

TV Highway Corridor Refinement Plan Arterial v. Throughway Issue Paper

ISSUE

The Project Management Team (PMT) is seeking input from the Policy Group on whether Tualatin Valley Highway (“TV Hwy”) should be designated as an arterial or throughway.

BACKGROUND

As part of the 2035 Regional Transportation Plan (RTP), the concept of regional mobility corridors emerged to help guide investments. The regional mobility corridor concept integrates arterial streets, throughways, high capacity transit, frequent bus routes, freight/passenger rail, and bicycle parkways into subareas of the region that work together to provide for regional, statewide and interstate travel.¹ The function of this network of integrated transportation corridors is metropolitan mobility – moving people and goods between different parts of the region and, in some corridors, connecting the region with the rest of the state and beyond. These transportation corridors also have significant influence on the development and function of the land uses they serve. The regional mobility corridor concept calls for consideration of multiple facilities, modes and land use when identifying needs and most effective mix of land use and transportation solutions to improve mobility within a specific corridor area.

In April of 2007, regional partners identified 24 mobility corridors centered on the region’s network of interstate and state highways. A mobility corridor was designated connecting Beaverton to Hillsboro and Forest Grove centering on TV Hwy. The Oregon Department of Transportation, City of Hillsboro, and Washington County are developing the Tualatin Valley Corridor Plan (TVCP) for the 8.5 mile section of TV Highway between downtown Beaverton and downtown Hillsboro, and the broader area served by this transportation corridor.

The purpose of the TVCP is to define the regional functional classification for all modes, design classification and typical cross section for TV Hwy and identify a package of transportation solutions to address transportation system deficiencies for all modes and transportation facilities in the project area.

TV Hwy is currently designated as a principal arterial² between Murray Boulevard and Brookwood Avenue and as an arterial from Brookwood Avenue west through Hillsboro and from Murray Boulevard east to Highway 217. The County Transportation System Plan (TSP) shows TV Hwy as a principal arterial from Brookwood to roughly Cedar Hills Boulevard.

¹ See 2.4.2.4 Regional Bicycle System for more information about the bicycle parkway concept.

² Under the RTP, throughways are classified as “principal arterials” (RTP at p. G-23).

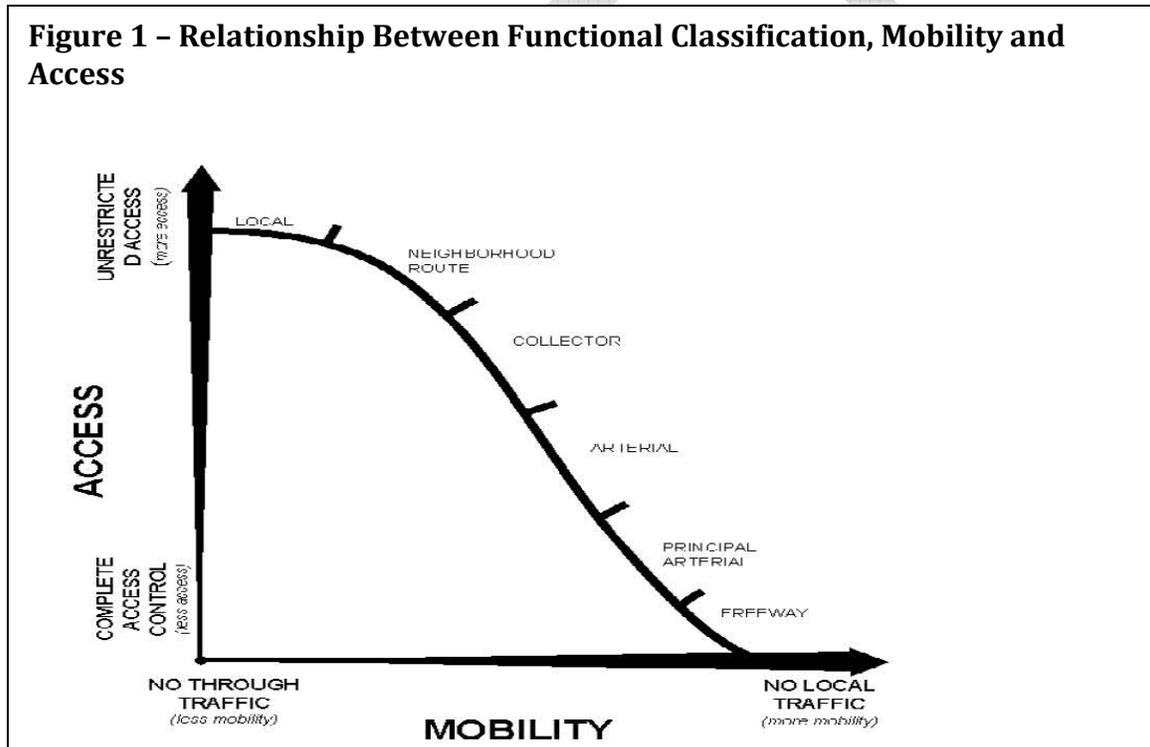
Consistent with these initiatives, the PMT is seeking an early determination from the Policy Group on whether TV Hwy should be classified as an Arterial or Throughway Principal or Major Arterial throughout the entire corridor.

CONSIDERATIONS

1. Should TV Hwy Primarily Serve Longer Distance Travel Through or Local Travel Within the Corridor?

In answering the question of whether TV Hwy should be an arterial or throughway, it is helpful to look at the functions of each of these roadways in comparison to how TV Hwy currently is used and to how it is envisioned to be used in the future. Table 1 compares features of throughways to arterials and how TV Hwy functions today.

Figure 1 illustrates the relationship between arterials and throughways, the throughways being more restrictive to local traffic and having more access control than arterials.



Source: Washington County Transportation System Plan (3.23.2003)

Table 1: Arterial v. Throughway Decision Matrix

THROUGHWAY	ARTERIAL	TV HIGHWAY PERFORMANCE TODAY
Serves longer distance travel within the region and state	For travel within the region to major destination areas and to throughways	Over half of the trips begin and end in corridor. ³
Carries between 50,000 and 100,000 vehicles per day	Carries between 10,000 and 40,000 vehicles per day	Current traffic volumes are between 30,000 and 40,000 vehicles per day. ⁴
Access to adjacent properties is highly limited	Access to adjacent properties is moderately limited	Frequent access points on north side of highway; limited access on south side due to railroad (<i>see maps</i>).
<ul style="list-style-type: none"> • 6 travel lanes • High speeds • Mix of at-grade and grade separated intersections/interchanges 	<ul style="list-style-type: none"> • 4 travel lanes with turn lanes • Moderate speeds • At-grade intersections 	<ul style="list-style-type: none"> • 4 travel lanes with turn lanes. • Speeds vary between 35 and 45 mph. • Existing intersections at grade.
Design emphasis for travel by car and freight truck and is not appropriate with granting access to transit, bicycles and pedestrians	Compatible with bicycle, pedestrian, truck and transit travel	<ul style="list-style-type: none"> • Sidewalks on north side but incomplete on south side. • Bike lanes along highway through most of project area. • TriMet 57 frequent bus 8th most used in system. • Current heavy congestion during peak periods.
<p><i>Land use implications:</i></p> <ul style="list-style-type: none"> • The above factors place emphasis on moving through, versus within the region. • Access to adjacent land uses is restricted. • Creates more conflicts with land uses and transportation and between modes of transportation. • “<i>Highway designs do not reflect adjacent land use.</i>”⁵ • Limits ability to create complete communities. 	<p><i>Land use implications:</i></p> <ul style="list-style-type: none"> • Accommodates movement within and through region. • Less restricted land use access. • Land uses can encourage alternative modes of transportation for local trips.⁶ • Emphasis on finding balanced multi-modal function.⁷ • Appropriate for more intensely developed activity centers.⁸ • Overall, greater opportunity to integrate land uses and transportation. 	<p><i>Existing Land Use Implications:</i></p> <ul style="list-style-type: none"> • Area characterized by residential to the north and south of the highway as the predominant use in the project area; commercial uses – predominantly retail – align the north side of the highway with a mix of industrial and commercial uses in areas along the south side. • Approximately 30 schools in corridor project area • High transit ridership • 92,000 persons and more than 33,700 dwelling units in corridor⁹ <p><i>Future Land Use Implications:</i></p> <ul style="list-style-type: none"> • Aloha-Reedville Livability Study includes project goal to “<i>develop strategies for economic improvements, housing, redevelopment, corridors and town centers, and transportation improvements that promote livability and sustainability.</i>” • Inclusion of 1063 acres (“South Hillsboro”) in UGB to accommodate 10,766 dwelling units. • Beaverton’s Civic Plan and its concept for a more pedestrian friendly environment in its downtown core, including Canyon Road.
<i>Examples in the region:</i> I-5, I-405, I-205, I-84, Highway 30, Highway 26, Highway 99, Highway 217; Highway 224 (McLoughlin to I-205)	<i>Examples in the region:</i> TV Highway from Brookwood Avenue west to Forest Grove and from Murray Boulevard east to Highway 217; Canyon Road from Highway 217 to I-5, Cornelius Pass Road between TV Highway and Highway 26; Cornell Road, SE Powell Blvd and NW/NE Broadway.	

Source: Metro 2035 Regional Transportation Plan (unless otherwise noted)

³ Metro Model

⁴ West of Highway 217, traffic volumes of Highway 8 (TV Highway) are close to 50,000 vehicles per day. That section is designated in the RTP as an arterial.

⁵ *Creating Livable Streets, Street Design Guidelines* (Metro, 2002)(because of the emphasis on through traffic, the *Guidelines* do not address throughways).

⁶ *Id.* at p.44.

⁷ *Id.* at p.58 (while the *Guidelines* address Regional boulevards, “regional boulevards serve a function similar to the major arterial classification.”)

⁸ *Id.*

⁹ 2010 U.S. Census for Census Block Groups that overlap the TVCP project Area.

Additional factors to consider regarding how TV Hwy may function in the future:

- The TVCP is to come up with solutions for all modes of transportation – including walking, transit and cycling, as well as automobiles, truck freight and rail.
- **Impacts to the Built Environment and Businesses:** Adding capacity would require acquiring right of way on the north side, as the south side is encumbered by the railroad. There would be significant impacts at intersections if grade separation were required. Designation as a throughway may also result in more restricted access management, further impacting existing businesses on the north side of TV Hwy.
- **Cost:** ODOT preliminary design developed a planning level cost estimate – *not including the right of way costs* – for the widening of TV Highway to 6 lanes, with 3 grade-separated intersections (one at Cedar Hills Boulevard, 185th Avenue and Murray Boulevard) from Murray Boulevard to Brookwood Avenue. The road widening is about \$70-\$90 million and *each* interchange at \$55-\$70 million.
- From stakeholder interviews of the Policy Group and Senior Staff:
 - **Adding Capacity:** Simply adding lanes was not a favored solution. Similarly, several people indicated that grade-separation is not favored. Both added lanes and grade-separated intersections were seen as further reducing the quality of the pedestrian environment and safety, as well as dividing communities. However, with regard to grade-separation, one senior staff member did encourage looking into designs of modern (arterial?) grade-separated intersections.
 - **Mobility:** It is expected that trips in the corridor will shorten. Several people stressed the need to find the balance between creating a better environment along the highway and moving people and freight.
 - **Future Development in the Corridor:** Looking to the future, it is envisioned that nodes of complete communities (consistent with Metro 2040) will develop along the corridor. This increased development is likely to result in TV Hwy being used for more local, as opposed to through traffic, resulting in shorter trips.

2. Transportation Solution Priorities

Under both the Oregon Highway Plan (OHP) and the Regional Transportation Plan, adding capacity is the last option.

Oregon Highway Plan Transportation System Solution Priorities:

1. *Protect existing transportation system*
 - Safety – reduce crashes and injuries
 - Technology – upgrade traffic signals to improve reliability for driving cars and trucks
 - Transit – enhance the quality, safety and reliability of transit and make it easier and safer to get to transit stops
 - Bicycle system – enhance the quality, safety and convenience for bicycling
 - Pedestrian system – enhance the quality, safety and convenience for walking or using a mobility device
2. *Improve efficiency and capacity of existing system*
 - Complete the street network – improve street connectivity and make all streets

- accessible for all modes
 - Intersection operations – solutions that add left or right turn lanes for vehicles at intersections
3. *Add capacity*
- Add vehicle lanes on TV Highway – add capacity for motor vehicles

Regional Transportation Plan – Policies for the Arterial and Throughway Network Vision¹⁰

The Arterial and Throughway concept

... contains policy and strategy provisions to develop a complete and well-connected roadway system that provides adequate capacity and supports all modes of travel. Rather than relying principally on levels of congestion to direct how and where to address motor vehicle capacity needs, the concept calls for implementing a well-connected network design that is tailored to fit local geography, respect existing communities and future development and protect the natural environment

The RTP sets forth the following three policies as the foundation for the arterial and throughway vision:

1. Build a well-connected network of “complete” streets that prioritize safe and convenient pedestrian and bicycle access.
2. Improve local and collector street connectivity.
3. Maximize system operations by implementing management strategies *prior to building new motor vehicle capacity*, where appropriate (emphasis added).

3. Intelligent Transportation Systems

Technology, known as Intelligent Transportation Systems, will likely play a large role in any solutions package. As stated in Metro’s report – *Mobility the Smart Way: The State of ITS in the Portland Metropolitan Region* – “**more than half of all congestion is caused by incidents and other sources that can be addressed using system management and operational strategies**” (p. 4). Accordingly, one of Oregon Transportation Plan’s key initiatives is to “**optimize system capacity and safety through information technology and other methods.**”

OPTIONS AVAILABLE

There are two options at this point:

- Give policy direction for designation of the entire length of TV Hwy in the corridor as an arterial. This will allow the study of solutions that maintain existing capacity for through traffic at four lanes (with additional turn lanes, as needed).
- Defer decision until the solution package is developed and include the possibility as adding capacity as a solution.

¹⁰ RTP Section 2.5.2.

IMPLICATIONS AND SUGGESTIONS

Making a determination of whether TV Hwy should be an arterial or throughway more clearly defines the target for the long-term design and, correspondingly, the range of tools/options to prioritize investment in the corridor. It also will provide more clarity to the public and stakeholders to help us get to a solutions package and set expectations.

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