# Corridor Sketch Summary

WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User Guide for Corridor Sketch Summaries prior to using information on this corridor:

## SR 240: SR 24 (Vernita Vic) Jct to US 395 Jct (Kennewick)

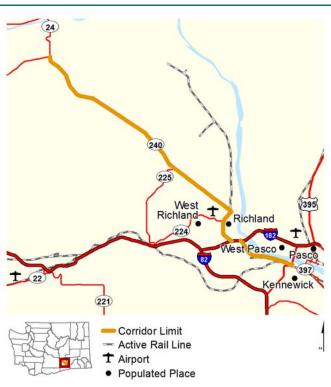
This 41-mile long corridor includes all of State Route 240 and is located entirely within Benton County. The corridor runs between the SR 24 junction, 38 miles east of Yakima. and the US Route 395 interchange in Kennewick. Land use varies dramatically along the corridor. The majority of the corridor is rural in character with large tracts of open shrubsteppe vegetation, some agriculture along the Yakima River Valley. The southeastern end of the corridor in Richland and Kennewick is more urban to suburban in character with commercial, industrial, and residential development. The corridor's density is low in the rural areas and higher in and around the Tri-Cities than it is along the rural sections. The corridor skirts the partiallydecommissioned U.S. Department of Energy's Hanford Nuclear Reservation, site of the world's first plutonium production reactor. The corridor crosses the Yakima River delta at its confluence with the Columbia River just south of Interstate 182 in Richland.

# **Current Function**

SR 240 is a major regional highway connecting the Tri-Cities and the Hanford Nuclear Reservation and serves as a major intercity connection in the Tri-Cities area. Owing to the diversity of land uses along the corridor. The corridor accommodates commuter, freight, recreational, and farm-to-market traffic. This corridor intersects with several regionally significant highways including I-182, US 395, SR 224, SR 225, and SR 24. The corridor also provides an alternate route between Yakima and the Tri-Cities, an indirect connection to the SR 24 Vernita Bridge over the Columbia River into the Columbia Basin, and an indirect connection to I-90 in Grant County. SR 240 briefly runs concurrently with I-182 between the bypass highway in Richland and the Columbia River crossing to Pasco. Local traffic generators on the corridor include the Hanford Nuclear Site, the Tri-Cities urban area, the Hanford Reach National Monument, Horn Rapids Motorsports Complex, Richland Airport, and nature preserves and parks. Ben Franklin Transit serves the corridor with bus routes on certain sections, vanpools, and ridesharing.

### **Future Function**

Based on the projected population, land use, and economic trends, the future function of this corridor is expected to remain the same.



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## **Highlights and Performance**

SR 240 is a two-lane, undivided highway for the northern two-thirds of the route near the Hanford Nuclear Reservation. North of I-182, "the bypass" is a four-mile, six-lane divided highway around the densely built section of Richland, and between I-182 and US 395 it is a multi-lane freeway. Average daily traffic volumes are highest on the freeway section just south of the I-182 interchange and lowest at the northern end of the corridor near SR 24.

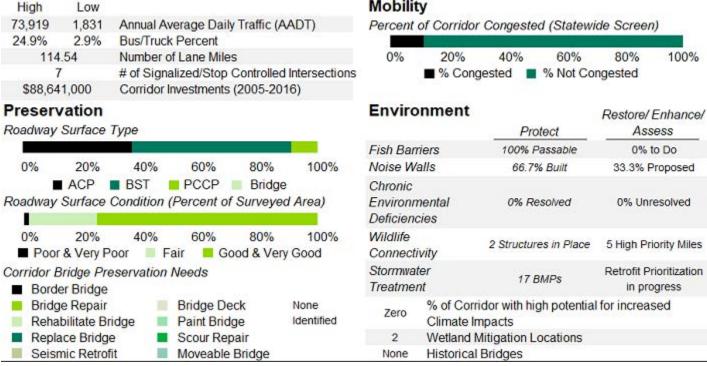
#### What's working well?

- About 98% of surveyed pavement on the corridor are in fair or better condition.
- There are no fish passage barriers on the corridor.
- All necessary noise walls are installed and operational.
- The corridor operates well outside of peak morning and afternoon peak hours.
- Ben Franklin Transit provides multimodal commuting options on the corridor.

#### What needs to change?

- Roughly 11% of the corridor is congested on a regular basis.
- Tri-Cities sections are congested up to 15 hours per day.
- I-182 separates the corridor segments north and south of the interstate, requiring SR 240 to run concurrently with I-182 at a key chokepoint. This concentrates traffic and causes weaving in and out leading to congestion on both routes.
- · Incomplete local system connections increase demand on the corridor.

WSDOT monitors the state system in ongoing efforts to track asset performance. For this corridor, WSDOT finds:



1) 2015 data unless otherwise noted. 2) For more information see the User Guide for Corridor Sketch Summaries at http://bit.ly/WSDOTcorridorsketch

#### What we heard from our partners

WSDOT planners collected feedback from agency partners. Key themes included:

- WSDOT partners expressed a concern for collisions and associated backups at several locations on the corridor.
- ٠ Traffic levels are growing. This corridor is on the Benton-Franklin Council of Governments' congested corridor list.
- Interest in adding capacity to sections of the corridor, particularly between I-182 and US 395.
- Delay on the Bypass Highway during morning and afternoon peak times is a major concern. •

• A strong interest in moving forward with local network improvements such as the Duportail Street Bridge across the Yakima River, bicycle/pedestrian links, and converting intersections to overpasses.

• Local government partners agreed the areas next to the corridor in the Tri-Cities will continue to grow.

#### Mobility

## **Strategies**

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WSDOT identified the following strategies and associated actions to keep the corridor working well and address performance gaps. Regional partners collaborated on high-level mobility strategies. The identified strategies are not meant to be all-inclusive, nor an established list of priorities. Further evaluation is needed before any strategy can be recommended as a solution to address performance. Project funding decisions will take place at the programming phase, and are subject to statewide prioritization. For more strategy information, visit the Corridor Sketch Summary User Guide.

#### Policy Goals / Strategies Description and Near-Term Actions

Economic vitality	
Under Development	WSDOT will continue to work with partners in developing strategies to address economic vitality.
Environment	
Protect and Maintain	Protect and maintain existing assets that provide environmental function (these include WSDOT's mitigation sites, storm water systems, fish passable culverts).
Enhance or Restore	Enhance or restore natural areas and environmental functions associated with the multimodal transportation system.
Fish Barrier Retrofit	WSDOT has prioritized the removal of state-owned culverts that block habitat for salmon and steelhead. See interactive map of uncorrected fish barriers at http://www.wsdot.wa.gov/Projects/FishPassage/default.htm.
Mobility	
Assessment	Further information about the proposed strategies can be found attached at the end of this document.
Preservation	
Maintenance	Based on expenditure history, it is expected that the top three activities will continue to be maintenance on snow and ice control, pavement repair, and vegetation control.
Pavement	WSDOT has identified five Pavement actions in the next six years encompassing 88% of the corridor.
Safety	
Investment	WSDOT has identified three Safety Investment actions in the next six years encompassing 42% of the corridor.
Stewardship	
Planning	Under Practical Solutions, the Corridor Sketch Initiative identifies corridor performance, and assesses alternative strategies to improve the quality, effectiveness, and efficiency of the transportation system.

# WSDOT

## Mobility assessment for segment of Corridor 138 SR 240: Tri-City Railroad Crossing to Stevens Dr Vicinity (MP 28.5-28.8)

This segment of SR 240 is located on the west leg of the SR240/Stevens Drive/Jadwin Avenue intersection near the Richland Airport. The intersection connects the two-lane portion of the corridor to the six-lane segment called "Bypass Highway".

The segment is congested between the Tri-City Railroad crossing and Stevens Drive during the morning and afternoon peak times.

#### Mobility Strategies: Operational Improvements

• Coordinate the railroad track signal with the SR 240/Stevens Drive traffic signal to reduce congestion at the intersection.

#### **Demand Management**

- Expand transit service or vanpools during peak travel times to reduce single occupancy vehicle trips on SR 240.
- Work with employers to modify work start and end times to encourage spreading of commute traffic.
- Expand the Commute Trip Reduction program to more employers on the congested corridor to reduce demand during peak times and improve mobility on the highway.

#### Local Network Improvements

• Extend the SR 240 bicycle-pedestrian path west of Stevens Drive in Richland to enhance bicycle travel and reduce highway trips.

#### **Further Study**

- Evaluate options to improve operations and reduce congestion.
- Evaluate options for the Stevens Drive intersection to reduce congestion on this segment and the segment to the west.

#### **Corridor Segment Characteristics**

- SR 240 is on the National Highway System from the western Richland city limits to US 395.
- Average daily traffic was 13,000 vehicles in 2015.
- SR 240 from SR 24 to Stevens Drive is classified as a T-3 on the Freight and Goods Transportation System. The corridor carried 2.5 million tons of freight each year with trucks accounting for 13% of the traffic in 2015.
- The speed limit on this segment is 55 mph.
- This segment of SR 240 is limited access.
- Shoulders are available for bicycle and pedestrian use. There is a separate bicycle-pedestrian path along the Bypass Highway section.
- Ben Franklin Transit service does not run along this segment, but is generally available in the corridor.

#### **Contributing Factors**

- The Tri-Cities area is rapidly growing, and WSDOT expects Hanford Nuclear Reservation employment will continue to remain strong for many years, increasing congestion in the area.
- SR 240 capacity is constrained between the Tri-City Railroad crossing and Stevens Drive where the roadway changes from two to seven lanes. An at-grade rail crossing on the two-lane section exacerbates traffic flow. The railroad crossing offers an additional bypass lane in each direction (for traffic required to stop at the railroad tracks), but this further complicates traffic flow by expanding, merging, and expanding again.

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Mobility assessment for segment of Corridor 138 SR 240: Stevens Dr to I-182 Jct (MP 30.6-34.9)

This segment of SR 240 is located between the intersections with Stevens Drive near the Richland Airport and I-182. This segment is called the "Bypass Highway" and is a major commuter route in the Tri-Cities with the heaviest traffic volumes in WSDOT's South Central Region.

SR 240 experiences congestion along the entire Bypass Highway segment, at the west I-182 interchange, and the US 395 interchange. The Bypass Highway traffic has sharp morning and afternoon peaks with traffic quadrupling compared to normal daytime traffic.

#### **Corridor Segment Characteristics**

- SR 240 is on the National Highway System from the western Richland city limits to US 395 and is a designated a Highway of Statewide Significance from Stevens Drive to US 395.
- The average daily traffic on this segment ranged from 28,000 vehicles before the SR 224 junction to 45,000 vehicles at the I-182 interchange in 2015.
- SR 240 from Stevens Drive to I-182 is designated as a T-2 Freight Economic Corridor for Washington State. It carries 7.5 million tons of freight per year with trucks accounting for 6% of the traffic in 2015.
- The speed limit on this segment is 55 mph.
- This segment of SR 240 is limited access.
- Shoulders are available for bicycle and pedestrian use. There is a separate bicycle-pedestrian path along the Bypass Highway section.
- Ben Franklin Transit service does not run on the Bypass Highway, but is generally available on the corridor.

#### **Contributing Factors**

• The Tri-Cities area is rapidly growing, and WSDOT expects Hanford Nuclear Reservation employment will continue to remain strong for many years increasing congestion in the area.

### Mobility Strategies:

#### **Operational Improvements**

- Implement hard shoulder running on the Bypass Highway to provide additional capacity during peak periods.
- Create reversible lanes on the Bypass Highway due to the difference in peak traffic flows from morning to afternoon commutes to provide additional peak direction capacity.
- Coordinate railroad track signals with the SR 240 traffic signals to reduce congestion at the intersections.

#### **Demand Management**

- Increase transit service or vanpools during peak travel times to reduce single occupancy vehicle trips on SR 240.
- Work with employers to modify work start and end times to encourage commute spreading.
- Expand the Commute Trip Reduction program to more employers on the congested corridor to reduce demand during peak times and improve mobility on the highway.

#### Local Network Improvements

• Extend the SR 240 bicycle-pedestrian path west of Stevens Drive in Richland to enhance bicycle travel and reduce highway trips.

#### **Further Study**

- Evaluate options to improve operations and reduce congestion on both SR 240 and I-182.
- Evaluate options west of the Stevens Drive intersection to reduce congestion on that segment.

# Mobility assessment for segment of Corridor 138 SR 240: US 395 Jct (MP 42.8-43.0)

This segment of SR 240 is located at the US 395 intersection in Kennewick near Columbia Park. It connects Kennewick with Pasco via the US 395 bridge.

SR 240 is congested at the US 395 interchange during the morning and afternoon peak times.

#### Mobility Strategies: Demand Management

- Increase transit service or vanpools during peak travel times to reduce single occupancy vehicle trips on SR 240.
- Work with employers to modify work start and end times to encourage spreading of commute traffic.
- Expand the Commute Trip Reduction program to more employers on the congested corridor to reduce demand during peak times and improve mobility on the highway.

#### Local Network Improvements

• Work with the local jurisdictions to evaluate and develop an additional Columbia River crossing between Kennewick and Pasco.

#### **Further Study**

- Evaluate options to improve operations on SR 240 and US 395 and reduce congestion.
- Develop options to reduce congestion between Columbia Center Boulevard and US 395.

### **Corridor Segment Characteristics**

- SR 240 is on the National Highway System from the western Richland city limits to US 395 and is designated a Highway of Statewide Significance from Stevens Drive to US 395.
- The average daily traffic on this segment was 42,000 vehicles in 2015.
- SR 240 from I-182 to US 395 is classified as a T-2 Freight Economic Corridor for Washington State. It carries 2.8 million tons of freight per year with trucks accounting for 3% of the traffic in 2015.
- The speed limit on this segment is 60 mph.
- SR 240 is a limited access highway for the entire corridor.
- Shoulders are available for bicycle and pedestrian use. There is a separate bicycle-pedestrian path paralleling SR 240 along the Columbia River.
- Ben Franklin Transit service does not operate on this segment, but is available in the corridor.

### **Contributing Factors**

- The Tri-Cities area is rapidly growing, and WSDOT expects Hanford Nuclear Reservation employment will continue to remain strong for many years increasing congestion in the area.
- The on-ramp curve from eastbound SR 240 to northbound US 395 is substantially slower at 35 mph than the 60 mph speeds on the main highway. A shock wave in the traffic stream can occur when the faster traffic catches up with the slower traffic on the curve.
- Shock waves can develop in the SR 240 traffic stream from issues on US 395 northbound. US 395 in this location has some of the heaviest traffic volumes in the region combining with heavy volumes on SR 240. Within a short distance on US 395 northbound, two lanes merge into one, then Columbia Drive merges into US 395 before a single lane from eastbound SR 240 blends with a single northbound US 395.
- The left off-ramp on US 395 the north side of the river (Lewis Street) requires traffic to change lanes to exit from the left lane further interrupting traffic flow on that facility and impacting operations on SR 240.

## For more information

To find out more information about this corridor or how to get involved, please contact:

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Washington State Department of Transportation's Corridor Sketch Initiative is a set of planning activities that engage our partners to define the context and performance information for all of the state's 304 highway corridors. The Corridor Sketch complements and supports regional planning processes in Washington. It is not intended to duplicate, substitute or compete with other planning efforts; nor is it intended to generate lists of projects.

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