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The 2014-2040 M/RTP is an update to the major planning update effort undertaken to create the 2010-2035 M/RTP to address MAP-21 requirements. This plan builds from 1) local agency plans, 2) the Washington State Transportation Plan ([WTP 2035](#)), and 3) influences from emerging strategies and principles, such as greenhouse gas reduction, livability, and sustainability, all in an increasingly unstable funding environment. The M/RTP identifies significant transportation projects and programs based on regional priorities that are consistent with the Goals and Policies of The WTP 2035 plan and others as discussed in this section.

The M/RTP builds from the region's history and prior investments in its transportation system. The 2014-2040 plan set the stage for regional transportation investments that have recently been constructed, are currently under way, or are otherwise committed for the region.

Land use and transportation are synergistic. Thus, while history and current commitments provide the initial basis for the M/RTP, the plan must also consider the effects of future land uses and growth patterns on forecasted transportation performance measures.

Understanding the broad regional travel characteristics assists in developing the M/RTP. In 2003, Yakima County undertook a survey of travel characteristics of area residents. The survey provides insights on socioeconomic factors that affect travel in the region. A summary of findings related to trip rates, travel patterns, and use of alternative modes is summarized.

The Yakima County region has embraced working collaboratively and cooperatively to identify and address the highest priority regional transportation needs. This cooperation has led to the creation of two regional transportation planning coalitions: TRANS-Action in the metropolitan area, and Driving Rural Yakima Valley's Economy (DRYVE) in the mid-lower valley.

In addition, the M/RTP incorporates key strategies from the Coordinated Public Transit and Human Services Transportation Plan. This plan is a separate MAP-21 requirement that focused on transportation issues for special needs populations.

Regional Land Use Growth

While the history of the region establishes the background for the M/RTP, forecast growth patterns will also affect priorities. The Yakima metropolitan area is forecasted to continue as the focal point for residential growth within Yakima County. Employment growth, while focused primarily in the metropolitan area, will affect transportation needs throughout the region, especially along freight routes and within the communities along I-82 and US 97 southeast of the metropolitan area.

Local population dynamics are influenced by an area's employment climate. Generally, population growth is based primarily on migration, driven by people in search of, or taking, new jobs in an area. In a large part, population growth depends on how favorable an area's employment opportunities are in relation to other areas. Stated simply, people follow jobs and in turn create demand for local goods and services, such as housing.



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The labor force in an area can be viewed as an indicator of an area's economic vitality. Changes in the labor force provide insight into how an economy is performing and how it has performed over time. The civilian labor force (defined as all persons 16 years of age and older who are either employed or unemployed and actively seeking work) can be seen as a key economic indicator for a region. Fluctuations in labor force growth and decline are influenced by broad economic cycles and the composition of the local industry sectors. Between 2000 and 2010 Yakima County's total labor force grew by about 0.38 percent per year. The unemployment rate increased from 9.4 to 11.1 percent during the same time period.

Changes in the labor force illustrate how an economy is performing but does not highlight changes in the composition of the local industry sectors. Employment data illustrate industry level trends in an area. Between 2000 and 2010, nonagricultural employment in the Yakima County region increased by 0.25 percent per year. The strongest growth occurred in the service- providing sectors, which grew by approximately 4.16 percent per year. These sectors include wholesale and retail trade, professional services, health services, and governmental services. A continuing shift in the composition of the Yakima County Region's economy is further shown by a decrease of 2,000 goods-producing jobs from 2000-2010. The implication of this growth and shift towards the service sector has land use and transportation planning implications.

Typically, jobs in the service sector tend to be located in more urban and metropolitan areas. With more people employed in service-producing industries, the Yakima County Region's population is becoming more urban. This shift is seen in the historical population estimates. In 2000, 58.1 percent of people lived in incorporated cities. By 2010, this increased to nearly 62.7 percent. The City of Yakima, the largest city in Yakima County, accounted for 32.3 percent of the county's population in 2000 and 35.6 percent by 2010. Changes in the economic condition within the county over time have driven the locational decisions of people seeking and receiving work in the county.

The existing land use data were derived from the 2010 metropolitan area travel demand model maintained by YVCOG and has had a few updates from local jurisdictions to develop the new region-wide Travel Demand Model. Since the region-wide travel demand model has not yet been calibrated or validated, stats from the 2010 model set continues to be used. For areas outside of the MPO boundaries, the data were derived from Yakima County and local agencies. The 2007 data were updated to 2010 conditions using Yakima County data and discussions with local agency staff. An overview of the land use methodology is provided in Appendix D.

Forecast land uses for 2040 are based on county forecasts and local jurisdiction plans. The resulting household and employment forecasts, and their allocation to specific analysis zones, were further reviewed and refined with agency staff.

For air quality analyses, land use forecasts were also prepared for the year 2040. These forecasts were developed using land use data provided by local agency staff.

The following summarizes the general growth patterns for Yakima County as a whole. Additional discussion of residential and employment growth for seven subregions (see the *Overall Plan Subregions* map in Section 6) is presented in Section 6.



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Residential Growth

During the next 25 years, almost 23,000 new residential units are expected in Yakima County. This represents an average annual growth rate of 0.74 percent. The forecast growth rate is somewhat higher than the county's population growth of 1.2 percent per year between 2000 and 2010. The higher growth rate will result in additional demands on the regional transportation system.

More than 91 percent of this growth is expected to occur in or near the Yakima metropolitan area, which includes the incorporated cities of Yakima, Union Gap, Selah, and Moxee, and their respective UGA's. Five percent of the growth is expected to occur within rural areas, with three percent occurring southwest of the metropolitan area and two percent east of the metropolitan area. Another three percent is expected in or near Naches and Tieton, northwest of the metropolitan area. Only 1.2 percent of residential growth is expected to occur within the small cities southeast of the metropolitan area including Grandview, Granger, Harrah, Mabton, Sunnyside, Toppenish, Wapato, and Zillah. An even smaller amount of growth is expected in the rural areas east, southwest, and northwest of the metropolitan area. While these specific numbers may not exactly replicate the growth expected in these areas as represented in local jurisdiction comprehensive plans, the overall trends are consistent with expected growth rates across the county.

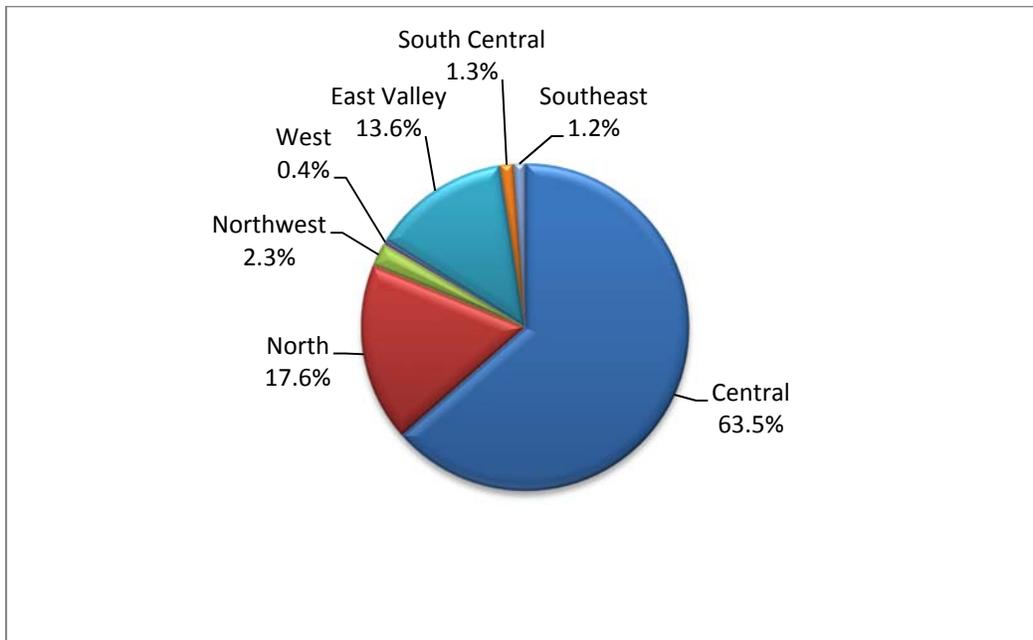


Figure 3.1 Percentage of Where the County Housing Growth is Expected by Subregion

The increased residential growth within the metropolitan area will add more travel to the regional arterials and state highways in and around the cities of Yakima, Moxee, Union Gap, and Selah. This will result in a need for adding capacity and upgrading existing roads to current urban standards.

More than 50 percent of residential growth is expected to be in single-family residences; however, duplex and other multi-family residences are expected to grow at a faster rate within the metropolitan area. In 2014, almost 70 percent of the region's housing was single-family dwelling units. By 2040, this is forecast to decline to about 66 percent. The shift



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to higher densities affects the types of transportation strategies that will be needed in the future. Roadways in the higher-density Yakima metropolitan area will need sidewalks, more traffic signals, more turn lanes, and capacity improvements. Expansion of transit service to serve the higher density areas also needs to be considered.

Employment Growth

Over 21,000 new nonagricultural employees are expected be added to the Yakima County region over the next 25 years. This represents an average annual growth rate of 1.3 percent. This translates into 0.9 new jobs for every new household of the region. The 1.3 percent forecast growth rate in the region's nonagricultural employment is consistent with the historical annual growth rate of 1.3 percent between 2000 and 2010.

As shown in Figure 3.2, employment within the metropolitan area, which includes the cities of Yakima, Union Gap, Selah, and Moxee, is expected to grow faster than outlying areas, capturing close to 84 percent of all employment growth. Another 14 percent is expected to occur within the cities southeast of the metropolitan area, including Grandview, Granger, Harrah, Mabton, Moxee, Sunnyside, Toppenish, Wapato, and Zillah. Approximately two percent of the employment growth is expected to occur in the rural areas of the county and within Naches and Tieton. The increase of employment relative to residential growth outside of the metropolitan area indicates an increase in local travel on I-82, US 97, SR 22, and other regional highways and arterials connecting workers to jobs. This will increase travel demands at interchanges and major regional access intersections.

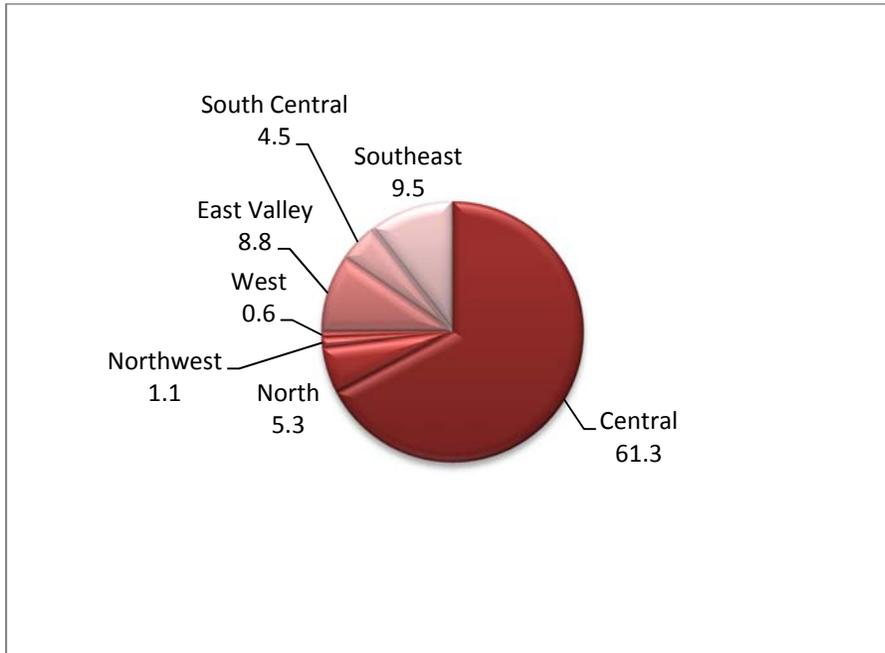


Figure 3.2 Percentage of Where the County Employment Growth is Expected by Subregion

Within the greater Yakima metropolitan area, employment in the industrial and retail sectors is expected to increase at slightly faster rates than employment within the public and service sectors. The increase in industrial employment will add more truck traffic, which needs to be accounted for in the design of transportation systems improvements. In comparison, within the small cities southeast of the metropolitan area, employment within the service and industrial



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sectors is expected to increase faster than employment within the retail and public sectors. The increase in service employment in the smaller communities along the I-82, US 97, and SR 22 corridors can help reduce some of the longer trips to the Yakima metropolitan area. These corridors also serve highway-oriented uses as volumes on I-82 continue to grow. However, the increase in traffic volumes may result in a need for improvements to the local arterials to serve the higher levels of employment in these communities.

Regional Travel Patterns

In 2003, NuStats conducted a household travel survey for Yakima County (Yakima County Household Travel Survey, Draft Final Report, NuStats, June 2003). The survey covered households throughout the county, including the metropolitan area around Yakima, Selah, Union Gap, and Moxee; cities and towns outside of the metropolitan area; and unincorporated areas of Yakima County. The survey was conducted to assist agencies with understanding the socioeconomic factors that affect travel, which in turn are applied in updating the regional travel demand forecasting model. The resulting survey data and model outputs provide a technical basis for defining transportation improvement needs and for conducting air quality analysis.

The results of the survey provide information on regional travel patterns, which affect the need for transportation improvements. YVCOG has included in their State Fiscal Year 2017 Unified Planning Work Program (SFY 2017 UPWP) an unfunded need for updating travel patterns for their region-wide travel demand model update and to inform our partners in the region about county-wide travel patterns for planning purposes.

Household Characteristics and Trip Rates

The number of people in a household affects the number and types of trips generated. A larger number of people in a household does not directly result in a larger number of trips generated per day. This is due to differences in income levels, the ages of household members, the number of vehicles, the number of licensed drivers, and other factors. Results from the 2003 survey.

- Households in the Yakima/Union Gap/Selah area averaged 2.68 people, while households in Grandview/Sunnyside averaged 3.06 people. The countywide average was 2.87 people per household.
- Households in the Yakima/Union Gap/Selah and Grandview/Sunnyside areas averaged 1.43 workers; the rest of the county averaged 1.68 workers per household.
- The survey results indicate that households in the Yakima/Union Gap/Selah area generates an average of 7.19 trips per day, while households in the Grandview/Sunnyside area generates only 5.78 trips per day on average. The countywide average is 6.96 trips per household.
- Overall, trips between home-to-work (or work-to-home) account for 28 percent of the total trip-making on an average day. Within the Grandview/Sunnyside area, work/home trips account for 34 percent of the total trips. Within the Yakima/Union Gap/Selah area, approximately 25 percent of the daily trips are work/home related.
- Trips between home and shopping or other non-work activities account for 45 percent of the total travel.



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- Trips that do not connect to/from a residential home (work to shopping, as an example) comprise the remaining 27 percent.

Travel Patterns

2014-2040

In defining regional transportation priorities, it is important to understand the origins and destinations of travel. If most trips stay within their community, then the focus may be on improving local arterials to serve travel needs. If the trips are between communities, access to and from the state highway system and major regional arterials will likely be a higher priority. The 2003 NuStats survey provided the following data on total daily trips that helps guide the M/RTP.

- 84 percent of the trips with a Yakima origin stay within Yakima; another eight percent drive to destinations in Selah, Union Gap, or Moxee.
- 64 percent of the trips originating in Union Gap have destinations in Yakima, with 18 percent connecting to destinations in Union Gap and six percent connecting to Moxee or Selah.
- More than 60 percent of the trips generated in Moxee connect to destinations in Yakima, with 14 percent staying in Moxee and 11 to 12 percent connecting to Selah or Union Gap.
- Only 43 percent of Selah's trips connect to Yakima, while 44 percent stay within Selah. Approximately five percent of the trips originating in Selah connect with Union Gap or Moxee.
- 55 to 70 percent of the trips generated within communities southeast of the Yakima metropolitan area stay within the community.
- Two to six percent of the daily travel generated within Sunnyside, Grandview, Granger, and Mabton have destinations within the four primary cities in the Yakima metropolitan area; however, 10 to 20 percent of the trips from Grandview, Granger, and Mabton connect with Sunnyside.
- Wapato, Zillah, and Toppenish are closer to Yakima; this results in 15 to 30 percent of their trips connecting to the metropolitan area cities. Another 30 to 60 percent of their trips stay within their local communities.
- Naches has relatively limited local services, which results in only eight percent of these trips staying within the community. More than 80 percent of the trips originating in Naches connect with the metropolitan area cities. This reflects the City's direct connection via US 12.
- For Tieton, 20 percent of the trips generally stay within the community, with nearly 45 percent connecting to Yakima and surrounding cities.

These results show the importance of regional accessibility to the Yakima metropolitan area for jobs, services, and other daily travel needs. They also indicate the need for local arterial and highway improvements within the metropolitan area and connecting to communities outside of the metropolitan area.



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As noted in the land use forecasts, the Yakima metropolitan area will be the primary growth area for both residents and employment over the next 25 years. The increases in employment in communities outside of the metropolitan area will also attract more trips to those communities, which will likely require transportation improvements.

Travel Mode

Based on the NuStats survey, 94 percent of the trips made by Yakima County households are by automobile. Of these, 81 percent are drivers and 13 percent are auto passengers. Walk trips comprise four percent of the trips and transit and other modes (such as bike) account for two percent of the trips. As discussed later, fixed route transit service was only available in Yakima in 2003, limiting its effectiveness in meeting regional travel demands.

Plans are under way to incorporate freight and transit as new modes into a single countywide travel demand model. The model set is expected to be completed in 2016 in time for the incorporation of Performance Measures into local, state, and federal Plans..

Other Transportation Planning Efforts

The M/RTP builds from and supports the WTP, local agency transportation plans, and the TRANS-Action and DRYVE prioritization efforts. It also builds on and supports the Coordinated Public Transit and Human Services Transportation Plan (HSTP) for the region. The following summarizes how the M/RTP relates to these plans and implementation programs.

Washington Transportation Plan

The Washington State Transportation Commission's Plan 2035 (WTP) provides the umbrella for all metropolitan and regional transportation plans. The WTP's vision statement is:

"By 2035, Washington's transportation system safely connects people and communities, fostering commerce, operating seamlessly across boundaries, and providing travel options to achieve an environmentally and financially sustainable system."

As presented in Section 4, the regional priorities set by the Yakima Valley M/RTP align with these state guidelines. The M/RTP priorities focus on preservation, safety, economic development, congestion relief, and transit and special needs transportation. The process for establishing regional priorities and identifying improvement projects within the fiscally constrained M/RTP support and are consistent with these WTP objectives.

Local Agency Transportation Plans

As required by the Growth Management Act (GMA), Yakima County and its cities have prepared and regularly update their comprehensive plans. The comprehensive plans include transportation elements. The transportation elements set the communities' priorities and improvement strategies to address existing and future transportation needs. These plans primarily focus on arterials and collectors within the agency's jurisdiction; however, needs in designated urban growth areas (UGA) and connecting routes in other jurisdictions are also described in some of the plans.

The local transportation elements were reviewed to identify possible improvements and programs for the M/RTP. The M/RTP process combined projects from WSDOT and local jurisdictions into strategies to define the recommended



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framework for the regional plan (see Section 4) based on the region's priorities and policies. The MPO/RTPO Policy board adopted a Transportation Element Certification Checklist on July 20, 2015.

The M/RTP project list incorporates all regionally significant local agency projects for reference. The M/RTP must provide a financial analysis demonstrating how the improvements and programs can be implemented; therefore, only the highest priority projects, based on the region's criteria, are included in the fiscally-constrained project list presented in the body of the M/RTP. The M/RTP also identifies projects that are a secondary priority for the regional transportation system, should additional funding become available or changes in regional needs occur prior to the next plan update.

The M/RTP also is consistent with local land use plans and forecasts from the comprehensive plans. This process provides consistency between the local land use plans and the regional transportation system needs.

Development of the M/RTP included a review of agency comprehensive plan goals and policies. The objective was to ensure that the M/RTP goals and priorities were in alignment with local plans and policies. The analysis confirmed that local agency goals are consistent with and support the M/RTP goals.

TRANS-Action and DRYVE

TRANS-Action and DRYVE (Driving Rural Yakima Valley's Economy) are coalitions of business leaders, elected officials agency staff, and community leaders. The purpose of these two groups is very similar. Their goals are to encourage the economic vitality of the region by defining, promoting, and obtaining funding for key transportation improvements. By working together, they are able to look beyond jurisdictional boundaries to support the regional needs. These objectives are consistent with the WTP, HSTP, M/RTP, and local comprehensive plans. TRANS-Action was established in 2002 and primarily focuses on needs in the metropolitan area. Based on the success of the TRANS-Action process, DRYVE was formed in 2006 to focus on rural needs in the mid to Lower Valley.

Both groups have identified a range of transportation improvement projects and strategies. Many of these projects are consistent with local agency or state plans. Other projects are newer ideas aimed at economic growth, freight traffic, and regional connectivity. Each of the TRANS-Action and DRYVE projects was evaluated based on the regional priorities and available funding. While not all of TRANS-Action and DRYVE projects are incorporated into the fiscally-constrained M/RTP, they are included in the regional project list (*Appendix F*). This allows the regional leaders to re-evaluate the project priorities and funding programs as part of future plan updates and Transportation Improvement Programs. Local agencies may opt to proceed with some of these projects outside of the regional planning and funding process to meet local or emerging needs that go beyond the regional priority process. YVCOG and member agencies will work together to track the status of the projects and consistency with the M/RTP.

Coordinated Public Transit and Human Services Transportation Plan (HSTP)

MAP-21 also requires communities to prepare a coordinated public transit and human services transportation plan to be eligible for certain Federal Transit Administration funding programs. The purpose of this requirement is to improve transportation services for people with special needs. In the Yakima Valley region, People for People led the development of the coordinated public transit and human services transportation plan in 2014.



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The 2014 HSTP was developed based on extensive input from stakeholders and special needs population groups throughout the Yakima County region. The coordinated public transit and human services transportation plan 2014 identifies three primary services needs for the region:

- Preserve and expand transportation services for individuals with disabilities, older adults, youth, veterans, and individuals with low-incomes.
- Promote safe and accessible transportation services for individuals with special needs by educating and advocating for special needs transportation.
- Coordinate transportation and human services for increased efficiencies and utilization of resources

The plan supports preservation and expansion of the existing Community Connector, Pahto Public Passage, dial-a-ride service and transportation to employment for needy families. The plan includes the following measurement rankings which are used to address the needs of the special needs population:

- Preservation – Ensure that current transportation resources remain in place.
- Unmet/Greatest Need – Meets the identified needs of the population.
- Coordination – Assure non-duplication and coordination of resources.
- Effectiveness/Cost Efficient – Transportation resources are available, accessible and adaptable to meet the needs. Transportation resources provide community savings.

The M/RTP identifies how these services and programs fit within the overall transportation system for the Yakima County region.

Yakima Valley Regional ITS Architecture

In 2014, the MPO/RTPO Policy Board adopted the Yakima Valley Regional ITS Architecture. The architecture is a document that describes the Intelligent Transportation Systems (ITS) in the Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO) regions of Yakima County, Washington are currently deployed or are being planned for the near future. By showing what advanced technology systems are in place, this plan can illustrate opportunities for sharing resources and improve overall system functionality.

This regional architecture is built on the U.S. National Architecture version 7.0, and was developed on guidelines suggested by the National ITS Architecture team.

Within Yakima Valley's MPO boundaries, several key stakeholders have ITS systems. The municipalities of Yakima, Selah, and unincorporated areas of Yakima County all have signalized intersections. Yakima maintains its own signalized intersections and all others are maintained by the Washington State Department of Transportation (WSDOT).

WSDOT owns and maintains the majority of ITS components in the region, including several ITS system elements (fiber, variable message signs, data stations, etc.). WSDOT also collects some remote weather information, which is sent, along with transportation data, to be coordinated out of the WSDOT Traffic Management Center in Yakima. In addition, WSDOT works with the Washington State Patrol (WSP) to share real-time information.



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Yakima Transit has ITS components in place and plans to expand systems to provide more dynamic services and improved security to their customers.

Stakeholders within the Yakima Valley's RTPO boundaries maintain a variety of ITS systems, as well. The cities of Grandview, Sunnyside, Toppenish, Wapato, and Zillah have signaled intersections.

In the U.S. National ITS Architecture, types of ITS equipment or projects are grouped into "service packages," which can be used to tie one region's architecture to the state or to specific project architectures. Several service packages have been selected to

describe the kind of services stakeholders have installed, or plan to install.

Another key purpose of the architecture is to define what standards are used in ITS equipment to make it easier for one system to interact with another. The architecture defines what standards are currently being used and suggests relevant national standards, which may be chosen to help make future projects more accessible to a wider range of stakeholders.

The architecture includes a list of data-sharing agreements within the region, showing how agencies work together to operate and maintain the various ITS systems.

The architecture, along with the broader Turbo database, fulfills the requirements set forth by the U.S. Federal Highway Administration Rule requiring regions with existing ITS applications to have a regional ITS architecture. It will be incorporated into the regional transportation plan update cycle, with any necessary amendments made as needed.

