

# **MASTER TRANSPORTATION PLAN**



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#### **Team Members**

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#### **EXECUTIVE SUMMARY**

Valley County has been experiencing substantial growth since 2003. This report is the Master Transportation Plan for Valley County which addresses the impacts of growth on the existing transportation system for the westerly portion of Valley County, and areas with substantial growth along the corridor of State Highway 55. The report also discusses the future transportation needs, and the funding strategies available to raise funds for future projects.

Following are the key findings of the study:

- Current Population and Land use: Approximately 4.8 percent population growth has been observed from 2004 to 2005 and continued from 2005 to 2006 with an average rate of 6.04 percent. As per the revised Valley County Comprehensive Plan, Valley County predominately consists of; forest lands (approximately 88 percent), State Lands (about 3.2 percent), and private lands (about 8.8 percent).
- Future Population and Land use: Population in Valley County may reach 25,950 by 2030 based on the growth workshop meeting held in April 2006. Projected total households in Valley County by 2030 can be expected to be 17,200, of which 60 percent are second or vacation homes. All development in Valley County is under Conditional Use Permits. Valley County encourages multiple use districts.
- Valley County Road Network and Traffic Counts: From the November 2007 local road mileage report, Valley County maintains 778.928 miles of roads, of which 232.617 miles are paved roads and 546.311 miles are improved (gravel) roads. Traffic volume on West Mountain Road, West Roseberry Road extension, Norwood Road and Tamarack Falls continues to increase when compared to other county roads. Future traffic levels on identified roads for the peak and non-peak seasons were estimated based on future growth projections.
- Road Functional Classification: The official ITD functional classification map of Valley County and proposed functional classification map are provided in the report. A future functional classification map was prepared based on the Capital Improvement Program developed by Valley County.



- Alternate Route for State Highway 55: Alternate routes for State Highway 55 around the cities of McCall, Cascade and Donnelly are identified and provided in this plan. Potential corridors for State Highway 55 alternate routes to the south of Cascade were identified in this study.
- Road Ratings and Surface Management Plan: Road surface ratings are provided based on the survey conducted during the summer of 2006 and information provided by the Valley County Road and Bridge Department. A surface management plan was developed and recommended to the Valley County Road and Bridge Department. Also, a strategy to maintain paved and unpaved roads is provided.
- Road Standards: Minimum standards for design and construction of public and private roads were reviewed and recommendations are made to Valley County to update the standards.
- Master Pathway Plan: The Valley County Pathway Committee developed a Master Pathway Plan, which shows potential corridors for the future pathways in Valley County. This plan helps Valley County Road and Bridge Department, and Planning and Zoning preserve easements for future pathways.
- Public Transportation: Current public transit facilities and future public transit needs are discussed in the report. There is a high potential for an increase in public transit in Valley County. The total demand by 2025 could be 93,000 passenger trips per year, as per the study completed by Valley Adams Planning Partnership (VAPP), in collaboration with Ostrander Consulting Inc.
- Regional Airport: The need for a regional airport in Valley County was identified at the Growth Workshop. Participants suggested alternatives such as expanding the existing McCall airport to accommodate more aircraft and larger planes, and constructing a regional airport near the Donnelly and Cascade area. Currently, Valley County and other cities in Long Valley are researching and studying different locations for a regional airport. In this process, a conceptual plan was developed by Cascade with a proposed 8,000 feet north-south runway parallel to State Highway 55.



- 5 year and 20 year Work Plans: Road construction and rehabilitation projects were identified in the 5 year work plan. These projects were identified based on the road surface ratings, projected traffic counts, and the Capital Improvement Program developed by Valley County.
- Funding Strategies: Funding sources and strategies to raise funds for improvement projects are included in this plan.



#### INTRODUCTION AND OVERVIEW

Valley County and surrounding areas have experienced significant growth since early 2000. Tamarack Resort is one of many developments that have sparked growth in Valley County. Many of the new developments are in the proximity of Tamarack Resort. The rate of growth in Valley County is expected to continue into the future resulting in increased demand for transportation facilities. It is necessary to develop a Master Transportation Plan for systematic planning to accommodate increasing traffic demand from Valley County growth and economic development for the westerly portion of Valley County, and for areas in the vicinity of State Highway 55 where high growth is expected.

The Valley County Master Transportation Plan provides guidelines for future transportation project developments and programs, and assists Valley County to plan and progress to achieve goals and objectives furnished in Valley County's Comprehensive Plan. This plan plays a vital role in determining how Valley County and surrounding areas will grow and accommodate growth in the future.

Valley County adopted a Comprehensive Plan in June 2001 (See **Appendix B**). Valley County identifies three (3) major transportation goals in their Comprehensive Plan. The following are the three major goals and objectives provided in the Comprehensive Plan [1]:

#### Goal I: To Improve county-wide transportation

#### **Objectives:**

- 1. Develop a comprehensive county wide transportation plan.
- 2. Encourage coordination of road construction and maintenance decisions between the various agencies with jurisdiction.
- *3.* Encourage improving road conditions and better road maintenance, rather than construction of new roads.
- 4. Encourage the three cities to maintain extensions of county collector roads to county standards or better.



- 5. Seek to balance protection of the public investment in airports with private property rights and the importance of quiet in our communities.
- 6. Explore acquisition of abandoned railroad rights-of-way for use as future transportation corridors.
- 7. Continue to utilize a Road Surface Management System to prioritize future improvements.

## Goal II: To ensure that roadways in new developments are properly planned for good circulation, will provide for future expansion needs, and are aesthetically pleasing

#### **Objectives:**

- 1. Discourage new development of permanent dead-end roads.
- 2. Encourage underground utilities in new developments.
- 3. Use design techniques for new development along Highway 55 and major collectors in order to reduce turning movements and preserve the safety and future capacity.

#### Goal III: To seek continued improvements for State Highway 55

#### **Objectives:**

- 1. Secure the preparation and adoption of the Payette River Scenic Byway Corridor Management Plan for State Highway 55 and its proposed alternate routes.
- 2. Improve design and landscaping standards for the corridor.
- 3. Encourage shared access points or shared access roads where appropriate.
- 4. Encourage development to accommodate for designated corridors along future alternate routes.

The Master Transportation Plan was developed for the following purposes:

- > To accomplish the goals in the Valley County's Comprehensive Plan.
- > To coordinate land use developments with the transportation system.
- > To project future traffic on selected county roads based on the future growth rate.
- To address issues and identify alternate measures for increasing traffic in Valley County and surrounding areas.



- To develop a surface management system to assist the Valley County Road and Bridge Department to maintain Valley County roads at acceptable level of service.
- To develop 5 and 20 year work plans based on the road surface condition survey, projected traffic counts, and the Capital Improvement Program (CIP) developed by Valley County.

This plan is developed to build on Valley County's policies and directions outlined in the Valley County's Comprehensive Plan. This is a dynamic document and should be updated periodically to reflect the growth and changes in Valley County.

The Master Transportation Plan is comprised of the following:

- 1. Introduction and an overview of the Master Transportation Plan.
- 2. Process and purpose of the Capital Improvement Program developed by Valley County.
- 3. Existing and projected population and land use information.
- 4. Evaluation of existing transportation system, including right of way and current traffic information.
- 5. Transportation issues and Future Planning: Looking at long term needs, right of way preservation for Valley County roads, State Highway 55 alternate route, proposed functional classification, and recreational pathways planning.
- 6. Assessing and evaluating existing roadways: Asset valuation, pavement management system for maintenance and reconstruction, and road standards.
- 7. 5 and 20 year work plans: Developing roadwork plans and projects for the next 5 and 20 years based on road condition survey, projected traffic volumes, and CIP developed by Valley County.



#### A. Purpose

A Master Transportation Plan and Capital Improvement Program are documents used as systematic planning tools to maintain and expand the Valley County facilities by providing citizens with the necessary resources for life sustaining accommodations and conveniences. In addition, a 5 year Work Plan will be required for submittal with any request for federal or state funding of road or bridge projects. The 5 year Work Plan will become an important criterion in evaluation of projects.

There are several funding possibilities from the State of Idaho and the federal government, through the State. These funding agencies require, indirectly, local governments to develop Transportation Plans in order to apply for various funding packages in an organized and thoughtful manner. The indirect requirement of transportation plans is to ensure that in making improvements, the local government will consider future growth and road usage patterns and will be making judicious choices in improvement considerations.

The Idaho Transportation Department (ITD) develops the Statewide Transportation Improvement Program (STIP). The STIP is a five-year master plan of transportation projects within the State. The STIP will be updated annually and shows how federal transportation funds will be used to fund a variety of transportation projects, including [10]:

- Highway, bridge, bicycle and pedestrian facilities
- ♦ Highway safety
- Air quality
- Railroad crossing safety
- ♦ Airports
- Public transportation
- Transportation planning



To receive federal-aid funding, a proposed project must be listed in the STIP. In order for a project to be listed in the STIP, an application must be completed. The Local Highway Technical Assistance Council (LHTAC) reviews the application and sets a priority for the improvement, based upon an "incentive program", before making a recommendation to ITD for inclusion of the project in the STIP. This incentive program consists of rating criteria of 100 possible points for various project characteristics. Approximately a third of these points may come from transportation planning issues through a Transportation Plan or a detailed transportation element of the Comprehensive Plan. Planning of transportation improvements is considered to be an essential part of a successful federal-aid application by the State of Idaho.

Materials from LHTAC, ITD funding requirements, and the CIP developed by Valley County were used in preparation of this report to ensure that this report can be used by Valley County in applying for the various funding resources available.

#### B. Scope of Work

The Master Transportation Plan identifies the current conditions of Valley County roads and transportation structures, and future potential transportation needs and requirements. The action plan is to inventory existing facilities and develop a Geographical Information System (GIS), including a countywide base map and database to prioritize improvements. The road inventory survey includes a Global Positioning System (GPS) inventory of current road conditions, a GIS database of Valley County roads, an evaluation of each county road surface condition, and a condition rating for each road. From this, Valley County can provide strong justification and support of the selected improvements for community understanding and funding application. The Road and Bridge Department will be able to track needed improvements and the associated costs using the GIS. Additionally, information for annual updates to the roadwork plans will be readily available from the GIS to match potential funding sources with required and desired improvements.



The scope of work also includes studying historical population census, assessing the existing transportation system, determining future transportation needs, forecasting traffic on major county roads, and providing recommendations for congestion mitigation. The study also identifies the future investment projects to be included in the 5 year and 20 year Work Plans.

This report includes a discussion of the methodology and hardware used for the collection and management of the data. The report also discusses current road conditions, future transportation system considerations based on the projected traffic volumes and the CIP developed by Valley County, and financial implications.

#### C. Planning Period

The Master Transportation Plan addresses transportation related issues and identifies needs to meet the future transportation demands through the year 2030. The travel demand forecast, population, and land use projections were projected through the planning period of 2030.

## D. Traffic Data and Analysis

The current traffic counts at key locations on major roads were collected and provided by the Valley County's Road and Bridge Department. They have also provided historical traffic counts.

A Travel Demand Forecast (TDF) method was developed based on the population, land use projections, and growth rates. The travel demand forecast process is limited to projecting traffic volumes on major roads in Valley County. The traffic volumes were projected based on growth information collected at the Valley County Growth Workshop held in April 2006. A detailed discussion on Travel Demand Forecast methodology is provided in **Appendix E**.

Alternate routes for State Highway 55 and future facilities like major and minor collectors were identified based on the projected traffic volumes, and the CIP developed by Valley County.



#### E. Capital Improvement Program Process and Purpose

Valley County has developed and adopted a Capital Improvement Program (CIP). The following description of the CIP is provided by Valley County:

"In 2005, the Valley County Commissioners initiated a Road Development Agreement (RDA) process to require new developments to pay a fee to mitigate the impacts of their developments on the roads and bridges in Valley County. The RDA process replaced the Capital Contribution Agreements that were used by Valley County for larger developments that needed infrastructure improvements. The RDA requires all developers to pay a fee based on the number of trips their developments generate. Developers are, in effect, required to pay for the roadway capacity their developments use. The fee must be paid at the time of final plat. Credit is given for ROW required from the development and any in-lieu-of contributions, such as construction materials or developer sponsored construction of portions of roads and bridges.

Local public roads in Valley County are classified based on their function, from major collector to local roads. Each classification has its own standards for width and structural section. Most of the existing public roads in Valley County are sub standard. A Capital Improvement Program, or CIP, is developed that identifies the cost of improvements needed to bring the roads and bridges in Valley County up to the adopted standard based on their classification.

CIP's have been developed for geographical sub-areas representing traffic sheds in Valley County. These traffic sheds are called CIP areas. A capital cost is calculated for each CIP area based on what it would take to bring roads and bridges up to the standard, including future ROW needs. A cost per trip is calculated by dividing the cost for improving the roads and bridges by the capacity, in trips per day, of the improved outlet roads for each CIP area.

Roadway fees collected must be spent in the areas they were collected from, unless a developer agrees in writing to spend them elsewhere.



Currently, Valley County has twenty-two CIP areas located in the valley floor generally along State Highway 55. The total cost of bringing Valley County roads and bridges up to an acceptable standard in these twenty-two CIP areas is estimated at \$185 million."

Section eight of this report identifies the 2007 CIP's for each of the twenty-two CIP areas.



#### POPULATION AND LAND USE

Valley County is located in the west central part of Idaho. The City of Cascade is the Valley County seat, located approximately 80 miles north of Boise. Valley County was established in 1917, named after the Long Valley of the North Fork of the Payette River. According to the US Census Bureau, Valley County has a total area of 3,734 square miles of which 3,678 square miles is land and the remaining 56 square miles is water. Idaho Department of Labor and Commerce lists the population of Valley County as 8,332 as of July 1, 2005.

#### Population

Population trends and projections are key issues in determining transportation needs for Valley County. Valley County characteristics were obtained from various sources including the Idaho Department of Commerce web page, Idaho Power, Valley and Adams County Planning Partnership (VAPP) and the U.S. Bureau of Census.

#### Historical Population

The population in Valley County has been growing at a steady pace since 1970. Second homes and tourism in Valley County has been increasing year after year. Second home owners and visitors do not count towards population, but they add significantly to the seasonal and weekend population of Valley County.

The historical population records for Valley County are obtained from the Valley County's Comprehensive Plan, Idaho Department of Commerce, Idaho Power, and are shown in Table 1.





Year	Population	Numerical Change	% Change per Year	
1970	3,609	-	-	
1980	5,604	1,995	5.53	
1990	6,109	505	0.90	
2000	7,651	1,542	2.52	
2001	7,692	41	0.54	
2002	7,608	-84	-1.09	
2003	7,761	153	2.01	
2004	7,947	186	2.40	
2005	8,332	385	4.84	
2006	8,836*	504	6.04	
Source: Idaho Department of Labor * Source: Idaho Department of Commerce				

Table 1: Valley County Historical Census Population Data

It can be observed from Table 1 that the population in Valley County increased from the year 1970 to 1980 at an average annual growth rate of 5.5 percent. Valley County's population changed 0.90 percent and 2.52 percent the next two decades, respectively. The population growth trends seem to have followed the change in economics of rural Idaho with the expansion of farming and timber in the 70's, the reduction of small family farms in the 80's, and followed by the reduction of the timber industry during the 90's. Valley County's population growth has varied since the year 2000. An increase in population, approximately 4.8 percent, can be observed from 2004 to 2005 with construction of Tamarack Resort which started in the summer of 2003. The increase in population continued from 2005 to 2006 with an average growth rate of 6.04 percent. The population of Valley County is expected to continue to grow in the foreseeable future due to the changing economy, its close proximity to the Treasure Valley, great recreational and tourism areas, four-season resorts, ski resorts, and beautiful natural ambiance with lakes, rivers, and forests.

#### **Future Population Projection**

Population projections depend on a number of variables and assumptions. In Valley County some of the variables include land speculation, jobs and salaries, and full time residence versus vacation homes. Changing these variables will yield a range of possible population projections. Tamarack Resort was the impetus for growth in Valley County these past years.



Growth is anticipated to continue to the year 2014 when 2,000 of their 2,043 permitted sites will be built upon. Brundage Mountain Resort successfully exchanged land with the Forest Service allowing them to develop resort facilities at the base of the mountain. Along with these developments, rapid population growth is expected in the immediate future with increases in residential lots, private resorts, and subdivisions. The following illustrates the population projection through the year 2030.



#### Figure 1: Population Projection through 2030

The above figure illustrates a comparison of population projections evaluated through three different methods.

- First method was using projection information obtained from Idaho Power. Idaho Power Company records the number of services when they receive requests for a new service. Idaho Power provided the historical and projected population census information through 2030.
- 2. Second method was using an average annual growth rate obtained from the historical population census. An average annual growth rate of 4.8 percent was observed from



2004 to 2005 and the population was projected through 2030 with an assumption of 4 percent annual growth rate.

- 3. Third method was using the information obtained from the Growth Workshop, conducted by Valley County, on April 12, 2006. Delphi Method approach was employed to conduct the growth workshop. A detailed description of the Delphi Process is provided in Appendix C. The output from the growth workshop is as follows:
  - 27,000 households were predicted by Valley County through 2030.
  - 60 percent of households were predicted as either second homes or vacant.
  - Predicted households were distributed to seven regions around the major communities currently in place. These regions included McCall, Lake Fork, Donnelly, Tamarack/Daystar, Cascade, Horsethief, and Round Valley/Smith's Ferry.

Based on the output from the growth workshop, the population in Valley County can be expected to reach 25,920 by 2030. The following Table shows the illustration of population projection:

Growth Workshop Summary	
Total Households	27,000
Persons/HH <sup>**</sup>	$2.4^{*}$
Second Homes	60%
Full Time HHs	10,800
Total Population	25,920
* As per Idaho Power, persons per HH	is 2.4

#### Table 2: Population Projection using Growth Workshop Output

An average annual growth of 4.6 percent was derived from the population projection using the growth workshop output, which is close to the current growth rate of 4.8 percent. The Valley County growth workshop summary report prepared by Valley County Engineers, Parametrix, is provided in **Appendix C**.



#### **Existing Land Use**

Valley County is basically a rural county with a population of 8,332. Valley County's Comprehensive Plan identified four (4) land use designations. They are as follows:

- Rural: Applies to all real property in the unincorporated areas of Valley County unless designated otherwise. Also applies to all privately owned land; and, to those public lands and uses on public lands which are deemed to be subject to Valley County's planning jurisdiction.
- 2. **Cities and City Areas of Impact**: Applies to all real property within incorporated city limits or within adopted areas of impact.
- 3. **Villages**: Applies to all real property within the small unincorporated communities known as Yellow Pine and Lake Fork.
- Tourist Hubs: Applies to all real property for the tourist services located in the areas known as: Smith's Ferry, Clear Creek, West Mountain Lodge, Tamarack Falls Store, Big Creek, Roseberry, Deadwood, Silver Creek Plunge, and Warm Lake.

A detailed description of each land use designation is provided in Valley County's Comprehensive Plan.

Valley County's Comprehensive Plan identified three (3) major goals for land use. They are as follows [1]:

- 1. Retain the rural atmosphere of Valley County by protecting its natural beauty and open characteristics and preserving its historical and scenic beauty.
- 2. Increase the economic value of privately owned land in Valley County.
- 3. Develop a policy of clean-up and fix-up.





The following figure illustrates the current county-wide land use distribution.

#### Figure 2: Current Land use Distribution

Valley County is predominately Forest area which constitutes 84 precent of the total county area. The surrounding areas of McCall, Donnelly, and Cascade are predominately rangeland with a high potential of development.

#### Land Ownership

As per the Valley County's Comprehensive Plan, "Valley County has 2,354,048 acres of land of which 2,147,983 acres are under federal, state, or county control. The remaining 206,065 acres are private. It was noted that over 250 cabins or buildings are on 174 acres of statelease land and that these improvements are subject to county building codes, sanitary regulations, and ordinances".



The following Table 3 illustrates the total land ownership in Valley County in acres.

Land Ownership	Acres <sup>1</sup>	Acres <sup>2</sup>
Federal Land	2,063,164	2,072,845
BLM	3,133	
National Forests	2,030,789	
Other	29,242	
State Land	67,545	74,784
Endowment Land	64,268	
Fish and Game	1,914	
Parks and Recreation	1,298	
University of Idaho Land	65	
Private Land	221,151	206,065
County Land	2,180	354
Municipal Land	8	
Total	2,354,048	2,354,048
<sup>1</sup> Source: Idaho Department of Comment	rce, County Profiles of Ida	ho (2006)

## **Table 3: Valley County Land Ownership**

<sup>2</sup> Source: Revised County's Comprehensive Plan, April 10, 2006

The above table shows the acreages and ownership of land in Valley County. Differences can be observed in acreages of land ownership between the two sources listed in the above table. The land ownership information should be verified and updated in the current Valley County's Comprehensive plan periodically. This report refers the reader to the individual reports for definitions of lands and variation of acreages. The Valley County total ownership distribution map is provided in Appendix D.





The following Figure 3 illustrates the percentage of total land ownership in Valley County.

#### Figure 3: Valley County Land Ownership Distribution

Currently, the majority of land is under federal ownership. With over two million acres of federal land next to private land; it may be speculated that there is a high potential for recreation developments on private lands. The majority of the private land is located in Long Valley, Round Valley, and High Valley; along the western edge of Valley County and State Highway 55. Less than 10 percent of Valley County is available for development or habitation and nearly all of this private land is concentrated in one area of Valley County [1].

Valley County has strategies to accomplish the goals identified in the Comprehensive Plan. These strategies suggest developing a Land use and Development Ordinance, Subdivision Ordinance, Sign Ordinance, Capital Improvement Program and specific plans as necessary to achieve the goals.



#### **Future Land Use**

Valley County adopted a Land use and Development Ordinance in August 2006 to accomplish the land use goals. "The purpose of this Ordinance is to provide a unified regulatory system for land use in Valley County dependent upon the concentration of development. It is designed to protect and promote the health, safety, and general welfare of present and future inhabitants of Valley County. The intent of this Ordinance is, as well, to protect both property rights and property values, minimize the adverse impact of development; control the sequence and timing of development; assure that development is maintained properly, requiring on-site and offsite public facilities or services; discouraging urban sprawl; requiring strict standards for commercial and residential development, including provisions for affordable housing; and encouraging efficient use of land while maintaining the open space and rural feel of the county by encouraging cluster development where appropriate. The Ordinance is further intended to protect the public health, safety and general welfare by regulating activities and development in hazardous areas" [5].

"Standards of this Ordinance additionally intend to encourage well planned development; to improve land records and resource data; to safeguard the interests of the public, adjacent property owners, developers, and purchasers; and, to assure equitable handling of all proposals by providing uniform procedures and standards" [5].

Currently, Valley County development is under Permitted and Conditional Use Permits. According to the Land use and Development Ordinance, "All lands or area of city impact except as may be altered under Idaho Code Sections 67-6525 and 67-6526 in the unincorporated areas of Valley County, are hereby classed into one multiple use district. The purpose of one land use classification is to grant landowners maximum flexibility in using and developing their properties. This concept is unlike traditional zoning where general categories of land use are separated geographically from each other in order to reduce the occurrence of incompatible uses on adjoining properties" [5].



According to the Land use and Development Ordinance, land use applications are classified into two primary categories:

- 1. Permitted Use
- 2. Conditional Use

"The Ordinance defines and sets standards and procedures for special areas, sign standards, cell towers, Planned Unit Developments, and provides guidelines for administration and enforcement" [5].

The two primary categories are defined as follows:

**Permitted Use:** These land use applications "are likely to be compatible with existing land uses in the Multiple Use District of Valley County, therefore review by the Commission and public are not necessary" [5].

**Conditional Use:** These land use applications "are likely to be incompatible with permitted uses in the Multiple Use District of Valley County and therefore are subject to review and evaluation by the Commission and the public. Conditional Uses may be allowed only after receiving proper application from developers, reviewing application, approval of application, and mitigation of impacts through conformance with the conditions of approval" [5].

A table showing classification of different land use and their status, as permitted or conditional uses, is provided in **Appendix D**. A complete set of standards and procedures defined in the Land use and Development Ordinance is available at the Valley County Clerks' office and Planning and Zoning office.

## Future Development Potential

Valley County is predominately federal forest land and a recreational area. Brundage Ski Resort located in Adams County is currently on federal land, which affects growth in Valley County especially near the McCall area. The lack of private land near the resort limits development at the base of the resort. Tamarack Resort, located on private and state land, is



a four-season resort which provides recreation throughout the year. Tamarack Resort is considered by many to be the impetus for growth in Valley County. Other recreation resorts in Valley County located on private land include Jug Mountain, Whitetail, etc. The City of McCall should also be considered a tourist hub and resort town that attracts thousands of tourists year around.

There is a potential of continuous growth in Valley County surrounding tourist hub areas, recreational areas, etc. As per Valley County's Comprehensive Plan "agricultural lands represent a future potential for subdivision and second-home development". A record number of applications for residential development from agricultural lands have been submitted to the Valley County Planning and Zoning department. As per records provided by the Valley County Assessors office, there are approximately 7,500 lots that have been approved in Valley County thru May 2005 of which, 55 percent of the lots are built. The total number of building permits (not necessarily full-time residents) in Valley County increased by 28% from 2000 to 2006. The increase in building permits and applications for new residential and commercial buildings indicates growth in Valley County.

The majority of developments are contiguous along State Highway 55 from south of Cascade to McCall. West Roseberry Road is currently classified as a major collector road and serves traffic to Tamarack Resort from State Highway 55 at Donnelly. Major developments were constructed between the City of Donnelly and Tamarack Resort and there are proposed developments in this area and along West Mountain Road.



#### TRAFFIC COUNTS AND TRANSPORTATION SYSTEM

Valley County has two jurisdictions responsible for roads, not including cities: the Valley County Road and Bridge Department and the State of Idaho Transportation Department. State Highway 55 is the only major highway in Valley County classified as a principal arterial and a scenic byway. It runs north and south through Long Valley connecting Cascade, Donnelly, McCall, and the Treasure Valley to the south. It is the only major outlet to urban areas north and south of Valley County. The other major collector roads, as per the official ITD functional classification map in Valley County, are; West Mountain Road, Warm Lake Road, Warren Wagon Road, and Roseberry Road, etc.

State Highway 55 is the major route of commute for the residents who work in McCall, Cascade, and New Meadows. West Mountain Road serves the area of Tamarack Resort and is the major route of commute for workers working in this area. Also, West Roseberry Road and the new extension of West Roseberry Road serve as commute routes between Donnelly and Tamarack Resort.

Many east-west routes intersecting State Highway 55 are not passable throughout the year. Other routes like Warm Lake Road, Warren Wagon Road, and Farm to Market Road serve local traffic year round. Warm Lake Road serves local traffic accessing the Warm Lake area. State Highway 55 and sections of West Mountain Road between Tamarack Resort and McCall serve local traffic year round.

#### **Existing Traffic in Valley County**

The current traffic counts on Valley County roads are important to understand the current travel behavior and pattern. The traffic counts provide a datum for Valley County decision-makers for future traffic volume comparisons. The Valley County Road and Bridge Department collected traffic counts for a one week period, at key locations, on major Valley County roads identified by Valley County in the summer of 2006.



The following Table 4 shows the average daily traffic on key roads within Valley County based on one week of traffic data collection.

Segment Code	Road Name	Location	ADT
002497	East Lake Fork Road	Lake Fork RoadEast of Wildgoose Ct.	
002498	Eastside Drive	Near N. Lick Creek Road	621
002492	Elo Road	East of Highway 55	1090
002492	Farm to Market Road	North of East Lake Fork Rd.	592
002492	Farm to Market Road	East of Highway 55	344
006494	Heinrich Lane	East of Norwood Road	366
002492	Loomis Lane	West of Highway 55	1176
007830	Norwood Road	South of Heinrich Lane	542
007840	Norwood Road	South of West Roseberry Rd.	2655
006478	Samson Trail	North of Stockton	860
006478	Samson Trail	South of Elo Road	376
007840	Tamarack Falls Road	West of Norwood Road	1582
007810	Warren Wagon Road	At McCall City Limits	1613
006464	West Mountain Road	West of Wisdom Road	356
006464	West Mountain Road	South of Crowley Lane	254
006464	West Mountain Road	South of Blackhawk Lake Rd.	78
006464	West Mountain Road	At Tamarack Store	1439
007830	West Roseberry Road	West of Highway 55	2501
007830	West Roseberry Road	West of Dawn Dr.	2118

 Table 4: Average Daily Traffic on Valley County Roads

It can be observed from the above table that traffic (ADT) enroute to Tamarack consists of 2,501 vehicles/day (vpd) on West Roseberry Road (which carries significant traffic when compared to other roads in Valley County), 2,655 vpd on Norwood Road, 1,582 vpd on Tamarack Falls Road, and 1,439 vpd on West Mountain Road at the Tamarack Store. Most of the traffic from Tamarack Falls and Norwood Road will divert to the new West Roseberry Road extension. West Roseberry Road is a major collector which serves the West Mountain



and Tamarack Resort areas. West Mountain Road carries traffic south to the Tamarack Resort area and North to the McCall area. Map 1 shows the current ADT of key roads in Valley County.

Other major routes in Valley County are; Farm to Market Road, Warren Wagon Road, Lakeshore Drive, Smylie Road, Lake Fork Road, etc. The average daily traffic volumes provided in the above table are the average from one week of traffic counts. Traffic volume and travel behavior vary depending on the day of the week and the season. Valley County has many recreational areas that tend to attract significant tourist and recreational traffic during the summer time, especially on long weekends. Winter sporting activities are becoming more popular which increase traffic volumes. High traffic volumes can be observed on all roads during special events, or local festivals such as Winter Carnivals, the County Fair, and special Resort events. Although the ADT is less during the winter months, winter driving conditions have a significant impact on traffic flow.



The following Figure 4 illustrates the variation in traffic volume on West Roseberry Road during a week.



#### Figure 4: Traffic Variation on West Roseberry Road over a Week Period

It can be observed from the above figure that the traffic volume varies between weekend and weekdays. This trend can be expected on other Valley County roads as well.

## Traffic Data on State Highway 55

As stated earlier, State Highway 55 is classified as a principal arterial with two travel lanes

for most of the section between Banks and New Meadows. State Highway 55 is a National Scenic Byway in Idaho, which follows the Payette River much of the way. Idaho Transportation Department took traffic counts on State Highway 55 over the past years. There is a permanent traffic counter installed on State Highway 55



approximately 4 miles south of Roseberry Road. It records traffic every day and periodic



traffic reports are available on ITD's website. It should be noted that this traffic data provides an idea of traffic volume on State Highway 55 at this location. Understanding State Highway 55 traffic volumes, variation, and the relationship to Valley County helps to predict future traffic on Valley County roads for planning purposes. The following Figure 5 shows the variation of traffic volume on State Highway 55 for the period from 1995 to 2006.



Figure 5: Annual Average Daily Traffic (ADT) on State Highway 55

The above figure illustrates Annual Average Daily Traffic (AADT), which is the daily traffic averaged over a year. It can be observed from the above figure that the AADT values remained constant until 2002. Traffic volume has significantly increased since 2002. An increase in heavy construction traffic has been observed during the years 2003, 2004 and 2005.



The following Table 5 illustrates the increase in traffic volume per year since 2000.

Year	AADT	% Change per Year
2000	3079	-
2001	3077	-0.06
2002	3208	4.26
2003	3393	5.77
2004	3780	11.41
2005	4138	9.47
2006	4324	4.49

Table 5:	Change in	AADT on	State	Highway	55
			~		

Referring to the above table, there was an 11 percent increase in traffic from 2003 to 2004 and the growth reduced gradually to 4.5 percent in 2006. The change in growth of 4.5 percent is consistent with the population growth, explained in Chapter 2. Using these few short years as trend data, excluding the two largest and two lowest observed, provides a trend of about 4.84 percent.

As stated earlier, State Highway 55 serves the Valley County area and carries traffic from the Treasure Valley area to Valley County, and traffic from Adams County north to the Treasure Valley. A high variation in seasonal traffic can be expected on State Highway 55 due to the presence of recreational areas in Valley County.



The following Figure 6 illustrates the variation in traffic volume on State Highway 55 during the year 2006.



## Figure 6: Seasonal Traffic Variation on State Highway 55 in 2006

It is evident from the above figure that the traffic volume varies significantly on State Highway 55 depending on the time of the year. Maximum traffic can be observed during the summer, especially in July and August. Annual Average Daily Traffic on State Highway 55 at MP 127.72 in 2006 was observed as 4,324 vehicles per day.

## Seasonal Variation Factor

A factor was determined using the current traffic volumes on State Highway 55 to understand seasonal variation in traffic. An average yearly traffic, represented as AADT, on State Highway 55 was taken because it represents average traffic over a year. Peak monthly traffic on State Highway 55 was observed during July. The traffic in June, July, and August can be expected to reach peak levels in Valley County.


Annual Average daily traffic on State Highway 55 for 2006 was observed as 4,324 vehicles per day.

Average Daily Traffic during peak season on State Highway 55 in July was observed as 6,580 vehicles per day.

Seasonal Variation Factor is given by the following equation:

 $Seasonal Variation Factor = \frac{Average Daily Traffic during Peak Season}{Annual Average Daily Traffic}$ 

Using the above equation, the Seasonal Variation Factor was found to be 1.52.

# **Future Traffic Projection**

The traffic volumes (demand) on key Valley County roads are forecasted using the travel demand projection process. These forecasts are based on a series of inputs, such as population, number of households, household distribution, and the current road system. The total number of households in Valley County was forecasted at the Valley County Growth Workshop based on the county-wide growth distribution. The following Table 6 lists the household allocation in seven sub-areas across Valley County through the year 2030.

Table 6: Sub Allocation of Additional To	otal Households 2005-2030
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Area	1	2	3	4	5	6	7	
				Tamarack/			Round Valley/	
	McCall	Lake Fork	Donnelly	Daystar	Cascade	Horsethief	Smith's Ferry	TOTAL
Group 1	4000	2000	2000	2000	5000	0	2000	
Group 2	2000	3000	5000	3000	3000	0	1000	
Group 3	1000	5000	2000	1000	6000	0	2000	
Total	7000	10000	9000	6000	14000	0	5000	
Average	2333	3333	3000	2000	4667	0	1667	17000
Adjusted								
Average	2500	3000	3000	2000	4500	500	1500	17000

# **Travel Demand Forecasting Method**

Travel Demand Forecasting is the process of projecting traffic volumes for vital roads in each of the growth sub-area across Valley County. No separate travel zones were created in sub-areas. Traffic volumes were projected on key roads, as identified by the Valley County



personnel, in each sub-area throughout Valley County. Local roads were not considered in the traffic forecast methodology. A detailed explanation of the travel demand forecasting method is provided in **Appendix E**.

The traffic volumes for the key roads were projected for the year 2030 based on the population growth rate, demographics, and total projected household information from the Growth Workshop (discussed in the Population and Land use section). The following table lists the projected traffic volumes on some Valley County roads.

Road Name	ADT (Veh/Day)
Cabarton Road (At Cascade City limit)	3,900
East Lake Fork (East of Highway 55)	3,940
Elo Road (East of Highway 55)	2,690
Farm to Market Road (South of Finn Church)	2,980
Heinrich Lane (West of Highway 55)	1,870
Lakeshore Drive (at Cascade City Limit)	6,200
Mission St. (Near McCall City Limits)	2,400
Old State Hwy	1,970
Samson Trail (Near McCall City Limits)	3,200
Warren Wagon Road	2,890
West Mountain Road (Near Blackhawk)	4,710
West Mountain Road (Near McCall)	3,500
West Mountain Road (Near Tamarack)	12,170
West Roseberry Road (West of Highway 55)	9,880
West Roseberry Road (West of Norwood)	10,070

### Table 7: Projected Traffic Volume on Key Roads

The above table lists the projected traffic volume for average daily traffic during the nonpeak season. During peak season and special event times, the projected traffic volumes can be expected to be more than the average non-peak seasonal traffic. The projected peak seasonal traffic volumes can be determined by multiplying non-seasonal average daily traffic with the seasonal variation factor, 1.52.



# **Future Traffic Volumes**

The following table lists the projected average daily seasonal non-peak and peak traffic on major Valley County roads.

Road Name	Non-Peak ADT	Peak ADT
Cabarton Road (At Cascade City limit)	3,900	5,930
East Lake Fork (East of Highway 55)	3,940	5,990
Lakeshore Drive (at Cascade City Limit)	6,200	9,420
Mission St. (Near McCall City Limits)	2,400	3,650
Old State Hwy	1,970	2,990
West Mountain Road (Near Blackhawk)	4,710	7,160
West Mountain Road (Near McCall)	3,500	5,320
West Mountain Road (Near Tamarack)	12,170	18,500
West Roseberry Road (West of Highway 55)	9,880	15,020
West Roseberry Road (West of Norwood)	10,070	15,300

Table	8:	Projected	Average	Daily	Seasonal	Peak	and	Non-l	Peak	Traffic
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It can be observed from the above table that the average daily traffic, during peak season on W. Roseberry Road and W. Mountain Road, can be projected to be more than 10,000 vehicles per day. The future traffic forecast process does not consider the impacts of individual large scale developments in Valley County. The forecast process using the projected total households does not take into account major transportation investments, such as road widening, river crossing, or new road connections. It should be noted that major transportation investment projects change the travel behavior and characteristics. These projected traffic volumes provide a picture of growth of the Valley County area and approximate number of vehicles on Valley County roads by 2030. Map 2 shows the projected average daily peak and non-peak seasonal traffic volumes across Valley County.



#### **ROAD FUNCTIONAL CLASSIFICATION**

Functional classification is the process of classifying roads into different classes according to the character of service they are intended to provide. To classify roads, it is necessary to understand travel behavior and traffic patterns between destination points.

Valley County has classified their roads into three basic categories: major collectors, minor collectors and local roads. State Highway 55 is the only arterial in Valley County. Arterials function to move through traffic and generally link counties and cities. They have limited access to adjacent land uses. Collectors are the connecting roadways in the Valley County road system. They generally move traffic from local roads to the arterials or other points of interest such as, local cities or serve farm to market trips. Local roads provide access to land uses and serve localized purposes such as providing access to residences and places of business.

#### Valley County Functional Classification

The Valley County road standards, adopted in July 2005, created a functional classification system in accordance with the Federal Highway Administration guidelines. As per the Valley County's Public Road Standards, "It shall be the prerogative of the Valley County Board of Commissioners to define the classification and level of maintenance for roads on the Valley County road system".

Roads classified as arterials and major collectors are eligible for federal-aid funds pursuant to Valley County submitting an application to the State. Federal-aid funds are not available to minor collectors and local roads, so the road classification is an important element in planning and funding of investment projects.

In February 2007, Valley County adopted an update to their Capital Improvement Program (CIP). This CIP includes a functional classification system for the Valley County road system. The following Table 9 lists the functional classification of major roads listed on the official ITD classification map as well as those included in Valley County's CIP.



Functional Classification	Road Name – Official ITD Classification	Road Name – Proposed in Valley County CIP
Regional/Principal Arterial	Idaho 55	Idaho 55
Major Collector	Warren Wagon Road	Warren Wagon Road
	Lick Creek Road (within McCall	Lick Creek Road (within McCall
	Impact Area)	Impact Area)
	West Roseberry Road	West Roseberry Road
	Norwood Road (Roseberry Road to Tamarack Falls Road)	East Roseberry Road
	Tamarack Falls Road	West Mountain Road
	West Mountain Road (Tamarack Falls Road to Tamarack Resort)	Warm Lake Road
	Warm Lake Road	Lakeshore Drive
	Lakeshore Drive	Old State Highway (Highway 55 to Loomis Drive)
		Elo Road
		Farm to Market Road
		Cabarton Road (between Cascade city limits and W. Mountain Road)
		Lake Fork Road (East of Highway 55)
		Paddy Flat Road
		Loomis Dr.
		Davis Creek Road
		Kantola Road
Minor Collector	East Roseberry Road	Old State Highway (South of Loomis Dr.)
	Farm to Market Road	Scheline Lane
	Smylie Lane	Smylie Lane
	West Mountain Road (Smylie Lane to Wisdom Road)	4 Lane
	Cabarton Road	Pearson Lane
	West Mountain Road (Tamarack Resort to Lake Shore Drive)	Samson Trail
	Heinrich Lane	Vista Point Blvd.
	Norwood Road (Heinrich Lane to McCall City Limits)	Clear Creek Road
	High Valley Road	Bacon Creek Road
	Old State Road	Dawn Drive

### **Table 9: Valley County Roads Functional Classification**



**Road Functional Classification** 

	Round Valley Road
	Durham Lane
	Gold Dust Road
	Goode Lane
	Heinrich Lane
	Herrick Lane
	Lake Fork (West of Highway 55)
	Lake Trail
	Lick Creek Road (outside McCall Impact Area)
	Mission Street
	Norwood Road
	Sixty Lane
	Smalley Road
	Spring Valley Road
	Tamarack Falls Road

Table 9 shows the road names and the corresponding functional classification obtained from the 2010 Rural Functional Classification Map prepared by ITD, and the proposed functional classification for the 2008 update of the CIP developed by Valley County. Map 3 shows Valley County's proposed road functional classification system.

# Minimum Right-of-Way Requirements

According to Valley County's Public Road Standards, Valley County has adopted standards for minimum right of way widths for different classes of roads. Table 10 shows the minimum right of way width requirements for roads in Valley County.



Functional Classification	Right-of-way Width
Major Collector	100 ft
Minor Collector	70 ft
Local Road	70 ft

#### Table 10: Minimum Right-of-Way Requirements

Valley County requires all new public roads to meet these standards before Valley County will accept a road into their system for maintenance. In addition, Valley County has adopted minimum standards for private roads. As per the Valley County Minimum Standards for Private Roads, "the minimum private right-of-way width for a private local road is 70 feet". Valley County reviews all private roads and modifications to the existing roads in Valley County before accepting them into their road system. Valley County's Road Standards addressing public and private roads are available from the Valley County Road and Bridge Department.



### STATE HIGHWAY 55 ALTERNATE ROUTES AND FUTURE FACILITIES

#### **Projected Daily Traffic on State Highway 55**

The average daily traffic volume on State Highway 55 was projected based on the Valley County growth rate obtained from the growth workshop held in April 2006, and the existing transportation system. The current average daily traffic volumes on State Highway 55 at various locations within Valley County were obtained from ITD. Major capital investment projects such as road connections, bridge construction, road widening, alternate routes, and major road construction parallel to State Highway 55 etc., were not considered in the traffic projection process. The following Table 11 illustrates the projected non-peak seasonal average daily traffic.

	Old State Hwy									
	(Case	cade)	Kantol	a Lane	Roseb	erry Rd.	Lake F	ork Rd.	Elo I	Road
	Non-		Non-		Non-		Non-		Non-	
Year	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak	Peak
2006	6,000	9,120	4,300	6,536	3,100	4,712	4,700	7,144	6,700	10,184
2007	6,278	9,543	4,500	6,839	3,244	4,931	4,918	7,476	7,011	10,657
2010	7,194	10,935	5,156	7,837	3,717	5,650	5,636	8,566	8,034	12,211
2015	9,027	13,721	6,469	9,833	4,664	7,089	7,071	10,748	10,080	15,322
2020	11,326	17,216	8,117	12,338	5,852	8,895	8,872	13,486	12,648	19,225
2025	14,211	21,602	10,185	15,481	7,343	11,161	11,132	16,921	15,870	24,122
2030	17,831	27,104	12,779	19,425	9,213	14,004	13,968	21,232	19,912	30,267

Table 11: Projecte	d Non-Peak and	Peak Seasonal	ADT on	State Highway	55
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The peak seasonal average daily traffic was obtained by multiplying the non-peak seasonal average daily traffic with the seasonal variation factor, 1.52, which was derived in the earlier section.

#### Alternate State Highway 55 Planning

State Highway 55 is a National Scenic Byway running north-south connecting six communities between Eagle and New Meadows. Currently, State Highway 55 runs through the downtown area of the cities of Cascade, Donnelly, and McCall. Due to rapid growth in Valley County it is necessary to plan alternate routes around the Cities of Cascade, Donnelly, and McCall. The Idaho Transportation Department has long range plans for two alternate routes and one reroute for State Highway 55 in Valley County. The following discussion



illustrates different alternatives for the State Highway 55 alternate route, for the three major cities.

### State Highway 55 Alternate Route for Cascade

Alternative locations were identified in this plan for the bypass route for State Highway 55, around the City of Cascade. Map 4 shows three feasible alternate route locations.

# State Highway 55 Alternate Route for Donnelly

The City of Donnelly has addressed an alternate route in their Master Transportation Plan. Several locations for the alternate route were identified in the plan and pros and cons were discussed in the Master Transportation Plan. Map 5 shows the State Highway 55 alternate route adopted in Donnelly's Transportation Plan.

# State Highway 55 Alternate Route for McCall

The City of McCall has identified an alternate route from Four Corners to Lardos. The City has made improvements to Deinhard Road, which serves to by-pass the downtown and lake front area. The McCall alternate route has been studied by ITD, Key Number 00688, and a No-Build option was selected in 2007. Map 4 shows potential State Highway 55 alternate route corridors around McCall.

# Smiths Ferry Alternate Route

A reroute of State Highway 55 in the Smith's Ferry area is being studied by ITD, Key Number 01004. Currently, an environmental impact statement is being developed by ITD. The seven-mile stretch of Idaho 55 from south of Smiths Ferry to Round Valley is a narrow, winding highway. The area often experiences congestion during holidays and weekends. The narrow shoulders and tight curves contribute to an accident rate that is 1.5 times higher than the statewide average. The purpose of the Idaho 55 – Smiths Ferry to Round Valley Alignment Study is to find an alternative which will best improve safety, address congestion, and accommodate future traffic [10].



Valley County identified an alternate route around McCall to reduce traffic congestion in the city limits of McCall. A potential corridor, running south of Cascade and parallel to State Highway 55, was identified that could eventually connect to Tamarack along the west side of Lake Cascade.

Advantages of the proposed alternate State Highway 55 routes:

- > Reduces congestion in downtown corridor in three cities.
- > Enhances safety to pedestrians.
- Reduces through and truck traffic through the Central Business District of three cities.
- > Increases mobility and speed of through traffic.
- Reduces travel time between Cascade and New Meadows and as a result decreases total travel time for commuters.
- Encourages commercial developments along the corridor and as a result increases Valley County's economy.

# <u>West Mountain Road Realignment</u>

West Mountain Road runs north-south between the City of McCall's Impact Area and south of Cascade Lake. This road runs along the shoreline of Cascade Lake on the west side. With the growth along W. Mountain Road, there is potential for realignment of unpaved road sections of W. Mountain Road from south of McCall's Impact Area to the south end of Lake Cascade.

Proposed connectors between W. Mountain Road and State Highway 55 are located north of Cascade and Donnelly. Map 4 shows the potential corridors for State Highway 55 alternate routes in and around the cities of McCall, Donnelly, Cascade, Smiths Ferry and also other potential corridors for future Valley County roads.



### **Connecting Idaho Projects and GARVEE Program**

In 2005, governor Kempthorne proposed a bold new funding plan, called GARVEE, to implement his vision of a major roadway system called Connecting Idaho. The following description is obtained from the ITD website [15].

"The GARVEE Transportation Program is a new funding program that allows Idaho to plan, design and build more highway projects in less time than through traditional transportation funding methods. It uses Grant Anticipation Revenue Vehicle (GARVEE) bonds to fund critical improvements in six transportation corridors throughout the state.

In November 2006, the Idaho Transportation Board recommended \$998 million in GARVEE bonds to be brought to the Idaho Legislature. The \$998 million will be approved in installments of approximately \$200 million. The first \$200 million was approved in the 2006 legislative session. During the 2007 session, the Legislature approved an additional \$250 million in bonds [15]". The Emmett to Mesa connection has not been funded in the 2006 and 2007 legislative sessions.

Valley County supports the Connecting Idaho plan to improve access to Valley County from the west via the proposed Indian Valley highway. The proposed Indian Valley highway connects between Emmett and New Meadows running through the Indian Valley near Mesa.



The following figure shows the transportation projects included in the GARVEE Program.



### Figure 7: Connecting Idaho Projects

Further information on the GARVEE Transportation Program can be obtained from the ITD website: http://connectingidahopartners.com/



#### **ROAD RATINGS AND PAVEMENT MANAGEMENT SYSTEM**

#### **Road Ratings**

Currently, Valley County maintains 778.93 miles of roads, of these roads 232.62 miles are paved roads and 546.31 miles are gravel roads. Each road maintained by the Valley County Road and Bridge Department, included in the inventory survey, is rated numerically. Poor road surface conditions result in delays and loss of comfort to the user. Each road condition attribute in the data dictionary is assigned a numeric value. Existing (2006) surface condition ratings for paved and gravel roads are determined using these values.

The future 2030 CIP Ratings are also included in Table 12. The CIP Ratings were derived for the year 2030 road capacity based on projected traffic volumes provided in Chapter 3. In addition to the existing surface conditions, CIP Ratings include width and base course adequacy considerations. For example, if a road is classified as a proposed collector and the current width is 24 feet wide with inadequate base, then the surface condition is multiplied by the existing width, divided by the future structural width for width consideration, and then multiplied by a factor of 0.35, for inadequate base. If a road currently has inadequate width but has adequate base then the surface condition is multiplied by the future structural width for width, divided by the future structural width for width, and then multiplied by 1.0 for adequate base. The structural width for Major Collectors, Minor Collectors, and Local Roads was taken from Valley County Road Standard Drawings. An inventory of roads with adequate base was provided by Valley County. For additional information about the CIP Program refer to Chapter 8. The following figure illustrates the graphical representation and description of the 2030 CIP Ratings.

FUTURE CIP	RATING	DESCRIPTION
71 – 100	GOOD	Good Base with adequate road width as per Valley County Road Standards.
36 - 70	FAIR	Good Base with inadequate road width, not meeting County road standards, to carry 2030 traffic.
0 – 35	POOR	Poor Base with inadequate road width, not meeting County road standards, to carry 2030 traffic.

Figure 8: Future 2030 CIP Ratings



#### **Paved Road Surface Condition Assessment**

The paved road surface condition can be assessed by calculating a numerical score or index between 0 (worst) and 100 (best) based on the visible pavement distress, which is called the Pavement Condition Index (PCI). Road ratings were determined using a weighted average of the individual road segment condition. The PCI values assigned were based on the following 3 surface distress conditions:

- 1. Surface cracking
- 2. Surface distortion
- 3. Surface disintegration

SURFACE PCI	RATING	DESCRIPTION
100	EXCELLENT	New road surface with smooth driving conditions.
95	VERY GOOD	Road surface with smooth driving conditions, no loss of speed and comfort.
80	GOOD	Road surface with rough driving surface, potential loss of speed and comfort occasionally and minor safety hazards.
65	FAIR	Road surface suitable for driving with reduction in speed and driving comfort, and occasional safety hazards.
45	POOR	Road surface suitable for driving passenger vehicles. Significant reduction in speed due to potholes and other distress, potential damage to vehicles and safety hazard conditions.
25	VERY POOR	Road surface not suitable for driving passenger cars. Potential damage to vehicles and safety hazard.
10	FAILED	Road surface not suitable for driving. Road Closed condition.
0		

Figure 9: PCI Scale and Existing Surface Condition Rating

The above figure shows the graphical representation of the PCI and pavement condition rating. This figure provides an idea of the paved road surface and base course condition with respect to PCI. The following Table 12 lists the weighted average of current surface condition ratings for paved and unpaved roads based on a survey conducted in the summer of



2006 and future (2030) CIP ratings in Valley County. The surface condition for gravel roads can be assessed by calculating a numerical index ranging from 0 to 100 based on visible surface condition, drainage, grade, and dust control. Gravel road ratings were determined based on the following parameters:

- Gravel Surface Type
- Surface Condition like Washboards, Loose Aggregate, Potholes, and Rutting
- Gravel Surface Width

Gravel road ratings change frequently throughout the year based on traffic volume and the last date of maintenance (grading). Maps showing current surface condition PCI ratings for paved and unpaved roads are provided in Maps 6 and 7, respectively.

	Surface	Road Length	<b>Current Surface</b>	Future CIP
Road Name	Туре	(Feet)	Rating	Rating
ADAMS CIRCLE	Paved	5112	93	60
ALDER WAY	Gravel	3568	91	25
ALPHA LN	Gravel	5445	89	20
ALTA VISTA DR	Paved	4538	88	56
ANGUS LN	Gravel	3161	90	21
ASHTON LN	Paved	7401	77	20
ATKIN LN	Gravel	1074	85	20
AURORA LN	Paved	1471	77	17
AXLE RD	Gravel	686	92	25
BACON CREEK RD	Gravel	12727	66	18
BADGERHOLLOW RD	Gravel	1722	89	15
BAKEN CREEK RD	Gravel	51	90	28
BARBER CT	Gravel	494	90	20
BARKER LN	Paved	4173	93	73
BARKER LN	Gravel	14603	84	24
BARKER LP	Paved	3225	93	27
BEAR WALLOW RD	Gravel	886	90	16
BEAVERLY GLENN DR	Gravel	487	70	11
BEVERLY RD	Paved	865	93	67
BIG PINE DR	Gravel	2072	70	14
BILLIE RD	Paved	113	47	7
BILLIE RD	Gravel	725	86	14
BIRCH LN	Gravel	1094	91	23
BLACK PINE PL	Gravel	429	90	16
BLACK PINE RD	Gravel	2947	72	12
BLUE JAY DR	Gravel	1160	90	23
BLUE SPRUCE CT	Gravel	1061	92	23

#### **Table 12: Valley County Roads Rating**





	Surface	Road Length	<b>Current Surface</b>	<b>Future CIP</b>
Road Name	Туре	(Feet)	Rating	Rating
BLUE SPRUCE CUL	Gravel	327	85	21
BLUE SPRUCE LN	Gravel	1654	90	23
BLUE SPRUCE PL	Gravel	1061	90	17
BOULDER LAKE RD	Paved	5061	77	60
BOULDER LAKE RD	Gravel	512	90	17
BOULDER PL	Gravel	1270	90	18
BROOK DR	Paved	2139	88	24
BROOKDALE DR	Gravel	953	90	23
BROOKDALE RD	Gravel	4196	90	23
BROOKIE RD	Paved	2804	93	80
BUCKCAMP LN	Gravel	727	84	13
BULL PINE PL	Gravel	171	85	16
BURR DR	Paved	1833	93	67
BUTTERCUP LN	Gravel	914	62	16
CABARTON RD	Paved	25508	74	14
CABARTON RD	Gravel	15331	84	18
CAMAS LN	Gravel	1180	75	19
CAMERON DR	Gravel	2270	90	23
CAREFREE LN	Paved	3888	73	48
CAREFREE LN	Gravel	1072	80	18
CASCADE DR	Paved	1710	62	17
CASCADE DR	Gravel	2946	83	22
CASEY LN	Gravel	1101	90	20
CHAD DR	Paved	3884	93	87
CHAD LOOP	Paved	1712	93	29
CHARLEY LN	Paved	586	67	15
CHRIS LN	Paved	330	93	28
CHUCK WAGON PL	Gravel	642	90	23
CHUCK WAGON RD	Gravel	1988	92	23
CINDY CT	Paved	335	88	69
CINDY LN	Paved	1580	93	73
CIRCLE VIEW LN	Paved	918	93	67
CLEAR CREEK RD	Paved	10025	84	21
CLEAR CREEK RD	Gravel	2995	85	19
CLEAR VIEW RD	Paved	2259	93	67
CLUB HILL BLVD	Paved	3356	93	73
COHO LN	Paved	4379	93	85
COMFORT RD	Paved	2657	77	17
CONECT	Gravel	1121	90	18
CORRAL CREEK RD	Gravel	5527	88	20
COTTONTAIL CT	Paved	203	93	60
COUNTRY WAY	Paved	5414	69	17
COY RD	Paved	2783	75	22
COYOTE TR	Paved	3474	93	26
CRESCENT RIM DR	Gravel	2781	91	20
CROWN POINT PKWY	Paved	2703	71	16



	Surface	Road Length	<b>Current Surface</b>	<b>Future CIP</b>
Road Name	Туре	(Feet)	Rating	Rating
CROWN POINT PKWY	Gravel	21319	88	14
CRYSTAL CT	Gravel	308	65	16
CURRENT DR	Paved	873	93	26
CUTOFF RD	Gravel	1412	85	16
DAVIS CREEK RD	Paved	12474	78	15
DAWN DR	Paved	16830	77	18
DAYSTAR LN	Paved	8884	86	21
DE LAYNE RD	Paved	843	93	21
DEERFIELD RD	Gravel	967	85	19
DRY BUCK RD	Gravel	10712	90	19
DUNCANS LN	Gravel	1381	80	12
DURHAM LN	Paved	3225	76	21
DURHAM LN	Gravel	341	64	8
DUTCH OVEN LN	Gravel	896	86	22
EAST 4 LN	Paved	1349	71	18
EAST LAKE FORK RD	Paved	9618	89	56
EAST PROSPECTOR DR	Gravel	1880	85	21
EAST ROSEBERRY RD	Paved	8067	80	14
EAST ROSEBERRY RD	Gravel	4590	90	18
EASTSIDE DR	Paved	11745	77	21
EASTSIDE DR	Gravel	22008	88	19
EASY STREET	Paved	5193	85	61
EASY STREET	Gravel	1407	81	18
EDDY CIRCLE	Paved	1215	80	22
EDWARDS LN	Paved	1771	93	83
EID LN	Gravel	1000	75	17
ELLIS RD	Gravel	1235	90	18
ELO RD	Paved	11158	74	53
ESTATE DR	Gravel	1821	88	18
FAIRBROTHER LN	Gravel	13500	85	17
FARM TO MARKET RD	Paved	63080	75	17
FINLANDIA RD	Gravel	6042	95	25
FINN CHURCH LN	Paved	4071	77	19
FINN CHURCH LN	Gravel	6779	90	25
FLAT CREEK RD	Gravel	138	85	15
FLICKER RD	Paved	1566	93	60
FOREST LAKE CR	Paved	4204	93	60
FOREST PL	Paved	2335	93	60
FOUR SEASONS DR	Gravel	2266	89	15
FRANKLIN RD	Paved	2598	93	21
GAIL-ALAN RD	Paved	2618	81	18
GAMANN DR	Gravel	2692	65	20
GARDEN LN	Gravel	3501	95	27
GARRETT LN	Gravel	1880	65	20
GATFIELD RD	Gravel	5295	65	16
GESTRIN RD	Gravel	1528	90	20



	Surface	Road Length	<b>Current Surface</b>	Future CIP
Road Name	Туре	(Feet)	Rating	Rating
GOLD FORK RD	Gravel	21223	88	19
GOLDDUST RD	Paved	7820	90	28
GOLDDUST RD	Gravel	2286	91	21
GOLDFORK RD	Gravel	12474	90	18
GOODIE LN	Paved	1636	93	67
GOODIE LN	Gravel	2803	90	20
GOSLIN LOOP	Gravel	9930	88	22
GRAND FIR DR	Paved	2678	93	80
GRAND VIEW RD	Gravel	2119	87	20
GRASSY PL	Gravel	600	76	27
GRAY LN	Gravel	15750	65	20
GUN HILL RD	Paved	324	93	23
HAMAKER PL	Paved	1699	93	26
HAMILTON RD	Paved	337	93	21
HANCOCK RD	Paved	2228	93	21
HARTLEY RD	Gravel	1252	85	19
HASBROUCK LN	Gravel	5806	87	18
HEATH PL	Gravel	1368	75	25
HEIGHT LOOP	Gravel	2662	85	16
HEIKKILA LN	Paved	136	83	19
HEIKKLA LN	Gravel	4883	89	20
HEINRICH LN	Paved	10469	77	19
HEINRICH LN	Gravel	3685	85	19
HEREFORD PL	Gravel	152	90	19
HEREFORD RD	Paved	8155	60	15
HEREFORD RD	Gravel	2564	84	19
HERRICK LN	Gravel	7989	63	19
HIGH VALLEY RD	Gravel	60792	82	20
HILL HOUSE LOOP	Paved	4922	77	17
HOGUE HOLLOW DR	Gravel	3566	85	21
HOLMES CEMETERY RD	Gravel	2908	88	16
HORIZON VIEW RD	Paved	835	93	23
HORSETHIEF RD	Gravel	13905	88	18
HUCKLEBERRY PL	Paved	421	93	60
JACK PINE PL	Gravel	916	85	16
JACKS LN	Gravel	3449	92	26
JEFFERSON RD	Paved	3974	84	17
JOHNSON LN	Paved	3974	93	25
JOHNSON LN	Gravel	847	72	14
JUGHANDLE DR	Paved	6919	93	60
JUGHANDLE PLACE	Paved	813	93	53
KANTOLA LN	Paved	3840	63	15
KNIGHTS RD	Paved	3816	86	62
KNOB HILL DR	Paved	3137	76	17
KNOB HILL DR	Gravel	1616	81	18
KOKANEE DR	Paved	2254	93	80



	Surface	Road Length	<b>Current Surface</b>	<b>Future CIP</b>
Road Name	Туре	(Feet)	Rating	Rating
KOKANEE DR	Gravel	1680	80	26
KOSKELLA RD	Paved	1279	93	67
KOSKELLA RD	Gravel	9759	88	19
KRAHN LN	Paved	2049	77	49
LAKE TRAIL CT	Gravel	320	90	23
LAKE TRAIL DR	Paved	3223	53	13
LAKE TRAIL DR	Gravel	983	92	23
LAKESHORE DR	Paved	15742	79	53
LANDALE LN	Gravel	2517	85	21
LANHAM RD	Gravel	1311	85	19
LELAND DR	Paved	3012	93	80
LICK CREEK RD	Paved	25111	76	12
LICK CREEK RD	Gravel	17581	80	9
LINDA LN	Paved	917	93	21
LITTLE PEARSOL RD	Gravel	6274	87	18
LLOYD CT	Gravel	1645	83	20
LODGEPOLE LN	Gravel	1614	84	23
LONE PINE	Gravel	1606	86	17
LONE TREE RD	Gravel	826	70	14
LONGHORN WAY	Gravel	1064	62	8
LOOMIS RD	Paved	8255	77	15
LOST BASIN RD	Gravel	6098	85	17
MAKILN	Gravel	18758	82	18
MARGOT DR	Paved	1515	93	19
MATHWIG RD	Gravel	2394	89	22
MCLEOD LN	Paved	2212	89	69
MEADOW PL	Gravel	1049	90	32
MEADOW VIEW DR	Gravel	1422	90	20
MEADOWS RD	Paved	2378	71	18
MESA CT	Gravel	860	90	23
MESA LN	Gravel	1237	90	23
MINERS CT	Gravel	1670	82	20
MISSION ST	Paved	6307	75	65
MOON DR	Paved	3643	87	23
MOONBEAM CIR	Paved	1022	93	26
MOONRIDGE DR	Paved	12759	82	24
MORNING DR	Paved	471	67	15
NASI LN	Gravel	9273	89	22
NEWELL CT	Gravel	646	90	27
NEWELL DR	Gravel	1692	88	23
NISULA PL	Gravel	877	85	19
NISULA RD	Gravel	41818	88	25
NO BUSINESS RD	Gravel	6265	68	17
NO NAME	Paved	411	93	26
NO NAME 2	Paved	1263	93	26
NORTH LAKE LN	Gravel	3986	86	19



	Surface	Road Length	<b>Current Surface</b>	Future CIP
Road Name	Туре	(Feet)	Rating	Rating
NORTHWIND RD	Gravel	1748	90	21
NORWOOD RD	Paved	29604	84	18
NORWOOD RD	Gravel	35088	85	20
NUGGET DR	Gravel	2309	85	19
OLD STATE HWY	Paved	18312	53	12
OLD STATE RD	Paved	11727	66	13
ONE ELEVEN WAY	Gravel	927	65	10
ORA LN	Paved	698	93	19
PACK SADDLE RD	Gravel	2635	65	18
PADDY FLAT RD	Paved	7818	77	47
PADDY FLAT RD	Gravel	20309	83	15
PANORAMA DR	Gravel	3324	87	20
PAUL BUNYAN RD	Gravel	352	90	17
PEARSON DR	Paved	2789	77	17
PEARSON LN	Paved	6439	71	17
PELICAN PL	Gravel	841	90	14
PERCH CT	Paved	975	93	80
PINE CONE LN	Gravel	3567	88	21
PINE NUT	Gravel	1662	89	20
PINE RIDGE DR	Gravel	2759	89	15
PINE TERRACE DR	Gravel	1632	87	23
PIONEER RD	Paved	2709	81	20
PLANT LN	Paved	916	93	21
PLANTATION CT	Paved	391	93	33
PLEASANT ACRES DR	Gravel	4960	90	20
POINTE AT GOLDFORK CT	Paved	1534	93	29
POLECATRIDGE RD	Gravel	2738	89	20
PONDEROSA DR	Paved	2740	93	19
PONDEROSA LN	Gravel	4400	89	18
POTTER LN	Gravel	8023	87	19
RAINBOW RD	Paved	1270	93	80
RED FIR DR	Paved	1385	93	31
RED FIR RD	Paved	222	93	28
REDFOX CT	Gravel	1706	85	19
REDFOX DR	Gravel	1943	85	17
RENO VISTA LN	Gravel	1617	60	13
RIDGE DR	Paved	1783	77	19
RIDGE ROAD	Paved	3059	93	80
RIDGE VIEW DR	Gravel	425	90	32
RISING LN	Gravel	1387	75	19
ROBBIN DR	Gravel	901	90	11
ROGERS LN	Paved	4075	80	18
ROUND VALLEY RD	Paved	211	77	17
ROUND VALLEY RD	Gravel	10262	79	24
RUSTIC RD	Gravel	2743	95	24
S.CLUB HILL BLVD	Paved	6747	93	73



	Surface	Road Length	<b>Current Surface</b>	Future CIP
Road Name	Туре	(Feet)	Rating	Rating
SAGE CT	Paved	381	67	15
SALMON LP	Paved	234	93	80
SALMON LP	Gravel	1474	83	25
SAMSON TRAIL	Paved	12074	65	16
SANDHILL LN	Paved	930	93	21
SANDY DR	Paved	3322	93	21
SCHELINE LN	Paved	8197	78	17
SHADOW TRAIL	Paved	2325	93	22
SHELIA LN	Paved	186	67	48
SHIMMERING COVE LN	Gravel	1347	88	26
SHORE DRIVE	Gravel	4581	84	15
SHORTHORN WAY	Gravel	846	71	10
SILVERFOX TRAIL	Paved	8128	93	60
SINGLE TREE LN	Gravel	640	90	25
SISCRA RD	Paved	1466	93	28
SISCRA RD	Gravel	3936	80	16
SIXTY LN	Gravel	12312	64	17
SKAIN RD	Gravel	625	90	23
SKUNK CREEK RD	Gravel	22540	80	21
SMALLEY RD	Paved	290	60	15
SMALLEY RD	Gravel	5826	90	21
SMITH FERRY DR	Gravel	16712	76	20
SMITHS FERRY DR	Paved	964	77	20
SMOKY DR	Paved	1090	93	72
SMOKY DR	Gravel	1582	82	21
SMYLIE LN	Gravel	22118	83	21
SOUTH ELD LN	Gravel	3081	79	18
SPINK LN	Paved	9617	93	78
SPINK LN	Gravel	8349	77	22
SPOOR RD	Gravel	5673	65	16
SPRING VALLEY RD	Paved	3510	71	18
SPRING VALLEY RD	Gravel	596	95	24
SPRINGFIELD CT	Paved	768	93	26
STIRRUP LN	Gravel	821	65	18
STOCKTON CT	Gravel	561	90	18
STOCKTON DR	Gravel	1861	90	20
STONE BRAKER LN	Paved	6763	93	23
STONE LANE	Paved	356	73	14
STONE LANE	Gravel	637	80	15
SUE DR	Paved	1084	85	23
SUN VALLEY PL	Gravel	1284	85	26
SUNDANCE DR	Paved	6742	93	23
SUNSET LOOP	Gravel	4185	89	12
SYRINGA RD	Gravel	1267	77	19
TAMARACK FALLS	Paved	4999	90	24
TAMARACK FALLS	Gravel	3464	81	20



THUNDER CITY RD	Gravel	10528	91	21
THUNDERCITY RD	Gravel	5173	90	20
TIMBER RIDGE CT	Gravel	980	85	17
TITUS LN	Gravel	5235	88	26
TRAMMELL RD	Gravel	1382	90	17
TUCKER RD	Gravel	361	90	20
TWIN VIEW RD	Gravel	2611	87	21
UPLAND RD	Gravel	1483	90	29
VALLEY RIM RD	Paved	3573	93	78
VALLEY VIEW LN	Paved	2234	93	77
VIEW DR	Gravel	1710	87	13
VISTA POINT BLVD	Paved	134	93	20
VISTA POINT BLVD	Gravel	5040	90	20
WAGON WHEEL LN	Paved	47	77	23
WAGON WHEEL LN	Gravel	2135	84	23
WALLACE LN	Gravel	4277	77	15
WARM LAKE RD	Paved	38054	84	53
WARREN WAGON RD	Paved	113669	89	21
WEANT LANE	Gravel	2795	82	19
WEST 4 LN	Paved	3956	72	18
WEST LAKE FORK RD	Paved	13614	66	14
WEST LAKEFORK RD	Gravel	4031	70	11
WEST MOUNTAIN RD	Paved	59895	85	59
WEST MOUNTAIN RD	Gravel	135607	87	17
WEST PROSPECTOR DR	Gravel	9975	85	22
WEST ROSEBERRY RD	Paved	9105	68	17
WEST ROSEBERRY RD	Gravel	3301	82	14
WEST VALLEY RD	Paved	1230	77	23
WEST VIEW RD	Gravel	1083	90	17
WEST WOOD DR	Gravel	1698	72	11
WESTWIND LN	Gravel	2684	85	21
WHITE FIR LP	Paved	1411	93	28
WHITEBARK RD	Gravel	1378	90	20
WHITEFOOT LN	Paved	915	77	19
WILDERNESS LAKE RD	Gravel	2363	70	19
WILDWOOD DR	Paved	1679	67	17
WILDWOOD DR	Gravel	3341	90	24
WILLEY LN	Gravel	2667	88	21
WILLIAMS RD	Gravel	3772	88	22
WILLOW RD	Gravel	1301	95	24
WILLOW WAY	Paved	1501	93	26
WISDOM RD	Paved	1317	80	24
WITHERS LN	Gravel	1336	90	14
WOODPECKER PL	Paved	563	93	60
WRANGLER RD	Paved	2349	93	21
YENSEN RD	Gravel	711	75	4
ZOON LN	Paved	1770	93	26



It should be noted that the ratings provided in the above table are from the road inventory survey conducted in the summer of 2006. The road inventory survey does not include all Valley County roads; hence the table does not show the roads built after the survey was done. Valley County should update the road inventory periodically and add new roads to the list.

### Pavement Management System

Pavements deteriorate over time due to traffic and environment. It is necessary to know how and when to resurface or apply other treatments to Valley County roads to maintain the pavement at a serviceable level and keep operating costs to a minimum. The purpose of a pavement management system is to provide assistance in making cost-effective decisions related to pavements.

The following is a brief description of the pavement management system, taken from the Pavement Management Guide, November 2001, published by the American Association of State Highway and Transportation Officials (AASHTO).

"A pavement management system (PMS) is a set of tools or methods that assist decision-makers in finding optimum strategies for providing, evaluating, and maintaining pavements in a serviceable condition over a period of time" [13].

An effective PMS can help Valley County to:

- maintain up-to-date information of Valley County roads and traffic control devices,
- employ cost-effective treatment strategies,
- allocate funds for road surface treatment and rehabilitation and make decisions on funding strategies, and
- enhance the quality and performance of Valley County roads.



Valley County Road and Bridge Department has a well staffed and equipped maintenance department to maintain Valley County roads at an acceptable level of service. In this project, a brief version of PMS is introduced and suggested to Valley County, called Surface Management Plan (SMP). SMP was developed based on the similar principles of an effective PMS. This SMP helps Valley County to maintain roads in a timely manner to minimize the life cycle costs and derive a maximum long-term benefit from the capital expenditure.

#### **Surface Management Plan**

The Surface Management Plan (SMP) is a set of tools or methods that can assist decisionmakers in finding cost effective strategies for providing, evaluating, and maintaining road surfaces in a serviceable condition. The proposed SMP consists of five (5) primary elements. These elements are flexible and may be tailored to Valley County's specific needs.

The following are the five (5) detail elements in the SMP:

- 1. Road Inventory and Database
- 2. Road Surface Condition Assessment
- 3. Prioritize Projects and Maintenance Techniques
- 4. Schedule and Funding
- 5. Documentation

A detailed description of the above elements is provided in the following sections.

# Road Inventory and Database

A road inventory survey includes visual inspection of surface type (paved and unpaved) and condition, pavement width, drainage characteristics, location of traffic control devices like sign posts, speed signs, etc., and location of culverts. A database can be developed from the road inventory survey.

A road inventory survey was conducted in Valley County using automated GPS equipment during the summer of 2006 and a database was set up to allow for frequent updates. Unit cost of materials, repair, and maintenance can be included in the database in the future.



These costs can be directly placed into the Valley County's Road and Bridge Department maintenance budget. The costs should be updated regularly to account for any variations from year-to-year and to reflect actual unit costs that Valley County has historically encountered. The GIS component of this project includes a road inventory and surface condition assessment. This information is vital in developing budgets for operation and maintenance of Valley County roads.

### **Road Surface Condition Assessment**

The road surface condition can be assessed from a survey based on severity and extent relative to the surface distress and disintegration. To assess the condition of a pavement structure, extensive data collection and a survey, such as base and sub-base exploration is necessary. As explained earlier, a numerical score or index between 0 and 100 can be assigned to the road surface based on the visible road surface distress. The numerical ratings of treated or rehabilitated roads in the database should be updated as and when road surface treatments are applied.

As discussed earlier, roads deteriorate over time due to traffic, environment, and weather condition. Pavements tend to deteriorate slowly during the first few years after construction and very rapidly when they are aged. The aged pavement without any treatments tends to fail quickly. Therefore, certain treatments and maintenance techniques should be adopted to rejuvenate the pavement life.



The following Figure 10 shows the curves of pavement deterioration with age, without any maintenance and with maintenance.



Figure 10: Pavement Condition vs. Age

The above figure allows the reader to visualize the life cycle of asphalt pavement with and without maintenance. With the proper construction and maintenance, the PCI can be increased and as a result the life cycle of pavement may be extended. Providing proper maintenance extends the asphalt life thus reducing capital expenditures of reconstruction of the road sections. The T2 Center of Idaho recommends a pavement management program of maintaining good roads first, then improving poor roads as the budget allows. Valley County may also prioritize maintenance based on traffic volumes on roads.

# Prioritize Projects and Maintenance Techniques

Based on the pavement condition and the PCI values, Valley County should identify the road sections needing repair or treatment and determine the source of funding so that the road sections can be restored to the desired level of service. These sections should be prioritized



for funding. The goal of prioritization of projects is to provide the greatest benefit to the community for the funds expended on the project.

There are a large number of project prioritization approaches. A simple ranking procedure often ranks those road sections with the worst condition as the highest priority; however, this procedure is limited in the number of available parameters. Generally, pavements with poor PCI require substantial repair or treatment which requires significant funds to restore the roads to the desired level of serviceability. Hence, prioritization of projects should be done based on good engineering judgment and net positive impact on the community and drivers.

### Paved Roads Maintenance Techniques

Maintenance activities on asphalt surfaces preserve the existing pavement surface and prevent further deterioration. Maintenance activities can be divided into four separate categories (as presented in The Asphalt Handbook, Asphalt Institute, 1989):

• Routine maintenance – the day-to-day work that is necessary to preserve and keep a pavement as close to an as-constructed condition as possible. This may include crack sealing (annually), pothole patching (as soon as possible), and drainage maintenance (semi annually). This maintenance technique should be applied to pavements with the PCI ranging between 100 and not less than 30.

In addition to the above listed routine maintenance, other road maintenance work like pavement marking, upgrading traffic control devices (sign boards), re-grading borrow ditches for proper drainage etc., should be applied to all Valley County roads.

• Preventive maintenance - work which is done to prevent deterioration of a pavement, thus reducing the need for more substantial maintenance work. This may include drainage (road side) maintenance, and fog or chip seals (every 4 to 5 years). This maintenance technique should be applied to pavements with the PCI ranging between 85 and not less than 30.



• Major maintenance (rehabilitation) – work which is needed to restore a pavement to an acceptable serviceability condition. It includes surface treatments, surface recycling and thin overlays. This maintenance treatment should be applied to pavements when the PCI rating is less than 50.

• Reconstruction – work includes reconstruction of sub-base, base and asphalt surface to restore a pavement to its as-constructed condition. This maintenance technique should be applied to pavements with the PCI less than 30.

PCI	Mai	Maintenance Technique		
100		Routine Maintenance		
80		Preventive Maintenance		
50		Major Rehabilitation		
30 0		Reconstruction with Base Treatment		

Figure 11: Pavement Maintenance and PCI Rating

The above figure illustrates the range of PCI values that triggers different maintenance techniques for paved roads. The above figure is a general guide. A field investigation would always take precedence over these general guidelines.

# <u>Gravel Road Maintenance Techniques</u>

The majority of Valley County roads are improved (gravel) roads. The Valley County Road and Bridge Department maintains 546.31 miles of gravel roads. Currently, the Road and Bridge Department adopted maintenance techniques and implemented them as and when required. As per the Road Department staff, they repair major roadways and bus routes as and when deterioration occurs. Roads with negligible traffic require minimum maintenance and are repaired on an as needed basis. The following Table 13 lists six (6) types of gravel road distresses and the respective maintenance techniques which can be helpful to the Valley



County Road and Bridge Department Staff in maintaining gravel roads in good serviceability.

	Gravel Surface Distresses	Maintenance Technique
1	Improper cross-section	Reshape or Re-grade depending on the severity of the distress
2	Inadequate roadside drainage	Re-grade ditches and clean culverts regularly
3	Corrugation	Reshaping or Blading depending on severity
4	Potholes	Blading or Reconstruction depending on severity
5	Rutting	Removing or stabilize sub-grade and reconstruction
6	Loose Aggregate	Reshaping and additional fines to obtain the proper gradation for stability

 Table 13: Gravel Road Surface Distresses and Maintenance Technique

Items 1 and 2, listed in the above table, are drainage issues that may compromise the structural integrity of the road base. Items 4 and 5 are indications of an inadequate base. Items 3 and 6 are related to surface management and daily traffic volumes. When traffic volumes are large enough it becomes cost effective to pave the road. A good indicator of requiring pavement is frequent grading, due to poor wearing surface conditions. Placing pavement over inadequate base and/or poorly drained roads will provide a temporary fix but will result in potholes and cracking within a few years.

The following are recommendations and time frequency for maintenance techniques for gravel roads.

- The debris and excess vegetation like grass and weeds should be removed from the bottom of ditches and culverts at the beginning of every fall season.
- The ditches should be graded by removing excess silt and sand sediments and reestablishing longitudinal and side slopes at the beginning of every spring and fall seasons.





- Road cross slope and shoulder slopes should be inspected and graded as required and at a minimum of the beginning of spring and fall seasons.
- Repair and/or upgrade culverts depending on storm water demand and existing culvert capacity each fall season.

This information will be helpful to the Valley County Road and Bridge Department to select an appropriate treatment to retain or enhance the level of serviceability of paved and unpaved roads. Good maintenance practices will prolong the life of the wearing surface of gravel and paved roads and thus reduce the capital expenditure on Valley County roads.

### Schedule and Funding

The schedule for road surface maintenance is based on the available funds and project priority. The current Road and Bridge Budget sources come from the Craig-Wyden Bill, the Blue Line Map (dollars for each road mile), and gas tax. The current Craig-Wyden funds exceed three million dollars for Valley County each year. To date Valley County has not had to use property taxes to fund the maintenance of roads and bridges.

### **Documentation**

Valley County road maintenance work should be documented, including techniques used, cost of upkeep, and time required. An updated unit cost schedule for improvements should be developed and maintained, as it is critical for budget and future planning. The road inventory and road surface condition database should be updated annually.



#### **Recommendations to Valley County**

Based on the SMP principles, the following are the recommendations to Valley County to maintain Valley County roads in acceptable and serviceable condition.

- The GIS component of this project provides the current road surface condition and also a database was set up from the road inventory survey. This database should be updated when the roads, culverts, and sign boards are repaired.
- It is recommended to continue to update the unit cost schedule regularly to account for any variations from year-to-year and to reflect actual unit costs that Valley County has historically encountered. The updated unit costs should be included in the database to prepare Valley County's road maintenance budget.
- It is recommended to apply chip seal to Valley County paved road sections where the PCI rating falls less than 50 or every 5 years, whichever presides, subject to availability of funding.
- It is recommended to continue a program to set aside funds for routine maintenance work every year and to apply for State and/or Federal funds for major capital expenditure projects, which is currently being implemented by Valley County.



#### Asset Management

Recently, the AASHTO and the Federal Highway Administration conducted workshops and seminars to include asset management concepts in transportation agencies. The following is the definition taken from the AASHTO, which was used at the workshops:

"Asset management is a systematic process of maintaining, upgrading, and operating physical assets cost-effectively".

Asset management is a critical part of the Valley County management. Law requires that counties complete a GASB Statement No. 34 of all publicly own properties. The GIS inventory completed for this study provides Valley County with valuable information that allows the assets to be monitored annually with current updates of the data base. Based on the value of right-of-way, replacement cost, standard life cycle of asphalt pavements (depreciation), and current surface conditions, the value of the road system may be calculated. An asset valuation report may be generated from the GIS data base.



#### PUBLIC TRANSPORTATION AND PEDESTRIAN PATHWAYS

#### **Public Transportation**

Public transit in Valley County is limited. Treasure Valley Transit, based in Nampa, operates a bus service in Valley County called the Valley County Connections service. The operation



hours are from 6:15 AM to 6:05 PM. The route begins at the McCall City Hall with stops at Ridley's (McCall), LakeFork Merc., Roseberry Plaza in Donnelly, Cascade's Ashley Inn, and Harpo's in Cascade. The route will then reverse, beginning at Cascade's Harpo's at 7:15. The bus schedule can be obtained from the Treasure Valley Transit

website at the following website address: http://www.treasurevalleytransit.com/schedules.htm.

The other transit services available in Valley County are as follows:

- 1. Transit service operated by Tamarack Resort. They provide services connecting Cascade, Donnelly, Lake Fork, Resort, and the McCall area.
- 2. Senior Citizen Centers in McCall and Cascade provide service for senior citizens within the area.

Valley Adams Planning Partnership (VAPP) in association with Idaho Transportation Department and rural transit consultant Amy Ostrander prepared an outline for a regional transit system covering Valley and Adam counties. Ostrander Consulting Inc. prepared a report evaluating the transit needs in both counties and identifying the viable integrated transit alternatives throughout the region. The report is available for review at the following website address: <u>http://community.idaho.gov/VAPP/tabid/481/Default.aspx</u>.



The key findings of the study are as follows [3]:

- The potential for developing transit alternatives for residents, workers, and visitors to Valley and Adams County is excellent.
- > Need for general public estimated at 30,900 annual trips.
- ▶ Work Trips estimated at 62,100 annual trips.
- > Total demand of 93,000 passenger trips per year.
- > Current service provides approximately 36% of the total demand
- Three short-term opportunities to expand transit service in the study area have been identified: 1) coordinate current services between Cascade/Tamarack/McCall and the local service provided by TVT in McCall; 2) continue coordinated services in Valley County and partner with TVT to expand this service to Adams County; 3) increase service to the City of McCall.
- McCall, Cascade, Donnelly, New Meadows, Adams and Valley counties, and Tamarack are at a critical decision point in terms of planning for transit and developing local partnerships. They must act promptly in order to capture the necessary rural funds; delaying action will allow other projects to develop statewide and compete for un-obligated rural funds.
- Possible Funding Sources:
  - FTA Section 5311 Rural General Public Transit Funding Program
- Match Requirements: Need local match annually to add additional services.
- To increase future transit; short term, mid term, and long term plans were identified in the study.

### Air Transit and Airports

The two major airports located in Cascade and McCall have asphalt runways. The airport in Donnelly and other remote areas have grass runways. None of the airports have air traffic control. The airports serve local residents, tourism, and fire fighting. There are charter services operating out of McCall and Cascade, and both have small private and corporate jet landings. The USFS fire base is located at the McCall Airport. Cascade has been planning to expand the current airport to a regional level.



# <u>Regional Airport</u>

Valley County and participants at the Growth Workshop identified the necessity of a regional airport in Valley County. The cities of McCall, Donnelly, and Cascade, along with Valley County are studying and researching possibilities of a regional airport in Valley County. In this process, the City of Cascade has prepared preliminary plans to evaluate the location and feasibility of building a regional airport in the Cascade area. Preliminary plans identified a proposed location for the regional airport with a runway of 8,000 ft long or more, which is free of obstructions and runs parallel to State Highway 55 in the Cascade Impact Area. Preliminary plans for the proposed regional airport may be viewed at the Cascade City Hall. The City of McCall has also considered the possibility of a regional airport. Regional support from all community agencies in Valley County will increase the possibility of building a regional airport.

#### **Recreational Pathways Plan**

The Valley County Comprehensive Plan identifies the need for developing greenbelts and recreational pathways. As per the Comprehensive plan; hiking, backpacking, mountain

biking, and Nordic skiing have increased dramatically in the last 5 years. Valley County encourages safe pedestrian and bicycle travel by promoting greenbelts and recreational pathways. In July of 2004, a citizens group formed the Valley County Pathways Committee. One of the goals of the Committee is to develop a north-south recreational pathway system in Long Valley that links communities and fosters the development of pathway corridors along scenic transportation routes and natural resources like lakes and rivers.



The Valley County Pathways Committee prepared a Pathways Master Plan which identifies the future pathway corridors. This plan helps Valley County achieve goals and objectives in developing a safe pedestrian and bicycle travel system. More information on the Valley County Pathways Committee and their plans are available on their website:

www.valleycountypathways.org.



The Valley County Pathways Committee has developed a master recreational pathways plan and they have identified a number of proposed pathway corridors in Long Valley that could create an outstanding linked pathway system. The proposed corridors are preliminary, and additional work is required to gauge public support, meet with neighbors and adjacent landowners, and identify any environmental and planning issues. Map 8 shows the proposed pathway corridors.

The key findings of the Master Pathway Plan are as follows:

- Identified a number of proposed pathway corridors.
- Prioritized projects for preservation of the proposed pathway corridors.
- Set goals that help communities to achieve a viable and enduring pathway system in a timely manner.
- Identified funding opportunities for the proposed pathway projects.
- Developed design standards and typical sections for pedestrian pathways as per the ITD and AASHTO standards.


# VALLEY COUNTY CAPITAL IMPROVEMENT PROGRAM

Valley County developed and adopted a Capital Improvement Program (CIP). The following description on CIP and cost information is provided by Valley County:

## **Process and Purpose**

"In 2005, the Valley County Commissioners initiated a Road Development Agreement (RDA) process to require new developments to pay a fee to mitigate the impacts of their developments on the roads and bridges in Valley County. The RDA process replaced the Capital Contribution Agreements that were used by Valley County for larger developments that needed infrastructure improvements. The RDA requires all developers to pay a fee based on the number of trips their developments generate. Developers are, in effect, required to pay for the roadway capacity their developments use. The fee must be paid at the time of final plat. Credit is given for ROW required from the development and any in-lieu-of contributions, such as construction materials or developer sponsored construction of portions of roads and bridges.

Local public roads in Valley County are classified based on their function, from major collector to local roads. Each classification has its own standards for width and structural section. Most of the existing public roads in Valley County are sub-standard. A Capital Improvement Program, or CIP, is developed that identifies the cost of improvements needed to bring the roads and bridges in Valley County up to the adopted standard based on their classification.

CIP's have been developed for geographical sub-areas representing traffic sheds in Valley County. These traffic sheds are called CIP areas. A capital cost is calculated for each CIP area based on what it would take to bring roads and bridges up to the standard, including future ROW needs. A cost per trip is calculated by dividing the cost for improving the roads and bridges by the capacity, in trips per day, of the improved outlet roads for each CIP area.



Roadway fees collected must be spent in the areas they were collected from, unless a developer agrees in writing to spend them elsewhere.

Currently, Valley County has twenty-two CIP areas located in the valley floor generally along State Highway 55. The total cost of bringing Valley County roads and bridges up to an acceptable standard in these twenty-two CIP areas is estimated at \$185 million". A detailed cost estimate of capital improvement projects in each CIP area is provided in an updated CIP cost estimate report, which is available with the Valley County Road and Bridge Department.

The following table shows the cost per lot in each CIP area and Map 9 shows Valley County CIP area boundaries.

CIP Area	2007 Cost per Lot			
Cabarton	\$	5,832		
Campbell Creek	\$	6,296		
Carefree	\$	3,864		
Corral Creek	\$	3,414		
Cruzen	\$	5,088		
E. Roseberry	\$	3,400		
Farm to Market	\$	2,528		
Finlandia	\$	3,872		
Herrick Hills	\$	6,400		
Horsethief	\$	8,416		
Kantola/Day Star	\$	2,712		
Koskella	\$	2,936		
Little Pearsol	\$	5,368		
NW Mountain Rd.	\$	4,816		
Osprey Point	\$	6,792		
Paddy Flat	\$	3,744		
Round Valley	\$	7,480		
Smalley	\$	4,072		
Smith's Ferry	\$	7,944		
Sugar Loaf	\$	6,144		
Wagon Wheel	\$	5,600		
W. Roseberry	\$	3,968		

## Table 14: Valley County CIP Cost Summary



#### FIVE AND TWENTY YEAR WORK PLANS

Road Work Plans are major transportation-planning tools. It is the process of systematically inventorying and prioritizing Valley County's major capital improvement projects within a proposed time frame. The work plan lists the projects and improvements needed based on the projected traffic volumes and current capacity of Valley County roads, sense of priority, and available funding options.

There are several benefits for developing and adopting a Work Plan. The work plan provides a management tool for Valley County decision-makers and Road Department Staff and can also provide valuable information to the Planning and Zoning Commission, citizens of Valley County, and developers and businesses who are interested in the development of Valley County. The work plan document will assist in planning available resources and funds and coordinating other major investment projects with those of other public or private developments.

It is necessary to understand that this work plan is a dynamic document and serves as a guideline book. There can be changes in the plan and order of projects identified because of many reasons. Estimated costs for the projects and available funds can fluctuate as a result of changing economic conditions or shifts in public policy and hence these projects should be reviewed and updated annually. Project priorities may be adjusted depending on the need and funding availability.

Recommended road improvement projects are identified in two classifications: major reconstruction and minor repairs/reconstruction of a small segment. For major reconstruction of roads, Valley County will most likely seek state and/or federal funding or use funds collected from the CIP process. Minor repairs/reconstruction of small segments will likely be locally funded projects. The following Table 15 presents the proposed projects for Valley County for the next 5 years.



## Table 15: 5 Year Work Plan

		Funding	Projected Construction Year					
Priority	Project Name	Source	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	
1	West Lake Fork Road Reconstruction – Phase I and Phase II	Local LHTAC	X					
2	West Mountain - Road Realign and Construction of Major Collector - Hait Lane to Smylie	Local Funds	X					
3	West Mountain Road Improvement - Phase IV Hurd Creek to French Creek	Local Funds 319 Grant RAC Grant	X					
4	West Mountain Road Improvement - Tamarack Main Entrance to Academy Drive	Local Funds		X				
5	East Lake Fork Road - Engineer for completion of Minor Collector (Bridge Canal crossing wet lands)	Local Funds LHTAC		X				
6	Herrick Lane - Reconstruction	Local Funds		X				
7	West Mountain Road Improvement - Phase V North Lake to Big Pine Drive	Local Funds		X				
8	Hereford Road - Surface Repair	Local Funds LHTAC		X				
9	Cascade Drive - Surface Repair	Local Funds LHTAC		X				
10	Lake Trail Drive - Surface Repair	Local Funds LHTAC		X				
11	Spring Valley Road - Surface Repair	Local Funds LHTAC		X				
12	East Lake Fork Road – Lake Fork Creek Bridge	Local Funds LHTAC			X			
13	East Lake Fork Road – Completion of Minor Collector	Local Funds			X			
14	West Mountain Road Improvement North Lake to Anderson Cr. – Phase VI	Local Funds 319 Grant			X			
15	East Side Drive – Surface Repair	Local Funds LHTAC				X		
16	Heinrich Lane Reconstruct and Pavement – Phase I & II	Local Funds LHTAC				X		
17	West Mountain Road Improvement North Lake to Anderson Cr – Phase VII	Local Funds 319 Grant				X		
18	Old State Highway Surface Improvement(may need reconstruction) Phase I	Local Funds LHTAC				X		
19	Durham Lane – Surface Repair	Local Funds LHTAC				X		



VC 5 Year and 20 Year Work Plans

Priority	Duciest Name	Funding Source	Projected Construction Year				
	roject Name		FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
20	West Mountain Road Improvement North Lake to Anderson Cr – Phase VIII	Local Funds 319 Grant					X
21	Old State Highway Surface Improvement(may need reconstruction) Phase II	Local Funds LHTAC					X
22	Old State Highway Surface Improvement(may need reconstruction) Phase III	Local Funds LHTAC					X

Note: All federal funding through the State is restricted to Major Collectors and Arterials in the Surface Transportation Improvement Program (STIP). Some of the proposed projects are not currently listed as Major Collectors in the STIP. An application may be made to the State to change the classification of qualified roads. Federal funded projects time frame is an average of four to eight years. Project size may vary in order to meet available funding.

The above table lists the major investment projects for the next five (5) years, the potential funding source and the projected construction year. It is recommended that Valley County develop a 20 Year Work Plan in the future.

## **Funding Strategies for Road Development**

Funding for road maintenance, operations, and capital improvement projects are of primary importance. Growth in Valley County is substantial and the County must plan, set a strategy, and budget for years to create sufficient funds for capital improvement projects. Obtaining matching funds through State and Federal Grant Programs is one method of stretching the County funds. All federally funded projects have additional costs; the County is encouraged to consider each project carefully, weighing the extra cost and regulations for federal funds versus using local funds.

There are several funding possibilities available from the State and Federal government, through State Agencies. There are possible funds available through agencies such as the Idaho Commerce Department and Economic Development. Most funding agencies require



Valley County to identify projects and list them in their Road Work Plan. Most of these funding agencies require Valley County to provide a percentage of local funds to match the total funding. The matching funds for Capital Improvement Projects may be funded through Craig-Wyden Bill funds and development fees from the Valley County's Capital Improvement Program. The following, is a list of funding agencies and their programs to provide funds for road developments:

# 1. Surface Transportation Program (STP) Local Rural

These funds are allocated for projects in rural areas and in cities with populations
below 5000. They may be used for new construction and/or reconstruction or
rehabilitation of roads functionally classified with FHWA as major collectors with a
small percentage allowed for minor collectors. The local match requirement is 7.34
percent. The funds are awarded through the Local Federal-aid Incentive Program
ministered by the Local Highway Technical Assistance Council.

## 2. Surface Transportation Program (STP) Enhancement

These funds are available to state, local, federal agencies, universities, and Indian tribes, for enhancement activities such as developing pedestrian and bicycle facilities, landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures or facilities, etc.

## 3. Local Rural Highway Investment Program

This Investment Program is a grant program that provides funding for road paving, drainage structure replacement, signage upgrades, transportation planning, reconstructing roadways, and most other types of construction on any public road. Matching funds are not required for this program but LHTAC encourages matching funds. The work must be contracted out when the estimated cost of the project is more than \$50,000. Maximum funds per year, per agency are \$100,000. These funds do not require that federal project requirements be met. Applications for the 2009 award allocation are available on the LHTAC website.

(Source: <u>www.lhtac.org</u>)



4. Congestion Mitigation Air Quality (CMAQ)

These funds are available through a statewide competitive program which provides
federal transportation funding for air quality projects, planning, and programs.
Projects under this program fall under two categories: construction and nonconstruction. These funds are available for projects which provide significant air
quality benefits, and projects directed toward solving a transportation related air
quality problem. The local match requirement is 7.34 percent. Projects such as dust
control and prevention (sweeper/flusher trucks, unpaved road stabilization, and
deicing equipment/supplies), special studies for air quality monitoring, alternative
transportation education etc., are eligible under this program.
(Source: http://www.itd.idaho.gov/planning/reports/cmaq/cmaq.html)

The above listed funds are available from the state and federal government annually. Each year LHTAC sends out application packets and notifications to eligible agencies. Eligible projects will be identified and rated. Top rated projects are funded based on available funds. The funding process and project selection procedure were explained in the first section of this report.

#### Future Funding for Operations and Maintenance

Following the decline in revenues from timber sales in 2000 the Craig-Wyden bill provided funding to Idaho counties that were impacted by the loss of revenue for the Road and Bridge Department's Budget. The Craig-Wyden Bill ended in budget year FY-2006 and was funded for one additional year in budget year FY-2007. The loss of this funding source has the potential to have a devastating affect on the Valley County's Road and Bridge Department budget. The Valley County Commissioners as well as Idaho legislators continue to lobby Washington for these funds.

The current Road and Bridge Budget sources come from the Craig-Wyden Bill, the Blue Line Map (dollars for each road mile), and gas tax. The current Craig-Wyden Funds exceed three million dollars for Valley County each year. To date, Valley County has not had to use property taxes to fund the operations and maintenance of roads and bridges.



The Craig-Wyden Bill was created to allow the Counties to make a transition from the dependency on timber sales revenue to other funding sources. Interestingly enough, the cost for maintenance and construction has escalated the past few years making it difficult to set aside any reserves. The following two options are presented in this transportation plan to encourage Valley County to review these options as well as others, choose an option, and proceed with a plan.

**Option One**: Start increasing the property tax at increments required (3 percent maximum per year) and set aside the money for the Road and Bridge Department. This reserve would be used to help the transition from the probable loss of the Craig-Wyden Bill Funds to Local Funds.

**Option Two**: Create a Highway District. The Highway District is a taxing district and may access property tax based on the amount of their budget. Different taxing laws govern the District than Valley County. The Highway District will have a District Board that is different and independent from the Valley County Commissioners to make decisions and direct the work, maintenance, and construction. Road Policies, Capital Improvement Plans, and the expenditure of funds will be under the jurisdiction of the District Board.

Several Counties in Idaho have only highway districts, some have a highway district and a county road and bridge department, and several have only a county road and bridge department. Regardless of the option, future budget sources will likely transition to the source of property tax. It is recommended that Valley County select the best option for Valley County and begin to prepare and initiate a plan for the future funding of your roads.

Long and short range planning is critical for growing counties like Valley County. State and federal funds matched with local funds will aid Valley County in meeting their transportation needs. It is recommended that Valley County start planning toward construction of the projects listed on the 5 Year Work Plan by submitting an application for the LHTAC Investment funds for the year 2009 and the STP local rural program.



#### **GIS DATABASE**

#### **Process and Data Collection**

#### <u>General</u>

An inventory of current road conditions, culverts, and bridges was taken to evaluate Valley County's need for this plan. The inventory of Valley County roads included in this study will compile all of the road data into one database and link this database to a Valley County map. The system utilized to obtain these results included the Global Positioning System (Trimble/Pathfinder XRS), Pathfinder Office 2.9 Software, and ArcView 3.0 Software programming language.

## Data Collection

Valley County roadway data was accomplished by using a Trimble GPS Data Collection Unit, a data dictionary with fields corresponding to ArcGis-9.2 and the inventory of each road by driving it from start to finish recording the variations in the road conditions. The roadway data survey also included pavement width, shoulder width, drainage information, and sign post and culvert location. The Trimble Data Collection unit is a small computer storing the coordinates of latitudes and longitudes and altitude, with an accuracy of plus or minus three feet, and linking these coordinates with the library data. The location of culverts and bridges are recorded as a part of road inventory survey but the attributes of culverts and bridges in Valley County were not recorded.

The inventory of Valley County roads was completed during the summer and fall of 2006. Referenced material included Valley County road files, the ITD's road segment map, the Valley County Road Classification map, and Valley County bridge map. Map 10 shows the surveyed Valley County roads and location of culverts.

## Database Library

A database library consists of geometric and road surface conditions, bridge and culvert size and type, and basic road sign groups. This database library contains the significant information required for the road evaluation, rating, and estimating the probable repair costs.



This library is a checklist for each road segment. Each category on the checklist must be recorded for each segment. Appendix A contains the database library and descriptions of each attribute.

## <u>Database</u>

The database includes all of the library information, the road rating values, and the probable repair costs that interact with one data map. The program allows digital pictures to be linked to any map location. The software allows for a live link between the database and the map. This concept (live link between the database and the map) identifies a true GIS system. The background of the data map is a county Government Control Database (GCDB) map. Any changes to the database or data map will automatically update the other. On the data map, roads are shown as lines and all other items such as bridges, culverts signs, etc. show up as points. Each time a road condition changes, a segment break is made in the road line. Any road segment or point may be selected on the map to obtain the road identification and conditions shown in a window on the computer monitor. This data may be sorted, joined or queried to identify any road having a certain condition.

## <u>ArcView</u>

ArcView software is used to automate repetitious queries, road ratings, and assigns probable repair costs to road segments. This programming language will also reduce time in computer operation and creating reports.

One important aspect of this software package is the flexibility to update the repair and maintenance costs, road widths, and interaction with the software to obtain the preferred results.

# **Road Inventory Survey**

The road inventory survey included pavement surface condition survey, pavement width, and location of culverts and sign posts in Valley County. As per the current Valley County's Local Road Mileage Report, Valley County Road and Bridge Department maintains 778.93



miles of roads, of which 232.62 miles are paved roads and the remaining 546.31 miles are gravel roads. Holladay Engineering Company, in direct supervision of the Valley County personnel, surveyed approximately 168 miles of paved roads and 193 miles of gravel roads. Back country roads were not included in the road inventory survey. Map 10 shows the surveyed paved and unpaved roads maintained by the Valley County Roads and Bridge Department.

All intersections in Valley County are STOP controlled intersections. Most of the traffic regulatory signs and traffic control signs like STOP and YIELD are according to the standards of the Manual on Uniform Traffic Control Devices (MUTCD). The following table shows the inventory of traffic control devices and signs surveyed.

Sign Description	Number
Speed limit	271
Regulatory	16
STOP/Yield	207
Informative Signs	100
Warning Signs	107
Road Signs	145

# Table 16: Inventory of Traffic Control Devices

## **Bridges and Culverts**

Bridges and culverts must meet the "clear-span measurement of over 20 feet 6 inches" to be

included in the National Bridge Inventory (NBI). Bridges that do not meet this requirement are not on the inspection program administered by ITD. Bridges included on the NBI are routinely inspected (every 12 to 24 months depending on the condition). Each bridge under the NBI





system is assigned an identification number known as the master key number (structure key number). During the data collection, bridges are identified by their master key number and compiled into the database, which includes the master key number, feature intersected, dimensions, superstructure material type, deck material type, and the sufficiency rating. All bridges, regardless if they are on the NBI or not, are located on the data map as a color dot. Map 11 shows the location of bridges in Valley County.

The following Table 17 lists some bridges (bridges included in the NBI) with the lowest sufficiency rating (latest rating) in Valley County. A complete list of the bridges that are part of the NBI is provided in Appendix F. It should be noted that bridges typically need to have a sufficiency rating of less than 50 to be eligible for federal funds for reconstruction and a sufficiency rating of less than 80 to be eligible for federal funds for rehabilitation.

Master Key No.	Road	Milepost	Feature Crossed	Inspection Date	Element	Sufficiency Rating
28635	Smith Ferry Road	105.938	N. Fork. Payette River	08/11/07	Bridge	46.6
28671	Gold Fork Road	106.882	Kennally Creek	08/19/07	Bridge	59.9
33615	Warren-Profile Gap	143.992	S. Fork Salmon River	09/10/07	Timber Deck	60.6
20095	STC 3906; Warren Wagon Rd.	005.845	Dead Horse Creek	08/11/07	Timber Deck Bridge	62.1
28595	Scheline Lane	101.211	Lake Fork Creek	08/11/07	Bridge	64.9
28640	East Lake Fork Road	103.566	Lake Fork Creek	08/11/07	Bridge	66.0
28655	CO.RD; PLNG#0013	106.223	N.FK. Payette R (N.BEACH)	08/10/06	Bridge	70.7
20165	East Fork Road	036.277	E.FK. of S.FK. Salmon River	09/07/07	Bridge	73.3
28580	Horsethief Road	111.923	Big Creek	09/27/06	Bridge	75.6

Table 17: Valley County Bridges and Sufficiency Rating

The location of culverts (not included on NBI list) was recorded along with the road data during road inventory survey. Culvert attributes such as size, condition, length etc., were not recorded at the time of survey. It is recommended that Valley County update the additional information on culverts periodically so that maintenance and upgrade costs can be estimated accurately.



#### ROAD STANDARDS AND ACCESS CONTROL MANAGEMENT

#### **Road Standards**

The Valley County Road and Bridge Department has developed and adopted minimum design and construction standards for public and private roads. The standards were developed and adopted in July 2005. These Standards are well prepared and cover critical elements for Valley County at this time. The recommendations for addition are:

- 1. Consider limiting the number of properties on private roads.
- Valley County has adopted a private road declaration which addresses funding for maintenance and repairs of private roads. The declaration should define the source of funding for maintenance and repairs of private roads and who will be performing the work.
- Valley County should continue to require permits to excavate in Valley County road easements and right-of-ways. These permits should require the location of work, type of work, compaction testing, and a sign off from the Road and Bridge Department after inspection and review of test results.

#### **Access Control Management**

Access management strategies are essential with growing traffic demand and congestion. These strategies involve the systematic control of driveways, intersection design and spacing, median openings, and roadway connections.

Access control and management is associated with a variety of benefits primarily preserving and improving public safety especially for pedestrians and bicyclists, reducing traffic congestion and delay, and creating safe traffic operation.

The following are the major principles of access management:

- Design and manage roadways according to the primary function that they are expected to serve.
- Limit direct access to major roads. Direct access to residential property from major collector and arterials should be discouraged.



- Limit the number of conflict areas on the highway.
- Provide appropriate transition from one classification of roadway to another by designing proper networks, including intersections.

#### Access Control Standards

The above listed benefits of access management can be achieved by setting standards on access location, spacing of intersections, and urban and private approaches. The following are the access control standards recommended to Valley County:

 Intersection spacing on State Highway 55 shall be at a minimum of 1 mile spacing. These standards confirm with the Rural Type IV access control standards described in ITD's Access Management policy.

2. The use of existing approaches on State Highway 55 shall be allowed to continue provided that:

a) The existing use is lawful and properly permitted by ITD.

b) The nature of land use does not change, for example, a residential use to a commercial use.

c) The intensity of land use does not increase, for example, an increase in the number of residential dwelling units or an increase in the square footage of commercial space.

- 3. The developer shall develop or acquire access to a road other than the State Highway if the owner proposes a change in intensity of use or change in land use type. The use of the existing approach shall be abandoned and removed.
- A shared driveway approach should be encouraged over individual approaches to minimize the total number of driveway approaches on State Highway 55 and major collectors.
- 5. Frontage roads should be encouraged for access control on Highway 55.
- 6. Access on major collector roads in Valley County are recommended be at a minimum spacing of 1000 feet between approaches and at a half a mile between intersections.
- Setbacks along other roads and streets should meet requirements described in the Valley County's Land Use and Development Ordinance.



# **Recommendations to Valley County**

The following recommendations were made to the County for the future planning and improvement of the transportation system.

- 1. Preserve and improve the existing road system by adopting the recommended Surface Management Plan and increasing the pavement width where traffic warrants.
- 2. Adopt the recommended SMP and maintain up-to date GIS database.
- 3. Update traffic counts annually during periods of heaviest use to confirm traffic volumes and travel patterns.
- 4. Adopt the proposed road functional classification map and preserve future rightof-way, as shown on the plan, by requiring setbacks and land dedications to allow for major and minor collectors. The proposed functional classifications for county roads identified in the plan should be updated on the current classification map and propose changes to the Idaho Transportation Department.
- 5. Initiate corridor studies for the possible realignment of West Mountain Road at the south end of Lake Cascade.
- 6. Work with ITD in the State Highway 55 corridor study to investigate possible realignments, as described in Chapter 5.
- 7. Adopt the proposed 5 year Work Plan and update it annually.
- 8. Adopt the proposed access control standards and enforce the access control policy on the new developments.
- 9. Work with the Valley County Pathways Committee and preserve right-of-way to develop a continuous recreational pathway as suggested in the master pathway plan.
- 10. Work with the cities in Valley County and research feasible locations for a regional airport.
- 11. Upgrade the current standards for public and private roads as per the recommendations provided in this plan.
- 12. Record and update culvert condition and drainage efficiency periodically to assess maintenance and upgrade costs.



#### REFERENCES

- 1. "Valley County Comprehensive Plan", Adopted in June, 2001.
- "Valley County Growth Workshop Summary Report", May 8, 2006, prepared by Valley County Engineers, Parametrix.
- "Valley/Adams Transit Expansion Study", March 2006, prepared by Ostrander Consulting Inc.
- 4. <u>http://www.treasurevalleytransit.com/schedules.htm</u>
- "Valley County Land use and Development Ordinance", August 29, 2006, prepared by the Planning and Zoning Department, Valley County.
- "Valley County Pathways Concept Master Plan", August 15, 2005, prepared by Valley County Pathways Committee.
- 7. <u>http://www.valleycountypathways.org</u>
- 8. <u>http://www.valleycountyeconomicdevelopment.com</u>
- "Regional Economic Development Strategic Plan", October 2006, prepared by Valley/Adams County Partnership.
- 10. http://www.itd.idaho.gov/Projects/D3/I551906
- "Transportation Impact Analyses for Site Development", Institute of Transportation Engineers, 2005.
- 12. "CIP boundaries and Cost Information", June 2007, prepared by Valley County Engineers, Parametrix.
- "Executive Summary Report, Pavement Management Guide", November 2001, prepared by the AASHTO.
- 14. http://connectingidahopartners.com/
- "Valley County Minimum Standards for Public and Private Road Design and Construction", July 2005, prepared by the Valley County Road Department.
- 16. Photos courtesy by Chris Guenzler; <u>http://www.trainweb.org/chris/Idaho.html</u> and <u>http://www.rootsweb.com/~idvalley/</u>



# APPENDICES