2040 LONG-RANGE TRANSPORTATION PLAN

Draft | February 2019

Idaho Transportation Department
3311 West State Street
Boise, ID 83707-1129

Your Safety • Your Mobility • Your Economic Opportunity

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APPENDICES

Executive Summary

Introduction

Over the last two years, planning staff from the Idaho Transportation Department (ITD) have engaged the public, stakeholders, and transportation professionals across Idaho in conversations about our present transportation infrastructure, future conditions, needs, and issues that we can expect as we progress toward the year 2040. This plan is a result of collaborative work group sessions, interactive surveys, and one-on-one engagement. ITD planners have used feedback from these efforts to develop a plan that provides recommendations to best navigate transportation decision making through 2040.

The ITD Long-Range Transportation Plan, branded as IDAGO 2040, provides information, guidance, and recommendations within the first four chapters covering the important topics of growth, modes of transportation, technology, and data analytics. The final chapter of this plan addresses implementation, with recommendations tied to ITD's project-delivery-focused work structure, outlining how this plan will improve processes. The Department's plan is focused primarily on surface transportation and the State Highway System; however, there are important relationships from the Divisions of Motor Vehicles and Aeronautics that tie into the future of Idaho's transportation network.

The recommendations from this plan are either aspirational in nature or identify areas where further planning is required. The aspirational recommendations are intended to help improve the general planning behind the work conducted by transportation professionals in Idaho. The recommendations that outline further planning, such as producing a State Highway System Plan, do give specific steps to improving decision making related to transportation in Idaho.

Summary

Preface

In the 2010 Long-Range Transportation Plan "Idaho on the Move," ITD established three long-range goals which were and still are critical in supporting Idaho's economy and quality of life: Safety, Mobility, and Economic Vitality. Since the adoption of "Idaho on the Move," ITD has elevated these three goals to now serve as the Department's mission:

Your Safety • Your Mobility • Your Economic Opportunity

The context of the plan is framed by ITD's long-term goals (LTG) from its Strategic Plan:

- **LTG-1:** Commit to providing the safest transportation system possible.
- **LTG-2:** Provide a mobility-focused transportation system that drives economic opportunity.
- **LTG-3:** Become the best organization by continually developing employees and implementing innovative business practices.

In addition to these long-term goals, the plan outlines the following recurring and most common issues mentioned to ITD staff during public and stakeholder outreach to provide additional context.

From the public:

- Congestion/delay relief and preservation/maintenance are the top two strategies for pursuing ITD's mission (per survey results).
- Commuting, personal/general, and recreational trips were the top use of the State Highway System (per public outreach survey).
- Preserving quality of life is important (from public comments).
- The public has a desire for more public transportation options in Idaho (from survey results and comments).

From stakeholders:

- ITD should actively pursue coordination with external agencies through partnerships, data sharing, and research opportunities.
- Consider all modes of transportation in planning and project development.
- Be a leader on applicable statewide transportation issues.

Chapter I – State of Transportation

In examining Idaho's State of Transportation, collaboration with stakeholders resulted in reporting on the entire network of state highways and local roads in regard to funding, condition, and traffic reporting. This plan will serve as a consolidated report for this information. The reporting focuses on changes since 2010, the date of adoption of ITD's previous plan. In addition to statewide reporting, ITD provides the status of its customer-friendly performance measures, guidance for understanding impacts from growth to transportation, and further analysis on growth that has occurred and, according to stakeholders participating in development of this plan, can be expected for years to come. The recommendations in Chapter I will help prepare ITD for a growing state by improving the Department's planning processes, positioning to pursue additional funding, and better reporting the performance of the State Highway System.

Chapter II – Modal Planning

ITD is dedicated to ensuring people can safely access their desired destinations. The Modal Planning chapter identifies the modes of transportation for which ITD plans on the State Highway System as follows:

- Active Transportation – (e.g., Bicycle, Pedestrian)
- Aeronautics – (e.g., Private and Commercial Aircraft)
- Freight – (e.g., Truck, Rail, Aircraft, Watercraft)
- Public Transportation – (e.g., Bus, Van Pool)
- Privately Operated Vehicles – (e.g., Automobile, Motorcycle, Registered Recreational Vehicle)

These modes are discussed in detail with references to relevant planning and operational documents. The recommendations in Chapter II provide specific guidance to maintain and improve how ITD plans and accounts for all modes of transportation in its deliverables to the public.

Chapter III – Highway Data Analytics

Chapter III outlines how ITD ensures quality data collection and how that data is converted into meaningful information. ITD has continuously enhanced its decision making by improving information availability and understanding used in decision-making processes. ITD also places constraints on such processes to ensure data is not manipulated to a point that it loses meaning or value. The recommendations in Chapter III will help ITD improve the quality, cost, and integrity of the data and information that are considered in decision making.

Chapter IV – New and Emerging Technologies

New technologies have the capacity to not only compliment and improve current policy and procedures, but to also disrupt them. Funding, growth, and other changes influencing various facets of transportation are important to incorporate in transportation planning, however ITD staff sees new and emerging technologies as a different type of influence than more traditional areas. It is important to understand not only how a technology could compliment or disrupt the status quo, but also if it results in a positive or negative impact to various facets of transportation. For example, changing from one fuel source to another can have great benefits to user costs or environmental impacts, but also might severely compromise the current revenue stream used to maintain the transportation system. This plan identifies vehicles, infrastructure, fuels (energy), data collection and analysis, driver information services, and funding as six potential impact areas to transportation from new and emerging technologies. The recommendations in Chapter IV will help ITD identify and evaluate new and emerging technologies' impact on transportation and plan for smooth transition of these technologies in the transportation system.

This plan has 21 total recommendations that are presented at the end of chapters I-IV.
Below are five key recommendations from this plan:

- **Inform and train transportation professionals on the impacts of population and economic growth on the State Highway System and statewide trends in travel patterns.**

Increasing the knowledge of our transportation professionals to incorporate future needs into the design of infrastructure will better prepare our transportation system for the future.

- **Partner with stakeholders and the public to best modify, adjust or expand the State Highway System**.

Working together with stakeholders and the public will ensure changes to the transportation system are in the best interest of as many as parties as possible.

- **Develop a State Highway System Plan**

ITD and partner transportation agencies currently produce large amounts of data and plan for several modes of transportation, but there is no integrated analysis of the State Highway System. A State Highway System plan would fully integrate data collection, forecasting, economics, safety and security to further assist decisions in the future.

- **Adopt the Quality-Centric model for tasks and services which create or use data and information.**

ITD and partner transportation agencies collect large amounts of data regarding the transportation network. Having a guiding model will be integral continuously providing quality data and information to decision makers

- **Continue public engagement and education on technology advancements and solicit input on community impacts.**

This plan points out future impacts of new technologies to transportation that are expected in the near future. Maintaining public awareness will ensure the public understands the benefits of such technologies and supports decisions to integrate them into the transportation network.

Chapter V – Implementation

ITD is focused on delivering a safe, efficient highway system that is free of impediments and promotes economic activity. This is accomplished through the Department's daily operations and capital improvements outlined in the Idaho Transportation Improvement Program. Chapter V incorporates the recommendations from Chapters 1-4 and ties them into ITD's project delivery and operational activities to serve as additional guidance for becoming the best transportation department in the country.

Closing

The recommendations in this plan will assist in developing our path to 2040. What the future holds for us is unpredictable, but along the way, together decisions can be made that are:

- well understood by an informed public and stakeholders;
- a consensus among transportation professionals;
- adaptable based on good planning;
- the best possible decisions from the best possible information at the time.

The intent of this plan is to provide information and guidance not only to ITD, but to any agency responsible for transportation oversight and management in Idaho. The recommendations set forth in this plan are aspirational in nature and are to be considered by transportation officials to improve the understanding of future impacts to the transportation system that occur from today's decisions.

Preface

In the 2010 Long-Range Transportation Plan "Idaho on the Move," the Idaho Transportation Department (ITD) established three long-range goals which were and still are critical in supporting Idaho's economy and quality of life: Safety, Mobility, and Economic Vitality. Since the adoption of "Idaho on the Move," ITD has elevated these three goals to now serve as the Department's mission:

Your Safety • Your Mobility • Your Economic Opportunity

ITD's Long-Term Goals – From Strategic Plan

Commit to providing the safest transportation system possible.

Provide a mobility-focused transportation system that drives economic opportunity.

Become the best organization by continually developing employees and implementing innovative business practices.

LTG-1: Commit to providing the safest transportation system possible.

Why it matters: In 2017, 245 people were killed and 12,969 injured in crashes on Idaho's highways. The economic and personal costs of these deaths and injuries, along with more than 25,851 collisions that occurred throughout the state, amounted to more than $4.1 billion. More importantly, those figures represent family members, friends, and neighbors – each individual death a tragic and unacceptable loss.

ITD works toward delivering the safest transportation system possible through infrastructure improvements and behavioral modification campaigns. The Office of Highway Safety manages many behavioral campaigns that are outlined in the Strategic Highway Safety Plan. Infrastructure improvements are outlined in the Safety and Capacity Program in the most recent Idaho Transportation Investment Program (ITIP).

In addition to behavioral and infrastructure initiatives, a transportation system that maintains a state of good repair serves as the foundation for the safest transportation system possible. Highways with bridges and pavements in good condition that are free of ice and snow and other natural impacts are a top priority.

LTG-2: Provide a mobility-focused transportation system that drives economic opportunity.

Why it matters: As Idaho develops, investments in its roads, airports, railroads, canals, and rivers have always preceded economic growth. Taxpayer dollars are spent on transportation projects after rigorous analysis of safety, congestion, optimum lifecycle, and other factors. The investment return to Idaho citizens is improved quality of life and prosperity.

Mobility is defined by not only the ability to arrive at a destination, but also the ability to use a preferred method of transportation. ITD delivers programs and initiatives that improve the performance of the state highways system, address emergency response incidents that impede mobility, provide transportation options for users, and maintain a state of good repair.

A mobility-focused transportation system is an integral part of Idaho's economic engine. Moving goods and services is vital to the economy of Idaho. Additionally, moving people to and from destinations engaged in recreation, tourism, or commerce is a large portion of Idaho's gross domestic product and an important component of economic growth in Idaho.

LTG-3: Become the best organization by continually developing employees and implementing innovative business practices.

Why it matters: ITD needs to continually review and improve its business practices to be responsive to its customers. Strong leadership is the key to this process. Leaders drive critical innovation, implement change, and create adaptable organizations that succeed in meeting and exceeding customer expectations.

Teamwork plays a vital role in ITD achieving its goals. It ensures broad employee input and creates an empowered and motivated workforce. Collaborative decision-making leads to better solutions and improves services to taxpayers.

Training ITD's workforce is also critical. Trained employees are more productive and deliver higher-quality results. As they gain higher-level skills, employees need to be financially compensated accordingly. Strong leadership combined with a well-developed, stable workforce will reduce turnover in key positions and improve ITD's organizational culture.

About This Plan

IDAGO 2040 updates the concepts of "Idaho on the Move" and provides high-level direction on the methods and approaches for implementing the Department's mission. The information presented in the following chapters are organized by topic and include relevant information, analysis, and recommendations. The chapters of IDAGO 2040 are:

Chapter I – State of Transportation: The first chapter contains Information regarding customer-oriented performance measures, technical analysis produced by ITD's subject matter experts that document current practices, the constraints and trends of the state's current and future transportation system, along with guidance and recommendations for transportation professionals. -

Chapter II – Modal Planning: Idaho has diverse transportation needs, from highways that carry less than one hundred vehicles per day to routes that carry over one hundred thousand vehicles. Some corridors have few modes or needs, while complex corridors service all modes of transportation and are vital to the economy of Idaho. The modal planning concept outlined in IDAGO 2040 allows staff to account for the specific planning needs for each corridor.

Chapter III – Highway Data Analytics: The methods by which data are analyzed plays an increasing role at ITD. Based on outreach results from IDAGO 2040, the public supports data-assisted decision making. Innovations towards improved accuracy in data analytics are vital to maintaining public confidence.

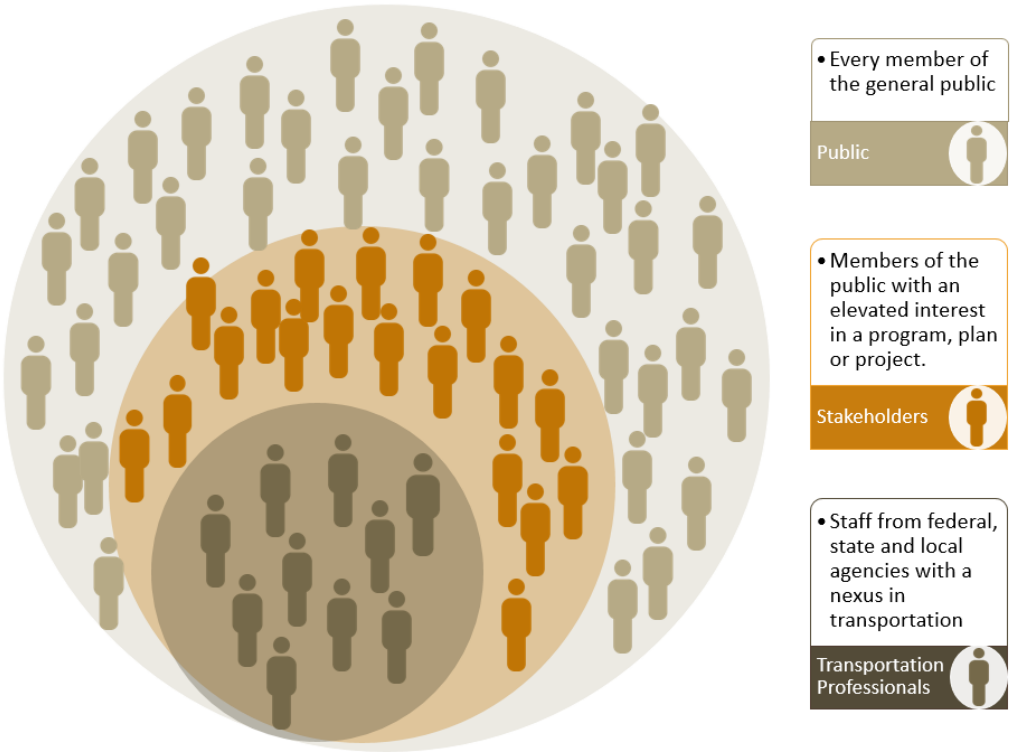
Chapter IV – New and Emerging Technologies: Technology advancements are creating new innovations, opportunities, and challenges for transportation. It is ITD's responsibility to apply new technologies that help meet the Department's mission, while taking a cautious approach to avoid dead-end or non-productive developments. Case studies and guidance material are provided to help direct staff in the adoption and implementation of new and emerging transportation technologies.

Chapter V – Implementation: This chapter outlines how ITD does business and achieves its mission. The discussion connects recommendations from earlier chapters to ITD's day-to-day operations.

Public and Stakeholder Outreach

In this plan, groups of persons are labeled as the public, stakeholders, and transportation professionals. Other entities, such as elected officials, have multiple roles in Idaho's transportation system and span multiple groups.

Figure P.1. Group Definitions



As part of the public outreach for IDAGO 2040, ITD held public meetings, facilitated meetings with organized advocacy groups, and conducted a public opinion survey. From this outreach, ITD learned the following topics are of most interest to the public:

Congestion/delay relief and preservation/ maintenance are the top two strategies for pursuing ITD's mission.

Commuting, personal/ general, and recreational trips were the top use of the State Highway System (per public outreach survey).

Preserving quality of life is important.

The public has a desire for more public transportation options in Idaho.

In addition to public outreach, ITD also met with stakeholders and transportation professionals to solicit additional input on the future direction of the State Highway System. Primary recommendations from stakeholders and transportation professionals are listed below.

ITD should actively pursue coordination with external agencies through partnerships, data sharing, and research opportunities.

Consider all modes of transportation in planning and project development.

Be a leader on applicable statewide transportation issues.

Detailed reports on the public and professional outreach are detailed in Appendix 3.

IDAGO 2040 Credits & Thanks

Project Manager

Kenneth Kanownik, AICP – *Planning Services Manager*

Steering Committee Members

Blake Rindlisbacher, P.E. – *Division of Engineering Services Administrator*
Randy Gill – *Program Management Office Manager*
Vince Trimboli – *Public Affairs Manager*
Bob Thompson – *Economist, Financial Planning and Analysis*

Work Group Team Leaders

Technical Reports: Sonna Lynn Fernandez – *Planning Project Manager*
New and Emerging Technologies: Jeff Marker – *Freight Program Manager*
Highway Data Analytics: David Coladner – *Research Analyst, Principal*

Work Group Staff

Modal Planning

Kim McGourty – *Public Transportation Manager*
Rachel Pallister – *Grants Officer, Public Transportation*
John Tomlinson – *Office of Highway Safety Manager*
Bill Statham – *Project Manager, Aeronautics*
Brian Shea – *Senior Transportation Planner, (retired)*
Blaine Schwendiman – *Staff Engineering Assistant, District 3*

New & Emerging Technologies

Amy Smith – *Business Analyst, Division of Motor Vehicles*
Chapman Munn – *Principal Research Analyst, Highway Data Analytics*
Chris Peirsol – *Senior Transportation Planner, District 5*
Juan Oleaga – *Service Integration Manager, Enterprise Technology Services*
Matthew Moore – *Transportation Legislation Policy Specialist, Governmental Relations*
Ned Parish – *Research Program Manager*
Pat Carr – *Program Manager, Division of Motor Vehicles*
Robert Koeberlein – *Program Manager (retired)*
Liisa Itkonen, Ph.D., AICP – *Principal Planner, Community Planning Association*

Highway Data and Analytics

Jim Poorbaugh, P.E. – *Asset Management Engineer*
Matt Farrar, P.E. – *Engineering Manager, Bridge*
Barbara Waite – *Program Supervisor*
Margaret Pridmore – *Program Manager, Roadway Data*
Mark Wasdahl – *Senior Transportation Planner, District 3*
Bill Roberson – *Senior Transportation Planner, District 1*
Kelly Campbell – *Research Analyst, Principal, Office of Highway Safety*
Jez Arroway – *Program Manager, Enterprise Technology Services*
Nick Jorgenson – *Data Coordinator, Enterprise Technology Services*

Technical Reports

Sydney Lewis – *GIS Analyst*
Wendy Terlizzi – *Program Manager, Environmental*
Ken Helm – *Project Manager, District 2*
Mark Layton – *Senior Transportation Planner, District 6*
Maranda OBray – *Senior Transportation Planner*
Mike Cram – *Project Manager – Contracting Services*
Nathan Hesterman – *Senior Transportation Planner Programming, Financial Planning and Analysis*
Brad Wolfinger – *Project Manager, Program Management Office*

Staff Contributors

Adam Rush – *Public Involvement Coordinator, Office of Communications*
Mark Snyder – *Data Analytics Engineer*
Margaret Havey – *Senior Transportation Planner, Planning Services*

Partner Contributors

Scott Frey – *Transportation Engineer, Federal Highway Administration*
Scott Ellsworth, P.E., P.L.S. – *Federal Aid Manager, Local Highway Technical Assistance Council*
Glenn Miles – *Director, Kootenai Metropolitan Planning Organization*
Shannon Grow – *Director, Lewis-Clark Valley Metropolitan Planning Organization*
Matt Stoll – *Director, Community Planning Association of Southwest Idaho*
Mori Byington – *Director, Bannock Transportation Planning Organization*
Darrell West – *Director, Bonneville Metropolitan Planning Organization*

Consultant Contributors

Technical Editing & Graphics Assistance

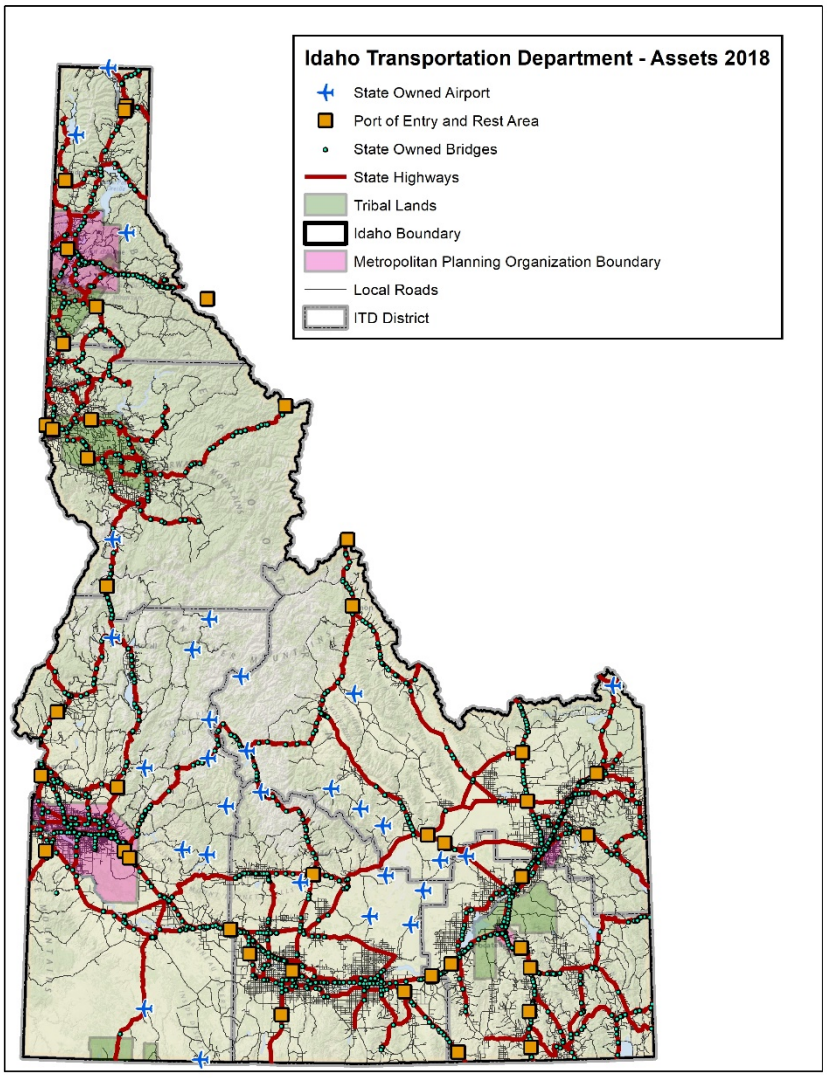
Sarah Nicolai, P.E., PTP – *DOWL*
Renee Whitesell, PTP – *DOWL*
Rachel Rogge – *DOWL*

Public Outreach

Sarah Nicolai, P.E., PTP – *DOWL*
Cody Salo, P.E. – *DOWL*
Rosemary Curtin – *RBCI*
Kate Reed – *RBCI*

I. State of Transportation

Introduction to the Idaho Transportation Department's Assets



As of 2018, the Idaho Transportation Department (ITD) maintained 12,323 lane miles of highways across Idaho, 1,824 bridges, 12 ports of entry, and 31 rest areas. This infrastructure is referred to as the State Highway System. This chapter provides information on ITD's evaluation, maintenance, and operations of the State Highway System and its collaborative work with aeronautics and partner agencies.

*Final plan will include link to interactive, zoomable map

Reporting Performance to the Public

ITD has identified four customer-friendly performance measures with specific targets that reflect the condition of the State Highway System and directly relate to ITD's mission.

Performance Measure: Fatalities

Performance Target: Reduce the five-year fatality rate to 1.10 per 100 million vehicle miles traveled for the 2016-2020 period.

Why This Is Important
Even one death on Idaho's highways is one death too many. An estimated total of 1,113 people lost their lives on Idaho roads between 2013 and 2017. Each death is a personal tragedy for the individual's family and friends, and the loss has an enormous financial cost to the community. Every life counts.

How We Measure It
The measure is calculated by dividing the number of fatalities that occur over a five-year period by the number of vehicle miles traveled over the same five-year period. The five-year rate for 2012 to 2016 is 1.28 fatalities per 100 million vehicle miles traveled. (Note: This rate is based on Idaho's estimate of vehicle miles traveled rather than the required Federal estimate which is not yet available.)

What We're Doing About It
The Department advances programs to eliminate traffic deaths, serious injuries, and economic losses. These programs focus on engineering, education, enforcement, and emergency response.

Performance Measure: Winter Mobility

Performance Target: Maintain at least 73% unimpeded mobility for the winter season

Why This Is Important
Idaho travelers need safe and reliable highways during winter storms. Preventing the accumulation of snow and ice or quickly removing it from highways increases safety, mobility, and improves commerce.

How We Measure It
Idaho's 4,984 centerline miles of highways are divided into 217 sections. Over 46% of these highway sections, including the most heavily traveled corridors, have automated roadway condition sensors and weather information stations located where travel is deemed to be highly impacted by winter storms including high elevation summits, steep grades, and bridge overpasses. This measure tracks the percent of time those highway sections with automated sensors and weather information stations are clear of ice and snow during winter storms.

What We're Doing About It
ITD uses data from the automated roadway condition sensors and weather information stations to continuously improve the effectiveness of its winter maintenance efforts across the state. The Department accomplishes this by customizing snowplowing practices and de-icing treatments for all sections of Idaho highways.

Performance Measure: Roadway Condition

LTG-1: Safety

LTG-2: Mobility Economy

Performance Target: Sustain 80% of all state highways in good or fair condition.

Why This Is Important
Pavement condition has an impact on the operating costs of passenger and commercial vehicles. Regularly scheduled preventive maintenance, preservation, and reconstruction treatments extend the useful life of pavements in the State Highway System.

How We Measure It
Roughness and rutting are measured by driving a specially equipped rating van over the entire State Highway System during spring and summer. Cracking is measured in the summer and fall by a visual inspection and digital video recordings of the System. The collected data and the visual inspections are then used to rate pavement conditions as good, fair, poor or very poor.

What We're Doing About It
ITD focuses on internal efficiencies to maximize investments in the system. Investment decisions are prioritized to keep highways in good or fair condition to avoid costly replacement. The Department has implemented new management systems to strategically schedule preventative maintenance and preservation projects at the optimal time across the state.

Performance Measure: Bridge Condition

LTG-1: Safety

LTG-2: Mobility Economy

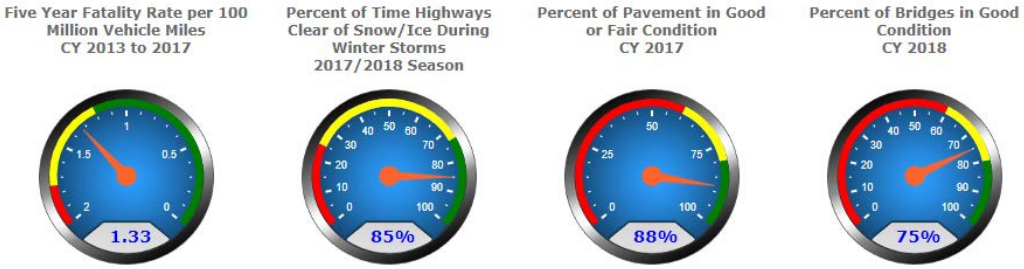
Performance Target: Maintain at least 80% of all bridges in the State Highway System in good condition.

Why This Is Important
Ensuring Idaho's bridges are in good condition protects transportation investments and lowers repair costs while maintaining connectivity and commerce. Commerce depends on the carrying capacity and reliability of roads and bridges.

How We Measure It
The measurement is the ratio of deck area (or plan dimension) of bridges in good condition to the deck area of the entire inventory of state bridges stated as a percentage.

What We're Doing About It
Idaho strategically schedules preservation and restoration projects to improve deteriorating bridges across the state. Over time, increased investments will be needed to achieve this goal.

Figure I.2. Customer Friendly Performance Measure Dashboard *Source: ITD, 2019*



In addition to bridge condition, ITD and local agencies track bridge age. This is important because as a bridge ages, its condition will deteriorate more quickly. Taking into account bridge age, 45% ITD's bridges are 50 years or older and 30% of bridges on local roads are 50 years or older. Of the 26% of bridges on the State Highway System, 2% are structurally deficient, while 11% of bridges on local roads are structurally deficient). By 2021, an additional 4% of bridges will become 50 years or older, bringing that total to 49%.

Transportation Funding in Idaho

ITD's funding combines federal revenue with state taxes and fees. Congress allocates revenue to states through the national transportation bill, historically reauthorized every six years. In December 2015, the President signed a new authorization, the FAST Act, which is a five-year bill expiring in 2020. Approximately two-thirds of this funding comes from the federal Highway Trust Fund, with sources including but not limited to gas and diesel fuel taxes, heavy tire, and heavy vehicle use taxes.

From a state funding perspective, most of the state fuel taxes on gasoline and diesel are deposited into the Highway Distribution Account along with revenue generated by vehicle registration fees, driver licensing fees, and miscellaneous sources. Effective July 1, 2015, the Idaho Legislature authorized an increase in state fuel taxes and vehicle registration fees. Sixty percent of the revenue generated by these increases is distributed to the State Highway Account. The remaining 40 percent is distributed to cities, counties, and highway districts.

The 2015 Legislature also authorized a "surplus eliminator" provision depositing 50 percent of excess state General Fund cash balance at the end of FY15 and FY16 into the Strategic Initiatives Program Fund.

House Bill 312, enacted during the 2015 Legislative session, directed ITD to establish and maintain a Strategic Initiatives Program. The purpose is to fund projects proposed by the Department's six Districts. The projects must compete for selection based on an analysis of their return on investment in these categories: safety, mobility, economic opportunity, bridge repair and maintenance, and right-of-way purchases.

House Bill 334, enacted during the 2017 Legislative session, added an additional category for child pedestrian safety on the state and local system.

Senate Bill 1206, enacted during the 2017 Legislative session, apportioned the moneys transferred into this fund. Sixty percent of the revenue generated by these increases is distributed to the State Highway Account. The remaining 40 percent is distributed to cities, counties, and highway districts.

Senate Bill 1206, enacted during the 2017 Legislative session, established the Transportation Expansion and Congestion Mitigation Program and fund. The purpose is to fund projects that are chosen by the Idaho Transportation Board based on a project's ability to mitigate traffic times, improve traffic flow, and mitigate traffic congestion. This fund receives revenue from one percent of sales tax after local revenue sharing, and all remaining moneys following the distribution of the cigarette tax revenue.

Financial Constraints and Funding Shortfall

In 2010, former Governor Butch Otter established a task force on transportation to produce an assessment of transportation funding in Idaho. The result was an annual shortfall for all roads and highways in Idaho of $543 million. Since 2010, several legislative efforts have reduced the recurring annual shortfall.

Table I-1 presents recurring annual funding from three state sources.

Table I.1. Ongoing Transportation Revenue Sources

Year	Ongoing Revenue Sources (in $ Millions)		
	Cigarette Tax * (HB 547)	Revenue Increase* (HB312a)	Congestion Mitigation * (SB 1206)
2015	$6.01	-	-
2016	$12.05	$88.88	-
2017	$9.24	$105.60	-
2018	$4.70	$108.99	$22.72
2019	$4.70	$109.84	$19.37
Totals	**$36.70**	**$413.31**	**$42.09**

Note: No changes between 2010-2014.

In addition to the recurring annual funding provided by the Idaho Legislature, additional legislative successes have provided one-time revenue increases that reduce the annual shortfall. Idaho has also been the recipient of several federal discretionary grants and federally ear-marked funds that have addressed the shortfall in a single year, as outlined in Table I.2.

Table I.2. One-Time Transportation Revenue Sources

Year	One-Time Revenue Sources (in $ Millions)	
	Strategic Initiatives* (HB312a)	Federal Discretionary
2010	-	$8.20
2011	-	$9.10
2012	-	$7.30
2013	-	$0.00
2014	-	$7.40
2015	$54.00	$0.30
2016	$0.00	$5.20
2017	$10.97	$2.30
2018	$27.67	$90.20
2019	$60.30	
Totals	**$152.93**	**$130.00**

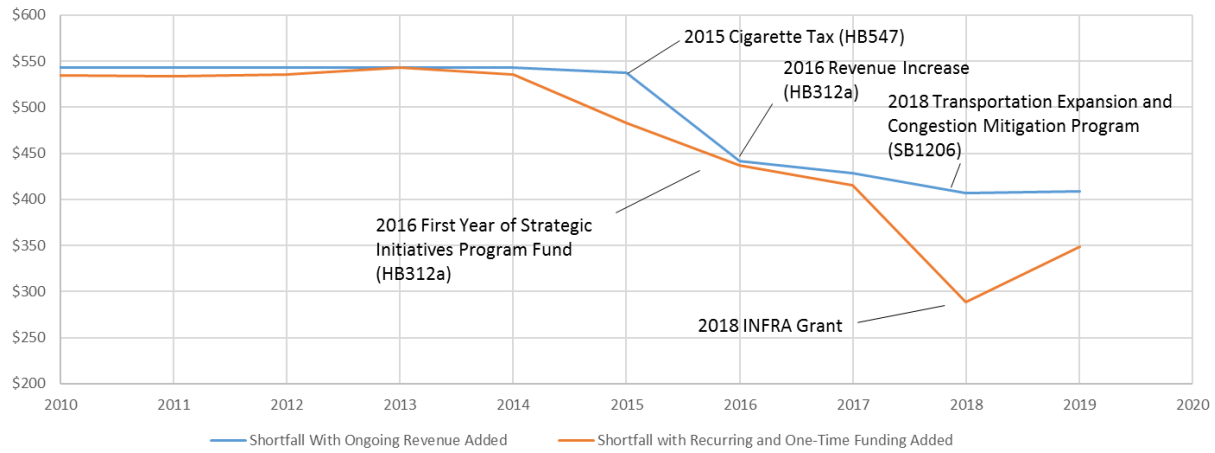
Table I.3 summarizes progress made by the Idaho Legislature, ITD, and Local Transportation Agencies towards the funding shortfall.

Table I.3. 2010-2019 Idaho Transportation Funding Shortfall Summary ($ Millions)

Year	2010 Task Force Short Fall *(2010 Dollars)*	Ongoing Revenue Sources			Shortfall With Ongoing Revenue Added	One-Time Revenue Sources		Shortfall with Recurring and One-Time Funding Added
		Cigarette Tax* (HB 547)	Revenue Increase* (HB312a)	Congestion Mitigation (SB1206)		Strategic Initiatives (HB312a)	Federal Discretionary	
2010	$543.00	-	-	-	$543.00		$8.20	**$534.80**
2011	$543.00	-	-	-	$543.00		$9.10	**$533.90**
2012	$543.00	-	-	-	$543.00		$7.30	**$535.70**
2013	$543.00	-	-	-	$543.00	-	$0.00	**$543.00**
2014	$543.00	-	-	-	$543.00	-	$7.40	**$535.60**
2015	$543.00	$6.01	-	-	$536.99	$54.00	$0.30	**$482.69**
2016	$543.00	$12.05	$88.88	-	$442.08	$0.00	$5.20	**$436.88**
2017	$543.00	$9.24	$105.60	-	$428.16	$10.97	$2.30	**$414.90**
2018	$543.00	$4.70	$108.99	$22.72	$406.59	$27.67	$90.20	**$288.72**
2019	$543.00	$4.70	$109.84	$19.37	$409.09	$60.30	-	**$348.79**

While data show continuous progress towards addressing the transportation funding shortfall in Idaho, challenges such as inflation, growth, and changes in the use of the state's highways were not taken into account in analyzing the shortfall. Since 2010, ITD has invested in staff and resources to better calculate project costs, system needs, and system use.

Figure I.3. 2010-2019 Idaho Transportation Funding Shortfall Summary ($ Millions)



Source: ITD, 2019

The 2010 Task Force identified highway construction material cost inflation as a key factor in the funding shortfall at the time. Since 2010, construction material costs have continued to outpace the Consumer Price Index calculated by the Bureau of Labor Statistics.

Table I.4. 1999-2010 Construction Material Costs:

Material Type	Cost 1999-2003	Cost 2004 -2006	Cost 2008-2009	Cost 2010	% Increase 1999-2010
Oil for Asphalt (per ton)	$211 Belgrove to Mica 2001	$290 I-90 Paving 2006	$865 Osgood to Roberts 2009	$779 Menan/Lorenzo I.C. 2010	269%
Plant Mix Paving (per ton)	$29.94 Arrow to Turkey Farm 1999	$44.45 Lewiston Hill to Genesee 2004	$60.00 U.S. 95, Milepost 430-436 2004	$54.00 Homedale Rd. Beet to Farway 2010	80%
Aggregate for Base (per ton)	$7.07 Yale Road, Cassia County 2003	$14.32 Twin Falls Alt. Rt, Stage 1 2005	$11.80 Chubbuck to Poc. Cr. IC 2009	$17.80 Fairgrounds to 20th St. St. Maries 2010	152%
Base Rock (per ton)	$5.26 Arrow to Turkey Farm 1999	$13.61 Lewiston Hill to Genesee 2004	$12.75 Twin Falls Alt. Route 2009	$15.00 Salt Lake I.C. to Raft River I.C. 2010	185%
Bridge Deck Concrete (per sq. yard)	$298 South Fork Palouse River 2003	$784 I-84, Milepost 17-23 2006	$581 Twin Falls Alt Route 2009	$755 Menan/Lorenzo I.C. 2010	153%

The Consumer Price Index had an inflation rate of 20.4%-33.2% in the 1999/2003-2010 period.

Table I.5. Inflation of Highway Construction Materials Costs 2011-2018
(Figures Calculated by ITD Project Cost Estimating Team)

Material	2011	2012	2013	2014	2015	2016	2017	2018	% Increase from 2011
Oil for Asphalt (per ton)	N/A in Present Project Bids								-
Plant Mix Paving 405-325A 5,000 to 15,000 Tons (per ton)	$72.78	$77.06	$71.23	$80.90	$68.51	$77.52	$65.25	$81.25	**12%**
Aggregate for Base 303-021A 8,000 to 20,000 Tons (per ton)	$12.63	$18.56	$15.41	$19.23	$26.07	$20.60	$16.25	$21.43	**70%**
Base Rock 301-005A 9,000 to 22,000 Ton (per ton)	$9.69	$8.20	$7.45	$13.60	$12.56	$12.66	$14.71	$17.47	**80%**
Bridge Deck Concrete (per sq yd)	*	*	$577	$649	$601	$654	$1,000	$729	**26%**

The Consumer Price Index had an inflation rate of 12% in the 2011-2018 period.

For the overall period of 1999/2003 to 2018, all construction material costs have continued to outpace Consumer Price Index inflation.

Table I.6. Inflation of Highway Construction Material Costs 1999-2018
(2010 Governor's Task Force and ITD Cost Estimating Figures)

Material	1999-2003	2018	% Increase from 1999-2003
Plant Mix Paving *405-325A *5,000 to 15,000 Tons (per ton)	$30	$81.25	**171%**
Aggregate for Base *303-021A *8,000 to 20,000 Tons (per ton)	$7	$21.43	**203%**
Base Rock *301-005A *9,000 to 22,000 Tons (per ton)	$5	$17.47	**232%**
Bridge Deck Concrete (per sq yd)	$298	$729	**145%**

Consumer Price Index had an inflation rate of 136%-150% for the 1999/2003 – 2018 period.

Growth and Transportation

Growth occurring in a given geographic area is highly correlated to an increase in travel demand on highways. There are two types of growth that contribute to an increase in transportation demand:

- **Economic Growth** – An increase in gross domestic product or other indicator of economic activity
- **Population Growth** – The increase of residents within a geographic area

In 2017, Idaho was named by the U.S. Census Bureau as the fastest-growing state in the country in terms of population by percentage, with an annual population growth rate of 2.2%. According to the U.S. Census Bureau, Idaho has been a "top ten" fastest-growing state since 2013. Continuation of this trend may strain the state's ability to accommodate past and future growth for an extended period of time. The following information is provided to help ITD staff better understand the economic and population growth impacts to the transportation network.

Available Information on Growth

The following five leading indicators for growth are readily available to ITD staff.

1. **Demographics** – Population statistics including age, location, race and gender
   - Provided by U.S. Census Bureau or Idaho Department of Labor
   - Derived from analysis
   - Delay in reporting
2. **Motor Vehicle and License** – Vehicle registration and license information
   - Directly reported, provided by Division of Motor Vehicles (DMV)
   - Minimal reporting delay
   - Detailed to zip code level
3. **Building Permits** – Issued building permits for residential dwelling units
   - Directly reported by City/County; U.S. Census also reports summaries
   - Reported monthly and annually
4. **Idaho Gross Domestic Product** – A summation of economic activity in Idaho
   - U.S. Department of Commerce
   - Derived by analysis
   - Released quarterly and annually
5. **Employment Information** – Labor force statistics such as total employment and unemployment
   - U.S. Bureau of Labor Statistics and Idaho Department of Labor
   - Derived from analysis
   - Income and employment rates

Other data and information on growth are available to ITD staff for growth analysis. Such information is usually regionally relevant or a trailing indicator of growth. Examples are listed below.

1. **Traffic Counts/Vehicle Miles Traveled** – This information would affirm growth predicted by leading indicators, but can also be used for capacity analysis of highways to direct future growth to other highways through travel demand forecasting efforts

2. **Ridership/Passenger Reports** – Annual reports on ridership and passengers for transit and airports can provide information regionally or confirm growth as a trailing indicator

3. **Fuel Sales** – Annual sales numbers for fuels in Idaho can be grouped in categories such as gasoline, diesel, and jet fuel to affirm growth predicted by leading indicators

Table I.7. Idaho Growth Indicators 2010-2018

	Category	Year		Growth in Period
		2010	2017/18	
Leading Indicators	**Idaho Population** *($ Millions)*	1.57	1.72	9.6%
	Driver's License Surrenders *($ Thousands) **	39.8	49	23.1%
	Residential Building Permits *(Annual)*	1723	7915	359.4%
	Idaho Gross Domestic Product *($ Millions)*	55.1	72.3	31.2%
	Idaho – Total Employment *(Thousands) ***	603	717	18.9%
Trailing Indicators	**Annual Vehicle Miles Traveled** *(Billions)*	15.5	17.3	11.6%
	Boise Airport Ridership *(Annual, Millions) **	2.6	3.5	34.6%
	Fuel Sales *(Billions of Gallons)****	1.1	1.3	16.7%

**Period of Data 2013-2017/18*
***Total Non-Farm Employment*

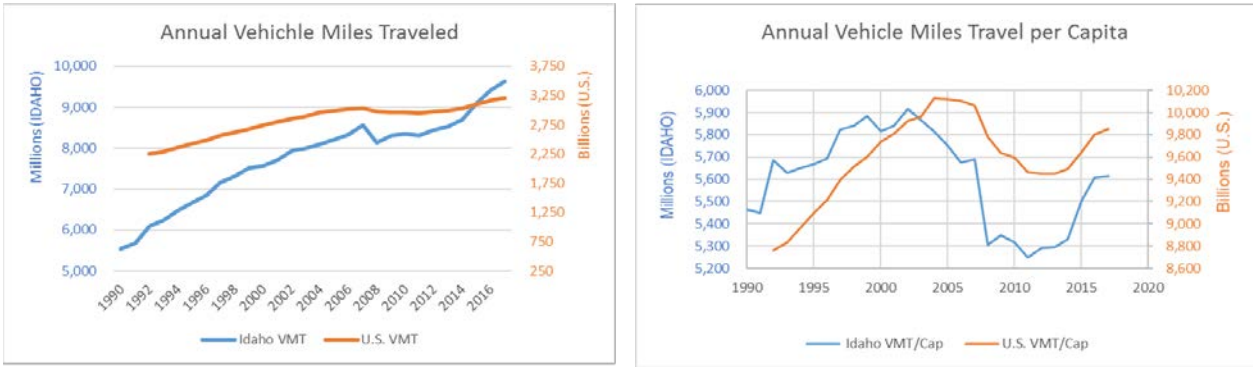


Figure I.4. AVMT

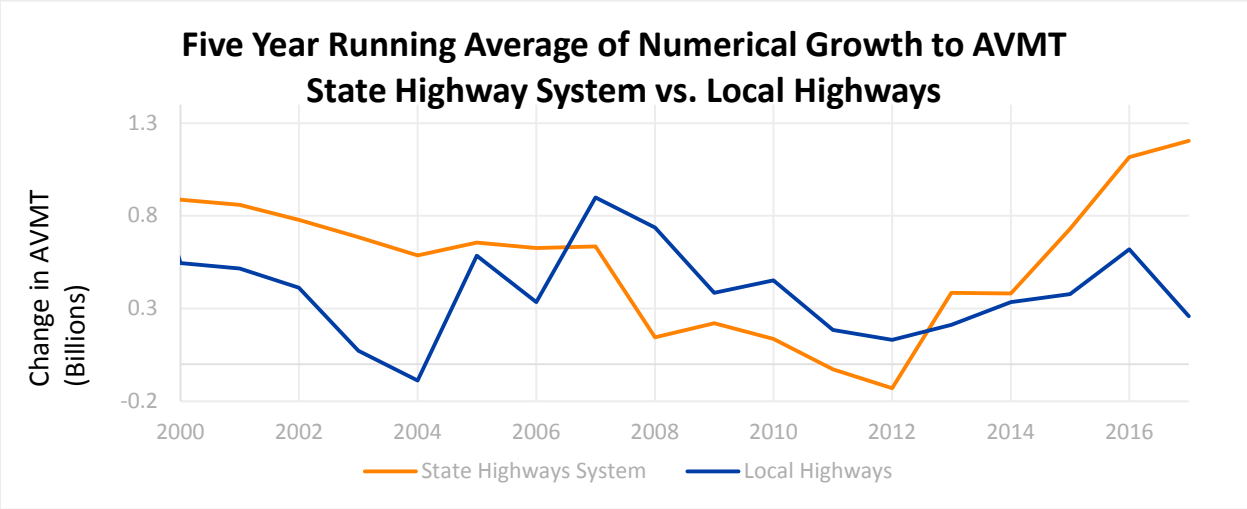
Source: ITD, 2019

Idaho's population growth has an impact on the transportation network. Figure I.4 presents Annual Vehicle Miles Traveled (AVMT), which is the total number of miles traveled on all state highways and roads in a given calendar year. Between 2014 and 2017, Idaho experienced growth rates not seen since the late 1990s. While the growth rates of these time periods might be similar, the more recent growth is numerically greater than the 1990s by hundreds of millions of vehicle miles traveled.

In the past, AVMT was highly correlated with growth. While short-term trends may still correlate with growth, new parameters such as mixed-use development, telecommuting, and flex scheduling for work forces influence these trends. To mitigate the impact to long-range forecasting from changes in highway use, ITD considers the effects of ride sharing (i.e., occupancy rates), mode split (transportation options such as transit, biking, or telecommuting), and land use (such as mixed-use development) in its travel demand model.

Using a five-year running average of numeric growth for AVMT in Idaho to compare the trends in the State Highway System and Local Highways, Figure I.5 demonstrates short-term changes in AVMT do not always correlate between systems. The portions of the graph which fall below zero are periods in which AVMT declined on the system.

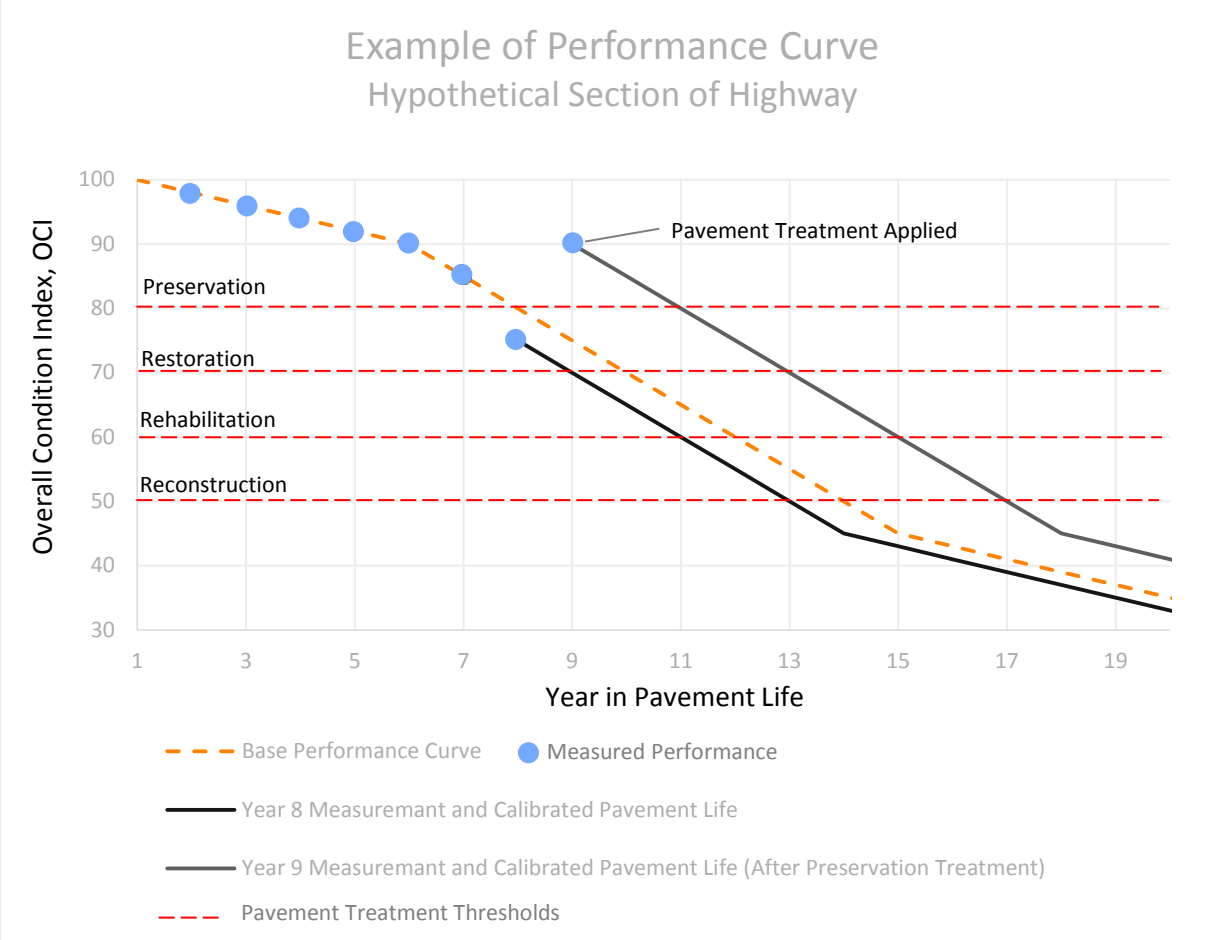
Figure I.5. Average AVMT



Source: ITD, 2019

ITD's Transportation Asset Management Plan accounts for growth on an annual basis by using a pavement management system that recalibrates each section of highway with updated pavement condition and traffic information. Figure I.6 presents an example of how a typical section recalibrates its predicted pavement life cycle.

Figure I.6. Asset Management - Pavement Performance Example



Source: ITD, 2019

Growth Impacts on the Transportation Network

S-3: Leadership

Population and/or economic growth is observationally confirmed as new structures are built. Residential, commercial and industrial buildings have a predictable impact on travel in an area and can result in induced future growth. Understanding investment timelines and trip generation from development is critical to a better understanding of how economic and population growth may impact a transportation system.

Short-term economic and population growth tends to have a more localized impact to the transportation network. Development investments that can produce return within a **1- to 10-year time span** are economically related to short-term growth. Small single-family housing, infill development, and small commercial developments all produce vehicular trips that can result in impacts to an existing local network but in most cases will not produce impacts outside of the local network with any significance. However, multiple short-term growth events in a single community could produce impacts similar to larger impacts outlined under the mid-term growth section below.

Types of transportation improvements that can accommodate short-term economic and population growth include, but are not limited to:

- Traffic signal construction
- Intersection modifications, such as added turn lanes
- Minor transit modifications and ride sharing
- Active transportation infrastructure

Mid-term economic and population growth impacts the regional transportation network. Development investments that can produce a return within **a 10- to 20-year time span** are economically related to mid-term growth. Larger commercial and retail developments generate trips that originate from neighboring cities. Multi-family housing developments tend to have higher occupancy turnover than single-family housing, causing changes in origin-destination patterns. Large single-family communities or master plan communities tend to build out in phases resulting in incremental impacts to the local and regional transportation network. As with short-term growth, multiple mid-term growth developments can result in impacts outlined under long-term growth scenarios discussed below. Types of transportation improvements that can accommodate mid-term economic and population growth include, but not limited to:

- Highway widening (in conformity with local comprehensive plans)
- Corridor-wide signal modifications or improvements
- Innovative intersection improvements
- Minor construction of new highways (less than 2 miles)
- Transit routing and expansion

Long-term economic and population growth results in impacts that extend beyond a regional transportation network. These can be impacts to commodity flow to accommodate new industrial investments or population changes. Development investments that can produce a return within a **timespan greater than 20 years** are economically related to long-term growth. High-rise buildings have lengthy zoning and building processes and require heavy capital investment prior to the opening of such developments. Industrial development also requires large capital investment and usually requires continued operation over the long term. Types of transportation improvements that can accommodate long-term economic and population growth include, but not limited to:

- Interstate capacity improvements
- Conversion from intersections to interchanges
- Major new highway construction
- New transit options

Table I.8 provides guidance on trip generation from various development types.

Table I.8. Trip Generation Quick Reference

Zoning	Growth Type	Unit	Type	Daily Trip Generation	Trips in Peak Hour
Residential	Population Growth	1	Single Family House	10	1
		1	Apartment	7	0.7
Commercial	Economic Growth	1,000 sqft	Retail	38	4.2
		1,000 sqft	Office	10	1.5
Industrial		1,000 sqft	Industrial	5	0.9

Round numbers based on ITE Trip Generation Report, 10th Edition

Analysis of Growth and Transportation in Idaho

ITD requested input from stakeholders on possible influencing factors for future growth scenarios, such as natural resources and economic conditions. Through outreach efforts conducted for this plan, stakeholders indicated future predictions based on their belief that 1) continued high growth was likely, 2) growth would be variable from year to year, or 3) continued high growth was unlikely. Table I.9 presents the results from 72 transportation professionals and elected officials.

Table I.9. Scenario Planning Results IDAGO 2040

	Likely Continued High Growth	Growth Variable Year to Year	Unlikely Continued High Growth
Votes	40	30	2
Percentage	56%	42%	3%

ITD interprets the results to indicate that it would be an acceptable assumption for future forecasting that minor fluctuations in economic markets might have short-term influence on growth, but as long as Idaho has a comparably low cost of living, low unemployment, and available natural resources, growth can be expected at rates higher than national averages.

The driver's license surrenders information provides nearly a real-time analysis of population growth among drivers in Idaho. In addition to knowing how many more drivers have relocated to Idaho in a given month, ITD also tracks information on states of origin for new Idahoans. Table I.10 presents the Driver's License Surrender Summary for 2017.

Table I.10. 2017 Driver's License Surrenders in Idaho Total and Top 10 States

Rank	Total	46,951
1	CA	11,293
2	WA	7,354
3	UT	3,510
4	OR	3,446
5	AZ	2,030
6	CO	1,943
7	NV	1,816
8	TX	1,717
9	MT	1,423
10	FL	902

For the same period, according to the U.S. Census Bureau, Table I.11 presents the top ten states in numeric growth from 2016 to 2017.

Table I.11. Top 10 States in Numeric Growth: 2016 to 2017

Rank	Name	2010	2016	2017	Numeric growth
1	Texas	25,146,100	27,904,862	28,304,596	399,734
2	Florida	18,804,594	20,656,589	20,984,400	327,811
3	California	37,254,518	39,296,476	39,536,653	240,177
4	Washington	6,724,545	7,280,934	7,405,743	124,809
5	North Carolina	9,535,721	10,156,689	10,273,419	116,730
6	Georgia	9,688,690	10,313,620	10,429,379	115,759
7	Arizona	6,392,309	6,908,642	7,016,270	107,628
8	Colorado	5,029,325	5,530,105	5,607,154	77,049
9	Tennessee	6,346,295	6,649,404	6,715,984	66,580
10	South Carolina	4,625,381	4,959,822	5,024,369	64,547

Source: U.S. Census Data

The four fastest and six of the top ten fastest numerically growing states are in the top ten states for driver's license surrenders in Idaho. ITD interprets this as an affirmation of the results of stakeholder outreach outlined above. ITD expects continued growth from residents relocating to Idaho from other states if those other states also have high numeric growth.

Design Constraints of the State Highway System

The State Highway System has yet to meet full capacity build out in many locations across Idaho. However, there are areas of the State Highway System that currently have no additional right-of-way for expansion. As ITD programs capacity-increasing projects such as highway widening, these areas will become more numerous in Idaho. As the State Highway System approaches a build-out scenario, ITD will have to look at alternative solutions to maintain mobility in built-out corridors. Innovative solutions will be needed on Idaho's Interstate and intercity arterial highways as they reach functional capacity limits. As a generalization of capacity calculations, arterial highways will reach maximum capacity efficiency at six traffic lanes (three in each direction) and Interstate highways will reach maximum capacity at eight to ten traffic lanes (four to five in each direction) based on design elements such as distance between interchanges and acceleration/deceleration lane widths.

Examples of constraints to arterial highways that limit capacity efficiency at more than six traffic lanes are:

- Increased signal delay for turns, vehicular crossings, and pedestrian crossings
- Increased delay from traffic weaving to make right or left turns

Examples of constraints to Interstate highways that limit capacity efficiency at more than eight to ten lanes of traffic are:

- Traffic weaving (i.e., the general crossing of lanes to exit) can increase delay
- Left-lane exits can increase the capacity efficiency of wider highways but also reduce the economic benefits due to increased costs for added infrastructure

Recognizing the limitations of such sections of highway in the future, ITD will consider innovative solutions to increase the capacity of Interstate and arterial highways of the State Highway System.

Preparing for the Future

Growing congestion and delay on highways was a concern identified by the public and stakeholders during ITD's outreach. In response, ITD staff researched various congestion measures used in other states and determined their state of readiness for implementation based on the availability of information, if the measure is public friendly, and if the underlying information and analysis is useful for ITD's project selection process. Table I.12 outlines various statewide-applicable congestion measurements and ITD's assessment of each.

Table I.12. Idaho Transportation Department Congestion Measurement Readiness

Congestion Measures Used in Other States		Statewide, Corridor or Segment Specific	Ready for Implementation	Public Friendly	Technically Useful for Congestion Mitigation Project Selection
Applicable to Statewide Congestion Measurement	**Average incident clearance time**	Statewide	Some Development Needed	Yes	Yes
	Per Person Delay	Statewide	Some Development Needed	Yes	Yes
	Percent of days with Severe Congestion	Statewide/Corridor/ Segment	Some Development Needed	Yes	Yes
	Percent of System Congested	Statewide	Some Development Needed	Yes	Yes
	Duration of Congestion (Length of Peak)	Statewide/Corridor	Some Development Needed	Yes	Yes
	Commute Congestion	Statewide	Some Development Needed	Yes	No
	Emissions	Statewide	Immediate	Yes	No

In addition to statewide congestion measurements, ITD researched and assessed congestion measurements that are applicable to corridors and segments of highway, as shown in Table I.13. These measures tend to produce information that cannot be projected across an entire network.

Table I.13. Idaho Transportation Congestion Measurement Readiness

Congestion Measures Used in Other States		Statewide, Corridor or Segment Specific	Ready for Implementation	Public Friendly	Technically Useful for Congestion Mitigation Project Selection
Corridor and Segment Specific Congestion Measurement	**Average peak travel time**	Corridor/Segment Specific	Immediate	Yes	Yes
	Vehicle Throughput	Corridor/Segment Specific	Immediate	Yes	Yes
	Before and After Analysis	Segment Specific	Immediate*	Yes	Yes
	Routinely congested segments	Segment Specific	Some Development Needed	Yes	Yes
	Person Throughput	Corridor/Segment Specific	Some Development Needed	Yes	Yes
	95th percentile reliable travel time	Corridor/Segment Specific	Some Development Needed	No	No
	Lost Throughput Productivity	Corridor/Segment Specific	Intensive Development Needed	No	Yes
	Maximum Throughput Travel Time Index (MT^{3}I)	Corridor/Segment Specific	Intensive Development Needed	No	No

**Implementation could be immediate, but results would be published after projects are complete*

Recommendations

Idaho has experienced a high pace of economic and population growth since 2010, which has impacted the highways of the Gem State. Having transportation professionals located around Idaho working for state, regional, and local agencies that understand the impacts of growth on transportation is essential for navigating transportation issues through 2040. The information contained in this chapter is intended to inform the public, stakeholders, and transportation professionals on important factors in transportation across Idaho. The recommendations below will help contribute to better transportation solutions for Idaho through 2040.

1.1 Continue to work with Idaho's Congressional delegation to secure ongoing support for federal funding to meet Idaho's diverse transportation needs; continue aggressively pursuing federal discretionary grants and other funding opportunities.

1.2 Continue to build relationships with the Idaho Legislature to assure support for new and additional funding sources to meet expanding transportation needs in Idaho.

1.3 Develop a customer-friendly performance measure for congestion.

1.4 Further invest in training, technologies, and services that can provide the best possible information regarding the condition and performance of highways in Idaho.

1.5 Inform and train transportation professionals on the impacts of population and economic growth on the State Highway System and statewide trends in travel patterns.

1.6 Use guidance from this plan to reinforce best practices in long-term land-use and transportation planning when invited to participate in local land-use work-groups or decisions.

1.7 Continue aggressively pursuing federal discretionary grants and other funding opportunities.

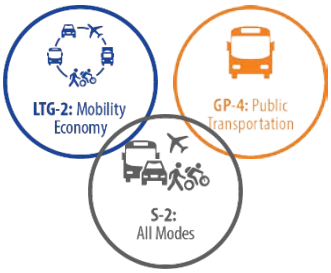
1.8 Prepare for an updated assessment of transportation funding in Idaho by the year 2020 by preparing estimates for the costs to maintain various levels of service for mobility and state of good repair while accounting for aging infrastructure.

1.9 Partner with stakeholders and the public to best modify, adjust or expand the State Highway System.

1.10 Collaborate with local transportation agencies on travel demand management strategies and public transit options that reduce trips on the State Highway System.

II. Modal Planning

Introduction to Planning



Idaho has much to offer its residents and guests: a unique history, employment prospects, inviting cities, recreational opportunities, and attractions. ITD is dedicated to ensuring people can safely access their desired destinations. To do this, the Department must take into consideration every aspect of state travel from the planning process to the operation of state highways. In Idaho, there is a significant variance in the need for planning and investing in transportation.

One way the Department maximizes investment dollars is through the planning process. As outlined in FHWA's *The Transportation Planning Process Key Issues*: *"transportation planning plays a fundamental role in the state, region or community's vision for its future. It includes a comprehensive consideration of possible strategies; an evaluation process that encompasses diverse viewpoints; the collaborative participation of relevant transportation-related agencies and organization; and open, timely, and meaningful public involvement."*

ITD's planning process follows a multidisciplinary-multimodal planning approach with the combined expertise of planners, engineers, project managers, research analysists, financial specialists, GIS experts, and many others. This approach is grounded in research, forecasting data, and analytics which enables ITD to deliver thoughtful and comprehensive roadmaps for strategic transportation planning, corridor assessments, as well as the development of complex projects that meet the needs of the citizens and visitors of Idaho. The modes of transportation ITD considers include:

- Active Transportation – (e.g., Bicycle, Pedestrian)
- Aeronautics – (e.g., Private and Commercial Aircraft)
- Freight – (e.g., Truck, Rail, Aircraft, Watercraft)
- Public Transportation – (e.g., Bus, Van Pool)
- Privately Operated Vehicles – (e.g., Automobile, Motorcycle, Registered Recreational Vehicle)

ITD recognizes this list may change with new developments in infrastructure, technology, and vehicles. For example, ITD must consider potential new modes of transportation such as connected and autonomous vehicles, commuter rail, and electric bicycles as demand and available transportation options evolve.

ITD dedicates a Subject Matter Expert (SME) for each mode of transportation. This staff person serves as the ultimate source of knowledge, expertise, and experience for the mode. For each transportation mode, the SME is responsible for:

- Making policy recommendations to the Idaho Transportation Board
- Managing the associated statewide modal planning document
- Administering representative committees (including advisory or administrative boards)
- Directing applicable public and stakeholder involvement

ITD's organizational structure also integrates safety, mobility, and economic opportunity considerations with each transportation mode. Through the modal planning process, ITD develops planning for specific modes of transportation by creating a planning "tool box" for decision makers and project managers. The following sections provide brief overviews of how ITD addresses each mode; how the ITD mission is addressed; how program funds are administered and distributed; and what the future brings for modal planning.

Active Transportation Planning

Active transportation refers to any self-propelled, human-powered mode of transportation, such as bicycling and walking. ITD employs an SME dedicated to bicycle/pedestrian planning and to manage the Department's Bicycle and Pedestrian Program. This Program is primarily focused on statewide coordination and long-range planning and is organized around the 5 E's of planning and coordination: **education**; **encouragement**; **engineering**; **enforcement**; and **evaluation**.

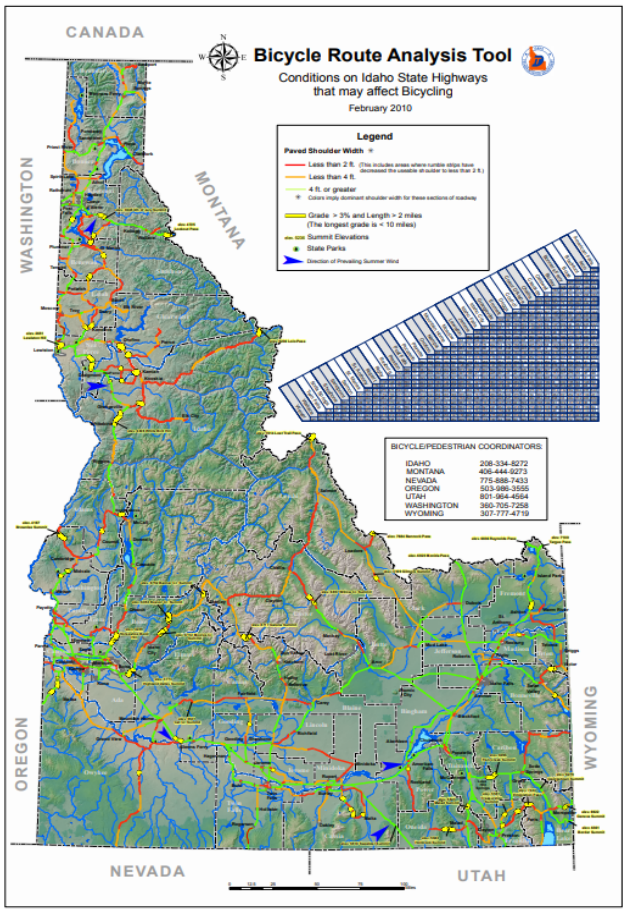
The Idaho Transportation Board has adopted a policy on bicycle and pedestrian activities that states: *"The Idaho Transportation Board is committed to achieving a safe, effective, and balanced multimodal*

transportation system that includes accommodations for bicyclists, pedestrians, and pedestrians with disabilities where they are appropriate for the context and function of the transportation facility along with motorized transportation modes. The Department shall follow and use American Association of State Highway and Transportation Officials requirements to establish standards and specifications for the provision of bicycle and pedestrian facilities in conjunction with highway projects."

ITD's Administrative Policy establishes a statewide Bicycle and Pedestrian Coordinator and a Bicycle and Pedestrian Administrative Committee made up of professional staff and SMEs to carry out the Board's policy on bicycle and pedestrian transportation.

Both policies encourage and respect local planning efforts through ITD conformance with regard to bicycle and pedestrian facilities when constructing projects on the state highways within a local jurisdiction. ITD works continually to strengthen partnerships with local jurisdictions in considering and developing bicycle and pedestrian facilities. In addition to its policies on bicycle and pedestrian transportation, ITD has developed a bicycle and pedestrian plan, bicycle and pedestrian study, a bicycle route analysis tool (presented in Figure II.1), and various safety manuals to help citizens with safe, effective, active transportation in Idaho. Continuously reviewing, updating, and seeking public and stakeholder input on the guidance documents will be integral for active transportation safety and mobility improvements.

Figure II.1. Bicycle Route Analysis Tool



Source: ITD, 2019 – Bicycle Route Analysis Tool

A guide to help bicyclists plan for long distance bicycle trips in Idaho.

Although no direct funding is provided for this program, funding opportunities for bicycle and pedestrian projects include (but are not limited to and may change at any time):

- Transportation Alternatives Program
- Child Pedestrian Safety Program (administered by Local Highway Technical Assistance Council [LHTAC])
- Americans with Disabilities Act (ADA) Curb Ramp Replacement Program.

The Bicycle and Pedestrian Coordinator works closely with local communities to access available funding programs when opportunities arise.

As Idaho's transportation needs change over time, ITD will continuously review its commitment to active transportation to maximize the effectiveness of available funding to improve safety, mobility, and economic opportunities as they relate to active transportation. ITD continually pursues opportunities to collect data and perform analysis of active transportation demands and needs. ITD's outreach efforts have shown that access to active transportation options is integral for quality of life in Idaho. ITD will continue to pursue opportunities to provide sidewalks, shared highway lanes that are efficient for neighborhoods and low-traffic highways, bike lanes for commuters, shared use paths to connect developments, wide shoulders to connect cities, and improved highways that connect to off-road trailheads.

Aeronautics Planning

The ITD Division of Aeronautics has a long history in aviation. From serving the state's backcountry to providing opportunities for international passenger travel and meeting the needs of businesses, airports are an integral component of the transportation system. In addition to serving transportation needs, Idaho's airports support the economy through the creation of jobs, provision of emergency transport and access, and facilitation of a flourishing tourism sector in the Gem State.

ITD's Division of Aeronautics recognizes the significance of a proactive approach to ensuring aviation's role in the statewide transportation system and oversees a variety of airports including commercial service, regional business, community business, local recreational, and basic service airports (illustrated in Figure II.2). The Division uses planning to link statewide aviation services to essential aviation programs, services, and projects which ultimately develops and fosters an exemplary system of airports to meet the current and future requirements of a growing and diverse Idaho aviation community.

Figure II.2. Airport Role Classifications

In addition to oversight by the Idaho Transportation Board, the Division receives direction and recommendations from two advisory groups: the Idaho Aeronautics Advisory Board (AAB) and the

Idaho Airstrip Network (IAN). The AAB is a five-member group, appointed by the Governor to review, comment upon, and recommend policies, direction, and grant projects for the Division on an advisory basis. The IAN is specifically tasked to review and make recommendations for the United States Forest Service (USFS) and public airports in Idaho.

The Division of Aeronautics has five sections that provides valuable planning and programs for aviation users and the state:

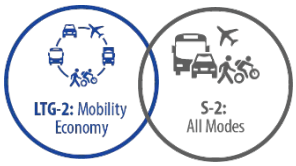
- The Airport Planning & Development Section provides various levels of both direct and indirect support to owners, managers, and users of public-use municipal airports throughout Idaho while leading the overall statewide airport planning effort for a safer, more economical and accessible aviation system. In the future, this Section intends to promote development of new software to manage the capital improvement and grant programs; provide specific procedures, agreements, and fees for *Through the Fence* users at community and state airports; and develop *Pavement Management Guidelines* for community construction projects.
- The Airport Maintenance Section operates and maintains airports throughout the state by providing runway surfacing, vegetation control, rodent control, irrigation systems, and safety improvements. Since the Department does not own some of these airports, aeronautics has operating leases from other state or federal agencies. In the future, this Section will study the effects of increased fees at state airports and the impact this may have on users with limited budgets, continue scheduled acquisition and replacement of equipment at state airports, and develop new revenue sources for operations, equipment, and maintenance budgets, while balancing between desired and needed investments.
- The Flight Operations Section provides safe, efficient, on-demand air transportation. This Section provides as-needed scheduling and air transportation to elected officials and state employees in the state-owned aircraft, emergency response services for State Police and other agencies, and staff transportation for efficiencies of state aeronautics programs and airports.
- The Safety and Education Section provides aviation safety programs, pilot and public aviation education, and critical aerial search operations for downed, missing, or overdue aircraft.
- The Administrative Section provides general administrative duties and administers the Division budget, accounts payable, capital expenses, program-funding levels, ongoing aircraft and dealer registration and fee payment services, the computer replacement program, and out-of-state travel support.

To address the state's aviation challenges, the Division developed the Idaho Airport System Plan (IASP) under the direction of the ITD Board, the AAB, and the Idaho Airstrip Network (IAN). The IASP follows a strategic approach to provide a blueprint for aviation facilities to ensure Idaho's future system of airports meets the state's aviation safety and infrastructure needs and the system's contribution to the overall economy. The IASP also provides input for federal planning documents. The Federal Aviation Administration's (FAA's) National Plan of Integrated Airport Systems (NPIAS) is updated every two years and provides funding for eligible airport development from the Airport Improvement Program (AIP). Airports must be included in the NPIAS for their projects to be eligible for AIP funding. Aeronautic planning recommendations from the IASP are included in the NPIAS.

The IASP is ITD's comprehensive plan for linking statewide aviation facilities with those of the nation and the world. Idaho's system plan also works in concert with Idaho's Transportation Vision. The Transportation Vision examines all of the state's transportation needs and sets the direction for making improvements and investments in all modes of transportation.

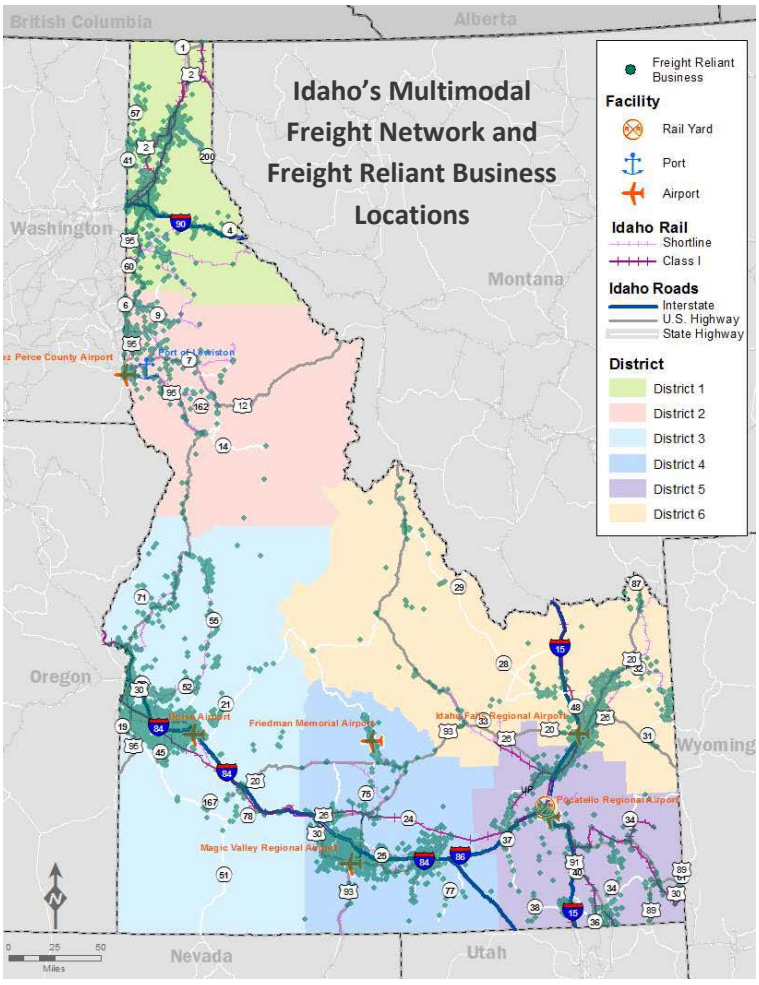
Freight Planning

Freight planning at ITD encompasses freight from a multimodal perspective. While ITD's major focus is trucking, the Freight Program additionally addresses freight railroads, air cargo, and watercraft from the Port of Lewiston. Pipelines in Idaho carry a significant amount of petroleum products but are not typically included in the planning process.



ITD employs an SME dedicated to freight planning and to manage the Department's Freight Program. The Freight Program Manager works with agencies throughout Idaho to identify freight movement, determine needs, and allocate federal freight funding where necessary. The Freight Program Manager is advised by the Freight Advisory Committee and internal ITD staff. The Idaho Freight Advisory Committee is comprised of representatives from various freight-related or freight-reliant agencies from throughout Idaho with members appointed by the Idaho Transportation Board. The ITD Freight Program Manager is the ITD liaison to the Committee. This Committee provides the Department with stakeholder input on freight issues and provides significant input to freight project prioritization and critical freight corridor selection.

Figure II.3. Idaho's Multimodal Freight Network



Source: ITD, 2019

In December 2015, the Fixing America's Surface Transportation (FAST) Act was enacted and formally established the freight program on a national level. The Act included both discretionary (formula) and grant funding for freight-related projects, with most of the funding designated for improving highway freight mobility and safety projects. The FAST Act also requires development of state freight plans and encourages state freight advisory committees. The Idaho Statewide Freight Strategic Plan and the Idaho Freight Advisory Committee are the foundations for the freight program and associated planning.

In February 2017 ITD published and the U.S. Department of Transportation approved the Statewide Freight Strategic Plan which provides analysis and identifies needs and issues for each freight mode. The document also includes an implementation plan which identifies freight projects in five-, ten- and twenty-year timeframes. As required by the FAST Act, the five-year projects are budget constrained and are

the basis for executing the federal freight formula funds. This budget-constrained project list is updated as required for inclusion in the ITIP and with coordination from the Freight Advisory Committee and the five metropolitan planning organizations (MPOs). Finally, to obligate federal freight formula funds, projects must either be on an Idaho Interstate or on a designated critical urban or critical rural freight corridor which are also fully coordinated through the Freight Advisory Committee and MPOs.

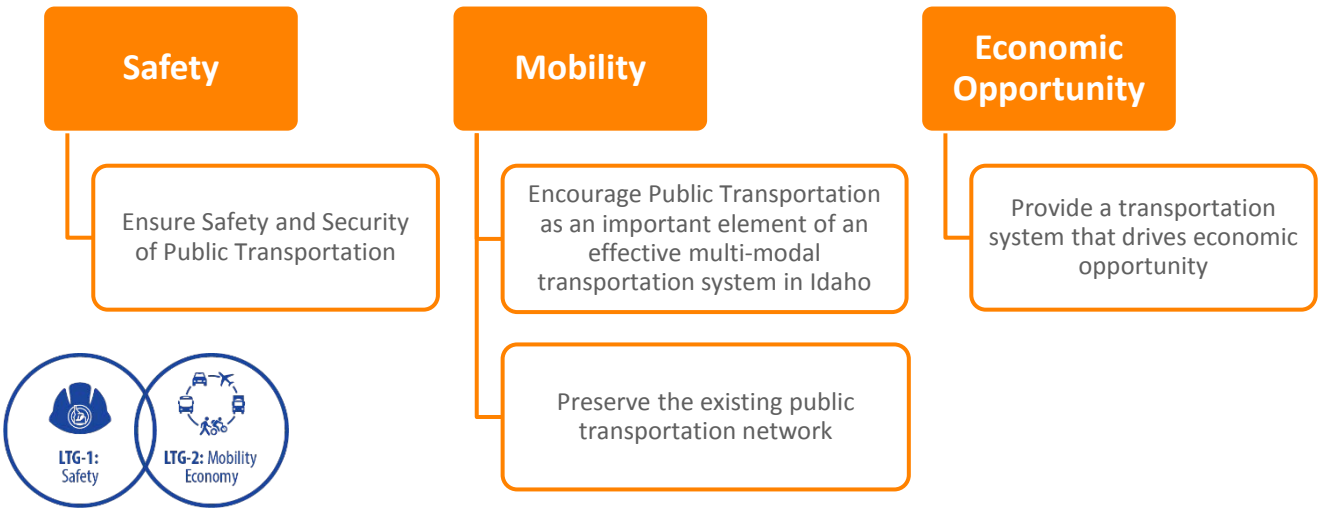
ITD also maintains a State Rail Plan which identifies railroad-specific needs and issues. Rail plans are required by the Federal Railroad Administration for those states seeking capital grants under the Passenger Rail Investment and Improvement Act (PRIIA). While ITD maintains a rail plan, passenger rail is very limited in Idaho with a single passenger rail facility in Sandpoint. Accordingly, Idaho has not requested PRIIA funds and ITD staff do not expect to make a request in the near future.

A final element in freight planning is the 129,000-pound trucking program. Idaho allows 129,000-pound vehicles with divisible loads on Interstates and approved state highways. The program requires stakeholders to request sections of highways they desire for 129,000-pound trucking operations. Upon request receipt, the Freight Program Manager develops the highway evaluations in coordination with the applicable District, Bridge Asset Management, and the Office of Highway Safety, while the Office of Communications collects public feedback on each request. The Chief Engineer presents each evaluation to the 129,000 Pound Trucking Subcommittee and eventually to the Idaho Transportation Board to make the final determination. Approved routes through the state continue to develop but are somewhat disjointed due to the request requirements and process. Any future planning should include efforts to address 129,000-pound trucking on a statewide level.

Public Transportation Planning

Public transportation planning takes into consideration fixed-route bus service, demand-response service, human-service transportation, rideshare (i.e., carpool and vanpool), car sharing, and other public conveyances. ITD's Division of Public Transportation (ITD-PT) is the responsible entity for the management and guidance of all rural and assigned small urban programs, and all State of Idaho funding dedicated to public transportation. The Public Transportation Advisory Council (PTAC) was established by Idaho Code and advises the Idaho Transportation Board on issues, policies, and performance concerning public transportation services in Idaho. The PTAC works to ensure the public transportation program is safe, financially sustainable within the current funding constraints, and capable of appropriately adjusting to the changing transportation landscape. Figure II.4 illustrates ITD-PT's efforts toward meeting the Department's mission.

Figure II.4. Public Transportation Connection to ITD Mission



Source: ITD, 2019

In April 2018, the Idaho Transportation Board adopted the ITD Statewide Public Transportation Plan. This plan was also supplemented by the FTA-required Locally Coordinated Human Service Transportation Plans completed in 2018. Additionally, a 2010 Intercity Bus Study was conducted and will be updated as needed.

ITD-PT's transit planning efforts are critical elements to enhance Idaho's current highway infrastructure and offer viable solutions and options for moving people, services, and goods. Modal coordination and planning at the statewide level, and in particular during the long-range planning efforts, ensures a more integrated and connected transportation system.

Through the planning process and the application and award phase, the PT office and transit stakeholders strive to meet the future mobility needs of Idahoans by considering congestion mitigation opportunities, anticipating the growth on state highway infrastructure, establishing processes for transit on state highway right of way, planning for bus rapid transit or light rail needs, and staying apprised and engaged on the topic of electric and autonomous vehicles.

Figure II.5: Public Transportation Gaps and Needs

Source: ITD, 2019

The PT office and transit stakeholders have a strong interest in identifying and understanding future impacts on the current state of transit and the way transit operates. Figure II.5 presents known public transportation gaps and needs. Innovative funding solutions are needed to help meet public transportation gaps and needs statewide.

Privately Owned Vehicle Planning

Infrastructure Planning (Highways and Bridges)

Transportation and infrastructure planning takes into consideration privately owned vehicles such as cars, recreational vehicles, and motorcycles. During the transportation planning process, ITD defines future policies, goals, investments, infrastructure needs, and lifecycles to ensure people and goods reach their destinations. Transportation infrastructure planning is a collaborative process that incorporates the input of stakeholders including federal, state, and local government agencies; the general public; and business owners. Transportation planners apply a comprehensive approach to analyzing the wide range of alternatives and impacts on the transportation system.

Highway Safety Planning

An important component of infrastructure planning is safety. The 2016-2020 Strategic Highway Safety Plan (SHSP) outlines the Department's detailed strategy on highway safety. ITD collaborates with the Idaho Traffic Safety Commission (ITSC) in carrying out highway safety initiatives outlined in the SHSP. ITD integrates highway safety into its work using the "4 E's" of safety planning – engineering, education, enforcement, and emergency medical services.

The Office of Highway Safety (OHS) has implemented a "Towards Zero Deaths" initiative for the state of Idaho. The goal for the year 2020 is to reduce the annual traffic deaths in Idaho to 185 or fewer. ITD's OHS uses a proactive evaluation process to ensure a successful roadway safety program. Through the evaluation process, the OHS analyzes overall processes and performance that determine whether current activities deserve enhancement, revision, or replacement.

The "4 E's" and the three focus areas are encompassed in ITD's behavioral and infrastructure programs. The federally funded Highway Safety Improvement Program is integrated in the Department's Safety and Capacity (S&C) Program. This allows these federal funds to be leveraged with other federal funds through capacity-related programs and with state programs to allow the Department to do more "Towards Zero Deaths."

Mobility and Congestion Management

The S&C funding program leverages funding from several federal and state sources for candidate projects that address safety and capacity issues on the State Highway System. The S&C program uses a competitive data-assisted process that evaluates candidate projects and optimizes the amount of funding available towards the Department's mission of safety, mobility, and economic opportunity. Capacity project candidates analyzed through S&C can leverage the Transportation Expansion and Congestion Mitigation (TECM) Program funds. TECM is a state-funded program created in 2017. ITD considers travel-time savings for individuals in its return on investment analysis for highway projects, which is an accepted practice of quantifying a quality of life improvement by assigning a value to personal time savings. The Congestion Mitigation and Air Quality (CMAQ) policy addresses how ITD will specifically use federally designated CMAQ funding to further address capacity issues.

As transportation officials look to solve mobility issues due to congestion, the tool kit for solutions has become more diversified. ITD is committed to looking beyond traditional highway widening as a sole solution to capacity issues. Innovative designs, connected infrastructure, intelligent transportation systems, active transportation programs, and partnerships with local governments or transit agencies are all used at ITD and will become more prevalent to solve mobility issues in the future as they provide greater benefits and allow each transportation dollar to purchase more benefits.

Looking forward, the citizens of Idaho can expect innovations in how ITD addresses mobility, including how it defines congestion. Traditionally, transportation professionals have defined congestion via an analysis called "level of service," a density-based (volume/capacity) formula that can be difficult for the public to relate to experienced delay. The Department will explore travel-time-based metrics such as travel time reliability and delay data. Additionally, the Department will explore the application of travel demand management and traffic engineering solutions that minimize some of the adverse impacts of traditional highway widening construction projects. Looking forward to the future of congestion management in Idaho, ITD seeks to be a leader in solutions.

Recommendations

2.1 Develop an up-to-date statewide planning document for every transportation mode that provide current, relevant information and guidance and continuously engage the public

2.2 Reaffirm ITD's commitment to include local, regional, and statewide stakeholders in the modal planning process by gathering valuable insight, developing a larger knowledge base and leading by example.

2.3 Coordinate internally to focus resources on a single effort when engaged in the development of a statewide modal plan to break down silos, focusing on discussions with stakeholders/public, and efficiently using staff resources.

2.4 Implement a collaborative planning approach ensuring SMEs have access to planning staff and services and create consistency on planning efforts

Commitment to these recommendations will provides functional multi-modal solutions for each corridor on the state highway system.

III. Highway Data Analytics

Introduction to Highway Data Analytics

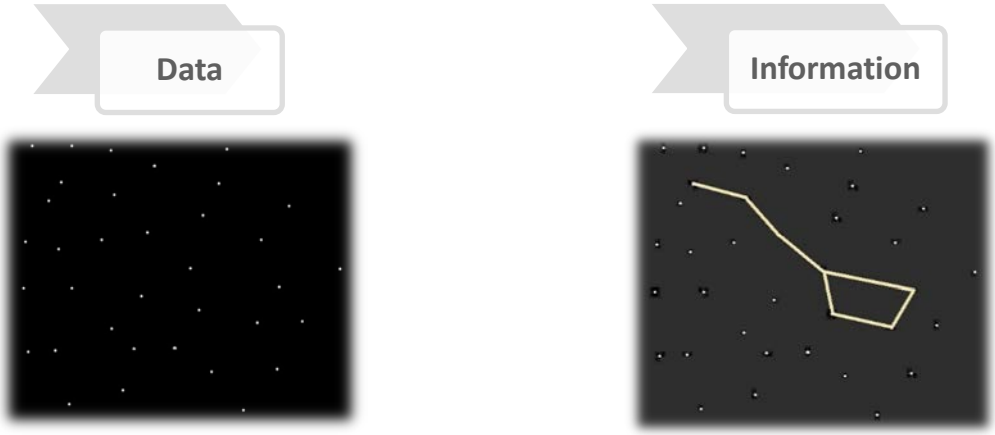
In recent years, highway data has played an increased role in decision making. ITD collects and processes data into information that is usable by staff, stakeholders, and the public. Figure III.1 illustrates the relationship between data and information in practice at ITD.

LTG-3: Innovation

Figure III.1. ITD Data and Information Definitions

Data: An actual occurrence or condition represented electronically, numerically, or textually

Information: One or more sets of data arranged to produce meaningful results or data with context.



Technology advancements in how highway data is collected and processed continue to drive mission-based goals of:

- Meeting a higher standard of accuracy and precision
- Managing a larger flow of data
- Maintaining larger sets of information

For example, information concerning the operational performance of the transportation network continues to grow in extent and coverage. In some cases, annually collected data is now being gathered and used in real time. The pace of advancements and the integral role of data in ITD's program delivery underscore the need for well-thought-out information systems, data governance, adherence to data collection standards, and established best practices in data analysis to meet ITD and stakeholders needs now and into the future.

Quality-Centric Model

LTG-3: Innovation

ITD compiles data and uses defined processes to develop information that informs the decision-making process. A core value within ITD is to make "data-assisted" decisions. Confident decision-making is reliant upon high-quality data and information. ITD understands quality must be central to all work associated with data to ensure efficacy of decisions derived from its use. To meet these needs, ITD has developed a Quality-Centric Model for ensuring quality highway data and information.

ITD's Quality-Centric Model focuses on the relationships between people, process, and technology with the actions or concepts that connect them.

- **People** – ITD staff and partners that develop or use highway data and information
- **Process** – The documented steps for collecting or using highway data and information
- **Technology** – The electronic platforms that allow for the work related to highway data and information

People require training to use technology, documentation to follow processes, and processes that are compatible with technology in use. ITD defines three related concepts as follows.

- **Governance** – The standards and procedures to publish, use, or maintain highway data and information
- **Effectiveness** – How closely process results in intended outcome
- **Talent** – Education, professional development, and experience levels of ITD employees

Properly governed technology, effective processes, and talented people yield quality results. Figure III.2 illustrates these relationships.

Figure III.2. Quality-Centric Model

Source: ITD, 2019

Highway Data Collection

Since ITD relies on data-assisted decision making in funding allocations and operations, consistent data collection and processing is paramount. ITD achieves consistency because of defined methodology, procedures, standards, and best practices that support data collection and information management. In addition to physical transportation network assets, ITD also produces and maintains vital data and information products. Just as ITD applies project management practices to the development of a construction project, so too ITD applies project management principles to data collection and information development. Figure III.3 provides a high-level illustration of ITD's data collection and information development lifecycle process.

Figure III.3.

Source: ITD, 2019
**Collection and processing of data may but need not occur simultaneously.*

- **Initiation** – Test, calibrate, and validate data collection systems; implement training and procedures to ensure equipment remains in working condition throughout data collection
- **Pre-Collection** – Ensure the data collection equipment can record accurate, consistent data; plan to collect data at the correct place and time
- **Collection** – Record events or conditions
- **Processing** – Conduct quality assurance activities to ensure data meet collection standards
- **Delivery** – Render raw data into useable formats

Highway Information

Following the Quality-Centric Model, effective processes are a component of quality highway information. Table III.1 outlines how highway data and information combine to create new levels of quality highway information. ITD recognizes highway data and information could potentially be over processed or analyzed into unreliable, meaningless conclusions. ITD limits the extent source data information is projected. When given data or information, ITD staff will identify it as source data or information at various levels or projections according to the guidance in Table III.1.

By identifying how far information is projected from source data, ITD can determine the correct role for the information in the applicable decision-making process.

Table III.1. Highway Data and Information Summary

Level		Description	Definition
Data		Current Conditions	Actual conditions or occurrences
Information	Level 1	Current Conditions	Derived directly from data (data + analysis/synthesis)
	Level 2	Projection	Combines two or more level 1 or data
	Level 3	Projection Analysis	Combines at least level 2 with level 1
	Level 4	Enhanced Projection Analysis	Combines level 2 with level two or level 3 with others

Table III.2 presents several examples of where specific data and information fall under the levels of projection.

Table III.2.

Examples of Highway Data and Information			Asset Management	Travel Demand Forecasting
Data		Actual conditions or occurrences	Skid, Falling Weight Deflectometer, Profiler laser/photo	Traffic Counts
Information	Level 1	Derived directly from data (data + analysis/synthesis)	Pavement Ratings	Average Daily Traffic, Land Use, Population

Examples of Highway Data and Information			Asset Management	Travel Demand Forecasting
Information	Level 2	Combines two or more level 1 or data	Projected Pavement Ratings	Future Land Use, Future Population, Current Travel Demand Scenarios
	Level 3	Combines at least level 2 with level 1	Pavement Program Analysis	Alternatives Analysis
	Level 4	Combines level 2 with level two or level 3 with others		Future Travel Demand

Topics on Highway Data and Information

Data Analytics

ITD uses qualitative and quantitative data analytic techniques and methods to improve information and efficiency in decision making. Through data analytics, ITD can identify and analyze enhanced data and patterns within data sets. Some of the applications in transportation include improving and innovating traffic analysis, projecting information on the state highway system from a limited data set, and increasing understanding of future travel scenarios. Additional applications in transportation are continuously under research, development, and testing. ITD will adopt data analytic methods when they provide costs savings, new and relevant information, improve decision-making ability, or provide public information.

Data Collection and Analysis

Transportation officials are increasingly reliant on data and analytics. Stakeholders, the public, and ITD management expect the Department to leverage data to make cost-effective decisions aligning with ITD's organizational objectives. ITD collects and analyzes data to guide decisions relating to safety, project selection, pavement condition, and many other areas. Concurrently, technologies available to transportation departments are being developed at an extreme rate. To remain productive and be good stewards of tax-payer financing, ITD must effectively research new and emerging technologies and only adopt options meeting critical business needs.

Numerous technologies address transportation-related data collection and analysis. ITD uses software packages including ESRI's ArcGIS for data collection, management, and analysis; Agile Asset's Transportation Asset Management (TAMS) software for data management and analysis; and a host of technologies such as SQL Server Reporting Services, Python, and Business Objects to analyze data.

ITD's business unit needs for data collection and analysis are vast, and ITD strives to modernize and consolidate appropriate tools in meeting those needs. In the future ITD will likely assess tool selection on a Department-wide scale to ensure multiple business units can benefit from data collection and analysis tools. ITD will also consider issues related to integration, standardization, and customization of data collection/analysis tools and practices as it selects and deploys new tools.

Out-of-the-box Data Analysis Tools

In many cases, standardized data analysis tools and methodologies meet ITD business needs. Although these options reduce the ability to customize for specific workflows, standardization offers ease of consolidation, automation, and consistency in data analysis results. In the future, ITD will likely strive to standardize data analysis tools for implementation Department wide.

Ad-Hoc Data Analysis Tools

Some transportation decisions and research projects require data points from multiple sources that may or may not be structured for combined analysis, and off-the-shelf software may not provide the necessary tools to do this research properly. In these cases, ITD can perform an ad-hoc analysis, although the process is typically difficult to automate and standardize with a mixed toolset.

Automated Data Collection Tools

ITD is exploring several new traffic and pavement data collection methods such as using cellphone signals for traffic counts, leveraging satellites to track congestion, and using automated vehicle data to assess pavement condition and traffic flows. These technologies could replace some of the more manual workflows that currently exist.

Data Integration

ITD gathers, uses, and transmits an enormous amount of data from a variety of sources to its end users. Unfortunately, data points are too frequently isolated in silos. As data requests become more complex, ITD will focus on integrating datasets to optimize the analysis process.

Third-Party Highway Data and Information

Sharing data and information has been a common practice between public agencies, however, the production and solicitation of third-party data and information from private, for-profit companies is an opportunity to expand the data and information used in transportation decision-making. ITD takes a proactive but cautious approach to purchasing and using third-party data and information.

ITD reviews data and information purchased or otherwise obtained from third-party sources (public or private) to ensure that it conforms to ITD standards, including accuracy (the degree to which the data reflects the "real world" it represents), completeness, consistency with governance, credibility and reputation of source, ease of integration with existing ITD data holdings, metadata (i.e., the degree of new data source documentation), data lineage, and other factors that contribute to overall quality. Other key factors include use of open data standards rather than proprietary formats, ease of use and interpretation, relevance to current and predicted data requirements, and currency of data being supplied. ITD also evaluates the terms of use of the new data to determine whether they are consistent with ITD's status as a public agency.

Travel Data

The current state of travel data collection, reporting, and modeling can be cumbersome and incomplete. Technologies are not well integrated; however, methods are emerging that will most likely change these relationships. Ultimately, ongoing improvements support ITD's twenty-year vision for the future of travel data:

1. To become a clearinghouse of collected and modeled travel data in the state of Idaho

2. To develop a safer and more efficient means of collecting and maintaining travel data, using emerging technologies and analysis methods

ITD has a long history of cooperative data collection and modeling with agencies around the state. The Department intends to grow this relationship, providing a means for smaller agencies to feed data and model outputs to systems that can house them in statewide models. For example, with the geospatial tools currently available, ITD already provides traffic data to the public on the federal aid system. This will expand to include all paved roads in the state.

Travel data collection, analysis, reporting, and modeling will continue to change. The travel monitoring industry has shifted from collecting speed and volume data at a single point to collecting a subset of volumes and travel times over a distance. However, there is no correlation between these data methods and information. The shift has already begun to occur to change this undefined relationship. Pooled funds and private research will ultimately create relationships between what is considered more "passive" data (such as Bluetooth and Google traffic) and more "active" data (such as road tubes, automatic traffic recorders, and weigh-in-motion devices). Within the next 20 years, ITD expects most of the active road tube collection will be limited to spot-checking and validating passive collection. Furthermore, significant gaps in active data completeness and collection frequency will continue to occur due to specific roadway challenges. ITD anticipates a time when passive data systems can be used to fill the gaps, providing more comprehensive information.

Geographic Information Systems

Almost all highway data and information have a location component, which provides an avenue to integrate and share data both inside and outside of the organization using Geographical Information Systems (GIS).

ITD has recently implemented its new Linear Reference System (LRS), named Roads and Highways, which is a means of associating asset location, physical characteristics, and other information with road and mile point details. Within a GIS environment, the LRS can easily combine data from multiple databases to enhance analysis or planning.

Location and GIS also provide a powerful means of sharing dating both internally and externally. ITD uses IPLAN to publish data within and outside of the organization in the form of dynamic web maps reflecting up-to-date and changing data. IPLAN leverages spatial data and information, allowing ITD personnel to create field data collection, public engagement, executive dashboard, and analysis applications.

Using location is also the most feasible way to import data from outside the organization. To meet the Model Inventory of Roadway Elements (MIRE) safety data requirements, ITD will need to report and maintain data on local roads throughout the state. Conducting field data collection is neither feasible nor desirable and does not maximize the benefit of the technology or available resources. ITD will use its location-based tool to efficiently import needed data. ITD is also currently working to create an application that will allow other road agencies, such as cities, counties, and highway districts, to edit a copy of ITD's roadway data within their jurisdiction. The Department will use available technology to help empower local organizations to improve overall data quality and

to foster more accurate and complete datasets necessary for ITD to comply with federal regulations and reporting requirements in alignment with ITD's Quality-Centric Model.

Recommendations

3.1 Adopt the Quality-Centric model for tasks and services which create or use data and information.

3.2 Pursue data analytics to provide costs savings, discover new and relevant information, improve decision making ability, and provide information to the public.

3.3 Pursue or create applications which allow local agencies to participate in ITD's data and information collection, sharing, production, or editing.

3.4 Pursue third party data if there is a cost savings, safety benefit, or new relevant information and the third-party data meets ITD's data and information guidelines.

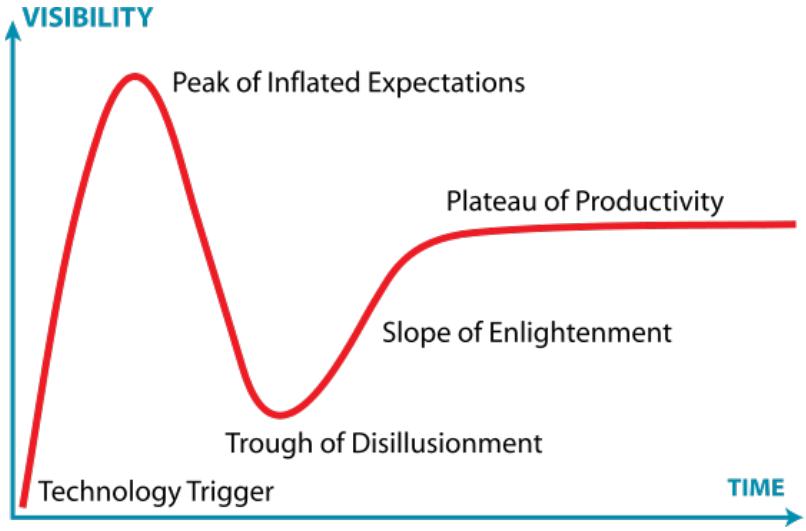
IV. New and Emerging Technologies

Introduction to New and Emerging Technologies

Idaho and the United States are embarking on revolutionary changes in transportation technologies. Rapidly developing autonomous and connected vehicles, electric and other alternate fuel source vehicles, advanced communications technologies, and innovative infrastructure developments are all helping shape transportation of the future. This section of the long-range transportation plan provides insight into technological developments and potential decisions the Department will face in the coming years. While ITD does not currently know how these technologies will ultimately develop, this section provides potential focus areas and broad recommendations on decision options.

An important aspect with any technological development is to understand the societal mindset. Technologies typically develop through what is referred to as the "hype cycle," where there is an initially inflated enthusiasm for what the new technologies will provide. This "peak of inflated expectations" is then followed by a period of disillusionment when the technology does not develop as expected or deliver the expected advantages. However, as time and technology progress, a clearer understanding of capabilities, or "enlightenment," is followed by a plateau of greater understanding and development.

Figure IV.1. Hype cycle:



Source: Wikimedia Commons

Autonomous, connected, and alternate fuel source vehicles are currently facing a decline, or a downward trend toward the "trough of disillusionment," but we can expect that during the planning horizon of this plan, these technologies will eventually reach the "plateau of productivity," which will shape the Department's decision-making process.

In addition to challenges with the "hype cycle," new technologies face development barriers primarily involving physical, economic, safety, and legal factors. Physical barriers can include both scientific and physical challenges such as battery size and range limitations with electric vehicles. Limited government budgets, low initial return on investment, and limited production capabilities are examples of economic barriers facing new and emerging technologies. Safety, especially in cases like autonomous vehicle development, presents challenges both in terms of practical testing and psychological factors with public acceptance. Legal barriers exist in terms of both legislation and litigation. Autonomous vehicles continue to face those challenges as government and private sectors struggle with liability and responsibility for vehicle operations.

Despite the hype and barrier challenges, transportation may be approaching a revolutionary change primarily through what is termed "Mobility as a Service" (MaaS) or "Transportation as a Service" (TaaS). Under this concept, transportation will move away from individual car ownership and more toward a MaaS model where individuals subscribe to automated vehicle services and rely more on ride-sharing services, bike-share programs, and public transportation. Ultimately, this affects transportation funding and transportation-related industries such as insurance, automobile sales, and automobile repair services. ITD staff and decision makers must understand possible decisions required in the future associated with these challenges and potential changes in the transportation system.

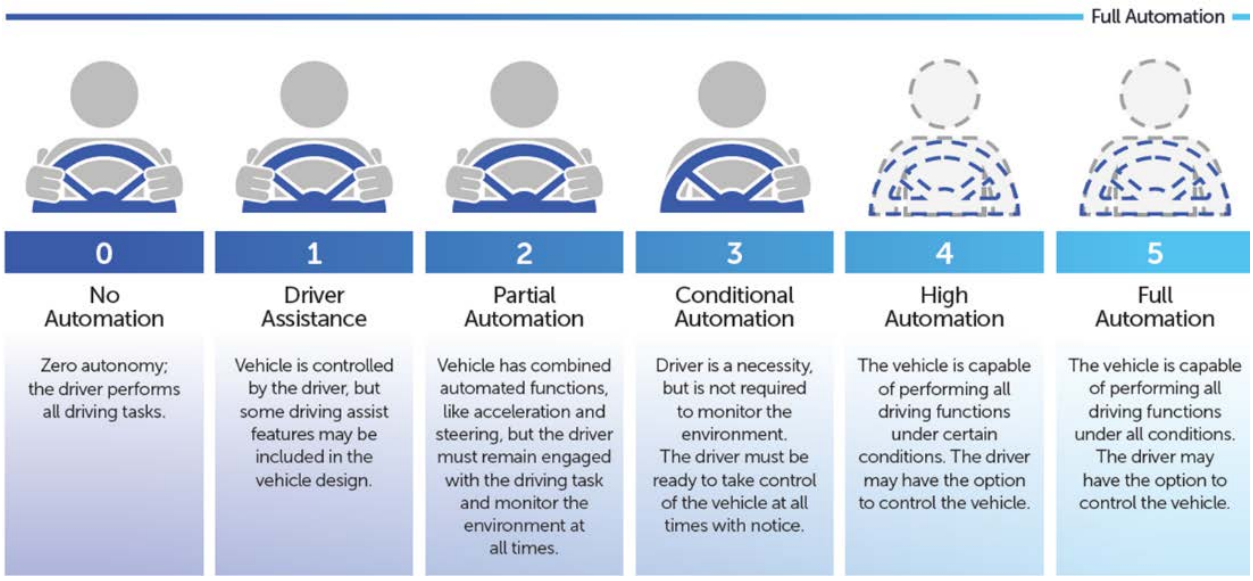
Vehicles

The automobile industry is undergoing significant disruption with the rapid development of autonomous vehicles. A number of companies, including ride-share organizations, project entirely autonomous vehicle fleets by approximately 2022. However, industry is recognizing the artificial intelligence systems required for fully autonomous vehicles are more complicated than originally expected and tempering development. Regardless, there is still rapid development and the Department will need to remain engaged with public and private agencies to understand when and where to expend resources to enable such vehicles.

ITD must consider the vehicles, roadway infrastructure and systems infrastructure as a collective system, or cooperative automated transportation (CAT). Understanding the CAT system will aid in understanding how independent systems work together and will aid in future decision making.

While highly autonomous vehicles, or self-driving cars, are most familiar to the public, the Society of Automotive Engineers (SAE) has developed commonly accepted definitions of autonomy as shown in Figure IV.2.

Figure IV.2. Definitions of Autonomy *Source: Society of Automotive Engineers*



Along with autonomous vehicles, there is rapid development in vehicle connectivity or connected vehicles. This entails systems within vehicles that communicate with other vehicles (V2V), with infrastructure (V2I), and with other parts of the transportation systems such as bicycles, pedestrians, and construction zones (V2X). A related but distinct area is truck platooning where large trucks are capable of V2V communications with each other allowing two or more trucks to connect and follow at close distance using automated systems reducing wind drag and increasing fuel efficiencies. Idaho will need to develop rules and laws that allow such operations to improve the economic benefits associated with truck freight movement.

Electric vehicles also continue to show rapid development. While the percentage of electric vehicles on the roads today remains relatively low, the rate of production and public acceptance shows there will be a marked increase in electric vehicle operations over the next decade.

With the increased proliferation of alternate fuel source vehicles (including electric, propane, liquid natural gas, and hydrogen cell vehicles) and improved fuel efficiencies associated with these technologies, transportation funding will become a greater challenge. Current funding mechanisms are reliant on gas taxes, which do not currently meet transportation system requirements and will diminish with these technologies.

ITD must also evaluate other types of vehicles such as electric bicycles, or e-bikes. As an example, in 2017 the City of Boise passed a law regarding e-bike operations on roads, sidewalks, and paths. The city developed different classifications with some e-bikes capable of traveling at speeds over 28 miles per hour. This faster class of bicycle will only be allowed on roads and not on bicycle paths, sidewalks, or cross walks. This could result in a slower, more vulnerable transportation mode integrating on roadways with larger vehicles. ITD does not currently have data on the effect e-bikes will have on traffic mobility, it is an issue the Department will need to understand as the technology becomes more prevalent.

Infrastructure

The impact of CAT could take multiple infrastructure development paths. If future vehicles rely on pavement markings and signage, along with electronic map files, then resources need to be planned and budgeted to meet these requirements. If future vehicles will instead use high precision GPS data and frequent electronic map file updating, then an enhanced GPS program will be required, along with dedicated communications channel(s) for delivery of GPS corrections and map file updates. An entire map file management and distribution system will be required to achieve the vision for these future vehicles. While industry research continues, systems maintenance responsibility remains uncertain and is something ITD will need to address.

Additional infrastructure investment will be needed to enable safety and mobility applications for the future vehicles at signalized intersections, major highway junctions, and other strategic locations on the highway network. Signalized intersections may need to be capable of broadcasting their signal phase and timing data and any safety related messages, map updates, and traveler information relevant for their locations.

Dedicated Short Range Communications (DSRC), cellular, satellite, or a combination of communications channels may be needed to connect to future vehicles. Some communications channel redundancy is recommended to provide highly reliable data delivery.

Infrastructure requirements to serve advancing technologies will be challenging to implement in rural Idaho. If autonomous and connected vehicles require specialized lines and signs, local jurisdictions may have difficulty funding installation and upkeep. Similarly, the systems requirements for CAT operations such as DSRC or cellular Wi-Fi will present additional financial challenges. Ultimately, transportation jurisdictions will need to coordinate efforts and prioritize system deployments to avoid disjointed system architecture across the state.

Fuels

While petroleum-based fuels provide 95.5% of transportation energy in Idaho, the use of alternative fuels such as compressed natural gas, liquefied natural gas, propane, and electricity is increasing. The US Energy Information Administration reports that the percentage of vehicles sold in the US using gasoline or gasoline/ethanol is expected to decline from 95% in 2017 to 78% in 2050, and sales of electric, plug-in hybrid electric, and hybrid vehicles are expected to grow in market share from 4% to 19% in that same period.

The Idaho Strategic Energy Alliance (ISEA) was established by Governor Butch Otter in 2009 to enable the development of a sound energy portfolio that emphasizes the importance of an affordable, reliable and secure energy supply. The Alliance established a Transportation Task Force to focus on developments related to

alternative fuel vehicles. In 2015, the task force reported that growth in the number of alternatively fueled vehicles has been constrained by higher vehicle purchase costs and, in some cases, limited fuel infrastructure. However, it was also noted that technology improvements are decreasing the cost of alternate fuel vehicles and improving fuel economy for all types of vehicles.

The FAST Act required designation of national alternative fuel corridors. In 2016, ITD worked with key stakeholders to identify nine potential routes for future alternative fuel corridors. These routes included all Interstate highways, U.S. 95, U.S. 93, SH75, and SH55. The selections were made in accordance with the federal goal to "connect communities, cities and regions to develop a national network of alternative fuel facilities." The designations were not meant to mandate or limit what is largely a market-driven process but rather to incorporate those realities into ITD's decisions. Market-driven decisions will ultimately influence design, use, types and locations.

Idaho is also a recipient of funding from the Volkswagen Diesel Settlement Trust. Approximately $17.3 million will be available for use in achieving diesel emissions reductions, primarily through rebuilding or replacing existing diesel vehicles to reduce pollution. Of that $17.3 million, approximately 15 percent is planned for construction and deployment of electric vehicle charging stations across the interstates identified in the Idaho Alternative Fuels Corridor plan.

Future increases in alternative fuel vehicles could impact revenue generated to support operation and maintenance of Idaho's transportation system. Legislative action may be required to address funding.

To support ITD's mission and prepare for future developments in fuels, ITD will pursue the following future actions:

- Continue to support the work of the ISEA's Transportation Task Force and the Volkswagen Settlement Interagency Work Group
- Monitor and report on growth in the number of alternative fuel vehicles in Idaho and nationally
- Support market-driven development of infrastructure for alternative fuel vehicles
- Monitor and report on revenues generated from fuel-based taxes
- Monitor policy-related developments regarding alternative fuel vehicles in other states and at the national level
- Support efforts by Idaho leaders to develop laws and regulations regarding alternative fuel vehicles

Driver Information Services

ITD must keep road users informed of transportation changes, including road conditions and changes to driver license testing and vehicle registration to ensure safe operation.

CAT will be a reality in Idaho's future. Drivers may need to acquire new skills to operate emerging automotive technologies, and the Department will need to help educate users to ensure safe implementation. ITD will develop and deploy driver training and driver manuals in cooperation with industry partners and media outlets. Tailored driver skills testing to incorporate use of new vehicle technology ensures that new and previously licensed drivers are educated in available automated vehicle systems. ITD will coordinate with the Department of Education to develop driver training curriculum and new core training for the Department's skills testers, ensuring appropriate knowledge levels for each application. Safety on Idaho roadways for all users is ITD's first priority.

ITD continues to follow federal requirements in developing and implementing changes to Idaho laws and regulations related to automated technology. ITD also publishes informational materials through media outlets to explain the capabilities, limitations, and operational requirements of connected and automated technology to help ensure safe and effective deployment.

Other Technologies

In addition to emerging vehicle technology, systems, fuels, and funding, ITD also tracks a range of other technologies. As an example, public input for this plan included recommendations to incorporate advance animal detection systems and modified infrastructure development for animal crossings. The input focused on improving driver safety through improved animal avoidance capabilities.

Funding

It is important to understand the impact new and emerging transportation technologies will have on funding. The National Cooperative Highway Research Program (NCHRP) has accomplished a variety of studies on the impacts and states:

> *"AV and CV systems could exacerbate funding deficits through increased costs for maintaining and operating roadways. A proliferation of shared AVs (SAVs) could reduce the amount of revenue from driver licensing, vehicle sales tax, vehicle registration, moving violations, transit fares, and federal funding associated with ridership levels. CV technology could potentially increase revenue from road user charges by providing a platform that supports usage-based revenue measurement and reporting" (NCHRP Report 845, 2017).*

Similarly, the Texas A&M Transportation Institute in 2018 concluded:

> *"CVI (Connected Vehicle Infrastructure) related legislation, funding, and deployments have primarily come from the federal level. Many states have passed automated or connected vehicle legislation, but none directly address CVI.…While the benefits that can be derived from these technologies can be substantial, the high initial costs of deployment can be a barrier."*

To begin addressing these funding issues ITD has partnered with the Western Road User Charge Consortium (RUC West) to research revenue options. RUC West states:

"RUC is a funding mechanism that would allow drivers to support road maintenance based on the distance they travel or the period of time they use the roads, rather than the amount of gasoline they consume."

RUC funding mechanisms are only a beginning, and ITD will need to remain engaged on such research to seek additional methods for generating revenue not only for integration of advanced technology systems, but to ensure maintenance of roads for the traveling public.

Recommendations

4.1 Continue public engagement and education on technology advancements and solicit input on community impacts.

4.2 Participate in research and testing of new potential funding sources such as road usage charges, through organizations such as the Western Road Usage Charge Consortium.

4.3 Be mindful of the impacts and costs associated with ever-expanding technologies that affect and drive transportation needs and mobility.

V. Implementation

Summary of Recommendations

Chapter I – State of Transportation

1.1 Continue to work with Idaho's Congressional delegation to secure ongoing support for federal funding to meet Idaho's diverse transportation needs; continue aggressively pursuing federal discretionary grants and other funding opportunities.

1.2 Continue to build relationships with the Idaho Legislature to assure support for new and additional funding sources to meet expanding transportation needs in Idaho.

1.3 Develop a customer-friendly performance measure for congestion.

1.4 Further invest in training, technologies, and services that can provide the best possible information regarding the condition and performance of highways in Idaho.

1.5 Inform and train transportation professionals on the impacts of population and economic growth on the State Highway System and statewide trends in travel patterns.

1.6 Use guidance from this plan to reinforce best practices in long-term land-use and transportation planning when invited to participate in local land-use work-groups or decisions.

1.7 Continue aggressively pursuing federal discretionary grants and other funding opportunities.

1.8 Prepare for an updated assessment of transportation funding in Idaho by the year 2020 by preparing estimates for the costs to maintain various levels of service for mobility and state of good repair while accounting for aging infrastructure.

1.9 Partner with stakeholders and the public to best modify, adjust or expand the State Highway System.

1.10 Collaborate with local transportation agencies on travel demand management strategies and public transit options that reduce trips on the State Highway System.

Chapter II – Modal Planning

2.1 Develop an up-to-date statewide planning document for every transportation mode.

2.2 Reaffirm ITD's commitment to include local, regional, and statewide stakeholders in the modal planning process.

2.3 Coordinate internally to focus resources on a single effort when engaged in the development of a statewide modal plan.

2.4 Implement a collaborative planning approach.

Chapter III – Highway Data Analytics

3.1 Adopt the Quality-Centric model for tasks and services which create or use data and information.

3.2 Pursue data analytics to provide costs savings, discover new and relevant information, improve decision making ability, and provide information to the public.

3.3 Pursue or create applications which allow local agencies to participate in ITD's data and information collection, sharing, production, or editing.

3.4 Pursue third party data if there is a cost savings, safety benefit, or new relevant information and the third-party data meets ITD's data and information guidelines.

Chapter IV – New and Emerging Technologies

4.1 Continue public engagement and education on technology advancements and solicit input on community impacts.

4.2 Participate in research and testing of new potential funding sources such as road usage charges, through organizations such as the Western Road Usage Charge Consortium.

4.3 Be mindful of the impacts and costs associated with ever-expanding technologies that affect and drive transportation needs and mobility.

Introduction to ITD's Business Practices

Applicable Recommendations: **1.1** **1.2** **1.4** **1.7** **1.8** **4.2**

Recommendations related to funding impact the agency as a whole. When staff receives grant funding, the legislature increases funding or when revenues increase, ITD has a greater impact on the transportation system for the better.

ITD's employees execute its mission of ***Your Safety. Your Mobility. Your Economic Opportunity*** daily by evaluating, improving, and maintaining the State Highway System. Improvement and maintenance projects outlined in the Idaho Transportation Improvement Program (ITIP) go through various phases including planning, scoping, programming, design, and construction. Once completed, the assets of the State Highway System are kept in a state of good repair through various preservation, restoration, or operational maintenance activities. The following sections outline how ITD currently performs these activities and how the recommendations from this plan tie into ITD's daily operations.

Project Selection and Development

Applicable Recommendations: **1.5** **1.9** **3.2**

A better understanding of the functioning of the highway system and future needs allows ITD to develop projects that fit the needs of today and tomorrow.

Details on project selection are outlined in the technical report provided in Appendix 2. The high-level steps are outlined below.

Planning:	Identify transportation issues in partnership with the public and stakeholders; recommend potential solutions to be evaluated by scoping.

Scoping:	Apply engineering principles and analytics to evaluate and identify transportation solutions
Programming:	Allocate budgeted funds to maximize public benefit as allowed by applicable policies and law. ITD's program is called the Idaho Transportation Improvement Program.

The ITIP outlines projects programmed during a seven-year period. The programmed year indicates the year project construction is planned to begin. Depending on complexity, a project may take multiple years to construct. Development and right-of-way funding is scheduled for prior years of expected expenditures to allow the project to be ready to advertise and award in the program year (i.e., construction year). Once a project is in the approved program, it goes through the following steps:

Design:	Apply engineering standards to create the construction plans for transportation solution at a specific location
Construction:	Build physical transportation infrastructure to the specifications in the construction plans

Asset Management

Applicable Recommendations: 1.9 3.2

Improved asset management practices allow for ITD to maintain a state of good repair adapting to changes in wear and tear and applying the correct maintenance treatment at the right time.

After a project is completed, it is now an asset of the state of Idaho. ITD's asset management and operations principles guide three activities that keep the State Highway System in a state of good repair and clear of obstruction.

Preservation:	Construction activities that maintain a state of good repair or extend the life cycle of an asset
Restoration:	Reconstruction that restores to a state of good repairpartly or completely rebuilds an existing asset to restart its life cycle
Maintenance:	Operational activities to respond to incidents and emergencies

Continuous Improvement

Applicable Recommendations: 1.3 1.6 1.10 2.3 3.1 3.4 4.3

Continuous Improvement is integral to ITD's long-term goals. Continuously improving our outreach and project delivery will increase confidence from the public.

In addition to maintaining the current system and expanding to meet new demands, ITD is committed to becoming the best transportation department in the country. To accomplish this, ITD will continue to improve its efforts to inform, engage and deliver its promises.

Inform:	ITD informs the public and partners through its Office of Communication (including public service announcements, general informational campaigns, and media) and planning documents

Engage:	ITD engages through its public involvement processes for planning and projects
Deliver:	ITD completes projects on time and on budget, improves safety, and keeps the highways in a state of good repair

Inform

Applicable Recommendations **2.1** **2.4** **2.5**

Our planning documents give insight to stakeholders and the public on what to expect from ITD. Continuously improving these products to maintain best practices ensures their recommendations are appropriate and accurate.

Office of Communication

ITD's Office of Communication works extensively with the public and news media organizations. From preparing news releases and stories for distribution, to producing articles for ITD's Transporter newsletter and coordinating social media efforts through the department's Facebook and Twitter accounts, the Office of Communication is the primary source for public information about the Department

The Office also maintains the Department's website, manages public involvement for transportation projects statewide, assists other ITD units with technical writing and graphic arts activities, provides photography and video production support, and tracks the Department's contest entries

Planning Documents:

Modal Plan
Serve as an informational document and provide guidance for a specific mode of transportation incorporating technical information, relevant data, public/stakeholder involvement, and recommendations (some of which may be required to recommend project candidates)

Corridor Plan
Serve as a guiding document for a specific corridor that balances each transportation mode's needs with local planning efforts, public/stakeholder involvement methods, and outcomes

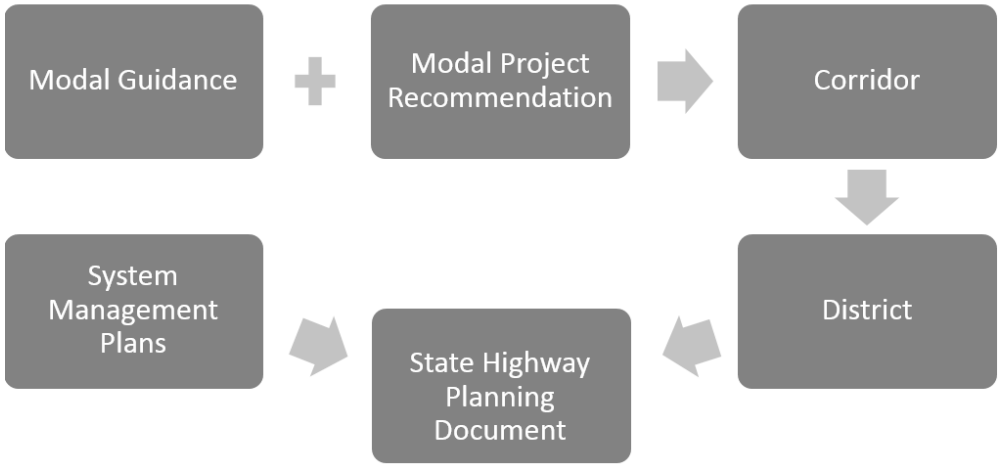
District Plan
Apply data-assisted engineering methodologies to identify top priorities or needs within a transportation district based on recommendations from multiple active corridor plans within each jurisdiction

System Management Plans
Provide specific engineering methodologies for staff to follow in maintaining the State Highway System in a state of good repair

State Highway System Plan
Provide guidance and information collectively for policy and decision makers; inform the public on the complete condition and performance of the State Highway System

Figure V.1 displays the relationship of the above-mentioned planning documents.

Figure V.1. Document Relationships



Source: ITD, 2019

Engage

Applicable Recommendations **2.2** **3.3** **4.1**

ITD's commitment to engaging the public, stakeholders and transportation professionals into our planning activities must be upheld.

Public Involvement

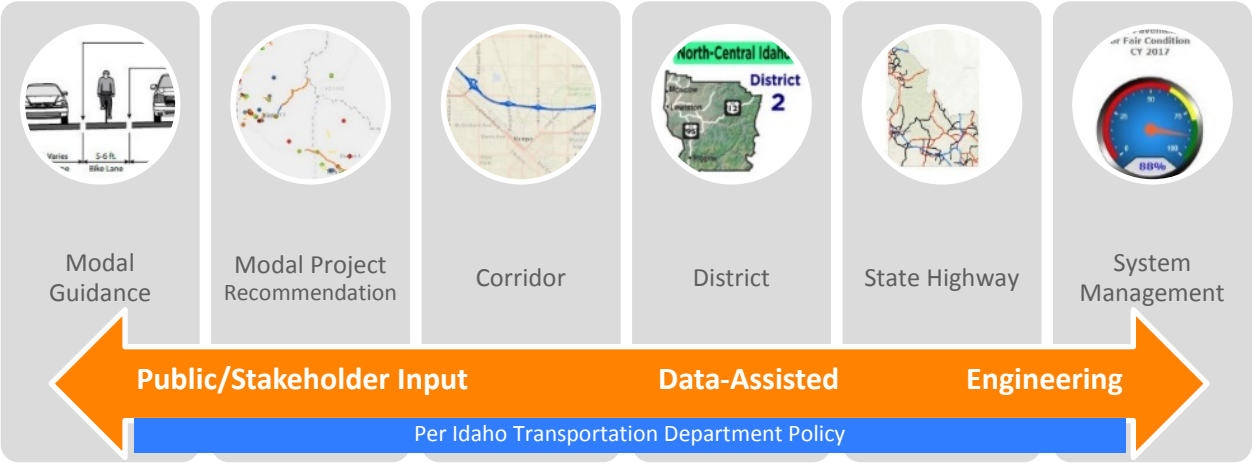
Planning

Public involvement is vital to the Department's efforts in ensuring the planning activities outlined in the LRTP are in the public's interest and do not conflict with local planning efforts. ITD values the input of the public and stakeholders. In pursuit of the department's goal of continuous innovation, ITD's public involvement aspirations are to:

- Increase participation
- Reduce barriers to participation
- Improve context for effective input

Understanding how public input influences ITD's planning activities can help citizens decide how and when they would like to participate in the process. Modal guidance plans provide recommendations that ultimately impact the infrastructure within a community, and the public has a vested interest in expressing what transportation solutions are appropriate locally. Licensed engineers and SMEs perform system management planning. The following graphic outlines how ITD balances public input and data-assisted engineering for various planning activities.

Figure V.2. Balancing Public Input and Data-Assisted Engineering Decisions



Source: ITD, 2019

Projects
The public has the opportunity to participate and comment on the development of the ITIP on an annual basis through the Department's program update process as outlined in the technical report on Program Update (see Appendix X). During a 30-day period every July, the Idaho Transportation Board solicits comments on projects recommended for funding. Public input is compiled in a report for Idaho Transportation Board review prior to its adoption of the Program Update, which it may elect to modify based on the public input.

Projects may also involve additional public involvement during the design and construction phases. Open houses, citizen information meetings, and public hearings are common avenues for participation in individual projects.

Innovations
ITD continues to develop electronic public involvement methods such a virtual public meetings, online surveys, and interactive maps. These innovations are directed towards the goal of increasing participation and removing barriers by creating a variety of input opportunities. Each ITD public involvement effort offers a balance of traditional in-person and innovative in-person and electronic participation as determined by project managers or communications specialists.

Deliver

Idaho Transportation Investment Program (ITIP) - This seven-year portfolio outlines projects for many different programs and contains approximately 700 projects totaling over $2 billion at any given time. ITD has increased investment towards delivering the projects identified in the ITIP each year, on time and on budget. The Department recently created a Program Management Office (PMO) that actively monitors the progress of each project in the ITIP to ensure they are delivered on time and on budget.

The PMO improves the delivery of the ITIP by:

1. **Idaho Transportation Investment Program (ITIP) Management**
   - Administer funding strategies and programming balancing
   - Coach in developing project charters, budgets, and schedules
   - Assist in project programming

2. **Project Management Leadership**
   - Provide current needed tools and training to improve necessary skills for project management
   - Provide tools and training on risk management

3. **Statewide Delivery Support**
   - Develop better ways of doing business through policies, procedures, standards and technology that assist in, and improve on, delivery and stabilizing the Program
   - Provide SMEs in project management, estimating, and funding
   - Develop metrics that help ITD further progress in program delivery
   - Develop consistent and reliable communications and tools statewide

Recommendations

In addition to ITD's daily operations, Table V.1 illustrates how the recommendations from this plan tie into its mission.

Table V.1: ITD Mission and Goals

Mission Element	Chapter I	Chapter II	Chapter III	Chapter IV
Your Safety	1.1, 1.2, 1.4, 1.5, 1.7, 1.8	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3, 3.4	4.1, 4.3
Your Mobility	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3, 3.4	4.1, 4.3
Your Economic Opportunity	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9	2.1, 2.2, 2.3, 2.4	3.1, 3.2, 3.3, 3.4	4.1, 4.2, 4.3

Appendix 1: FAST Act Reference

IDAGO Long-Range Transportation Plan

The State shall develop a long-range statewide transportation plan that incorporates the following:

FAST Act Reference	Description	✓ ✗	IDAGO Location (Chapter/Appendix; Page)
23 CFR 450.216(1)	**A minimum 20-year forecast period** at the time of adoption that provides for the development and implementation of the multimodal transportation system for the State.	✓	Forecast year is 2040
23 CFR 450.216(2)	The long-range statewide transportation plan **shall consider and include**, as applicable, elements and connections between public transportation, non-motorized modes, rail, commercial motor vehicle, waterway, and aviation facilities, particularly with respect to intercity travel.	✓	Chapter II
23 CFR 450.216(3)	The long-range statewide transportation plan **should** include capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated.	✓	Chapter I
23 CFR 450.216(4)	The long-range statewide transportation plan **may consider** projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the State's transportation system.	✗	

✓ - Included in IDAGO

✗ - Plan does not address this optional element

23 CFR 450.216(5)	The long-range statewide transportation plan **shall reference, summarize, or contain** any applicable short-range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (*e.g.,* transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long-range statewide transportation plan.	✓	Preface Chapter I, II
23 CFR 450.216(6)	The long-range statewide transportation plan **should integrate** the priorities, goals, countermeasures, strategies, or projects contained in the HSIP, including the SHSP, required under 23 U.S.C. 148, the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan.	✓	Chapter II
23 CFR 450.216(7)	The long-range statewide transportation plan **should include** a security element that incorporates or summarizes the priorities, goals, or projects set forth in other transit safety and security planning and review processes, plans, and programs, as appropriate.	✗	
23 CFR 450.216(8)(a)	**A description of the performance measures and performance targets** used in assessing the performance of the transportation system in accordance with § 450.206(c).	✓	Chapter I Appendix 2
23 CFR 450.216(8)(b)	**A system performance report and subsequent updates evaluating the condition and performance of the transportation system** with respect to the performance targets described in § 450.206(c), including progress achieved by the MPO(s) in meeting the performance targets in comparison with system performance recorded in previous reports.	✓	Chapter I Appendix 3
23 CFR 450.216(9)	Within each metropolitan area of the State, the State **shall develop the long-range statewide transportation plan in cooperation with the affected MPOs.**	✓	Appendix 4

23 CFR 450.216(10)	For nonmetropolitan areas, the State **shall develop** the long-range statewide transportation **plan in cooperation with affected nonmetropolitan local officials** with responsibility for transportation or, if applicable, through RTPOs described in § 450.210(d) using the State's cooperative process(es) established under § 450.210(b).	With Final	
23 CFR 450.216(11)	For each area of the State under the jurisdiction of an Indian Tribal government, the State **shall** develop the long-range statewide transportation plan in **consultation with the Tribal government and the Secretary of the Interior** consistent with § 450.210(c).	With Final	
23 CFR 450.216(12)	The State **shall** develop the long-range statewide transportation plan, as appropriate, **in consultation** with State, Tribal, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. This consultation **shall** involve comparison of transportation plans to State and Tribal conservation plans or maps, if available, and comparison of transportation plans to inventories of natural or historic resources, if available.	✓	Appendix 4
23 CFR 450.216(13)	A long-range statewide transportation plan **shall include a discussion of potential environmental mitigation activities and potential areas** to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion **may** focus on policies, programs, or strategies, rather than at the project level. The State **shall** develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife, and regulatory agencies. The State **may** establish reasonable timeframes for performing this consultation.	✓	Appendix 2
23 CFR 450.216(14)(a)	To **nonmetropolitan local elected officials**, or, if applicable, through RTPOs described in § 450.210(d), an opportunity to participate in accordance with §450.216(h).	✓	Appendix 4

23 CFR 450.216(14)(b)	To individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, private providers of transportation (including intercity bus operators, employer-based cash-out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties **with a reasonable opportunity to comment on the proposed long-range statewide transportation plan**. In carrying out these requirements, the State **shall** use the public involvement process described under §450.210(a).	With Final
23 CFR 450.216(15)	The long-range statewide transportation **plan may include a financial plan that** demonstrates how the adopted long-range statewide transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. In addition, for illustrative purposes, the financial plan **may** include additional projects that the State would include in the adopted long-range statewide transportation plan if additional resources beyond those identified in the financial plan were to become available. The financial **plan may include an assessment of the appropriateness of innovative finance techniques** (for example, tolling, pricing, bonding, public-private partnerships, or other strategies) as revenue sources.	✘
23 CFR 450.216(16)	The State **is not required to select any project from the illustrative list** of additional projects included in the financial plan described in paragraph of this section.	✘
23 CFR 450.216(17)	The State **shall publish or otherwise make available the long-range statewide transportation plan for public review**, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web, as described in § 450.210(a).	After Adoption
23 CFR 450.216(18)	The State **shall continually evaluate, revise, and periodically update the long-range statewide transportation plan,** as appropriate, using the procedures in this section for development and establishment of the long-range statewide transportation plan.	With Final
23 CFR 450.216(19)	The State **shall provide copies of any new or amended long-range statewide transportation plan documents** to the FHWA and the FTA for informational purposes.	With Final After Adoption

Appendix 2: Technical Reports

Technical Report 1

Strategic Planning

Subject Matter Expert

Sonna Lynn Fernandez
Transportation Planning Project Manager

Introduction: Strategic Planning

The Idaho Transportation Department has had a Strategic Plan for many years. All Idaho State Agencies are required to have a Strategic Plan. The plan must be outcome based with a Vision or Mission statement that paints a picture of how the agency sees its future and set forth goals on how the Vision/Mission will be accomplished. To ensure that the agency is meeting its goals, performance measures also need to be a part of the agency's Strategic Plan. These performance measures are to quantify the effectiveness of the department's efforts and the benefit to the public.

Strategic Plans are to be submitted to the Idaho Division of Financial Management on July 1st annually. The plan must include the following items:

- Agency overview and profile
- Core functions and statute authority
- Key services provided
- Performance highlights
- Identified performance measures
- Results of the performance

At the current time, the Idaho Transportation Department has submitted its 2018-2021 Strategic Plan (https://dfm.idaho.gov/publications/bb/strategicplans/economic/stratplan_transportation.pdf).

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

Section 2: Federal and/or State Reference

Federal Reference: None
State Reference: Idaho Code 67-1901 – 1905

Section 3: ITD Board or Administrative Policies

It is important to note that all Board and Administrative Policies call to action the processes the department will take to meet its goals of Safety, Mobility and Economic Opportunity. This every policy is important to this report. However, the following policies call out the Strategic Plan specifically.

Department Memo:

- DIR-24 – Cell Phones

Board Policy:

- 4020 – Employee Education and Training
- 4002 – Public Convenience
- 4007 – Memorandum of Understanding

Administrative Policy:

- 5020 – Employee Education and Training

- 5007 – Memorandum of Understanding

Section 4: MOU or Service Agreements

There are no MOU or Service Agreements with this process.

Section 5: Stakeholders and Partners

The Governor and the Idaho Legislature are our partners that can make or break our ability to meet the department's mission by adding or subtracting necessary funding to enable ITD to provide ongoing transportation services.

Division of Financial Management Website: https://dfm.idaho.gov/state_agencies/strat_perf_process/sp_pr_info.html

Section 6: Process

All state agencies in Idaho are required by Idaho Code 67-1901 – 1905 to have a Strategic Plan. The Code intends to:

1. Improve state agency accountability to citizens and state lawmakers.
2. Increase the ability of the Legislature to assess and oversee agency performance.
3. Assist lawmakers with policy and budget decision.
4. Increase the ability of state agencies to improve agency management and service delivery and assess program effectiveness.

Per Idaho Code 67-1903(1), each agency's strategic plan should, at a minimum, contain the following:

- A comprehensive outcome-based vision or mission statement covering the major divisions and core functions of the agency;
- Goals for the major divisions and core functions of the agency;
- Objectives and/or tasks that indicate how the goals are to be achieved;
- Performance measures, developed in accordance with section 67-1904, Idaho Code, that assess the progress of the agency in meeting its goals in the strategic plan, along with an indication of how the performance measures are related to the goals in the strategic plan;
- Benchmarks or performance targets for each performance measure for, at a minimum, the next fiscal year, along with an explanation of the manner in which the benchmark or target level was established; and
- An identification of those key factors external to the agency and beyond its control that could significantly affect the achievement of the strategic plan goals and objectives.

Per Idaho Code 67-1904(1), agency performance reports should contain the following elements:

- Agency overview provides a brief description of the agency and may include the agency's governance structure, the number of employees, number and location of offices, and a brief history of the agency.
- Core functions/Idaho Code that describe the agency's primary operations and corresponding statutory authority.
- Fiscal year revenue and expenditure information for the prior four fiscal years broken down by revenue source and type of expenditure. This may include informative breakdowns such as amounts from different revenue sources or types of expenditures.
- Profile of cases managed and/or key services provided for the prior four fiscal years including the most recently completed fiscal year. Each agency may determine the items to be reported.
- Performance measures that assess the progress the agency is making in achieving a goal (quantifiable indicator). These are the measures established in the strategic plan. Agencies should choose 10 or fewer measures to highlight in table format and provide the results for each measure for the prior four fiscal years. If actual results are not available because it is a new measure, that should be stated. Performance measures should be organized by goal to clearly indicate which performance measures demonstrate the agency's progress in

achieving each goal.

- Benchmarks or performance targets for each performance measure as included in the strategic plan for, at a minimum, the next fiscal year, and for each year of the four years of reported results.
- Explanatory notes which provide context important for understanding the measures and the results, and any other qualitative information useful for understanding agency performance.
- Attestation signed by the agency director that the data reported has been internally assessed for accuracy and is deemed to be accurate.

The performance report should also meet the following additional requirements outlined in Idaho Code 67-1904(2)-(10):

- Information is reported in a consistent format determined by the Division of Financial Management (DFM) to allow for easy review of the information reported.
- Agency uses the information for internal management purposes.
- Agency maintains reports and four years of documentation to support the data reported.
- Agency submits the report to DFM and the Legislative Services Office (LSO) by September 1 each year.
- DFM publishes the report each year as part of the executive budget.
- LSO may use the information in its budget publication.
- Agency presents the information to legislative germane committees.
- Germane committees may authorize alternative forms of measurement or request increases in the number of measures.

Section 7: Recommendations and Implementation

None.

Section 8: Helpful Resources

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- https://dfm.idaho.gov/publications/bb/strategicplans/economic/stratplan_transportation.pdf
- http://apps.itd.idaho.gov/apps/Dashboard/

Technical Report 2

Transportation Performance Management

Photo Source: ITD Staff

Subject Matter Expert

Chapman Munn
Research Analyst Principal

Introduction: Transportation Performance Planning

Federal Highways Administration (FHWA) defines Transportation Performance Management as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. In short, Transportation Performance Management:

- Is systematically applied, a regular ongoing process
- Provides key information to help decision makers allowing them to understand the consequences of investment decisions across transportation assets modes
- Improving communications between decision makers, stakeholders and the traveling public.
- Ensuring targets and measures are developed in cooperative partnerships and based on data and objective information

or

According to ITD's Strategic Plan (see Technical Report 1), the department has set measurable objectives for each of the primary goals as detailed below:

- Commit to having the safest transportation system possible.
  - Reduce fatalities.
- Provide a mobility focused transportation system that drives economic opportunity.
  - Maintain the pavement in "good" or "fair" condition.
  - Maintain the bridges in "good" or "fair" condition.
  - Keep highways clear or snow and ice during winter storms.
- Become the best organization by continually developing employees and implementing innovative business practices.
  - Hold Administration and Planning expenditures constant.
  - Complete project designs on time.
  - Hold construction costs to contract award.
  - Reduce the time to process vehicle titles.
  - Increase DMV transactions on the internet.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

Section 2: Federal and/or State Reference

Federal Reference: FAST Act §§ 1116, 1406; 23 U.S.C. 119, 148, 150, 167
State Reference: None.

Section 3: ITD Board or Administrative Policies

It is important to note that all Board and Administrative Policies call to action the processes the department will take to meet its goals of Safety, Mobility and Economic Opportunity. This every policy is important to this report. However, the following policies call out the Strategic Plan specifically.

Board Policy:

- 4004 – Annual Report
- 4011 – Idaho Transportation Investment Program

Administrative Policy:

- 5011 – Idaho Transportation Investment Program

Section 4: MOU or Service Agreements

There are no MOU or Service Agreements with this process.

Section 5: Stakeholders and Partners

The Governor and the Idaho Legislature are our partners that can make or break our ability to meet the department's mission by adding or subtracting necessary funding to enable ITD to provide ongoing transportation services.

Section 6: Process

Transportation Performance Management (TPM) is a holistic planning and reporting program created by the Federal Highways Administration (FHWA) to help state transportation departments set targets based on key transportation criteria to strive towards. TPM is broken down into three separate and distinct Performance Measures (PM):

- PM I - Safety
- PM II - Pavement and Bridge Condition
- PM III - System Performance

Within each Performance Measure there are a number of criteria that each state transportation department is required to assess and set targets towards for future operations:

Performance Measure	Targeting Criteria
PM I	Number of state wide fatalities
	Rate of fatalities per 100 million vehicle miles traveled (VMT)
	Number of serious injuries
	Rate of serious injuries per 100 million VMT
	Number of non-motorized fatalities and non-motorized serious injuries
PM II	Percent of interstate pavement in Good condition
	Percent of interstate pavement in Poor condition
	Percent of non-interstate National Highway System pavement in Good condition
	Percent of non-interstate National Highway System pavement in Poor condition
	Percent of National Highway System bridges in Good condition
	Percent of National Highway System bridges in Poor condition
PM III	Level of Travel Time Reliability (LOTTR) on interstate and non-interstate National Highway System
	Truck Travel Time Reliability (TTTR) on the interstate
	Peak Hour Excessive Delay on the National Highway System
	Congestion Mitigation and Air Quality (CMAQ)
	Non-Single Occupancy Vehicle Travel Measure (non-SOV)

The Federal Highways Administration (FHWA) is responsible for administering Transportation Performance Management and tracking state transportation department's targets and progress on those targets. Furthermore, FHWA will be using TPM data to make assessments about the current state of our national transportations system.

Municipal Planning Organizations (MPOs) are stake holders in TPM as well. The TPM final rulings require that MPOs be able to set some of their own targets if they wish not to adopt the state transportation departments. However, in the

event a MPO feels comfortable with a state transportation department target, MPOs are able to adopt state targets as their own.

	FHWA Final Rule	FHWA Effective Date	State Target Deadline	MPO Target Deadline
PM I	March 15, 2016	April 14, 2016	August 31, 2017	February 28, 2018
PM II	January 18, 2017	May 20, 2017	May 20, 2018	November 16, 2018
PM III	January 18, 2017	May 20, 2017	May 20, 2018	November 16, 2018

Complete implementation timeline: Link

Section 7: Recommendations and Implementation

It is recommended that the department continues to work closely with our Metropolitan Planning Organizations as we proceed with statewide and metropolitan performance.

Section 8: Helpful Resources

Helpful References

- FHWA TPM Resource Page/s:
  - https://www.fhwa.dot.gov/tpm/
  - Performance-Based Planning and Programming: https://www.fhwa.dot.gov/planning/performance_based_planning/
  - FAST Act Fact Sheet: https://www.fhwa.dot.gov/fastact/factsheets/performancemgmtfs.pdf
- PM I (Safety) Final Rule:
  - https://www.federalregister.gov/documents/2016/03/15/2016-05202/national-performance-management-measures-highway-safety-improvement-program
- PM II (Bridge and Safety) Final Rule:
  - https://www.federalregister.gov/documents/2017/01/18/2017-00550/national-performance-management-measures-assessing-pavement-condition-for-the-national-highway
- PM III (System Performance) Final Rule:
  - https://www.federalregister.gov/documents/2017/01/18/2017-00681/national-performance-management-measures-assessing-performance-of-the-national-highway-system

Technical Report 3

Statewide Transportation Planning

Subject Matter Expert

Ken Kanownik
Planning Services Manager

Introduction: Statewide Transportation Planning

Statewide transportation planning includes a comprehensive consideration of possible strategies, an evaluation process that encompasses diverse viewpoints, the collaborative participation of relevant transportation-related agencies and organizations, and open, timely, and meaningful public involvement.

One of the greatest challenges facing Idaho's transportation system is how to meet the needs of a rapidly growing population and ever-changing economy. According to the U.S. Census Bureau, Idaho is the ninth fastest growing state in the country, and the Idaho Department of Labor says that Idaho's population will grow at three times the national rate, or 15.3% between now and 2025.

Through transportation planning, the Idaho Transportation Department:

- Articulates a long-term vision for Idaho's state highway system
- Implements statewide transportation policy through partnerships with federal, state, regional, and local agencies
- Oversees the framework for the department's project management process
- Employs a number of tools to manage projects efficiently and effectively
- Provides geographic information products and services through the development of spatially enabled application, databases, mapping products, analysis, education, and technical support.

ITD's Long-Range Transportation Plan outlines the department's goals and provides a plan for how ITD will turn these goals into reality. Being the best transportation department in the country is the department's vision and ITD will apply principles of collaboration and partnership, performance management, and focused investment to that end. The long-range transportation planning process guides us on this journey.

Long-Range Goals and Objectives

In December 2010, the ITD Board adopted "*Idaho on the Move*" which outlined three long-range goals and objectives. These were:

IMPROVING TRANSPORTATION SAFETY

- ☑ ITD is committed to providing facilities that enable the safe movement of people and goods. Safety is considered in all transportation activities, investments, and decision making processes.
- ☑ Key safety objectives are tied to five target areas discussed in Idaho's Strategic Highway Safety Plan: making data-driven decisions, changing the operating culture, committing to stay the course, developing partnerships, and evaluating efforts for future improvement.

ENHANCING MOBILITY

- ☑ ITD promotes accessible, affordable and convenient transportation choices for the movement of people and goods.
- ☑ Keeping transportation infrastructure in good repair and ensuring uninterrupted service is paramount.
- ☑ ITD is committed to wise use of limited resources, and is turning to new technologies and intermodal strategies to keep Idaho on the move.

SUPPORTING IDAHO'S ECONOMIC VITALITY

- ☑ Resources will be applied to maintain, improve and expand routes and services that contribute to economic vitality.
- ☑ ITD supports the state's economic vitality by enabling efficient movement of people and goods.
- ☑ ITD seeks partnerships and cooperative initiatives to improve freight mobility and provide convenient intermodal access to jobs and centers of commerce.

INVESTMENT STRATEGIES

Emphasis for operation, preservation, restoration and expansion investments are closely tied to long-range goals and objectives for safety, mobility and economic vitality. Investments will be cost-effective and will maintain existing infrastructure first.

ITD also supports effective investments that build complete transportation systems, such as public transportation, local streets and roads, airports, bicycle/pedestrian facilities, railways and Idaho's port in Lewiston. The department participates statewide in local transportation forums to provide an opportunity for two-way input into both local and state decision making processes.

MANAGEMENT PRINCIPLES

ITD's management principles reflect its philosophical approach to serving Idahoans. ITD aims to serve Idahoans by becoming the best transportation department in the country. The department will work to create best practices for others to follow, thereby improving through competition. To that end, the following principles serve as unifying concepts for the department, spanning all ITD divisions, transportation modes and work functions:

- Customer Service – ITD provides extraordinary customer service. When it is in the best interests of the public and the department, ITD looks for ways to get to "yes".
- Transparency and Accountability – ITD will operate transparently, be accountable for decisions and actions, and deliver on commitments. The department will openly report on progress and will be held accountable for results.
- Efficiency and Effectiveness – ITD is committed to operating with maximum internal efficiency and effectiveness. Being effective refers to what ITD does and how well it is done. Efficiency is about operating in a way that gets the most out of the resources available and ensuring public funds are used wisely.
- Partnerships, Teamwork, and Collaboration – ITD seeks opportunities for collaboration. The power of partnerships is applied to solve difficult problems. The department values teamwork and uses it as a learning tool to improve.
- Employee Development – ITD values its employees and promotes their development as subject matter experts. ITD seeks and retains dependable, self-disciplined people who contribute to the agency's success. Every employee is important and their every job contributes to ITD's success.
- Balanced Approach – ITD uses integrated planning and its livability principles to ensure resources and activities are appropriately balanced across all modes, and support a variety of needs. This approach also expands to planning partnerships and supports broad stakeholder involvement and consultation.

In the upcoming Long-Range Transportation Plan, we will take these goals and objectives and expand upon them as we continue our journey to becoming the best transportation department in the country.

Section 1: FAST Act Applicable Section(s) for the LRTP

- 23 CFR 450.200

  Each State is required to carry out a continuing, cooperative, and comprehensive performance-based statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan and STIP, that facilitates the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the State, including those areas subject to the metropolitan transportation planning requirements of 23 U.S.C. 134 and 49

U.S.C. 5303.

- 23 CFR 450.206(a)
  Each State shall carry out a continuing, cooperative, and comprehensive (3-C) statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will address the following factors:
  1. Support the economic vitality of the United States, the States, metropolitan areas, and nonmetropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
  2. Increase the safety of the transportation system for motorized and non-motorized users;
  3. Increase the security of the transportation system for motorized and non-motorized users;
  4. Increase accessibility and mobility of people and freight;
  5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
  6. Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
  7. Promote efficient system management and operation;
  8. Emphasize the preservation of the existing transportation system;
  9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
  10. Enhance travel and tourism.

- 23 CFR 450.216
  The State shall develop a long-range statewide transportation plan, with:
  1. A minimum 20-year forecast period at the time of adoption that provides for the development and implementation of the multimodal transportation system for the State.
  2. The long-range statewide transportation plan shall consider and include, as applicable, elements and connections between public transportation, non-motorized modes, rail, commercial motor vehicle, waterway, and aviation facilities, particularly with respect to intercity travel.
  3. The long-range statewide transportation plan should include capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned and operated.
  4. The long-range statewide transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the State's transportation system.
  5. The long-range statewide transportation plan shall reference, summarize, or contain any applicable short-range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (*e.g.,* transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long-range statewide transportation plan.
  6. The long-range statewide transportation plan should integrate the priorities, goals, countermeasures, strategies, or projects contained in the HSIP, including the SHSP, required under 23 U.S.C. 148, the Public Transportation Agency Safety Plan required under 49 U.S.C. 5329(d), or an Interim Agency Safety Plan in accordance with 49 CFR part 659, as in effect until completion of the Public Transportation Agency Safety Plan.

7. The long-range statewide transportation plan should include a security element that incorporates or summarizes the priorities, goals, or projects set forth in other transit safety and security planning and review processes, plans, and programs, as appropriate.
8. The statewide transportation plan shall include:
    a. A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with § 450.206(c); and
    b. A system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in § 450.206(c), including progress achieved by the MPO(s) in meeting the performance targets in comparison with system performance recorded in previous reports.
9. Within each metropolitan area of the State, the State shall develop the long-range statewide transportation plan in cooperation with the affected MPOs.
10. For nonmetropolitan areas, the State shall develop the long-range statewide transportation plan in cooperation with affected nonmetropolitan local officials with responsibility for transportation or, if applicable, through RTPOs described in § 450.210(d) using the State's cooperative process(es) established under § 450.210(b).
11. For each area of the State under the jurisdiction of an Indian Tribal government, the State shall develop the long-range statewide transportation plan in consultation with the Tribal government and the Secretary of the Interior consistent with § 450.210(c).
12. The State shall develop the long-range statewide transportation plan, as appropriate, in consultation with State, Tribal, and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. This consultation shall involve comparison of transportation plans to State and Tribal conservation plans or maps, if available, and comparison of transportation plans to inventories of natural or historic resources, if available.
13. A long-range statewide transportation plan shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The State shall develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife, and regulatory agencies. The State may establish reasonable timeframes for performing this consultation.
14. In developing and updating the long-range statewide transportation plan, the State shall provide:
    a. To nonmetropolitan local elected officials, or, if applicable, through RTPOs described in § 450.210(d), an opportunity to participate in accordance with § 50.216(h); and
    b. To individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, private providers of transportation (including intercity bus operators, employer-based cash-out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties with a reasonable opportunity to comment on the proposed long-range statewide transportation plan. In carrying out these requirements, the State shall use the public involvement process described under § 450.210(a).
15. The long-range statewide transportation plan may include a financial plan that demonstrates how the adopted long-range statewide transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. In addition, for illustrative purposes, the financial plan may include additional projects that the State would include in the adopted long-range statewide transportation plan if additional resources beyond those identified in the financial plan were to become available. The financial plan may include an assessment of the appropriateness of innovative

finance techniques (for example, tolling, pricing, bonding, public-private partnerships, or other strategies) as revenue sources.

16. The State is not required to select any project from the illustrative list of additional projects included in the financial plan described in paragraph of this section.
17. The State shall publish or otherwise make available the long-range statewide transportation plan for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web, as described in § 450.210(a).
18. The State shall continually evaluate, revise, and periodically update the long-range statewide transportation plan, as appropriate, using the procedures in this section for development and establishment of the long-range statewide transportation plan.
19. The State shall provide copies of any new or amended long-range statewide transportation plan documents to the FHWA and the FTA for informational purposes.

Section 2: Federal and/or State Reference

Federal Reference:

- FAST Act §§ 1116, 1406; 23 U.S.C. 119, 148, 150, 167

State Reference:

- Idaho Code 67-6501 through 67-6539
  Idaho Local Land Use Planning Act

Section 3: ITD Board or Administrative Policies

Board Policy:

- 4011 – Idaho Transportation Investment Program
- 4026 – Environmental Stewardship
- 4038 – Public Transportation Program
- 4050 – Bicycle/Pedestrian Coordination
- 4060 – Functional Classification of State Highway Systems
- 4061 – State Highway System Adjustments
- 4069 – Corridor Planning for Idaho Transportation Systems
- 4082 – Idaho Byways Program
- 4085 – Rail-Highway Crossing Program
- B1105 – Congestion Mitigation and Air Quality Improvement Program

Administrative Policy:

- 5011 – Idaho Transportation Investment Program
- 5038 – Public Transportation Program
- 5060 – Functional Classification of State Highway Systems
- 5061 – State Highway System Adjustments
- 5069 – Corridor Planning for Idaho Transportation Systems
- 5082 – Idaho Byways Program
- 5085 – Rail-Highway Crossing Program
- A1105 – Congestion Mitigation and Air Quality Improvement Program

Section 4: MOU or Service Agreements

There are no MOU or Service Agreements with this process.

Section 5: Stakeholders and Partners

The Idaho Transportation Department (ITD) recognizes the benefits and advantages of working closely with our partners to maximize limited resources, to build consensus and resolve conflicts. ITD partners with many agencies and in many ways, from long-range transportation planning to project development. Outlined below are some of our most common partnerships.

1. Federal Agencies
   ITD works closely with several federal agencies to meet federal regulations as well as to ensure federal funding is spent appropriately, to streamline project development, and to plan for future needs.

   Some of the federal agencies ITD works with on a regular basis include:
   - U.S. Department of Transportation (USDOT)
   - Federal Highways Administration (FHWA)
   - Federal Transit Administration (FTA)
   - U.S. Department of the Interior (DOI)
   - Bureau of Indian Affairs (BIA)
   - Bureau of Land Management (BLM)

2. Metropolitan Planning Organizations
   Metropolitan Planning Organizations (MPOs) are entities designated by law with the lead responsibility for the development of a metropolitan area's transportation plans and to coordinate the transportation planning process. All urban areas of 50,000 populations or more are federally required to have an MPO if the agency spends federal funds on transportation improvements. MPOs were created to ensure that existing and future expenditures for transportation projects and programs were based on a continuing, cooperative and comprehensive (3-C) planning process.

   Idaho has five MPOs throughout the state:
   - Bannock Transportation Planning Organization (BTPO)
   - Bonneville Metropolitan Planning Organization (BMPO)
   - Community Planning Association of Southwest Idaho (COMPASS)
   - Kootenai Metropolitan Planning Organization (KMPO)
   - Lewis-Clark Valley Metropolitan Planning Organization (LCVMPO)

3. Local Highway Technical Assistance Council
   The Local Highway Technical Assistance Council (LHTAC) connects Local Highway Jurisdictions in Idaho with available resources for maintenance and construction of Idaho's Local Highway System in the most efficient and effective manner possible.

4. Idaho Associations
   Cities, counties and local highway jurisdictions have separate associations that represent hundreds of local governments. As part of ITD's ongoing outreach, we use these associations to target and inform community leaders of plans, programs, policies, and projects that may affect their community.
   - Association of Idaho Cities (AIC)
   - Idaho Association of Counties (IAC)
   - Idaho Association of Highway Districts (IAHD)

5. Other State Agencies
   ITD works closely with its Idaho state counterparts, such as the Departments of Commerce, Labor, Fish and Game, and Lands. Each state agency is considered a subject matter expert, and we rely heavily on their expertise

to help ITD develop plans, make better decisions and identify infrastructure needs.

6. Tribal Nations
7. General Public

Section 6: Process

Idaho Transportation Department

ITD plans for transportation facilities that are located on the federal and state highway system. ITD also works in conjunction with LHTAC; Local Highway Jurisdictions; cities; counties; metropolitan areas; tribal nations; other federal and state agencies; etc. to conduct transportation planning.

Modal Planning & Process

Each metropolitan planning organization has its own process for conducting transportation planning within their areas. It is recommended to visit each MPO website to find out more.

Section 7: Recommendations and Implementation

To ensure a balanced planning approach, the department utilizes mode-specific and integrated planning approaches. These low and high-level plans allow for the appropriate scale and context for users and partners. It is recommended that the department establish a policy on how and when long-range and modal plans are updated.

Section 8: Helpful Resources

- Idaho Code 67-6501 Idaho Local Land Use Planning Act (https://legislature.idaho.gov/statutesrules/idstat/title67/t67ch65/)

Technical Report 4

Public Involvement & Stakeholder Engagement

Subject Matter Experts

Adam Rush
Public Involvement Coordinator

Sonna Lynn Fernandez
Planning Project Manager

Introduction: Public Involvement

The Idaho Transportation Department has long been committed to the concept of public participation. A public participation process has been developed which offers the citizens of Idaho the opportunity to speak out on transportation issues and needs. The process provides for:

- Opportunities for early and continuing participation.
- Timely dissemination of information to the public and other interested groups.
- Reasonable public access to technical and policy information.
- Timely public notice and an adequate review period through this process.
- Consideration of the needs of those under-served: i.e. minority, low-income, persons with limited English proficiency, people with disabilities and American Indian Tribal Governments.
- Adequate public review of major policy changes.
- Opportunity for review of proposed project plans.
- Encouraging public comment.
- Documentation of public comments and responses.

ITD's Public Involvement Goals

GOAL 1: EDUCATE AND PRESENT INFORMATION

ITD's goal is to educate and present information to the public that enables them to make educated and informed decisions. There are a variety of means that the department uses to educate citizens from sending out literature to conducting meetings. Visualization is an important part of how the department presents information. ITD uses graphics, maps, and pictures, just to name a few.

GOAL 2: SOLICIT PUBLIC INPUT

ITD solicits input from the public to identify mobility needs, desires, issues, and concerns. Furthermore, ITD continuously seeks opportunities for public involvement throughout the transportation planning processes, though specifically targeted at the beginning of transportation planning processes, at key decision points and when final plan drafts are issued. ITD staff closely monitors public input received throughout the year and provides the Idaho Transportation Board with updates for their consideration.

GOAL 3: FACILITATE INFORMATION FLOW BETWEEN THE PUBLIC AND DECISION-MAKERS

ITD staff is responsible for compiling public issues, comments, and concerns into complete and concise documents for presentation to the Idaho Transportation Board and Executive Management. Staff also schedules and organizes meetings where the public can present concerns to the Idaho Transportation Board. The Idaho Transportation Board and ITD staff works closely with the Office of the Governor and the Idaho Legislature to facilitate the flow of information between the public and our decision-makers. In addition, ITD District staff works hand-in-hand with local officials and metropolitan planning organizations.

GOAL 4: CONSIDER PUBLIC CONCERNS IN DECISION-MAKING

The Idaho Transportation Board considers the public's concerns that are presented to them by the staff as well as those presented to them by people at public meetings. ITD Planning staff also considers public concerns as it prepares draft planning documents.

Section 1: FAST Act Applicable Section(s) for Public Involvement

23 CFR 450.210(a)

In carrying out the statewide transportation planning process, including development of the long-range statewide transportation plan and the STIP, the State shall develop and use a documented public involvement process that provides opportunities for public review and comment at key decision points. The State's public involvement process at

a minimum shall:

1. Establish early and continuous public involvement opportunities that provide timely information about transportation issues and decision-making processes to individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, private providers of transportation (including intercity bus operators), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties;
2. Provide reasonable public access to technical and policy information used in the development of the long-range statewide transportation plan and the STIP;
3. Provide adequate public notice of public involvement activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed long-range statewide transportation plan and STIP;
4. To the maximum extent practicable, ensure that public meetings are held at convenient and accessible locations and times;
5. To the maximum extent practicable, use visualization techniques to describe the proposed long-range statewide transportation plan and supporting studies;
6. To the maximum extent practicable, make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate to afford reasonable opportunity for consideration of public information;
7. Demonstrate explicit consideration and response to public input during the development of the long-range statewide transportation plan and STIP;
8. Include a process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services; and
9. Provide for the periodic review of the effectiveness of the public involvement process to ensure that the process provides full and open access to all interested parties and revise the process, as appropriate.
10. The State shall provide for public comment on existing and proposed processes for public involvement in the development of the long-range statewide transportation plan and the STIP. At a minimum, the State shall allow 45 calendar days for public review and written comment before the procedures and any major revisions to existing procedures are adopted. The State shall provide copies of the approved public involvement process document(s) to the FHWA and the FTA for informational purposes.

The State shall provide for nonmetropolitan local official participation in the development of the long-range statewide transportation plan and the STIP.

1. The State shall have a documented process(es) for cooperating with nonmetropolitan local officials representing units of general purpose local government and/or local officials with responsibility for transportation that is separate and discrete from the public involvement process and provides an opportunity for their participation in the development of the long-range statewide transportation plan and the STIP.
2. At least once every 5 years, the State shall review and solicit comments from nonmetropolitan local officials and other interested parties for a period of not less than 60 calendar days regarding the effectiveness of the cooperative process and any proposed changes.
3. The State shall direct a specific request for comments to the State association of counties, State municipal league, regional planning agencies, or directly to nonmetropolitan local officials. Although the FHWA and the FTA shall not review or approve this cooperative process(es), the State shall provide copies of the process document(s) to the FHWA and the FTA for informational purposes.

4. The State, at its discretion, is responsible for determining whether to adopt any proposed changes. If a proposed change is not adopted, the State shall make publicly available its reasons for not accepting the proposed change, including notification to nonmetropolitan local officials or their associations.

For each area of the State under the jurisdiction of an Indian Tribal government, the State shall develop the long-range statewide transportation plan and STIP in consultation with the Tribal government and the Secretary of the Interior. States shall, to the extent practicable, develop a documented process(es) that outlines roles, responsibilities, and key decision points for consulting with Indian Tribal governments and Department of the Interior in the development of the long-range statewide transportation plan and the STIP.

Section 2: Federal and/or State Reference

Federal Reference:

- FAST ACT (= Documented Process)
  23 CFR 450.210(a)

- Civil Rights Act of 1964 (= No Discrimination)
  Title VI of the Civil Rights Act of 1964 states that "no person in the United States shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

- Americans With Disabilities Act of 1990 (=Access for all)
  Title II of the Americans with Disabilities Act of 1990 prohibits disability discrimination by all public entities at the local or state level. Access includes physical access and programmatic access that might be by discriminating policies or procedures.

State Reference:

- Idaho Code 74-201 through 74-208 Idaho Open Public Meeting Law
  Open and honest government is fundamental to a free society. The Idaho Legislature formalized our state's commitment to open government by enacting the Idaho Open Meeting Law in 1974. The Open Meeting Law codifies a simple, but fundamental, Idaho value: The public's business ought to be done in public. The Idaho Open Meeting Law was designed to ensure transparency of the legislative and administrative processes within state and local governments.

Section 3: ITD Board or Administrative Policies

It is the policy of this department to develop its transportation plans in partnership with local governments, metropolitan planning organizations, elected officials, federal partners, Tribal Nations, those impacted by the plans and projects and those who use the transportation system. The department shall conduct its public involvement process in a manner to ensure accountability for its actions, continuous communication with stakeholders and constituents, consistency in approach, and integrity in its dealings.

Board Policy:

- 4008 – Open Meeting Requirements
- 4011 – Idaho Transportation Investment Program
- 4024 – Public Hearings

Administrative Policy:

- A1302 – Public Involvement for Location and Design Determinations
- 5024 – Public Hearings

- A2004 – Public Hearing Officers
- 5069 – Corridor Planning for Idaho Transportation Systems
- 5057 – Release of Public Information to the Media
- 5011 – Idaho Transportation Improvement Program

Section 4: MOU or Service Agreements

23 CFR 450.208(c) – States that two or more States may enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in support of activities under this subpart related to interstate areas and localities in the States and establishing authorities the States consider desirable for making the agreements and compacts effective. The right to alter, amend, or repeal interstate compacts entered into under this part is expressly reserved.

Section 5: Stakeholders

- General Public – anyone who uses the state's transportation facilities (i.e. citizens, tourists, shippers, etc.).
- Stakeholders – anyone who can affect or be affected by the department's policies, objectives and actions (i.e. other federal agencies, state agencies, business owners, property owners, metropolitan planning organizations, Tribal Nations, etc.).

Section 6: Public Involvement and Stakeholder Engagement Process

Public involvement is viewed as an integral part of the Department's planning efforts. Public involvement is more than holding a public hearing, posting a notice in a newspaper or on a website and expecting people to willingly comment on a project.

Engaging the public involves creative thinking, with the willingness to interact openly to the public's preferred forms of communication. It's going to them instead of the department expecting them to seek us out. It's also about balance – meeting their needs and the needs of the department. It's giving stakeholders the opportunity to influence decision-making when decisions are being considered, not when a project is ready to be constructed.

The U.S. Department of Transportation defines public involvement as "two-way communication aimed at incorporating the views, concerns and issues of the public into the decision-making process."

Decision-makers can sometimes forget the importance of two-way communication, focusing solely on public education while overlooking active public involvement. Both are necessary. Public education is "one-way communication intended to inform the public." Certainly, public education is vital because it allows the department to inform people of critical issues. However, actively listening to the needs and wants of our stakeholders, engaging them in the beginning of the process and including them throughout the development process is more important.

Moreover, transportation plans, and therefore individual transportation projects, are more likely to be accepted and supported by stakeholders who can see that they have had an active role in shaping the decisions embodied in the plan. Showing stakeholders that the transportation department is willing to address their concerns will set up the project for "buy in," even if all the stakeholders are not in complete agreement with the outcome of the process.

Public Involvement Philosophy

ITD's public involvement philosophy can be summed up in three key words: integrated, early and often.

- INTEGRATED
  Public involvement is part of the project planning process, being integration interdependent and occurring non- simultaneously. This includes the outreach of all key stakeholders (agency and level of agency) into a customized public process. Objectives, activities, the address support and the timing of public an affected involvement are individualized to the project unique characteristics and needs of community. Collaboration among the public manager, team members, public in the truly involvement consultants and/or involvement coordinator will result customized, integrated public involvement approach.

	WHAT IS IT?	WHY?	TECHNIQUES
INFORM	One-way communication, provide information	Keep public informed	Flier, website posting, open houses, public presentations, info station, email updates
ENGAGE	Getting feedback from the public, working back and forth with stakeholders to address concerns and answer questions. Feedback may or may not influence a project or decision	Directly and specifically address public concerns. Receive feedback to potentially include in decision-making process	Asking for public comment, surveys, polling, stakeholder interviews, site tour
INVOLVE	Working with and communicating with the public with the goal to influence a project and/or decision.	Gain knowledge, receive advice and incorporate recommendations in projects and decision-making	Citizen advisory groups, workshops

- EARLY
  The purpose of early involvement is to both educate and receive public input on a developing plan or project. Through early scoping and planning, ITD can develop a public involvement process that will ensure controversy does not stop projects/plans or erode public trust. The time and effort spent involving stakeholders early in the process is returned in public confidence and support.

- OFTEN
  Public involvement during project planning and development encompasses more than information meetings or public hearings. Opportunities to involve stakeholders by sharing and collecting information can range from one-on-one meetings to attending local city council meetings and should continue throughout the life of a project.

More Than a Meeting

Public involvement provides the structure and opportunities for a diversity of stakeholders and interest groups to resolve conflicts and manage change in a collaborative manner. Critical to this collaborative process is realizing that:

- PUBLIC INVOLVEMENT IS MORE ART THAN SCIENCE.
  Public involvement oftentimes has set parameters based on legal requirements. The law comes into play based on the funding source. There may be different public involvement requirements based on city, county, states, or metropolitan planning organizations. There most definitely are public involvement requirements if there is federal funding or significant impacts that invoke the National Environmental Policy Act (NEPA). Even with the various requirements for public involvement, each plan and project is unique and will require different levels of public involvement. There is no one-size-fits-all approach to public involvement. As previously mentioned, a public involvement plan should be based on the needs and history of a community and its stakeholders. With a basic approach as your canvas, your public involvement plan should be crafted and developed with customized strategies and technique, resulting in a unique “work of art.”

- EVERY PUBLIC INVOLVEMENT PROCESS WILL BE DIFFERENT AND REQUIRE A CUSTOM APPROACH.
  There simply is not a cookie cutter approach to public involvement. Key principles are found in virtually every effort: public education, addressing the past/present/future, identification of key stakeholders, listening, etc. Different communities require different approaches. In one city, the key may be outreach to all of the local civic groups. In another, an open house and direct outreach through the local churches may be the key. In a third

community, it may be an early-morning presence at the local truck stop and informal visits with residents over a cup of coffee. Furthermore, each district has its own public involvement style and process. What works in one district may or may not work in another. However, it is important to understand that there are minimum requirements that each district must meet to ensure that stakeholders are being notified, consulted and included in the decision-making process.

How Public Involvement Is Used at ITD

- STRATEGIC PLANNING

  ITD's Strategic Plan has clearly identified its mission statement as – Our Mission: Your Safety. Your Mobility. Your Economic Opportunity. This declaration drives everything we do within the department. But this Mission Statement did not come out of a vacuum. Through intense public involvement and from listening to our stakeholders, the department was able to:
  - set priorities
  - focus departmental energy and resources
  - strengthen our operations
  - ensure that employees and other stakeholders are working toward common goals
  - establish agreement around intended outcomes/results
  - assess and adjust ITD's direction in response to a changing environment.

  Through the Strategic Plan, ITD has refined its efforts to endure that fundamental decisions and actions shape and guide the organization including who it serves, what it does, and why it does it, with a focus on the future.

- LONG- AND SHORT-RANGE PLANNING

  Planning is a dynamic decision-making process that involves the ongoing evaluation and refining of transportation policies, programs and plans. Throughout this process, it is necessary to build a strong partnership with the citizens of Idaho. A long-lasting, strong partnership with the general public, tribal governments, metro planning organizations, universities, non-metropolitan elected and appointed officials as well as other state government agencies is the goal. Typical types of planning documents in this category include:
  - Long Range Transportation Plan
    - Modal Plans
    - Bike/Pedestrian
    - Freight
    - Rail
    - Transit
    - Aeronautics
  - District Corridor Plans

- PROJECT PLANNING AND DEVELOPMENT

  Financial planning is very important to ensure that what limited federal and state dollars ITD receives is used appropriately and that expenditures meet the Mission, Vision and strategic goals outlined for the department. This is accomplished through financial planning during the annual update of the Idaho Transportation Improvement Program (ITIP).

  Annually in July, the department conducts a 30-day public comment period on the ITIP. In recent years, comments have dwindled to only a handful. Does this mean that the department is lacking in its way of reaching stakeholders and the public? Probably not. The reason is that the Districts have engaged in public involvement activities throughout the year, so that when the time comes for comment, much of the public has already been

consulted and is satisfied.

Section 7: Recommendations and Implementation

Continue to monitor and encourage community engagement. Use a variety of technologies to reach as many as possible.

Section 8: Helpful Resources

- Idaho Open Public Meeting Law Manual (http://www.ag.idaho.gov/publications/legalManuals/OpenMeeting.pdf)

Technical Report 5

Metropolitan Planning Organization (MPO) Partnerships

Subject Matter Expert

Maranda Obray
Senior Transportation Planner

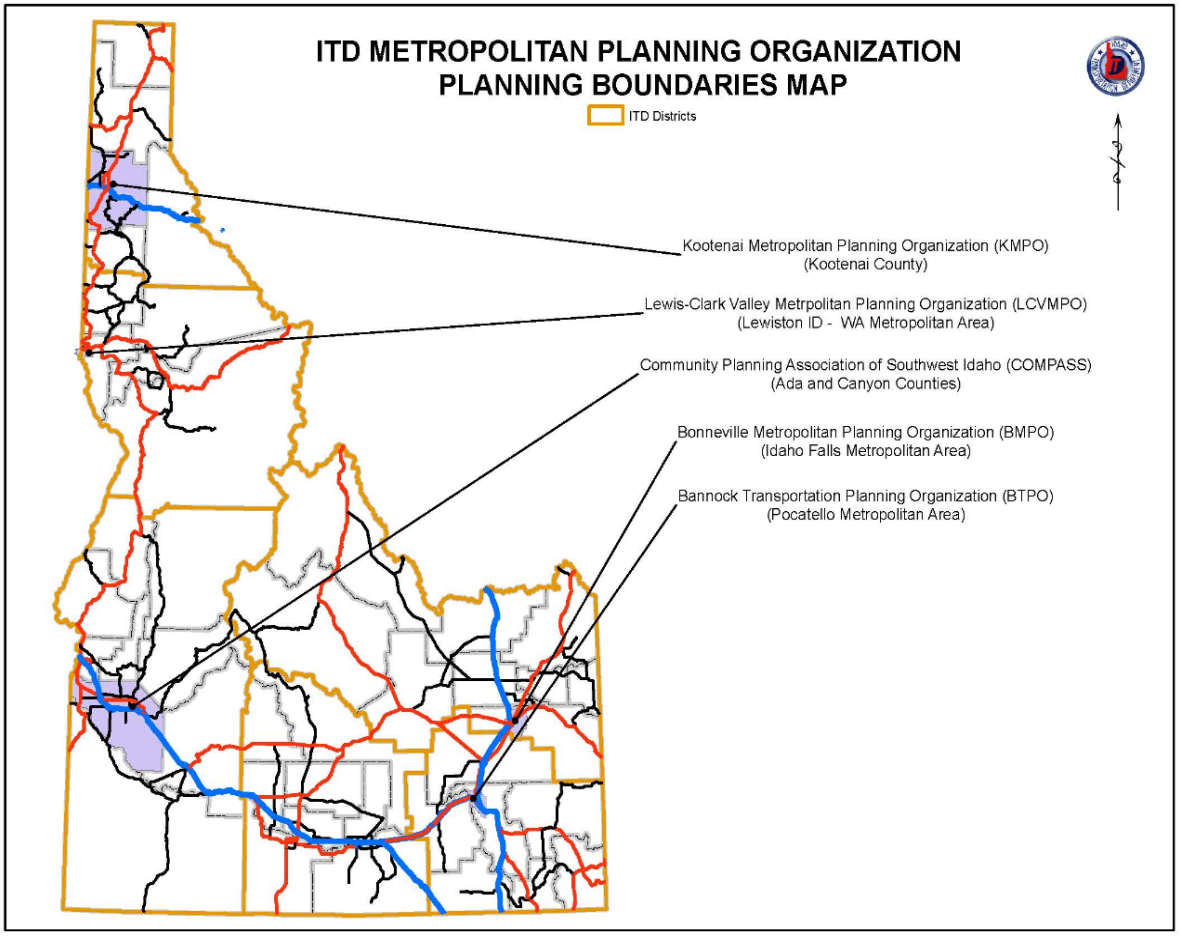
Introduction: Metropolitan Planning Organizations in Idaho

A Metropolitan Planning Organization (MPO) is a local decision-making body responsible for carrying out a continuing, cooperative, and comprehensive the (3-C) transportation planning process within a defined Metropolitan Planning Area (MPA). The US Department of Transportation recognizes the urbanized area (UZA) published in the Federal Register for purposes of disseminating federal transportation funds for highways, public transit, and other travel and freight modes. Every UZA must be represented by an MPO in accordance with 23 USC §134(b) and 49 USC §5303(c). Federal laws and regulations (23 USC §134(d) and 23 CFR §450.310(b)) require that the governor of each state in cooperation with local officials establish an MPO within 12 months of a place being designated a UZA by the Census Bureau.

MPOs provide a forum for cooperative transportation decision-making in metropolitan areas. Metropolitan planning grant funds are apportioned by FHWA and FTA to ITD annually, and are distributed to the MPOs by formula. Planning funds are used by MPOs to carry out the metropolitan planning functions (23 USC Section 134 and 49 USC 5303 et. seq.). As of 2018, Idaho has four MPOs:

- Kootenai Metropolitan Planning Organization (KMPO) in the Coeur d'Alene area
- Lewis-Clark Valley Metropolitan Planning Organization (LCVMPO) in the Lewiston area
- Bannock Transportation Planning Organization (BTPO) in the Pocatello area
- Bonneville Metropolitan Planning Organization (BMPO) in the Idaho Falls area

Idaho has one MPO, COMPASS, that is designated a Transportation Management Area (TMA); areas with populations greater than 200,000 or more residents. In addition to the above listed federally required documents, TMAs must have a Congestion Management Process (CMP) that identifies actions and strategies to reduce congestion and increase mobility and air quality.



Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

§8. "The Statewide transportation plan shall include:

- A description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with § 450.206(c); and
- A system performance report and subsequent updates evaluating the condition and performance of the transportation system in accordance with the performance targets described in § 450.206(c), including progress achieved by the MPO(s) in meeting the performance targets in comparison with system performance recorded in previous reports."

Section 2: Federal and/or State Reference

National transportation policy is set by the US Congress in the form of laws, which can establish specific planning requirements and/or delegate that responsibility to the US Secretary of Transportation. Table 1-1 lists the major US transportation laws since 1990, including the most recent law, *Fixing America's Surface Transportation Act* (FAST Act), enacted on December 4, 2015.

Table 1-1: Major US Transportation Laws: 1991-Present

Year	Public Law #	Acronym	Full Name
1991	102-240	ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
1998	105-178	TEA-21	Transportation Equity Act for the 21st Century
2005	109-59	SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
2012	112-141	MAP-21	Moving Ahead for Progress in the 21st Century Act
2015	114-94	FAST Act	Fixing America's Surface Transportation Act

Each new law can add, delete, or modify previsions in previous laws. A compilation of currently applicable laws, as amended, is found in the *Code of Laws of the United States of America*, often referred to as the *U.S. Code*. Transportation planning requirements are found in *Title 23 (Highways)* of the *U.S. Code*. Key sections with regard to transportation planning include the following, all modified by FAST Act:

Title 23: Highways
Chapter I: Federal-Aid Highways
Sections 134 & 135:

- *23 USC §134 Metropolitan Transportation Planning*
- *23 USC §134 Statewide Non-metropolitan Transportation Planning*

FAST Act also amended *23 USC §201*, *Federal Lands and Tribal Transportation Programs,* which mandates, "In

consultation with the Secretary of each appropriate Federal land management agency, the Secretary shall implement transportation planning procedures for Federal lands and tribal transportation facilities that are consistent with the planning processes required under sections 134 and 135." An approved tribal transportation program, federal lands transportation program, and federal lands access program, as well as transportation improvement programs (TIPs) are required to be included in appropriate state and MPO plans and programs (23 USC §201(c)(4)).

Federal Regulations

As noted above, Congress delegates to the US Secretary of Transportation the responsibility to issue regulations detailing how transportation laws are to be implemented. New regulations from all federal agencies are published on each non-holiday weekday in the *Federal Register* (FR). Each new regulation can add, delete, or modify provisions in previous regulations. A compilation of currently applicable regulations, as amended, is found in the *Code of Federal Regulations* (CFR). Transportation planning requirements are found in *Title 23 (Highways).*

Title 23: Highways
Chapter I: Federal Highway Administration, Department of Transportation
S**ubchapter E:** Planning and Research
Part 450: Planning Assistance and Standards
Subpart A, B & C:

- A: *23 CFR §450.100 et seq.:* Planning Definitions
- B: *23 CFR §450.200 et seq.:* Statewide Transportation Planning
- C: *23 CFR §450.300 et seq.:* Metropolitan Transportation Planning and Programming

**"Et seq." is an abbreviation for the Latin et sequences, which means "and the following." It indicates that relevant information continues in the sections that follow the section cited.*

Corresponding, nearly identical requirements are found in *Title 49 (Transportation),* addressing planning for federal transit projects, which are under the jurisdiction of the Federal Transit Administration (FTA).
Title 49: Transportation
Subtitle III: General and Intermodal Programs
Chapter V3: Public Transportation
Sections 5303 & 5304:

- *49 USC §5303:* Metropolitan Transportation Planning
- *49 USC §5304:* Statewide and Non-metropolitan Transportation Planning

The regulations in 23 CFR §450 specify the federal transportation planning requirements that are addressed in this Plan. Regulations implementing the July 2012 Performance Management Measures (23 USC §150) are anticipated to be issued by the US Department of Transportation (USDOT) in the 2016-2018 timeframe and communicated through ITD-DES Planning Services section to the MPOs throughout the State.

Transportation planners should be aware that it takes time to incorporate provisions of a new law into the US Code, time for the US Secretary to Transportation to circulate new regulations in response to a new law, and additional time to incorporate new regulations into the Code of Federal Regulations. Therefore, check with the ITD-DES Planning Services for clarification regarding the current applicable requirements, especially if a new federal transportation law has recently been enacted and state action is required.

Required Federal Products

There are various required federal documents that must be developed by MPOs (including MPOs that have TMA status). Table 1-2 summarizes the required federal documents, the time period that each project covers, general contents and how often the document needs to be updated. More specific detail on each of the projects is contained in this Plan.

Table 1-2: Schedule of Required Federal Products					
Product/Document	**Horizon**	**Contents**	**Updates**	**Agency**	
				TMA	**MPO**
MTP (Metropolitan Transportation Plan)	20 years (min.)	Policies, goals, and strategies	Every 5 years (4 years for nonattainment and maintenance areas)	✓	✓
UPWP (Unified Planning Work Program)	1 year	Planning studies and tasks	Annually	✓	✓
WP (Work Program)	1 year	Planning studies and tasks	Annually	✓	✓
TIP (Transportation Improvement Program)	4-5 years	Transportation investments by fund type and funding year	Annually	✓	✓
Public Participation Plan	N/A	Details of the MPO public involvement process	As needed (to stay in compliance with federal regulations)	✓	✓
Title VI Plan	N/A	Actions taken to meet antidiscrimination laws	Annually	✓	✓
Regional Coordination Plan	N/A	Transportation services for people with disabilities, low incomes, and older adults	Annually	✓	✓
Disadvantaged Business Enterprises Policy/Plan	N/A	Policies for required DBE participation	As needed	✓	✓
Air Quality Plan	Based on TIP	Describes nonattainment or maintenance status and applicable transportation control measures	Based on TIP	✓	✓
Congestion Management Plan	Ongoing	Provides demand reduction and operational management strategies	As needed	✓	

Idaho Statutes

Similar to the federal process, the Idaho State Legislature passes laws (approved by the governor) which are incorporated into the *Idaho Code.* Idaho's laws on transportation planning are found in:

Title 40: Highways and Bridges

Title 67: State Government and State Affairs

Chapter I9: State Planning and Coordination

Section 03 & 04

- *IC §67-1903 et seq.:* Strategic Planning
- *IC §67*-1904 et seq.: Performance Measurement

Chapter II3: Miscellaneous Provisions

Idaho's statutory requirements focus largely on development of the statewide transportation plan and the statewide 7-year Transportation Facilities Construction Program. The statewide plan and 7-year program are developed including the regional and metropolitan project priorities resulting from federally mandated transportation planning processes. All plans and programs developed by MPOs, including TMAs, must be consistent with Idaho statutes and ITD planning documents.

Section 3: ITD Board or Administrative Policies

Board Policies

- #4007 – Memorandum of Understanding
- #4008 – Open Meeting Requirements
- #4011 – Idaho Transportation Investment Program
- #4028 – Allocation of Federal Formula Highway Apportionments to Local Public Agencies
- #4028S – Local Public Agency Share of Federal Highway Funding
- #4060 – Functional Classification of State Highway Systems

Administrative Policies

- #5011 – Idaho Transportation Investment Program
- #5028 – Allocation of Federal Formula Highway Apportionments to Local Public Agencies
- #5060 – Functional Classification of State Highway Systems
- #A0110 – Memorandum of Understanding

Section 4: MOU or Service Agreements

The Memorandum of Understanding, or MOU, is the umbrella agreement between ITD and each MPO. Unlike contracts that are executed annually, the MOU is amended only as needed. At a minimum, ITD-Division of Engineering Services and the MPO should review the MOU at least once every three years to make sure it reflects current practice and law. Revisions are developed cooperatively by ITD and the MPO. The MOU describes the roles and responsibilities of participating agencies for the development of the following three main planning products of the MPO: the MTP, TIP and UPWP.

Each MPO/TMA has a Memorandum of Agreement with the department.

- MOU or Service Agreement References
- M:\DES\PlanningServices\Employee Folders\Maranda\MPO Coordination\Idaho MPOs\MOUs

Section 5: Stakeholders and Partners

Each MPO has a variety of stakeholders and partners. The following list outlines some of them:

	KMPO	LCVMPO	COMPASS	BTPO	BMPO
State	• ITD District 1	• ITD District 2 • WASHDOT South Central Region	• ITD District 3 • Idaho Department of Environmental Quality	• ITD District 5	• ITD District 6
Federal	• Bureau of Land Management • Bureau of Reclamation • US Forrest Service • US Dept. of Lands	• Bureau of Land Management • Bureau of Reclamation • US Forrest Service • US Dept. of Lands	• Bureau of Land Management • Bureau of Reclamation • US Forrest Service • US Dept. of Lands	• Bureau of Land Management • Bureau of Reclamation • US Forrest Service • US Dept. of Lands	• Bureau of Land Management • Bureau of Reclamation • US Forrest Service • US Dept. of Lands

Counties	• Kootenai County	• Nez Perce County • Asotin County, WA	• Ada County • Canyon County	• Bannock County	• Bonneville County
Highway Districts	• Eastside Highway District • Lakes Highway District • Post Falls Highway District • Worley Highway District	• Deer Creek Highway District • Nez Perce County Road and Bridge	• Ada County Highway Distirct • Nampa Highway District • Notus Parma Highway District • Golden Gate Highway District • Canyon Highway District	• Bannock County Road and Bridge	• Bonneville County Road and Bridge
Air	• Coeur d'Alene Regional Airport	• Lewiston-Nez Perce County Regional Airport	• Boise Airport • Nampa Regional Airport • Caldwell Regional Airport	• Pocatello Airport	• Idaho Falls Airport
Transit	• Citylink Transit • Kootenai County Transit Services	• Lewiston Transit • SMART Transit • COAST Transit •	• Valley Regional Transit	• Pocatello Regional Transit	• Targhee Regional Public Transit Agency
Tribes	• Spokane Tribe • Kalispell Tribe • Coeur d'Alene Tribe • Salish/Kootenai Tribe • Colville Tribe	• Nez Perce Tribe		• Shoshone-Bannock Tribes	
Local	• Kootenai Clinic Hospital	• Port of Clarkston • Port of Lewiston • Port of Wilma • St. Joseph's Regional Medical Center	• Capital City Development Corporation • Greater Boise Auditorium District • St. Luke's Hospital • St. Alphonsus Hospital • Intermountain Hospital • Boise VA Hospital	• Portneuf Medical Center	• Eastern Idaho Regional Medical Center

Universities	• Lewis-Clark State College • North Idaho Community College • University of Idaho	• Lewis-Clark State College • Walla Walla Community College	• Boise State University • University of Idaho • Northwest Nazarene University • College of Idaho • College of Western Idaho	• Idaho State University • Bingham Young University - Idaho	• Eastern Idaho Technical College

* All MPOs provide a coordinated planning effort between the public, cities, small cities and towns, the county, highway districts, the state, transit providers, and Tribal Nations

Section 6: Process

Plans	Metropolitan Transportation Plan, Transportation Improvement Document, Public Involvement Plan, Title VI, Coordinated Public-Transit-Human Services Transportation Plan, Short-Tangy Transportation Plan, Bike and Pedestrian Plan, Unified Planning Work Program
Release Dates	As needed, monthly reviewed/update, Annually adopted
Notification Methods	Email, Public Meetings, Workshops, Forums, Emergency/Urgent Meetings, Website, Media Outlet, Staff Dedication to Assistance and Outreach

Section 7: Recommendations and Implementation

Continue to work hand-in-hand with each metropolitan planning organization to assist them in being successful.

Section 8: Helpful Resources

- Attached are the MPO boundary maps for each area of the state.

Technical Report 6

Local Highway Technical Assistance Council (LHTAC)

Subject Matter Expert

Mike Cram

Project Manager

Introduction: Local Highway Technical Assistance Council (LHTAC)

The Local Highway Technical Assistance Council connects Local Highway Jurisdictions in Idaho with available resources for maintenance and construction of Idaho's Local Highway System in the most efficient and effective manner possible.

LHTAC Strategic Plan: http://lhtac.org/wordpress/wp-content/uploads/2013/08/StrategicPlan2015_Web.pdf

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

Section 2: Federal and/or State Reference

Federal Reference:

- 23 CFR 1.11 and 23 CFR 635.105 – Allows for the Idaho Transportation Department to delegate all or some project activities to Local Public Agencies (LPAs)
- 23 CFR 504.b – Authorizes the establishment of Local Technical Assistance Programs

State Reference:

- Idaho Code Title 40 Chapter II4 – Establishment, organization, authority, and requirements of the Local Highway Technical Assistance Council (LHTAC)
- Idaho Code 40-317 – Authority to enter into cooperative agreements with the federal and local governments.

Section 3: ITD Board or Administrative Policies

Board Policy:

- 4028 – Allocation of Federal Formula Highway Apportionments to Local Public Agencies
- 4028s – Local Public Agency Share of Federal Highway Funding
- 4030 – Surface Transportation Program Rural (STPR) Exchange Program
- 4081 – Transportation Alternative Program

Administrative Policy:

- 5028 – Allocation of Federal Formula Highway Apportionments to Local Public Agencies
- 5030 – Surface Transportation Program Rural (STPR) Exchange Program

- 5081- Transportation Alternatives Program

Section 4: MOU or Service Agreements

The Local Highway Technical Assistance Council (LHTAC), and the Idaho Transportation Department (ITD) have signed a new stewardship agreement! This agreement ensures that, for at least the next five years, the LHTAC is able to continue to assist locals in the contract administration of the Federal-aid program throughout Idaho. Outlined within the agreement are defined authorities for stakeholders, and procedures and processes that are to be implemented when working through the Federal-aid process.

In drafting this agreement, LHTAC and ITD staff worked closely to enhance and streamline which individuals hold approval authority on local Federal-aid projects and eliminate any duplication. LHTAC understands that the sponsors input is key, and because of that, we are especially excited about one particular change; decision making authority is now in the hands of LHTAC in close coordination with the sponsor agency. This will allow decisions to be made by those closest to the project, further ensuring the long-term success, and local satisfaction with each project. LHTAC works hard to ensure that processes are streamlined, and that the sponsor is always getting the most bang for their buck, this agreement will only help in achieving this goal.

Stewardship Agreement: http://lhtac.org/wordpress/wp-content/uploads/2013/08/stewardship.pdf

Section 5: Stakeholders and Partners

- Highway Districts
- Cities
- Counties
- Metropolitan Planning Organizations (MPOs)
- ITD

Section 6: Process

The Local Highway Technical Assistance Council (LHTAC) was established under Idaho Code Chapter II4, Title 40, in 1994 and continues to assist the Local Highway Jurisdictions (LHJs) on local best management practices and administering funding programs.

According to Idaho Code: The Council shall have the authority to:

1. Represent its member jurisdictions in conferences, meetings and hearings related to highways, roads and streets and other transportation factors affecting local highway jurisdictions;
2. Develop uniform standards and procedures that may be recommended to its member jurisdictions for the construction, maintenance, use, operation and administration of local highways;
3. Cooperate with and receive and expend aid and donations from the federal or state governments, and from other sources for the administration and operation of the council;
4. Make recommendations to the Idaho Transportation Board for the distribution and prioritization of federal funds for local highway projects;
5. Assist the legislature by providing research and data relating to transportation matters affecting local highway jurisdictions within the state;
6. Maintain and disseminate information to local highway jurisdictions of federal and state legislation and administrative rules and regulations affecting local highway jurisdictions;
7. Maintain and disseminate information to local highway jurisdictions of activities relating to ground transportation in other states;
8. When authorized by the participating local jurisdiction, to act for that local jurisdiction through a joint exercise of powers agreement with any other local jurisdiction, and any agency of the state of Idaho, or any agency of the federal government;
9. Buy, sell, receive and exchange property, both real and personal, as necessary to perform its functions;
10. Be the sole and exclusive authority for the expenditure of the moneys made available by appropriation or otherwise to the Council.

LHTAC has several programs which they administer on behalf of local agencies. Those programs include:

- Federal-aid: This program is fairly large and includes local rural funds (for cities/towns with a population of less than 5,000), urban funds (areas with populations between 5,000-50,000), and dedicated funds granted to the one traffic management area in the state (northern Ada County) and the five metropolitan planning organizations (MPOs) throughout the state along with funds dedicated to the local bridge program.

Local rural funds are allocated for projects in rural areas. Funds may be used for new construction, reconstruction or rehabilitation of roadways functionally classified by FHWA as arterial or rural major collectors with a small percentage allowed for minor collectors. The funds are recommended for award through a competitive application process administered by LHTAC. LHTAC sets an upper project limit of $5 million for these projects with a preference given to those that are below $2 million. The Idaho Transportation Department Board decides which rural projects to include in the Idaho Transportation Investment Program (ITIP) based upon the LHTAC recommendations and availability of funds.

Urban funds are allocated for projects in urban areas as determined by the US Census Bureau. Funds may be used for new construction, reconstruction or rehabilitation of roadways functionally classified by FHWA as urban collectors or arterials. The Federal Highway program dedicates funds to urban areas. In recent years, LHTAC has an agreement to manage the Urban-Federal Air projects for the Metropolitan Planning Organizations.

The Traffic Management Area (TMA), northern Ada County, has dedicated funds since the population is over 200,000. The other urban fund allocation, for urban areas between 5,000 - 200,000, is divided using population data between the 5 MPO's and all other urban areas. LHTAC represents the smaller urban areas with populations 5,000 - 50,000. For these smaller urban areas the funds are recommended for award through a competitive application process administered by LHTAC.

The local bridge program provides funds for the replacement or rehabilitation of bridges. This program has a limit of one project application per year per jurisdiction. The funds are recommended for award through a competitive application process administered by LHTAC. The Idaho Transportation Department Board decides which local bridge projects to include in the Idaho Transportation Investment Program (ITIP) based upon the LHTAC recommendations and availability of funds. In order to qualify for Bridge Funds, the bridge must be in the National Bridge Inventory (NBI) Database, which requires the bridge be longer than 20 feet and it must carry a public road. In order to receive Bridge Funds, the project should fall into one of the 3 categories:

- Replacement: Bridge should be in poor condition (deck, superstructure, and/or substructure, or culvert)
- Rehabilitation: Bridge should be in fair or poor condition
- Preserve: Bridge should be in good or fair condition

- Local Rural Highway Investment Program (LRHIP): The Idaho Transportation Board in conjunction with the Idaho Transportation Department (ITD), and the Local Highway Technical Assistance Council (LHTAC) has developed this program to assist small cities, counties, and highway districts to improve the investment in their roadway infrastructure. The program is funded by an exchange of Federal-aid Rural funds for ITD State funds. Currently, up to $2,800,000 in state funding is available annually to this program. At the request of the Idaho Transportation Board, LHTAC has agreed to administer this program and account for the expenditures of the funds based on criteria established by the Idaho Transportation Board and LHTAC. Individual projects can each be awarded a maximum amount of $100,000 as the program is currently administered. Additionally, LHTAC reserves $400,000 of this fund annually to help with emergency type projects. Jurisdictions can apply for up to $100,000 to help with an emergency once it has occurred. Upon completion of an LRHIP project, a single-page Project Document Summary is submitted by the local agency and annually a report is presented by LHTAC to the ITD Transportation Board.

- Construction Administration: LHTAC has performed construction administration of local Federal-aid highway construction projects since 2009. The program has matured and grown from the initial successes of the Governors Discretionary program and ARRA projects to larger and more complex projects currently in the program. LHTAC works in close partnership with the private consulting engineers of Idaho, ITD and the local sponsors to ensure continued success during construction. Projects are managed by LHTAC; however, the onsite construction engineering and inspection is accomplished through consulting firms selected by the local highway jurisdiction and LHTAC. This insures local involvement and that qualified consultants are selected to perform the work.

- Local Strategic Initiatives Program: LHTAC administers the Local Strategic Initiatives Program, a program established by the Idaho Legislature. The Strategic Initiatives Program requires that funded projects must be related to maintenance, and address safety and mobility. During the 2017 Legislative session, Idaho Law makers voted to continue the Surplus Eliminator program previously established in 2015. The Surplus Eliminator Program stated that at the end of the year, remaining unallocated funds will be split between the rainy-day fund and the Surplus Eliminator program for state transportation projects administered by the Idaho Transportation Department (ITD). In 2017, the previously established program was modified slightly to allow for a portion of the allocation to go toward the local system. Now the money is shared 60% to the state system and 40% to the local system. In 2018, the total local share of the Surplus Eliminator fund is approximately $10.2 million.

- Local Highway Safety Improvement Program (LHSIP): The Highway Safety Improvement Program (HSIP) is a federally funded program aimed at eliminating fatal and serious injury (type A) crashes on the roadway system. Local highway jurisdictions receive approximately 50% of the HSIP funds received by the state and is funneled through the Local Highway Safety Improvement Program (LHSIP), a program administered through LHTAC. Eligibility for the LHSIP is based on local highway jurisdictions with a fatal or serious injury (type A) crashes during the previous five year period.

- Children Pedestrian Safety Program: LHTAC administers this program jointly with the Idaho Transportation Department. In 2017, the Idaho Legislature passed legislation which allows for a portion of the Strategic Initiatives funding to be used on projects addressing children pedestrian safety on the state and local system. Currently about $2M ($1.2M state share and $800K local share) has been set aside for local projects which promote children or pedestrian safety. The requirements for funding under this program are that the project is able to go out for bid shortly after award of the grant, will be completed in one construction season, and are considered maintenance as required under previous legislation. Some examples of eligible projects include: paths or sidewalks along or adjacent to an existing roadway, connecting sidewalks or paths between two terminal points, ADA ramps, or pedestrian crossing facilities across an existing roadway including signing and/or signalization, and paving an existing pathway.

- Transportation Alternatives Program (TAP): The purpose of the Transportation Alternatives Program is to provide for a variety of alternative transportation projects to address the needs of non-motorized users while maximizing the use of federal funds. The program will provide a mechanism to solicit locally identified projects and leverage potential federal funding opportunities for sponsored projects. The Local Highway Technical Assistance Council (LHTAC) has agreed to manage the projects that are primarily on the local system. Statewide, this program is currently funded at about $3.2 million dollars for both state and local projects with no prescriptive allocation or split. Projects are funded based on their merit regardless of whether they are on the state or local system.

Section 7: Recommendations and Implementation

- Additional resources may be needed in the form of a Transportation Planner at LHTAC to provide support for the smaller urban areas (those communities with populations 5,000-50,000).
- Maintain and build on the partnership developed with LHTAC.
- Evaluate the LHRIP funding match and determine if the program goals are still being met.

Section 8: Helpful Resources

Helpful References

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- Website: http://lhtac.org/

Technical Report 7

Project Selection

Subject Matter Experts:
Ken Helm
District 2 Senior Transportation Planner

Mark Layton
District 6 Senior Transportation Planner

Sonna Lynn Fernandez
Transportation Planning Project Manager

Introduction: Project Selection

The Idaho Transportation Department is committed to providing high quality, cost-effective transportation systems that are safe, reliable and responsive for the economical and efficient movement of people and products.

Idaho 's transportation system is an integrated network of more than 60,000 miles of roads, about 4,000 bridges, 1,887 miles of rail lines, 125 public airports, and the Port of Lewiston . Of these, the transportation department has jurisdictional responsibility for almost 5,000 miles of highway (or nearly 12,000 lane miles), more than 1,700 bridges, and 30 recreational and emergency airstrips. Also included on the state highway system are 30 rest areas and 10 fixed ports of entry. The transportation department also oversees federal grants to 15 rural and urban public transportation systems, provides state rail planning and rail-project development and supports bicycle and pedestrian projects.

With so many roads, bridges, airports, rail crossings, and a limited budget, many people ask the question "how are projects selected?" This Technical Report will offer a general perspective of this overall complicated process.

Section 1: FAST Act Applicable Section(s) for Project Selection

Applicable Section is 23 CFR 450.200 of the Long-Range Transportation Plan (FAST Act):

23 CFR 450.208(d) – Management Systems

"States may use any one or more of the management systems (in whole or in part) described in 23 CFR part 500. In carrying out the statewide transportation planning process, States should apply asset management principles and techniques consistent with the State Asset Management Plan for the NHS and the Transit Asset Management Plan, and Public Transportation Agency Safety Plan in establishing planning goals, defining STIP priorities, and assessing transportation investment decisions, including transportation system safety, operations, preservation, and maintenance."

23 CFR 450.208(g) – ITS Systems

"The statewide transportation planning process shall (to the maximum extent practicable) be consistent with the development of applicable regional intelligent transportation systems (ITS) architectures, as defined in 23 CFR part 940."

23 CFR 450.218 – Statewide Transportation Improvement Program

"The State shall develop a statewide transportation improvement program (STIP) for all areas of the State.

1. The STIP shall cover a period of no less than 4 years and shall be updated at least every 4 years, or more frequently if the Governor of the State elects a more frequent update cycle. However, if the STIP covers more than 4 years, the FHWA and the FTA will consider the projects in the additional years as informational. In case of difficulties developing a portion of the STIP for a particular area (*e.g.,* metropolitan planning area, nonattainment or maintenance area, or Indian Tribal lands), the State may develop a partial STIP covering the rest of the State.

2. For each metropolitan area in the State, the State shall develop the STIP in cooperation with the MPO designated for the metropolitan area. The State shall include each metropolitan TIP without change in the STIP, directly or by reference, after approval of the TIP by the MPO and the Governor. A metropolitan TIP in a nonattainment or maintenance area is subject to a FHWA/FTA conformity finding before inclusion in the STIP.
3. In areas outside a metropolitan planning area but within an air quality nonattainment or maintenance area containing any part of a metropolitan area, projects must be included in the regional emissions analysis that supported the conformity determination of the associated metropolitan TIP before they are added to the STIP.
4. For each nonmetropolitan area in the State, the State shall develop the STIP in cooperation with affected nonmetropolitan local officials with responsibility for transportation or, if applicable, through RTPOs described in § 450.210(d) using the State's consultation process(es) established under § 450.210(b).
5. For each area of the State under the jurisdiction of an Indian Tribal government, the STIP shall be developed in consultation with the Tribal government and the Secretary of the Interior. Tribal Transportation Program, Federal Lands Transportation Program, and Federal Lands Access Program TIPs shall be included without change in the STIP, directly or by reference, once approved by the FHWA pursuant to 23 U.S.C. 201(c)(4).
6. The Governor shall provide all interested parties with a reasonable opportunity to comment on the proposed STIP as required by § 450.210(a).
7. The STIP shall include capital and non-capital surface transportation projects (or phases of projects) within the boundaries of the State proposed for funding under title 23 U.S.C. and title 49 U.S.C. Chapter V3 (including transportation alternatives and associated transit improvements; Tribal Transportation Program projects, Federal Lands Transportation Program projects, and Federal Lands Access Program projects; HSIP projects; trails projects; and accessible pedestrian walkways and bicycle facilities), except the following that may be included:
    a. Safety projects funded under 23 U.S.C. 402 and 49 U.S.C. 31102;
    b. Metropolitan planning projects funded under 23 U.S.C. 104(d) and 49 U.S.C. 5305(d);
    c. State planning and research projects funded under 23 U.S.C. 505 and 49 U.S.C. 5305(e);
    d. State planning and research projects funded with Surface Transportation Program funds;
    e. Emergency relief projects (except those involving substantial functional, locational, or capacity changes);
    f. Research, development, demonstration, and deployment projects funded under 49 U.S.C. 5312, and technical assistance and standards development projects funded under 49 U.S.C. 5314;
    g. Project management oversight projects funded under 49 U.S.C. 5327; and
    h. State safety oversight programs funded under 49 U.S.C. 5329.

8. The STIP shall contain all regionally significant projects requiring an action by the FHWA or the FTA whether or not the projects are to be funded with 23 U.S.C. Chapters 1 and 2 or title 49 U.S.C. Chapter V3 funds (*e.g.,* addition of an interchange to the Interstate System with State, local, and/or private funds, and congressionally designated projects not funded under title 23 U.S.C. or title 49 U.S.C. Chapter V3). For informational and conformity purposes, the STIP shall include (if appropriate and included in any TIPs) all regionally significant projects proposed to be funded with Federal funds other than those administered by the FHWA or the FTA, as well as all regionally significant projects to be funded with non-Federal funds.
9. The STIP shall include for each project or phase (*e.g.,* preliminary engineering, environment/NEPA, right-of-way, design, or construction) the following:
    a. Sufficient descriptive material (*i.e.,* type of work, termini, and length) to identify the project or phase;
    b. Estimated total project cost or a project cost range, which may extend beyond the 4 years of the STIP;
    c. The amount of Federal funds proposed to be obligated during each program year. For the first year, this includes the proposed category of Federal funds and source(s) of non-Federal funds. For the second, third, and fourth years, this includes the likely category or possible categories of Federal funds and sources of non-Federal funds; and
    d. Identification of the agencies responsible for carrying out the project or phase.
10. Projects that are not considered to be of appropriate scale for individual identification in a given program year may be grouped by function, work type, and/or geographic area using the applicable classifications under 23 CFR 771.117(c) and (d) and/or 40 CFR part 93. In nonattainment and maintenance areas, project classifications must be consistent with the ‘‘exempt project’’ classifications contained in the EPA’s transportation conformity regulations (40 CFR part 93, subpart A). In addition, projects proposed for funding under title 23 U.S.C. Chapter II that are not regionally significant may be grouped in one line item or identified individually in the STIP.
11. Each project or project phase included in the STIP shall be consistent with the long-range statewide transportation plan developed under § 450.216 and, in metropolitan planning areas, consistent with an approved metropolitan transportation plan developed under § 450.324.
12. The STIP may include a financial plan that demonstrates how the approved STIP can be implemented, indicates resources from public and private sources that are reasonably expected to be available to carry out the STIP, and recommends any additional financing strategies for needed projects and programs. In addition, for illustrative purposes, the financial plan may include additional projects that would be included in the adopted STIP if reasonable additional resources beyond those identified in the financial plan were to become available. The State is not required to select any project from the illustrative list for implementation, and projects on the illustrative list cannot be advanced to implementation without an action by the FHWA and the FTA on the STIP. Revenue and cost estimates for the STIP must use an inflation rate to reflect ‘‘year

of expenditure dollars,'' based on reasonable financial principles and information, developed cooperatively by the State, MPOs, and public transportation operators.

13. In nonattainment and maintenance areas, projects included in the first 2 years of the STIP shall be limited to those for which funds are available or committed. Financial constraint of the STIP shall be demonstrated and maintained by year and shall include sufficient financial information to demonstrate which projects are to be implemented using current and/or reasonably available revenues, while federally supported facilities are being adequately operated and maintained. In the case of proposed funding sources, strategies for ensuring their availability shall be identified in the financial plan consistent with paragraph (l) of this section. For purposes of transportation operations and maintenance, the STIP shall include financial information containing system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways (as defined by 23 U.S.C. 101(a)(5)) and public transportation (as defined by title 49 U.S.C. 5302).
14. Projects in any of the first 4 years of the STIP may be advanced in place of another project in the first 4 years of the STIP, subject to the project selection requirements of § 450.222. In addition, subject to FHWA/FTA approval (see § 450.220), the State may revise the STIP at any time under procedures agreed to by the State, MPO(s), and public transportation operators consistent with the STIP development procedures established in this section, as well as the procedures for participation by interested parties (see § 450.210(a)). Changes that affect fiscal constraint must take place by amendment of the STIP.
15. The STIP shall include a project, or an identified phase of a project, only if full funding can reasonably be anticipated to be available for the project within the time period contemplated for completion of the project.
16. In cases where the FHWA and the FTA find a STIP to be fiscally constrained, and a revenue source is subsequently removed or substantially reduced (*i.e.,* by legislative or administrative actions), the FHWA and the FTA will not withdraw the original determination of fiscal constraint. However, in such cases, the FHWA and the FTA will not act on an updated or amended STIP that does not reflect the changed revenue situation.
17. A STIP shall include, to the maximum extent practicable, a discussion of the anticipated effect of the STIP toward achieving the performance targets identified by the State in the statewide transportation plan or other State performance-based plan(s), linking investment priorities to those performance targets."

<u>23 CFR 450.222 – Project Selection from the STIP</u>

1. Only projects in a FHWA/FTA approved STIP are eligible for funds administered by the FHWA or the FTA.
2. In metropolitan planning areas, transportation projects proposed for funds administered by the FHWA or the FTA shall be selected from the approved STIP in accordance with project selection procedures provided in § 450.332.

3. In nonmetropolitan areas, with the exclusion of specific projects as described in this section, the State shall select projects from the approved STIP in cooperation with the affected nonmetropolitan local officials, or if applicable, through RTPOs described in § 450.210(e). The State shall select transportation projects undertaken on the NHS, under the Bridge and Interstate Maintenance programs in title 23 U.S.C. and under sections 5310 and 5311 of title 49 U.S.C. Chapter V3 from the approved STIP in consultation with the affected nonmetropolitan local officials with responsibility for transportation.
4. Tribal Transportation Program, Federal Lands Transportation Program, and Federal Lands Access Program projects shall be selected from the approved STIP in accordance with the procedures developed pursuant to 23 U.S.C. 201, 202, 203, and 204.
5. The projects in the first year of an approved STIP shall constitute an ‘‘agreed to’’ list of projects for subsequent scheduling and implementation. No further action under paragraphs (b) through (d) of this section is required for the implementing agency to proceed with these projects. If Federal funds available are significantly less than the authorized amounts, or where there is significant shifting of projects among years, § 450.332 (a) provides for a revised list of ‘‘agreed to’’ projects to be developed upon the request of the State, MPO, or public transportation operator(s). If an implementing agency wishes to proceed with a project in the second, third, or fourth year of the STIP, the procedures in paragraphs (b) through (d) of this section or expedited procedures that provide for the advancement of projects from the second, third, or fourth years of the STIP may be used, if agreed to by all parties involved in the selection process.

   Any decision by the Secretary concerning a long-range statewide transportation plan or STIP developed through the processes provided for in 23 U.S.C. 135, 49 U.S.C. 5304, and this subpart shall not be considered to be a Federal action subject to review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*).

Section 2: Federal and/or State Reference

Federal Reference: FAST Act 23 CFR 450.200

Section 3: ITD Board or Administrative Policies

Because every Board and Administrative Policy impacts the way the department selects and constructs projects, they will not be listed here. Please refer to ITD’s PolicyFinder for a list of all department policies.

Section 4: MOU or Service Agreements

There are no MOU or Service Agreements with this process.

Section 5: Stakeholders

Because Idaho's transportation system belongs to the public, shared involvement in planning, developing and maintaining all facets of transportation is essential. That is the foundation upon which the transportation department's public involvement program is based. Construction and maintenance programs reflect needs that emerge from the grassroots of Idaho. Public input is essential in locating interchanges, widening travel lanes, resurfacing roadways, determining traffic patterns and creating pedestrian and bicycle paths.

The public involvement process includes both talking and listening, teaching and learning. While projects are not expected to be unanimously endorsed by every citizen, the transportation department is committed to the two-way information exchange as an indispensable part of a representative decision-making process. These decisions balance the need for safe and efficient transportation with the need to preserve economic, social and environmental conditions. The transportation department strives to be not only a good provider, but a good neighbor as well. Project planning includes numerous opportunities for the public to convey needs and suggestions. Those lines of communication instill shared ownership and a common vision for Idaho's transportation system. Information meetings and formal hearings provide public access to the process. By encouraging public involvement early and often in the planning and development of transportation projects, the department hopes to ensure a product that serves the best interests of the most people.

Section 6: Project Selection Process

ITD's project selection process is a complicated and ongoing process that considers rules and regulations, funding provisions, data, plans, community outreach and other information. This process is fluid and requires a great deal of time to ensure the appropriate projects are selected, scheduled and built. For an overall view of the process, please see the graphic on the next page.

The ITD Board and Executive Management have a great deal of control on the types of projects the department constructs. ITD's Mission and Vision drives the department daily and influences all decisions to ensure we meet the vision of selecting and constructing projects that improves safety, enhances mobility and positively impacts economic opportunities. This philosophy is evident through the many Board and Administrative policies that guide ITD staff in their daily jobs.

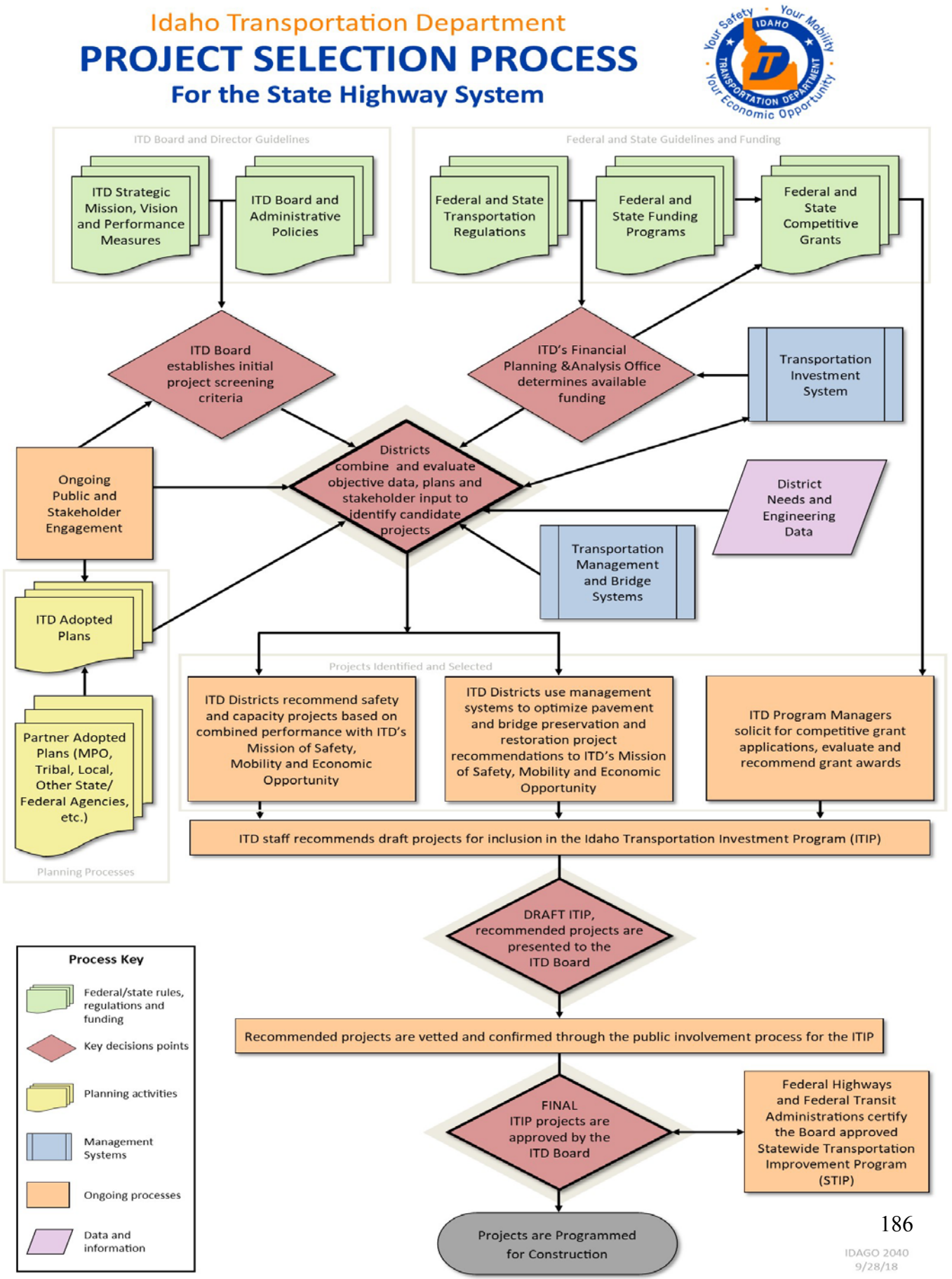
Project selection is also influenced by federal and state regulations which spells out how and where the funds can be used. There are many conditions placed on the funds and specific guidelines on the engineering standards to maintain national standards and performance. Sometimes when additional funds become available, grants are offered. These grants also have special contingencies and requirements.

Annually the ITD Board and Executive Management reviews the departments Mission and Vision as well as statewide performance to ensure the department is moving in the right direction. The ITD Board then establishes the initial project selection screening criteria that staff uses to select projects, determine funding availability, and project timelines. At the same time, ITD's Financial Planning and Analysis (FP&A) reviews federal and state funding availability and outlines the amount of money that

will be allocated (through the Transportation Investment System) to specific pots and what each area of the state will receive.

Once the criteria and the funding allocations have been established, each district begins its project selection process. To do this each district combines and evaluates:

- Objective data gathered from several transportation management systems
- Needs identified during ongoing public and stakeholder engagement
- Long-range plans, corridor and modal plans, local and metropolitan plans, other federal and state agency plans, etc.


Idaho Transportation Department
PROJECT SELECTION PROCESS
For the State Highway System
ITD Board and Director Guidelines
ITD Strategic Mission, Vision and Performance Measures
ITD Board and Administrative Policies
Federal and State Guidelines and Funding
Federal and State Transportation Regulations
Federal and State Funding Programs
Federal and State Competitive Grants
ITD Board establishes initial project screening criteria
ITD's Financial Planning &Analysis Office determines available funding
Transportation Investment System
Ongoing Public and Stakeholder Engagement
Districts combine and evaluate objective data, plans and stakeholder input to identify candidate projects
District Needs and Engineering Data
Transportation Management and Bridge Systems
ITD Adopted Plans
Partner Adopted Plans (MPO, Tribal, Local, Other State/ Federal Agencies, etc.)
Planning Processes
Projects Identified and Selected
ITD Districts recommend safety and capacity projects based on combined performance with ITD's Mission of Safety, Mobility and Economic Opportunity
ITD Districts use management systems to optimize pavement and bridge preservation and restoration project recommendations to ITD's Mission of Safety, Mobility and Economic Opportunity
ITD Program Managers solicit for competitive grant applications, evaluate and recommend grant awards
ITD staff recommends draft projects for inclusion in the Idaho Transportation Investment Program (ITIP)
DRAFT ITIP, recommended projects are presented to the ITD Board
Recommended projects are vetted and confirmed through the public involvement process for the ITIP
FINAL ITIP projects are approved by the ITD Board
Federal Highways and Federal Transit Administrations certify the Board approved Statewide Transportation Improvement Program (STIP)
Projects are Programmed for Construction
Process Key
Federal/state rules, regulations and funding
Key decisions points
Planning activities
Management Systems
Ongoing processes
Data and information

- Funding allocations and funding strategies
- Construction schedules and engineering standards

Meanwhile, ITD Program Managers at Headquarters are soliciting grant applications for a variety of competitive grants such as Transportation Alternative Program (TAP), Highway Safety grants, Public Transportation Grants, etc. Grants are then evaluated and recommendations for awards are forwarded to be included into the Idaho Transportation Investment Program (ITIP).

The Districts are deciding upon two types of projects:

1. Safety and Capacity projects – expansion projects or new facilities
2. Operations, Preservation and Restoration Projects – maintaining the system

Once the Districts have evaluated pertinent data and input, their recommendations are also forwarded to be included into the ITIP. In June every year, the ITD Board considers all of the projects identified for construction in the draft ITIP. The draft ITIP is submitted to stakeholders and the public for 30-days for consideration and comment. At the end of the Comment Period, the ITD Board reconsiders the draft ITIP and comments and makes a final determination. If all looks good and there are no additions or deletions, the ITD Board will approve the draft ITIP. The final ITIP will be submitted to the Federal Highways Administration and the Federal Transit Administration of certification of the approved project list. This usually occurs in September with certification in October.

Section 7: Recommendations and Implementation

No suggestions offered.

Section 8: Helpful Resources

Helpful References

Technical Report 8

Program Planning
ITIP/STIP/TIP

Subject Matter Expert

Nathan Hesterman
Senior Transportation Planner

Introduction: Program Planning ITIP/STIP/TIP

1. Programming is the process of scheduling and funding projects envisioned during the planning process by committing projected revenues to potential projects outlined in plans and studies. It is during this phase that an idea becomes a project. Just like Planning, it is important to consider stakeholder needs, issues, and wants. Transportation Programming is the commitment of transportation funds to be available over a period of several years to particular projects. Idaho considers three separate programming documents – The Idaho Transportation Investment Program (ITIP), the Statewide Transportation Improvement Program (STIP) and the Transportation Improvement Program (TIP). Each document is prepared and adopted by various agencies for somewhat different purposes. Here is a concise breakdown of these three important programming documents.

2.

What's the Difference?			
	Idaho Transportation Investment Program (ITIP)	Statewide Transportation Improvement Program (STIP)	Transportation Improvement Program (TIP)
What is it?	The ITIP is a state document that guides ITD's investments through various funding programs (including state and federal funds). Individual projects are listed in this document as well as those found in the MPO TIPs.	The STIP is a federal document that contains projects that are federally funded based on grouped projects. The STIP also contains the MPO Transportation Improvement Programs (TIPs) by reference. It is during the programming process when staff (ITD, LHTAC and MPOs) matches proposed projects to available funds that best meets agency strategic performance goals. The key to successful programming begins with planning and project development and the relationships our agencies have with stakeholders. The federally-approved STIP is the final document preceding the actual construction or implementation of projects.	The TIP is a metropolitan planning organization (MPO) document that guides local investments through various funding programs (including local, state and federal funds). TIPs are stand-alone documents, approved at the local level and includes only projects within the MPO Planning Boundaries that are federally, state and locally funded. Individual projects are listed in this document as well as those projects that are in the MPO area found in ITIP.

What is included?	Includes all modes of transportation (i.e., air, highway, freight, bicycle/ pedestrian, public transportation, rail, etc.) and other programs (i.e., safety, strategic initiatives, etc.).	Includes all modes of transportation (i.e., air, highway, freight, bicycle/ pedestrian, public transportation, rail, etc.) and other programs that are federally funded.	Includes all modes of transportation (i.e., air, highway, freight, bicycle/ pedestrian, public transportation, rail, etc.) and projects that are regionally significant.
How many years?	Contains seven-years of individually identified projects. The ITIP includes financial summary tables to demonstrate fiscal constraint to the STIP.	Contains four-years (federally funded) and one year (planning) of grouped projects. Projects may not be specifically identified because they are grouped ("rolled-up") by funding category. The STIP includes financial summary tables to demonstrate fiscal constraint. This reduces the need for STIP Amendments.	Contains five-years of metropolitan identified projects. The TIP includes financial summary tables to demonstrate fiscal constraint at the local level.
Air Quality	Must have performed an Air Quality conformity analysis for projects located in non-attainment areas of the state.	Must have performed an Air Quality conformity analysis for projects located in non-attainment areas outside of MPOs.	Must have performed an Air Quality conformity analysis for projects located within MPOs areas that are considered non-attainment.
Who approves	The ITIP is approved by the Idaho Transportation Board.	Approved by the Idaho Transportation Board. The approved STIP is submitted to Federal Highways, Federal Transit Administrations and the Environmental Protection Agency for their approvals.	Projects are recommended by the MPO Technical Advisory Committee and Approved by the MPO Policy Board. The TIP is then sent to ITD to be included by reference in the ITIP and STIP.

How the Public involved	Annually during the month of July, the Idaho Transportation Department conducts a 30-day open public comment period on the draft ITIP. Although the projects located in metropolitan areas are included in the ITIP for public consideration, MPOs also conduct their own 30-day public comment period. ITD staff will accept and consider each comment made on the ITIP; however, it is the Idaho Transportation Board that has the final say on how the comment(s) will affect the plan and/or program. To assist the ITD Board, the Office of Communication will create a comment book showing each of the comments received and indicate how the comment could be implemented. The Board will receive the Comment Book prior to the adoption of the plan/program for their consideration. Opportunities will be available to comment on the proposed Idaho Transportation Investment Program. Notice will be given (via advertisements, postcards, and electronic mail) that the draft will be available online for review and comment for a 30-day period. Comments can be submitted during this time period by electronic mail, via on-line comment form or through regular mail. The draft ITIP will be available at each of the ITD District offices, MPO offices, and online throughout the 30-day comment period. All Idaho Native American Tribe tribal councils will be notified of ITIP outreach opportunities as they become available. Communication and coordination will be different between the ITD District and their corresponding tribal council. The District will determine with their tribe which projects are of interest and important to them, and plan accordingly for future public involvement in project phases. Idaho tribes include those with reservation land in Idaho and land area claims in Idaho.		
	By ITD policy, a 30-day public comment period will be conducted on the ITIP.	By USC Title 23, a 30-day public comment period is required on the STIP.	By USC Title 23, a 30-day public comment period is required.

What about Amendments?	Amendments to the ITIP may occur when funding sources change, priorities change, project scope and termini changes and purpose and need changes, etc. Opportunities to comment on proposed amendments to the ITIP outside of the annual update will be publicized by sending out a notice of the proposed amendments to the public through the media, as an advertisement, via electronic mail or by postcard. At the same time, a 7-day comment period will be announced.	Formal amendments are required what changes cause: addition or deletion of a project; changes in project cost beyond a predetermined threshold; changes in project construction years; or major changes in design concept or scope. STIP Amendments are subjected to a 7-day public comment before they can be approved by the Idaho Transportation Board and submitted for final approval by Federal Highways, Federal Transit Administrations and the Environmental Protection Agencies. If an Amendment is on a project that is also included in the TIP, the MPO must also concur with the change. In many cases, the MPO will conduct the outreach for public comment.	For projects located within an MPO, amendments will first be requested through the MPO. If a comment period is required, the MPO will be required to fulfill this obligation. The comment period will be subjective to MPO policy and procedures. Once the MPO certifies that the amendment has met public involvement requirements and it has been acted upon by their Board, a letter from the MPO will be sent to ITD for ITD Board action. ITD will then send an amendment request to the proper federal agencies for final approval.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§3. "The long-range statewide transportation plan should include capital, operations and management strategies, investments, procedures, and other measures to ensure the preservation and most efficient use of the existing transportation system including consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner and strategies and investments that preserve and enhance intercity bus systems, including systems that are privately owned."

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental

effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

§15. "The long-range statewide transportation plan may include a financial plan that demonstrates how the adopted long-range statewide plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed public projects and programs. In addition, for illustrative purposes, the financial plan may include additional projects that the state would include in the adopted long-range statewide transportation plan in additional resources beyond those identified in the financial plan were to become available. The financial plan may include an assessment of the appropriateness of innovative finance techniques (for example, tolling, pricing, bonding, public-private partnerships, or other strategies) as revenue sources."

Section 2: Federal and/or State Reference

Federal References

- 23 USC 101 – Moving Ahead for Progress in the 21st Century Act (MAP-21)

State References

- Idaho Code 21-105 – The Department may provide technical services and financial assistance to municipal airports.
- Idaho Code 40-310(14) – Authority to transfer funds from the state highway account established in Idaho Code 40-702 for the construction, repair or maintenance of roadways in and through any state institution.
- Idaho Code 40-312(2) – Authority of Board to promulgate rules for the expenditure of all moneys appropriated or allocated by law to the Department or the Board.
- Idaho Code 40-317 – Authority to enter into cooperative agreements with the federal and local governments.
- Idaho Code 40-528 – Federal Transit Administration Authority
- Idaho Code 40-702(5) – Establishment of state highway account to include all federal surface transportation funds received from the United Stated government.
- Idaho Code 40-707 – Appropriation of money in the state highway account.
- Idaho Code 40-708 – Legislative policy regarding expenditure from state highway account – only for state highway purposes.

Section 3: ITD Board or Administrative Policies

ITD Board Policy References

- 4011 – Idaho Transportation Investment Program
- 4028 – Allocation of Federal Funding Formula Highway Apportionment to Local Public Agencies
- 4028S – 4028 Supplemental
- 4029 – Cooperative Agreements for Construction of State Highways
- 4030 – Surface Transportation Program Rural (STPR) Exchange Program

- 4032 – Local Bridge Inspection Fund
- 4045 – State Institution Road Improvement
- 4075 – Assistance to Idaho's Airports
- 4081 – Transportation Alternative Program
- B1105 – Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- B0908 – Bicycle/Pedestrian Facilities
- B1907 – Highway Safety Funds

Administrative Policy References

- 5011 – Idaho Transportation Investment Program
- 5029 – Cooperative Agreements for Construction of State Highways
- 5030 – Surface Transportation Program Rural (STPR) Exchange Program
- 5032 – Local Bridge Inspection Fund
- 5045 – State Institution Road Improvement
- 5075 – Assistance to Idaho's Airports
- 5081 – Transportation Alternative Program
- 5514 – Decision Process for Funding Division of Transportation Performance Public Transportation Projects
- 5536 – Financial Reporting Approach for the Infrastructure Inventory Classification of Roadways
- A0109 – Authority to Sign Contracts, Agreements or Grants
- A0126 – FHWA Emergency Relief
- A0538 – Disaster /Emergency Support
- A1105 – Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- A1406 – Approval of Plans/Specifications/Estimates and the Award of Construction Projects
- A2804 – Bicycle/Pedestrian Facilities

Section 4: MOU or Service Agreements

None.

Section 5: Stakeholders and Partners

ITD works closely with our Metropolitan Planning Organizations and the Local Highway Technical Assistance Council to select and program projects.

Section 6: Process

Summary of the STIP Update Process

ITD includes highways, public transportation, bicycle and pedestrian, and aeronautics projects within the STIP. Aeronautics projects are included for informational purposes only as they are not required to be in the STIP per 23 CFR 450.

Program Organization

Executive management and the Idaho Transportation Board (Board) create and fund a series of programs within the STIP to accomplish specific objectives. Example programs and abbreviated objectives include:

- Pavement Preservation - maintain the pavement riding surface on the State Highway System
- Bridge Restoration – replace or reconstruct highway bridges on the State Highway System
- Urban - maintain and improve local roads in urban areas

A team of engineers and/or planners with expertise in each program area manage each of these programs. These program teams:

1. Determine the specific objectives for their program,
2. Determine the engineering requirements for specific project types to cost effectively and efficiently meet these objectives,
3. Collect data, analyze, and report on the condition of the system within their area,
4. Make recommendations to management on funding required to meet objectives,
5. Recommend which projects to fund to meet the objectives of their program, and
6. Manage program budgets and delivery milestones as projects are developed and delivered for construction.

Constituents of each program generally represent regions of the state such as Department Districts One through Six for the State Highway System (SHS) or the six metropolitan planning areas and the Local Highway Technical Assistance Council (LHTAC) representing the urban areas of the Local Road System (LRS). Formulae are used to target funds between regions to manage "equity", i.e. there is a healthy tension between program performance and regional equity of funding.

System Condition

Program teams collect data, analyze, and report on the system condition within their program area throughout the year. This assessment is used at the beginning of each annual Program Update cycle by management and the Board to review and focus program priorities and set funding levels.

Program Revenue

The STIP is funded from several sources:

1. Federal transportation acts provide apportionments (Fixing America's Surface Transportation (FAST) for FY 2016 – 2020),
2. Federal apportionment levels are estimated via FAST apportionment tables,
3. Annual federal appropriation acts provide authority to obligate these apportionments (avg. obligation authority is approximately 95% of annual apportionments),
4. State and local funds to match federal aid (avg. 92% F.A. and 8% state or local match),
5. Annual federal project-specific discretionary awards or congressional earmarks,
6. Private funding; e.g., through Idaho State Tax Anticipated Revenue (STAR) legislation,
7. Grant Anticipation Revenue Vehicle (GARVEE) bond proceeds, and
8. State funds for Capital Construction on the State Highway System.

Seven-year forecasts of these funds are updated each December through January. These forecasts are used at the beginning of each annual Program Update cycle by management and the Board to review and focus program priorities and funding levels.

Project Solicitations and Submittals

The annual Program Update Manual captures and communicates the Program Teams', management's, and the Board's objectives, priorities, and funding levels to constituencies throughout the state including:

1. Department Districts One through Six and headquarters,
2. Six Metropolitan Planning Areas (five metropolitan planning organizations),
3. The Local Highway Technical Assistance Council, and
4. Local transit providers in urbanized areas.

These constituencies, in turn, are composed of other constituencies and so-on. Through this process, the request for project solicitations reaches individual project managers who create project scopes, budgets, and delivery schedules that meet the objectives, priorities, and funding levels as requested by the Board, and corridor goals as established in continual corridor planning activities with the general public and other transportation stakeholders. The Program Teams for statewide competitive programs such as the Transportation Alternatives Program and Congestion Mitigation and Air Quality (CMAQ) may solicit projects directly from cities, counties, and local highway districts.

These project submittals travel back up the constituency chain for review and approval at each stage including local councils and local boards until they reach the Program Teams prior to the June Board review.

Program Review

The overall program of projects is analyzed by each Program Team to determine if the nominated projects meet the objectives, fiscal constraint, and other guidance as determined by the Board for each program. There are usually budget overages and underages by program, region, and year caused by project size and delivery schedule of the individual projects of which each program is composed.

Any inconsistencies in the Draft Program which prevent it from fully meeting program objectives, fiscal constraint, or applicable regional equity to the maximum extent possible given project submittals could be resolved through Statewide or District-level or Local Program Balancing meetings where individual constituencies can collaboratively modify project delivery schedules between years and programs to deliver as many of the submitted projects as possible.

The state and Metropolitan Planning Organizations (MPOs) cooperatively review projects within each Metropolitan Planning Area before inclusion in each Draft Transportation Improvement Program (Draft TIP).

The Draft Program is reviewed and modified by management at the end of May and by the Board in June. The Draft STIP and Draft TIPs are then made available to the general public for a 30-day review and

comment period in July. Modifications to the Draft Program due to public comment and end-of-year delivery of the Approved Program are made in August.

At this point, the state and Metropolitan Planning Organizations (MPOs) again cooperatively review projects within each Metropolitan Planning Area to ensure any changes made since public involvement are captured in each TIP. The Draft Program now becomes the Recommended Program which is reviewed and modified by management at the end of August and reviewed and approved by the ITD Board in September and by the MPO Boards by the end of October.

The newly Approved Program is input into our budgeting and obligation systems in October. Projects approved in previous years' STIPs may proceed to obligation. Per 23 CFR 450.218(j), ITD also groups projects that are likely to receive an environmental categorical exclusion. These projects may also proceed to obligation. The previous year's STIP and MPO TIPs are then amended to include new projects so that obligation for preliminary engineering may proceed prior to approval of the new STIP.

The newly Approved Program is then submitted to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) in the STIP Submittal document. This document includes self-certifications from each MPO that their TIP and planning processes meet all of the requirements of 23 CFR 450l. Final STIP approval by these administrations generally occurs in December. The next annual Program Update cycle begins.

Program Summaries

State Highway System Infrastructure Programs

Approximately 75% of federal and 100% of state funding are used on the State Highway System. The core programs fund the life-cycle costs of the present highway system. Core programs are funded with federal National Highway Performance Program (NHPP), federal Surface Transportation Block Grant (STBG), state, state HB312, and state strategic initiatives fund apportionments.

Pavement programs include Pavement Preservation on Commerce Routes (average truck traffic at or above 300 daily), Pavement Preservation on Non-Commerce Routes, and Pavement Restoration. The optimal splits of funds between preservation and restoration activities are determined by the Transportation Asset Management System (TAMS). This system is also used to determine the optimal funding split between ITD Districts. District personnel use this system to determine which projects to nominate for these pavement programs. This system optimizes project selection based upon asset life-cycle costs.

Core bridge programs include Bridge Preservation and Bridge Restoration. The Bridge Management System (BrM) is used by the bridge section to select the optimal set of bridges for programming in the new year of the program based upon asset life-cycle costs and whether a bridge is structurally deficient, width, height, or load restricted, or has a deteriorated bridge deck. The bridge engineer visits each District to review the list, modify it based upon District priorities, and finally reach agreement on the bridge project nominations.

Submittals to the Safety & Capacity Program are nominated based upon a benefit-cost ratio (BCR) generated by the Transportation Economic Development Impact System (TREDIS) software. TREDIS measures the safety, mobility, and economic impact of project submittals. The Safety & Capacity Program is funded with federal Highway Safety Improvement Program (HSIP), NHPP, STBG, state, and state transportation expansion and congestion mitigation (TECM) funds.

The Freight Program integrates freight system needs into the State's infrastructure development ensuring the effective, competitive, efficient, and safe movement of freight in Idaho. It is a new program begun under the FAST Act. Project submittals are reviewed by the Freight Advisory Council and nominated by the Freight Project Selection Team based upon criteria published in the Program Update Manual. Occasionally, a local freight project will be nominated. Submittals are also run through TREDIS to generate their BCR.

The Early Development Program funds preliminary engineering on up to $175,000 of unfunded construction projects. This allows time for obtaining Environmental Impact Statements on large projects that take up to seven years to develop prior to their inclusion in the STIP.

Completed GARVEE Authorizations total $857 million in highway improvements with an annual debt service payment of approximately $56.7 million in federal funds and state match. In FY 2017 the state legislature authorized an additional $300 million in new GARVEE bonds. The Board has allocated $64 million to the US-95 Garwood to Sagle corridor and $236 million to the I-84 Caldwell to Meridian corridor. The $300 million in additional bonding authority corresponds to additional debt service of approximately $24 million totaling $87.7 million annually.

Local Road System Programs

The Local Highway Technical Assistance Council (LHTAC) administers the Local Safety Program, Local Rural Program, Local Bridge Program, Off-System Bridge Program, and Local Urban projects in urban areas less than 50,000 in population. Project applications to these programs are accepted from counties, cities, local highway districts, and tribes with jurisdiction over public roads in Idaho. These applications are reviewed by LHTAC staff and projects are nominated for inclusion in the STIP by the LHTAC Board. These programs are funded with federal HSIP and STBG apportionments.

Members of the Local Urban Program include LHTAC who represents urban areas of less than 50,000 population and the metropolitan planning organization directors who represent urbanized areas of 50,000 to 200,000 population. The individual member boards nominate projects which are then programmed by the Local Urban Committee for nomination into the STIP. This program is funded with federal STBG apportionments.

The Transportation Alternatives Program (TAP) provides funding that promotes safe alternative, non-motorized forms of transportation. In addition to local agencies, applications are accepted from schools, public transportation providers, natural resource or public lands agencies, or non-profit entities responsible for the administration of local transportation safety programs. Agencies within the Boise Transportation Management Area (TMA) are not eligible as they receive a separate allocation. Applications are scored and projects nominated by the TAP Recommendation Committee. This program utilizes TAP urban , rural, and flex apportionments.

The Community Planning Association of Southwest Idaho (COMPASS) is the MPO for the greater Boise area and is the only MPO in Idaho with a population that exceeds 200,000. The FHWA allocates funds toward a Transportation Management Area (TMA) Program and for TAP restricted to the Boise TMA.

The TAP-TMA Program funds the same types of projects as TAP. Only entities located within the Boise TMA may apply, however. Project applications are reviewed by the regional transportation advisory committee (RTAC) and nominated by the COMPASS Board. The program is funded with the TAP-TMA apportionment.

The Transportation Management Area Program is administered by COMPASS. Agencies within the Boise TMA make applications which are scored by the RTAC and nominated by the COMPASS Board. This program is funded with the federal Transportation Management Area apportionment.

The purpose of the Rail-Highway Crossing Program is to enhance safety at Idaho's public rail-highway crossings. The Railroad Operations and Safety Team (ROAST) is composed of representatives from the railroads and from each District. They rate project submittals according to the Federal Railroad Association's crossing safety criteria. Nominations are also run through TREDIS to obtain safety BCRs. Occasionally, a crossing on the state highway system will be nominated. This program is funded through federal rail-highway crossing apportionments.

The Recreational Trails Program is a pass-through of funds to the Idaho Parks and Recreation Department. They solicit applications for and select projects to be funded with the Recreational Trail apportionment. These projects are not individually included in the STIP.

Planning Programs

The Systems Planning Program is used for state highway District planning, corridor studies, and pre-project planning. These projects are funded through a decrease in their core programs.

The purpose of the State Planning and Research Program (SPR) is to conduct planning and research on behalf of ITD in order to establish a cooperative, continuous, and comprehensive framework for making transportation investment decisions and develop new tools, technologies, and practices to improve agency operations. This program is funded with the SPR apportionment.

The purpose of the Metropolitan Planning Program is to fund Idaho's five metropolitan planning organizations in order to establish a cooperative, continuous, and comprehensive framework for making transportation investment decisions and to carryout planning activities throughout the state.

Federal Lands Access Program (FLAP)

The Federal Lands Access Program was established to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

The Access Program is funded by contract authority from the Highway Trust Fund and subject to obligation limitation. Funds will be allocated among the States using a statutory formula based on road mileage, number of bridges, land area, and visitation.

Projects are selected by a Programming Decision Committee (PDC) established in each State. The PDCs request project applications through a call for projects. The frequency of the calls is established by the PDCs. The PDC in Idaho is composed of representatives from ITD, LHTAC, and the Federal Highway Administration. They score and select projects from periodic application solicitations.

Federal Lands Transportation Program (FLTP)

The Federal Lands Transportation Program was established to improve the transportation infrastructure owned and maintained by the following Federal Lands Management Agencies: National Park Service (NPS), US Fish and Wildlife Service (FWS), USDA Forest Service (Forest Service), Bureau of Land Management (BLM), US Army Corps of Engineers (USACE), Bureau of Reclamation and independent Federal agencies with land and natural resource management responsibilities.

The FLMAs have considerable responsibility and latitude for managing their program within the FLTP. The FHWA, however, is ultimately responsible for ensuring the program is administered according to the statutory and implementing regulations for title 23, United States Code. This includes conformity to highway planning, design, construction, maintenance, and safety standards.

The use of FLTP funds does not affect the overall responsibility for construction, maintenance, and operations of the facilities. That responsibility continues to lie with the owner of the facility.

Indian Reservation Roads Program (IRR)

The Indian Reservation Roads Program mission is to provide safe and adequate transportation and public road access to and within Indian reservations in the Great Plains Region, Indian lands and communities for Native Americans, visitors, recreationists, resource uses and others while contributing to economic development, self-determination, and employment of Native Americans.

The IRR is part of the Federal-Aid Highway Program and is funded from the Highway Trust Fund. This program is jointly administered by the Bureau of Indian Affairs (BIA) and the FHWA. The BIA prepares the Transportation Improvement Program (TIP) that is a 5- year plan for improvements on each reservation. Each project on the TIP is supported by tribal resolution. The TIP is submitted to the BIA Division of Transportation (BIADOT) for review and approval. BIADOT reviews, approves, and forwards our TIP to FHWA Federal Lands Highway Office for approval. Once the TIP is approved by the FHWA, we then have projects that costs can be charged to. All projects have to be on the approved TIP.

Discretionary Programs

The FHWA funds two nationally competitive discretionary programs. Both Transportation Investments for Generating Economic Recovery (TIGER) and Infrastructure for Rebuilding America (INFRA) grants solicit applications annually from state and local agencies. The TIGER program provides Federal financial assistance to projects that will have a significant impact on the Nation, a metropolitan area, or a region.

The INFRA program provides dedicated, discretionary funding for projects that address critical issues facing our nation's highways and bridges. Both programs stress the need for strong local and federal local participation in funding the project.

GARVEE Program

The Grant Anticipation Revenue Vehicle (GARVEE) bond program was legislated in 2006. ITD used $857 million to improve 5 five corridors throughout the state. The FY17 Legislature provided an additional $300 million in bonding authority. The Board applied $64 million to the US-95, Garwood to Sagle Corridor, and $236 million to the I-84, Caldwell to Meridian corridor. GARVEE debt service including interest and fees is currently estimated at $80.8 million for the entire $1,157 million in bonds. Payment of annual debt service uses federal formula funds with state match.

Public Transportation Program

Public transportation provides services to citizens without access to other transportation alternatives and allows them travel to employment, shopping, medical care, and social/recreational opportunities. Consequently, well-crafted public transportation options strategically placed across the state is a major enabler and contributor to the economic development and well-being of the state.

Further, the Public Transportation Program benefits Idaho by helping to extend the lifespan and quality of the state highway system's infrastructure as well as helps extend the lifespan and quality of this infrastructure by improving the efficiency of its use along with providing alternative mobility choices for Idaho's citizens.

ITD is the direct recipient of Federal Transit Administration (FTA) funding for rural and small urban programs. These programs support fixed route and paratransit services, transportation services for the elderly and persons with disabilities, buses, and bus facilities.

The remaining funding is provided directly to transit service providers in the urbanized areas.

Idaho Airport Aid Program

Idaho's system of public-use airports serves a wide variety of aviation activities. General-aviation airports serve not only corporate and business users, but these airports also play an important role in supporting recreation and tourism in the state. Idaho's commercial airports accommodate operations by regional and commuter airlines, as well as major airline operations. Air cargo activities are also supported by the state's aviation system, as is military activity and aerial fire suppression. In addition to these airports, the Division of Aeronautics oversees maintenance and operation activities at state operated airports.

The Division of Aeronautics, in partnership with the FAA and municipalities, coordinates a multi-level planning process comprised of the State Airport System Plan, Airport Master Plans, and the Statewide Capital Improvement Program (SCIP). System planning establishes statewide needs while master planning is a more detailed plan for a single airport.

Project selection is a collaborative process involving the FAA, municipalities, and ITD.

Statewide system planning and airport master planning coupled with public input are the basis of the SCIP. Project prioritization based upon the intended use of funds is the basis for project selection and acceptance. The division annually requests grant applications from the 70 eligible public airports throughout the state. The state has a specific application form and set of application procedures. The division requests an updated SCIP prior to the application.

The FAA regularly requests review and comment upon the FAA applications from the division prior to the final processing. A copy of the FAA application is accepted in lieu of an IAAP application when the request is simply for assistance with the local match requirement for the AIP funds.

The AERO-IAAP program is managed by the Project Manager of the Airport Planning and Development section within the Division of Aeronautics.

Primary Service airport projects are identified, estimated, and scheduled by the FAA. Projects are prioritized and selected based upon FAA's National Priority System and the availability of local matching funds. Projects are developed by the airport owner and their consultant with overall management from the FAA and construction management from the airport owner and their consultant.

General Aviation airport projects are identified and estimated by the FAA with coordination and scheduling input from the Division of Aeronautics. Projects are prioritized and selected based upon FAA's National Priority System and the availability of local matching funds. Projects are developed by the airport owner and their consultant with overall management from the FAA and construction management from the airport owner and their consultant.

Statewide Airport System Planning projects are identified, estimated, and scheduled by the Division of Aeronautics. Projects are prioritized and selected based upon FAA's National Priority System. The Division of Aeronautics and their consultant with overall management from the FAA and contract management from the Division of Aeronautics develop projects.
General Aviation (Community airports) projects are identified, estimated, and scheduled by the airport owner and the Division of Aeronautics. Projects are prioritized and selected based upon the Division of Aeronautics Priority System and the availability of local matching funds. Projects are developed by the airport owner with overall management from the Division of Aeronautics and construction management from the airport owner.

The STIP Publication

Idaho's STIP and the Metropolitan Planning Organizations' TIPs meet all federal requirements under 23 CFR 450. TIPs include all projects within Metropolitan Planning Area boundaries for both state highway and local road system projects. The STIP includes projects within Metropolitan Planning Areas by reference only. This means that the internet address of each TIP document is published in the STIP so that one can browse the internet to view all projects. Costs within the documents are shown in year-of-expenditure dollars at (currently) 2% annual inflation. Projects in the TIPs are not grouped. Projects expected to receive an environmental categorical exclusion are grouped on one line by geographic region or project type as group control totals rather than being individually listed within the STIP. This removes routine projects from the STIP and allows for project obligation without awaiting full STIP

approval the following year. The STIP format is used both for the 30-day public involvement period in July and for the submittal for approval to the FHWA and FTA.

For each project the STIP shows project route; name; mileposts; work type and work subclass; sponsor; program; fund source; program year; construction, development, and right-of-way costs by year; project lifetime cost, breakout of shares (federal, state, other); advanced construction; work zone safety priority; alternative contracting projects; and a public description. Projects are sorted by Key Number (KeyNo) for ease of use by the FHWA Idaho Division Office in finding specific projects when approving obligations.

The same dataset is used to print a report called the Idaho Transportation Investment Program (ITIP). For the convenience of stakeholders, this report shows costs in present value, includes projects in Metropolitan Planning Areas, and individually lists grouped projects. This report is available in sorts by KeyNo, County/City, Route, and Program on ITD's web site.

Mid-Year STIP Amendments and Administrative Modifications

A key feature of a process document regarding changes to the STIP are that it includes clear criteria to guide the decision whether to process a STIP change as an amendment or as an administration modification.

Coupled with this is an understanding that ITD's criteria for determining the processing of a STIP change is ***independent*** of the criteria used by a metropolitan planning organization (MPO) for treating changes to TIPs for projects in their planning areas. In other words, the process followed by the state DOT – whether amendment or administrative modification – may differ from the handling chosen by the MPO through application of their amendment or administration modification policy.

State DOT (ITD) Criteria for STIP Amendments vs Administrative Modifications	**Amendment**	**Administrative Modification**
1. Adding a new non-grouped project into the 4-year STIP;	X	
2. Removing a non-grouped project within first four years of the approved STIP;	X	
3. Adding or Removing projects that are exempt (per Title 40 §93.126) and/or that have air quality implications; and	X	
4. Make major changes to one or more projects using the below guidelines for 'Major Changes'.	X	
• Either the percentage change to an individual project's Total Project Cost greater than 30%, or the project's Total Project Cost changes by at least $2,000,000.		
• Cost changes to one or more grouped projects result in a percentage change to the group control total of at least 30%, or a dollar cost change to the group control total of at least $2,000,000.		
• Change in funding across modes (i.e. funding source changes from highway to transit or vice versa), unless the project is grouped.		

• Major changes in project scope (e.g. number of through traffic lanes).		
• Changes in project location limits greater than a net 0.25 miles and/or which trigger an air quality conformity amendment.		
• Changes to a project that affect air quality conformity demonstration		
5. Any project changes other than those described in Items 1 through 4.		X

Additionally, any corrections to errors in the STIP will be handled as Administrative Modifications. These include corrections to:

- Improvement type
- Project limits
- Functional classification
- Typographical errors
- Transposed numbers

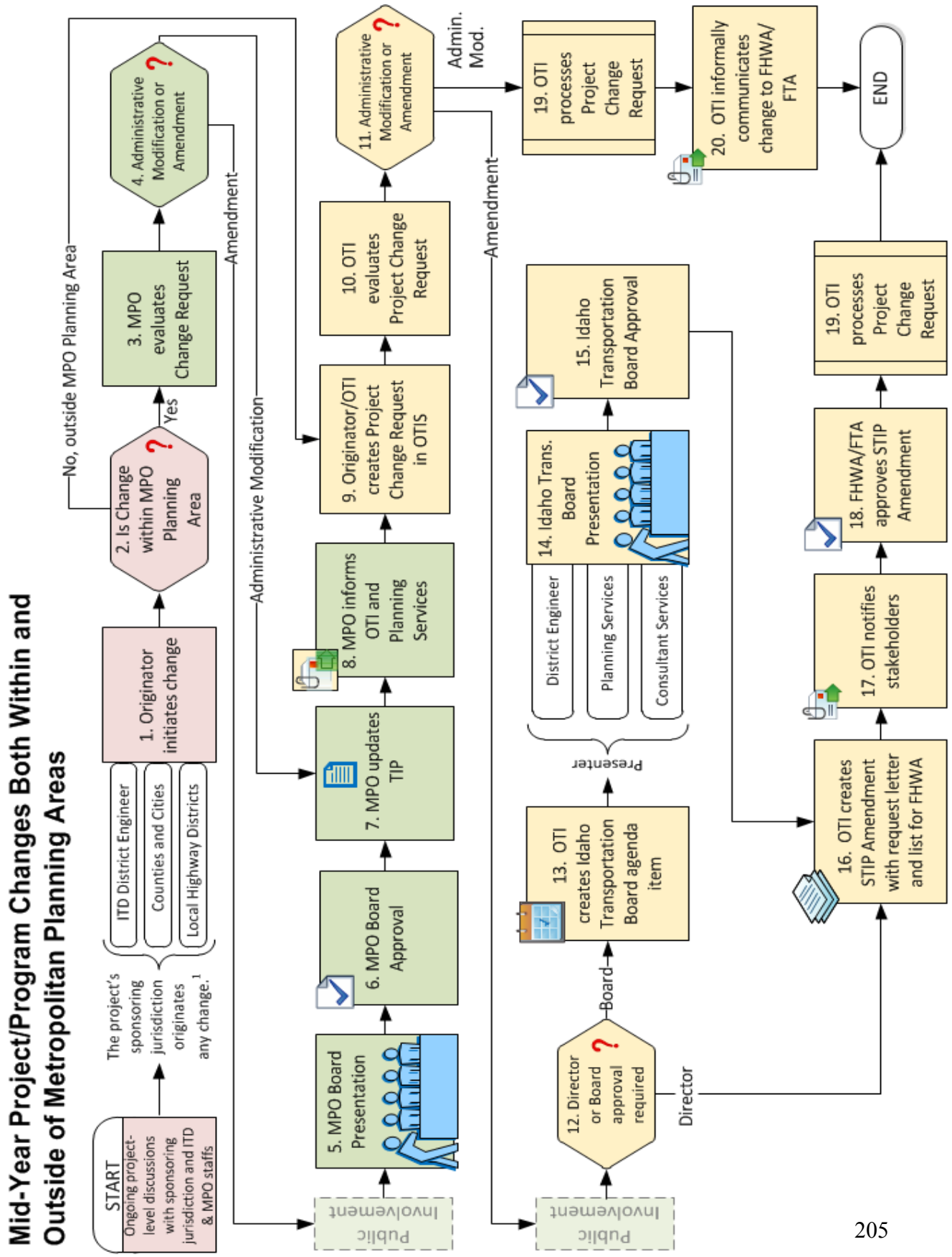
The processing of changes to the STIP can be categorized based on whether they are for projects within or outside of a metropolitan planning area, and whether the change to the STIP meets the criteria for an Amendment or an Administrative Modification.

The exhibit on the next page shows the handling for STIP changes keeping in mind the considerations listed above.

Section 7: Recommendations and Implementation

Recommendations for the Annual ITIP/STIP are made annually by the Idaho Transportations Board.

Section 8: Helpful Resources



[1]LHTAC and public transportation authorities are not members of any MPO board; therefore they are required to get a document from the sponsoring agency authorizing a change.

Technical Report 9

Aeronautics Planning & Administration

Subject Matter Expert

Bill Statham
Aeronautics Project Manager

Introduction: Aeronautics Planning and Programming

The mission of the Division of Aeronautics serves to provide the highest quality, most effective, efficient, and safest airport system for all users of aviation services.

To this end, the Division of Aeronautics plans and implements essential programs, services and projects to develop, encourage, and foster an exemplary system of airports that meet the current and future requirements of a growing and diverse Idaho aviation community.

The direction and operations of the division receives guidance from ITD Policies. Aeronautics has 17 board and administrative policies to aid in program direction. We have nine board and eight administrative policies. Additionally, the division has promulgated eight administrative rules.

The Division receives comment and recommendations from two advisory groups. The Idaho Aeronautics Advisory Board (AAB) is a five-member group, appointed by the Governor to review, comment upon, recommend policies, direction, and grant projects for the Division on an advisory basis. Idaho Airstrip Network (IAN) is an additional advisory board specifically tasked to review and make recommendations for the USFS and public airports in Idaho.

Section 1: FAST Act Applicable Section(s) for the LRTP

- CFR 450.200
  Each State is required to carry out a continuing, cooperative, and comprehensive performance-based statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan and STIP, that facilitates the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the State, including those areas subject to the metropolitan transportation planning requirements of 23 U.S.C. 134 and 49 U.S.C. 5303.

Section 2: Federal and/or State Reference

Federal Reference: Title 14 Aeronautics and Space Sections, Volume 4, Chapters 200-1199
State Reference: Title 21, Aeronautics

Section 3: ITD Board or Administrative Policies

Administrative:

- 5011 – Idaho Transportation Investment Program (ITIP)
- 5034 – Charter or Rented Aircraft and Pilot's Requirements
- 5035 – Coordination with Aeronautics Advisory Board

- 5037 – Aeronautical Activities
- 5064 – Classification and Maintenance of State-Owned and/or Operated Airports
- 5065 – Acquisition and Closure of State Airports
- 5066 – Airport Caretakers
- 5075 – Assistance to Idaho's Airports

Board:

- 4011 – Idaho Transportation Investment Program (ITIP)
- 4034 – Charter or Rented Aircraft and Pilot's Requirements
- 4035 – Coordination with Aeronautics Advisory Board
- 4036 – State Aircraft Operation
- 4037 – Aeronautical Activities
- 4064 – Classification and Maintenance of State-Owned and/or Operated Airports
- 4065 – Acquisition and Closure of State Airports
- 4066 – Airport Caretakers
- 4075 – Assistance to Idaho's Airports

IDAPA Rules:

- 39.04.04 – Idaho Airport Aid Program
- 39.04.08 – Rules Governing Operations at State Airports

Section 4: MOU or Service Agreements

There are several MOUs and Service Agreements between ITD's Aeronautics Division and individual airports throughout the state. These are available upon request.

Section 5: Stakeholders and Partners

Stakeholders: Cities, Counties, Airport users

Partners: Federal Aviation Administration, Airports

Section 6: Process

The Division of Aeronautics has five sections with valuable programs for aviation users and the state. The sections include Airport Planning and Development, Airport Maintenance, Flight Operations, Safety and Education, and Administration.

AIRPORT PLANNING & DEVELOPMENT (AP&D) SECTION

The Airport Planning & Development section provides various levels of both direct and indirect support to owners, managers, and users of public-use municipal airports throughout Idaho while leading the overall statewide airport planning effort for a safer, more economical and accessible aviation system.

This section prepares regular updates to the Idaho Airport System Plan and Economic Impact Analysis Plan, conducts on-going airport Network Pavement Management studies and funding, and provides

airport lighting and safety supplies to public airports. We also conduct on-going airport land use and zoning coordination and provide financing for small airport construction and planning projects. This section issues annual airport grants through the Idaho Airport Aid Program (IAAP) and compiles an annual Idaho Statewide Capital Improvement Program (ISCIP) cooperatively with the FAA. We conduct on-going airport Safety Data Inspections (5010) with reports and perform continuous Airspace Obstruction Evaluations statewide. Our stakeholder services include on-going technical assistance to airport managers and owners, interagency aviation coordination with federal land managers, and capital improvement program and grant training. We regularly publish an airport Facility Directory and Aeronautical Chart and annually conduct legislative and policy updates.

Recent developments make our work more effective and timely including development and use of automated grant payment software, prioritizing pavement inspections and updating the related performance measures, and current preparation of a NEW System Plan & Economic Impact Study.

Board policies, 4011-ITIP and 4075-Assistance to Idaho Airports, provide fundamental program guidance while Administrative Rules, 39.04.01-Federal Aviation Regulations, 02-Marking Hazards, and 04-Idaho Airport Aid Program, provide procedures for the public and division alike.

Plans and manuals are a foundation and pathway for the division's actions. The Airport System Plan and Economic Impact study will continue to provide perspective and direction for program operations and improvement while the Idaho Statewide Capital Improvement Program provides immediate data for project funding and priorities. The Network Pavement program provides both data for funding and long-range maintenance planning while the Idaho Airport Land Use Guidelines (2016) is a pathway for local airports to protect their facilities and meet FAA compliance goals ensuring Aeronautics a degree of protection for our prior investments.

FAA Statutes, Rules, Directives, Advisory Circulars, and Program Guidance provide the main source of technical guidance and specifications for many airports. The remaining airports are under Idaho Statutes, Rules, Aeronautics Reports and Procedures, and ITD Specifications. Another valuable resource is the Airport Cooperative Research Program (ACRP) publications that provide new and proven guidance from the Transportation Research Board of the National Academies' of Science.

This section's funding comes from multiple sources including aviation fuel taxes, aircraft registration fees, Airport Safety Data (5010) contract inspections, and grant funding from FAA grants.

Looking ahead, we will promote development of new software to manage the capital improvement and grant programs, provide specific procedures, agreements, and fees for Through the Fence users at community and state airports, and develop Pavement Management Guidelines for community construction projects. Additional program improvements might include continued assistance to Fish & Game for establishment of new public use backcountry airports, grant funding for pavement maintenance as a high priority project, and explore new revenue sources to expand the grant program and aeronautics functions in general.

A significant challenge will be identifying and developing new revenue sources for operation, equipment, and grant budgets, while maintaining a balance between wants and needs at Idaho airports.

AIRPORT MAINTENANCE SECTION

The Airport Maintenance section operates and maintains airports throughout the state. This section performs regular maintenance on Idaho owned and/or operated airports including: runway surfacing, vegetation control, rodent control, irrigation systems, and safety improvements. Since the department does not own some of these airports, aeronautics has operating leases from other state or federal agencies.

The Airport Maintenance section also provides flight-planning facilities at busy airports, provides direction for ground operations, and arrange for the leasing of airport property and/or through-the-fence agreements for hangars, tie-downs, and other long-term use of airport facilities.

They provide caretakers and camping facilities for select active state airports including staffing, direction, training, supplies, and firewood. They also schedule, administer, and provide instructions for organized Fly-In events and other busy flight gathering.
The Airport Maintenance section also operates a courtesy car program, Adopt-An-Airport program, determines the appropriateness of memorials at state airports, reviews new airport proposals, and provides for acquisition or closure of an airport.

Recent developments include helping Fish & Game establish a new public airport, detailed scheduling of maintenance equipment replacement, scheduling new, or replacement facilities at high activity airports, and assisting the 5010 inspector to get a vehicle for his inspections. The section is experimenting with use of wildlife cameras to count aircraft operations and using a Delorme 'inReach' radio to help track and communicate with staff for safety while in remote areas.

The Airport Maintenance section has a number of board and administrative policies that provide fundamental program guidance including 5064-State Owned Airports, 4065-Closure of State Airports, and 4066-Airport Caretakers. Administrative Rules, 39.04.06-Through the Fence-Hangars at State Airports, and 08-Operations at State Airports, provide procedures for the public and division alike.

Plans and manuals are a foundation and pathway for the sections actions. The Idaho Airstrip Network (IAN) action plan (2005) brought together transportation partners, interested in enhancing the status, condition, functionality, and usefulness of this asset. The development of this Focus Area Action Plan is the result of these diverse stakeholders, interested citizens, and professionals from The Idaho Transportation Department, Division of Aeronautics and the US Forest Service working together around a common vision.

This strategic plan lays out a blueprint for an innovative approach as a way to ensure that Idaho's reputation in this area of transportation moves forward and contributes to the economy of the state. Finally, the approach proposed herein assures that this unique transportation asset remains an integrated part of Idaho's overall transportation system, retains its competitive advantage within the world, and continues to reflect Idaho's long and rich aviation tradition.

The Airport Materials and Construction Desk Manual has been an aeronautics reference and specifications manual for the Airport Maintenance and the Airport Planning & Development sections since the early 1980's. This internal reference, written by Aeronautics staff, is information gathered from many sources to assist, develop, and maintain simple airports without detailed FAA requirements or regulations while maintaining quality safety standards.

This section's funding comes from multiple sources including aviation fuel taxes, aircraft registration fees, and donations from pilot users.

Looking ahead, the Airport Maintenance section seek alternatives for firewood and other costs for use of aeronautical facilities where we have caretakers and find a way to pay for firewood out of donations or some other method. We will try to work closer with our Forest Service, BLM, and Dept. of Lands partners and list major capital development projects in the ISCIP to aid in getting funds. As time permits, the section will continue to update the *Airport Desk Manual* and other technical directives for aero staff, airport employees, and airport owners to provide them with updated reference information.

Some of the challenges ahead include:

- studying the effects of increased fees at state airports and the impact this may have on users with limited budgets,
- continue scheduled acquisition and replacement of equipment at state airports while verifying it is the best fit for that facility,
- developing new revenue sources for operations, equipment, and maintenance budgets, while balancing between wants and needs.

FLIGHT OPERATIONS SECTION

The goal of Flight Operations is to provide safe and efficient, on-demand air transportation. This section consists of aircraft operations, and aircraft maintenance.

This section provides as needed scheduling and air transportation to elected officials and state employees in the state owned aircraft, they provide as needed emergency response services for State Police and other agencies and as needed staff transportation for efficiencies of state aeronautics programs and airports. Pilots accomplish this using regular and required aircraft operations procedures and directives to provide safe and quality air transportation.

The section also provides a regular and on-going program of staff pilot training and refresher classes, pilot qualifications and proficiency, and marketing of services to state agencies. In addition, they provide a regular program of aircraft maintenance, including maintaining serviceable aircraft, performing required inspections, fueling aircraft, maintenance of ground support equipment, and hangar preservation.

Recent developments involve plans to acquire a new reliable and versatile single engine turbo-prop aircraft. The section updated radios and NavAids in the current aircraft for compliance and safety and use an Unmanned Aerial System (UAS) for airport analysis & photos, avalanche data & control, and for use with roads, bridges, and highway construction. A staff member chairs the ITD committee to coordinate and teach classes for proper and legal UAS activities.

Division aircraft operations and maintenance conform to requirements contained in Title 14, Part 91, Code of Federal Regulations. Aircraft operations conform to all applicable FAR, local, and national laws, manufacturers' aircraft manuals and limitations and their procedures manual. Aviation personnel utilize sound, conservative judgment in their approach to assigned duties.
This section receives funding from aviation fuel taxes that supports most activities of this section and the annual aircraft inspections and modest repairs. They also get revenue from agency aircraft passengers. Additionally, the Highways Division funds major annual repairs and the inspections and replacement parts, such as engines, propellers, NavAids, and windshields associated with the five-year inspection requirements.

Looking forward, the section will add a new single engine turbo-prop aircraft to increase reliability and versatility of operations, and continue to provide as needed emergency response services for State Police and other agencies. They will improve aircraft equipage with enhanced radios, use of ADS-B, both in and out, for flight safety, and install newer aerial search tracking instrumentation to enhance SAR capabilities.

The section plans to continue using UAS equipment for airport analysis and photos, avalanche data and analysis, and to assist the Division of Highways inspections for roads, bridges, and highway construction. They will continue to chair the ITD UAS committee to coordinate and teach proper and legal UAS activities, and to provide sound and compliant direction to State agencies. The section will continue to develop an ITD policy about UAS use, operations, and information as well as providing data management and storage for UAS data and airport information.

The Flight Operations section will complete a feasibility study concerning use of a helicopter for broad state agency support and use and will develop maintenance-operations-management procedures for the owner.

The Flight Operations section anticipates challenges identifying and developing new revenue sources for operation, equipment, and inspection budgets, acquisition of UAS units and integration of those units and UAS policy into ITD's programs, and determining if or when additional personnel are required for both manned and unmanned flight operations.

Additional challenges involve the study of effects of increased passenger costs that might be adequate to help support passenger service, while potentially reducing passenger numbers due to increased costs.

SAFETY AND EDUCATION SECTION

The Safety and Education section involves activities to provide aviation safety programs, provide pilot and public aviation education, and perform critical aerial search operations for downed, missing, or overdue aircraft. The Safety and Education Coordinator (SEC) also serves as the Division's Aviation Safety Manager.

The Safety and Education section provides aviation safety programs such as on-going public program of pilot safety clinics, an annual Safety Stand-down for pilots, and installing En route web cameras and ADS-B receivers to enhanced safety in the backcountry. They also participate in a pilot and public education program involving an annual aviation art contest, an annual Aerospace Career Education (ACE) academy for our youth to encourage future pilots and aviation professionals in Idaho. Public education involves publishing the Rudder Flutter newsletter on a regular basis to inform and educate Idaho pilots on current activities and pilot safety directives and maintenance of an active Facebook page with updates on aviation related incidents/accidents and hazards/Notams in addition to publishing general aviation and aviation safety related articles.

The section further directs and conducts an aerial search program for lost, missing, or overdue aircraft in association with the Civil Air Patrol (CAP), Idaho Office of Emergency Management (OEM), and State Communications. This critical function seeks to save lives, locate pilots and passengers, and provide examples for teaching safe pilot operations. The search program also provides data for the annual Idaho Aviation Accident Scorecard (IAASC) report.

The state administrative rule 39.04.07-Aerial Search and Rescue of Lost Aircraft provides procedures for the public and division alike while supporting the development of the Safety and Education Coordinator Desk Manual.

Plans and manuals are a foundation and pathway for the division's actions. The IAASC and associated performance measure provide quantifiable data for the education program while the Aeronautics Standard Operating Procedures (SOP) give pilots proper procedures at backcountry airports. The IAASC further provides the division data to modify the Aerial Search Manual, the division's Safety Program Manual, and the SEC Desk Manual for increased accuracy and applicability.

FAA regulations, rules, and directives form the basic specifications for program operations. The basic specifications receive support from the Air Force Rescue Coordination Center (AFRCC) training program and the Idaho Aerial Search Manual.

The sections funding comes from aviation fuel taxes and from aircraft registration fees.

Aeronautics added the IAASC as a division performance measure and for safety management as a part of the Idaho Aviation Safety Initiative to reduce accidents by 50% over a 5-year period.
Looking ahead, the section aims to promote development of a multi-platform outreach program using social media and technology to inform pilots and students of aviation safety equipment and operations.

The aerial search program plans to continue using cell phone and radar tracking forensics data for aerial searches as well as investing in training to better use cell phone and radar forensics to enhance the aerial search program. Additional measures include encouraging pilots to purchase, register, and use ELT 406 MHz equipment to aid aeronautics in search operations.

Additional measures to explore as an enhancement of aerial search operations include installation of a Becker Unit (ELT tracking) as a dedicated receiver, installation of En Route Web Cameras, and continued installation of ADS-B receivers at various locations to increase search capabilities in the backcountry.

On-going operations continue to provide a regular program of pilot safety clinics, annual Safety Stand-down, annual aviation art contest, and annual ACE academy programs for future pilots and aviation professionals throughout Idaho.

This section's greatest challenge involves identifying and developing new revenue sources for operation, equipment, and education budgets, while balancing between wants and needs.

ADMINISTRATIVE SECTION

The Administrative section provides general administrative duties keeping all functions of an office active. Additionally, each administrative employee has specific tasks to perform, and they are required to back each other up during times of employee absences such as illness or annual leave. For that reason, a certain amount of cross training is mandatory between positions.

The Administrative section develops and maintains the division budget, accounts payable, capital expenses, program-funding levels, on-going aircraft and dealer registration and fee payment services, provide a program for computer replacements, out of state travel plans, and time sheet support.

Additionally, they provide assistance and administration for the Aeronautics Advisory Board including agendas, presentations, speakers, issue topics, division status reports, administration, support, and permanent storage space for publications and airport files of the Idaho Division of Aeronautics, and provide flight scheduling, coordinating of billing, and other financial tasks.

The Administrator provides on-going personnel support, management direction, supervision, leadership, and program coordination.

Recent developments include cross training of aero employees, making the receptionist position full time, and getting a computer software upgrade for automated aircraft registration. Additionally, employee evaluations and annual goals receive greater attention and priority and the administrator performed a study to determine the size, and design of new Aeronautics facilities because the Boise Airport requires that we move to allow for airport expansion.

Board policies, 4034-Aircraft and Pilots Requirements, 4035-Coordination with AAB, 4036-State Aircraft Operations, 4037-Aeronautical Activities, and 4064-State Owned Airports Major Plans provide fundamental program guidance while Administrative Rules, 39.04.03 - Flight in Emergency Areas and 05 - Aircraft Operations provide procedures for the public and division alike.

Plans and manuals are a foundation and pathway for the division's actions. The Procedures Manual indicates current procedures and programs while the Airport Facilities Directory and Aeronautical Chart provide a fundamental service to our stakeholders.

This sections funding comes from aviation fuel tax revenue and aircraft registration fees.

Looking ahead, the section must continue on-going computer upgrades for administrative functions, website updates, and efficient processing of aircraft registration, payments, and tracking of aircraft history. Also, seek reasonable revenue enhancement opportunities.

A significant challenge will be to collect more aircraft information, including data about the 15 digits 406 MHz ELT, on all aircraft registration forms and renewals. The updated 2019 registration form will request this information. Another significant challenge is identifying and developing new revenue sources for operation, equipment, and administrative budgets.

Section 7: Recommendations and Implementation

The Idaho Division of Aeronautics programs have grown and changed with the development of the aviation industry since the 1920's. Since aviation is a major element of the transportation industry, we plan to continue meeting the needs of the flying public with our programs. Staying adaptable and foresighted, we will continue to fulfill our mission and associated goals.

Section 8: Helpful Resources

- 39.04.04, Idaho **Airport** Aid Program
- 39.04.08, Rules Governing Operations at State **Airports**

Technical Report 10

Air Quality

Subject Matter Expert

Brian Shea, RETIRED 2018
Senior Transportation Planner

Introduction: Air Quality

The CMAQ program was created under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, and reauthorized under every successive Transportation Bill up to and including the Fixing America's Surface Transportation (FAST) Act in 2015. Administered by FHWA, the CMAQ program provides funding to areas that face the challenge of attaining or maintaining the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide, and/or particulate matter. In addition, States that have no nonattainment or maintenance areas - facing much less of a clean air challenge - still receive a minimum apportionment of CMAQ funding. FHWA released Interim Program Guidance under MAP-21 on November 12, 2013. Final Program Guidance is nearing completion and expected to be released in early FY 2017. While project eligibilities remain largely the same, the legislation places increased emphasis on diesel engine retrofits including construction equipment, port-related landside non-road or on- road equipment and alternative fuel infrastructure in designated alternative fuel corridors. See FHWA's FAST Act CMAQ website at: https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and **any statements of policies, goals, and objectives on issues** (e.g., transportation, safety, economic development, social and **environmental effects,** or energy), as appropriate, that were relevant to the development of the long range statewide plan."

§13. "A long-range statewide transportation plan shall **include a discussion of potential environmental mitigation activities and potential areas to carry out these activities; including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan.** The discussion may focus on policies, programs, or strategies, rather than at the project level. The state shall develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife, and regulatory agencies. The State may establish reasonable timeframes for performing this consultation."

Section 2: Federal and/or State Reference

Federal Reference: Clean Air Act 42 USC §7401

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

State Reference: IDAPA 58.01.01.563 (https://adminrules.idaho.gov/rules/2012/58/0101.pdf)

The Idaho Administrative Code distinguishes two different approaches to transportation conformity -those areas with Metropolitan Planning Organizations (MPO) and those without. In areas with MPOs, the responsibility for gathering information and performing transportation modeling falls on the MPO. In rural non-attainment areas, small areas outside MPO jurisdiction (donut areas) or for federally-funded "regionally significant" projects outside of non-attainment and maintenance areas, ITD is responsible for transportation modeling and regional emissions analyses (IDAPA58.01.01.568-569, 40 CFR 93.109(n)).

DEQ is the designated lead air quality agency (IDAPA 58.01.01.569.01) is responsible for developing the draft and final data and analysis for:

- Air quality inventories;
- Emissions budgets;
- Attainment and maintenance demonstrations;
- Control strategy implementation plan revisions;
- Updated motor vehicle emission factors; and
- Proposal and evaluation of Transportation Control Measures (TCMs).

The lead air quality agency is responsible for working with the Inter-Agency Consultation Committee in developing the Motor Vehicle Emission Budget (MVEB) and control measures for State Implementation Plans (SIPs). MPOs and ITD are responsible for assuring emissions from transportation projects "conform" to MVEBs and National Ambient Air Quality Standards. Because DEQ was responsible for developing non-attainment and maintenance plans, the agency trained several individuals how to use the MOVES model and developed the extensive local data inputs now required by the new model. DEQ now has the technical expertise and the computing infrastructure to provide ITD and MPOs training, MOVES data input development, and MOVES modeling support. When it comes to MOVES modeling capabilities and infrastructure, DEQ is a leader in the Pacific Northwest. DEQ is willing to provide our mobile modeling and input database expertise, if ITD provides funding to support the DEQ tasks related to ITD's transportation conformity analysis requirements.

Section 3: ITD Board or Administrative Policies

Administrative:	Administrative Policy A1105 – Congestion Mitigation and Air Quality Improvement Program
Board:	Board Policy B1105 – Congestion Mitigation and Air Quality Improvement Program

Section 4: MOU or Service Agreements

ITD/DEQ MOU – State Implementation Plan Development

In June 2014, ITD and the Idaho Department of Environmental Quality signed a Memorandum of Understanding where ITD would fund EQ to provide air quality conformity and transportation modeling

services including the development and maintenance of Idaho-specific input databases for MOVES. The goal of the MOU is to ensure that DEQ, ITD, and the MPO's are able to cooperatively fulfill their responsibilities under IDAPA 58.01.01.563 – 574 to effectively and efficiently enable the State to remain in conformity with air quality emissions budgets. This is a summary of MOVES:

In March of 2010, EPA released a new mobile emissions model known as MOVES to replace the simplistic MOBILE6 vehicle emissions model. The new MOVES model requires more complex data inputs and databases that run in the background to support the modeling. In March of 2012, MOVES was required for all regional emission analysis in support of transportation conformity. In December of 2012, the MOVES model was required for all "regionally significant" projects/hot spots that required modeling.

The transition from MOBILE6 to MOVES greatly increased the technical expertise required to run the model, and dramatically increased the data input demands. Where MOBILE6 used season averages, MOVES now requires hourly data inputs by road segment. As an example of the complexity of this work, DEQ now uses two years of ITD's statewide hourly Automatic Traffic Recorder (ATR) data in over 131,000 data files to develop hourly profiles of vehicle type by roadway type. The vehicle type profiles are cross referenced with county-level registration data to develop vehicle age and vehicle miles travelled (VMT) profiles as part of calculating hourly emissions by vehicle type and roadway type.

ITD is responsible to assist IDEQ with the development and maintenance of the MOVES model. Specifically:

1. Support STIP conformity process and Hot Spot analyses, including:
   a. Cache Valley (donut area) conformity
   b. Pinehurst (rural area) conformity
   c. Project-level PM hotspot analysis and documentation

   Conformity determinations in support of the Statewide Transportation Improvement Plan (STIP), as needed to conduct Project Level Hot Spot analyses or to meet non-attainment area conformity requirements in areas without MPOs. This task includes a hypothetical threshold hot spot analysis to establish threshold size of regionally significant projects that may reach a threshold emissions level beyond which a refined analysis is required. Includes one analysis per year. With an appropriate hypothetical Hot Spot threshold analysis, ITD, MPOs, and contractors will, in most cases, be able to establish compliance with air quality standards by reference to this threshold analysis. This will reduce costs and planning time on future projects for several years to come.

   Deliverable: Update PLAQ (Project Level Air Quality) screening and analysis tool along with county level MOVES data inputs for PM Hot Spot analyses.

2. ITD and MPO conformity training, assistance & documentation. Specifically:
   ITD/MPO conformity assistance includes training and/or preparation of MOVES model conformity demonstrations as necessary until MPOs acquire a demonstrated capability to produce their own conformity demonstrations. This requires link-level integration of COMPASS' Travel Demand Model (TDM) with Idaho traffic and vehicle source population data. Side-by-side training will continue until MPOs/ITD are capable of running MOVES in-house. Deliverable: A report will document each conformity demonstration including inputs, methods and results.

MOU between MPOs and Tribes

Establishes a cooperative effort among all parties to produce an approvable state implementation plan (SIP) for the Portneuf Valley PM_{10} Non-Attainment Area and to evaluate and amend, if necessary, the federal implementation plan (FIP) for the Fort Hall Non-Attainment Area. http://www.deq.idaho.gov/media/60180338/moa-kootenai-tribe-deq-1108.pdf

Northwest Cooperative Agreement Environmental Streamlining and Interagency Cooperation on Environmental and Transportation Issues (http://www.deq.idaho.gov/media/562994-all_nw_cooperative_agreement_2000_174.pdf)

The agencies agree to work cooperatively to promote "environmental streamlining" that will facilitate the timely delivery of quality transportation programs, protect and enhance environmental quality, and make effective and efficient use of agency resources.

Stakeholders: DEQ, ITD, IDWR, IDFG, State Historic Preservation Office, USDOT, BLM, USFS Regions 1 and 4, and others from WA and OR

Section 5: Stakeholders and Partners

To make conformity determinations in each non-attainment or maintenance area, a committee of agency representatives called the Interagency Consultation Committee (ICC) is required to be constituted. These agencies generally include the following (IDAPA 58.01.01.567.01-02):

- Idaho Department of Environmental Quality (DEQ)
- Idaho Transportation Department (ITD)
- Metropolitan Planning Organization (MPO)
- Federal Highway Administration (FHWA) and Federal Transit Administration (FTA)
- Local Highway Technical Assistance Council (LHTAC)
- Local agencies including Highway Districts, Counties, Cities
- Public Transit agencies or service providers
- Tribal governments

Within the Interagency Consultation Committees (ICCs), the following three agencies have specific designated responsibilities, all of which are subject to interagency consultation.

Idaho Department of Environmental Quality (DEQ)—the state's designated lead air quality agency (IDAPA 58.01.01.569.01).

- State Implementation Plan (SIP) including public outreach on draft plan, emission inventories and budgets, control measures, plan updates.
- Motor vehicle emission factors.
- Attainment and maintenance demonstrations.

Idaho Transportation Department (ITD) in non-attainment /maintenance areas without an MPO--currently Cache Valley, Pinehurst, West Silver Valley (IDAPA 58.01.01.569.03).

- Conformity determinations for the projects in the Statewide Transportation Improvement Program (STIP) and for those subject to the National Environmental Policy Act (NEPA).
- Identify regionally significant projects through the ICC process.
- Implement Transportation Control Measures (TCMs).
- Technical and policy input on emission budgets.
- Transportation modeling, regional emissions and project level (hot-spot) analyses.
- Distribute draft and final documentation to ICC and interested stakeholders.

Metropolitan Planning Organizations (MPO) in non-attainment/maintenance areas with an MPO--currently Portneuf Valley and Northern Ada County (IDAPA 58.01.01.569.02).

- Conformity determinations for Long Range Transportation Plans (LRTPs) and Transportation Improvement Plans (TIPs).
- Identify regionally significant projects through the ICC process.
- Implement Transportation Control Measures (TCMs).
- Technical and policy input on emission budgets.
- Transportation modeling, regional emissions and project level (hot-spot) analyses.
- Distribute draft and final documentation to ICC and interested stakeholders.

Those agencies making conformity determinations on transportation plans, programs, and projects (i.e., the MPOs and ITD), are required, at a minimum, to establish a proactive public involvement process which provides reasonable public access and opportunities for public review and comment on all technical and policy information being considered by the ICC at both the beginning of the public comment period and prior to taking any formal action. In addition, these agencies must specifically address, in writing, all public comments relating to known plans for a regionally significant project, which is not receiving FHWA or FTA funding, or approval (IDAPA 58.01.01.574).

Members of the public may submit requests to receive information about the ICC, including meeting dates and times, relevant documents and other information.

Following below are the general responsibilities of the MPOs and ITD with respect to the ICC consultation process and with interested members of the public (IDAPA 58.01.01.571.01).

- Initiate the process by notifying the ICC members of the document to be discussed or decision to be made and by scheduling and convening meetings.
- Maintain a distribution list of all ICC members and interested members of the public.
- Distribute an agenda and all supporting material including the minutes of prior ICC meetings:

  - 14 days in advance of an ICC meeting if there are non-technical issues to be resolved.
  - 30 days in advance for technical issues.
- Confer with other agencies and persons interested in the document or decision.
- Provide an opportunity for informal questions and answers on draft documents and proposed decisions.
- Consider the views of ICC members and interested members of the public and respond in writing to significant comments in a timely and substantive manner prior to finalizing or taking any final actions.
- Assure all comments and written responses of ICC members and members of the public are made part of the record of any action.

Section 6: Process

Program Purpose & Benefits

The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to the attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter both coarse (PM_{10}) and fine ($PM_{2.5}$). The program supports two important benefits: improving air quality and relieving traffic congestion.

Project Eligibility

Each project must meet three basic criteria. It must…

- Be a transportation project.
- Generate a measurable emissions reduction.
- Be located in or benefit an area in nonattainment or maintenance of the NAAQS. In Idaho, these currently include:
  - Nonattainment areas:
    - Cache Valley (Franklin County) for $PM_{2.5}$.
    - Pinehurst (Shoshone County) for PM_{10}.
    - West Silver Valley (Shoshone County) for $PM_{2.5}$.
  - Maintenance areas:
    - Portneuf Valley (Bannock County) for PM_{10}.
    - Northern Ada County for PM_{10} and CO.
    - Sandpoint (Bonner County) for PM_{10}.

In general, the following types of projects and programs are eligible for funding:

Diesel engine retrofits	Engine idle reductions
Traffic flow improvements	Freight/intermodal
Public transportation	Bicycle and pedestrian
Travel demand management	Public education and outreach
Carpooling, vanpooling and car sharing	Inspection & maintenance programs
Alternative fuels and vehicles	

Program Funding

Idaho's CMAQ apportionment will be approximately $13 million for FFY 2018 per the FAST Act. A 25% sub-allocation of this total is only usable for projects targeting $PM_{2.5}$ in those areas designated as being in nonattainment or maintenance for $PM_{2.5}$, i.e., the Cache and West Silver Valleys. The remaining 75% of the funding can be transferred out of the program. These transferred funds are fully flexible and are available statewide for deliverable projects with Surface Transportation Program (STP) eligibility, subject to the availability of Obligation Authority.

Program Status

This program is currently inactive per Idaho Transportation Board Resolution ITB 08-17. The Board made this decision to focus the Idaho Transportation Department's available, limited funding on pavement preservation and restoration activities on the state's highway system.

Federal Clean Air Act

The Clean Air Act (CAA) sets the framework and goals for improving the air quality to protect public health. The CAA established provisions for attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). NAAQS are set for "criteria" pollutants such as those that adversely affect human health and safety, at levels to ensure adequate protection of the public.

When a geographic area violates a NAAQS, it is designated as a "non-attainment" area. Non-attainment areas in Idaho currently include:

- **Cache Valley** (Franklin County) for Fine Particulate Matter <2.5 micrometers in diameter ($PM_{2.5}$)
- **Pinehurst** (Shoshone County) for Coarse Particulate Matter <10 micrometers (PM_{10})
- **West Silver Valley** (Shoshone County) for $PM_{2.5}$

Once designated, a plan must be created and implemented to bring the area back into attainment. In Idaho, these plans are prepared by the Idaho Department of Environmental Quality (DEQ) and approved by the U.S. Environmental Protection Agency (EPA). The plan is called the State Implementation Plan (SIP).

When an area achieves attainment for three consecutive years, it may request re-designation as a "maintenance" area. Maintenance areas are required to have SIPs to ensure the NAAQS continue to be met. Maintenance areas in Idaho include:

- **Portneuf Valley** (Bannock County) for PM_{10}
- **Northern Ada County** for PM_{10} and Carbon Monoxide (CO)

EPA classifies emissions of criteria pollutants into three source categories: **point** (electric utilities, refineries, etc.), **area** (dry cleaners, paints, solvents, etc.) and **mobile** including both *on-road* (cars, trucks, buses, etc.) and *non-road* (airplanes, trains, construction equipment, etc.). SIPs must include strategies and control measures to sufficiently reduce emissions in each of these source categories to levels that meet the NAAQS. The SIPs also set emission caps or "budgets" for each air pollutant.

Transportation conformity refers to the Clean Air Act requirement that all transportation **plans**, **programs** and **projects** developed, funded or approved by the Federal Highway Administration, the Federal Transit Administration, and any state or locally funded regionally significant projects must demonstrate they "conform" to the applicable State Implementation Plan (SIP). For more information see IDAPA 58.01.01.563 at https://adminrules.idaho.gov/rules/2012/58/0101.pdf.

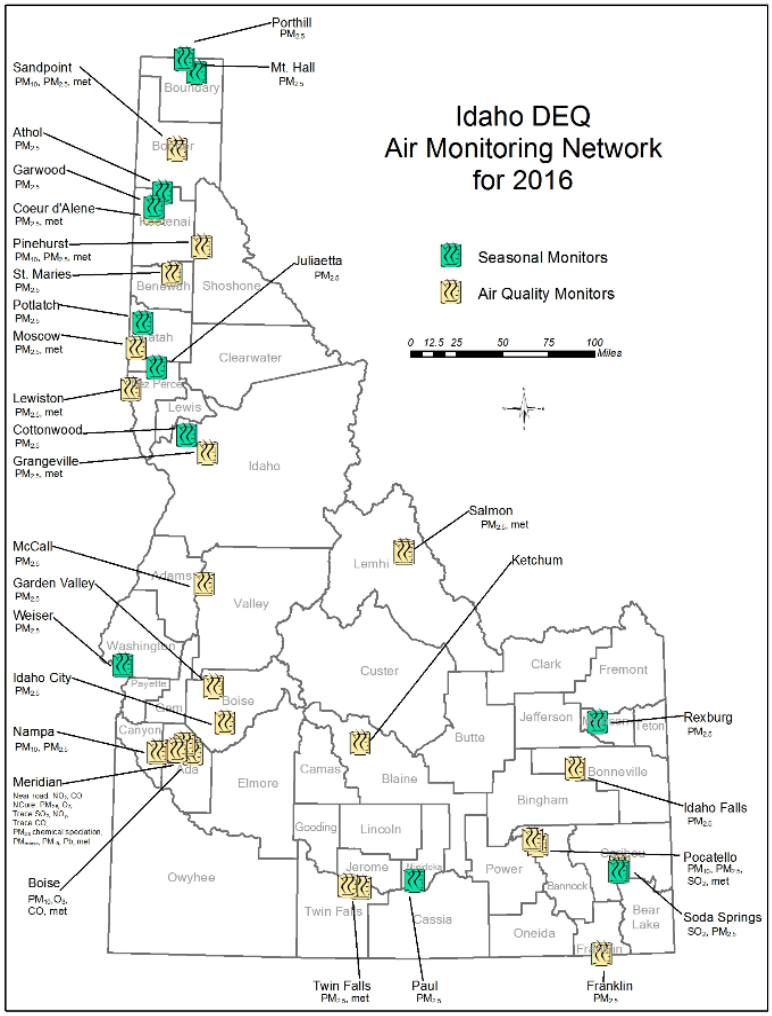
Given the fact that controlling pollutants from *on-road* mobile sources is critically important to meeting the NAAQS, transportation conformity is intended to help the SIP attain the NAAQS.

Section 7: Recommendations and Implementation

Continue to work closely with the Idaho Department of Environmental Quality to collect data for the MOVES Model, monitor air quality conditions throughout the state, and establish plans for air quality conformity.

Section 8: Helpful Resources

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- EPA Clean Air Act Website (https://www.epa.gov/clean-air-act-overview)
- Idaho Real-Time Air Quality Monitoring (http://airquality.deq.idaho.gov/)
- Idaho Department of Environmental Quality (http://www.deq.idaho.gov/air-quality.aspx
- Transportation Conformity Rule: https://www.fhwa.dot.gov/environment/air_quality/conformity/laws_and_regs/rule.cfm



Technical Report 11

Environmental Planning

Subject Matter Expert

Sue Sullivan, RETIRED
Environmental Planning Manager

Wendt Terlizzi
Environmental Planning Manager

Introduction: Environmental Planning

Environmental planning is the process of facilitating decision making to carry out land development with the consideration given to the natural environment, social, political, economic and governance factors and provides a holistic framework to achieve sustainable outcomes. A major goal of environmental planning is to create sustainable communities, which aim to conserve and protect undeveloped land.

At the Idaho Transportation Department, environmental planners deal with a full range of environmental regulations from federal to state and city levels, administered federally by the Environmental Protection Agency. A rigorous environmental process has to be undertaken to examine the impacts and possible mitigation of any construction project. Depending on the scale and impact of the project, an extensive environmental review is known as an Environmental Impact Statement (EIS), and the less extensive version is Environmental Assessment (EA). Procedures follow guidelines from National Environmental Policy Act (NEPA), State environmental reviews and/or City environmental reviews, and other related federal or state agencies published regulations.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

§13. "A long-range statewide transportation plan shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities; including activities that may have the greatest potential to restore and maintain the environmental functions affected by the long-range statewide transportation plan. The discussion may focus on policies, programs, or strategies, rather than at the project level. The state shall develop the discussion in consultation with applicable Federal, State, regional, local and Tribal land management, wildlife, and regulatory agencies. The State may establish reasonable timeframes for performing this consultation."

Section 2: Federal and/or State Reference

The Idaho Transportation Department (ITD) is responsible for providing leadership and ensuring regulatory compliance for actions that affect the built and natural environment during planning, project development, construction, and maintenance activities. ITD evaluates environmental resources; identifies potential impacts and determines measures to avoid, minimize, or mitigate impacts in compliance with local, state, federal, and tribal laws, regulations, and policies.

ITD is responsible for complying with a host of regulations addressing documentation and disclosure of decisions and protection of the built and natural environment. It must avoid, minimize, and mitigate impacts to a range of resources, including protected parks and other public sites, fish and wildlife species, vegetation, wetland and aquatic resources, farmlands, air quality, sensitive noise receptors, and cultural resource. ITD identifies resources within proposed project limits, evaluates potential project impacts, and identifies potential avoidance and minimization measures while meeting its transportation mission. ITD also supports investigations and remediation of hazardous waste, solid waste, and groundwater quality associated with ITD construction projects and ITD maintenance and operations of facilities. Throughout all efforts, ITD coordinates as appropriate with local, state, federal, and tribal regulatory agencies with jurisdiction and interest in these issues.

Section 3: ITD Board or Administrative Policies

Administrative: A407 discusses the Department's Environmental Monitoring Policy
Board: 4026 articulates the Department's environmental ethic and stewardship policy

Section 4: MOU or Service Agreements

- Programmatic Agreement between the Federal Highway Administration Idaho Division and the Idaho Transportation Department Regarding Approval Actions Classified as Categorical Exclusions for Federal-Aid Highway Projects. (2018)
- MOU between the Idaho Transportation Department and the Idaho Department of Fish & Game on interagency coordination (2015)
- MOA between Idaho Transportation Department and Idaho Department of Water Resources. (2017)
- MOA with FHWA and USFWS on *Procedures Relating to Section 7 of the Endangered Species Act and Transportation Projects in Idaho* (2003)
- Cooperative Agreement between the Idaho Transportation Department and the Idaho State Historic Preservation Office (SHPO) (2012)
- Cooperative Agreement between the U.S. Army Corps of Engineers (Walla Walla District), ITD, and FHWA to fund a liaison to streamlining and prioritization of reviews (2015)
- Memorandum of Understanding between the Federal Highway Administration Region 10, Portland, Oregon and the Environmental Protection Agency Region 10, Seattle, Washington and the Idaho Transportation Department Boise, Idaho on sole Source Aquifer protection in the State of Idaho (1989)

Section 5: Stakeholders and Partners

On a project by project basis, staff coordinates with

- Tribes
- FHWA
- Federal Land Management and Regulatory Agencies

- State Agencies
- Local Governments
- The public
- Advocacy groups
- MPO's

Similar coordination happens on a program level on an annual or sometimes quarterly basis

Section 6: Process

ITD statewide environmental staff assists the Department to construct transportation facilities in an environmentally responsible manner and comply with multiple environmental laws and regulations. This includes:

- Prepare, review, and approve environmental evaluations for transportation projects.
- Ensure legal compliance with environmental regulations and policy.
- Resolve conflicts on environmental matters.
- Plan and manage the environmental program:
    - Review and comment on federal and state rulemaking.
    - Provide interpretation of regulations and requirements to the Department.
    - Provide ITD's environmental policies, guidance, standards, and strategic goals.
    - Coordinate/liaison with federal or state environmental agencies; manage relationships and communications, dispute resolution, and enforcement issues.
    - Manage agreements with external agencies.
    - Develop and implement streamlining tools.
    - Identify and assess compliance risk.
    - Conduct statewide program reviews.
    - Meet project delivery standards.
    - Collect data for performance measures or assessments.
    - Prepare support data for legal counsel.
    - Provide technical support to statewide environmental training efforts.

Section 7: Recommendations and Implementation

Encourage Planning and Environmental Linkages (PEL) as projects are developed and constructed.

Section 8: Helpful Resources

- FHWA Environmental Toolkit: https://www.environment.fhwa.dot.gov/

To address regulatory requirements, ITD has outlined its practices and procedures in a series of manuals.

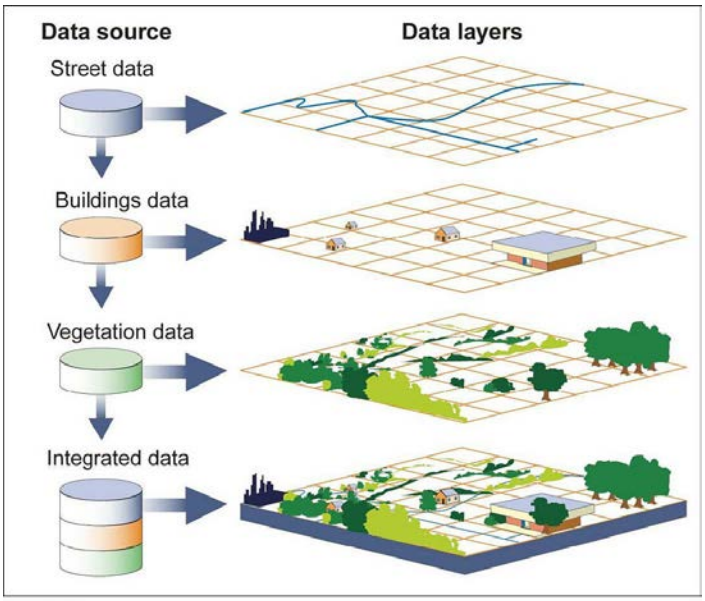
- The ITD Environmental Process Manual provides guidance for performing environmental investigations and preparing environmental documents for ITD projects. The manual outlines the National Environmental Policy Act (NEPA) process, provides guidance on conducting environmental analyses and complying with applicable environmental laws and regulations, and

provides information on developing and tracking mitigation measures and meeting environmental permitting obligations.

- The Best Management Practices Manual assists ITD and its contractors with Clean Water Act compliance during construction and post-construction phases of ITD projects.
- ITD-2950 Form (Stormwater Pollution Prevention Plan (SWPPP) Narrative for Construction Activities) provides ITD's contractors a template for stormwater compliance when working on a construction project that requires a National Pollutant Discharge Elimination Permit (NPDES).
- The Idaho Transportation Department Transportation Nosie Guidelines contains ITD's policy on highway traffic noise, construction noise, and noise abatement as it affects the human environment. This policy describes ITD's implementation of Federal Highway Administration (FHWA) traffic noise requirements codified in 23 Code of Federal Regulations (CFR) Part 772.

Technical Report 12

Geographic Information Systems (GIS)



Source: GAO.

Subject Matter Expert

Sydney Lewis
GIS Analyst

Introduction: Geographic Information Systems

A geographic information system (**GIS**) is a framework for gathering, managing, and analyzing data. Rooted in the science of geography, **GIS** integrates many types of data. It analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes. ITD uses GIS to create, analyze, and display critical data on maps to aid in planning and engineering decision-making.

ITD's GIS Section has 2 main goals:

1. Plan and scope roads, highways and bridges for the traveling public.
2. Empower users with a single source of truth for location data.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§5. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

Section 2: Federal and/or State Reference

Federal Reference:

- FAST Act
- Presidential Executive Order 13286 (https://ita.idaho.gov/documents/ExecutiveOrder13286.pdf)
- Federal Geographic Data Committee (https://www.fgdc.gov/standards)

State Reference:

- Idaho Technology Authority (https://ita.idaho.gov/resources.html#policies)
- Executive Order 2017-02 (https://ita.idaho.gov/documents/EO_2017-02.pdf)
- Executive Order 2005 (https://ita.idaho.gov/documents/execorder200522.pdf)

Section 3: ITD Board or Administrative Policies

Board Policy:

- 4015 – Idaho Highway Map

Administrative Policy:

- 5015 – Idaho Highway Map

Section 4: MOU or Service Agreements

All Idaho State Agencies work closely with the Idaho Geospatial Office (https://gis.idaho.gov/). The mission of the IGO is to provide leadership and coordination for the creation and maintenance if statewide based geospatial data (also known as the state's framework) and overall support to the GIS community. The IGO facilitates the use, development, access, sharing, and management of geospatial data and assist with communicating the value of geospatial information to citizens and decision-makers in the state of Idaho.

Section 5: Stakeholders and Partners

- Internal ITD staff
- Other State Agencies
- Federal Government
- Local Government
- Utilities
- Private Sector
- General Public
- Academic Institutions
- Tribal Government

Section 6: Process

Strategic decision-making is important to ITD. ITD staff relies heavily on information such as functional classification and pavement conditions to prioritize work and plan for future cycles. From pavement types to ramps to number of injury crashes, GIS integrates and distributes reliable, consistent information on visual maps for decision-making and information sharing.

PLAN	•Short-, mid-, and long-term planning based on accident locations, corridor analysis, etc. are possible with the help of GIS.
DEVELOP	•ITD staff uses GIS to forecast and prioritize projects with asset management, balancing funding and development needs throughout Idaho.
CONSTRUCT	•All projects are mapped, mainatined, and shared with the public through web GIS so that community members can proactively engage in the process.
MAINTAIN	•Using location as the common denominator, GIS tools allow ITD staff to visualize work activities and support future cycles of operating and planning.

Section 7: Recommendations and Implementation

Recommendations and Implementation

- Ensure that GIS is the single source of truth.
- Integrate business utilizing authoritative data.
- Minimize duplication.
- Empower personnel to access data, and make their own decisions.

Section 8: Helpful Resources

Helpful References

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- Maps and applications: http://www.iplan.mapsarcgis.com/home/gallery.html

Technical Report 13

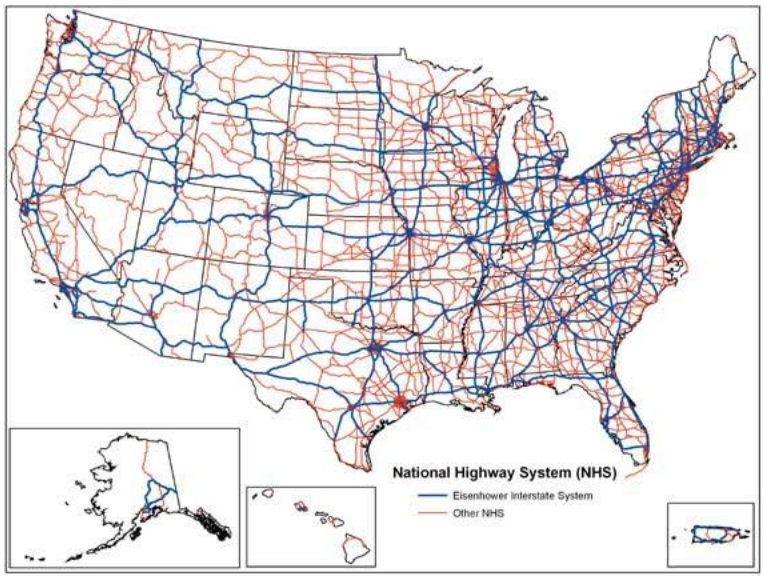
Systems Adjustments

Subject Matter Expert

Maranda Obray
Senior Transportation Planner

Introduction: System Adjustments

The Department has developed Standard Operating Procedures, or SOPs, outlining all adopted processes in order to make modifications on the National Highway and State Highway systems; activities to revise functional classifications of roads and highways; procedures to add/subtract to the highway systems; justify locations of urban boundaries; and methods to identify the multiple designations of roadways.



The National Highway System, or NHS, is a network of highways important to the Nation's economy, defense and mobility; which includes all designated Interstates, Expressways and Freeways, all Principal Arterials and above since the implementation of MAP-21. All NHS routes are subject to specific design standards, performance and asset management targets, data and monitoring, signs, project selection authority, and project funding and eligibility opportunities.

In addition to the NHS, the Idaho Transportation Board must establish and maintain Idaho's State Highway System, or SHS; which serves statewide economic interests, movement of products and materials, and statewide mobility. When presented with an adjustment (addition, removal or other system action) to the SHS, the Board Subcommittee shall rely upon department staff and recommend their decision to the Idaho Transportation Board.

Functional classification is the process by which "streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide". Basically, this process is the recognition that individual roads and streets do not serve travel independently; rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channelized within the network in a logical and efficient manner.

Functional classification carries with it expectations about roadway design, including its speed, capacity and relationship to existing and future land use development. Transportation agencies often describe roadway system performance, benchmarks and targets by functional classification. As agencies continue to move towards a more performance-based planning approach, functional classification will be an increasingly important consideration in setting expectations and measuring outcomes for preservation, mobility and safety.

Another important consideration is urban boundaries and how changes to the designated areas can affect the overall transportation system. Every 10 years, the United States Census Bureau reviews urban growth. Approximately two years after the decennial census is conducted, the Census Bureau distributes Urban Area Boundary maps. All cities over 5,000 populations, must review the potential census boundary changes and either accept them as is or adjust them for transportation planning purposes.

Section 1: FAST Act Applicable Section(s) for the LRTP

Applicable Sections of 23 CFR 450.216 Long Range Transportation Plan (FAST):

§C. "The long-range statewide transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; transportation needs studies; management systems reports; emergency relief and disaster preparedness plans; and any statements of policies, goals, and objectives on issues (e.g., transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long range statewide plan."

Section 2: Federal and/or State Reference

Federal Reference:

- 23 CFR 470
- 23 USC 100
- 49 USC 5302

State Reference:

- Idaho Code 40-120(5) – Definition of State Highway System
- Idaho Code 40-203 – Department may abandon or assume control of highway with consent of local highway jurisdiction
- Idaho Code 40-310 – ITD Board shall designate and accept/abandon roads as part of the State Highway System
- Idaho Code 40-312
- Idaho Code 67-5229
- Idaho Administrative Rule 39.03.43

Section 3: ITD Board or Administrative Policies

Board Policy:

- 4061 – State Highway System Adjustments
- 4069 – Corridor Planning for Idaho Transportation Systems

Administrative Policy:

- 5061 – State Highway System Adjustments
- 5069 – Corridor Planning for Idaho Transportation Systems

Section 4: MOU or Service Agreements

ITD does not have any specific MOUs or Service Agreements in place for System Adjustments.

Section 5: Stakeholders and Partners

ITD's stakeholders and partners include any local, metropolitan, state or federal agency that wants to make modifications to the State- and Local-Systems in Idaho. Additionally, stakeholders can be users of the system, as well as, property owners that are along the roadway.

Section 6: Process

Please review the following Procedures Manuals for full description of processes:

- Idaho Transportation Department Systems Procedures - https://apps.itd.idaho.gov/apps/plan/ITDSystemsProcedures.pdf
- Idaho Transportation Department State Highway System Adjustment Procedures – https://apps.itd.idaho.gov/apps/plan/ITDSystemsAdjustmentsProcedures.pdf

In accordance with 23 CFR 470, ITD has the primary responsibility for developing and updating Idaho's NHS, SHS, State and Local Functional Classification and Urban Boundary maps. To complete this task, ITD must collaborate with local officials, MPOs and/or appropriate federal agencies.

For urbanized areas, the designated MPO is responsible for developing and maintaining the functional classification of roads within their adopted boundaries through coordination with local cities, counties and highway districts. The goal of the MPO is to establish consistent standards in the overall classification process within their area and to maintain effective communication among public agencies responsible for roadways. If your community is within an MPO area, please contact that agency to determine what their process is for updating a specific roadway system classification.

The official National Highway System routes are depicted:

- On the PDF maps posted to http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/
- In the NHS Interactive Map Viewer located at http://hepgis.fhwa.dot.gov/. Users can pan and zoom to view NHS segments in greater detail
- In the NHS Shapefile posted to http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/. (When putting together an NHS submittal package to require System changes, as part of the review process, if ITD plans to compare the State's GIS record against the FHWA NHS shapefile, please make sure to download the latest NHS Shapefile from the link above.)

FHWA has final decision-authority for Idaho's NHS, SHS, State and Local functional classification and urban boundary designations. Once approval has been granted by FHWA, ITD will map the results to serve as the official record for all federally funded routes. The most up-to-date designations can be found in ITD's IPLAN; which is a web-based portal linking directly to ITD's authoritative data sources.

Section 7: Recommendations and Implementation

Use the Department's Systems Procedures and Systems Adjustment SOP to ensure that all procedures are followed to guarantee smooth additions, deletions and modifications to the transportation systems.

Section 8: Helpful Resources

Helpful References

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- 23 CFR Part 470 - https://www.ecfr.gov/cgi-bin/text-

idx?c=ecfr&SID=eae973efc51d208648a64d2bf8513117&rgn=div5&view=text&node=23:1.0.1.5.13&idno=23#23:1.0.1.5.13.1.1.9.15

- FHWA Highway Functional Classification Concepts, Criteria, and Procedures (2013 Edition) Manual - https://www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/
- Guidance Criteria for Evaluating Requests for Modifications to the NHS - https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=eae973efc51d208648a64d2bf8513117&rgn=div5&view=text&node=23:1.0.1.5.13&idno=23#23:1.0.1.5.13.1.1.9.18
- FHWA National Highway System Q&A - https://www.fhwa.dot.gov/map21/qandas/qanhs.cfm
- AASHTO Green Book - https://www.fhwa.dot.gov/design/standards/151112.cfm
- ITD Roadway Design Manual
- Strategic Highway Network (STRAHNET) - https://www.fhwa.dot.gov/policy/2004cpr/chap18.cfm
- Census Urban Boundary Maps - https://www.census.gov/

Technical Report 14

Asset Management

Subject Matter Expert

James Poorbaugh, PE, PMP
Asset Management Engineer

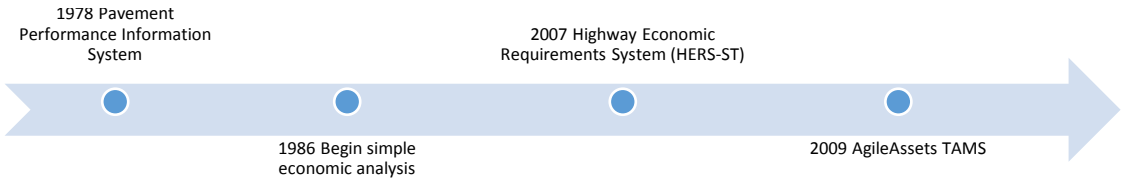
Introduction: Asset Management

Since the beginning of the Interstate Era, billions of dollars have been spent in Idaho building a sound transportation system. Maintaining and preserving our assets promotes safety, improves mobility and enhances economic opportunities. Utilizing transportation asset management strategies provides important quantitative and qualitative data that helps the department plan for future needs and program projects around pavement life-cycles. Based on the data the department also sets targets for asset condition and performance. The development and use of a Transportation Asset Management Plan (TAMP) incorporates asset management into the long-range transportation planning process. Furthermore, performance standards specific in the TAMP help ITD manage the organization's infrastructure so as to cost-effectively achieve the organization's strategic goals in the long-term.

The ITD manages a state highway network of approximately 5,000 centerline miles, or 12,000 lane miles, plus more than 1,700 bridges over 20 feet. The entire Idaho road network is more than 60,000 miles with the large majority owned by local governments. ITD's routes carry 54% of the state vehicle miles of travel (VMT) with 45% of the state's VMT being on the Interstate Highway System network. The effective management of this system into the future is critical and is dependent upon good decisions based on quality data and information.
A widely held definition for asset management is:

> *A strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets a minimum practicable cost.*

ITD Pavement Management Historical Timeline



Over the last 40-years ITD has implemented numerous best practices and strives to meet this definition. These efforts have provided a stable and strong foundation upon which ITD will continue to build its asset management practice over the next 20-years. As previously discussed, the cornerstones of this foundation, which support quality, are people, process, and technology.

Section 1: FAST Act Applicable Section(s) for the LRTP

23 CFR 450.216 (c) of the FAST Act states that Long-Range Transportation Plans should include the following:

*"The long-range transportation plan shall reference, summarize, or contain any applicable short range planning studies; strategic planning and/or policy studies; **transportation needs studies**; **management systems reports**; emergency relief and disaster preparedness plans; and any statements of policies, goals and objectives on issues (e.g, transportation, safety, economic development, social and environmental effects, or energy), as appropriate, that were relevant to the development of the long-range statewide plan."*

Section 2: Federal and/or State Reference

Federal Reference:	23 U.S.C. 101(a)(2), 23 U.S.C. 119(e)(1), 23 CFR 515.9 MAP-21 § 1103, MAP-21 § 1106
State Reference:	No Idaho Code References found

Section 3: ITD Board or Administrative Policies

Administrative:	None
Board:	None

Section 4: MOU or Service Agreements

At the present time, there are no MOU or Service Agreements in place concerning Aeest Management.

Section 5: Stakeholders and Partners

Stakeholders: Internally, every section and district is considered a stakeholder in the asset management process. Each area is responsible for collecting data and using the analysis output. Executive leadership use the data to assess performance policies and strategically direct limited funds.

Partners: LHTAC, MPOs and Local Highway Jurisdictions

Section 6: Process

The Idaho Transportation Department (ITD) is committed to the effective management of the state's highways to protect the public's safety and its massive investment in this important infrastructure. As part of this commitment ITD has demonstrated a focus on the effective utilization of technology and asset management practices for over 40-years. It is important to note that ITD does not solely consider facility classification; rather, ITD looks through the lens of overall benefit to the visitors and residents of Idaho. This focus has placed ITD in the enviable position that the State Highway System (SHS) roads and bridges are nearing or exceeding ITD's goals and where the National Highway System (NHS) subset of

SHS exceeds Federal targets and goals. The NHS is a subset of 174,000 of the most important roads nationally. In Idaho, 2,096 miles are on the NHS including the Interstates and major routes such as US-95, US-55, US-26, US-33, US-12 and others. Congress emphasizes the condition of the NHS because of its freight and travel importance.

The State's roadway network is one of Idaho's most valuable assets and is integral to the public's safety, mobility and economic opportunity. Idaho's transportation system includes a statewide network of more than 60,000 miles of roads and nearly 4,000 bridges. Of these, ITD manages almost 5,000 miles of highways and more than 1,700 bridges. ITD manages just 9.7 percent of all roadway miles in Idaho; however, the state system carries 55 percent of Idaho's total vehicle miles of travel (VMT). Although a small percentage of total lane miles within the State of Idaho, 1.2 percent, the Interstate highways alone carry 25 percent of miles traveled in Idaho. Within the SHS that ITD manages, the interstate accounts for 45 percent of the VMT. These assets are aging but as they do, they become even more important. From 1996 to 2018, vehicle miles travelled on the state highway system grew more than 38 percent. The Interstate system experienced a 55 percent increase in travel over the same period while the state system, excluding the interstates, experienced a 27 percent increase. This growth reflects the increasing mobility of Idaho's population and the growing importance of freight movement to our economy.

In 2018, the department submitted the DRAFT ***Transportation Asset Management Plan*** (TAMP) which, as federally required, focuses mainly on the NHS but emphasizes the need to adequately maintain all roads.

The TAMP includes information on:

- Objectives that ITD seeks to achieve;
- ITD's asset measures and targets;
- Description of the department's assets;
- Description of the gap analysis the department used and results;
- The asset management life cycle planning process;
- The risk management process used;
- Documenting the financial planning process; and
- Identifying Investment strategies for expenditures.

Section 7: Recommendations and Implementation

As ITD Asset Management looks to the future, we understand that the practice of asset management is about maintaining the transportation assets in a condition meeting the expectations of a varied and diverse group of people. This includes users of the system (citizens, tourists, trucking industry...); metropolitan planning organizations; and local, state and federal government officials. In order to accomplish this ITD Asset Management is focused on the 3-R's: Relationships, Relevance, Rigor. With respect to relationships, ITD Asset Management is committed to maintaining and strengthening existing strategic relationships. ITD will accomplish this through continued outreach and communication. A critical component of relationships is establishing understanding of relevance between the parties. ITD future practice of asset management is dependent upon successfully promoting the understanding to our stakeholders why asset management is relevant. This will be accomplished through the public

outreach and the preparation, adoption and certification of a Transportation Asset Management Plan (TAMP). Rigor is the quality of being extremely thorough, exhaustive or accurate, though relational communication with stakeholders ITD will ensure that it is not confusing effort with results rather providing the right information, to the right people at the right time.

Regarding the second cornerstone, processes, ITD asset management staff will identify processes that hinder progress toward achieving and sustaining the desired state of good repair. The state of good repair will be measured by the degree to which performance targets are achieved.

The types of possible process improvements that will be sought if the targets are not being met could include:

- Difficulty in delivering needed projects and maintenance activities because of issues related to funding, permitting, contractor availability, storms, or other climatic or seismic events;
- Accelerated deterioration caused by increased traffic loadings, failure of materials or earlier treatments to provide the longevity that was expected;
- Inaccuracies in forecasts from bridge or pavement models, or:
- Other factors such as a re-direction of priorities from the Legislature.

Alternative strategies will be investigated through consultation with bridge and pavement subject matter experts, materials and construction staff, district personnel, and agency leadership.

As appropriate, alternative strategies will be reviewed that could include:

- Increased investments or tradeoffs from other programs if needed;
- Review of possible different materials or treatment types, if needed;
- Re-calibration or improvement in deterioration curves and other elements of bridge and pavement forecasts;
- Updates of unit costs to more accurately reflect evolving prices;
- Stepped up maintenance efforts if they can contribute to the target achieve, or:
- Adoption of additional policies appropriate to addressing the gaps.

Other process that will be reviewed will be those that could affect the performance of the transportation network.

The performance of the transportation network will be viewed through three primary lenses:

1. Does any condition gap impede achievement of any ITD highway safety goal, objective, or target?
2. Does any condition gap impede the efficient movement of freight on the network, and/or;
3. Does any condition gap impede the efficient movement of people, such as contributing to inordinate congestion or travel delays?

The methodology for identifying these process gaps will rely on consultation with the ITD staff. The consultation also will be facilitated with MPOs, and operators of public transportation via jointly agreed upon and development of specific written provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the

reporting of performance targets, the reporting of performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO, and the collection of data for the State asset management plan. As part of this joint, collaborative process, ITD will seek from the regional planners and operators of transit agencies any identified gaps that impede achievement of the safe, efficient movement of goods or people.

If gaps are identified, the ITD will use its planning and asset management process to develop alternative strategies to present to the ITD Board. The tools and processes it will use could include, as appropriate and relevant:

- Iterations of bridge and pavement investment strategy scenarios using the bridge and pavement models;
- Scenarios of increase investments, or tradeoffs between asset classes, to close gaps;
- Review of alternative maintenance strategies if any of the gaps could be alleviated through maintenance activities;
- The adjustment of targets;
- Consideration of different materials or treatments if, for example, a lack of pavement frictions is determined to contribute to highway crashes, or;
- Increased bridge investments if posted structures are restricting freight movement on NHS connectors or other key routes.

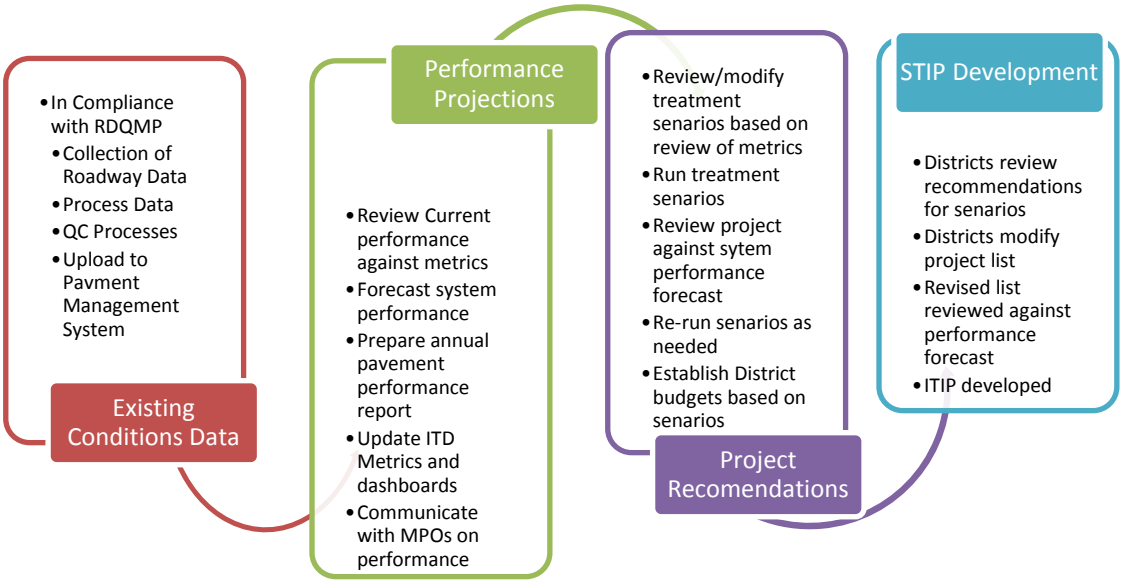
As alternative strategies are developed, they will be summarized and presented to the ITD board along with their implications relating to funding, tradeoffs with other asset classes, and/or their impact on system performance. At the direction of the Board, the approved strategies will be implemented to address the performance of the NHS as influenced by asset conditions.

Additional Process Improvements
ITD also is taking steps to enhance several asset management processes that will strengthen future asset management plans.
These include:

- ITD will enhance its pavement management model. It is in process of having additional consultant subject matter experts review the model and help ITD improve deterioration curves, treatment triggers, and condition forecasts. This effort is part of the continuous improvement process that ITD applies to all of its asset management efforts.
- ITD will continue developing the BrM Bridge Management System. ITD has been using the relatively new AASHTO bridge management system known as BrM. BrM has been available for data collection and storage for several years but its modeling functions are still relatively new. ITD is in process of refining the modeling capability of BrM to complement the in-house modeling processes that ITD has been using. ITD will continue to review its capabilities with BrM to enhance its bridge modeling processes.
- Assess the long-term consequences of the Non-Commerce Route treatments. ITD has divided all routes into Commerce and Non-Commerce routes. Non-Commerce routes handle less than 300 trucks per day. Because of higher priorities in other programs, ITD has limited for several years the treatments on Non-Commerce routes to preservation-type treatments and is not funding structural repairs to Non-Commerce pavements.

- Assess the Long-Term Needs of ITD's Large Structures. ITD's ten largest structures have an average age of 41 years old. Within the next 20 years, several of them are likely to need major rehabilitation which will create inordinately high costs for the bridge program. Three of them have substructures that are rated 5, which is Fair, and one has a deck and another a superstructure rated 5. ITD will consider whether it necessary to develop a multi-year program to plan for the rehabilitation or replacement of these structures at the appropriate time in their lifecycle.

Technology is the last focus area for ITD Asset Management. ITD employs technology to acquire, process and report data. The following graphic shows a schematic of the data flow within ITD Asset Management Section.



Currently the primary data collection devices utilized by ITD include PathRunner Profiler van, a Pavement Friction Tester (PFT), and a Falling Weight Deflectometer (FWD). Since 1995, Idaho has used PathRunner Profiler van technology to gather the majority of the roadway data. In 2017, ITD purchased a new road profiler van to greatly enhance the data quality and quantity that we are able to obtain and process. The profiler van drives every mile of state jurisdiction highway in the State of Idaho and digitally records its condition. From that data, the Pavement Analysis section extracts two values for pavement: roughness index and rutting depth. Public access to information generated by the profiler van is available via http://pathweb.pathwayservices.com/idaho/ .
The Department collects friction data (a number typically between 20 - 100, with the higher numbers representing a higher friction value) by towing a trailer that measures the force on a wheel that is locked but not rotating (i.e., skidding). The friction represents the friction experienced by tires traveling on the pavement surface while wet. The pavement engineers can use this number to calculate whether a pavement needs a sealcoat or other remedy to improve surface friction.

The FWD is a non-destructive testing device that is used to complete structural testing for pavement rehabilitation projects, research, and pavement structure failure detection. The FWD is a device capable of applying dynamic loads to the pavement surface, similar in magnitude and duration to that of a single heavy moving wheel load. The response of the pavement system is measured in terms of vertical deformation, or deflection, over a given area using seismometers. ITD collects this data on sections of state highways that are eligible for paving projects, and uses the results to design the new pavement that is needed.

The Department has initiated a pilot program to explore the use of Ground Penetrating Radar (GPR) to visualize the pavement sub-surface structure. The intent is to provide pavement engineers better data from a continuous scan of a section rather than just the 1/10th or ½ mile data from the FWD and borings. This will enable them to better estimate and plan for variations in sub-surface conditions when programming roadway improvements. ITD also began collecting network level GPR scans of all commerce routes in the state. This effort was completed summer of 2017

Collection technology is ever evolving. ITD is committed to embracing new technology that advances the practice of asset management. One such technological advance come in the form of the Travel Speed Deflectometer (TSD). This technology is similar to the FWD except that it travels at highway speeds and collects data continuously, whereas accepted practice is that the FWD collects data ever 550-feet and collection occurs at approximately 4-mph. ITD demonstrated its commitment to this advance technology by joining a national pooled fund study in 2018 which will explore the effectiveness of this technology as well as establish best practices. The aim of this is more efficient collection of pavement structure data. With this information ITD will be more effective in the determination of the pavement structure. This in turn will lead to ITD selecting the right treatment at the right location at the right time.

Sharing information and data is currently facilitated by posting reports and findings on the ITD website. ITD has begun using geographic information systems (GIS) as a framework to organize and report out data. The future of ITD asset management will rely heavily on this technology to provide access to and communicate asset management information.

Section 8: Helpful Resources

- http://www.hrtpo.org/uploads/docs/State%20of%20Transportation%202017%20-%20Final%20Report.pdf
- ITD Transportation Asset Management Plan
- https://www.fhwa.dot.gov/asset/

Appendix 3: Public Involvement Summary

IDAGO 2040 – Stakeholder Meeting Summary

Meeting Purpose
The Idaho Transportation Department (ITD) hosted a series of stakeholder meetings in each ITD District to encourage participation in the long-range planning process and solicit input on future planning scenarios related to safety, mobility, and economic opportunity. The purpose of the meetings was to share information about ITD's modal planning activities, transportation systems, transportation data, and new/emerging technologies and to strengthen long-term working relationships between partner agencies.

Invitations and Attendance
ITD sent email invitations to approximately 850 stakeholders to attend stakeholder workshops in their local ITD Districts. A total of 82 stakeholders attended the seven meetings. Sign-in sheets for each meeting are provided in Attachment 1.

Table 1 Stakeholder Attendees

ITD District	Meeting Location	Meeting Date	Stakeholder Attendees
1	Coeur d'Alene	4/25/18	16
2	Lewiston	3/12/18	4
3	New Plymouth	4/23/18	5
	Meridian	5/3/18	26
4	Twin Falls	4/11/18	5
5	Pocatello	3/22/18	8
6	Idaho Falls	3/7/18	18
		Total	**82**

Meeting Overview
Each of the seven stakeholder meetings held throughout the state followed the same agenda format (included in Attachment 2). Staff intentionally presented the same information to facilitate the same discussions with participants on the topics presented to enable quantitative and qualitative analysis of responses, which are presented in this report.

Each meeting was staffed with ITD HQ, ITD District, and consultant staff to accommodate the pre-registered attendees. The LRTP Project Manager, Ken Kanownik, provided an overview presentation outlining the purpose and scope of the long-range transportation plan.

After the initial presentation, ITD staff and consultant representatives facilitated an exercise to gather stakeholder input on three primary topic areas: modal planning, transportation data, and new and emerging technologies. After a brief introduction to each topic, stakeholders were encouraged to write their views on each board with suggestions, best practices, and key words related to categories in which they had experience or interest. Following the initial input, stakeholders were given 10 red dots to

affirm those comments they felt best addressed their statements. The number of red dots next to a topic indicated the number of affirmations from other stakeholders. After the exercise, ITD staff and the consultant reviewed and compiled stakeholder dots from all white board comments throughout the state. The comments with the most dots in each tub-topic area are presented in Table 2.

Table 2 White Board Comments

Primary Topic	Sub-Topic	Category	Comment with Highest Dot Count	Dot Count
Modal Planning	Purpose/Scope	Multi Modal	Look beyond state system	10
	Guidance/Policy	Coordination	Coordinate with City/County plans	9
	Public Involvement/ Advisory Groups	Coordination	Regional councils or groups	8
	Priority Planning	Multi Modal	Pursue funding for all modes and ITD needs to take a leadership role to get that funding	17
Data and Systems	Models	Coordination	State/regional/local needs	5 (tie)
		Multi Modal	Alternate transportation models	5 (tie)
	Governance	Share	Share Data	16
	Data Collection	Share	Collaboration and sharing	7
	Analytics	Governance	Standardize results	7
New and Emerging Technology	Benefits	Safety	Improved safety	7
	Risks	Safety	Not safer infrastructure	7
	Leadership Role	Coordination	Local/state coordination	10
	Investment Strategies	Coordination	Out-of-State Case Studies	6

Attachment 3 provides a summary of all white board comments based on the number of red dots that were represented. While some comments did not receive a red dot, ITD staff will review and consider all comments. Attachment 3 also includes photographs of each board with dots.

Following the white board exercise, ITD staff and the consultant requested input from stakeholders in eight scenario categories. For each scenario topic, ITD staff provided an overview of Idaho data and trends before asking stakeholders to consider whether the trend would increase, decrease, or remain unchanged over the next twenty years. Votes are intended to indicate predictions (i.e., forecasts) as opposed to positions (i.e., desired outcomes). Table 3 details statewide percentages for each scenario topic, with top percentages outlined in black. Copies of scenario ballots are provided in Attachment 4.

At the statewide level, participating stakeholders predict:

- Long-term continued high growth for Idaho demographics – (56%)
- No significant difference in rural fatalities – (42%)
- Alternative transportation trips (mode split) will increase compared to single occupancy vehicle (SOV) trips – (45%)
- Autonomous vehicle use will increase slower than hybrid/electric vehicles – (46%)
- Connected vehicle use will increase faster than hybrid/electric vehicles – (63%)
- Ride sharing serves a different use base than public transit – (39%)
- Private services will evolve and outdate public service 511 – (53%)
- "Wear & tear," natural variations in pavement life, and the nature of funding legislation will continue to make funding strategies and pavement modeling longer than 5 years difficult – (42%)

Table 3 Scenario Planning – Statewide Results

Scenario Category		Which scenario will control Idaho?									
		Prediction ⇧	#	%	Prediction ⇔	#	%	Prediction ⇩	#	%	Total #
1	**Idaho Demographics**	The economic factors of Idaho will support long-term continued high growth.	40	56%	The economic factors of Idaho are variable and growth will vary from year to year.	30	42%	Limiting economic factors and resources of Idaho will limit growth and continued high growth is not likely.	2	3%	72
2	**Safety – Rural Fatalities**	The demographic shift from rural to urban will increase rural fatalities.	29	40%	No significant difference.	31	42%	The demographic shift from rural to urban will decrease rural fatalities.	13	18%	73
3	**Urban & Alternative Transportation**	Alternative transportation trips (mode split) will increase compared to single occupancy vehicle (SOV) trips.	32	45%	No significant difference.	27	38%	Alternative transportation trips (mode split) will decrease compared to SOV trips.	12	17%	71
4A	**Vehicle Fleet – Autonomous Vehicles**	Autonomous vehicles use will increase faster than Hybrid/Electric vehicles.	25	36%	No significant difference.	13	19%	Autonomous vehicle use will increase slower than hybrid/electric vehicles.	32	46%	70
4B	**Vehicle Fleet – Connected Vehicles**	Connected vehicle use will increase faster than hybrid/electric vehicles.	44	63%	No significant difference.	9	13%	Connected vehicle use will increase slower than hybrid/electric vehicles.	17	24%	70
5	**Ride Sharing**	Ride sharing serves as a compliment to public transit and increases the user base of public transit.	22	33%	No significant difference.	19	28%	Ride sharing serves a different user base than public transit.	26	39%	67
6	**511 – Highway Information Systems**	Private services will evolve and outdate public service 511.	38	53%	No significant difference.	11	15%	511 service will maintain an equitable commercial-free highway information service.	23	32%	72
7	**Long-Term Highway Preservation Strategy**	Funding strategies and pavement models can be accurate longer than 5 years with increased investments and development.	14	20%	ITD can adapt and innovate regardless of funding and pavement modeling strategy.	26	38%	"Wear & tear," natural variations in pavement life, and the nature of funding legislation will continue to make funding strategies and pavement modeling longer than 5 years difficult.	29	42%	69
Percentages reflect total number of votes for each scenario category (as opposed to total number of attendees).											

Individual Presentations and Engagement

ITD provided an open invitation to any transportation-related work groups, agencies, or professional organizations across the state during the development of the Long-Range Transportation Plan. Table 4 references those engagements.

Table 4 Invitational LRTP Presentations

Group/Presentation	Date	Location	Attendance
ITD Tribal Summit	8/3/2017	Boise	~25
Bicycle and Pedestrian Advisory Committee	3/29/2017	Boise/Conference Call	~10
Bicycle and Pedestrian Advisory Committee	2/1/2018	Boise/Conference Call	5
Boise Metro Chamber of Commerce	3/21/2018	Boise	~20
Idaho Freight Summit	4/10/2018	Boise	~50
Foundation for Ada/Canyon Trail System, Inc.	5/23/2018	Meridian	8
Nez Perce Tribe	3/17/2018	Lewiston	3
Southeast Idaho Five County Coalition	7/19/2018	Malad	120
Relevance2 Retreat	7/25/2018	Boise	15
Public Transit Summit	8/21/2018	Boise	81
		Total	**~337**

Metropolitan Planning Organization Collaboration

ITD also provided updates to the five Idaho Metropolitan Planning Organizations (MPOs). The Idaho MPOs meet on a regularly scheduled basis known as the Urban Balancing Committee. This committee also has membership from Idaho's Local Highway Technical Assistance Council, and the FHWA attends in an observatory role. ITD presented updates to the MPOs via the Urban Balancing Committee as detailed in Table 5.

Table 5 MPO/FHWA/LHTAC Updates

Date	Location	Attendance
4/6/2017	Meridian	~10
11/2/2017	Meridian	~11
2/1/2018	Meridian	~12
	Total	**~33**

ITD Long-Range Transportation Plan Steering Committee

The Steering Committee meetings also included a built-in component to further allow participation and collaboration from stakeholders. Each Steering Committee meeting provided an open forum for stakeholders to comment directly to the members of the Steering Committee which could be considered in the advice and direction given to ITD staff directly working on the plan. Each ITD district office also had a video feed to the steering committee meetings. This allowed for participation across the state. Table 6 summarizes these meetings.

Table 6 Steering Committee Meetings

Date	Location	Attendance
7/13/2017	Boise & Video Feed in Each District	~30
2/13/2018		~30
8/2/2018		~30
Total		**~90**

List of Attachments (Electronic Version Only)

- Attachment 1: Workshop Agenda and Presentation
- Attachment 2: Whiteboard Photos
- Attachment 3: Whiteboard Consolidation Tables

ITD Response and Incorporation of Stakeholder Input

Stakeholder meeting attendees were informed that their input would be summarized and distributed to Subject Matter Experts (SMEs) at ITD responsible for input to IDAGO 2040. ITD staff received copies of the Stakeholder Meeting Summary on June 11, 2018. A presentation was given, including a summary of input, to the Idaho Transportation Board on June 21, 2018. The IDAGO 2040 Steering Committee received a briefing on August 2, 2018. In addition to incorporating the input into the plan. The feedback from stakeholders also resulted in additional targeted stakeholder involvement. An example of the additional outreach was a presentation and interactive input at ITD's annual Transit Summit on August 21, 2018.

Online Survey Summary

Introduction

On March 5, 2018, the Idaho Transportation Department (ITD) launched an online public survey to solicit user feedback on transportation priorities, budget allocation, and tradeoffs as part of the IDAGO 2040 update process. The survey was linked through the ITD website and hosted via a third-party vendor. ITD placed advertising in newspapers across Idaho encouraging members of the public to participate in the survey. The survey closed on June 7, 2018, after nearly 1,000 people viewed the survey and more than 500 provided information through at least one of the input screens.

The survey tool included an interactive set of five screens providing information to respondents and requesting their input in three specific areas: selection of transportation priorities, preferred budget allocation, and assessment of transportation tradeoffs. Survey screens are presented in Attachment 1. The purpose of the survey was to educate the public about competing priorities and strategies, provide an opportunity for public involvement and feedback in the plan process, and enable ITD to gauge preferences of survey respondents. Survey respondents could also submit written comments regarding the priorities and tradeoffs screens. ITD received a total of 183 written survey comments, which are compiled in Attachment 2.

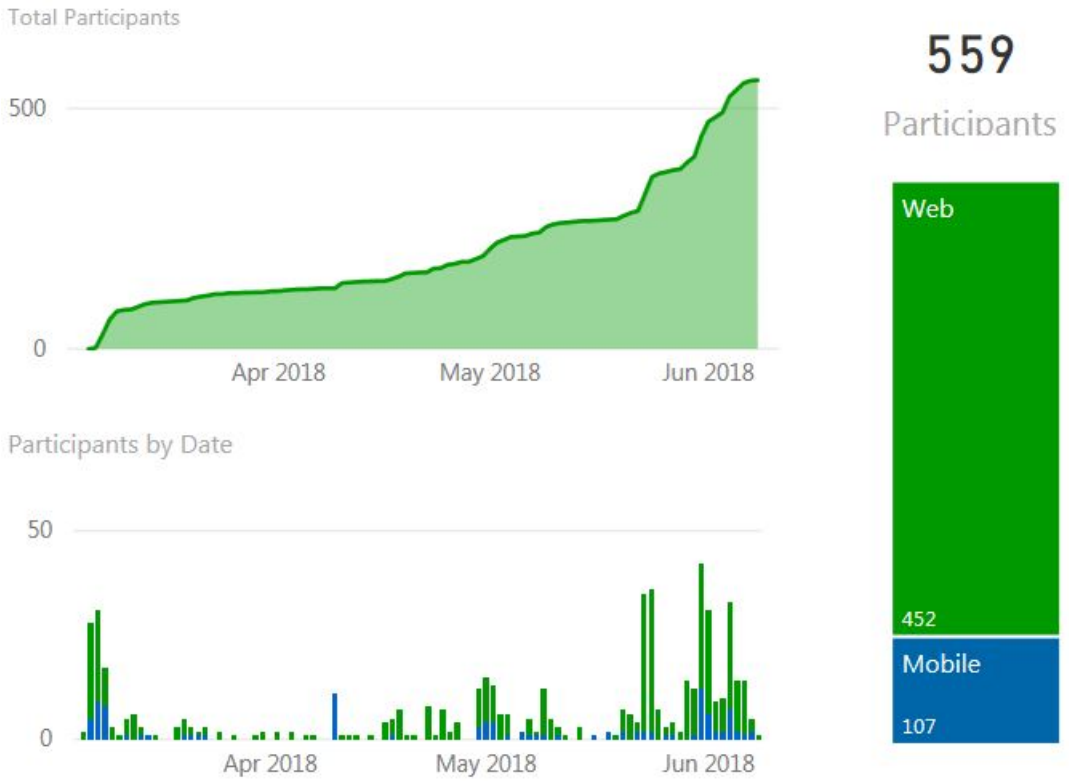
This summary provides an overview of respondent results and demographic information. Results are not intended to provide statistically-valid comparisons.

Survey Visits

A total of 983 people viewed at least one screen via a mobile or desktop platform. Of those, 559 provided data through at least one screen resulting in a conversion rate of approximately 57%. Visits peaked at the beginning and the end of the survey period with occasional spikes following a coordinated media push or IDAGO 2040 event.

Most participants accessed the survey using a desktop website, while approximately 20% accessed the survey through a mobile device.

Figure 1 Survey Participants



Priority Ranking

The survey asked respondents to rank priority areas from most to least important. Respondents could select one to four areas most important to them. The results in Figure 2 show the number of times each priority was ranked (i.e., how often it was selected as a priority) as well as the average ranking. A rank of 1 indicated the highest priority and a rank of 4 indicated the lowest priority.

At the statewide level, participants selected Congestion & Delay Relief as the top priority area according to average rank, while Preservation & Maintenance was ranked the most times.

Within each District, top priority areas in terms of average rank included Idaho's Environment (D1 and D5), Preservation and Maintenance (D2, D4, and D6), and Congestion & Delay Relief (D3). In terms of number of times ranked, Preservation & Maintenance was the top priority or tied for top priority in D1, D2, D4, D5, and D6. Congestion & Delay Relief received the most rankings in D3.

Figure 2 Statewide Priority Ranking

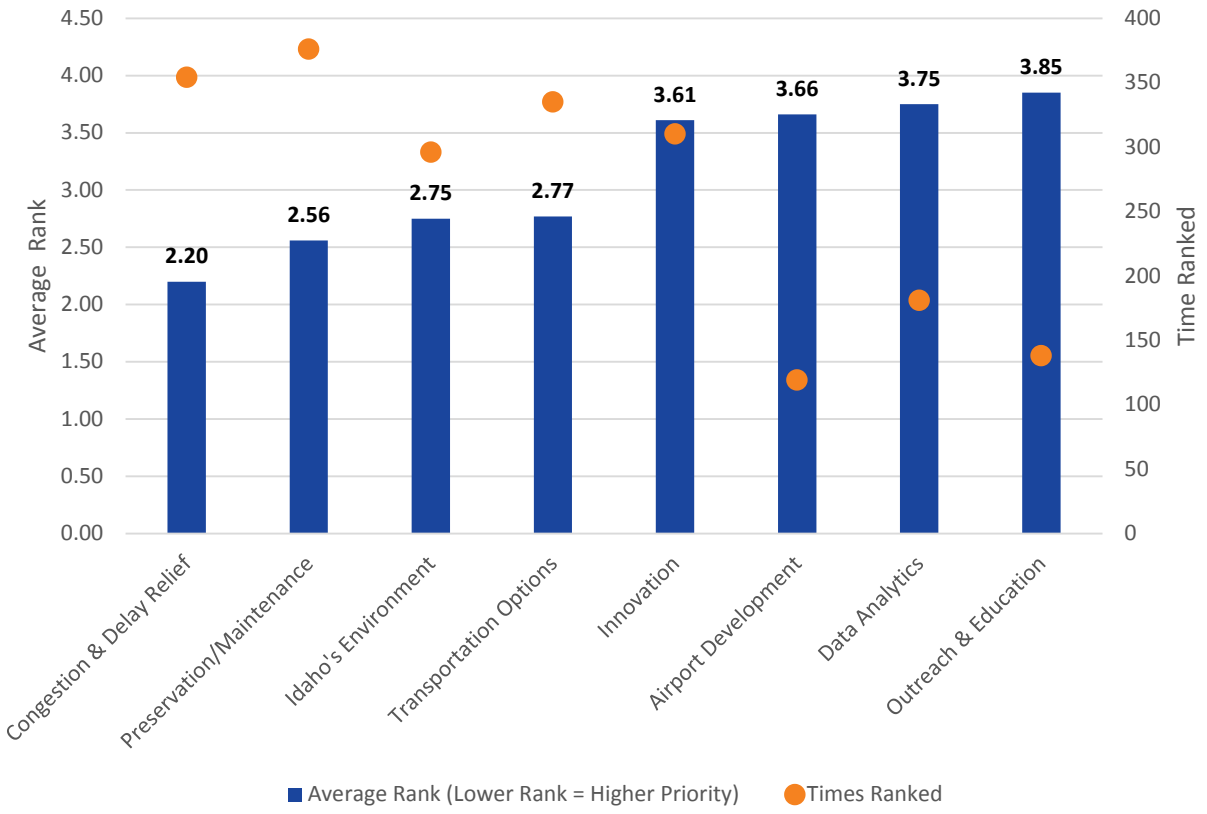


Table 7 Priority Ranking Summary

Priority Area	Average Rank						
	State	D1	D2	D3	D4	D5	D6
Congestion & Delay Relief	**2.20**	2.57	3.42	**1.90**	3.00	2.33	3.20
Preservation & Maintenance	2.56	2.43	**2.05**	2.86	**1.82**	2.75	**2.00**
Idaho's Environment	2.75	**2.30**	2.53	3.02	2.50	**1.00**	2.87
Transportation Options	2.77	2.78	2.85	2.71	4.11	2.50	2.75
Innovation	3.61	3.72	3.26	3.63	3.11	4.00	3.26
Airport Development	3.66	4.00	4.43	3.48	3.67	4.00	4.40
Data Analytics	3.75	4.00	3.90	3.80	3.00	5.00	3.40
Outreach & Education	3.85	4.14	3.08	3.95	3.50	3.00	3.56

Shaded cells indicate lowest rank (highest priority) for each geographic area. Statewide values exclude entries with zip code marked as 1. District results are based on reported home zip codes.

Table 8 Priority Ranking Summary

Priority Area	Number of Times Ranked						
	State	D1	D2	D3	D4	D5	D6
Preservation & Maintenance	**376**	**54**	**22**	187	**11**	**4**	**23**
Congestion & Delay Relief	353	46	12	**191**	9	3	20
Transportation Options	332	50	13	167	9	**4**	20
Innovation	308	46	19	154	9	**4**	19
Idaho's Environment	294	47	15	147	8	1	15
Data Analytics	179	22	10	99	6	1	10
Outreach & Education	136	22	12	60	4	2	9
Airport Development	116	11	7	56	3	1	5

Shaded cells indicate highest number of times ranked for each geographic area. Statewide values exclude entries with zip code marked as 1. District results are based on reported home zip codes.

Budget Allocation

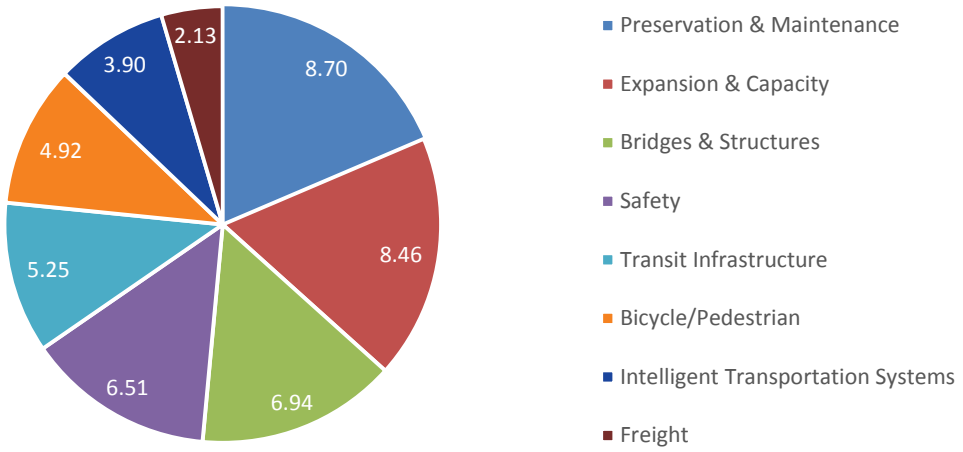
Participants were given a value of 50 "coins" (10 coins with a value of 1 and 8 coins with a value of 5) with instructions to divide between eight budget areas. Results reflect the average value of coins allotted to each area. Aligning with results for the Priority Ranking screen, the Preservation & Maintenance and Expansion & Capacity categories received the highest average budget allocation at the statewide level. Preservation & Maintenance was also rated the highest in four of six ITD Districts, with Expansion & Capacity ranking highest in District 3 and Bicycle/Pedestrian ranking highest in District 5.

Table 9 Budget Allocation Summary

Budget Area	Average Allocation						
	Statewide	D1	D2	D3	D4	D5	D6
Preservation & Maintenance	**8.70**	**9.13**	**11.10**	8.15	**11.57**	8.60	**10.06**
Expansion & Capacity	8.46	8.30	7.14	**9.67**	7.57	5.43	6.71
Bridges & Structures	6.94	7.96	7.66	6.54	10.92	7.40	7.94
Safety	6.51	6.36	8.61	6.24	8.93	10.20	6.44
Transit Infrastructure	5.25	6.18	4.73	5.36	3.53	5.67	4.31
Bicycle/Pedestrian	4.92	5.91	3.88	4.89	2.57	**11.80**	3.94
Intelligent Transportation Systems	3.90	3.91	2.49	4.29	2.57	5.20	3.79
Freight	2.13	1.57	2.95	2.14	2.64	3.60	2.91

Shaded cells indicate highest average for geographic area. Statewide averages exclude entries with zip code marked as 1. District results are based on reported home zip codes.

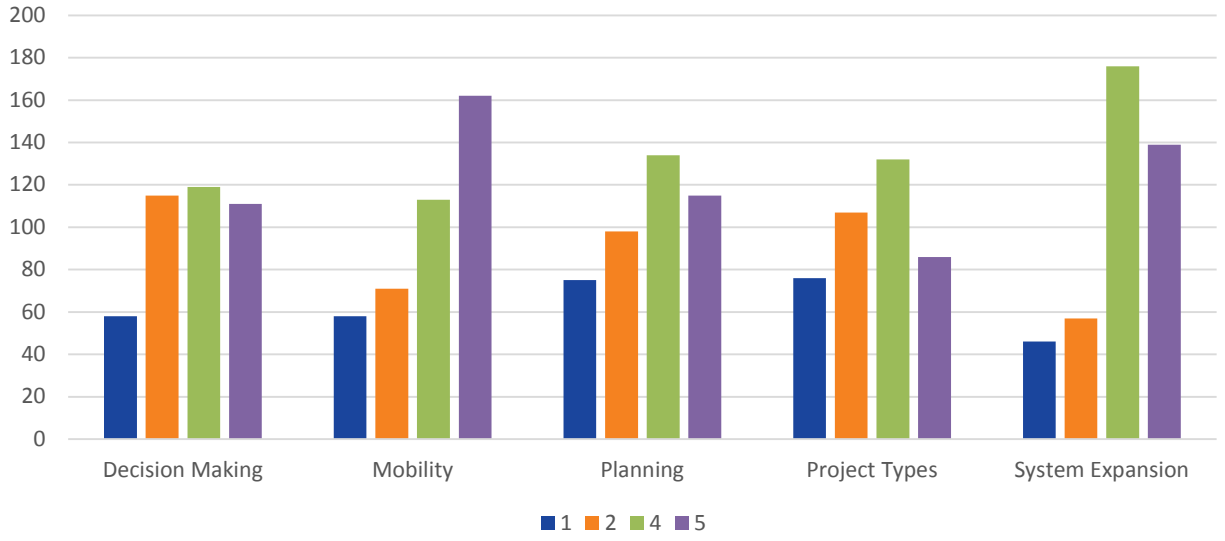
Figure 3 Statewide Average Budget Allocation



Tradeoffs

ITD must balance competing needs across the state. Survey participants were asked to indicate recommendations for how ITD should manage five transportation tradeoffs. For each tradeoff, participants could choose one of five selections: 1) strongly prefer option A, 2) somewhat prefer option A, 3) neutral, 4) somewhat prefer option B, and 5) strongly prefer option B. Excluding the neutral option (3), statewide average results for the remaining four choices are presented in the figure below.

Figure 4 Statewide Average Tradeoffs



In all cases, the sum of statewide preferences for option B was greater than the sum for option A. Preference for option B also occurred in Districts 3 and 5, with mixed results in Districts 1, 2, 4, and 6.

Table 10 Tradeoffs Summary – Statewide

Tradeoff Category	Option A	SUM A	1 <<	2 <	4 >	5 >>	SUM B	Option B
Decision Making	Return on Investment	173	58	115	119	111	**230**	**Public Opinion and Input**
Mobility	Freight and Commerce	129	58	71	113	162	**275**	**Commuters and Transit**
Planning	Traditional Highway Infrastructure	173	75	98	134	115	**249**	**Infrastructure of Future Technologies**
Project Types	Larger Number of Smaller Projects Statewide	183	76	107	132	86	**218**	**Fewer Number of Larger, Strategically Located Projects Statewide**
System Expansion	Construct New Highways	103	46	57	176	139	**315**	**Expand Existing Highways**

Shaded cells indicate highest sum of preferences. Statewide averages exclude entries with zip code marked as 1. Neutral responses (3) are excluded from analysis.

Table 11 Tradeoffs Summary – Districts

Tradeoff Category	D1		D2		D3		D4		D5		D6	
	SUM A	SUM B	SUM A	SUM B	SUM A	SUM B	SUM A	SUM B	SUM A	SUM B	SUM A	SUM B
Decision Making	19	**33**	7	**16**	108	**121**	**6**	**6**	1	**3**	11	**17**
Mobility	15	**38**	**10**	**10**	68	**168**	**6**	4	1	**4**	**15**	13
Planning	14	**43**	**15**	7	96	**148**	6	**7**	1	**3**	**13**	12
Project Types	**34**	19	**14**	9	78	**151**	**7**	4	2	**3**	**13**	11
System Expansion	4	**52**	3	**19**	72	**168**	4	**7**	0	**4**	6	**21**

Shaded cells indicate highest sum of preferences. Statewide averages exclude entries with zip code marked as 1. Neutral responses (3) are excluded from analysis.

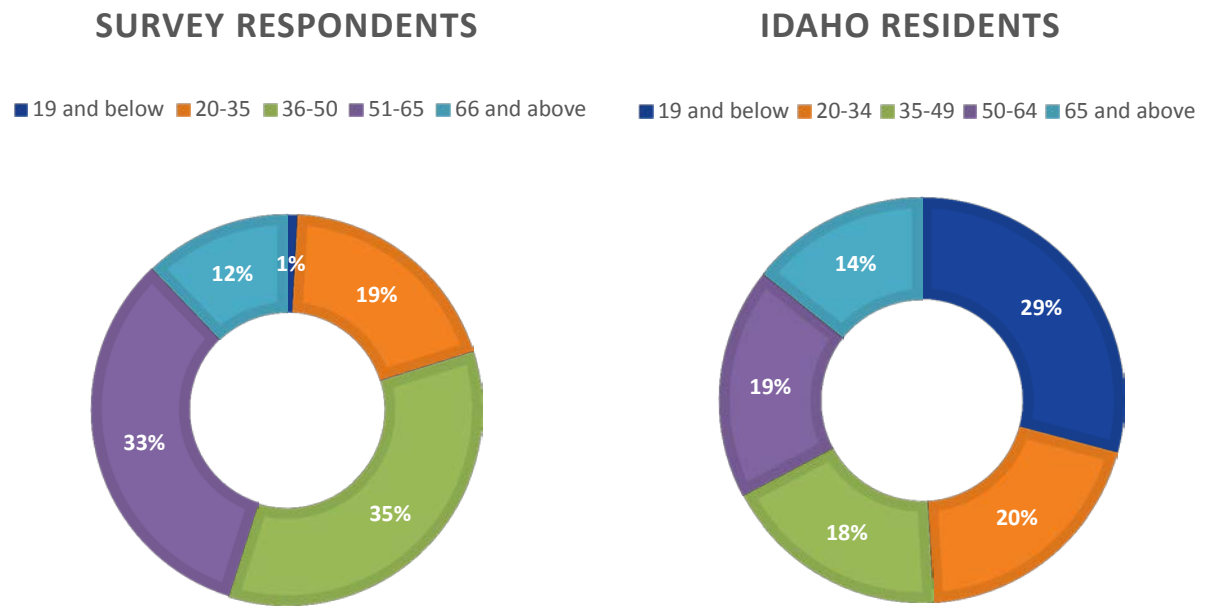
Wrap Up

The final survey screen asked participants to answer a series of demographic questions.

Age

Most survey respondents were within the 36-50 and 51-65 age ranges. Younger Idahoans were less represented in the survey compared to recent population estimates.

Figure 5 Age of Survey Respondents and Idaho Residents

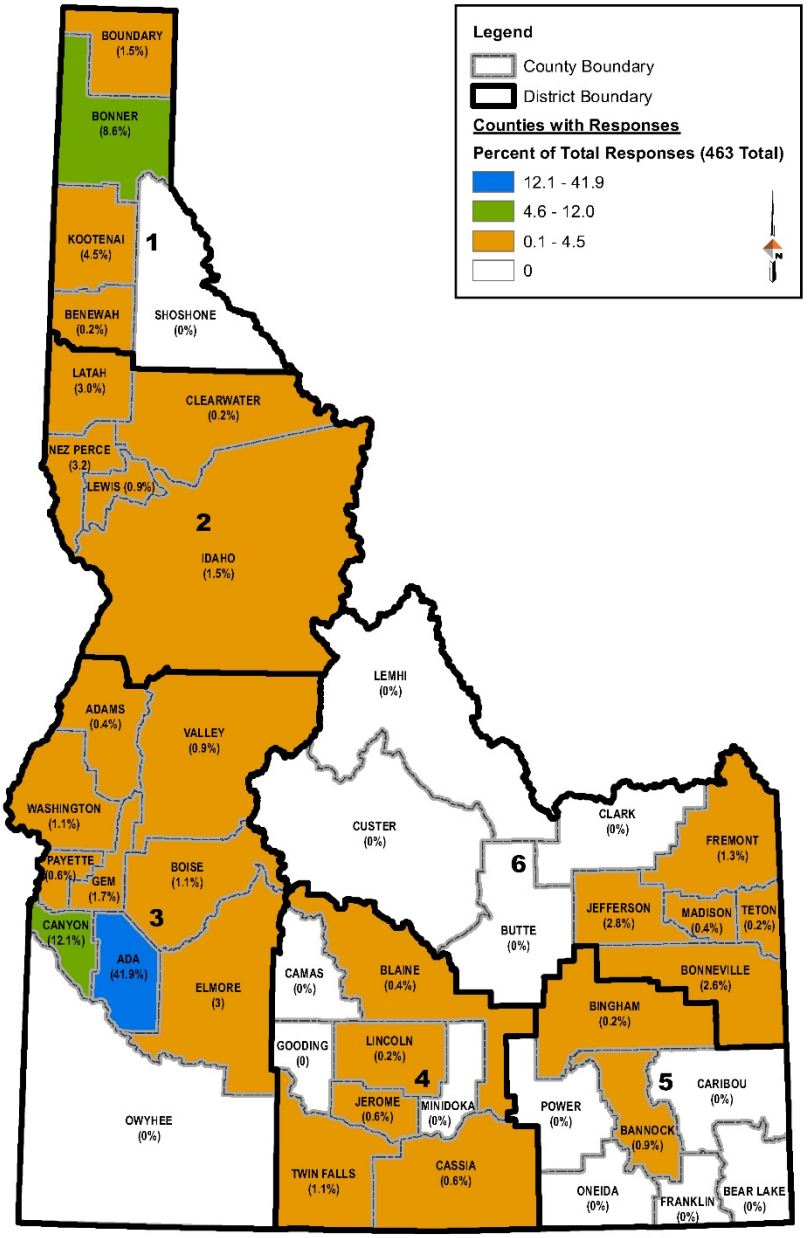


Source: 2012-2016 American Community Survey 5-Year Estimates.

Respondent County of Residence

Survey respondents live in a variety of locations throughout the state. Based on the 463 responses that included home zip codes, most respondents live in Ada (41.9%) and Canyon (12.1%) Counties. Survey responses reflected participation from each ITD district and 32 out of 44 Idaho counties (73%). Approximately 4.3% of responses did not indicate a home zip code or are located outside of Idaho. Figure 5 indicates the percentage of respondents who indicated an Idaho home zip code.

Figure 6 Survey Responses by County

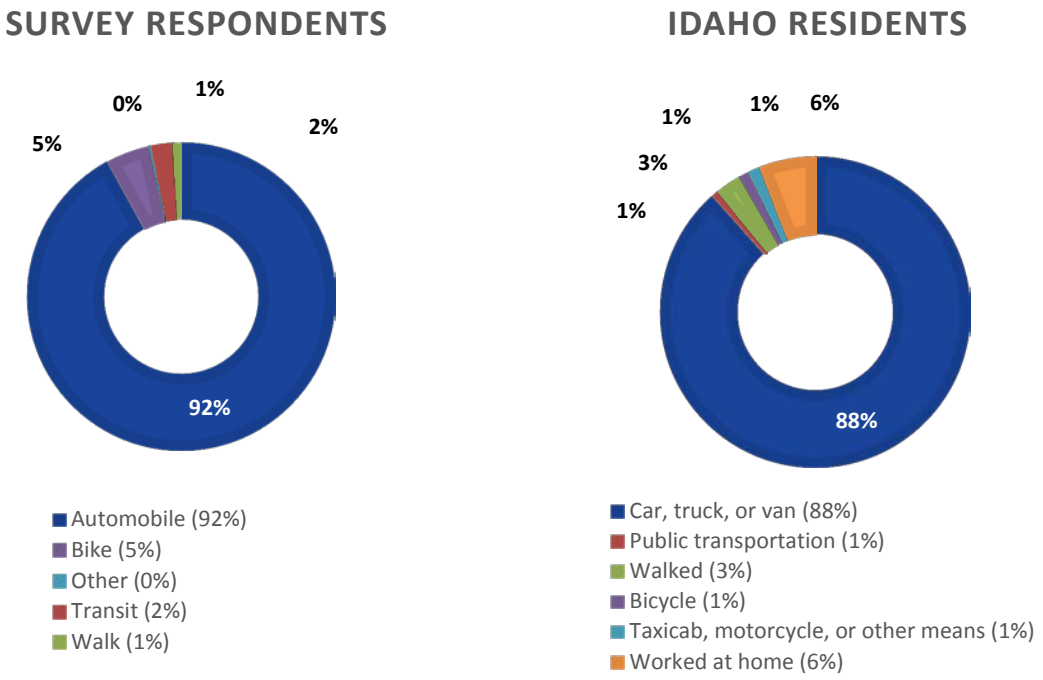


Percentages are drawn from 463 responses that indicated a home zip code. Of these, 20 responses are from Other/Outside ID.

Primary Mode of Transportation

Most survey respondents use a personal automobile for travel. Smaller percentages walk or use a bicycle, transit, or other modes. These results generally mirror recent commuting characteristic estimates for the state.

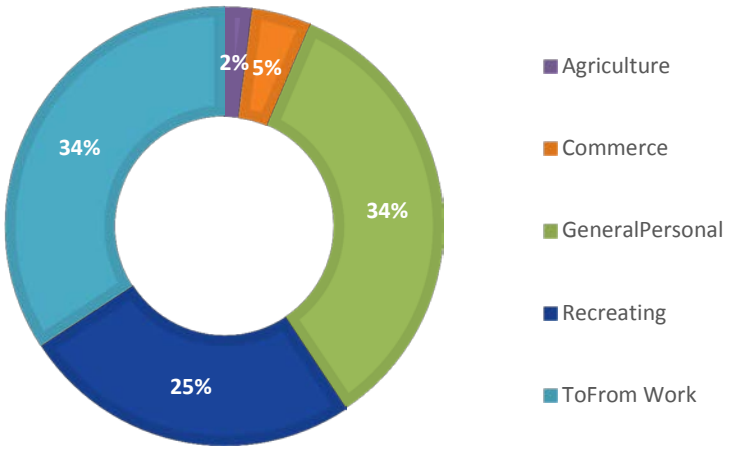
Figure 7 Primary Mode of Transportation



Source: 2012-2016 American Community Survey 5-Year Estimates – Commuting Characteristics.

Top Uses of Idaho Highways
The top two uses of Idaho highways involve travel for work and travel for general/personal use. Respondents also indicated recreation is a common reason for travel, with fewer participants reporting travel for agriculture or commerce.

Figure 8 Top Uses of Idaho Highways



Comment Summary:

The survey had 183 additional comments, either in free form or with some direction. The comments are compiled into 13 categories for a response to each topic.

Active Transportation (Bicycle and Pedestrian) – ITD has taken several recent actions to help citizens who engage in active transportation. A Child Pedestrian Safety (CPS) Program was established that has provided $2 Million in infrastructure grants annually since inception (FY 2018 & FY2019) and the Idaho Transportation Board has updated the policy outlining Bicycle and Pedestrian Coordination at ITD. The establishment of CPS requires additional coordination between the ITD and partner agency Local Highways Technical Assistance Council (LHTAC) which helps improve other active transportation programs at ITD.

Coordination – This topic was also popular with stakeholders across Idaho. There are recommendations in IDAGO 2040 to encourage and promote more coordination between ITD and partner Agencies.

Economy – Economic Opportunity is part of ITD's mission. IDAGO 2040 informs on several initiatives ITD undertakes to contribute to Idaho's economic growth.

Environment – Idaho's environment and how it relates it transportation is outlined in the technical report on ITD's environmental processes.
Highway Maintenance – The basics of highway maintenance are outlined in the technical report on Asset Management. There are also other sections that include topics and concepts of highway maintenance.

Mobility – IDAGO 2040 addressed mobility in the Modal Planning section of IDAGO 2040. Recently, the Idaho Legislature authorized a new program call Transportation Expansion and Congestion Mitigation that uses state funds to address congestion. Mobility is also address in other areas of IDAGO 2040.

Planning – Many of the planning comments were for project specific issues. These comments were forwarded to the appropriate ITD staff. In regards to the general planning comments, several sections of IDAGO 2040 have recommendations and guidance on how ITD will conduct planning work in the future.

Policy – The Idaho Transportation Board sets the policies for the Idaho Transportation Department. The comments provided relating to policies have been forwarded to the Idaho Transportation Board.

Safety – Part of ITD's mission, safety has been addressed throughout IDAGO 2040.

Transit – The transit comments were forwarded to ITD's Public Transit Manager. In addition to review of the comments, the overall interest in transit led to an additional stakeholder involvement session at the 2018 Idaho Public Transportation Summit in Boise on August 21, 2018.

Survey Related Comments – There were comments related to the survey itself which is useful to ITD and will be used to help shape future public outreach efforts.

List of Attachments (Final Electronic Version Only)

- Attachment 1: Survey Screens
- Attachment 2: Comments

Appendix 4: Transportation Performance Management Report

Transportation Performance Management

TPM Overview

The Federal Highway Administration's (FHWA), during the creation of The Moving Ahead for Progress in the 21st Century Act (MAP-21) and Fixing America's Surface Transportation Act (FAST Act), developed a performance measurement program called Transportation Performance Management (TPM). Under TPM, the Idaho Transportation Department (ITD) is required to establish performance targets for four different performance management (PM) criteria. Furthermore, along with setting performance targets, ITD is responsible for producing a Transportation Asset Management Plan (TAMP) and a Data Quality Management plan (DQM).

ITD Target Setting Philosophy

ITD holds itself accountable to the public by setting high but achievable internal goals and targets for the conditions of the state's highways and bridges. ITD has established and is implementing corresponding strategies to set targets that correspond with TPM's condition rating criteria. However, ITD's targets and condition rating criteria are generally more stringent than the newly-defined TPM minimum requirements. Hence, ITD will continue to plan projects and rate quality based on the more stringent, internal performance targets. Therefore ITD believes that following these strategies to meet our internal targets will in turn position us to well meet or exceed the TPM minimum requirements.

While TPM specifies the four PM criteria, it does not dictate the PM targets that each state transportation department must meet. Rather, TPM requires each state transportation department to establish its own state-specific targets for the four TPM criteria. ITD has proposed targets that meet both the TPM minimum requirements and ITD's internal goals and targets.

Idaho State Metric and Target Table:

PM	PM Criterion	ITD Target
PM I Safety	5-Year Average Number of Fatalities	188
	5- Year Fatality Rate Per 100 Million VMT	1.14
	5-Year Average Number of Serious Injuries	1,239
	5-Year Serious Injury Rate per 100 Million VMT	7.49
	5-Year Average Number of Non-Motorized Fatalities and Serious Injuries	120
PM II Pavement*	Interstate NHS Percent Good	50%
	Interstate NHS Percent Poor	4%
	Non-Interstate NHS Percent Good	50%
	Non-Interstate NHS Percent Poor	8%
PM II Bridge*	NHS Bridge Percent Good	19%
	NHS Bridge Percent Poor	3%
PM III Congestion*	Interstate NHS Level of Travel Time Reliability (LOTTR)	90%
	Non-Interstate NHS Level of Travel Time Reliability (LOTTR)	75%
	Interstate Truck Travel Time Reliability (TTTR)	1.25

*Values will be used for two and four year PM II and PM III targets

PM Network Information

There are fundamental differences in the networks used for the different performance measures. State transportation departments are required to set their performance targets based on these predefined networks regardless of which roads are actually managed by the department. Furthermore, when ITD plans and set targets it does so for the entire state system and not a subset of routes. The table below denotes which networks are to be used for the different performance measures.

PM	Network	Note
PM I	Complete State Wide Network	Entire network regardless of ownership
PM II	National Highway System (NHS)	Current NHS
PM III	National Highway System (NHS)	Two year old NHS provided by third party vendor

Metropolitan Planning Organizations (MPO) and TPM

TPM is structured so that MPOs can affect the target setting process for their geographic area. For each performance measure, a state's MPOs have the ability to either accept the state transportation department's targets or to generate a different target. A MPO's PM target can be more or less stringent than that of the state.

TPM Deadlines

TPM Criteria	State Deadline	MPO Deadline
PM I	August 31, 2017	February 27, 2018
PM II	May 20, 2018	November 16, 2018
PM III	May 20, 2018	November 16, 2018
Transportation Asset Management Plan*	April 30, 2018	-
Data Quality Management Plan*	May 20, 2018	-

*State transportation department specific item

PM I Safety Synopsis

The Idaho state targets, as referenced in the table above, were set in accordance with PM I rules by August 31, 2017 and were incorporated in the state's Highway Safety Improvement Program (HSIP). As outlined above, PM I differs from the other performance measures in that PM I focuses on a state's entire network instead of explicitly on the National Highway System (NHS). Moving forward targets for PM I will be established each year. MPOs had a target setting deadline of February 27, 2018 and each MPO accepted the state's PM I target as their own.

PM II Pavement Synopsis

State transportation departments must submit targets for the overall percentage of lane miles in "Good" and "Poor" condition for two and four year cycles on the interstate National Highways System (NHS) and non-interstate NHS. Condition and targets must be set using FHWA's predetermined criteria. For the purpose of target setting, FHWA and ITD both measure the same data items (pavement smoothness, rutting and cracking). However, when it comes to condition measurement, ITD has more

stringent thresholds when evaluating these data items. TPM guidelines require that a section of pavement be rated "Poor" if two out of three data items are rated as "Poor". Conversely, ITD's internal measures rate a section of pavement as "Poor" if only one data item is rated as "Poor". Finally, when planning projects and measuring condition, ITD considers the entire state system as opposed to only the NHS and ITD has historically reported the percentage of "Good" and "Fair" pavements as opposed to the percentage of "Good" and "Poor" as outlined in TPM. The difference in condition criteria thresholds, ITD's more stringent rating criteria, and network differences cause ITD's internal targets and condition ratings to be substantially different than ITD's TPM targets.

PM II Bridge Synopsis

State transportation departments must submit targets for the overall percentage of bridge surface area (square feet) in 'Good' condition and 'Poor' condition on two and four year cycles for bridges that reside on the NHS. Bridge rating will be done according to the National Bridge Inventory (NBI) rating methodology. ITD currently employees the same bridge rating criteria as the NBI but structures the condition categories slightly differently. Furthermore, when ITD plans projects and sets internal targets it does so for all bridges on the state system and not only bridges that reside on the NHS. The difference in condition categories and networks used cause ITD's internal targets and condition ratings to be substantially different than ITD's TPM targets.

PM III Congestion Synopsis

State transportation departments must submit a target for Level of Travel Time Reliability (LOTTR) on the NHS and a Truck Travel Time Reliability (TTTR) target for the interstate for two and four year cycles. LOTTR is a measurement in the variability of car and truck travel times on the entirety of the NHS. TTTR focuses on truck travel time variability on the interstate. TPM regulations require that the reliability targets will be computed using a third party database called the National Performance Management Research Data Set (NPMRDS).

Transportation Asset Management Plan (TAMP)

Each state transportation department is required to develop a TAMP which is meant to be an all-encompassing document pertaining to the departments operations. This document, at a minimum, should describe the pavement and bridge condition on the NHS, asset management objectives, performance gap identification, lifecycle plans, financial plans, and investment strategies.

Appendix 5: Metropolitan Long-Range Transportation Plans

To be included in final plan