TV HIGHWAY CORRIDOR PLAN

... TVHIGHWAY.ORG

DRAFT Initial Improvement Concepts 4/5/12

Priority 1 Improvement Concepts

(P1) Develop and Implement Alternative Mobility Targets on TV Hwy

In accordance with Oregon Highway Plan (OHP) Policy 1F (Highway Mobility Policy) and to support the TVCP Policy Group's multimodal, balanced Arterial policy direction and associated TVCP goals and objectives, the PMT proposes the development of alternative mobility targets to reflect the balanced community-based corridor needs through the 2035 planning year.

(P1) Signal Priority for Transit on TV Hwy

Signal priority alters signal timing to provide additional green time to select modes of travel through the use of transponders that detect when the priority use is approaching the intersection. The addition of transit signal priority at signalized intersections on TV Hwy would improve transit travel times along TV Hwy by detecting when a transit vehicle is approaching a signalized intersection and altering the intersection signal timing to provide additional green time to the transit vehicle movement.

(P1) Signal Optimization for All Modes (Corridor-wide)

Adjusting the green time at signalized intersections in the study area to optimize traffic operations under current traffic volumes may reduce delay and improve travel times for all vehicles.

(P1) Adaptive Signal Control (Corridor-wide)

Adaptive signal control is an advanced form of signal optimization that allows traffic signals to adjust signal timing in real time as traffic volumes change. Adaptive systems also communicate traffic volume and signal timing information between signals to improve overall corridor traffic flow. TV Hwy and other arterial corridors such as 185th Avenue are good candidates for adaptive signal control.

(P1) Real-time Traveler Information

Real-time traveler information includes electronic readerboards that alert motorists of crashes and provide other pertinent information that help motorists decide whether or not to choose alternative routes.

(P1) Enhance Existing Bus Service Within TVCP Area, Including the #57 on TV Hwy

Increased bus service includes shorter headways for buses within the TVCP area. The increased transit service may attract additional riders and reduce the number of vehicles on the roads.

(P1) Community Education for Rideshare/Transit

Educating the community concerning alternative transportation options via the internet, marketing and promotion at bus stops, and presentations to schools, large employers, and retirement communities helps people of all ages understand the use and benefits of using public transit.

(P1) Employer Incentive Programs
Promote business Energy Tax Credit program to organizations as a motivation to subsidize or purchase transit passes for employees.

(P1) Install Street Lighting on TV Hwy
Existing conditions on TV Hwy make it difficult to see other drivers, pedestrians, and bicyclists. The addition of street lighting along TV Hwy will aid in accident prevention while increasing safety for all users. Additionally, increased safety for users may shift pedestrian, transit, and bicycle mode share.

(P1) Add Wayfinding Signage for Non-Motorists
Wayfinding signage informs users about available pathways, street networks, and other facilities to effectively move throughout an area. Wayfinding signage links pedestrians and bicyclists to transit facilities and other notable areas within the TVCP area. This signage strengthens connectivity, improves the appearance of TV Hwy, and has the potential to increase bicycle, pedestrian, and transit mode share.

(P1) Add Security Cameras at Transit Stops
Security cameras can assist transit agencies in monitoring and responding to situations at transit facilities and can be used in incident response. Cameras can be used to monitor the safety of passengers while ensuring that the station equipment remains intact. Security cameras at transit stops can warn officials of possible intentional acts of crime or violence.

(P1) Add Red Light Violation Cameras
Red light violation cameras photograph vehicles going through red lights at selected intersections. Drivers are sent a notice of the violation and are expected to pay a fine. Red light violation cameras deter motorists from illegally running red lights and support the TVCP goal of safety.

(P1) Install Secure Fencing on South Side of Railroad Track between Authorized Crossings
A fence separating the railroad track and the residential and commercial developments on the south side of TV Hwy will funnel pedestrians and bicyclists through authorized crossings, which would improve freight travel time reliability. This fencing will reduce the number of unauthorized crossings of the Portland and Western Rail (PNWR) track, thus increasing safety within the corridor.

(P1) Public Rail Safety Education
Promoting and integrating public rail safety education ("Operation Lifesaver"), particularly targeted at school-aged children within the TVCP vicinity is an effective way of increasing community awareness of safety issues. The primary immediate and sustained benefit of implementing this program through schools in the TVCP area will be reduced exposure to freight trains by people who may otherwise trespass across the PNWR track, or stop their vehicle within a marked rail crossing.

(P1) Access Management (e.g., Driveway Consolidation)
Managing the number, spacing, and access of driveway and side street connections protects those traveling along the corridor from conflicts with those entering or leaving the corridor. Access management includes such measures as limiting the number of or establishing minimum spacing between driveways; providing for right-in, right-out only movements; locating signals to favor through movements; restricting turns to certain intersections; and using non-traversable medians to manage left-turn and U-turn movements. Limiting driveway access on TV Hwy is an access management strategy

that may be useful in protecting bicyclists riding in the right-hand travel lanes and pedestrians along the north side of the highway. Access management improves safety and mobility for through-corridor travel.

(P1) Preserve Minimum One-Mile Train Storage Segment (Between 209th and 229th)
PNWR has identified the need for an additional track of at least one mile in length for train staging and storage capacity within the TVCP area to be able to more efficiently access the portion of the PNWR rail line shared with TriMet's Westside Express Service (WES) commuter rail. PNWR has suggested that this additional track could be installed adjacent to and directly south of its existing freight track between 209th and 229th Avenues.

Priority 2 Improvement Concepts

(P2) Implement Pedestrian Refuges on TV Hwy
Pedestrian refuges are small islands in the middle of the street that will provide an area buffered from traffic for pedestrians to wait in between travel directions until vehicular traffic clears. These pedestrian refuges allow them to cross the street in stages.

The actual location of pedestrian refuges will be determined based on the need for access management, transit stop locations, property access, and safety.

(P2) Complete Sidewalk Network Along TV Hwy
Existing sidewalk facility gaps along TV Hwy will be filled (exact locations to be determined) and existing sidewalks will be widened to a minimum of 6 feet, consistent with the Metro Regional Street and Pedestrian Corridor designations.

(P2) Complete Sidewalk Network on North-South Arterials and Collectors
To complement RTP and MSTIP projects, and to enhance the sidewalk network and connections in the project area, sidewalks will be provided on streets intersecting TV Hwy, including some parallel streets as shown on the Draft Potential Sidewalk Network Map. Sidewalks will connect schools, parks, and employment and commerce areas to TV Hwy.

(P2) Add Landscape Buffer with Trees Between Sidewalks and Streets on TV Hwy
Consistent with the Regional street designation, a 5- to 8-foot planter strip would be provided between the bike lanes and sidewalk along TV Hwy.

(P2) Add Bicycle Parking at Transit Stops
Bike parking will consist of U racks at a minimum, but may include covered rack areas or secure bike storage areas. The availability of safe and convenient parking is critical for bicyclists riding transit. Otherwise, bicyclists will lock their bikes to anything they find, including the pole the bus schedule is mounted on, inconveniencing passengers who are accessing transit on foot.

(P2) Provide Standard Bicycle Facilities on TV Hwy
Bike lanes will be widened to a minimum of 6 feet, consistent with the Metro Regional Street designation. Existing bike lanes are constrained, especially considering the traffic volumes and speed on TV Hwy.

(P2) Develop Continuous East-West Parallel Bike Routes North and South of TV Hwy
To complement RTP and MSTIP projects, continuous east-to-west bike routes that parallel TV Hwy will be provided. The following are some of the streets that will potentially have bike facilities (see Potential Bicycle Network Map for additional potential bicycle facilities):

North of TV Hwy:
Alexander Street from 170th Avenue to 214th Avenue
Johnson Street from 209th Avenue to 234th Avenue
Drake Street form 67th Avenue to Brookwood Avenue
Frewing Road from Brookwood Avenue to 45th Avenue

South of TV Hwy:
Witch Hazel from River Road to Brookwood Avenue
Construct Shaw Road as a bike/ped facility from Brookwood Avenue to 198th Avenue
Shaw Road from 198th Avenue to 160th Avenue

(P2) Enhance Bus Stop Amenities
Amenities such as shelters, seating, trash cans, lighting, and TransitTracker displays will be provided, depending on the stop location to attract transit riders.

(P2) Combine Bus/Right Lane and Far-side Pull-outs at Major Intersections
At locations with right-turn lanes on TV Hwy, move the bus stop to the far side of the intersection with a bus pull-out and allow bus to use the right-turn lane as a through lane. Buses can use the right-turn lane to bypass through-lane congestion. The bus pull-out allows through traffic to pass the stopped bus, and the far-side bus stop allows the bus to merge back into the through lanes during the red phase of the traffic signal.

(P2) Add Express Bus Service on TV Hwy with Stops Limited to Major Nodes
Express bus service reduces the overall number of stops, which streamlines the service and reduces headways. Express bus service along TV Hwy would make it faster to go between major nodes of interest.

(P2) Pedestrian and Transit-Oriented Development (Code Amendments)
Code amendments—potentially a zoning overlay—that promote moderate- to high-density, mixed-use neighborhoods, with a high use transit stop as a nucleus, are designed to maximize access to and use of public transportation. These code amendments will include design guidelines to maintain a certain level of aesthetic appeal.

(P2) Enhance Existing North-South Routes for All Modes
Some of the congestion on TV Hwy is a result of TV Hwy being used for a portion of north-south travel. Enhancing north-south roadways could reduce travel demand on TV Hwy. All north-south arterials and collectors could benefit from enhancements. However, improvements to roadways such as 209th Avenue, 198th Avenue, 185th Avenue, and 170th Avenue, which are being heavily used by commuters between jobs north of TV Hwy and housing south of TV Hwy, would provide the most benefit to the overall operations of the corridor.

(P2) Complete Regional Trails in Corridor (Rails to Trails)
Because the TV Hwy Corridor is identified by Tualatin Hills Parks and Recreation District (THPRD) as part of the Surf to Turf Rail-with-Trail and other regional trails identified in the Metro RTP Financially Constrained project list are also in the TVCP area, completion of these regional trails would improve the multimodal system.

(P2) Dedicate Right-of-Way (ROW) for Off-network, Connective Streets for Motorists and for Non-motorists w/ Land Use Changes and Redevelopment (via Plan/Code Changes)
Dedicating ROW for connective streets before development occurs provides a transportation-efficient framework to guide development and provides for a healthy multimodal system and land use that complements transportation system.

(P2) Add Raised Median on TV Hwy (and Allow/Provide for U-Turns at Signalized Intersections)
Consistent with the Regional street designation, a raised landscaped median (possibly 10 feet wide) will be provided on TV Hwy. Medians can provide a refuge for pedestrians while improving access control.

(P2) Make Improvements at Specific Intersections Along TV Hwy
Spot capacity improvement provided at key intersections along TV Hwy may improve corridor safety. The analysis to determine specific improvements is not yet complete.

(P2) Provide "Jug Handle" Left Turns Near Major TV Hwy Intersections
The analysis to determine specific improvements for providing "jug handle" left turns is not yet complete.

(P2) Consolidate Number of At-grade Rail Crossings (Safety/Access Management)
At-grade rail crossings pose a safety risk; therefore, reducing the number of crossings may improve rail-related safety. Analysis is ongoing, but the 229th Avenue rail crossing is one potential location that could be closed if capacity enhancements are provided at adjacent crossings.

Priority 3 Improvement Concepts

(P3) Add a Business-Access and Transit (BAT) Lane on TV Hwy Westbound
A BAT lane would be a new westbound lane on TV Hwy reserved for transit use and right-turn access to businesses and right turns at intersections. The BAT lane would improve transit travel time by reserving through capacity for transit on TV Hwy while maintaining business access.

(P3) Implement Fixed or Flex Guideway System Such as Light Rail, Streetcar, or Bus Rapid Transit
High-capacity transit vehicles make fewer stops, travel at higher speeds, have more frequent service, and carry more people than local service transit such as typical bus lines.

(P3) Use Existing Railroad ROW for Commuter Rail
Through an operating agreement with the PNWR, the existing tracks and ROW could be used for commuter rail service in the corridor (e.g., Sound Transit).

(P3) Add a Cycle Track on TV Hwy

Cycle tracks are bike lanes that are separated from automobile traffic by a physical barrier such as parked cars, bollards, a landscaped buffer, or a curb to provide cyclists with a higher level of comfort and safety. Cycle tracks may be two-way on the same side of the road.

(P3) Transit and Pedestrian-Oriented Development (Market Response)

Market conditions can deter investors from development, making transit-oriented development harder to implement. Potential financial incentives, site suitability success analysis, and public/private partnerships can enhance the economic feasibility of higher density mixed-use projects served by transit and increase developer interest.

(P3) Add Undercrossing of Railroad Tracks for Pedestrians and Bicyclists (Between 209th and 160th Avenues)

An undercrossing will allow safe access to and from TV Hwy for pedestrians and bicyclists from the south without creating an additional crossing of the railroad tracks.

(P3) Add a Grade-Separated Crossing at TV Hwy and Cornelius Pass Road

Adding a grade-separated crossing would remove a signalized intersection of TV Hwy and improve traffic operations. Full access between the two roadways would be provided through compact urban arterial ramps that take less space than a freeway ramp system. The adjacent rail crossing would also be grade-separated.

(P3) Add a Grade-Separated Crossing at TV Hwy and 185th Avenue

Adding a grade-separated crossing would remove a signalized intersection of TV Hwy and improve traffic operations. Full access between the two roadways would be provided through compact urban arterial ramps that take less space than a freeway ramp system. The adjacent rail crossing would also be grade-separated.

(P3) Add a Grade-Separated Crossing at TV Hwy and 170th Avenue

Adding a grade-separated crossing would remove a signalized intersection of TV Hwy and improve traffic operations. Full access between the two roadways would be provided through compact urban arterial ramps that take less space than a freeway ramp system. The adjacent rail crossing would also be grade-separated.

(P3) Add a Grade-Separated Crossing at TV Hwy and Murray Boulevard

Adding a grade-separated crossing would remove a signalized intersection of TV Hwy and improve traffic operations. Full access between the two roadways would be provided through compact urban arterial ramps that take less space than a freeway ramp system. The adjacent rail crossing would also be grade-separated.

(P3) Create a Couplet Between Cornelius Pass Road and 170th Avenue (Makes Alexander One-way Westbound and Blanton One-way Eastbound)

A couplet between Cornelius Pass Road and 170th Avenue would function as more of a circulatory system south and parallel to TV Hwy.

(P3) Develop a New North-South Arterial and Collector Links

Some of the congestion on TV Hwy is a result of the highway being used for a portion of north-south travel. By upgrading neighborhood streets that connect TV Hwy to other arterials and collectors and/or community resources, there is the potential to reduce travel demand on TV Hwy.

(P3) Add a High-Occupancy Vehicle (HOV) Lane

HOV lanes are also known as carpool or diamond lanes. HOV lanes can connect major population and employment centers. They are generally inside (left) lanes that are identified by signs and diamond symbols painted on the pavement, and are typically separated from the other lanes on the freeway by a solid white line.

(P3) Relocate and Cut/Cover Railroad Within TV Hwy Median and Use Existing Railroad ROW for Multimodal Use

This would be a major reconstruction project to relocate a portion of the PNWR track alignment and to depress the track elevation so that other modes could cross it via structures. The existing PNWR ROW would be available for use as a dedicated high-capacity transit and multi-use trail.