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LONG RANGE PLANNING
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Solutions for Addressing Walkway Gaps in the Urban Unincorporated Area

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Revision
On February 2, 2016 an Issue Paper addressing solutions for walkway gaps in urban unincorporated Washington County (UUWC) was released. The initial paper has been revised to reflect recent direction on walkway gap funding. Staff recommends delaying new discussions about walkway financing until after the MSTIP 3e decision takes place in the fall of 2016. Recent Board discussions and direction that influence future decisions on walkway gap funding include MSTIP 3e and Gain Share. After finalizing decisions on MSTIP 3e in the fall of 2016, the Board may wish to examine, consider, and discuss other financial tools listed in "Appendix A."

I. Issue

Numerous residents, stakeholders and organizations[1] in Washington County have identified the incomplete network of sidewalks and walkways in UUWC as a persistent problem that needs to be addressed in order to promote safe, livable communities. At the same time, members of the development community have requested process changes for determining public improvement requirements (including sidewalks). These requests were approved as part of the 2015 Work Program, Tier 1, Task 1.23 (New tools for eliminating sidewalk gaps). This Issue Paper examines existing conditions and policies related to sidewalks and walkways, reviews sidewalk/walkway implementation methods in the context of both development and public projects, and recommends several policy and procedural changes that would potentially result in more successful completion of sidewalks and walkways throughout UUWC. Walkway gaps on county roadways inside city jurisdictions were not considered as part of this paper.

II. Summary of Recommendations

To address walkway gaps in UUWC, staff proposes 11 recommendations for potential implementation or further consideration and scoping. These recommendations are divided into "Potential Administrative Changes" (those that can be implemented by staff) and "Potential Legislative Changes" (those that would require action by the Board of Commissioners and warrant a higher level of public involvement). Each of these recommendations is described in further detail in the Recommendations section starting on page 32 of this paper.

<u>Potential Administrative Changes</u>:

1. Expand capabilities and usage of the Transportation Improvement Master List for documenting, characterizing, mapping and monitoring walkway gaps and programmed projects.

[1] This Issue Paper responds to requests received by the Department of Land Use & Transportation from the Washington County Committee for Citizen Involvement, unincorporated county residents Mary Manseau and Eric Squires, and Justin Wood representing the Homebuilders Association of Metropolitan Portland.

2. Add walkway presence/absence information to the Integrated Road Inventory System and Asset Browser.

3. Focus walkway project development efforts on gaps identified in the following sources:
   - Washington County Bicycle and Pedestrian Improvement Prioritization Project ("DOE project," 2012)
   - Aloha-Reedville Study and Livable Community Plan, Addendum C: Pedestrian and Bicycle Plan (2014)
   - School Access Improvement Study (2015)
   - Small Road Improvement Candidates List (ongoing)
   - External sources, including the TriMet Pedestrian Network Analysis, ODOT Pedestrian/Bicycle Inventory, and the Metro Regional Active Transportation Plan
   - Future studies that identify and prioritize sidewalk gaps.

4. As part of future capital projects and facility permits, identify opportunities to strategically and efficiently address walkway gaps on other roadways in the immediate vicinity.

5. Identify interim system completion targets for different roadway functional classes, or for different locational contexts (such as Pedestrian/Bicycle Districts or areas near schools).

6. Institute a more coordinated, intra-divisional effort to prioritize transportation projects (including walkway projects) and match them with appropriate internal and external funding sources, including a regularly-scheduled transportation project "super-committee."

Potential Legislative Changes:

7. Replace or revise Resolution & Order 86-95 (Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance – Process Documentation) with a multimodal transportation development improvement process with guidance from the 2014 Multimodal Performance Measures and Standards report.

8. Clarify or revise conflicting Community Development Code (CDC) sections regarding the circumstances in which public improvements are required.

9. Amend Article VII of the CDC to exempt from land use review walkway projects that would require additional right-of-way but would otherwise meet the requirements of CDC Section 702-4 (*Public Transportation Facilities – Exempt Projects*).

10. Take limited actions to address improvement needs on non-county public roadways in UUWC.

11. Examine, consider, and discuss other financial tools listed in "Appendix A". These can come back to the Board as separate work sessions discussion.

III. Background

In 2005, the Long Range Planning Section of the Washington County Department of Land Use & Transportation (LUT) completed Issue Paper No. 9, which proposed potential remedies to the fragmented walkway system in UUWC. Recommended solutions included modifying Traffic Impact Fee (TIF) and Local Improvement District (LID) policies and procedures to fund walkway needs identified in the Washington County 2020 Transportation Plan. It also suggested investigating the ability to obtain off-site sidewalks in conjunction with new development through the Transportation Funding Plan (a precursor effort to the Transportation Development Tax).

This Issue Paper updates and builds upon the 2005 paper. The following Background section defines key terms, summarizes existing conditions and policies and describes how sidewalks and walkways are provided through land development and public projects. The subsequent Analysis section synthesizes this information to inform the Recommendation section.

A. Definitions

This Issue Paper was originally defined in terms of "sidewalk gaps," which was subsequently revised to "walkway gaps." Sidewalk is defined in CDC Section 502-2.2 (*Sidewalk Standards – Definitions*) as "a concrete sidewalk which meets adopted design standards and is used primarily by pedestrians as a means of travel." A more inclusive term is "walkway," since not all facilities intended for walking along a roadway are built of concrete and built to standard. For example, some walkways are made of asphalt, and some concrete sidewalks are built directly next to the curb (contrary to adopted design standards, but allowed under certain circumstances). Furthermore, solving the problem of sidewalks gaps in UUWC will require looking at a variety of walkway solutions, some of which will not meet the county's strict definition of a sidewalk.

This Issue Paper uses the terms sidewalk and walkway intentionally and not interchangeably. In this paper, the definition of sidewalk is expanded to include curbside sidewalks, which do not meet adopted design standards but are otherwise made of concrete and installed with the approval of the County Engineer. The definition of walkway in this paper focuses on all types of facilities intended for walking along a roadway, but does not include off-street facilities such as trails and accessways; nor does it include facilities that help people cross roadways, such as crosswalks or mid-block crossings.

Key definitions for the purposes of this Issue Paper are as follows:

Curbside sidewalk: A sidewalk that is built directly adjacent to the curb of a roadway, typically at the same grade as the top of the curb (also "curb-tight sidewalk").

Enhanced sidewalk: A sidewalk that contains more features and/or has larger dimensions than the county's standard sidewalk. Examples of additional features include pedestrian-scale lighting, landscaping, decorative paving techniques, benches and public art.

Multi-use path: A paved pathway that accommodates people walking, running, using mobility devices, riding bicycles, using skateboards and performing other human-powered movement. Multi-use paths can be located in off-roadway locations as well as parallel and adjacent to roadways. In the latter case, the multi-use path often functions as both a walkway and a bikeway.

Pedestrian facility: Any constructed improvement intended to facilitate the movement of people walking or using mobility devices. Pedestrian facilities include sidewalks, walkways, accessways, multi-use paths, trails, crosswalks, mid-block crossings, walk signals, stairways and elevators.

Separated asphalt path: A walkway constructed of asphalt located parallel to a roadway and separated from the roadway by grass, landscaping, gravel, and/or a drainage ditch.

Separated sidewalk: A sidewalk that is separated horizontally from the roadway by trees, grass, landscaping and/or other materials.

Sidewalk: A walkway constructed of concrete located alongside a roadway and intended for people walking or using mobility devices.

Walkway: A constructed linear space located alongside a roadway and intended for people walking or using mobility devices. Walkways include separated sidewalks, curbside sidewalks, separated asphalt paths and wide-shoulder walkways (also “pedestrian path”).

Wide-shoulder walkway: A walkway located adjacent to and at the same grade as the roadway, typically constructed of asphalt, and separated from vehicular traffic by profile striping.

Figure 1 on the following page illustrates six common walkway typologies in UUWC.

Figure 1: Common Walkway Typologies in Urban Unincorporated Washington County

No walkway – SW Rosa Rd

Wide-shoulder walkway – SW Johnson St

Separated asphalt path – SW 170th Ave

Curbside sidewalk – NW 185th Ave

Separated sidewalk – NW Evergreen Parkway

Enhanced sidewalk – NW Cornell Rd

B. Existing Conditions

UUWC is home to over 200,000 people and would be the second largest city in Oregon if it incorporated. Provision of urban services such as sidewalks has been a particular policy challenge as the area has changed incrementally over 70 years from a largely rural land base to a collection of suburban communities.

The presence or absence of sidewalks in UUWC is largely a function of when a particular location developed with suburban/urban land uses and densities. Sidewalks were not required as a condition of development approval until the adoption of the 1983 urban Community Development Code.[2] In the 50 years prior to that, it was not common practice for developers to voluntarily build sidewalks. Sidewalks were common in urban communities built before World War II, but UUWC contains very few communities of this vintage – most are located within incorporated cities (downtown Hillsboro, for example).

LUT performed an inventory of sidewalks, walkways and bike lanes along Principal Arterials, Arterials and Collectors ("major roadways") in 2012 as part of the Washington County Bicycle and Pedestrian Improvement Prioritization Project funded by a U.S. Department of Energy (DOE) grant. This inventory, known as the DOE project, was updated and quality-checked in 2014 as part of the Washington County Transportation System Plan (TSP) update.

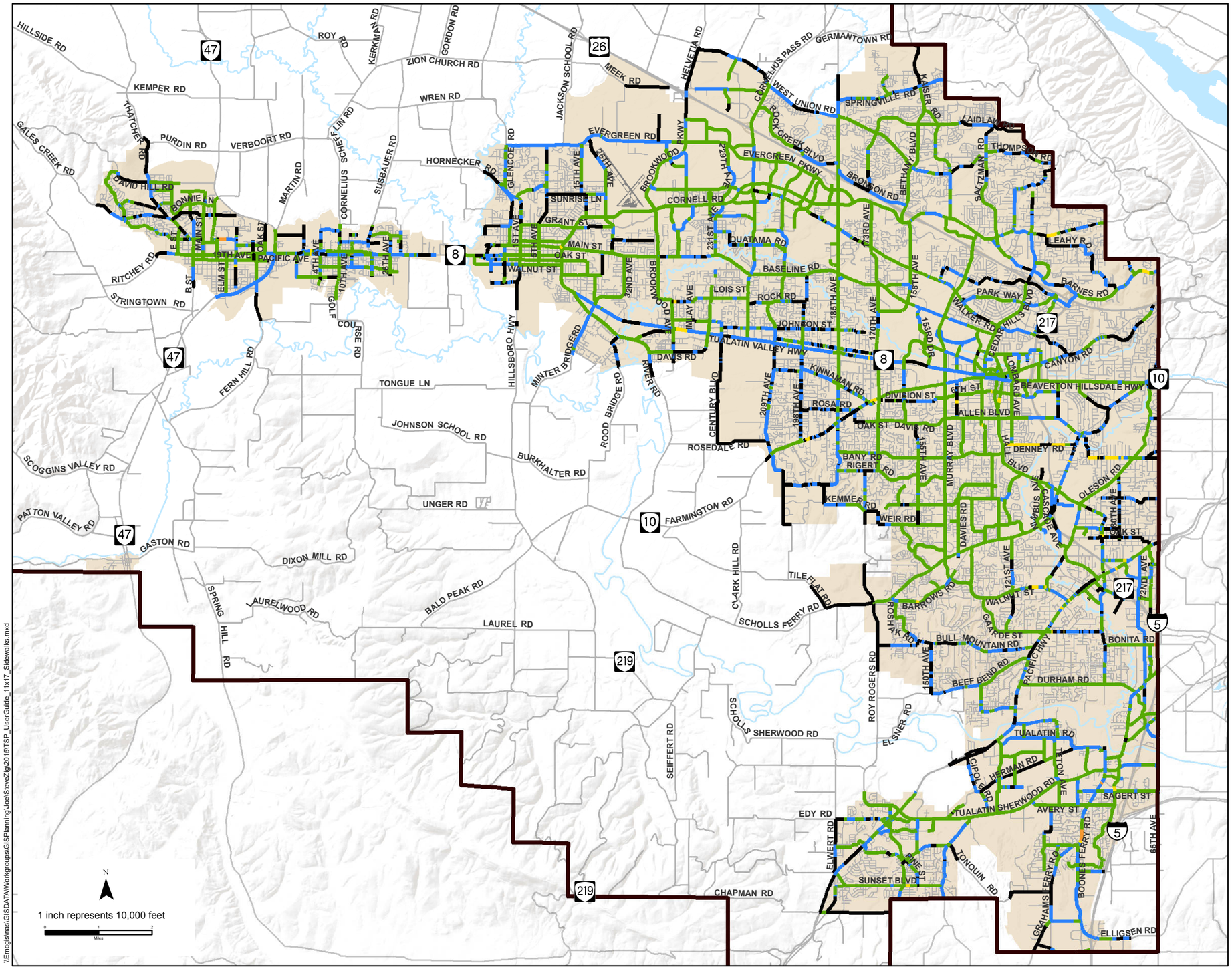
The inventory found that, as of 2014, **56% of major roadways in urban Washington County** (including county and state facilities in unincorporated and incorporated areas) **have sidewalks on both sides of the street**, while 19% of these streets have no walkways at all. The remainder, 25%, has sidewalks on one side of the street, or has non-standard paved walkways on one or both sides of the street. Figure 2 provides a map of walkway coverage along major roadways in urban Washington County.

Sidewalk coverage statistics for all roadway functional classes are not available for the entirety of UUWC. However, a sidewalk inventory of all roadways in Aloha-Reedville was performed as part of the 2014 Aloha-Reedville Study and Livable Community Plan. In the nine-square-mile **Aloha-Reedville study area**, **66% of roadsides have sidewalks or walkways**, leaving 34% of roadsides without walkways. Similar conditions are found in other mixed-era neighborhoods in UUWC such as Metzger, Garden Home and Cedar Mill. Newer areas, such as Bethany, tend to have more complete (but not total) sidewalk coverage.

In practice, walkways in UUWC are provided through a variety of means. As an example, Figure 3 demonstrates how walkways along a segment of SW Kinnaman Road in Aloha have been or will be provided by both the private sector (through development) and the public sector (through Washington County capital projects, Minor Betterment projects, and Urban Road Maintenance District safety projects). Figure 3 also indicates the type of walkways that have been provided along this stretch of Kinnaman, including interim wide-shoulder walkways, curbside sidewalks and county-standard separated sidewalks.

[2] Source: Tom Harry, Senior Planner, Current Planning section.

Figure 2: Arterial/Collector Sidewalk Inventory



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Existing Both Sides
Existing One Side
Substandard Both Sides
Substandard One Side
No Sidewalks
Other Roads
Urban Area
County

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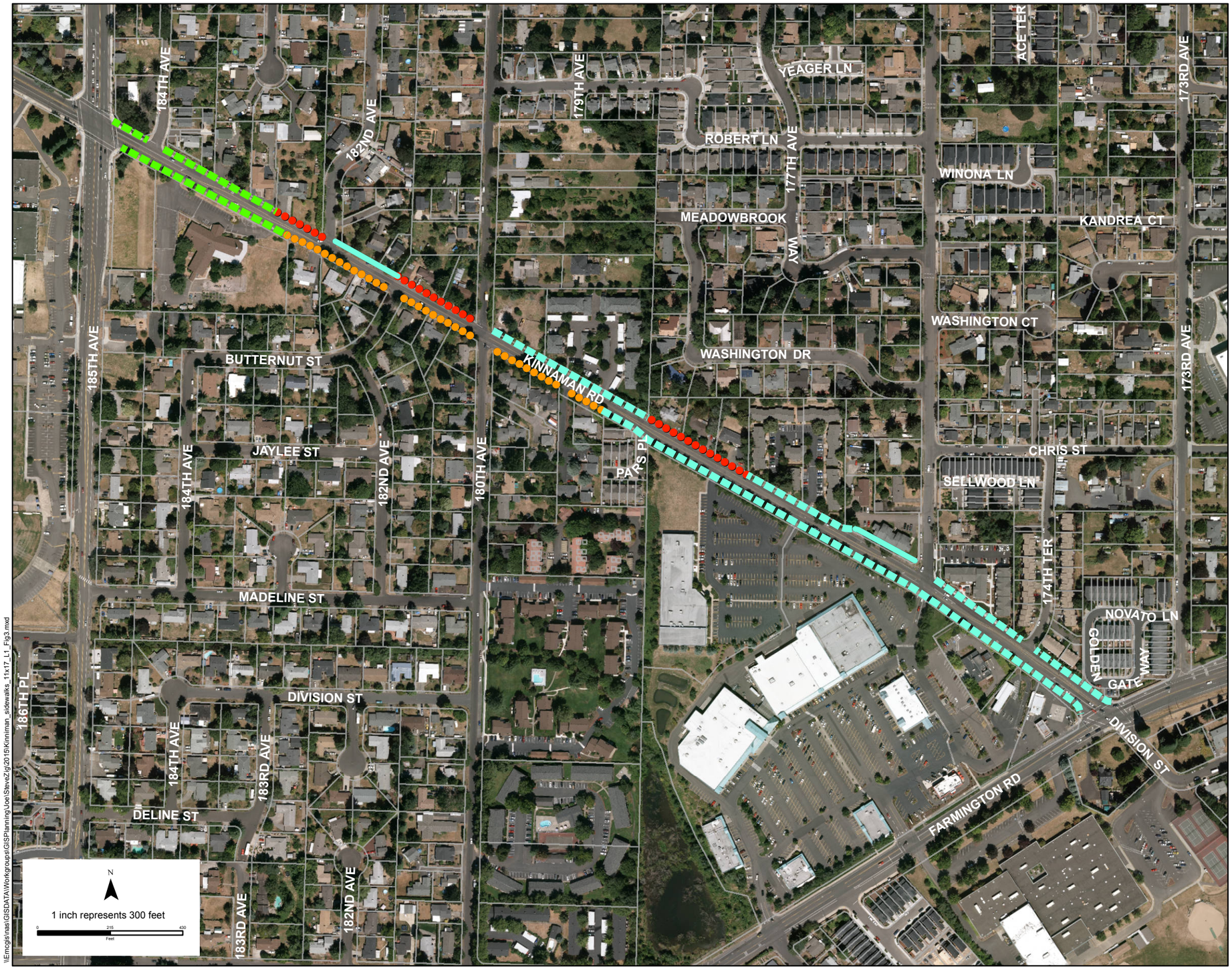
Figure 3

Pedestrian Facility Provision History



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Kinnaman Rd

Funding Source

- Privately Funded: Redevelopment
- Publically Funded: Capital Project
- Publically Funded: Minor Betterment
- Publically Funded: Urban Road Maintenance District

Improvement Type

- Separated Sidewalk
- Curb-tight Sidewalk
- Wide Shoulder Walkway
- Tax Lots

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C. Policy Framework

County policies call for sidewalks to be provided along roads in UUWC, pursuant to state and regional requirements. Oregon Administrative Rule 660-012 (the "Transportation Planning Rule"), in its description of the required transportation components of land use and subdivision regulations, states in section 660-012-0045 that, "Sidewalks shall be required along Arterials, Collectors and most Local Streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways." The Metro Regional Transportation Functional Plan restates this requirement in section 3.08.130, requiring transportation system plans to include "Provision for sidewalks along Arterials, Collectors and most Local Streets, except that sidewalks are not required along controlled roadways, such as freeways."

Overarching county pedestrian policies are consistent with state and regional requirements and are found in the Washington County Comprehensive Framework Plan and the Washington County Transportation System Plan, described below. Walkway implementation mechanisms are discussed in sections 'D' and 'E' of this paper.

Washington County Comprehensive Framework Plan (CFP)

CFP Policy 14 – Managing Growth – categorizes urban facilities and services into essential, critical and desirable services:[3]

- **Critical** facilities and services include public water, public sewer, fire protection, drainage, and access on Local and Neighborhood Route roads. An inability to provide an adequate level of critical services in conjunction with a proposed development will result in the denial of a development application.

- **Essential** facilities and services include schools, Arterial (including State highways) and Collector roads, transit improvements (such as bus shelters and turnouts, etc.), police protection, street lighting, regional trails and **on-site pedestrian and bicycle facilities** in the public right-of-way. Failure to ensure the availability of an adequate level of all essential services within five years from occupancy may result in the denial of a development application.

- **Desirable** facilities and services include public transportation service, parks, community trails, traffic calming devices, mid-block crossings and **off-site pedestrian and bicycle facilities**. These are facilities and services that may be expected in a reasonable timeframe from the occupancy of a development. A development application may be conditioned to facilitate desirable facilities and services based upon specific findings.

[3] These descriptions incorporate changes made by A-Engrossed Ordinance No. 799, which became effective November 27, 2015.

Washington County Transportation System Plan (TSP)

Overarching county polices related to pedestrian infrastructure are included under TSP Goal 8: Active Transportation.[4] Goal 8 directs county transportation providers to "create a built environment that encourages safe, comfortable and convenient active transportation options that are viable for all users." Supporting text adds that, "active transportation modes are essential components of the overall transportation system, meeting a variety of societal, environmental and economic goals," including environmental stewardship and energy sustainability, congestion alleviation, health, safety, efficient travel, cost savings and social equity, and attractive, efficient urban form.

More specific walkway-related strategies are included under TSP Objective 8.2: [5]

> **Objective 8.2** Provide a pedestrian network that is safe, comfortable and convenient for people of all ages and abilities.
>
> > **Strategy 8.2.1** Prioritize pedestrian projects that are technically and financially feasible and that also improve connectivity, fill gaps, and/or provide safe routes to schools, community facilities, commercial areas, transit stops, or essential destinations.
> >
> > **Strategy 8.2.2** Prioritize pedestrian projects based on need; factors to consider may include: safety, density (residential and employment), access to essential destinations and transit, and environmental justice factors, among others.
> >
> > **Strategy 8.2.3** Inside the Urban Growth Boundary, require that sidewalks are constructed along new or improved streets and along street frontages of new developments.
> >
> > **Strategy 8.2.4** Facilitate safe, convenient and comfortable pedestrian facilities through the provision of pedestrian scale amenities as deemed appropriate and in compliance with applicable regulations.

The TSP Goals, Objectives and Strategies are further refined in the TSP Modal Elements.[6] The TSP Pedestrian Element establishes that all roadways in the urban area (with the exception of freeways) are pedestrian routes, and delineates particular roadway segments and areas where enhanced pedestrian features are desired because of land use context and/or transit service. The Pedestrian Element also identifies county-adopted Regional and Community Trails. Pedestrian Element designations that have a particular bearing on walkway provision and features include Pedestrian Parkway, Streetscape Overlay, and Pedestrian/Bicycle District. Definitions (edited for brevity) and examples are as follows:

- **Pedestrian Parkway**: A major urban thoroughfare (typically an Arterial with transit service) that has the potential for significant pedestrian activity. Enhanced pedestrian facilities are encouraged to facilitate a safe, direct, efficient, comfortable walking

[4] The TSP Goals, Objectives and Strategies were adopted by A-Engrossed Ordinance No. 768 in 2013.
[5] Objective 8.2 also includes strategies 8.2.5 and 8.2.6, which pertain to enhanced pedestrian crossings and rural pedestrian activity areas, respectively.
[6] The TSP Modal Elements were adopted by A-Engrossed Ordinance No. 783 in 2014.

environment along and across these roadways, including enhanced pedestrian crossings and wide sidewalks. *Example: 185th Avenue between Springville Road and Farmington Road.*

- **Streetscape Overlay**: A segment of urban roadway (typically within a Town Center, Regional Center or Station Community) in which enhanced pedestrian features, expanded pedestrian facility dimensions and place-making amenities are encouraged to facilitate a comfortable and attractive walking environment and to leverage community and economic development. *Example: Cornell Road between 143rd Avenue and 119th Avenue.*

- **Pedestrian/Bicycle District**: An area where high use by pedestrians and cyclists is either observed or intended. Pedestrian-oriented design of streets, public spaces and land uses are generally required in these areas to provide a safe, direct, efficient, comfortable and attractive walking environment. *Example: Elmonica Station Community on 170th Avenue.*

In addition, the TSP Roadway Element includes **Special Area Street** designations in the Cedar Mill, Sunset Station, Merlo, Elmonica, Willow Creek and Raleigh Hills areas. These include existing or proposed Special Area Collectors, Special Area Neighborhood Routes, Special Area Local Streets and Special Area Commercial Streets. Special Area Street design standards typically include wider sidewalks, narrower paved widths and on-street parking. The sidewalks on Special Area Streets typically include individual trees in tree grates rather than continuous planter strips.

Washington County Community Plans

Some Community Plans require wider-than-standard sidewalks or prioritize certain areas for pedestrian network completion:

- **Cedar Hills – Cedar Mill Community Plan** requires arterials in areas with Transit-Oriented plan designations are required to have 12-foot wide sidewalks. This provision is detailed in the CDC and described in the next section.

- **Sunset West Community Plan** identifies pedestrian connectivity areas. The appropriate types of pedestrian improvements within these areas are sidewalks along streets, accessways, off-street trails, off-street pathways, or a combination of these improvements.

- **Metzger-Progress Community Plan** requires all new subdivisions, attached unit residential developments, and commercial developments to provide pedestrian pathways that allow public access through, or along, the development and connect with adjacent developments and/or shopping areas, schools, public transit, parks and recreation sites.

- **Chapter 2: North Bethany Subarea Plan of the Bethany Community Plan** contains provisions for sidewalk and interim pedestrian connections as identified in the CDC below.

D. Sidewalk Provision through Development

Many sidewalks in UUWC are provided by land development activity. Implementation documents that regulate development-provided sidewalks in UUWC include the CDC, Road Design & Construction Standards, Resolution & Order 86-95, and the Transportation Development Tax code. Pertinent provisions from these documents are described below along with legal nexus/proportionality considerations.

Washington County Community Development Code (CDC)

Sidewalks are one of several facilities regulated by CDC Section 501-2 (*Application of the Public Facility and Service Standards Inside a UGB*). Consistent with CFP Policy 14, Managing Growth, referenced earlier, "on-site pedestrian and bicycle facilities in the public right-of-way" are designated as an essential service and "off-site pedestrian and bicycle facilities" are designated as a desirable service (CDC Section 501-7.1). Additional regulations specific to sidewalks are included in CDC Section 502.

Below, in question/answer format, are several important sidewalk-related provisions in the CDC.

- **What type/scale of development is required to provide sidewalks?**

Development subject to the Public Facility and Service Standards includes all land divisions, property line adjustments, new construction of structures and expansion of existing structures, with some exceptions. The most notable exception is for "construction of a single (one [1] only) detached dwelling unit or duplex on an approved duplex lot…" (CDC Section 501-2.2).

However, CDC Section 502-1.4 states:

> Sidewalks shall be required to be constructed prior to occupancy for the following development in the unincorporated areas of Washington County within an Urban Growth Boundary:
>
> A. All development that is subject to the Public Facility and Service Standards as required by Section 501-2, except for:
>
> (1) Private streets for four (4) or fewer dwelling units pursuant to Section 409-3.3 A. (1), (2), and (4 - 7); and

(2) Residential development that meets the exemption criteria in Section 502-14; or

B. One (1) detached dwelling unit or one (1) duplex on a legally created lot or parcel when:

(1) The lot or parcel has two hundred fifty (250) feet or less of street frontage; and

(2) A sidewalk or temporary sidewalk exists, or is required to be constructed as part of a development approval, on an adjacent lot or parcel with the same street frontage.

While CDC Sections 501-2.2 and 502-1.4 may appear to be at odds, Current Planning staff have developed an administrative interpretation to **exempt sidewalk requirements for single family detached homes on lots of record**. This is based on the premise that the home to be constructed on the lot of record would not generate trips over and above what was already permitted on the site, and therefore public improvements would not be proportional to the development.

However, on a newly created single family lot created by a partition, a sidewalk may be required if the frontage is less than 250 feet and an adjacent sidewalk exists, per CDC Section 502-1.4.

Other exemptions from building sidewalks are available in CDC Section 502-14 (*Exemption From The Sidewalk and Temporary Sidewalk Construction Requirements*), including situations where there are topographic/environmental constraints and on Non-Arterial/Collector streets where there are no sidewalks and no divisible properties in the surrounding area. Nevertheless, CDC Section 502-14 further states that sidewalks may be required if it would benefit access to transit or pedestrian-oriented land uses, if there is a safety need due to high vehicle speeds or volumes, or if it is in a Transit-Oriented or Pedestrian District.

- **What are the design standards for required sidewalks?**

CDC Section 502-3.1 states that sidewalks shall be built in accordance with adopted county standards. The current county sidewalk standard, in effect since 2011, is a **five-foot concrete walkway separated from the curb by a minimum four-foot wide planter strip**.[7] The curb is typically six inches wide, resulting in a 9½-foot minimum pedestrian corridor, not including any space outside the sidewalk for utilities, topographic features or sound walls.

Sidewalk design modifications may be approved by the County Engineer. One common modification is to build a curbside sidewalk that omits the planter strip. Typical reasons for pursuing curbside sidewalks include limited right-of-way, topographic constraints, and/or a determination that other features of the roadway are considered to be more important for overall safety, such as a right turn lane. Curbside sidewalks have been built in many locations in UUWC, both by development activity and by county projects.

[7] The Washington County Road Design & Construction Standards were adopted by Ordinance 738 in 2011.

While both separated and curbside sidewalks provide safe walkway facilities, excluding the planter strip can have a negative effect on the perceived safety and comfort of the sidewalk, particularly along busier roadways. Insufficient data is available to determine whether separated sidewalks result in fewer pedestrian/vehicle collisions compared to curbside sidewalks. However, the additional horizontal separation ("shy distance") and provision of trees and light poles may reduce the potential of pedestrians being struck by vehicles departing the roadway. Conversely, trees and other objects within the planter strip can create visibility problems if these features are not properly designed and maintained.

In other circumstances, the county requires a sidewalk to be built along a development frontage at its ultimate location without completing other elements of the half-street. Typically this leaves an open ditch between the sidewalk and the roadway, and the roadway typically remains without a bike lane and without standard pavement width and base. The intent in these circumstances is to provide complete roadway, stormwater and bicycle facilities through a future capital project.

The CDC includes provisions for wider sidewalks in certain areas including the following:

- Eight-foot sidewalks are required along certain state highways. CDC Section 502-13.3 states, "Sidewalks shall be constructed in accordance with the adopted County Road Standards, except an eight-foot width shall be required along Beaverton-Hillsdale Highway, Canyon Road and Tualatin Valley Highway." In practice, sidewalks built to this standard have been built curb-tight with no planter strip, which conflicts with current county Road Design & Construction Standards. This is because the eight-foot sidewalk requirement on certain state highways predates the county requirement for planter strips. Application of both standards would theoretically yield a 12-foot pedestrian corridor including an eight-foot sidewalk and four-foot planter strip.

- Twelve-foot sidewalks are required along certain streets within Transit-Oriented plan designations indicated in the Community Plans. CDC Section 431-5.1 B (4) states:

  > Minimum sidewalk widths in Transit Oriented Districts shall be the widest identified by the Washington County Road Design and Construction Standards for the adjacent Special Area Street (as shown in the Transportation System Plan), except for Special Area Commercial Streets. Special Area Commercial Streets shall have sidewalks that are a minimum of twelve (12) feet in width. On Arterials within or adjacent to Transit Oriented Districts and which are designated as 'Streetscape Overlay' on the Pedestrian System Map in the Transportation System Plan, the minimum sidewalk width shall be twelve (12) feet.

  An example of an applicable segment where 12-foot sidewalks are required is NW Cornell Road in the Cedar Mill Town Center.

- Sidewalks along designated Special Area Commercial Streets in the Peterkort Station Area are required to be 15 feet wide (CDC Section 431-12.3 B (4)).

- North Bethany sidewalks are required to meet standards identified in CDC Section 502 (*Sidewalk Standards*) per CDC 501-10.1 G. Furthermore, a direct, safe and continuous pedestrian connection is required for pedestrian-oriented uses (schools, parks, recreation centers, commercial uses, and nearest transit stops). Interim pedestrian connections are required based on specific standards (CDC Section 501-10.2 F).

- **At what stage of development are sidewalks actually constructed?**

Subdivision public improvements are typically phased – usually the first phase is the roadways and the final phase is the sidewalks. Sidewalk completion is not required until homes or other buildings have been constructed on the lots. Small subdivisions typically do not have a major time lag in providing complete sidewalks. However, in large subdivisions (e.g., 50 or more homes), new residents in the first phase of the subdivision may experience sidewalk gaps in their community for many months if not years. During the economic recession of the late 2000s, many public improvements associated with subdivisions were left incomplete, perpetuating gaps in the walkway system. One way of potentially mitigating this situation in the future is to have the developer build temporary asphalt walkways in key locations as an interim solution.

Washington County Road Design & Construction Standards

The current Washington County Road Design & Construction Standards were adopted by Ordinance No. 738 in 2011. As referenced earlier, the county sidewalk standard for urban roadways is a **five-foot wide concrete sidewalk set back four feet from the back of curb** (section 340.060 and standard drawing 2110), or as otherwise specified in the county Comprehensive Plan. Grades and cross-slopes of sidewalks and crosswalks must meet Americans with Disabilities Act (ADA) requirements.

Curbside sidewalks – an exception to the County Road Design & Construction Standards – are allowed as determined and approved by the County Engineer. In cases of land development, this design exception is included in the development's Notice of Decision. Curbside sidewalks have been constructed in many circumstances along county roads, by development and as part of county capital projects. These non-standard sidewalks are often the result of difficult trade-offs between design optimization, available right-of-way and the proportionality of exactions from development.

The County Road Design & Construction Standards are anticipated to be updated in 2016 to reflect new pedestrian/bicycle designations and right-of-way requirements added to the TSP in 2014 and 2015, including Streetscape Overlays.

Washington County Resolution & Order 86-95

Resolution & Order (R&O) 86-95 (Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance – Process Documentation) was adopted by the Board of Commissioners in 1986. It establishes the process and criteria by which developments are required to make safety improvements to the roadway system. Appendix B to the R&O, which describes the criteria, states that:

> Sidewalks will be installed along the sites [sic] frontage, placed at ultimate location and grade, unless an exception is approved in accordance with the standard of the Community Development Code (CDC) Section 501-5.4.

In cases where a hazard is predicted, Appendix B states that:

> Off-site sidewalks which are needed to allow safe pedestrian travel from the development to an existing network of sidewalks or to an area of heavy pedestrian draw, such as a neighborhood commercial development, will be required.

Off-site sidewalks have been particularly difficult to implement because negotiation with a third party is usually required. If additional right-of-way is needed to construct the off-site sidewalk, the adjacent property owner may or may not be willing to sell it. In addition, the county does not have a standard procedure for measuring, predicting, setting thresholds or delineating impact areas for off-site pedestrian, bicycle or transit demand. R&O 86-95 establishes only a motor vehicle impact threshold, defined as locations where site-generated traffic equals or exceeds 10% of existing traffic.

While the core functions of R&O 86-85 are still effective, staff believes an updated framework is needed to better account for multiple transportation modes during development review. The county undertook a **Multimodal Performance Measures and Standards** project in 2013-2014 (funded by an Oregon Transportation and Growth Management grant) that explored potential tools and methods that could be incorporated into such an update.

Transportation Development Tax (TDT) Credit

The TDT is the countywide system development charge for transportation capacity improvements. Development applicants may receive credit against their TDT payment obligations for constructing eligible improvements that were conditions of development approval.[8] TDT credit eligibility for roadway improvements applies only to Arterials and Collectors, which make up about 30% of urban roads maintained by Washington County.

Sidewalks are eligible for TDT credit in very limited circumstances because they typically do not provide additional capacity beyond what a Local Street would provide. Variables that

[8] Washington County Code 3.17 regulates the Transportation Development Tax. TDT credit regulations are included in section 3.17.070.

affect credit eligibility for sidewalks include whether it is built larger or the same as the Local Street standard, whether it is contiguous or non-contiguous to the development site, and whether the roadway is or is not included in the adopted TDT Capital Project List. Table 1 below describes credit eligibility in these contexts.

Table 1: Transportation Development Tax Credit Eligibility of Sidewalks

	On the TDT Project List	**Not on the TDT Project List**
On or contiguous to the developing property		
• Built to local street standard	Sidewalk is not eligible	Sidewalk is not eligible
• Built larger than local street standard	Portion of sidewalk beyond local street standard is 100% eligible	Portion of sidewalk beyond local street standard is 75% eligible on arterials, 50% eligible on Collectors
• Right-of-way (ROW) is dedicated	ROW is 100% eligible based on assessed market land value in county tax records	ROW is not eligible
Neither on nor contiguous to the developing property		
• Built to local street standard	Sidewalk is 100% eligible	Sidewalk is 75% eligible on Arterials, 50% eligible on Collectors
• Built larger than local street standard	Sidewalk is 100% eligible	Sidewalk is 75% eligible on arterials, 50% eligible on Collectors
• Right-of-way is dedicated	ROW is 100% eligible based on reasonable market value purchased from a third party	ROW is 100% eligible based on reasonable market value purchased from a third party

Under no circumstances are sidewalks along Neighborhood Routes or Local Streets eligible for TDT credit. However, several Neighborhood Routes in the North Bethany subarea are eligible for North Bethany Transportation System Development Charge (NBTSDC) credit. The NBTSDC is a separate charge that is regulated by similar, but not identical, code language as the TDT.

Legal Considerations

Sidewalks and other public improvements required of development are subject to the legal concepts of **nexus** and **proportionality** as established through case law in the United States. Several court cases have created a framework in which LUT must carefully consider how the private cost of frontage improvements may or may not be proportional to the scale and

impact of development. With no objective criteria or standards available to measure proportionality, the county has had to rely on informal back-and-forth negotiations with development applicants as well as more formal proceedings and decisions by Hearings Officers. If disagreement persists, the applicant or the review authority may appeal to the state Land Use Board of Appeals (LUBA), followed by the Oregon Court of Appeals, Oregon Supreme Court and U.S. Supreme Court. It is worth noting that the nation's most significant legal test of proportionality – Dolan v. City of Tigard – occurred in Washington County.

This and two other U.S. Supreme Court cases have had a profound impact on development requirements:

- In **Nollan v. California Coastal Commission** (1987), the Court decided that there was not a sufficient nexus for the Coastal Commission to require a public easement across beachfront property as a condition for rebuilding a house, and it was therefore an unconstitutional taking. As a result of the case, review authorities must make a clear connection – nexus – between the required condition and the impact of the development.

- In **Dolan v. City of Tigard** (1994), the Court ruled that there must be "rough proportionality" between a required land dedication and the development's impact. In this case, the requirement to dedicate land to the city for the construction of a pedestrian/bicycle trail was ruled to be disproportionate to the impact of expanding an existing plumbing/electric supply store.

- In **Koontz v. St. Johns River Water Management District** (2013), the Court ruled that the Nollan/Dolan tests of nexus and proportionality apply in situations where a permit is denied, and they apply in cases where money is demanded instead of improvements or land. The case effectively expanded the reach of nexus/ proportionality considerations, including fee-in-lieu situations.

On a relatively frequent and increasing basis, development applicants in UUWC have been appealing land use decisions because they feel sidewalk and other public improvements required by the county are too onerous and disproportionate to the scale of development. Hearings Officers have often sided with the applicant, resulting in no sidewalks. Recent examples include the following:

- **SW 85th Avenue Partition** (Case File 14-365-P Appeal) – The Hearings Officer (H.O.) determined that staff had not demonstrated that the required improvements (a half-street with sidewalk) were related in nature or roughly proportional to the impact of the partition. The H.O. also determined that sidewalks should not be required due to the lack of sidewalks in the vicinity of the site and because the partition itself would not generate any pedestrian traffic to require the improvement.

- **Lithia Mini Auto Dealership Expansion** (Case File 14-289-D(C)-Appeals) – The H.O. determined that the cost of the required improvement (widening the roadway to accommodate a bike lane, relocating the sidewalk and dedicating the appropriate right-of-

way along SW Canyon Road) was disproportionate to the scale of the proposed development.

- **Chestnut Corner Subdivision** (Case File 14-460-S Appeal) – The H.O. determined that the required improvements (half-streets with sidewalk along two intersecting streets) were not appropriate due to the limited impact of the proposed subdivision. The applicant proposed to replace four pre-existing dwelling units with four new units, theoretically resulting in no new transportation impacts. The H.O. ultimately required temporary, at-grade sidewalks along the site's two street frontages, unless one or both temporary sidewalks trigger Clean Water Services requirements to construct stormwater facilities.

In addition, "minimum density" developments tend not to be required to make sidewalk improvements due to proportionality. Development applications that do not meet minimum density requirements may be approved if future development plans are submitted with the applications. A future development plan must demonstrate how the entire site can be ultimately developed consistent with the minimum density and other applicable standards of the CDC. For example, a two lot partition that may ultimately accommodate additional, denser development would most likely not be required to make sidewalk improvements due to the disproportionate cost relative to the development action.

Notwithstanding the cases above, LUT has been successful in requiring sidewalks on a large majority of development applications. Looking specifically at the 20 urban partition[9] casefiles that were marked final or approved in calendar year 2014:

- **Seven** casefiles resulted in sidewalk construction on all frontages (totaling nearly 1,100 lineal feet);

- **Nine** casefiles had pre-existing sidewalks on the frontages (These were typically partitions within recent subdivisions or serial partitions[10]);

- **One** casefile resulted in 90 feet of sidewalk constructed and 158 feet of sidewalk exempted due to a provision in CDC Section 502-14 (*Exemption From The Sidewalk and Temporary Sidewalk Construction Requirements*);

- **One** casefile resulted in a Hearings Officer decision to remove a requirement to build 100 feet of sidewalk; and

- **Two** casefiles were not included in this analysis because the partition was a small part of a larger development.

[9] A partition is defined in the Oregon Revised Statutes (92.010) as a land division that creates no more than three parcels.
[10] A serial partition is when a de facto subdivision is created through multiple, adjacent partitions.

Development Industry Perspectives

Most developers are willing partners in constructing public improvements within and along their development sites. In some cases, however, developers find the county's public improvement requirements to be burdensome.

As an example, in 2014 a representative of the Homebuilders Association of Metropolitan Portland (HBA) contacted county staff to raise a proportionality issue with the SW 85th Avenue partition described above, in which the required improvements exceeded the value of the lot. During this contact, the HBA representative requested process improvements for determining public facility requirements, mentioning the City of Portland as an example. The HBA representative described a city process in which developers can learn of and contest public improvement requirements prior to formal submittal and for a small fee. The HBA representative stated that this process provides the opportunity to reconsider a development project before making significant investments including land use fees.

LUT staff confirmed with Portland Bureau of Transportation (PBOT) staff that there is an **Early Assistance for Public Works** program that allows applicants to submit development proposals and receive an assessment of what public improvements would be required, for a $150 fee. However, this program is limited to developments of one or two single family homes and does not apply to developments that necessitate land use review (e.g., partitions and subdivisions). For eligible participants that are not satisfied with the proposed requirements, two levels of appeals are available, each with a $250 fee. The first appeal is the Alternative Review process which allows applicants to propose alternatives to a Public Works Alternative Review Committee. The second appeal is to a Public Works Appeal Panel consisting of residents and other volunteers. After exhausting these options, applicants can either reconsider the project or proceed to formal submittal of the land use application (which includes appeal opportunities similar to those in Washington County).

LUT does not have a program comparable to Portland's Early Assistance for Public Works program, but it does offer two processes that provide early notification of public facility requirements: the Pre-Application Conference ("pre-app") and the Traffic Impact Statement (TIS). As of July 2015, fees for pre-apps and TISs are $268 and $400, respectively.

The pre-app is intended to provide important, multi-faceted information about developing a property, including the plan designation, identification of any natural resources or special areas of consideration, and identification of all applicable CDC sections that require attention – including public facility requirements. Pre-apps are required for most Type II and Type III land use applications, though waivers are available. Pre-apps for Type I applications are voluntary.

A TIS is more detailed and provides development applicants with a preliminary, site-specific list of applicable county transportation improvement requirements. A TIS is mandatory for all development generating 40 or more average daily vehicle trips, including residential developments with four or more dwelling units. The TIS must be completed and submitted as part of the land development application.

Staff believes that the pre-app and TIS processes, combined with informal phone and e-mail communication between staff and applicants, provide developers with adequate, early information on public facility requirements. In addition, LUT's ability to address transportation-specific requirements prior to plan submittal has improved with the hiring of a Transportation Planner within the Current Planning section.

E. Walkway Provision through Public Projects

LUT has been proactively addressing walkway gaps in UUWC by investing public funds, from large capital projects that rebuild entire roadways for all modes of travel, to smaller infill projects that construct interim improvements. The sections below describe funding sources available for walkway projects and methods used to prioritize projects and measure progress toward completing the walkway network.

Funding Sources

Washington County has a number of different funding sources available to address walkway gaps. These are described below.

- **Major Streets Transportation Improvement Program (MSTIP)** – Washington County's property tax-funded MSTIP program addresses multimodal safety and capacity issues on the System of Countywide Interest, an agreed-upon system of Arterial and limited Collector roadways[11]. Through 2018, MSTIP will have invested $730 million in 130 multimodal projects since the program's inception in 1986. Currently about $35 million is available annually through the program. MSTIP projects are significant in scope and have allowed dozens of miles of new sidewalk to be built in long, continuous stretches. Some MSTIP projects do not provide additional motor vehicle travel lanes and are therefore focused primarily on providing pedestrian, bicycle and lighting improvements. Examples include SW Oleson Road, SW 170th Avenue south of Farmington Road, and the upcoming SW 198th Avenue project. As of this writing, projects are being developed for the next round of MSTIP, called MSTIP 3e. This round of funding will construct projects over the five-year period from 2019 through 2023.

  MSTIP also includes two offshoot programs:

  - **MSTIP Opportunity Fund** – In 2012 the Board established a $5 million set-aside of MSTIP 3d (the current five-year allocation of MSTIP) for the purpose of providing matching funds for competitive grants. Project eligibility is broad, but is intended to focus on unique projects that would not otherwise meet the intent of the core MSTIP

[11] The System of Countywide Interest map was endorsed by the Washington County Coordinating Committee (WCCC) in 2007 and subsequently amended in 2012 and 2015. The latest version is scheduled to be endorsed by the WCCC in January 2016 as part of the MSTIP 3e process.

program, including stand-alone pedestrian/bicycle improvements, access-to-transit projects, travel demand management (TDM) and intelligent transportation systems (ITS). The Board and Washington County Coordinating Committee (WCCC) have indicated support for increasing the Opportunity Fund allocation to $7.5 million under MSTIP 3e.

- **Residential High-Growth Transportation Funding Program** – Approved by the Board in June 2015, this program is funded by bonds paid back by anticipated growth in the MSTIP fund. It is intended to address safety and capacity needs on county roads near major new development areas along the edge of the Urban Growth Boundary. The approved 10-year list of projects includes several projects that focus primarily on pedestrian, bicycle and lighting improvements, including NW Thompson Road near Bonny Slope West, SW Kinnaman Road near South Hillsboro, and SW Tile Flat Road near South Cooper Mountain. Other projects that add vehicular capacity are also constructing sidewalks in places where they do not currently exist, such as NW Springville Road near North Bethany and SW Roy Rogers Road near River Terrace.

- **Transportation Development Tax (TDT)** – The TDT, which replaced the Traffic Impact Fee (TIF) in 2009, is a countywide transportation System Development Charge (SDC). TDT revenues, consistent with state statutes pertaining to SDCs, can be spent only on additional capacity for future users. Pedestrian/bicycle improvements are eligible for TDT spending because they increase the capacity of the roadway. TDT and TIF have been used to expand a number or roadways to include additional vehicle lanes, bike lanes and sidewalks. Washington County's first TDT capital investment will be the widening and realignment of NW Springville Road between 185th and 178th Avenues, including complete sidewalks on both sides of the road.[12] TDT revenues vary annually. Unincorporated Washington County collected approximately $8.5 million in FY 2014-15 and had an account balance of approximately $19.9 million on August 3, 2015.

- **Minor Betterment Program** – The Minor Betterment program was a small allocation of the county Road Fund originating from fuel taxes. The intent of the program was to provide small-scale improvements that were beyond routine maintenance but not large enough to be programmed as capital projects. Many (but not all) Minor Betterment projects filled gaps in the pedestrian network. These pedestrian improvements typically did not meet county sidewalk standards. Instead, asphalt pathways or wide shoulder walkways were provided to fill walkway gaps in a low cost fashion. Each year, project candidates were collected from the public and a joint citizen-staff selection committee scores and prioritizes projects based on Candidate Evaluation Criteria. The committee invited and reviewed public comments on the top candidates prior to making a recommendation. The Minor Betterment program is funded at $500,000 for FY 2015-16 and will fund three projects. There is currently no plan to fund the Minor Betterment

[12] The project is in design phase as of January 2016. Several cities in Washington County have already spent TDT on capital improvements within their respective jurisdictions.

program for FY 2016-17 and beyond. For the foreseeable future, the Road Fund is needed to address deferred road maintenance.

- **Urban Road Maintenance District (URMD) Safety Improvement Program** – The URMD taxing district covers much of UUWC and is used primarily for maintenance of Local Streets and Neighborhood Routes. The URMD is funded through property taxes, with an assessment of $0.2456 per $1,000 in assessed property value. In 2011 the Board decided to set aside some URMD funds for safety projects, including pedestrian infrastructure needs. In FY 2015-16, $2.5 million was allocated to six URMD Safety projects. The citizen-led URMD Advisory Committee (URMDAC) uses a process similar to the Minor Betterment Program to prioritize projects, using the same Candidate Evaluation Criteria and public comment process. In addition, funded improvements draw from the same list of candidates and are constructed in a similar fashion to Minor Betterments. The URMD Safety Improvement Program is anticipated to continue until county roadways begin to approach minimum Pavement Condition Index (PCI) levels, at which time the funds will likely be redirected back to pavement maintenance. When the program was originally proposed, it was projected to have $17 million available over 10 years. Actual spending after four years has been $8.5 million due to higher project costs. URMDAC has recommended projects estimated to cost about $2 million for FY 2016-17. Assuming a continued allocation of $2 million per year, the program should be able to function through FY 2019-20 or FY 2020-21. It might last a year or two longer if pavement deterioration is slower than projected or if assessed valuations increase at a rate higher than currently projected.

- **Local Improvement District (LID)** – Per County Title 3 – Revenue and Finance, Chapter 3.20, LIDs can be formed for the purpose of constructing, operating and maintaining public improvements financed wholly or in part by a special tax assessment on benefitting properties. LIDs have been used by LUT Operations & Maintenance Division to upgrade gravel roads and to chip-seal roads. A handful of LIDs are also in effect for traffic calming measures and ongoing road maintenance. So far, LIDs have not been used to build sidewalks on county roads, in part due to the relatively high costs of drainage, water quality, ADA compliance and utility relocations. These costs would likely exceed what property owners are willing to pay for sidewalk installation. However, CDC Section 502-8 (*Developed Area Sidewalks*) enables the Board to create LIDs for the express purpose of constructing sidewalks along already developed properties. For such LIDs, a petition must be signed by at least 51 percent of property owners within the proposed LID and those who sign must also represent a majority of the linear frontage of the proposed sidewalk.

- **County Service District (CSD)**. State statute allows the county to form a service district and levy ad valorem property taxes for the purpose of constructing road improvements.[13] The URMD is one such district. Washington County established another CSD in the North Bethany subarea to help finance new roads and improvements to existing roads in the area. Properties within that CSD are assessed $1.25 per $1,000 of assessed value for a

[13] ORS 371 – Road Districts and Road Assessment Plans; ORS 451 – County Service Facilities.

period of thirty years. It is anticipated that the North Bethany CSD will raise approximately $22 million over this time period. CSDs typically must be approved by voters who live in the affected area. A CSD specific to sidewalk improvements could be explored for other areas of UUWC.

- **Federal transportation funds** – Outside of pass-through funds to the state, most ongoing federal transportation funds are managed by Metro regional government and are programmed every three years through the Metropolitan Transportation Improvement Program (MTIP). A subset of these funds is made available to local jurisdictions through a competitive process known as the **Regional Flexible Fund Allocation** (RFFA). The last RFFA round allocated 75% of funds for "active transportation/complete streets" and 25% for freight projects. The next round (2019-21) is anticipated to have at least $38 million in competitive funds available for capital projects around the region. Policies are still under development as of this writing. Past RFFA active transportation funds have been used to fund trails, sidewalks, pedestrian crossings and bicycle infrastructure.

  Generally speaking, federal transportation funds have been stagnant while needs have been increasing. The Federal Highway Trust Fund has been eroded by inflation and reduced per capita fuel consumption and has required backfilling from the U.S. Treasury. After years of short-term extensions of the previous transportation bill, Congress passed and the President signed the **Fixing America's Surface Transportation (FAST) Act** in December 2015. While the bill does not solve the systemic transportation funding problem, it does provide five years of stable federal funding for transportation, including increased allocations for local governments and for Transportation Alternatives – the set-aside typically used for pedestrian/bicycle projects.

  Other federal sources include the following:

  - **Federal Community Development Block Grants (CBDG)** – Federal funds are available from the U.S. Department of Housing and Urban Development to fund infrastructure in communities that meet certain demographic and economic characteristics. Sidewalks are an eligible and common expense of CDBG funds. In 2014, Washington County used CDBG funds to build a sidewalk on SW 173rd Avenue linking to Aloha-Huber School. During this project LUT Engineering staff found that it was not cost-efficient to use federal funds to construct such a small project.

  - **Transportation Investments Generating Economic Recovery (TIGER)** Now in its seventh round, the U.S. Department of Transportation offers discretionary grants for large, "shovel-ready" capital projects or major transportation planning projects. The 2015 grant round, called TIGER VII, had $500 million available nationwide. Stand-alone sidewalk projects typically do not compete well for TIGER funds, unless bundled into larger projects such as industrial access, corridor revitalization, bridge or transit capital projects.

- **State transportation funds** – The Oregon Department of Transportation (ODOT) administers state transportation funds, which are predominantly pass-through funds from the Federal Highway Trust Fund. Prior to 2013, ODOT maintained funding set-asides for Transportation Enhancements and Safe Routes to School. These programs were commonly used for sidewalks, including a 2013 Washington County project on NW 90th Avenue and Stark Street near West Tualatin View Elementary School. Currently all non-maintenance state transportation funds are bundled into an allocation called "**Enhance**" under the **Statewide Transportation Improvement Program** (STIP). Sidewalks and other pedestrian improvements along Tualatin Valley Highway in Aloha have been funded through STIP Enhance. STIP Enhance funds are increasingly limited as federal transportation funds stagnate and more emphasis is placed on basic maintenance. Separately, a portion of Oregon Lottery funds are allocated into a transportation program called **Connect Oregon**. However, eligible improvements for past rounds of Connect Oregon have focused on off-street pedestrian/bicycle connections, rail freight and maritime improvements. Another effort to raise additional state transportation funds through increased fuel taxes and vehicle fees failed during the 2015 state legislative session but may be revisited in the 2017 session.

- **Gain Share –** Washington County receives a share of state income tax revenue generated by firms that have received tax abatements through the Oregon Strategic Investment Program. In 2013 the Board agreed to allocate $15 million in Gain Share funds (about 7% of projected Gain Share funds) to pedestrian/bicycle projects throughout the county. LUT selected 15 projects, drawing from the DOE and Minor Betterment project lists and other sources. Eleven of these projects, totaling $6 million, have gone to construction. In July 2015, Oregon Senate Bill 129 modified the Gain Share agreement, resulting in a $16 million annual cap on funds for Washington County. This had the effect of cancelling any Gain Share ped/bike projects that were not already underway. The County Administrative Office (CAO) reworked the Gain Share spending program and on December 15, 2015 the Board adopted a revised program that dedicates $2 million per year over ten years for "Safe Access to Schools." Intent moving forward is to invest this $20 million in sidewalk, crosswalk and accessway projects identified in the 2015 School Access Improvement Study.

Taylor Street sidewalk constructed with Gain Share funding in December 2015.

Prioritization Methods

LUT has taken deliberate steps to prioritize sidewalk on county roads. Efforts have included the following:

- **Small Road Improvement Candidates List / URMD Safety Public Comment Process** – LUT Operations maintains a list of sidewalk gaps and other needs, populated by ongoing service requests from the public. Through the previous Minor Betterment and URMD Safety programs described above, LUT calls on the public to comment on nominated candidates. The process has been effective; however, some neighborhoods are more active than others in nominating candidates.

- **Bicycle and Pedestrian Improvement Prioritization Project** – The aforementioned DOE project identified over 500 sidewalk and bike lane gaps on Arterials and Collectors in urban Washington County. These gaps were evaluated using criteria including population density and land use mix, surrounding street connectivity, safety, and benefits to traditionally underserved communities. Outcomes included the identification of 30 high-priority sidewalk and bike lane projects with planning-level cost estimates.

- **Aloha-Reedville Study and Livable Community Plan** – Based on direction gleaned from an extensive public involvement process, LUT staff identified and prioritized a list of 99 sidewalk, crossing and accessway projects that would provide safe, convenient walking access to public K-12 schools in the area. The prioritization involved pedestrian network modeling that estimated potential usage levels for home-to-school trips. The resulting prioritized list included 11 sidewalk projects.

- **School Access Improvement Study –** Completed as part of Washington County's Safe Routes to School program in October 2015, this document identifies and provides planning-level cost estimates for key walkway and other pedestrian projects that would help students safely walk to public schools in UUWC. The study identifies over $98 million in projects for a total of 53 schools. Further prioritization of projects will be necessary.

- **Transportation Improvement Master List (TIM) –** GIS staff have developed an interactive mapping tool available to all LUT employees to keep track of the wide range of transportation improvement needs that have been identified in plans, by staff and through public comments. While TIM is not a prioritization tool per se, it allows users to view improvement needs in the context of other information in order to better inform decision making. It is a particularly good tool for identifying needs that appear on multiple project lists or have been requested by the public multiple times.

Measuring Progress

As part of the TSP update in 2014, LUT staff developed performance targets for sidewalk and bike lane completion on urban Arterials and Collectors in Washington County.[14] For sidewalks, the performance target is 84% of Arterial/Collectors having sidewalks on both sides of the street by the year 2040. This would represent a 50% increase in sidewalk miles in concert with the Metro Regional Transportation Plan performance target for "Basic Infrastructure" (2014 RTP Table 2.3). Complete implementation of the TSP Capital Project Candidate List would result in 70% of Arterials and Collectors having sidewalk coverage on both sides, moving Washington County about halfway toward the target. Staff intends to maintain and periodically update the Arterial/Collector sidewalk inventory as county projects and development incrementally move the county toward a complete sidewalk network.

Additionally, LUT Operations & Maintenance Division hosts a central repository of transportation asset information called the **Integrated Road Inventory System (IRIS)**, along with a graphical user interface called **Asset Browser**. Together these tools document facility characteristics and conditions as well as facility permit information. Primary data classes available on Asset Browser include: Jurisdiction, Permits, Bridges, Signals, Culverts, Street Lighting, and Road Projects. IRIS and Asset Browser may be appropriate tools for developing a comprehensive sidewalk and bike lane inventory for county roadways.

IV. Analysis

This section provides a summary of key takeaways from the preceding Background section, then provides an analysis of different walkway types from a cost and safety perspective.

A. Key Takeaways from Background Section

Major findings from the Background section, which help inform the subsequent Analysis and Recommendations, include the following:

- While over half of the Arterial/Collector mileage in urban Washington County has walkways on both sides of the street, nearly one-fifth has no pedestrian facilities and one-quarter has interim and/or one-sided walkways. In Aloha-Reedville, one-third of walkways are missing on all roadway types.

- Different eras of development, stalled subdivisions, different county funding programs, and varied application of county codes and standards have resulted in a patchwork of standard, non-standard and/or absent walkways.

[14] A-Engrossed Ordinance 783, Technical Appendix 3: System Evaluation, pp 64-65, October 2014.

- There is strong policy and code guidance in the Comprehensive Framework Plan for the Urban area, Transportation System Plan, Community Plans and Community Development Code to improve the walkway network in UUWC.

- Sidewalks are required for most development; exceptions include single family lots of record and single family lots with greater than 250 feet of frontage and/or no existing, adjacent sidewalks.

- The county sidewalk standard is a five-foot concrete walkway set back four feet from a six-inch curb; wider sidewalks are required or recommended in areas where more pedestrian activity is expected. Non-standard curbside sidewalks have been built in many locations due to right-of-way constraints and trade-offs with other features of the roadway.

- R&O 86-95 – the county's process for determining transportation safety improvements by development – does not adequately address non-vehicular needs, especially off-site.

- The Transportation Development Tax code allows credit for building sidewalks only in rare circumstances, including if they are built off-site and/or larger than standard.

- Sidewalks that are required as conditions of development approval are subject to appeal based on the legal concepts of nexus and proportionality as established by U.S. Supreme Court case law (Nollan/Dolan/Koontz).

- Development applicants are increasingly exercising these appeal rights to oppose sidewalk and other public improvement requirements; Hearings Officers are increasingly deciding in favor of the appellants.

- The Homebuilders Association has requested earlier notification of what public facility improvements will be required; the county offers the Traffic Impact Statement process and pre-application conferences for this purpose.

- Washington County has access to at least 14 available funding sources to construct sidewalks, at least five of which are controlled or managed by the Board of Commissioners.

- State and federal transportation funding is stagnant and not keeping pace with inflation and system needs; it is increasingly unreliable as a source for enhancement funds, even with recent passage of the federal FAST Act.

- The CDC, Washington County Code and state statute enable the county to use LIDs and CSDs to construct sidewalks; however, property owners may not be willing or able to shoulder all of the associated costs, such as stormwater treatment.

- Through several different processes, Washington County has prioritized sidewalk needs on urban Arterials and Collectors, near schools in Aloha-Reedville and in other locations in UUWC; matching these needs with funding is the next logical step.

- Washington County has tools in use to continually monitor sidewalk needs, including the Transportation Improvement Master List, the DOE/TSP Arterial/Collector sidewalk inventory, and Operations & Maintenance IRIS and Asset Browser.

B. Walkway Construction Cost

Staff performed an analysis of infill walkway projects recently built by the county to assess the cost differences between different walkway design and material types. Because of the variety of contexts and scales in which the projects were built, this analysis was inconclusive and is not included in this paper. Generally, walkway projects cost between $250 and $500 per lineal foot to construct. This cost covers engineering, project management, inspection, construction and contingency necessary to provide a walkway facility that is four to five feet wide. As with any cost estimate, unique circumstances at each particular project site can add or subtract from these numbers. In particular, stormwater improvements and right-of-way tend to inflate project costs significantly. Typically, a wide-shoulder walkway is less expensive to construct than a concrete separated sidewalk. Cost differences between concrete and asphalt construction were inconclusive. Long-term maintenance costs also must be considered.

C. Safety Analysis of Different Walkway Types

All dedicated walkway facilities provide improved safety for people walking. The Federal Highway Administration publication, *Safety Benefits of Walkways, Sidewalks, and Paved Shoulders*,[15] notes that approximately 4,500 pedestrians are killed by motor vehicles annually (representing 13% of all traffic fatalities), and that 8% of these collisions are "walking along roadway" crashes. FHWA cites safety benefits of both sidewalks and wide shoulder walkways, based on a literature review. Specifically, the agency finds that:

- Sidewalks on both sides of the roadway reduce "walking along roadway" crashes by 88%.
- Paved wide shoulders (minimum 4-foot width) reduce "walking along roadway" crashes by 71%.

Providing guidance on appropriate contexts for the above walkway types, FHWA notes that:

> Sidewalks should be considered the preferred treatment for accommodating pedestrians in urban areas and where frequent pedestrian use is expected. For less developed areas with occasional

[15] US Department of Transportation, Federal Highway Administration Safety Program, 2010.

> pedestrian traffic expected, walkable shoulders (a minimum of 4 feet stabilized or paved surface) should be provided along both sides of rural highways.

The concept of "perceived safety" is also important to consider when making decisions about walkway types. FHWA makes the case that:

> Providing walkways for pedestrians dramatically increases how well pedestrians perceive their needs are being met along roadways. The wider the separation is between the pedestrian and the roadway, the more comfortable the pedestrian facility.

For this reason, separated sidewalks are the design and construction standard for many jurisdictions, including Washington County. LUT staff have received feedback from individuals and entities with safety concerns about wide-shoulder walkways and curbside sidewalks. Beaverton School District staff has stated that wide-shoulder walkways will not be considered as part of a school-sanctioned "safe routes to school," particularly if located along busier roadways.

However, wide-shoulder walkways, curbside sidewalks and other non-standard walkway facilities will continue to be installed in certain situations to fill critical gaps in the walkway network at a reasonable cost.

V. Recommendations

To better address walkway gaps in UUWC, staff recommends further consideration of 11 different options, including six potential **administrative** changes that can be implemented by staff, and eight potential **legislative** changes that would require adoption by the Board of Commissioners. Each recommendation below is accompanied by supporting information. The word "potential" is included under both headings to indicate that the Board and Planning Commission may want to weigh in on these recommendations.

Potential Administrative Changes:

1. ***Expand capabilities and usage of the Transportation Improvement Master List (TIM) for documenting, characterizing, mapping and monitoring walkway gaps and programmed projects.***

   The county has a well-developed Geographic Information System (GIS) that is being used to keep track of walkway gaps and to monitor progress toward meeting sidewalk completion goals. TIM was developed with the purpose of consolidating and digitizing a number of different project or project candidate lists maintained by county staff in different divisions. The consolidated list is mapped and made available to all staff through a web-based GIS tool. TIM is a good platform for finding sidewalk project opportunities that have been identified on multiple lists. For example, a certain segment of county roadway may appear on the DOE

list and the Small Road Improvement Candidates List while also receiving multiple public requests for improvement.

Another desired function that could be integrated with TIM is providing Current Planning (and other) staff with better information on committed sidewalk projects in the area of proposed development, including Trust & Agency accounts and Facility Permits. For example, if it is known that a particular developing property is located immediately to the east of a funded county sidewalk project, and immediately to the west is a Trust & Agency account dedicated to frontage improvements, LUT staff could work together to deliver a cohesive sidewalk project connecting all three locations.

In concert with TIM and IRIS, the Arterial/Collector sidewalk inventory created through the DOE project and updated during the 2014 TSP update should continue to be updated as sidewalks are completed by county projects and development improvements. Doing so would provide staff with an indication of how well the county is progressing toward its goal of 84% of Arterials and Collectors having sidewalks on both sides of the street.

The process of updating TIM should continue, including adding new project needs that arise, as well as changing the status of projects once they are funded and constructed. Staff from multiple LUT divisions would be involved in this effort, with Long Range Planning GIS staff in a coordination role.

2. Add walkway presence/absence information to the Integrated Road Inventory System and Asset Browser.

The Integrated Road Inventory System (IRIS), maintained by LUT Operations and Maintenance Division, is the county's centralized digital repository for transportation-related features and assets. Asset Browser, also maintained by LUT Operations, is a graphical user interface that depicts IRIS information along with a variety of other features and details drawn from database and GIS platforms. IRIS is generally more spatially precise and updated more frequently than TIM. As a result, IRIS is probably the most appropriate platform for storing and updating walkway information for county roadways. LUT Operations staff have begun integrating and quality-checking walkway information from a variety of sources, including the DOE/TSP Arterial/Collector inventory, the 2015 School Access Improvement Study, the Aloha-Reedville Study, and as-built development. Unique walkway information is shown for each side of the roadway for superior visualization, and any walkway typology information is being preserved from the source data (for example, standard sidewalk vs. non-standard walkway). Sidewalk data will continue to be updated by LUT Operations staff on an ongoing basis as data becomes available and resources allow, with the ultimate goal of completing walkway information for all road segments maintained by Washington County. Walkway information stored in IRIS will be graphically depicted in Asset Browser. Staff may also consider adding Trust & Agency account information to Asset Browser.

3. ***Focus walkway project development efforts on gaps identified in the following sources:***
   - ***Washington County Bicycle and Pedestrian Improvement Prioritization Project ("DOE project," 2012)***
   - ***Aloha-Reedville Study and Livable Community Plan, Addendum C: Pedestrian and Bicycle Plan (2014)***
   - ***School Access Improvement Study (2015)***
   - ***Small Road Improvement Candidates List (ongoing)***
   - ***External sources, including the TriMet Pedestrian Network Analysis, ODOT Pedestrian/Bicycle Inventory, and the Metro Regional Active Transportation Plan***
   - ***Future studies that identify and prioritize sidewalk gaps.***

   LUT staff has spent considerable time and resources over the past four years identifying and prioritizing the most critical sidewalk gaps on county roads. The DOE project addressed Arterials and Collectors; the Aloha-Reedville and School Access Improvement Study efforts identified needs on all roadway types near schools; and the Small Road Improvement Candidates project list is a good source for other gaps identified by the public. Funding allocated through recommendation #11 should be applied to these identified sidewalk priorities.

4. ***As part of future capital projects and facility permits, identify opportunities to strategically and efficiently address walkway gaps on other roadways in the immediate vicinity.***

   Common practice during major Washington County capital projects has been to address some deficiencies on nearby, adjacent roadways. For example, the NW Cornelius Pass Road project between U.S. 26 and Cornell Road is constructing missing bike lanes along intersecting Evergreen Parkway. The SW Farmington Road project in Beaverton is realigning 141st and 142nd Avenues to create a standard, four-point intersection. The 124th Avenue / Basalt Creek Parkway project is improving the geometry of Tonquin Road in both directions. Some LUT staff have been referring to these efforts as "backpack projects" – one or more small projects attached to a larger project. A backpack project can be accomplished more efficiently as part of major capital project than as a stand-alone project because of overhead and mobilization costs.

   As future capital projects are scoped, efforts should be made to scan the immediately surrounding area and reference the plans and studies listed under recommendation #3 to identify walkway gaps that could be addressed without taking significant funds away from the core project.

   Similar efforts could be implemented when private contractors are completing required right-of-way improvements through the Facility Permit process as part of development. The county would reimburse the developer/contractor for any work above and beyond the conditions of approval.

5. Identify interim system completion targets for different roadway functional classes, or for different locational contexts (such as Pedestrian/Bicycle Districts or areas near schools).

One way of helping ensure that walkway investments are being made in the most sensible, beneficial locations is to identify different system completion targets for different contexts. The System Evaluation[16] performed as part of the 2014 TSP update proposed a target of 84% sidewalk completion along Arterials/Collectors by the year 2040. This target could be bifurcated and broadened to identify different walkway completion targets for different roadway functional classes. Presumably, Arterials would have the highest targets and Local Streets would have the lowest.

Alternatively, a more context-sensitive approach could be taken in which walkway completion targets are determined by location with respect to one of more of the following adopted or non-adopted features:

- Public schools (e.g., one-quarter-mile radius around schools)
- Transit stops (e.g., one-quarter-mile buffer of streets with transit, or a radius around Major Transit Stops adopted in the Community Plans)
- Pedestrian Parkways and/or Streetscape Overlays adopted in the TSP
- Pedestrian/Bicycle Districts adopted in the TSP

Completion targets developed based on this recommendation would likely take the form of an unofficial department policy. If more formal action is desired, the policy could be memorialized by a Board Resolution and Order. Complex performance targets with multiple gradations and contexts are probably not appropriate to adopt into the TSP.

6. Institute a more coordinated, intra-divisional effort to prioritize transportation projects (including walkway projects) and match them with appropriate internal and external funding sources, including a regularly-scheduled transportation project "super-committee."

Washington County is fortunate to have several local transportation funding programs established by current and past Boards and voters (MSTIP, TDT, URMD, Gain Share, etc.), and to have access to external funding (RFFA, STIP, etc.). While these programs are effective, they are also somewhat "siloed." Different staff manage different programs, and often times priorities must be re-evaluated at each funding opportunity. Instituting a formal, consolidated Capital Improvement Program (CIP) has not been the recent practice at LUT, mainly due to concerns about inflexibility and the uniqueness of each funding program. LUT's closest analog to a CIP is the Capital Project List included in the Technical Appendix to the TSP.[17]

[16] A-Engrossed Ordinance 783, Technical Appendix 3: System Evaluation, pp 64-65, October 2014.
[17] A-Engrossed Ordinance 783, Technical Appendix 2: Capital Project List, October 2014.

Short of developing a CIP, LUT could revise internal procedures and create a transportation project super-committee that meets regularly to discuss current transportation priorities, upcoming funding rounds, and how to best match the two. This would include discussion of what projects to propose for regional, state and federal grant opportunities, what projects to prioritize for county MSTIP and TDT funding, what smaller-scale needs (such as stand-alone walkway projects) to address with URMD and Gain Share, what improvements are proposed to be built by development, and how to take advantage of any leverage or efficiency opportunities.

A similar effort took place in 2013 during the planning of the initial round of Gain Share pedestrian/bike projects. LUT staff from Planning & Development Services, Engineering & Construction Services, Operations & Maintenance, and the Director's Office came together to assess previously-identified priorities within different funding silos and arrived at a prioritized list that addressed multiple needs. This effort was very effective and could be reinstated.

Potential Legislative Changes:

7. ***Replace or revise Resolution & Order 86-95 (Determining Traffic Safety Improvements under the Traffic Impact Fee Ordinance – Process Documentation) with a multimodal transportation development improvement process with guidance from the 2014 Multimodal Performance Measures and Standards report.***

   After 30 years, R&O 86-95 continues to be an effective tool for identifying vehicular safety issues and requiring development to address them, as appropriate. However, overhauling or building upon the procedure is necessary to better incorporate pedestrian, bicycle and transit modes. Doing so would provide the county with a better-informed, more effective process for requiring on-site and off-site walkways during development. It would also provide greater certainty and fairness for the development community by basing pedestrian improvement requirements on measurable, objective criteria.

   The grant-funded Multimodal Performance Measures and Standards project in 2014 explored several ways to better address multimodal transportation performance in the context of development review, corridor/area plans, and transportation system plans. For development review, it recommended the following series of actions:

   - Define system adequacy in terms of system completeness and system performance.
   - Assess existing conditions.
   - Define an impact area (four options were explored, including a district-based system, routes to essential destinations, distance along the network, and a set radius from the development).
   - Determine development impact, including data on pedestrian trip generation.
   - Develop mitigation strategies.
   - Determine the multimodal impacts of the mitigation, including trade-offs between modes.
   - Determine proportional share.

In September 2015, Long Range Planning staff organized a cross-divisional work group and kicked off a process to update the R&O 86-95 function, pursuant to the 2015 Long Range Planning Work Program. As of this writing, the work group has reviewed the current functions of R&O 86-95 ("what's working, what's not"), explored the recommendations of the Multimodal Performance Measures and Standards project, and divided into sub-groups to explore the following four topics that have shown the most promise for agreed-upon action:

- **Cumulative impact and safety** – Are existing mechanisms such as the Safety Priority Index System (SPIS) adequately documenting multimodal safety issues, particularly pedestrian/bicycle network issues? What can be done when multiple developments cumulatively cause a safety issue but no one development triggers the issue individually? There is general agreement that emphasizing safety (rather than system completeness) puts the county in a better position if improvement requirements are appealed.

- **Capacity-based approaches** – How can LUT better leverage private development to provide transportation improvements, particularly when those improvements are not triggered by safety issues but rather capacity and system completeness needs (such as widening a road and adding sidewalks)? How have other jurisdictions in the county accomplished this and made it a "win-win" for both the developer and the public? Tools being discussed include voluntary conditions of approval to build capacity/ system improvements that result in 100% TDT credit for eligible improvements.

- **Proportionality** – Given that U.S. case law (Nollan/Dollan/Koontz) restricts what and how much can be asked of development, how can improvements such as off-site walkways be required in a way that is fair and that demonstrates nexus and proportionality to the development's impacts? Are tools such as CDC 501-10.2 (which requires walkway connections to nearby pedestrian generators in North Bethany) appropriate for wider implementation?

- **Off-site right-of-way acquisition** – Even if LUT and a developer agree to a condition to build off-site walkways, it is often difficult for the developer to negotiate the required right-of-way from a third party. Since LUT is better equipped to purchase right-of-way, could a special fund be established specifically for purchasing right-of-way for off-site development improvements?

It is recommended that the desired updates to R&O 86-95 be codified in the CDC to make it easy for staff, developers and the public to know the associated rules and processes in one document.

8. Clarify or revise conflicting Community Development Code sections regarding the circumstances in which public improvements are required.

As referenced earlier in this paper, CDC sections 501-2.2 and 502-1.4 are conflicting: The former indicates that development of a single detached dwelling unit or duplex is exempt

from public improvement requirements, while the latter indicates that those developments must build a sidewalk if the lot frontage is less than or equal to 250 feet and sidewalks exist (or will exist) along adjacent properties. Current Planning staff have developed an administrative interpretation to exempt sidewalk requirements for single family detached homes on existing lots of record.

A CDC amendment is recommended to remove the conflict between these two provisions and to instate a requirement that matches current administrative practice.

This also may be an opportunity to address other conflicting or unclear sidewalk requirements in Article V, such as whether the eight-foot sidewalk required along certain state highways includes or does not include the four-foot planter strip indicated in county road standards (CDC 502-13.3).

9. Amend Article VII of the CDC to exempt from land use review walkway projects that would require additional right-of-way but would otherwise meet the requirements of CDC Section 702-4 (Exempt Projects).

Article VII (*Public Transportation Facilities*) is intended to provide a review process for major transportation capital projects to ensure that they do not adversely impact the surrounding community. Projects are either categorized as being either exempt from Article VII, or are classified in Categories A, B or C, with increasing discretion and legal judgement required under categories with higher letters. CDC 702-3 allows "operational improvements within existing right-of-way and ancillary easements," including "pedestrian ways," to be exempt from Article VII.

This recommendation would expand the Article VII exemption of pedestrian ways to include those that require right-of-way acquisition, but that otherwise have minimal impacts. To define minimal impacts, criteria in CDC 702-4 could be applied:

- No removal or displacement of buildings occur;
- No new land parcels result;
- The facility is not located in a flood plain, drainage hazard area or Significant Natural Resource Area;
- No change or alteration to a designated historic or cultural resource occur, pursuant to CDC Section 373 (*Historic and Cultural Overlay Districts*);
- No additional travel lanes result; and
- No reduction in bicycle and pedestrian facilities result.

Discretion may be needed in some circumstances. For example, if major grading and retaining walls are needed to construct the walkway, an Article VII review may still be appropriate.

10. Take limited actions to address improvement needs on non-county public roadways in UUWC.

A small number of public roadways in UUWC have not been "accepted" as county roadways and are therefore not eligible for Road Fund expenditures based on state statute.[18] In many cases this is not a problem. However, if the surrounding community desires walkways or other improvements on these roads, the county cannot legally provide any help unless the Board takes special action. ORS 368.031 (2) states:

> A county governing body shall spend county moneys on the local access road only if it determines that the work is an emergency or if:
>
> (a) The county road official recommends the expenditure;
> (b) The public use of the road justifies the expenditure proposed; **and**
> (c) The county governing body enacts an order or resolution authorizing the work and designating the work to be either a single project or a continuing program.

In limited circumstances where deemed appropriate, the county could take one of the ORS actions above, or it could bring the road into county maintenance. Alternatively, URMD could agree to address the issue.

A similar challenge prevents the county from constructing or maintaining accessways in off-street public rights-of-way. As a result, the county generally has not been improving these locations. Several recent plans and strategies, including the Aloha-Reedville Study and Livable Community Plan and the School Access Improvement Study, recommend specific accessway connections to improve connectivity and access to key destinations such as schools. As with the non-county public roadways, the Board would need to take special action to improve these locations.

11. Examine, consider, and discuss other financial tools listed in "Appendix A". These can come back to the Board as separate work sessions discussion.

Recent Board discussions and direction that influence future decisions on walkway gap funding include MSTIP 3e and Gain Share.

The MSTIP will continue to address multimodal capacity and safety needs on Arterial and limited Collector roadways, including projects where pedestrian/bicycle needs are the primary focus. (For example, the SW 198th Avenue MSTIP project will provide sidewalks, bike lanes, lighting and a center left turn lane, but will not provide additional vehicle travel lanes). For the next round of MSTIP (3e, construction starting in 2019), the Board has tentatively indicated support for funding some stand-alone pedestrian/bicycle projects along eligible roadways, in addition to projects that fully rebuild entire roadways. Several cities in Washington County are interested in using MSTIP funds for these smaller infill projects. Standard separated concrete sidewalk is recommended for all MSTIP projects.

[18] ORS 368.031 – County jurisdiction over local access roads.

MSTIP 3e – The Board has already set parameters for the MSTIP 3e funding program, which includes an increase to the MSTIP Opportunity Fund to $7.5 million dollars. The opportunity fund can continue to leverage outside grants to build pedestrian focused projects. Unlike the core MSTIP funds, the Opportunity Fund can be applied to projects on Local Streets, Neighborhood Routes and off-street pathways. The County is currently working with partner cities to develop the MSTIP 3e funding program for 2019 through 2023. MSTIP 3e is expected to have elements very similar to those noted for MSTIP 3d. The public will be asked to weigh in on the MSTIP 3e program this spring. The Board of Commissioners is expected to adopt the MSTIP 3e program in fall 2016.

Gain Share – On December 15, 2015 the Board adopted a revised Gain Share program that dedicates $2 million per year over ten years for "Safe Access to Schools." The intent moving forward is to invest this $20 million in sidewalk, crosswalk or accessway projects identified in the 2015 School Access Improvement Study. Traffic safety improvements identified in the study vary by school and include sidewalks, bike lanes, crosswalk treatments, and trails. Decisions on the next set of projects are anticipated by summer of 2016.

VI. Conclusion

Addressing the significant backlog of walkways gaps in UUWC requires a strategic, multi-faceted approach involving both private development and public investments. LUT staff has presented 11 potential actions that would help implement this approach and work toward gradual completion of the walkway network, with an emphasis on the most critical gaps.

If desired, the Board of Commissioners can direct staff to further investigate any of these recommendations, and/or to move some of them forward as ordinances, as part of the 2016 Long Range Planning Work Program or future Work Programs.

Appendix A
Potential Financial Tools to Consider to Address Walkway Gaps

1. Develop a fee-in-lieu sidewalk program that allows development along certain Local Streets with low vehicle volumes to pay into a fund dedicated to completing higher-need sidewalks identified in a neighborhood sidewalk plan.

On Local Streets with very low traffic volumes and little potential for additional traffic in the future, an alternative public improvement requirement could allow developers pay a fee-in-lieu of constructing sidewalk. The fee would go toward constructing a nearby sidewalk or walkway that is deemed to be more beneficial to the community. A neighborhood sidewalk plan would be necessary to identify which roadways are eligible for exemption from sidewalk construction and which roadways would be targeted for walkway improvements using the collected fees. Neighborhood sidewalk plans could build upon previous efforts such as the School Access Improvement Study, but would still require significant staff time.

Additional considerations include the following:

- The applicability of this provision should be limited because development is often the only opportunity for Local Streets to be improved with sidewalks. In addition, state law requires sidewalks along "most local streets in urban areas."[19] Limitations should include the following:
    - Development of multiple lots (adjacent or otherwise) on the same street by the same developer should not be able to use this provision.
    - Eligible streets should have very low traffic volumes and speeds. Federal Highway Administration (FHWA) guidance on woonerven (plural of woonerf, a shared street concept originating in the Netherlands) recommends no more than 100 vehicles per hour, and speeds between 8 and 15 miles per hour.[20] Future traffic volumes should be considered along with existing volumes.
- Developers should still have the option of constructing the sidewalk rather than paying the fee.

[19] Oregon Administrative Rule 660-012-0045.
[20] Federal Highway Administration University Course on Bicycle and Pedestrian Transportation, Lesson 20: Traffic Calming, July 2006. http://www.fhwa.dot.gov/publications/research/safety/pedbike/05085/chapt20.cfm

- Fee-in-lieu does not eliminate nexus and proportionality concerns, particularly after the Koontz case. Some developers may ask why a fee is being charged in addition to the Transportation Development Tax (even though TDT cannot be used on Local Streets).

2. Continue County investment in walkways using funding sources that are controlled or managed by Washington County, including:

- ***Transportation Development Tax***
- ***Urban Road Maintenance District***

Typically the County has relied on state and federal grants to fund stand-alone pedestrian/ bicycle projects that do not otherwise fit into the County's existing portfolio of funding programs. For example, the County received an Oregon Safe Routes to School grant and a federal Community Development Block Grant earlier this decade to complete sidewalks on non-Arterial roadways near schools in UUWC.[21] However, even with the recent passage of the FAST Act with its modest increase in Transportation Alternatives funding, federal and state transportation funds remain scarce and competitive. County transportation funding may be a superior option for funding walkway projects in places where development is not likely to provide them. Local funding would also avoid the costs and complexities of federalization, which can be particularly problematic for small projects.

At least two County transportation funding programs could be further used to address walkway gaps in UUWC:

- **Transportation Development Tax (TDT)** funds, which are limited by state statute to providing additional capacity for future users of facilities listed on the adopted Capital Project List, can be used to build sidewalks that increase overall travel capacity on those facilities. The TDT Capital Project List includes a discrete set of Arterials and Collectors, as well as a small number of off-street or Local Street connections to transit service. In practice, TDT has typically been used for roadway widening in newly growing areas (such as NW Springville Road near North Bethany). However, TDT may also be an appropriate source for funding sidewalk projects in infill development areas such as Aloha, Cedar Hills and Metzger. Re-evaluation of TDT is an identified Tier 1 task on the 2016 work program.

- The **Urban Road Maintenance District (URMD) Safety Improvement Program** is anticipated to continue funding walkway projects at about $2 million per year through at least FY 2019-20, until such time that the funds are needed for road maintenance. The URMD Advisory Committee (URMDAC) will continue to lead the project selection process and to advise the Board on the use of URMD funds. Based on stakeholder feedback and research guidance documented in this paper, URMDAC and LUT may want to consider limiting the application of wide shoulder walkways in favor of

[21] NW Leahy/Stark project in West Haven funded by Oregon SRTS; SW 173rd Avenue project in Aloha funded by CDBG.

walkways with greater separation from vehicular traffic. However, doing so would limit the buying power and reach of the program. A potential compromise is to set maximum traffic volume and speed thresholds for the use of wide-shoulder walkways.

3. Develop an LID matching program in which property owners agree to pay for a portion of the cost of a particular walkway improvement and the County pays for the other portion.

The County has intended to utilize LIDs to build sidewalks since at least 1983, when CDC Section 502-8 (*Developed Area Sidewalks*) was adopted. That section – still in effect today – gives the Board the authority to create LIDs for sidewalk construction when 51% of affected property owners representing a majority of the project frontage sign a petition in favor. Washington County Revenue and Finance Code (Title 3) also enables this action and further defines four different types of LIDs. Infill walkways would most likely be accomplished by either a Neighborhood LID, "in which the assessments may be levied to pay the actual cost of capital construction benefiting primarily developed properties," or a Frontage/Off-Site LID, "in which assessments may be levied to pay the actual cost of capital construction of off-site or frontage public improvements benefiting developed or undeveloped properties.[22] Each type of LID has a number of requirements set forth in the County Code.

While LUT staff found that LIDs for sidewalk construction may not be financially feasible for property owners by themselves, a partially subsidized LID program could provide just enough leverage to be financially viable for property owners. Such a program was implemented by the Portland Development Commission in the Lents neighborhood of southeast Portland. In that case, property owners covered half of the cost of the sidewalk improvements, while city urban renewal funds covered the other half. Washington County could consider using Gain Share, URMD or other funds for its contribution to such a program. County Road Fund cannot be used to match LID funds. Early and throughout the process, care must be taken address cash flow issues and potential cost overruns. If a project is intended to be built immediately, the county would have to finance the project up front.

4. Initiate a ballot measure that would create either a new County Service District or an additional assessment under the existing Urban Road Maintenance District for the purposes of funding a specific set of identified walkway projects.

The Board could ask UUWC voters to approve a new County Service District (CSD) or an increased assessment in the county's existing Urban Road Maintenance District (URMD, which is legally a CSD) to fund walkway projects. Identifying a specific list of projects is a best practice that often improves the odds of transportation-related ballot measures.

[22] Washington County Code 3.20.040(A)

An additional $0.25 per $1,000 assessed value under URMD would generate approximately $4 million annually, based on recent URMD revenue figures.[23] This would essentially double the URMD assessment. For a home with an assessed value[24] of $200,000, the annual payment of $49 to URMD would increase to $99. Staff would work closely with URMD Advisory Committee prior to bringing any proposals to the Board.

A new CSD, or multiple CSDs, could be applied in a more targeted fashion, both geographically and financially. Geographically, a CSD could be applied to specific neighborhoods where sidewalk/walkway completion is low, such as Aloha or Metzger. In this case, the residents that are being taxed receive the benefits of those revenues. However, limiting the assessment area also limits the revenue.

Multiple CSDs would provide the opportunity to establish different tax rates based on median household income or other factors. For example, a CSD for sidewalks in Aloha-Reedville could have a lower tax rate than a CSD for sidewalks north of Sunset Highway. This would help alleviate concerns about a regressive tax structure, but may not be universally popular.

[23] The URMD property tax, which is $0.2456 per $1,000 assessed value, generated $4.1 million in FY 2013-14, according to the URMD FY 13-14 Annual Report.
[24] Assessed values of residential properties in Washington County tend to be approximately 70% of market values due to statewide ballot measures in the 1990s.