CHAPTER SEVEN – MODEL RESULTS & MPO TRANSPORTATION SYSTEM EVALUATION

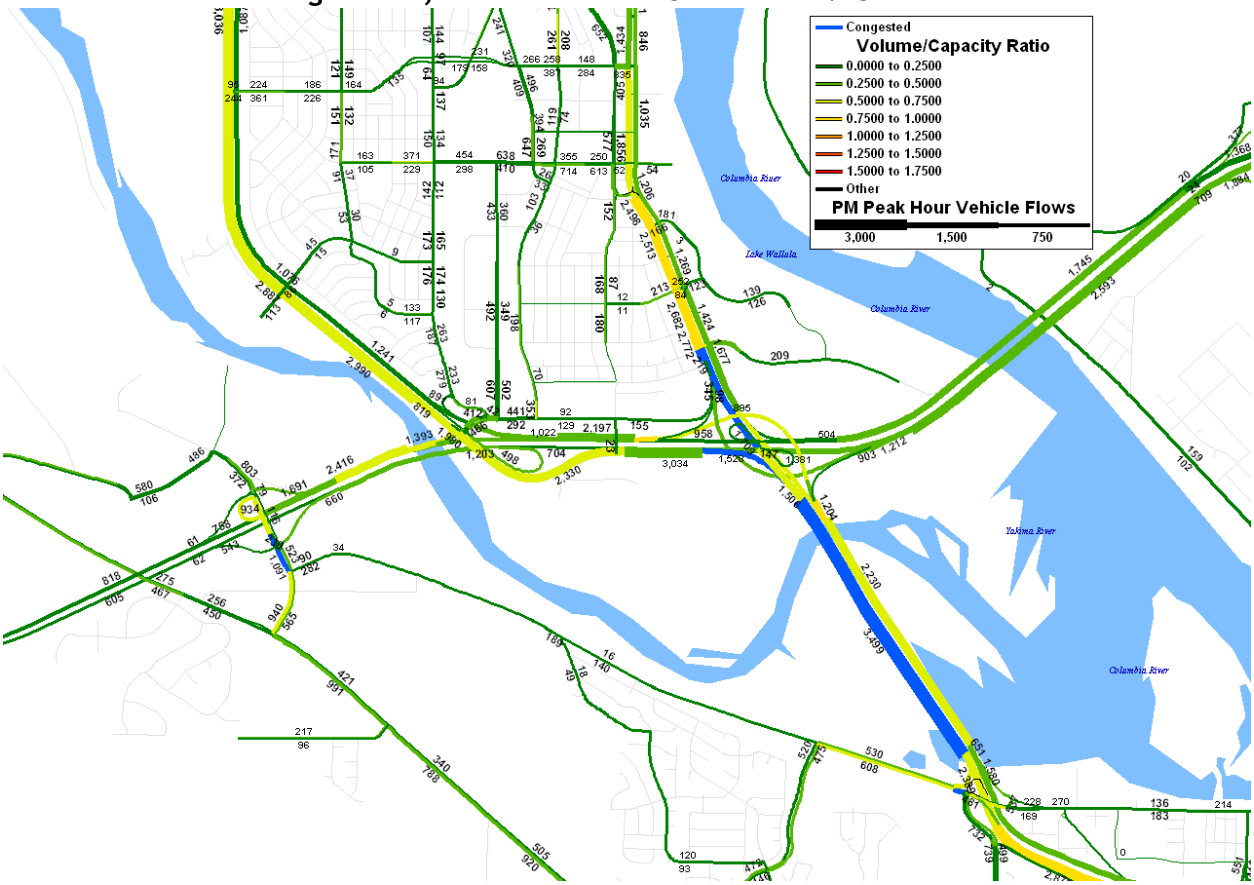
INTRODUCTION

After calibration of the model to base year traffic volumes, the model was then altered to reflect anticipated capacity improvements and expected land use growth, allowing for evaluation of future road networks. As with all models, this is a tool to evaluate the impacts of future change. The results should be used with caution. A model is only as good as the data and assumptions used in its development. Results are heavily dependant on future year inputs, as well as the base-year calibration. Will the area develop as projected in the land use data? Will travel behavior stay essentially the same over the evaluation period? Will planned improvements used in scenario development occur as anticipated? It is also important to note that the model is best used for evaluation of regional traffic patterns, rather than analysis of specific segments of roadway. Attention should be paid to those areas where several segments show congestion, rather than focusing on individual segments. The 2006 model focuses on four scenarios for future analysis of area roadways: 1) 2015 No-build, 2) 2015 Build, 3) 2025 No-build, and 4) 2025 Build. This chapter will detail the findings of these scenarios, as well as the results of the base year analysis.

It is important to remember that the model replicates traffic patterns during the p.m. peak hour. There are numerous locations that show congestion during the a.m. peak hour and other periods of the day. These will be addressed separately. It is also important to remember that, while the model is calibrated quite well statistically, there may be some areas of congestion, which don't show up under model analysis. The converse is also true, in that the model may reflect congestion where none exists. BFCG staff and the urban area jurisdictions reviewed the results and have identified those areas not identified by the model. These locations will also be addressed. Complete documentation of the Tri-Cities Metropolitan Area Traffic Model is on file at the BFCG office.

The modeling software package can portray results in a variety of measures. A measure that is easily understood and best portrays future congestion is a volume/capacity (V/C) ratio. This chapter will rely heavily on V/C ratios for the purposes of discussion about potential congestion. As an example, model volumes that equal the capacity of a given roadway would yield a V/C ratio of one. A roadway that has very little volume would be near zero, while a roadway operating above it's stated capacity would have a V/C ratio larger than one. V/C ratios equal to .85 or greater are indicative of congested segments. Figure 7-1 shows an example of a typical V/C map taken from the base year calibration of the model. V/C measures are shown by a range of colors, while volumes on road segments are shown both by the line thickness and also numerically above the roadways. A listing of deficiencies found through the modeling efforts can be found in appendix F for the varying scenarios completed.

Figure 7-1, Base Year 2005 Calibration V/C results



2005 BASE-YEAR RESULTS

As addressed in Chapter 1, Level of Service (LOS) D is considered acceptable in the urban area. LOS D represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level (For definitions of LOS A through F, see page 1-21). Any roadways or intersections, with LOS E or F, are considered deficient. Volume/Capacity (V/C) ratios in excess of .85 would be indicative of an LOS E or F. The base year for the model was 2005 and closely reflects the traffic volumes, as they existed during the PM peak hour of a typical weekday that year. The significant areas of congestion identified in the base year are listed below.

- George Washington Way (Comstock to I-182)
- Queensgate Interchange in vicinity of EB I-182 ramps
- Eastbound SR 240 Causeway (including ramps from EB I-182 and to Columbia Park Trail)
- SR 395 Blue Bridge Southbound fly-over of SR 240
- SR 397 (south of 10th Ave to Finley Rd vicinity)

ALTERNATIVE SCENARIOS

The future scenarios for 2015 and 2025 were completed using the forecasted land use described in Chapters 5 & 6. For the "No-build" scenarios, the road network remained as it was in the year 2005. In the Tri-City area, many significant capacity improvement projects are currently underway. So, while it may not be realistic to expect a road network with no improvements to the 2005 roadway, these scenarios are a good representation of what conditions might be like if continuing efforts aren't made to handle needed capacity. As part of the financial element of this plan, each jurisdiction was required to provide a financially constrained list of projects for the twenty-year period. The "Build" scenarios incorporate the financially constrained projects contained within that list. The project list and additionally those projects listed as planning projects, are detailed in Tables 7-2 & 7-3 at the end of this chapter. The 2015-Build scenario incorporates all projects expected to be built between 2005 and 2015. The 2025-Build scenario reflects the addition of those projects expected to be built by 2025. This list will be discussed in further detail in the following chapters, but is shown in this chapter for a better understanding of what projects were added to the two "Build" scenarios.

DEFICIENCY IDENTIFICATION

2015 "No-build" – Under this scenario, the model shows the locations mentioned in the base year findings have significantly worsened, with considerable congestion apparent throughout the modeling area. Areas of congestion are primarily along major corridors or their interchanges with area highways. Some of the deficiencies new, or worsened, to this scenario are listed below.

- I-182 ramps to and from George Washington Way/SR 240
- I-182 WB over Yakima River and loop ramp to Queensgate
- Queensgate between Keene and Columbia Park Trail
- Goethals Drive north of Aaron Drive and north of Swift
- Burden Blvd at Road 68 and eastward
- Rd 68 Interchange with I-182
- Rd 100 south of I-182 eastbound ramps
- SR 224 between Bombing Range Rd. and Ruppert Rd. vicinity
- Stevens Drive north of SR 240 Bypass
- SR 240 between I-182 and Columbia Center Blvd
- Gage Boulevard between Steptoe and Leslie Rd
- Leslie Road south of Gage
- Union Loop Rd south of 27th Ave.

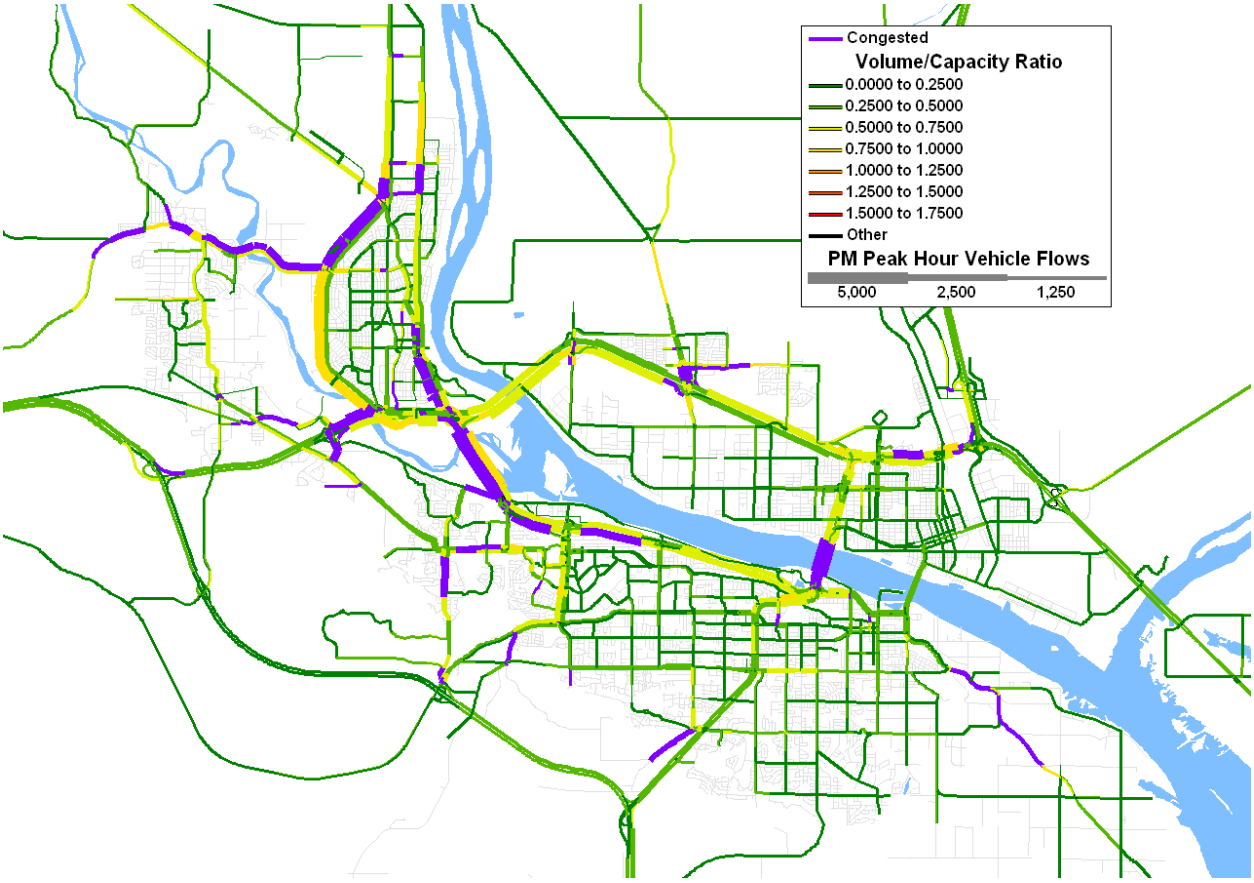
2015 "Build" – In this scenario, several significant projects have been built. Some that are currently underway, and others that are likely before the year 2015. Understandably, these projects have eliminated many of the deficiencies found in the no-build scenario. However, there still remain some locations with projected congestion. Listed below are some of the remaining deficiencies.

- George Washington Way southbound from Lee to I-182
- Jadwin Avenue southbound to George Washington Way

- Rd 100 northbound overcrossing of I-182
- Rd 68 northbound in vicinity of I-182 Interchange, Burden Blvd eastbound
- I-182 WB ramp to Queensgate northbound
- SR 224 westbound between Bombing Range Rd and Grosscup
- SR 395 "Blue Bridge" southbound
- SR 397 between 10th Ave and East 25th Ave vicinity

2025 "No-build" – As expected, this scenario truly depicts the gridlock that could be expected with no capacity improvements to the road network. Many of the major corridors under this scenario are forecasted as having deficiencies either on the roadways or at intersections. The results of the 2025 No-build scenario are shown in Fig. 7-2. With sound planning and capacity improvements, we hope to never see these conditions in the Tri-City area.

Figure 7-2, 2025 No-Build Scenario



2025 "Build" – As in the 2015-Build scenario, several significant projects have been built into this forecast. As a reminder, the projects built into this scenario can be found in Table 7-1. As we saw in the 2015 scenarios, many of the deficiencies shown under the "no-build" scenario have been eliminated with the "build" scenario. There are, however, some areas that continue to be forecasted as deficient. The major locations have been listed below.

- SR 395 corridor between SR 397 and Yelm Ave in Kennewick.
- George Washington Way southbound south of Williams to SR 240

- Kennedy Rd between Keene and Duportail
- I-182 interchanges with Thayer/SR 240, Queensgate, and I-82
- Northern portions of the SR 240 bypass and SR 224 westward to West Richland
- I-182 interchanges with Rd 100 and Rd 68
- Burden Blvd east of Rd 68
- Segments of Road 44 north of Argent
- SR 224 north of connection with planned Red Mountain interchange
- SR 240 east of Columbia Center Boulevard
- SR 397 south of 10th Ave to Finley area

LOS CONCERNS FOR A.M. PEAK HOUR

There are several locations throughout the Tri-City area that have significant LOS problems during the a.m. commute. These locations are likely to not show LOS problems in the model, given travel trends in the Tri-Cites area, related to the Hanford site, and the focus of the regional model on the p.m. commute. BFCG staff, with the help of WSDOT and the local jurisdictions, has compiled the following list to identify these locations.

- Stevens Dr. corridor and left turn pockets between SR 240 and Battelle Blvd.??
- Queensgate access to I-182 eastbound
- I-182 eastbound off ramp to SR 240 northbound
- At-grade railroad crossings on Leslie, Edison, Washington St./Fruitland, SR 397
- SR 395 to I-182 Eastbound and 20th Ave. "weave" N/O Court St.

OTHER LOS CONCERNS NOT IDENTIFIED BY MODEL

There invariably are locations in all models that don't reflect the LOS problems that exist in real life. BFCG staff and local jurisdictions have reviewed the model findings, and have identified the following locations as those where LOS problems are more significant than portrayed by the model. It is necessary to understand that if a location doesn't reflect the problems that exist in the base-year, it will most definitely underestimate the problems likely under future scenarios.

- SR 240 Westbound off-ramp @ Edison St.
- Clearwater Blvd.- Edison St. to SR 395

W.S.D.O.T. has established the LOS levels on several urban roadways and made projections for the future. Table 7-1 shows the 2005 LOS on these roadways and projections for 2015 and 2025.

Table 7-1, WSDOT Urban Highway LOS Determinations

State Route	Description	Total Capacity	2005 AADT	2015 AADT	2025 AADT	**2005 LOS**	**2015 LOS**	**2025 LOS**
182	I-82 to Dallas Rd. O'xing	5652	18000	26280	34560	A	B	B
240	Van Geisen to 1/2 mile S/O Duport	11532	31000	40920	50840	B	B	C
240	Aaron Dr. Vicinity	7688	19,000	25080	31160	B	B	C

Table 7-1, WSDOT Urban Highway LOS Determinations

State Route	Description	Total Capacity	2005 AADT	2015 AADT	2025 AADT	**2005 LOS**	**2015 LOS**	**2025 LOS**
240	RM 33.03 to Yakima River	6152	25000	33000	41000	B	B	C
240	I-182 to Yakima River	9228	30000	39600	49200	A	B	B
240	Yakima River to Columbia Park Tr. Off-ramp	9228	54000	76680	93960	B	C	D
240	Columbia Park Tr. To Columbia Center Blvd.	6152	42000	55440	68880	C	C	D
395	36th Ave. to 19th Ave.	7008	16000	21120	26240	A	B	B
395	10th Ave. to 2nd Ave.	7008	26000	34320	42640	B	C	C
395	Kennewick Ave. to Clearwater Ave.	7008	26000	34320	42640	B	C	C
395	Clearwater Ave. to Canal Dr. Bridge	7008	30000	39600	49200	B	C	D
395	Canal Dr. Bridge to Off-ramp	5608	41000	54120	67240	C	D	E
395	Within SR 240 Interchange	2302	41000	54120	67240	F	F	F
395	Off-ramp to Columbia River Bridge	5608	33000	43560	54120	B	C	D
395	Columbia River Bridge to Lewis O'xing	5608	57000	75240	93480	D	F	F
395	Court St. to I-182	5608	40000	52800	65600	C	D	D

CONCLUSIONS

Solutions to many of the existing and anticipated deficiencies are included in the 2007-2012 MPO TIP, while others are addressed in the twenty-year constrained and planning lists found in Tables 7-2 and 7-3.

With the network deficiencies identified throughout the model area, it is clear significant problems must be addressed over the next twenty years. Most urban areas have an equal distribution of employees throughout the model network. The Tri-Cities urban area is unique in that the heaviest concentration of employees lies to the Northwest in areas on, or adjacent to, the Hanford site. This unequal distribution of employees has historically created areas of congestion in both the a.m. and p.m. peak hours along the "Hanford Commute." While there is an inevitable decline in Hanford related employment facing the area in coming years, other anticipated growth could largely offset the impacts of employment drawdown at Hanford. The Tri-City area has experienced 26% population growth over the last decade and area planners forecast an additional increase of 43% over the next 20 years. The employment numbers for the area are also increasing, with an increase expected of 30% over the twenty-year planning period. Recent trends show no sign of slowdown. Forecasts for the model area put the population over 276,000 by the year 2025. These elements are sure to contribute to more deficiencies throughout the road network.

Officials should continue to work toward solutions easing congestion along area roadways. The anticipated projects contained in Table 7-2 address many problems, but other areas of congestion will also need to be addressed. Themes evident throughout most modeling scenarios indicate a need to:

- Provide a more efficient, or alternate, southbound exit from "core" Richland, to ease George Washington Way congestion.

- Continue to monitor traffic operations along local corridors and their intersection with area highways. Modeling efforts indicate area interchanges are likely to need capacity improvements as the area continues to grow.
- Evaluate conditions along the SR 395 corridor, particularly traffic volumes crossing the Columbia River over the SR 395 "Blue Bridge".

OTHER LONG RANGE PLANNING CONSIDERATIONS

Columbia River Crossing Analysis

This modeling effort evaluated the impacts at key interchanges along SR 240 and I-182 and measured attractiveness of three different Columbia River crossings between Benton & Franklin Counties in the urban area. Each scenario was studied with the land use and project assumptions held in the 2025 Build scenarios mentioned earlier in this chapter. The options studied are detailed below:

1. ***Rd 100/Columbia Center Blvd*** – It was assumed for the Rd 100/Columbia Center scenario that accesses would first be at Court Street in Pasco and Columbia Park Trail in Richland with both locations signalized. Our assumption was that a four lane facility be modeled as a principal arterial and speeds of 45 mph. The characteristics of Rd 100 between this span and I-182 were adjusted to match these traits.
2. ***Road 68/Edison Street*** - It was assumed for the Rd 68/Edison scenario that accesses would be at Court Street in Pasco and Edison/SR 240 WB ramps in Kennewick, again with both locations signalized. The assumption for a four lane facility as a principal arterial and 45 mph speed. The characteristics of Edison St crossing of SR 240 were altered to allow for two lanes of travel in both directions.
3. ***SR 395 "Blue Bridge" Additional Span*** - At WSDOT direction, we modeled an additional span allowing for three lanes of travel in each direction. The outermost lane in each direction would drop off at SR 240 southbound and Lewis Street northbound. Also included in this scenario was an interchange at Lewis/Sylvester. The alignment of ramps/roads was built according to the preferred option from the 1990 study of this interchange. Beyond these modifications, no alterations were made to SR 395.

Results of the Columbia River Crossing Analysis demonstrate traffic flows likely high enough to warrant an additional Columbia River crossing. Circulation between the two cities could be greatly enhanced with another span, while reducing volumes on area highways.

Forecasts for 2015 and 2025 on SR 395 exhibit deficiencies not addressed in the WSDOT financially constrained project list. While funding is in place for needed improvements on the south end, other needed improvements must compete for funding. Further analysis should be made in regard to the operational aspects of potential river crossings, potential sources of funds for such improvements, and how such improvements might affect other area roadways/highways.

Duportail Bridge Analysis

This modeling effort evaluated the impacts of a new bridge extending Duportail Street across the Yakima River and also a host of improvements along I-182 coupled with improvements at

the interchanges with Queensgate and SR240/Thayer vicinity. Of particular interest is how such a facility would alter volumes along I-182 at both the SR 240 and Queensgate interchanges. Scenarios were modeled in both the 2015 and 2025 scenario years with accompanying land use and projects as described in earlier portions of the chapter. Two scenarios were evaluated, as described below:

1. **Duportail Option A** – Consisted of improvements at Wellsian/Aaron/Thayer including: elimination of the westbound I-182 access from Aaron and creation of a new westbound access directly across from Wellsian Way/Aaron Drive intersection. This option also assumed a EB loop ramp at Queensgate and widening of the Queensgate overpass to two lanes in each direction. The I-182 EB off-ramp to SR 240 NB also had another lane added "mid off-ramp" to the point of merge with SR 240. Westbound I-182 was modeled as having four lanes, while Eastbound I-182 was shown as three lanes. The connection of Stevens to Wellsian was also added.
2. **Duportail Option B** - Involved taking out some of the improvements WSDOT had already indicated they'd like in the future modeling scenarios. Specifically, this option considered if a Duportail Bridge structure could alleviate the need for capacity improvements along portions of I-182 by handling capacity at another location. Queensgate I/C and the Thayer/Aaron/SR 240 area are left at current conditions, with the exception of the "Lawless access/Thayer termination" revision. Again, the Stevens to Wellsian was added but in this option continues westward to connect with the bypass directly across from the new span. The Duportail bridge was added as a four-lane facility and turn movements were added at SR 240.

Option A modeling shows that a single lane on-ramp, Wellsian Way to westbound I-182, may not have sufficient capacity for the anticipated traffic flow. While the modeled I-182 improvements should be sufficient, the interchange at Queensgate interchange is likely to need additional capacity for westbound off-ramps and Queensgate's bridge across I-182.

Under Option B, the Duportail Bridge appears to draw significant volumes away from the SR 240 Bypass and the I-182 interchange with Thayer/Aaron. This change in traffic pattern also leads to improvements at the I-182/Queensgate interchange ramps, although the Queensgate crossing of I-182 may need added capacity. The southern portion of Wellsian Way sees a noticeable decrease in volumes and congestion under this option.

Neither option appears to draw much traffic away from the George Washington Way corridor. Further study is warranted to ensure improvements in this area of town provide an attractive alternative entry/exit from "core" Richland.

I-82 Red Mountain Interchange Connection to SR 224 & SR 240

This effort considered the study of an interchange on I-82 with a connecting roadway northward to SR 224 in the vicinity of Red Mountain. The study used land use and project forecasts from 2015 and 2025 with particular emphasis on how an interchange in this location might affect volumes at adjacent interchanges (SR 224 @ Benton City, I-182 @ Queensgate). The previously completed *I-82 and Red Mountain Area Transportation Study* (JUB Engineers/BFCG – 2000) was used as the guide for this modeling effort. The preferred alignment and connecting roadways from that study were used in this effort. Traffic volumes along new segments and existing interchanges are currently being evaluated to measure the effectiveness of a new interchange at this location. A draft Interchange Access Point Decision Report is anticipated to be ready for review in October 2006.

US 395 Corridor Study

The US 395 corridor through the Tri-Cities has many limitations, including substandard interchanges from I-182 to SR 240, a lack of US 395 continuity at the SR 240 interchange, then many signalized grade intersections through Kennewick. There the highway functions more as a city arterial than a major U.S. route congressionally designated a "Highway of National Significance" as a north-south link between the Canadian and Mexican borders.

A 1995 consultant study jointly managed by WSDOT and ODOT considered alternative routings for US 395 from north of Pasco to I-84 in Oregon. There was strong local opposition in Oregon to relocating the highway to not pass through the cities of Hermiston and Stanfield. The study, thus, recommended retaining the existing US 395 routing, in full recognition of the on-going congestion problems in the Tri-Cities.

At such time US 395 congestion and resultant accidents in Pasco and Kennewick approach intolerability, major capacity and safety improvements will have to be made. Due to the extent of abutting developments, such improvements will have extreme costs. Recent funding efforts have targeted small sections of this corridor, focusing on a few intersections and an interchange improvement. Anticipated conditions along this corridor warrant a more detailed study of alternative routings or increased capacity through or around the area.

North Richland Toll Bridge

Initially studied in 1980, the intent was to solve SR 240 corridor problems by providing an alternative route to Hanford for daily work commutes and for freight and hazardous materials shipments.

This toll bridge route would have connected SR 240 near Horn Rapids to SR 395 north of Pasco via Horn Rapids Road in Benton County and Alder Road in Franklin County. Access from I-182 to the toll bridge would have been provided by Road 68 and Columbia River Road in Franklin County.

The study concluded that a toll of $3-$4 would have been required to make the project feasible in terms of cost. However, when a toll of that magnitude was added to the traffic simulation model, the proposed route attracted only about 1,000 vehicles per day.

Further analysis as part of a 1993 SR 240 Corridor Transportation Study determined the maximum charge that should be considered was $2. At that toll rate the river crossing was expected to attract only 3,540 vehicles per day in the Year 2012. Consequently, the toll route did not significantly reduce projected traffic congestion on either the SR 240/Stevens Drive corridor or George Washington Way in Richland. A $0.50 toll was projected to attract 12,000-13,000 daily vehicles in the Year 2012, but, would have paid off indebtedness at a much slower rate.

The SR 240 Richland "Bypass" has now been expanded to six lanes. Similar capacity improvements are being constructed on SR 240 from I-182 southerly to Columbia Center Boulevard. The City of Richland similarly expanded Stevens Drive from SR 240 northerly into Hanford. These commute route improvements either have or will alleviate much of the daily congestion. If, in the long term, congestion again approaches intolerable conditions, a North Richland toll bridge alternative should likely be revisited.

FINANCIALLY CONSTRAINED PROJECT LISTS

Table 7-2 contains the financially constrained project lists for the MPO area. The Table serves two purposes: to list the project needs in the MPO area and to show what projects were selected by each jurisdiction to be added to the road network for the 2015 and 2025 traffic model scenarios.

Because the model area is greater than the MPO boundary, some projects listed in this section are in the rural portion of Benton and Franklin Counties. Because they are outside the MPO boundary, the costs of these projects are included in Chapter Eight, Rural Transportation (RTPO) System Evaluation. These projects are listed in **bold** in the project listings below. Projects included in the 2015 and 2025 "Build" model scenarios are *italicized* in the list on the following pages.

Table 7 - 2, Metropolitan Area Project List

	Benton County 2006-2015 Projects	
Project Name	**Description**	**Project Cost**
Intertie Phase 2: Olympia St. to Finley Rd.	Construct a new two lane arterial road from Olympia St. to Finley Rd.	$7,800,000
Intertie Phase 3: Finley Rd. to SR 397	Construct/reconstruct a new two lane arterial road from Finley Rd. to SR397	$5,800,000
Piert Road : SR 397 to Bernath	Construct a new two lane access road from SR397 to Bowles Rd.	$3,210,000
Bernath Road: SR 397 to Yew St.	Reconstruct Bernath Road from SR397 to Yew St.	$180,000
Webber Road: Dennis to I-82	Two lane major collector, 50 mph	
Sagebrush Road: Cottonwood to Badger Rd	Two lane access, 50 mph	
DNR Road: Sunset to SR 224	Two lane access, 50 mph	
Total Project Cost 2006-2015		**$16,990,000**
	Benton County 2016-2025 Projects	
Project Name	**Description**	**Project Cost**
Leslie Road: Clearwater Ave. to Richland City Limits	Clearwater Reconstruct Clearwater Ave. to Richland City Limits	$456,000
27th Avenue: Oak St. to SR 397	Reconstruct 27th Avenue from Oak St. to SR397	$750,000
Finley Road: SR397 to SR397	Reconstruct Finley Rd. from SR397 to SR397	$2,500,000
Red Mountain Interchange	Diamond Interchange with frontage road accesses and SR 224 connection	
Badger Mountain area road: Dallas Rd. to Reata Rd.	Two lane collector, 50 mph	
Total Benton County Project Cost 2016-2025		**$3,706,000**
Total Benton County Project Cost 2006-2025		**$20,696,000**

Kennewick 2006-2015 Projects

Project Name	Description	Project Cost
Steptoe Street	Sidewalks, curbs, streetlights, new construction, signals and roundabouts	$12,675,000
Gage Boulevard/Center Parkway Extension	Joint project with Richland - Roadway widening/reconstruction to six lanes, resurfacing of Gage; New (Center Parkway) roadway, curb & gutter, sidewalk, illumination; New signal at Intersection	$7,500,000
US 395/27th / 36th Avenues Reconstruction	Reconstruct intersection to provide additional turn lanes, signal	$1,295,000
4th Avenue - Kellogg To CCB	Reconstruction, curb, gutter, sidewalk, illumination	$2,855,000
4th Avenue - Union To Kellogg	Reconstruction, curb and gutter, sidewalk, and illumination	$2,855,000
4th Avenue & Kellogg Traffic Control	Traffic Signal or Roundabout	$300,000
Citywide Intersection & Corridor Safety Project	City-wide signal modifications & retiming for Flashing Yellow Left-turns	$541,000
Clearwater Avenue	Resurfacing	$815,000
Canal Drive - Columbia Center Blvd To Edison	Resurfacing	$793,000
10th Avenue - Columbia Center Blvd To Union	Resurfacing	$1,857,000
Canal Drive - US 395 To Washington	Resurfacing	$753,000
Washington Street - 27th To 10th	Resurfacing	$497,000
Columbia Drive	Resurfacing	$222,000
Vista Way	Resurfacing	$93,000
Olympia Street	Reconstruction, roadway widening, illumination, sidewalks	$3,800,000
45th Ave./Olympia St. Intersection Imp.	New roundabout, and widen intersection.	$235,000
Southridge Blvd & Hildebrand Traffic Control	Signal or Roundabout	$300,000
Edison Street	Widening, add bike lanes, dedicated turn lanes at intersections	$1,931,000
Cascade Street	Reconstruction	$2,211,000
10th Avenue	*Hansen Park - reconstruction of existing roadway.*	*$2,000,000*
Southridge Boulevard - South Of High School	*Reconstruction, curb, gutter, sidewalks, illumination, roundabout or signal.*	*$800,000*
Hildebrand Boulevard	*New road construction, signals, roundabouts*	*$2,500,000*
Visitor's Village	Construction of a visitor's center and traveler's rest stop	$2,000,000
Clearwater Ave/Edison Intersection Imp.	*Upgrade Signal, Widen Intersection,*	*$290,000*
Edison St./Metaline Ave. Intersection Imp.	*Traffic control improvements and intersection widening*	*$944,000*
Kennewick Avenue	*Reconstruction & widening, curb, gutter and sidewalk*	*$550,000*
Canal Drive Sidewalk/Landscaping	Sidewalk, northside and landscaping	$120,000
Tri-City Gateway Landscaping	Along SR-395 in Southridge Area	$118,000

10th & Morain Traffic Signal	*New Signal & turn-lanes*	*$300,000*
Clearwater & Canal WB Right Turn Lane	*Add a right turn lane*	*$150,000*
Clearwater & Edison WB	*Add a right turn lane and widen southbound appoach for a left-turn lane*	*$250,000*
Clearwater & Arthur Street Signal	*New Signal*	*$200,000*
Clearwater & 10th Avenue	*New signal or roundabout*	*$225,000*
Kennewick & Yelm Signal Upgrade	New Poles and Equipment	$125,000
Citywide Traffic Signal System Upgrade/Retiming	New signal system software, communications equipment and retiming	$600,000
Grandridge And Young Street	*New Roundabout*	*$250,000*
Deschutes & Center Parkway Roundabout	*Mini roundabout*	*$75,000*
Gum Street Sidewalks	Sidewalks	$125,000
Hildebrand Boulevard	*New roadway on new alignment - Southridge Planning area.*	*$3,000,000*
Southridge Boulevard	*Reconstructtion, roadway widening, curb and gutter, sidewalk, and illumination, roundabout at old 36th Ave.*	*$2,000,000*
Five Corners Intersection Improvement	*Intersection reconstruction or roundabout*	*$479,000*
Canal Drive Sidewalks	Sidewalks North side of roadway	$125,000
Clodfelter Road / Steptoe	*Construct interconnecting and frontage roadways to support economic development Clearwater Business Park Roadways*	*$107,000*
Clearwater And Leslie Intersection	*Install signal or roundabout, realign intersection with I-82 ramp (City of Richland lead)*	*$300,000*
27th Avenue & Washington Street Signal	*Signal or Roundabout*	*$250,000*
10th Avenue - CCB to 5 Corners	*Street Improvements*	*$5,000,000*
10th Avenue/SR 397	*Install signal or roundabout*	*$249,000*
36th Avenue/Union Loop Road	*Install signal or roundabout*	*$278,000*
Total Project Cost 2006-2015		**$64,938,000**

Kennewick 2016-2025 Projects

Project Name	**Description**	**Project Cost**
Christensen Road Interchange @ US-395	New Interchange	$10,000,000
8th Avenue	Gum to 10th Ave Street Improvements	$1,600,000
Canal Drive	Quinalt to Yost Street Improvements	$600,000
Canal Drive	US 395 to Kent Street Improvements	$3,000,000
Kennewick Avenue	Union to Morain Street Improvements	$775,000
Vancouver Street	45th Avenue to 36th Avenue - Street Improvements	$1,015,000
Rainier Street	7th Ave to 27th Ave Street Improvements	$1,750,000

Columbia Center Blvd.	*New Construction. Hildebrandt to I-82. Local funding includes developer contributions*	*$2,475,000*
45th Avenue - (Southern Arterial In Southridge)	Clodfelter to US 395	$6,000,000
1st Avenue - Washington To SR 397	Resurfacing	$166,000
10th Avenue	Widen & construct interconnecting and frontage roadways	$3,000,000
Citywide Traffic Signal System Upgrade/Retiming	New signal system software, communications equipment and retiming	$800,000
27th Avenue	Reconstruction, curb and gutter, sidewalks, illumination, signal or roundabout	$1,500,000
10th Avenue - Union To Us 395	Resurfacing	$360,000
10th Avenue - Us 395 To Olympia	Resurfacing	$360,000
Union Street - 10th To Clearwater	Resurfacing	$440,000
Union Street - 27th To 10th	Resurfacing	$354,000
Kennewick Avenue - US 395 To Morain	Resurfacing	$160,000
Kennewick Avenue - Olympia To Dayton	Resurfacing	$202,000
27th Avenue	Resurfacing	$358,000
Clearwater - Columbia Center Blvd To Leslie	Resurfacing	$740,000
Hood & Neel Roundabout	Mini roundabout	$50,000
Miscellaneous Streetscape	Citywide	$262,000
Columbia Center Blvd. Safety Improvements	Channelization and signalization improvements, safety analysis	$880,000
Downtown Revitalization - Canal Drive	Enhancement work, ornamental street lighting, pedestrian facilities, downtown revitalization project	$500,000
Kennewick Avenue	Reconstruction & widening, curb, gutter and sidewalk	$550,000
Columbia Center Blvd.- Deschutes to Quinault	Widening	$2,000,000
46th Avenue - Steptoe to Clodfelter	New construction	$1,000,000
Edison /BNSF Grade Separation	Railway Crossing Grade Separation	$13,000,000
Downtown UPRR/BNSF Grade Separation	Railway Crossing Grade Separation for the Downtown Corridor	$16,000,000
Total Kennewick Project Cost 2016-2025		**$69,897,000**
Total Kennewick Project Cost 2006-2025		**$134,835,000**
Richland 2006-2015 Projects		
Project Name	**Description**	**Project Cost**
Leslie Road Improvements Meadow Hills to Clearwater Ave	Principal Arterial, two-lane w/turn lane, sidewalks, bike lanes	$2,530,000
Center Parkway, Tapteal to south city limit	Collector arterial, two-lane w/turn lane, 30 mph	$850,000
Gage Boulevard, Leslie to east city limits	Principle arterial, four-lane w/turn lane, 40 mph	$2,900,000

Duportail Street Extention	Keene to Kennedy w/signal @ Duportail/Keene	$1,530,000
Keene Road Widening, Queensgate to Tomich	Principal Arterial, four-lane w/turn lane, sidewalks, bike lanes	$5,400,000
Spengler Street Extension,Robertson to Stevens Dr.	Collector, two lane w/turn land, sidewalks, bike lanes	$900,000
Steptoe St. Extension, Gage Blvd to S City Limits.	Principal Arterial, four lane, sidewalks, bike lanes, lighting	$3,245,000
Lawless Drive, Thayer to Wellsian	Minor arterial, two-lane, 25 mph	$700,000
George Washington Way and Jadwin Ave Improvements, Jadwin to Columbia Point *George Washington Way to Knight*	Principle arterial, six-lane w/turn lane, 35 mph Minor arterial, one nb two sb w/turn lane, 30 mph	$1,400,000
SR 224/SR 240 Grade Separation, Terminal Dr. to Birch	Principal Arterial, Prelim Engineering for six lane, Elevated interchange/On-Off ramps	$150,000
Duportail Street, Ph I, SR 240 to Wellsian Way	Minor Arterial, two lane w/turn lane, sidewalks, bike lanes	$1,420,000
Jones Road (Kingsgate), SR 224 to SR 240	Minor Arterial, 2 lane w/left turn lane, rural section w/St.lights & Bike lanes	$4,522,000
George Wash. Way and Hanford St. Signal	E/W stop controlled to full-actuated	$223,000
Stevens Dr, Knight street Trafic signal	New Signalized Intersection	$180,000
Elementary St, and Keene Rd Traffic signal	New Signalized Intersection	$200,000
Kingsgate Way and SR 240 Traffic signal	New Signalized Intersection	$200,000
Wellsian Way and Lee Boulevard Traffic Signal	NB stop control to full-actuated	$200,000
Wellsian Way and Aaron Drive Traffic Signal	Install Traffic Signal	$200,000
Steptoe St. and Tapteal Dr. traffic Signal	New Signalized Intersection	$250,000
Steptoe St. and Canyon Blvd. Traffic Signal	New Signalized Intersection	$200,000
Citywide Traffic signal Upgrades: Thayer/Swift IntersectionJadwin/McMurray IntersectionStevens/Williams IntersectionG.W.W./Spengler IntersectionStevens/Van Giesen IntersectionThayer/Swift IntersectionStevens/Lee IntersectionG.W.W./McMurray IntersectionJadwin/Symons IntersectionLeslie/Mountain View IntersectionG.W.W./Saint IntersectionG.W.W./Catskill IntersectionG.W.W./Battelle IntersectionThayer/Long Intersection	Semi-actuated to full-actuatedFull-actuated to full-actuatedFixed-time to full-actuatedSemi-actuated to full-actuatedFull-actuated to full-actuatedFull-actuated to full-actuatedFixed-time to full-actuatedFixed-time to full-actuatedFixed-time to full-actuatedPed-only to full-actuatedSemi-actuated to full-actuatedSemi-actuated to full-actuatedSemi-actuated to full-actuatedSemi-actuated to full-actuated	$1,100,000
Citywide LID Incentive Program	Encourage and support for Street and Sidewalk LIDs	$965,000
Stevens Drive Bike/Ped Trail	12-ft. Paved Trail from Spengler to Horn Rapids Rd.	$360,000
UPRR Bike /Ped Trail	12-ft Paved Trail along RR ROW next to Keene Rd.	$140,000
Queensgate Drive Bike/Ped Trail.	12-ft Paved Trail along Keene Rd.	$50,000
SR 240, ByPass Highway Trail.	12-ft Paved Trail from VanGiesen to Coast.	$180,000
Aaron Drive Pedestrian Pathway	Paved or Concrete Pedestrian Trail along Aaron Dr.	$200,000

Kennedy Road, Duportail to West C/L	Minor Arterial, two lane w/left turn, sidewalk, bike lanes	$1,400,000
Canyon Street, Englewood Dr. to Steptoe	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$2,500,000
Leslie Road and Reata Road Traffic Signal	New traffic Signal	$220,000
Comstock Street, GWW to Wellsian	Collector, two lane w/left turn, sidewalks, bike lanes	$1,400,000
Total Project Cost 2006-2015		**$35,715,000**
Richland 2016-2025 Projects		
Project Name	**Description**	**Project Cost**
Logston Blvd. Extension, Robertson to Battelle Blvd.	Collector, two lane w/turn lane, rural street section w/ St. lights & bike lanes	$2,560,000
Wellsian Way and Stevens Dr. Connection	Minor Arterial, four lane, sidewalks, bike lanes.	$2,004,000
First Street, George Washington Way, to Stevens Dr.	Collector, two lane w/turn lane, sidewalks, bike lanes	$1,000 ,000
First Street, Kingsgate Way to Logston Blvd.	Minor Arterial, two lane w/turn lane, sidewalks, bike lanes	$1,800,000
Columbia Park Trail, West C/L to Steptoe	Minor Arterial, four lane, sidewalks, bike lanes, 40 mph.	$2,000,000
Columbia Park Tr., Steptoe to east C/L	Minor Arterial, four lane, sidewalks, bike lanes, 40 mph.	$1,600,000
Horn Rapids Rd., George Wash. Way to Stevens	Minor arterial, two-lane w/turn lane, 30 mph	$795,455
Horn Rapids Rd., Stevens Dr. to Twin Bridges Road	Minor arterial, two-lane w/turn lane, 50 mph	$4,659,091
Beardsley Road, Horn Rapids to SR-240	Minor arterial, two-lane w/turn lane, 50 mph	$1,732,955
Battelle Blvd, Kingsgate Way to Blanchard Blvd	Collector, two lane w/left turn lane, rural street section w/ St. lights & bike lanes.	$800,000
Blanchard Blvd, Horn Rapids Road to SR 240	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$2,200,000
Unnamed Street No 1, Westcliff toMeadow Hills Dr.	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,200,000
Sky Meadows Ave., Gage Blvd to Meadow Hills	Unclassified, two lane , sidewalks	$700,000
Englewood Drive, Keene Road to Glenwood Ct.	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,100,000
Gage Boulevard Extension, West end to C/L	Minor Arterial, two lane w/turn lane, sidewalks, bike lanes	$1,900,000
Queensgate Drive, Keene Road to Meadow Hills	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,400,000
Fowler St Extension, Fowler to Columbia Park Trail	Collector, two lane w/left turn lane, sidewalks, bike lanes	$800,000
Westcliff Boulevard, Keene Road to Meadow Hills Dr.	Collector, two lane w/left turn lane, sidewalks, bike lanes	$1,193,182
Center Boulevard, Steptoe to Leslie Rd	Collector, two lane w/left turn lane, sidewalks, bike lanes	$1,761,364
Bellerive Dr., Broadmoor Center Blvd	Collector, two lane, sidewalks, bike lanes.	$800,000
Unnamed Street No 2. Unnamed St.#1 to Gage Blvd	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,200,000
Heritage Hills Dr., Sundance Ridge to Keene Rd	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,400,000

Unnamed Street No 3, Heritage Hills to Columbia Park Trail	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$1,200,000
Twin Bridges Road, SR 240 to South City Limits	Minor arterial, two-lane, 40 mph	$880,682
Hagen Road, SR 240 to Airport Entrance	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$2,200,000
Saint Street, Hagen Road to Jones Road	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$2,000,000
Shockley Road, Keene to Queensgate	Collector, two lane, sidewalks, bike lanes.	$900,000
Comstock St. Goethals Dr. to Wellsian Way.	Collector, two lane w/left turn lane, sidewalks, bike lanes.	$650,000
Twin Bridges Road, Horn Rapids Road to SR 240	Unclassified, two lanes w/left turn lane, sidewalks, bike lanes	$2,650,000
Leslie Rd. and Center Blvd. Traffic Signal	New traffic Signal	$220,000
Center Parkway and Tapteal Dr.Traffic Signal	New traffic Signal	$220,000
Van Giesen and Thayer traffic Signal	New Signalized Intersection	$200,000
George Wash.Way / First St. traffic signal	New Signalized Intersection	$200,000
Keene Road and Shockley road traffic signal	New Signalized Intersection	$200,000
Keene Rd, Westcliff Blvd Traffic Signal	New Signalized Intersection	$200,000
Blanchard Boulevard and SR 240 Traffic Signal	New traffic Signal	$220,000
Logston Boulevard and SR 240 Traffic Signal	New traffic Signal	$220,000
Van Giesen St. Jones Road Traffic Signal	New traffic Signal	$220,000
SR 240 and Twin Bridges Road Traffic Signal	New traffic Signal	$220,000
Leslie Rd. and Columbia Park Tr. Traffic signal	New Signalized Intersection	$220,000
Goethals Dr. and Lee Blvd. Traffic Signal	New traffic Signal	$220,000
Citywide Traffic Signal Upgrades.	Update existing traffic signals to current standards	$1,500,000
Citywide LID Incentive Program	Encourage and support for Street and Sidewalk LIDs	$1,500,000
Citywide Pedestrian, ADA and School Routes projects	Const sidewalks, ADA ficilities and improve school walking routes	$1,200,000
Citywide Bicycle Trail facilities.	Add new Bicycle Trails and Lanes where needed.	$1,200,000
Total Richland Project Cost 2016-2025		**$52,046,728**
Total Richland Project Cost 2006-2025		**$87,761,728**

West Richland 2006-2015 Projects

Project Name	**Description**	**Project Cost**
Keene Rd/Kennedy Rd Traffic Signal	Install traffic signal	$204,000
S 38th Ave./SR224 Traffic Signal	Install traffic signal	$240,000
Bombing Range Rd/Kennedy Traffic Signal	Install traffic signal	$204,000
Keene Rd. Beautification Project:	Landscaping from East City Limits to Bombing Range Rd.	$300,000
Bombing Range Road Improvements - Phase 8:	Street widening and reconstruction from Silver Lake CT. to City Limits	$508,000

Belmont Blvd. - Phase 1: Keene Rd. to Paradise Way	$1,270,000
Paradise Way Extension - Phase 2: S. 54th to Kilawea Dr.	$856,000
S. 38th Ave.-Phase 2: Grant Street to S. City Limits	$1,419,000
Grosscup Blvd./SR224 Traffic Signal	$240,000
City Wide Pavement Rehabilitation Program	$300,000
City Wide Street Lighting Program	$30,000
City Wide Storm Drainage Program	$45,000
Total Project Cost 2006-2015	**$5,616,000**

West Richland 2016-2025 Projects

Project Name	**Description**	**Project Cost**
Horn Loop Rd. - Phase 1: SR224 to Ruppert Rd.		$1,936,000
Horn Loop Rd.- Phase 2:Ruppert to Twin Bridges		$1,914,000
Paradise Way Ext. - Phase 3:Belmont to SR224		$1,500,000
Belmont Blvd. - Phase 2: Kilawea Dr. to SR224		$1,917,000
Pedestrian Pathway along Keene Road		$65,000
Keene Rd. Ph. 2 & 3 Widening:Bombing Range Rd. to SR224		$2,000,000
City Wide Pavement Rehabilitation Program		$350,000
City Wide Street Lighting Program		$50,000
City Wide Storm Drainage Program		$60,000
Total West Richland Project Cost 2016-2025		**$9,792,000**
Total West Richland Project Cost 2006-2025		**$15,408,000**

Franklin County 2006-2015 Projects

Project Name	**Description**	**Project Cost**
Road 68 (Court St. to Argent Rd.)	Widen to four lanes	$500,000
Argent Rd. (Rd. 52 to Rd. 68)	Widen to 3 or 4 lanes	$500,000
Road 100 (Broadmoor & Dent Connection)	Construct new road	$1,000,000
Rd 68 (North C/L to Taylor Flats Rd)	Widen to 4 lanes	$500,000
Wernett Rd. (Rd. 76 to Court St.)	Construct new road	$300,000
Road 60 (Park St. to Court St.)	Reconstruct and Widen	$900,000
Court St. Inters. Improvements	Install Signalization	$250,000
Total Project Cost 2006-2015		**$3,950,000**

Franklin County 2016-2025 Projects

Project Name	Description	Project Cost
Argent Rd. Intersections Improv.	Install turn lanes and signalization	$300,000
Road 60 (Court St. to Argent Rd.)	Reconstruct and Widen	$700,000
Road 52 (Sylvester St. to Argent)	Reconstruct and Widen	$500,000
Glade North Road (C/L to Selph Landing Rd)	Reconstruct and Widen	$1,000,000
Riverview Wide	Reconstruct and Improve Roads	$1,000,000
Riverview Wide	Improve Intersections and Install	$1,000,000
Total Franklin County Project Cost 2016-2025		**$4,500,000**
Total Franklin County Project Cost 2006-2025		**$8,450,000**

Pasco 2006-2015 Projects

Project Name	Description	Project Cost
Lewis Street/A Street Connector ("Billings")	New Roadway (3 lane, 40 mph)	$500,000
Rd 68/Wrigley Traffic Signal	under contract	$180,000
Chapel Hill Blvd. /Broadmoor Traffic Signal	under contract	$180,000
Chapel Hill Blvd. /68 Traffic Signal	exists (flashing)	$180,000
Madison Avenue extension	Burden Blvd to Sandifur Ext (3 lane, 30 mph)	$400,000
Lewis Street Overpass	Replacement of Overpass	$14,000,000
Road 68 & Court Street Traffic Signal	Install New Traffic Signal	$180,000
Road 44 & Burden Traffic Signal	Install New Traffic Signal	$180,000
Court Street Widening	Improve Road 68-84 (3 lane, 40 mph)	$900,000
Road 44 & Court Street Traffic Signal	Install New Traffic Signal	$180,000
Court Street Widening	Improve Road 84-100 (3 lane, 40 mph)	$750,000
Road 100 Widening	Court Street to I-182 (3 lane, 35mph S/O canal)	$600,000
Road 100 & Argent Road Traffic Signal	Install New Traffic Signal	$180,000
Argent Road Widening	Road 72 to Road 84 (3 lane, 35 mph)	$500,000
Court Street Widening	Road 44 to Road 68 (5 lanes)	$800,000
Road 68 & I-182 Improvement	Road Improvements - Norm sent drawing	$400,000
Road 100 & I-182 Ramps and Signals	Interchange Improvements (loops NW & SE, with signals)	$3,000,000
Broadmoor Blvd & Sandifur Pwky Traffic Signal	Install New Traffic Signal	$180,000
Wrigley Drive	Clemente 68 to 68th Pl.	$200,000
Burden Blvd Widening	Road 44 to Road 60 (3 lane, 40 mph)	$363,000
Capitol Street Extension	North of Hillsboro to County line	$800,000
Ainsworth Street Improvements	Curb & Gutter	$300,000
"A" Street Improvements	Oregon to SR-12 (3 lane, 40 mph)	$1,300,000

Chapel Hill Blvd. Connection	Broadmoor Blvd. to Road 68 (4 lane w/turn)	$600,000
Oregon Street Overpass	South of "A" Street study	$200,000
Sandifur Parkway Extension	Road 68 to Burden Blvd. @Road 44 (3 lane)	$500,000
Road 84 Extension	North Terminus to Chapel Hill (2 lane), including signal @ Argent	$500,000
Overlays and Crack Seal	Various Locations	$6,000,000
Miscellaneous Street Projects	Various Locations	$500,000
Miscellaneous Traffic Signal Upgrades	Various Locations	$500,000
Total Project Cost 2006-2015		**$35,053,000**

Pasco 2016-2025 Projects

Project Name	**Description**	**Project Cost**
Road 44 & Argent Traffic Signal	Install New Traffic Signal	$180,000
Road 36 & Argent Traffic Signal	Install New Traffic Signal	$180,000
Madison Avenue Bypass	Burden Blvd to Rd 44 (2 lane, 35 mph)	$400,000
Road 84 & Argent Road Traffic Signal	Install New Traffic Signal	$180,000
Clark Street Improvements Including Signals	One Way Street in conjunction with Lewis St	$1,500,000
Road 100 & Court Street Traffic Signal	Install New Traffic Signal	$180,000
Railroad Ave Improvements	Road Improvements - overlay, minor improvements	$200,000
Traffic Signals on Lewis/"A" (Billings)Connect	Install Two new traffic Signal	$320,000
Road 44 & Madison Road Traffic Signal	Install New Traffic Signal	$180,000
Road 60 & Burden Blvd Traffic Signal	Install New Traffic Signal	$180,000
Madison Avenue & Burden Blvd. Traffic Signal	Install New Traffic Signal	$180,000
Oregon Drive & James Street Traffic Signal	Install New Traffic Signal	$180,000
Overlays and Crack Seal	Various Locations	$6,000,000
Miscellaneous Street Projects	Various Locations	$500,000
Miscellaneous Traffic Signal Upgrades	Various Locations	$500,000
Total Pasco Project Cost 2016-2025		**$10,860,000**
Total Pasco Project Cost 2006-2025		**$45,913,000**

Port of Pasco 2006-2015 Projects

Project Name	**Description**	**Project Cost**
Industrial Way Extension	Extension of roadway Jason St to end of Industrial Way	$300,000
Argent Road Widening	20th to 36th to 4 lanes	$60,000
SR397 Widening	Widen SR397 to 5 lanes from "A" St to Grey St	$400,000
Total Port of Pasco Project Cost 2006-2015		**$760,000**

Port of Benton

2006-2015 Projects

Project Name	Description	Project Cost
North Richland Rail Transload Facility	Construction of a transload facility to provide climate controlled loading and unloading of rail cars with fresh produce.	$1,000,000
Slurry Seal of Port Roads	Annual maintenance ($100,000 annual cost)	$1,000,000
Horn Rapids Road Extension	Extend from existing east terminus to the Columbia River Barge facility	$750,000
South Richland Rail Bridge Replacement	Replace existing rail wood structure with steel	$750,000
Port of Benton Boulevard Upgrade	Improve existing Boulevard	$500,000
Total Project Cost 2006-2015		**$4,000,000**

2016-2025 Projects

Project Name	Description	Project Cost
Slurry Seal of Port Roads	Annual maintenance ($100,000 annual cost)	$1,000,000
Total Port of Benton Project Cost 2016-2025		**$1,000,000**
Total Port of Benton Project Cost 2006-2025		**$5,000,000**

WSDOT 2006-2015 Projects

Project Name	Description	Project Cost
I-82/Dallas Road I/C –Paving (Exit 104)	Project will resurface existing pavement, restore signing, striping and Other safety features of the Dallas Road interchange	$136,000
I-82/Badger Road I/C – Paving (Exit 109)	Project will resurface existing pavement, restore signing, striping and Other safety features of the Badger Road interchange	$552,000
I-82/Locust Grove Road I/C – Paving (Exit 114)	Project will resurface existing pavement, restore signing, striping and Other safety features of the Locust Grove interchange	$361,000
US 12/SR 124 Interchange Improvements	*This project will construct a new interchange.*	*$21,385,000*
I-82 to SR 397 Intertie	*Completion of a 11-mile roadway between I-82 and SR 397*	*$5,410,000*
I-182 Queensgate/Thayer I/C Improvements	Construction of an auxiliary lane on I-182	$1,931,000
I-182 Road 100 Interchange Improvements	Provide two signals at ramp intersections with Road 100, add lanes and two ramps to Road 100 and modify the other existing ramps	$275,000
I-182/Road 68 I/C-Interstate Safety	Interstate safety work such as improving roadside slopes to meet current standards.	$33,000
I-182 Pasco Vicinity Median Barrier	Installing cable barrier in the median	$405,000
SR 224/Yakima R. to SR 240-Paving	Project will resurface existing pavement, restore signing, striping, and other safety features in the Richland vicinity.	$547,000

SR 240/I-182 to Richland Y - Add Lanes	Project will construct an additional lane in each direction, construct a new bridge, change ramp alignment, and provide a pedestrian/bike path.	
SR 240/Yakima River Bridge at Richland	The project will replace existing bridge with a new bridge built to current standards.	
SR 240/Richland Y to Columbia Center I/C - Add Lanes	Project will construct an additional lane in each direction, construct a new bridge, change ramp alignment, and provide a pedestrian/bike path.	
Columbia River Bridge Traffic Operations	Install monitoring equipment, signs and communications on the Blue Bridge on US-395 across the Columbia River that connects Pasco and Kennewick.	$418,000
US 395/Columbia Drive to SR 240 Interchange Improvement	This project will reconfigure and reconstruct the interchange.	$19,028,000
US 395/I-182 to Hillsboro Street-Paving	This project will resurface existing pavement, restore signing, striping, and other safety features in the Pasco vicinity.	$408,000
US 395/Pasco Vicinity-Paving	This project will resurface existing pavement, restore signing, striping, and other safety features in the Pasco vicinity.	$583,000
SR 397/BridgeRail Retrofit- Columbia River Bridge West of Kennewick	Upgrade the bridge rail to meet current safety standards.	$1,081,000
SR 397/Ainsworth Ave. to I-182-Paving	This project will resurface existing pavement, restore signing, striping, and other safety features in the Pasco vicinity.	$1,174,000
SR 397 Ainsworth Ave. Grade Crossing	This project adds a grade separation where SR 397 crosses the Burlington Northern Santa Fe (BNSF) tracks.	$5,611,000
Total Project Cost 2006-2015		**$59,338,000**

WSDOT 2016-2025 Projects

Project Name	**Description**	**Project Cost**
Unnamed Projects	These projects have not been identified as they will be determined through the normal selection process.	$36,262,000
Total WSDOT Project Cost 2016-2025		**$36,262,000**
Total WSDOT Project Cost 2006-2025		**$95,600,000**

Ben Franklin Transit 2006-2015 Purchases

Project Name	**Year**	**Project Cost**
Purchase 9 Buses	2006	$2,807,443
Purchase 16 Paratransit Vehicles	2006	$1,333,425

Purchase 46 Vanpool Vehilces	2006	$798,630
Purchase 10 Buses	2007	$3,262,873
Purchase 1 Paratransit Vehicle	2007	$91,373
Purchase 5 Vanpool Vans	2007	$109,830
Purchase 9 Buses	2008	$3,798,746
Purchase 14 Paratransit Vehicles	2008	$1,338,059
Purchase 42 Vans	2008	$772,008
Purchase 4 Buses	2009	$1,765,995
Purchase 11 Paratransit Vehicles	2009	$1,099,693
Purchase 38 Vans	2009	$730,614
Purchase 9 Buses	2010	$4,156,269
Purchase 3 Paratransit Vehicles	2010	$313,713
Purchase 1 Bus	2011	$483,051
Purchase 5 Paratransit Vehicles	2011	$546,906
Purchase 30 Vans	2011	$631,087
Purchase 28 Vans	2013	$589,008
Purchase 35 Vans	2014	$736,260
Purchase 3 Paratransit Vehicles	2015	$299,916
Purchase 5 Vans	2015	$105,180
Total Project Cost 2006-2015		**$25,770,079**

Ben Franklin Transit 2016-2025 Purchases

Project Name	**Year**	**Project Cost**
Purchase 2 Paratransit Vehicles	2016	$199,944
Purchase 15 Vans	2016	$315,540
Purchase 8 Buses	2017	$4,889,709
Purchase 19 Paratransit Vehicles	2017	$1,899,468
Purchase 10 Vans	2017	$210,360
Purchase 3 Buses	2018	$1,917,988
Purchase 20 Paratransit Vehicles	2018	$1,999,440
Purchase 5 Vans	2018	$105,180
Purchase 16 Paratransit Vehicles	2019	$1,599,552
Purchase 42 Vans	2019	$883,512
Purchase 1 Paratransit Vehicle	2020	$99,972
Purchase 38 Vans	2020	$799,368
Purchase 6 Buses	2021	$4,390,066
Purchase 14 Paratransit Vehicles	2021	$1,399,608

Purchase 11 Paratransit Vehicles	2022	$1,099,692
Purchase 30 Vans	2022	$631,080
Purchase 3 Paratransit Vehicles	2023	$299,916
Purchase 5 Paratransit Vehicles	2024	$499,860
Total BFT Project Cost 2016-2025		**$23,240,255**
Total BFT Project Cost 2006-2025		**$49,010,334**

PLANNED PROJECT LISTS

Table 7-3 contains those projects identified by local jurisdictions as needed during the twenty year planning horizon, but beyond the limits of financial constraint. These projects were not included in the build scenarios, but are listed here as important elements of the areas future transportation system. Area officials should continue to work toward the successful completion of these projects, in an effort to encourage the efficient movement of people and products through the urban area.

Table 7 - 3, Metropolitan Area Planned Project List

City of Richland Planning Projects

Project	Description	Cost
Duportail St. Bridge over Yakima River	4-lane bridge with bike lanes, sidewalks and lighting	$9,000,000
Total Unmet Need		**$9,000,000**

City of Pasco Planning Projects

Project	Description	Cost
"A" Street/SR-12 Interchange	Install New Interchange	$12,000,000
Foster Wells Interchange	Install New Interchange	$12,000,000
Total Unmet Need		**$24,000,000**

WSDOT Planning Projects

Project	Description	Cost
US 12A Street Intersection MP 293.62	Construct Diamond interchange	$15,500,000
I-182 Wellsian Way/Aaron Dr/Thayer Ramp MP 4.3	Improve Westbound ramp and Thayer I/S South Configuration	$2,100,000
I-182 Argent Road MP 10.8	Construct Interchange	$14,120,000
US 395-Foster Wells Road MP 25.11	Construct Interchange and Frontage Roads	$15,150,000
SR 224 I-82 to Red Mountain Road MP 0 to MP 4.24	Construct Red Mountain Interchange on I-82 and 4 lane roadway connecting to existing US 224 to 4 lanes to Red Mountain Vicinity	Undetermined
SR 224 West Richland Vicinity MP 4.75 to MP 7.44	Widen and pave shoulders for bike/ped. Connect to Keene Road extension	$1,580,000

SR 224 Red Mountain Road vicinity to South 38th Ave MP4.24 to MP 7.55	Widen to 4 lane roadway, signalize major intersections	$11,050,000
SR 240 SR 240/ US 395 Interchange Vicinity MP 42.7 to MP 43.17	Revise interchange for better bike/ped access(cost & solution included in capacity improvement project)	Undetermined
SR 397 I-82 to SR 397 Intertie MP 0 to MP 11	Construct new roadway connecting I-82 to SR 397	$17,142,000
SR 397 Railroad grade crossing (Ainsworth) MP 8.18	Construct railroad grade separation	$10,700,000
SR 397 Grey Avenue to North Property Line BPIC MP 8.43 to MP 9.18	Widen to 4 lanes with two-way left turn lane	$1,210,000
Total Unmet Need		**$88,552,000**
TOTAL UNMET NEED - MPO AREA PLANNING PROJECTS		**$121,552,000**

CHAPTER SEVEN

MODEL RESULTS & MPO TRANSPORTATION SYSTEM EVALUATION