Transportation Planning in Utah Reaches the Modern Era
by Chuck Chappell, Executive Director of the Wasatch Front Regional Council

It is no big secret that traffic congestion along the Wasatch Front has gotten worse in the last few years, even with the re-construction of I-15 and new TRAX extensions. Most of us suspect that congestion will continue to get worse over time even with such major projects as the Legacy Parkway, Commuter Rail and several important arterial street widening projects. What is not generally known is how much worse it will be and how quickly it will happen. As the transportation planning agency for the Wasatch Front Region (Davis, Weber and Salt Lake Counties), the Wasatch Front Regional Council (WFRC), in partnership with the Mountainland Association of Governments (MAG) in Utah County, UDOT and UTA, is charged with developing and adopting the Regional Transportation Plan which governs transportation development along the Wasatch Front.

As part of the development of the Regional Transportation Plan, the WFRC simulates future travel demand using a sophisticated mathematical model based on predicted population and employment increases. It is apparent from the results this model that, given the current levels of investment and the anticipated population and travel demand increases, by the year 2015 the Wasatch Front will begin to hit a tipping point at which traffic congestion will begin to be much worse.

A graphic depiction of what this will mean to the average motorist at peak rush hour is shown below with red representing traffic congestion in which the average highway speed is 30 miles per hour or below the posted speed limit.
This means that not only will it be inconvenient and time consuming just to get work, it will also be almost as bad for other special events such as going to a ball game or a concert. This congestion will have particularly negative implications for freight movement and the general economic health of our community. The transportation network has often been compared to the circulatory system of our bodies. When that network gets clogged, the body may sicken and even die. In like manner, a clogged transportation network inhibits the economic health of the region and its ability to provide jobs and tax revenue to support basic services such as schools and public safety.

Being concerned about the future, we have proposed what amounts to a paradigm shift in the Utah transportation planning world. It is apparent that in certain corridors we cannot easily or cheaply widen the roads anymore and we cannot get any more cars on the roads we already have. During peak periods of congestion, the throughput of these roads diminishes dramatically.
For example, a typical freeway lane can handle approximately 2200 vehicles per hour at maximum capacity. When 2400 cars per hour attempt to use that lane, congestion quickly reduces the average vehicle speed to a crawl and vehicle throughput falls accordingly to a few hundred vehicles per hour. Accidents and other incidents have a similar, though not as frequent effect.

Other, generally larger, cities in the United States and around the world have long since discovered the fact that in such congested corridors, public rail transit such as subways, and commuter and light rail trains continue to move at the scheduled speed despite the adjacent congestion. That is the difference. This is not rocket science and it is not new. Though the trains may be packed solid, because they are dispatched in an orderly fashion, they continue to move. Thus, even though they are very expensive, most large cities have invested in fixed guideway public transit systems that are not subject to congestion.

This has been a difficult transition for the transportation community in Utah which has historically used a relatively simple mantra that if traffic congestion exists, we simply build more highway capacity to solve the problem. As a result of our dramatic growth, however, we are beginning to reach that tipping point where the old rules no longer apply. We cannot, for example, realistically widen I-15 in Salt Lake County any more than we already have.

We are not saying that we should not add highway capacity where we can, such as the Legacy Parkway in Davis County for example, because we should. We will always be a car dependant community and it is unlikely that we will ever approach the densities and transportation requirements of New York or Chicago. Nevertheless, our population densities are increasing rapidly and we are becoming much more urban than past years which necessitates a shift in the response to the challenge of increasing traffic congestion.

Consequently, the WFRC has recommended a transportation infrastructure improvement plan that would commit substantial spending to highways and public transit, primarily in the form of TRAX and commuter rail. Even though public transit presently accounts for only 3% of all trips made in a vehicle, we believe the percent of work trips made on public transit will become much higher in future years as commuters discover, as they have in other cities, that they can reliably predict the time it will take them to get to work on these fixed guideway systems as opposed to the uncertainties of traffic congestion.

At the same time, channeling large numbers of commuters onto public transit reduces the peak loads on the highways and allows them to function more reliably as well for those individuals who cannot use public transit and for freight movement. Hopefully, the vote in November to fund an aggressive extension of our public transit system will make this new vision a reality.

Lastly, the funds we commit for highways will implement additional productivity improvements because congestion management and not simply new capacity will be the goal including strategies such as signal timing, ramp metering, HOV lanes, etc.

To facilitate this philosophical shift, WFRC and MAG partnered with Envision Utah in a lengthy and extensive visioning program that explored dozens of options for meeting our future transportation and growth needs. Through the use of extensive public participation involving thousands of citizens and community leaders at thirteen workshops and four open houses across the Wasatch Front, a vision for future growth was agreed upon and a series of growth principles adopted to guide future infrastructure investment. Among those principles are goals such as emphasizing transit oriented developments, multiple town centers and placing employment centers closer to where people live, coordinating the placement of large traffic generators such as colleges and hospitals with transit development, etc. The WFRC has actively promoted these principles with our member cities and counties with a generally favorable response.
With this change in transportation philosophy and practice, we hope to make your transportation future a livable one. Without such a change, we believe we are less than ten years away from a traffic situation similar to that in Denver where most people respond to the question, how far is such and such place with an answer in time rather than in miles.