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## Executive Summary

The Idaho 55 Central Corridor Plan studies Idaho 55 from the junction with Idaho 44 (State Street) in the City of Eagle to the junction with Banks Lowman Road. The plan is an evaluation of current and future transportation, traffic and regional conditions that the Idaho Transportation Department (ITD) will use to plan future highway improvements. The southern end of the corridor has had a number of residential property developments in the last decade. The plan identifies 15 actions recommended to be implemented before 2030. One of the recommendations has already been included in the current Idaho Transportation
 Improvement Program (ITIP). No expansion or capacity projects have been recommended before 2030.

Within the study corridor, Idaho 55 is designated as part of the National Highway System and is a National Scenic Byway. It is identified as a corridor of regional significance under ITD's Investment Corridor Analysis Planning System and has a functional classification of Principal Arterial.

Idaho 55 operates as a "Holiday" route with higher weekend than weekday traffic volumes. Payette River access points on Bureau of Land Management and U.S. Forest Service property are day use only; overnight camping facilities only exist to the north of the study corridor. The predominant traffic flow is northbound on Fridays and through mid-day on Saturdays reversing to predominantly southbound on Sundays and through mid-day on Mondays. Summer traffic volumes are much higher than winter traffic volumes. Level of Service can drop to "D" on Friday afternoons and evenings for northbound traffic and on Sunday afternoons for southbound traffic. Reduction of the speed limit in Horseshoe Bend corresponds to a lower Level of Service in the city compared to the adjacent higher speed limit highway segments. Annual peak traffic hours occur in conjunction with Memorial Day, Independence Day and Labor Day holiday weekends. Level of Service for local crossroad traffic is " E " or worse during these annual peak traffic hours but for 98 percent of the year it is "C" or better. Availability of alternative transportation modes is very limited.

There have been seven fatalities in the study corridor within the last five years. One accident cluster with a statewide rank of 93 has been identified north of Porter Creek Road.

One passing lane location is recommended for pre-project scoping and development prior to competing for inclusion in a future ITIP.

One wildlife crossing corridor has been identified north of Milepost 58 on Horseshoe Bend Hill, with a priority ranking at the bottom of the top four within ITD District 3.

Pavement conditions are "Fair" or "Good" for the entire study corridor. The Payette River Bridge on the south side of Horseshoe Bend is programmed for replacement in 2016. Additional state and local bridges are eligible for replacement or repair.

Future Land Use plans for Ada County, Boise County, City of Eagle and City of Horseshoe Bend have identified large tracts of land available for residential development. Prime farmland, wetlands and floodplains exist in and adjacent to the study corridor.

## Introduction

A corridor plan is a long-range planning document that describes the current characteristics of a transportation corridor and identifies needs within a 20-year timeframe. The development of corridor plans for Idaho highways was authorized by Idaho Transportation Board Resolution TB97-06 in January, 1997. Specific guidance for producing a corridor plan is provided through the "Idaho Corridor Planning Guidebook," dated December 2006, and ITD Director's Memorandum Number 22, dated January 30, 2009.

A corridor plan is not limited to solely the highway, but to a transportation corridor including all modes of transportation: motor vehicles, bicycle, pedestrian, rail and aviation. The width of a transportation corridor varies and is usually defined by major parallel arterial/collector roadways and/or geographic features that channel or prohibit roadways.

The purpose of the Idaho 55 Central Corridor Plan is to maintain functionality and improve safety on Idaho 55 from the junction with Idaho 44 (State Street) in the City of Eagle north to the junction with Banks Lowman Road in Boise County. There is a need to manage access to and from the highway; work with local jurisdictions to match land use to the highway's traffic volume capacity; develop a project list to improve the operation and safety of the highway; and develop geographically based data sets to support those needs.

## Corridor Description

The south end of the Idaho 55 Central Corridor begins at the intersection with State Street (Idaho 44) in the City of Eagle, Ada County. A four-lane access controlled highway proceeds north two and a half miles through suburban residential developments, and then becomes a two-lane rural highway through lowdensity rural residences and a golf course for three miles. Climbing out of the Treasure Valley through Spring Valley Creek canyon, the highway continues for four miles past a suburban residential development and a ranch. A second northbound lane is added at the Boise County Line for three and a half miles up Horseshoe Bend Hill while there is a four-lane highway north of the summit for six miles. The highway becomes two lanes entering the City of Horseshoe Bend and crossing the Payette River. North of the river a center two-
way left-turn lane is added for one mile until reaching the junction with Idaho 52. North of the junction rural residential predominates until there is a second crossing of the Payette River two miles north of Horseshoe Bend. After crossing the Payette River, Idaho 55 is often constrained in a narrow river valley with the river to the west and steep slopes to the east. The next five miles are a mixture of irrigated farmland, river recreational access, tourism related businesses and access across the river to the community of Gardena via a three-span pony truss bridge built in 1920. The final eight miles are limited to river recreational accesses ending at Banks Lowman Road (old State Highway 17) with destinations of the communities of Crouch and Garden Valley. Figure 1 (see page 10) illustrates the planning corridor.

Figure 1: Idaho 55 Central Planning Corridor


The corridor plan covers 33.675 miles of Idaho 55. The Idaho Transportation Department milepost (MP) identifiers are from 44.645 at the south end to 78.820 on the north end.

## Corridor Width

Idaho 55 is primarily a two-lane facility in the study area except in the City of Eagle where it widens to four lanes, Horseshoe Bend Hill where it is three lanes south of the summit and four lanes north of it, and three lanes through most of the City of Horseshoe Bend. The local road network is constrained by rugged terrain and is intermittent, so the corridor study width is one-quarter mile to each side of the highway.

## Corridor Function

Idaho 55 is identified as an urban principal arterial south of North Brookside Lane in Ada County and a rural principal arterial north of it. It is also designated in full as a part of the National Highway System and is a National Scenic Byway.

Locally, the highway provides mobility for tourism, commuters and shoppers. Logging and mining are industries that depend upon the highway.

## Route History

Idaho 55 was originally named the Star-McCall Road as part of Chapter 59, Emergency Laws, Fifteenth Session, 1919 Legislature, which appropriated \$75,000 for building said road. On August 20, 1919, the roadway from McCall to New Meadows was designated a state highway to be known as the "Payette Highway," along with the Star-McCall Road. It was identified as the "Payette Highway" because at that time, highways were named in documents of record rather than numbered. The name "Long Valley Highway" was also used in the designation. The Gardena Bridge and its approaches were designated a state highway on October 15, 1919. Figure 2 illustrates the 1919 state highway designations.

Federal participation in forest road construction began when Congress passed the Federal-Aid Road Act in 1916. This act appropriated \$10 million ( $\$ 1$ million per year for 10 years) for the "...survey, construction, and maintenance of roads and trails within or only partly within the national forests when necessary for the use and development of resources upon which communities within and adjacent to the national forests are dependent...."

It was not until the passage of the Federal Highway Act of 1921 that two types of forest roads were defined:

- Forest Development Roads - those forest roads that are needed primarily for management of the national forests.
- Forest Highways - those forest roads which must serve the national forests and also serve the communities within and adjacent to the national forests.

Figure 2: Payette Highway Designations 1919


The State Highway Commission, at its meeting on September 13, 1916, considered the various applications for the survey, construction and maintenance of roads under the provisions of Section 8 of the act of July $11^{\text {th }}, 1916$, commonly known as the Federal Road Act, and resolved:
"That this commission recommends the survey, construction and maintenance, under the provisions of said Act, of the road in and adjacent to the Payette National Forest in Idaho County, from Smith's Ferry to Horseshoe Bend in said county, provided, however, that it recommended that the aforesaid work be done from the appropriation available after July 1st, 1917."

A cooperative agreement with the U.S. Secretary of Agriculture for construction of 22.8 miles of the North Fork Payette Project Construction in Boise and Valley counties was signed on May 16, 1919. This construction was completed in 1920. On March 4, 1921, $\$ 15,000$ was allotted to extend this highway as far south as possible. Survey work for this extension was completed in 1922.

Funds were allotted for construction of a 12-foot wide standard section road on Section No. 2, later identified as Forest Highway Project (FHP) $23-C$, on February 24,1923 . The 9.7 miles of this earth roadway were completed in November, 1924. The location of this, and other original construction projects, is illustrated in Figure 3.

A cooperative agreement with the U.S. Secretary of Agriculture was signed on December 4, 1924, for the construction of the 4.8 miles of Section No. 1 (FHP 23-D). Construction was completed in October, 1925. Both Sections No. 1 and 2 were surfaced with gravel by September 23, 1926.

Funding was allotted for preliminary survey of the future Boise to Horseshoe Bend roadway on February 15, 1926. Construction of the new roadway was divided into four separate Federal Aid Projects (FAP) and one National Recovery Highway Project (NRH): FAP 129-A, FAP 129-B, FAP 129-C, FAP 129-D and NRH 129-E. FAP 129-

A constructed two 8-foot wide lanes surfaced with crushed rock. FAP 129-B and FAP 129-C constructed a 21-foot wide earthen roadway. FAP 129-D constructed two 8-foot wide lanes surfaced with gravel. NRH 129-E constructed one 8 -foot wide and one 9 -foot wide lanes, a 78 -foot bridge over the Power Canal and a 360 -foot bridge over the Payette River.

Figure 3: Payette Highway Original Construction Projects


Right-of-Way (R/W) acquired for the Boise to Horseshoe Bend segment totaled 64.82 acres in 22 separate parcels. No record of R/W for the three Forest Highway projects was located while researching for this corridor plan.

The description of the Payette Highway was redesignated with its southern terminus in Boise on December 15, 1933 in Minute Book \#6A of the Idaho Commissioner of Public Works, page 166:
"Beginning at a junction with the Boise Valley Highway at Saxton Corner, in Ada County, and extending northerly via Horseshoe Bend, Banks, Smith's Ferry, Cascade, Donnelly, and McCall, to a junction with the North and South Highway at New Meadows in Adams County, with a branch from Star to Horseshoe Bend, via Emmett, known as the Emmett Branch, and a spur known as the Gardena Branch, across the Payette River at Gardena."

Saxton Corner is now identified as the intersection of State Street and Horseshoe Bend Road. The southern terminus of the Emmett Branch was identified as Liberty Corner, east of Star.

The Gardena Branch had its designation dropped on April 15, 1937. All of these changes in designation are illustrated in Figure 4.

Highway numbers were included with the compilation titled "Designated Federal Highways as of April 15, 1937" as a part of Minute Book 8 of the Idaho Commissioner of Public Works. All of the highway numbers
shown in Figure 4 matched the current numbers except for the Payette Highway which was then State Highway 15. The section of highway north of Horseshoe Bend to Banks Lowman Road was also designated as Forest Highway 23. The highway was a part of the Federal Aid System with a Federal Route Number of 9.

Figure 4: Payette Highway Designations in the 1930s


In the late 1930s through the 1950s, additional right-of-way (R/W) was purchased as part of six highway projects:

- Federal Aid Project (FAP) 129-A (1935) widened the roadway from two 8 -foot lanes to two 10 -foot lanes and straightened some of the curves in the alignment. R/W purchases totaled 19.84 acres in seven separate parcels.
- FAP $129 \mathrm{~A}(3) \mathrm{B}(2)$ widened the roadway from 21 feet to 26 feet, straightened some curves and eliminated a major out-ofdirection curve just north of the Ada-Boise county line. R/W purchases totaled 64.99 acres in six separate parcels.
- FAP F-129(13) widened the roadway from 21 feet to 24 feet, relocated some roadway segments and straightened some curves. R/W purchases totaled 199.34 acres in 9 separate parcels.
- FHP 23-C2D2 widened a 14 -foot wide roadway to a 30 -foot wide roadway. R/W purchases totaled 43.92 acres in six separate parcels.
- FHP 23-C3 widened a 14-foot wide roadway to a 30 -foot wide roadway. $\mathrm{R} / \mathrm{W}$ purchases totaled 19.31 acres in two separate parcels.
- FHP 23-C4 widened a 14-foot wide roadway to a 33 -foot wide roadway. R/W purchases totaled 81.06 acres in five separate parcels.

FHP 23-A12-B1-C6 replaced the existing South Fork Payette River Bridge and realigned the bridge approaches. Additional R/W was not required for this project.

Figure 5 illustrates the location of these projects.
Figure 5: Payette Highway Projects 1936 1955


In the 1960s and 1970s, additional R/W purchases were limited to four projects:

- F-3271(9) straightened the roadway alignment in the Spring Valley Creek Canyon. R/W purchases totaled 22.82 acres in six separate parcels. Effective September 20, 1966, a 0.076 mile in length section of the former State Highway No. 15 beginning at a point 2.051 miles south of the Ada-Boise county line was abandoned as a public road and vacated to abutting property owners. ${ }^{1}$
- FH 23-1(1) was a pavement project that changed the highway alignment north of Horseshoe Bend and included 44.5 acres of R/W purchases in 16 separate parcels. Some property deeds also referenced the project as F-3271(8). Effective December 31, 1971, a 0.095 mile section of the former State Highway No. 55, beginning at a point 0.979 miles north of the Horseshoe Bend north city limits and extending northerly for 0.095 miles, was removed from control of the state and relinquished to Boise County as a public road. Another section of former State Highway No. 55, beginning at a point 1.074 miles north of the Horseshoe Bend north city limits and extending northerly for 0.700 miles, was abandoned and vacated to abutting property owners. ${ }^{2}$
- ST-3271(546) purchased 8.86 acres of R/W in three separate parcels to flatten the curve at Beacon Light Road. This project eventually became HES-3271(047)

[^0]in 1986 and in 1988 merged with project STP-NH-F-3271(052).

- ST-3271(554) purchased 4.87 acres of R/W in two separate parcels prior to project cancellation in September, 1982.

Project ST-3271(528) constructed the weigh station north of Horseshoe Bend but did not include any R/W purchases. Figure 6 illustrates the location of these projects.

Figure 6: Payette Highway Projects 1960s 1970s


On September 11, 1967, the state highway number of the Payette Highway was redesignated from 15 to the current State Highway 55. ${ }^{3}$ On June 8, 1977, the Payette Highway was designated an Idaho Scenic Byway. ${ }^{4}$

Major changes were made in the 1980s and 1990s requiring large R/W purchases:

- Project F-FR-3271(036) added a second lane northbound in Boise County northerly from Spring Valley to the Horseshoe Bend Hill summit. R/W purchases totaled 188.01 acres in two separate parcels.
- Projects ER-F-3271(043) and ER-3271(055) moved the highway alignment east between Horseshoe Bend Hill Summit and the City of Horseshoe Bend and constructed a four-lane highway. R/W purchases totaled 4,675.77 acres in 22 separate parcels.
- Project STP-NH-F-3271(052) moved the highway alignment west from Old Horseshoe Bend Road and constructed a four-lane access-controlled highway from State Street to North Brookside Lane. R/W purchases totaled 72.84 acres in 60 separate parcels. Additional R/W was purchased for improvements on the State Highway 44 portion of the project.
- Project STP-3270(106) replaced the Dry Creek Bridge and improved the highway north of North Brookside Lane to past Spring Creek Way. R/W purchases were included under project STP-NH-F-3271(052).

[^1]The property deed description of the project was shortened to "F-3271(052)."

Project ST-3270(606) constructed passing lanes north of Gardena but required no additional R/W purchases. Figure 7 illustrates the location of these projects.

Figure 7: Payette Highway Projects 1980s Present


The Payette River Scenic Byway Corridor Management Plan was published in 2001. In 2005, the Payette River Scenic Byway was (nationally) designated as one of America's Byways. America's Byways program was established in 1996 and includes 126 routes in 44 states designated by the U.S. Secretary of Transportation. The Payette River Scenic

Payette River Scenic Byway Byway Corridor Management Plan was updated in 2014.

Projects for passing lanes at Gardena South, northbound only, and Banks, both directions, were included in the State Highway Transportation Improvement Plan (STIP) under key numbers 07791 and 07051 , respectively, as early as 1999.

The Gardena project, NH-3270(128), received environmental clearance on July 16, 2003, and had the R/W plan approved on June 1, 2004. One parcel of 0.033 acres was purchased on January 16, 2007, but the project was later removed from the STIP in September 2011 for lack of funding.

The Banks project, NH-3270(122), purchased three parcels for a total of 10.41 acres on or before September 2000. A construction contract was awarded on May 21, 2004, but was cancelled due to design deficiencies that required additional design work and another $\$ 2$ million in funding. On March 18, 2005, the ITD Board delayed the project until FY 2008. The project was added to the FY2007-2011 STIP as a planning only project and was removed from the STIP on September 22, 2011.

## Existing Transportation Conditions

Existing corridor conditions were identified through two public information meetings, discussions with local jurisdictions and ITD maintenance personnel, and data sourced from both ITD and local governments. South of Horseshoe Bend, the highway is a mix of two, three and four lane segments usually with a minimum of five-foot shoulders. North of Horseshoe Bend, the highway primarily is a twolane rural roadway with minimal shoulders.

The corridor plan separates the highway into a number of segments to better understand its performance. A roadway segment is defined as:

The portion of a highway, including shoulders, for vehicle use. A roadway segment consists of a continuous portion of a roadway with similar geometric, operational, and vehicular characteristics. Roadways where significant changes in these characteristics are observed from one location to another should be analyzed as separate segments. ${ }^{5}$

Table 1 (see page 18) provides a summary of existing and future transportation conditions in the corridor, as separated into nine segments.

[^2]Table 1: Idaho 55 Central Corridor Plan Summary Conditions

| Seg- <br> ment No. | Segment MP | Begin Description | End Description | Segment Description | $\begin{array}{r} \text { Traffic } \\ \text { Volumes } \\ (2014 \\ \text { AADT) } \end{array}$ | 2014 <br> Level of <br> Service | Percent Trucks | $\begin{array}{r} \text { Future } \\ \text { Traffic } \\ \text { Volumes } \\ (2030 \text { AADT }) \\ \hline \end{array}$ | 2030 <br> Future <br> Level of <br> Service | Future Traffic Volumes (2040 AADT) | 2040 Future Level of Service | Signed Speed Limit | Lanes North/South | Turn Lanes | Pedestrian Facilities | Paved Shoulder Width | Pavement <br> Conditions | Bridge <br> Sufficiency | $\begin{aligned} & R / W \\ & \text { Width } \end{aligned}$ | Utilities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $\begin{array}{\|l\|} 44.645 \\ 47.303 \end{array}$ | Junction $\text { S.H. } 44$ | North <br> Brookside <br> Lane | Urban Principal Arterial | 14,000 | A | 12.9\% | 33,300 | B | 44,900 | E | $\begin{gathered} 55 \\ \mathrm{MPH} \end{gathered}$ | $2 / 2$ | Signalized left-turn bays at Hill Road and Floating Feather Road. Right-turn lanes at Hill Road. Unsignalized left-turn bay northbound at Beacon Light Road and North Brookside Lane. | None | 10-feet both sides | Good | Dry Creek <br> Canal - <br> 98.3 <br> Farmers <br> Union <br> Canal - <br> 98.5 | $\begin{array}{\|l\|} \hline 120- \\ 145 \\ \text { feet } \end{array}$ | Idaho Power <br> overhead <br> transmission lines, <br> Intermountain Gas <br> underground gas line <br> and underground <br> communication <br> utilities are adjacent <br> to the highway. There <br> are a number of <br> overhead utility <br> crossings. |
| 2 | $\begin{aligned} & 47.303- \\ & 50.275 \end{aligned}$ | North <br> Brookside <br> Lane | Spring <br> Valley <br> Creek <br> Canyon <br> Exit | Urban Principal Arterial | 7,500 | A | 12.5\% | 24,200 | D | 29,800 | D | $\begin{gathered} 55 \\ \text { MPH } \end{gathered}$ |  | Left-turn bays at Dry Creek Road southbound, Brookside Lane and Shadow Valley Golf Course northbound. Right-turn lane southbound opposite Shadow Valley Golf Course. | None | 5 to 10 <br> feet <br> both <br> sides | Good / Fair | $\begin{array}{\|l\|} \hline \text { Dry Creek - } \\ 99.1 \end{array}$ | $\begin{aligned} & 120- \\ & 180 \\ & \text { feet } \end{aligned}$ | Idaho Power <br> overhead <br> transmission lines, <br> Intermountain Gas <br> underground gas line <br> and underground <br> communication <br> utilities are adjacent <br> to the highway. There <br> are a number of <br> overhead utility <br> crossings. |
| 3 | $\begin{aligned} & 50.275- \\ & 52.101 \end{aligned}$ | Spring <br> Valley <br> Creek <br> Canyon <br> Exit | West <br> Avimor <br> Drive | Rural Principal Arterial | 4,700 | B | 13.2\% | 12,600 | C | 17,000 | D | 55-60 <br> MPH | 1/1 | None | None | 5-feet both sides | Fair | n/a | $\begin{array}{\|l\|} \hline 120- \\ 180 \\ \text { feet } \end{array}$ | Idaho Power overhead transmission lines are adjacent to the highway. There are a number of overhead utility crossings. |
| 4 | $\begin{aligned} & 52.101- \\ & 53.960 \end{aligned}$ | West <br> Avimor <br> Drive | north of Ada-Boise County Line | Rural Principal Arterial | 4,700 | B | 13.2\% | 8,400 | C | 12,200 | C | $\begin{gathered} 60 \\ \text { MPH } \end{gathered}$ | 1/1 | Left-turn bay southbound and rightturn lane northbound at Avimor Drive. | None | 7-feet both sides | Fair / Good | n/a | $\begin{array}{\|l\|} \hline 120- \\ 180 \\ \text { feet } \end{array}$ | Idaho Power overhead transmission lines are adjacent to the highway. There are a number of overhead utility crossings. |
| 5 | $\begin{aligned} & 53.960- \\ & 56.488 \end{aligned}$ | north of Ada-Boise County Line | south of Horseshoe Bend Hill Summit | Rural Principal Arterial | 4,700 | B | 13.2\% | 6,900 | B | 8,300 | B | $\begin{gathered} 60 \\ \text { MPH } \end{gathered}$ | 2/1 | None | None | 7-feet both sides | Fair | n/a | $\begin{aligned} & 260- \\ & 400 \\ & \text { feet } \end{aligned}$ | There is one overhead utility crossing at MP 56.200. |

Continued to next page

Table 1: Idaho 55 Central Corridor Plan Summary Conditions (cont'd)

| Segment No. | Segment MP | Begin Description | End Description | Segment Description | $\begin{array}{r} \hline \text { Traffic } \\ \text { Volumes } \\ (2014 \\ A A D T) \end{array}$ | 2014 Level of Service | Percent <br> Trucks | Future Traffic Volumes (2030 AADT) | 2030 <br> Future Level of Service | Future Traffic Volumes (2040 AADT) | 2040 <br> Future <br> Level of <br> Service | Signed Speed Limit | Lanes <br> North/South | Turn Lanes | Pedestrian <br> Facilities | Paved Shoulder Width | Pavement Conditions | Bridge <br> Sufficiency | R/W Width | Utilities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | $\begin{aligned} & 56.488 \\ & 62.700 \end{aligned}$ | south of Horseshoe Bend Hill Summit | Harris Creek Rd | Rural Principal Arterial | 4,600 | A | 11.1\% | 6,100 | A | 7,400 | A | $\begin{gathered} 60 \\ \text { MPH } \end{gathered}$ | 2/2 | None | None | 5-feet both sides | Good / Fair | Horseshoe Bend Hill Drive Culvert 74.9 | $\begin{aligned} & 650- \\ & 1000 \\ & \text { feet } \end{aligned}$ | Idaho Power overhead transmission lines are adjacent to the highway north of MP 62.139. There are three overhead utility crossings. |
| 7 | $\begin{aligned} & 62.700- \\ & 63.766 \end{aligned}$ | Harris Creek Rd | Madison Street | Rural Principal Arterial | 5,100 | A | 10.4\% | 6,800 | A | 8,200 | B | $\begin{gathered} 35 \\ \text { MPH } \end{gathered}$ | 1/1 | Left-turn bay northbound at Harris Creek Road. | None | 2 to 8 feet both sides | Good | Payette River $\text { - } 33.1$ | $\begin{aligned} & 60-80 \\ & \text { feet } \end{aligned}$ | Idaho Power overhead transmission lines are adjacent to the highway. There are a number of overhead utility crossings. |
| 8 | $\begin{aligned} & 63.766- \\ & 64.656 \end{aligned}$ | Madison Street | Junction $\text { S.H. } 52$ | Rural Principal Arterial | 5,100 | A | 10.4\% | 6,800 | A | 8,200 | B | $\begin{gathered} 25 \\ \mathrm{MPH} \end{gathered}$ | $\begin{gathered} 1 / 1 \\ + \text { +TWLTL } \end{gathered}$ | Center two-way left turn lane. | Sidewalk east <br> side at <br> Chevron <br> Station. <br> Curb west side <br> MP 64.361- <br> 64.656. <br> Curb east side <br> MP 64.481- <br> 64.656. | 6 to 8 feet both sides | Good | Power Canal 95.1 | 80 feet | Idaho Power overhead transmission lines are adjacent to the highway. There are a number of overhead utility crossings. |
| 9 | $\begin{aligned} & 64.656- \\ & 78.820 \end{aligned}$ | $\begin{aligned} & \text { Junction } \\ & \text { S.H. } 52 \end{aligned}$ | Banks <br> Lowman <br> Road | Rural Principal Arterial | 5,100 | B | 12.0\% | 6,200 | B | 7,300 | B | $\begin{gathered} 55 \\ \text { MPH } \end{gathered}$ | 1/1 | Left-turn bay and right-turn lane southbound at Idaho 52. <br> Left-turn bay northbound at Beehive Bend. Center two-way left turn lane MP 78.64778.712. | Curb both sides MP 64.656-64.784 | 1 to 5 feet both sides | Good | Union Pacific <br> RR - 87.6 <br> Payette River <br> - 96.4 <br> Porter Creek - <br> 95.5 <br> Hill Creek - <br> 96.4 <br> Fleming Creek <br> - 43.5 <br> North Fork <br> Payette - 49.5 | $\begin{array}{\|l\|} 100- \\ 260 \\ \text { feet } \end{array}$ | Idaho Power overhead transmission lines are adjacent to the highway south of MP 76.059. There are a number of overhead utility crossings. |

ITD R/W for Idaho 55 consists of in-fee title deeds and easements. Property adjacent to the R/W is a mixture of private and public owned. Public owned parcels located within the study corridor are managed by:

- Idaho Department of Lands
- Idaho Department of Fish \& Game
- U.S. Department of Interior, Bureau of Land Management
- U.S. Forest Service
- U.S. Department of Interior, Bureau of Reclamation

Acreage and distribution is presented in Table 2.
Table 2: Idaho 55 Central Corridor Surface Land Ownership

| Land Ownership | Acres | Percent of <br> Corridor |
| :--- | ---: | ---: |
| Bureau of Land Management | $1,203.0$ | $11.1 \%$ |
| Bureau of Reclamation | 2.4 | $0.0 \%$ |
| Historic Waters | 563.5 | $5.2 \%$ |
| Idaho Department of Lands | 35.2 | $0.3 \%$ |
| Idaho Fish \& Game | 12.1 | $0.1 \%$ |
| Private | $8,728.5$ | $80.6 \%$ |
| U.S. Forest Service | 280.2 | $2.6 \%$ |
| TOTAL | $\mathbf{1 0 , 8 2 4 . 8}$ | $\mathbf{1 0 0 . 0 \%}$ |

## Terrain Profile

Idaho 55 generally runs in a north-south direction. Departing the Boise River Valley, the highway crosses rolling hills until entering the Dry Creek Valley. The highway continues upstream through flat terrain and diverges into the Spring Creek Valley. The terrain is steep ascending the Spring Creek Canyon and flattens out again in the Spring Valley. Horseshoe Bend Hill is a steep ascent and descent into the Payette River Valley. The terrain is flat through Horseshoe Bend and gently rises to and past the junction with Idaho 52 until descending again in a second crossing of the Payette River. The remainder of the corridor is a moderate ascent confined between the Payette River and steep terrain to the immediate east. See Figure 8 on page 21.

Figure 8: Elevation Profile Idaho 55 - State Street to Banks Lowman Road


## Parallel Roadways

The local road network adjacent to Idaho 55 is irregular due to steep and mountainous terrain. In the event Idaho 55 was temporarily closed, limited alternate routes are available. ${ }^{6}$ Within the City of Eagle, Horseshoe Bend Road, Eagle Road, Floating Feather Road and Beacon Light Road can all be used as alternate routes. North of Brookside Lane, the next alternate option is Idaho 16 to Idaho 52 arriving in the City of Horseshoe Bend. The only alternate route north of the City of Horseshoe Bend is U.S. 95 arriving in the City of New Meadows.

[^3]
## Traffic and Transportation

Traffic volumes are collected by permanent Automatic Traffic Recorders (ATRs) at two locations on Idaho 55 in the central corridor:

- ATR \# 10 - Idaho 55 south of Dry Creek Road at milepost 47.833
- ATR \# 184 - Idaho 55 south of Banks Lowman Road at milepost 78.748

Additional short-term traffic volume counts of 48 -hour or greater duration are periodically collected with traffic tubes throughout the corridor.

Turning volume counts are collected upon special request. These involve one or more employees being on-site and manually collecting both through traffic counts and turning traffic counts.

Idaho 55 operates as an urban highway at its south end and as a rural highway to the north. Annual average daily traffic volumes for both Idaho 55 and selected crossroads are illustrated in Figure 9.

Figure 9: Idaho 55 Central Corridor and Crossroads 2014 AADT


Traffic volumes on State Street (Idaho 44) are nearly four times greater than traffic volumes on Idaho 55. Peak traffic volumes on Idaho 55 occur at the intersection with Hill Road. Traffic volumes on Floating

Feather Road are moderately close (75\%) to those on Idaho 55 at this intersection. Crossroad traffic volumes fall considerably after Beacon Light Road. Traffic volumes on Idaho 55 north of Brookside Lane vary little to Banks Lowman Road except for local only traffic in the City of Horseshoe Bend.

Banks Lowman Road has an annual average daily traffic volume of 1,600. Idaho 55 has an annual average daily traffic volume of 4,700 to the south of Banks Lowman Road and only 3,300 north of it. This means that approximately 25 percent of traffic approaching Banks Lowman Road from the south on Idaho 55 has a destination or a through travel requirement on Banks Lowman Road.

Overall, Idaho 55 operates as a rural road with high traffic peaking. Figure 10 illustrates the seasonal characteristics of the highway at both ATR \# 10 and ATR \# 184.

Figure 10: Idaho 55 ATR Site Average Daily Traffic Volumes by Month


Average daily traffic volumes by month were approximately 2,000 vehicles greater at the ATR site south of Dry Creek Road compared to the ATR site south of Banks Lowman Road. Traffic volumes at ATR \# 10 varied from a low of 4,800 in January 2013, to a high of 11,000 in July 2013. Traffic volumes at ATR \# 184 varied from a low of 3,100 in January 2013, to a high of 9,400 in July 2014. Variations are also found in the day of the week as average daily traffic volumes on weekends (Friday through Sunday) are higher than average daily traffic volumes on weekdays. See Figure 11 on page 24.

Figure 11: Idaho 55 south of Dry Creek Road Average Daily Traffic by Day Type and Month


Average daily traffic volumes by day type (i.e. Sunday, Monday, Tuesday, etc.) and month at Dry Creek Road varied from a low of 3,727 on Tuesdays in January 2013, to a high of 13,758 on Sundays in July 2013. Traffic volumes at Banks Lowman Road varied from a low of 1,862 on Tuesdays in January 2013, to a high of 13,879 on Sundays in July 2014. See Figure 12 on page 25.

Figure 12: Idaho 55 at Banks Lowman Road Average Daily Traffic by Day Type and Month


The direction of traffic flows also varied depending upon the day of the week. Fridays had much more northbound traffic than southbound and Thursdays had moderately more northbound traffic. Sundays had much more southbound traffic than northbound traffic and Mondays had moderately more southbound traffic. Tuesdays, Wednesdays and Saturdays varied in the directionality of their traffic flows. See Figure 13 on page 26.

Figure 13: Idaho 55 south of Dry Creek Road Traffic Volume Direction Differentials by Day Type and Month


## Traffic Conditions at the Southern End of Idaho 55

Traffic operations on the southern end of the highway were analyzed using traffic volumes collected by traffic tubes placed to the north of State Street between February 21 and February 25 in 2014. These counts were compared to counts collected from ATR \#10 south of Dry Creek Road, just outside the suburban limits of the City of Eagle.

Northbound traffic coming from roads north of State Street (Hill Road, Floating Feather Road and Beacon Light Road) equaled or exceeded State Street originating traffic from 5:00 a.m. to 11:00 a.m. on weekends and from 4:00 a.m. to 8:00 a.m. on weekdays. Northbound traffic originating from State Street peaks on weekdays at 6:00 p.m. and on weekends between 2:00 p.m. and 4:00 p.m. The northbound peak at Dry Creek Road occurs earlier at 5:00 p.m. on weekdays and at 12:00 p.m. on weekends. Overall, northbound traffic volumes decrease by over 40 percent between State Street and Dry Creek Road. See Figure 14 on page 27.

Figure 14: Idaho 55 Southern End Northbound Traffic Conditions


Southbound traffic originating north of Dry Creek Road only exceeds traffic arriving at State Street on weekdays between 4:00 a.m. and 7:00 a.m. Peak hour traffic at Dry Creek Road occurs between 7:00 a.m. and 9:00 a.m. on weekdays and between 3:00 p.m. and 5:00 p.m. on weekends. The southbound peak at State Street is between 8:00 a.m. and 9:00 a.m. on weekdays and between 6:00 p.m. and 7:00 p.m. on weekends. Overall, traffic volumes increased 80 percent between Dry Creek Road and State Street. See Figure 15 on page 28.

Weekday peak hour traffic is more pronounced in the morning than the afternoon. In the mornings, more than 550 vehicles in an hour may arrive southbound at State Street than pass by Dry Creek Road. In the northbound direction, 400 more vehicles may start at State Street than pass by Dry Creek Road.

Figure 15: Idaho 55 Southern End Southbound Traffic Conditions


## Traffic Conditions at the Dry Creek Road Automatic Traffic Recorder

Average hourly traffic volumes by day of week from January 1, 2013 through December 31, 2014, are displayed in Figure 16 (see page 29). These traffic volumes are a combination of both northbound and southbound vehicle counts.

The weekday counts (black lines) show a 4:00 p.m. to 6:00 p.m. peak. The Friday afternoon peak is higher than all other days. Saturday counts (orange line with red diamonds) show a mid-day plateau from 11:00 a.m. to 4:00 p.m. Sunday counts (orange line with orange diamonds) show a similar plateau from 12:00 p.m. to 6:00 p.m.

More than 7 percent of vehicles counted were longer than 23 feet and are considered to be commercial, but could also include recreational vehicles.

Figure 16: Idaho 55 South of Dry Creek Road Average Vehicles per Hour


## Seasonal Variation

Summer traffic volumes from Memorial Day in May through Labor Day in September are higher than traffic volumes in the other three seasons. Seasonal traffic variations were compared for traffic data collected from January 1, 2013 to December 31, 2014. The two peak and two off-peak seasons for each day of the week showed similar traffic patterns for both directions of travel. Data for both peak seasons were combined and averaged, and the same was done for both off-peak seasons.

Average traffic volumes on Sundays showed similar patterns regardless of season and direction of travel. Southbound peak season, peak hour traffic volumes were twice as great as off-peak season, peak hour traffic volumes. Northbound peak hour traffic volumes were less than twice as great as off-peak traffic volumes. The primary direction of travel was southbound. See Figure 17 on page 30.

Monday through Thursday average traffic volumes showed similar patterns regardless of season and direction of travel. The difference between peak and non-peak season traffic volumes was far less than the differences in Sunday traffic. Northbound and southbound traffic volumes were approximately equal. See Figure 18 on page 30.

Figure 17: Idaho 55 South of Dry Creek Road Average Sunday Traffic Volume by Direction by Hour


Figure 18: Idaho 55 South of Dry Creek Road Average Monday through Thursday Traffic Volume by Direction by Hour


Average traffic volumes on Friday showed similar patterns regardless of season and direction of travel. The primary direction of travel is northbound with a peak season peak hour traffic volume being approximately 300 vehicles per hour higher than the corresponding non-peak season peak hour traffic volume. See Figure 19.

Figure 19: Idaho 55 South of Dry Creek Road Average Friday Traffic Volume by Direction and Hour


Saturday average traffic volumes showed similar patterns regardless of season and direction of travel. The difference between peak season peak hour traffic volumes and non-peak season peak hour traffic volumes was from 200 to 250 additional vehicles per hour. Primary direction of travel is northbound before 2:00 p.m. and southbound after 2:00 p.m. See Figure 20 on page 32.

Figure 20: Idaho 55 South of Dry Creek Road Average Saturday Traffic Volume by Direction and Hour


## Traffic Conditions at the Banks Lowman Road (south) Automatic Traffic Recorder

Average hourly traffic volumes by day of week from January 1, 2013 through December 31, 2014, are displayed in Figure 21 (see page 33). These traffic volumes are a combination of both northbound and southbound vehicle counts.

The Monday through Thursday counts (black lines) show a 4:00 p.m. to 5:00 p.m. peak. The Friday afternoon peak is an hour later from 5:00 p.m. to 6:00 p.m. and is twice as high as all the other weekdays. Saturday counts (orange line with red diamonds) peaks from 11:00 a.m. to 12:00 p.m. Sunday counts (orange line with orange diamonds) show a plateau from 12:00 p.m. to 5:00 p.m.

Average hourly vehicle counts are typically 100 to 150 vehicles higher at ATR \#10 (south of Dry Creek Road) compared to ATR \#184 (south of Banks Lowman Road). Hourly vehicle counts are equal from 10:00 p.m. to 7:00 a.m.

Unlike the Dry Creek ATR, the Banks Lowman Road ATR is unable to determine vehicle lengths. This explains the absence of commercial vehicle counts for this site.

Figure 21: Idaho 55 South of Banks Lowman Road Average Vehicles per Hour


## Seasonal Variation

Summer traffic volumes from Memorial Day in May through Labor Day in September are higher than traffic volumes in the other three seasons. Seasonal traffic variations were compared for traffic data collected from January 1, 2013 to December 31, 2014. The two peak and two off-peak seasons for each day of the week showed similar traffic patterns for both directions of travel. Data for both peak seasons were combined and averaged, and the same was done for both off-peak seasons.

Average traffic volumes on Sundays showed similar patterns regardless of season and direction of travel. Southbound peak season, peak hour traffic volumes were twice as great as off-peak season, peak hour traffic volumes. Northbound peak hour traffic volumes were less than twice as great as off-peak traffic volumes. The primary direction of travel was southbound. See Figure 22 on page 34.

Monday through Thursday average traffic volumes showed similar patterns regardless of season and direction of travel. The difference between peak and non-peak season traffic volumes averaged 100
vehicles per hour. Northbound and southbound traffic volumes were approximately equal. See Figure $\mathbf{2 3}$ on page 35.

Figure 22: Idaho 55 South of Banks Lowman Road Average Sunday Traffic Volume by Direction by Hour


Figure 23: Idaho 55 South of Banks Lowman Road Average Monday through Thursday Traffic Volume by Direction by Hour


Average traffic volumes on Friday showed similar patterns regardless of season and direction of travel. The primary direction of travel is northbound with a peak season, peak hour traffic volume being approximately 300 vehicles per hour higher than the corresponding non-peak season, peak hour traffic volume. See Figure 24 on page 36.

Figure 24: Idaho 55 South of Banks Lowman Road Average Friday Traffic Volume by Direction and Hour


Saturday average traffic volumes showed similar patterns regardless of season and direction of travel. The difference between peak season peak hour traffic volumes and non-peak season peak hour traffic volumes was from 150 to 300 additional vehicles per hour. Primary direction of travel is northbound before 2:00 p.m. and southbound after 2:00 p.m. See Figure 25 on page 37.

Figure 25: Idaho 55 South of Banks Lowman Road Average Saturday Traffic Volume by Direction and Hour


## Alternative Modes

The Idaho Northern and Pacific Railroad Company (INPR) operates four branch lines in southwestern Idaho and northeastern Oregon. The Cascade Branch starts in Payette and ends in Cascade. There is an at-grade railroad crossing of Idaho 55 at Milepost 64.346 in Horseshoe Bend. The INPR operates a tourist train, the Thunder Mountain Line, with scenic train rides from Horseshoe Bend to
 Montour and Banks. Information is available online at: http://thundermountainline.com.

The Rio Grande Pacific Corporation maintains a $100 \%$ equity interest in the INPR. Information is available online at: http://www.rgpc.com/idaho-northern-and-pacific.

Valley Regional Transit (VRT) operates one bus route on State Street adjacent to the Idaho 55 Central Corridor. Route 44 is scheduled only on weekdays between Caldwell and downtown Boise. A single eastbound trip in the morning passes the bus
 stop on State Street at Horseshoe Bend Road after 7:11 a.m. and returns westbound after 5:29 p.m. Information is available online at: http://valleyride.com.

The "ValleyConnect" plan, adopted by the VRT Board of Directors on August 17, 2011, identified three future "Park \& Ride" lots to be located at the intersection of State Street and Idaho 55, in the vicinity of Avimor, and in Horseshoe Bend. Information is available online at http://valleyregionaltransit.org/PROJECTSSTUDIES/VALLE YCONNECT.aspx

Northwestern Trailways operates daily bus service
 between downtown Boise and the Spokane Airport.
Starting from Boise, the service operates on State Street, Idaho 55 to New Meadows, and then on to U.S. 95. The one bus stop in the corridor is located at the Chevron Station in Horseshoe Bend.

Northbound service is scheduled to arrive at 8:00 a.m. and southbound service is scheduled to arrive at 3:50 p.m. Information is available on-line at: http://northwesterntrailways.com/

There are no signed bicycle lanes on Idaho 55. The Ada County Bicycle Network map dated February 2015 has identified the following corridor roadways as bicycle routes:

- Idaho 55 from State Street north to Beacon Light Road is identified as a "Highway Bike Route."
- Idaho 44 from Edgewood Road to Horseshoe Bend Road is identified as a "Highway Bike Route."
- Hill Road east of Idaho 55 is identified as a "Highway Bike Route."
- Floating Feather Road to both the west and east of Idaho 55 is identified as a "Bike Lane."

There are trails and pathways at four different locations in the corridor:

- City of Eagle facilities are located on Horseshoe Bend Road, Dry Creek Canal and Farmers Union Canal.
- Ada County facilities are east of Horseshoe Bend Road and north of Floating Feather Road. These are mapped in Figure 26 (see page 39).
- The Avimor planned community; east side of Idaho 55.
- A bicycle and pedestrian pathway from the southwestern area of the school grounds north along the Payette River to the city's wastewater treatment facilities in Horseshoe Bend. ${ }^{7}$

There is one aviation facility within the corridor: Horseshoe Bend Heliport. This is mapped in Figure 27 (see page 39). Figure 27 shows two additional aviation facilities not within the corridor: Peaceful Cove Airport and Loomis Airport.

[^4]Figure 26: Ada County Trails and Pathways


Figure 27: Idaho 55 Central Corridor Aviation Facilities


## Corridor Performance Measures

## Level of Service

Level of Service (LOS) is a quantitative stratification of quality of service. Beginning in 1965, the Highway Capacity Manual (HCM) divided highway quality of service into six letter grades, " $A$ " through " $F$," with " $A$ " being the best and " $F$ " being the worst. The " $A$ " through " $F$ " LOS scheme allowed traffic engineers to better explain operating and design concepts of highways to the general public and elected officials. The LOS letter scheme was so successful that it is now used throughout the United States in transportation, as well as other fields.

Nevertheless, it is important to note that LOS is simply a quantitative breakdown from transportation users' perspectives of transportation quality of service. LOS reflects the quality of service as measured by a scale of user satisfaction and is applicable to each of the following modes that use roadways: automobiles, trucks, bicycles, pedestrians and buses. ${ }^{8}$ Figure $\mathbf{2 8}$ illustrates the traffic conditions for various levels of service within each transportation mode.

Figure 28: LOS for Different Transportation Modes


ITD has different recommended levels of service for interstate highways, National Highway System (NHS) highways, and non-NHS highways. Idaho 55 is an NHS highway with the recommended LOS shown in Table 3 on page 41. Idaho 55 is identified as an urban principal arterial north of State Street to Brookside Lane with a recommended minimum LOS of "C." North of Brookside Lane, Idaho 55 is identified as a rural principal arterial with a recommended minimum LOS of "B" or "C" depending upon location.

Driver perception of trip quality and traffic congestion varies whether they consider a particular segment of highway to be rural or non-rural. A 2006 study of road users in Florida concluded that "first, (traffic) density is definitely highly correlated with traveler perceptions of trip quality on rural freeways. Second, travelers are less tolerant of traffic congestion on rural freeways than is currently suggested by the HCM (Highway Capacity Manual)." ${ }^{9}$

[^5]Table 3: NHS Recommended Minimum Level of Service for Arterials

| Type of Area | Minimum LOS |
| :---: | :---: |
| Rural Level | B |
| Rural Rolling | B |
| Rural Mountainous | C |
| Urban/Suburban | C |

LOS for local roads and access points meeting and/or crossing Idaho 55 is determined by highway traffic volumes at stop sign controlled intersections or by signal light timing at signal light controlled intersections. At stop sign controlled intersections, crossing and turning movements require drivers to find a gap in traffic. Base values of acceptable gaps, in seconds, have been determined based upon nation-wide studies across a broad range of conditions. ${ }^{10}$ These base gap values for two lane major streets, such as Idaho 55, at two-way, stop-controlled intersections (TWSC), are displayed in Table 4. Trucks and vehicles towing units have longer base gap values.

Table 4: Base Critical Gaps for Passenger Vehicles at Two-Way Stop Controlled Intersections

| Passenger Vehicle Movement | Base Critical Gap (in seconds) |
| :---: | :---: |
| One-Stage Left Turn from Idaho 55 | 4.1 |
| Two-Stage Left Turn on to Idaho 55 | 5.4 |
| Right Turn on to Idaho 55 | 6.2 |
| Through Traffic across Idaho 55 | 6.5 |
| One-Stage Left Turn on to Idaho 55 | 7.1 |

A two-stage left turn occurs when a vehicle stops its initial turn movement in a center median before completing the full turn. A one-stage left turn is a non-stop movement into the destination lane. Critical gaps are greater for larger commercial vehicles. Critical gap times decrease with greater traffic volumes and increase with decreased traffic volumes.

TWSC intersection LOS is defined in terms of the average vehicle delay of an individual movement. This LOS criteria is displayed in Table 5 (see page 42).

[^6]Table 5: Level of Service Criteria for Two-Way Stop Controlled Intersections

| Level of Service | Average Control Delay (sec/veh) |
| :---: | :---: |
| A | $0-10$ |
| B | $>10-15$ |
| C | $>15-25$ |
| D | $>25-35$ |
| E | $>35-50$ |
| F | $>50$ |

## Current AADT

Generalized Annual Average Daily Traffic (AADT) volumes for the entire corridor and associated LOS for 2014 are presented in Table 1 (see page 18).

## Current Hourly Traffic Volumes and Associated Level of Service

Precise hourly LOS can only be provided for the two locations where ATR \#10 (south of Dry Creek Road) and ATR \#184 (south of Banks Lowman Road) are located. Actual hourly traffic counts are presented in the following graphs and accompanying tables. The dates of the data range from January 1, 2013 to December 31, 2014.

## Level of Service for Idaho 55 near ATR \#10 South of Dry Creek Road

The LOS determination lines shown in Figures 29 through 36 and Tables 6 through 13 are accurate for two-lane undivided highways with speed limits above 45 miles per hour located in an area transitioning from rural to urban within 20 years. Data points found beneath a particular LOS determination line have an LOS higher than the line's LOS. Data points with the same traffic volume value will stack with no indication of how many times that value occurs. The accompanying table with each figure provides the actual number of data points found within each LOS category.

Figure 29: Sunday Hourly Traffic Northbound South of Dry Creek Road 2013-2014


Table 6: Data Points for Sunday Hourly Traffic Northbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,389 | 11 | 0 | 0 | $\mathbf{2 , 4 0 0}$ |
| $99.5 \%$ | $0.5 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Sunday northbound traffic is operating within LOS standards of " C " or better.

Figure 30: Sunday Hourly Traffic Southbound South of Dry Creek Road 2013-2014


Table 7: Data Points for Sunday Hourly Traffic Southbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 1,958 | 385 | 57 | 0 | $\mathbf{2 , 4 0 0}$ |
| $81.6 \%$ | $16.0 \%$ | $2.4 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Sunday southbound traffic is operating within LOS standards of " C " or better. All times of LOS " C " occurred between June and August with the exception of two hours during McCall Winter Carnival 2014.

The primary flow of Sunday traffic is southbound with peak hours from 11:00 a.m. to 8:00 p.m.

Figure 31: Monday-Thursday Hourly Traffic Northbound South of Dry Creek Road 2013-2014


Table 8: Data Points for Monday-Thursday Hourly Traffic Northbound South of Dry Creek Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 9,559 | 54 | 9 | 2 | $\mathbf{9 , 6 2 4}$ |
| $99.3 \%$ | $0.6 \%$ | $0.1 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

Monday through Thursday northbound traffic is operating within LOS standards of " B " or better except for afternoons the day before Independence Day. Two times of LOS "D" occurred on July 3, 2014 at 5:00 p.m. and 6:00 p.m.

Figure 32: Monday-Thursday Hourly Traffic Southbound South of Dry Creek Road 2013-2014


Table 9: Data Points for Monday-Thursday Hourly Traffic Southbound South of Dry Creek Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 9,616 | 8 | 0 | 0 | $\mathbf{9 , 6 2 4}$ |
| $\mathbf{9 9 . 9 \%}$ | $0.1 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Monday through Thursday southbound traffic is operating within LOS standards of " B " or better.

Figure 33: Friday Hourly Traffic Northbound South of Dry Creek Road 2013-2014


Table 10: Data Points for Friday Hourly Traffic Northbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,047 | 381 | 19 | 1 | $\mathbf{2 , 4 4 8}$ |
| $83.6 \%$ | $15.6 \%$ | $0.8 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

Friday northbound traffic is operating within LOS standards of "C" or better 99.9 percent of the time. The one instance of LOS " D " occurred on August 30, 2013 at 5:00 p.m., leading into the Labor Day holiday weekend. The 19 instances of LOS " $C$ " occurred between 4:00 p.m. and 7:00 p.m.:

- Six hours leading into the Memorial Day holiday weekend.
- Five hours leading into the Father's Day weekend.
- July 26, 2013 at 4:00 p.m. and 5:00 p.m.
- August 9, 2013 at 5:00 p.m.
- Five hours leading into the Labor Day holiday weekend.

All instances of LOS " B " occurred between 10:00 a.m. and 9:00 p.m.

Figure 34: Friday Hourly Traffic Southbound South of Dry Creek Road 2013-2014


Table 11: Data Points for Friday Hourly Traffic Southbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,440 | 8 | 0 | 0 | $\mathbf{2 , 4 4 8}$ |
| $99.7 \%$ | $0.3 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Friday southbound traffic is operating within LOS standards of " B " or better. The eight instances of LOS "B" occurred on:

- July 5, 2013 from 11:00 a.m. to 5:00 p.m., following the Independence Day holiday weekend.
- July 19, 2013 at 12:00 p.m.

Figure 35: Saturday Hourly Traffic Northbound South of Dry Creek Road 2013-2014


Table 12: Data Points for Saturday Hourly Traffic Northbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,310 | 138 | 0 | 0 | $\mathbf{2 , 4 4 8}$ |
| $94.4 \%$ | $5.6 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Saturday northbound traffic is operating within LOS standards of " $B$ " or better. All instances of LOS "B" occurred between 8:00 a.m. and 2:00 p.m.

Figure 36: Saturday Hourly Traffic Southbound South of Dry Creek Road 2013-2014


Table 13: Data Points for Saturday Hourly Traffic Southbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,390 | 58 | 0 | 0 | $\mathbf{2 , 4 4 8}$ |
| $97.6 \%$ | $2.4 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Saturday southbound traffic is operating within LOS standards of " $B$ " or better. All instances of LOS "B" occurred between 11:00 a.m. and 8:00 p.m. in June, July and August except for five hours during the 2014 McCall Winter Carnival and one hour on October 25, 2014.

Holidays may have different traffic patterns than would normally occur on days of the week in which they land. There are seven national holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving and Christmas. There are three additional Idaho state holidays: Idaho Human Rights Day, Presidents' Day and Columbus Day. Public transit providers typically recognize six holidays with reduced or no service: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas. These were all tagged as holidays in reviewing LOS. Traffic volumes
were reviewed for the remaining four holidays with only Presidents' Day having an LOS of "B" for both the Dry Creek ATR and the Banks Lowman ATR. This day was also tagged as a holiday. Holiday data is displayed in Figures 37 and 38 and Tables 14 and 15.

Figure 37: Holiday Hourly Traffic Northbound South of Dry Creek Road 2013-2014


Table 14: Data Points for Holiday Hourly Traffic Northbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 321 | 14 | 1 | 0 | 336 |
| $95.5 \%$ | $4.2 \%$ | $0.3 \%$ | $0.0 \%$ | $100.0 \%$ |

All holiday northbound traffic is operating within LOS standards of "C" or better. All instances of LOS "B" and "C" occurred on Independence Day between 7:00 a.m. and 3:00 p.m.

Figure 38: Holiday Hourly Traffic Southbound South of Dry Creek Road 2013-2014


Table 15: Data Points for Holiday Hourly Traffic Southbound South of Dry Creek Road 2013 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 284 | 37 | 15 | 0 | $\mathbf{3 3 6}$ |
| $84.5 \%$ | $11.0 \%$ | $4.5 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All holiday northbound traffic is operating within LOS standards of "C" or better. All instances of LOS "B" occurred on New Year's Day, Presidents' Day, Memorial Day and Labor Day. All instances of LOS "C" occurred between 12:00 p.m. and 6:00 p.m. on Memorial Day and Labor Day.

## Level of Service for Dry Creek Road and Brookside Lane

Dry Creek Road, and other three-leg TWSC intersections north of Beacon Light Road in Ada County, were analyzed at a planning level using Highway Capacity Software ${ }^{\text {TM }} 2010$. The LOS for these local roads and access points in 2013 is presented in Table 16 (see page 53).

Table 16: LOS for Minor Road TWSC T-Intersections with Idaho 55 in Ada County

| T-Intersection (i.e. Dry Creek Road, etc.) |  | Left Turn |  | Right Turn |  |
| :---: | :---: | ---: | :---: | ---: | :---: |
| Level of Service | Delay (in seconds) | Hours | Annual Percent | Hours | Annual Percent |
| A | $<=\mathbf{1 0}$ | 4,520 | $52.0 \%$ | 5,810 | $66.9 \%$ |
| B | $>10-15$ | 3,310 | $38.1 \%$ | 2,762 | $31.8 \%$ |
| C | $>15-\mathbf{2 5}$ | 672 | $7.7 \%$ | 116 | $1.3 \%$ |
| D | $>25-\mathbf{3 5}$ | 130 | $1.5 \%$ | 0 | $0.0 \%$ |
| E | $>35-50$ | 27 | $0.3 \%$ | 0 | $0.0 \%$ |
| F | $>50$ | 29 | $0.3 \%$ | 0 | $0.0 \%$ |

Brookside Lane, and other four-way TWSC intersections north of Beacon Light Road in Ada County, were analyzed at a planning level using Highway Capacity Software ${ }^{\text {TM }}$ 2010. The LOS for these local roads in 2013 is presented in Table 17.

Table 17: LOS for Minor Road TWSC Four-Leg Intersections with Idaho 55 in Ada County

| 4-Way Intersection (Brookside Lane, <br> etc.) |  | Left Turn |  | Through |  | Right Turn |  |
| :---: | :---: | ---: | :---: | ---: | :---: | ---: | :---: |
| Level of Service | Delay (in seconds) | Hours | Annual \% | Hours | Annual \% | Hours | Annual \% |
| A | $<=\mathbf{1 0}$ | 4,038 | $46.5 \%$ | 4,038 | $46.5 \%$ | 7,363 | $84.7 \%$ |
| B | $>\mathbf{1 0 - 1 5}$ | 3,590 | $41.3 \%$ | 3,792 | $43.6 \%$ | 1,269 | $14.6 \%$ |
| C | $>\mathbf{1 5 - 2 5}$ | 868 | $10.0 \%$ | 672 | $7.7 \%$ | 56 | $0.6 \%$ |
| D | $>\mathbf{2 5 - 3 5}$ | 76 | $0.9 \%$ | 157 | $1.8 \%$ | 0 | $0.0 \%$ |
| E | $>\mathbf{3 5 - 5 0}$ | 87 | $1.0 \%$ | 29 | $0.3 \%$ | 0 | $0.0 \%$ |
| F | $>\mathbf{5 0}$ | $\mathbf{2 9}$ | $0.3 \%$ | 0 | $0.0 \%$ | 0 | $0.0 \%$ |

## Level of Service for Idaho 55 near ATR \#184 South of Banks Lowman Road

The LOS determination lines shown in Figures 39 through 46 and Tables 18 through 25 are accurate for two-lane undivided highways with speed limits above 45 miles per hour located in an undeveloped rural area. Data points found beneath a particular LOS determination line have an LOS higher than the line's LOS. Data points with the same traffic volume value will stack with no indication of how many times that value occurs. The accompanying table with each figure provides the actual number of data points found within each LOS category.

Figure 39: Sunday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014


Table 18: Data Points for Sunday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,009 | 170 | 5 | 0 | $\mathbf{2 , 1 8 4}$ |
| $92.0 \%$ | $7.8 \%$ | $0.2 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Sunday northbound traffic is operating within LOS standards of " $C$ " or better.

Figure 40: Sunday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014


Table 19: Data Points for Sunday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 1,467 | 366 | 254 | 97 | $\mathbf{2 , 1 8 4}$ |
| $67.2 \%$ | $16.8 \%$ | $11.6 \%$ | $4.4 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

Sunday southbound traffic is operating within LOS standards of "C" or better approximately 95 percent of the time. All times of LOS "D" occurred between June and August except for three hours during the McCall Winter Carnival in 2014.

The primary flow of Sunday traffic is southbound with peak hours from 11:00 a.m. to 7:00 p.m..

Figure 41: Monday-Thursday Hourly Traffic Northbound South of Banks Lowman Road 2013 2014


Table 20: Data Points for Monday-Thursday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 9,041 | 479 | 17 | 15 | $\mathbf{9 , 5 5 2}$ |
| $94.7 \%$ | $5.0 \%$ | $0.2 \%$ | $0.2 \%$ | $\mathbf{1 0 0 . 0} \%$ |

Monday through Thursday northbound traffic is operating within LOS standards of "C" or better over 99 percent of the time. All times of LOS "C" and "D" occurred during:

- July 3, 2013 - one day prior to Independence Day from 10:00 a.m. to 10:00 p.m.
- July 2, 2014 - two days prior to Independence Day from 12:00 p.m. to 7:00 p.m.
- July 3, 2014 - one day prior to Independence Day from 10:00 a.m. to 10:00 p.m.
- August 7, 2014 from 2:00 p.m. to 3:00 p.m.

Figure 42: Monday-Thursday Hourly Traffic Southbound South of Banks Lowman Road 2013 2014


Table 21: Data Points for Monday-Thursday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 9,210 | 338 | 4 | 0 | $\mathbf{9 , 5 5 2}$ |
| $96.4 \%$ | $3.5 \%$ | $0.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Monday through Thursday southbound traffic is operating within LOS standards of " B " or better except between 11:00 a.m. to 3:00 p.m. on Monday, July 7, 2014, following the Independence Day weekend.

Figure 43: Friday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014


Table 22:Data Points for Friday Hourly Traffic Northbound South of Banks Lowman Road 2013 - 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 1,730 | 406 | 255 | 33 | $\mathbf{2 , 4 2 4}$ |
| $71.4 \%$ | $16.7 \%$ | $10.5 \%$ | $1.4 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

Friday northbound traffic is operating within LOS standards of "C" or better 98 percent of the time. The 33 instances of LOS " $D$ " occurred during the peak summer season between Memorial Day weekend and Labor Day weekend.

All instances of LOS "C" occurred between 10:00 a.m. and 9:00 p.m.

Figure 44: Friday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014


Table 23:Data Points for Friday Hourly Traffic Southbound South of Banks Lowman Road 2013 - 2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,282 | 137 | 5 | 0 | $\mathbf{2 , 4 2 4}$ |
| $94.1 \%$ | $5.7 \%$ | $0.2 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

All Friday southbound traffic is operating within LOS standards of "C" or better. The five instances of LOS "C" occurred on July 5, 2013 from 11:00 a.m. to 3:00 p.m., following the Independence Day holiday weekend.

Figure 45: Saturday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014


Table 24: Data Points for Saturday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,016 | 304 | 124 | 4 | $\mathbf{2 , 4 4 8}$ |
| $82.4 \%$ | $12.4 \%$ | $5.1 \%$ | $0.2 \%$ | $\mathbf{1 0 0 . 0} \%$ |

Saturday northbound traffic is operating within LOS standards of "C" or better 99.8 percent of the time. The four instances of LOS "D" occurred at:

- 11:00 a.m. on the Saturday of the 2013 Labor Day holiday weekend.
- 10:00 a.m. on the Saturday of the 2014 McCall Winter Carnival.
- 11:00 a.m. and 12:00 p.m. on the Saturday of the 2014 Labor Day holiday weekend.

Figure 46: Saturday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014


Table 25: Data Points for Saturday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 2,071 | 328 | 48 | 1 | $\mathbf{2 , 4 4 8}$ |
| $84.6 \%$ | $13.4 \%$ | $2.0 \%$ | $0.0 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

Saturday southbound traffic is operating within LOS standards of "C" or better 99.9 percent of the time.
Holidays may have different traffic patterns than would normally occur on days of the week in which they land. There are seven national holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving and Christmas. There are three additional Idaho state holidays: Idaho Human Rights Day, Presidents' Day and Columbus Day. Public transit providers typically recognize six holidays with reduced or no service: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas. These were all tagged as holidays in reviewing LOS. Traffic volumes were reviewed for the remaining four holidays with only Presidents' Day having an LOS of " B " for both
the Dry Creek ATR and the Banks Lowman ATR. This day was also tagged as a holiday. Holiday data is displayed in Figures 47 and 48 and Tables 26 and 27.

Figure 47: Holiday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014


Table 26: Data Points for Holiday Hourly Traffic Northbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 262 | 10 | 8 | 8 | $\mathbf{2 8 8}$ |
| $91.0 \%$ | $3.5 \%$ | $2.8 \%$ | $2.8 \%$ | $100.0 \%$ |

All instances of LOS "C" and "D" occurred on Independence Day in both 2013 and 2014between 8:00 a.m. and 4:00 p.m.

Figure 48: Holiday Hourly Traffic Southbound South of Banks Lowman 2013-2014


Table 27: Data Points for Holiday Hourly Traffic Southbound South of Banks Lowman Road 2013-2014

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 225 | 25 | 15 | 23 | 288 |
| $78.1 \%$ | $8.7 \%$ | $5.2 \%$ | $8.0 \%$ | $100.0 \%$ |

All instances of LOS "C" and "D" occurred on Memorial Day (Monday) and Labor Day (Monday) in 2013 and 2014 between 10:00 a.m. and 8:00 p.m.

## Level of Service for Idaho 55 in Horseshoe Bend

The LOS determination lines shown in Figure 49 and Table 28 (see page 64) are accurate for combined two-way traffic operating on two-lane undivided highways with speed limits of 35 miles per hour identified as principal arterials. The LOS determination lines shown in Figure 50 and Table 29 (see page 65) are accurate for combined two-way traffic operating on two-lane undivided highways with a center two-way left-turn lane and speed limits of 35 miles per hour identified as principal arterials. The
decrease in speed limits when Idaho 55 becomes a city's main street results in lower traffic flows and lower LOS compared to higher speed highway segments outside the city.

Data points found beneath a particular LOS determination line have an LOS higher than the line's LOS. Data points with the same traffic volume value will stack with no indication of how many times that value occurs. The accompanying table with each figure provides the actual number of data points found within each LOS category.

Figure 49: Idaho 55 (Main Street) and 3rd Street in Horseshoe Bend: July 25-26, 2012


Table 28: Data Points for Two-Way Hourly Traffic on Idaho 55 at 3rd Street in Horseshoe Bend: July 25-26, 2012

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 6 | 4 | 12 | 2 | $\mathbf{2 4}$ |
| $25.0 \%$ | $16.7 \%$ | $50.0 \%$ | $8.3 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

July 25 was a Wednesday and July 26 was a Thursday. LOS performance will typically be at these levels between mid-day Mondays through mid-day Fridays in the peak summer season. Traffic volumes on the
same days in the off-peak season will be half as much. LOS will be at "E" for parts of peak summer season weekends.

Figure 50: Idaho 55 (Main Street) \& Ada Street in Horseshoe Bend: July 25-26, 2012


Table 29: Data Points for Two-Way Hourly Traffic on Idaho 55 at Ada Street in Horseshoe Bend: July 25-26, 2012

| LOS A | LOS B | LOS C | LOS D | Total |
| ---: | ---: | ---: | ---: | ---: |
| 5 | 4 | 15 | 0 | $\mathbf{2 4}$ |
| $20.8 \%$ | $16.7 \%$ | $62.5 \%$ | $8.3 \%$ | $\mathbf{1 0 0 . 0 \%}$ |

July 25 was a Wednesday and July 26 was a Thursday. LOS performance will typically be at these levels between mid-day Mondays through mid-day Fridays in the peak summer season. Traffic volumes on the same days in the off-peak season will be half as much. LOS will be at "E" for parts of peak summer season weekends.

## Level of Service for Alternative Transportation Modes on Idaho 55

There are no LOS standards for bicycles, pedestrians, and transit Service. The current 2015 LOS standards for those transportation modes are shown in Table 30.

Table 30: Corridor Level of Service for Bicycles, Pedestrians and Public Transit

| Segment No. | Segment <br> Mileposts | Begin Description | End Description | Bicycle LOS | Pedestrian LOS | $\begin{aligned} & \text { Bus } \\ & \text { LOS } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 44.645-47.303 | Junction S.H. 44 | North Brookside Lane | C | E | F |
| 2 | 47.303-50.275 | North Brookside Lane | Spring Valley Creek Canyon Exit | C | E | F |
| 3 | 50.275-52.101 | Spring Valley Creek Canyon Exit | West Avimor Drive | F | F | F |
| 4 | 52.101-53.960 | West Avimor Drive | north of Ada-Boise County Line | C | E | F |
| 5 | 53.960-56.488 | north of Ada-Boise County Line | south of Horseshoe Bend Hill Summit | C | E | F |
| 6 | 56.488-62.700 | south of Horseshoe Bend Hill Summit | Harris Creek Rd | C | E | F |
| 7 | 62.700-63.766 | Harris Creek Rd | Madison Street | C | E | F |
| 8 | 63.766-64.656 | Madison Street | Junction S.H. 52 | C | E | F |
| 9 | 64.656-78.820 | Junction S.H. 52 | Banks Lowman Road | F | F | F |

## Projected 2030 and 2040 AADT

Future traffic volumes have been developed for both 10 years (2030) and 20 years (2040) into the future. Issues identified through projected traffic volumes in 2030 will generate recommended improvements and management strategies that can realistically be expected to be funded within 10 years. These projects are listed on page 92 of this corridor plan. Issues identified through projected traffic volumes in 2040 will be noted, but potential solutions will not be developed until a future revision of the Idaho 55 Corridor Plan.

ITD has developed future traffic volume projections for all state highways. The methodology develops a trend line based upon previous years' volumes and a future growth rate. For Ada County, COMPASS has developed future traffic volume projections based upon a different methodology:

- The first major step was to develop a Communities in Motion (CIM) 2040 Vision which broadly described where future households and businesses will be located in Ada and Canyon counties in the year 2040, taking into account projected growth in population and jobs, citizen input, and existing comprehensive plans.
- The second major step, and the ultimate purpose of CIM 2040, was planning a fiscally constrained transportation system to serve the needs of the Treasure Valley as described in the vision.

Since the traffic projections were developed under different methodologies, the results are different. ITD is currently developing a statewide traffic model that will reconcile these projections. Until the statewide model is completed, the Idaho 55 Corridor Plan will present the CIM 2040 future projections for Ada County and the ITD future projections for Boise County. Current 2014 AADT, projected 2030 AADT, and projected 2040 AADT are displayed in Table 31.

Table 31: Projected Future Traffic Volumes and Level of Service

| Beginning <br> Milepost | Ending Milepost | Segment Description | $\begin{gathered} \hline 2014 \\ \text { AADT } \end{gathered}$ | $\begin{gathered} 2014 \\ \text { LOS } \end{gathered}$ | 2030 <br> AADT | $\begin{gathered} 2030 \\ \text { LOS } \end{gathered}$ | $\begin{aligned} & \hline 2040 \\ & \text { AADT } \end{aligned}$ | $\begin{gathered} 2040 \\ \text { LOS } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44.645 | 47.303 | SH-44 to N Brookside Lane | $14,000$ | A | $33,300$ | B | 44,900 | E |
| 47.303 | 50.275 | N Brookside Lane to Spring Valley Creek Canyon Exit |  | A | 24,200 | D | 29,800 | D |
| 50.275 | 52.101 | Spring Valley Creek Canyon Exit to W Avimor Drive | $4,700$ | B | 12,600 | C | 17,000 | D |
| 52.101 | 53.960 | W Avimor Drive to north of Ada-Boise County Line | 4,700 | B | $8,400$ | C | 12,200 | C |
| 53.960 | 56.488 | North of Ada-Boise County Line to south of Horseshoe Bend Hill Summit | $4,700$ | B | 6,900 | B | 8,300 | B |
| 56.488 | 62.700 | South of Horseshoe Bend Hill Summit to Harris Creek Road | $4,600$ | A | 6,800 | A | 8,100 | A |
| 62.700 | $63.766$ | Harris Creek Road to Madison Street | 4,600 | A | 6,800 | A | 8,100 | A |
| 63.766 | 64.656 | Madison Street to SH-52 | 5,100 | A | 7,500 | A | 9,000 | B |
| 64.656 | 78.820 | SH-52 to Banks Lowman Road | 4,700 | B | 6,500 | B | 7,700 | B |
| Reflects programmed construction projects (2015-2019). |  |  |  |  |  |  |  |  |

## Crash Locations

There have been four crashes with five fatalities in the corridor from 2010 to 2014. All of the crashes were on Idaho 55. These fatal crash locations are displayed in Figure 51.

Figure 51: Idaho 55 Central Corridor Fatal Crashes 2010-2014


High Accident Locations (HAL) identification and analysis is an important tool in managing the safety of Idaho's highways. The appearance of a location on a HAL listing does not conclusively define the location as a problem. It merely points to possible problem locations. Only a technical safety analysis of each section of the roadway will determine whether it actually is a problem location and what priority the location should be given for improvements.

The HAL listing is updated annually and is the aggregate of the previous three years' crash data. The 2015 HAL listing contains crash data for 2012, 2013 and 2014. The HAL listing is composed of four separate reports: interstate segment report, interstate interchange report, non-interstate segment report, and non-interstate intersection report. Only the non-interstate segment report and the noninterstate intersection report apply to the Idaho 55 Central Corridor.

Locations receive a statewide ranking based upon collision frequency, severity (economic loss) and the collision rate. Statewide rankings can change considerably from year to year.

The corridor has one HAL non-interstate segment, within the top 100 state-wide, which is displayed in Table 32. This segment has no funded improvement project.

Table 32: 2015 HAL Idaho 55 Central Corridor Non-Interstate Segments

| $\mathbf{2 0 1 5}$ <br> Rank | Route | Segment <br> Code | Milepost Range | Length (in <br> miles) | Description | Previous <br> 2014 Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 93 | 55 | 001990 | $67.038-67.538$ | 0.50 | SH-55 from Porter Creek <br> Road north $1 / 2$ mile | 22 |

The corridor has three HAL non-interstate intersection locations, all below the top 100 statewide, which are displayed in Table 33.

Table 33: 2015 HAL Idaho 55 Central Corridor Non-Interstate Intersections

| 2015 <br> Rank | Intersection | Signalized? | Table 1 <br> Segment <br> No. | Previous 2014 <br> Rank | Project <br> Date |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 331 | Hill Rd @ SH 55 -- Eagle | Yes | $\mathbf{1}$ | 216 | $6 / 26 / 2012$ |
| 380 | SH 44 @ SH 55 -- Eagle | Yes | $\mathbf{1}$ | 590 | -- |
| 745 | Floating Feather Rd @ <br> SH 55 -- Eagle | Yes | $\mathbf{1}$ | -- | -- |

The intersection of Hill Road and Idaho 55 was signalized with a project date of June 26, 2012. The leftturn lights on Hill Road were changed to flashing yellows on February 21, 2013. The left-turn lights on Idaho 55 were changed to flashing yellows on November 7, 2013.

Figure 52 illustrates intersection crashes within the south end of the corridor. The majority of the corridor crashes in this area occur on State Street.

Figure 52: 2010-2014 Crashes Milepost 44.645 to 47.920


Figure 53 illustrates intersection crashes on Idaho 55 between Beacon Light Road and the Horseshoe Bend Hill summit. The crashes are well distributed with no apparent concentrations.

Figure 53: 2010-2014 Crashes Milepost 47.020 to 56.500


Figure 54 illustrates intersection crashes on Idaho 55 between the Horseshoe Bend Hill summit and north of the Payette River Bridge north of Horseshoe Bend. The intersections with the most crashes are in and south of Horseshoe Bend.

Figure 54: 2010-2014 Crashes Milepost 55.700 to 66.900


Figure 55 illustrates crashes on Idaho 55 between Horseshoe Bend and south of Fleming Creek. The areas with the most crashes are north of Porter Creek Road and south of Waverly Drive. These correspond with the locations in the HAL non-Interstate segment list.

Figure 55: 2010-2014 Crashes Milepost 63.270 to 73.600


Figure 56 illustrates crashes on Idaho 55
between Gardena Road and Banks Lowman
Road. The intersection with the most accidents is Banks Lowman Road.

Figure 56: 2010-2014 Crashes Milepost 70.100 to 79.07


## Railroad Crossing Safety

The railroad crossing in Horseshoe Bend, with a Federal Railroad Administration crossing number of "818750Y," does not have any history of accidents.

## Passing Lanes and Slow Vehicle Turnouts

South of Horseshoe Bend, 63 percent of Idaho 55 is a multi-lane facility. Through Horseshoe Bend to Banks Lowman Road only 6 percent of Idaho 55 is a multi-lane facility. Idaho 55 north of Horseshoe Bend is usually topographically constrained between steep slopes prone to rockfall, rock faces and close proximity to the Payette River. Building cost effective improvements in this environment is challenging. Passing lanes and slow vehicle turnouts are lower cost options compared to making a long segment of the highway multi-lane.

The term "traffic platooning" is described as a group of pedestrians or vehicles travelling together as a group, either voluntarily or involuntarily, because of traffic signal controls, geometrics or other factors (Source: AASHTO Glossary). Traffic platooning can be a source of frustration when the lead vehicle is unable to travel at the signed speed limit. Passing lanes and slow vehicle turnouts can reduce platooning and driver frustration. If possible, passing lanes should be placed at regular intervals. The consistency of passing opportunities is important to regulating traffic platooning. An effective passing lane typically reduces platooning 3 to 10 miles down the road before traffic congestion resumes.

Table 34 (See page 74) presents the current spacing of multi-lane highway and passing lanes in the corridor. There are two slow vehicle turnouts in both the northbound and southbound directions.

Table 34: Idaho 55 Central Corridor Passing Lane and Slow Vehicle Turnout Locations

| Milepost Range | $\begin{gathered} \text { \# of } \\ \text { Lanes } \end{gathered}$ | Slow <br> Vehicle <br> Turnout Location (north) | Distance from last passing opportunity northbound (in miles) | Distance from last passing opportunity southbound (in miles) | Slow <br> Vehicle <br> Turnout Location (south) | NOTES |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44.64-47.30 | 4 | none | n/a | 9.185 |  |  |
| 47.30-53.96 | 2 |  | -- |  |  |  |
| 53.96-56.48 | 3 |  | 6.657 |  |  | 2 lanes northbound, <br> 1 lane southbound |
| 56.48-62.70 | 4 |  | -- | 6.944 |  |  |
| 62.70-70.14 | 2 |  |  |  |  | milepost correction $62.77 \mathrm{Bk}=63.270 \mathrm{Ah}$ |
| 70.14-71.09 | 4 |  | 6.944 | 9.845 |  | dual passing lanes |
| 71.09-78.82 | 2 | 74.19 |  |  | 72.02 | 2 slow vehicle turnouts in each direction of travel |
|  |  | 78.07 |  |  | 75.87 |  |
| 78.82-80.94 | 2 | none |  |  | none |  |
| 80.94-81.64 | 4 |  | 9.845 | n/a |  | dual passing lanes |
|  |  |  |  |  |  |  |

Excluding slow vehicle turnouts, regular passing opportunities either on multi-lane highway or passing lanes are available at least every 10 miles. This is a minimum effective standard.

ITD annually produces a list of priority passing lane locations from a mathematical model. No locations within the Idaho 55 Central Corridor were selected but there were two locations selected within the Idaho 55 North Corridor.

## Pavement Conditions

Pavement condition is determined by three measures: cracking, roughness and rutting. Cracking and roughness are each rated on an index of 5.0 (good) to 0.0 (maximum distress). Figure 57 and Figure 58 illustrate crack ratings.

Figure 57: Pavement at 5.0 Crack Rating


Figure 58: Pavement at 0.0 Crack Rating


The roughness index is a measure of the number of inches per mile that a laser, mounted on a profiler van, jumps as the van is driven along the roadway. Typically, the lower the International Roughness Index (IRI) number, the smoother the ride; but IRI is not known as a direct measure of rider discomfort. Idaho takes the measured IRI values for pavement and compresses them onto a scale of 0.0 to 5.0 , similar to the Cracking Index scale, where 0.0 is very rough and 5.0 is very smooth. Rutting is measured as a depth in inches. For more information, see the ITD Pavement Rating Manual.

Pavement condition is described as being good, fair, poor or very poor. Pavement is considered to be "deficient" if it is in either poor or very poor condition. Table $\mathbf{3 5}$ (see page 76) presents the Idaho 55 pavement conditions in 2014.

Table 35: Idaho 55 Central Corridor Pavement Conditions in 2014

| Beginning Milepost | Beginning Cross Street | Ending Milepost | Ending Cross Street | Length (in miles) | Overall Condition | Cracking Index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44.645 | State Street | 47.303 | N Brookside Ln | 2.658 | GOOD | 3.9 |
| 47.303 | $\begin{gathered} \text { N Brookside } \\ \text { Ln } \\ \hline \end{gathered}$ | 47.460 | none | 0.157 | GOOD | 4.2 |
| 47.460 | none | 50.089 | none | 2.629 | GOOD | 3.1 |
| 50.089 | none | 51.670 | none | 1.581 | FAIR | 2.6 |
| 51.670 | none | 54.000 | none | 2.330 | FAIR | 3.8 |
| 54.000 | none | 56.488 | none | 2.488 | FAIR | 4.3 |
| 56.488 | none | 57.179 | Old <br> Horseshoe Bend Hill Rd | 0.691 | FAIR | 4.7 |
| 57.179 | Old <br> Horseshoe Bend Hill Rd | 58.960 | none | 1.781 | FAIR | 4.6 |
| 58.960 |  | 62.770 | 4th Street | 3.810 | FAIR | 4.5 |
| 63.270 | 4th Street | 65.996 | Begin Payette River Bridge | 2.726 | GOOD | 4.9 |
| 65.996 | Begin <br> Payette River Bridge | 66.700 | none | 0.704 | GOOD | 4.9 |
| 66.7010 | none | 78.820 | Banks Lowman Rd | 12.120 | GOOD | 4.9 |

## Bridge Conditions

The condition of a bridge is described by a Sufficiency Rating. A bridge sufficiency rating includes a multitude of factors: inspection results of the structural condition of the bridge, traffic volumes, number of lanes, road widths, clearances, and importance for national security and public use, to name just a few.

The sufficiency rating is calculated per a formula defined in Federal Highway Administration's Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges. This rating is indicative of a bridge's sufficiency to remain in service. The formula places 55 percent value on the
structural condition of the bridge, 30 percent on its serviceability and obsolescence, and 15 percent on its essentiality to public use.

The point calculation is based on a 0-100 scale and it compares the existing bridge to a new bridge designed to current engineering standards.

The bridge's sufficiency rating provides an overall measure of the bridge's condition and is used to determine eligibility for federal funds. Bridges are considered structurally deficient if significant loadcarrying elements are found to be in poor condition due to deterioration or the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions.

Every bridge constructed goes through a natural deterioration or aging process, although each bridge is unique in the way it ages.

The fact that a bridge is classified under the federal definition as "structurally deficient" does not imply that it is unsafe. A structurally deficient bridge, when left open to traffic, typically requires significant maintenance and repair to remain in service and eventual rehabilitation or replacement to address deficiencies. To remain in service, structurally deficient bridges are often posted with weight limits to restrict the gross weight of vehicles using the bridges to less than the maximum weight typically allowed by statute.

Functionally obsolete refers to bridges with deck geometry (e.g., lane width, shoulder widths), load carrying capacity, vertical clearance or approach roadway alignment that no longer meets the criteria for the system of which the bridge is a part.

To be eligible for federal aid for replacement or repair, the following is necessary (a local match is required):

- Replacement: bridge must have a sufficiency rating of less than 50 and be either functionally obsolete or structurally deficient.
- Repair: bridge must have a sufficiency rating of less than 80 and the jurisdiction is prevented from using any additional federal aid for 10 years.

A bridge may be defined as a structure erected over a depression or an obstruction, such as water, a highway, or a railway, and having an opening measured along the center of the roadway of more than 20 feet. A culvert provides similar functionality but measures less than 20 feet long.

Table 36 (see page 78) presents the Idaho 55 Central Corridor bridge conditions. The Payette River (South Horseshoe Bend Bridge) is scheduled for replacement in 2016. Although ITD inspects all public roadway bridges, it is not involved in funding repairs or replacement of non-state highway bridges.

Table 36: Idaho 55 Central Corridor Bridge Conditions

| Sufficiency Rating | Milepost From | Features | Length (in feet) | Structure Type Design | Structure Type Material |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 98.3 | 44.646 | Dry Creek Canal | 15 | Culvert | Concrete |
| 98.5 | 45.763 | Farmers Union Canal | 29 | Frame | Concrete |
| 93.5 | Off-System | N Echohawk Wy @ Farmers Union Canal | 27 | Frame | Concrete |
| 99.6 | Off-System | Beacon Light Rd @ Dry Creek Canal | 60 | Slab | Prestressed Concrete |
| 99.0 | Off-System | Brookside Rd @ Dry Creek | 25 | Slab | Prestressed Concrete |
| 99.1 | 48.292 | Dry Creek | 63 | Stringer/Girder | Prestressed Concrete |
| 74.9 | 61.800 | Horseshoe Bend Hill Drive | 14 | Culvert | Concrete |
| 98.0 | Off-System | Pioneer Rd @ Schafer Creek | 55 | Slab | Prestressed Concrete |
| 33.1 | 63.647 | Payette River * | 364 | Tee Beam | Concrete |
| 34.3 | Off-System | Boise St @ Payette River | 184 | Truss - Thru | Steel |
| 92.0 | Off-System | Boise St @ Power Canal | $101$ | Stringer/Girder | Prestressed Concrete |
| 95.1 | 64.199 | Power Canal | 100 | Slab | Concrete Continuous |
| 70.5 | 65.895 | Union Pacific Railroad | 198 | Stringer/Girder | Prestressed Concrete |
| 96.4 | 65.996 | Payette River | 376 | Stringer/Girder | Prestressed Concrete |
| 95.5 | 67.050 | Porter Creek | 10 | Culvert | Concrete |
| 81.4 | Off-System | Porter Creek Rd @ Porter Creek | 22 | Stringer/Girder | Prestressed Concrete |
| 96.4 | 68.805 | Hill Creek | 10 | Culvert | Concrete |
| 45.0 | Off-System | Gardena Bridge | 292 | Truss - Thru | Steel |
| 43.5 | 74.911 | Fleming Creek | 10 | Frame | Concrete |
| 52.0 | 78.762 | South Fork Payette River | 274 | Stringer/Girder | Concrete |
| 61.6 | Off-System | Dry Buck Rd @ N Fork Payette River | 129 | Tee Beam | Concrete |

* Payette River Bridge in Horseshoe Bend is scheduled to be replaced in 2016 under ITIP Key Number 07215.
** Bridge is Functionally Obsolete
** Bridge is Structurally Deficient
The Gardena Bridge was funded at $\$ 4.6$ million for replacement under Key Number 12052 in October 2009. The local match for this federally funded project was to be provided by Boise County. That match was never identified so the project was cancelled in September 2013.


## Access Management

Access management is the process of balancing the need for traffic movement with property access.
Roads serve two primary purposes—to provide mobility and access. Mobility is the efficient movement of people and goods. Access is getting those people and goods to specific properties. A roadway designed to maximize mobility typically does so in part by managing access to adjacent properties.

Interstate highways have very limited access and high mobility. Local residential roads provide numerous accesses to properties but are not appropriate for long-distance travel. Most state highways serve a function somewhere between interstate highways and residential roads. One of ITD's most important responsibilities is to ensure that the design of each state highway properly balances access and mobility. Access management is the tool used to provide this balance.

ITD policy on Access Control is governed by Idaho Transportation Board Policy 4005 and IDAPA Rule 39.03.42. Idaho 55 in Ada and Boise counties is categorized as a Regional Route. Access spacing under this policy is displayed in Table 37.

Table 37: IDAPA 39.03.42 Access Spacing

| Highway Type | Area Type | Signalized Road Spacing | Public Road Spacing (A) | Driveway <br> Distance <br> Upstream <br> From Public <br> Road <br> Intersection <br> (B) | Driveway Distance Downstream From <br> Unsignalized Public Road Intersection (C) | Distance <br> Between Unsignalized Accesses Other Than Public Roads (D) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Expressway |  | Accessible only at locations specified by the Department. |  |  |  |  |
| Regional Route | Rural | 5,280 feet | 2,640 feet | 1,000 feet | 650 feet | 650 feet |
|  | Transitional | 2,640 feet | 1,320 feet | 690 feet | 360 feet* | 360 feet* |
|  | Urban > 35 mph | 2,640 feet | 660 feet | 660 feet | 360 feet* | 360 feet* |
|  | Urban <= 35 mph | 2,640 feet | 660 feet | 660 feet | 250 feet* | 250 feet* |

Distances in table are minimums based on optimal operational and safety conditions such as adequate sight distance and level grade. Definitions of spacing designated by (A), (B), (C), and (D) are represented on Figure 1 of IDAPA 39.03.42.

* Where the public road intersection or private access intersection is signalized, the distances in the table are for driveways restricted to right-in/right-out movements only. For unrestricted driveways the minimum distance shall be 500 feet from a signalized intersection.

The four-lane highway north of State Street to Beacon Light Road is only accessed at the crossroads of Hill Street and Floating Feather Road. It would be appropriate for it to be designated by the ITD Board as an expressway.

In response to proposed large-scale residential developments in the Northwest Ada County Foothills, ITD commissioned a traffic impact study that was delivered in October 2010. That study was updated in December 2013, and is attached as Appendix A. It established what roadway improvements would be required in response to increased traffic through the year 2035. Large-scale residential development would change Idaho 55 from a rural arterial to an access controlled expressway with grade separated interchanges and overpasses from Beacon Light Road to Avimor Drive (Road South).

The only current large-scale residential development in the corridor is Avimor. The Approach Permit for Avimor Drive, number 3-10-081, contains the following special provisions:

- Once $30 \%$ (of 8,500 square feet of commercial, 220 residential dwelling units, and 1 community center per special provisions of permit number 3-07-422) of the development is complete, SunCor or their successors shall conduct traffic counts at the intersection of Avimor Drive and SH 55 every six months, review the need for a signal each spring, and provide such data to ACHD and ITD.
- When signalization of the SH 55/ Avimor Drive intersection is deemed warranted based on the studies required in these conditions and approved by ITD, SunCor or their successors shall design and construct a traffic signal and all associated improvements at their expense. Design and construction shall be completed in approximately one year.
- Upon activation of the signal, SunCor or their successors shall provide a concept plan for the future grade separated interchange to ITD and ACHD for review.


## Regional Land Use and Environmental Conditions

## Regional Land Use

The land use in a highway corridor directly affects the traffic volumes traveling in and through that corridor. Changes in land use, and the effect upon traffic volumes, can be calculated with the ITE Trip Generation Manual.

Control of land use is accomplished through zoning restrictions. Zoning authority is vested in cities and counties under Idaho Statute Title 67, Chapter 65: Local Land Use Planning. Figure 59 (see page 81) illustrates the current land use zoning in the highway corridor in Ada County. The predominant land use is Residential and Planned Community Residential. Open Space and Rural-Urban Transition are also prominent.

Unincorporated Boise County is a single multiple use district. Figure 60 (see page 82 ) illustrates the current land use zoning in Horseshoe Bend.

Figure 59: Idaho 55 Central Corridor Ada County Current Zoning


Figure 60: Idaho 55 Central Corridor Horseshoe Bend Current Zoning


Economic use of land within the corridor in the year 2014 is presented in Table 38.
Table 38: Idaho 55 Central Corridor Economic Land Use

| Land Use | Acres | Percent of Corridor |
| :--- | ---: | ---: |
| Crops | 213.7 | $2.0 \%$ |
| Fallow Cropland | 4.7 | $0.0 \%$ |
| Pasture | $4,042.7$ | $37.4 \%$ |
| Developed | $1,819.6$ | $16.8 \%$ |
| Open Water | 125.7 | $1.2 \%$ |
| Wetlands | 13.1 | $0.1 \%$ |
| Barren | 0.4 | $0.0 \%$ |
| Shrubland | $3,739.6$ | $34.6 \%$ |
| Forest | 862.4 | $8.0 \%$ |
| TOTAL | $\mathbf{1 0 , 8 2 1 . 9}$ | $100.0 \%$ |

Comprehensive plans project land use up to 20 years in the future. The comprehensive plans referenced have the following publication dates:

- The Ada County Comprehensive Plan is dated November 2007.
- The City of Eagle Comprehensive Plan is dated February 2011.
- The Boise County Comprehensive Plan is dated May 2010.
- The City of Horseshoe Bend Comprehensive Plan is dated September 2009.

Figures 61 and 62 (see pages 84 and 85 ) illustrate the expected long-range changes to land use in the corridor.

Figure 61: Idaho 55 Central Corridor Ada County Future Comprehensive Plan Land Uses


Figure 62: Idaho 55 Boise County Central Corridor Future Comprehensive Plan Land Uses


## Environmental Conditions

Key environmental issues found within the Idaho 55 Central Corridor were identified in an Environmental Scan (Appendix B). Key findings are included here for reference.

An environmental scan of the Idaho 55 Corridor has been completed to identify the existing environmental conditions, potential fatal flaws, and environmental permits that may be required during any future design and construction projects within the existing right-of-way. The Corridor Plan is not linked to any projects in the current Idaho Transportation Investment Plan that would merit special attention.

The environmental scan included windshield surveys of the project corridor, as well as review of existing data sources from local, state, and federal regulatory agencies. The lateral extent along the corridor included in the scan generally consisted of a 100 foot buffer from the highway centerline. The environmental scan included a review of the natural and built environment along the project corridor. It revealed the following information:

- Land cover was evaluated within the project corridor. Most of the natural environment remains as shrubland and evergreen forest while the remainder has been developed for either agriculture or human habitation.
- Twenty soil complexes were identified as being prime farmlands within or adjacent to the Idaho 55 project corridor.
- Ada County is considered an area of concern for particulate matter with a diameter of 2.5 micrometers or less (PM-2.5) (such as pollen and smoke) and ozone. Northern Ada County is also a federally designated and DEQ identified air quality maintenance area for carbon monoxide and PM-10.
- The majority of surface waters identified along Idaho 55 are natural drainages. The following named rivers and streams were identified along and/or crossing Idaho 55: Dry Creek, Spring Valley Creek, South Fork Willow Creek, Alkali Creek, Cottonwood Creek (1), Robbs Creek, Payette River, Porter Creek, Hill Creek, Cottonwood Creek (2), and Flemming Creek. In addition, numerous ephemeral drainages were also identified. Of these 11 drainages, the South Fork Willow Creek has been identified as being water quality impaired by the Department of Environmental Quality. In addition to the natural drainages, the following irrigation related drainages were identified along and/or crossing Idaho 55: a stormwater pond, Dry Creek Canal, Farmers Union Canal, Power Canal, and four unnamed ditches/laterals.
- The Payette River north of Beehive Bend boat access is a State Protected River.
- Mapped floodplains were identified along the Boise River, Payette River, and Dry Creek.
- Sixty wetland communities were identified, mostly along natural drainages.
- There are no designated Sole Source Aquifers located within the project corridor. There are no nitrate-degraded areas located within the project corridor.
- Nineteen hazardous materials sites were identified within or adjacent to the Idaho 55 project corridor.
- Seven species are listed on the U.S. Fish and Wildlife Service Threatened and Endangered species list for Ada and Boise counties.
- Nine species of greatest conservation need with recorded occurrences within one mile of Idaho 55 were identified through the Idaho Fish and Wildlife Information Systems.
- Wildlife and fish resources documented during a windshield survey included: four riparian corridors, two locations of raptor nests, three locations of cliff swallow and possibly barn swallow nests, one game crossing, areas of intact sagebrush/shrub steppe habitat along the Horseshoe Bend Hill segment of Idaho 55, and one location of a golden eagle nest.
- The corridor is adjacent to or bisects deer, elk and pronghorn winter ranges.
- No minority or low-income populations were identified.
- No cultural resource sites were listed on the National Register of Historic Places; however, fourteen (14) potentially eligible historic resources were identified within or adjacent to the Idaho 55 project corridor.
- The project corridor lies within the Payette River Scenic Byway.
- Six potential Section 4(f) resources were identified, all of which are park/recreation sites. Section 4(f) resources will be identified as potential until a Section 4(f) evaluation is completed.
- A search of Section 6(f) grants funded for Ada and Boise counties did not indicate projects funded through the Land and Water Conservation Fund program within the corridor.
- Land use within Eagle, Idaho includes a mix of commercial, residential, and multi-use. As the corridor moves from Eagle, Idaho and into Ada County, land use is predominantly rural residential/rural preservation. Boise County is considered one Multiple Use Zone District.
- Ten point noise transects were conducted along the corridor which recommended allowable setbacks by categories.
- One public aviation facility was identified within the corridor: Horseshoe Bend Heliport.

The environmental scan identified existing conditions of the corridor for each resource. This document is not to serve as the environmental document for any proposed future work; rather it should be used as a guide to identify potential resources of concern within the area. Project-specific environmental review in
accordance with the National Environmental Policy Act (NEPA) is needed, as well as resource-specific agency approvals and permitting.

## Wildlife Crossing Corridors

In November, 2007, ITD and Idaho Department of Fish and Game (IDFG) produced a wildlife linkage report and an accompanying GIS database. The purpose of the assessment was to identify opportunities and needs for protecting or creating appropriate movement habitats for wildlife, identify linkage areas for wildlife, and address areas of interest along the highway segments relating to wildlife habitat, development pressure and public safety. Most of Idaho 55 in the study corridor is adjacent to or bisects big game winter range as illustrated in Figure 63.

Figure 63: Wildlife Linkage Zones


ITD Research Report 229, "Methodology for Prioritizing Appropriate Mitigation Actions to Reduce Wildlife-Vehicle Collisions on Idaho Highways", was published in August, 2014. Fifteen (15) priority locations of wildlife-vehicle collision hotspots were identified state-wide. Within District 3, only a ten mile segment of Idaho 21 made this list. A secondary list of the top four wildlife-vehicle collision priority areas within each ITD District in Idaho was published and is shown in Table 39. The lowest ranked area within the study corridor was milepost 58 north of Summit Ridge Road.

Table 39: Top Four Wildlife-Vehicle Collision Priority Areas within District 3

| Ranking | Top Score <br> Out of 100 | Road | Milepost | Name |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 84 | SH-21 | $3-21$ | SH-21 Lucky Peak/Boise |
| 2 | 70 | SH-55 | $95-96$ | SH-55 Smiths Ferry |
| 3 | 70 | SH-55 | $135 \& 138$ | SH-55 Lake Fork |
| 4 | 69 | SH-55 | 58 | SH-55 Horseshoe Bend South |

## Population Forecasts

In 2010, Ada County had the highest population and Boise County was the $34^{\text {th }}$ when compared to the other 44 counties in Idaho. From 2000 to 2010, the population of Ada County grew by 43.7 percent, the fifth highest growth rate in Idaho. Boise County population grew by 5.4 percent, the $27^{\text {th }}$ highest growth rate in Idaho.

Over the last ten years, the population growth rate (73.5\%) within the entire Idaho 55 Central Corridor was higher than that of the highest county (Teton) in Idaho (69.5\%). Table 40 illustrates historic population growth and projected future population growth through 2040. The COMPASS 2010 count is higher than the Census 2010 count because the COMPASS Traffic Analysis Zones are larger in area than the U.S. Census Bureau's Census Blocks.

Table 40: Idaho 55 Central Corridor Population Forecast

|  | 1990 | 2000 | $2010-2010-$ <br> Census | COMPASS | 2015 | 2020 | 2030 | 2040 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Ada County <br> Corridor | 1,240 | 3,206 | 4,356 | 6,520 | 7,856 | 10,244 | 14,083 | 20,551 |
| Boise County <br> Corridor | 1,010 | 1,469 | 1,420 | 1,420 | 1,470 | 1,530 | 1,650 | 1,770 |
| TOTAL <br> CORRIDOR | $\mathbf{2 , 2 5 0}$ | $\mathbf{4 , 6 7 5}$ | $\mathbf{5 , 7 7 6}$ | $\mathbf{7 , 9 4 0}$ | $\mathbf{9 , 3 2 6}$ | $\mathbf{1 1 , 7 7 4}$ | $\mathbf{1 5 , 7 3 3}$ | $\mathbf{2 2 , 3 2 1}$ |

Within the corridor, the number of housing units in Ada County has almost quadrupled in the last 20 years, but in Owyhee County it has increased by less than 60 percent. Table 41 illustrates the historic count of housing units and projected future housing growth through 2040.

Additional population attributes may be found in the Environmental Scan (Appendix B).

Table 41: Idaho 55 Central Corridor Housing Unit Forecast

|  | 1990 | 2000 | $2010-$ <br> Census | $2010-$ <br> COMPASS | 2015 | 2020 | 2030 | 2040 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Ada County <br> Corridor | 468 | 1,142 | 1,591 | 2,428 | 2,927 | 3,903 | 5,405 | 7,888 |
| Boise County <br> Corridor | 403 | 596 | 637 | 637 | 645 | 665 | 705 | 745 |
| TOTAL <br> CORRIDOR | $\mathbf{8 7 1}$ | $\mathbf{1 , 7 3 8}$ | $\mathbf{2 , 2 2 8}$ | $\mathbf{3 , 0 6 5}$ | $\mathbf{3 , 5 7 2}$ | $\mathbf{4 , 5 6 8}$ | $\mathbf{6 , 1 1 0}$ | $\mathbf{8 , 6 3 3}$ |

## Public Process

ITD held public meetings in Boise and Ada counties to give community members an opportunity to help develop the Idaho 55 Central Corridor Plan.

- On Dec. 11, 2008, ITD held a public meeting in Horseshoe Bend.
- On Dec. 17, 2013, ITD held a public meeting in Eagle.

Attendees were asked to identify and prioritize specific improvements on Idaho 55 . In all, 112 people attended the meetings and 38 people gave comments about Idaho 55.

## Frequent Comments

Several themes were mentioned multiple times in the comments. Many included specific locations or intersections, which are listed in the summaries in Appendix C.

Frequent comments and themes included:

- Widen the roadway and add turn lanes or passing lanes. Attendees emphasized the Gardena Bridge in Boise County and key locations in Ada County.

Figure 64: Horseshoe Bend Public Meeting


- Add more slow vehicle pull-outs and ingress/egress improvements. Attendees emphasized the area from Boise to Cascade as well as sites along the Payette River.
- Address safety issues, primarily sight distance on curves.
- Pursue an alternate route or bypass for Idaho 55.
- Enforce speeds; speeds are not observed.

Attendees in Horseshoe Bend were also asked to comment on highway improvements near foothills developments. Frequent comments said developers should pay for improvements; Idaho 55 should be widened; and other projects should come first.

Attendees gave many other comments about Idaho 55. A detailed summary of comments is included in Appendix C.

## Recommended Improvements and Capital Improvement Program

The Idaho Transportation Investment Program (ITIP) is a multi-modal program that includes highways, bridges, public transportation, railroads, aviation and non-motorized transportation. It is a five-year investment plan based upon the priorities of safety, mobility and economic vitality. The current ITIP covers projects scheduled from Fiscal Year 2015 (beginning July 1, 2014) through Fiscal Year 2019 (ending June 30, 2019). The ITIP - which is updated annually - is available at https://itd.idaho.gov/itip/.

The outcome of a corridor plan is to identify possible improvements. Some recommendations can be implemented without requiring funding outside of regular District 3 operations and maintenance budgets; these do not require an entry in the ITIP. Recommendations that do require additional funding must proceed through a pre-project planning and development phase to determine preliminary cost estimates. These potential projects must compete with other projects both within District 3 and statewide to receive funding. The inclusion of these potential projects on the corridor plan's recommendation list does not guarantee inclusion in a future ITIP. However, one of the recommended improvements has already been incorporated into the ITIP for construction in 2016.

ITD Director's Memorandum Number 22 limits improvement project recommendations to those that can be funded for construction in the next ten years with available funding. Longer term needs will only be identified for future consideration.

Improvements are separated into two categories: Safety and Operations, and Expansion. Statewide, the Expansion category is currently not funded. Table 42 (see page 95) shows projects within the Idaho 55 Central Corridor that are recommended for consideration through year 2030. Not included are potential off-system bridge projects as these are determined and usually funded by the Local Highway Technical Assistance Council (LHTAC).

Changes from May 2014 Draft Recommendations
Seven recommendations from the May 2014 Draft Corridor Plan have been altered or eliminated.

- Line 3: Install a Two-Way Left-Turn Lane south of Dry Creek Road to accommodate two-stage left turns onto southbound Idaho 55. The actual name for the recommended improvement at a 3-leg T-intersection is a Median Acceleration Lane.
- Line 4: District 3 Traffic (Section) to evaluate changing left-turn lanes on Idaho 55 into two-way left-turn lanes (TWLTL) at West Brookside Lane to accommodate two-stage left turns on to Idaho 55. This intersection does not have a crash history in the last ten years (2005-2014). The ITD Traffic Manual, Section 202.05, recommends TWLTL for use in areas with businesses generating numerous (mid-block) left turns. A review of other state Department of Transportation (DOT) TWLTL policies found that warrants were based upon number of access points (usually a minimum of 10) per mile, speed limit and number of lanes of the highway, minimum length of the TWLTL, and volume of left turn movements. All treated TWLTLs as a median improvement and not an intersection improvement. Adjacent to West Brookside Lane, there are three gated agriculture-use access points within $1 / 4$ mile to the south and no access points within $1 / 4$ mile to the north. Converting the West Brookside Lane intersection to a stand-alone TWLTL facility is
not warranted under the ITD Traffic Manual or any other researched state DOT design guidelines.
- Lines 6 and 7: Design and construct wildlife crossings between milepost 53 to 54, and between milepost 55 to 60. The publication in August, 2014, of Idaho Research Report 229, "Methodology for Prioritizing Mitigation Actions to Reduce Wildlife-Vehicle Collisions on Idaho Highways", prioritized this location to between milepost 58 to 59.
- Line 8: Install a Two-Way Left-Turn Lane south of Harris Creek Road to accommodate two-stage left turns onto southbound Idaho 55. The actual name for the recommended improvement at a 3-leg T-intersection is a Median Acceleration Lane.
- Line 11: Conduct Roadway Safety Audit for two non-interstate segments ranked statewide at \#7 and \#63. The segment between milepost 67.538 to 68.538 ranked at \#63 in 2013 fell out of the top 100 statewide in both 2014 and 2015. The segment between milepost 67.037 to 67.538 has ranked at \#7 in 2013 has dropped to \#93 in 2015. A full Roadway Safety Audit has been changed to a District 3 Traffic Section safety review.
- Line 12: Upgrade Beach/River Access signage for BLM and Forest Service sites per Appendix D.


New signage for the locations of Banks River Access, Banks Beach, Chief Parrish, and Beehive Bend was installed in the summer of 2014 by BLM and U.S. Forest Service using funding from fee based recreation sites. Only Parnell Beach (MP 67.27) lacks this signage. Appendix D: Idaho 55 Central Corridor Beach/River Access Signage has been deleted.

Five recommendations have been added:

- New Line 11: Construct a left-turn bay for Idaho 55 northbound traffic at Brownlee Road / Gardena Bridge. Intersection turn counts were collected at four intersections: Summit Ridge Road, Horseshu Vue Road, Porter Creek Road, and Brownlee Road. This data is presented in Appendix D: Idaho 55 Central Corridor Turn Lane Warrant Study. Only the Brownlee Road intersection (narrowly) met the conditions for a left-turn bay.
- New Line 12: Construct passing lanes north of Gardena Bridge to existing passing lanes at milepost 70.210. The south limits of this recommendation are constrained by the north limits of the recommended Brownlee Road left-turn bay. There are no potential passing lane locations further north within this corridor that are constructible at a competitive cost with other passing lane projects outside this corridor.
- New Line 13: Replace 10-foot frame culvert at Fleming Creek. Sufficiency rating is under 50. This structure has a sufficiency rating of 43.5 and is eligible for replacement.
- New Line 15: Review recommendation for installation of an on-demand traffic signal at Banks Lowman Road. This recommendation may be found in Idaho Research Report 242, "Measures to Alleviate Congestion at Rural Intersections (Appendix E). This proposed project would replace temporary flagging operations with a traffic signal that would activate during times of high traffic, typically during summer holiday weekends.

Table 3 (see page 41) showed a recommended minimum LOS of "C" for urban/suburban segments of Idaho 55. This recommendation is found in the ITD Roadway Design Manual and is based upon the 2004 edition of the American Association of State Highway and Transportation Officials (AASHTO) "Green Book." Table 31 (see page 67) shows a future LOS of "D" by 2030 between North Brookside Lane (Milepost 47.303) and the Spring Valley Creek Exit (Milepost 50.275). This segment would have qualified for entry in Table 42 (see page 95), except that the 2011 edition of the AASHTO "Green Book" recommended a revised minimum LOS of " $D$ " for metropolitan segments.

The following future conditions should be reviewed in the next update of the Idaho 55 Central Corridor Plan:

- What is the build-out status of Foothills development and how much traffic is being generated?
- Does present/future LOS warrant expansion from two to four lanes north of Beacon Light Road?
- Does present/future LOS warrant construction of grade-separated interchanges in the corridor?
- What is the status of the Gardena Bridge replacement? Will the replacement be at a different site than the current bridge? Will the current Gardena Bridge be retained as an historically significant resource?

Table 42: Recommended Action Plan for Idaho 55 Central Corridor Through 2030

| PRIORITY | CATEGORY | Beginning Milepost | Ending Milepost | PROJECT DESCRIPTION |
| :---: | :---: | :---: | :---: | :---: |
| Low | Safety \& Operations | 44.645 | 47.144 | ITD Board to designate as an Expressway for Access Control. |
| Low | Safety \& Operations | 47.144 | 47.144 | Construct a traffic signal at Beacon Light Road as warranted by traffic levels. |
| Medium | Safety \& Operations | 48.130 | 48.130 | Install a Median Acceleration Lane at Dry Creek Road to accommodate two-stage left turns on to southbound Idaho 55. |
| Low | Safety \& Operations | 52.090 | 52.090 | Construct a traffic signal at West Avimor Drive as warranted by traffic levels and conditions of ITD Permit 03-10-081. |
| Low | Safety \& Operations | 58.000 | 59.000 | Study feasibility of a wildlife crossing if/when segment is selected as a funding priority in a competitive state-wide review. |
| Medium | Safety \& Operations | 62.700 | 62.700 | Install a Median Acceleration Lane at Harris Creek Road to accommodate two-stage left turns on to southbound Idaho 55. |
| High | Safety \& Operations | 63.647 | 63.713 | Replace Payette River Bridge. Sufficiency Rating is under 50 and bridge is structurally deficient. Scheduled for 2016. |
| Medium | Safety \& Operations | 64.429 | 64.429 | Install crosswalk at Boise Street.* |
| Medium | Safety \& Operations | 67.038 | 67.538 | Conduct a District 3 Traffic Section safety review. Non-interstate highway segment ranked statewide at \#93. |
| High | Safety \& Operations | 67.280 | 67.280 | ITD to install Parnell Beach name sign in advance of that BLM River/Beach access. |
| Medium | Safety \& Operations | 69.172 | 69.172 | Construct a left-turn bay for Idaho 55 northbound traffic at Brownlee Road / Gardena Bridge. |
| Low | Safety \& Operations | 69.700 | 70.210 | Construct passing lanes north of Gardena Bridge to existing passing lanes at milepost 70.210. |
| Low | Safety \& Operations | 74.911 | 74.911 | Replace 10-foot frame culvert at Fleming Creek. Sufficiency rating is under 50. |
| High | Safety \& Operations | 77.846 | 77.846 | Work with U.S. Forest Service to research options for summer parking issues at Banks Beach. |
| Low | Safety \& Operations | 78.820 | 78.820 | Review recommendation for installation of an ondemand traffic signal at Banks Lowman Road. |

* Recommended in the City of Horseshoe Bend Transportation Master Plan dated September, 2009. Per the ITD-City of Horseshoe Bend Local Agreement, this would be a locally funded project.


## Conclusions

The Idaho 55 Central Corridor Plan in Ada and Boise counties evaluated the current and projected future conditions on and adjacent to Idaho 55 between mileposts 44.645 (State Street) to 78.820 (Banks Lowman Road). A list of recommended projects for the next ten years was produced, as well as a watch list of tasks for the next update of the corridor plan.

Improvements to the planning process for the next corridor plan update include a new statewide traffic model and a statewide economic model. The IPlan program should also increase the quantity and timeliness of spatial data available from sources outside of ITD.

## Data Sources

## IN ORDER OF APPEARANCE

Figure 1: Imagery - United States Department of Agriculture. "Digital Orthoimagery Series of Idaho (2013, 0.5-meter, Natural Color." Served through http://gis.apfo.usda.gov/ArcGIS/services under name of "NAIP/Idaho_2013_05m_NC." Idaho Transportation Department. "MilePost Signs." Theoretical State Highway Milepost locations. Generated by dynamic segmentation.

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Figure 9: Idaho Transportation Department, Roadway Data Section. "AADT2014."
Figure 10: Idaho Transportation Department. http://www.itd.idaho.gov/highways/roadwaydata/counters/010/index.html http://www.itd.idaho.gov/highways/roadwaydata/counters/184/index.html

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Figure 13: Idaho Transportation Department. http://www.itd.idaho.gov/highways/roadwaydata/counters/010/index.html

Figure 14: Idaho Transportation Department, District 3 Traffic Section.
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## APPENDIX A: Northwest Foothills Traffic Impact Study Update

See attached appendix.

## APPENDIX B: Idaho 55 Central Corridor Environmental Scan

See attached appendix.

## APPENDIX C: Idaho 55 Central Corridor Public Involvement

See attached appendix.

## APPENDIX D: Idaho 55 Central Corridor Turn Lane Warrant Study

See attached appendix.

## APPENDIX E: ITD Research Paper 242

See attached appendix.


HORSESHOE BEND

EAGLE

## CALDWELL

MERIDIAN

## 55 MARSING <br> IDAHO

For more information about the Idaho 55 Corridor Study, visit itd.idaho.gov and select Projects, Southwest Idaho and Idaho 55 Corridor Study, or contact:

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[^0]:    ${ }^{1}$ Single Minute Book of the State Highway Engineer 1966: Page 247, Exhibit B-39, ITD Board 9/20/66
    ${ }^{2}$ Single Minute Book of the State Highway Engineer 1971: Page 303, Exhibit B-105, ITD Board 12/15/71

[^1]:    ${ }^{3}$ Minutes of the Idaho Board of Highway Directors Book 10: Page 280
    ${ }^{4}$ Minutes of the Idaho Board of Highway Directors Book 16: Page 101

[^2]:    ${ }^{5} 2010$ Highway Safety Manual, $1^{\text {st }}$ Edition Volume 3, American Association of State Highway Transportation Officials, page 13-2

[^3]:    ${ }^{6}$ Transportation Incident Management Plan; District 3 Alternate Route Plan; 2008: Pages 88-89

[^4]:    ${ }^{7}$ City of Horseshoe Bend Transportation Master Plan; 2009: Page 17

[^5]:    ${ }^{8} 2013$ Quality/Level of Service Handbook. State of Florida, Department of Transportation
    ${ }^{9}$ Scott Washburn and David Kirschner, "Rural Freeway Level of Service Based Upon Traveler Perception" (paper presented at the $85^{\text {th }}$ Annual Meeting of the Transportation Research Board, Washington, D.C., 2006).

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