and safety) and the public opinion (i.e. safety and comfort). Obviously, eliminating roadside vegetation is probably not possible, not completely desirable (i.e. non-restricting vegetation in ditches is valuable to the environment as a treatment for roadway runoff), and certainly not economically feasible. However, particular attention to certain maintenance procedures on the gravel road will help to minimize the detrimental affects of roadside vegetation. Namely, providing a roadway cross-section with good ditches that does not discourage motorists from utilizing the full width of the roadway serves to minimize the growth of roadside vegetation. The SLHD may consider using a sterilant along the roadside edges as an additional measure in minimizing roadside vegetation. Also, SLHD personnel may want to consider picking up what vegetation is brought back onto the road during grading activities, instead of leaving this material on the travel way, to discourage the chance for additional dust production. Areas where a large amounts of vegetation are brought back onto the travel way may warrant the use of discs, or other "agitating" type devices, to remove the vegetation from roadway aggregate.

Gravel Roads

Everything the SLHD does in regards to maintaining existing gravel roads should focus on reducing the effort needed to keep the gravel roads in good shape for a long as possible. That is, the more times SLHD personnel have to perform maintenance activities on any particular segment of gravel road, the more costs are associated with the maintenance of that gravel road. In turn, this translates directly to fewer resources, including personnel, equipment and monies, available for maintenance of other SLHD facilities. Certain practices, if completed properly, have been proven to increase the amount of time required between necessary maintenance. Such practices include cross slope grading, the specific moisture content of roadway material when grading, proper compaction when grading, application of dust suppressants/base stabilizers, and aggregate specifications. SLHD personnel should consider these practices for inclusion in their regular maintenance activities. These practices are discussed in more detail below.

Cross-Slope Grading

Cross-slope on gravel roads is essential for drainage of surface water. Cross-slopes between 3% and 6% are desirable, with 4% probably preferred, based on acceptable drainage, driver comfort, and the desire to maintain four-track gravel roadways. Too flat of a cross-slope may

not promote proper shedding of surface water and does not discourage drivers from driving towards the middle of the roadway. A cross-slope close to 4% provides adequate shedding of surface water and discourages drivers from driving their vehicles near the change of cross-slope (an 8% grade break) in the middle of the roadway.

In general, good cross-slopes were observed on SLHD roads. However, varying cross-slopes were observed, and some “parabolic” cross-sections were also observed. “Parabolic” sections indicate overuse of the middle of the roadway creating a nearly flat cross-slope for a significant portion of the roadway section in the middle of the road. If not already in use, SLHD personnel should consider using slope indicators in their grading equipment to ensure cross-slopes as close to 4% as possible are achieved during grading activities.

Moisture Content during Blading

Moisture content is probably the most critical variable associated with grading procedures on gravel roads. Current SLHD grading practices provide evidence of the importance of moisture content not necessarily by policy or standards, but by the history of actual grading procedures. That is, when and how grading activities occur in the SLHD is almost solely dependent on moisture content. Right now, that moisture content is determined by the weather.

Current SLHD grading practices depend on waiting for the right conditions (i.e. moisture content) of the roadways to proceed with grading activities. These practices go so far as to realize poor roadway surfaces exist at times on existing gravel roads, but maintenance procedures wait until either the roadways “dry out,” or rainfall occurs, to bring the roadway moisture up to “workable” conditions.

A key fact to recognize is grading activities provide for the best overall roadway surface when the moisture content of the road surface aggregate mix is at, or near, optimum moisture content. Optimum moisture content will vary from mix to mix and should be determined for the actual material on the ground. Therefore, a consistent road surface aggregate mix, associated with a near constant optimum moisture content, is important to establish – and is discussed in more detail in the next subsection of this gravel road section. Also, SLHD should consider implementing the use of a water truck to enhance both their ability to grade roads as necessary and their grading procedures. The proper use of dust control/stabilization treatments, also a suggested maintenance procedure addition for the SLHD and discussed in a following subsection, is very dependent on roadway surface material near optimum moisture content, and provides additional consideration for the use of a water truck.

Aggregate Specifications for Gravel Roads

For gravel roads, the importance of proper aggregate gradation ensuring good compaction and “binding” (apparent cohesion) of aggregate material is easily overlooked in the overall picture of roadway maintenance. That is to say, all “rock” is not the same. A uniformly graded aggregate mix without adequate fines (that material passing the No. 200 sieve) doesn’t ‘lie down’ (relative compaction, or settling, associated with minimally compacted gravel roads) well after blading. The pebbles become loose and vehicles throw them off the road accelerating aggregate loss and subsequent rutting and/or corrugations, in addition to vehicle damage attributed to these flying pebbles. On the other hand, an aggregate mix with too many fines can get slick and muddy in wet conditions and increase the likelihood of dust problems in dry conditions.

In general, observed roadway conditions (i.e. minimal corrugation and dust, and aggregate inspection) indicate the SLHD has an adequate gradation associated with its surface aggregate.

And indeed, specifications are given to contract rock crushers that provide a satisfactory aggregate mix. One practice SLHD should consider implementing is testing actual placed roadway aggregate gradation. Existing soil conditions and handling of roadway aggregate may result in gradations much different than the specifications provided rock crushers. For guidance, a good surface aggregate should have 12-15% fines with at least 75% fractured faces for the entire gradation. The table below outlines a recommended aggregate gradation for gravel roads in SLHD.

Table 4-2

Aggregate Specifications for Gravel Roads

<u>Sieve:</u>	<u>Percent Passing:</u>
1"	95-100
¾"	80-90
½"	64-85
No. 4	42-70
No. 8	37-65
No. 40	13-35
No. 200	12-15
Plasticity Index	4-15

Compaction

One aspect of gravel road construction often overlooked is proper compaction. A combination of proper aggregate gradation, moisture content, and compaction equally contribute to the construction and maintenance of a good gravel road surface. Proper compaction helps to bind fines at the top of the roadway creating a tighter and smoother surface. In addition, this compaction also helps to embed larger aggregate preventing aggregate "fly out" and thereby resulting in a more stable roadway surface and minimizing aggregate loss.

Compaction should be completed in conjunction with proper blading procedures. The most effective compaction comes from the use of a vibratory roller. However, the use of vibratory roller obviously requires additional personnel hours and equipment hours on the roadway. Another effective means of compaction is the use of grader-mounted rollers. Grader-mounted rollers are an efficient means of combining placing fresh aggregate, blading, and compaction procedures when vibratory rollers and/or extra personnel are not available.

Gravel Road Dust Control/Base Stabilization

All gravel roads will produce dust. This study found that dust alone is one primary concern of the SLHD and its patrons. How much dust is produced from any given road varies greatly based largely on the quality and gradation of the roadway aggregate mix and the amount of moisture available. The semi-arid/arid climate of the SLHD sees prolonged periods of dry weather and that equates to dust. Another aspect of dust sometimes overlooked is how much aggregate material is lost due to dust. A typical gravel road in a semi-arid region such the SLHD will lose up to two and one-half (2-½) tons of gravel for each vehicle traveled on the road

each day (ADT) per mile per year. That is, one mile of gravel road with an ADT of 200 vehicles loses \$5,000 of aggregate per year (assuming a placed aggregate cost of \$10 per ton). Obviously, something that reduces dust addresses two very important aspects of gravel road maintenance: 1) the nuisance of dust to motorists, homeowners adjacent to the road, air quality, and 2) the cost of lost aggregate on roadway. That “something” is a dust suppressant/base stabilizer.

The same roads that lose 2-½ tons of gravel per vehicle per mile per year without dust suppressant treatment lose only about one ton of gravel over the same period, or \$2,000 of aggregate per year on that same 200 ADT with dust suppressant – a savings of \$3,000. In addition, current use of dust suppressants, on the average, shows an increase in the time between maintenance required to be around seven times that required without dust suppressants. That is, if a road required maintenance once every two weeks without the use of a dust suppressant, this same road is likely to only require maintenance once every 14 weeks with the use of a dust suppressant. Current costs of applying the dust suppressant magnesium chloride in the SLHD area are around \$70 per ton of suppressant. This equates to approximately \$3,100 per mile of road on a four-track gravel road. These numbers essentially illustrate that on any SLHD gravel road with an ADT of over 200 vehicles, material costs associated with the use of a suppressant (aggregate plus MgCl) will remain the same as those materials costs without the use of a suppressant (aggregate alone). However, the use of the suppressant will reduce the costs of the personnel and equipment associated with maintaining this mile of road by one-seventh (1/7).

Virtually all methods of dust control utilizing suppressants require periodic treatment. And, the cost of such treatments can be cost prohibitive on roads where traffic volume is low. On the other hand, on roads where traffic volumes are higher, the cost of dust control can more than pay for itself in the benefit of reduced material loss alone, not to mention the reduced need for maintenance activities. Obviously, the reduced cost of maintenance activities and/or the reduced cost of replenishing lost aggregate suggest the use of a dust suppressant/base stabilizer by the SLHD, especially on high traffic volume roads, is desirable.

REGULATORY AGENCY REQUIREMENTS

In June of 1999, the Governmental Accounting Standards Board (GASB) issued Statement No. 34 (GASB 34), *Basic Financial Statements – and Management’s discussion and Analysis – for State and Local Governments*, and changed the financial reporting requirements for agencies such as SLHD, significantly. Specifically, as of June 15, 2003, small-sized governments (less than \$10 million in total annual revenues) must provide prospective reporting for all major general infrastructure assets built or improved during the fiscal year and report on these assets in subsequent years using accounting methods outlined by GASB. Such reporting may take significant efforts by agencies such as SLHD to define appropriate policies, develop consistent methodologies, implement asset management systems, and complete appropriate documentation to comply with these federal requirements. SLHD has taken a big step towards this compliance with GASB 34 by initiating the development of this transportation plan.

First, one of the key components to any Asset Management System as outlined by GASB 34 is an on-going inventory of existing assets ideally linked by a Geographic Information System (GIS). SLHD, as part of the roadway inventory completed as part of this plan, implemented the use of a hand-held computer with GIS and GPS capabilities specifically set up to aid in inventorying SLHD assets. In addition, SLHD personnel now use this hand-held device to maintain an up-to-date inventory and condition reports of SLHD assets such as roadways, culverts, bridges, and signs.

Second, this hand-held computer also works in conjunction with a road surface management system. Roadway surface conditions, specific to roadway segments within the SLHD and located with GPS sub-meter technology, can now be maintained and updated as they are identified. In turn, this information can be downloaded directly to the newly developed Total Asset Management System software (TAMS). This software, developed with the assistance of LHTAC and the Idaho T2 Center, utilizes the information to analyze existing roadway surface conditions and estimate the remaining service life of each roadway segment.

Implementing the use of the database initiated in this inventory process, the on-going inventory of SLHD assets utilizing the GIS and GPS technology now at hand, and the TAMS software, sets SLHD well on its way to not only complying with GASB 34 requirements, but streamlines their effort to forecast needs and the allocation of SLHD resources.

SLHD officers now have the responsibility to enact procedures in routine accounting and maintenance practices that take advantage of and enhance the information provided as part of this transportation plan. These on-going accounting and maintenance procedures are the core of the GASB 34 requirements.

Section 5

Transportation Plan

Transportation Plan

INTRODUCTION

This section presents a summary of recommended transportation improvements for mitigating existing and projected future transportation system deficiencies. Based on the evaluation of the projects in Section 4 the projects were broken into near-term, mid-term, and long-term projects. Near-term projects are generally those projects that are either existing safety deficiencies or will be needed in the near term to maintain acceptable operations of the transportation system. Mid-term projects are generally projects that are either needed in the near-term but not critical to the safety or operation of the transportation system or projects that will be needed in the next 10 years. Long-term projects are generally those that are either very costly and therefore must be funded over many years, or those projects that are needed 10 years to 20 years in the future Table 6-1.

ROADWAY IMPROVEMENT PROGRAM

The required transportation improvements in the SLHD over the next 20 years, to meet both short- and long-term needs, are listed below in Table 5-1. The project locations are shown in Figure 5-1. The projects have been divided into three time periods; 0 to 5 years, 5 to 10 years, and 10 to 20 years.

**TABLE 5-1
 ROADWAY IMPROVEMENTS**

Priority Number	Improvement Description	Estimated Cost*
Near Term High Priority Projects (0 - 5 Years)		
1	Cedar Ridge Rd./Texas Ridge Rd. Intersection: Improve sight distance	\$20,000
2	Genesee-Juliaetta Rd./Lenville Rd. Intersection: Improve sight distance and pave within 300 feet of intersection	\$120,000
3	Replace Non-Reflective Signage: Comply with retro-reflectivity requirements and provide additional signage where needed. Include new "T" intersection warning signs at Genesee-Juliaetta Rd/Gray Eagle Rd. and "curve ahead" signs one mile east of Genesee-Juliaetta Rd./Gray Eagle Rd. intersection.	\$60,000
4	Lenville Rd.: Pave from end of pavement south of Campbell Loop Rd. to Magee Rd.	\$500,000
5	Genesee-Juliaetta Rd. south of Lenville Rd. intersection: Widen roadway to standard and pave	\$1.6 million
6	Implement road stabilization and dust control on key roadways adapt existing dump truck for magnesium chloride distribution and obtain storage tank.	\$20,000
7	Inspect bridges less than 20 feet long	\$20,000
8	Upper Lenville Rd. bridge: widen	\$50,000

Priority Number	Improvement Description	Estimated Cost*
Mid-Term Projects (5 - 10 Years)		
9	Uniontown Rd.: Pave to state line	\$750,000
10	Genesee-Juliaetta Road/Jain Road: modify intersection to improve sight distance	\$120,000
11	Lenville Rd.: Widen narrow portions to standard	\$15,000
12	Old Highway 95: Improve curve safety north of Genesee	\$25,000
Long-term Projects (10 to 20 Years)		
13	Lenville Rd., Harmon Bridge: Widen	Not estimated
14	Lenville Rd.: Pave	\$1.1 million
15	Genesee-Troy Rd.: Pave	\$940,000
16	Old Highway 95: Widen to meet standards	Not estimated
17	Little Bear Ridge Rd.: Widen bridge	Not estimated
18	Jenkins Rd.: Upgrade to gravel	\$25,000
19	Stout Rd.: Upgrade to gravel	\$70,000
20	Giljie Rd.: Upgrade to gravel	\$72,500
Beyond 20 Years		
21	Cedar Ridge Rd.: widen to standard	\$6.9 million
22	Central Grade Rd.: pave	\$1.5 million
23	Sprenger Rd. Bridge: widen	Not estimated

*Estimated costs are in 2003 dollars and do not include right-of-way acquisition

PEDESTRIAN AND BICYCLE SYSTEM PLAN

The recommended pedestrian and bicycle improvements are shown in Table 5-2. The improvements listed in Table 5-2 are specifically for pedestrians and bicycles. Other improvements such as the widening and paving of Genesee-Juliaetta Road and Lenville Road will also benefit bicycles since these improvements will provide safe routes and paved shoulders for use by bicycles.

PUBLIC TRANSPORTATION SYSTEM PLAN

Transit service provides mobility to community residents who do not have access to automobiles and provides an alternative to driving for those who do. Transit is not a function of the SLHD, but transit is important to meet the needs of travelers within the SLHD and those making trips outside of the community. In the near term, a Dial-a-Ride form of transit should be considered. In the long-term commuter transit service between Genesee and Moscow, and Genesee and

Lewiston should be considered. Although no specific public transit projects have been identified that the Highway District should pursue, the District should encourage public transit in the District whenever the opportunity presents itself. Some methods may be supporting grant applications made by other agencies for public transit, and cooperating with other agencies should improvements in the right-of-way be sought for facilities such as bus loading zones and park-and-ride lots. PCEI has also expressed the desire to advertise their upcoming carpool website by placing signs in the local road right-of-ways.

**TABLE 5-2
 PEDESTRIAN AND BICYCLE SYSTEM IMPROVEMENTS**

General Alignment	Project Start/End Point	Improvement Description	Estimated Cost*	Responsible Jurisdiction
Near-Term, High Priority Projects (0-5 years)				
	No pedestrian/bicycle projects assigned a high priority			
Mid-Term Projects (5 - 10 years)				
	No pedestrian/bicycle projects assigned a medium priority			
Long-Term Projects (10 - 20 years)				
Little Bear Ridge Rd.	1.2 miles between Highway 3 and bridge	Multi-use path	Not estimated	Latah Co. Parks and Recreation
Beyond 20 years				
Little Bear Ridge canyon	Kendrick, Idaho to Troy, Idaho	Acquire abandoned railroad right-of-way	Not estimated	Latah Co. Parks and Recreation

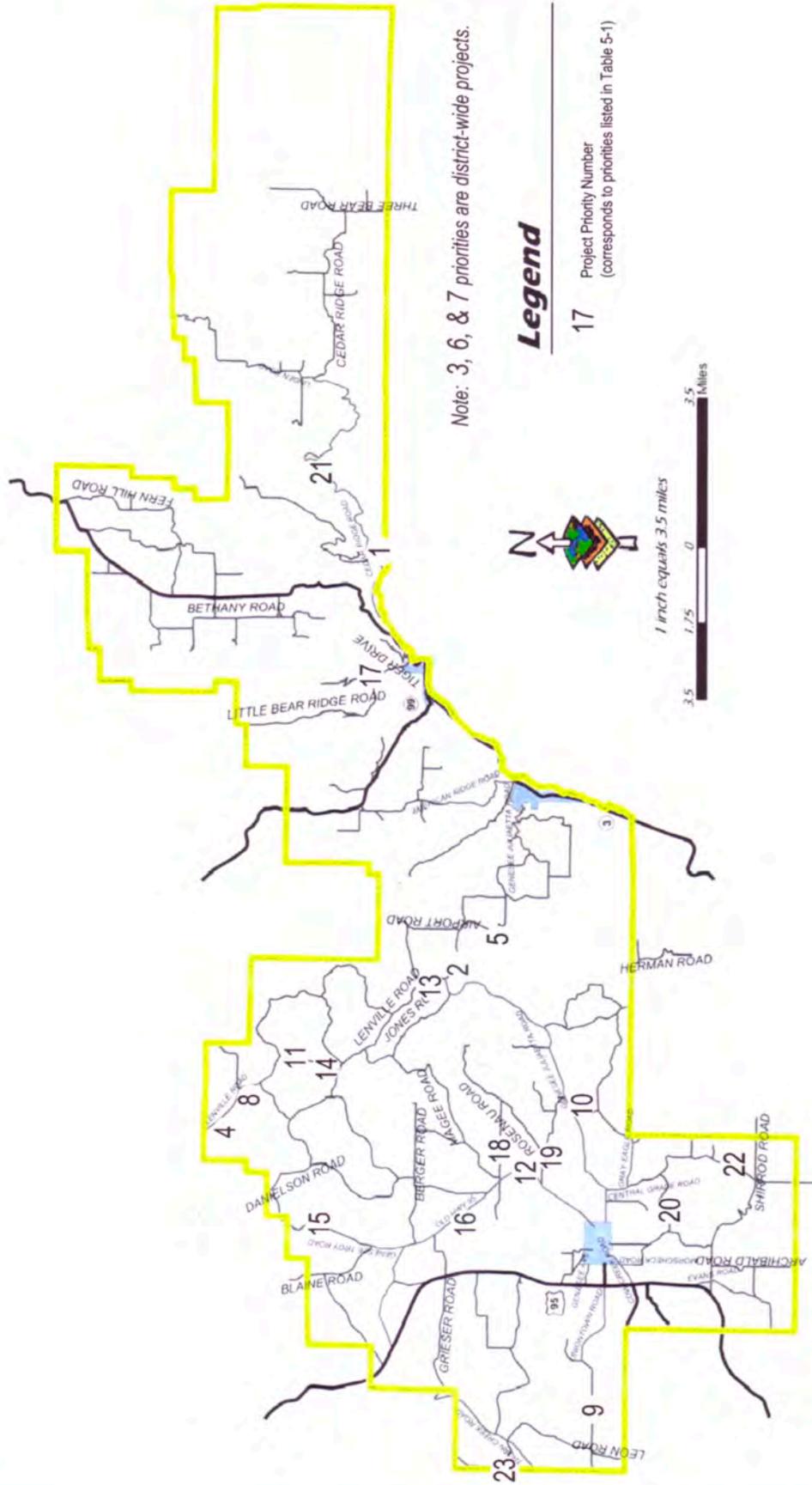
IMPLEMENTATION PLAN

This section has outlined specific transportation system improvements as well as a corresponding timeline for implementation of the identified improvements. The sequencing plan presented is not detailed to the point of a schedule identifying specific years when infrastructure should be constructed, but rather ranks projects to be developed over 0 to 5 year, 5 to 10 year, and 10 to 20 year horizon periods. In this manner, the implementation of identified system improvements has been staged to spread investment in this infrastructure over the 20-year life of the plan.

The construction of roads, water, sewer, and electrical facilities in conjunction with local development activity should be coordinated if the SLHD and the Cities of Genesee, Juliaetta, and Kendrick are to develop in an orderly and efficient way. The transportation plan should be considered in light of developing infrastructure-sequencing plans.

SUMMARY

The adoption and implementation of this Transportation System Plan will enable the SLHD to rectify existing transportation system deficiencies while facilitating growth in the study area population and employment levels assumed in this study.



Note: 3, 6, & 7 priorities are district-wide projects.

Legend

17 Project Priority Number
(corresponds to priorities listed in Table 5-1)

**Roadway Improvement
Projects**

SOUTH LATAH HIGHWAY DISTRICT · Transportation Plan

FIGURE
5-1

Hodge & Associates, Inc.
Engineers • Planners • Landscape Architects



KITTELSON & ASSOCIATES, INC.



Geographic Mapping Consultants, Inc.

Section 6

Funding and Capital Improvement Plan

Funding and Capital Improvement Plan

INTRODUCTION

The State of Idaho requires that the SLHD Transportation Plan include a transportation financing program. These programs are to include:

- A list of planned transportation facilities and major improvements
- A general estimate of the timing for planned transportation facilities and major improvements
- Determination of rough cost estimates for the transportation facilities and major investments identified in the transportation plan (intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plans and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms)
- A discussion of existing and potential financing sources to fund the development of each transportation facility and major improvement (which can be described in terms of general guidelines or local policies)

Section 5 of this plan identified the recommended improvement projects, an implementation timeline, and estimated improvement costs. This section provides an overview of the SLHD's historic funding levels and available funding sources at the federal, state, county, and local level.

FUNDING HISTORY

The Highway District currently operates primarily as a maintenance organization funded by traditional revenue sources of property taxes, motor users funds, from electrical cooperatives and forest service funds. The consultant reviewed SLHD's annual budget for the last three years and found the average annual budget for the last three years was \$1,150,000. Very little of this money has been used for capital improvements. In the past, funding for capital projects was made available primarily through the Exchange Program (approximately \$32,000 per year) or rarely through federal funds obtained by approval of competitive project applications. The Highway District has been able to construct minor capital improvement projects (up to \$65,000) with money from the traditional revenue sources. Historically, significant improvement projects have been constructed only when funds were secured through sources other than the traditional revenue sources. The Exchange Program used to be a constant reliable source of funding for rural local jurisdictions that was in addition to traditional revenue sources. The Exchange Program was eliminated by the Idaho Transportation Board in FY 2004.

Prior to FY 2004, the Highway District received approximately \$32,000 per year in Exchange Program funds. Federal-aid funds in the amount of \$84,000 were received in Fiscal Year (FY) 2003 for developing this Transportation Plan. Only a small percentage of the annual budget has been used for capital projects during the three years ranging from 2.5% to 6%. Typically, the Exchange Program funds allowed the District to pay for capital improvements and amounted to

approximately 2.5% of the budget. FY 2003 was an exception when 6% of the total budget was allocated to the Transportation Planning project.

Starting in FY 2004 the Exchange Program funds were no longer distributed and instead were replaced with a new program referred to as the Local Rural Highway Investment Program (LRHIP). Exchange funds are pooled and award of funding is based on competitive applications. Funding through LRHIP is not guaranteed because competition for project funds is great; for example, last year LHTAC received requests totaling about 16 million dollars for an available pool of two million dollars. Without having Exchange Program funds in the annual budget for the first time in FY 2004, the Highway District anticipates that approximately \$65,000 will be available for capital projects out of the traditional revenue sources.

POTENTIAL TRANSPORTATION FUNDING SOURCES

Detailed information and recommendations for funding maintenance and capital projects can be found in "Manual on Local Highway Jurisdictions Funding", first edition by the Local Highway Technical Assistance Council (LHTAC). The publication suggests that the most appropriate sources for funding maintenance and rehabilitation activities should be on-going revenues (highway user revenues and property tax). It is recommended that capital improvement projects be funded through local option registration fees, bonding or federal-aid funding. LHTAC is currently investigating implementation of local option registration fees as a tool to obtain badly needed capital funding for local jurisdictions. The local option registration fee requires voter approval. This is an idea that may gain support in the near future with LHTAC providing guidance to statewide rural jurisdictions. The local option registration fee is not considered in this funding plan because the implementation is uncertain. It may be an option to consider in future Capital Improvement Plan updates.

LHTAC recommends that a portion of on-going revenues be retained to form a capital reserve fund. The capital reserve fund would be used to provide matching funds for federal-aid projects and to implement smaller capital projects. A review of the District's annual budget indicates that a minimum of one percent (\$10,000) should be set aside annually to fund matches for federal-aid projects and small-scale capital projects (projects with total costs less than \$100,000). Based on the FY 2004 budget the maximum amount the Highway District can afford to set aside on an annual basis would be approximately six percent (\$65,000). This funding plan conservatively assumes three percent per year (\$35,000) will be dedicated to the capital reserve fund.

This funding plan addresses capital projects identified in the Transportation Plan. This report has not determined whether the annual budget available through traditional revenue sources is adequate to maintain the existing system. The funding level needed to maintain the system can be calculated once an inventory of assets has been conducted, the conditions have been analyzed and a valuation of the entire system has been applied. A test of the South Latah Highway Districts current annual maintenance budget compared to calculated costs for maintaining the system is beyond the scope of this project, however, the Asset Management System developed as part of this project accomplishes the majority of the first two steps needed to make the assessment. This assessment would determine whether current funding levels are

adequate to maintain the system. If not, then methods to secure additional reliable annual revenue should be explored. For the purpose of this summary, it is assumed the current level of revenue adequately supports system preservation. If this assumption proves to be correct, then perhaps reduced maintenance costs can be realized through the implementation of new road stabilization methods described in Section 4 of this report. The savings could be added to those being reserved for capital projects. This funding plan assumes current funds are sufficient to maintain the system.

This section focuses on identifying potential funding sources for the projects identified in the Transportation Plan. The Capital Improvement Plan (CIP) identifies specific funding sources for projects. The Highway District prefers to fund significant capital projects with funds other than traditional revenue so as not to degrade the level of maintenance applied to the system. Federal-aid and Local Rural Highway Investment Program funds are the preferred way to fund these proposed capital projects. There are several Non-highway User Revenue funding sources that the Highway District should consider for funding larger priced Capital projects in the future; bonding, increased property tax and local option vehicle registration fees. These are discussed in more detail in the Non-highway User Revenue subsection below.

South Latah Highway District is eligible for the Local Rural Highway Investment Program (non-federal aid) and Local Federal-aid Incentive Program (funded with STP Rural Funds). The Local Rural Highway Investment Program (LRHIP) is a large pool of funds (approximately two million dollars annually) and has fewer requirements for qualification and compliance. Local Federal-aid Incentive Program (LFAIP) funds are only available for roads with a functional classification of Rural Minor Collector or higher and projects must comply with federal standards. There are a few other Federal funding sources available; enhancements, congestion mitigation and air quality improvement, and bridge replacement or rehabilitation. Other funding sources are outlined in LHTAC's "Manual on Local Highway Jurisdictions Funding", but were not applicable to South Latah Highway District proposed projects and therefore are not discussed in this report.

LOCAL RURAL HIGHWAY INVESTMENT PROGRAM

Local Rural Highway Investment funds are the old Exchange Program funds that are now competitively awarded. There is a cap of \$100,000 for project requests and no matching funds are required. Once again, it must be stated that these funds are not guaranteed and applications are very competitive. It may be difficult to secure these funds no matter how well a project application is put together.

These funds can be used for construction, reconstruction, planning and matching funds for federal-aid projects. LRHIP projects are evaluated and administered by LHTAC. State code requires the use of private contractors for roadwork and supplies for projects over \$25,000.

Project applications traditionally are mailed out in September and due in November of each year. Contact: Joe Haynes, Local Highway Administrator, LHTAC, 3330 Grace St., Boise, Idaho 83703 Telephone (800) 259-6841.

LOCAL FEDERAL-AID INCENTIVE PROGRAM

Approximately \$5.5 million is available annually for projects on rural federal routes from the Local Federal-aid Incentive Program. These funds can be used for new construction, reconstruction or rehabilitation of roadways classified with Federal Highway Administration (FHWA) as Minor Collector or higher. These funds can also be used for transportation planning, corridor studies, and purchase of minimally corrosive anti-icing material for use on bridges. A per project cap of \$2.8 million (does not include matching funds) has been set and it is recommended by LHTAC representatives that federal-aid funds be requested for projects with estimated costs over \$250,000 (with the exception of transportation planning projects). These funds are distributed through a competitive application process. Approximately \$35 million in project costs were requested for the \$5.5 million program this year. An equity rating is considered as part of the process for awarding funds. The equity rating will aid in balancing the dollars awarded to jurisdiction with the size of the jurisdiction related to roadway miles. The more roadway miles a jurisdiction has, the more funding the jurisdiction may be awarded. A small District can get a much larger award, but the small District may have to wait several years after a successful large award before the equity factor works to their advantage. LHTAC evaluates and administers these projects. A 7.34% match is required.

Applications are mailed out in November, submitted in March, and approved in September. Contact: Joe Haynes, Local Highway Administrator, LHTAC, 3330 Grace St., Boise, Idaho 83703 Telephone: (800) 259-6841

OTHER FEDERAL FUNDING SOURCES

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT:

This program purpose is to reduce transportation related sources of air pollution and emissions throughout the state. The application process targets communities with air quality problems as identified in cooperation with Idaho Department of Environmental Quality. Projects are evaluated and ranked on a statewide basis for air quality benefits and cost effectiveness.

Project applications are submitted in December or January. Contact Matthew Moore, CM/AQ Coordinator, Idaho Transportation Department, Boise, Idaho Telephone: (208) 334-8296

STP ENHANCEMENT

Enhancement funds can be used for the following types of projects:

- Pedestrian and bicycle facilities
- Safety and educational activities for pedestrians and bicycles
- Acquisition of scenic easement and scenic or historic sites
- Scenic or historic highway programs including tourist and welcome centers
- Landscaping and beautification
- Historic preservation
- Rehabilitation and operation of historic transportation buildings, structures or facilities
- Preservation of abandoned railway corridors
- Control and removal of outdoor advertising
- Archaeological planning
- Mitigation of water pollution due to highway runoff
- Mitigation of wildlife mortality caused by vehicles
- Establishment of Transportation Museums

The maximum cap on Federal-aid for any one project is \$500,000. A local match of 2% to 10% is required.

Projects applications are due in January. Contact: Patti Raino, Intermodal Planning Manager, Idaho Transportation Department, Boise, Idaho. Telephone: (208) 334-8209

BRIDGE REPLACEMENT OR REHABILITATION

Funds are available for bridge replacement if the bridge sufficiency rating is 50 or lower. Rehabilitation funds may be awarded if the sufficiency rating is between 50 and 75. Projects are prioritized statewide based on bridge condition. Bridge replacements are heavily emphasized over rehabilitation projects. Contact: Joe Haynes, Local Highway Administrator, LHTAC, 3330 Grace St., Boise, Idaho 83703. Telephone: (800) 259-6841

NON-HIGHWAY USER REVENUE

Federal-aid funding sources are extremely competitive. It may take many years for a project application to be approved, if ever. Projects funded by federal-aid are included in the "Statewide Transportation Improvement Plan" (STIP) which programs project expenditures for a four-year period into the future. The STIP is updated annually. Programmed projects are occasionally dropped off the list or moved further into the future due to unforeseen circumstances, such as the discovery of environmental problems. This allows a later-scheduled project to move up to closer year. According to representatives of LHTAC, it is unlikely that a small local highway jurisdiction will have more than one project listed in the STIP at one time (with the exception of bridge projects which are awarded according to need based on bridge sufficiency ratings). In the most optimistic scenario, a small highway district can plan for one federal-aid project every five years. This reality is prompting local jurisdictions to pursue other funding options for larger capital projects. LHTAC has outlined other options in the recently published "Manual of Local Highway Jurisdictional Funding". Three other potential sources for SLHD are bonding, a property tax increase and the local option vehicle registration fee. All three of these options require the coordination with and support of other agencies in the county as well as voter approval. The reality is that it may be easier to obtain voter approval for some capital projects than it is to obtain federal-aid. Although bonding is an option, it was decided by the commissioners based on input received from the public that at this time there is no one project overwhelmingly supported by the constituents of the District that would meet approval with a bond levy at this time. The Commissioners are not supportive of increased property tax to fund identified capital projects. A local option vehicle registration fee, while not supported at this time by the Commissioners, may be the favored option in the future if federal-aid is not approved for the District's large capital projects.

LOCAL OPTION VEHICLE REGISTRATION FEE

Voters in Latah County may authorize the board of County Commissioners to implement and collect a motor vehicle registration fee. The fee must be used exclusively for the construction, repair, maintenance and traffic supervision of their highway system. The generated funds must be distributed as provided by written agreement by each local highway jurisdiction in the county. If no agreement is adopted, then the following shall apply: 30% to the cities in the same proportion as the population of the city bears to the total population of all the cities in the county. The remaining 70% shall be divided between each highway district in the county based on road mileage in the highway district as a percentage of the road mileage in the county.

CAPITAL IMPROVEMENT PLAN

Table 6-1 proposes a feasible implementation plan based on funding recommendations described in this section.

TARGET START YEAR (*1)	PRIORITY NUMBER	PROJECT LOCATION	PROJECT DESCRIPTION	ESTIMATED COST (*2)	POTENTIAL FUNDING SOURCE(S)	NOTES
Near-term High Priority Projects (0 – 5 Years)						
		Thorn Creek Bridge	Inspect failing culvert to establish current sufficiency rating. Replace as soon as possible.	\$550,000	Bridge program	In Design
2012	1	Little Bear Ridge Rd. Bridge	Repair abutment, re-deck, repaint and widen	\$150,000	Local Road Investment program and Capitol Reserve	Apply for LRHIP funds in 2010
2014	2	Chip seal Projects	Chip Seal paved roads	\$500,000	Federal-aid Incentive program	
2015	3	Baumgartner Rd. Bridge	Widen bridge	\$100,000	Investment Program	
	4	Jenkins Rd.	Upgrade to gravel	\$25,000	Capital Reserve	
	5	Giljje Rd.	Upgrade to gravel	\$30,000	Capital Reserve	
Mid-term Projects and Beyond						
2018	6	Morscheck Road	Widen bridge	\$100,000	Investment Program	
2020	7	Old Highway 95, northeast of Genesee	Improve curve safety north of Genesee	\$75,000	Local Roads Investment program or Capital Reserve	
	8	Cedar Ridge Road/Linden Rd. Intersection	Widen 0.5 mile segment to standard	Not estimated	Federal-aid Incentive program	
	9	Krier Road Bridge	Widen Bridge	Not estimated		

TARGET START YEAR (*1)	PRIORITY NUMBER	PROJECT LOCATION	PROJECT DESCRIPTION	ESTIMATED COST (*2)	POTENTIAL FUNDING SOURCE(S)	NOTES
	10	Sprenger Rd.	Widen bridge	Not estimated	Bridge program, Local Roads Investment program or Capital Reserve	This bridge is not currently eligible for Bridge Program funds because the sufficiency rating is too high. Reevaluate sufficiency rating at project initiation phase to determine if eligibility status has changed. Reconsider Bridge Program at that time.
	11	Little Bear Ridge Rd.	Separated multi-use path east of roadway or in railroad right-of-way	Not estimated	STP Enhancement Funds	Could be an extension of Juliaetta-Kendrick Path under jurisdiction of Latah County Parks and Recreation. Sponsor must provide matching funds required from 2 to 10 percent.
	12	Uniontown Rd.	Pave to state line	\$750,000	Federal-aid Incentive or VRF (*3)	Federal-aid matching funds from Local Roads Investment program or Capital Reserve.
	13	Cedar Ridge Road	Widen to standard	\$6.9 million	Federal-aid Incentive program	

Section 7

References

References

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4. Idaho Transportation Department. "Idaho Statewide Public Transportation Needs and Benefits Study". 1997.
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10. South Latah Highway District. *Policy on Road Standards, Maintenance, Access*. 1999.
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14. Local Highway Technical Assistance Council (LHTAC). *Manual for Managing Dust on Unpaved Roads for the Local Highway Jurisdictions of Idaho*. 2001.
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Appendix A

Survey Results

**South Latah Highway District Transportation Plan
Summary of Questionnaire Responses from Advisory Committee and
Constituents**

1. Within the boundaries of South Latah Highway District (SLHD) have you witnessed accidents, slide-offs or problems that were caused by a roadway condition? Examples of “roadway conditions” are slickness due to weather conditions, a flaw in the roadway design or sight restrictions. If so, what did you experience or witness and where? Please be as specific as possible about the road conditions and the location.
 - One person slid off of a soft shoulder
 - Grieser Rd., Reisenauer Hill, Leon (extension) Rd. connecting to Hwy 95
 - Junk Parked in road –Cooks canyon (Highlighted map –Alvin Schmidt)
 - Drifting snow on American Ridge Rd.
 - Snow conditions on Berger Rd. , Lenville Rd., Danielson Rd., Old Hwy 95, (Highlighted map –Lucinda Jokisaari)
 - Dry conditions on Gray Eagle Rd, Old Hwy 95 (highlighted map, Lucinda Jokisaari)
 - Little Bear Ridge Rd from Kendrick High to the bridge at bottom of grade –rough and dusty, creates necessary maintenance on farm vehicles due to its condition.
 - Troy/Genesee cut-off gets very rough during summer months
 - Little Bear Ridge Bridge at bottom of grade could be widened. Over the years this same side of the bridge has been hit numerous times.
 - Aware of 2 ‘slide offs’ on South Grade, heard of many more

2. Have you ever had difficulty doing your job because of a roadway condition? If so please describe the condition and location of the condition.
 - County Rds. Plowed late in day south of Sather/Grieser Rd.
 - Grade from Juliaetta to Genesee is steep and winding
 - Pave the Juliaetta/Genesee Rd.
 - During summer routine dumping of dirt from ditches back onto roads creates hazards. Large trucks on road during harvest cause way too much dust, making a driving hazard cause you can’t see anything until the dust clears.
 - Airport Rd, Genesee/Juliaetta Rd between Dave Dennler and Don Dennler road –heavy drifting

3. Is there a need for a different, faster way to get somewhere or another connection, bypass, or short cut? Please be as specific as you can.
 - Pave From Juliaetta to Lenville Rd.
 - There must be a better alternative to going over Paradise ridge or into Washington when accidents occur on Reisonauer Hill.

4. Have you had any experience with conflicts on the roadways between motor vehicles, pedestrians, bicyclists or people riding horses? If so, how many times per location and please describe the location.
 - Meeting farm equipment on narrow roads

- Little Bear Ridge Rd. from Kendrick High to the bridge at bottom of grade –many pedestrians use this dangerous road also, kids going to school, PE class, and extra curricular activities.
5. What would you say is the most significant problem with the roadways in the SLCHD?
- Lack of pavement, dust
 - Dredging ditches and putting silt on roads should not be allowed. Gravel roads should be given a higher priority as far as maintenance with routine grading scheduals (3)
 - Road needs to be paved from top of Juliaetta grade to bridge across Potlatch Creek. –5 ½ Miles (2)
 - Genesee/Juliaetta Rd. and American Ridge Rd. need to be paved.
 - South Grade Rd. needs to be widened. Sally and Gary Browning (landowners next to South Grade) said they would give the county the necessary land to widen the road.
 - Width, loose gravel on shoulders, washboards
 - Lack of gravel
 - Oil top of Juliaetta grade to county bridge
6. Miscellaneous answers
- Suggest centerline and fog lines on Lamb Road/Driscoll Ridge Rd. (Troy Cutoff). Very dangerous at night, especially in the rain. (Note – this is in the North Latah County Highway District jurisdiction.)

South Latah Highway District Transportation Plan Summary of Questionnaire Responses from Latah County Sheriff Deputies

1. Have you experienced or witnessed accidents or problems on the roads of the South Latah Highway District (SLHD)? If so, what did you witness and where? Please be as specific as possible about where.
 - Troy/Genesee Rd. is unmaintained, dirt
 - Juliaetta/Genesee Road, not paved the whole way (2)
 - Thorn Creek from Hwy 95, needs better marking
 - Cedar Creek Hill, slippery, people have slid off
 - Risenauer Hill (339), sharp curve, north side
 - Genesee Ave. from Hwy 95, poor visibility, needs signage
 - Old 95, near Genesee, people have slid off
 - Cedar Ridge grade, treacherous, no guard rails

1. Have you ever had difficulty doing your job because of a roadway condition? If so please describe the condition and location of the condition.
 - Need better shoulders on all county paved roads, there is not enough room to pull over (4)
 - County roads not plowed enough in winter (2)
 - 'Washboard' gravel roads have ruined suspension on police vehicles (2)
 - Pavement chipped at shoulders
 - Need centerline painted in places (can't ticket effectively without)
 - Address markers get knocked down by snowplow

2. Do you think there is a need for other roadways to run a detour? Is there a need for a different, faster way to get somewhere or another connection, bypass, or short cut?
 - Pave all of Lenville Rd (4)
 - Pave all of Juliaetta/Genesee Rd (4)
 - Pave American Ridge Rd
 - Pave secondary county roads
 - Add By-pass for commercial trucks to alleviate ruts in Hwy 95.

3. Have you had any experience with conflicts on the roadways between motor vehicles, pedestrians, bicyclists or people riding horses? If so, how many times per location and please describe the location.
 - Need turning Ln. – Hwy 95/Old Hwy. 95, Hwy 95/Genesee Ave, Hwy 95/Cow Creek Rd.
 - Add shoulders
 - Grain trucks during harvest need designated routes to alleviate congestion.
 - Old Hwy 95 needs Bicycle/Pedestrian lane

4. What would you say is the most significant problem with the roadways in the SLCHD?
 - More blading of all gravel roads in summer (7)
 - More sanding in winter
 - Use sand, and not gravel, better on windshield
 - Why post speed limit signs without doing surveys? We can't successfully prosecute speed violations on roads like Lenville, cause Hamlett states no survey was done.
 - Add shoulders (4)
 - Add passing lanes

Appendix B

Summary of Public Comments

South Latah Highway District Transportation Plan

Summary of Comments Received at Community Events

Prepared by: Laura L. Taylor, LA
Hodge & Associates, Inc.

Genesee/Deary High School Basketball Game

A large map (3'x 4.5') was displayed at the Genesee High School JV, and Varsity Basketball game, Jan. 27th 2003 between 5:30-8:00pm. Laura Taylor of Hodge & Associates, Inc. solicited comments from people of all ages as they entered the gymnasium. Individuals and groups of people were given a brief overview of the project as they stopped to look at the map and as a precursor to requesting their verbal input. Comments specific to an area were noted directly on the display map as a permanent record.

Summary of Comments:

- There is no good connection between Deary and Genesee. Travelers have to go through Troy. A major bridge over ravines would have to be built to make the connection.
- One person said that Hwy. 3 is a good road now that Idaho Transportation has re-built it. He was grateful for the rebuild.
- A few students described an accident they had seen less than five miles out of Genesee on Genesee-Troy Rd. (before white church). They were biking to the church when they witnessed a near collision between a semi-truck and a movie crew at a sharp corner.
- Several people praised the job the highway district was doing maintaining the roads and they had no complaints.
- Several people mentioned that the unpaved section of Evans Road should be paved.
- One family on Hillside Rd. (outside of SLHD boundary) said they wish SLHD was still taking care of their road because SLHD did a much better job than Nez Perce does now.
- Several people commented that it would be nice if Genesee-Juliaetta Road was paved from Genesee to Juliaetta. One section of the road is still unpaved.
- One person reported heavy snow drifts right before you get to the hairpins on Lenville Road.
- One person said that a new bridge is needed on Cow Creek Road just outside of Genesee because it isn't big enough and tends to make water back up during periods of heavy rain.
- One person commented that the entrance onto US Hwy. 95 from Evans Road is dangerous because of a blind spot. Tall grass at the intersection blocks visibility to the Highway.
- A speed limit sign is needed on Evans Rd. on Hwy. 95.
- One person suggested that in general paving should be done between paved sections of roadways so that a driver didn't have to slow down for gravel.
- Gilje Rd. is very muddy in the winter. The person claimed there were two or three cars that have been temporarily abandoned because they are stuck in the mud on the road.
- There is a sharp curve on Old Hwy 95 just north of Genesee.

Kendrick/Genesee High School Basketball Game

A large map (3' x 4.5') was displayed at the Kendrick High School JV, and Varsity Basketball game, Feb. 18, 2003 between 5:30-8:00pm. Laura Taylor and MaryAnn Fiorillo of Hodge & Associates, Inc. solicited comments from people of all ages as they entered the gymnasium. Individuals and groups of people were given a brief overview of the project as they stopped to look at the map and as a precursor to requesting their verbal input. Comments specific to an area were noted directly on the display map as a permanent record. General comments not specific to an area were also noted.

Summary of Comments:

- A school bus driver for the Genesee School District said the roads were just fine in regards to material and convenience. He felt that the best use for public money would be to grade existing roads more often and to add more gravel. He mentioned that if all of Jenkins Road and Rosenau Road were made gravel (some portions are dirt), it would make his bus route more efficient. Currently he has to go around on the gravel roads in order to drop the kids off from school. The kids have to spend a longer time on the bus.
- A contractor who works in the area wanted SLHD to know he felt they were doing a good job on road upkeep and service. We received several comments like this one. He said that he would like to see more gravel put down and he specified crushed rock, NOT to pit run.
- Several young people from the same household on Three Bear Road said it needed to be graded more often.
- One family that used to live on Bethany Road said there were lots of humps on that road making visibility a problem, especially when it was dusty.
- There is a drainage problem on American Ridge Road south of Cemetery Road. A driver complained about cattle crossing the road too often and making it a very messy area for vehicles driving through.
- There is a corner that is too sharp between Kendrick and Juliaetta on Highway 3. Residents of Juliaetta knew of a few accidents that have taken place on this road.
- A few people mentioned the road between Genesee and Juliaetta should be fully paved between Lenville Road and Juliaetta on the hairpin turns going down into Juliaetta. This request seemed to be more for an anticipated timesavings rather than a safety issue.
- There was a request that the Genesee-Troy Rd. be paved.
- There was another request that the Uniontown Rd. be paved, since it is a major connector to Hwy. 195, WSU and the Spokane airport.

Juliaetta-Kendrick EMT Sausage Feed

A large map (3' x 4.5') was displayed at the EMT Sausage Feed at the Kendrick High School on March 15, 2003 3:45 pm and 7:00 pm. Laura Taylor of Hodge & Associates, Inc. solicited comments from people of all ages as they walked through the main exit of the gymnasium. Individuals and groups of people were given a brief overview of the project as they stopped to look at the map and as a precursor to requesting their verbal input. Comments specific to an area were noted directly on the display map as a permanent record. General comments not specific to an area were also noted.

Summary of Comments:

- A turn-around is needed at the end of Middle Potlatch Creek Road. Right now a driver must turn-around on private property or back out for a long way before the road is wide enough to turn around.
- The segment of Genesee-Juliaetta Rd. closest to Juliaetta should be widened and an escape route for run-away trucks should be added. That segment of road is heavily used by truck traffic during harvest.
- Several people complained about what they considered to be mistakes in the application of deicer to State Highway 3. A couple people said that in one instance the deicer wasn't applied soon enough on the curve

between Juliaetta and Kendrick. They knew of an instance where four accidents occurred within an eight-hour period because the deicer was not applied in time. Several other people complained that they thought the deicer might make the roads more slippery right after it is applied because they had seen an increase in accidents right after the deicer was applied. One person complained about slicker road conditions after deicer application on Highway 3 between Kendrick and Bethany Rd. intersection.

- Two people who drive trucks for a living suggested that Highway 99 should be widened and that an escape route for runaway trucks should be added. The rock wall located on the east side at the bottom of the grade should be cut back. They said that the local truck drivers avoid coming down Highway 99 and take Highway 3 instead. It is mostly truck drivers from out of state that are not familiar with the hazards of Highway 99 that come down Highway 99. They were concerned about the possibility that a specific apartment building located at the bottom of Highway 99 (between Hwy. 99 and Hwy. 3) might get hit by a runaway truck driving off of Highway 99.
- Two people commented that Little Bear Rd. should be seal coated. It gets a lot of traffic, especially by the Kendrick High School.
- One person commented that the logging trucks drive too fast on Highway 3 between Kendrick and Bethany Road.
- One truck driver said that Highway 3 between Kendrick and Deary was not wide enough. He thinks the Highway should be wider to allow slow moving farm equipment to pull out of the way of the chip and logging trucks. He feels the slow moving farm equipment has the potential to cause accidents because they are moving too slowly (far below the posted speed limit). He feels this is a serious problem when they are moving slowly on the blind side of a curve.
- One person felt that some turn-arounds were needed on Cedar Ridge Road.
- One logging truck driver felt that Cedar Ridge Road between Hwy. 3 and Parsley Rd. should be improved to accommodate heavier trucks. He said a lot of logging occurs on the Potlatch land to the north. Cedar Ridge Road would be a much more efficient route to haul logs than the current route around the to east and down through Southwick. He felt that the current weight restriction of 30 tons on Cedar Ridge Road needed to be more specific – related to axel weights. He did not feel the current weight restriction was legitimate. He said occasionally agricultural trucks are allowed to use Cedar Ridge Road even though they exceed the limit. He felt that the same occasional exceptions should be applied to logging trucks as well.
- One person said that some rock wall should be cut away to get Cedar Ridge Road further away from the creek. He pointed to the segment of road south west of Parsley Road.
- Two residents on Three Bear Road said the logging trucks drive too fast on that road. They said that road gets a lot of traffic because of the logging trucks, ATV's and snowmobiles. They said they needed the road to be snowplowed earlier so that they could get to work on time.

Appendix C

Road Condition Survey

Road conditions are currently being updated using pavement and sign management software through iWorq.