Active Transportation & Complete Streets Projects

Name of Project: Beaverton Creek Trail: Westside Trail – Hocken Avenue

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

Project application

The project application provides in depth process, location and project definition details and serves as the nomination form for project funding consideration. **Project applications should be kept to 12 pages total per project.** The application form is available electronically at: http://www.oregonmetro.gov/rffa. Please complete the following:

Project Definition

Project Description

- Facility or area: street(s), intersection(s), path or area. **Beaverton Creek Trail**
- Beginning facility or milepost. **Westside Trail**
- Ending facility or milepost. **Hocken Avenue**
- Provide a brief description of the project elements.
  The project will include final engineering, permitting and construction of a 1.5-mile long, 12-foot wide regional trail; and will consist of pervious and/or impervious paving, bridges/boardwalks, lighting, road right-of-way improvements, environmental mitigation and bicycle/pedestrian amenities and site furnishings.
- City (ies). **Beaverton**
- County(ies). **Washington**

Base project information

- Corresponding RTP project number(s) for the nominated project. **10811**
- Attach a completed Public Engagement and Non-discrimination checklist (Appendix A).
- 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).
  Currently only on-street routes exist in the project corridor for bicycles and pedestrians. These routes are undesignated, provide out-of-direction connections and create conflicts between motorists and bicycles/pedestrians. These routes may also be inaccessible and/or require extra time for people to reach their destinations. The purpose of this project is to complete a 1.5-mile long section of the Beaverton Creek Trail in order to provide an east-west off-street transportation alternative that will:

1) **Serve identified environmental justice areas such as low-income, minority and youth populations ;**
2) **Improve safety for bicyclists, pedestrians and motorists along arterial and collector streets;**
3) **Serve and improve access to employment and commercial areas and essential public services, such as the Downtown Beaverton Regional Center, Cedar Hills Crossing and the Tektronix and Nike campuses;**
4) **Complete a gap in the off-street transportation network by connecting to existing sections of regional trails and multi-use paths, such as the Westside Trail and Waterhouse Trail;**
5) **Improve user experience by providing design elements such as lighting, furnishings and appropriate trail width in anticipated high use areas;**
6) **Improve access to transit services including the Beaverton Creek, Millikan Way, Merlo Road/158th Avenue and Beaverton Central light rail stops and bus service along Hocken Avenue, Millikan Way, 153rd Avenue and Cedar Hills Boulevard;**
7) **Reinforce public outreach efforts undertaken during the master planning and preliminary engineering phases that will begin in early 2017;**
8) **Build upon other public investment undertaken by THPRD, TriMet and the City of Beaverton within and adjacent to the project corridor, including completion of two off-street trails, one on-street trail/multi-use path and safety/access improvements at transit stops, as well as the PD/PE phase of this project (funded by the 2013 RFFA process; and**
9) **Reduce auto-trips generated by providing a pedestrian/bicycle transportation alternative that connects the community.**

- Attach a completed Active Transportation Design checklist (Appendix C).

- Description of post implementation measurement of project effectiveness (Metro staff is available to help design measurement methodologies for post-construction project criteria performance).
  THPRD anticipates 70,000 to 90,000 users per year once the project is completed. This is based on actual trail counts along THPRD's Fanno Creek Trail between Denney and Scholl's Ferry Roads, which is a stretch of regional trail sharing similarities with the proposed BCT (length, proximity to transit services and proximity to employment and commercial areas). As part of its trail management program, THPRD uses electronic trail counters to gauge the number of people using its trails on a daily, weekly, monthly and yearly basis. This data allows THPRD to identify trends in existing trail use and project future trends as gaps in the trail system are completed. Upon completion of this project, trail counters will be located at each end of the project corridor to track trail usage. Each year, THPRD also uses volunteers to administer trail user surveys and take trail counts at specific locations at specific times. The intent is to better understand how its trails are being used (e.g., commuter, recreation or short trip destination). At its completion, this project will be incorporated into THPRD's trail management program and the trail use monitoring process,

Project Cost and Funding Request Summary

- Attach a completed Cost Methodology workbook (Appendix E) or alternative cost methodology. Describe how the project cost estimate was determined, including details on project readiness and ability for project funding to be obligated within the 2019-21 timeframe. Reference availability of local match funds, status of project development relative to the requirements of federal-aid projects, and indicators of political and community support

  The project cost estimate is based on current understanding of the project corridor and anticipated project elements derived from recently completed THPRD trail projects. This information was entered into the Cost Methodology Workbook (Appendix E) to determine the estimated project cost. The cost estimate includes primarily construction costs with some funds requested for final engineering. THPRD will be starting Project Development (PD) and Preliminary Engineering (PE) in early 2017 for this project. This work will be completed in mid-2018 in order to facilitate a smooth transition into final engineering in late 2018 and construction in 2019, which will ensure project readiness and obligation of funds within the 2019-2021 timeframe.

  THPRD's match will come from System Development Charges (SDC) and will be obligated in its fiscal year 2018-19 budget, which begins July 1, 2018. This will ensure local funds are obligated and available for the project during the 2019-21 timeframe. In addition to THPRD's match, Washington County has also pledged funds to this project. Those funds will be obligated and available through THPRD's budget during the same 2018-19 fiscal year. In addition to this financial support, the project also has support from a number of interested groups and individuals, including Washington County, City of Beaverton, TriMet, Nike, Providence Health Services and residents of THPRD's service area (Letters of support are attached). In addition to its support for the project, the City of Beaverton will also be providing technical support during the PD/PE phase, as well as during final engineering and construction and will also be a standing member of THPRD's internal design team.

- Total project cost
  (Include and describe any cost elements beyond those funded by the request + match):
  Total Project Cost I = $5,758,079
  - **Non-RFFA Project Costs = $1,141,564 (for PD, PE and ROW beginning in early 2017)**
  - **RFFA Project Cost = $4,616,515**

- RFFA funding request by project phase:
  (e.g. Project Development, P.E., Environmental, ROW acquisition, Construction)
  RFFA Funding Request = $3,892,399 or 84.31% of the estimated project cost
  - **PD - $0**
  - **PE - $278,306**
  - **Environmental - $311,003**
  - **ROW - $0**
  - **Construction - $3,303,090**

- Local match or other funds
  (minimum match = 10.27% of funds requested + match):
  Local Match = $724,116 or 15.69% of the project cost
  - **THPRD SDC - $474,116**
  - **Washington County - $250,000**

Map of project area

- Provide a map of the project consistent with GIS shapefile standards found in Appendix B

Project sponsor agency

- Contact information (phone # & email) for:
- Application lead staff. **Brad Hauschild, 503-614-4007, bhauschild@thprd.org**
- Project Manager (or assigning manager). **Rene Brucker, 503-614-4012, rbrucker@thprd.org**
- Project Engineer (or assigning manager). **To be determined**
- Describe the agencies record in delivering federal aid transportation projects on time and budget or whether the lead agency has failed to deliver a federal aid transportation project and if so, why.
  THPRD has led multiple federally funded projects and has completed them successfully on-time and on-budget. From 2006-2009, THPRD managed the Beaverton Powerline (Westside) Trail project, which designed and constructed 2-miles of off-street, multi-use trail. Total project cost was $1,864,338 and included $1,030,500 in federal funds. From April 2011 to October 2012, THPRD managed an alternatives analysis planning study (PD) to determine a feasible crossing of the Fanno Creek Trail at SW Hall Boulevard in Beaverton. The budget for this project was $400,000 and included $359,000 in federal funds. The project was completed under budget at a total cost of $357,222 and included $320,535 in federal funds.

  Since February 2012 THPRD has managed the Westside Trail Segment 18 project, which will construct 1-mile of off-street, multi-use trail. Design and engineering was completed in July 2015, with construction beginning in June 2016. The budget for this project is $2,674,000 and includes $2,399,337 in federal funds. Total project cost is estimated to be $3,200,000, as a result of higher than expected construction bids. No additional federal funds were programmed for the project. Construction is currently on schedule and is expected to be completed by year's end 2016.

  In August 2016, THPRD entered into an intergovernmental agreement (IGA) with ODOT for PD/PE of this Beaverton Creek Trail (BCT) project and is currently work with ODOT to complete a scope of work. The solicitation process for consultant services is expected to begin this fall with PD beginning in early 2017. PE work will be completed by summer 2018. The budget for this project is $891,564 and includes $800,000 in federal funds.

- Describe how the agency currently has the technical, administrative and budget capacity to deliver the project, with an emphasis on accounting for the process and requirements of federal aid transportation projects.
  THPRD has the staff resources and funding capacity to ensure the proposed BCT can be completed successfully and on time. The proposed project manager, Rene Bruckner, is currently

managing the PD/PE phases on this BCT project and is partnered with Brad Hauschild, who has worked on current and past federally funded projects. Both are familiar with the processes needed to ensure successful project completion. The City of Beaverton has also pledged to provide technical support during the project's duration, including PD/PE, and will be part of THPRD's design team. The City's support will include transportation planning and engineering staff familiar with the federally funded project processes.

THPRD has also incorporated its local match requirement (approximately $474,116) into its budgeting process to ensure those funds will be available (with a successful funding request) in 2019 through its System Development Charge (SDC) fund. Additionally, THPRD is working on land acquisition simultaneously with PD/PE to secure all ROW needs prior to beginning final engineering in 2018.

Highest priority criteria

1. What communities will the proposed project serve? What are the estimated totals of low-income, low-English proficiency, non-white, elderly and young, and persons with disabilities populations that will benefit from this project, and how will they benefit?

   Metro's environmental justice equity maps show the project corridor contains significantly above average populations of minorities, low-income and youth populations. Low English-speaking proficiency, people with disabilities and elderly populations are also present but not considered to be above average. As an off-street transportation option, the proposed BCT will improve connections for these typically underserved populations by creating a safer, more direct route than currently exists. This east-west route will provide direct access to two TriMet light rail stations (Beaverton Creek and Millikan Way) and improve access to two additional light rail stations located at each end of the project corridor (Merlo Road/158th Avenue and Beaverton Central). Additionally, the proposed BCT will improved access to essential services, employment and commercial areas, recreation and natural areas within and adjacent to the project corridor.

   Based on 2016 data provided by the City of Beaverton, which analyzed a 5.8-square mile area around the proposed BCT alignment, approximately 29,500 people in 12,000 households live within one mile of the project corridor. This number is expected to be 31,500 people in 12,800 households by 2021. Key demographic information for 2016 includes:

   - **Approximately 39%, or 11,500 people, are considered to be minority and includes concentrations of African-Americans (10%), Asians (29%) or Other (43%).**
   - **Approximately 30%, or 8,700 people, are considered to have Hispanic origins.**
   - **Approximately 24%, or 7,100 people, are under the age of 18.**
   - **Approximately 49%, or 5,900 households, are considered to be low-income.**

2. What safety problem does the proposed project address in an area(s) with higher-than-average levels of fatal and severe crashes? How does the proposed project make people feel safer in an area with high walking and bicycling demand by removing vehicle conflicts?

   The proposed BCT will provide an off-street transportation option that provides direct connections to transit services, employment and commercial centers, public services, recreation and natural areas that currently do not exist in the project corridor. This project addresses the fact that there is no direct east-west route for bicycles and pedestrians travelling from the Downtown Beaverton Regional Center and Cedar Hills Crossing area to the Westside Trail and Tualatin Hills Nature Park area and transit. Currently only on-street routes exist, generally Millikan Way or Jenkins Road, and do not offer bike lanes and/or sidewalks within the project corridor. Being on-street routes, there is a higher likelihood of conflicts and crash incidents between bicyclists/pedestrians and vehicles because of street intersections and private driveways. High traffic volumes are also of concern along these on-street routes, which include Murray Boulevard (26,000-29,000 vehicles per day), Jenkins Road (19,000-22,000), Millikan Way (8,00-10,000), Hocken Avenue (8,000-10,000) and 153rd Avenue (8,000-9,000), Also worth noting are TV Highway (34,000-40,000) and Cedar Hills Boulevard (24,000-26,000), which are located within a half-mile of the project corridor.

   According to Metro's crash data map for bicycles and pedestrians, the project corridor is generally free of weighted crash incidents - except at the project corridor's east end where crash data appears (Cedar Hills area). However, it does not appear to be considered a "hotspot" for crash incidents. It should be noted that potential conflicts are likely to increase as the project corridor continues to develop with increased density, including the expansion of the Nike World Headquarters within the project corridor. This project can proactively minimize these conflicts as the proposed BCT will offer an off-street alternative to those using the current on-street routes. As an off-street trail, conflicts with vehicles will be greatly reduced as there are only three street crossings proposed with this project, two will be signalized midblock crossings and one will be at an existing controlled street intersection. None of these streets are considered heavily-travelled or arterial-type facilities.

3. What priority destinations will the proposed project will serve? How will the proposed project improve access to these destinations?

   The proposed BCT will improve access to a number of priority destinations by providing a more direct, east-west off-street transportation alternative. This project will create a pedestrian friendly option to employment areas, such as Nike, Tektronix and Reser's Fine Foods, mixed-use areas, such as Cedar Hills Crossing and the Beaverton Round, and essential public services, such Beaverton City Hall and Providence Health Services. Based on Metro pedestrian corridor maps, the proposed BCT is generally bordered by four pedestrian corridors:

#4 – Aloha to Beaverton (TV Highway)
#9 – Tanasbourne to Beaverton (Walker Road)
#10 – Murray/Scholls to Cedar Mill (Murray Boulevard)
#14 – Cedar Hills Boulevard.

While these corridors generally have fewer pedestrian/bicyclist-vehicle crashes, good sidewalk connections and better access to people and places, they are not pedestrian friendly due to higher auto speed, volume and lanes; limited tree canopy, few signalized street crossings, and poor street connectivity.

Based on Metro pedestrian district maps, the project will help improve access to four districts located within or adjacent to the project corridor and include:

#10 – Merlo Road
#11 – Beaverton Creek
#12 – Millikan Way,
#14 – Beaverton

While these districts have lower auto speed, volume and lanes, fewer pedestrian/bicyclist-vehicle crashes, good sidewalk completion and better access to people and places, they are not pedestrian friendly due to limited tree canopy, few signalized street crossings, and poor street connectivity.

In general, these pedestrian corridors and districts are average in the number of signalized crossings available compared to nearby areas; have higher density than surrounding areas, but moderate density compared to the region; and have high levels of sidewalk completeness compared to nearby areas. The proposed BCT will improve and strengthen existing connections within these pedestrian corridors and districts by providing an off-street travel option that provides direct connection to employment areas, mixed-use centers and essential public services (including transit).

As it relates to the bicycle comfort index, the project corridor is moderate meaning some bicycle facilities exist but they may be substandard or lacking in amenities that promote a safe and comfortable cycling experience (this is lower compared to other areas adjacent to it). However, bicycle connectivity and bikeway density are high compared to adjacent areas, and is comparable to densities found in the region. There is also a high level of cycle zone potential in the project corridor, which is comparable to those found in region.

4. How will the proposed project support the existing and planned housing/employment densities in the project area?

The proposed BCT is located within a high density employment area in west-central Beaverton that includes over 1,700 businesses employing nearly 28,000 people, and includes places like Nike, Tektronix, Reser's Fine Foods, TriMet, Providence Health Services and Cedar Hills Crossing. At the east end of the project corridor, high density residential development can be found on the south side of Millikan Way (less than a quarter mile from the trail corridor) and on the north side of Jenkins Road (less than a half mile from the trail corridor).

With its connection to Hocken Avenue, the project provides access to central Beaverton where, in 2013, the city completed a visioning process for what its downtown should be. An outcome of this process was the creation of an urban renewal district at the east edge of the project corridor. Over the next several years, the Downtown Beaverton Regional Center is expected to see increases in residential, commercial, and employment component densities. The proposed BCT will provide an opportunity to act as a catalyst for this re-development effort being undertaken by the City of Beaverton.

Higher priority criteria

5. How does the proposed project complete a gap or improve a deficiency in the Regional Active Transportation network? (See Appendix 1 of the Regional ATP: Network Completion, Gaps and Deficiencies).

   The proposed BCT will help improve deficiencies in the Regional Active Transportation network specially addressing the Beaverton Creek Trail (ATP ID# T4). The project also helps address deficiencies because it will provide a bicycle and pedestrian route having direct access to Hocken Avenue (ATP ID# B), Beaverton Creek TC (ATP ID# D11) and Millikan Way TC (ATP ID# D12). The project also improves access to the Merlo Road/158th Avenue TC (ATP ID# D10), Aloha Bicycle/Pedestrian District (ATP ID# D13) and Beaverton Bicycle/Pedestrian District (ATP ID # D14).

6. What design elements of the proposed project will lead to increased use of Active Transportation modes by providing a good user experience/increasing user comfort? What barriers will be eliminated or mitigated?

   The proposed BCT will addresses twelve of the design elements noted in Appendix C, Section D – Off-Street and Trail Facilities:

   - **The proposed BCT will be designed to have a minimum width of 12-feet with 2-foot shoulders. In areas where high bicycle and pedestrian activity is anticipated, such as near transit stops, and site conditions are appropriate additional a trail width of 14-feet may be considered.**
   - **The trail is will be off-street throughout the entire project corridor with a minimum 5-foot separation where located adjacent to Terman Road (west of Schottky Place). However, there is an approximate 500-foot long section along Terman Road, under the Murray Boulevard overpass, that may need to be located adjacent to the roadway without separation due to topography and the overpass supports.**
   - **There are three street crossings anticipated with the project – two mid-block and one at a controlled intersection. All crossings will include signage and striping on street and on trail to make sure bicycles, pedestrians and motorists are aware of the crossing location. One of the mid-block crossings will be located on 153rd Avenue where the light rail track crossing occurs. This crossing will be coordinated with TriMet to ensure appropriate safety measures are in place. The other mid-block crossing will occur at Shannon Place and may warrant a rectangular rapid flashing beacon. The final crossing will occur at the**

intersection of Terman Road and Schottky Place, which is controlled by a stop sign on Schottky Place.

- **All street crossings are located on 2-lane local streets. No 4-lane streets are located along the project corridor.**
- **All three street crossings will include lighting. Lighting will be designed to match existing lighting patterns at each respective crossing.**
- **The proposed BCT will have at least eight access points along its 1.5-mile project length and includes Hocken Avenue, Shannon Place, Millikan Way light rail station, Schottky Place, Terman Road (including Murray Boulevard on/off ramps), Beaverton Creek light rail station, 153rd Avenue and the Westside Trail.**
- **The proposed BCT will include benches with wheelchair rest areas. These are generally located between points of access along the trail and strategically located at points of interest such as interpretive areas, wildlife viewing areas or plazas/gathering spaces.**
- **The project will provide wayfinding standards meeting MUTCD guidelines, including directional signage and trail identification signage. Interpretive signage may also be provided along Beaverton Creek where the opportunity for outdoor education or information presents itself.**
- **Regulatory signage will be provided at street crossings and other areas of high use where conflicts between bicycles and pedestrians may occur. This signage will inform all users that pedestrians have the right of way and bicycles should yield.**
- **Signage and striping will be used to give the proposed BCT priority over local streets and driveways. Because the trail will be off-street there are minimal instances where these types of crossings occur, but signage and striping will promote awareness of the trail for motorists and trail users alike.**

7. How does the proposed project complete a so-called 'last-mile' connection between a transit stop/station and an employment area(s)?

   The proposed BCT will provide direct connection to TriMet's Millikan Way and Beaverton Creek light rail station, both of which also include bus service (Line 62). Both of these transit stops are located near major employment centers, such as Nike and Texkronix. At the east end of the project corridor, the proposed BCT connects to Hocken Avenue and is within one quarter-mile of bus stops (Line 62) in both directions and the Cedar Hills Crossing commercial area. At the west end of the project corridor, the proposed BCT connects to the Westside Trail and is within one quarter mile of the Merlo Road/158th Avenue light rail station (Bus Line 67) and the Reser's Fine Foods facility.

Priority criteria

8. How the public will be engaged relative to the proposed project? Include description of engagement during project development and construction, as well as demand management efforts to increase public awareness and utilization of the project post-construction. (Metro

Regional Travel Options staff is available to help design an effective and appropriate level of education and marketing for your project nomination).

There has been no specific public engagement related to design or construction of the proposed BCT. To date, the only engagement has taken place through development of THPRD's 2015 Trails Functional Plan and its subsequent 2016 5-Year SDC Project List prioritization process (discussed in more detail below in the "Process" section of this application). However, as part of the PD/PE phase of this project (expected to begin in early 2017), an extensive public engagement process will be undertaken. A summary of this engage process is included with Appendix A – Environmental Justice Compliance Checklist. Generally, this process will include identifying community partners and neighborhood interests, small and large scale public meetings, distribution of project information by mail and online, posting of signage and other activities intended to engage the public of all interests, backgrounds, ages and abilities.

9. What additional sources of funding, and the amounts, will be leveraged by an investment of regional flexible funds in the proposed project?

   With a successful application, THPRD will be able to leverage $250,000 from Washington County's Major Street Transportation Improvement Program (MSTIP) Opportunity Fund. These funds will be used to help pay for construction and are in additional to THPRD's local match. A successful application will also build upon $800,000 being used for PD/PE for this project. THPRD was awarded these funds as part of the 2013 RFFA process.

   The proposed BCT will also build upon previous projects to the east and west where federal funds were used to invest in bicycle and pedestrian projects. To the east, the City of Beaverton has made improvements from Hocken Avenue east to the Beaverton Transit Center that includes new streets, bike lanes and sidewalks. The city has also added bike lanes to Lombard Avenue from the Beaverton Transit Center south to Denney Road. Over the next two years the city plans to make additional improvements to Lombard Avenue, as well as along Denny Road east to the Fanno Creek Trail, that enhance on-street portions of the BCT, such as intersection upgrades and wayfinding signage.

   To the west, the proposed BCT will connect to the Westside Trail. Two miles of this trail, formerly the Beaverton Powerline Trail, was completed in 2009 using federal funds. Where it will connect to the proposed BCT, the Westside Trail continues 5-miles southward through Beaverton into Tigard. From this same point, the Westside Trail continues westward less than half a mile to the Merlo Road/158th Avenue light rail station, where it becomes the Waterhouse Trail and heads 5-miles north through Beaverton to the Bethany area of unincorporated Washington County.

10. How will the proposed project provide people with improved options to driving in a congested corridor?

    The proposed BCT will provide a 1.5-mile long off-street travel option for bicyclists and pedestrians that will have direct access to two light rail stations and improved access to

two nearby stations. These connections will offer an alternative for those commuting to and from the project corridor for jobs, services or homes. This will likely help reduce congestion in the Beaverton area along Cedar Hills Boulevard, Jenkins Road, Murray Boulevard and TV Highway, which are the major roadways bordering the project corridor.

The proposed BCT also offers a more direct route to destinations within the project corridor than what currently exists today. Existing on-street routes often take longer to navigate and can be confusing without previous knowledge of the area. As part of the project, wayfinding signage, consistent with THPRD standards established with a Regional Travel Options (RTO) grant from Metro in 2010, will be installed to identify connections along the trail corridor. Appropriate signage and a more direct route to destinations within the project corridor will also help get people out of their automobiles and reduce congestion.

Between Hocken Avenue and Murray Boulevard, the proposed BCT will generally parallel Beaverton Creek offering trail users a connection to natural open space nestled within developed employment centers. Between Murray Boulevard and the Westside Trail, the proposed BCT will be located parallel with the light rail tracks along the Nike Woods natural area. This off-street alternative with connections to nature and open spaces is also likely to increase non-auto trips within the project corridor.

Process

- 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)

  As part of its 2015 Trails Functional Plan process, THPRD utilized an extensive public outreach process that included a citizen advisory committee, community open houses, an online survey and a public hearing with the board of directors. In addition to these formal efforts, comments were accepted by mail, email, online and telephone throughout the year long plan development process. This process helped to identify and prioritize new trail development and existing trail enhancement. The proposed BCT, which includes portions of Segments 3 and 4, is identified as high priority for new trail development in the Trails Function Plan. Furthermore, as part of the development of THPRD's 2016-17 6-Year SDC capital improvements project list additional public outreach occurred to help prioritize funding for development projects. This included an online survey, community open houses and a public hearing with the board of directors. This process reinforced development of the BCT as a high priority for THPRD.

  As part of its outreach process, THPRD heard from its residents that completion of trails that fill gaps should be a priority. As such, THPRD has shifted its focus to completing new trails that offer connections to the existing trail network (rather than completing trails to "nowhere"). The proposed BCT falls into this approach and is why it was selected for funding consideration. As mentioned previously, a project-specific

public outreach process will be undertaken in 2017 as part of the PD/PE phase of this project. This effort will determine project-specific needs as it relates to the trail alignment and connections to specific destinations within the project corridor. A summary of the public engagement process to be used is included with Appendix A.

This project was also selected for funding consideration because it is an east-west corridor, which is lacking in THPRD's service area. Its focus has traditionally been in establishing a north-south "spine" through its service area. This project represents an opportunity to establish an east-west "spine" that will connect to the existing north-south trails (Westside/Waterhouse Trails and Fanno Creek Trail).

In addition to being identified in THPRD's Trails Functional Plan, the Beaverton Creek Trail is also identified in Beaverton's Transportation Plan, Washington County's Transportation Plan and Metro's Trails and Greenspaces Plan and Transportation Plan. All of these plans followed a similar outreach process as THPRD's for the development and approval.

- 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.
  THPRD has started coordinating with the City of Beaverton, Washington County and TriMet for ROW needs adjacent to the light rail tracks and roadways, as well as mid-block crossings. As PD/PE get underway in 2017, more formal coordination will take place with these agencies to determine a feasible trail alignment in those locations where right-of-way is needed.

  At the west end of the project corridor, a small portion of Bonneville Power Administration (BPA) ROW will be needed to make the connection to the Westside Trail. THPRD already has an approved Land Use Agreement for the Westside Trail. The process to amend this agreement will occur in 2017 during the PD/PE phase. Clean Water Services (CWS) is another agency that coordination will likely be needed as portions of the proposed BCT will be located in sensitive areas or water quality facilities. This coordination effort will also occur during the PD/PE phase as a feasible trail alignment is identified.

  THPRD has had successful working relationships with each of these agencies on current and past projects and does not anticipate any issues in coordination on the proposed BCT. The City of Beaverton has also pledged to provide technical support to the project and will be included on THPRD's internal design team once PD/PE gets underway in 2017. It is likely that Washington County will also offer its technical support as the project corridor spans both city and county jurisdiction.

APPENDIX A – ENVIRONMENTAL JUSTICE COMPLIANCE

Public engagement and non-discrimination certification

Regional flexible funds 2019-21

Background and purpose

Use of this checklist is intended to ensure project applicants have offered an adequate opportunity for public engagement, including identifying and engaging historically underrepresented populations. Applications for project implementation are expected to have analyzed the distribution of benefits and burdens for people of color, people with limited English proficiency and people with low income compared to those for other residents.

The completed checklist will aid Metro in its review and evaluation of projects.

Instructions

Applicants must complete this certification, including a summary of non-discriminatory engagement (see Section B), for projects submitted to Metro for consideration for 2019-21 regional flexible funding.

Project sponsors should keep referenced records on file in case of a dispute. Retained records do not have to be submitted unless requested by Metro.

Please forward questions regarding the public involvement checklist to regional flexible funds allocation project manager Dan Kaempff at daniel.kaempff@oregonmetro.gov or 503-813-7559.

1. Checklist

Transportation or service plan development

☒ At the beginning of the agency's transportation or service plan, a public engagement plan was developed to encourage broad-based, early and continuing for public involvement.
***Retained records**: public engagement plan and/or procedures*

❑ At the beginning of the agency's transportation or service plan, a jurisdiction-wide demographic analysis was completed to understand the location of communities of color, limited English proficient and low-income populations, disabled, seniors and youth in order to include them in engagement opportunities.
***Retained records**: summary of or maps illustrating jurisdiction-wide demographic analysis*

☒ Public notices included a statement of non-discrimination (Metro can provide a sample).
***Retained records**: public engagement reports including/or dated copies of notices*

☒ Throughout the process, timely and accessible forums for public input were provided.
***Retained records**: public engagement reports including/or descriptions of opportunities for ongoing engagement, descriptions of opportunities for input at key milestones, public meeting records, online or community survey results*

☒ Throughout the process, appropriate interested and affected groups were identified and contact information was maintained in order to share project information, updates were provided for key decision points, and opportunities to engage and comment were provided.
Retained records*: public engagement reports including/or list of interested and affected parties, dated copies of communications and notices sent, descriptions of efforts to engage the public, including strategies used to attract interest and obtain initial input, summary of key findings; for announcements sent by mail or email, documented number of persons/groups on mailing list*

❑ Throughout the process, focused efforts were made to engage underrepresented populations such as communities of color, limited English proficient and low-income populations, disabled, seniors and youth. Meetings or events were held in accessible locations with access to transit. Language assistance was provided, as needed, which may include translation of key materials, using a telephone language line service to respond to questions or take input in different languages and providing interpretation at meetings or events.
Retained records*: public engagement reports including/or list of community organizations and/or diverse community members with whom coordination occurred; description of language assistance resources and how they were used, dated copies of communications and notices, copies of translated materials, summary of key findings*

☒ Public comments were considered throughout the process, and comments received on the staff recommendation were compiled, summarized and responded to, as appropriate.
Retained records*: public engagement reports or staff reports including/or summary of comments, key findings and final staff recommendation, including changes made to reflect public comments*

☒ Adequate notification was provided regarding final adoption of the plan or program, at least 15 days in advance of adoption, if feasible, and follow-up notice was distributed prior to the adoption to provide more detailed information. Notice included information and instructions for how to testify, if applicable.
Retained records*: public engagement reports or final staff reports including/or dated copies of the notices; for announcements sent by mail or email document number of persons/groups on mailing list*

Project development

This part of the checklist is provided in past tense for applications for project implementation funding. Parenthetical notes in future tense are provided for applicants that have not completed project development to attest to ongoing and future activities.

☒ At the beginning of project development, a public engagement plan was (is budgeted to be) developed to encourage broad-based, early and continuing opportunity for public involvement.
Retained records*: public engagement plan and/or procedures*

☒ At the beginning of project development, a demographic analysis was (is budgeted to be) completed for the area potentially affected by the project to understand the location of

communities of color, limited English proficient and low-income populations, disabled, seniors and youth in order to include them in engagement opportunities.
Retained records*: summary of or maps illustrating demographic analysis*

☒ Throughout project development, project initiation and requests for input were (will be) sent at least 15 days in advance of the project start, engagement activity or input opportunity.
Retained records*: public engagement reports including/or dated copies of notices*

☒ Throughout project development, public notices included (will include) a statement of non-discrimination.
Retained records*: public engagement reports including/or dated copies of notices*

☒ Throughout project development, timely and accessible forums for public input were (will be) provided.
Retained records*: public engagement reports including/or descriptions of opportunities for ongoing engagement, descriptions of opportunities for input at key milestones, public meeting records, online or community survey results*

☒ Throughout project development, appropriate interested and affected groups were (will be) identified and contact information was (will be) maintained in order to share project information, updates were (will be) provided for key decision points, and opportunities to engage and comment were (will be) provided.
Retained records*: public engagement reports including/or list of interested and affected parties, dated copies of communications and notices sent, descriptions of efforts to engage the public, including strategies used to attract interest and obtain initial input, summary of key findings; for announcements sent by mail or email, documented number of persons/groups on mailing list*

☒ Throughout and with an analysis at the end of project development, consideration was (will be) given to the benefits and burdens of the project for people of color, people with limited English proficiency and people with low income compared to those for other residents, as identified through engagement activities.
Retained records*: staff reports including/or description of identified populations and information about benefits and burdens of the project for them in relation to other residents;*

❑ There was a finding of inequitable distribution of benefits and burdens for people of color, people with limited English proficiency and people with low income
Submitted records: for a finding of inequitable distribution of benefits and burdens, attach analysis, finding and documentation justifying the project and showing there is no less discriminatory alternative.

☒ Public comments were (will be) considered throughout project development, and comments received on the staff recommendation were (will be) compiled, summarized and responded to, as appropriate.

***Retained records**: public engagement reports or staff reports including/or summary of comments, key findings and final staff recommendation, including changes made to reflect public comments*

☒ Adequate notification was (will be) provided regarding final adoption of the plan, at least 15 days in advance of adoption, if feasible, and follow-up notice was distributed prior to the adoption to provide more detailed information. Notice included (will include) information and instructions for how to testify, if applicable.
***Retained records**: public engagement reports or final staff reports including/or dated copies of the notices; for announcements sent by mail or email document number of persons/groups on mailing list*

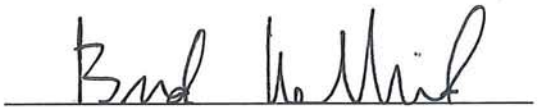
2. Summary of non-discriminatory engagement

Attach a summary (1-2 pages) of the key elements of the public engagement process, including outreach to communities of color, limited English and low-income populations, for this project or transportation or service plan.

3. Certification statement

Tualatin Hills Park & Recreation District (agency) certifies adherence to engagement and non-discrimination procedures developed to enhance public participation and comply with federal civil rights guidance.

As attested by:



(signature)

Brad Hauschild, Urban Planner
(name and title)

8/19/16
(date)

APPENDIX C – ACTIVE TRANSPORTATION DESIGN GUIDELINES

The following checklist items are street design elements that are appropriate and desirable in regional mobility corridors. Trail projects should use the *Off-Street and Trail Facilities* checklist (item D) at the end of this list. All other projects should use items A – C.

Use of federal transportation funds on separated pathways are intended for projects that primarily serve a transportation function. Pathways for recreation are not eligible for federal transportation funding through the regional flexible fund process. Federal funds are available from other sources for recreational trails. To allow for comfortable mixing of persons on foot, bicycle and mobility devices at volumes expected to be a priority for funding in the metropolitan region, a 12-foot hard surface with shoulders is a base design width acceptable to FHWA Oregon. Exceptions to this width for limited segments is acceptable to respond to surrounding context, with widths less than 10-feet subject to a design exception process. Wider surfaces are desirable in high volume locations.

A. Pedestrian Project design elements – check all that apply
Design elements emphasize separating pedestrians from auto traffic with buffers, increasing the visibility of pedestrians, especially when crossing roadways, and make it easier and more comfortable for people walking to access destinations.

For every element checked describe existing conditions and proposed features:

- ❑ Add sidewalks or improve vertical delineation of pedestrian right-of-way (i.e. missing curb)
- ❑ Add sidewalk width and/or buffer for a total width of 17 feet (recommended), 10 feet minimum; buffer may be provided by parking on streets with higher traffic volumes and speeds (over 35 mph, ADT over 6,000)
- ❑ Add sidewalk width and/or buffer for a total width of 10 feet (recommended), 8 feet minimum on streets with lower traffic volumes and speeds (ADT less than 6,000 and 30 mph or less); Buffer may be provided by parking, protected bike lane, furnishing zone, street trees/planting strip
- ❑ Sidewalk clear zone of 6 feet or more
- ❑ Remove obstructions from the primary pedestrian-way or add missing curb ramps
- ❑ Add pedestrian crossing at appropriate location
- ❑ Re-open closed crosswalks
- ❑ Raised pedestrian refuge median or raised crossing, required if project is on a roadway with 4 or more lanes
- ❑ Reduced pedestrian crossing distance
- ❑ Narrowed travel lanes
- ❑ Reduced corner radii (e.g. truck apron)
- ❑ Curb extensions
- ❑ Rectangular Rapid Flashing Beacon (RRFB) or pedestrian signal
- ❑ Lighting, especially at crosswalks – pedestrian scale (10-15 feet), preferably poised over sidewalk
- ❑ Add countdown heads at signals
- ❑ Shorten signal cycle lengths of 90 seconds or less – pedestrian friendly signal timing, lead pedestrian intervals
- ❑ Access management: minimize number and spacing of driveways
- ❑ Arterial traffic calming: Textured intersections, gateway treatments, raised medians, road diets, roundabouts
- ❑ Wayfinding
- ❑ Benches

- ❑ Transit stop amenities or bus stop pads
- ❑ Add crosswalk at transit stop
- ❑ Pedestrian priority street treatment (e.g. woonerf) on very low traffic/low volume street

B. Bicycle Projects design elements

Design elements emphasize separating bicycle and auto traffic, increasing visibility of bicyclists, making it easier and more comfortable for people traveling by bicycle to access routes and destinations.

For every element checked describe existing conditions and proposed features:

- ❑ On streets with higher traffic volumes and speeds (over 35 mph, ADT over 6,000): Buffered bicycle lane, 6 foot bike lane, 3 foot buffer; Protected bikeway with physical separation (e.g. planters, parking); Raised bikeway
- ❑ Separated multi-use trail parallel to roadway
- ❑ Bike priority treatments at intersections and crossings (i.e. advance stop lines, bike boxes, signals, high-intensity activated crosswalk (HAWK) signals, user-activated signals
- ❑ Medians and crossing treatments
- ❑ Wayfinding, street markings
- ❑ Lighting at intersections
- ❑ Bicycle boulevard treatment where ADT is less than 3,000 per day: Buffered bicycle lane, 6 foot bike lane, 3 foot buffer

C. Other Complete Street Features

For every element checked describe existing conditions and proposed features:

- ❑ Turning radius improvements (freight route only)
- ❑ Gateway feature
- ❑ Street trees
- ❑ ITS elements (i.e. signal timing and speed detection)

D. Off-Street and Trail Facilities

For every element checked describe existing conditions and proposed features:

- ☒ Minimum 12' trail width (plus 2' graded area each side)
- ☒ Always maintains minimum 5' separation when adjacent to street **or** never adjacent to street
- ❑ All on-street segments include improvements beyond bike lanes (item C, above) **or** no on-street segments
- ☒ All street crossings include an appropriate high-visibility crosswalk treatment
- ☒ All 4-lane street crossings include appropriate refuge island **or** no 4-lane street crossings
- ☒ Frequent access points (generally every ¼-mile)
- ☒ All crosswalks and underpasses include lighting
- ❑ Trail lighting throughout
- ❑ Trailhead improvements
- ☒ Rest areas with benches and wheelchair spaces
- ☒ Wayfinding or interpretive signage
- ☒ Signs regulating bike/pedestrian interaction (e.g. bikes yield to pedestrians)
- ☒ Trail priority at all local street/driveway crossings

Instructions for Using This Workbook

Password for locking/unlocking this sheet is 'metro'. All other sheets have no password.

Purpose:

This workbook provides a methodology for planning-level cost estimating for transportation infrastructure projects. Alternative methodology of similar or better detail is acceptable.

Where agencies propose cost methodology significantly different from this methodology, documentation should be provided. This includes unit costs which vary significantly from that specified here. Consistency of such costs between projects is desirable in that it allows for equitable comparison of projects.

Instructions:

This workbook or a comparable cost estimate must be completed for each project submitted.

Complete the project information below and in Sheets 1 through 5. Worksheets are accessed by tabs at the bottom of the window. Sheet 6 summarizes total estimated cost of the project.

Input cells are shaded light blue, and should be filled in by the user (where applicable). Other cells are locked and should not be changed.

<sample> ← Appearance of input cells used throughout this workbook.

Locked cells can be unlocked by selecting Review > Unprotect Sheet. This is not recommended in most cases. Password is 'metro'.

Questions about completing the workbook should be directed to Anthony Buczek, Transportation Engineer with Metro. Feedback and comments about this workbook are encouraged, and will help to improve it for future updates.

phone: 503-797-1674 e-mail: anthony.buczek@oregonmetro.gov

These cells are shaded light blue, which means they should be filled in.

Project Information:

Funding year:	PE	2019
	ROW	2020
	Const	2021
Project name:		Beaverton Creek Trail: Westside Trail - Hocken Avenue
Corridor and endpoints:		Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)
Project description:		Construct approximately 1.5-miles of off-street multi-use path / regional trail.
Local plan project #:		THPRD Trails Functional Plan Tier I (High) Priority - Beaverton Creek Trail #3 & #4
RTP project #:		10811
Submitting agency:		Tualatin Hills Park & Recreation District (THPRD)
Agency contact:		Brad Hauschild
Contact phone:		503-629-6305
Contact e-mail:		bhauschild@thprd.org

Proceed to Sheet 1 when the above is completed.

Unit costs year: 2007

Escalation rate	Used in Calculations	Default	Override
2007 - 2008	100.38%	100.38%	
2008 - 2009	84.72%	84.72%	
2009 - 2010	96.78%	96.78%	
2010 - 2011	101.04%	101.04%	
2011 - 2012	105.05%	105.05%	
2012 - 2013	97.86%	97.86%	
2013 - 2014	100.79%	100.79%	
2014 - 2015	100.71%	100.71%	
2015 - 2016	104.00%	104.00%	
2016 - 2017	104.00%	104.00%	
2017 - 2018	104.00%	104.00%	
2018 - 2019	104.00%	104.00%	
2019 - 2020	104.00%	104.00%	
2020 - 2021	104.00%	104.00%	

Do not override these unless better escalation factors are identified.
2007 - 2015 based on FHWA NHCCI
2016 - 2021 based on ODOT inflation assumptions

Escalation Lookup Table

v From \ To >	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007	100.00%	100.38%	85.04%	82.30%	83.16%	87.36%	85.49%	86.16%	86.78%	90.25%	93.86%	97.61%	#####	#####	#####
2008	---	100.00%	84.72%	81.99%	82.84%	87.03%	85.17%	85.84%	86.45%	89.91%	93.50%	97.24%	#####	#####	#####
2009	---	---	100.00%	96.78%	97.79%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
2010	---	---	---	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
2011	---	---	---	---	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
2012	---	---	---	---	---	#####	97.86%	98.63%	99.33%	#####	#####	#####	#####	#####	#####
2013	---	---	---	---	---	---	#####	#####	#####	#####	#####	#####	#####	#####	#####
2014	---	---	---	---	---	---	---	#####	#####	#####	#####	#####	#####	#####	#####
2015	---	---	---	---	---	---	---	---	#####	#####	#####	#####	#####	#####	#####
2016	---	---	---	---	---	---	---	---	---	#####	#####	#####	#####	#####	#####
2017	---	---	---	---	---	---	---	---	---	---	#####	#####	#####	#####	#####
2018	---	---	---	---	---	---	---	---	---	---	---	#####	#####	#####	#####
2019	---	---	---	---	---	---	---	---	---	---	---	---	#####	#####	#####
2020	---	---	---	---	---	---	---	---	---	---	---	---	---	#####	#####
2021	---	---	---	---	---	---	---	---	---	---	---	---	---	---	#####

Workbook revision date: June 27, 2016 (metro)

1. Construction

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Sections A through E must be completed. Complete Sections F and/or G if applicable.

Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Projects will not include all elements below, but most will include elements from multiple sections.

Tualatin Hills Park & Recreation District (THPRD)

Enter quantities only for elements actually included in your project.

1.A - Road Construction, Reconstruction, or Resurfacing

Item	Unit	Quantity	Unit cost	Total	Description
Road - new/reconstruct (incl. curb, sidewalk, drainage)	SF	0.0	$15	$0	Specify SF of pavement, not including sidewalks and curbs (these are assumed in unit cost).
Road - resurface	SF	0.0	$4	$0	
▫ Specify length and typical width of project					For documentation of assumptions used.
Section 1.A Subtotal				**$0**	

1.B - Addition of Roadway Elements to Existing Roadway

Item	Unit	Quantity	Unit cost	Total	Description
Minor widening, no curbs	SF	0.0	$15	$0	Used for bike lanes, other minor widening. Does not include curbs, sidewalks, or drainage.
Remove pavement	SF	6,500.0	$0.75	$4,875	
Curb only	LF	800.0	$16	$12,800	For new curb installation. Does not include drainage.
Remove curb	LF	150.0	$6	$900	
Median in existing lane no drainage	LF	0.0	$86.50	$0	Includes pavement removal, curbs, landscaping for a 12' median in 14' lane. No drainage included.
Landscaping only - medians and bulbouts	SF	0.0	$4	$0	Install 18" topsoil plus plants
Drainage system - both sides	LF	1,200.0	$115	$138,000	For new installatations. Length is overall project length where drainage is added.
Bridge - new or replace	SF	0.0	$250	$0	
▫ Specify length and width of bridge					For documentation of assumptions used.
Street trees with tree grates	LF	0.0	$40	$0	Per side.
Irrigation system		Provide estimate	→		For irrigation of medians and bulbouts. Specific estimate required if used (describe in Section 1.G).
Signing/marking	LF	500.0	$2	$1,000	Use when new pavement markings are to be installed (per line).
Clearing	SF	191,250.0	$0.06	$11,475	Used for new alignments.
Grading	CY	5,313.0	$17.50	$92,978	Provide an estimate of grading and describe assumptions in Section 1.G.
Retaining walls (by wall area)	SF	0.0	$55	$0	Use SF of walls if known. If not, estimate length of walls and describe assumptions in Section 1.G.
Retaining walls (by length)	LF	400.0	$250	$100,000	
Section 1.B Subtotal				**$362,028**	

1.C - Addition of Pedestrian Elements to Existing Roadway

Item	Unit	Quantity	Unit cost	Total	Description
Sidewalk, no curb	SF	0.0	$10	$0	Includes curb ramps.
Remove sidewalk	SF	750.0	$1.25	$938	
Shared-use path	SF	107,100.0	$5	$535,500	Includes curb ramps.
Street furniture - bench	EA	8	$2,275	$18,200	
Street furniture - bike rack	EA	0	$330	$0	
Street furniture - trash can	EA	5	$1,350	$6,750	
Section 1.C Subtotal				**$561,388**	

1.D - Utilities

Item			Total	Description
Utility burial		Provide estimate →		If utility burial is included, provide a detailed cost from the appropriate utility.
Utility relocation		Provide estimate →	$150,000	Describe what utilities will or may be relocated. Provide cost estimate and describe assumptions.
	Description:	Coordination w/ Clean Water Servoces, City of Beaverton, Tualatin Valley Water District, NW Natural, PGE & BPA where potential conflicts arise.		
Railroad impacts		Summarize impacts		Describe potential impacts to railroads in project area.
	Summary:	Coordination w/ TriMet & ODOT to add bijke/pedestrian facilities where tracks cross roads.		
Section 1.D Subtotal			**$150,000**	

1.E - Traffic Signals and Lighting

Item	Unit	Quantity	Unit cost	Total	Description
Traffic signals (4-lanes or more)	EA	0	$150,000	$0	Use where at least one roadway is 4 lanes or more.
Traffic signals (less than 4-lanes)	EA	2	$105,000	$210,000	Use where both roadways are 3 lanes or less.
Street lighting - per side	LF	3825.0	$80	$306,000	Install street lighting at 100' spacing per side.
Section 1.E Subtotal				**$516,000**	

1.F - Associated Costs

Item			Basis	Total	Description
Mobilization, staging, traffic control			15%	$238,412	
Erosion control - enter value to override fixed 1.5%	$		1.5%	$23,841	Use 1.5% of construction costs, or provide a cost estimate and describe assumptions.
	No Description Required:				
Section 1.F Subtotal				**$262,253**	

1.G - Additional Information

Use the space below to provide additional information, including items not listed above, or to expand on assumptions used.

Bollards - 27 @ $600/EA = $16,200
Seeding - 84,150 SF @ $0.15/SF = $12,623
Boardwalk - 2,800 SF @ $89/SF = $249,200

Other Expected Costs	Provide estimate →	$278,023	
Section 1.G Subtotal		**$278,023**	

SUMMARY

Total of sections A through G	**$2,129,691**	Section 1 Total

2. Environmental Impact and Mitigation

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Sections A and B must be completed. Complete Section C if applicable. Contact Metro if information for Beaverton Creek Trail: Westside Trail - Hocken Avenue Segment of the Westside to Wilsonville Commuter Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Tualatin Hills Park & Recreation District (THPRD)

2.A - Status and Information

Please place an 'X' in the appropriate box.

EA not completed; an EIS IS expected.	
EA not completed; an EIS is NOT expected.	
EA not completed; unknown whether EIS is expected.	X
EA has been completed; an EIS IS required.	
EA has been completed; an EIS is NOT required.	
Both an EA and an EIS have been completed.	

Describe expected environmental impacts, assumptions, and unknowns.

Description: Wetland & CWS vegetated corridor mitigation will be needed where trail & boardwalks are located within such areas. A "no-rise" certification will be needed where the trail is located within the 100-year floodplain. Mitigation for tree removal at the west end of the project area is likely.

2.B - Environmental Impacts and Mitigation

Item	Unit	Quantity	Unit cost	Total	Description
Estimate acreage of impact/mitigation	ACRE	1.20	$150,000	$180,000	
Section 2.B Subtotal				**$180,000**	

2.C - Additional Information

Use the space below to provide additional information, including items not listed above, or to expand on assumptions used.

Hazardous materials clean-up & below ground well/tank decommissioning is a possibility at the east end of the project area.

Other Expected Costs	Provide estimate →	$100,000	
Section 2.C Subtotal		**$100,000**	

SUMMARY

Total estimate for environmental mitigation	**$280,000**	Section 2 Total

3. Right-of-Way Cost Estimation

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Use either Method 'A' or Method 'B'. Method 'A' is preferred. Complete Section C if applicable. Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Tualatin Hills Park & Recreation District (THPRD)

Where the exact SF of ROW is unknown, an estimate must be made. At the most simplistic level, this estimate can be made by calculating the difference between the proposed cross-section width and the existing ROW width, multiplied by the project length. Where ROW width cannot be determined, it should be assumed to be the width of the existing roadway including sidewalks.

3.A - Method 'A' (moderate confidence)

Item	Unit	Quantity	Unit cost	Total	Description
Estimate area (SF) of ROW taking	SF	0.0			
Describe assumptions used in calculating area:		See comment in 3.C below.			
Estimate unit cost (per SF) of taking	$	$0.00			
Describe assumptions used in calculating unit cost(s):					
Estimated total cost of taking				$0	Estimated area multiplied by estimated unit cost.
Number of affected parcels:	EA		$10,000	$0	Reflects administrative costs of property acquisition.
Section 3.A Subtotal				**$0**	

3.B - Method 'B' (low confidence)

Item	Unit	Quantity	Unit cost	Total	Description
Estimate square-feet of high-value ROW taking	SF	0.0	$30	$0	Use in urban areas and moderate to high-priced neighborhoods.
Estimate square-feet of developed ROW taking	SF	0.0	$20	$0	Use in other established neighborhoods.
Estimate square-feet of undeveloped ROW taking	SF	0.0	$15	$0	Use in undeveloped areas.
Describe assumptions used in calculating area:		See comment in 3.C below.			
Estimated total cost of taking				$0	Estimated area multiplied by estimated unit cost.
Number of affected parcels:	EA	0	$10,000	$0	Reflects administrative costs of property acquisition.
Section 3.B Subtotal				**$0**	

3.C - Additional Information

Use the space below to provide additional information, including items not listed above, or to expand on assumptions used.

ROW work is currently underway & will be completed as part of the project's Planning & PE work starting in 2017.

SUMMARY

Method 'A' Right-of-Way estimate (moderate confidence)	**$0**	Section 3 Total (moderate confidence)
Method 'B' Right-of-Way estimate (low confidence)	**$0**	Section 3 Total (low confidence)

4. Design and Administration Costs

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Complete input cells in Sections A and B if applicable. Default markup values can be overridden. Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Tualatin Hills Park & Recreation District (THPRD)

4.A - Design

Construction Costs (from Section 1):	$2,129,691
Environmental Impact Costs (from Section 2):	$280,000

Item	Base Cost	Markup	Total	Description
Surveying, design, coordination	$2,409,691	10%	$240,969	(Default 30%) Typically included in the professional engineering contract
Construction Engineering	$2,409,691	20%	$481,938	(Default 20%) Engineering services during constuction
Other Expected Costs	Provide estimate →			

Description of other expected costs:

Section 4.A Subtotal **$722,907**

4.B - Administration

Project Administration will be applied throughout project.

Administration	$2,409,691	15%	$361,454	(Default 35%) Project overhead

Section 4.B Subtotal **$361,454**

4.C - Additional Information

Use the space below to provide additional information, including items not listed above, or to expand on assumptions used.

Markup for Survey, Design & Coordination & Administration was reduced because this work will begin in 2017. It is anticipated some final engineering and administration work will be needed for this project but does not warrant the default markup rate.

SUMMARY

Total of all above items **$1,084,361** Section 4 Total

5. Contingency and Risk

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Complete input cells in Section A if applicable. Default markups can be overriden. Section B must be completed.

Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Tualatin Hills Park & Recreation District (THPRD)

5.A - Contingency

Item	Section Total	Markup	Contingency $	Description
Section 1 - Construction	$2,129,691	20%	$425,938	(Default 20%)
Section 2 - Environmental	$280,000	20%	$56,000	(Default 20%)
Section 3.A - Right-of-Way (moderate confidence)	$0	40%	$0	(Default 40%)
Section 3.B - Right-of-Way (low confidence)	$0	50%	$0	(Default 50%)
Section 4.A - Design	$722,907	20%	$144,581	(Default 20%)
Section 4.B - Administration	$361,454	No contingency on Administration		
Other Expected Costs	Provide estimate →			

Description of other expected costs:

Section 5.A Subtotal **$626,520**

5.B - Risk

Describe project components, impacts, or unknowns that are uncertain in scope at this point. Items might include:

- environmental issues
- nearby historic or cultural resources
- railroad or utility work
- bridge work
- agency approvals
- existing deficient infrastructure
- complex or untested components
- other unique elements

Description of these items is not intended to affect project selection, but rather to identify and document key issues that need refinement.

The project area generally follows the TriMet light rail tracks in Beaverton between the Tualatin Hills Nature & Cedar Hills Crossing. This corridor is developed on both sides with employment center land uses (office/industrial) east of Murray Boulevard. This eastern portion of the project area presents the most challenges for construction due to changing development patterns & property ownership, as well as environmental impacts (floodplain & wetlands). Challenges with the western portion of the project area include coordination with TriMet at 153rd Avenue to add bike/ped improvements to the existing road crossing. No envrionemtnal impacts are anticipated in the western portion of the project area. THPRD will begin Planning & PE in 2017 for this project to identify the final trail alignment. This work is expected to be completed in mid-2018.

6. Project Summary Sheet

Beaverton Creek Trail: Westside Trail - Hocken Avenue

Beaverton Creek/TriMet Light Rail Line - Westside Trail/Tualatin Hills Nature Park (west) & Hocken Avenue/Cedar Hills Crossing (east)

Construct approximately 1.5-miles of off-street multi-use path / regional trail.

Tualatin Hills Park & Recreation District (THPRD)

6.A - Cost Summary in 2007$

	Item Total	Phase Total
Preliminary Engineering (PE)		$325,308
Surveying, design, coordination	$240,969	
Contingency at 20%	$48,194	
Administration at 15%	$36,145	
Right-of-Way (ROW)		$0
Right-of-Way (moderate confidence)	$0	
Contingency at 40%	$0	
Right-of-Way (low confidence)	$0	
Contingency at 50%	$0	
Construction (Const)		$3,903,700
Construction (Section 1)	$2,129,691	
Contingency at 20%	$425,938	
Environmental (Section 2)	$280,000	
Contingency at 20%	$56,000	
Construction Engineering	$481,938	
Contingency at 20%	$96,388	
Administration at 15%	$433,744	
		Total
		$4,229,009

6.B - Funding Summary by Year of Expenditure

Phase		2007 Dollars	YOE Year	Escalation	YOE Cost
Preliminary Engineering	PE	$ 325,308	2019	1.52%	$ 330,242
Right-of-Way	ROW	$ -	2020	5.58%	$ -
Construction	Const	$ 3,903,700	2021	9.80%	$ 4,286,274
	Total	$ 4,229,009			**$ 4,616,515**

SUPPLEMENTAL INFORMATION

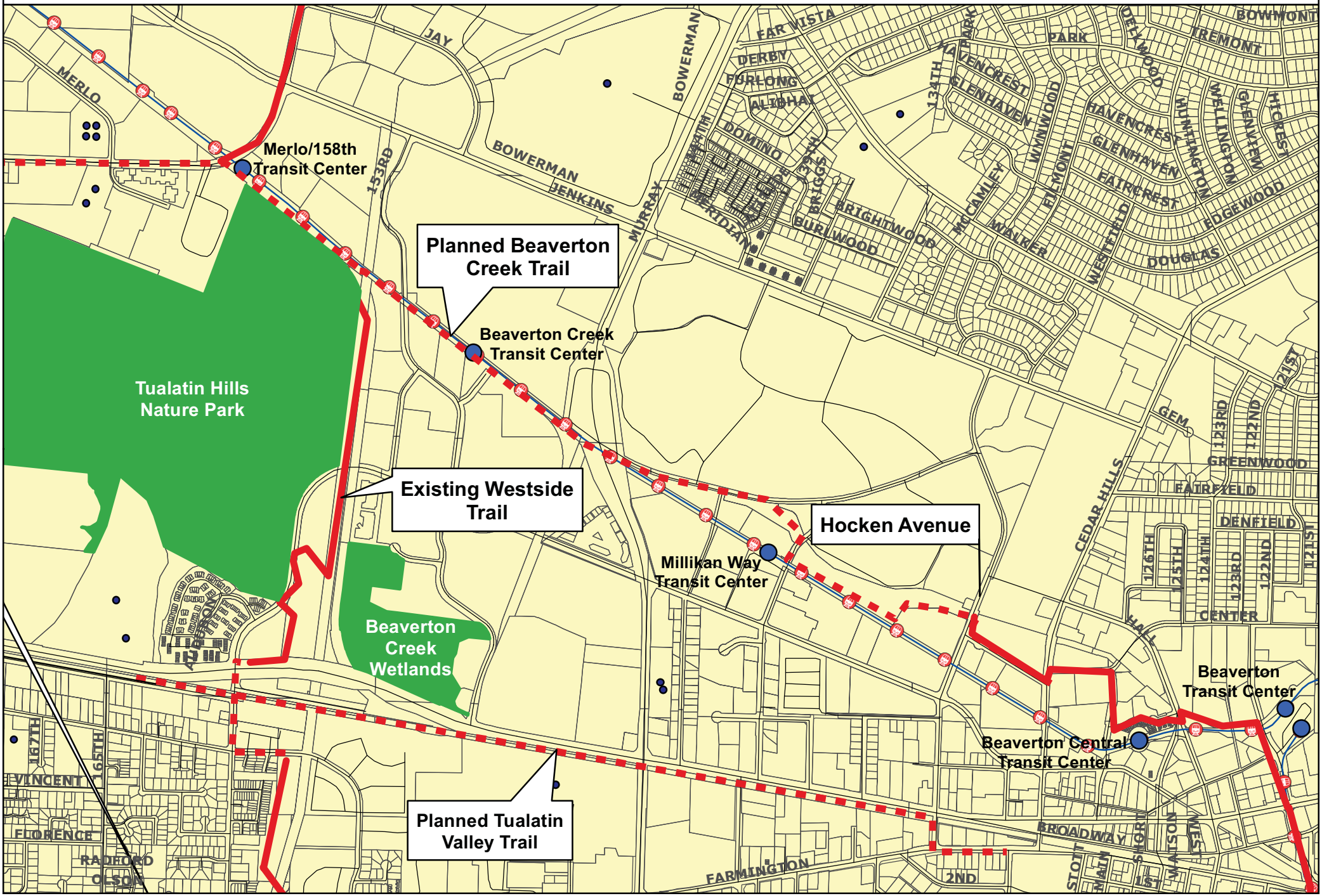
1. Project Area Vicinity Map
2. Project Area Aerial View
3. THPRD Board of Directors Resolution
4. THPRD Community Outreach & Public Engagement Process
5. Letters of Support
6. City of Beaverton Project Description & Vicinity Map

Beaverton Creek Trail: Westside Trail - Hocken Avenue
Vicinity Map

TUALATIN HILLS
PARK & RECREATION DISTRICT

N

0 600 1,200 2,400
Feet

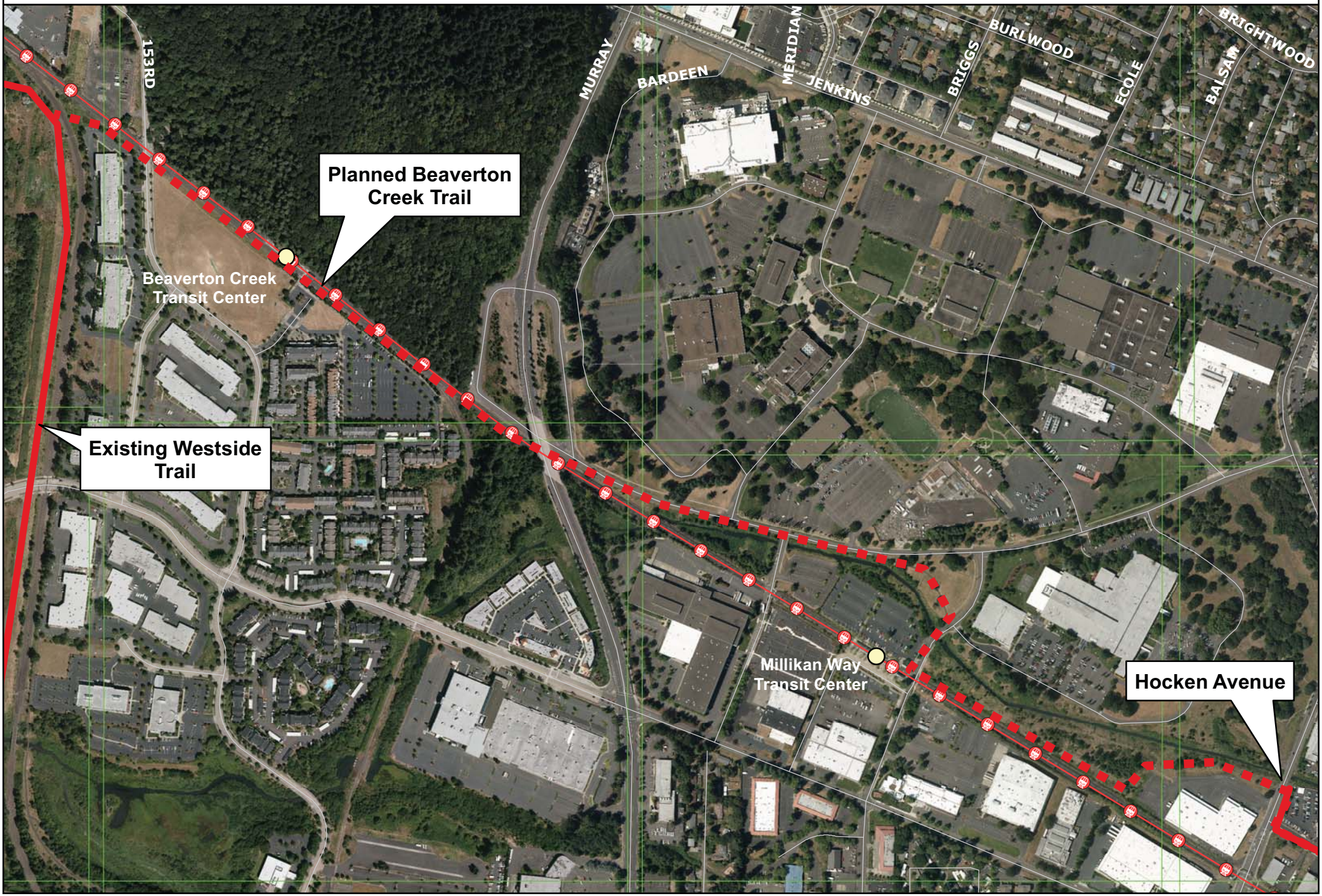


TUALATIN HILLS
PARK & RECREATION DISTRICT

Beaverton Creek Trail: Westside Trail - Hocken Avenue
Aerial View

N

0 300 600 1,200
Feet



RESOLUTION NO. 2016-13

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
TUALATIN HILLS PARK & RECREATION DISTRICT
AUTHORIZING APPLICATION TO METRO TO THE
2016 REGIONAL FLEXIBLE FUND ALLOCATION PROGRAM
FOR THE BEAVERTON CREEK TRAIL: WESTSIDE TRAIL – HOCKEN AVENUE

WHEREAS, federal funds are available through the Federal Highway Administration and administered by Metro and the Oregon Department of Transportation for the 2016 Regional Flexible Fund Allocation Program for federal fiscal years 2019-2021 for transportation projects; and

WHEREAS, the Tualatin Hills Park & Recreation District (THPRD) is a local government agency/special service district that is eligible to receive said federal funds; and

WHEREAS, final engineering and construction of the Beaverton Creek Trail (a regional trail) between the Westside Trail and Hocken Avenue is a high-priority project that would meet local needs identified in THPRD's Comprehensive Plan and its Trails Functional Plan; the City of Beaverton's Transportation Plan; Washington County's Transportation Plan; Metro's 2035 Regional Transportation Plan and its Trails and Greenways Plan; the Oregon State Comprehensive Outdoor Recreation Plan (SCORP); and the Oregon Statewide Planning Goals and Objectives for recreation.

LET IT HEREBY BE RESOLVED BY THE BOARD OF DIRECTORS OF THE TUALATIN HILLS PARK & RECREATION DISTRICT IN BEAVERTON, OREGON, that:

THRPD staff are authorized to submit an application to the Metro Regional Flexible Fund Allocations Program for assistance in funding the final engineering and construction of the Beaverton Creek Trail between the Westside Trail and Hocken Avenue; and

THPRD will set aside funds through its budgeting process in FY 2019/20 in order to provide the local match requirements of approximately 10.27% of the total estimated project cost.

Approved by the Tualatin Hills Park & Recreation District Board of Directors on the 16th day of August 2016.

Jerry Jones Jr., President

Ali Kavianian, Secretary

ATTEST:

Jessica Collins, Recording Secretary

THPRD Community Outreach & Public Engagement Process

updated: 8/19/16

Community Outreach Procedure

Implemented in 2009, THPRD's outreach procedure identifies four levels of outreach that are based on project level of effort or complexity. The following represent the minimum expectations:

- Level I represent routine activities performed on a regular basis. No outreach is required.
- Level II represents activities that are closely related to routine but not performed regularly. Outreach includes letters/postcards a minimum of 14 days prior to the activity beginning.
- Level III represents activities that are not routine and usually involve a site modification. Outreach includes letters/postcards a minimum of 14 days prior to the activity beginning; at least one neighborhood meeting; and posting notice on site a minimum of seven days prior to the activity beginning.
- Level IV represents activities that are larger in scale and usually involve site closures. Outreach includes the same process as Level III, plus an additional neighborhood meeting.

Level II, III and IV outreach procedures also include posting notice on THPRD's website.

Public Engagement Process

Recognizing that every project is unique, THPRD has implemented measures to ensure that traditionally underserved populations are engaged and represented during the project development and master planning phases of a project. This includes locating populations with higher than average concentrations of minorities, low-income, disabilities, elderly and youth living in close proximity to the project area. The intent is to conduct a targeted and broadly accessible public participation process that engenders local interest and captures community aspirations, values, needs, concerns and preferences to guide creation of future development. Throughout the public engagement process, translation services are provided for meetings and printed materials.

<u>Step 1</u>

Once a project is identified and funding secured for its development, the first step in public engagement is to perform a needs assessment. Targeted outreach of key demographics and geographic groups will occur in order to identify those community needs and preferences for the project's development. This early engagement helps ensure community interests are considered from the outset and can be addressed early in the master plan and design development process. Typical activities in this step include:

- Research project area demographics and identify underserved groups to determine strategies for engagement.
- Identify potential outreach partners and establish the grassroots network.

- Develop an interested party contact database for use of project duration. Database will be used to send out regular project status updates.
- Create project website.
- Create project notice materials such as project factsheet, campaign mailer, display ads and signage.
- Recruit participants and conduct focus groups.
- Build a needs and aspirations survey for posting online and neighborhood distribution.
- Prepare a needs assessment summary report.

Step 2

The next step is to seek broad community appraisal of and comment on development alternatives of the proposed project. These concepts are derived out of the needs assessment stage and provide opportunity for review with the neighborhood to ensure needs were understood and addressed. Typical activities in this step include:

- Conduct community workshops, including an on-site workshop.
- Develop and manage an online community workshop.
- Prepare public input summary report.

Step 3

The last step in the public engagement process is final review of a master plan. This is another broad community review approach, but is supplemented by focused input at the neighborhood level with those key demographic and geographic groups engaged at the start of the project. Target review also includes THPRD's citizen-based advisory committees, neighborhood associations and THPRD's Board of Directors. Typical activities in this step include:

- Conduct final master plan review meetings with identified stakeholders.
- Develop and manage an online final master plan review survey.
- Prepare a project public involvement process report
- Conduct a public meeting with the THPRD Board of Directors for approval of the final master plan.

August 19, 2016

Joint Policy Advisory Committee on Transportation (JPACT)
Metro
600 NE Grand Avenue
Portland, OR 97232

RE: Tualatin Hills Park & Recreation District (THPRD) Application for Regional Flexible Funds
Beaverton Creek Trail

Dear JPACT Members:

This letter represents Nike's support for THPRD's planned construction of the Beaverton Creek Trail between the Westside Trail and Hocken Avenue in Beaverton. This project will provide a needed east-west off-street transportation option between the 200+ acre Tualatin Hills Nature Park and Cedar Hills Crossing commercial area, as well as two MAX stations. To make this trip currently, bicyclists and pedestrians must use Jenkins Road or Millikan Way, both of which are high-volume roadways that require out-of-direction bike travel.

In addition to being an important route for the overall community, THPRD's project will also benefit Nike and our employees. As part of our company bike share program, Nike employees will be able to better travel between Nike facilities located along the Beaverton Creek Trail corridor, including the World Headquarters, North America Headquarters and the Nike Company Store without using a motor vehicle. Additionally, the new trail will further improve access to employees who commute to and from work by MAX and/or bicycle and who utilize the Nike bike share as a "last-mile" connection to the four nearby MAX stations near our campus. Currently, Nike provides annual TriMet passes to employees at no cost to encourage transit use for commuting. Nike has also been partnering with THPRD and Washington County to address both vehicular and non-vehicular improvements in the area, most recently via the comprehensive and innovative Transportation Agreement.

Nike is supporting the trail and project in multiple ways and this demonstrates the continued partnership and good neighbor relationship that exists between Nike, THPRD and the County.

Thank you for your consideration to provide funding for THPRD's planned construction of the Beaverton Creek Trail, as it is an important community asset and off-street transportation alternative and is in alignment with the ongoing collaboration on the Westside Trail issues. We support THPRD's plans and urge your support for this project.

Sincerely,

Julia Brim-Edwards
Sr. Director, Government + Public Affairs

CC: Washington County Board of Commissioners

Beaverton
OREGON

Community Development

August 19, 2016

Dear Selection Committee:

The City of Beaverton is pleased to participate as a technical partner for Tualatin Hills Park and Recreation District's Regional Flex Funds Application for the completion of the Beaverton Creek Trail (BCT). The BCT project reinforces public investment in other bicycle and pedestrian projects occurring at either end of the BCT.

The proposed BCT trail will provide vital off-street walking and biking trails that will connect the City of Beaverton's funded work for the construction of the on-street section of the "Crescent Connection" pathway between SW Hocken Avenue and SW Denney Road to the east to THPRD's recently completed section of the Westside Trail and the soon-to-be completed Westside to Waterhouse Connection to the west (see map).

This project will increase accessibility, efficiency and safety of the area's transportation system and will be a critical step in completing elements of THPRD's Regional Trails Functional Plan. The completion of the BCT in connection with adjacent projects will support active transportation and provide seamless connections to nearby transit stops, likely leading to an increase in transit trips among all users. The completion of the 1.5 mile long section of this BCT is especially important in that it will provide the surrounding, lower-income census tract communities with more access to housing, jobs and vital services.

In partnering with THPRD, the City of Beaverton will partner with THPRD on engineering and design to ensure that we are providing a seamless bicycle and pedestrian experience for end users and, most importantly, achieving a fully integrated transportation corridor that serves Beaverton and greater Washington County residents. Thank you in advance for your support of this vital project.

Sincerely,

Cheryl Twete
Community Development Director

15715 SW Division St.
Beaverton, OR 97007

August 22, 2016

Joint Policy Advisory Committee on Transportation (JPACT)
Metro
600 NE Grand Avenue
Portland, OR 97232

Regional Flexible Funds Allocation (RFFA)
Beaverton Creek Trail Segments 3 & 4 (Westside Trail at Nature Park to SW Hocken)

As a former member (10 years) and immediate past chair of the THPRD Trails Advisory Committee (TAC), I strongly support District's application for RFFA funding for design and construction of Beaverton Creek Regional Trail (BCRT) from Hocken to the Nature Park.

While I was serving as Chair, the TAC assisted THPRD staff in preparing the 2016 Trails Functional Plan, essentially an update of the 2006 Trails Master Plan. Over a nine month period the TAC set evaluation criteria, visited existing and proposed trail sites, analyzed and prioritized trails for future development and submitted its recommendations to THPRD staff. After careful consideration, the TAC assigned the highest priority to development of BCRT.

BCRT will be the sole off-street, east-west, trail within THPRD south of Highway 26. (It should be noted that polls conducted by THPRD and others consistently indicate high public support for off-street trails as compared to those located on roadways.) BCRT will eventually connect to City of Hillsboro trails to the west as well as Fanno Creek Regional Trail to the southeast (via an on-street trail being built by the City of Beaverton). BCRT will intersect Westside Regional Trail, the District's principal north-south trail, at the Nature Park. Westside Regional Trail, large portions of which are now complete, is planned to connect a City of Portland trail system to the north as well as to future trails beyond THPRD's boundary to the south. Thus, the completed BCRT represents an essential link in a trail network that will enable recreational users and commuters to move around and beyond the District on all points of the compass.

Segments 3 & 4 represent the first phase of BCRT. Benefits to the public of the entire BCRT are touched on above. However, when this first phase is completed, from Hocken to the Nature Park, immediate benefits to the public include:

- Provides east-west off-street transportation and recreational option where none now exists
- Improves access to Millikan Way, Beaverton Creek and Merlo/158th MAX stations
- Improves access to employment and commercial centers such as Nike World Headquarters, Tektronix and Cedar Hills Crossing
- Provides direct access to THPRD's Nature Park and nearby Beaverton Creek Wetlands

I believe that the many future and near term benefits more than qualifies Beaverton Creek Regional Trail for RFFA funding and enthusiastically support THPRD's application to Metro for this purpose.

Very Respectfully

Tom Hjort

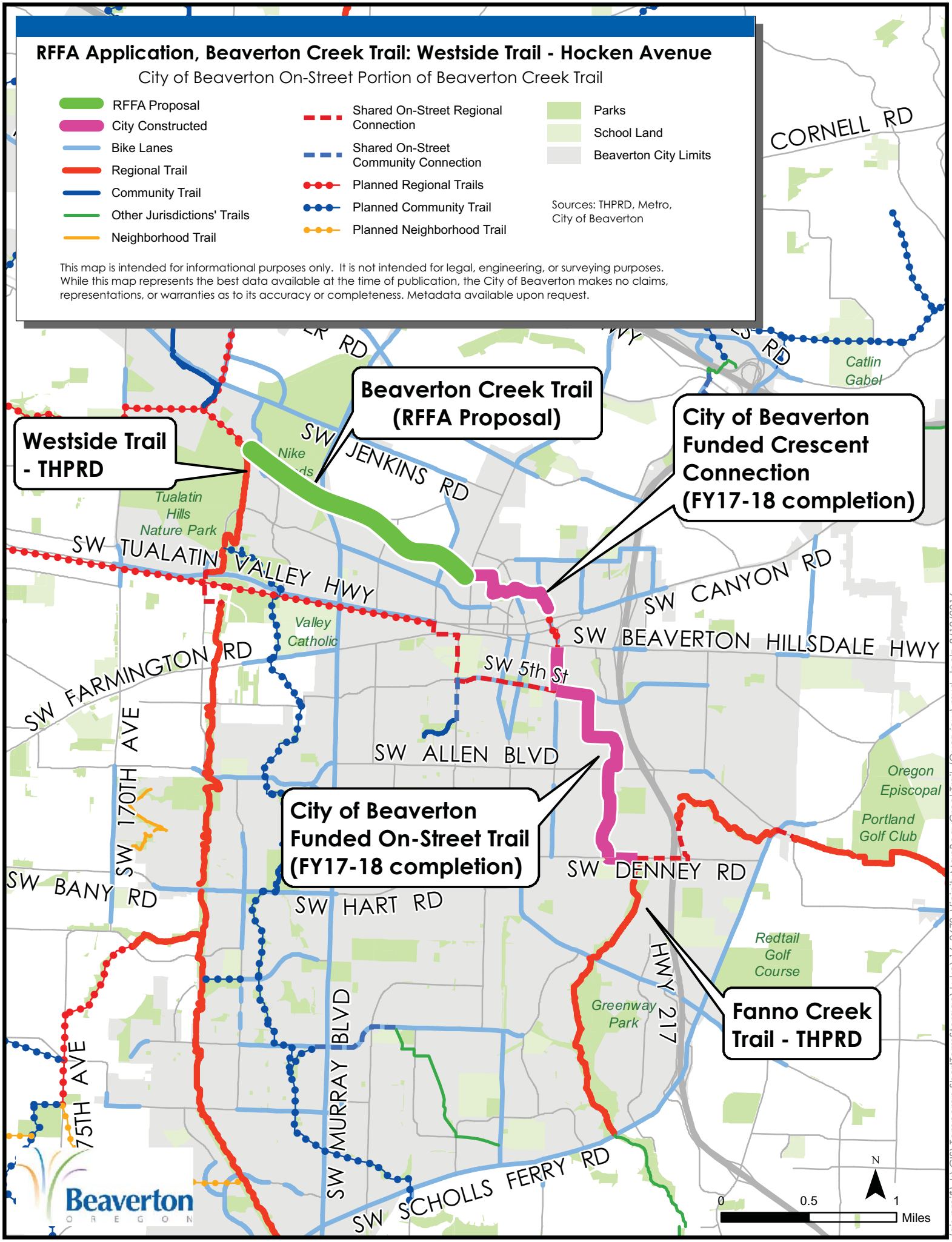
Tom Hjort,

The City of Beaverton is constructing a portion of the Beaverton Creek Trail (named Crescent Connection) that includes pedestrian and bicycle project design elements. Overall, the Beaverton Creek Trail (BCT) connects two main regional trails within the City of Beaverton. These two trail connections include, Fanno Creek (south end of BCT) and Westside Trail (west end of BCT). The entire stretch of the Crescent Connection is between SW Hocken Avenue and SW Denney Road.

These improvements will include an off-street shared use path between the Beaverton Transit Center on Lombard Avenue and the Beaverton Central Max Station at Watson Avenue and then continues the path to Cedar Hills Boulevard with:

- sidewalks and sidewalks buffered by on-street parking
- street trees/planting strip
- bike lanes
- wayfinding
- on-street markings (sharrows)
- benches
- curb extensions to reduce pedestrian crossing distance and speed of traffic
- median island located on SW Denney Road to enhance safe pedestrian crossing from Fanno Creek Trail

This project will provide striped bike lanes, signage, and shared lane markings (sharrows) on King Blvd, Alger Ave, 11th St., 5th St. and Lombard Avenue to the Beaverton Transit Center. These improvements will be completed in FY17-18 and provide a continuous bicycle and pedestrian route to allow safe and efficient multi-modal transportation throughout the City of Beaverton.


RFFA Application, Beaverton Creek Trail: Westside Trail - Hocken Avenue
City of Beaverton On-Street Portion of Beaverton Creek Trail
RFFA Proposal
City Constructed
Bike Lanes
Regional Trail
Community Trail
Other Jurisdictions' Trails
Neighborhood Trail
Shared On-Street Regional Connection
Shared On-Street Community Connection
Planned Regional Trails
Planned Community Trail
Planned Neighborhood Trail
Parks
School Land
Beaverton City Limits
Sources: THPRD, Metro, City of Beaverton
This map is intended for informational purposes only. It is not intended for legal, engineering, or surveying purposes. While this map represents the best data available at the time of publication, the City of Beaverton makes no claims, representations, or warranties as to its accuracy or completeness. Metadata available upon request.
Beaverton Creek Trail (RFFA Proposal)
Westside Trail - THPRD
City of Beaverton Funded Crescent Connection (FY17-18 completion)
City of Beaverton Funded On-Street Trail (FY17-18 completion)
Fanno Creek Trail - THPRD
CORNELL RD
SW JENKINS RD
SW TUALATIN VALLEY HWY
SW CANYON RD
SW BEAVERTON HILLSDALE HWY
SW 5th St
SW FARMINGTON RD
SW ALLEN BLVD
SW 170TH AVE
SW BANY RD
SW HART RD
SW DENNEY RD
HWY 217
SW MURRAY BLVD
SW 175TH AVE
SW SCHOLLS FERRY RD
Tualatin Hills Nature Park
Valley Catholic
Catlin Gabel
Oregon Episcopal
Portland Golf Club
Redtail Golf Course
Greenway Park
Beaverton OREGON
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Miles
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