

CHAPTER 14

LOOKING BEYOND 2035

Setting the Stage

The federal government requires the life of a regional long-range transportation plan be a minimum of 20 years. *Communities in Motion* was given a horizon year of 2035—25 years beyond the adoption date in 2010. But growth is not likely to stop in 2035. In fact, growth could be much stronger than anticipated through 2035 and the resulting population and employment numbers could be much larger than assumed in the plan. The rate of growth is not absolutely predictable. The region went through a major boom between 2000 and 2006, followed by a major slump that is still going on at the time of this plan. No one can really know the future, and this lack of certainty requires that the plan consider many possibilities.

Many larger regions now conduct longer-term forecasts and evaluations. Seattle, Portland, Sacramento, and Salt Lake are among the metropolitan areas extending their horizons. A 40 or 50-year horizon is used to test transportation systems, while a shorter 20-year plan contains more detail about projects and their priorities.

Why take the longer view? A 20-year plan seems distant, but it is short when considering urban growth and transportation system changes. A significant road widening project may take ten or more years to complete, while a major new corridor – such as a new freeway or rail system – can be 10 to 20 years in planning and construction. Land use patterns and travel behavior can take far longer to change. The private automobile has been the dominant mode of urban transportation for three generations.



Designing for the automobile has driven urban form in the Treasure Valley since World War II. Roads, parking lots, and garages dominate the urban image. Look at a regional shopping center and its acres and acres of asphalt. Consider the amount of frontage on a home dedicated to the car.

The 50-year time horizon in the scenario process is necessary, in order to see significant effects from land use policies and from transit-building policies, too. The fact that MPOs do 20-year plans biases them against such policies.

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The intent of a longer-term analysis is to put the recommendations of *Communities in Motion* into perspective. Road corridor and public transportation investments that may be seen as unnecessary in terms of growth within the next 25 years could be vital to accommodate growth beyond that period. Also consider that forecasts can be wrong.

Growth Beyond 2035

The growth envisioned in *Communities in Motion* would add 460,000 residents to Ada and Canyon Counties. Employment is expected to increase by 222,000. The two counties would have 1.046 million residents and 470,661 jobs.

In the 2006 plan, growth was projected in a straight-line fashion beyond 2030 to achieve a population within Ada County and Canyon County of approximately 1.5 million and a regional population (including Boise, Elmore, Gem and Payette Counties) of nearly 1.8 million. Employment growth was also projected to achieve a two-county total of 852,000 and a regional total of 960,000.

Was it far-fetched to consider 1.5 million people in Ada and Canyon Counties? Depending on the future economy, that number may not be far off. The 1.046 million population by 2035 used in *Communities in Motion* is based on an annual growth rate of 2.5%, a heavy pace of growth compared to the national growth rate of 0.75%. Another 15 years at that rate would see a two county population of 1.5 million.

Buildout Implications

For the 2010 plan, a different approach was taken. Instead of using a growth rate to look at a long-term population, COMPASS staff worked with local land use agencies in Ada and Canyon Counties to analyze their comprehensive plans to determine the amount of growth that would be possible under their collective plans. The comprehensive plans were mapped (Figure 14-1), and assumed densities under each land use category, by jurisdiction, were put into the model. Information on existing development, vacant land, floodways/floodplains, slopes, farmland, wildlife habitat, and other factors was used to determine the limitations on growth. For example, if the comprehensive plan for City X called for higher residential density than currently exists, would City X expect redevelopment to occur? This compilation of area comprehensive plans is titled the “Buildout Analysis” and is intended to inform long-term planning efforts for roads, transit, and other modes. See Appendix F for additional information about local comprehensive plans used in the analysis.

Examples of inaccurate forecasts and decisions abound. They serve as reminders that there is wisdom in remaining flexible and erring on the side of caution. It is imperative that forecasts be made, knowing that eventually they may be proven wrong; otherwise there is no chance to be right and no opportunity to shape the future.

ACCESS OHIO 2004-2030

These “buildout” projections come with limitations:

- The growth forecasts were modeled in the Community Choices roadway and transit networks at full build-out. The process assumes that the entire network would be built and not constrained by available resources. No attempt was made to modify the Community Choices network in response to additional travel demand.
- No forecasted travel information was available for the neighboring counties (Boise, Gem, Payette, Elmore).
- No fuel prices or other cost factors were assessed to determine the effects of such prices on growth patterns or travel demands.
- There are no limits to the build-out growth based on limitations posed by water, sewer capacity, energy supplies, or any other factor.
- There is no time limit to this growth. For the Community Choices scenario the horizon is the year 2035. There is no expected year when the growth would match the visions of the comprehensive plans. It could be 100 years or more.

The Buildout Analysis, given the assumptions and limitations, would result in the following:

- 2.6 million population
- 0.9 million households
- 1.4 million jobs

Implications of the Buildout Analysis for the Transportation System

The Buildout Analysis was originally conceived as a way to relate growth in the plans to available transportation capacity. A typical statistic used in transportation plans is “vehicle miles of travel” (Figure 14-2). It is a significant statistic since it closely correlates with issues such as air pollution due to vehicles, consumption of fuel, and travel delays. Under buildout, there could be approximately 79 million vehicle miles of travel per weekday compared with the current 12 million. The challenge with evaluating this magnitude of demand is that there is simply not enough supply even assuming a fully funded *Communities in Motion* plan plus two additional major corridors – Western Canyon County Arterial Route and Kuna-Mora Road Expressway. This was the network used for evaluating buildout.



Figure 14-2: Vehicle Miles of Travel

Although the extrapolation of growth beyond 2035 is not a sophisticated scenario of future growth, the implications of continued growth without a fundamental change in travel modes and investments are daunting. The evaluation is based on typical weekday travel in the Year X – a year which could be 70, 80, or more years in the future. Some of the highlights of the initial evaluation:

- The average speed on Interstate-84 would be approximately 15 mph.
- Sections of I-84 would carry over 350,000 vehicles per day compared to today’s peak of 120,000 vehicles per day.
- State Highway 19, west of Caldwell, would serve over 140,000 vehicle trips per day.
- 60% of the vehicle miles of travel would be on non-state roads.
- There would be over 3.4 million hours of vehicle delay per weekday. Today’s delay is 27,000 hours (Figure 14-3).

Delay is calculated by estimating the “free flow” travel time for a trip and comparing it to the time needed under congested conditions.

Generally these congested conditions would be worst during peak hours. As travel demand increases, more and more travel will shift outside the “typical” peak hours of 7:00 a.m. to 8:00 a.m. and 5:00 p.m. to 6:00 p.m. In larger metropolitan areas, the travel demand spreads out as travelers seek to shorten their commute times by starting their trips outside the peak hours. In these larger areas, peak hours are likely to last two to four hours during the evening. This is called “peak spreading” and is similar to a market approach in balancing demand and supply. Think of airline travel pricing, where tickets for travel outside of peak demand times cost less than at peak times such as holidays. Travelers see the advantages and adjust their travel patterns.

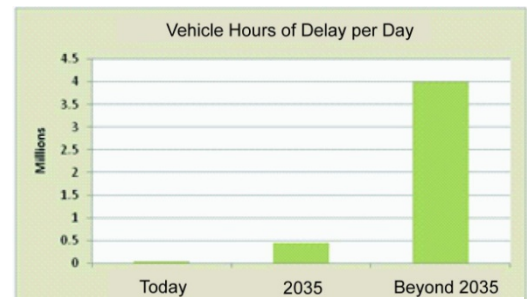


Figure 14-3: Vehicle Hours of Delay

The increase in hours of delay is much greater than the increase in vehicle miles of travel since roadway capacity is being consumed, and congestion is not a linear function. As roadway capacities are exceeded, each new vehicle added generates higher levels of delay. Think of vehicles entering a freeway late at night. Due to the low traffic volumes, the effect on traffic flow is slight. Now think of the same number of vehicles entering at the same point on the freeway at 5:15 p.m. During rush hour, only a slight number of additional vehicles need to change slow moving traffic into traffic that is stopped.

Figure 14-4 shows I-84 at a typical mid-day traffic level and a morning peak level. The morning peak under the Buildout Analysis would stretch for three hours.



Figure 14-4: I-84 Traffic Levels: Mid-Day on Left; Morning Peak on Right

Increases in vehicle miles of travel, hours of delay, and percentages of roadway system over capacity are interesting numbers—at least to transportation professionals. But what do they mean to the average driver in the region? Many can identify with a very simple statistic, “How long will it take me to make my trip in the future?” While there are a very large number of possible trips for regional residents, the analysis picked four common origin-destination pairs, as described below:

- It would take over 1 hour 40 minutes to drive between Caldwell and downtown Boise.
- It would take over 1 hour to drive between Nampa and the Boise Airport.
- It would take almost 1 hour 30 minutes to drive between Middleton and Hewlett-Packard.
- It would take almost 40 minutes to drive between north Meridian and Boise Towne Square Mall.

Figure 14-5 shows the congested corridors under the Buildout Analysis. Every major road shown in red has an average daily speed less than 20 mph. Peak speeds will be much lower.

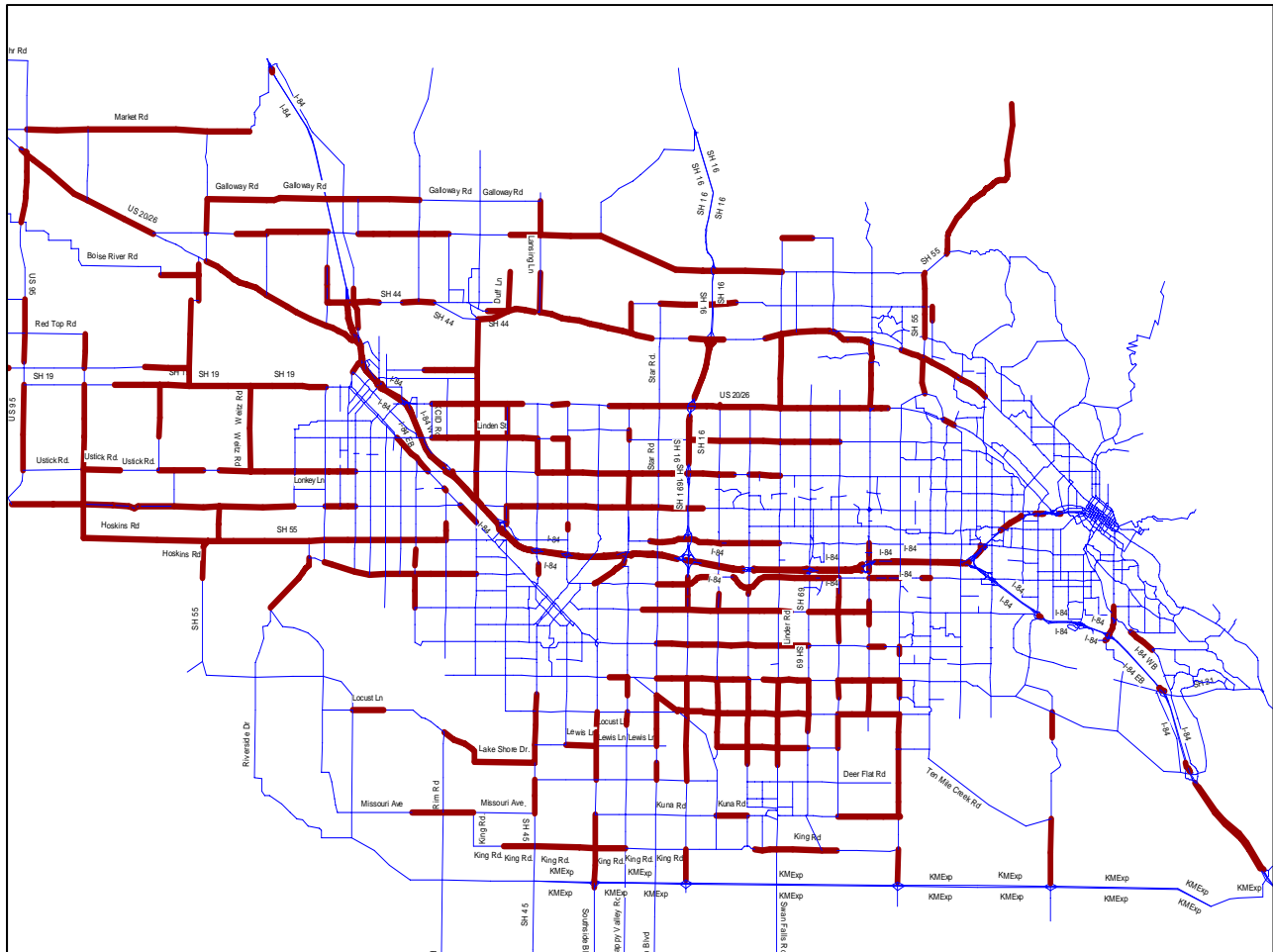


Figure 14-5: Buildout Analysis on Full *Communities in Motion* Network (Funded and Unfunded). Roads with Average Daily Speeds < 20 mph.

With most roads at or above capacity, widening existing roads even more than proposed in *Communities in Motion* would mean substantial financial costs and cause impacts on the adjacent residences, businesses, and other uses. Area residents need to consider how far we should go in providing for auto mobility at the expense of neighborhoods, rural land, and existing businesses.

These are not absolute forecasts. The evaluation has not yet factored in the contributions of a greatly expanded public transportation system. It does not assume any revolution in vehicle technology, such as automated highways and vehicles that would greatly increase travel efficiency. Nor are there any radical economic or social changes assumed that would keep people from driving personal vehicles. For example, what would happen if the 2008 gas prices had remained at \$4 per gallon or higher?

What the evaluation does indicate is that the potential under the existing comprehensive plans is far in excess of any budgeted or planned roadway capacity. One approach could be to evaluate the full functional classification system, assuming that all roads would be built out to their maximum number of lanes envisioned in the policy/design manuals. Another approach would be to develop an optimal transit network appropriate for a region of 2.6 million people. Even with these in place, it is possible—likely—that demand is so high as to be intolerable. For example, sections of State Highway 44 are forecasted with more than 100,000 vehicles per day, yet there are no options for east-west travel north of the river. So tests could be run on new corridors outside of the functional classification system.

The potential of looking beyond 2035 indicates the need to:

- Offer alternatives to driving
- Move toward a development pattern that reduces the need to travel
- Preserve future corridors not yet warranted for construction under growth by 2035. This is a major reason for the functional classification map included in Chapter 5.

Comparisons to Other Communities

The potential travel issues are significant, yet they should not be viewed as catastrophic. While 2.6 million is a large population, there are many cities in the west and southwest approaching or over 1 million that are economically vital and maintain a desirable quality of life. These cities have higher congestion than the Treasure Valley. They also put significant money into roadways and transit. All have rail systems. Las Vegas, Nevada's, system is privately-owned, oriented for visitors, and has an extensive bus system in place. In 2004, these communities spent between \$188 and \$972 per household on transit operations and maintenance and capital investments such as rail systems. This puts the \$400 per household in new revenue for implementing the road and transit networks in this region as described in Chapters 5 and 6 into perspective. Also consider that the average per household roadway expenditure alone for these regions ranges from \$634 to \$1,505 (Table 14-1).

Table 14-1: Expenditure Comparison with Other Regions

| | Population ¹ | Annual Transit Expense ² | Transit Expenditures per Household ³ | Annual Regional Transportation Plan Expenditures on Roadways ⁴ | Roadway Expenditures per Household |
|------------------------|-------------------------|-------------------------------------|---|---|------------------------------------|
| San Jose, California | 1,731,400 | \$520,012,617 | \$972 | \$1,680,000,000 | \$634 |
| Austin, Texas | 727,000 | \$143,978,488 | \$525 | \$640,160,000 | \$1,125 |
| Denver, Colorado | 2,545,000 | \$484,848,233 | \$490 | \$1,557,520,000 | \$1,505 |
| Las Vegas, Nevada | 1,686,827 | \$119,262,312 | \$188 | \$463,760,000 | \$660 |
| Sacramento, California | 1,035,009 | \$289,957,034 | \$757 | \$796,571,000 | \$1,000 |
| Salt Lake City, Utah | 1,744,417 | \$168,852,111 | \$299 | \$758,154,000 | \$1,383 |

The Next Plan

Communities in Motion will be updated by September 2014, to meet the four-year update cycle mandated by the Federal Transportation Act, *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU). COMPASS may update it sooner, and it will most certainly be amended before the four years are up. As noted in Chapter 3, COMPASS prepares an annual *Communities in Motion Performance Monitoring Report*. This report will track growth, transportation investments, transportation performance and policy changes tied to the goals and objectives espoused in *Communities in Motion*.

The next update will reprise the detailed analysis of land use options that was undertaken for *Communities in Motion* in 2006, but it will need to address whether land use patterns are shifting to reflect more of the higher density, mixed use developments called for in this plan.

The update will also need to evaluate the pace of development, especially in smaller cities that can see rapid increases in building and subdivision activity. Is the 2.5% growth rate used in developing a 2035 population of 1.046 million for Ada County and Canyon County valid—or has it been exceeded year after year?



¹ Table 1 – Population. National Transit Database. 2004. Includes operating and capital expenditures.

<http://www.ntdprogram.com/ntdprogram/pubs.htm>

² Table 1 – Annual Transit Expenditure. *ibid*

³ Table 1 – Annual Transit Expenditure per Household. Census household sizes for the urbanized areas were used to estimate number of households.

⁴ Table 1 – Annual Roadway Expenditure. Expenditures based on average annual roadway investments derived from the respective regional transportation plans. Includes all capital and operating/maintenance expenses for state and local roads. The total investment costs were divided by the number of years covered in each plan.

We need to better understand what drives growth in the region and need to consider:

- How strong is the tie between job creation and population growth?
- To what extent will this region see growth as a result of retirees attracted by a favorable climate, outdoor amenities, affordable housing (compared to some regions), and other qualities?
- How attractive is the region to younger adults? Will they be seeking a suburban environment or a more diversified urban environment?
- What is the relationship between the pace of housing development and out-of-area speculation? The boom from 2000 to 2006 owed a great deal to such speculation. An analysis by the Ada County Assessor's office determined that non-owner occupied single family homes went from 22% of the total stock to 28% between 2004 and 2006. That represented an increase of 10,000 single family homes not owner-occupied. During those same two years, 13,000 single family homes were built in Ada County.⁵
- Will energy costs begin to affect residential location decisions and choices between driving and other modes?
- How will raw land prices affect development patterns if prices escalate as they did during the boom years?
- Will more employment, especially in terms of retail and services, move into areas undergoing booms in residential construction? Conversely, will residential construction booms near the urban centers increase as has occurred in other metropolitan areas?
- What is the support for expanding the revenue base for public transportation?
- How does the region balance roadway design, traffic growth, and community goals for neighborhood protection and downtown vitality?

⁵ The analysis looked at homes for which a home owner exemption was in place. Homes not qualifying for such an exemption would be homes rented out, homes owned by out of state residents, builder or bank owned homes, and second homes not used as a primary residence by the owner.

In Sum

A plan is not a solution in itself. Rather it offers a destination and a broad set of instructions on how to get there. During three years of *Communities in Motion* public outreach sessions, residents told us loud and clear that they want change in the way this region grows. The intent is to create a future in which there is:

- Open space
- Well-defined communities
- A choice of housing
- Effective public transportation
- Better options for walking and biking

To reach these goals involves investing in transportation, considering the design of our transportation systems, and integrating transportation and land use decisions. The adoption of *Communities in Motion* is not our destination; it is the start of our journey.

