



Active Transportation & Complete Streets Projects

Name of Project Pedestrian Arterial Crossing Enhancements

(project name will be adjusted to comply with ODOT naming convention if necessary)

Project nomination narrative

Project nomination narratives provide in depth process, location and project definition details and serves as the nomination form for project funding consideration.. **Project narratives should be kept to 12 pages total per project.** The narrative form is available electronically at:

<http://www.oregonmetro.gov/regionalflexiblefund>. Please complete the following:

Project Definition

Base project information

1. Corresponding RTP project number(s) for the nominated project. Walker Road: 2035 RTP #11235, 185th Avenue: 1992 RTP #72, Baseline Road: 2004 RTP #3103, 170th Avenue: 2035 RTP #10546, Cornell Road: 1995 RTP #12, Rock Creek Trail: 2035 RTP #10851
2. Project extent or area description. Project area includes five arterial roadway segments in Washington County, two which are also included the Aloha-Reedville Study and Livable Community Plan. These include Walker Road (Murray to Cedar Hills Blvd), Baseline Road (Cornelius Pass Rd to 185th), Cornell Road (Aloclek to John Olson), 185th Avenue (Baseline to Alexander), and 170th (Merlo to Farmington).
3. Purpose and need statement (The purpose and need statement should address the criteria as they apply to the project, for example: increase non-auto trip access to essential services in the X town center, particularly for the high concentration of Y and Z populations in the project area). Ensuring that people can cross streets safely and conveniently to access destinations is essential to creating an effective transportation network. Getting across the street can be one of the primary barriers to achieving true accessibility and mobility. Washington County has many multi-lane arterials that move large volumes of vehicles at high speeds where signalized intersections are the only location that offer more protected crossing opportunity for pedestrians. However, signalized intersections on arterials are often spaced so far apart that pedestrians must either travel significantly out of their way to reach their destination or attempt to cross at a location without a crosswalk or signal at their own risk. Additional protected arterial crossing opportunities are needed to improve the access, mobility, livability, and safety for all citizens. The roadway segments selected for this project include areas where increased connections to transit service, schools, employment areas, multi-family housing and shopping are needed. In addition the areas have identified concentrations of traditionally underserved populations that would benefit greatly from improved crossing opportunities and safety.
4. Description of project design elements. Project will look at specific roadway segments for creation of new designated arterial crossings and enhancements of existing crossings. Exact improvements and locations will be based on audits of the individual roadway segments which include considerations of land use, potential demand, types of users, and existing

roadway geometry. Crossing enhancements will address each unique location and include a combination of treatments such as curb extensions, lighting, signals, rectangular rapid flashing beacons, crossing islands, pavement markings, and signage. The cost estimate for a typical signalized crossing is \$343,000 and a typical rectangular flashing beacon crossing is \$166,000. For the project corridors, funding is requested for 9 signalized and 3 rectangular rapid flashing beacon crossings for a total of \$3,585,000, with a County fund/in kind match of \$394,350 (11%). However the final mix of treatments will be determined through analysis of each unique location.

5. Description of post implementation measurement of project effectiveness (Metro staff is available to help design measurement methodologies for post-construction project criteria performance). The County will measure several factors to determine the effectiveness of this project. The quantitative data will include crossing counts before and after the installation of improvements, review of vehicle compliance with treatments, and the monitoring of crash incidents along the road segments. Qualitative data will be collected through public comment and user satisfaction surveys

Map of project area

1. Provide a map of the project consistent with instruction in Exhibit B

Project sponsor agency

1. Contact information for:
 - Application lead staff Clark Berry, clark_berry@co.washington.or.us, 503-846-3876
 - Project Manager (or assigning manager) Joe Younkins
 - Project Engineer (or assigning manager) Joe Younkins
2. Describe whether the lead agency has recently led or failed to deliver a federal aid transportation project, and how the agency currently has the technical, administrative and budget capacity to deliver the project. Washington County has successfully completed several federally funded projects and is well experienced in delivering projects with ODOT review and administration. Recent projects include Safe Routes to School sidewalk projects, Banks-Vernonia Linear Trail and Trailhead, Hwy 47 Bridge over Scoggins Creek, Oleson Road Bridge over Fanno Creek, and Tualatin Sherwood Road ITS. The County completed 8 ARRA projects such as, bridge guardrail, school flasher, flashing yellow arrow, pavement overlay, pedestrian countdown signal, and signal video detection. Washington County has the technical and administration capacity to manage federally funded projects. The County's Engineering and Construction Services Division delivers an estimated \$40 million annually in projects and various sizes and complexities. Washington County has budget capacity to deliver the project and standard federal-aid local agency match would be made through one of several sources including TDT, MSTIP, MSTIP Opportunity Funds, and Road Fund.

Location

1. Describe how you identified the travel corridor/area for the project and how regional and local data relevant to the project criteria support this location as your top priority(s). (See [Appendix D](#) of the Nomination Packet for criteria relevant to prioritizing project location) Over the last two years through the Washington County TSP update, Bicycle and Pedestrian Prioritization Project, Aloha-Reedville Study, and other outreach efforts, increased connectivity of the active

transportation system been identified as a priority need and goal in these areas. Increasing the number of safe crossing opportunities is reflected in several County plans and documents, and repeatedly voiced by citizens as a primary need. Safe mid-block crossings are the most requested trail improvement in surveys conducted with trail users in 2008-2010 by Hillsboro Parks. The 2012 Washington County Bicycle and Pedestrian Prioritization Project, funded in part by a grant from the U.S. Department of Energy identified arterial/collector sidewalk and bike lane gaps throughout Washington County and determined the most critical gaps based on geographic analysis of pedestrian/bicycle crash data, land use density and mix, street connectivity and social equity. The prioritization criteria are very similar to Metro's criteria. Each of the selected roadway segments included in this project is supported by this data. There is opportunity to dramatically increase safety by focusing pedestrian and bicycle improvements on arterials in the region. Arterials comprise a majority of the on-street regional bicycle and pedestrian network and have the highest serious crash rate of any street facility type for all modes of travel, including walking and bicycling according to Metro's State of Safety Report. The report recommends improving pedestrian crossings particularly on multi-lane arterials. The project corridors have a typical suburban-style street system which is often inefficient and unfriendly for cyclists and pedestrians. The corridors have typical arterial characteristics, higher speed, high volume, multi-lane, carry freight traffic, and have longer distances between protected crossings. This project will help provide much needed connectivity to residential neighborhoods, employment and retail centers, and recreational areas, as well as connections to transit and light rail stations.

Highest priority criteria

1. Describe how the project improves access to priority destinations mixed-use centers, large employment areas, schools, and essential services for EJ/underserved communities. (See maps/data on Metro FTP site). Arterial roadways often are lined by destinations that are easy to access by car however bicyclist and pedestrians seek safe and convenient access to many of the same destinations. Each of the project corridors contains multiple local and regional destinations of interest. Business expansion and high density residential growth continue to fuel demand for safe alternative transportation in Washington County. The key land use features for each corridor that generate a demand for crossings include:
 185th Avenue: High concentrations of multi-family housing –Neighborhood commercial – Portland Community College Willow Creek Campus –Worksource Oregon Office –Several private adult care facilities and daycare/preschools
 170th Avenue:–Beaver Acres Elementary School, Merlo Station High School of Science and Technology, Aloha Huber Elementary School and Faith Bible Christian School–Merlo Park Athletic Fields, Tualatin Hills Nature Park. Vendla Park–Autism Community Center and School–Multi-family housing –Neighborhood commercial at TV Hwy and Alexander – Beaverton School District Headquarters to the east of 170th
 Walker Road: –Barnes Elementary School and Holy Trinity Catholic School–West and south of segment employment centers including Nike and Textronix-Howard Vollum Park–Walker Center Commercial south side of roadway and Cedar Hills Crossing Center retail south of corridor
 Baseline Road:–Neighborhood commercial north and south –Future high density housing on north side of Baseline–Portland Community College Willow Creek Campus–Worksource Oregon Office –PCC Willow Creek and Worksource Oregon Office north of segment –Public School within ¼ mile south of segment–Two nature parks

Cornell Road:—Employment & business parks including future Legacy medical-office campus—Multi-family Housing currently being constructed adjacent to roadway —Rock Creek Trail – a regional trail intersects on the north and south side of segment with connections to Orchard Park and Quatama MAX station—Computer Learning Center in business park on the south side

2. Identify the safety issues in the project area. How does the project design address safety in the area? (See bike/pedestrian crash map/data on Metro FTP site). Metro’s recent “Metro State of Safety Report” documents roadway crash data, patterns and trends for all modes in the region. The findings include that arterial roadways comprise 59% of the region’s serious crashes, 67% of the serious pedestrian crashes, and 52% of the serious bike crashes, while accounting for 40% of vehicle travel. Arterials have the highest serious crash rate per road mile and per VMT. Serious pedestrian crashes are disproportionately represented after dark. While 29% of all serious crashes happen at night, 45% of serious pedestrian crashes happen at night. Nighttime serious pedestrian and bicycle crashes occur disproportionately where street lighting is not present –79% of serious pedestrian crashes and 85% of serious bicycle crashes occurring at night happen where lighting is not present, as compared to 18% of all serious crashes occurring at night. The project arterial corridors proposed for crossings all have high volumes, high speeds, are multi-lane, with long distance between protected crossing opportunities. A summary of the roadway data for each of the corridor follows.
185th Avenue: ADT of 25,000 and 85th percentile speed of 47 mph, 6% truck traffic, spacing between existing signalized pedestrian crossings north to south: 5470 ft and 2355 ft.
170th Avenue: ADT of 15,000 and 85th percentile speed of 44 mph, 5% truck traffic, spacing between existing signalized pedestrian crossings north to south: 5320 ft, 660 ft, 590 ft, and 2720 ft.
Walker Road: ADT of 13,500 and 85th percentile speed of 38 mph, 3% truck traffic, spacing between existing signalized pedestrian crossings west to east: 5470 ft.
Baseline Road: ADT 21,000 and 85th percentile speed 47 mph, 4% truck traffic, spacing between existing signalized pedestrian crossings west to east: 3320 ft, 2170 ft, 2290 ft, and 920 ft.
Cornell Road: ADT 21,500 and 85th percentile speed 47 mph, 5.5% truck traffic, spacing between existing signalized pedestrian crossings west to east: 5470 ft.
The Metro State of Safety Report developed a set of short term recommendations, based on findings from the report, for the region to pursue to address transportation safety and work to reduce fatalities and serious injuries. Several of the findings and recommendations pertain to safety for pedestrians and bicyclists including a focus on improved pedestrian crossings including lighting, particularly on multi-lane arterials. The proposed project will improve safety by providing designated crossings with features that will increase visibility of pedestrians and limit exposure time to vehicular traffic. The addition of crossings will provide an alternative to illegal jaywalking behavior and accommodate those that are young or disabled.
3. How does the project serve traditionally underserved (minority, low-income, limited English speaking, youth, elderly, disabled) communities? Explain how your project responds to data

identifying concentrations of underserved communities and what project elements address the transportation needs of these communities. (See Transportation Equity maps/data on Metro FTP site for help identifying concentrations of EJ and underserved communities and how well they are served/not served). Transportation Equity analysis and mapping performed by Metro graphically indicates areas with population of above average poverty, ethnic minorities, and numbers of children and the elderly. Concentrations of these EJ populations are present on or adjacent to each of the project corridors. The proposed crossings will drastically improve access for all users especially for youth, older users or those with mobility impairments that need frequent and enhanced crossings to comfortably and confidently reach their destinations. Households with lower income levels make more of their trips using active travel, especially and taking transit, and non-white householders make a greater percentage of their trips by walking, bicycling and transit than white householders. 2011 Oregon Household Activity Survey- Mode Share by Race of Householder – 4 counties show that non-white households make 20.5 % and white 15.0 % of total trips by walking, biking or transit.

High priority criteria

1. Describe any outreach that has been conducted with EJ/underserved communities to date. (Targeted outreach to these communities may be facilitated by Metro during the regional public comment period for comments on project scope. Additional outreach during project development phases (final design, preliminary engineering, etc.) may be a condition of funding approval. The need for pedestrian crossings has been identified through various planning and development processes that engaged the public. The County considers environmental justice issues, which is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of laws, regulations, and policies. As part of the Aloha-Reedville Study and Livable Community Plan, Washington County has contracted with Centro Cultural and the Center for Intercultural Organizing to engage historically underrepresented segments of the community, particularly Latino and immigrant/refugee communities. Through over 600 translated in-person surveys, this work has revealed transportation safety as a top concern, including the lack of sidewalks and safe crossings throughout the Aloha community. Additional engagement efforts in Aloha have focused on youth, low-income, renters and people with disabilities. Feedback is similar in that transportation is a top safety concern for all community members.
2. Describe any conflicts with freight/active transportation you've identified in your project area. How does the project design address or provide mitigation to these conflicts? Cornell Road, 185th Avenue, Baseline Road, and 170th Avenue, are all identified as County Through Truck Routes in the TSP. Trucks as a percentage of total volume range from 3% to 6%. Increasing the visibility and safety of pedestrians reduces crashes and potential delay for freight on the project corridors. Integration of crossing signals in to the traffic signal system will also provide greater efficiency and minimize delay associated with additional signals.
3. Does the project design include "last mile" connections? Please explain. (Last mile connections create safe and comfortable biking and walking routes that directly connect transit stops to

nearby origins and destinations, and can include the provision of secure and convenient bicycle parking at stations). Roadway crossings are often cited barriers to last mile connections to transit and community destinations and services. Most transit stops are directly across the street from one another and require at least one roadway crossing to access the stop or end destination. Significant out of direction travel to safe crossings is a deterrent to a user's willingness to make the "last mile" connection. The Trimet Pedestrian Network Analysis cites safe roadway crossings as a key feature in access to transit. This project aims to begin addressing this issue on corridors where there is the most need and most potential for benefit to users. The selected corridors all are serviced by transit.

185th Avenue: Third highest ridership corridor in Washington County for Trimet Line #52, major north-south bus route that connects to MAX and PCC community college campuses, and Tanasbourne Regional Center.

170th Avenue: Access and connection to MAX stations at Merlo and Elmonica. Existing bus service on TV Highway and Farmington Road and future service planned for 170th Avenue as part of the Trimet Westside Service Enhancement Plan.

Walker Road: Serviced by Trimet Line #59, with rush hour only service.

Baseline Road: Serviced by Trimet Line #88, with connections to Willow Creek Light Rail Station.

Cornell Road: Serviced by Trimet Line #48 weekdays and Saturdays, a new east-west route which began service in fall 2011.

4. Describe how the project will lead to an increase in non-auto trips through improvements in the user experience. ([See Appendix C](#) for design elements that improve the user experience).
5. Does the project serve a high density or projected high growth area? Please explain. (For high growth areas, explain how the project is coordinated with growth plans to focus or orient future development to maximize use of the project). Answers for 4 and 5 below
 - 4) There is opportunity to replace short trips made by car in the region with bicycling and walking trips; 43.7 % of all trips made by auto in the 4-County region are less than 3 miles, and over 14.7% are less than 1-mile according to the 2011 Oregon Household Activity Survey. A Rails to Trails Conservancy national study found that replacing 6-21% of short trips under three miles made by auto with bicycle and pedestrian would reduce 21 billion to 52 billion miles of driving annually. Providing additional safe and convenient crossing opportunities can encourage more local trips through walking and biking and facilitate connections to transit for longer trips. The project aims to leverage existing investments in transportation system where capacity currently exists – sidewalks, bicycle lanes and transit, to reduce SOV trips and VMT. The project will propose solutions that would greatly improve pedestrian and bicycle safety and convenience in the corridor and would likely convert some auto trips to active modes. Significant "latent demand" may exist for non-auto trips in the project corridors, especially walk and bike trips. The enhancements will address many of the 'Attributes of Good Crossings' cited in the Trimet Pedestrian Network Analysis Report, including clarity, visibility, appropriate spacing, short waits, adequate crossing times, limited exposure, and clear, continuous paths. The proposed arterial crossing enhancements will improve the livability and health of the community with safe and viable connections to walk and bike, not only for commuting, shopping, but recreation as well.
 - 5) Significant portions of three corridors (those within the Aloha-Reedville study area) are

located within or alongside Metro 2040 centers. The 185th Avenue corridor passes through the heart of Aloha town center on the south end and Willow Creek station area on the north end. The 170th Avenue corridor defines the eastern edge of Aloha town center. The Baseline Road corridor includes the Willow Creek station area on the east and is adjacent to the Quatama station area on the west. In the two station areas, Washington County has established transit-oriented zoning districts that mix medium- to high-density residential uses with limited neighborhood-serving commercial uses. Quatama station area has seen significant multi-family residential development over the past decade. This continues today with the first phase of 750-unit Baseline Woods, one of the largest developments currently under construction in the county. Aloha town center includes nearly a square mile of medium- to high-density residential zoning as well as Community Business District zoning, one of the most dense and flexible planning designations in the county. Aloha town center continues to see a steady stream of denser, infill development in these zones. The remaining corridors, Cornell Road and Walker Road, are surrounded by lower density land uses, but see significant traffic volume associated with major employment centers nearby. Cornell Road links the Tanasbourne-Amber Glen regional center and North Hillsboro employment area, the latter of which includes Intel Ronler Acres campus. Walker Road connects Highway 217 with Nike World Campus. Both heavily-traveled roads experience crossing demands associated with residential, commercial, institutional and recreational uses. In all cases, enhanced crossings would help these five corridors more safely accommodate the existing and anticipated densities and multi-modal trips associated with higher-density planning designations.

Priority criteria

1. Please describe the outreach/education/engagement element of the project nomination (Metro Regional Travel Options staff is available to help design an effective and appropriate level of education and marketing for your project nomination). Washington County will coordinate with its city and other jurisdiction partners to implement a public involvement process representing all of the RFFA project nominations throughout Washington County. This will include a public open house, press releases, website content, and targeted outreach to historically underrepresented communities. For this particular project nomination, Washington County will build on public involvement efforts associated with the Aloha-Reedville Study and Livable Community Plan, including scheduled Community Advisory Committee meetings and an open house in late summer 2013. The countywide RFFA projects will also be discussed and at several Washington County Coordinating Committee (WCCC) and Washington County Coordinating Committee Transportation Advisory Committee (WCCC TAC) meetings, all of which are open to the public.
2. Are there opportunities to leverage other funds or investments with this project? Describe any opportunities you have identified and how you plan to coordinate with other project(s) or leverage other funds. Investments in bicycle and pedestrians facilities have been made as part of road projects in the past and the project would leverage those existing investments to promote increased use and safety. Several of the corridors have been identified for traffic signal system upgrades that would offer opportunities to include pedestrian signals in the

system engineering yielding efficient and integrated operation. The crossings also have the opportunity to coordinate with school zone safety projects and trail development on the corridors to provide increased network connectivity and service to key destinations. Increased crossing opportunities to access transit stops could be leveraged to support implementation of Trimet's Westside Service Enhancement Plan that begins or increases service on the study corridors.

3. Describe how the project may help reduce the need for road and highway expansion. There is opportunity to replace short trips made by car in the region with bicycling and walking trips; 43.7 % of all trips made by auto in the 4-County region are less than 3 miles, and over 14.7% are less than 1-mile according to the 2011 Oregon Household Activity Survey. A Rails to Trails Conservancy national study found that replacing 6-21% of short trips under three miles made by auto with bicycle and pedestrian would reduce 21 billion to 52 billion miles of driving annually. Providing additional safe and convenient crossing opportunities can encourage more local trips through walking and biking and facilitate connections to transit for longer trips. The project aims to leverage existing investments in transportation system where capacity currently exists – sidewalks, bicycle lanes and transit, to reduce SOV trips and VMT.

Process

1. Describe the planning process that led to the identification of this project and the process used to identify the project to be put forward for funding consideration. (Answer should demonstrate that the process met minimum public involvement requirements for project applications per [Appendix A](#)) There is a need for enhanced crossings on arterial corridors in Washington County as identified in existing studies and plans - including the draft TSP 2035 Existing Conditions Report - which were all developed with considerable public involvement. The County public involvement process seeks out and engages affected community members providing an opportunity to participate in decisions about proposed activities that will affect their environment and/or health. The County has renewed efforts to remove barriers and engage citizens through a variety of formats including open houses, event information tables, website-internet presence, and mailings. Priority projects were identified from existing plans and studies, and focused on candidates that met the criteria set out including benefits to underserved populations.
2. Describe how you coordinated with regional or other transportation agencies (e.g. Transit, Port, ODOT, Metro, Freight Rail operators, ODOT Region 1, Regional Safety Workgroup, and Utilities if critical to use of right-of-way) and how it impacted the project location and design. The proposed crossings are on County roadways right of way but will require coordination with local agencies and partners. The City of Hillsboro and Hillsboro Parks has coordinated with the county previously on an unsuccessful grant application for the Cornell and Rock Creek Trail crossing. The County has also worked with Tualatin Hills Parks and Recreation in the review and approval of several pedestrian crossing signals and beacons. Tri-Met supports 'additional, frequent, and protected pedestrian crossings' to access route services and destinations and operations staff will be consulted to coordinate design elements. Staff has and will continue to coordinate with partner agencies in designing projects that provide the most benefit for all the users of the corridor.

