



Active Transportation & Complete Streets Projects

Name of Project Merlo/170th Complete Corridor Design Plan

(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 (if applicable). 10546 (170th Ave Improvements), 10578 (Merlo/158th Improvements), 10811 (Beaverton Creek Trail)
2. Project extent or area description. The project corridor consists of two roadway and right-of-way segments owned and maintained by Washington County: (1) SW 170th Avenue from Tualatin Valley ("TV") Highway to Baseline Road and (2) SW Merlo Road / 158th Avenue from 170th Avenue to Jenkins Road. Land use jurisdiction includes unincorporated Washington County to the west and City of Beaverton to the east. The unincorporated portion is part of the county's Aloha-Reedville study area.
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). The project corridor hosts a complex set of transportation challenges, including severe deficiencies in pedestrian and bicycle facilities, high traffic volume, high observed speeds, a high proportion of freight traffic, and a land use context that includes neighborhoods, schools, employment areas, recreation destinations and transit stations. But the corridor also presents a number of opportunities, including future bus service, context-sensitive roadway improvements, and potential innovative walkway and bikeway treatments such as cycle tracks and buffered bike lanes. Washington County wishes to pursue a rigorous design plan that considers multiple and phased roadway improvement options that would safely accommodate all users and modes. Improvements scoped in the plan would meet nearly all of the project criteria, including: (1) Improving access to and from Aloha town center, Elmonica station community and Merlo station community; (2) Improving access to and from a large employment area that includes Nike World Campus; (3) Improving access to Beaver Acres Elementary School and Merlo Station Community School; (4) Separating pedestrian/bicycle traffic from freight and other vehicles on two busy arterial roadways; (5) Serving eastern Aloha's major concentration of environmental justice (EJ) populations as well as essential destinations for that community; (6) Providing "last mile" connections to/from Elmonica and Merlo MAX stations and the frequent service #57 bus; (7) Improving the user experience for

people walking and biking along 170th and Merlo; (8) Serving three Metro 2040 centers that feature existing medium- to high-density development and significant additional development/redevelopment capacity; (9) Including a public outreach element that builds on existing efforts undertaken in the Aloha-Reedville area, (10) Leveraging Washington County's unique, dedicated transportation funding resources; and (11) Potentially reducing or delaying the need for roadway expansion in the corridor.

4. Description of project design elements. The design plan would: (1) Identify, quantify and evaluate multi-modal travel needs and safety deficiencies in the project corridor; (2) Engage adjacent residents, businesses, schools and other corridor stakeholders; (3) Develop and compare multiple design solutions that incorporate enhanced pedestrian and bicycle facilities that are sensitive to the natural environment and that anticipate future bus transit and planned roadway expansion; (4) Identify a preferred design solution; (5) Provide preliminary engineering and cost estimates; and (6) Propose phasing options for the preferred solution that include an option to construct pedestrian/bicycle improvements before roadway expansion. The design plan would put the county in a more favorable position to secure funding for final engineering, right-of-way acquisition (if needed) and construction of the preferred solution. It would also give corridor residents, stakeholders and roadway users a higher level of certainty as to the ultimate future of this critical north-south link. Total cost for the design plan is \$500,000. Washington County is requesting \$445,000 in RFFA funds and providing a \$55,000 match in county funds and/or in-kind services.
5. Description of post implementation measurement of project effectiveness (Metro staff is available to help design measurement methodologies for post-construction project criteria performance). As this is a design/preliminary engineering project, effectiveness will be measured in the ability to secure funding and implement construction of the preferred solution. After improvements are constructed, effectiveness will be measured in increased walk/bike trips in the corridor, reduced vehicle/pedestrian and vehicle/bicycle conflicts, increase walk/bike mode share for students at Beaver Acres Elementary School, and user satisfaction as measured through 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) Steve Szigethy, steven_szigethy@co.washington.or.us, 503.846.3847
 - Project Engineer (or assigning manager) Joe Younkings, joe_younkings@co.washington.or.us, 503.846.7832
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 delivered numerous federal aid transportation projects in recent years, including the Meacham Road Bridge over Dairy Creek, Banks-Vernonia Trail Extension, Phillip Harris Bridge (Farmington Road) over the Tualatin River, and nine American Reinvestment and Recovery Act (ARRA) projects. The county

continues to deliver federal projects, including two Safe Routes to School projects and two bridges currently entering construction. The county's Department of Land Use and Transportation is a robust organization with proven experience in transportation planning and capital project management. The department routinely handles numerous planning and capital projects at any given time, including 22 capital projects and four transportation planning projects currently. Washington County also has permanent, dedicated, local funding sources for transportation projects, including property tax levies and system development charges, which will help implement the projects proposed in the design plan.

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 page 11 for criteria relevant to prioritizing project location) While Washington County has long known of the active transportation deficiencies along SW 170th Avenue and SW Merlo Road, additional insight was provided in 2012 through the Washington County Bicycle and Pedestrian Prioritization Project, funded in part by a grant from the U.S. Department of Energy. This project 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 portions of SW 170th Avenue and SW Merlo Road featured in this project nomination scored within the top 30 out of hundreds of roadway segments lacking sidewalks or bike lanes countywide. The county is also pursuing this project because filling sidewalk and bikeway gaps is a key recommendation emerging from the Aloha-Reedville Study and Livable Community Plan (funded by grants from Metro and the U.S. departments of Transportation and Housing and Urban Development). Finally, the location is poised for additional residential and employment growth due to underutilized properties in medium-density residential zones, and due to anticipated major growth at corporate properties in the corridor.

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). The project corridor connects the eastern portion of Aloha town center with the Elmonica and Merlo station communities as defined in the Metro 2040 Growth Concept. All three centers are seeing significant residential infill development and continued commercial activity. The corridor also includes Beaver Acres Elementary School (with 869 students enrolled and 66.5% eligible for the National School Lunch Program in 2011-2012), Merlo Station Community School (an alternative high school), Merlo Station Athletic Fields, 219-acre Tualatin Hills Nature Park, a retail cluster at TV Highway and 170th Avenue, Costco wholesale store on Jenkins Road, and the western edge of Nike World Campus. Due to a disconnected local street network to the west and the large nature park to the east, very few alternate routes are available to access these destinations. Improvements to the corridor would greatly increase the safety and comfort of reaching corridor destinations and transit stops on foot, bicycle or mobility device.
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). The most serious safety concern in the project corridor is the lack of standard sidewalks, bike lanes and roadway

shoulders on SW 170th Avenue between Merlo Road and Alexander Street. A narrow asphalt path on the west side of the road provides a minimal facility for pedestrians. On the east side of the road, along the Tualatin Hills Nature Park frontage, people have worn a demand path into the grass and dirt. Park users have been observed darting across the roadway between the Cedar Grove Trail and SW Johnson Street. Cyclists, if they are not avoiding the road altogether, either share the asphalt path or "take the lane" on a through truck route with a 40 mph posted speed and an observed 44 mph 85th percentile speed. People using mobility devices have even fewer options and may not be able to pass certain pinch points such as the Beaverton Creek bridge. The remainder of the project corridor on SW 170th Avenue and SW Merlo Road consists primarily of three-lane roadway profiles with curb-tight sidewalks and no bikeway facilities. This presents cyclists with an awkward choice between taking the lane or riding on the sidewalk. Metro's recent "State of Safety" report finds arterial roadways comprise 59% of the region's serious crashes, 67% of serious pedestrian crashes, and 52% of serious bike crashes, while accounting for only 40% of vehicle travel. Arterials have the highest serious crash rate per road mile and per VMT. The project will address these safety issues by proposing several design solutions that explore standard and enhanced walkway and bikeway facilities, potentially including cycle tracks, buffered bike lanes, separated sidewalks, enhanced crosswalks, and reallocation of existing roadway space.

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). The neighborhood along the west side of the project corridor, part of the unincorporated Aloha area, is home to "significantly above average" concentrations of low income, non-White, low English proficiency and youth populations. Beaver Acres Elementary School, which serves a majority of the corridor, has a 66.5% eligibility rate for the National School Lunch Program. Due to the street connectivity issues mentioned earlier, these transportation-disadvantaged populations are forced to travel along substandard arterial roadways to reach critical destinations including the elementary school, light rail and bus stops, and grocery stores including CostCo and Manila Market. For those who do not have access to a vehicle, this project will propose design solutions that drastically improve safety, mobility and accessibility for people walking, bicycling or using mobility devices along SW 170th Avenue and SW Merlo Road.

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. 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 active transportation and safety are top concerns 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? SW 170th Avenue from Farmington Road to Merlo Road, and SW Merlo Road / 158th Avenue from 170th Avenue to Cornell Road is a county Through Truck Route that feeds into the Bethany/Cornell interchange on Sunset Highway (US 26). Trucks as a percentage of total volume range from 5% on SW 170th Avenue to 11% on SW Merlo Road, equating to approximately 750 to 1,000 daily trucks. Observed 85th percentile speed on SW 170th Avenue is 44 mph. This data is further evidence that a design solution is needed to safely separate pedestrians and bicyclists from freight traffic in the project corridor. The project will carefully evaluate the implications of freight traffic - including truck turning movements - during the development of design alternatives. Other vehicular traffic is also a concern, with nearly 16,000 average daily traffic (ADT) at the SW 170th Avenue bridge over Beaverton Creek; over 9,000 ADT on SW Merlo Road near the MAX line; and about 18,000 daily entering vehicles at the intersection of the two roads.
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). The project corridor is a last mile connection in the truest sense. SW 170th Avenue and SW Merlo Road are important last mile connections from the Elmonica and Merlo MAX stations southward to residential areas in Aloha and northward to transit-oriented developments and major employment areas including Nike. Elmonica and Merlo MAX stations saw approximately 2,700 and 1,700 average weekday ons/offers in spring 2012, respectively. SW 170th Avenue also serves as a last mile connection from the heavily used #57 bus stop pair at TV Highway and 170th Avenue. These are the 9th and 10th busiest non-transit center bus stops in Washington County with over 400 average weekday ons/offers. In addition, TriMet's Westside Service Enhancements Plan proposes extending the #67 bus from Merlo MAX station southward along SW Merlo Road and SW 170th Avenue, ultimately reaching Progress Ridge and Tigard. In this future scenario, the project corridor would serve both as a transit corridor and as a last mile connection to/from new and existing bus stops and MAX stations. But under current conditions, the pedestrian/bicycle deficiencies along SW 170th Avenue and SW Merlo Road prevent these roads from serving as a genuinely safe connection to and from transit. The project will address this problem through design solutions and will study the implications of a new bus route on the subject roadways.
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). 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 corridor, especially walk and bike trips from residences to Beaver Acres Elementary School, the two MAX light rail stations, Tualatin Hills Nature Park, and Nike World Campus. It is likely that some regular users of the 430-space park-and-ride at Elmonica MAX station may live nearby, and these users may be able to switch to walking or biking to MAX after improvements are constructed. Solutions that improve the user experience may include sidewalks separated from the roadway by a planter strip, buffered bike lanes created through lane restriping, enhanced crosswalks, and a two-way cycle track (all subject to further study in this project). The constructed improvements would leverage other active transportation investments planned in and adjacent to the corridor, including the Waterhouse Trail northward extension from Merlo MAX station to US 26, the Beaverton Creek Trail from Bronson Creek to downtown Beaverton, and a potential neighborhood bikeway on SW Alexander Street. Interlocking active transportation investments such as these can have a multiplying effect, leading to bigger gains in active transportation mode share compared to projects in isolation.

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). The project corridor connects the eastern edge of Aloha town center with the Elmonica and Merlo station communities. Washington County has established transit-oriented medium-density residential zoning within its share of the Elmonica station community. This land use designation has resulted in significant infill development over the past ten years and continuing today, including 291 townhomes completed at Arbor Station and 243 apartments under construction at Steed Creek. Further south in the project corridor, several older apartment communities face SW 170th Avenue near Alexander Street, including the 440-unit Arbor Creek Apartment Homes. Residential development capacity remains west of SW 170th Avenue due to underdeveloped medium-density residential zoned properties in the Aloha town center. Merlo station community has more of an employment focus, and is within walking distance of Nike World Campus, a Costco wholesale store, and TriMet's Merlo train yard. This area could see major job growth if Nike chooses to expand on land it owns on the west edge of its campus. Due to all of the transit-oriented or transit-adjacent activity above, multi-modal travel is expected to increase significantly on both SW 170th Avenue and SW Merlo Road. While immediately adjacent development is required to provide "half street improvements" including a sidewalk, planter strip and bike lane, a more holistic approach is needed to address corridor-wide travel and safety needs.

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. If the project moves forward and is awarded RFFA funds, a new public process will be initiated. This will include the creation of a project advisory committee consisting of representatives from the City of Beaverton, THPRD, TriMet and Beaver Acres Elementary School, as well as adjacent residents, property owners, business owners and other corridor stakeholders. The project will include two open houses - one near the beginning of the process to elicit comments on safety concerns and improvement ideas, and one near the end to present and get feedback on draft design concepts. Outreach to underrepresented communities will continue throughout the project.

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. Project management at the county level would be funded through the county's general transportation planning fund. Funds for implementing the project(s) proposed in the final document may come from a variety of available sources. The county's Major Streets Transportation Improvement Program (MSTIP) - a permanent property tax levy that provides about \$35 million in dedicated funds annually for arterial/collector improvement needs - goes through a new project selection process approximately every five years, and will do so next in 2017 or 2018. SW 170th Avenue was a strong candidate for the current round of MSTIP funding, but the WCCC ultimately chose other projects. Nevertheless, SW 170th Avenue will very likely be a candidate for the next round of MSTIP. Most of SW 170th Avenue and SW Merlo Road also are on the Transportation Development Tax (TDT) Project List. TDT is the county's transportation system development charge. Recent residential development in the Elmonica station community has resulted in TDT collection that could potentially be invested in nearby roadways including SW 170th Avenue. As noted earlier, the project will integrate well with other proposed active transportation projects nearby, including the Beaverton Creek Trail, Waterhouse Trail and Alexander Street Bikeway.
3. Describe how the project may help reduce the need for road and highway expansion. While SW Merlo Road and a portion of SW 170th Avenue are designated as ultimate four- or five- lane roadways in the Washington County Transportation System Plan (TSP), one outcome of this project will be phasing options that include constructing pedestrian/bicycle improvements first. In this case, it is foreseeable that significant improvements to active transportation infrastructure in the project corridor could reduce or stabilize vehicle travel demand and reduce or delay the need to add vehicle lanes. This effect could potentially spill beyond the immediate project corridor as well. Facilitating safer and more convenient access to MAX stations may convert some east-west automobile trips to transit. The project will also investigate alternative roadway design concepts, including a restriping "road diet" for the existing three-lane segments, and a limited left turn lane / access management concept for the

ultimate four-lane profile proposed in the TSP. The latter concept would reduce the impervious footprint of any future roadway expansion.

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) The proposed project responds to needs identified in existing studies and plans that were developed with considerable public involvement, including the Aloha-Reedville Study and Livable Community Plan and the Washington County Bicycle Pedestrian Prioritization Project. The county public involvement process seeks out and engages affected community members, providing an opportunity for people to participate in decisions about proposed activities that may 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. Washington County staff have reviewed priority projects from existing plans and studies to develop RFFA project nominations. Staff considered benefits and impacts to underserved populations along with other priority criteria to help select projects for nomination.
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. Washington County coordinates with its regional partners through regular phone and e-mail contact and more formally through monthly WCCC and WCCC TAC meetings. These committees include elected officials and technical staff, respectively, from jurisdictions in the county. For this project, key partners include the City of Beaverton, Tualatin Hills Park and Recreation District (THPRD) and TriMet. All three entities are represented on the WCCC and WCCC TAC. Leading up to this year's RFFA process, Washington County and its partners shared anticipated project nominations at WCCC and WCCC TAC meetings. Both committees will continue to discuss and help advance those RFFA project nominations that are deemed appropriate to move forward. For this project, staff from the City of Beaverton, THPRD and TriMet will serve on a project advisory committee along with other corridor stakeholders and members of the public.