Christopher H. Meyer [ISB No. 4461]
Michael P. Lawrence [ISB No. 7288]
Jack W. Relf [ISB No. 9762]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com

Attorneys for Applicant SUEZ Water Idaho Inc.

BEFORE THE IDAHO DEPARTMENT OF WATER RESOURCES

IN THE MATTER OF INTEGRATED MUNICIPAL APPLICATION PACKAGE ("IMAP") OF SUEZ WATER IDAHO INC., BEING A COLLECTION OF INDIVIDUAL APPLICATIONS FOR TRANSFERS OF WATER RIGHTS AND APPLICATIONS FOR AMENDMENT OF PERMITS.

FIFTEENTH AFFIDAVIT OF JACK W. RELF (CIM 2040)

State of Idaho)
) ss.
County of Ada)

JACK W. RELF, being first duly sworn upon oath, deposes and states:

1. I am an associate attorney with the above-captioned firm, Givens Pursley LLP. I am one of the attorneys representing SUEZ Water Idaho Inc. in the above-entitled action and am duly licensed to practice law in the state of Idaho.

2. I make this affidavit based upon my personal knowledge of the facts set forth in this affidavit and to the best of my information and belief.

3. A true and accurate copy of the document entitled *Communities in Motion 2040 Regional Long-Range Transportation Plan, Ada and Canyon Counties, Idaho* ("*CIM 2040*"), published in 2014 by the Community Planning Association of Southwest Idaho ("COMPASS"), is attached hereto as Exhibit A.

4. This document is also available at this link: http://www.compassidaho.org/documents/prodserv/CIM2040/final/Final_CIM2040_Interactive.pdf

DATED this 9th day of April, 2018.

GIVENS PURSLEY LLP

By _____
Jack W. Relf

Subscribed and sworn to before me this 9th day April, 2018.

Lisa A. Hughes
Notary Public for Idaho
Residing at: Boise Idaho
My Commission Expires: 3-22-2019

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 9th day of April, 2018, the foregoing was filed, served, and copied as shown below. Service by email is authorized by the Hearing Officer's Order of September 11, 2017 at page 3. Due to the size of the exhibit, a courtesy copy of the foregoing without the exhibit attached was emailed to all parties noted below, and a physical copy of the same with the exhibit has been placed on a disk and mailed as indicated below.

DOCUMENT FILED:

IDAHO DEPARTMENT OF WATER RESOURCES
P.O. Box 83720
Boise, ID 83720-0098
Hand delivery or overnight mail:
322 East Front Street
Boise, ID 83702

- ☐ U. S. Mail
- ☒ Hand Delivered
- ☐ Overnight Mail
- ☐ Facsimile
- ☐ E-mail

SERVICE COPIES TO PROTESTANTS, INTERVENORS, AND INTERESTED PARTIES:

Stephan L. Burgos
Director
Public Works Department
CITY OF BOISE
PO Box 500
Boise, ID 83701-0500
Facsimile: 208-433-5650
sburgos@cityofboise.org
Hand delivery or overnight mail:
150 N Capitol Blvd, City Hall #1
Boise, ID 83702
(For the City of Boise, intervenor in support)

- ☒ U. S. Mail
- ☐ Hand Delivered
- ☐ Overnight Mail
- ☐ Facsimile
- ☒ E-mail

Abigale R. Germaine, Esq.
Assistant City Attorney
City Attorney's Office
CITY OF BOISE
PO Box 500
Boise, ID 83701-0500
Facsimile: 208-384-4454
agermaine@cityofboise.org
Hand delivery or overnight mail:
150 N Capitol Blvd
Boise, ID 83702
(For the City of Boise, intervenor in support)

- ☒ U. S. Mail
- ☐ Hand Delivered
- ☐ Overnight Mail
- ☐ Facsimile
- ☒ E-mail

Chris M. Bromley, Esq. McHugh Bromley PLLC 380 S 4th St, Ste 103 Boise, ID 83702 Facsimile: 208-287-0864 cbromley@mchughbromley.com (*For the City of Boise, intervenor in support*)	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
John Roldan, P.E. Strategic Water Resources Manager Public Works Department CITY OF BOISE PO Box 500 Boise, ID 83701-0500 Facsimile: 208-433-5650 jroldan@cityofboise.org Hand delivery or overnight mail: 150 N Capitol Blvd Boise, ID 83702 *(For the City of Boise, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Warren Stewart, P.E. City Engineer Public Works Department CITY OF MERIDIAN 33 E Broadway Ave, Ste 200 Meridian, ID 83642 Facsimile: 208-898-9551 wstewart@meridiancity.org *(For the City of Meridian, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Dale Bolthouse Director Public Works Department CITY OF MERIDIAN 33 E Broadway Ave, Ste 200 Meridian, ID 83642 Facsimile: 208-898-9551 dbolthouse@meridiancity.org *(For the City of Meridian, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail

Kyle Radek, P.E. Assistant City Engineer, Engineering Division Public Works Department CITY OF MERIDIAN 33 E Broadway Ave, Ste 200 Meridian, ID 83642 Facsimile: 208-898-9551 kradek@meridiancity.org *(For the City of Meridian, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Garrick Nelson Staff Engineer II Public Works Department CITY OF MERIDIAN 33 E Broadway Ave, Ste 200 Meridian, ID 83642 Facsimile: 208-898-9551 gnelson@meridiancity.org *(For the City of Meridian, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Charles L. Honsinger, Esq. HONSINGER LAW, PLLC PO Box 517 Boise, ID 83701 Facsimile: 208-908-8065 honsingerlaw@gmail.com *(For the City of Meridian, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Brent Orton, P.E., MSC Public Works Director, City Engineer CITY OF CALDWELL 621 East Cleveland Blvd. Caldwell, ID 83605 Facsimile: 208-455-3012 borton@cityofcaldwell.org *(For the City of Caldwell, intervenor in support)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail

Christopher E. Yorgason, Esq. Middleton City Attorney YORGASON LAW OFFICES, PLLC 6200 N Meeker Pl Boise, ID 83713 Facsimile: 208-375-3271 chris@yorgasonlaw.com *(For the City of Middleton, protestant)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Cherese D. McLain, Esq. MOORE, SMITH, BUXTON & TURCKE, CHARTERED 950 W Bannock St, Ste 520 Boise, ID 83702 Facsimile: 208-331-1202 cdm@msbtlaw.com *(For the Star Sewer & Water District, intervenor in support, and for the City of Eagle, interested party)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
S. Bryce Farris, Esq. Andrew J. Waldera, Esq. SAWTOOTH LAW OFFICES, PLLC PO Box 7985 Boise ID 83707 Facsimile: 208-629-7559 bryce@sawtoothlaw.com andy@sawtoothlaw.com Hand delivery or overnight mail: 1101 W River St, Ste 110 Boise ID 83702 *(For Nampa & Meridian Irrigation District and Settlers Irrigation District, protestants)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail

Albert P. Barker, Esq.
Shelley M. Davis, Esq.
BARKER, ROSHOLT & SIMPSON, LLP
PO Box 2139
Boise, ID 83701-2139
Facsimile: 208-344-6034
apb@idahowaters.com
smd@idahowaters.com
Hand delivery or overnight mail:
1010 W Jefferson, Ste 102
Boise, ID 83702
(For Boise Project Board of Control, Big Bend Irrigation District, Boise-Kuna Irrigation District, and Wilder Irrigation District, protestants)

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Richard T. Roats, Esq.
City Attorney
CITY OF KUNA
PO Box 13
Kuna, ID 83634
Facsimile: 208-922-5989
rroats@kunaID.gov
kunaattorney@icloud.com
(For the City of Kuna, interested party)

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Bob Bachman
Public Works Director
CITY OF KUNA
PO Box 13
Kuna, ID 83634
Facsimile: None
bbachman@kunaID.gov
Hand delivery or overnight mail:
6950 S Ten Mile Rd
Meridian, ID 83634
(For the City of Kuna, interested party)

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

COURTESY COPIES TO IDWR AND OTHER NON-PARTIES:

James Cefalo
Hearing Officer
Eastern Regional Office
Idaho Department of Water Resources
900 North Skyline Dr., Ste. A
Idaho Falls ID 83402-6105
Facsimile: 208-525-7177
james.cefalo@idwr.idaho.gov

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Sharla Cox
Administrative Assistant
Eastern Regional Office
Idaho Department of Water Resources
900 North Skyline Dr., Ste. A
Idaho Falls ID 83402-6105
Facsimile: 208-525-7177
sharla.cox@idwr.idaho.gov

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Kimi White
Paralegal
IDAHO DEPARTMENT OF WATER RESOURCES
PO Box 83720
Boise, ID 83720-0098
Facsimile: 208-287-6700
kimi.white@idwr.idaho.gov
Hand delivery or overnight mail:
322 E Front St
Boise, ID 83702

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Garrick L. Baxter, Esq.
Deputy Attorney General
IDAHO DEPARTMENT OF WATER RESOURCES
PO Box 83720
Boise, ID 83720-0098
Facsimile: 208-287-6700
garrick.baxter@idwr.idaho.gov
Hand delivery or overnight mail:
322 E Front St
Boise, ID 83702

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Emmi Blades, Esq. Deputy Attorney General IDAHO DEPARTMENT OF WATER RESOURCES PO Box 83720 Boise, ID 83720-0098 Facsimile: 208-287-6700 emmi.blades@idwr.idaho.gov Hand delivery or overnight mail: 322 E Front St Boise, ID 83702	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Nick Miller, P.E. Manager Western Regional Office IDAHO DEPARTMENT OF WATER RESOURCES 2735 Airport Way Boise, ID 83705-5082 Facsimile: 208-334-2348 nick.miller@idwr.idaho.gov	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Sarah A. Klahn, Esq. White & Jankowski, LLP 511 Sixteenth St, Ste 500 Denver, CO 80202-4224 sarahk@white-jankowski.com Facsimile: (303) 825-5632 *(For the City of Pocatello, withdrawn)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail
Kathleen Marion Carr, Esq. Office of the Field Solicitor U.S. DEPARTMENT OF THE INTERIOR 960 Broadway Ave, Ste 400 Boise, ID 83706 Facsimile: 208-334-1918 kathleenmarion.carr@sol.doi.gov *(For the U.S. Bureau of Reclamation, withdrawn)*	☒ ☐ ☐ ☐ ☒	U. S. Mail Hand Delivered Overnight Mail Facsimile E-mail

E. Gail McGarry
Program Manager, Water Rights & Acquisitions
U.S. BUREAU OF RECLAMATION
Pacific Northwest Regional Office
1150 N Curtis Rd
Boise, ID 83706-1234
Facsimile: 208-378-5305
emcgarry@ usbr.gov
(For the U.S. Bureau of Reclamation, withdrawn)

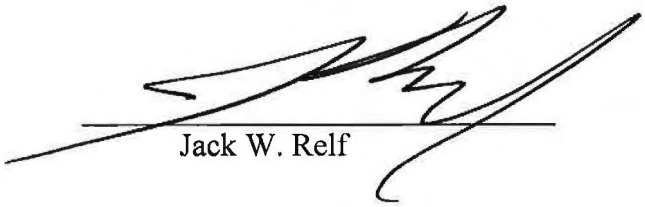
☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Matt J. Howard, Esq.
Water Rights Analyst
U.S. BUREAU OF RECLAMATION
Pacific Northwest Regional Office
1150 N Curtis Rd
Boise, ID 83706-1234
Facsimile: 208-378-5305
mhoward@ usbr.gov
(For the U.S. Bureau of Reclamation, withdrawn)

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail

Paul L. Arrington, Esq.
Director
Idaho Water Users Association
1010 W Jefferson St, Ste 101
Boise, ID 83702
Facsimile: 208-344-2744
paul@iwua.org

☒ U. S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile
☒ E-mail



Jack W. Relf

Exhibit A ***CIM 2040***

CONNECTING TREASURE VALLEY COMMUNITIES

COMMUNITIES IN MOTION 2040

REGIONAL LONG-RANGE TRANSPORTATION PLAN
ADA AND CANYON COUNTIES, IDAHO

JULY 2014

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

Adopted by the COMPASS Board of Directors July 21, 2014 • Resolution 10-2014 • Report No. 10-2014

www.compassidaho.org

COMMUNITIES IN MOTION 2040

REGIONAL LONG-RANGE TRANSPORTATION PLAN
ADA AND CANYON COUNTIES, IDAHO

ADOPTED ON JULY 21, 2014
COMPASS BOARD OF DIRECTORS
RESOLUTION NO. 10-2014

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

700 NE 2nd Street, Suite 200
Meridian, ID 83642
www.compassidaho.org

Preparation of this document was financed in part through grants from the US Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration. The contents are the sole responsibility of the Community Planning Association of Southwest Idaho.

COMPASS

RESOLUTION NO. 10-2014

FOR THE PURPOSE OF APPROVING *COMMUNITIES IN MOTION 2040* AS THE REGIONAL LONG-RANGE TRANSPORTATION PLAN FOR ADA AND CANYON COUNTIES AND THE ASSOCIATED AIR QUALITY CONFORMITY DEMONSTRATION FOR NORTHERN ADA COUNTY

WHEREAS, the Community Planning Association has been designated by the Governor of Idaho as the metropolitan planning organization (MPO) responsible for transportation planning in Ada and Canyon Counties;

WHEREAS, the Moving Ahead for Progress in the 21st Century (MAP-21) Act, Title 23 United States Code Section 134, and Title 49 United States Code Section 5303 of the Code of Federal Regulations require MPOs to prepare regional long-range transportation plans covering a period of at least 20 years;

WHEREAS, the 1990 Clean Air Act Amendment requires all regional long-range transportation plans in nonattainment and maintenance areas demonstrate conformity to applicable state implementation plans for air quality improvements;

WHEREAS, the Community Planning Association of Southwest Idaho has performed an air quality conformity demonstration and has concluded the recommended plan does comply with applicable state implementation plans;

WHEREAS, MAP-21, Title 23 United States Code Section 134 and Title 49 United States Code Section 5303 require that regional long-range transportation plans be financially constrained, a condition which has been demonstrated in *Communities in Motion 2040*; and

WHEREAS, a 8-week public comment period was held for *Communities in Motion 2040*, meeting the requirements of MAP-21 and the Community Planning Association of Southwest Idaho's public involvement policy.

NOW, THEREFORE, BE IT RESOLVED, that the Community Planning Association of Southwest Idaho Board approves the finding that *Communities in Motion 2040* conforms to relevant provisions of the state implementation plans for Idaho and hereby adopts *Communities in Motion 2040*, dated July 21, 2014, as the regional long-range transportation plan for Ada and Canyon Counties.

BE IT FURTHER RESOLVED, that the Community Planning Association of Southwest Idaho Board of Directors authorizes the submittal of this plan to the appropriate local, state, and federal agencies for their consideration.

Dated this 21st day of July 2014.

APPROVED:

By: _____
Charlie Rountree, Chair
Community Planning Association Board

ATTEST:

By: _____
Matthew J. Stoll, Executive Director
Community Planning Association

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CREDITS

ACKNOWLEDGMENTS

Developing a regional long-range transportation plan such as *Communities in Motion 2040* is a complex endeavor involving individuals with expertise in a wide variety of subjects, including transportation, finance, demographics, environmental issues, land use, and much more. This type of plan requires a great deal of collaboration and compromise, as well as a great deal of time.

The COMPASS Board of Directors, member agency staff, private consultants, and volunteers put in countless hours to develop this plan. They provided policy direction, technical expertise, and data, in addition to reviewing countless documents and devoting dozens of hours to participating in committee meetings and serving on subcommittees and work groups.

The COMPASS Board of Directors, COMPASS staff, and consultants who worked on this plan are listed on the following pages, as are members of the *Communities in Motion 2040* Planning Team and Leadership Team—committees formed specifically to guide the development of this plan. In addition, COMPASS also acknowledges and appreciates the assistance of members of the following committees and work groups:

- Demographic Advisory Committee
- Environmental Review Work Group
- Interagency Consultation Committee
- Performance Measures Work Group
- Public Participation Committee
- Regional Geographic Advisory Committee
- Regional Technical Advisory Committee
- Technical Working Group for the Treasure Valley Management Operations Plan
- Transportation Model Advisory Committee

Equally important are the members of the public who took the time to attend all-day scenario planning workshops, submit photos via the photo challenge, track progress online and via social media, attend presentations and open houses, and, of course, provide input, feedback, and comments. This plan is your plan...for the future of your Treasure Valley. Thank you for helping to make it the best it can be.

COMPASS MEMBER AGENCIES

General Members

Ada County

Ada County Highway District

City of Boise

Canyon County

Canyon Highway District #4

City of Caldwell

City of Eagle

City of Garden City

City of Kuna

City of Meridian

City of Middleton

City of Nampa

City of Parma

City of Star

City of Wilder

Nampa Highway District #1

Special Members

Boise State University

Capital City Development Corporation

Idaho Department of Environmental Quality

Idaho Transportation Department

Valley Regional Transit

Ex Officio Members

Central District Health Department/ Southwest District Health Department

Office of the Governor

Greater Boise Auditorium District

COMPASS BOARD OF DIRECTORS

As of July 21, 2014, when *Communities in Motion 2040* was adopted.

Officers

Charlie Rountree, Chair

Garret Nancolas, Chair-Elect — Sara Baker, Vice Chair

Steve Rule, Secretary/Treasurer — Bryce Millar, Immediate Past Chair

General Members

Ada County	David Case Jim Tibbs Rick Yzaguirre
Ada County Highway District	Rebecca Arnold Sara Baker Jim Hansen
Canyon County	Kathy Alder Craig Hanson Steve Rule
Canyon Highway District #4	John McEvoy
City of Boise	David Bieter Elaine Clegg Maryanne Jordan
City of Caldwell	Garret Nancolas Brent Orton
City of Eagle	James Reynolds
City of Garden City	John Evans
City of Meridian	Tammy de Weerd Charlie Rountree
City of Middleton	Darin Taylor
City of Nampa	Bob Henry Paul Raymond
City of Parma	Nathan Leigh
City of Star	Nathan Mitchell
City of Wilder	Luke McHenry
Nampa Highway District #1	Bryce Millar

Special Members

Boise State University	Nicole Nimmons
Capital City Development Corporation	John Brunelle
Idaho Department of Environmental Quality	Pete Wagner
Idaho Transportation Department	Aaron Bauges
Valley Regional Transit	Kelli Fairless

Ex Officio Members

COMPASS	Matt Stoll
Greater Boise Auditorium District	Pat Rice
Office of the Governor	David Hensley
Southwest District Health/Central District Health	Bruce Krosch

COMPASS STAFF

Developing CIM 2040 was a four-year process. Below are all COMPASS staff who contributed to the planning process between October 2011 and July 2014.

Eric Adolfson
Nancy Brecks
Lethal Coe
Nathan Dale
Pam Elliott
Keith Holmes
Liisa Itkonen, AICP
Megan Larsen
Tom Laws
Amy Luft
Don Matson, AICP
Carl Miller, AICP
Scott Moreno
Janet Russell
Walt Satterfield
Ian Shives
Matt Stoll
Toni Tisdale
Charles Trainor
Jeanne Urlezaga
John Van Dyke
MaryAnn Waldinger
Jessica Wilson
Deborah Winchar

CONSULTANTS

Many consultants contributed to the development of this plan:

- DKS
- EnviroIssues
- Honey Creek Resources
- IBI Group
- McFarland Management, LLC
- Neighborhood All-Stars Creative, LLC
- Placeways, LLC

COMMUNITIES IN MOTION 2040 COMMITTEES

In addition to the COMPASS standing committees listed under "Acknowledgements," two additional committees were formed specifically to guide the development of *Communities in Motion 2040*. Members of these committees dedicated countless hours to making this a better plan.

During the nearly four years that these committees met, some of the faces around the tables changed. All individuals who served on these committees during the course of the development of *Communities in Motion 2040* are recognized below.

CIM 2040 Planning Team

Jennifer Almeida, Canyon County Development Services
Sabrina Anderson, Ada County Highway District
Mary Barker, Valley Regional Transit
Richard Beck, Ada County Development Services
Clair Bowman (Co-Chair), City of Nampa
Jason Pretty Boy, Native American Coalition of Boise
Janie Burns, Treasure Valley Food Coalition
Jon Cecil, Capital City Development Corporation
Ned Conroy, Federal Transit Administration
Daren Coon, Nampa and Meridian Irrigation District
George Crookham, Coalition for Agriculture's Future
Bob Flowers, Mayor, City of Parma
Darin Fluke, City of Boise
Dawn Fowler, Pioneer Irrigation District
Scott Frey, Federal Highway Administration
Karen Gallagher, City of Boise
Michael Garz, Idaho Transportation Department
Jay Gibbons, FEA Engineering Associates
Brooke Green, Community Transportation Association of Idaho
Angie Gribble, Idaho Department of Health and Welfare
Patty Haller, Idaho Office for Refugees
Jaime Harding, Idaho Department of Health and Welfare
Steve Hasson, City of Kuna
Ryan Head, Ada County Highway District

CIM 2040 Planning Team, *cont.*

Caleb Hood, City of Meridian
Chris Hopper, Canyon Highway District #4
Robert Howarth, Central District Health Department
Wendy Howell, City of Kuna and City of Middleton
Casey Jones, Boise State University
Tracy Kasper, Silverhawk Realty
Kathleen Lacey, City of Boise
Katie Lamansky, Idaho Department of Health and Welfare
Meg Leatherman, Ada County Development Services
Justin Lucas, City of Meridian and Ada County Highway District
David Luft, Idaho Department of Environmental Quality
Brian McClure, City of Meridian
Robb McDonald, City of Caldwell
Neeley Miller, Idaho Department of Water Resources
Nathan Mitchell, Mayor, City of Star
Dan Morrow, Treasure Valley Cycling Alliance
Patricia Nilsson, Canyon County Development Services and City of Boise
Nicole Nimmons, Boise State University
Lori Porreca, Federal Highway Administration
Eric Shannon, Nampa Highway District #1
Erica Slayton, Pioneer Irrigation District
Deanna Smith, Public Participation Committee
Nichoel Baird Spencer (Co-Chair), City of Eagle
Wade Steele, Coleman Homes
Jordan Swain, Valley Regional Transit
Joe Swenson, Neighborhood Housing Services, Inc.
Mark Tate, Building Contractors Association of Southwest Idaho
Darin Taylor, Mayor, City of Middleton
Sandra Thiel, Idaho Department of Water Resources
Jenah Thornborrow, City of Garden City
Michael Toole, Idaho Department of Environmental Quality
Brent Turley, Transpo Group
Jim Vannoy, Idaho Department of Health and Welfare
Mark Wasdahl, Idaho Transportation Department
Tara Wolfson, Idaho Office for Refugees

CIM 2040 Planning Team, *cont.*

Kurt Ziegler, Treasure Valley Cycling Alliance
Mark Zirschky, Pioneer Irrigation District

CIM 2040 Leadership Team

Sara Baker, Commissioner, Ada County Highway District
David Bieter, Mayor, City of Boise
David Case, Commissioner, Ada County
Bill Connors, Boise Metro Chamber of Commerce
Tom Dale, Mayor, City of Nampa
David Ferdinand, Commissioner, Canyon County
Chad Hamilton, Urban Land Institute
Bob Henry, Mayor, City of Nampa
Gerald Hunter, Idaho Housing and Finance Association
Bruce Krosch, Southwest District Health Department
Melissa Lavitt, Boise State University
Carol McKee, Commissioner, Ada County Highway District
Bryce Millar, Commissioner, Nampa Highway District #1
Nathan Mitchell, Mayor, City of Star
Garret Nancolas, Mayor, City of Caldwell
Lenny Nelson, Thornton Oliver Keller Commercial Real Estate
Scot Oliver, Idaho Smart Growth
Peter Oliver, Thornton Oliver Keller Commercial Real Estate
Charlie Rountree, Councilman, City of Meridian
Darin Taylor, Mayor, City of Middleton
Vicki Thurber, Mayor, City of Middleton
Steve Rule, Commissioner, Canyon County
Jaap Vos, Boise State University
Julie Williams, Idaho Housing and Finance Association
Rachel Winer, Idaho Smart Growth
Angela Wood, Idaho Power
Mitch Young, Regional Coordinating Council
Rick Yzaguirre, Commissioner, Ada County

EXECUTIVE SUMMARY

What will Ada and Canyon Counties—the Treasure Valley—look like in 2040? How many people will live here? Where will they live, work, and play? How will they move between home, work, and other destinations? What transportation investments are necessary to fulfill their needs? How will we pay for them?

The Community Planning Association of Southwest Idaho (COMPASS) developed *Communities in Motion 2040* (CIM 2040), the regional long-range transportation plan for Ada and Canyon Counties, to examine these issues and to develop a vision and transportation plan for the Treasure Valley looking ahead to the year 2040.

Silhouettes of silos near Black Cat Road and Amity Road, Ada County. Photo: Troy Behunin, as part of the *Your Treasure Valley Future Photo Challenge*.

The plan describes the current transportation system, outlines what is needed to accommodate future growth, explores how to fund future transportation needs, discusses how to maintain a safe and secure transportation system, and examines the environmental issues that have the potential to impact, or be impacted by, transportation investments.

This plan also recognizes the interdependent relationship between transportation and land use, housing, community infrastructure, health, economic development, open space, and farmland, and sets goals for all these elements. The non-transportation elements have been included in recognition that transportation cannot be examined, or planned, in a vacuum. Each of these other elements impacts, and is impacted by, transportation decisions.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

This plan is the result of the efforts of many individuals with diverse backgrounds and interests. The CIM 2040 Planning Team met monthly throughout the planning process to provide technical guidance in the areas of transportation, land use, housing, agriculture/farmland, and much more. In addition, the CIM 2040 Leadership Team provided policy-level guidance on the same issues. Residents of Ada and Canyon Counties were kept informed of the planning process and encouraged to participate in a variety of ways. Finally, the COMPASS Board of Directors provided ultimate leadership and approval of the plan and all elements contained in it. CIM 2040 was adopted by the COMPASS Board of Directors on July 21, 2014.

COMPASS forecasts that 1.022 million people will live in the two-county area by 2040, and that the area will support 462,000 jobs. The CIM 2040 Vision, developed with extensive public input in 2012, identifies where the homes and jobs will be and moves beyond simply data to expressing a vision for the future of the Treasure Valley:

> *The* Communities in Motion 2040 *Vision provides new housing and jobs along transit corridors and in major activity centers with a strong focus on maintaining the region's recreation and open space areas. New growth would be comprised of a variety of housing types, served by infrastructure, nearby services, and outside of prime farmland or environmental constraints. This scenario supports local comprehensive plan goals and densities, and includes entitled developments as of July 2012. This scenario would support high-capacity transit for State Street (Highway 44) and a route parallel to Interstate 84, as well as multimodal infrastructure and services throughout the region.*

The CIM 2040 Vision sets the stage for the future transportation system. COMPASS considered the currently planned and funded transportation investments and examined where growth is expected to occur, according to the CIM 2040 Vision, to determine what regional transportation improvements will be most needed over the next 27 years. This analysis resulted in a list of 33 transportation corridor and project improvements ranked in order of need ("priority order"). While some individual projects along the corridors are funded, **funding is not available to complete any of the 33 items on the list**. These 33 unfunded future needs are the priorities to be completed if and when additional funding—of any kind—becomes available.

The 33 unfunded future needs and priorities are:

1. Interstate 84 (Centennial Way Interchange to Franklin Boulevard Interchange)
2. State Highway 44/State Street High Capacity Corridor
3. US Highway 20/26 (Chinden Boulevard) (Middleton Road to Locust Grove Road)
4. State Highway 55 (Snake River to the City of Nampa)
5. Regional park and ride lots (near-term improvements)
6. Linder Road (includes river crossing and new overpass – Lake Hazel Road to State Highway 44)
7. Franklin Road (bottleneck between Star Road and McDermott Road)
8. Caldwell/Nampa Boulevard (Linden Street to Orchard Avenue)
9. Ustick Road (Montana Avenue to McDermott Road)
10. Regional park and ride lots (medium-term improvements)
11. *valley**connect*** near-term (capital/operating)
12. Treasure Valley High Capacity Corridor (study to determine locally preferred option)
13. State Highway 45 reroute (in City of Nampa – Bowmont Road to Interstate 84)
14. State Highway 16/McDermott Road (Kuna-Mora Road to Ada/Gem County Line)
15. Boise Downtown Circulator
16. *valley**connect*** medium-term (capital/operating)
17. State Highway 55 (Beacon Light Road to Ada/Boise County Line)
18. Middleton Road (State Highway 55 in the City of Nampa to Main Street in the City of Middleton)
19. Overland Road (multimodal corridor plan)
20. North/South Kuna Corridor (railroad crossing in the City of Kuna)
21. Cherry Lane (Middleton Road to Black Cat Road)
22. Lake Hazel Road/Amity Road (as a corridor – Lake Hazel Road, McDermott Road to Linder Road; Amity Road, Southside Boulevard to Black Cat Road)
23. State Highway 55/Midland Boulevard Bottleneck (in City of Nampa)
24. State Highway 45 (Greenhurst Road to Bowmont Road)
25. Victory Road (Happy Valley Road to McDermott Road)
26. US Highway 20/26 (City of Caldwell to City of Parma)

27. Three Cities River Crossing (preserving land for a future project – bridge over the Boise River east of City of Eagle)
28. Star/Robinson Road (Greenhurst Road to Ustick Road)
29. CIM 2040 transit, long-term (capital/operating)
30. Greenhurst Road (Middleton Road to McDermott Road/Happy Valley Road)
31. Happy Valley Road (Greenhurst Road to Stamm Lane)
32. Bowmont Road to Kuna-Mora Road (new connection)
33. Beacon Light/Purple Sage (new connection – preserving land for a future project)

There is not enough transportation funding to support anticipated growth and ensure the viability of the current transportation system. ***Therefore, the COMPASS Board directed that all federal transportation funding allocated through this plan be directed toward maintenance of the existing system.***

Even when federal, state, and local funding sources are combined, the region falls **$4.3 billion short of long-term needs**.

The financial forecast is bleak. The regional transportation system needs an investment of approximately $9.7 billion—in current dollars—to be able to meet maintenance needs and the demands of growth over the next 27 years to 2040. Federal dollars allocated through CIM 2040 for the COMPASS planning area for this time period will total about $664 million. Also, based on the 2014-2018 average, it is assumed that the Idaho Transportation Department (ITD) will spend approximately $923 million (in current dollars) between 2014 and 2040 on the state system within the COMPASS planning area. This funding comes from a combination of state and federal dollars (Table ES.1). Local funding is forecasted to contribute an additional $3.8 billion over the same time period. It is these local, state, and federal funding sources, with a combined anticipated revenue of $5.4 billion, that will pay for transportation system maintenance, improvements, and expansions. However, this combined amount still falls **$4.3 billion short** of long-term needs (Table ES.2).

Table ES.1. Transportation funding sources*

Source	Average Annual Amount	Projected Total, 2014-2040
Federal	$25 million	$664 million
State†	$34 million	$923 million
Local‡	$141 million	$3.8 billion
Total	**$200 million**	**$5.4 billion**

* Costs are in current dollars and are not adjusted for inflation, which is assumed to be 4% per year.
† Includes federal funds spent by Idaho Transportation Department.
‡ Includes state and local-generated funds.

Table ES.2. Transportation needs, funding, and shortfall*

	Needs	Funding	Shortfall
Total (2014-2040)	$9.7 billion	$5.4 billion	$4.3 billion
Annual	$359 million	$200 million	$159 million

* Costs are in current dollars and are not adjusted for inflation, which is assumed to be 4% per year.

The funding shortfall does not mean that this plan will sit idly on the shelf. Over 100 individual tasks have been developed to meet 17 overall goals established for CIM 2040. These tasks have been synthesized into nine regional policy statements to guide overall implementation of the plan. Success will be measured through performance measures and targets established for the 17 goals. Progress will be formally reported every other year through a performance monitoring report; however, the data behind that report will be available via an online dashboard open for anyone to access at any time.

Key to implementing this plan, and to achieving the CIM 2040 Vision, is securing additional funding to complete a transportation system that will support the Treasure Valley's future needs.

COMPASS will continue to educate state and federal elected officials on transportation funding issues, and is committed to continually "telling the story" of our regional transportation needs to implement this plan and bring about a prosperous future for the Treasure Valley.

CHAPTER 1

INTRODUCTION

Transportation is one of the foundations of society, a means of moving people and goods from place to place. From multilane interstate highways to gravel roads, from bike lanes, trails and sidewalks to airports and rail lines, transportation infrastructure enables society and the economy to meet people's needs.

The interdependent relationship between transportation and land use means that development decisions made today will affect future transportation needs. Decisions about housing, open space, and farmland affect where and how people travel, and impact public health and economic development.

Therefore, to effectively maintain, improve, and plan for the future needs of the transportation system, it's necessary to consider the system's current condition as well as societal trends. High-growth areas may require new roads, additional capacity, or improvements to public transportation. Routes used by heavy farm machinery and trucks may require additional maintenance or safety features. Modes of transportation other than vehicles and trucks, such as buses, rail, biking, and walking, may become more prevalent based on changing economic and social conditions. In addition, security concerns and the economy have spurred significant changes in air travel patterns.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

The Community Planning Association of Southwest Idaho (COMPASS) has developed this regional long-range transportation plan, *Communities in Motion 2040* (CIM 2040). This plan looks out to the year 2040 and has two main purposes:

- document the present state of the transportation system in Ada and Canyon Counties, Idaho, across all transportation modes, and
- chart a course for the maintenance and improvement of the transportation system based on anticipated needs and expected revenues.

Agricultural field along Black Cat Road, Kuna. Photo: Troy Behunin, as part of the *Your Treasure Valley Future Photo Challenge*.

In addition to assessing regional transportation and land use issues, CIM 2040 considers six other related elements: housing, community infrastructure, economic development, open space, farmland, and health.

The forecasted needs in CIM 2040 are based on expected growth patterns, described by the CIM 2040 Vision (Chapter 3). To account for new developments and changing trends in the region, COMPASS evaluates and revises the regional long-range transportation plan every four years.

Plan Format

This plan is divided into 11 chapters:

Chapter 1: Introduction provides an overview of transportation planning requirements, the function of COMPASS, and the goals of CIM 2040.

Chapter 2: Public Participation and Involvement describes the public involvement process throughout the development of the plan and how public input helped shape the planning decisions that are the backbone of this plan.

Chapter 3: Defining the Vision describes the scenario planning process and the resulting CIM 2040 Vision, and presents population and employment forecasts.

Chapter 4: Transportation Financial Analysis reviews current sources of transportation funding and estimates the revenues and funding that will be available through 2040.

Chapter 5: Existing Transportation System discusses the characteristics and operation of the current transportation system.

Chapter 6: Future Transportation System Priorities and Needs describes the future transportation system and services required to meet the region's needs in 2040, and lists the funded and unfunded transportation projects.

Chapter 7: Transportation Safety discusses goals and priorities relating to the safety of the transportation system users.

Chapter 8: Transportation Security reviews potential threats to the region and how the transportation system interacts with local preparedness and emergency management strategies.

Chapter 9: Environmental Considerations examines the potential impacts of planned transportation projects on the environment, and discusses methods to avoid, minimize, and mitigate those impacts.

Chapter 10: Assessing Performance of the Transportation System outlines how the performance of the transportation system will be evaluated per CIM 2040 goals and targets.

Chapter 11: Implementing the Plan focuses on policy statements that summarize how the plan elements work together to foster better coordination, planning, and decision making in the region.

Community Planning Association of Southwest Idaho

COMPASS is an association of local governments working together to plan for the future of the region. COMPASS members consider factors that affect quality of life for area residents when making decisions about transportation and setting priorities for spending federal transportation dollars over the next 27 years.

COMPASS conducts this work as the metropolitan planning organization (MPO) for two urbanized areas in southwest Idaho: the Boise Urbanized Area in Ada County and the Nampa Urbanized Area in Canyon County. COMPASS has served as the MPO for the Boise Urbanized Area since 1977 and the Nampa Urbanized Area since early 2003. The COMPASS planning area consists of all of Ada and Canyon Counties (Figure 1.1).

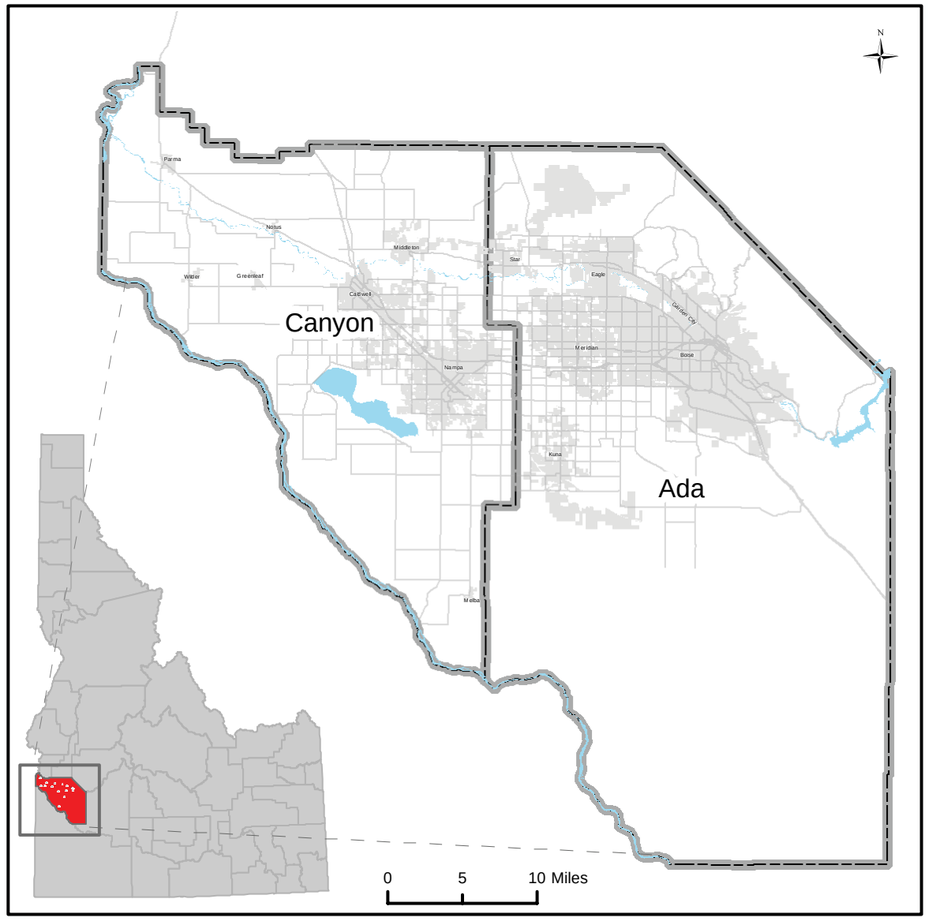


Figure 1.1. The COMPASS planning area[1]

Federal Requirements

Federal law has mandated transportation planning at the state and metropolitan (population greater than 50,000) levels since the 1960s. Guidelines for transportation planning are included in past and current federal transportation laws, including 2012's Moving Ahead for Progress in the 21st Century Act (MAP-21).

1 www.compassidaho.org/documents/prodserv/CIM2040/Maps/CompassPlanningArea_1_1[Converted].pdf

MAP-21 Required Elements

The current federal transportation law, MAP-21, was signed into law on July 6, 2012. It states that metropolitan planning shall consider projects and strategies that will

- support economic vitality, especially by enabling global competitiveness, productivity, and efficiency;
- increase the safety of the transportation system for motorized and non-motorized users;
- increase the security of the transportation system for motorized and non-motorized users;
- increase the accessibility and mobility of people and freight;
- protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
- enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- promote efficient system management and operation; and
- emphasize the preservation of the existing transportation system.

MAP-21 also requires that regional long-range transportation plans include the following:

- an identification of transportation facilities (including major roadways, transit, multimodal and intermodal facilities, nonmotorized transportation facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system
- a description of the performance measures and performance targets used in assessing the performance of the transportation system
- a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets
- a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities

- a financial plan that
    - o demonstrates how the adopted transportation plan can be implemented;
    - o indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan; and
    - o recommends any additional financing strategies for needed projects and programs.
- operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods
- capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs
- proposed transportation and transit enhancement activities

Regional Long-Range Transportation Plan: *Communities in Motion 2040*

Federal requirements outlined in MAP-21 direct each state and MPO to conduct a continuing, cooperative, and comprehensive transportation planning process. As the delegated transportation planning authority for Ada and Canyon Counties, COMPASS is responsible for conducting the planning process for the region. This document, CIM 2040, is a product of that planning process.

A long-range transportation plan such as CIM 2040 is required in order for transportation projects in the planning area to receive federal funding. Long-range transportation plans must be updated (or a new plan written) every four years. They must look at least 20 years into the future and address future needs of the region based on projected growth, land use, demographics, and other factors. Public involvement is an important part of the planning process and is discussed in more detail in Chapter 2.

CIM 2040 is required to be "fiscally constrained"—that is, it lists projects that have a reasonable chance of being funded based on current financial conditions. It also contains a prioritized list of needed transportation projects that are currently unfunded.

The plan discusses the congestion management process, including operations and management improvements, as a means of addressing future needs. With its long timeframe and comprehensive view of the transportation system, CIM 2040 provides insight into how transportation policies can be turned into future investments in the region.

Themes of the Plan

The following four themes were developed for the regional long-range transportation plan in 2006 (*Communities in Motion 2030*), and have been incorporated in subsequent plans, including this one:

Connections: Providing options for safe access and expanded mobility choices for all users in a cost-effective manner in the region.

Coordination: Achieving better inter-jurisdictional coordination of transportation and land-use planning.

Environment: Minimizing transportation impacts to people, cultural resources, and the environment.

Information: Coordinating data gathering for all modes and dispensing better information.

Goals of the Plan

The COMPASS Board established 17 goals for CIM 2040. These goals tie to the four themes above.

1. **Transportation**
    - 1.1 Enhance the transportation system to improve accessibility and connectivity to jobs, schools, and services; allow the efficient movement of people and goods; and ensure the reliability of travel by all modes considering social, economic, and environmental elements.
    - 1.2 Improve safety and security for all transportation modes and users.
    - 1.3 Protect and preserve existing transportation systems and opportunities.
    - 1.4 Develop a transportation system with high connectivity that preserves capacity of the regional system and encourages walk and bike trips.
2. **Land Use**
    - 2.1 Coordinate local land use planning, transportation planning, and development to maximize the use of existing infrastructure, increase the effectiveness of investment, and retain or enhance the vitality of the local community.

2.2 Recognize and more clearly define and support the regional role of all communities, including small communities.

2.3 Encourage infill development and more compact growth near community-identified activity centers.

2.4 Strive for more walkable, bikeable, and livable communities with a strong sense of place and clear community identity and boundaries.

3. **Housing**

3.1 Encourage mixed-use neighborhoods, town centers, and other development types that include a variety of housing options to meet the transportation and housing needs of all socio-economic groups.

4. **Community Infrastructure**

4.1 Promote land use patterns that provide Treasure Valley residents with safe, reliable, and cost-efficient infrastructure services.

4.2 Promote maintenance and preservation of existing infrastructure.

5. **Health**

5.1 Promote a transportation system and land use patterns that enhance public health, protect the environment, and improve the quality of life.

6. **Economic Development**

6.1 Develop a regional transportation system that connects communities, provides access to employment centers, and provides efficient truck, rail, and/or air freight movement throughout the Treasure Valley.

6.2 Maintain the vitality of regional centers, downtowns, and main streets through continued public and private investments in new and existing business, housing, and transportation options as appropriate.

7. **Open Space**

7.1 Promote development and transportation projects that protect and provide all of the region's population with access to open space, natural resources, and trails.

8. **Farmland**

8.1 Protect and enhance transportation routes for the efficient movement of farm equipment and products.

8.2 Protect agricultural land for food, fiber, and fuel production and support of other agricultural and food-related businesses.

Each goal also has one or more objectives that support specific areas of the goal. Each objective then has a number of tasks that contribute to the fulfillment of the goal. The objectives and tasks can be found online.

CIM 2040 also includes a tiered approach to performance measurement. Fifty-six performance measures track progress toward the CIM 2040 goals. Each performance measure has a performance target to quantify and track progress. The performance measures and targets are discussed in Chapter 10, and can also be found throughout the document as they relate to individual topics.

CHAPTER 2

PUBLIC PARTICIPATION AND INVOLVEMENT

Public involvement is key to the CIM 2040 planning process. Developing a plan that serves the needs of area residents requires more than providing opportunities for public input; honest, meaningful analysis of the feedback is just as essential.

COMPASS has an overarching public involvement policy that's updated and adopted by the COMPASS Board every three years. The policy states that COMPASS' public involvement process shall provide comprehensive information, timely public notice, and full public access to key decisions, and support early and continuing involvement of the public in developing plans.

> The planning processes of COMPASS shall include an active public involvement process...

In October 2011, the COMPASS Board adopted a public involvement plan specific to CIM 2040. The plan is consistent with COMPASS's overarching public involvement policy.

> Long-term planning processes often comprise periods of behind-the-scenes planning and technical work, punctuated by bursts of public outreach.

The public involvement plan reiterates COMPASS' commitment to engaging the public and targeted stakeholders throughout the development of CIM 2040. This ensures all residents of Ada and Canyon Counties, including traditionally underrepresented populations, have opportunities to actively

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

participate in the planning process. This commitment is also stated in the COMPASS Title VI and Limited English Proficiency Plans and is reflected in its process of identifying locations of Environmental Justice (minority and low-income) populations.

Outreach Structure and Timing

The development of CIM 2040 included four public comment periods (Figure 2.1) and three scenario planning workshops. COMPASS also provided quarterly email updates and ongoing participation opportunities to keep the public and stakeholders informed during periods of behind-the-scenes technical work.

This chapter will focus on the ongoing outreach, the scenario planning workshops, and the four public comment periods.

Public Comment Period Dates and Topics

May 7–June 17, 2012
Four alternative growth scenarios resulting from February/March scenario workshops

December 27, 2012–January 15, 2013
Proposed plan goals, objectives, and tasks; functional classification changes; the prioritization process; and transportation investment areas

August 5–September 4, 2013
The list of 33 prioritized corridors and projects for CIM 2040

March 3–April 27, 2014
The draft CIM 2040 plan

Figure 2.1. CIM 2040 public participation opportunities

Ongoing Outreach

COMPASS employed several platforms to keep the CIM 2040 planning process in front of stakeholders and the public.

Advisory Committees

COMPASS invited representatives from multiple stakeholder groups (Table 2.1) to serve on the CIM 2040 Planning Team and CIM 2040 Leadership Team to provide in-depth knowledge and expertise throughout the planning process. The Planning Team met regularly between September 2011 and May 2014 to provide technical input and review; the Leadership Team met bi-monthly for the same time period to provide policy-level input and review. Both teams worked closely with COMPASS staff and made recommendations on action items to the COMPASS Board.

Table 2.1. CIM 2040 Planning and Leadership Team representation

Agriculture/farmland	Irrigation districts
Business/economic development	Native American tribes
COMPASS member agencies	Real estate/developers
COMPASS Public Participation Committee	Refugee advocates
Emergency management	Smart growth advocates
Federal Highway and Transit Administrations	Transit/alternative transportation
Health	Transportation engineers
Housing	Utilities

Additionally, representatives from environmental resource agencies and organizations were invited to lend their expertise to the planning process. This environmental review work group and the COMPASS staff collaborated to develop an environmental suitability analysis of priority corridors for the plan (Chapter 9).

Web Updates

COMPASS provided details about the development of CIM 2040 on its website. The website was, and continues to be, updated regularly and contains information on all aspects of this plan, including the plan itself and links to background on the issues and policies discussed within it. Draft plan chapters were posted online for public review and comment as they were completed. The plan was posted for final public comment March 3–April 27, 2014.

Quarterly Email Updates

COMPASS sent quarterly email updates to approximately 1,700 people on its CIM 2040 email list.[1] The emails outlined the technical work and public involvement activities that had occurred in the previous three months and highlighted those planned for the next three. These quarterly email updates were also posted on the CIM 2040 web page.

COMPASS included a section titled "Why Should I Care?" in each email update to generate interest in the plan. This section featured thought-provoking submissions from the email audience and participants at COMPASS events explaining why it makes sense to think about long-range planning now. Some of these submissions were also spotlighted quarterly in the COMPASS Executive Director's blog.

Youth Art Contest

To kick off the development of CIM 2040, COMPASS sponsored a youth art contest in fall 2011. Elementary-aged children in Ada and Canyon Counties were asked to draw what they thought their community would look like in 25 years. The winning artwork was displayed in the COMPASS office, at CIM 2040 outreach events, and on ValleyRide buses. First-place winners are shown in Figure 2.2. All winning entries are posted online.

Picture This! Youth Video Contest

As a follow-up to the art contest for elementary-aged children, COMPASS sponsored the *Picture This!* CIM 2040 youth video contest in fall 2012.

Students in 7th–12th grades in Ada and Canyon Counties were asked to create videos reflecting what the Treasure Valley might look like and what life might be like in 2040.

1 Sign up for COMPASS emails by emailing a request to info@compassidaho.org.

First Place, 3rd Grade
Avery Scanlon, Hunter Elementary

First Place, 5th Grade
Olivia Christensen, Hunter Elementary

First Place, 4th Grade
Delaney Salisbury, Prospect Elementary

Click each image to enlarge.

Figure 2.2. Youth art contest winners

« click image to play video

The winning video, *2040: A Sneak Peek into the Future*, created by East Junior High students Vera Gaddi and Sarah Dean, portrayed a future with electric vehicles and hover-

craft, with a decreasing dependence on fossil fuels. COMPASS displayed the video at outreach events throughout 2013 and 2014 and will continue to use it as CIM 2040 is implemented.

Your Treasure Valley Future Photo Challenge
COMPASS invited people of all ages to participate in the yearlong *Your Treasure Valley Future Photo Challenge*.

From December 2012 through November 2013, residents submitted photos that represent values, ideals, and other aspects of Ada and Canyon Counties that they would like to see carried into the year 2040 or changed for the better. Several of these photos are used throughout this document to illustrate the future through the lenses of those who live here. Visit the COMPASS website or Facebook page to view all of the submitted photos.

(L) Children fish in a pond within Meridian's Paramount subdivision. Photo: Shelly Houston. (R) Units in the Waterfront District along the Boise River in Garden City. Photo: Diane Kushlan. Both were submitted as part of the *Your Treasure Valley Future Photo Challenge*.

Facebook
Throughout the planning process, COMPASS used its Facebook page to highlight public comment opportunities, promote education series speakers and other events, showcase photo challenge submissions, and more.

Blog
In his blog, COMPASS Executive Director Matt Stoll discussed a variety of issues relating to CIM 2040. The blog featured a series of posts discussing the CIM 2040 elements and how each relates to transportation as well as "Why Should I Care?" submissions.

Education Series
Throughout the development of CIM 2040, the COMPASS education series featured speakers who addressed elements covered in the plan.

Presentations
COMPASS offered presentations to community groups throughout the planning process, with increased frequency during specific public comment periods. In total, COMPASS staff gave 67 presentations to approximately 1,160 individuals between January 2012 and June 2014.

Traveling Display
A freestanding display highlighting CIM 2040, with an emphasis on the adopted CIM 2040 Vision, was placed in eight public locations, including libraries, city halls, health district offices, and YMCA facilities throughout Ada and Canyon Counties between May and November 2013. The display helped increase awareness of CIM 2040 by reaching out to people in a simple, low-key manner in public gathering places.

Scenario Planning Workshops

In February and March 2012, COMPASS hosted three all-day workshops as a first step in developing a "preferred growth scenario" (the CIM 2040 Vision) to serve as the basis for CIM 2040. The scenario planning process is discussed in depth in Chapter 3.

For CIM 2040 to be successful, it was imperative to include diverse perspectives in the discussion. A total of 577 individuals representing a wide variety of interests (Table 2.2) were invited to participate in the workshops. In addition, 49 individuals submitted self-nomination forms, indicating their interest in participating; all self-nominees were invited to attend. A special effort was made to include participants from a wide variety of stakeholder groups.

Individuals who indicated they planned to attend were sent meeting reminders as well as a scenario workshop guidebook in advance to help them prepare.

CIM 2040 scenario planning workshops. Photos: COMPASS staff.

To help remove barriers to attendance, COMPASS offered reimbursement for childcare costs, language translation and Spanish-speaking facilitators, and transportation assistance to participants.

Of the 577 invitees and 49 self-nominees, approximately 170 community leaders, elected officials, stakeholders, and members of the general public participated in one of three day-long workshops, where they examined regional issues and developed potential visions for growth in the Treasure Valley between now and 2040.

Attendees participated in keypad polling to share their priorities on regional issues and the policies and programs that could address those issues. Participants then broke into work groups to develop maps of Ada and Canyon Counties for the year 2040, using interactive CommunityViz® software. As the groups worked through this process, they were able to see the results of their decisions in real time and compare those to their priorities.

A CIM 2040 scenario planning workshop participant explores effects of growth in the Treasure Valley. Photo: COMPASS staff.

The workshops yielded 27 distinct future growth scenarios. Results from the workshops were distilled to develop four alternative scenarios submitted for public comment.[2] More information on the workshops and the scenario planning process can be found in Chapter 3.

2 A report describing the process used to create the four scenarios and information about the scenarios can be found at www.compassidaho.org/prodserv/cim2040_scenarioplanning_process.htm (see "Step 2").

Table 2.2. Scenario workshop invitees

Advocates for the disabled	First responders	Real estate agents
Advocates for the elderly	Government "watchdogs"	Recreation groups
Agriculture	Health interests	Refugees/refugee agencies
Bankers/lenders	Healthy/local foods	Schools/school districts
Bike/pedestrian advocates	Housing agencies	Special districts
Business community	Local emergency management	State and federal agencies
Community groups	Low-income groups	Tourism/hospitality
COMPASS Board	Major employers	Transit groups
COMPASS Leadership Team	Military	Transportation/land use professionals
COMPASS member agencies	Minority groups	Universities and trade schools
Developers/builders	Neighborhood and homeowner associations	University students
Economic development	News media	Utilities
Elected officials	Non-COMPASS-member cities/highway districts	Vanpool users
Environmental interests	Property managers	Youth
Faith-based organizations	The public at large	

Public Comment Periods

While public feedback was welcomed at any time during the development of CIM 2040, COMPASS held four formal public comment periods. Each comment period solicited feedback on specific issues in advance of the COMPASS Board making decisions on those issues.

May–June 2012: Comment on Alternative Scenarios

The first public comment period was held May 7–June 17, 2012. During this time, COMPASS solicited feedback on the four alternative growth scenarios that resulted from the scenario planning workshops held in February/March 2012.

COMPASS publicized and facilitated the public comment period via:

- Advertising and promotion
  - Radio and print ads
  - Email
  - Social media
  - News releases and interviews
  - Flyers
  - Community calendars
- Website outreach
  - Many CIM materials posted online for review and comment
  - Details regarding CIM 2040 open houses and libraries that had information available for review
  - Opportunity to comment online or download and print PDF comment forms
- Open houses (3)
  - Idaho Hispanic Cultural Center, Nampa
  - COMPASS office, Meridian
  - Library! at Hillcrest, Boise
- Presentations to community groups (26)
- Booths at public events (10)
- Comment materials at libraries (9 libraries)
  - Scenario handouts and comment forms available
- Meetings in a bag (17 meetings)
  - COMPASS provided materials for members of the public and agency representatives to host their own public comment meetings.

Throughout this comment period, COMPASS received 283 comments. Public comment results were used to create a draft preferred growth scenario. See Chapter 3 for a discussion of that process; additional information is also available online (see "Step 3" here).

December 2012–January 2013: Comment on Plan Processes and Components

From December 27, 2012, through January 15, 2013, COMPASS held its second public comment period, this one to solicit input on four plan components:

- Proposed goals, objectives, and tasks for CIM 2040 (Chapter 1)
- Proposed changes to the "functional classification" of roads (Chapter 6)
- Proposed process for prioritizing transportation projects (Chapter 6)
- Proposed transportation investment areas (not included in the plan[4])

COMPASS publicized and provided opportunities to comment via:

- Advertising and promotion
  - Print ads
  - Email
  - Social media
  - News release
  - Flyers
  - Community calendars
- Website outreach
  - Many CIM 2040 materials posted online for review and comment
  - Details regarding CIM 2040 open houses
  - Opportunity to comment online or download and print PDF comment forms
- Open houses (2)
  - Caldwell Public Library, Caldwell
  - COMPASS office, Meridian

3 Per direction from the COMPASS Board, transportation investment areas are not included in this plan.

Forty comments were received. In addition, open house participants were encouraged to write comments directly on a large map of the two-county area. Twenty-three comments were left on maps at the open houses.

Open-ended comments reflected support for:

- Safe Routes to Schools funding
- Protection of the Boise River

A majority of respondents agreed with the proposed prioritization process (58.3%) and proposed functional classification map (52.6%). Forty-seven percent agreed with the proposed changes to the functional classification map; the same percentage indicated they were unsure. All other questions requested open-ended responses.

Two primary themes emerged from the open-ended comments: support for Safe Routes to Schools funding (as part of the discussion of prioritization) and support for protection of the Boise River (as part of the discussion of goals).

All comments were provided to the COMPASS Board prior to the Board making decisions on those issues. Comments were also provided to COMPASS advisory committees and are available online.

August–September 2013: Comment on Prioritized Corridors and Projects

COMPASS held a third public comment period August 5–September 4, 2013, to solicit input into a list of 33 prioritized corridors and projects for CIM 2040 (Chapter 6).

COMPASS publicized and provided opportunities to comment via:

- Advertising and promotion
  - Print ads
  - Email blasts
  - Social media
  - News release
  - Flyers
  - Community calendars
- Website outreach
  - All background and comment materials posted online for review and comment
  - Details regarding CIM 2040 open houses and other comment opportunities
  - Interactive online map
- Open houses (2)
  - Hugh Nichols Public Safety Building, Nampa
  - COMPASS office, Meridian
- Discussion group (1)
  - National Federation for the Blind
- Comment materials at libraries and other public locations (9 locations)

COMPASS specifically reached out to youth via drivers' education programs, providing instructors with information about public comment opportunities to pass along to their students via emails and a newsletter distributed by the Driver Education Coordinator at the Idaho State Department of Education. COMPASS also offered to present information to drivers' education classes but did not receive any responses to this offer.

As noted above, COMPASS led a discussion group on transportation priorities with visually impaired individuals through the National Federation for the Blind. The group discussed how they currently travel throughout the Treasure Valley, what types of transportation issues they would like improved, and their priorities based on the 33 identified priority corridors and projects. All priorities identified by the group were related to transit or park and ride facilities. Discussion group notes are online.

In addition to those received from the discussion group, 24 other comments were received during this comment period. Verbatim comments are online. Six comments related to priority rankings and the rest discussed individual corridors. No specific themes emerged from the comments.

March–April 2014: Comment on Draft Plan Document

COMPASS held a fourth and final public comment period March 3-April 27, 2014, on the full draft CIM 2040 plan document. The public was invited to comment on any or all portions of the plan, but specific questions focused public comment on the plan's primary policy issues:

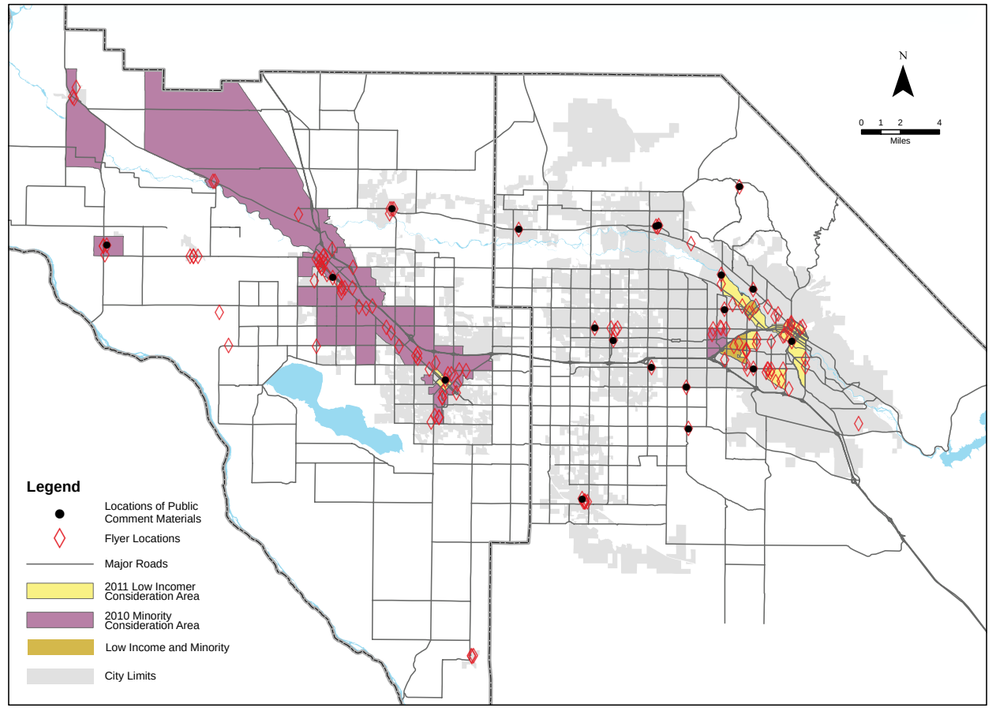
- CIM 2040 goals (Chapter 1)
- CIM 2040 Vision (Chapter 3)
- Focus of federal transportation funding on maintenance (Chapter 6)
- Unfunded priority corridors and projects (Chapter 6)

- Performance measures (Chapter 10)
- Implementation policies (Chapter 11)

With the exception of performance measures and implementation policies, these issues had also been previously vetted with the public during the course of the planning process.

COMPASS publicized and provided opportunities to comment via:

- Advertising and promotion
  - Print ads
  - Radio ads
  - ValleyRide bus billboards
  - Op-ed that ran in the *Idaho Statesman* and *Idaho Press Tribune*
  - Email blasts
  - Social media
  - News releases
  - Flyers (focusing on low-income and minority neighborhoods [Figure 2.3])
  - Community calendars
- Website outreach
  - Draft plan and all comment materials posted online for review and comment
  - Details on CIM 2040 open houses and other comment opportunities
  - Virtual open houses (2 + "anytime")
  - Opportunity to comment online or download and print PDF comment forms
- Open houses (3)
  - Library! at Cole/Ustick, Boise
  - Hugh Nichols Public Safety Building, Nampa
  - COMPASS office, Meridian
- Presentations to community groups (20)
- Discussion groups (3)
  - Latino/low-income
  - Elderly/low-income
  - Refugee/low-income
- Comment materials at libraries and other public locations (18 locations; Figure 2.3)
- Newsletter articles (3)
  - National Federation for the Blind
  - Central District Health
  - Women in Transportation Seminars



Note: Low-income areas are calculated for each census tract using the 2007-2011 American Community Survey 5-year data, the most recent data available at the time of publication. Minority areas are calculated using the 2010 Decennial Census, which allows for the analysis of block groups (smaller than census tracts). Income information is not available from the 2010 Decennial Census. Low-income areas maintain a median household income that is 60 percent of the median household income of the respective county. Minority areas maintain at least 30 percent of the population that is Non-white or Hispanic.

Figure 2.3. Locations of comment materials and flyers posted for 2014 public comment period; shown with Environmental Justice consideration areas (minority and low-income)[4]

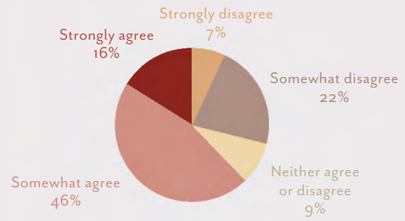
As noted above, COMPASS provided virtual (online) open houses during this public comment period. During two "hosted" virtual open houses, COMPASS provided a live presentation, an opportunity for questions/answers on the presentation, and live (real-time) online chats to respond to questions. In addition, for six weeks, COMPASS provided the same virtual open house experience, but in an "unhosted" format, with a pre-recorded presentation. COMPASS staff checked and responded to chat comments daily. In total, 53 individuals participated in the virtual open houses. For more information on the virtual open houses, see a full report online.

4 www.compassidaho.org/documents/prodserv/CIM2040/Maps/CommentFlyerLocations_2_3.pdf

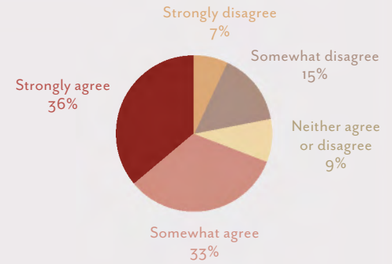
A total of 114 comments were received during the comment period, in addition to notes from the three discussion groups and notes/questions left in the chat rooms of the virtual open house. All comments, as well as quantitative results from comment forms, can be found online.

As shown in Figure 2.4, comments showed general support for the primary policies/concepts in the plan, with the following percentages selecting either "somewhat" or "strongly" agree on the comment form: goals (69%), implementation polices (65%), CIM 2040 Vision (62%), focus federal funding on maintenance (53%), and priority corridors (44%).

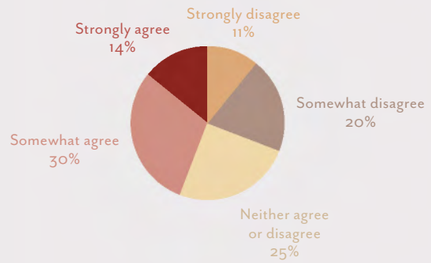
Do you agree with the *Communities in Motion* 2040 Vision? (n=55)



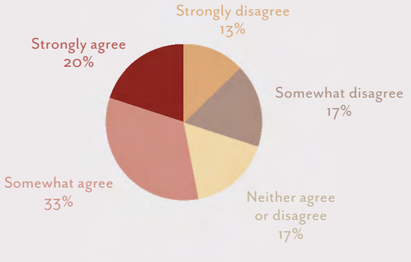
Do you agree with the 17 goals? (n=45)



Do you agree with the prioritized order of the 33 transportation corridors and projects? (n=44)



Do you agree with the decision to focus federal funding on maintenance? (n=46)



Do you agree with the eight policy statements? (n=46)

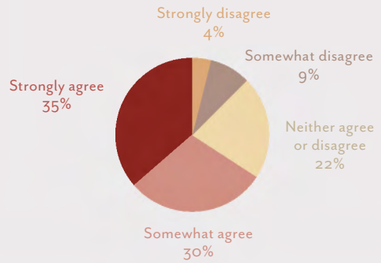


Figure 2.4. Public comments reflecting general support for the primary policies/concepts in the full draft CIM 2040 plan

Open-ended comments varied greatly, but the following themes emerged:

- Remove the Beacon Light/Purple Sage connection from the list of unfunded projects (priority #33 on the list of unfunded projects).
- Remove the Linder Road expansion/improvements from the list of unfunded projects (priority #6).
- Support more transit (ranged from specific comments on light rail to general comments on the need for more transit).
- Support improvements to bicycle and pedestrian infrastructure.
- Focus regional traffic on the state system.
- Support improvements/expansion to State Highway 16 (priority #14).

The discussion groups (elderly/low-income, Latino/low-income, and refugee/low-income) had varying comments:

- The elderly and refugee groups expressed strong support for improvements to the transit system.
- The Latino group indicated they did not use the transit system at all.
- All three groups supported the decision to focus federal transportation funding on maintenance.
- Responses regarding ways to increase transportation funding varied within and between the groups.

COMPASS responded by email to questions submitted during the public comment period, when an email address was provided. Comments submitted in the virtual open house chat room were responded to in the chat room. Those responses, as well as responses to questions when there was not a mechanism for a direct response, can be found with the comments online.

All comments were provided to the CIM 2040 Planning Team, CIM 2040 Leadership Team, Public Participation Committee, and COMPASS Board of Directors. In addition, the comments are available on the COMPASS website and were sent to the COMPASS email list.

Comments requesting or suggesting changes to the plan were addressed in one of three ways, and are noted with the comments:

- Suggested changes to text or format for clarity were reviewed and changes were made by staff, as appropriate.
- Suggested technical changes, such as addition of information or corrections to technical details, were reviewed by staff in collaboration with the entity requesting the change and were made, as appropriate.
- Suggested changes to policy issues or other items previously acted upon by the COMPASS Board of Directors were reviewed by staff, and recommendations were presented to the CIM 2040 Planning Team. The Planning Team reviewed the staff recommendations, as well as all comments, and recommended the draft plan, with changes (based on staff and Planning Team recommendations) to the Leadership Team. The Leadership Team then reviewed the Planning Team's recommendations and recommended the plan, with changes, to the COMPASS Board for adoption.

The following five policy recommendations were approved by the COMPASS Board, in response to public comment and staff and committee recommendations. These have been incorporated into the final plan.

- The words "and connectivity" were added to Goal 1.1 (Chapter 1), to read: "Enhance the transportation system to improve accessibility and connectivity to jobs, schools, and services; allow the efficient movement of people and goods; and ensure the reliability of travel by all modes considering social, economic, and environmental elements."
- A ninth implementation policy was added to the list of implementation policies in Chapter 11: "Focus available federal funding on maintaining the existing transportation system."
- Several tasks were revised to better articulate how they will be accomplished to meet plan goals. The tasks are not part of the plan document, but are available online with other supporting documents.

- The unfunded priority corridor list was kept intact (Chapter 6). Public comments had been received requesting that some of the priorities—particularly a connection between Beacon Light and Purple Sage Roads—be removed. The identified transportation needs were based on underlying land uses and existing entitlements, which have not changed; therefore, the priority list was kept intact.
- The discussion of the division of funding between roadways/transit/planning and special projects in Chapter 6 was clarified to state that the division of funds will be calculated on a five-year rolling average to allow flexibility for larger projects in any of the categories to move forward and still remain consistent with the policy.

Additional changes made to the plan in response to public comment are noted with the verbatim comments.

Summary

Throughout the planning process, from September 2011 to July 2014, COMPASS involved community leaders, specific stakeholders, and the general public in its planning processes.

Individuals were kept up-to-date on progress and public involvement opportunities through the COMPASS website, quarterly email updates, social media, a traveling display, and more.

Stakeholders and members of the general public were invited to participate in the planning process through all-day scenario planning workshops, art and video contests, a photo challenge, commenting on plan chapters posted online, and submitting reasons why they care about CIM 2040 for the quarterly email update and executive director's blog. Specific stakeholders were also invited to participate as members of the CIM 2040 Planning Team, Leadership Team, or environmental review work group to directly contribute to the plan update throughout the planning process.

In addition, COMPASS held three public comment periods to receive public input into planning issues before those issues were brought to the COMPASS Board for action. Finally, a fourth public comment period was held March 3–April 27, 2014, to receive feedback on the entire draft plan document.

Figure 2.5 shows the number of comments received, by zip code, during the four public comment periods, in relation to minority and low-income populations (Environmental Justice consideration areas).

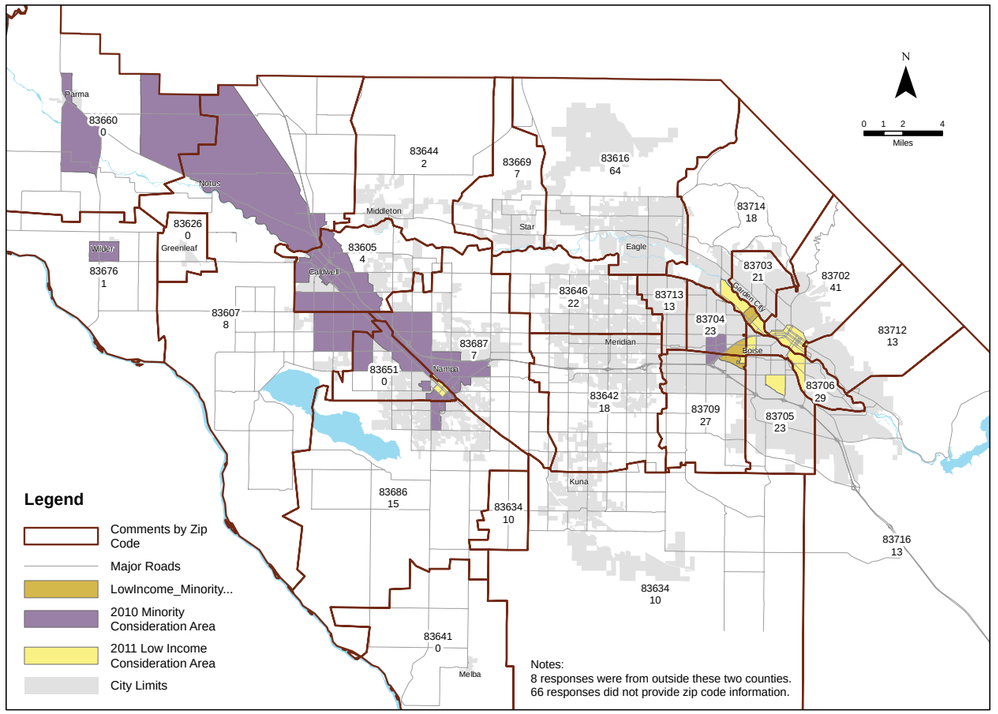


Figure 2.5. Total number of public comments received by zip code; shown with minority and low-income Environmental Justice consideration areas[5]

5 www.compassidaho.org/documents/prodserv/CIM2040/Maps/ZipCodesComments_EJ_2_5.pdf

CHAPTER 3

DEFINING THE VISION

Developing a plan for the Treasure Valley's future requires an understanding of where and how growth will occur in the region and possible ramifications of that growth.

From September 2011 through September 2012, COMPASS, its member agencies, and hundreds of stakeholders undertook a process to develop a "preferred growth scenario"—a realistic vision of what Treasure Valley residents want the valley to look like in the year 2040. This scenario is the CIM 2040 Vision.

Scenario Planning Parameters

Regional

Numerous agencies and organizations from around the region played an active role in the CIM 2040 scenario planning process. Transportation planning today clearly requires a regional rather than a solely local view. For most people, a day's activities don't occur in one place. Driving to work, school, shops, and recreation may require traveling through several cities and rural areas. Communities acting individually cannot solve regional transportation demands. Also, funding resources are limited. It makes sense for communities to collaborate to make sure transportation systems work smoothly together and that individual projects strengthen the system as a whole.

Collaborative

Throughout the CIM 2040 scenario planning process, COMPASS and its member agencies made it a priority to engage stakeholders and the public (Figure 3.1).

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

By creating public involvement opportunities, COMPASS was able to

- represent community needs;
- reach underserved populations;
- offer educational opportunities; and
- provide public input to planners and decision makers in a timely manner.

Figure 3.1. Stakeholders in the CIM 2040 planning process

Scenario Planning Process

The final CIM 2040 Vision was developed over the course of a full year (September 2011–September 2012) through a multi-step process (Figure 3.2). Each step is described in more detail in this chapter.

1. Data gathering: Data on existing and projected future conditions were collected to provide background for the scenario planning process.
2. Initial scenarios: Three initial scenarios were developed as a starting point for the scenario workshops. They were titled Trend; Community Choices; and Transit, Trails, and Transit-Oriented Development.
3. Scenario workshops: More than 170 individuals participated in three separate all-day workshops, developing 27 scenarios for future land use.
4. Alternative scenarios/public feedback: Scenario workshop results were combined to create four alternative scenarios, submitted to the public for feedback.
5. Final workshop: 50 individuals worked in six subgroups to develop a draft preferred scenario that was submitted to the COMPASS Board for approval.

> Strategic planning is worthless—unless there is first a strategic vision.
>
> —John Naisbitt

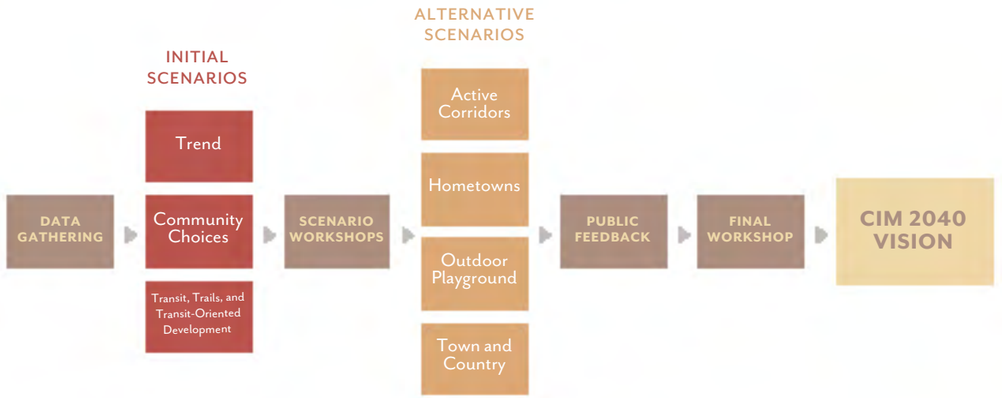


Figure 3.2. CIM 2040 scenario planning process

Data Gathering

Existing Conditions

Prior to mapping the Treasure Valley's future, COMPASS and stakeholders reviewed data on existing conditions. COMPASS tracks building permits, employment statistics, proposed developments, real estate trends, and other information for purposes of evaluating the area's transportation networks. These findings are published in COMPASS reports.

Population Forecast

Planning for the transportation needs of a rapidly growing urban area such as the Treasure Valley requires an understanding of future demands. Population, employment, and land use are basic determinants of travel; therefore, a first step in assessing future needs is preparing a population forecast.

COMPASS works with its Demographic Advisory Committee to prepare population forecasts (Figure 3.3) using industry-standard modeling methods and based on the best available information at the time they're produced. They are meant to help prepare for the future and are not an expression for or against growth.

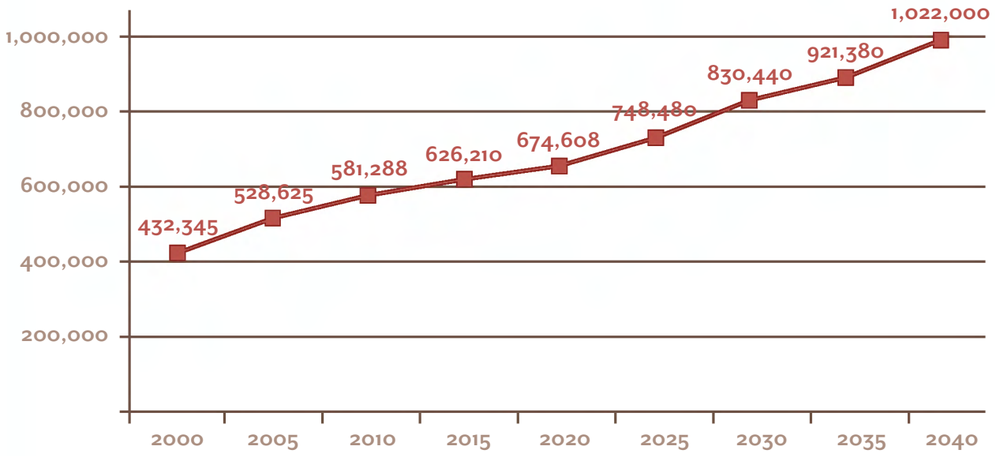


Figure 3.3. CIM 2040 population forecast. Data for 2000, 2005, and 2010 are from the US Census Bureau, www.census.gov.

Regional Strengths, Weaknesses, Opportunities, and Threats (SWOT)

The SWOT analysis is a tool commonly used in strategic planning, as it encourages participants to explore the strengths, weaknesses, opportunities, and threats associated with a project or program. To provide a starting point for the scenario workshop participants, COMPASS and the CIM 2040 Planning Team performed a SWOT analysis on eight elements that impact—and are impacted by—growth in the Treasure Valley:

- transportation
- land use
- housing
- community infrastructure
- economic development
- open space
- farmland
- health

The SWOT analyses were included in a guidebook provided to all workshop participants to help them prepare for the planning discussions.

Initial Scenarios

Taking into consideration regional data, population forecasts, advisory committee input, and results from the SWOT analyses, three initial scenarios were created to serve as starting points for discussions at the workshops. They were:

- Trend: A scenario that looks at development, transportation, and housing patterns that have occurred over the last several decades and projects the same trend into the year 2040.
- Community Choices: The official, adopted growth scenario for CIM 2030 and CIM 2035. This scenario is different from Trend in that new homes and jobs are more evenly balanced in the region, and it provides more choices in housing types and transportation modes, higher housing densities in applicable areas, and preservation of open space and farmland.
- Transit, Trails, and Transit-Oriented Development: Developed specifically for the workshop, this scenario is similar to Community Choices but it allocates a larger portion of development to be near public transportation and expands the

> A part of our future appears to be evolutionary and unpredictable, and another part looks developmental and predictable. Our challenge is to invent the first and discover the second.
>
> –John Smart

» Click image to play Scenario Workshops video

transportation system with robust public transportation, complete streets (see Chapter 5 and the 2014 COMPASS Complete Streets report), and trail networks.

Scenario Workshops

In February and March 2012, COMPASS facilitated three day-long workshops to develop scenarios for future land use. More than 170 people participated in the workshops, including stakeholders and community leaders from Ada and Canyon Counties representing a broad array of interests. In addition, residents were invited to "self nominate" to attend one of the workshops.

Workshop participants broke into small groups to develop regional vision maps for the year 2040, based on a population of 1,022,000 and 462,000 jobs. In addition, participants used keypad polling to express their views on a variety of issues concerning regional priorities and challenges.

Learn more about the workshops in Chapter 2 and online (under "Step 1" here).

Scenario Planning Software

The scenarios were created, analyzed, and visually displayed using CommunityViz® software. CommunityViz is a software tool used for scenario planning and other planning applications. The system combined computerized maps and graphics with analysis capabilities that let users sketch future scenarios, then see what impacts they would have on economic development, transportation, housing, agriculture, and other topics of interest.

Alternative Scenarios/Public Feedback

COMPASS synthesized the many potential scenarios and themes that emerged during the workshops into four alternative scenarios. These alternative scenarios offered four visions for the future of the COMPASS region[1] and were each given a descriptive name:

- Active Corridors
- Hometowns
- Outdoor Playground
- Town and Country

COMPASS presented the four scenarios for public comment from May 7 to June 17, 2012. During this time, Treasure Valley residents were invited to weigh in on which scenario best represented their vision for the future of the valley and why. In addition to informal feedback from open houses and conversations with the public, COMPASS received 283 comments.

The rankings were:

1. Active Corridors
2. Outdoor Playground
3. Town and Country
4. Hometowns

Respondents were also asked to rank eight indicators (issues/values) in order of importance. The rankings were:

1. Walkability
2. Housing and transportation affordability
3. Traffic congestion
4. Jobs-housing balance
5. Population near transit
6. Population near parks and schools
7. Preserved agricultural land
8. Housing variety

More information on public comments can be found in Chapter 2.

Figure 3.4 illustrates how well the four alternative scenarios and the final, adopted sce-

1 Information on the alternative scenarios, including maps, descriptions, public comments, and details about how they were created, can be found at www.compassidaho.org/prodserv/cim2040_scenarioplanning_process.htm (see "Step 2. Public participation and comment").

nario (the CIM 2040 Vision) compared to the Trend scenario. Performance is based on the eight key indicators. One star means the scenario performed slightly better than the Trend scenario, and three stars means the scenario is a best case compared to Trend.

All four alternative scenarios performed "good," or better than the Trend scenario, on the eight key indicators. The CIM 2040 Vision performed better than Trend for each indicator; however, it underperforms compared to the alternative scenarios on most indicators because the final CIM 2040 Vision accounts for already entitled developments, which were not included in the four alternative scenarios.

Indicators	Performance of Alternative Scenarios				Performance of Final Scenario
	Active Corridors	Hometowns	Outdoor Playground	Town and Country	CIM 2040 Vision
Job-Housing Balance	★★	★★	★★★	★★★	★
Housing Variety	★★★	★★	★	★★★	★
Housing + Transportation Affordability	★★★	★	★	★★★	★★
Traffic Congestion	★★	★★	★★	★	★★★
Population Near Transit	★★★	★	★★	★★★	★
Population Near Parks and Schools	★	★★	★★	★★★	★
Preserve Agricultural Land	★★	★★	★★★	★★★	★
Walkability	★★★	★★	★	★	★★

★ Good ★★ Better ★★★ Best

Figure 3.4. Comparison of alternative scenarios and the CIM 2040 Vision on eight key indicators

Final Workshop: Development of the CIM 2040 Vision

After reviewing all public and stakeholder comments, COMPASS developed a new draft scenario based on the two alternative scenarios ranked highest by the public: Active Corridors and Outdoor Playground. This new draft scenario was then tailored to conform to local comprehensive land use plans and presented at a July 2012 workshop. During the workshop, participants had the opportunity to address outstanding issues and resolve differences between the draft scenario and existing local plans.

The work completed at this workshop, plus final input from local planners and technical reviewers, resulted in a draft preferred scenario that was presented to the COMPASS Board in September 2012 (see "Step 3" here).

The CIM 2040 Vision

The COMPASS Board adopted the preferred scenario (*Communities in Motion 2040* Vision) on October 15, 2012. The following is the Board-approved vision statement describing the scenario:

> The *Communities in Motion 2040* Vision provides new housing and jobs along transit corridors and in major activity centers with a strong focus on maintaining the region's recreation and open space areas. New growth would be comprised of a variety of housing types, served by infrastructure, nearby services, and outside of prime farmland or environmental constraints.
>
> This scenario supports local comprehensive plan goals and densities, and includes entitled developments as of July 2012. This scenario would support high-capacity transit for State Street (Highway 44) and a route parallel to Interstate 84, as well as multimodal infrastructure and services throughout the region.
>
> Key goals include walkability, preserving farmland, minimizing congestion, increasing transportation options, improving jobs-housing balance, better access to parks, and maintaining environmental resources.

Figure 3.5 is a visual representation of the CIM 2040 Vision.

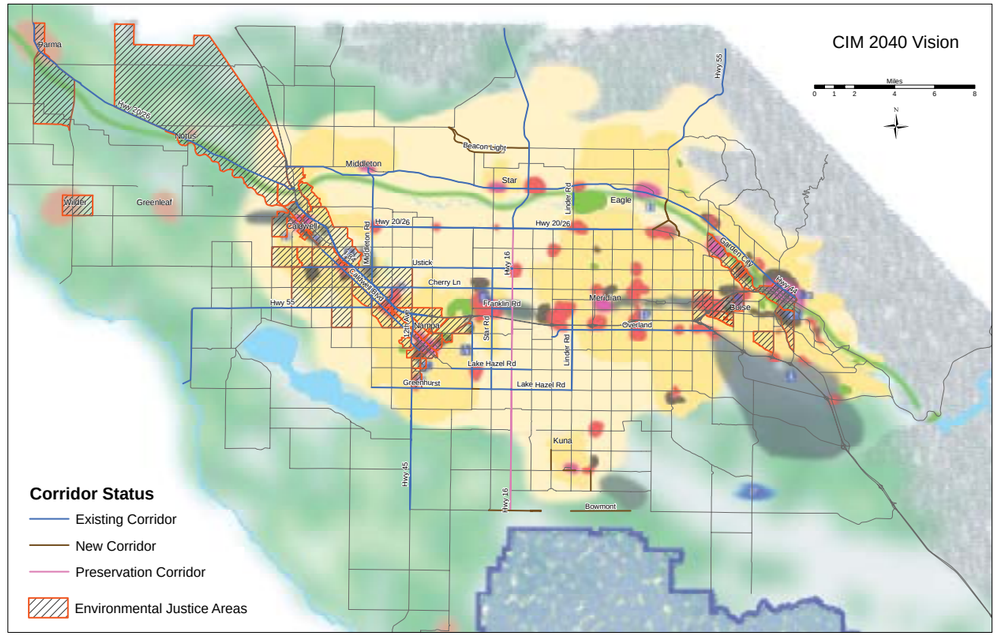


Figure 3.5. CIM 2040 Vision[2]

The CIM 2040 Vision includes a total 2040 population in the two-county region of 1,022,000 and 462,000 jobs. Table 3.1 shows how this growth is allocated among the jurisdictions (cities and counties) in the region.

2 www.compassidaho.org/documents/prodserv/CIM2040/Map_Final.pdf

Table 3.1. *Communities in Motion 2040* population and employment forecast

	2010			2040		
	Population	House-holds	Jobs	Population	House-holds	Jobs
Boise	237,241	96,654	141,628	317,192	140,848	234,520
Eagle	23,122	8,197	5,507	52,246	18,823	15,498
Garden City	11,101	4,949	7,049	18,311	8,911	13,794
Kuna	13,319	4,283	1,806	25,991	10,270	4,950
Meridian	83,786	28,296	30,772	154,780	57,501	65,642
Star	6,472	2,177	564	35,644	12,035	3,114
Ada County (outside areas of impact)	17,426	3,925	7,648	70,153	23,656	13,161
Ada County Total	392,365	148,445	190,324	674,317	272,044	350,679
Caldwell	50,672	16,540	13,144	109,111	40,098	37,550
Greenleaf	2,748	959	440	5,947	2,145	977
Melba	845	279	205	2,358	801	539
Middleton	10,348	3,514	1,282	18,475	6,626	1,937
Nampa	96,173	32,829	29,278	160,886	59,886	61,973
Notus	984	332	134	2,452	822	462
Parma	2,568	905	687	6,861	2,456	1,118
Wilder	1,951	612	283	6,760	2,317	729
Canyon County (outside areas of impact)	22,634	7,634	4,729	34,833	12,224	5,693
Canyon County Total	188,923	63,604	50,182	347,683	127,375	110,978
TOTAL	**581,288**	**212,049**	**240,506**	**1,022,000**	**399,419**	**461,657**

Now What?

Obviously, scenario planning is not the end goal. It helped define a unified vision for future growth of the Treasure Valley—a vision that COMPASS and stakeholders worked toward as they developed CIM 2040.

Implementation of the CIM 2040 Vision is explained in more detail in Chapters 10 and 11.

Summary

The CIM 2040 Vision offers a more cost-effective, multimodal transportation system. If this vision is realized, new growth patterns will mean that our region will

- promote economic development;
- increase affordable housing;
- use land efficiently while protecting property rights;
- encourage open space;
- encourage healthier lifestyles;
- protect farmland and the environment; and
- save money in community infrastructure.

CHAPTER 4

TRANSPORTATION FINANCIAL ANALYSIS

COMPASS commissioned a financial analysis, finalized in 2012, to support the CIM 2040 update. The analysis, *Financial Forecast for the Funding of Transportation Facilities and Services 2012-2040*, estimates funds available for the operation, preservation, and expansion needs of transportation systems within the COMPASS region. The analysis applies inflation assumptions to agency revenues and expenditures that affect overall funds available for operations, maintenance, and expansion through year 2040. This analysis is summarized in this chapter. Chapter 6 discusses funding in current dollars.

Why Conduct an Analysis?

Assessing the financial capacity of CIM 2040 is important for several reasons. First, federal rules require that MPO plans and programs include only projects that have a reasonable chance of being funded. This is due, in part, to the fact that plans must demonstrate that the future transportation system will conform to federal air quality regulations, as discussed in Chapter 9.

Just as important, local and state officials and citizens need to understand the financial situation facing transportation over the next 25 years so they can plan, govern, and participate effectively.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

Agencies Included in the Analysis

The financial analysis takes into consideration plans and operations of the 15 public agencies in Ada and Canyon Counties that provide transportation:

- Idaho Transportation Department (ITD)
- Ada County Highway District (ACHD)/ACHD Commuteride
- Nampa Highway District No. 1
- Notus-Parma Highway District No. 2
- Golden Gate Highway District No. 3
- Canyon Highway District No. 4
- City of Caldwell
- City of Greenleaf
- City of Melba
- City of Middleton
- City of Nampa
- City of Notus
- City of Parma
- City of Wilder
- Valley Regional Transit (VRT)

Idaho Transportation Department. ITD has jurisdiction over the state and federal roadways throughout the state and also has programs addressing rail and air transportation. ITD District 3 comprises 10 counties in southwest Idaho. These 10 counties contain 44% of the state's population.

Ada County Highway District. Ada County is unique in Idaho and the nation, in that it's had a single, county-wide highway district since 1972 with a separately elected board. ACHD maintains roadways and makes improvements throughout the county, except for public roads under ITD jurisdiction. No cities have roadway jurisdiction in Ada County.

Canyon County. Unlike Ada County, the cities in Canyon County have jurisdiction over their roadways. The cities of Nampa, Caldwell, Middleton, and Parma have their own road departments; the remaining smaller cities contract with highway districts to maintain roads within the city limits. The four highway districts that serve the smaller cities and unincorporated areas are Nampa Highway District #1, Notus-Parma Highway District #2, Golden Gate Highway District #3, and Canyon Highway District #4.

Valley Regional Transit. VRT was established by vote in 1998 as the regional public transportation authority for Ada and Canyon Counties. It operates ValleyRide, which provides local bus services to the cities of Boise, Nampa, Caldwell, and Garden City; operates inter-county transportation routes between Ada and Canyon Counties (through the cities of Meridian, Middleton, Star, and Eagle); and has over 860 bus stops in the Treasure Valley. Paratransit services, door-to-door service for people who have special needs and live within three-quarters of a mile of a fixed route, are available in the cities of Nampa, Caldwell, Boise, and Garden City.

Ada County Highway District Commuteride. ACHD Commuteride is best known for its vanpools, but it also promotes public transportation, carpooling, bicycling, and walking. ACHD Commuteride's vanpool routes extend from Ontario, Oregon, to Mountain Home, Idaho, and from Emmett, Idaho, to Melba and Kuna, Idaho. While most vanpools bring commuters into Boise area employment centers, there are also reverse routes from Boise to the Mountain Home Air Force Base. In calendar year 2012, Commuteride provided a total of 274,806 one-way passenger trips in approximately 100 vanpool routes.

Both ACHD Commuteride and Valley Regional Transit make use of park-and-ride lots, locations where individuals can park a car to board a bus or join a vanpool or carpool. These park-and-ride lots are an integral part of the Treasure Valley's public transportation system.

Agency Budget Issues

Over the long term, a transportation agency must balance revenue and costs, although, in any given year, revenue may exceed costs or vice-versa.

Agency budgets include these cost categories:

- **Operations**: administration, utilities, fuel, labor, insurance, etc.
- **Preservation** and **rehabilitation** (**maintenance**): sweeping, patching potholes, applying chip seals and overlays, repairing and replacing equipment, and replacing bridge decks
- **Expansion**: building new roads or bridges, expanding current roads or bridges, and adding new services and equipment, such as buses

Another category, debt service, is sometimes added. An example of debt service is the recent widening on Interstate 84, which was initially paid for with Idaho Grant Anticipation Revenue Vehicle (GARVEE) bonds that will be paid back with future funds.

Transportation agencies budget for debt service and operating costs first, then preservation and rehabilitation costs. By estimating future revenue, then subtracting estimated future operations and maintenance (O&M) and preservation costs, agencies can determine if there is budget left for new capacity, such as adding lanes or buses.

This process is similar to budgeting for a home (Figure 4.1). If a homeowner knows her income (revenue), the cost to operate and maintain the home (mortgage, utilities, routine upkeep), and the cost to preserve/rehabilitate the home (larger repairs such as replacing a broken furnace), she can figure out if she has enough money left for something new, such as a kitchen remodel or an additional room.

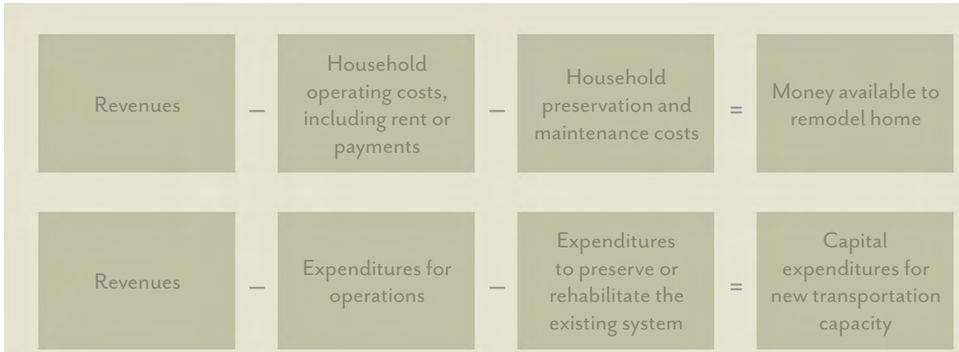


Figure 4.1. The budgeting process used by transportation agencies is similar to that of a homeowner.

Revenue Assumptions

Funds for transportation infrastructure and services come mainly from federal, state, and local taxes. Figure 4.2 shows how these are currently (and approximately) funded in Ada and Canyon Counties.

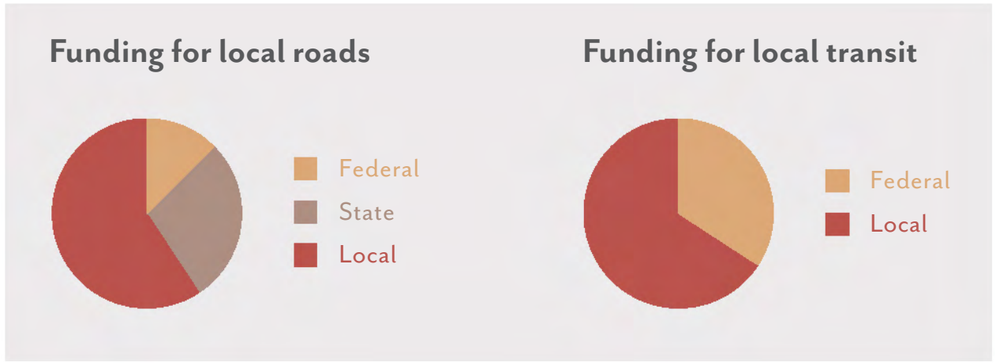


Figure 4.2. Transportation funding sources (approximate values)

Federal Funding Sources for Roadways and Transit

The Highway Trust Fund is the primary source of federal funds for local roads and many transit projects across the country. It's funded by the federal fuel tax rate, which has been fixed since 1993 at 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel.

In July 2012, MAP-21 was signed into law, which authorized funding for several transportation programs for a two-year period. Transit funding *authority* increased by 60% but, by January 2013, *actual funding* remained at 2012 levels.

Several federal funding programs address transportation. The National Highway Performance Program is the largest, with $166.7 million apportioned to Idaho in 2014; most of this is going to Idaho's state and federal highway system. The Surface Transportation Program (STP), with $76.7 million in 2014 for Idaho, provides flexible funding that may be used by states and localities to preserve and improve the conditions and performance on any federal-aid highway, bridge, or tunnel projects on any public road, pedestrian, and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

For pathways and other alternative transportation needs, MAP-21 established a new funding category called the Transportation Alternatives Program (TAP). The Boise Urbanized Area received approximately $422,000 in federal funds for the TAP program

for FY2014. If the TAP funding level is increased by 1% annually, the total available for pathways would be roughly $12 million through 2040. While no guarantee exists for the Nampa Urbanized Area, as this area must compete for funding with other urban areas in the state, its share of the urban TAP funds could amount to approximately $7 million through 2040.

Federal funds typically require some level of local cost share, or "match," but to varying degrees can be used for both operations and management and capital expenditures. Based on the US Congress' reluctance to increase federal fuel tax and a very modest increase in total fuel usage over time, the COMPASS financial analysis anticipates only **a 1% increase in overall federal transportation funding allocated to Idaho** for the period 2012–2040.

State Funding Sources for Roadways

State fuel taxes—fixed since 1996 at 25 cents per gallon for gas and diesel—make up a large portion (67%) of Idaho's Highway Distribution Account, which allocates money to ITD and local road agencies. Vehicle registration fees on cars and trucks supply the remaining percentage. The COMPASS financial analysis assumes **a 1.7% per year increase in state funding for local road agencies,** based on population growth and relatively modest increases in fuel sales. Highway Distribution Account funds can be used for any type of road project, but not for transit services.

Local Funding Sources for Roadways

Property Taxes

Property taxes are the single largest source of local funding for roads and are assessed directly by the highway districts. In Canyon County, the highway districts return a portion of the property tax revenue to the cities within their boundaries that have their own road departments (Caldwell, Greenleaf, Melba, Middleton, Nampa, Notus, Parma, and Wilder). The COMPASS financial analysis assumes that **property tax revenues will increase either 1) at a rate equal to the rate of increase of households plus the rate of inflation *or* 2) by 3%—whichever is less.**

Impact Fees

Additional funding for ACHD and the City of Nampa comes from impact fees collected on new development; the fees are designed to partially recover the costs associated with the increase in traffic on major streets in the general area. Impact fee levels can increase with inflation, but revenues depend on a relatively volatile local construction market.

Under Idaho law, impact fees recover just the "proportionate" costs associated with improving capacity. The fees cannot be used for existing problems, repairs, safety enhancements, transit, or improvements such as sidewalks that don't expand the road system. In ACHD's Capital Improvement Plan, of $520.5 million total costs for roadway improvements, $277.2 million is eligible for funding with impact fees.

The Village at Meridian. Photo: Shelly Houston, as part of the *Your Treasure Valley Future Photo Challenge*.

Vehicle Registration Fees

ACHD also collects vehicle registration fees. The fee is a fixed amount for all vehicles, so revenue will only grow if the number of licensed vehicles increases and/or voters approve an increase in the registration fee. The latest increase in registration fees was put into effect in 2009; the amount collected roughly doubled from $4 million a year to $8 million.

Other Local Revenue Sources

Other local revenue sources include items such as interest earnings and bond proceeds. The City of Nampa has historically supplemented its transportation budget by periodically issuing General Obligation bonds, and intends to continue this practice. But, like a loan, bonds must be repaid with revenue from existing or new sources.

Local Funding Sources for Transit Services

Local transit funding comes from riders' fares and contributions from local governments. Fares make up about 10% of local transit operating revenues and are expected to increase over time at a rate approximately equal to inflation. The fares will most likely continue to cover about 10-12% of local transit operating costs in the future. Payments from the cities are also expected to increase over time with inflation, with the share of each local government roughly tied to service levels within their areas.

Revenue Outlook

Of all the revenue sources, only property tax revenues, impact fees, and transit fares are likely to keep pace with inflation. Increasing other revenue streams such as fuel taxes requires congressional, legislative, local government, or voter approval. These approvals appear unlikely due to current economic conditions—and an improving economy wouldn't necessarily equate to a willingness to change existing fee structures.

Operations, Maintenance, and Preservation Assumptions

The COMPASS financial analysis assumes that operations and preservation/reconstruction expenditures for roads and transit will trend at their historic levels. However, this makes broad assumptions about current road conditions and whether historic spending patterns are sufficient to keep roads adequately maintained. There currently is not a way to evaluate and compare the conditions of all transportation systems in the region. As a result, conclusions about system maintenance are primarily based on discussions with roadway and transit agencies. It appears reasonable to conclude that transportation systems are currently in good condition. Long-term maintenance needs are discussed in Chapter 6. Agencies have expressed several areas of concern moving forward:

- One city believes it's falling behind in maintenance overlays. Other urban agencies have similar concerns about local and collector roads. In Canyon County, rural areas appear to have fewer issues with pavement conditions than urban areas.
- Specific programs to fund the rehabilitation or reconstruction of major structures such as bridges have not been developed. Although all agencies are committed to adequately maintaining their major structures as needs arise, few have taken steps to ensure these maintenance expenditures will be evenly distributed in future years.
- VRT will likely fall behind in bus and van replacements. Based on expected expenditures and the size and age of the current vehicle fleet, annual expenditures for bus replacements should be doubled or tripled.

Available Local Funding for New Roadway Capacity

Based on the assumptions discussed above, the COMPASS financial analysis estimates that funding available for roadway expansion (adding capacity to the system) in Ada and Canyon Counties during 2014–2040 will largely depend on impact fees that will generate funding shown below:

Total funds available for roadway expansion, 2011-2040, in inflated dollars	
Ada County	$526.3 million
Canyon County	$46.3 million
Total	**$572.6 million**

Figure 4.3 shows estimates of future total revenues versus combined operations and preservation/reconstruction costs for the local roadway agencies, according to the financial analysis and including a 4% inflation rate for expenditures. As shown, costs begin to exceed revenues in approximately 2025, after which something— such as increasing revenue, postponing maintenance, or cutting service—will be needed to keep the system financially sound. Funds for expanding the roadway system will be depleted at this point for all agencies except ACHD and the City of Nampa, which collect impact fees.

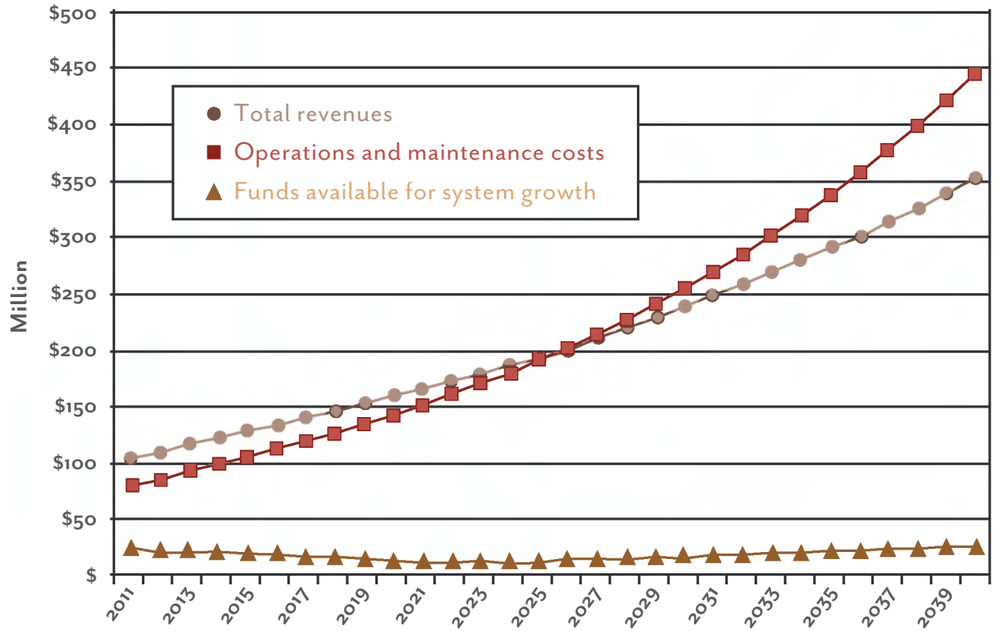


Figure 4.3. Future revenues, expenditures, and remaining funds available for system growth, Ada and Canyon Counties combined, assuming 4% inflation

Figure 4.4 shows annual revenues for system growth over time, allocated to Canyon County agencies and Ada County, with payments broken down between impact fees (collected by ACHD and City of Nampa) versus other revenue sources. Impact fee revenues compose the bulk of the estimated available funds after 2015.

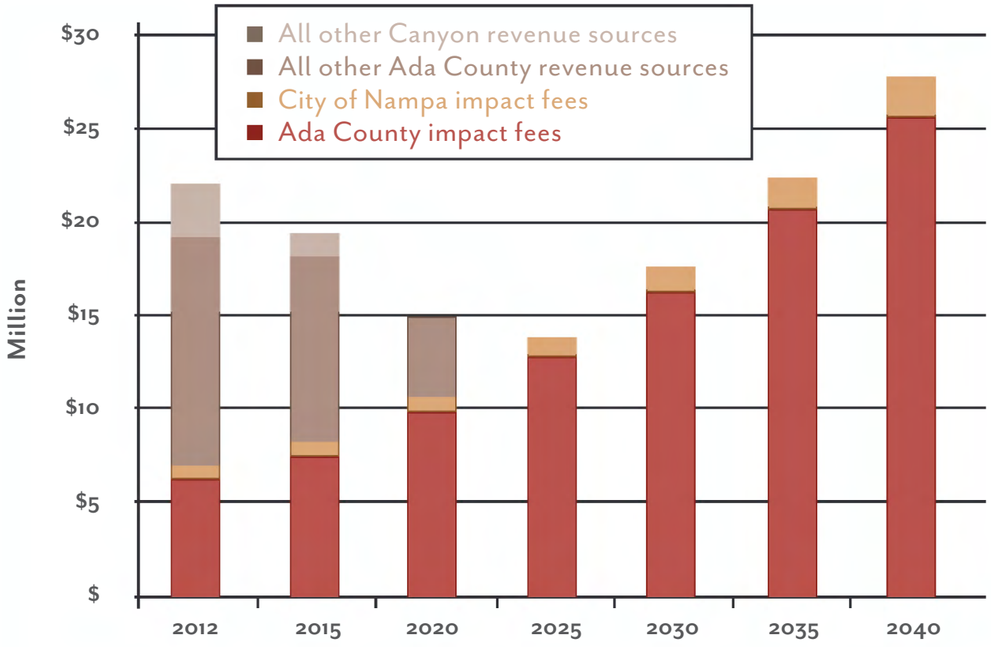


Figure 4.4. Estimated annual revenue available for roadway system expansion projects

Available Funding for Transit Expansion

VRT is the transit authority for Ada and Canyon Counties and oversees the ValleyRide bus system. ACHD's Commuteride vanpool program operates in both counties as well, but all its routes must connect to or travel through Ada County. VRT has recently initiated vanpool services in areas not covered by ACHD's program.

Federal Funding Futures

Federal transit revenues are assumed to grow at 1% per year—but they could remain the same or be eliminated with nearly equal probability.

Under the current financial situation, VRT plans to focus on sustaining current services, covering operations, and maintaining its fleet and facilities. If there are carryover funds in a given year, the monies will be used to meet existing obligations or be held as operating capital; as such, annual revenue will equal annual costs with little leftover. There is no known source of additional funding that might cover new or expanded services.

The COMPASS financial analysis assumes **cities will maintain their current levels of payments to VRT over time, adjusted for inflation**. Regardless, costs are assumed to increase more rapidly than revenue, with the projected deficit shown in Figure 4.5. A relatively small surplus changes over time to an estimated annual deficit of $2.6 million in 2020 and $34.2 million in 2040.

This result is similar to many roadway agencies, although the VRT deficit is experienced earlier and with greater severity in relative terms. No funds will remain for increasing level of transit service. Even if the federal funding boost under MAP-21 remains, it is not enough to counter a long-term deficit. Without additional revenue from existing or new sources, a potential consequence of this gap could be reductions in transit service to match available funding.

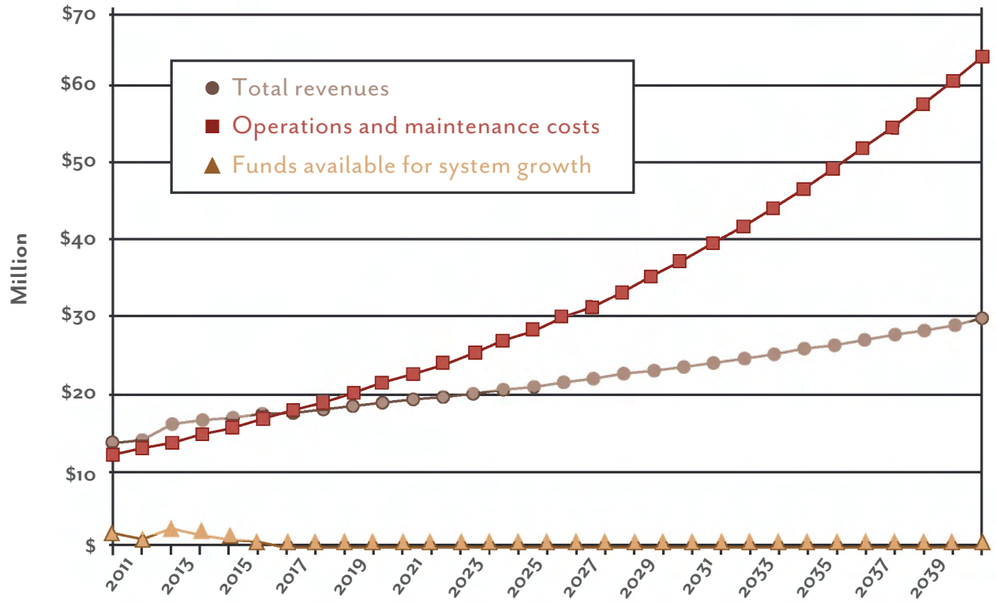


Figure 4.5. Annual transit revenues, O&M expenditures, and remaining funds available for increasing service levels

The financial situation for ACHD Commuteride is more stable, as 80% of its base costs (vehicle replacement, fuel, maintenance, and administration) are covered by rider fares—and fares are periodically adjusted to cover increased costs. From 2009 through 2013,

Photo: Sylvia Marmon, as part of the *Your Treasure Valley Future Photo Challenge*.

Commuteride costs amounted to roughly $1.5 million per year, with approximately 100 vans in operation during 2012. The general conclusion is that Commuteride can sustain its existing level of services if certain conditions continue.

There are insufficient resources within the program to expand services or add new facilities such as park-and-ride lots.

Potential Sources of New or Additional Revenue

The previous discussion and analyses include inflation and point to the inadequacy of projected available revenues to meet the future transportation system needs. Chapter 6 describes the unfunded needs and available funding in current dollars, looking out to the year 2040.

Table 4.1 describes several possible sources for additional revenue to fund needed transportation improvements.

Table 4.1. Examples of *possible* sources to raise $159 million,* or $755 per household, per year (in 2012 dollars)

Tax/Fee Source	Tax Type	Added Rate	Current Rate	Total Rate	Current Legal Uses
Unit fuel tax	Fixed cents per gallon	$0.453	$0.25	$0.70	Roadway construction and maintenance
Sales tax on fuel	Percentage of price (less state/ federal unit tax)	14.0%	0.0%	14.0%	Potentially any transportation but needs legal review
Vehicle registration fee	Dollars per vehicle	$333	Up to $60 plus up to $48 additional in Ada	Up to $393 in Canyon and up to $441 in Ada	Roadway construction and maintenance
Sales tax on goods	Percentage of price	2.9%	6.0%	8.9%	Any transportation
Income tax	Added to existing tax	34.3%	Variable	Variable	Any transportation
Property tax	Percentage of assessed value	0.509% for two-county region	Example rates: 0.129% ACHD; 0.197% CHD4	Variable	Any transportation

* This amount is for a single year. It is in addition to existing revenues and would cover the gap between existing revenues and the amount needed to fully fund maintenance and operations, new capital, and an expanded public transportation system.

Other Sources	Type	Probable Benefit	Current Legal Uses
Impact fees	Variable fee paid when a building permit is issued	Can be high revenue. ACHD received as much as $14 million prior to the economic slump starting in 2007.	Capital needs tied to effects of growth. Cannot be used for maintenance and operations, existing problems, or non-capacity improvements such as landscaping or drainage.
Tolls	Variable charge. Often applied to limited-access facilities such as expressways, tunnels, and bridges	Can be high revenue. Nationally, toll revenue was 5% of all roadway revenues in 2006.	Typically limited to construction and maintenance of the specific facility, e.g., a toll road
Vehicle miles of travel fees	New system that can use technology to track time and location of driving	Can be high revenue	Legal uses are unclear. To be a fee, the charge has to be tied to a specific benefit conferred upon the user.
Rental cars tax	An add-on to the base fee	Low. Currently 6% but ranges up to 18% nationally.	No constraints

Summary

While revenues will increase over the next 27 years, costs for operations and preservation/rehabilitation will likely rise faster. This means that only agencies with funding dedicated to expansion—specifically, impact fees—will have long-term capacity to expand. Across 27 years, the $1 billion of local funds in today's dollars results in annual investments of about $37 million a year in current dollars.

The following examples put this in perspective:

- Widening of Franklin Road for one mile (from two to five lanes) with a sidewalk, curb, and gutter is $10.9 million (in Nampa).
- Adding a signal to the intersection of Middleton and Flamingo Roads (in Nampa) costs $280,000, and a roundabout at Middleton and Ustick Roads (in Caldwell) is $950,000.
- A new bus route costs $370,000 per year to operate, not including bus purchases; each new heavy-duty transit coach is $400,000 or more.

To allow for new transportation capacity and services, changes will need to be made—by figuring out how to increase existing revenue streams and/or developing new funding sources. COMPASS will continue to educate state and federal officials on these transportation funding issues.

CHAPTER 5

EXISTING TRANSPORTATION SYSTEM

The Treasure Valley transportation system comprises a number of elements, including roadways, facilities for pedestrians and bicycles, and public transportation that function together to get people where they need to go.

CIM 2040 commits to maintaining the existing transportation system as its top priority, reflected by goal 1.3 of the plan—*Protect and preserve existing transportation systems and opportunities*—and by the funding priorities discussed in Chapter 6.

Table 5.1 summarizes key statistics that illustrate the overall performance of the existing transportation system; the same information for the year 2040 is shown in Chapter 6, which addresses future transportation system needs.

Table 5.1. 2013 existing transportation network characteristics

Transportation Network Characteristics	2013
Population	599,840
Employment	250,697*
Vehicle miles of travel, average weekday	12,077,400
Hours of delay, average weekday	27,670

* *Source*: Idaho Department of Labor data, June 2013

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

Travel time to/from common destinations	
• Caldwell to downtown Boise	34 minutes
• Nampa to Boise Airport	23 minutes
• CanAda Road in Star to St Luke's in Boise	30 minutes
• North Meridian to Veteran's Memorial Parkway	20 minutes
• City of Eagle to St Luke's Meridian	17 minutes
ValleyRide	
• Number of bus routes (fixed)	26
• Total one-way passenger trips	1,506,289
Treasure Valley Transit	
• Number of bus routes	N/A; this is demand-response
• Total one-way passenger trips	39,039
Commuteride	
• Number of vanpools	102
• Total one-way vanpool passenger trips	274,735

Transportation System Goals

The CIM 2040 goals addressing transportation management and maintenance are:

Goal 1.1: Enhance the transportation system to improve accessibility and connectivity to jobs, schools, and services; allow the efficient movement of people and goods; and ensure the reliability of travel by all modes considering social, economic, and environmental elements.

Goal 1.2: Improve safety and security for all transportation modes and users. (Discussed in Chapters 7 and 8.)

Goal 1.3: Protect and preserve existing transportation systems and opportunities.

Goal 1.4: Develop a transportation system with high connectivity that preserves capacity of the regional system and encourages walk and bike trips.

Goal 6.1: Develop a regional transportation system that connects communities, provides access to employment centers, and provides efficient truck, rail, and/or air freight movement throughout the Treasure Valley.

Goal 8.1: Protect and enhance transportation routes for the efficient movement of farm equipment and products.

Performance measures and targets are discussed in Chapter 6.

Roadway Management and Maintenance

Roadway management and maintenance activities can include safety improvements, travel demand management, and investments in intelligent transportation systems, but typically focus on maintaining the integrity of pavement and bridges. According to information provided by individual transportation agencies, it is reasonable to conclude that their systems are *currently* in good condition. For example, according to ITD, as of 2013, 85% of ITD's pavement statewide was in good or fair condition and 74% of ITD's bridges statewide were in good condition.

As of 2013, 85% of ITD's pavement statewide was in good or fair condition and 74% of ITD's bridges statewide were in good condition.

However, agencies have expressed concern about falling behind in maintaining pavement conditions, particularly chip sealing and maintenance overlays. Over time, more investment will also be needed to preserve and restore deteriorating bridges, but specific strategies have not been developed.

Chapter 6 details specific maintenance needs, including those funded by federal dollars, in the Treasure Valley.

Public Transportation

Public transportation provides options for people to meet their travel needs and is a key component of the overall transportation system. In addition to providing a transportation option for all individuals, public transit systems often provide the sole source of transportation for people who do not, or cannot, operate a motor vehicle because of personal choice, income, disability, or age.

Public transportation is a shared passenger transportation service, such as a bus or train, available for use by the general public. It does not include taxis or carpools.

In the Treasure Valley, buses are the primary form of public transportation.

The major public transportation providers in southwest Idaho are discussed in Chapter 4. VRT is the regional public transportation authority for Ada and Canyon Counties, and oversees the ValleyRide bus system. One of VRT's priorities is improved coordination of existing transportation services to enhance mobility and access for the people who are typically most dependent on them.

Management and maintenance of the existing public transportation system is as much a priority as maintaining existing roadways and bridges. However, it appears VRT will likely fall behind in its ability to keep up with bus replacement. Based on the size and age of the current fleet, annual expenditures for bus replacements should be doubled or tripled.

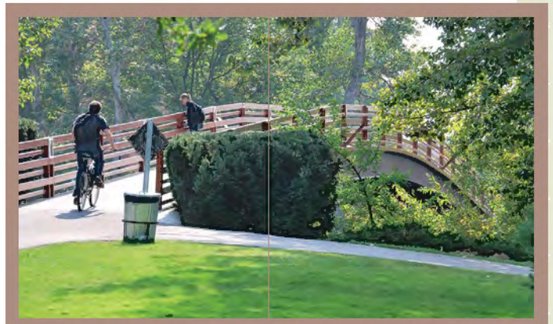
In 1994, the Idaho State Legislators passed a law (Title 40, Chapter 21) giving citizens the opportunity to vote on the formation of public transportation authorities. The purpose was to establish a single governmental agency oriented entirely toward public transportation needs within a county or region.

VRT's *valley**connect*** plan identifies current and future potential transportation options, other than driving alone, in Ada and Canyon Counties. It also details how customers can access information about routes and services, and discusses future improvements to the system. These improvements are discussed in Chapter 6 as unfunded needs.

Bike and Pathways

The region has a long history of bikeway planning dating back to the 1970s and the start of a "greenbelt" in Ada County. Today, a 30-mile-plus greenbelt runs alongside the Boise River and there are more than 150 miles of on-street bike lanes.

Figure 5.1 depicts the current regional pathway map for Ada and Canyon Counties. The two-county Foundation for Ada/Canyon Trail Systems, Inc. (F.A.C.T.S.) is a nonprofit organization working to expand the existing Boise River Greenbelt to create one path from Lucky Peak Dam to where the Boise River meets the Snake River west of Parma. Many local jurisdictions also have their own bike and pathway plans. In Ada County, ACHD has a bikeways plan, the City of Eagle has a map of proposed bicycle and trail connections, the City of Boise has a map of existing trails and the greenbelt, as well as their maintenance needs, and the City of Meridian has a pathways master plan and a map of planned bicycle facilities. The City of Kuna[1] also has a bicycle and pathway plan. In Canyon County, Caldwell and Nampa have adopted bike and pathway plans, and Middleton is working to expand its pathway system.



The Boise River Greenbelt. Photo: Toni Tisdale, as part of the *Your Treasure Valley Future Photo Challenge*.

1 This will become its own document, but the information is currently included in the City of Kuna Comprehensive Plan, 2013: www.kunacity.id.gov/DocumentCenter/View/69.

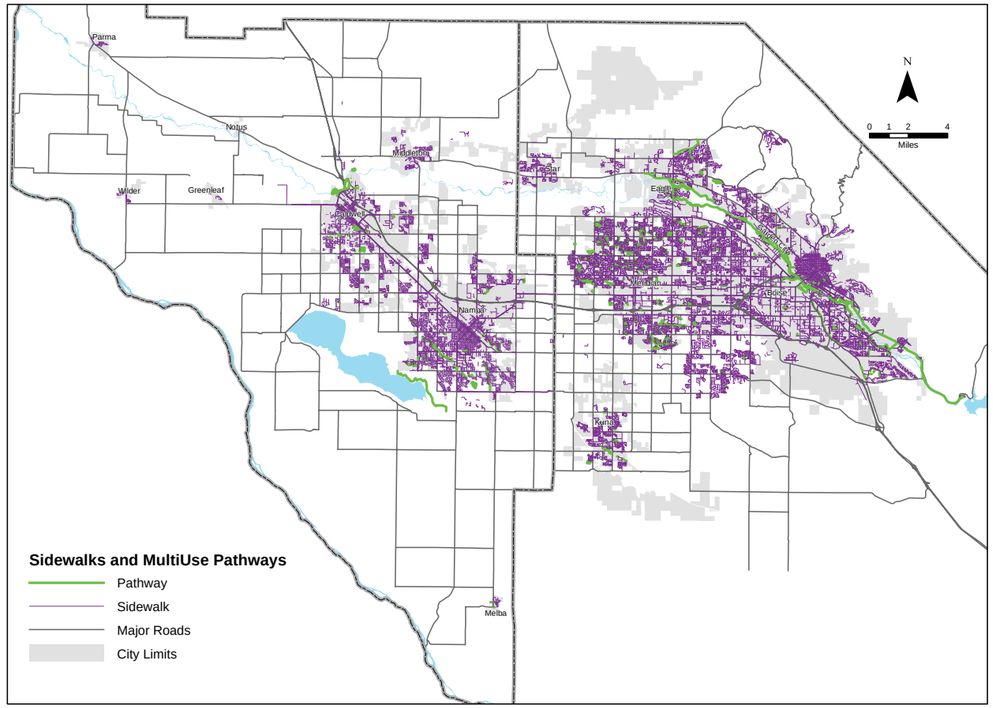


Figure 5.1. Current pathways in Ada and Canyon Counties[2]

Full bike racks at Washington Elementary School, Boise. Photo: Marcus Orton, as part of the *Your Treasure Valley Future Photo Challenge*.

Safe Routes to Schools

Safe Routes to Schools is a national program that encourages students to walk and bike to school to promote a healthy lifestyle, reduce traffic congestion, improve air quality, and enhance quality of life in our communities. There are Safe Routes to Schools programs in the Boise School District, Joint School District #2, and Cities of Caldwell and Nampa.

The enhanced vehicle registration fees, approved by Ada County voters in 2008, have helped ACHD, as part of its partnership with Safe Routes to Schools, install a variety of safety features such as speed zone flashing beacons, paths and sidewalks, and raised curbs, which provide a physical separation between pedestrians, bikes, and motorists.

2 www.compassidaho.org/documents/prodserv/CIM2040/Maps/CurrentPathways_5_1[Converted].pdf

Complete Streets

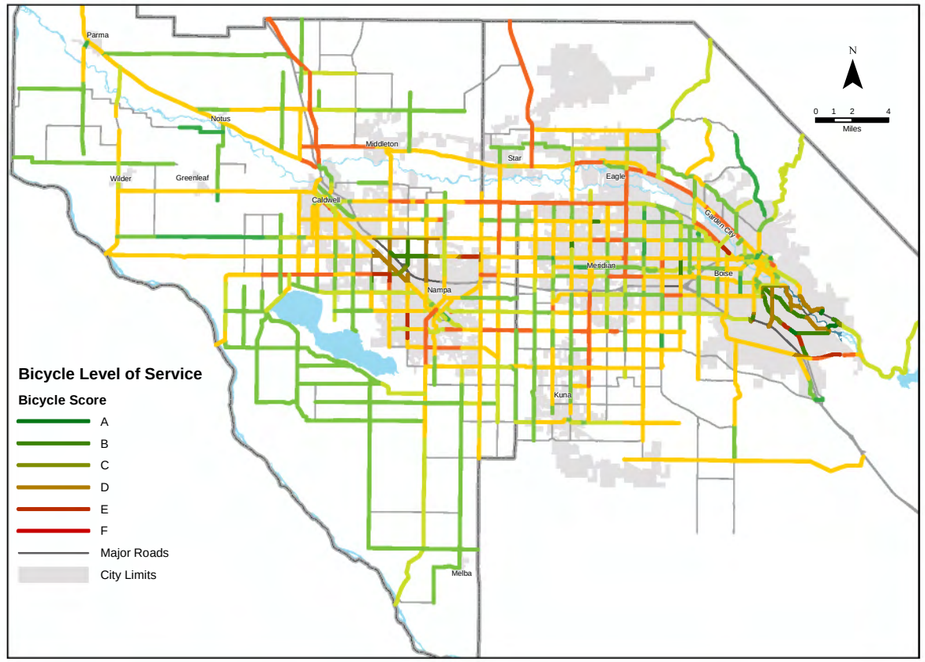
A complete street is safe and convenient for all users of the street, including bicyclists, pedestrians, transit riders, and motorists. Since users will have different needs for a road based on its location and context, a two-lane road without sidewalks or bike lanes may be considered complete in a rural area but incomplete in a downtown area.

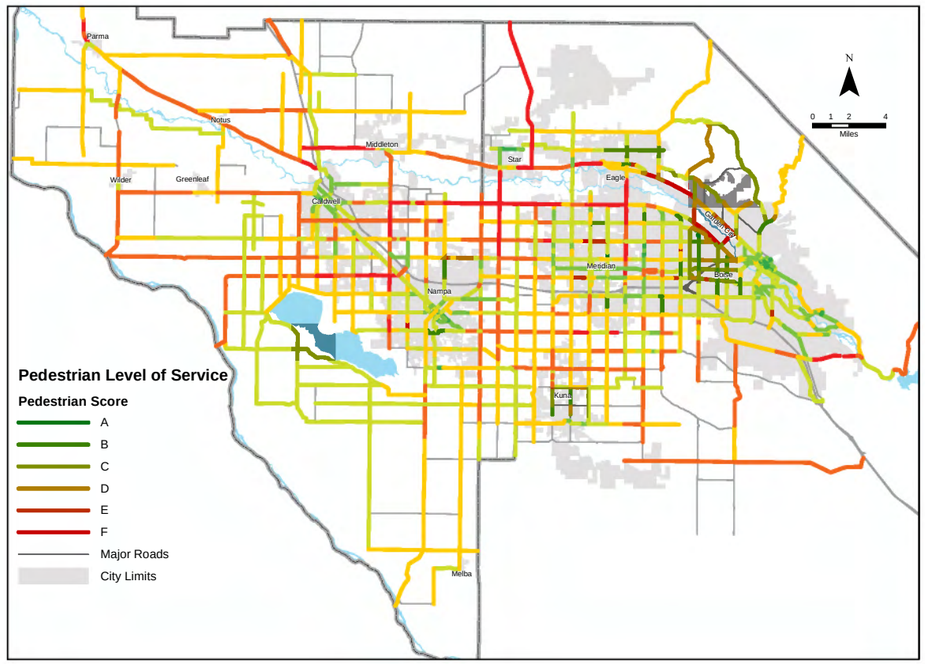
The COMPASS Board adopted a Complete Streets policy in August 2009. Many other agencies in Ada and Canyon Counties have Complete Street policies, and more are being developed all the time.

COMPASS uses a Complete Streets Level of Service (CSLOS) model to evaluate the completeness of transportation corridors for bicycle, pedestrian, and transit services, and to provide a level of service (LOS) letter grade (A-F) for each mode of travel. The model is based on the 2010 Highway Capacity Manual methodology. For more information, see the COMPASS Complete Streets Report.

A comprehensive approach to complete streets planning encourages stakeholders from land use, economic development, housing, community infrastructure, health, and other fields to work collaboratively towards a more inclusive transportation network.

In 2013, COMPASS completed an initial complete streets analysis of all principal and minor arterials and select collector roadways to identify LOS for pedestrian, bicycle, and transit modes of transportation. Figure 5.2 portrays the LOS for these users for 2013. Maps reflecting the optimal LOS proposed for 2040 and the percentage of the 2040 LOS currently completed are available online.





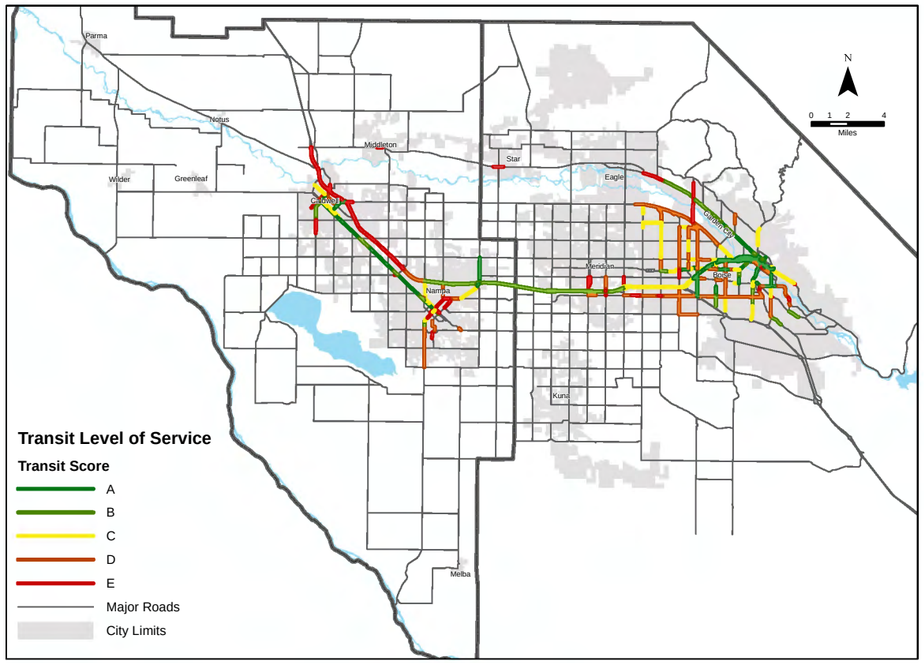


Figure 5.2. Current (2013) LOS for bicyclists, pedestrians, and transit users[3]

Freight

The ability to move freight efficiently is a key to national, state, and regional economic growth and vitality. Truck freight affects, and is affected by, travel times on major roads. Minimizing delays in the freight system cuts costs and thereby improves our economy.

The importance of freight can be seen through employment data. Of the 240,000 jobs in Ada and Canyon Counties, about 43,000 have a strong tie to freight, including agriculture, warehousing, manufacturing, and construction (Figure 5.3).[4]

3 www.compassidaho.org/documents/prodserv/CIM2040/Maps/Current_Bike_Ped_Transit_LOS_5_2.pdf
4 Source: Idaho Department of Labor 2010 data using North American Industrial Classification (NAICS) codes

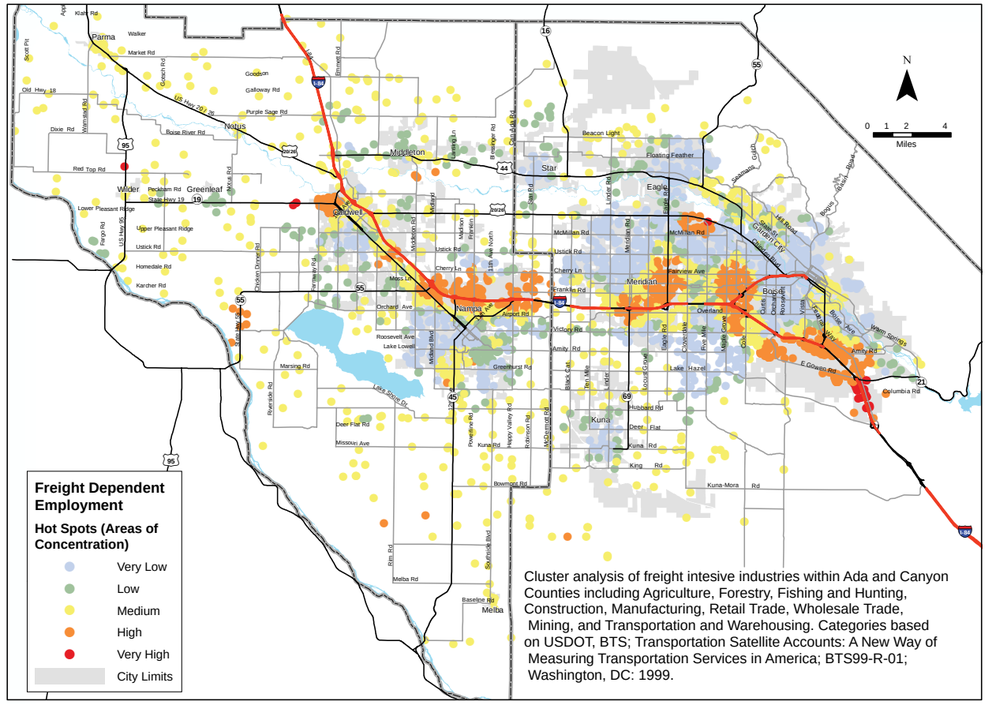


Figure 5.3. Freight-related employment and the National Highway System.[5] The size of the dots reflects the number of employees in that area whose jobs are tied to freight. National Highway System routes are shown in red.

State Freight Plan

In 2013, ITD completed a statewide freight plan. Working with a committee of private and public interest groups, ITD set forth the following initial recommendations:

- Collect and analyze freight data.
- Facilitate the efficient movement of freight.
- Expand sources for freight infrastructure funding.
- Strategically invest in a freight network, including corridors and new/expanded multi-modal facilities and connections.
- Align transportation policy and projects with economic-development strategies.
- Create an institutional framework for communication, collaboration, and partnership.

5 www.compassidaho.org/documents/prodserv/CIM2040/Maps/FreightDependentEmployment_5_3[Converted].pdf

The Treasure Valley Freight System

While trucks carry most of the freight in the Treasure Valley, air, rail, and pipeline are other main methods of moving freight.

Truck

Almost all material goods spend time on a truck, even if they spent time on a plane or train. In Idaho, trucks carry 65% of the freight by value and 58% by weight. Freight carried by truck is expected to increase from 80 million tons in 2011 to 139 million tons by 2040.[6]

In 2008, COMPASS commissioned the *Treasure Valley Truck Freight Travel Survey* to provide information on truck freight issues in Ada and Canyon Counties.

Based on the survey information, an estimated 330,000 internal commercial vehicle trips (starting and ending in Ada/Canyon Counties) occurred each day inside the two-county area. The study also concluded that through trips (originating outside the area and not stopping in Ada/Canyon Counties for any reason) were 15% of eastbound I-84 and 9% of westbound I 84 commercial vehicle trips.

The most common freight routes[7] through Ada and Canyon Counties are listed below. Five of these corridors (marked with an asterisk) are part of prioritized, unfunded needs in this plan (Chapter 6).

East-West Routes

- Interstate 84*
- Chinden Boulevard (US Highway 20/26)*
- State Street (State Highway 44)*
- Franklin Road[8]*
- Fairview Avenue
- Overland Road*
- Emerald Street

North-South Routes

- Eagle Road (State Highway 55)
- Franklin Boulevard[9]
- Cole Road
- Cloverdale Road

6 Note that mode is how the freight was shipped in Idaho, not how it ultimately arrived at its destination.
7 Routes used for most local freight, based on results from the commercial vehicle survey.
8 Franklin Road and Franklin Boulevard reported as one.
9 Franklin Road and Franklin Boulevard reported as one.

Air

Air freight's share of tonnage is slight but the value of its shipments is high. Exports to other countries by air from Idaho were just 0.06% of the weight of shipments but were 5.5% of the total value in 2011, which is the most recent year data are available. Total Idaho air freight is forecasted to increase from 5,000 tons in 2011 to 7,000 tons in 2040.

CIM 2040 addresses the road access to airports located in Boise, Caldwell, and Nampa. The Boise airport is the largest in the region and is served by four interchanges along Interstate 84. The Caldwell and Nampa airports are both constrained due to runway lengths and weight limits. Each is primarily served by two interchanges. All three airports have adequate road access for freight.

Rail

Shipping by rail is relatively inexpensive; rail cost per ton is low compared to other modes. Rail freight in Idaho is projected to increase from 13 million tons in 2011 to 24 million tons by 2040.

Railroad along Shortline Road, Kuna. Photo: Troy Behunin, as part of the *Your Treasure Valley Future Photo Challenge*.

A main line track runs through Ada and Canyon Counties, with a side track called the Boise Cutoff running from a rail yard in Nampa through Meridian and Boise (Figure 5.3, above). The rail lines in the region are owned primarily by the Union Pacific Railroad. The City of Boise owns 18 miles of track south of Gowen Road to a point north of the junction of the Boise Cutoff and the main line. The main line is heavily used, seeing more than 35 trains a day, while the Boise Cutoff provides local freight service with two trains a day. A transload facility (where truck trailers are loaded/unloaded onto rail cars) is being considered south of Boise.

Pipeline

Pipeline freight is second to truck freight in Idaho in terms of tonnage, carrying 40 million tons in 2011 and forecasted to increase to 67 million tons by 2040. The pipeline in Ada and Canyon Counties serves primarily cars and trucks, as it supplies most of the gasoline to the region. The tank farm in Boise generates a lot of truck traffic.

CHAPTER 6

FUTURE TRANSPORTATION SYSTEM PRIORITIES AND NEEDS

The Treasure Valley's population is expected to almost double from 600,000 in 2013 to 1,022,000 by the year 2040. That growth will impact future transportation needs.

Table 6.1 shows estimated changes in some of the transportation system characteristics in the next 27 years. The changes are based on an additional 422,160 people, 186,000 households, and 221,000 jobs—the equivalent of adding almost two new cities the size of Boise or five cities the size of Nampa. The changes reflect transportation improvements that are currently funded (see Table 6.2 and Table 6.3).

Table 6.1. Transportation network characteristics: 2013 vs. 2040. 2040 figures account for improvements that are currently funded.

Transportation Network Characteristics	2013	2040*
Population	599,840	1,022,000
Employment	250,697†	461,660
Vehicle miles of travel, average weekday	12,077,400	27,154,000
Hours of delay, average weekday	27,670	430,350
Travel time to/from common destinations (average weekday)		
• Caldwell to downtown Boise	34 minutes	70 minutes
• Nampa to Boise Airport	23 minutes	45 minutes
• CanAda Road in Star to St Luke's in downtown Boise	30 minutes	60 minutes
• North Meridian to Veteran's Memorial Parkway	20 minutes	30 minutes
• City of Eagle to St Luke's Meridian	17 minutes	25 minutes

*Reflects 2040 characteristics with currently funded transportation projects.
†*Source*: Idaho Department of Labor data, June 2013

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

This chapter discusses functional classification as well as COMPASS' congestion management process (CMP) and provides details on funded transportation projects and unfunded transportation needs and priorities; all figures are in current dollars.

The COMPASS Board has chosen to focus federal dollars allocated through this plan on maintenance, so no new capital projects will be funded by federal funds. However, the plan does include projects with previously committed (budgeted) federal funds and projects on principal arterials and Interstate 84, regardless of funding source, because these projects must be included to comply with air quality conformity regulations (Chapter 9 and Appendix A).

Functional Classification

Streets are classified by how they function within a transportation system—called their "functional classification" (see Figure 6.1). For example, local streets are intended to serve residential areas, not heavy through traffic, while interstate highways *are* designed for heavy traffic and high speeds. Classification is determined by the service a road supplies, not simply by the size of the road or the amount of traffic it carries. This means roads that look similar may have different functional classifications because they are serving different needs.

Road name and location: 20th Avenue, Nampa
Functional classification: Local
Function: Provides maximum access from residential or commercial properties to the public street system. Not intended for long-distance travel.

Road name and location: Birch Lane, Nampa
Functional classification: Collector
Function: Provides connection from local streets to arterial streets in the immediate area. Moderate length—generally less than one mile.

Road name and location: Overland Road, Boise
Functional classification: Arterial
Function: Provides for longer travel within a community or to adjacent communities. Serves commercial, educational, employment, and other activity centers.

Road name and location: I-84 Eastbound east of Eagle Road, Boise
Functional classification: Interstate
Function: Provides connection between communities and regions. Relatively long distances of travel—typically 10+ miles.

Figure 6.1. Examples of functional classifications of roads in the Treasure Valley

The 2040 functional classification map is shown in Figure 6.2, and can also be found online. For the purposes of this plan, the map shows only the interstate and arterial roadways; local and collector streets are not included. This corresponds to the roadways that were included when determining if the future system will conform to air quality standards (Chapter 9) and funding priorities.

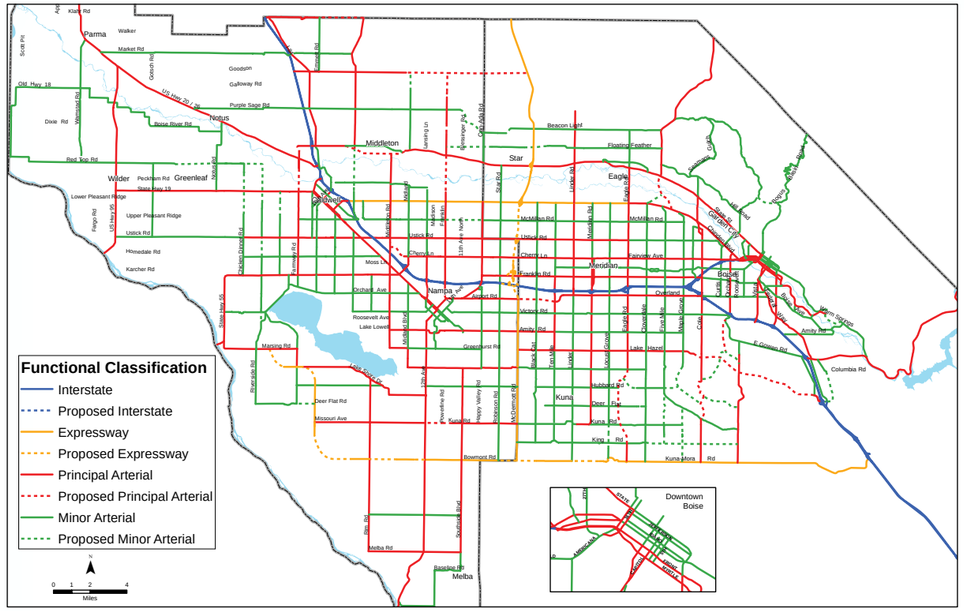


Figure 6.2. 2040 functional classification map[1]

Congestion Management Process

COMPASS uses a CMP—basically, a set of complementary plans and analytical tools—to gauge the level of congestion, help improve transportation system efficiencies, and design strategies to better manage the transportation system. When developing CIM 2040, COMPASS used its CMP to identify traffic congestion and its causes and propose strategies (management and operations) to relieve congestion. Processes outlined in the CMP are used annually to monitor the performance of the implemented strategies.

Many of the transportation corridor-specific strategies employ technology "tools" such as intelligent transportation systems (ITS), which include coordinating signal timing, adding closed circuit cameras to monitor traffic conditions, and other technologies.

The *Treasure Valley Transportation System: Operations, Management, and Intelligent Transportation Systems (ITS)* plan is an update to the *2006 Treasure Valley ITS Plan*. This update has highlighted the importance of management and operations to improve the transportation system, with additional emphasis on non-technical aspects of the regional operations program, including:

- agency roles and responsibilities
- regional coordination and agreements
- supporting transportation policies
- integration with regional planning
- performance measurement

This plan provides a blueprint for ITS systems used by various agencies in support of transportation operations. It also describes the projects necessary to build the technology infrastructure to meet the operational needs of the region.

Transportation system management and operations projects are relatively low-cost, but they can provide benefits relative to their investment. Secondly, these strategies can be introduced with relatively short lead times and may provide a near-term solution that defers the need for expensive investments—such as widening or building new roads. Learn more about CMP on the COMPASS website.

Describing the Future Transportation System

A well-connected transportation network based on major roadways is vital to accommodate the growth forecasted in the CIM 2040 Vision. This future regional transportation system will be designed and built to recognize and support neighborhoods, downtowns, and activity centers where new housing and jobs will be concentrated.

While the system continues to rely on highways to provide regional commuting and freight, it would also include high-capacity transit for the State Street/State Highway 44 corridor and the Interstate 84 corridor. Enhanced multimodal infrastructure and services, such as a system of connected pathways and trails, are needed to provide transportation options for all citizens. Investments are necessary to maintain the system, and to ensure streets in the system are "complete" with accommodations for all users.

Highway districts, cities, ITD, VRT, other partners and stakeholders will maintain existing transportation infrastructure and invest in technology to promote a safe and reliable transportation system. The regional transportation system has a continuing role to enhance and support economic development, and preserve and enhance the quality of life for everyone in the region.

1 www.compassidaho.org/documents/prodserv/CIM2040/FunClass_adacan2040_official.pdf

Identifying Future Transportation System Needs

COMPASS and its partners determined the region's future transportation system needs using a multi-step approach:

1. COMPASS identified the corridors and projects that should be included in the plan. Using the COMPASS travel-demand forecast model and data describing the current system and travel concerns, COMPASS developed a list of corridors known to have current and/or future deficiencies. This list considered all modes of transportation (auto, transit, bicycle, and pedestrian). Future travel needs were based on forecasted population and employment patterns as described in Chapter 3.
2. COMPASS asked members of the CIM 2040 Planning Team to complete an online survey to rank the resulting list of corridors and projects from high priority to low priority for funding, should additional funding become available in the future. Planning Team members were provided with brief descriptions of the corridors to assist in completing the survey.
3. COMPASS staff compiled the following detailed background information for each corridor for Planning Team members to use in the prioritization process:
   - current and expected land uses around the corridor
   - current and expected 2040 speed loss, travel time, and traffic volume on the corridor (average weekday)
   - expected problems, such as gaps, bottlenecks, and barriers (e.g., benches, canals, rivers) for the corridor, considering all modes of transportation
   - expected improvements through local funding sources
   - current level of service for bicycle, pedestrian, and transit facilities
   - possible environmental concerns along the corridor
   - consideration for minority or low-income populations along the corridor
4. After reviewing the detailed background information for each corridor, the Planning Team discussed and prioritized the corridors and projects over the course of two facilitated meetings, then recommended the prioritization of the corridors to the CIM 2040 Leadership Team.

The Leadership Team reviewed the prioritized list and recommended it to the COMPASS Board for approval. The public was invited to review and comment on the list, and public comments were provided to the COMPASS Board prior to its action (see Chapter 2 for more information on public comment). In September 2013, the Board approved the 33 corridors and projects in the priority order, as listed below and shown in Figure 6.3. Note that while some individual projects along the corridors are funded, **funding is not available to complete any of the 33 items on the list.** These 33 unfunded future needs are the priorities to be completed if and when additional funding—of any kind—becomes available.

CIM 2040 Unfunded Needs (Corridors and Projects) in Priority Order

1. Interstate 84 (Centennial Way Interchange to Franklin Boulevard Interchange)
2. State Highway 44/State Street High Capacity Corridor
3. US Highway 20/26 (Chinden Boulevard) (Middleton Road to Locust Grove Road)
4. State Highway 55 (Snake River to the City of Nampa)
5. Regional park and ride lots (near-term improvements)
6. Linder Road (includes river crossing and new overpass – Lake Hazel Road to State Highway 44)
7. Franklin Road (bottleneck between Star Road and McDermott Road)
8. Caldwell/Nampa Boulevard (Linden Street to Orchard Avenue)
9. Ustick Road (Montana Avenue to McDermott Road)
10. Regional park and ride lots (medium-term improvements)
11. valleyconnect near-term (capital/operating)
12. Treasure Valley High Capacity Corridor (study to determine locally preferred option)
13. State Highway 45 reroute (in City of Nampa – Bowmont Road to Interstate 84)
14. State Highway 16/McDermott Road (Kuna-Mora Road to Ada/Gem County Line)
15. Boise Downtown Circulator
16. valleyconnect medium-term (capital/operating)
17. State Highway 55 (Beacon Light Road to Ada/Boise County Line)
18. Middleton Road (State Highway 55 in the City of Nampa to Main Street in the City of Middleton)
19. Overland Road (multimodal corridor plan)

20. North/South Kuna Corridor (railroad crossing in the City of Kuna)
21. Cherry Lane (Middleton Road to Black Cat Road)
22. Lake Hazel Road/Amity Road (as a corridor – Lake Hazel Road, McDermott Road to Linder Road; Amity Road, Southside Boulevard to Black Cat Road)
23. State Highway 55/Midland Boulevard Bottleneck (in City of Nampa)
24. State Highway 45 (Greenhurst Road to Bowmont Road)
25. Victory Road (Happy Valley Road to McDermott Road)
26. US Highway 20/26 (City of Caldwell to City of Parma)
27. Three Cities River Crossing (preserving land for a future project – bridge over the Boise River east of City of Eagle)
28. Star/Robinson Road (Greenhurst Road to Ustick Road)
29. CIM 2040 transit, long-term (capital/operating)
30. Greenhurst Road (Middleton Road to McDermott Road/Happy Valley Road)
31. Happy Valley Road (Greenhurst Road to Stamm Lane)
32. Bowmont Road to Kuna-Mora Road (new connection)
33. Beacon Light/Purple Sage (new connection – preserving land for a future project)

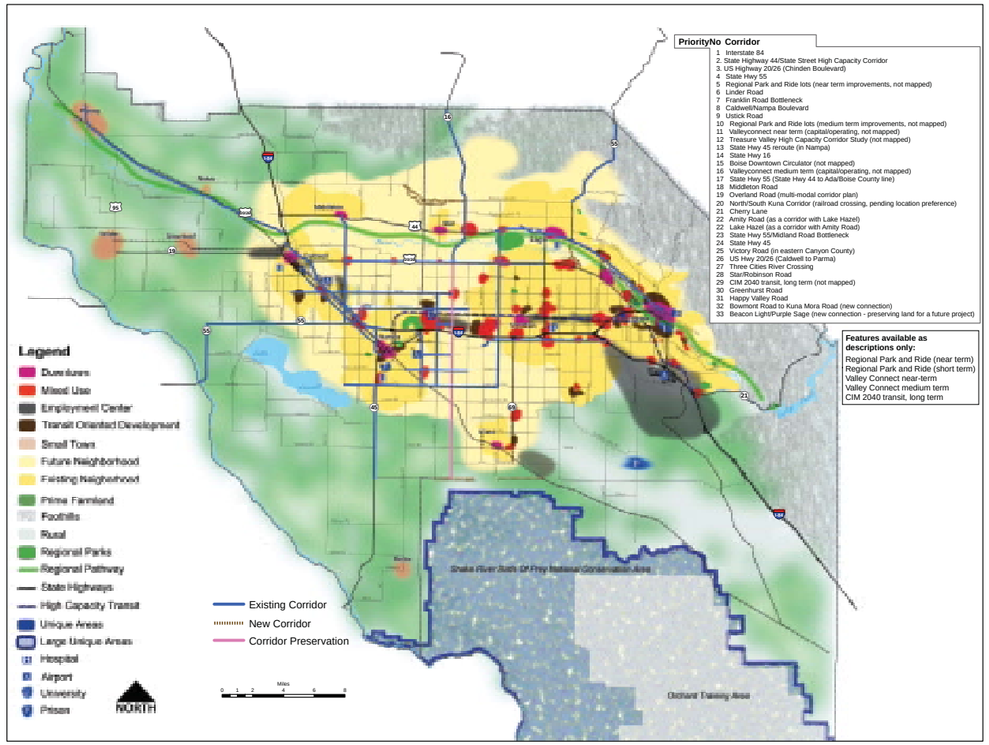


Figure 6.3. CIM 2040 priority corridors[2]

Some individual capital expansion projects within these corridors are expected to be funded with local or state funds (Table 6.2 and Table 6.3). The remaining, unfunded needs in the 33 corridors are shown in Table 6.5. These unfunded corridors and projects will be the priorities to be completed ***when or if*** additional funding becomes available.[3]

Future Transportation Projects

The regional transportation system, including roadways, as well as public and alternative transportation, needs a ***currently unfunded*** investment of approximately $4.3 billion to be able to meet the demands of growth and maintenance to the year 2040. That equates to $160 million ***per year*** (in current dollars). Of the total amount, $1.2 billion is needed for ITD expansion projects on state-owned roads, such as US 20/26 and State Highway 55.

2 www.compassidaho.org/documents/prodserv/CIM2040/Maps/Priority_Corridors_6_3.pdf
3 More about financial options to obtain necessary funding can be found in Chapter 4.

The regional transportation system needs a currently unfunded investment of $4.3 billion to be able to meet the demands of growth to the year 2040.

The federal dollars allocated through CIM 2040 for the COMPASS planning area will total about $664 million (including an annual increase of 1%), or an average of $25 million a year, over the next 27 years to 2040. This funding comes primarily from the STP and federal transit programs. In CIM 2040, all of this federal funding is directed to roadway and transit maintenance.

The $664 million ***does not include*** federal funds awarded to ITD for use throughout the state. However, based on the 2014–2018 average, it is assumed that ITD will spend approximately $923 million on the state system in the COMPASS planning area through 2040. (This funding comes from a combination of state and federal dollars.) When ITD spends federal funds within the COMPASS planning area, the projects must be consistent with the CIM plan. The total federal/state funds to 2040 in the COMPASS planning area are estimated to be about $1.6 billion.

Between 2014 and 2040, local revenue sources in Ada and Canyon Counties are estimated to generate about $3.8 billion, for a total of $5.4 billion anticipated revenue from local, state, and federal sources.

This section describes how future needs are addressed through local and state dollars, and how much of the need will remain unfunded.

Funded Needs

CIM 2040 includes no new federally funded capital projects. However, some projects funded either with 1) local or state dollars or 2) previously budgeted federal dollars that will occur early in the plan's timeline are shown in this plan. For state and locally ***funded*** projects, only projects on principal arterials and Interstate 84 or those deemed "regionally significant" for air quality purposes are shown in the plan, regardless if they are in any of the 33 priority corridors.

Short-term Funded Needs (2014-2018)

Table 6.2 describes capital projects on principal arterials or Interstate 84 that are budgeted for construction by 2018. These projects have been brought forward from prior plans and are budgeted for improvements in the next five years. They are funded by local, state, and/or federal dollars. Note that some of these projects occur on the priority corridors that remain largely unfunded.

Table 6.2. Short-term funded (budgeted) regional capital projects for FY2014–2018.*† These projects are listed in priority corridor order,‡ followed by the rest in alphabetical order.

CIM 2040 Priority Corridor	Project	Total Cost, Current $	Total Cost, Year of Expenditure $†	Key Number§
1	**I-84, Meridian Road Interchange to Five Mile Road** – rebuild I-84	$26,545,000	$26,545,000	13057
1	**I-84, Meridian Road Interchange, Meridian** – redesign and rebuild interchange	$46,031,000	$46,031,000	10939
2	**State Street and Collister Drive Intersection** – reconstruct and widen to a seven-lane by three-lane intersection, including realignment of Collister Drive and construction of an access road for existing alignment and capacity needs	$5,280,000	$6,110,000	13481
3	**US 20/26, Intersections of Meridian Road and Locust Grove Road, Meridian** – add right turn lanes on eastbound side of US 20/26	$1,410,000	$1,518,000	13941
4	**Intersection of State Highway 55 (Karcher Road) and Midway Road, Nampa** – add traffic signal and other operational improvements	$4,640,000	$4,818,000	13025
4	**State Highway 55 (Karcher Road), Intersection of Karcher Road and Indiana Avenue, Canyon County** – add traffic signal and other operational improvements	$3,822,000	$3,960,000	13475
4	**State Highway 55 (Karcher Road), Intersection of Karcher Road and Lake Avenue, Canyon County** – add traffic signal and other operational improvements	$4,310,000	$4,460,000	12383
4	**State Highway 55 (Karcher Road), Intersection of Karcher Road and Middleton Road, Nampa** – add intersection improvements	$6,172,000	$6,172,000	12046
7	**Franklin Road, Black Cat Road to Ten Mile Road** – widen from two to five lanes with curb, gutter, sidewalks, and bike lanes. Includes intersection widening at Franklin Road and Black Cat Road.	$11,336,000	$11,630,000	12368
9	**Ustick Road, Linder Road to Meridian Road** – widen from two to five lanes with curb, gutter, sidewalks, and bike lanes	$2,960,000	$3,204,000	RD202-35

CIM 2040 Priority Corridor	Project	Total Cost, Current $	Total Cost, Year of Expenditure $†	Key Number§
9	**Ustick Road, Meridian Road to Locust Grove Road** – widen from two to five lanes with curb, gutter, sidewalks, and bike lanes	$5,415,000	$5,736,000	RD202-37
9	**Ustick Road, Locust Grove to Leslie Way** – widen from two to five lanes with curb, gutter, sidewalks and bike lanes	$3,005,000	$3,005,000	RD205-05
22	**Amity Road, Chestnut Street to Kings Corner** – widen to four lanes with curb, gutter, and sidewalks	$8,401,000	$8,401,000	10541
32	**Bowmont Road, Lynwood to State Highway 45, Nampa** – realign Bowmont Road from Lynwood to State Highway 45	$4,129,000	$4,276,000	12898
-	**21st Avenue, Chicago Avenue to Cleveland Boulevard, Caldwell** – widen from two to five lanes with curb, gutter, sidewalks, and bike lanes	$2,727,000	$2,822,000	13052
-	**Cole Road, I-84 to Franklin Road** – widen from three to five lanes with curb, gutter, sidewalks, and bike lanes	$5,242,000	$5,674,000	RD207-16
-	**I-84, Broadway Avenue Interchange, Boise** – redesign and rebuild interchange and railroad overpasses	$42,966,000	$42,966,000	09821
-	**I-84, Broadway Interchange to Gowen Interchange, Traffic Control**	$1,470,000	$1,470,000	13846
-	**I-84, Gowen Road Interchange, Boise** – redesign and rebuild interchange and add third lane in each direction on I-84 between Broadway and Gowen Interchanges	$36,865,000	$36,865,000	09822
-	**Intersection of State Highway 55 (Eagle Road) and State Highway 44, Ada County** – add safety improvements	$1,038,000	$1,098,000	13476
-	**Linder Road and Deer Flat Road Intersection, Kuna** – add intersection improvements, including curb, gutter, sidewalks, and bike lanes	$1,986,000	$2,127,000	13492
-	**Middleton Road and Ustick Road Roundabout, Caldwell** – build roundabout at the intersection	$1,215,000	$1,318,000	13487
-	**Old Highway 30, Plymouth Street Bridge, Caldwell** – replace one-lane bridge with a new two-lane structure	$9,240,000	$10,155,000	13494
-	**State Highway 55 (Eagle Road), I-84 to River Valley, Meridian** – add one lane each direction	$11,206,000	$11,206,000	13473 13349
-	**State Highway 55, Intersection of Eagle Road and McMillan Road, Ada County** – add intersection improvements	$5,365,000	$5,365,000	13058
-	**South Cemetery Road, State Highway 44 to Willow Creek, Middleton** – construct a new road linking State Highway 44 and Middleton Road by way of Sawtooth Lake Drive	$3,342,000	$3,547,000	12048
-	**US 20/26, Broadway Bridge, Boise** – rebuild the Broadway Bridge to six-lane section, to include pedestrian facilities	$19,552,000	$19,877,000	11588
	TOTAL SHORT-TERM BUDGETED REGIONAL CAPITAL PROJECTS	$278,675,000	$280,356,000	

* Capital projects on I-84, principal arterials, and/or using federal funds
† Costs are adjusted assuming a 2% per year inflation rate.
‡ Projects are listed in priority corridor order for table-to-table comparison purposes only.
§ The key number is the tracking number for each project, and can be used when looking for project details in other documents.

The following eight categories of projects describe additional federally funded investments into the transportation system during the first five years of this plan (FY2014–2018). The percentage shown corresponds to the cost of all projects budgeted for these first five years. (View the specific projects.)

Safety

Twenty-six safety projects are funded over the next five years throughout Ada and Canyon Counties. These projects cover a range of elements such as sidewalk improvements and road and railroad intersection improvements, at a total cost of **$17.4 million**. Safety projects consume about 4.2% of the FY2014–2018 budget.

Bridge Rehabilitation and Replacement

Nine bridge rehabilitation or replacement projects are funded over the next five years

throughout Ada and Canyon Counties. Bridge projects range in cost from just over $100,000 to more than $16 million depending on the length of bridge and type of structure. These bridge projects have a total cost of **$44.0 million** and consume about 10.8% of the FY2014–2018 budget.[4]

Paved Pathways
Nineteen paved pathway projects are funded over the next five years throughout Ada and Canyon Counties. These projects include trail projects in Boise, Eagle, Meridian, and other areas in the two-county region. These types of projects account for **$4.4 million**, or 1% of the FY2014–2018 budget.

Roadway Maintenance
Twenty-eight roadway maintenance projects are funded over the next five years throughout Ada and Canyon Counties. These projects cover a range of maintenance elements, such as seal coating and resurfacing of existing roadways, at a total cost of **$92.7 million**, or 22.7% of the FY2014–2018 budget.

Studies/Planning/Special Projects
Thirty-five studies, planning, or special projects are funded over the next five years throughout Ada and Canyon Counties. These projects range from supporting planning efforts for various municipalities to conducting an alternatives analysis for the Boise downtown circulator. These types of projects have a combined cost of **$14.5 million**, or 3.5% of the FY2014–2018 budget.

Public Transportation
One hundred twenty-five public transportation projects are funded over the next five years throughout Ada and Canyon Counties. These projects cover bus service operations, maintenance of existing facilities, and bus replacements, with a combined cost of **$49.98 million**, or 16.7% of the FY2014–2018 budget.

Intelligent Transportation System
Nine ITS projects are funded over the next five years throughout Ada and Canyon Counties. These projects include the installation of adaptive signal technology to numerous intersections. These nine projects cost **$4.2 million**, or 1% of the FY2014–2018 budget.

Travel Demand Management
Eleven Travel Demand Management projects are funded over the next five years throughout Ada and Canyon Counties. These projects, including improvements to the ACHD Commuteride program, total **$1.4 million**, or roughly three-tenths of 1% of the FY2014–2018 budget.

Local Investments
Local transportation agencies in Ada and Canyon Counties are projected to spend, on average, $166 million each year on the local road system between 2014 and 2040. This does not include deferred maintenance or the major corridor and transit improvements to offset the effects of the area's projected growth through 2040.

Long-term Funded Needs (2019-2040)
The projects listed in Table 6.3 include those on principal arterial roads that involve additional lanes or new construction, using local or state funding, for 2019–2040. Note that some of these projects occur on the priority corridors that remain largely unfunded. Table 6.1 (above) illustrates the effects of these investments on the transportation system. The projects are listed here for informational purposes only and are not subject to prioritization or additional planning reviews through CIM 2040. This information is from ACHD's *2012 Capital Improvement Plan* and from ITD's District 3 plans.

Other minor and/or local budgeted projects can be found in the Regional Transportation Improvement Program or an individual jurisdiction's capital improvements program, and are also described in the corridor summaries.

Table 6.3. Long-term funded regional capital transportation projects for FY2019–2040. These projects are listed in priority corridor order,* followed by the rest in alphabetical order.

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)†	Year of Expenditure $#	Year of Expenditure	Key Number‡
2	**State Highway 44, State Highway 16 (Emmett Highway) to Linder Road** – widen from two to four lanes	$22,100,000	$30,250,000	2019-2025	TBD
2	**State Street, State Highway 44 (Glenwood Street) to Pierce Park Lane** – widen from five to seven lanes	$1,170,000	$1,600,000	2019-2025	RD2012-123

4 Note: Projects that add travel lanes on bridges or overpasses are listed in Table 6.2.

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)†	Year of Expenditure $#	Year of Expenditure	Key Number‡
2	**State Street, Pierce Park Lane to Collister Drive** – widen from five to seven lanes	$6,030,000	$8,250,000	2019-2025	RD2012-124
2	**State Street, Collister Drive to 36th Street** – widen from five to seven lanes	$9,090,000	$12,440,000	2019-2025	RD2012-125
2	**State Street, 36th Street to 27th Street** – widen from five to seven lanes	$4,550,000	$6,230,000	2019-2025	RD2012-126
3	**US 20/26, Smeed Parkway to Middleton Road, Caldwell** – widen from two to six lanes	$12,600,000	$17,260,000	2019-2025	13921
3	**US 20/26, Locust Grove Road to Eagle Road** – widen from two to four lanes	$20,800,000	$43,820,000	2026-2040	TBD
4	**State Highway 55, 10th Avenue to Midway Road** – widen from two to four lanes	$21,492,000	$45,280,000	2026-2040	TBD
4	**State Highway 55, Midway Road to Middleton Road** – widen from two to four lanes	$7,164,000	$9,800,000	2019-2025	TBD
6	**Linder Road, Overland Road to Franklin Road** – widen from two to five lanes. Project costs do not include construction of a new I-84 overpass.	$3,150,000	$6,640,000	2026-2040	RD2012-80
6	**Linder Road, Franklin Road to Cherry Lane** – widen from two to five lanes	$2,490,000	$3,410,000	2019-2025	RD2012-81
6	**Linder Road, Cherry Lane to Ustick Road** – widen from two to five lanes	$5,970,000	$12,580,000	2026-2040	RD2012-82
6	**Linder Road, Ustick Road to McMillan Road** – widen from two to five lanes	$2,730,000	$5,750,000	2026-2040	RD2012-83
6	**Linder Road, McMillan Road to US 20/26 (Chinden Boulevard)** – widen from three to five lanes (east side of the road only)	$1,420,000	$1,940,000	2019-2025	RD2012-84
6	**Linder Road, US 20/26 (Chinden Boulevard) to State Highway 44 (State Street)** – widen from two to seven lanes	$20,660,000	$28,270,000	2019-2025	RD2012-85

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)†	Year of Expenditure $#	Year of Expenditure	Key Number‡
6	**Linder Road, State Highway 44 (State Street) to Floating Feather Road** – widen from two to five lanes	$3,300,000	$4,520,000	2019-2025	RD2012-86
6	**Linder Road, Floating Feather Road to Beacon Light Road** – widen from two to five lanes	$4,020,000	$5,500,000	2019-2025	RD2012-87
7	**Franklin Road, McDermott Road to Black Cat Road** – widen from two to five lanes	$2,910,000	$6,130,000	2026-2040	RD2012-59
9	**Ustick Road, McDermott Road to Black Cat Road** – widen from two to five lanes	$3,060,000	$6,450,000	2026-2040	RD2012-136
9	**Ustick Road, Black Cat Road to Ten Mile Road** – widen from two to five lanes	$2,790,000	$5,880,000	2026–2040	RD2012-137
9	**Ustick Road, Ten Mile Road to Linder Road** – widen from two to five lanes	$2,770,000	$3,790,000	2019–2025	RD2012-138
22	**Amity Road, Black Cat Road to Ten Mile Road** – widen from two to five lanes	$2,970,000	$6,260,000	2026–2040	RD2012-5
22	**Lake Hazel Road, Linder Road to State Highway 69 (Meridian Road)** – widen from two to five lanes	$3,040,000	$6,400,000	2026–2040	RD2012-67
22	**Lake Hazel Road, State Highway 69 (Meridian Road) to Locust Grove Road** – widen from two to five lanes	$4,620,000	$9,730,000	2026–2040	RD2012-68
22	**Lake Hazel Road, Locust Grove Road to Eagle Road** – widen from two to five lanes	$4,500,000	$9,480,000	2026–2040	RD2012-69
22	**Lake Hazel Road, Eagle Road to Cloverdale Road** – widen from two to five lanes	$2,830,000	$5,960,000	2026–2040	RD2012-70
22	**Lake Hazel Road, Cloverdale Road to Five Mile Road** – widen from two to five lanes	$3,000,000	$6,320,000	2026–2040	RD2012-71

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)†	Year of Expenditure $#	Year of Expenditure	Key Number‡
22	**Lake Hazel Road, Five Mile Road to Maple Grove Road** – widen from two to five lanes	$2,970,000	$6,260,000	2026–2040	RD2012-72
22	**Lake Hazel Road, Maple Grove Road to Cole Road** – widen from two to five lanes; extend/construct five-lane roadway to Cole Road	$2,590,000	$5,460,000	2026–2040	RD2012-73
22	**Lake Hazel Road, Cole Road to Orchard Ext-1** – construct new five-lane roadway	$3,900,000	$8,220,000	2026–2040	RD2012-74
22	**Lake Hazel Road, Orchard Ext-1 to Pleasant Valley Road** – construct new five-lane roadway	$5,280,000	$11,120,000	2026–2040	RD2012-75
22	**Lake Hazel Road, Pleasant Valley Road to Eisenman Road** – construct new five-lane roadway	$23,870,000	$50,290,000	2026–2040	RD2012-76
-	**Eagle Road, Lake Hazel Road to Amity Road** – widen from four to five lanes	$3,180,000	$6,700,000	2026–2040	RD2012-36
-	**Eagle Road, Amity Road to Victory Road** – widen from two to five lanes	$3,220,000	$6,780,000	2026-2040	RD2012-37
-	**Eisenman Road, Lake Hazel Road to I-84 Interchange** – construct new five-lane roadway	$810,000	$1,710,000	2026–2040	RD2012-39
-	**Fairview Avenue, Meridian Road to Locust Grove Road** – widen from five to seven lanes	$4,010,000	$5,490,000	2019–2025	RD2012-46
-	**Fairview Avenue, Locust Grove Road to State Highway 55 (Eagle Road)** – widen from five to seven lanes	$3,650,000	$5,000,000	2019–2025	RD2012-47
-	**Fairview Avenue, State Highway 55 (Eagle Road) to Cloverdale Road** – widen from five to seven lanes	$3,310,000	$6,970,000	2026–2040	RD2012-48
-	**Fairview Avenue, Cloverdale Road to Five Mile Road** – widen from five to seven lanes	$4,010,000	$8,450,000	2026–2040	RD2012-49
-	**Fairview Avenue, Five Mile Road to Maple Grove Road** – widen from five to seven lanes	$5,430,000	$11,440,000	2026–2040	RD2012-50
-	**Fairview Avenue, Maple Grove Road to Cole Road** – widen from five to seven lanes	$4,320,000	$9,100,000	2026–2040	RD2012-51
-	**Fairview Avenue, Cole Road to Curtis Road** – widen from five to seven lanes	$4,470,000	$9,420,000	2026–2040	RD2012-52
-	**Glenwood Couplet, Cole Road to Goddard Road** – construct new three-lane roadway; reconfigure Glenwood/Mountain View/Goddard intersection; and reconstruct Cole/Glenwood intersection	$1,090,000	$2,300,000	2026–2040	RD2012-62
-	**Orchard Extension, Gowen Road to Victory Road** – construct new seven-lane roadway	$2,860,000	$6,030,000	2026–2040	RD2012-110
-	**Ten Mile Road, Lake Hazel Road to Amity Road** – widen from two to five lanes	$2,980,000	$6,280,000	2026–2040	RD2012-128
-	**Ten Mile Road, Amity Road to Victory Road** – widen from two to five lanes	$3,030,000	$6,380,000	2026–2040	RD2012-129
-	**Ten Mile Road, Victory Road to Overland Road** – widen from two to five lanes	$4,010,000	$5,490,000	2019–2025	RD2012-130
	TOTAL LONG-TERM FUNDED REGIONAL CAPITAL PROJECTS	$270,216,000	$488,830,000		

* Projects are listed in priority corridor order for table-to-table comparison purposes only.
† Costs are in current dollars and are not adjusted for inflation, which is assumed to be 4% per year.
# Calculated for the middle year of the year-of-expenditure range, assuming inflation to be 4% per year.
‡ The key number is the tracking number for each project, and can be used when looking for project details in other documents.

Federally Funded Maintenance Programs

As described earlier, the COMPASS Board directed that federal funds be focused on maintenance of the existing transportation system.This is a shift from the past, when approximately half of available federal funds were expected to be used for capital or expansion projects.

The Surface Transportation Program is one federal funding source available to local jurisdictions through the Federal Highway Administration (FHWA). STP funds are the most flexible and can be used for a variety of projects, including alternative transportation and transit. The STP funds dedicated to urban areas are programmed (budgeted) at the local level and are some of the funds budgeted through this plan; therefore, the COMPASS Board determines how these funds are used in the region. The Board directed these funds be used as follows:

- Specific "off-the-top" funds for each urbanized area:
  - $220,000 for ACHD's Commuteride program in the Boise Urbanized Area and $55,000 in the Nampa Urbanized Area
  - $232,000 for COMPASS planning in the Boise Urbanized Area and $99,000 in the Nampa Urbanized Area
- Percentage splits of remaining funding (maintenance):
  - 82% for roadway maintenance projects (also includes bridges and ITS)
  - 15% for public/alternative transportation maintenance projects
  - Up to 3% for planning or special projects

The funding split will be calculated as a five-year rolling average to allow flexibility for a larger project in any of the categories to move forward and still remain consistent with the policy. An illustration of these percentage splits using the approximate amount of local STP funding available, based on FY2013 funding levels, is provided in Table 6.4. Other federal and state funding sources are discussed in Chapter 4.

Table 6.4. Approximate split of surface transportation program funds, based on FY2013 funding levels

	Approximate Funds per Year	Commuteride and COMPASS	Roadway (82%)	Public/ Alternative Transportation (15%)	Studies/ Special Projects (3%)
Boise Urbanized Area	$8,500,000	$220,000 $232,000	$6,599,360	$1,207,200	$241,440
Nampa Urbanized Area	$1,868,000	$55,000 $99,000	$1,405,480	$257,100	$51,420

Maintenance funds will be set aside and specific projects will be prioritized two to four years prior to funds being available, as maintenance needs are best evaluated in that time frame rather than the seven- to eight-year time frame more common to capital projects. Maintenance for roadways includes preservation and restoration work that does not widen the road with more traffic lanes.

In the Boise Urbanized Area, roadway maintenance funds will be set aside for ACHD's maintenance program. In the Nampa Urbanized Area, the roadway maintenance funds will be distributed on a five-year rolling average among five highway agencies—Canyon Highway District No.4, City of Caldwell, City of Nampa, City of Middleton, and Nampa Highway District No. 1—based on arterial lane miles.

Maintenance for public/alternative transportation includes repairing and replacing existing vehicles, equipment, or facilities needed to operate the existing system.

Safe Routes to Schools (Chapter 5) coordination is a top priority for the area. TAP specifically includes funding for this coordination. The COMPASS Board allocates TAP funds in the Boise Urbanized Area and determines TAP priorities for the Nampa Urbanized Area, but these funds are not allocated through this plan. Additional resources for Safe Routes to Schools can be applied for through the STP's Special Projects category.

Bike lanes and sidewalks could be included as projects under the roadway, public/alternative transportation, and/or studies/special projects categories, depending on the nature of the project.

Roadway maintenance, particularly in the areas of chip sealing and maintenance overlays, and including some bridge rehabilitation or reconstruction, has an estimated annual

regional need of $80 million (does not include state/US highways or the interstate). The local agencies currently fund about $50 million of this; they defer about $30 million a year. ITD has a goal for at least 82% of pavement statewide to be in good or fair condition. As of 2012, ITD was meeting that goal, with 86% of the pavement rated as good or fair.

The estimated need to maintain transit equipment and facilities is about $3 million per year.

Unfunded Needs

Table 6.5 lists the unfunded projects needed in the 33 CIM 2040 priorities regardless of possible/potential funding source or roadway classification. Both the project descriptions and the estimated costs represent planning-level assumptions and there is no commitment for funding any of them.

Table 6.5. CIM 2040 priority corridors, unfunded needs to 2040

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)
1	**Interstate 84 (Centennial Way Interchange to Franklin Boulevard Interchange)** – widen to six lanes; replace four overpasses and two canal bridges	$115,500,000
2	**State Highway 44/State Street High Capacity Corridor** **Exit 25 to State Highway 16** – widen to four lanes and construct new roadway from Canyon Lane to Duff Lane in the city of Middleton ($140,800,000) **Glenwood Street to downtown Boise** – transit capital, increased service frequency, pedestrian and bike facility improvements, additional transit amenities, and other related improvements ($197,400,000)	$338,200,000
3	**US Highway 20/26 (Chinden Boulevard) (Middleton Road to Locust Grove Road)** – widen to four lanes[16]	$199,350,000
4	**State Highway 55 (Snake River to the City of Nampa)** – widen the highway and Snake River bridge to four lanes	$45,240,000
5	**Regional park and ride lots (near-term improvements)** – upgrade four existing lots and build 11 new lots throughout Ada and Canyon Counties	$10,125,000
6	**Linder Road (includes river crossing and new overpass – Lake Hazel Road to State Highway 44)** – widen to five lanes and construct new I-84 overpass	$17,720,000
7	**Franklin Road (bottleneck between Star Road and McDermott Road)** – widen to five lanes	$4,400,000
8	**Caldwell/Nampa Boulevard (Linden Street to Orchard Avenue)** – upgrade all 11 existing traffic signals and implement identified ITS projects	$39,300,000
9	**Ustick Road, Montana Avenue to McDermott Road** **Montana Avenue to Star Road** – widen to five lanes with curb, gutter, sidewalks, and bike lanes ($61,200,000). **Star Road to McDermott Road** – widen to five lanes with curb, gutter, sidewalks, and bike lanes ($2,460,000).	$63,660,000
10	**Regional park and ride lots (medium-term improvements)** – upgrade 16 existing lots and build nine new lots throughout Ada and Canyon Counties	$11,700,000
11	*valley**connect*** **near-term (capital/operating)** – improve existing (2013) transit route frequencies and develop transit stations as appropriate to accommodate service changes Total cost estimate is $846,900,000. The unfunded portion is $487,100,000, as shown.	$487,100,000
12	**Treasure Valley High Capacity Corridor (study to determine locally preferred option)** – conduct an environmental analysis to identify a locally preferred alternative. This is necessary to secure New Starts/Small Starts funding.	$10,000,000
13	**State Highway 45 reroute (in City of Nampa – Bowmont Road to Interstate 84)** – provide a more efficient route from State Highway 45 directly to I-84. This project will include changes to 2nd and 3rd Streets South, 11th and 12th Avenues South, 11th Avenue North, 7th Street South, Yale, and Northside Boulevard.	$24,800,000
14	**State Highway 16/McDermott Road (Kuna-Mora Road to Ada/Gem County Line)** **McDermott Road, Kuna-Mora to I-84** – widen to four lanes with access control, construct new connection to Kuna-Mora Road, and new railroad overpass. Widen to five lanes from Lake Hazel Road to new I-84 interchange. **State Highway 16 (Expressway), I-84 to State Highway 44** – construct new four-lane expressway with interchanges at I-84/Franklin Road, Ustick Road, US 20/26, and State Highway 44. **State Highway 16 (Highway), State Highway 44 to Ada/Gem County line** – widen to four-lane limited-access highway with interchanges at Beacon Light Road and Chaparral Road.	$525,000,000

5 The draft Environmental Assessment for US 20/26 (http://itd.idaho.gov/projects/d3/US2026Corridor/) includes the eventual widening of US 20/26 from State Highway 16 to Eagle Road from four to six lanes. This additional widening would add an estimated cost of $25,400,000.

An additional local need overlapping the priority corridor has been identified. This project, construction of local frontage roads and slip ramps between Aviation Way and Midland Boulevard, is anticipated to cost $135,800,000 and is not included in the above cost estimate. It is anticipated to be paid for by a developer.

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)
15	**Boise Downtown Circulator** – add circulator service in downtown Boise to improve mobility among primary destinations	$41,900,000
16	*valley**connect*** **medium-term (capital/operating)** – expand upon *valley**connect*** near-term by adding approximately 20 new routes Cost shown is the net change from the near-term to expand service in the medium-term.	$470,600,000
17	**State Highway 55 (Beacon Light Road to Ada/Boise County Line)** – widen to four lanes and construct three new interchanges	$85,700,000
18	**Middleton Road (State Highway 55 in City of Nampa to Main Street in the City of Middleton)** – widen to five lanes with curb, gutter, sidewalks, and bike lanes, and reconstruct I-84 overpass and river crossing	$85,300,000
19	**Overland Road (multimodal corridor plan)** – develop a multimodal plan to expand and evaluate other options	TBD
20	**North/South Kuna Corridor (railroad crossing in the City of Kuna)** – construct railroad crossing in the city of Kuna	$17,000,000
21	**Cherry Lane (Middleton Road to Black Cat Road)** – widen to five lanes with curb, gutter, sidewalks, and bike lanes	$78,000,000
22	**Lake Hazel Road (McDermott Road to Linder Road)** – widen to five lanes with curb, gutter, sidewalks, and bike lanes. Also see Greenhurst Road, priority 30.	$9,300,000
	Amity Road (Southside Boulevard to Black Cat Road) – widen to five lanes with curb, gutter, sidewalks, and possibly bike lanes	$14,500,000
23	**State Highway 55/Midland Boulevard Bottleneck (in City of Nampa)** – add a southbound lane on Midland Boulevard from westbound ramp to overpass	$900,000
24	**State Highway 45 (Greenhurst Road to Bowmont Road)** – widen to four lanes	$64,200,000
25	**Victory Road (Happy Valley Road to McDermott Road)** – widen to three lanes	$8,500,000
26	**US Highway 20/26 (City of Caldwell to City of Parma)** – widen to four lanes and reconstruct Exit 26 to accommodate the additional lanes	$78,800,000
27	**Three Cities River Crossing *(preserving land for a future project: bridge over the Boise River east of City of Eagle)*** – construct new four-lane river crossing	$82,500,000
28	**Star/Robinson Road (Greenhurst Road to Ustick Road)** – widen to five lanes, including the I-84 overpass	$40,300,000

CIM 2040 Priority Corridor	Project	Estimated Cost in 2014 Dollars (does not include inflation)
29	**CIM 2040 transit, long-term (capital/operating)** – expands upon *valley**connect*** near- and medium-term by adding new service routes and improving frequencies of planned routes Cost shown is the net change from the medium-term to the long-term.	$295,100,000
30	**Greenhurst Road (Middleton Road to McDermott Road/Happy Valley Road)** – widen to five lanes, including curb, gutter, and sidewalk, and construct new five-lane extension and railroad overpass from Happy Valley Road to McDermott Road. Also see Lake Hazel Road, priority 22.	$60,000,000
31	**Happy Valley Road (Greenhurst Road to Stamm Lane)** – widen to five lanes, including curb, gutter, and sidewalk	$46,100,000
32	**Bowmont Road to Kuna-Mora Road (new connection)** – rebuild existing road and construct extensions on approximately seven miles of this two-lane roadway. This project also includes two canal bridges and one railroad overpass.	$63,000,000
33	**Beacon Light/Purple Sage *(new connection – preserving land for a future project)*** – rebuild existing road and construct approximately five miles of a new two-lane roadway	$38,000,000
	UNFUNDED TOTAL PROJECT NEEDS	**$3,471,795,000**

Table 6.6 compares two 2040 scenarios: what the transportation network would look like if *currently unfunded* projects do not become completed vs. if they were to receive funding and be completed. The table shows that, even with all the prioritized improvements, by 2040, the overall congestion and travel times will increase from current levels due to population growth.

Figure 6.4 illustrates the speed loss by 2040 if only the improvements with current funding are built.

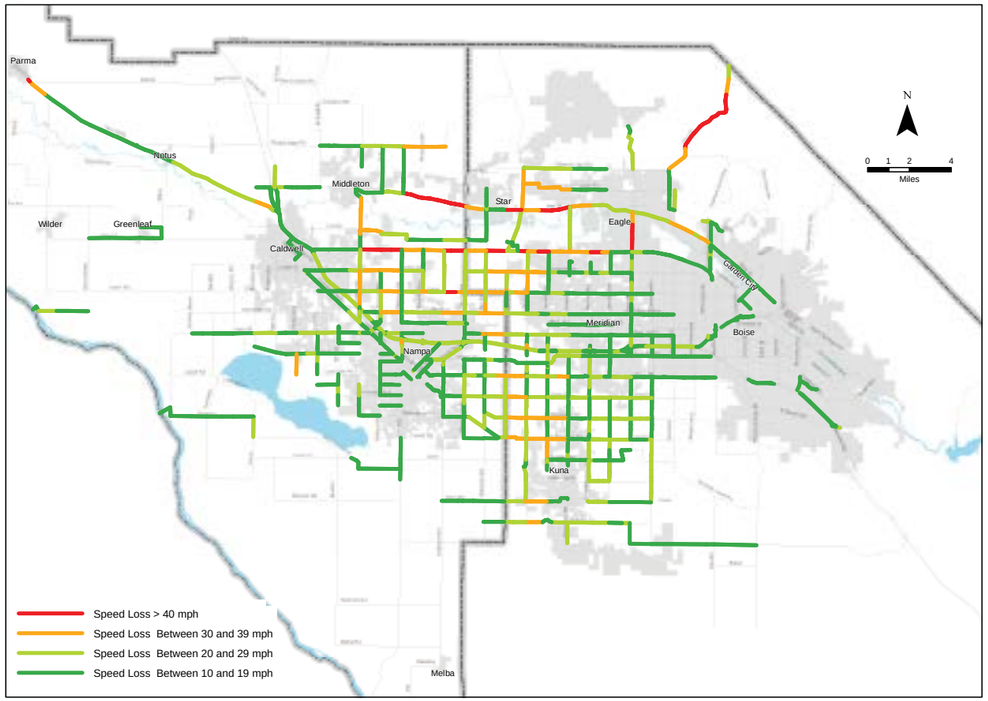


Figure 6.4. 2040 loss of speed due to congestion with funded roadway and transit projects[6]

6 www.compassidaho.org/documents/prodserv/CIM2040/fundedonly.pdf

Table 6.6. Transportation network characteristics: 2013 vs. 2040 if currently funded *and* unfunded projects were completed

Transportation Network Characteristics	2013	2040*	2040 Funded Plus Unfunded†
Population	599,840	1,022,000	1,022,000
Employment	275,610‡	461,660	461,660
Vehicle miles of travel, average weekday	12,077,000	27,138,000	26,860,000
Hours of delay, average weekday	27,670	430,100	233,100
Hours of delay, average weekday			
• Caldwell to downtown Boise	35 minutes	70 minutes	50 minutes
• Nampa to Boise Airport	25 minutes	50 minutes	40 minutes
• CanAda Road in Star to St Luke's in downtown Boise	30 minutes	50 minutes	40 minutes
• North Meridian to Veteran's Memorial Parkway	20 minutes	25 minutes	25 minutes
• City of Eagle to St Luke's Meridian	15 minutes	20 minutes	15 minutes

* Reflects 2040 characteristics with currently funded transportation projects completed.
† Reflects 2040 characteristics with currently funded *and* currently unfunded projects completed.
‡ *Source*: Idaho Department of Labor data, August 2013

Figure 6.5 illustrates the speed loss by 2040 if both the currently funded projects *and* the currently unfunded improvements were built.

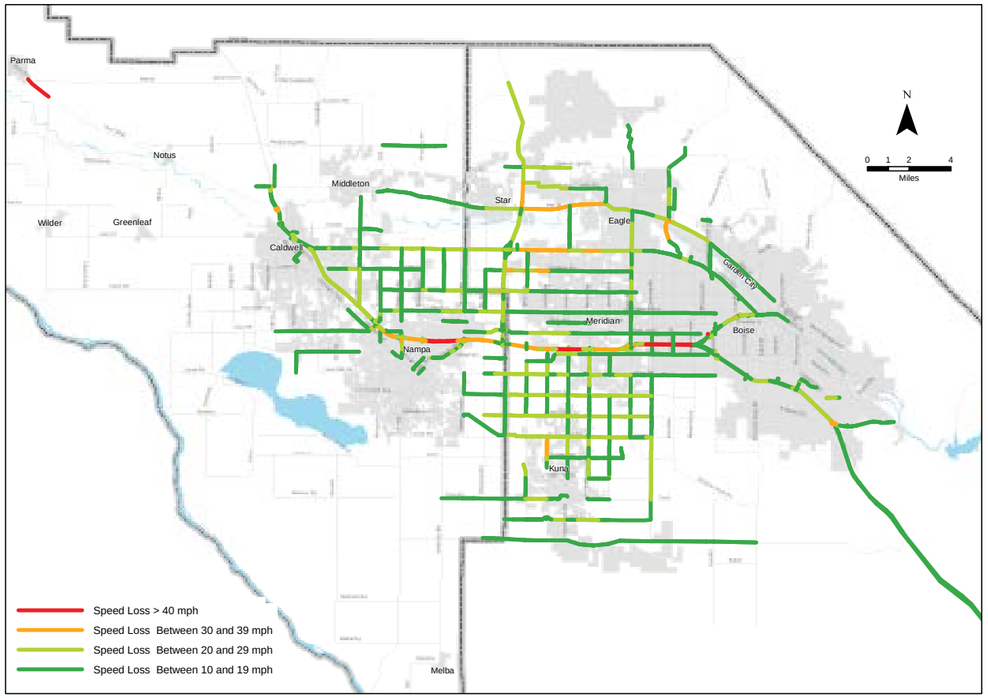


Figure 6.5. 2040 loss of speed due to congestion with funded plus unfunded roadway and transit projects[7]

Transportation System Performance Measures and Targets

COMPASS will track progress toward meeting system-related goals by monitoring the following performance measures and reporting on progress toward achieving defined targets for 2040.[8] Targets take into account the anticipated growth and its impact.

- Travel time index (interstate)
  - Current: 1.18
  - Target: 2.17
- Travel time index (non-interstate)
  - Current: 1.55
  - Target: 1.83
- Transit level of service completion
  - Current: 62%
  - Target: 81%
- Peak hour travel time (downtown Caldwell to downtown Boise)
  - Current: 35 minutes
  - Target: 80 minutes
- Bridge conditions (percentage of bridges not "functionally obsolete")
  - Current: 87%
  - Target: 87%
- Bridge conditions (percentage of bridges not "structurally deficient")
  - Current: 96%
  - Target: 100%
- Annual transit ridership
  - Current: 1,418,311
  - Target: 2,500,000
- Sidewalks per roadway mile
  - Current: 38%
  - Target: 50%
- Bikeways per roadway miles
  - Current: 16%
  - Target: 25%
- Miles of trails and pathways
  - Current: 195.7 miles
  - Target: increase from previous year

Travel time index (TTI) refers to the ratio of peak travel time to free-flow travel time. A TTI of 2.0, for example, means that it takes twice as long to travel a given roadway during the peak or congested period as during free-flow or ideal conditions. Over 1.25 is considered "congestion" in this metric.

Pedestrian level of service is the typical pedestrian's perception of the travel experience based on the characteristics of the roadway, including sidewalks; and traffic volumes and speeds.

Bicycle level of service is the same concept, but from a bicyclist's point of view, and includes bike lanes.

Scores reflect the current score as a percentage of the optimal score.

7 www.compassidaho.org/documents/prodserv/CIM2040/fundUnfund.pdf
8 See Chapter 10 for a discussion on the development of CIM 2040 performance measures and targets.

- Pedestrian level of service completion
  - Current: 77%
  - Target: 89%
- Bicycle level of service completion
  - Current: 70%
  - Target: 85%
- Freight travel time index (local routes, non-interstate, on freight corridors only)
  - Current: 1.70
  - Target: 2.04
- Vehicle emissions (coarse particulate matter [PM10])
  - Current: 24.4 tons/day
  - Target: Less than 60.1 tons/day
- Household connectivity (how closely households are linked to schools, parks, and grocery stores within a reasonable walking distance—about 1/4-mile)
  - Current: 8% (61,568)
  - Target: 14% (214,584)

The annual performance monitoring report, with data on progress toward meeting all regional performance measures, as well as reports from past years, is available on the COMPASS Performance Dashboard. The 2014 report will be the first to address these specific performance measures.

Summary

This plan lists funded improvements to the regional transportation system as well as priorities for future needed, *but unfunded*, improvements. The unfunded needs are listed beginning on page 110, and more detailed descriptions of each of these prioritized corridors and projects can be found online. These descriptions will be updated as conditions change in the corridors and/or as projects are completed. Table 6.2 and Table 6.3 describe the projects that are funded through 2040, and Table 6.5, the needs that remain unfunded in this plan. Both the project descriptions and estimated costs represent planning-level assumptions of needed improvements and do not represent agency commitment.

The total amount necessary for improving and maintaining the transportation system to meet future needs is estimated[9]—in current dollars—to be about $9.7 billion (about $359 million per year), with about 44% ($4.3 billion total, $159 million per year) of that unfunded (Table 6.7). The remaining 56%, or $5.4 billion, is locally or federal/state-funded (Table 6.8).

Table 6.7. Transportation needs, funding, and shortfall*

	Needs	Funding	Shortfall
Total (2014-2040)	$9.7 billion	$5.4 billion	$4.3 billion
Annual	$359 million	$200 million	$159 million

* Costs are in current dollars and are not adjusted for inflation, which is assumed to be 4% per year.

Table 6.8. Transportation funding sources*

Source	Average Annual Amount	Projected Total, 2014-2040
Federal	$24.6 million	$664 million
State†	$34.2 million	$923 million
Local‡	$140.7 million	$3.8 billion
TOTAL	**$200 million**	**$5.4 billion**

* Costs are in current dollars and are not adjusted for inflation, which is assumed to be 4% per year.
† Includes federal funds spent by Idaho Transportation Department.
‡ Includes state and local-generated funds.

COMPASS will continue its efforts to secure additional funding to complete a transportation system that supports the Treasure Valley's future needs.

9 Estimated future needs are higher when inflation is considered.

CHAPTER 7

TRANSPORTATION SAFETY

CIM 2040 assesses regional safety in terms of roadway crashes. The term "crash" is used in this plan because "accident" implies something that can't be foreseen or prevented. Most, if not all, crashes can be prevented by changing driver behavior, roadway design, or both.

Reducing Fatalities and Serious Injuries on Public Roads

Federal regulations state that regional transportation plans such as CIM 2040 shall "increase the safety of the transportation system for motorized and non-motorized users" and "...should be consistent with the Strategic Highway Safety Plan...and other transit safety and security planning and review processes, plans, and programs, as appropriate."

A well-maintained roadway in Meridian. Photo: Shelly Houston, as part of the *Your Treasure Valley Future Photo Challenge*.

The Strategic Highway Safety Plan (SHSP) is a federally mandated safety plan for all states to reduce highway fatalities and serious injuries on all public roads. In Idaho, ITD develops and manages the SHSP, establishing statewide goals, objectives, and key emphasis areas in consultation with federal, state, local, and private sector safety stakeholders. SHSP elements are integrated into statewide and regional transportation plans and transportation improvement programs to place safety on par with other planning factors, particularly when choosing or evaluating new and continuing projects and initiatives.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

ITD approved the base SHSP in 2010 (view original 2010 plan and a 2013 update without county-level statistics). The safety plan's subtitle, *Toward Zero Deaths*, supports its vision of death and injury-free travel on Idaho roadways. Ada and Canyon Counties are showing progress toward this goal. In Ada and Canyon Counties, fatality rates from crashes dropped from 7.6 per 100,000 people in 2007 to 3.6 per 100,000 in 2011. Serious injury rates for that same period fell from 104.5 to 78.0 per 100,000 people, and the total number of crashes declined by about 30%.

SHSP Goals and Strategies

The SHSP divides crash issues into 11 emphasis areas, each of which is supported by strategies to increase safety and reduce crashes, injuries, and deaths. The strategies associated with each emphasis area are summarized in Table 7.1; more detail can be found in the original SHSP and the 2013 update.

Table 7.1. Strategies and emphasis areas in the Strategic Highway Safety Plan, 2010

Strategies	Aggressive driving	Distracted driving	Occupant protection	Impaired driving	Young drivers	Vulnerable users	Commercial vehicles	Motorcyclists	Roadway-related	Intersections	Emergency response
Non-capital strategies											
Improved enforcement	•	•		•	•		•	•	•	•	
New or changed laws	•			•	•		•				
Speed limit changes										•	
Training for professionals, officials	•			•		•			•		•
Training for public, including events	•	•		•	•	•	•	•	•		
Data monitoring and analysis		•				•		•		•	•
Public transportation						•					
Safe Routes to School						•					
Partnerships between private sector and transportation		•		•	•	•	•		•		•
Other public or private policies	•	•					•				
Capital-related strategies											
New or improved facilities						•	•				
Intersection and roadway design						•	•		•	•	
Shoulder, edge line, and centerline rumble strips/ stripes, drop-off removal, paint markings		•	•					•	•	•	
Roundabouts						•				•	
Traffic calming						•				•	
Guardrail design and installation									•		
Message boards and signs	•		•				•	•	•		
Rail crossing improvements							•				
Traffic control devices										•	
Rest area parking		•									
Pullouts for emergency vehicles									•		•
Improved clear zones off road									•		
Lighting and beacons						•				•	
Visual obstruction clearance						•				•	
Work zone safety projects	•						•				
Equipment funding							•				•

CIM 2040 and Transportation Safety

CIM 2040 specifically addresses safety issues in goal 1.2: *Improve safety and security for all transportation modes and users*. Several other CIM 2040 goals, as well as related objectives and tasks, also address safety either directly or indirectly. These are discussed below, organized by SHSP emphasis area.

CIM 2040 and SHSP Emphasis Areas

1. **Aggressive Driving**
   Aggressive driving includes failure to yield right-of-way, driving too fast for conditions, exceeding the posted speed, and following too closely. Ever-increasing vehicle miles of travel, traffic congestion, travel delays, and the resulting frustration and impatience all contribute to aggressive driving.

   CIM 2040 addresses aggressive driving through improvements to minimize congestion and manage increases in vehicles miles of travel.

2. **Distracted Driving**
   Distracted driving collisions occur when at least one of the drivers is not paying attention. The SHSP indicates that distracted driving crashes resulted in 160 fatalities and 1,073 serious injuries in Idaho from 2009 to 2011.

   CIM 2040 helps alleviate distracted driving by supporting education on sharing the road, coordinating with law enforcement, and reducing distractions via improvements in the current transportation system.

3. **Occupant Protection**
   A 2012 seat belt survey placed Ada and Canyon County seat belt usage at 95% and 94%, respectively.

   While CIM 2040 does not directly address occupant protection (seat belt usage), it does help support this target area through data collection and sharing.

4. **Impaired Driving**
   An impaired driving collision is one in which alcohol or drugs may have contributed to the collision. Impaired driving is of particular concern due to the significant number of fatal crashes caused by impaired drivers (42% of fatal crashes in Ada/Canyon Counties between 2007–2011) as well as the high number of youth involved. Statewide, nearly 15% of drivers in impaired driving crashes were under the age of 21.

   As with occupant protection, CIM 2040 does not directly address impaired driving, but does help support this target area through data collection and coordinating with law enforcement.

5. **Young Drivers**
   Drivers between the ages of 15 and 19 are considered "young" drivers. Between 2007 and 2011 in Ada and Canyon Counties, there were 10,382 crashes involving young drivers. Regionally, this is 25% of all crashes and 20% of all fatalities.

   CIM 2040 goals and tasks address issues relating to young drivers by placing a high priority on creating walkable and bikeable communities and improved access to transit, thus providing young drivers with accessible, safe options to driving a car or riding with a friend.

6. **Vulnerable Users**
   Bicyclists and Pedestrians
   Between 2007 and 2011, there were 945 crashes involving bicycles in Ada and Canyon Counties, resulting in six fatalities and 129 serious injuries. During that same time frame, there were 424 crashes involving pedestrians, resulting in 19 fatalities and 113 serious injuries.

   CIM 2040 addresses bike and pedestrian safety through supporting more walkable and bikeable communities, prioritizing projects that help complete bike and pedestrian networks, and supporting education on sharing the road with all users.

   Mature Drivers
   National research indicates drivers and passengers over the age of 65 are more likely than younger persons to sustain injuries or die in traffic collisions.

   While mature drivers are not specifically addressed in CIM 2040, several CIM 2040 goals and tasks will serve to assist this part of the population. These goals and tasks include creating walkable and bikeable communities, improving access to transit, and reducing distractions by addressing congestion and providing for overall improvements to the current transportation system.

7. **Commercial Vehicles**
   Commercial vehicles include buses, truck tractors, truck-trailer combinations,

trucks with more than two axles, trucks with more than two tires per axle, and trucks exceeding 8,000 pounds that are primarily used for the transportation of property. The SHSP states that in 2008, 36 people died in collisions with commercial vehicles. This number makes up 16% of fatalities in Idaho; 61% of those fatalities were occupants of personal vehicles. Commercial vehicles are addressed in CIM 2040 through numerous goals, objectives, and tasks to better manage congestion and roadway access, including encouraging entities to adopt measures in the *Access Management Toolkit*.

8. **Motorcyclists**
   In 2008, motorcycle collisions represented just 3% of the total number of collisions in Idaho, yet accounted for almost 13% of the total number of fatalities and serious injuries. Between 2007 and 2011 there were 987 motorcycle crashes in Ada and Canyon Counties.

   CIM 2040 helps address issues related to motorcycle safety by supporting education on sharing the road with all users and coordinating with law enforcement.

9. **Roadway-Related Crashes**
   The SHSP identified two components to roadway-related crashes:
   - single-vehicle run-off-road crashes
   - head-on and side-swipe crashes

   Between 2004 and 2008, nearly half of the 1,286 Idaho highway fatalities resulted from roadway departure crashes.

   This issue is addressed in CIM 2040 through goals, objectives, and tasks that prioritize projects that help complete and improve the overall transportation system.

10. **Intersections**
    Statewide, in 2008, 82% of intersection crashes occurred on urban roads, but 60% of the fatalities were at rural intersections. This is a result of higher speeds and fewer signalized intersections in rural areas.

    Collisions at intersections are addressed in CIM 2040 through encouraging entities to adopt measures in the *Access Management Toolkit* and reducing conflict points between modes.

11. **Emergency Response**
    The availability and quality of services provided by local emergency management agencies may mean the difference between life and death for someone injured in a traffic crash. The sooner someone receives appropriate medical care, the better the chances of recovery; however, no data are available for this emphasis area.

    The SHSP has a goal of re-opening a roadway as quickly as possible after a crash but notes that other needs take precedence over this goal:
    - quick and effective response to address care of crash victims
    - safety of emergency responders, incident victims, and the public
    - collection of accurate crash data

    CIM 2040 addresses emergency response issues by improving the transportation system as a whole, coordinating with law enforcement, and implementing the updated *Treasure Valley Transportation System: Operations, Management, and Intelligent Transportation Systems (ITS)* plan.

Safety Performance Measures and Targets

As discussed above, CIM 2040 specifically addresses safety issues in goal 1.2— *Improve safety and security for all transportation modes and users*—as well as through several objectives and tasks.

However, simply developing goals and tasks is not enough. To impact safety, and reduce crashes, injuries, and deaths, the plan must be implemented. COMPASS will track progress toward meeting goal 1.2 by monitoring the following performance measures and advancement toward their specific targets for 2040:[1]

- Number of auto crashes per year
  - Current: 8,538
  - Target: Less than previous year
- Number of bike crashes per year
  - Current: 187
  - Target: Less than previous year

1 See Chapter 10 for a discussion on the development of CIM 2040 performance measures and targets.

- Number of pedestrian crashes per year
  - Current: 86
  - Target: Less than previous year
- Number of transit crashes per year
  - Current: 46
  - Target: Less than previous year
- Number of auto fatalities per year[2]
  - Current: 30.6
  - Target: 0
- Number of bike fatalities per year[3]
  - Current: 1
  - Target: 0
- Number of pedestrian fatalities per year[4]
  - Current: 4
  - Target: 0
- Number of auto injuries per year[5]
  - Current: 369
  - Target: Less than previous year
- Number of bike injuries per year[6]
  - Current: 21.2
  - Target: Less than previous year
- Number of pedestrian injuries per year[7]
  - Current: 5
  - Target: Less than previous year

The annual performance monitoring report, reflecting progress toward meeting regional performance measures, is available on the COMPASS Performance Dashboard. The 2014 report will be the first to address the above performance measures.

2 Baseline is 2002-2012 average.
3 Baseline is 2002-2012 average.
4 Baseline is 2002-2012 average.
5 Baseline is 2002-2012 average.
6 Baseline is 2002-2012 average.
7 Baseline is 2002-2012 average.

CHAPTER 8

TRANSPORTATION SECURITY

Transportation security is an integral part of regional planning. In broad terms, transportation security refers to the ability of a transportation system—including physical structures, transit, and road networks—to physically hold up and enable safe movement of the population during emergencies, disasters, and other threats. For example, during a flood, will bridges remain intact and will the system be adequate to handle an emergency evacuation?

Federal requirements state that long-range transportation plans should include "...emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users."

CIM 2040 specifically addresses security in goal 1.2: *Improve safety and security for all transportation modes and users*. Several CIM 2040 objectives and tasks also indirectly address security. A complete listing of all CIM 2040 goals, objectives, tasks, performance measures, and lead agencies can be found online.

This chapter addresses transportation security as it relates to roadway networks and facilities, and to transit networks and facilities.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

Roadway Networks and Facilities

Security assessments of roadway networks focus primarily on major routes, including state-owned highways. Regionally, Interstate 84 is of chief importance, as it serves as the main transportation route for the trucking industry in the northwestern US. In addition to I-84 and the remaining state highway network, there are nearly 3,000 centerline miles of road and 400 bridges; these are owned by local agencies, including highway districts and cities.

The major roadways serving urban areas in Ada and Canyon Counties tend to be well-maintained with adequate capacity for efficient evacuation.

Threats to Roadway Networks and Facilities

Six potential threats related to the Treasure Valley roadway networks have been evaluated by county emergency management agencies: floods, dam failure, snow, fires, earthquakes, and landslides. This section of the plan will address floods and dam failure, which pose the more serious concerns for transportation and evacuation.

Floods

Historically, flooding along the Boise River has been associated with heavy snowpack and early thaws. To a large degree, serious floods have been negated by construction of dams along the Boise River to the east of the region. However, very long-term climate forecasts indicate a possibility of earlier snowmelts and more winter precipitation in the form of rain. This pattern could affect the timing and volume of dam releases to balance flood control with retention for agricultural and recreational purposes.[1]

Nearly 30,000 homes (64,000 residents) are within the 500-year flood zone, and 10,200 of these homes (approximately 24,000 residents) are within the 100-year flood zone. About half of these homes and residents are in the flood zone along the Boise River.

Figure 8.1 shows the major roadway system in relation to the 100- and 500-year flood zones. It also depicts bridges in relation to the flood zones. There are 133 bridges 20 feet or longer within the 500-year flood zone. Of these, 27 cross the Boise River and are built to accommodate 100-year flood events. The main threat to these bridges during a flood is the pile-up of debris against their upstream sides, which can put added stress on the structures and cause even more flooding upstream.

1 *Climate Change Impact Assessment for Surface Transportation in the Pacific Northwest and Alaska*, Washington State Department of Transportation, January 2012, 4-6. www.wsdot.wa.gov/research/reports/fullreports/772.1.pdf.

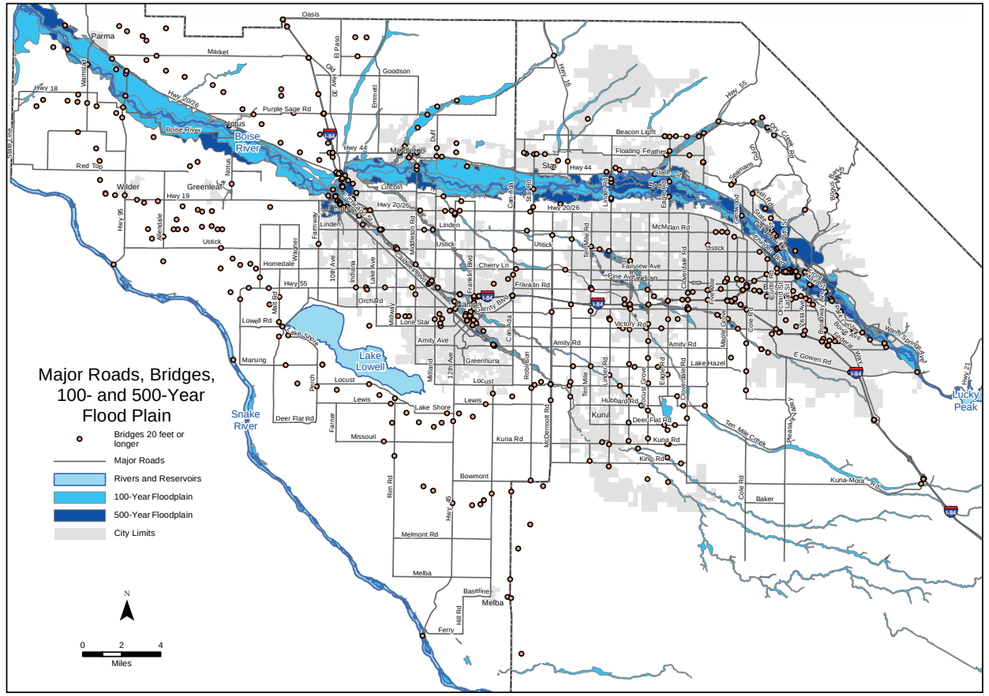


Figure 8.1. Major roads and bridges and the 100- and 500-year flood zones[2]

Drainage from the foothills along the north end of the valley is another source of concern. Over the past 50 years, development has encroached on the foothills' drainage and outflow areas, placing more homes in the path of flooding. Foothills floods are more localized events and not a major evacuation issue.

The Snake River is remote from most development and transportation corridors within the planning area. However, significant crossings in Ada and Canyon Counties include State Highway 45, State Highway 55, US 95, and US 20/26.

Dam Failure

The Idaho Department of Water Resources (IDWR) and the US Bureau of Reclamation administer dam safety throughout the state. IDWR inspects each dam at least every two years. Every dam inspected is given a risk classification to grade potential downstream losses and damages that could occur from dam failure during typical flow conditions.

2 www.compassidaho.org/documents/prodserv/CIM2040/Maps/MajorRoads_flood_8_1[Converted].pdf

Lucky Peak, Arrowrock, and Anderson Ranch Dams, all located upstream from Boise on the Boise River (Figure 8.2), are classified as "high risk," or Category 1, by IDWR. While Boise is in closest proximity to these dams, the cities of Garden City, Eagle, Star, Middleton, Caldwell, Notus, and Parma are also located downstream of these dams and subject to flooding in the case of dam failure.

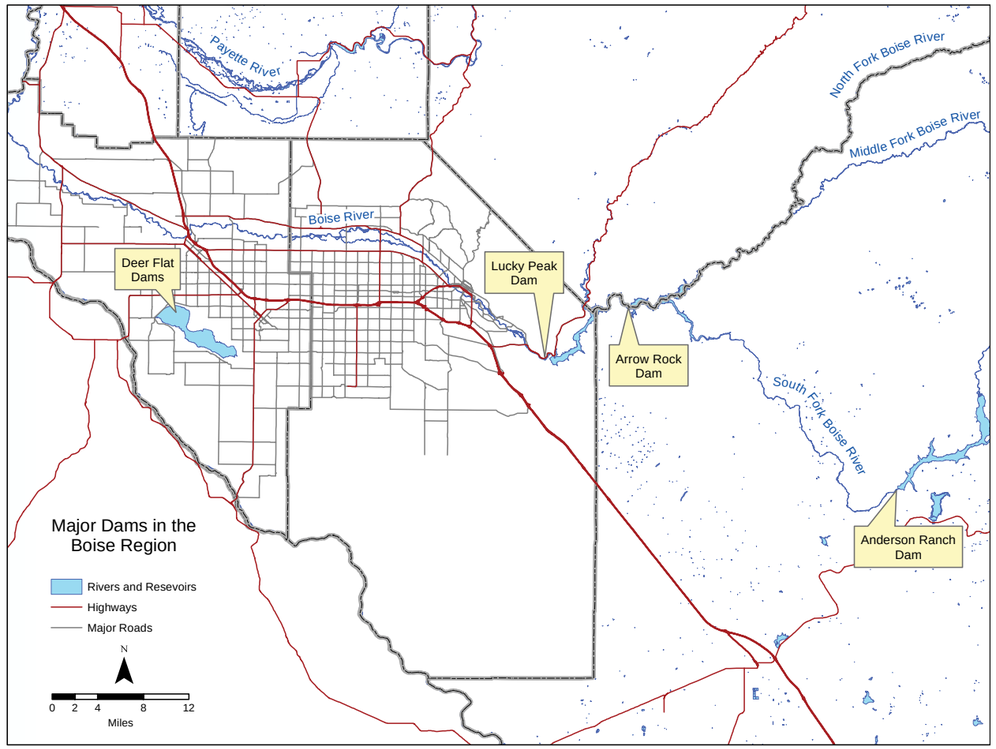


Figure 8.2. High-risk dams in the region[3]

A recent evaluation by the Ada City-County Emergency Management program depicted a possible dam failure resulting in a flood flow of as much as 34,000 cubic feet per minute (cfm). This contrasts with "normal" flood stages, when flows exceed 7,000 cfm.

Another security issue is that key transportation administrative and/or maintenance facilities are located in or near the 500-year floodplain, including ACHD's headquarters, maintenance yard, and traffic operations center; ITD headquarters; and offices of the

3 www.compassidaho.org/documents/prodserv/CIM2040/Maps/MajorDams_8_2.pdf

Federal Highway Administration, Local Highway Technical Assistance Council, Notus Parma Highway District, and Treasure Valley Transit (TVT). Recovery after a major flood could be hampered by loss of equipment and records.

Transit Networks and Facilities

In the CIM 2040 region, the main public transportation providers are VRT, TVT, and Commuteride. The first two provide fixed-route and special transit bus services within Ada and Canyon Counties, and Commuteride operates a vanpool mostly in Ada County. VRT maintains a fleet of 63 vehicles based in two facilities, one in south Boise and the other in north Nampa. TVT has 16 vehicles based out of its facility in northwest Nampa. Commuteride has 104 vans.

There are no fixed-guideway (i.e., rail) services in the region.

Threats to Transit Networks and Facilities

Security assessments of transit services and facilities consider two main factors:

- threats to transit passengers and facilities
- disruption to services in the event of a natural or human-caused catastrophe

Threats to Transit Passengers and Facilities

Transportation organizations work to enhance the safety of the current transportation system and build security measures into future projects. For example, the design of the transit center being built in downtown Boise may incorporate visual surveillance and communications technology, and space for a police substation.[4]

COMPASS examined security in its September 2009 publication, *Technology in Mobility Management*. The report addressed several security-related technologies that can increase the safety of the valley's public transit system, including:

- global positioning system (GPS) tracking to allow automated vehicle location. While principally a benefit in providing real-time information to transit dispatchers and transit customers, knowing the exact location of a transit vehicle in an emergency is critical. (Implemented on buses at the time of this plan.)
- radio systems, enabling voice and data communication in the event of an emergency or on-board threat. (Implemented on buses at the time of this plan.)

4 Consideration of surveillance technology was part of the multimodal preliminary design concepts developed by URS under contract to Valley Regional Transit during 2008 and 2009.

- emergency/panic button(s) and remote surveillance.
- surveillance via on-board cameras. (Implemented on buses at the time of this plan.)
- surveillance via cameras along routes and at park-and-ride locations.

Part of the updated ITS plan reflects how electronic communications have been deployed in the Treasure Valley to increase coordination between agencies, dispatch, and emergency services. The ITS plan is discussed in more detail in Chapter 6, and the full report is available online.

Disruption to Services

In an emergency, the CIM 2040 region's surface bus system would experience far less disruption than systems in bigger cities, where populations depend on rail transit corridors comprising tunnels, bridges, and main stations. The downtown Boise transit center (currently under construction), while concentrating vehicles at a specific location, is not essential to the provision of service. In the event of an incident, buses could use other streets for transferring passengers. However, transit routes cross several bridges; the absence of even a single bridge would disrupt transit services, causing detours and delays.

Evacuation Services

Transportation facilities are critical for evacuations of both auto users and non-auto users (populations unable to drive in the event of an evacuation).

Auto Users in Evacuations

While bridges may be compromised in the event of a flood, they provide routes for evacuation in the event of a natural or human-caused disaster. As Figure 8.1 indicates, even a major 500-year flood would affect a fairly small area of the region and leave most evacuation routes intact, though damage to bridges would impact vehicular travel and transit services, as described above.

The transportation system provides multiple routes for evacuation in the event of other, more localized disasters such as wildfires, landslides, or hazardous material spills. Landslides and wildfires are of primary concern in the foothills area.

Non-Auto Users in Evacuations

In 2005, Hurricane Katrina devastated the Gulf Coast, killing almost 730 people in New Orleans alone. Nearly 72% of the city's fatalities were age 60 or older, although that age group represented only 15% of the city's population.[5] One major reason for this disparity was the failure to consider the needs of people who could not drive or lacked access to a vehicle. This included the elderly, people with disabilities, and people in nursing care facilities. These vulnerable populations must be considered when developing evacuation plans.

In Ada and Canyon Counties, about 64,000 residents live within the 500-year flood zone.[6] Of these, 7,600 residents are 65 years and older. American Community Survey (ACS) 2011 data indicates that 38% of this age group—about 2,900 people—has a disability. According to ACS statistics, of the 58,000 persons *under* age 65 in the 500-year flood zone, approximately 4,600 have a disability. However, not all of these individuals are transit-dependent. Although there are no statistics available, many of these vulnerable residents are able to drive or have someone in their household who can drive.

Elderly persons and those with disabilities in group homes may need assistance. Idaho Department of Health and Welfare data indicates there are more than 3,100 beds in residential care facilities in Ada and Canyon Counties and, of those, 430 are in or near the 500-year floodplain.

The vast majority of the 430 beds are in Ada County, with more than 300 within Boise and Garden City, sites closest to upstream dams. Some facilities are not along the Boise River but in floodplains at the base of the foothills or along other streams.

Security plans specifically note the need to involve VRT and other owners of buses, especially those with lift equipment, in evacuation planning. Other entities that have vehicles with lift equipment and wheelchair capacity include school districts and private firms providing non-emergency transportation.

The report *Ensuring Workforce Mobility in Emergencies*[7] by ICF International recommends working with local agencies to

- collect regional geographic data in a common format and offer this data in a

5 Profiles of General Demographic Characteristics: 2000 Census of Population and Housing, Louisiana. Washington: US Census Bureau, 2001. Total population of New Orleans in 2000 was 484,674, while the population of people aged 60 and older was 73,311.

6 *Idaho: 2010, Summary Population and Housing Characteristics.* Washington: US Census Bureau, 2012. COMPASS used its geographic information system platform to aggregate census population data and floodplain data from the U.S. Federal Emergency Management Agency.

7 *Ensuring Workforce Mobility in Emergencies*, ICF International, Inc., 2010, accessed June 20, 2013, www.icfi.com/insights/white-papers/2010/ensuring-workforce-mobility-in-emergencies.

repository for emergency planning, training, and response; and

- conduct an inventory of public and private transit-related resources to share, such as vehicles available for use, staging areas, and technology.

Both projects are underway through COMPASS programs that are collecting information on locations of vulnerable populations (nursing homes, group homes, training centers) and transportation services. COMPASS is also working with state and local agencies to compile consistent GIS data on facilities such as streets, bridges (including weight restrictions), schools, and hospitals.

Local Emergency Management Strategies

Strategies included in the *Ada County Hazard Mitigation Plan* or the *Canyon County, Idaho, All Hazards Mitigation Plan* that are relevant to CIM 2040 are listed below, based on type of emergency. Many of these items are addressed indirectly in CIM 2040 through preservation of open space, maintaining existing transportation infrastructure, and land use planning.

Dam Failures

- Map dam failure inundation areas.
- Relocate critical facilities out of dam failure inundation areas.
- Consider open space land use in designated dam failure inundation areas.
- Flood-proof facilities within dam failure inundation areas.
- Develop a continuity of operations plan.

Earthquakes

- Locate critical facilities or functions outside hazard areas where possible.

Floods

- Locate or relocate critical facilities outside of hazard areas.
- Promote open space in identified high-hazard areas by implementing planned unit developments, easements, setbacks, greenways, and sensitive area tracks.
- Adopt land development criteria such as planned unit developments, density transfers, and clustering.
- Acquire vacant land or promote open space in developing watersheds to control increases in runoff.
- Improve infrastructure to make more flood-resistant via a bridge replacement program.
- Provide redundancy for critical functions and infrastructure.
- Implement stormwater management regulations and master planning; adopt a stormwater management master plan.
- Incorporate retrofitting or replacement of critical system elements in capital improvement plans.
- Warehouse critical infrastructure components.
- Develop and adopt a continuity of operations plan.
- Maintain existing data and gather new data needed to define risks and vulnerability.
- Create an inventory of structures, including elevation data, within the floodplain.
- Integrate floodplain management policies into other planning mechanisms within the planning area.
- Consider the probable impacts of climate change on the risks associated with floods.
- Consider the residual risk associated with structural flood control in future land-use decisions.
- Post and publicize evacuation routes.

Security Performance Measures and Targets

As discussed above, CIM 2040 specifically addresses security in goal 1.2: *Improve safety and security for all transportation modes and users*.

COMPASS will track progress toward meeting goal 1.2 by monitoring the following performance measures and advancement toward their specific targets for 2040:[8]

- Bridge conditions (% of bridges not "functionally obsolete")
  - Current: 87%
  - Target: 87%
- Bridge conditions (% of bridges not "structurally deficient")
  - Current: 96%
  - Target: 100%

8 See Chapter 10 for a discussion on the development of CIM 2040 performance measures and targets.

The annual performance monitoring report, with data on progress toward meeting all regional performance measures, as well as reports from past years, are available on the COMPASS Performance Dashboard. The 2014 report will be the first to address these specific performance measures.

CHAPTER 9

ENVIRONMENTAL CONSIDERATIONS

Federal regulations require MPOs to take a comprehensive approach to environmental and natural resource issues when developing their long-range transportation plans. For example, MAP-21 directs MPOs to consult with federal and state agencies to identify potential mitigation activities that can help restore and maintain environmental functions affected by the plan.

By working closely with both transportation and natural resource organizations, COMPASS was able to take into account key environmental, community, and economic goals early on in the CIM 2040 planning process. Ongoing cooperation among these groups will help ensure CIM 2040 goals are considered during the design and construction of any new transportation projects.

Indian Creek, Bernie Fisher City Park, Kuna. Photo: Troy Behunin, as part of the *Your Treasure Valley Future Photo Challenge*.

To address the Treasure Valley's unique blend of geographic features and natural resources—from the foothills and the Boise River to wide expanses of farmland and open space—COMPASS incorporated the following goals into CIM 2040:

Goal 1.1: Enhance the transportation system to improve accessibility to jobs, schools, and services; allow the efficient movement of people and goods; and ensure the reliability of travel by all modes considering social, economic, and environmental elements.

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

Goal 5.1: Promote a transportation system and land-use patterns that enhance public health, protect the environment, and improve the quality of life.

Goal 7.1: Promote development and transportation projects that protect and provide all of the region's population with access to open space, natural resources, and trails.

Goal 8.2: Protect agricultural land for food, fiber, and fuel production and support of other agricultural and food-related businesses.

Environmental Review Process

COMPASS has collaborated with a work group of environmental and natural resource agencies since 2008 to address environmental issues relevant to long-range transportation planning. Details about work group activities can be found in the *COMPASS Environmental Review Process, 2008–2013* (see App. A for a list of participating agencies).

Environmental Suitability Analysis

Through the work group partnership, COMPASS is able to access the most current and complete environmental and resource data available for the two-county area. COMPASS has produced environmental and resource maps using the shared data, but wanted to use the data for more than simply mapping. To this end, the work group discussed various methods for employing the data to determine which Treasure Valley areas would be the most and least suitable for new or widened roads. COMPASS and the work group drafted a methodology for using a CommunityViz suitability analysis tool to assess priority transportation corridors for environmental and resource values. (As discussed in Chapter 3, COMPASS used CommunityViz software in the CIM 2040 scenario planning process.)

View from Eagle Road north of Chinden Boulevard. Photo: Toni Tisdale, as part of the *Your Treasure Valley Future Photo Challenge*.

The group suggested categorizing the various environmental data sets to help stakeholders and the public visualize clusters of environmentally sensitive areas as well as enable the CommunityViz suitability analysis tool to identify key areas for preservation and/or conservation.

Data categories governed by federal requirements were weighted with the highest values.

In May 2013, the work group reviewed results of the environmental suitability analysis of priority transportation corridors for CIM 2040 (Figure 9.1). Corridor summaries, which include descriptions of environmental concerns and likely issues for each corridor, are available online.

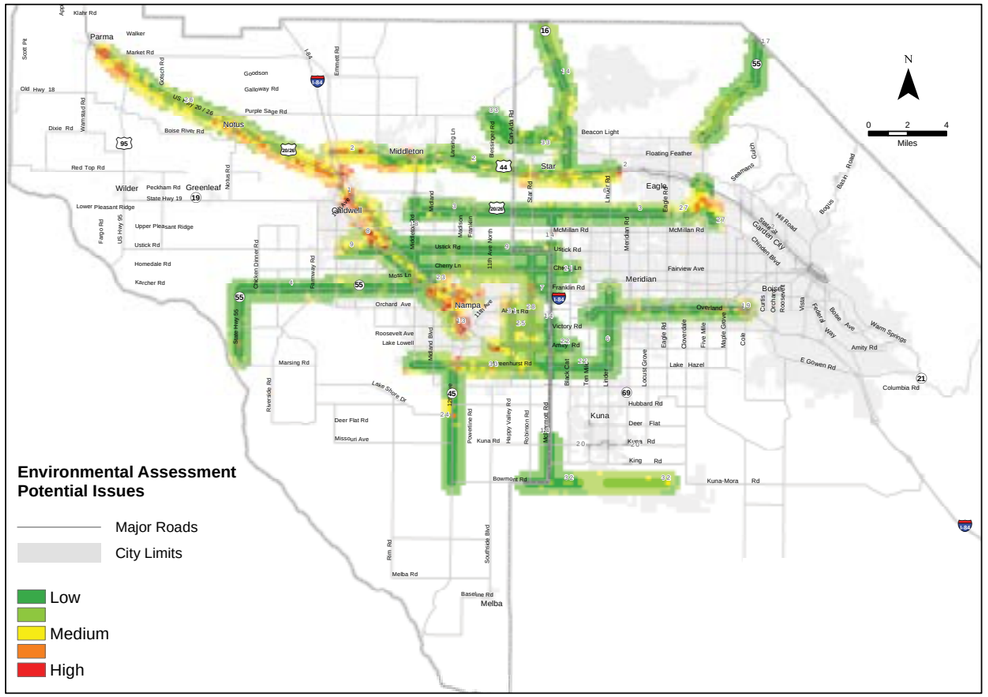


Figure 9.1. Potential environmental issues along priority corridors.[1]

The following categories were used in the initial analysis to pinpoint potential environmental impacts along the prioritized corridors:

- Hydrological areas
  - water quality and quantity
  - runoff (stormwater)

1 www.compassidaho.org/documents/prodserv/CIM2040/PotentialEnvironmental_PriorityCorridors.pdf

- streams, wetlands, and canals
- groundwater
- floodplains and floodway areas

Deer feeding near Boise State University, on the south side of the Boise River. Photo: Liz Paul, as part of the *Your Treasure Valley Future Photo Challenge*.

- Habitat and wildlife areas
  - Boise foothills
  - aquatic and riparian habitats
  - wildlife management areas
  - endangered species
- Traffic noise
- Hazardous materials/contaminated sites
  - potential remediation sites
  - gas stations
- Cultural and historic resources
  - historic sites, trails, and/or structures
  - aesthetics
- Environmental justice
- Open space, parks, and recreation areas
  - parks
  - cemeteries
- Agricultural and farmland
- Land use
  - existing residential neighborhoods
  - schools
  - railroads
  - tank trail
  - airports/private airstrips

Mitigation Strategies

From an environmental standpoint, mitigation strategies refer to actions that can avert or lessen the environmental impact of a project.

Once the CIM 2040 environmental review work group identified and mapped environmentally sensitive areas, it then identified general mitigation strategies for CIM 2040 prioritized corridors and projects. These are discussed in brief below, along with mitigation strategies that address the air quality maintenance area designation in northern Ada County. A more extensive discussion of mitigation strategies is included in the *COMPASS Environmental Review Process, 2008-2013* report.

Mitigation measures should be approached in the following order, per the National Environmental Policy Act (NEPA):

1. Avoid the impact altogether by not taking a certain action or parts of an action.
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
4. Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.
5. Compensate for the impact by replacing or providing substitute resources or environments.

Streams and wetlands are governed under federal mitigation standards, which require projects to

- adhere to "avoid, minimize, compensate" sequencing—that is, avoid impacts to a wetland or other aquatic resource but, if that's not possible, minimize impacts and compensate for them;
- compensate for the lost functions of the impacted aquatic resources; and
- set measurable and enforceable ecological performance standards to ensure successful compensation.

Boise River angler. Photo: Ken Miracle, as part of the *Your Treasure Valley Future Photo Challenge*.

Hydrological Areas

Water quality and quantity are key considerations in any planning process. To minimize impacts in this arena, planning efforts should

- emphasize/require redevelopment over new development to preserve existing permeable lands;
- require low-impact development and strongly encourage zero-impact development;
- restore permeability, habitats, and ecosystems wherever possible; and
- avoid and/or fully accommodate sensitive ecological areas such as streams, riparian areas, wetlands, buffers, and groundwater recharge areas.[2]

Runoff (Stormwater)

Runoff from roads, parking lots, and other impermeable surfaces can collect pollutants and carry them to local rivers and other water bodies such as the Boise River and Lake Lowell. Permeable surfaces, where water can sink into the ground, like lawns, fields, and even some types of cement, filter water as it sinks into the ground, thus reducing the amount of pollutants carried into local bodies of water and recharging underground aquifers.

General runoff mitigation strategies include

- establishing procedures to control runoff from construction projects;
- designing storm sewers to catch sediment runoff and prevent it from reaching streams and rivers;
- using water catch basins to detain runoff and allow water absorption;
- reducing the use of materials such as sand on icy roads;
- increasing road/surface sweeping to pick up materials before they enter storm drains; and
- using permeable surfaces where appropriate.

2 "Compensatory Mitigation for Losses of Aquatic Resources." *Code of Federal Regulations*. Title 40, 230. September 6, 2013.

Road construction projects may be subject to a federal Construction General Permit and development of a Stormwater Pollution Prevention Plan (SWPPP) or a Stormwater Management Plan.[3] General mitigation strategies include

- ensuring stormwater requirements are planned/met prior to project implementation;
- implementing the SWPPP or stormwater management best practices;
- implementing erosion- and sediment-control practices; and
- involving relevant agencies early, including ITD, IDWR, US Environmental Protection Agency (EPA), US Army Corps of Engineers (ACE), local canal or drainage districts, health districts, city/county public works, and local highway districts.

Wetlands and Other Sensitive Areas

When planning transportation-related projects, avoiding streams and wetlands is the preferred strategy. Federal "no net loss" policies protect, restore, and enhance natural wetlands and other aquatic resources that could be adversely impacted by construction, maintenance, and operations activities. In the event of unavoidable impacts, federal mitigation rules require some sort of mitigation to help ensure no overall net loss of wetland functions; this may include wetland mitigation banking or wetland or stream corridor preservation.

Generally, all transportation projects that may result in the placement of fill (soil or rock) into wetlands, streams, rivers, and other water bodies must be evaluated to determine how to avoid the filling and, if unavoidable, how to minimize and mitigate for the loss. If federal funds are used for a project, the agency building or maintaining the road will be subject to FHWA or Western Federal Lands Highway Division policies regarding wetland mitigation, per Executive Order 11990, Protection of Wetlands.

All permitting requirements, such as those falling under federal 401/404 "dredge and fill" permits, short-term activity exemptions from the Idaho Department of Environmental Quality (DEQ), and Stream Channel Protection Act permits from IDWR, must be met prior to project construction. Transportation agencies should involve IDWR, DEQ, EPA, and ACE early in the planning and/or design process.

3 The ACHD NPDES permit requires a stormwater management plan outlining a project's planned runoff control measures.

Groundwater

Groundwater provides a significant portion of the drinking water in southwest Idaho, and thus is extremely important to our growing population. However, population growth has the potential to negatively impact groundwater via increased pollution and new development, which can prevent water from seeping into the ground to recharge the groundwater storage (aquifers).

General strategies to mitigate construction impacts on groundwater include

- avoiding areas of high groundwater (where groundwater is close to the surface);
- implementing steps in DEQ's short-term activity exemption for dewatering operations to prevent intrusion into groundwater; and
- involving local highway districts, ITD, IDWR, DEQ, and EPA in groundwater mitigation activities.

Floodplains

Floodplains are areas that are likely to flood. They possess significant natural features and perform numerous functions important to the public interest. Federally funded projects and those involving federal lands must be evaluated for their impact on floodplains.[4] Regulations are intended to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

Local agencies require permits under floodplain ordinances for structures in floodplains, including roads and berms. Most local ordinances do not allow structures in a floodway, the channel that carries water in a river or stream.[5]

Habitat and Wildlife Areas

Transportation projects can severely impact wildlife and their habitats. Road construction activities may spread exotic or invasive species, and routes that divide—or "fragment"—wildlife habitats often cause animals to cross roadways, resulting in auto crashes.

4 The intent of Executive Order 11988, Floodplain Management, is to "avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative..." www.archives.gov/federal-register/codification/executive-order/11988.html. September 6, 2013. For example, see the ACE regulation, 33 CFR 320.4(l), www.gpo.gov/fdsys/pkg/CFR-2008-title33-vol3/xml/CFR-2008-title33-vol3-sec320-4.xml.

5 According to the Federal Emergency Management Agency (FEMA), the regulatory floodway "means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood..." www.fema.gov/floodplain-management/floodway.

Habitat fragmentation can be avoided by consulting mapped habitat areas (see Environmental Suitability Analysis, above) when planning roads, and modifying routes accordingly. When a project unavoidably affects wildlife habitat, impacts can be mitigated by providing bridges or other structures to span streams, wetlands, seepage areas, riparian areas, shorelines, and open water. These structures are often designed to accommodate both wildlife and water movement.

Several agencies should be involved early in the process: Idaho Department of Fish and Game, Idaho Department of Lands, EPA, US Forest Service, Bureau of Land Management (BLM), other public land management agencies (if lands are affected by the project), US Fish and Wildlife Service (if threatened, endangered, or proposed species habitat is involved), FHWA, ITD, IDWR, DEQ, counties, and local highway districts.

Traffic Noise

Traffic noise can be an ongoing issue for homes and businesses located on or near busy roads. General strategies to mitigate traffic noise address heavy truck volumes and high speeds, both of which typically increase noise levels.

Planners need to incorporate noise impact abatement techniques into projects and developments within or encroaching any major highway corridor or major local arterial roadway. Abatement options include the use of noise barrier walls, siting less-noise-sensitive uses, such as commercial or industrial facilities, closer to major roads, and designing buildings with no windows or other openings toward the roadway.

Noise can also be a short-term issue during road construction. Construction noise can be mitigated by controlling hours of work, shielding the work site, requiring certain equipment types and mufflers, and eliminating the use of backup beepers on equipment. Beepers may be eliminated if a flagger is used for backing of equipment or could be replaced by a flashing strobe light at night. FHWA's *Construction Noise Handbook* and construction noise model provide guidance for mitigating construction noise.

Hazardous Materials/Contaminated Sites

If there are any indications that a tract of land pending development could possibly be contaminated with hazardous materials—such as from a leaking or abandoned underground storage tank (e.g., from an old gas station)—a site assessment should be conducted. The property should also be crosschecked against DEQ's inventory of prior uses. If contamination is encountered, a remedial investigation can be conducted using *DEQ's*

Risk Evaluation Manual for Petroleum Releases.

The presence of contamination or hazardous materials should not be cause to relocate a project. The cleanup and re-use of contaminated sites for transportation projects actually has several advantages: it avoids impacts to uncontaminated sites and provides economic and safety benefits to the community. EPA, DEQ, ITD, local highway districts, and cities and counties should be involved early in the assessment and remediation process.

Cultural and Historical Resources

Impacts to cultural and historic resources, such as historic buildings and areas with tribal significance, may come under National Historic Preservation Act and Section 4(f) regulations,[6] and should be avoided if at all possible.

General mitigation strategies include

- consulting early on with the state historic preservation officer and other interested persons and parties to determine what resources may exist in a specific area; and
- employing relocation, marking, and other measures as appropriate.

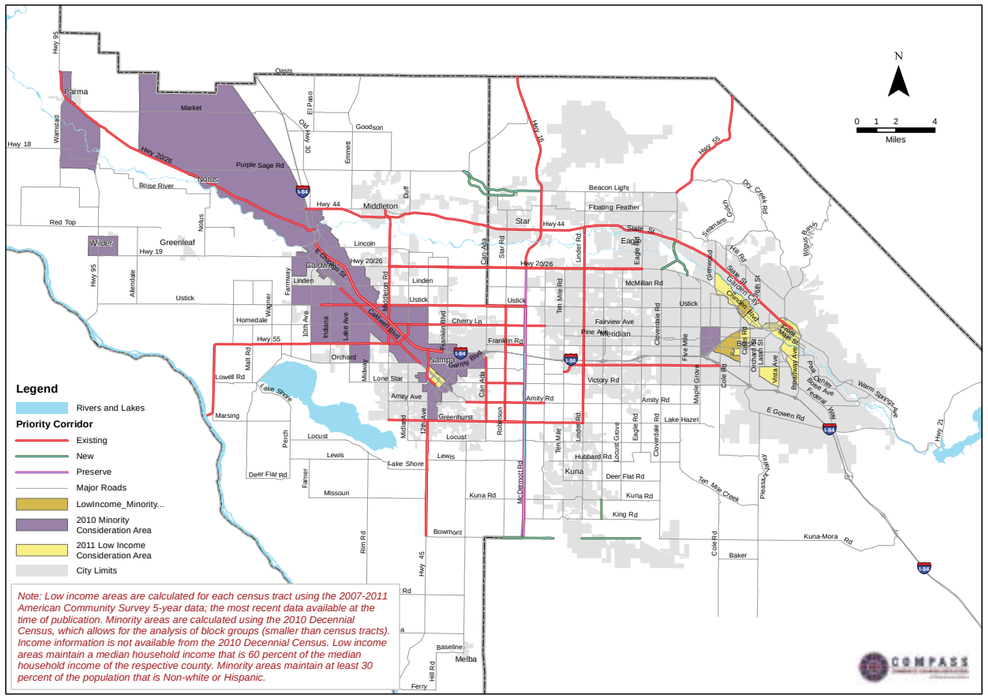
Environmental Justice

State and local transportation agencies have a legal obligation to prevent discrimination and to protect the environment through their plans and programs. Any projects funded with federal dollars and those requiring federal action (like a permit) must comply with the 1994 Executive Order "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which states:

> *[F]ederal agencies are required to identify and address disproportionate adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies, and activities on minority and low-income populations in the United States. This environmental justice analysis requires in-depth studies of communities affected by transportation projects and requires effective community outreach to correctly identify potential impacts. This process is intended to ensure that the project avoids, minimizes or mitigates adverse effects on minority and low-income populations.*

6 Department of Transportation Act of 1966, 49 U.S.C §303; 23 CFR 774.4(f). Section 4(f) declares a national policy to preserve, where possible, "the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

COMPASS has mapped minority and low-income populations in Ada and Canyon Counties to determine where priority corridors intersect with populations of minority and low-income individuals (Figure 9.2). This information is considered when prioritizing projects for the TIP and the long-range transportation plan.



Note: Low-income areas are calculated for each census tract using the 2007-2011 American Community Survey five-year data, the most recent data available at the time of publication. Minority areas are calculated using the 2010 Decennial Census, which allows for the analysis of block groups (smaller than census tracts). Income information is not available from the 2010 Decennial Census. Low-income areas maintain a median household income that is 60% of the median household income of the respective county. Minority areas maintain at least 30 percent of the population that is Non-white or Hispanic.

Figure 9.2. Map of Canyon and Ada Counties' Environmental Justice special consideration areas[7]

7 www.compassidaho.org/documents/prodserv/CIM2040/Maps/EJ_PriorityCorridors_9_2.pdf

Open Space, Parks, and Recreation Areas

A publicly owned park, recreation area, wildlife or waterfowl refuge, or historic site, as well as designated wild and scenic rivers, are subject to federal requirements under Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) declares a national policy to preserve, where possible, "the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Transportation projects can cross "special lands" only if there is no other "feasible and prudent alternative" and the sponsoring agency demonstrates that all possible planning to minimize harm has been accomplished.

Section 4(f) is also called into effect when a project's impacts in the proximity of the protected area are so severe that the resources' activities, features, or attributes are substantially impaired, even if the project does not actually intrude into the protected use.

Agricultural and Farmland

Encouraging growth within existing community footprints is the primary way to minimize encroachment and development on agricultural lands. Planners and developers should consider designing compact and walkable communities, expanding public transportation systems, and maintaining and maximizing use of existing infrastructure.

Agricultural field on Black Cat Road, Kuna. Photo: Troy Behunin, as part of the *Your Treasure Valley Future Photo Challenge*.

Transportation planners working on projects in close proximity to farmlands should involve local planning and zoning agencies and the Natural Resources Conservation Service in the process to preserve and minimize the loss of farmland.

There is no way to mitigate for loss of prime farmland or a change in use to non-agricultural uses.

Land Use

The density and mix of buildings and other constructed features shape people's travel needs and habits, which in turn also shape urban form. For example, in areas with higher densities and mixed commercial and residential buildings, people walk, cycle, and use other non-motorized transport more because trip distances are typically shorter and are less likely to require travel on major roadways. When personal vehicles are used in these areas, trips tend to be shorter, and ride sharing is more feasible because there is a greater likelihood that individuals are traveling to and from similar locations. Transportation planning and design should incentivize high-density and mixed-use building to minimize land consumption from urban sprawl.

Air Quality

Strategies to preserve air quality and reduce pollution can be incorporated into general land use and transportation planning, and are included in the goals and objectives of this plan. For example, compact and walkable community designs, expanded public transportation and non-motorized transportation systems, and maintaining and maximizing the use of the existing transportation infrastructure would likely reduce transportation-related air emissions. Practical examples of these strategies include providing infrastructure to support carpooling and implementing bicycle and pedestrian plans.

Northern Ada County is an air quality "maintenance area" for carbon monoxide and coarse particulate matter (PM10), meaning that northern Ada County has violated federal health-based air quality standards for these pollutants in the past, but is now in compliance with those standards and has federally approved plans to maintain compliance in the future. As a maintenance area, COMPASS must demonstrate that federally funded and "regionally significant" transportation projects will not degrade air quality in the Treasure Valley. This is referred to as an "air quality conformity demonstration." Through required computer modeling, COMPASS demonstrated that the estimated impacts of the funded projects in CIM 2040 (Chapter 6) meet air quality conformity requirements for northern Ada County and will not degrade air quality. Appendix A contains the full air quality conformity demonstration documentation and report.

The Treasure Valley airshed is subject to stagnant air, which exacerbates the concentration of air pollutants and contributes to the future possibility of exceeding health standards. Pollutants of particular concern are PM2.5 and ozone. Strategies in this plan also address these pollutants and are intended to reduce the likelihood of future exceedances.

In addition to air quality impacts of using our transportation system, dust generated by transportation-related construction can also cause short-term impacts. These impacts can be mitigated by developing and following a dust prevention and control plan and employing control measures such as

- watering roadways;
- covering loads;
- sweeping roadways; and
- reducing speed limits through construction zones.

Additional mitigation measures during construction can include

- properly maintaining construction equipment;
- evaluating the use of available alternative engines and diesel fuels;
- reducing construction-related traffic trips and unnecessary idling;
- using newer, "cleaner" construction equipment;
- installing control equipment on diesel construction equipment; and
- rerouting truck traffic away from communities and schools.

Adopting a construction emissions mitigation plan (CEMP) will help ensure procedures are sufficiently defined, thereby reducing air quality impacts.

Design and implementation of mitigation measures should include consultation with ITD, DEQ, local highway districts, cities, and counties.

In addition to the mitigation measures discussed above, state and local agencies and even private businesses have been proactive in protecting air quality throughout the Treasure Valley for several decades. In 1999, the Division (now Department) of Environmental Quality published *Treasure Valley Air Quality*, a regional look at air pollution issues in Ada and Canyon Counties and a discussion of proactive strategies to control air pollution. The Practical Paths to Clean Air Governor's Conference was held in 2003; following this, in 2005, then-Governor Dirk Kempthorne signed the Regional Air Quality Council Act into law. The act established the Treasure Valley Air Quality Council, which then developed the Treasure Valley Air Quality Plan in 2007.

While each of these has moved the conversation forward with new data and specific actions to curb air pollution, these plans, conferences, and reports have all focused on the same types of recommendations: educate the public, plan a transportation system that encourages the use of alternatives and discourages idling, plan land use to reduce (or slow the growth of) vehicle miles traveled, and facilitate change in government and business practices and processes through incentives or, when necessary, regulation.

Some programs and projects have spawned specifically due to these collaborative efforts, while others developed of their own accord. A few of the many programs that support clean air in the Treasure Valley include

- the adoption of CIM 2040, CIM 2035, and CIM 2030, including growth scenarios ("Community Choices" for CIM 2030 and 2035 and the CIM 2040 Vision) that promote development patterns that support the use of transportation alternatives (and, therefore, decrease reliance on single-occupancy vehicles);
- an expanding alternative-transportation network, including improvements in public transportation, vanpools/carpools, and bicycle and pedestrian facilities;
- public education and awareness campaigns, including campaigns in the early to mid-2000s sponsored by the Treasure Valley Partnership and Department of Environmental Quality and a new campaign initiated in 2013, funded by the Air Quality Board and Department of Environmental Quality and managed by COMPASS;
- the implementation of a Stage I Vapor Recovery program;[8]
- employer-based programs to reduce employees' vehicle miles traveled, including incentives to use alternative transportation and/or work from home;
- improving signal timing to reduce idling of cars in traffic;
- the implementation of local ordinances regulating open burning and limiting indoor residential burning based on air quality forecasts; and
- organization-specific initiatives, such as purchasing fuel-efficient and alternative-fueled vehicles and maintenance equipment and using paints and other chemicals low in volatile organic compounds.

In addition, any business or industry that emits air pollutants into the air is required to have an air-pollution-control permit from DEQ; this helps ensure compliance with state and federal air-pollution-control rules.

8 Vapor recovery is a process of capturing gasoline vapors that would otherwise escape during the transfer of fuel from delivery trucks to storage tanks at retail gas stations; when unchecked, these vapors contribute to air pollution.

Environmental Performance Measures and Targets

CIM 2040 addresses the environment in goal 5.1: *Promote a transportation system and land use patterns that enhance public health, protect the environment, and improve the quality of life.*

COMPASS will track progress toward meeting goal 5.1 through monitoring the following performance measures and advancement toward their specific targets in 2040:[9]

- Vehicle emissions (PM10)
  - Current: 24.4 tons/day
  - Target: Less than 60.1 tons/day
- Ratio of regional preserved open space to population
  - Current (2010): 22.3 acres/1,000 people
  - Target: 25 acres/1,000 people

The annual performance monitoring report, with data on progress toward meeting all regional performance measures, as well as reports from past years, are available on the COMPASS Performance Dashboard. The 2014 report will be the first to address these specific performance measures.

9 See Chapter 10 for a discussion on the development of CIM 2040 performance measures and targets.

CHAPTER 10

ASSESSING PERFORMANCE OF THE TRANSPORTATION SYSTEM

***Communities in Motion 2040* discusses the many issues—such as financial, current and future transportation needs, and sustainability—that have been taken into account while developing the long-range vision for the Treasure Valley. But is it possible to determine if the plan is actually working—that is, whether growth is consistent with the CIM 2040 Vision? Or, if public resources are being used as effectively as possible?**

The answer is yes. COMPASS regularly gathers data on growth in the economy, jobs, building permits, and other indicators to determine the health of the valley and the potential demand on the transportation system. It shares this data with the public and with stakeholders, who use it to track progress made toward each of CIM 2040's 17 goals. To track progress, COMPASS compares the data to performance measures and targets.

> Set goals—high goals for you and your organization. When you have a goal to shoot for, you create teamwork, people working for a common good.
>
> – Bear Bryant

COMPASS provides the data on growth in a number of reports, including:

- **Performance Monitoring Report.** This report summarizes and evaluates many factors in order to show how much progress is being made toward meeting CIM goals. The baseline performance monitoring report for CIM 2040 was posted to the

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

COMPASS website in July 2014 and will be updated every two years. All previous performance monitoring reports are currently available online.

- **Congestion Management System Report.** This annual CMP report helps transportation and land use planning entities implement congestion management strategies and projects to improve travel time, particularly in areas of high congestion. (See Chapter 6 for additional information on the COMPASS CMP.) The report also helps evaluate progress made toward managing congestion. Additionally, the information within the report serves as input into the project prioritization process for the yearly update of the regional TIP.
- **Development Monitoring Report.** This report gives an overview of development activity using building permit information collected from cities and counties. Building permits are tabulated with their addresses at several levels of geography, allowing for the creation of maps and detailed analyses of specific geographic areas upon request. Annual development monitoring reports are available online.

In addition, the COMPASS Performance Dashboard will display performance monitoring data for Ada or Canyon Counties.

CIM 2040 Performance Measures and Targets

Infill development, 13th Street, Boise. Photo: Diane Kushlan, as part of the *Your Treasure Valley Future Photo Challenge*.

CIM 2040 includes performance measures and targets for transportation, and also assesses land use, housing, community infrastructure, economic development, open space, farmland, and health as they relate to transportation.

Performance measures and targets were developed from several sources, and comprise those that were:

- identified by the COMPASS Board;
- created for the scenario planning process to establish the CIM 2040 Vision (Chapter 3);
- used in previous performance monitoring reports; and
- likely to be required by MAP-21.

CIM 2040 Goals

1. Transportation

1.1. Enhance the transportation system to improve accessibility and connectivity to jobs, schools, and services; allow the efficient movement of people and goods; and ensure the reliability of travel by all modes considering social, economic, and environmental elements.

1.2. Improve safety and security for all transportation modes and users.

1.3. Protect and preserve existing transportation systems and opportunities.

1.4. Develop a transportation system with high connectivity that preserves capacity of the regional system and encourages walk and bike trips.

2. Land Use

2.1 Coordinate local land use planning, transportation planning, and development to maximize the use of existing infrastructure, increase the effectiveness of investment, and retain or enhance the vitality of the local community.

2.2 Recognize and more clearly define and support the regional role of all communities, including small communities.

2.3 Encourage infill development and more compact growth near community-identified activity centers.

2.4 Strive for more walkable, bikeable, and livable communities with a strong sense of place and clear community identity and boundaries.

3. Housing

3.1 Encourage mixed-use neighborhoods, town centers, and other development types that include a variety of housing options to meet the transportation and housing needs of all socio-economic groups.

4. Community Infrastructure

4.1 Promote land use patterns that provide Treasure Valley residents with safe, reliable, and cost-efficient infrastructure services.

4.2 Promote maintenance and preservation of existing infrastructure.

5. Health

5.1 Promote a transportation system and land-use patterns that enhance public health, protect the environment, and improve the quality of life.

6. Economic Development

6.1 Develop a regional transportation system that connects communities, provides access to employment centers, and provides efficient truck, rail, and/or air freight movement throughout the Treasure Valley.

6.2 Maintain the vitality of regional centers, downtowns, and main streets through continued public and private investments in new and existing business, housing, and transportation options as appropriate.

7. Open Space

7.1 Promote development and transportation projects that protect and provide all of the region's population with access to open space, natural resources, and trails.

8. Farmland

8.1 Protect and enhance transportation routes for the efficient movement of farm equipment and products.

8.2 Protect agricultural land for food, fiber, and fuel production and support of other agricultural and food-related businesses.

The COMPASS Board approved initial CIM 2040 performance measures and then asked the CIM Planning Team to refine them (Figure 10.1). The Planning Team and the Public Participation Committee formed a work group to review the initial measures and targets, and made recommendations to the Board. The Board approved the final measures in December 2013.

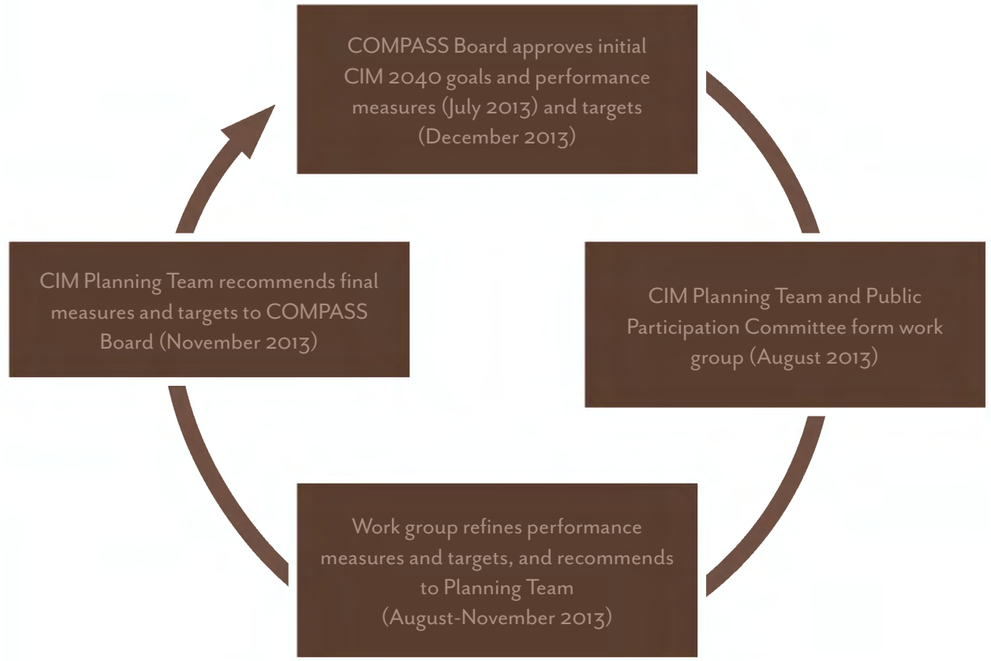


Figure 10.1. CIM 2040 performance measures and target development

The work group considered many factors as it reviewed each potential performance measure:[1]

- Does it represent a key concern?
- Is it clear?
- Are data available?
- Can it be forecasted?
- Is the measure something the agency and its investments can influence?
- Is the measure meaningful for the types of services or area?

1 These considerations are from *Performance-Based Planning and Programming Guidebook*, FHWA, September 2013.

Figure 10.2 and Figure 10.3 categorize the 56 CIM 2040 performance measures by topic area. Many of the performance measures address multiple CIM 2040 goals and MAP-21 performance areas. The full list of performance measures, their descriptions, cross-referenced goals, and baseline and target values are online.

Safety	• Automobile: crashes, injuries, and fatalities • Bicycle: crashes, injuries, and fatalities • Pedestrian: crashes, injuries, and fatalities • Transit crashes
Infrastructure Conditions	• Bridge conditions • Transit vehicle replacement • Pavement conditions (pending available data) • Bicycle and pedestrian facility conditions (pending available data)
Congestion Reduction	• Interstate congestion • Travel time index • Duration of congestion (pending available data)
System Reliability	• Automobile peak hour travel time • Bicycle level of service • Pedestrian level of service • Miles of sidewalks and bikeways • On-time performance • Transit level of service • Passenger load factor (pending available data)
Freight Movement and Economic Vitality	• Freight travel time index • Farm-to-market travel time (pending available data) • Housing + Transportation Affordability Index (pending available data)
Environmental Sustainability	• Vehicle emissions
Reduced Project Delivery Delays	• Transportation Improvement Program (TIP) status report

Figure 10.2. CIM 2040 transportation performance measures

Land Use	• Jobs-housing balance • Population in downtowns • Land development consistency • Population in major activity centers • Population in infill development • Transit-supportive housing • Households near transit
Housing	• Housing affordability index • Location affordability index • New multi-family units • Average residential density
Community Infrastructure	• Acres annexed per new population • Households outside area of impact • LEED buildings
Health	• Household connectivity • Households near parks • Households near schools • Households near grocery stores
Economic Development	• Employment near transit • Economic clusters
Open Space	• Miles of trails and pathways • Boise River Greenbelt miles • Boise River Greenbelt access • Ratio of parks to population • Ratio of open space to population
Farmland	• Consumption of agricultural land • Acres of farmland

Figure 10.3. CIM 2040 other performance measures

MAP-21 Performance Requirements

MAP-21 emphasizes performance-based planning and programming to direct resources toward projects that collectively and efficiently help achieve national goals.

MAP-21 requires that MPOs collaborate with states and with public transportation providers to set targets. (MAP-21 rulemaking is still ongoing, and national and state performance measures are still forthcoming.)

MAP-21 National Goals

1. Safety: Achieve a significant reduction in traffic fatalities and serious injuries on all public roads
2. Infrastructure Condition: Maintain a highway infrastructure asset system in a state of good repair
3. Congestion Reduction: Achieve a significant reduction in congestion on the national highway system
4. System Reliability: Improve the efficiency of the surface transportation system
5. Freight Movement and Economic Vitality: Improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
6. Environmental Sustainability: Enhance the performance of the transportation system while protecting and enhancing the natural environment
7. Reduced Project Delivery Delays: Promote jobs and the economy; and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

Performance Measure Usage

Performance measurement reporting helps COMPASS demonstrate whether the region is meeting the goals outlined in CIM 2040 and required by MAP-21. Reporting also allows for clear communication, accountability to the public, and better decision making.

Residents and other stakeholders can track progress made toward CIM 2040 goals on the COMPASS Performance Dashboard.

Local governments can use COMPASS' development review checklist to evaluate whether land development proposals support CIM goals and objectives.

Summary

The CIM 2040 performance measures and targets serve a vital role in identifying progress toward 1) achieving the plan goals (Chapter 1) and implementation policies (Chapter 11) and 2) meeting MAP-21 performance goal area requirements. They also allow for increased communication with and accountability to stakeholders and the public and provide a systematic approach to improved decision making through better information.

Over the next several decades, we are certain to get somewhere—but only by focusing on the CIM 2040 goals and objectives, and using performance measures to track progress will we identify progress toward a better quality of life for Treasure Valley residents.

CHAPTER 11

IMPLEMENTING THE PLAN

The interdependent relationship between transportation and land use means that decisions made today about Idaho's transportation system will affect where and how people travel, and how cities, counties, and the state continue to develop.

COMPASS has developed CIM 2040 to

- document the present state of the transportation system in Ada and Canyon Counties across all transportation modes; and
- chart a course for the maintenance and improvement of the transportation system based on anticipated needs and revenues.

In addition to assessing regional transportation and land use issues, CIM 2040 considers six other related elements: housing, community infrastructure, economic development, open space, farmland, and health.

Bike parade at Nampa's Bicycle Boulevard grand opening street fair. Photo: Kristi Watkins, as part of the *Your Treasure Valley Future Photo Challenge*.

The plan includes recommendations for more than 100 tasks and prioritizes corridors and other improvements that are currently unfunded. Performance measures and targets are also identified that can help measure progress in the region. CIM 2040 stresses the importance of working together as a region and communication and collaboration among agencies.

This chapter synthesizes the goals, objectives, and tasks identified for CIM 2040 into eight regional policy statements to help guide the implementation of the plan. They are designed to serve as a tool for the COMPASS Board of Directors in its role as a regional

Note: A glossary of terms is available at **www.compassidaho.org/comm/glossary.htm**. Acronyms in this document are defined in Appendix B.

policy board and to support COMPASS staff-level work on specific tasks. The policies are not intended to replace CIM tasks or goals. These policies are listed below.

To implement the goals of CIM 2040, including the CIM 2040 Vision, COMPASS will

- focus available federal funding on maintaining the existing transportation system;
- consider corridor priority order when monies become available for unfunded projects;
- coordinate local plans for land use and transportation investments to implement the CIM 2040 goals and vision;
- cultivate new funding sources for transportation investments;
- promote the appropriate design of transportation facilities for the needs of all users as outlined in the COMPASS complete streets policy (adopted by the COMPASS Board August 8, 2009);
- employ a grant program to assist agencies in funding innovative ways to implement CIM 2040;
- educate and actively engage the public and stakeholders on best practices for implementing CIM 2040;
- monitor, track, and report development activity and changes to comprehensive plans and other related documents; and
- consider the CIM 2040 goals and vision when developing projects and tasks for the annual COMPASS Unified Planning Work Program.

Going Forward

A plan offers a destination and a broad set of instructions on how to get there. Reaching the goals of this plan requires investing in transportation, considering the design of our transportation systems, and integrating transportation and land development decisions. The adoption of *Communities in Motion 2040* is not the destination; it is the start of the journey.

APPENDICES

APPENDIX A

WORKING

TOGETHER

TO PLAN

FOR THE

FUTURE

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

Conformity Demonstration of *Communities in Motion 2040*

Report No. 07-2014
Adopted by the COMPASS Board on July 21, 2014
Resolution No. 10-2014

March 2014

THIS DOCUMENT IS SUBMITTED TO THE U.S. DEPARTMENT OF TRANSPORTATION IN FULFILLMENT OF THE REQUIREMENTS OF THE 1990 CLEAN AIR ACT AMENDMENTS, THE FEDERAL TRANSPORTATION AIR QUALITY CONFORMITY RULES (40CFR93), AND THE STATE OF IDAHO ADMINISTRATIVE CODE ON TRANSPORTATION CONFORMITY (IDAPA 58-01.01.563-574).

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COMPASS

RESOLUTION NO. 10-2014

FOR THE PURPOSE OF APPROVING *COMMUNITIES IN MOTION 2040* AS THE REGIONAL LONG-RANGE TRANSPORTATION PLAN FOR ADA AND CANYON COUNTIES AND THE ASSOCIATED AIR QUALITY CONFORMITY DEMONSTRATION FOR NORTHERN ADA COUNTY

WHEREAS, the Community Planning Association has been designated by the Governor of Idaho as the metropolitan planning organization (MPO) responsible for transportation planning in Ada and Canyon Counties;

WHEREAS, the Moving Ahead for Progress in the 21st Century (MAP-21) Act, Title 23 United States Code Section 134, and Title 49 United States Code Section 5303 of the Code of Federal Regulations require MPOs to prepare regional long-range transportation plans covering a period of at least 20 years;

WHEREAS, the 1990 Clean Air Act Amendment requires all regional long-range transportation plans in nonattainment and maintenance areas demonstrate conformity to applicable state implementation plans for air quality improvements;

WHEREAS, the Community Planning Association of Southwest Idaho has performed an air quality conformity demonstration and has concluded the recommended plan does comply with applicable state implementation plans;

WHEREAS, MAP-21, Title 23 United States Code Section 134 and Title 49 United States Code Section 5303 require that regional long-range transportation plans be financially constrained, a condition which has been demonstrated in *Communities in Motion 2040*; and

WHEREAS, a 8-week public comment period was held for *Communities in Motion 2040*, meeting the requirements of MAP-21 and the Community Planning Association of Southwest Idaho's public involvement policy.

NOW, THEREFORE, BE IT RESOLVED, that the Community Planning Association of Southwest Idaho Board approves the finding that *Communities in Motion 2040* conforms to relevant provisions of the state implementation plans for Idaho and hereby adopts *Communities in Motion 2040*, dated July 21, 2014, as the regional long-range transportation plan for Ada and Canyon Counties.

BE IT FURTHER RESOLVED, that the Community Planning Association of Southwest Idaho Board of Directors authorizes the submittal of this plan to the appropriate local, state, and federal agencies for their consideration.

Dated this 21st day of July 2014.

APPROVED:

By: _____
Charlie Rountree, Chair
Community Planning Association Board

ATTEST:

By: _____
Matthew J. Stoll, Executive Director
Community Planning Association

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700 NE 2nd Street, Suite 200
Meridian, ID 83642
P: 208.855.2558
F: 208.855.2559
www.compassidaho.org

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LIST OF ACRONYMS

ACHD		Ada County Highway District
ATR		Automatic Traffic Recorder
AVFT		Alternative Vehicle Fuels and Technology
CFR		Code of Federal Regulations
CIM		*Communities in Motion*
CIM 2040		*Communities in Motion 2040*
CIP		ACHD's Capital Improvement Plan
CNG		Compressed Natural Gas
CO		Carbon Monoxide
COMPASS		Community Planning Association of Southwest Idaho
DEQ		Idaho Department of Environmental Quality
E10		10% ethanol in gasoline
EPA		US. Environmental Protection Agency
ICC		Interagency Consultation Committee
ITD		Idaho Transportation Department
ITIP		Idaho Transportation Investment Program
MOVES		Motor Vehicle Emission Simulator
MPO		Metropolitan Planning Organization
NAAQS		National Ambient Air Quality Standards
NO_x		Oxides of Nitrogen
OBD		On-board Diagnostics
PM_{10}		Particulate Matter with a diameter less than 10 micrometers (i.e. $1x10^{-6}$) (Coarse particulate matter)
RPM		Revolutions Per Minute
SH		State Highway
SIP		State Implementation Plan
TIP		Transportation Improvement Program
TMAC		Transportation Modeling Advisory Committee
TPD		Tons per Day
VIN		Vehicle Identification Number
VOC		Volatile Organic Compounds

FOREWORD

The federal government mandates that any transportation projects using federal funds or deemed to be "regionally significant" in nonattainment and maintenance areas cannot contribute to a degradation of air quality (40CFR93). Thus, transportation plans must "conform" to air quality plans. Transportation conformity is demonstrated in a nonattainment or maintenance area when it can be shown, within the applicable guidelines and regulations, that planned transportation projects listed in a transportation program or plan will not cause or contribute to exceedances of the U.S. Environmental Protection Agency's (EPA's) health-based air quality standards. A finding of nonconformity would prevent the implementation of certain federally funded and/or regionally significant transportation projects.

Only EPA's criteria pollutants[1] are subject to conformity analyses. One of two tests is used in a conformity demonstration:

> Budget: State air quality implementation and maintenance plans for nonattainment and maintenance areas will often have maximum limits on the amounts of pollutants that transportation related sources emit. These maximum emissions limits on transportation related sources are known as "budgets." A transportation conformity budget test consists of a comparison between regional emissions estimates that include the impacts associated with planned transportation projects to the established budget. If the budget is not exceeded by the emissions estimate, then conformity has been demonstrated.
>
> Build/No Build: Conceptually, this process is rather simple - estimate the amount of a given pollutant emitted in a region before the programmed projects are built (no build scenario) and after construction (build scenario). If the emissions from a build scenario are equal to or less than the emissions from a no build scenario, conformity has been demonstrated. This test is used for nonattainment or maintenance areas where motor vehicle emissions budgets are not established.

This document contains the information and analyses necessary for the Federal Highway Administration and the Federal Transit Administration to make a transportation conformity finding for *Communities in Motion 2040*, the regional long-range transportation plan for Ada and Canyon Counties.

[1] EPA sets air quality standards for six common pollutants, referred to as "criteria" air pollutants. These standards are developed based on human health and/or environmental criteria (science-based guidelines). Of the six criteria pollutants, particulate pollution and ground-level ozone are the two most widespread health threats.

SUMMARY

The U.S Environmental Protection Agency's Motor Vehicle Emission Simulator (MOVES) and the Community Planning Association of Southwest Idaho's (COMPASS') most current and approved travel demand model were used to estimate pollutant emissions from the transportation projects contained in *Communities in Motion 2040* (CIM 2040) and the FY2014-2018 Regional Transportation Improvement Program (TIP). A TIP is a short-range (five-year) capital improvement budget for the transportation system in a given urbanized area. The Interagency Consultation Committee (ICC) approved the modeling methodologies and assumptions used in the regional emissions analyses including the applicable transportation model networks. Growth and demographic assumptions from the region's *Communities in Motion 2040* Vision are used in this demonstration.

The *Northern Ada County PM_{10} State Implementation Plan, Maintenance Plan: Ten-Year Update*[2] contains motor vehicle emissions budgets for three pollutants: coarse particulate matter, oxides of nitrogen, and volatile organic compounds. Emissions budget tests, as required by 40CFR93.118, demonstrate conformity of CIM 2040. The *Northern Ada County Air Quality Maintenance Area Second 10-Year Carbon Monoxide Limited Maintenance Plan*[3] does not contain any motor vehicle emissions budgets. However, COMPASS conducts a carbon monoxide emissions analysis as requested by the Idaho Department of Environmental Quality to aid in regional air quality planning.

While areas with maintenance plans approved under the limited maintenance plan option are not subject to the budget test, the areas remain subject to other transportation conformity requirements of 40CFR 93, subpart A. Thus, the metropolitan planning organization (MPO) in the area or the state must document and ensure that:

a. Transportation plans and projects provide for timely implementation of SIP transportation control measures in accordance with 40CFR93.113;
b. Transportation plans and projects comply with the fiscal constraint element per 40CFR93.108;
c. The MPO's interagency consultation procedures meet applicable requirements of 40CFR93.105;
d. Conformity of transportation plans is determined no less frequently than every four years, and conformity of plan amendments and transportation projects is demonstrated in accordance with the timing requirements specified in 40CFR93.104;
e. The latest planning assumptions and emissions model are used as set forth in 40CFR93.110 and 40CFR93.111;
f. Projects do not cause or contribute to any new localized carbon monoxide or particulate matter violations, in accordance with procedures specified in 40CFR93.123; and
g. Project sponsors and/or operators provide written commitments as specified in 40CFR93.125. [40CFR93, subpart A]

[2] http://www.deq.idaho.gov/media/971222-ada_county_pm1 0_sip_0213.pdf

[3] http://www.deq.idaho.gov/media/909866-ada-county-co-maintenance-plan-2011.pdf

I. INTRODUCTION

Community Planning Association of Southwest Idaho

The Community Planning Association of Southwest Idaho (COMPASS) is an association of local governments in Ada and Canyon Counties, Idaho. It provides transportation planning and a host of other planning and community services to its member agencies and the general public. Since 1977, COMPASS, formerly known as the Ada Planning Association, has been designated as the metropolitan planning organization (MPO) for northern Ada County. In April 2003, COMPASS was designated as the MPO for the Nampa Urbanized Area, located in neighboring Canyon County. The agency's service area covers Ada and Canyon Counties.

Clean Air Act Designations

Coarse Particulate Matter (PM_{10})

Northern Ada County is designated as a maintenance area in attainment of the 24-hour PM_{10} National Ambient Air Quality Standard (NAAQS). Appendix A shows the extent of the maintenance area boundaries. While exceedances of the 24-hour PM_{10} NAAQS have occurred due to wind-blown dust events, no violations of the 24-hour PM_{10} NAAQS have occurred since the area was designated as a maintenance area in attainment of the standard. Prior to March 12, 1999, Northern Ada County was designated as a nonattainment area for PM_{10}. However, on that date, the U.S. Environmental Protection Agency (EPA) Administrator signed a revocation of Northern Ada County's nonattainment designation based on changes made to the PM_{10} NAAQS (64FR12257). This ruling was challenged in the Ninth District Circuit Court. On January 31, 2001, the U.S. Department of Justice approved a settlement agreement for the Idaho Clean Air Force et al. v. EPA et al. lawsuit. A major component of the settlement agreement required the Idaho Department of Environmental Quality (DEQ) to update Northern Ada County's PM_{10} State Implementation Plan (SIP). In September 2003, the EPA approved the *Northern Ada County PM_{10} SIP Maintenance Plan and Redesignation Request*. In March 2013, the *Northern Ada County PM_{10} State Implementation Plan, Maintenance Plan: Ten-Year Update*[4] (PM_{10} maintenance plan) was submitted to EPA. On May 17, 2013, EPA announced receipt of the "maintenance plan" and issued determination of adequacy of the motor vehicle emission budgets for transportation conformity purposes.

Commonly, past exceedances of the 24-hour PM_{10} NAAQS in Northern Ada County occurred during severe wintertime air stagnation events. These events, known as atmospheric inversions, are caused when cold, stagnant air is held close to the valley floor by warmer air aloft. During these events, particulates form in the atmosphere out of gaseous pollutants such as oxides of nitrogen (NO_X) and volatile organic compounds (VOCs). Thus, both NO_X and VOCs are considered precursors of PM_{10}. As a result, the PM_{10} maintenance plan contains approved PM_{10}, NO_X, and VOC motor vehicle emissions budgets.

Carbon Monoxide (CO)

Additionally, Northern Ada County is designated as an attainment area with an approved limited maintenance plan of the CO NAAQS. Northern Ada County has not experienced a violation of the CO NAAQS since 1987. DEQ submitted the *Limited Maintenance Plan and Request for Redesignation to Attainment for the Northern Ada County Carbon Monoxide Not-Classified Nonattainment Area* to EPA in December 2001. EPA approved the limited maintenance plan and subsequently redesignated the area in December 2002. The *Northern Ada County Air Quality Maintenance Area Second 10-Year Carbon Monoxide Limited Maintenance Plan* (CO maintenance plan) was approved by EPA September 2012. Maintenance areas under a limited maintenance plan are not required to demonstrate their transportation programs or long-range transportation plans conform through a regional emissions analysis. Therefore, there are no applicable CO motor vehicle emissions budgets established for Northern Ada County.

[4] http://www.deq.idaho.gov/media/971222-ada_county_pm10_sip_0213.pdf

Rules

As described previously, the PM_{10} maintenance plan established motor vehicle emissions budgets for PM_{10}, NO_x, and VOCs. Therefore, to satisfy transportation conformity requirements established by 40CFR93.118, budget tests must be performed for *Communities in Motion 2040* (CIM 2040), the regional long-range transportation plan for Ada and Canyon Counties. Budget tests are satisfied when regional emissions estimates based on the transportation projects outlined in a Regional Transportation Improvement Program (TIP) or transportation plan are less than or equal to "budgets" established by SIPs and/or air quality maintenance plans.

EPA guidance related to "limited maintenance plans" eliminates this requirement with regard to CO for Northern Ada County's conformity demonstrations:

> *…in areas with approved limited maintenance plans, Federal actions requiring conformity determinations under the transportation conformity rule could be considered to satisfy the budget test required in section 93.118, 93.119, and 93.120 of the rule.*[5]

Therefore, CO motor vehicle emissions budget tests are not federally required for Northern Ada County. However, DEQ requires COMPASS conduct a build/no build analysis of its programs and long-range plans in order to facilitate good air quality planning. If the results of this analysis show an unacceptable increase in CO emissions, DEQ may choose to require mitigation measures.

Interagency Consultation

Idaho Administrative Code (IDAPA 58.01.01.567) requires nonattainment and maintenance areas establish an Interagency Consultation Committee (ICC) on transportation conformity. The Northern Ada County ICC approved the assumptions and methodologies employed in the development of the regional emissions analyses in this demonstration on January 9, 2014. The approved assumptions and methodologies are listed in Appendices B and C. The roadway project list was also approved by the ICC on January 9, 2014. A complete listing of the ICC requirements can be found in Idaho Administrative Code (IDAPA 58.01.01.563-574).

Budget Test

A budget test is a comparison of emissions estimates to an established limit (or budget) for motor vehicles. As per 40CFR93.118(b), budget tests must be performed:

> *…each year for which the applicable … implementation plan specifically establishes motor vehicle emissions budget(s), for the last year of the transportation plan's*

[5] Page 8 of the *Northern Ada County Air Quality Maintenance Area Second 10-Year Carbon Monoxide Limited Maintenance Plan* http://www.deq.idaho.gov/media/909866-ada-county-co-maintenance-plan-2011.pdf

forecast period, and for any intermediate years as necessary so that the years for which consistency is demonstrated are no more than ten years apart…

The PM_{10} maintenance plan established motor vehicle emissions budgets. Budget tests were performed for:

- 2014 - Base year of the FY2014-2018 TIP
- 2018 - Last year of the FY2014-2018 TIP
- 2025 - Intermediate analysis year, no more than 10 years between analysis years
- 2035 - Intermediate analysis year, no more than 10 years between analysis years
- 2040 - Long-range transportation plan (CIM 2040*)* horizon year

Projects for the five scenarios are shown in Table 1, Table 3, Table 5, and Table 7 and the results for these five scenarios are shown in Table 2, Table 4, Table 6, Table 8, and Table 9.

Regionally Significant Projects
Regional emissions analyses, for the purposes of demonstrating transportation conformity of a TIP or long-range plan, must include all regionally significant and/or federally funded projects in the nonattainment or maintenance area.

40CFR93.101[6] defines a regionally significant project as:

> *… a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.*

Idaho Administrative Code (IDAPA 58.01.01.566)[7] further defines a regionally significant project as:

> *A transportation project, other than an exempt project, that is on a facility which serves regional transportation needs… and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum:*
>
> a. *All principal arterial highways;*
> b. *All fixed guideway transit facilities that offer an alternative to regional highway travel; and*
> c. *Any other facilities determined to be regionally significant through Section 570, interagency consultation.*

The ICC maintains discretionary authority in interpreting and applying these definitions to the area's transportation programs, plans, and projects. For the purposes of this conformity determination, all applicable roadway projects, despite their significance, were included in the travel demand model networks.

[6] Code of Federal Regulations Title 40: Protection of Environment
[7] Idaho Administrative Code Rules for the Control of Air Pollution in Idaho

Regionally Significant Roadway Project Definition
On January 30, 2002, the ICC developed the following definition of a "Regionally Significant" transportation project:

> *A transportation project in Ada County, Idaho is designated "Regionally Significant" if:*
>
> *(a) the project is for the improvement of either:*
> *(i) a principal arterial or higher functional classification; or*
> *(ii) a minor arterial which will have a twenty (20) year projected traffic volume of at least 45,000 vehicles a day after completion of the project; and*
>
> *(b) the project will add at least one new continuous vehicular lane which either:*
> *(i) extends from one intersecting principal or minor arterial to another intersecting principal or minor arterial; or*
> *(ii) in the case of an interstate, extends from the on ramp of one interstate interchange to a point beyond the off ramp of the next adjacent interstate interchange.*

Regionally Significant Transit Project Definition
On August 31, 2005, the ICC adopted the following definition of a "Regionally Significant" transit project:

> *A transit project in Ada County, Idaho is designated "Regionally Significant" if the transit project:*
>
> *(a) has the potential to change the vehicle demand of an existing roadway classified as a principal arterial or higher by 400 vehicles per hour, or 4,000 vehicles per weekday; and*
>
> *(b) is a transit service or facility that provides services to (or connects) at a minimum:*
> *(i) two counties and;*
> *(ii) three incorporated cities*

<u>Exempt Projects:</u>
Pursuant to 40CFR93.126 (Exempt Projects), certain projects listed in a long-range transportation plan or TIP may proceed even in the absence of a conformity finding/ demonstration. Exempt projects include highway safety or mass transit projects, landscaping projects, roadway rehabilitation and repair, transportation enhancement projects, and transportation planning activities that do not lead directly to construction. However, the exempt projects listed in 40CFR93.126 are not considered exempt if the ICC concludes that they may have an adverse impact on air quality.

In addition, 40CFR93.127 (Projects Exempt from Regional Emissions Analyses) considers projects, such as intersection signalization, changes in alignment, bus terminals, and transit transfer points, exempt from regional emissions analyses. However, these projects must demonstrate project-level conformity. As with the types of exempt projects listed in 40CFR93.126, the projects listed in 40CFR93.127 may not be considered exempt if the ICC concludes they may have an adverse impact on air quality.

Transportation Control Measures
As per 40CFR93.113(c), in order for a TIP or long-range transportation plan to be conforming, it cannot interfere with the implementation of any transportation control measures. There are no transportation control measures requiring implementation in either the PM_{10} maintenance plan or the CO maintenance plan. Therefore, CIM 2040 meets the requirements of 40CFR93.113(c).

II. EMISSIONS ESTIMATION

Emissions Analysis Assumptions and Tools

This air quality conformity demonstration is based upon average speed distributions for each roadway type by 16 speed "bins." The regional travel demand model's average daily estimates or forecasts for each roadway segment provide the necessary data for this input. Emissions factors are generated using the latest version of EPA's motor vehicle emissions model (Motor Vehicle Emission Simulator, or MOVES2010b). A regional emission analysis was conducted as described below.

COMPASS' Travel Demand Model
The COMPASS travel demand model provides estimates of average weekday and peak hour travel demand for each link of a given transportation network based on current and future growth assumptions. In addition to travel demand, the model produces weekday vehicle miles of travel forecasts, congested network speeds, and other data relevant to regional emissions analyses. The travel demand model is regularly maintained and updated to include all completed roadway projects. Future-year model networks include anticipated widening and new roadway projects, regardless of significance or exemption status. Transportation network components include interstates, principal arterials, minor arterials, collectors, and select local roads in Ada and Canyon Counties.

COMPASS' travel demand modeling activities are performed under the review of the Transportation Model Advisory Committee (TMAC). TMAC is a technical committee formed by the COMPASS Board of Directors. The committee is made up of local experts, technical staff from COMPASS member agencies, and local traffic engineers from both the public and private sectors. TMAC works with COMPASS staff to periodically calibrate and validate the travel demand model to reflect the actual travel patterns and behaviors in the Ada and Canyon Counties. COMPASS' current travel demand model is calibrated and validated to 2008 conditions. To learn more about the travel demand model visit http://www.compassidaho.org/prodserv/traveldemand.htm.

Demographic Data
The COMPASS Board approves the official population and employment forecast control totals for the Treasure Valley. Between September 2011 and October 2012, COMPASS, its member agencies, stakeholders, and the general public participated in the development of a preferred growth scenario – the *Communities in Motion 2040* Vision. This preferred growth scenario was based on approved population and employment forecasts and was adopted by the COMPASS Board in October 2012. To learn more about the process and growth allocations visit http://www.compassidaho.org/prodserv/cim2040_scenarioplanning.htm.

Demographic data for the analysis years of 2014 and 2018 were developed using data from the 2010 Census and 2015 and 2020 demographic forecasts, which were accepted by the COMPASS Demographic Advisory Committee on November 28, 2012.

Roadway Network Assumptions
The projects used in the regional emissions analysis for the CIM 2040 are derived from:

- COMPASS' FY2014-2018 TIP
- Ada County Highway District's (ACHD's) FY2014-2018 Integrated Five-Year Work Plan
- Idaho Transportation Investment Program (ITIP) for FY2014-2018
- ACHD's FY2012 Capital Improvement Plan (CIP) (FY2012-2031)
- CIM 2040, the regional long-range transportation plan for Ada and Canyon Counties

Roadway projects were placed into analysis (or budget) year networks based on information contained in the above sources. The anticipated project completion date is used to place the transportation project in the appropriate network year. Projects in preliminary development were placed in the roadway network year based on information contained in ACHD's CIP. Other future roadway projects listed on the funded list of both *Communities in Motion 2035* and ACHD's CIP were placed in a roadway network year based on information contained in ACHD's CIP. Roadway projects listed as unfunded in CIM 2040 **and** right-of-way only/ unfunded in ACHD's CIP were not included in the roadway networks. These "unfunded" projects could not be considered funded or go to construction without an accompanying emissions analysis.

Transit Service Assumptions

Regional impacts from access to the area's transit system were included in the emissions analysis. This was done within COMPASS' travel demand model using a "mode choice" model. A "mode choice" model is the third step in a traditional four-step travel demand model, such as the one maintained by COMPASS. It takes estimates of "person trips" and predicts the mode of travel the trip will use.

Figure 1 shows the motorized modes available to the travel demand model for assignment. Transit trips are assigned to a transit network input into the travel demand model. Non-motorized trips are not assigned to a network.

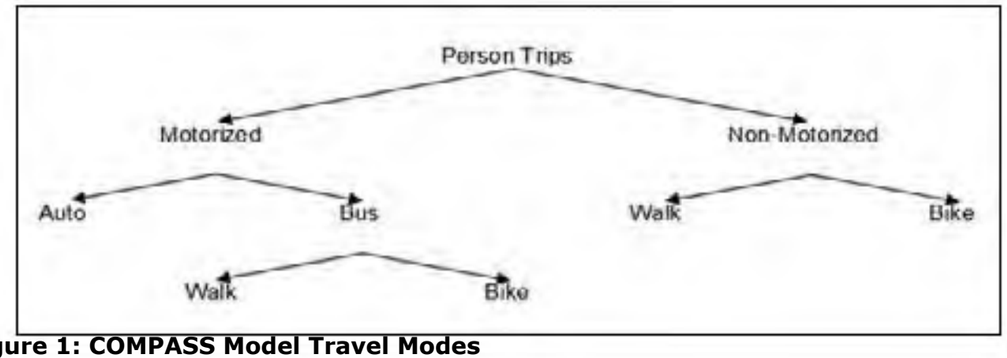


Figure 1: COMPASS Model Travel Modes

Currently, no major system expansion is funded for the region's transit system in either the FY2014-2018 TIP or CIM 2040. Therefore, only the transit system as it exists today is included in the analysis through 2040. The current system includes:

- Sixteen routes and approximately 717 stops with peak hour headways between 20-60 minutes in the Boise/Garden City service area.
- Five Nampa and Caldwell fixed routes with peak hour headways up to 60 minutes and one Nampa/Caldwell dial-a-ride service route.
- Five inter-county routes (between Ada and Canyon Counties) with up to 30 minute headways during the morning/afternoon peak periods and 2-3 hour headways during off peak periods.

Chapter 5 in CIM 2040[8] contains more general information on the region's current transit system. Specific information on the routes and schedules used to model the transit system can be found at Valley Regional Transit's website: http://www.valleyride.org/.

Emissions Modeling

EPA's new emissions model, MOVES, was used to estimate the air quality impacts associated with current and future roadway networks.

The MOVES model uses local data inputs for climate, elevation, Northern Ada County's vehicle emissions testing program, and travel demand model forecasted roadway speeds to develop emission factors for specified air pollutants. Appendix B summarizes the MOVES modeling assumptions approved by the ICC for use in this demonstration. These model settings and inputs were reviewed during the interagency consultation process. Both the PM_{10} and CO maintenance plans were recently updated by DEQ's Boise Regional Office. All of the methodologies, assumptions, processes, and results are documented in the updated maintenance plans. Both plans and associated appendices are available on DEQ's website, as listed below:

PM_{10} Maintenance Plan
http://www.deq.idaho.gov/media/971222-ada_county_pm10_sip_0213.pdf

PM_{10} Maintenance Plan appendices
http://www.deq.idaho.gov/media/971226-ada_county_pm10_sip_appendices_0213.pdf

CO Maintenance Plan
http://www.deq.idaho.gov/media/909866-ada-county-co-maintenance-plan-2011.pdf

CO Maintenance Plan appendices
http://www.deq.idaho.gov/media/909870-ada-county-co-maintenance-plan-2011-appendices.pdf

EPA's model Motor Vehicle Emissions Estimator (MOVES)
http://www.epa.gov/otaq/models/moves/index.htm.

As described on page 10, PM_{10}, VOC, and NO_x budget tests were performed under the five scenario years: 2014, 2018, 2025, 2035, and 2040. Results are shown in Table 2, 4, 6, 8, and 9.

[8] http://www.compassidaho.org/prodserv/cim2040.htm#Plan

2014 Baseline Scenario

The 2014 baseline scenario uses near-term population and employment estimates with the 2014 roadway network which includes the projects listed in Table 1. *(Note: The numbers in the "No." column are for reference only)*.

Table 1: Projects Included in the 2014 Network for the 2014 Baseline Scenario

No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?	Exempt from Regional Conformity	Identification No.[1]
1.	Eagle Rd (SH 55)	River Valley Rd to I-84	6	Yes	No	No	13349/13349
2.	Five Mile Rd	Franklin Rd - Fairview Ave	5	Yes	Yes	No	F038/ RD2012-56/11582
3.	Ustick Rd	Locust Grove Rd – Leslie Dr	5	Yes	No	No	RD205-05/ RD2012-141
4.	Ustick Rd	Cloverdale Rd – Five Mile Rd	5	No	No	Yes	RD220/ RD2012-142

[1]Identification No: Numeric numbers refer to projects in the TIP. Alphanumeric identification numbers refer to projects ACHD's Five-Year Work Plan or CIP.

Table 2 shows estimated motor vehicle emissions for PM_{10}, VOC, and NO_X from the 2014 baseline scenario.

Table 2: 2014 Estimated Emissions, Tons per Day

	PM_{10}				VOC	NO_X
2014	Unpaved Road Dust Emissions	Paved Road Dust Emissions	Tailpipe, Tire, and Brakewear Emissions	Total PM_{10} Emitted		
Estimated Emissions	2.65	21.03	0.74	24.42	7.45	16.17
Budget	***n/a***	***n/a***	***n/a***	***31.0***	***12.6***	***29.5***

2018 Scenario

The 2018 scenario uses 2018 population and employment forecasts with the 2018 roadway network. The 2018 roadway network includes the projects listed in Tables 1 and 3. *(Note: The numbers in the "No." column are for reference only)*.

Table 3: Projects Added to the 2014 Network for the 2018 Scenario

No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?	Exempt from Regional Conformity	Identification No.[1]
5.	Broadway Ave IC	Reconstruct interchange	NA	Yes	Yes	Yes - Safety (40CFR 93.127)	09821
6.	Broadway Bridge Replacement	Front St to University Dr	6	Yes	Yes	No	11588
7.	Cloverdale Rd	Franklin Rd – Fairview Ave	5	No	No	Yes	RD202-14RD2012-30 / RC0087
8.	Cloverdale Rd	Fairview Ave – Ustick Rd	5	No	No	Yes	RD202-14/ RD2012-31 / RC0087
9.	Cole Rd	I-84 WB ramps – Franklin Rd	5	Yes	No	No	RD2012-34
10.	Five Mile Rd	Fairview Ave - Ustick Rd	5	No	No	Yes	RD195A/ RD2012-57
11.	Franklin Rd	Black Cat Rd – Ten Mile Rd	5	Yes	Yes	No	RC0152/ RD2012-60
12.	Gowen Rd IC	Reconstruct interchange	NA	Yes	Yes	Yes - Safety (40CFR 93.127)	09822
13.	Hill Rd Extension	State St - Horseshoe Bend Rd	3	No	No	Yes	RD308
14.	I-84	Broadway Ave IC to Gowen IC	6	Yes	Yes	No	13812
15.	Lake Hazel Rd Extension	Connect existing Lake Hazel Rd to Cole Rd	2	Yes	No	No	RD213-17
16.	McMillan Rd	Locust Grove Rd - Eagle Rd	5	No	No	Yes	RC0240/ RD2012-100
17.	Meridian Rd IC	Reconstruct interchange	NA	Yes	Yes	Yes - Safety (40CFR 93.127)	10939
18.	Pine Ave/ Executive St	Eagle Rd – 1000' east of Cloverdale Rd	5	No	No	Yes	RD2012-119
19.	SH 16 River Crossing	Connect SH 16 from SH 44 to US 20/26	4	Yes	Yes	No	11236
20.	Ten Mile Rd	Cherry Ln - Ustick Rd	5	No	No	Yes	RD188/ RD2012-131
21.	Ustick Rd	Linder Rd -Meridian Rd	5	Yes	No	No	RD2012-139
22.	Ustick Rd	Meridian Rd – Locust Grove Rd	5	Yes	No	No	RD2012-140

[1] Identification No: Numeric numbers refer to projects in the TIP. Alphanumeric identification numbers refer to projects in ACHD's Five-Year Work Plan or CIP.

Table 4 shows estimated motor vehicle emissions for PM_{10}, VOC, and NO_X from the 2018 scenario.

Table 4: 2018 Estimated Emissions, Tons per Day

2018	PM_{10}				VOC	NO_X
	Unpaved Road Dust Emissions	Paved Road Dust Emissions	Tailpipe, Tire, and Brakewear	Total PM_{10} Emitted		
Estimated Emissions	2.65	23.43	0.65	26.73	5.95	11.8
Budget	***n/a***	***n/a***	***n/a***	***42.9***	***12.6***	***29.5***

2025 Scenario

The 2025 scenario uses 2025 population and employment estimates with the 2025 roadway network. The 2025 roadway network includes all projects listed in Tables 1, 3, and 5. (*Note: The numbers in the "No." column are for reference only)*.

Table 5: Projects Added to the 2018 Network for the 2025 Scenario

No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?	Exempt from Regional Conformity	Identification No.[1]
23.	Black Cat Rd	Overland Rd - Franklin Rd (no widening of the overpass)	5	No	No	Yes	RD2012-18
24.	Black Cat Rd	Franklin Rd – Cherry Ln	5	No	No	Yes	RD2012-19
25.	Black Cat Rd	Cherry Ln – Ustick Rd	5	No	No	Yes	RD2012-20
26.	Cloverdale Rd	Overland Rd - Franklin Rd (no widening of the overpass)	5	No	No	Yes	RD2012-29
27.	Cloverdale Rd	Overland Rd – Victory Rd	5	No	No	Yes	RD2012-28
28.	Cloverdale Rd	Amity Rd – Victory Rd	5	No	No	Yes	RD2012-27
29.	Cloverdale Rd	Lake Hazel Rd – Amity Rd	5	No	No	Yes	RD2012-26
30.	Cloverdale Rd	Columbia Rd – Lake Hazel Rd	5	No	No	Yes	RD2012-25
31.	Eagle Rd	SH 44 to Plaza Dr (or State St depending on study)	5	No	No	Yes	RD2012-38
32.	Emerald St	Five Mile Rd – Curtis Rd	5	No	No	No	RD2012-41/42/43
33.	Executive St / Presidential	1000' east of Cloverdale Rd – Five Mile Rd (3 ln couplet with Presidential)	5	No	No	Yes	RD2012-45
34.	Fairview Ave Access Management	Linder Rd to Orchard St	5	No	No	Yes	RD208-10
35.	Fairview Ave	Meridian Rd - Locust Grove Rd	7	Yes	No	No	RD2012-46
36.	Fairview Ave	Locust Grove Rd – Eagle Rd	7	Yes	No	No	RD2012-47
37.	Five Mile Rd	Victory Rd – Amity Rd	5	No	No	No	RD2012-54
38.	Five Mile Rd	Overland Rd - Franklin Rd (no widening of the overpass)	5	No	No	No	RD2012-55
39.	Hill Rd	Horseshoe Bend Rd – Seaman's Gulch Rd	5	No	No	No	RD2012-63
40.	Linder Rd	US 20/26 (Chinden Blvd) – SH 44	7	Yes	No	No	RD2012-85
41.	Linder Rd	McMillan Rd to US 20/26 (Chinden Blvd) east side of road only	5	Yes	No	No	RD2012-84
42.	Linder Rd	SH 44 – Floating Feather Rd	5	Yes	No	No	RD2012-86
43.	Linder Rd	Floating Feather Rd – Beacon Light Rd	5	Yes	No	No	RD2012-87
44.	Linder Rd	Franklin Rd – Cherry Ln	5	Yes	No	No	RD2012-81/RD213-16
45.	Locust Grove Rd	Amity Rd – Victory Rd	3	No	No	Yes	RD2012-88
46.	Locust Grove Rd	Fairview Ave – Ustick Rd	5	No	No	Yes	RD2012-90
47.	Locust Grove Rd	Ustick Rd - McMillan Rd	3	No	No	Yes	RD2012-91
48.	Maple Grove Rd	Fairview Ave - McMillan Rd	5	No	No	Yes	RD2012-94/95
49.	Maple Grove Rd	Victory Rd to Overland Rd	5	No	No	Yes	RD2012-93
50.	Maple Grove Rd	Amity Rd – Victory Rd	5	No	No	Yes	RD2012-92

Table 5: Projects Added to the 2018 Network for the 2025 Scenario							
No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?	Exempt from Regional Conformity	Identification No.[1]
51.	McMillan Rd	Star Rd - McDermott Rd	3	No	No	Yes	RD2012-97
52.	McMillan Rd	McDermott Rd – Black Cat Rd	3	No	No	Yes	RD2012-98
53.	McMillan Rd	Black Cat Rd – Ten Mile Rd	3	No	No	Yes	RD2012-99
54.	Meridian Rd	Cherry Ln – Ustick Rd	5	No	No	Yes	RD2012-104
55.	Meridian Rd	Ustick Rd – McMillan Rd	3	No	No	Yes	RD2012-105
56.	SH 44	SH 16 – Linder Rd	4	Yes	TBD	No	TBD
57.	Star Rd	McMillan Rd – US 20/26 (Chinden Blvd)	5	No	No	Yes	RD2012-121
58.	Star Rd	US 20/26 (Chinden Blvd) – SH 44	5	No	No	Yes	RD2012-122
59.	State St	Glenwood St – Peirce Park Ln	7	Yes	No	No	RD208-04/ RD2012-123
60.	State St	Peirce Park Ln – Collister Dr	7	Yes	No	No	RD208-05/ RD2012-124
61.	State St	Collister Dr – 36th St	7	Yes	No	No	RD208-06/ RD2012-125
62.	State St	36th St – 27th St	7	Yes	No	No	RD208-07/ RD2012-126
63.	Ten Mile Rd	Victory Rd – Overland Rd	5	Yes	No	No	RD2012-130
64.	Ten Mile Rd	Ustick Rd – McMillan Rd	5	No	No	Yes	RD2012-132
65.	Ustick Rd	Ten Mile Rd – Linder Rd	5	Yes	No	No	RD2012-138
66.	Ustick Rd	Cole Rd - Curtis Rd	5	No	No	Yes	RD2012-143
67.	Victory Rd	Meridian Rd – Locust Grove Rd	3	No	No	Yes	RD2012-148
68.	Victory Rd	Locust Grove Rd – Eagle Rd	3	No	No	Yes	RD2012-149
69.	Victory Rd	Cloverdale Rd – Five Mile Rd	5	No	No	Yes	RD2012-151
70.	Victory Rd	Five Mile Rd – Maple Grove Rd	5	No	No	Yes	RD2012-152

[1]Identification No: Alphanumeric identification numbers refer to projects in ACHD's Five-Year Work Plan or CIP.

Table 6 shows estimated motor vehicle emissions for PM_{10}, VOC, and NO_X from the 2025 scenario.

Table 6: 2025 Estimated Emissions, Tons per Day						
2025	PM_{10}				VOC	NO_X
	Unpaved Road Dust Emissions	Paved Road Dust Emissions	Tailpipe, Tire, and Brakewear Emissions	Total PM_{10} Emitted		
Estimated Emissions	2.65	31.04	0.64	34.33	4.83	9.08
Budget	***n/a***	***n/a***	***n/a***	***60.1***	***17.2***	***34.2***

2035 Scenario and 2040 Scenario

The 2035 scenario uses 2035 population and employment estimates with the 2035 roadway network. The 2035 roadway network includes all projects listed in Tables 1, 3, 5, and 7. (*Note: The numbers in the "No." column are for reference only)*. The 2040 scenario uses 2040 population and employment estimates with the 2035 roadway network since no additional roadways projects are planned for funding.

Table 7: Projects Added to the 2025 Network for the 2035 Scenario and 2040 Scenario							
No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?[1]	Exempt from Regional Conformity	Identification No.[2]
71.	36th St Extension 1	Bison Dr to Cartwright Rd	2	No	No	Yes	RD2012-2
72.	36th St Extension 2	Cartwright Rd and Bogus Basin Rd	2	No	No	Yes	RD2012-3
73.	Amity Rd	Black Cat Rd –Ten Mile Rd	5	Yes	No	No	RD2012-5
74.	Amity Rd	Ten Mile Rd – Linder Rd	5	No	No	Yes	RD2012-6
75.	Amity Rd	Linder Rd – Meridian Rd	5	No	No	Yes	RD2012-7
76.	Amity Rd	SH 69 – Locust Grove Rd	5	No	No	Yes	RD2012-8
77.	Amity Rd	Locust Grove Rd – Eagle Rd	5	No	No	Yes	RD2012-9
78.	Avalon Rd (Kuna Rd)	Linder Rd - Orchard St	3	No	No	Yes	RD2012-10
79.	Beacon Light Rd	SH 16 – Palmer Ln	5	No	No	Yes	RD2012-11
80.	Beacon Light Rd	Palmer Rd - Linder Rd	5	No	No	Yes	RD2012-12
81.	Beacon Light Rd	Linder Rd – Ballantyne Rd	5	No	No	Yes	RD2012-13
82.	Beacon Light Rd	Ballantyne Rd – Eagle Rd	5	No	No	Yes	RD2012-14
83.	Beacon Light Rd	Eagle Rd – SH 55	5	No	No	Yes	RD2012-15
84.	Cloverdale Rd	Ustick Rd – McMillan Rd	5	No	No	Yes	RD2012-32
85.	Deer Flat Rd	Linder Rd – SH 69	5	No	No	Yes	RD2012-35
86.	Eagle Rd	Lake Hazel Rd – Amity Rd	5	Yes	No	No	RD2012-36
87.	Eagle Rd	Amity Rd – Victory Rd	5	Yes	No	No	RD2012-37
88.	Eisenmann Rd	New Lake Hazel Rd – I-84 IC	5	No	No	Yes	RD2012-39
89.	Eisenmann Rd	New Lake Hazel Rd – Gowen Rd	3	No	No	Yes	RD2012-40
90.	Fairview Ave	Eagle Rd – Cloverdale Rd	7	Yes	No	No	RD2012-48
91.	Fairview Ave	Cloverdale Rd - Five Mile Rd	7	Yes	No	No	RD2012-49
92.	Fairview Ave	Five Mile Rd - Maple Grove Rd	7	Yes	No	No	RD2012-50
93.	Fairview Ave	Maple Grove Rd - Cole Rd	7	Yes	No	No	RD2012-51
94.	Fairview Ave	Cole Rd - Orchard St (or e/o Curtis Rd)	7	Yes	No	No	RD2012-52
95.	Five Mile Rd	Lake Hazel Rd – Amity Rd	5	No	No	Yes	RD2012-53
96.	Five Mile Rd	Ustick Rd - McMillan Rd	5	No	No	Yes	RD2012-58
97.	Franklin Rd	McDermott Rd - Black Cat Rd	5	Yes	No	No	RD2012-59
98.	Glenwood St / Cole Rd couplet	Two way couplet - Mountain View Dr	3	Yes	No	No	RD2012-62
99.	Lake Hazel Rd	Linder Rd – SH 69	5	Yes	No	No	RD2012-67
100.	Lake Hazel Rd	SH 69 – Locust Grove Rd	5	Yes	No	No	RD2012-68
101.	Lake Hazel Rd	Locust Grove Rd – Eagle Rd	5	Yes	No	No	RD2012-69
102.	Lake Hazel Rd	Eagle Rd – Cloverdale Rd	5	Yes	No	No	RD2012-70
103.	Lake Hazel Rd	Cloverdale Rd – Five Mile Rd	5	Yes	No	No	RD2012-71

Table 7: Projects Added to the 2025 Network for the 2035 Scenario and 2040 Scenario

No.	Project	Location	Lanes	Regionally Significant?	Federal Aid?[1]	Exempt from Regional Conformity	Identification No.[2]
104.	Lake Hazel Rd	Five Mile Rd – Maple Grove Rd	5	Yes	No	No	RD2012-72
105.	Lake Hazel Rd	Maple Grove Rd – Cole Rd	5	Yes	No	No	RD2012-73
106.	Lake Hazel Rd Ext 1	Cole Rd – Orchard St	5	Yes	No	No	RD2012-74
107.	Lake Hazel Rd Ext 2	Orchard Ext 1 – Pleasant Valley Rd	5	Yes	No	No	RD2012-75
108.	Lake Hazel Rd Ext 3	Pleasant Valley Rd – Eisenmann Rd	5	Yes	No	No	RD2012-76
109.	Linder Rd	Cherry Ln – Ustick Rd	5	Yes	No	No	RD2012-82
110.	Linder Rd	Ustick Rd – McMillan Rd	5	Yes	No	No	RD2012-83
111.	Linder Rd	Overland Rd - Franklin Rd (new overpass is NOT included)	5	Yes	TBD	No	RD2012-80
112.	Locust Grove Rd	Victory Rd – Overland Rd	3	No	No	Yes	RD2012-89
113.	McMillan Rd	Can Ada Rd - Star Rd	3	No	No	Yes	RD2012-96
114.	McMillan Rd	Cloverdale Rd - Maple Grove Rd	5	No	No	Yes	RD2012-101/102
115.	Meridian Rd	McMillan Rd – Chinden Blvd	3	No	No	Yes	RD2012-106
116.	Orchard Rd Ext 1	Lake Hazel Rd – Orchard Ext	5	No	No	Yes	RD2012-107
117.	Orchard Rd Ext 2	Pleasant Valley Rd – Orchard Ext	5	No	No	Yes	RD2012-108
118.	Orchard Rd Ext 3	Orchard Ext 1 – Gowen Rd	5	Yes	No	No	RD2012-109
119.	Orchard Rd Ext 4	Gowen Rd – Victory Rd	7	Yes	No	No	RD2012-110
120.	Overland Rd New Extension	Black Cat Rd – Ten Mile Rd	3	No	No	Yes	
121.	Pine Ave	Meridian Rd – Locust Grove Rd	3	No	No	Yes	RD2012-118
122.	Ten Mile Rd	McMillan Rd – Chinden Blvd	5	No	No	Yes	RD2012-133
123.	Ten Mile Rd	Lake Hazel - Victory Rd	5	Yes	No	No	RD2012-128/129
124.	Ten Mile Rd	Columbia Rd - Lake Hazel Rd	5	No	No	Yes	RD2012-127
125.	US 20/26	Locust Grove Rd – Eagle Rd	4	Yes	TBD	No	TBD
126.	Ustick Rd	Black Cat Rd – Ten Mile Rd	5	Yes	No	No	RD2012-137
127.	Ustick Rd	McDermott Rd – Black Cat Rd	5	Yes	No	No	RD2012-136
128.	Victory Rd	McDermott Rd – Black Cat Rd	3	No	No	Yes	RD2012-144
129.	Victory Rd	Black Cat Rd – Ten Mile Rd	3	No	No	Yes	RD2012-145
130.	Victory Rd	Ten Mile Rd – Linder Rd	3	No	No	Yes	RD2012-146
131.	Victory Rd	Linder Rd – Meridian Rd	3	No	No	Yes	RD2012-147
132.	Victory Rd	Eagle Rd - Cloverdale Rd	5	No	No	Yes	RD2012-150

[1] The fiscal constraints of a long-range plan are more flexible than those of a TIP. Therefore, TBD means To Be Determined, as a funding source has not been identified.

[2] Identification No: Alphanumeric identification numbers refer to projects in ACHD's Five-Year Work Plan or CIP. Blanks indicate an identification number has not been assigned.

Table 8 and Table 9 show estimated motor vehicle emissions for PM_{10}, VOC, and NO_X from the 2035 scenario and 2040 scenario.

Table 8: 2035 Estimated Emissions, Tons per Day

2035	PM_{10}				VOC	NO_X
	Unpaved Road Dust Emissions	Paved Road Dust Emissions	Tailpipe, Tire, and Brakewear Emissions	Total PM_{10} Emitted		
Estimated Emissions	2.65	41.89	0.80	45.34	5.11	9.59
Budget	***n/a***	***n/a***	***n/a***	***60.1***	***17.2***	***34.2***

Table 9: 2040 Estimated Emissions, Tons per Day

2040	PM_{10}				VOC	NO_X
	Unpaved Road Dust Emissions	Paved Road Dust Emissions	Tailpipe, Tire, and Brakewear Emissions	Total PM_{10} Emitted		
Estimated Emissions	2.65	41.16	0.93	51.74	5.68	10.60
Budget	***n/a***	***n/a***	***n/a***	***60.1***	***17.2***	***34.2***

Carbon Monoxide Emissions

To satisfy DEQ requirements, a regional CO emissions analysis was conducted using EPA's MOVES model and the COMPASS travel demand model. Specific information on the models and their inputs can be found in previous sections of this document. Build emissions were estimated and compared to no build emissions estimates. A build scenario estimates emissions for a given analysis year assuming the appropriate programmed/planned roadway/transit projects have been constructed. Conversely, a no build scenario estimates emissions for a given analysis year using the transportation system as it exists in the base year (i.e., before programmed or planned projects are built). This comparison provides the CO emissions impacts to the region from the planned transportation system.

Build/No Build Scenarios

The build scenarios use transportation networks and demographic assumptions specific to the analysis year. These are the same scenarios used to estimate PM_{10}, NO_X, and VOC emissions, above. Table 1, 3, 5, and 7 provide more detailed information on the roadway projects used to develop the build scenario networks.

The no build scenarios use the 2014 (baseline) transportation network with the demographic assumptions specific to the analysis year. Table 1 provides more detailed information on the roadway projects included in the 2014 baseline transportation network.

Table 10 shows the build and no build CO emissions estimates for 2014, 2018, 2025, 2035, and 2040.

Table 10: Build/No Build Scenario CO Emissions

	Year				
	2014	2018	2025	2035	2040
Build CO Emissions (*Ton/day*)	92.67	83.75	92.20	113.49	127.74
No Build CO Emissions (*Ton/day*)	n/a	83.77	92.01	114.71	128.93

III. CONCLUSIONS

PM_{10} Budget Test

The results of the PM_{10} budget test for CIM 2040 show that the emissions impacts associated with the planned improvements to the northern Ada County transportation system (projects listed in Table 1, 3, 5, and 7) will not exceed the PM_{10} emissions budgets established by the PM_{10} maintenance plan (Figure 2).

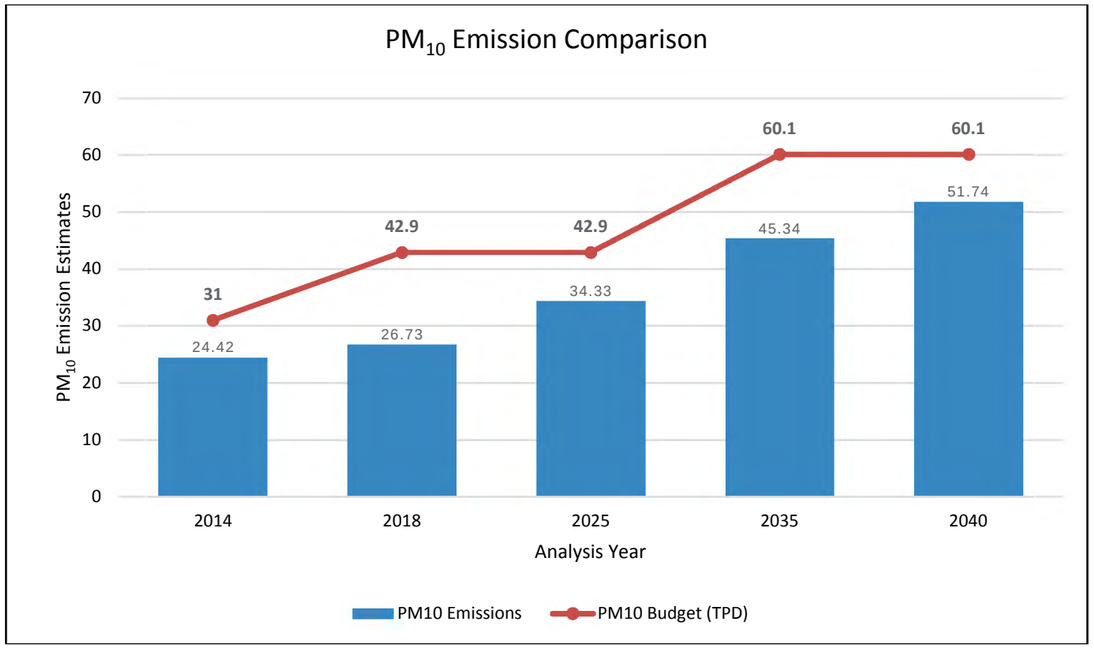


Figure 2: PM_{10} Budget Test Results

VOC Budget Test

The results of the VOC budget test for CIM 2040 show that the emissions impacts associated with the planned improvements to the northern Ada County transportation system (projects listed in Tables 1, 3, 5, and 7) will not exceed the VOC emissions budgets established by the PM_{10} maintenance plan (Figure 3).

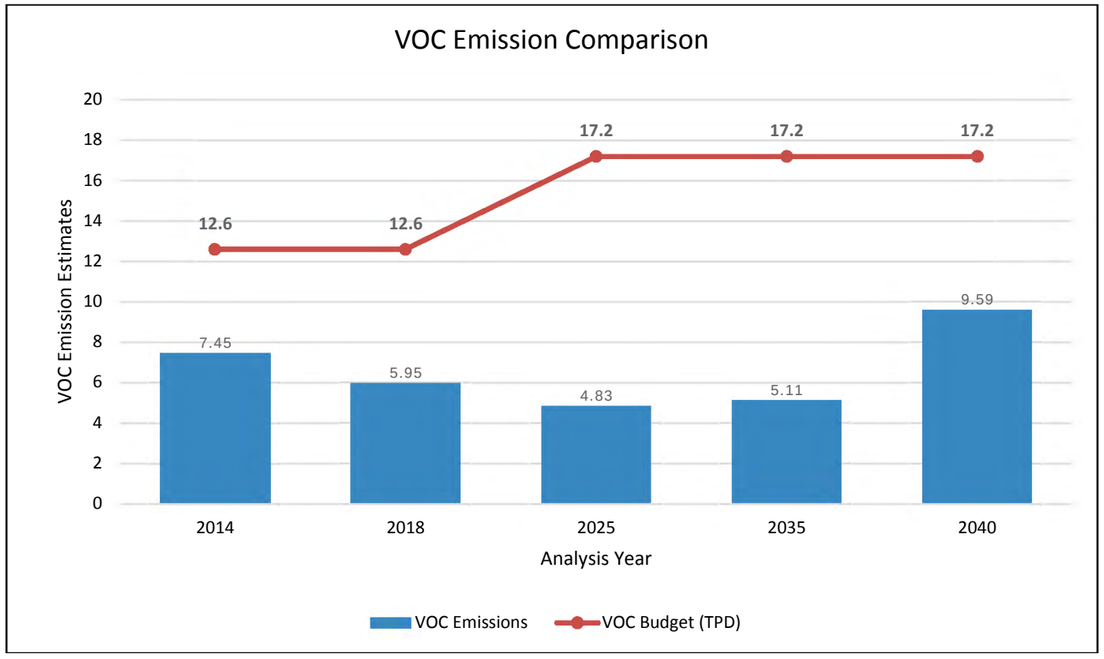


Figure 3: VOC Budget Test Results

NO_X Budget Test

The results of the NO_x budget test for CIM 2040 show that the emissions impacts associated with the planned improvements to the northern Ada County transportation system (projects listed in Tables 1, 3, 5, and 7) will not exceed the NO_X emissions budgets established by the PM_{10} maintenance plan (Figure 4).

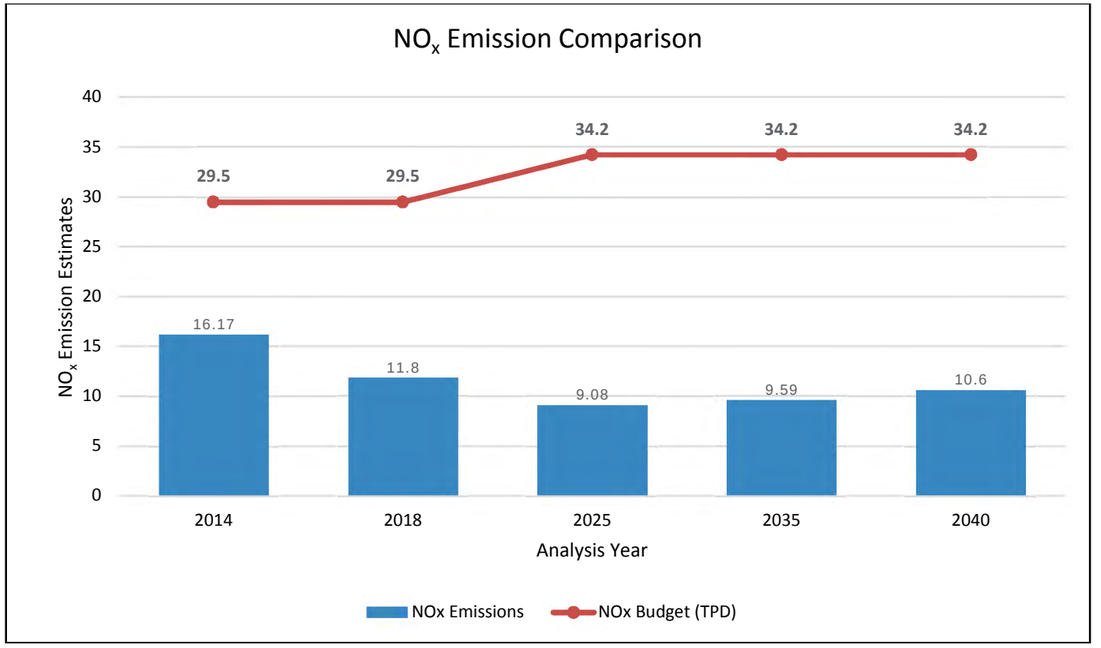


Figure 4: NO_x Budget Test Results

CO Planning Analyses

Build/No Build Emissions Comparison:
Figure 5 shows the comparison between the build and no build emissions scenarios for each analysis year. Again, the purpose of these comparisons is not to demonstrate conformity with the CO limited maintenance plan, but rather to facilitate good air quality planning in northern Ada County.

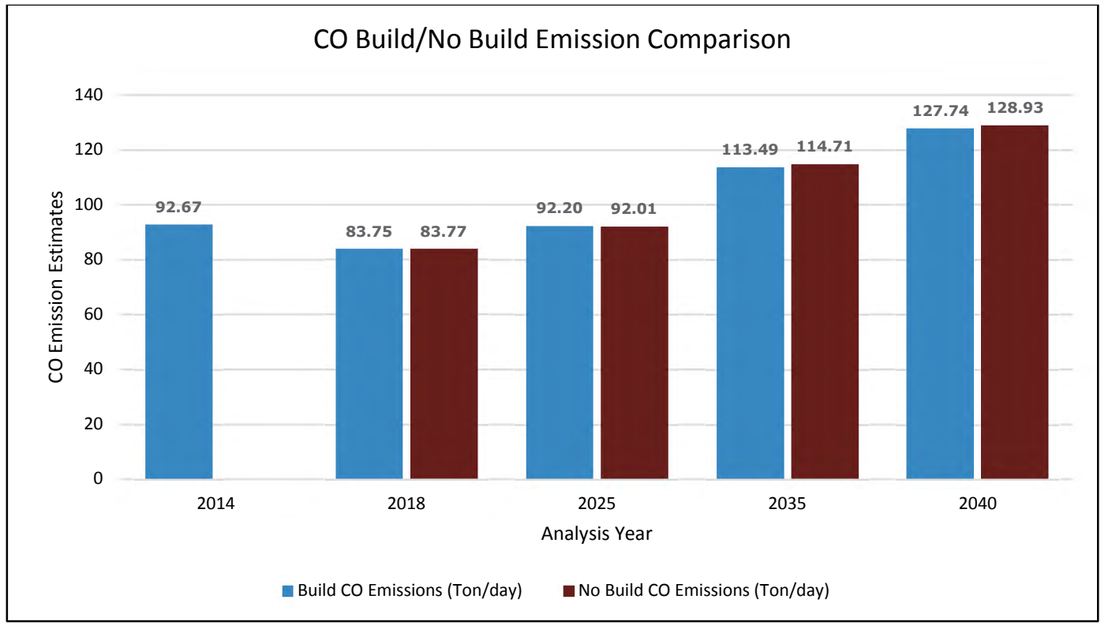
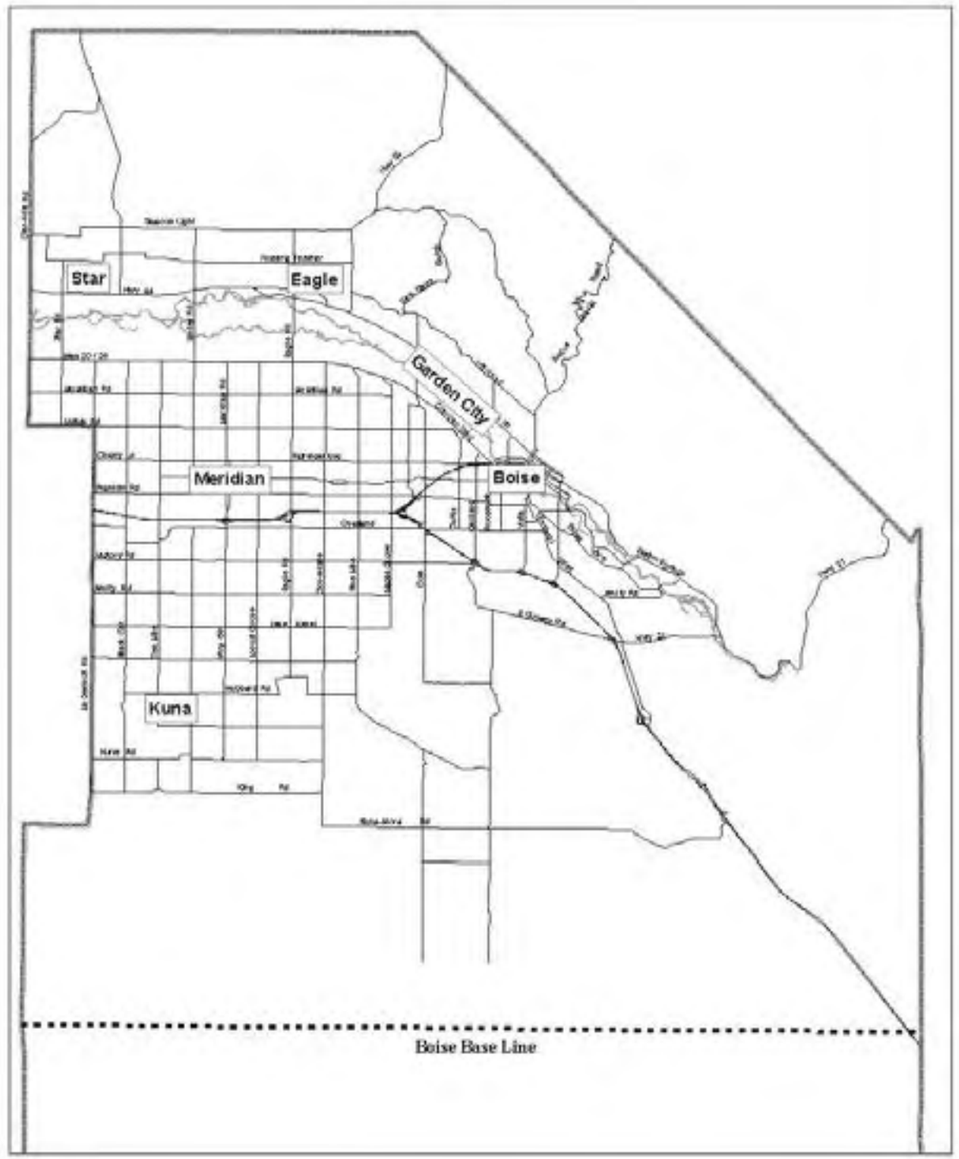


Figure 5: CO Build/No Build Comparison

The comparisons show that the CO emissions for the build scenario are slightly higher than the no build scenario in 2025, but slightly lower than the no-build scenario in 2018, 2035, and 2040. The higher estimate for the build scenario in 2025 is due to a reduction in roadway congestion, which increased network speeds forecasted by the regional travel demand model. Carbon monoxide emissions factors are very sensitive to speed. Since the 2025 build scenario emission estimates are higher than the no build, the build scenario is compared to the 1990 CO emissions as allowed by the conformity rule under 40CFR93.113(c)(ii). The 1990 on-road mobile source emissions are 58,777.3 tons per year (i.e., 161.03 tons per day). Clearly, the 2025 CO emission estimate of 92.2 tons per day is below the 1990 CO emissions.

APPENDICES

Appendix A: Northern Ada County PM_{10} and CO Maintenance Area



Legal Description for Northern Ada County PM_{10} and CO Maintenance Area

The legal description of the area boundaries is as follows:

- Beginning at a point in the center of the channel of the Boise River where the section line between Sections 15 and 16 of Township 3 North, Range 4 East, crosses the Boise River.

Northern Boundary

- Thence down the center of the channel of the Boise River to a point opposite the mouth of Mores Creek.
- Thence in a straight-line going 44 degrees north and 38 minutes west until said line intersects the north line of Township 5 North in Range 1 East.
- Thence west to the northwest corner of Section 6, Township 5 North, Range 1 West.

Western Boundary

- Thence south to the northwest corner of Section 6, Township 3 North, Range 1 West.
- Thence east to the northeast corner of Section 5, Township3 North, Range 1 West.
- Thence south to the southeast corner of Section 32, Township 2 North, Range 1 West.
- Thence west to the northwest corner of Section 6, Township 1 North, Range 1 West.
- Thence south to the southwest corner of Section 31, Township 1 North, Range 1 West.

Southern Boundary

- Thence east to the southeast corner of Section 33, Township 1 North, Range 4 East.

Eastern Boundary

- Thence north to the point of beginning.

Appendix B: Approved Regional Emission Assumptions

Source type population and fleet age distribution:
DEQ decoded individual Idaho Department of Motor Vehicles registration records of vehicles registered in the Treasure Valley using the Polk vehicle identification number (VIN) decoding system. The decoded VINs provide information regarding the vehicle make, model, age, and fuel types. This information was then used to develop the MOVES input.

Inspection Maintenance Program – June 1, 2010 - future

Ada County:

1) Two speed test (idle and 2500 RPM) for pre 1996 vehicles only.
2) Exhaust on-board diagnostics (OBD) check for 1996 and newer vehicles.
3) Evaporative system OBD check for 1996 and newer vehicles.
4) Compliance rate = 98.0%.
5) Waiver rate = 1.0%
6) Four-year grace period for new vehicles
7) Biennial testing – effective January 1, 2010.

Canyon County:

1) Two speed test (idle and 2500 RPM) for pre 1996 vehicles only.
2) Evaporative gas cap check for 1996 and newer vehicles.
3) Exhaust OBD check for 1996 and newer vehicles.
4) Evaporative system OBD check for 1996 and newer vehicles.
5) Compliance rate = 98.0%.
6) Waiver rate = 1.0%
7) Five-year grace period for new vehicles
8) Biennial testing – effective January 1, 2010.

Meteorology
The meteorology input compiles the average hourly temperature and relative humidity data for each county. Base- and future-year inventories were modeled using average hourly temperature and relative humidity data by county for each month from a representative weather station for each county. Ada County is represented by the National Weather Service station at the Boise Air Terminal and Canyon County is represented by the data set from the Caldwell Industrial Airport.

Fuel-Related Inputs

Alternative Vehicle Fuels and Technology (AVFT): Ada and Canyon Counties were modeled using a custom AVFT input file derived from VIN-decoded registration data. The same AVFT input was used for base and future years.

Fuel Supply: National default fuel supply inputs were used for all source types except transit buses. A large portion of the transit bus fleet in the Treasure Valley operates on compressed natural gas (CNG). For this reason, CNG fuels were included in base- and future-year modeling.

Fuel Formulation: With the exception of 10% ethanol in gasoline (E10), MOVES national default fuel formulations were used as base-year inputs for each county. These default values were judged to be reasonable based on local knowledge, except for the E10 market share. The base-year E10 market share was updated with information provided by fuel suppliers.

Average Speed Distribution
The average speed distribution allocates the different source types (vehicles) for each roadway type to 16 speed bins ranging from 0 to >75 miles per hour. Average speed distributions were developed from the regional travel demand model average daily estimates or forecasts for each roadway segment and hourly traffic count statistics developed from detailed automatic traffic recorder (ATR) traffic count data provided by Idaho Transportation Department (ITD).

The hourly ATR-based traffic count profiles for each roadway type were used to estimate hourly volume on each segment and the modified Bureau of Public Roadways volume/capacity curve was used to develop the average speed distribution database for each hour.

$$Hourly\ Vehicle\ Speed = Free\ Flow\ Speed * \left(1 + A * \left(\frac{Volume}{Capacity}\right)^{B}\right)$$

Where A and B are local coefficients used in the regional travel demand model as provided by COMPASS.

Base- and future-year average speed distributions were developed for all four MOVES road types using travel demand model base and future-year outputs developed by COMPASS for the Treasure Valley and detailed ATR data provided by ITD.

Note: Treasure Valley refers to Ada and Canyon Counties.

APPENDIX B

ACRONYM LIST

ACE	US Army Corps of Engineers
ACHD	Ada County Highway District
ACS	American Community Survey
BLM	US Bureau of Land Management
CEMP	construction emissions mitigation plan
CIM	*Communities in Motion*
CMP	congestion management process
CSLOS	Complete Streets Level of Service
COMPASS	Community Planning Association of Southwest Idaho
DEQ	Idaho Department of Environmental Quality
EPA	US Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GARVEE bonds	Grant Anticipation Revenue Vehicle bonds
GPS	global positioning system
IDWR	Idaho Department of Water Resources
ISTEA	Intermodal Surface Transportation Efficiency Act
ITD	Idaho Transportation Department
ITS	Treasure Valley Intelligent Transportation System
LOS	Level of service
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	metropolitan planning organization
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and maintenance costs
SHSP	Strategic Highway Safety Plan
SWPPP	Stormwater Pollution Prevention Plan
STP	Surface Transportation Program
TAP	Transportation Alternatives Program
TDM	Travel Demand Management
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TTOP	State Street Transit and Traffic Operational Plan
TVT	Treasure Valley Transit
VRT	Valley Regional Transit

A glossary of terms is available at www.compassidaho.org/comm/glossary.htm.

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

700 NE 2nd Street, Suite 200
Meridian, ID 83642
www.compassidaho.org

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